



Building a Better World for All of Us®

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Owner: New Horizon Academy, 3405 Annapolis Lane N., Suite 100, Plymouth, MN 55447, 763.557.1111. Architect: Short Elliott Hendrickson, Inc., 2000 South Colorado Boulevard, Tower One, Suite 6000, Denver, Colorado 80222, 720.540.6800. Landscape Architect: Short Elliott Hendrickson, Inc., 10901 Reed Circle Drive, Suite 300, Minnetonka, MN 55343, 952.912.2600. Civil Engineer: Short Elliott Hendrickson, Inc., 418 West Superior Street, Suite 200, Duluth, MN 55802, 218.279.3000. Structural Engineer: Short Elliott Hendrickson, Inc., 418 West Superior Street, Suite 200, Duluth, MN 55802, 218.279.3000.

Mechanical Engineer

Electrical Engineer

NEW HORIZON ACADEMY - DOUGLAS XXX FILING, NO. X PARKER, CO

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

Project Status: TOWN REVIEW. Issue Date: 8/26/2020.

Revision Issue table with columns: Rev. #, Description, Date.

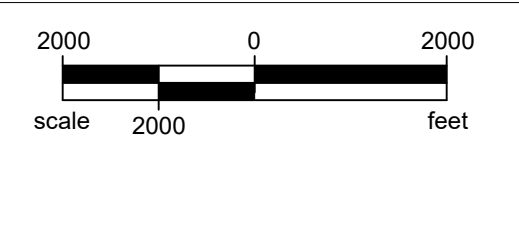
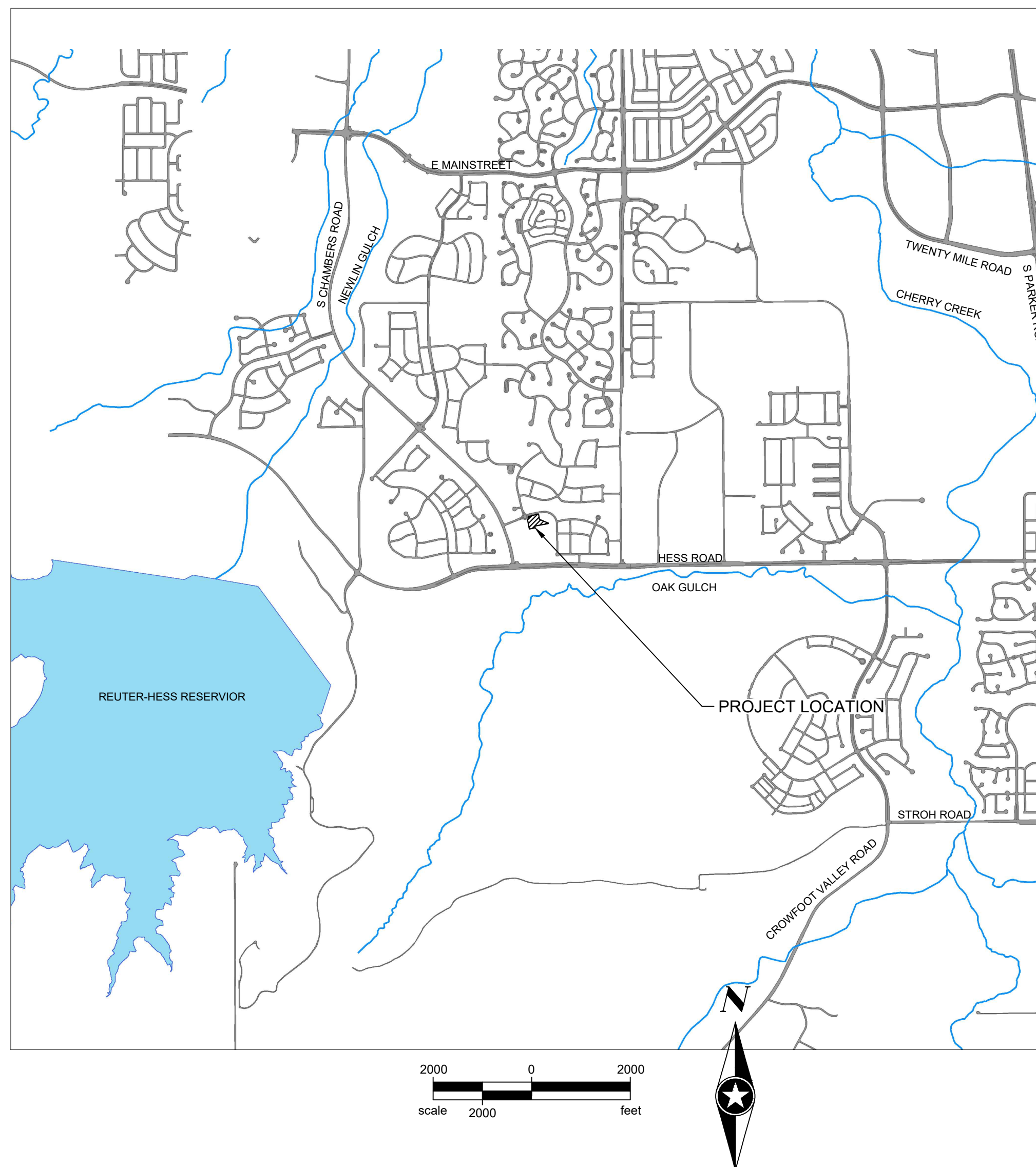
COVER SHEET

C0.0

DOUGLAS 234, FILING NO. X

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 X.X ACRES

WATER & SEWER CONSTRUCTION PLANS FOR NEW HORIZON ACADEMY



PLAN SHEET INDEX table with columns: SHEET NUMBER, SHEET TITLE. Rows: C0.0 COVER SHEET, C0.1 GENERAL NOTES, C1.0 OVERALL UTILITY PLAN, C1.1 SANITARY SERVICE PLAN & PROFILE, C1.2 SANITARY SEWER DETAILS, C1.3 WATER DETAILS, C1.4 WATER DETAILS, C1.5 WATER DETAILS.

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 (811). 800-922-1987.

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.

URBAN DRAINAGE FLOOD CONTROL DISTRICT (UDFCD): MIKE SARMENTO, 2480 W 26TH AVE. SUITE 156-B, DENVER, CO 80211. 303-455-6277.

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

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

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.

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TOWN OF PARKER GENERAL NOTES – CONSTRUCTION

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.

TOWN OF PARKER GENERAL NOTES – WATER SYSTEM

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.

TOWN OF PARKER GENERAL NOTES – SANITARY SEWER SYSTEM

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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Structural Engineer

Mechanical Engineer

Electrical Engineer

NEW HORIZON ACADEMY -
DOUGLAS XXX FILING, NO. X
PARKER, CO

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

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Issue Date: 8/26/2020

Revision Issue		
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-	-	-

GENERAL NOTES

C0.1

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OVERALL UTILITY PLAN

C1.0

GENERAL UTILITY NOTES

- ALL UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE TOWN OF PARKER 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.
- 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.

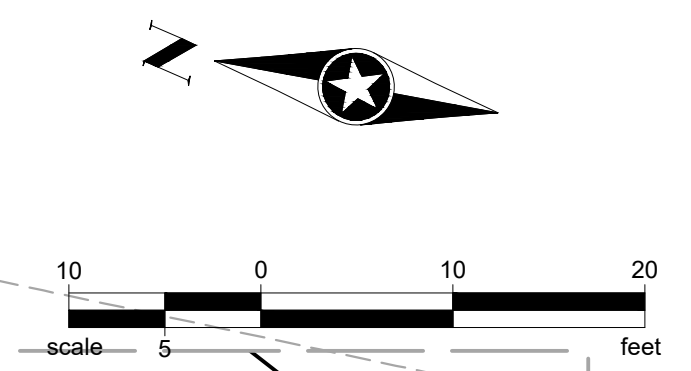
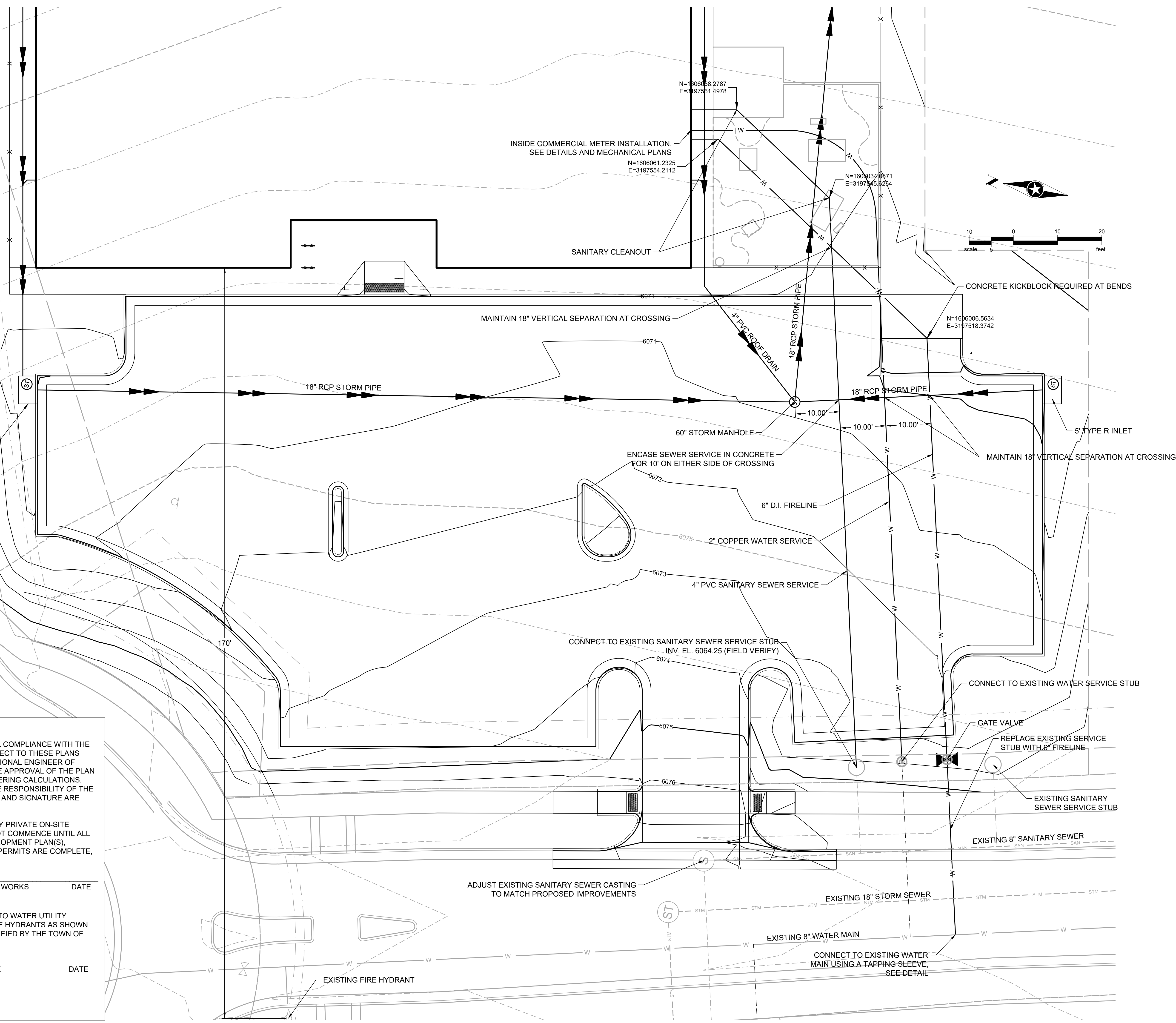
THIS REVIEW DOES NOT CONSTITUTE APPROVAL OF ANY PRIVATE ON-SITE IMPROVEMENTS WHICH MAY BE CONSTRUCTION CANNOT COMMENCE UNTIL ALL REQUIRED DRAINAGE/TRAFFIC REPORT(S), FINAL DEVELOPMENT PLAN(S), SPECIAL REVIEW(S), GRADING PERMIT, AND/OR OTHER PERMITS ARE COMPLETE, APPROVED AND ON FILE WITH THE TOWN OF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

TOWN OF PARKER, DIRECTOR OF ENGINEERING/PUBLIC WORKS DATE

FIRE/LIFE SAFETY 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.

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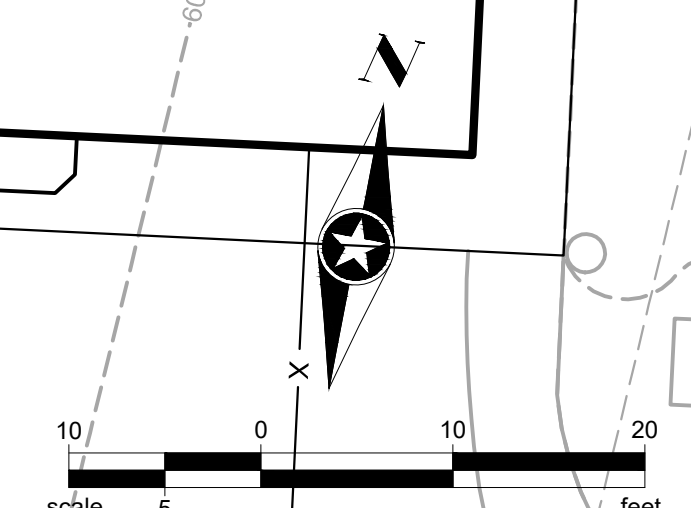
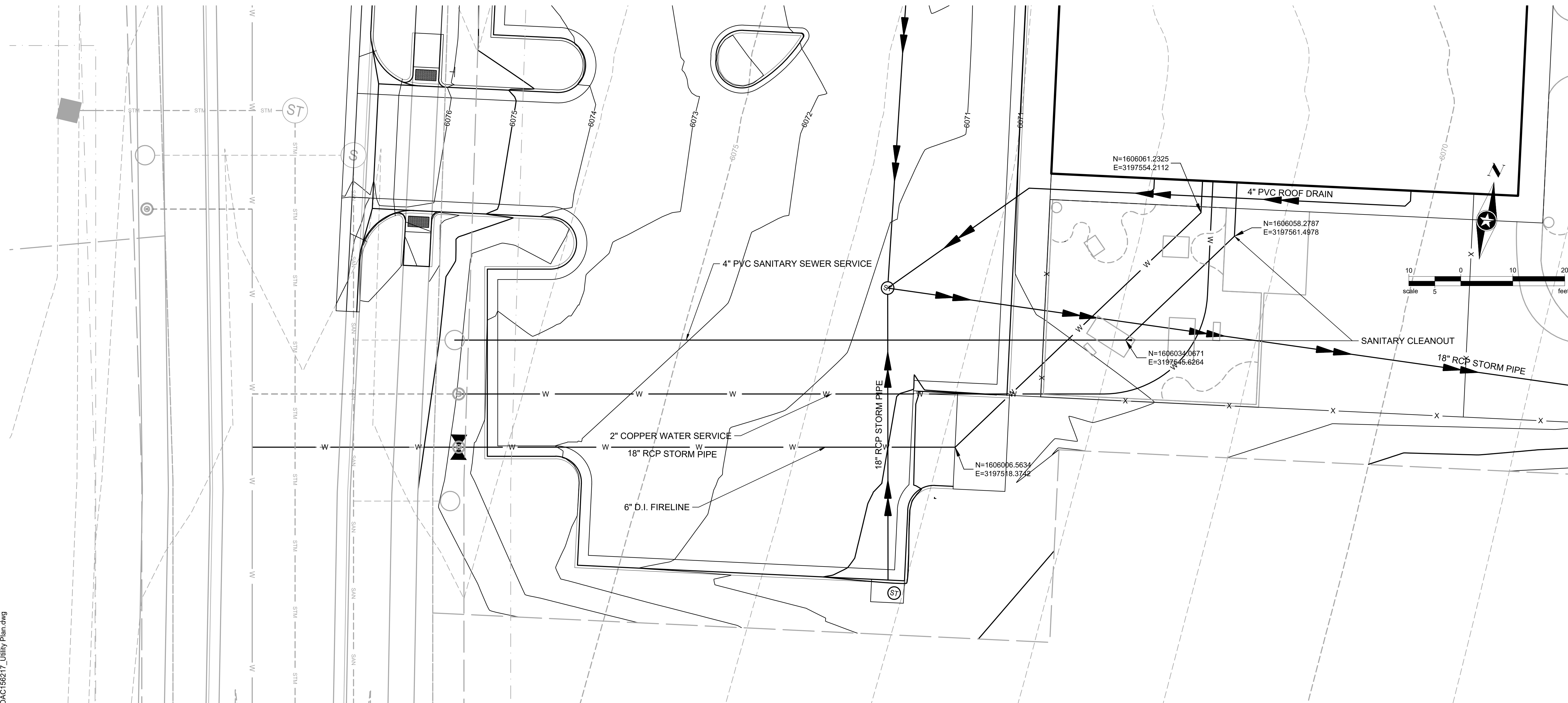
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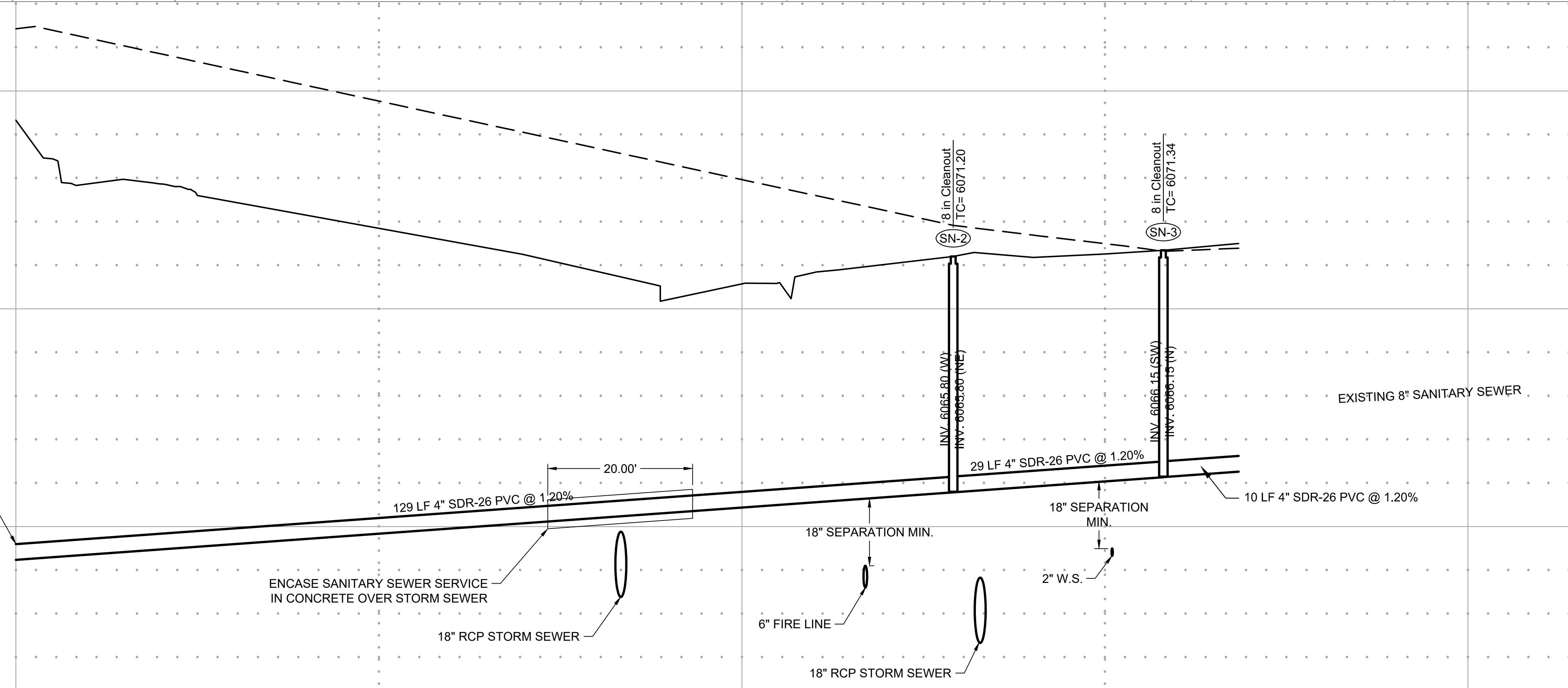
SANITARY SERVICE PLAN & PROFILE

C1.1

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CONNECT TO EXISTING SANITARY SEWER SERVICE STUB
INV. EL. 6064.25 (FIELD VERIFY)



**NOT FOR
CONSTRUCTION**

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PARKER, CO**

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

Project Status: Issue Date: 8/26/2020

Revision Issue

SANITARY SEWER DETAILS

C1.2

INSPECTION POLICY:

1. ALL SERVICE INSPECTIONS MUST BE SCHEDULED WITH THE DISTRICT OFFICE AT LEAST 24 HOURS IN ADVANCE OF THE REQUESTED INSPECTION.
2. 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.
3. 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.
4. 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.
5. ALL EXCAVATIONS SHALL BE IN ACCORDANCE WITH OSHA STANDARDS.
6. LOTS WITHOUT BUILDING ADDRESSES OR LOT AND BLOCK NUMBERS BEFORE DISTRICT INSPECTION OR METER SET WILL FAIL AUTOMATICALLY.
7. CONTRACTOR MUST BE PRESENT AT TIME OF INSPECTION UNLESS COORDINATED WITH DISTRICT INSPECTOR.

INSTALLATION NOTES:

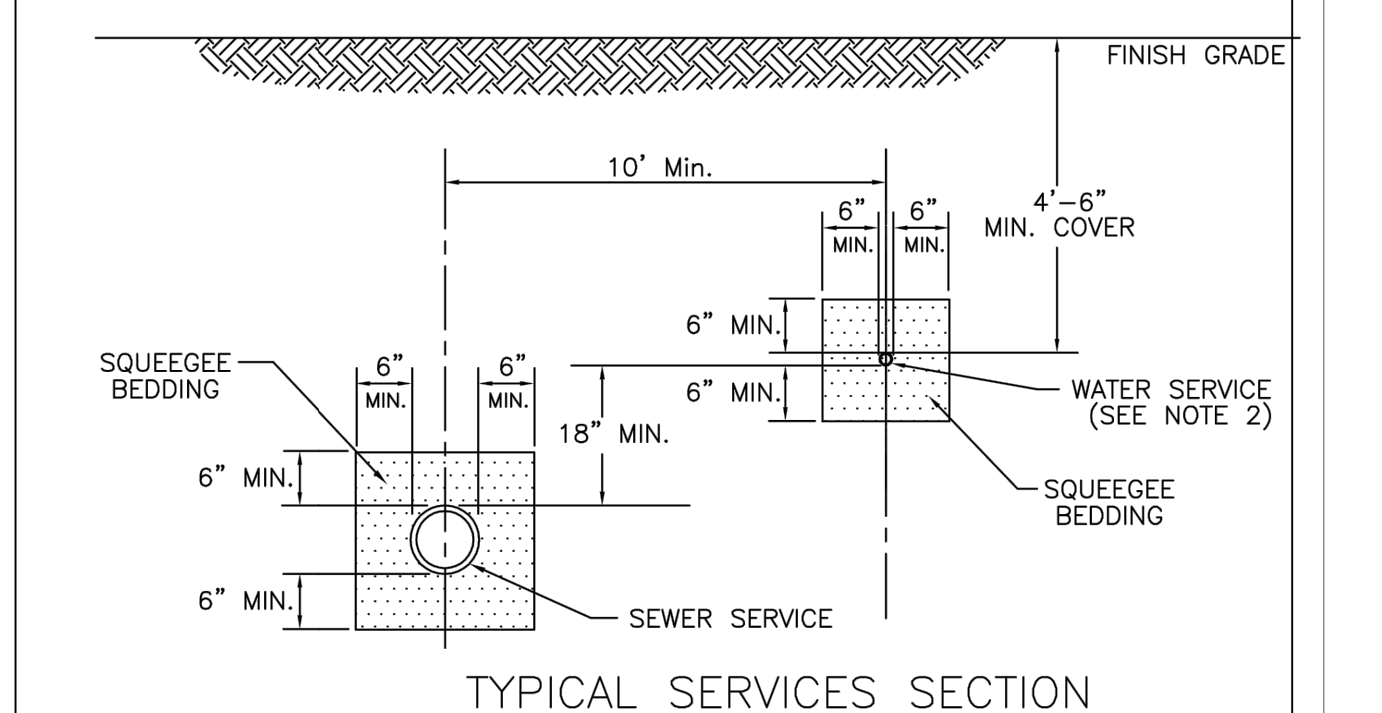
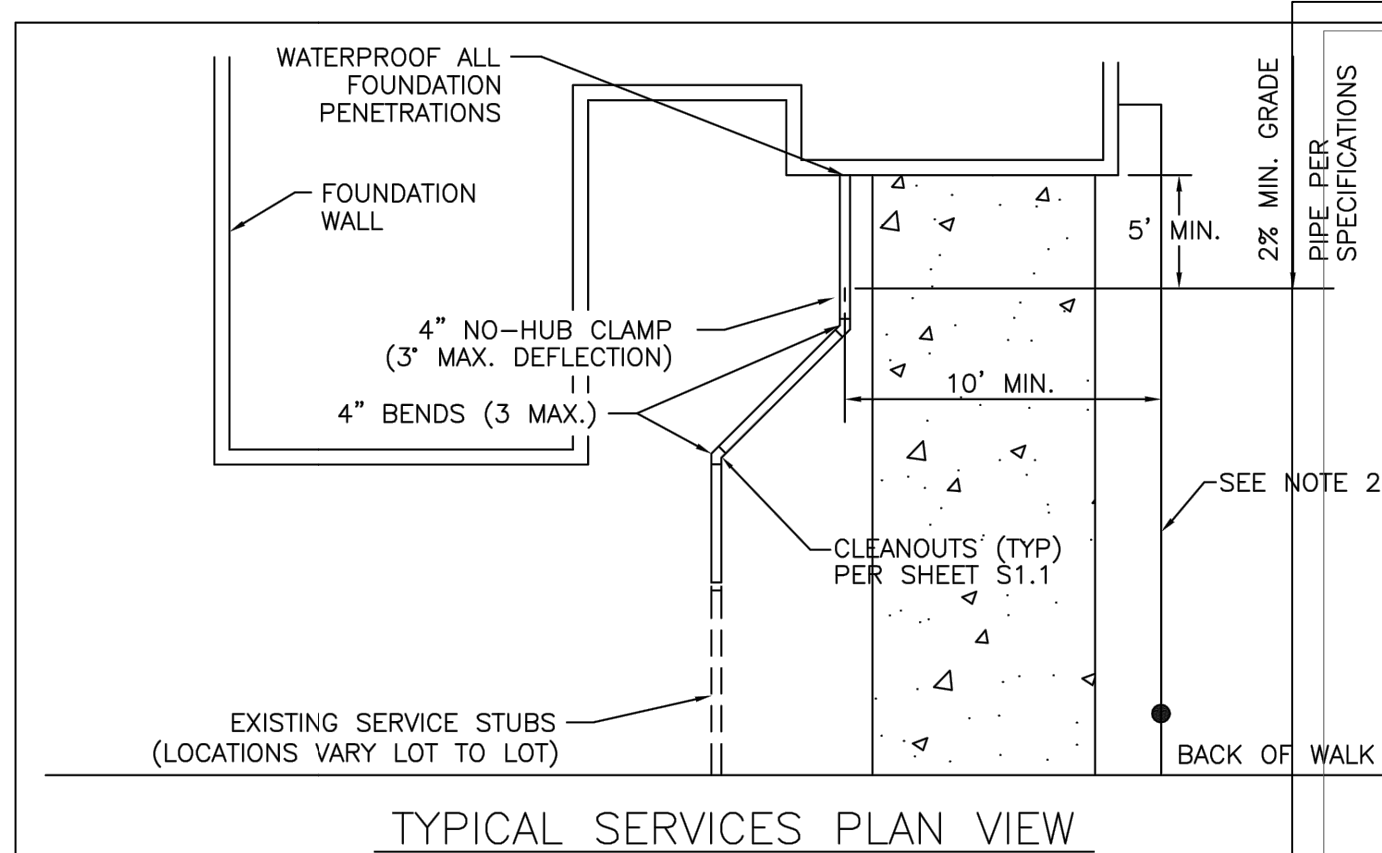
SEWER

1. ACCEPTABLE PIPE MATERIALS ARE TO BE SDR 35 PVC PIPE, ABS PIPE AND PVC SCHD 40 PIPE. APPROVED BEDDING IS TO BE SQUEEGEE.
2. NO-HUB CLAMPS SHALL BE USED TO JOIN 2 MALE PIPE ENDS WITH A MAXIMUM DEFLECTION OF 3'.
3. MINIMUM GRADE SHALL BE 2%.
4. INSTALLATION SHALL INCLUDE NO MORE THAN 3 BENDS. 90° BENDS ARE NOT ALLOWED. SOLVENT WELDED PIPE WILL NOT BE ALLOWED.
5. 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.
6. STRESSING OF THE PIPE BETWEEN FITTINGS WILL NOT BE ALLOWED.
7. SEWER SERVICE LINE SHALL NOT BE LOCATED UNDER CONCRETE SURFACE.
8. ALL SERVICES WILL BE PERMANENTLY MARKED ON CURB FACE AS FOLLOWS:
"X" FOR SANITARY SEWER SERVICE
"V" FOR WATER SERVICES

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

2016 REVISION

SHEET S1.1



PARKER WATER & SANITATION DISTRICT	
TYPICAL SEWER SERVICES	
SCALE: NONE	DATE: 2/96
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DIRECTOR OF ENGINEERING	

2016 REVISION

SHEET S1.2

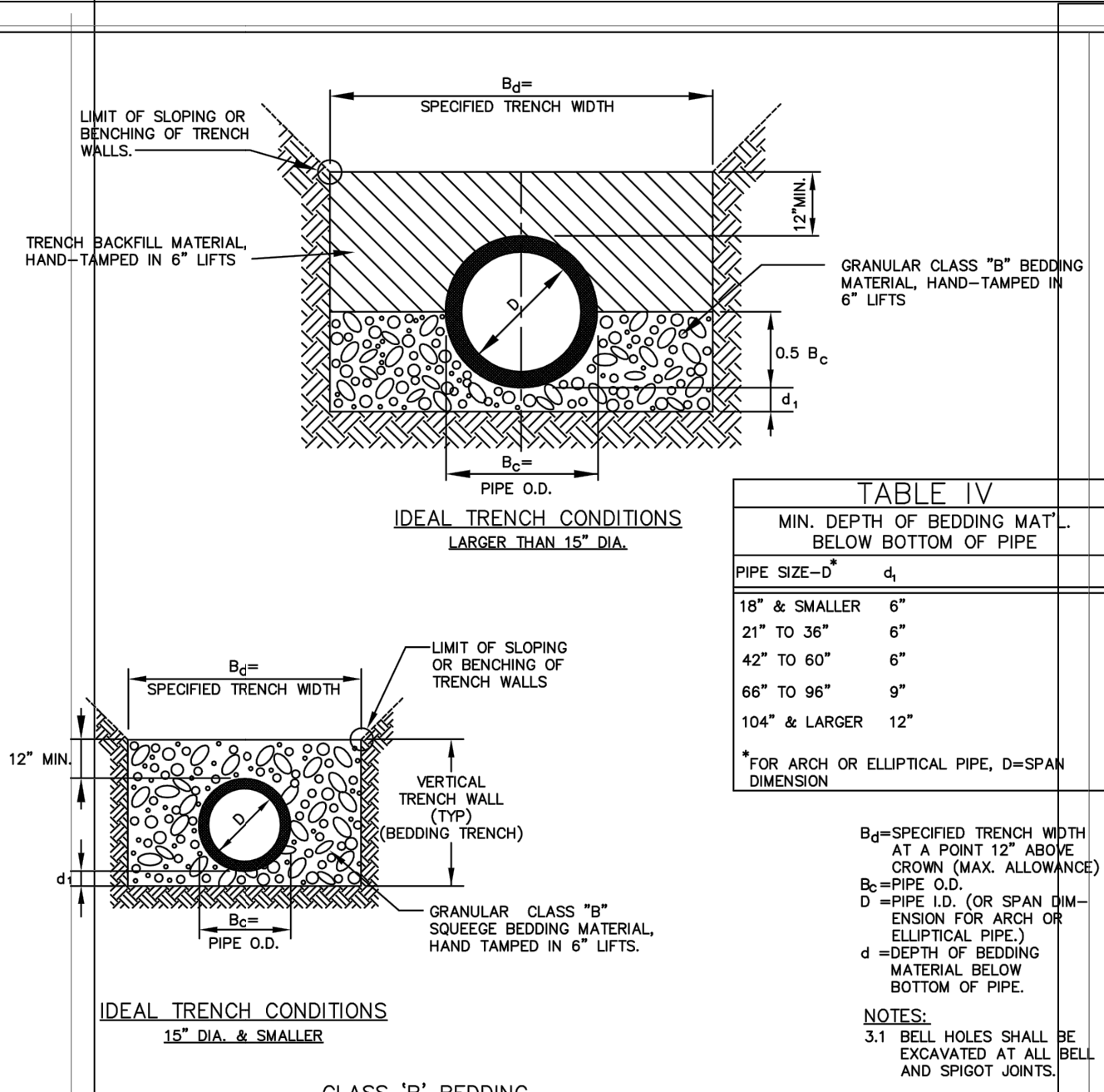


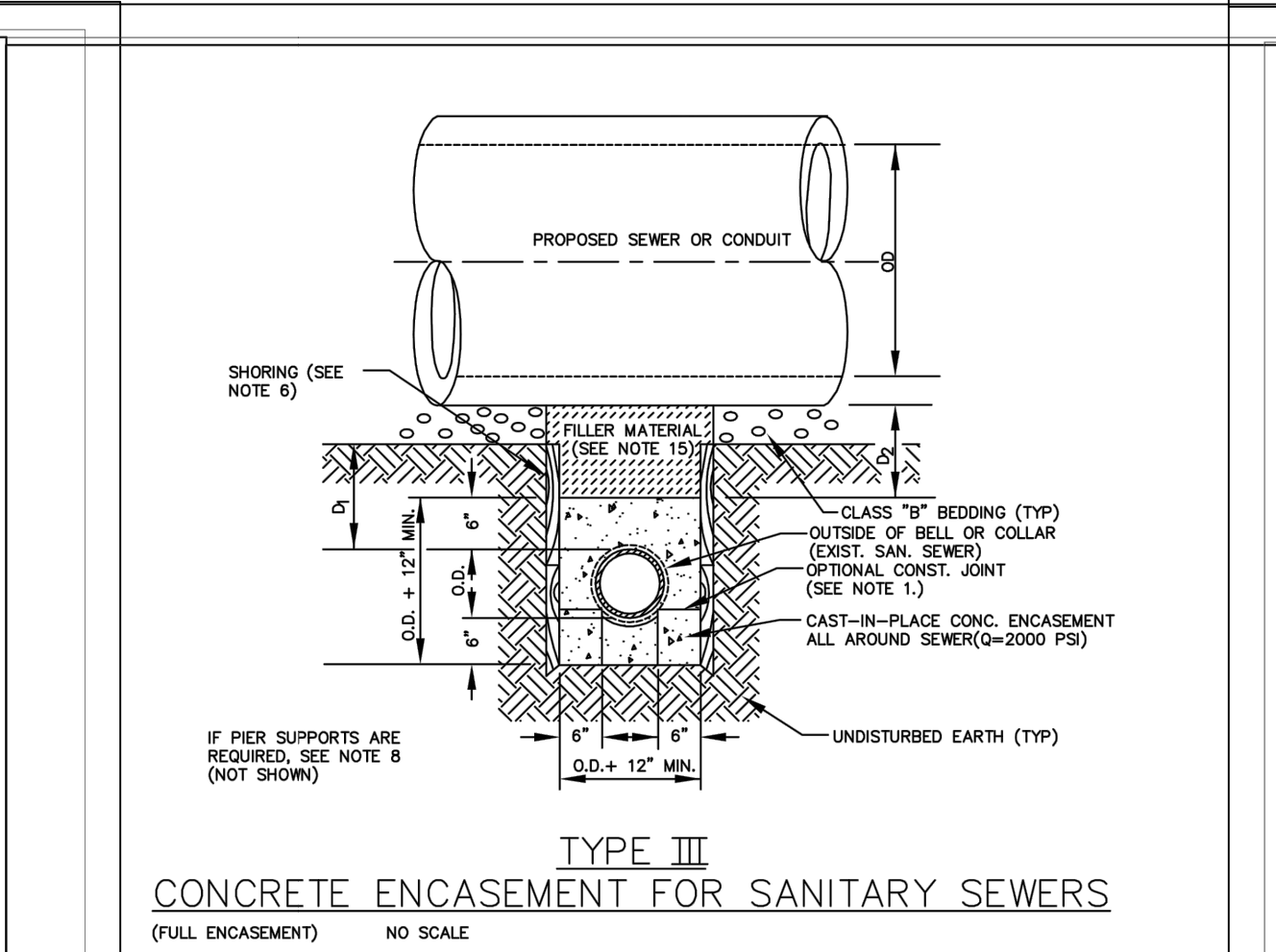
TABLE IV	
MIN. DEPTH OF BEDDING MAT. BELOW BOTTOM OF PIPE	
PIPE SIZE - d	h
18\"/>	6"
21\"/>	6"
42\"/>	6"
66\"/>	6"
104\"/>	12"

GENERAL NOTES:
G-1 THESE DETAILS ARE TYPICAL FOR NORMAL TRENCH CONDITIONS. FOR INSTALLATIONS OTHER THAN THESE (SUCH AS EMBANKMENT OR TUNNEL INSTALLATIONS, ETC) EXCAVATION, BEDDING AND BACKFILL REQUIREMENTS SHALL BE DETAILED ON THE CONSTRUCTION DRAWINGS. FOR UNUSUAL OR UNSTABLE SOIL CONDITIONS, TRENCH AND BEDDING DETAILS SHALL BE A SPECIAL DESIGN.

PARKER WATER & SANITATION DISTRICT	
TRENCHING AND BEDDING CLASS "B"	
SCALE: NONE	DATE: 2/96
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DIRECTOR OF ENGINEERING	

2016 REVISION

SHEET S4.3

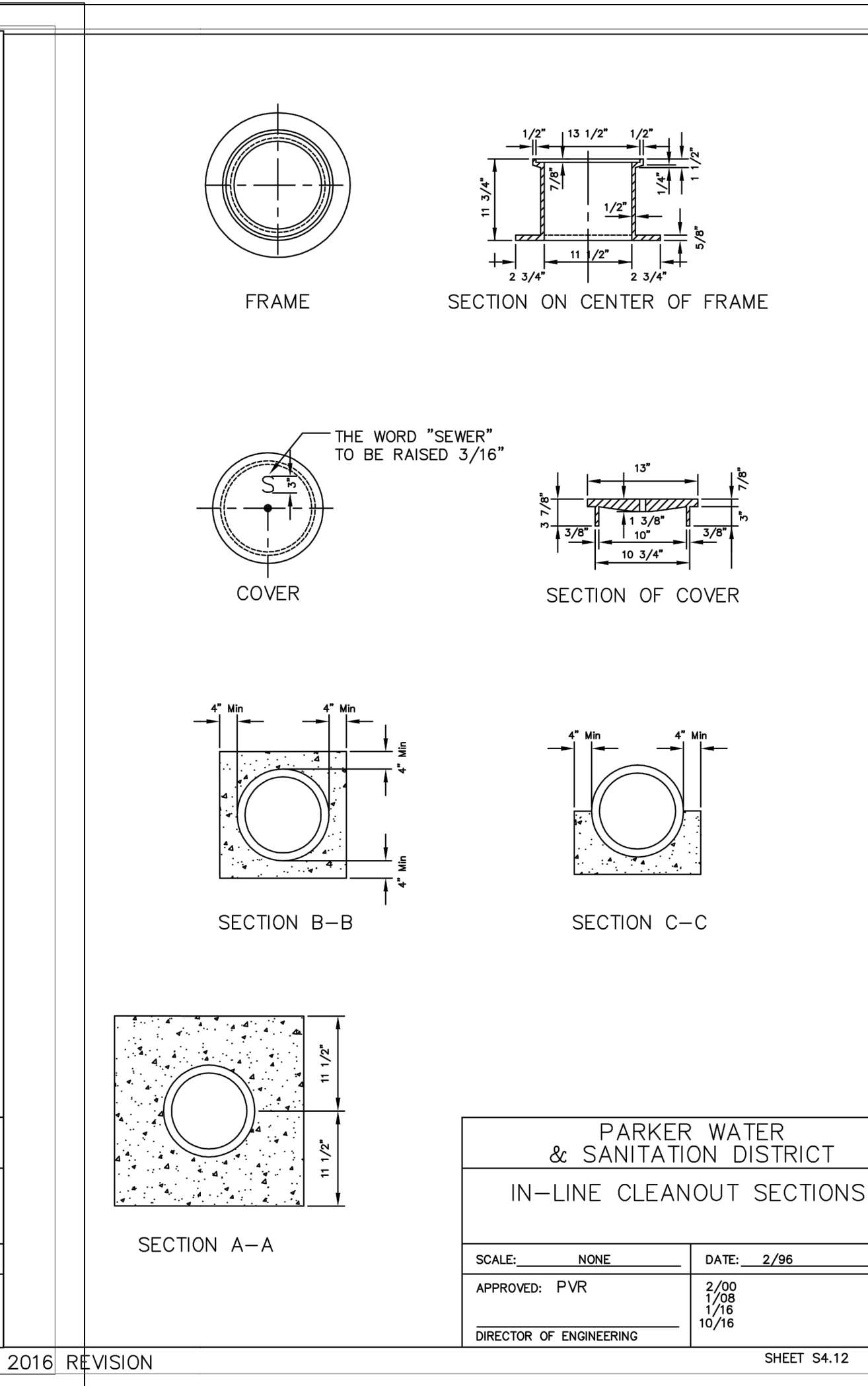


- GENERAL NOTES FOR TYPE I, II & III ENCASEMENT**
1. CONCRETE TO BE CAST AGAINST UNDISTURBED SOIL OR SHORING. IF OPTIMAL CONSTRUCTION JOINT IS USED & BOTTOM HALF OF ENCASEMENT IS PLACED SEPARATELY, A ONE INCH LAYER OF SAND OR MORTAR SHALL BE PLACED BETWEEN BOTTOM OF SANITARY SEWER AND TOP OF CONCRETE.
 2. LENGTH OF ENCASEMENT FOR:
 - (a) TYPE I & TYPE II ENCASEMENT SHALL EXTEND FULL TRENCH WIDTH EXCAVATED FOR PROPOSED SEWER OR CONDUIT.
 - (b) TYPE III ENCASEMENT SHALL EXTEND AT LEAST 10 FEET EACH SIDE OF WATER MAIN.
 3. UNLESS OTHERWISE NOTED ON PLAN/PROFILE DRAWINGS, TYPE I, II & III ENCASEMENTS NEED NOT BE REINFORCED. REINFORCEMENT IF REQUIRED, TO BE SPECIFIED AND DETAILED SEPARATELY ON PLAN & PROFILE DRAWINGS.
 4. TYPE I, II OR III ENCASEMENTS ARE REQUIRED UNDER FOLLOWING CONDITIONS:
 - (a) TYPE I OR TYPE II IF $d_1 \leq 18"$ ($d_2 \leq 12"$) EXCEPT FOR SANITARY SEWER CROSSING OVER OR UNDER WATER MAINS.
 - (b) TYPE II IS REQUIRED FOR SANITARY SEWERS CROSSING UNDER WATER MAINS AND $d_1 \leq 24"$ ($d_2 \leq 18"$).
 - (c) TYPE III IS REQUIRED FOR SANITARY SEWERS CROSSING OVER TOP OF WATER MAINS, REGARDLESS OF DIMENSION d_1 .
 - (d) EXCEPT FOR UNUSUAL CIRCUMSTANCES, WATER MAIN CROSSINGS, OR WHERE UNSTABLE SOIL CONDITIONS ARE ENCOUNTERED, TYPE I ENCASEMENT WILL NORMALLY BE SATISFACTORY.
 - (e) IF THE SANITARY SEWER IS REPLACED OR CONSTRUCTED OF SUCTILE IRON PIPE (AWWA C-150 OR C-151), CONCRETE ENCASEMENT MAY NOT BE REQUIRED.
 5. FILLER MATERIAL BETWEEN CONDUITS TO BE:
 - (a) APPROVED COMPRESSIBLE MATERIAL SUCH AS STYROFOAM, ETC.
 - (b) COMPACTED CLASS "B" BEDDING IF d_1 & $d_2 > 6"$.
 - (c) IF $d_1 > 6"$ FOR TYPE III ENCASEMENT POUR CONCRETE IN UNDISTURBED SOIL.
 6. SHORING OR SHEETING, IF USED, TO BE CUT OFF AT TOP OF ENCASEMENT.
 7. THESE ENCASEMENT DETAILS MAY ALSO BE APPLICABLE FOR CONDUITS OTHER THAN STORM OR SANITARY SEWER INSTALLATIONS.
 8. IN CERTAIN SITUATIONS WHERE CONDUIT DIAMETER "D" IS EXTREMELY LARGE, PIER 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.
 9. CONCRETE ENCASED PIPING SHALL BE LINED WITH FELT LAYER.

PARKER WATER & SANITATION DISTRICT	
CONCRETE ENCASEMENT TYPE III	
SCALE: NONE	DATE: 2/96
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DIRECTOR OF ENGINEERING	

2016 REVISION

SHEET S4.6



PARKER WATER & SANITATION DISTRICT	
IN-LINE CLEANOUT SECTIONS	
SCALE: NONE	DATE: 2/96
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SHEET S4.12

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SEH Project Checked By Drawn By
NHOAC 156217 DRH AMP

Project Status Issue Date
TOWN REVIEW 8/26/2020

Revision Issue
Rev. # Description Date

WATER DETAILS

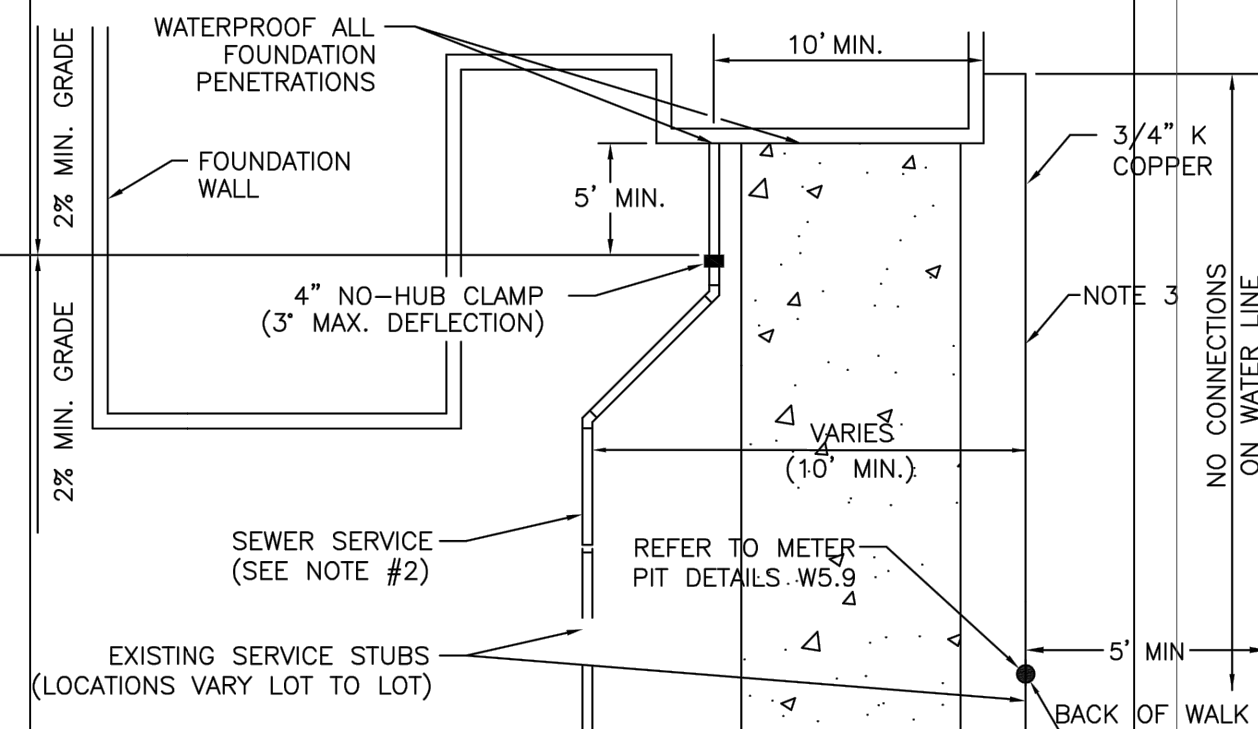
C1.3

INSPECTION POLICY:

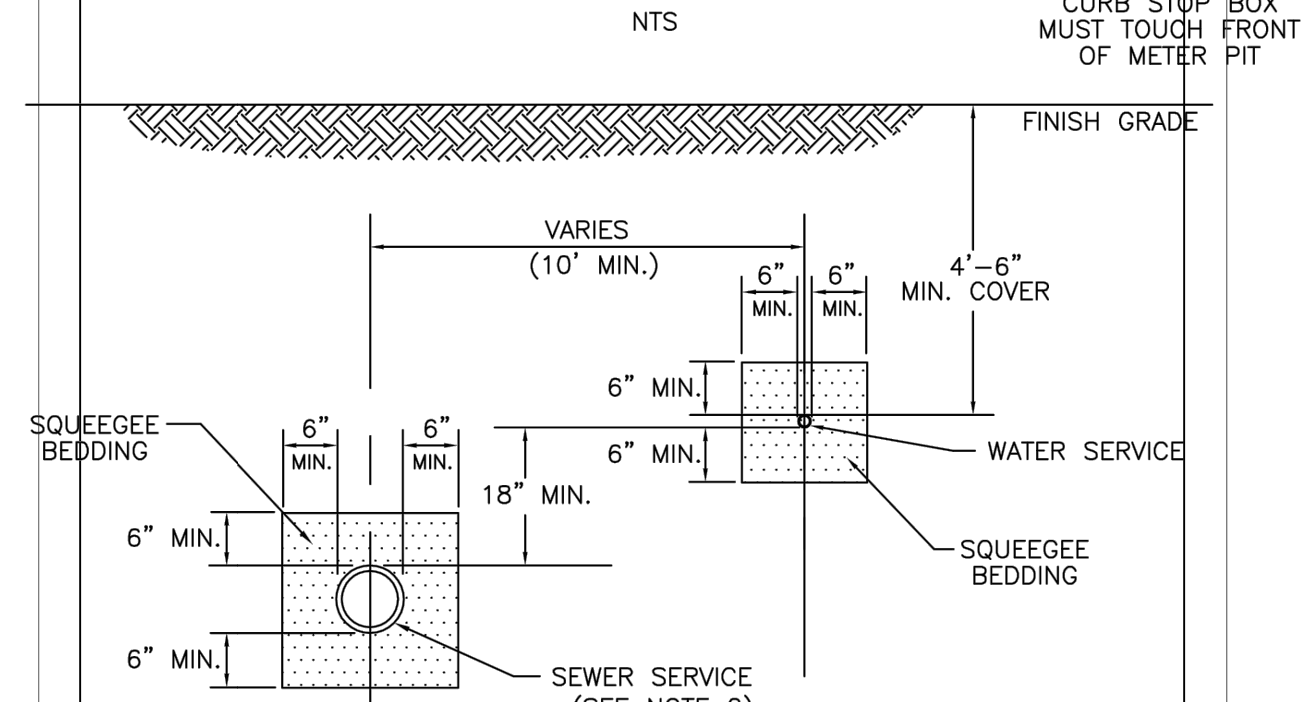
- ALL SERVICE INSPECTIONS MUST BE SCHEDULED AT LEAST 24 HOURS IN ADVANCE OF THE REQUESTED INSPECTION.
- SERVICE INSPECTIONS WILL OCCUR BETWEEN 1:00 P.M. AND 3:00 P.M. SPECIFIC INSPECTION TIMES ARE NOT AVAILABLE.
- IF THE CONTRACTOR IS NOT READY FOR INSPECTION WHEN THE INSPECTOR ARRIVES AT THE SITE OR 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 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 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
"W" 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.



TYPICAL SERVICES PLAN VIEW



TYPICAL SERVICES SECTION

- NOTE:**
- SEE SHEET W1.1 FOR DISTRICT POLICIES AND INSTALLATION NOTES.
 - REFER TO SEWER SERVICES DETAIL SHEET S1.2.
 - 4" PVC SLEEVES REQUIRED FOR SERVICE LINES UNDER CONCRETE SURFACE.

PARKER WATER & SANITATION DISTRICT
DISTRICT POLICIES & INSTALLATION NOTES FOR WATER SERVICES

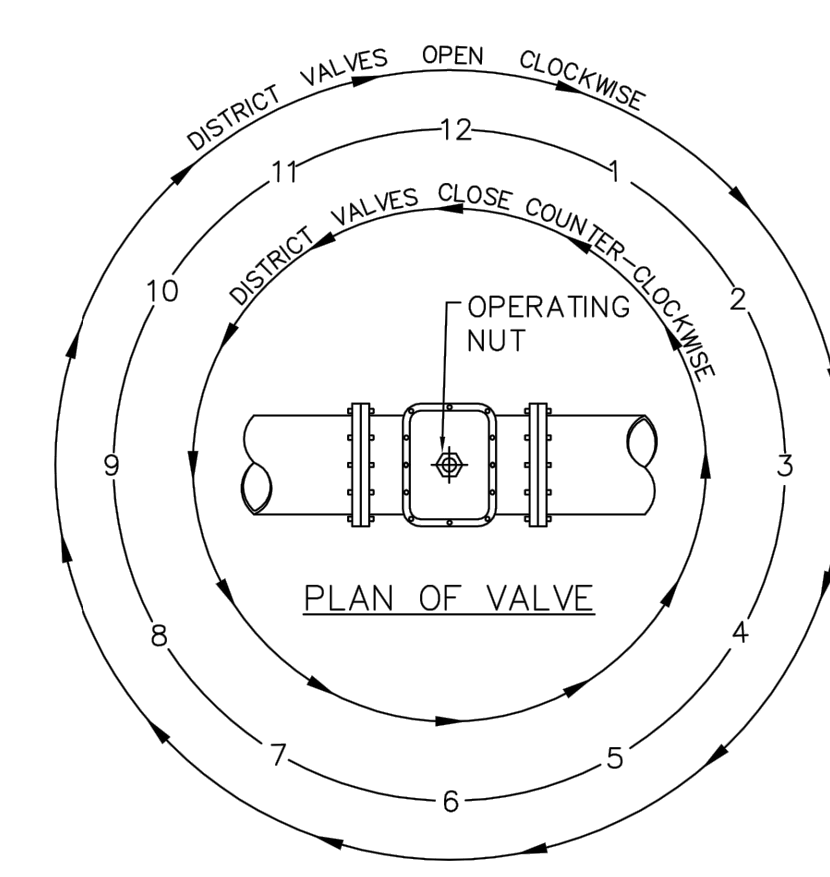
SCALE: NONE DATE: 2/96

APPROVED: 1/04 1/16 10/16
PVR
DIRECTOR OF ENGINEERING

PARKER WATER & SANITATION DISTRICT
TYPICAL WATER SERVICES

SCALE: NONE DATE: 2/96

APPROVED: 1/04 10/16 06/05 12/07 1/16
PVR
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NOTE:
ONLY RIGHT HAND OPENING VALVES ALLOWED.

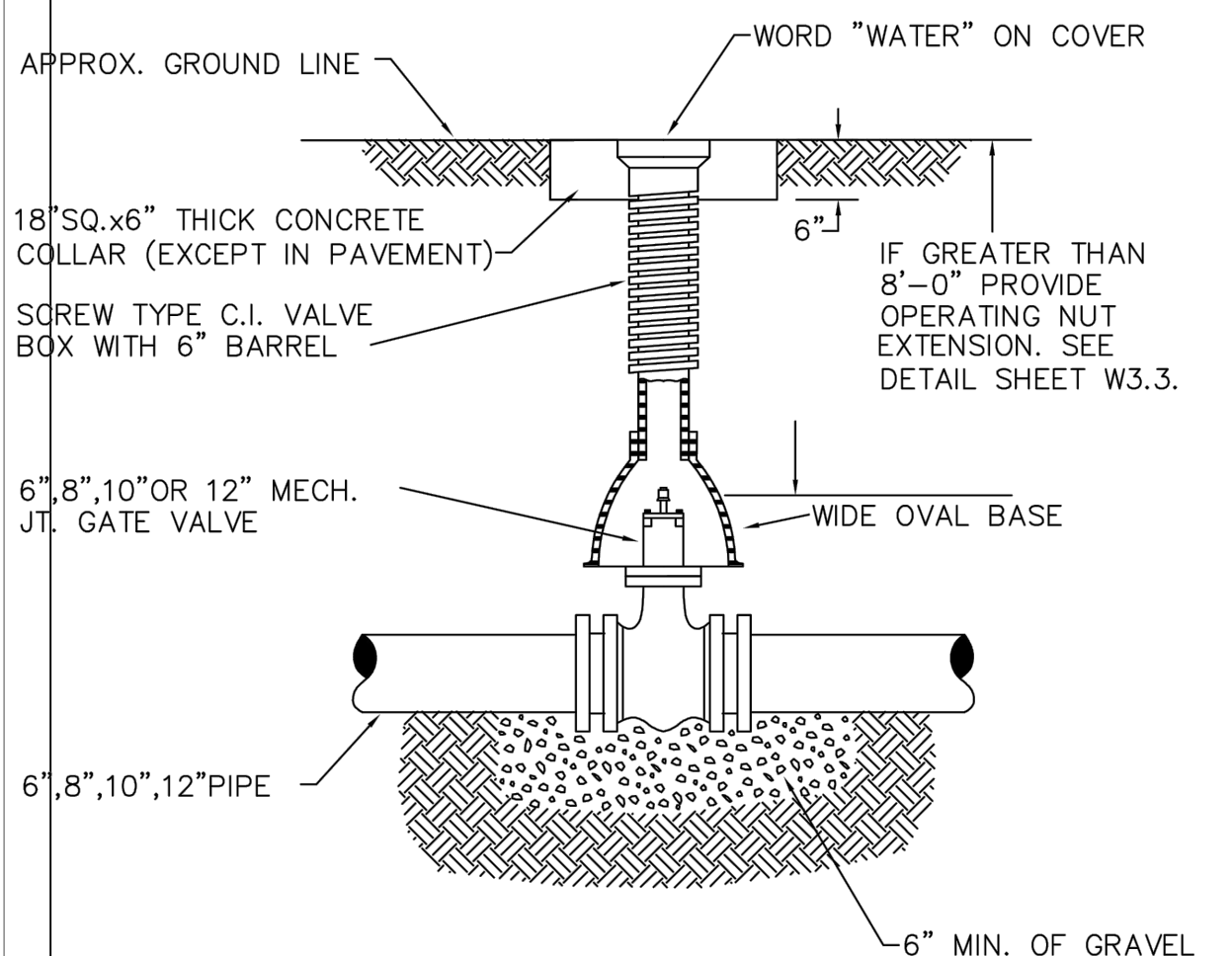
VALVE OPENING & CLOSING PROCEDURE

PARKER WATER & SANITATION DISTRICT
VALVE OPERATION

SCALE: NONE DATE: 2/96

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

- NOTES:**
- ALL C.I. SHALL BE WRAPPED WITH 8 MIL. MIN. THICKNESS POLYETHYLENE.
 - VALVE NUT SHALL BE CENTERED.
 - VALVE BOX SHALL BE PLUMB.
 - SEE MATERIAL SPECIFICATIONS FOR VALVE BOX WITH GREATER THAN BURIED DEPTH OF 4.5 FT.



PARKER WATER & SANITATION DISTRICT
VALVE BOX DETAIL

SCALE: NONE DATE: 2/96

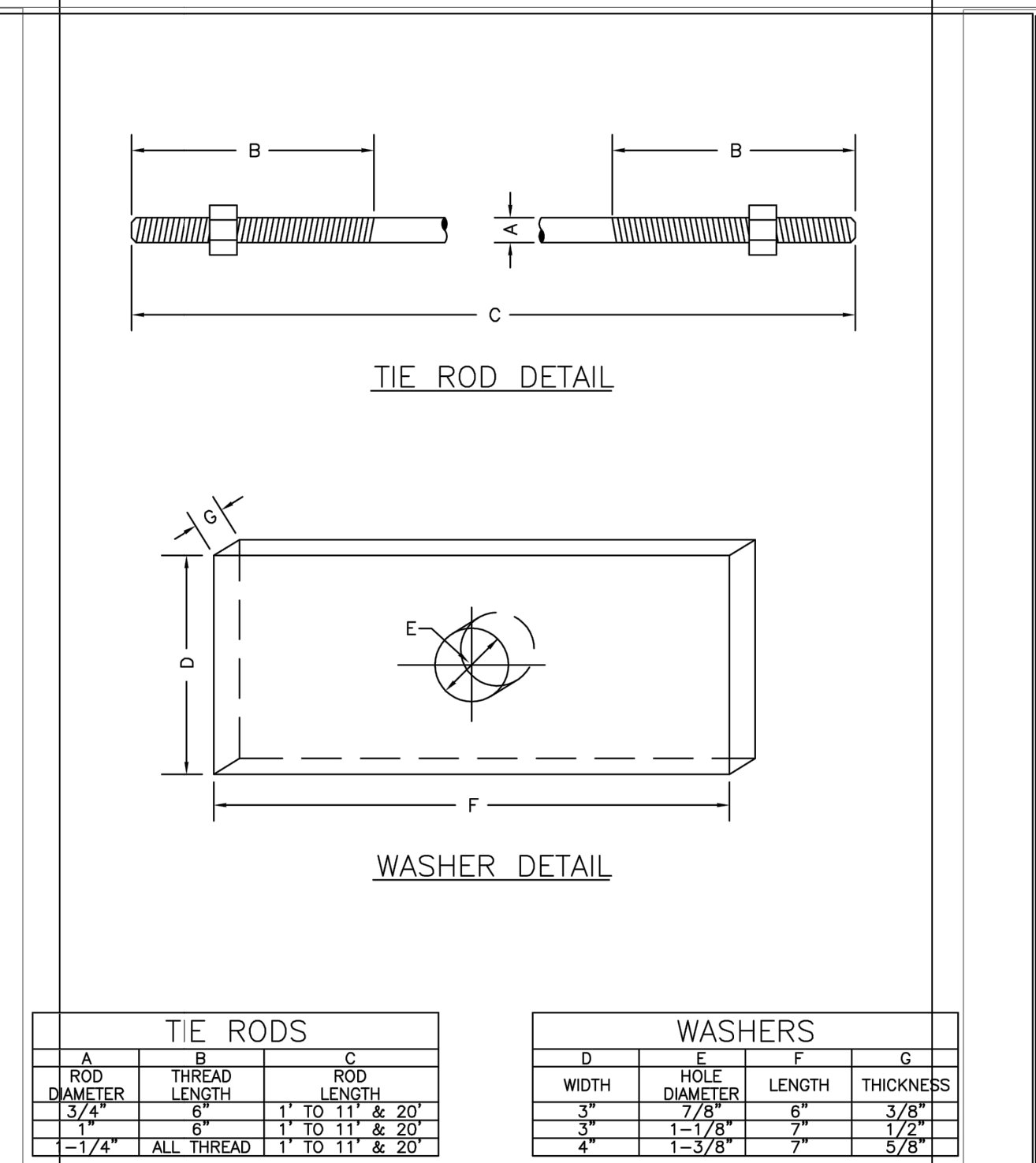
APPROVED: 5/98 10/16 6/99 12/07 1/16
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LENGTH OF TIED PIPE

PIPE SIZE	4"			6"			8"			12"			16"			20"			24"		
	D	L	G	D	L	G	D	L	G	D	L	G	D	L	G	D	L	G	D	L	G
TIE OR VALVE	3/4"	6.0'	M.S.	3/4"	13.0'	M.S.	3/4"	20.0'	M.S.	3/4"	26.0'	M.S.	3/4"	32.0'	M.S.	3/4"	38.0'	M.S.	3/4"	44.0'	M.S.
90° BEND	3/4"	6.0'	M.S.	3/4"	13.0'	M.S.	3/4"	20.0'	M.S.	3/4"	26.0'	M.S.	3/4"	32.0'	M.S.	3/4"	38.0'	M.S.	3/4"	44.0'	M.S.
45° BEND	3/4"	2.0'	M.S.	3/4"	4.0'	M.S.	3/4"	6.0'	M.S.	3/4"	8.0'	M.S.	3/4"	10.0'	M.S.	3/4"	12.0'	M.S.	3/4"	14.0'	M.S.
22-1/2° BEND	3/4"	1.0'	M.S.	3/4"	2.0'	M.S.	3/4"	3.0'	M.S.	3/4"	4.0'	M.S.	3/4"	5.0'	M.S.	3/4"	6.0'	M.S.	3/4"	7.0'	M.S.
11-1/4° BEND	3/4"	0.0'	M.S.	3/4"	1.0'	M.S.	3/4"	2.0'	M.S.	3/4"	3.0'	M.S.	3/4"	4.0'	M.S.	3/4"	5.0'	M.S.	3/4"	6.0'	M.S.

NOTES:

- LENGTH OF TIED PIPE MEASURED EACH WAY FROM VALVES AND BENDS.
- CLAMPS AND RODS NOT ALLOWED FOR 24" AND LARGER PIPES.
- D = DIAMETER, L = LENGTH, G = GRADE, M.S. = MILD STEEL, H.S. = HIGH STRENGTH.
- MINIMUM 4.5' GROUND COVER REQUIRED.
- BASED ON 150 PSI INTERNAL PRESSURE.
- M.S. MEANS MILD STEEL ROD A.S.T.M. STANDARD DESIGNATION A-36.
- H.S. MEANS HIGH STRENGTH STEEL ROD A.S.T.M. STANDARD DESIGNATION A-193 GRADE B-7.
- 90° BENDS HEAVY SERIES.
- 22-1/2° BENDS HEAVY SERIES.
- SEE TIE ROD DETAIL DRAWINGS. ALSO, TIE ROD COUPLING DETAILS, CLAMP DETAILS AND SET CLAMP DETAILS.
- LENGTH REFERS TO THE AMOUNT OF PIPE WHICH MUST BE TIED TOGETHER AND IS NOT NECESSARILY THE LENGTH OF THE RODS.
- STAR BOLTS NOT ALLOWED ON PIPE LARGER THAN 16".
- MINIMUM OF 4 RODS REQUIRED ON 16" PIPE IF STAR BOLTS ARE USED.
- TIERS ARE TO BE RODDED ON BRANCH ONLY.



PARKER WATER & SANITATION DISTRICT
LENGTH OF TIED PIPE

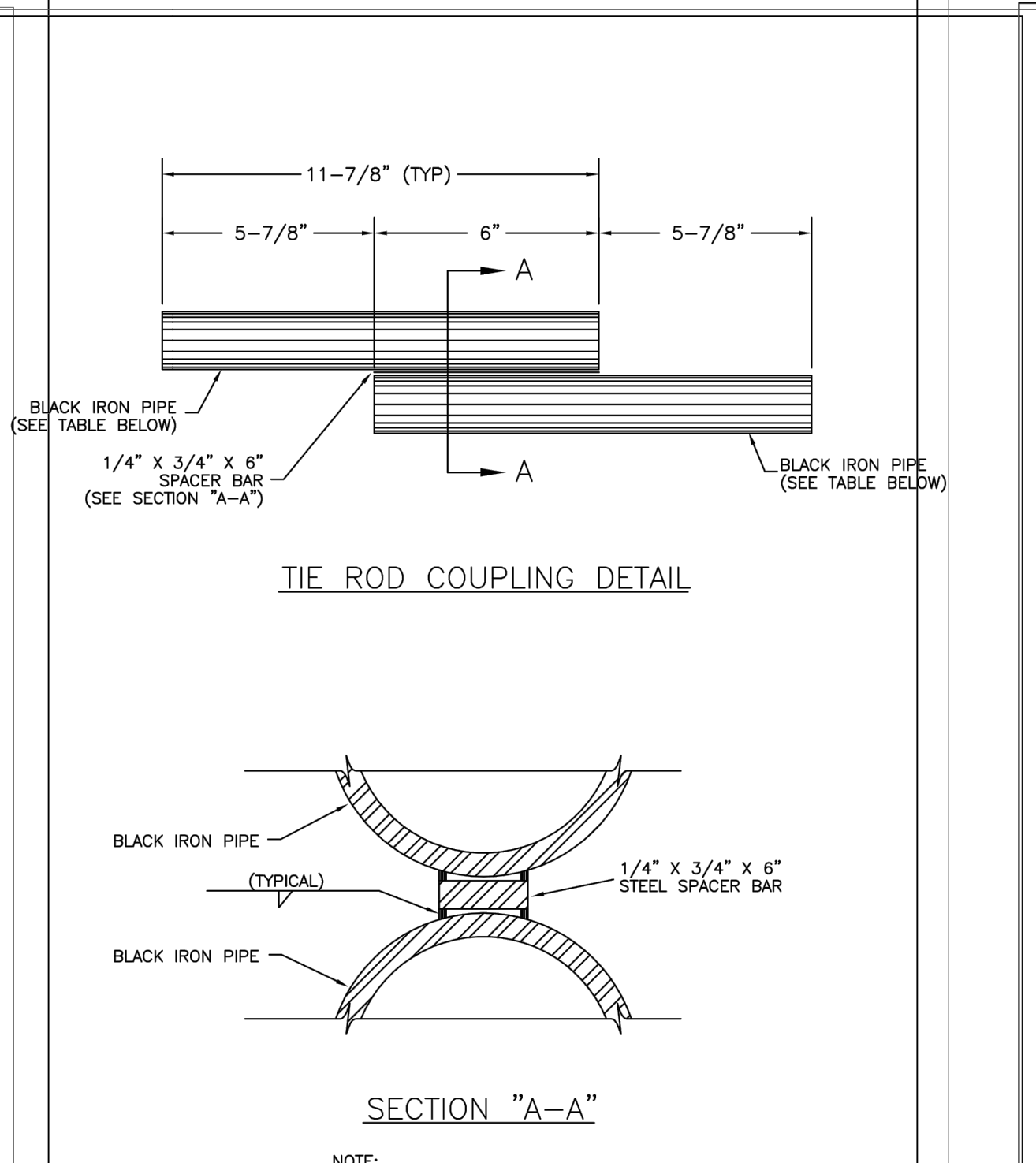
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PARKER WATER & SANITATION DISTRICT
TIE ROD AND WASHER DETAILS

SCALE: NONE DATE: 2/96

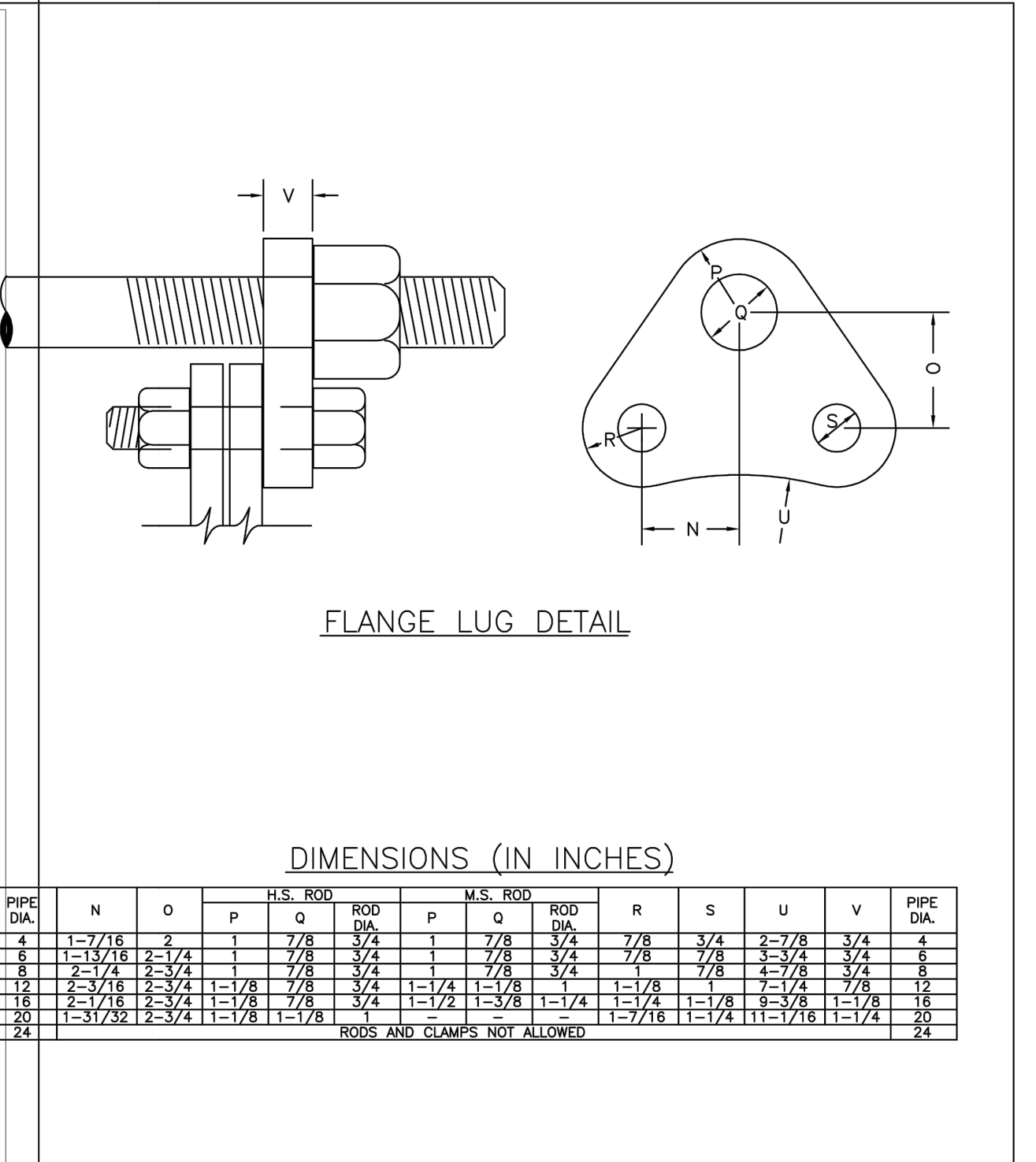
APPROVED: 1/16 10/16
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PARKER WATER & SANITATION DISTRICT
TIE ROD COUPLING

SCALE: NONE DATE: 2/96

APPROVED: 1/16 10/16
PVR
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PARKER WATER & SANITATION DISTRICT
TIE ROD COUPLING

SCALE: NONE DATE: 2/96

APPROVED: 1/16 10/16
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PARKER WATER & SANITATION DISTRICT
FLANGE LUG DETAIL

SCALE: NONE DATE: 2/96

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

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PARKER, CO

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Drawn By: AMP

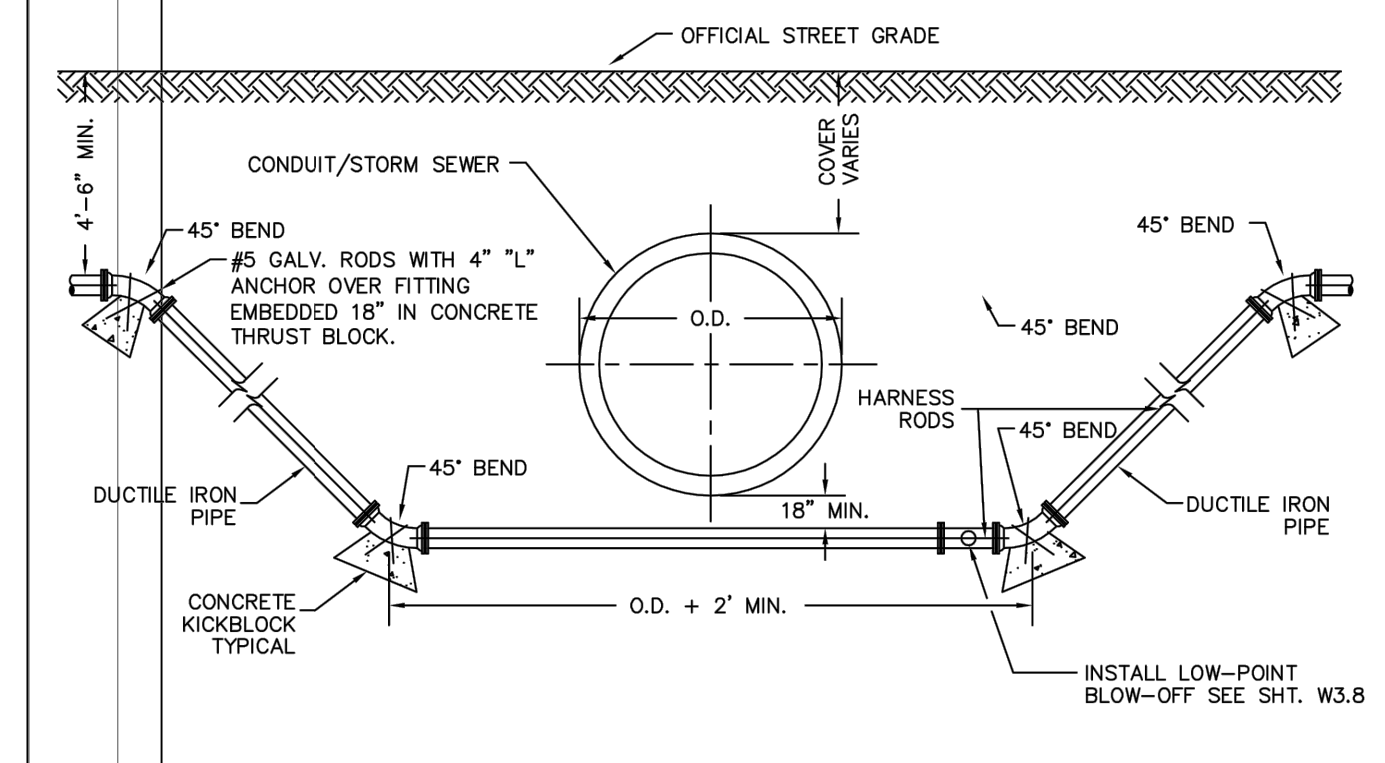
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Issue Date: 8/26/2020

Revision Issue

Rev. #	Description	Date

WATER DETAILS

C1.4



- NOTES:
- LENGTH OF EXTENSION OF PIPE AND HARNESS RODS SHALL BE IN ACCORDANCE WITH THESE ENGINEERING STANDARDS.
 - ALL WATER MAINS TWELVE (12") INCHES OR SMALLER, WHICH CROSS UNDER CONDUITS/STORM SEWER SHALL BE DUCTILE IRON OR PVC PER SPECIFICATIONS.
 - A BORED CROSSING MAY BE REQUIRED BY THE ENGINEER.
 - CONCRETE KICKBLOCKS PER SHEET W3.8

PARKER WATER & SANITATION DISTRICT
CONDUIT OR STORM SEWER CROSSING

SCALE: NONE DATE: 2/96

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

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 tamped 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:

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

Sieve Size	Total Percent Passing by Weight
3/8 inch	100
No. 4	70-100
No. 6	36-93
No. 16	20-50
No. 30	8-65
No. 50	2-30
No. 100	1-10
No. 200	0-3

Squeegee Sand for use with 20-inch or smaller

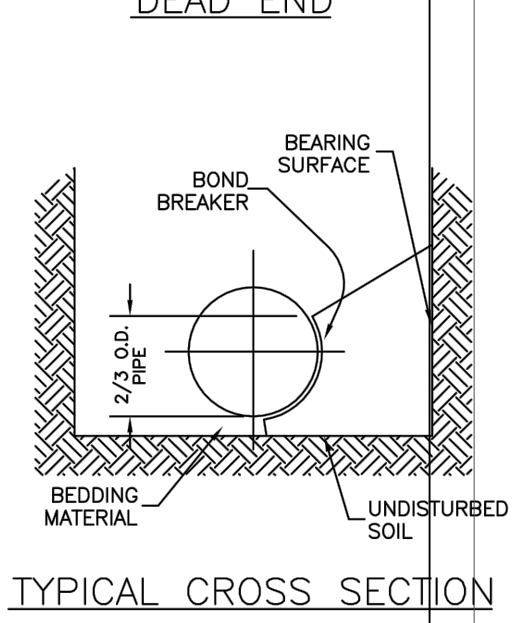
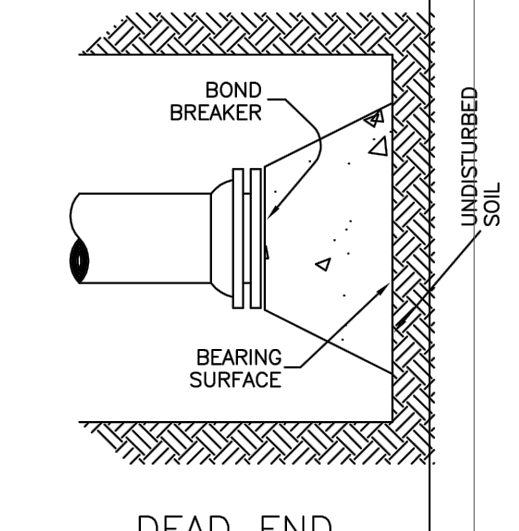
Sieve Size	Total Percent Passing by Weight
3/8 inch	100
No. 200	0-3

If approved by the District, fines form 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 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

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



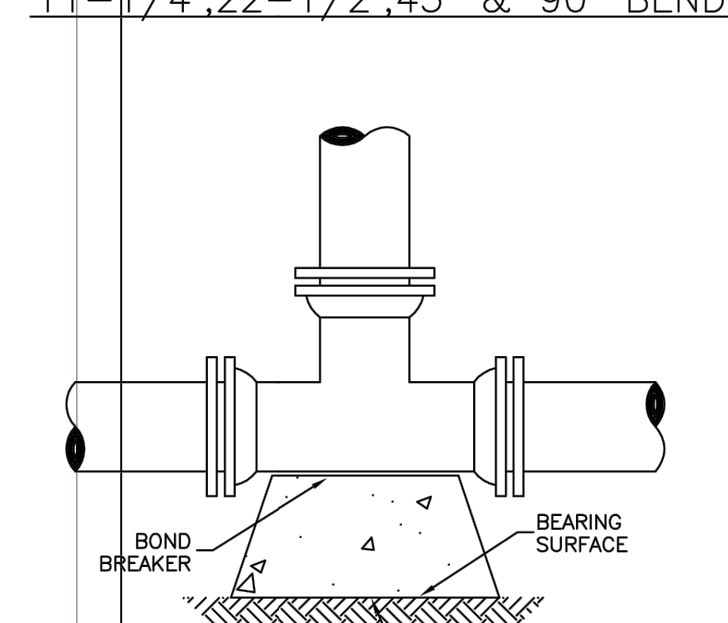
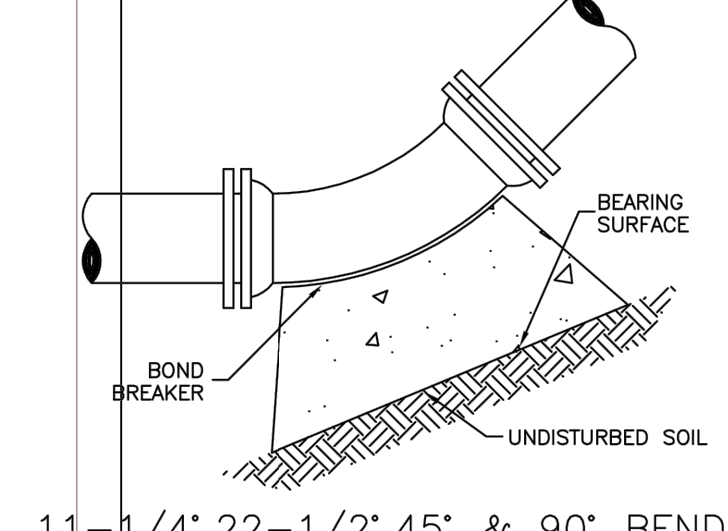
MINIMUM BEARING SURFACE AREA (IN SQUARE FEET)

SIZE OF PIPE	11-1/4" BENDS	22-1/2" BENDS	45" BENDS	90" BENDS	TEE OR DEAD END
4"	1.00	1.00	1.00	1.00	1.50
6"	1.00	1.00	2.00	4.00	3.00
8"	1.00	2.00	4.00	7.50	5.25
12"	2.00	4.25	8.25	15.25	11.00
16"	3.50	6.50	12.50	23.00	16.50
20"	5.00	10.00	19.50	35.50	25.00
24"	6.50	13.00	26.00	47.00	33.00

PARKER WATER & SANITATION DISTRICT
CONCRETE KICKBLOCKS BEARING SURFACES AND INSTALLATION

SCALE: NONE DATE: 2/96

APPROVED: 4/01 1/16
PVR 10/16
DIRECTOR OF ENGINEERING



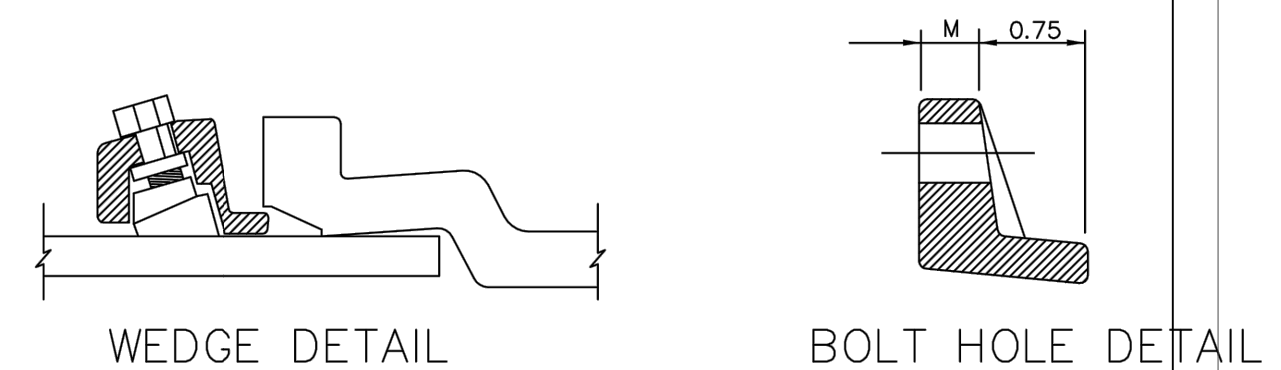
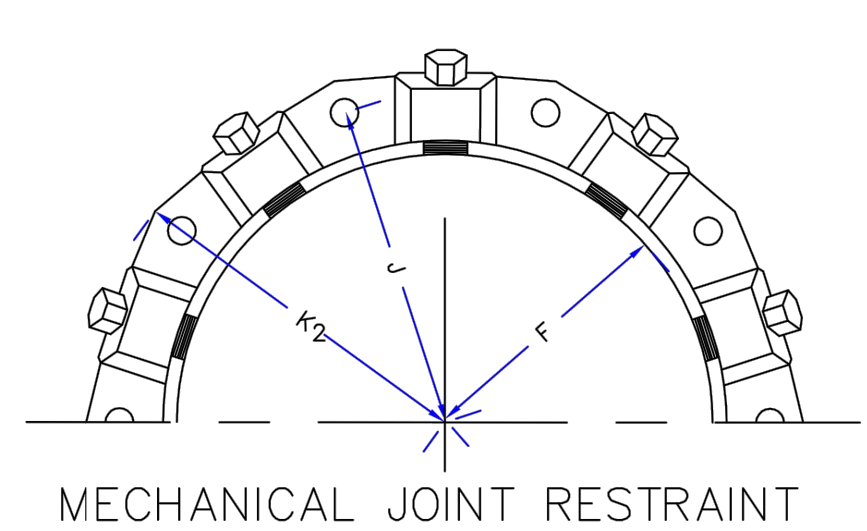
NOTES:

- ALL VALVES, TEES, BENDS AND PLUGS SHALL BE RESTRAINED AND KICKBLOCKED.
- BEARING SURFACES SHOWN IN CHART ARE MINIMUM.
- 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.
- SOIL BEARING CAPACITY = 3,000 LBS./SQ. FT.

PARKER WATER & SANITATION DISTRICT
PIPE BEDDING

SCALE: NONE DATE: 2/96

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

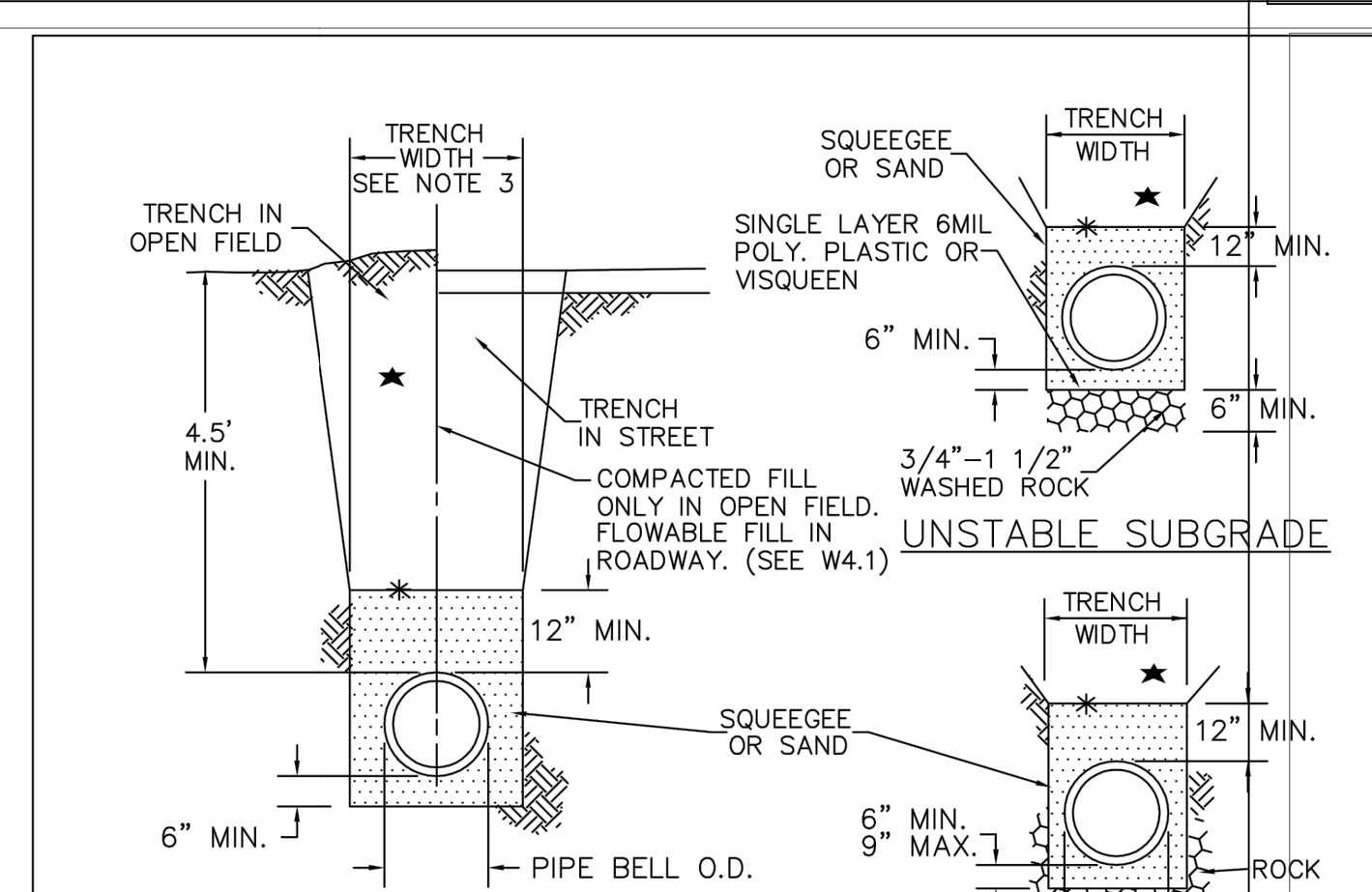


NOMINAL PIPE SIZE	NO. OF BOLTS	NO. OF WEDGES	K2 INCHES	J INCHES	F INCHES	M INCHES
P 4"	2	2				
V 6"	6	3	11.12	9.5	7.00	0.88
V 8"	6	4	13.37	11.75	9.15	1.00
V 10"	8	6	15.62	14.00	11.20	1.00
C 12"	8	8	17.88	16.25	13.30	1.25
C 14"	8	8	17.88	16.25	13.30	1.25
D 6"	4	2				
D 8"	6	3	11.12	9.5	7.00	0.88
D 10"	6	4	13.37	11.75	9.15	1.00
D 12"	8	6	15.62	14.00	11.20	1.00
D 14"	8	8	17.88	16.25	13.30	1.25

PARKER WATER & SANITATION DISTRICT
MECHANICAL JOINT RESTRAINT DETAILS

SCALE: NONE DATE: 2/96

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

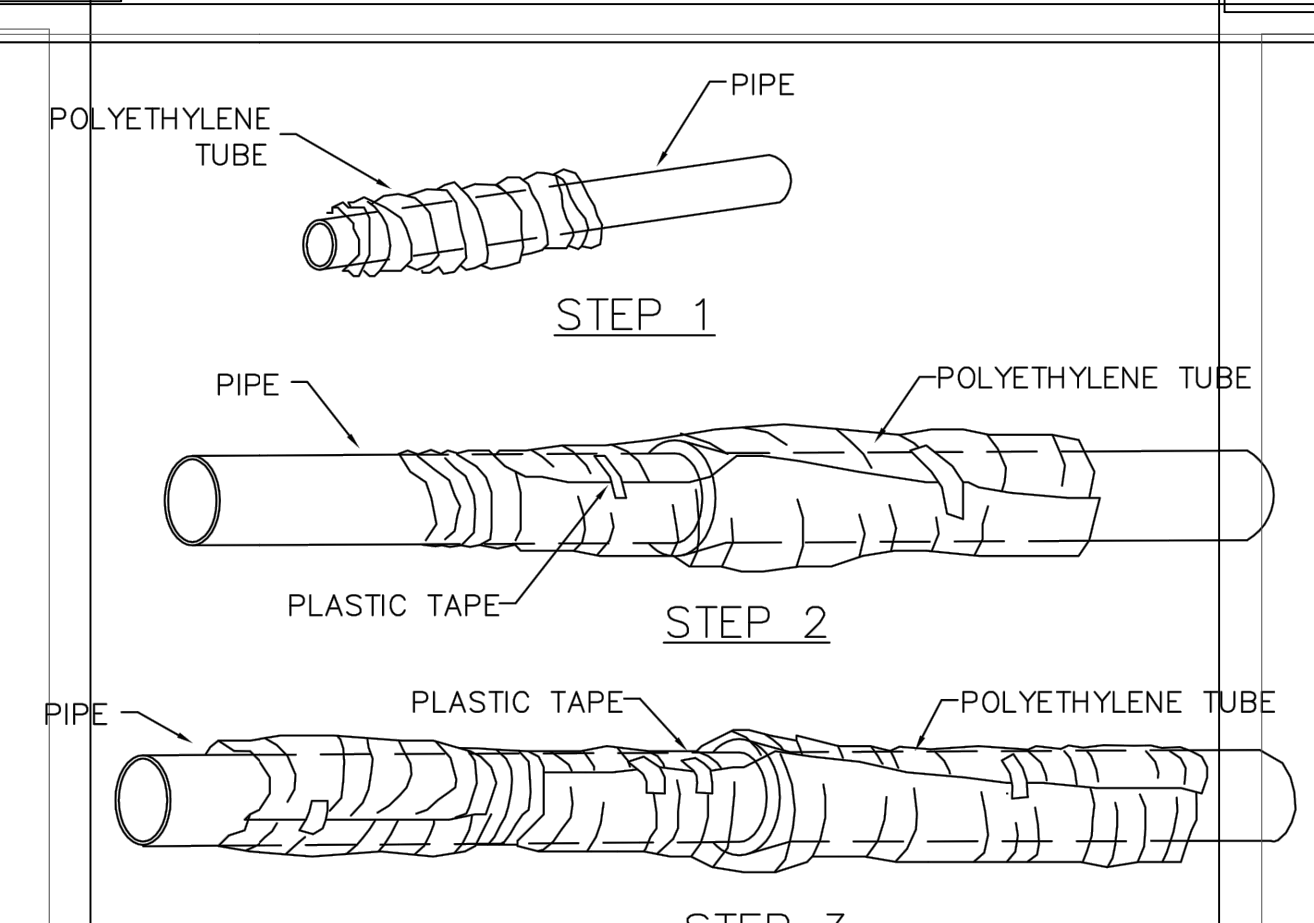


- STANDARD PIPE BEDDING**
- ★ MACHINE COMPACTED TRENCH BACKFILL
 - * LIMIT OF SLOPING OR BENCHING OF TRENCH WALLS
 - UNDISTURBED GROUND
- PIPE BEDDING IN ROCK**
- NOTES:
- MIN. COVER TO BE BELOW FINAL STREET GRADE. CONSTRUCTION OF WATER MAIN MAY NOT START UNTIL FINAL GRADE WITHIN 1 FOOT.
 - TRENCH TO BE BRACED OR SHEETED AS NECESSARY FOR THE PROTECTION OF OTHER UTILITIES AND TO MEET OSHA SAFETY REQUIREMENT.
 - 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

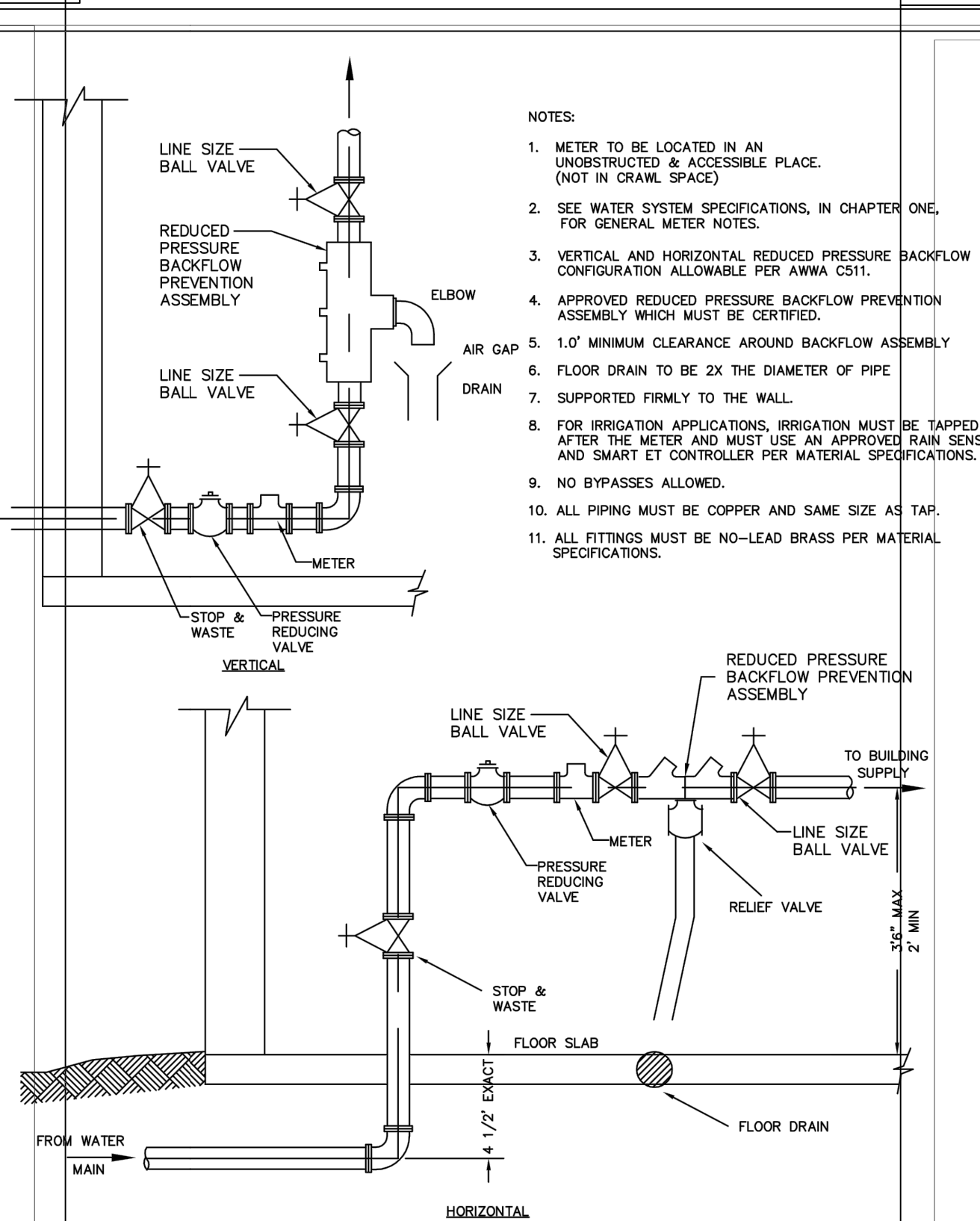


- FIELD INSTALLATION - POLYETHYLENE WRAP**
- STEP 1 - PLACE TUBE OF POLYETHYLENE MATERIAL ON PIPE PRIOR TO LOWERING IT INTO TRENCH.
- STEP 2 - PULL THE TUBE OVER THE LENGTH OF THE PIPE. TAPE TUBE TO PIPE AT JOINT. FOLD MATERIAL AROUND THE ADJACENT SPIGOT END AND WRAP WITH TAPE TO HOLD THE PLASTIC TUBE 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

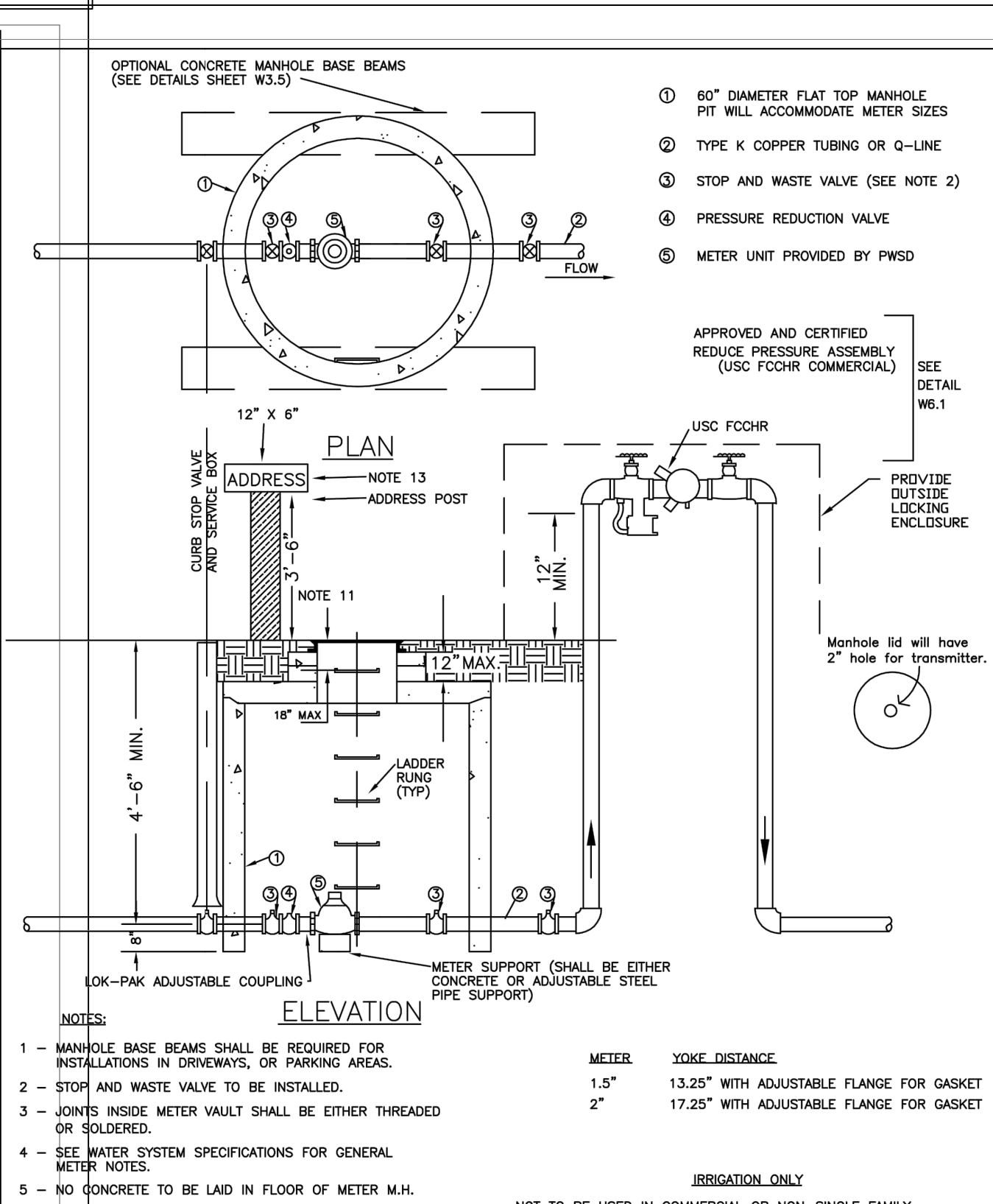
APPROVED: 1/16 10/16
PVR
DIRECTOR OF ENGINEERING



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

SCALE: NONE DATE: 2/96

APPROVED: 8/99 1/16 1/04 06/08
PVR 2/00 10/16 4/01 17/16
DIRECTOR OF ENGINEERING 01/02 06/05



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

SCALE: NONE DATE: 2/96

APPROVED: PVR 1/04 06/08
DIRECTOR OF ENGINEERING 17/16 10/16

**NOT FOR
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Structural Engineer

Mechanical Engineer

Electrical Engineer

New Horizon Academy

**NEW HORIZON ACADEMY -
DOUGLAS XXX FILING, NO. X**
PARKER, CO

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SEH Project NHOC 156217
Checked By DRH
Drawn By AMP

Project Status TOWN REVIEW
Issue Date 8/26/2020

Revision Issue

Rev. # Description Date

WATER DETAILS

C1.5

