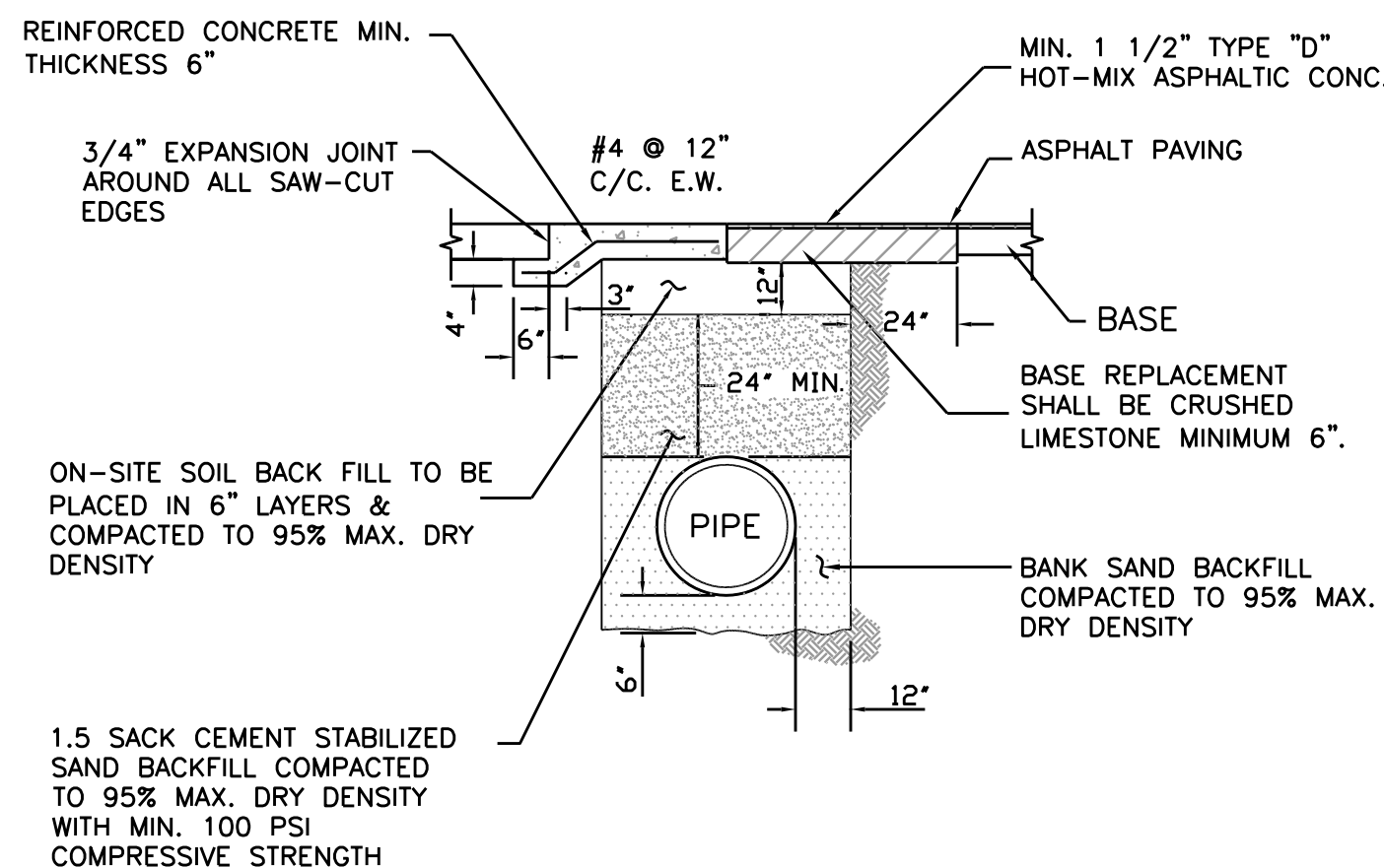
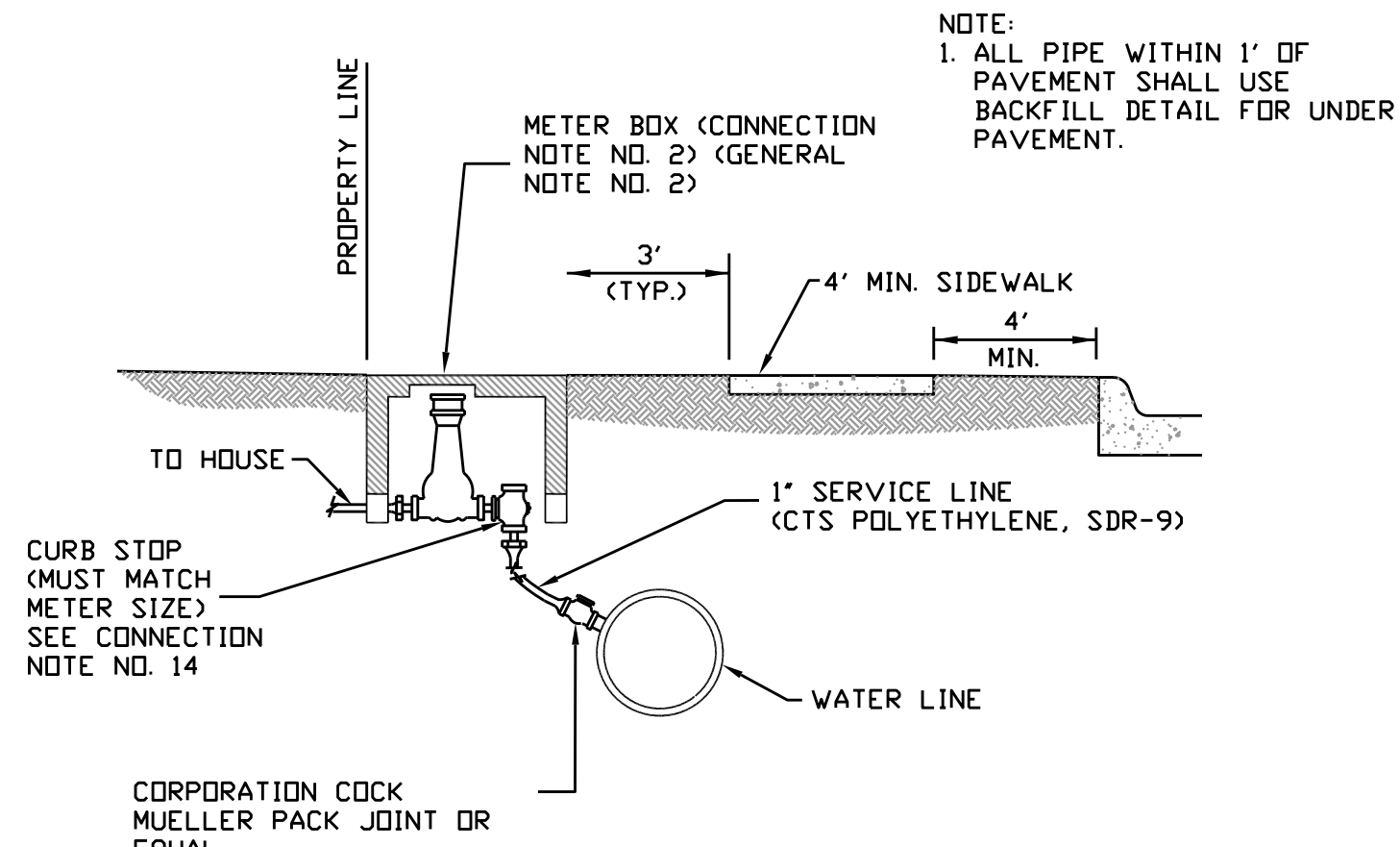


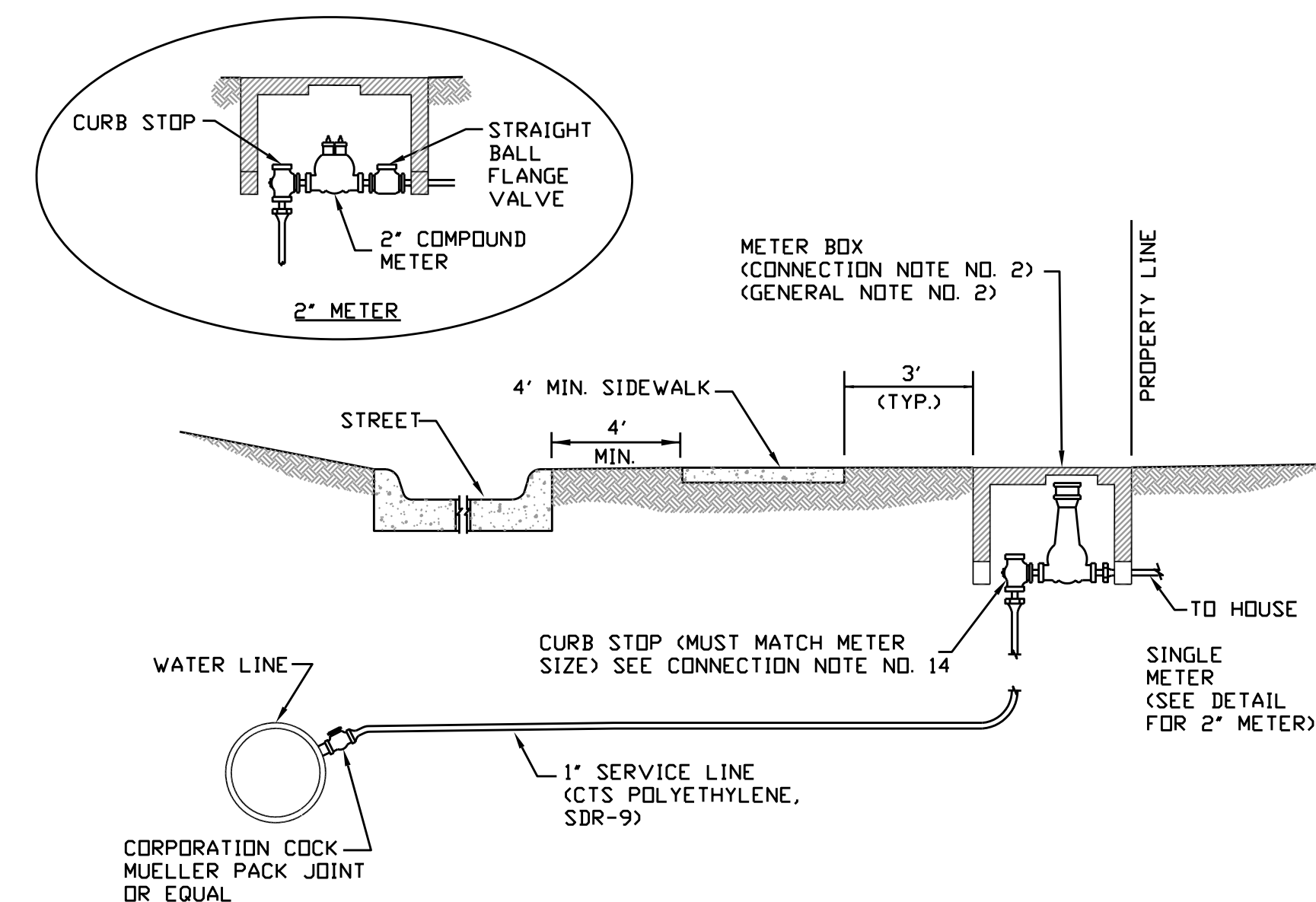
1
1
**TYPICAL TRENCH SECTION
GRADED AREA**



4
1
TYPICAL TRENCH SECTION IN PAVED AREA



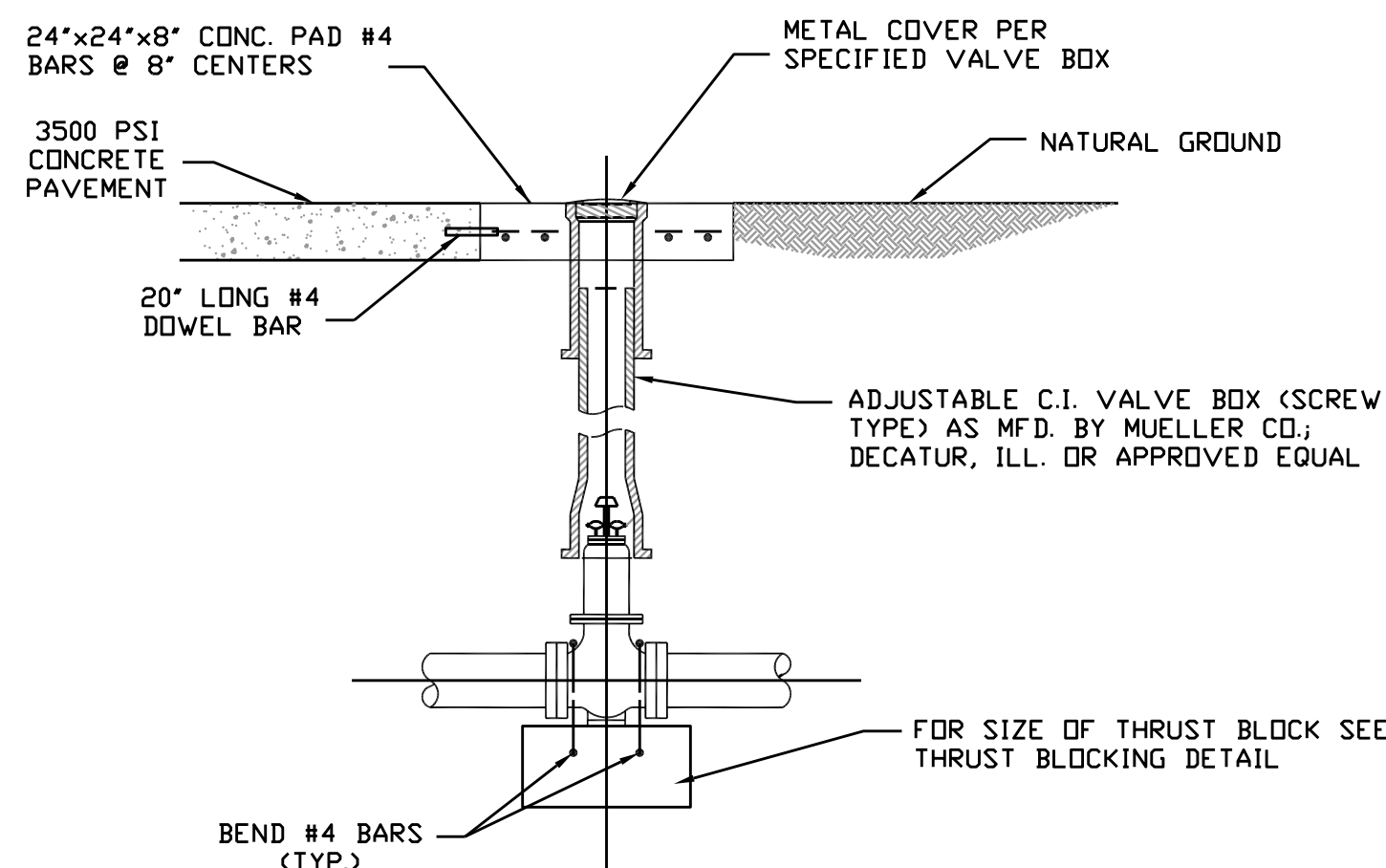
7
1
WHEN SERVICE METER IS NEAR WATER MAIN



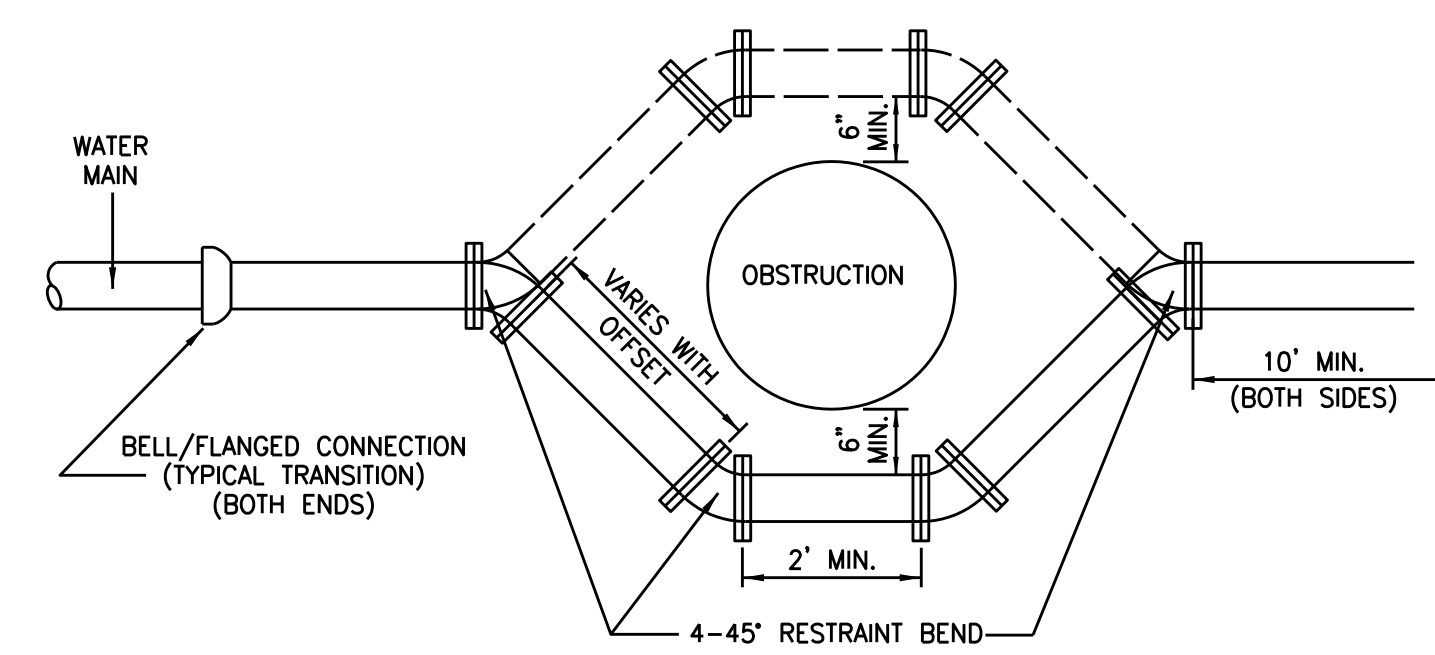
8
1
WHEN SERVICES CROSS PAVED STREET

SERVICE CONNECTION DETAILS

- NOTES:**
1. THE WATER MAIN SHALL HAVE A MINIMUM COVER OF 48" BELOW TOP OF CURB GRADE.
 2. THE WATER SERVICE LINES THAT ARE INSTALLED BEFORE THE COMPLETION OF STREET CONSTRUCTION SHALL BE LAID IN THE SERVICE DITCH AT THE SAME ELEVATION AS THE WATER MAIN OR A MINIMUM COVER OF 48" BELOW TOP OF CURB GRADE. AT THE PROPER LOCATION FOR THE METER BOX, THE METER (CURB) STOP SHALL BE RAISED TO 18" BELOW TOP OF CURB GRADE WITH ENOUGH EXCESS TUBING TO RAISE THE STOP AT A FUTURE DATE TO 6" BELOW TOP OF CURB GRADE.
 3. LOCATOR WIRE SHALL BE PLACED ON ALL MAINS AND SERVICES. (MIN. 14 GA. COPPER)
 4. SINGLE METER SERVICE LINES SHALL BE 1" MIN. I.D., C.T.S. POLYETHYLENE, SDR-9.
 5. CONTRACTOR TO FURNISH AND INSTALL DOUBLE SERVICE METER BOXES AT FINISH GRADE.
 6. FIRE HYDRANT ASSEMBLIES SHALL NORMALLY BE LOCATED THREE FEET BEHIND BACK OF CURB, DEFLECT WATERLINES AS NECESSARY TO MAINTAIN THREE FOOT CLEARANCE. REQUIRED ASSEMBLY SHALL INCLUDE ONE LINE SIZE BY SIX INCH TEE, ONE SIX INCH GATE VALVE AND BOX, ONE FIRE HYDRANT AND SIX INCH LEAD PIPING AND TIE BACKS.
 7. WATER VALVES ON MAIN LINES SHALL BE LOCATED AS CLOSE AS POSSIBLE TO EXTENDED PROPERTY LINE AND SHALL CONFORM TO AWWA C-500, OPEN LEFT, EQUIPPED WITH 2" SQUARE OPERATING NUT.
 8. WATERLINES 4 INCH THROUGH 12 INCH I.D. SHALL COMPLY WITH THE REQUIREMENTS OF AWWA STANDARD C-900 CLASS 150, DR-18 WITH CAST IRON OUTSIDE DIAMETER.
 9. ALL CONCRETE THRUST BLOCKING SHALL BE PLACED TO FORM A SOLID CONNECTION BETWEEN FITTINGS, VALVES, AND FIRE HYDRANTS AND UNDISTURBED EARTH. CONCRETE FOR THRUST BLOCKING SHALL HAVE A MINIMUM OF 2500 P.S.I. COMPRESSIVE STRENGTH AT 28 DAYS.
 10. DUCTILE IRON COMPACT FITTINGS SHALL CONFORM TO AWWA C-153 AND END JOINTS OF FITTINGS AND MAIN LINE VALVES SHALL CONFORM TO AWWA C-153 FOR RUBBER GASKETED JOINTS. GRAY IRON AND DUCTILE IRON FITTINGS SHALL BE CEMENT LINED OR EPOXY COATED.
 11. ALL FIRE HYDRANTS AND VALVE BOXES ARE TO BE ADJUSTED TO FINISH GRADE AFTER PAVING IS COMPLETE.
 12. INSTALL CONCRETE BLOCK BENEATH FIRE HYDRANTS BEFORE PLACING CONCRETE THRUST BLOCKING TO INSURE THAT FIRE HYDRANTS ARE INSTALLED LEVEL.
 13. CONTRACTOR SHALL NOTIFY CITY ENGINEER 48 HOURS BEFORE START OF CONSTRUCTION.
 14. RIGHT ANGLE CURB STOPS MADE BY FORD, OR APPROVED EQUAL, SHALL BE USED. (SINGLE JOINT: FORD BA43-342W OR EQUIVALENT, DOUBLE SERVICE: FORD UAVB43-42W OR EQUIVALENT). ONLY PACK JOINT CURB STOPS ARE PERMITTED.
 15. WATER MANIFOLDS ARE NOT PERMITTED (EXCLUDING 1 INCH WATER SERVICES WITH 1 INCH U-BRANCH ASSEMBLY).
 16. WATER TAPS SHALL HAVE A MINIMUM OF 24 INCH SEPARATION BETWEEN TAPS ON THE MAIN WATER LINE.



2
1
VALVE BOX

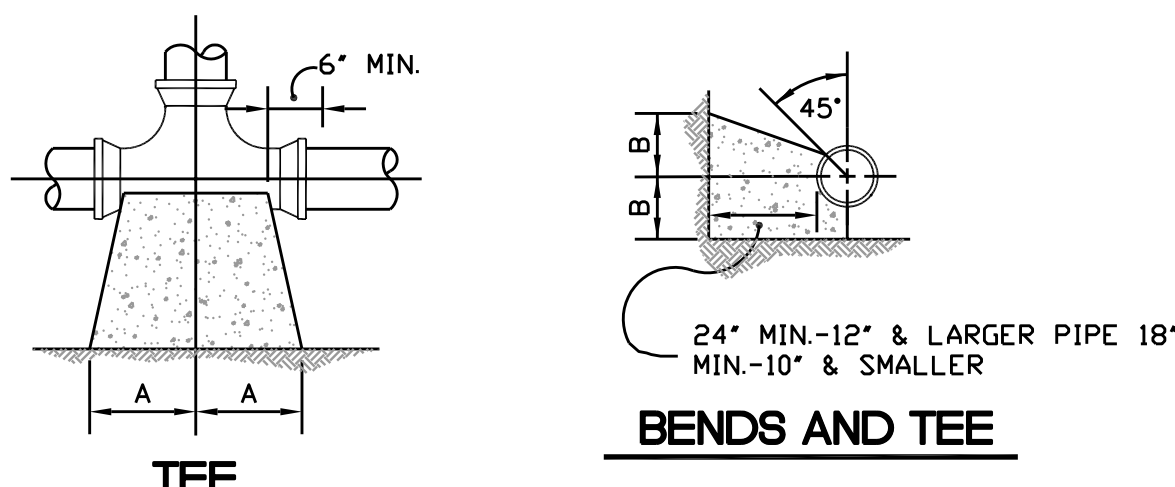


FOR A LINE TO PASS OVER AN OBSTRUCTION RATHER THAN UNDER, IT MUST HAVE ADEQUATE COVER AND BE APPROVED BY THE ENGINEERING DEPARTMENT.

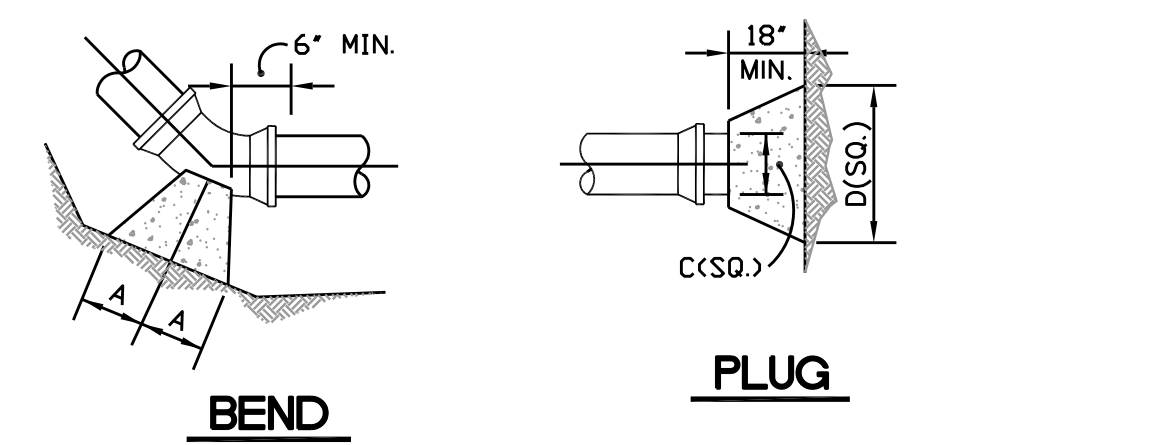
MIN. PIPE WALL THICKNESS	
4"	- 0.250"
6"	- 0.280"
8"	- 0.322"
12"	- 0.375"
AND LARGER	- 0.375"

- NOTES:**
1. PIPE MATERIAL SHALL BE AWWA C900 PVC, DR-14, 200 PSI WITH INTEGRAL PVC RESTRAINED JOINTS.
 2. OFFSET ASSEMBLY MUST PASS OVER THE OBSTRUCTION AS LONG AS THE MINIMUM CLEARANCE IS MAINTAINED. SPECIFIC APPROVAL FROM THE UTILITIES DEPARTMENT MUST BE GRANTED FOR THE OFFSET TO PASS UNDER THE OBSTRUCTION.
 3. MATERIAL AND COATINGS SHALL BE IN ACCORDANCE WITH WATER MAIN STANDARD SPECIFICATIONS.
 4. RESTRAIN EXISTING PIPING BEYOND OFFSET SECTION AS REQUIRED TO PREVENT MOVEMENT.
 5. ALL PVC PRODUCTS MUST BE LISTED ON CITY OF PEARLAND'S APPROVED PRODUCTS LIST.

5
1
OFFSET ASSEMBLY



6
1
THRUST BLOCKING DETAIL



6
1
THRUST BLOCKING DETAIL

NOTE: DIMENSION WITH ASTERISK (*) REQUIRES STRUCTURAL DESIGN.

SIZE	90° BEND		45° BEND		22½° BEND		TEES		PLUGS	
	A	B	A	B	A	B	A	B	C	D
4"	16"	10"	9"	10"	6"	8"	10"	12"	10"	21"
6"	22"	13"	12"	13"	8"	10"	13"	16"	12"	29"
8"	26"	17"	14"	17"	10"	13"	16"	20"	14"	36"
10"	29"	21"	16"	21"	11"	16"	18"	24"	16"	41"
12"	35"	24"	19"	24"	12"	20"	22"	27"	18"	48"
14"	38"	27"	21"	27"	12"	24"	24"	30"	20"	54"
16"	42"	30"	24"	30"	12"	24"	24"	30"	24"	60"
18"	50"	40"	30"	40"	18"	30"	30"	40"	30"	*78"
24"	60"	48"	36"	48"	20"	36"	36"	48"	36"	*96"

- NOTE:**
1. ALL WATER METER BOXES SHALL BE MODEL NO. DFW 1600 (FOR 1/2-2") OR DFW 1200 (FOR 5/8-1") OR APPROVED EQUAL. (BOX NEEDS TO BE COMPATIBLE TO NEPTUNE PRO-READ.) LOCKING LIDS WILL NOT BE ACCEPTED.
 2. PROVIDE "UNI-FLANGE" OR APPROVED EQUAL PIPE RESTRAINT AND CASING SYSTEM ON UNDERGROUND PRESSURE PIPE SYSTEMS.
 3. ALL WATER TAPS TO BE PLACED IN LINE WITH PROPERTY CORNER OR PLACED HALF WAY BETWEEN THE FRONT LOT CORNERS, OR AT PC OF CURB RETURN IN MULTI LOT SUBDIVISIONS.
 4. IF LOTS ARE LESS THAN 60' WIDE, TAPS ARE TO BE PLACED AT PROPERTY CORNERS.

PLEASE READ THE APPLICABLE COP SPECIFICATION SECTIONS FOR DETAILED INFORMATION.
PLEASE REFERENCE THE COP APPROVED PRODUCT LIST FOR APPLICABLE PRODUCT INFORMATION.

THIS DETAIL SHEET HAS BEEN PREPARED FOR USE ON STANDARD CITY OF PEARLAND PROJECTS. AN ENGINEER WHO INCORPORATES THE DETAILS ON THIS SHEET BECOMES RESPONSIBLE FOR ITS USE IN THE END PRODUCT IN ACCORDANCE WITH RULE 137.33 (b) AND (c) OF THE TEXAS STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS.



City of Pearland, Texas

STANDARD DETAILS

WATER

Job No.:	Scale:	SHEET
Date: JAN 2020	HORIZ: 1" = NONE	1
Dwn By: PRP	VERT: 1" = NONE	OF 2
Chkd By: RS	CAD FILE:	
	CDP-WTR1	