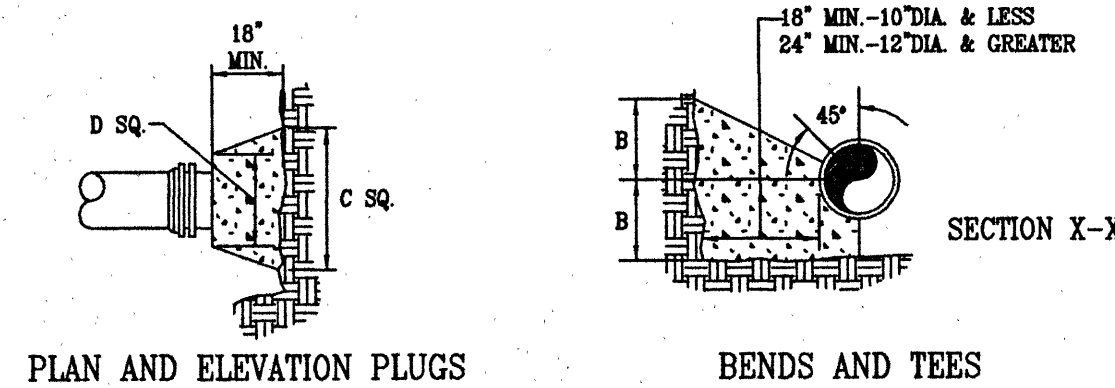
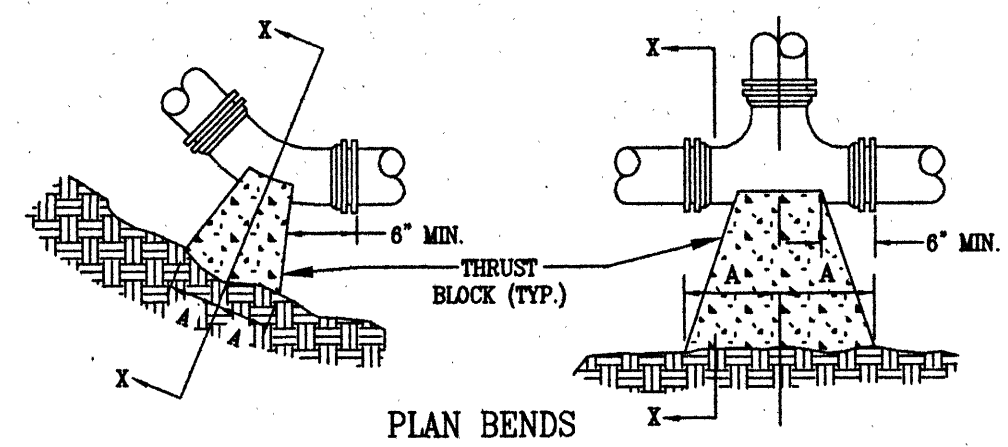
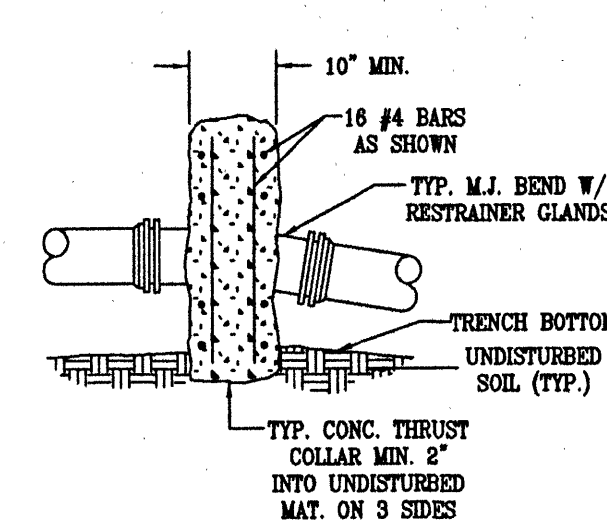




PIPE SIZE	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND	TEE	PLUG
4"	8"	8"	8"	8"	8"	8"
6"	12"	12"	12"	12"	12"	12"
8"	16"	16"	16"	16"	16"	16"
10"	20"	20"	20"	20"	20"	20"
12"	24"	24"	24"	24"	24"	24"
14"	28"	28"	28"	28"	28"	28"
16"	32"	32"	32"	32"	32"	32"
18"	36"	36"	36"	36"	36"	36"
20"	40"	40"	40"	40"	40"	40"
22"	44"	44"	44"	44"	44"	44"
24"	48"	48"	48"	48"	48"	48"
26"	52"	52"	52"	52"	52"	52"
28"	56"	56"	56"	56"	56"	56"
30"	60"	60"	60"	60"	60"	60"

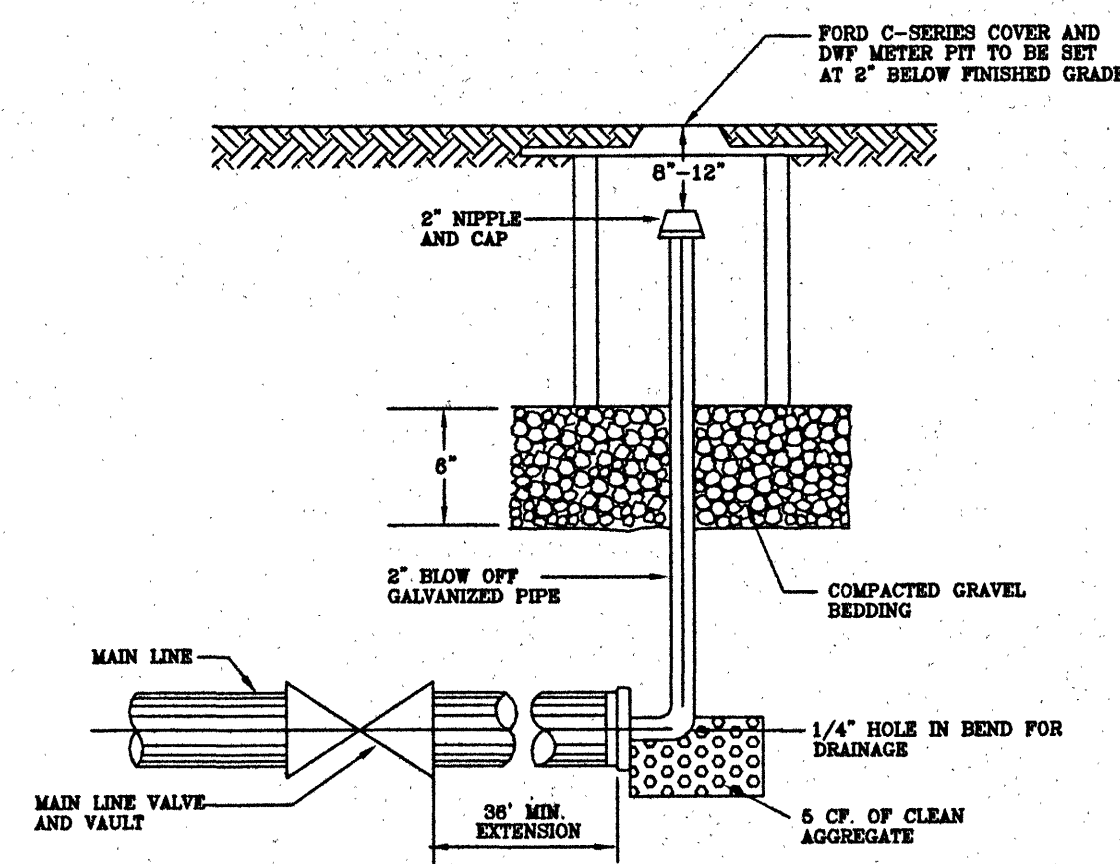
THRUST BLOCK CONSTRUCTION
NO SCALE



SECTION OF VERTICAL BEND

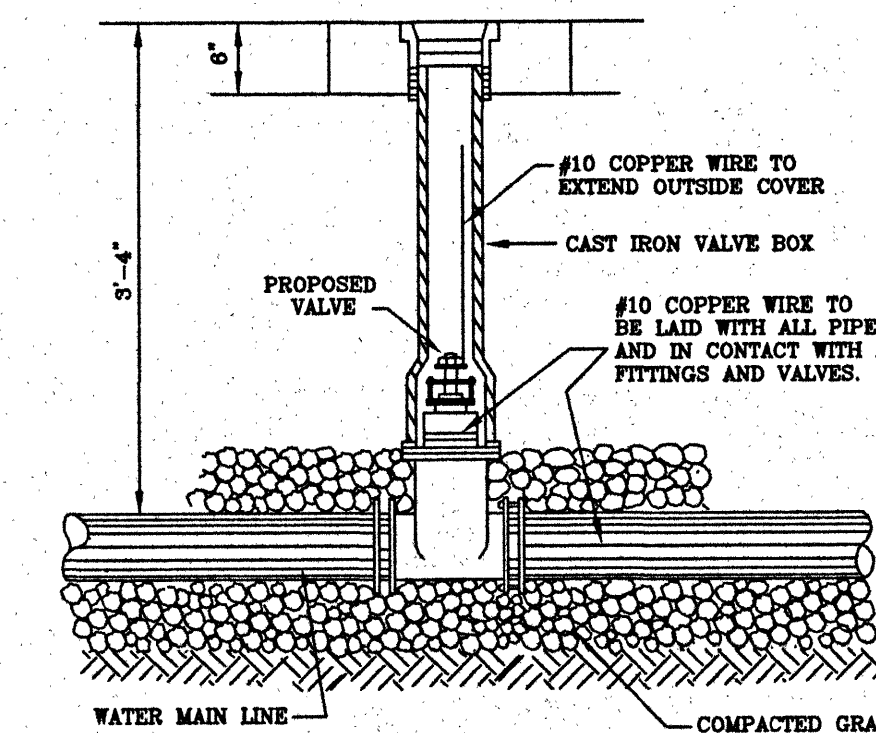
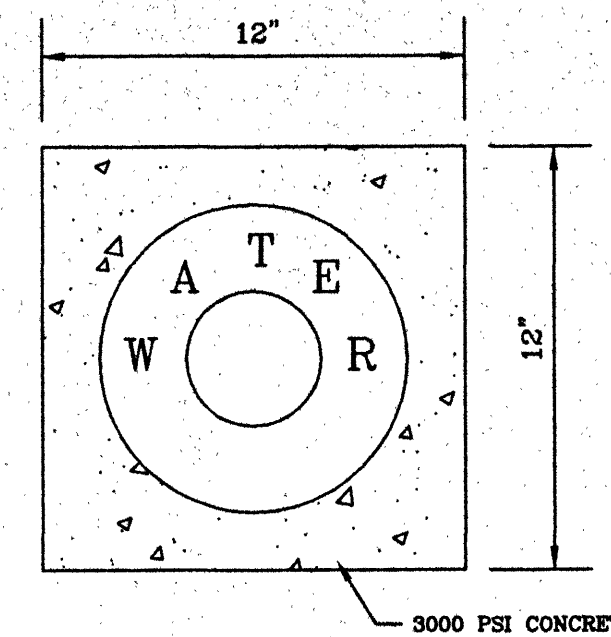
- NOTES:
- FOR VERT. BEND DOWN IN EXCESS OF 11 1/4" BEND, ANCHORAGE SHALL BE DESIGNED BY ENGINEER.
 - FOR VERT. BEND UPWARD, BLOCKING TO BE SIMILAR TO THAT FOR HORIZ. BEND.
 - GLANDS & BOLTS SHALL BE PROTECTED FROM CONC. BY PLASTIC SHEETING WHEN POURING THRUST BLOCKS.
 - ALL THRUST BLOCK & SUPPORT CONC. SHALL BE 3000 PSI READY MIX CONC.
 - THRUST BLOCKS WITH "B" DIMENSION GREATER THAN 30" SHALL HAVE THE RESTRAINED PIPE INSTALLED WITH A MINIMUM OF 4' OF COVER.

PRESSURE = 200 psi
BEARING = 2000 psf
FACTOR OF SAFETY = 1.5



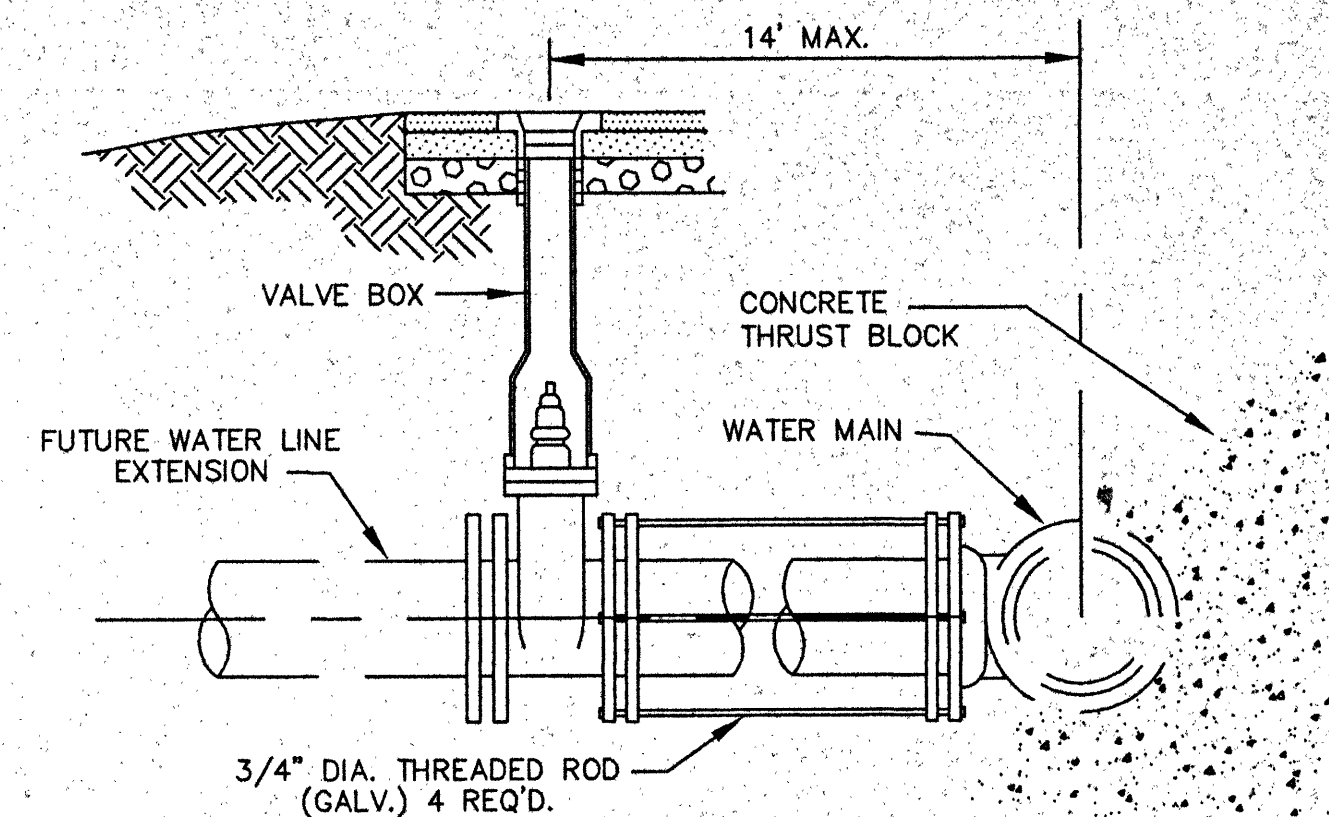
- NOTES:
- ALL PLUMBING AND FITTINGS SHALL BE BRASS. RED WITH COLOR CODED CAPS PER FLOW RATE.
 - BLOW OFF ASSEMBLIES LOCATED IN THE SHOULDERS OR EMBANKMENT WITHIN RIGHT-OF-WAY SHALL BE INSTALLED 2' BELOW FINISH GRADE. OTHERWISE THEY SHALL BE SET AT FINISHED GRADE.

BLOW OFF ASSEMBLY FOR MAIN LINE
TEMPORARY TERMINATION



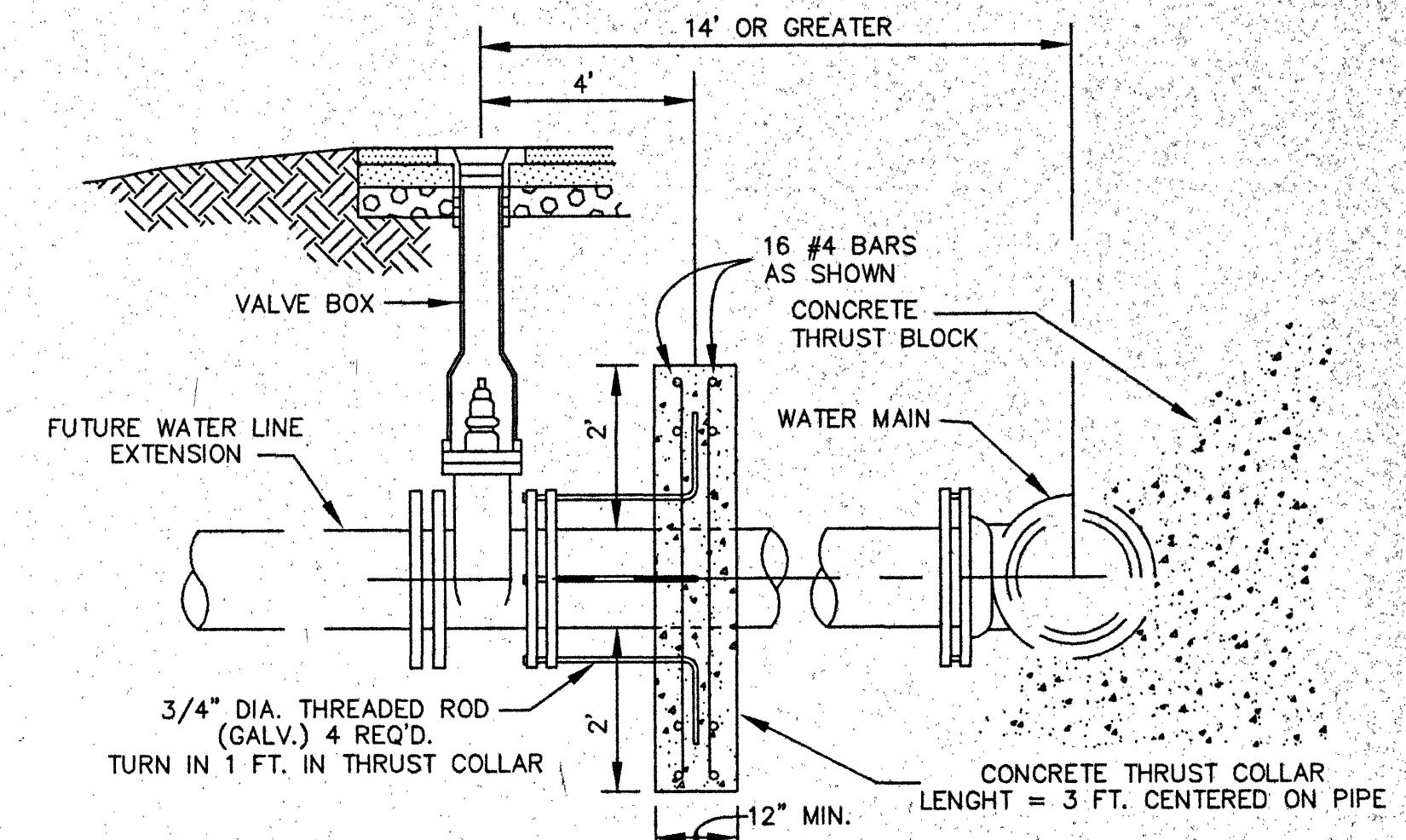
- NOTES:
- VALVE BOX COVERS SHALL BE INSTALLED 2" BELOW FINISHED GRADE WHEN LOCATED IN THE SHOULDERS OR EMBANKMENT WITHIN RIGHT-OF-WAY. OTHERWISE VALVE BOX COVERS SHALL BE SET AT FINISHED GRADE.

STANDARD VALVE
BOX INSTALLATION



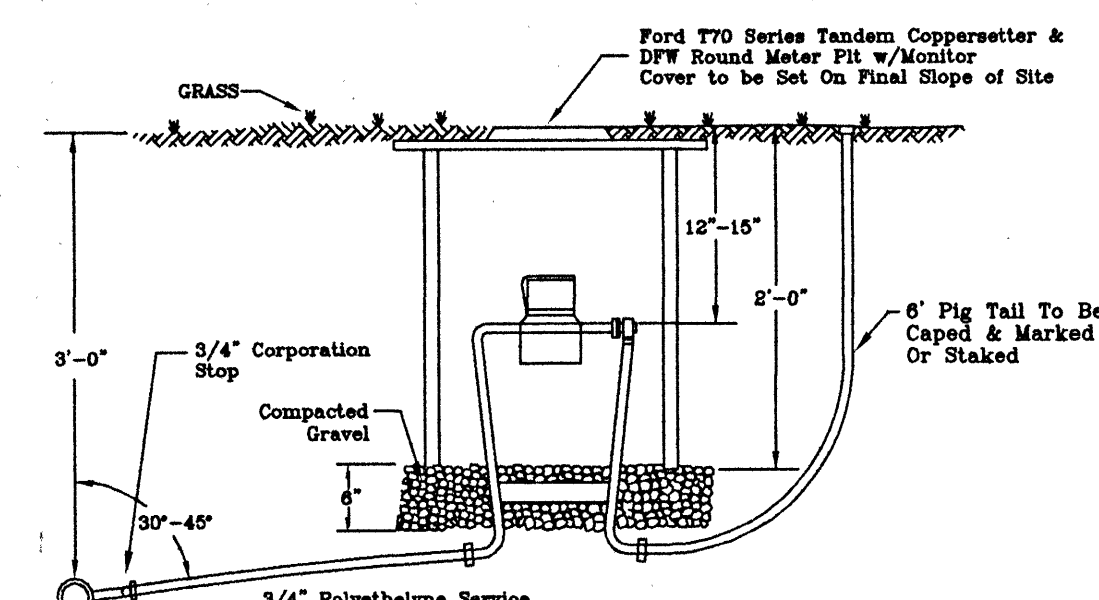
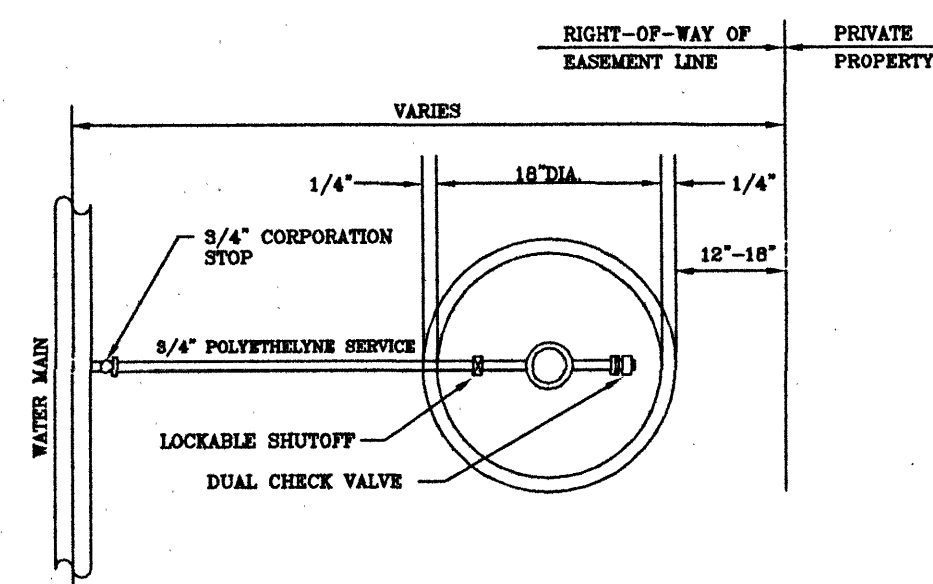
- NOTES:
- VALVE BOX COVERS SHALL BE INSTALLED 2" BELOW FINISHED GRADE WHEN LOCATED IN THE SHOULDERS OR EMBANKMENT WITHIN RIGHT-OF-WAY. OTHERWISE VALVE BOX COVERS SHALL BE SET AT FINISHED GRADE.

WATER LINE VALVE INSTALLATION
(VALVE 14' OR LESS FROM WATER MAIN)



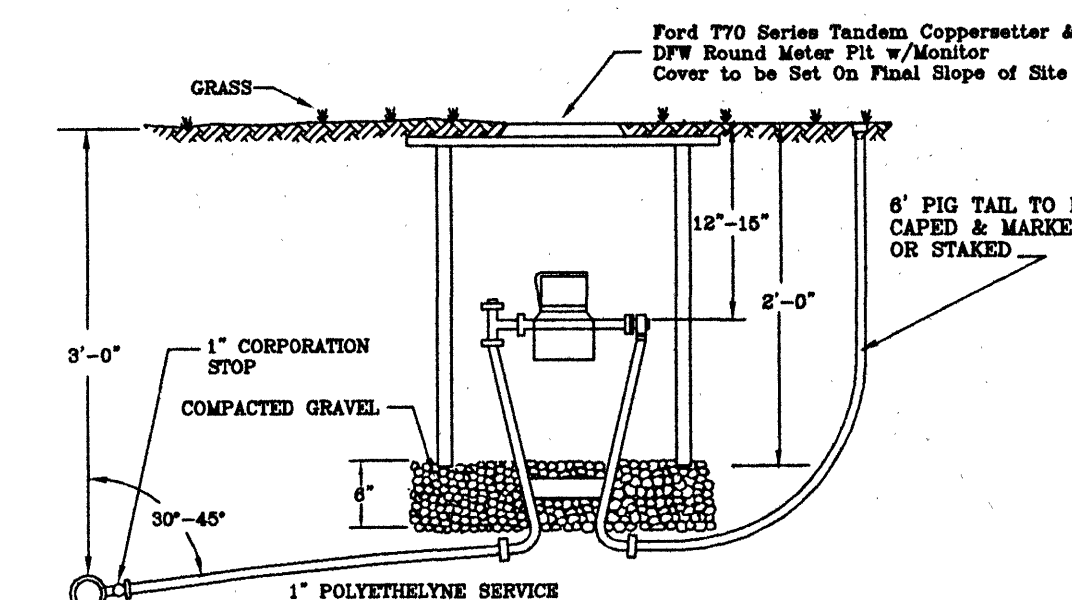
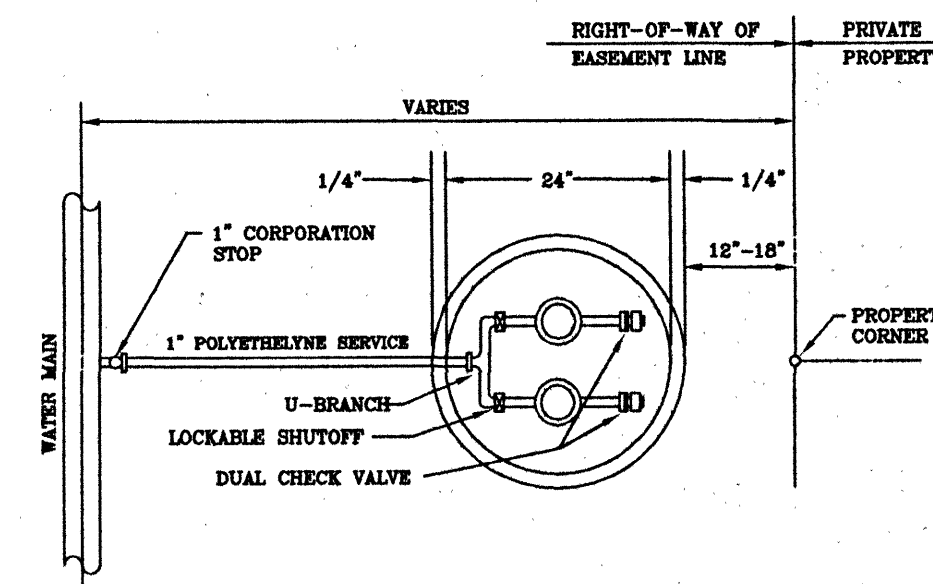
- NOTES:
- VALVE BOX COVERS SHALL BE INSTALLED 2" BELOW FINISHED GRADE WHEN LOCATED IN THE SHOULDERS OR EMBANKMENT WITHIN RIGHT-OF-WAY. OTHERWISE VALVE BOX COVERS SHALL BE SET AT FINISHED GRADE.

WATER LINE VALVE INSTALLATION
(VALVE 14' OR GREATER FROM WATER MAIN)



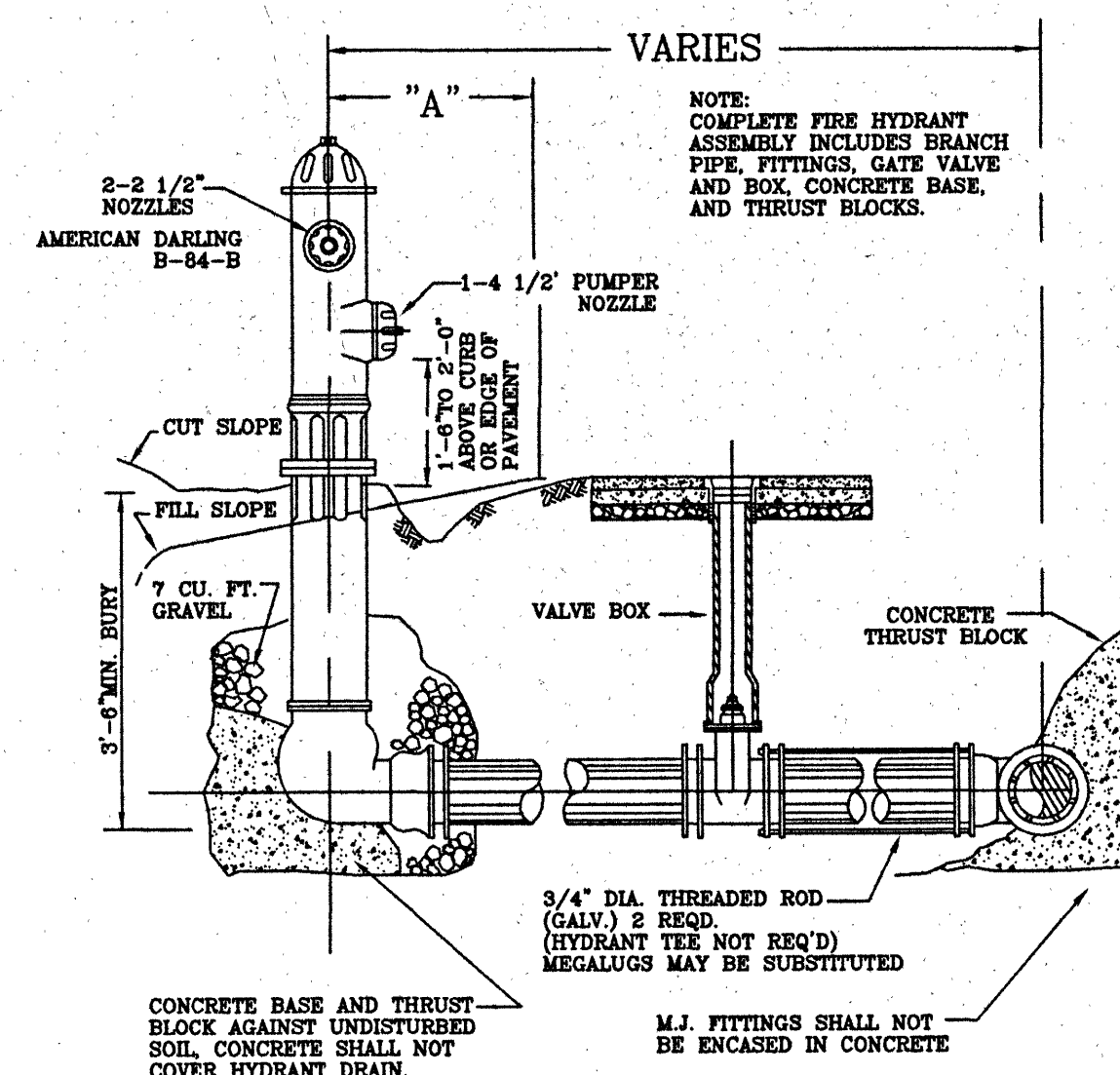
- NOTES:
- Ford meter setters must be used by contractor.
 - Meters must not be installed in bottom of ditch.
 - Meters provided and installed by Botetourt County Utility Department.
 - Meters will be Sensus SRI Water Meters.
 - Saddles must be used with all plastic & Class 50 Ductile Iron pipe.

SINGLE RESIDENTIAL
WATER SERVICE



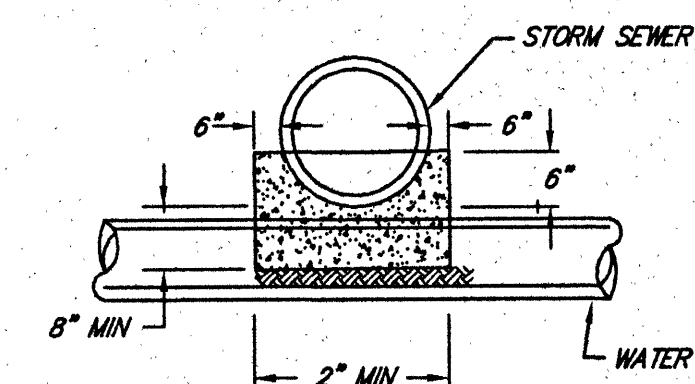
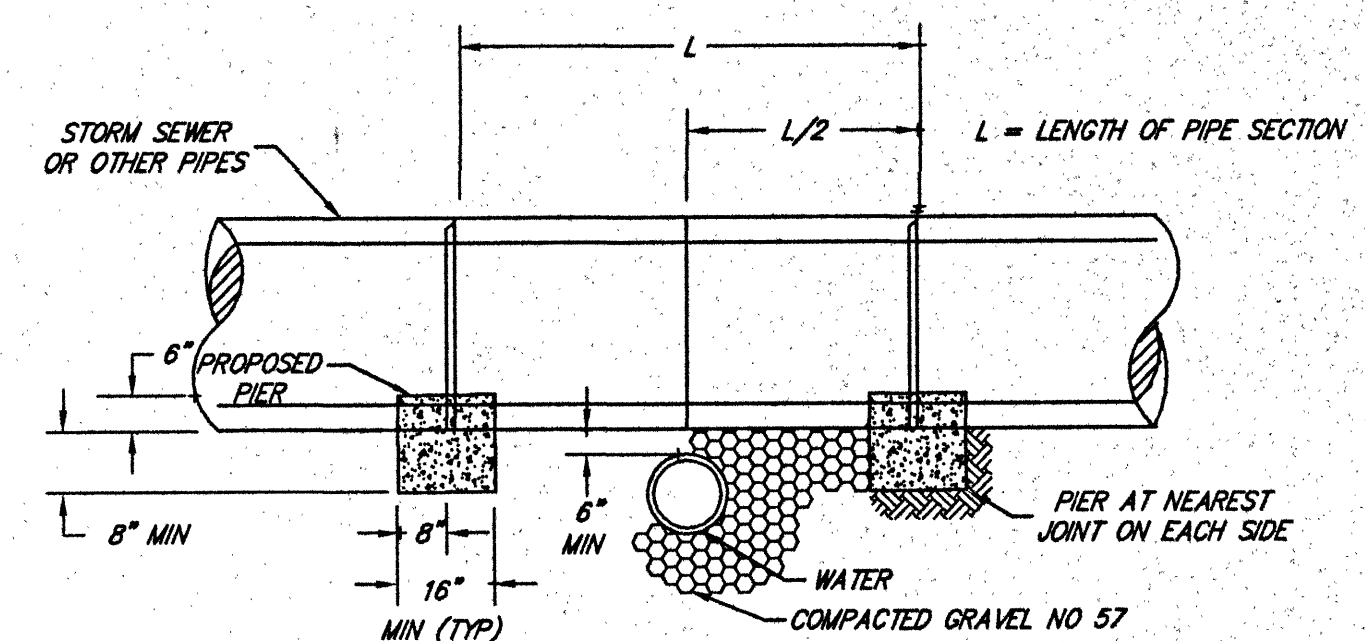
- NOTES:
- Ford meter setters must be used by contractor.
 - Meters must not be installed in bottom of ditch.
 - Meters provided and installed by Botetourt County Utility Department.
 - Meters will be Sensus SRI Water Meters.
 - Saddles must be used with all plastic & Class 50 Ductile Iron pipe.

DOUBLE RESIDENTIAL
WATER SERVICE



- NOTES:
- MAIN BODY OF HYDRANT MUST BE PAINTED RED WITH COLOR CODED CAPS PER FLOW RATE.
 - DISTANCE "A" WITH CURB AND GUTTER. 2" MIN., 4" MAX. FROM BACK OF CURB.
 - DISTANCE "A" WITHOUT CURB AND GUTTER.
 - AREA AROUND HYDRANT AT A RADIUS OF 4' TO BE APPROXIMATELY LEVEL AND UNOBSTRUCTED FOR ROAD CONSTRUCTION.

FIRE HYDRANT ASSEMBLY



- NOTE:
- PIER REQUIRED WHEN STORM DRAIN OR OTHER PIPES CROSSES OVER THE OTHER UTILITY WITH A VERTICAL CLEARANCE OF LESS THAN 18".
 - PIER TO BE BUILT ON UNDISTURBED EARTH.
 - CONCRETE TO BE READY MIX, CLASS A3.

CONCRETE PIER

NO.	DATE	REVISIONS	DESCRIPTION
1			
2			
3			
4			
5			