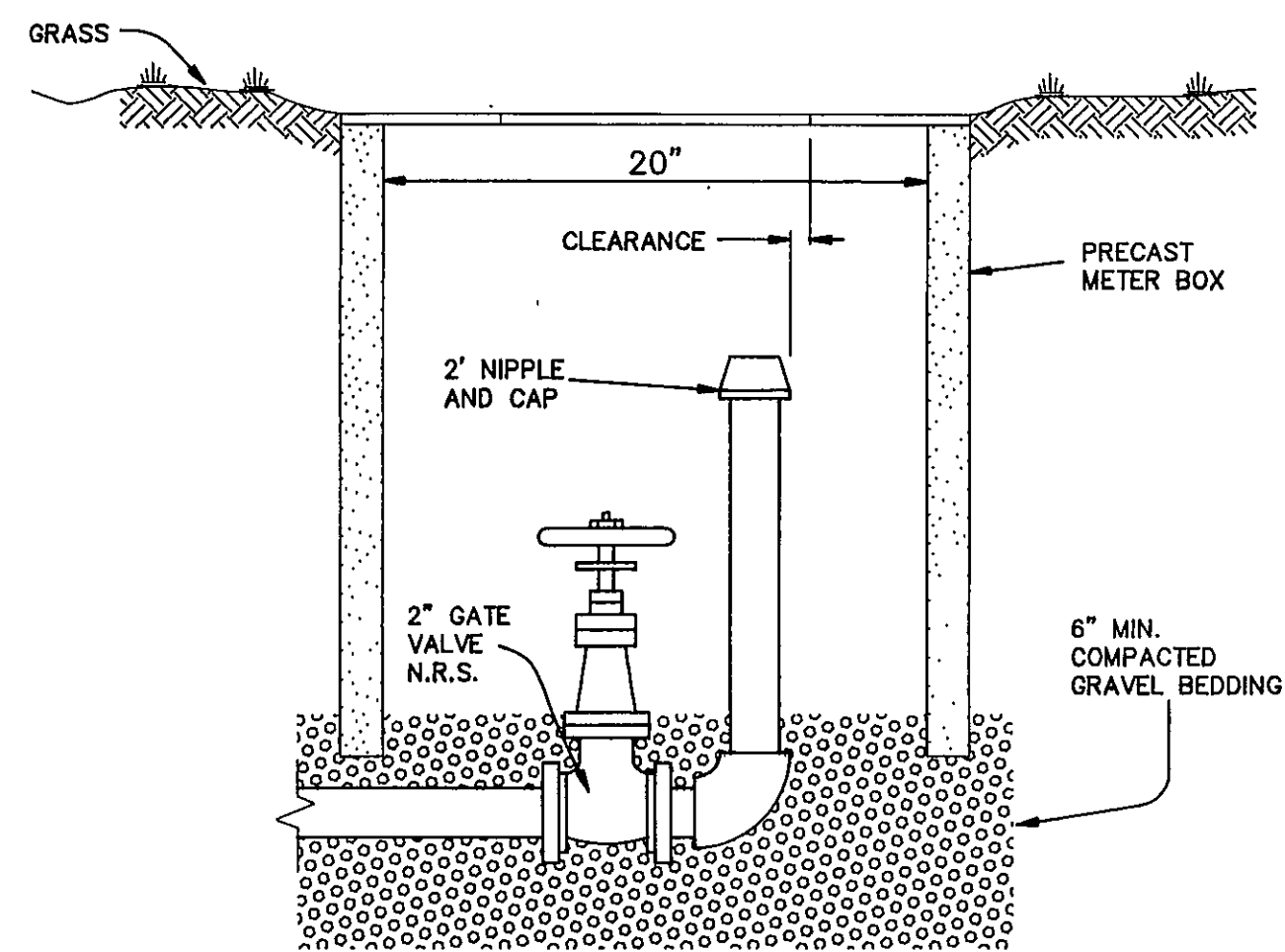
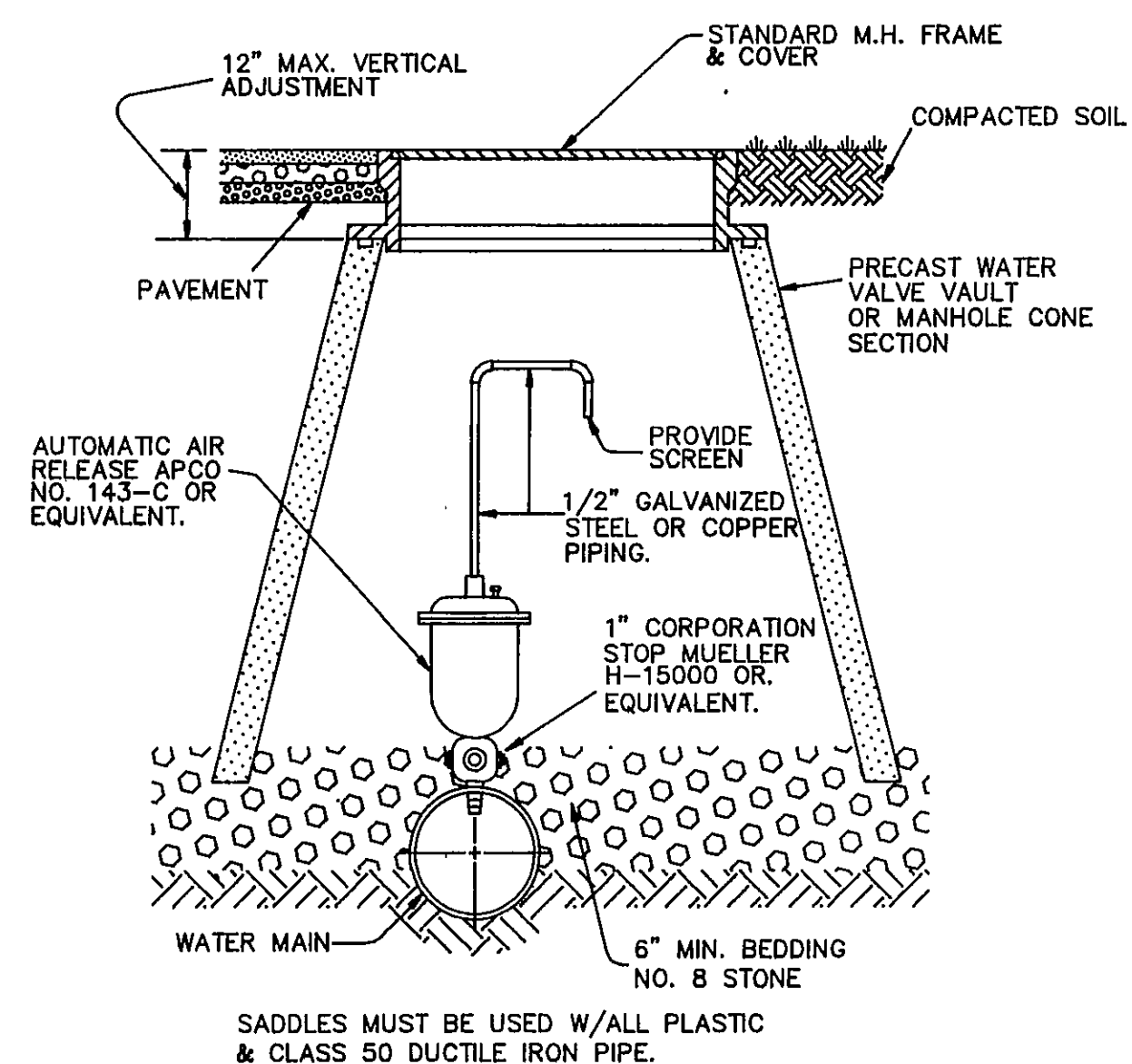
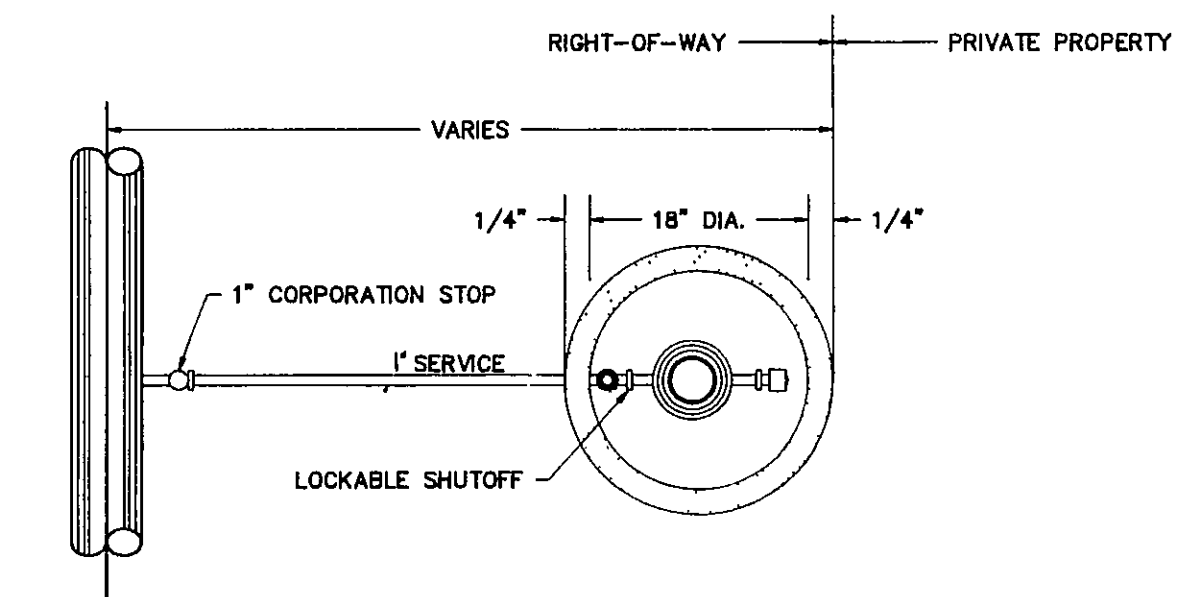




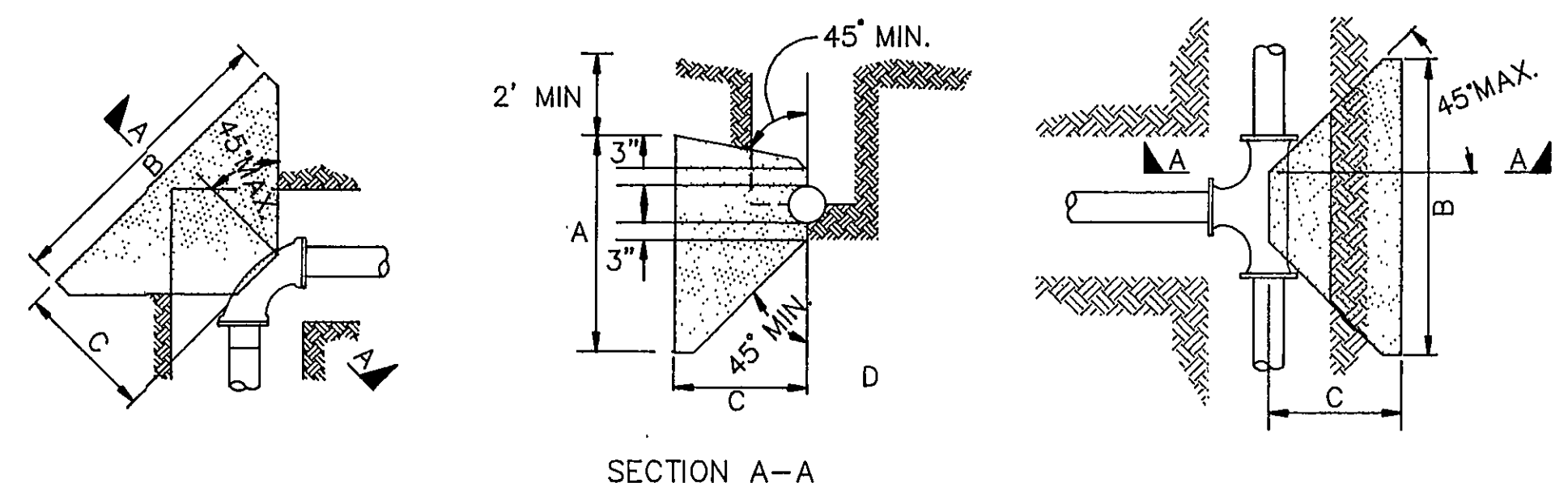
TYPICAL BLOW-OFF ASSEMBLY



AUTOMATIC AIR RELEASE ASSEMBLY



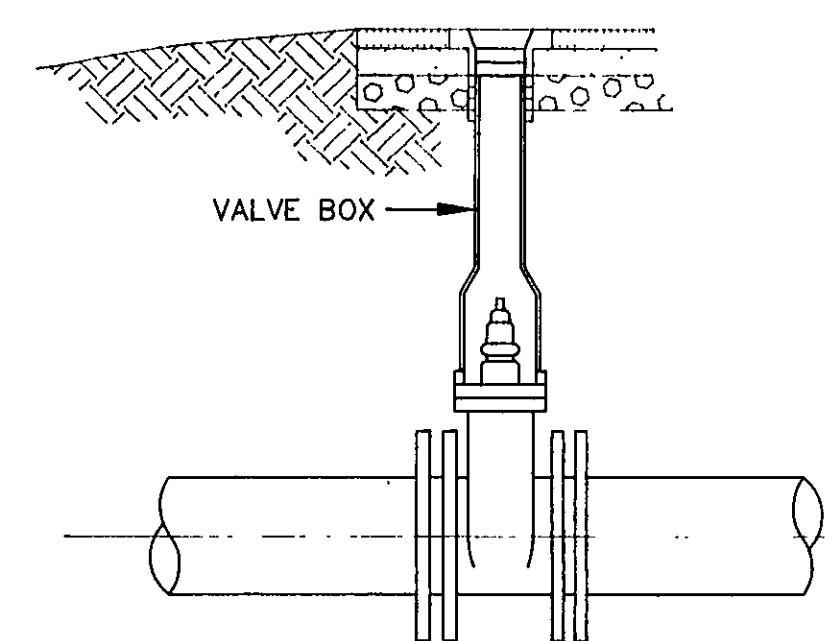
SINGLE RESIDENTIAL WATER SERVICE



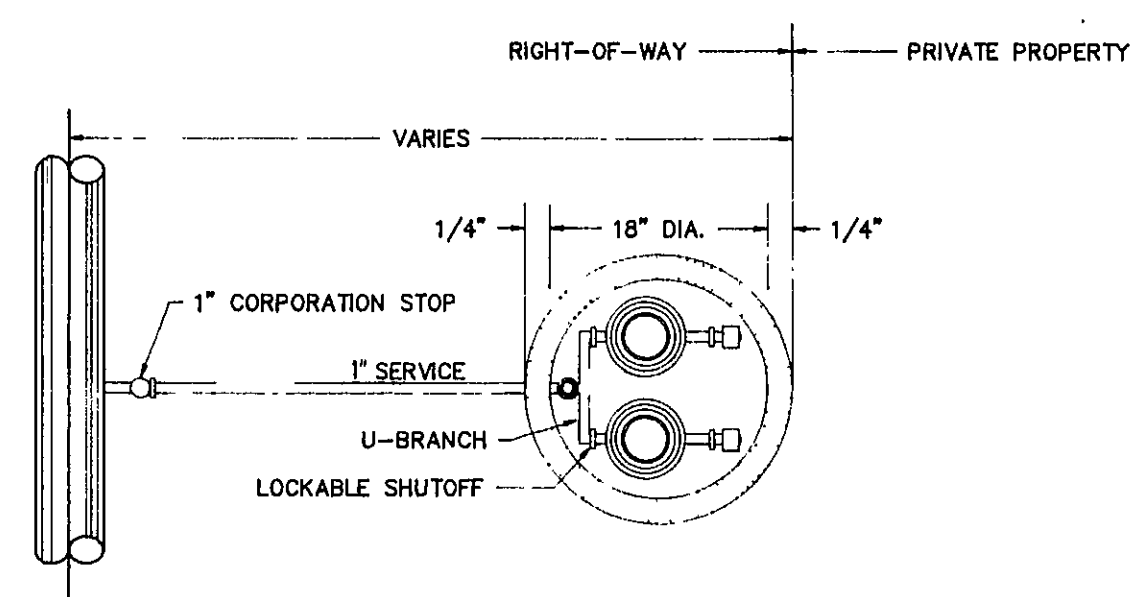
PIPE SIZE	TEE OR DEAD END	90° BEND	45° BEND	22.5° LESS BEND
6" OR LESS	A B C	A B C	A B C	A B C
6"	1.2 3.0 1.0	1.5 3.3 2.0	1.2 2.3 1.0	1.2 2.0 1.0
8"	1.7 3.8 1.5	2.0 4.5 2.0	1.3 3.6 1.5	1.3 2.0 1.0
10"	2.0 4.9 2.0	3.0 4.7 2.0	1.7 4.5 2.0	1.5 2.6 1.5
12"	2.5 5.7 2.0	3.5 5.8 2.5	2.2 5.0 2.5	1.7 3.3 1.5
16"	3.5 7.0 3.0	4.5 8.0 3.5	3.0 6.5 3.0	2.5 4.0 2.0
24"				

- NOTES:
- THE ABOVE NOTED DIMENSIONS ARE MINIMUM BASED ON CONCRETE ANCHOR EXTENDING TO UNDISTURBED SOIL. LINE PRESSURE NOT TO EXCEED 150 PSI AND MINIMUM SOIL BEARING CAPACITY OF 2500 PSF. UNSATISFACTORY SOIL BEARING OR EXCESS PRESSURE WILL REQUIRE ADDITIONAL DESIGN.
 - CONCRETE SHALL NOT BE POURED ON JOINTS OR BOLTS.
 - CONCRETE TO BE MINIMUM 3000 PSI - 28 DAY COMPRESSIVE STRENGTH.

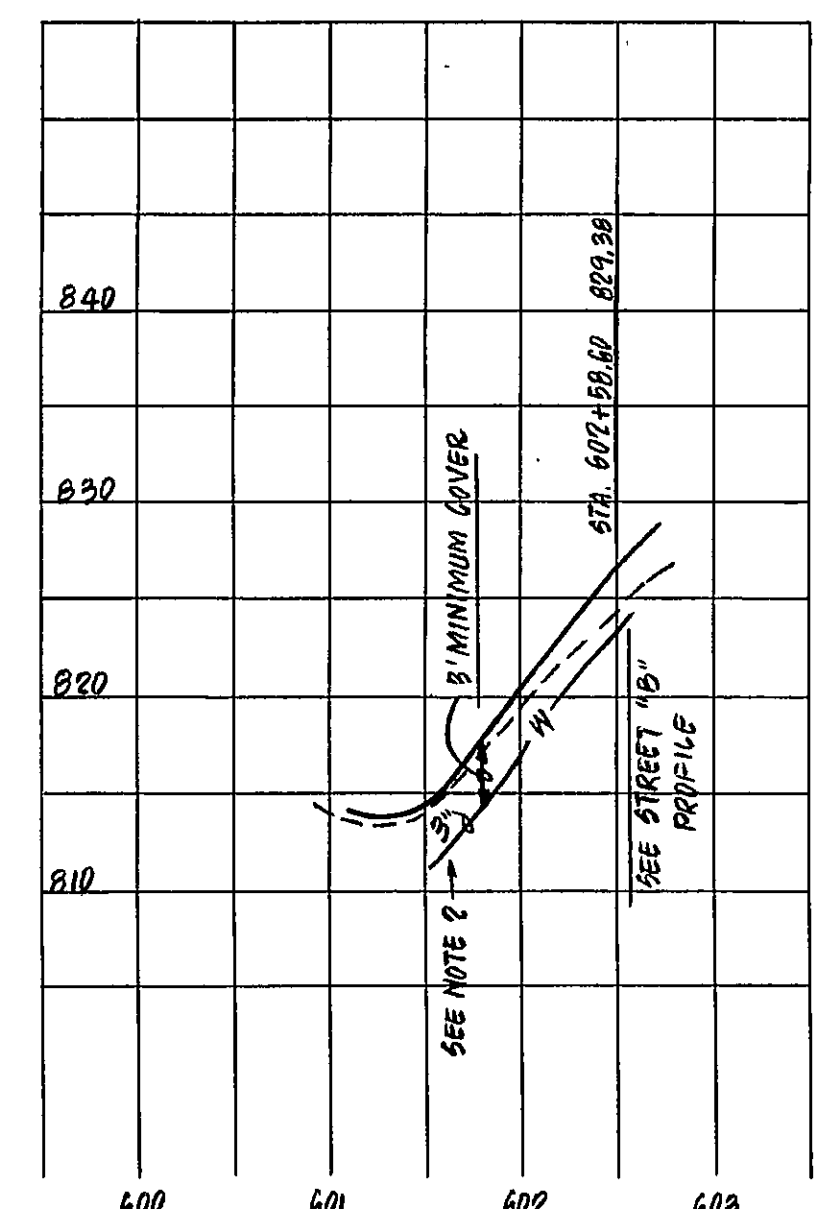
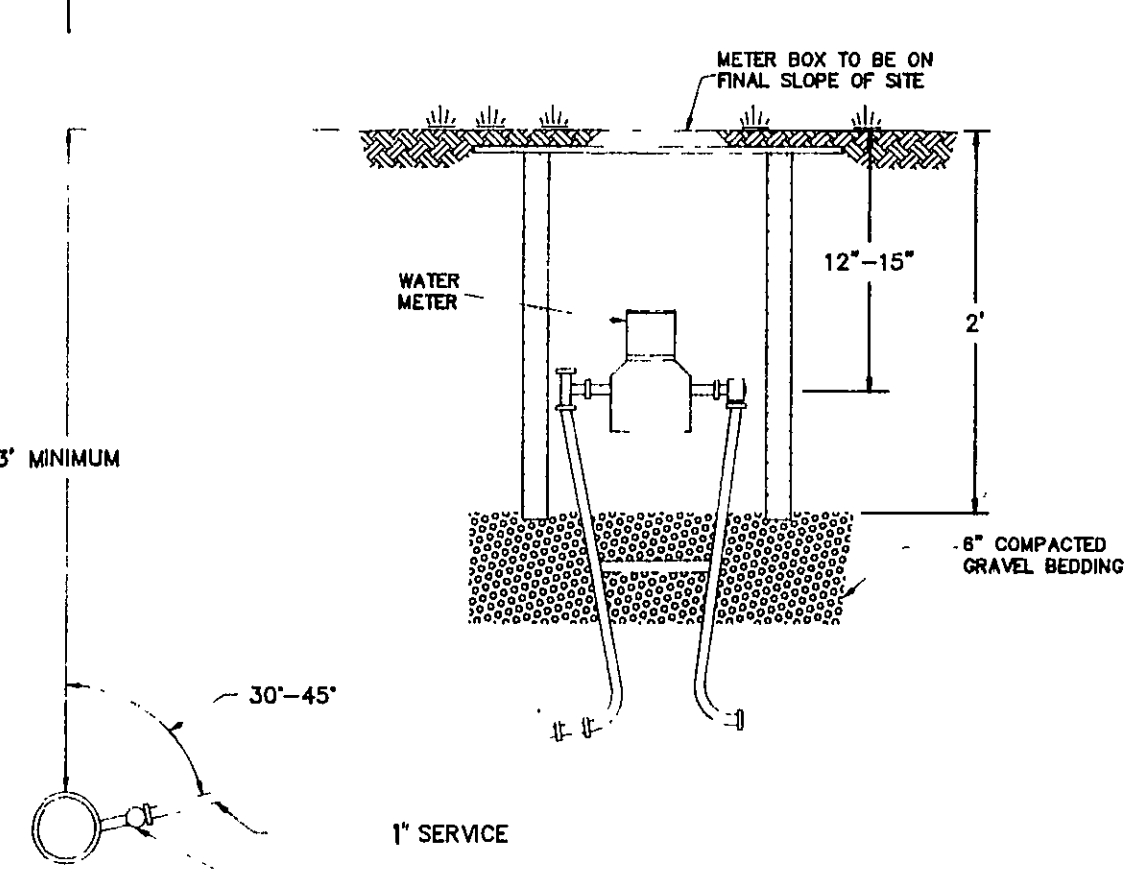
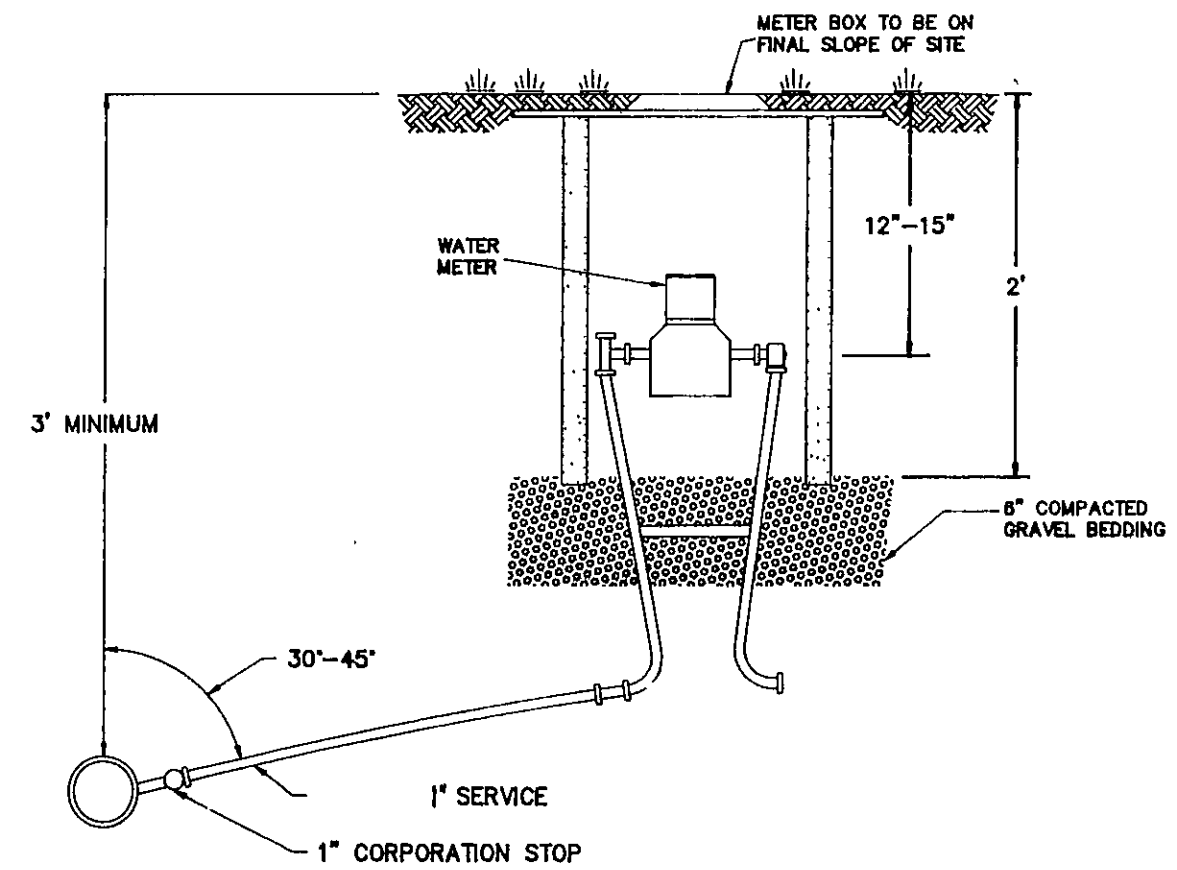
THRUST BLOCK FOR HORIZONTAL & LOWER VERTICAL BENDS



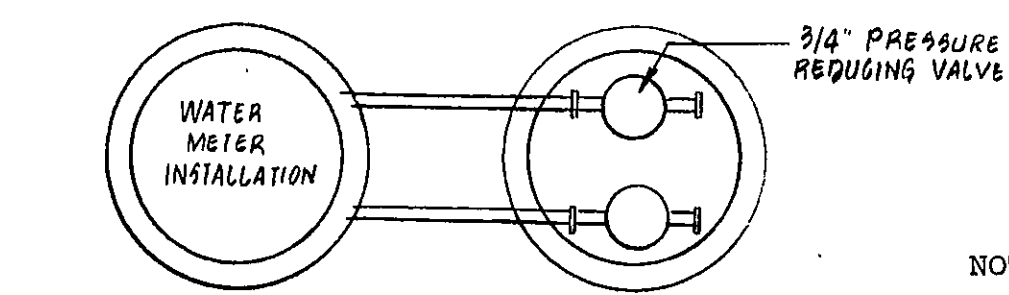
WATER LINE VALVE INSTALLATION



DOUBLE RESIDENTIAL WATER SERVICE

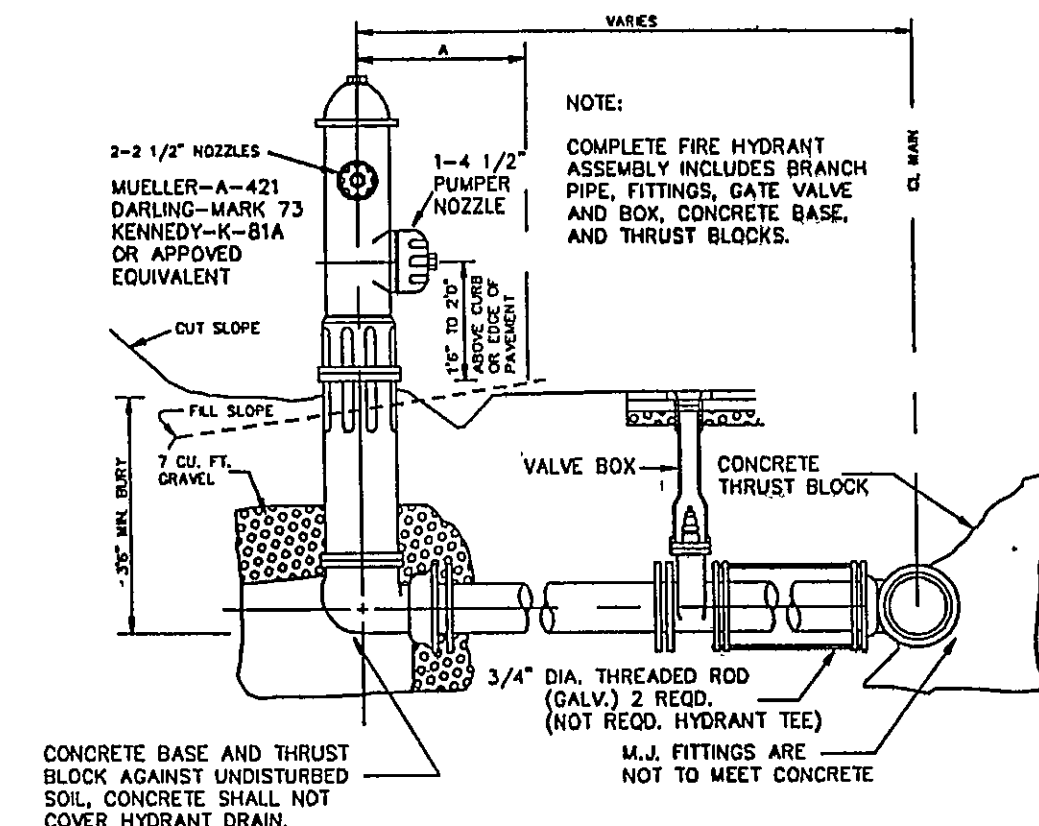


STREET "C"

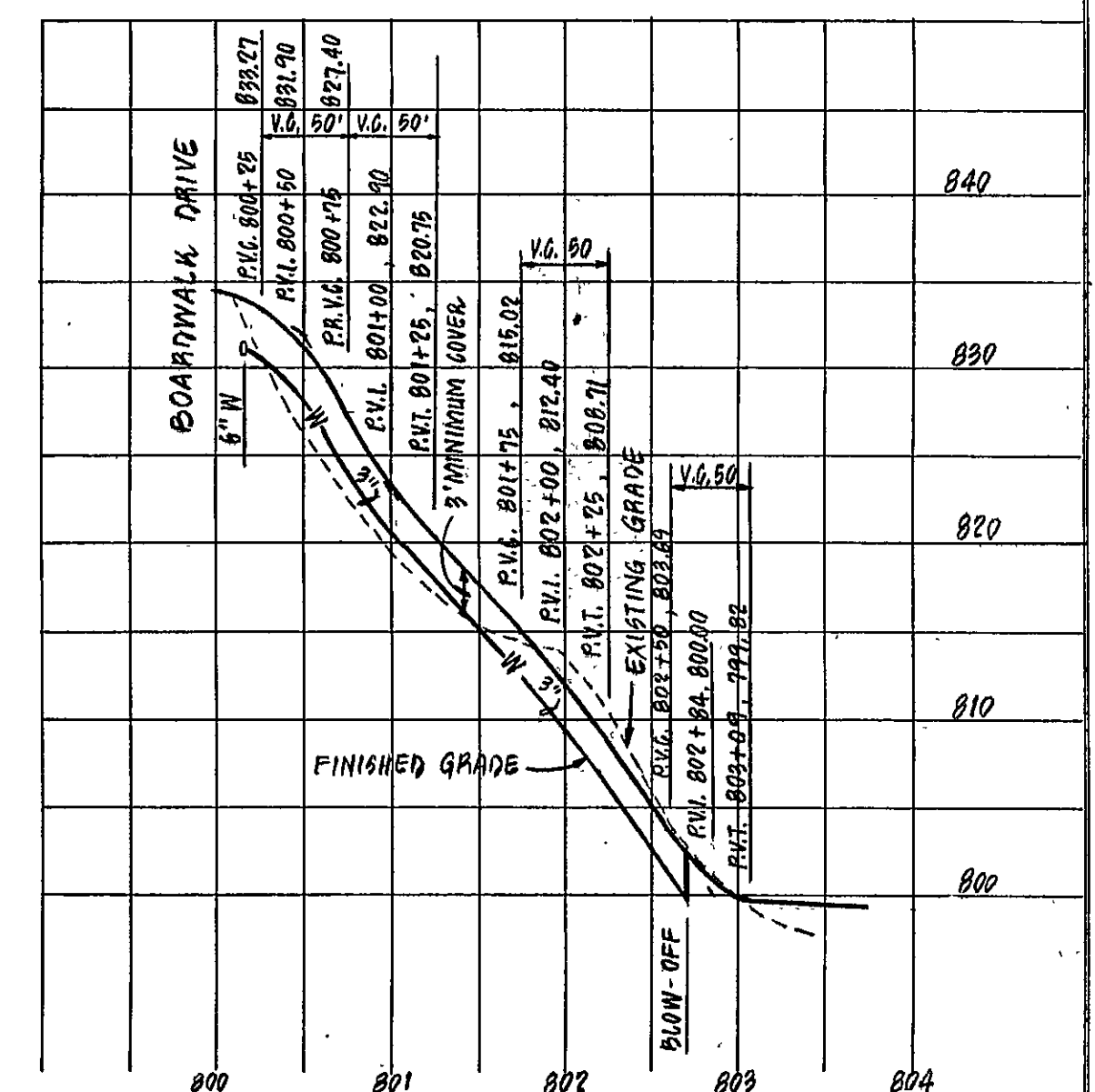


PRESSURE REDUCING VALVE DETAIL

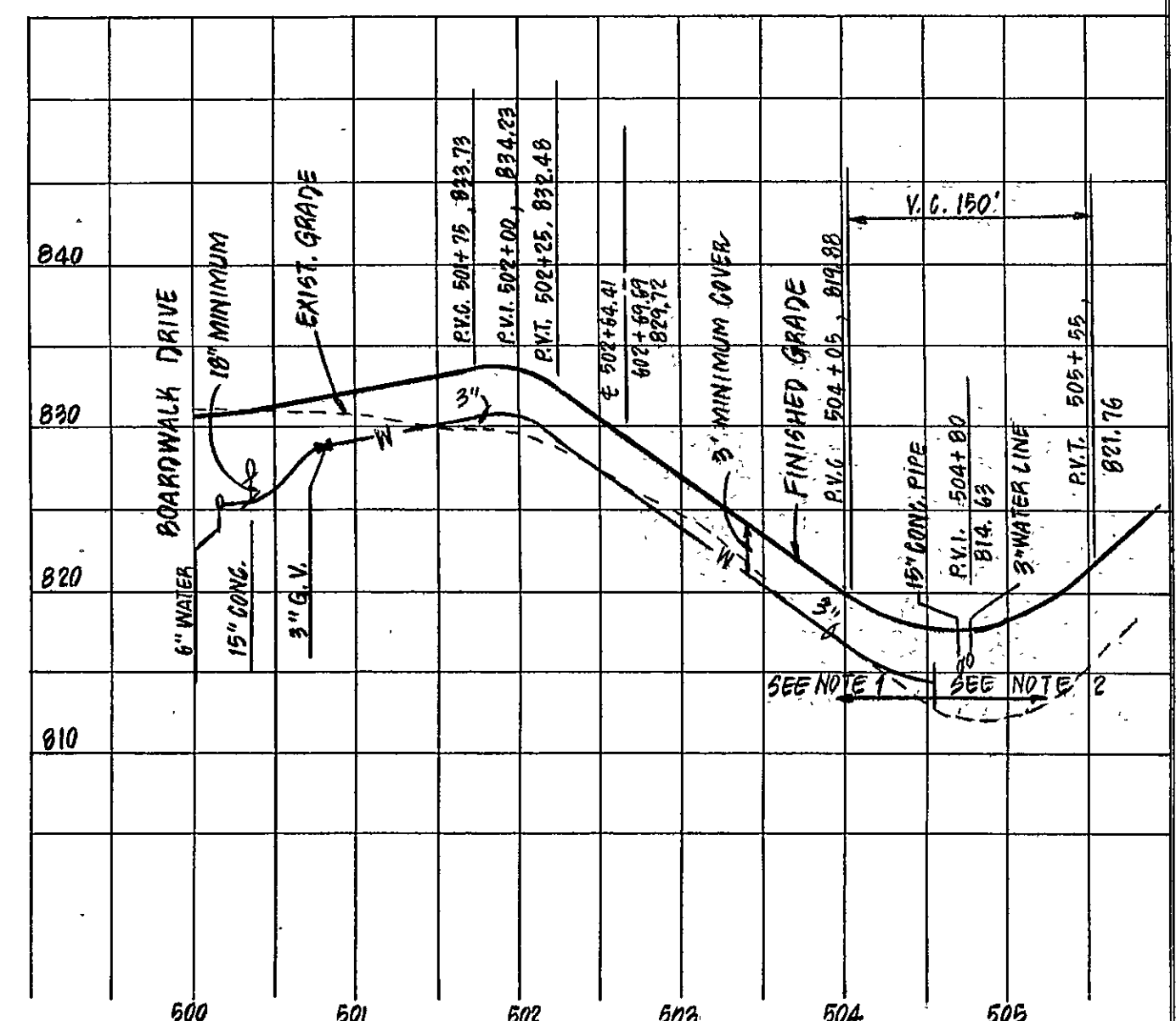
- NOTES:
- MAIN BODY OF HYDRANT MUST BE SILVER AND HAVE RED CAPS AND BONNET.
 - DISTANCE "A" WITH CURB AND GUTTER, 2' MIN., 4' MAX. FROM BACK OF CURB.
 - DISTANCE "A" WITHOUT CURB AND GUTTER, 6' MIN., 12' MAX. FROM EDGE OF PAVEMENT.
 - AREA AROUND HYDRANT AT A RADIUS OF 4' TO BE APPROXIMATELY LEVEL AND UNOBSERVED FOR ROAD CONSTRUCTION.
 - IF HIGH GROUND WATER ELEVATIONS ARE FOUND WHEN INSTALLING FIRE HYDRANTS, THE CONTRACTOR IS TO CONTACT THE ENGINEER TO DETERMINE IF WEEP HOLES ARE TO BE FILLED IN.



FIRE HYDRANT SETTING

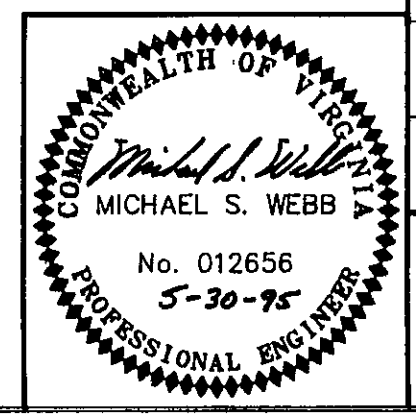


STREET "A"
COTTAGE CIRCLE



STREET "B"
COTTAGE LANE

- NOTES:
- FROM STA 503+00 TO 504+55, WATERLINE IS GENERALLY 15' LEFT OF CENTERLINE. ELEVATION SHALL BE ADJUSTED IN FIELD TO PROVIDE 3' MINIMUM COVER.
 - SEE DIMENSIONAL LAYOUT PLAN FOR BLOW-OFF AND WATERLINE LOCATION.



REVISION	DATE	DESCRIPTION
DESIGNED	M6W	WATER SYSTEM DETAILS FOR "THE BOARDWALK"
DRAWN	PVR	PREPARED FOR WILLARD CONSTRUCTOIN OF ROANOKE VALLEY, INC.
CHECKED	M6W	GILLS CREEK MAGISTERIAL DISTRICT FRANKLIN COUNTY, VIRGINIA
LUMSDEN ASSOCIATES, P.C. ENGINEERS-SURVEYORS-PLANNERS ROANOKE, VIRGINIA		SCALE: AS SHOWN COMM: 89-284
DATE: 2 JUNE 1995		SHEET 7 of 7