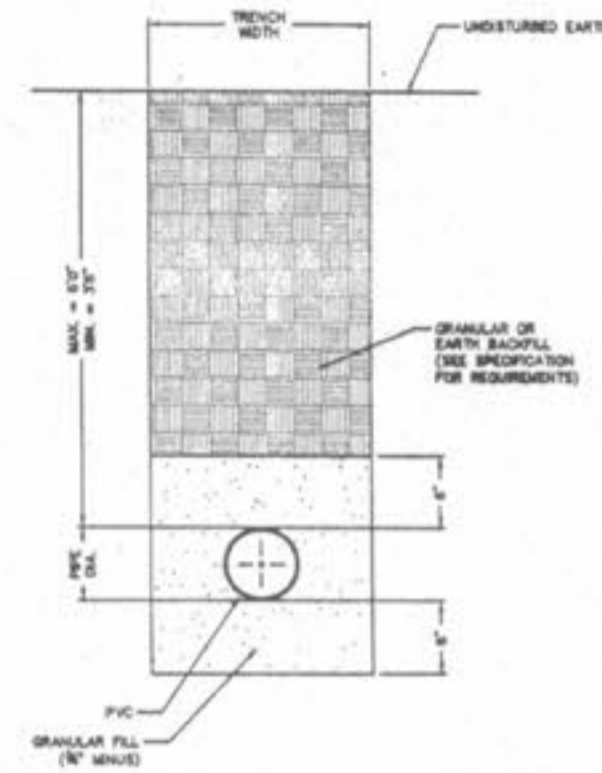
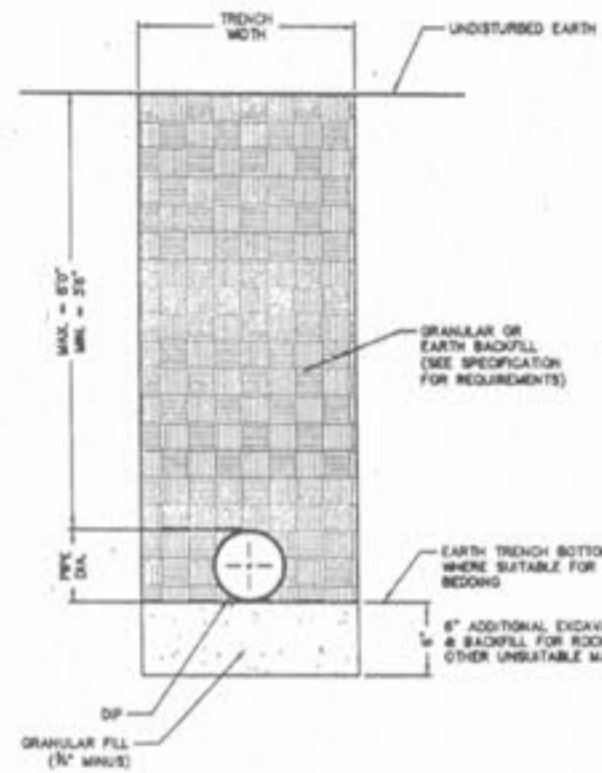


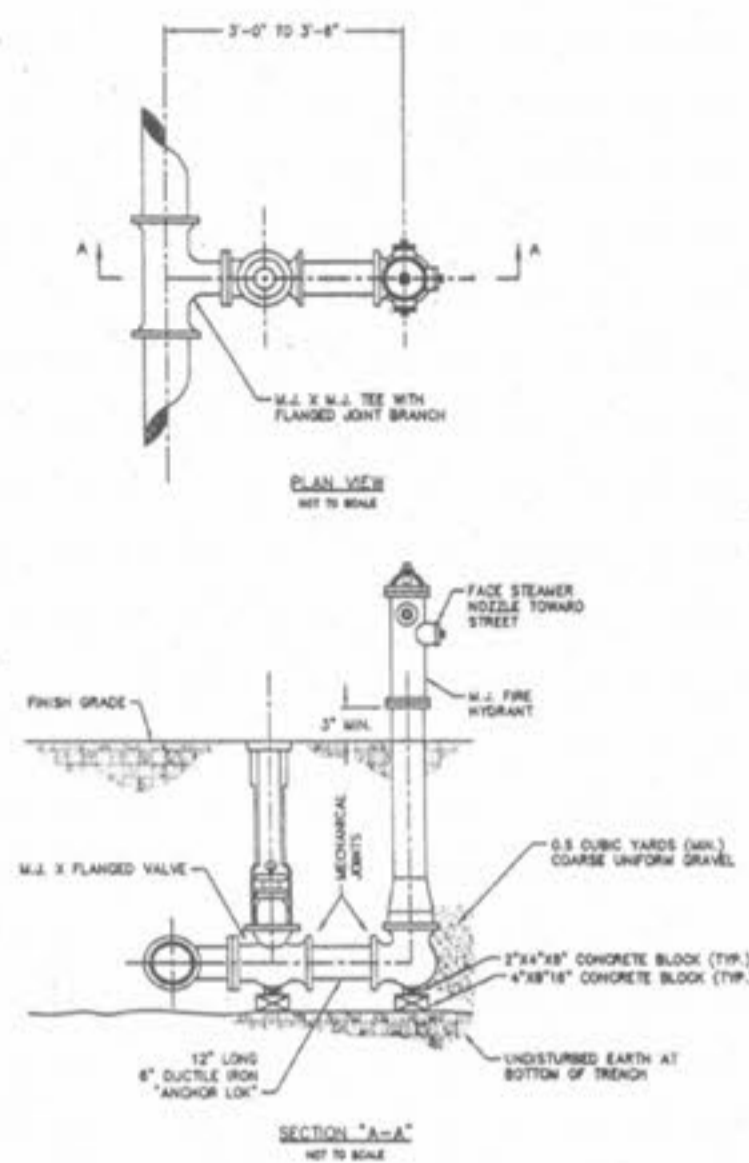
Drawing name: K:\0206142 Briarchase Addition\IMPROVEMENTS\6142DETAILS.dwg Plotted on: Jun 23, 2004 - 7:20am Plotted by: jluetkenhous



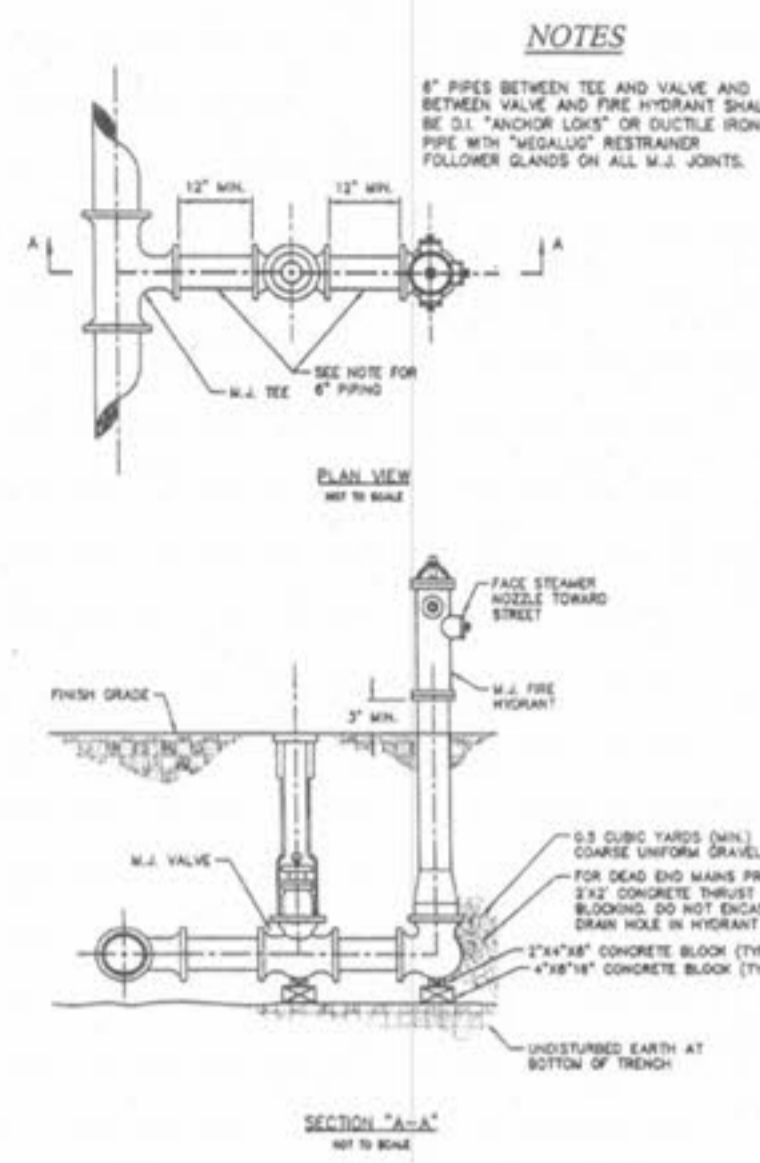
**TYPICAL TRENCH SECTION FOR PVC PIPE**  
NOT TO SCALE  
DETAIL "A"  
PAGE 1 OF 2



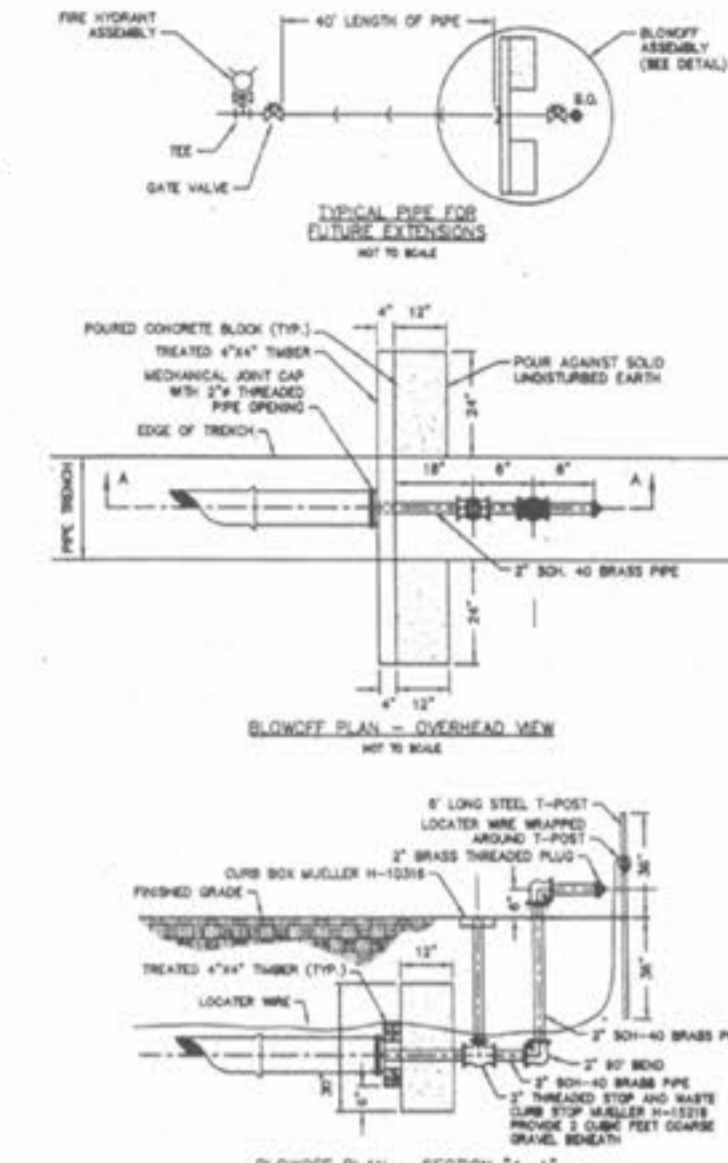
**TYPICAL TRENCH SECTION FOR DUCTILE IRON PIPE**  
NOT TO SCALE  
DETAIL "A"  
PAGE 2 OF 2



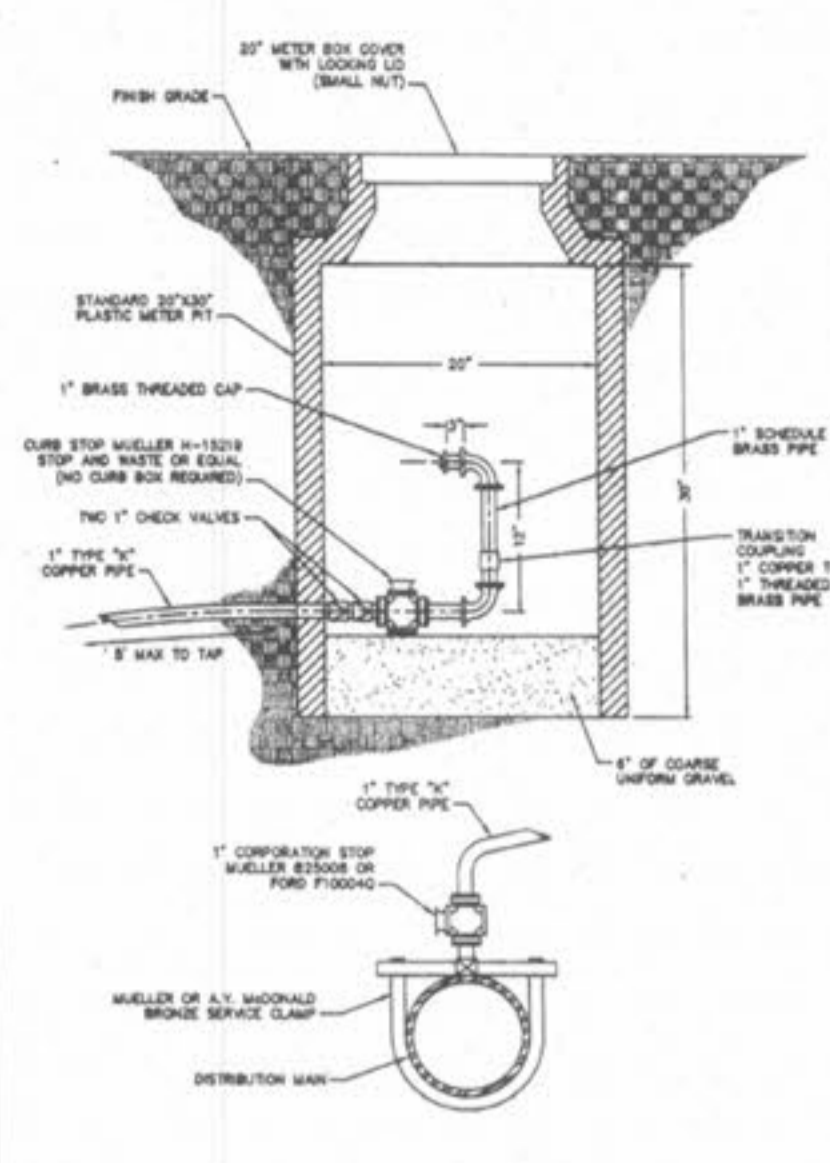
**STANDARD FIRE HYDRANT DETAIL**  
DETAIL "B"  
SHEET 1 OF 3



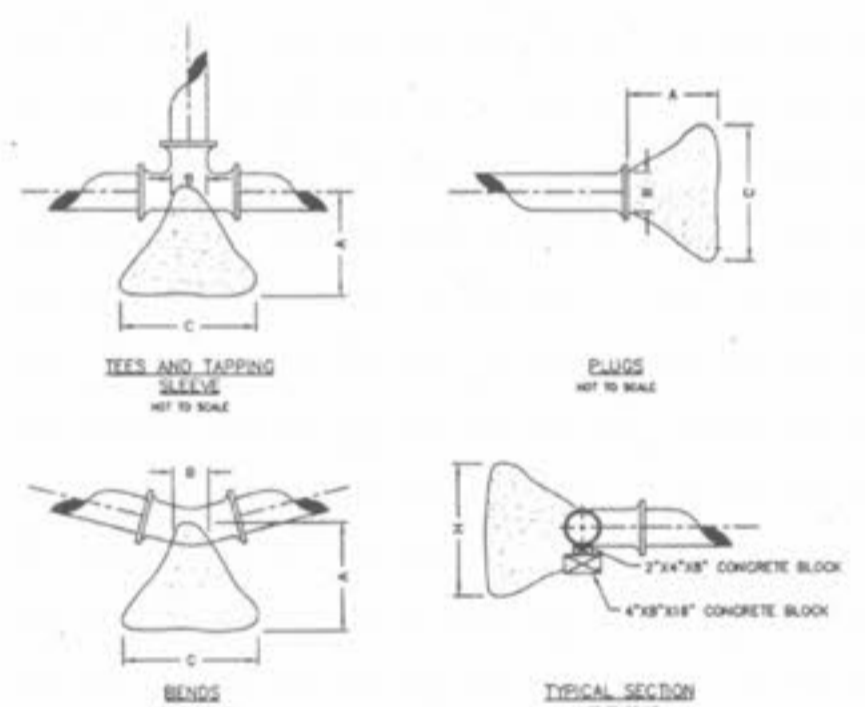
**OPTIONAL FIRE HYDRANT DETAIL**  
DETAIL "B"  
SHEET 2 OF 3



**TEMPORARY BLOWOFF INSTALLATION**  
DETAIL "C"



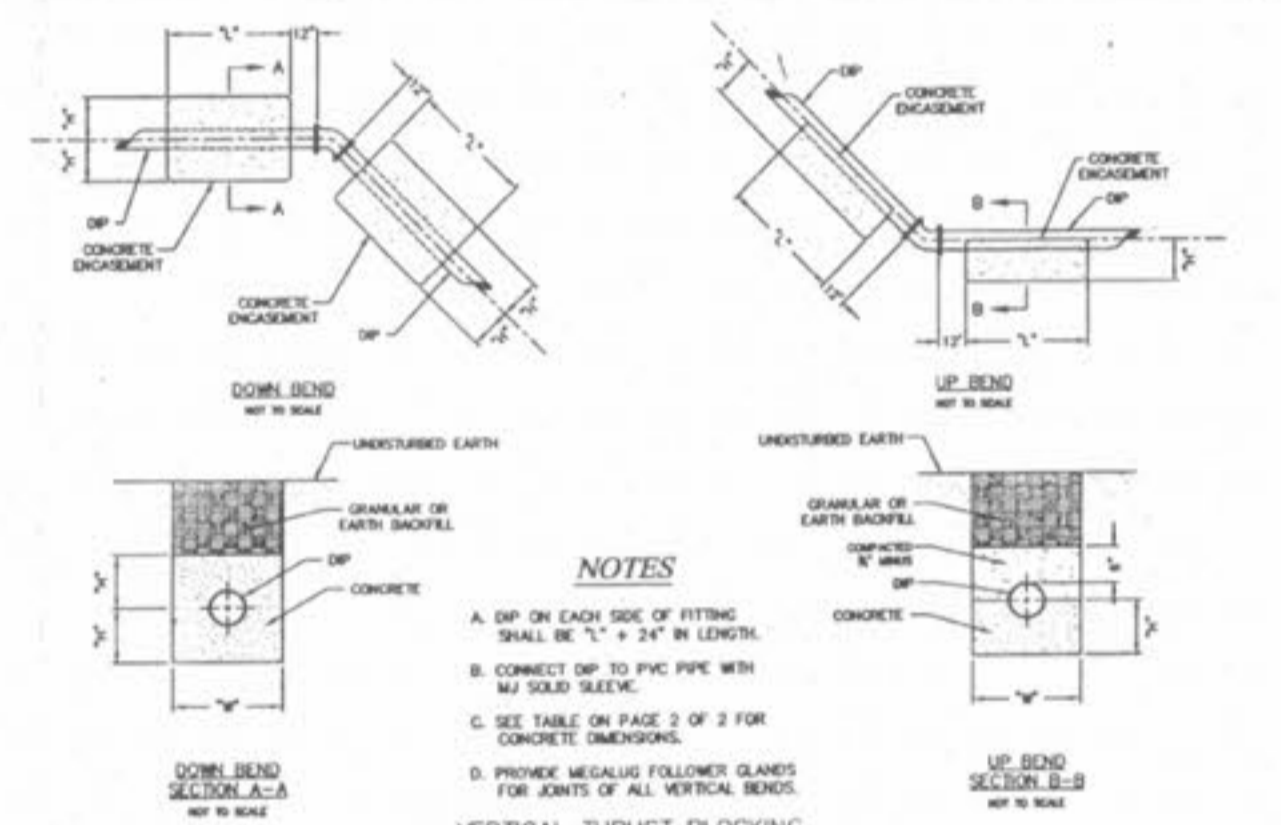
**MANUAL AIR RELEASE DEVICE**  
DETAIL "C"  
NOT TO SCALE



**THRUST BLOCK DIMENSIONS - INCHES**

PIPE DIA.	ALL FTGS.	TEE PLUG TAPPING			90 DEGREE BEND			45 DEGREE BEND			22-1/2 BEND			11-1/4 BEND		
		A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
4	14	4	24	12	25	15	18	12	12	12	12	12	12	12	12	12
6	18	6	30	18	30	24	30	18	24	12	12	12	12	12	12	12
8	20	8	36	20	42	30	36	24	24	18	18	18	18	18	18	18
10	22	10	42	22	48	36	42	30	28	24	18	18	18	18	18	18
12	24	12	48	24	54	42	48	36	30	24	18	18	18	18	18	18

**HORIZONTAL THRUST BLOCKING**  
DETAIL "C"



**VERTICAL THRUST BLOCKING**  
DETAIL "D"  
PAGE 1 OF 2

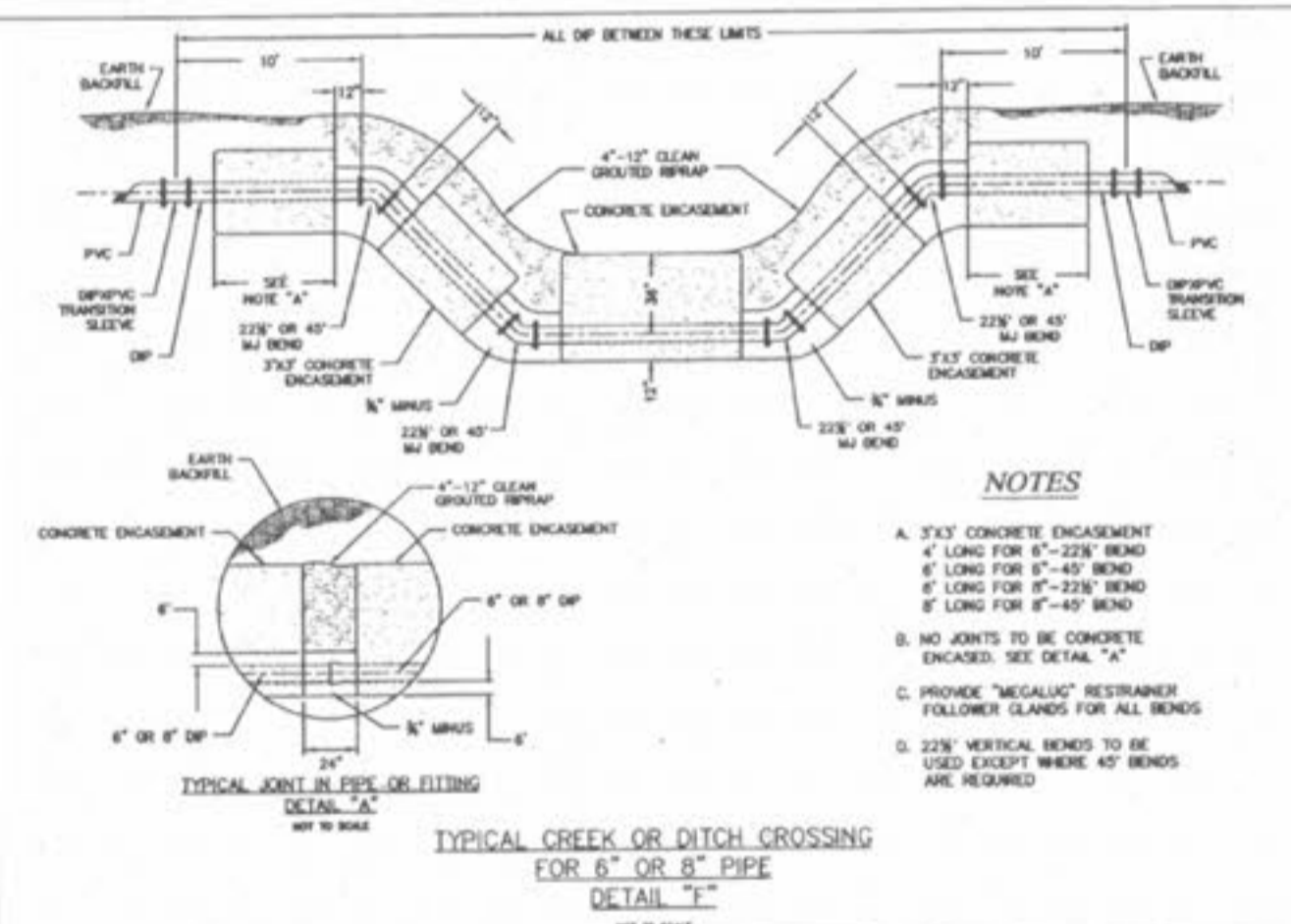
**PIPE SIZE DEGREE BEND DOWN BENDS UP BENDS**

PIPE SIZE	DEGREE BEND	DOWN BENDS			UP BENDS		
		W	H	L	W	H	L
4"	11 1/4°	18	12	18	12	12	12
	22 1/2°	18	18	24	12	12	12
	45°	18	18	30	12	12	18
6"	11 1/4°	24	18	18	12	12	12
	22 1/2°	24	18	24	12	12	12
	45°	24	18	48	12	12	18
8"	11 1/4°	24	18	24	12	12	18
	22 1/2°	24	18	42	12	12	24
	45°	24	18	72	18	18	18
10"	11 1/4°	30	24	24	18	18	24
	22 1/2°	30	24	42	18	18	24
	45°	30	24	72	18	18	36
12"	11 1/4°	30	24	30	18	18	18
	22 1/2°	30	24	54	18	18	30
	45°	30	24	72	24	18	36

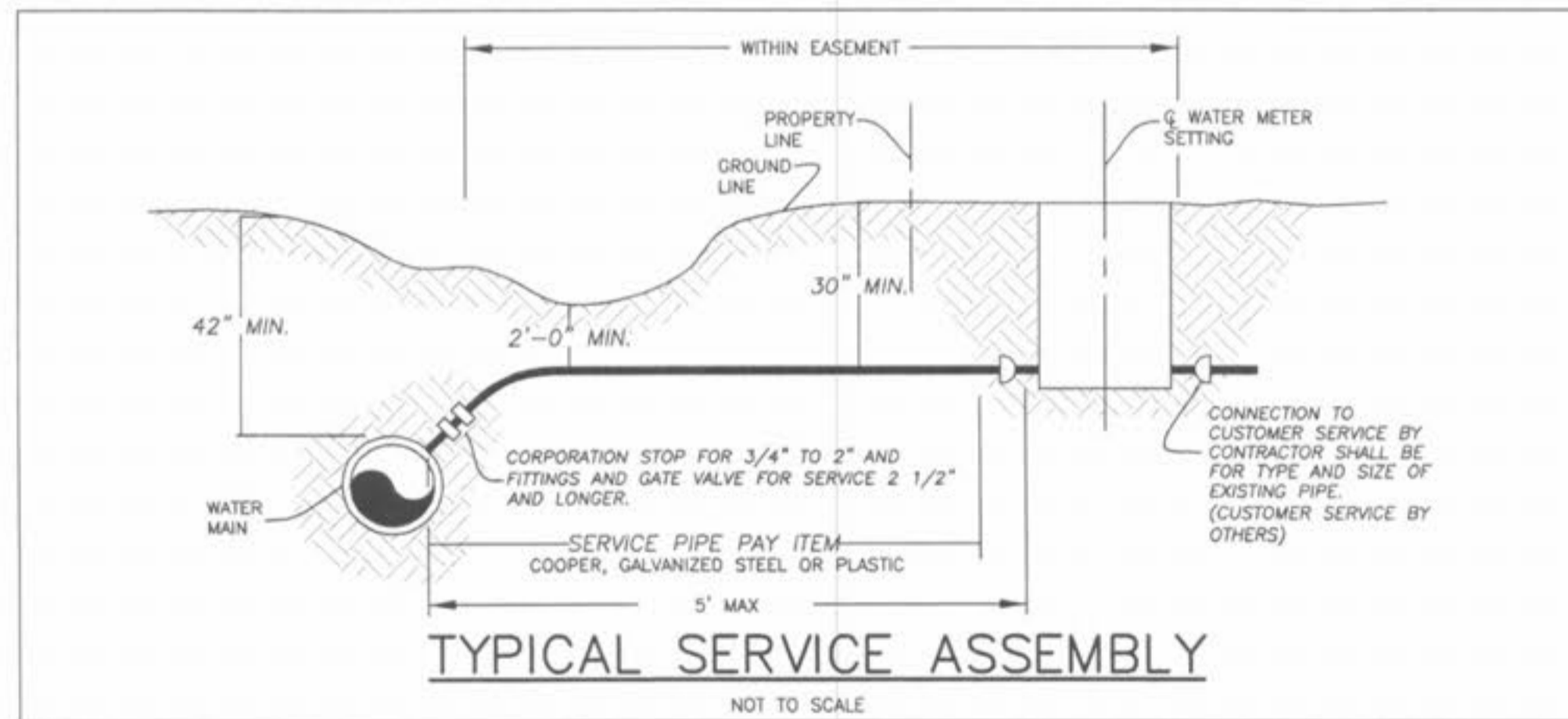
**DIMENSIONS FOR VERTICAL BENDS**  
(IN INCHES)  
DETAIL "D"  
PAGE 2 OF 2

**GENERAL NOTES**

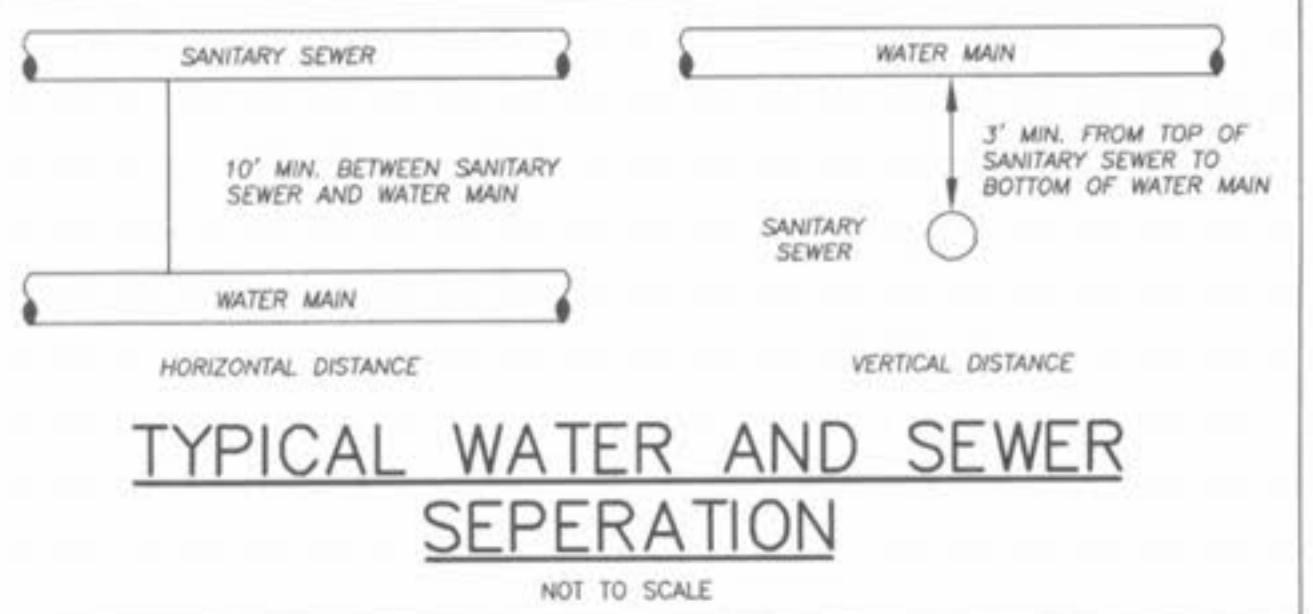
- All water lines shall be laid at least 10 feet horizontally from any sanitary sewer or manhole. An 18" vertical clearance from outside of pipe to outside of pipe shall be maintained wherever water lines must cross sanitary sewers or laterals. The water line shall be laid at such an elevation that the bottom of the water line is above the top of the drain or sewer. A full length of water pipe shall be centered over the sewer line to be crossed so that the joints will be equally distant from the sewer and as remote therefrom as possible. This vertical separation shall be maintained for that portion of the water line located within 10 feet horizontally, of any sewer or drain it crosses.
- All PVC water pipe shall conform to ASTM D2241, SDR 21 Standard specification for P.V.C. Pressure Pipe, 200 P.S.I. working pressure for water, with approved joint.
- Water lines, valves, sleeves, meters, and fittings shall meet all specifications and installation requirements of the Public Water Supply District No. 2 of St. Charles County.
- All water hydrants and valves shall be ductile iron and installed in accordance with plans and details. All ductile iron pipe for water mains shall conform to A.W.W.A. Specifications C-106 and/or C-108. The ductile iron fittings shall conform to A.W.W.A. Specification CC-110. All rubber gasket joints for water ductile iron pressure pipe and fittings shall conform to A.W.W.A. Specification C-111.
- No flushing hydrants or water meters shall be located in driveways, sidewalks or other hard surface areas.



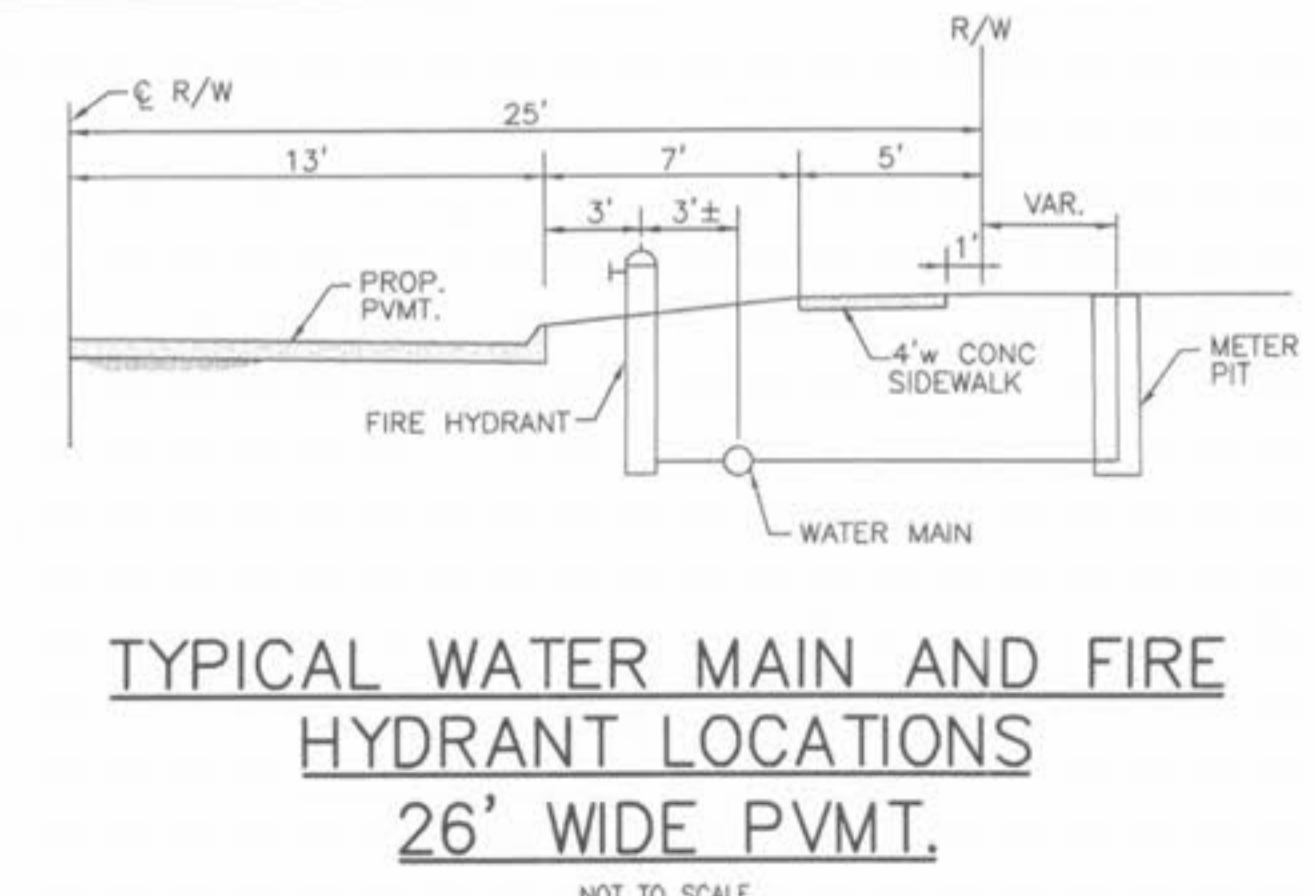
**TYPICAL CREEK OR DITCH CROSSING FOR 8" OR 8" PIPE**  
DETAIL "A"  
NOT TO SCALE



**TYPICAL SERVICE ASSEMBLY**  
NOT TO SCALE



**TYPICAL WATER AND SEWER SEPERATION**  
NOT TO SCALE



**TYPICAL WATER MAIN AND FIRE HYDRANT LOCATIONS**  
**26' WIDE PVMT.**  
NOT TO SCALE

ISSUE REMARKS/DATE

1	04-29-04	FIRST SUBMITTAL
2	06-21-04	REVISED PER CITY OF FALLON COMMENTS

PREPARED FOR:  
**McBride & Son Homes Land Development, Inc.**  
#1 McBride & Son Center Drive  
Chesterfield, Missouri 63005  
(636) 537-2000



THE **STERLING CO.**  
ENGINEERS & SURVEYORS  
5685 NEW BALMARTNER ROAD  
ST. LOUIS, MISSOURI 63128  
(314) 487-0440 FAX 487-8944  
E-Mail: Sterling@sterling-eng-sur.com

PROJECT: **BRIARCHASE ADDITION**

DESIGNED: \_\_\_\_\_ CHECKED: \_\_\_\_\_

SHEET TITLE: **WATER DETAILS**

NO	02	06	142
M.S.D.			SHEET
P#			WD1
DIGITAL FILE LOCATION			
SERVER=STERLING-2			
PLOTDATE.dwg			