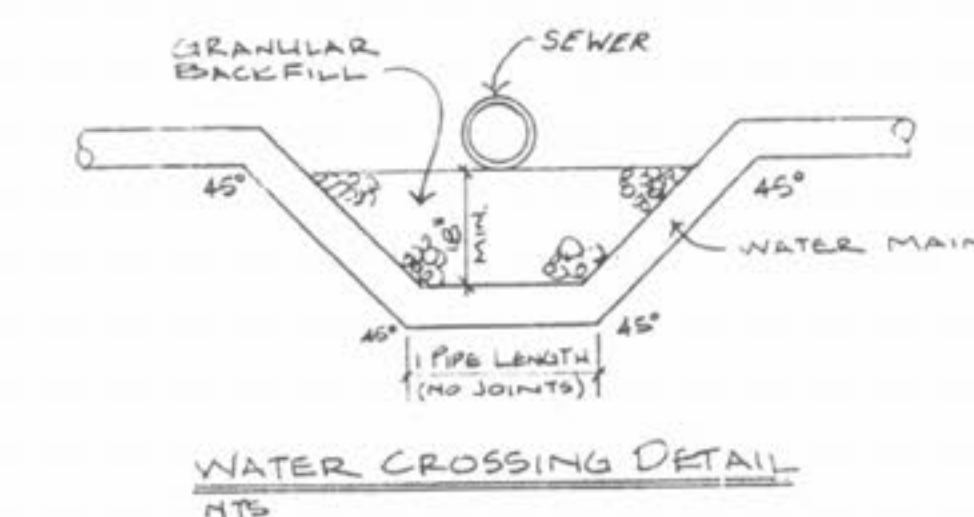
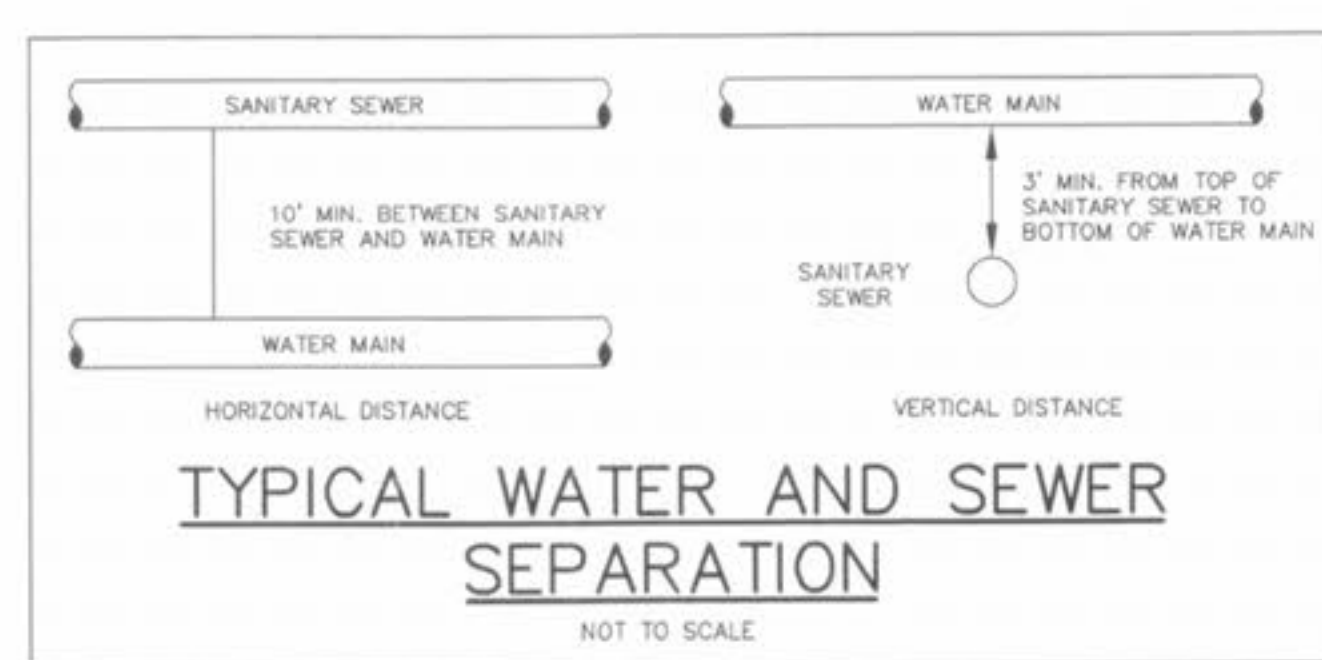
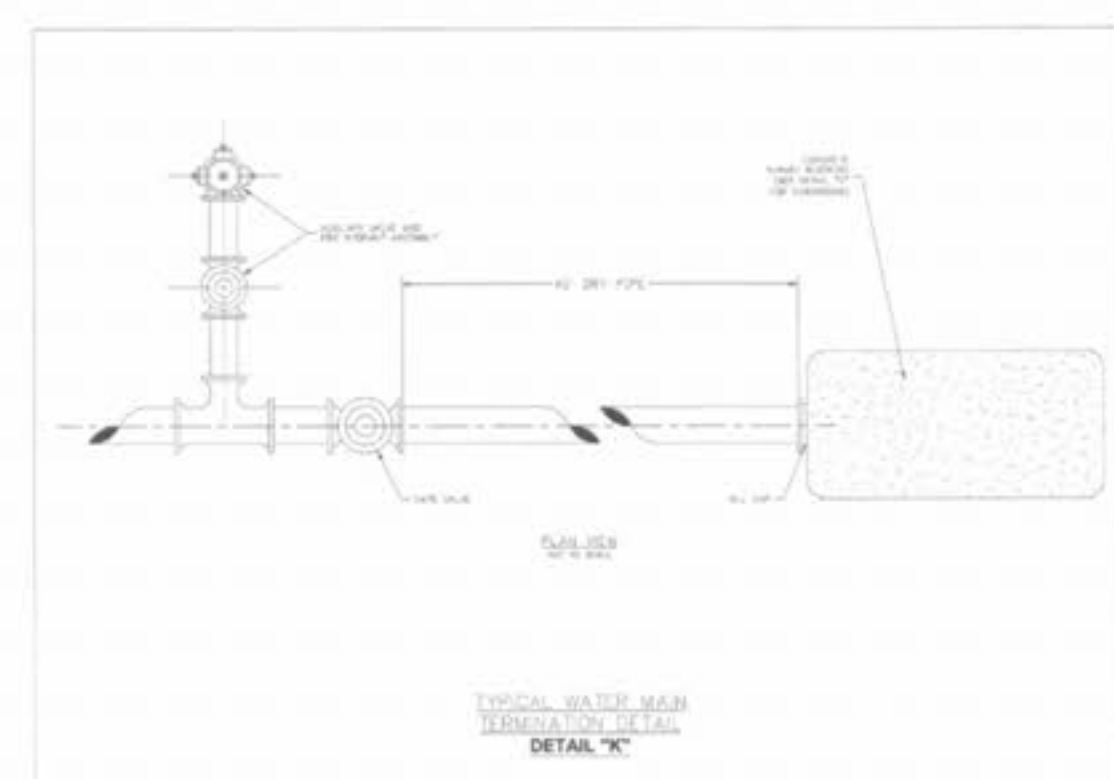
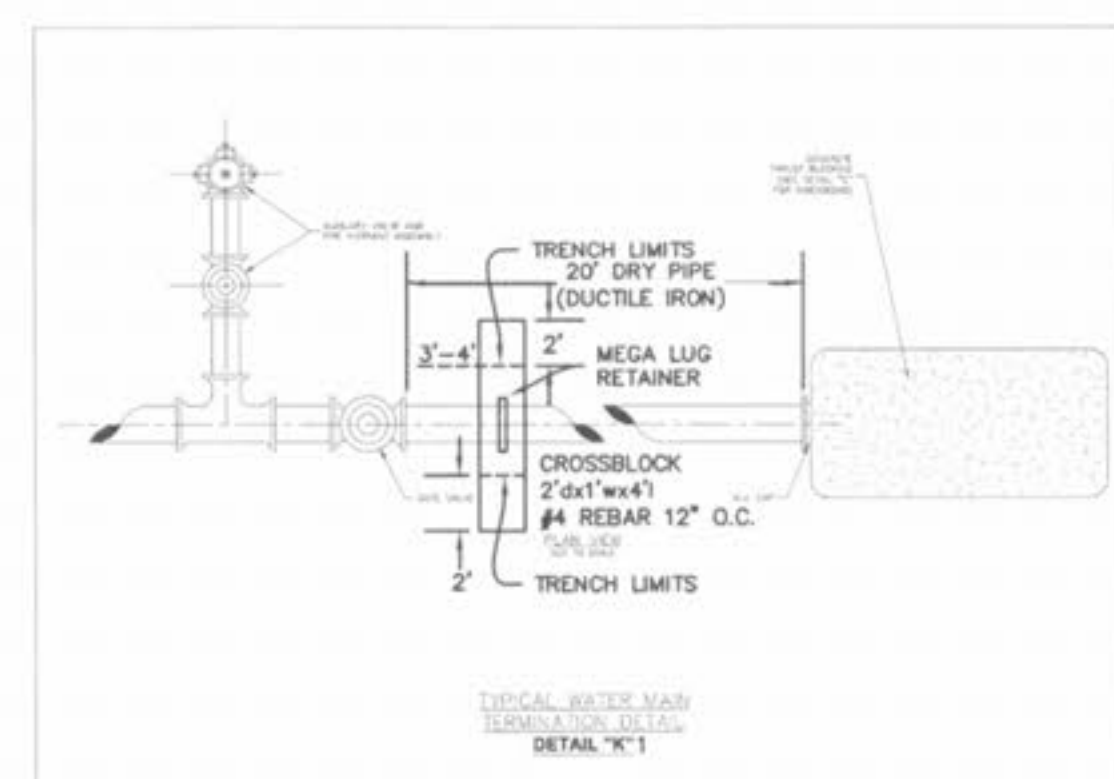
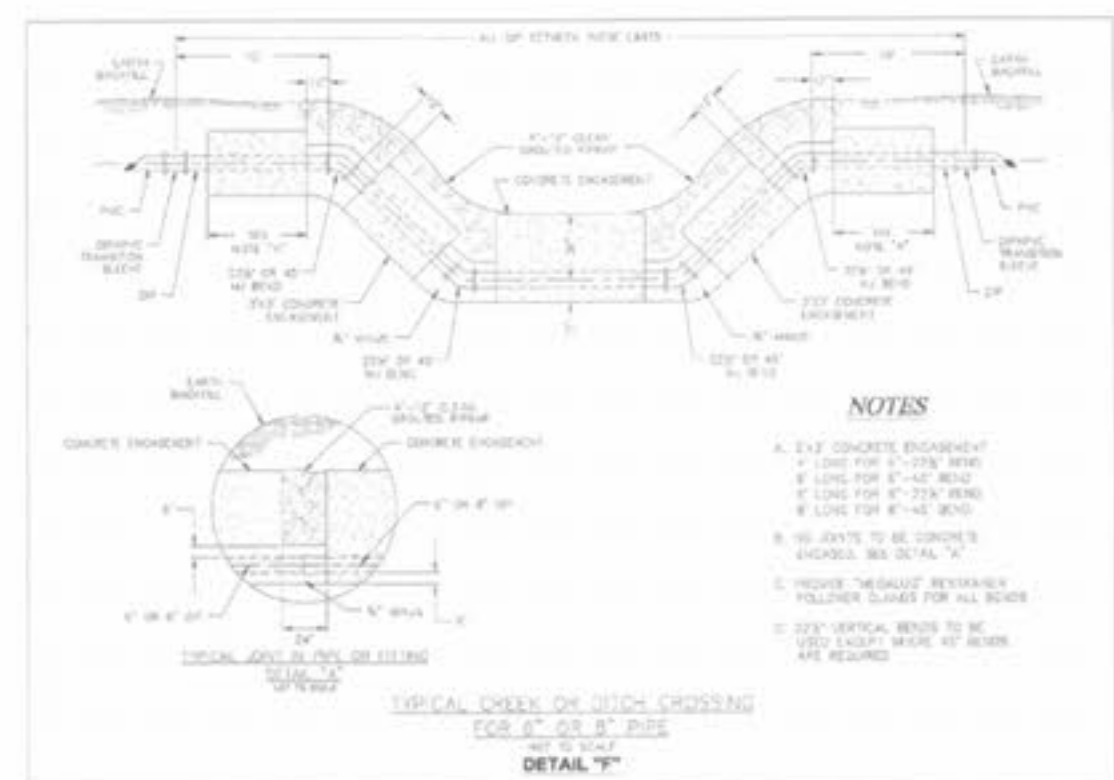


**DIMENSIONS FOR VERTICAL BENDS (IN INCHES)**

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
6"	11 1/4°	24	18	24	12	12	12
	22 1/2°	24	18	30	12	12	18
8"	11 1/4°	24	18	24	12	12	18
	22 1/2°	24	18	30	12	12	24
10"	11 1/4°	30	24	30	18	18	24
	22 1/2°	30	24	36	18	18	30
12"	11 1/4°	36	30	36	18	18	30
	22 1/2°	36	30	42	18	18	36



**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.
- All water mains, valves, fittings, hydrants, and related items are to be installed in accordance with the current St. Charles County, Missouri Public Water Supply District No. 2 guidelines and specifications as approved by the Missouri Department of Natural Resources Review No. 61996-04.
- 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-151. The ductile iron fittings shall conform to A.W.W.A. Specification CC-153. 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.

**ISSUE/REMARKS/DATE**

10	CITY COMMENTS/02/03/06
11	CITY COMMENTS/02/14/06
3	DCSD COMMENTS/02/26/06
4	DCSD COMMENTS/03/13/06
5	DCSD AND CITY COMMENTS/03/14/06
6	CITY COMMENTS/03/22/06
7	CITY COMMENTS/03/23/06
8	WATER DISTRICT #2 COMMENTS/01/17/06
9	DEVELOPER REVISIONS/01/24/06

PREPARED FOR:  
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DRAWN: LG  
DESIGNED: JCM  
CHECKED: JM

PROJECT: COUNTRYSHIRE  
SHEET TITLE: WATER DETAILS

NO. 02 12 311  
M.S.D. SHEET 1 OF 1  
P# 1  
DIGITAL FILE LOCATION: S:\DWG\STERLING\02-12-311