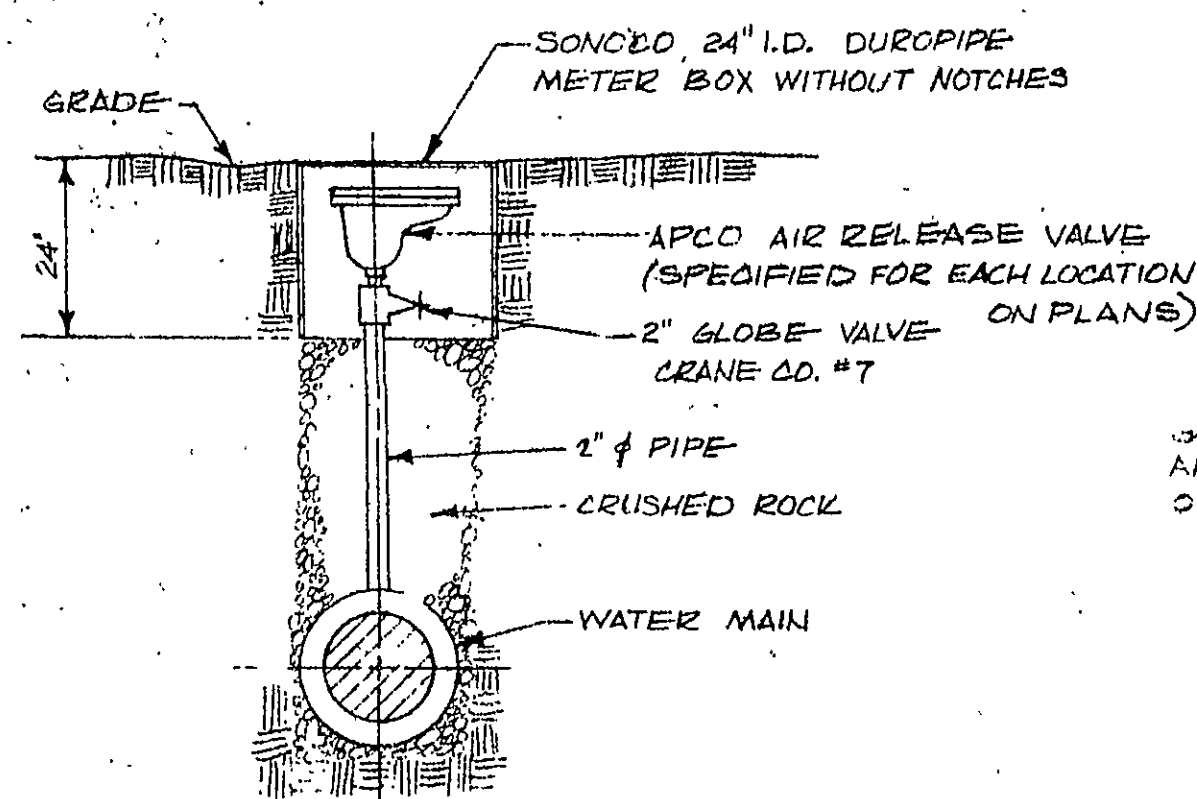
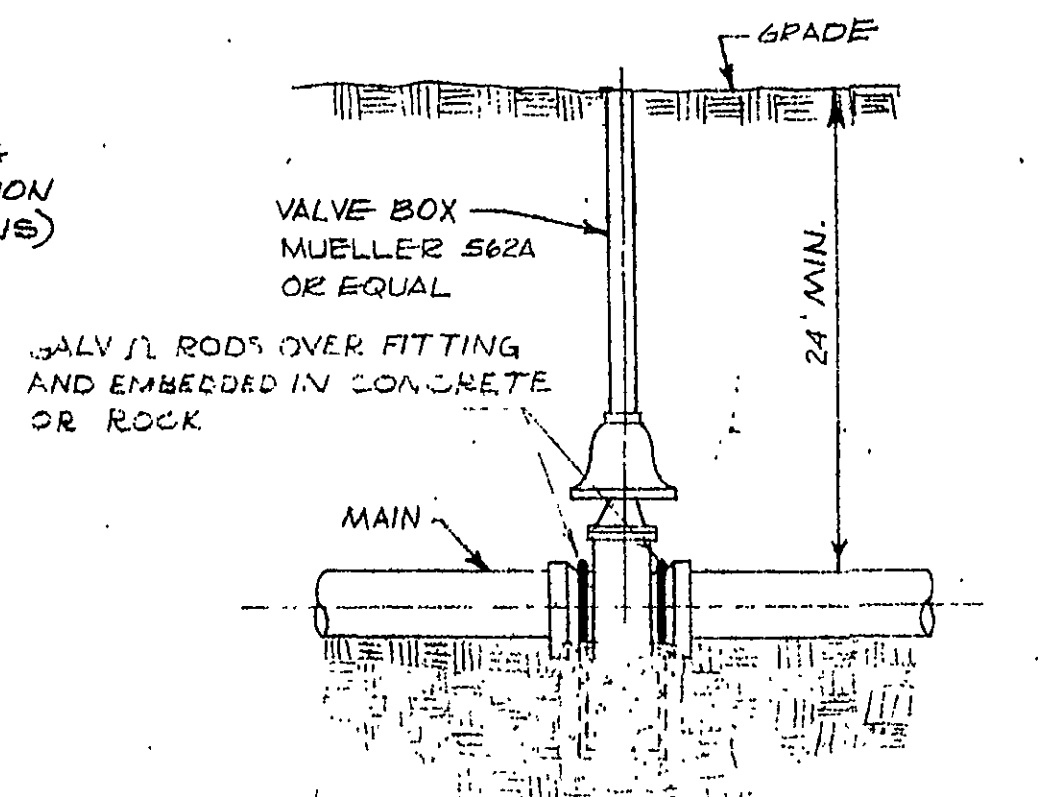
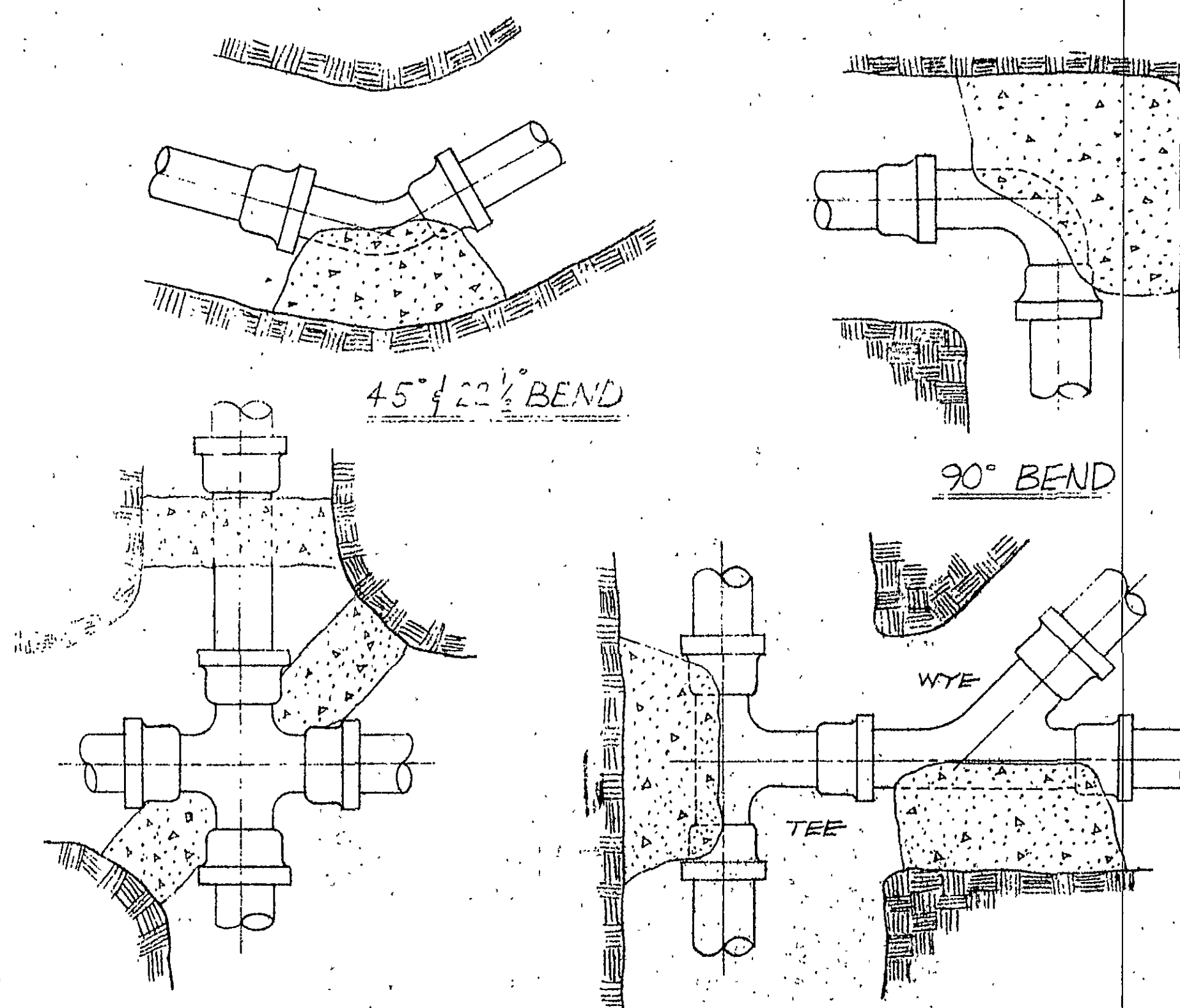




AUTOMATIC AIR RELEASE VALVE



TYPICAL VALVE INSTALLATION



CROSS

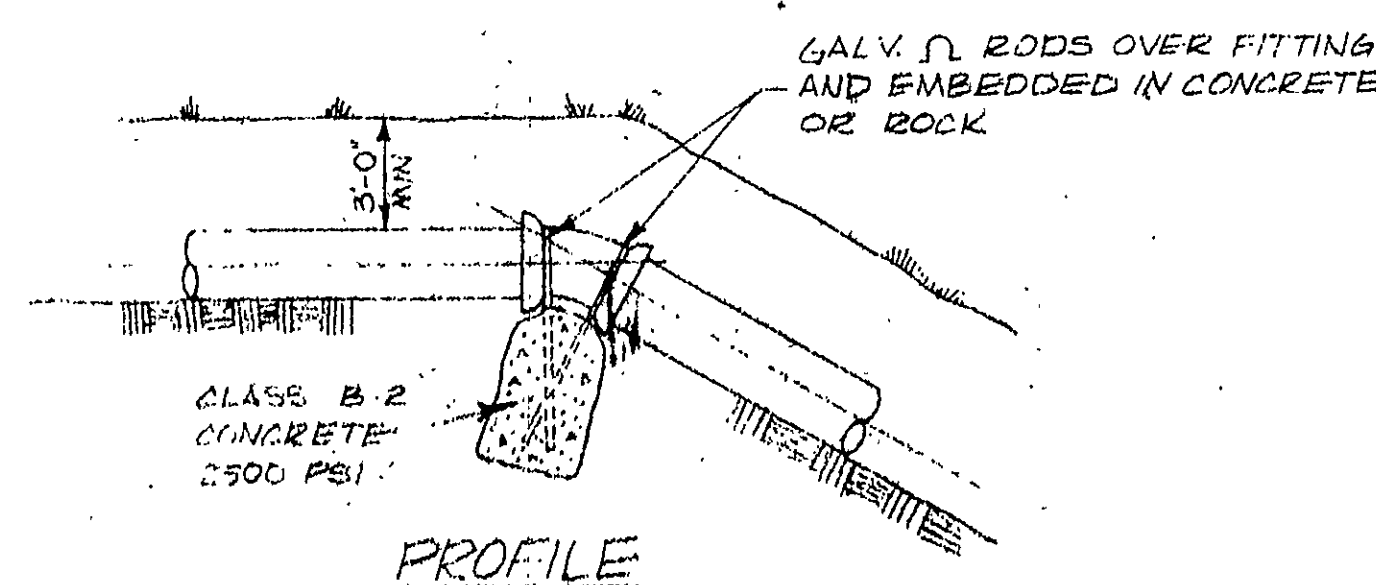
TEE & WYE

NOTE: ALL FITTINGS SHALL BE BLOCKED AS SHOWN

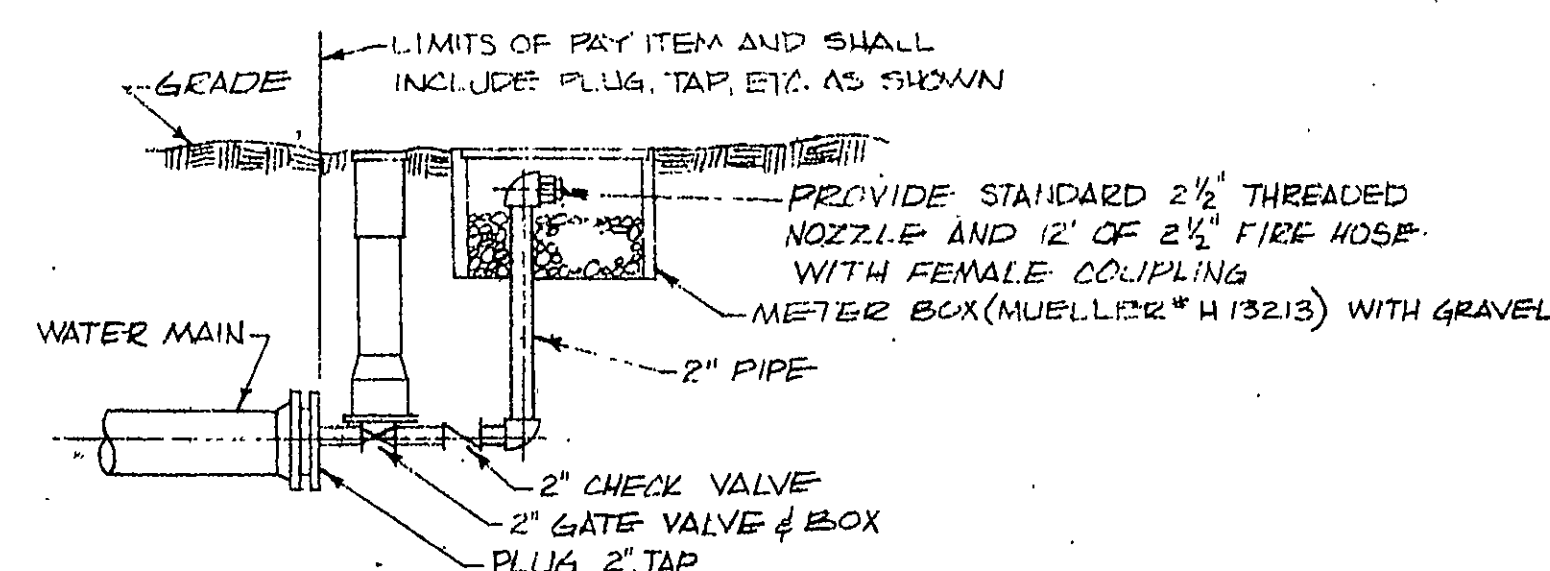
THRUST BLOCK DETAILS

PIPE DIA.	TEE CROSS 90°		45° or WYE		22 1/2°	
	A	B	A	B	A	B
4"	12"	12"	12"	12"	12"	12"
6"	12"	12"	12"	12"	12"	12"
8"	15"	24"	12"	18"	12"	12"

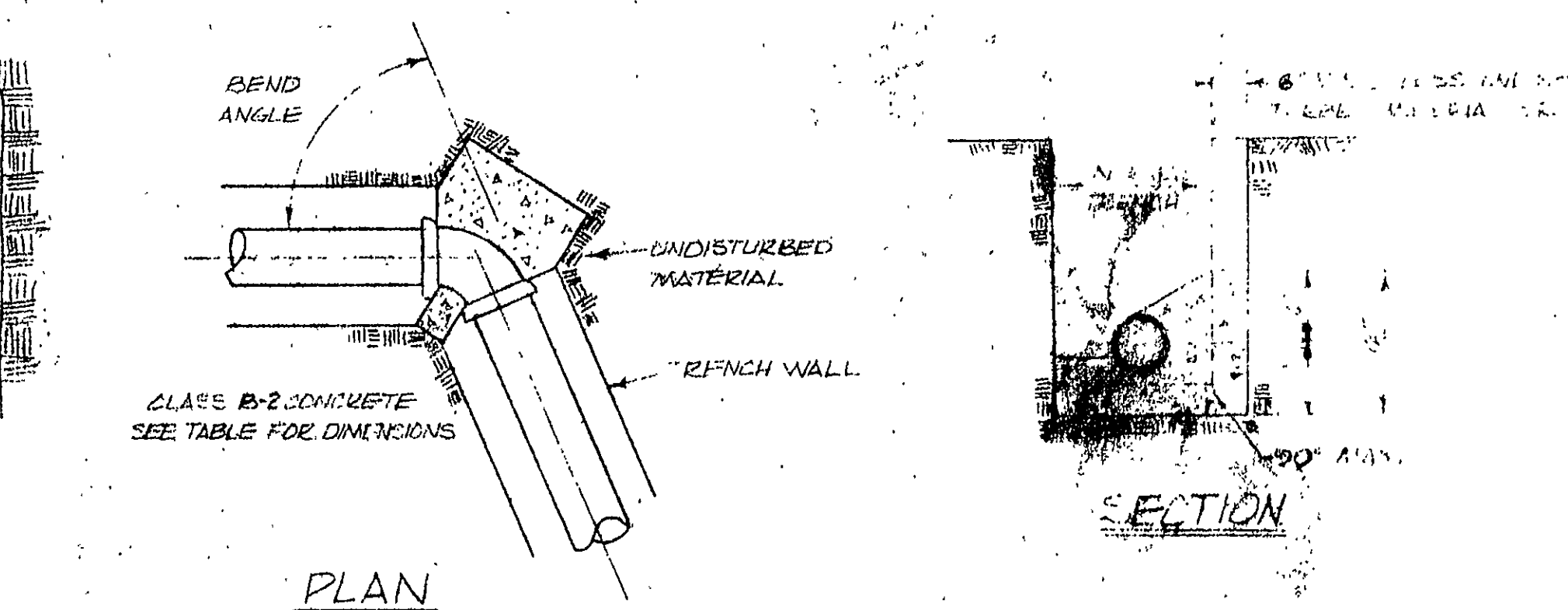
THRUST BLOCK SIZES



TYPICAL HIGHWAY CROSSING

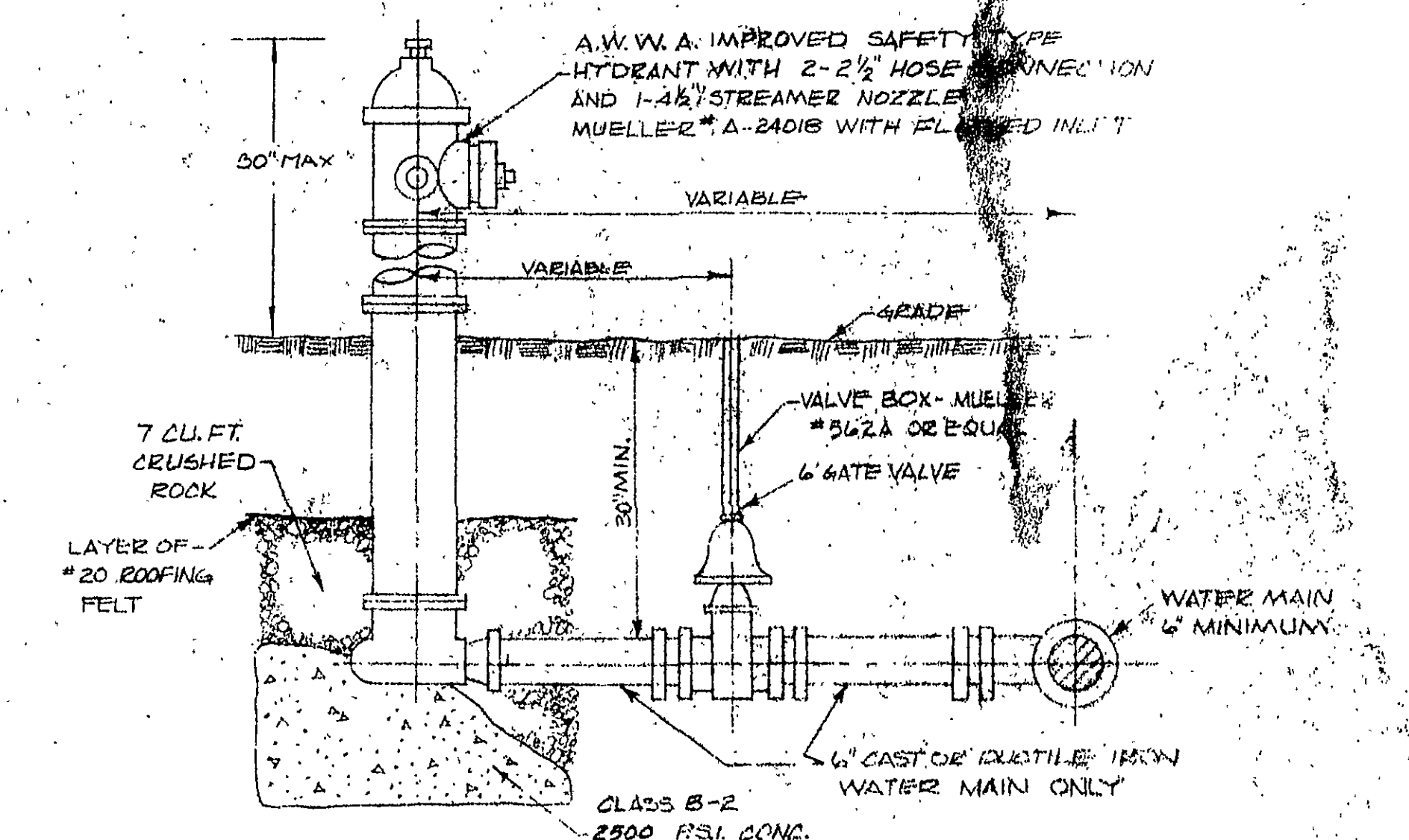


FLUSHING HYDRANT

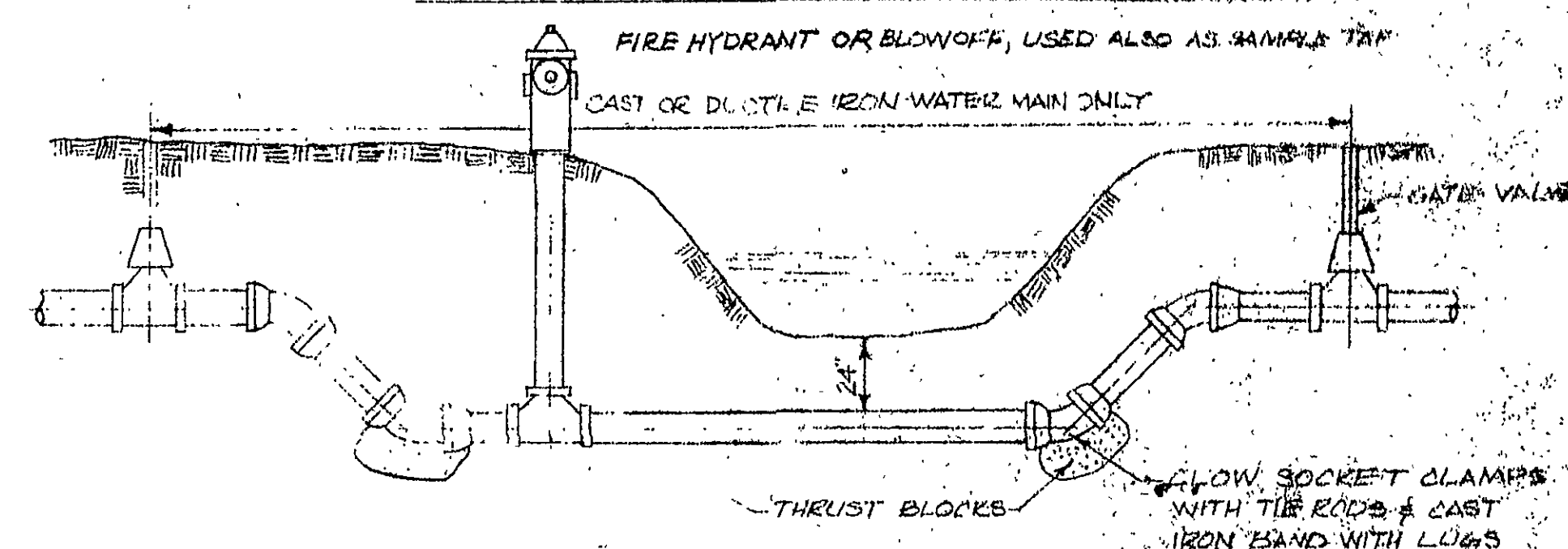


- NOTES:
1. AREA OF THRUST BLOCKS ARE BASED ON 1500 TO 4000 PSF LATERAL BEARING CAPACITY AND A TEST PRESSURE WITHIN PIPE OF 150 PSI.
 2. THRUST BLOCKS ARE REQUIRED AT ALL BEND OF MORE THAN 5°.
 3. BEARING SURFACE OF THRUST BLOCKS MUST BE NORMAL TO RESULTANT THRU ON SUITABLE UNDISTURBED MATERIAL.
 4. KEEP CONCRETE CLEAR OF JOINT & JOINT ACCESSORIES.

HORIZONTAL THRUST BLOCK DETAIL



TYPICAL FIRE HYDRANT ASSEMBLY



NOTE: WHERE BEDROCK IS ENCOUNTERED IN THE STREAM BED THE TOP OF THE WATER MAIN MAY BE LAID SIX (6) INCHES BELOW THE NORMAL STREAM BED WITH THE PIPE ENCASED IN CONCRETE. ALL ITEMS SHALL BE PAID AT UNIT BID PRICES.

TYPICAL CREEK CROSSING

FITTING SIZE	ROD SIZE	NO. RODS	EMBEDMENT
4", 6", 8"	6"	2	30"

FITTING SIZE	VOLUME OF THRUST BLOCKS IN CU. YDS.			
	90°	45°	22 1/2°	11 1/4°
4	0.7	0.3	0.1	—
6	1.3	0.5	0.3	—
8	2.3	1.1	0.5	0.2

1. KEEP CONCRETE CLEAR OF JOINT & JOINT ACCESSORIES.
2. THRUST BLOCKS FOR VERTICAL UP BENDS SHALL BE THE SAME AS FOR HORIZONTAL BENDS.

VERTICAL THRUST BLOCK DETAIL