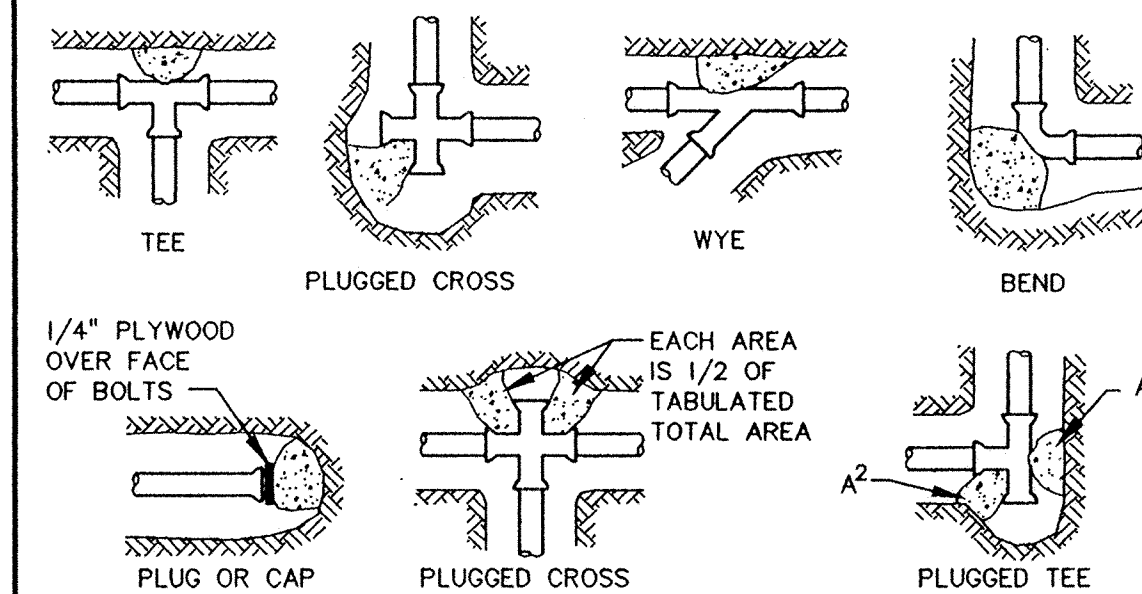
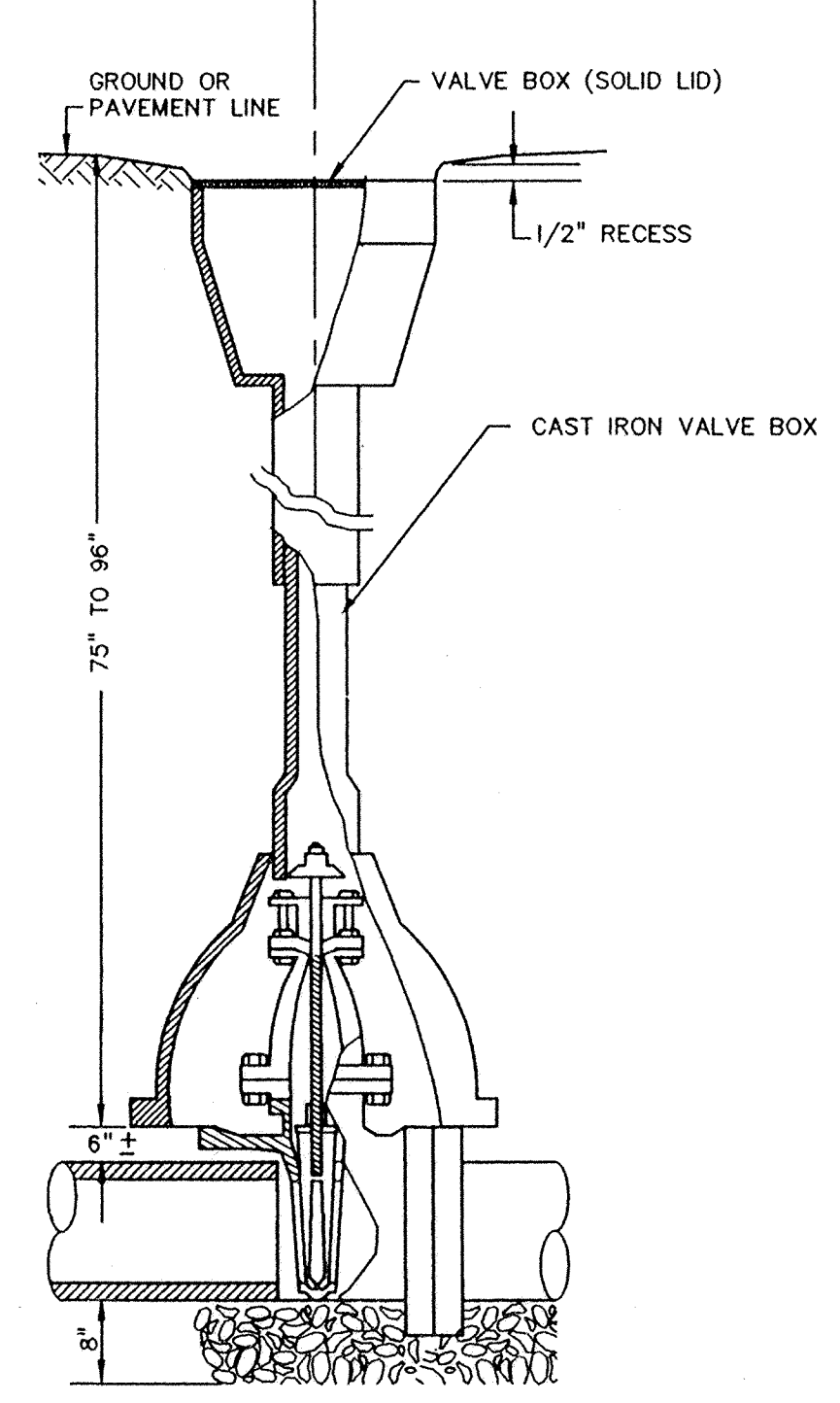


RECORD DRAWINGS

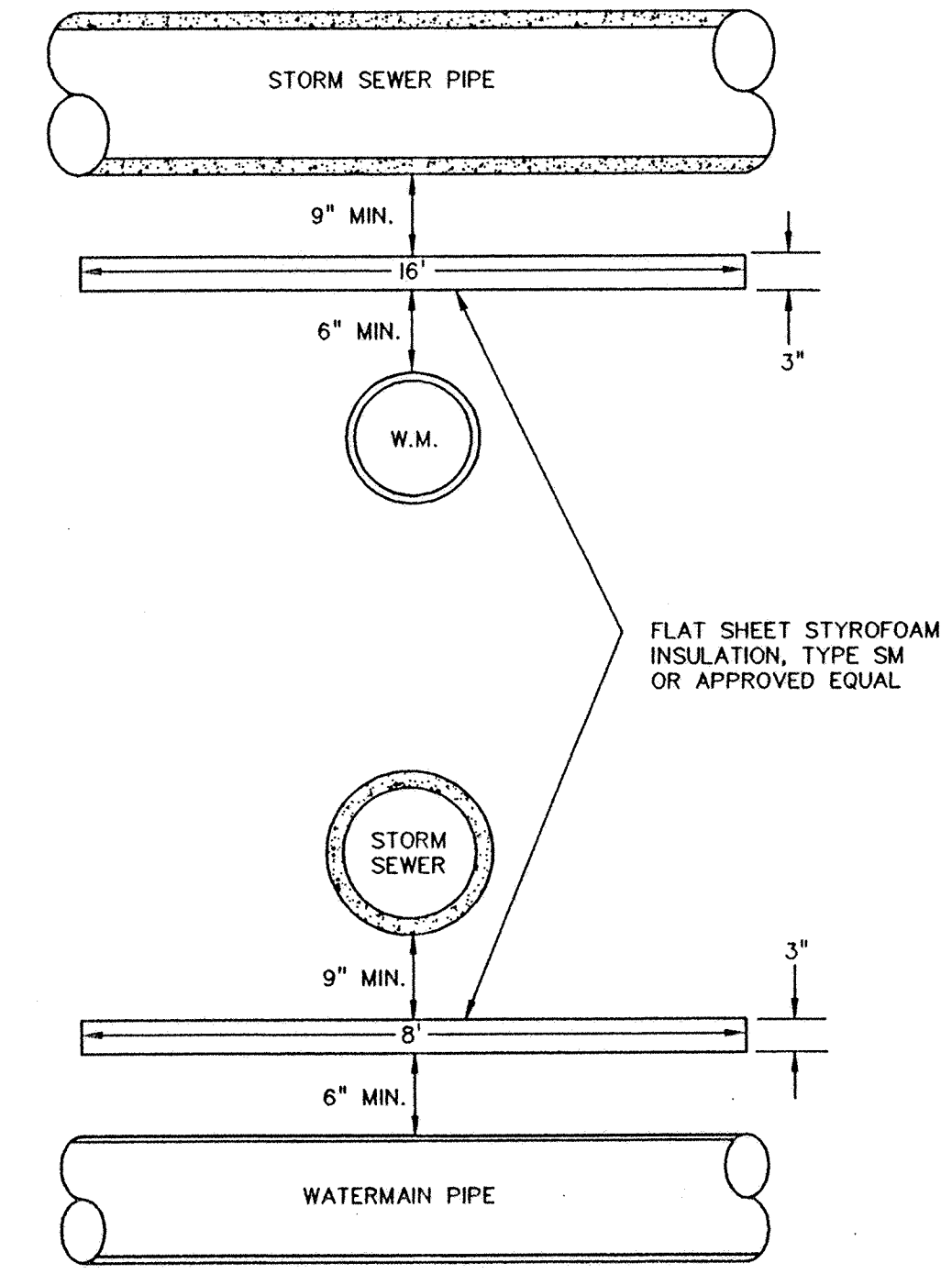


NOMINAL FITTING SIZE (INCHES)	TEE, WYE, PLUG OR CAP	90° BEND, PLUGGED CROSS	TEE PLUGGED ON RUN		45° BEND	22 1/2° BEND	11 1/4° BEND
			A ¹	A ²			
4	1.0	1.4	1.9	1.4	1.0	---	---
6	2.1	3.0	4.3	3.0	1.6	1.0	---
8	3.8	5.3	7.6	5.4	2.9	1.5	1.0
10	5.9	8.4	11.8	8.4	4.6	2.6	1.2
12	8.5	12.0	17.0	12.0	6.6	3.4	1.7
14	11.5	16.3	23.0	16.3	8.9	4.6	2.3
16	15.0	21.3	30.0	21.3	11.6	6.0	3.0
18	19.0	27.0	38.0	27.0	14.6	7.6	3.8
20	23.5	33.3	47.0	33.3	18.1	9.4	4.7
24	34.0	48.0	68.0	48.0	26.2	13.6	6.8

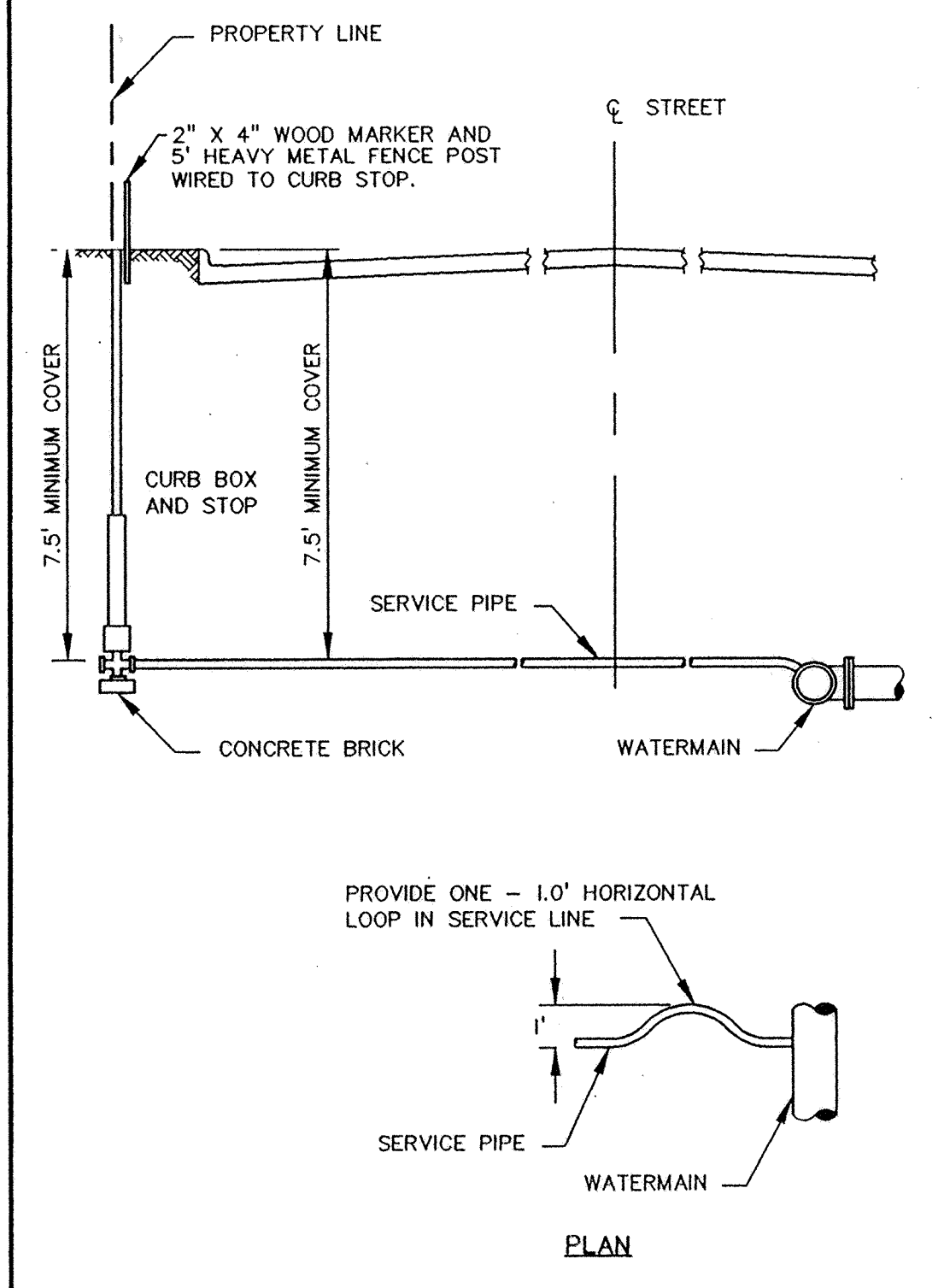
- NOTES:**
1. CONCRETE THRUST BLOCKING TO BE POURED AGAINST UNDISTURBED EARTH.
 2. KEEP CONCRETE CLEAR OF JOINT AND ACCESSORIES.
 3. IF NOT SHOWN ON PLANS, REQUIRED BEARING AREAS AT FITTING SHALL BE AS INDICATED ABOVE, ADJUSTED IF NECESSARY, TO CONFORM TO THE TEST PRESSURE(S) AND ALLOWABLE SOIL BEARING STRESS(ES).
 4. BEARING AREAS AND SPECIAL BLOCKING DETAILS SHOWN ON PLANS TAKE PRECEDENCE OVER BEARING AREAS AND BLOCKING DETAILS SHOWN IN THIS STANDARD DETAIL.
 5. ABOVE BEARING AREAS BASED ON TEST PRESSURE OF 150 P.S.I. AND AN ALLOWABLE SOIL BEARING STRESS OF 2000 POUNDS PER SQUARE FOOT. TO COMPUTE BEARING AREAS FOR DIFFERENT TEST PRESSURES AND SOIL BEARING STRESSES, USE THE FOLLOWING EQUATION: BEARING AREA = (TEST PRESSURE/150) X (2000/SOIL BEARING STRESS) X (TABLE VALUE).



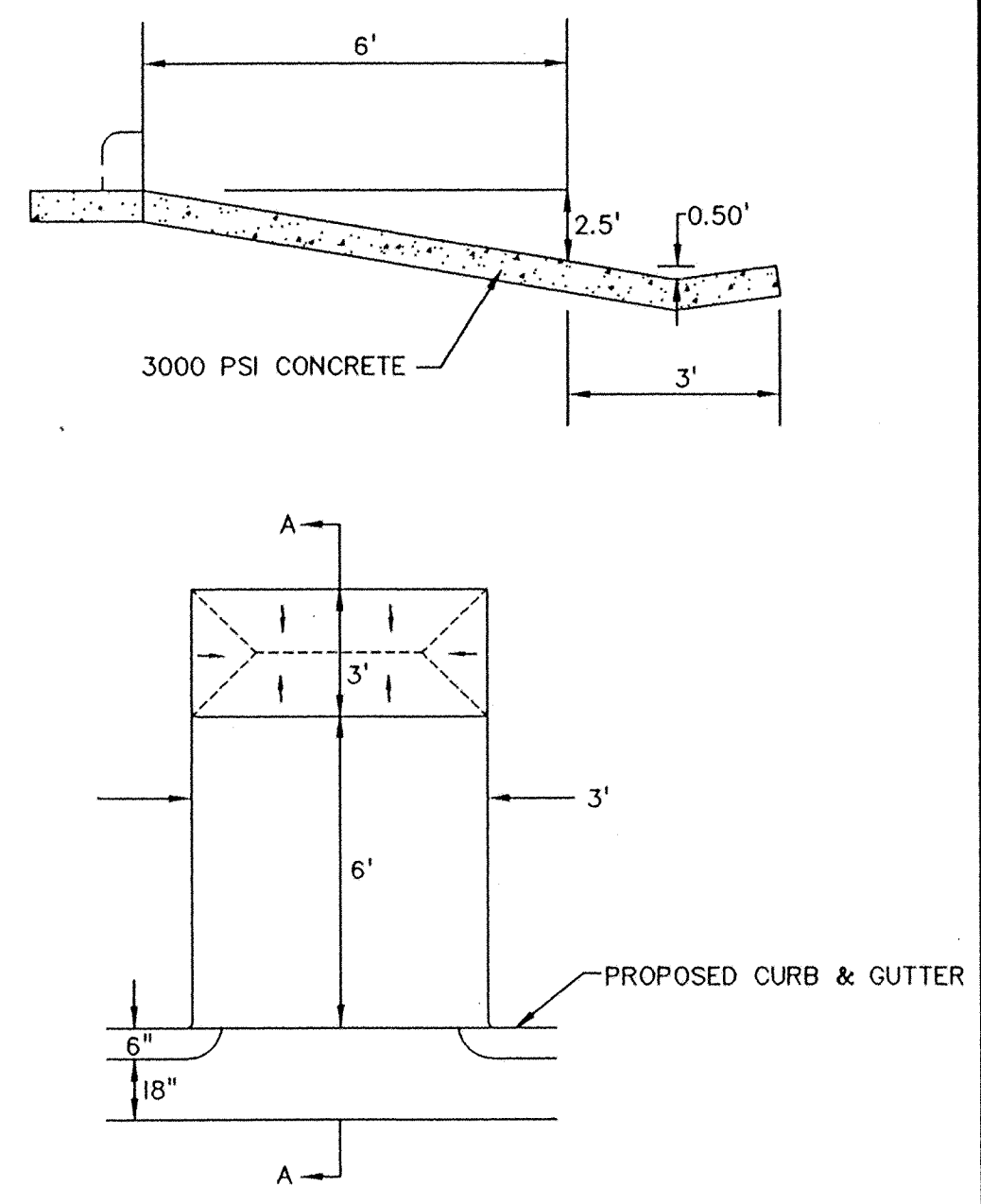
GATE VALVE AND BOX INSTALLATION (W-SP-06)



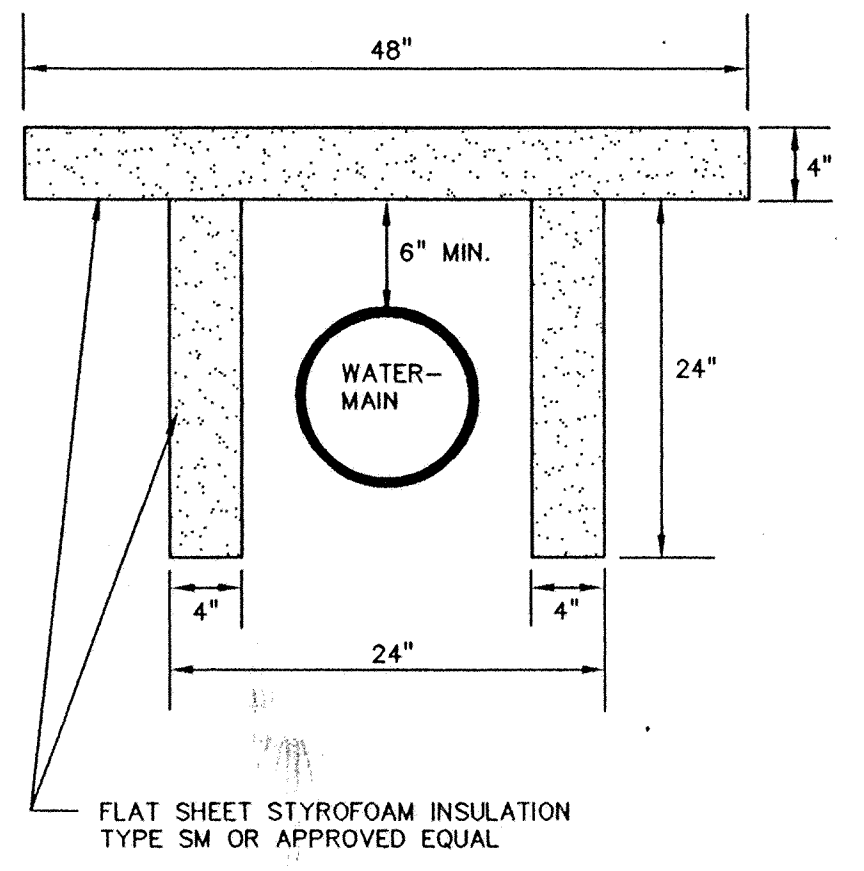
TYPICAL WATERMAIN INSULATION (W-06)



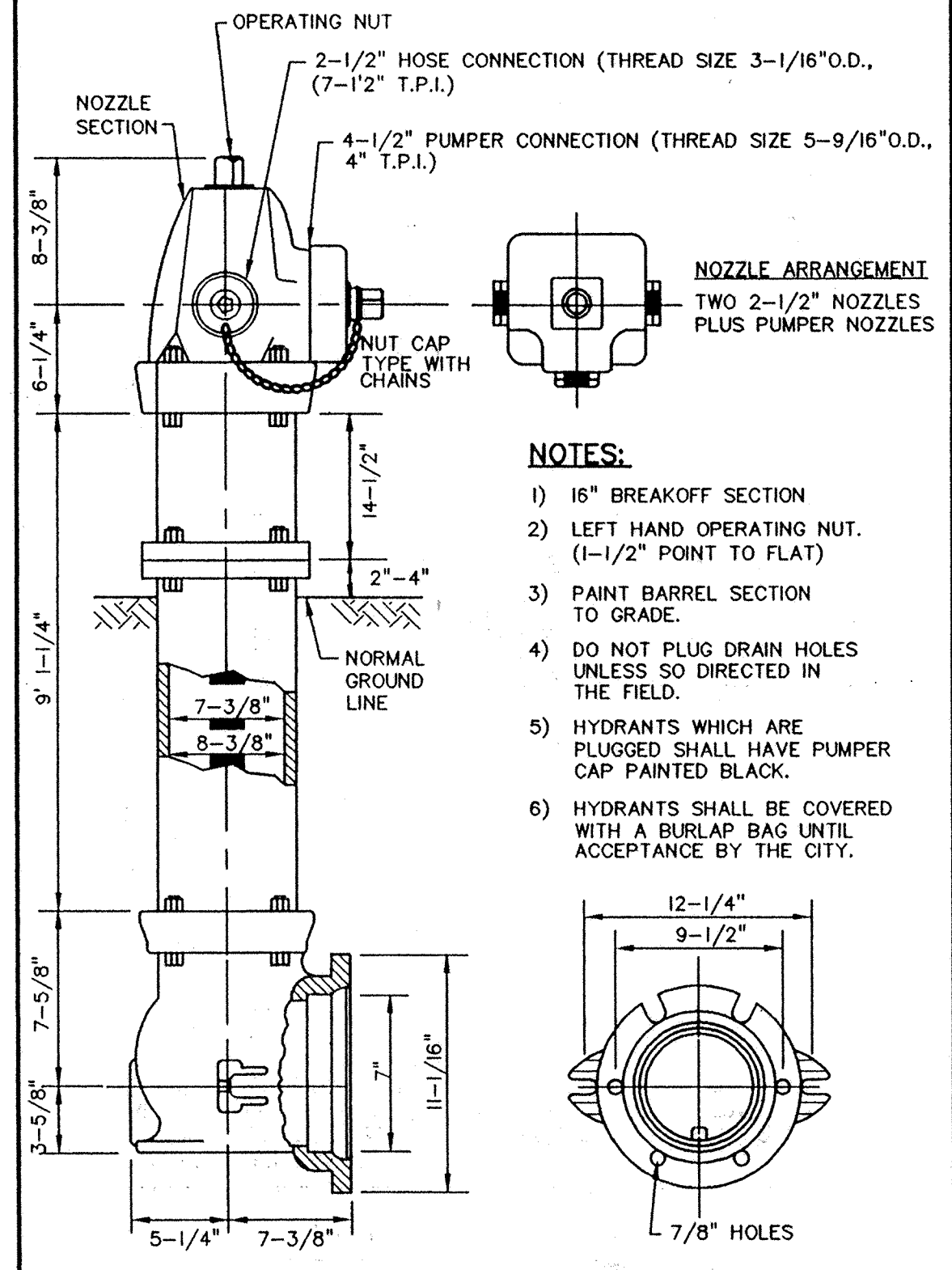
TYPICAL SERVICE DETAIL



CONCRETE SPILLWAY DETAIL N.T.S

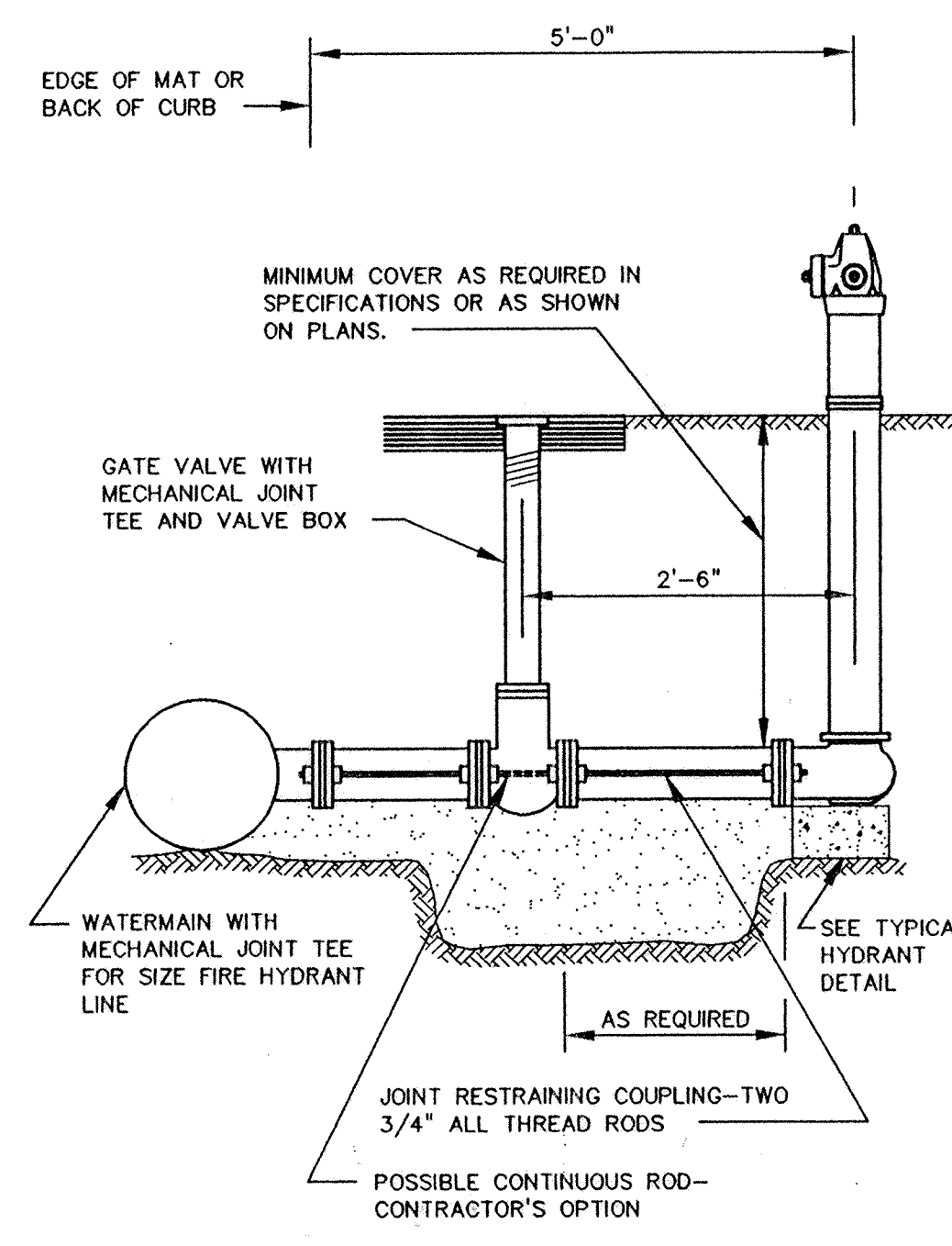


TYPICAL SHALLOW WATERMAIN INSULATION (W-SP-03)

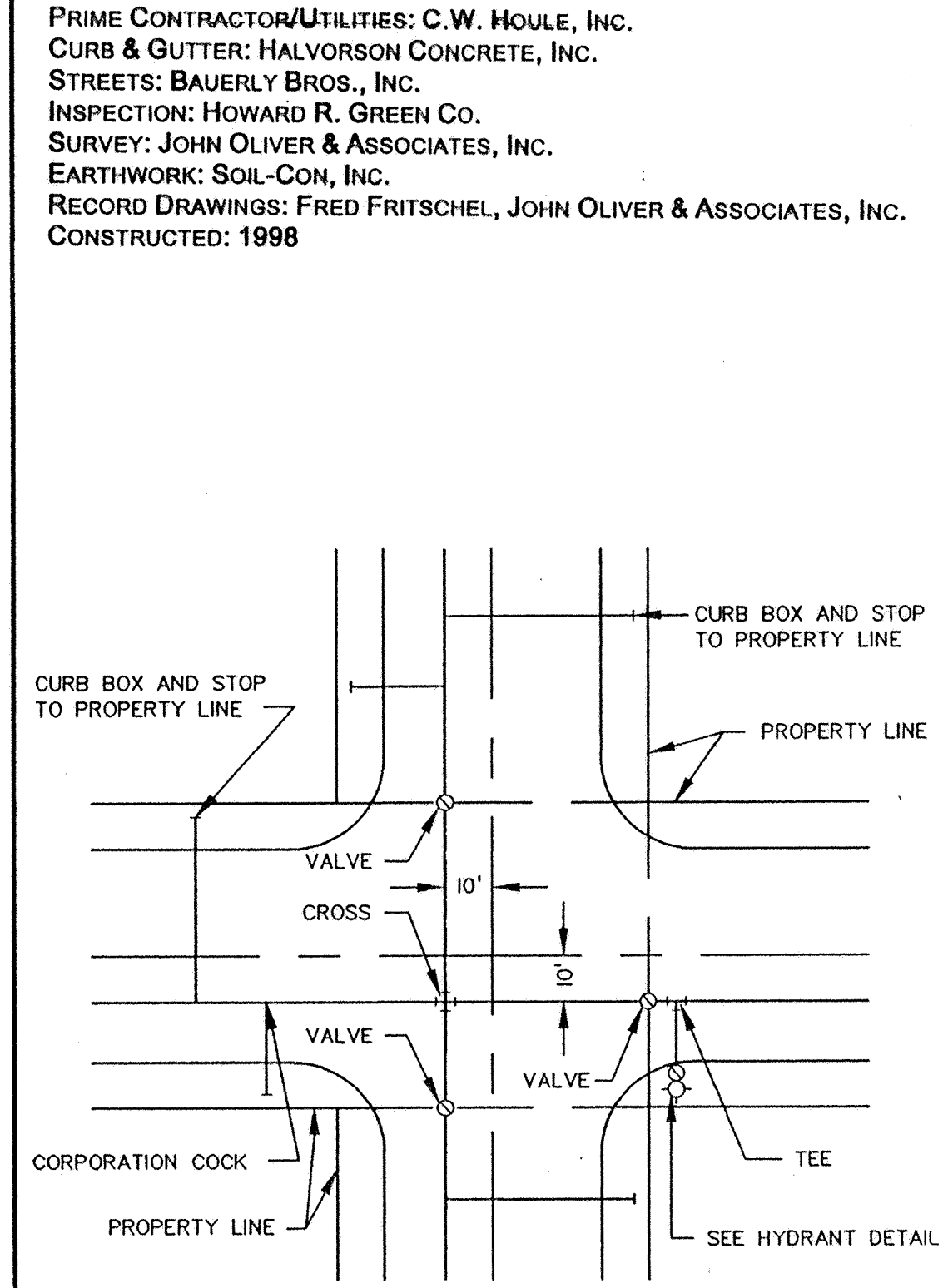


- NOTES:**
- 1) 16" BREAKOFF SECTION
 - 2) LEFT HAND OPERATING NUT. (1-1/2" POINT TO FLAT)
 - 3) PAINT BARREL SECTION TO GRADE.
 - 4) DO NOT PLUG DRAIN HOLES UNLESS SO DIRECTED IN THE FIELD.
 - 5) HYDRANTS WHICH ARE PLUGGED SHALL HAVE PUMPER CAP PAINTED BLACK.
 - 6) HYDRANTS SHALL BE COVERED WITH A BURLAP BAG UNTIL ACCEPTANCE BY THE CITY.

PACER TRAFFIC FLANGE HYDRANT (W-01)



RODDING DETAIL



TYPICAL WATER LAYOUT

REV. NO.	DATE	DESCRIPTION
1	10/14/97	SPILLWAY DETAIL
2	5/18/77	Record Drawing

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.
 Signed: *[Signature]* Reg. No. 14960
 Date: 9/16/97

DATE: 9/26/97
 DESIGN BY: GD
 DRAWN BY: BG
 CHECKED BY: GDJB
 DWG FILE: 8-PPDET.
 TEXT FILE: NONE
 FILE NO.: 7024.20-03

PRIME CONTRACTOR/UTILITIES: C.W. HOULE, INC.
 CURB & GUTTER: HALVORSON CONCRETE, INC.
 STREETS: BAUERLY BROS., INC.
 INSPECTION: HOWARD R. GREEN CO.
 SURVEY: JOHN OLIVER & ASSOCIATES, INC.
 EARTHWORK: SOIL-COM, INC.
 RECORD DRAWINGS: FRED FRITSCHER, JOHN OLIVER & ASSOCIATES, INC.
 CONSTRUCTED: 1998

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 Elk River, Minnesota
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 201 W. Transverser Trail, Suite 200
 Burnsville, MN 55337
 (612)894-3045 (FAX)894-3049

LAFAYETTE WOODS
 SECOND ADDITION
 ELK RIVER, MN
 WINDSOR DEVELOPMENT L.L.P.
 DETAILS

SHEET NO. 8 OF 9