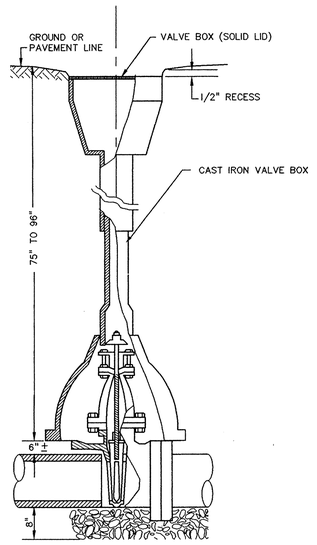
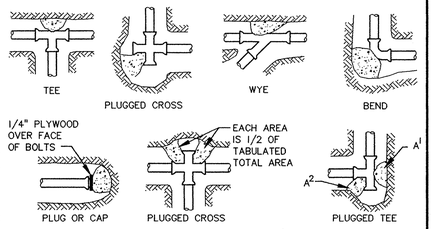
RECORD DRAWINGS



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

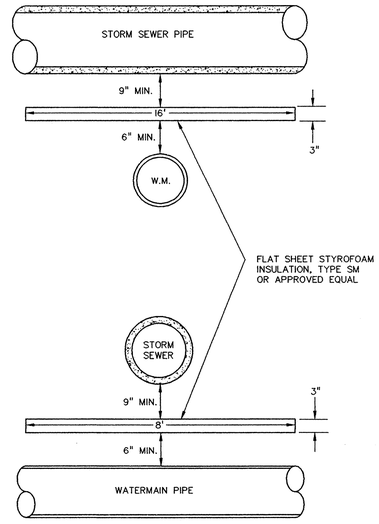


NOMINAL FITTING SIZE (INCHES)	TEE, WYE, PLUG OR CAP	90° BEND, PLUGGED CROSS	TEE PLUGGED ON RUN		45° BEND	22 1/2° BEND	11 1/4° BEND
			A^1	A^2			
4	1.0	1.4	1.9	1.4	1.0	----	----
6	2.1	3.0	4.3	3.0	1.6	1.0	----
8	3.8	5.3	7.6	5.4	2.9	1.5	1.0
10	5.9	8.4	11.8	8.4	4.6	2.6	1.2
12	8.5	12.0	17.0	12.0	6.6	3.4	1.7
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

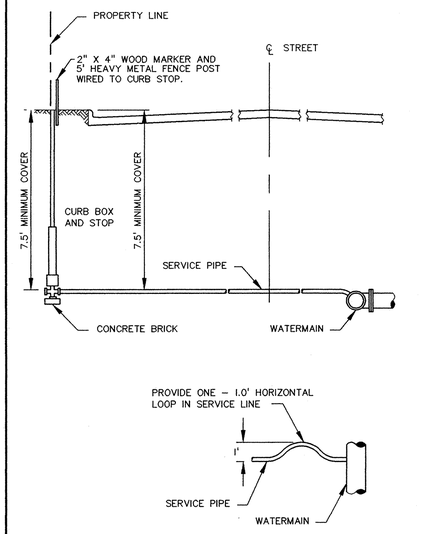
NOTES:

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).

THRUST BLOCKING DETAIL



TYPICAL WATERMAIN INSULATION (W-06)



PLAN

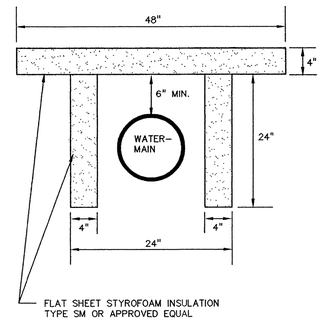
TYPICAL SERVICE DETAIL

REV NO.	DATE	DESCRIPTION
1	2/3/99	CHANGED FROM 4TH TO 3RD
2	3/15/99	CITY COMMENTS
3	1/5/00	Record Drawings

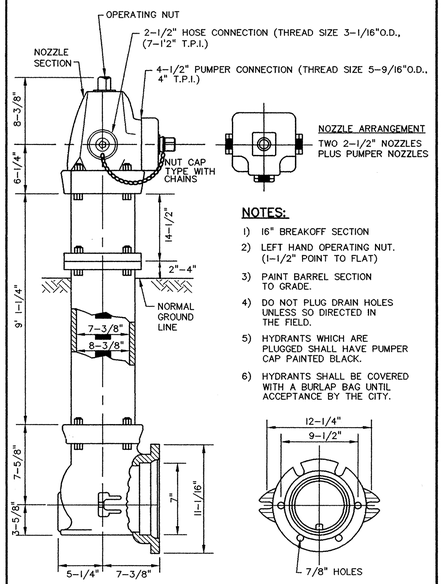
DATE: 10/31/97
DESIGN BY: JB
DRAWN BY: BG
CHECKED BY: JB
DWG FILE: 7-PPDET.
TEXT FILE: NONE
FILE NO.: 7024.40-03

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: John C. Fruth
Date: 2/3/99 Reg. No. 14960



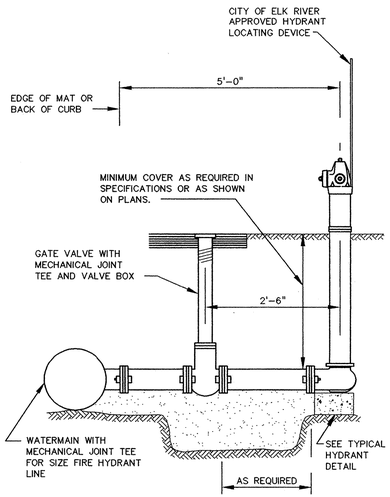
TYPICAL SHALLOW WATERMAIN INSULATION (W-SP-03)



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.

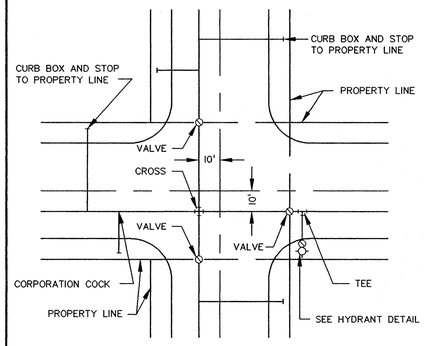
PACER TRAFFIC FLANGE HYDRANT (W-01)



INSTALL MEGALUG OR APPROVED EQUIVALENT JOINT RESTRAINT AT EACH MECHANICAL JOINT.

RODDING DETAIL

PRIME CONTRACTOR/UTILITIES: C. W. HOULE, INC.
CURB & GUTTER: HALVORSON CONCRETE, INC.
STREETS: BAUERLY BROS., INC.
INSPECTION: STEVE TORGESON, HOWARD R. GREEN CO.
SURVEY: JOHN OLIVER & ASSOCIATES, INC.
EARTHWORK: SOIL-CON, INC.
RECORD DRAWINGS: FRED FRITSCHEL, JOHN OLIVER & ASSOCIATES, INC.
CONSTRUCTED: 1999



TYPICAL WATER LAYOUT

John Oliver & Associates, Inc.
Civil Engineering, Land Surveying, Land Planning
580 Dodge Avenue
Elk River, Minnesota
(612)441-2072 (FAX)441-5665
201 W. Travelers Trail, Suite 200
Burnsville, MN 55337
(612)894-3045 (FAX)894-3049

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

SHEET NO. 7 OF 8

DRAWING NUMBER
LAFAY3.99
7

DRAWING NUMBER
SAFCO PRODUCTS • NEW HOPE, MINNESOTA
REORDER BY PART NUMBER 6582