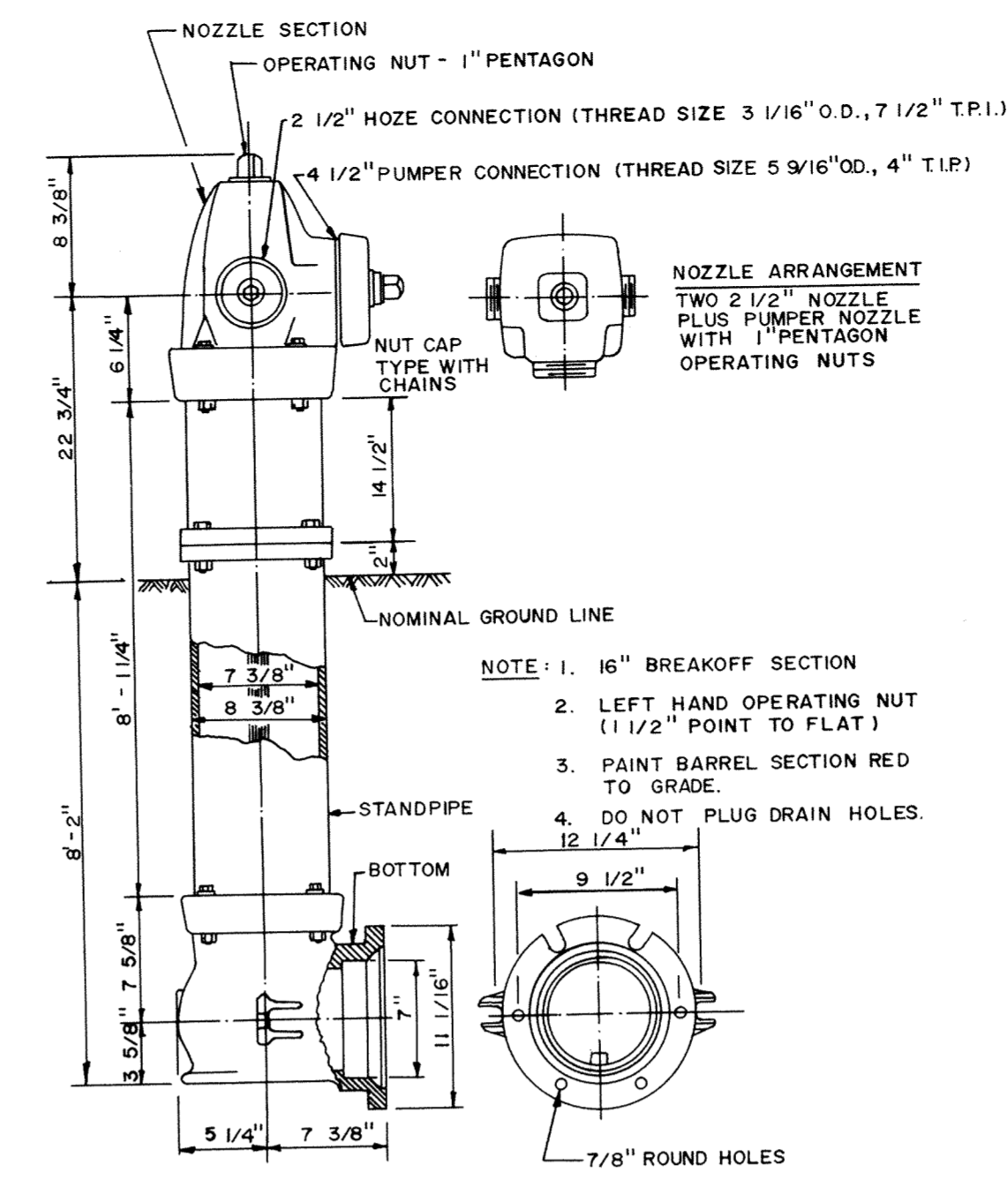
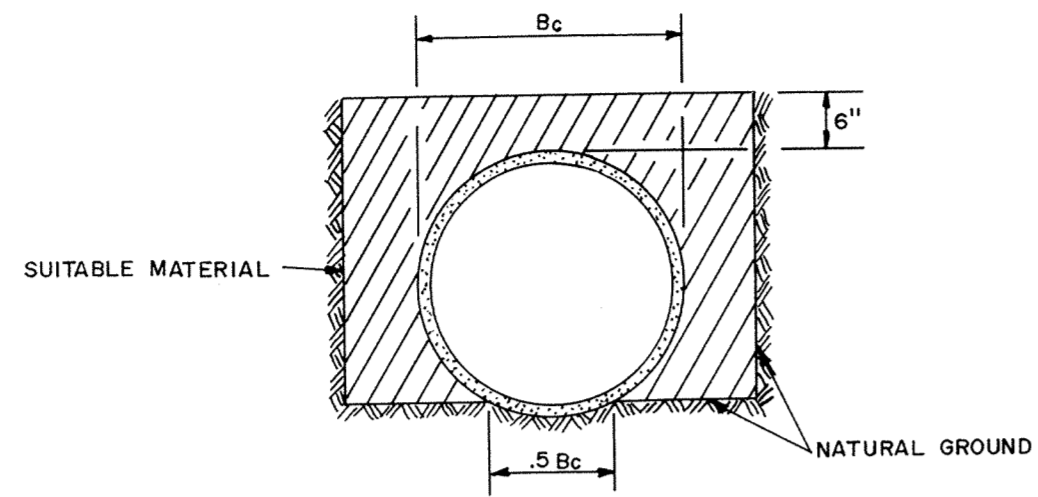
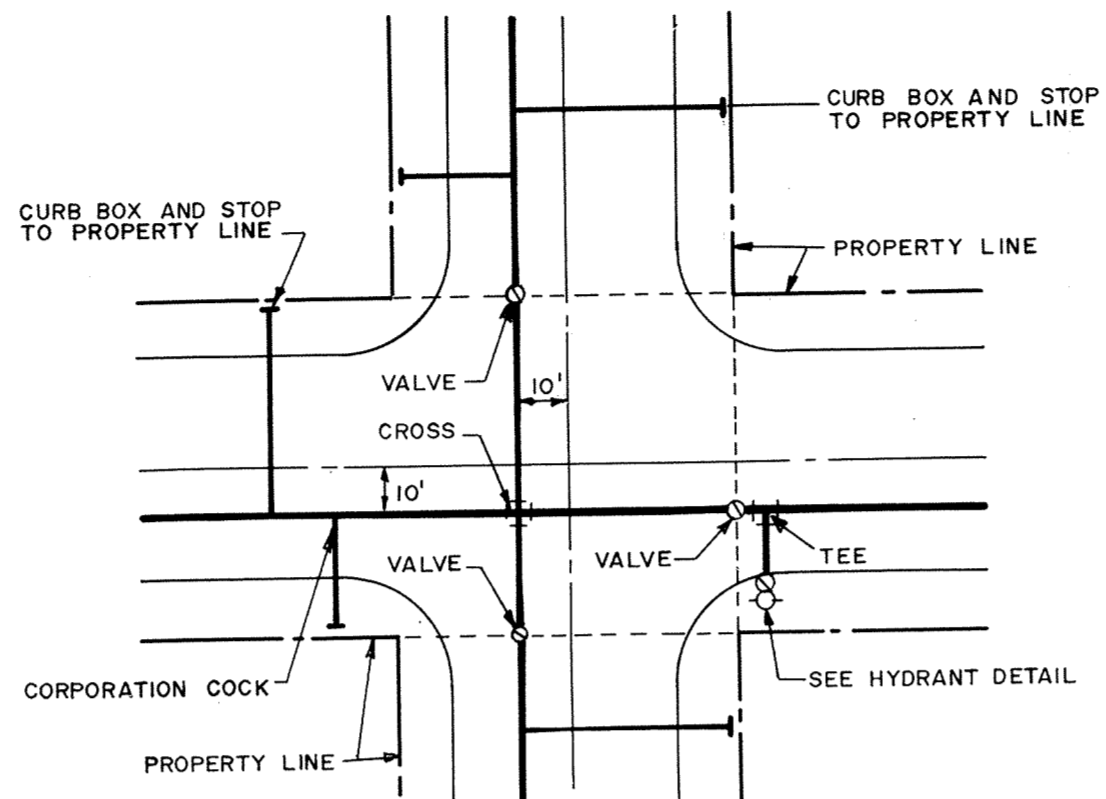


NOMINAL FITTING SIZE, INCHES	TEE, WYE, PLUG OR CAP	90° BEND, PLUGGED CROSS	TEE PLUGGED ON RUN		45° BEND	22 1/2° BEND	11 1/4° BEND
			A'	A"			
4	1.0	1.4	1.9	1.4	1.0	—	—
6	2.1	3.0	4.3	3.0	1.6	1.0	—
8	3.8	5.3	7.6	5.4	2.9	1.5	1.0
10	5.9	8.4	11.8	8.4	4.6	2.6	1.2
12	8.5	12.0	17.0	12.0	6.6	3.4	1.7
14	11.5	16.3	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

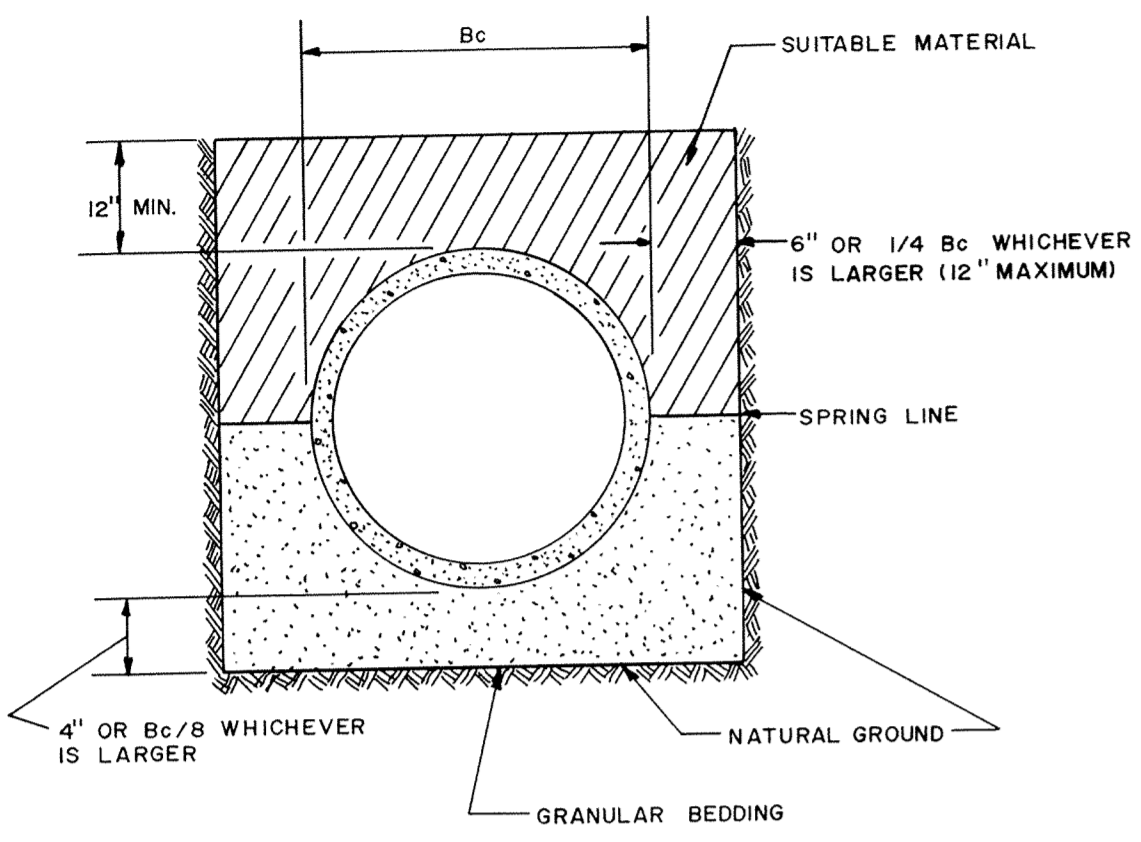
- NOTE:
- CONCRETE THRUST BLOCKING TO BE POURED AGAINST UNDISTURBED EARTH.
 - KEEP CONCRETE CLEAR OF JOINT AND ACCESSORIES.
 - IF NOT SHOWN ON PLANS, REQUIRED BEARING AREAS AT FITTING SHALL BE AS INDICATED ABOVE, ADJUSTED IF NECESSARY, TO CONFORM TO THE TEST PRESSURE (S) AND ALLOWABLE SOIL BEARING STRESS (ES).
 - BEARING AREAS AND SPECIAL BLOCKING DETAILS SHOWN ON PLANS TAKE PRECEDENCE OVER BEARING AREAS AND BLOCKING DETAILS SHOWN THIS STANDARD DETAIL.
 - 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)



- NOTE:
- 16" BREAKOFF SECTION
 - LEFT HAND OPERATING NUT (1 1/2" POINT TO FLAT)
 - PAINT BARREL SECTION RED TO GRADE.
 - DO NOT PLUG DRAIN HOLES 12 1/4"

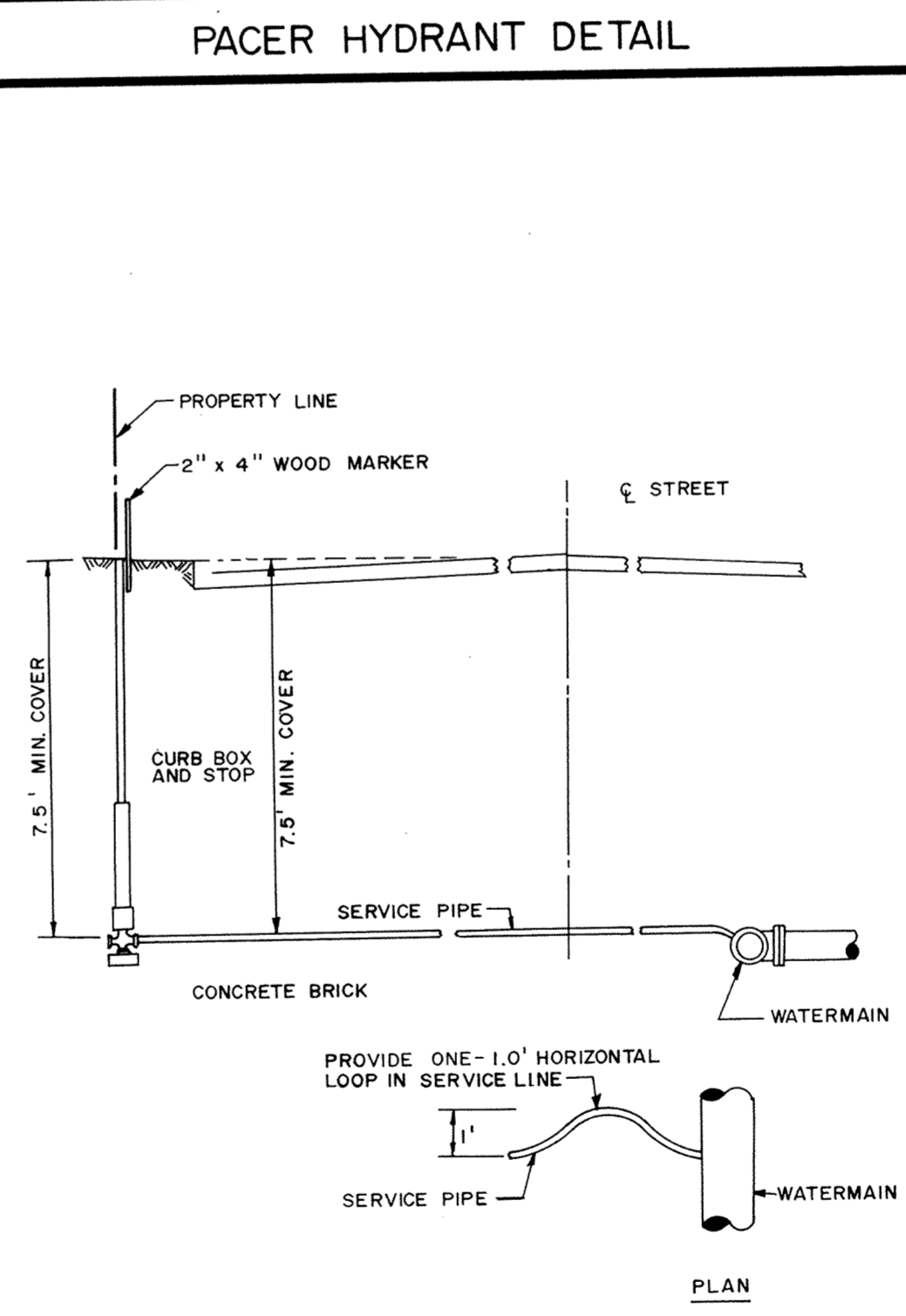


NOTE: ALL COSTS OF EXCAVATION BELOW GRADE AND PLACEMENT OF GRANULAR BEDDING SHALL BE INCLUDED IN THE BID PRICES FOR PIPE ITEMS.



NOTE: ALL COSTS OF EXCAVATION BELOW GRADE AND PLACEMENT OF GRANULAR BEDDING SHALL BE INCLUDED IN THE BID PRICES FOR PIPE ITEMS.

THRUST BLOCKING DETAIL



Freezeless Yard Hydrants IOWA® Models Y34 and Y1

IOWA® hydrants are used for filling field spray equipment, cleaning tools and equipment, lawn and garden care, watering livestock, fire protection — immediate water flow even in sub-zero temperatures.

ADJUSTABLE LINK — provides easy and positive adjustment of the lever lock-in tension.

ROD GUIDE — eliminates side pull on rod, reduces wear on packing, packing nut and stem.

FLOW-FINDER and LOCK — a simple cam that can be set to automatically obtain the same flow each time or lock against accidental opening.

LONG LIFE PACKING — Teflon impregnated packing in deep chamber with adjustable packing nut.

ONE PIECE VARIABLE FLOW PLUNGER — Large cushion type seal for longer life — is not easily damaged and assures positive shut-off even when foreign particles are present. Automatic drain feature — plunger positively opens drain to prevent freezing — positively closes at any flow to prevent wasting water.

INTERCHANGEABLE PARTS — Although many important improvements have been made, parts for new IOWA® hydrants can be used in any made during the past 40 years or more.

SPECIFICATIONS:

MODEL Y34
 INLET 1/2" N.P.T.
 CASING 1" galvanized steel pipe
 OPERATING ROD 1/2" galvanized steel pipe
 DRAIN HOLE Tapped-1/4" N.P.T.
 BRASS NOZZLE 1/2" Male hose thread

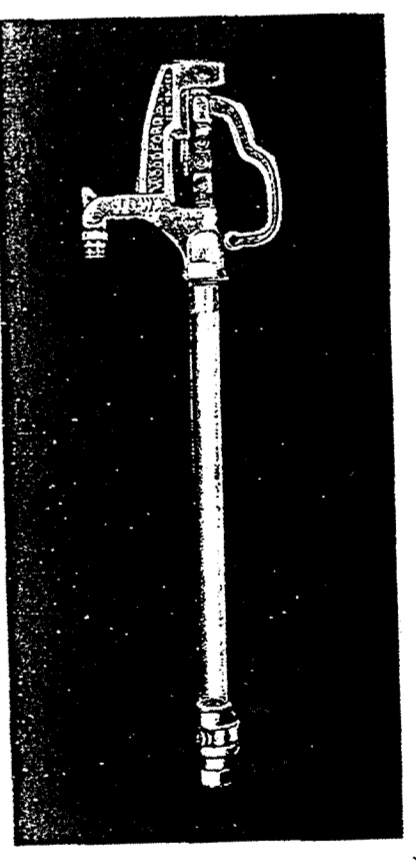
MODEL Y1
 INLET 1" N.P.T.
 CASING 1 1/2" galvanized steel pipe
 OPERATING ROD 3/4" galvanized steel pipe
 DRAIN HOLE Tapped-1/4" N.P.T.
 BRASS NOZZLE 1/2" Male hose thread

OPTIONAL
 1" brass pipe outer casing (Y34 only)
 3/4" brass pipe operating rod
 DRAIN HOLE Tapped-1/4" N.P.T.
 BRASS NOZZLE 1/2" Male hose thread

SHIPPING WEIGHT (Approximate, pounds)

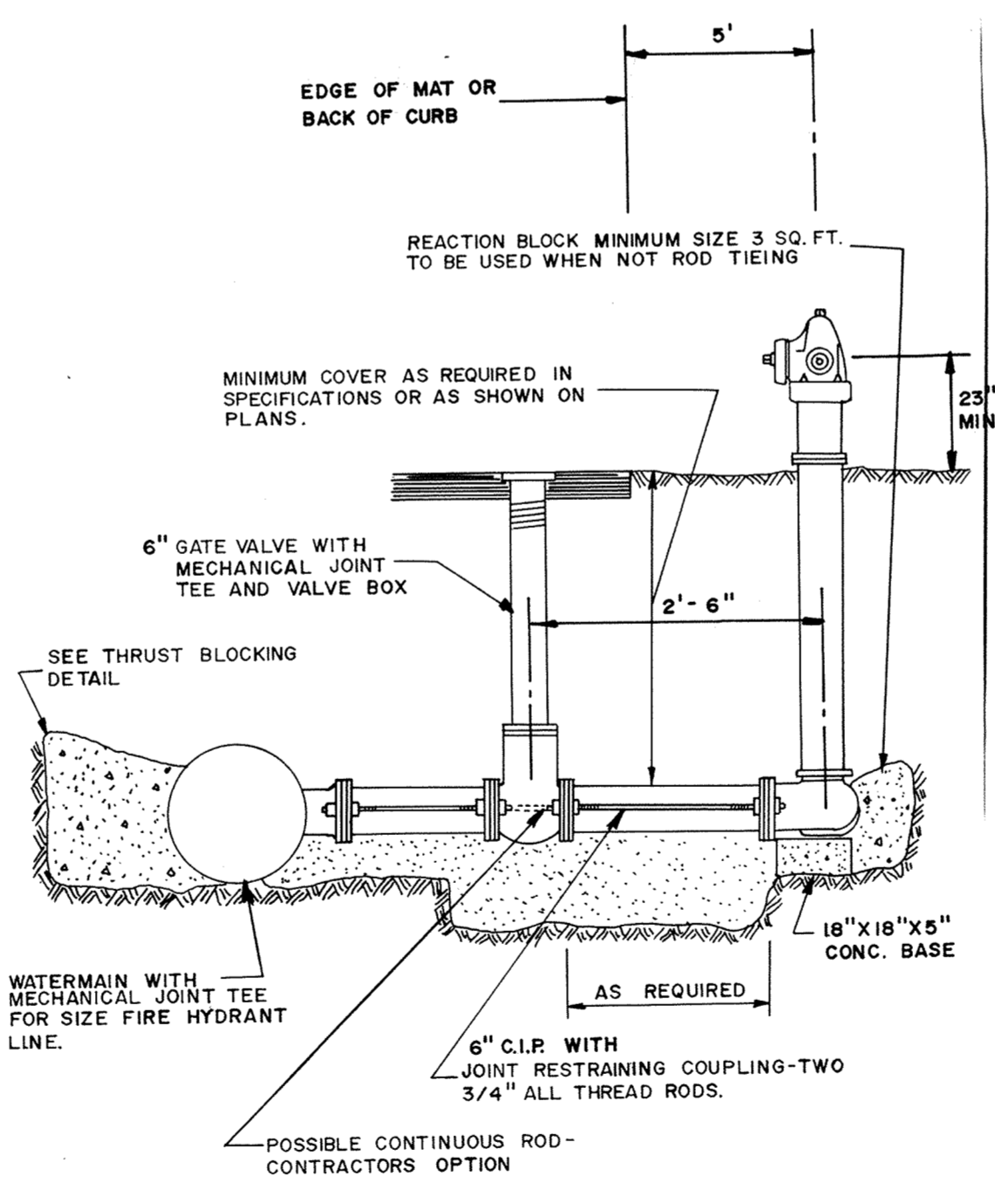
BLURRY DEPTH (feet)	1	2	3	4	5	6	7
MODEL Y34	13	17	19	22	24	26	28
MODEL Y1	18	25	28	32	35	38	41

WHEN ORDERING, SPECIFY MODEL AND BLURRY DEPTH.

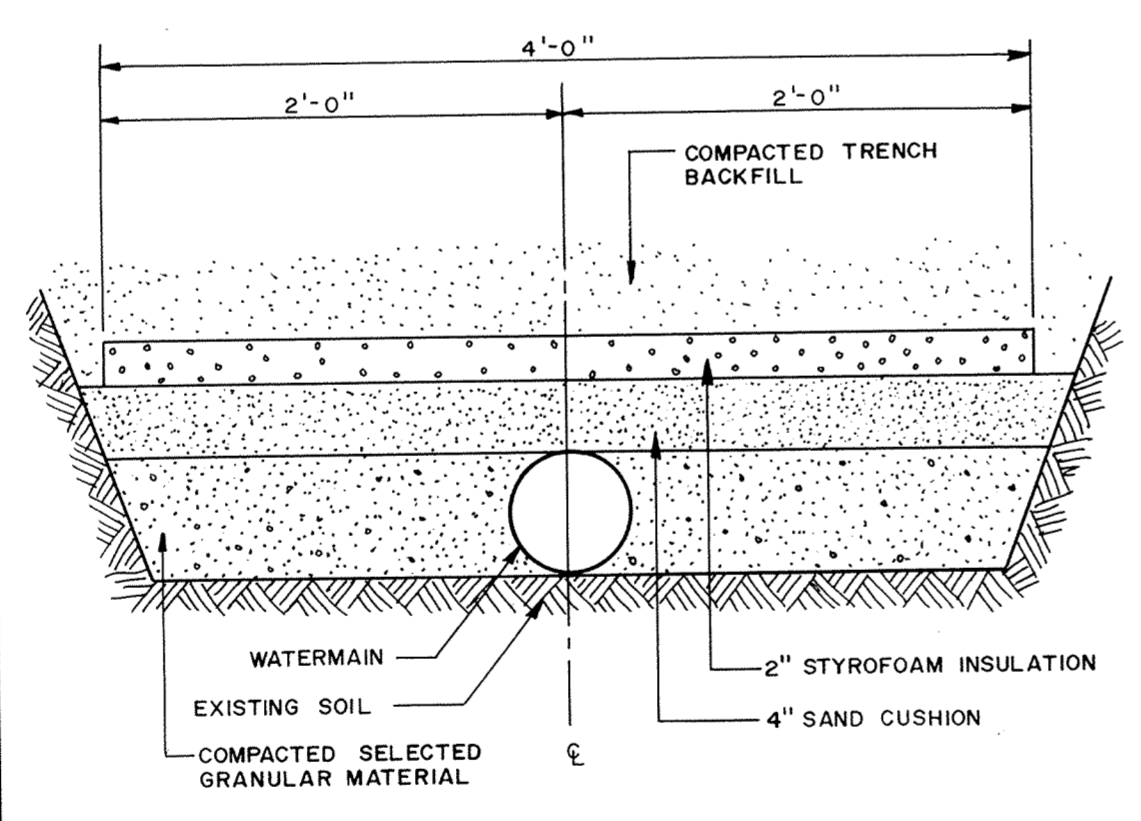


RECORD PLAN JAN. 1991

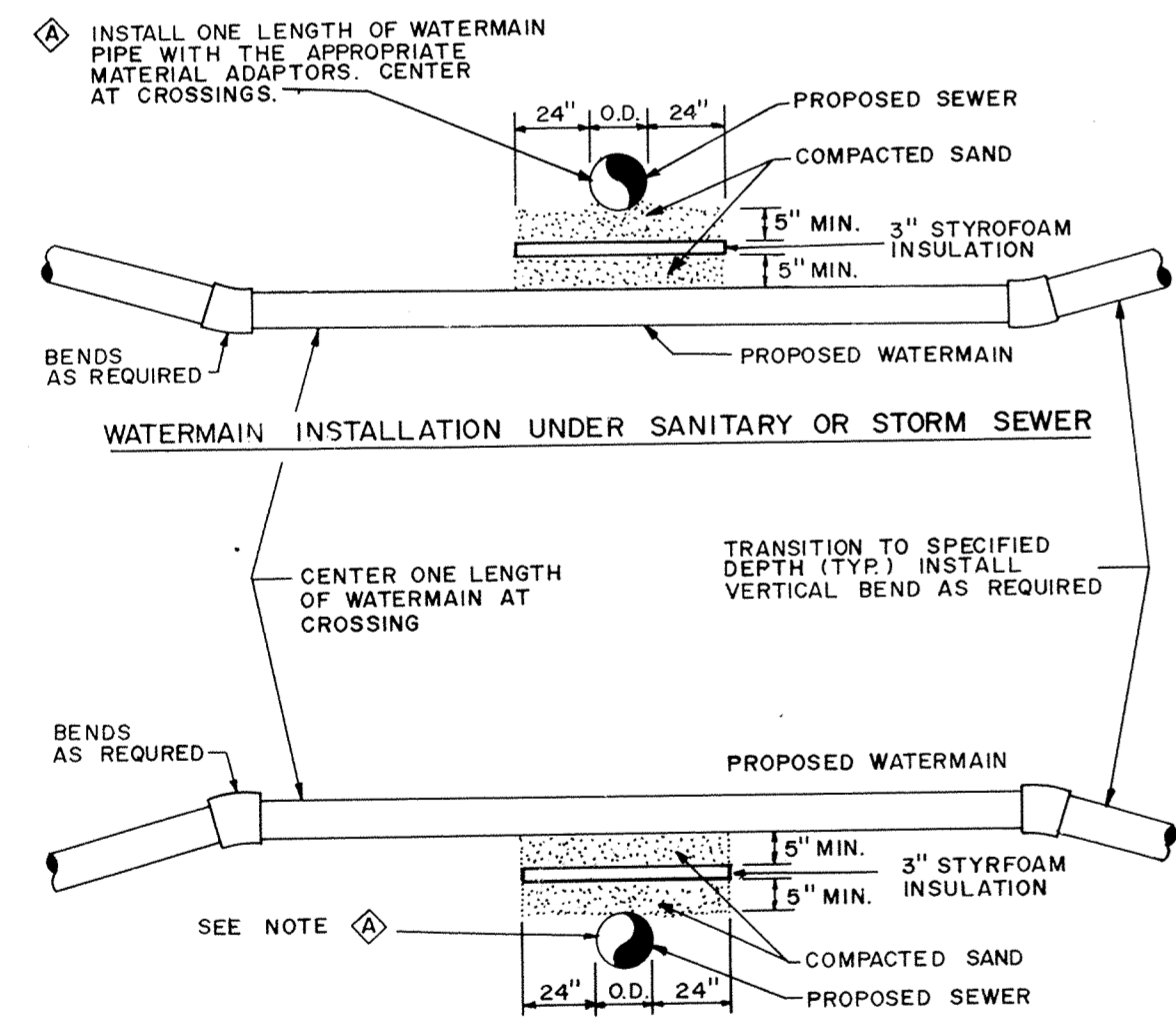
YARD HYDRANT DETAIL



HYDRANT & RODDING DETAIL



PIPE INSULATION DETAIL



WATERMAIN CROSSING

- NOTES:
- WHEN WATERMAIN AND SANITARY SEWER CROSSINGS HAVE LESS THAN 18" VERTICAL SEPARATION, INSTALL CROSSING AS SHOWN.
 - WHEN WATERMAIN COVER IS LESS THAN 7.5 FEET, INSTALL WATERMAIN UNDER SANITARY SEWER.

IOWA CONSULTING ENGINEERS
 Maier Stewart & Associates Inc.
 1959 SLOAN PLACE (612) 774-6021 ST. PAUL, MINNESOTA 55117

DATE	DESCRIPTION	DESIGNED	CHECKED

REVISIONS

GRAPHIC SCALE
 0 HORIZ. NONE
 0 VERT.

CITY OF ELK RIVER
 EVANS AVENUE
 WATERMAIN DETAILS

DATE JULY 1990 SHEET 5 OF 7 SHEETS PROJECT NO. 230-092