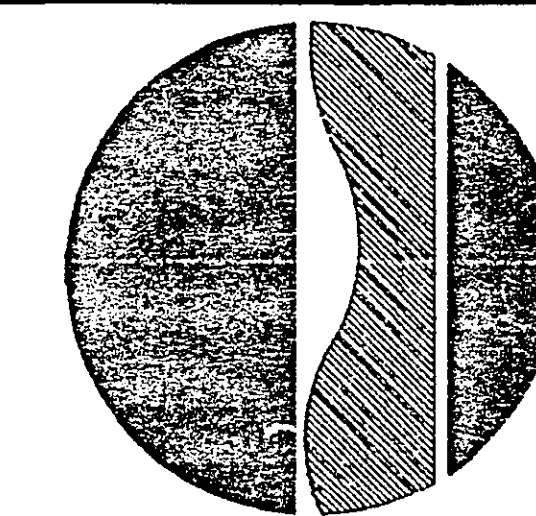


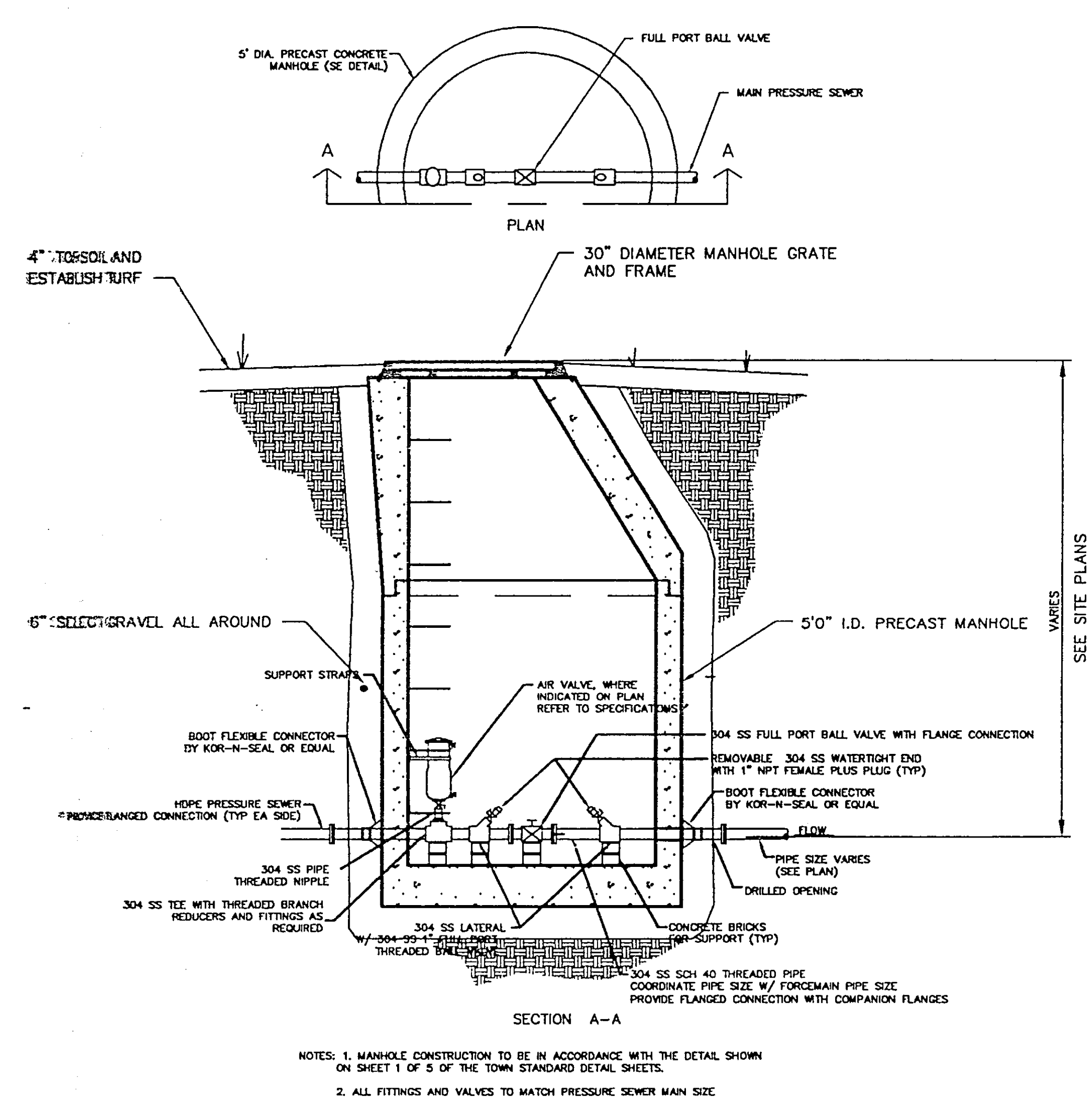
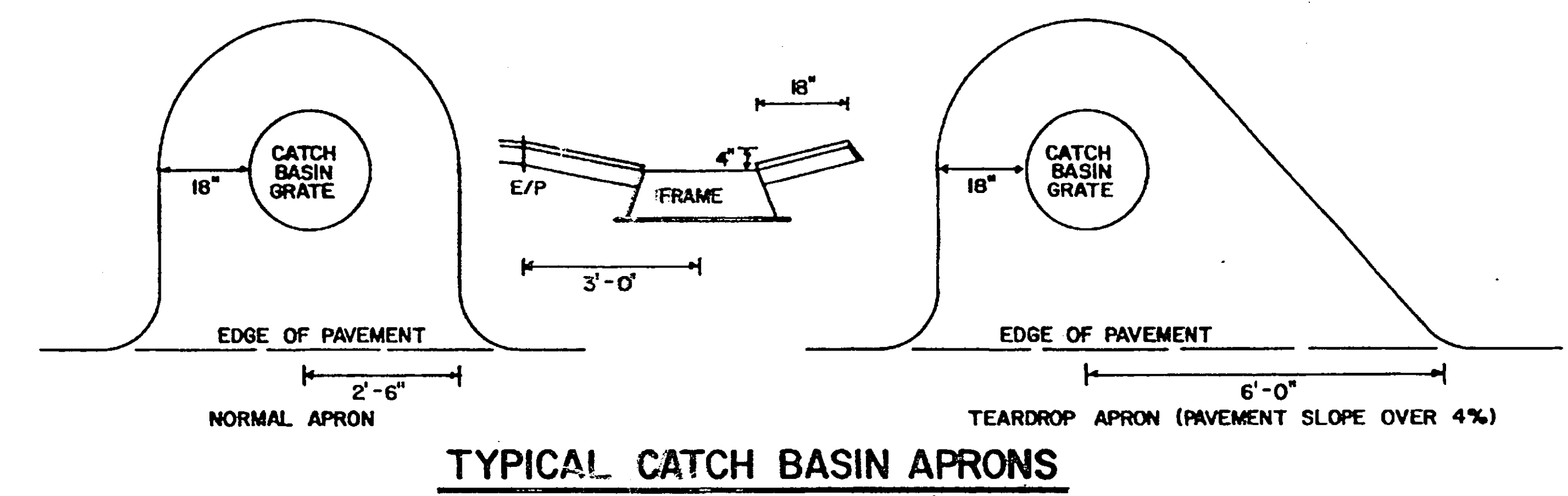
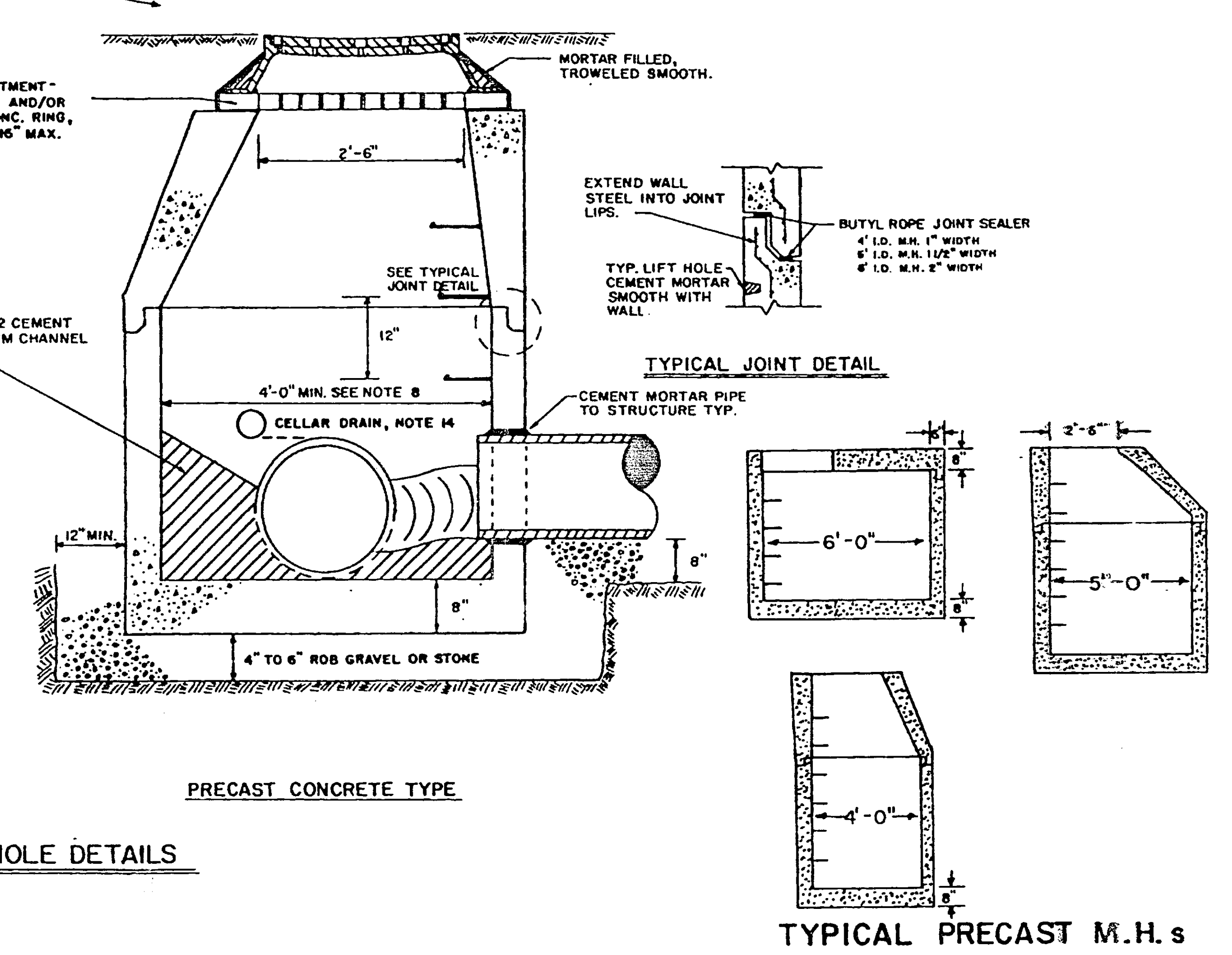


DESIGNED BY	CHECKED BY	DRAWN BY	AS BUILT
208	171	171	

PROJECT DESCRIPTION	REVISIONS
FIVE RIVERS ENVIRONMENTAL EDUCATION CENTER MUNICIPAL SEWAGE AND WATER CONNECTION	NO. DATE DESCRIPTION
TOWN OF BETHLEHEM STANDARD DETAILS	

FACILITY NAME	FIVE RIVERS ENV. EDUCATION CENTER
FACILITY NO.	2515
PROJECT NO.	97-2789
DATE	AUGUST, 2001
SCALE	N.T.S.
DRAWING NO.	15

Necah 1559-2000 frame with 1556-5001 cover, or Campbell 1203 frame and cover.
Necah 1559-2000 frame with 2556-3005 grate, or Campbell 2253 frame and grate.



CLEANOUT MANHOLE

SCALE: N.T.S.

TABLE 1

SAFE BEARING LOADS OF SOILS & MULTIPLICATION FACTORS FOR MODIFICATION OF THRUST BLK. AREAS

SOIL	SAFE BEARING LOAD (LBS./SQ. FT.)	FACTOR
MUCK	0	0
SOFT CLAY	1000	2.00
SAND	3000	1.00
SAND & GRAVEL	3000	0.87
SAND & GRAVEL CEMENTED WITH CLAY	4000	0.80
SHALE	10000	0.20

TABLE 2

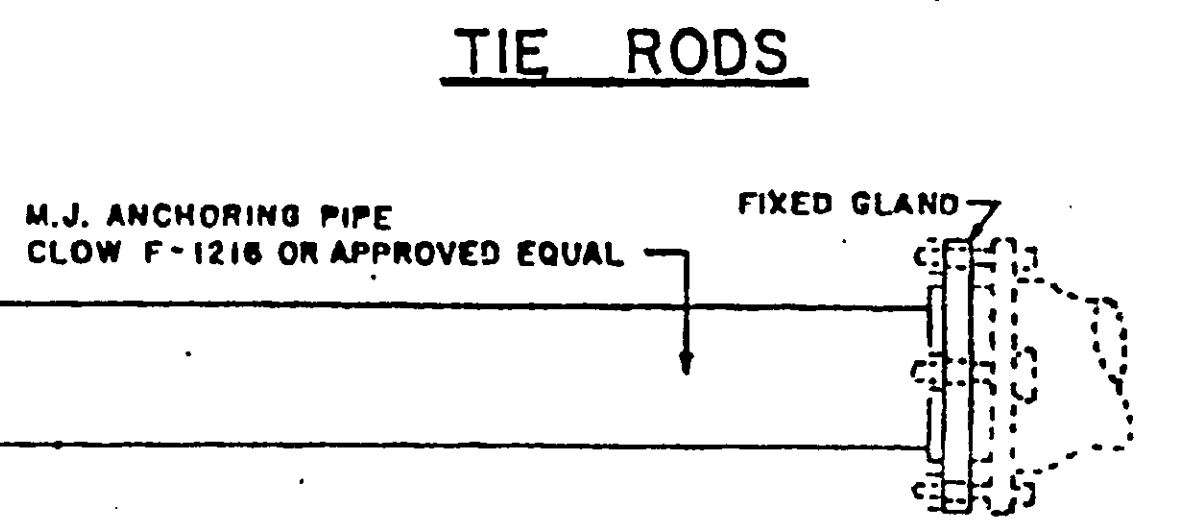
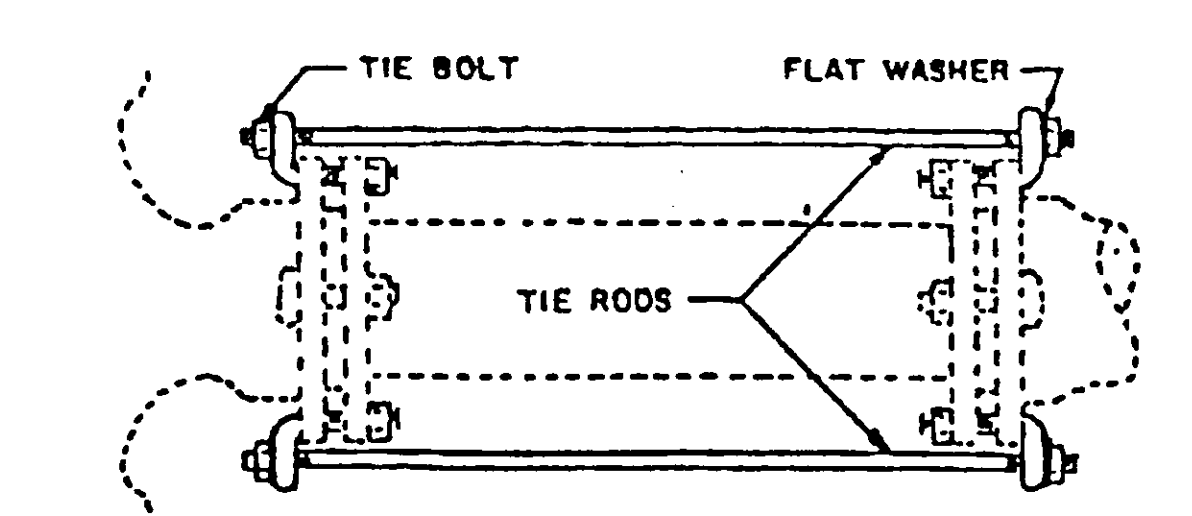
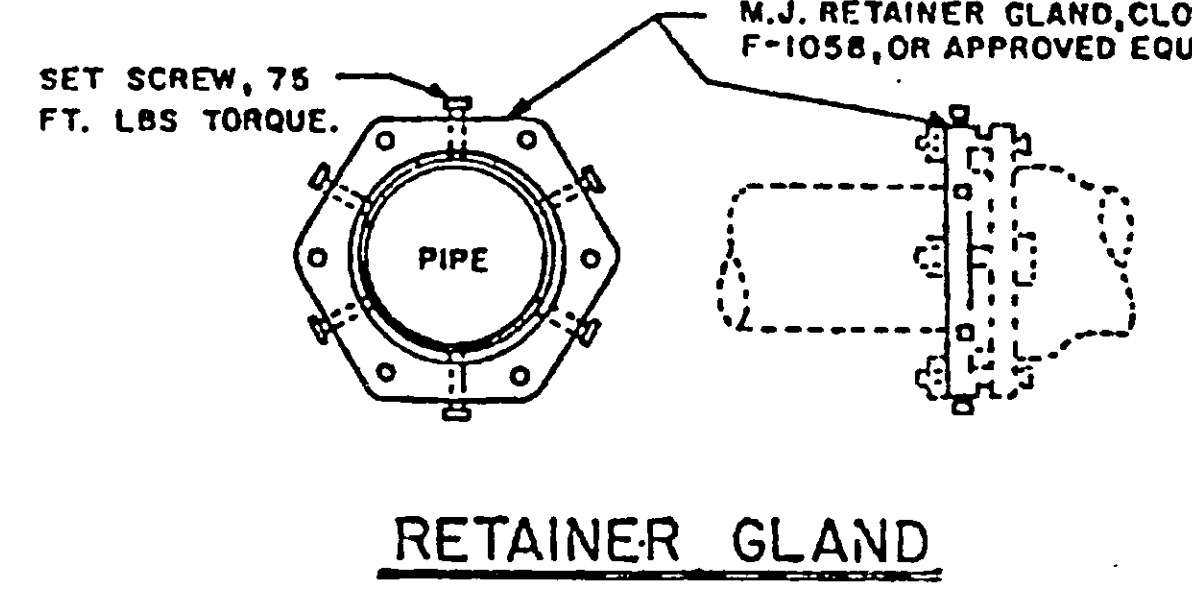
REQUIRED BEARING AREAS & DIMENSIONS FOR CONCRETE THRUST BLOCKS

PIPE SIZE (INCHES)	TEE AREA (SQ. FT.)	90° (W) BEND AREA (SQ. FT.)	45° (W) BEND AREA (SQ. FT.)	22-1/2° (W) BEND AREA (SQ. FT.)	11-1/4° (W) BEND AREA (SQ. FT.)
2	0.4	0.5	0.3	0.3	0.3
3	0.6	0.8	0.4	0.4	0.4
4	1.0	1.2	0.6	0.6	0.6
6	1.4	1.8	0.9	0.9	0.9
8	2.0	2.5	1.3	1.3	1.3
10	2.8	3.5	1.8	1.8	1.8
12	3.5	4.5	2.3	2.3	2.3
14	4.5	5.8	3.0	3.0	3.0
16	5.5	7.2	3.7	3.7	3.7
18	6.8	8.8	4.5	4.5	4.5
20	8.2	10.5	5.4	5.4	5.4

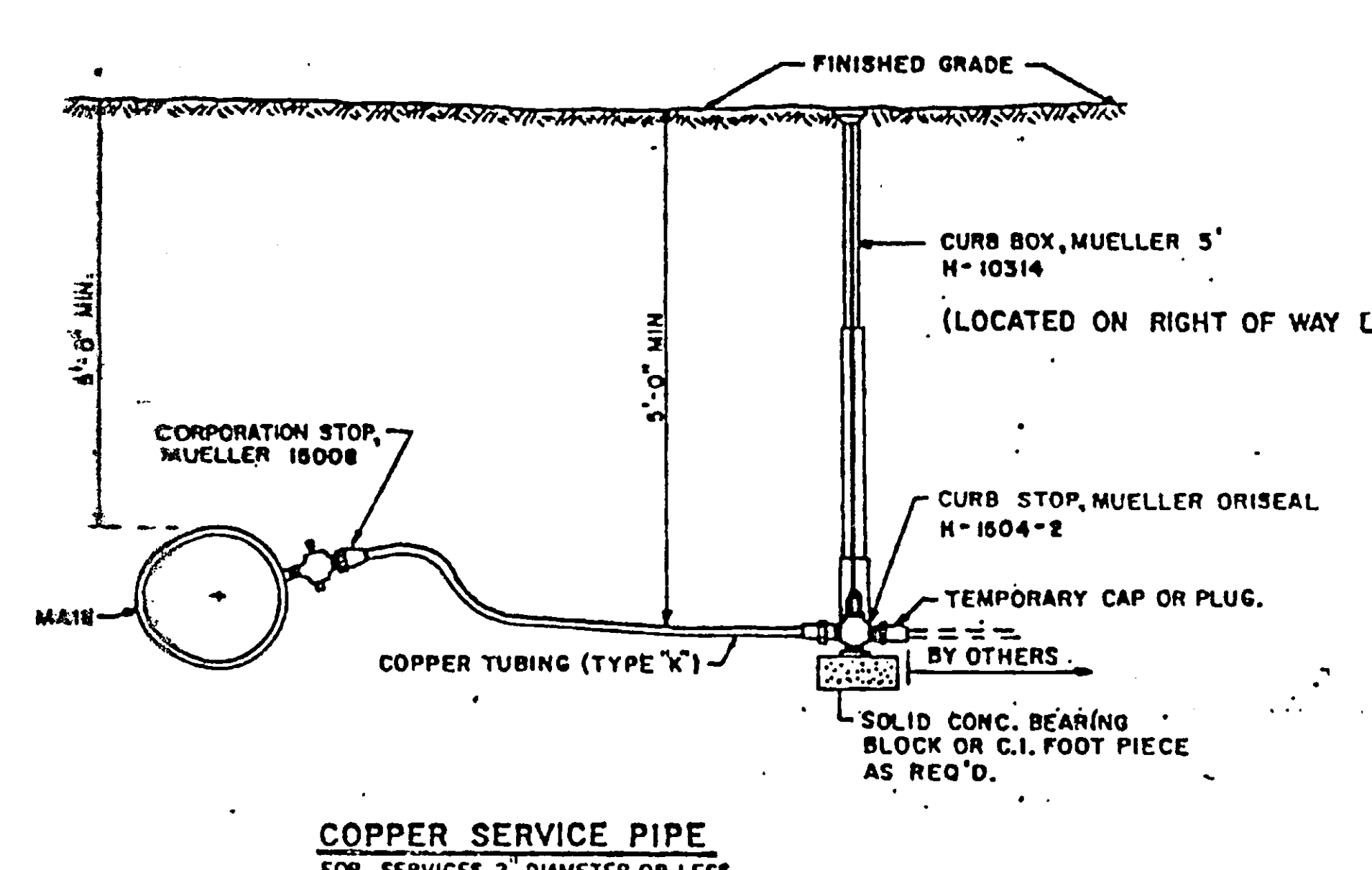
NUMBER OF TIE RODS REQUIRED

PIPE SIZE (INCHES)	MINIMUM NO. OF 3/4" RODS
2	2
3	2
4	2
6	2
8	2
10	2
12	2
14	4
16	4
18	4
20	6

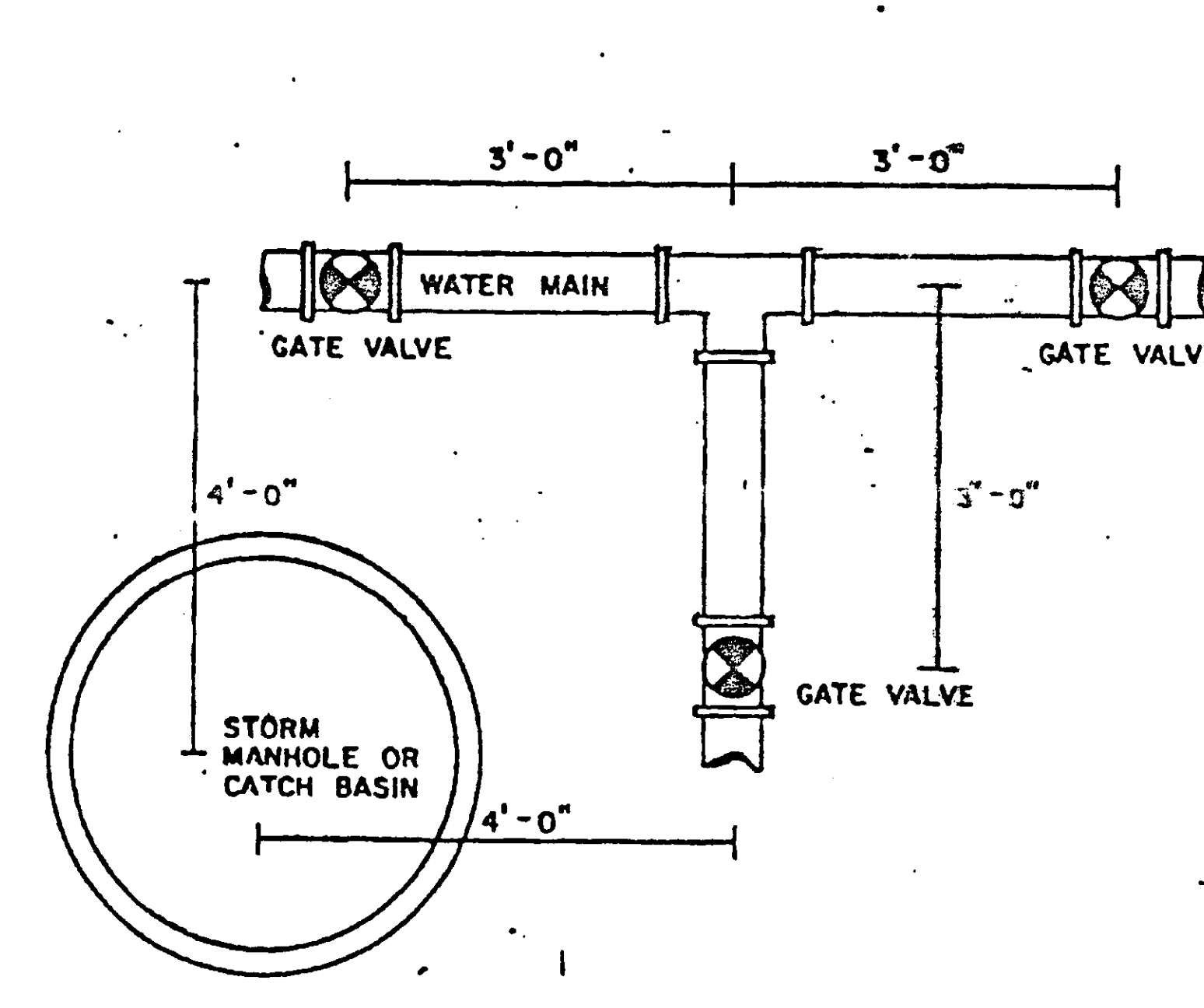
NOTES:
1. APPLIES TO 5/8" RODS AS WELL.



THRUST RESTRAINT OPTIONS



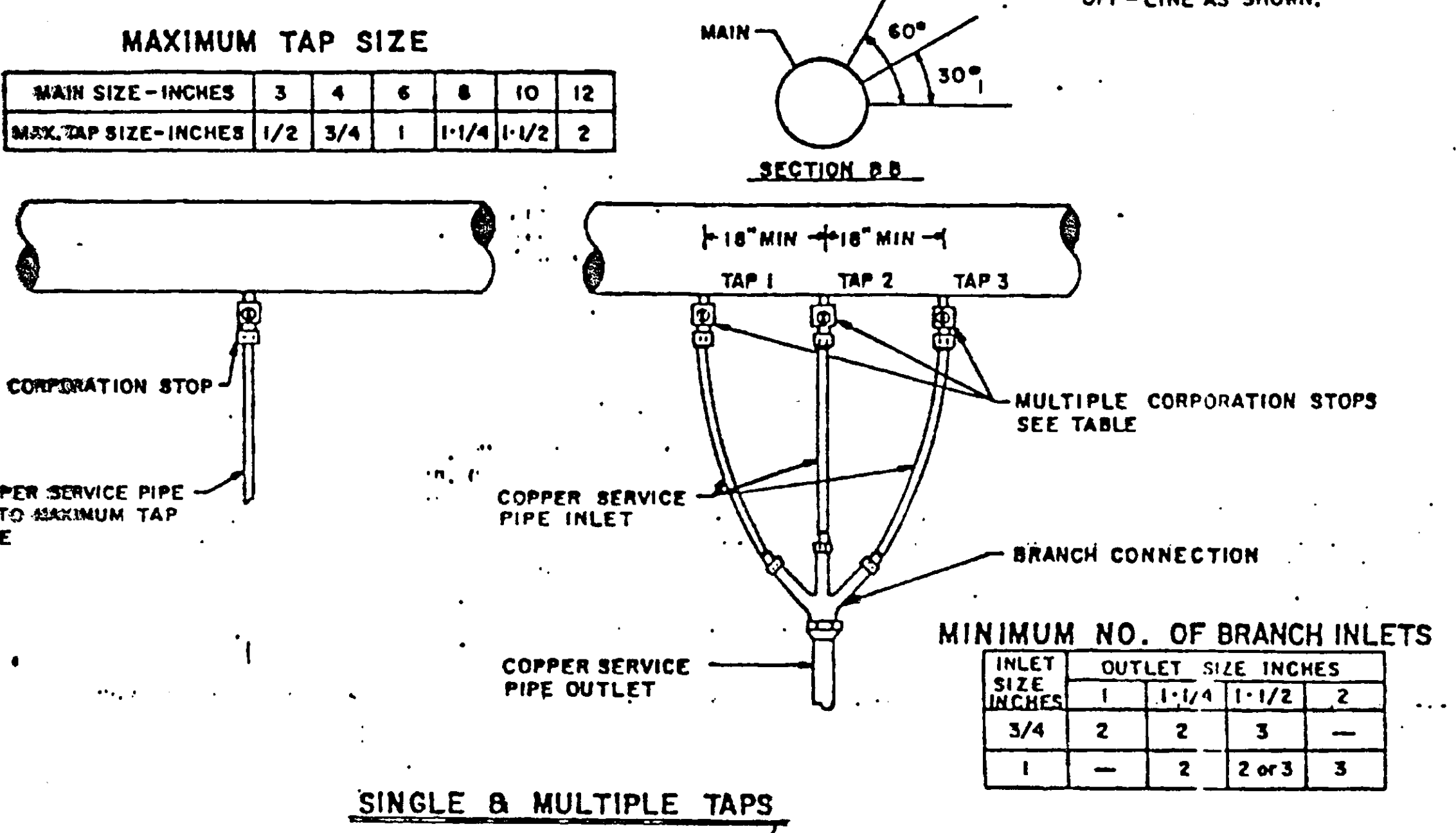
TYPICAL SERVICE CONNECTIONS



TYPICAL SPACING

TRENCH WIDTH

PIPE SIZE (INCHES)	MIN. SUGGESTED TRENCH WIDTH (INCHES)
10	26
12	28
14	30
16	32
18	34
20	36



TYPICAL END OF MAIN HYDRANT

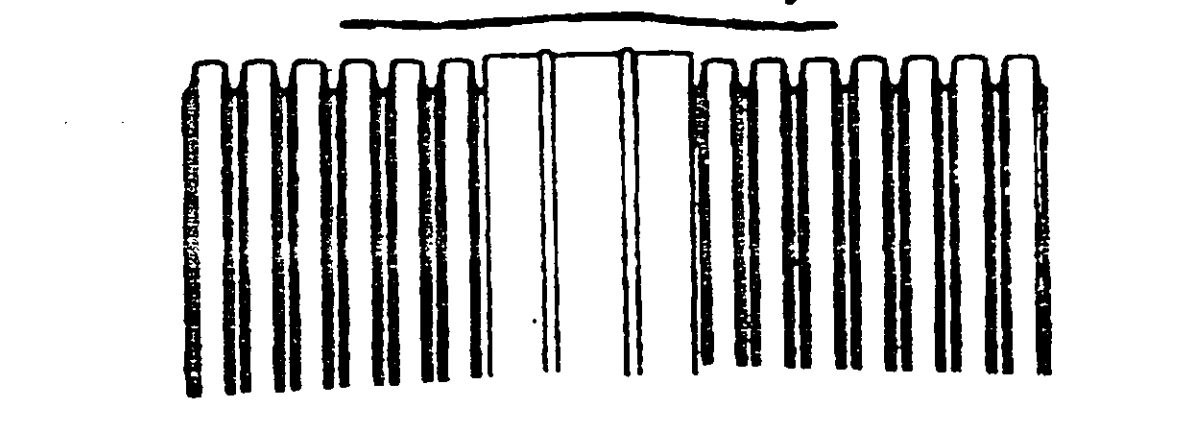
NOTE: All water mains and low pressure sanitary force mains shall be installed, inspected, tested, flushed, and placed into service in accordance with these plans and specifications, the "Town of Bethlehem Department of Public Works Water Distribution Details", and the Town of Bethlehem "Standard Specifications" referenced by the Standard Details (Sanitary Sewer Notes - 10/01/91 and Water Main Notes - 10/01/91).
Low pressure force mains shall be air or water pressure tested to 75 psi for one hour before being placed into service. The test shall be witnessed by Town inspection personnel. Force mains do not require disinfection.

STANDARD GAUGE FOR C.M.P.

MIN. BAND WIDTH (IN)	DIAMETER REQUIRED (INCHES)	GAUGE
7	8	10
7	10	15
7	12	15
7	14	15
7	16	15
7	18	15
7	20	15
7	22	15
7	24	15
7	26	15
7	28	15
7	30	15
10.5	36	15
10.5	42	15
10.5	48	15
10.5	54	15
10.5	60	15
10.5	72	15
10.5	84	15

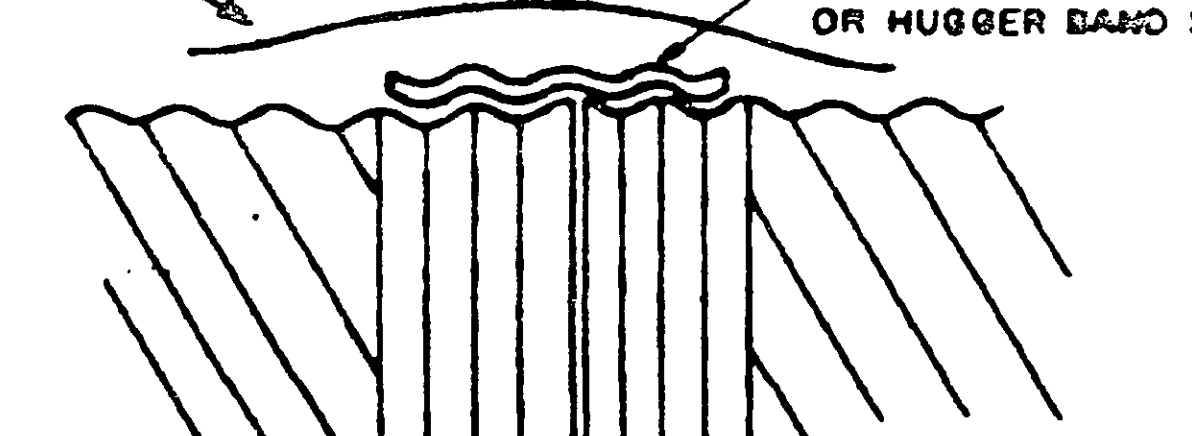
GAUGES LISTED ARE FOR STANDARD INSTALLATIONS, SHALLOW OR DEEP INSTALLATIONS MAY REQUIRE HEAVIER GAUGES

Geotextile fabric shall be used to wrap each coupling

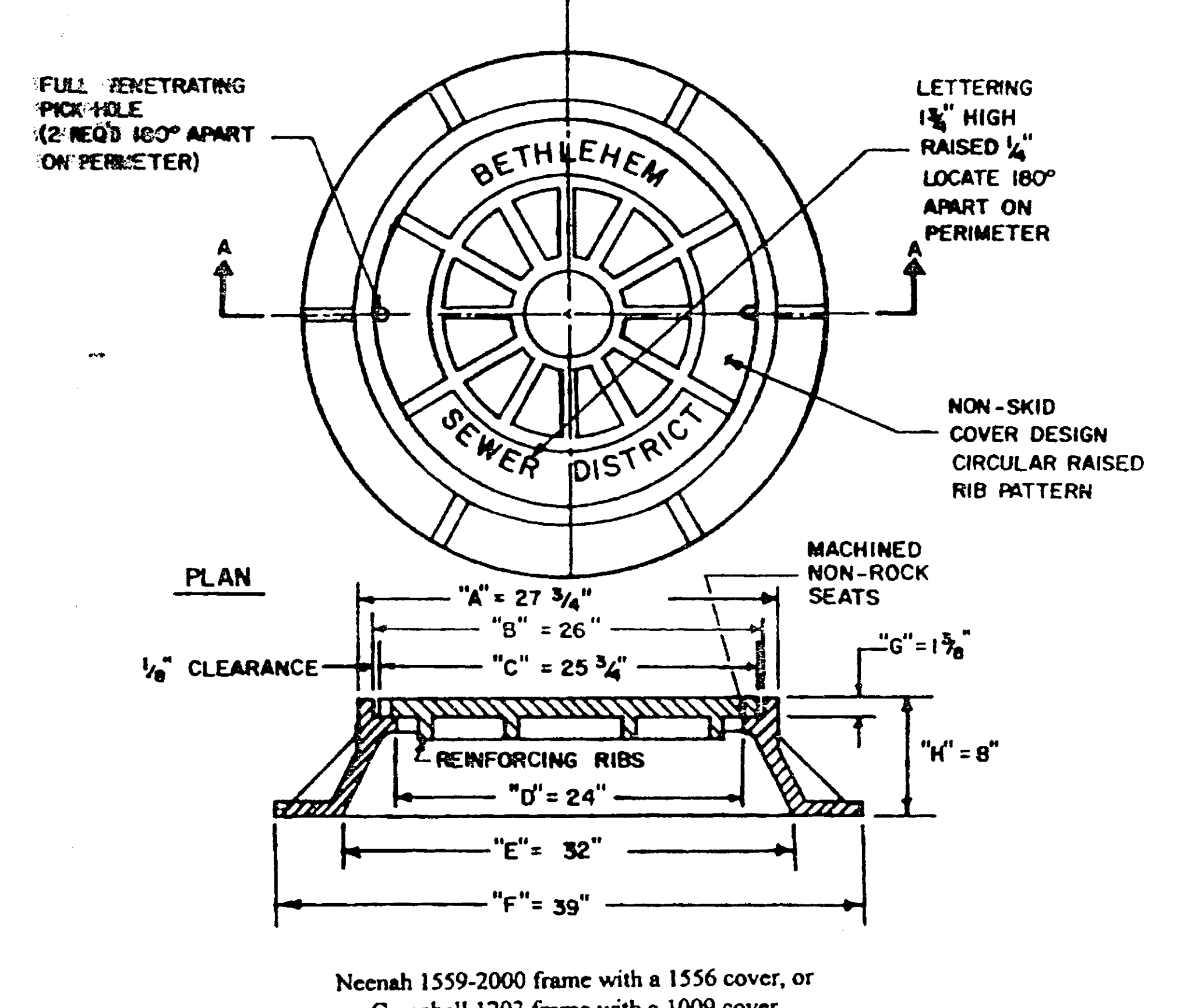


TYPICAL JOINT DETAILS HIGH DENSITY POLYETHYLENE PIPE

Geotextile fabric shall be used to wrap each coupling



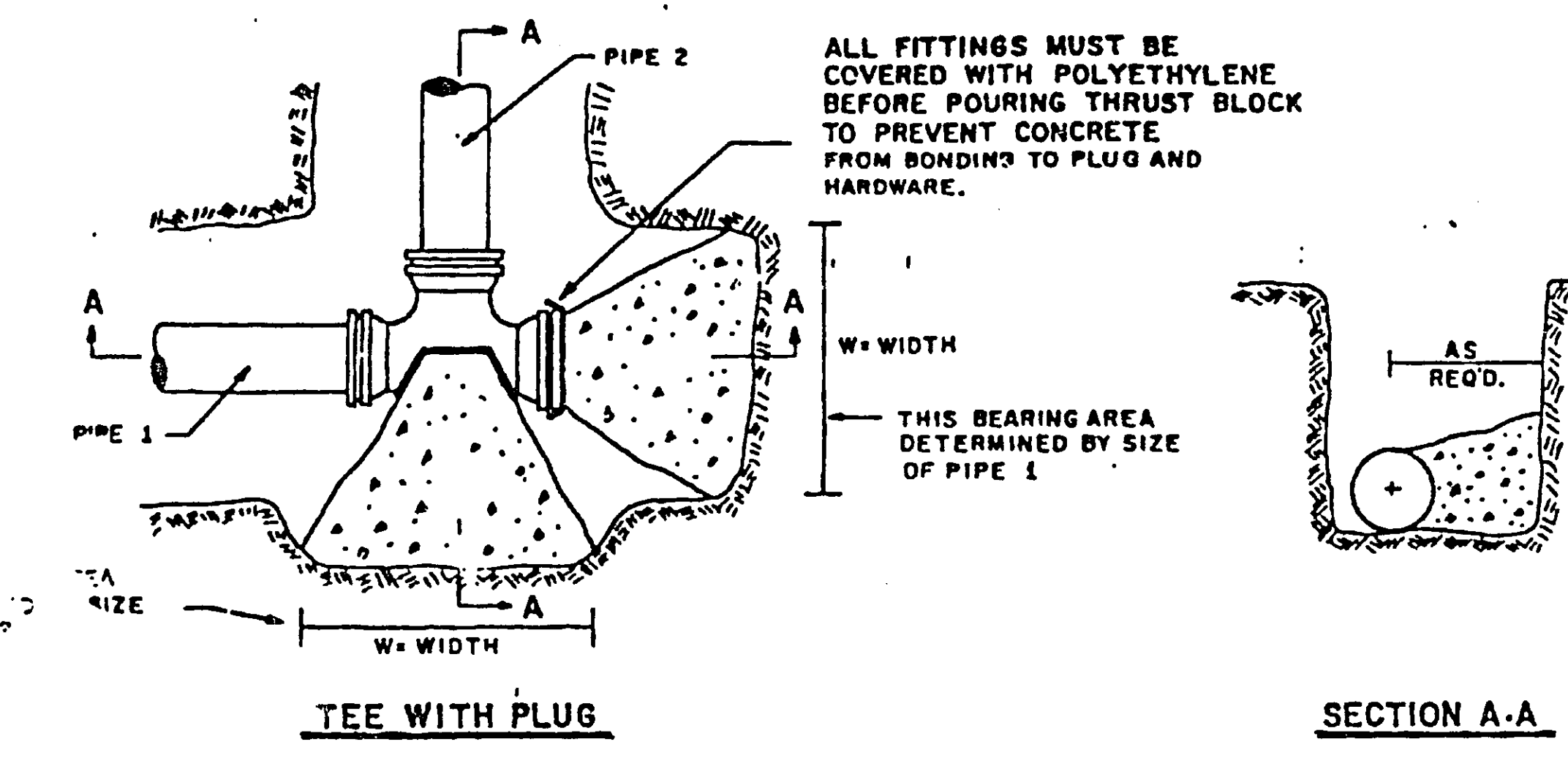
TYPICAL C.M.P. JOINT DETAILS



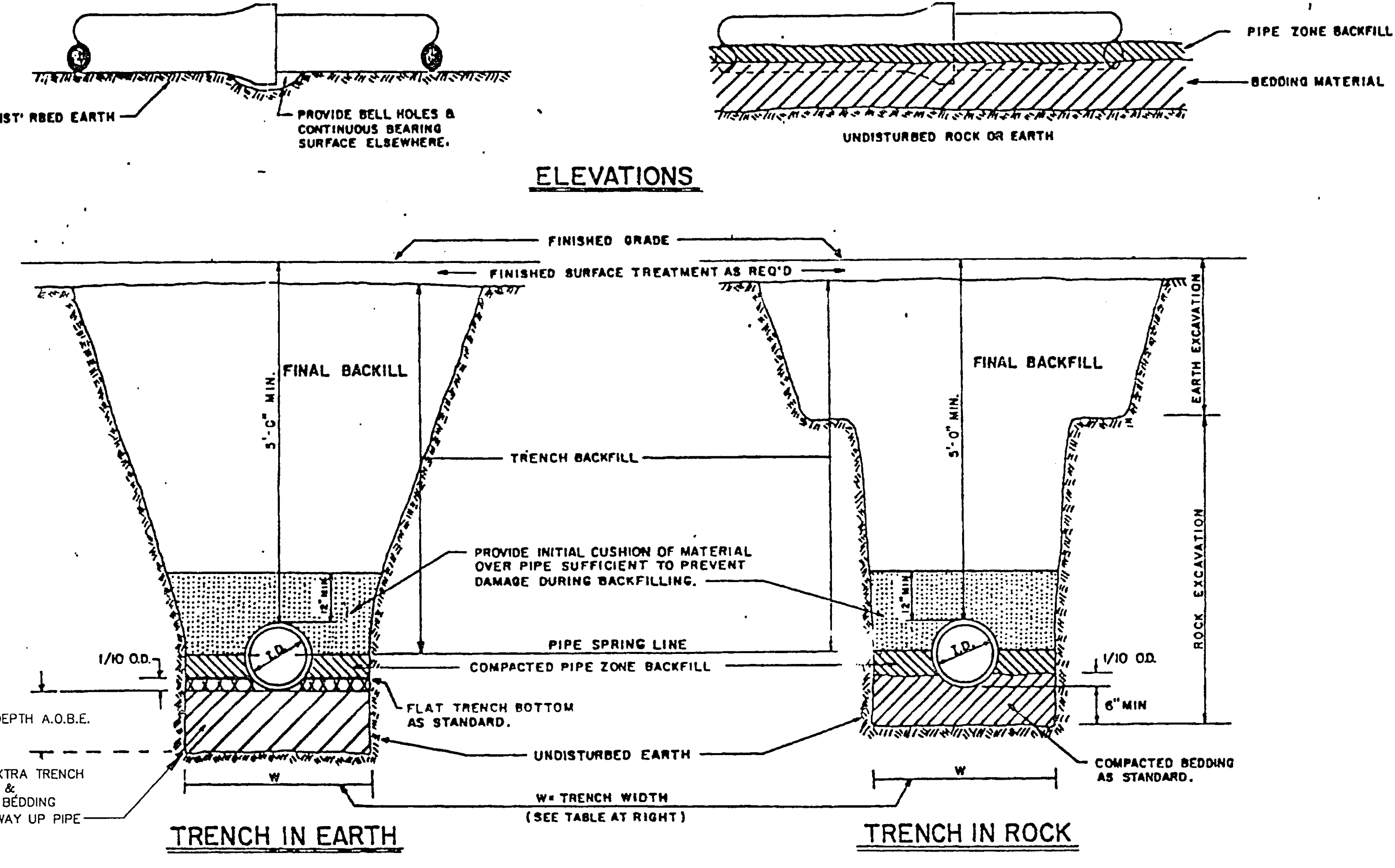
NOTE: WHEN A WATER-TIGHT COVER IS REQUIRED, USE CAMPBELL FOUNDATION ISOS FRAME AND COVER ON AN ECCENTRIC MANHOLE COVER SECTION WITH A 4" DIA. OPENING.

STANDARD CAST IRON MH COVER DETAIL

TYPICAL CONCRETE THRUST BLOCK DETAILS



ELEVATIONS



TYPICAL TRENCH DETAILS