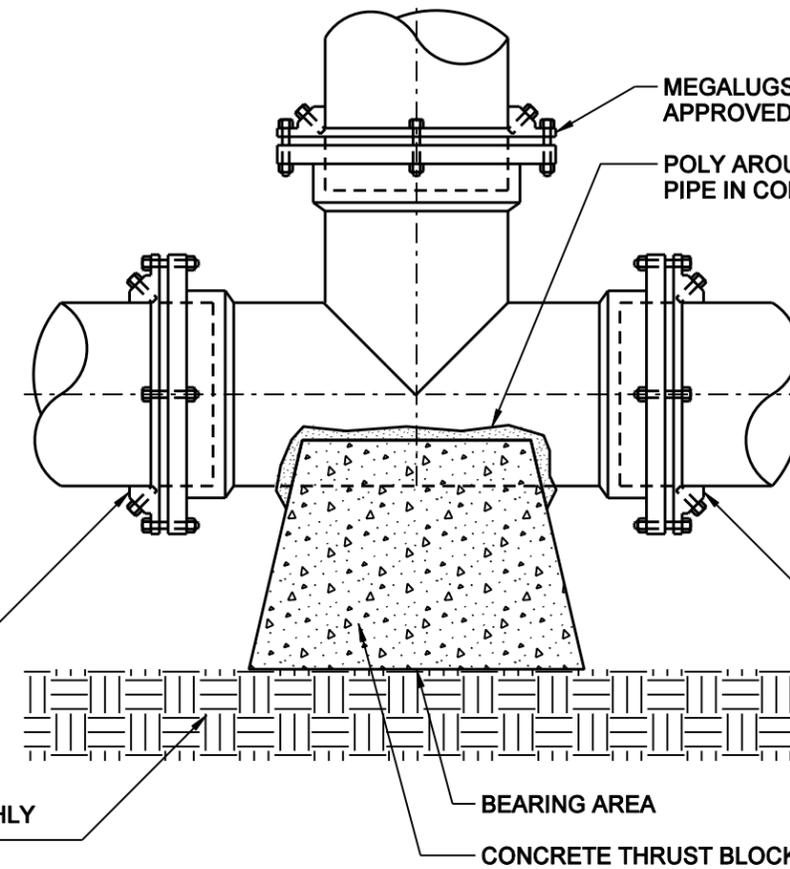


MEGALUGS OR APPROVED EQUAL  
UNDISTURBED OR THOROUGHLY COMPACTED SOIL



MEGALUGS OR APPROVED EQUAL

THRUST AT FITTINGS AT 150 PSI WATER PRESSURE					
TOTAL POUNDS					
NOM. PIPE DIA. (IN.)	DEAD END OR TEE	90° BEND	45° BEND	22.5° BEND	11.5° BEND
6	5,609	7,932	4,293	2,189	1,100
8	9,650	13,646	7,385	3,765	1,892
12	20,528	29,030	15,711	8,010	4,025
16	35,699	50,442	27,299	13,917	6,992
24	78,419	110,901	60,020	30,597	15,374

MPLS. WATER DEPT. REFERENCE TABLE	
SOIL	BEARING LOAD (LBS. / SQ. FT.)
MUCK	0
SOFT CLAY	1,000
SILT	1,500
SANDY SILT	3,000
SAND	4,000
SANDY CLAY	6,000
HARD CLAY	9,000

**NOTES:**

- UPWARD VERTICAL BENDS - WEIGHT OR EARTH ABOVE CONCRETE AREA HAS TO EQUAL THE THRUST ON THE BEND USING THE CHART PROVIDED.
- DOWNWARD VERTICAL BENDS - SAME BEARING AS UPWARD VERTICAL BENDS.
- HORIZONTAL BENDS, TEES, AND DEAD ENDS - THE CONCRETE BEARING AREAS OF THRUST BLOCKS SHALL BE CALCULATED USING THE CHARTS PROVIDED.
- ON 12" and 16" WATER MAINS THE TIE RODS SHALL BE INSTALLED THROUGH THE BOLT HOLES IN FLANGES AND RETAINER RINGS.
- EXACT THRUST BLOCK SIZE AND CONFIGURATION WILL BE DETERMINED BY FIELD CONDITIONS AND REQUIRE APPROVAL BY WATER WORKS ENGINEER.
- USE MN/DOT CONCRETE MIX 3A 42 3/4.
- USE EBAA MEGALUGS OR APPROVED EQUAL.

NO RESPONSIBILITY CAN BE ASSUMED FOR THE ACCURACY OF THE DATA IN THIS TABLE DUE TO THE WIDE VARIATION OF BEARING LOAD CAPABILITIES FOR EACH SOIL TYPE.

	<b>MINNEAPOLIS</b> DEPARTMENT OF PUBLIC WORKS		THRUST BLOCK INSTALLATION	STANDARD PLATE NO. WATR-4000A-R1
	DRAWN: TDS APPROVED: RCE	DATE: 1/1/12 DATE: 1/1/12		

NOT TO SCALE