



REQUIRED BEARING AREA ON UNDISTURBED SOIL AND TYPICAL DIMENSIONS															
SIZE	CROSSES/90° BENDS			45° BENDS			11-1/4° BENDS			22-1/2° BENDS			TEES & PLUGS		
	AREA SQ. FT.	"A"	"B"	AREA SQ. FT.	"A"	"B"	AREA SQ. FT.	"A"	"B"	AREA SQ. FT.	"A"	"B"	AREA SQ. FT.	"A"	"B"
6"	4.0	32"	18"	2.2	18"	16"	0.6	5"	18"	1.1	9"	18"	2.8	23"	18"
8"	7.0	42"	24"	3.8	23"	24"	1.0	6"	24"	2.0	12"	24"	5.0	30"	24"
10"	11.0	53"	30"	6.3	30"	30"	1.6	8"	30"	3.1	15"	30"	8.0	38"	30"
12"	16.1	64"	36"	10.0	40"	36"	2.2	9"	36"	4.4	18"	36"	11.3	45"	36"
14"	21.6	74"	42"	12.5	43"	42"	3.0	10"	42"	6.0	21"	42"	15.5	53"	42"
16"	28.3	85"	48"	17.7	53"	48"	4.0	12"	48"	7.7	23"	48"	20.1	60"	48"

\* SURFACE AREA OF BEARING SOIL IS PROVIDED FOR 200 PSI MAXIMUM PRESSURE (INCLUDING SURGE) AND 2000 PSF SOIL BEARING. IF PRESSURE IS HIGHER OR SOIL BEARING IS POTENTIALLY LOWER, CONSULT THE ENGINEER FOR ADJUSTMENTS.

**NOTES:**

- COVER OVER TOP OF PIPE SHALL BE BELOW THE FROST LINE OR 30" MINIMUM, 72" MAXIMUM ACCORDING TO REGULATORY REQUIREMENTS. IF GRADING PLANS RECEIVED BY THE ENGINEER/OWNER WITH THE REQUEST FOR WATER MAIN LAYOUT INDICATE ADJUSTMENTS TO EXISTING GRADE, THEN PIPE SHALL BE INSTALLED TO MEET MINIMUM AND MAXIMUM COVER FROM PROPOSED GRADES SHOWN ON THE SAID PLANS.
- THRUST BLOCKS SHALL BE BUILT AGAINST UNDISTURBED SOIL WITH ADEQUATE BACKING TO PREVENT MOVEMENT OF FITTING.
- NO THRUST BLOCKS TO BE PLACED IN SEWER LATERAL DITCHES.
- THRUST BLOCKING MUST FIT WITHIN THE EASEMENT.
- IN SOME CASES, ADDITIONAL RESTRAINT MAY BE REQUIRED BASED ON 150 PSI STATIC PRESSURE, PLUS 50 PSI WATER HAMMER AND 2000 PSF SOIL BEARING.
- POLYETHYLENE ENCASEMENT IS REQUIRED ON ALL D.I. PIPE AND FITTINGS.
- THRUST BLOCKING SHALL BE PERFORMED SUCH THAT PIPE JOINTS AND BOLTS ARE ACCESSIBLE.
- SUFFICIENT CLEARANCE SHALL BE ALLOWED BETWEEN CONCRETE AND BOLTS FOR FUTURE MAINTENANCE.
- ALL ANCHOR BOLTS SHALL BE STAINLESS STEEL, MINIMUM 3/4" DIAMETER.
- ALL M.J. AND FLG. FITTINGS TO RECEIVE THRUST BLOCKS SHALL BE WRAPPED IN POLYWRAP. CONTRACTOR SHALL ENSURE THAT POLYWRAP EXTENDS FAR ENOUGH BEYOND THE FITTING TO ENCLOSE ALL BOLTS WITHIN THE POLYWRAP.
- THRUST BLOCKING DETAILS ARE SHOWN HERE FOR TYPICAL INSTALLATIONS. IN SOME CASES, ADDITIONAL RESTRAINT MAY BE REQUIRED.
- PORTLAND CEMENT CONCRETE USED FOR THRUST BLOCKS SHALL BE MIN 3000 PSI CONCRETE.
- FOR UNSTABLE SOIL CONDITIONS, CHECK WITH ENGINEER FOR THRUST BLOCK DIMENSIONS.
- FOR MAIN SIZES GREATER THAN 16", SEE ENGINEER FOR THRUST BLOCK DIMENSIONS.

## THRUST BLOCK DETAIL

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: center;">REVISIONS</th> </tr> <tr> <td style="text-align: center;">1/16 - MSG EDITS</td> </tr> </table>	REVISIONS	1/16 - MSG EDITS	<p><b>AMERICAN WATER MILITARY SERVICES GROUP</b>  <b>CIVIL</b>  <b>THRUST BLOCK</b>  <b>DETAILS</b></p> <hr/> <p>AMERICAN WATER MILITARY SERVICES GROUP          CAMDEN, NJ 08102</p> <hr/> <p>AMERICAN WATER M.S.G.          1 WATER STREET          CAMDEN, NJ 08102</p> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="font-size: small;">             DRAWN BY Z. ALAM              PROJECT ENG'R PDK              APPROVED         </div> <div style="font-size: small;">             DATE 05-03-2010              PROJECT N/A         </div> <div style="font-size: small;">             USE DIMENSIONS ONLY              SCALE N.T.S.         </div> </div> <hr/> <p style="text-align: center; font-weight: bold;">USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES</p>
REVISIONS			
1/16 - MSG EDITS			
<p><b>MSG-W-08</b></p>	<p><b>MSG-W-08</b></p>		