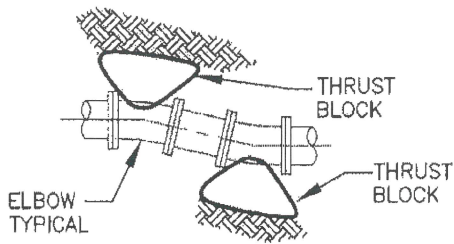
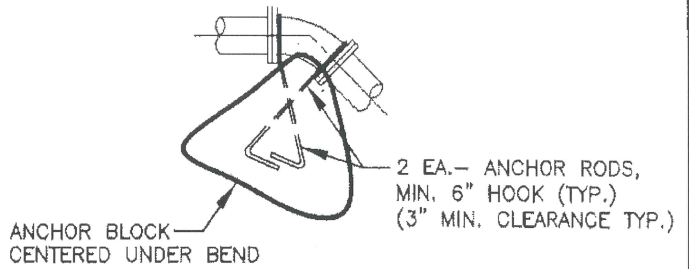


SECTION 103.00

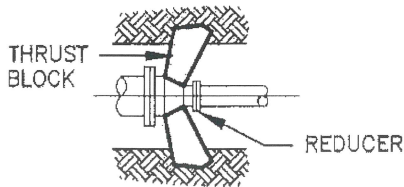
THRUST BLOCK AND ANCHOR DETAILS



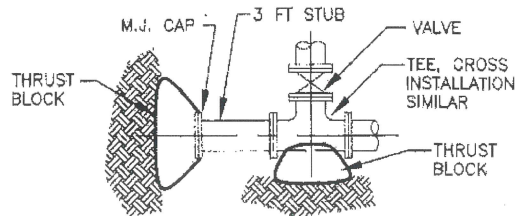
45° BEND
22-1/2° BEND
11-1/4° BEND
 PLAN VIEW



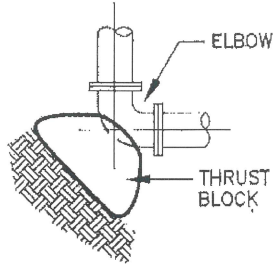
ANCHOR BLOCK
 PROFILE VIEW
 (TO PREVENT UPLIFT)



REDUCER
 PLAN VIEW



TYPICAL DEAD END/TEE
 PLAN VIEW
 (ALLOWING FOR FUTURE EXTENSION)



90° BEND
 PLAN VIEW

ANCHOR BLOCK SCHEDULE				
PIPE DIA. (IN)	ANCHOR ROD DIA. (IN)	MINIMUM VOLUME (CY)		
		45° BEND	22-1/2° BEND	11-1/4° BEND
4	3/8	0.3	0.2	0.1
6	3/8	0.7	0.4	0.2
8	5/8	1.0	0.6	0.3
10	5/8	1.7	0.9	0.4
12	3/4	2.2	1.2	0.7

THRUST BLOCK SCHEDULE										
PIPE DIA. (IN)	REDUCERS, DEAD END TEES, WYES, & VALVES		90° BEND		45° BEND		22-1/2° BEND		11-1/4° BEND	
	BEARING AREA	CY	BEARING AREA	CY	BEARING AREA	CY	BEARING AREA	CY	BEARING AREA	CY
4	1.5' x 2'	0.2	2' x 2'	0.3	1' x 2'	0.2	1' x 1'	0.1	1' x 1'	0.1
6	2' x 3'	0.4	3' x 3'	0.7	2' x 2.5'	0.4	1.5' x 1.5'	0.2	1' x 1.5'	0.1
8	3' x 3.5'	0.8	3.5' x 4'	1.0	2.5' x 3'	0.6	2' x 2'	0.3	2' x 1'	0.2
10	4' x 4'	1.2	4.5' x 5'	1.7	3' x 4'	0.9	2' x 3'	0.4	1.5' x 2'	0.2
12	4.5' x 4.5'	1.5	5.5' x 5.5'	2.2	4' x 4'	1.2	3' x 3'	0.7	2' x 2'	0.3

NOTES:

1. All concrete shall be per Section 100.01.
2. Thrust blocks shall be constructed so that major bearing surface is in direct line with the major force created by the pipe or fittings. The bearing surface shall be placed against undistributed earth.

Approved:

District Manager

3. Thrust block sizes are based on an assumed soil bearing capacity. Should actual soils conditions reveal a potentially lower bearing capacity, thrust block sizes may need to increase at the direction of the District.
4. Thrust and anchor block configurations other than those shown on this page shall be engineered.
5. All thrust blocks for pipes larger than 12" shall be engineered.
6. A double layer of 6 mil polyethylene film shall be placed between concrete and fittings.
7. Concrete shall be kept behind the bell of the fitting.
8. Fittings shall not be rendered inaccessible by the concrete. Clearance shall be provided for bolt removal.