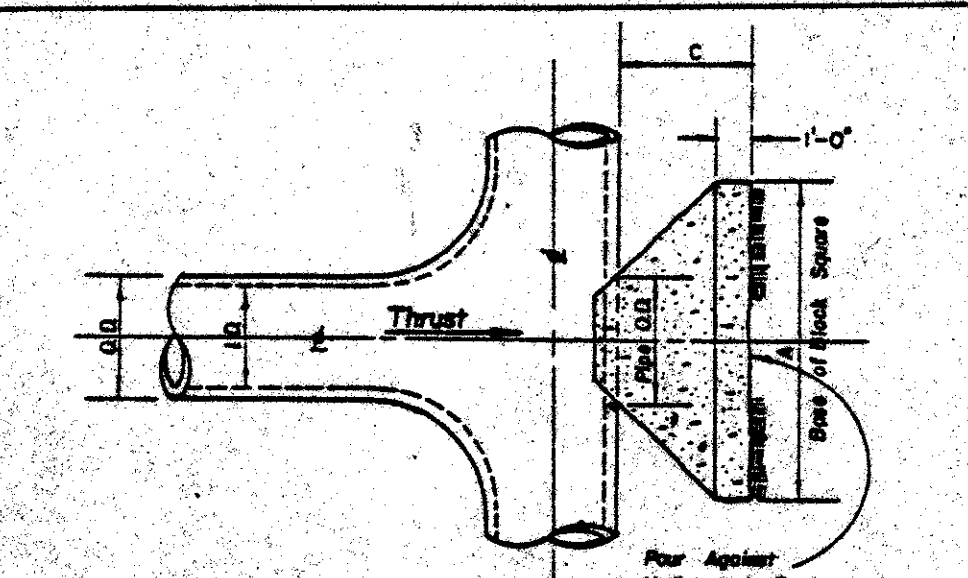


PLAN OF PLUG THRUST BLOCK



PLAN OF TEE THRUST BLOCK

I.D. (IN.)	THRUST (TONS)	EARTH			ROCK		
		C (FT.)	A (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)
4.68	5.1	1.5	2.5	0.3	2.0	0.2	
10.12	11.3	1.5	3.5	0.6	2.5	0.3	
16.18	25.5	2.0	5.5	1.6	4.0	0.9	
20	31.5	2.0	6.0	1.9	4.0	0.9	
24	45.2	2.5	7.0	3.1	5.0	1.7	
30	53.0	3.0	7.5	4.1	5.5	2.4	
36	76.3	4.0	9.0	7.3	6.5	4.2	
42	104.0	4.5	10.5	11.0	7.5	6.2	
48	136.0	5.0	12.0	15.6	8.5	6.7	
54	172.0	5.5	13.5	21.4	9.5	11.9	
60	212.0	6.0	15.0	28.4	10.5	13.7	
66	257.0	6.5	16.5	36.9	11.5	20.5	
72	305.0	7.5	17.5	47.2	12.5	27.2	
78	358.0	8.0	19.0	58.9	13.5	33.7	
84	416.0	8.5	20.5	72.3	14.5	41.2	
90	477.0	9.0	22.0	87.7	15.5	49.7	
96	543.0	9.5	23.5	104.8	16.5	61.0	

PLUG & TEE THRUST BLOCK

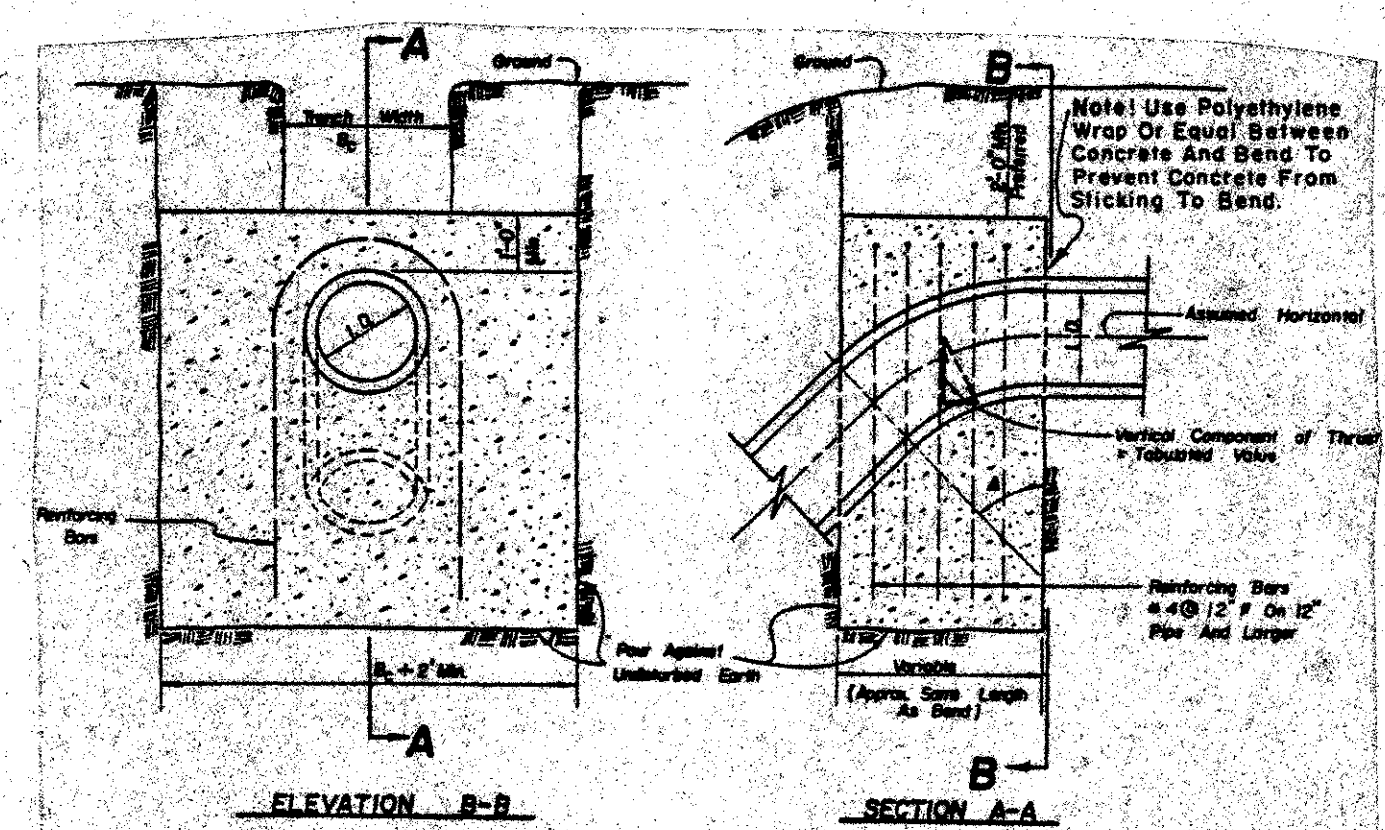
I.D. (IN.)	T (IN.)	C 11.25°		C 22.50°		E (FT.)
		FT.	FT.	FT.	FT.	
4.68	0.4	1.5	1.3	0.9		
10.12	0.5	1.5	1.5	1.2		
16.18	0.6	1.5	1.5	1.6		
20	0.7	1.5	1.5	1.8		
24	0.9	1.5	1.5	2.1		
30	2.9	1.5	1.9	2.6		
36	4.5	1.5	2.3	3.3		
42	5.0	1.8	2.6	3.8		
48	5.5	2.0	3.0	4.3		
54	6.0	2.3	3.4	4.8		
60	6.5	2.5	3.8	5.3		
66	6.8	2.8	4.1	5.7		
72	7.5	3.0	4.5	6.3		
78	7.5	3.3	4.9	6.7		
84	8.0	3.5	5.3	7.2		
90	8.5	3.8	5.6	7.7		
96	9.0	4.0	6.0	8.2		

I.D. (IN.)	G (FT.)	THRUST (TONS)	EARTH			ROCK			I.D. (IN.)	G (FT.)	THRUST (TONS)	EARTH			ROCK		
			A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)				A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)
4.68	0.4	1.0	1.0	1.5	0.1	1.0	1.0	4.68	0.8	2.0	1.5	1.5	0.1	1.0	1.0	0.1	
10.12	0.6	2.2	1.5	1.5	0.1	1.0	1.5	10.12	1.1	4.4	2.0	2.5	0.3	1.5	1.5	0.1	
16.18	0.8	5.0	2.0	2.5	0.3	1.5	2.0	16.18	1.6	9.9	3.0	3.5	0.6	2.0	2.5	0.3	
20	0.9	6.2	2.0	3.5	0.4	1.5	3.0	20	1.8	12.3	3.5	3.5	0.7	2.0	3.5	0.4	
24	1.1	8.9	3.0	3.0	0.5	1.5	3.0	24	2.2	17.7	4.0	4.5	1.0	3.0	3.0	0.5	
30	1.4	10.4	3.0	3.5	0.6	2.0	3.5	30	2.7	20.7	4.0	4.5	1.5	3.0	4.0	0.8	
36	1.7	15.0	3.5	4.5	0.9	2.0	4.0	36	3.3	29.8	5.5	5.5	2.3	4.0	4.0	1.3	
42	1.9	20.4	4.5	5.0	1.5	2.5	5.0	42	3.8	40.9	7.0	6.0	3.9	4.5	5.0	2.1	
48	2.2	26.6	4.5	6.0	2.0	2.5	6.0	48	4.4	52.8	8.0	7.0	5.7	4.5	6.0	2.8	
54	2.5	33.7	6.0	6.0	3.0	3.0	6.0	54	4.9	67.0	9.0	8.0	8.0	6.0	6.0	4.1	
60	2.7	41.6	6.0	7.0	3.8	3.0	7.0	60	5.5	82.7	9.5	9.0	10.6	6.0	7.0	5.3	
66	3.0	50.3	6.5	8.0	5.1	3.5	8.0	66	6.0	100.1	10.5	10.0	14.1	6.5	8.0	7.2	
72	3.3	59.9	7.5	8.0	6.3	4.0	8.0	72	6.6	119.1	11.0	11.0	17.6	7.5	8.0	9.1	
78	3.6	70.2	8.0	9.0	8.1	4.0	9.0	78	7.1	139.8	12.0	12.0	22.5	8.0	9.0	11.7	
84	3.8	81.5	8.5	10.0	10.3	4.5	10.0	84	7.6	162.1	13.0	12.5	27.2	8.5	10.0	14.8	
90	4.1	93.5	9.5	10.0	12.2	5.0	10.0	90	8.2	186.1	14.0	13.5	33.7	9.5	10.0	17.8	
96	4.4	106.4	10.0	11.0	15.0	5.0	11.0	96	8.7	211.7	15.0	14.5	41.2	10.0	11.0	21.0	

HORIZONTAL THRUST BLOCK SPECIFICATIONS

I.D. (IN.)	G (FT.)	THRUST (TONS)	EARTH			ROCK			I.D. (IN.)	G (FT.)	THRUST (TONS)	EARTH			ROCK		
			A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)				A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)
4.68	1.0	2.6	2.0	1.5	0.2	1.0	1.5	0.1	4.68	1.5	3.9	2.0	2.0	0.2	1.5	1.5	0.1
10.12	1.5	5.9	2.5	2.5	0.3	2.0	1.5	0.2	10.12	2.2	8.7	3.5	2.5	0.5	2.0	2.5	0.3
16.18	2.2	13.2	3.5	4.0	0.8	2.5	3.0	0.8	16.18	3.2	19.5	4.5	4.5	1.2	3.0	3.5	0.6
20	2.4	16.3	4.5	4.0	1.0	3.0	3.0	0.5	20	3.6	24.1	5.5	4.5	1.5	3.5	3.5	0.7
24	2.9	23.4	6.0	4.0	1.4	3.5	3.5	0.7	24	4.3	34.6	8.0	4.5	2.3	4.5	4.0	1.1
30	3.6	27.5	5.5	5.0	1.9	3.5	4.0	0.9	30	5.4	40.6	8.5	5.0	3.2	5.5	4.0	1.6
36	4.4	39.5	7.0	6.0	3.4	4.5	4.5	1.6	36	6.5	56.5	10.0	6.0	5.3	6.5	4.5	2.6
42	5.1	53.6	8.0	7.0	5.1	5.5	5.0	2.5	42	7.5	79.6	11.5	7.0	8.1	8.0	5.0	4.2
48	5.8	70.3	9.0	8.0	7.4	6.0	6.0	3.7	48	8.6	104.0	13.0	8.0	11.9	9.0	6.0	6.3
54	6.5	89.0	10.0	9.0	10.3	7.0	6.5	5.3	54	9.7	131.5	15.0	9.0	17.1	10.5	6.5	8.9
60	7.3	110.0	11.0	10.0	13.9	7.5	7.5	7.3	60	10.7	162.4	16.5	10.0	23.1	11.0	7.5	12.0
66	8.0	132.9	12.5	11.0	18.9	8.5	8.0	9.6	66	11.8	196.5	18.0	11.0	30.1	12.0	8.5	16.2
72	8.7	158.2	13.5	12.0	24.0	9.0	9.0	12.3	72	12.9	233.9	19.5	12.0	38.6	14.0	8.5	20.7
78	9.4	185.6	14.5	13.0	30.0	10.0	9.5	15.6	78	13.9	274.5	21.5	13.0	49.8	14.5	9.5	25.9
84	10.1	215.3	15.5	14.0	37.1	10.5	10.5	19.5	84	15.0	318.4	23.0	14.0	61.2	15.5	10.5	32.6
90	10.9	247.1	16.5	15.0	45.0	11.5	11.0	23.9	90	16.1	365.5	24.5	15.0	74.5	17.5	10.5	39.6
96	11.6	281.2	18.0	16.0	55.5	12.5	11.5	28.9	96	17.1	415.6	26.0	16.0	89.5	18.5	11.5	48.5

I.D. (IN.)	G (FT.)	THRUST (TONS)	EARTH			ROCK			I.D. (IN.)	G (FT.)	THRUST (TONS)	EARTH			ROCK		
			A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)				A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)
4.68	2.1	5.6	3.0	2.0	0.3	2.0	1.5	0.2	4.68	2.7	7.1	3.0	1.5	0.4	2.0	2.0	0.2
10.12	3.1	12.6	5.5	2.5	0.8	3.5	2.0	0.4	10.12	4.0	16.0	6.5	2.5	1.0	3.5	2.5	0.5
16.18	4.7	28.3	7.5	4.0	1.9	5.0	3.0	0.9	16.18	6.0	36.0	9.0	4.0	2.4	4.5	4.0	1.0
20	5.2	34.9	9.0	4.0	2.3	5.5	3.5	1.2	20	6.6	44.4	10.0	4.5	3.1	6.0	4.0	1.5
24	6.2	50.3	11.5	4.5	3.5	6.5	4.0	1.6	24	7.9	64.0	14.5	4.5	5.0	8.0	4.0	2.1
30	7.8	58.9	12.0	5.0	4.8	7.5	4.0	2.2	30	9.9	75.0	15.0	5.0	6.7	10.0	4.0	3.3
36	9.4	84.9	14.5	6.0	6.2	9.5	4.5	3.8	36	11.9	108.0	18.0	6.0	11.4	12.0	4.5	5.3
42	10.9	115.5	17.0	7.0	12.8	11.0	5.5	6.3	42	13.9	147.0	21.0	7.0	17.8	14.0	5.5	8.7
48	12.5	150.9	19.0	8.0	18.4	13.0	6.0	9.2	48	15.9	192.0	24.0	8.0	26.2	16.0	6.0	12.4
54	14.0	191.0	21.5	9.0	26.0	15.0	6.5	12.9	54	17.9	243.0	27.0	9.0	36.9	18.0	7.0	18.1
60	15.6	235.8	24.0	10.0	35.6	16.0	7.5	17.6	60	19.9	299.8	30.0	10.0	50.3	20.0	7.5	24.0
66	17.1	285.3	26.0	11.0	48.0	18.0	8.0	23.0	66	21.8	362.8	33.0	11.0	66.2	22.0	8.5	32.5
72	18.7	339.5	28.5	12.0	67.8	19.0	9.0	28.4	72	23.6	431.8	36.0	12.0	85.6	24.0	9.0	41.0
78	20.2	398.5	31.0	13.0	93.7	21.0	9.5	37.4	78	25.7	506.7	39.0	13.0	108.2	26.0	10.0	53.2
84	21.8	462.1	33.5	14.0	124.7	22.0	10.5	46.5	84	27.7	587.7	42.0	14.0	134.4	28.0	10.5	64.8
90	23.3	530.5	35.5	15.0	164.4	24.5	11.0	58.2	90	29.0	674.6	45.0	15.0	164.9	30.0	11.5	81.2
96	24.9	603.6	38.0	16.0	218.9	25.5	12.0	70.0	96	31.6	767.5	48.0	16.0	199.0	32.0	12.0	95.1



A=	11.25°	22.50°	30°	45°	67.50°	90°	180°
I.D. (IN.)	4.68	10.12	16.18	20	24	30	36
THRUST (TONS)	5.1	11.3	25.5	31.5	45.2	53.0	76.3
VOL. (C.Y.)	0.3	0.6	1.6	2.0	2.8	3.3	4.8
I.D. (IN.)	4.68	10.12	16.18	20	24	30	36
THRUST (TONS)	11.3	25.5	58.9	76.3	104.0	136.0	172.0
VOL. (C.Y.)	0.6	1.6	4.0	5.0	6.7	8.5	11.9
I.D. (IN.)	16.18	20	24	30	36	42	48
THRUST (TONS)							