



SIZE OF PIPE (D)	11 1/4 DEGREE					22 1/2 DEGREE					45 DEGREE				
	L"	W"	H"	E"	VOL	L"	W"	H"	E"	VOL	L"	W"	H"	E"	VOL
4"	12	24	24	12	4	12	34	34	12	8	22	37	32	22	15
6"	18	32	27	18	9	15	52	40	15	18	28	64	32	28	33
8"	21	40	33	21	16	22	61	40	22	31	35	64	45	35	58
10"	24	50	36	24	25	30	59	48	30	49	42	72	52	42	90
12"	31	56	36	31	36	36	70	48	36	70	45	80	62	45	129

NOTES:

- 1) VOLUME IS IN CUBIC FEET.
- 2) ALL CONCRETE TO BE 3,000 P.S.I. MIN.
- 3) BLOCKS TO BE CENTERED HORIZONTALLY ON THE BEND.
- 4) DESIGN BASED ON A TEST PRESSURE OF 150 P.S.I. AND SAFETY FACTOR ( $S_f$ ) OF 1.5

THE DESIGN ENGINEER IS RESPONSIBLE FOR VERIFYING THE ACTUAL SITE CONDITIONS WITH RESPECT TO THE ASSUMPTIONS LISTED ABOVE.

$$5) V_g = \frac{S_f PA \sin \theta}{W_m}$$

$$6) W_m = 140 \# / FT^3$$

**UPPER VERTICAL THRUST BLOCK DETAIL**

NTS

