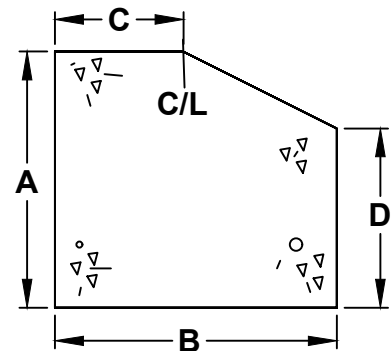


	PIPE SIZE	A	B	C	D	WIDTH	CU. YARDS
11 1/4°	6"	2' - 0"	2' - 0"	1' - 0"	1' - 10"	2' - 0"	0.29
	8"	2' - 4"	3' - 0"	1' - 6"	2' - 1"	2' - 0"	0.51
	10"	2' - 9"	2' - 9"	1' - 4.5"	2' - 6"	2' - 9"	0.78
	12"	3' - 0"	3' - 4"	1' - 6"	2' - 8"	3' - 0"	1.11
	14"	3' - 0"	4' - 0"	1' - 8"	2' - 8"	3' - 4"	1.48
	16"	4' - 0"	4' - 0"	1' - 8"	3' - 8"	3' - 4"	2.22
	20"	4' - 1"	5' - 0"	2' - 0"	3' - 9"	4' - 2"	3.69
	24"	5' - 1"	5' - 0"	2' - 4"	4' - 8"	4' - 9"	4.22
	30"	5' - 3"	6' - 0"	3' - 0"	4' - 8"	6' - 0"	7.00
	36"	6' - 1"	7' - 0"	3' - 2"	5' - 6"	6' - 4"	10.30
22 1/2°	6"	2' - 10"	2' - 6"	1' - 3"	2' - 4"	2' - 6"	0.56
	8"	3' - 4"	3' - 0"	1' - 6"	2' - 9"	3' - 0"	1.01
	10"	3' - 11"	4' - 0"	2' - 0"	3' - 1"	3' - 0"	1.54
	12"	4' - 2"	4' - 0"	2' - 0"	3' - 5"	4' - 0"	2.19
	14"	4' - 4"	5' - 0"	2' - 6"	3' - 4"	4' - 0"	2.98
	16"	4' - 6"	5' - 0"	2' - 6"	3' - 6"	5' - 0"	3.88
	20"	5' - 4"	5' - 6"	2' - 9"	4' - 2"	6' - 0"	6.07
	24"	6' - 4"	6' - 7"	3' - 4"	5' - 1"	6' - 0"	8.75
	30"	7' - 4"	7' - 6"	3' - 9"	5' - 10"	7' - 0"	13.64
	36"	8' - 4"	8' - 5"	4' - 2"	6' - 8"	8' - 0"	19.87
45°	6"	3' - 6"	3' - 0"	1' - 6"	1' - 9"	3' - 3"	1.08
	8"	3' - 9"	4' - 0"	2' - 0"	1' - 10"	4' - 0"	1.19
	10"	4' - 6"	4' - 0"	2' - 0"	2' - 3"	5' - 0"	2.92
	12"	4' - 6"	4' - 2"	2' - 1"	2' - 3"	5' - 0"	3.06
	14"	5' - 6"	5' - 5"	2' - 7"	2' - 9"	6' - 0"	5.83
	16"	6' - 1"	6' - 0"	3' - 0"	3' - 0"	6' - 0"	7.41
	20"	7' - 1"	7' - 0"	3' - 6"	3' - 6"	7' - 0"	11.88
	24"	7' - 9"	8' - 0"	4' - 0"	3' - 10"	8' - 0"	17.29
	30"	9' - 6"	9' - 0"	4' - 5"	4' - 9"	9' - 0"	26.70
	36"	10' - 5"	10' - 5"	5' - 2"	5' - 3"	10' - 0"	38.48

MINIMUM DIMENSIONS FOR CONCRETE BLOCKING

NOTES:

1. SEE STRAP DETAIL IN S-18A FOR REQUIRED STRAPS.
2. COVER GLANDS & BOLTS W/ 6 MIL POLYETHYLENE BEFORE PLACING CONCRETE.
3. ALLOW CONCRETE TO SET FOR A MINIMUM OF 6 HOURS BEFORE PLACING BACKFILL.
4. CONCRETE SHALL BE 3000 PSI CLASS A.
5. ALL DUCTILE IRON FITTINGS SHALL BE BLOCKED AND SUPPORT AS SHOWN
6. UNDER ADVERSE CONSTRUCTION CONDITIONS, CONCRETE SHALL BE "HIGH EARLY" TYPE.
7. COAT STEEL STRAP W. BITUMINOUS ASPHALT COATING.



LATEST REVISION

07/14/2017

CITY OF CUMMING

DEPARTMENT OF UTILITIES

THRUST RESTRAINT SIZE CHART

UPWARD THRUST

DETAIL NUMBER:

S-18B

SCALE: NOT TO SCALE