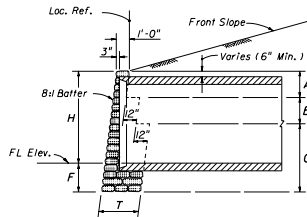
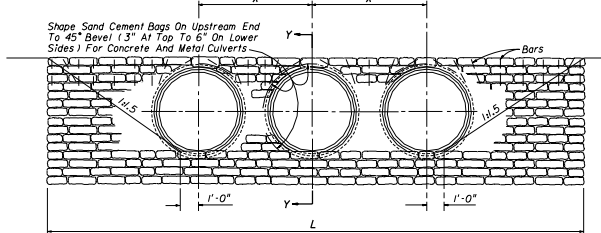


CORRUGATED METAL PIPE



CONCRETE PIPE

SECTION Y



- Note: (1) For concrete and corrugated metal pipes, concrete pipe shown.
 (2) The top row of riprap bags shall be secured by pinning, using #4 reinforcing bars 18 inches in length, as follows:
 (a) The end bags shall be secured using two bars per bag, one vertical and one diagonal as shown.
 (b) The next to last bag on each end shall be secured with two bars vertically.
 (c) Bags located over the pipe shall be secured by a bar which is driven diagonally except that for concrete pipe two bars shall be used for single bags above the pipe.
 (d) Intermediate bags shall be secured with a single bar.
 Bars shall be driven to one inch below the surface of the bag.
 The cost of furnishing and installing the bars shall be included in the cost of the riprap.

FRONT ELEVATION

TABLE OF DIMENSIONS AND QUANTITIES FOR ONE ENDWALL

SIZE OF PIPE	H	T	A	B	C	F	X	ONE PIPE CULVERTS								TWO PIPE CULVERTS				THREE PIPE CULVERTS				FOUR PIPE CULVERTS			
								L		RIPRAP CY		L		RIPRAP CY		L		RIPRAP CY		L		RIPRAP CY					
								CP	CMP	CP	CMP	CP	CMP	CP	CMP	CP	CMP	CP	CMP	CP	CMP						
18"	2'-3"	1'-0"	4'-0"	0'-0"	0'-0"	1'-9"	2'-10"	8'-9"	1.2	1.2	11'-7"	1.5	1.6	14'-5"	1.8	1.9	17'-3"	2.1	2.3								
24"	2'-9"	2'-0"	2'-0"	2'-6"	0'-0"	0'-0"	1'-9"	3'-5"	2.4	2.5	13'-8"	3.0	3.2	17'-1"	3.7	4.0	20'-6"	4.3	4.7								
30"	3'-4"	2'-0"	2'-0"	3'-2"	0'-0"	1'-10"	4'-3"	12'-0"	3.3	3.4	16'-3"	4.2	4.5	20'-6"	5.1	5.5	24'-9"	6.0	6.5								
36"	3'-10"	2'-0"	2'-0"	3'-8"	0'-0"	0'-0"	1'-10"	5'-1"	4.0	4.2	18'-7"	5.2	5.7	23'-8"	6.3	6.9	28'-9"	7.4	8.2								
42"	4'-5"	3'-0"	2'-0"	2'-0"	2'-4"	1'-11"	6'-0"	15'-3"	6.4	6.7	21'-3"	8.3	8.9	27'-3"	10.2	11.2	33'-3"	12.3	13.4								
48"	4'-11"	3'-0"	2'-0"	2'-0"	2'-10"	1'-11"	6'-9"	16'-9"	7.7	8.1	23'-6"	10.0	10.8	30'-3"	12.3	13.5	37'-0"	14.5	16.2								
54"	5'-6"	3'-0"	2'-0"	2'-0"	3'-6"	2'-0"	7'-8"	18'-6"	9.5	10.1	26'-2"	12.4	13.5	33'-10"	15.3	17.0	41'-6"	18.2	20.4								
60"	6'-0"	3'-0"	2'-0"	2'-0"	4'-0"	2'-0"	8'-6"	20'-0"	11.0	11.7	28'-6"	14.4	15.8	37'-0"	17.8	19.8	45'-6"	21.1	23.8								
66"	6'-7"	3'-0"	2'-0"	2'-0"	4'-8"	2'-1"	9'-3"	21'-9"	13.2	14.1	31'-0"	17.2	18.9	40'-3"	21.2	23.7	49'-6"	25.1	28.5								
72"	7'-1"	3'-0"	2'-0"	2'-0"	5'-2"	2'-1"	10'-0"	23'-3"	15.0	16.0	33'-3"	19.4	21.4	43'-3"	23.9	26.8	53'-3"	28.3	32.3								
78"	7'-8"	3'-0"	2'-0"	2'-0"	5'-10"	2'-2"	10'-9"	25'-0"	17.5	18.7	35'-9"	22.6	25.0	46'-6"	27.8	31.3	57'-3"	32.9	37.6								
84"	8'-2"	3'-0"	2'-0"	2'-0"	6'-4"	2'-2"	11'-8"	26'-6"	19.5	20.9	38'-2"	25.3	28.1	49'-10"	31.1	35.2	61'-6"	36.9	42.4								

GENERAL NOTES

1. Straight sand-cement endwalls are intended for use outside the clear zone.

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
ROAD DESIGN

STRAIGHT SAND-CEMENT
ENDWALLS

Designed By	State	Date	Approved By	State
Drawn By	Scale	Sheet No.	Sheet No.	Sheet No.
Checked By	16/708	08/88	00	1 of 1