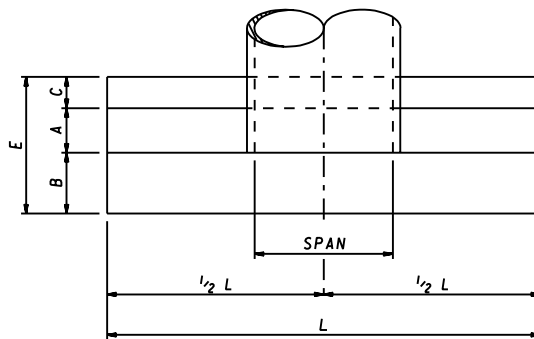
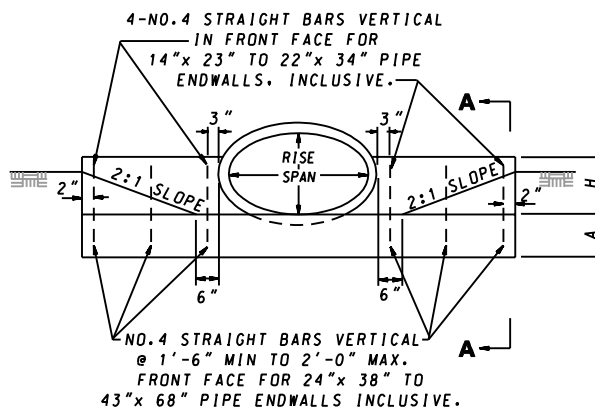
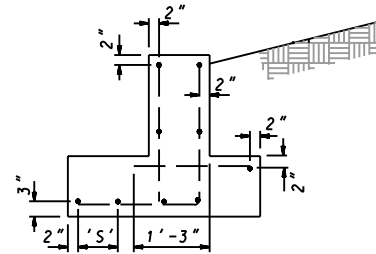




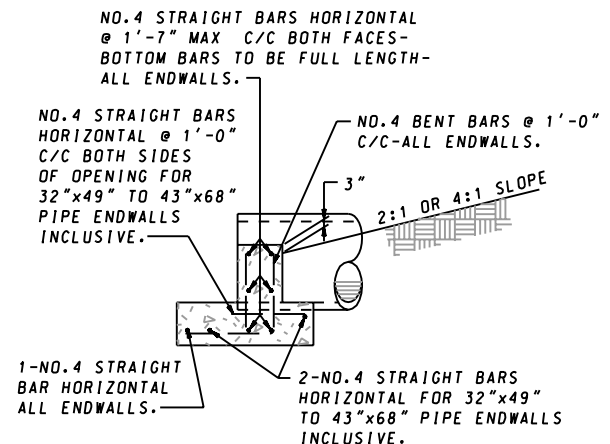
PLAN



ELEVATION



DISPOSITION OF BARS DETAIL



SECTION A-A

QUANTITIES FOR ESTIMATING PURPOSES ONLY

OPENING		DIMENSIONS						QUANTITIES	
RISE x SPAN	AREA	A	B	C	E	H	L	CONC.	STEEL
INCHES	SO. FT							C.Y.	LBS.
14X23	1.8	9"	8"	6"	1'-11"	1'-0"	4'-11"	.42	25
19X30	3.3	9"	8"	6"	1'-11"	1'-2"	6'-2"	.55	32
22X34	4.1	9"	14"	6"	2'-5"	1'-5"	7'-6"	.68	38
24X38	5.1	12"	16"	10"	3'-2"	1'-6"	8'-2"	1.22	51
27X42	6.3	12"	16"	10"	3'-2"	1'-8"	9'-2"	1.41	57
29X45	7.4	12"	16"	10"	3'-2"	1'-9"	9'-9"	1.50	65
32X49	8.8	12"	16"	10"	3'-2"	1'-11"	10'-9"	1.70	94
34X53	10.2	12"	16"	10"	3'-2"	2'-0"	11'-5"	1.81	98
38X60	12.9	12"	16"	12"	3'-4"	2'-1"	12'-4"	2.00	103
43X68	16.6	12"	20"	12"	3'-8"	2'-4"	13'-4"	2.35	111

'S' DISTANCES

6" FOR 14"x23" TO 27"x42" PIPES INCLUSIVE.
8" FOR 29"x45" TO 43"x68" PIPES INCLUSIVE.

GENERAL NOTES

SPECIFICATIONS: LATEST S.H.A.
CONCRETE: SEE S.H.A. SPECIFICATIONS.
REINFORCEMENT: DEFORMED STEEL BARS NO.4
CHAMFER: ALL EXPOSED EDGES 1"x1" OR AS DIRECTED.

SPECIFICATION 305	CATEGORY CODE ITEMS
APPROVED <i>Kirk G. McCall</i> DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT	
APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL 10-1-01	APPROVAL 9-27-01
REVISED 8-12-02	REVISED
REVISED	REVISED
REVISED	REVISED



Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

STANDARD END SUPPORT WALL
HORIZONTAL ELLIPTICAL CONCRETE PIPE

STANDARD NO.

MD 355.03