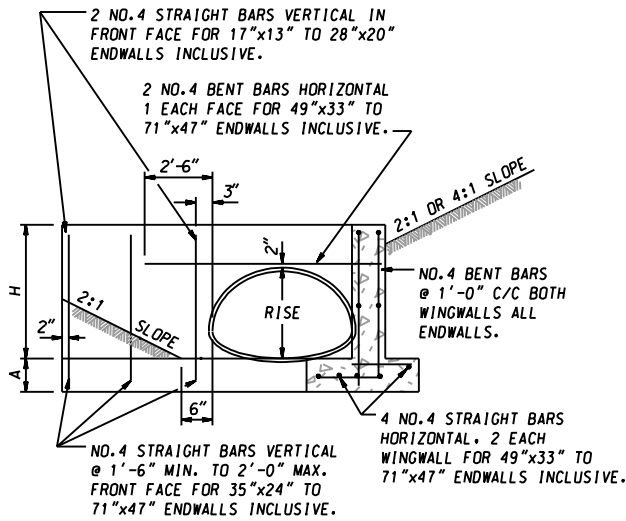


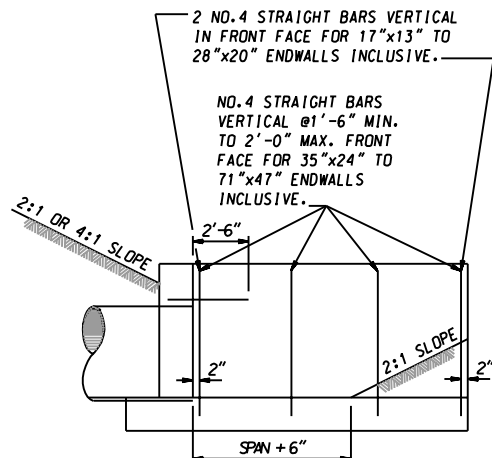
PLAN

QUANTITIES FOR ESTIMATING PURPOSES ONLY

OPENING		DIMENSIONS						QUANTITIES	
SIZE	AREA	A	B	C	E	H	L	CONC. C. Y.	STEEL LBS.
INCHES SxR	SO. FT.								
17x13	1.23	9"	6"	6"	1'-9"	1'-7"	3'-9"	.73	53
21x15	1.77	9"	6"	6"	1'-9"	2'-2"	5'-10"	1.30	75
24x18	2.40	9"	6"	6"	1'-9"	2'-2"	5'-10"	1.28	75
28x20	3.14	9"	6"	6"	1'-9"	2'-2"	5'-10"	1.26	74
35x24	4.91	9"	14"	6"	2'-5"	3'-2"	8'-6"	2.57	118
42x29	7.07	9"	14"	6"	2'-5"	3'-2"	8'-6"	2.52	117
49x33	9.62	12"	16"	10"	3'-2"	3'-11"	11'-3"	5.80	271
57x38	12.57	12"	16"	10"	3'-2"	3'-11"	11'-3"	5.65	261
64x43	15.90	12"	20"	12"	3'-8"	4'-8"	13'-9"	8.12	366
71x47	19.64	12"	20"	12"	3'-8"	4'-8"	13'-9"	7.98	355



SECTION A-A



END VIEW

'S' DISTANCES

4" FOR 17"x13" TO 24"x18" INCLUSIVE.
 6" FOR 28"x20" TO 42"x29" INCLUSIVE.
 8" FOR 49"x33" TO 71"x47" INCLUSIVE.

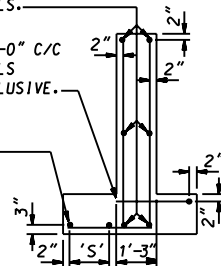
GENERAL NOTES

SPECIFICATIONS: LATEST S.H.A.
 CONCRETE SHALL BE MIX NO.2
 REINFORCING: DEFORMED STEEL BARS- NO. 4
 CHAMFER: ALL EXPOSED EDGES 1"x1" OR AS DIRECTED.

NO.4 STRAIGHT BARS HORIZONTAL @ 1'-7" MAX. C/C BOTH FACES- LAP 1'-3" TOP & BOTTOM BARS @ CORNER- BOTH WINGWALLS- ALL ENDWALLS.

NO.4 STRAIGHT BARS HORIZONTAL @ 1'-0" C/C BOTH SIDES OF OPENING BOTH WINGWALLS FOR 49"x33" TO 71"x47" ENDWALL INCLUSIVE.

2 NO.4 STRAIGHT BARS HORIZONTAL, 1 EACH WINGWALL- ALL ENDWALLS.



DISPOSITION OF BARS DETAIL

SPECIFICATION 305	CATEGORY CODE ITEMS
APPROVED <i>Kirk G. McCall</i> DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT	
	APPROVAL • SHA REVISIONS APPROVAL 8-28-86
	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION APPROVAL 12-12-86
	REVISED 10-1-01
	REVISED

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

STANDARD TYPE E ENDWALL
METAL PIPE ARCH

STANDARD NO. MD 357.01