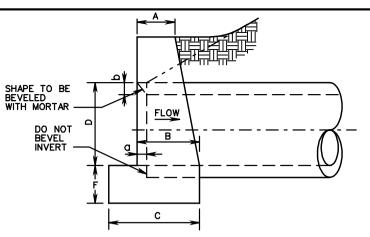


- NOTES: 1. "H" MAY BE REDUCED UNTIL "X" REACHES A MINIMUM OF 4" WHERE ENDWALL WOULD PROTRUDE ABOVE SHOULDER LINE. IN NO CASE SHALL TOP OF ENDWALL PROJECT ABOVE FILL SLOPE, DITCH SLOPE, OR SHOULDER.
  - 2. THIS ITEM MAY BE PRECAST OR CAST IN PLACE.
  - 3. ALL CAST IN PLACE CONCRETE TO BE CLASS A3. FOR PRECAST SEE SHEET 101.02.
  - 4. THIS STANDARD TO BE USED WITH STRAIGHT CROSSINGS AND ALL SKEWS(0° TO 45°).
  - 5. HEADWALL TO BE BEVELED IN ALL AREAS EXCEPT WHERE A CONFLICT WITH INVERT OR WINGWALLS OCCUR



- 6. BEVEL EDGE IS REQUIRED ON THE HEADWALL AT THE INLET END OF THE CULVERT (WHERE THE FLOW ENTERS THE CULVERT).
- 7. HEADWALL AT THE OUTLET END OF THE CULVERT MAY BE EITHER SQUARE EDGE OR BEVEL EDGE.
- 8. ON SHALLOW FILLS, WHERE ENDWALLS ARE 1'OR LESS BELOW SHOULDER LINE, THE TOP OF THE ENDWALL SHALL BE CONSTRUCTED PARALLEL TO THE GRADE OF THE ROAD.
- 9. 34" CHAMFER MAY BE PROVIDED ON ALL EDGES AT MANUFACTURER'S OPTION.

EW-1A EW-1

ENDWALL FOR CIRCULAR PIPE							
DIAMETER OF PIPE CULVERT							
	12"	15"	18"	21" OR 24"	27" OR 30"	33" OR 36"	
Α	0'-6"	0'-8''	0'-9''	0'-11"	1'-0''	1'-0"	
В	0'-11"	1'-1"	1'-3"	1'-6''	1'-9"	2'-0"	
С	1'-4"	1'-7''	1'-9"	2'-2"	2'-6"	2'-9"	
D	1'-0"	1'-3''	1'-6"	2'-0"	2'-6"	3'-0"	
F	0'-6"	0'-8"	0'-8"	0'-9"	0'-9"	0'-9"	
Н	2'-3"	2'-11"	3'-2"	3'-9''	4'-3"	4'-9"	
L	4'-0''	5'-0"	6'-0"	8'-0"	10'-0"	12'-0"	
а	0'-11/4"	0'-13/4"	0'-2"	0'-21/2"	0'-31/4"	0'-3¾''	
Ь	0'-1"	0'-11/4"	0'-11/2"	0'-2"	0'-21/2"	0'-3"	
CUBIC YARDS OF CONCRETE							
CONC. PIPE	0.241	0.492	0.697	1.319	2.067	2.947	
C.M. PIPE	0.257	0.521	0.739	1.398	2.198	3.145	

ENDWALL FOR ELLIPTICAL PIPE								
SIZE OF ELLIPTICAL PIPE CULVERT (SPAN x RISE)								
	23"x14"	30"x19"	34"x22"	38"x24"	42"x27"	45"x29"	49"x32"	53"x34"
A	0'-8"	0'-9"	0'-10"	0'-11"	0'-11"	1'-0''	1'-0''	1'-0"
В	1'-2''	1'-5"	1'-6"	1'-8''	1'-9''	1'-10"	1'-11"	1'-11"
С	1'-8"	1'-11"	2'-1"	2'-4"	2'-5"	2'-7"	2'-8"	2'-9"
D	1'-2"	1'-7''	1'-10''	2'-0"	2'-3"	2'-5"	2'-8"	2'-10"
F	0'-8"	0'-8"	0'-9"	0'-9"	0'-9"	0'-9"	0'-9"	0'-9"
Н	2'-10"	3'-3"	3'-7"	3'-9"	4'-0"	4'-2"	4'-5"	4'-7"
L	5'-5"	7'-2"	8'-6"	9'-2"	10'-2"	10'-11''	12'-1"	12'-11''
s	1'-11''	2'-6"	2'-10"	3'-2"	3'-6"	3'-9"	4'-1"	4'-5"
a	0'-21/2"	0'-31/4"	0'-31/2"	0'-4"	0'-41/2"	0'-4¾''	0'-5"	0'-51/2"
b	0'-2"	0'-21/2"	0'-2¾"	0'-3"	0'-31/2"	0'-3¾"	0'-4"	0'-41/2"
CUBIC YARDS OF CONCRETE								
CONC.PIPE	0.502	0.855	1.236	1.500	1.811	2.101	2.512	2.801

SPECIFICATION REFERENCE

## STANDARD ENDWALL FOR PIPE CULVERTS

12" - 36" CIRCULAR AND 23" x 14" - 53" x 34" ELLIPTICAL PIPES

VIRGINIA DEPARTMENT OF TRANSPORTATION

	1	NDO.	Т
ROAD	AND	BRIDGE	STANDARDS

REVISION DATE SHEET 1 OF 1

101.01

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