



NOTE:

"H" MAY BE REDUCED UNTIL "X" REACHES A MINIMUM OF 4" WHERE HEADWALL WOULD PROTRUDE ABOVE SHOULDER LINE. IN NO CASE SHALL TOP OF HEADWALL PROJECT ABOVE FILL SLOPE, DITCH SLOPE, OR SHOULDER.

THIS STANDARD TO BE USED WITH STRAIGHT CROSSINGS AND ALL SKEWS (0° TO 45°).

ALL CAST IN PLACE CONCRETE TO BE CLASS A3.

ON SHALLOW FILLS, WHERE HEADWALLS ARE 1' OR LESS BELOW SHOULDER LINE, THE TOP OF THE HEADWALL SHALL BE CONSTRUCTED PARALLEL TO THE GRADE OF THE ROAD.

HW-1

HW-1A

HEADWALL FOR CIRCULAR PIPE

DIAMETER OF PIPE CULVERT						
	12"	15"	18"	24"	30"	36"
A	0'-6"	0'-8"	0'-9"	0'-11"	1'-0"	1'-0"
B	0'-11"	1'-1"	1'-3"	1'-6"	1'-9"	2'-0"
C	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"
H	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"

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

HEADWALL FOR ELLIPTICAL PIPE

SIZE OF ELLIPTICAL PIPE CULVERT (SPAN x RISE)								
	23x14	30x19	34x22	38x24	42x27	45x29	49x32	53x34
A	0'-8"	0'-9"	0'-10"	0'-11"	0'-11"	1'-0"	1'-0"	1'-0"
B	1'-2"	1'-5"	1'-6"	1'-8"	1'-9"	1'-10"	1'-11"	1'-11"
C	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"
H	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"

CUBIC YARDS OF CONCRETE								
CONC. PIPE	0.502	0.855	1.236	1.500	1.811	2.101	2.512	2.801



DESIGN AND CONSTRUCTION STANDARDS

HEADWALL FOR PIPE CULVERTS

08/01/03	REV. FOR INTERNET 2003	DR. BY:	DATE:
DATE	REVISIONS	CHK. BY:	DATE:

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