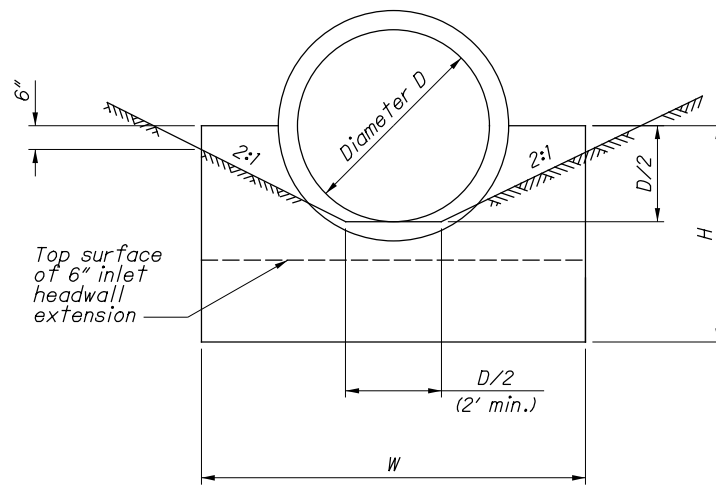
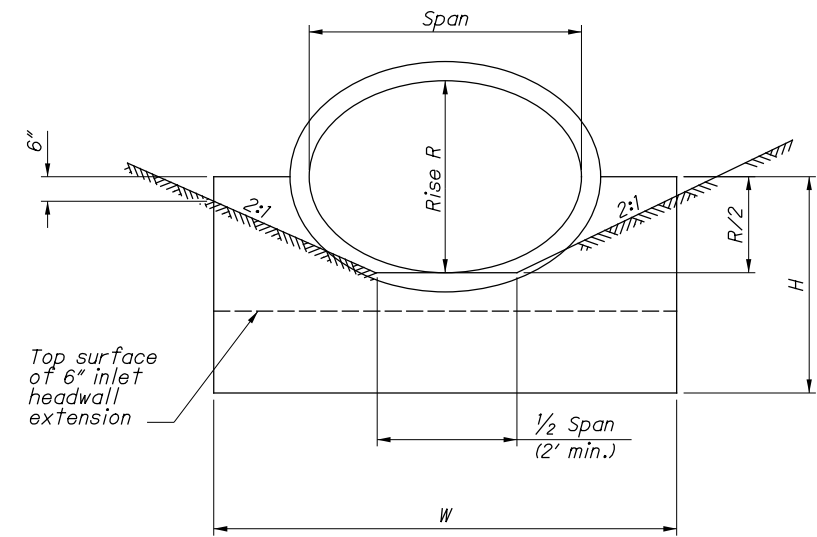


PROFILE



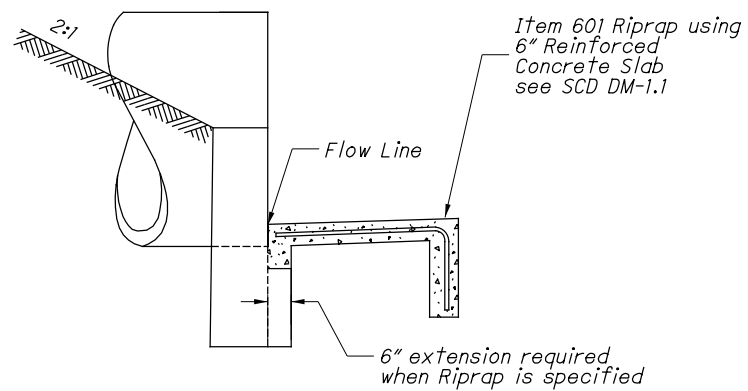
CIRCULAR



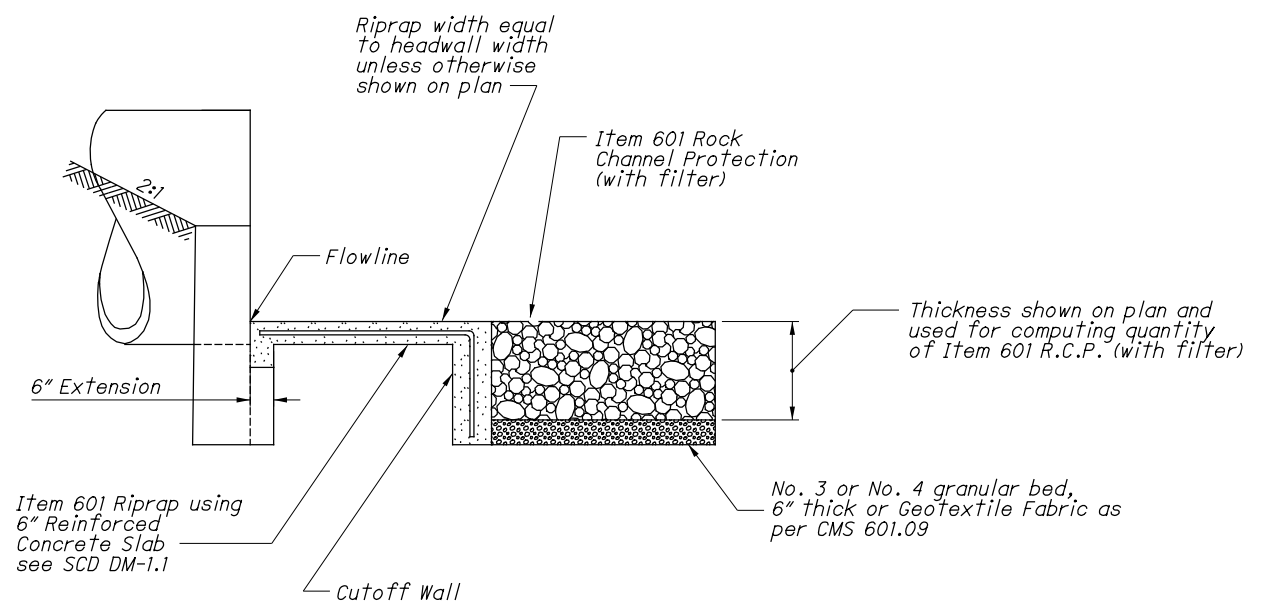
ELLIPTICAL

CONCRETE PIPE

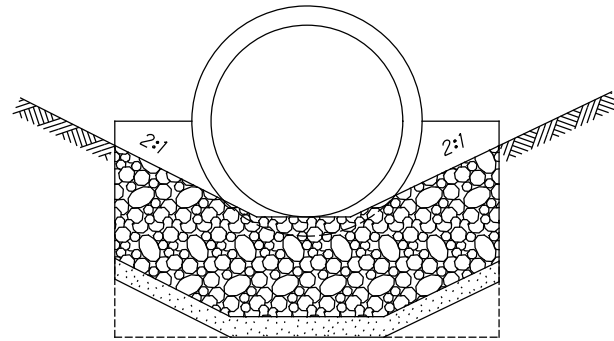
See Sheet 2 of 2 for Pipe Tables and NOTES.



INLET CHANNEL PROTECTION DETAIL



OUTLET CHANNEL PROTECTION DETAIL



Riprap and rock channel protection width equal to headwall width unless otherwise shown on the plans. (Minimum width 4'-0".)

NOTES

GENERAL: Provide a riprap reinforced concrete slab according to SCD DM-1.1 if the pipe is depressed or it is specified in the plan. Payment for the slab is made per square yard of **Item 601 Riprap Using 6" Reinforced Concrete Slab** and includes the cost of the cutoff wall.

This drawing is for cast in place half-height concrete headwalls. Precast half-height headwalls are only approved for round conduits with a maximum conduit diameter of 78".

CONCRETE: Use 4000 psi compressive strength concrete for headwalls.

Concrete quantities are based on headwalls without the 6" extension under the channel protection.

C.I.P. HEADWALL FOR CONCRETE PIPE (English)

CIRCULAR					ELLIPTICAL					
D	W	H	T	Conc. cu. yds.	Rise	Span	W	H	T	Conc. cu. yds.
12"	2'-0"	3'-0"	12"	0.20	--	--	--	--	--	--
15"	2'-6"	3'-2"	12"	0.25	--	--	--	--	--	--
18"	3'-0"	3'-3"	12"	0.31	14"	23"	3'-0"	3'-2"	12"	0.29
21"	3'-6"	3'-4"	12"	0.37	19"	30"	3'-7"	3'-4"	12"	0.35
24"	4'-0"	3'-6"	12"	0.43	22"	34"	3'-11"	3'-5"	12"	0.38
27"	4'-6"	3'-8"	12"	0.49	24"	38"	4'-6"	3'-6"	12"	0.44
30"	5'-0"	3'-9"	12"	0.56	--	--	--	--	--	--
33"	5'-6"	3'-10"	12"	0.62	29"	45"	5'-2"	3'-8"	12"	0.49
36"	6'-0"	4'-0"	12"	0.69	--	--	--	--	--	--
39"	6'-6"	4'-2"	12"	0.77	34"	53"	5'-11"	4'-0"	14"	0.66
42"	7'-0"	4'-3"	12"	0.84	38"	60"	6'-10"	4'-2"	14"	0.82
48"	8'-0"	4'-6"	14"	1.09	43"	68"	8'-0"	4'-4"	16"	1.01
54"	9'-3"	4'-9"	14"	1.32	48"	76"	9'-2"	5'-0"	16"	1.34
60"	10'-6"	5'-6"	16"	1.93	53"	83"	10'-4"	5'-2"	18"	1.65
66"	11'-9"	5'-9"	18"	2.42	58"	91"	11'-6"	5'-5"	18"	1.97
72"	13'-0"	6'-0"	18"	2.77	63"	98"	12'-7"	5'-7"	20"	2.38
78"	14'-3"	6'-3"	20"	3.37	68"	106"	13'-9"	5'-10"	20"	2.69
84"	15'-6"	6'-6"	22"	4.05	72"	113"	14'-9"	6'-0"	22"	3.14
90"	16'-9"	6'-9"	22"	4.51	77"	121"	15'-11"	6'-3"	22"	3.49
96"	18'-0"	7'-0"	24"	5.31	82"	128"	17'-0"	6'-5"	24"	4.04
102"	19'-3"	7'-3"	26"	6.20	87"	136"	18'-2"	6'-8"	24"	4.84
108"	20'-6"	7'-6"	26"	6.78	92"	143"	19'-4"	6'-10"	26"	5.12
114"	21'-9"	7'-9"	28"	7.81	97"	151"	20'-6"	7'-1"	26"	5.42
120"	23'-0"	8'-0"	30"	8.93	106"	166"	22'-7"	7'-5"	28"	6.60
126"	24'-3"	8'-3"	30"	9.57	116"	180"	24'-10"	7'-10"	30"	7.99
132"	25'-6"	8'-6"	32"	10.84	--	--	--	--	--	--
144"	28'-8"	9'-0"	34"	13.00	--	--	--	--	--	--