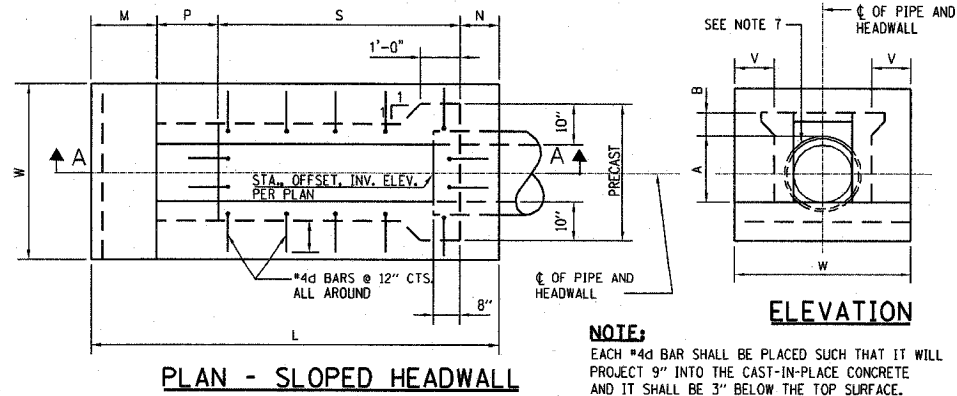
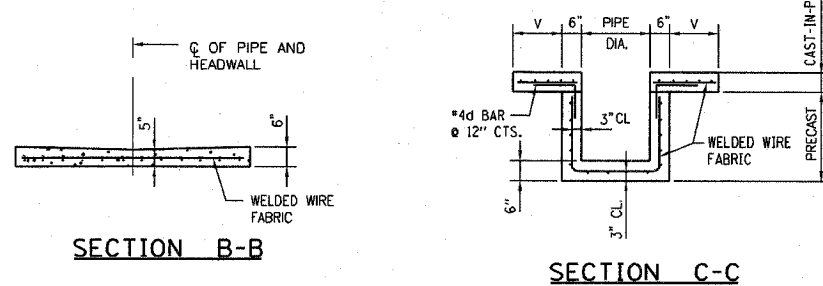
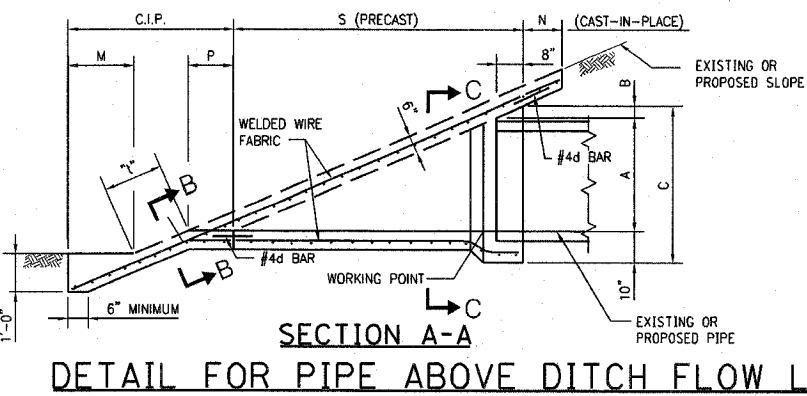
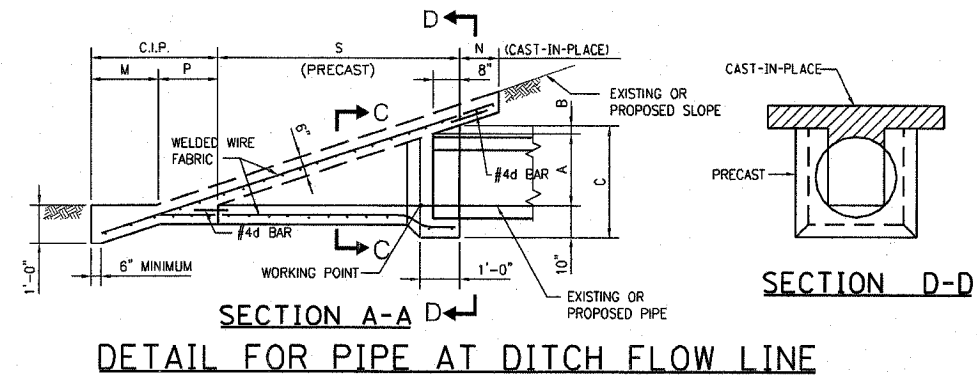


DIMENSIONS AND QUANTITIES IN ONE SLOPED HEADWALL TYPE III



NOTE:
EACH #4d BAR SHALL BE PLACED SUCH THAT IT WILL PROJECT 9" INTO THE CAST-IN-PLACE CONCRETE AND IT SHALL BE 3" BELOW THE TOP SURFACE. HOOKS IN THE PRECAST SECTION SHALL BE TIPPED TO CLEAR ALL CONCRETE SURFACES A MIN. OF 2".



BAR #4d

PIPE DIA	DIMENSIONS										PRE CAST CONC. CU. YD.	CAST-IN-PLACE CU. YD.	WELDED WIRE FABRIC SQ. YD.	NO. OF #4d BARS	REINF. STEEL LBS.
	A	B	C	N	M	P	S	L	V	W					
3 TO 1 SLOPE															
6"	9"	2 3/4"	1'-9 3/4"	1'-0"	1'-8"	1'-6 3/4"	2'-11 1/4"	7'-2"	1'-0"	3'-6"	.19	.51	2.67	12	16
12"	1'-3 1/2"	2 3/4"	2'-4 1/4"	1'-0"	1'-8"	1'-6 3/4"	4'-6 3/4"	8'-9 1/2"	1'-0"	4'-0"	.36	.65	3.80	14	19
15"	1'-6 1/2"	2 3/4"	2'-7 1/4"	1'-0"	1'-8"	1'-6 3/4"	5'-3 3/4"	9'-6 1/2"	1'-0"	4'-3"	.47	.73	5.13	16	21
18"	1'-10"	2 3/4"	2'-10 3/4"	1'-0"	1'-8"	1'-6 3/4"	6'-2 1/4"	10'-5"	1'-0"	4'-6"	.61	.80	5.65	18	24
21"	2'-1"	2 3/4"	3'-1 3/4"	1'-0"	1'-9"	1'-6 3/4"	6'-11 1/4"	11'-3"	1'-3"	5'-3"	.74	1.0	7.42	22	29
24"	2'-4 1/2"	2 3/4"	3'-5 1/4"	1'-0"	2'-0"	1'-6 3/4"	7'-9 3/4"	12'-4 1/2"	1'-6"	6'-0"	.86	1.24	8.80	24	32
27"	2'-7 1/2"	2 3/4"	3'-8 1/4"	1'-1 1/2"	2'-3"	1'-6 3/4"	8'-6 3/4"	13'-6"	1'-9"	6'-9"	1.03	1.53	12.35	24	32
30"	2'-11"	2 3/4"	3'-11 3/4"	1'-3"	2'-6"	1'-6 3/4"	9'-5 1/4"	14'-9"	2'-0"	7'-6"	1.22	2.00	15.08	26	35
4 TO 1 SLOPE															
6"	9"	1 3/4"	1'-8 3/4"	1'-0"	1'-8"	2'-1"	3'-7"	8'-4"	1'-0"	3'-6"	.21	.57	3.27	12	16
12"	1'-3 1/2"	1 3/4"	2'-3 1/4"	1'-0"	1'-8"	2'-1"	5'-9"	10'-6"	1'-0"	4'-0"	.44	.75	4.58	16	21
15"	1'-6 1/2"	1 3/4"	2'-6 1/4"	1'-0"	1'-8"	2'-1"	6'-9"	11'-6"	1'-0"	4'-3"	.57	.83	5.66	18	24
18"	1'-10"	1 3/4"	2'-9 3/4"	1'-0"	1'-8"	2'-1"	7'-11"	12'-8"	1'-0"	4'-6"	.73	.93	7.57	22	29
21"	2'-1"	1 3/4"	3'-0 3/4"	1'-0"	1'-9"	2'-1"	8'-11"	13'-9"	1'-3"	5'-3"	.89	1.16	9.83	24	32
24"	2'-4 1/2"	1 3/4"	3'-4 1/4"	1'-0"	2'-0"	2'-1"	10'-1"	15'-2"	1'-6"	6'-0"	1.12	1.45	12.51	28	37
27"	2'-7 1/2"	1 3/4"	3'-7 1/4"	1'-1 1/2"	2'-3"	2'-1"	11'-1"	16'-6 1/2"	1'-9"	6'-9"	1.32	1.77	13.28	30	40
30"	2'-11"	1 3/4"	3'-10 3/4"	1'-3"	2'-6"	2'-1"	12'-3"	18'-1"	2'-0"	7'-6"	1.58	2.14	18.77	32	43
6 TO 1 SLOPE															
6"	9"	1 1/2"	1'-8 1/2"	1'-0"	1'-8"	3'-0"	5'-3"	10'-11"	1'-0"	3'-6"	.29	.71	4.11	16	21
12"	1'-3 1/2"	1 1/2"	2'-3"	1'-0"	1'-8"	3'-0"	8'-6"	14'-2"	1'-0"	4'-0"	.60	.96	7.27	22	29
15"	1'-6 1/2"	1 1/2"	2'-6"	1'-0"	1'-8"	3'-0"	10'-0"	15'-8"	1'-0"	4'-3"	.79	1.07	8.91	26	35
18"	1'-10"	1 1/2"	2'-9 1/2"	1'-0"	1'-8"	3'-0"	11'-9"	17'-5"	1'-0"	4'-6"	1.03	1.20	10.95	28	37
21"	2'-1"	1 1/2"	3'-0 1/2"	1'-0"	1'-9"	3'-0"	13'-3"	19'-0"	1'-3"	5'-3"	1.29	1.51	14.00	34	45
24"	2'-4 1/2"	1 1/2"	3'-4"	1'-0"	2'-0"	3'-0"	15'-0"	21'-0"	1'-6"	6'-0"	1.59	1.89	15.49	38	51
27"	2'-7 1/2"	1 1/2"	3'-7"	1'-1 1/2"	2'-3"	3'-0"	16'-6"	22'-10 1/2"	1'-9"	6'-9"	1.90	2.30	21.82	40	53
30"	2'-11"	1 1/2"	3'-10 1/2"	1'-3"	2'-6"	3'-0"	18'-3"	25'-0"	2'-0"	7'-6"	2.27	2.79	26.60	44	59

NOTES

- CLASS SI CONCRETE SHALL BE USED THROUGHOUT.
- THE CAST-IN-PLACE SLOPEWALL SHALL BE CONSTRUCTED FLUSH WITH EXISTING OR PROPOSED SLOPE.
- THE SLOPEWALL DETAILS SHOWN IN THIS DRAWING ARE FOR USE ONLY WITH PIPES HAVING DIAMETER OR SPAN OF 30" OR LESS AND SHALL NOT BE USED WHEN THE PIPE OPENING IS FACING THE TRAFFIC UNLESS THE LOCATION IS OUTSIDE THE REQUIRED CLEAR ZONE.
- THE REQUIRED EXCAVATION, BACKFILL, RESTORATION, DITCH GRADING AND WELDED WIRE FABRIC SHALL BE INCLUDED IN THE CONTRACT UNIT PRICES FOR CONCRETE HEADWALLS AND CONCRETE COLLARS.*
- AFTER THE PRECAST HEADWALL HAS BEEN PLACED, THE SPACE BETWEEN THE HEADWALL AND PIPE SHALL BE COMPLETELY FILLED WITH AN APPROVED NON-SHRINK GROUT WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 5000 PSI. THE COST FOR FURNISHING AND PLACING THE GROUT SHALL BE INCIDENTAL TO CONCRETE HEADWALLS.
- WELDED WIRE FABRIC SHALL BE 6x6-W4xW4, 58 LBS. PER 100 SQ.FT.
- QUANTITIES FOR CONCRETE HEADWALL AND CONCRETE COLLARS, WELDED WIRE FABRIC, AND REINFORCING STEEL SHOWN IN THE SCHEDULES OF QUANTITIES ARE BASED ON A "4" DIMENSION OF 0'-0".
- PRECAST UNIT USE IS OPTIONAL. THE ENTIRE STRUCTURE MAY BE CAST IN PLACE.

* ADJUSTMENT TO THE LENGTH OF PIPE AND REMOVAL OF THE EXISTING HEADWALL OR END SECTION PAID SEPARATELY.

APPROVED *Jeff Daley*
CHIEF ENGINEER DATE 1-1-2007

DATE	REVISIONS

Illinois Tollway
Open Roads for a Faster Future

SLOPED HEADWALLS
TYPE III DETAILS

STANDARD B10-00