

GRATE DIMENSIONS AND QUANTITIES IN ONE HEADWALL TYPE III END ENTRANCE 1:4 SLOPE

INSIDE PIPE DIAMETER	GRATES		BARS FOR ONE GRATE				HEADWALL GRATES (LBS.)	
	NUMBER REQUIRED	TYPE REQ'D.	BAR NO. 1		BAR NO. 2		EACH GRATE	TOTAL
			BARS REQ'D.	LENGTH	BARS REQ'D.	LENGTH		
36"	6	B	2	6'-7"	11	1'-10 1/2"	103	608
	-	-	-	-	-	-	-	
42"	6	A	2	7'-1"	12	2'-4 1/2"	121	705
	-	-	-	-	-	-	-	
48"	2	A	2	7'-7"	13	2'-4 1/2"	119	941
	6	B	2	7'-7"	13	1'-10 1/2"	108	

GRATE DIMENSIONS AND QUANTITIES IN ONE HEADWALL TYPE III END ENTRANCE 1:6 SLOPE

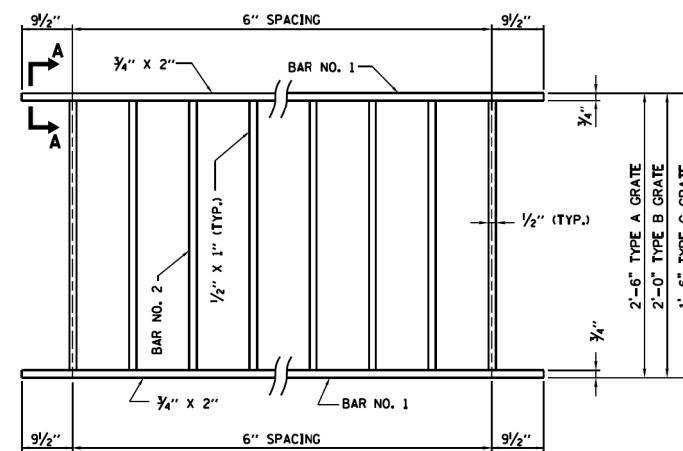
INSIDE PIPE DIAMETER	GRATES		BARS FOR ONE GRATE				HEADWALL GRATES (LBS.)	
	NUMBER REQUIRED	TYPE REQ'D.	BAR NO. 1		BAR NO. 2		EACH GRATE	TOTAL
			BARS REQ'D.	LENGTH	BARS REQ'D.	LENGTH		
36"	2	A	2	6'-7"	11	2'-4 1/2"	112	860
	7	B	2	6'-7"	11	1'-10 1/2"	103	
42"	6	A	2	7'-1"	12	2'-4 1/2"	121	1126
	5	B	2	7'-1"	12	1'-10 1/2"	100	
48"	8	A	2	7'-7"	13	2'-4 1/2"	130	1278
	2	B	2	7'-7"	13	1'-10 1/2"	119	

GRATE DIMENSIONS AND QUANTITIES IN ONE HEADWALL TYPE III END ENTRANCE 1:10 SLOPE

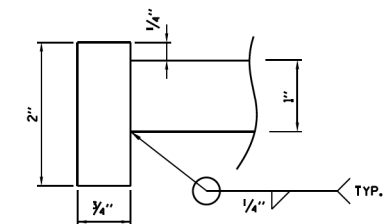
INSIDE PIPE DIAMETER	GRATES		BARS FOR ONE GRATE				HEADWALL GRATES (LBS.)	
	NUMBER REQUIRED	TYPE REQ'D.	BAR NO. 1		BAR NO. 2		EACH GRATE	TOTAL
			BARS REQ'D.	LENGTH	BARS REQ'D.	LENGTH		
18"	8	B	2	3'-7"	5	1'-10 1/2"	53	414
	1	C	2	3'-7"	5	1'-4 1/2"	48	
24"	9	B	2	4'-7"	7	1'-10 1/2"	69	747
	2	A	2	4'-7"	7	2'-4 1/2"	63	
30"	12	B	2	5'-7"	9	1'-10 1/2"	86	1110
	2	C	2	5'-7"	9	1'-4 1/2"	78	
36"	16	B	2	6'-7"	11	1'-10 1/2"	103	1535
	-	-	-	-	-	-	-	
42"	13	B	2	7'-1"	12	1'-10 1/2"	111	2043
	7	C	2	7'-1"	12	1'-4 1/2"	100	
48"	19	B	2	7'-7"	13	1'-10 1/2"	119	2443
	2	A	2	7'-7"	13	2'-4 1/2"	108	

NOTES:

- ALL STRUCTURAL STEEL SHALL BE AASHTO M270, GRADE 36.
- GALVANIZING SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
- FOR PLACEMENT OF GRATES, SEE SHEET 1 (OF 3) IN THIS SERIES.
- ALL TABLE DIMENSIONS AND QUANTITIES ARE FOR SINGLE PIPE CULVERT HEADWALLS.
- ALL SLOPES ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V:H).



TYPICAL GRATE



SECTION A-A

SHEET 3 OF 3

Illinois Tollway
Open Roads for a Faster Future

HEADWALL TYPE III
18"-24"-30"-36"-42"-48"
FOR 1:4, 1:6, AND 1:10 SLOPES

STANDARD B6-03

Paul Kovacs
APPROVED CHIEF ENGINEER DATE 2-7-2012 ...

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
Chicago, Illinois
312.228.0100
www.bbandainc.com



FILE NAME = \$FILES\$	USER NAME = default	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = H=1"=10' V=1"=5'	CHECKED - RGR	REVISED -
	PLOT DATE = 6/18/2012	DATE - 6/19/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOLLWAY STANDARD DRAWING

SCALE: SHEET NO. N/A OF N/A SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	620
			CONTRACT NO. 60L77	
ILLINOIS FED. AID PROJECT				

S:\1101\95\CADD\60L77 IL 175\60L77 Sheets\0160L77-INT-151TH.dwg