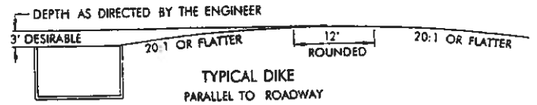
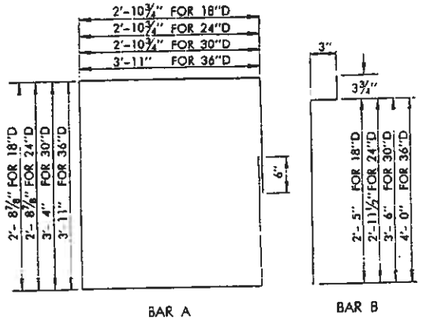
DESCRIPTION	REVISIONS	DATE
RE-ISSUE 'M/ENGLISH' 1999 SPECS. Gen. Note No. 4, Inlet Pay Items		lpc 7/99
Amend General Note No. 4		lpc 8/00
Bar List, Amend Pipe Sizes		lpc 8/03



TYPICAL DIKE
PARALLEL TO ROADWAY

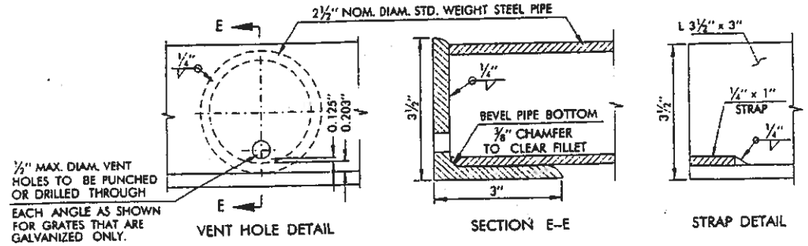
WHEN A DIKE IS REQUIRED, IT SHALL BE CONSTRUCTED SLOPING UP FROM THE INLET ON A 20:1 SLOPE TO A DESIRABLE HEIGHT OF 3 FEET. IN NO CASE SHALL THE DIKE TOP BE HIGHER THAN 6" BELOW THE FINISHED GRADE OF THE INNER EDGE OF SURFACING AS SHOWN ON THE PLAN AND PROFILE SHEET.



BAR A

BAR B

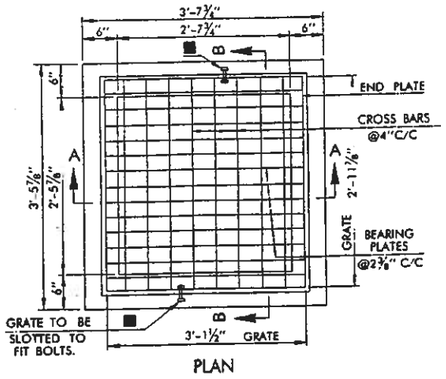
APPLIES TO TYPES 1, 2, 2A & 2B



VENT HOLE DETAIL

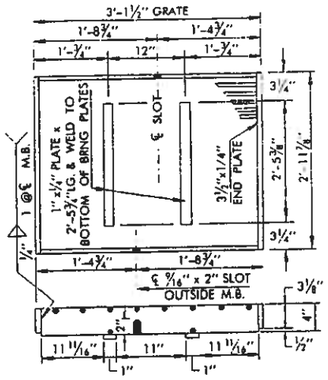
SECTION E–E

STRAP DETAIL

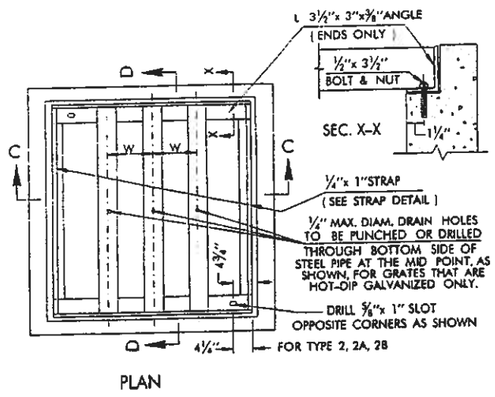


PLAN

■ ½" Ø x 3½" STD. HEX BOLT (W/ NUT) (2 TOTAL)
CROSS BARS – ⅜" Diam. x 2'– 11⅛" (10 TOTAL)
END BANDS – 3½" x ¼" x 2'– 11⅛" (2 TOTAL)
BEARING PLATES – 4" x ¼" x 3'– 1" (16 TOTAL)



DETAIL
ALTERNATE STIFFNER
TYPE 1 GRATE



PLAN

BAR LIST

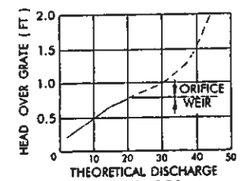
BAR	SIZE	NO.	SHAPE	LENGTH	SPACE
TYPE 1 – 18" OR 24" RCP OR CGSP					
A	#4	5	BENT	1'-10"	6" C/C
B	#4	15	BENT	2'-11 3/4"	9" C/C
C	#5	7	STR.	2'-1 7/8"	6" C/C
D	#5	6	STR.	2'-3 3/4"	6" C/C
TYPE 2 – 18" OR 24" RCP OR CGSP					
A	#4	6	BENT	11'-10"	6" C/C
B	#4	16	BENT	3'-6 1/4"	9" C/C
C	#5	7	STR.	3'-1 7/8"	6" C/C
D	#5	6	STR.	2'-3 3/4"	6" C/C
TYPE 2A – 18", 24" OR 30" RCP OR CGSP					
A	#4	7	BENT	12'-11 1/2"	6" C/C
B	#4	18	BENT	4'-1"	9" C/C
C	#5	7	STR.	3'-3 3/4"	6" C/C
D	#5	7	STR.	3'-7"	6" C/C
TYPE 2B–18",24",30" OR 36" RCP OR CGSP					
A	#4	8	BENT	16'-2"	6" C/C
B	#4	20	BENT	4'-7"	9" C/C
C	#5	7	STR.	4'-4"	6" C/C
D	#5	8	STR.	4'-4"	6" C/C

GRATES – OVERALL DIMENSIONS

TYPE 1 GRATE – 3'– 1½" x 2'–11⅞"
TYPE 2 GRATE – 3'– 1½" x 2'–11⅞"
TYPE 2A GRATE – 3'– 1½" x 3'– 6½"
TYPE 2B GRATE – 4'– 1½" x 4'– 1½"
W = 8½" FOR TYPE 2
W = 9" FOR TYPE 2A, 2B

PIPE GRATE MATERIAL

2½" I.D. STD. WEIGHT STEEL PIPE



HYDRAULIC PERFORMANCE CHART

TO ALLOW FOR CLOGGING 60% THEORETICAL DISCHARGE IS THE RECOMMENDED FACTOR TO USE IN AREAS SUBJECT TO FLOODING.

ESTIMATED QUANTITIES

DESIGNATED PIPE SIZE IN INLET	TYPE OF GRATE	1 PIPE CLASS A CONC. C.Y.	2 PIPES CLASS A CONC. C.Y.	REINF. STEEL LB.	ADD'L DEPTH PER VERT. FT. OF CLASS A CONC. C.Y.	ADD'L DEPTH PER VERT. FT. OF REINF. STEEL LB.
18" R.C.P.	1 OR 2	0.75	0.67	115	0.23	27
24" R.C.P.	1 OR 2	0.85	0.76	129	0.23	27
30" R.C.P.	2A	1.06	0.96	160	0.25	29
36" R.C.P.	2B	1.52	1.38	211	0.31	35

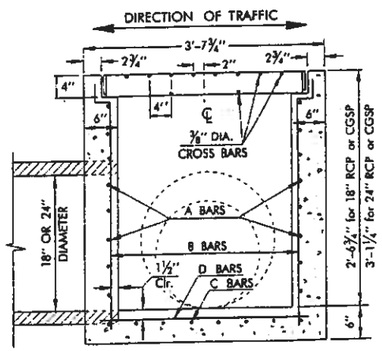
GENERAL NOTES

1. ALL CONSTRUCTION METHODS AND MATERIAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE 1999 ENGLISH STANDARD SPECIFICATIONS.
2. EXPOSED CONCRETE EDGES SHALL HAVE A 3/4" CHAMFER, OR AN APPROVED ROUNDED EDGING. ALL EXPOSED SURFACES SHALL BE FINISHED IN ACCORDANCE WITH SECTION 509.
3. VENT HOLES AND DRAIN HOLES FOR HOT DIP GALVANIZATION SHALL BE DRILLED OR PUNCHED IN GRATE AS SHOWN.
4. BICYCLE AND PEDESTRIAN SAFE GRATES, SIMILAR TO TYPE 1 GRATES, MAY BE SUBSTITUTED FOR TYPE 2A AND 2B GRATES, IF THEY MEET THE MINIMUM EQUIVALENT HYDRAULIC AND STRUCTURAL REQUIREMENTS AND PROPOSED DESIGNS ARE APPROVED BY THE ENGINEER. GRATES SIMILIAR TO TYPE 1 GRATES, USED AS ALTERNATIVES TO TYPE 2A AND 2B GRATES, SHALL BE DESIGNATED TYPES 1A AND 1B GRATES. COST FOR TYPES 1A AND 1B GRATES SHALL BE INCLUDED IN THE PRICE BID FOR THE RESPECTIVE INLET.

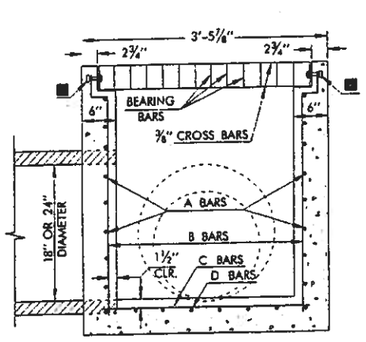
BASIS OF PAYMENT

ITEM NO.	ITEM	UNIT
611.06(E)	INLET (SMD–TYPE 1)	EA.
611.06(E)	INLET (SMD–TYPE 2)	EA.
611.06(E)	INLET (SMD–TYPE 2A)	EA.
611.06(E)	INLET (SMD–TYPE 2B)	EA.

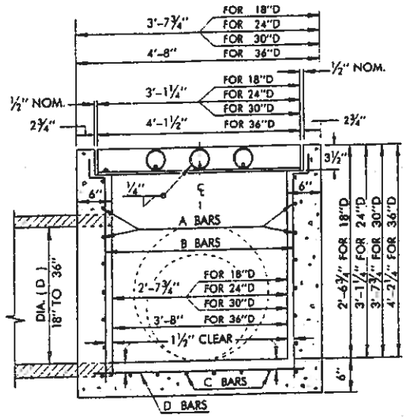
NOTE: COST OF INLET GRATE SHALL BE INCLUDED IN THE PRICE BID FOR THE INLET. COST OF ALL CLASS A CONCRETE AND REINFORCING STEEL NECESSARY FOR ADDITIONAL DEPTH SHALL BE INCLUDED IN THE PRICE BID FOR THE INLET. INLET ADDITIONAL DEPTH DATA SHALL BE NOTED ON THE PLANS.



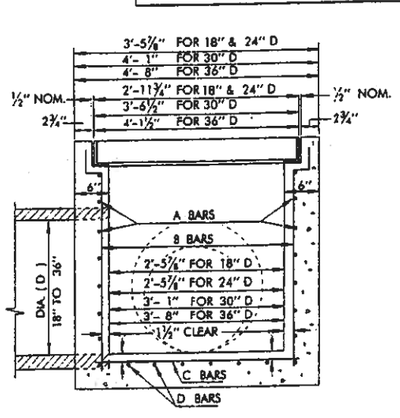
SEC A–A



SEC B–B



SEC C–C



SEC D–D

SMD INLET WITH TYPE 1 GRATE

SMD INLET WITH TYPE 2, 2A & 2B GRATE

APPROVED BY ROADWAY ENGINEER C M Senkowski DATE 6/9/03

OKLAHOMA DEPT. OF TRANSPORTATION
ROADWAY STANDARD (ENGLISH)
MEDIAN DRAIN
(FOR 18", 24", 30" & 36" PIPES)

1999 SPECIFICATIONS | SMD–2 | 02E | R–73E