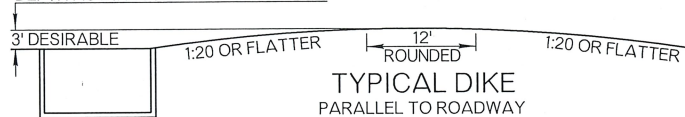
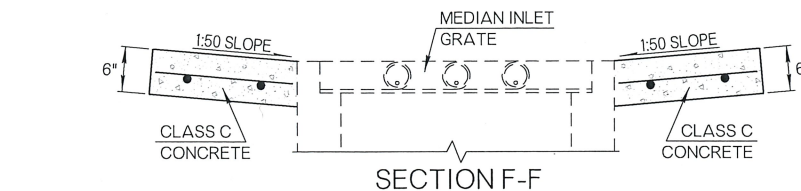
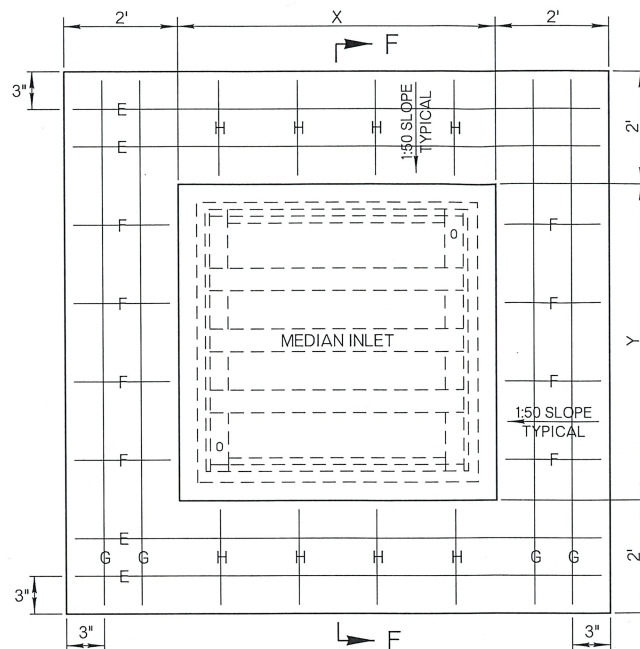
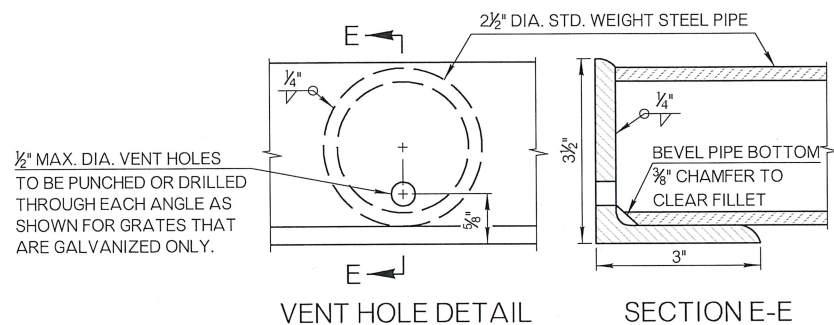


DEPTH AS DIRECTED BY THE ENGINEER



NOTE: WHEN A DIKE IS REQUIRED, IT SHALL BE CONSTRUCTED SLOPING UP FROM THE INLET ON A 1:20 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.



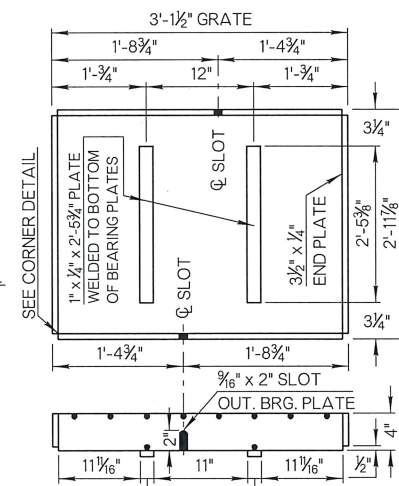
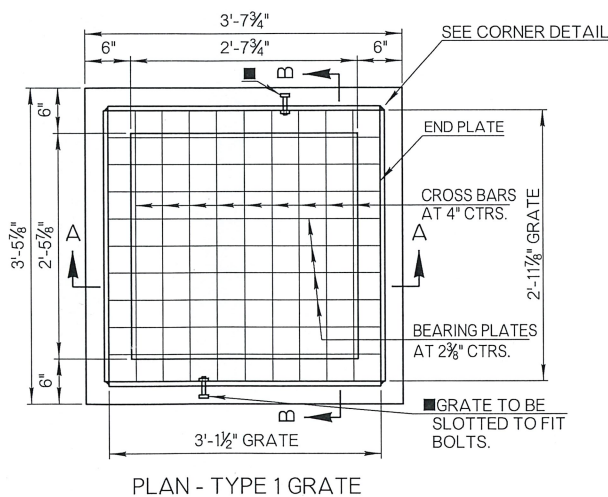
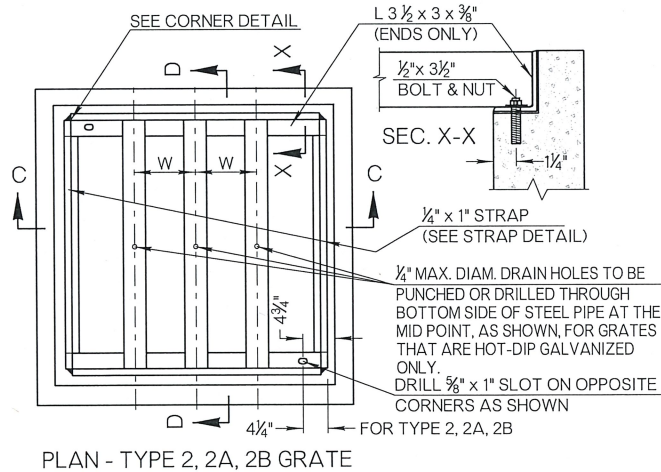
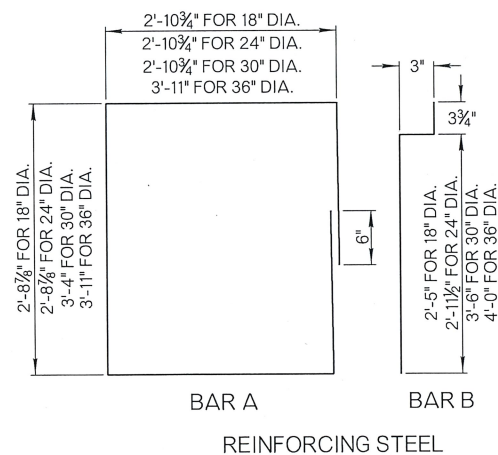
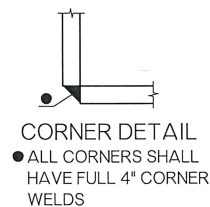
APRON REINFORCING STEEL LOCATION & LENGTHS

(#4 BARS - EQUALLY SPACED @ 18" MAXIMUM)*

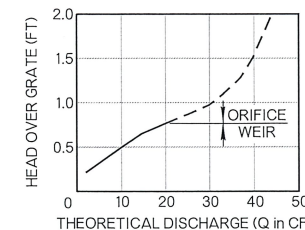
DIAMETER	E - BARS	F - BARS	G - BARS	H - BARS	X	Y	APRON REINF. STEEL °	APRON CLASS C CONCRETE °
IN.	(NO.) FT. - IN.	(NO.) FT. - IN.	(NO.) FT. - IN.	(NO.) FT. - IN.	FT. - IN.	FT. - IN.	LB.	C.Y.
18 & 24	(4) 7 - 2 1/2"	(8) 1 - 9	(4) 7 - 4 3/4"	(8) 1 - 9	3 - 7 3/4"	3 - 5 1/2"	57	0.41
30	(4) 7 - 10	(8) 1 - 9	(4) 7 - 4 3/4"	(8) 1 - 9	3 - 7 3/4"	4 - 1	59	0.43
36	(4) 8 - 5	(9) 1 - 9	(4) 8 - 5	(9) 1 - 9	4 - 8	4 - 8	66	0.49

*MINIMUM 1 1/2" COVER OVER STEEL

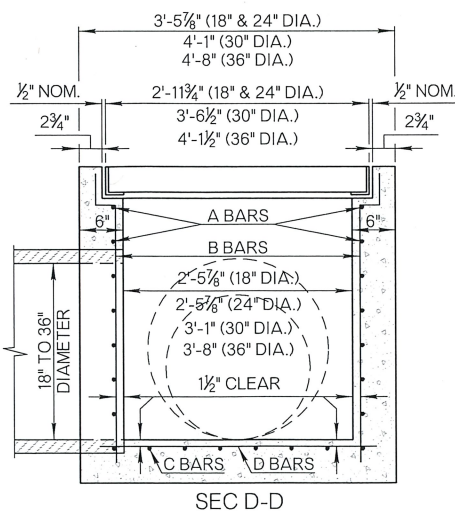
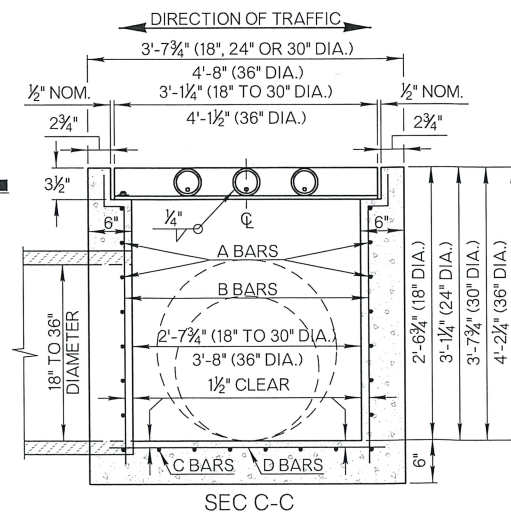
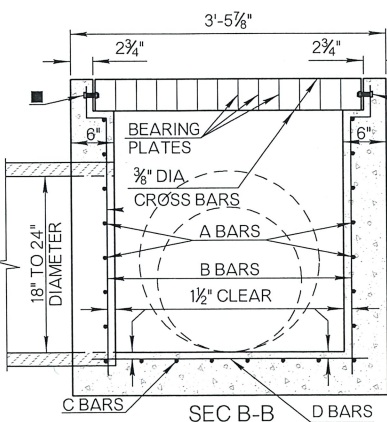
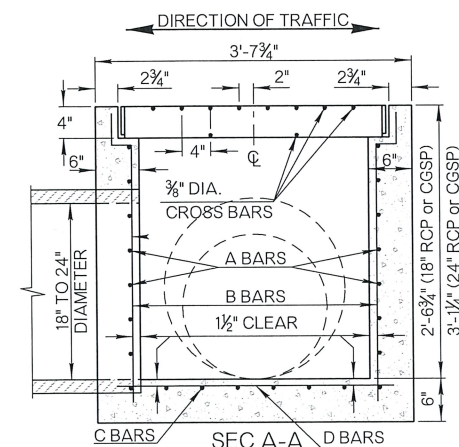
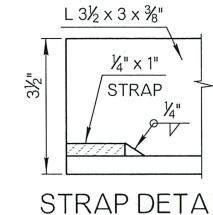
°QUANTITIES ARE FOR ONE APRON



■ 1/2" DIA. x 3 3/4" STD. HEX BOLT W/ NUT (2 TOTAL)
CROSS BARS - 3/8" DIA. x 2'-11 1/8" (10 TOTAL)
END PLATES - 3 1/2" x 1/4" x 2'-11 1/8" (2 TOTAL)
BEARING PLATES - 4" x 1/4" x 3'-1" (16 TOTAL)



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



SMD BAR LIST					
BAR	SIZE	NO.	SHAPE	LENGTH	SPACE
TYPE 1 - 18" OR 24" RCP OR CGSP					
A	#4	5	BENT	11'-10"	6" C/C
B	#4	15	BENT	2'-11 1/2"	9" C/C
C	#5	7	STR.	3'-1 1/4"	6" C/C
D	#5	6	STR.	3'-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 1/4"	6" C/C
D	#5	6	STR.	3'-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'-1 1/2" x 2'-11 1/8"

TYPE 2 GRATE: 3'-1 1/4" x 2'-11 1/8"

TYPE 2A GRATE: 3'-1 1/4" x 3'-6 1/2"

TYPE 2B GRATE: 4'-1 1/2" x 4'-1 1/2"

W = 8 1/2" FOR TYPE 2

W = 9" FOR TYPE 2A & 2B

PIPE GRATE MATERIAL

2 1/2" I.D. STD. WEIGHT STEEL PIPE

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

GENERAL NOTES

- ALL CONSTRUCTION AND MATERIAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE 2009 ODOT STANDARD SPECIFICATIONS.
- VENT HOLES AND DRAIN HOLES FOR HOT DIP GALVANIZATION SHALL BE DRILLED OR PUNCHED IN GRATE AS SHOWN.
- BICYCLE AND PEDESTRIAN SAFE GRATES, SIMILAR TO TYPE 1 GRATES, MAY BE USED, PROVIDED THEY MEET THE MINIMUM EQUIVALENT HYDRAULIC AND STRUCTURAL REQUIREMENTS AND PROPOSED DESIGNS ARE APPROVED BY THE ENGINEER. SUBSTITUTED GRATES SHALL BE INCLUDED IN THE PRICE BID FOR THE RESPECTIVE INLET.
- EXPOSED ROUNDED EDGING. ALL EXPOSED SURFACES SHALL BE FINISHED IN ACCORDANCE WITH SECTION 509 OF THE SPECIFICATIONS.
- COST OF APRON MATERIALS (INCLUDING REINFORCING STEEL), LABOR, AND INSTALLATION SHALL BE INCLUDED IN THE PRICE BID FOR SMD INLET.
- AS-SHOWN ON THIS STANDARD, INLET CONCRETE DRAWINGS AND INLET REINFORCING STEEL DESIGN ARE BASED ON CAST-IN-PLACE MANUFACTURING. PRECAST CONCRETE MANUFACTURED DESIGN AND DRAWINGS ARE ON ROADWAY STANDARD PSMD-0.

BASIS OF PAYMENT

ITEM NO.	ITEM	UNIT
611 (G)	INLET (SMD-TYPE 1)	EA
611 (G)	INLET (SMD-TYPE 2)	EA
611 (G)	INLET (SMD-TYPE 2A)	EA
611 (G)	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.

APPROVED BY
ROADWAY ENGINEER:

ROADWAY DESIGN DIVISION STANDARD

STANDARD MEDIAN DRAINS (18" TO 36" PIPES)

OKLAHOMA DEPARTMENT OF TRANSPORTATION
2009 SPECIFICATIONS

SMD-3

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R-36