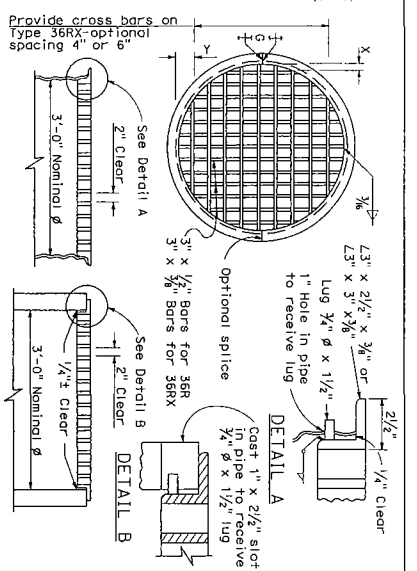


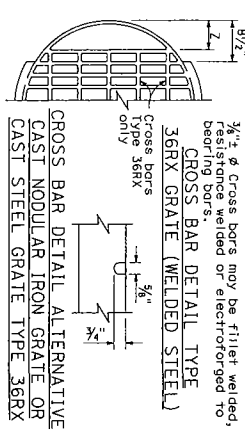
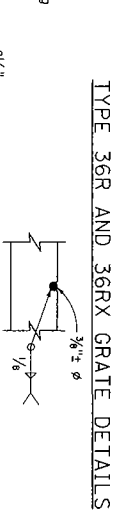
D77B COUNTY ROUTE POST MILES SHEET TOTAL
 REGISTERED CIVIL ENGINEER
 MAY 1, 2006
 FILMS APPROVAL DATE
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of the technical content of this plan
 To get to the Caltrans web site go to <http://www.dot.ca.gov>



ALTERNATIVE CAST NODULAR IRON GRATE OR CAST STEEL GRATE TYPE 36R AND 36RX

BASIS FOR MISC IRON & STEEL FINAL PAY WEIGHTS FOR DRAINAGE INLETS

INLET TYPE	GRATE TYPE	NO. OF GRATES	WEIGHT
ODD	24-10C	2	351
(SEE NOTE 4)	24-10S	2	456
	24-12X	2	473
	24-13	2	374
	24-13	1	202
00,60L,61,G2,	24-10S	1	259
G3,G4	24-12X	1	239
(TYPE 24)	24-13	1	188
	18-8S	1	187
G4 (TYPE 18)	18-9X	1	187
G5,G6	18-10	1	149
	18-10	2	374
G11, G12	18-9X	2	374
	18-10	2	298
	24-10S	2	404
G13,G14	24-10S	2	458
	24-12X	2	478
	24-13	2	376
ODI	36RX (Mod)	1	196
GMP GCP GCP1	36RX	1	215
ODI	36R (Mod)	1	220
GMP GCP GCP1	36R	1	236



MODIFIED TYPE 36R AND 36RX GRATE FOR ODI INLET

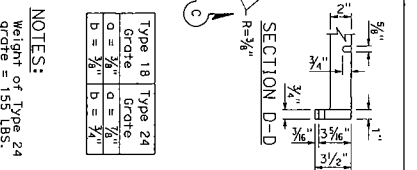
- NOTES:
- When alternative grates are allowed - Final pay based on alternative with the lesser weight.
 - Seal welding of all surfaces not required when grates are galvanized.
 - Use frame shown on Standard Plan D74A, D74B or D77A as appropriate.
 - When Type 24-10S, 24-12X or 24-13 grates are used with ODI Inlets, a 1/4" x 3/4" x 3-4/8" steel bar shall be welded across the center of inlet frame to separate the individual grates.

GRATE BAR SPACING TABLE

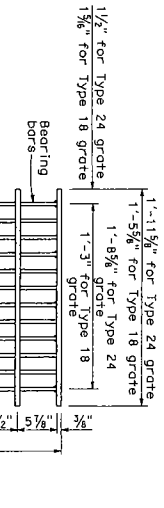
TYPE	NO. OF BARS	CLEAR BAR SPACING	X	4" SPACING	6" SPACING	Y	Z
36R	13	2"	2 7/8"	5 1/2"	-	-	-
36RX (Steel)	15	2"	3 3/4"	5 3/4"	-	-	-
36RX (Cast)	13	2"	2 7/8"	5 3/4"	-	-	-
36R Mod	12	2"	2 7/8"	5 3/4"	-	-	-
36RX Mod (Steel)	13	2"	3 3/4"	5 3/4"	5 1/2"	5 1/2"	-
36RX Mod (Cast)	12	2"	2 7/8"	5 3/4"	5 1/2"	5 1/2"	-

BICYCLE PROOF GRATE DETAILS

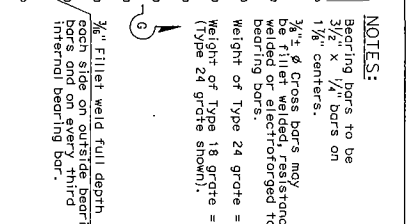
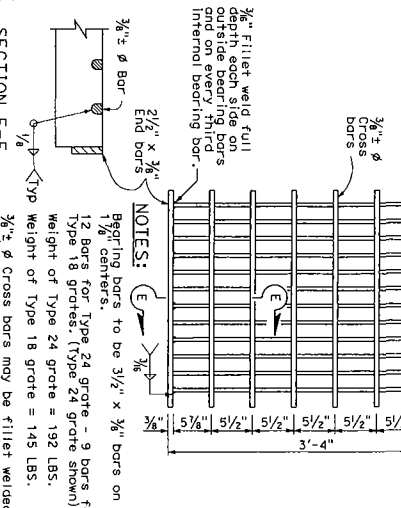
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
 PROOF GRATE DETAILS
 NO SCALE
D77B



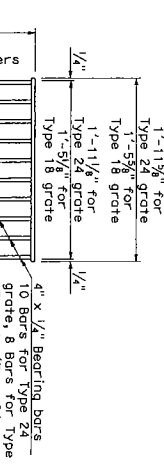
TYPE 18-8C AND 24-10C GRATE (Cast nodular iron)



TYPE 18-9X AND 24-12X GRATE (Welded Steel)



TYPE 18-10 AND 24-13 GRATE (Welded Steel)



TYPE 18-8S AND 24-10S GRATE (Welded Steel) Retaining type

