Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	DN	101,197, 199	Var	2	50

REGISTERED CIVIL ENGINEER 9-14-09 DATE

1-4-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER SCOTT A. LEE No. 66936 Exp. 9-30-10 CIVIL STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. EXISTING UTILITY FACILITIES HAVE NOT BEEN POSITIVELY IDENTIFIED.
2. OVERHEAD UTILITIES HAVE BEEN IDENTIFIED AT LOCATIONS 21, 23-29, AND 41-43.

LOCATIONS OF CONSTRUCTION

LOCATION	ROUTE	POST MILE LIMITS **	DIRECTION	No. OF LANES ***	BRIDGE NUMBER
1	101	M0.14 - 0.15	N	4	01-0071
2	101	M0.17 - 0.18	S	4	01-0071
3	101	R0.76 - 0.83	N	4	
4	101	R1.40 - 1.51	S	4	
5	101	R1.56 - 1.68	S	4	
6	101	R1.96 - 2.05	S	4	
7	101	R2.16 - 2.30	N	4	
8	101	R2.32 - 2.41	S	4	
9	101	R3.05 - 3.21	N	4	
10*	101	13.88 - 13.94	S	3	
11*	101	16.08 - 16.21	S	3	
12*	101	16.50 - 16.55	S	2	
13*	101	18.47 - 18.52	S	3	
14*	101	21.12 - 21.26	S	2	
15*	101	21.37 - 21.39	S	2	
16*	101	21.45 - 21.54	N	2	
17*	101	21.47 - 21.67	S	3	
18*	101	21.72 - 21.77	N	3	
19	101	R28.46 - 28.50	N	4	
20	101	39.61 - 39.63	S	2	01-0023
21	101	39.61 - 39.63	N	2	01-0023
22	101	39.67 - 39.69	S	2	01-0023
23	101	39.67 - 39.69	N	2	01-0023
24*	197	R0.78 - 0.79	S	2	
25*	197	R0.84 - 0.98	S	2	
26	197	R1.11 - 1.12	S	2	
27	197	R1.17 - 1.18	S	2	

LOCATION	ROUTE	POST MILE LIMITS **	DIRECTION	No. OF LANES ***	BRIDGE NUMBER
28	197	R1.26 - 1.40	S	2	
29	197	6.12 - 6.17	N	2	
30	199	T0.51 - 0.71	S	2	01-0058F
31	199	T0.51 - 0.52	S	2	01-0058F
32*	199	1.77 - 1.80	N	2	
33*	199	4.20 - 4.22	S	2	01-0006
34*	199	4.21 - 4.22	N	2	01-0006
35*	199	4.35 - 4.36	S	3	01-0006
36*	199	4.35 - 4.36	N	3	01-0006
37	199	7.07 - 7.09	N	2	01-0007
38	199	7.07 - 7.09	S	2	01-0007
39	199	7.13 - 7.15	N	2	01-0007
40	199	7.13 - 7.15	S	2	01-0007
41	199	7.25 - 7.33	N	2	01-0074
42	199	7.35 - 7.39	N	2	01-0074 01-0075
43	199	7.41 - 7.43	N	2	01-0075
44	199	8.11 - 8.15	N	2	
45	199	R11.93 - 11.95	N	2	01-0009
46	199	R11.94 - 11.95	S	2	01-0009
47	199	R12.02 - 12.04	N	2	01-0009
48	199	R12.02 - 12.04	S	2	01-0009
49	199	R17.05 - 17.06	N	4	01-0044
50	199	R17.05 - 17.06	S	4	01-0044
51	199	R17.17 - 17.18	N	4	01-0044
52	199	R17.17 - 17.18	S	4	01-0044
53	199	R17.31 - 17.46	N	4	01-0067

LOCATION	ROUTE	POST MILE LIMITS **	DIRECTION	No. OF LANES ***	BRIDGE NUMBER
54	199	R17.58 - 17.59	N	4	01-0067
55	199	R17.95 - 17.98	N	4	
56	199	R18.25 - 18.26	N	4	01-0068
57	199	R18.44 - 18.45	N	4	01-0068
58	199	R18.50 - 18.71	N	4	
59	199	R18.92 - 19.05	S	4	
60	199	R19.21 - 19.22	N	4	01-0012
61	199	R19.21 - 19.22	S	4	01-0012
62	199	R19.29 - 19.30	N	4	01-0012
63	199	R19.29 - 19.30	S	4	01-0012
64	199	R19.42 - 19.53	S	4	
65	199	19.96 - 19.99	N	2	01-0019
66	199	19.97 - 19.99	S	2	01-0019
67	199	20.04 - 20.05	N	2	01-0019
68	199	20.04 - 20.05	S	2	01-0019
69	199	R22.01 - 22.07	S	2	01-0014
70	199	R22.01 - 22.07	N	2	01-0014
71	199	R22.10 - 22.36	N	2	01-0014
72	199	R22.10 - 22.11	S	2	01-0014
73	199	24.87 - 24.88	N	2	01-0016
74	199	24.87 - 24.88	S	2	01-0016
75	199	24.92 - 24.93	N	2	01-0016
76	199	24.92 - 24.93	S	2	01-0016
77	199	33.49 - 33.52	N	2	01-0049
78	199	33.49 - 33.52	S	2	01-0049
79	101	15.03 - 15.39	S	2	

2

*NEW RAILING WILL BE TREATED TO PRODUCE A NON-SHINY SURFACE.

**POST MILE LIMITS ARE APPROXIMATE.

***BOTH DIRECTIONS

2 **REVISED PER ADDENDUM No. 2 DATED APRIL 23, 2010**

LOCATIONS OF CONSTRUCTION

LC-1

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY: SCOTT A. LEE | CHECKED BY: AMARJIT S. RANDHAWA

FUNCTIONAL SUPERVISOR: CYRUS HUI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
OFFICE OF DESIGN, SOUTH
DESIGN BRANCH 7

LAST REVISION 00-00-00 | DATE PLOTTED => 22-APR-2010 | TIME PLOTTED => 06:50

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	DN	101,197, 199	Var	4	50

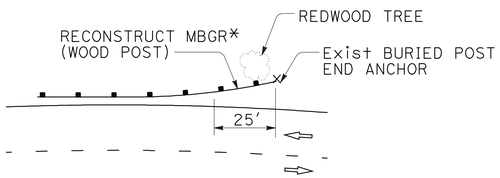
REGISTERED CIVIL ENGINEER 9-14-09 DATE

1-4-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER SCOTT A. LEE No. 66936 Exp. 9-30-10 CIVIL STATE OF CALIFORNIA

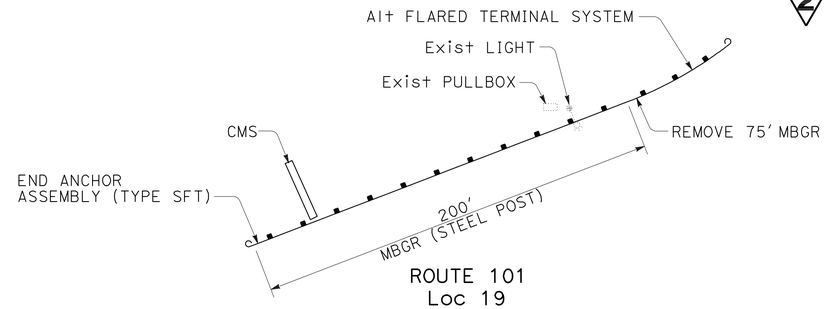
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

2

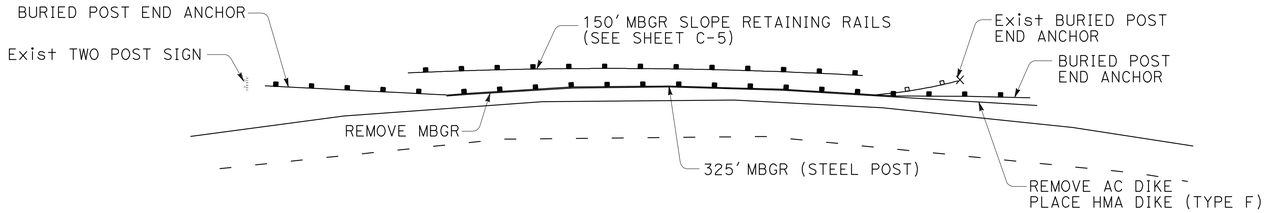


ROUTE 101
Loc 13

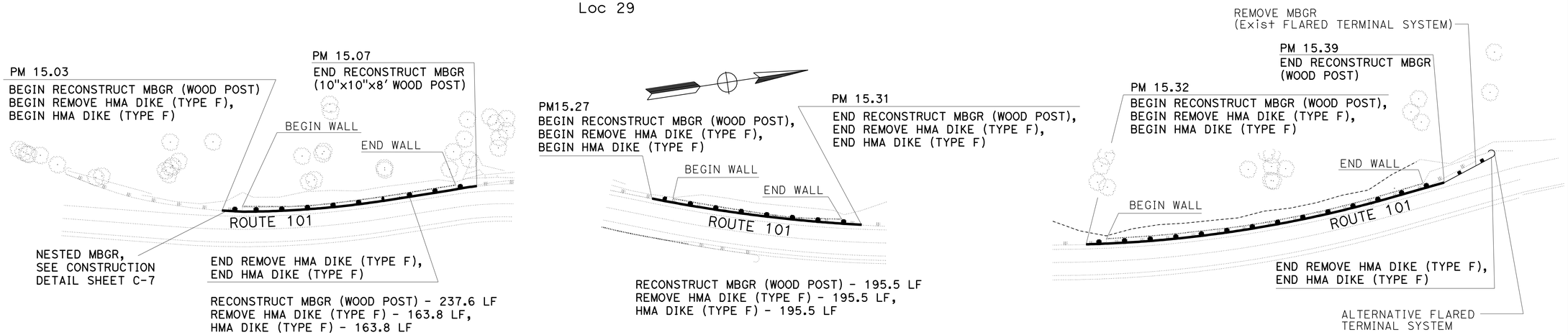
* RECONSTRUCT PER THE "STRENGTHENED RAILING SECTIONS FOR FIXED OBJECTS" DETAIL SHOWN ON Std PLANS A77G1-A77G8 (10" x 10" POSTS @ 3'-1½" C-C)



ROUTE 101
Loc 19

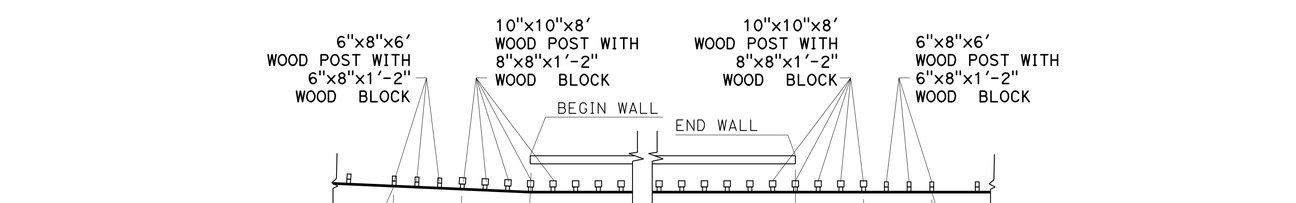


ROUTE 197
Loc 29



ROUTE 101 (PM 15.03 - 15.39)
Loc 79

RECONSTRUCT MBGR (WOOD POST) - 337.5 LF
REMOVE HMA DIKE (TYPE F) - 377.5 LF,
HMA DIKE (TYPE F) - 377.5 LF
REMOVE MBGR - 37.5 LF
ALTERNATIVE FLARED TERMINAL SYSTEM - 1 EA



STRENGTHENED RAILING SECTION DETAIL FOR Loc 79

NO SCALE

NOTE: FOR DETAILS NOT SHOWN SEE STANDARD PLANS A77G3

2 **REVISED PER ADDENDUM No. 2 DATED APRIL 23, 2010**

CONSTRUCTION DETAILS

NO SCALE

C-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
NORTH REGION
OFFICE OF DESIGN, SOUTH
DESIGN BRANCH 7

FUNCTIONAL SUPERVISOR: CYRUS HUI
CALCULATED-DESIGNED BY: SCOTT A. LEE
CHECKED BY: AMARJIT S. RANDHAWA
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 22-APR-2010
TIME PLOTTED => 06:50

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	DN	101,197, 199	Var	9	50

REGISTERED CIVIL ENGINEER 9-14-09 DATE

1-4-10
PLANS APPROVAL DATE

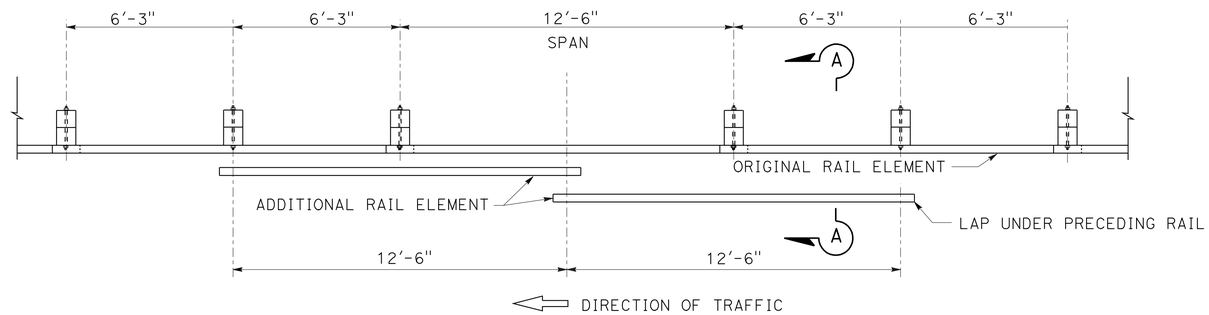
REGISTERED PROFESSIONAL ENGINEER SCOTT A. LEE No. 66936 Exp. 9-30-10 CIVIL STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

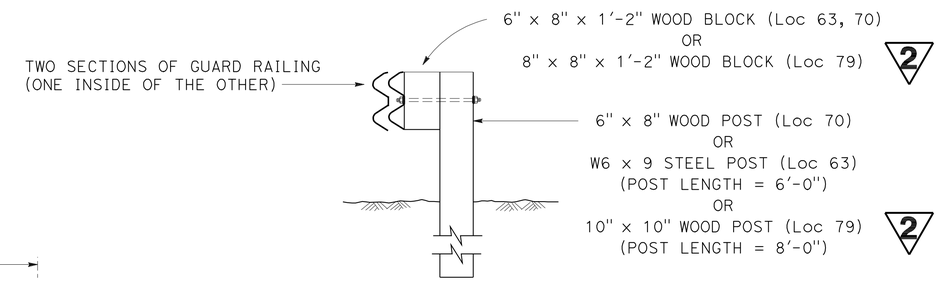
2

1. FOR DETAILS NOT SHOWN, REFER TO Std PLANS A77A1 (FOR WOOD POSTS) OR A77A2 (FOR STEEL POSTS).
2. FOR LOCATION 79, POST SPACING SHALL BE AS SHOWN ON SHEET C-2 AND THE SPAN WILL BE 6'-3".

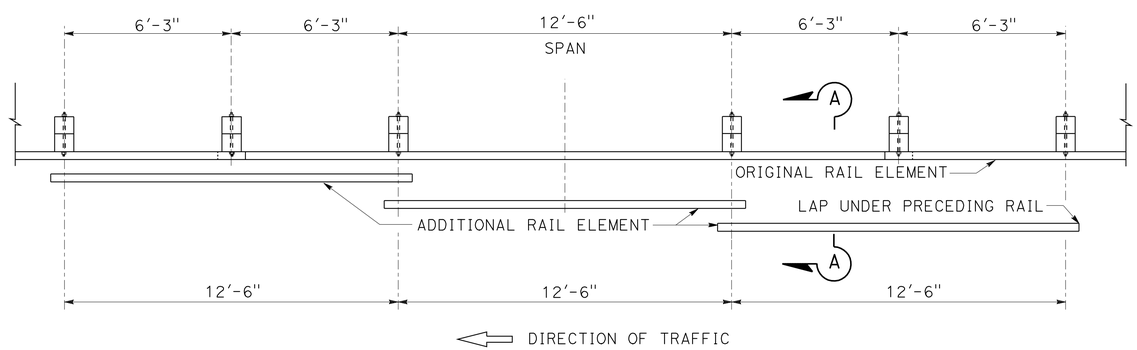


PLAN

CASE 1
ONE POST OMITTED (SPLICE IN CENTER)



SECTION A-A



PLAN

CASE 2
ONE POST OMITTED (SPLICE AT POSTS)

NESTED GUARD RAILING

ROUTE 199
Loc 63, 70

2 ROUTE 101
Loc 79 (SEE NOTE 2 ABOVE)

2 **REVISED PER ADDENDUM No. 2 DATED APRIL 23, 2010**

CONSTRUCTION DETAILS

NO SCALE

C-7

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
OFFICE OF DESIGN, SOUTH
DESIGN BRANCH 7

FUNCTIONAL SUPERVISOR: CYRUS HUI
CALCULATED-DESIGNED BY: SCOTT A. LEE
CHECKED BY: AMARJIT S. RANDHAWA
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 22-APR-2010
TIME PLOTTED => 06:50

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	DN	101,197, 199	Var	18	50

REGISTERED CIVIL ENGINEER 9-14-09 DATE

1-4-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER SCOTT A. LEE No. 66936 Exp. 9-30-10 CIVIL STATE OF CALIFORNIA

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NOTE: ¾ WRAP END SECTIONS SHALL BE INSTALLED AT ALL END ANCHOR ASSEMBLIES (TYPE SFT).

METAL BEAM GUARD RAILING

LOCATION: ROUTE	LOCATION No.	POST MILE LIMITS * *	DIRECTION	STANDARD PLAN	DETAIL SHEET No.	REMOVE MBGR (LF)	RECONSTRUCT MBGR (WOOD POST) (LF)	RESET TERMINAL SYSTEM (EA)	ADJUST MBGR (LF)	MBGR (STEEL POST) (LF)	MBGR (WOOD POST) (LF)	CONCRETE BARRIER (TRANSITION ANCHOR BLOCK) (LF)	(N) BRIDGE REMOVAL (PORTION) (CY)	TRANSITION RAILING (TYPE WB) (EA)	END CAP (TYPE TC) (EA)	ALTERNATIVE IN-LINE TERMINAL SYSTEM (EA)	ALTERNATIVE FLARED TERMINAL SYSTEM (EA)	END ANCHOR ASSEMBLY (TYPE SFT) (EA)	END SECTION (EA)	(N) BURIED POST END ANCHOR (EA)	MBGR SLOPE RETAINING RAILS (THRIE BEAM BARRIER) (LF)	CLASS 2 AB (CY)	IMPORTED BORROW (CY)	REMOVE AC DIKE (LF)	PLACE HMA DIKE (TYPE C) (LF)	PLACE HMA DIKE (TYPE F) (LF)	PLACE HMA (Misc AREA) (SQYD)	HOT MIX ASPHALT (TON)	GUARD RAILING DELINEATOR (EA)	OBJECT MARKER (TYPE L-1) (EA)	RESET MARKERS AND DELINEATORS (EA)	RESET ROADSIDE SIGN (EA)	WEED CONTROL MAT (FIBER) (SQYD)	MULCH (CY)	DESCRIPTION
199	68	R20.04-20.05	S	A77F1		63																													REMOVE ALL Exist MBGR
												40		1	1		1											1		2	1				CONSTRUCT ANCHOR BLOCK; INSTALL TRANSITION RAILING, TERMINAL SYSTEM
199	69	22.01-22.07	S	A77F4		30						4		1	1																				CONSTRUCT ANCHOR BLOCK; INSTALL TRANSITION RAILING
						37.5	187.5										1													1					RECONSTRUCT REMAINING Exist MBGR; INSTALL TERMINAL SYSTEM
199	70	R22.01-22.07	N	A77F1	C-4	30						4		1	1																				CONSTRUCT ANCHOR BLOCK; INSTALL TRANSITION RAILING
																					175	16													RECONSTRUCT HINGE VIA RETAINING RAILS
						37.5	237.5										1													1					RECONSTRUCT REMAINING Exist MBGR; INSTALL TERMINAL SYSTEM
199	71	R22.10-22.36	N	A77F4		1400																													REMOVE Exist MBGR (FROM BRIDGE TO BEGIN PULLOUT ONLY)
																					1375	127								2					RECONSTRUCT HINGE VIA RETAINING RAILS
										1400		4		1	1																				CONSTRUCT ANCHOR BLOCK; INSTALL TRANSITION RAILING, MBGR
199	72	R22.10-22.11	S	A77F1		50																													REMOVE ALL Exist MBGR
												4		1	1		1											1		1	1				CONSTRUCT ANCHOR BLOCK; INSTALL TRANSITION RAILING, TERMINAL SYSTEM
199	73	24.87-24.88	N	A77F1		37.5																													REMOVE ALL Exist MBGR (NOT TERMINAL SYSTEM)
								1				6		1	1		1											1		1	2				CONSTRUCT ANCHOR BLOCK; INSTALL TRANSITION RAILING; RESET TERMINAL SYSTEM
199	74	24.87-24.88	S	A77F4		37.5																													REMOVE ALL Exist MBGR (NOT TERMINAL SYSTEM)
								1				6		1	1		1											1			1				CONSTRUCT ANCHOR BLOCK; INSTALL TRANSITION RAILING; RESET TERMINAL SYSTEM
199	75	24.92-24.93	N	A77F4		50																													REMOVE ALL Exist MBGR (NOT TERMINAL SYSTEM)
								1			37.5	6		1	1		1											2							CONSTRUCT ANCHOR BLOCK; INSTALL TRANSITION RAILING, MBGR; RESET TERMINAL SYSTEM
199	76	24.92-24.93	S	A77F1		25																													REMOVE ALL Exist MBGR (NOT TERMINAL SYSTEM)
												6		1	1		1											1		1	1				CONSTRUCT ANCHOR BLOCK; INSTALL TRANSITION RAILING; RESET TERMINAL SYSTEM
199	77	33.49-33.52	N	A77F2		113																													REMOVE ALL Exist MBGR
										175		20		1	1					1								3		2	1				CONSTRUCT ANCHOR BLOCK; INSTALL TRANSITION RAILING, MBGR, END ANCHOR
199	78	33.49-33.52	S	A77F5		125																													REMOVE ALL Exist MBGR
										175		20		1	1					1								3		2					CONSTRUCT ANCHOR BLOCK; INSTALL TRANSITION RAILING, MBGR, END ANCHOR
101	79	15.03-15.39	S	A77G3	C-2																			740		740		9.9							REMOVE AND REPLACE Exist AC DIKE (TYPE F)
						37.5	771										1												23						RECONSTRUCT MBGR PER DETAIL, REMOVE AND REPLACE TERMINAL SYSTEM
				2 SUBTOTAL		2073.5	1196.0	3		1750.0	37.5	120		11	11		9			2	1550	143		740		740		9.9	36		13	7			
				SUBTOTAL Q-1		1738.5	2925.0		900.0	1075.0	375.0	15.0	0.6	2	2		14	7	7			2	31	170	145	25	32	6.7	88	3	17	2	1075	30.0	
				SUBTOTAL Q-2		513.5	775.0	2	2812.5	200.0	225.0	24		5	5	1	9	1	1	5				85	85		1	0.9	33	5	6	5	235		
				SUBTOTAL Q-3		1582.75	75.0	3	1387.5	1000.0	225.0	62.2	1.9	10	10	2	7			4	250	19		100		100		0.9	35	1	16	6			
				SUBTOTAL Q-4		880		2	825.0	175.0	412.5	76.5	1.2	13	13	2	3	2	2	2	100	9		145	75	70	2	1.9	14		12	4			
				SUBTOTAL Q-5		976				800.0	300.0	159.5	0.8	10	10	3	4	6	6	3				340	170	170		3.7	22	2	7	5			
				2 TOTAL		7764.25	4971.0	10	5925.0	5000.0	1575.0	457.2	4.5	51	51	8	46	16	16	16	1900	173	31	1580	475	1105	35	24.0	228	11	71	29	1310	30.0	

(N) - NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.
* NEW RAILING WILL BE TREATED TO PRODUCE A NON-SHINY SURFACE.
* * POST MILE LIMITS ARE APPROXIMATE.

2 **REVISED PER ADDENDUM No. 2 DATED APRIL 23, 2010**

SUMMARY OF QUANTITIES

Q-6

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
OFFICE OF DESIGN, SOUTH
DESIGN BRANCH 7

FUNCTIONAL SUPERVISOR: CYRUS HUI
CALCULATED-DESIGNED BY: SCOTT A. LEE
CHECKED BY: AMARJIT S. RANDHAWA
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 22-APR-2010
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