

INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2-3	LOCATIONS OF CONSTRUCTIONS
4-9	CONSTRUCTION DETAILS
10-11	TRAFFIC HANDLING DETAILS AND QUANTITIES
12-21	SUMMARY OF QUANTITIES
22-58	REVISED AND NEW STANDARD PLANS

THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.

STRUCTURE PLANS	
59-69	TRANSITION ANCHOR BLOCK DETAILS

STATE OF CALIFORNIA **ACHSSTPG-X045(022)E**
DEPARTMENT OF TRANSPORTATION
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN MENDOCINO COUNTY
AT VARIOUS LOCATIONS

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1,20,128, 162,253,271	Var	1	69

LOCATION MAP

ROUTE 1
LOCATIONS OF CONSTRUCTION
Nos. 1-111

ROUTE 128
LOCATIONS OF CONSTRUCTION
Nos. 144-164

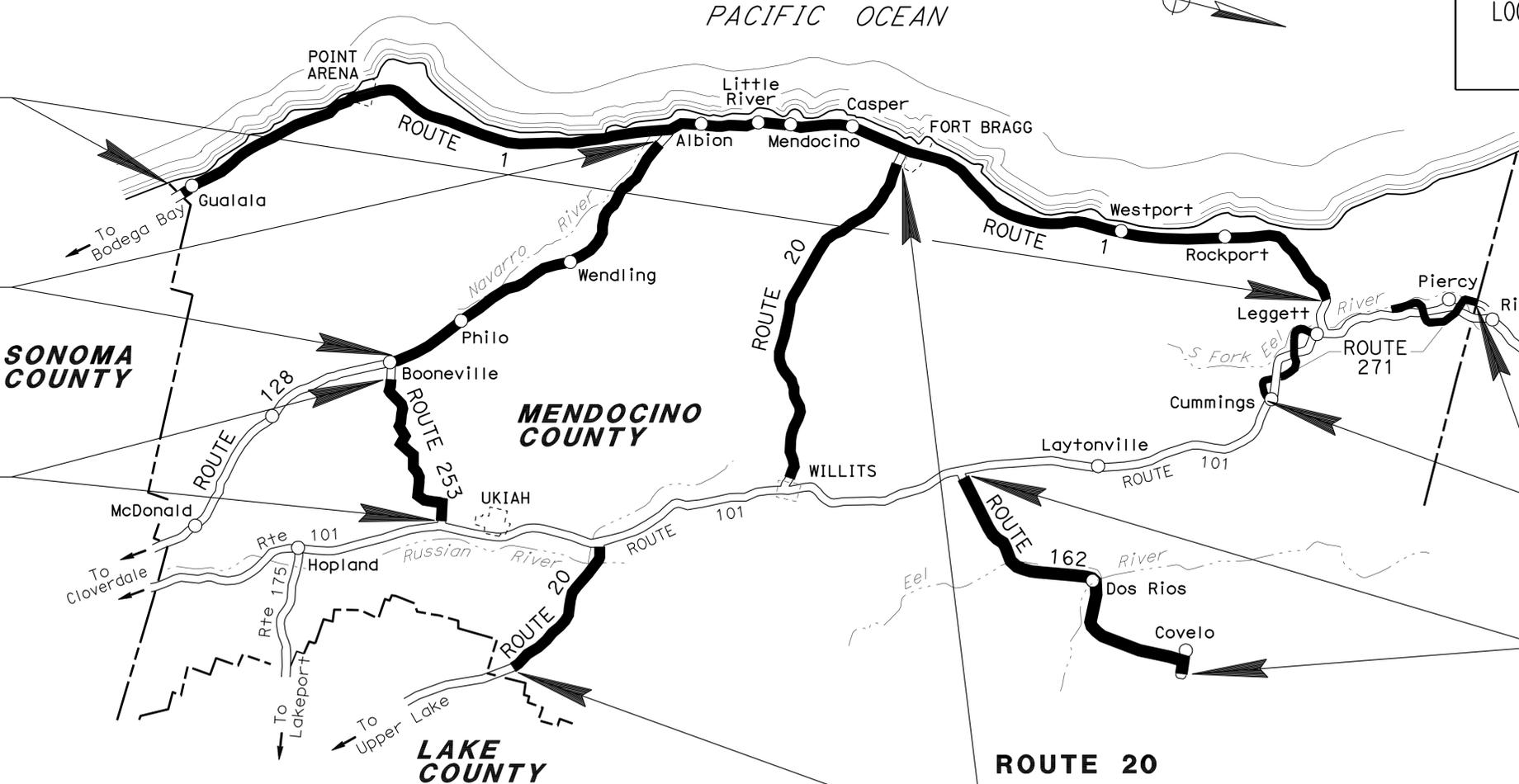
ROUTE 253
LOCATIONS OF CONSTRUCTION
Nos. 192-215

HUMBOLDT COUNTY

ROUTE 271
LOCATIONS OF CONSTRUCTION
Nos. 216-244

ROUTE 162
LOCATIONS OF CONSTRUCTION
Nos. 165-191

ROUTE 20
LOCATIONS OF CONSTRUCTION
Nos. 112-143



NOTE: THE TABLE OF LOCATION OF CONSTRUCTION IS SHOWN ON THE LOCATIONS OF CONSTRUCTION SHEETS.

PROJECT ENGINEER DATE 6-23-11
 REGISTERED CIVIL ENGINEER
 REGISTERED PROFESSIONAL ENGINEER
 CAREN E. COONROD
 No. 63231
 Exp. 6-30-12
 CIVIL
 STATE OF CALIFORNIA

October 3, 2011
 PLANS APPROVAL DATE
 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.

THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

NO SCALE

PROJECT MANAGER Steven Blair
 DESIGN ENGINEER Dennis P. McBride

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1,20,128 162,253,271	Var	2	69

Caren Coonrod
REGISTERED CIVIL ENGINEER DATE 6-23-11
10-3-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
CAREN E. COONROD
No. 63231
Exp. 6-30-12
CIVIL

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.

LOCATIONS OF CONSTRUCTION

No.	Rte	POSTMILE		Dir	COMMENTS
		FROM	TO		
1	1	3.16	3.19	NB	
2	1	3.16	3.19	SB	
3	1	3.33	3.37	SB	
4	1	3.78	3.81	SB	COLLINS LANDING SIDEHILL VIADUCT
5	1	3.83	3.86	SB	COLLINS LANDING SIDEHILL VIADUCT
6	1	4.48	4.63	SB	
7	1	4.65	4.68	SB	RETAINING WALL PM 4.7
8	1	4.76	4.80	SB	RETAINING WALL PM 4.7
9	1	4.80	4.81	SB	RETAINING WALL PM 4.9
10	1	4.82	4.83	SB	RETAINING WALL PM 4.9
11	1	5.25	5.28	SB	
12	1	6.86	6.88	SB	
13	1	8.57	8.61	NB	
14	1	9.35	9.37	NB	
15	1	10.10	10.16	NB	
16	1	11.52	11.61	NB	
17	1	11.52	11.61	SB	
18	1	17.17	17.21	SB	
19	1	17.66	17.67	SB	GASKER SLOUGH BRIDGE # 10-68
20	1	17.66	17.67	NB	GASKER SLOUGH BRIDGE # 10-68
21	1	17.69	17.70	SB	GASKER SLOUGH BRIDGE # 10-68
22	1	17.69	17.70	NB	GASKER SLOUGH BRIDGE # 10-68
23	1	20.58	20.65	NB	
24	1	20.60	20.64	SB	
25	1	24.39	24.41	NB	
26	1	25.41	25.54	NB	
27	1	25.41	25.53	SB	
28	1	27.11	27.13	NB	
29	1	30.80	30.89	SB	
30	1	30.90	30.93	NB	
31	1	31.08	31.11	SB	
32	1	31.50	31.56	NB	
33	1	31.71	31.74	SB	
34	1	31.87	31.91	SB	
35	1	34.82	34.84	SB	
36	1	36.20	36.23	SB	
37	1	36.23	36.25	NB	
38	1	36.31	36.36	SB	
39	1	36.98	37.02	NB	
40	1	39.02	39.15	SB	
41	1	39.49	39.61	SB	
42	1	39.63	39.65	SB	
43	1	39.68	39.81	SB	
44	1	39.85	39.87	SB	
45	1	40.96	41.20	SB	
46	1	44.80	44.82	SB	
47	1	44.97	44.99	NB	
48	1	44.99	45.60	SB	
49	1	46.86	46.94	NB	
50	1	46.86	46.94	SB	

LOCATIONS OF CONSTRUCTION

No.	Rte	POSTMILE		Dir	COMMENTS
		FROM	TO		
51	1	47.89	47.95	SB	
52	1	49.28	49.37	SB	
53	1	49.62	49.80	SB	
54	1	50.16	50.17	NB	BIG RIVER BRIDGE #10-146
55	1	50.16	50.17	SB	BIG RIVER BRIDGE #10-146
56	1	50.27	50.28	SB	BIG RIVER BRIDGE #10-146
57	1	50.27	50.38	NB	BIG RIVER BRIDGE #10-146
58	1	50.51	50.55	SB	
59	1	53.65	53.72	SB	
60	1	54.64	54.69	NB	
61	1	54.65	54.70	SB	
62	1	54.68	54.71	NB	CASPAR CREEK BRIDGE #10-153
63	1	54.68	54.71	SB	CASPAR CREEK BRIDGE #10-153
64	1	54.87	54.88	NB	CASPAR CREEK BRIDGE #10-153
65	1	54.87	54.88	SB	CASPAR CREEK BRIDGE #10-153
66	1	62.57	62.59	SB	
67	1	71.49	71.56	SB	
68	1	74.20	74.29	SB	
69	1	74.60	74.70	SB	
70	1	74.94	74.97	SB	BLUE SLIDE GULCH RETAINING WALL
71	1	74.98	74.99	SB	
72	1	74.98	75.00	NB	BLUE SLIDE GULCH BRIDGE # 10-166
73	1	75.04	75.07	SB	BLUE SLIDE GULCH BRIDGE # 10-166
74	1	75.04	75.07	NB	BLUE SLIDE GULCH BRIDGE # 10-166
75	1	75.14	75.29	SB	
76	1	75.28	75.29	NB	
77	1	75.59	75.71	SB	
78	1	75.75	75.80	SB	
79	1	76.29	76.34	SB	
80	1	76.44	76.46	SB	
81	1	78.29	78.30	SB	WAGES CREEK BRIDGE #10-137
82	1	78.29	78.30	NB	WAGES CREEK BRIDGE #10-137
83	1	78.32	78.33	SB	WAGES CREEK BRIDGE #10-137
84	1	78.32	78.33	NB	WAGES CREEK BRIDGE #10-137
85	1	79.21	79.22	SB	DE HAVEN CREEK BRIDGE #10-138
86	1	79.21	79.22	NB	DE HAVEN CREEK BRIDGE #10-138
87	1	79.23	79.24	SB	DE HAVEN CREEK BRIDGE #10-138
88	1	79.23	79.24	NB	DE HAVEN CREEK BRIDGE #10-138
89	1	82.33	82.40	SB	
90	1	83.46	83.56	SB	SOLDIER POINT SIDEHILL VIADUCT
91	1	83.60	83.61	SB	SOLDIER POINT SIDEHILL VIADUCT
92	1	84.00	84.10	NB	
93	1	84.90	84.97	SB	
94	1	85.25	85.37	SB	
95	1	85.84	85.86	NB	
96	1	86.05	86.08	NB	
97	1	86.18	86.24	NB	
98	1	86.42	86.48	NB	
99	1	87.12	87.16	NB	
100	1	87.81	87.82	SB	SOUTH FORK COTTONEVA Cr Br #10-142

LOCATIONS OF CONSTRUCTION

No.	Rte	POSTMILE		Dir	COMMENTS
		FROM	TO		
101	1	87.81	87.82	NB	SOUTH FORK COTTONEVA Cr Br #10-142
102	1	87.83	87.84	SB	SOUTH FORK COTTONEVA Cr Br #10-142
103	1	87.83	87.84	NB	SOUTH FORK COTTONEVA Cr Br #10-142
104	1	90.59	90.60	SB	COTTONEVA CREEK BRIDGE #10-147
105	1	90.59	90.60	NB	COTTONEVA CREEK BRIDGE #10-147
106	1	90.62	90.63	SB	COTTONEVA CREEK BRIDGE #10-147
107	1	90.62	90.63	NB	COTTONEVA CREEK BRIDGE #10-147
108	1	92.30	92.40	NB	SOLDIER PILE WALL
109	1	92.40	92.50	NB	SOLDIER PILE WALL
110	1	101.55	101.58	NB	
111	1	105.47	105.49	SB	
112	20	7.61	7.62	WB	
113	20	8.54	8.57	EB	
114	20	9.78	9.86	EB	
115	20	10.38	10.41	EB	
116	20	10.45	10.60	EB	
117	20	10.61	10.68	WB	
118	20	12.78	12.84	WB	
119	20	14.72	14.85	EB	
120	20	19.14	19.22	EB	
121	20	28.33	28.38	EB	
122	20	31.19	31.20	WB	BROADDUS CREEK BRIDGE #10-104
123	20	31.19	31.20	EB	BROADDUS CREEK BRIDGE #10-104
124	20	31.21	31.22	WB	BROADDUS CREEK BRIDGE #10-104
125	20	31.21	31.22	EB	BROADDUS CREEK BRIDGE #10-104
126	20	31.55	31.56	WB	BROADDUS CREEK BRIDGE #10-107
127	20	31.58	31.59	WB	
128	20	33.20	33.21	EB	101/20 SEPARATION BRIDGE #205R
129	20	33.25	33.26	WB	101/20 SEPARATION BRIDGE #205R
130	20	33.30	33.31	EB	NORTH CALPELLA OC #10-206
131	20	33.32	33.34	WB	NORTH CALPELLA OC #10-206
132	20	38.20	38.31	EB	COLD CREEK BRIDGE #10-41
133	20	38.30	38.31	WB	COLD CREEK BRIDGE #10-41
134	20	38.34	38.35	EB	COLD CREEK BRIDGE #10-41
135	20	38.34	38.35	WB	COLD CREEK BRIDGE #10-41
136	20	39.53	39.65	EB	COLD CREEK BRIDGE #10-43
137	20	39.64	39.65	WB	COLD CREEK BRIDGE #10-43
138	20	39.67	39.70	EB	COLD CREEK BRIDGE #10-43
139	20	39.67	39.69	WB	COLD CREEK BRIDGE #10-43
140	20	40.84	40.85	EB	COLD CREEK BRIDGE #10-44
141	20	40.84	40.85	WB	COLD CREEK BRIDGE #10-44
142	20	40.87	40.88	EB	COLD CREEK BRIDGE #10-44
143	20	40.87	40.88	WB	COLD CREEK BRIDGE #10-44
144	128	0.62	0.65	EB	
145	128	3.06	3.08	EB	
146	128	3.45	3.48	EB	
147	128	3.51	3.56	EB	
148	128	5.32	5.37	EB	
149	128	10.17	10.20	WB	
150	128	10.30	10.34	EB	

**LOCATIONS OF CONSTRUCTION
LC-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN
FUNCTIONAL SUPERVISOR
Dennis P. McBride
CALCULATED BY
DESIGNED BY
CHECKED BY
CAREN E. COONROD
REVISOR
DATE REVISOR
DATE REVISOR



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN
 FUNCTIONAL SUPERVISOR
 Dennis P. McBride
 CALCULATED/DESIGNED BY
 CHECKED BY
 CAREN E. COONROD
 REVISED BY
 DATE REVISED

LOCATIONS OF CONSTRUCTIONS

No.	Rte	POSTMILE		Dir	COMMENTS
		FROM	TO		
151	128	11.59	11.60	WB	FLYNN CREEK BRIDGE #10-79
152	128	11.59	11.60	EB	FLYNN CREEK BRIDGE #10-79
153	128	11.61	11.62	WB	FLYNN CREEK BRIDGE #10-79
154	128	11.61	11.62	EB	FLYNN CREEK BRIDGE #10-79
155	128	12.69	12.70	WB	NORTH FORK NAVARRO RIVER Br #10-78
156	128	12.69	12.70	EB	NORTH FORK NAVARRO RIVER Br #10-78
157	128	12.71	12.72	WB	NORTH FORK NAVARRO RIVER Br #10-78
158	128	12.71	12.72	EB	NORTH FORK NAVARRO RIVER Br #10-78
159	128	19.68	19.76	WB	
160	128	23.88	23.92	EB	
161	128	28.26	28.27	WB	ANDERSON CREEK BRIDGE #10-132
162	128	28.26	28.27	EB	ANDERSON CREEK BRIDGE #10-132
163	128	28.29	28.30	WB	ANDERSON CREEK BRIDGE #10-132
164	128	28.29	28.30	EB	ANDERSON CREEK BRIDGE #10-132
165	162	0.02	0.03	WB	LONG VALLEY CREEK BRIDGE #10-293
166	162	0.02	0.03	EB	LONG VALLEY CREEK BRIDGE #10-293
167	162	0.07	0.08	WB	LONG VALLEY CREEK BRIDGE #10-293
168	162	0.07	0.08	EB	LONG VALLEY CREEK BRIDGE #10-293
169	162	0.64	0.65	EB	
170	162	0.66	0.67	WB	
171	162	4.89	4.92	WB	
172	162	5.60	5.61	WB	RETAINING WALL
173	162	5.64	5.65	WB	RETAINING WALL
174	162	8.24	8.25	WB	EEL RIVER BRIDGE #10-236
175	162	8.24	8.25	EB	EEL RIVER BRIDGE #10-236
176	162	8.31	8.33	WB	EEL RIVER BRIDGE #10-236
177	162	8.31	8.33	EB	EEL RIVER BRIDGE #10-236
178	162	15.12	15.14	WB	MIDDLE FORK EEL RIVER BRIDGE #10-252
179	162	15.12	15.14	EB	MIDDLE FORK EEL RIVER BRIDGE #10-252
180	162	15.22	15.23	WB	MIDDLE FORK EEL RIVER BRIDGE #10-252
181	162	15.22	15.23	EB	MIDDLE FORK EEL RIVER BRIDGE #10-252
182	162	16.25	16.30	EB	
183	162	25.59	25.64	EB	
184	162	28.29	28.30	WB	GRIST CREEK BRIDGE #10-235
185	162	28.29	28.30	EB	GRIST CREEK BRIDGE #10-235
186	162	28.31	28.32	WB	GRIST CREEK BRIDGE #10-235
187	162	28.31	28.32	EB	GRIST CREEK BRIDGE #10-235
188	162	28.74	28.74	WB	TOWN CREEK BRIDGE #10-94
189	162	28.73	28.74	EB	TOWN CREEK BRIDGE #10-94
190	162	28.76	28.77	WB	TOWN CREEK BRIDGE #10-94
191	162	28.76	28.77	EB	TOWN CREEK BRIDGE #10-94
192	253	2.26	2.30	WB	
193	253	2.51	2.52	WB	TYPE 5 RETAINING WALL
194	253	2.54	2.58	WB	
195	253	2.61	2.62	WB	TIE BACK WALL
196	253	6.39	6.43	WB	
197	253	6.50	6.52	WB	
198	253	6.56	6.58	WB	
199	253	10.76	10.78	EB	
200	253	11.59	11.68	WB	

LOCATIONS OF CONSTRUCTIONS

No.	Rte	POSTMILE		Dir	COMMENTS
		FROM	TO		
201	253	11.86	12.07	WB	
202	253	12.62	12.75	WB	
203	253	12.79	12.87	WB	
204	253	13.00	13.07	WB	
205	253	13.08	13.16	WB	
206	253	13.11	13.14	EB	
207	253	13.19	13.28	WB	
208	253	13.24	13.27	EB	
209	253	13.30	13.37	WB	
210	253	13.46	13.48	EB	
211	253	14.00	14.07	WB	
212	253	15.05	15.06	WB	ROBINSON CREEK BRIDGE #10-231
213	253	15.05	15.06	EB	ROBINSON CREEK BRIDGE #10-231
214	253	15.10	15.11	WB	ROBINSON CREEK BRIDGE #10-231
215	253	15.12	15.13	EB	ROBINSON CREEK BRIDGE #10-231
216	271	0.00	0.03	NB	
217	271	0.00	0.03	SB	
218	271	0.04	0.07	SB	
219	271	0.18	0.19	SB	SOLDIER PILE WALL
220	271	0.21	0.23	SB	SOLDIER PILE WALL
221	271	0.37	0.41	SB	
222	271	2.30	2.50	SB	
223	271	3.19	3.21	SB	
224	271	3.30	3.33	SB	OLD US 101 UNDERCROSSING #10-145
225	271	3.37	3.39	SB	OLD US 101 UNDERCROSSING #10-145
226	271	3.37	3.39	NB	OLD US 101 UNDERCROSSING #10-145
227	271	3.54	3.60	SB	
228	271	4.10	4.30	SB	
229	271	5.60	5.61	SB	SCANDIA OVERCROSSING #10-135
230	271	5.60	5.61	NB	SCANDIA OVERCROSSING #10-135
231	271	5.61	5.62	SB	SCANDIA OVERCROSSING #10-135
232	271	5.61	5.62	NB	SCANDIA OVERCROSSING #10-135
233	271	6.15	6.25	SB	
234	271	6.74	6.81	SB	
235	271	15.64	15.93	SB	
236	271	16.05	16.43	SB	
237	271	17.01	17.05	NB	REYNOLDS OVERCROSSING #10-217
238	271	17.01	17.05	SB	REYNOLDS OVERCROSSING #10-217
239	271	17.06	17.07	SB	REYNOLDS OVERCROSSING #10-217
240	271	17.06	17.07	NB	REYNOLDS OVERCROSSING #10-217
241	271	17.42	17.49	SB	
242	271	19.03	19.08	SB	
243	271	20.70	20.96	SB	
244	271	21.42	21.62	SB	

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1,20,128 162,253,271	Var	3	69

Caren Coonrod
 REGISTERED CIVIL ENGINEER DATE 6-23-11
 10-3-11
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 CAREN E. COONROD
 No. 63231
 Exp. 6-30-12
 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.

LOCATIONS OF CONSTRUCTION LC-2

LAST REVISION DATE PLOTTED => 05-OCT-2011
 00-00-00 TIME PLOTTED => 13:06

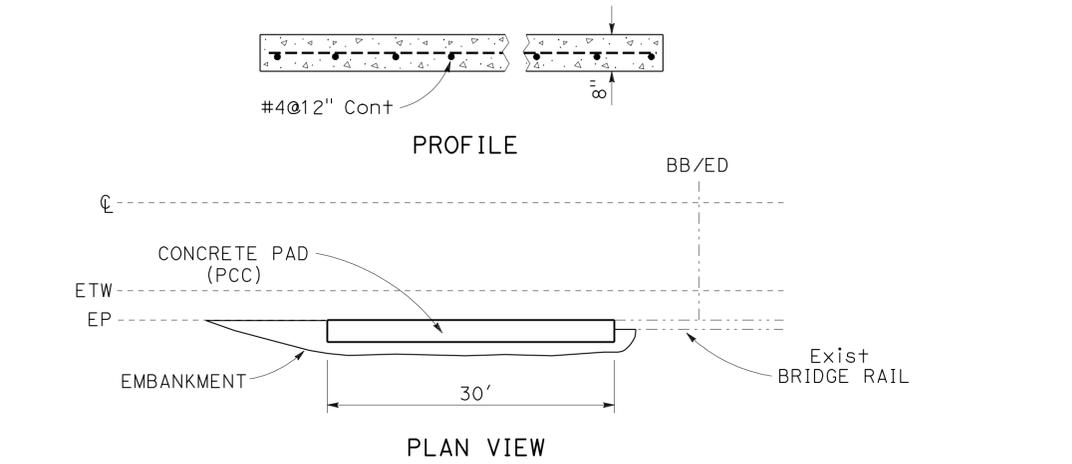
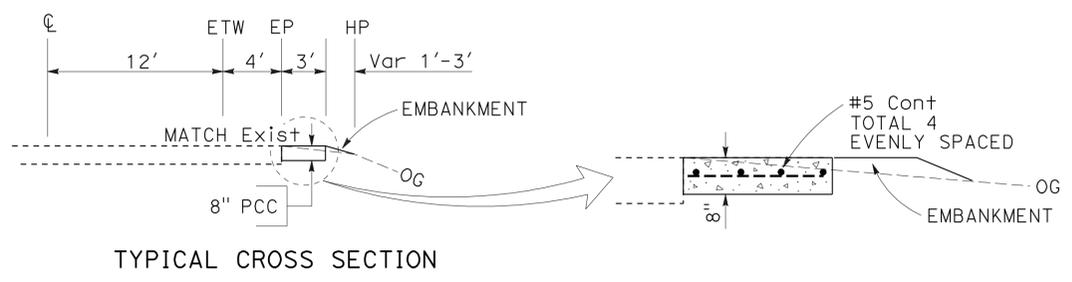
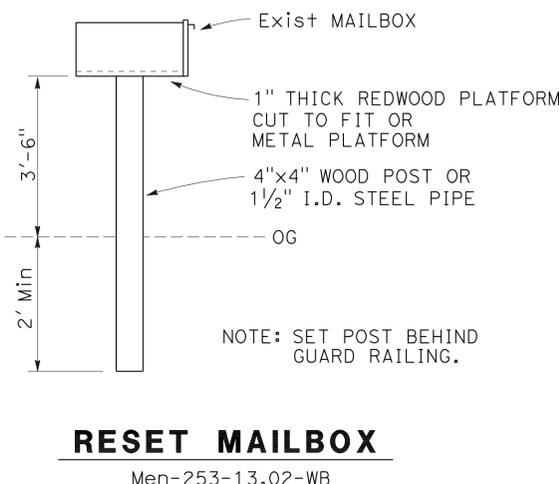
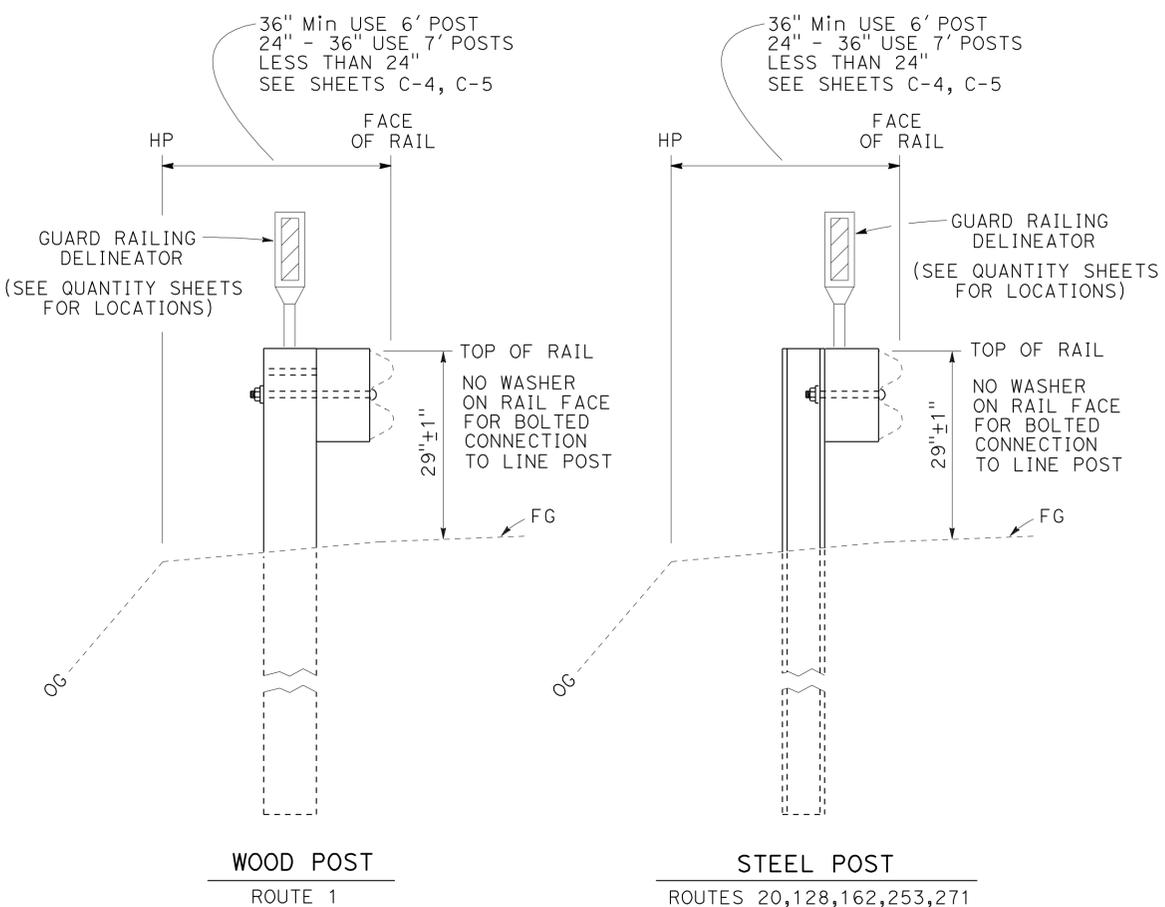
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1,20,128 162,253,271	Var	4	69

Caren Coonrod
 REGISTERED CIVIL ENGINEER DATE 6-23-11
 10-3-11
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 CAREN E. COONROD
 No. 63231
 Exp. 6-30-12
 CIVIL
 STATE OF CALIFORNIA

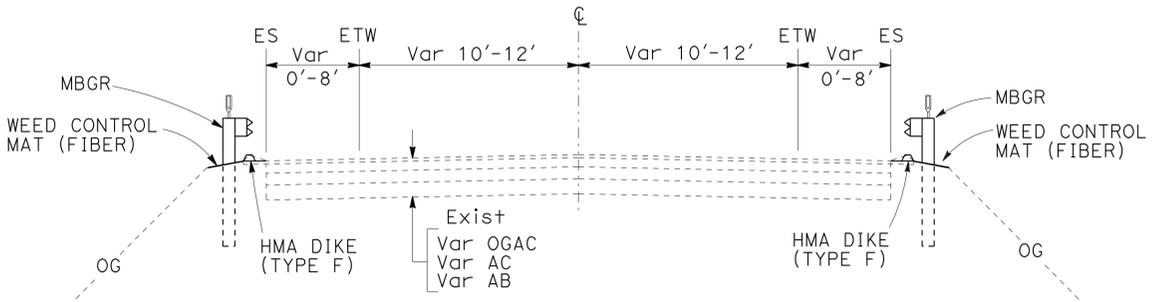
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

- NOTES:
- FOR DETAILS NOT SHOWN SEE STANDARD PLANS.
 - EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.



ALTERNATIVE CRASH CUSHION CONCRETE ANCHOR SLAB

- Men-1-78.30-NB
- Men-162-15.22-WB
- Men-253-15.06-EB
- Men-253-15.12-EB

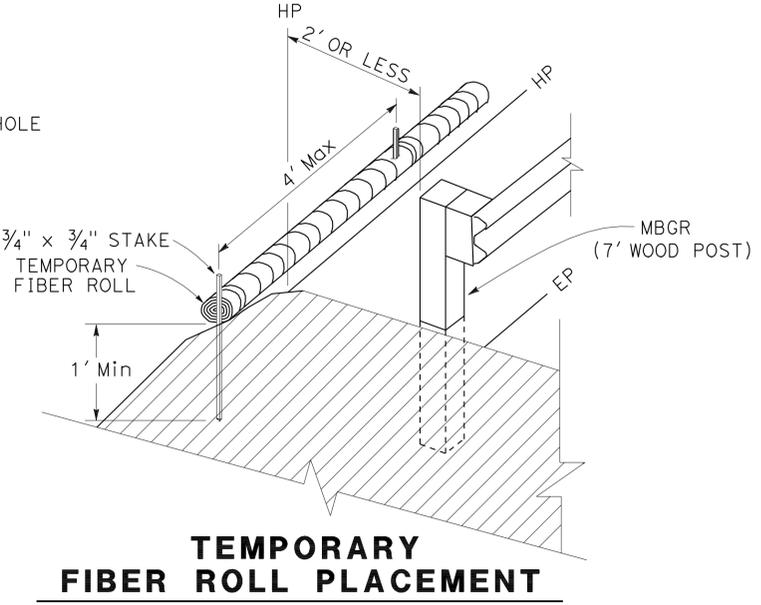
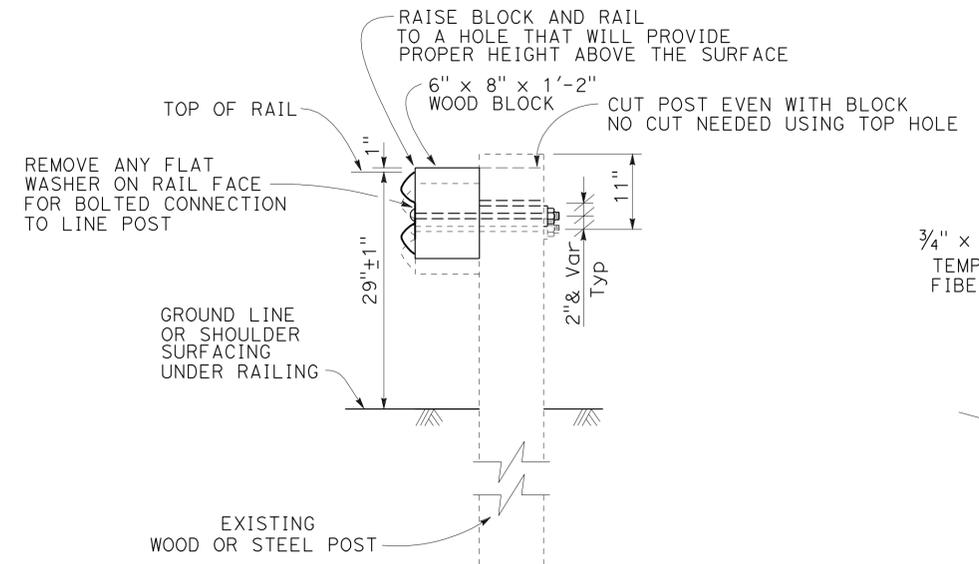


ROUTE 1, 20, 128, 162, 253, 271

CONSTRUCTION DETAILS C-1

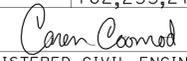
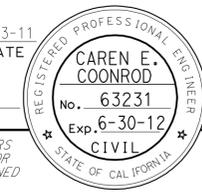
NO SCALE

RECONSTRUCT MBGR



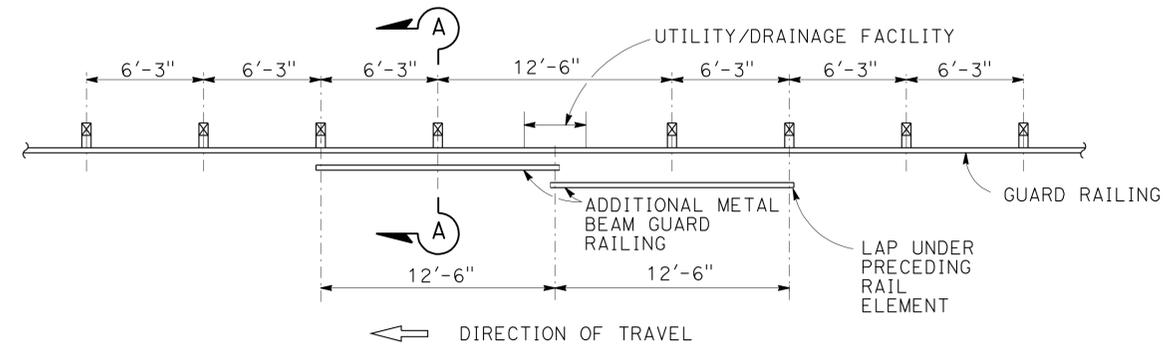
PLACE TEMPORARY FIBER ROLL WHEN OFFSET, BETWEEN BACK OF MBGR POST AND HINGE POINT IS 2' OR LESS.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION DESIGN
 CAREN E. COONROD
 DENNIS P. McBRIDE
 REVISIONS: 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

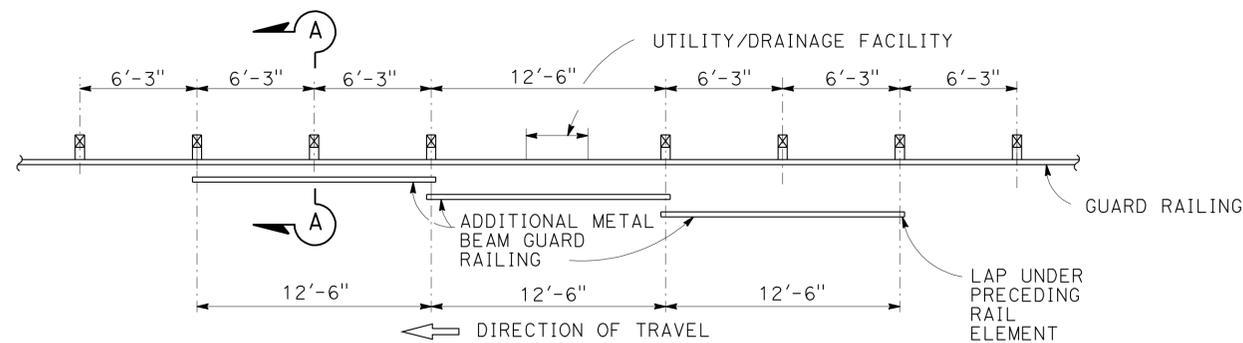
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1,20,128 162,253,271	Var	5	69
 REGISTERED CIVIL ENGINEER			6-23-11 DATE		
10-3-11 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

NOTES:

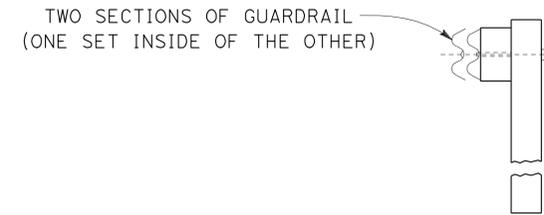
- EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.
- EXACT LOCATION OF NESTED RAIL ELEMENTS TO BE DETERMINED BY THE ENGINEER.



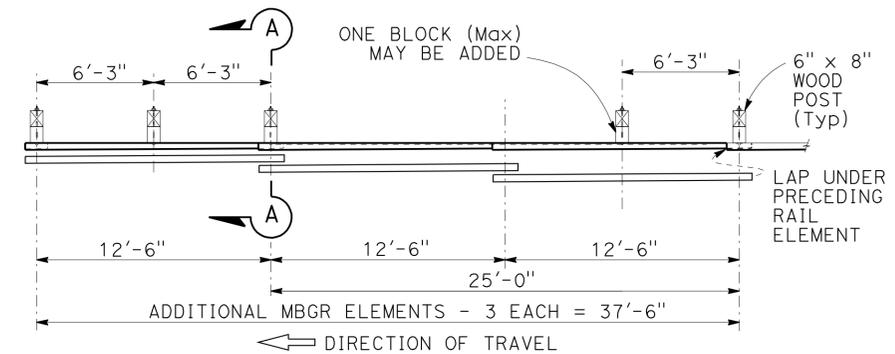
CASE 1
ONE POST OMITTED
(SPLICE IN CENTER)



CASE 2
ONE POST OMITTED
(SPLICE AT POSTS)



SECTION A-A



PLAN



ELEVATION

CASE 3
TWO POSTS OMITTED

NESTED RAIL ELEMENTS

FOR DETAILS NOT SHOWN SEE STANDARD PLAN RSP A77A1.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION DESIGN
 Caltrans®
 CAREN E. COONROD
 DENNIS P. MCBRIDE
 REVISIONS: REVISED BY DATE, CALCULATED/DESIGNED BY CHECKED BY, FUNCTIONAL SUPERVISOR

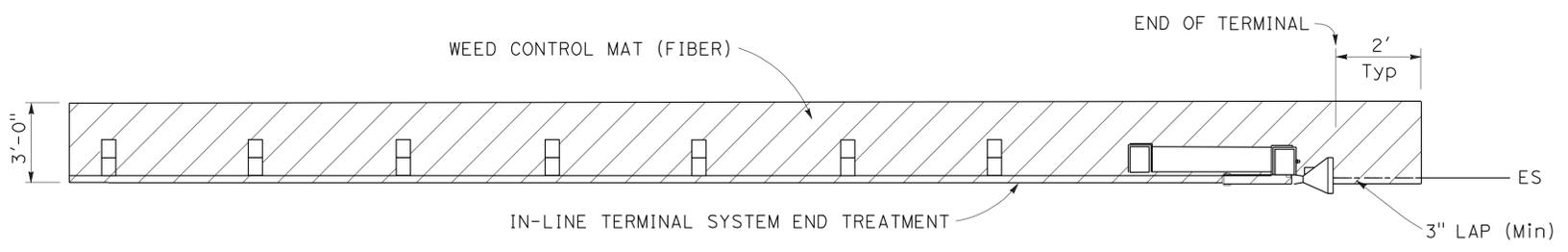
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1,20,128 162,253,271	Var	6	69

<i>Caren Coonrod</i>		6-23-11
REGISTERED CIVIL ENGINEER	DATE	
10-3-11		
PLANS APPROVAL DATE		

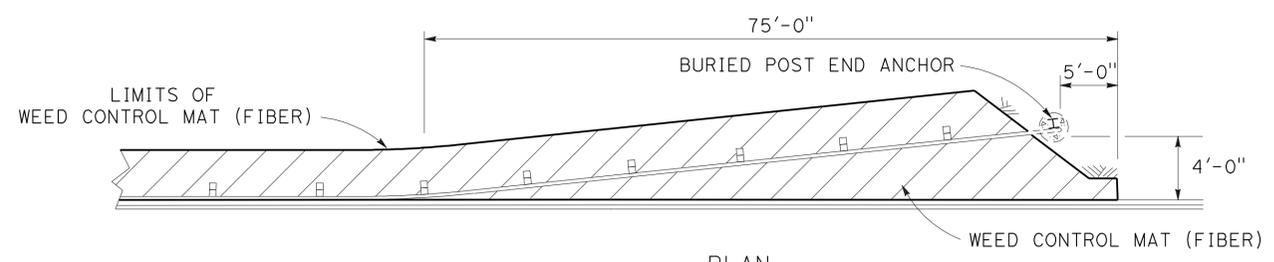
REGISTERED PROFESSIONAL ENGINEER
CAREN E. COONROD
 No. 63231
 Exp. 6-30-12
 CIVIL
 STATE OF CALIFORNIA

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.

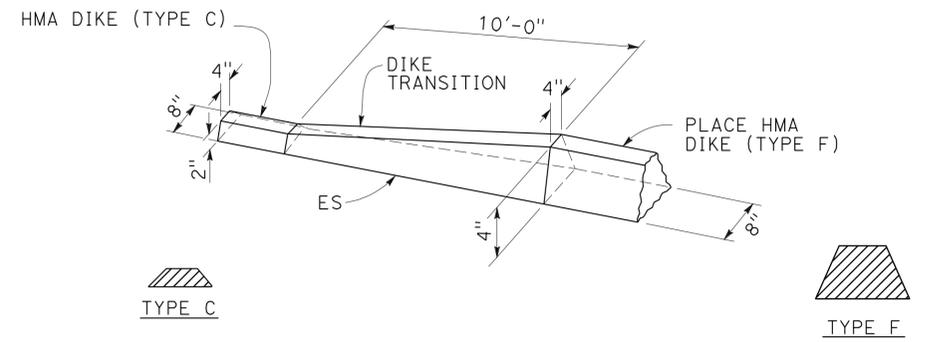
NOTE:
EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.



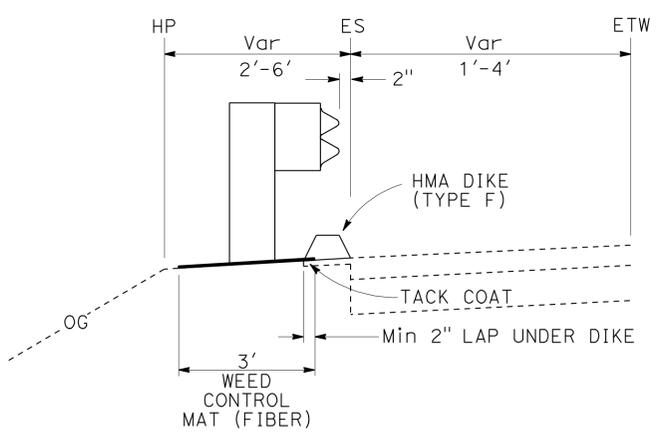
PLAN
**WEED CONTROL MAT (FIBER)
UNDER ALTERNATIVE IN-LINE TERMINAL SYSTEM**



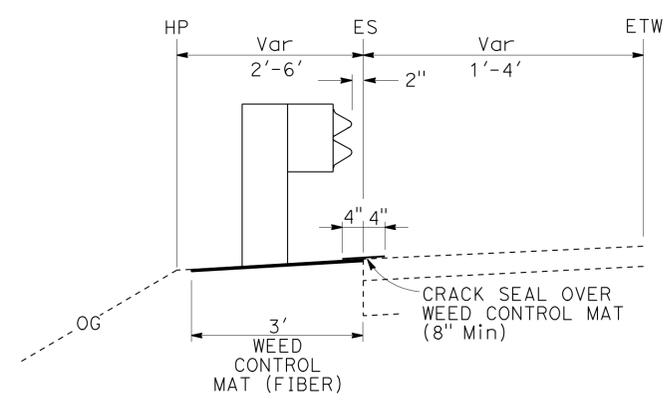
PLAN
WEED CONTROL MAT (FIBER) AT BURIED POST END ANCHOR



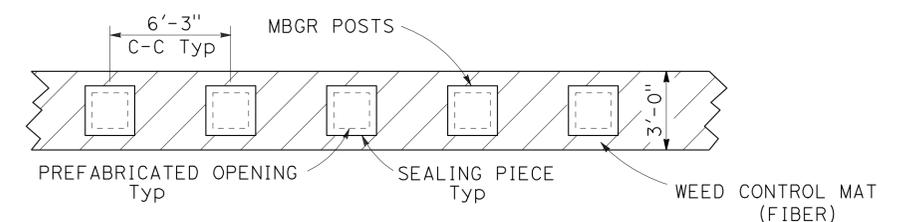
HMA DIKE (TYPE C) TO HMA DIKE (TYPE F)



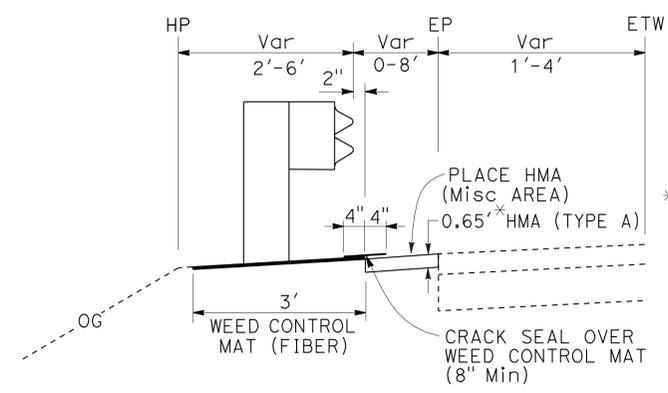
WITH NEW HMA DIKE (TYPE F)



WITHOUT HMA DIKE



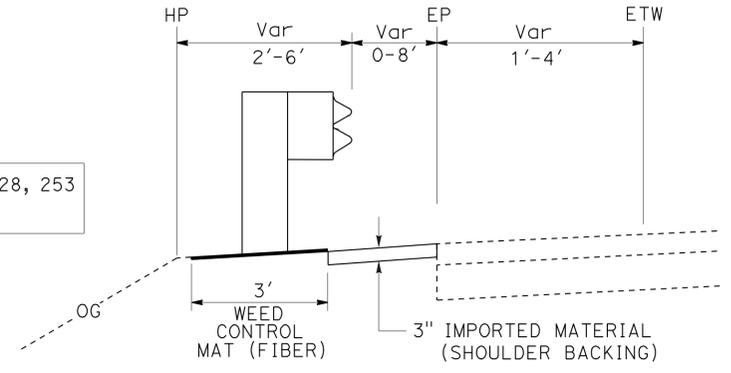
PLAN
WEED CONTROL MAT (FIBER) UNDER MBGR



WITH HMA (TYPE A)

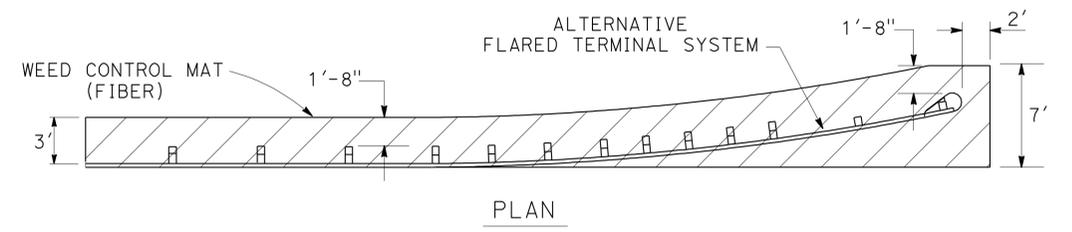
ROUTE 20,128,162,253 & 271
ROUTE 1 PM 86.18-105.49

* 0.65' - Rte 1, 20, 128, 253
0.55' - Rte 162, 271



WITH SHOULDER BACKING

ROUTE 1 PM 3.16-86.18



**WEED CONTROL MAT (FIBER)
UNDER ALTERNATIVE FLARED TERMINAL SYSTEM**

WEED CONTROL MAT (FIBER)

CONSTRUCTION DETAILS

NO SCALE

C-3

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DESIGN
 CAREN E. COONROD
 DENNIS P. MCBRIDE
 REVISIONS: 00-00-00 DATE PLOTTED => 05-OCT-2011 TIME PLOTTED => 13:07

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1,20,128 162,253,271	Var	7	69

Caren Coonrod
 REGISTERED CIVIL ENGINEER DATE 6-23-11
 10-3-11
 PLANS APPROVAL DATE

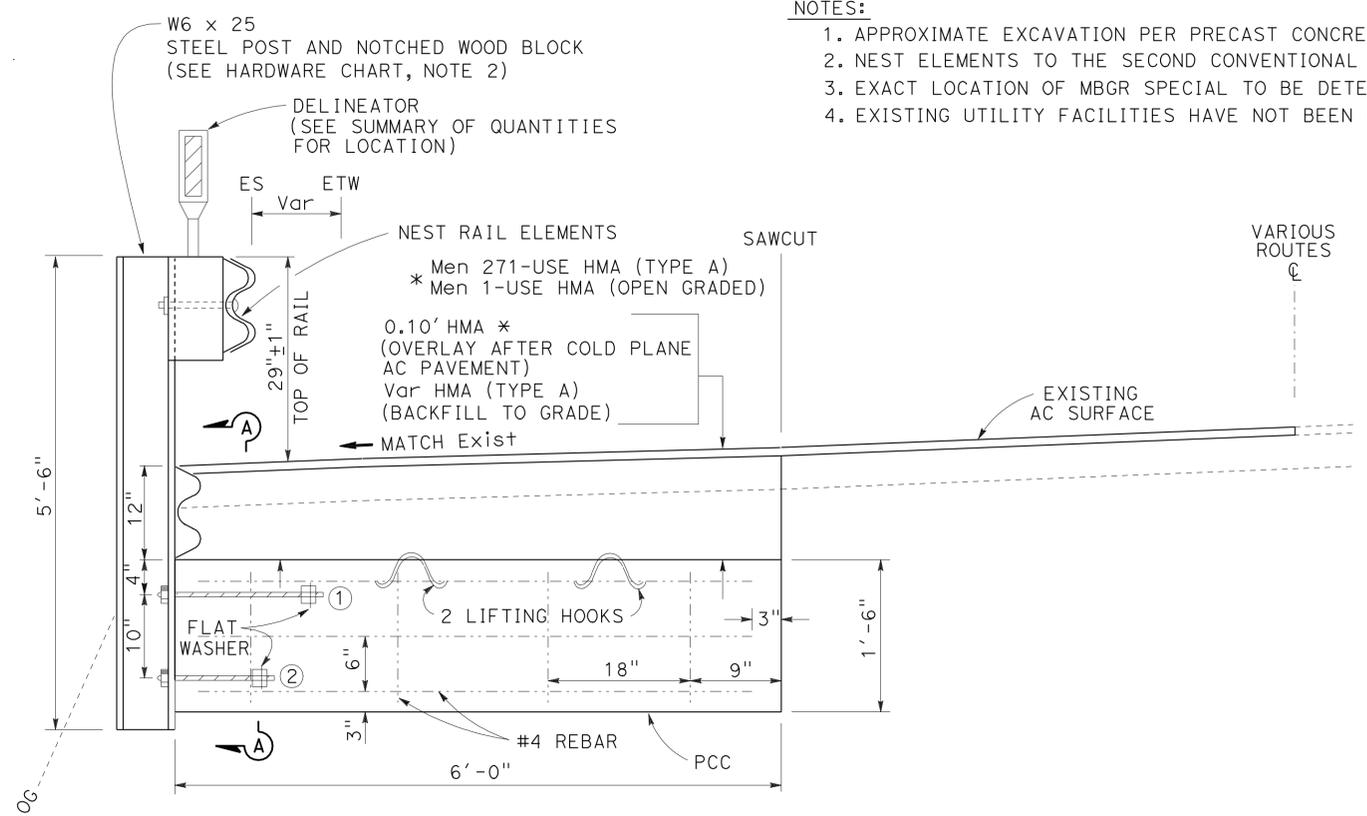
REGISTERED PROFESSIONAL ENGINEER
 CAREN E. COONROD
 No. 63231
 Exp. 6-30-12
 CIVIL
 STATE OF CALIFORNIA

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.

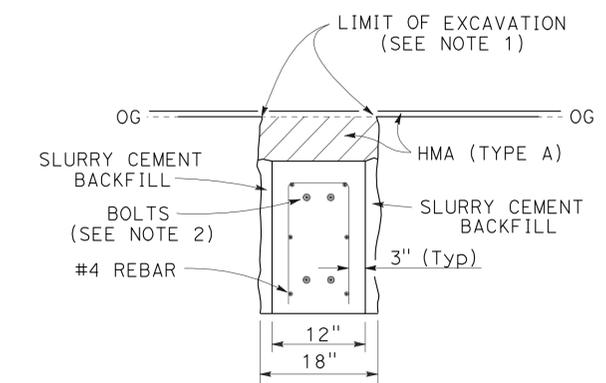
- NOTES:**
1. APPROXIMATE EXCAVATION PER PRECAST CONCRETE BEAM IS 1 CY.
 2. NEST ELEMENTS TO THE SECOND CONVENTIONAL POST.
 3. EXACT LOCATION OF MBGR SPECIAL TO BE DETERMINED BY THE ENGINEER.
 4. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.

LEGEND

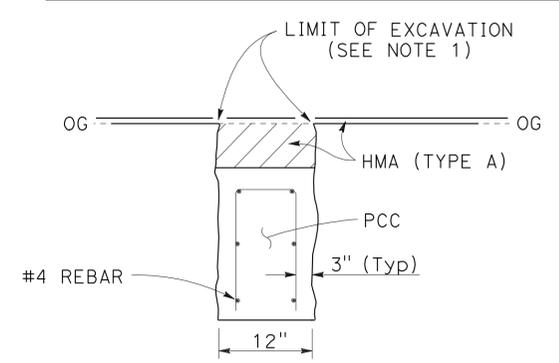
 = COLD PLANE AC PAVEMENT



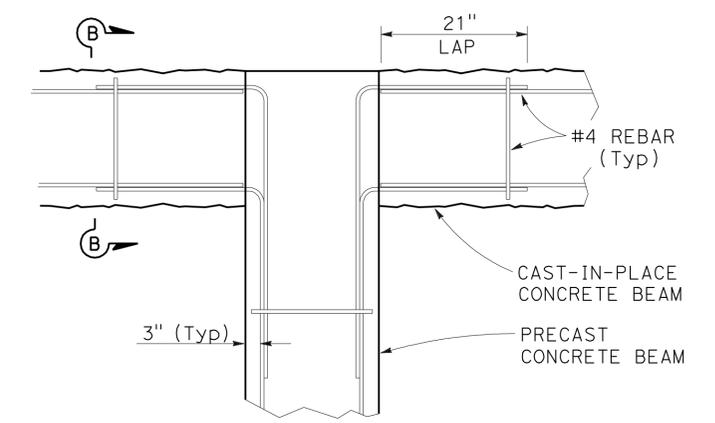
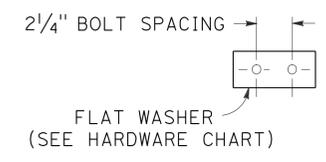
ELEVATION



SECTION A-A

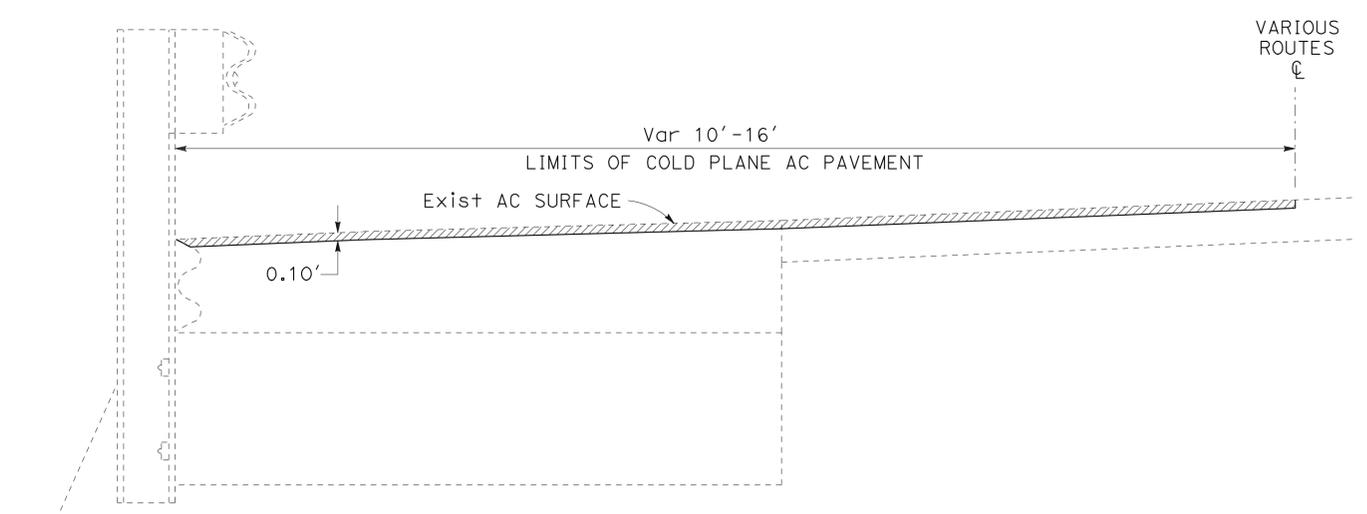


SECTION B-B

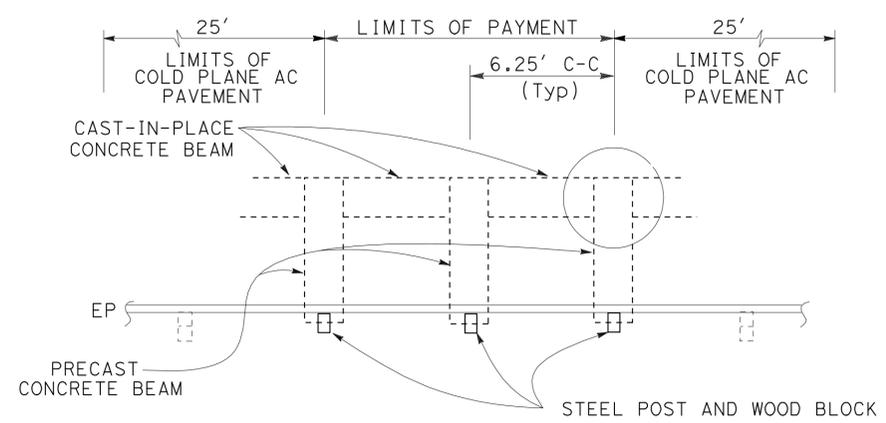


CONCRETE BEAM DETAIL

HARDWARE CHART FOR PRECAST CONCRETE BEAM					
CASE	STEEL POST	WOOD BLOCK	①	②	BOLT SPACING
PRECAST BEAM	W6 x 25	8" x 8" x 1'-2"	2 EA 3/4" Dia x 1'-6" HS BOLTS (THREADED BOTH ENDS) WITH 3 EA HEX NUTS AND 3" x 7" x 1/4" FLAT WASHER	2 EA 5/8" Dia x 1' HS BOLTS (THREADED BOTH ENDS) WITH 3 EA HEX NUTS AND 2" x 7" x 1/4" FLAT WASHER	2 1/4"



COLD PLANE AC PAVEMENT DETAIL



PLAN VIEW

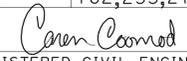
MBGR SPECIAL

- Men-1-75.59 / 75.71 SB
- Men-1-76.29 / 76.34 SB
- Men-1-85.25 / 85.37 SB
- Men-1-92.30 / 92.40 NB
- Men-1-92.40 / 92.50 NB
- Men-271-2.30 / 2.50 SB
- Men-271-3.19 / 3.21 SB
- Men-271-20.70 / 20.96 SB

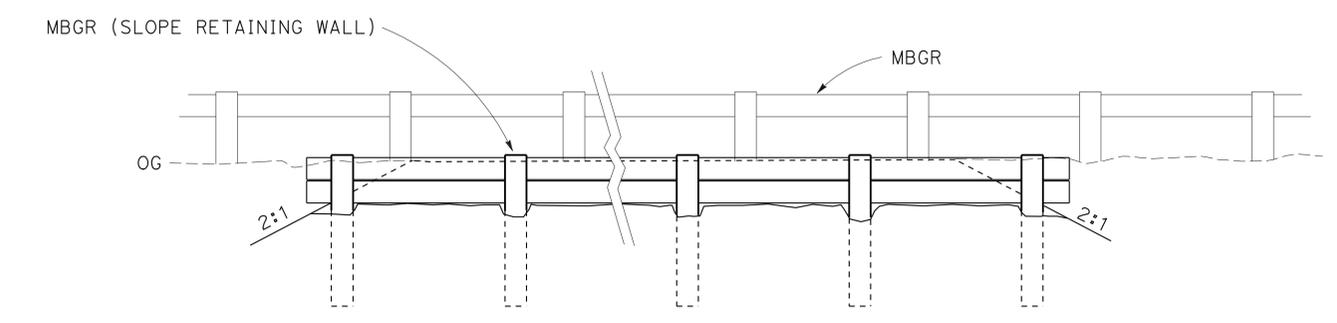
CONSTRUCTION DETAILS

NO SCALE **C-4**

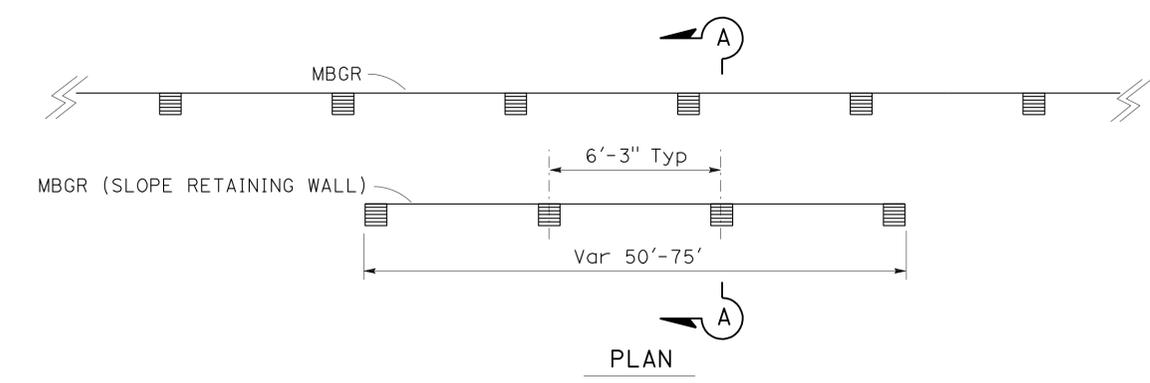
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 CAREN E. COONROD
 DENNIS P. McBRIDE
 DESIGN

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1,20,128 162,253,271	Var	8	69
 REGISTERED CIVIL ENGINEER			6-23-11 DATE		
10-3-11 PLANS APPROVAL DATE					
<small>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.</small>					

- NOTES:**
1. EXACT LOCATION OF THE MBGR (SLOPE RETAINING WALL) TO BE DETERMINED BY THE ENGINEER.
 2. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.

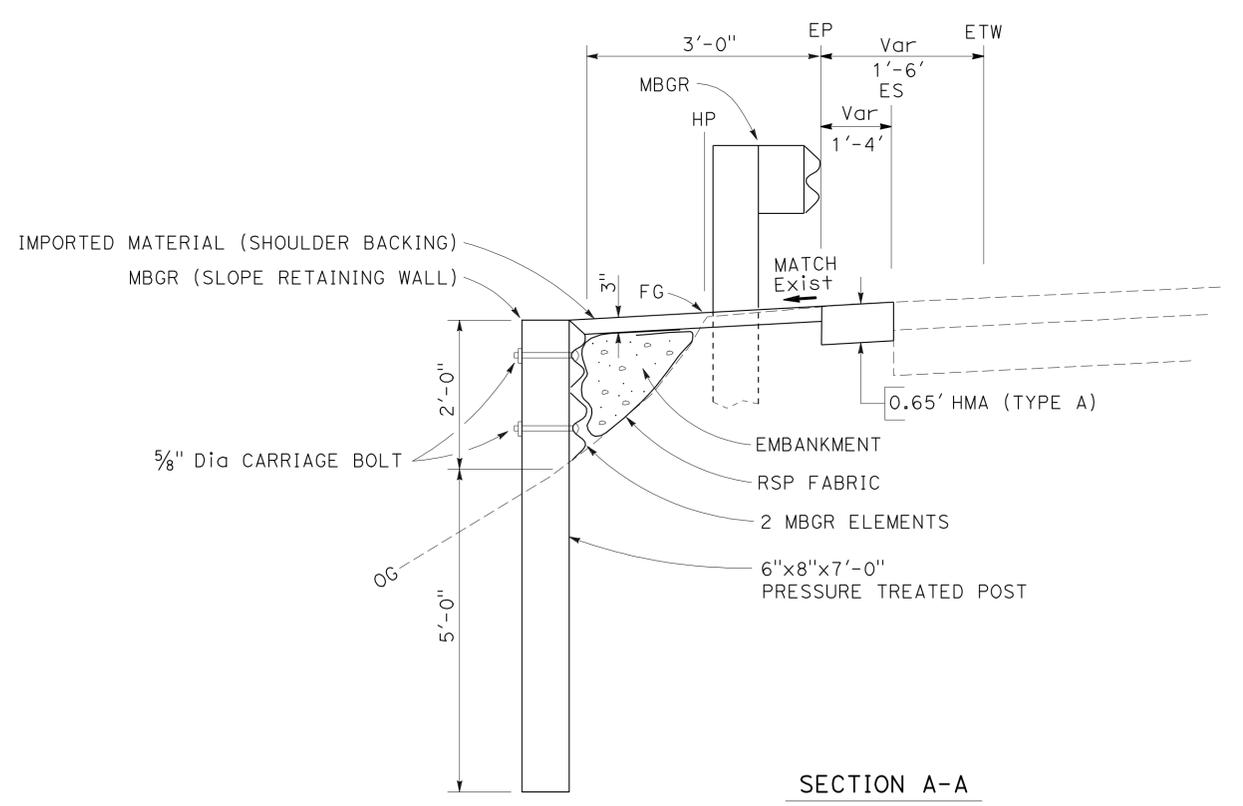


ELEVATION
MBGR (SLOPE RETAINING WALL)



PLAN
MBGR (SLOPE RETAINING WALL)

Men-128-0.62 / 0.65 EB
Men-128-5.32 / 5.37 EB
Men-128-10.30 / 10.34 EB



SECTION A-A

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN
 FUNCTIONAL SUPERVISOR: Dennis P. McBride
 CALCULATED/DESIGNED BY: [Blank]
 CHECKED BY: [Blank]
 CAREN E. COONROD
 REVISED BY: [Blank]
 DATE REVISED: [Blank]

CONSTRUCTION DETAILS
NO SCALE
C-5

LAST REVISION | DATE PLOTTED => 05-0CT-2011
 00-00-00 | TIME PLOTTED => 13:07

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN

FUNCTIONAL SUPERVISOR
 Dennis P. McBride

DESIGNED BY
 CAREN E. COONROD

CHECKED BY

REVISIONS

NO.	DATE	DESCRIPTION

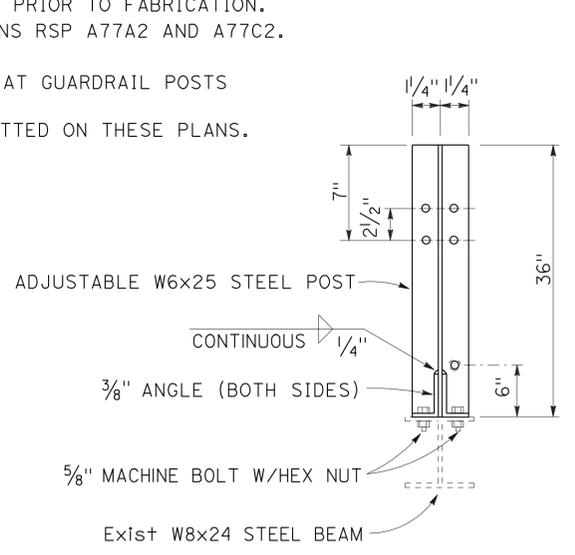
REVISOR

DATE

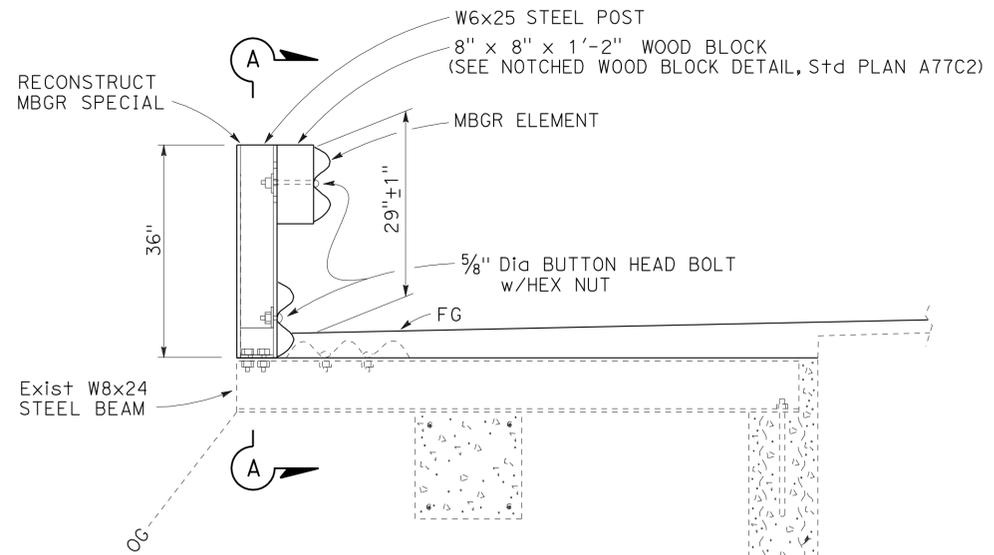
DESIGNED BY

CHECKED BY

- NOTES:
1. ALL DIMENSIONS SHALL BE VERIFIED IN THE FIELD PRIOR TO FABRICATION.
 2. FOR MBGR DETAILS NOT SHOWN, SEE STANDARD PLANS RSP A77A2 AND A77C2.
 3. ALL POST SPACING 6.25' C-C.
 4. HEADLIGHT GLARE SCREEN MESH JOINTS TO OCCUR AT GUARDRAIL POSTS AND TO OVERLAP AT LEAST 2 DIAMONDS.
 5. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.

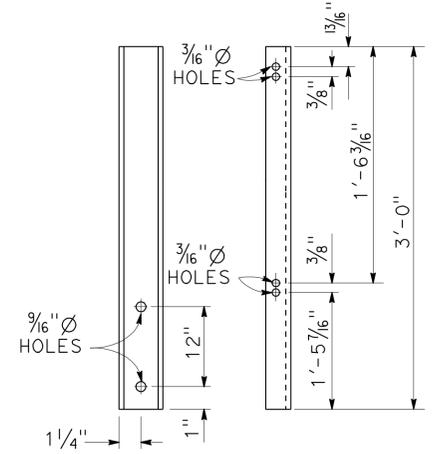


SECTION A-A

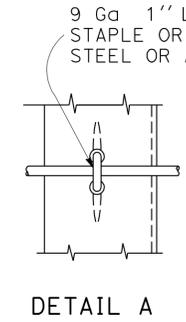


RECONSTRUCT MBGR

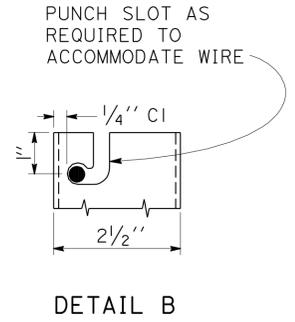
Men-1-84.90/84.97 SB - 9 POSTS



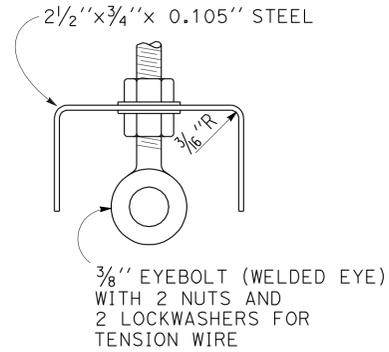
GLARE SCREEN POST DETAILS



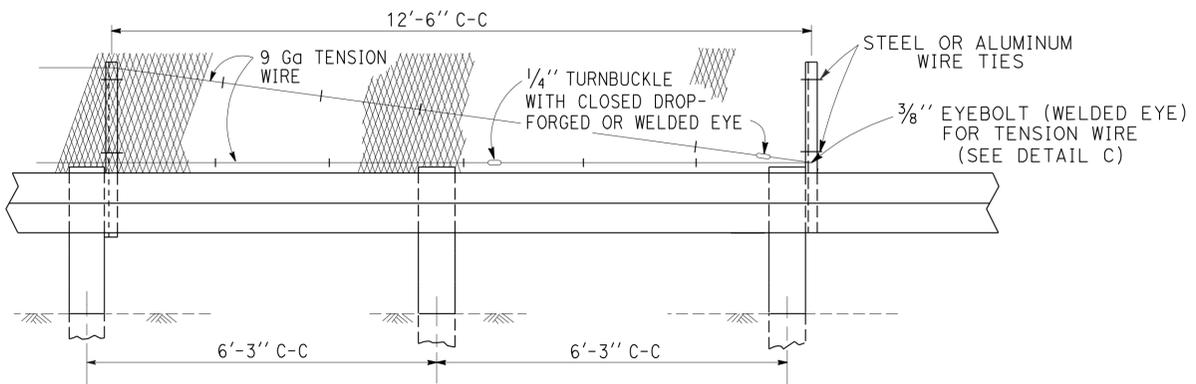
DETAIL A



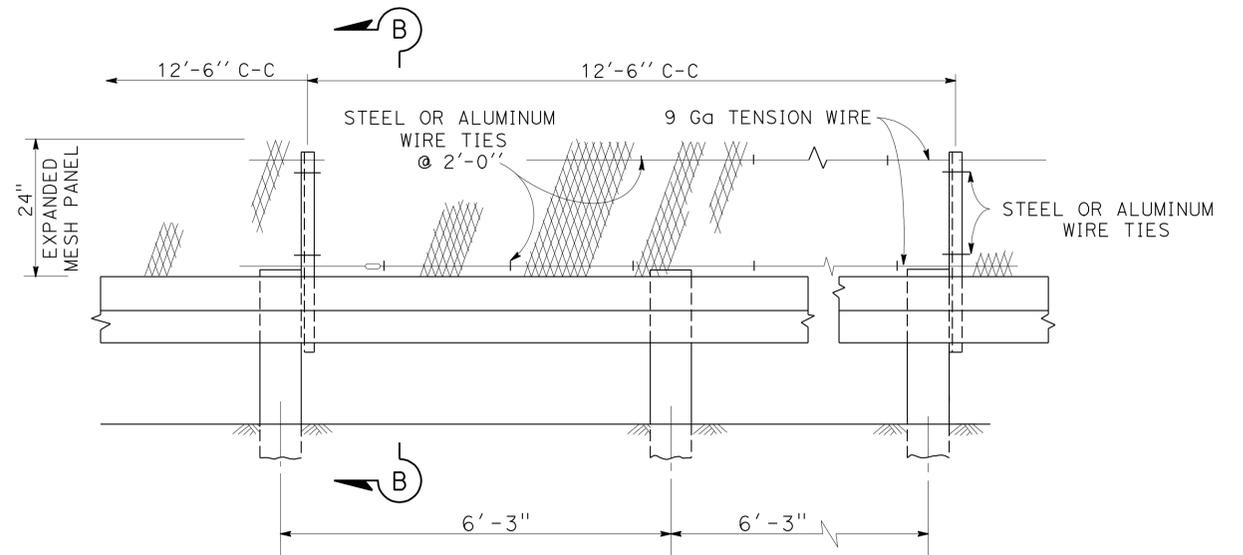
DETAIL B



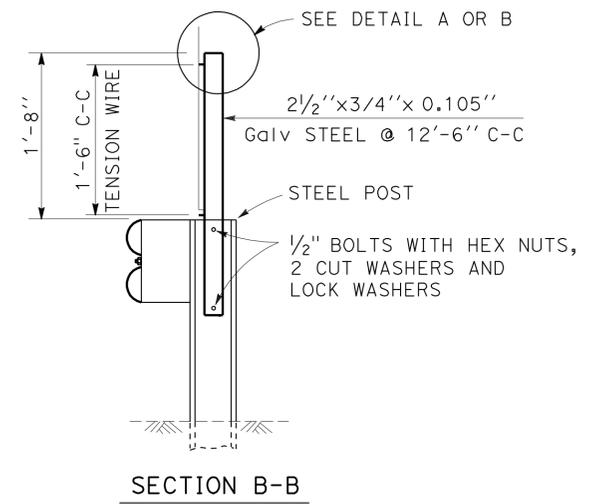
DETAIL C



END PULL POST ASSEMBLY



ELEVATION



SECTION B-B

HEADLIGHT GLARE SCREEN

Men-271-4.10/4.30-SB

CONSTRUCTION DETAILS

C-6

NO SCALE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1,20,128 162,253,271	Var	9	69

Caren Coonrod
 REGISTERED CIVIL ENGINEER DATE 6-23-11

10-3-11
 PLANS APPROVAL DATE

CAREN E. COONROD
 No. 63231
 Exp. 6-30-12
 CIVIL

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.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN
 FUNCTIONAL SUPERVISOR
 Dennis P. McBride
 CALCULATED/DESIGNED BY
 CHECKED BY
 CAREN E. COONROD
 REVISED BY
 DATE REVISED

NOTES:

- EXACT LOCATION OF TEMPORARY RAILING (TYPE K), CHANNELIZERS AND SIGNS TO BE DETERMINED BY THE ENGINEER.
- PORTABLE CHANGEABLE MESSAGE SIGN TO DISPLAY "WATCH FOR BICYCLES".

TRAFFIC HANDLING QUANTITIES

BRIDGE No.	STRUCTURE NAME	ROUTE	PM	DIRECTION	LOCATION	CHANNELIZER (SURFACE MOUNTED)	TEMPORARY RAILING (TYPE K)	TEMPORARY ALTERNATIVE CRASH CUSHION
						EA	LF	EA
10-166	BLUE SLIDE GULCH BRIDGE	1	74.98	SB	APPROACH	7	60	2
10-217	REYNOLDS OC - 271/101 SEPARATION	271	17.05	SB	DEPARTURE	7	60	2
10-217	REYNOLDS OC - 271/101 SEPARATION	271	17.06	NB	DEPARTURE	7	60	2
TOTAL						21	180	6

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1,20,128 162,253,271	Var	10	69

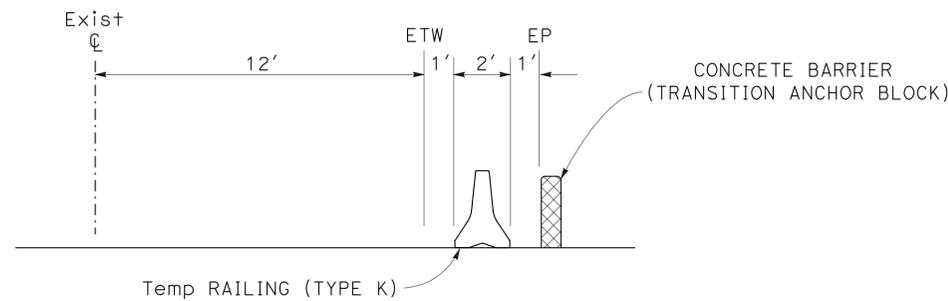
Caren Coonrod
 REGISTERED CIVIL ENGINEER
 6-23-11 DATE
 10-3-11 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
CAREN E. COONROD
 No. 63231
 Exp. 6-30-12
 CIVIL
 STATE OF CALIFORNIA

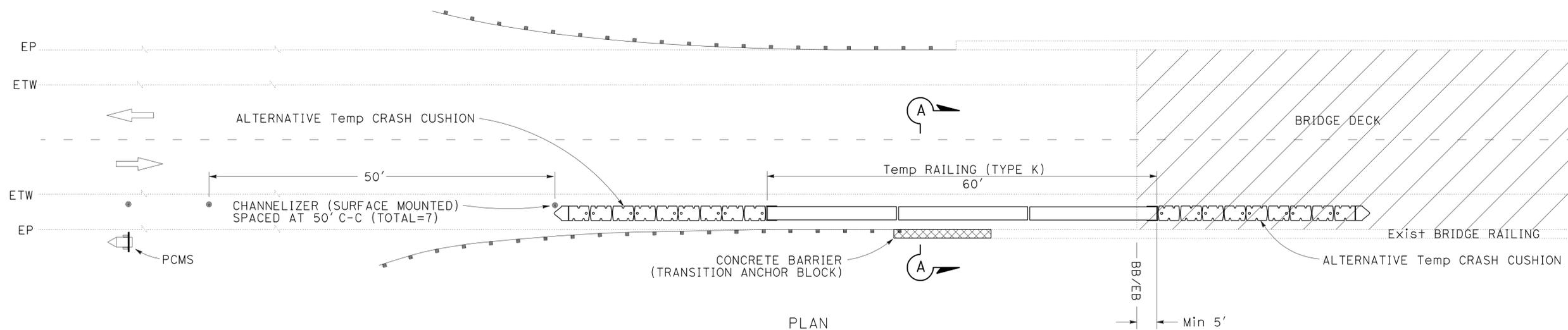
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LEGEND

-  = PORTABLE CHANGEABLE MESSAGE SIGN
-  = CHANNELIZER (SURFACE MOUNTED)
-  = CONCRETE BARRIER (TRANSITION ANCHOR BLOCK)



SECTION A-A



PLAN

TEMPORARY RAILING (TYPE K) PLACEMENT

BLUE SLIDE GULCH BRIDGE
 REYNOLDS OC - 271/101 SEPARATION

THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY

TRAFFIC HANDLING DETAILS AND QUANTITIES

NO SCALE

THD-1

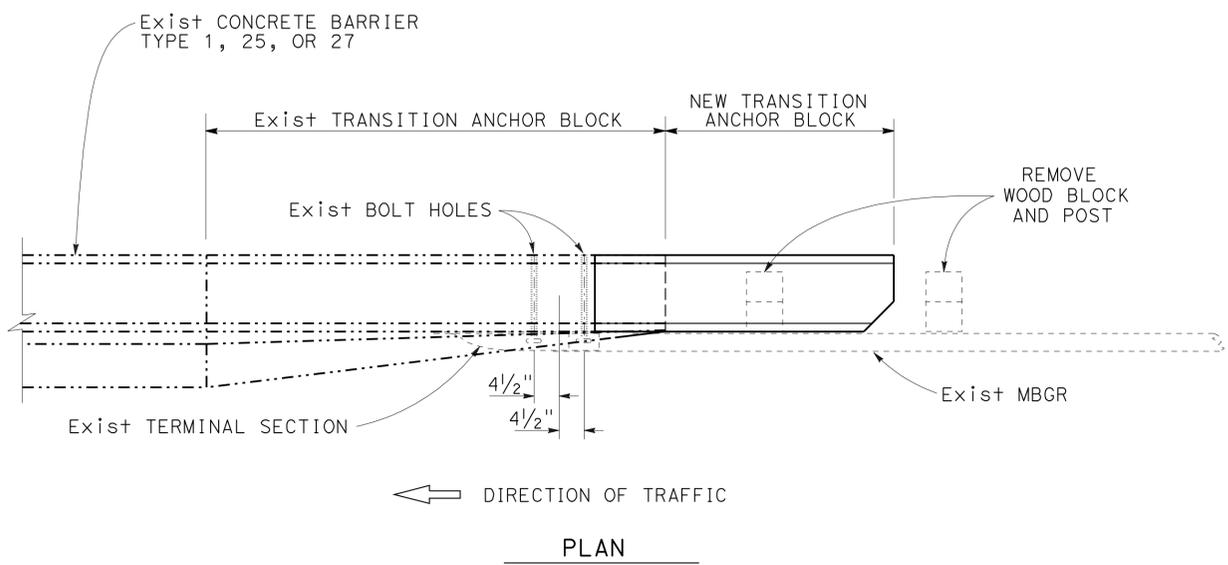
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1,20,128 162,253,271	Var	11	69

Caren Coonrod
 REGISTERED CIVIL ENGINEER DATE 6-23-11
 10-3-11
 PLANS APPROVAL DATE

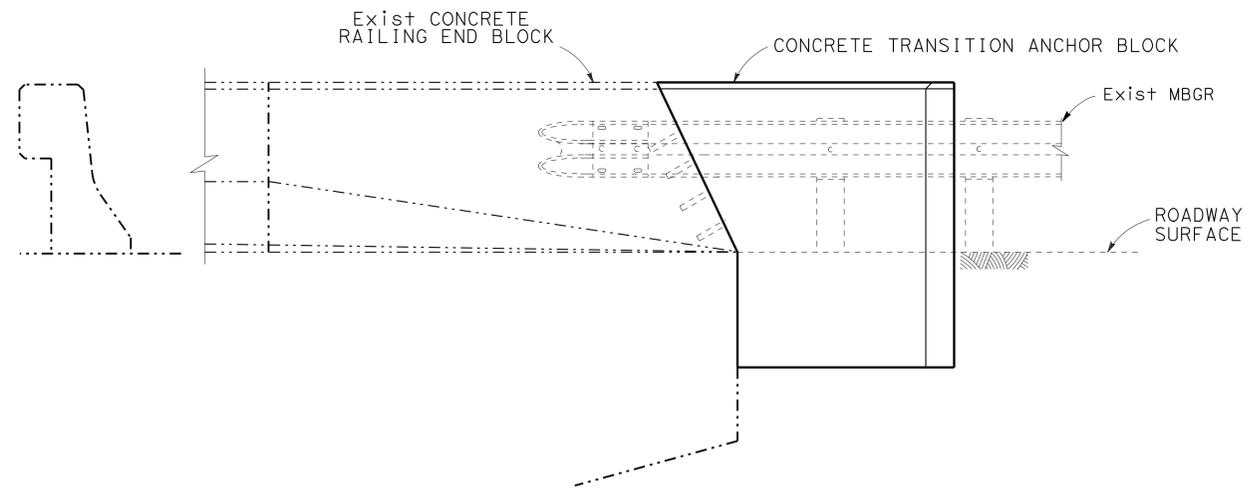
REGISTERED PROFESSIONAL ENGINEER
 CAREN E. COONROD
 No. 63231
 Exp. 6-30-12
 CIVIL
 STATE OF CALIFORNIA

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. TO PROTECT NEW ANCHOR BLOCK DURING CURE TIME, RE-HANG EXISTING RAIL ELEMENT IN EXISTING BOLT HOLES.



PLAN



ELEVATION

TEMPORARY TRAFFIC PROTECTION DETAILS

TRANSITION ANCHOR BLOCKS LESS THAN 10'

LOCATION			BRIDGE/STRUCTURE NAME	BARRIER TYPE	TRANSITION ANCHOR BLOCK LENGTH	
ROUTE	PM	BRIDGE No.			LF	
1	4.68		SOLDIER PILE WALL	27	5	
1	4.81		SOLDIER PILE WALL	27	5	
1	17.66	10-68	GASKER SLOUGH BRIDGE	25	6	
1	50.16	10-146	BIG RIVER BRIDGE	1	6	
1	54.71	10-153	CASPAR CREEK BRIDGE	1	6	
1	74.97		BLUE SLIDE GULCH RETAINING WALL	27	5	
1	74.98	10-166	BLUE SLIDE GULCH BRIDGE	25	6	
1	78.29	10-137	WAGES CREEK BRIDGE	25	6	
1	79.22	10-138	DE HAVEN CREEK BRIDGE	1	4.7	
1	83.56		SOLDIER POINT SIDEHILL VIADUCT	25	6	
1	87.81	10-142	SOUTH FORK COTTONEVA CREEK BRIDGE	25	6	
1	90.59	10-147	COTTONEVA CR. BRIDGE	25	6	
20	31.19	10-104	BROADDUS CREEK BRIDGE	25	6	
20	31.55	10-107	BROADDUS CREEK BRIDGE	25	6	
20	38.31	10-41	COLD CREEK BRIDGE	1	4.7	
20	39.65	10-43	COLD CREEK BRIDGE	1	4.7	
20	40.85	10-44	COLD CREEK BRIDGE	1	4.7	
128	11.59	10-79	FLYNN CREEK BRIDGE	27	5	
128	12.69	10-78	NORTH FORK NAVARRO RIVER BRIDGE	27	5	
162	0.02	10-293	LONG VALLEY CREEK BRIDGE	25	6	
162	5.61		TIE BACK WALL	27	5	
162	8.25	10-236	EEL RIVER BRIDGE	NONSTANDARD	7	
162	15.12	10-252	MIDDLE FORK EEL RIVER BRIDGE	25	6	
162	28.29	10-235	GRIST CREEK BRIDGE	25	6	
162	28.74	10-94	TOWN CREEK BRIDGE	25	6	
253	2.52		TYPE 5 RETAINING WALL	25	6	
253	2.61		TIE BACK WALL	27	5	
253	15.05	10-231	ROBINSON CREEK BRIDGE	25	6	
271	3.37	10-145	ROUTE 101/271 SEPARATION		4.6	
271	5.61	10-135	SCANDIA OC - 271/101 SEPARATION	9	4.3	
271	17.01	10-217	REYNOLDS OVERCROSSING - SB & NB APPROACH	25	6	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 CAREN E. COONROD
 DENNIS P. MCBRIDE
 DESIGN

THIS PLAN ACCURATE FOR TRAFFIC HANDLING WORK ONLY.

**TRAFFIC HANDLING DETAILS
 THD-2**

NO SCALE



METAL BEAM GUARD RAILING

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1,20,128 162,253,271	Var	13	69

Caren Coonrod
 REGISTERED CIVIL ENGINEER DATE 6-23-11
 10-3-11
 PLANS APPROVAL DATE

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.

No.	Rte	POST MILE		DIRECTION	LENGTH LOCATION (N)		REMOVE MBGR	RECONSTRUCT MBGR	RECONSTRUCT MBGR (7' POST)	ADJUST ELEMENT	MBGR	MBGR (SPECIAL)	MBGR (7' POST)	MBGR (SLOPE RETAINING WALL)	HAND EXCAVATE POST HOLES	BURIED POST	TRANSITION RAILING (N) ANCHOR (TYPE MB)	END ANCHOR ASSEMBLY (TYPE SF-T)	ALTERNATIVE IN-LINE TERMINAL SYSTEM	ALTERNATIVE FLARED CRASH SYSTEM	WEED CUSHION MAT (FIBER)	EROSION CONTROL (COMPOST BLANKET)	GUARD RAILING DELINEATOR	OBJECT MARKER		LAYOUT TYPE	COMMENTS		
		BEGIN	END		EXISTING	NEW																		EA	EA				
		LF	EA		SQYD	CY																		EA	TYPE			EA	
40	1	39.02	39.15	SB	678	675.0	75.0		600.0										2						1	1	11E		
41	1	39.49	39.61	SB	740	750.0	37.5	700.0			12.5				1				1						1	1	11G		
42	1	39.63	39.65	SB	163	175.0	37.5	125.5			12.5				1				1						1		11L		
43	1	39.68	39.81	SB	701	725.0		700.0			25				2										1		11F		
44	1	39.85	39.87	SB	134	162.5		137.5			25				2												11F		
45	1	40.96	41.20	SB	2688	2687.5	100.0	1537.5	250.0	800								2							3		11D	UTILITY CONFLICT- PHONE TO BE RELOCATED BY OTHERS	
46	1	44.80	44.82	SB	139	137.5	87.5	50.0										1	1								11J		
47	1	44.97	44.99	NB	215	250.0		225.0			25				2										1		11F		
48	1	44.99	45.60	SB	467	412.5	100.0	312.5										2									11D		
49	1	46.86	46.94	NB	198	225.0		200.0			25				2										1		11F		
50	1	46.86	46.94	SB	203	200.0	75.0	125.0										2							1	1	11E		
51	1	47.89	47.95	SB	322	325.0	87.5	237.5							3			1	1								11J		
52	1	49.28	49.37	SB	473	475.0	75.0		400									2									11E		
53	1	49.62	49.80	SB	986	1000.0	37.5		950	12.5					1			1									11G	NEST ELEMENTS AT OVERSIDE DRAIN	
54	1	50.16	50.17	NB	59	62.5	25.0	37.5							1	1									1	1	12C	BIG RIVER BRIDGE #10-146	
55	1	50.16	50.17	SB	52	62.5	12.5	37.5							1	1											12CC	BIG RIVER BRIDGE #10-146	
56	1	50.27	50.28	SB	65	62.5	62.5											1		1					1	1	12B	BIG RIVER BRIDGE #10-146	
57	1	50.27	50.38	NB	671	675.0	62.5	612.5										1		1							12BB	BIG RIVER BRIDGE #10-146	
58	1	50.51	50.55	SB	200	200.0	75.0		125									2								1	1	11E	EXISTING MBGR (SPECIAL) - ADJUST ELEMENTS ONLY
59	1	53.65	53.72	SB	376	375.0	75.0		300									2									11E		
60	1	54.64	54.69	NB	416	412.5	75.0		337.5									2									11E	RADIUS RAIL R=25'	
61	1	54.65	54.70	SB	300	325.0	37.5		262.5	62.5					1											2	11G	RADIUS RAIL R=35'	
62	1	54.68	54.71	NB	75	75.0	62.5	12.5										1		1							12B	CASPAR CREEK BRIDGE #10-153	
63	1	54.68	54.71	SB	65	62.5	25.0											1		1							12BB	CASPAR CREEK BRIDGE #10-153	
64	1	54.87	54.88	NB	65	62.5	25.0											1		1							12BB	CASPAR CREEK BRIDGE #10-153	
65	1	54.87	54.88	SB	65	62.5	25.0											1		1							12B	CASPAR CREEK BRIDGE #10-153	
66	1	62.57	62.59	SB	132	150.0	62.5	75.0							1				2								11E	CULVERT MARKER PM 62.52	
67	1	71.49	71.56	SB	412	450.0	50.0		350.0										1								11H		
68	1	74.20	74.29	SB	350	350.0	100.0	250.0				12.5							1								11D	RELOCATE SIGN, EXTEND LEADER TO PULLOUT	
69	1	74.60	74.70	SB	384	437.5	37.5		337.5										1								11J		
70	1	74.94	74.97	SB	140	162.5	25.0	125.0			12.5				1	1											12CC	BLUE SLIDE GULCH RETAINING WALL	
71	1	74.98	74.99	SB	172	175.0	50.0	125.0										2									12D	USE CONNECTION DETAILS SHOWN IN STANDARD PLAN A77J2	
72	1	74.98	75.00	NB	78	75.0	75.0			50					1	1											12C	BLUE SLIDE GULCH BRIDGE #10-166	
73	1	75.04	75.07	SB	55	62.5	12.5	37.5							1	1											12C	BLUE SLIDE GULCH BRIDGE	
74	1	75.04	75.07	NB	28	62.5	25.0			37.5					1	1											12CC	BLUE SLIDE GULCH BRIDGE	
75	1	75.14	75.29	SB	829	837.5	75.0	125.0	637.5										2								11E		
76	1	75.28	75.29	NB	77	112.5	12.5	37.5											1								11E		
77	1	75.59	75.71	SB	611	612.5	200.0		412.5		125								2								11E		
78	1	75.75	75.80	SB	320	325.0	75.0		250										2								11E		
79	1	76.29	76.34	SB	271	287.5	25.0	187.5				25								1							11E	MBGR (SPECIAL) NEEDED AT SCARP	
80	1	76.44	76.46	SB	202	250.0	25.0		175.0										2								11D	USE X-TENSION TERMINAL SYSTEM	
81	1	78.29	78.30	SB	65	62.5	65.0								1				1								12BB	WAGES CREEK BRIDGE #10-137	
SUBTOTAL THIS SHEET						2315.0	6013.0	1712.5	4475.0	300.0	150.0	25.0	0	4	15	0	12	38	0	5666	151	363	-	10	27	16	-		

(N) NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.

SUMMARY OF QUANTITIES Q-2

METAL BEAM GUARD RAILING

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1,20,128 162,253,271	Var	14	69



Caren Coonrod
 REGISTERED CIVIL ENGINEER DATE 6-23-11
 10-3-11
 PLANS APPROVAL DATE

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.

No.	Rte	POST MILE		DIRECTION	LENGTH LOCATION (N)		REMOVE MBGR	RECONSTRUCT MBGR	RECONSTRUCT MBGR (7' POST)	ADJUST MBGR ELEMENT	MBGR	MBGR (SPECIAL)	MBGR (7' POST)	MBGR (SLOPE RETAINING WALL)	HAND EXCAVATE POST HOLES	BURIED POST	TRANSITION RAILING (N) ANCHOR (TYPE MB)	END ANCHOR ASSEMBLY (TYPE SFT)	ALTERNATIVE IN-LINE TERMINAL SYSTEM	ALTERNATIVE FLARED CRASH SYSTEM	WEED CUSHION MAT (FIBER)	EROSION CONTROL (COMPOST BLANKET)	GUARD RAILING DELINEATOR	OBJECT MARKER		COMMENTS			
		BEGIN	END		EXISTING	NEW																		EA	EA				
		LF	EA		SQYD	CY																		EA	TYPE		EA		
82	1	78.29	78.30	NB	12	12.0													1	0	0	1	F	1		WAGES CREEK BRIDGE #10-137			
83	1	78.32	78.33	SB	65	62.5	65.0										1		1	32	1	2	F	1	1	12B	WAGES CREEK BRIDGE #10-137		
84	1	78.32	78.33	NB	65	62.5	65.0										1		1	32	1	2	F			12BB	WAGES CREEK BRIDGE #10-137		
85	1	79.21	79.22	SB	65	62.5	65.0										1		1	32	1	2	F			12BB	DE HAVEN CREEK BRIDGE #10-138		
86	1	79.21	79.22	NB	65	75.0	65.0										1	1		25	2	3	F	1	1	1	12A	DE HAVEN CREEK BRIDGE #10-138	
87	1	79.23	79.24	SB	65	62.5	65.0										1		1	32	2	2	F	1	1	1	12B	DE HAVEN CREEK BRIDGE #10-138	
88	1	79.23	79.24	NB	65	62.5	65.0										1		1	32	2	2	F			12BB	DE HAVEN CREEK BRIDGE #10-138		
89	1	82.33	82.40	SB	300	300.0	87.5		212.5										1	1		94	2	8	F		11J		
90	1	83.46	83.56	SB	550	550.0	75.0		475	50							1	1		194	2	10	F		2	12DD	SOLDIER POINT SIDEHILL VIADUCT; FLARE SFT 20' FROM CENTERLINE		
91	1	83.60	83.61	SB	65	62.5	65.0										1		1	32	2	2	F	1	1	12B	SOLDIER POINT SIDEHILL VIADUCT		
92	1	84.00	84.10	NB	402	437.5	12.5												1			157	2	12	F		11J	Exist MBGR SPECIAL, DOUBLE RAIL ELEMENTS	
93	1	84.90	84.97	SB	340	350.0	87.5	262.5											1	1		128	7	10	F		11H	62.5 LF OF RECONSTRUCT MBGR (SPECIAL)	
94	1	85.25	85.37	SB	600	637.5	12.5	537.5			12.5								1			234	4	17	F		11E	PLACE TERMINAL SYSTEM IN TURNOUT	
95	1	85.84	85.86	NB	140	150.0	87.5		50	12.5									1	1		50	3	6	F		11H	NEST RAIL ELEMENTS AT PM 85.32	
96	1	86.05	86.08	NB	200	212.5	75.0	125.0											1	1		82	4	6	F		16H	CONSTRUCT STRENGTHENED RAILING SECTIONS AT UTILITY POLE	
97	1	86.18	86.24	NB	390	462.5	12.5	362.5											1			176	9	13	F		11E		
98	1	86.42	86.48	NB	300	300.0	75.0		225.0	25.0									1			122	2	8	F		11E		
99	1	87.12	87.16	NB	292	337.5	25.0	250.0											1			112	2	9	F		11H		
100	1	87.81	87.82	SB	55	62.5	25.0	25.0			12.5								1	1		21	1	2	F		12DD	RADIUS RAIL R=35'; USE CONNECTION DETAIL SHOWN IN S+D PLAN A77J2	
101	1	87.81	87.82	NB	65	62.5	65.0												1		1	32	1	2	F	1	1	12B	SOUTH FORK COTTONEVA CREEK BRIDGE #10-142
102	1	87.83	87.84	SB	65	62.5	65.0												1		1	32	1	2	F	1	1	12B	SOUTH FORK COTTONEVA CREEK BRIDGE #10-142
103	1	87.83	87.84	NB	40	40.0														0	1								SOUTH FORK COTTONEVA CREEK BRIDGE #10-142
104	1	90.59	90.60	SB	65	62.5	65.0												1		1	32	1	2	F		12BB	COTTONEVA CREEK BRIDGE #10-147	
105	1	90.59	90.60	NB	65	62.5	65.0												1		1	32	1	2	F	1	1	12B	COTTONEVA CREEK BRIDGE #10-147
106	1	90.62	90.63	SB	65	62.5	65.0												1		1	32	1	2	F	1	1	12B	COTTONEVA CREEK BRIDGE #10-147
107	1	90.62	90.63	NB	65	62.5	65.0												1		1	32	1	2	F		12BB	COTTONEVA CREEK BRIDGE #10-147	
108	1	92.30	92.40	NB	75	275.0	50.0				175	37.5							1		1	102	5	8	F	1	1	12B	SOLDIER PILE WALL, BARRIER RAILING TYPE 736
109	1	92.40	92.50	NB	75	150.0	50.0				50	37.5							1		1	61	3	5	F		1	12BB	SOLDIER PILE WALL, BARRIER RAILING TYPE 736
110	1	101.55	101.58	NB	154	150.0	25.0													0	3	5	F						RECONSTRUCT MISSING BLOCK
111	1	105.47	105.49	SB	180	187.5	87.5		100										1	1		73	2	6	F		1	11H	
SUBTOTAL MEN-1							6179.5	8788.0	3575.0	9012.5	862.5	387.5	112.5	0.0	80		40	4	31	97	1	11133	321	758		28	69	47	
112	20	7.61	7.62	WB	585	612.5	50.0	537.5											2			226	8	16	F		1	11E	
113	20	8.54	8.57	EB	420	425.0	75.0		350										2			164	2	12	F		1	11E	
114	20	9.78	9.86	EB	360	387.5	50.0	312.5											2			151	5	10	F		1	11E	
115	20	10.38	10.41	EB	190	200.0	137.5			25												89	4	4	F		1	11L	
116	20	10.45	10.60	EB	750	762.5	50.0	700.0		12.5									1		1	265	10	20	F	1	1	11K	
117	20	10.61	10.68	WB	375	400.0	50.0	325.0											2			155	5	11	F		1	11E	
118	20	12.78	12.84	WB	285	312.5	50.0		200										1		1	126	4	9	F		1	11C	FLARE SFT 20' FROM CENTERLINE
119	20	14.72	14.85	EB	685	712.5	50.0	637.5											2			260	9	19	F	1	1	11E	
120	20	19.14	19.22	EB	470	500.0	50.0	425											2			189	3	14	F	1	1	11E	
121	20	28.33	28.38	EB	300	300.0	100.0		200										2			100	2	9	F		1	11D	
122	20	31.19	31.20	WB	65	62.5	65.0												1		1	32	1	2	F		1	12BB	BROADDUS CREEK BRIDGE #10-104

(N) NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.

SUMMARY OF QUANTITIES Q-3

METAL BEAM GUARD RAILING

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1,20,128 162,253,271	Var	17	69

REGISTERED CIVIL ENGINEER DATE 6-23-11
 10-3-11
 PLANS APPROVAL DATE

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.

No.	Rte	POST MILE		DIRECTION	LENGTH LOCATION (N)		REMOVE MBGR	RECONSTRUCT MBGR	RECONSTRUCT MBGR (7' POST)	ADJUST MBGR ELEMENT	MBGR	MBGR (SPECIAL)	MBGR (7' POST)	MBGR (SLOPE RETAINING WALL)	HAND EXCAVATE SELECTED POST HOLES	BURIED POST	TRANSITION RAILING (N) ANCHOR (TYPE MB)	END ANCHOR ASSEMBLY (TYPE SFT)	ALTERNATIVE IN-LINE TERMINAL SYSTEM	ALTERNATIVE FLARED CRASH SYSTEM	WEED CUSHION MAT (FIBER)	EROSION CONTROL (COMPOST BLANKET)	GUARD RAILING DELINEATOR	OBJECT MARKER		LAYOUT TYPE	COMMENTS	
		BEGIN	END		EXISTING	NEW																		EA	EA			
216	271	0.00	0.03	NB	230	225.0	75	150											2	97	4	7	F	1	1	11E	RADIUS RAIL, R=30'	
217	271	0.00	0.03	SB	216	212.5	75	137.5											2	93	4	6	F	1		11E	RADIUS RAIL, R=30'	
218	271	0.04	0.07	SB	210	212.5	75	137.5											2	93	4	6	F	1		11E		
219	271	0.18	0.19	SB	64	62.5	64												1	32	1	3	F	1		12BB	SOLDIER PILE WALL	
220	271	0.21	0.23	SB	65	62.5	65												1	32	1	3	F	1	1	1	12B	SOLDIER PILE WALL
221	271	0.37	0.41	SB	130	137.5	75		50		12.5								2	68	3	4	F	1		11E		
222	271	2.30	2.50	SB	1352	1375.0	100	1000.0	200.0			100							1	480	9	35	F			11E		
223	271	3.19	3.21	SB	140	225.0	62.5		62.5			62.5							1	97	4	7	F			11E		
224	271	3.30	3.33	SB	112	112.5	37.5	75			12.5								1	60	2	4	F			12DD	OLD US 101 UC #10-145, USE CONNECTION DETAIL STANDARD PLAN A77J2	
225	271	3.37	3.39	SB	90	100.0	25	62.5			12.5								1	44	2	3	F	1	1	12C	OLD US 101 UC #10-145	
226	271	3.37	3.39	NB	64	75.0	25	37.5			12.5								1	36	2	3	F		1	12CC	OLD US 101 UC #10-145	
227	271	3.54	3.60	SB	350	350.0	50	300			12.5								1	128	7	10	F	1		11G		
228	271	4.10	4.30	SB	920	925.0		875.0											1	319	12	24	F		1	11B	REPLACE HEADLIGHT GLARE SCREEN	
229	271	5.60	5.61	SB	66	62.5	66												1	32	2	3	F	1		12BB	SCANDIA OVERCROSSING #10-135	
230	271	5.60	5.61	NB	70	75.0	62.5	12.5											1	36	2	3	F	1	1	1	12B	SCANDIA OC #10-135, RADIUS RAIL R=24'
231	271	5.61	5.62	SB	70	75.0	62.5	12.5											1	36	2	3	F	1	1	1	12B	SCANDIA OC #10-135, RADIUS RAIL R=36'
232	271	5.61	5.62	NB	66	62.5	66												1	32	2	3	F	1		12BB	SCANDIA OC #10-135	
233	271	6.15	6.25	SB	475	475.0	25	450		25									1	180	6	13	F	1		11C		
234	271	6.74	6.81	SB	370	375.0	25	350		25									1	147	5	10	F	1		11C		
235	271	15.64	15.93	SB	1650	1650.0	25	1175		450	25								1	550	10	42	F	1	1	11C		
236	271	16.05	16.43	SB	1881	1900.0	25	1525	350		25								1	633	12	48	F	1	1	11C		
237	271	17.01	17.05	NB	153	150.0	62.5	87.5											1	61	3	5	F/G	1	1	1	12B	REYNOLDS OC #10-217, RADIUS RAIL R=50'
238	271	17.01	17.05	SB	67	87.5	37.5	25											1	40	2	3				12BB	REYNOLDS OC #10-217, RADIUS RAIL R=30'	
239	271	17.06	17.07	SB	221	225.0	62.5	162.5											1	86	4	7	F/G	1	1	12B	REYNOLDS OC #10-217, RADIUS RAIL R=50'	
240	271	17.06	17.07	NB	73	100.0	37.5	37.5											1	45	2	3	F			12BB	REYNOLDS OC #10-217, RADIUS RAIL R=20'	
241	271	17.42	17.49	SB	364	387.5		225.0	100.0		25								1	151	5	11	F			11B		
242	271	19.03	19.08	SB	290	312.5	50.0			237.5									2	126	2	9	F			11E		
243	271	20.70	20.96	SB	1322	1362.5		1112.5	100			75							1	465	17	35	F		1	1	11E	
244	271	21.42	21.62	SB	702	750.0	50.0	650.0											2	250	10	20	F	1		11D		
SUBTOTAL MEN-271							1598.5	8600.0	862.5	687.5	225.0	237.5	0.0	0.0	0.0	13	7	2	29	0	4449	141	333		7	23	10	
TOTAL							13367.5	26213.0	5937.5	11075.0	1775.0	625.0	112.5	175.0	128	112	20	50	212	4	22952	739	1657		65	140	81	

(N) NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION DESIGN
 CAREN E. COONROD
 DENNIS P. MCBRIDE
 REVISIONS: 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

SUMMARY OF QUANTITIES Q-6

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1,20,128 162,253,271	Var	18	69

Caren Coonrod
REGISTERED CIVIL ENGINEER DATE 6-23-11
10-3-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
CAREN E. COONROD
No. 63231
Exp. 6-30-12
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.

ROADSIDE SIGN

LOCATION			NUMBER OF POSTS AND SIZE INCH x INCH	SIGN MESSAGE	RESET ROADSIDE SIGN
ROUTE	POST MILE	DIRECTION			EA
1	4.48	SB	2 - 4X6	20 RIGHT ARROW	1
1	4.48	SB	1 - 4X6	CHEVRON ARROW	1
1	4.48	SB	1 - 4X6	CHEVRON ARROW	1
1	4.48	SB	1 - 4X6	CHEVRON ARROW	1
1	20.63	NB	1 - 4X4	END SCHOOL ZONE	1
1	25.54	SB	1 - 4X4	ADOPT-A-HIGHWAY	1
1	30.98	NB	1 - 4X4	ARROW	1
1	34.84	SB	1 - 4X4	ARROW 25 MPH	1
1	47.95	SB	1 - 4X4	ADOPT-A-HIGHWAY	1
1	49.79	SB	1 - 4X4	SOUTH ROUTE 1	1
1	50.17	NB	1 - 4X4	BIG RIVER BRIDGE #10-146	1
1	50.27	SB	1 - 4X4	BIG RIVER BRIDGE #10-146	1
1	50.28	SB	1 - 4X4	CROSS TRAFFIC AHEAD	1
1	62.58	SB	1 - 4X4	ENTERING HAZARD ZONE	1
1	71.56	SB	1 - 4X4	ARROW 25 MPH	1
1	78.3	NB	1 - 4X4	WAGES CREEK BRIDGE #10-137	1
1	78.32	SB	1 - 4X4	WAGES CREEK BRIDGE #10-137	1
1	83.5	SB	1 - 4X4	\$1000 FINE FOR LITTERING	1
1	86.24	NB	1 - 4X4	ARROW 15 MPH	1
1	87.82	NB	1 - 4X4	SOUTH FORK COTTONEVA CREEK BRIDGE #10-142	1
1	87.84	SB	1 - 4X4	SOUTH FORK COTTONEVA CREEK BRIDGE #10-142	1
1	90.62	SB	1 - 4X4	COTTONEVA CREEK BRIDGE #10-147	1
20	9.87	EB	1 - 4X4	TURN OUT 1/4 MILE TO ALLOW PASSING	1
20	38.31	EB	1 - 4X4	COLD CREEK BRIDGE #10-41	1
20	38.34	WB	1 - 4X4	COLD CREEK BRIDGE #10-41	1
128	11.59	WB	1 - 4X4	WEST CALIFORNIA 128	1
128	12.68	EB	1 - 4X4	NORTH FORK NAVARRO RIVER BRIDGE #10-78	1
128	12.72	WB	1 - 4X4	NORTH FORK NAVARRO RIVER BRIDGE #10-78	1
128	28.27	EB	1 - 4X4	ANDERSON CREEK BRIDGE #10-132	1
128	28.29	WB	1 - 4X4	ANDERSON CREEK BRIDGE #10-132	1
162	0.03	EB	1 - 4X4	LONG VALLEY CREEK BRIDGE #10-293	1
162	0.07	WB	1 - 4X4	LONG VALLEY CREEK BRIDGE #10-293	1
162	0.65	EB	1 - 4X4	TRACKS OUT OF SERVICE	1
162	0.66	WB	1 - 4X4	TRACKS OUT OF SERVICE	1
162	8.25	EB	1 - 4X4	EEL RIVER BRIDGE #10-236	1
162	15.13	EB	1 - 4X4	MIDDLE FORK EEL RIVER BRIDGE #10-252	1
162	28.74	EB	1 - 4X4	TOWN CREEK BRIDGE #10-94	1
162	28.74	WB	1 - 4X4	TRUCK SYMBOL	1
271	3.3	SB	1 - 4X4	ARROW	1
271	3.38	NB	1 - 4X4	SCHOOL BUS STOP 400 FT	1
271	3.54	SB	2 - 4X4	LEFT TURN ARROW "25 MPH"	1
271	3.54	SB	1 - 4X4	CHEVRON ARROW	1
271	5.61	SB	1 - 4X4	NO TURN SYMBOL	1
271	5.62	NB	1 - 4X4	DO NOT ENTER	1
271	5.62	NB	1 - 4X4	ONE WAY	1
271	17.05	SB	1 - 4X4	DO NOT ENTER WRONG WAY	1
271	17.05	SB	1 - 4X4	ONE WAY	1
TOTAL					46

ASPHALT CONCRETE DIKE

ROUTE	LOCATION POST MILE		DIRECTION	REMOVE AC DIKE	PLACE AC DIKE	
	FROM	TO			(TYPE C)	(TYPE F)
1	4.48	4.63	SB	812.5	75	737.5
1	20.60	20.64	SB	66	86.6	
1	25.41	25.54	NB	550	100	450
1	25.41	25.53	SB	575	100	475
1	36.31	36.36	SB	110	50	60
1	39.49	39.61	SB	152	62.5	125
1	39.63	39.65	SB	120	50	100
1	39.68	39.81	SB	701	75	625
1	39.85	39.87	SB	137.5	62.5	75
1	46.86	46.94	SB	200	87.5	112.5
1	79.23	79.24	SB	70	37.5	25
20	7.61	7.62	WB	200	75	125
20	33.20	33.21	EB	62.5	37.5	25
20	33.25	33.26	WB	62.5	37.5	25
162	15.22	15.23	WB	100	75	25
253	2.51	2.52	WB	67	37.5	25
253	13.08	13.16	WB	240		240
253	13.19	13.28	WB	370		370
271	0.00	0.03	NB	150		150
271	0.00	0.03	SB	137.5		137.5
271	2.30	2.50	SB	255	37.5	225
271	6.74	6.81	SB	300		300
TOTAL				5438.5	1086.6	4432.5

MISCELLANEOUS ROADWAY ITEMS

LOCATION			RESET MAILBOX	RESET NEWSPAPER HOLDER (N)	REMOVE HEADLIGHT GLARE SCREEN	HEADLIGHT GLARE SCREEN	REMOVE TUBULAR BICYCLE RAILING	COMMENT
ROUTE	PM	DIRECTION	EA		LF			
253	13.02	WB	1	1				4005 HIGHWAY 253
271	4.10-4.21	SB			542	550		
271	0.19-0.21	SB					117	SOLDIER PILE WALL
TOTAL			1	-	542	550	117	

(N) NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.

CONSTRUCTION SITE BMP

ROUTE	LOCATION POST MILE		TEMPORARY FIBER ROLL	TEMPORARY DRAINAGE INLET PROTECTION	TEMPORARY GRAVEL BAG BERM
	FROM	TO	LF	EA	LF
1	3.16	105.49	5000	9	900
20	7.61	40.88	400	4	120
128	0.62	28.30	475	5	0
162	0.02	28.77	480	2	
253	2.26	15.13	160	2	240
271	0.00	21.62	490	3	150
TOTAL			7005	25	1410

SUMMARY OF QUANTITIES Q-7

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1,20,128 162,253,271	Var	19	69

Caren Coonrod
 REGISTERED CIVIL ENGINEER DATE 6-23-11
 10-3-11
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 CAREN E. COONROD
 No. 63231
 Exp. 6-30-12
 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.

ROADWAY QUANTITIES

Rte	LOCATION			COLD PLANE AC PAVEMENT SQYD	ROADWAY EXCAVATION CY	HMA		PLACE HMA (Misc AREA) SQYD	IMPORATED MATERIAL (SHOULDER BACKING) TON	EMBANKMENT (N) CY	RSP FABRIC SQYD	4" THERMOPLASTIC TRAFFIC STRIPE LF	COMMENTS	
	POST MILE		DIRECTION			(TYPE A)	(OG)							
	BEGIN	END				TON								
1	3.16	3.19	NB		4.6				8.8					
1	4.48	4.63	SB		15.0				28.4					
1	5.25	5.28	SB		6.5				12.3					
1	6.86	6.88	SB		1.9				3.5					
1	8.57	8.61	NB		10.6				20.1					
1	9.35	9.37	NB		2.3				4.4					
1	11.52	11.61	NB		1.7				3.3					
1	17.17	17.21	SB		5.1				9.6					
1	20.58	20.65	NB		2.8				5.3					
1	20.60	20.64	SB		1.6				3.0					
1	30.90	30.93	NB		3.7				7.0					
1	31.08	31.11	SB		3.9				7.4					
1	31.50	31.56	NB		9.0				17.1					
1	31.71	31.74	SB		5.6				10.5					
1	36.23	36.25	NB		5.6				10.5					
1	36.31	36.36	SB		2.7				5.0					
1	39.85	39.87	SB		3.0				5.7					
1	40.96	41.20	SB		24.8				47.0					
1	46.86	46.94	NB		8.3				15.7					
1	46.86	46.94	SB		3.7				7.0					
1	47.89	47.95	SB		6.0				11.4					
1	49.28	49.37	SB		4.4				8.3					
1	49.62	49.80	SB		9.3				17.5					
1	53.65	53.72	SB		6.9				13.1					
1	54.64	54.69	NB		3.8				7.2					
1	62.57	62.59	SB		5.6				10.5					
1	71.49	71.56	SB		8.3				15.7					
1	74.20	74.29	SB		6.5				12.2					
1	74.60	74.70	SB		16.2				30.6					
1	74.94	74.97	SB		3.0				5.7				BLUE SLIDE GULCH RETAINING WALL	
1	74.98	74.99	SB		1.6				3.1				BLUE SLIDE GULCH BRIDGE	
1	75.04	75.07	SB		0.6				1.1				BLUE SLIDE GULCH BRIDGE	
1	75.04	75.07	NB		0.6				1.1				BLUE SLIDE GULCH BRIDGE	
1	75.28	75.29	NB		2.1				3.9					
1	75.59	75.71	SB	233	5.7		13.1		10.7			175	MBGR SPECIAL	
1	75.75	75.80	SB		3.0				5.7					
1	76.29	76.34	SB	100	5.3		5.6		10.1			75	MBGR SPECIAL	
1	76.44	76.46	SB		4.6				8.8					
1	78.29	78.30	SB		0.6				1.1				WAGES CREEK BRIDGE #10-137	
1	78.29	78.30	NB		0.0				0.0				WAGES CREEK BRIDGE #10-137	
1	78.32	78.33	SB		0.6				1.1				WAGES CREEK BRIDGE #10-137	
1	78.32	78.33	NB		0.6				1.1				WAGES CREEK BRIDGE #10-137	
1	79.23	79.24	SB		0.6				1.1				DE HAVEN CREEK BRIDGE #10-138	
1	79.23	79.24	NB		0.6				1.1				DE HAVEN CREEK BRIDGE #10-138	
1	82.33	82.40	SB		2.8				5.3					
1	83.60	83.61	SB		1.2				2.2				SOLDIER POINT SIDEHILL VIADUCT	
1	85.25	85.37	SB	83			4.7					62	MBGR SPECIAL	
1	86.18	86.24	NB		44.5		114.2		205.6					
1	86.42	86.48	NB		28.9		74.1		133.3					
1	87.12	87.16	NB		16.3		41.7		75.0					
1	92.30	92.40	NB	400			22.5					225	MBGR SPECIAL	
1	92.40	92.50	NB	178			10.0					100	MBGR SPECIAL	
SUBTOTAL MEN-1				994	312.6		230.0	55.9	413.9	421.3		0.0	637	

(N) NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.

SUMMARY OF QUANTITIES Q-8

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN
 FUNCTIONAL SUPERVISOR
 Dennis P. McBride
 CALCULATED/DESIGNED BY
 CHECKED BY
 CAREN E. COONROD
 REVISED BY
 DATE REVISED

LAST REVISION DATE PLOTTED => 06-OCT-2011
 00-00-00 TIME PLOTTED => 05:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1,20,128 162,253,271	Var	20	69

Caren Coonrod
 REGISTERED CIVIL ENGINEER DATE 6-23-11
 10-3-11
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 CAREN E. COONROD
 No. 63231
 Exp. 6-30-12
 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.

ROADWAY QUANTITIES

R+e	LOCATION			COLD PLANE AC PAVEMENT SQYD	ROADWAY EXCAVATION CY	HMA		PLACE HMA (Misc AREA) SQYD	IMPORATED MATERIAL (SHOULDER BACKING) TON	EMBANKMENT (N) CY	RSP FABRIC SQYD	4" THERMOPLASTIC TRAFFIC STRIPE LF	COMMENTS
	POST MILE BEGIN	POST MILE END	DIRECTION			(TYPE A)	(OG)						
20	7.61	7.62	WB		59.0	151.3		272.2					
20	9.78	9.86	EB		37.3	95.7		172.2					
20	10.38	10.41	EB		19.3	49.4		88.9					
20	10.45	10.60	EB		73.4	188.3		338.9					
20	10.61	10.68	WB		57.8	148.2		266.7					
20	12.78	12.84	WB		15.1	38.6		69.5					
20	14.72	14.85	EB		34.3	88.0		158.3					
20	19.14	19.22	EB		48.1	123.5		222.2					
SUBTOTAL MEN-20				0.0	344.3	883.0	0.0	1588.9	0.0		0.0	0.0	
128	0.62	0.65	EB		39.7	101.9		183.1	2.0	7.0	39.0		MBGR (SLOPE RETAINING WALL)
128	3.06	3.08	EB		16.9	43.2		77.8					
128	3.45	3.48	EB		14.4	37.1		66.7					
128	3.51	3.56	EB		57.8	148.2		266.7					
128	5.32	5.37	EB		48.1	123.5		222.2	2.0	7.0	39.0		MBGR (SLOPE RETAINING WALL)
128	10.17	10.20	WB		16.3	41.7		75.0					
128	10.30	10.34	EB		12.0	30.9		55.6	3.0	11.0	58.0		MBGR (SLOPE RETAINING WALL)
128	11.59	11.60	WB		3.1	7.7		13.9					FLYNN CREEK BRIDGE #10-79
128	11.59	11.60	EB		3.0	7.7		13.9					FLYNN CREEK BRIDGE #10-79
128	11.61	11.62	WB		3.0	7.7		13.9					FLYNN CREEK BRIDGE #10-79
128	11.61	11.62	EB		3.0	7.7		13.9					FLYNN CREEK BRIDGE #10-79
128	12.69	12.70	WB		3.0	7.7		13.9					NORTH FORK NAVARRO RIVER BRIDGE #10-78
128	12.69	12.70	EB		3.0	7.7		13.9					NORTH FORK NAVARRO RIVER BRIDGE #10-78
128	12.71	12.72	WB		3.0	7.7		13.9					NORTH FORK NAVARRO RIVER BRIDGE #10-78
128	12.71	12.72	EB		3.0	7.7		13.9					NORTH FORK NAVARRO RIVER BRIDGE #10-78
128	19.68	19.76	WB		21.7	55.6		100.0					
128	23.88	23.92	EB		10.8	27.8		50.0					
SUBTOTAL MEN-128				0.0	261.8	671.5	0.0	1208.3	7.0		136.0	0.0	
162	0.07	0.08	EB		1.5	3.9		8.3					LONG VALLEY CREEK BRIDGE #10-293
162	4.89	4.92	WB		21.4	54.9		116.7					
162	5.60	5.61	WB		1.3	3.3		6.9					RETAINING WALL
162	25.59	25.64	EB		21.4	54.9		116.7					
162	28.29	28.30	WB		2.5	6.5		13.9					GRIST CREEK BRIDGE #10-235
162	28.29	28.30	EB		2.5	6.5		13.9					GRIST CREEK BRIDGE #10-235
162	28.31	28.32	WB		3.1	7.8		16.7					GRIST CREEK BRIDGE #10-235
162	28.31	28.32	EB		3.1	7.8		16.7					GRIST CREEK BRIDGE #10-235
162	28.73	28.74	EB		1.5	3.9		8.3					TOWN CREEK BRIDGE #10-94
162	28.76	28.77	WB		1.5	3.9		8.3					TOWN CREEK BRIDGE #10-94
162	28.76	28.77	EB		0.8	2.0		4.2					TOWN CREEK BRIDGE #10-94
SUBTOTAL MEN-162				0.0	60.6	155.4	0.0	330.6	0.0		0.0	0.0	

(N) NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN
 DENNIS P. MCBRIDE
 FUNCTIONAL SUPERVISOR
 CALCULATED/DESIGNED BY
 CHECKED BY
 CAREN E. COONROD
 REVISED BY
 DATE REVISED

SUMMARY OF QUANTITIES Q-9

LAST REVISION | DATE PLOTTED => 06-OCT-2011
 00-00-00 | TIME PLOTTED => 13:19

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1,20,128 162,253,271	Var	21	69

Caren Coonrod
REGISTERED CIVIL ENGINEER DATE 6-23-11

10-3-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
CAREN E. COONROD
No. 63231
Exp. 6-30-12
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.

ROADWAY QUANTITIES

Rte	LOCATION			COLD PLANE AC PAVEMENT SQYD	ROADWAY EXCAVATION CY	HMA		PLACE HMA (Misc AREA) SQYD	IMPORATED MATERIAL (SHOULDER BACKING) TON	EMBANKMENT (N) CY	RSP FABRIC SQYD	4" THERMOPLASTIC TRAFFIC STRIPE LF	COMMENTS
	POST MILE		DIRECTION			(TYPE A)	(OG)						
	BEGIN	END				TON							
253	2.26	2.30	WB		24.1	61.7		111.1					
253	2.61	2.62	WB		6.0	15.4		27.8					TIE BACK WALL
253	6.39	6.43	WB		24.1	61.7		111.1					
253	6.50	6.52	WB		23.5	60.2		108.3					
253	6.56	6.58	WB		36.1	92.6		166.7					
253	10.76	10.78	EB		18.1	46.3		83.3					
253	11.59	11.68	WB		24.7	63.3		113.9					
253	11.86	12.07	WB		26.8	68.7		123.6					
253	12.62	12.75	WB		72.2	185.2		333.3					
253	12.79	12.87	WB		93.9	240.8		433.3					
253	13.00	13.07	WB		62.6	160.6		288.9					
253	13.08	13.16	WB		7.2	18.5		33.3					
253	13.11	13.14	EB		20.5	52.5		94.4					
253	13.19	13.28	WB		48.1	123.5		222.2					
253	13.24	13.27	EB		14.4	37.1		66.7					
253	13.30	13.37	WB		33.7	86.5		155.6					
253	13.46	13.48	EB		9.6	24.7		44.4					
253	14.00	14.07	WB		33.7	86.5		155.6					
253	15.05	15.06	WB		1.5	3.9		7.0					ROBINSON CREEK BRIDGE #10-231
253	15.10	15.11	WB		1.5	3.9		7.0					ROBINSON CREEK BRIDGE #10-231
SUBTOTAL MEN-253				0.0	582.3	1493.6	0.0	2687.5	0.0	0.0	0.0	0.0	
271	0.18	0.19	SB		2.5	7.7		13.9					SOLDIER PILE WALL
271	0.21	0.23	SB		2.5	7.7		13.9					SOLDIER PILE WALL
271	0.37	0.41	SB		5.6	17.0		30.6					
271	2.30	2.50	SB	200.0		13.7					150.0		MBGR SPECIAL
271	3.19	3.21	SB	133.3		9.1					100.0		MBGR SPECIAL
271	3.30	3.33	SB		9.2	23.5		50.0					OLD US 101 UC #10-145
271	3.37	3.39	SB		8.1	20.9		44.4					OLD US 101 UC #10-145
271	3.37	3.39	NB		6.1	15.7		33.3					OLD US 101 UC #10-145
271	3.54	3.60	SB		7.1	18.3		38.9					
271	4.10	4.30	SB		37.7	96.7		205.6					
271	6.15	6.25	SB		19.4	49.6		105.6					
271	6.74	6.81	SB		15.3	39.2		83.3					
271	15.64	15.93	SB		67.2	172.4		366.7					
271	19.03	19.08	SB		6.4	16.3		34.7					
271	20.70	20.96	SB	166.7	55.5	153.8		302.8			125.0		MBGR SPECIAL
271	21.42	21.62	SB		15.3	39.2		83.3					
SUBTOTAL MEN-271				500.0	257.9	700.8	0.0	1407.0	0.0	0.0	0.0	375.0	
SUBTOTAL MEN-1				994.0	312.6	230.0	55.9	413.9	421.3	0.0	0.0	637	
SUBTOTAL MEN-20				0.0	344.3	883.0	0.0	1588.9	0.0	0.0	0.0	0.0	
SUBTOTAL MEN-128				0.0	261.8	671.5	0.0	1208.3	7.0	136.0	0.0	0.0	
SUBTOTAL MEN-162				0.0	60.6	155.4	0.0	330.6	0.0	0.0	0.0	0.0	
SUBTOTAL MEN-253				0.0	582.3	1493.6	0.0	2687.5	0.0	0.0	0.0	0.0	
DIKE QUANTITIES				0.0	0.0	78.8	0.0	0.0	0.0	0.0	0.0	0.0	LOCATIONS AND TYPES OF DIKES SHOWN IN DIKE QUANTITY TABLE
TOTAL				1494.0	1819.5	4213.1	55.9	7636.2	428.3	136.0	1012.0		

(N) NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.

SUMMARY OF QUANTITIES Q-10

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1,20,128, 162,253,271	Var	22	69

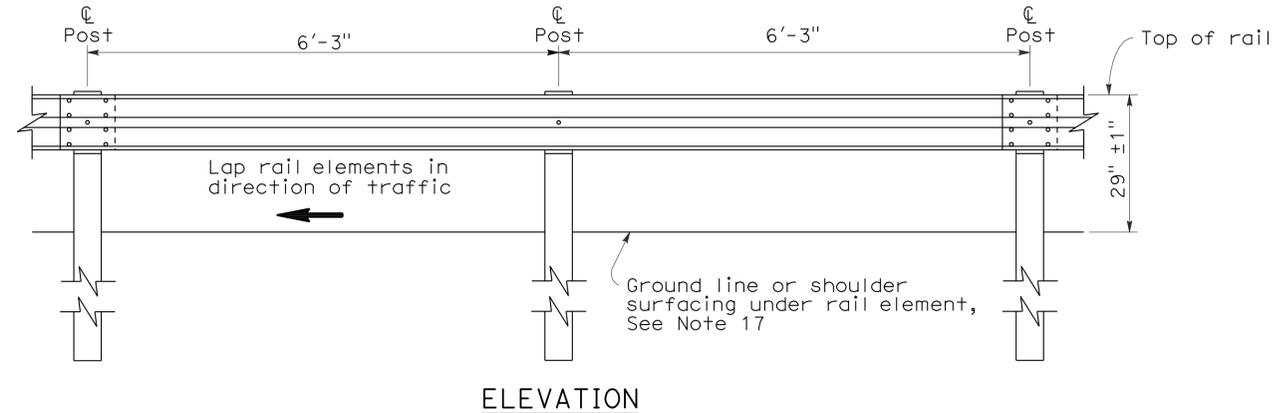
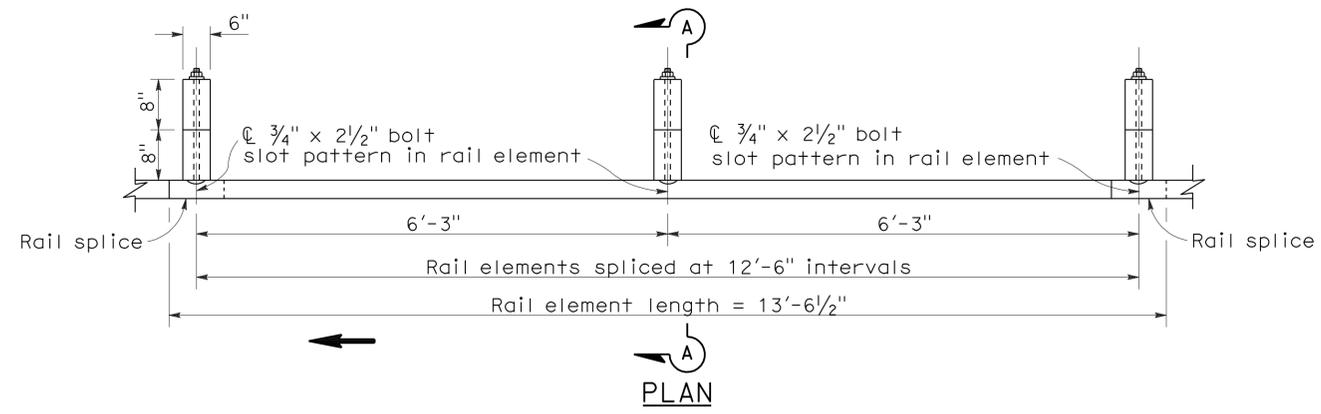
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

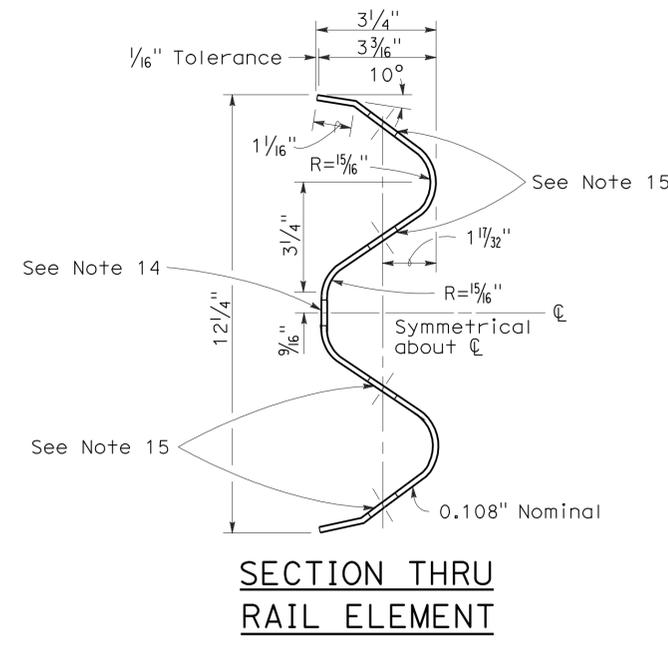
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 10-3-11

2006 REVISED STANDARD PLAN RSP A77A1

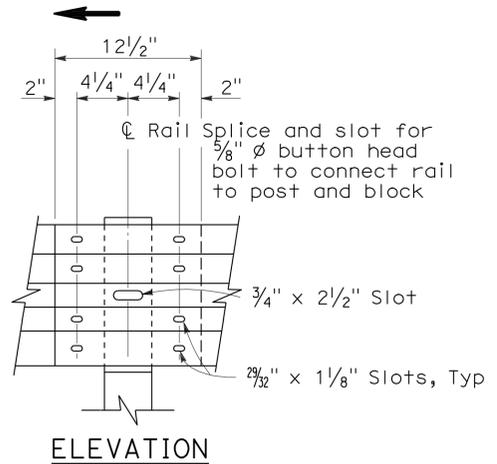


METAL BEAM GUARD RAILING WITH WOOD POST AND BLOCKS



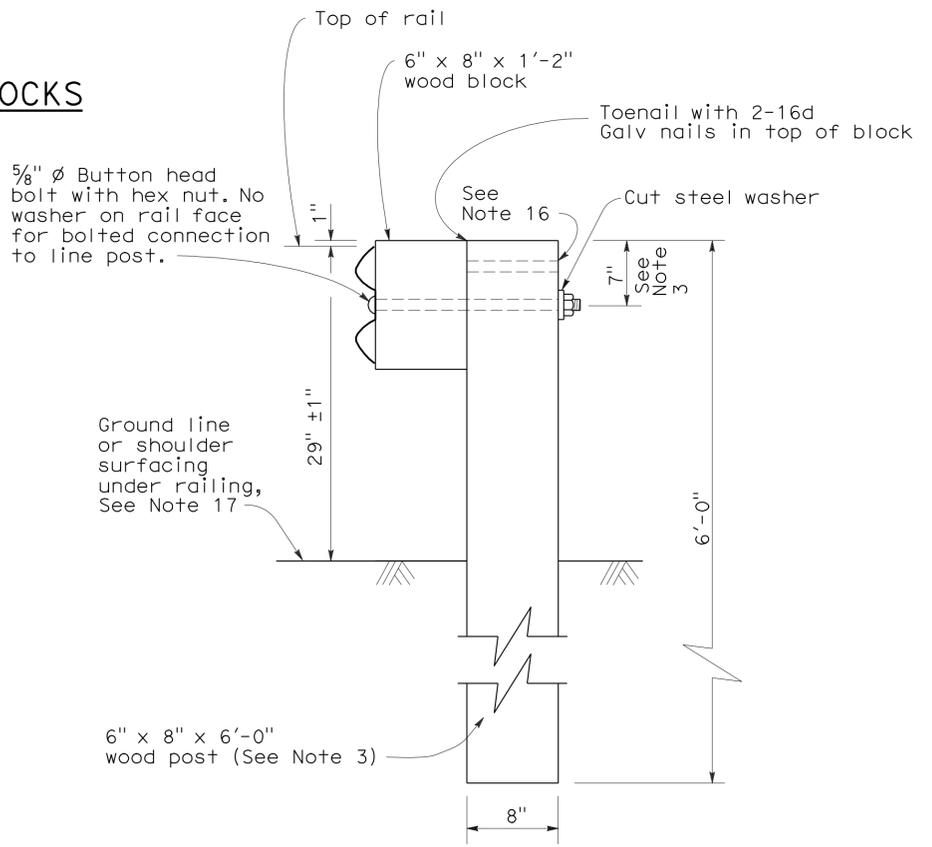
NOTES:

- For details of steel post installations, see Standard Plan A77A2.
- For details of standard hardware used to construct guard railing, see Standard Plan A77B1.
- For details of wood posts and wood blocks used to construct guard railing, see Standard Plan A77C1.
- For additional installation details, see Standard Plan A77C3.
- Guard railing post spacing to be 6'-3" center to center, except as otherwise noted.
- For guard railing typical layouts, see the A77E, A77F and A77G Series of Standard Plans.
- For terminal system end treatment details, see the A77L Series of Standard Plans. To connect railing to terminal system end treatment, transition the top of railing height at a ratio of 120:1 to terminal system end treatment height plus one 12'-6" standard railing section at the transitioned height for a horizontal connection to the end treatment.
- For guard railing end anchor details, see Standard Plans A77H1 and A77I2.
- For details of guard railing transition to bridge railing, see Standard Plan A77J4.
- For additional details of guard railing connection to bridge railings, see Standard Plans A77J1, A77J2 and A77K1.
- For guard railing connection details to abutments and walls, see Standard Plan A77J3.
- Direction of adjacent traffic indicated by →.
- For typical guard railing delineation and dike positioning details, see Standard Plan A77C4.
- Slotted hole for bolted connection of rail element to block and post. See "Section Thru Rail Element".
- Slotted holes for splice bolts to overlap ends of rail element. See "Section Thru Rail Element".
- Additional hole in uppermost portion of line post is for potential future adjustments of railing height. See Standard Plan A77C1.
- Install posts in soil.



RAIL ELEMENT SPLICE DETAIL

- Connect the over lapped end of the rail elements with 5/8" ϕ x 1 3/8" button head oval shoulder splice bolts inserted into the 29/32" x 1 1/8" slots and bolted together with 5/8" ϕ recessed hex nuts. Recess of hex nut points toward rail element. A total of 8 bolts and nuts are to be used at each rail splice connection.
- The ends of the rail elements are to be overlapped in the direction of traffic (see details).
- Where end cap is to be attached to the end of a rail element, a total of 4 of the above described splice bolts and nuts are to be used.



SECTION A-A TYPICAL WOOD LINE POST INSTALLATION

See Note 4

METAL BEAM GUARD RAILING STANDARD RAILING SECTION (WOOD POST WITH WOOD BLOCK)

NO SCALE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1,20,128, 162,253,271	Var	23	69

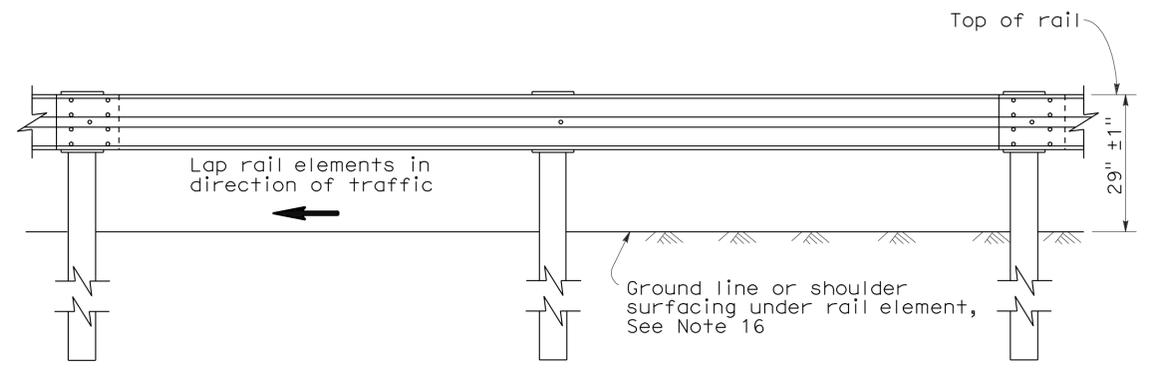
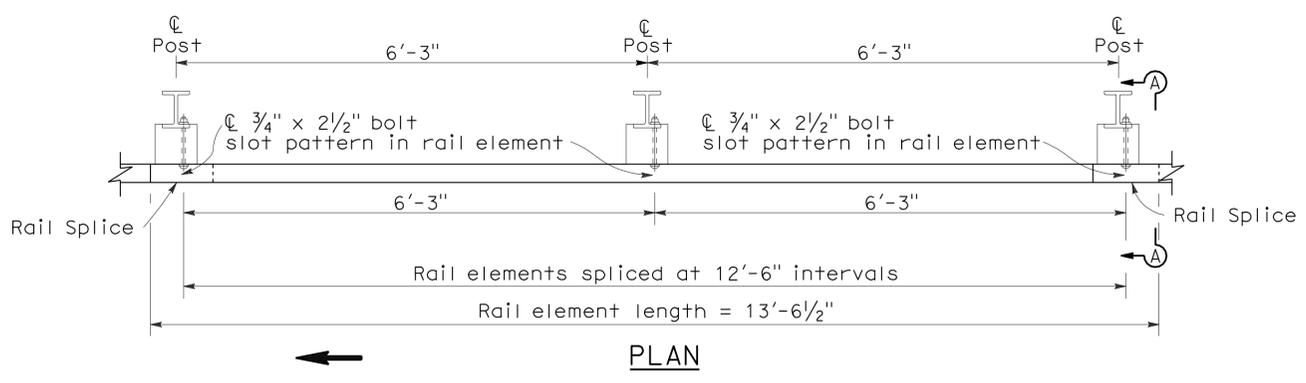
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

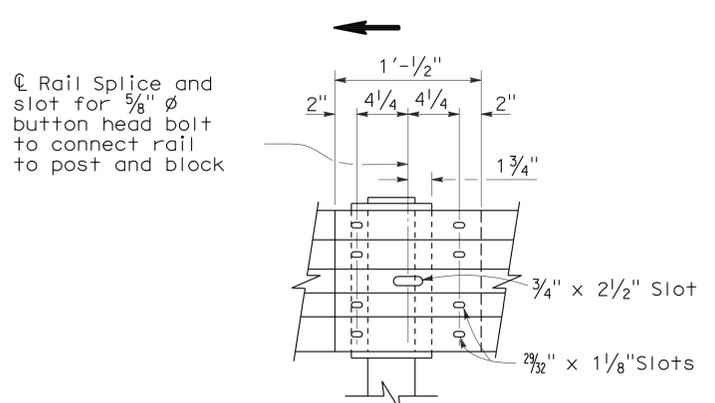
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 10-3-11

2006 REVISED STANDARD PLAN RSP A77A2



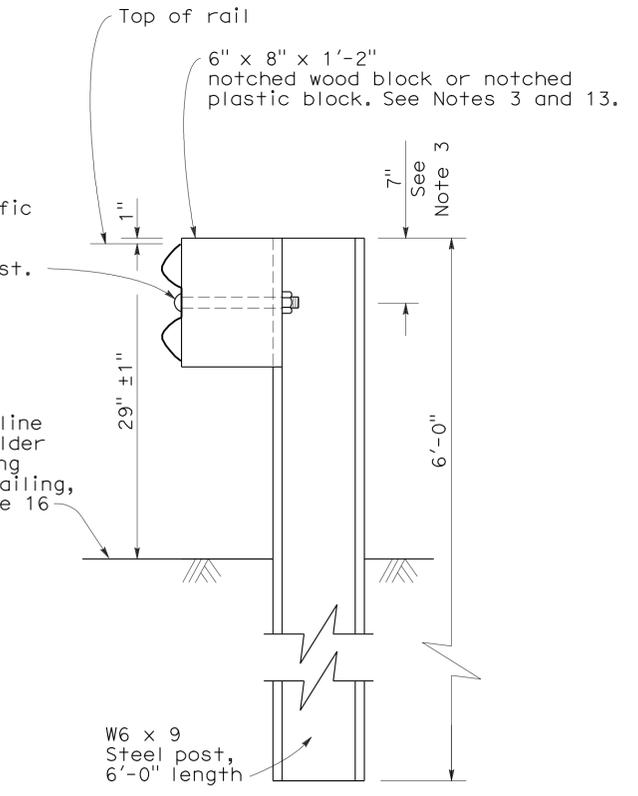
**METAL BEAM GUARD RAILING WITH STEEL POSTS
AND NOTCHED WOOD OR NOTCHED RECYCLED PLASTIC BLOCKS**



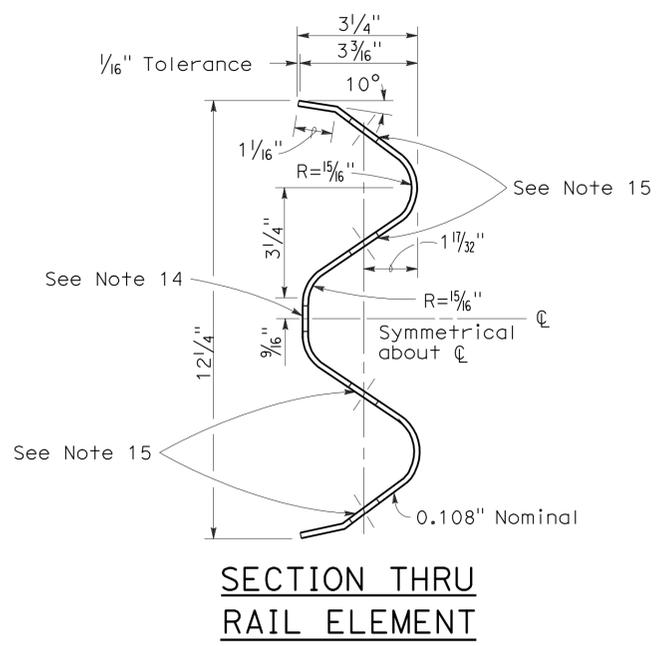
**ELEVATION
RAIL ELEMENT SPLICE DETAIL**

- Connect the over lapped end of the rail elements with $\frac{5}{8}$ " ϕ x $1\frac{3}{8}$ " button head oval shoulder splice bolts inserted into the $2\frac{7}{32}$ " x $1\frac{1}{8}$ " slots and bolted together with $\frac{5}{8}$ " ϕ recessed hex nuts. Recess of hex nut points toward rail element. A total of 8 bolts and nuts are to be used at each rail splice connection.
- The ends of the rail elements are to be overlapped in the direction of traffic (see details).
- Where end cap is to be attached to the end of a rail element, a total of 4 of the above described splice bolts and nuts are to be used.

$\frac{5}{8}$ " ϕ Button head bolt with hex nut. Attach rail element to wood block and steel post with bolt on traffic approach side of post web. No washer on rail face for bolted connection to line post.



**SECTION A-A
TYPICAL STEEL LINE
POST INSTALLATION**
See Note 4



NOTES:

- For details of wood post installations, see Standard Plan A77A1.
- For details of standard hardware used to construct guard railing, see Standard Plan A77B1.
- For details of steel posts and notched wood blocks used to construct guard railing, see Standard Plan A77C2.
- For additional installation details, see Standard Plan A77C3.
- Guard railing post spacing to be 6'-3" center to center, except as otherwise noted.
- For guard railing typical layouts, see the A77E, A77F and A77G Series of Standard Plans.
- For terminal system end treatment details, see the A77L Series of Standard Plans. To connect railing to terminal system end treatment, transition the top of railing height at a ratio of 120:1 to terminal system end treatment height plus one 12'-6" standard railing section at the transitioned height for a horizontal connection to the end treatment.
- For guard railing end anchor details, see Standard Plans A77H1 and A77I2.
- For details of guard railing transition to bridge railing, see Standard Plan A77J4.
- For additional details of guard railing connection to bridge railings, see Standard Plans A77J1, A77J2 and A77K1.
- For dike positioning and guard railing delineation details, see Standard Plan A77C4.
- Direction of adjacent traffic indicated by \rightarrow .
- Notched face of block faces steel post.
- Slotted hole for bolted connection of rail element to block and post. See "Section Thru Rail Element".
- Slotted holes for splice bolts to overlap ends of rail element. See "Section Thru Rail Element".
- Install posts in soil.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING
STANDARD RAILING SECTION
(STEEL POST WITH NOTCHED
WOOD OR NOTCHED
RECYCLED PLASTIC BLOCK)**

NO SCALE

To accompany plans dated 10-3-11

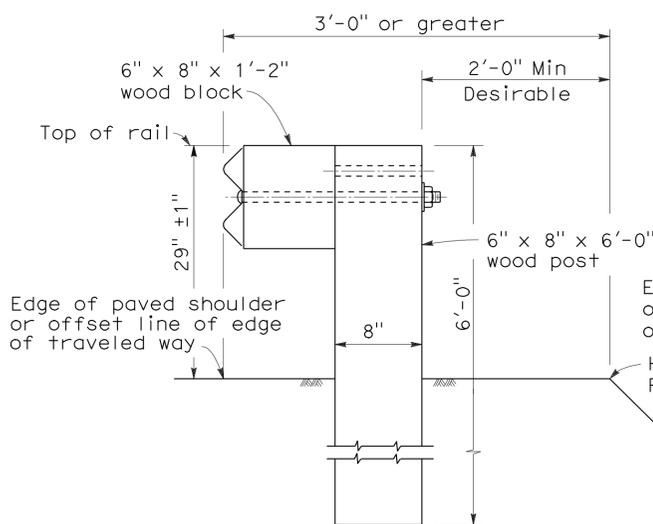
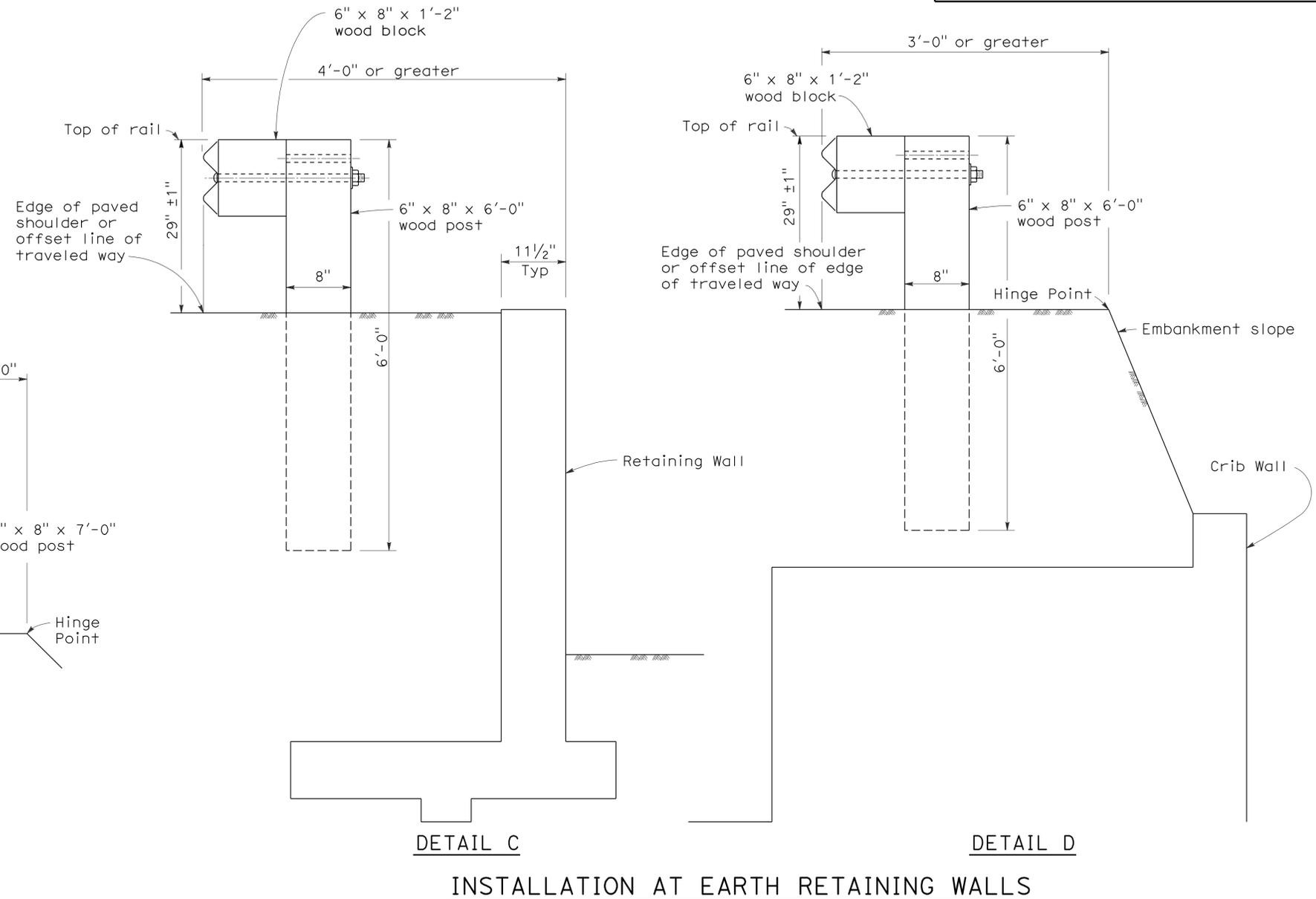
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1,20,128,162,253,271	Var	24	69

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

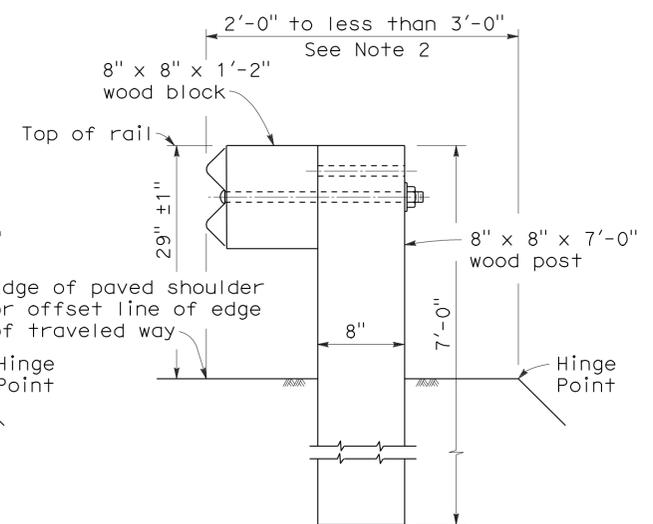
May 20, 2011
PLANS APPROVAL DATE

Randell D. Hiatt
No. C50200
Exp. 6-30-11
CIVIL
STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



DETAIL A
TYPICAL ROADWAY
INSTALLATION
See Note 1



DETAIL B
NARROW ROADWAY
INSTALLATION
See Note 1

POST EMBEDMENT

DETAIL C
INSTALLATION AT EARTH RETAINING WALLS
DETAIL D

NOTES:

1. These installation details also applicable to steel line post installations. For Detail A, C, and D, where steel line post installations are constructed, W6 x 9 steel post, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks are to be used in place of the size of wood post and wood block shown. For Detail B, where steel line post installations are constructed, W6 x 9 steel post, 7'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks are to be used in place of the size of wood post and wood block shown. For additional installation details, see Standard Plans A77A1 and A77A2.
2. Where the distance between the face of the rail and the hinge point is less than 2'-0", see the Project Plans for special details.
3. For dike positioning with guard railing installations, see Standard Plan A77C4.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

METAL BEAM GUARD RAILING
TYPICAL LINE POST
EMBEDMENT AND
HINGE POINT OFFSET DETAILS

NO SCALE

RSP A77C3 DATED MAY 20, 2011 SUPERSEDES STANDARD PLAN A77C3
DATED MAY 1, 2006 - PAGE 46 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77C3

2006 REVISED STANDARD PLAN RSP A77C3

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1,20,128, 162,253,271	Var	25	69

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

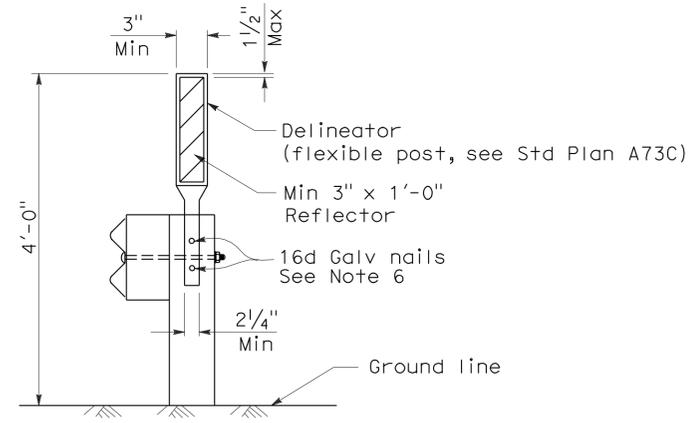
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-11
CIVIL
STATE OF CALIFORNIA

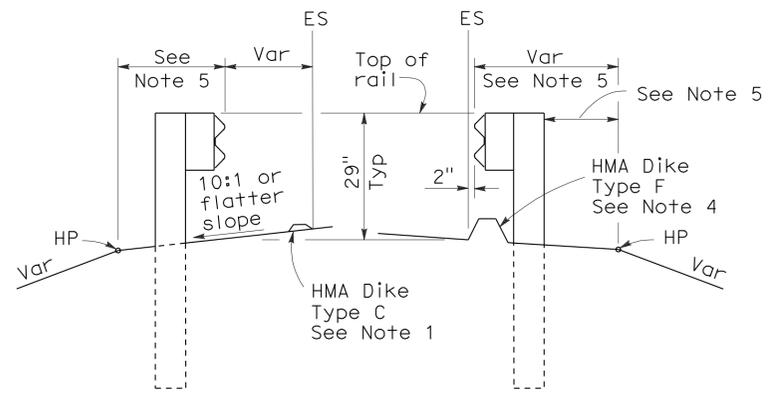
To accompany plans dated 10-3-11

NOTES:

1. When necessary to place dike in front of face of guard railing, only Type C dike may be used. For dike details, see Standard Plan A87B.
2. For standard railing post embedment, see Standard Plans A77C3.
3. Guard railing delineation to be used where shown on the Project Plans.
4. When dike or curb is placed under guard railing, the maximum height of the dike or curb shall be 4". Mountable dike should not be used. For dike and curb details, see Standard Plans A87A and A87B.
5. For details of typical distance between the face of rail and hinge point, see Standard Plan A77C3.
6. For steel line posts, use 1/4" - 20 self-tapping screws in 0.22" diameter holes or 1/4" bolts in 3/32" diameter holes.



GUARD RAILING DELINEATION
See Note 3



DIKE POSITIONING
See Note 1

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING
TYPICAL RAILING DELINEATION
AND DIKE POSITIONING DETAILS**

NO SCALE

RSP A77C4 DATED MAY 20, 2011 SUPERSEDES RSP A77C4 DATED JUNE 6, 2008 AND STANDARD PLAN A77C4 DATED MAY 1, 2006 - PAGE 47 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77C4

2006 REVISED STANDARD PLAN RSP A77C4

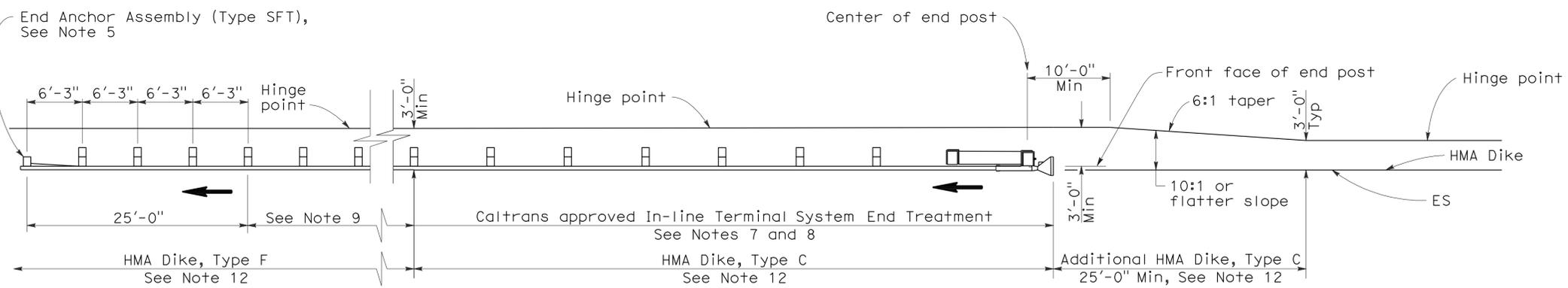
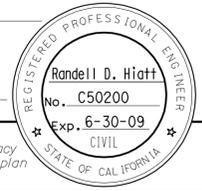
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	Men	1,20,128, 162,253,271	Var	26	69

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

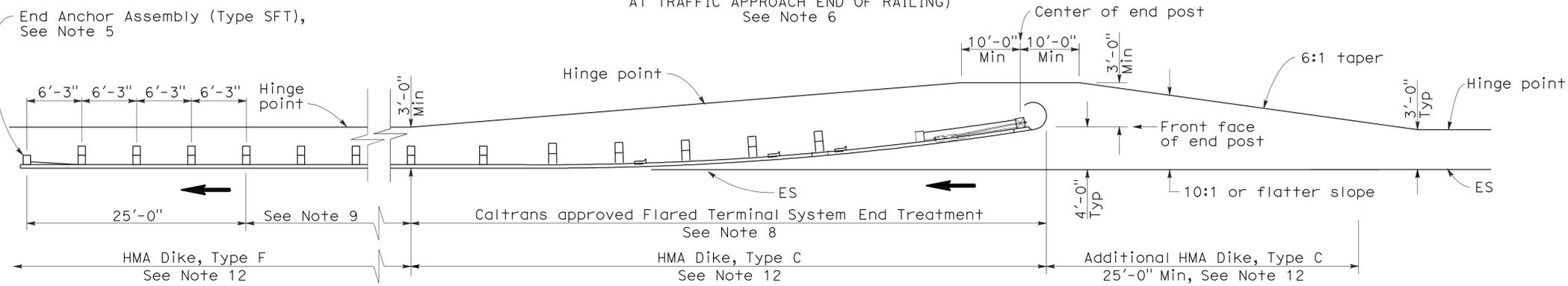
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 10-3-11



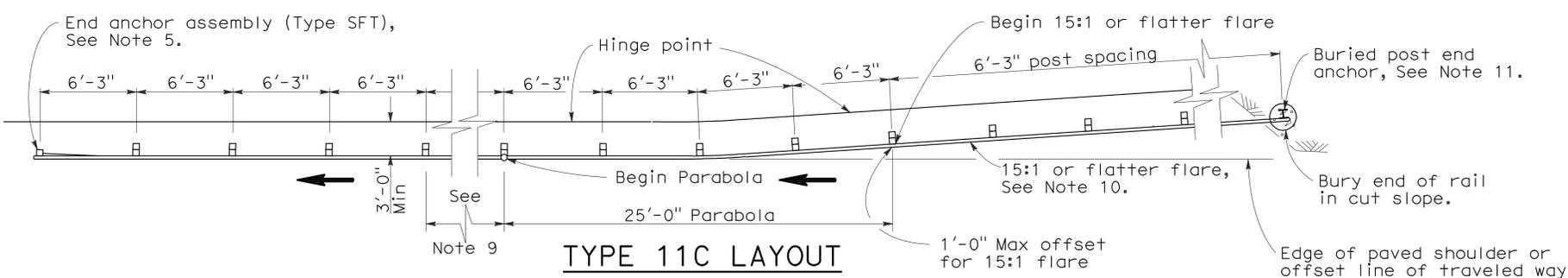
TYPE 11A LAYOUT

(EMBANKMENT GUARD INSTALLATION WITH IN-LINE END TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Note 6



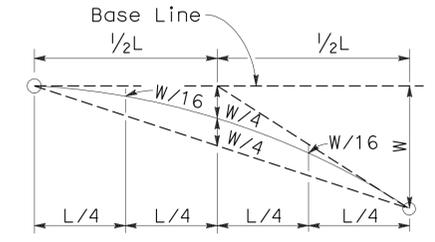
TYPE 11B LAYOUT

(EMBANKMENT GUARD RAILING INSTALLATION WITH FLARED END TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Note 6

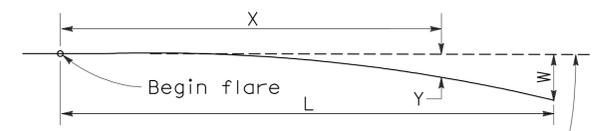


TYPE 11C LAYOUT

(EMBANKMENT GUARD RAILING INSTALLATION WITH BURIED END ANCHOR TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Notes 6 and 12



TYPICAL PARABOLIC LAYOUT

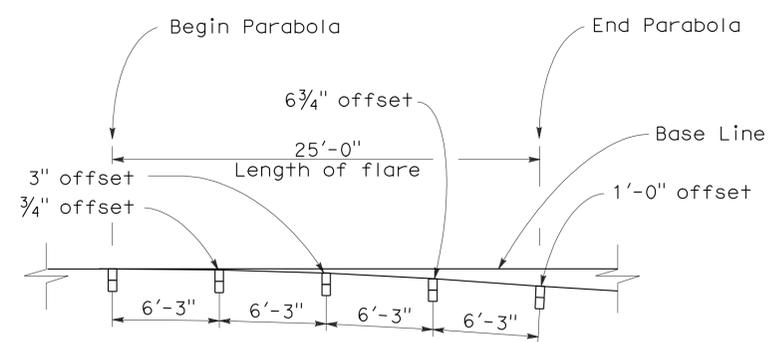


Base Line (Edge of paved shoulder or offset line of edge of traveled way)

$$Y = \frac{WX^2}{L^2}$$

Y = Offset from base line
W = Maximum offset
X = Distance along base line
L = Length of flare

PARABOLIC FLARE OFFSETS



TYPICAL FLARE OFFSETS FOR 1 FOOT MAX END OFFSET

NOTES:

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1, and A77C2.
- Guard rail post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or recycled plastic blocks may be used for 6" x 8" x 6'-0" wood post with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- Direction of adjacent traffic indicated by \rightarrow .
- For End Anchor Assembly (Type SFT) details, see Standard Plan A77H1.
- Layout Types 11A, 11B or 11C are typically used where guard railing is recommended to shield embankment slopes and a crashworthy end treatment is required for only one direction of traffic.
- In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
- The type of terminal system end treatment to be used will be shown on the Project Plans.
- Dependent on site conditions (embankment height and side slope), construction of additional guard railing (length equal to multiples of 12'-6" with 6'-3" post spacing) may be advisable.
- The 15:1 or flatter flare used with buried end anchors is based on the edge of the paved shoulder or offset line of edge of the traveled way. The length of guard railing within the 15:1 or flatter flare is based on site conditions and should be a length equal to multiples of 12'-6".
- For details of the buried post end anchor used with Type 11C Layout, see Standard Plan A77I2.
- Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77C4 for dike positioning details.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
METAL BEAM GUARD RAILING
TYPICAL LAYOUTS FOR EMBANKMENTS
NO SCALE

RSP A77E1 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77E1
DATED MAY 1, 2006 - PAGE 48 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77E1

2006 REVISED STANDARD PLAN RSP A77E1

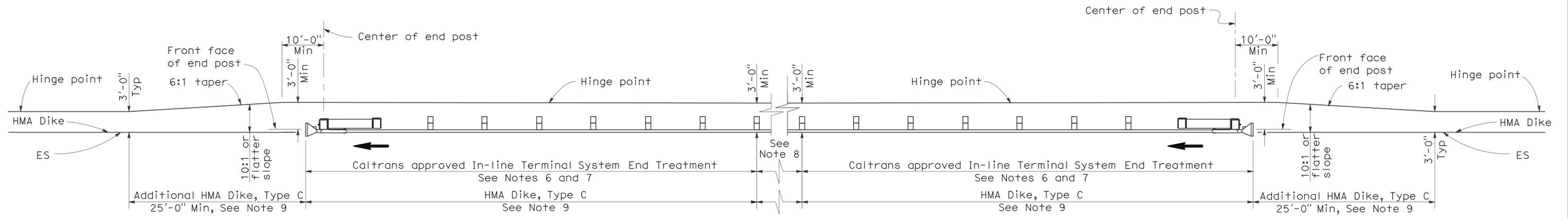
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	Men	1,20,128,162,253,271	Var	27	69

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

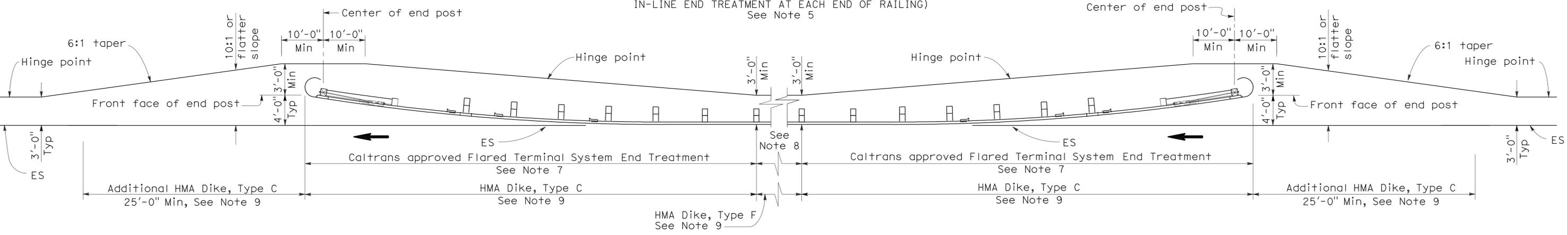
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 10-3-11



TYPE 11D LAYOUT

(EMBANKMENT GUARD RAILING INSTALLATION WITH IN-LINE END TREATMENT AT EACH END OF RAILING)
See Note 5



TYPE 11E LAYOUT

(EMBANKMENT GUARD RAILING INSTALLATION WITH FLARED END TREATMENT AT EACH END OF RAILING)
See Note 5

NOTES:

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard rail post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or plastic blocks may be used for 6" x 8" x 6'-0" wood post with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- Direction of adjacent traffic indicated by
- Layout Types 11D through 11L, shown on the A77E Series of Revised Standard Plans, are typically used where guard railing is recommended to shield embankment slopes and a crashworthy end treatment is required for both directions of traffic.
- In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
- The type of terminal system end treatment to be used will be shown on the Project Plans.
- Dependent on site conditions (embankment height and side slope), construction of additional guard railing (length equal to multiples of 12'-6" with 6'-3" post spacing) may be advisable.
- Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77C4 for dike positioning details.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**METAL BEAM GUARD RAILING
TYPICAL LAYOUTS FOR
EMBANKMENTS**

NO SCALE
RSP A77E2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77E2
DATED MAY 1, 2006 - PAGE 49 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP A77E2

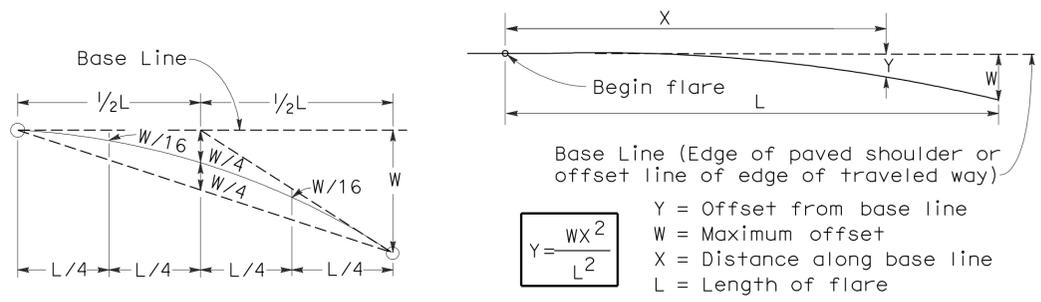
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	Men	1,20,128, 162,253,271	Var	28	69

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

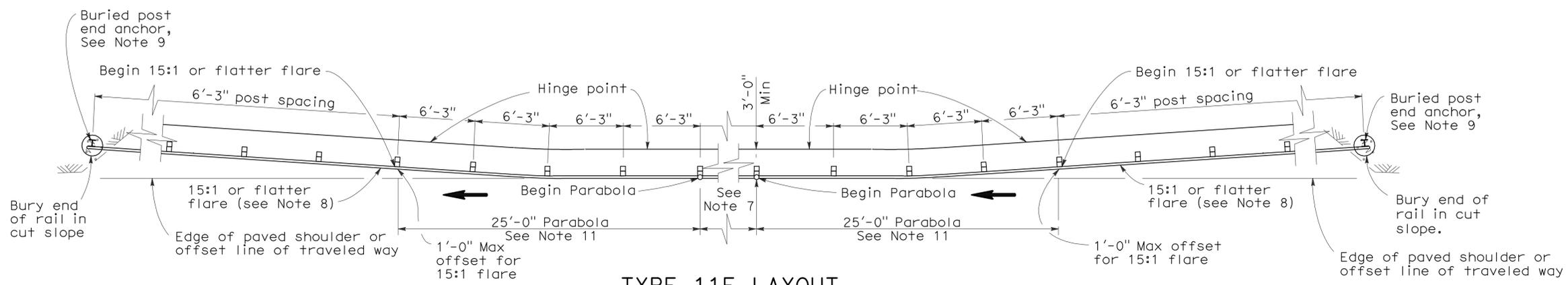
June 6, 2008
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 10-3-11

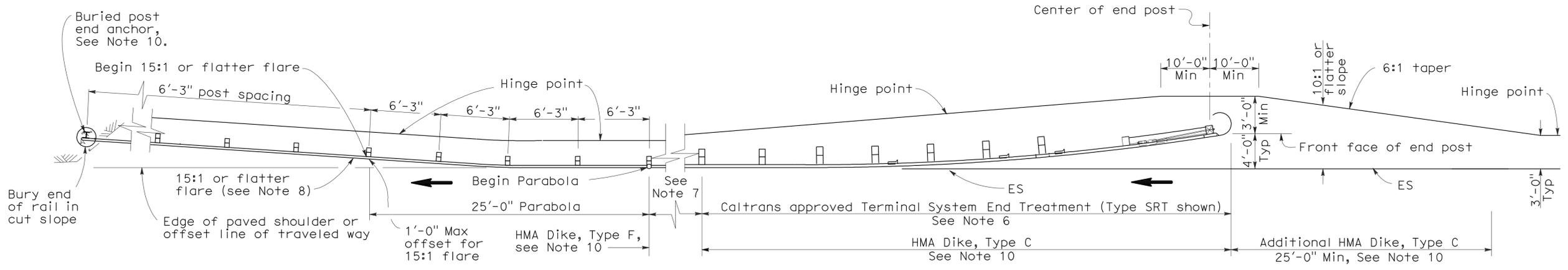


TYPICAL PARABOLIC LAYOUT **PARABOLIC FLARE OFFSETS**



TYPE 11F LAYOUT

(EMBANKMENT GUARD RAILING INSTALLATION WITH A BURIED END ANCHOR TREATMENT AT EACH END OF RAILING)
See Notes 5 and 10



TYPE 11G LAYOUT

(EMBANKMENT GUARD RAILING INSTALLATION WITH FLARED END TREATMENT AND A BURIED END ANCHOR TREATMENT AT THE ENDS OF RAILING)
See Notes 5 and 10

NOTES:

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard rail post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or plastic blocks may be used for 6" x 8" x 6'-0" wood post with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- Direction of adjacent traffic indicated by \rightarrow .
- Layout Types 11D through 11L, shown on the A77E Series of Revised Standard Plans, are typically used where guard railing is recommended to shield embankment slopes and a crashworthy end treatment is required for both directions of traffic.
- The type of terminal system end treatment to be used will be shown on the Project Plans.
- Dependent on site conditions (embankment height and side slope), construction of additional guard railing (length equal to multiples of 12'-6" with 6'-3" post spacing) may be advisable.
- The 15:1 or flatter flare used with buried end anchors is based on the edge of the paved shoulder or offset line of edge of the traveled way. The length of guard railing within the 15:1 or flatter flare is based on site conditions and should be a length equal to multiples of 12'-6".
- For details of the buried post end anchor used with Type 11F and 11G Layouts, see Standard Plan A77I2.
- Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77C4 for dike positioning details.
- For typical flare offsets for 25'-0" length parabola with maximum offset of 1'-0", see Revised Standard Plan RSP A77E1.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING
TYPICAL LAYOUTS FOR
EMBANKMENTS**

NO SCALE

RSP A77E3 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77E3
DATED MAY 1, 2006 - PAGE 50 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77E3

2006 REVISED STANDARD PLAN RSP A77E3

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	Men	1,20,128,162,253,271	Var	29	69

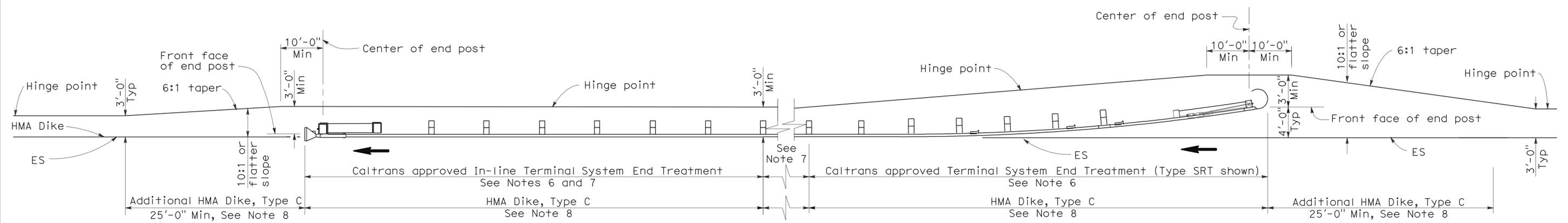
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 10-3-11



TYPE 11H LAYOUT

(EMBANKMENT GUARD RAILING INSTALLATION WITH FLARED END TREATMENT AND AN IN-LINE TREATMENT AT THE ENDS OF RAILING)
See Notes 5 and 8

NOTES:

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard rail post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or plastic blocks may be used for 6" x 8" x 6'-0" wood post with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- Direction of adjacent traffic indicated by →.
- Layout Types 11D through 11L, shown on the A77E Series of Revised Standard Plans, are typically used where guard railing is recommended to shield embankment slopes and a crashworthy end treatment is required for both directions of traffic.
- The type of terminal system end treatment to be used will be shown on the Project Plans.
- Dependent on site conditions (embankment height and side slope), construction of additional guard railing (length equal to multiples of 12'-6" with 6'-3" post spacing) may be advisable.
- Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77C4 for dike positioning details.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**METAL BEAM GUARD RAILING
TYPICAL LAYOUTS FOR
EMBANKMENTS**
NO SCALE

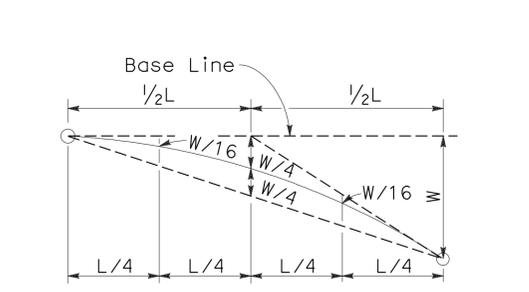
RSP A77E4 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77E4
DATED MAY 1, 2006 - PAGE 51 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77E4

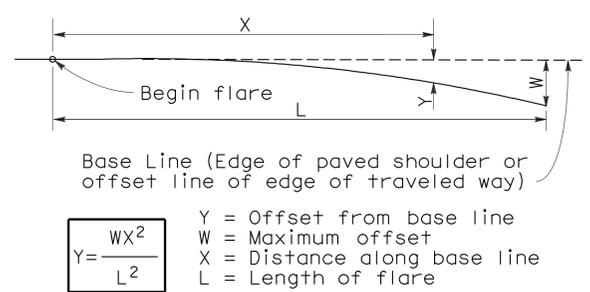
2006 REVISED STANDARD PLAN RSP A77E4

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	Men	1,20,128, 162,253,271	Var	30	69

RANDALL D. HIATT
 REGISTERED CIVIL ENGINEER
 June 6, 2008
 PLANS APPROVAL DATE
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



TYPICAL PARABOLIC LAYOUT

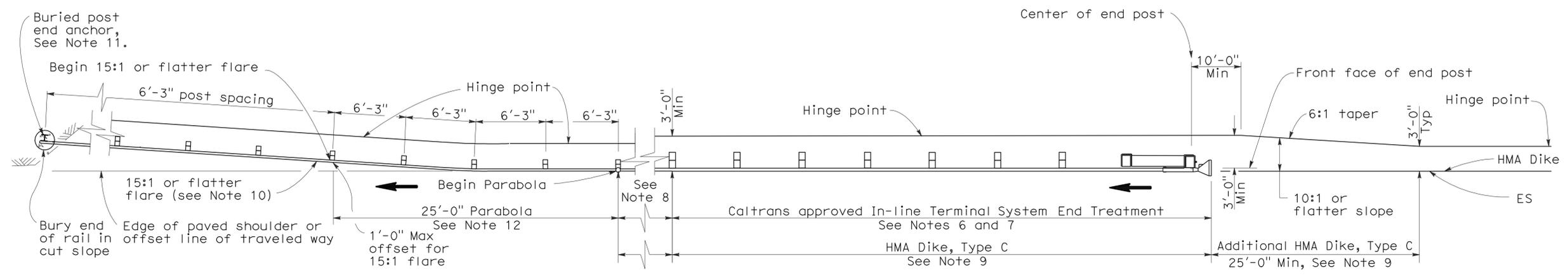


PARABOLIC FLARE OFFSETS

$$Y = \frac{WX^2}{L^2}$$

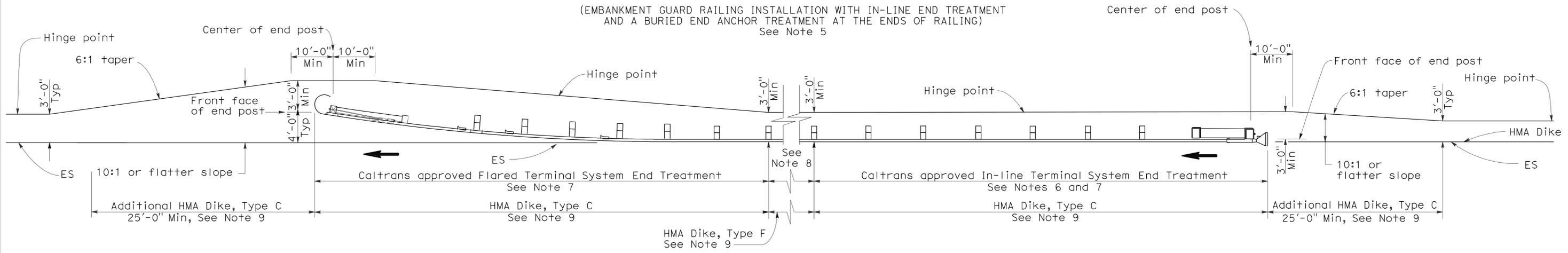
Y = Offset from base line
 W = Maximum offset
 X = Distance along base line
 L = Length of flare

To accompany plans dated 10-3-11



TYPE 11I LAYOUT

(EMBANKMENT GUARD RAILING INSTALLATION WITH IN-LINE END TREATMENT AND A BURIED END ANCHOR TREATMENT AT THE ENDS OF RAILING)
See Note 5



TYPE 11J LAYOUT

(EMBANKMENT GUARD RAILING INSTALLATION WITH IN-LINE END TREATMENT AND FLARED END TREATMENT AT THE ENDS OF RAILING)
See Note 5

NOTES:

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard rail post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or plastic blocks may be used for 6" x 8" x 6'-0" wood post with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- Direction of adjacent traffic indicated by →.
- Layout Types 11D through 11L, shown on the A77E Series of Revised Standard Plans, are typically used where guard railing is recommended to shield embankment slopes and a crashworthy end treatment is required for both directions of traffic.
- In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
- The type of terminal system end treatment to be used will be shown on the Project Plans.
- Dependent on site conditions (embankment height and side slope), construction of additional guard railing (length equal to multiples of 12'-6" with 6'-3" post spacing) may be advisable.
- Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77C4 for dike positioning details.
- The 15:1 or flatter flare used with buried end anchors is based on the edge of the paved shoulder or offset line of edge of the traveled way. The length of guard railing within the 15:1 or flatter flare is based on site conditions and should be a length equal to multiples of 12'-6".
- For details of the buried post end anchor used with Type 11I Layout, see Standard Plan A77I2.
- For typical flare offsets for 25'-0" length parabola with maximum offset of 1'-0", see Revised Standard Plan RSP A77E1.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**METAL BEAM GUARD RAILING
TYPICAL LAYOUTS FOR
EMBANKMENTS**

NO SCALE
RSP A77E5 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77E5
DATED MAY 1, 2006 - PAGE 52 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP A77E5

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	Men	1,20,128, 162,253,271	Var	31	69

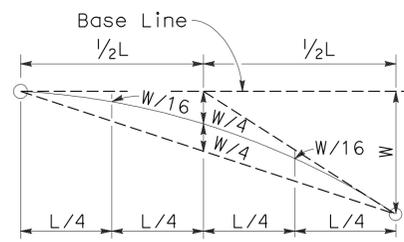
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

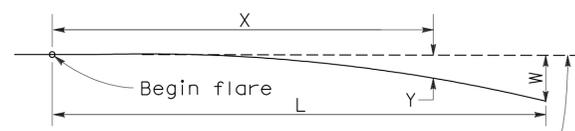
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 10-3-11

2006 REVISED STANDARD PLAN RSP A77E6



TYPICAL PARABOLIC LAYOUT

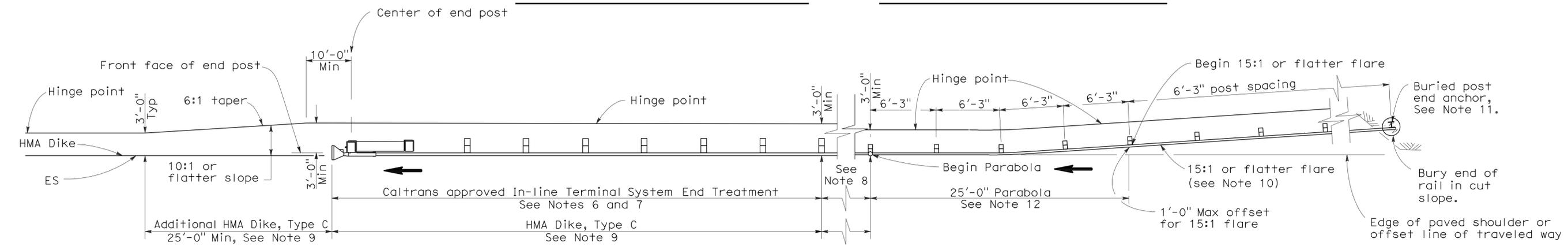


Base Line (Edge of paved shoulder or offset line of edge of traveled way)

$$Y = \frac{WX^2}{L^2}$$

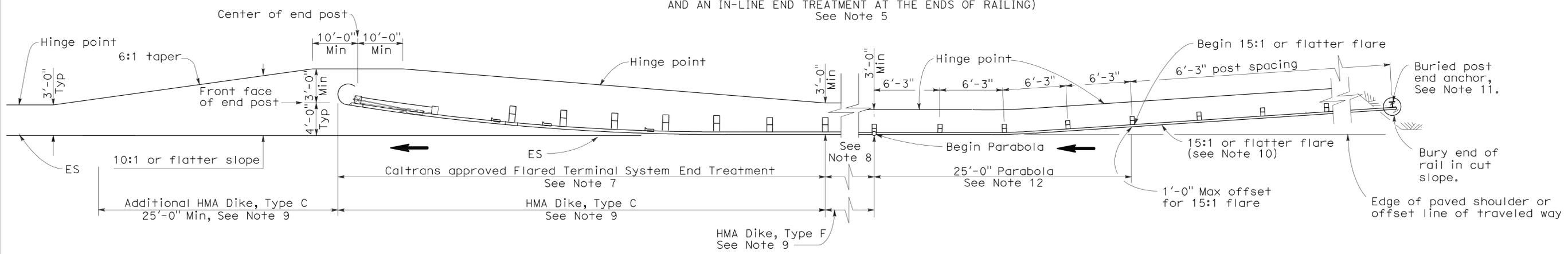
Y = Offset from base line
W = Maximum offset
X = Distance along base line
L = Length of flare

PARABOLIC FLARE OFFSETS



TYPE 11K LAYOUT

(EMBANKMENT GUARD RAILING INSTALLATION WITH A BURIED END ANCHOR TREATMENT AND AN IN-LINE END TREATMENT AT THE ENDS OF RAILING)
See Note 5



TYPE 11L LAYOUT

(EMBANKMENT GUARD RAILING INSTALLATION WITH A BURIED END ANCHOR TREATMENT AND A FLARED END TREATMENT AT THE ENDS OF RAILING)
See Note 5

NOTES:

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard rail post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or plastic blocks may be used for 6" x 8" x 6'-0" wood post with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- Direction of adjacent traffic indicated by →.
- Layout Types 11D through 11L, shown on the A77E Series of Revised Standard Plans, are typically used where guard railing is recommended to shield embankment slopes and a crashworthy end treatment is required for both directions of traffic.
- In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
- The type of terminal system end treatment to be used will be shown on the Project Plans.
- Dependent on site conditions (embankment height and side slope), construction of additional guard railing (length equal to multiples of 12'-6" with 6'-3" post spacing) may be advisable.
- Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77C4 for dike positioning details.
- The 15:1 or flatter flare used with buried end anchors is based on the edge of the paved shoulder or offset line of edge of the traveled way. The length of guard railing within the 15:1 or flatter flare is based on site conditions and should be a length equal to multiples of 12'-6".
- For details of the buried post end anchor used with Type 11K and 11L Layouts, see Standard Plan A77I2.
- For typical flare offsets for 25'-0" length parabola with maximum offset of 1'-0", see Revised Standard Plan RSP A77E1.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**METAL BEAM GUARD RAILING
TYPICAL LAYOUTS FOR
EMBANKMENTS**

NO SCALE
RSP A77E6 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77E6
DATED MAY 1, 2006 - PAGE 53 OF THE STANDARD PLANS BOOK DATED MAY 2006.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	Men	1,20,128,162,253,271	Var	32	69

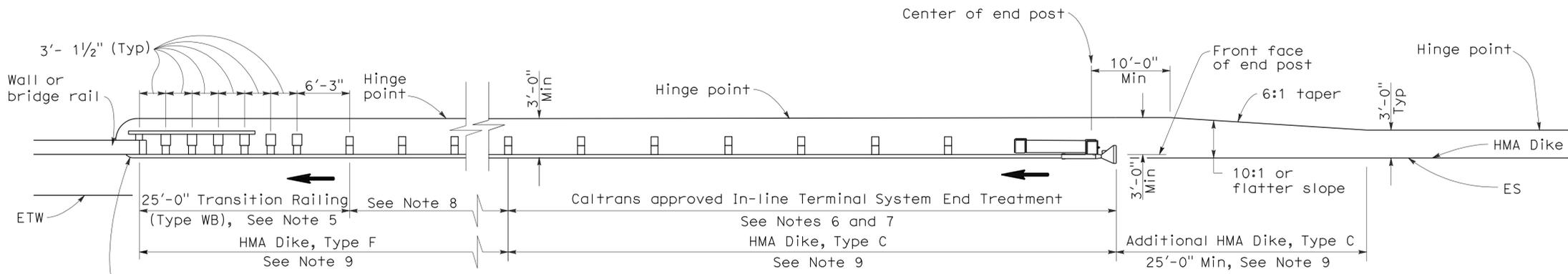
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

Randell D. Hiatt
REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

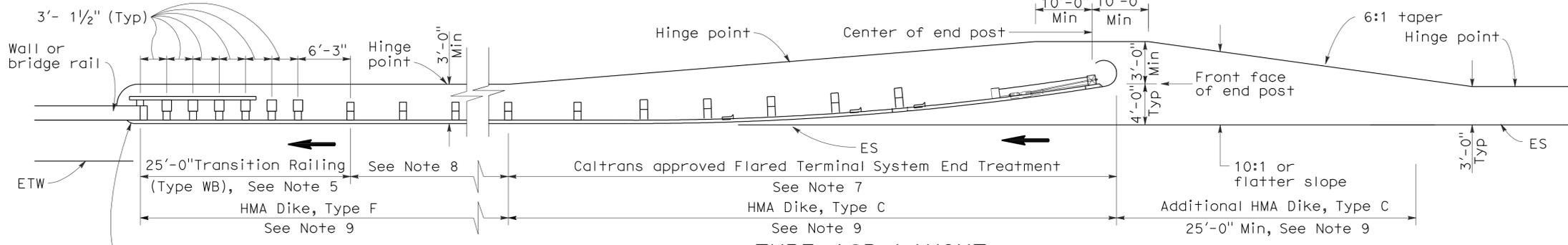
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 10-3-11



TYPE 12A LAYOUT

(GUARD RAILING INSTALLATION AT STRUCTURE APPROACH WITH AN IN-LINE END TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Notes 10



TYPE 12B LAYOUT

(GUARD RAILING INSTALLATION AT STRUCTURE APPROACH WITH A FLARED END TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Notes 10

NOTES:

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard rail post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or plastic blocks may be used for 6" x 8" x 6'-0" wood posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- Direction of adjacent traffic indicated by \rightarrow .
- For Transition Railing (Type WB) details for Types 12A and 12B Layouts, see Standard Plan A77J4.
- In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
- The type of terminal system end treatment to be used will be shown on the Project Plans.
- Dependent on site conditions (embankment height, side slopes, or other fixed objects), it may be advisable to construct additional guard railing (a length equal to multiples of 12'-6" with 6'-3" post spacing) between the transition railing and end treatment.

- Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77C4 for dike positioning details.
- Type 12A or Type 12B Layouts are typically used:
 - To the right of approaching traffic, at the end of a structure, on two-lane conventional highway where the roadbed width across the structure is less than 40 feet.
 - To the left of approaching traffic, at the end of a structure, on two-lane conventional highway where the roadbed width across the structure is less than 40 feet.
 - To the right of approaching traffic at the end of each structure on multilane freeways or expressways with separate adjacent or parallel bridges.
 - To the right of approaching traffic at the end of the structure on multilane freeways or expressways with decked median on the bridge.
- See Revised Standard Plan RSP A77F3 for typical layout used left of approaching traffic at the ends of each structure on multilane freeways or expressways with separate adjacent or parallel bridges.

- For additional details of typical connections to bridge rail, see Connection Detail AA on Revised Standard Plans RSP A77J1 and RSP A77J2 and Connection Detail FF on Standard Plans A77K1 and A77K2.
- For additional details of a typical connection to walls or abutments, see Standard Plan A77J3.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING
TYPICAL LAYOUTS FOR
STRUCTURE APPROACH**

NO SCALE

RSP A77F1 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77F1
DATED MAY 1, 2006 - PAGE 54 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77F1

2006 REVISED STANDARD PLAN RSP A77F1

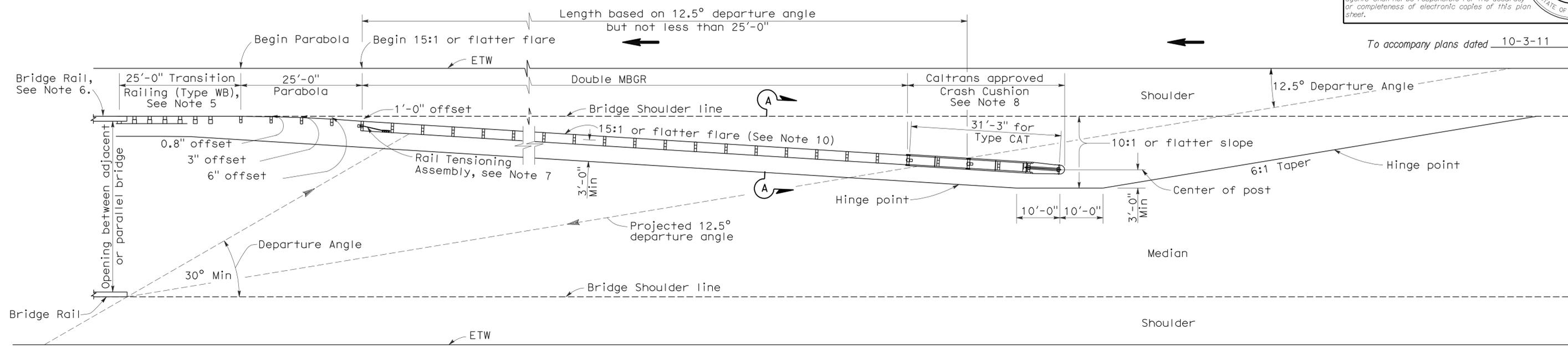
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1,20,128, 162,253,271	Var	33	69

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-11
CIVIL
STATE OF CALIFORNIA

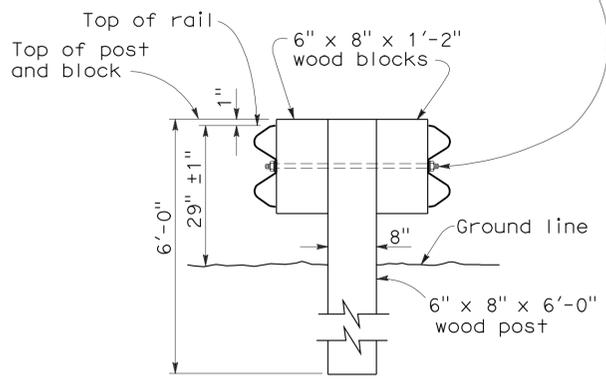


To accompany plans dated 10-3-11

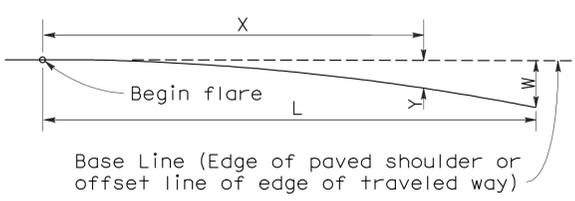
TYPE 12E LAYOUT

See Note 10

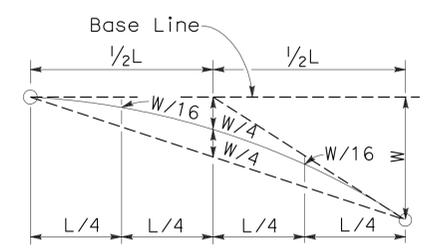
5/8" Ø Button head bolt with hex nut or 5/8" Ø Rod, threaded both ends, with hex nuts. 1/2" Max exposed threads after hex nut(s) tightened. No washer on rail faces for bolted connection to line post.



SECTION A-A
TYPICAL DOUBLE METAL BEAM GUARD RAILING



PARABOLIC FLARE OFFSETS



TYPICAL PARABOLIC LAYOUT

NOTES:

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard railing post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks may be used for 6" x 8" x 6'-0" wood line posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- Direction of adjacent traffic indicated by →.
- For Transition Railing (Type WB) details, see Standard Plan A77J4.
- For additional details of a typical connection to bridge rail, see Connection Detail AA on Revised Standard Plan RSP A77J1.
- For Rail Tensioning Assembly details, see Standard Plan A77H2.
- The type of Crash Cushion to be used will be shown on the Project Plans.
- Type 12E Layout is typically used left of approaching traffic at the end of each structure on multilane freeways or expressways where a median type barrier is not constructed between separated roadbeds.
- The 15:1 or flatter flare is measured off of the edge of traveled way.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
METAL BEAM GUARD RAILING
TYPICAL LAYOUTS FOR
STRUCTURE APPROACH

NO SCALE

RSP A77F3 DATED MAY 20, 2011 SUPERSEDES RSP A77F3 DATED JUNE 6, 2008 AND STANDARD PLAN A77F3 DATED MAY 1, 2006 - PAGE 56 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP A77F3

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	Men	1,20,128, 162,253,271	Var	34	69

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

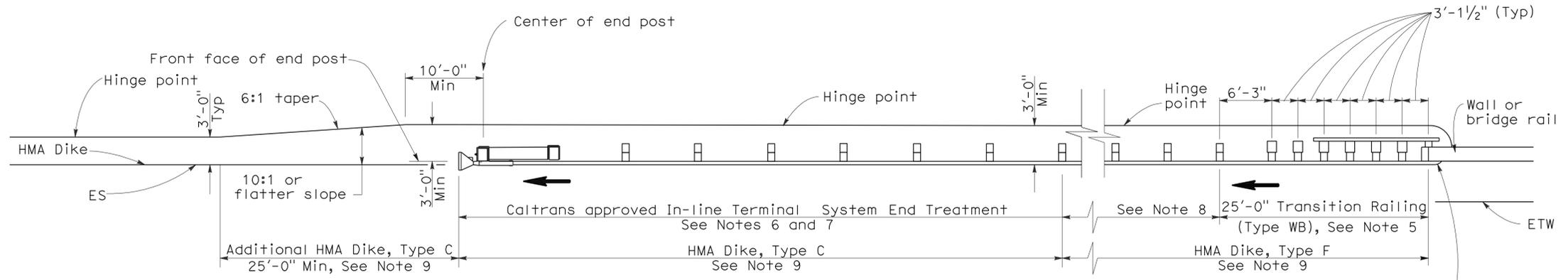
June 6, 2008
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

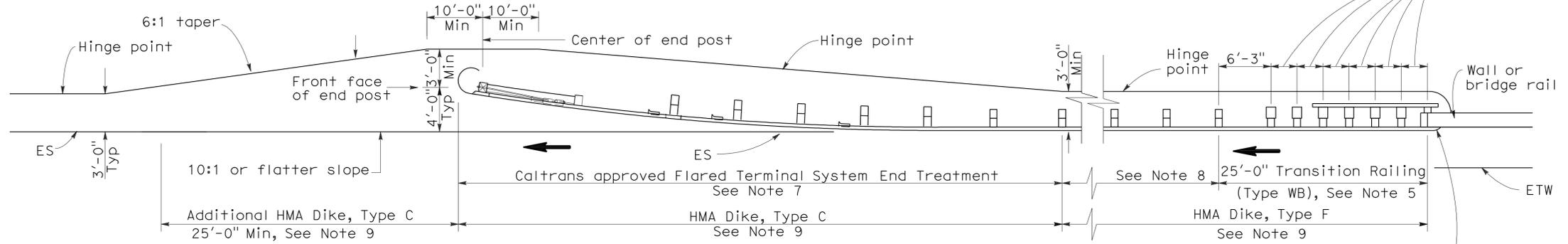
To accompany plans dated 10-3-11

2006 REVISED STANDARD PLAN RSP A77F4



TYPE 12AA LAYOUT

(GUARD RAILING INSTALLATION AT STRUCTURE DEPARTURE WITH AN IN-LINE END TREATMENT AT TRAILING END OF RAILING)
See Notes 9 and 10



TYPE 12BB LAYOUT

(GUARD RAILING INSTALLATION AT STRUCTURE DEPARTURE WITH A FLARED END TREATMENT AT TRAILING END OF RAILING)
See Notes 9 and 10

NOTES:

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard rail post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks may be used for 6" x 8" x 6'-0" wood posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- Direction of adjacent traffic indicated by \rightarrow .
- For Transition Railing (Type WB) details for Types 12AA and 12BB Layouts, see Standard Plan A77J4.
- In-line Terminal System Treatments are used where site conditions will not accommodate a flared end treatment.
- The type of terminal system to be used will be shown on the Project Plans.
- Dependent on site conditions (embankment height, side slopes, other fixed objects), it may be advisable to construct additional guard railing (a length equal to multiples of 12'-6" with 6'-3" post spacing) between the transition railing and end treatments.
- Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77C4 for dike positioning details.
- Type 12AA or Type 12BB Layouts are typically used to the right of traffic departing a structure on two-way conventional highways where the roadbed width across the structure is less than 40 feet.
- For additional details of typical connections to bridge rail, see Connection Detail CC on Revised Standard Plan RSP A77J2 and Connection Detail HH on Standard Plans A77k2.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING
TYPICAL LAYOUTS FOR
STRUCTURE DEPARTURE**

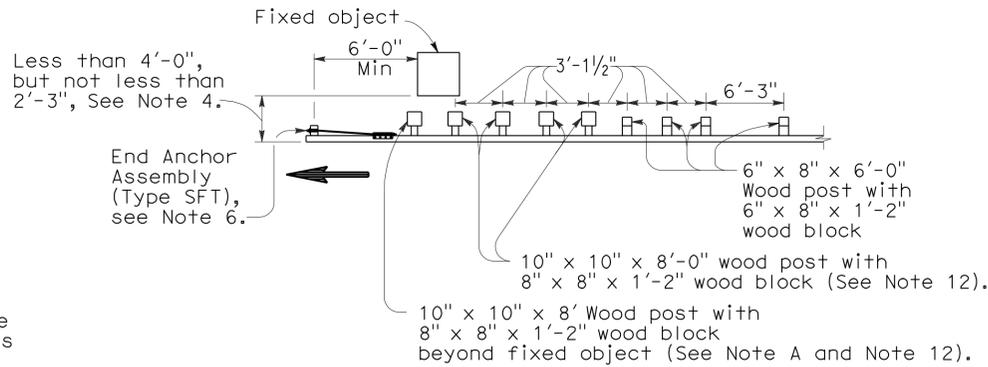
NO SCALE

RSP A77F4 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77F4
DATED MAY 1, 2006 - PAGE 57 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77F4

NOTES:

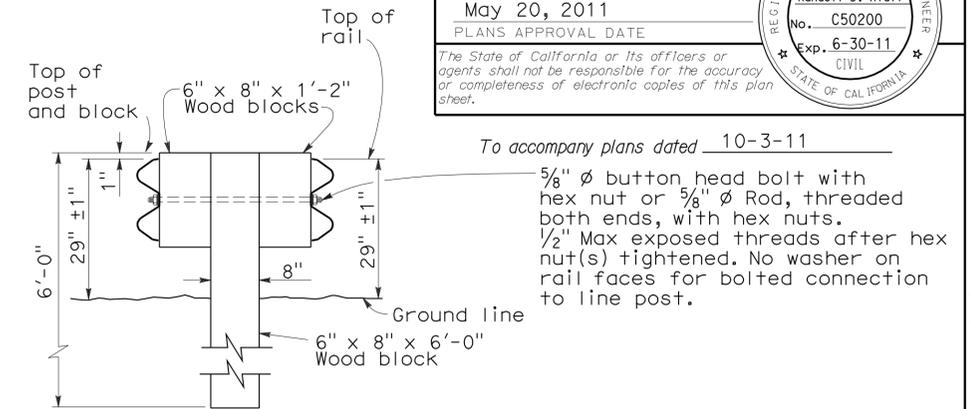
- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard railing post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks may be used for 6" x 8" x 6'-0" wood line posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- A 4'-0" minimum clearance is required between the face of the railing and the face of a fixed object located directly behind standard guard railing sections with post spacing of 6'-3". Construct guard railing as shown in the detail "Strengthened Railing Sections for Fixed Objects" on this plan, where the clearance between the face of the railing and the face of a fixed object is less than 4'-0", but not less than 2'-3". Where the clearance is less than 2'-3", a concrete wall or barrier should be constructed to shield the fixed object(s).
- Direction of adjacent traffic indicated by \rightarrow .
- For End Anchor Assembly (Type SFT) details, see Standard Plan A77H1.
- For details of Rail Tensioning Assembly, see Standard Plan A77H2.
- The type of crash cushion to be used will be shown on the Project Plans.
- Type 14A layout is typically used on multilane freeways or expressways to shield fixed objects where a median type barrier is not constructed between the separated roadbeds.
- For typical flare offsets for 25'-0" length parabola with maximum offset of 1'-0", see Revised Standard Plan RSP A77E1.
- The 15:1 or flatter flare is measured off of the edge of traveled way.
- W6 x 15 steel post, 8'-0" in length, with 8" x 8" x 1'-2" notched wood block or notched recycled plastic block may be used in place of the 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood block shown in the "Strengthened Railing Sections Detail".



NOTE A: For a series of fixed objects (bridge columns, overhead sign supports, etc.) additional 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood blocks at 3'-1 1/2" center to center spacing are to be used between fixed objects.

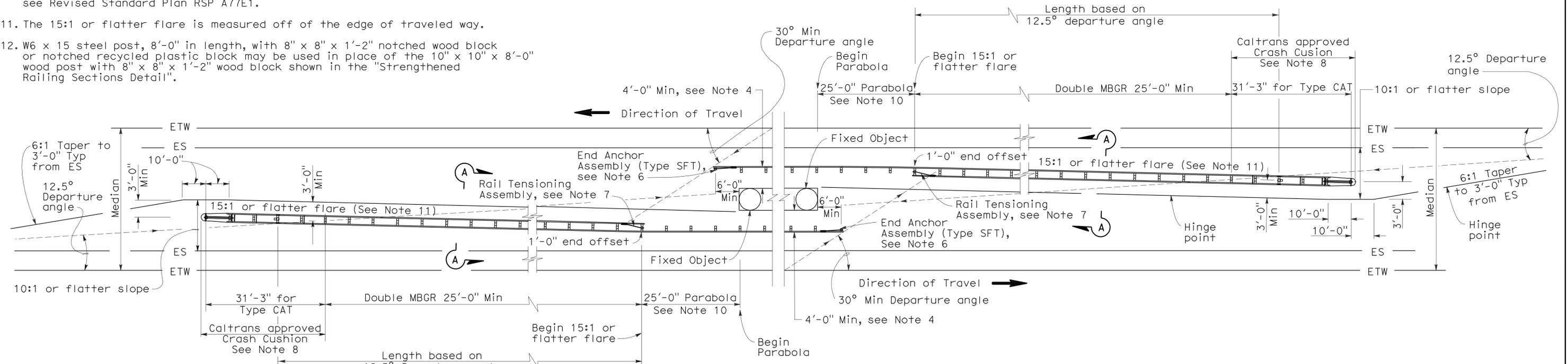
STRENGTHENED RAILING SECTIONS FOR FIXED OBJECT

Use strengthened railing sections with Type 14A layout where minimum clearance between the face of the guard railing and fixed object(s) is less than 4'-0", but not less than 2'-3", See Note 4.



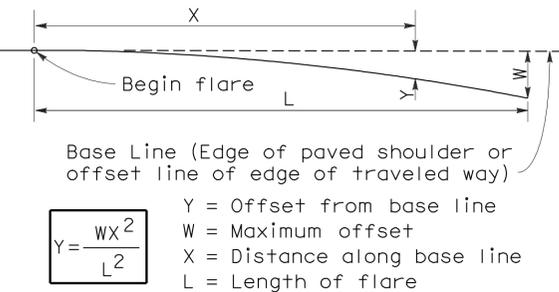
**SECTION A-A
TYPICAL DOUBLE METAL BEAM GUARD RAILING**

To accompany plans dated 10-3-11
 5/8" ϕ button head bolt with hex nut or 5/8" ϕ Rod, threaded both ends, with hex nuts.
 1/2" Max exposed threads after nut(s) tightened. No washer on rail faces for bolted connection to line post.

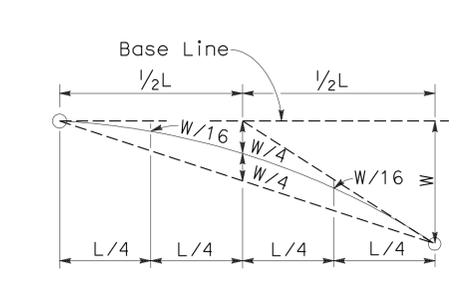


TYPE 14A LAYOUT

See Note 9



PARABOLIC FLARE OFFSETS



TYPICAL PARABOLIC LAYOUT

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**METAL BEAM GUARD RAILING
 TYPICAL LAYOUTS FOR
 FIXED OBJECTS
 BETWEEN SEPARATE ROADBEDS
 (TWO-WAY TRAFFIC)**
 NO SCALE

RSP A77G1 DATED MAY 20, 2011 SUPERSEDES RSP A77G1
 DATED JUNE 6, 2008 AND STANDARD PLAN A77G1
 DATED MAY 1, 2006 - PAGE 59 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77G1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1,20,128, 162,253,271	Var	35	69

Randell D. Hiatt
 REGISTERED CIVIL ENGINEER

May 20, 2011
 PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER
 Randell D. Hiatt
 No. C50200
 Exp. 6-30-11
 CIVIL
 STATE OF CALIFORNIA

2006 REVISED STANDARD PLAN RSP A77G1

NOTES:

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard railing post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks may be used for 6" x 8" x 6'-0" wood line posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- A 4'-0" minimum clearance is required between the face of the railing and the face of a fixed object located directly behind standard guard railing section with post spacing of 6'-3". Construct guard railing as shown in the detail "Strengthened Railing Sections for Fixed Objects" on this plan, where the clearance between the face of the railing and the face of a fixed object is less than 4'-0", but not less than 2'-3". Where the clearance is less than 2'-3", a concrete wall or barrier should be constructed to shield the fixed object(s).
- Direction of adjacent traffic indicated by \rightarrow .

- For End Anchor Assembly (Type SFT) details, see Standard Plan A77H1.
- Type of crash cushion to be used will be shown on the Project Plans.
- Type 15A layout is typically used on multilane freeways or expressways to shield fixed objects in the area between separated one-way roadbeds.
- For typical flare offsets for 25'-0" length parabola with maximum offset of 1'-0", see Revised Standard Plan RSP A77E1.
- The 15:1 or flatter flare is measured off of the edge of the traveled way.
- W6 x 15 steel post, 8'-0" in length, with 8" x 8" x 1'-2" notched wood block or notched recycled plastic blocks may be used in place of the 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood block shown in the "Strengthened Railing Sections Detail".

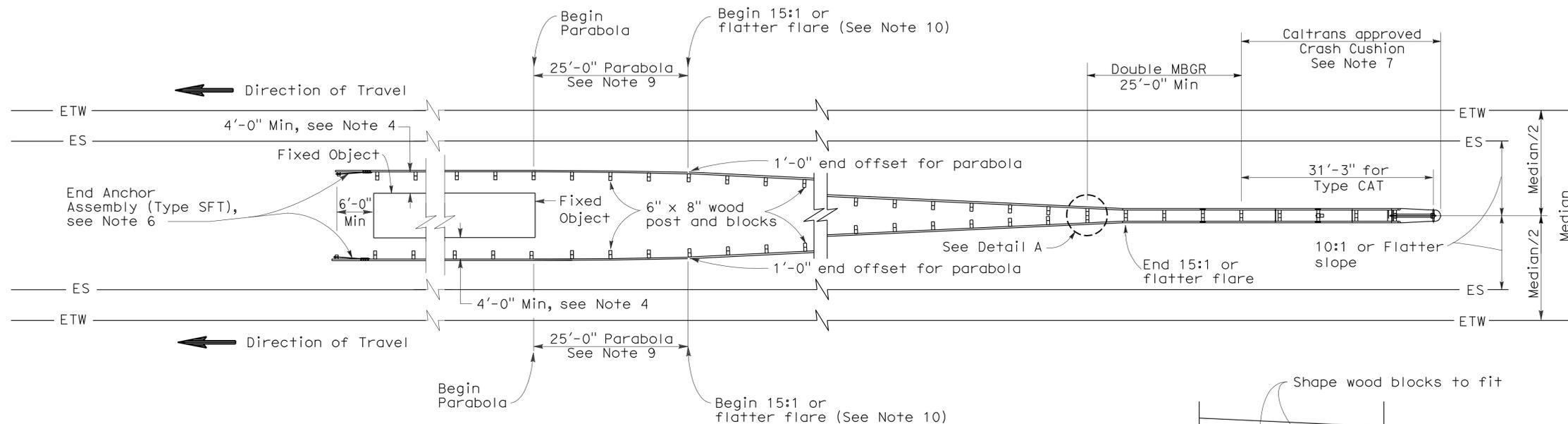
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	Men	1,20,128, 162,253,271	Var	36	69

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

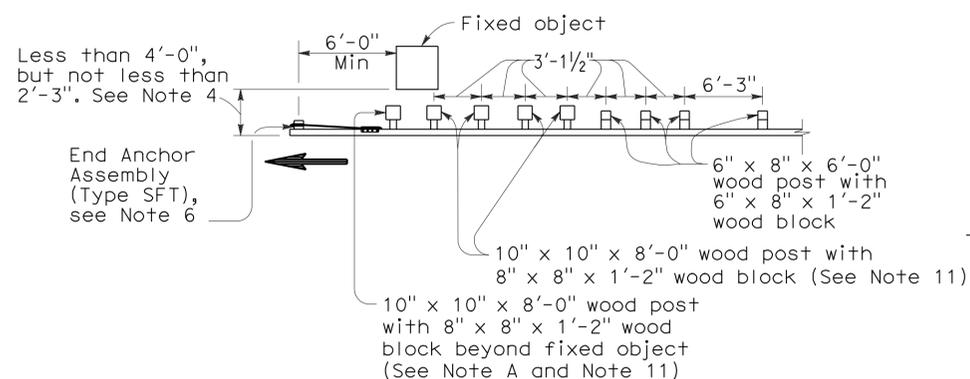
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 10-3-11



TYPE 15A LAYOUT

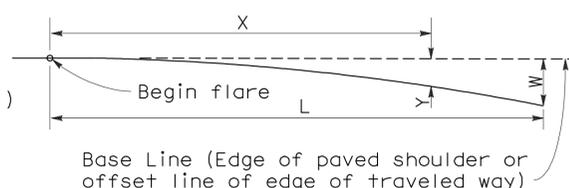
See Note 9



NOTE A: For a series of fixed objects (bridge columns, overhead sign supports, etc.) additional 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood blocks at 3'-1/2" center to center spacing are to be used between fixed objects.

STRENGTHENED RAILING SECTIONS FOR FIXED OBJECT

Use strengthened railing sections with Type 15A layout where minimum clearance between the face of the guard railing and the fixed object(s) is less than 4'-0", but not less than 2'-3". See Note 4.

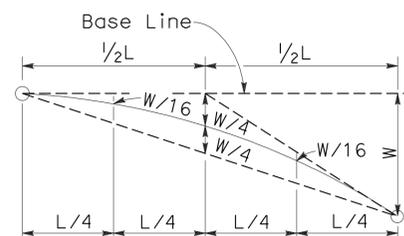


Base Line (Edge of paved shoulder or offset line of edge of traveled way)

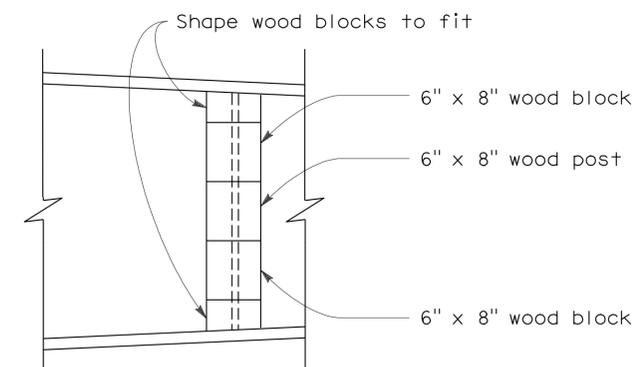
$Y = \frac{WX^2}{L^2}$

Y = Offset from base line
W = Maximum offset
X = Distance along base line
L = Length of flare

PARABOLIC FLARE OFFSETS



TYPICAL PARABOLIC LAYOUT



DETAIL A

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**METAL BEAM GUARD RAILING
TYPICAL LAYOUTS FOR
FIXED OBJECTS
BETWEEN SEPARATE ROADBEDS
(ONE-WAY TRAFFIC)**

NO SCALE

RSP A77G2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77G2
DATED MAY 1, 2006 - PAGE 60 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77G2

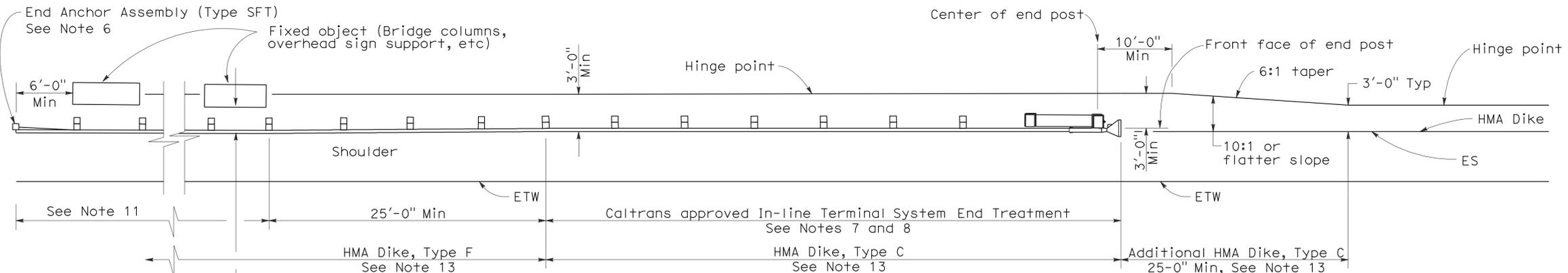
2006 REVISED STANDARD PLAN RSP A77G2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	Men	1,20,128, 162,253,271	Var	37	69

RANDALL D. HIATT
 REGISTERED CIVIL ENGINEER
 No. C50200
 Exp. 6-30-09
 CIVIL
 STATE OF CALIFORNIA

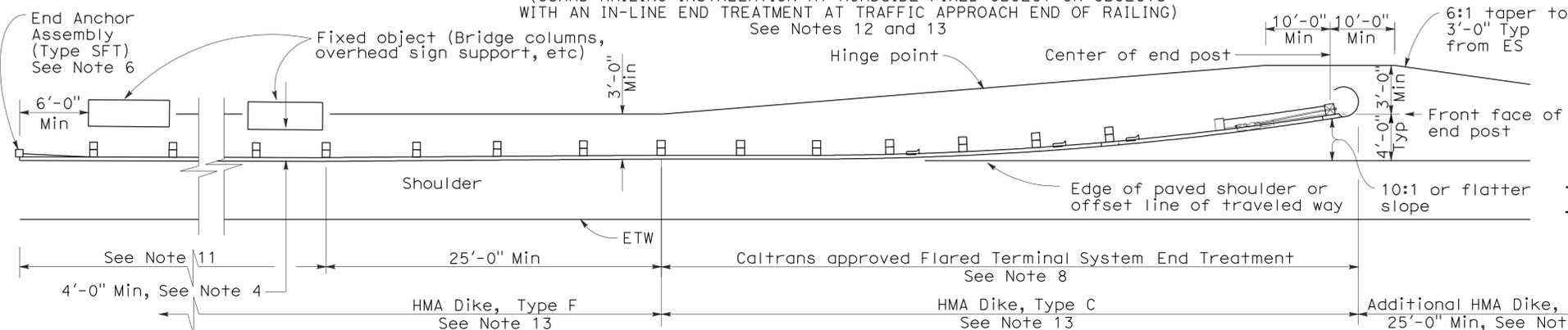
June 6, 2008
 PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



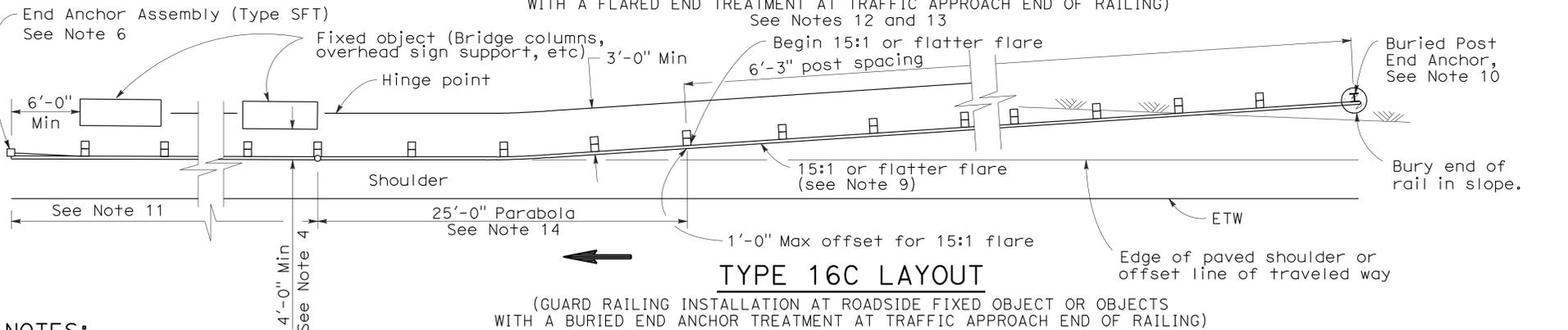
TYPE 16A LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH AN IN-LINE END TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Notes 12 and 13



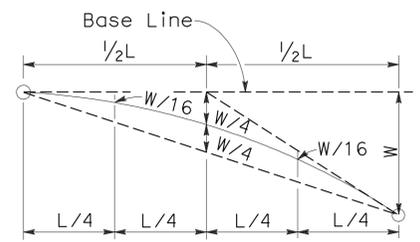
TYPE 16B LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH A FLARED END TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Notes 12 and 13

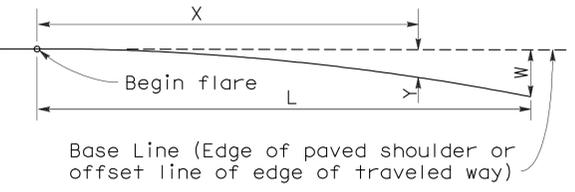


TYPE 16C LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH A BURIED END ANCHOR TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Notes 12 and 13

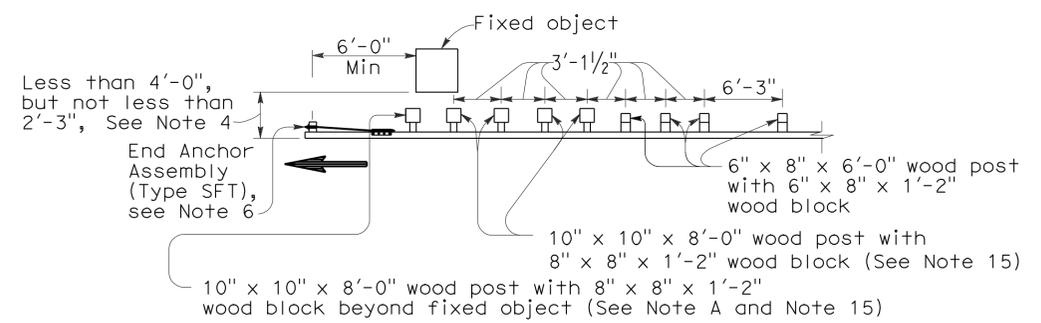


TYPICAL PARABOLIC LAYOUT



$Y = \frac{WX^2}{L^2}$
 Y = Offset from base line
 W = Maximum offset
 X = Distance along base line
 L = Length of flare

PARABOLIC FLARE OFFSETS



NOTE A: For a series of fixed objects (bridge columns, overhead sign supports, etc.) additional 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood blocks at 3'-1/2" center to center spacing are to be used between fixed objects.

STRENGTHENED RAILING SECTIONS FOR FIXED OBJECT

Use strengthened railing sections with Types 16A, 16B or 16C Layouts where minimum clearance between the face of the guard railing and fixed object(s) is less than 4'-0", but not less than 2'-3". See Note 4

NOTES:

- Line post, blocks and hardware to be used are shown on Revised Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard railing post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks may be used for 6" x 8" x 6'-0" wood line posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- A 4'-0" minimum clearance is required between the face of the railing and the face of a fixed object located directly behind standard guard railing sections with post spacing of 6'-3". Construct guard railing as shown in the detail "Strengthened Railing Sections for Fixed Objects" on this plan, where the clearance between the face of the railing and the face of a fixed object is less than 4'-0", but not less than 2'-3". Where the clearance is less than 2'-3", a concrete wall or barrier should be constructed to shield the fixed object(s).
- Direction of adjacent traffic indicated by \rightarrow .
- For End Anchor Assembly (Type SFT) details, see Standard Plan A77H1.
- In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
- The type of terminal system to be used will be shown on the Project Plans.
- The 15:1 or flatter flare used with Type 16C Layout is based on the edge of the paved shoulder or offset line of edge of the traveled way. The length of guard railing within the 15:1 or flatter flare is based on site conditions and should be a length equal to multiples of 12'-6".
- For details of the Buried Post End Anchor used with Type 16C Layout, see Standard Plan A77I2.
- As site conditions dictate, construct additional guard railing to shield fixed object(s). Additional guard railing length equal to multiples of 12'-6". Post spacing at 6'-3" except as specified in Note 4.
- Layout Types 16A, 16B or 16C are typically used where guard railing is recommended to shield roadside fixed object(s) and a crashworthy end treatment is required for only one direction of traffic.
- Where placement of dike is required with guard railing, see Revised Standard Plan RSP A77C4 for dike positioning details.
- For typical flare offsets for 25'-0" length parabola with maximum offset of 1'-0", see Revised Standard Plan RSP A77E1.
- W6 x 15 steel post, 8'-0" in length, with 8" x 8" x 1'-2" notched wood block or notched recycled plastic blocks may be used in place of the 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood block shown in the "Strengthened Railing Sections Detail".

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
METAL BEAM GUARD RAILING TYPICAL LAYOUTS FOR ROADSIDE FIXED OBJECTS

NO SCALE
RSP A77G3 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77G3
DATED MAY 1, 2006 - PAGE 61 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77G3

2006 REVISED STANDARD PLAN RSP A77G3

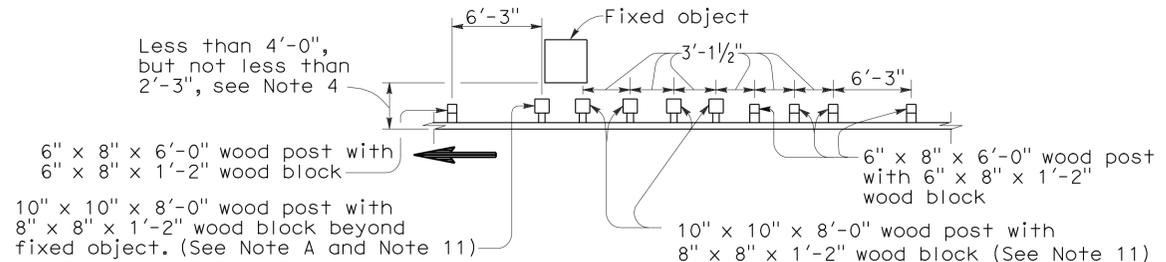
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	Men	1,20,128, 162,253,271	Var	38	69

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

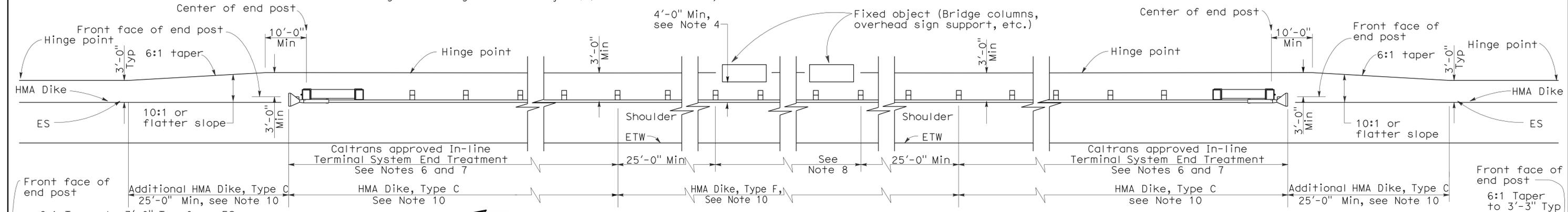
To accompany plans dated 10-3-11



NOTE A: For a series of fixed objects (bridge columns, overhead sign supports, etc.) additional 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood blocks at 3'-1/2" center to center spacing are to be used between fixed object(s).

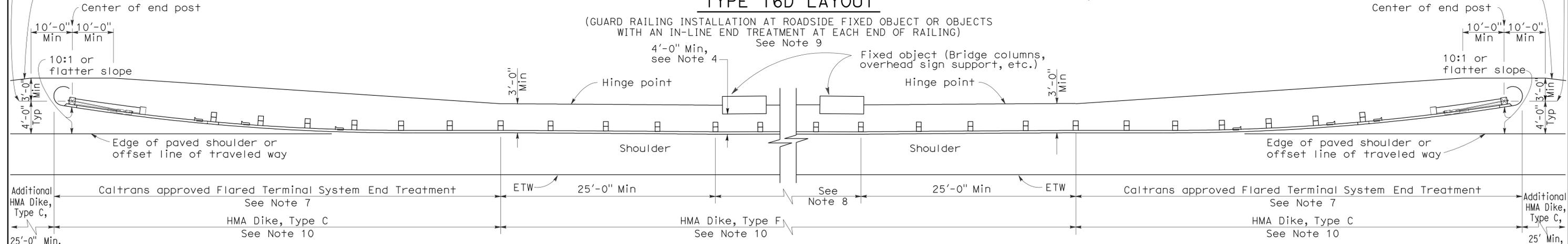
**STRENGTHENED RAILING SECTIONS
FOR FIXED OBJECT**

Use strengthened railing sections with Layout Types 16D or 16E where minimum clearance between the guard railing and fixed object(s) is less than 4'-0", but not less than 2'-3". See Note 4.



TYPE 16D LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH AN IN-LINE END TREATMENT AT EACH END OF RAILING)
See Note 9



TYPE 16E LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH A FLARED END TREATMENT AT EACH END OF RAILING)
See Note 9

NOTES:

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard railing post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks may be used for 6" x 8" x 6'-0" wood line posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- A 4'-0" minimum clearance is required between the face of the railing and the face of a fixed object located directly behind standard guard railing sections with post spacing at 6'-3". Construct guard railing as shown in the detail "Strengthened Railing Sections for Fixed Objects" on this plan, where the clearance between the face of the railing and the face of a fixed object is less than 4'-0", but not less than 2'-3". Where the clearance is less than 2'-3", a concrete wall or barrier should be constructed to shield the fixed object(s).
- Direction of adjacent traffic indicated by →.

- In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
- The type of terminal system to be used will be shown on the Project Plans.
- As site conditions dictate, construct additional guard railing to shield fixed object(s). Additional guard railing length equal to multiples of 12'-6". Post spacing at 6'-3", except as specified in Note 4.
- Layout Types 16D through 16L, shown on the A77G Series of Revised Standard Plans, are typically used where guard railing is recommended to shield roadside fixed object(s) and a crashworthy end treatment is required for both directions of traffic.
- Where placement of dike is required with guard railing, see Revised Standard Plan RSP A77C4 for dike positioning details.

- W6 x 15 steel post, 8'-0" in length, with 8" x 8" x 1'-2" notched wood block or notched recycled plastic block may be used in place of the 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood block shown in the "Strengthened Railing Sections Detail."

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**METAL BEAM GUARD RAILING
TYPICAL LAYOUTS FOR
ROADSIDE FIXED OBJECTS**
NO SCALE

RSP A77G4 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77G4
DATED MAY 1, 2006 - PAGE 62 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77G4

2006 REVISED STANDARD PLAN RSP A77G4

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	Men	1,20,128, 162,253,271	Var	39	69

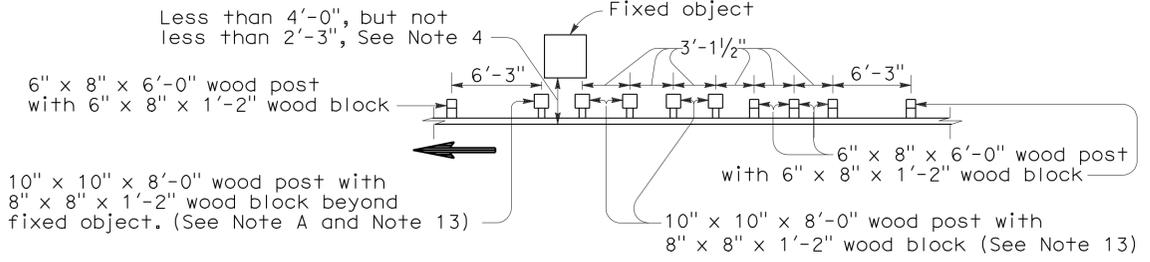
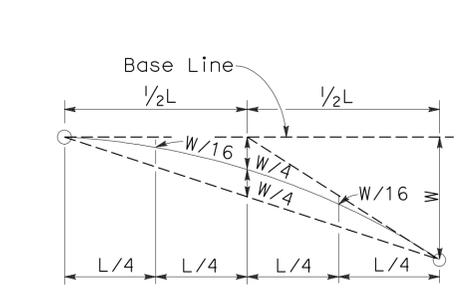
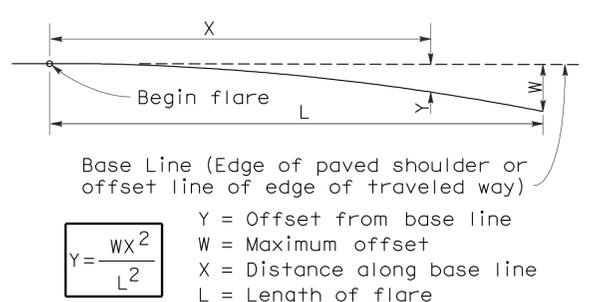
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 10-3-11

2006 REVISED STANDARD PLAN RSP A77G5



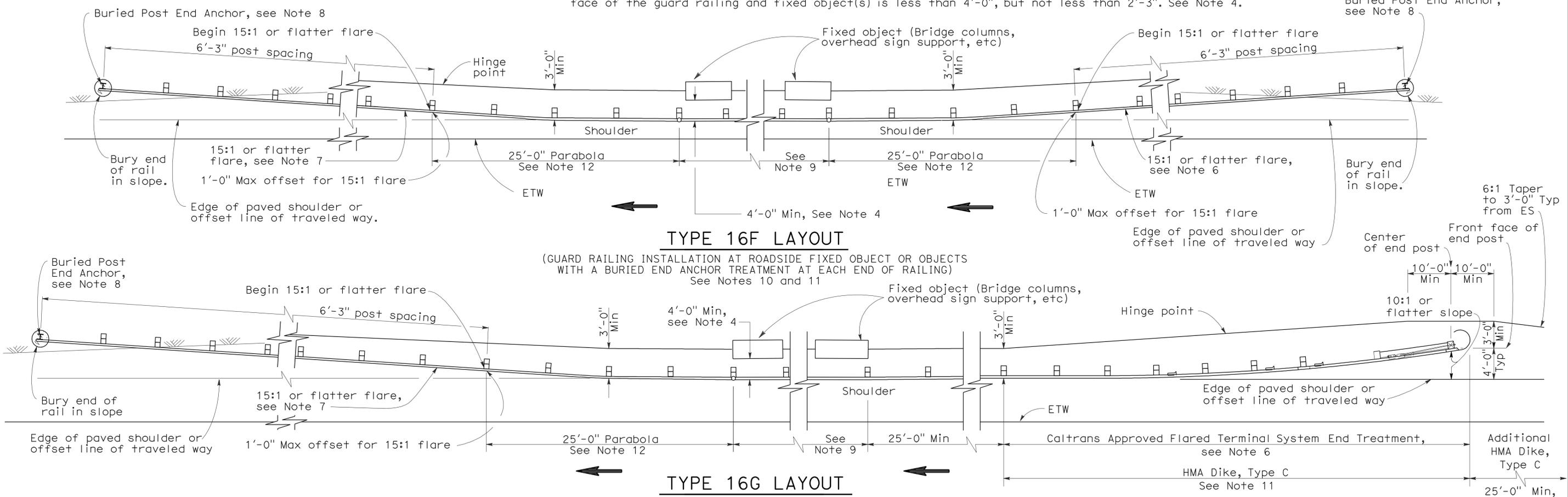
NOTE A: For a series of fixed objects (bridge columns, overhead sign supports, etc.) additional 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood blocks at 3'-1/2" center to center spacing are to be used between fixed object(s).

PARABOLIC FLARE OFFSETS

TYPICAL PARABOLIC LAYOUT

STRENGTHENED RAILING SECTIONS FOR FIXED OBJECT

Use strengthened railing sections with Layout Types 16F or 16G where minimum clearance between the face of the guard railing and fixed object(s) is less than 4'-0", but not less than 2'-3". See Note 4.



TYPE 16F LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH A BURIED END ANCHOR TREATMENT AT EACH END OF RAILING) See Notes 10 and 11

TYPE 16G LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH A FLARED END TREATMENT AND A BURIED END ANCHOR TREATMENT AT THE ENDS OF RAILING) See Notes 10 and 11

NOTES:

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard railing post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 8" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks may be used for 6" x 8" x 6'-0" wood posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- A 4'-0" minimum clearance is required between the face of the railing and the face of a fixed object located directly behind standard guard railing sections with post spacing at 6'-3". Construct guard railing as shown in the detail "Strengthened Railing Sections for Fixed Objects" on this plan, where the clearance between the face of the railing and the face of a fixed object is less than 4'-0", but not less than 2'-3". Where the clearance is less than 2'-3", a concrete wall or barrier should be constructed to shield the fixed object(s).
- Direction of adjacent traffic indicated by →.

- The type of terminal system to be used will be shown on the Project Plans.
- The 15:1 or flatter flare for the buried post anchor is based on the edge of the paved shoulder or offset line of edge of the traveled way. The length of guard railing within the 15:1 or flatter flare is based on site conditions and should be a length equal to multiples of 12'-6".
- For details of the Buried Post End Anchor details, see Standard Plan A77I2.
- As site conditions dictate, construct additional guard railing to shield fixed object(s). Additional guard railing length equal to multiples of 12'-6". Post spacing at 6'-3", except as specified in Note 4.
- Layout Types 16D through 16L, shown on the A77G Series of Revised Standard Plans, are typically used on highways where guard railing is recommended to shield roadside fixed object(s) and a crashworthy end treatment is required for both directions of traffic.
- Where placement of dike is required with guard railing, see Revised Standard Plan RSP A77C4 for dike positioning details.

- For typical flare offsets for 25'-0" length parabola with maximum offset of 1'-0", see Revised Standard Plan RSP A77E1.
- W6 x 15 steel post, 8'-0" in length, with 8" x 8" x 1'-2" notched wood block or notched recycled plastic blocks may be used in place of the 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood block shown in the "Strengthened Railing Sections Detail".

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING
TYPICAL LAYOUTS FOR
ROADSIDE FIXED OBJECTS**

NO SCALE

RSP A77G5 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77G5
DATED MAY 1, 2006 - PAGE 63 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77G5

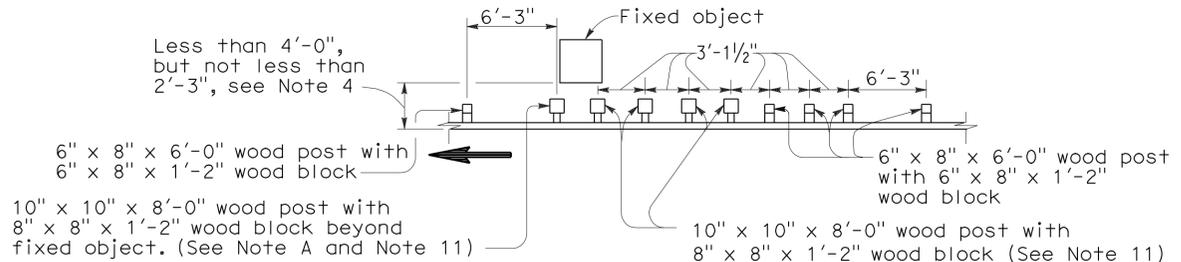
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	Men	1,20,128, 162,253,271	Var	40	69

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

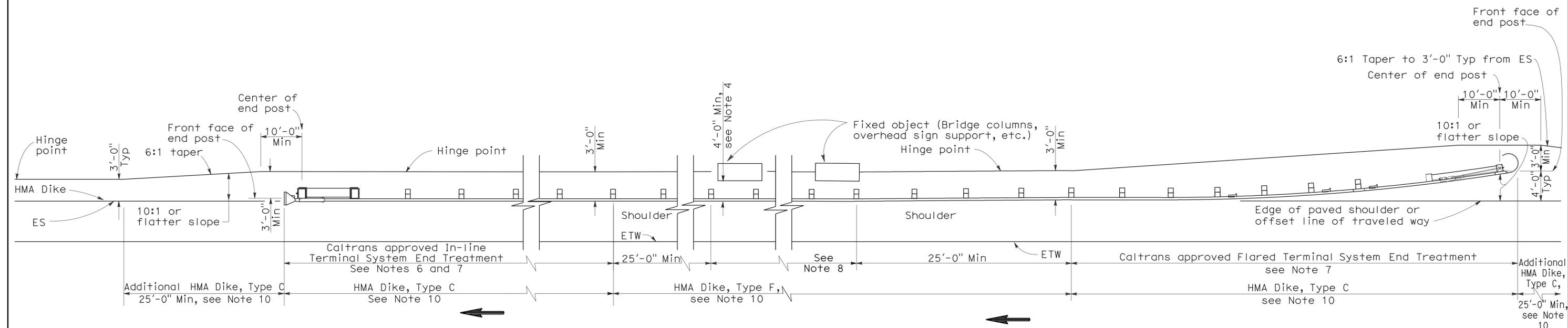
To accompany plans dated 10-3-11



Note A. For a series of fixed objects (bridge columns, overhead sign supports, etc.) additional 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood blocks at 3'-1/2" center to center spacing are to be used between fixed object(s).

STRENGTHENED RAILING SECTIONS FOR FIXED OBJECT

Use strengthened railing sections with Layout Type 16H where minimum clearance between the face of the guard railing and fixed object(s) is less than 4'-0", but not less than 2'-3". See Note 4.



TYPE 16H LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH A FLARED END TREATMENT AND AN IN-LINE TREATMENT AT THE ENDS OF RAILING) See Note 9

NOTES:

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard railing post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks may be used for 6" x 8" x 6'-0" wood posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- A 4'-0" minimum clearance is required between the face of the railing and the face of a fixed object, located directly behind standard guard railing sections with post spacing at 6'-3". Construct guard railing as shown in the detail "Strengthened Railing Sections for Fixed Objects" on this plan, where the clearance between the face of the railing and the face of a fixed object is less than 4'-0", but not less than 2'-3". Where the clearance is less than 2'-3", a concrete wall or barrier should be constructed to shield the fixed object(s).
- Direction of adjacent traffic indicated by →.

- In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
- The type of terminal system to be used will be shown on the Project Plans.
- As site conditions dictate, construct additional guard railing to shield fixed object(s). Additional guard railing length equal to multiples of 12'-6". Post spacing at 6'-3", except as specified in Note 4.
- Layout Types 16D through 16L, shown on the A77G Series of Revised Standard Plans, typically used where guard railing is recommended to shield roadside fixed object(s) and a crashworthy end treatment is required for both directions of traffic.
- Where placement of dike is required with guard railing, see Revised Standard Plan RSP A77C4 for dike positioning details.
- W6 x 15 steel post, 8'-0" in length, with 8" x 8" x 1'-2" notched wood block or notched recycled plastic blocks may be used in place of the 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood block shown in the "Strengthened Railing Sections Detail".

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

METAL BEAM GUARD RAILING TYPICAL LAYOUTS FOR ROADSIDE FIXED OBJECTS

NO SCALE
RSP A77G6 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77G6
DATED MAY 1, 2006 - PAGE 64 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77G6

2006 REVISED STANDARD PLAN RSP A77G6

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	Men	1,20,128, 162,253,271	Var	41	69

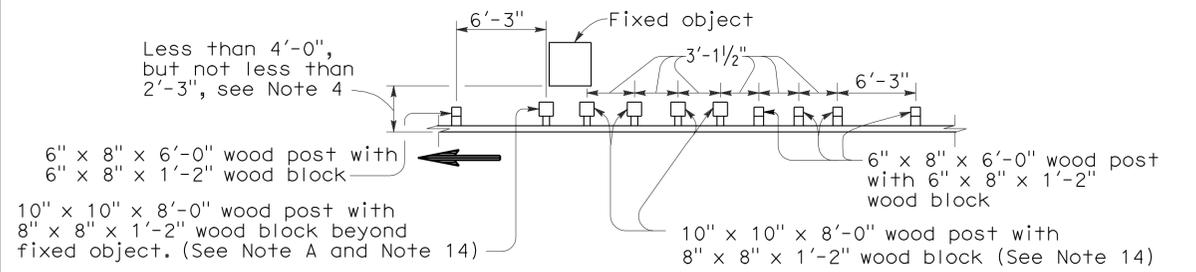
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

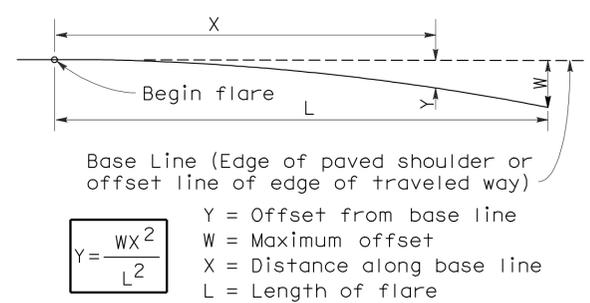
To accompany plans dated 10-3-11

2006 REVISED STANDARD PLAN RSP A77G7



Note A. For a series of fixed objects (bridge columns, overhead sign supports, etc.) additional 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood blocks at 3'-1/2" center to center spacing are to be used between fixed object(s).

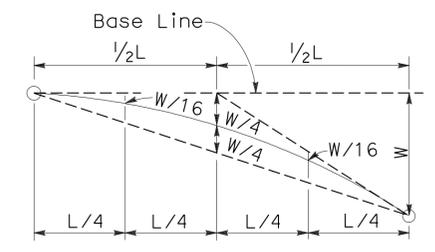
STRENGTHENED RAILING SECTIONS FOR FIXED OBJECT



$$Y = \frac{WX^2}{L^2}$$

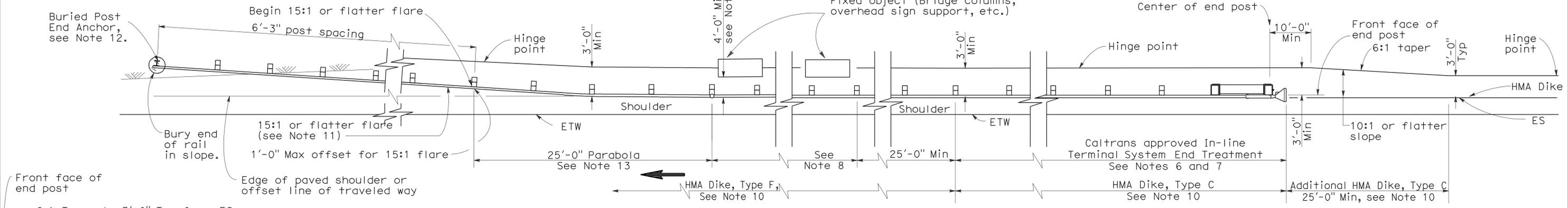
Y = Offset from base line
W = Maximum offset
X = Distance along base line
L = Length of flare

PARABOLIC FLARE OFFSETS



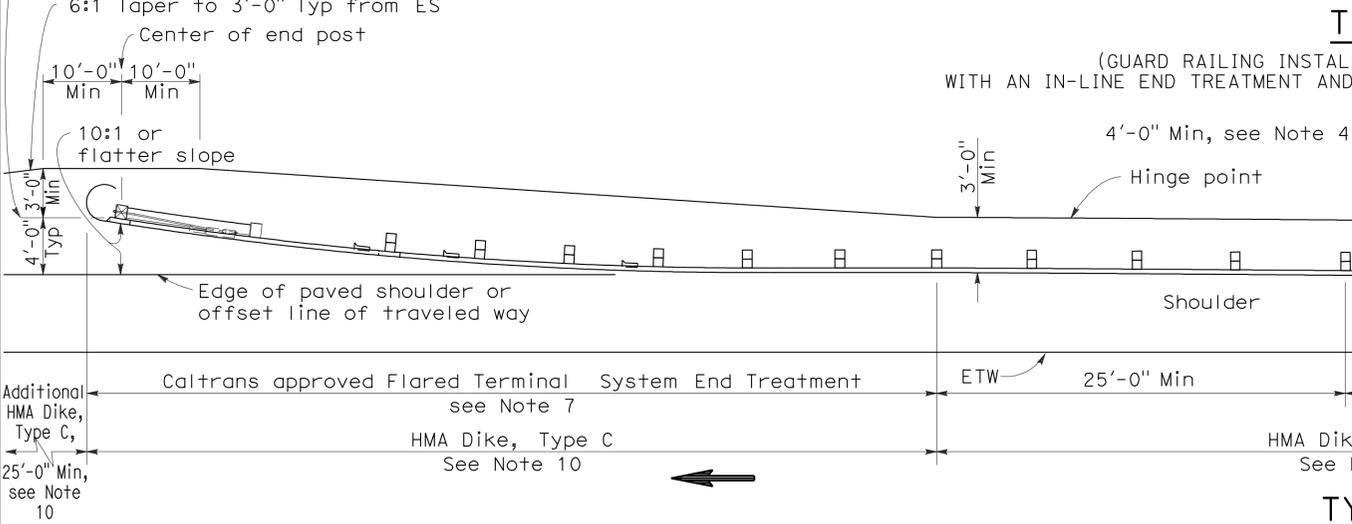
TYPICAL PARABOLIC LAYOUT

Use strengthened railing sections with Layout Types 16I or 16J Layouts where minimum clearance between the face of the guard railing and fixed object(s) is less than 4'-0", but not less than 2'-3". See Note 4.



TYPE 16I LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH AN IN-LINE END TREATMENT AND A BURIED END ANCHOR TREATMENT AT THE ENDS OF RAILING) See Note 9



TYPE 16J LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH AN IN-LINE END TREATMENT AND A FLARED END TREATMENT AT THE ENDS OF RAILING) See Note 9

NOTES:

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard railing post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks may be used for 6" x 8" x 6'-0" wood posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- A 4'-0" minimum clearance is required between the face of the railing and the face of a fixed object located directly behind standard guard railing sections with post spacing at 6'-3". Construct guard railing as shown in the detail "Strengthened Railing Sections for Fixed Objects" on this plan, where the clearance between the face of the railing and the face of a fixed object is less than 4'-0", but not less than 2'-3". Where the clearance is less than 2'-3", a concrete wall or barrier should be constructed to shield the fixed object(s).
- Direction of adjacent traffic indicated by →.

- In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
- The type of terminal system to be used will be shown on the Project Plans.
- As site conditions dictate, construct additional guard railing to shield fixed object(s). Additional guard railing length equal to multiples of 12'-6". Post spacing at 6'-3", except as specified in Note 4.
- Layout Types 16D through 16L, shown on the A77G Series of Revised Standard Plans, are typically used where guard railing is recommended to shield roadside fixed object(s) and a crashworthy end treatment is required for both directions of traffic.
- Where placement of dike is required with guard railing, see Revised Standard Plan RSP A77C4 for dike positioning details.
- The 15:1 or flatter flare for the buried post anchor is based on the edge of the paved shoulder or offset line of edge of the traveled way. The length of guard railing within the 15:1 or flatter flare is based on site conditions and should be a length equal to multiples of 12'-6".

- For details of Buried Post End Anchor details, see Standard Plan A77I2.
- For typical flare offsets for 25'-0" length parabola with maximum offset of 1'-0", see Revised Standard RSP Plan A77E1.
- W6 x 15 steel post, 8'-0" in length, with 8" x 8" x 1'-2" notched wood block or notched recycled plastic blocks may be used in place of the 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood block shown in the "Strengthened Railing Sections Detail".

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
METAL BEAM GUARD RAILING
TYPICAL LAYOUTS FOR
ROADSIDE FIXED OBJECTS
NO SCALE

RSP A77G7 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77G7
DATED MAY 1, 2006 - PAGE 65 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77G7

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	Men	1,20,128, 162,253,271	Var	42	69

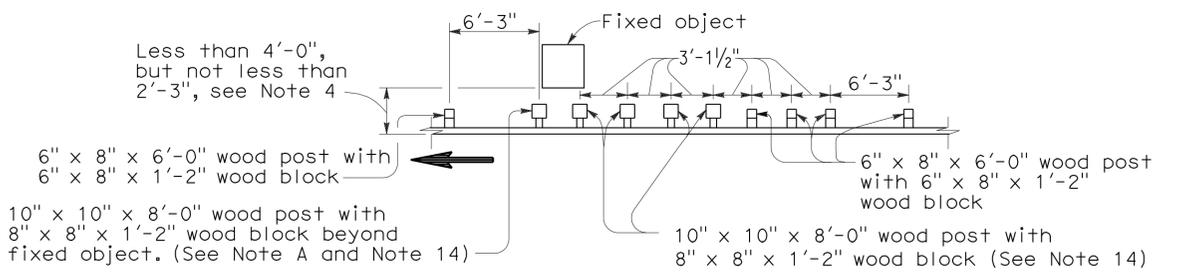
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 10-3-11

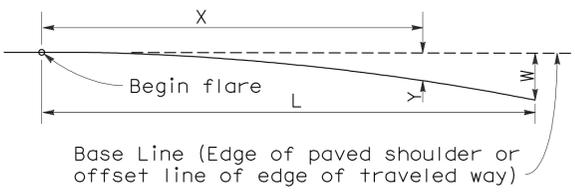
2006 REVISED STANDARD PLAN RSP A77G8



Note A. For a series of fixed objects (bridge columns, overhead sign supports, etc.) additional 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood blocks at 3'-1/2" center to center spacing are to be used between fixed object(s).

STRENGTHENED RAILING SECTIONS FOR FIXED OBJECT

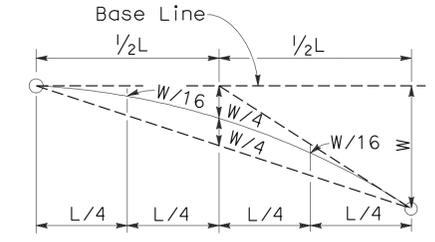
Use strengthened railing sections with Layout Types 16K or 16L Layouts where minimum clearance between the face of the guard railing and fixed object(s) is less than 4'-0", but not less than 2'-3". See Note 4.



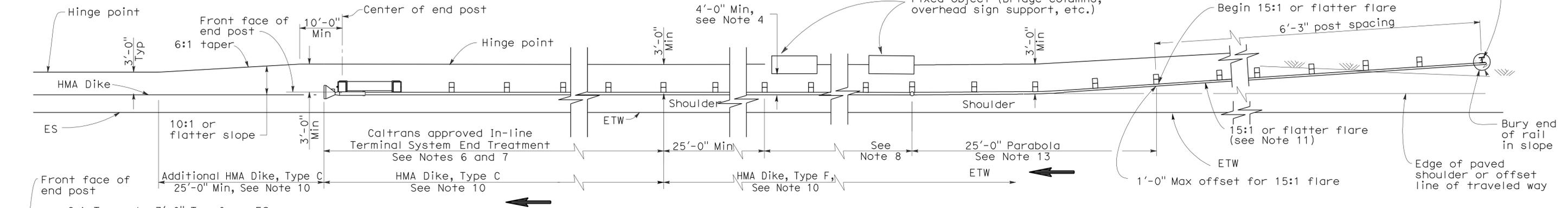
Y = Offset from base line
W = Maximum offset
X = Distance along base line
L = Length of flare

$$Y = \frac{WX^2}{L^2}$$

PARABOLIC FLARE OFFSETS

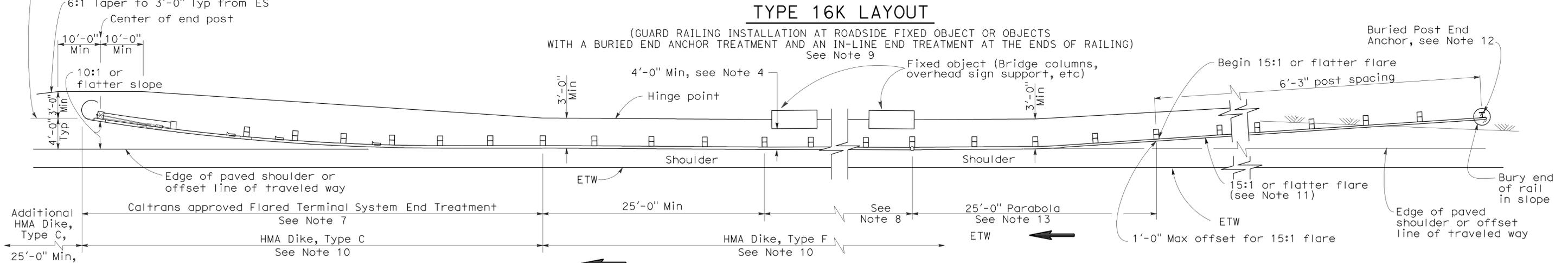


TYPICAL PARABOLIC LAYOUT



TYPE 16K LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH A BURIED END ANCHOR TREATMENT AND AN IN-LINE END TREATMENT AT THE ENDS OF RAILING) See Note 9



TYPE 16L LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH A BURIED END ANCHOR TREATMENT AND A FLARED END TREATMENT AT THE ENDS OF RAILING) See Note 9

NOTES:

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard railing post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks may be used for 6" x 8" x 6'-0" wood posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- A 4'-0" minimum clearance is required between the face of the railing and the face of a fixed object located directly behind standard guard railing sections with post spacing at 6'-3". Construct guard railing as shown in the detail "Strengthened Railing Sections for Fixed Objects" on this plan, where the clearance between the face of the railing and the face of a fixed object is less than 4'-0", but not less than 2'-3". Where the clearance is less than 2'-3", a concrete wall or barrier should be constructed to shield the fixed object(s).
- Direction of adjacent traffic indicated by →.

- In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
- The type of terminal system to be used will be shown on the Project Plans.
- As site conditions dictate, construct additional guard railing to shield fixed object(s). Additional guard railing length equal to multiples of 12'-6". Post spacing at 6'-3", except as specified in Note 4.
- Layout Types 16D through 16L, shown on the A77G Series of Revised Standard Plans are typically used where guard railing is recommended to shield roadside fixed object(s) and a crashworthy end treatment is required for both directions of traffic.
- Where placement of dike is required with guard railing, see Revised Standard Plan RSP A77C4 for dike positioning details.
- The 15:1 or flatter flare for the buried post anchor is based on the edge of the paved shoulder or offset line of edge of the traveled way. The length of guard railing within the 15:1 or flatter flare is based on site conditions and should be a length equal to multiples of 12'-6".

- For details of Buried Post End Anchor details, see Standard Plan A77I2.
- For typical flare offsets for 25'-0" length parabola with maximum offset of 1'-0", see Revised Standard RSP Plan A77E1.
- W6 x 15 steel post, 8'-0" in length, with 8" x 8" x 1'-2" notched wood block or notched recycled plastic blocks may be used in place of the 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood block shown in the "Strengthened Railing Sections Detail".

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
METAL BEAM GUARD RAILING TYPICAL LAYOUTS FOR ROADSIDE FIXED OBJECTS

NO SCALE
RSP A77G8 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77G8
DATED MAY 1, 2006 - PAGE 66 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77G8

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1,20,128, 162,253,271	Var	43	69

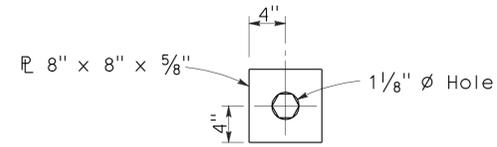
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

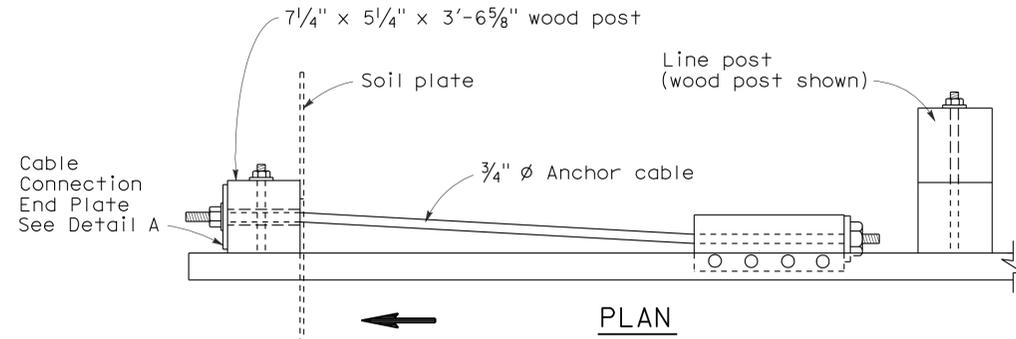
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-11
CIVIL
STATE OF CALIFORNIA

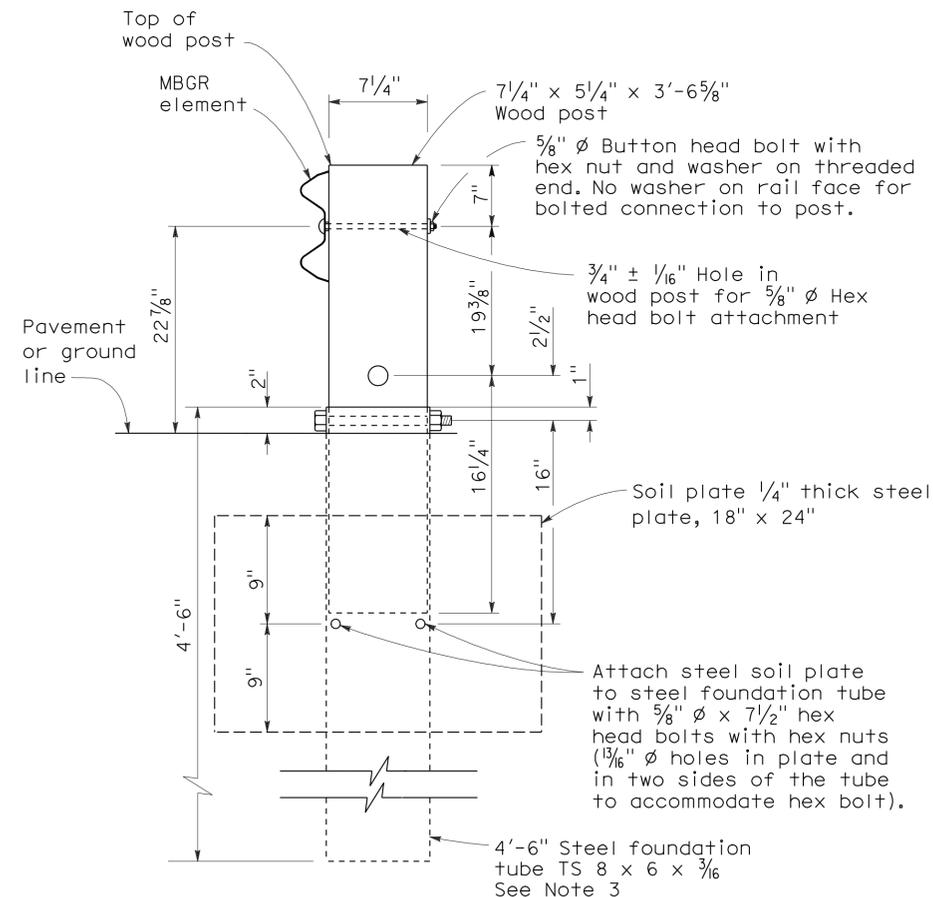
To accompany plans dated 10-3-11



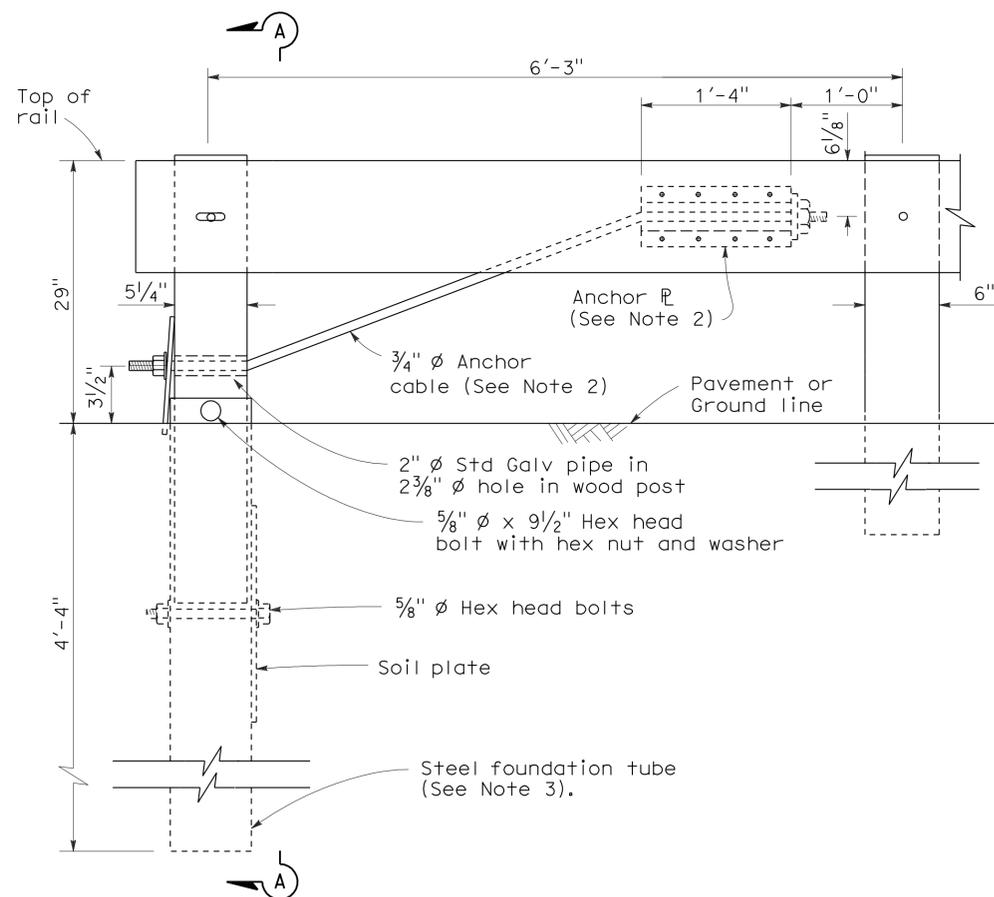
DETAIL A
CABLE CONNECTION
END PLATE



PLAN



SECTION A-A



ELEVATION
END ANCHOR
ASSEMBLY (TYPE SFT)

See Note 1

NOTES:

1. See the A77E, A77F and A77G series of Standard Plans for typical use of End Anchor Assembly (Type SFT).
2. For details of the anchor plate and 3/4" cable, see Standard Plan A77H3.
3. A 6'-0" length steel foundation tube, TS 8 x 6 x 3/16, without a soil plate, may be furnished and installed in place of the 4'-6" length steel foundation tube and soil plate shown. Minimum embedment of the 6'-0" length tube shall be 5'-9". A 5/8" diameter hex head bolt and nut shall be installed in the hole in the 6'-0" length tube to keep the wood post from dropping into the tube.
4. Direction of traffic indicated by \Rightarrow .
5. Install line post, steel foundation tube and soil plate in soil.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

METAL RAILING
END ANCHOR ASSEMBLY
(TYPE SFT)

NO SCALE

RSP A77H1 DATED MAY 20, 2011 SUPERSEDES STANDARD PLAN A77H1
DATED MAY 1, 2006 - PAGE 67 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77H1

2006 REVISED STANDARD PLAN RSP A77H1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1,20,128, 162,253,271	Var	44	69

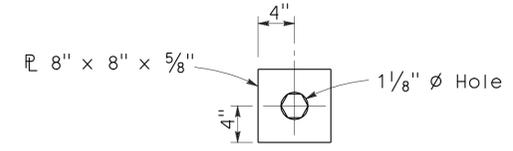
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

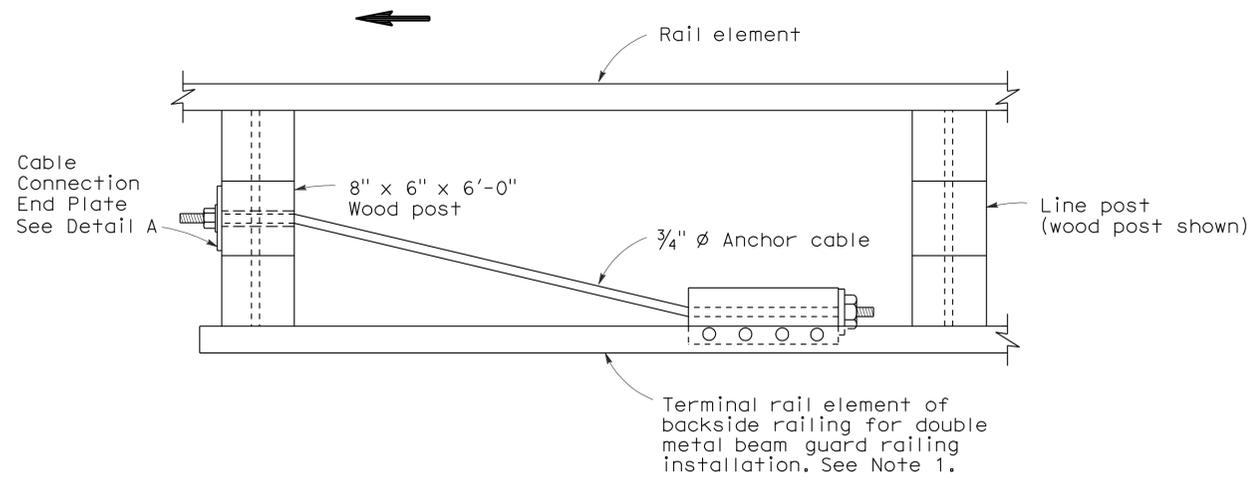
Randell D. Hiatt
REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-11
CIVIL
STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

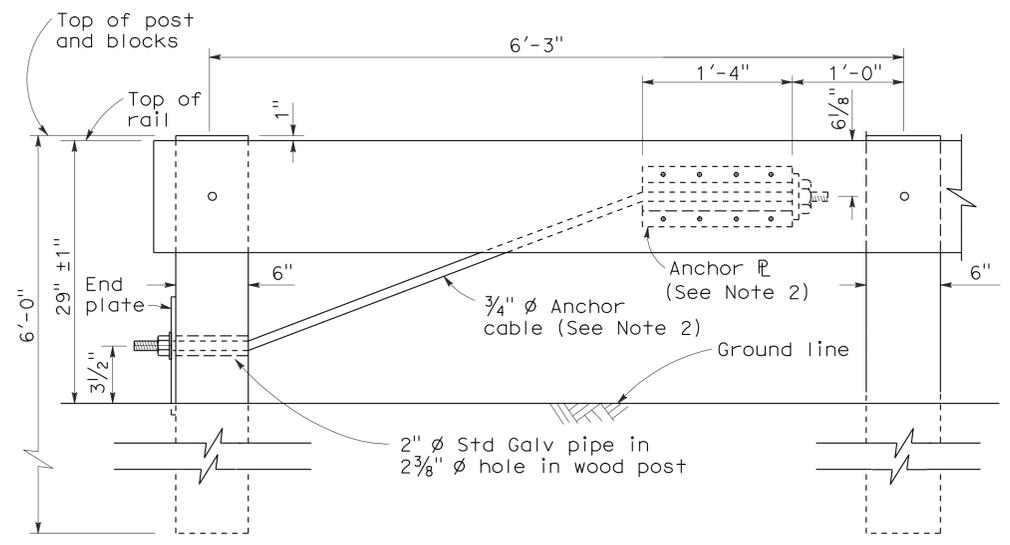
To accompany plans dated 10-3-11



DETAIL A
CABLE CONNECTION
END PLATE



PLAN



ELEVATION
RAIL TENSIONING
ASSEMBLY
See Note 1

NOTES:

1. See Standard Plan A77F3 and Standard Plan A77G1 for typical use of rail tensioning assembly.
2. For details of the anchor plate and 3/4 inch cable, see Standard Plan A77H3.
3. Direction of traffic indicated by →.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
METAL RAILING
RAIL TENSIONING ASSEMBLY

NO SCALE

RSP A77H2 DATED MAY 20, 2011 SUPERSEDES STANDARD PLAN A77H2
DATED MAY 1, 2006 - PAGE 68 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77H2

2006 REVISED STANDARD PLAN RSP A77H2

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1,20,128, 162,253,271	Var	45	69

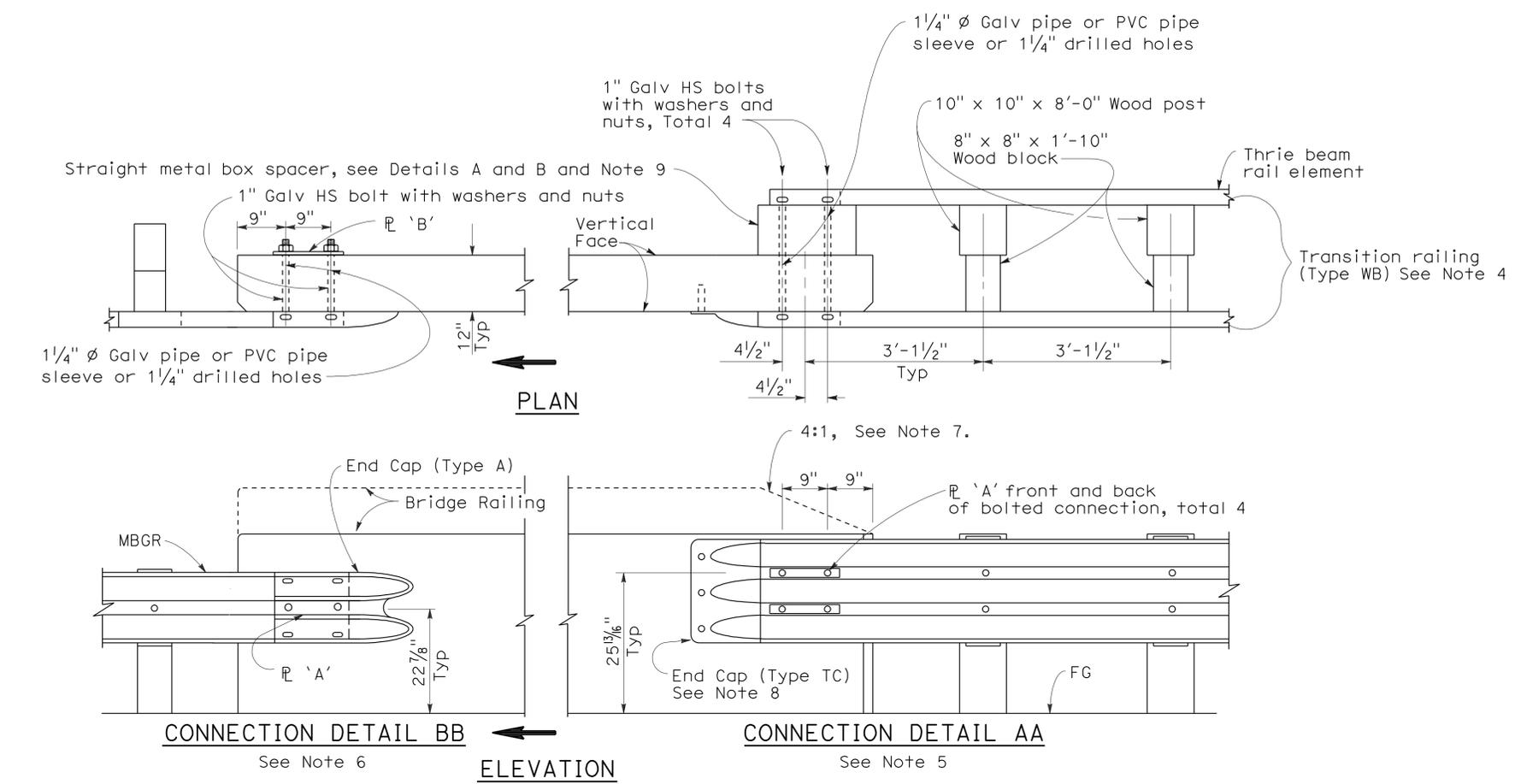
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

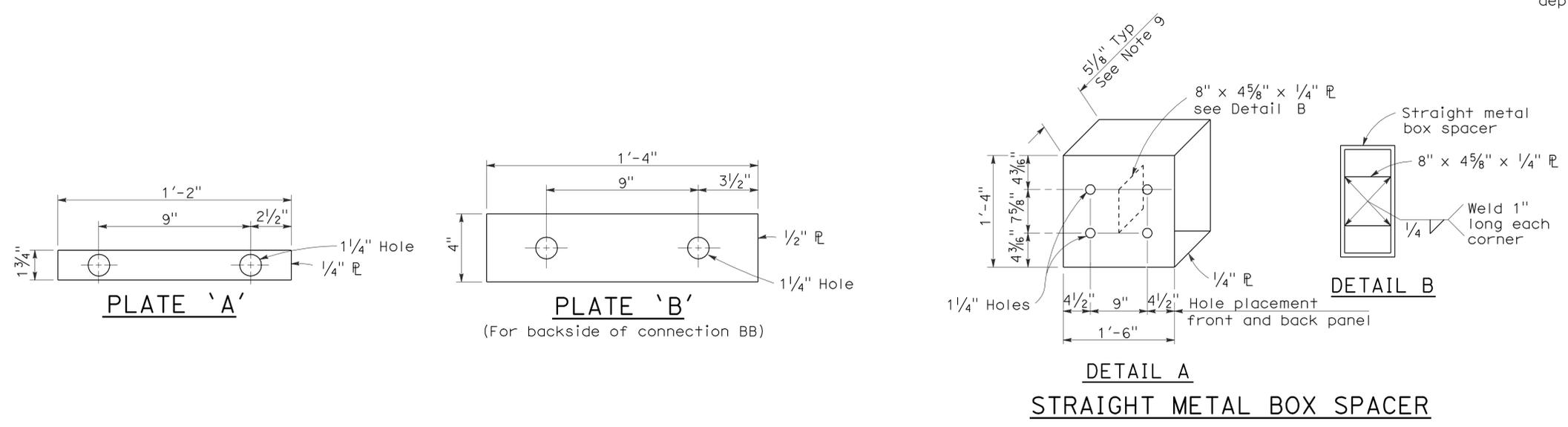
REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-11
CIVIL
STATE OF CALIFORNIA

To accompany plans dated 10-3-11



- NOTES:**
- See Revised Standard Plan RSP A77J2 for additional connection details to bridges without sidewalks.
 - Additional details of posts, blocks and hardware are shown on Standard Plan A77B1, A77C1 and A77C2.
 - Direction of adjacent traffic indicated by \rightarrow .
 - For additional details of Transition Railing (Type WB), see Standard Plan A77J4. Transition Railing (Type WB) transitions the 12 gage w-beam standard railing section of guard railing to a heavier gage nested thrie beam railing section which is connected to the concrete bridge railing.
 - For typical use of Connection Detail AA, see Layout Types 12A and 12B on Revised Standard Plan RSP A77F1, Layout Types 12C and 12D on Standard Plan A77F2, and Layout Type 12E on Revised Standard Plan RSP A77F3.
 - For typical use of Connection Detail BB, see Layout Type 12D (structure departure railing connection) on Standard Plan A77F2 and Layout Type 12DD on Standard Plan A77F5.
 - Where the height of the bridge railing exceeds the height of the thrie beam railing by more than 1" at Connection Detail AA, taper the top of the end of the bridge railing at 4:1 to match the top elevation of the thrie beam rail.
 - For details of End Cap (Type TC), see Standard Plan A77J4.
 - See Standard Plan A77J4 for additional details regarding depth dimension for straight metal box spacer.

GUARD RAILING CONNECTION TO BRIDGE RAILING WITHOUT SIDEWALK



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

METAL BEAM GUARD RAILING CONNECTIONS TO BRIDGE RAILINGS WITHOUT SIDEWALKS DETAILS No.1

NO SCALE

RSP A77J1 DATED MAY 20, 2011 SUPERSEDES RSP A77J1 DATED JUNE 6, 2008 AND STANDARD PLAN A77J1 DATED MAY 1, 2006 - PAGE 72 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP A77J1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	Men	1,20,128, 162,253,271	Var	46	69

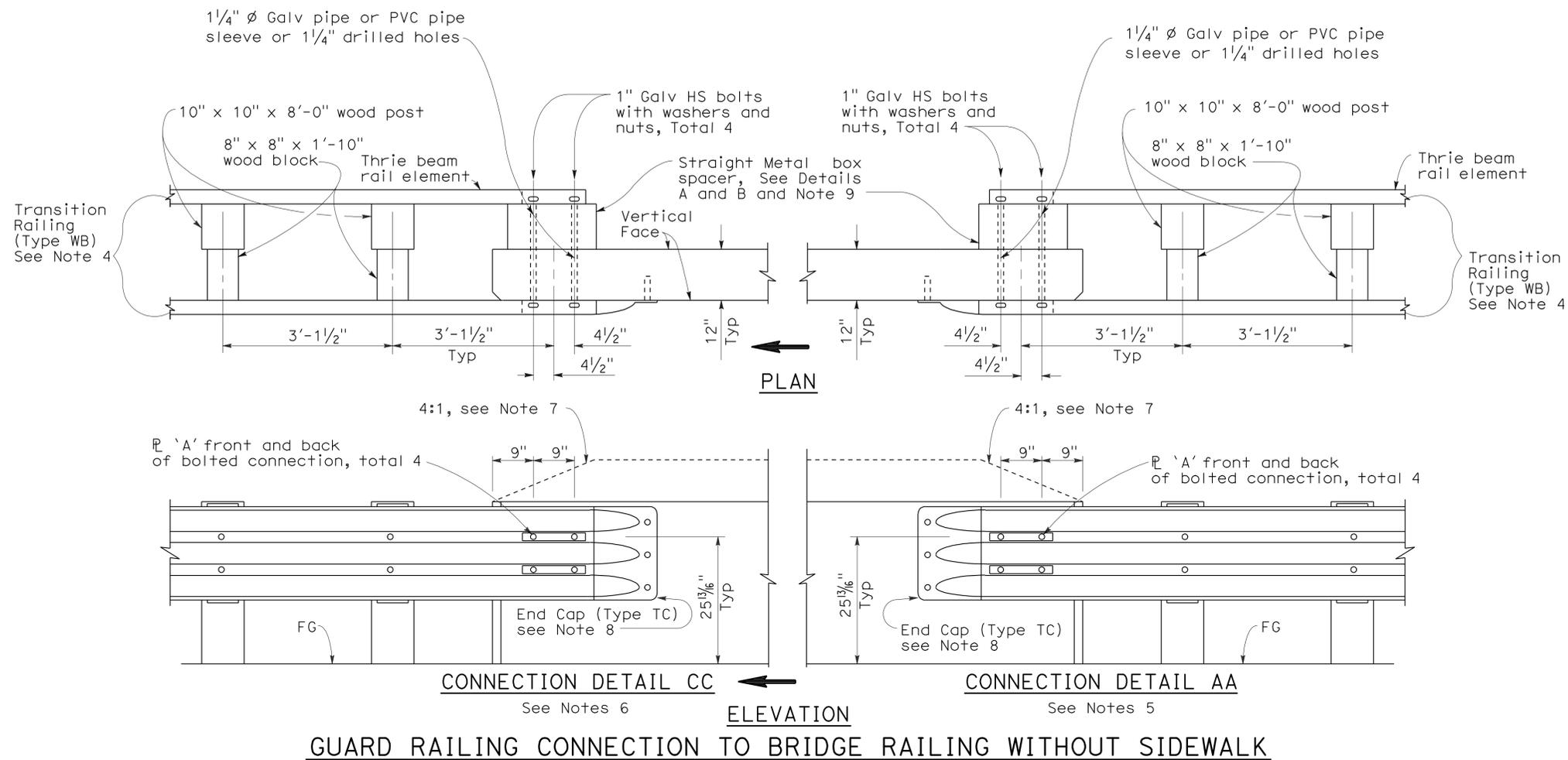
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

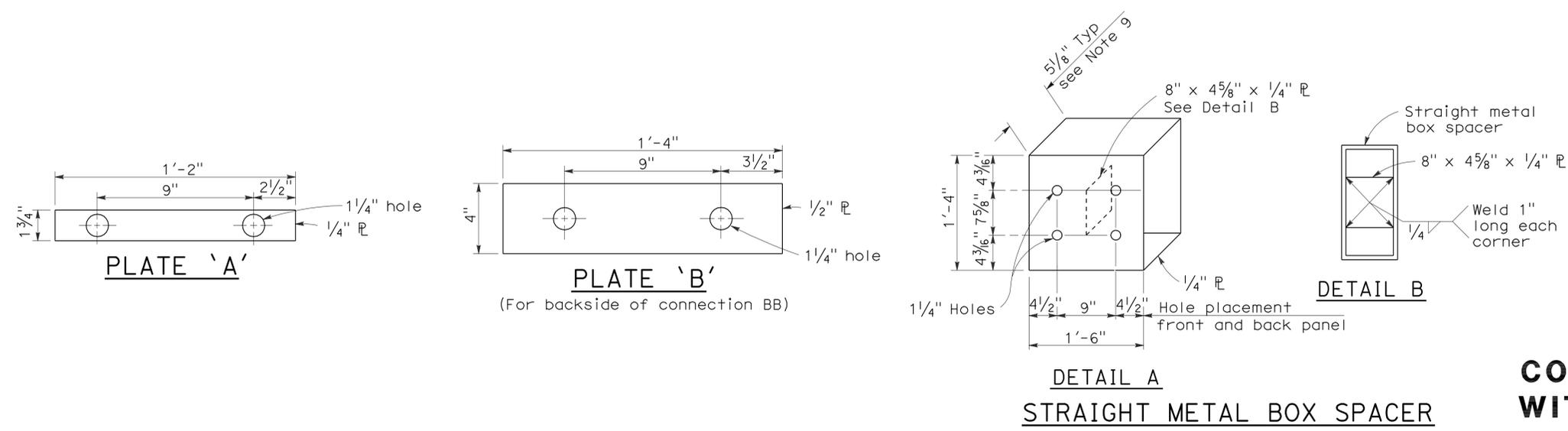
REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

To accompany plans dated 10-3-11



NOTES:

1. See Revised Standard Plan RSP A77J1 for additional connection details to bridges without sidewalks.
2. Additional details of posts, blocks and hardware are shown on Standard Plan A77B1, A77C1 and A77C2.
3. Direction of adjacent traffic indicated by →.
4. For additional details of Transition Railing (Type WB), see Standard Plan A77J4. Transition Railing (Type WB) transitions the 12 gage w-beam standard railing section of guard railing to a heavier gage nested thrie beam railing section which is connected to the concrete bridge railing.
5. For typical use of Connection Detail AA, see Layout Types 12A and 12B on Revised Standard Plan RSP A77F1, Layout Types 12C and 12D on Standard Plan A77F2, and Layout Type 12E on Revised Standard Plan RSP A77F3.
6. For typical use of Connection Detail CC, see Layout Types 12AA and 12BB on Standard Plan A77F4 and Layout Type 12CC on Standard Plan A77F5.
7. Where the height of the bridge railing exceeds the height of the thrie beam railing by more than 1" at Connection Detail AA and connection Detail CC, taper the top of the end of the bridge railing at 4:1 to match the top elevation of the thrie beam railing.
8. For details of End Cap (Type TC), see Standard Plans A77J4.
9. See Standard Plans A77J4 for additional details regarding depth dimension for straight metal box spacer.



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

METAL BEAM GUARD RAILING CONNECTIONS TO BRIDGE RAILINGS WITHOUT SIDEWALKS DETAILS No.2

NO SCALE
RSP A77J2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77J2
DATED MAY 1, 2006 - PAGE 73 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP A77J2

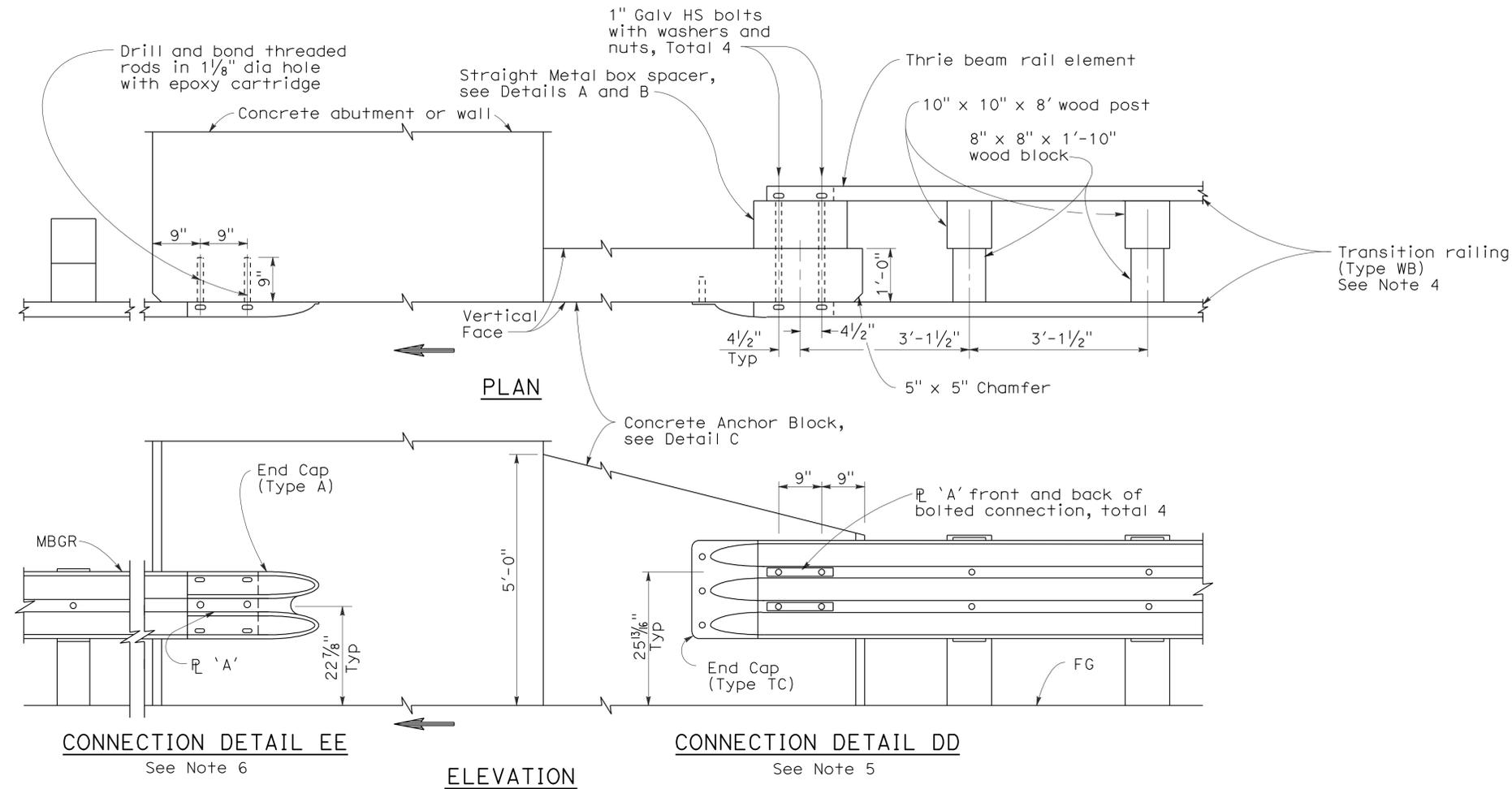
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1,20,128, 162,253,271	Var	47	69

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

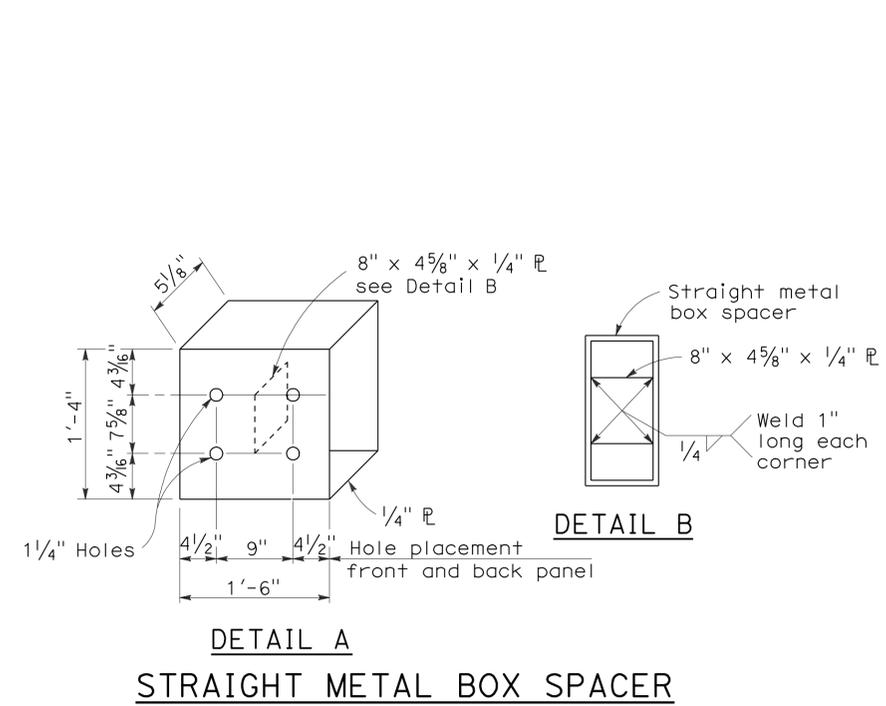
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 10-3-11

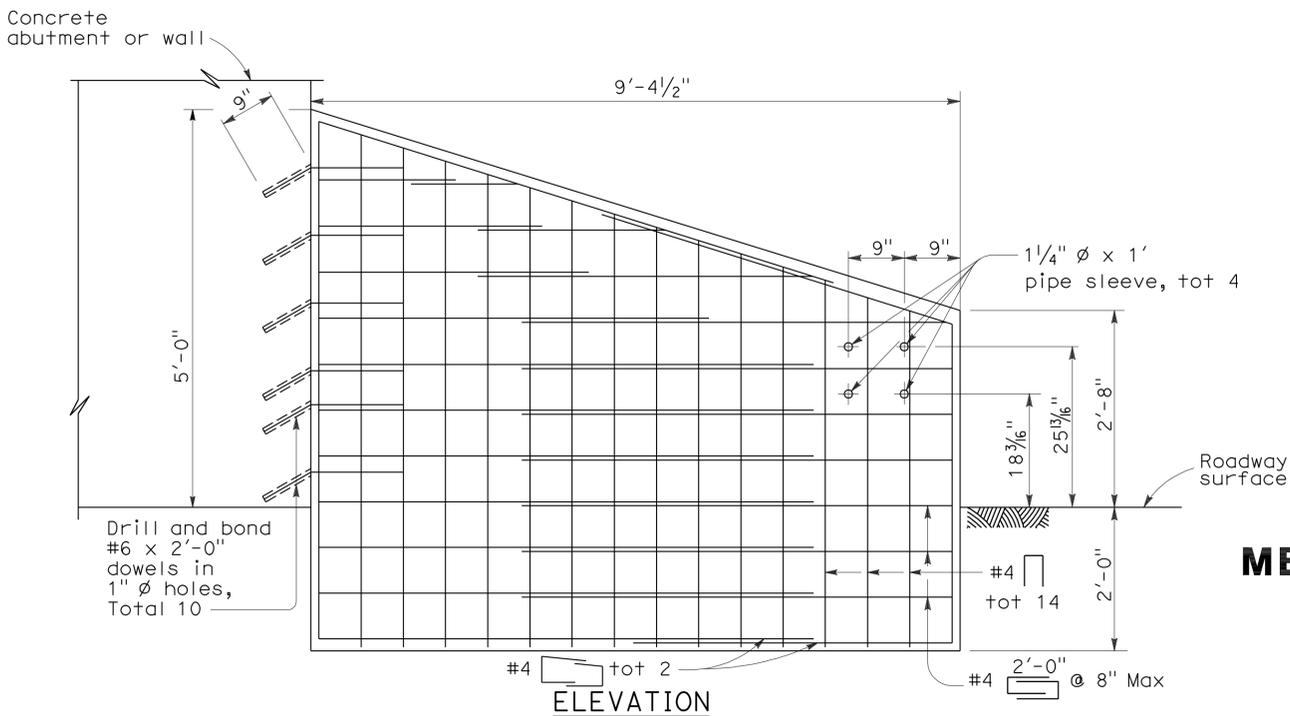


NOTES:

1. These connection details apply to abutments and walls.
2. Additional details of posts, blocks and hardware are shown on Standard Plans A77B1, A77C1 and A77C2.
3. Direction of adjacent traffic indicated by \rightarrow .
4. For additional details of Transition Railing (Type WB), see Standard Plan A77J4 Transition Railing (Type WB) transitions the 12 gage w-beam standard railing section of guard railing to a heavier gage nested thrie beam railing section which is connected to the concrete anchor block.
5. For typical use of Connection Details DD, See Layout Types 12A and 12B on Standard Plan A77F1 and Layout Types 12C and 12D on Standard Plan A77F2.
6. For typical use of Connection Detail EE, see Layout Type 12D on Standard Plan A77F2 and Layout Type 12DD on Standard Plan A77F5.



STRAIGHT METAL BOX SPACER



ANCHOR BLOCK FOR TRANSITION RAILING CONNECTION

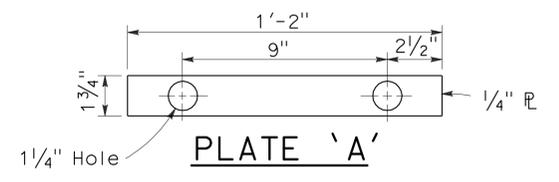


PLATE 'A'

METAL BEAM GUARD RAILING CONNECTIONS TO ABUTMENTS AND WALLS

NO SCALE

2006 REVISED STANDARD PLAN RSP A77J3

RSP A77J3 DATED MAY 20, 2011 SUPERSEDES STANDARD PLAN A77J3 DATED MAY 1, 2006 - PAGE 74 OF THE STANDARD PLANS BOOK DATED MAY 2006.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1,20,128, 162,253,271	Var	49	69

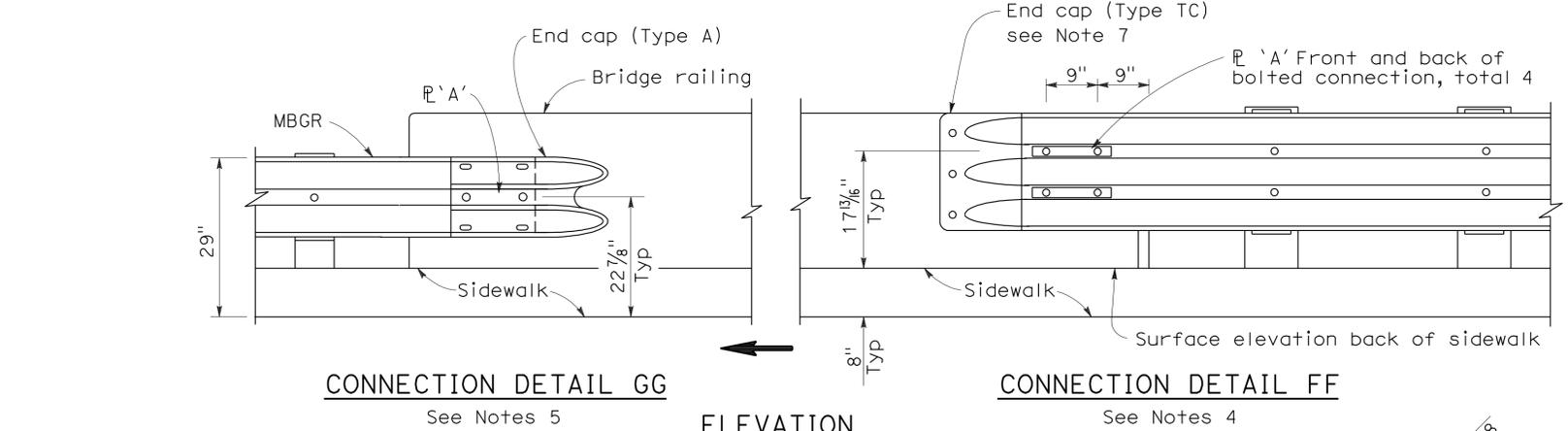
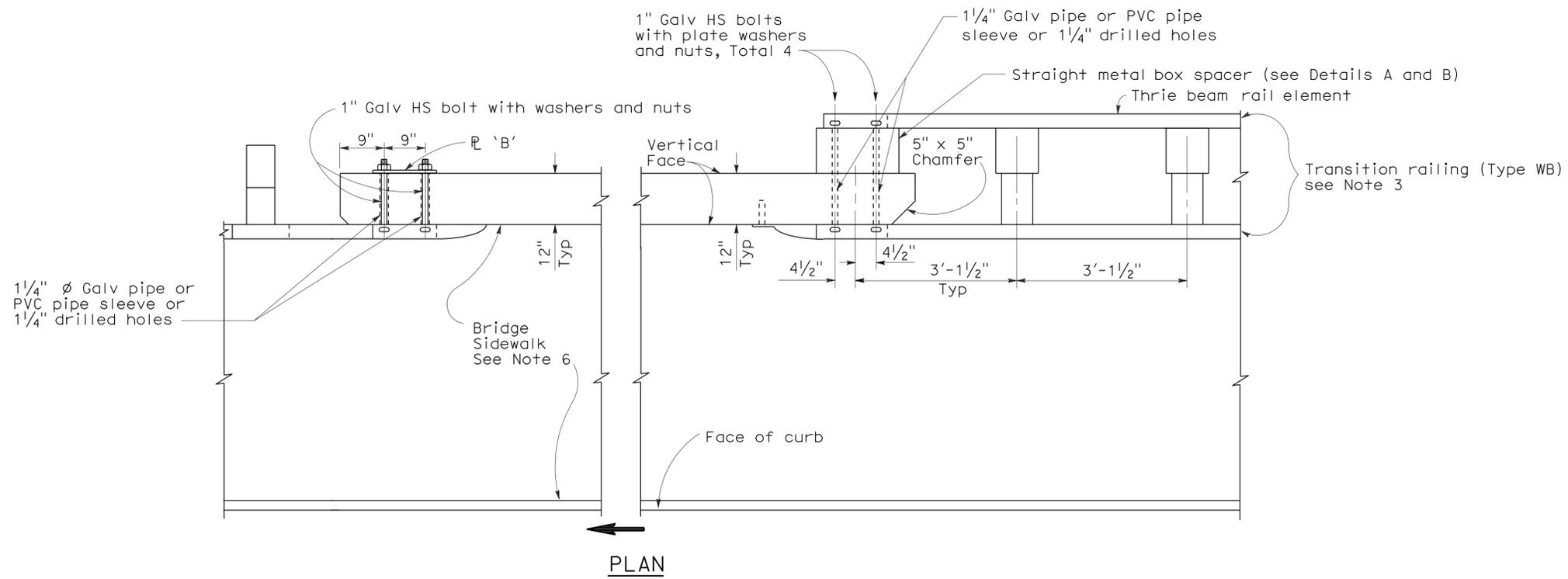
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-11
CIVIL
STATE OF CALIFORNIA

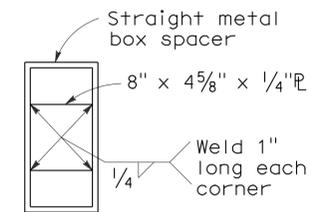
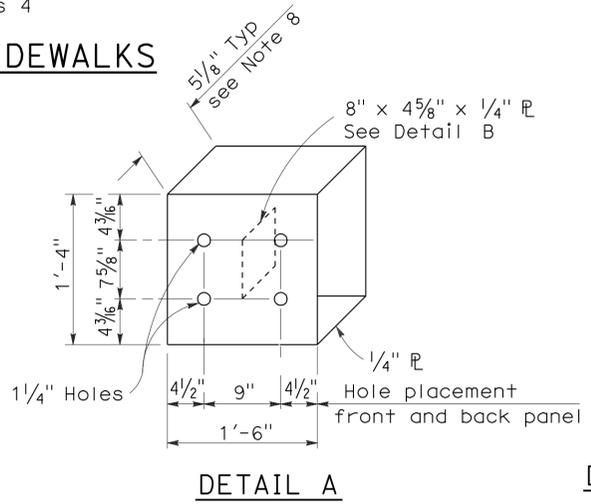
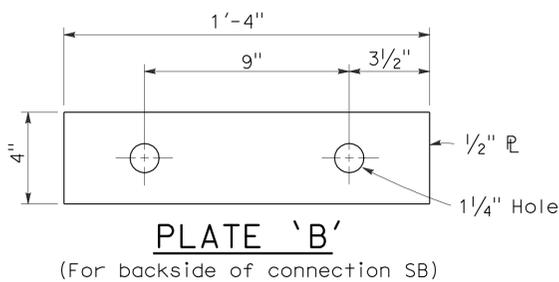
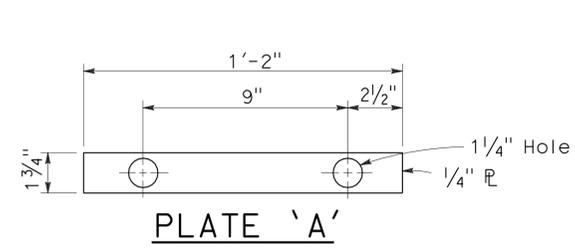
To accompany plans dated 10-3-11



GUARD RAILING CONNECTION TO BRIDGE RAILING WITH SIDEWALKS

NOTES:

1. See Standard Plan A77K2 for additional connection details to bridges with sidewalks.
2. Direction of adjacent traffic indicated by
3. For additional details of Transition Railing (Type WB), see Standard Plan A77J4. Transition Railing (Type WB) transitions the 12 gage w-beam standard railing section of guard railing to a heavier gage nested three beam railing which is connected to the concrete bridge railing.
4. For typical use of Connection Detail FF, see Layout Types 12A and 12B on Standard Plan A77F1.
5. For typical use of Connection Detail GG, see Layout Type 12D on Standard Plan A77F2 and Layout Type 12DD on Standard Plan A77F5.
6. Where the bridge sidewalk is not continued beyond the end of the bridge railing, the portion of the sidewalk beyond each end of the bridge railing shall be transitioned down from the top elevation of the sidewalk, for its entire width, to the finished grade of the adjacent roadbed. The longitudinal slope of each sidewalk elevation transition shall not exceed 8.33 percent.
7. For details of End Cap (Type TC), see Standard Plan A77J4.
8. See Standard Plan A77J4 for additional details regarding depth dimension for straight metal box spacer.



STRAIGHT METAL BOX SPACER

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
METAL BEAM GUARD RAILING CONNECTIONS TO BRIDGE RAILINGS WITH SIDEWALKS DETAILS No.1

NO SCALE

RSP A77K1 DATED MAY 20, 2011 SUPERSEDES STANDARD PLAN A77K1 DATED MAY 1, 2006 - PAGE 76 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77K1

2006 REVISED STANDARD PLAN RSP A77K1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	Men	1,20,128, 162,253,271	Var	50	69

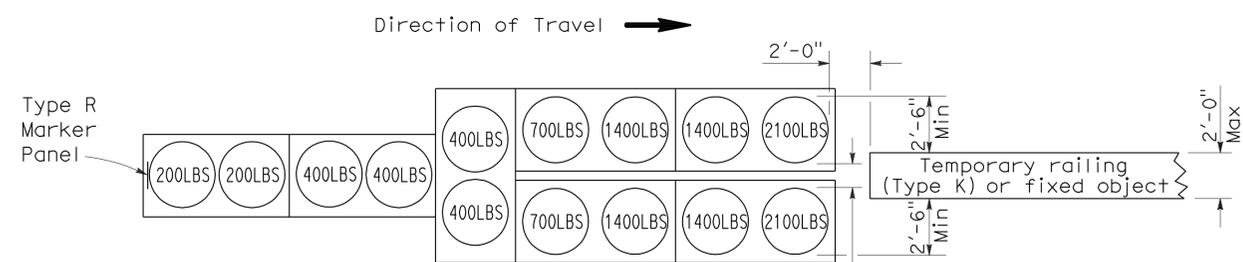
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

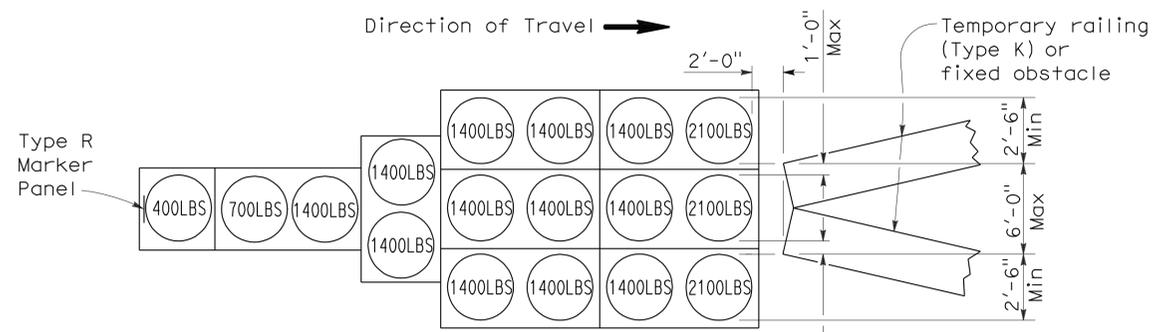
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 10-3-11



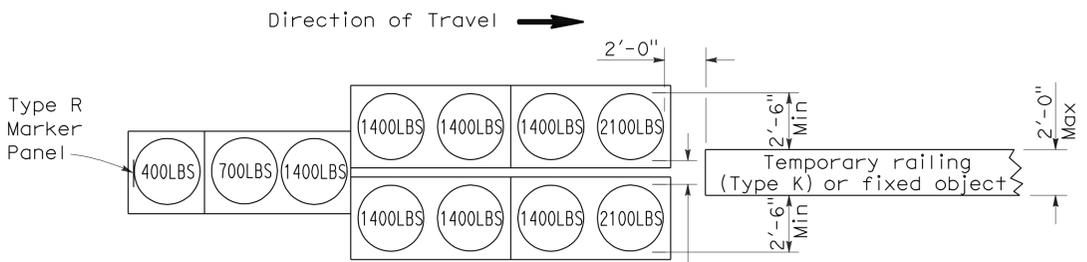
ARRAY 'TU14'

Approach speed 45 mph or more



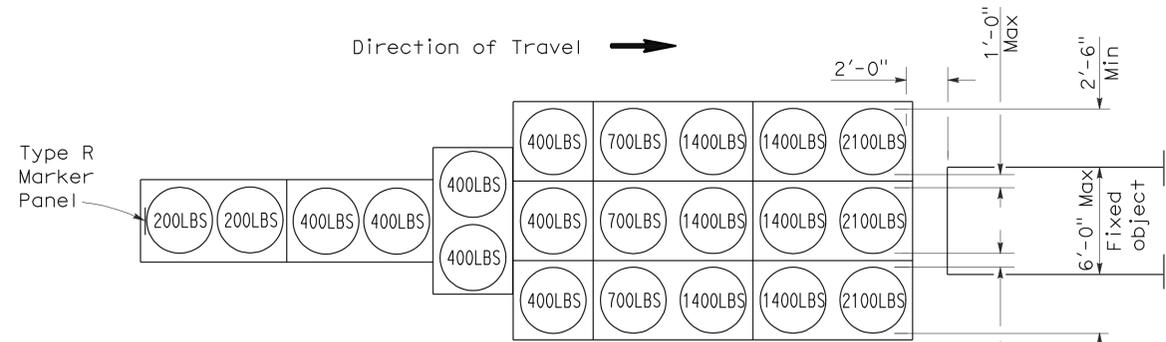
ARRAY 'TU17'

Approach speed less than 45 mph



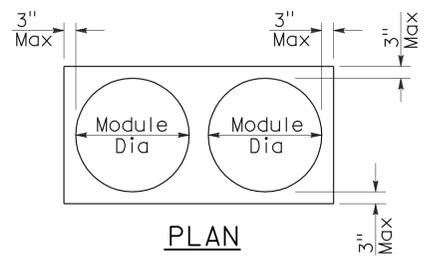
ARRAY 'TU11'

Approach speed less than 45 mph

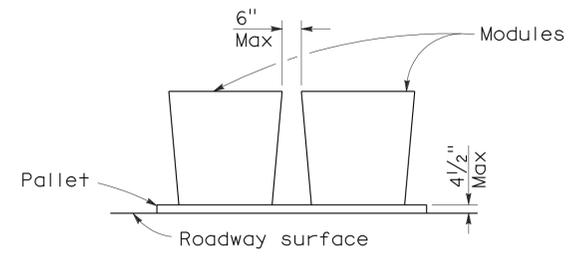


ARRAY 'TU21'

Approach speed 45 mph or more



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. Temporary crash cushion arrays shall not encroach on the traveled way.
4. Place the top of Type R marker panel 1" below the module lid.
5. Refer to Standard Plan A73B for marker details.
6. Approach speeds indicated conform to NCHRP 350 Report criteria.
7. Use of pallets is optional.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**TEMPORARY CRASH CUSHION,
SAND FILLED
(UNIDIRECTIONAL)**

NO SCALE

RSP T1A DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T1A
DATED MAY 1, 2006 - PAGE 211 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T1A

2006 REVISED STANDARD PLAN RSP T1A

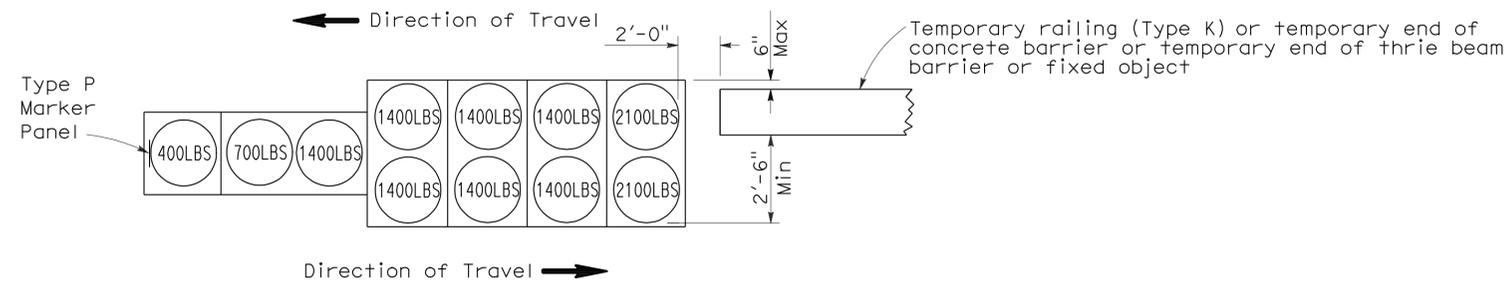
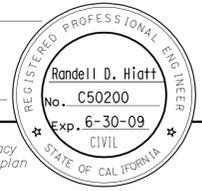
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	Men	1,20,128, 162,253,271	Var	51	69

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

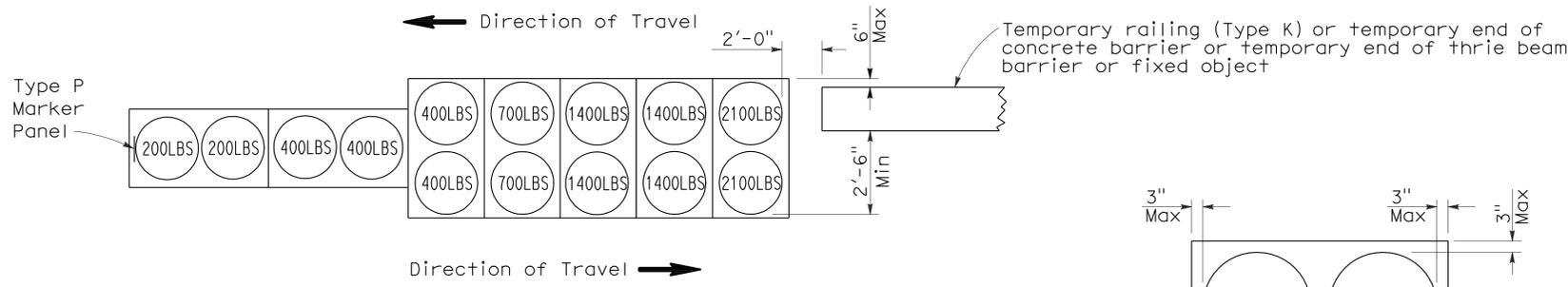
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 10-3-11



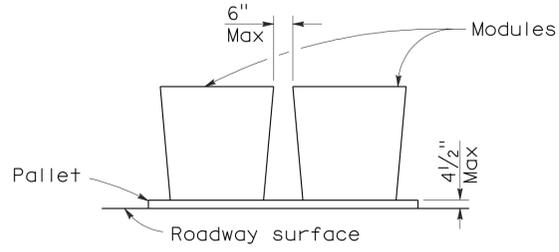
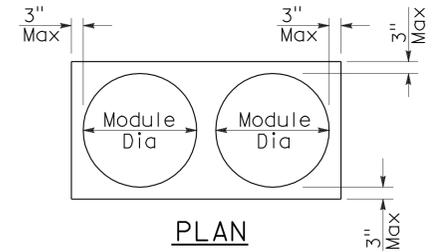
ARRAY 'TB11'

Approach speed less than 45 mph



ARRAY 'TB14'

Approach speed 45 mph or more



CRASH CUSHION PALLET DETAIL
See Note 7

NOTES:

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. Temporary crash cushion arrays shall not encroach on the traveled way.
4. Place the Type P marker panel so that the bottom of the panel rests upon the pallet.
5. Refer to Standard Plan A73B for marker details.
6. Approach speeds indicated conform to NCHRP 350 Report criteria.
7. Use of pallets is optional.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**TEMPORARY CRASH CUSHION,
SAND FILLED
(BIDIRECTIONAL)**

NO SCALE
RSP T1B DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T1B
DATED MAY 1, 2006 - PAGE 212 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T1B

2006 REVISED STANDARD PLAN RSP T1B

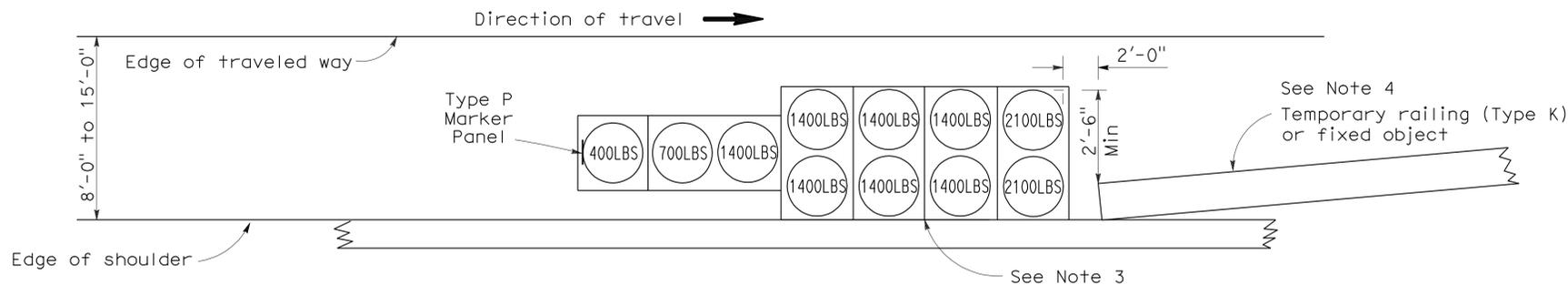
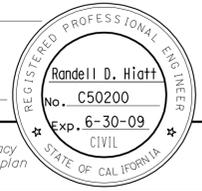
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	Men	1,20,128, 162,253,271	Var	52	69

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

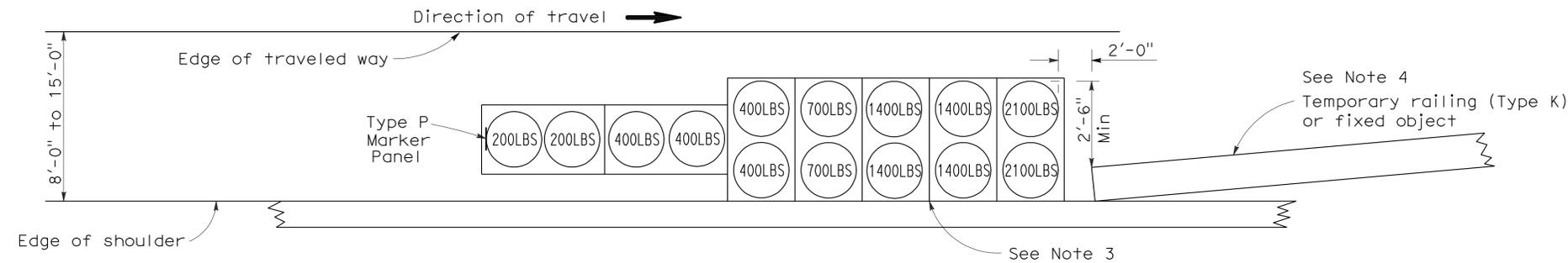
June 6, 2008
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

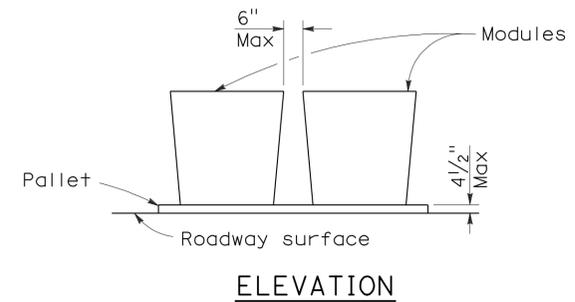
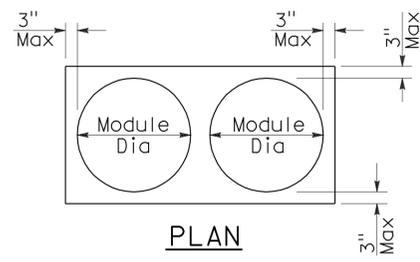
To accompany plans dated 10-3-11



ARRAY 'TS11'
Approach speed less than 45 mph
See Note 9



ARRAY 'TS14'
Approach speed 45 mph or more
See Note 9



CRASH CUSHION PALLET DETAIL
See Note 11

NOTES:

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. The temporary crash cushion arrays shown on this plan shall be used only in locations where there will be traffic on one side of the temporary crash cushion array.
4. If the fixed object or approach end of the temporary railing is less than 15'-0" from the edge of traveled way, a temporary crash cushion is required in a construction or work zone.
5. Temporary crash cushion arrays shall not encroach on the traveled way.
6. Arrays for median shoulders shall conform to details shown on this plan for outside shoulders.
7. Place the Type P marker panel so that the bottom of the panel rests upon the pallet and faces traffic.
8. Refer to Standard Plan A73B for marker details.
9. For shoulder widths less than 8'-0", appropriate approved crash cushion protection, other than sand filled modules, shall be provided at fixed objects and at approach ends of temporary railing. The specific type of crash cushion shall be as shown on the project plans or as specified in the Special Provisions, or if not shown on the project plans or specified in the Special Provisions, shall be as approved by the Engineer.
10. Approach speeds indicated conform to NCHRP 350 Report criteria.
11. Use of pallets is optional.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**TEMPORARY CRASH CUSHION,
SAND FILLED
(SHOULDER INSTALLATIONS)**

NO SCALE
RSP T2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T2
DATED MAY 1, 2006 - PAGE 213 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T2

2006 REVISED STANDARD PLAN RSP T2

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1,20,128, 162,253,271	Var	53	69

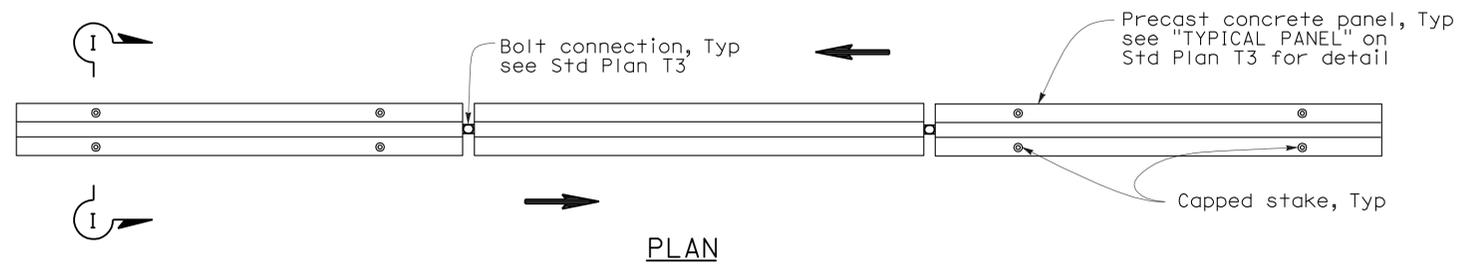
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

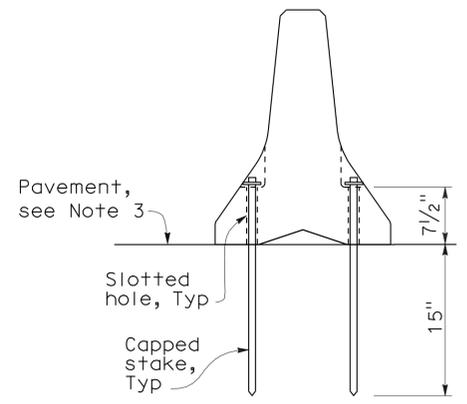
Randell D. Hiatt
No. C50200
Exp. 6-30-11
CIVIL
STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 10-3-11



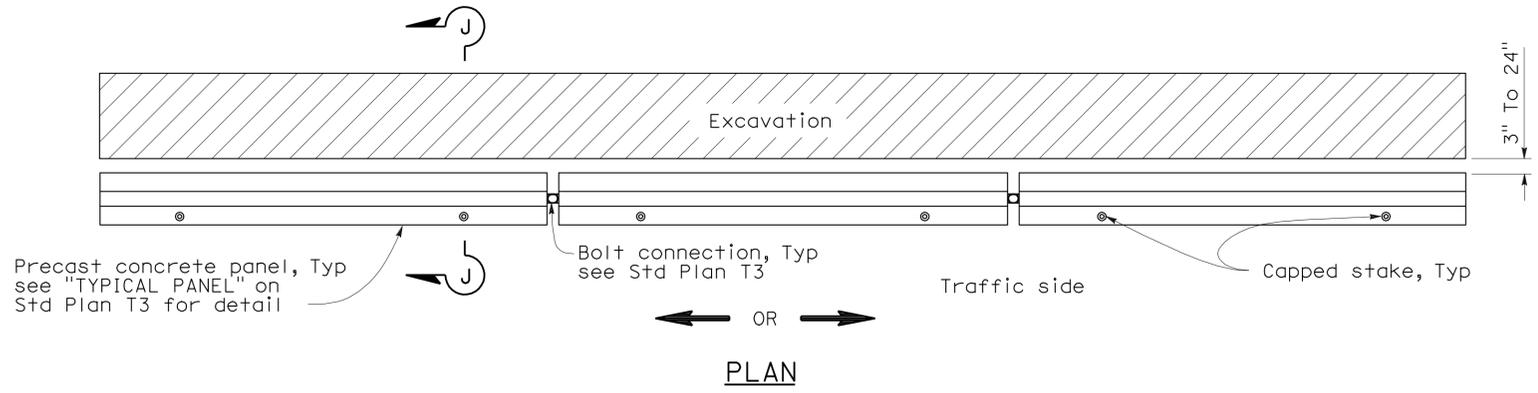
RAILING STAKING CONFIGURATION FOR TWO-WAY TRAFFIC
See Note 1



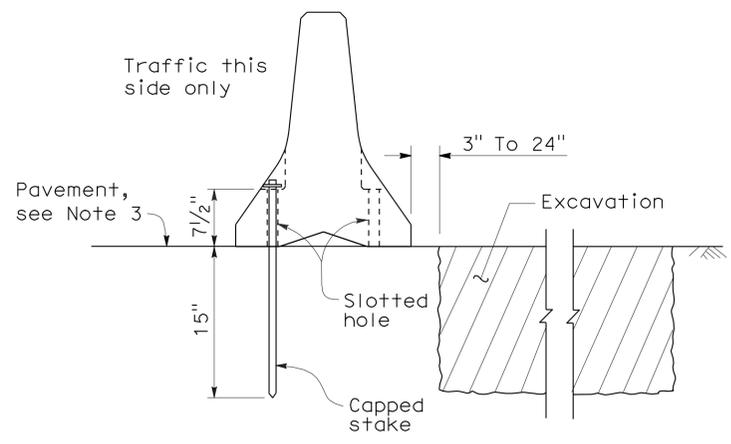
SECTION I-I

NOTES:

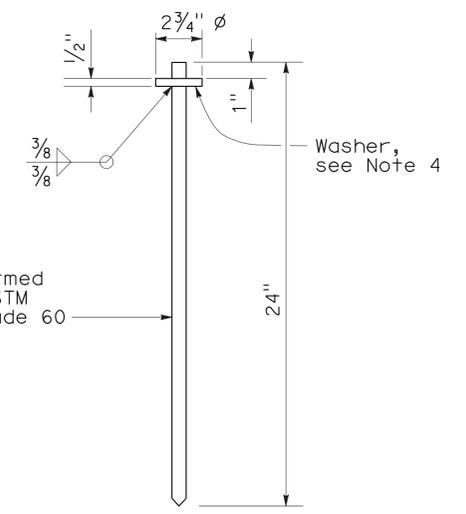
1. Where Type K Temporary Railing is placed as a temporary or long term barrier in two-way traffic on highways with less than 24" from the edge of traveled way, use four capped stakes per every other panel with end panels staked.
2. Where Type K Temporary Railing is placed 3" to 24" from the edge of an excavation on highways, use two capped stakes per panel along the traffic side.
3. Staked Type K Temporary Railing must be supported by at least 4" thick concrete, hot mix asphalt or existing asphalt concrete pavement.
4. The minimum yield strength for the washer must be 60,000 psi.
5. Direction of adjacent traffic indicated by \Rightarrow .



RAILING STAKING CONFIGURATION ADJACENT TO AN EXCAVATION
See Note 2



SECTION J-J



CAPPED STAKE DETAIL

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**TEMPORARY RAILING
(TYPE K)**
NO SCALE

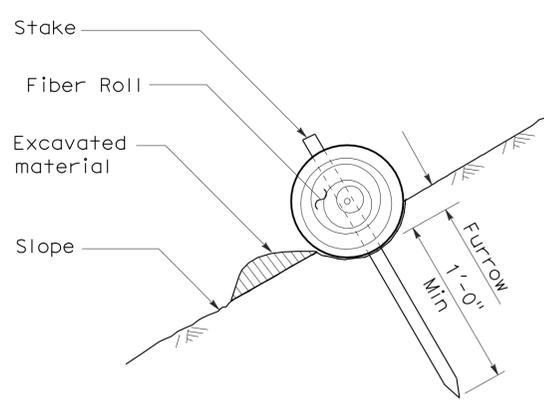
NSP T3A DATED MAY 20, 2011 SUPPLEMENTS
THE STANDARD PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP T3A

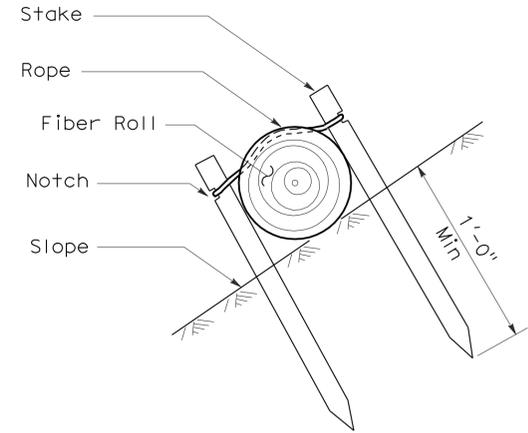
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	Men	1,20,128, 162,253,271	Var	54	69

Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT
 April 3, 2009
 PLANS APPROVAL DATE
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

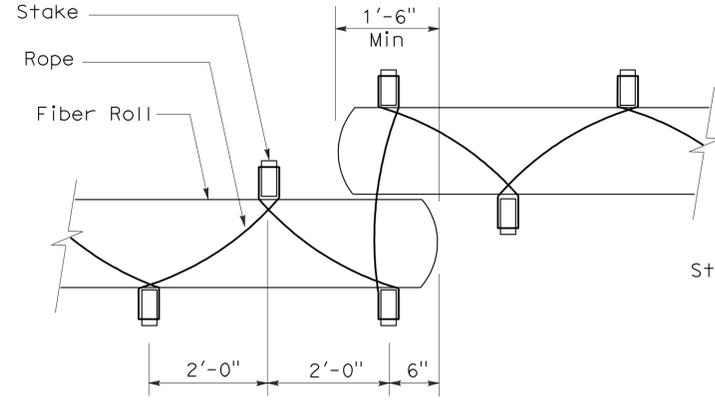
To accompany plans dated 10-3-11



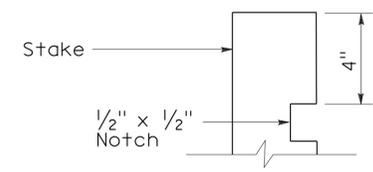
SECTION
TEMPORARY FIBER ROLL (TYPE 1)



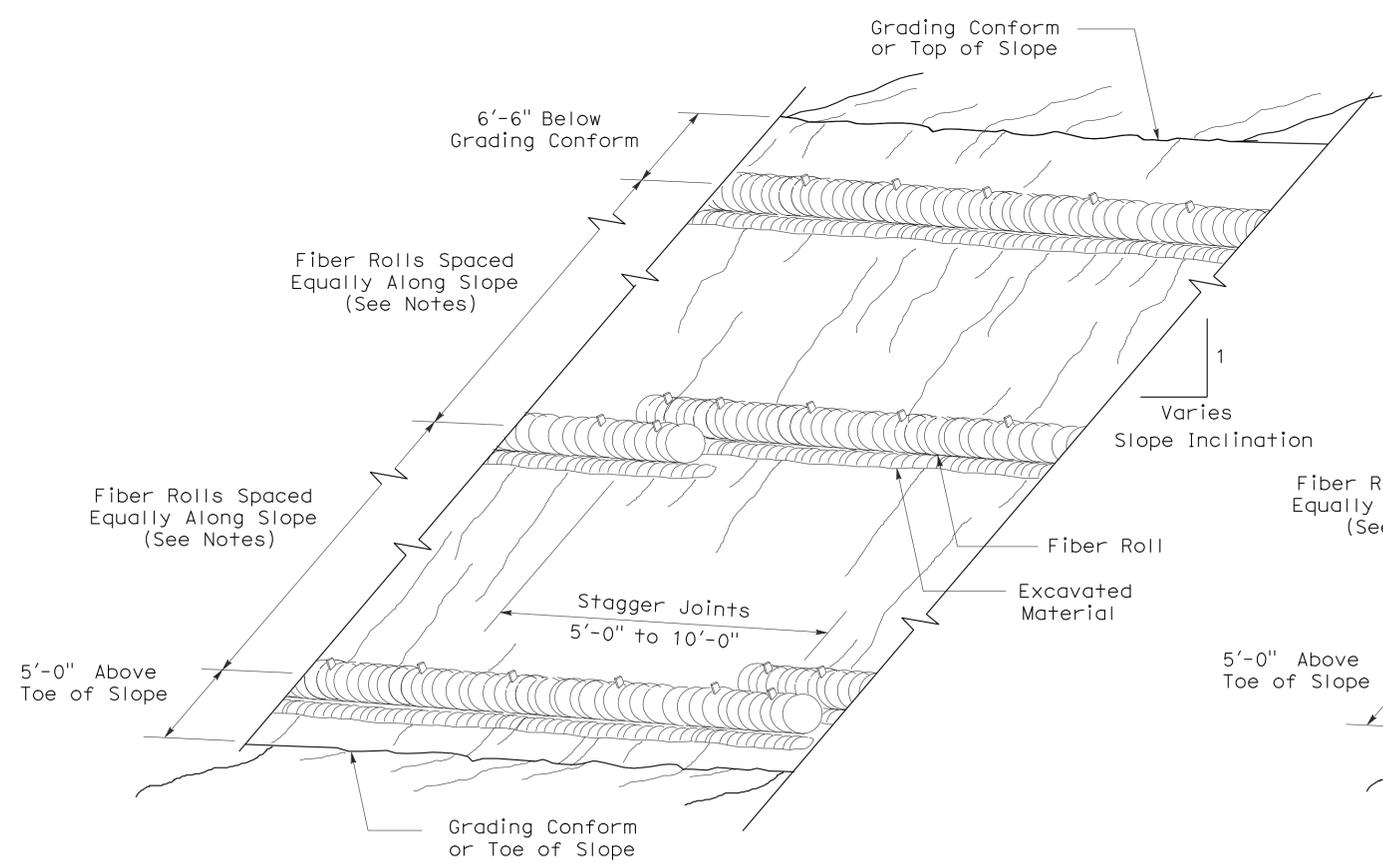
SECTION
TEMPORARY FIBER ROLL (TYPE 2)



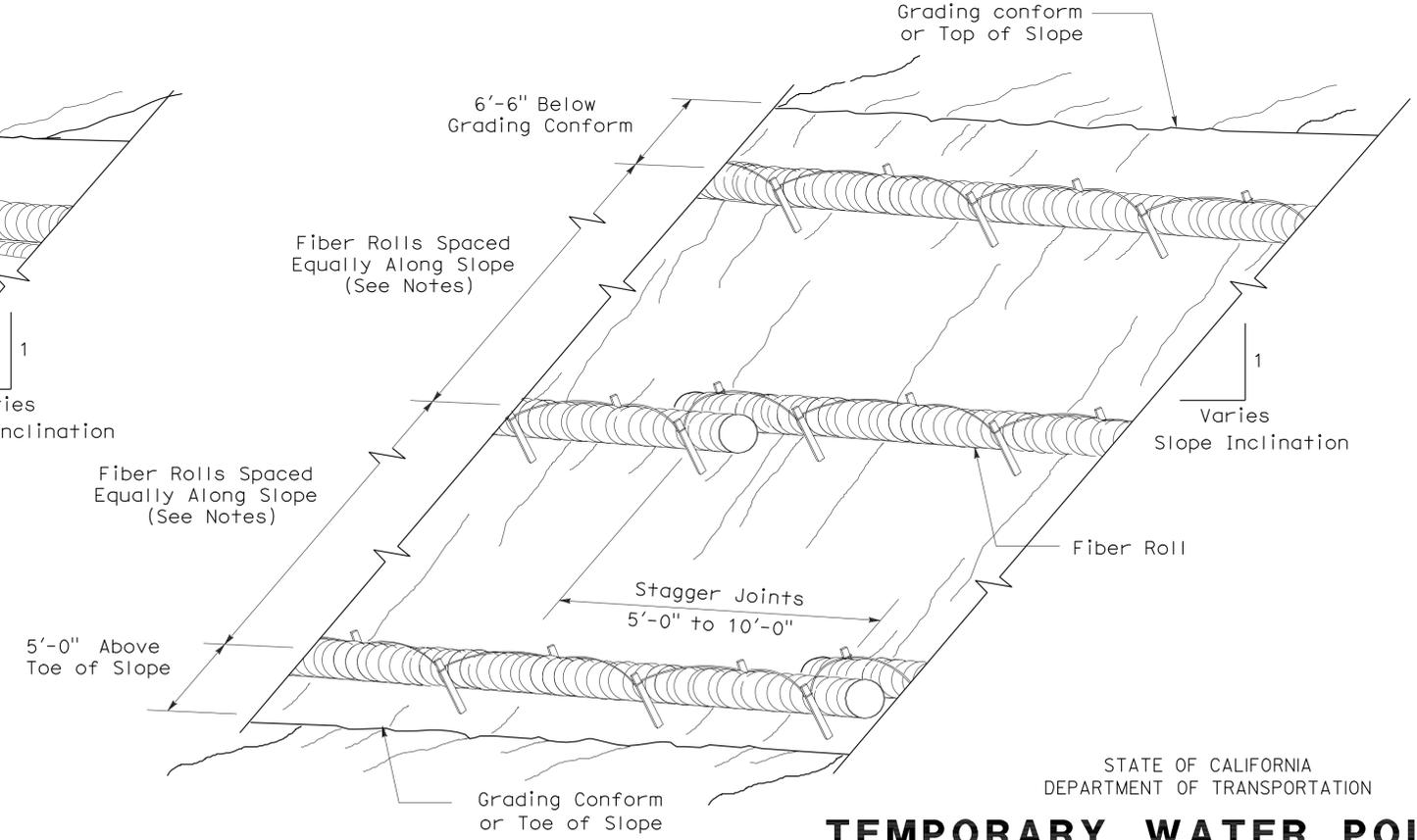
PLAN
ELEVATION
STAKE NOTCH DETAIL



- NOTES:**
1. Temporary fiber roll spacing varies depending upon slope inclination.
 2. Installations shown in the perspectives are for slope inclination of 10:1 and steeper.



PERSPECTIVE
TEMPORARY FIBER ROLL (TYPE 1)



PERSPECTIVE
TEMPORARY FIBER ROLL (TYPE 2)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY FIBER ROLL)

NO SCALE

RSP T56 DATED APRIL 3, 2009 SUPERSEDES STANDARD PLAN T56 DATED MAY 1, 2006 - PAGE 232 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T56

2006 REVISED STANDARD PLAN RSP T56

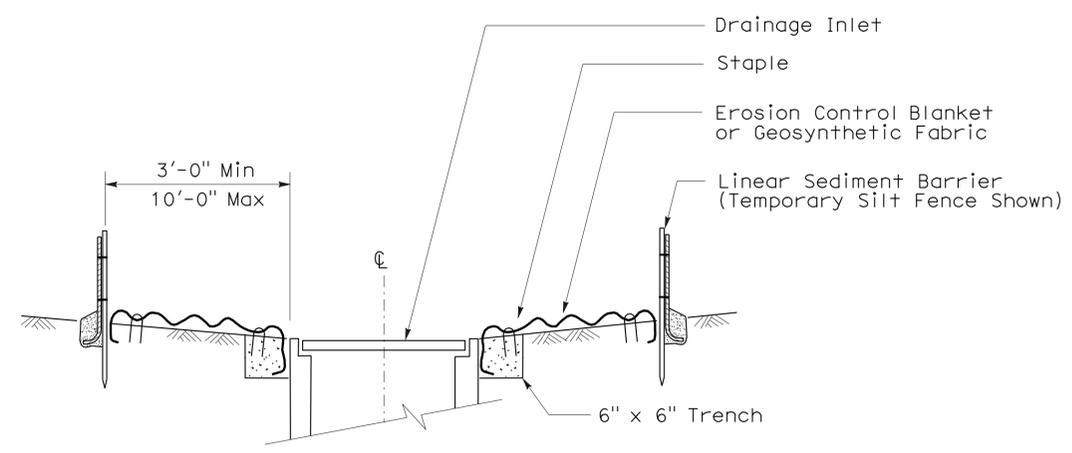
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	Men	1,20,128, 162,253,271	Var	55	69

Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT
 August 15, 2008
 PLANS APPROVAL DATE
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

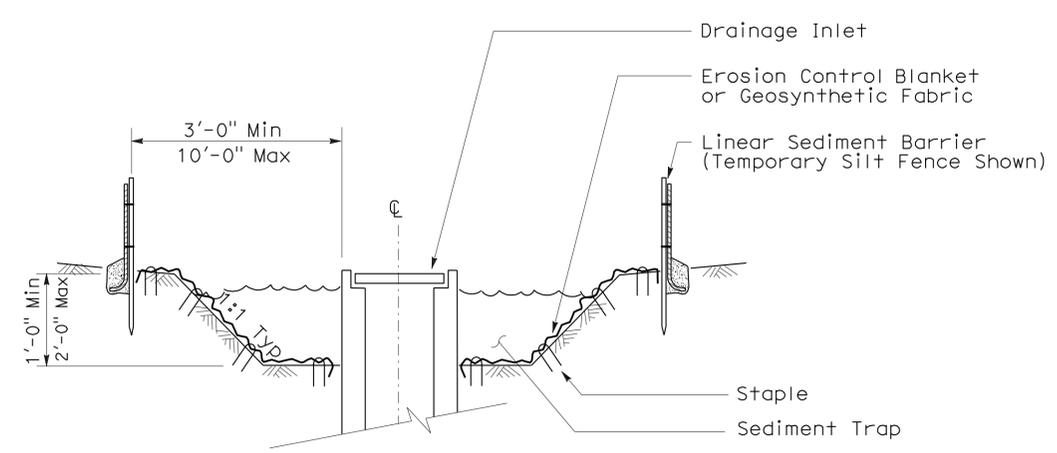


To accompany plans dated 10-3-11

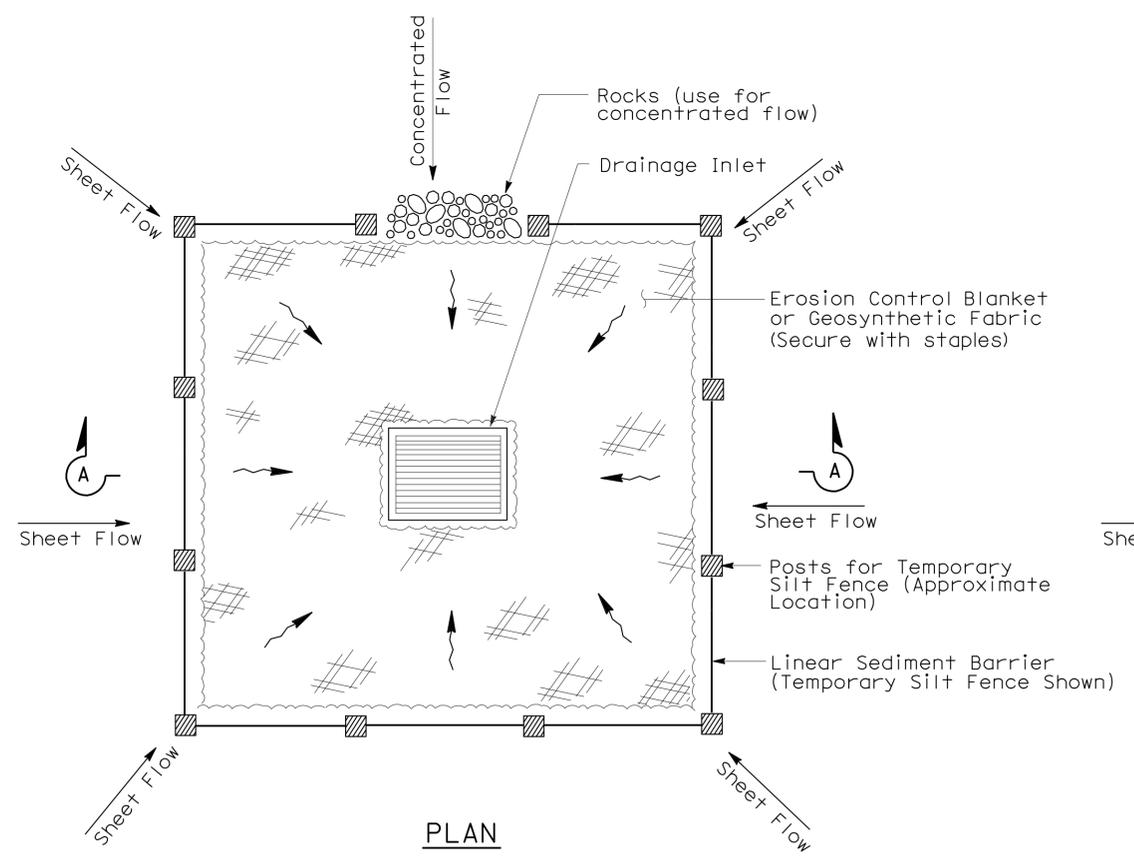
- NOTES:**
- See Standard Plan T51 for Temporary Silt Fence.
 - Dimensions may vary to fit field conditions.



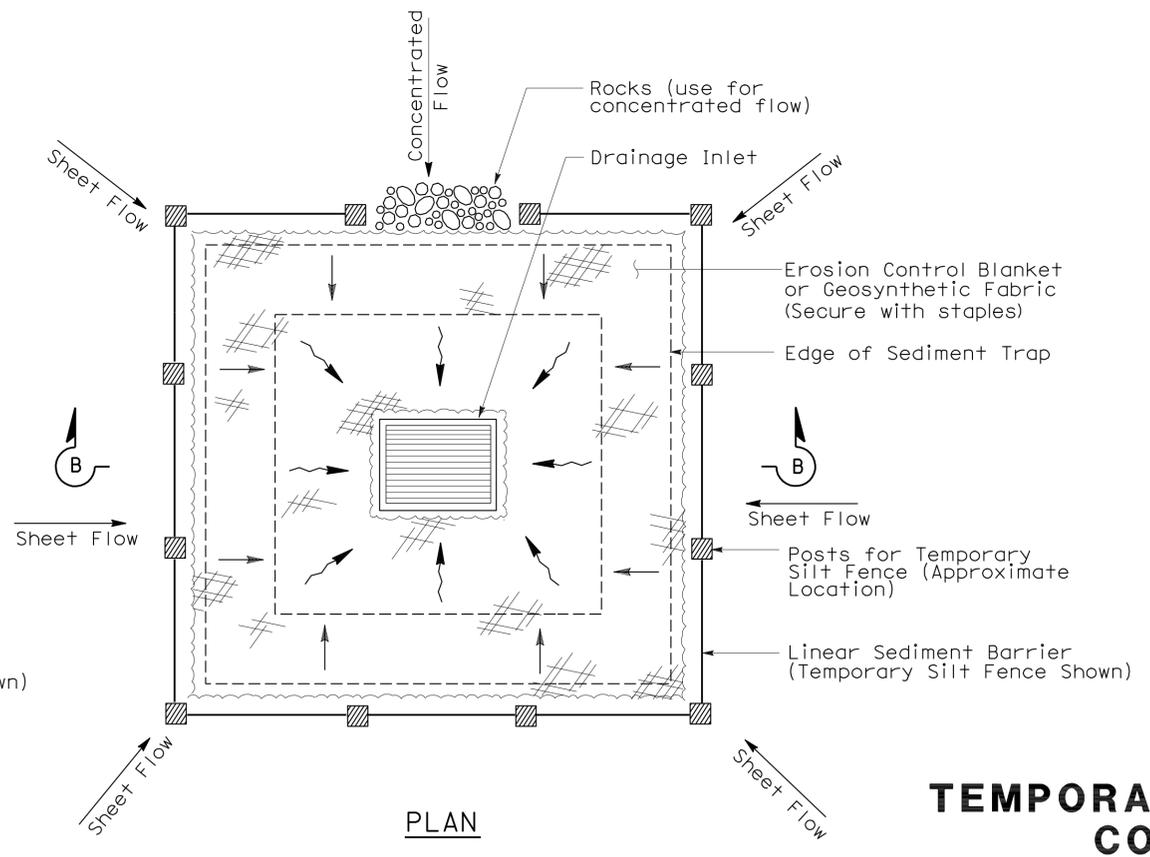
SECTION A-A



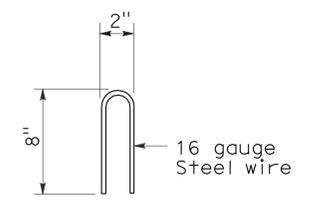
SECTION B-B



TEMPORARY DRAINAGE INLET PROTECTION (TYPE 1)



TEMPORARY DRAINAGE INLET PROTECTION (TYPE 2) (EXCAVATED SEDIMENT TRAP)



STAPLE DETAIL

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
TEMPORARY WATER POLLUTION CONTROL DETAILS
(TEMPORARY DRAINAGE INLET PROTECTION)
 NO SCALE

NSP T61 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

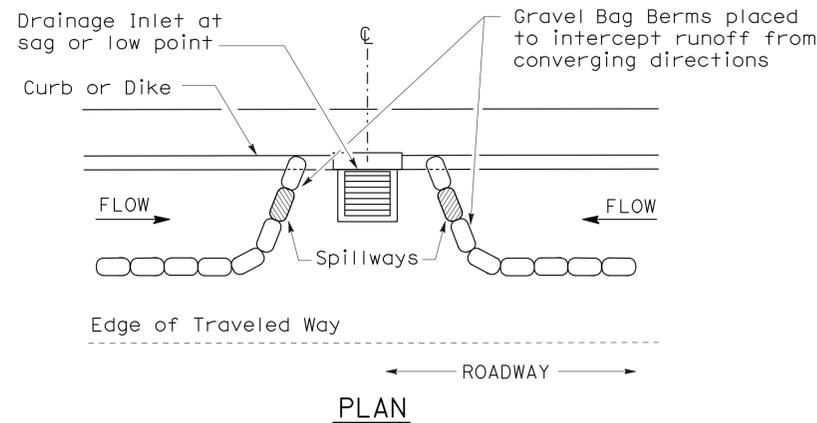
2006 NEW STANDARD PLAN NSP T61

2006 NEW STANDARD PLAN NSP T62

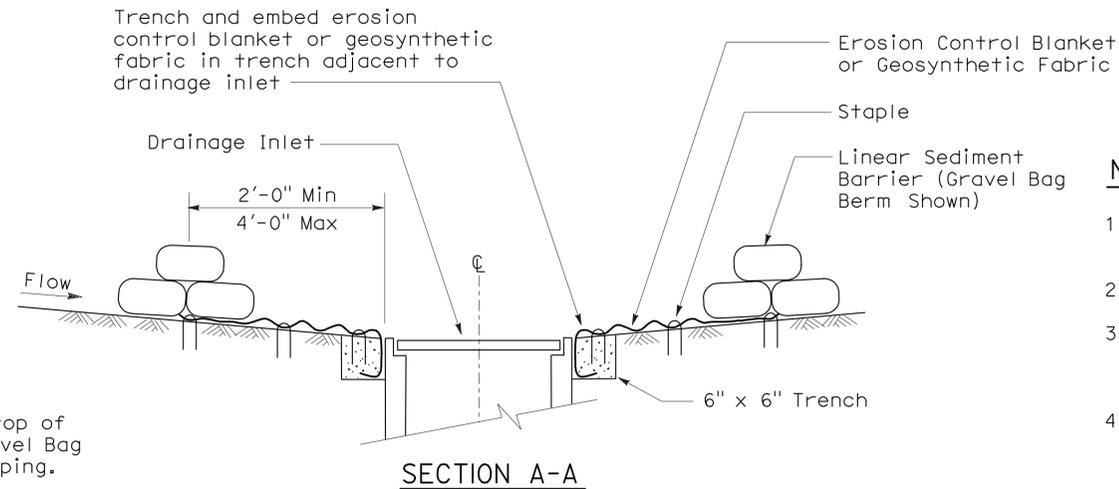
GRAVEL BAG BERM (TYPE 3A) SPACING TABLE

SLOPE OF ROADWAY (PERCENT)	1 to 3.9	4 to 5.9	6 to 7.9	8 to 10	10+
INTERVAL BETWEEN BERM	100'	75'	50'	25'	12'

For slope of less than 1%, install barriers only if erosion/sediment is prevalent



PLAN
CONFIGURATION FOR SAG POINT INLET (GRAVEL BAG BERM)

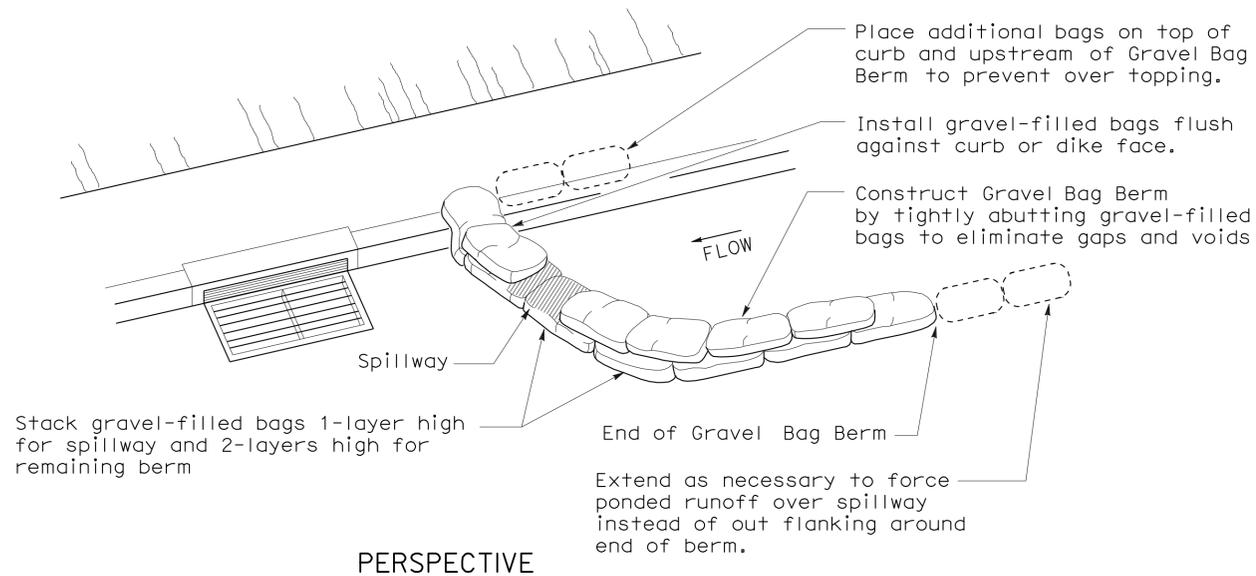


SECTION A-A

NOTES:

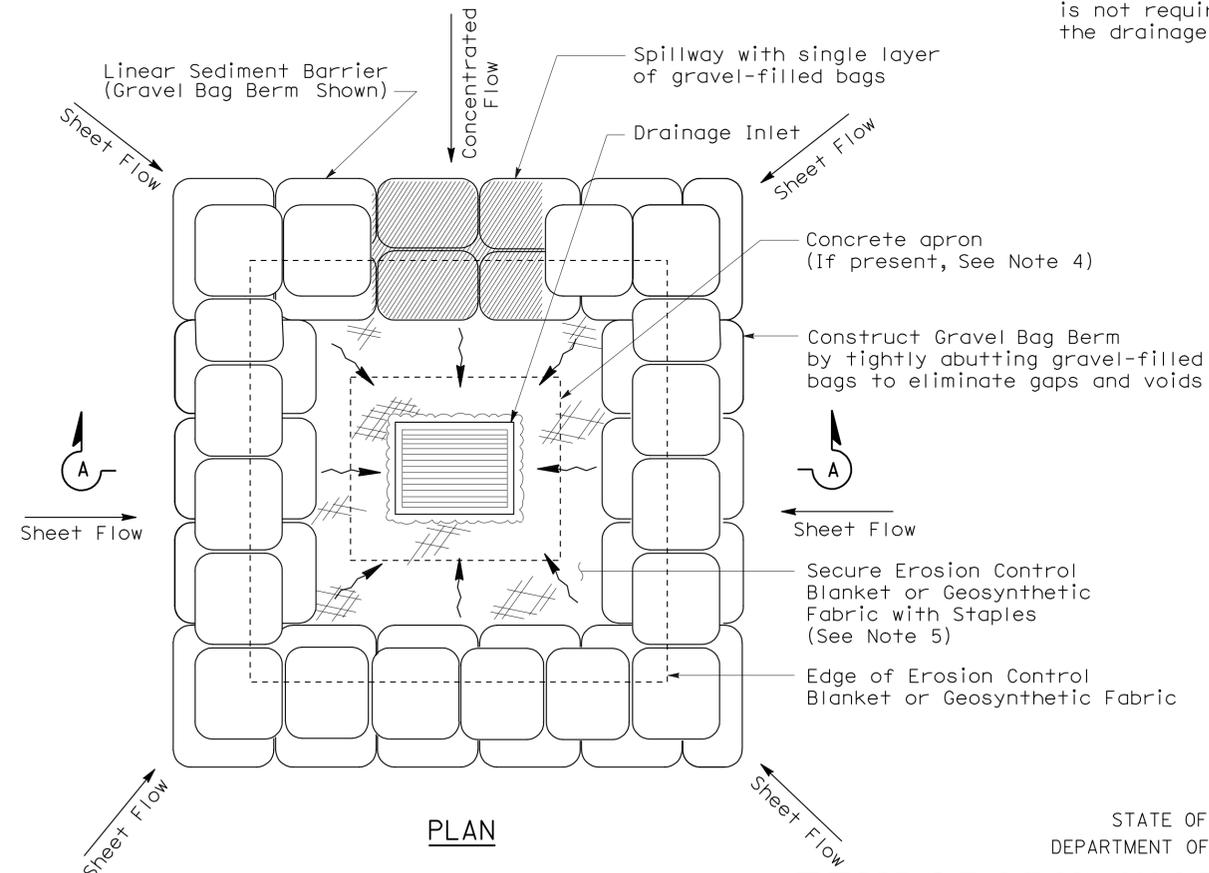
1. Place safety cones adjacent to drainage inlet protection.
2. Dimensions may vary to fit field conditions.
3. Install a minimum of 3 gravel bag berms upstream of each drainage inlet to be protected.
4. Position erosion control blanket or geosynthetic fabric at edge of concrete apron and secure in trench.
5. Erosion control blanket or geosynthetic fabric is not required if the area adjacent to the drainage inlet is vegetated or paved.

To accompany plans dated 10-3-11

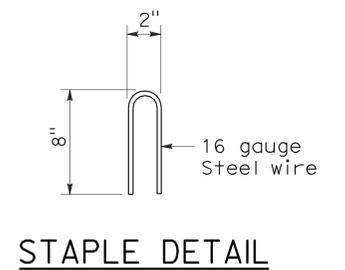


PERSPECTIVE

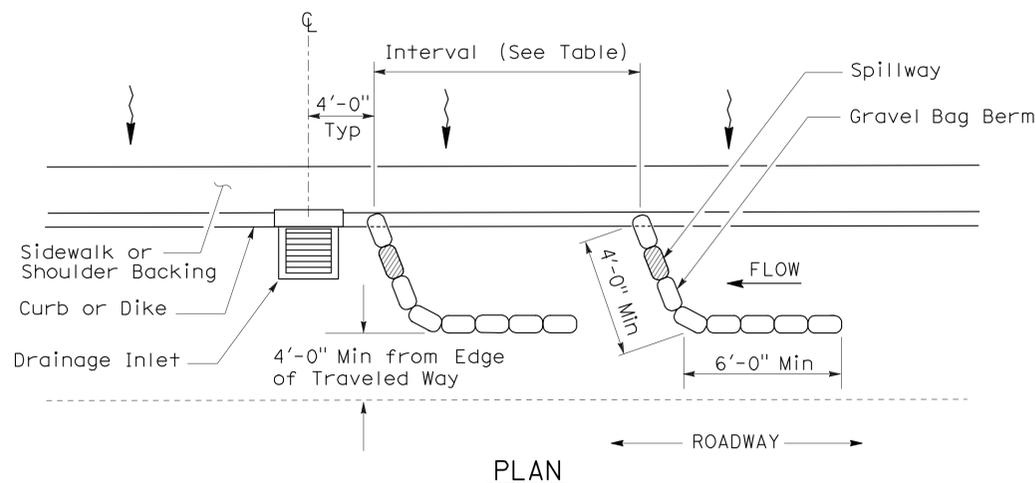
Stack gravel-filled bags 1-layer high for spillway and 2-layers high for remaining berm



PLAN
TEMPORARY DRAINAGE INLET PROTECTION (TYPE 3B)



STAPLE DETAIL



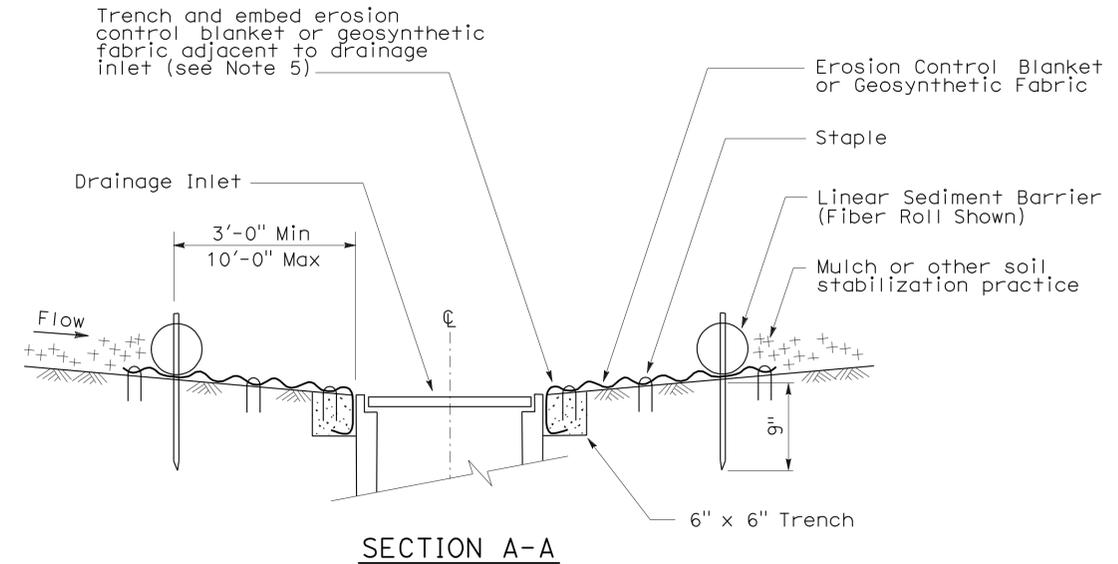
PLAN
TEMPORARY DRAINAGE INLET PROTECTION (TYPE 3A) (GRAVEL BAG BERM)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)

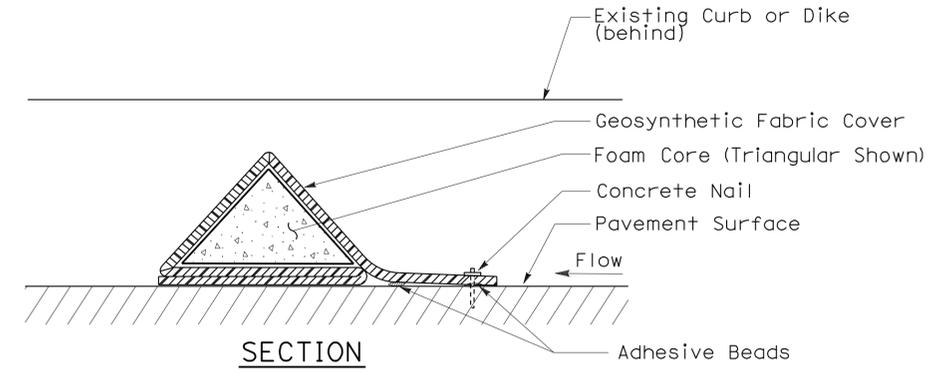
NO SCALE
NSP T62 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

FLEXIBLE SEDIMENT BARRIER SPACING TABLE

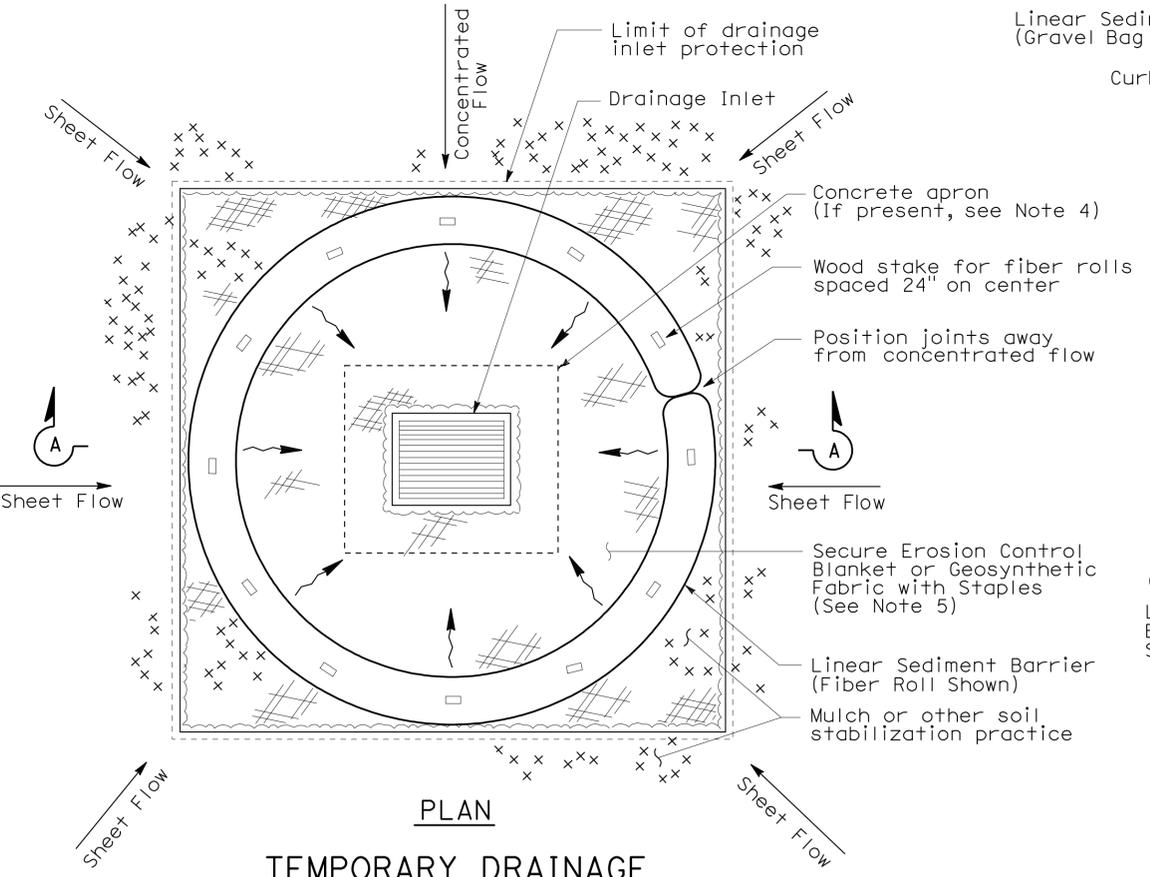
SLOPE OF ROADWAY (PERCENT)	0 to 0.9	1 to 1.9	2 to 2.9	3 to 4	5+
INTERVAL BETWEEN BARRIERS	50'	35'	30'	25'	20'
ANGLE FROM FACE OF CURB	70°	70°	70°	45°	45°
SUGGESTED BARRIER LENGTH	6'	6'	6'	6'	6'



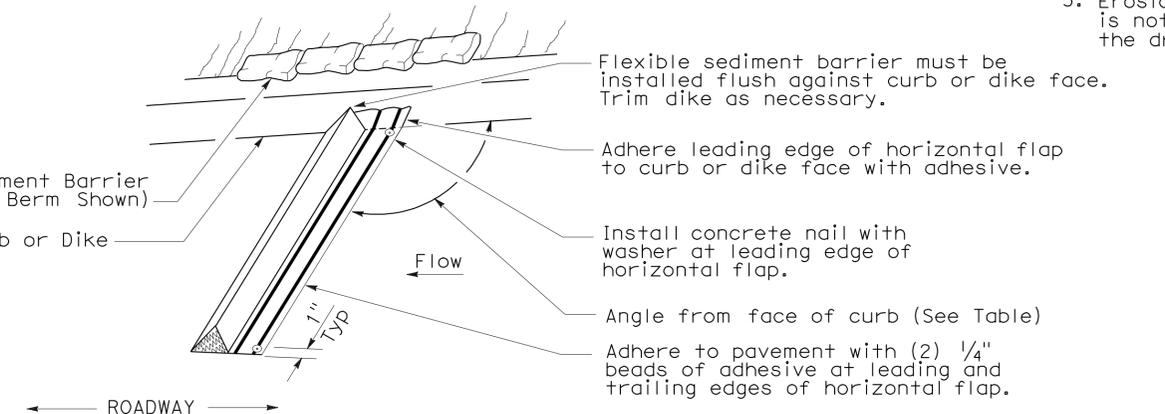
SECTION A-A



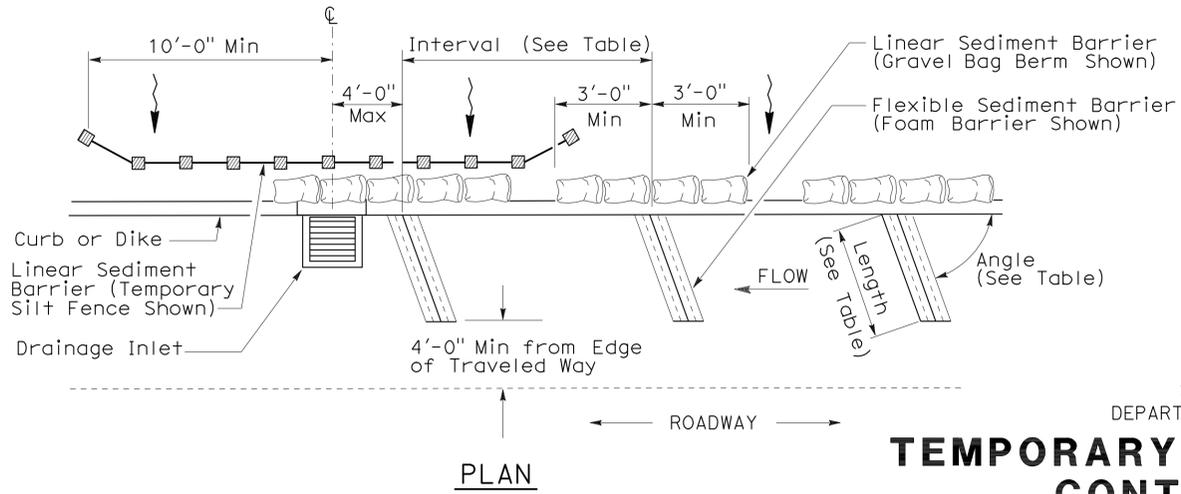
SECTION FLEXIBLE SEDIMENT BARRIER DETAIL (FOAM BARRIER SHOWN)



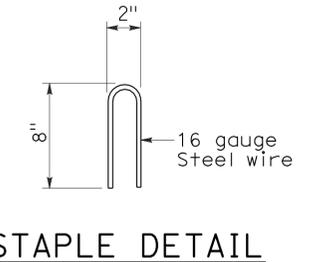
PLAN TEMPORARY DRAINAGE INLET PROTECTION (TYPE 4A)



PERSPECTIVE



PLAN TEMPORARY DRAINAGE INLET PROTECTION (TYPE 4B) FLEXIBLE SEDIMENT BARRIER



STAPLE DETAIL

NOTES:

1. See Standard Plan T51 for Temporary Silt Fence.
2. Dimensions may vary to fit field conditions.
3. Install a minimum of 3 flexible sediment barriers upstream of each drainage inlet to be protected.
4. Position erosion control blanket or geosynthetic fabric at edge of concrete apron and secure in trench.
5. Erosion control blanket or geosynthetic fabric is not required if the area adjacent to the drainage inlet is vegetated.

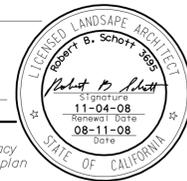
STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)

NO SCALE
 NSP T63 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

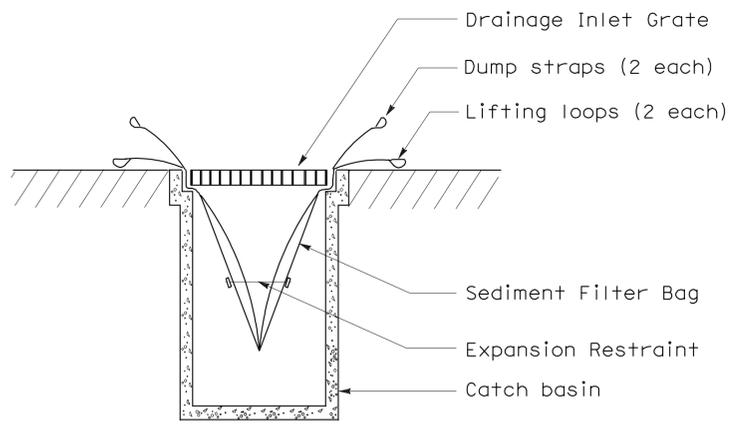
2006 NEW STANDARD PLAN NSP T63

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	Men	1,20,128, 162,253,271	Var	58	69

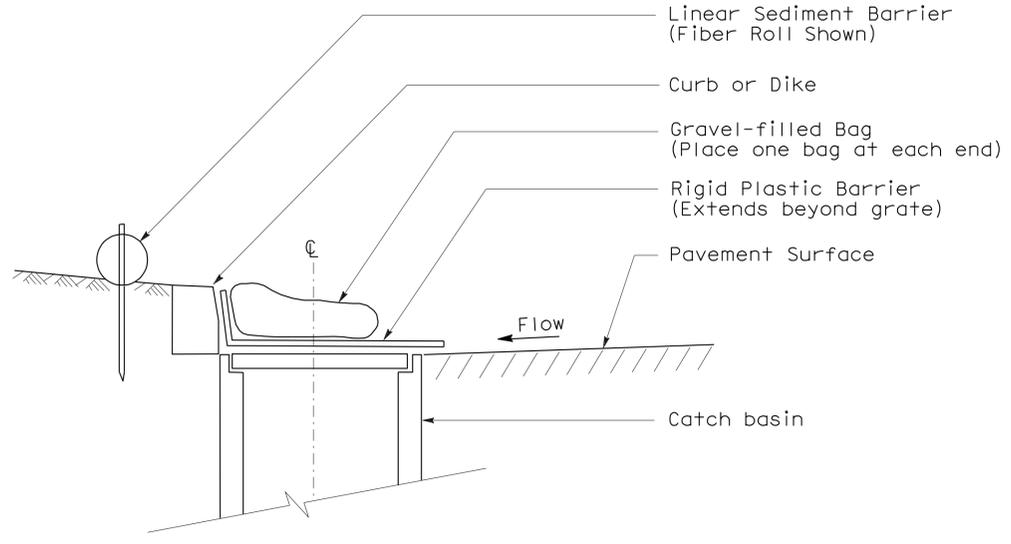
Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT
 August 15, 2008
 PLANS APPROVAL DATE
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



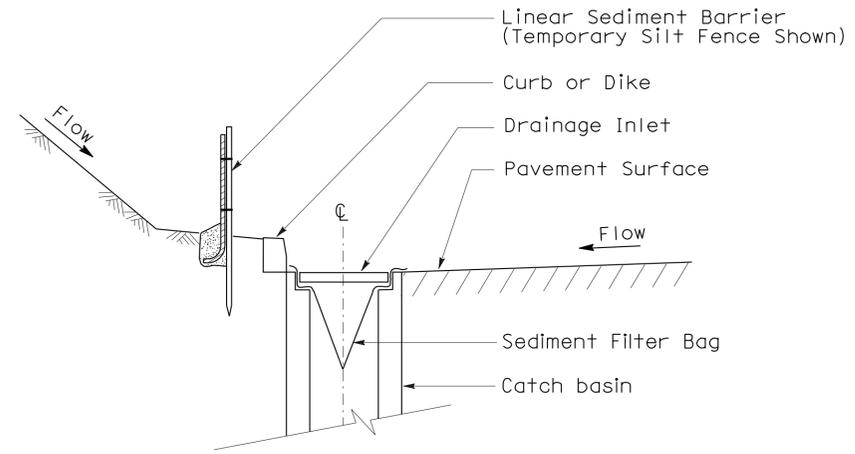
To accompany plans dated 10-3-11



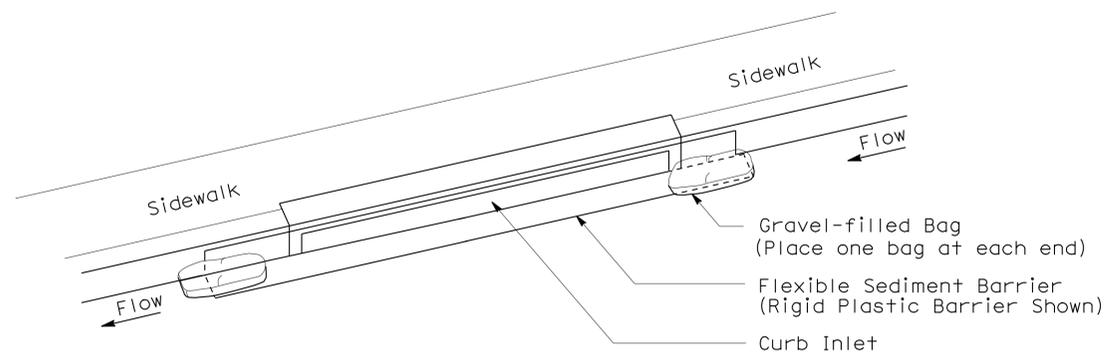
SECTION B-B
SEDIMENT FILTER BAG DETAIL



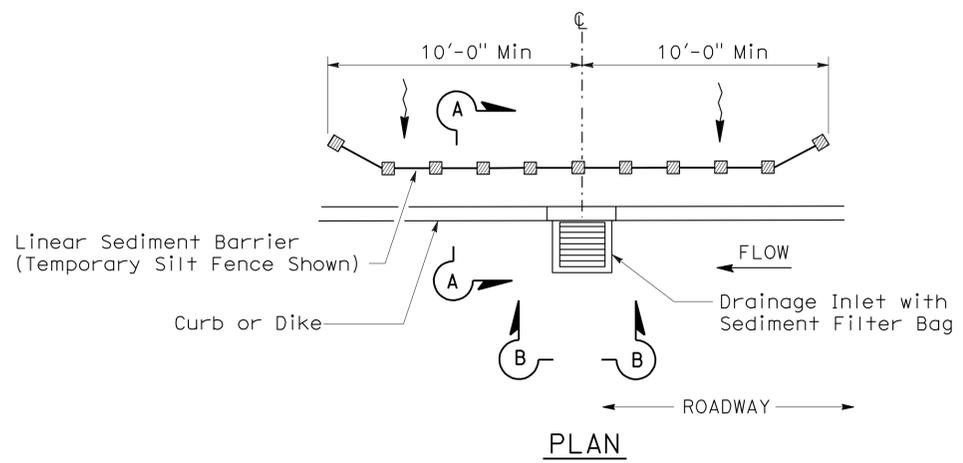
SECTION
TEMPORARY DRAINAGE INLET PROTECTION (TYPE 6A)
(CATCH BASIN WITH GRATE)



SECTION A-A



PERSPECTIVE
TEMPORARY DRAINAGE INLET PROTECTION (TYPE 6B)
(CURB INLET WITHOUT GRATE)



PLAN
TEMPORARY DRAINAGE INLET PROTECTION (TYPE 5)
(SEDIMENT FILTER BAG)

NOTES:

1. See Standard Plan T51 for Temporary Silt Fence.
2. Dimensions may vary to fit field conditions.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)

NO SCALE

NSP T64 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP T64

2006 NEW STANDARD PLAN NSP T64

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
01	Men	1, 20, 128, 162, 253, 271	Var	60	69

Felix S. Altamirano 5/27/10
REGISTERED CIVIL ENGINEER DATE

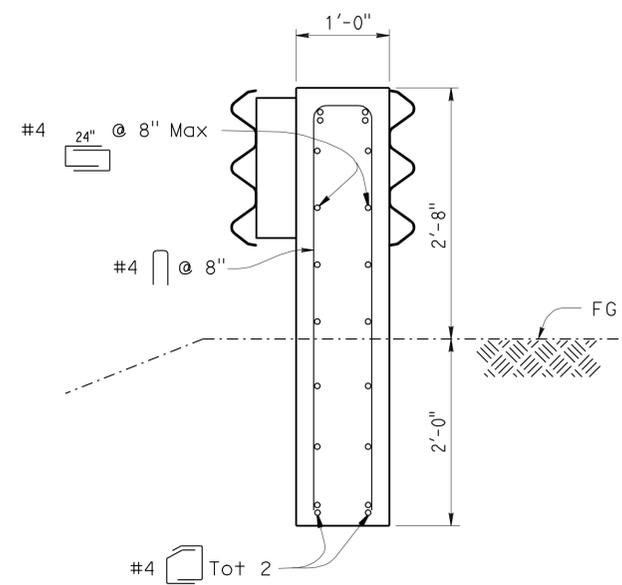
10-3-11
PLANS APPROVAL DATE

No. **C56401**
Exp. **6/30/13**
CIVIL
STATE OF CALIFORNIA

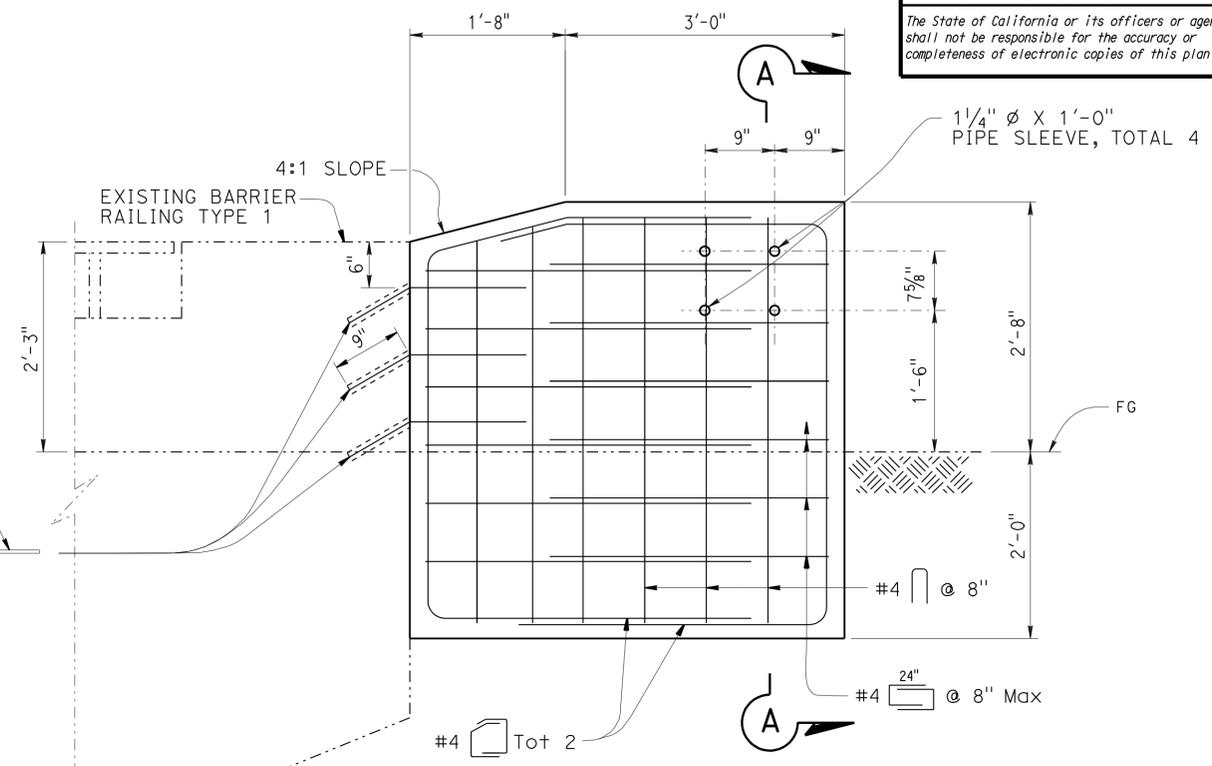
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

LEGEND

----- INDICATES EXISTING STRUCTURE
 _____ INDICATES NEW CONSTRUCTION



SECTION A-A
NO SCALE

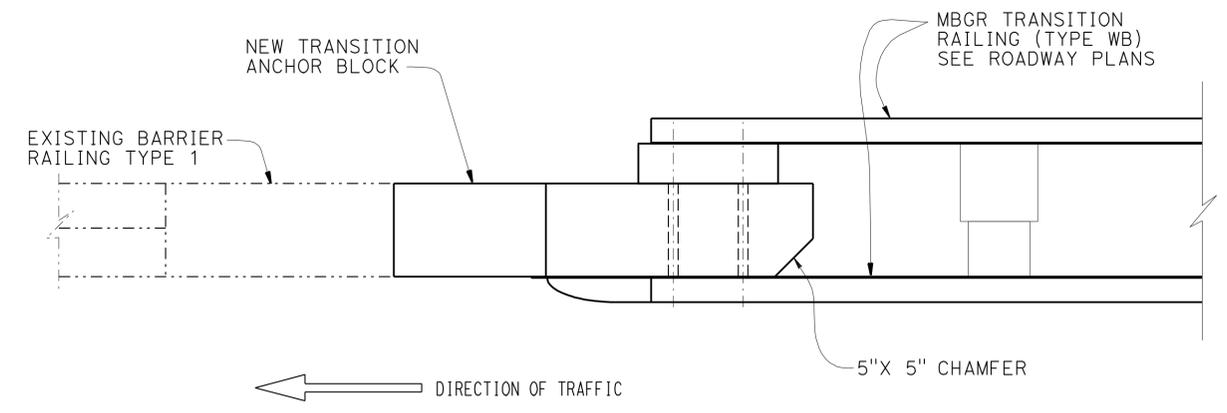


ELEVATION
NO SCALE

- NOTES:
1. For limits of excavation and backfill, see 2006 Standard Plans A62C, section E-E.
 2. The contractor shall verify all controlling field dimensions, before ordering or fabricating any material.
 3. Minimum 2" cover, typical.

TRANSITION BARRIER LOCATION TABLE

Bridge No	Location	Route	Post Mile	Direction	No. of "WB" connections @		Concrete Barrier (Transition Anchor Block) (LF)
					Approach End	Departure End	
10-146	BIG RIVER BRIDGE	1	50.16	NB	1	1	19
				SB	1	1	
10-153	CASPAR CREEK BRIDGE	1	54.71	NB	1	1	19
				SB	1	1	
10-138	DE HAVEN CREEK BRIDGE	1	79.22	NB	1	1	19
				SB	1	1	
10-0041	COLD CREEK NO. 2 BRIDGE	20	38.31	EB	1	1	19
				WB	1	1	
10-0043	COLD CREEK NO. 4 BRIDGE	20	39.65	EB	1	1	19
				WB	1	1	
10-0044	COLD CREEK NO. 5 BRIDGE	20	40.85	EB	1	1	19
				WB	1	1	



PLAN
NO SCALE

DESIGN	BY F ALTAMIRANO	CHECKED Y SONG	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN SPECIAL DESIGNS BRANCH	BRIDGE NO.	TRANSITION ANCHOR BLOCK DETAILS TYPE 1 BARRIER
DETAILS	BY B EDWARDS	CHECKED F ALTAMIRANO			VARIABLES	
QUANTITIES	BY F ALTAMIRANO	CHECKED Y SONG			POST MILE	

STRUCTURES DESIGN SPECIAL DESIGN SHEET (ENGLISH) (REV. 10-25-05)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

0 1 2 3

CU 01
EA 464201

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
5/27/2010 4/27/10 5/27/10 12/29/10	2	11

FILE => 01-464201trdrf01.dgn

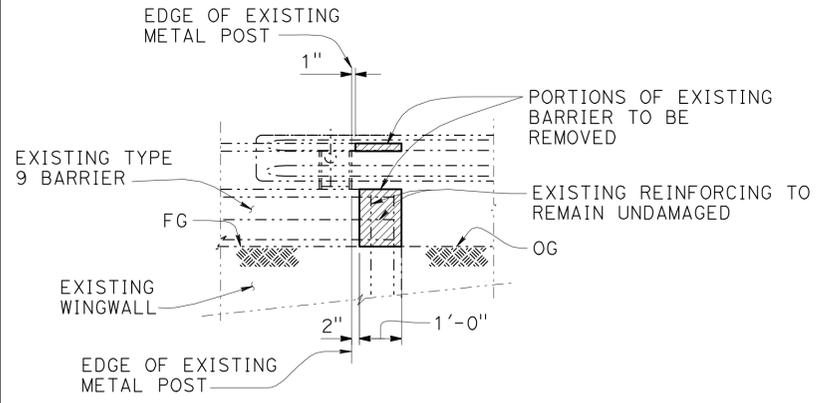
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
01	Men	1,20,128,162,253,271	Var	61	69

Felix S. Altamirano 5/27/10
 REGISTERED CIVIL ENGINEER DATE

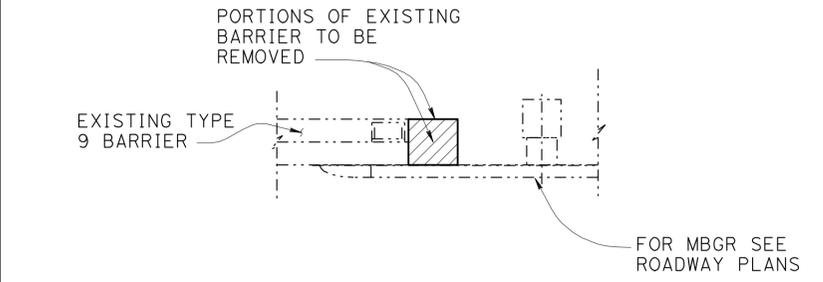
10-3-11
 PLANS APPROVAL DATE

No. **C56401**
 Exp. **6/30/13**
 CIVIL

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

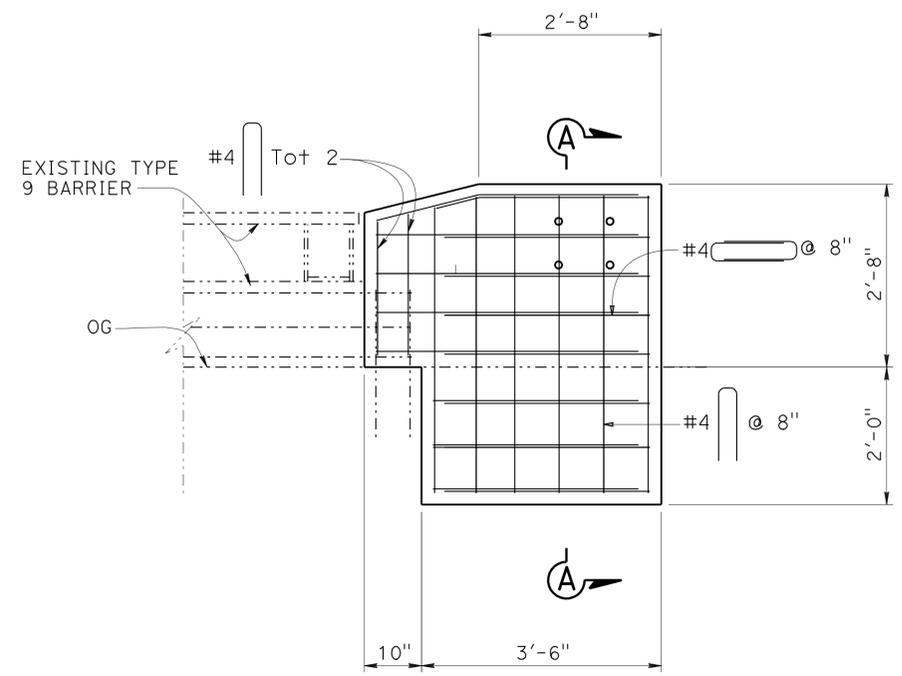


ELEVATION

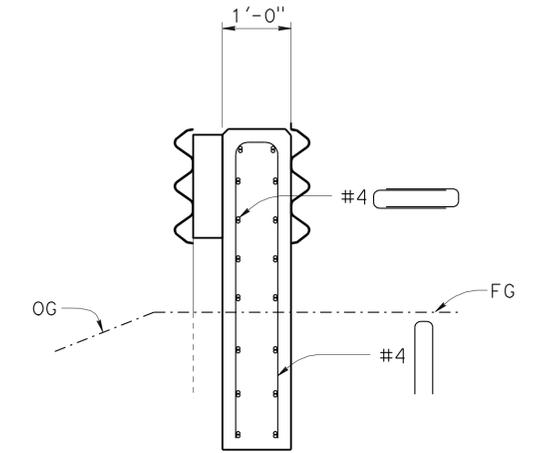


PLAN

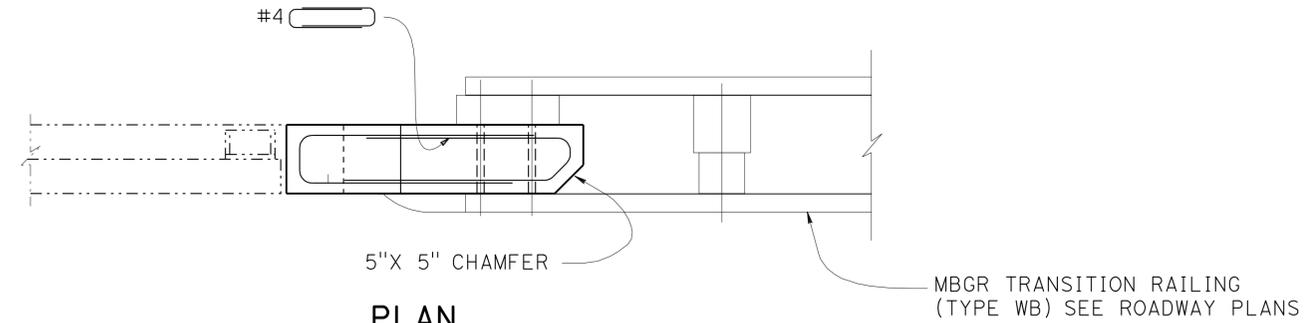
DEMOLITION
NO SCALE



ELEVATION
NO SCALE



SECTION A-A
NO SCALE



PLAN
NO SCALE

NOTES:

1. For limits of excavation and backfill, see Roadway Plans and Standard Plans May 2006, Sheet A62C, Section E-E.
2. The contractor shall verify all controlling field dimensions, before ordering or fabricating any material.
3. Minimum 2" cover, typical.

TRANSITION BARRIER LOCATION TABLE

Bridge No	Location	Route	Post Mile	Direction	No. of "WB" connections @		Concrete Barrier (Transition Anchor Block) (LF)
					Approach End	Departure End	
10-135	ROUTE 271/101 SEPARATION (SCANDIA OVERCROSSING)	271	5.6	NB	1	1	18
				SB	1	1	

LEGEND

- Indicates existing structure
- Indicates new construction
- ▨ Concrete Removal

DESIGN BY F ALTAMIRANO CHECKED Y SONG	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN	BRIDGE NO. VARIES	TRANSITION ANCHOR BLOCK DETAILS TYPE 9 BARRIER	
DETAILS BY B EDWARDS CHECKED F ALTAMIRANO		SPECIAL DESIGNS BRANCH	POST MILE VARIES		
QUANTITIES BY F ALTAMIRANO CHECKED Y SONG					
STRUCTURES DESIGN SPECIAL DESIGN SHEET (ENGLISH) (REV. 10-25-05)	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	CU 01 EA 464201	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 1/10/2010 4/10/10 5/10/10 5/6/10	SHEET 3 OF 11

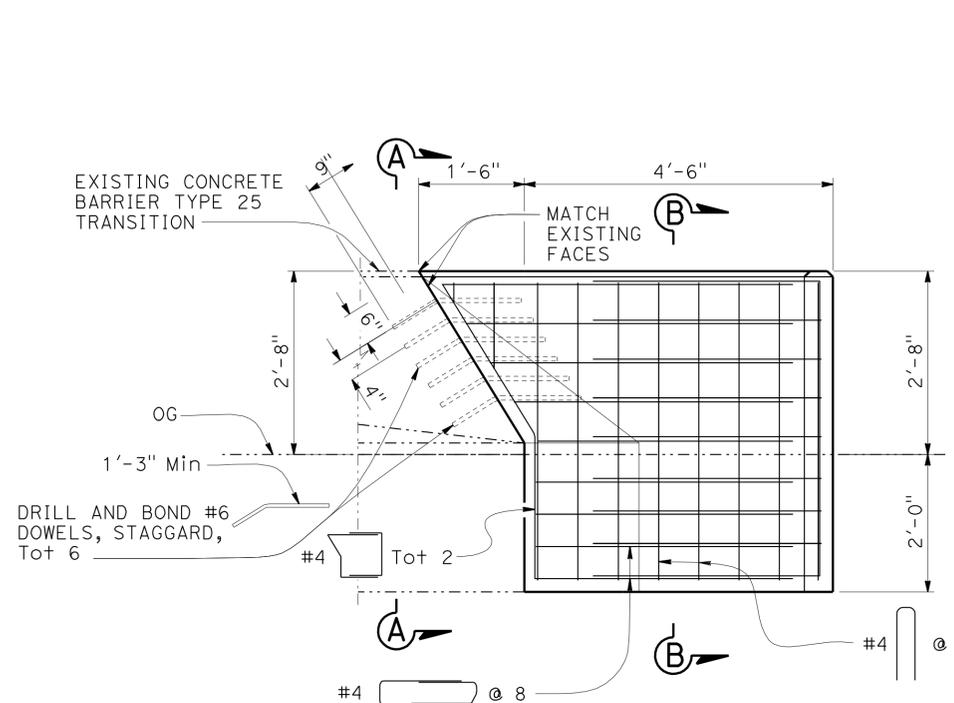
USERNAME => s124496 DATE PLOTTED => 05-OCT-2011 TIME PLOTTED => 12:46

TRANSITION BARRIER LOCATION TABLE

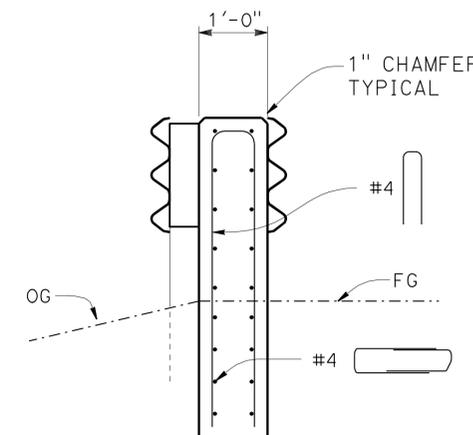
Bridge No.	Location	Route	Post Mile	Direction	No. of "WB" Connections		Concrete Barrier (Transition Anchor Block) (LF)
					Approach	Departure	
10-068	GASKER SLOUGH BRIDGE	1	17.66	NB	1	1	24
				SB	1	1	
10-166	BLUE SLIDE GULCH BRIDGE	1	74.98	NB	1	1	33
				SB	SEE SHEET 5	1	
10-137	WAGES CREEK BRIDGE	1	78.29	NB		1	18
				SB	1	1	
10-295	UNION LANDING BRIDGE	1	82.1	SB		1	6
10-271	SOLDIER PT SIDEHILL VIADUCT	1	83.56	SB	1	1	12
10-142	SOUTH FORK COTTONEVA CREEK BRIDGE	1	87.81	NB	1		18
				SB	1	1	
10-147	COTTONEVA CREEK BRIDGE	1	90.59	NB	1	1	24
				SB	1	1	
10-104	BROADDUS CREEK BRIDGE	20	31.19	EB	1	1	24
				WB	1	1	
10-107	BROADDUS CREEK BRIDGE	20	31.55	EB			6
				WB		1	
10-293	LONG VALLEY CREEK BRIDGE	162	0.02	EB	1	1	24
				WB	1	1	
10-252	MIDDLE FORK EEL RIVER BRIDGE	162	15.12	EB	1	1	18
				WB		1	
10-253	GRIST CREEK BRIDGE	162	28.29	EB	1	1	24
				WB	1	1	
10-094	TOWN CREEK BRIDGE	162	28.74	EB	1	1	18
				WB	1		
	TYPE 5 RETAINING WALL	253	2.52	WB	1	1	12
10-231	ROBINSON CREEK BRIDGE	253	15.05	EB			12
				WB	1	1	
10-217	REYNOLDS OC 271/101 SEPARATION	271	17.01	NB	1	SEE SHEET 6	30
				SB	1	SEE SHEET 6	

LEGEND

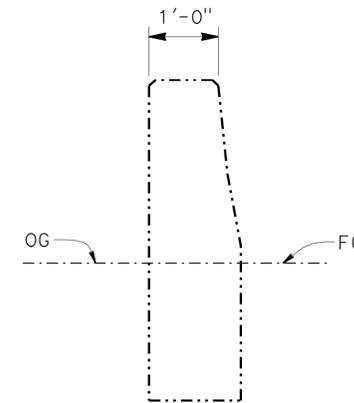
- Indicates existing structure
- Indicates new construction



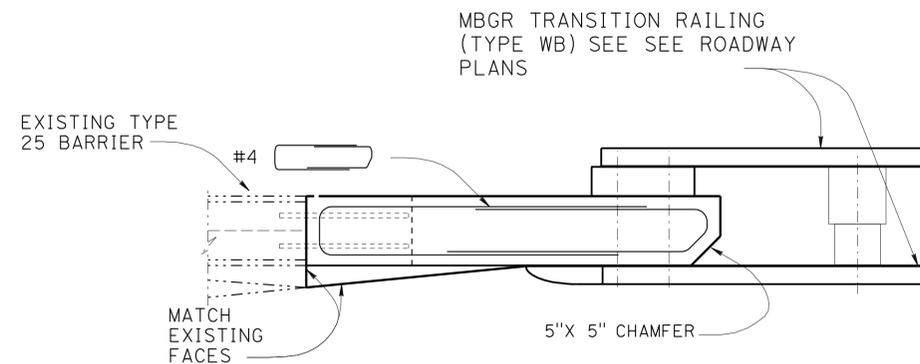
ELEVATION
NO SCALE



SECTION B-B
NO SCALE



SECTION A-A
NO SCALE



PLAN
NO SCALE

NOTES:

- For limits of excavation and backfill, see 2006 Standard Plans A62C, section E-E.
- The contractor shall verify all controlling field dimensions, before ordering or fabricating any material.
- Minimum 2" cover, typical.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
01	Men	1, 20, 128, 162, 253, 271	Var	62	69

Felix S. Altamirano 5/27/10
REGISTERED CIVIL ENGINEER DATE

10-3-11
PLANS APPROVAL DATE

No. C56401
Exp. 6/30/13
CIVIL
STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

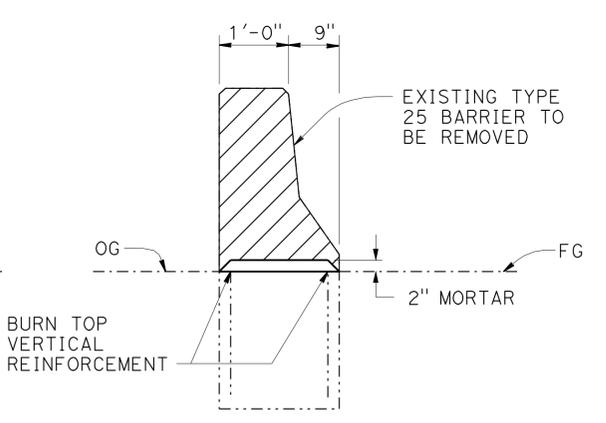
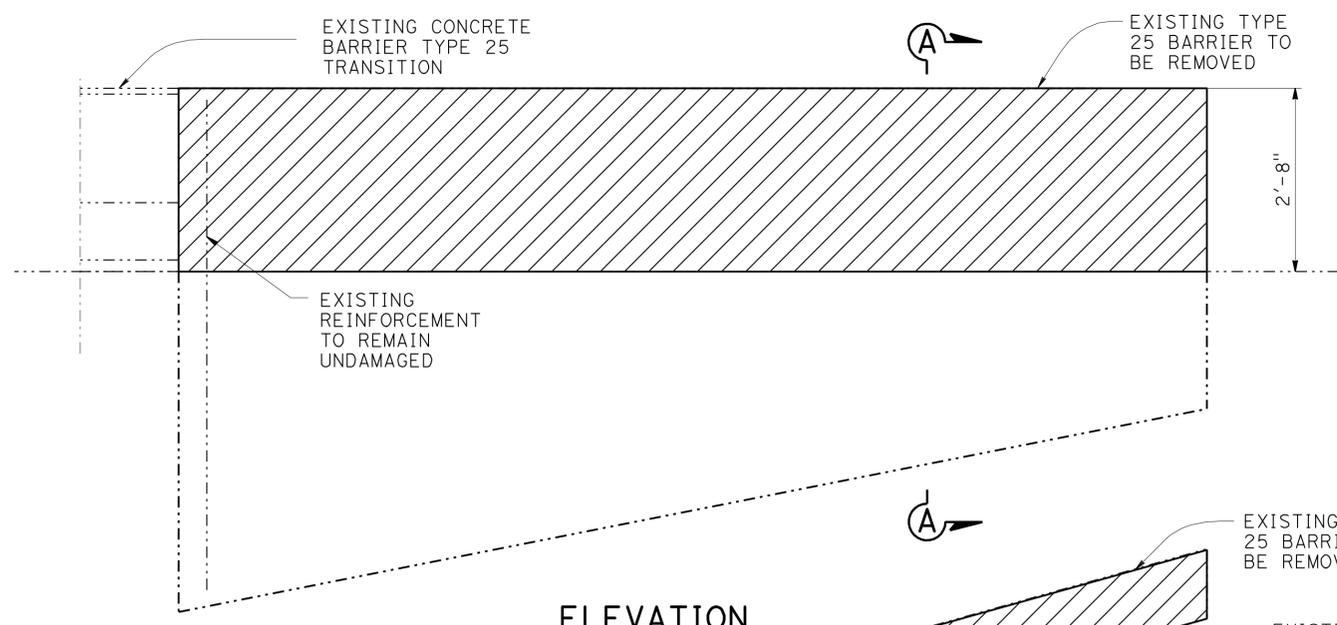
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
01	Men	1, 20, 128, 162, 253, 271	Var	63	69

Felix S. Altamirano 5/27/10
REGISTERED CIVIL ENGINEER DATE

10-3-11
PLANS APPROVAL DATE

No. C56401
Exp. 6/30/13
CIVIL
STATE OF CALIFORNIA

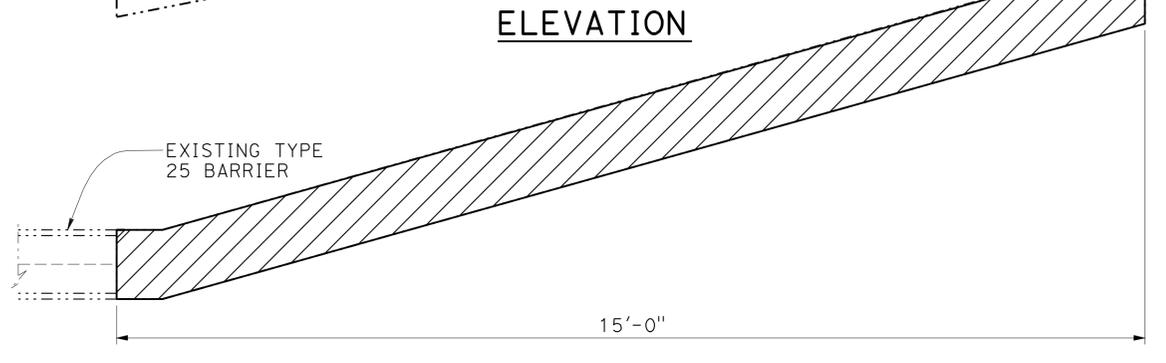
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



SECTION A-A
NO SCALE

LEGEND

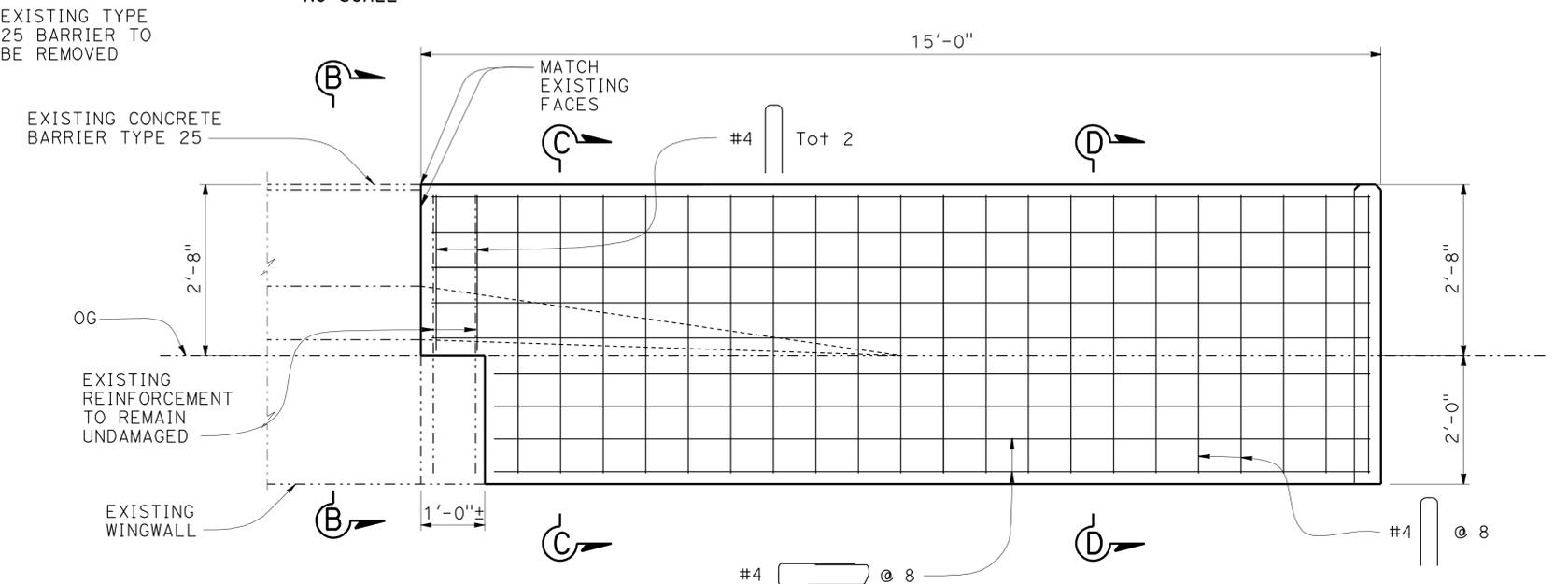
- Indicates existing structure
- Indicates new construction
- Concrete Removal



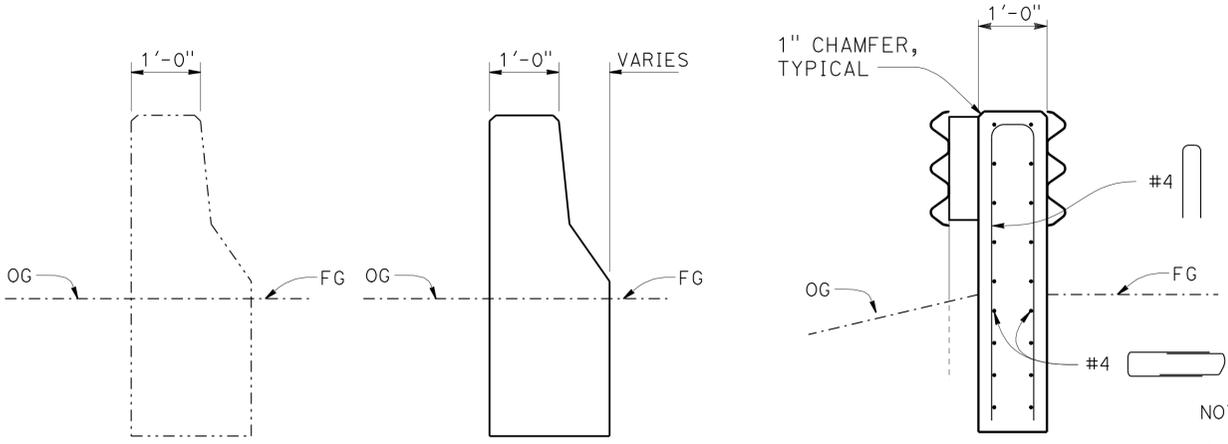
ELEVATION



PLAN
CONCRETE REMOVAL
NO SCALE



ELEVATION
NO SCALE



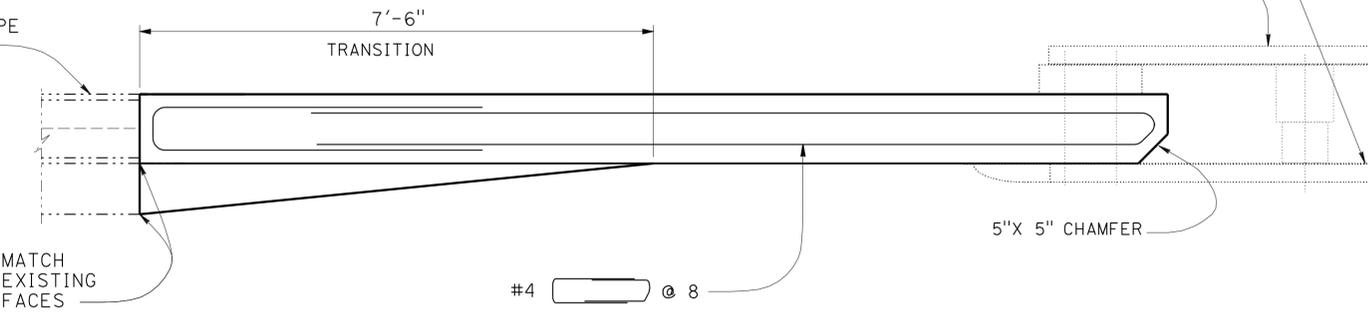
SECTION B-B
NO SCALE

SECTION C-C
NO SCALE

SECTION D-D
NO SCALE

NOTES:

1. For limits of excavation and backfill, see 2006 Standard Plans A62C, section E-E.
2. The contractor shall verify all controlling field dimensions, before ordering or fabricating any material.
3. Minimum 2" cover, typical.



PLAN
NO SCALE

DESIGN	BY F ALTAMIRANO	CHECKED Y SONG	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN SPECIAL DESIGNS BRANCH	BRIDGE NO.	TRANSITION ANCHOR BLOCK SB APPROACH-BLUE SLIDE GULCH BRIDGE
DETAILS	BY B EDWARDS	CHECKED FELIX ALTAMIRANO			VARIES	
QUANTITIES	BY F ALTAMIRANO	CHECKED Y SONG			VARIES	

STRUCTURES DESIGN SPECIAL DESIGN SHEET (ENGLISH) (REV. 10-25-05) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3 CU 01 EA 464201 DISREGARD PRINTS BEARING EARLIER REVISION DATES 5/12/2010 5/5/10

SHEET 5 OF 11

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
01	Men	1, 20, 128, 162, 253, 271	Var	64	69

Felix S. Altamirano 5/27/10
REGISTERED CIVIL ENGINEER DATE

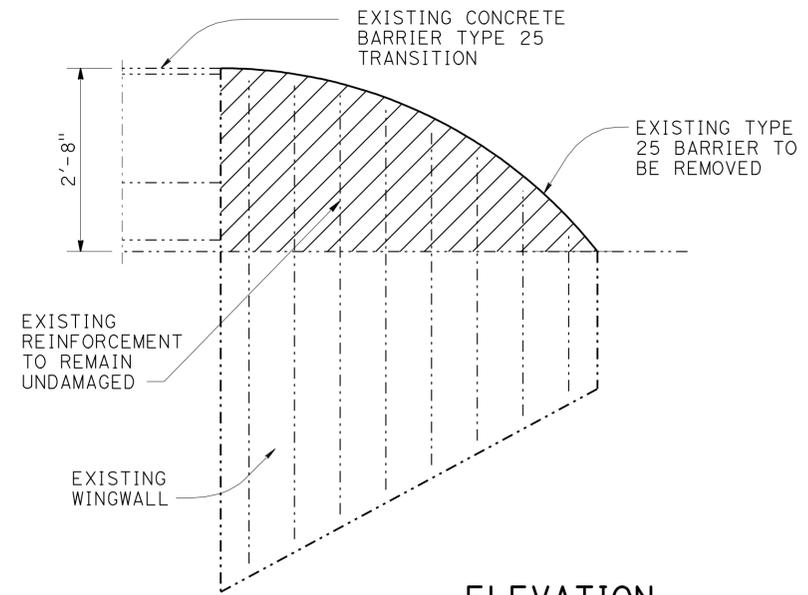
10-3-11
PLANS APPROVAL DATE

No. C56401
Exp. 6/30/13
CIVIL
STATE OF CALIFORNIA

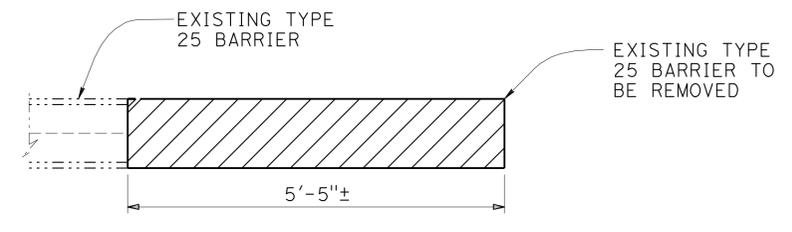
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

LEGEND

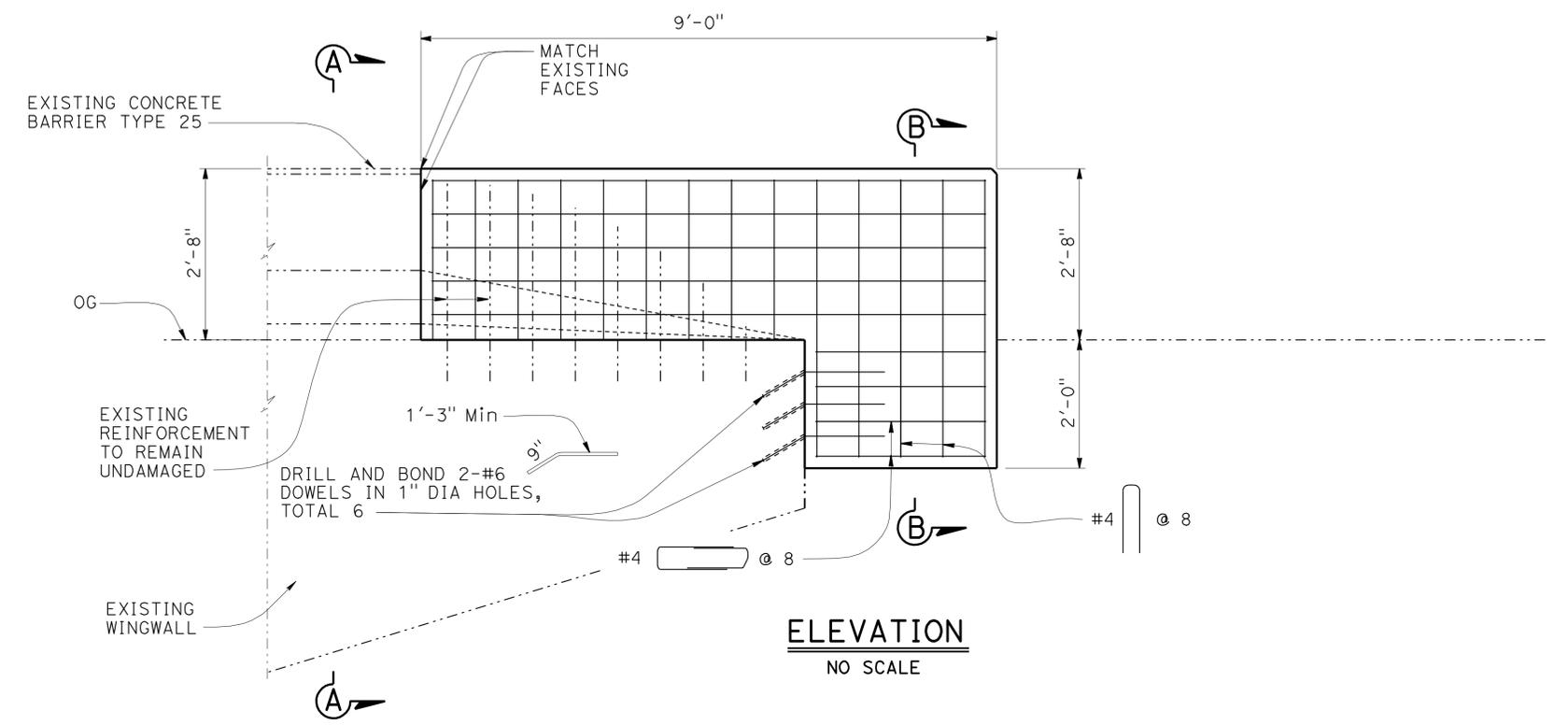
- Indicates existing structure
- Indicates new construction
-  Concrete Removal



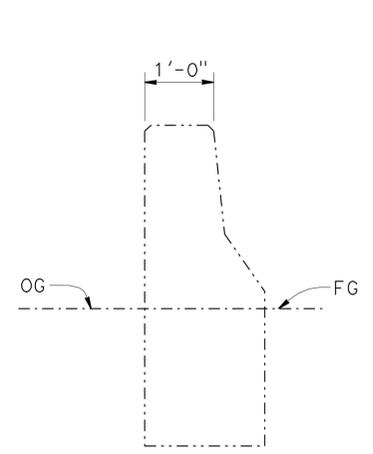
ELEVATION



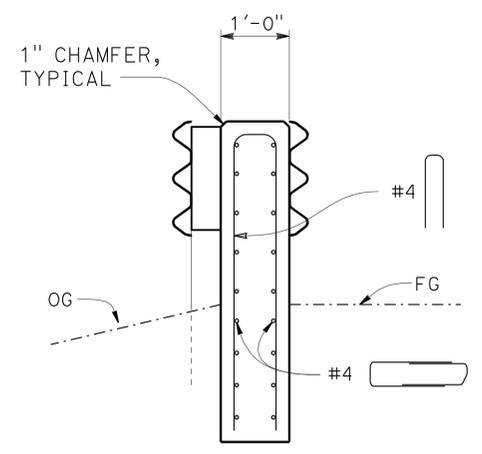
PLAN
CONCRETE REMOVAL
NO SCALE



ELEVATION
NO SCALE



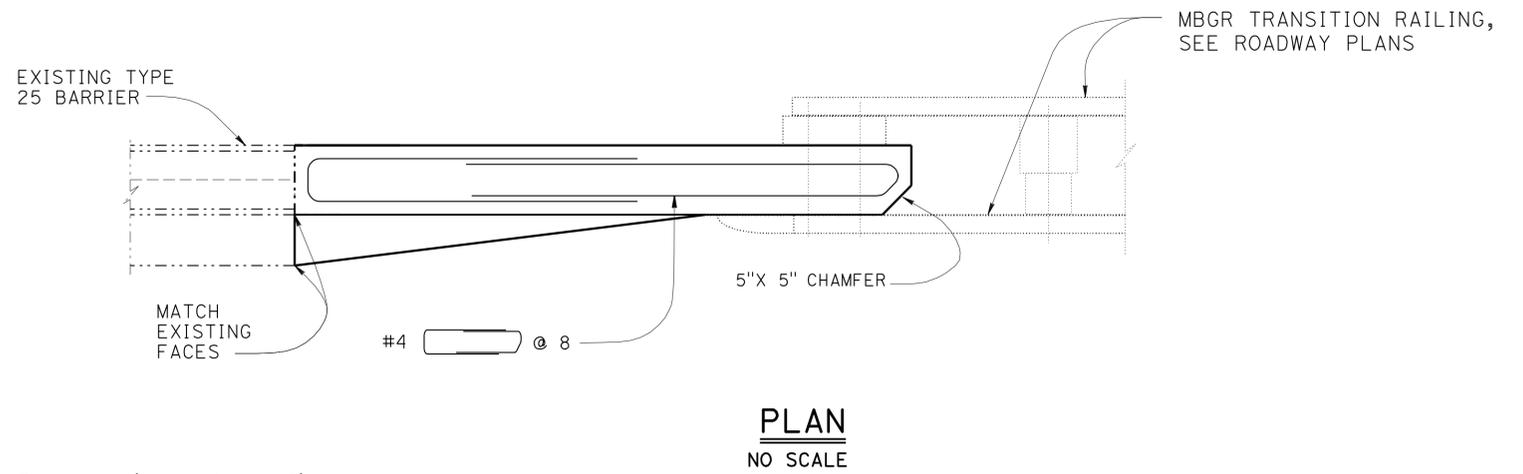
SECTION A-A
NO SCALE



SECTION B-B
NO SCALE

NOTES:

1. For limits of excavation and backfill, see 2006 Standard Plans A62C, section E-E.
2. The contractor shall verify all controlling field dimensions, before ordering or fabricating any material.
3. Minimum 2" cover, typical.

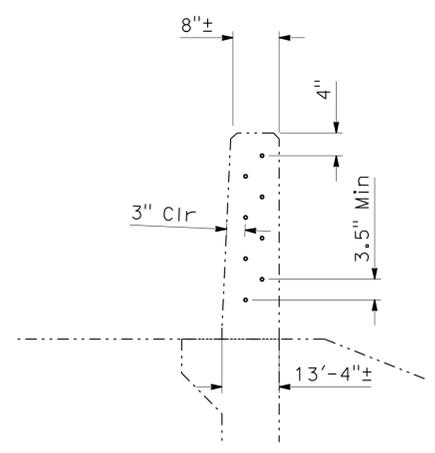


PLAN
NO SCALE

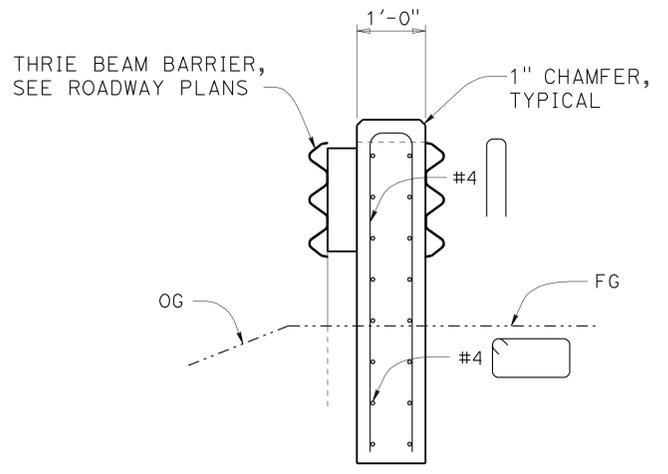
STRUCTURES DESIGN SPECIAL DESIGN SHEET (ENGLISH) (REV. 10-25-05)	DESIGN	BY F ALTAMIRANO	CHECKED Y SONG	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN SPECIAL DESIGNS BRANCH	BRIDGE NO.	TRANSITION ANCHOR BLOCK					
	DETAILS	BY B EDWARDS	CHECKED FELIX ALTAMIRANO			VARIABLES	SB & NB DEPARTURE-REYNOLDS OC					
	QUANTITIES	BY F ALTAMIRANO	CHECKED Y SONG			POST MILE	VARIES					
				CU 01 EA 464201	DISREGARD PRINTS BEARING EARLIER REVISION DATES	1/10/2010	4/10/10	5/5/10				SHEET 6 OF 11

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS: 0 1 2 3

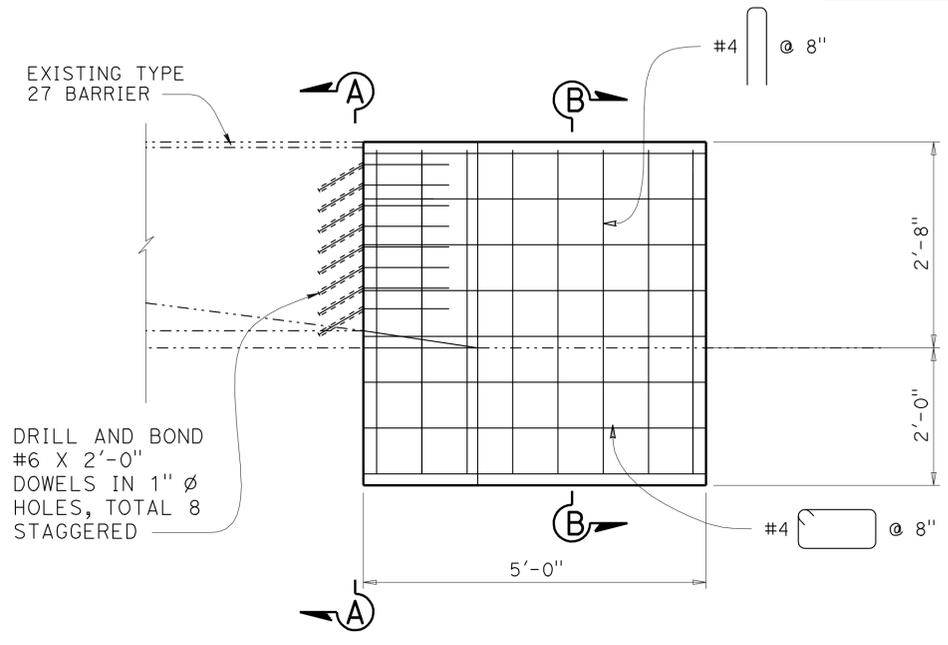
FILE => 01-464201fbrd+03b.dgn



SECTION A-A
NO SCALE



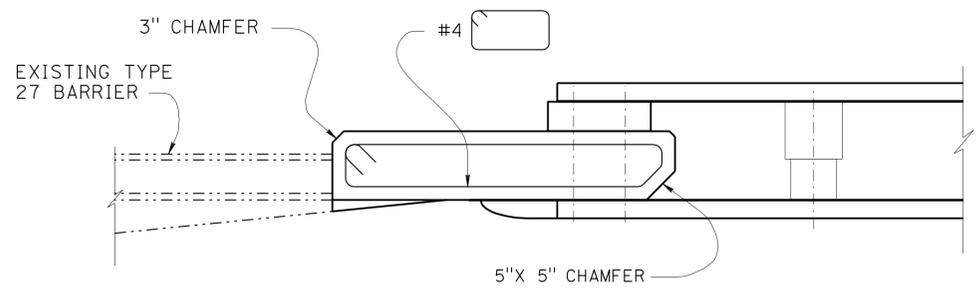
SECTION B-B
NO SCALE



ELEVATION
NO SCALE

TRANSITION BARRIER LOCATION TABLE

Bridge No.	Location	Route	Post Mile	Direction	No. of "WB" connections @		Concrete Barrier (Transition Anchor Block) (LF)
					Approach End	Departure End	
	SOLDIER PILE WALL	1	4.68	SB	1	1	10
	SOLDIER PILE WALL	1	4.81	SB	1	1	10
	BLUE SLIDE GULCH RETAINING WALL	1	74.97	SB	1	1	10
10-0079	FLYNN CREEK BRIDGE	128	11.63	EB	1	1	20
				WB	1	1	
10-0078	N. FORK NAVARRO RIVER BRIDGE	128	12.69	EB	1	1	20
				WB	1	1	
	TIE BACK WALL	162	5.61	WB	1	1	10
	RAIL TYPE 27 MODIFIED - TIE BACK WALL	253	2.61	WB	1	1	10



PLAN
NO SCALE

NOTES:

- For limits of excavation and backfill, see 2006 Standard Plans A62C, section E-E.
- The contractor shall verify all controlling field dimensions, before ordering or fabricating any material.
- Minimum 2" cover, typical.

LEGEND

- INDICATES EXISTING STRUCTURE
- _____ INDICATES NEW CONSTRUCTION

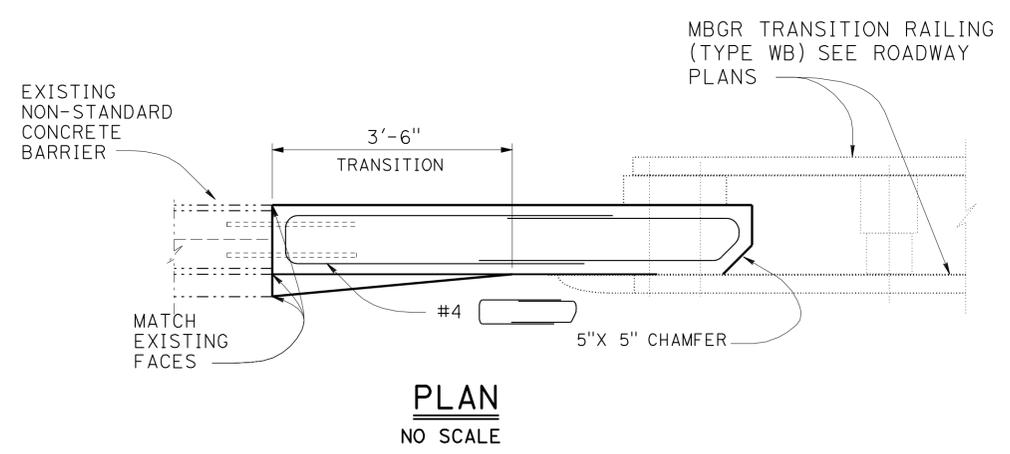
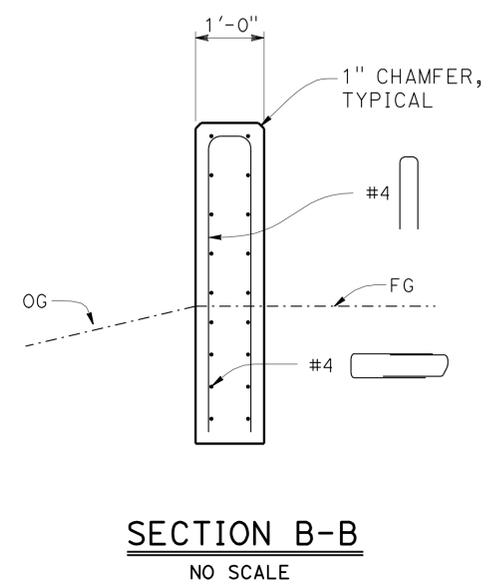
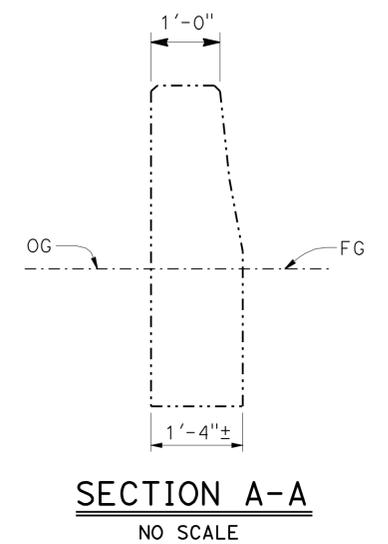
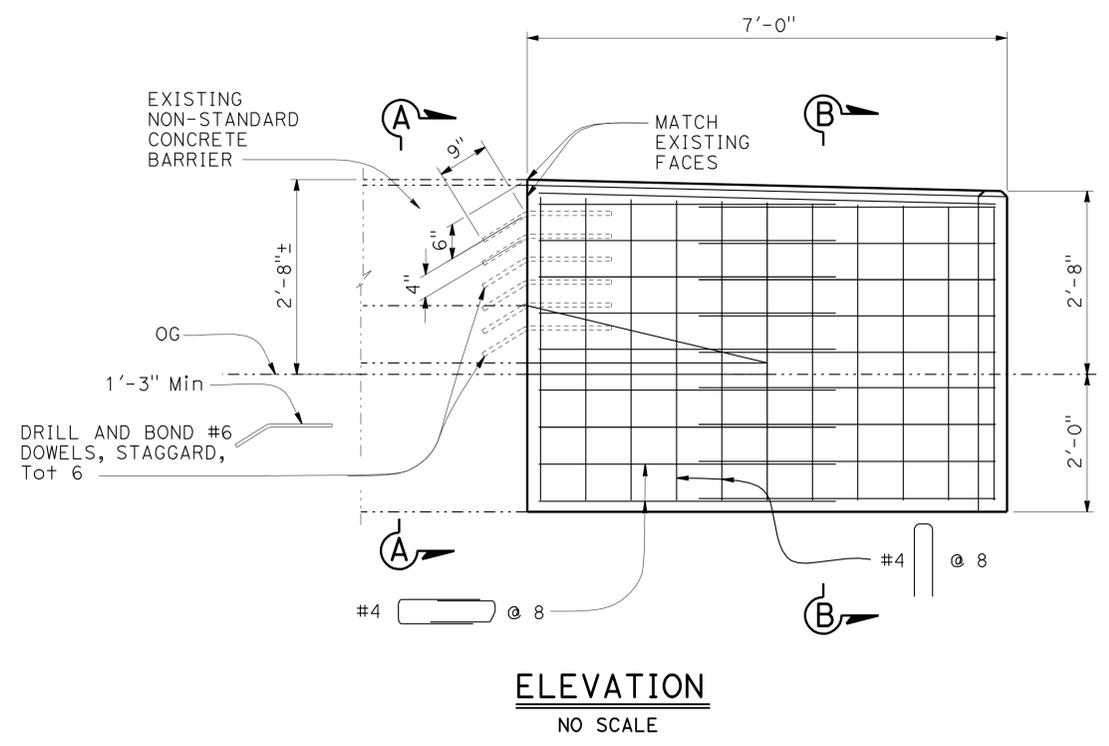
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
01	Men	120, 128, 162, 253, 271	Var	66	69

Felix S. Altamirano 5/27/10
 REGISTERED CIVIL ENGINEER DATE

10-3-11
 PLANS APPROVAL DATE

No. **C56401**
 Exp. **6/30/13**
 CIVIL
 STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



- NOTES:
- For limits of excavation and backfill, see 2006 Standard Plans A62C, section E-E.
 - The contractor shall verify all controlling field dimensions, before ordering or fabricating any material.
 - Minimum 2" cover, typical.

TRANSITION BARRIER LOCATION TABLE

Bridge No	Location	Route	Post Mile	Direction	No. of "WB" connections @		Concrete Barrier (Transition Anchor Block) (LF)
					Approach End	Departure End	
10-236	EEL RIVER BRIDGE	162	8.25	EB	1	1	28
				WB	1	1	

LEGEND

----- Indicates existing structure
 _____ Indicates new construction

THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DESIGN BY F ALTAMIRANO CHECKED Y SONG	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN	BRIDGE NO. VARIES	TRANSITION ANCHOR BLOCK DETAILS NON-STANDARD BARRIER
DETAILS BY B EDWARDS CHECKED FELIX ALTAMIRANO		SPECIAL DESIGNS BRANCH	POST MILE VARIES	
QUANTITIES BY F ALTAMIRANO CHECKED Y SONG		CU 01 EA 464201	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES

STRUCTURES DESIGN SPECIAL DESIGN SHEET (ENGLISH) (REV. 10-25-05) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3 FILE => 01-464201tbrd+05.dgn

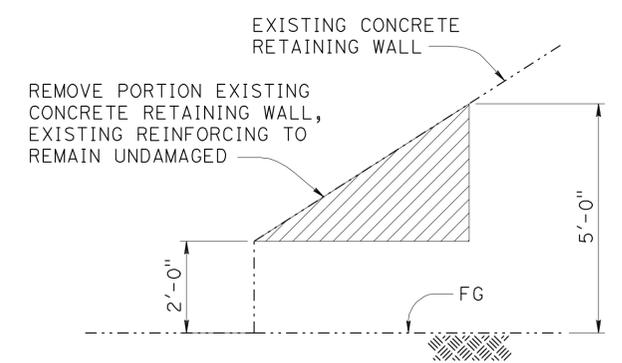
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
01	Men	1, 20, 128, 162, 253, 271	Var	67	69

Felix S. Altamirano 5/27/10
REGISTERED CIVIL ENGINEER DATE

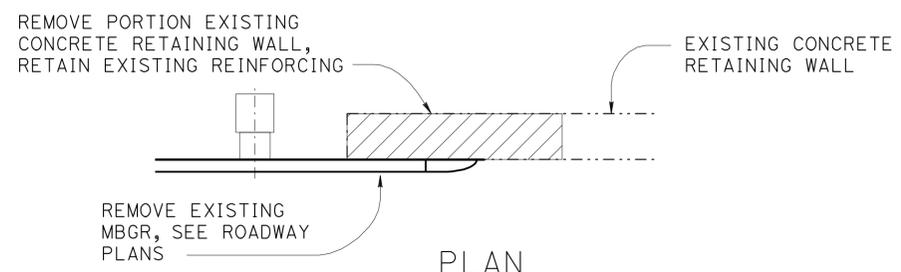
10-3-11
PLANS APPROVAL DATE

No. **C56401**
Exp. **6/30/13**
CIVIL
STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

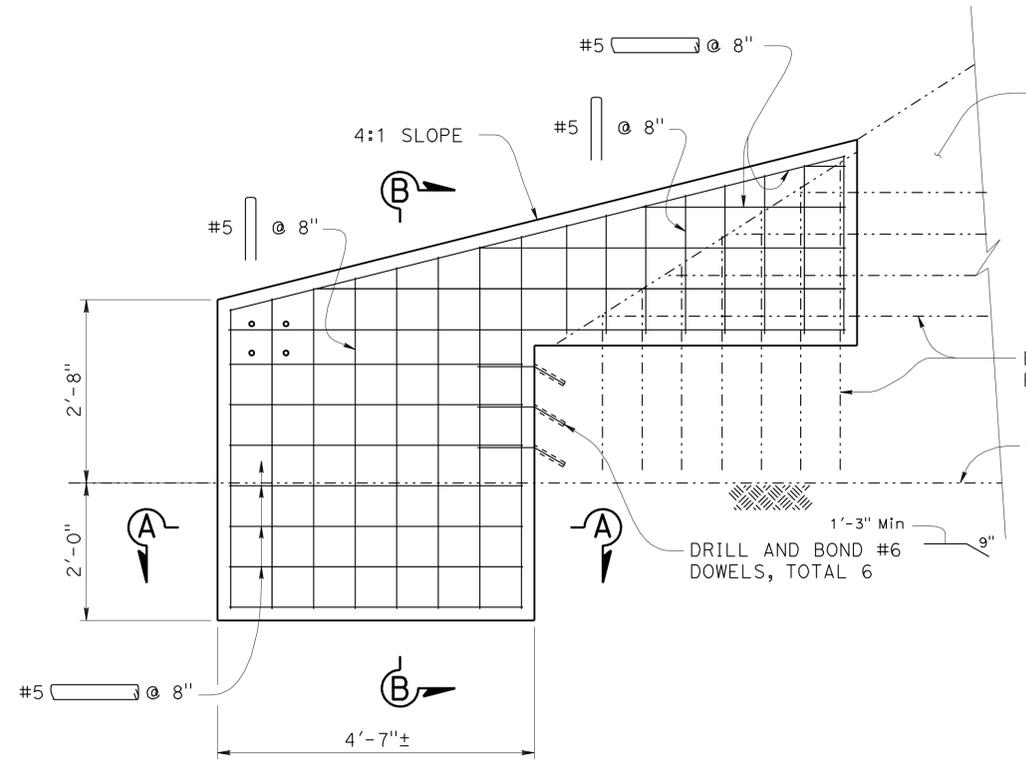


ELEVATION

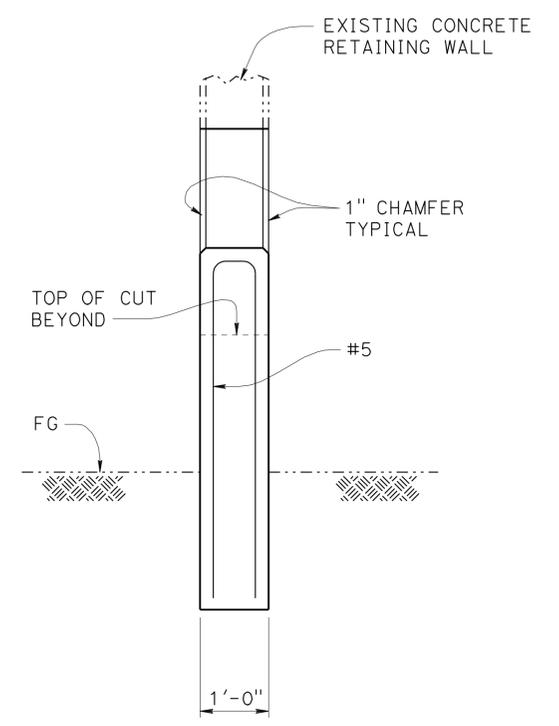


PLAN

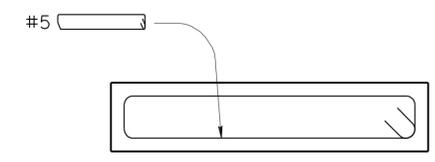
DEMOLITION
NO SCALE



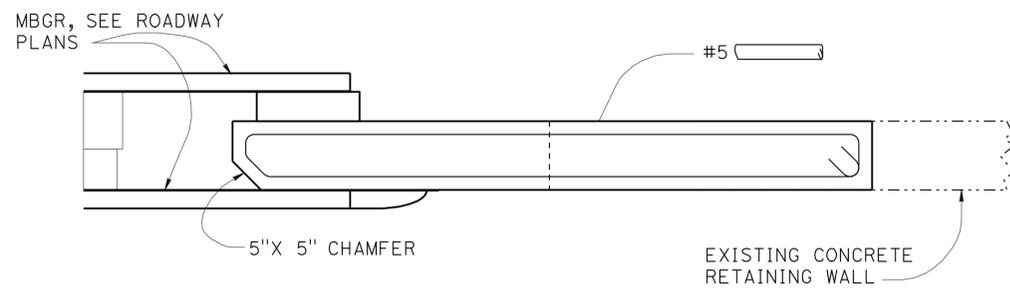
ELEVATION
NO SCALE



SECTION B-B
NO SCALE



SECTION A-A
NO SCALE



PLAN
NO SCALE

NOTES:

- For limits of excavation and backfill, see 2006 Standard Plans A62C, section E-E.
- The contractor shall verify all controlling field dimensions, before ordering or fabricating any material.
- Minimum 2" cover, typical.

LEGEND

- Indicates existing structure
- Indicates new construction
- ////// Concrete Removal

TRANSITION BARRIER LOCATION

Bridge No	Location	Route	Post Mile	Direction	No. of "WB"connections @		Concrete Barrier (Transition Anchor Block) (LF)
					Approach End	Departure End	
10-0145	ROUTE 101/271 SEPARATION	271	3.3	NB		1	28
				SB	1	1	

DESIGN BY F AILTAMIRANO CHECKED Y SONG	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN SPECIAL DESIGN BRANCH	BRIDGE NO. 10-0145	TRANSITION ANCHOR BLOCK DETAILS ROUTE 101/271 SEPARATION
			POST MILE 3.3	
DETAILS BY P C Wells CHECKED F AILTAMIRANO				
QUANTITIES BY F AILTAMIRANO CHECKED Y SONG				
STRUCTURES DESIGN SPECIAL DESIGN SHEET (ENGLISH) (REV. 10-25-05)			REVISION DATES	SHEET 9 OF 11

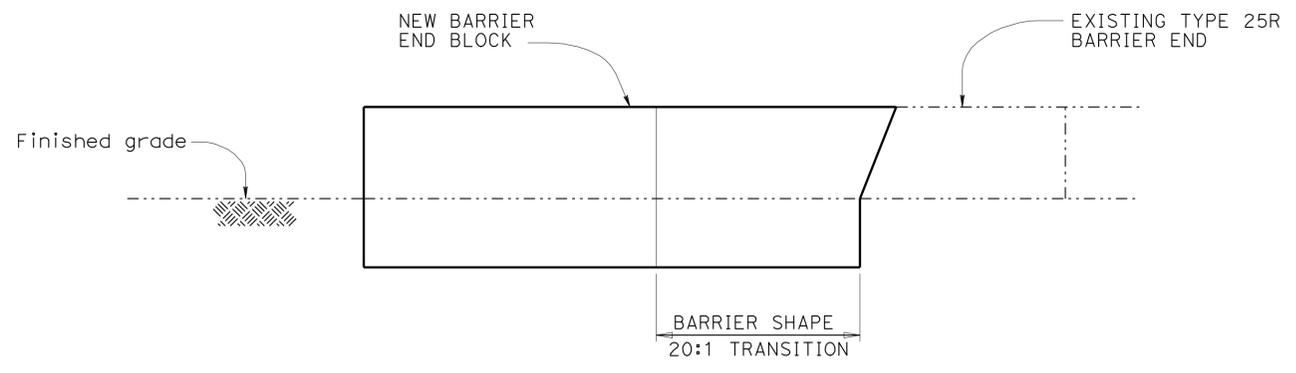
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS: 0 1 2 3

CU 01 EA 464201

DISREGARD PRINTS BEARING EARLIER REVISION DATES

FILE => 01-464201+brd+06.dgn

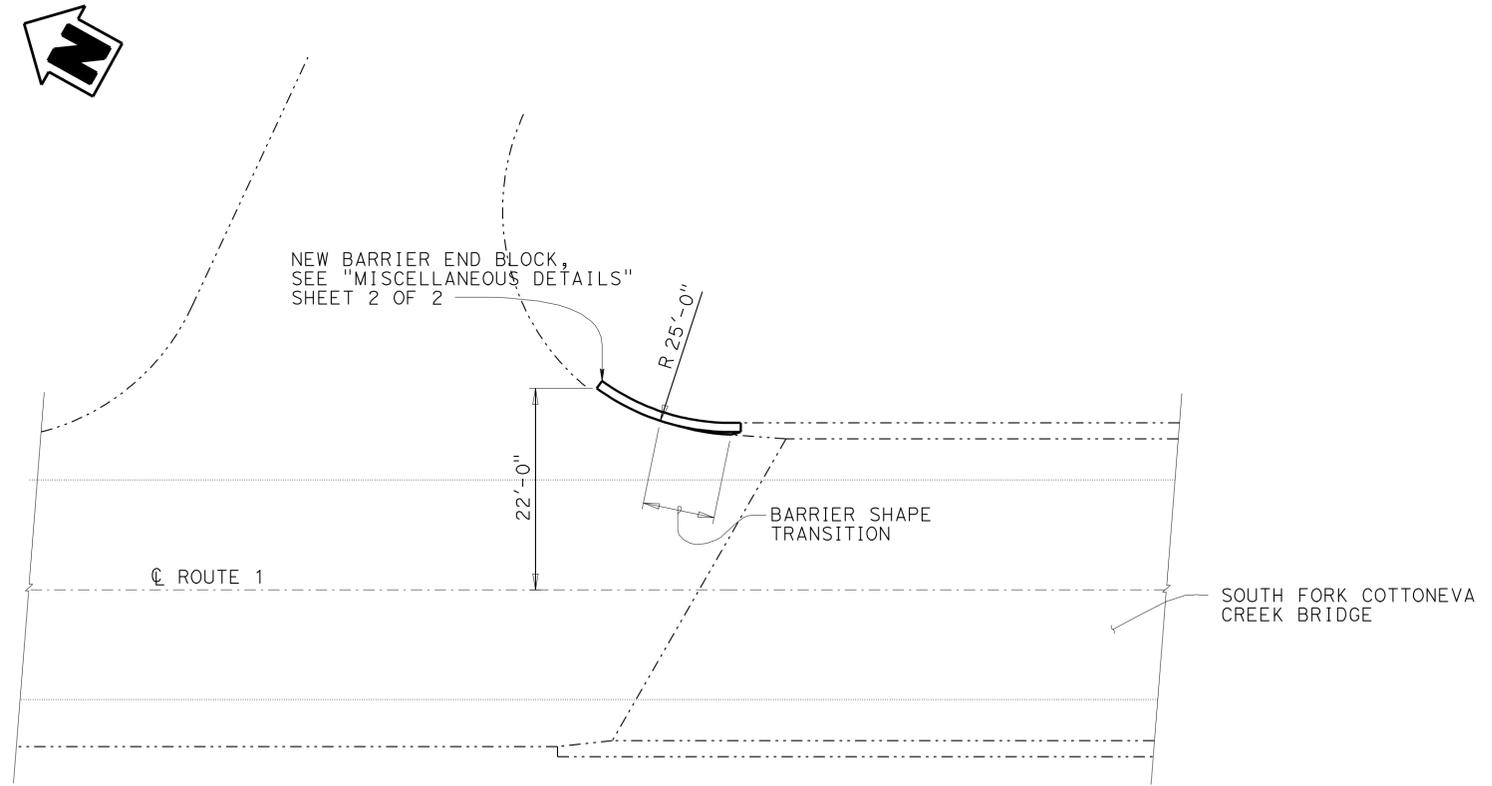
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
01	Men	1, 20, 128, 162, 253, 271	Var	68	69
REGISTERED CIVIL ENGINEER			DATE	X	
10-3-11			PLANS APPROVAL DATE		
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					



ELEVATION
 (@ BARRIER END BLOCK)
 3/8" = 1'-0"

LEGEND

-----	EXISTING
—————	NEW CONSTRUCTION



PLAN
 1" = 1'-0"

X JAMES SAGAR DESIGN ENGINEER	DESIGN	BY J MAGANA	CHECKED G DORIA	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING:	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN SPECIAL DESIGNS BRANCH	BRIDGE NO.	SOUTH FORK COTTONEVA CREEK BRIDGE GENERAL PLAN		
	DETAILS	BY PC WELLS	CHECKED J MAGANA	LAYOUT	BY X			CHECKED X		POST MILE	
	QUANTITIES	BY J MAGANA	CHECKED G DORIA	SPECIFICATIONS	BY X			PLANS AND SPECS COMPARED X		87.81	
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS						0 1 2 3	UNIT: 3619 PROJECT NUMBER & PHASE: 0100000260	CONTRACT NO.: 01-464201	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 10 OF 11

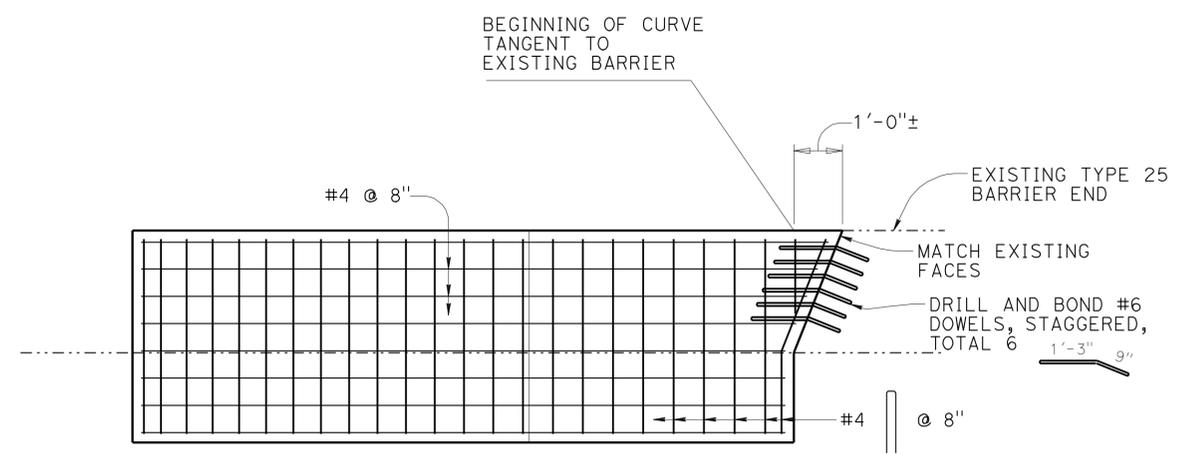
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
01	Men	1, 20, 128, 162, 253, 271	Var	69	69

REGISTERED CIVIL ENGINEER *Joel Magana* X DATE
 10-3-11 PLANS APPROVAL DATE
 No. C61500
 Exp. 6/30/13
 CIVIL
 STATE OF CALIFORNIA

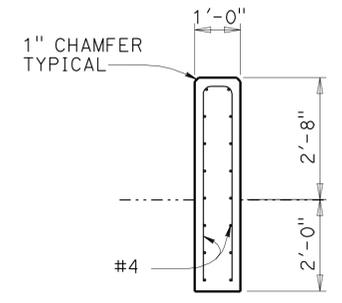
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

LEGEND

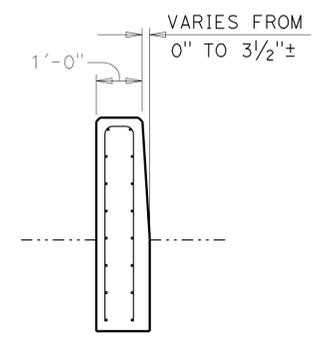
----- EXISTING
 _____ NEW CONSTRUCTION



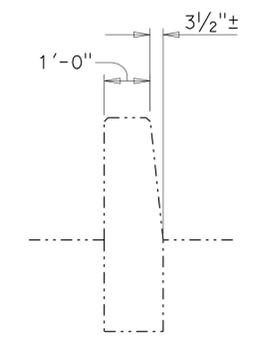
ELEVATION
 1/2" = 1'-0"



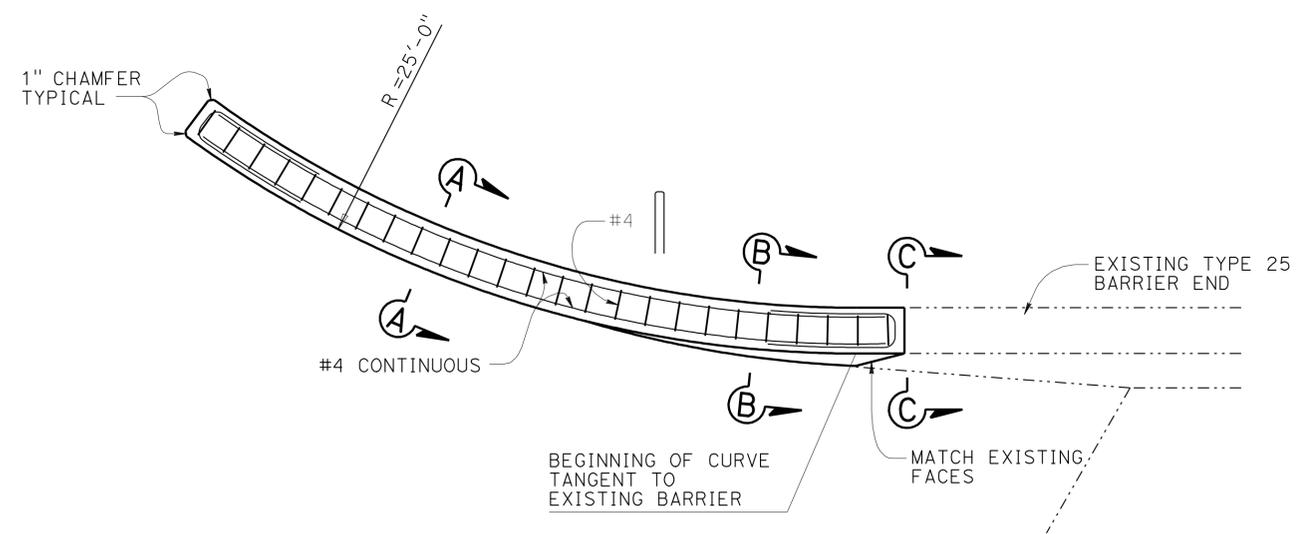
SECTION A-A
 1/2" = 1'-0"



SECTION B-B
 1/2" = 1'-0"



SECTION C-C
 1/2" = 1'-0"



PLAN
 1/2" = 1'-0"

TRANSITION BARRIER LOCATION TABLE

Bridge No	Location	Route	Post Mile	Direction	No. of "WB" connections @		Concrete Barrier (Transition Anchor Block) (LF)
					Approach End	Departure End	
10-142	SOUTH FORK COTTONEVA CREEK BRIDGE	1	87.81	NB	0	1	17
				SB	0	0	

NOTES:

- For limits of excavation and backfill, see 2006 STANDARD PLANS A62C SECTION E-E.
- Epoxy fill drilled holes for bolts used to fasten MBGR to existing end block, unless holes were cast using pipe sleeves.

BRANCH CHIEF <u>JAMES SAGAR</u>	DESIGN BY J MAGANA	CHECKED G DORIA	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN SPECIAL DESIGN BRANCH	BRIDGE NO.	SOUTH FORK COTTONEVA CREEK BRIDGE TYPE 25 BARRIER END BLOCK - MISC. DETAILS
	DETAILS BY P WELLS	CHECKED J MAGANA			10-142	
	QUANTITIES BY J MAGANA	CHECKED G DORIA			87.81	