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

STATE OF CALIFORNIA  
**DEPARTMENT OF TRANSPORTATION**  
**PROJECT PLANS FOR CONSTRUCTION ON**  
**STATE HIGHWAY**  
**IN SISKIYOU COUNTY NEAR EDGEWOOD**  
**FROM 0.3 MILE SOUTH OF WEED ROADSIDE**  
**REST AREA TO 0.7 MILE SOUTH OF**  
**GRENADE OVERCROSSING**

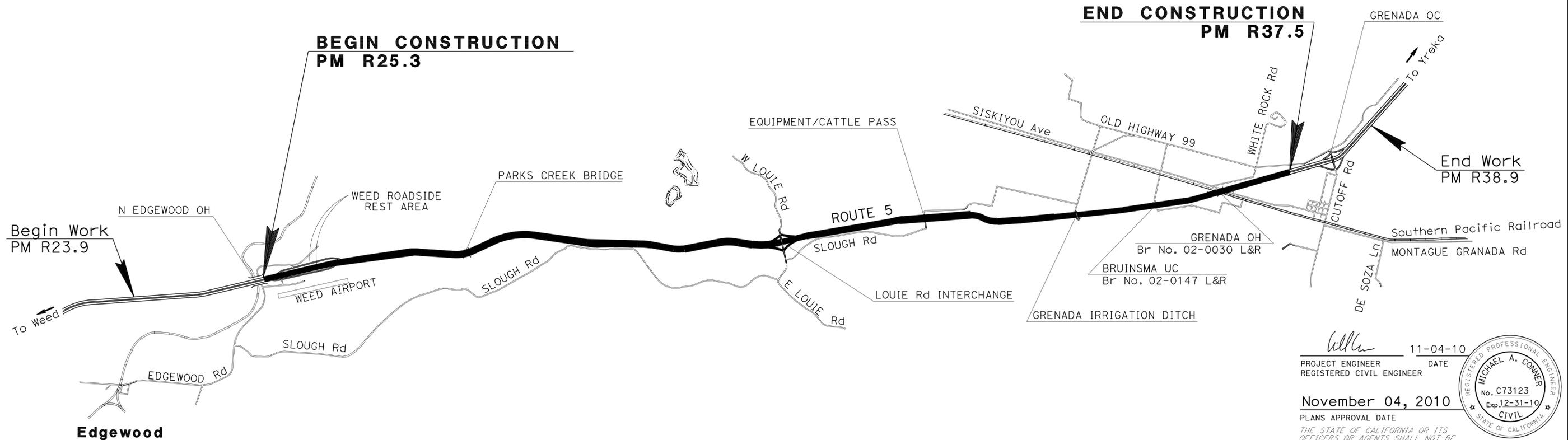
TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sis	5	R25.3/R37.5	1	37





LOCATION MAP



PROJECT MANAGER  
**LANCE BROWN**  
 DESIGN ENGINEER  
**LANCE BROWN**

 11-04-10  
 PROJECT ENGINEER DATE  
 REGISTERED CIVIL ENGINEER  
**November 04, 2010**  
 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."

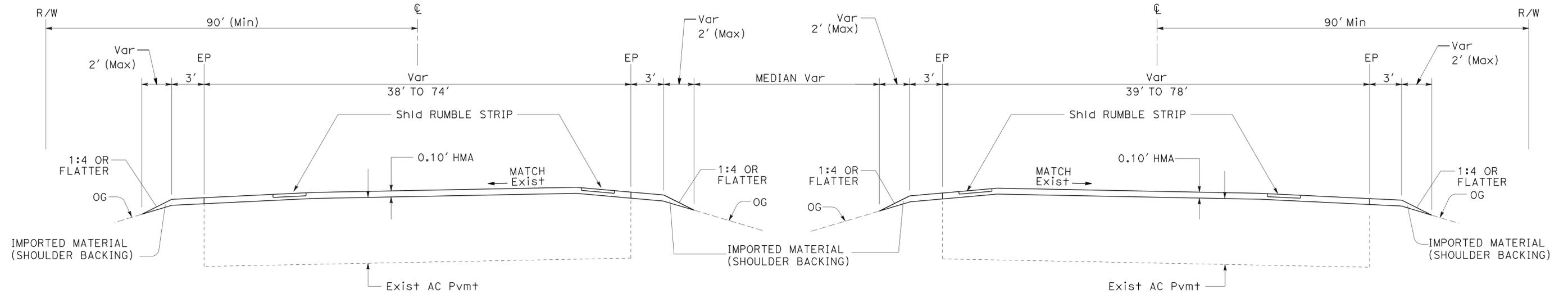
NO SCALE

CONTRACT No.	<b>02-2E6904</b>
PROJECT ID	<b>0200000595</b>

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sis	5	R25.3/R37.5	2	37
			11-04-10	REGISTERED CIVIL ENGINEER DATE	
			11-04-10	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:**

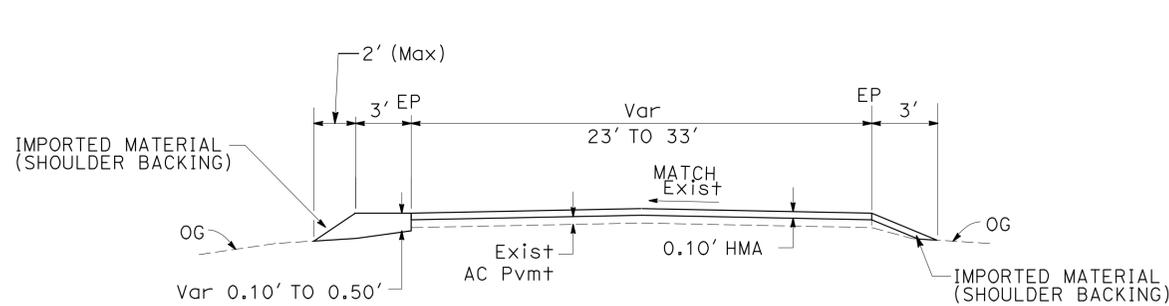
- DIMENSIONS OF THE STRUCTURAL SECTIONS ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
- SUPERELEVATIONS AS SHOWN OR AS DIRECTED BY THE ENGINEER.
- EXISTING UTILITY FACILITIES HAVE NOT BEEN POSITIVELY IDENTIFIED.
- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- DO NOT PLACE RUMBLE STRIP ON POLYESTER CONCRETE BRIDGE DECKS.



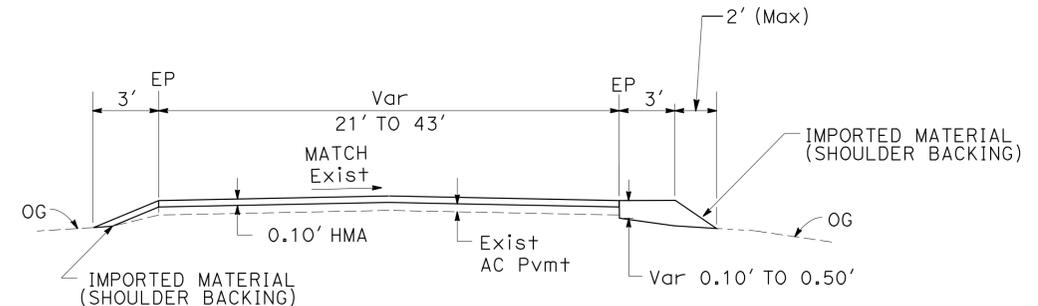
SOUTHBOUND

NORTHBOUND

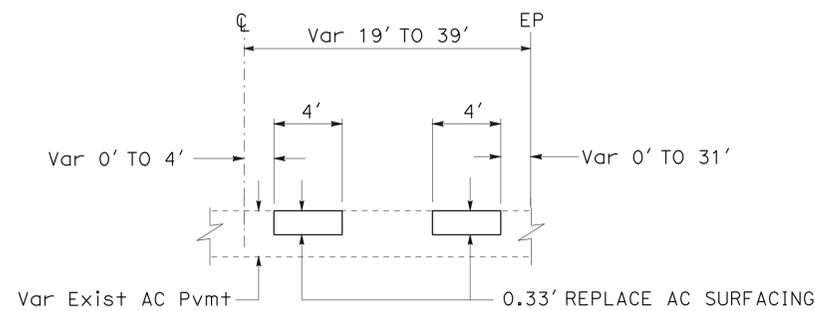
**ROUTE 5**



LOUIE Rd SB ON  
LOUIE Rd SB OFF



LOUIE Rd NB ON  
LOUIE Rd NB OFF



**REPLACE AC SURFACING**  
(TYPICAL BOTH DIRECTIONS)

**TYPICAL CROSS SECTIONS**

NO SCALE

**X-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** MAINTENANCE  
 FUNCTIONAL SUPERVISOR: LANCE BROWN  
 CALCULATED/DESIGNED BY: MICHAEL CONNER  
 CHECKED BY: KARLIE SMITH  
 REVISIONS: REVISOR: DATE: REVISIONS: DATE:

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sis	5	R25.3/R37.5	3	37

REGISTERED CIVIL ENGINEER	DATE
<i>Michael A. Conner</i>	11-04-10
PLANS APPROVAL DATE	
	11-04-10

REGISTERED PROFESSIONAL ENGINEER
MICHAEL A. CONNER
No. C73123
Exp. 12-31-10
CIVIL
STATE OF CALIFORNIA

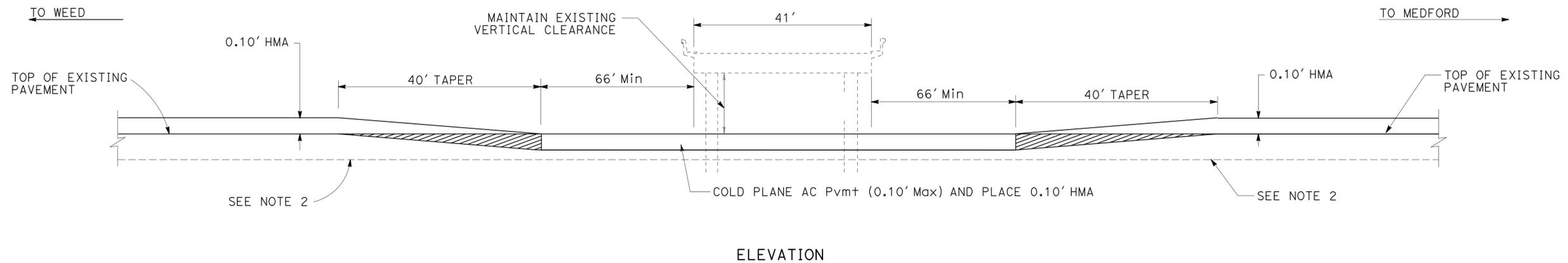
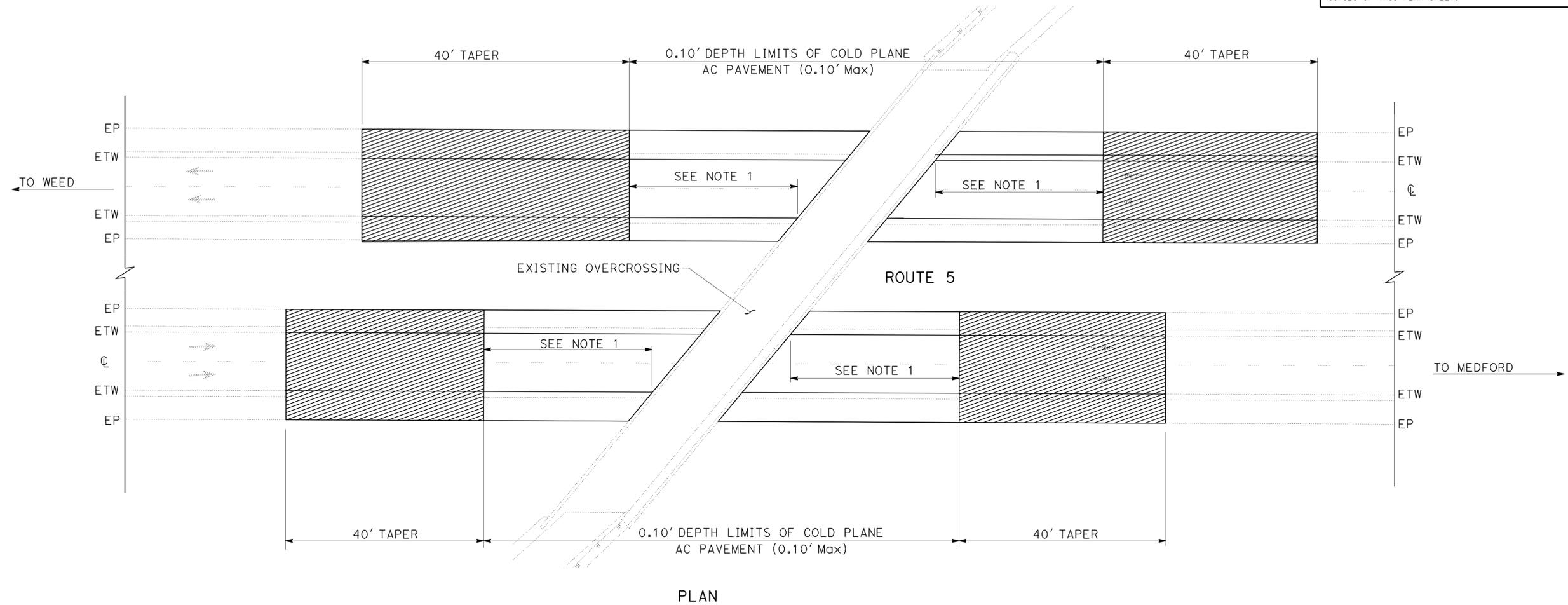
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**NOTES:**

1. THE 0.10' DEPTH COLD PLANE AC PAVEMENT SHALL BE A MINIMUM OF 66' IN LENGTH MEASURED ALONG THE ETW.
2. SEE TYPICAL CROSS SECTIONS FOR EXISTING STRUCTURAL SECTION.
3. EXISTING UTILITY FACILITIES HAVE NOT BEEN POSITIVELY IDENTIFIED.

**LEGEND**

-  COLD PLANE AC SURFACING (0.00' TO 0.10')
-  DIRECTION OF TRAVEL



**OVERCROSSING PAVEMENT OVERLAY TAPER**

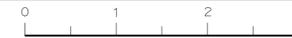
PM R31.18 NB & SB  
R34.96 NB & SB

**CONSTRUCTION DETAILS**

NO SCALE

**C-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - MAINTENANCE  
 FUNCTIONAL SUPERVISOR: LANCE BROWN  
 CALCULATED/DESIGNED BY: MICHAEL CONNER  
 CHECKED BY: KARLIE SMITH  
 REVISOR BY: MICHAEL CONNER  
 DATE REVISOR: [blank]



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sis	5	R25.3/R37.5	4	37
			11-04-10	DATE	
REGISTERED CIVIL ENGINEER			DATE		
11-04-10			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:**

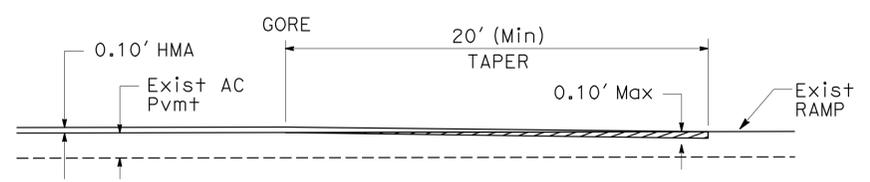
- EXISTING UTILITY FACILITIES HAVE NOT BEEN POSITIVELY IDENTIFIED.
- NO EXISTING UTILITY FACILITIES HAVE BEEN IDENTIFIED WITHIN THE WORK AREA DELINEATED ON THIS PLAN SHEET.

**LEGEND:**

- COLD PLANE AC SURFACING (0.00' TO 0.10')
- COLD PLANE AC SURFACING (0.20')
- DIRECTION OF TRAVEL

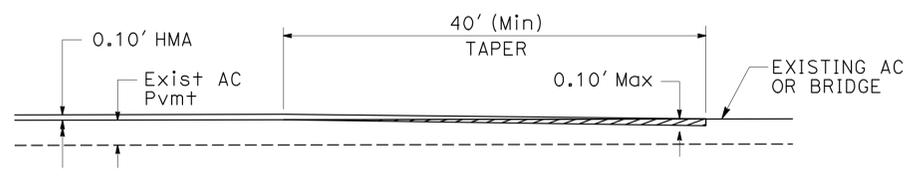
**ABBREVIATIONS:**

SPRR SOUTHERN PACIFIC RAILROAD



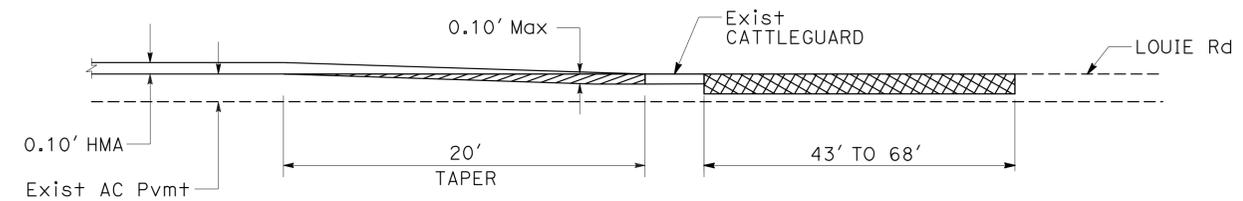
**MAINLINE CONFORM AT GORE TAPER**

PM R25.35 NB  
R25.50 SB  
R25.88 NB  
R25.89 SB



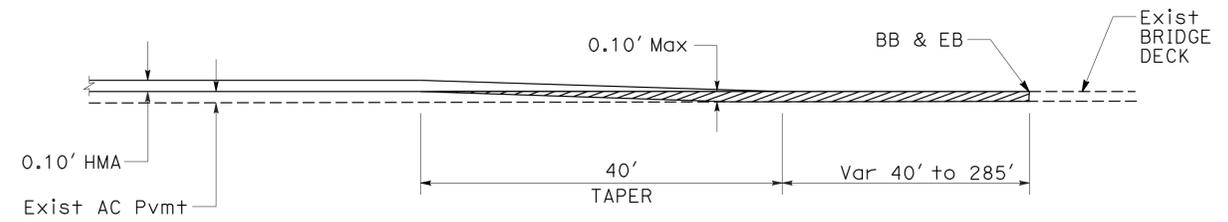
**MAINLINE CONFORM TAPER**

PM R25.26 NB & SB  
R37.50 NB & SB



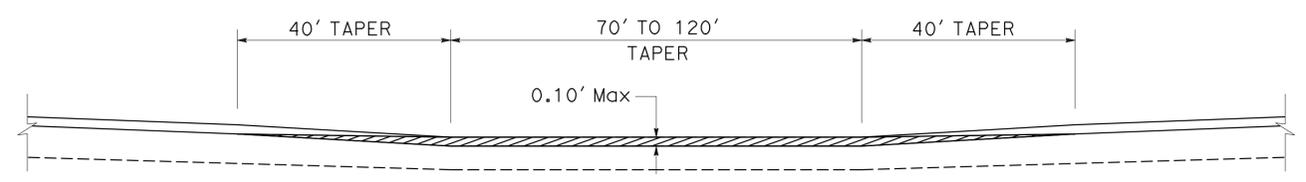
**LOUIE Rd RAMP TAPER**

PM R31.01 NB  
R31.02 SB  
R31.36 SB  
R31.37 NB



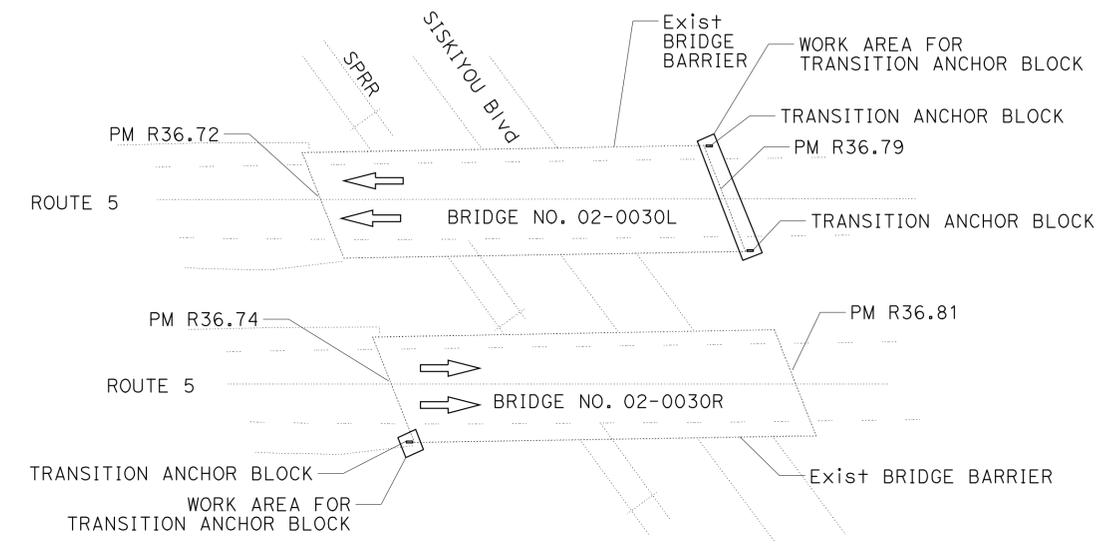
**BRIDGE CONFORM TAPER**

PM R27.18 NB & SB  
R27.22 SB  
R27.23 NB

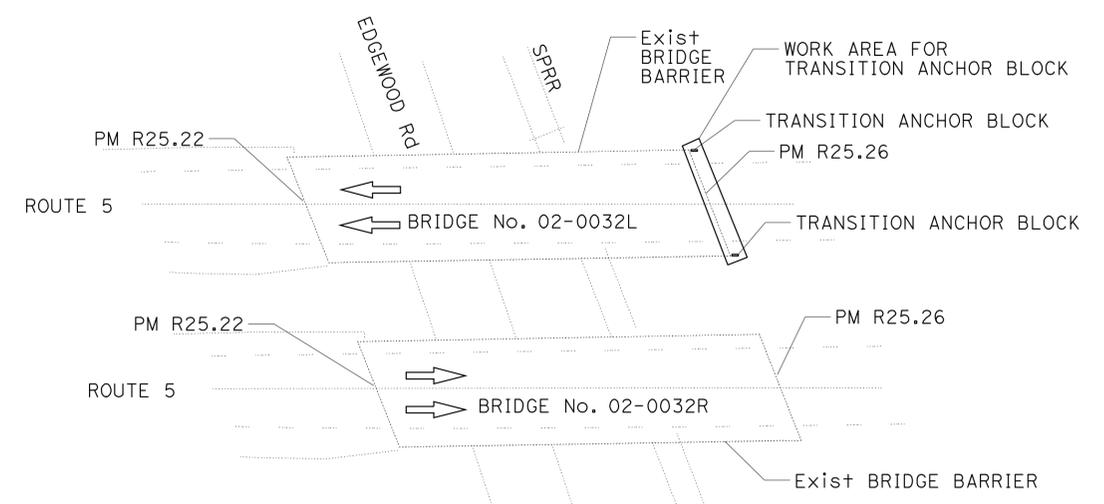


**UNDERCROSSING PAVEMENT OVERLAY TAPER**

PM R33.00 NB & SB  
R36.01 NB & SB



**GRENADA OH**



**N EDGEWOOD OH**

**TRANSITION ANCHOR BLOCK LOCATION**

**CONSTRUCTION DETAILS**

NO SCALE

**C-2**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - MAINTENANCE  
 LANCE BROWN  
 FUNCTIONAL SUPERVISOR  
 MICHAEL CONNER  
 KARLIE SMITH  
 REVISOR  
 DATE REVISOR  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 USERNAME => s115152  
 DGN FILE => 22E690ga002.dgn  
 BORDER LAST REVISED 7/2/2010  
 RELATIVE BORDER SCALE IS IN INCHES  
 UNIT 0156  
 PROJECT NUMBER & PHASE 02000005951

LAST REVISION DATE PLOTTED => 09-NOV-2010  
 11-04-10 TIME PLOTTED => 10:53

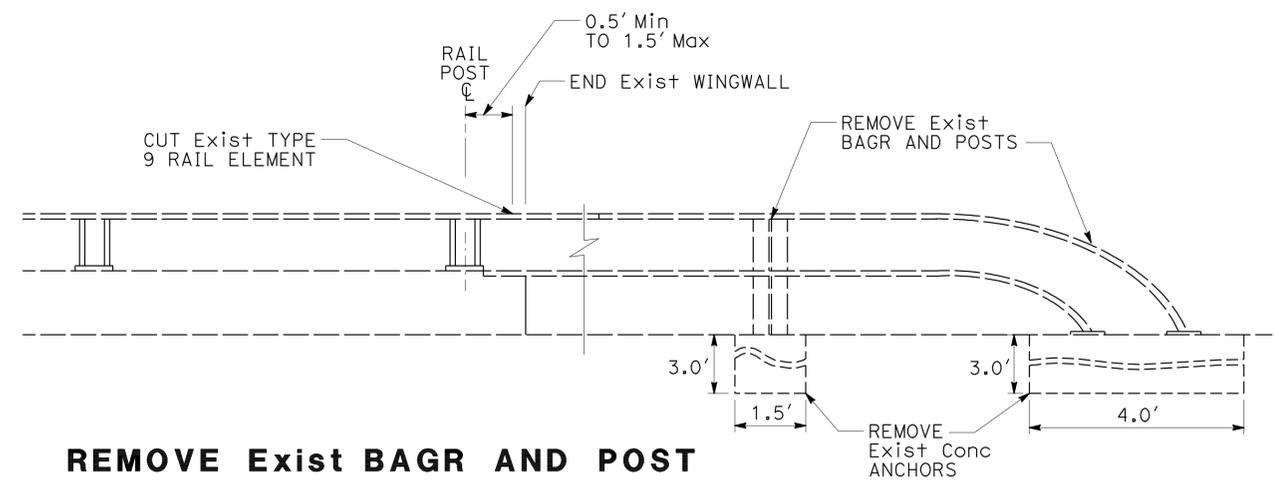


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sis	5	R25.3/R37.5	6	37
			11-04-10	DATE	
REGISTERED CIVIL ENGINEER			DATE		
11-04-10			PLANS APPROVAL DATE		
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					

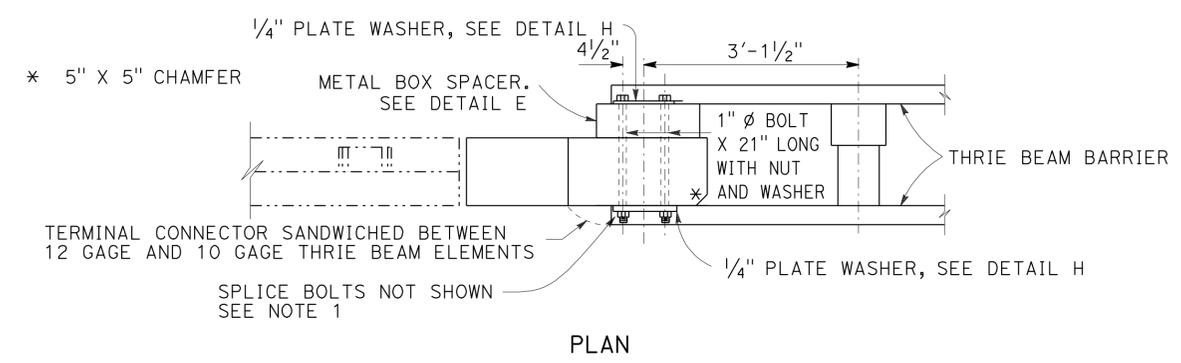


**NOTES:**

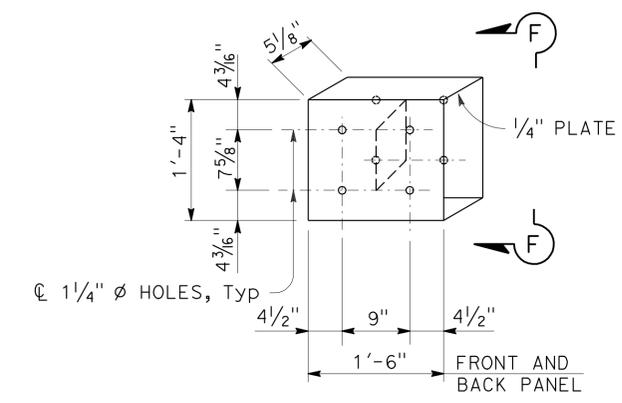
- FOR DETAILS NOT SHOWN, SEE STANDARD PLANS.
- DEPENDENT DIMENSIONS WILL BE VERIFIED IN THE FIELD BEFORE FABRICATING ANY END CONNECTION TO CONFORM WITH EXISTING PAVED CONDITIONS.
- WHEN END SECTION IS CALLED FOR, MODIFY TYPICAL TERMINAL SECTION TO FIT. SEE DETAIL E.
- FOR WB CONNECTION, SEE STANDARD PLANS "RSP A77J4 METAL BEAM GUARD RAILING TRANSITION RAILING (TYPE WB)".
- ALL PLATES AND BOLTS ARE GALVANIZED.
- CUT AND REMOVE THAT PORTION OF TYPE 9, 9-11 AND BAGR AS REQUIRED. REMAINING RAIL MUST SPAN TWO POSTS.
- TAPER THE TOP OF THE END OF THE BRIDGE RAILING AT 4:1 TO MATCH THE TOP ELEVATION OF THE THRIE BEAM RAIL ELEMENT.
- EXISTING UTILITY FACILITIES HAVE NOT BEEN POSITIVELY IDENTIFIED.



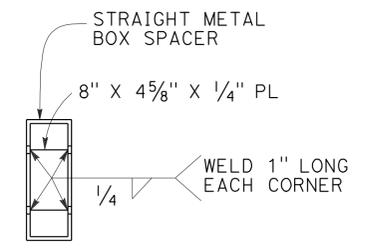
**REMOVE Exist BAGR AND POST**



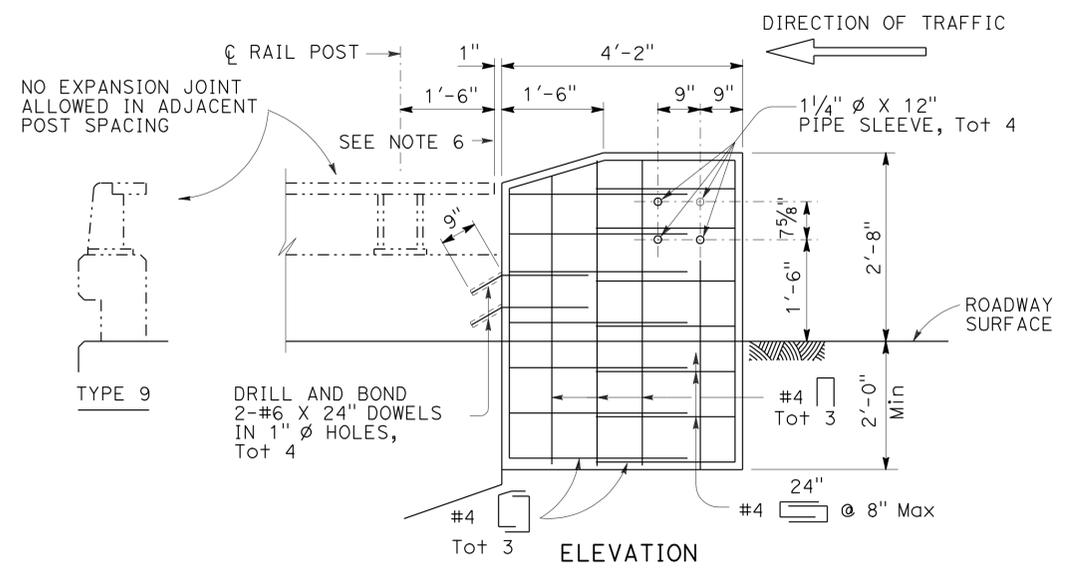
**PLAN**



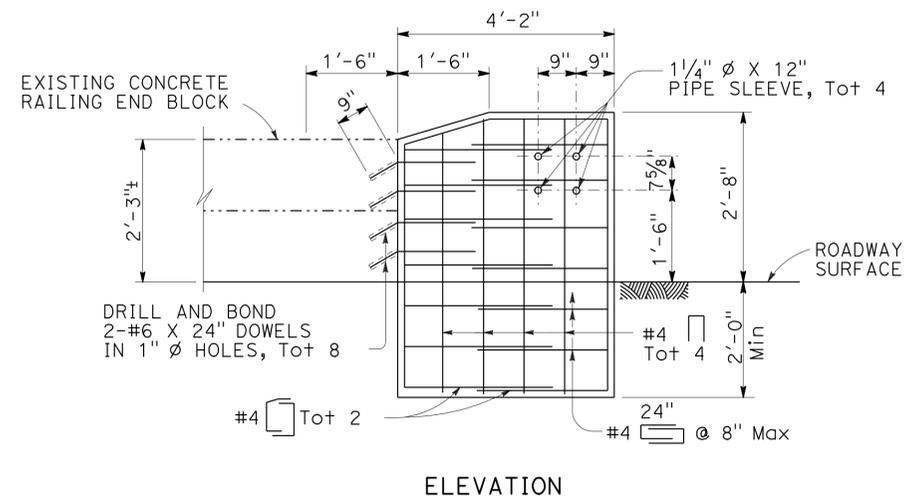
**DETAIL E**



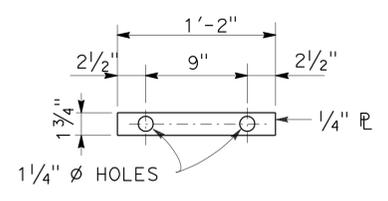
**VIEW F-F**



**EXISTING BARRIER RAILING TYPE 9 ALTERNATIVE 1**



**EXISTING BARRIER RAILING TYPE 9 ALTERNATIVE 5**



**DETAIL H**

**CONSTRUCTION DETAILS**

NO SCALE

**C-4**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - MAINTENANCE  
 FUNCTIONAL SUPERVISOR: LANCE BROWN  
 CALCULATED/DESIGNED BY: MICHAEL CONNER  
 CHECKED BY: KARLIE SMITH  
 REVISED BY: [blank]  
 DATE REVISED: [blank]



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** MAINTENANCE  
 FUNCTIONAL SUPERVISOR LANCE BROWN  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 MICHAEL CONNER  
 KARLIE SMITH  
 REVISED BY  
 DATE REVISED

**NOTES:**

1. EXACT LOCATION OF ALL SIGNS TO BE DETERMINED BY THE ENGINEER.
2. ALL SIGNS SHALL BE BLACK ON ORANGE EXCEPT C40 (CA), WHICH IS BLACK ON WHITE.
3. CALIFORNIA CODES ARE DESIGNATED BY (CA), OTHERWISE FEDERAL CODES ARE SHOWN.
4. EXISTING UTILITY FACILITIES HAVE NOT BEEN POSTIVELY IDENTIFIED.

**LEGEND**

-  ONE POST STATIONARY MOUNTED SIGN
-  TWO POST STATIONARY MOUNTED SIGN
-  DIRECTION OF TRAVEL
-  PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)
-  TRAFFIC CONE
-  PORTABLE SIGN

**ABBREVIATIONS**

PCMS PORTABLE CHANGEABLE MESSAGE SIGN

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sis	5	R25.3/R37.5	8	37

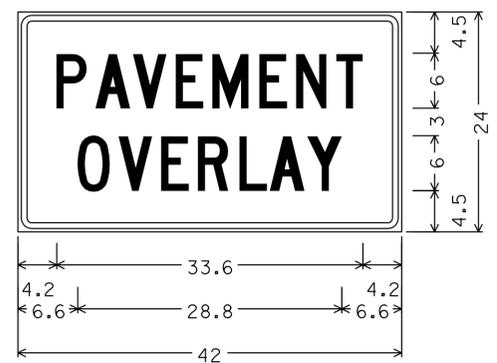
11-04-10  
 REGISTERED CIVIL ENGINEER DATE  
 11-04-10  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 MICHAEL A. CONNER  
 No. C73123  
 Exp. 12-31-10  
 CIVIL  
 STATE OF CALIFORNIA

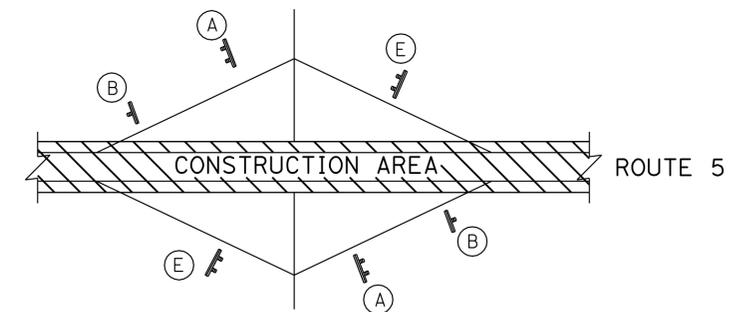
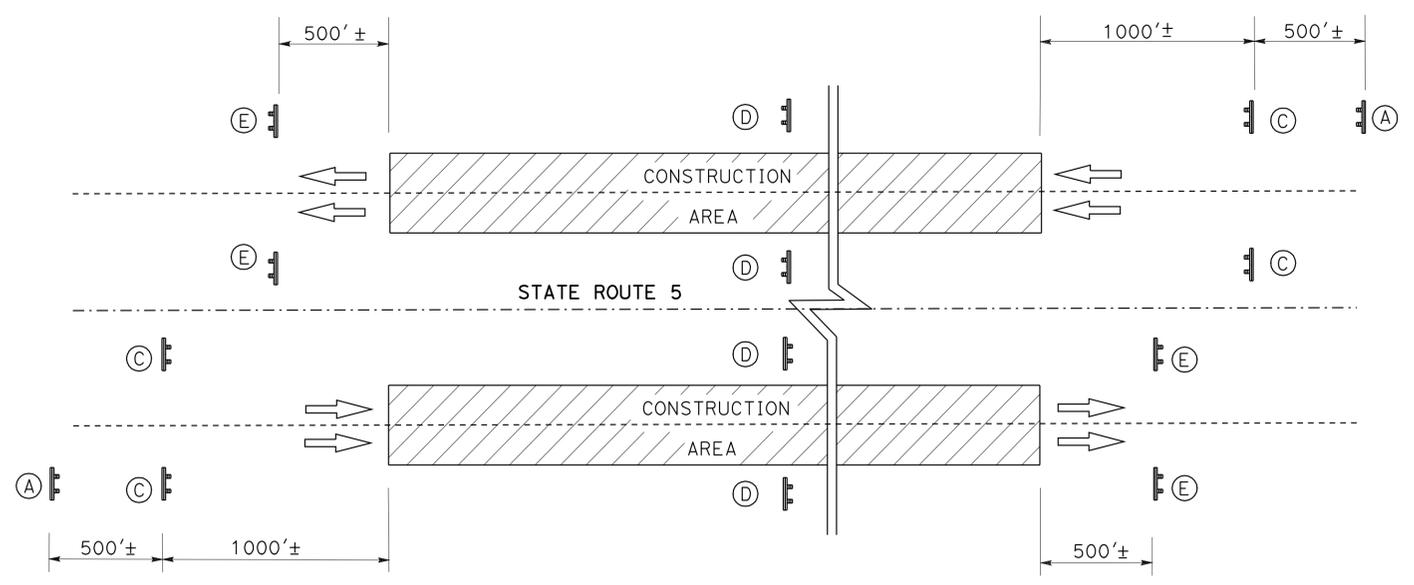
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**CONSTRUCTION AREA SIGNS (STATIONARY MOUNTED)**

○	TYPE	PANEL SIZE INCHES	SIGN MESSAGE	NO. OF POSTS AND SIZE	NO OF SIGNS
A	C40(CA)	108" x 42"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	2- 4" x 6"	6
B	W20-1 C23B(CA)	48" x 48" 42" x 24"	ROAD WORK AHEAD PAVEMENT OVERLAY	1- 4" x 6"	4
C	C11 C23B(CA)	60" x 36" 42" x 24"	ROAD WORK NEXT XX MILES PAVEMENT OVERLAY	2- 4" x 6"	4
D	C11	60" x 36"	ROAD WORK NEXT XX MILES	2- 4" x 4"	12
E	C14	48" x 24"	END ROAD WORK	2- 4" x 4"	8



**C23B SIGN PANEL DETAIL**



**TYPICAL SIGN LOCATIONS FOR ENTRANCE-RAMPS AND EXIT-RAMPS**

**ENTRANCE-RAMPS AND EXIT-RAMPS**

PM	LOCATION
R25.35	WEED AIRPORT NB EXIT
R25.50	WEED AIRPORT SB ENTRANCE
R25.88	WEED AIRPORT NB ENTRANCE
R25.89	WEED AIRPORT SB EXIT
R31.01	LOUIE Rd NB EXIT
R31.02	LOUIE Rd SB ENTRANCE
R31.36	LOUIE Rd SB EXIT
R31.37	LOUIE Rd NB ENTRANCE

**CONSTRUCTION AREA SIGNS**

NO SCALE

**CS-1**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sis	5	R25.3/R37.5	9	37

REGISTERED CIVIL ENGINEER	DATE	11-04-10
PLANS APPROVAL DATE		11-04-10

REGISTERED PROFESSIONAL ENGINEER	NO.	Exp.
MICHAEL A. CONNER	073123	12-31-10
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.

**NOTES:**

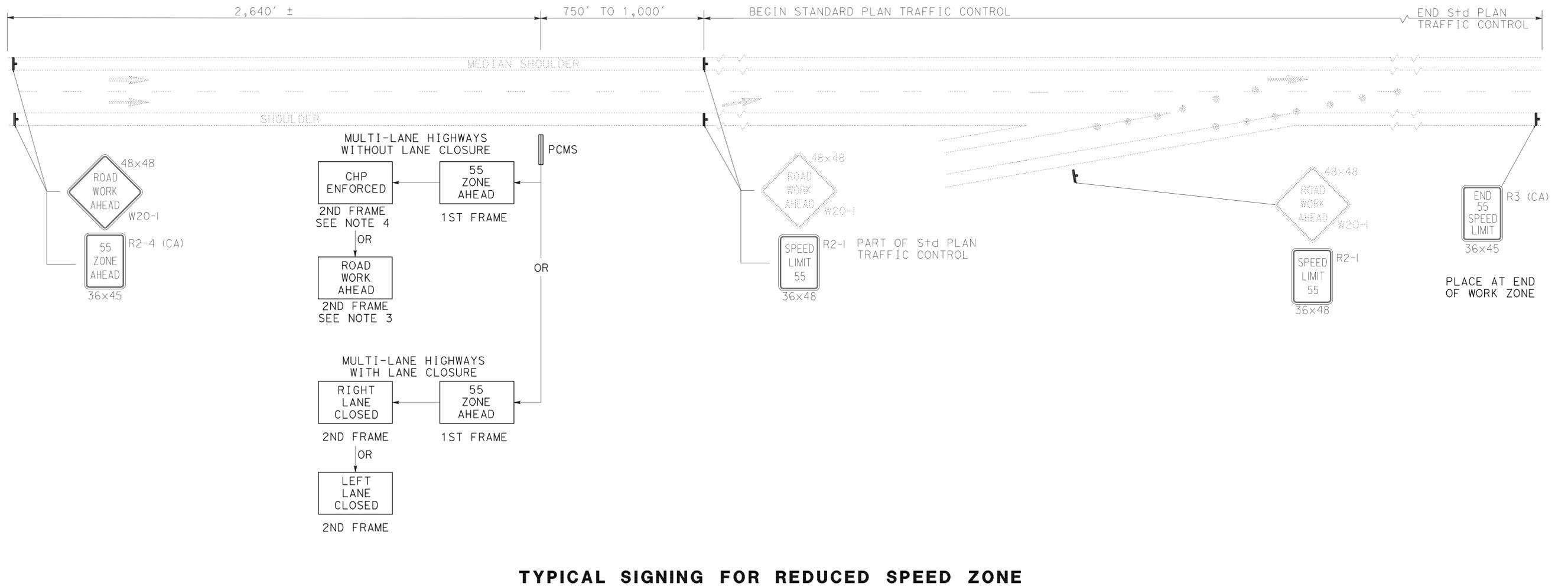
1. EXACT LOCATION OF ALL SIGNS TO BE DETERMINED BY THE ENGINEER.
2. CALIFORNIA CODES ARE DESIGNATED BY (CA), OTHERWISE FEDERAL CODES ARE SHOWN.
3. SEE STANDARD PLANS FOR LANE CLOSURE REQUIREMENTS.
4. USE THE "ROAD WORK AHEAD" SIGN FRAMES WHEN COZEOP OFFICERS ARE NOT REQUIRED TO BE PRESENT DURING THE ENTIRE DURATION OF THE SPEED REDUCTION.
5. COVER THE EXISTING SPEED LIMIT SIGNS WITHIN THE REDUCED SPEED ZONE.
6. EXISTING UTILITY FACILITIES HAVE NOT BEEN POSTIVELY IDENTIFIED.

**LEGEND**

- PORTABLE SIGN
- DIRECTION OF TRAVEL
- PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)
- TRAFFIC CONE

**ABBREVIATIONS**

PCMS PORTABLE CHANGEABLE MESSAGE SIGN



**CONSTRUCTION AREA SIGNS**

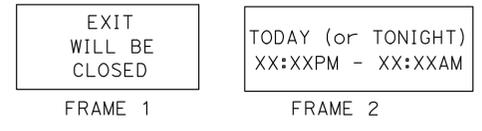
NO SCALE

**CS-2**

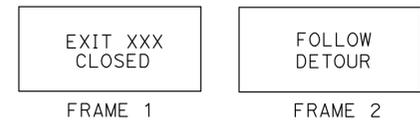
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 MAINTENANCE  
 FUNCTIONAL SUPERVISOR: LANCE BROWN  
 CALCULATED/DESIGNED BY: MICHAEL CONNER  
 CHECKED BY: KARLIE SMITH  
 REVISED BY: [blank]  
 DATE REVISED: [blank]

**NOTES:**

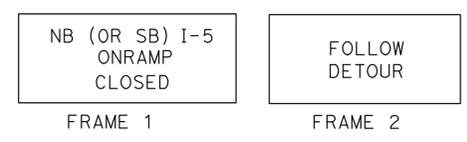
1. PRE-NOTIFICATION PCMS: PLACE NEAR RAMP AND ACTIVATE APPROXIMATELY 12 HOURS PRIOR TO RAMP CLOSURE.



2. RAMP CLOSED PCMS: MOVE PRE-NOTIFICATION PCMS APPROXIMATELY 1000 FEET BEFORE RAMP AND ACTIVATE DURING RAMP CLOSURE.



3. PLACE 7 DAYS PRIOR TO RAMP CLOSURE.  
 4. ADD SIGN(S) SPACED EQUALLY BETWEEN INTERCHANGES.  
 5. IF AVAILABLE, EXISTING ROUTE SHIELDS AND DIRECTIONS MAY BE USED IN PLACE OF SIGNS SHOWN.  
 6. RAMP CLOSED PCMS: PLACE BEFORE OPEN ENTRANCE RAMP AND ACTIVATE DURING RAMP CLOSURE.



7. EXIT NUMBER SHOWN AS FOLLOWS.

EXIT NAME	EXIT NUMBER
WEED AIRPORT ROAD/REST AREA	753
LOUIE Rd	759

8. EXACT SIGN LOCATION TO BE DETERMINED BY THE ENGINEER.  
 9. EXISTING UTILITY FACILITIES HAVE NOT BEEN POSTIVELY IDENTIFIED.

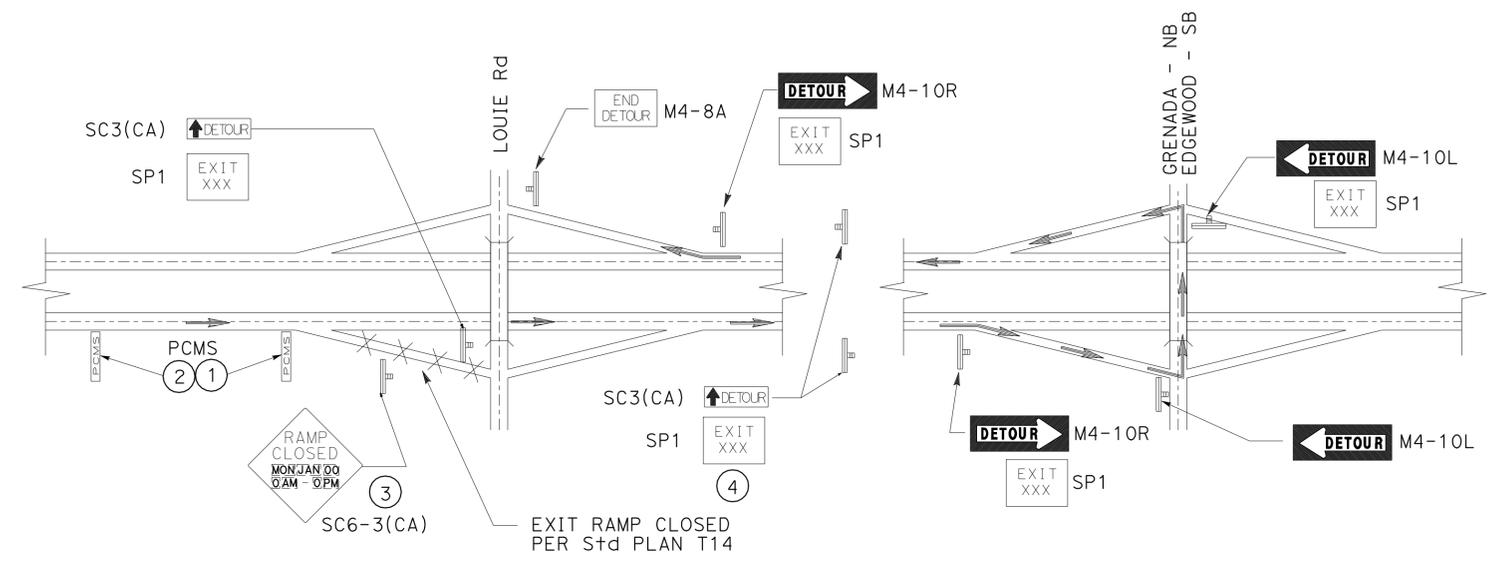
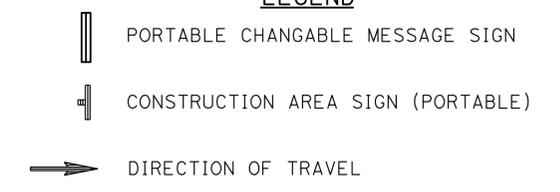
**CONSTRUCTION AREA SIGNS (PORTABLE)**

CODE	PANEL SIZE	PANEL MESSAGE
G27-2 (5) (CA)	24" x 24"	I-5
M3-1	24" x 12"	NORTH
M3-3	24" x 12"	SOUTH
M4-8A	24" x 18"	END DETOUR
M4-10L	48" x 18"	DETOUR
M4-10R	48" x 18"	DETOUR
SC3 (CA)	48" x 18"	DETOUR
SC6-3 (CA)	48" x 48"	RAMP CLOSED
SP1	24" x 30"	EXIT XXX

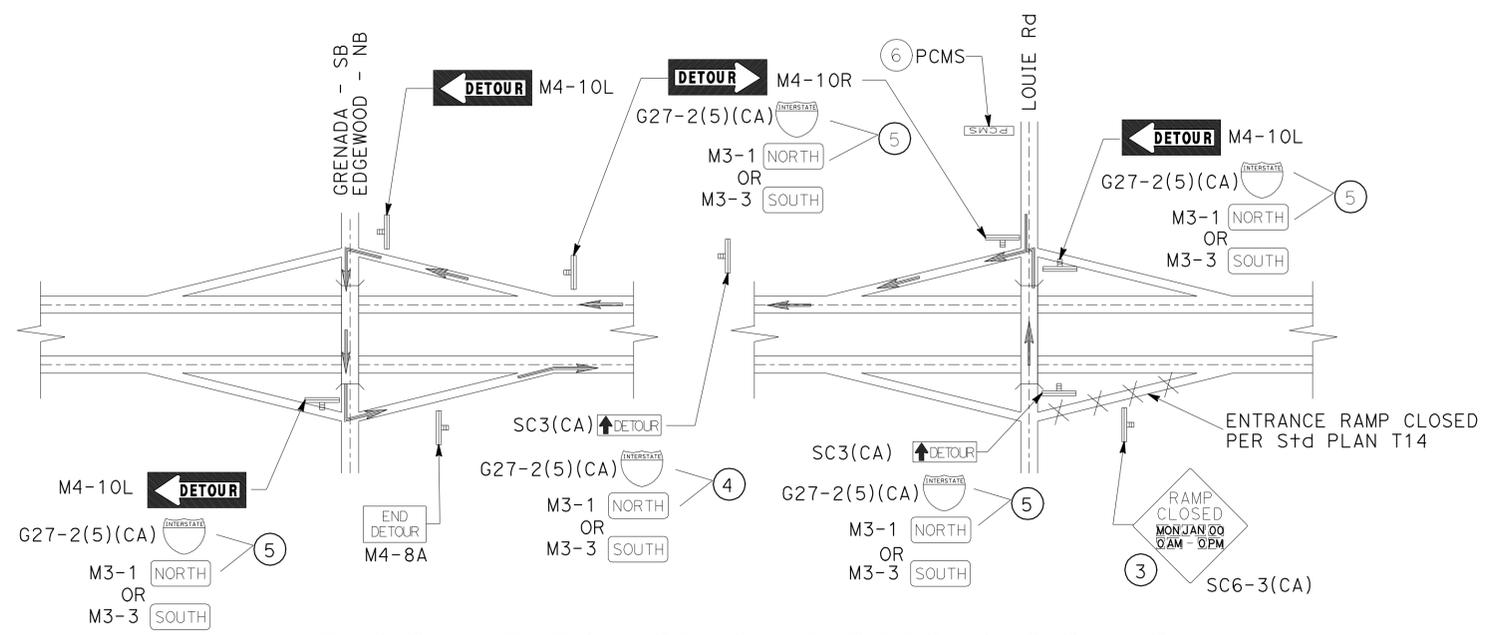
**ABBREVIATIONS**

PCMS PORTABLE CHANGEABLE MESSAGE SIGN

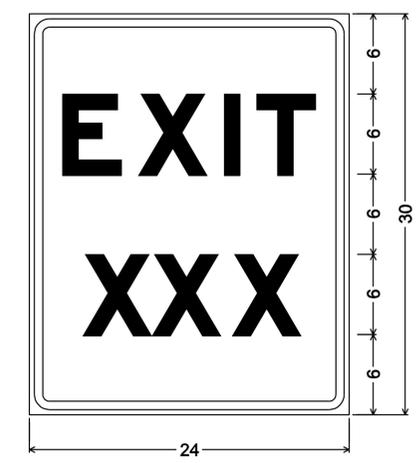
**LEGEND**



**TYPICAL EXIT-RAMP DETOUR SIGNING**



**TYPICAL ENTRANCE RAMP DETOUR SIGNING**



1.5" Radius, 0.6" Border, 0.4" Indent, Black on Orange;  
 [EXIT] E Mod; [XXX] E Mod;

**EXIT NUMBER SIGN (SP1) DETAIL**  
 (SEE NOTE 7)

**DETOUR PLAN**

NO SCALE  
**DE-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - MAINTENANCE  
 FUNCTIONAL SUPERVISOR: LANCE BROWN  
 CHECKED BY: MICHAEL CONNER, KARLIE SMITH  
 REVISOR: MICHAEL CONNER, KARLIE SMITH  
 DATE REVISOR: [blank], [blank]

**NOTES:**

- EXACT SIGN LOCATION TO BE DETERMINED BY ENGINEER.
- CALIFORNIA SIGN CODES ARE DESIGNATED BY (CA), OTHERWISE FEDERAL SIGN CODES ARE SHOWN.
- PLACE SIGN (A) 7 DAYS PRIOR TO RAMP CLOSURE.
- PRE-NOTIFICATION PCMS (3) : PLACE NEAR RAMP AND ACTIVATE APPROXIMATELY 12 HOURS PRIOR TO RAMP CLOSURE.



FRAME 1                      FRAME 2

- RAMP CLOSED PCMS (2) : MOVE PRE-NOTIFICATION PCMS (3) APPROXIMATELY 1000' BEFORE RAMP AND ACTIVATE DURING RAMP CLOSURE.



FRAME 1                      FRAME 2

- ADVANCE RAMP CLOSED PCMS (1) : ACTIVATE DURING RAMP CLOSURE.



FRAME 1                      FRAME 2

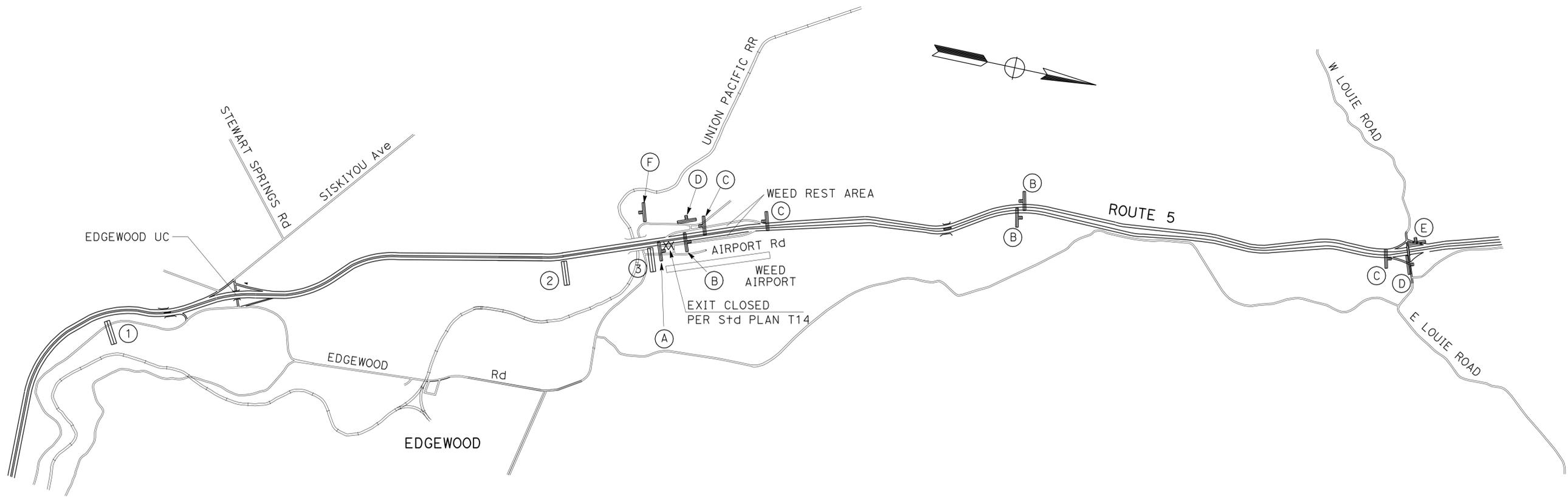
- EXISTING UTILITY FACILITIES HAVE NOT BEEN POSTIVELY IDENTIFIED.

**CONSTRUCTION AREA SIGNS (PORTABLE)**

	SIGN CODE	PANEL SIZE	PANEL MESSAGE
(A)	SC6-3(CA)	48" x 48"	RAMP CLOSED
(B)	SC3(CA)	48" x 18"	DETOUR W/ARROW
	G7-1(CA)	36" x 36"	WEED AIRPORT RD
(C)	M4-10R	48" x 18"	DETOUR
	G7-1(CA)	36" x 36"	WEED AIRPORT RD
(D)	M4-10L	48" x 18"	DETOUR
(E)	M4-10L	48" x 18"	DETOUR
	G7-1(CA)	36" x 36"	WEED AIRPORT RD
(F)	M4-8A	24" x 18"	END DETOUR



3.0" Radius, 1.0" Border, Black on Orange;  
 [Weed] D; [Airport] D;  
 [Road] D;  
 G7-1(CA)



**NORTHBOUND WEED AIRPORT ROAD/REST AREA ENTRANCE RAMP CLOSURE**

**DETOUR PLAN**

NO SCALE

**DE-2**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 MAINTENANCE  
 Michael Conner  
 Karlie Smith  
 Lance Brown  
 11-04-10 10:55

**NOTES:**

- EXACT SIGN LOCATION TO BE DETERMINED BY ENGINEER.
- CALIFORNIA SIGN CODES ARE DESIGNATED BY (CA), OTHERWISE FEDERAL SIGN CODES ARE SHOWN.
- PLACE SIGN (A) 7 DAYS PRIOR TO RAMP CLOSURE.
- PRE-NOTIFICATION PCMS (1) : PLACE NEAR RAMP AND ACTIVATE APPROXIMATELY 12 HOURS PRIOR TO RAMP CLOSURE.



FRAME 1                      FRAME 2

- RAMP CLOSED PCMS (2) : MOVE PRE-NOTIFICATION PCMS (1) APPROXIMATELY 1000' BEFORE RAMP AND ACTIVATE DURING RAMP CLOSURE.



FRAME 1                      FRAME 2

- EXISTING UTILITY FACILITIES HAVE NOT BEEN POSTIVELY IDENTIFIED.

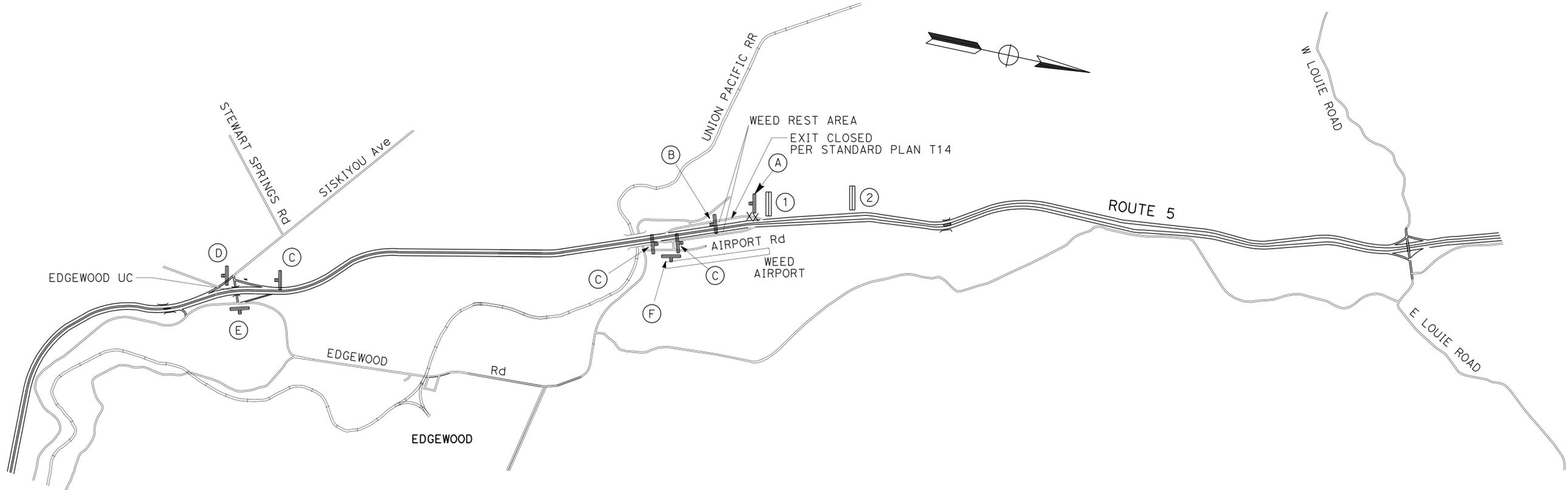
**CONSTRUCTION AREA SIGNS (PORTABLE)**

	SIGN CODE	PANEL SIZE	PANEL MESSAGE
(A)	SC6-3(CA)	48" x 48"	RAMP CLOSED
(B)	SC3(CA)	48" x 18"	DETOUR W/ARROW
	G7-1(CA)	36" x 36"	WEED AIRPORT RD
(C)	M4-10R	48" x 18"	DETOUR
	G7-1(CA)	36" x 36"	WEED AIRPORT RD
(D)	M4-10L	48" x 18"	DETOUR
(E)	M4-10L	48" x 18"	DETOUR
	G7-1(CA)	36" x 36"	WEED AIRPORT RD
(F)	M4-8A	24" x 18"	END DETOUR



3.0" Radius, 1.0" Border, Black on Orange;  
 [Weed] D; [Airport] D;  
 [Road] D;

G7-1(CA)



**SOUTHBOUND WEED AIRPORT ROAD/REST AREA ENTRANCE RAMP CLOSURE**

**DETOUR PLAN**

NO SCALE

**DE-3**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 Caltrans MAINTENANCE  
 FUNCTIONAL SUPERVISOR: LANCE BROWN  
 CALCULATED/DESIGNED BY: MICHAEL CONNER  
 CHECKED BY: KARLIE SMITH  
 REVISED BY: DATE REVISED:



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 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - MAINTENANCE  
 FUNCTIONAL SUPERVISOR LANCE BROWN  
 CALCULATED/DESIGNED BY MICHAEL CONNER  
 CHECKED BY KARLIE SMITH  
 REVISED BY DATE REVISIONS  
 x x x x x

**NOTES:**

- EXISTING UTILITY FACILITIES HAVE NOT BEEN POSITIVELY IDENTIFIED.
- (N) - NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.
- DO NOT PLACE RUMBLE STRIP ON POLYESTER CONCRETE BRIDGE DECKS.
- EXACT LOCATION OF GRIND EXISTING CONCRETE PAVEMENT TO BE DETERMINED BY ENGINEER.

**ABBREVIATIONS**

SRRA SAFETY ROADSIDE REST AREA

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sis	5	R25.3/R37.5	14	37

11-04-10  
 REGISTERED CIVIL ENGINEER DATE  
 11-04-10  
 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.

**ROADWAY QUANTITIES SUMMARY**

DESCRIPTION		POST MILE LIMITS	HMA	IMPORTED MATERIAL (SHOULDER BACKING)	TACK COAT	GRIND EXISTING CONCRETE PAVEMENT
			TON	TON	TON	SQYD
MAINLINE	NB	R25.26/R37.50	19,933	7031	83.9	14,000
MAINLINE	SB	R25.26/R37.50	19,922	7031	83.8	
WEED AIRPORT	NB EXIT	R25.35	8	5	0.1	
	SB ENTRANCE	R25.50	8	5	0.1	
	NB ENTRANCE	R25.88	8	5	0.1	
	SB EXIT	R25.89	8	5	0.1	
	NB SRRA LANE	R25.56	0	60	1.5	
	SB SRRA LANE	R25.68	0	35	0.9	
LOUIE Rd	NB EXIT	R31.01	273	191	1.2	
	SB ENTRANCE	R31.02	312	224	1.3	
	SB EXIT	R31.36	236	152	1.0	
	NB ENTRANCE	R31.37	318	216	1.4	
HMA DIKE		*	47			
TOTAL			41,073	14,960	175.4	14,000

\*SEE TABLE FOR LIMITS OF HMA DIKE.

**PLACE HMA DIKE (TYPE F)**

POST MILE LIMITS	DIRECTION	SIDE	LENGTH LF
R25.30-R25.33	NB	R+	144
R27.52-R27.64	NB	R+	635
R29.79-R30.04	SB	R+	1300
R30.35-R30.61	NB	R+	1390
TOTAL			3469

**REMOVE ASPHALT CONCRETE DIKE**

POST MILE LIMITS	DIRECTION	SIDE	LENGTH LF
R25.30-R25.33	NB	R+	144
R27.52-R27.64	NB	R+	635
R29.79-R30.04	SB	R+	1300
R30.35-R30.61	NB	R+	1390
TOTAL			3469

**COLD PLANE ASPHALT CONCRETE PAVEMENT**

POST MILE	(N) LENGTH	(N) WIDTH	AREA	REMARKS
	LF	LF	SQYD	
R25.26	40	39	174	CONFORM GRIND AT BEGIN OF PROJECT (NB MAINLINE)
R25.26	40	39	174	CONFORM GRIND AT BEGIN OF PROJECT (SB MAINLINE)
R25.35	40	24	107	CONFORM GRIND AT GORE (WEED AIRPORT NB EXIT)
R25.50	40	24	107	CONFORM GRIND AT GORE (WEED AIRPORT SB ENTRANCE)
R25.88	40	24	107	CONFORM GRIND AT GORE (WEED AIRPORT NB ENTRANCE)
R25.89	40	24	107	CONFORM GRIND AT GORE (WEED AIRPORT SB EXIT)
R27.18	325	40	1445	CONFORM GRIND AT BB OF PARKS Cr Br (NB MAINLINE)
R27.18	80	39	347	CONFORM GRIND AT BB OF PARKS Cr Br (SB MAINLINE)
R27.22	250	39	1084	CONFORM GRIND AT EB OF PARKS Cr Br (SB MAINLINE)
R27.23	80	39	347	CONFORM GRIND AT EB OF PARKS Cr Br (NB MAINLINE)
R31.01	88	24-200	934	CONFORM GRIND AT RAMP (LOUIE Rd NB EXIT)
R31.02	78	33-255	1005	CONFORM GRIND AT RAMP (LOUIE Rd SB ENTRANCE)
R31.36	68	29-275	889	CONFORM GRIND AT RAMP (LOUIE Rd SB EXIT)
R31.37	63	31-188	599	CONFORM GRIND AT RAMP (LOUIE Rd NB ENTRANCE)
R31.18	253	40	1125	CONFORM GRIND AT LOUIE Rd OVERCROSSING (NB MAINLINE)
R31.18	253	40	1125	CONFORM GRIND AT LOUIE Rd OVERCROSSING (SB MAINLINE)
R33.00	150	39	650	CONFORM GRIND AT GAZELLE EQUIPMENT & CATTLE UC (NB MAINLINE)
R33.00	150	39	650	CONFORM GRIND AT GAZELLE EQUIPMENT & CATTLE UC (SB MAINLINE)
R34.96	253	40	1125	CONFORM GRIND AT GRENADA IRRIGATION DISTRICT OVERCROSSING (NB MAINLINE)
R34.96	253	40	1125	CONFORM GRIND AT GRENADA IRRIGATION DISTRICT OVERCROSSING (SB MAINLINE)
R36.01	200	39	867	CONFORM GRIND AT BRUINSMA UC (NB MAINLINE)
R36.01	200	39	867	CONFORM GRIND AT BRUINSMA UC (SB MAINLINE)
R36.71	148	39	642	CONFORM GRIND AT BEGINNING OF GRENADA OH (SB MAINLINE)
R36.73	148	39	642	CONFORM GRIND AT BEGINNING OF GRENADA OH (NB MAINLINE)
R36.79	148	39	642	CONFORM GRIND AT END OF GRENADA OH (SB MAINLINE)
R36.81	148	39	642	CONFORM GRIND AT END OF GRENADA OH (NB MAINLINE)
R37.50	40	40	178	CONFORM GRIND AT END OF PROJECT (NB MAINLINE)
R37.50	40	42	187	CONFORM GRIND AT END OF PROJECT (SB MAINLINE)
TOTAL			17,893	

**RUMBLE STRIP**

DESCRIPTION	POST MILE LIMITS	Sta
NB MAINLINE	R25.26-R27.18	204
	R27.23-R36.74	1006
	R36.81-R37.50	74
SB MAINLINE	R25.26-R27.18	204
	R27.22-R36.72	1004
	R36.79-R37.50	76
TOTAL		2568

**REPLACE ASPHALT CONCRETE SURFACING**

DESCRIPTION		POST MILE LIMITS	(N) No. OF DIGOUTS	(N) Avg LENGTH	(N) WIDTH	(N) DEPTH	REPLACE AC SURFACING
		PM - PM		LF	LF	LF	CY
MAINLINE	NB	R25.26/R37.50	29	100	4	0.33	143
	SB	R25.26/R37.50	29	100	4	0.33	143
NB SRRA LANE		R25.56	1	1100	15	0.50	306
SB SRRA LANE		R25.68	1	640	17	0.50	202
TOTAL							794

**SUMMARY OF QUANTITIES**

**Q-1**

LAST REVISION DATE PLOTTED => 09-NOV-2010 11-04-10 TIME PLOTTED => 10:55

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 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** MAINTENANCE  
 FUNCTIONAL SUPERVISOR  
 LANCE BROWN  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 MICHAEL CONNER  
 KARLIE SMITH  
 REVISED BY  
 DATE REVISED

**NOTES:**

- EXISTING UTILITY FACILITIES HAVE NOT BEEN POSTIVELY IDENTIFIED.
- (N) - NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sis	5	R25.3/R37.5	15	37

11-04-10  
 REGISTERED CIVIL ENGINEER DATE  
 11-04-10  
 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.

**BRIDGE QUANTITIES**

PM	BRIDGE No.	BRIDGE NAME	REMOVE AC SURFACING	REMOVE UNSOUND CONCRETE	PREPARE CONCRETE BRIDGE DECK SURFACE	RAPID SETTING CONCRETE (PATCH)	FURNISH POLYESTER CONCRETE OVERLAY	PLACE POLYESTER CONCRETE OVERLAY	CLEAN EXPANSION JOINT	BONDED JOINT SEAL (MR 3")
			SQFT	CF	SQFT	CF	CF	SQFT	LF	LF
R36.72	02-0030L	GRENADA OH	15,308	115	15,308	115	1531	15,308	48	48
R36.74	02-0030R	GRENADA OH	15,308	115	15,308	115	1531	15,308	48	48
TOTAL			30,616	230	30,616	230	3062	30,616	96	96

**METAL BEAM GUARD RAIL ITEMS**

POST MILE LIMITS	DIRECTION	R+/L+	RECONSTRUCT MBGR	MBGR (WOOD POST)	REMOVE MBGR	ALTERNATIVE FLARED TERMINAL SYSTEM	ALTERNATIVE TERMINAL SYSTEM	(N) BURIED POST END ANCHOR	REMOVE Exist BAGR AND POST	MINOR CONCRETE (MINOR STRUCTURE)	TRANSITION RAILING (TYPE WB)	GUARD RAILING DELINEATOR	REMARKS
R25.26-R25.29	SB	L+	137.5	12.5	12.5	EA	EA	EA	LF	CY	EA	EA	
R25.26-R25.29	NB	R+	144.0				1			0.65	1		
R25.26-R25.36	SB	R+	528.0			1				0.65	1	2	DELINEATOR Approx Beg AND End
R27.09-R27.18	SB	R+	360.0										
R27.23-R27.29	NB	R+	325.0										
R27.52-R27.63	NB	R+	588.0					1				2	DELINEATOR Approx Beg AND End
R29.79-R30.05	SB	R+	1380.0					1				4	DELINEATOR Approx 345' SPACING
R29.84-R29.97	NB	R+	685.0					1				3	DELINEATOR Approx 345' SPACING
R30.25-R30.52	SB	R+	1428.0			1						4	DELINEATOR Approx 357' SPACING
R30.35-R30.65	NB	R+	1584.0					2				4	DELINEATOR Approx 396' SPACING
R30.58-R30.66	SB	R+	420.0			1							
R36.71-R36.74	NB	L+	137.5	12.5	12.5		1				1		
R36.46-R36.74	NB	R+	1447.5		12.5	1				0.65	1	4	DELINEATOR Approx 360' SPACING
R36.50-R36.72	SB	R+	1160.0									3	DELINEATOR Approx 385' SPACING
R36.79-R36.82	SB	L+		162.5			1		99	0.65	1		
R36.79-R36.92	SB	R+	686.0			1				0.65	1	3	DELINEATOR Approx 345' SPACING
TOTAL			11,010.5	187.5	37.5	5	3	5	99	3.25	6	29	

**SUMMARY OF QUANTITIES**

**Q-2**

LAST REVISION DATE PLOTTED => 09-NOV-2010  
 11-04-10 TIME PLOTTED => 10:55

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sis	5	R25.3/R37.5	16	37

*J. Hannigan* 11-04-10  
 REGISTERED ELECTRICAL ENGINEER DATE  
 11-04-10  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
**J.M. HANNIGAN**  
 No. E13665  
 Exp. 6-30-11  
 ELECTRICAL  
 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:**

- FOR ACCURATE RIGHT OF WAY AND ACCESS DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

**NOTES (THIS SHEET):**

- COIL 10' OF LOOP CONDUCTORS IN PULL BOX.
- SLOTS SHALL BE FILLED WITH ASPHALTIC EMULSION SEALANT.
- SLOTS SHALL BE FILLED WITH HOT-MELT RUBBERIZED ASPHALT SEALANT.

**LEGEND**

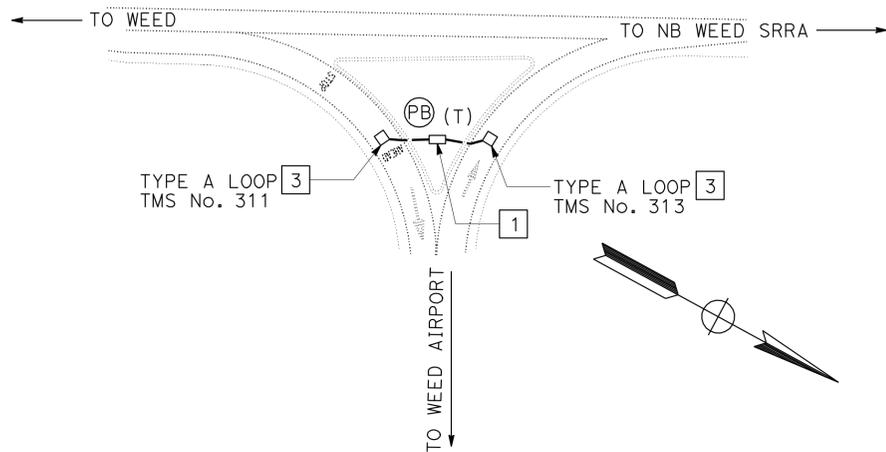
- (PB) OBJECT MARKER (TYPE PB) AND PULL BOX PAVING
- (PB) Exist OBJECT MARKER (TYPE PB) AND PULL BOX PAVING

**EXISTING TRAFFIC MANAGEMENT SYSTEM ELEMENTS TO BE MAINTAINED**

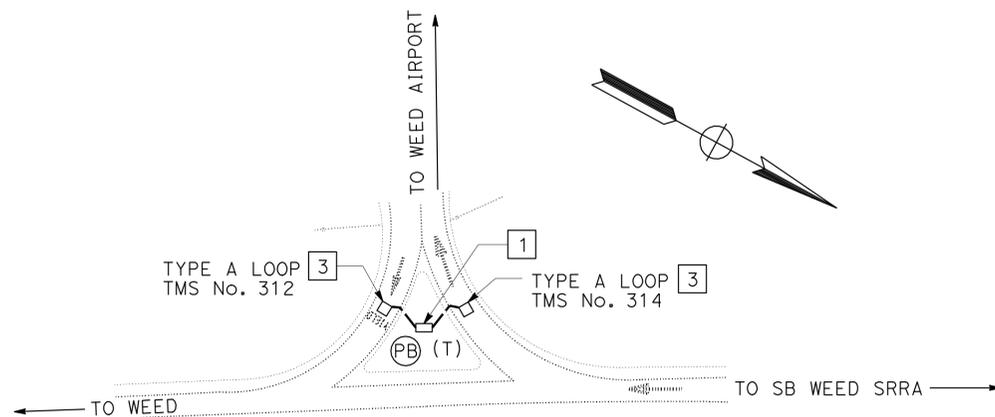
Co-Rt-PM	TYPE	DESCRIPTION
SIS-05-PM R25.46	RWIS	WEED SRRA
SIS-05-PM R25.46	CCTV	WEED SRRA
SIS-05-PM R25.59	HAR FLASHER	WEED SRRA FOR SB TRAFFIC
SIS-05-PM R25.69	HAR RECIEVER	WEED SRRA

**EXISTING TRAFFIC MONITORING STATIONS TO BE MAINTAINED**

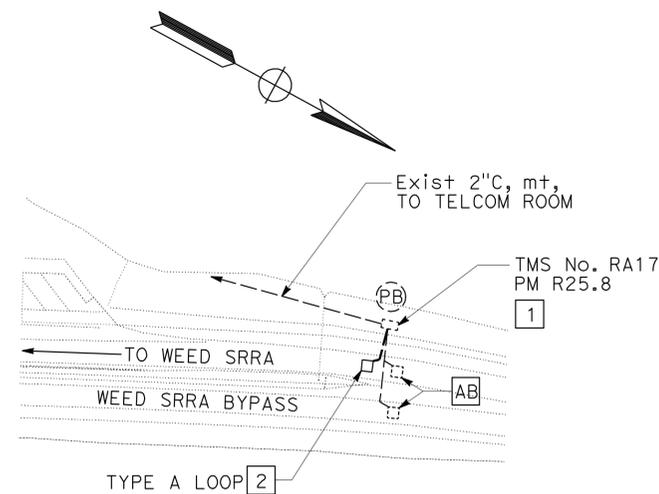
Co-Rt-PM	TYPE	DESCRIPTION	STATION NUMBER
SIS-5-PM R25.6	SRRA	NB OFFRAMP TO WEED SRRA	RA16



**NB WEED SRRA**



**SB WEED SRRA**



**SB WEED SRRA**

**TRAFFIC MONITORING STATION**

**E-1**

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

NO SCALE

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** ELECTRICAL DESIGN

JAMES M. HANNIGAN  
 ROB STINGER  
 REVISED BY DATE  
 CALCULATED-DESIGNED BY  
 CHECKED BY



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Sis	5	R25.3/R37.5	18	37

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

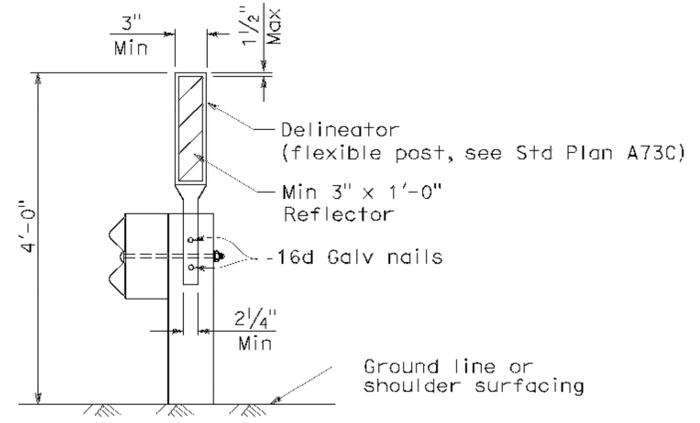
*Randell D. Hiatt*  
No. C50200  
Exp. 6-30-09  
CIVIL  
STATE OF CALIFORNIA

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.

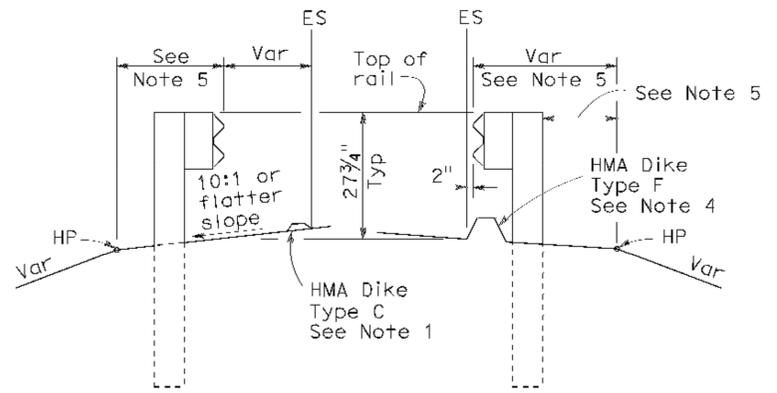
To accompany plans dated 11-04-10

**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 Revised Standard Plans RSP A87A and Standard Plan A87B.
5. For details of typical distance between the face of rail and hinge point, see Standard Plan A77C3.



**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 JUNE 6, 2008 SUPERSEDES 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

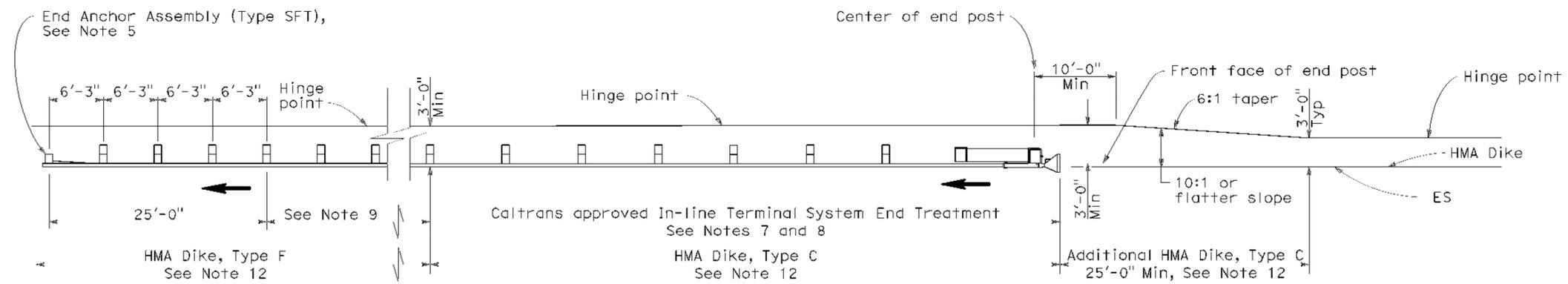
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Sis	5	R25.3/R37.5	19	37

Randell D. Hiatt  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

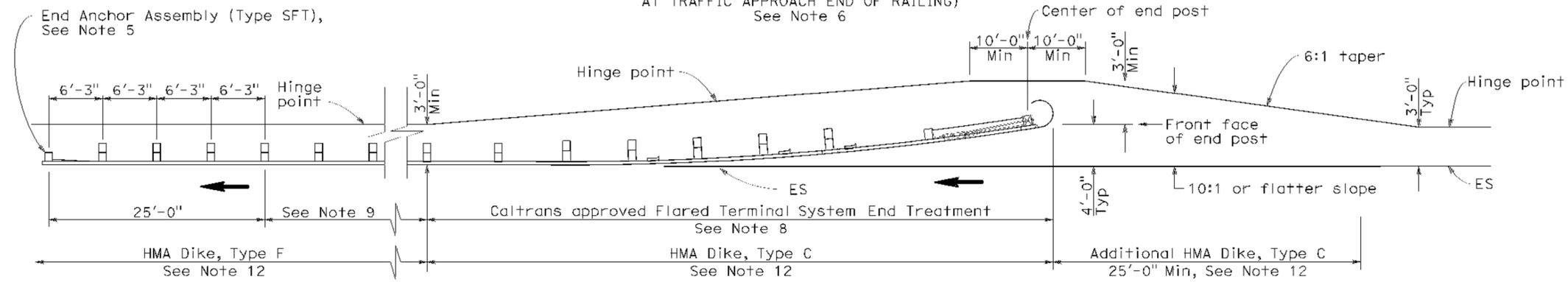
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 11-04-10



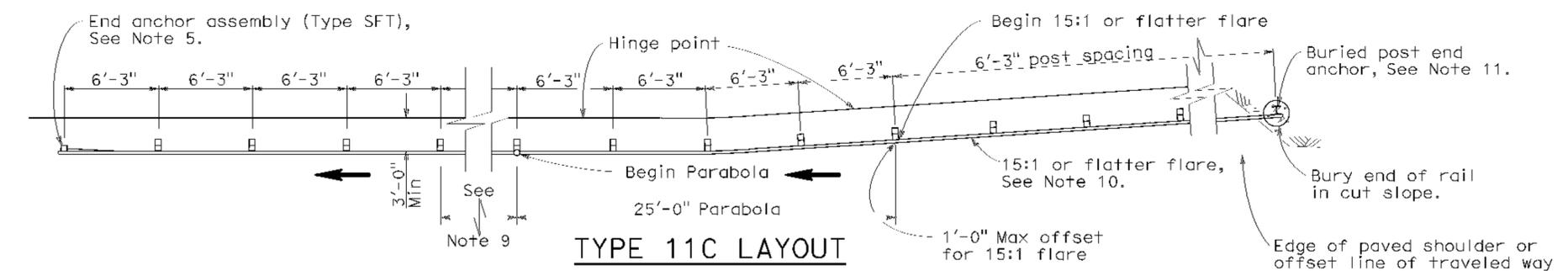
**TYPE 11A LAYOUT**

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



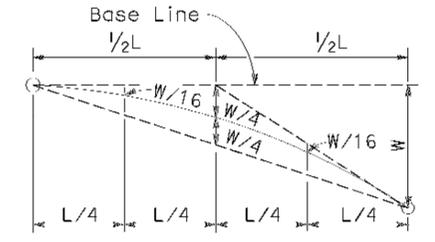
**TYPE 11B LAYOUT**

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

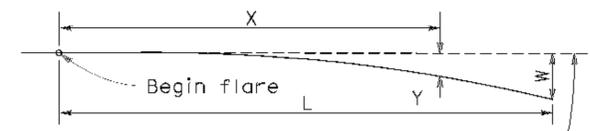


**TYPE 11C LAYOUT**

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



**TYPICAL PARABOLIC LAYOUT**

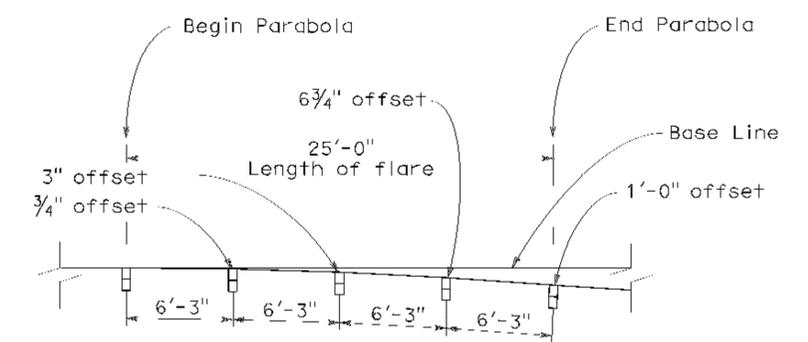


Base Line (Edge of paved shoulder or offset line of edge of traveled way)

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

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**

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2006 REVISED STANDARD PLAN RSP A77E1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Sis	5	R25.3/R37.5	20	37

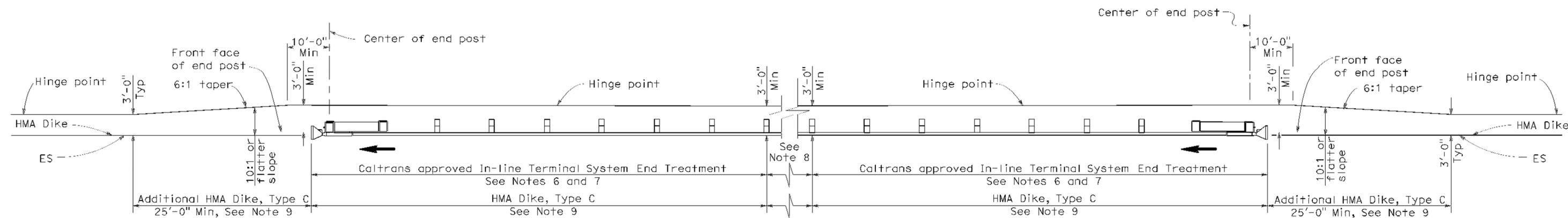
Randell D. Hiatt  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

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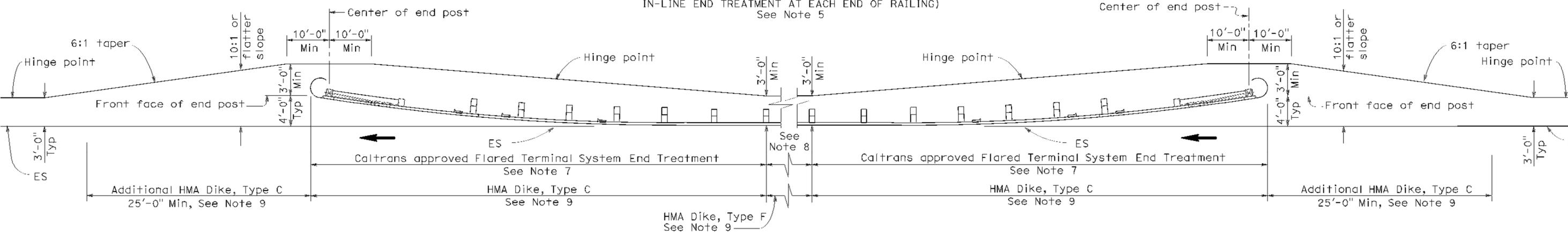
REGISTERED PROFESSIONAL ENGINEER  
Randell D. Hiatt  
No. C50200  
Exp. 6-30-09  
CIVIL  
STATE OF CALIFORNIA

To accompany plans dated 11-04-10



**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.

**REVISED STANDARD PLAN RSP A77E2**

2006 REVISED STANDARD PLAN RSP A77E2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Sis	5	R25.3/R37.5	21	37

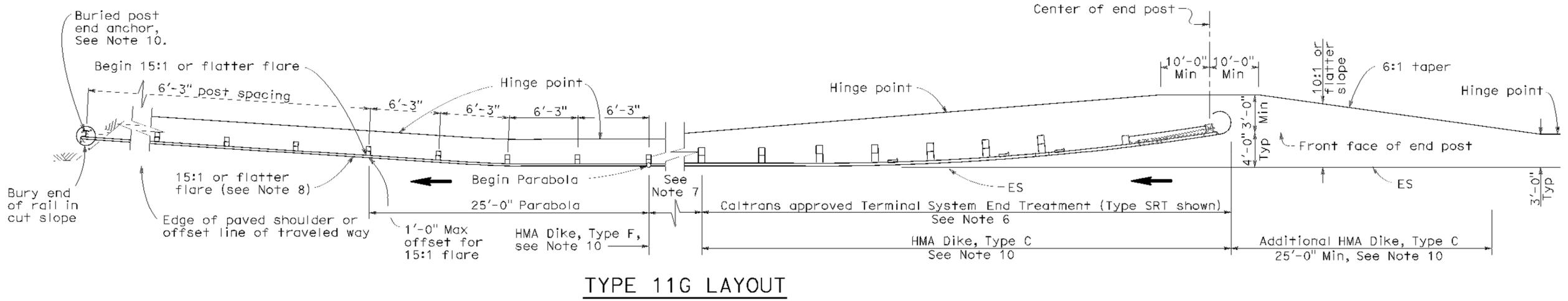
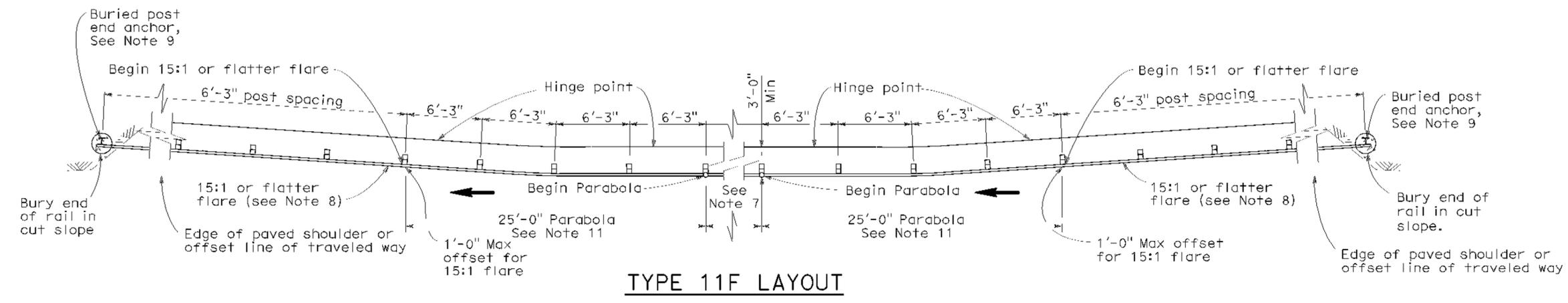
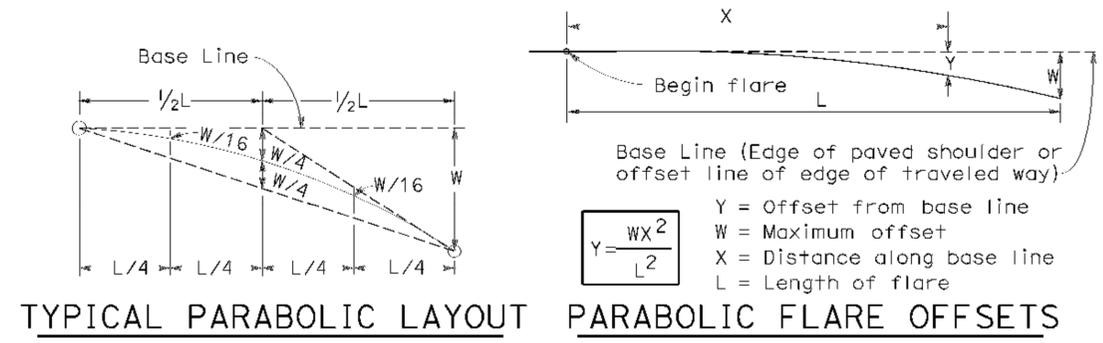
Randell D. Hiatt  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

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

To accompany plans dated 11-04-10



**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

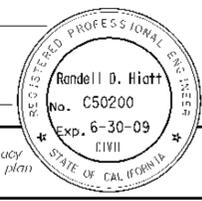
RSP A77E3 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77E3  
DATED MAY 1, 2006 - PAGE 50 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP A77E3**

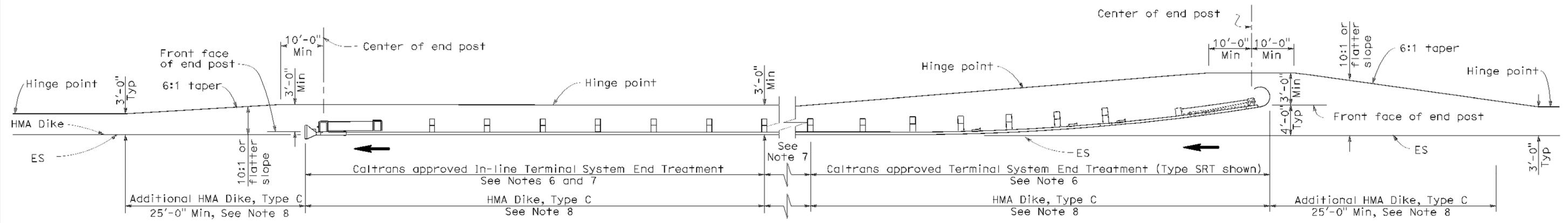
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2006 REVISED STANDARD PLAN RSP A77E3

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Sis	5	R25.3/R37.5	22	37
<i>Randell D. Hiatt</i> REGISTERED CIVIL ENGINEER					
June 6, 2008 PLANS APPROVAL DATE					
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To accompany plans dated 11-04-10



**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**

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2006 REVISED STANDARD PLAN RSP A77E4

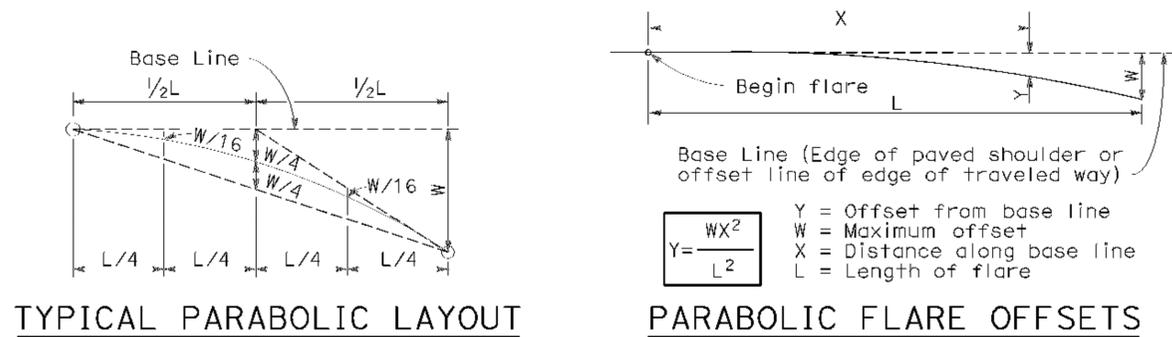
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Sis	5	R25.3/R37.5	23	37

Randell D. Hiatt  
REGISTERED CIVIL ENGINEER

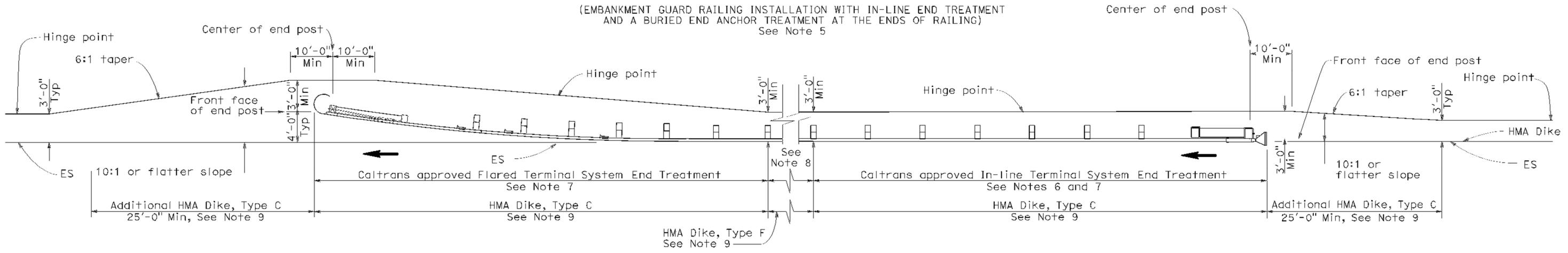
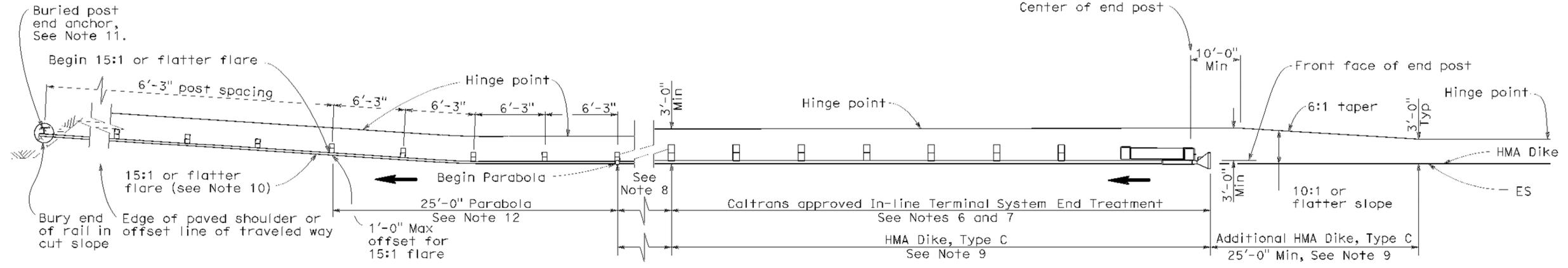
June 6, 2008  
PLANS APPROVAL DATE

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



To accompany plans dated 11-04-10



**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.
- 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

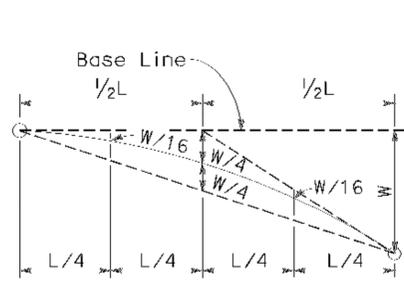
RSP A77E5 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77E5  
DATED MAY 1, 2006 - PAGE 52 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP A77E5**

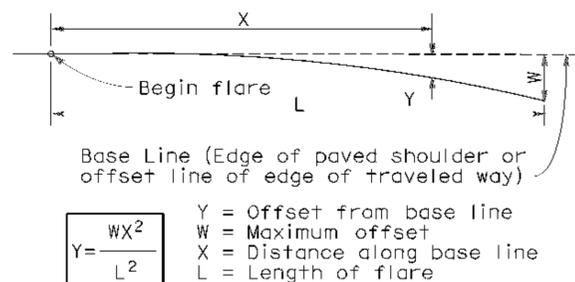
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2006 REVISED STANDARD PLAN RSP A77E5

To accompany plans dated 11-04-10



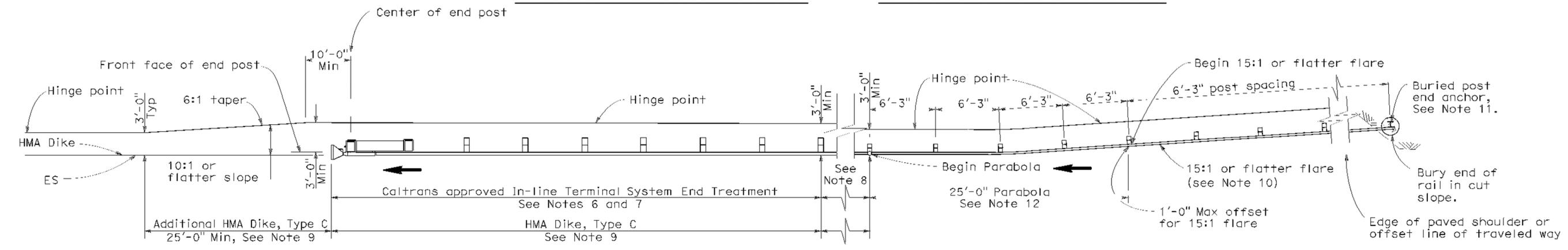
TYPICAL PARABOLIC LAYOUT



PARABOLIC FLARE OFFSETS

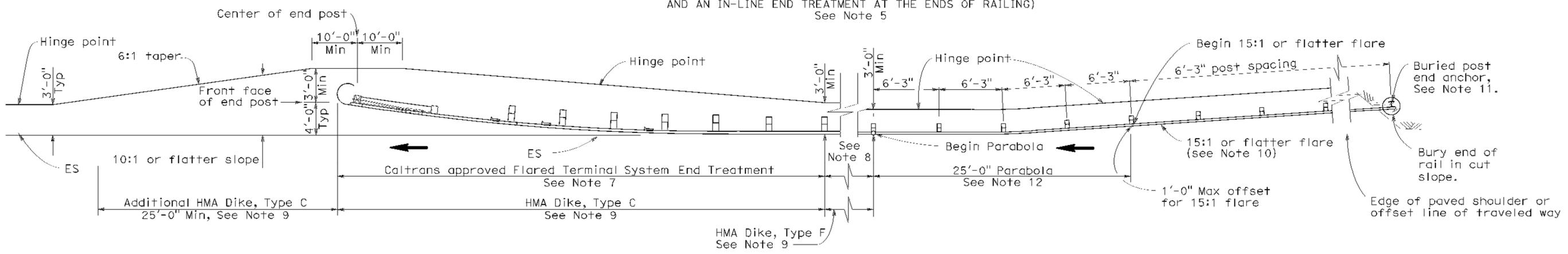
$$Y = \frac{WX^2}{L^2}$$

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



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.

**REVISED STANDARD PLAN RSP A77E6**

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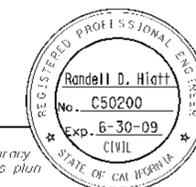
2006 REVISED STANDARD PLAN RSP A77E6

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Sis	5	R25.3/R37.5	25	37

Randell D. Hiatt  
REGISTERED CIVIL ENGINEER

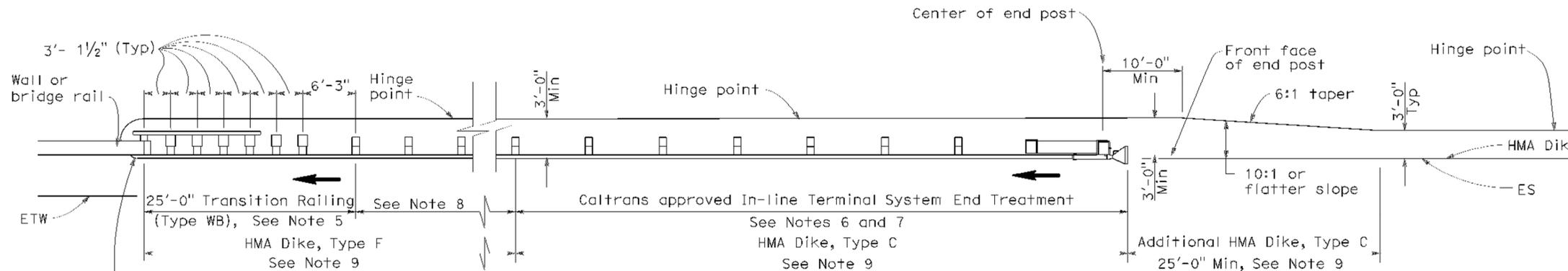
June 6, 2008  
PLANS APPROVAL DATE

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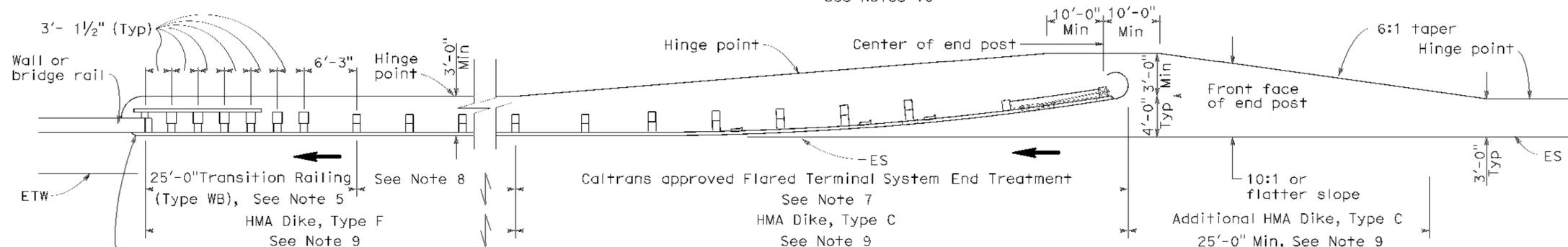
To accompany plans dated 11-04-10

2006 REVISED STANDARD PLAN RSP A77F1



**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.

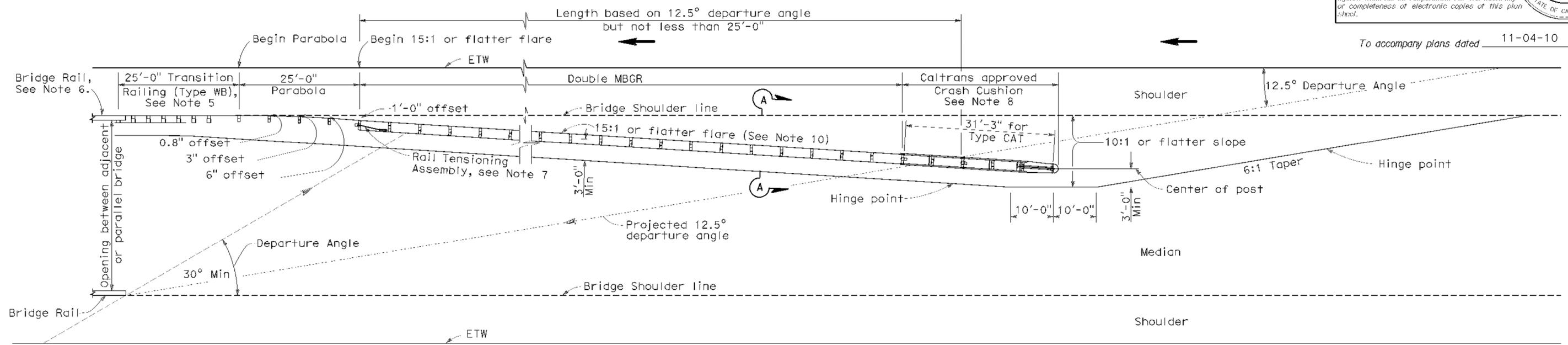
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**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.

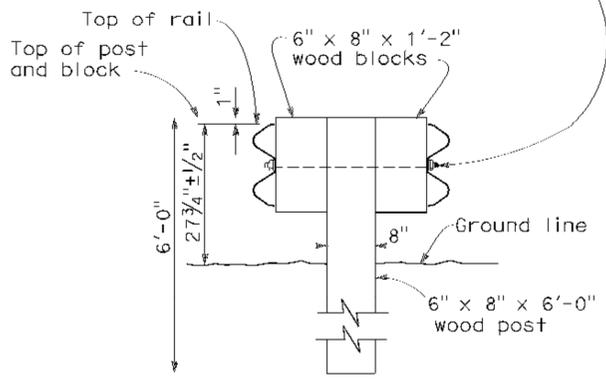
**REVISED STANDARD PLAN RSP A77F1**



**TYPE 12E LAYOUT**

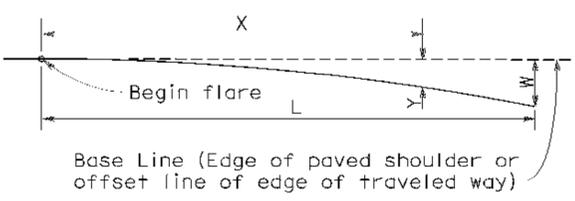
See Note 10

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**

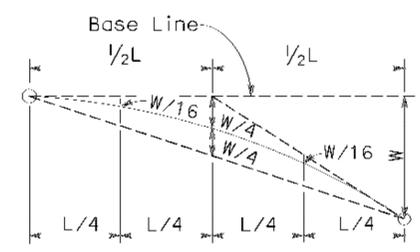
**TYPICAL DOUBLE METAL BEAM GUARD RAILING**



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

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

**PARABOLIC FLARE OFFSETS**



**TYPICAL PARABOLIC LAYOUT**

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

**REVISED STANDARD PLAN RSP A77F3**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Sis	5	R25.3/R37.5	27	37

Randell D. Hiatt  
REGISTERED CIVIL ENGINEER

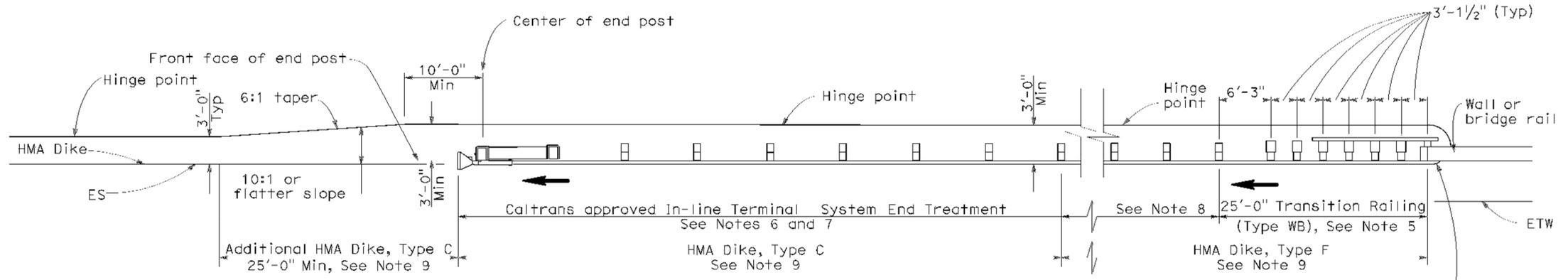
June 6, 2008  
PLANS APPROVAL DATE

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

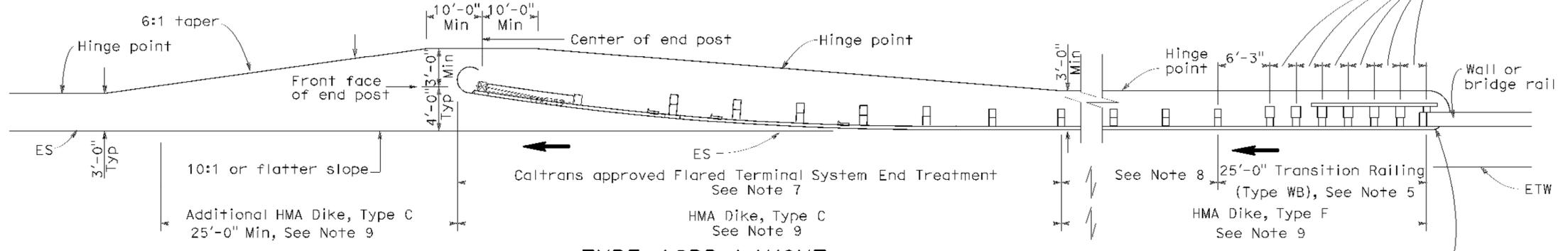
To accompany plans dated 11-04-10

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**

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Sis	5	R25.3/R37.5	28	37

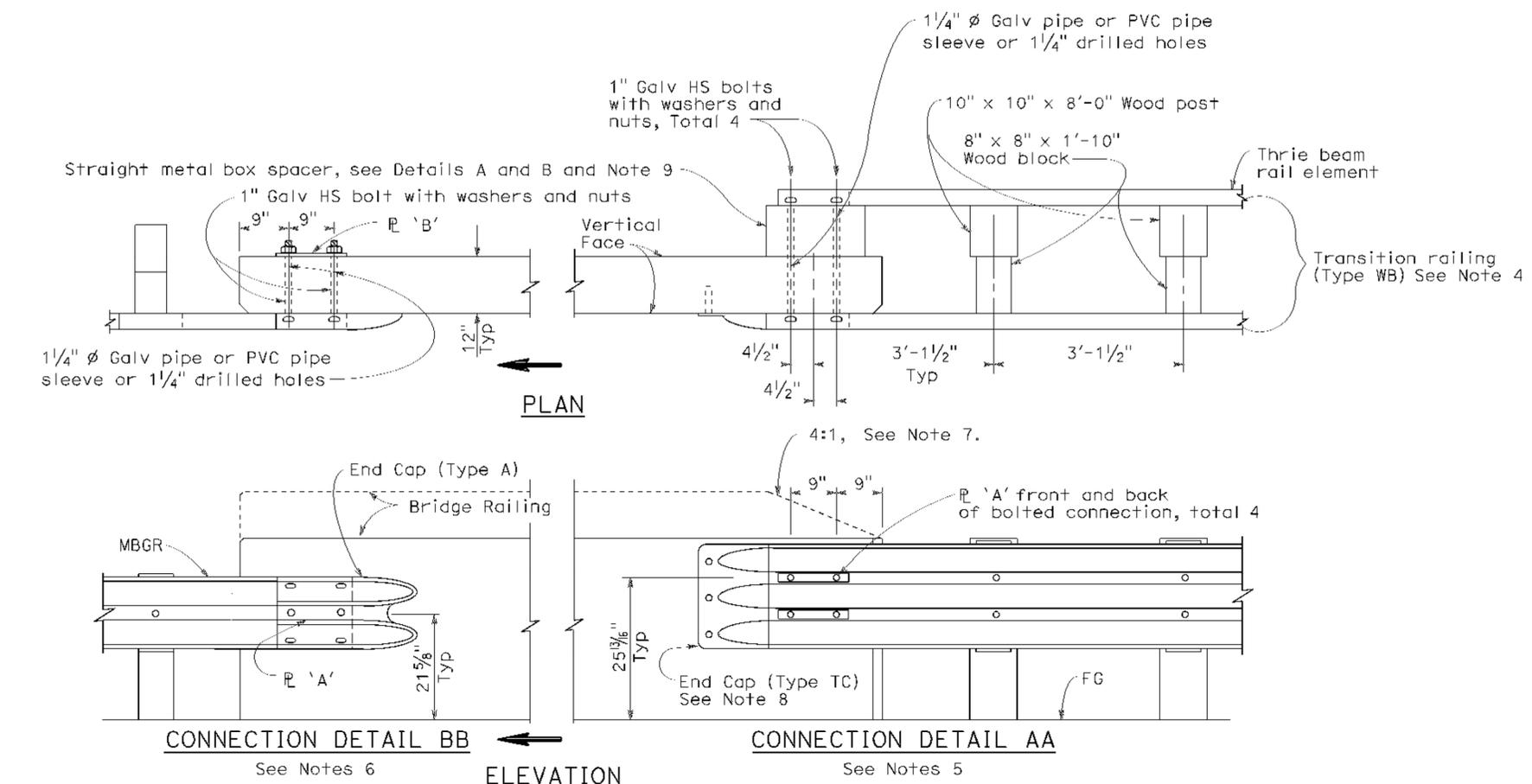
Randell D. Hiatt  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

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

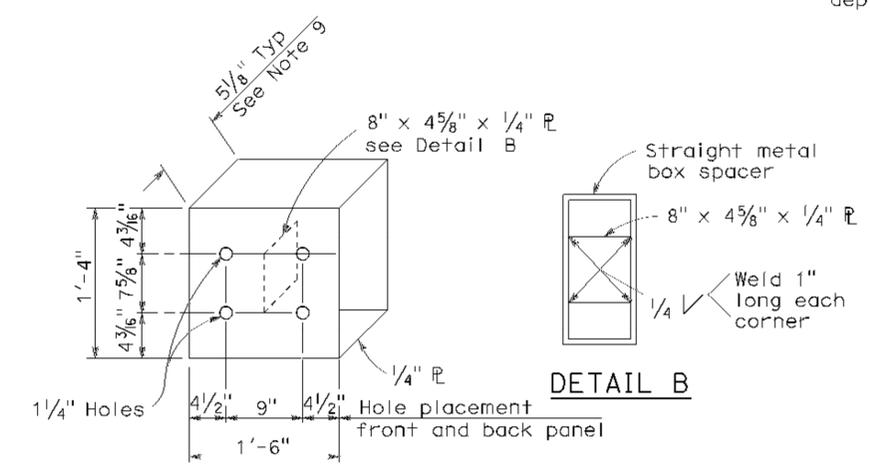
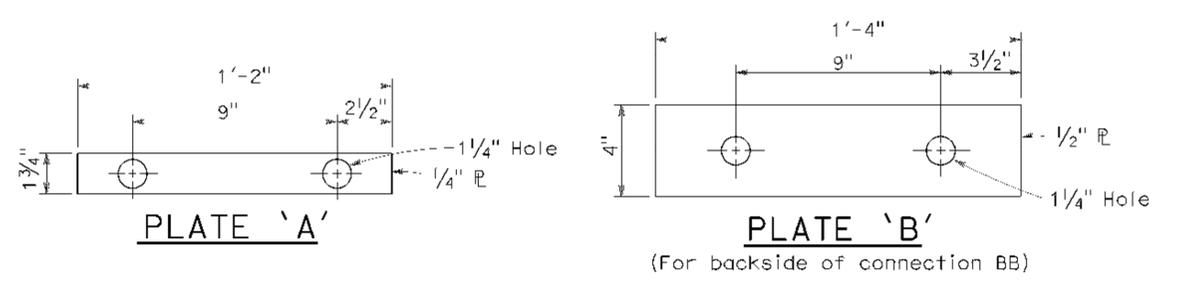
To accompany plans dated 11-04-10



**NOTES:**

1. See Revised Standard Plan RSP A77J2 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  $\rightarrow$ .
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 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 BB, see Layout Type 12D (structure departure railing connection) on Standard Plan A77F2 and Layout Type 12DD 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, taper the top of the end of the bridge railing at 4:1 to match the top elevation of the thrie beam rail.
8. For details of End Cap (Type TC), see Standard Plan A77J4.
9. See Standard Plan A77J4 for additional details regarding depth dimension for straight metal box spacer.

**GUARD RAILING CONNECTION TO BRIDGE RAILING WITHOUT SIDEWALK**



**DETAIL A  
STRAIGHT METAL BOX SPACER**

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

NO SCALE

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

**REVISED STANDARD PLAN RSP A77J1**

2006 REVISED STANDARD PLAN RSP A77J1

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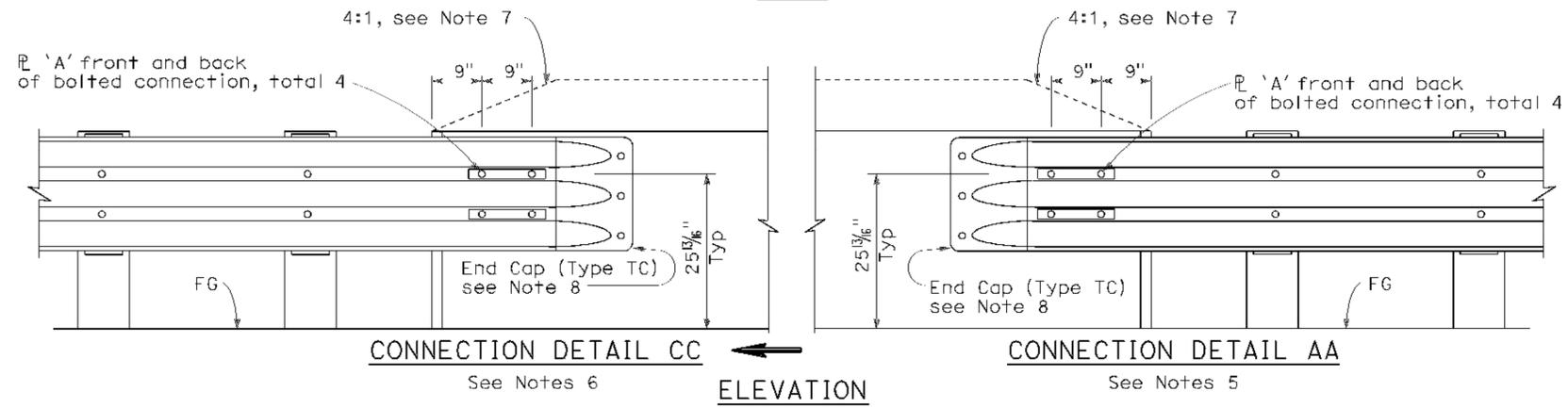
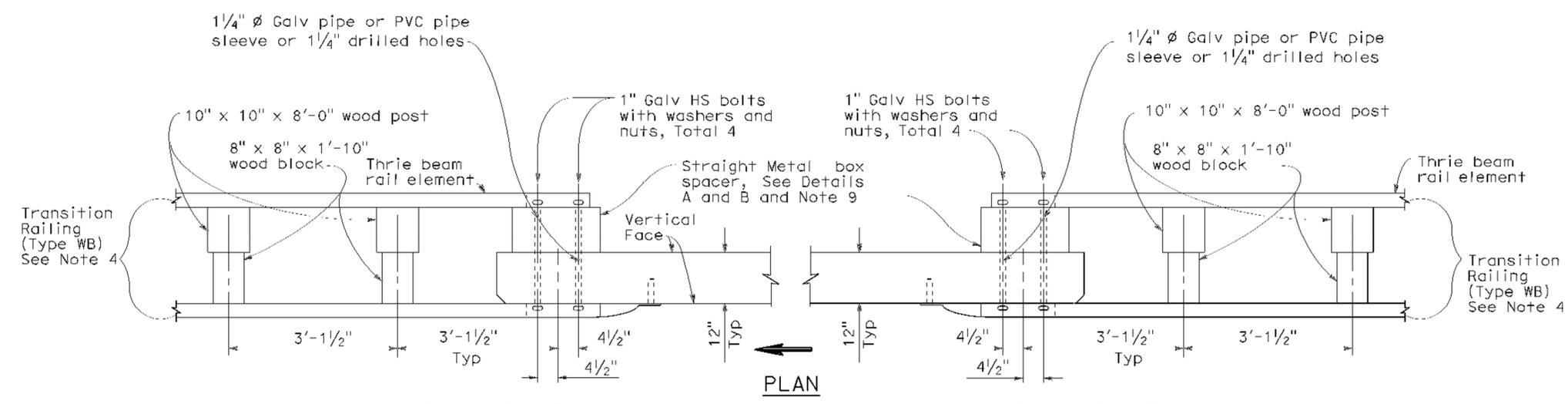
Randell D. Hiatt  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

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

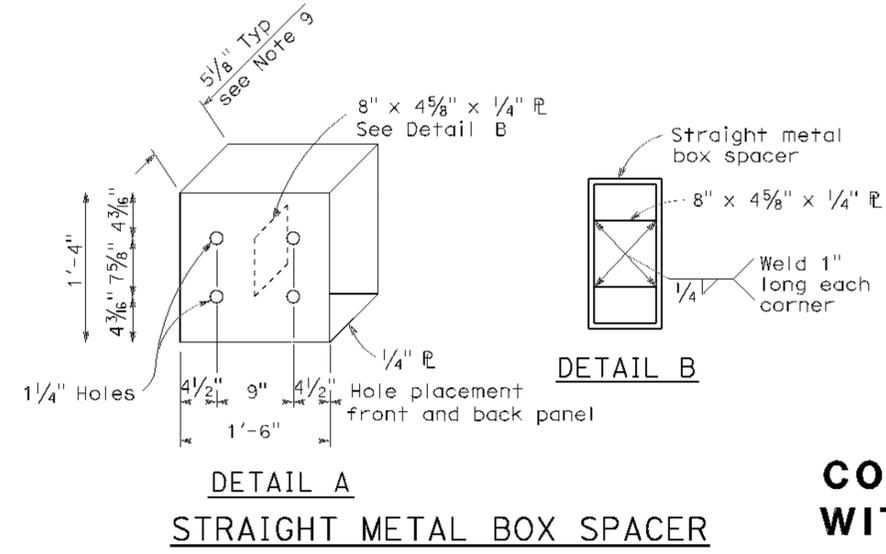
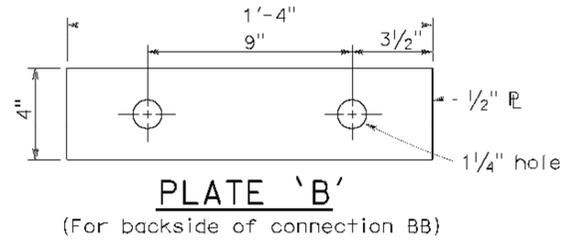
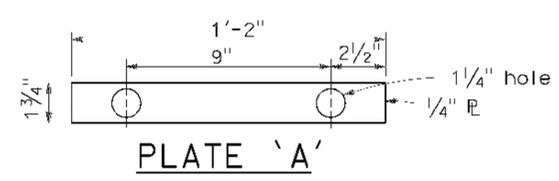
To accompany plans dated 11-04-10



**GUARD RAILING CONNECTION TO BRIDGE RAILING WITHOUT SIDEWALK**

**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.



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

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

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.

**REVISED STANDARD PLAN RSP A77J2**

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2006 REVISED STANDARD PLAN RSP A77J2

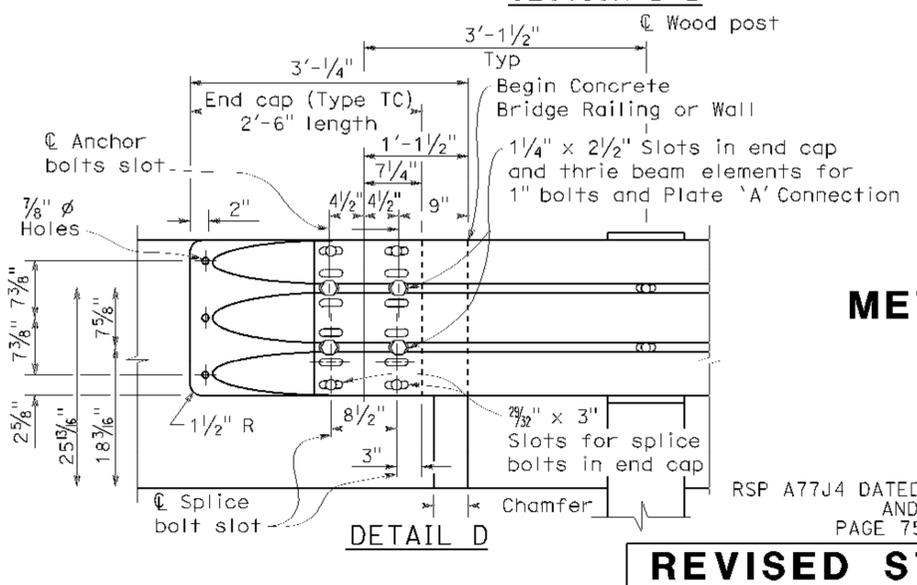
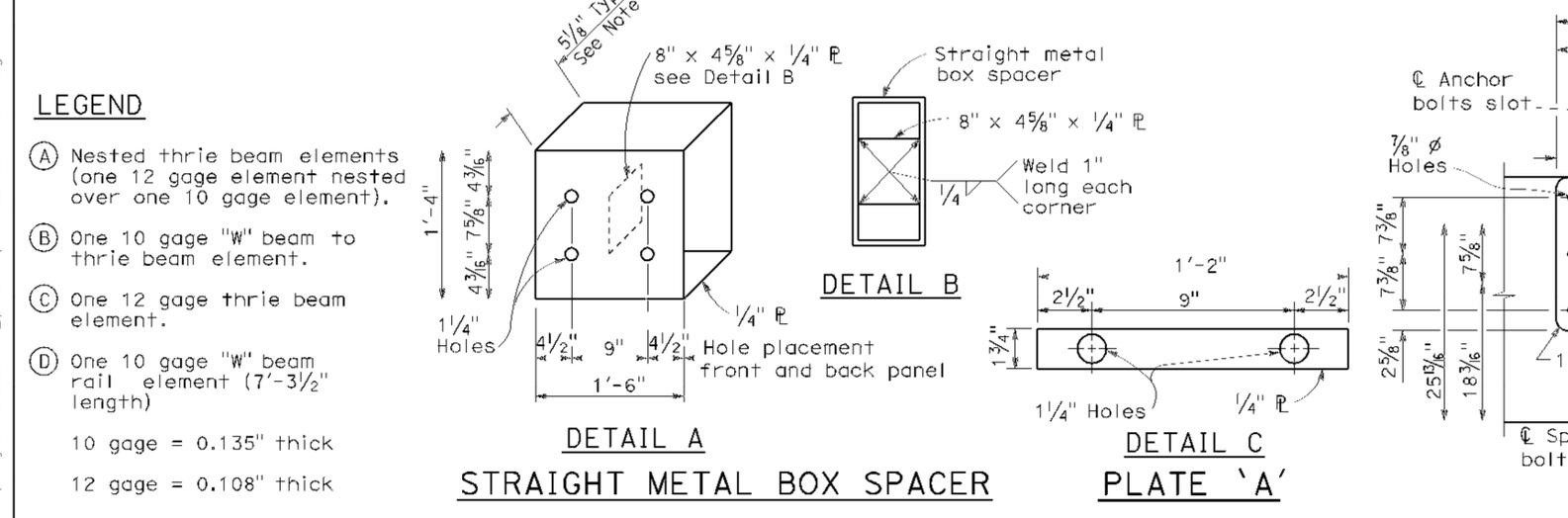
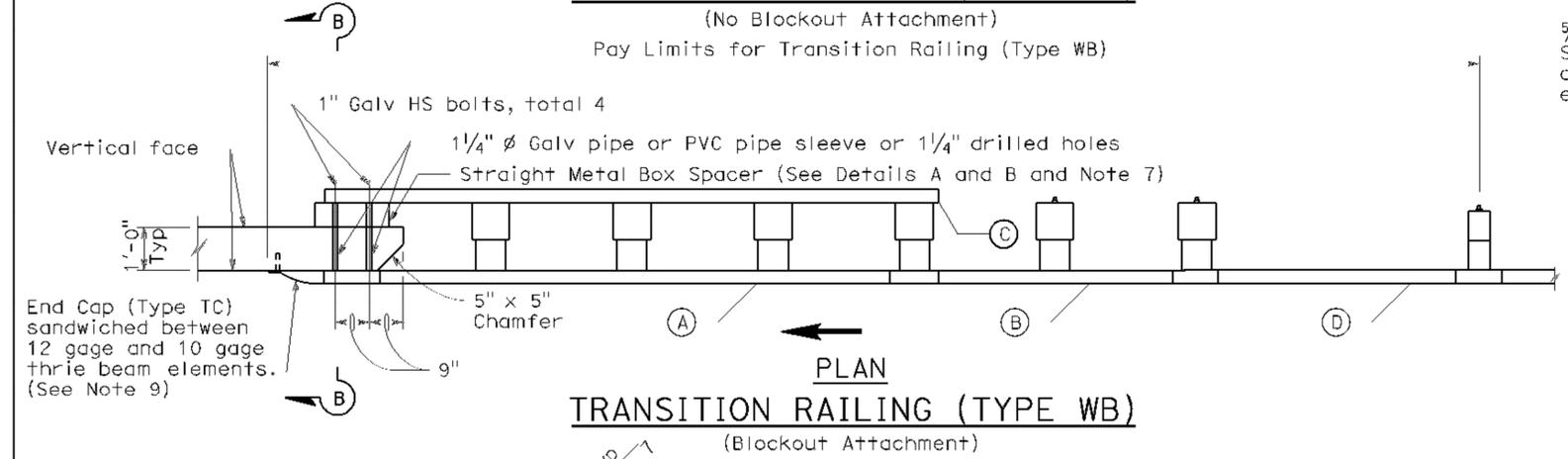
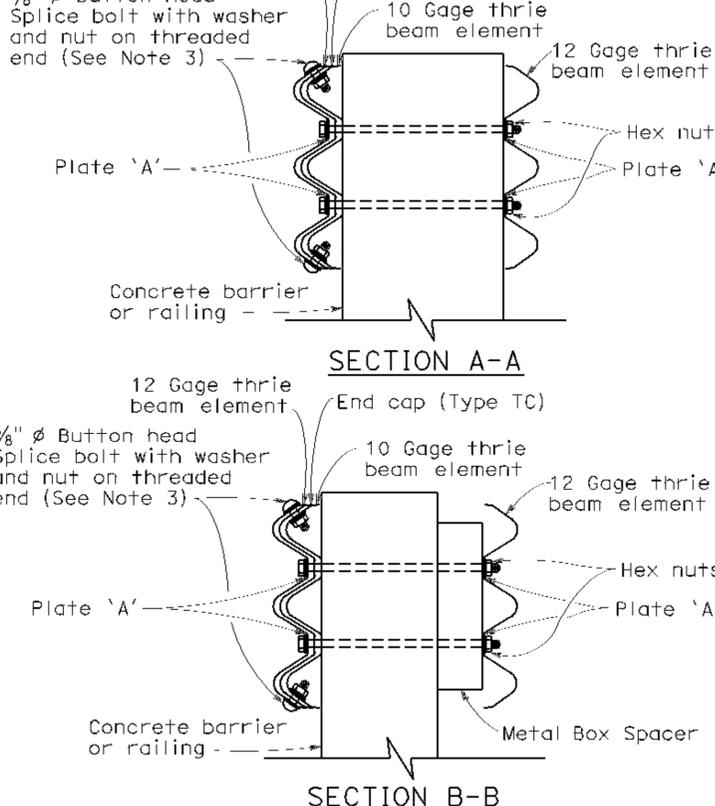
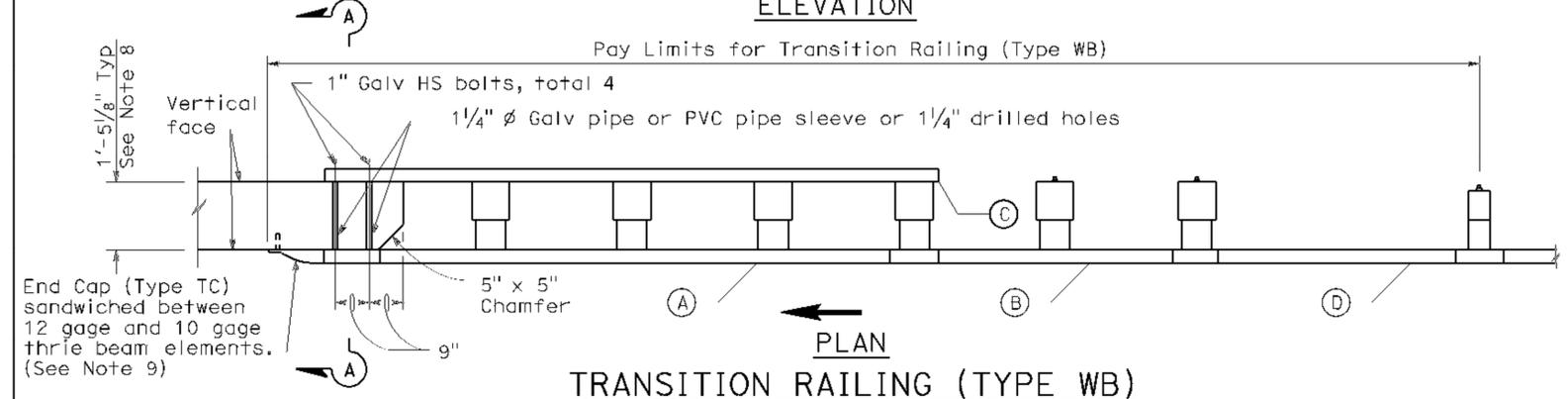
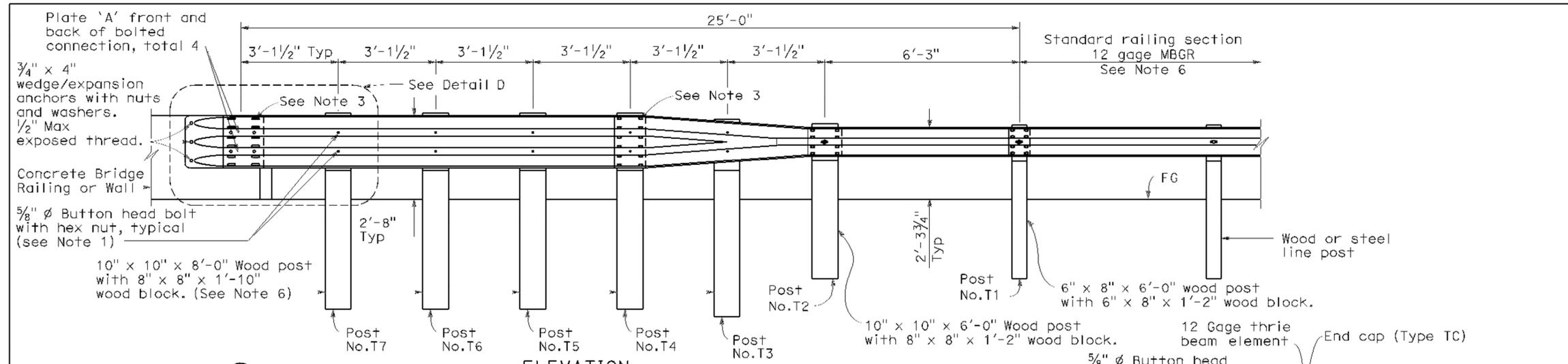
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Sis	5	R25.3/R37.5	30	37

Randell D. Hiatt  
REGISTERED CIVIL ENGINEER

June 5, 2009  
PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER  
Randell D. Hiatt  
No. CS0200  
Exp. 6-30-09  
CIVIL  
STATE OF CALIFORNIA



- NOTES: To accompany plans dated 11-04-10
- Use 5/8"  $\phi$  Button head bolts and hex nuts for connections to posts. No washer on rail face for bolted connections to post.
  - The nested rail elements, end cap, and "W" beam to thrie beam element may be spliced together prior to bolting the elements to the wood post and concrete barrier or railing.
  - Exterior splice bolt holes for rail element splices at Post No. T4 and the connection to the concrete barrier or railing shall be the standard 29/32" x 1 1/8" slot size. Interior splice bolt holes at these locations may be increased up to 1 1/4"  $\phi$ . Only the top 2 and the bottom 2 splice bolts with washers and nuts are required for rail splices at Post No. T4 and the connection to the concrete barrier or railing.
  - Direction of adjacent traffic indicated by  $\rightarrow$ .
  - The top elevation of Post Nos. T2 through T7 shall not project more than 1" above the top elevation of the rail element.
  - Typically, the railing connected to Transition Railing (Type WB) will be either standard railing section of metal beam guard railing or an approved Caltrans end treatment attached to Post No. T1.
  - The depth of the metal box spacer varies from the 5 1/8" to 1 1/2" and is dependent on the width of the concrete railing or wall. The combined dimension for the depth of the metal box spacer plus the width of railing or wall is typically 17 1/8". Where the space between the backside of the concrete railing or wall and the rear thrie beam element is less than 1 1/2", metal plates similar to Plate 'A' are to be used as spacers.
  - Where the width of the concrete railing or wall is greater than 17 1/8", wood blocks are to be used to fill the space created between the backside of Posts No. 4 through No. 7 and the rear thrie beam element. These wood blocks shall be 8" in width and 1'-2" in length. The dimension between the front thrie beam element and the rear thrie beam element is to match the width of the concrete railing or wall.
  - End cap may be installed over 12 gage and 10 gage thrie beam elements where transition railing is installed on the departure end of bridge railing.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING  
TRANSITION RAILING  
(TYPE WB)**

NO SCALE

RSP A77J4 DATED JUNE 5, 2009 SUPERSEDES RSP A77J4 DATED JUNE 6, 2008 AND STANDARD PLAN A77J4 DATED MAY 1, 2006 - PAGE 75 OF THE STANDARD PLANS BOOK DATED MAY 2006.

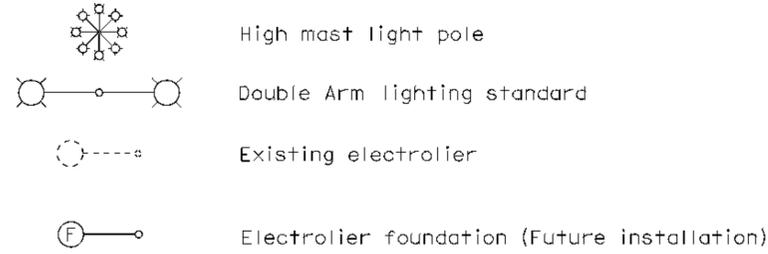
**REVISED STANDARD PLAN RSP A77J4**

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2006 REVISED STANDARD PLAN RSP A77J4

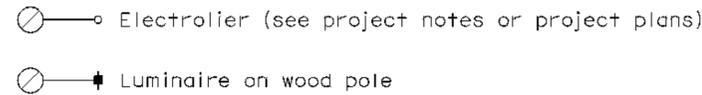
# ELECTROLIERS

STANDARD TYPES
15, 15D
15 STRUCTURE
21, 21D STRUCTURE
30
31
32
35
36-20A



### NOTES:

- Luminaires shall be 310 W HPS when installed on Type 21, 21D, 30, 31, 32, 35 and 36-20A Standards, unless otherwise specified. Luminaires shall be 200 W HPS when installed on other type standards or poles, unless otherwise specified.
- Luminaires shall be the cutoff type, ANSI Type III medium cutoff lighting distribution, unless otherwise specified.
- Variations noted adjacent to symbol on project plans.



### STANDARD NOTES:

- AB** Abandon. If applied to conduit, remove conductors.
- BC** Install pull box in existing conduit run.
- BP** Pedestrian barricade, type as indicated on plan.
- CB** Install conduit into existing pull box.
- CC** Connect new and existing conduit. Remove existing conductors and install conductors as indicated.
- CF** Conduit to remain for future use. Remove conductors. Install pull wire or rope.
- DH** Detector handhole.
- FA** Foundation to be abandoned.
- IS** Install sign on signal mast arm.
- NS** No slip base on standard.
- PEC** Photoelectric control.
- PEU** Photoelectric unit.
- RC** Equipment or material to be removed and become the property of the Contractor.
- RE** Remove electrolier, fuses and ballast. Tape ends of conductors.
- RL** Relocate equipment.
- RR** Remove and reuse equipment.
- RS** Remove and salvage equipment.
- SC** Splice new to existing conductors.
- SD** Service disconnect.
- SF** Standard to remain for future use. Remove luminaire, pole conductors, fuses and ballast.
- TSP** Telephone service point.

# ABBREVIATIONS AND EQUIPMENT DESIGNATIONS

## PROPOSED EXISTING

BBS	bbs	Battery backup system
BC	bc	Bolt circle
C	C	Conduit
CCTV	cctv	Closed circuit television
CKT	ckt	Circuit
CMS	cms	Changeable message sign
DLC	dlc	Loop detector lead-in cable
EMS	ems	Extinguishable message sign
EVC	evc	Emergency vehicle cable
EVD	evd	Emergency vehicle detector
FB	fb	Flashing beacon
FBCA	fbca	Flashing beacon control assembly
FBS	fb	Flashing beacon with slip base
FO	fo	Fiber optic
G	G	Ground (Equipment Grounding Conductor)
GFCI	GFCI	Ground fault circuit interrupt
HAR	har	Highway advisory radio
HEX	hex	Hexagonal
HPS	hps	High pressure sodium
IISNS	iisns	Internally illuminated street name sign
ISL	isl	Induction sign lighting
LED	led	Light emitting diode
LMA	lma	Luminaire mast arm
LPS	lps	Low pressure sodium
LTG	ltg	Lighting
LUM	lum	Luminaire
MAT	mat	Mast arm mounting vehicle signal faces, top attachment
MAS	mas	Mast arm mounting vehicle signal faces, side attachment
MAS-4A	mas-4A	Mast arm mounting vehicle signal faces, side attachment - 4 signal section
MAS-4B	mas-4B	
MAS-4C	mas-4C	
MAS-5A	mas-5A	Mast arm mounting vehicle signal faces, side attachment - 5 signal section
MAS-5B	mas-5B	
MC	mc	Mercury contactor
M/M	m/m	Multiple to multiple transformer
MT	mt	Conduit with pull wire or rope only
MTG	mtg	Mounting
	mv	Mercury vapor lighting fixture
N	N	Neutral (Grounded Conductor)
NC	NC	Normally closed
NO	NO	Normally open
PB	pb	Pull box
PEC	pec	Photoelectric control (Type I, II, III, IV or V as shown)
PED	ped	Pedestrian
PEU	peu	Photoelectric unit
PPB	ppb	Pedestrian push button
RL		Relocated equipment
RM	rm	Ramp metering
SB	sb	Slip base
SIC	sic	Signal interconnect cable
SIG	sig	Signal
SMA	sma	Signal mast arm
SNS	sns	Street name sign
SP	sp	Service point
TDC	tdc	Telephone demarcation cabinet
TMS	tms	Traffic monitoring station
TOS	tos	Traffic Operations System
VEH	veh	Vehicle
XFMR	xfmr	Transformer
COMM	comm	Communication
RWIS	rwis	Roadway weather information system

DISI	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Sis	5	R25.3/R37.5	31	37

Jeffery G. McRae  
REGISTERED ELECTRICAL ENGINEER

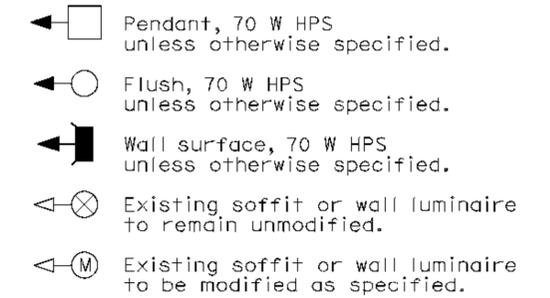
October 5, 2007  
PLANS APPROVAL DATE

Jeffery G. McRae  
No. E14512  
Exp. 6-30-08  
REGISTERED PROFESSIONAL ENGINEER  
ELECTRICAL  
STATE OF CALIFORNIA

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To accompany plans dated 11-04-10

## SOFFIT AND WALL MOUNTED LUMINAIRES



### NOTE:

Arrow indicates "street side" of luminaire.

# ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

RSP ES-1A DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-1A DATED MAY 1, 2006 - PAGE 400 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP ES-1A**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
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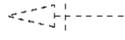
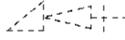
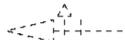
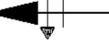
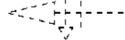
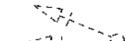
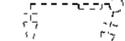
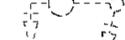
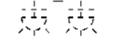
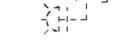
Jeffrey G. McRae  
 REGISTERED ELECTRICAL ENGINEER  
 October 5, 2007  
 PLANS APPROVAL DATE  
 No. E14512  
 Exp. 6-30-08  
 ILLINOIS  
 STATE OF CALIFORNIA

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### CONDUIT

PROPOSED	EXISTING	
---	---	Lighting Conduit, unless otherwise indicated or noted
---	---	Traffic signal conduit
-C-	-c-	Communication conduit
-T-	-t-	Telephone conduit
-F-	-f-	Fire alarm conduit
-FO-	-fo-	Fiber optic conduit
---	---	Conduit termination 
		Conduit riser in/on structure or service pole

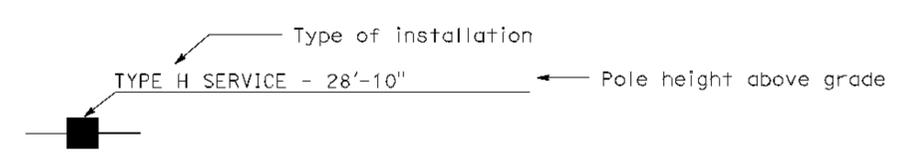
### SIGNAL EQUIPMENT

PROPOSED	EXISTING	
		Pedestrian signal face
		Pedestrian push button post
		Pedestrian barricade
		Vehicle signal face (with backplate, 3-Section: red, yellow and green)
		Vehicle signal face with angle visors
		Modifications of basic symbols: "L" indicates all non-arrow sections lowered "LG" indicates lowered green section only "PV" indicates 12" programmed visibility sections "8" indicates all 8" sections (only when specified)
		Type 15TS and Vehicle signal face
		Vehicle signal face with red, yellow and green left arrow sections
		Vehicle signal face with red and yellow sections and up green arrow
		Vehicle signal face (5 Section) with red, yellow and green sections and yellow and green right arrows
		Type 1 Standard and attached vehicle signal faces
		Standard with signal mast arm only and attached vehicle signal faces and internally illuminated street name sign
		Type 33 Standard, Left-turn vehicle signal face and sign
		Standard with luminaire and signal mast arms and attached vehicle signal faces
		Cantilever flashing beacon Type 9 Frame, with a sign unless otherwise specified or indicated
		Type 15-FBS Standard with two vehicle signal face sections with lens, backplate and visor with a sign
		Flashing beacon. One vehicle signal face section with lens, backplate and visor. "R" indicates red indication, "Y" indicates yellow indication
		Controller assembly. Door indicates front of cabinet

### SERVICE EQUIPMENT

PROPOSED	EXISTING	
---OH---	---oh---	Overhead lines
		Wood pole "U" indicates utility owned
		Pole guy with anchor
		Utility transformer - ground mounted
		Service equipment enclosure type
		Service equipment enclosure door indicates front of enclosure
		Telephone demarcation cabinet

### POLE-MOUNTED SERVICE DESIGNATION



### ILLUMINATED OVERHEAD SIGN

PROPOSED	EXISTING	
		Overhead sign - Single post
		Overhead sign - Two post
		Overhead sign - Mounted on structure
		Overhead sign with electrolier

### SIGNAL EQUIPMENT Cont

PROPOSED	EXISTING	
		Guard post
		Type 1 Standard with "Meter On" sign
		Emergency Vehicle detector

### NOTES:

- All signal sections shall be 12" unless shown otherwise.
- Signal heads shall be provided with backplates unless shown otherwise.
- Signal indication shall be LED.

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS  
 (SYMBOLS AND ABBREVIATIONS)**  
 NO SCALE

RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B  
 DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

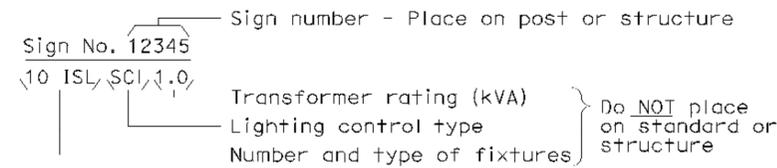
**REVISED STANDARD PLAN RSP ES-1B**

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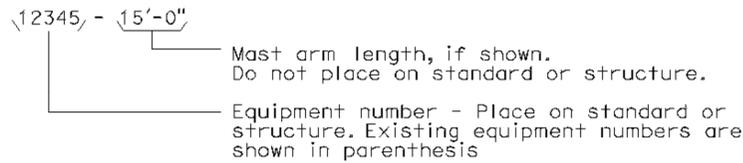
2006 REVISED STANDARD PLAN RSP ES-1B

### EQUIPMENT IDENTIFICATION

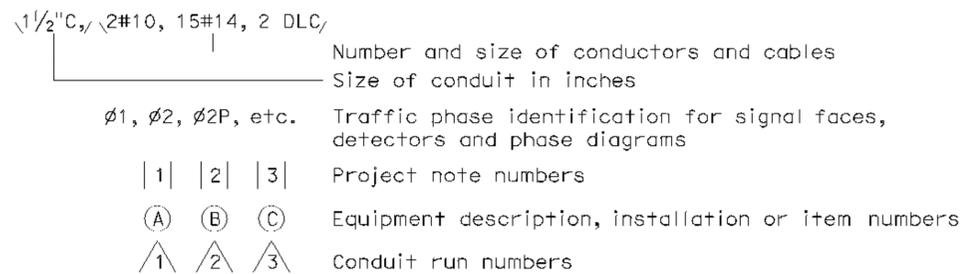
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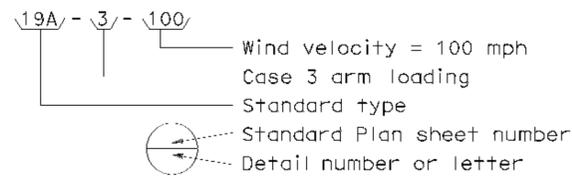
#### ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



#### CONDUIT AND CONDUCTOR IDENTIFICATION:



#### SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



### MISCELLANEOUS EQUIPMENT

PROPOSED	EXISTING	
		Changeable message sign
		Closed circuit television camera
		Highway advisory radio pole and antenna
		Extinguishable message sign
		Detection device M = Microwave sensor V = Video image sensor

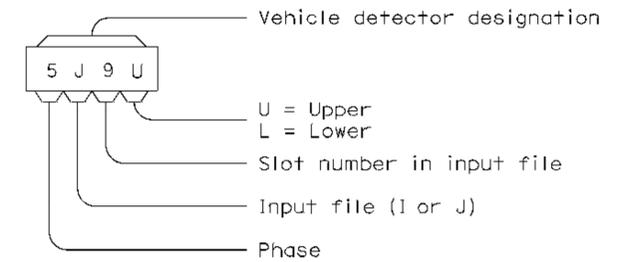
### WIRING DIAGRAM LEGEND

P	Pole	----	External conductor
CB	Circuit breaker	—	Conductor or bus
A	Ampere	—•—	Tie point
V	Volt	—/—	Contactor coil
M	Metered	— —	Contactor, Contact NO
UM	Unmetered	—X—	Terminal blocks
NB	Neutral bus	— /—	Contactor, Contact NC
GB	Ground bus	—/—	Enclosure bond
G	Equipment grounding conductor	— —	Grounding electrode
N	Grounded conductor (Neutral)	—•—	Circuit breaker
		Ⓡ	Receptacle

### PULL BOXES

PROPOSED	EXISTING	
		Pull box—No. 5 unless otherwise indicated or noted.
		Pull box—Additional designations or descriptions
3		(C) = Communications pull box
5		(E) = Pull box with extension
6		(S) = Sprinkler control pull box
7		(21) = Anchor bolts and conduit for future installation of Type 21 Standard
8		(T) = Traffic pull box
9		
9A		

### VEHICLE DETECTORS



PROPOSED	EXISTING	
		Type A detector loop. Outline of sawcut shown.
		Type B detector loop. Outline of sawcut shown.
		Type C detector loop. Outline of sawcut shown.
		Type D detector loop. Outline of sawcut shown.
		Type E detector loop. Outline of sawcut shown.
		Type Q detector loop. Outline of sawcut shown.
		Magnetic detector
		Detector handhole
		Microwave or video detection zone

STATE OF CALIFORNIA  
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## ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

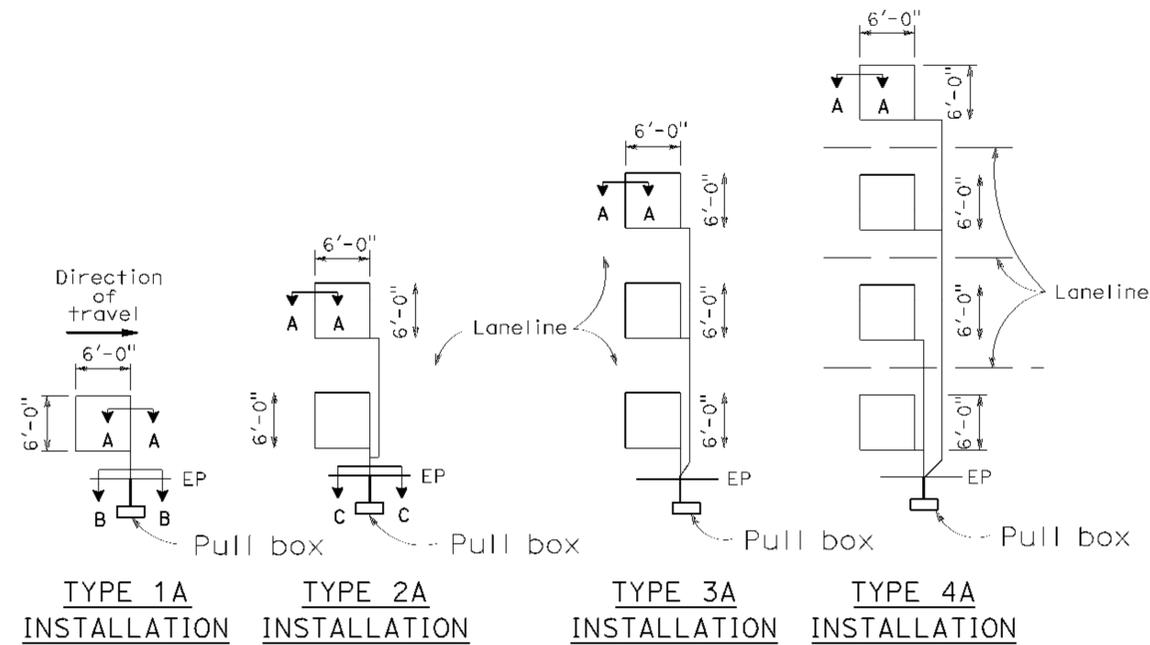
NO SCALE

RSP ES-1C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1C  
 DATED MAY 1, 2006 - PAGE 402 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP ES-1C**

# LOOP INSTALLATION PROCEDURE

- Loops shall be centered in lanes.
- Saw slots in pavement for loop conductors as shown in details.
- Distance between side of loop and a lead-in saw cut from adjacent detectors shall be 2'-0" minimum. Distance between lead-in saw cuts shall be 6" minimum.
- Bottom of saw slot shall be smooth with no sharp edges.
- Slots shall be washed until clean, blown out and thoroughly dried before installing loop conductors.
- Adjacent loops on the same sensor unit channel shall be wound in opposite directions.
- Identify and tag loop circuit pairs in the pull box with loop number, start (S) and finish (F) of conductor. Identify and tag lead-in-cable with sensor number and phase.
- Install loop conductor in slot using a 3/16" to 1/4" thick wood paddle. Hold loop conductors with wood paddles (at the bottom of the sawed slot) during sealant placement.
- No more than 2 twisted pairs shall be installed in one sawed slot.
- Allow additional 5'-0" of slack length of conductor for the lead-in run to pull box.
- The additional length of each conductor for each loop shall be twisted together into a pair (6 turns per 3'-4" minimum) before being placed in the slot and conduit leading to pull box.
- Test each loop circuit for continuity, circuit resistance and insulation resistance at the pull box before filling slots.
- Fill slots as shown in details.
- Splice loop conductors to lead-in-cable. Splices shall be soldered.
- End of lead-in-cable and Type 2 loop conductor shall be waterproofed prior to installing in conduit to prevent moisture from entering the cable.
- Lead-in-cable shall not be spliced between the pull box and the controller cabinet terminals.
- Test each loop circuit for continuity, circuit resistance and insulation resistance at the controller cabinet location.
- Where loop conductors are not to be spliced to a lead-in-cable, the ends of the conductors shall be taped and waterproofed with electrical insulating coating.

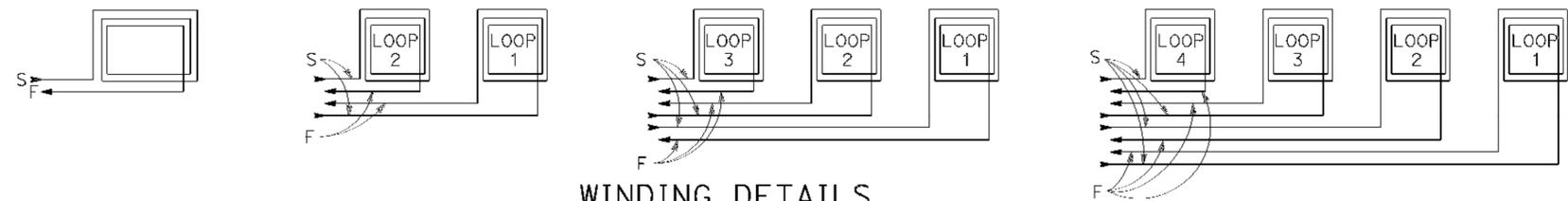


TYPE 1A INSTALLATION    TYPE 2A INSTALLATION    TYPE 3A INSTALLATION    TYPE 4A INSTALLATION

## SAWCUT DETAILS

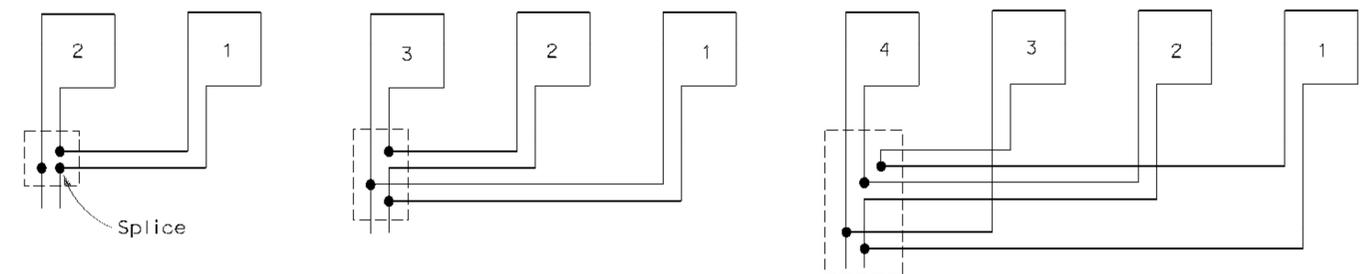
(Type A loop detector configurations illustrated)

- 1A thru 4A = 1 Type A loop configuration in each lane.
  - 1B thru 4B = 1 Type B loop configuration in each lane.
  - 1C = 1 Type C loop configuration entering lanes as required.
  - 1D thru 4D = 1 Type D loop configuration in each lane.
  - 1E thru 4E = 1 Type E loop configuration in each lane.
  - 1Q thru 4Q = 1 Type Q loop configuration in each lane.
- (Use Type A, B, C, D, E or Q loop detector configurations only when specified or shown on plans)



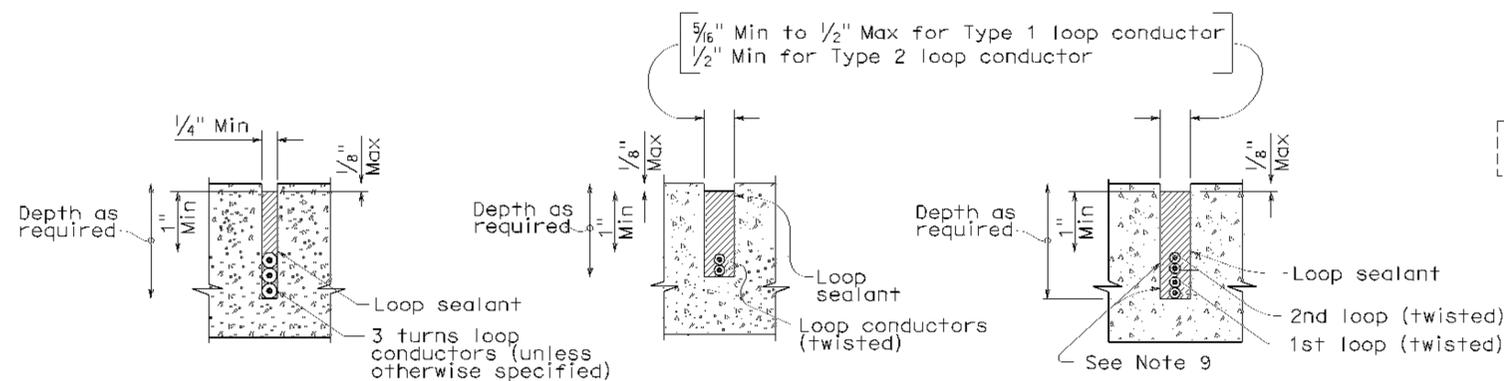
## WINDING DETAILS

See Notes 6 and 7



## TYPICAL LOOP CONNECTIONS

(Dashed lines represent the pull box)



SECTION A-A    SECTION B-B    SECTION C-C  
SLOT DETAILS - TYPE 1 AND TYPE 2 LOOP CONDUCTOR

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Sis	5	R25.3/R37.5	34	37

Jeffery G. McRae  
REGISTERED ELECTRICAL ENGINEER

October 5, 2007  
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
Jeffery G. McRae  
No. E14512  
Exp. 6-30-08  
ELECTRICAL  
STATE OF CALIFORNIA

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To accompany plans dated 11-04-10

2006 REVISED STANDARD PLAN RSP ES-5A

# ELECTRICAL SYSTEMS (DETECTORS)

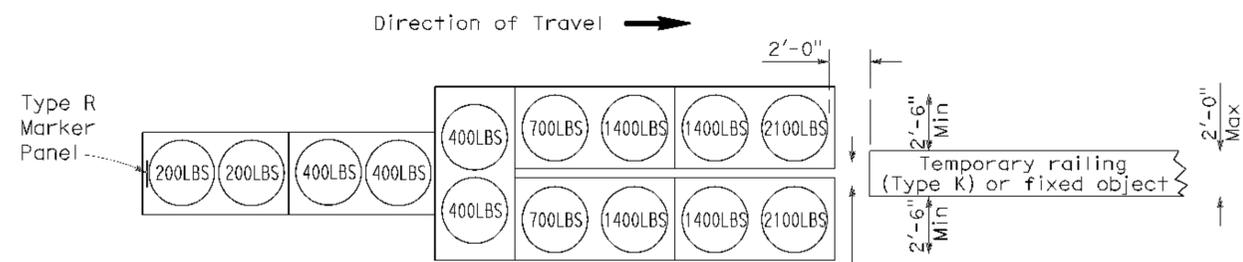
NO SCALE

RSP ES-5A DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-5A DATED MAY 1, 2006 - PAGE 423 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP ES-5A**

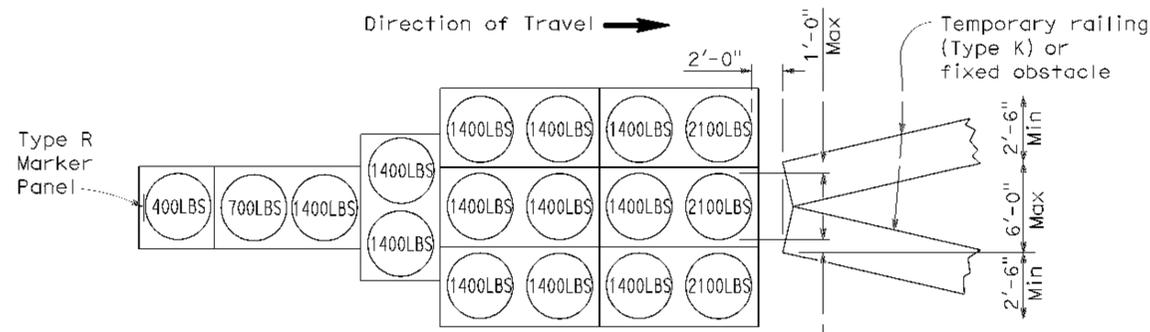
To accompany plans dated 11-04-10

2006 REVISED STANDARD PLAN RSP T1A



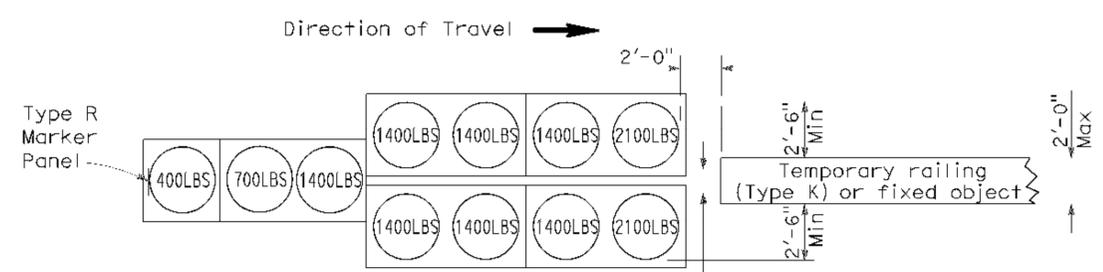
**ARRAY 'TU14'**

Approach speed 45 mph or more



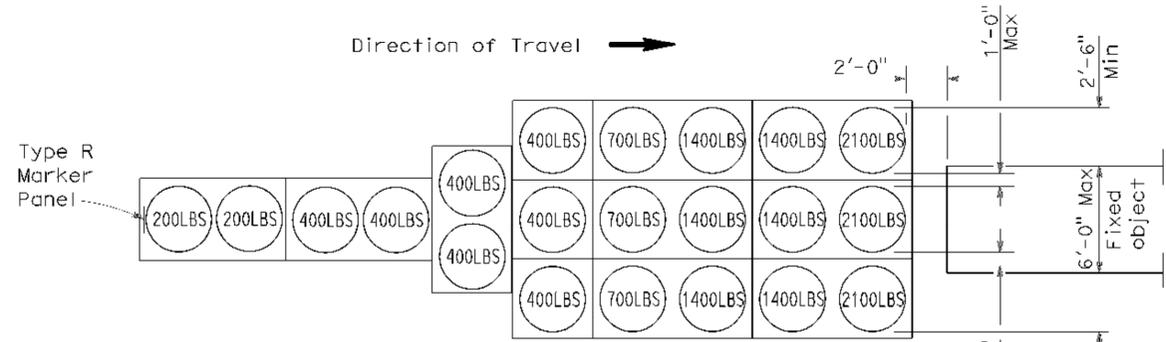
**ARRAY 'TU17'**

Approach speed less than 45 mph



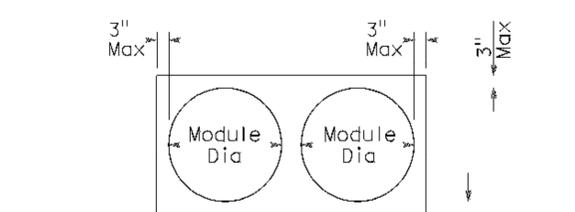
**ARRAY 'TU11'**

Approach speed less than 45 mph

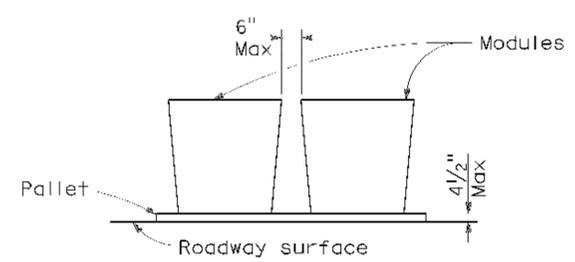


**ARRAY 'TU21'**

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**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Sis	5	R25.3/R37.5	36	37

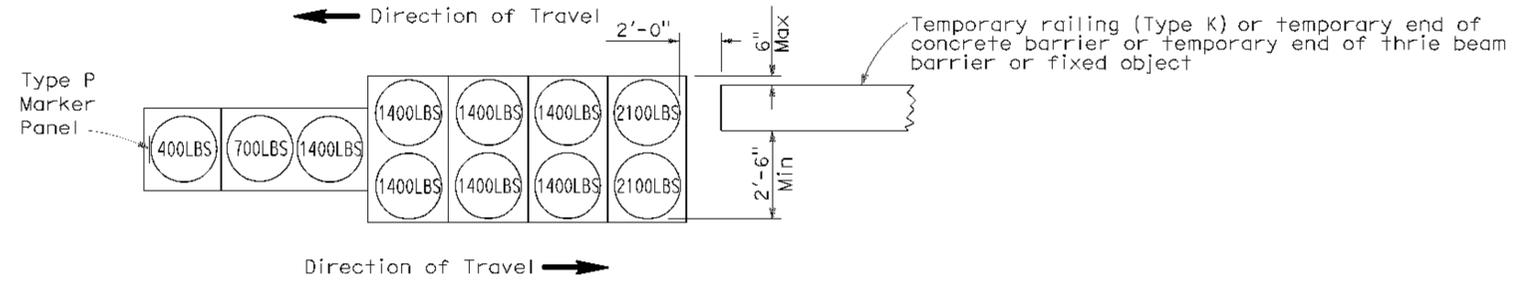
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

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

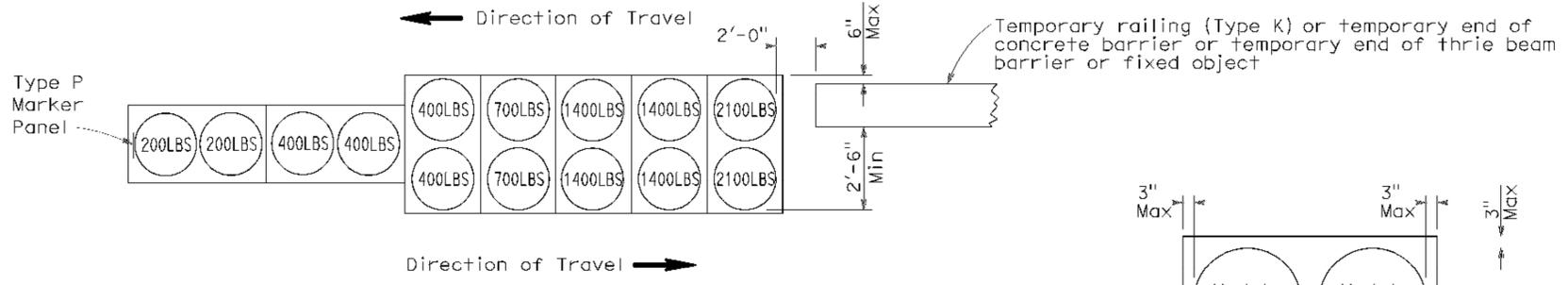
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To accompany plans dated 11-04-10



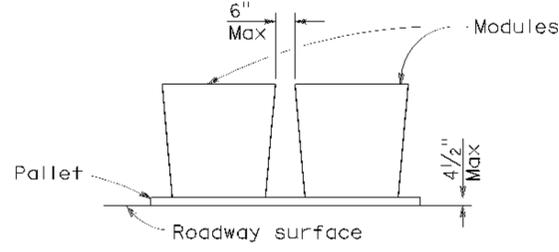
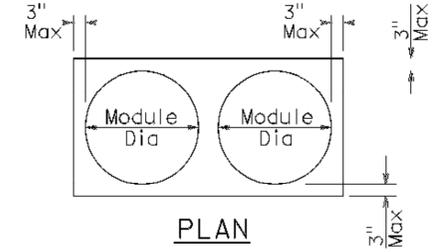
**ARRAY 'TB11'**

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**

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2006 REVISED STANDARD PLAN RSP T1B

DIST	COUNTY	ROUTE	POST MILE TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Sis	5	R25.3/R37.5	37	37

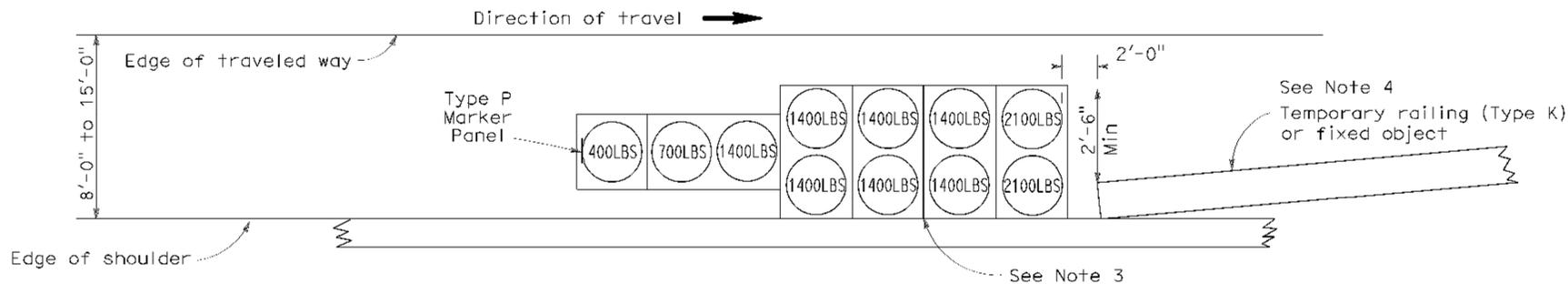
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

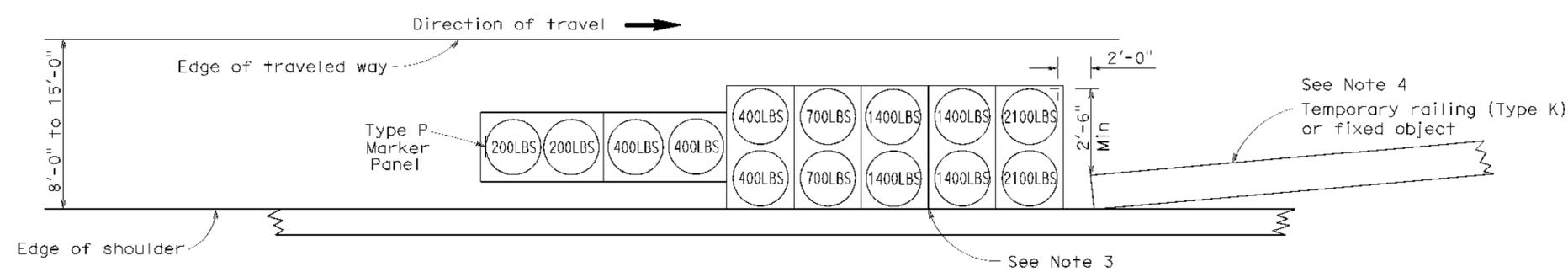
*Randell D. Hiatt*  
No. C50200  
EXP. 6-30-09  
CIVIL  
STATE OF CALIFORNIA

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To accompany plans dated 11-04-10



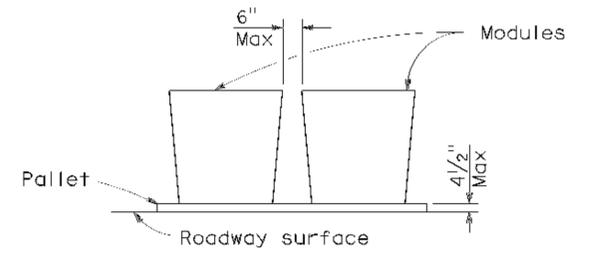
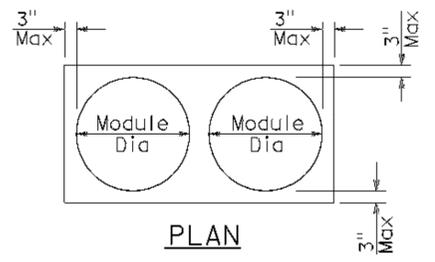
**ARRAY 'TS11'**  
Approach speed less than 45 mph  
See Note 9



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

**NOTES:**

- (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.
- All sand weights are nominal.
- 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.
- 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.
- Temporary crash cushion arrays shall not encroach on the traveled way.
- Arrays for median shoulders shall conform to details shown on this plan for outside shoulders.
- Place the Type P marker panel so that the bottom of the panel rests upon the pallet and faces traffic.
- Refer to Standard Plan A73B for marker details.
- 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.
- Approach speeds indicated conform to NCHRP 350 Report criteria.
- Use of pallets is optional.



**CRASH CUSHION PALLET DETAIL**  
See Note 11

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