

STATE OF CALIFORNIA  
**DEPARTMENT OF TRANSPORTATION**  
**PROJECT PLANS FOR CONSTRUCTION ON**  
**STATE HIGHWAY**  
**IN SHASTA COUNTY NEAR REDDING**  
**FROM 0.1 MILE WEST OF ROUTE**  
**5 SEPARATION TO STILLWATER**  
**CREEK BRIDGE**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	44	L1.7/R4.3	1	35

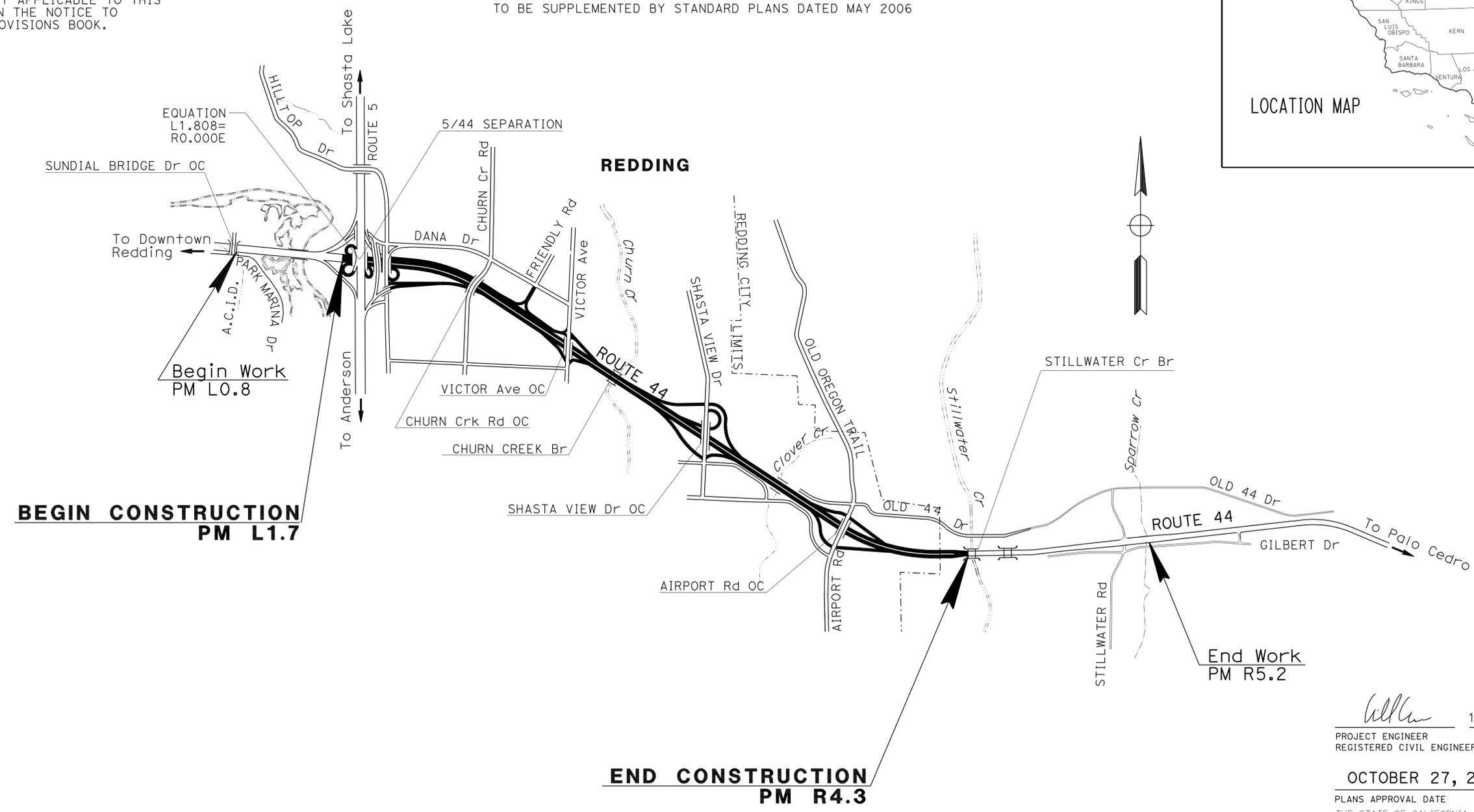
LOCATION MAP

INDEX OF PLANS

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

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006



PROJECT MANAGER LANCE BROWN	DESIGN ENGINEER LANCE BROWN
--------------------------------	--------------------------------

PROJECT ENGINEER      DATE 10-27-11  
 REGISTERED CIVIL ENGINEER

**OCTOBER 27, 2011**  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 MICHAEL A. GOWER  
 No. 073123  
 Exp. 12-31-12  
 CIVIL  
 STATE OF CALIFORNIA

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

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

NO SCALE



USERNAME => s115152  
 DGN FILE => 23E990ab001.dgn

UNIT 0156      PROJECT NUMBER & PHASE      0200020224

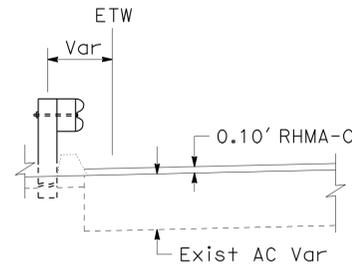
LAST REVISION: 10-27-11      DATE PLOTTED => 15-NOV-2011      TIME PLOTTED => 13:37

**NOTES:**

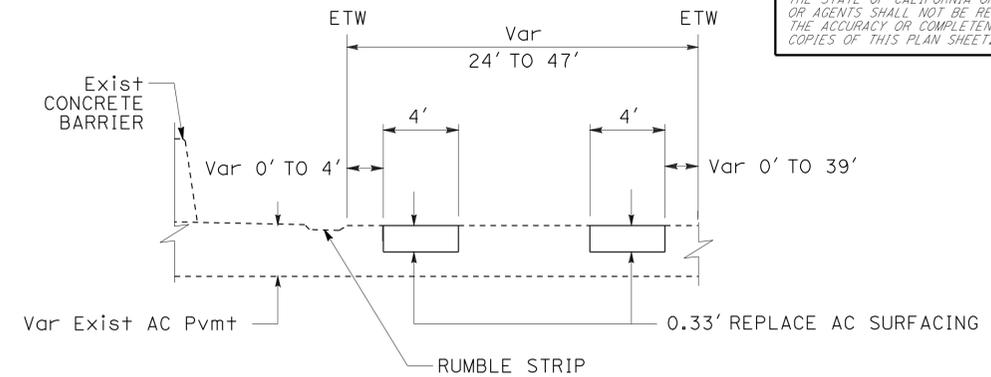
- DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
- SUPERELEVATIONS AS SHOWN OR AS DIRECTED BY THE ENGINEER.
- EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THESE PLANS.
- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- SEE CONSTRUCTION DETAILS FOR RAMP PAVING LIMITS AND RAMPS TO BE PAVED.

**ABBREVIATIONS:**

- RHMA-O RUBBERIZED HOT MIX ASPHALT (OPEN GRADED)  
 RAC RUBBERIZED ASPHALT CONCRETE

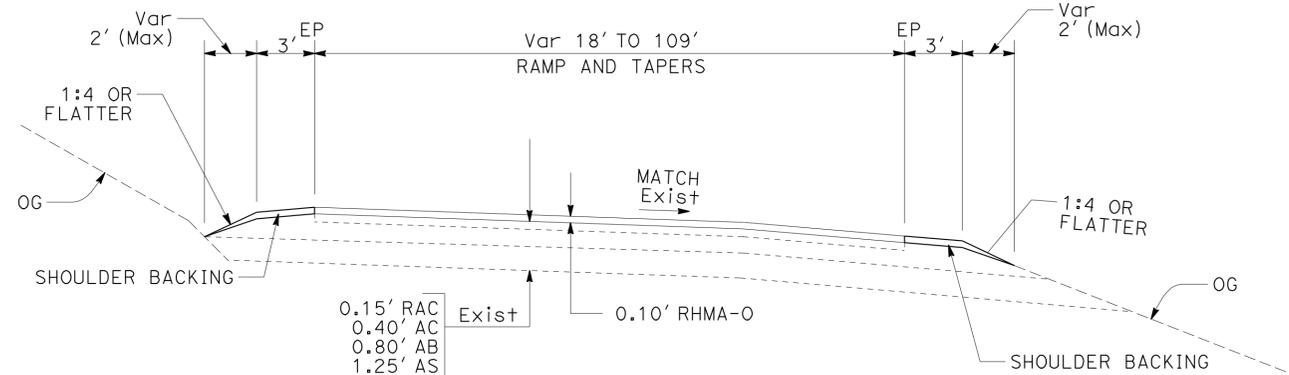


**AC DIKE LOCATION**  
 WITH OR WITHOUT MBGR  
 TYPICAL BOTH SIDES OF  
 MAINLINE OR RAMPS

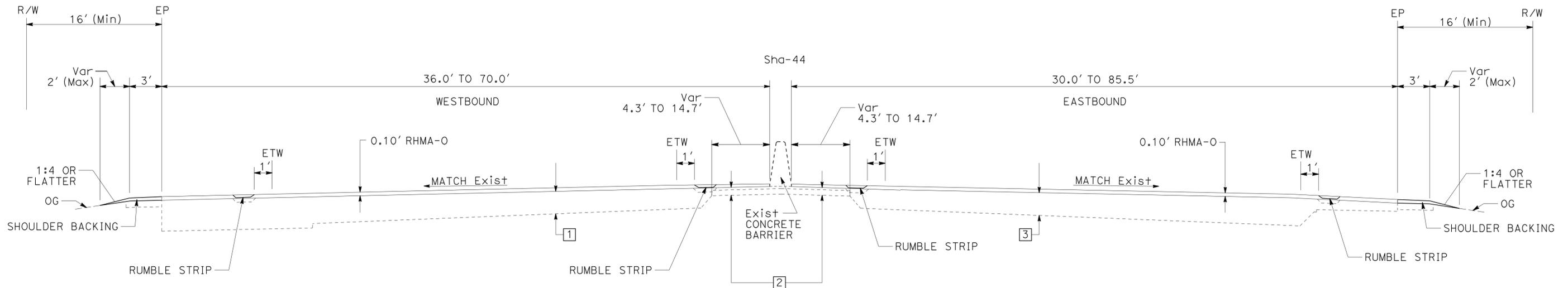


**REPLACE AC SURFACING**  
 (TYPICAL BOTH DIRECTIONS)

PM LIMITS	1 Exist	2 Exist	3 Exist
L1.7-L1.81	0.05' OGAC 0.33' & Var AC 0.67' CTB 0.75' & Var AS	0.20' & Var AC 0.50' AB	0.05' OGAC 0.33' & Var AC 0.67' CTB 0.75' & Var AS
R0.00-R0.39	0.15' RAC 0.50 AC 1.50' CI 2 AB	0.10'-0.15' RAC 0.28' AC 0.50' AB	0.15' RAC 0.53'-1.13' AC 0.75' AB 0.50'-0.60' AS
R0.39-R1.24	0.15' RAC 0.50' AC 1.50' CI 2 AB	0.10'-0.15' RAC 0.20' AC 0.36' CI 2 AB	0.15' RAC 0.53' AC 0.75' AB 0.50'-0.60' AS
R1.24-R4.31	0.15' RAC 0.53' AC 0.75' AB 0.50'-0.60' AS	0.25' AC 0.36' AB	0.15' RAC 0.53' AC 0.75' AB 0.50'-0.60' AS



\*SEE NOTE 5  
**TYPICAL RAMP**



**TYPICAL CROSS SECTIONS**  
 NO SCALE

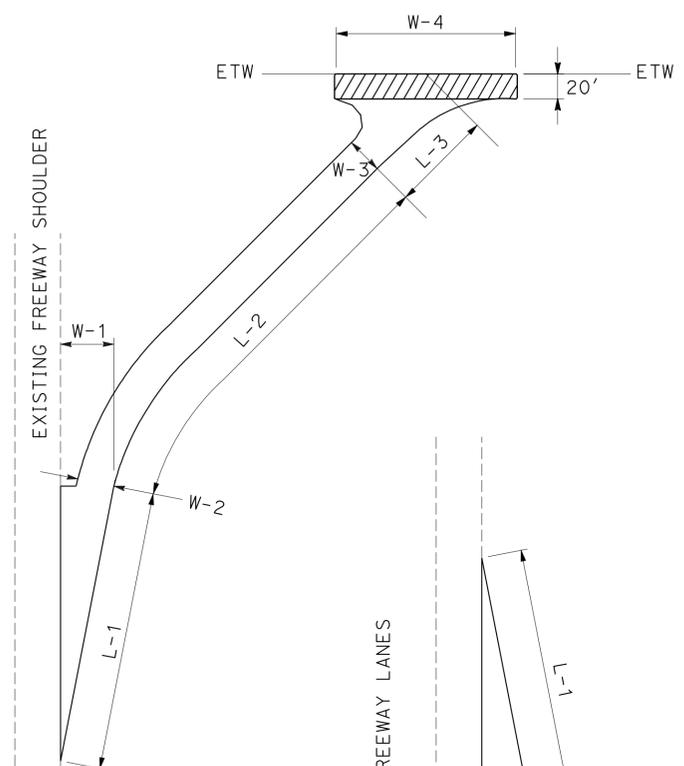
X-1

REVISIONS: 10-27-11 DATE PLOTTED => 15-NOV-2011 TIME PLOTTED => 13:37  
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - MAINTENANCE  
 FUNCTIONAL SUPERVISOR: LANCE BROWN  
 CALCULATED-DESIGNED BY: MICHAEL CONNER  
 CHECKED BY: KARLIE SMITH  
 REVISIONS: 10-27-11 DATE PLOTTED => 15-NOV-2011 TIME PLOTTED => 13:37  
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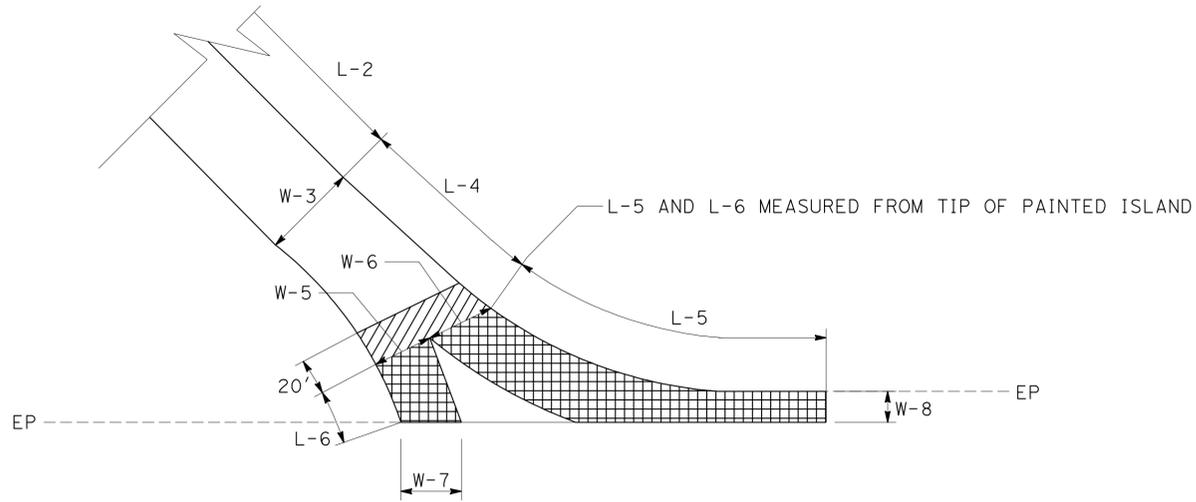


**NOTE:**

1. EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THESE PLANS.



**EXIT-RAMP**  
 EB EXIT TO VICTOR Ave  
 WB EXIT TO VICTOR Ave  
 EB EXIT TO SHASTA VIEW Dr  
 EB EXIT TO AIRPORT Rd  
 WB EXIT TO AIRPORT Rd



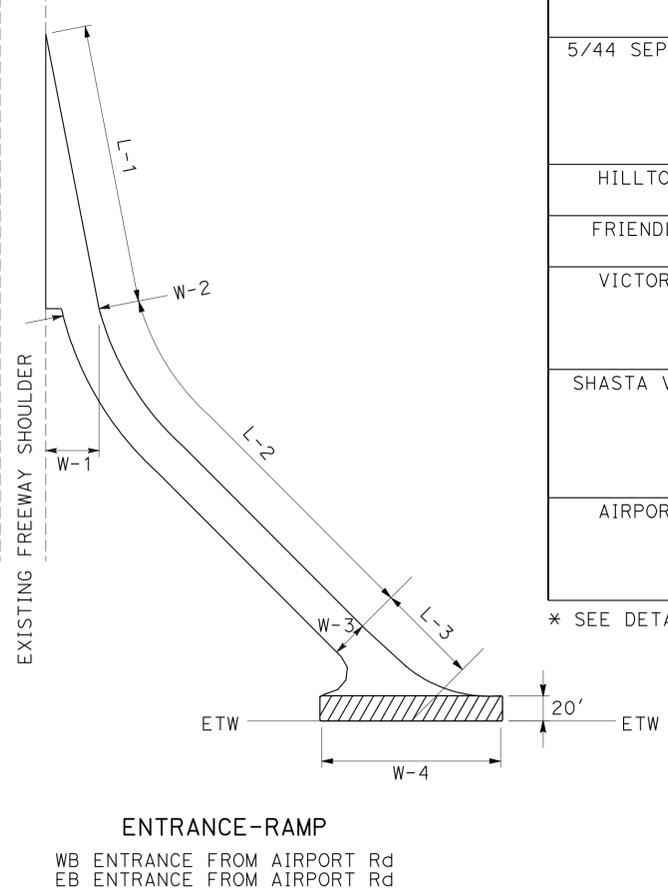
**ENTRANCE-RAMP**  
 EB ENTRANCE FROM VICTOR Ave  
 WB ENTRANCE FROM SHASTA VIEW Dr  
 EB ENTRANCE FROM SHASTA VIEW Dr

**EXIT-RAMP**  
 WB EXIT TO SHASTA VIEW Dr

**RAMPS**

OVERCROSSING	DIRECTION OF TRAVEL		ENTRANCE RAMP	EXIT RAMP	POST MILE	DIMENSIONS														
						WIDTH IN FEET								LENGTH IN FEET						
						W-1	W-2	W-3	W-4	W-5	W-6	W-7	W-8	L-1	L-2	L-3	L-4	L-5	L-6	
5/44 SEPARATION	X		X			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
		X		X	L1.74	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	X			X	R0.06	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
		X		X	R0.09	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
HILLTOP Dr	X			X	R0.16	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	X		X		R0.22	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
FRIENDLY Rd		X	X		R0.63	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
		X		X	R0.79	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
VICTOR Ave		X	X		R1.08	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	X			X	R1.12	33.0	25.0	43.0	65.0					506	810	55				
		X		X	R1.38	31.5	24.5	34.0	78.0					420	904	33				
	X		X		R1.44	33.0	23.0	32.0	42.5	15.5	27.0	24.0	21.5	1378	680		50	163	97	
SHASTA VIEW Dr		X	X		R1.87	37.0	26.0	35.5		13.0	22.5	13.0	20.0	1090	875				350	128
	X			X	R1.88	34.5	24.5	34.0	60.0					415	1290	70				
		X	X		R2.11	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	X		X		R2.26	38.5	23.0	23.0		15.0	20.0	21.5	23.0	435	650		500	50	45	
AIRPORT Rd				X	R2.27	37.0	26.0	37.0		14.0	22.0	34.0	46.0	930	664		20	153	125	
	X			X	R3.44	38.5	25.5	38.0	89.0					472	1025	100				
		X	X		R3.45	41.5	18.0	27.0	100.0					1350	836	96				
	X		X		R3.81	43.0	26.0	22.5	109.0					1062	868	79				
		X	X	R3.81	38.5	26.5	26.5	82.0					460	1030	56					

\* SEE DETAIL ON C-3 & C-4 FOR DIMENSIONS



**ENTRANCE-RAMP**  
 WB ENTRANCE FROM AIRPORT Rd  
 EB ENTRANCE FROM AIRPORT Rd

**CONSTRUCTION DETAILS**

NO SCALE

**C-2**

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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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	44	L1.7/R4.3	5	35

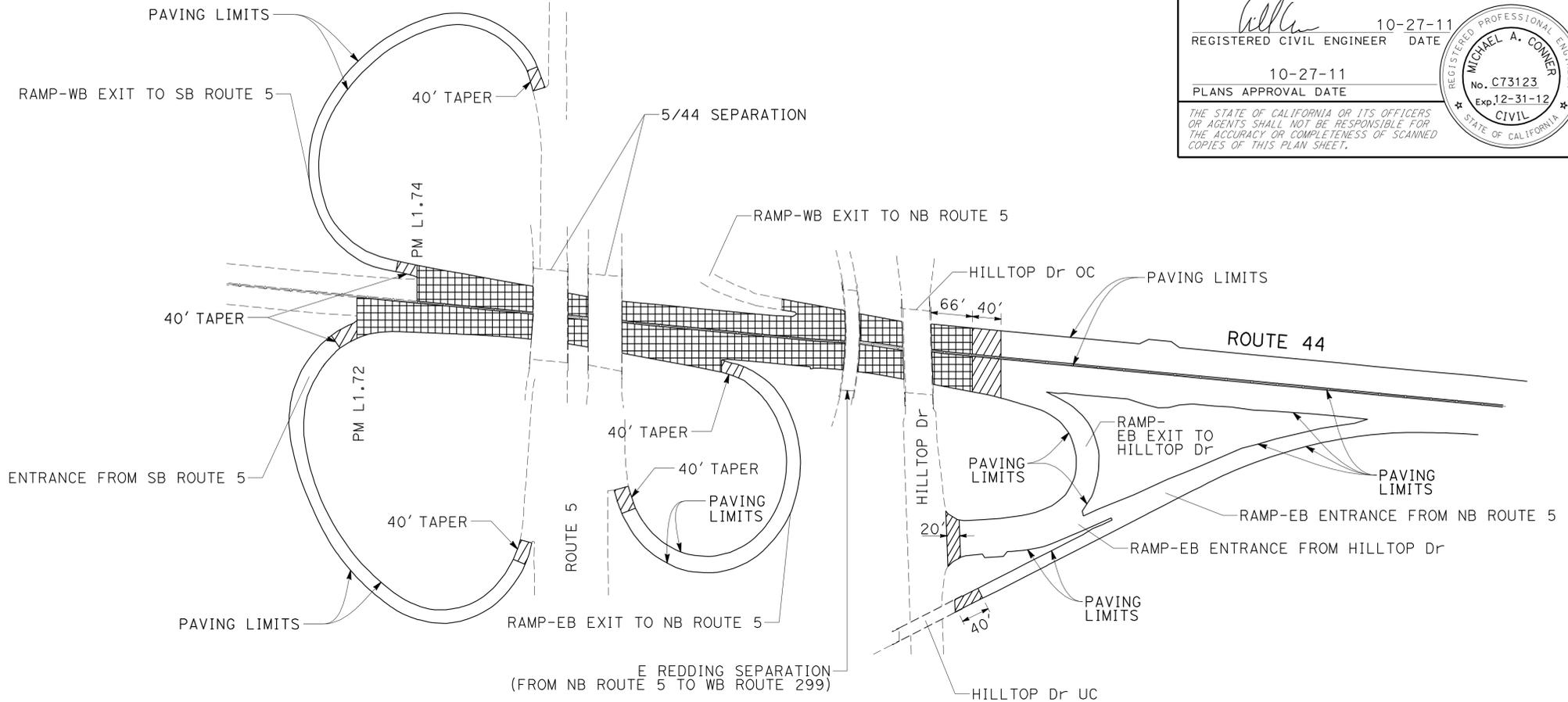
REGISTERED CIVIL ENGINEER	DATE
<i>Michael A. Conner</i>	10-27-11
PLANS APPROVAL DATE	
	10-27-11

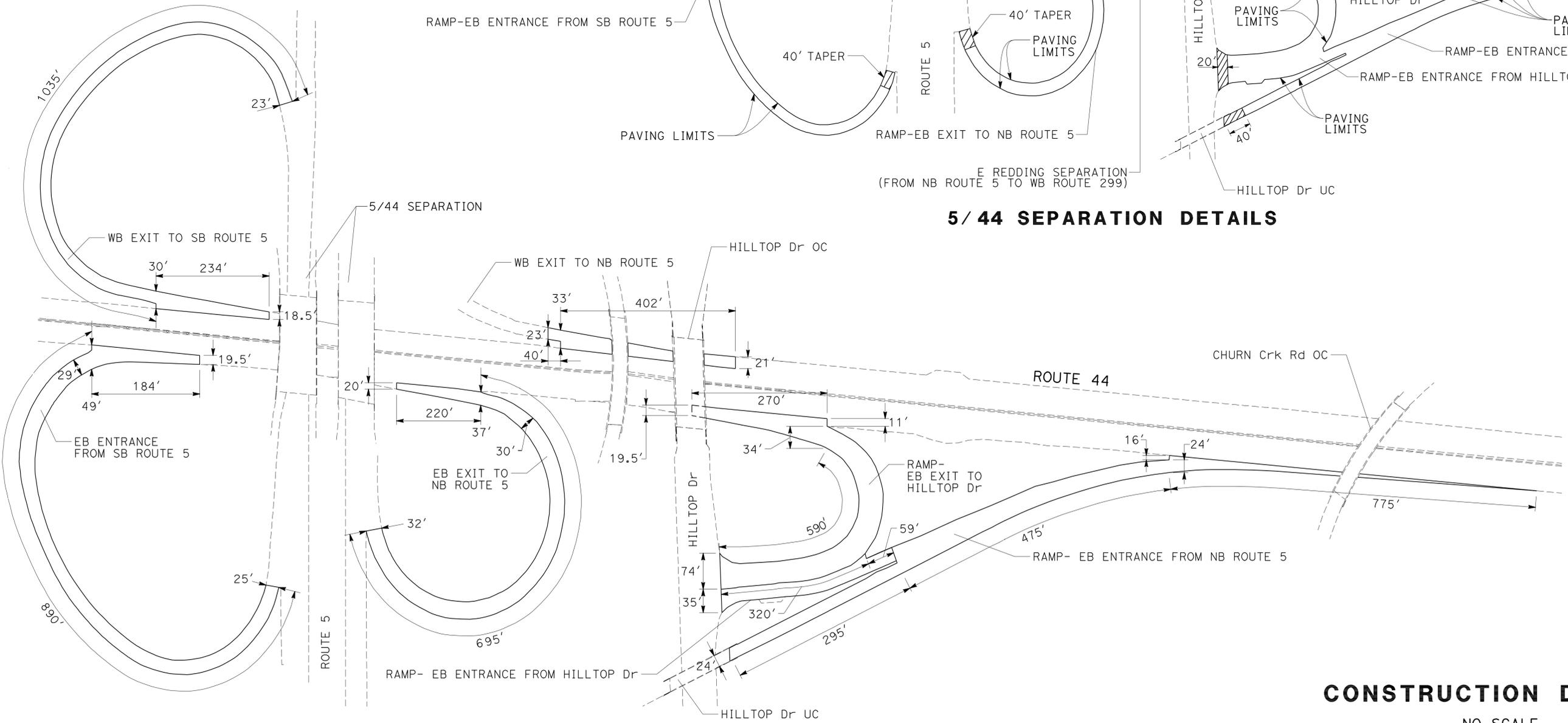
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**NOTE:**  
1. EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THESE PLANS.



**5/44 SEPARATION DETAILS**



**5/44 SEPARATION AND HILLTOP DRIVE RAMP DIMENSIONS**

**CONSTRUCTION DETAILS**

NO SCALE

**C-3**

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



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	44	L1.7/R4.3	7	35

REGISTERED CIVIL ENGINEER	DATE	10-27-11
PLANS APPROVAL DATE		10-27-11

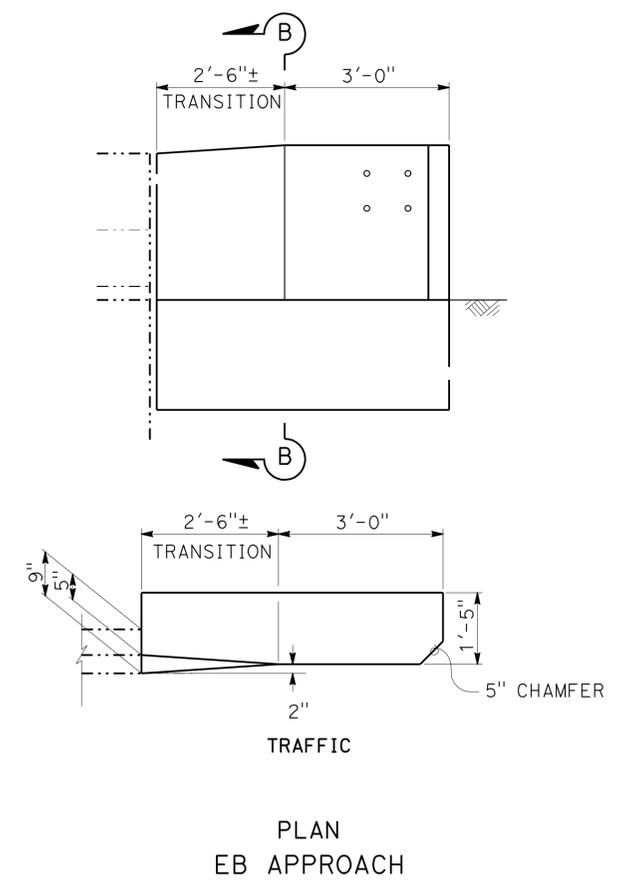
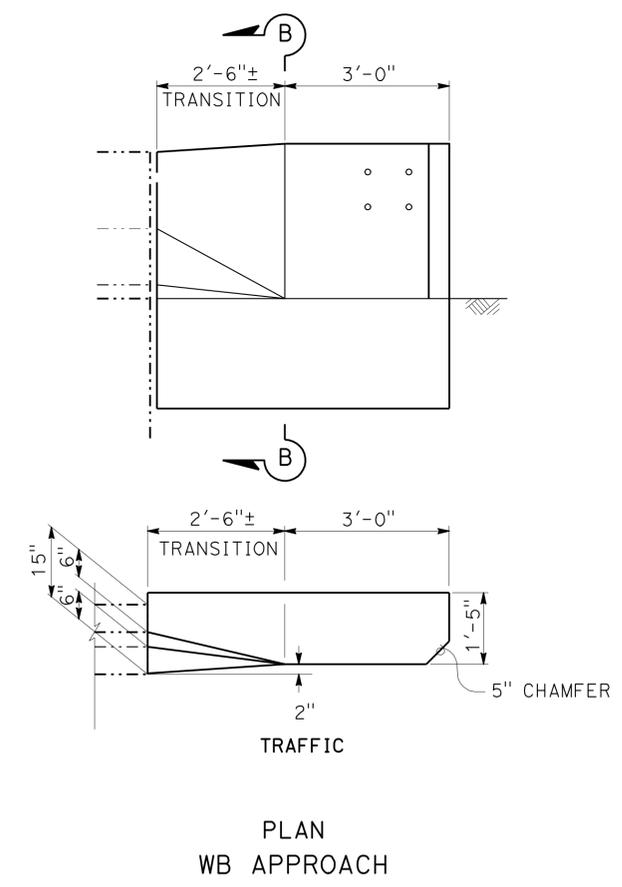
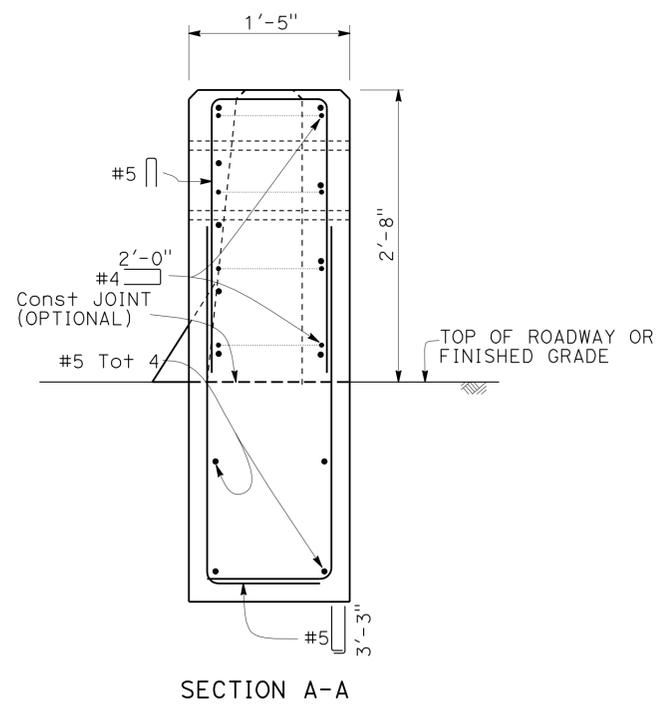
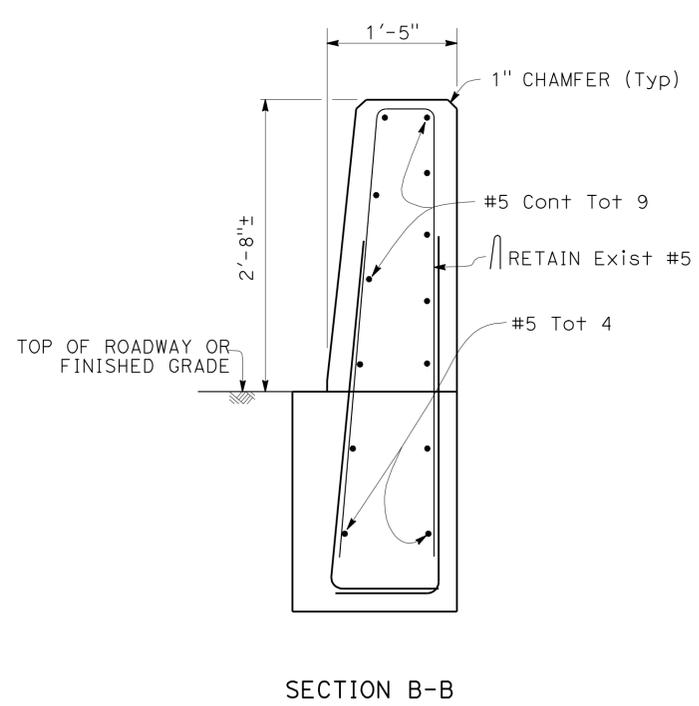
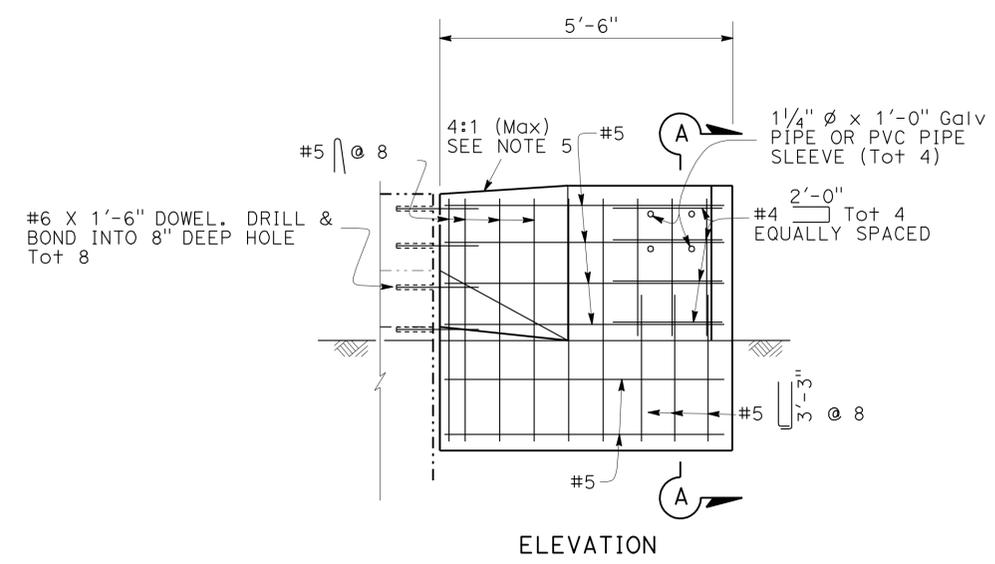
  

REGISTERED PROFESSIONAL ENGINEER MICHAEL A. CONNER No. C73123 Exp. 12-31-12 CIVIL STATE OF CALIFORNIA
--

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**NOTES:**

- EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THESE PLANS.
- FOR TYPICAL METAL RAILING CONNECTION DETAILS NOT SHOWN, SEE STANDARD PLANS A77J1-A77J4.
- 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.
- TAPER END TO MATCH TOP ELEVATION OF WB TRANSITION.
- ALL PLATES AND BOLTS ARE GALVANIZED.
- FOR THRIE BEAM CONNECTION, SEE STANDARD PLANS A78F1 AND A78F2



**TYPE 50 CONCRETE BARRIER TO TYPE WB TRANSITION RAIL**

**CONSTRUCTION DETAILS**

NO SCALE

**C-5**

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

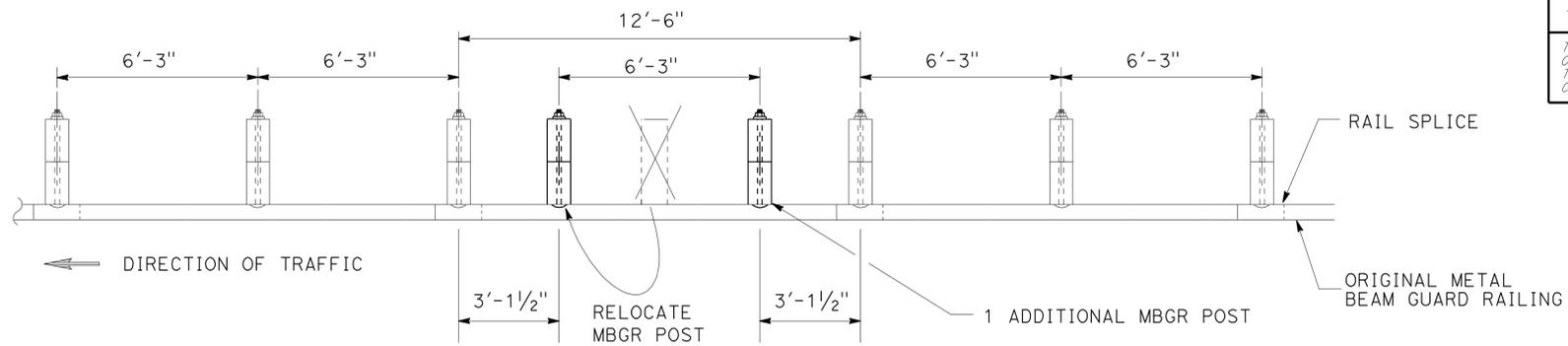


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	44	L1.7/R4.3	9	35
			10-27-11	REGISTERED CIVIL ENGINEER DATE	
			10-27-11	PLANS APPROVAL DATE	
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					



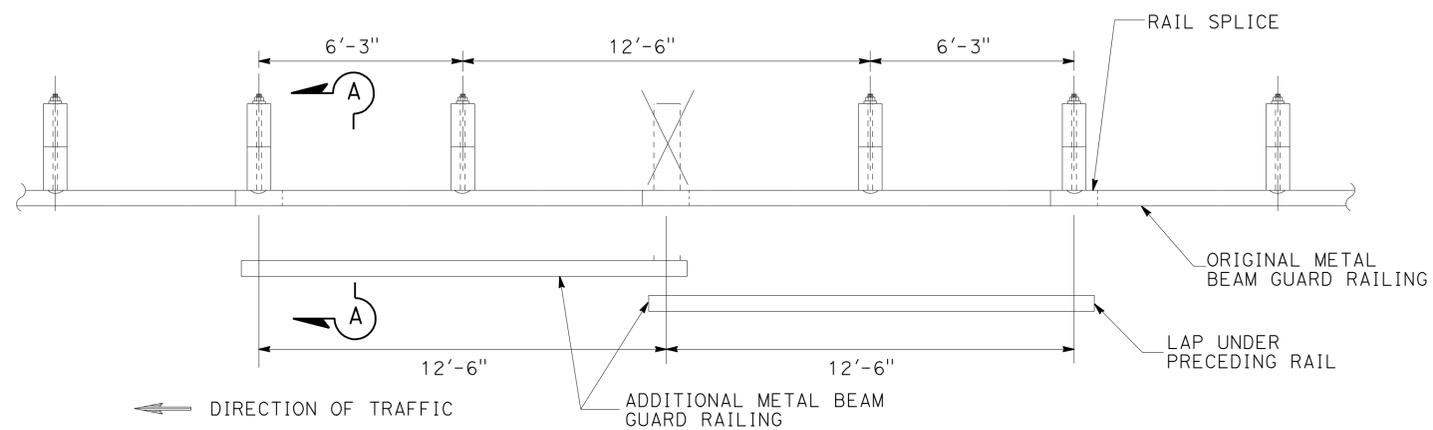
**NOTES:**

- LAP ALL RAILS AT EXISTING RAIL LAPS.
- WHEN A POST IS REMOVED AND THE RAIL ELEMENTS ARE LAPPED, THEN THE LAPPED ELEMENTS MUST BE SUPPORTED BY A Min OF 2 POSTS OR ADD ADDITIONAL LENGTH OF LAPPED ELEMENTS.
- EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THESE PLANS.



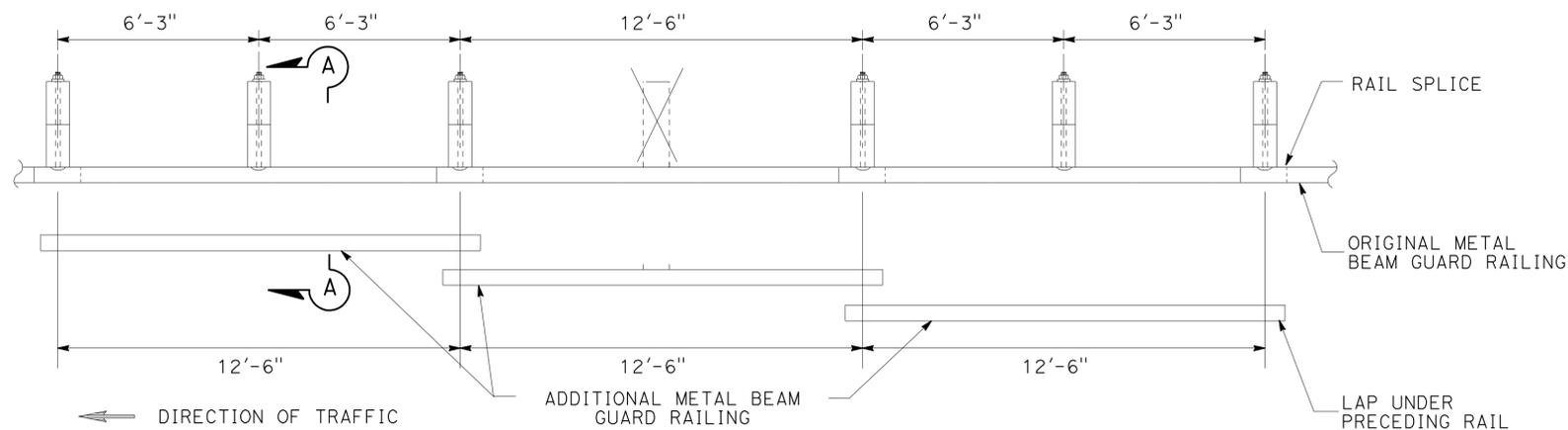
**CASE 1**

(ONE POST OMITTED, MOVE THE POST and ADD ONE POST)



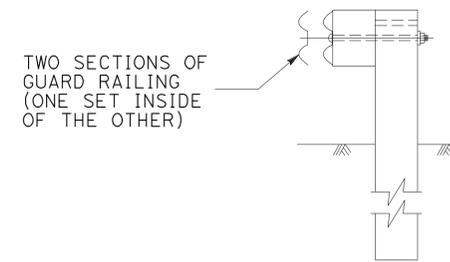
**CASE 2**

(ONE POST OMITTED AT JUNCTION OF TWO ELEMENTS)



**CASE 3**

(ONE POST OMITTED AT CENTER OF OF ELEMENT)



SECTION A-A

**TYPICAL RAILING OVERLAP INSTALLATION AT POST**

**CONSTRUCTION DETAILS**

NO SCALE

**C-7**

**LONG SPAN NESTED GUARD RAILING**

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

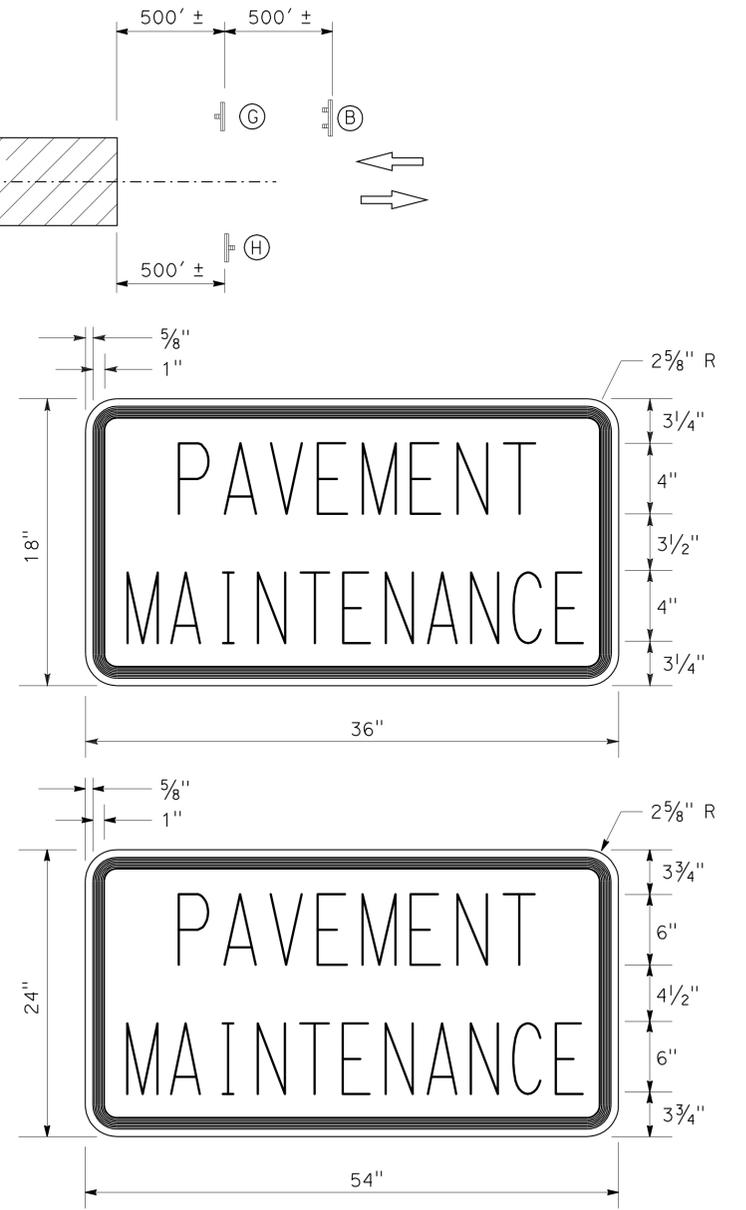
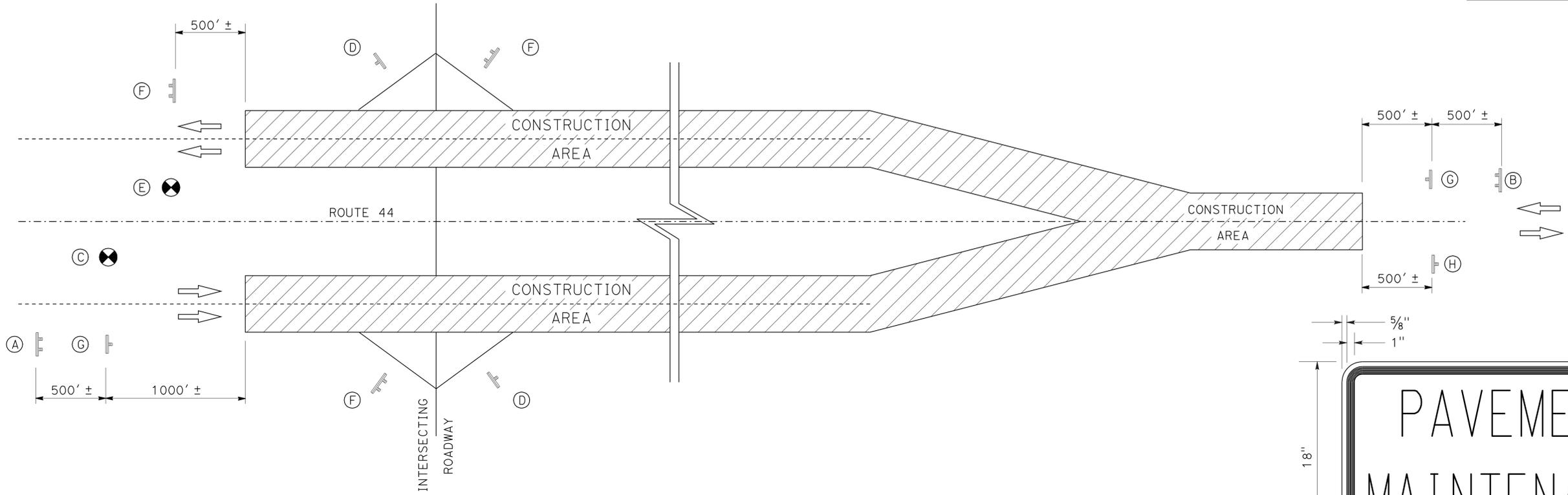
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**NOTES:**

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. INTERMEDIATE G20-1 SIGNS SHOULD BE PLACED EVERY 3 TO 5 MILES AS NECESSARY.
4. EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THESE PLANS.

**LEGEND:**

-  ONE POST STATIONARY MOUNTED SIGN
-  TWO POST STATIONARY MOUNTED SIGN
-  DIRECTION OF TRAFFIC
-  BARRIER MOUNTED SIGN



**CONSTRUCTION AREA SIGNS (STATIONARY MOUNTED)**

TYPE	CODE	PANEL SIZE	SIGN MESSAGE	NUMBER AND SIZE OF POST	No. OF SIGNS
(A)	C40(CA)	108" x 42"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	2-4" x 6"	1
(B)	C40(CA)	72" x 36"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	2-4" x 6"	1
(C)	W20-1 C23B(CA)	48" x 48" 36" x 18"	ROAD WORK AHEAD PAVEMENT MAINTENANCE	4" x 6" BARRIER MOUNT	1
(D)	W20-1 C23B(CA)	48" x 48" 54" x 24"	ROAD WORK AHEAD PAVEMENT MAINTENANCE	1-4" x 6"	11
(E)	C14(CA)	48" x 24"	END ROAD WORK	4" x 4" BARRIER MOUNT	1
(F)	C14(CA)	48" x 24"	END ROAD WORK	2-4" x 4"	12
(G)	W20-1 C23B(CA)	48" x 48" 36" x 18"	ROAD WORK AHEAD PAVEMENT MAINTENANCE	1-4" x 6"	2
(H)	G20-2	36" x 18"	END ROAD WORK	1-4" x 4"	1

**ENTRANCE-RAMPS AND EXIT-RAMPS**

Co-Rte	PM	DESCRIPTION
Sha-44	L1.73	EB ENTRANCE FROM SB I-5
Sha-44	L1.74	WB EXIT TO SB I-5
Sha-44	R0.06	EB EXIT TO NB I-5
Sha-44	R0.09	WB EXIT TO NB I-5
Sha-44	R0.16	EB EXIT TO HILLTOP Dr
Sha-44	R0.22	EB ENTRANCE FROM HILLTOP Dr
Sha-44	R0.35	EB ENTRANCE FROM NB I-5
Sha-44	R0.63	WB ENTRANCE FROM FRIENDLY Rd
Sha-44	R0.79	WB EXIT TO FRIENDLY Rd
Sha-44	R1.08	WB ENTRANCE FROM VICTOR Ave
Sha-44	R1.12	EB EXIT TO VICTOR Ave
Sha-44	R1.38	WB EXIT TO VICTOR Ave
Sha-44	R1.44	EB ENTRANCE FROM VICTOR Ave
Sha-44	R1.87	WB ENTRANCE FROM SHASTA VIEW Dr
Sha-44	R1.88	EB EXIT TO SHASTA VIEW Dr
Sha-44	R2.11	WB ENTRANCE FROM NB SHASTA VIEW Dr
Sha-44	R2.26	WB EXIT TO SHASTA VIEW Dr
Sha-44	R2.27	EB ENTRANCE FROM SHASTA VIEW Dr
Sha-44	R3.44	EB EXIT TO AIRPORT Rd
Sha-44	R3.45	WB ENTRANCE FROM AIRPORT Rd
Sha-44	R3.81	EB ENTRANCE FROM AIRPORT Rd
Sha-44	R3.81	WB EXIT TO AIRPORT Rd

**C23B(CA) SIGN PANEL DETAIL**

**CONSTRUCTION AREA SIGNS**

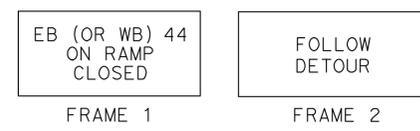
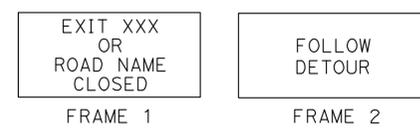
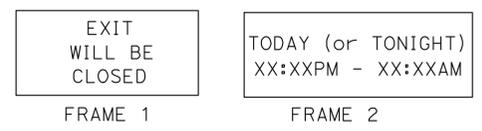
NO SCALE

**CS-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 Michael Conner  
 Karlie Smith  
 Lance Brown  
 MAINTENANCE

**NOTES:**

- PRE-NOTIFICATION PCMS: PLACE NEAR RAMP AND ACTIVATE APPROXIMATELY 12 HOURS PRIOR TO RAMP CLOSURE.
- RAMP CLOSED PCMS: MOVE PRE-NOTIFICATION PCMS APPROXIMATELY 1000 FEET BEFORE RAMP AND ACTIVATE DURING RAMP CLOSURE.
- PLACE 7 DAYS PRIOR TO RAMP CLOSURE.
- ADD SIGN(S) SPACED EQUALLY BETWEEN INTERCHANGES.
- EXACT SIGN LOCATION TO BE DETERMINED BY THE ENGINEER.
- EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THESE PLANS.
- RAMP CLOSED PCMS: PLACE BEFORE OPEN ON-RAMP AND ACTIVATE DURING RAMP CLOSURE.



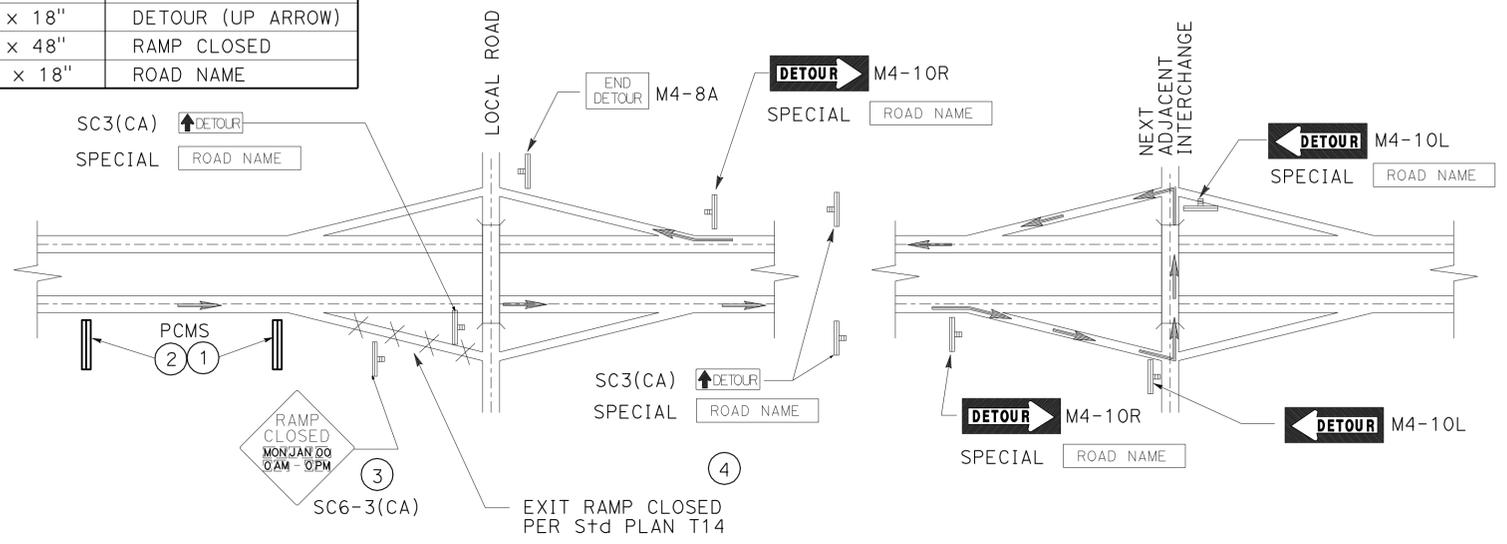
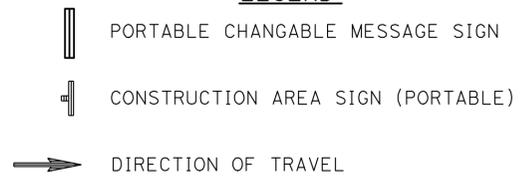
**CONSTRUCTION AREA SIGNS (PORTABLE)**

CODE	PANEL SIZE	PANEL MESSAGE
G28-2 (44) (CA)	24" x 24"	ROUTE SHIELD (44)
M3-2	24" x 12"	EAST
M3-4	24" x 12"	WEST
M4-8A	24" x 18"	END DETOUR
M4-10L	48" x 18"	DETOUR (L+ ARROW)
M4-10R	48" x 18"	DETOUR (R+ ARROW)
SC3 (CA)	48" x 18"	DETOUR (UP ARROW)
SC6-3 (CA)	48" x 48"	RAMP CLOSED
SPECIAL	Var x 18"	ROAD NAME

**ABBREVIATIONS:**

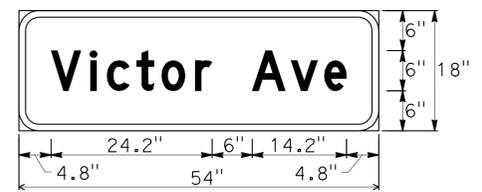
PCMS PORTABLE CHANGEABLE MESSAGE SIGN

**LEGEND:**

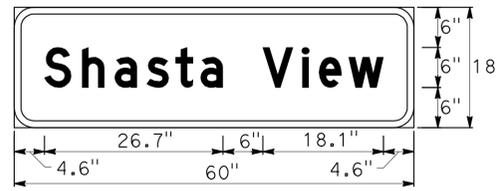


**TYPICAL EXIT-RAMP DETOUR SIGNING**

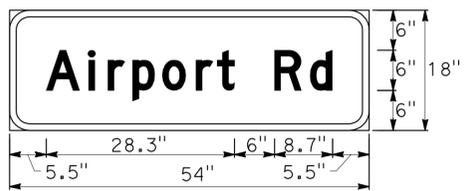
- EB - TO VICTOR Ave
- WB - TO VICTOR Ave
- EB - TO SHASTA VIEW Dr
- WB - TO SHASTA VIEW Dr
- EB - TO AIRPORT Rd
- WB - TO AIRPORT Rd



3.0" RADIUS, 1.0" BORDER, BLACK ON ORANGE; [VICTOR Ave] D;

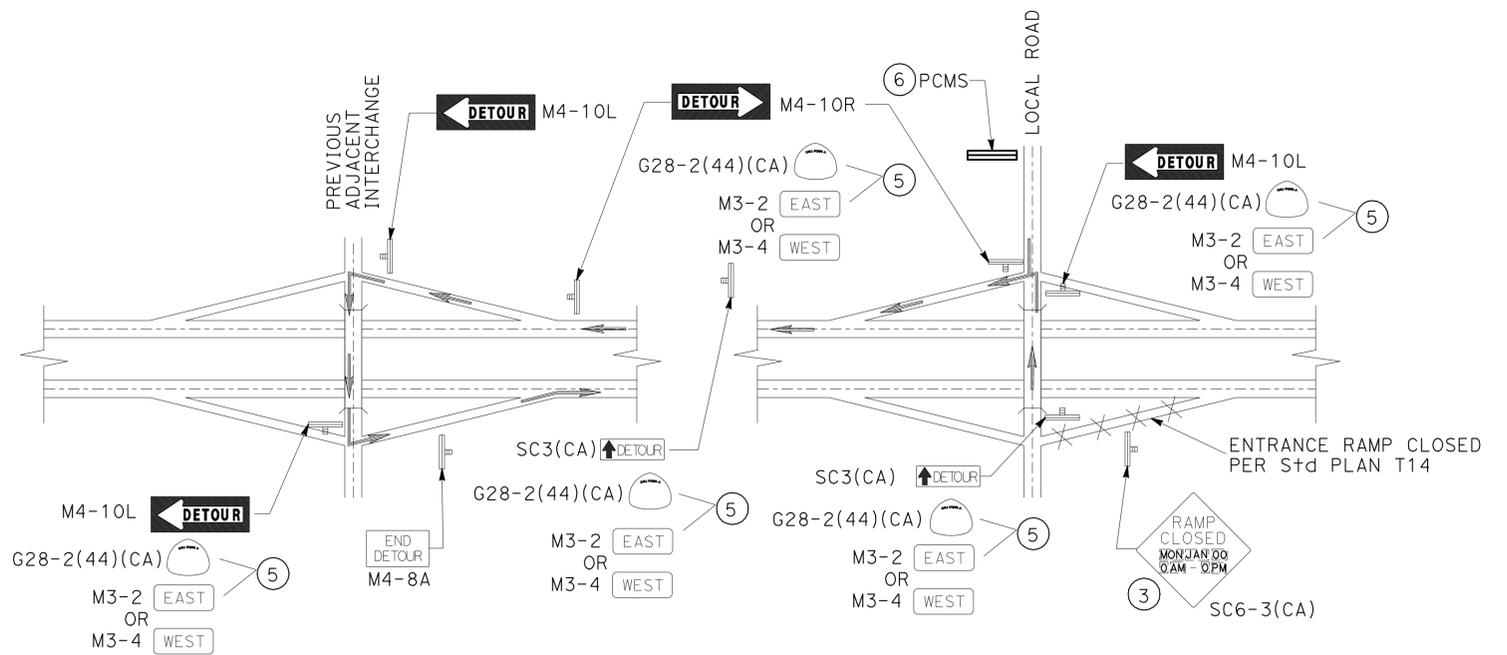


3.0" RADIUS, 1.0" BORDER, BLACK ON ORANGE; [SHASTA VIEW] D;



3.0" RADIUS, 1.0" BORDER, BLACK ON ORANGE; [AIRPORT Rd] D;

**SPECIAL**



**TYPICAL ENTRANCE RAMP DETOUR SIGNING**

- WB - FROM VICTOR Ave
- EB - FROM VICTOR Ave
- WB - FROM SB SHASTA VIEW Dr
- WB - FROM AIRPORT Rd
- EB - FROM AIRPORT Rd

**DETOUR PLAN**

NO SCALE

**DE-1**

REVISOR: MICHAEL CONNER, KARLIE SMITH  
DESIGNER: LANCE BROWN  
FUNCTIONAL SUPERVISOR: LANCE BROWN  
DEPARTMENT OF TRANSPORTATION - MAINTENANCE  
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
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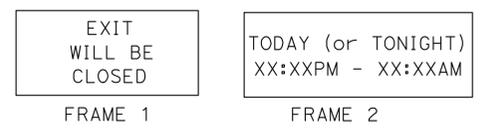
LAST REVISION: 10-27-11  
DATE PLOTTED => 11-NOV-2011  
TIME PLOTTED => 1:31:38

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	44	L1.7/R4.3	12	35
			10-27-11	REGISTERED CIVIL ENGINEER DATE	
			10-27-11	PLANS APPROVAL DATE	
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					

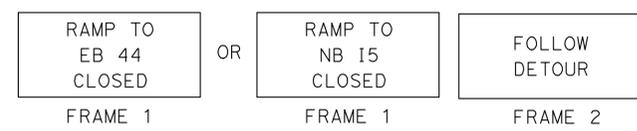


**NOTES:**

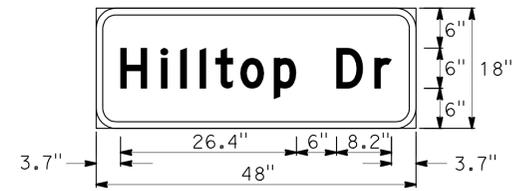
1. PRE-NOTIFICATION PCMS: PLACE NEAR RAMP AND ACTIVATE APPROXIMATELY 12 HOURS PRIOR TO RAMP CLOSURE.



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

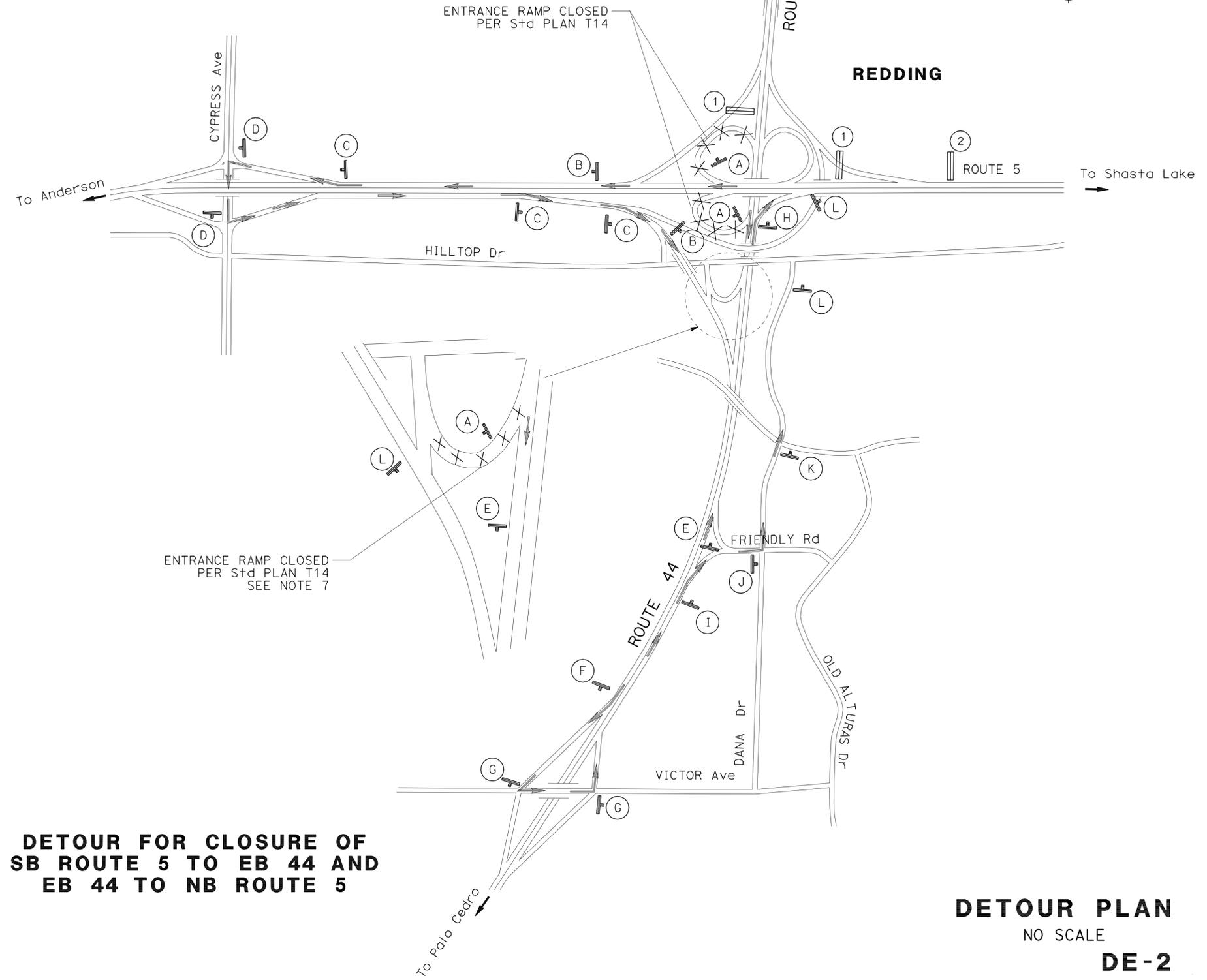


- PLACE 7 DAYS PRIOR TO RAMP CLOSURE.
- ADD SIGN(S) SPACED EQUALLY BETWEEN INTERCHANGES.
- EXACT SIGN LOCATION TO BE DETERMINED BY THE ENGINEER.
- EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THESE PLANS.
- DURING COLD PLANE OPERATIONS ON EB 44, IT WILL BE NECESSARY TO CLOSE THE HILLTOP Dr EXIT RAMP.



3.0" RADIUS, 1.0" BORDER, BLACK ON ORANGE; [HILLTOP Dr] D;

**SPECIAL**



**CONSTRUCTION AREA SIGNS (PORTABLE SIGNS)**

SIGN No.	CODE	PANEL SIZE (INCH)	REMARKS	No. (EA)
(A) *	SC6-3(CA)	48" x 48"	"RAMP CLOSED" "DATE-TIME"	3
(B)	SC3 (CA) G28-2 (44) (CA) M3-2	48" x 18" 25" x 24" 24" x 12"	DETOUR (UP ARROW) ROUTE SHIELD (44) EAST	2
(C)	M4-10 R G28-2 (44) (CA) M3-2	48" x 18" 25" x 24" 24" x 12"	DETOUR (R+ ARROW) ROUTE SHIELD (44) EAST	3
(D)	M4-10 L G28-2 (44) (CA) M3-2	48" x 18" 25" x 24" 24" x 12"	DETOUR (L+ ARROW) ROUTE SHIELD (44) EAST	2
(E)	SC3 (CA) G27-2 (5) (CA) M3-1	48" x 18" 25" x 24" 24" x 12"	DETOUR (UP ARROW) ROUTE SHIELD (5) NORTH	2
(F)	M4-10 R G27-2 (5) (CA) M3-1 SPECIAL	48" x 18" 25" x 24" 24" x 12" 48" x 18"	DETOUR (R+ ARROW) ROUTE SHIELD (5) NORTH HILLTOP Dr	1
(G)	M4-10 L G27-2 (5) (CA) M3-1 SPECIAL	48" x 18" 25" x 24" 24" x 12" 48" x 18"	DETOUR (L+ ARROW) ROUTE SHIELD (5) NORTH HILLTOP Dr	2
(H)	M4-10 R G27-2 (5) (CA) M3-1	48" x 18" 25" x 24" 24" x 12"	DETOUR (R+ ARROW) ROUTE SHIELD (5) NORTH	1
(I)	M4-10 R SPECIAL	48" x 18" 48" x 18"	DETOUR (R+ ARROW) HILLTOP Dr	1
(J)	M4-10 L SPECIAL	48" x 18" 48" x 18"	DETOUR (L+ ARROW) HILLTOP Dr	1
(K)	SC3 (CA) SPECIAL	48" x 18" 48" x 18"	DETOUR (UP ARROW) HILLTOP Dr	1
(L)	M4-8A	24" x 18"	END DETOUR	3
TOTAL				21

\* SEE NOTE 3

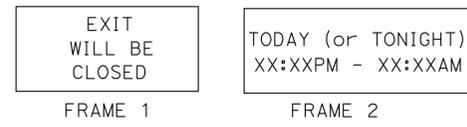
**DETOUR FOR CLOSURE OF SB ROUTE 5 TO EB 44 AND EB 44 TO NB ROUTE 5**

**DETOUR PLAN**  
NO SCALE  
**DE-2**

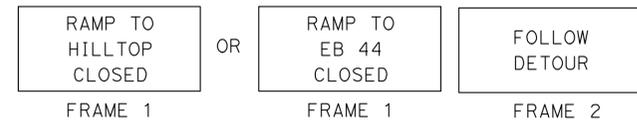
P:\proj\11\02\3E990\plans\pse\23E990mg002.dgn  
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 MAINTENANCE  
 Michael Conner  
 Karlie Smith  
 Lance Brown

**NOTES:**

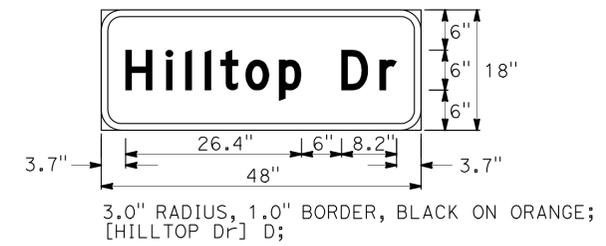
- PRE-NOTIFICATION PCMS: PLACE NEAR RAMP AND ACTIVATE APPROXIMATELY 12 HOURS PRIOR TO RAMP CLOSURE.



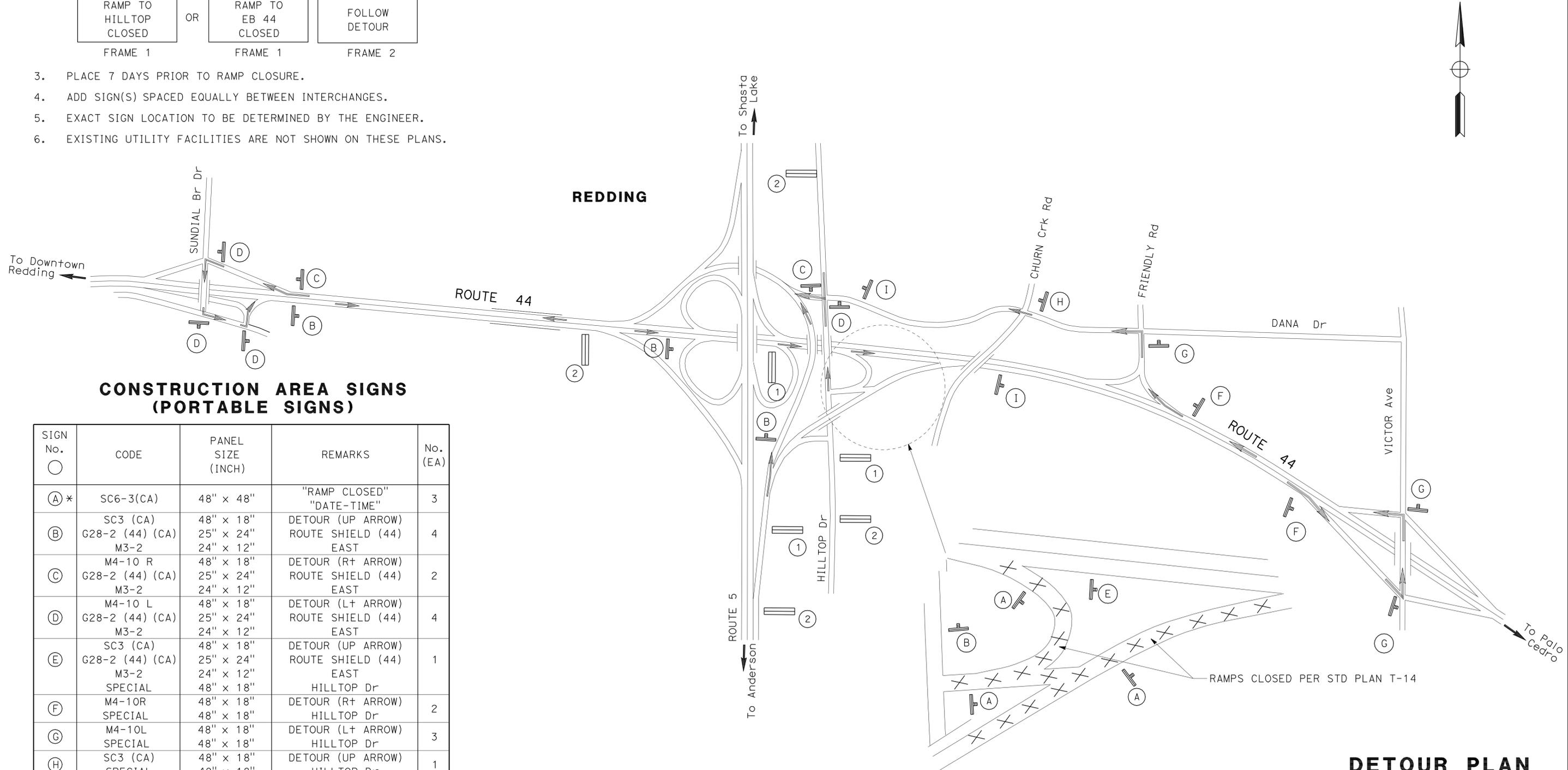
- RAMP CLOSED PCMS: MOVE PRE-NOTIFICATION PCMS APPROXIMATELY 1000 FEET BEFORE RAMP AND ACTIVATE DURING RAMP CLOSURE.



- PLACE 7 DAYS PRIOR TO RAMP CLOSURE.
- ADD SIGN(S) SPACED EQUALLY BETWEEN INTERCHANGES.
- EXACT SIGN LOCATION TO BE DETERMINED BY THE ENGINEER.
- EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THESE PLANS.



**SPECIAL**



**CONSTRUCTION AREA SIGNS (PORTABLE SIGNS)**

SIGN No.	CODE	PANEL SIZE (INCH)	REMARKS	No. (EA)
(A) *	SC6-3(CA)	48" x 48"	"RAMP CLOSED" "DATE-TIME"	3
(B)	SC3 (CA) G28-2 (44) (CA) M3-2	48" x 18" 25" x 24" 24" x 12"	DETOUR (UP ARROW) ROUTE SHIELD (44) EAST	4
(C)	M4-10 R G28-2 (44) (CA) M3-2	48" x 18" 25" x 24" 24" x 12"	DETOUR (RT ARROW) ROUTE SHIELD (44) EAST	2
(D)	M4-10 L G28-2 (44) (CA) M3-2	48" x 18" 25" x 24" 24" x 12"	DETOUR (LT ARROW) ROUTE SHIELD (44) EAST	4
(E)	SC3 (CA) G28-2 (44) (CA) M3-2 SPECIAL	48" x 18" 25" x 24" 24" x 12" 48" x 18"	DETOUR (UP ARROW) ROUTE SHIELD (44) EAST HILLTOP Dr	1
(F)	M4-10R SPECIAL	48" x 18" 48" x 18"	DETOUR (RT ARROW) HILLTOP Dr	2
(G)	M4-10L SPECIAL	48" x 18" 48" x 18"	DETOUR (LT ARROW) HILLTOP Dr	3
(H)	SC3 (CA) SPECIAL	48" x 18" 48" x 18"	DETOUR (UP ARROW) HILLTOP Dr	1
(I)	M4-8A	24" x 18"	END DETOUR	2
TOTAL				22

**DETOUR FOR CLOSURE OF  
EB 44 TO HILLTOP Dr, HILLTOP Dr TO EB 44, & NB ROUTE 5 TO EB 44**

**DETOUR PLAN  
NO SCALE  
DE-3**

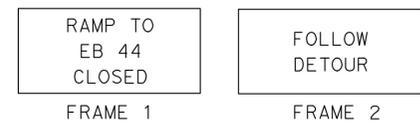
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 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - MAINTENANCE  
 LANCE BROWN  
 FUNCTIONAL SUPERVISOR  
 MICHAEL CONNER  
 KARLIE SMITH  
 REVISIONS BY DATE  
 REVISIONS BY DATE





**NOTES:**

- RAMP CLOSED PCMS: MOVE PRE-NOTIFICATION PCMS APPROXIMATELY 1000 FEET BEFORE RAMP AND ACTIVATE DURING RAMP CLOSURE.
- PLACE 7 DAYS PRIOR TO RAMP CLOSURE.
- ADD SIGN(S) SPACED EQUALLY BETWEEN INTERCHANGES.
- EXACT SIGN LOCATION TO BE DETERMINED BY THE ENGINEER.
- EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THESE PLANS.



**CONSTRUCTION AREA SIGNS  
(PORTABLE SIGNS)**

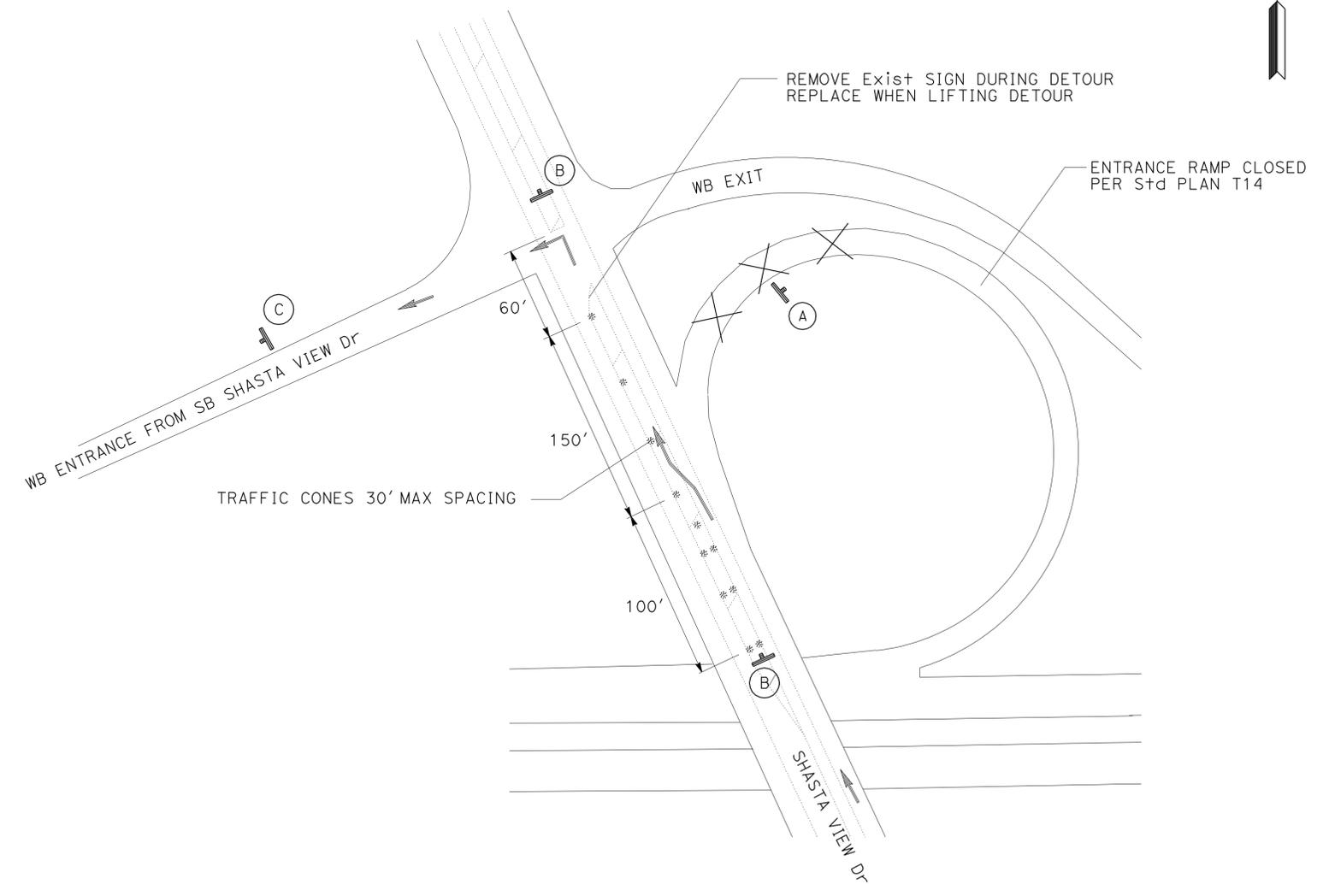
SIGN No.	CODE	PANEL SIZE (INCH)	REMARKS	No. (EA)
(A) *	SC6-3(CA)	48" x 48"	"RAMP CLOSED" "DATE-TIME"	1
(B)	SC3 (CA) G28-2 (44) (CA) M3-4	48" x 18" 25" x 24" 24" x 12"	DETOUR (LT ARROW) ROUTE SHIELD (44) WEST	2
(C)	M4-8A	24" x 18"	END DETOUR	1
TOTAL				4

\* SEE NOTE 2

**CONSTRUCTION AREA SIGNS  
(PORTABLE SIGNS)**

SIGN No.	CODE	PANEL SIZE (INCH)	REMARKS	No. (EA)
(A) *	SC6-3(CA)	48" x 48"	"RAMP CLOSED" "DATE-TIME"	1
(B)	SC3 (CA) G28-2 (44) (CA) M3-2	48" x 18" 25" x 24" 24" x 12"	DETOUR (UP ARROW) ROUTE SHIELD (44) EAST	1
(C)	M4-10 R G28-2 (44) (CA) M3-2	48" x 18" 25" x 24" 24" x 12"	DETOUR (RT ARROW) ROUTE SHIELD (44) EAST	3
(D)	M4-10 L G28-2 (44) (CA) M3-2	48" x 18" 25" x 24" 24" x 12"	DETOUR (LT ARROW) ROUTE SHIELD (44) EAST	2
(E)	M4-8A	24" x 18"	END DETOUR	1
TOTAL				8

\* SEE NOTE 2



**DETOUR FOR CLOSURE OF  
WB ENTRANCE FROM NB SHASTA VIEW DRIVE**



**DETOUR FOR CLOSURE OF  
EB ENTRANCE FROM SHASTA VIEW DRIVE**

**DETOUR PLAN  
NO SCALE  
DE-6**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - MAINTENANCE  
Michael Conner  
Karlle Smith  
Lance Brown

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	44	L1.7/R4.3	17	35

10-27-11  
 REGISTERED CIVIL ENGINEER DATE  
 10-27-11  
 PLANS APPROVAL DATE

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

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

**NOTE:**

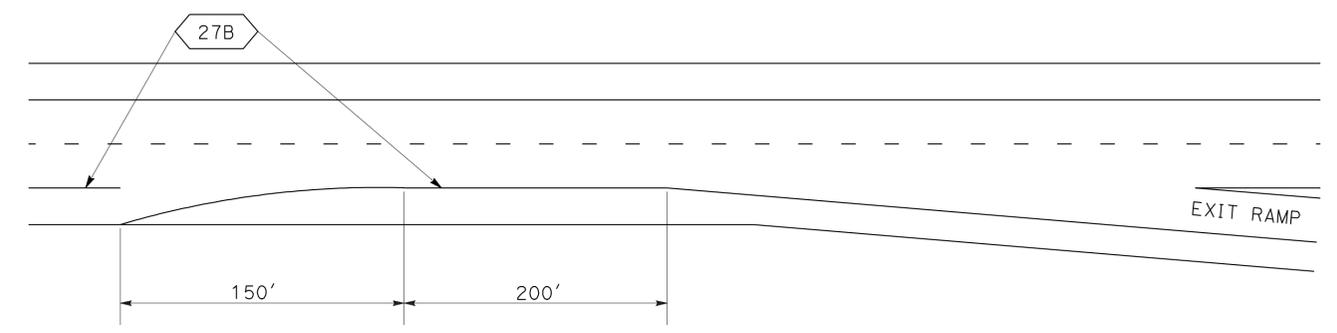
1. EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THESE PLANS.

**LEGEND:**

- Dir OF TRAFFIC
- 27B TRAFFIC STRIPE DETAIL No.

**THERMOPLASTIC TRAFFIC STRIPE (SPRAYABLE)**

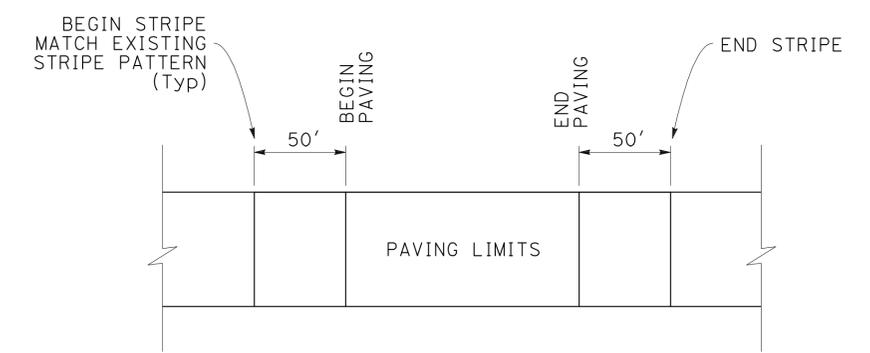
DESCRIPTION	POSTMILE LIMITS	DETAIL 9	DETAIL 12	DETAIL 14	DETAIL 19	DETAIL 25	DETAIL 25A	DETAIL 27	DETAIL 27B	DETAIL 29	DETAIL 36	DETAIL 36A	DETAIL 36B	DETAIL 37	DETAIL 38A	DETAIL 38B
MAINLINE	PM-PM	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF
RAMPS	L1.7/R4.3	1846	3021				17,333	1212	31,067		3322	3113	193		1748	2182
SUBTOTAL		1846	42,199	4752	159	44,511	17,333	1582	77,426	581	3322	3113	193	4013	1748	2182
TOTAL		204,960														



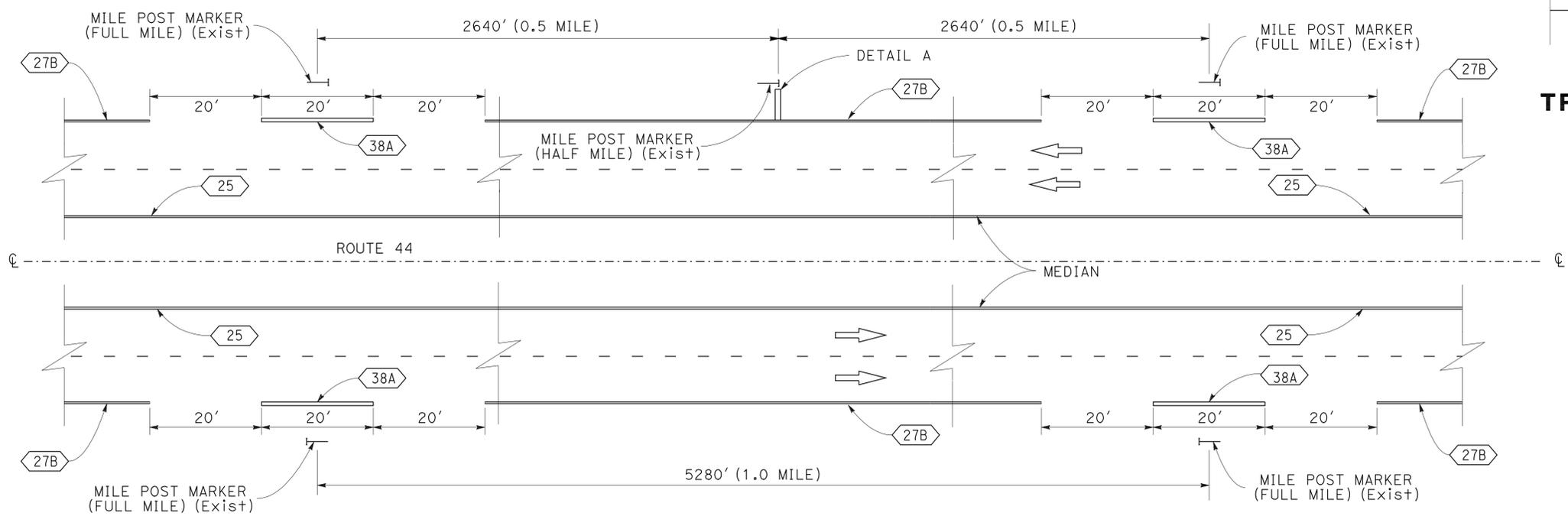
**EDGE LINE FLAIR DETAIL**

**PAVEMENT MARKER (RETROREFLECTIVE)**

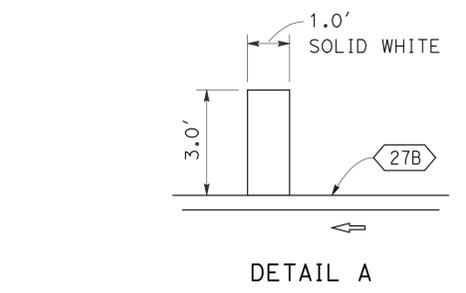
DESCRIPTION	POST MILE LIMITS	TYPE A	TYPE C	TYPE D	TYPE G	TYPE H
		EA	EA	EA	EA	EA
MAINLINE	L1.7/R4.3	396	132	55	818	945
RAMPS	L1.7/R4.3				706	750
SUBTOTAL		396	132	55	1524	1695
TOTAL		3802				



**TRAFFIC STRIPE MATCH DETAIL**



**TYPICAL HALF MILE AND MILE POST STRIPE**



**DETAIL A**

**PAVEMENT DELINEATION DETAILS AND QUANTITIES**

NO SCALE **PDQ-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION MAINTENANCE  
 LANCE BROWN  
 MICHAEL CONNER  
 KARLIE SMITH  
 REVISIONS: 10-27-11, 11-15-2011

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	44	L1.7/R4.3	18	35

10-27-11  
REGISTERED CIVIL ENGINEER DATE

10-27-11  
PLANS APPROVAL DATE

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

**NOTE:**

1. EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THESE PLANS.

**THERMOPLASTIC PAVEMENT MARKING**

DESCRIPTION	PM	EB	WB	EA	SOFT	REMARKS
MAINLINE	R0.50-R3.50	X	X	8	24.0	DETAIL A
	R0.17	X		1	42.0	TYPE VI ARROW
	R0.19	X		1	42.0	TYPE VI ARROW
	R0.22	X		1	42.0	TYPE VI ARROW
	R4.00	X		1	42.0	TYPE VI ARROW
	R4.04	X		1	42.0	TYPE VI ARROW
	R4.06	X		1	42.0	TYPE VI ARROW
	R4.10		X	2	66.0	TYPE V ARROW
	R4.15	X	X	2	66.0	TYPE V ARROW
	R4.19	X		1	33.0	TYPE V ARROW
R4.28	X	X	2	66.0	TYPE V ARROW	
R4.31	X	X	2	66.0	TYPE V ARROW	
HILLTOP Dr	EB EXIT	R0.16		1	33.0	TYPE V ARROW
				6	252.0	TYPE III (L) ARROW
				7	294.0	TYPE III (R) ARROW
				1	95.0	ROAD CONNECTION LIMIT LINE
FRIENDLY Rd	EB ENTRANCE	R0.22	X	3	99.0	TYPE V ARROW
	WB ENTRANCE	R0.63		2	84.0	TYPE VI ARROW
VICTOR Ave	WB ENTRANCE		X	2	66.0	TYPE V ARROW
			X	2	107.0	CROSSWALK
	EB EXIT		X	2	66.0	TYPE V ARROW
			X	2	84.0	TYPE III (R) ARROW
			X	2	90.0	TYPE II (L) ARROW
			X	1	121.0	CROSSWALK
	WB EXIT		X	2	66.0	TYPE V ARROW
			X	2	84.0	TYPE III (R) ARROW
			X	2	90.0	TYPE II (L) ARROW
			X	1	54.0	ROAD CONNECTION LIMIT LINE
SHASTA VIEW Dr	WB ENTRANCE		X	1	42.0	TYPE III (R) ARROW
			X	2	66.0	TYPE V ARROW
			X	1	620.0	DASHES INSIDE ISLAND
	EB EXIT		X	2	66.0	TYPE V ARROW
			X	3	126.0	TYPE III (R) ARROW
			X	3	135.0	TYPE II (L) ARROW
			X	1	96.0	ROAD CONNECTION LIMIT LINE
			X	1	40.0	SET BACK "X"
			X	1	42.0	DASHED EDGE
	WB ENTRANCE			X	1	33.0
			X	1	33.0	TYPE V ARROW
WB EXIT			X	2	84.0	TYPE III (R) ARROW
			X	2	84.0	TYPE III (L) ARROW
			X	2	44.0	STOP
			X	1	53.0	ROAD CONNECTION LIMIT LINE
EB ENTRANCE		X		2	66.0	TYPE V ARROW
		X		2	115.0	CROSSWALK
		X		1	42.0	DASHES INSIDE ISLAND
		X		2	84.0	TYPE III (R) ARROW
AIRPORT Rd	EB EXIT		X	2	84.0	TYPE III (R) ARROW
			X	2	90.0	TYPE II (L) ARROW
			X	1	51.0	ROAD CONNECTION LIMIT LINE
WB ENTRANCE			X	1	33.0	TYPE V ARROW
			X	1	33.0	TYPE V ARROW
WB EXIT			X	1	92.0	CROSSWALK
			X	2	66.0	TYPE V ARROW
			X	1	49.0	ROAD CONNECTION LIMIT LINE
			X	1	22.0	STOP
TOTAL					5317.0	

**REMOVE THERMOPLASTIC PAVEMENT MARKING**

DESCRIPTION	PM	EB	WB	EA	SOFT	REMARKS	
MAINLINE	R0.17	X		1	42.0	TYPE VI ARROW	
	R0.19	X		1	42.0	TYPE VI ARROW	
	R0.22	X		1	42.0	TYPE VI ARROW	
	R4.00	X		1	42.0	TYPE VI ARROW	
	R4.04	X		1	42.0	TYPE VI ARROW	
	R4.06	X		1	42.0	TYPE VI ARROW	
	R4.10		X	2	66.0	TYPE V ARROW	
	R4.15	X	X	2	66.0	TYPE V ARROW	
	R4.19	X		1	33.0	TYPE V ARROW	
	R4.28	X	X	2	66.0	TYPE V ARROW	
HILLTOP Dr	EB EXIT	R0.16	X	1	33.0	TYPE V ARROW	
			X	4	168.0	TYPE III (L) ARROW	
			X	5	210.0	TYPE III (R) ARROW	
FRIENDLY Rd	EB ENTRANCE	R0.22	X	2	66.0	TYPE V ARROW	
	WB ENTRANCE	R0.63		2	84.0	TYPE VI ARROW	
VICTOR Ave	WB EXIT			2	66.0	TYPE V ARROW	
				4	132.0	TYPE V ARROW	
	EB EXIT			2	84.0	TYPE III (L) ARROW	
				2	84.0	TYPE III (R) ARROW	
				2	90.0	TYPE II (L) ARROW	
SHASTA VIEW Dr	EB EXIT		X	2	66.0	TYPE V ARROW	
			X	2	84.0	TYPE III (R) ARROW	
			X	3	135.0	TYPE II (L) ARROW	
			X	3	126.0	TYPE III (R) ARROW	
	WB ENTRANCE			X	1	33.0	TYPE V ARROW
				X	1	33.0	TYPE V ARROW
				X	2	84.0	TYPE III (R) ARROW
WB EXIT			X	2	84.0	TYPE III (L) ARROW	
			X	2	84.0	TYPE III (L) ARROW	
			X	1	54.0	ROAD CONNECTION LIMIT LINE	
			X	1	42.0	DASHED EDGE	
AIRPORT Rd	EB ENTRANCE		X	1	20.0	DASHES INSIDE ISLAND	
			X	2	90.0	TYPE II (L) ARROW	
	WB EXIT			X	1	51.0	ROAD CONNECTION LIMIT LINE
				X	1	92.0	CROSSWALK
TOTAL	TOTAL				3273.0		

**PAVEMENT DELINEATION QUANTITIES**

**PDQ-2**

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

LAST REVISION DATE PLOTTED => 15-NOV-2011  
 10-27-11 TIME PLOTTED => 13:39

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 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - MAINTENANCE  
 Et trans

**NOTES:**

- (N) - NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.
- EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THESE PLANS.

**ABBREVIATIONS:**

RHMA-O RUBBERIZED HOT MIX ASPHALT (OPEN GRADED)

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	44	L1.7/R4.3	19	35

10-27-11  
 REGISTERED CIVIL ENGINEER DATE  
 10-27-11  
 PLANS APPROVAL DATE

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

**ROADWAY QUANTITIES**

DIRECTION	POST MILE LIMITS	(N) LENGTH	(N) WIDTH	RHMA-O	TACK COAT	SHOULDER BACKING			
							PM - PM	LF	LF
DIVIDED-EB	L1.72-L1.76	211.2	42.0-60.0	3086	17.0	48			
	L1.76-L1.80	211.2	79.5-52.0						
	L1.80-L1.81	52.8	52.0-55.0						
	R0.00-R0.02	105.6	55.0-67.0						
	R0.02-R0.14	633.6	47.0-85.5						
	R0.14-R0.19	264.0	66.0-57.5						
	R0.19-R0.32	686.4	57.5-48.0						
	R0.32-R0.80	2534.4	48.0-50.0						
	R0.80-R0.91	580.8	65.0-59.0						
	R0.91-R1.14	1214.4	50.0						
	R1.14-R1.43	1531.2	50.0						
	R1.43-R1.56	686.4	50.0-41.0						
	CHURN CREEK BRIDGE						4596	25.2	273
	R1.57-R1.77	1056.0	41.0-50.0						
	R1.77-R2.00	1214.4	50.0-48.0						
	R2.00-R2.08	422.4	61.0-67.0						
	R2.08-R2.11	158.4	67.0-75.0						
	R2.11-R2.13	105.6	75.0-68.0						
	R2.13-R2.23	528.0	68.0-60.0						
	R2.23-R3.00	4065.6	48.0-48.5						
	R3.00-R3.80	4224.0	48.5						
	R3.80-R4.00	1056.0	48.5-50.5						
	R4.00-R4.19	1003.2	50.5-30.0						
	EB ENTRANCE FROM SB ROUTE 5			205	1.4	30			
	EB EXIT TO NB ROUTE 5			188	1.3	23			
EB EXIT TO HILLTOP Dr			274	1.9	30				
EB ENTRANCE FROM HILLTOP Dr			63	0.4	3				
EB ENTRANCE FROM NB ROUTE 5			297	2.0	72				
EB EXIT TO VICTOR Ave			262	1.8	71				
EB ENTRANCE FROM VICTOR Ave			378	2.6	95				
EB EXIT TO SHASTA VIEW Dr			325	2.2	62				
EB ENTRANCE FROM SHASTA VIEW Dr			352	2.4	32				
EB EXIT TO AIRPORT Rd			324	2.2	92				
EB ENTRANCE FROM AIRPORT Rd			331	2.3	99				
EB PULLOUTS			52	3.2	7				
<b>EB TOTAL</b>			<b>10,733</b>	<b>65.9</b>	<b>937</b>				

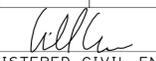
**ROADWAY QUANTITIES (Cont)**

DIRECTION	POST MILE LIMITS	(N) LENGTH	(N) WIDTH	RHMA-O	TACK COAT	SHOULDER BACKING			
							PM - PM	LF	LF
DIVIDED-WB	L1.74-L1.79	264.0	45.0-36.5	2902	15.9	149			
	L1.79-L1.81	105.6	55.0-46.0						
	R0.00-R0.05	264.0	46.0-42.5						
	R0.05-R0.17	633.6	42.5-36.0						
	R0.17-R0.30	686.4	57.0-57.5						
	R0.30-R0.50	1056.0	57.5-61.5						
	R0.50-R0.65	792.0	41.5-44.5						
	R0.65-R0.90	1320.0	44.5-41.5						
	R0.90-R1.04	739.2	61.5-70.0						
	R1.04-R1.11	369.6	47.0-50.0						
	R1.11-R1.50	2059.2	50.0-49.5						
	R1.50-R1.56	316.8	49.5-47.0						
	CHURN CREEK BRIDGE						4681	25.7	199
	R1.57-R1.91	1795.2	47.0-48.0						
	R1.91-R2.54	3326.4	48.0						
	R2.54-R2.56	105.6	69.0-60.5						
	R2.56-R2.69	686.4	60.5-60.0						
	R2.69-R2.71	105.6	60.0-69.0						
	R2.71-R2.72	52.8	69.0-59.0						
	R2.72-R2.81	475.2	59.0-57.5						
	R2.81-R3.00	1003.2	48.5						
	R3.00-R3.81	4276.8	48.5-52.5						
	R3.81-R4.00	1003.2	52.5						
	R4.00-R4.19	1003.2	52.5-37.5						
	WB EXIT TO SB ROUTE 5			199	1.4	35			
WB EXIT TO NB ROUTE 5			73	0.5					
WB ENTRANCE FROM FRIENDLY Rd			301	2.1	62				
WB EXIT TO FRIENDLY Rd			426	2.9	50				
WB ENTRANCE FROM VICTOR Ave			232	1.6	50				
WB EXIT TO VICTOR Ave			236	1.6	35				
WB ENTRANCE FROM SB SHASTA VIEW Dr			379	2.6	29				
WB ENTRANCE FROM NB SHASTA VIEW Dr			323	2.2	83				
WB EXIT TO SHASTA VIEW Dr			268	1.8	95				
WB ENTRANCE FROM AIRPORT Rd			357	2.4	108				
WB EXIT TO AIRPORT Rd			265	1.8	88				
WB PULLOUTS			30	1.8	5				
CONVENTIONAL	R4.19-R4.31	633.6	67.5-40.0	230	1.1	21			
<b>EB TOTAL</b>				<b>10,733</b>	<b>65.9</b>	<b>937</b>			
<b>GRAND TOTAL</b>				<b>21,635</b>	<b>131.3</b>	<b>1946</b>			

**SUMMARY OF QUANTITIES**

**Q-1**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	44	L1.7/R4.3	20	35

 10-27-11  
 REGISTERED CIVIL ENGINEER DATE

10-27-11  
 PLANS APPROVAL DATE

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



**NOTES:**

- EXACT LOCATIONS OF REPLACE ASPHALT CONCRETE SURFACING TO BE DETERMINED BY ENGINEER.
- (N) - NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.
- EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THESE PLANS.

**RUMBLE STRIP**

DESCRIPTION	POST MILE LIMITS	S+a
EB MAINLINE	L1.72-RL1.81	10
	RO.00-R4.19	444
	RO.19-R3.81	320
WB MAINLINE	L1.74-L1.81	8
	RO.00-R4.19	444
	RO.02-R4.23	376
TOTAL		1602

**COLD PLANE ASPHALT CONCRETE PAVEMENT**

DIRECTION	MAINLINE	RAMP	POST MILE	(N)	(N)	AREA	REMARKS		
				LENGTH	WIDTH				
				LF	LF	SQYD			
EB	X		L1.72	1373	42.0-85.5	9521	EB MAINLINE		
		X	L1.73	40 & 224	19.5-49.0	941	EB ENTRANCE FROM SB ROUTE 5		
		X	RO.06	40 & 260	20.0-37.0	973	EB EXIT TO NB ROUTE 5		
		X	RO.16	20	74.0	165	EB EXIT TO HILLTOP Dr		
		X	RO.22	20	35.0	78	EB ENTRANCE FROM HILLTOP Dr		
		X	RO.35	40	24.0	107	EB ENTRANCE FROM NB ROUTE 5		
		X	RO.38	279	57.0-68.0	1937	CHURN CREEK OC		
		X	R1.12	20	65.0	145	EB EXIT TO VICTOR Ave		
		X	R1.24	292	50.0	1621	VICTOR Ave OC		
		X	R1.44	117 & 183	21.5-42.5	745	EB ENTRANCE FROM VICTOR Ave		
		X	R1.56	62.5	47.0	327	CHURN CREEK Br BB		
		X	R1.57	40	47.0	209	CHURN CREEK Br EB		
		X	R1.88	20	60.0	134	EB EXIT TO SHASTA VIEW Dr		
		X	R2.09	292	67.0-75.0	2305	SHASTA VIEW OC		
		X	R2.27	145-176	14.0-46.0	992	EB ENTRANCE FROM SHASTA VIEW Dr		
		X	R3.44	20	89.0	198	EB EXIT TO AIRPORT Rd		
		X	R3.44	82-136	12.0	146	PULLOUT AT EB EXIT TO AIRPORT Rd		
		X	R3.63	254	48.5	1369	AIRPORT Rd OC		
	WB		X	R3.81	20	109.0	243	EB ENTRANCE FROM AIRPORT Rd	
			X	L1.74	1268	36.0-55.0	5850	WB MAINLINE	
		X	L1.74	40 & 274	18.5-30.0	835	WB EXIT TO SB ROUTE 5		
		X	RO.09	442	21.0-33.0	1309	WB EXIT TO NB ROUTE 5		
		X	RO.38	279	57.0-68.0	1937	CHURN CREEK OC		
		X	RO.63	40	34.0-51.0	189	WB ENTRANCE FROM FRIENDLY Rd		
		X	RO.79	40	44.0-71.0	256	WB EXIT TO FRIENDLY Rd		
		X	R1.08	70 & 148	14.0-60.5	636	WB ENTRANCE FROM VICTOR Ave		
		X	R1.24	292	50.0	1621	VICTOR Ave OC		
		X	R1.38	20	78.0	174	WB EXIT TO VICTOR Ave		
		X	R1.56	40	41.0	183	CHURN CREEK Br BB		
		X	R1.57	62.5	41.0	285	CHURN CREEK Br EB		
		X	R1.87	148-370	13.0-35.5	1091	WB ENTRANCE FROM SHASTA VIEW Dr		
		X	R2.09	292	48.0	1558	SHASTA VIEW OC		
		X	R2.11	81 & 292	19.5-55.5	1285	WB ENTRANCE FROM NB SHASTA VIEW Dr		
		X	R2.26	65-70	15.0-35.0	289	WB EXIT TO SHASTA VIEW Dr		
		X	R3.45	20	100.0	223	WB ENTRANCE FROM AIRPORT Rd		
		X	R3.63	254	52.0	1468	AIRPORT Rd OC		
		X	R3.81	20	82.0	183	WB EXIT TO AIRPORT Rd		
		X	R4.31	62.5	42.7	297	STILLWATER CREEK Br BB		
TOTAL						41,825			

**METAL BEAM GUARD RAIL ITEMS**

POST MILE	DIRECTION	R+/L+	RECONSTRUCT MBGR	REMOVE MBGR	ALTERNATIVE FLARED TERMINAL SYSTEM	ALTERNATIVE IN-LINE TERMINAL SYSTEM	MINOR CONCRETE (MINOR STRUCTURE)	TRANSITION RAILING (TYPE WB)
			LF	LF	EA	EA	CY	EA
L1.74	WB	L+	495.0					
RO.35	EB	R+	450.0					
RO.35	EB	L+	200.0					
RO.35	EB	R+	37.5	25	1		1.35	1
RO.39	WB	R+	37.5	25	1		1.35	1
R1.38	WB	R+	800.0			1		
R1.56	EB	R+	75.0		1			
R1.56	WB	R+	75.0		1			
R1.88	EB	R+	1256.0			1		
R2.76	EB	R+	75.0		1			
TOTAL			3501.0	50	5	2	2.70	2

**REPLACE ASPHALT CONCRETE SURFACING**

DIRECTION	POST MILE LIMITS	LOCATION	(N) No. OF DIGOUTS	(N)	(N)	(N)	(N)	REPLACE AC SURFACING
	PM - PM			Avg LENGTH	WIDTH	DEPTH		
				LF	LF	LF	CY	
EB	L1.71/R1.00	MAINLINE	5	100	4	0.33	25	
	R1.00/R2.00		5	100	4	0.33	25	
	R2.00/R3.00		5	100	4	0.33	25	
	R3.00/R4.31		5	100	4	0.33	25	
WB	L1.75/R1.00	MAINLINE	5	100	4	0.33	25	
	R1.00/R2.00		5	100	4	0.33	25	
	R2.00/R3.00		5	100	4	0.33	25	
	R3.00/R4.31		5	100	4	0.33	25	
EB	R1.12	RAMP-EB EXIT TO VICTOR Ave	1	55	12	0.33	9	
	R1.88	RAMP-EB EXIT TO SHASTA VIEW Dr	1	15	12	0.33	3	
	R3.44	RAMP-EB EXIT TO AIRPORT Rd	1	25	12-23	0.33	6	
WB	R3.45	RAMP-EB ENTRANCE FROM AIRPORT Rd	1	35	4	0.33	2	
			1	12	4	0.33	1	
TOTAL								221

**SUMMARY OF QUANTITIES**

**Q-2**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - MAINTENANCE  
 Michael Conner  
 Karlie Smith  
 Lance Brown

**NOTE:**

1. EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THESE PLANS.

**LEGEND:**

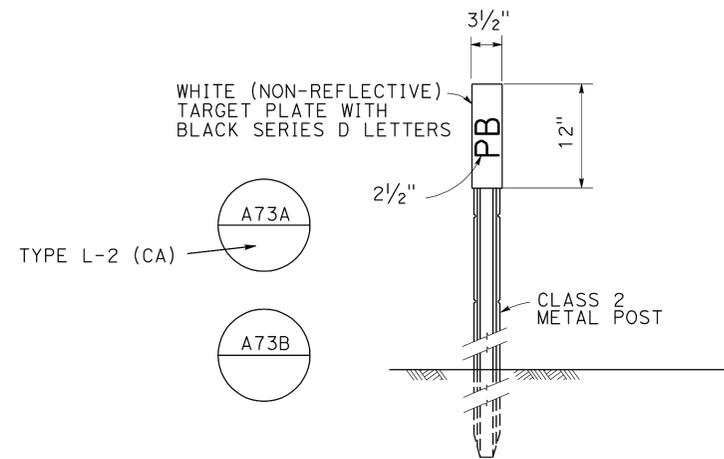
- Exist AXLE SENSOR
- PROPOSED AXLE SENSOR
- (pb) Exist OBJECT MARKER (TYPE PB)
- (PB) OBJECT MARKER (TYPE PB)

**ABBREVIATIONS:**

- STC SCREENED TRANSMISSION CABLE
- TC TELEPHONE CABLE
- Cab CABINET

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

TYPE	LOCATION	DESCRIPTION
CCTV	Sha-5-15.42	CENTRAL REDDING INTERCHANGE
HAR FLASHER	Sha-44-R1.56	E OF VICTOR Ave - FEBT
CMS	Sha-44-R2.77	W OF AIRPORT Rd - FEBT

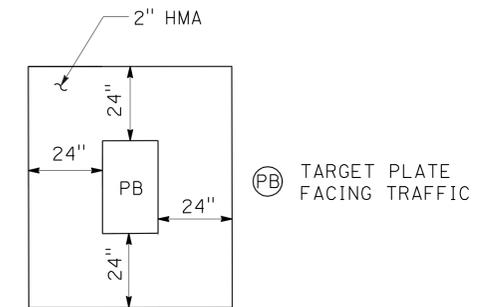


NOTE: MARKERS SHALL COMPLY WITH TYPE L-2 MODIFIED WITH A SNOW POLE BRACKET. PLACE MARKER 2" OUTSIDE PULL BOX PAVING ON SIDE AWAY FROM TRAFFIC. SEE PULL BOX PAVING DETAIL.

**OBJECT MARKER (TYPE PB)**

**EXISTING TRAFFIC MONITORING STATIONS TO BE PROTECTED IN PLACE**

ID No.	LOCATION	TYPE	DESCRIPTION	EQUIPMENT
R118	Sha-44-L1.74	RAMP	WB Conn TO SB 5. 193' WEST OF PAVED GORE ON L+ SHOULDER	1 LOOP
R94	Sha-44-R0.18	RAMP	285' E OF HILLTOP NB ETW PULL BOX SHARED WITH TMS R2	1 LOOP
R2	Sha-44-R0.18	RAMP	285' E OF HILLTOP NB ETW PULL BOX SHARED WITH TMS R94	1 LOOP
R93	Sha-44-R0.70	RAMP	50' S OF PAVED GORE NOSE DANA/FRIENDLY WB ON	2 LOOP
R95	Sha-44-R0.70	RAMP	50' S OF PAVED GORE NOSE DANA/FRIENDLY WB OFF	2 LOOP
R96	Sha-44-R1.09	RAMP	VICTOR WB ON. PB DIRECTLY ACROSS FROM END OF PAVED GORE	1 LOOP
R97	Sha-44-R1.14	RAMP	VICTOR EB OFF. 47' E OF PAVED GORE NOSE ON R+ SHOULDER	1 LOOP
R98	Sha-44-R1.37	RAMP	VICTOR WB OFF. 44' W OF EXIT SIGN ON R+ SHOULDER	1 LOOP
R101	Sha-44-R1.87	RAMP	SHASTA VIEW WB ON. 260' E OF PAVED GORE ON R+ SHOULDER	1 LOOP
R100	Sha-44-R1.88	RAMP	SHASTA VIEW EB OFF. 75' W OF SIGNAL AHEAD SIGN	1 LOOP
R102	Sha-44-R2.26	RAMP	SHASTA VIEW WB ON FROM NB. 281' NORTHWEST OF STOP AHEAD SIGN BETWEEN WB ON AND OFF	1 LOOP
R103	Sha-44-R2.26	RAMP	SHASTA VIEW WB OFF. 281' NORTHWEST OF STOP AHEAD SIGN BETWEEN WB ON AND OFF	1 LOOP
R105	Sha-44-R3.44	RAMP	AIRPORT Rd EB OFF	2 LOOPS
R193	Sha-44-R4.30	CONTROL	27' W OF BB AT STILLWATER CK	2 LOOPS 4 PIEZOS



**PULL BOX PAVING**

**TRAFFIC MONITORING STATION**

NO SCALE

**E-1**

APPROVED FOR ELECTRICAL WORK ONLY

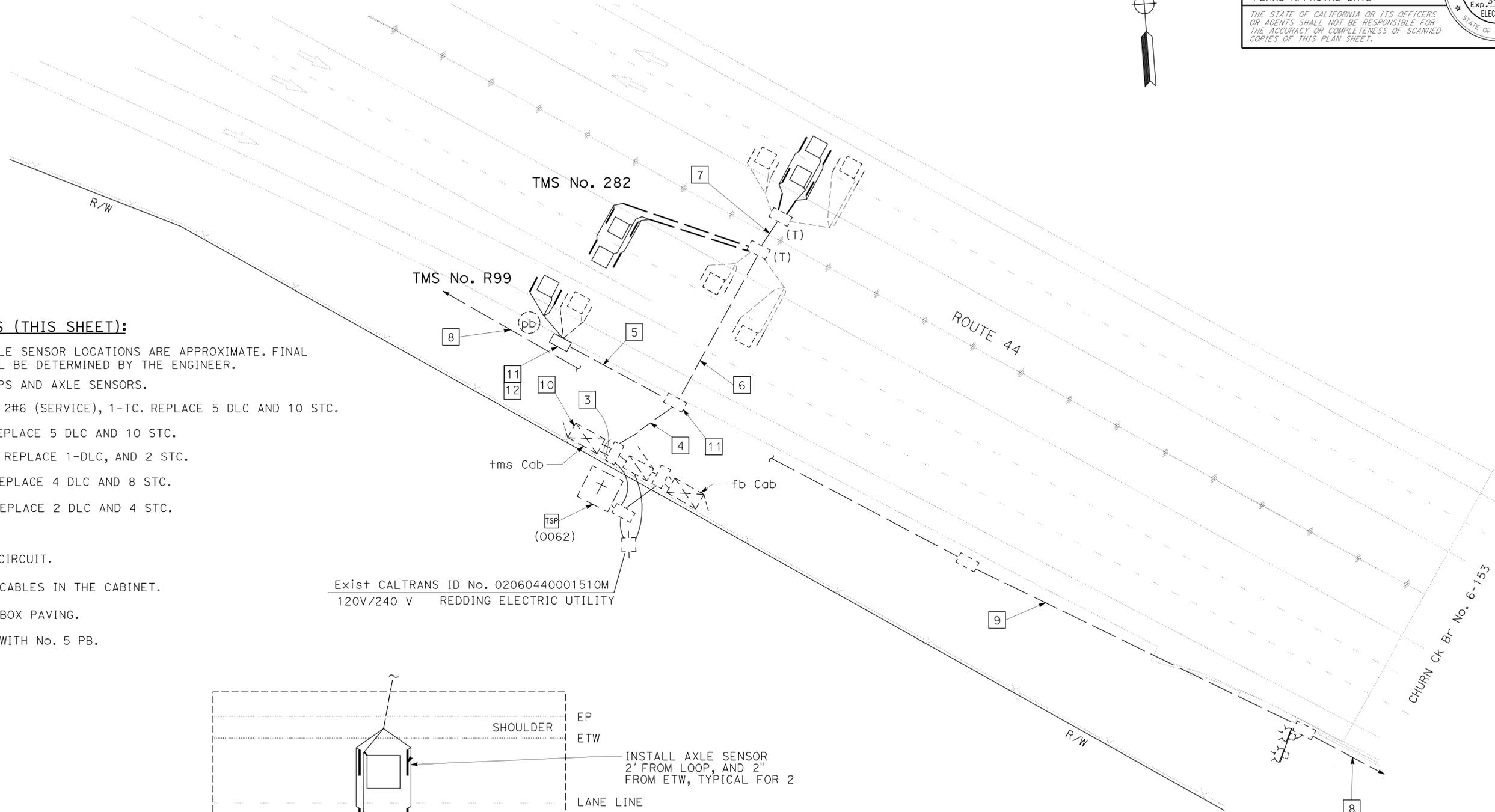


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	44	L1.7/R4.3	23	35
ART			10-27-11		
REGISTERED ELECTRICAL ENGINEER			DATE		
10-27-11			PLANS APPROVAL DATE		
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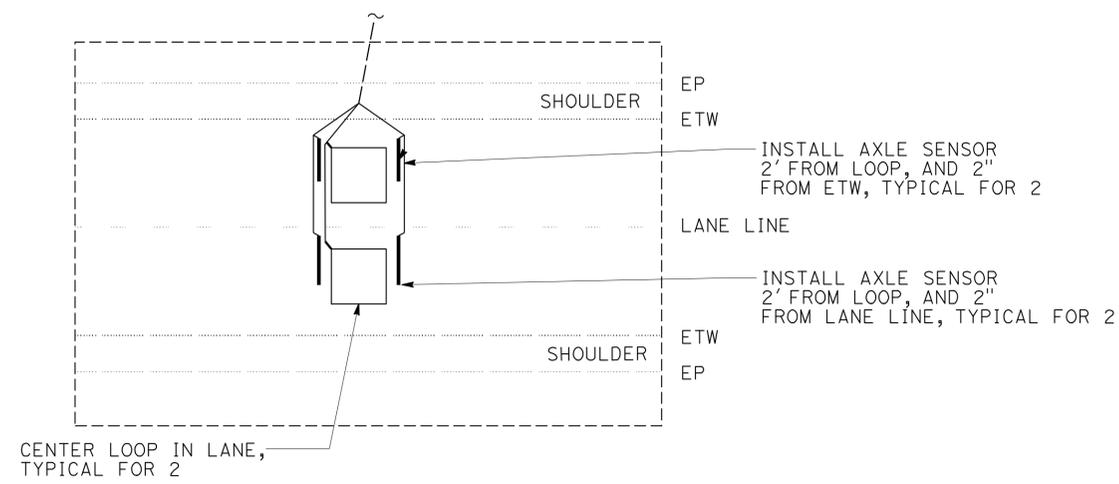
**NOTES:**

- FOR ACCURATE RIGHT OF WAY AND ACCESS DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THESE PLANS.



**NOTES (THIS SHEET):**

- LOOP AND AXLE SENSOR LOCATIONS ARE APPROXIMATE. FINAL LOCATION WILL BE DETERMINED BY THE ENGINEER.
- AB Exist LOOPS AND AXLE SENSORS.
- Exist 2-3"C, 2#6 (SERVICE), 1-TC. REPLACE 5 DLC AND 10 STC.
- Exist 2"C, REPLACE 5 DLC AND 10 STC.
- Exist 1 1/2"C, REPLACE 1-DLC, AND 2 STC.
- Exist 2"C, REPLACE 4 DLC AND 8 STC.
- Exist 2"C, REPLACE 2 DLC AND 4 STC.
- Itg CIRCUIT.
- Itg AND fb CIRCUIT.
- COIL 10' OF CABLES IN THE CABINET.
- PLACE PULL BOX PAVING.
- REPLACE pb WITH No. 5 PB.



**TYPICAL AXLE SENSOR INSTALLATION DETAIL**

**TRAFFIC MONITORING STATION**  
NO SCALE  
**E-3**

APPROVED FOR ELECTRICAL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Electrical DESIGN**  
 ARTURO ROBLES  
 KAREN CARMO  
 ROB STINGER  
 FUNCTIONAL SUPERVISOR  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 REVISED BY  
 DATE REVISED  
 USERNAME => s115152  
 DGN FILE => 23e990ua003.dgn  
 BORDER LAST REVISED 7/2/2010  
 P:\proj\11\02\3E990\plans\pse\23e990ua003.dgn

LAST REVISION DATE PLOTTED => 15-NOV-2011  
 10-27-11 TIME PLOTTED => 13:39





Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	44	L1.7/R4.3	25	35

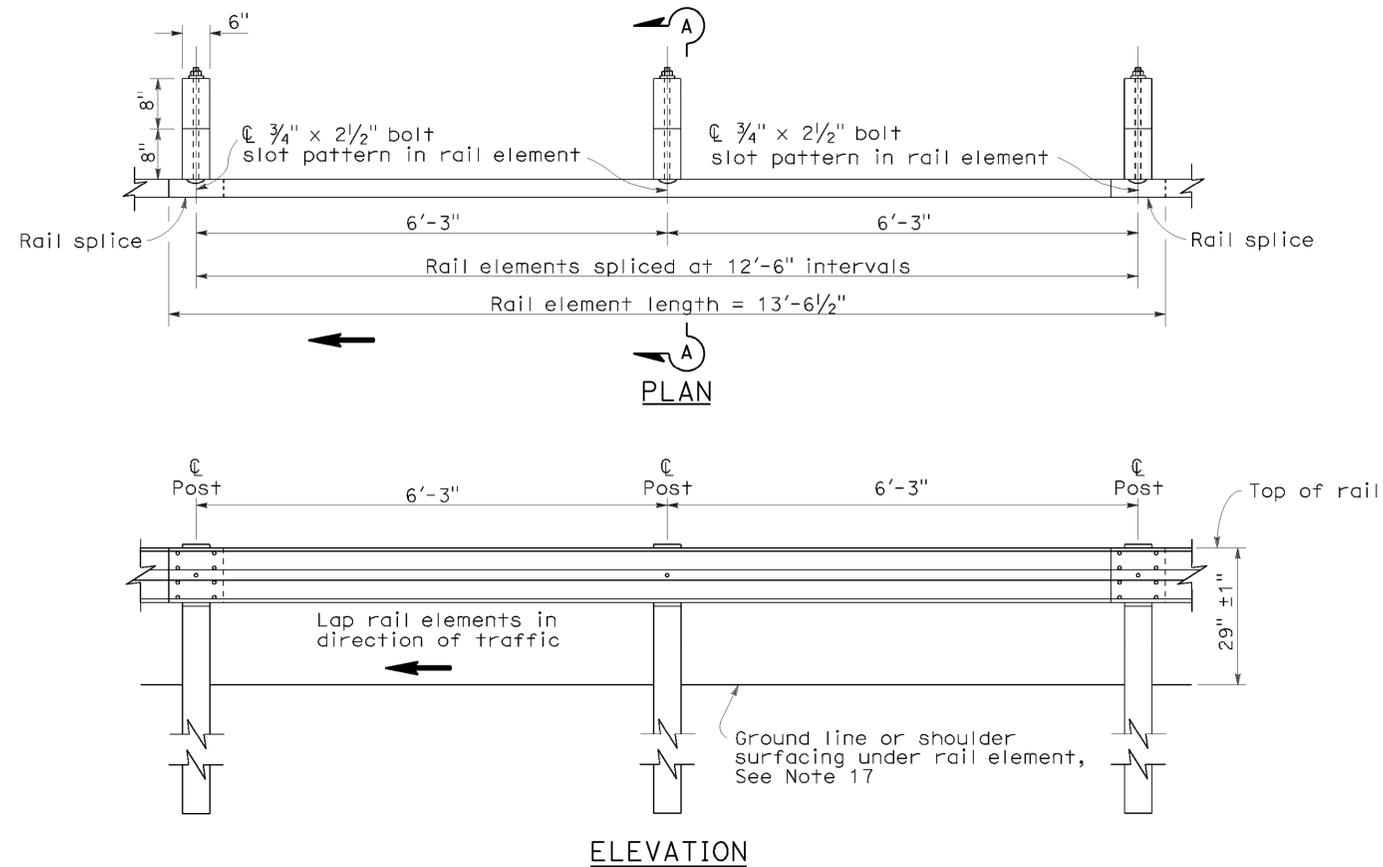
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

May 20, 2011  
PLANS APPROVAL DATE

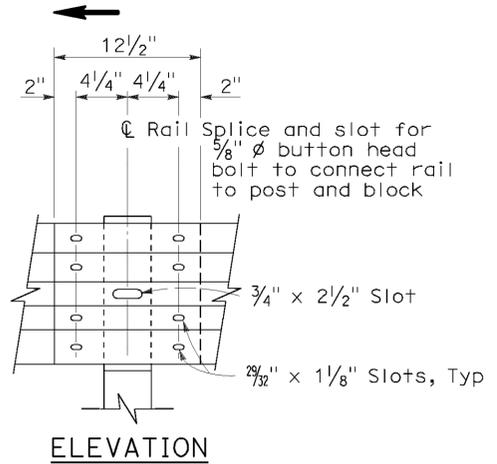
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To accompany plans dated 10-27-11

2006 REVISED STANDARD PLAN RSP A77A1

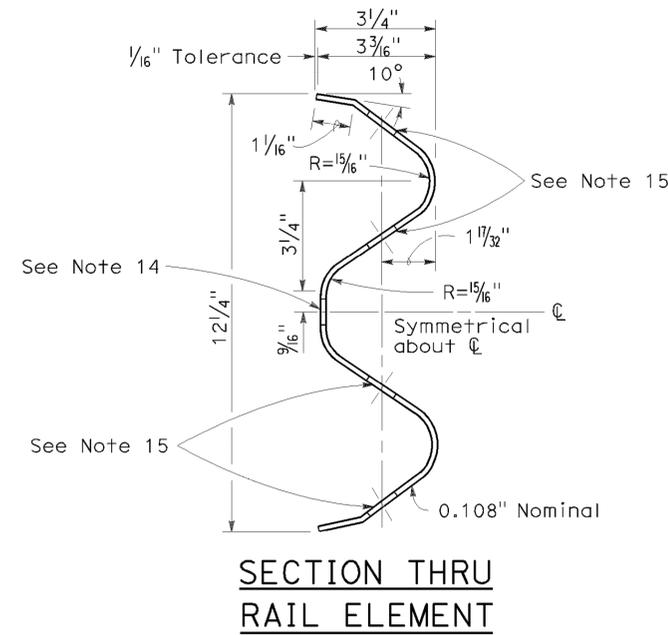


**METAL BEAM GUARD RAILING WITH WOOD POST AND BLOCKS**

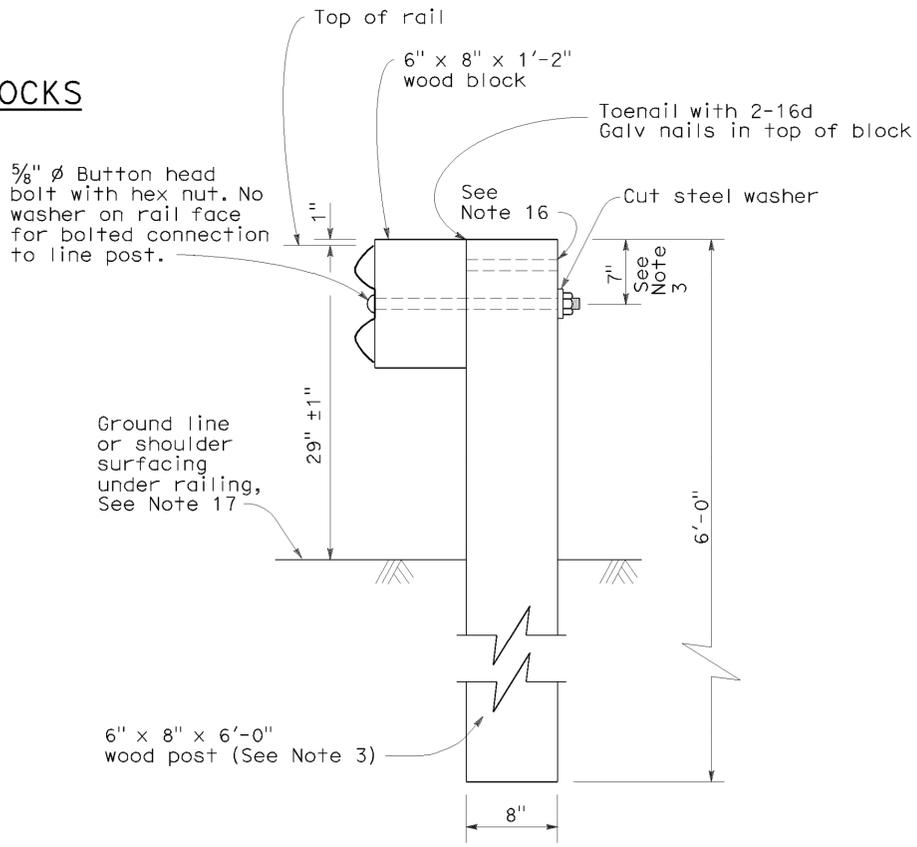


**RAIL ELEMENT SPLICE DETAIL**

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



**SECTION THRU RAIL ELEMENT**



**SECTION A-A TYPICAL WOOD LINE POST INSTALLATION**

See Note 4

**NOTES:**

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

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

RSP A77A1 DATED MAY 20, 2011 SUPERSEDES STANDARD PLAN A77A1  
DATED MAY 1, 2006 - PAGE 41 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP A77A1**

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	44	L1.7/R4.3	26	35

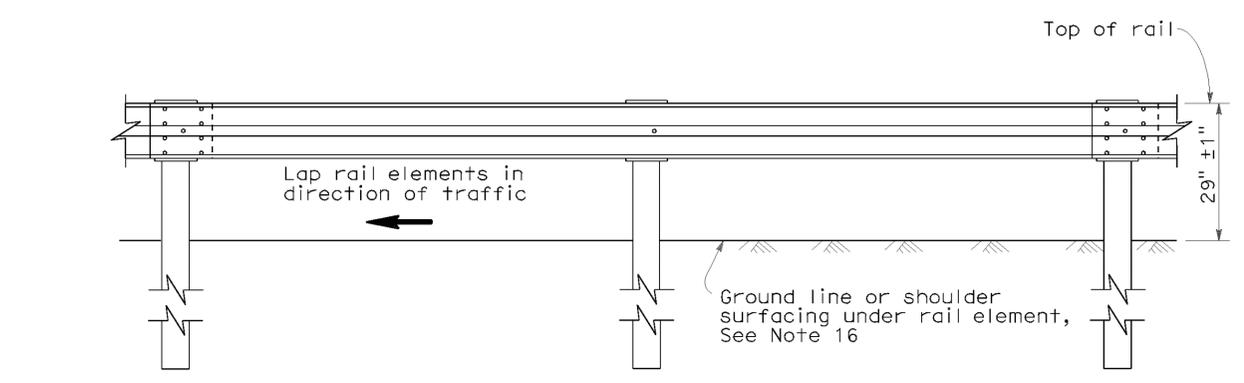
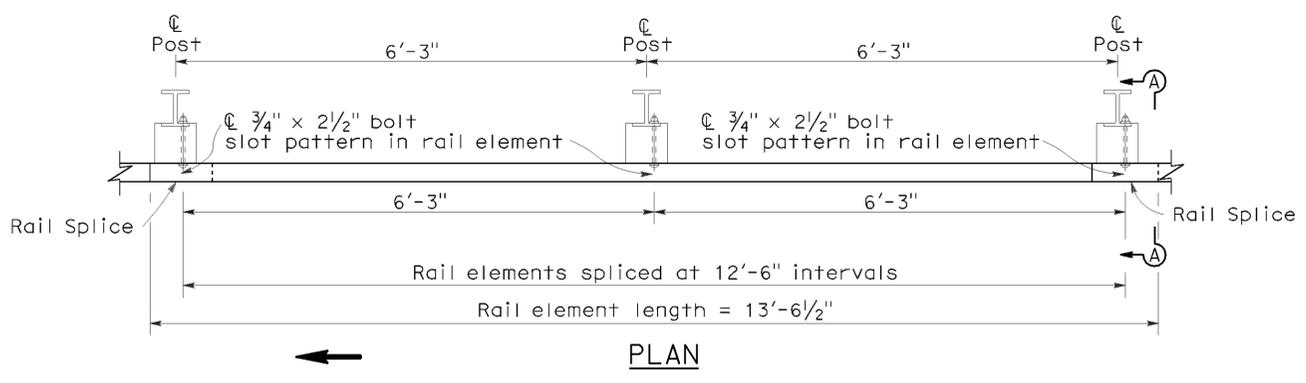
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

May 20, 2011  
PLANS APPROVAL DATE

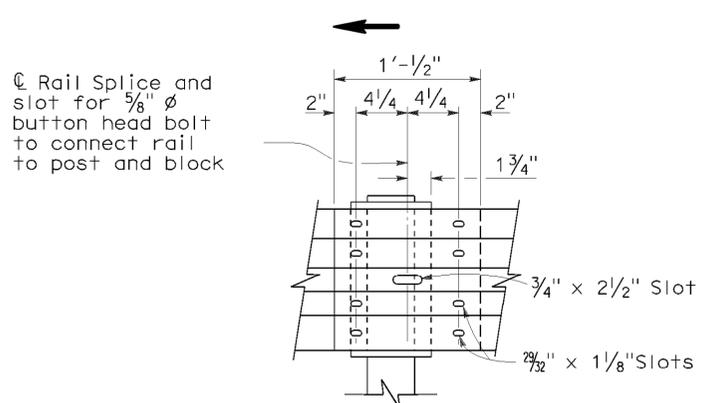
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To accompany plans dated 10-27-11

2006 REVISED STANDARD PLAN RSP A77A2

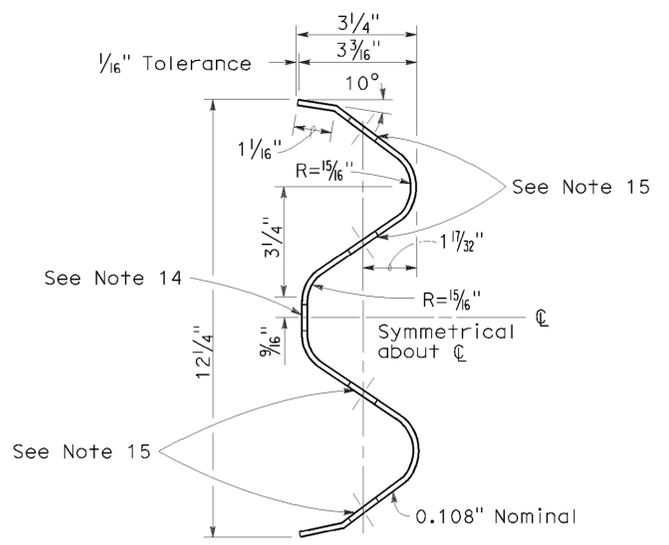


**METAL BEAM GUARD RAILING WITH STEEL POSTS AND NOTCHED WOOD OR NOTCHED RECYCLED PLASTIC BLOCKS**

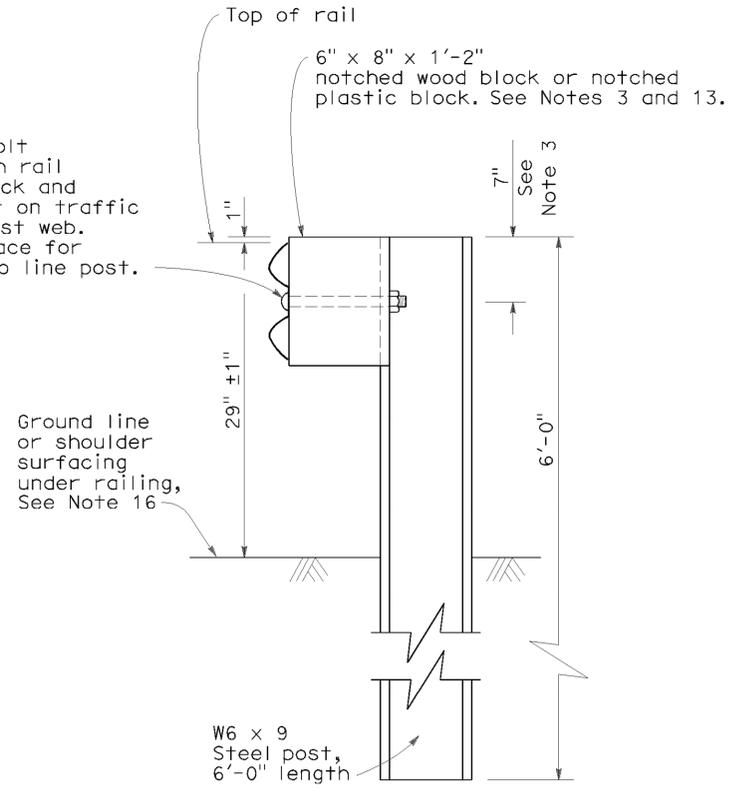


**ELEVATION  
RAIL ELEMENT SPLICE DETAIL**

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



**SECTION THRU  
RAIL ELEMENT**



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

**NOTES:**

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

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

NO SCALE

RSP A77A2 DATED MAY 20, 2011 SUPERSEDES STANDARD PLAN A77A2  
DATED MAY 1, 2006 - PAGE 42 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP A77A2**

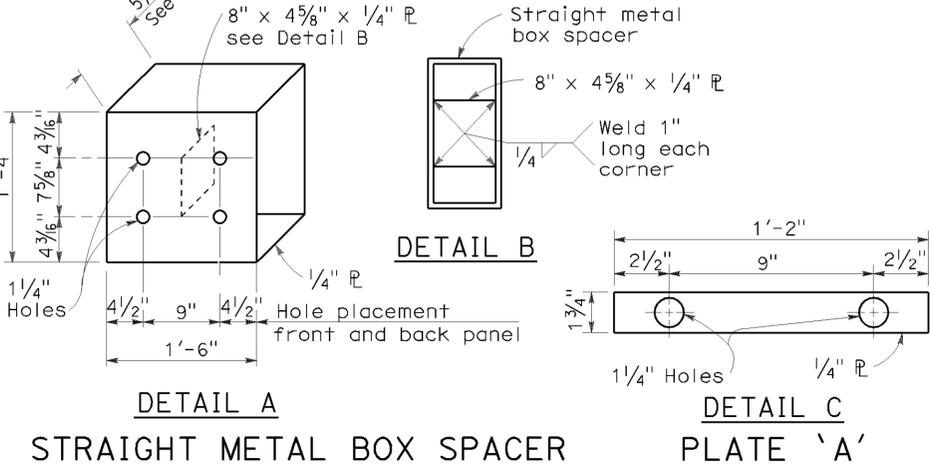
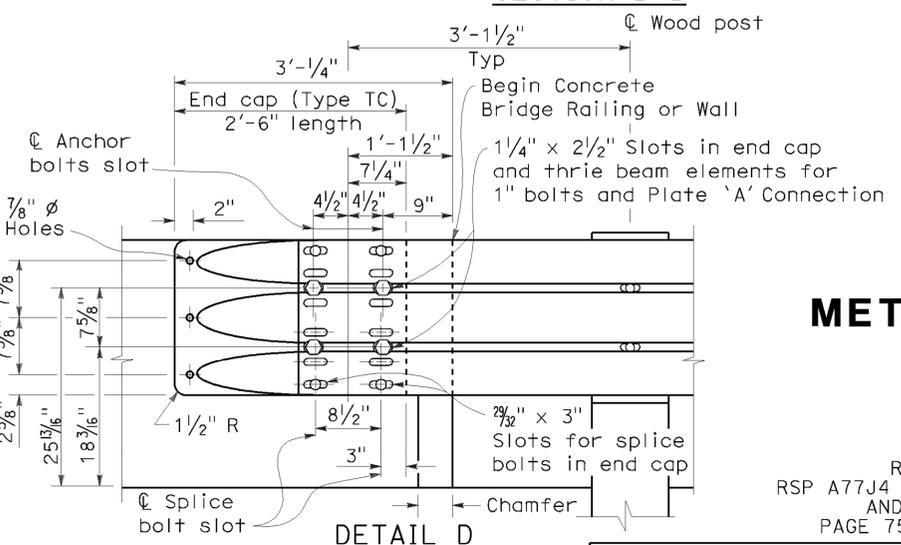
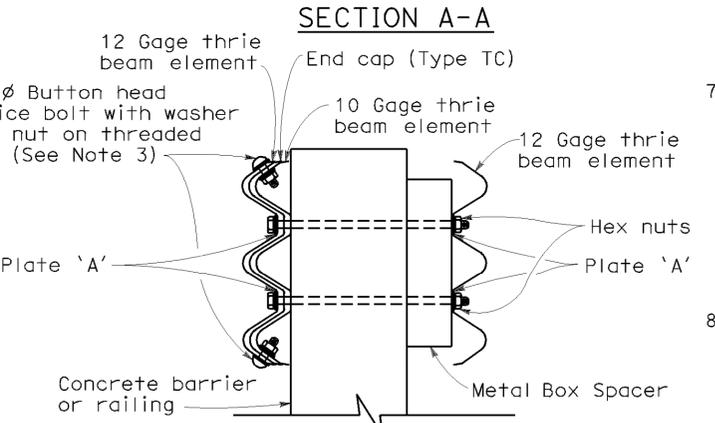
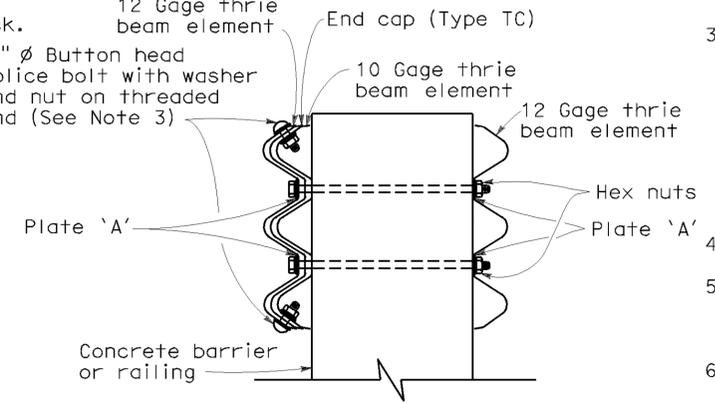
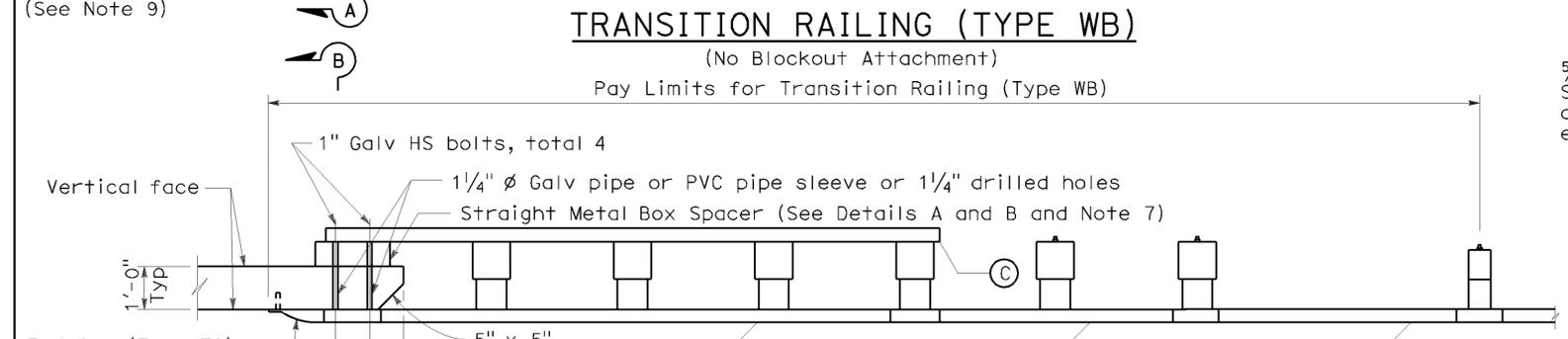
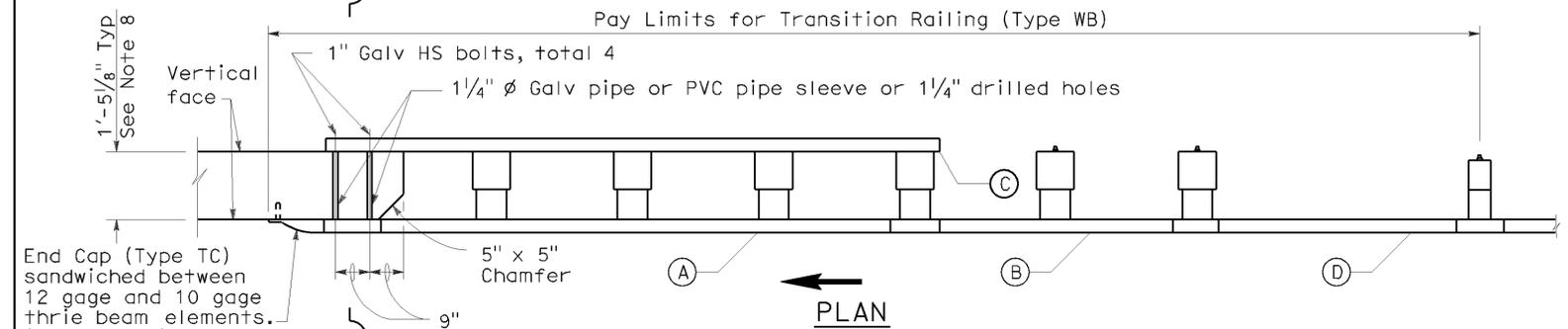
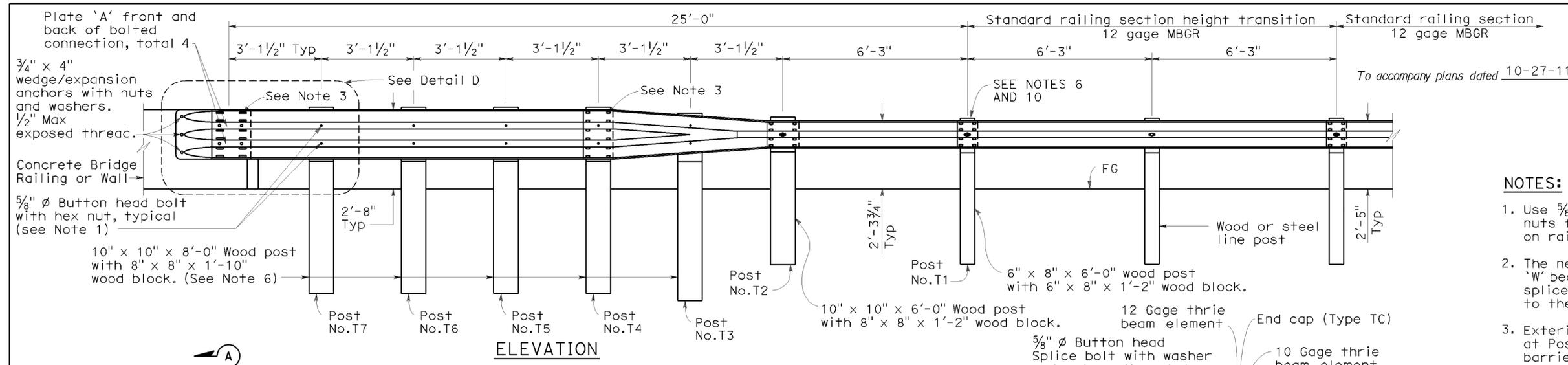
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	44	L1.7/R4.3	27	35

May 20, 2011  
 PLANS APPROVAL DATE  
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**Randell D. Hiatt**  
 REGISTERED CIVIL ENGINEER

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



- LEGEND**
- (A) Nested thrie beam elements (one 12 gage element nested over one 10 gage element).
  - (B) One 10 gage "W" beam to thrie beam element.
  - (C) One 12 gage thrie beam element.
  - (D) One 10 gage "W" beam rail element (7'-3 1/2" length)
- 10 gage = 0.135" thick  
 12 gage = 0.108" thick

- NOTES:**
1. Use 5/8" ø Button head bolts and hex nuts for connections to posts. No washer on rail face for bolted connections to post.
  2. 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.
  3. 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 7/32" x 1/8" slot size. Interior splice bolt holes at these locations may be increased up to 1/4" ø. 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.
  4. Direction of adjacent traffic indicated by →.
  5. The top elevation of Posts No. T2 through No. T7 shall not project more than 1" above the top elevation of the rail element.
  6. Typically, the railing connected to Transition Railing (Type WB) will be either standard railing section of metal beam guard railing with height transition ratio of 120:1 or an approved Caltrans end treatment attached to Post No. T1.
  7. The depth of the metal box spacer varies from the 5/8" 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.
  8. 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. T4 through No. T7 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.
  9. 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.
  10. Conform standard railing section height to 2'-3 3/4" at Post No. T1 using height transition ratio of 120:1.

STATE OF CALIFORNIA  
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**METAL BEAM GUARD RAILING  
 TRANSITION RAILING  
 (TYPE WB)**

NO SCALE

RSP A77J4 DATED MAY 20, 2011 SUPERSEDES  
 RSP A77J4 DATED JUNE 5, 2009, 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**

2006 REVISED STANDARD PLAN RSP A77J4

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
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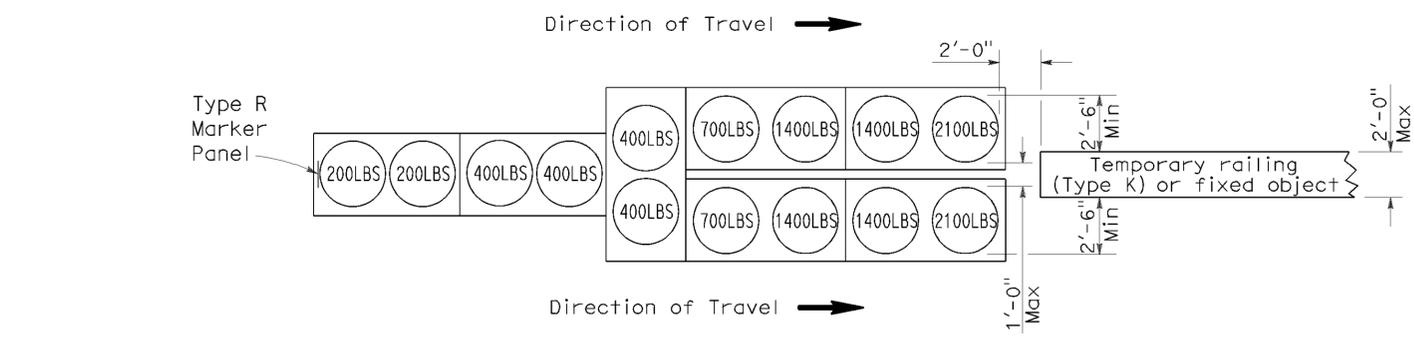
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

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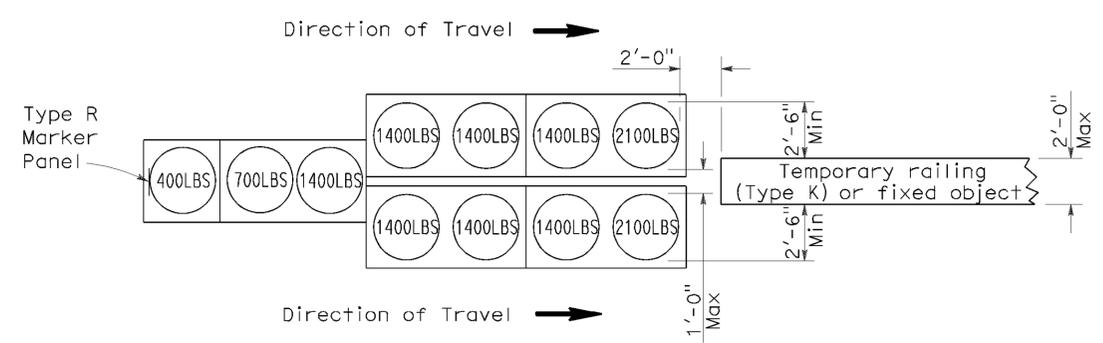
REGISTERED PROFESSIONAL ENGINEER  
*Randell D. Hiatt*  
No. C50200  
Exp. 6-30-09  
CIVIL  
STATE OF CALIFORNIA

To accompany plans dated 10-27-11



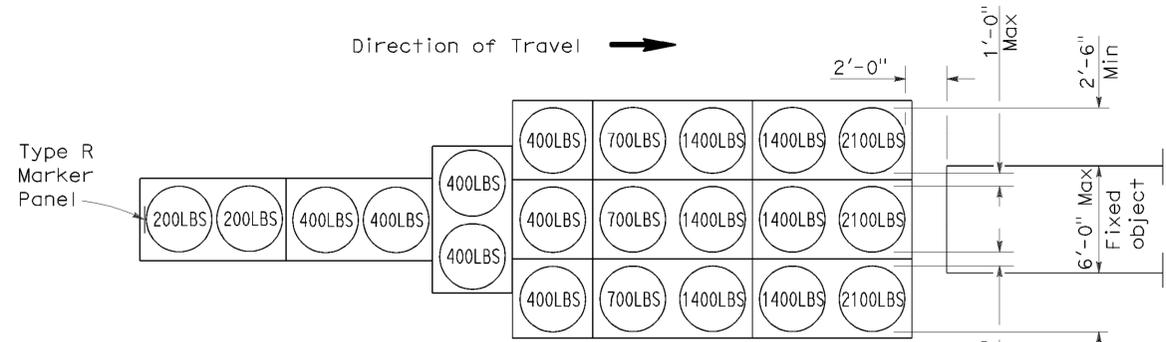
**ARRAY 'TU14'**

Approach speed 45 mph or more



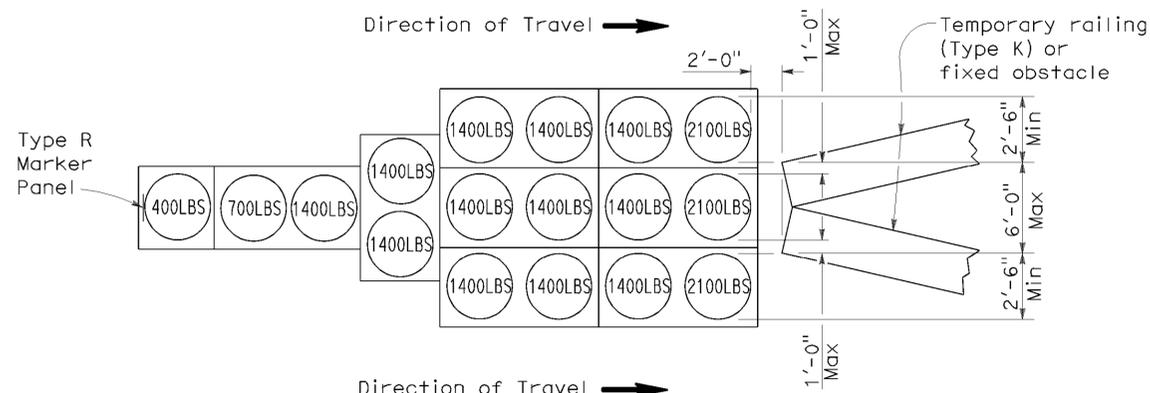
**ARRAY 'TU11'**

Approach speed less than 45 mph



**ARRAY 'TU21'**

Approach speed 45 mph or more

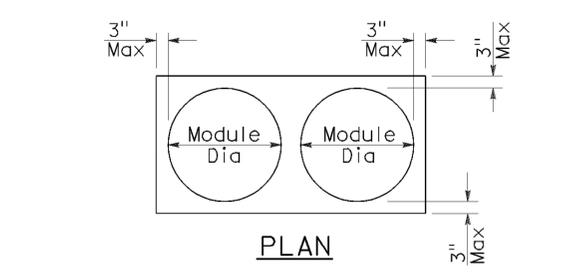


**ARRAY 'TU17'**

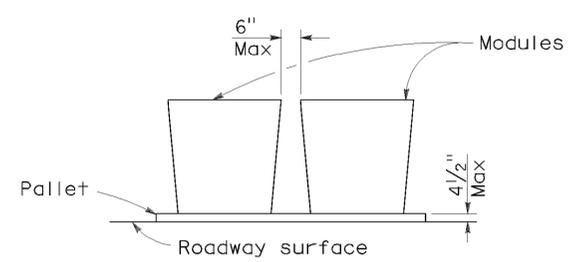
Approach speed less than 45 mph

**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.



**PLAN**



**ELEVATION**

**CRASH CUSHION PALLET DETAIL**

See Note 7

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**

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2006 REVISED STANDARD PLAN RSP T1A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
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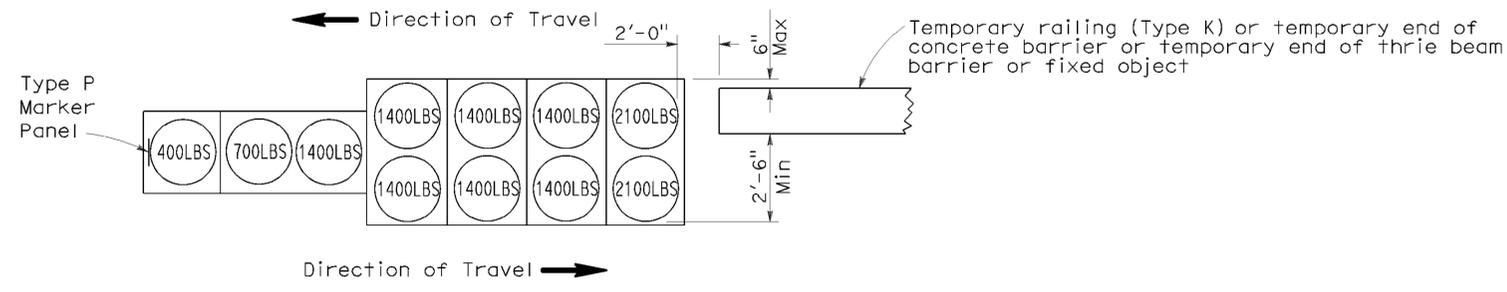
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

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

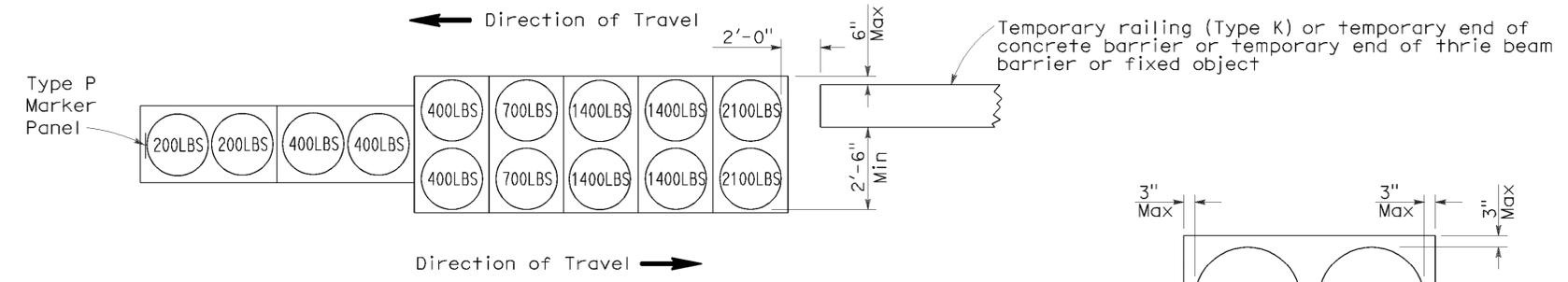
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To accompany plans dated 10-27-11



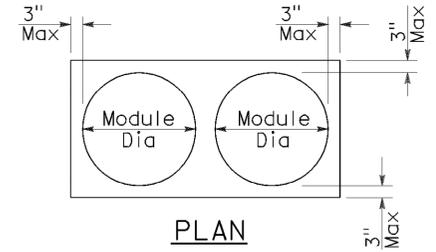
**ARRAY 'TB11'**

Approach speed less than 45 mph

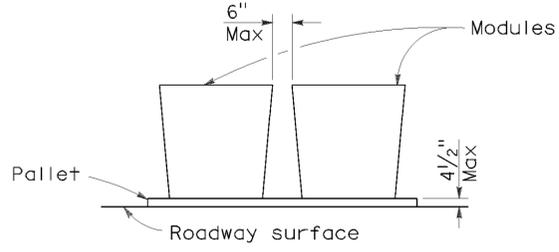


**ARRAY 'TB14'**

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 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 MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Sha	44	L1.7/R4.3	30	35

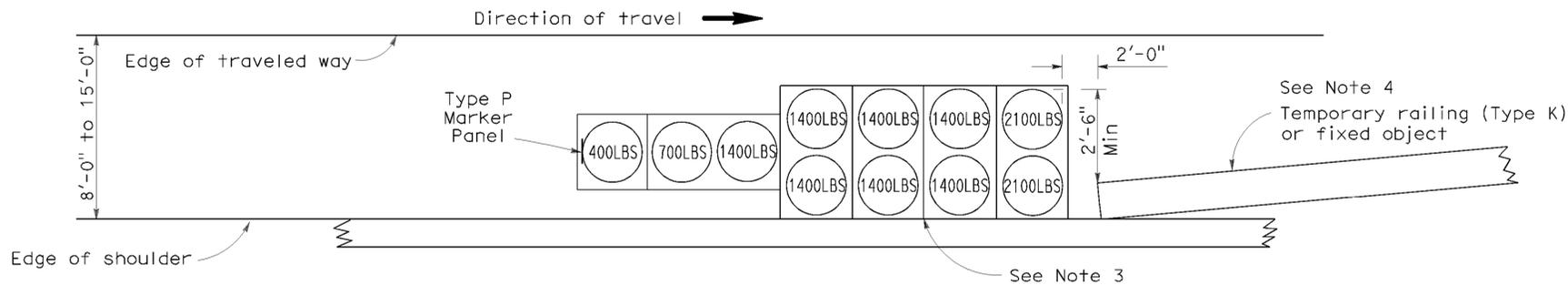
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

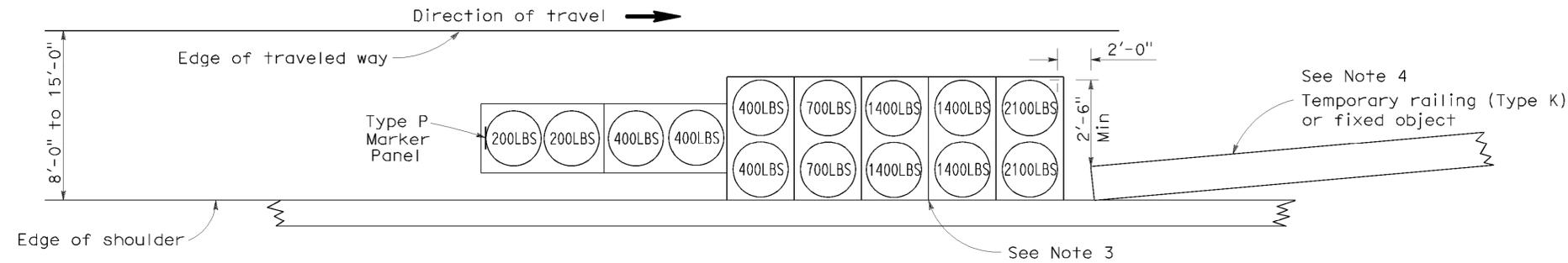
*Randell D. Hiatt*  
REGISTERED PROFESSIONAL ENGINEER  
No. C50200  
Exp. 6-30-09  
CIVIL  
STATE OF CALIFORNIA

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To accompany plans dated 10-27-11



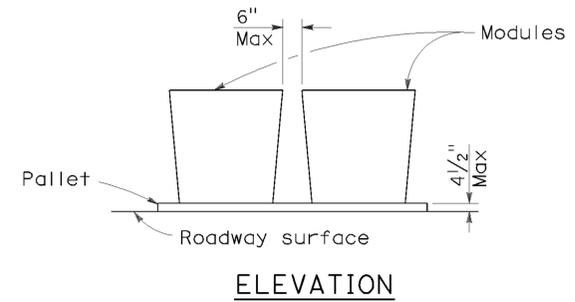
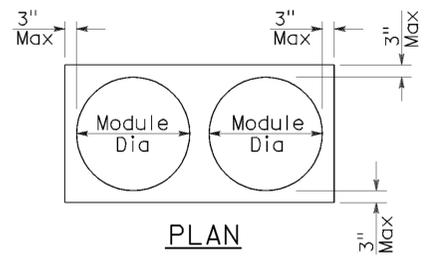
**ARRAY 'TS11'**  
Approach speed less than 45 mph  
See Note 9



**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

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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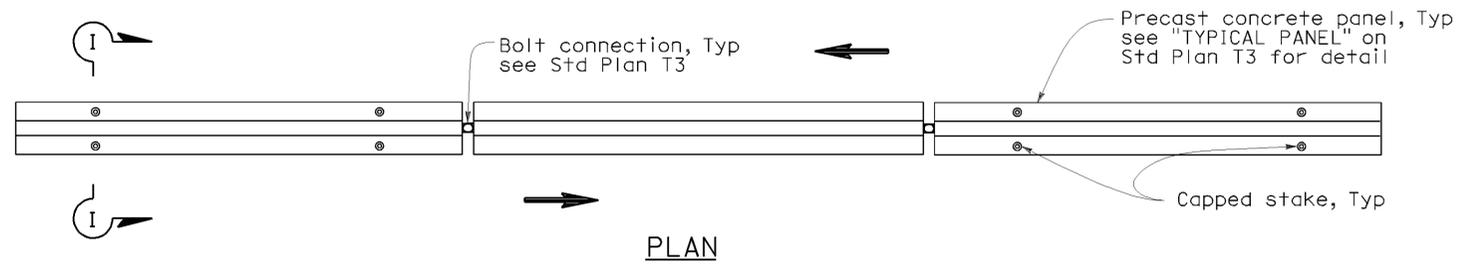
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

May 20, 2011  
PLANS APPROVAL DATE

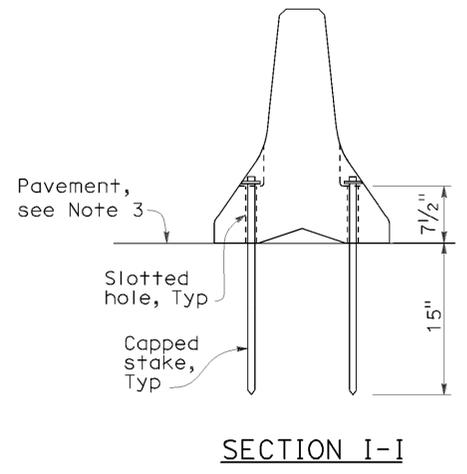
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REGISTERED PROFESSIONAL ENGINEER  
No. C50200  
Exp. 6-30-11  
CIVIL  
STATE OF CALIFORNIA

To accompany plans dated 10-27-11



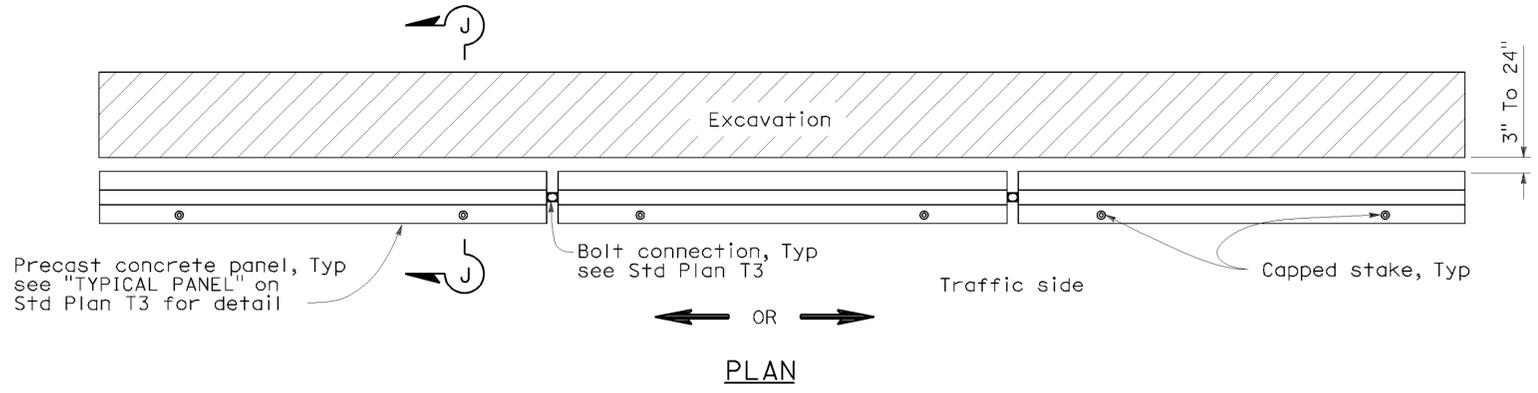
**RAILING STAKING CONFIGURATION FOR TWO-WAY TRAFFIC**  
See Note 1



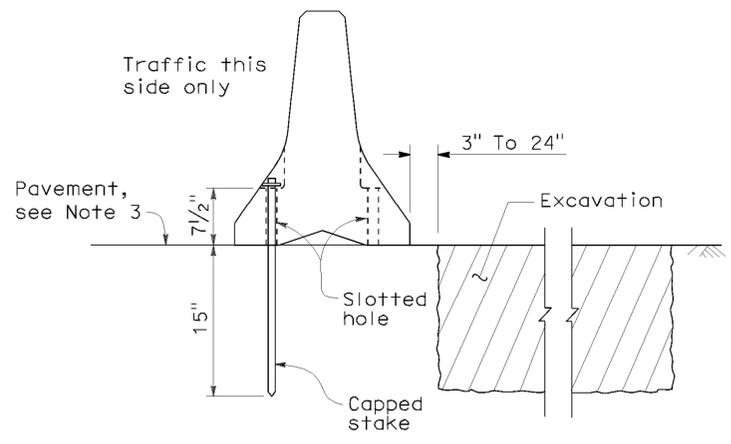
**SECTION I-I**

**NOTES:**

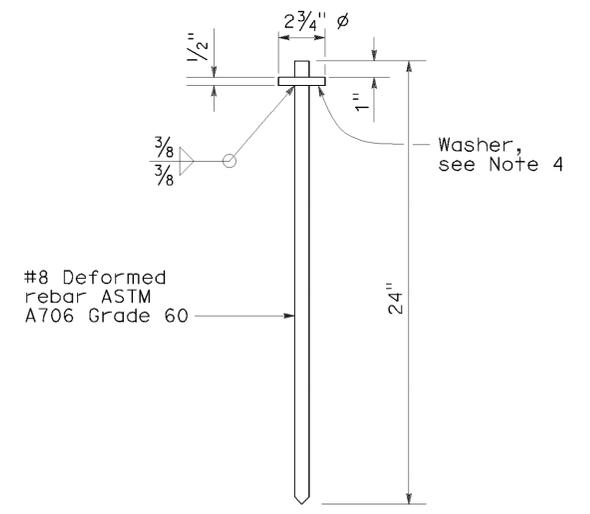
1. Where Type K Temporary Railing is placed as a temporary or long term barrier in two-way traffic on highways with less than 24" from the edge of traveled way, use four capped stakes per every other panel with end panels staked.
2. Where Type K Temporary Railing is placed 3" to 24" from the edge of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



**RAILING STAKING CONFIGURATION ADJACENT TO AN EXCAVATION**  
See Note 2



**SECTION J-J**



**CAPPED STAKE DETAIL**

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

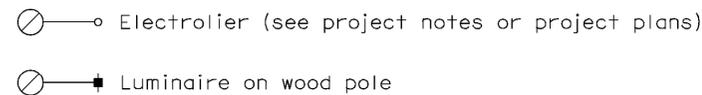
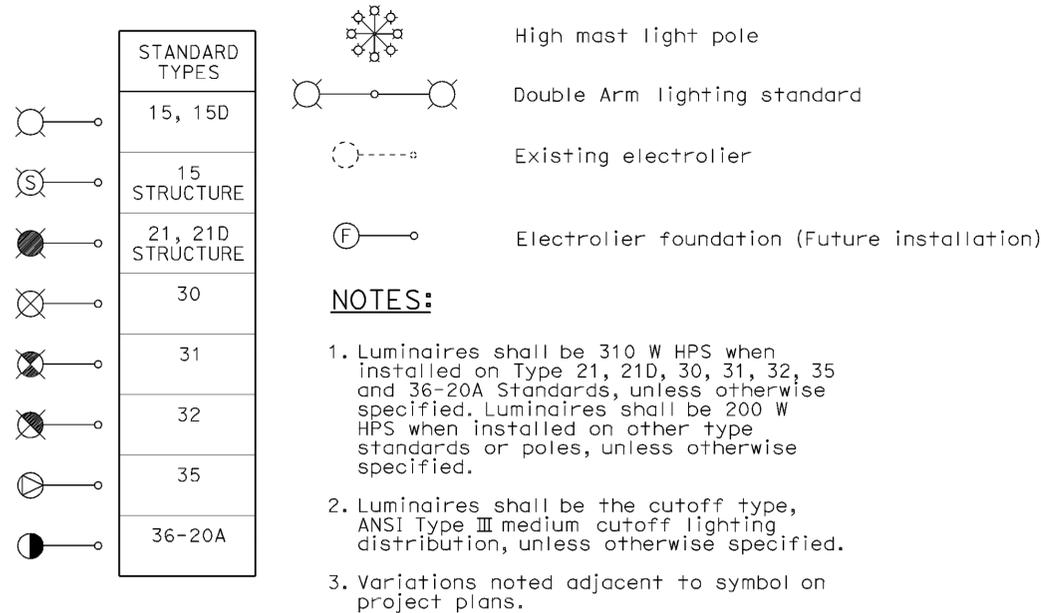
NSP T3A DATED MAY 20, 2011 SUPPLEMENTS  
THE STANDARD PLANS BOOK DATED MAY 2006.

**NEW STANDARD PLAN NSP T3A**

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2006 NEW STANDARD PLAN NSP T3A

# ELECTROLIERS



## 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	fbs	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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Sha	44	L1.7/R4.3	32	35

*Jeffery G. McRae*  
REGISTERED ELECTRICAL ENGINEER

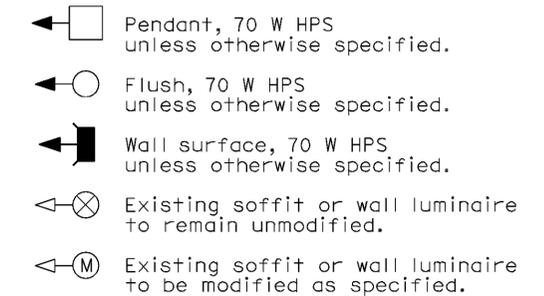
October 5, 2007  
PLANS APPROVAL DATE

*Jeffery G. McRae*  
No. E14512  
Exp. 6-30-08  
ELECTRICAL  
STATE OF CALIFORNIA

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To accompany plans dated 10-27-11

## SOFFIT AND WALL MOUNTED LUMINAIRES



### NOTE:

Arrow indicates "street side" of luminaire.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

## 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
02	Sha	44	L1.7/R4.3	33	35

Jeffrey G. McRae  
 REGISTERED ELECTRICAL ENGINEER  
 October 5, 2007  
 PLANS APPROVAL DATE  
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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

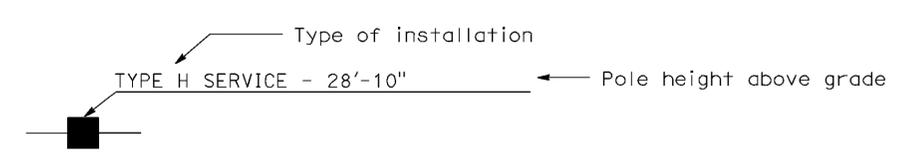
### SIGNAL EQUIPMENT

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
T	t	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.

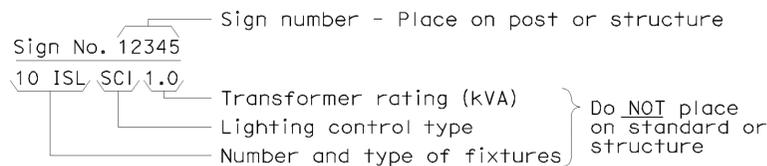
**REVISED STANDARD PLAN RSP ES-1B**

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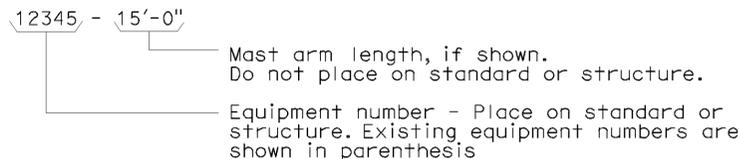
2006 REVISED STANDARD PLAN RSP ES-1B

### EQUIPMENT IDENTIFICATION

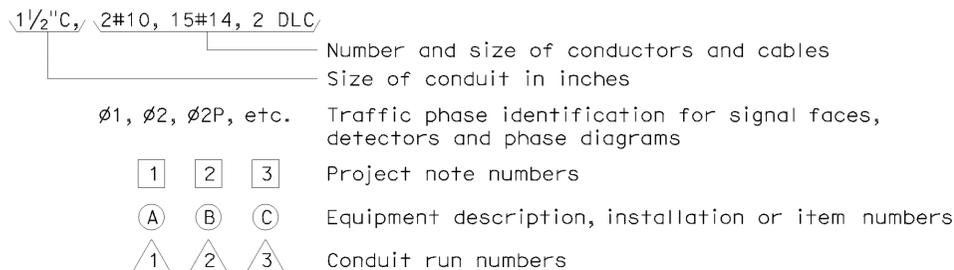
#### ILLUMINATED SIGN IDENTIFICATION NUMBER:



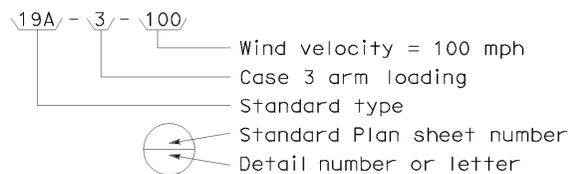
#### ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



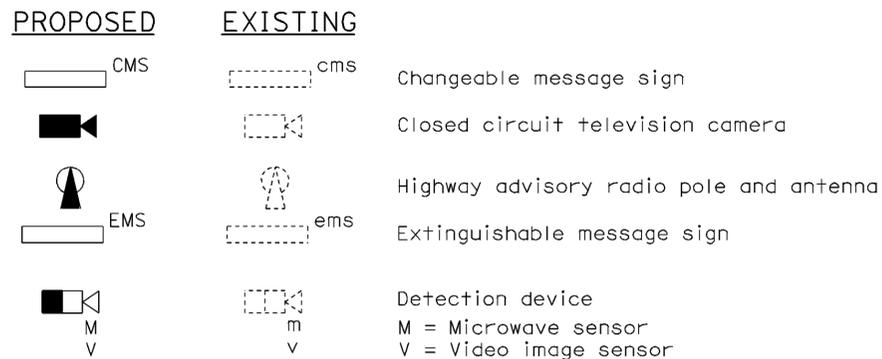
#### CONDUIT AND CONDUCTOR IDENTIFICATION:



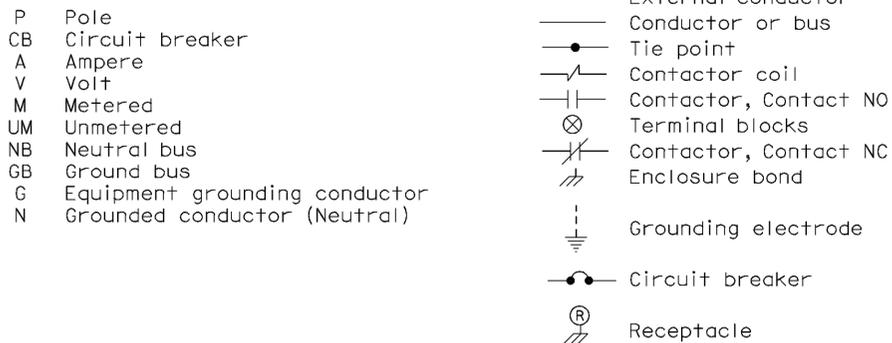
#### SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



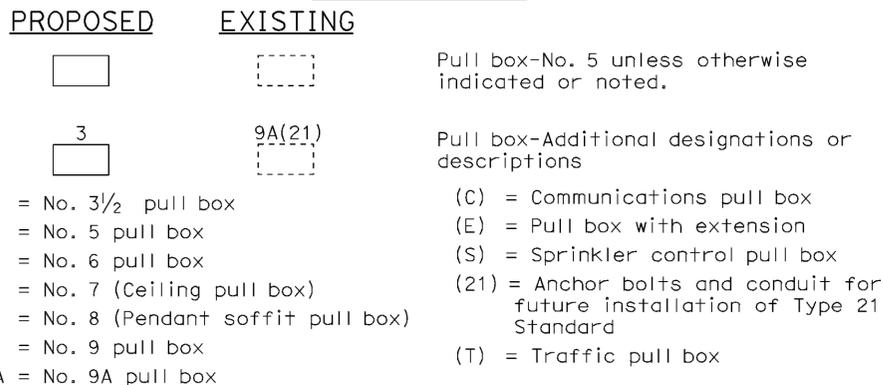
### MISCELLANEOUS EQUIPMENT



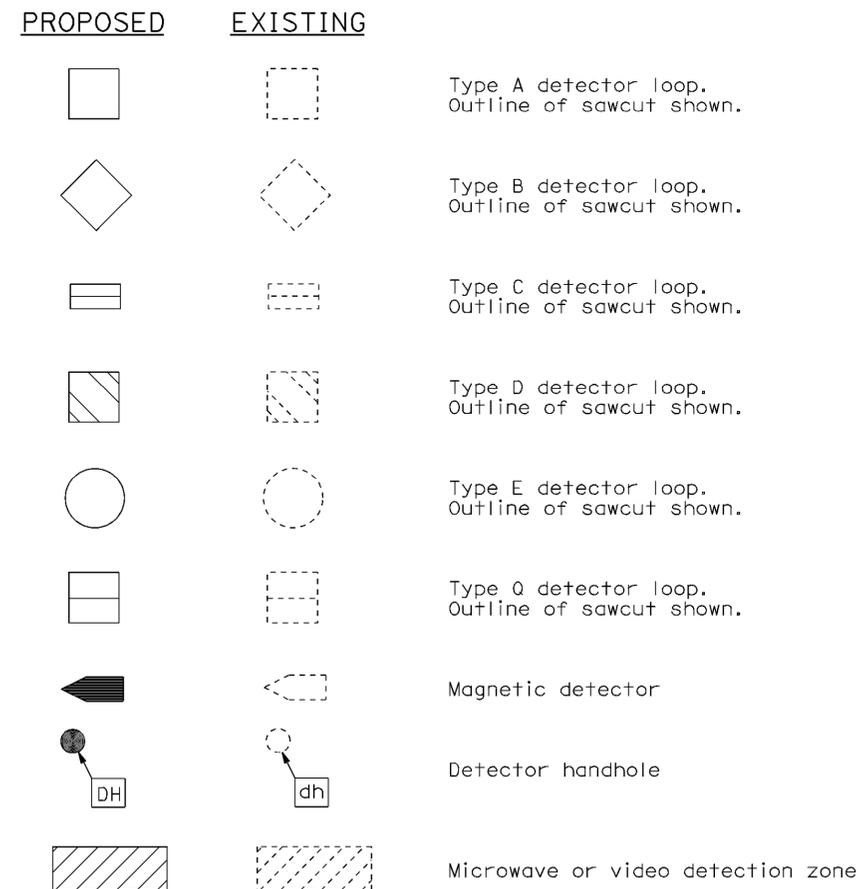
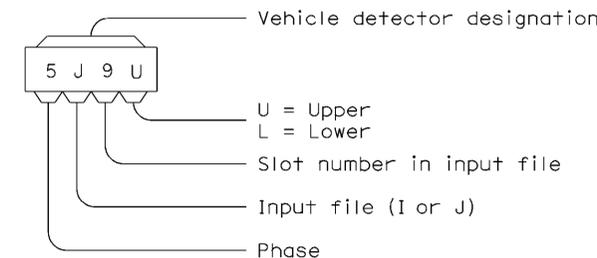
### WIRING DIAGRAM LEGEND



### PULL BOXES



### VEHICLE DETECTORS



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**

2006 REVISED STANDARD PLAN RSP ES-1C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Sha	44	L1.7/R4.3	35	35

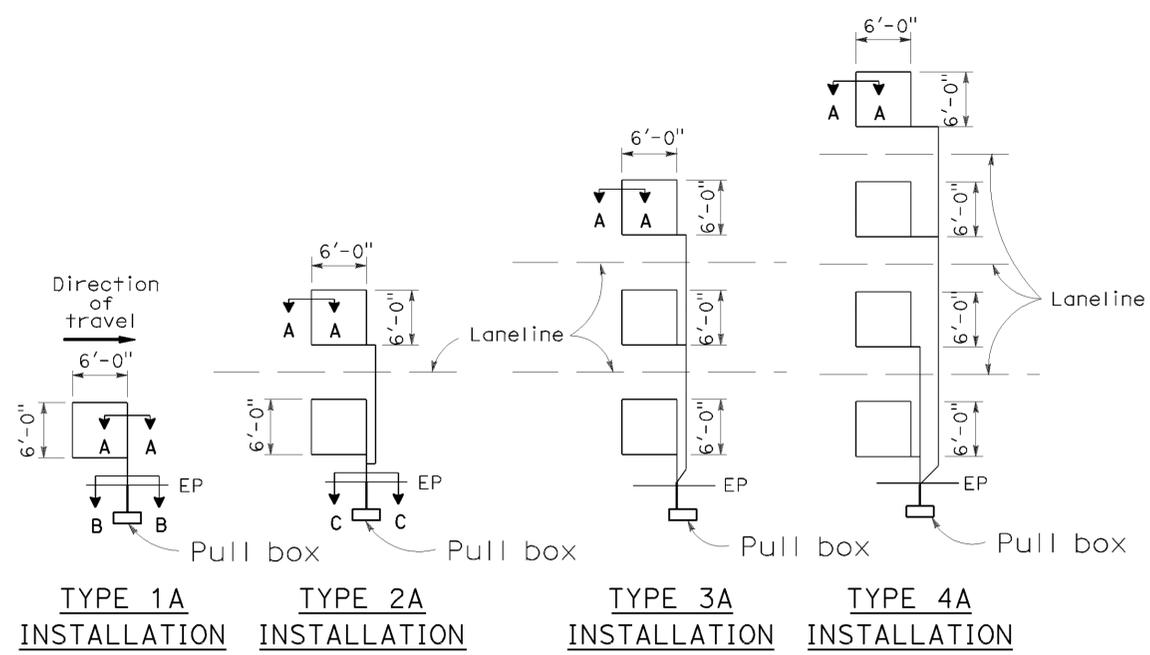
Jeffrey G. McRae  
 REGISTERED ELECTRICAL ENGINEER  
 No. E14512  
 Exp. 6-30-08  
 ELECTRICAL  
 STATE OF CALIFORNIA

October 5, 2007  
 PLANS APPROVAL DATE

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# 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.



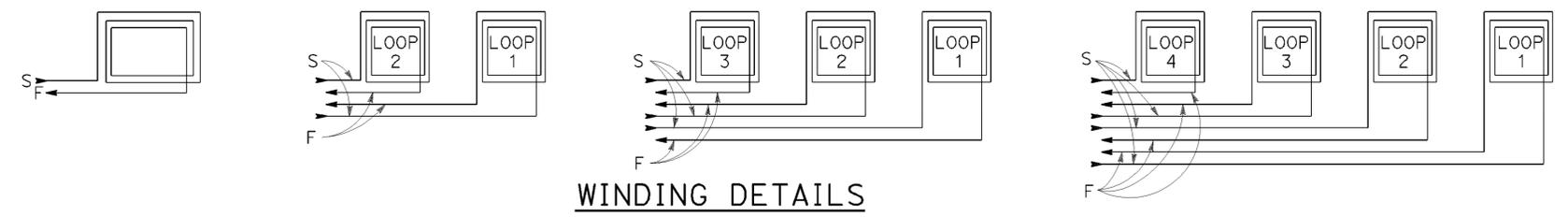
TYPE 1A INSTALLATION    TYPE 2A INSTALLATION    TYPE 3A INSTALLATION    TYPE 4A INSTALLATION

## 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)

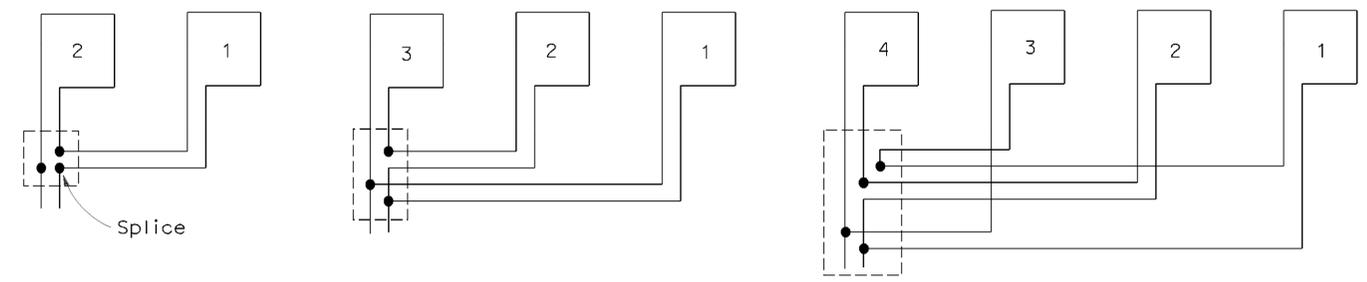
To accompany plans dated 10-27-11

2006 REVISED STANDARD PLAN RSP ES-5A



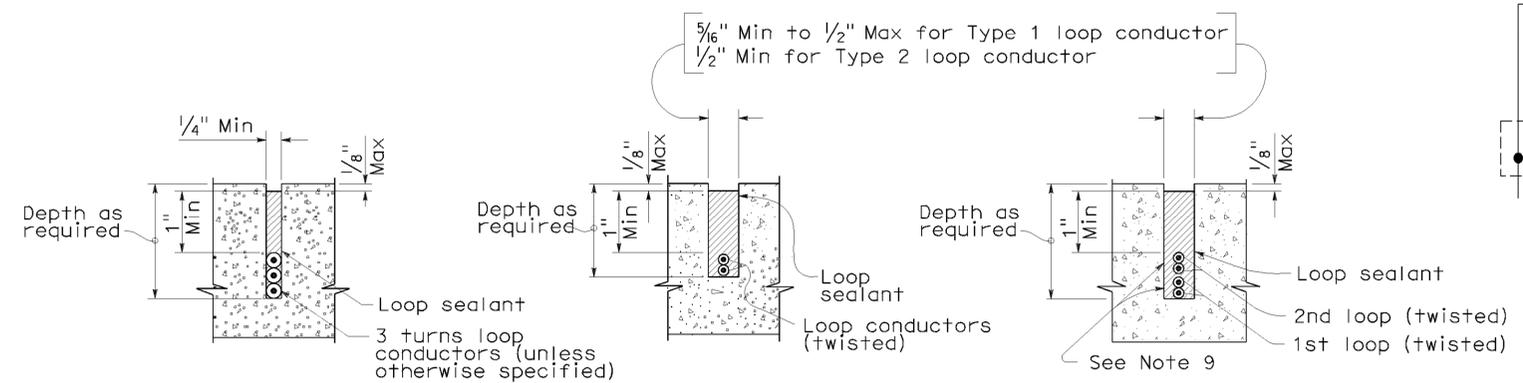
## WINDING DETAILS

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

## ELECTRICAL SYSTEMS (DETECTORS)

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

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

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