

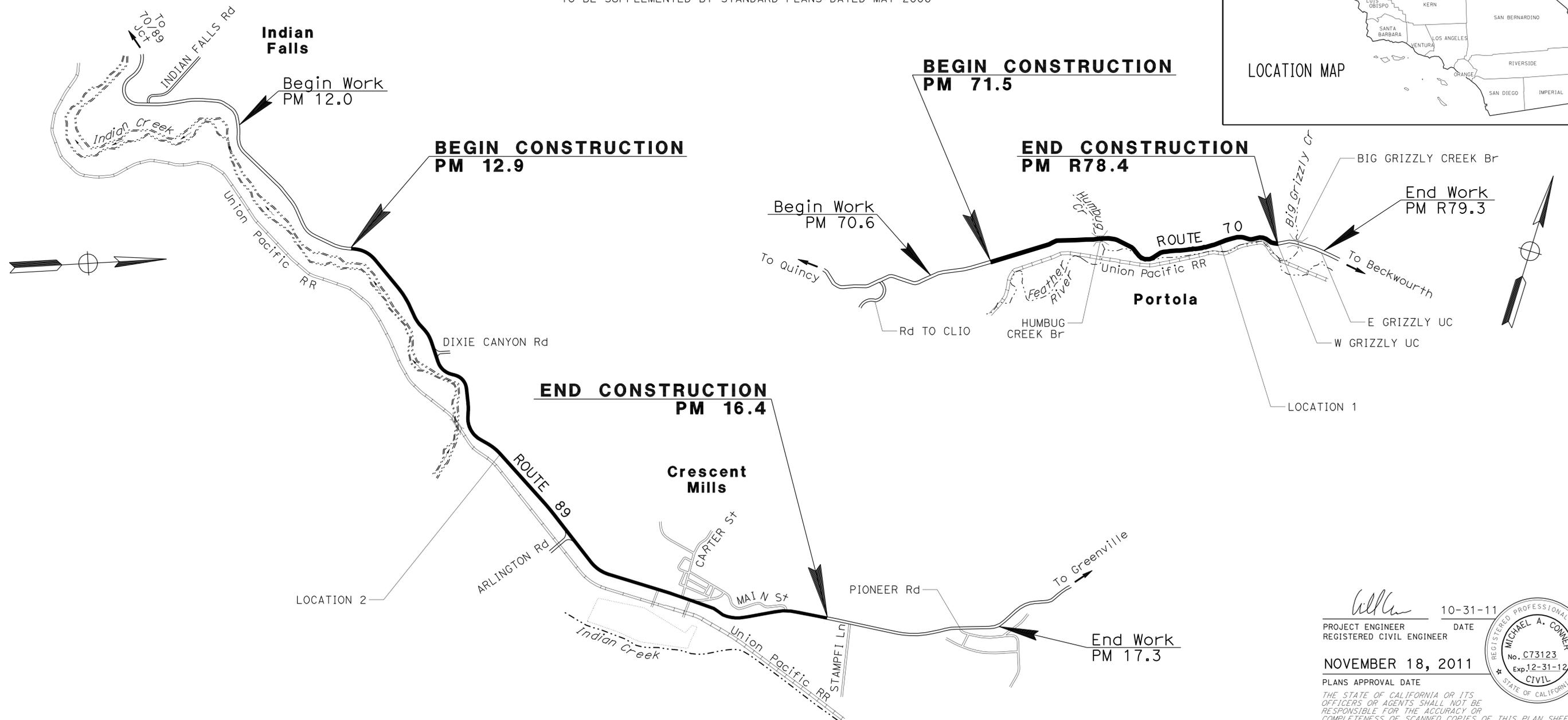
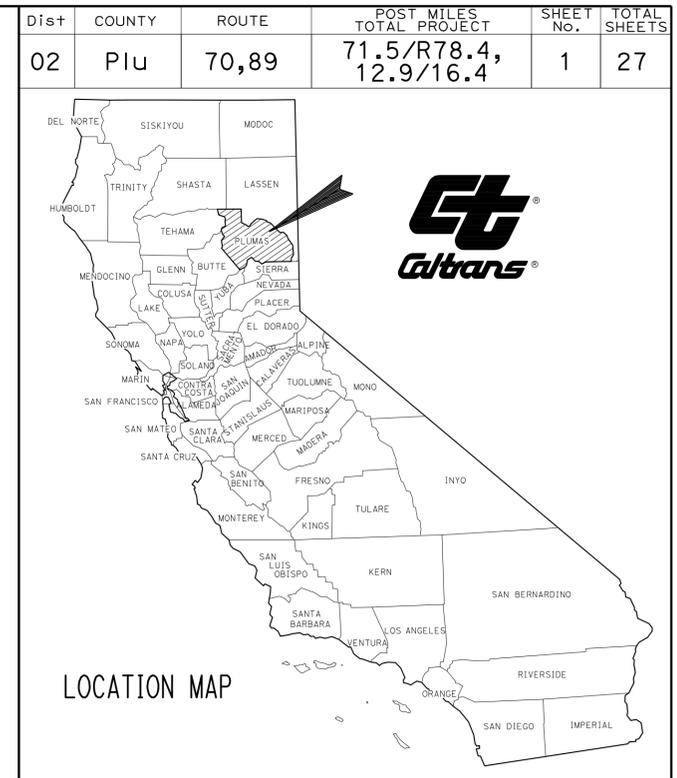
INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE SHEET
2	TYPICAL CROSS SECTIONS
3-4	LAYOUT
5-6	CONSTRUCTION DETAILS
7	CONSTRUCTION AREA SIGNS
8-9	PAVEMENT DELINEATION DETAILS
10-11	PAVEMENT DELINEATION QUANTITIES
12-13	SUMMARY OF QUANTITIES
14	TRAFFIC MONITORING STATION
15	MODIFY SIGNAL
16-27	REVISED AND NEW STANDARD PLANS

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 PLUMAS COUNTY ON ROUTE 70 FROM  
2.5 MILES WEST OF HUMBUG CREEK BRIDGE  
TO 0.3 MILE WEST OF BIG GRIZZLY CREEK  
BRIDGE AND ON ROUTE 89 FROM 1.5 MILES  
NORTH OF INDIAN FALLS ROAD TO 0.2 MILE  
SOUTH OF STAMPFL LN

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006



PROJECT MANAGER  
LANCE BROWN  
DESIGN ENGINEER  
LANCE BROWN

PROJECT ENGINEER DATE 10-31-11  
 REGISTERED CIVIL ENGINEER  
 NOVEMBER 18, 2011  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



CONTRACT No.	<b>02-3E9204</b>
PROJECT ID	<b>0200020231</b>

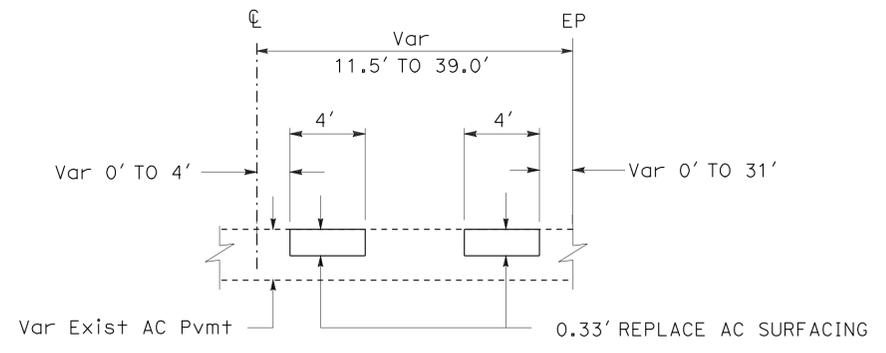
THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

NO SCALE

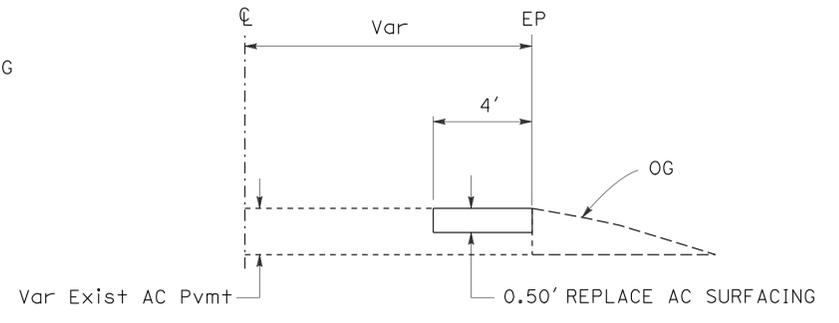
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	PIU	70,89	71.5/R78.4, 12.9/16.4	2	27
			11-18-11	DATE	
			11-18-11	PLANS APPROVAL DATE	
REGISTERED CIVIL ENGINEER No. C73123 Exp. 12-31-12 CIVIL					

**NOTES:**

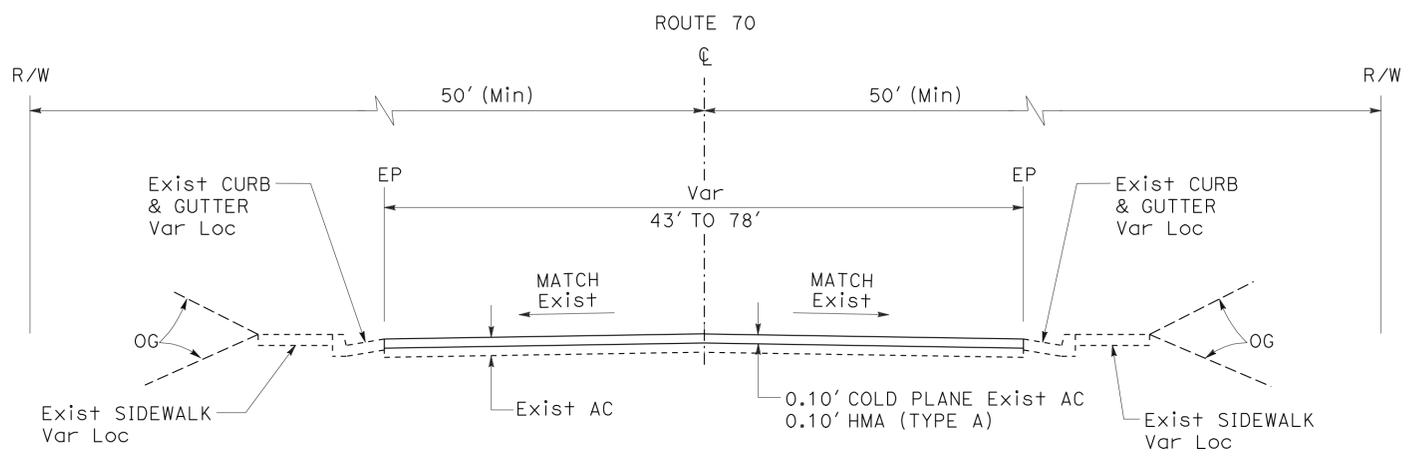
- DIMENSIONS OF THE STRUCTURAL SECTIONS ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
- SUPERELEVATIONS AS SHOWN OR AS DIRECTED BY THE ENGINEER.
- EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THESE PLANS.
- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- DO NOT PAVE BRIDGES.



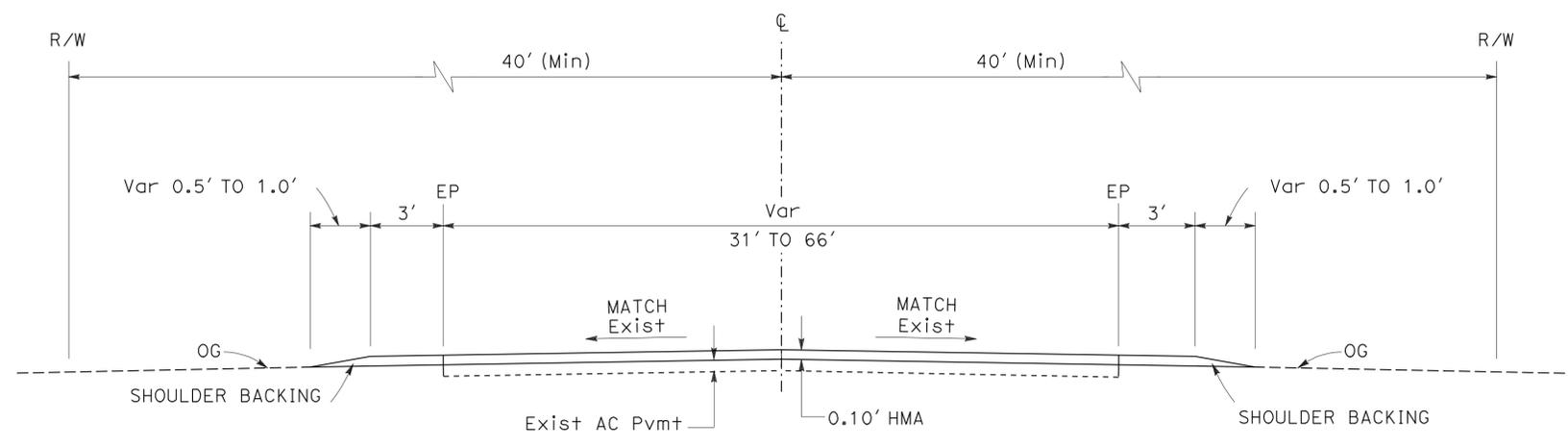
**REPLACE AC SURFACING**  
(TYPICAL BOTH DIRECTIONS)



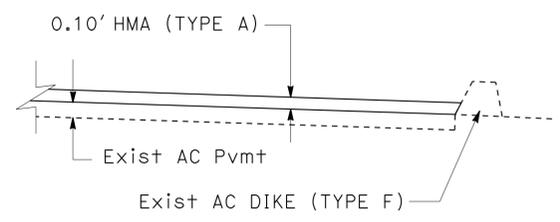
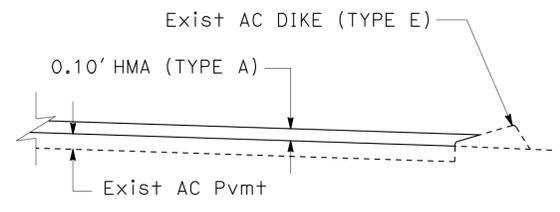
**REPLACE AC SURFACING (0.5' DEEP)**  
(TYPICAL BOTH DIRECTIONS)



**TYPICAL CROSS SECTION**  
LOCATION 1 PM 75.69 TO PM 76.27



**TYPICAL CROSS SECTION**  
LOCATION 1: PM 71.50 TO PM 75.69 AND PM 76.27 TO PM R78.36  
LOCATION 2: PM 12.90 TO 16.40



**DIKE DETAILS**  
(TYPICAL BOTH DIRECTIONS)

**TYPICAL CROSS SECTIONS**  
NO SCALE

X-1

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

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

**NOTES:**

1. LOCATION OF UTILITY AND FACILITY SHOWN ON THESE PLANS ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. OTHER EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THESE PLANS.
2. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT THE DISTRICT OFFICE.
3. DO NOT PLACE PAVEMENT MARKERS WITHIN THE TOWN OF PORTOLA (PM 75.69-76.27).

**LEGEND:**

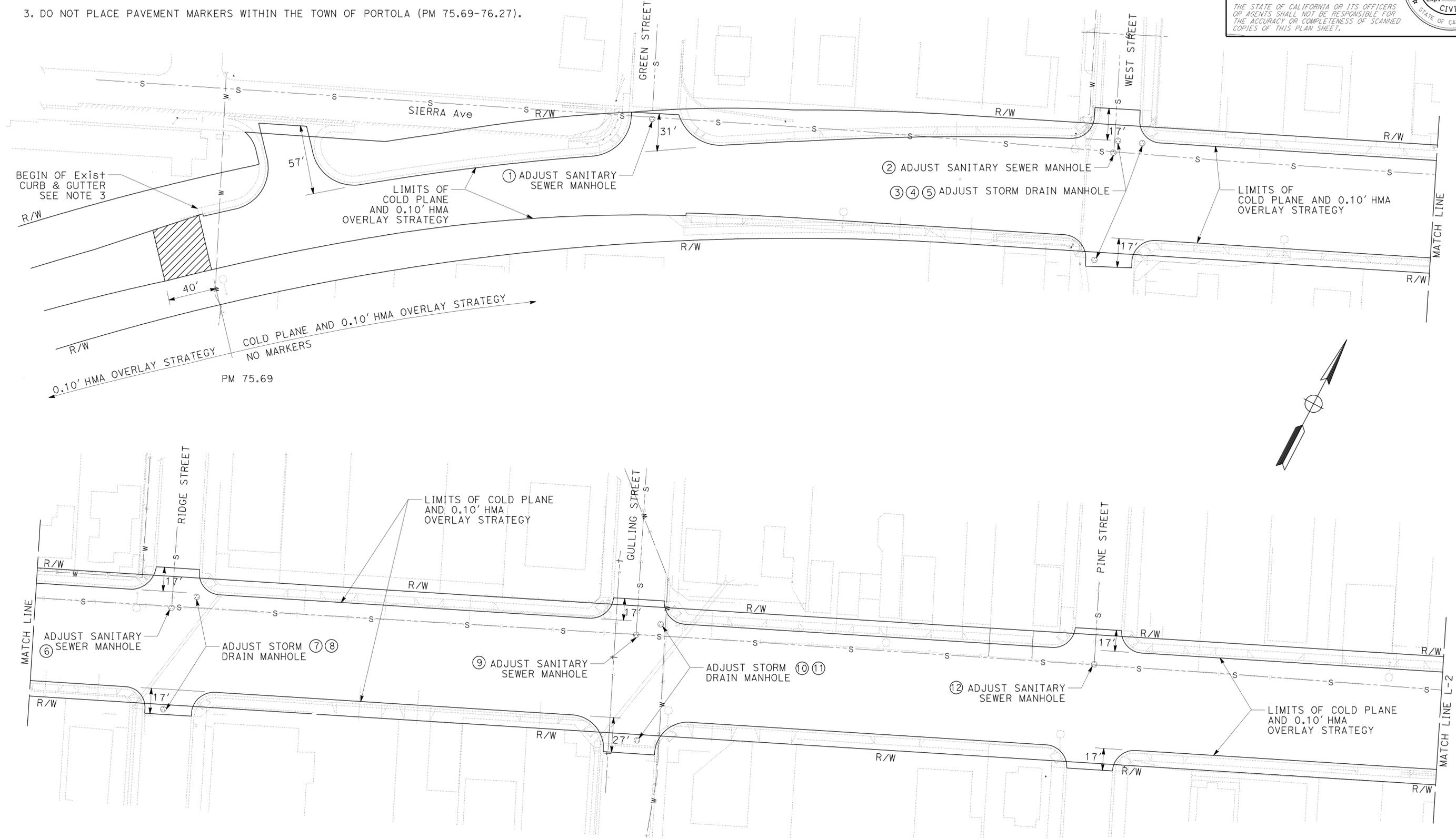
- [Hatched Box] COLD PLANE ASPHALT CONCRETE SURFACING (0.00' TO 0.10')
- [Circle with #] UTILITY LOCATION No.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70,89	71.5/R78.4, 12.9/16.4	3	27

11-18-11  
 REGISTERED CIVIL ENGINEER DATE  
 11-18-11  
 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.



**LAYOUT**  
 NO SCALE **L-1**

LAST REVISION DATE PLOTTED => 29-NOV-2011 10-24-11 TIME PLOTTED => 08:16

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	PIU	70,89	71.5/R78.4, 12.9/16.4	4	27

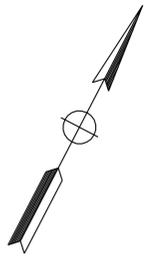
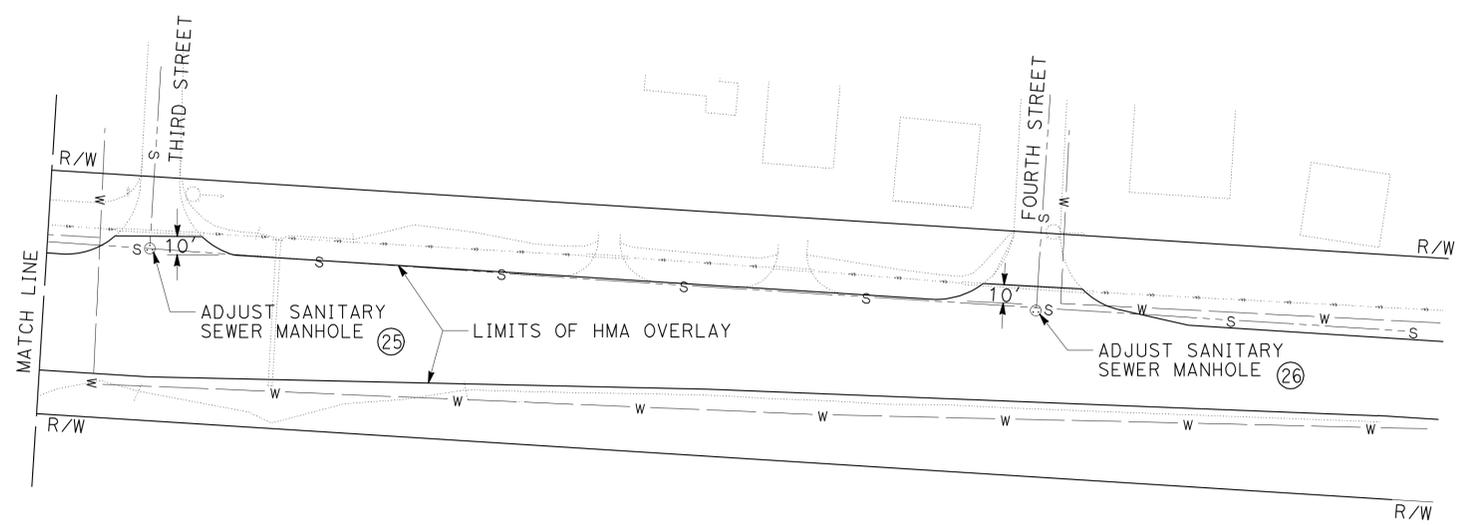
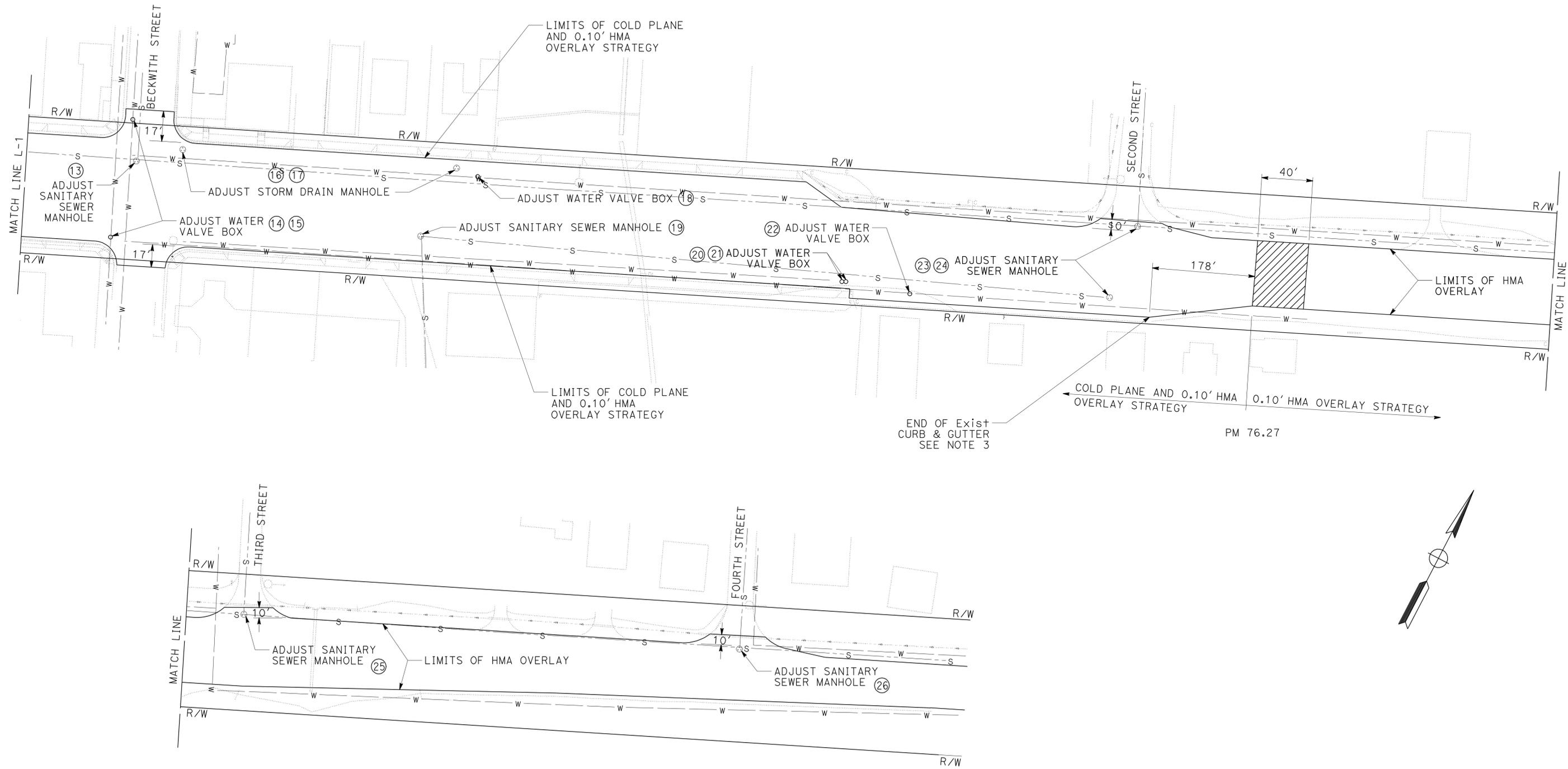
  

<i>William</i>	11-18-11
REGISTERED CIVIL ENGINEER	DATE
11-18-11	
PLANS APPROVAL DATE	

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. LOCATION OF UTILITY AND FACILITY SHOWN ON THESE PLANS ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. OTHER EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THESE PLANS.
2. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT THE DISTRICT OFFICE.
3. DO NOT PLACE PAVEMENT MARKERS WITHIN THE TOWN OF PORTOLA (PM 75.69-76.27).



**LAYOUT**  
NO SCALE **L-2**

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

LAST REVISION: 10-24-11     
 DATE PLOTTED => 29-NOV-2011     
 TIME PLOTTED => 08:16



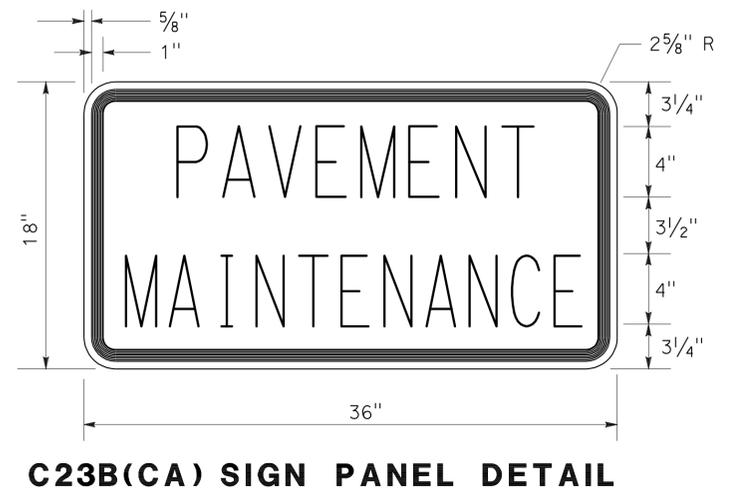


**NOTES:**

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.

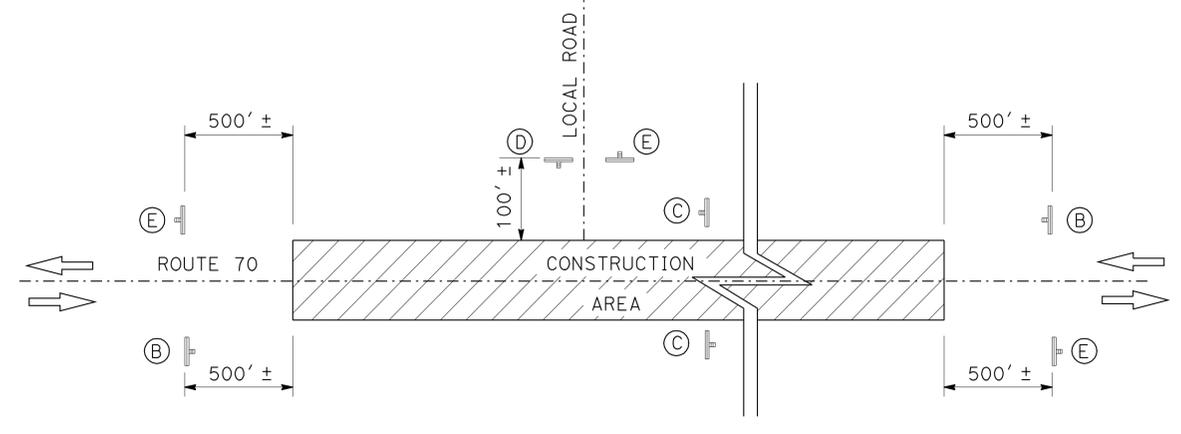
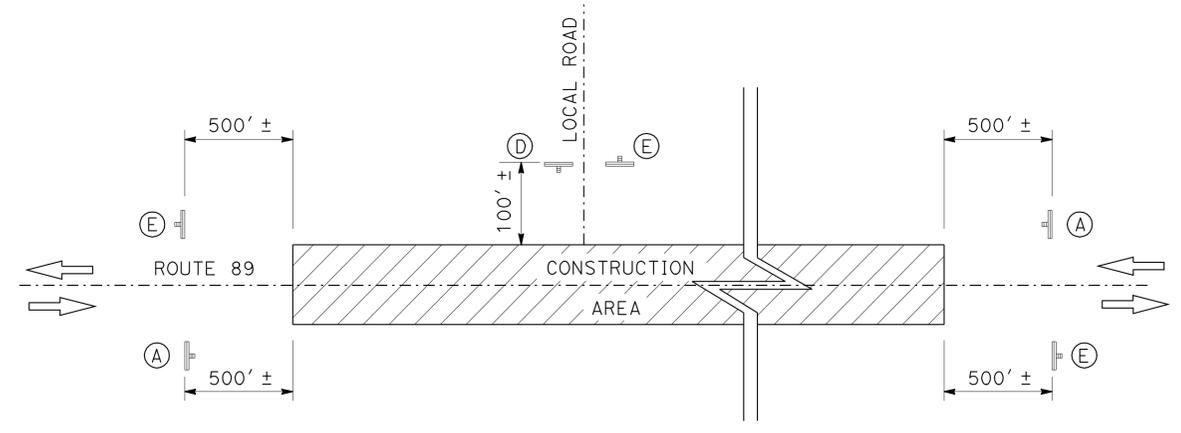
**LEGEND:**

- ↑ ONE POST STATIONARY MOUNTED SIGN
- ← DIRECTION OF TRAFFIC



**ROAD CONNECTIONS**

Loc	Co-Rte	PM	DESCRIPTION	(D)	(E)
1	PIU-70	71.56	ROAD CONNECTION	R+	
		72.16	CLIO ST	R+	
		72.29	ROAD CONNECTION	R+	
		72.62	MITCHELL Ln	R+	
		73.14	CONNECTION TO OLD Hwy	R+	
		73.38	ROAD CONNECTION	L+	
		73.43	WOLF MEADOW	L+	
		73.45	WALLY	L+	
		73.49	ROAD CONNECTION	L+	
		73.57	ROAD CONNECTION	R+	
		73.75	MEADOWRIDGE Ln	R+	
		73.83	ESPINAL Dr	R+ & L+	
		73.96	ROAD CONNECTION	L+	
		74.18	DELLEKER Rd	R+ & L+	R+ & L+
		75.70	CONNECTION TO SIERRA Ave	L+	
		75.77	GREEN ST	L+	
		75.81	WEST ST	R+ & L+	R+ & L+
		75.90	RIDGE ST	R+ & L+	R+ & L+
		75.96	GULLING ST	R+ & L+	R+ & L+
		76.03	PINE ST	R+ & L+	R+ & L+
76.10	BECKWITH ST	R+ & L+	R+ & L+		
76.23	SECOND ST	L+	L+		
76.30	THIRD ST	L+	L+		
76.37	FOURTH ST	L+	L+		
R76.43	ROAD CONNECTION	L+			
R76.54	ROAD CONNECTION	R+			
R76.60	MEADOW WAY	L+			
R76.81	ROAD CONNECTION	R+ & L+			
2	PIU-89	13.63	DIXIE CANYON Rd	L+	
		14.84	ARLINGTON Rd	R+	R+
		15.48	OLD WAGON Rd	L+	
		15.65	L P MILL Rd	R+	
		15.72	CARTER ST	L+	L+
		15.76	ROAD CONNECTION	R+	
		15.77	MAIN ST	L+	L+



**CONSTRUCTION AREA SIGNS (STATIONARY MOUNTED)**

TYPE	CODE	PANEL SIZE	SIGN MESSAGE	NUMBER AND SIZE OF POST	No. OF SIGNS
(A)	W20-1 C23B(CA)	48" x 48" 36" x 18"	ROAD WORK AHEAD PAVEMENT MAINTENANCE	1-4" x 6"	2
(B)	G20-1 C23B(CA)	36" x 18" 36" x 18"	ROAD WORK NEXT XX MILES PAVEMENT MAINTENANCE	1-4" x 4"	2
(C)	G20-1	36" x 18"	ROAD WORK NEXT XX MILES	1-4" x 4"	2
(D)	W20-1	48" x 48"	ROAD WORK AHEAD	1-4" x 6"	43
(E)	G20-2	36" x 18"	END ROAD WORK	1-4" x 4"	22

**CONSTRUCTION AREA SIGNS**

NO SCALE

**CS-1**

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	PIU	70,89	71.5/R78.4, 12.9/16.4	8	27
			11-18-11	DATE	
REGISTERED CIVIL ENGINEER			DATE		
11-18-11			PLANS APPROVAL DATE		
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

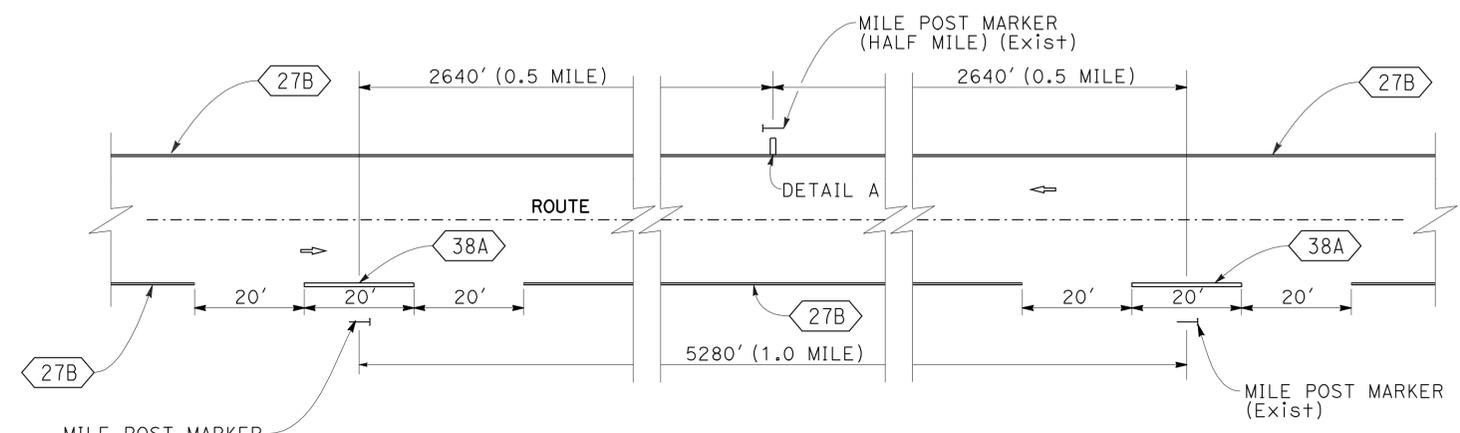


**NOTES:**

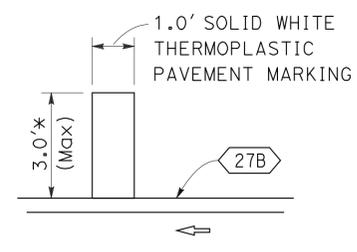
- EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THESE PLANS.
- DO NOT PLACE PAVEMENT MARKERS WITHIN THE TOWN OF PORTOLA (PM 75.69-76.27).

**LEGEND:**

- DIRECTION OF TRAFFIC
- TRAFFIC STRIPE DETAIL No.

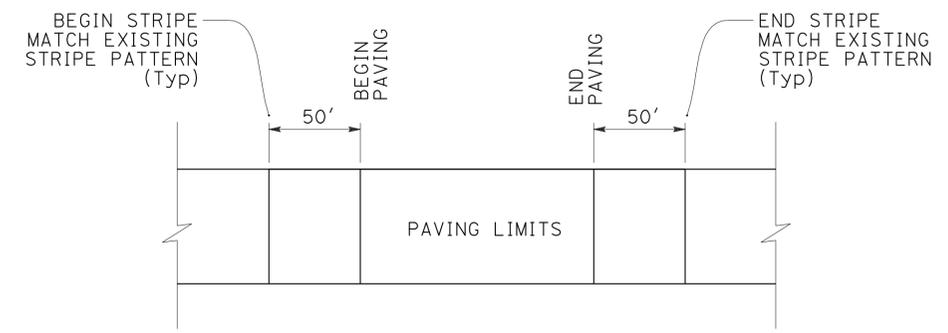


**TYPICAL HALF MILE AND MILE POST STRIPE**  
NO HALF MILE STRIPE WITHIN AN EQUATION

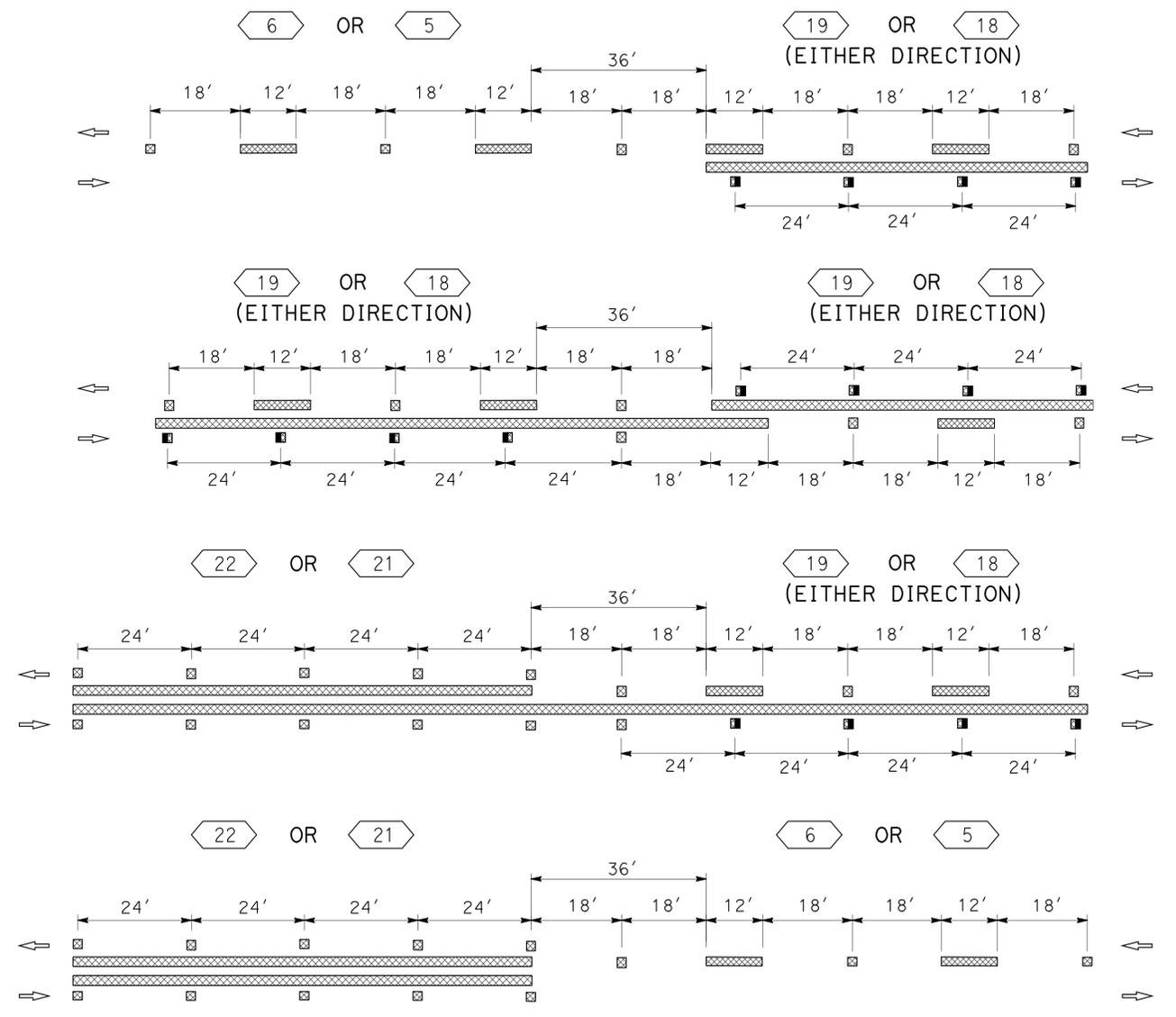


**DETAIL A**

\* ACTUAL LENGTH MAY VARY DUE TO PAVEMENT WIDTH



**TRAFFIC STRIPE MATCH DETAIL**



**TYPICAL STRIPE TRANSITION DETAILS**

**PAVEMENT DELINEATION DETAILS**

NO SCALE

**PDD-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - MAINTENANCE  
 Michael Conner  
 Karlie Smith  
 Lance Brown  
 10-24-11 10:08:16

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	PIU	70,89	71.5/R78.4, 12.9/16.4	9	27

<i>William</i>	11-18-11
REGISTERED CIVIL ENGINEER	DATE
11-18-11	
PLANS APPROVAL DATE	

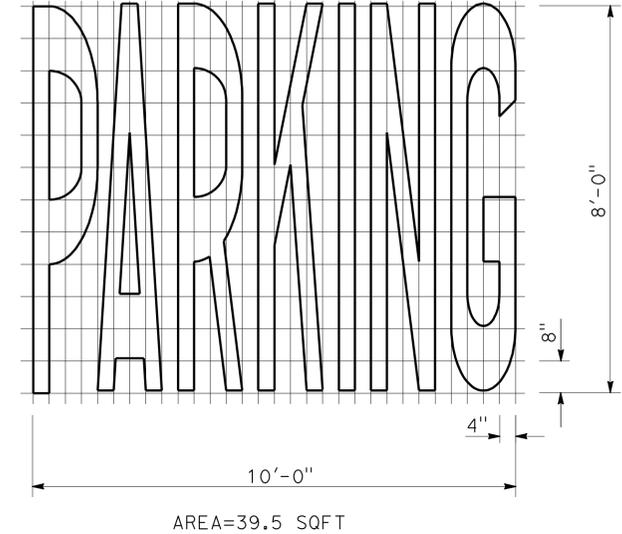
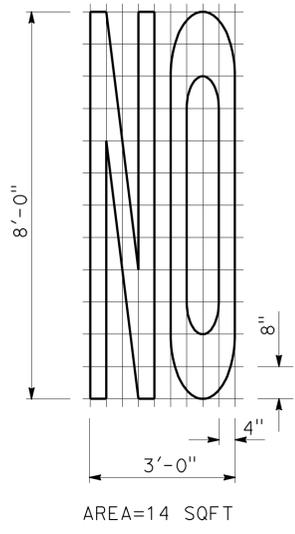
  

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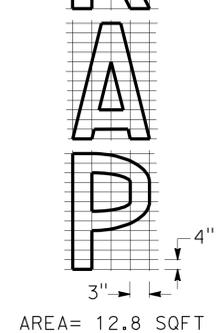
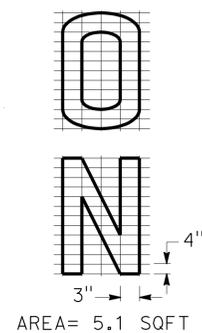


**NOTE:**

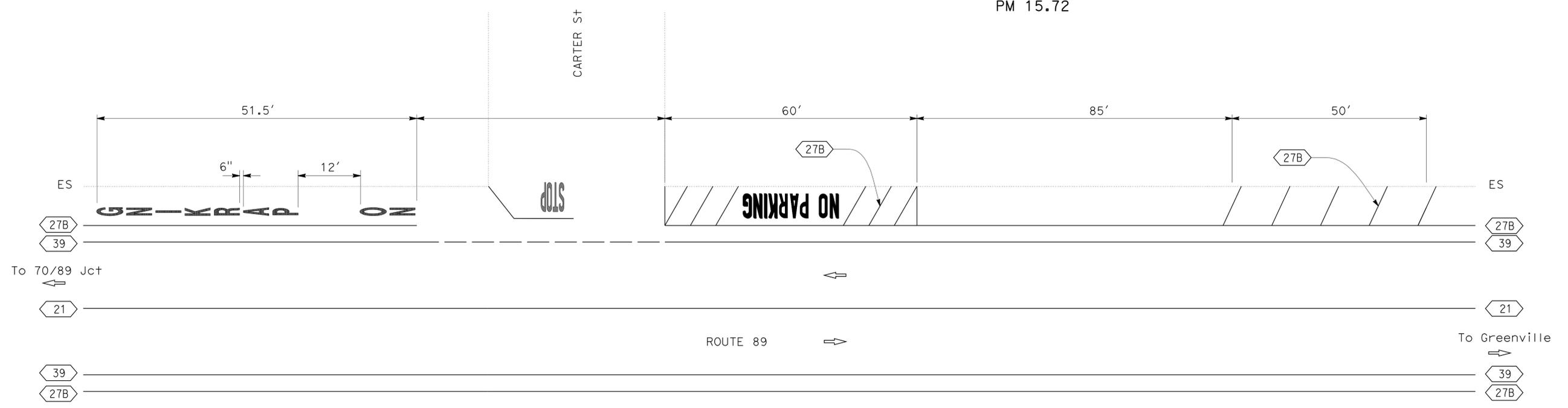
1. EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THESE PLANS.



**NO PARKING DETAIL**  
PM 15.73



**NO PARKING DETAIL**  
PM 15.72



**CRESCENT MILLS**

**PAVEMENT DELINEATION DETAILS**

NO SCALE

**PDD-2**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - MAINTENANCE  
 Michael Conner  
 Karlie Smith  
 Lance Brown  
 10-24-11 10:24:11 AM



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	PIU	70,89	71.5/R78.4, 12.9/16.4	11	27

11-18-11  
 REGISTERED CIVIL ENGINEER DATE  
 11-18-11  
 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.

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

### REMOVE THERMOPLASTIC PAVEMENT MARKING (Cont)

#### NOTES:

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

### REMOVE THERMOPLASTIC PAVEMENT MARKING

Loc	Co-Rte	PM	Lt	Mid	Rt	(N) EA	SQFT	REMARKS
1	PIU-70	71.56			X	1	30.0	ROAD CONNECTION LIMIT LINE
		71.56			X	1	22.0	STOP
		72.16			X	1	33.0	ROAD CONNECTION LIMIT LINE
		72.16			X	1	22.0	STOP
		72.29			X	1	27.0	ROAD CONNECTION LIMIT LINE
		73.14			X	1	36.0	ROAD CONNECTION LIMIT LINE
		73.14			X	1	22.0	STOP
		73.38	X			1	35.0	ROAD CONNECTION LIMIT LINE
		73.43	X			1	37.0	ROAD CONNECTION LIMIT LINE
		73.45	X			1	24.0	ROAD CONNECTION LIMIT LINE
		73.49	X			1	28.0	ROAD CONNECTION LIMIT LINE
		73.57			X	1	27.0	ROAD CONNECTION LIMIT LINE
		73.57			X	1	22.0	STOP
		73.75			X	1	27.0	ROAD CONNECTION LIMIT LINE
		73.75			X	1	22.0	STOP
		73.83	X		X	2	60.0	ROAD CONNECTION LIMIT LINE
		73.83	X		X	2	44.0	STOP
		73.96	X			1	29.0	ROAD CONNECTION LIMIT LINE
		73.96	X			1	22.0	STOP
		74.14			X	1	42.0	TYPE III (R) ARROW
		74.14			X	1	42.0	TYPE III (L) ARROW
		74.18	X		X	2	53.0	ROAD CONNECTION LIMIT LINE
		74.18	X		X	2	44.0	STOP
		74.19			X	1	42.0	TYPE III (R) ARROW
		74.19			X	1	42.0	TYPE III (L) ARROW
		75.70	X			1	21.0	ROAD CONNECTION LIMIT LINE
		75.70	X			1	22.0	STOP
		75.77	X			1	22.0	ROAD CONNECTION LIMIT LINE
		75.77	X			1	22.0	STOP
		75.80		X		2	84.0	TYPE III (L) ARROW
		75.80	X			1	42.0	TYPE VI ARROW
		75.81			X	1	17.0	ROAD CONNECTION LIMIT LINE
		75.81	X		X	2	44.0	STOP
		75.81	X			1	84.0	CROSSWALK
		75.82	X			2	84.0	TYPE VI ARROW
		75.85		X		2	84.0	TYPE III (L) ARROW
		75.85	X			1	42.0	TYPE VI ARROW
		75.90	X		X	2	41.0	ROAD CONNECTION LIMIT LINE
		75.90	X		X	2	44.0	STOP
		75.94		X		2	84.0	TYPE III (L) ARROW
		75.96	X	X	X	4	548.0	CROSSWALK
		75.96	X		X	4	168.0	TYPE III (L) ARROW
		76.00		X		2	84.0	TYPE III (L) ARROW
		76.03	X		X	2	39.0	ROAD CONNECTION LIMIT LINE
		76.03	X		X	2	44.0	STOP
		76.05		X		2	84.0	TYPE III (L) ARROW
		76.08			X	1	42.0	TYPE VI ARROW
SUBTOTAL Loc 1							2580.0	

Loc	Co-Rte	PM	Lt	Mid	Rt	(N) EA	SQFT	REMARKS
1	PIU-70	76.10	X		X	2	38.0	ROAD CONNECTION LIMIT LINE
		76.10	X		X	2	44.0	STOP
		76.10			X	1	42.0	TYPE VI ARROW
		76.12		X		2	84.0	TYPE III (L) ARROW
		76.12			X	1	42.0	TYPE VI ARROW
		76.21		X		2	84.0	TYPE III (L) ARROW
		76.23	X			2	25.0	ROAD CONNECTION LIMIT LINE
		76.23	X			2	44.0	STOP
		76.27		X		2	84.0	TYPE III (L) ARROW
		76.30	X			1	21.0	ROAD CONNECTION LIMIT LINE
		76.30	X			1	22.0	STOP
		76.37	X			1	27.0	ROAD CONNECTION LIMIT LINE
		76.37	X			1	22.0	STOP
		R76.43	X			1	22.0	ROAD CONNECTION LIMIT LINE
		R76.43	X			1	22.0	STOP
		R76.54	X			1	34.0	ROAD CONNECTION LIMIT LINE
		R76.54	X			1	22.0	STOP
		R76.60	X			1	44.0	ROAD CONNECTION LIMIT LINE
		R76.60	X			1	22.0	STOP
		R76.81	X		X	2	112.0	ROAD CONNECTION LIMIT LINE
		R76.81	X		X	3	66.0	STOP
		R76.72			X	1	42.0	TYPE III (R) ARROW
		R76.79			X	1	42.0	TYPE III (R) ARROW
		R76.83	X			1	42.0	TYPE III (R) ARROW
		R76.86	X			1	42.0	TYPE III (R) ARROW
		R77.22	X			1	42.0	TYPE VI ARROW
		R77.26	X			1	42.0	TYPE VI ARROW
		R77.30	X			1	42.0	TYPE VI ARROW
		R78.23			X	1	42.0	TYPE VI ARROW
		R78.27			X	1	42.0	TYPE VI ARROW
		R78.32			X	1	42.0	TYPE VI ARROW
2	PIU-89	13.63	X			1	41.0	ROAD CONNECTION LIMIT LINE
		13.63	X			1	22.0	STOP
		14.84			X	1	45.0	ROAD CONNECTION LIMIT LINE
		14.84			X	1	22.0	STOP
		14.84			X	1	70.0	RAILROAD CROSSING SYMBOL
		15.48	X			1	24.0	ROAD CONNECTION LIMIT LINE
		15.48	X			1	22.0	STOP
		15.65			X	1	14.0	ROAD CONNECTION LIMIT LINE
		15.65			X	1	22.0	STOP
		15.72	X			1	17.9	NO PARKING
		15.72	X			1	21.0	ROAD CONNECTION LIMIT LINE
		15.73	X			1	96.0	DASHED ISLAND
		15.73	X			1	14.0	NO
		15.73	X			1	39.5	PARKING
		15.74	X			1	80.0	DASHED ISLAND
		15.76			X	1	15.0	ROAD CONNECTION LIMIT LINE
		15.77	X			1	50.0	ROAD CONNECTION LIMIT LINE
		15.77	X			2	44.0	STOP
TOTAL Loc 1							3923.0	
TOTAL Loc 2							659.4	
TOTAL							4582.4	

### THERMOPLASTIC TRAFFIC STRIPE (SPRAYABLE)

Loc	Co-Rte	POSTMILE LIMITS	DETAIL 5	DETAIL 6	DETAIL 11	DETAIL 12	DETAIL 18	DETAIL 19	DETAIL 21	DETAIL 22	DETAIL 27B	DETAIL 27C	DETAIL 28	DETAIL 29	DETAIL 31	DETAIL 32	DETAIL 38	DETAIL 38A	DETAIL 39	DETAIL 39A
1	PIU-70	71.50-R78.40	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF
2	PIU-89	12.90-16.40	2957	1320	3591	14,098		3538	11,986	2852	159	21,279	72,442	7287	159	7287	2746	106	1215	1936
SUBTOTAL			2957	1320	3591	14,098	3538	2852	12,145	21,279	109,402	8291	159	7287	2746	106	1215	2016	2007	317
TOTAL			195,326																	

### PAVEMENT DELINEATION QUANTITIES PDQ-2

P:\proj\1\02\3E920\plans\pse\23E920nc002.dgn  
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 MAINTENANCE  
 Et Caltrans  
 REVISIONS: 10-24-11  
 DATE PLOTTED: 10-24-11  
 TIME PLOTTED: 08:16

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70,89	71.5/R78.4, 12.9/16.4	12	27

11-18-11  
REGISTERED CIVIL ENGINEER DATE  
11-18-11  
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.

**NOTES:**

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

**COLD PLANE ASPHALT CONCRETE PAVEMENT**

Loc	Co-Rte	PM	(N)	(N)	AREA	REMARKS		
			LENGTH	WIDTH				
1	Plu-70	71.50	40	24.5	109	MAINLINE CONFORM TAPER BEGIN OF LOCATION 1		
		71.56	10	41	46	ROAD CONNECTION CONFORM - R+		
		72.16	10	55	61	ROAD CONNECTION CONFORM - R+		
		72.29	10	36	40	ROAD CONNECTION CONFORM - R+		
		72.62	10	40	44	ROAD CONNECTION CONFORM - R+		
		73.14	10	65	72	ROAD CONNECTION CONFORM - R+		
		73.38	10	38	42	ROAD CONNECTION CONFORM - L+		
		73.43	10	38	42	ROAD CONNECTION CONFORM - L+		
		73.45	10	26	29	ROAD CONNECTION CONFORM - L+		
		73.49	10	34	38	ROAD CONNECTION CONFORM - L+		
		73.51	10	68	76	ROAD CONNECTION CONFORM - L+		
		73.57	10	30	33	ROAD CONNECTION CONFORM - R+		
		73.57	10	88	98	ROAD CONNECTION CONFORM - L+		
		73.75	10	35	39	ROAD CONNECTION CONFORM - R+		
		73.83	10	36	40	ROAD CONNECTION CONFORM - R+		
		73.83	10	58	64	ROAD CONNECTION CONFORM - L+		
		73.96	10	44	49	ROAD CONNECTION CONFORM - L+		
		73.98	40	42	187	MAINLINE CONFORM TAPER HUMBUG Cr BB		
		74.00	40	42	187	MAINLINE CONFORM TAPER HUMBUG Cr EB		
		74.18	10	52	58	ROAD CONNECTION CONFORM - R+		
		74.18	10	34	38	ROAD CONNECTION CONFORM - L+		
		75.68	40	44	196	MAINLINE CONFORM TAPER BEGIN OF MILL AND FILL LIMITS		
		75.69-76.27	3062	44-76	25,429	MILL AND FILL LIMITS		
		76.27	40	49.5	220	MAINLINE CONFORM TAPER END OF MILL AND FILL LIMITS		
		76.30	10	21	23	ROAD CONNECTION CONFORM - L+		
		76.37	10	25	28	ROAD CONNECTION CONFORM - L+		
		R76.43	10	27	30	ROAD CONNECTION CONFORM - L+		
		R76.54	10	29	32	ROAD CONNECTION CONFORM - L+		
		R76.60	10	59	66	ROAD CONNECTION CONFORM - L+		
		R76.81	10	100	111	ROAD CONNECTION CONFORM - R+		
		R76.81	10	62	69	ROAD CONNECTION CONFORM - L+		
		R78.36	40	51.5	229	MAINLINE CONFORM TAPER END OF LOCATION 1		
		2	Plu-89	12.90	40	27	120	MAINLINE CONFORM TAPER BEGIN OF LOCATION 2
				13.63	10	50	56	ROAD CONNECTION CONFORM - L+
				14.84	10	52	58	ROAD CONNECTION CONFORM - R+
15.48	10			31	34	ROAD CONNECTION CONFORM - L+		
15.65	10			14	16	ROAD CONNECTION CONFORM - R+		
15.65	4			79	35	CONFORM IN FRONT OF POST OFFICE - L+		
15.71	4			327	145	CONFORM IN FRONT OF STORE - L+		
15.76	4			306	136	CONFORM IN FRONT OF STORE - R+		
15.77	10			71	79	ROAD CONNECTION CONFORM - L+		
16.40	40			28	124	MAINLINE CONFORM TAPER END OF LOCATION 2		
TOTAL					28,628			

**ADJUST UTILITY COVER TO GRADE**

Loc	Co-Rte	POST MILE	UTILITY LOCATION	SHEET No.	WATER VALVE BOX	STORM DRAIN MANHOLE	SANITARY SEWER MANHOLE
					EA	EA	EA
1	Plu-70	75.77	①	L-1			1
		75.81	②	L-1			1
		75.81	③	L-1		1	
		75.81	④	L-1		1	
		75.81	⑤	L-1		1	
		75.90	⑥	L-1			1
		75.90	⑦	L-1		1	
		75.90	⑧	L-1		1	
		75.96	⑨	L-1			1
		75.96	⑩	L-1		1	
		75.96	⑪	L-1		1	
		76.03	⑫	L-1			1
		76.10	⑬	L-2			1
		76.10	⑭	L-2	1		
		76.10	⑮	L-2	1		
		76.10	⑯	L-2		1	
		76.16	⑰	L-2		1	
		76.16	⑱	L-2	1		
		76.16	⑲	L-2			1
		76.20	⑳	L-2	1		
		76.20	㉑	L-2	1		
		76.20	㉒	L-2	1		
		76.23	㉓	L-2			1
		76.23	㉔	L-2			1
		76.30	㉕	L-2			1
		76.37	㉖	L-2			1
SUBTOTAL					6	9	11
TOTAL					26		

**METAL BEAM GUARD RAIL**

Loc	Co-Rte	POST MILE	R+/L+	RECONSTRUCT MBGR	ALTERNATIVE FLARED TERMINAL SYSTEM	REMARKS
				LF	EA	
1	Plu-70	75.10	R+	2113	2	STEEL POSTS
		R77.18	L+	745	2	STEEL POSTS
		R77.39	R+	423	2	STEEL POSTS
		R77.37	L+	581	2	STEEL POSTS
		R77.53	R+	793	1	WOOD POSTS
		R77.74	R+	1215	1	WOOD POSTS
		R77.83	L+	634		STEEL POSTS
		R78.13	R+	951	2	STEEL POSTS
		2	Plu-89	13.72	R+	1130
TOTAL				8585	13	

**SUMMARY OF QUANTITIES**

Q-1

P:\proj\1102\3E920\plans\pse\23E920pa001.dgn

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

LAST REVISION DATE PLOTTED => 29-NOV-2011  
10-24-11 TIME PLOTTED => 08:16

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	PIU	70,89	71.5/R78.4, 12.9/16.4	13	27

11-18-11  
 REGISTERED CIVIL ENGINEER DATE  
 11-18-11  
 PLANS APPROVAL DATE

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**NOTES:**

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

**ROADWAY QUANTITY SUMMARY**

Loc	Co-Rte	PM LIMITS	(N) LENGTH	(N) WIDTH	HMA	SHOULDER BACKING	TACK COAT
		PM - PM	LF	LF	TON	TON	TON
1	PIU-70	71.50-72.00	2640	24.5-27.0	11,961	2490	54
		72.00-72.50	2640	27.0-23.5			
		72.50-72.69	1003	23.5-24.5			
		72.69-72.71	106	24.5-39.5			
		72.71-73.00	1531	39.5-40.5			
		73.00-73.50	2640	40.5-30.5			
		73.50-73.75	1320	30.5-31.0			
		73.75-73.87	634	31.0-42.0			
		73.87-74.01	739	42.0-34.0			
		74.01-74.09	422	34.0-35.0			
		74.09-74.18	475	35.0-56.5			
		74.18-74.36	950	56.5-32.5			
		74.36-75.64	6758	32.5-33.5			
		75.64-75.69	264	47.0-44.0			
		75.69-75.78	475	44.0-53.0			
		75.78-75.81	158	53.0-76.0			
		75.81-75.92	581	76.0			
		75.92-76.05	686	76.0			
		76.05-76.19	739	76.0			
		76.19-76.21	106	76.0-57.0			
		76.21-76.24	158	57.0-64.5			
		76.24-76.27	158	64.5-49.5			
		76.27-76.38	581	49.5-35.5			
		76.38-76.48	528	35.5-37.0			
		R76.48-R76.49	53	37.0-42.0			
		R76.49-R76.60	581	42.0-40.0			
		R76.60-R76.74	739	40.0			
		R76.74-R76.76	106	40.0-56.0			
		R76.76-R77.00	1267	56.0-50.0			
		R77.00-R77.50	2640	50.0-61.0			
R77.50-R78.00	2640	61.0					
R78.00-R78.32	1690	61.0-60.0					
R78.32-R78.36	211	60.0-51.5					
ROAD CONNECTIONS							
HMA DIKE (* SEE TABLE FOR PM LIMITS)					22		
2	PIU-89	12.90-12.96	317	27.0	4073	1252	18
		12.96-12.97	53	27.0-42.0			
		12.97-13.05	422	42.0			
		13.05-13.06	53	42.0-25.0			
		13.06-13.22	845	25.0			
		13.22-13.23	53	25.0-36.0			
		13.23-13.30	370	36.0-37.0			
		13.30-13.31	53	37.0-26.0			
		13.31-13.69	2006	26.0			
		13.69-13.95	1373	26.0-24.0			
		13.95-14.00	264	24.0-29.5			
		14.00-14.21	1109	29.5-25.0			
		14.21-14.50	1531	25.0-25.5			
		14.50-14.84	1795	25.5			
		14.84-15.09	1320	25.5-26.0			
		15.09-15.46	1954	26.0			
		15.46-15.48	106	26.0-36.0			
		15.48-15.65	898	36.0-46.0			
		15.65-15.77	634	46.0			
		15.77-15.81	211	46.0-39.0			
		15.81-16.00	1003	26.0-27.5			
		16.00-16.09	475	27.5-26.0			
		16.09-16.40	1637	26.0-28.0			
ROAD CONNECTIONS							
TOTAL					16,056	3742	72

**PLACE HMA DIKE (TYPE F)**

Co-Rte	POSTMILE LIMITS	SIDE	LENGTH
PIU-70	R77.39	R+	423
	R77.74	R+	1162
TOTAL			1585

**REMOVE ASPHALT CONCRETE DIKE**

Co-Rte	POSTMILE LIMITS	SIDE	LENGTH
PIU-70	R77.39-R77.47	R+	423
	R77.74-R77.96	R+	1162
TOTAL			1585

**REPLACE ASPHALT CONCRETE SURFACING**

Loc	Co-Rte	PM LIMITS	(N) Approx No. OF DIGOUTS	(N) Avg LENGTH	(N) WIDTH	(N) DEPTH	CY
				LF	LF	LF	
1	PIU-70	71.50-72.00	12	100	4	0.33	59
		71.50-72.00	6	100	4	0.50	45
		72.00-73.00	20	100	4	0.33	98
		72.00-73.00	10	100	4	0.50	75
		73.00-74.00	20	100	4	0.33	98
		73.00-74.00	2	100	4	0.50	15
		74.00-75.00	20	100	4	0.33	98
		74.00-75.00	8	100	4	0.50	60
		75.00-75.69	15	100	4	0.33	74
		75.00-75.69	4	100	4	0.50	30
		76.24-R77.00	15	100	4	0.33	74
		R77.00-R78.00	20	100	4	0.33	98
		R78.00-R78.36	10	100	4	0.33	49
		2	PIU-89	12.90-14.00	10	100	4
12.90-14.00	5			100	4	0.50	38
14.00-15.00	10			100	4	0.33	49
14.00-15.00	4			100	4	0.50	30
15.00-16.00	10			100	4	0.33	49
15.00-16.00	4			100	4	0.50	30
16.00-16.40	10			100	4	0.33	49
TOTAL							1197

**SUMMARY OF QUANTITIES**

**Q-2**

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** ELECTRICAL DESIGN  
 FUNCTIONAL SUPERVISOR: ROB STINGER  
 CALCULATED/DESIGNED BY: [blank]  
 CHECKED BY: [blank]  
 ARTURO ROBLES  
 KAREN CARMO  
 REVISED BY: [blank]  
 DATE REVISED: [blank]

**NOTES:**

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- LOCATION OF UTILITY AND FACILITY SHOWN ON THESE PLANS ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. OTHER EXISTING UTILITIES ARE NOT SHOWN ON THESE PLANS.

**NOTES (THIS SHEET):**

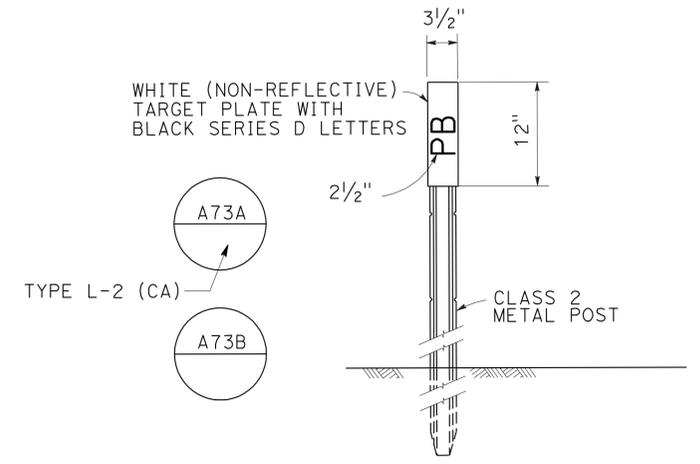
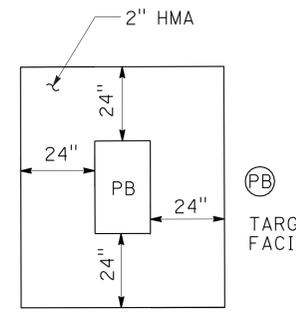
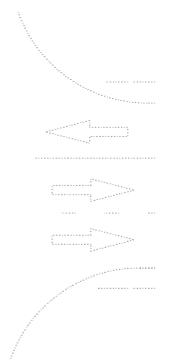
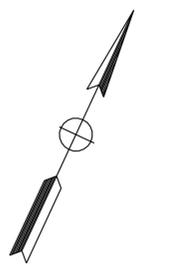
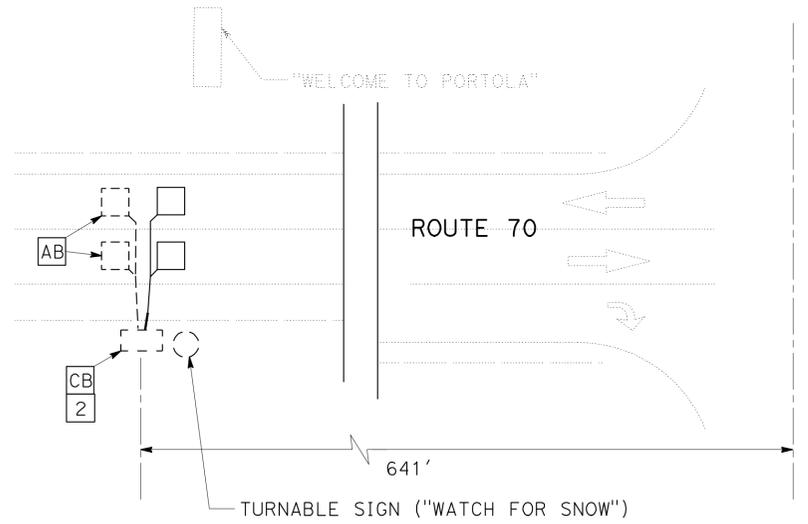
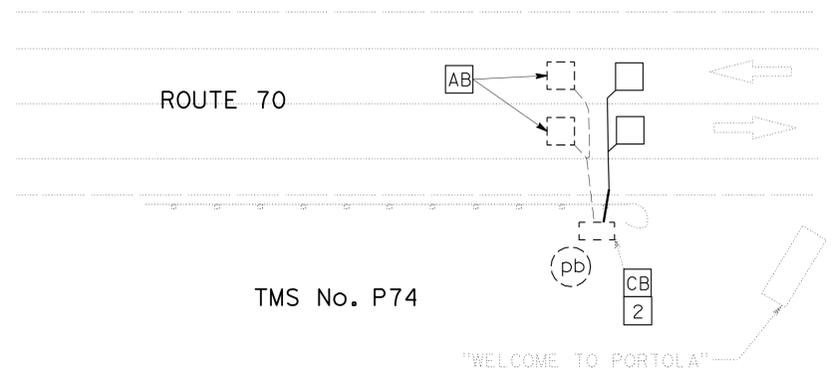
- LOOP LOCATION WILL BE DETERMINED BY THE ENGINEER.
- COIL 10' OF CONDUCTORS IN PULL BOX.

**LEGEND:**

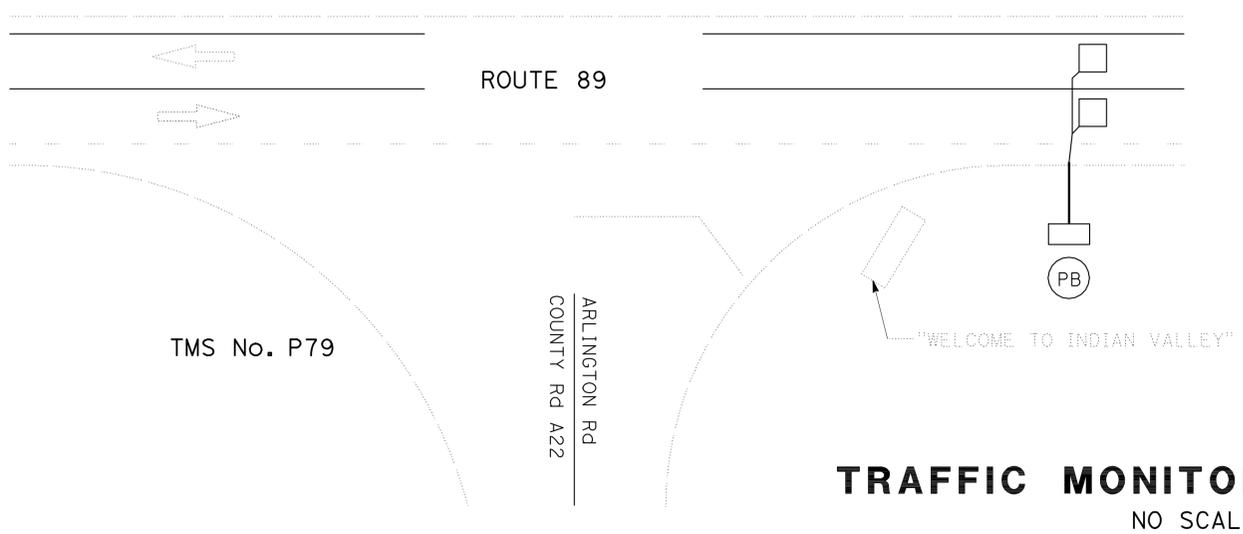
- OBJECT MARKER (TYPE PB)
- Exist OBJECT MARKER (TYPE PB)
- DIRECTION OF TRAVEL
- GATEWAY MONUMENT

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70 89	71.5/R78.4 12.9/16.4	14	27

ART 11-18-11  
 REGISTERED ELECTRICAL ENGINEER DATE  
 11-18-11  
 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: 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.



**TRAFFIC MONITORING STATION**  
NO SCALE

APPROVED FOR ELECTRICAL WORK ONLY

LAST REVISION: 11-18-11 DATE PLOTTED => 29-NOV-2011 TIME PLOTTED => 08:16

P:\proj\11\02\3E920\plans\pse\23e920ua002.dgn  
 STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** ELECTRICAL DESIGN  
 FUNCTIONAL SUPERVISOR: ROB STINGER  
 CALCULATED/DESIGNED BY: ARTURO ROBLES  
 CHECKED BY: KAREN CARMO  
 REVISED BY: DATE REVISIONS:

**NOTES:**

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- LOCATION OF UTILITY AND FACILITY SHOWN ON THESE PLANS ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. OTHER EXISTING UTILITIES ARE NOT SHOWN ON THESE PLANS.

**NOTES (THIS SHEET):**

- MODIFY VIDEO DETECTION ASSIGNMENTS AS SHOWN AND AS DIRECTED BY THE ENGINEER.
- SIGNAL CONTROLLER CABINET AND BATTERY BACKUP SYSTEM.
- ADD 4 DLC.
- LOOP LOCATIONS WILL BE DETERMINED BY THE ENGINEER.
- TRAFFIC MONITORING STATION CABINET. COIL 10' OF CABLES IN THE CABINET.
- REMOVE 10 Exist DLC. INSTALL 5 DLC.
- AB Exist LOOP DETECTORS. INSTALL NEW LOOP DETECTORS.

**LEGEND:**



**ABBREVIATIONS:**

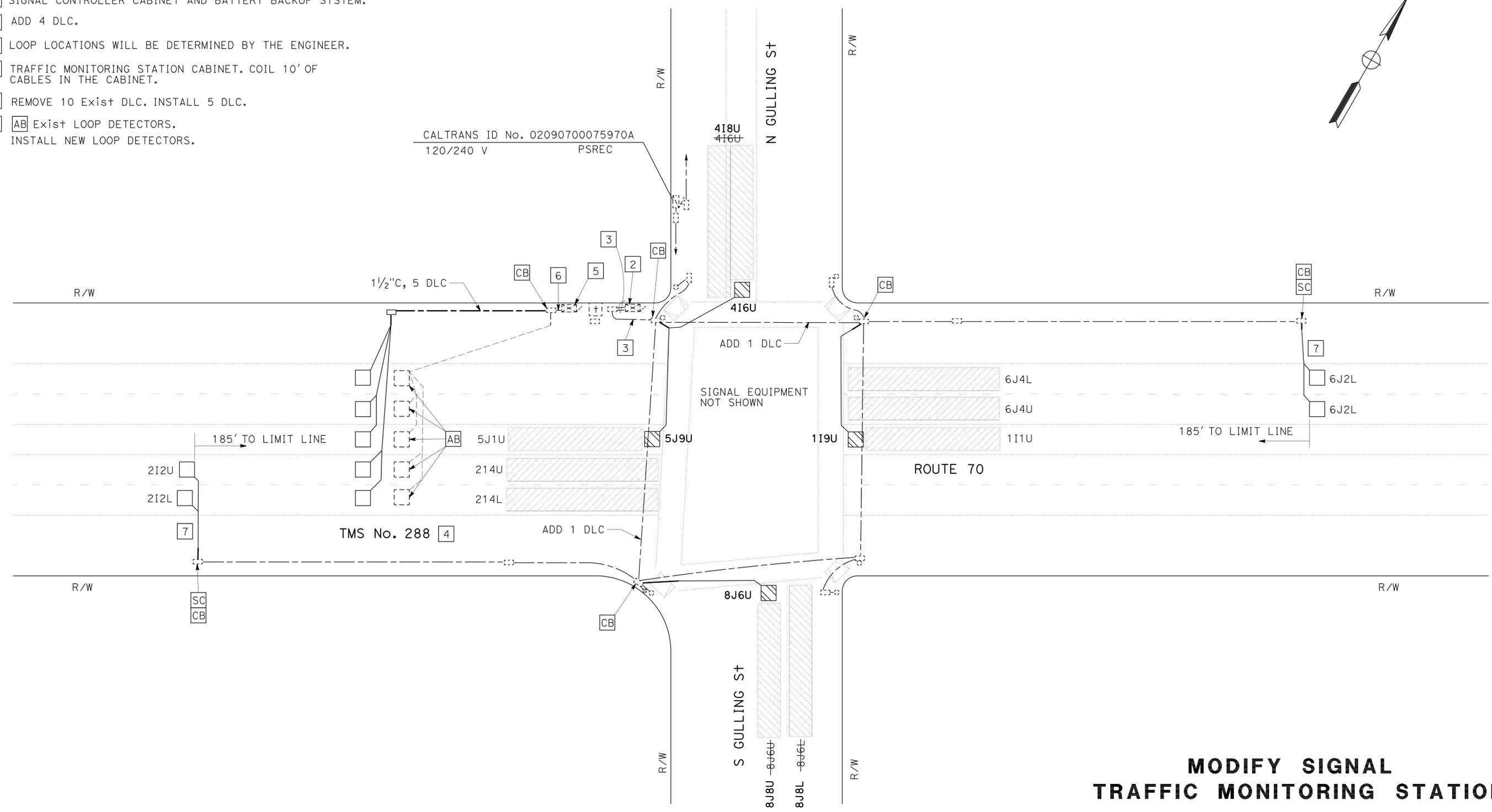
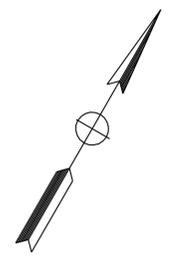
PSREC PLUMAS-SIERRA RURAL ELECTRIC COOPERATIVE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70 89	71.5/R78.4 12.9/16.4	15	27

ART 11-18-11  
 REGISTERED ELECTRICAL ENGINEER DATE  
 11-18-11  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 A.P. ROBLES  
 No. E15293  
 Exp. 3-31-13  
 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.



**MODIFY SIGNAL TRAFFIC MONITORING STATION**

SCALE: 1" = 20'

**E-2**

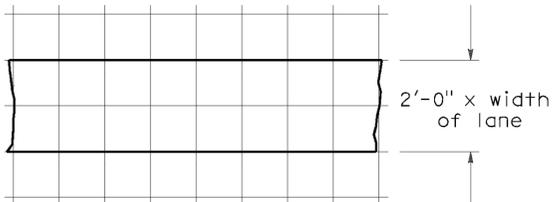
APPROVED FOR ELECTRICAL WORK ONLY

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Plu	70,89	71.5/R78.4, 12.9/16.4	16	27

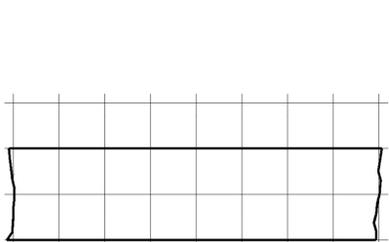
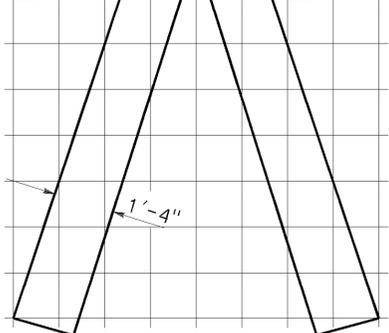
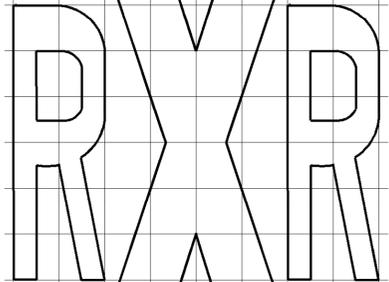
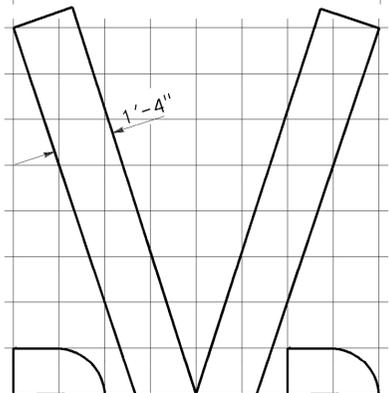
*Donald E. Howe*  
 REGISTERED CIVIL ENGINEER  
 June 6, 2008  
 PLANS APPROVAL DATE

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 11-18-11



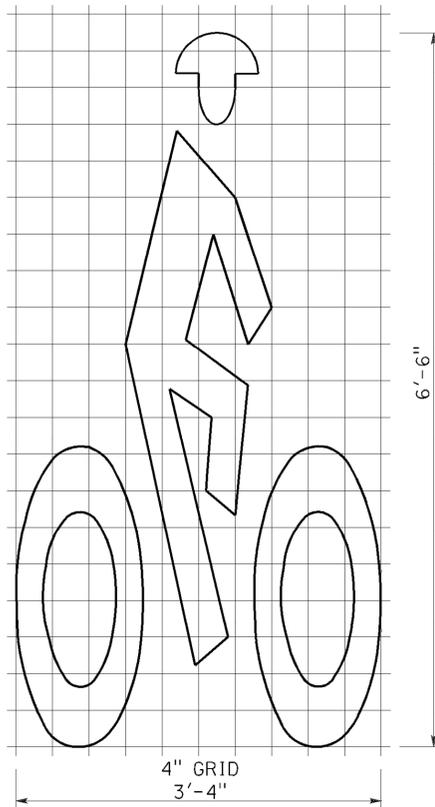
8'-0"



1'-0" GRID  
A=70 sq ft \*

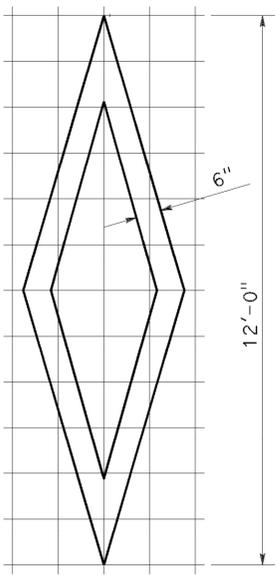
**RAILROAD CROSSING SYMBOL**

\*70 sq ft DOES NOT INCLUDE THE 2'-0" x VARIABLE WIDTH TRANSVERSE LINES.



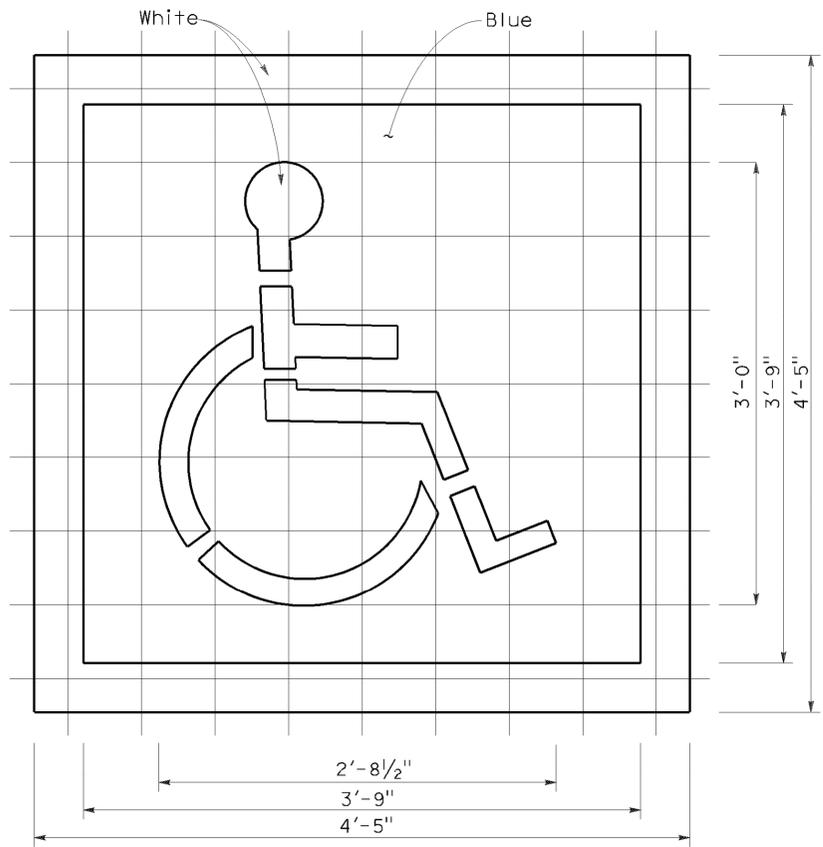
4" GRID  
3'-4"

A=7 sq ft  
**BIKE LANE SYMBOL**



1'-0" GRID  
3'-3"

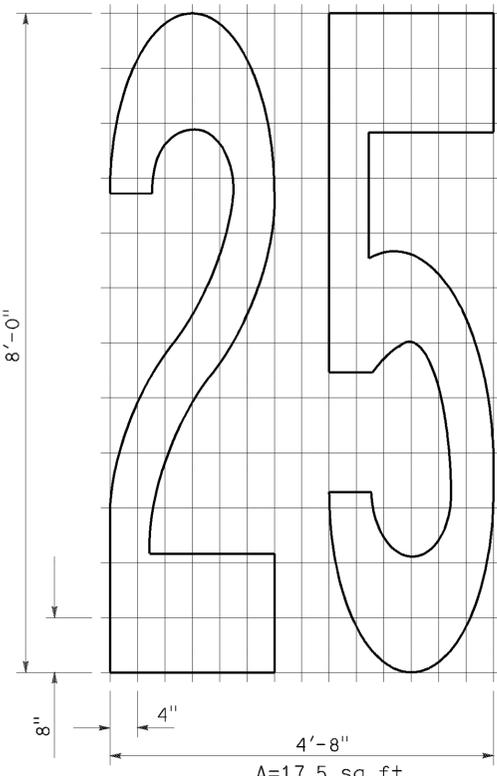
A=11 sq ft  
**DIAMOND SYMBOL**



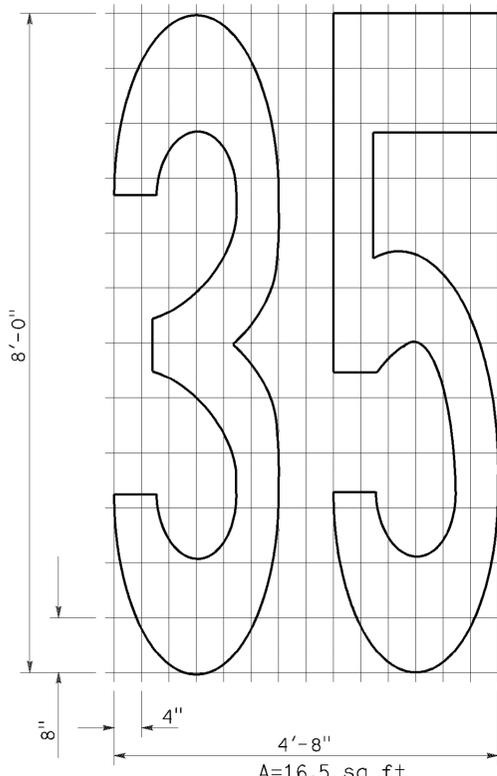
2'-8 1/2"  
3'-9"  
4'-5"

6" GRID  
A (White) = 9 sq ft  
A (Blue) = 14 sq ft

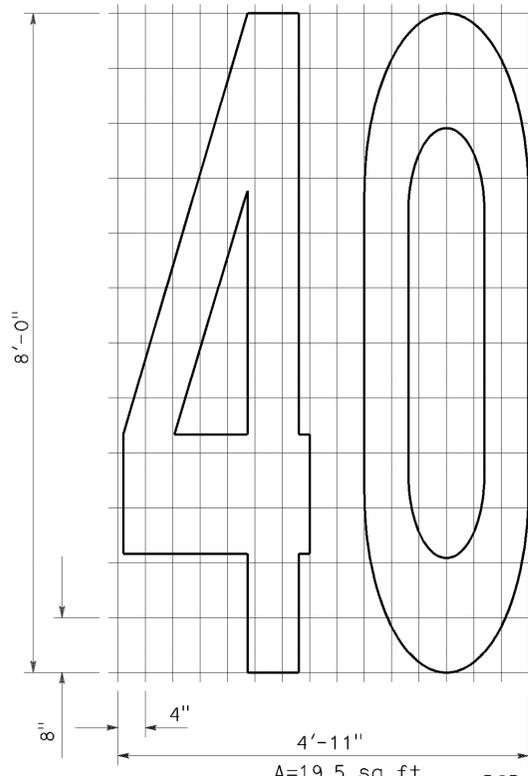
**INTERNATIONAL SYMBOL OF ACCESSIBILITY MARKING**



A=17.5 sq ft

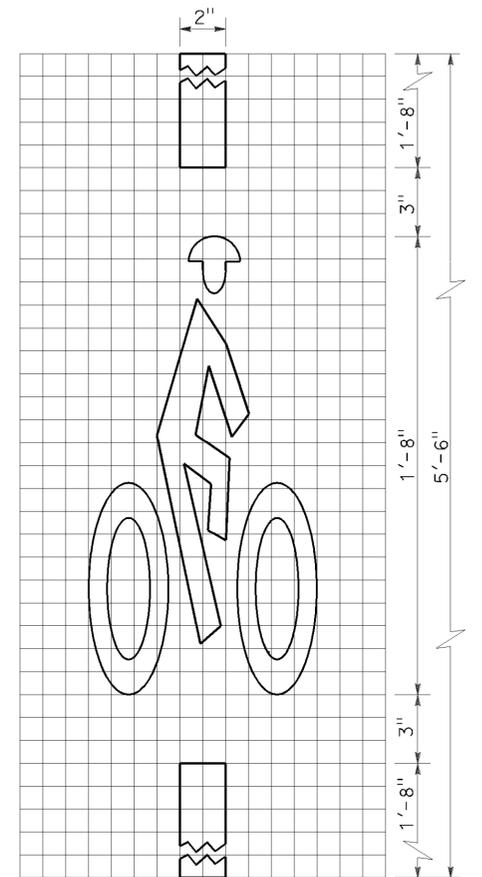


A=16.5 sq ft



A=19.5 sq ft

**NUMERALS**



1" GRID  
10"

A=2 sq ft

**BICYCLE LOOP DETECTOR SYMBOL**

**NOTE:**

1. Minor variations in dimensions may be accepted by the Engineer.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**PAVEMENT MARKINGS SYMBOLS AND NUMERALS**

NO SCALE

RSP A24C DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A24C DATED MAY 1, 2006 - PAGE 11 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP A24C**

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2006 REVISED STANDARD PLAN RSP A24C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Plu	70,89	71.5/R78.4, 12.9/16.4	17	27

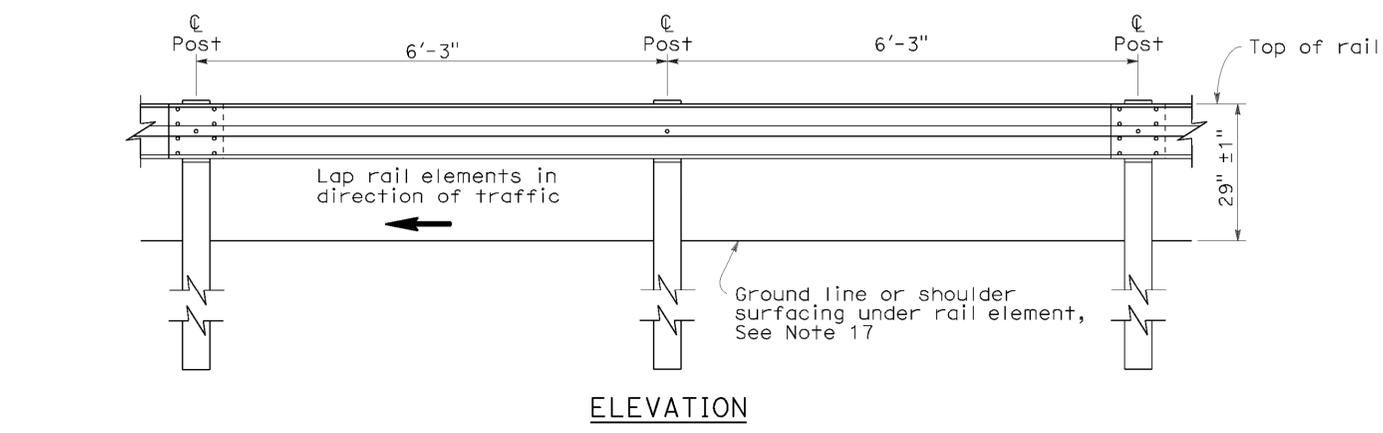
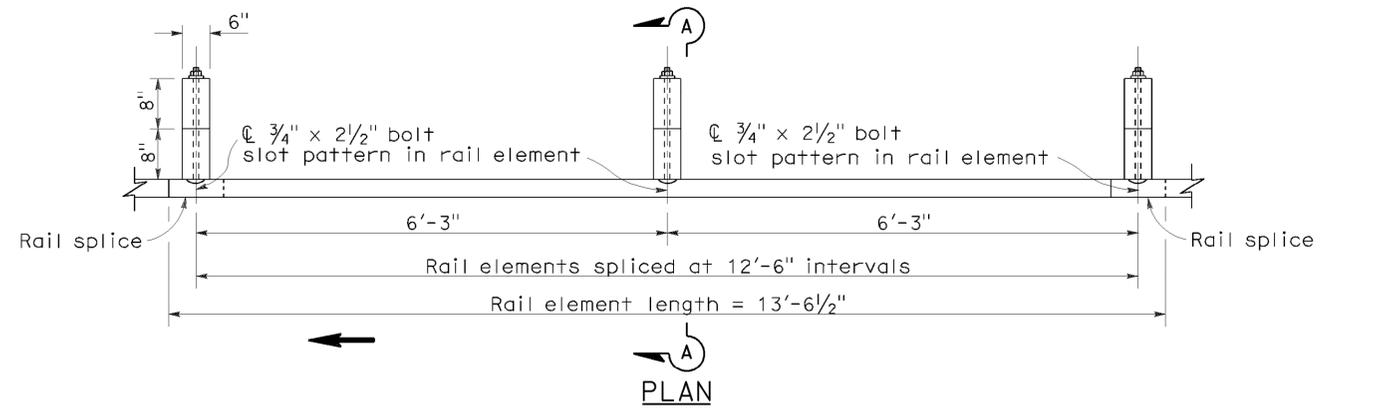
**Randell D. Hiatt**  
REGISTERED CIVIL ENGINEER

May 20, 2011  
PLANS APPROVAL DATE

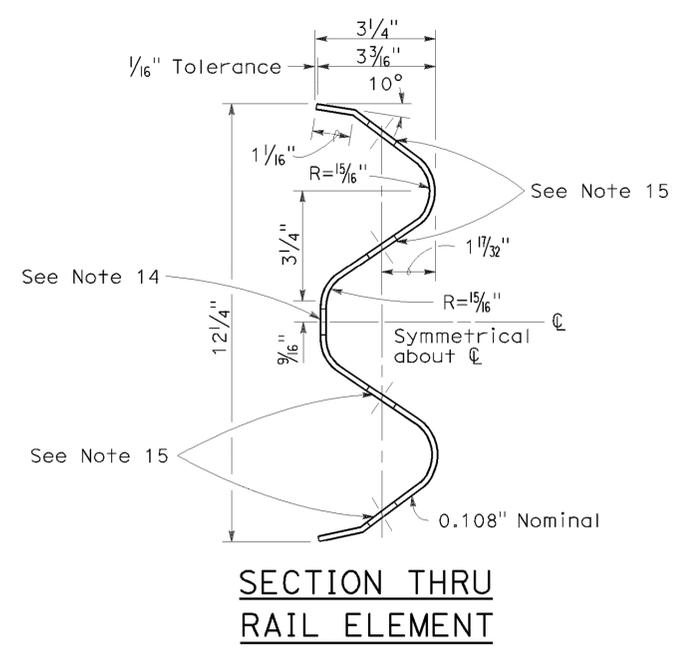
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

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

To accompany plans dated 11-18-11

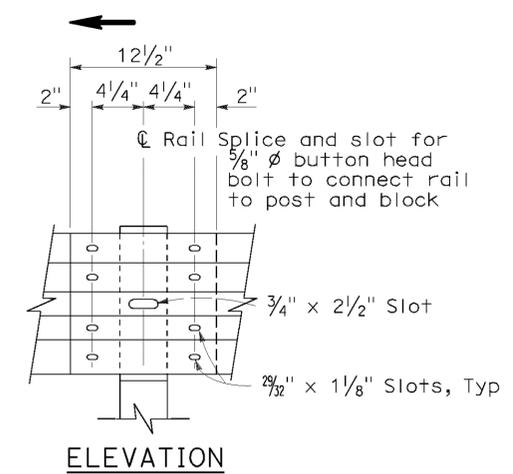


**METAL BEAM GUARD RAILING WITH WOOD POST AND BLOCKS**

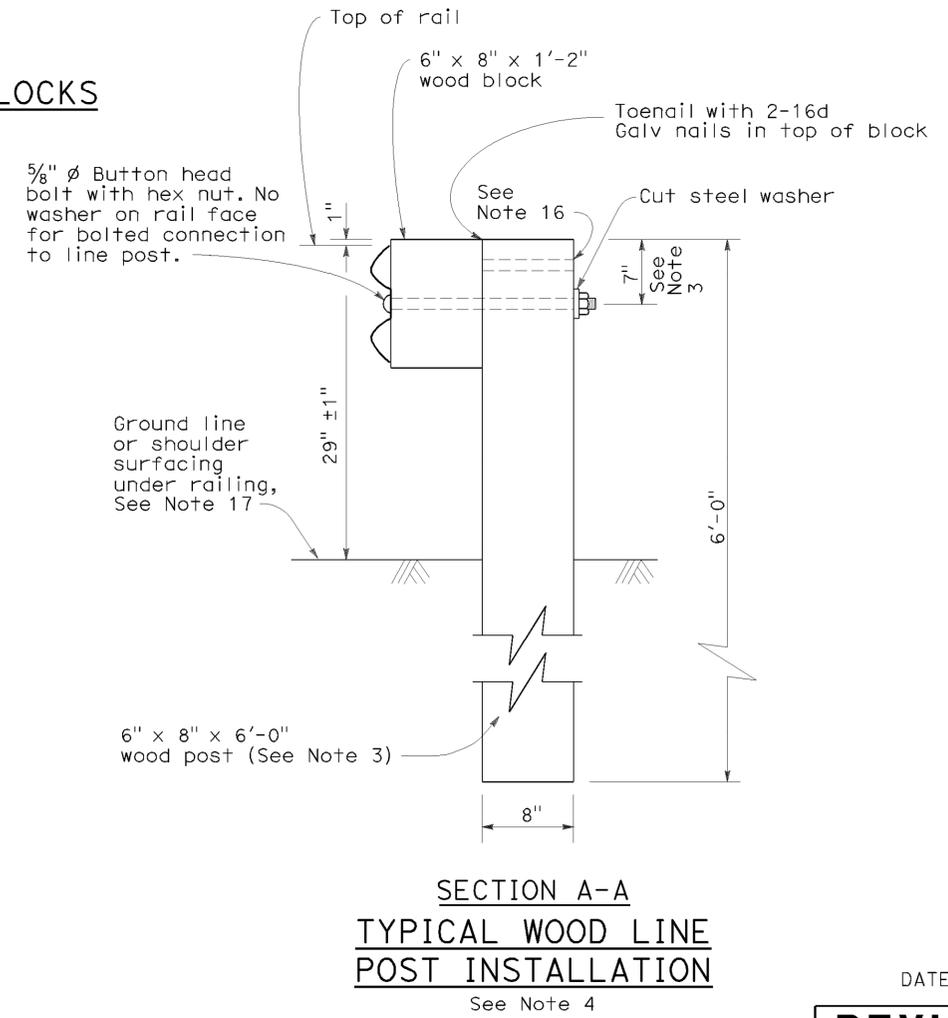


**NOTES:**

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



- Connect the over lapped end of the rail elements with 5/8"  $\phi$  x 1 3/8" button head oval shoulder splice bolts inserted into the 2 3/32" x 1 1/8" slots and bolted together with 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.



**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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2006 REVISED STANDARD PLAN RSP A77A1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70,89	71.5/R78.4, 12.9/16.4	18	27

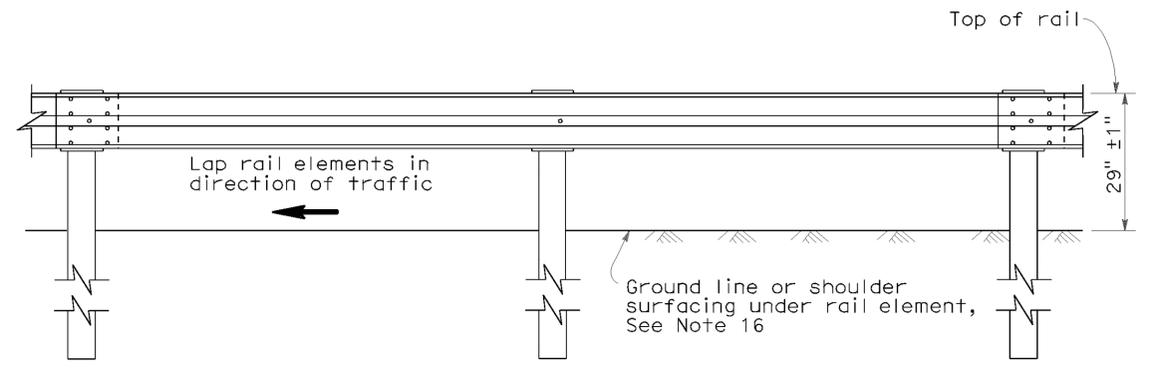
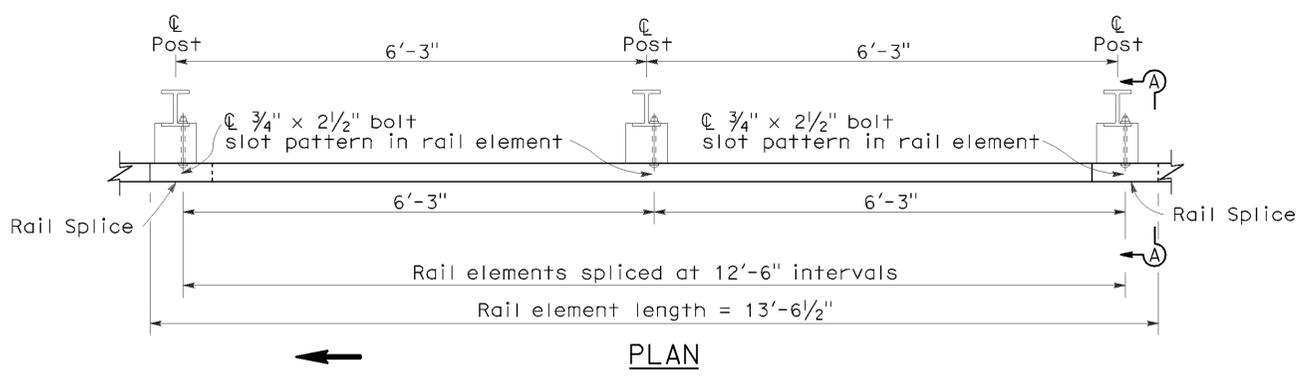
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

May 20, 2011  
PLANS APPROVAL DATE

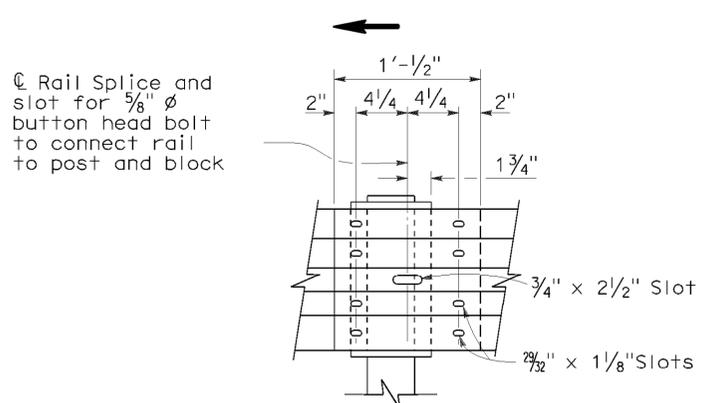
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To accompany plans dated 11-18-11

2006 REVISED STANDARD PLAN RSP A77A2

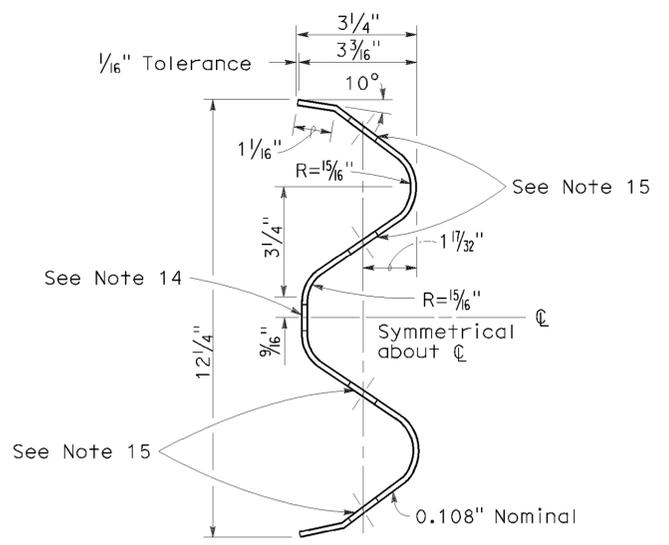


**METAL BEAM GUARD RAILING WITH STEEL POSTS AND NOTCHED WOOD OR NOTCHED RECYCLED PLASTIC BLOCKS**

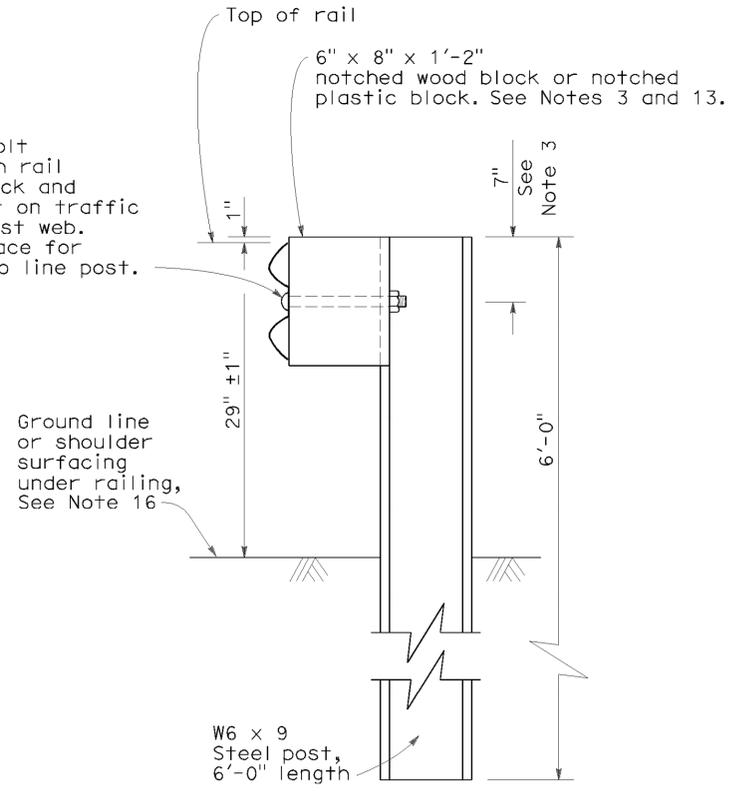


**ELEVATION  
RAIL ELEMENT SPLICE DETAIL**

- 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  
DEPARTMENT OF TRANSPORTATION

**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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To accompany plans dated 11-18-11

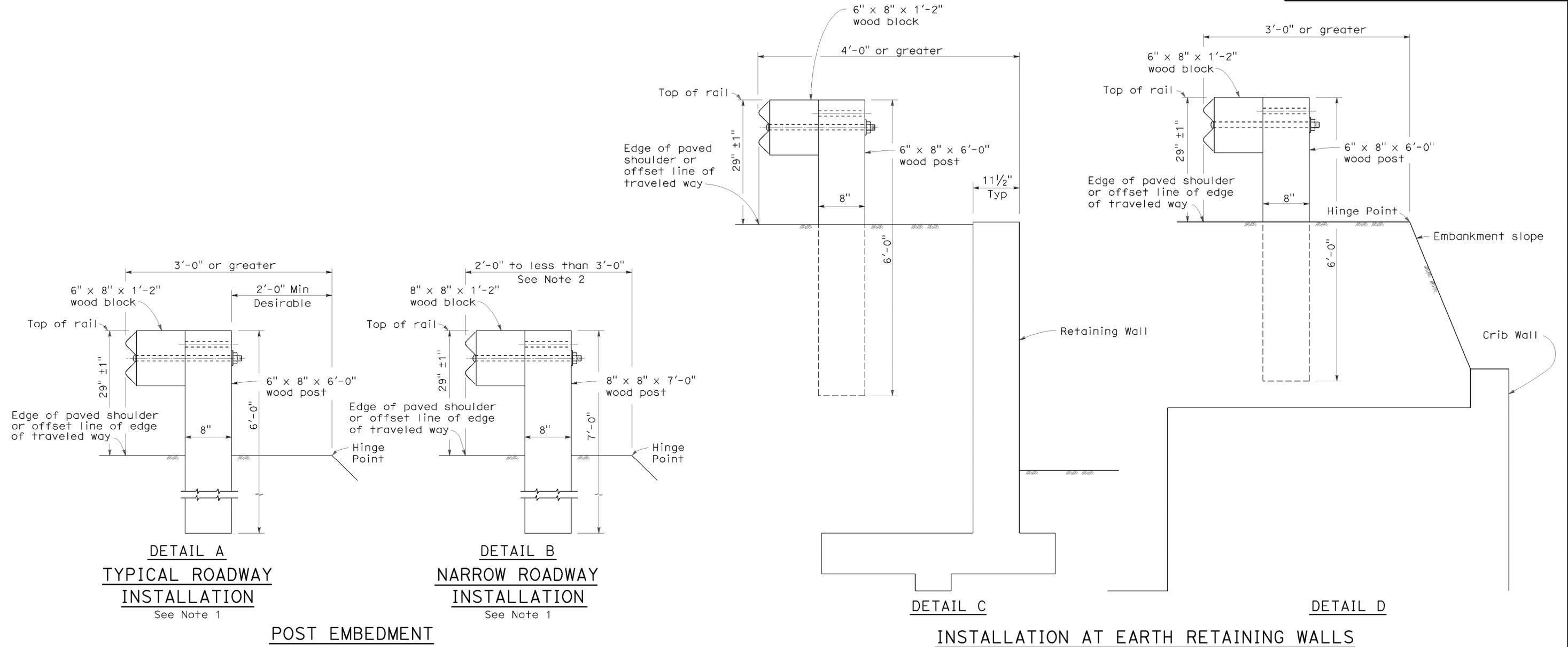
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70,89	71.5/R78.4, 12.9/16.4	19	27

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

May 20, 2011  
PLANS APPROVAL DATE

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

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**NOTES:**

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

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

**REVISED STANDARD PLAN RSP A77C3**

2006 REVISED STANDARD PLAN RSP A77C3

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Piu	70,89	71.5/R78.4, 12.9/16.4	20	27

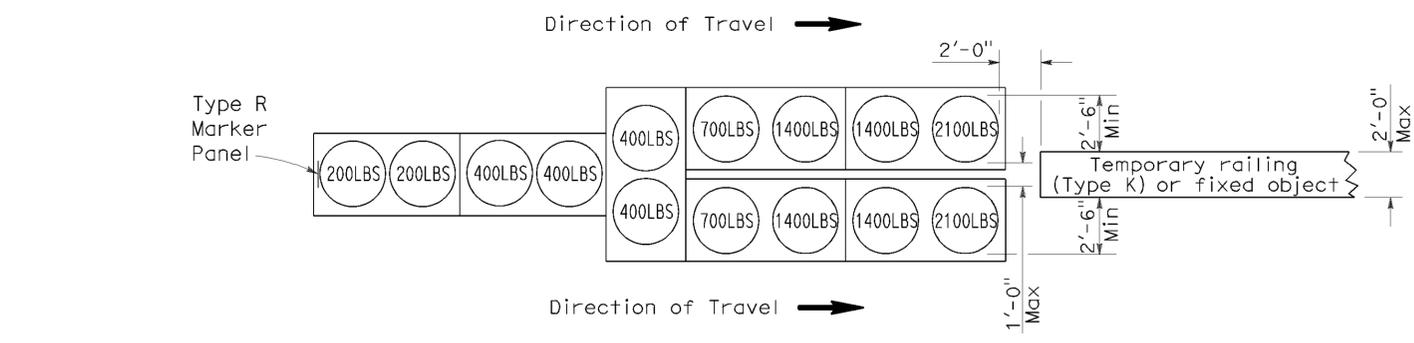
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

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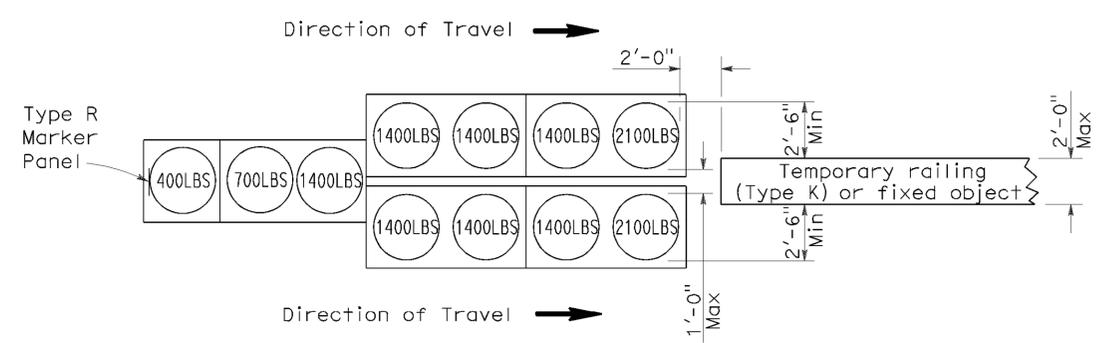
REGISTERED PROFESSIONAL ENGINEER  
No. C50200  
Exp. 6-30-09  
CIVIL  
STATE OF CALIFORNIA

To accompany plans dated 11-18-11



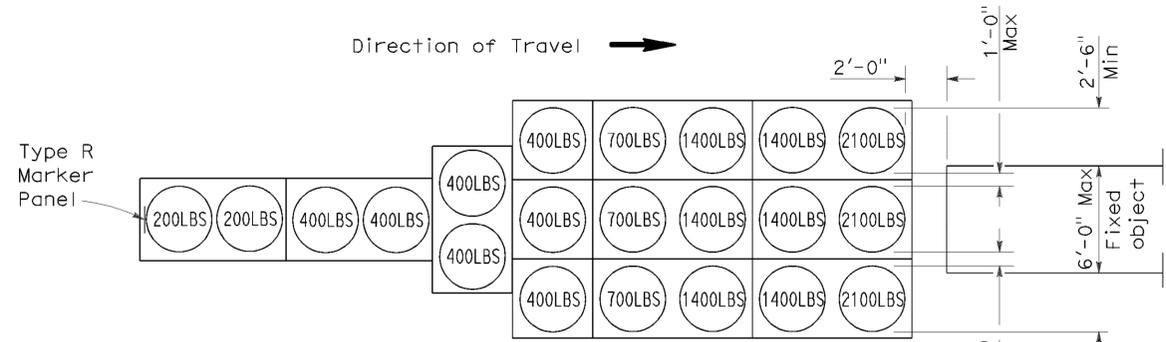
**ARRAY 'TU14'**

Approach speed 45 mph or more



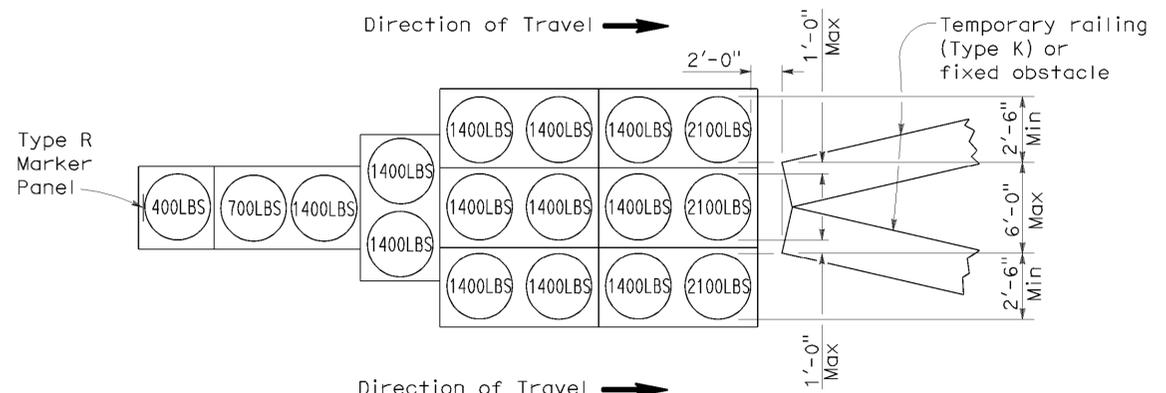
**ARRAY 'TU11'**

Approach speed less than 45 mph



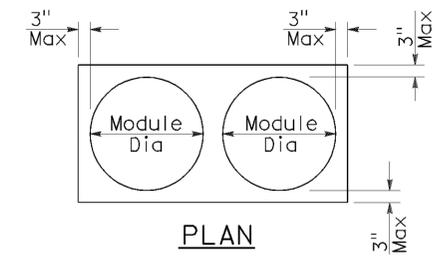
**ARRAY 'TU21'**

Approach speed 45 mph or more

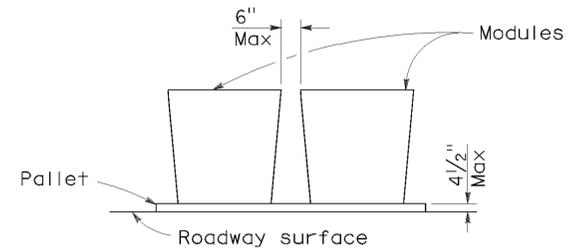


**ARRAY 'TU17'**

Approach speed less than 45 mph



**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**

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2006 REVISED STANDARD PLAN RSP T1A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Piu	70,89	71.5/R78.4, 12.9/16.4	21	27

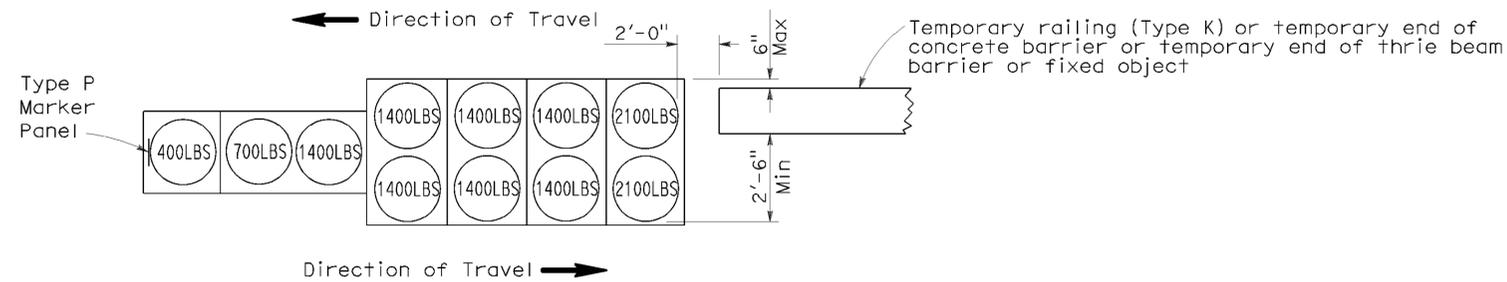
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

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

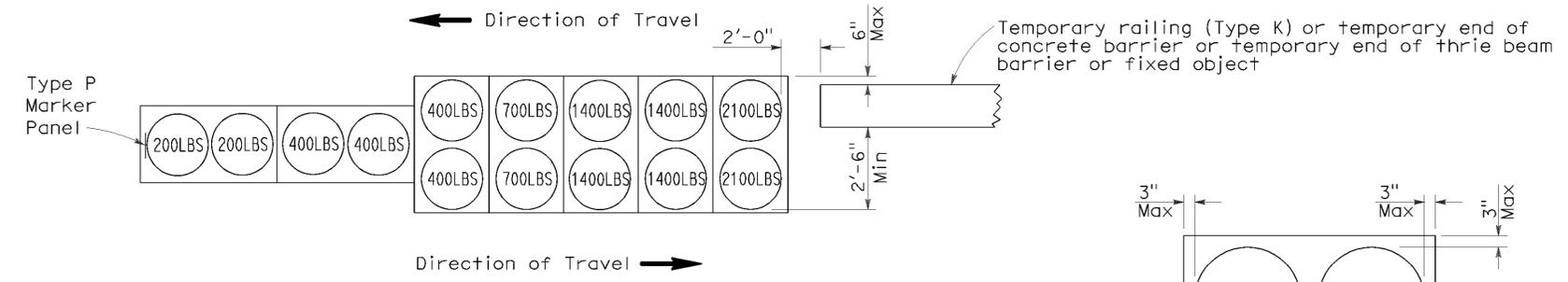
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To accompany plans dated 11-18-11



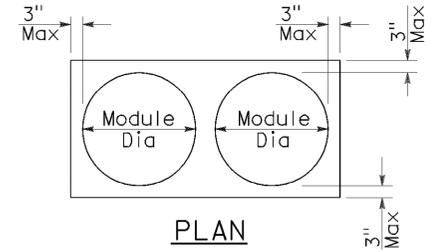
**ARRAY 'TB11'**

Approach speed less than 45 mph

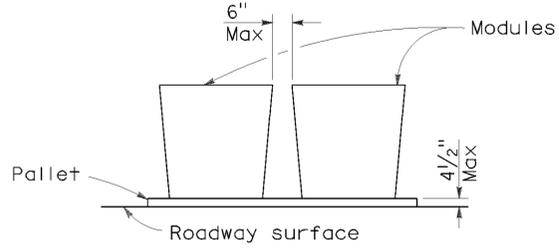


**ARRAY 'TB14'**

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

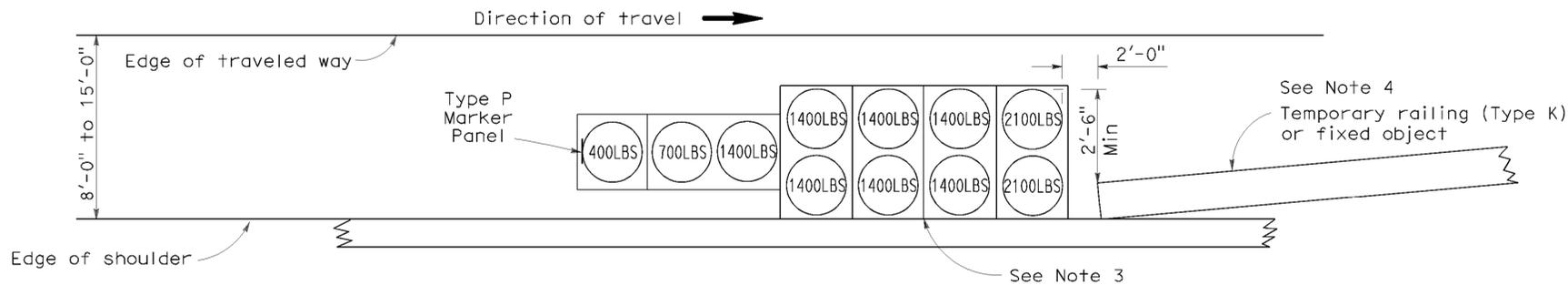
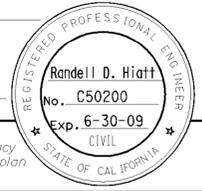
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Plu	70,89	71.5/R78.4, 12.9/16.4	22	27

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

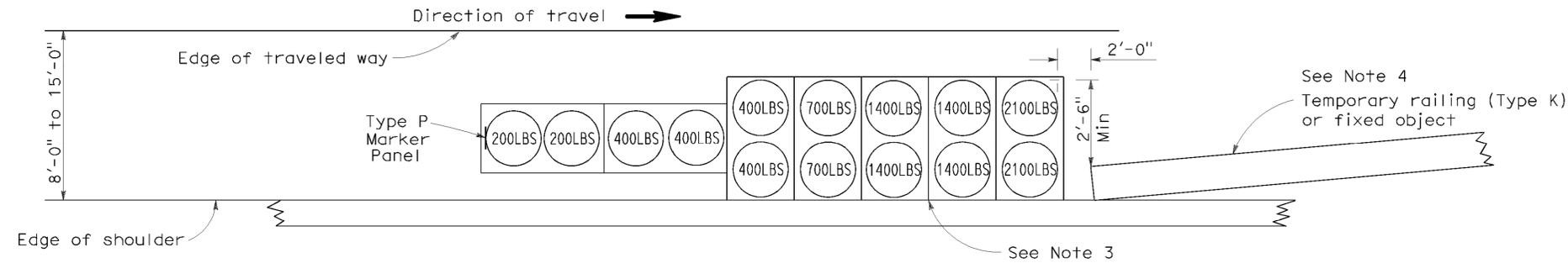
June 6, 2008  
PLANS APPROVAL DATE

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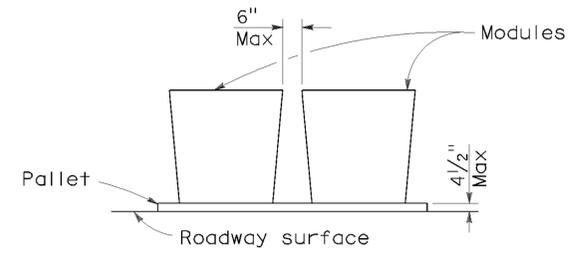
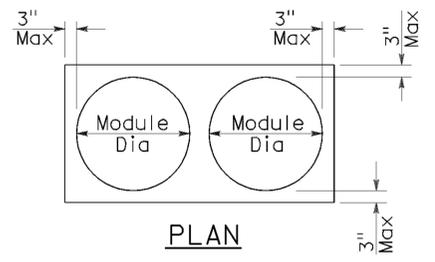
To accompany plans dated 11-18-11



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



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



**CRASH CUSHION PALLET DETAIL**  
See Note 11

**NOTES:**

- (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.

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**

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2006 REVISED STANDARD PLAN RSP T2

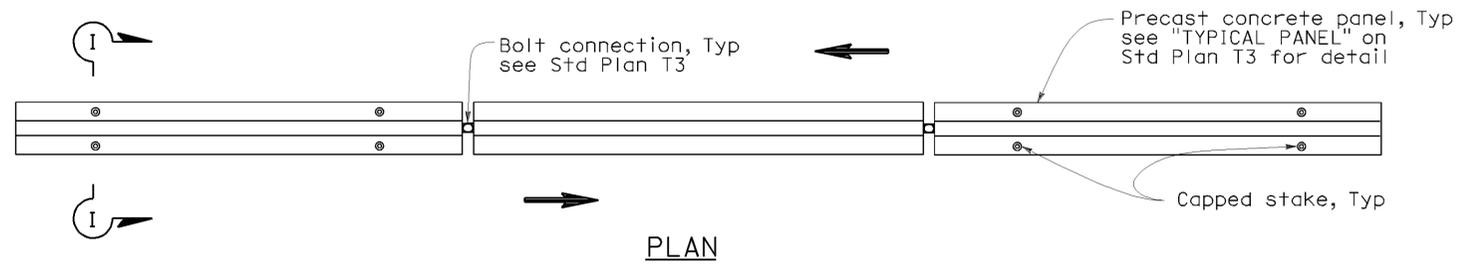
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Plu	70,89	71.5/R78.4, 12.9/16.4	23	27

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

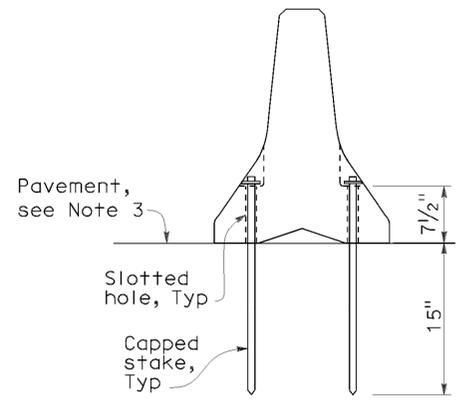
May 20, 2011  
PLANS APPROVAL DATE

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To accompany plans dated 11-18-11



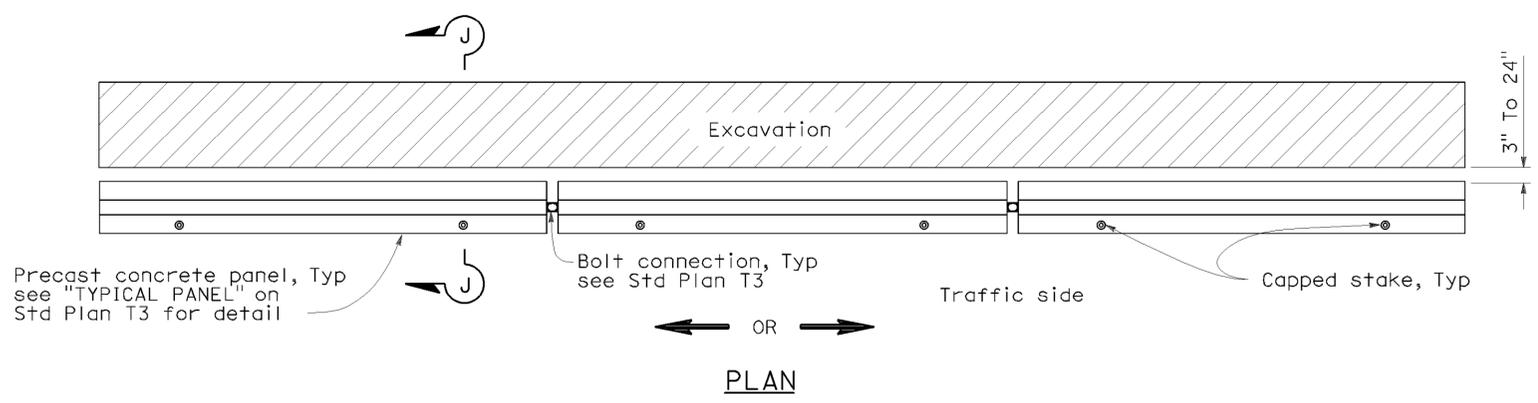
**RAILING STAKING CONFIGURATION FOR TWO-WAY TRAFFIC**  
See Note 1



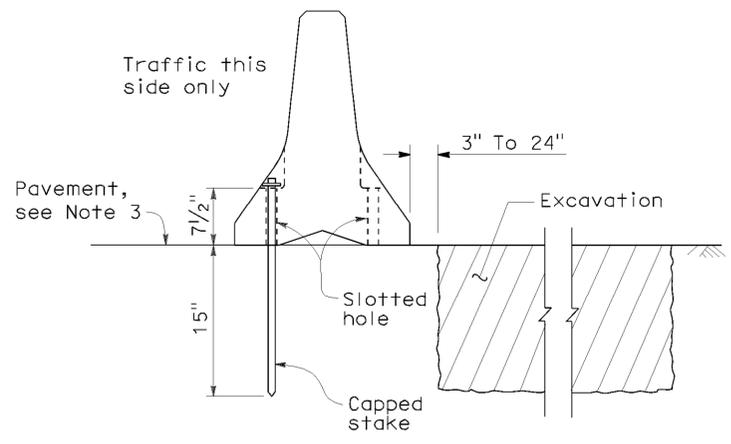
**SECTION I-I**

**NOTES:**

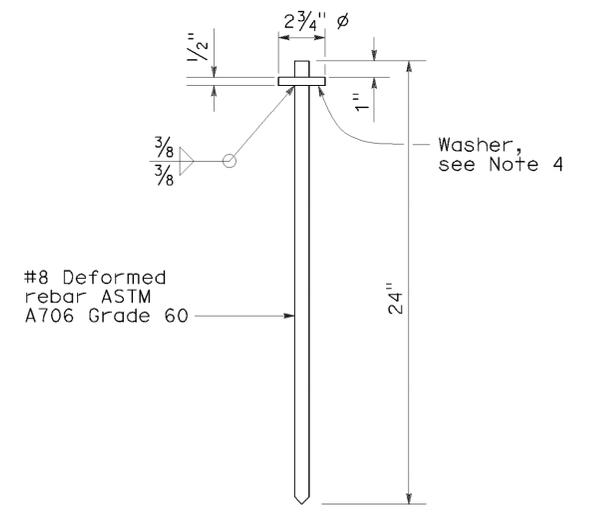
1. Where Type K Temporary Railing is placed as a temporary or long term barrier in two-way traffic on highways with less than 24" from the edge of traveled way, use four capped stakes per every other panel with end panels staked.
2. Where Type K Temporary Railing is placed 3" to 24" from the edge of 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

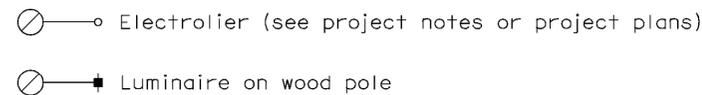
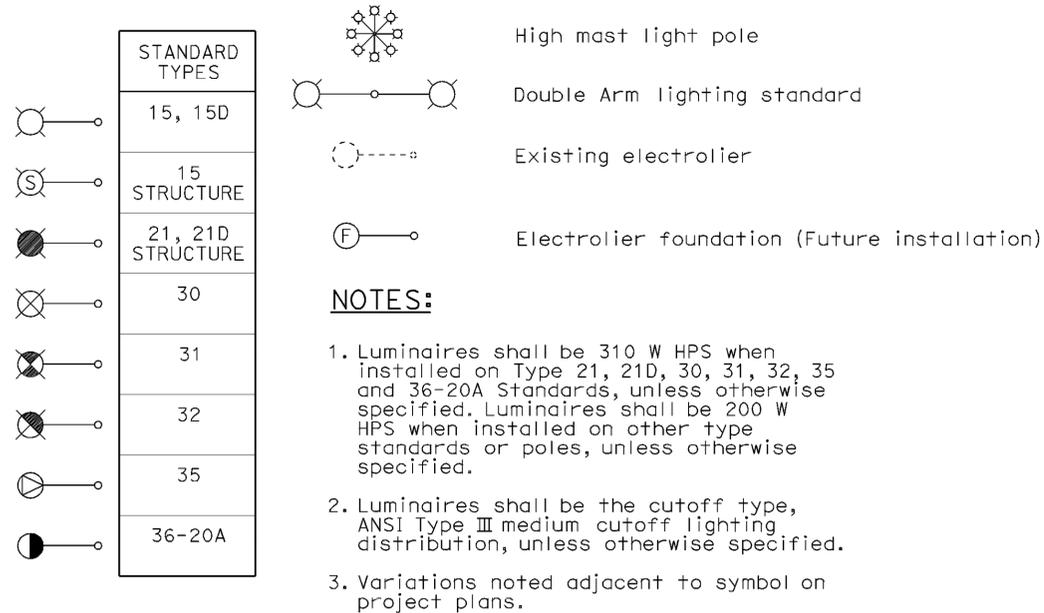
NSP T3A DATED MAY 20, 2011 SUPPLEMENTS  
THE STANDARD PLANS BOOK DATED MAY 2006.

**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	Plu	70,89	71.5/R78.4, 12.9/16.4	24	27

*Jeffery G. McRae*  
REGISTERED ELECTRICAL ENGINEER

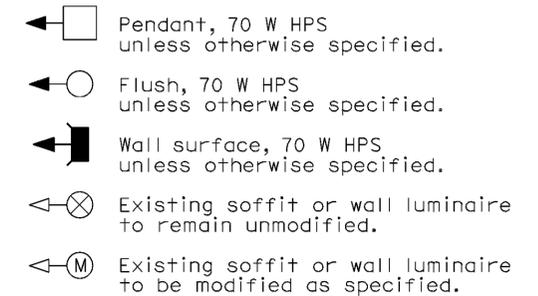
October 5, 2007  
PLANS APPROVAL DATE

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

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To accompany plans dated 11-18-11

## SOFFIT AND WALL MOUNTED LUMINAIRES



### NOTE:

Arrow indicates "street side" of luminaire.

STATE OF CALIFORNIA  
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## 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	Plu	70,89	71.5/R78.4, 12.9/16.4	25	27

Jeffrey G. McRae  
 REGISTERED ELECTRICAL ENGINEER  
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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

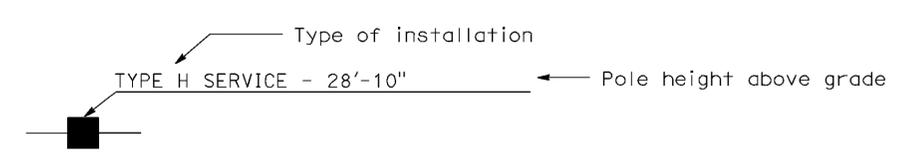
### SIGNAL EQUIPMENT

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.

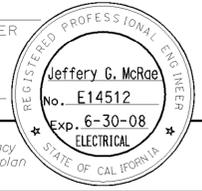
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS  
 (SYMBOLS AND ABBREVIATIONS)**  
 NO SCALE

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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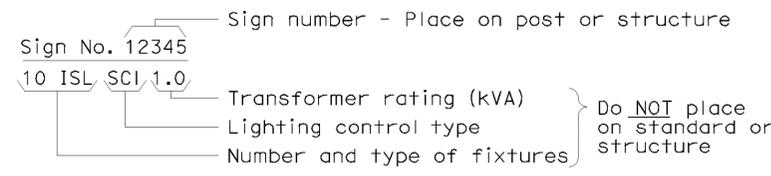
2006 REVISED STANDARD PLAN RSP ES-1B



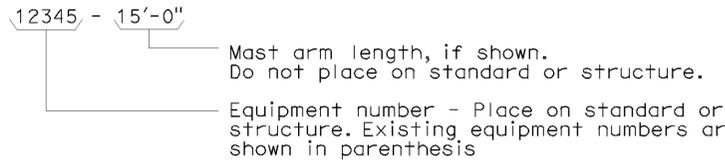
To accompany plans dated 11-18-11

### EQUIPMENT IDENTIFICATION

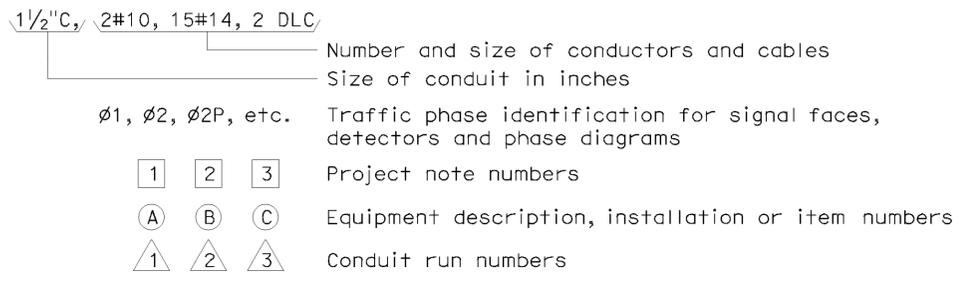
#### ILLUMINATED SIGN IDENTIFICATION NUMBER:



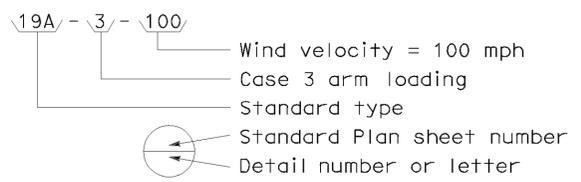
#### ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



#### 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

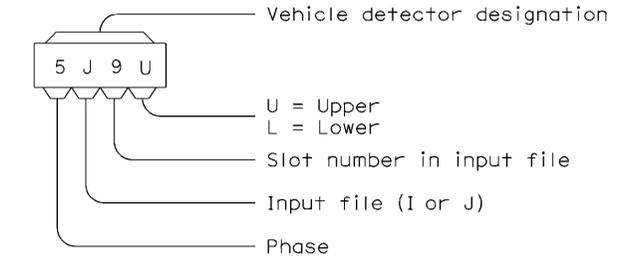
### WIRING DIAGRAM LEGEND

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**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Plu	70,89	71.5/R78.4, 12.9/16.4	27	27

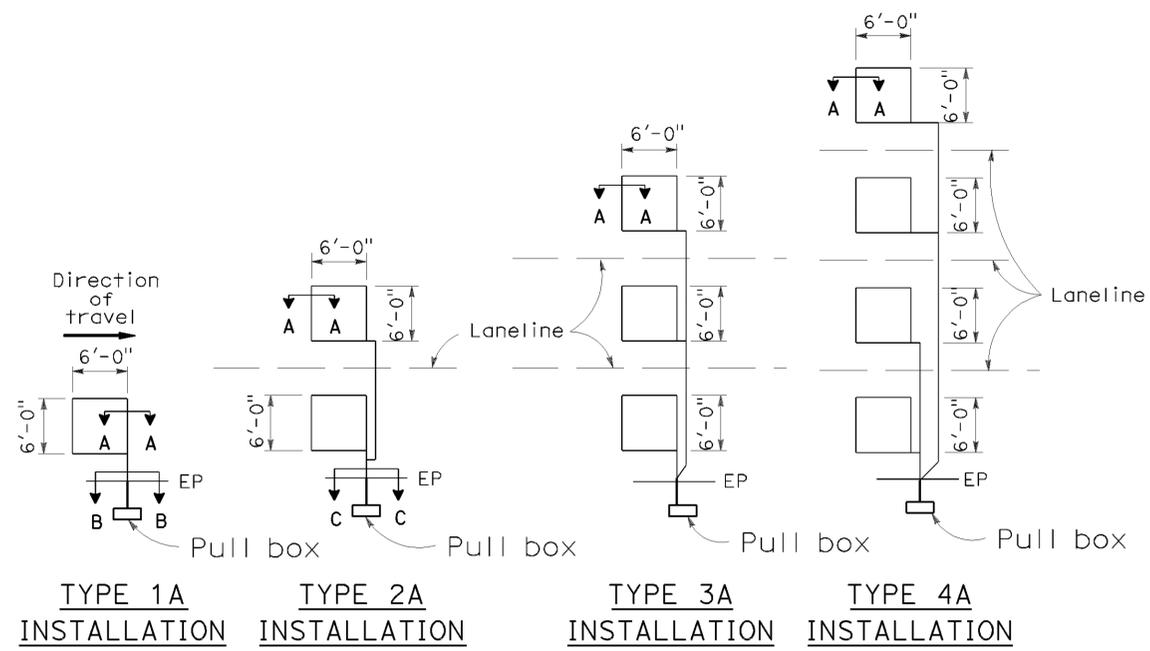
Jeffrey G. McRae  
 REGISTERED ELECTRICAL ENGINEER  
 No. E14512  
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 STATE OF CALIFORNIA

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.



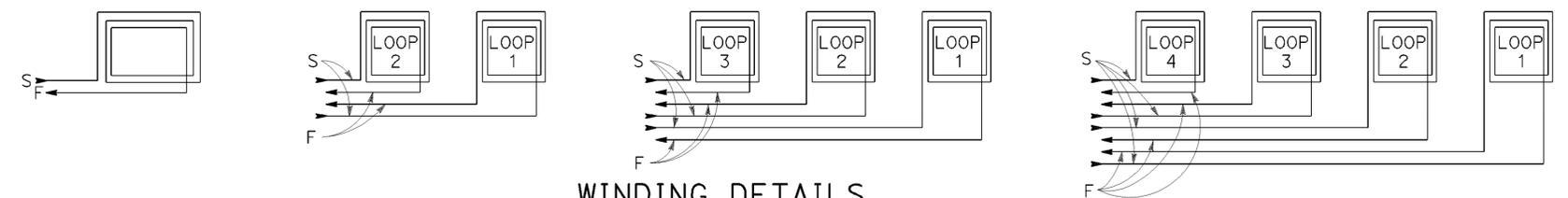
TYPE 1A INSTALLATION TYPE 2A INSTALLATION TYPE 3A INSTALLATION TYPE 4A INSTALLATION

### 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)

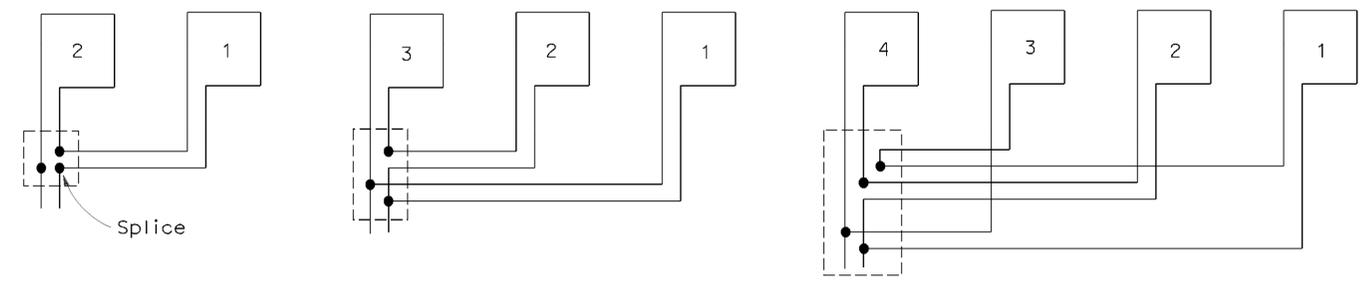
To accompany plans dated 11-18-11

2006 REVISED STANDARD PLAN RSP ES-5A



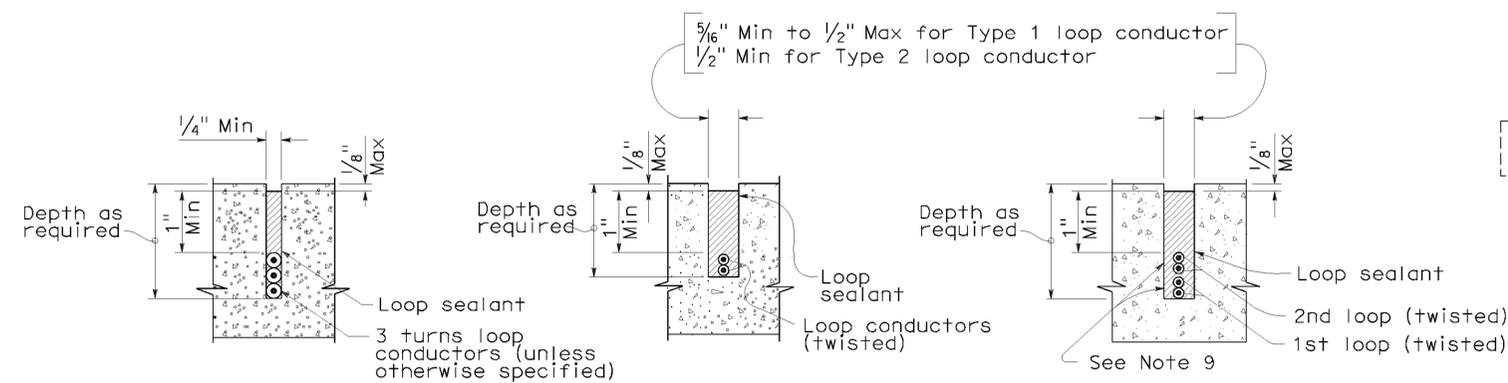
### WINDING DETAILS

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