

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

REVISOR BY
 JOHN ZAKI
 KEVIN KWAN

DESIGNED BY
 KEVIN KWAN

CHECKED BY

FUNCTIONAL SUPERVISOR
 KEVIN KWAN

DATE

DATE

LOCATIONS OF CONSTRUCTION

Loc	COUNTY	ROUTE	DIRECTION	PM	LOCATION/DESCRIPTION
1	LA	1	SB	35.6	POC TO OCEAN AVENUE
2	LA	1	NB	37.0	CONCRETE BARRIER PCH/ W CHANNEL ROAD, CHAUTAUQUA BOULEVARD
3	LA	1	SB	37.1	CONCRETE BARRIER PCH/ W CHANNEL ROAD, CHAUTAUQUA BOULEVARD
4	LA	5	SB	14.2	OLYMPIC BOULEVARD OFF RAMP
5	LA	10	EB	R13.1	SIGN STRUCTURE VERMONT AVENUE/HOOVER STREET ROUTE 110 SOUTH SAN PEDRO
6	LA	10	WB	16.8	CENTRAL AVENUE OFF RAMP
7	LA	10	WB	17.0	ALAMEDA STREET OFF RAMP
8	LA	90	EB	2.4	BEGINNING OF ROUTE 405 CONNECTOR
9	LA	90	EB	2.5	GORE AREA OF ROUTE 405 CONNECTOR
10	LA	101	NB	0.2	VIGNES OFF RAMP
11	LA	101	SB	1.2	BROADWAY OFF RAMP
12	LA	101	NB	3.6	SILVER LAKE BOULEVARD OFF RAMP
13	LA	101	SB	4.4	BRIDGE COLUMN OF N VERMONT AVENUE
14	LA	101	NB	4.7	MELROSE/NORMANDIE EXIT
15	LA	101	NB	5.9	COLUMN OF FOUNTAIN AVENUE BRIDGE
16	LA	101	SB	7.3	VINE STREET OFF RAMP
17	LA	105	WB	0.5	SUPELVEDA BOULEVARD SOUTH OFF RAMP
18	LA	105	WB	0.7	SUPELVEDA BOULEVARD NORTH OFF RAMP
19	LA	105	WB	1.0	NASH STREET OFF RAMP
20	LA	105	WB	1.9	IMPERIAL HIGHWAY OFF RAMP
21	LA	110	SB	R1.3	CHANNEL STREET, PACIFIC AVENUE OFF RAMP
22	LA	110	SB	13.9	ROUTE110 MAIN LINE AND EB ROUTE 105 CONNECTOR
23	LA	110	NB	16.4	FLORENCE AVENUE OFF RAMP
24	LA	110	SB	17.9	GORE AREA SLAUSON AVENUE OFF RAMP
25	LA	110	SB	23.8	GORE AREA BETWEEN ROUTE 5 AND ROUTE 101 RIGHT SIDE OF LOCATION # 26
26	LA	110	SB	23.8	GORE AREA BETWEEN ROUTE 5 AND ROUTE110 LEFT SIDE OF LOCATION # 25
27	LA	405	NB	R21.6	ROUTE405/ROUTE 105 CONNECTOR
28	LA	405	NB	22.5	MANCHESTER Blvd/LA CIENEGA Blvd OFF RAMP
29	LA	405	NB	23.6	LA CIENEGA BOULEVARD OVERCROSSING BRIDGE COLUMN
30	LA	405	SB	30.0	ROUTE 405 TO ROUTE 10 CONNECTOR NORTH OF PICO UNDERCROSSING
31	Ven	1	NB	10.2	LAS POSAS ROAD
32	Ven	1	SB	10.2	LAS POSAS ROAD
33	Ven	1	NB	10.6	MAIN ROAD POC
34	Ven	1	SB	10.6	MAIN ROAD POC
35	Ven	1	NB	11.6	WOOD ROAD
36	Ven	1	NB	12.8	E HUENEME ROAD
37	Ven	1	SB	12.8	E HUENEME ROAD

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Ven	1,5,10,90 101, etc	Var	2	31

John T. Zaki 10-17-13
 REGISTERED CIVIL ENGINEER DATE

11-4-13
 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.

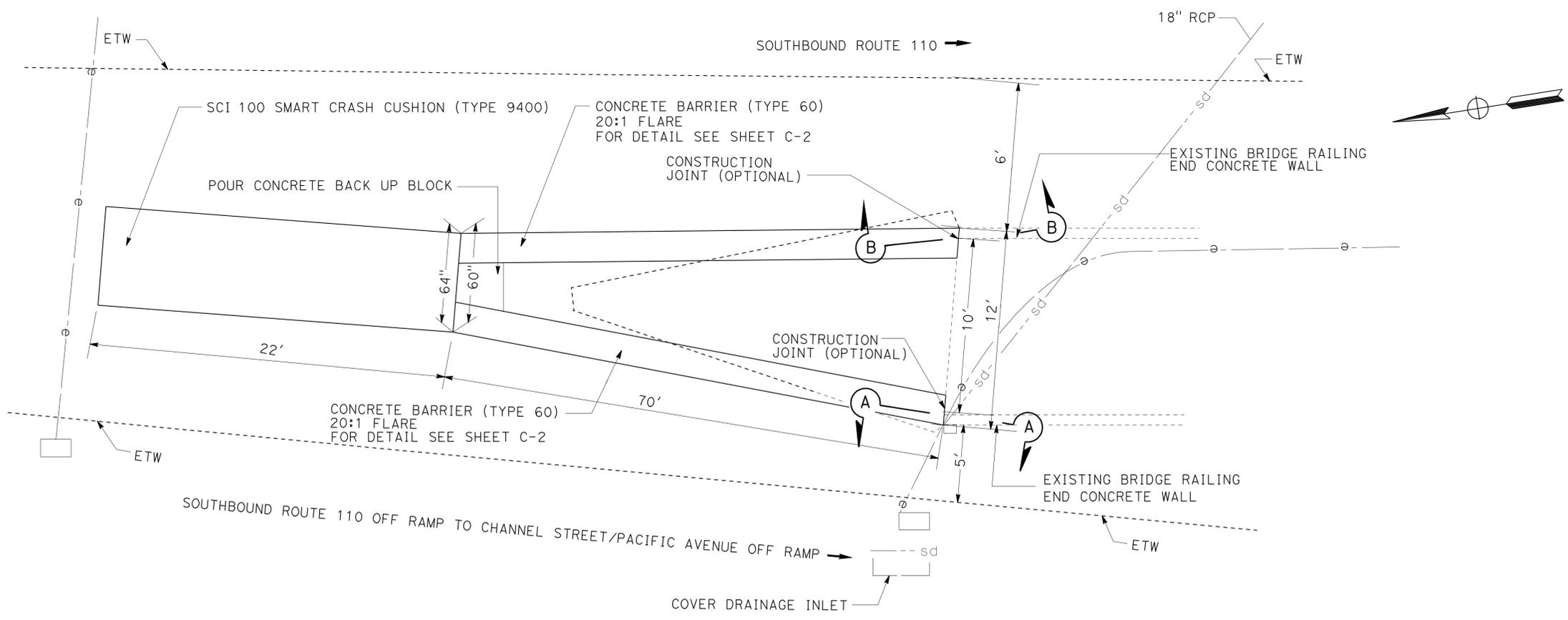
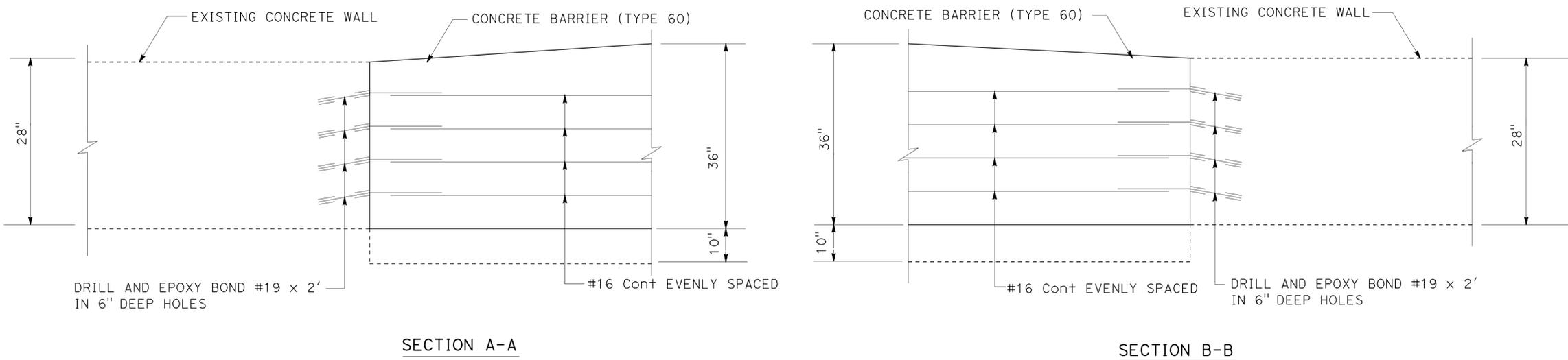
REGISTERED PROFESSIONAL ENGINEER
JOHN ZAKI
 No. C63665
 Exp. 9-30-14
 CIVIL
 STATE OF CALIFORNIA

LOCATIONS OF CONSTRUCTION

LC-1

LAST REVISION | DATE PLOTTED => 04-NOV-2013
 11-04-13 | TIME PLOTTED => 2:15Z

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Ven	1,5,10,90 101, etc	Var	3	31
<i>John T. Zaki</i> 10-17-13 REGISTERED CIVIL ENGINEER DATE			PROFESSIONAL ENGINEER JOHN ZAKI No. C63665 Exp. 9-30-14 CIVIL STATE OF CALIFORNIA		
11-4-13			PLANS APPROVAL DATE		
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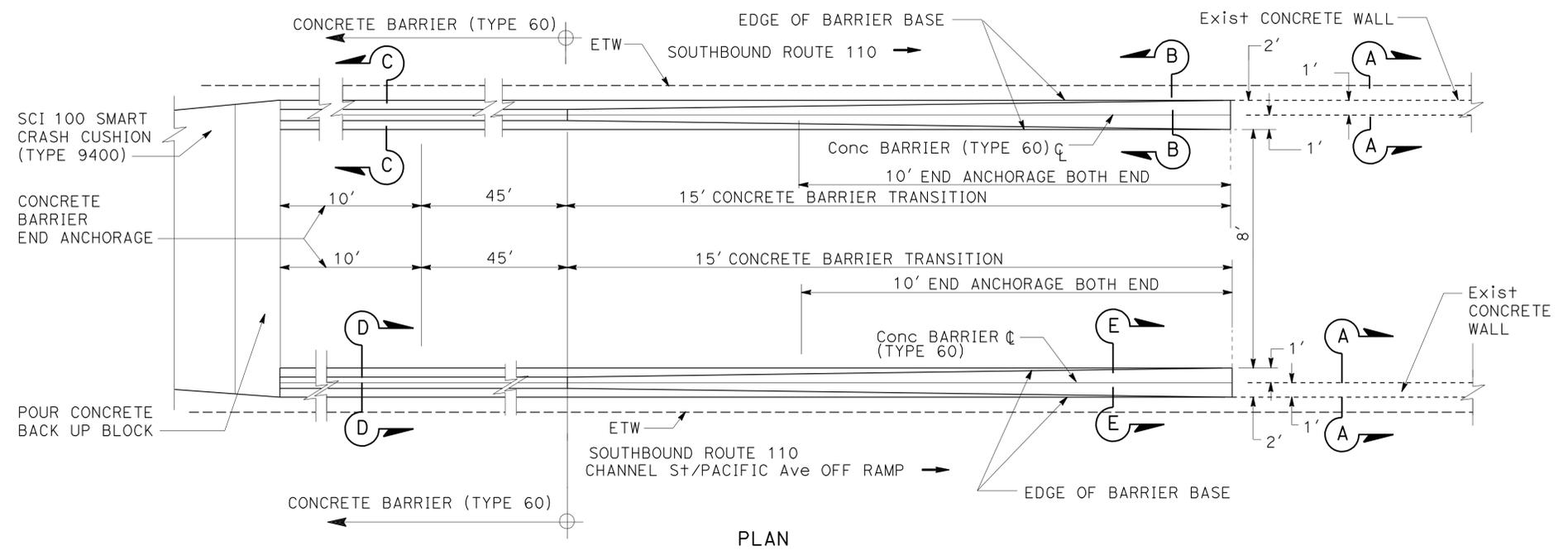
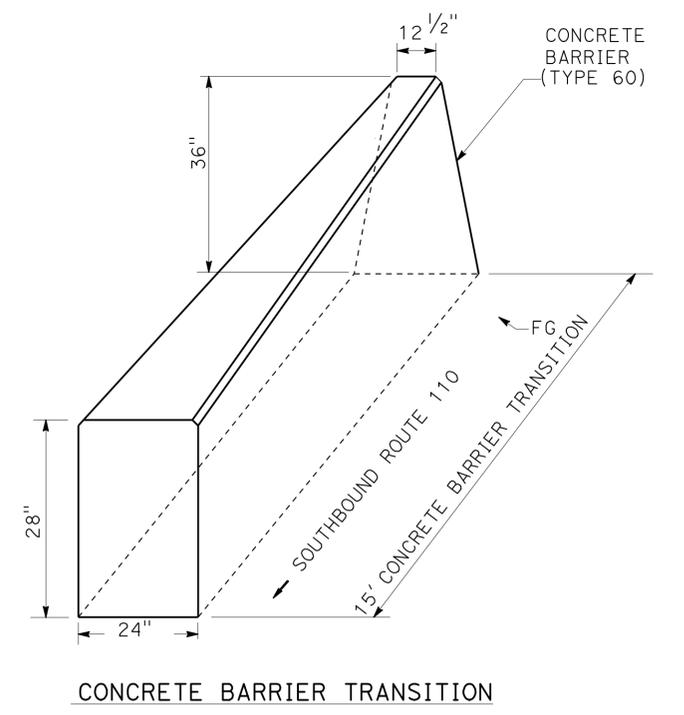
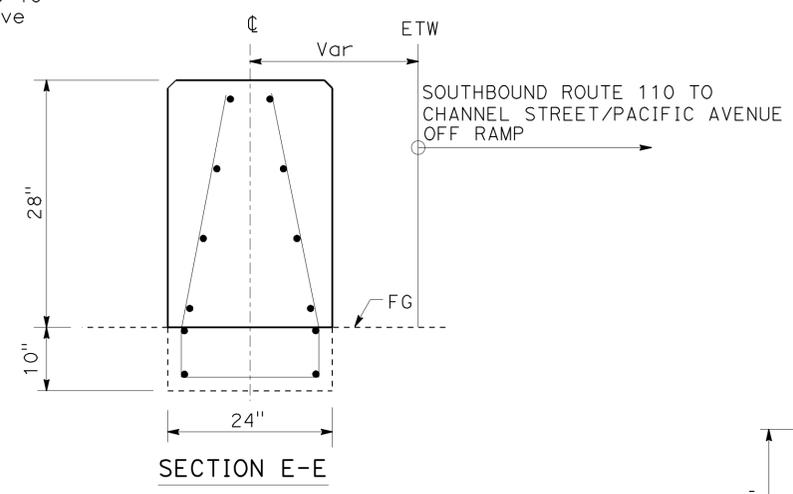
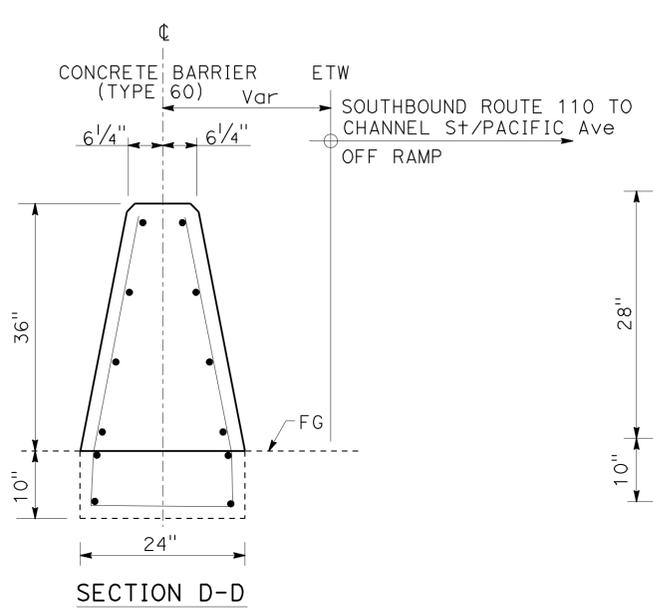
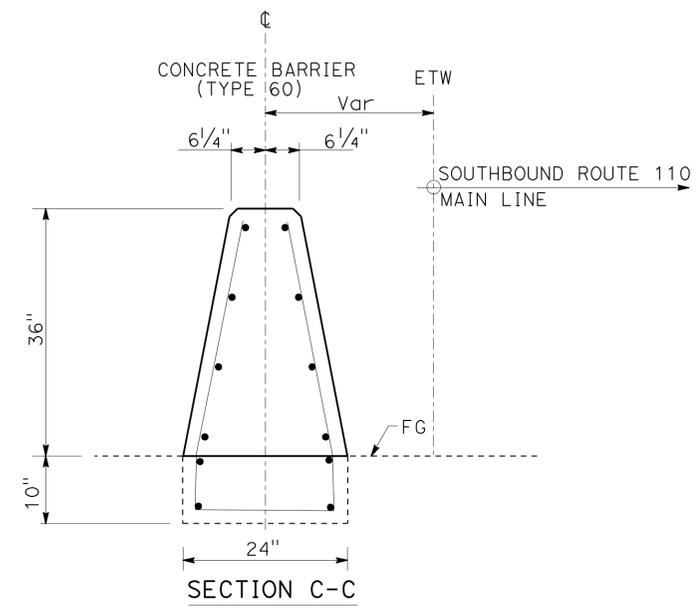
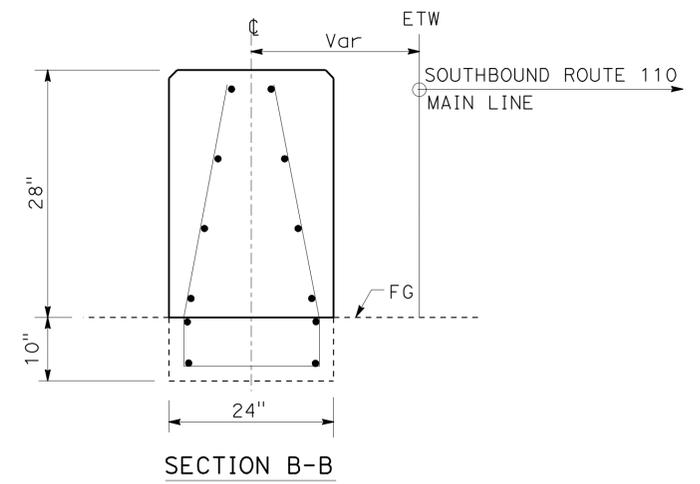
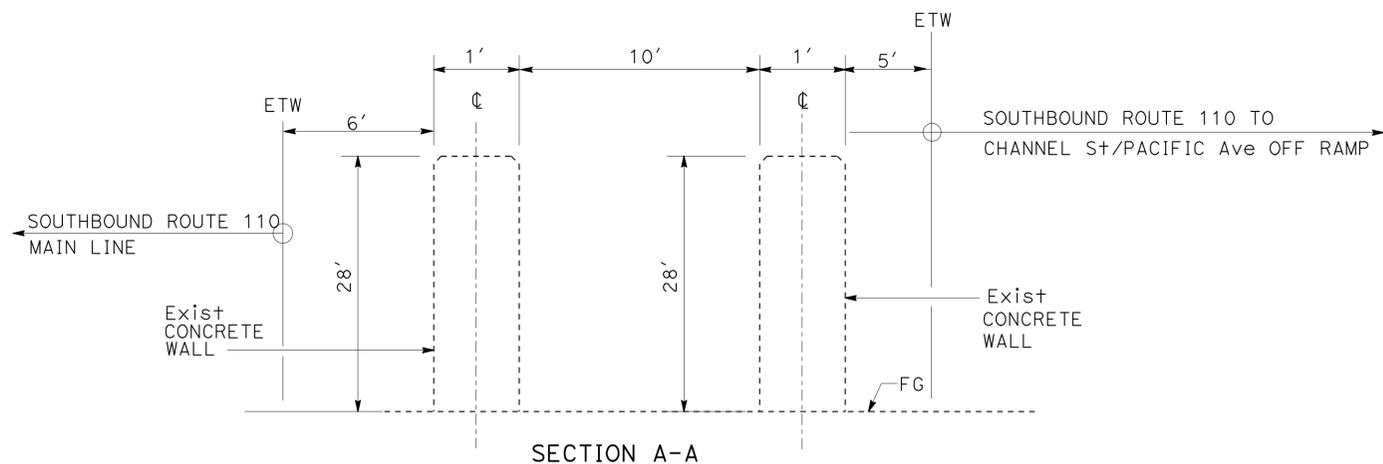
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING
 FUNCTIONAL SUPERVISOR: KEVIN KWAN
 CALCULATED/DESIGNED BY: KEVIN KWAN
 CHECKED BY: KEVIN KWAN
 JOHN ZAKI
 KEVIN KWAN
 REVISOR BY: KEVIN KWAN
 DATE REVISOR: KEVIN KWAN

GORE DETAIL
 LOCATION NUMBER 21
 SOUTHBOUND ROUTE 110 TO CHANNEL STREET/PACIFIC AVENUE OFF RAMP PM R1.3

CONSTRUCTION DETAILS
 NO SCALE

C-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Ven	1,5,10,90 101, etc	Var	4	31
<i>John T. Zaki</i> 10-17-13 REGISTERED CIVIL ENGINEER DATE			JOHN ZAKI No. C63665 Exp. 9-30-14 CIVIL STATE OF CALIFORNIA		
11-4-13 PLANS APPROVAL DATE					
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CONSTRUCTION DETAILS
NO SCALE

LOCATION 21
SOUTHBOUND ROUTE 110 TO CHANNEL STREET/PACIFIC AVENUE OFF RAMP PM R1.3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING
 FUNCTIONAL SUPERVISOR: KEVIN KWAN
 CALCULATED/DESIGNED BY: KEVIN KWAN
 CHECKED BY: KEVIN KWAN
 JOHN ZAKI
 KEVIN KWAN
 REVISOR BY: DATE
 REVISOR DATE

USERNAME => s122436
DGN FILE => 72w470ga002.dgn



UNIT 1964

PROJECT NUMBER & PHASE

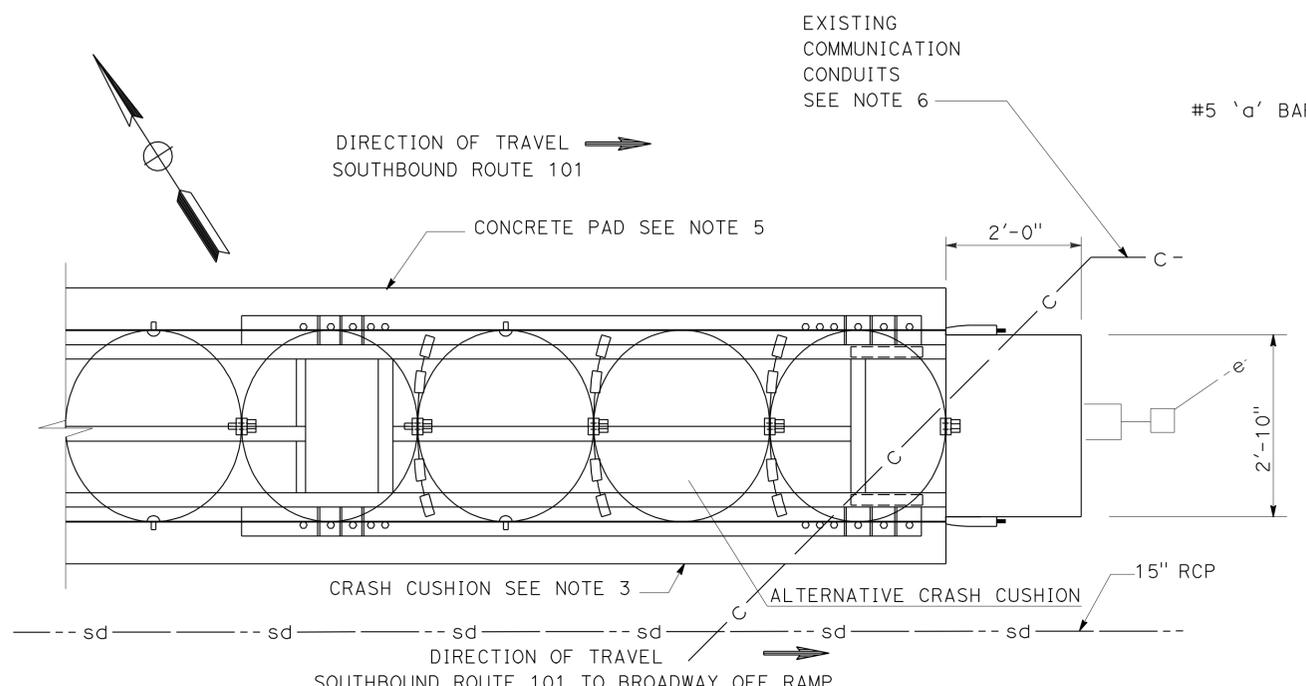
07130001501

C-2

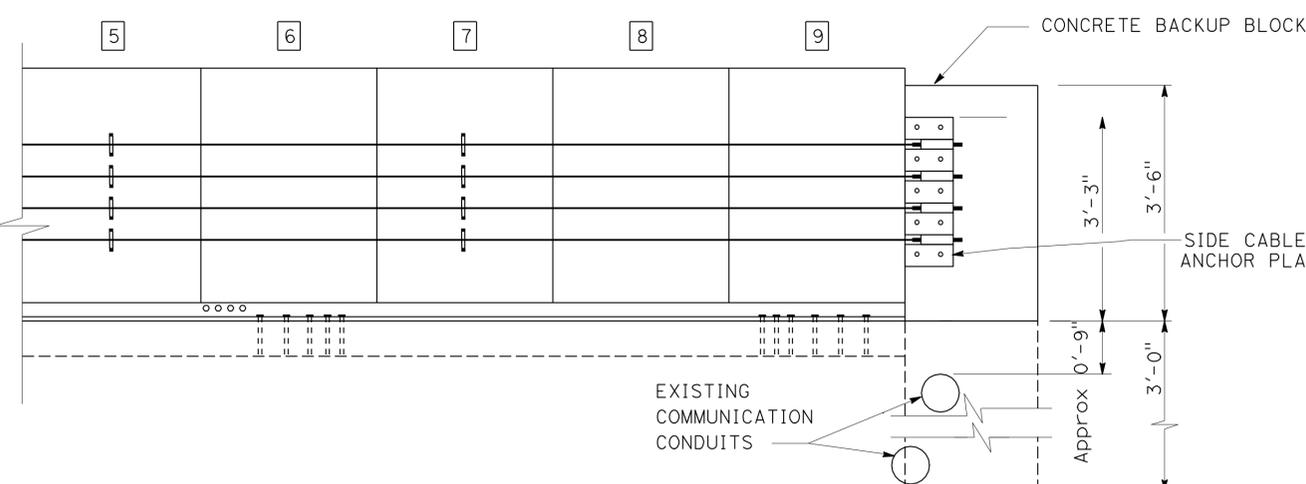
LAST REVISION DATE PLOTTED => 04-NOV-2013
 11-04-13 TIME PLOTTED => 2:15:52

NOTES:

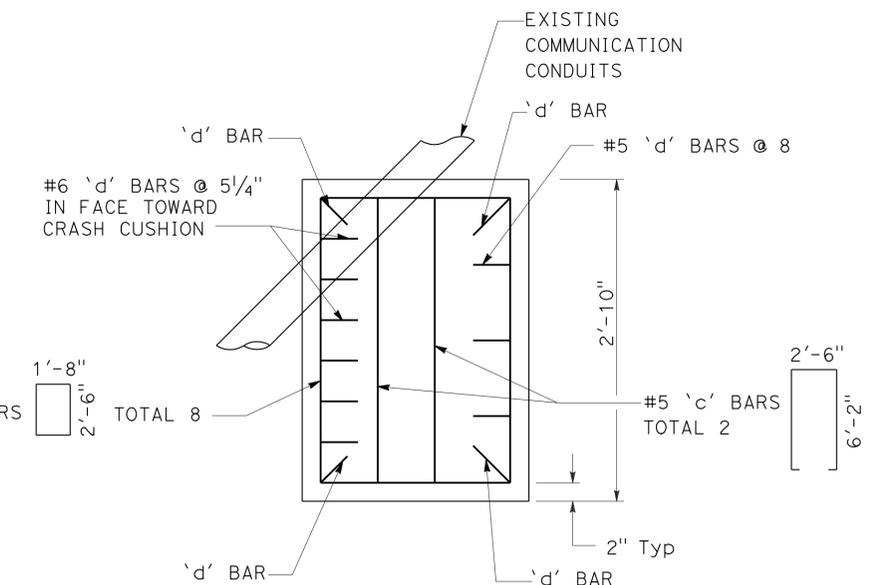
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. SAWCUT AND REMOVE INTERFERING PORTIONS OF EXISTING CONCRETE ANCHOR PAD.
3. FOR TYPE OF EXISTING CRASH CUSHIONS REMOVED, SEE SHEETS Q-1, Q-2.
4. FOR DETAILS NOT SHOWN REFER TO MANUFACTURERS INSTRUCTIONS AND DETAILS.
5. FOR CONCRETE PAD DETAILS, SEE MANUFACTURER'S DETAIL.
6. LOCATION OF THE EXISTING COMMUNICATION CONDUITS SHOWN IS APPROXIMATE. CONTRACTOR SHALL HAND-EXCAVATE.



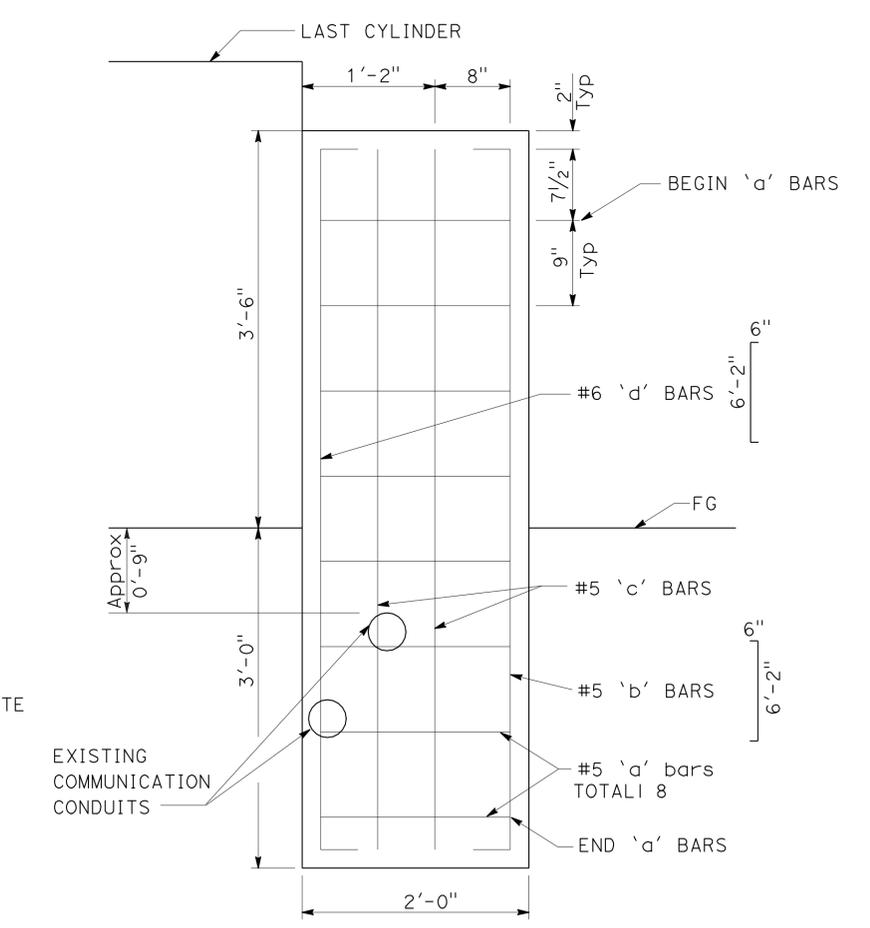
PLAN VIEW



ELEVATION



PLAN VIEW



ELEVATION

CONCRETE BACKUP BLOCK

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Ven	1,5,10,90 101, etc	Var	5	31

John T. Zaki 10-17-13
 REGISTERED CIVIL ENGINEER DATE
 11-4-13
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REGISTERED PROFESSIONAL ENGINEER
JOHN ZAKI
 No. C63665
 Exp. 9-30-14
 CIVIL
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ALTERNATIVE CRASH CUSHION BACKUP BLOCK DETAILS

LOCATION No.11
SOUTHBOUND ROUTE-101 PM 1.2

CONSTRUCTION DETAILS

NO SCALE

C-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING
 FUNCTIONAL SUPERVISOR: KEVIN KWAN
 CALCULATED/DESIGNED BY: KEVIN KWAN
 CHECKED BY: KEVIN KWAN
 JOHN ZAKI
 KEVIN KWAN
 REVISIONS: JOHN ZAKI, KEVIN KWAN
 REVISIONS: KEVIN KWAN

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Ven	1,5,10,90 101, etc	Var	6	31

John T. Zaki 10-17-13
 REGISTERED CIVIL ENGINEER DATE
 11-4-13
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REGISTERED PROFESSIONAL ENGINEER
 JOHN ZAKI
 No. C63665
 Exp. 9-30-14
 CIVIL
 STATE OF CALIFORNIA

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

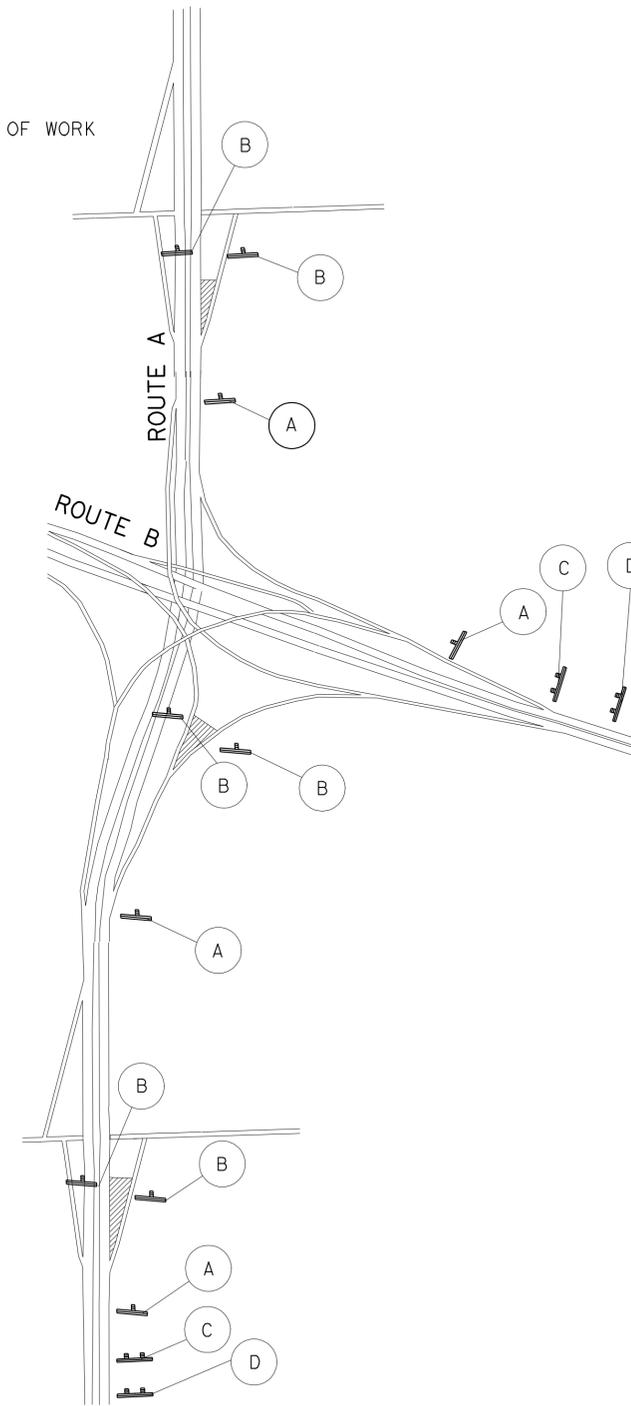
SIGN NUMBER	SIGN CODE	PANEL SIZE	SIGN MESSAGE	NUMBER OF POST AND SIZE	NUMBER OF SIGNS (SHEET CS-1)
(A)	W20-1	48" x 48"	ROAD WORK AHEAD	1-6" x 6"	13
(B)	G20-2	48" x 24"	END ROAD WORK	1-4" x 6"	19
(C)	C40 (CA)	144" x 60"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	2-6" x 8"	8
(D)	G20-1	48" x 24"	ROAD WORK NEXT 6 MILES	2-6" x 8"	2

NOTES:

- LOCATIONS OF CONSTRUCTION AREA SIGNS SHOWN ARE APPROXIMATE. THE ENGINEER DETERMINES EXACT LOCATION.
- "TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES" SIGN SHALL BE PLACED APPROXIMATELY 500 FEET IN ADVANCE OF "ROAD WORK AHEAD" SIGN OR AS DETERMINED BY THE ENGINEER.

LEGEND:

 AREA OF WORK



STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

LOCATION			SIGN NUMBER	No. OF SIGNS	DESCRIPTION
ROUTE	DIRECTION	PM			
1	NORTHBOUND	35.6	(A)	1	ROUTE 1 NB
			(B)	1	ROUTE 1 NB
1	NORTHBOUND	37.0	(A)	1	ROUTE 1 NB
			(A)	1	ON LOCAL STREET CHANNEL ROAD
			(A)	1	ON LOCAL STREET CHAUTAUQUA BOULEVARD
			(B)	1	ROUTE 1 NB
			(B)	1	ON LOCAL STREET
			(C)	2	ROUTE 1 NB AND LOCAL STREET CHANNEL ROAD
1	SOUTHBOUND	37.1	(C)	1	ROUTE 1 SB AND LOCAL STREET CHAUTAUQUA BOULEVARD
			(A)	1	ROUTE 1 SB
			(B)	2	ROUTE 1 SB AND LOCAL STREET CHAUTAUQUA BOULEVARD
1	SOUTHBOUND	35.6	(A)	1	ROUTE 1 SB
			(B)	1	ROUTE 1 SB
5	SOUTHBOUND	14.2	(C)	1	ROUTE 5 SB
			(A)	1	ROUTE 5 SB
			(B)	2	ROUTE 5 SB AND SB OFF RAMP TO OLYMPIC BOULEVARD
10	EASTBOUND	R13.1	(C)	1	ROUTE 10 EB
			(A)	1	ROUTE 10 EB
			(B)	2	ROUTE 10 EB AND EB OFF RAMP TO VERMONT AVENUE
10	WESTBOUND	16.8	(C)	1	ROUTE 10 WB
			(A)	1	ROUTE 10 WB
			(B)	2	ROUTE 10 WB AND WB OFF RAMP TO CENTRAL AVENUE
10	WESTBOUND	17.0	(A)	1	ROUTE 10 WB
			(B)	2	ROUTE 10 WB AND WB OFF RAMP TO ALAMEDA STREET
90	EASTBOUND	2.4	(C)	1	ROUTE 90 EB
			(A)	1	ROUTE 90 EB
			(B)	1	ROUTE 90 EB
90	EASTBOUND	2.5	(A)	1	ROUTE 90 EB TO ROUTE 405 NB AND SB AT BEGINNING OF CONNECTOR
			(B)	2	ONE AT 405 NB CONNECTOR AND ONE AT 405 SB CONECTOR
101	NORTHBOUND	0.2	(C)	1	ROUTE 101 NB
			(A)	1	ROUTE 101 NB
			(B)	2	ROUTE 10 NB AND NB OFF RAMP TO VIGNES STREET
101	NORTHBOUND	0.1	(D)	1	ROUTE 101 NB
101	SOUTHBOUND	8.0	(D)	1	ROUTE 101 SB

CONSTRUCTION AREA SIGNS NO SCALE

CS-1

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Ven	1,5,10,90 101, etc	Var	7	31

John T. Zaki 10-17-13
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STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN NUMBER	SIGN CODE	PANEL SIZE	SIGN MESSAGE	NUMBER OF POST AND SIZE	NUMBER OF SIGNS (SHEET CS-2)
(A)	W20-1	48" x 48"	ROAD WORK AHEAD	1-6" x 6"	18
(B)	G20-2	48" x 24"	END ROAD WORK	1-4" x 6"	28
(C)	C40 (CA)	144" x 60"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	2-6" x 8"	6

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

LOCATION			SIGN NUMBER	No. OF SIGNS	DESCRIPTION
ROUTE	DIRECTION	PM			
101	SOUTHBOUND	1.2	(C)	1	ROUTE 101 SB
			(A)	1	ROUTE 101 SB
			(B)	2	ROUTE 101 SB AND SB OFF RAMP TO BROADWAY STREET
101	NORTHBOUND	3.6	(A)	1	ROUTE 101 NB
			(B)	2	ROUTE 101 NB AND NB OFF RAMP TO SILVER LAKE BOULEVARD
101	SOUTHBOUND	4.4	(A)	1	ROUTE 101 SB
			(B)	2	ROUTE 101 SB AND SB OFF RAMP TO N VERMONT AVENUE
101	NORTHBOUND	4.7	(A)	1	ROUTE 101 NB
			(B)	2	ROUTE 101 NB AND NB OFF RAMP TO MELROSE/NORMANDIE BOULEVARD
101	NORTHBOUND	5.9	(A)	1	ROUTE 101 NB
			(B)	2	ROUTE 101 NB AND NB OFF RAMP TO FOUNTAIN AVENUE
101	SOUTHBOUND	7.3	(A)	1	ROUTE 101 SB
			(B)	2	ROUTE 101 SB AND SB OFF RAMP TO VINE STREET
105	WESTBOUND	0.5	(A)	1	ROUTE 105 WB
			(B)	2	ROUTE 105 WB AND WB OFF RAMP TO SUPELVEDA BOULEVARD
105	WESTBOUND	0.7	(A)	1	ROUTE 105 WB
			(B)	2	ROUTE 105 WB AND WB OFF RAMP TO SUPELVEDA BOULEVARD
105	WESTBOUND	1.0	(A)	1	ROUTE 105 WB
			(B)	2	ROUTE 105 WB AND WB OFF RAMP TO NASH STREET
105	WESTBOUND	1.9	(C)	1	ROUTE 105 WB
			(A)	1	ROUTE 105 WB
405	NORTHBOUND	R21.6	(B)	2	ROUTE 105 WB AND WB OFF RAMP TO IMPERIAL HIGHWAY
			(C)	1	ROUTE 405 NB
405	NORTHBOUND	22.5	(A)	2	ROUTE 405 NB AND ROUTE 105 CONNECTOR
			(B)	2	ROUTE 405 NB AND ROUTE 105 CONNECTOR
405	NORTHBOUND	23.6	(C)	1	ROUTE 405 NB
			(A)	2	ROUTE 405 NB AND NB ON RAMP FROM LA CEINEGA BOULEVARD
405	NORTHBOUND	23.6	(B)	2	ROUTE 405 NB AND NB ON RAMP FROM LA CEINEGA BOULEVARD
			(C)	1	ROUTE 405 NB
405	NORTHBOUND	23.6	(A)	2	ROUTE 405 NB AND NB ON RAMP FROM LA CEINEGA BOULEVARD
			(B)	2	ROUTE 405 NB AND NB ON RAMP FROM LA CEINEGA BOULEVARD
405	SOUTHBOUND	30.0	(C)	1	ROUTE 405 SB
			(A)	2	ROUTE 405 SB TO EASTBOUND ROUTE 10 CONNECTOR
			(B)	2	ROUTE 405 SB TO EASTBOUND ROUTE 10 CONNECTOR

CONSTRUCTION AREA SIGNS

NO SCALE

CS-2

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING
 FUNCTIONAL SUPERVISOR KEVIN KWAN
 CALCULATED/DESIGNED BY KEVIN KWAN
 REVISIONS BY JOHN ZAKI
 DATE REVISED KEVIN KWAN

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Ven	1,5,10,90 101, etc	Var	8	31

John T. Zaki 10-17-13
 REGISTERED CIVIL ENGINEER DATE

11-4-13
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STATIONARY MOUNTED CONSTRUCTION AREA SIGNS					
SIGN NUMBER	SIGN CODE	PANEL SIZE	SIGN MESSAGE	NUMBER OF POST AND SIZE	NUMBER OF SIGNS (SHEET CS-3)
Ⓐ	W20-1	48" x 48"	ROAD WORK AHEAD	1-6" x 6"	13
Ⓑ	G20-2	48" x 24"	END ROAD WORK	1-4" x 6"	19
Ⓒ	C40 (CA)	144" x 60"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	2-6" x 8"	8

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS					
LOCATION		PM	SIGN NUMBER	No. OF SIGNS	DESCRIPTION
ROUTE	DIRECTION				
Ven 1	NORTHBOUND	10.2	Ⓒ	1	ROUTE Ven 1 NB
			Ⓐ	1	ROUTE Ven 1 NB
			Ⓑ	1	ROUTE Ven 1 NB
Ven 1	NORTHBOUND	10.6	Ⓐ	1	ROUTE Ven 1 NB
			Ⓑ	1	ROUTE Ven 1 NB
Ven 1	NORTHBOUND	11.6	Ⓐ	1	ROUTE Ven 1 NB
			Ⓑ	1	ROUTE Ven 1 NB
Ven 1	NORTHBOUND	12.8	Ⓐ	1	ROUTE Ven 1 NB
			Ⓑ	1	ROUTE Ven 1 NB
Ven 1	SOUTHBOUND	13.5	Ⓒ	1	ROUTE Ven 1 SB
Ven 1	SOUTHBOUND	10.2	Ⓐ	1	ROUTE Ven 1 SB
			Ⓑ	1	ROUTE Ven 1 SB
Ven 1	SOUTHBOUND	10.6	Ⓐ	1	ROUTE Ven 1 SB
			Ⓑ	1	ROUTE Ven 1 SB
Ven 1	SOUTHBOUND	12.8	Ⓐ	1	ROUTE Ven 1 SB
			Ⓑ	1	ROUTE Ven 1 SB
110	SOUTHBOUND	R1.3	Ⓒ	1	ROUTE 110 SB
			Ⓐ	1	ROUTE 110 SB
			Ⓑ	2	ROUTE 110 SB AND SB OFF RAMP TO CHANNEL STREET/PACIFIC AVENUE
110	SOUTHBOUND	13.9	Ⓒ	1	ROUTE 110 SB
			Ⓐ	1	ROUTE 110 SB
			Ⓑ	2	ROUTE 110 SB AND EB ON RAMP TO ROUTE 105
110	NORTHBOUND	16.4	Ⓒ	1	ROUTE 110 NB
			Ⓐ	1	ROUTE 110 NB
			Ⓑ	2	ROUTE 110 NB AND NB OFF RAMP TO FLORANCE AVENUE
110	SOUTHBOUND	17.9	Ⓒ	1	ROUTE 110 SB
			Ⓐ	1	ROUTE 110 SB
			Ⓑ	2	ROUTE 110 SB AND SB OFF RAMP TO SLAUSON AVENUE
110	SOUTHBOUND	23.8	Ⓒ	1	ROUTE 110 SB
			Ⓐ	1	ROUTE 110 SB
			Ⓑ	2	ROUTE 110 SB AND ROUTE 5/101 CONNECTOR
110	SOUTHBOUND	23.8	Ⓒ	1	ROUTE 110 SB
			Ⓐ	1	ROUTE 110 SB
			Ⓑ	2	ROUTE 110 SB AND ROUTE 5/101 CONNECTOR

CONSTRUCTION AREA SIGNS
NO SCALE

CS-3

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - **Caltrans** MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: KEVIN KWAN

DESIGNED BY: JOHN ZAKI

CHECKED BY: KEVIN KWAN

REVISOR: JOHN ZAKI

DATE: 11-4-13

LAST REVISION: 11-04-13 DATE PLOTTED => 04-NOV-2013 TIME PLOTTED => 21:52

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Ven	1,5,10,90 101, etc	Var	9	31

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STATIONARY MOUNTED CONSTRUCTION AREA SIGNS					
SIGN NUMBER	SIGN CODE	PANEL SIZE	SIGN MESSAGE	NUMBER OF POST AND SIZE	TOTAL NUMBER OF SIGNS SHEET CS-1, CS-2, CS-3 AND CS-4
(A)	W20-1	48" x 48"	ROAD WORK AHEAD	1-6" x 6"	44
(B)	G20-2	48" x 24"	END ROAD WORK	1-4" x 6"	66
(C)	C40 (CA)	144" x 60"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	2-6" x 8"	22
(D)	G20-1	48" x 24"	ROAD WORK NEXT 6 MILES	2-6" x 8"	2

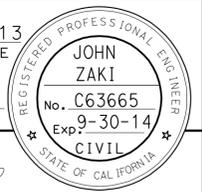
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING
 FUNCTIONAL SUPERVISOR KEVIN KWAN
 CALCULATED/DESIGNED BY CHECKED BY
 JOHN ZAKI KEVIN KWAN
 REVISED BY DATE REVISED

CONSTRUCTION AREA SIGNS
NO SCALE

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

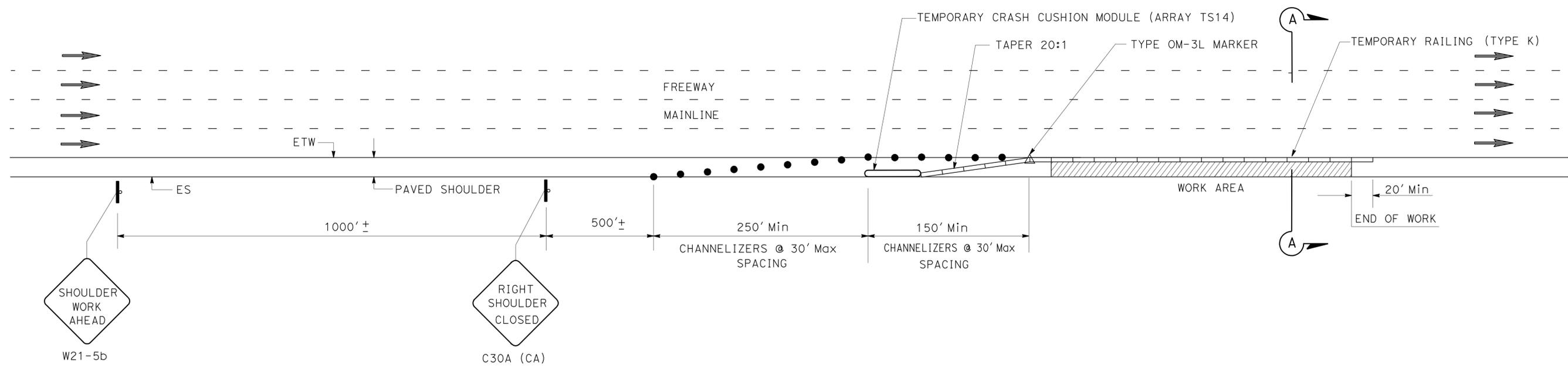
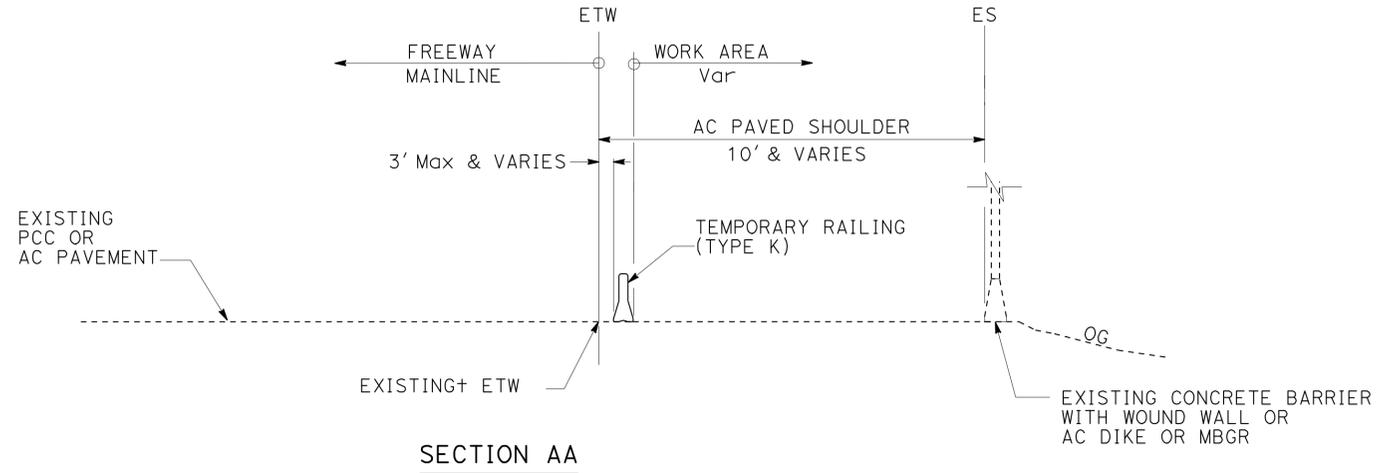
CS-4

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Ven	1,5,10,90 101, etc	Var	10	31
John T. Zaki		10-17-13		REGISTERED CIVIL ENGINEER DATE	
11-4-13		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.					



- LEGEND:**
- ➔ DIRECTION OF TRAVEL
 - CHANNELIZER (SURFACE MOUNTED)
 - ⊥ CONSTRUCTION AREA SIGN
 - ▨ WORK AREA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING
 FUNCTIONAL SUPERVISOR: KEVIN KWAN
 CALCULATED/DESIGNED BY: KEVIN KWAN
 CHECKED BY: KEVIN KWAN
 REVISIONS: JOHN ZAKI, KEVIN KWAN
 REVISED BY: KEVIN KWAN
 DATE REVISED:



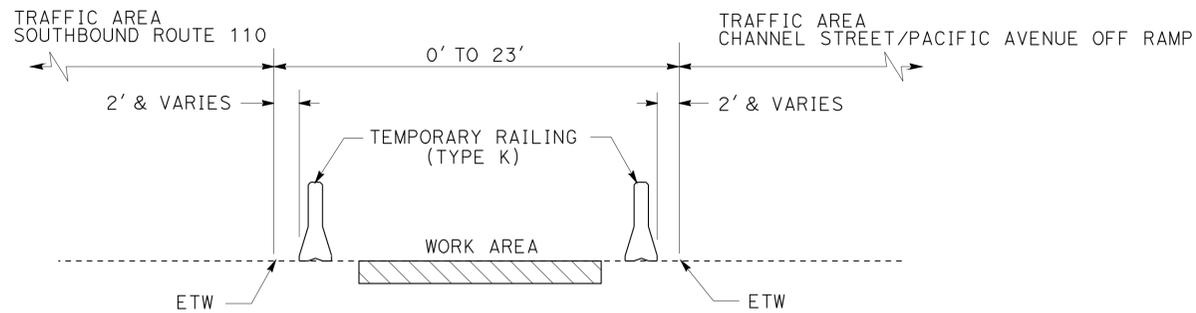
**TYPICAL TRAFFIC HANDLING PLAN
TYPICAL SHOULDER CLOSURES**

**TRAFFIC HANDLING PLAN
NO SCALE**

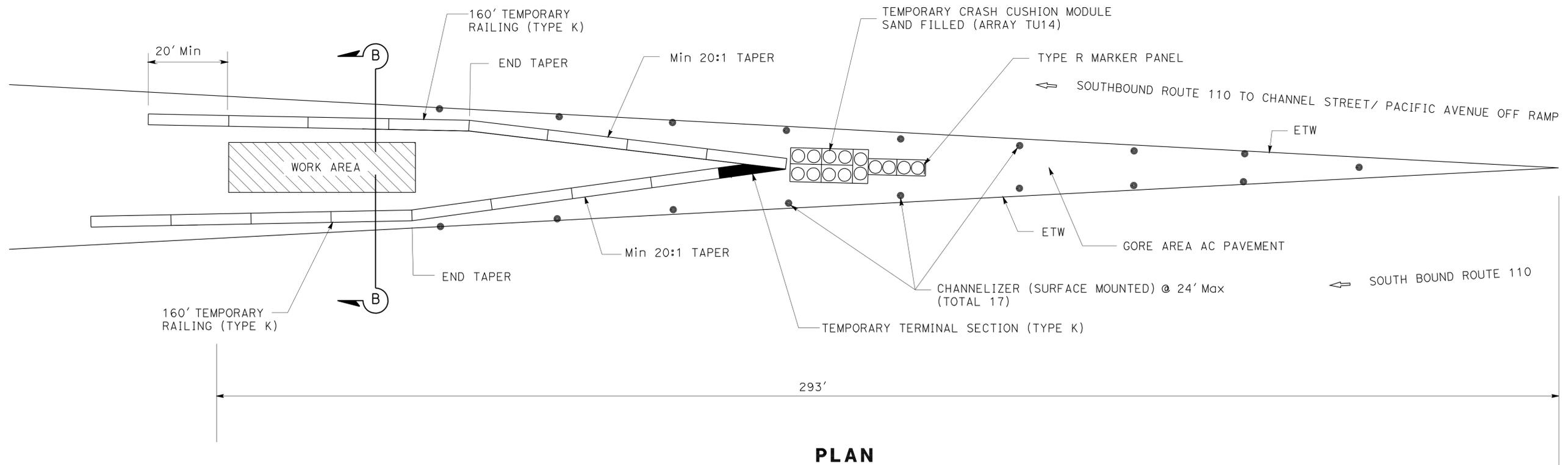
TH-1

APPROVED FOR TRAFFIC HANDLING WORK ONLY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Ven	1,5,10,90 101, etc	Var	11	31
<i>John T. Zaki</i> 10-17-13 REGISTERED CIVIL ENGINEER DATE					
11-4-13				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>					



SECTION B-B



PLAN

**TRAFFIC HANDLING PLANS
WITH TEMPORARY RAILING (TYPE K)**

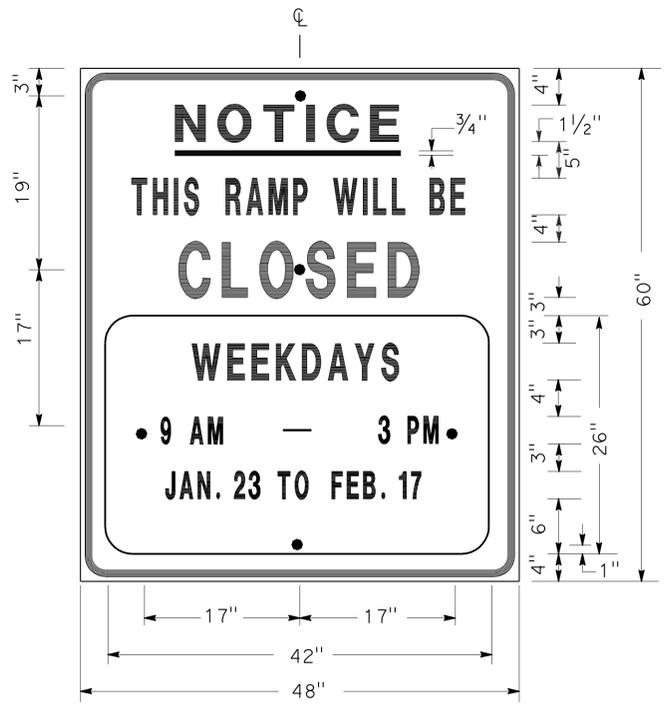
TH-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	REVISOR	DATE
Caltrans MAINTENANCE ENGINEERING	KEVIN KWAN	JOHN ZAKI	
	CHECKED BY	KEVIN KWAN	
	DESIGNED BY		
	REVISOR		
	DATE		

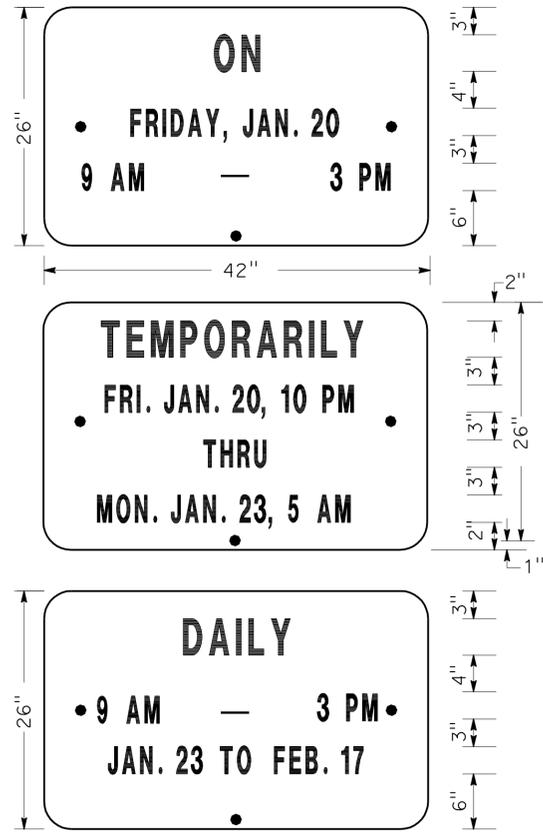
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA/Ven	1,5,10,90, 101, etc.	Var	12	31

REGISTERED CIVIL ENGINEER: SHANGJIA HORN
 No. 51846
 Exp. 6-30-14
 CIVIL
 DATE: 10-9-13
 PLANS APPROVAL DATE: 11-4-13

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.



SIGN SP-1



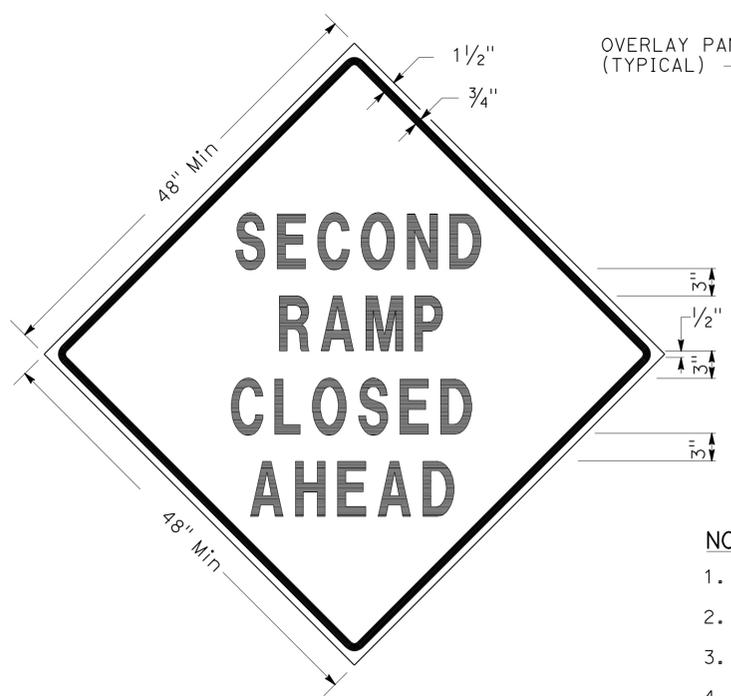
ALTERNATE OVERLAY PANELS (TYPICAL)

- NOTES: (SIGN SP-1)
- SIGNS SHALL HAVE ORANGE RETROREFLECTORIZED BACKGROUND WITH BLACK BORDER AND LETTERS.
 - BOLT HOLES SHALL BE 3/8" DIAMETER.
 - BASE MATERIAL SHALL BE ALUMINUM (MINIMUM 0.06").
 - SIGNS SHALL BE MOUNTED WITH BOTTOMS OF SIGNS A MINIMUM OF 6' ABOVE GROUND.

SIZE	BORDER	MARGIN	LETTER SIZE					CORNER RADIUS
	WIDTH	WIDTH	LINE 1	LINE 2*	LINE 3	LINE 4	LINE 5,6 & 7*	
48"x60"	1 1/4"	3/4"	4E	4D	6E	4D		3"
42"x26"	OVERLAY						3D	1 1/2"

* CONDENSED SPACING IF NECESSARY

SPECIAL ADVANCE NOTICE PUBLICITY SIGN



SIGN SP-3

SPECIAL SIGN FOR EXIT RAMP CLOSURES

- NOTES: (SIGNS SP-3 & SP-5)
- LETTERS - 6" SERIES D.
 - LETTERS AND BORDERS - BLACK ON RETROREFLECTORIZED ORANGE BACKGROUND.
 - BASE MATERIAL SHALL BE ALUMINUM (MINIMUM 0.06").
 - SIGNS SHALL BE MOUNTED WITH BOTTOMS OF SIGNS A MINIMUM OF 6' ABOVE GROUND.



SIGN SP-5



SIGN SP-4

- NOTES: (SIGN SP-4)
- LETTERS - 6" SERIES C.
 - LETTERS AND BORDERS - BLACK ON RETROREFLECTORIZED WHITE BACKGROUND.
 - BASE MATERIAL SHALL BE ALUMINUM (MINIMUM 0.06").
 - SIGNS SHALL BE PLACED AT RAMP ENTRANCES IN ADDITION TO SIGNS POSTED IN ACCORDANCE WITH REVISED STANDARD PLAN RSP T14.

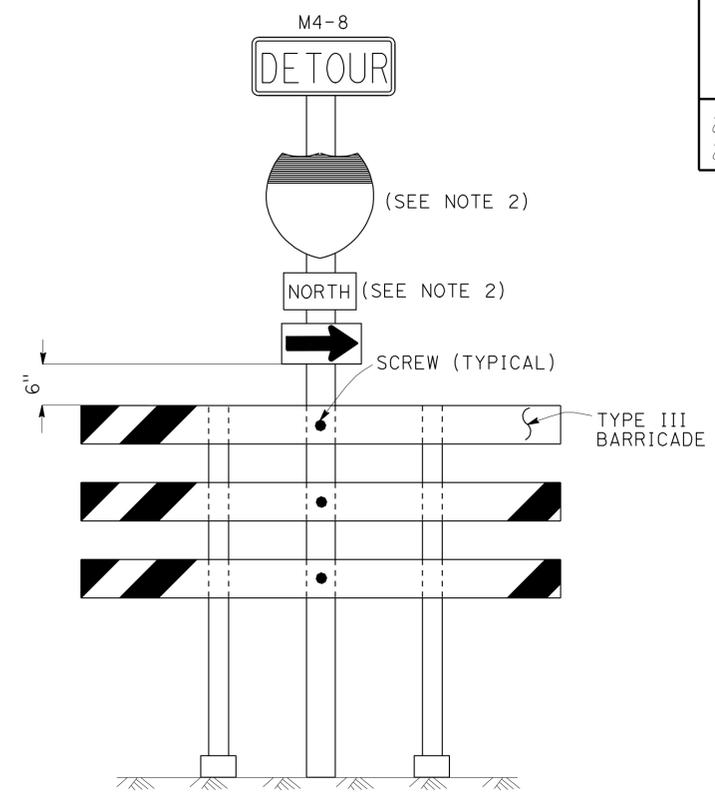
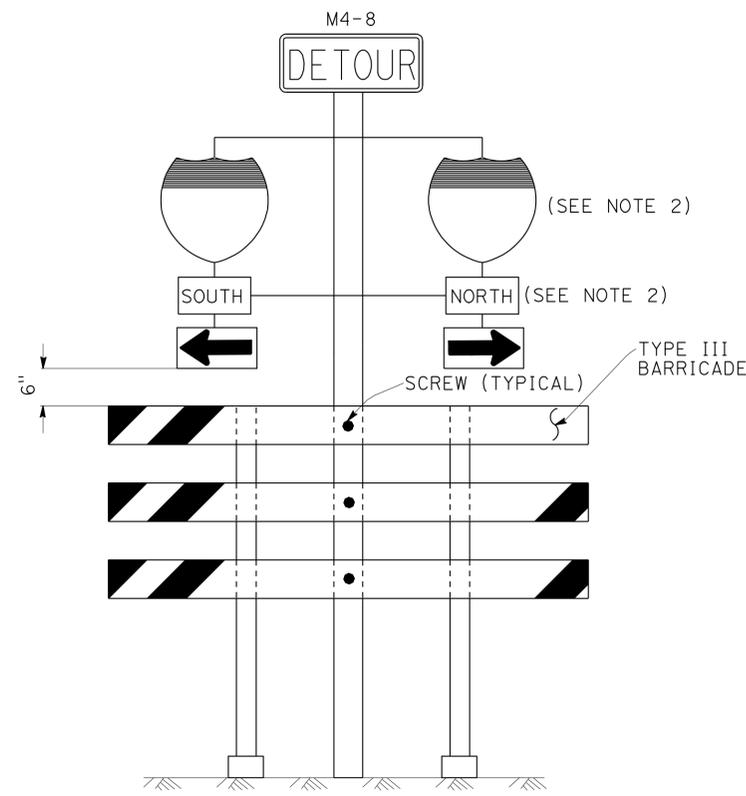
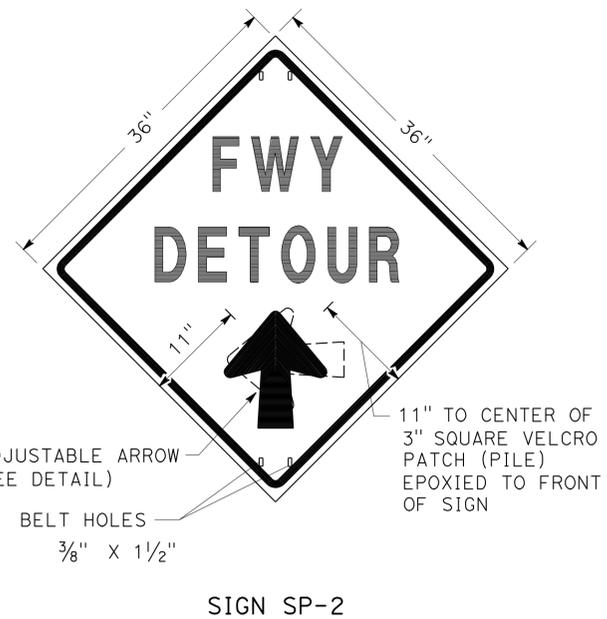
SPECIAL SIGN FOR ENTRANCE RAMP CLOSURES

**TRAFFIC HANDLING DETAILS
 TRAFFIC CONTROL SYSTEM
 FOR RAMP CLOSURES, DETOUR SIGNS
 AND MISCELLANEOUS DETAILS**

SHEET 1 OF 2

NO SCALE

THD-1

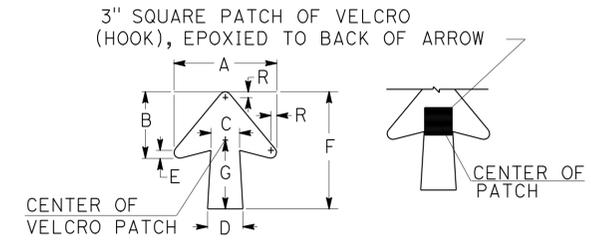


- NOTES:** (SIGN SP-2)
- LETTERS -6" SERIES E.
 - LETTERS, BORDER AND ARROW - BLACK ON RETROREFLECTORIZED ORANGE BACKGROUND.
 - BASE MATERIAL FOR SIGNS AND ARROWS SHALL BE ALUMINUM (MINIMUM 0.06").
 - BELTS (LUGGAGE STRAPS) SHALL BE 1" WIDE BY 48" LONG, MADE OF COTTON OR POLYPROPYLENE WEB MATERIAL.
 - SIGNS SHALL BE MOUNTED WITH BOTTOMS OF SIGNS A MINIMUM OF 6' ABOVE GROUND EXCEPT AS OTHERWISE SHOWN ON OTHER TRAFFIC HANDLING DETAILS PLANS.

ABBREVIATION
 (CA) CALIFORNIA CODE

- NOTES:** (SIGNS SP-6 & SP-7)
- IN LIEU OF PLACING SIGNS ON TYPE III BARRICADES, SIGNS, INCLUDING POSTS, MAY BE PLACED INTO THE GROUND OR FASTENED ONTO ELECTROLIERS.
 - USE APPROPRIATE ROUTE SHIELD [G26-2(CA), G27-2(CA), G28-2(CA)] AND CARDINAL DIRECTION [NORTH (M3-1), SOUTH (M3-3), EAST (M3-2), WEST (M3-4)]

SPECIAL PORTABLE FREEWAY DETOUR SIGNS



DIMENSIONS							
A	B	C	D	E	F	G	R
11 1/4"	7 1/4"	3 1/8"	4"	7/8"	13"	7 1/2"	5/8"

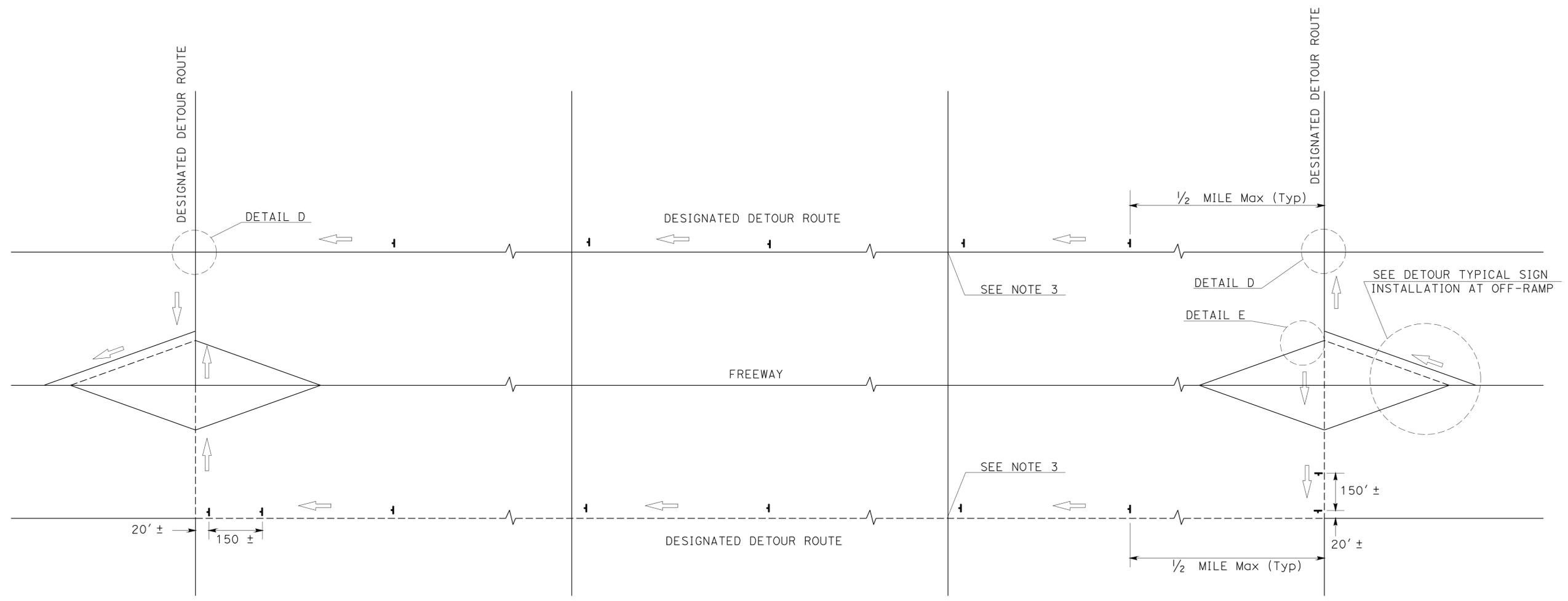
SPECIAL PORTABLE FREEWAY DETOUR SIGN

TRAFFIC HANDLING DETAILS
TRAFFIC CONTROL SYSTEM
FOR RAMP CLOSURES, DETOUR SIGNS
AND MISCELLANEOUS DETAILS
SHEET 2 OF 2
 NO SCALE

THD-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 DTMM
 SHANGJIA HORN
 ALBERT K YU
 ALBERT K YU
 JC
 7/10

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA/Ven	1,5,10,90, 101, etc.	Var	14	31
			10-9-13		
REGISTERED CIVIL ENGINEER			DATE		
11-4-13			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>					



TYPICAL DETOUR SIGN INSTALLATION ALONG DESIGNATED DETOUR ROUTE

- LEGEND**
-  TEMPORARY SIGN (SP-2)
 -  AND/OR DESIGNATED DETOUR ROUTE
 -  DIRECTION OF TRAVEL

- NOTES:**
- SP-2 SIGNS SHALL NOT BE INSTALLED ON BARRICADES EXCEPT AS OTHERWISE SHOWN.
 - SIGN LOCATIONS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.
 - SP-2 SIGNS SHALL BE POSTED AT SIGNALIZED INTERSECTIONS ALONG THE DESIGNATED DETOUR ROUTE OR 1/2 MILE MAXIMUM APART.

**TRAFFIC HANDLING DETAILS
TRAFFIC CONTROL SYSTEM
FOR DETOUR SIGN INSTALLATION
ALONG DESIGNATED DETOUR ROUTE
SHEET 1 OF 2
NO SCALE**

THD-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DTM

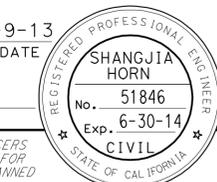
FUNCTIONAL SUPERVISOR
ALBERT K YU

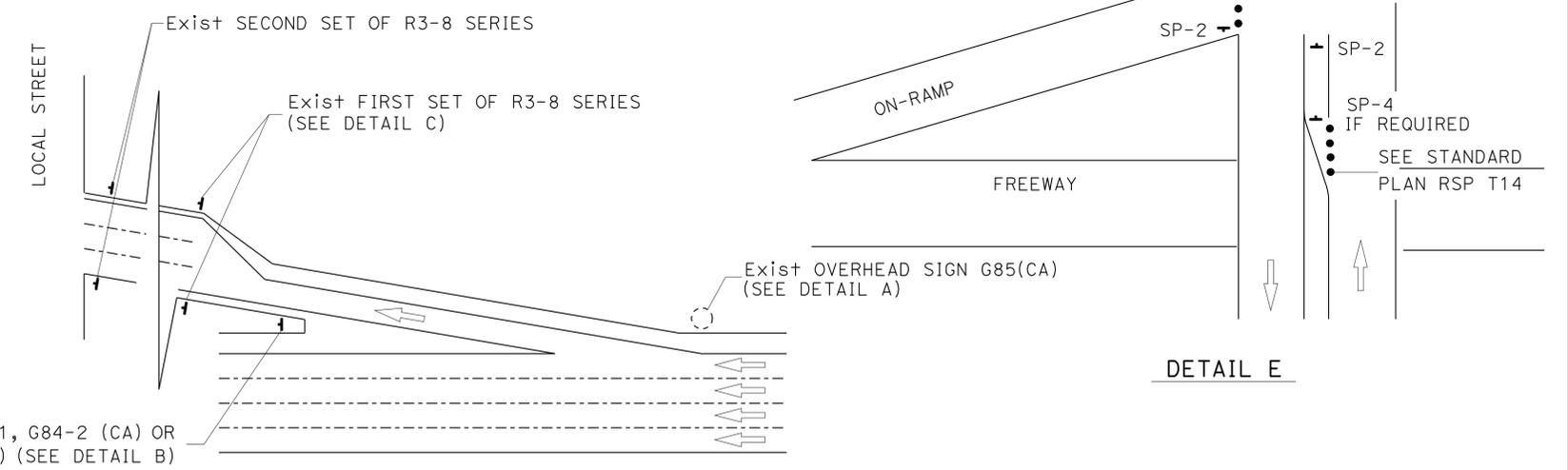
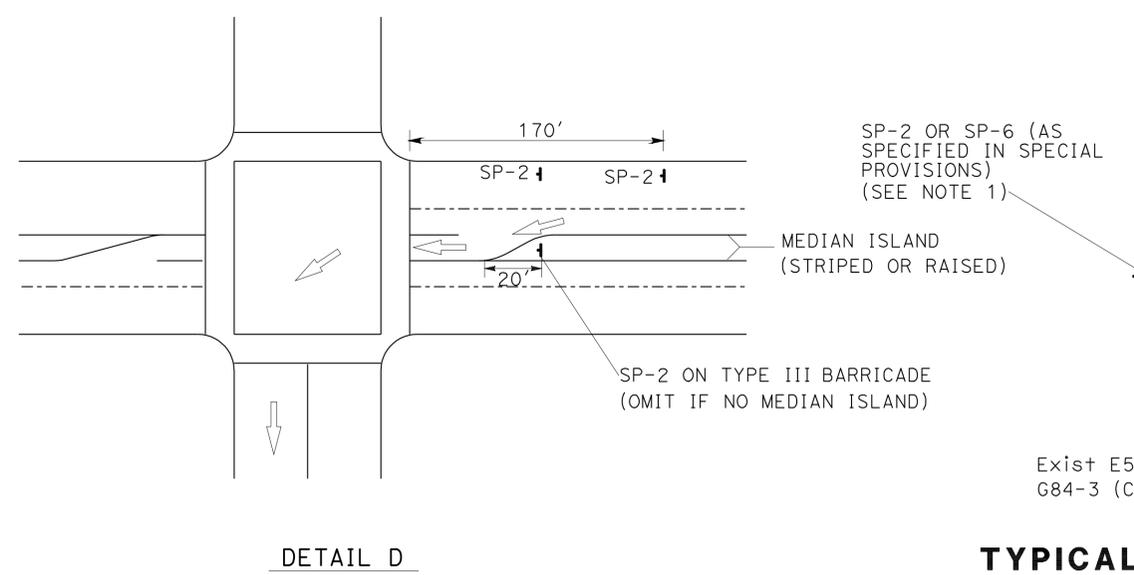
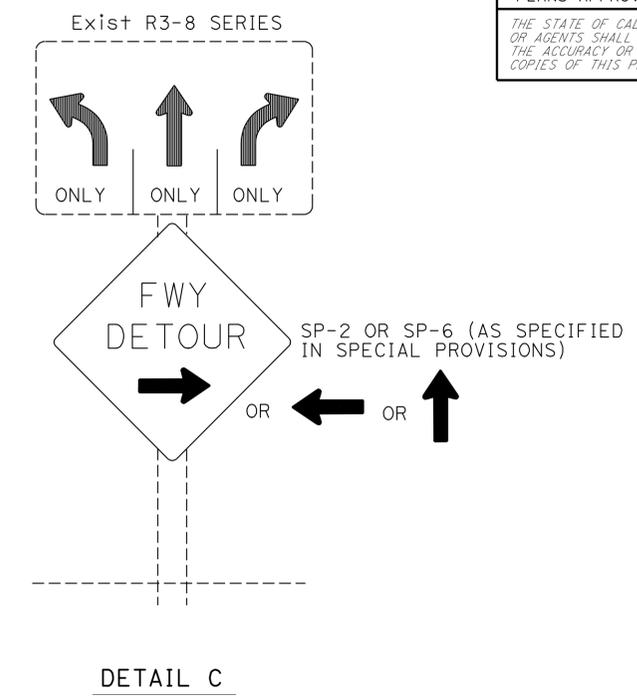
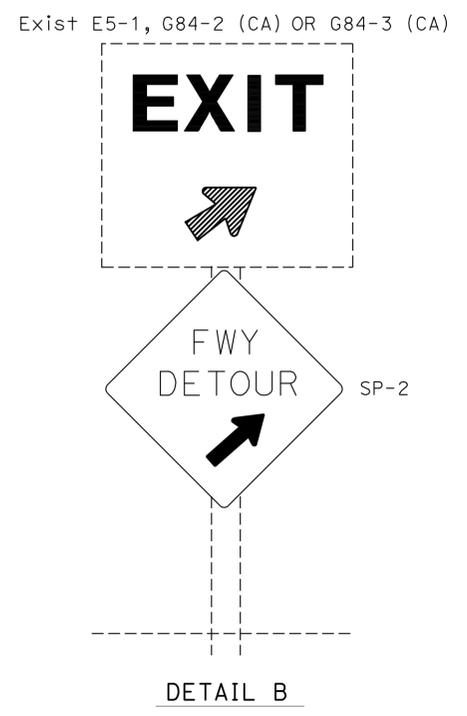
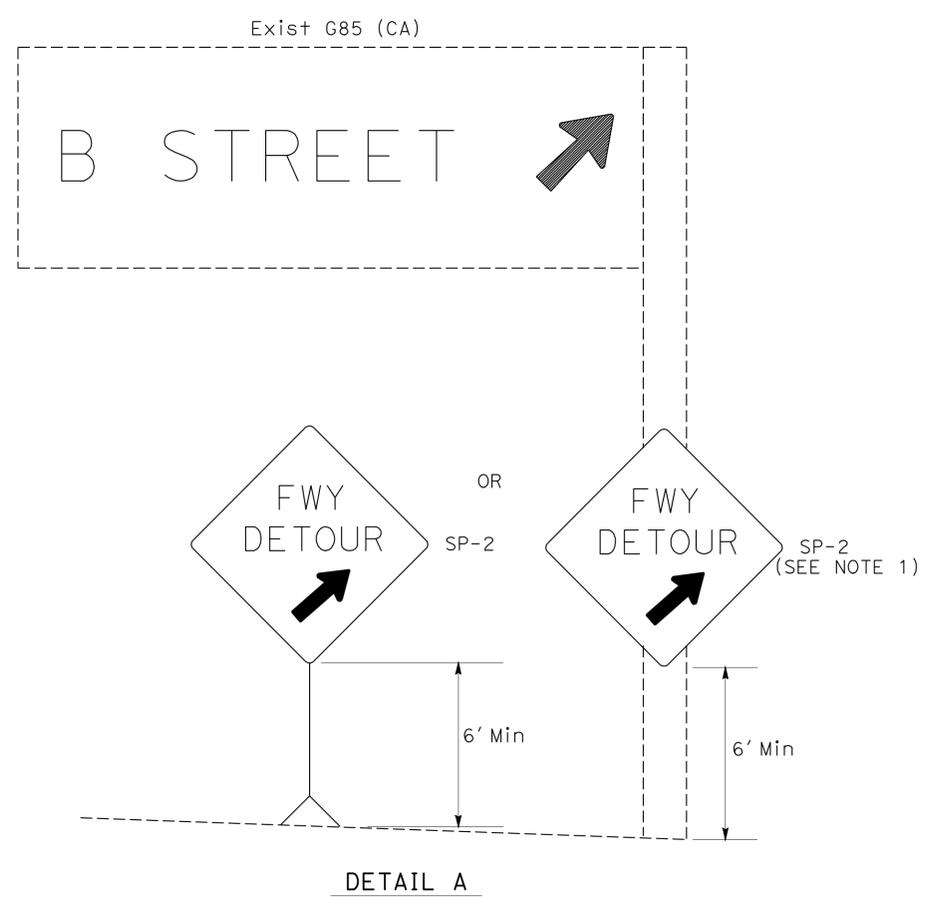
CALCULATED/DESIGNED BY
CHECKED BY

SHANGJIA HORN
ALBERT K YU

REVISOR BY
DATE REVISED

JC
7/10

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA/Ven	1,5,10,90,101, etc.	Var	15	31
			10-9-13		
REGISTERED CIVIL ENGINEER			DATE		
11-4-13			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>					



TYPICAL DETOUR SIGN INSTALLATION AT OFF-RAMP

- NOTES:**
1. TEMPORARY SIGNS MAY BE STRAPPED ON EXISTING ELECTROLIER, SIGNAL POSTS, OR SIGN POSTS.
 2. OMIT DETAIL A AND DETAIL B FOR FULL FREEWAY CLOSURES.
 3. SEE TRAFFIC HANDLING DETAILS PLAN-TRAFFIC CONTROL SYSTEM FOR RAMP CLOSURES, DETOUR SIGNS AND MISCELLANEOUS DETAILS SHEET 2 OF 2 FOR SP-6.

ABBREVIATIONS

(CA) CALIFORNIA CODE

- LEGENDS**
- TRAFFIC CONE
 - ↑ TEMPORARY SIGN
 - DIRECTION OF TRAVEL
 - EXISTING OVERHEAD SIGN

**TRAFFIC HANDLING DETAILS
TRAFFIC CONTROL SYSTEM
FOR DETOUR SIGN INSTALLATION
ALONG DESIGNATED DETOUR ROUTE
SHEET 2 OF 2**

NO SCALE

THD-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DTM
Caltrans

REVISOR: JC 8/10
DESIGNER: SHANGJIA HORN
CHECKER: ALBERT K YU

FUNCTIONAL SUPERVISOR: ALBERT K YU

DATE: 11-4-13
TIME: 21:53

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Ven	1,5,10,90 101, etc	Var	17	31

John T. Zaki 10-17-13
 REGISTERED CIVIL ENGINEER DATE
 11-4-13
 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.

SUMMARY OF QUANTITIES

LOCATION No.	COUNTY	ROUTE	DIRECTION	PM	SALVAGE CRASH CUSHION (N)					ALTERNATIVE CRASH CUSHION	SCI 100 SMART CRASH CUSHION (TYPE 9400)	QUAD GUARD CRASH CUSHION (TYPE QG210036)	QUAD GUARD CRASH CUSHION (TYPE QG210048)	QUAD GUARD CRASH CUSHION (TYPE QG210069)	MARKER PANEL (TYPE R)	(N)	CHANNELIZER (SURFACE MOUNTED)	CONCRETE BARRIER (TYPE 60)	TEMPORARY RAILING (TYPE K)	TEMPORARY TERMINAL SECTION (TYPE K)	TEMPORARY CRASH CUSHION MODULE	TEMPORARY DRAINAGE INLET PROTECTION	REMARKS
					EA	EA	EA	EA	EA														
31	Ven	1	NB	10.2						1	1				1								FIXED OBJECT MBGR BULLET NOSE
32	Ven	1	SB	10.2						1	1				1								FIXED OBJECT MBGR BULLET NOSE
33	Ven	1	NB	10.6						1	1				1								FIXED OBJECT MBGR BULLET NOSE
34	Ven	1	SB	10.6						1	1				1								FIXED OBJECT MBGR BULLET NOSE
35	Ven	1	NB	11.6						1	1				1								FIXED OBJECT MBGR BULLET NOSE
36	Ven	1	NB	12.8						1	1				1								FIXED OBJECT MBGR BULLET NOSE
37	Ven	1	SB	12.8						1	1				1								FIXED OBJECT MBGR BULLET NOSE
SUB TOTAL										7	7				7								
SUB TOAL FROM SHEET Q-1					1	1	14	1	13	25	2	1	1	1	30	17	140	320	1	14	25		
GRAND TOTAL					1	1	14	1	20	32	2	1	1	1	37	17	140	320	1	14	25		

SUMMARY OF QUANTITIES

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Ven	1,5,10,90 101, etc	Var	18	31

<i>Chambers O Anserlian</i>	5-23-13
REGISTERED CIVIL ENGINEER	DATE
11-4-13	
PLANS APPROVAL DATE	

OHANNES ANSERLIAN
No. E16682
Exp. 6/30/14
ELECTRICAL

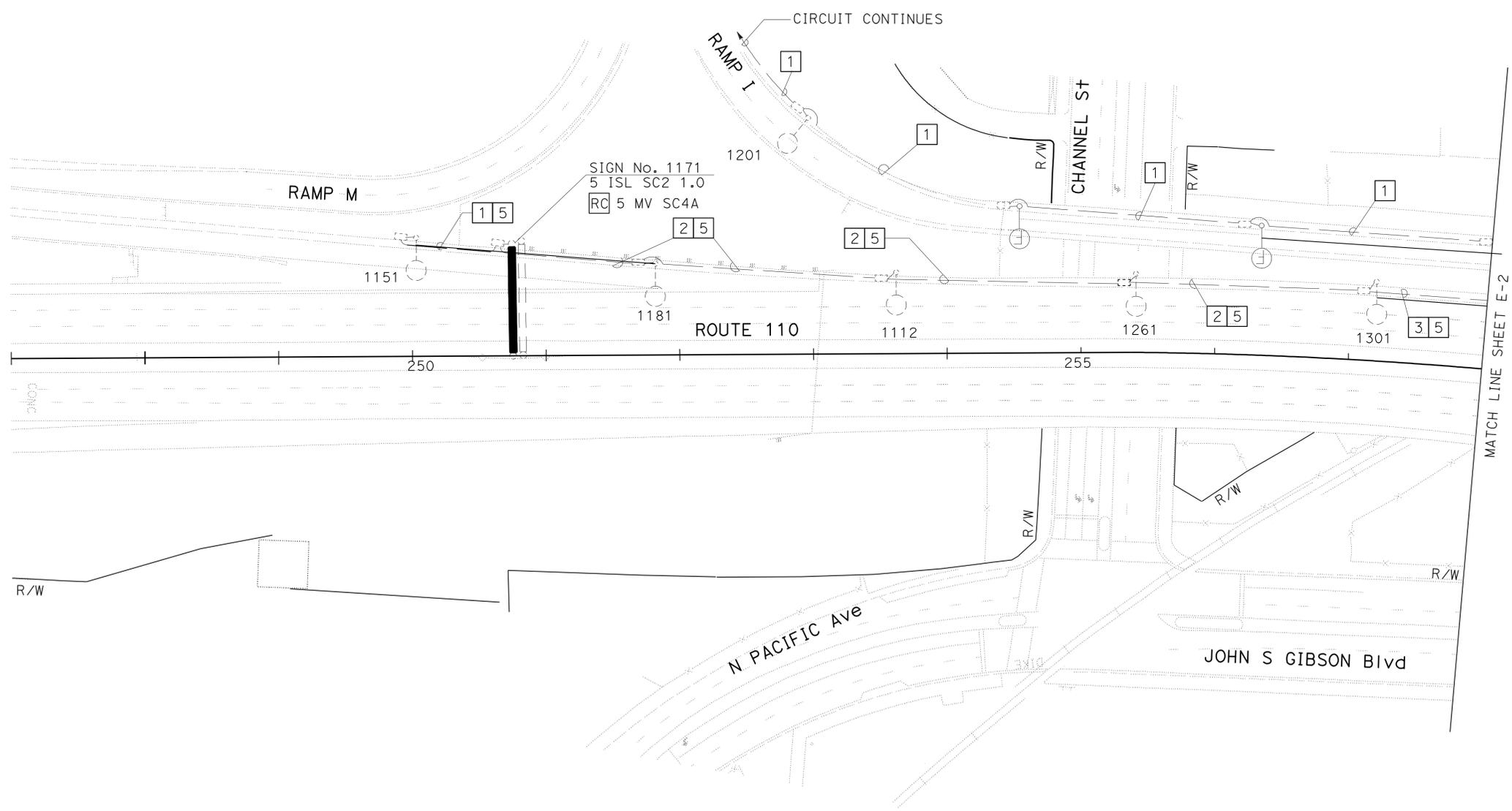
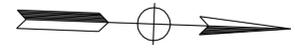
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR WIRING DIAGRAM SEE SHEET E-4.

LEGEND: (SHEET E-1 TO E-3)

- 1 Exist 1 1/2"C, 2#6.
- 2 Exist 1 1/2"C, 2#6, 2#8.
- 3 Exist 1 1/2"C, 2#8, 4#6.
- 4 INSTALL 2"C, 4#6, 2#8, 1#8 (G). (SEE E-2).
- 5 ADD 1#8 (G).



MODIFY LIGHTING AND SIGN ILLUMINATION

SCALE : 1"=50'

APPROVED FOR ELECTRICAL WORK ONLY

E-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING
FUNCTIONAL SUPERVISOR OSWALD ELIZONDO
CALCULATED/DESIGNED BY CHECKED BY
LIEN VO OHANNES ANSERLIAN
REVISED BY DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Ven	1,5,10,90 101, etc	Var	19	31

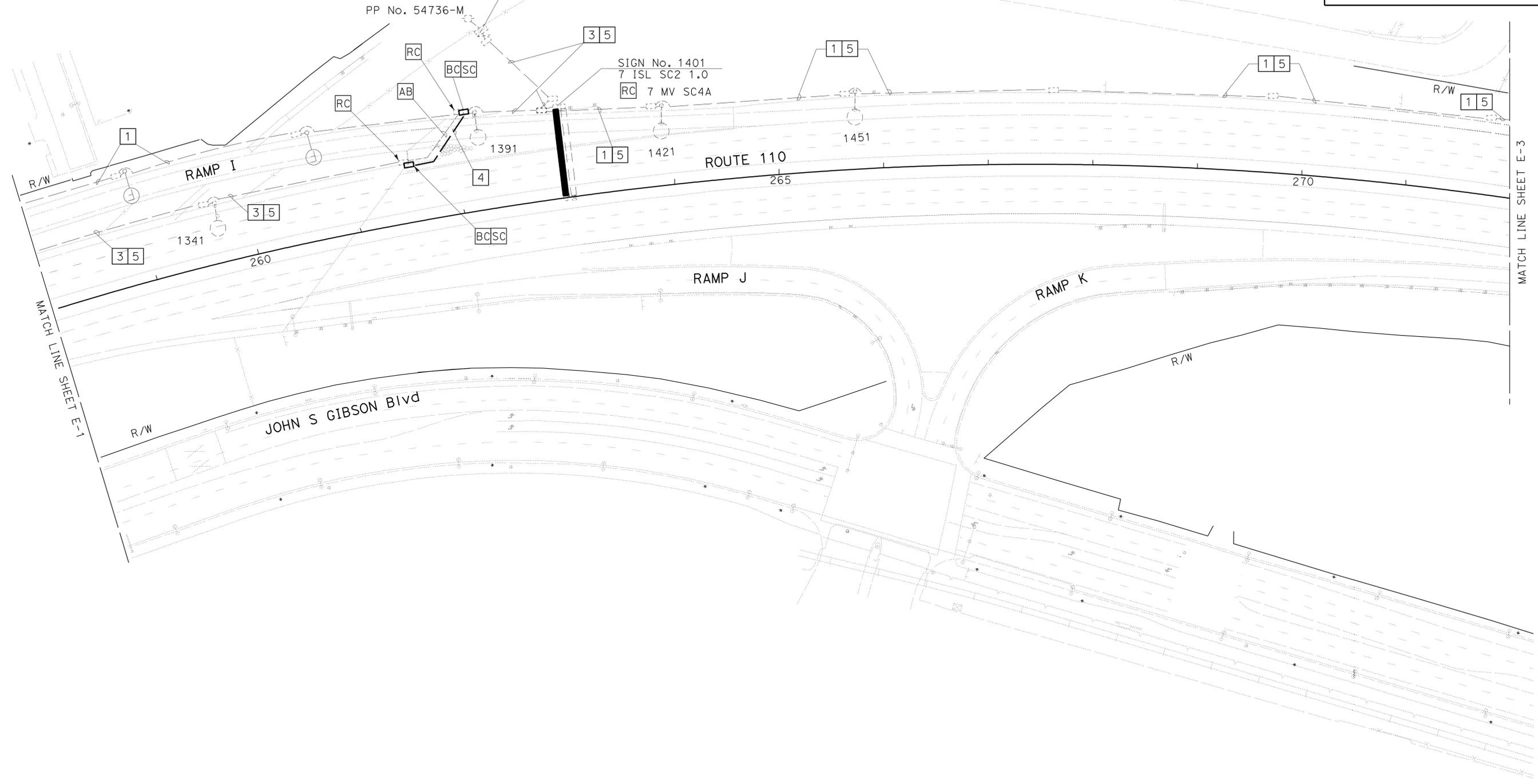
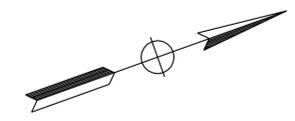
Chamun O Anserlian 5-23-13
 REGISTERED CIVIL ENGINEER DATE
 11-4-13
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
OHANNES ANSERLIAN
 No. E16682
 Exp. 6/30/14
 ELECTRICAL
 STATE OF CALIFORNIA

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR LEGEND, SEE SHEET E-1.
3. FOR WIRING DIAGRAM, SEE SHEET E-4.

EXISTING 120/240 V TYPE III-BF SERVICE EQUIPMENT ENCLOSURE WITH TYPE V PEC AND:
 100 A, 240 V, 2P CB. MAIN BREAKER
 2-30 A, 240 V, 2P, CB. (LIGHTING AND SIGN ILLUMINATION)
 15 A, 120V, 1P, CB. (FLASHING BEACON)
 ADDRESS: 1250 1/2 GAFFEY ST
 CTID 07-53-110-0-002.234



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	LIEN VO	REVISOR BY
Caltrans MAINTENANCE ENGINEERING	OSWALD ELIZONDO	CHECKED BY	OHANNES ANSERLIAN	DATE REVISED

MODIFY LIGHTING AND SIGN ILLUMINATION
 SCALE : 1"=50'

APPROVED FOR ELECTRICAL WORK ONLY

E-2

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Ven	1,5,10,90 101, etc	Var	20	31

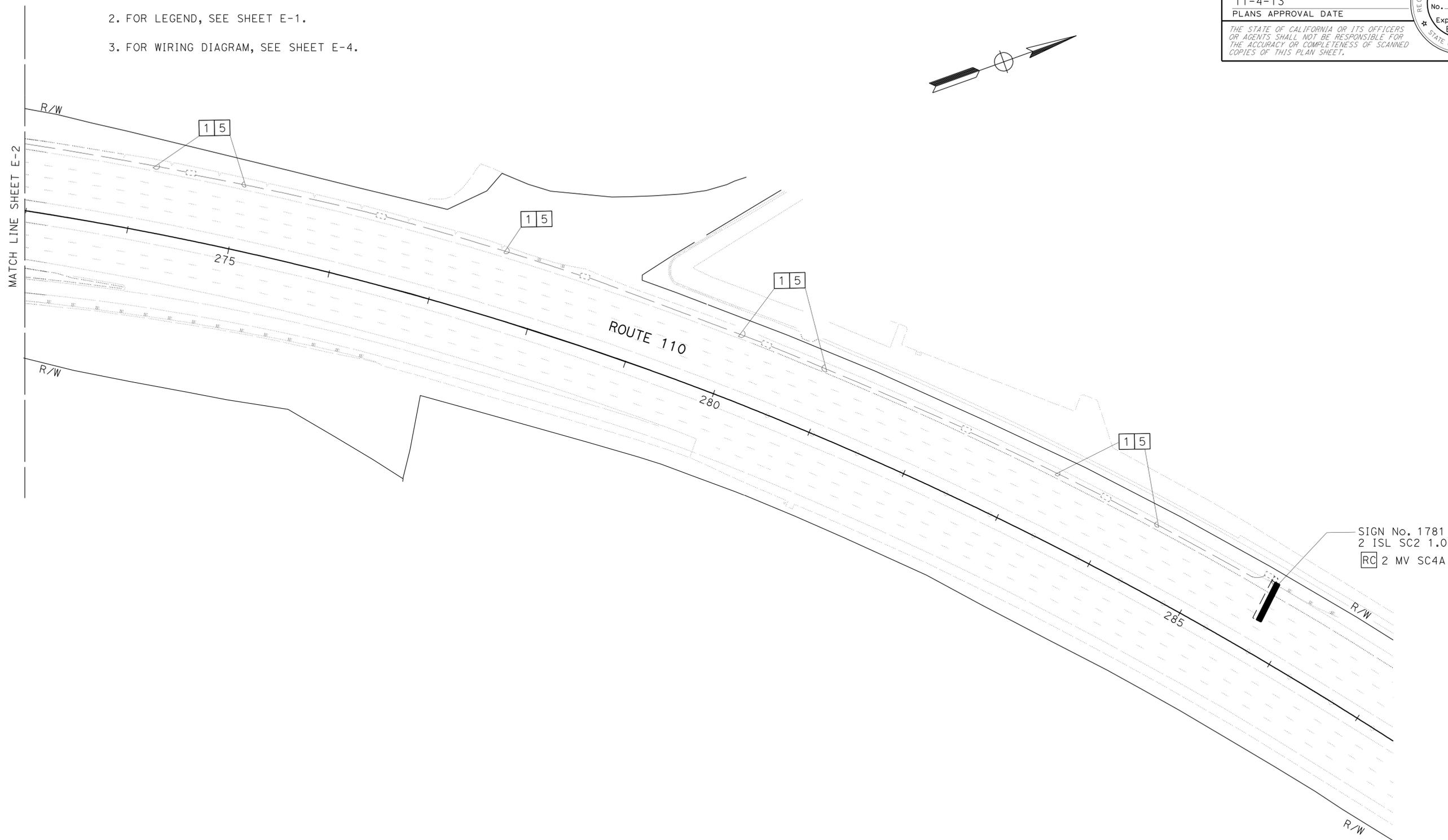
Ohannes Anserlian 5-23-13
 REGISTERED CIVIL ENGINEER DATE
 11-4-13
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
OHANNES ANSERLIAN
 No. E16682
 Exp. 6/30/14
 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.

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR LEGEND, SEE SHEET E-1.
3. FOR WIRING DIAGRAM, SEE SHEET E-4.



MODIFY LIGHTING AND SIGN ILLUMINATION

SCALE : 1"=50'

E-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	LIEN VO	REVISOR
Caltrans MAINTENANCE ENGINEERING	OSWALD ELIZONDO	CHECKED BY	OHANNES ANSERLIAN	DATE

APPROVED FOR ELECTRICAL WORK ONLY

RELATIVE BORDER SCALE
1" = 10' IN INCHES



UNIT 1878

PROJECT NUMBER & PHASE

07130001501

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Ven	1,5,10,90 101, etc	Var	22	31

Chamun O Anserlian 5-23-13
 REGISTERED CIVIL ENGINEER DATE
 11-4-13
 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.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING
 FUNCTIONAL SUPERVISOR
 OSWALD ELIZONDO
 CALCULATED/DESIGNED BY
 CHECKED BY
 LIEN VO
 OHANNES ANSERLIAN
 REVISED BY
 DATE REVISED

MODIFY LIGHTING AND SIGN ILLUMINATION						
SHEET No	No. 5 PULL BOX (EA) (N)	2"C (LF) (N)	#6 (LF) (N)	#8 (LF) (N)	#8 (G) (LF) (N)	ISL (EA) (N)
E-1	_____	_____	_____	_____	800	5
E-2	2	100	400	200	1700	7
E-3	_____	_____	_____	_____	1300	2
TOTAL	2	100	400	200	3800	14

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

ELECTRICAL QUANTITIES

E-5

APPROVED FOR ELECTRICAL WORK ONLY

LAST REVISION | DATE PLOTTED => 04-NOV-2013
 11-04-13 | TIME PLOTTED => 22:04

	M	
Maint	MAINTENANCE	
Max	MAXIMUM	
MB	METAL BEAM	
MBB	METAL BEAM BARRIER	
MBGR	METAL BEAM GUARD RAILING	
Med	MEDIAN	
MGS	MIDWEST GUARDRAIL SYSTEM	
MH	MANHOLE	
Min	MINIMUM	
Misc	MISCELLANEOUS	
Misc I & S	MISCELLANEOUS IRON AND STEEL	
Mkr	MARKER	
Mod	MODIFIED, MODIFY	
Mon	MONUMENT	
MP	METAL PLATE	
MPGR	METAL PLATE GUARD RAILING	
MR	MOVEMENT RATING	
MSE	MECHANICALLY STABILIZED EMBANKMENT	
Mt	MOUNTAIN, MOUNT	
MtI	MATERIAL	
MVP	MAINTENANCE VEHICLE PULLOUT	
	N	
N	NORTH	
NB	NORTHBOUND	
No.	NUMBER (MUST HAVE PERIOD)	
Nos.	NUMBERS (MUST HAVE PERIOD)	
NPS	NOMINAL PIPE SIZE	
NS	NEAR SIDE	
NSP	NEW STANDARD PLAN	
NTS	NOT TO SCALE	
	O	
Obir	OBLITERATE	
OC	OVERCROSSING	
OD	OUTSIDE DIAMETER	
OF	OUTSIDE FACE	
OG	ORIGINAL GROUND	
OGAC	OPEN GRADED ASPHALT CONCRETE	
OGFC	OPEN GRADED FRICTION COURSE	
OH	OVERHEAD	
OHWM	ORDINARY HIGH WATER MARK	
O-O	OUT TO OUT	
Opp	OPPOSITE	
OSD	OVERSIDE DRAIN	
	P	
p	PAGE	
PAP	PERFORATED ALUMINUM PIPE	
PB	PULL BOX	
PC	POINT OF CURVATURE, PRECAST	
PCC	POINT OF COMPOUND CURVE, PORTLAND CEMENT CONCRETE	
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN	
PCP	PERFORATED CONCRETE PIPE, PRESTRESSED CONCRETE PIPE	
PCVC	POINT OF COMPOUND VERTICAL CURVE	
PEC	PERMIT TO ENTER AND CONSTRUCT	
Ped	PEDESTRIAN	
Ped OC	PEDESTRIAN OVERCROSSING	
Ped UC	PEDESTRIAN UNDERCROSSING	
Perm MtI	PERMEABLE MATERIAL	

	P continued	
PG	PROFILE GRADE	
PI	POINT OF INTERSECTION	
PJP	PARTIAL JOINT PENETRATION	
Pkwy	PARKWAY	
PL, PL	PLATE	
P/L	PROPERTY LINE	
PM	POST MILE, TIME FROM NOON TO MIDNIGHT	
PN	PAVING NOTCH	
POC	POINT OF HORIZONTAL CURVE	
POT	POINT OF TANGENT	
POVC	POINT OF VERTICAL CURVE	
PP	PIPE PILE, PLASTIC PIPE, POWER POLE	
PPL	PREFORMED PERMEABLE LINER	
PPP	PERFORATED PLASTIC PIPE	
PRC	POINT OF REVERSE CURVE	
PRF	PAVEMENT REINFORCING FABRIC	
PRVC	POINT OF REVERSE VERTICAL CURVE	
PS&E	PLANS, SPECIFICATIONS AND ESTIMATES	
PS, P/S	PRESTRESSED	
PSP	PERFORATED STEEL PIPE	
PT	POINT OF TANGENCY	
PVC	POLYVINYL CHLORIDE	
Pvmt	PAVEMENT	
	Q	
Qty	QUANTITY	
	R	
R	RADIUS	
R & D	REMOVE AND DISPOSE	
R & S	REMOVE AND SALVAGE	
R/C	RATE OF CHANGE	
RCA	REINFORCED CONCRETE ARCH	
RCB	REINFORCED CONCRETE BOX	
RCP	REINFORCED CONCRETE PIPE	
RCPA	REINFORCED CONCRETE PIPE ARCH	
Rd	ROAD	
Reinf	REINFORCED, REINFORCEMENT, REINFORCING	
Rel	RELOCATE	
Repl	REPLACEMENT	
Ret	RETAINING	
Rev	REVISED, REVISION	
Rdwy	ROADWAY	
RHMA	RUBBERIZED HOT MIX ASPHALT	
Riv	RIVER	
RM	ROAD-MIXED	
RP	RADIUS POINT, REFERENCE POINT	
RR	RAILROAD	
RSP	ROCK SLOPE PROTECTION, REVISED STANDARD PLAN	
Rt	RIGHT	
Rte	ROUTE	
RW	REDWOOD, RETAINING WALL	
R/W	RIGHT OF WAY	
Rwy	RAILWAY	

	S	
S	SOUTH, SUPPLEMENT	
SAE	STRUCTURE APPROACH EMBANKMENT	
Salv	SALVAGE	
SAPP	STRUCTURAL ALUMINUM PLATE PIPE	
SB	SOUTHBOUND	
SC	SAND CUSHION	
SCSP	SLOTTED CORRUGATED STEEL PIPE	
SD	STORM DRAIN	
Sec	SECOND, SECTION	
Sep	SEPARATION	
SG	SUBGRADE	
Shld	SHOULDER	
Sht	SHEET	
Sim	SIMILAR	
SL	STATION LINE	
SM	SELECTED MATERIAL	
Spec	SPECIAL, SPECIFICATIONS	
SPP	SLOTTED PLASTIC PIPE	
SS	SLOPE STAKE	
SSBM	STRAP AND SADDLE BRACKET METHOD	
SSD	STRUCTURAL SECTION DRAIN	
SSPA	STRUCTURAL STEEL PLATE ARCH	
SSPP	STRUCTURAL STEEL PLATE PIPE	
SSPPA	STRUCTURAL STEEL PLATE PIPE ARCH	
SSRP	STEEL SPIRAL RIB PIPE	
St	STREET	
Sta	STATION	
STBB	SINGLE THRIE BEAM BARRIER	
Std	STANDARD	
Str	STRUCTURE	
Surf	SURFACING	
SW	SIDEWALK, SOUND WALL	
Swr	SEWER	
Sym	SYMMETRICAL	
S4S	SURFACE 4 SIDES	
	T	
T	SEMI-TANGENT	
Tan	TANGENT	
TBB	THRIE BEAM BARRIER	
Tbr	TIMBER	
TC	TOP OF CURB	
TCB	TRAFFIC CONTROL BOX	
TCE	TEMPORARY CONSTRUCTION EASEMENT	
TeI	TELEPHONE	
Temp	TEMPORARY	
TG	TOP OF GRADE	
Tot	TOTAL	
TP	TELEPHONE POLE	
TPB	TREATED PERMEABLE BASE	
TPM	TREATED PERMEABLE MATERIAL	
Trans	TRANSITION	

	T continued	
TS	TRANSVERSE, TRAFFIC SIGNAL, TUBULAR STEEL	
Typ	TYPICAL	U
UC	UNDERCROSSING	
UD	UNDERDRAIN	
UG	UNDERGROUND	
UON	UNLESS OTHERWISE NOTED	
UP	UNDERPASS	V
V	VALVE, DESIGN SPEED	
Var	VARIABLE, VARIES	W
VC	VERTICAL CURVE	
VCP	VITRIFIED CLAY PIPE	
Vert	VERTICAL	
Via	VIADUCT	
Vol	VOLUME	
W	WEST, WIDTH	
WB	WESTBOUND	
WH	WEEP HOLE	
WM	WIRE MESH	
WS	WATER SURFACE	
WSP	WELDED STEEL PIPE	
Wt	WEIGHT	
WV	WATER VALVE	
WW	WINGWALL	
WWLOL	WINGWALL LAYOUT LINE	X
X Sec	CROSS SECTION	
Xing	CROSSING	Y
Yr	YEAR	
Yrs	YEARS	

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Ven	1,5,10,90 101, etc	Var	23	31

Grace M. Tsushima
REGISTERED CIVIL ENGINEER

July 19, 2013
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.

TO ACCOMPANY PLANS DATED 11-4-13

UNIT OF MEASUREMENT SYMBOLS:

Some of the symbols used in the project plan quantity tables and in the Bid Item List are:

TABLE A

SYMBOL USED	DEFINITIONS
ACRE	ACRE
CF	CUBIC FOOT
CY	CUBIC YARD
EA	EACH
GAL	GALLON
LB	POUND
LF	LINEAR FOOT
SQFT	SQUARE FOOT
SQYD	SQUARE YARD
STA	100 FEET
TAB	TABLET
TON	2,000 POUNDS

Some of the symbols used in the plans other than in the project plan quantity tables are:

TABLE B

SYMBOL USED	DEFINITIONS
ksi	KIPS PER SQUARE INCH
ksf	KIPS PER SQUARE FOOT
psi	POUNDS PER SQUARE INCH
psf	POUNDS PER SQUARE FOOT
lb/ft ³ , pcf	POUNDS PER CUBIC FOOT
tsf	TONS PER SQUARE FOOT
mph, MPH *	MILES PER HOUR
ø	NOMINAL DIAMETER
oz	OUNCE
lb	POUND
kíp	1,000 POUNDS
cal	CALORIE
ft	FOOT OR FEET
gal	GALLON

* For use on a sign panel only

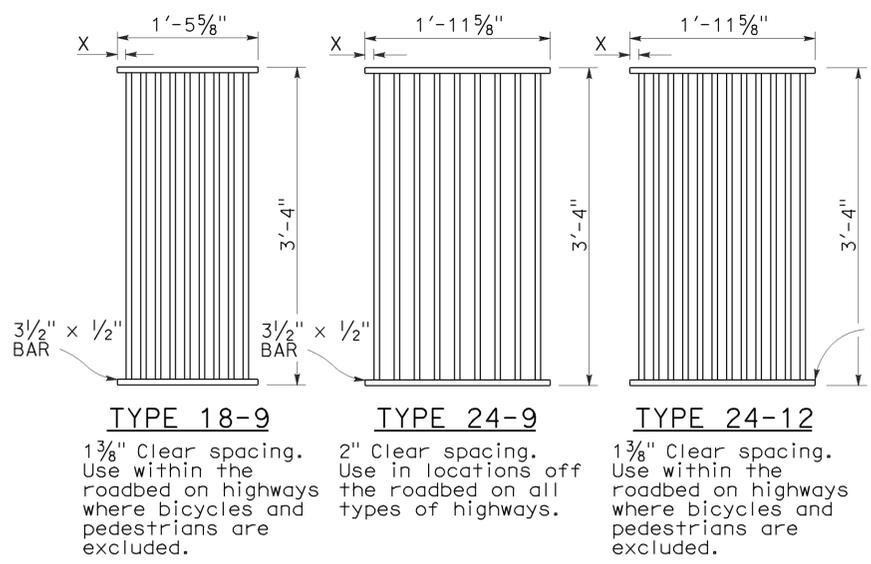
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ABBREVIATIONS
(SHEET 2 OF 2)**

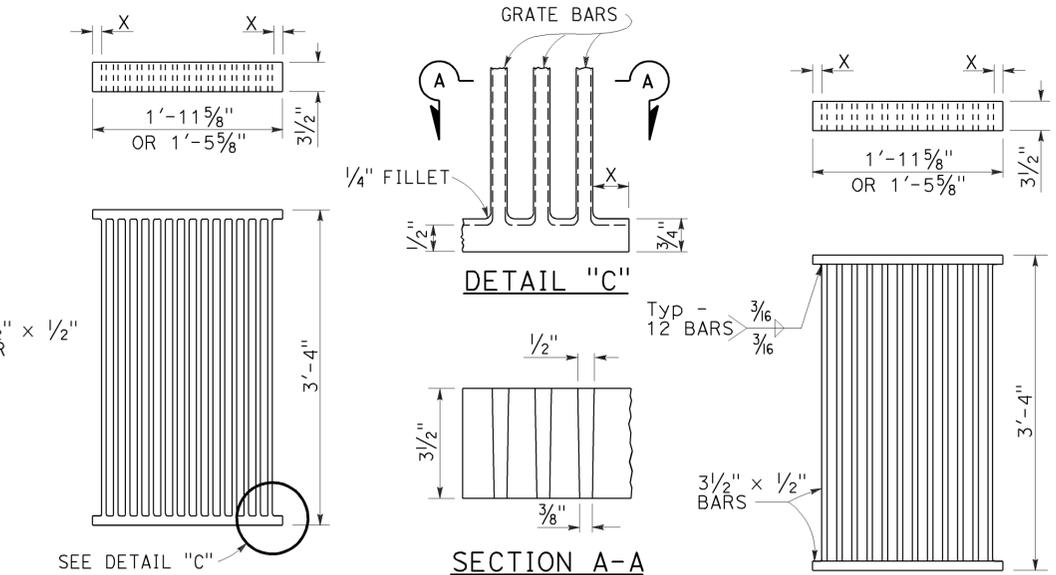
NO SCALE

RSP A10B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A10B
DATED MAY 20, 2011 - PAGE 2 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP A10B

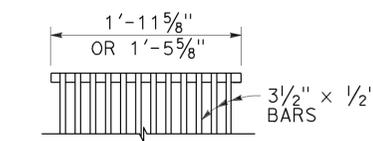


RECTANGULAR GRATE DETAILS
(See table below)

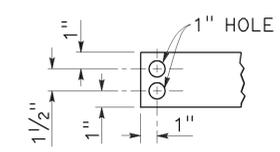


ALTERNATIVE CAST DUCTILE IRON GRATE OR CAST CARBON STEEL GRATE

ALTERNATIVE WELDED GRATE

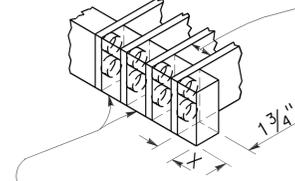


CAST END BLOCK

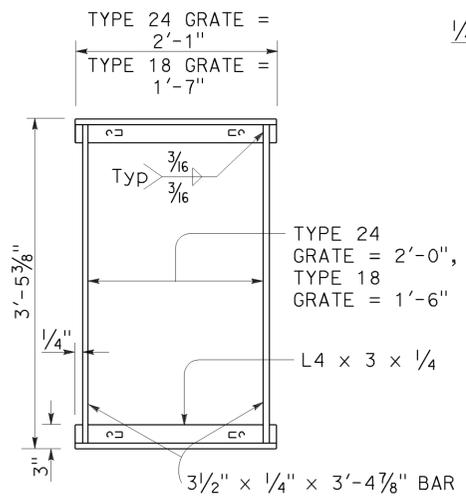


END OF BAR

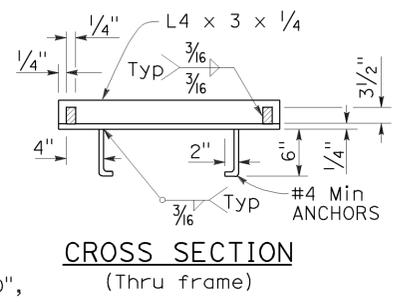
SPACING SAME AS FOR WELDED OR BOLTED GRATE



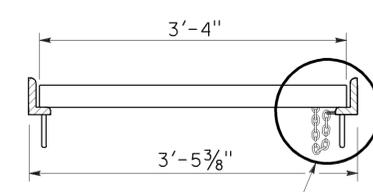
ALTERNATIVE CAST DUCTILE IRON OR CAST CARBON STEEL END BLOCK GRATE



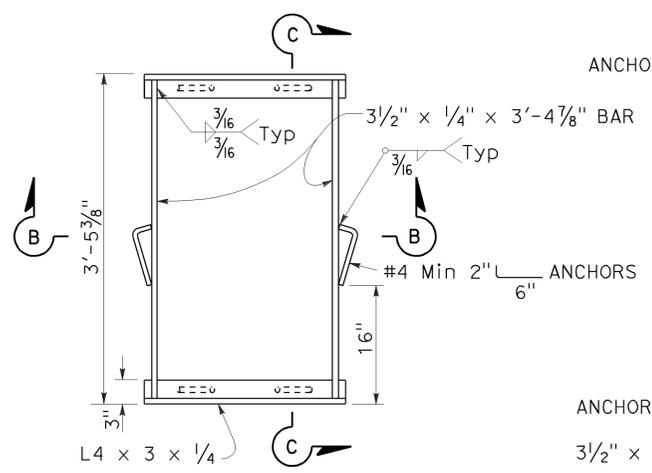
TYPICAL FRAME



CROSS SECTION (Thru frame)

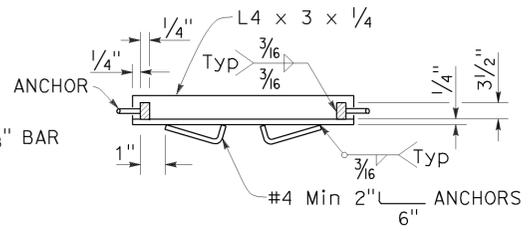


LONGITUDINAL SECTION (Thru frame and grate)

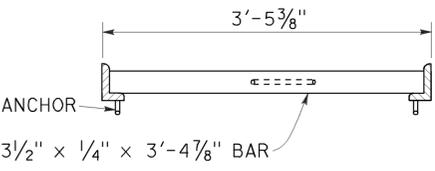


TYPICAL FRAME

ALTERNATIVE ANCHOR FOR RECTANGULAR FRAME
(For details not shown, See Rectangular Frame Details)



SECTION B-B



SECTION C-C

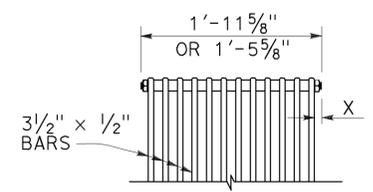
RECTANGULAR FRAME DETAILS
(For all rectangular grates)

GRATE BAR SPACING TABLE

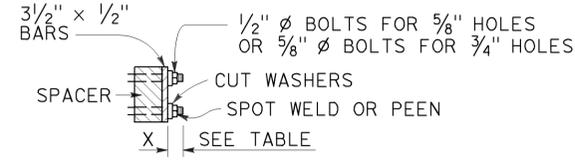
TYPE	NO. OF BARS	CLEAR BAR SPACING	X
18-9	9	1 3/8"	1 1/16"
24-9	9	2"	1 9/16"
24-12	12	1 3/8"	1 1/4"

INLET TYPE	COVER TYPE	WEIGHT LB
OS	PLATE	174
OL-7	PLATE	170
OL-10	PLATE	170
OL-14	PLATE	170
OL-21	PLATE	170
OCPI	PLATE	112
OCPI	PLATE	112
OCPI	REDWOOD	42
OMP	PLATE	177
OMPI	PLATE	177

INLET TYPE	GRATE TYPE	NO. OF GRATES	WEIGHT LB
GDO	24-12	2	634
GOL-7	24-12	1	326
GOL-10	24-12	1	326
G0,G1,G2,G3,G4 (TYPE 24)	24-9	1	263
	24-12	1	326
G4 (TYPE 18),G5,G6	18-9	1	249
GT1	18-9	2	498
GT2	18-9	2	498
GT3	24-12	2	652
GT4	24-12	2	652
TRASH RACK			22
GRATE CHAIN			3

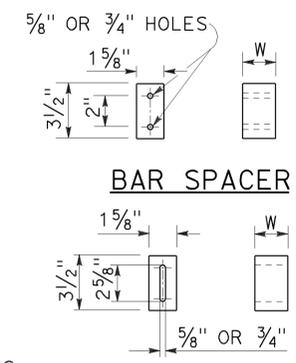


BOLTED END BLOCK



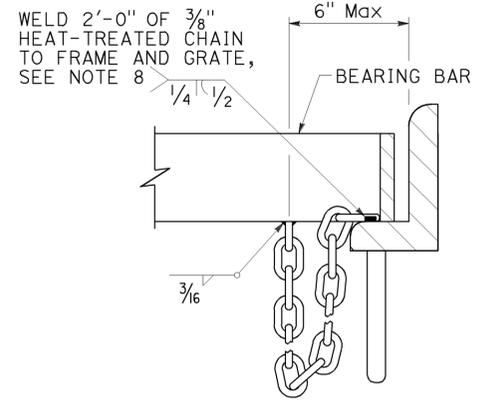
BOLTING DETAIL

ALTERNATIVE BOLTED GRATE



BAR SPACER

ALTERNATIVE SPACER
W = 1 3/8" or 2"



DETAIL "D"
(Steel grates only)

NOTES:

- Grate type numbers refer to approximate width of grate in inches and number of bars, respectively.
- Contractor has the option of using cast ductile iron, cast carbon steel, welded, bolted, or cast end block grate.
- Rounded top of bars optional on all grates.
- Pipe inlets with a grate shall be placed so that bars parallel direction of principle surface flow.
- Complete joint penetration butt welds may be substituted for the fillet welds on all anchors.
- Standard square, hexagon, round or equivalent headed anchors may be substituted for the right angle hooks on the anchors shown on this plan.
- Grate and frame weights are based on welded grates (weights of face angles, steps, protection bars, etc. are not included).
- Connect chain to grate and frame only at locations shown on the plans. When chain is required, do not use cast ductile iron grates.

TO ACCOMPANY PLANS DATED **11-4-13**

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
GRATE DETAILS

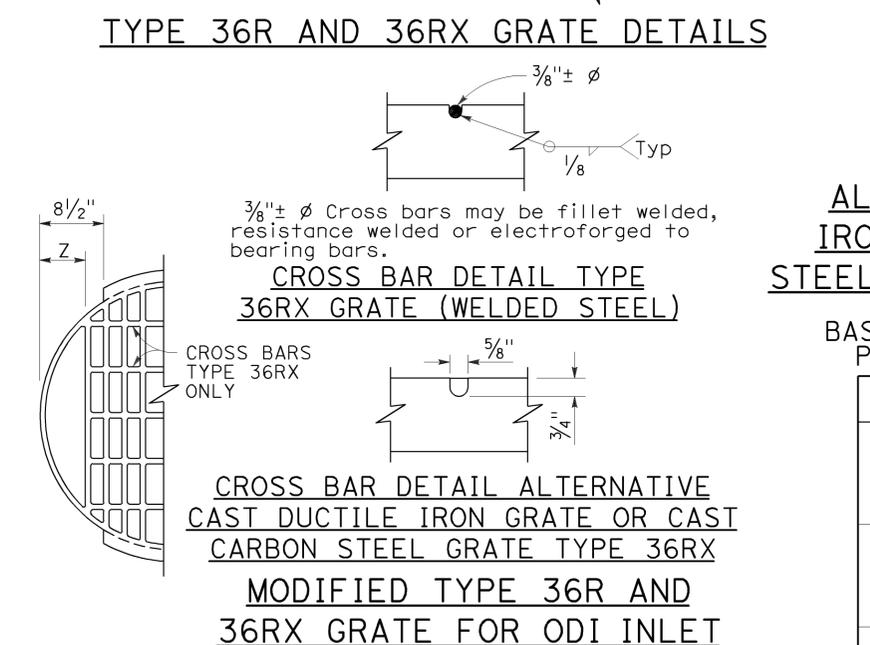
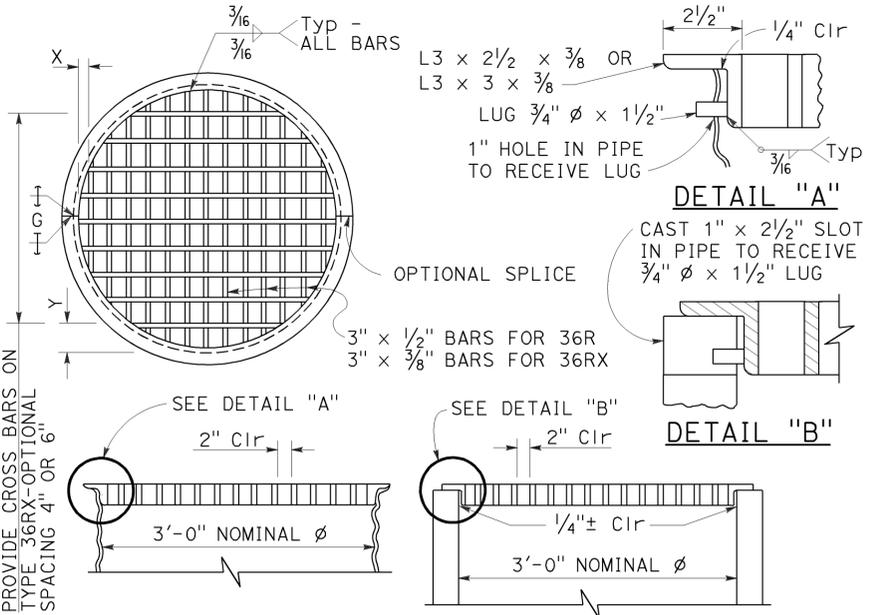
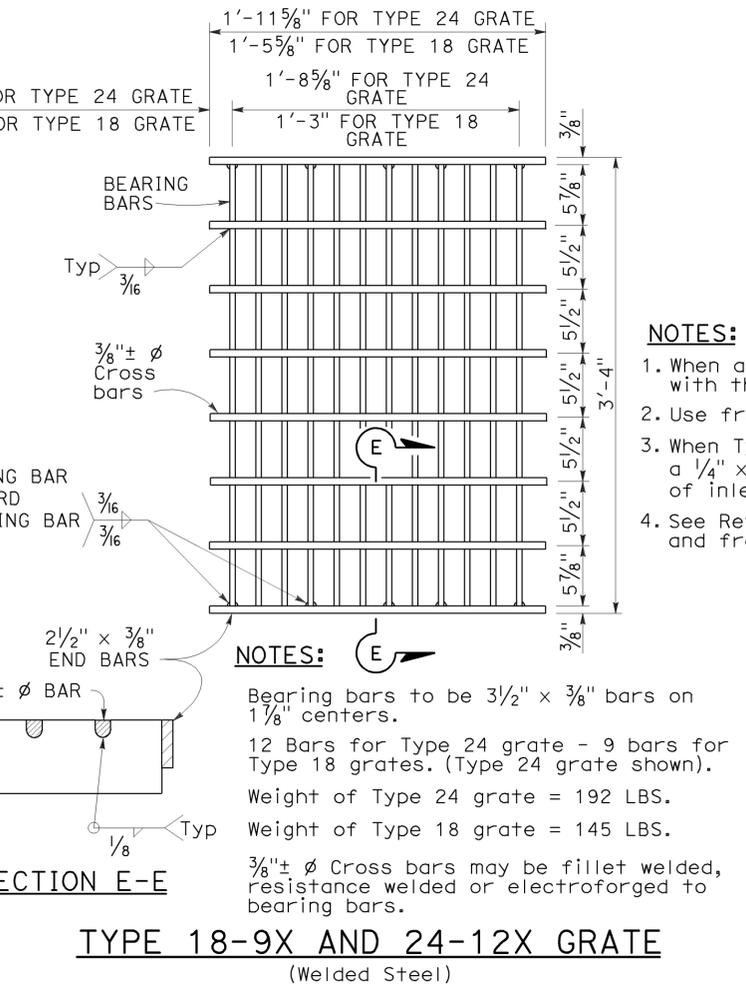
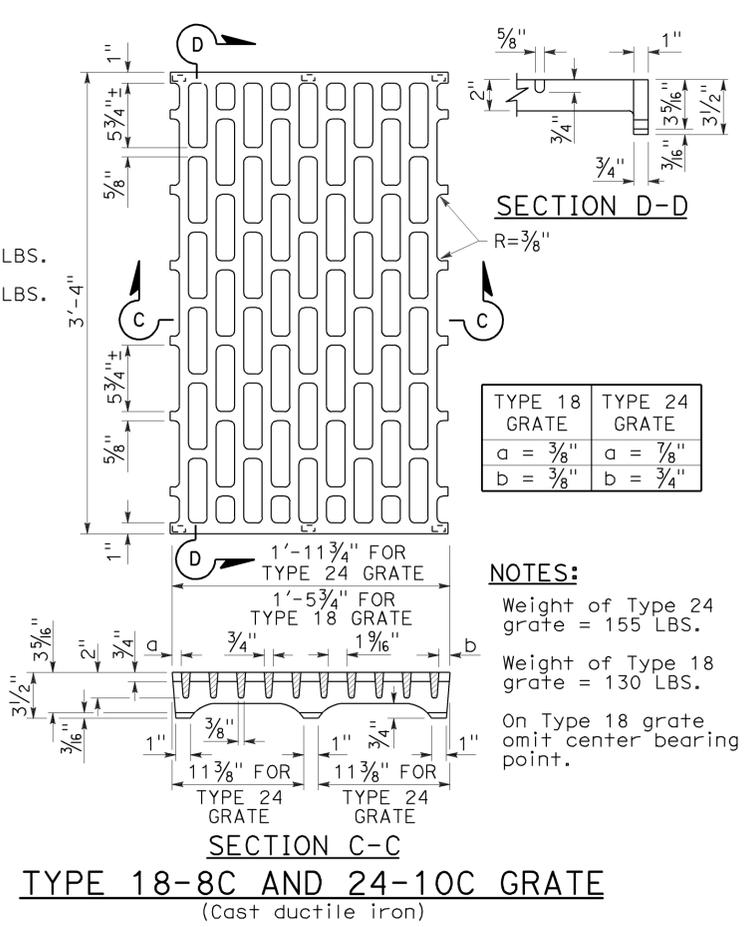
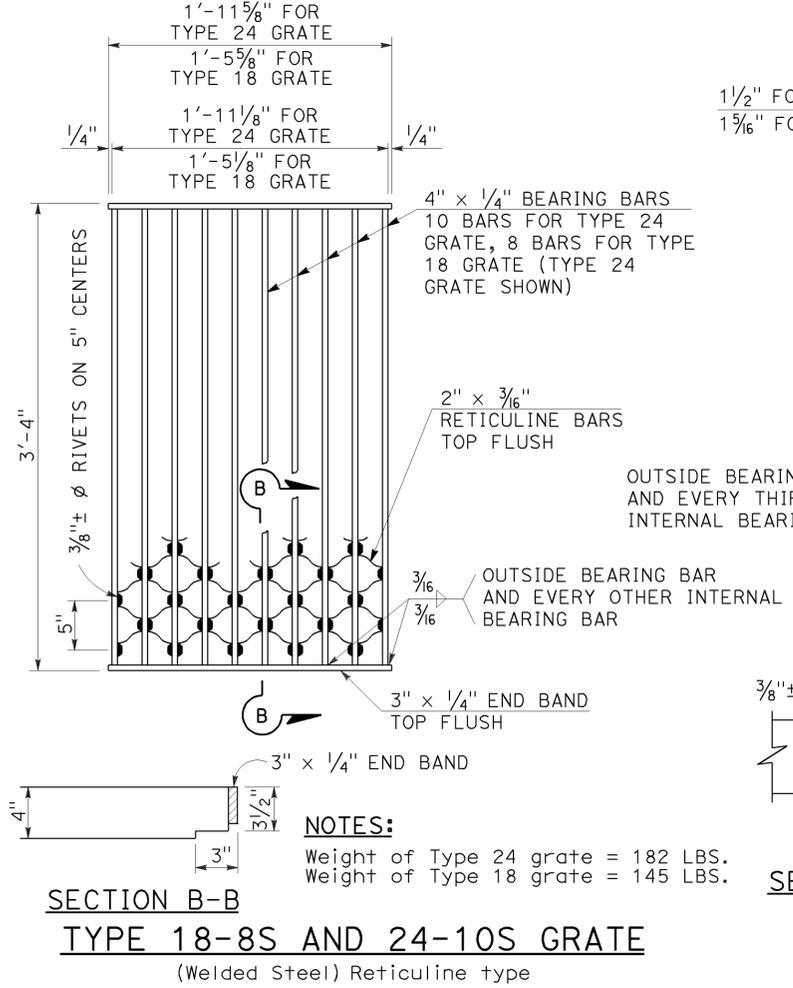
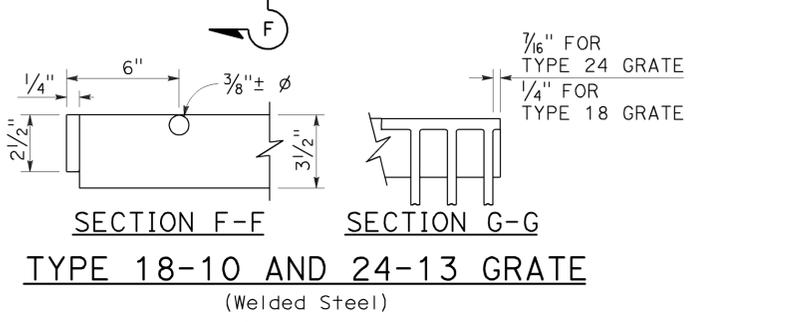
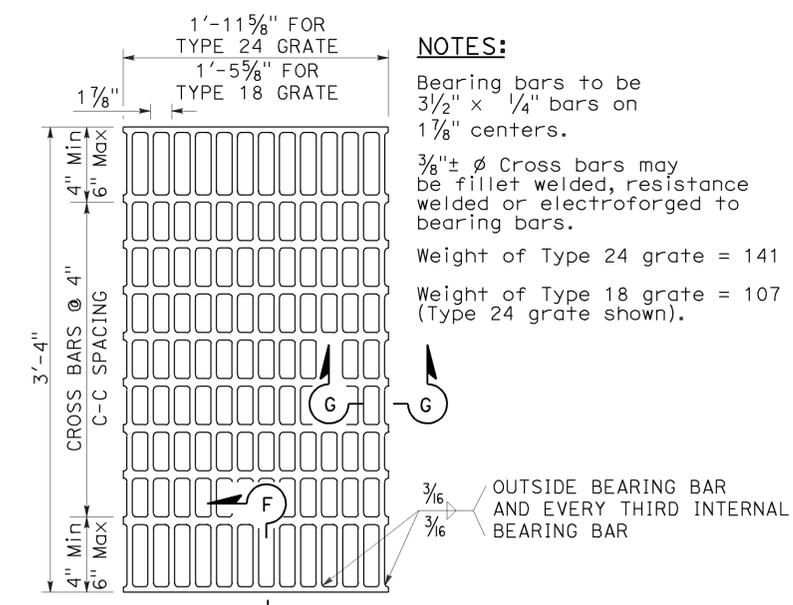
NO SCALE

RSP D77A DATED JULY 20, 2012 SUPERSEDES STANDARD PLAN D77A
DATED MAY 20, 2011 - PAGE 164 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D77A

2010 REVISED STANDARD PLAN RSP D77A

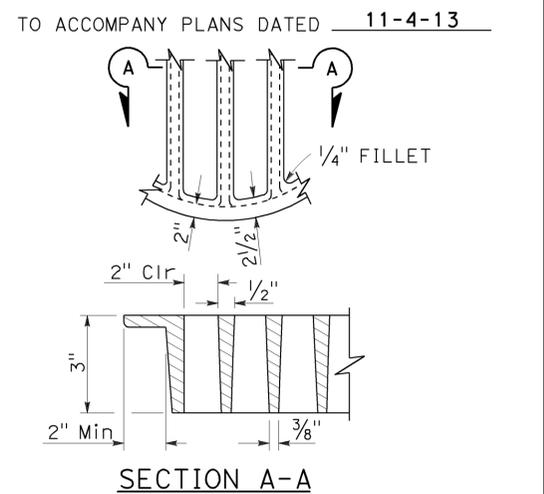
BASIS FOR Misc IRON & STEEL FINAL PAY WEIGHTS FOR DRAINAGE INLETS
(See Note 7)



- NOTES:**
- When alternative grates are allowed - Final pay based on alternative with the lesser weight.
 - Use frame shown on Standard Plan D74A, D74B or RSP D77A as appropriate.
 - When Type 24-10S, 24-12X or 24-13 grates are used with GDO Inlets, a 1/4" x 3/2" x 3'-4 7/8" steel bar shall be welded across the center of inlet frame to separate the individual grates.
 - See Revised Standard Plan RSP D77A for connecting chain to welded grate and frame. When chain is required, do not use cast ductile iron grate.

GRATE BAR SPACING TABLE

TYPE	NO. OF BARS	CLEAR BAR SPACING	X	Y		Z
				4" SPACING	6" SPACING	
36R	13	2"	2 1/8"	-	-	-
36RX (STEEL)	15	2"	9/16"	3 3/4"	5 3/4"	-
36RX (CAST)	13	2"	2 1/8"	3 3/4"	5 3/4"	-
36R Mod	12	2"	2 1/8"	-	-	5"
36RX Mod (STEEL)	13	2"	9/16"	3 3/4"	5 3/4"	5 1/16"
36RX Mod (CAST)	12	2"	2 1/8"	3 3/4"	5 3/4"	5"



BASIS FOR Misc IRON AND STEEL FINAL PAY WEIGHTS FOR DRAINAGE INLETS

INLET TYPE	GRATE TYPE	No. OF GRATES	WEIGHT LB
GDO (SEE NOTE 4)	24-10C	2	391
	24-10S	2	456
	24-12X	2	473
	24-13	2	374
G0, G0L, G1, G2, G3, G4 (TYPE 24)	24-10C	1	202
	24-10S	1	229
	24-12X	1	239
	24-13	1	188
G4 (TYPE 18) G5, G6	18-8S	1	187
	18-9X	1	187
	18-10	1	149
GT1, GT2	18-8S	2	374
	18-9X	2	374
	18-10	2	298
GT3, GT4	24-10C	2	404
	24-10S	2	458
	24-12X	2	478
ODI	24-13	2	376
	36RX (Mod)	1	196
	36R (Mod)	1	220
GMP, GCP, GCPI	36RX	1	215
	36R	1	236
TRASH RACK			22
GRATE CHAIN			3

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

GRATE DETAILS No. 2
NO SCALE

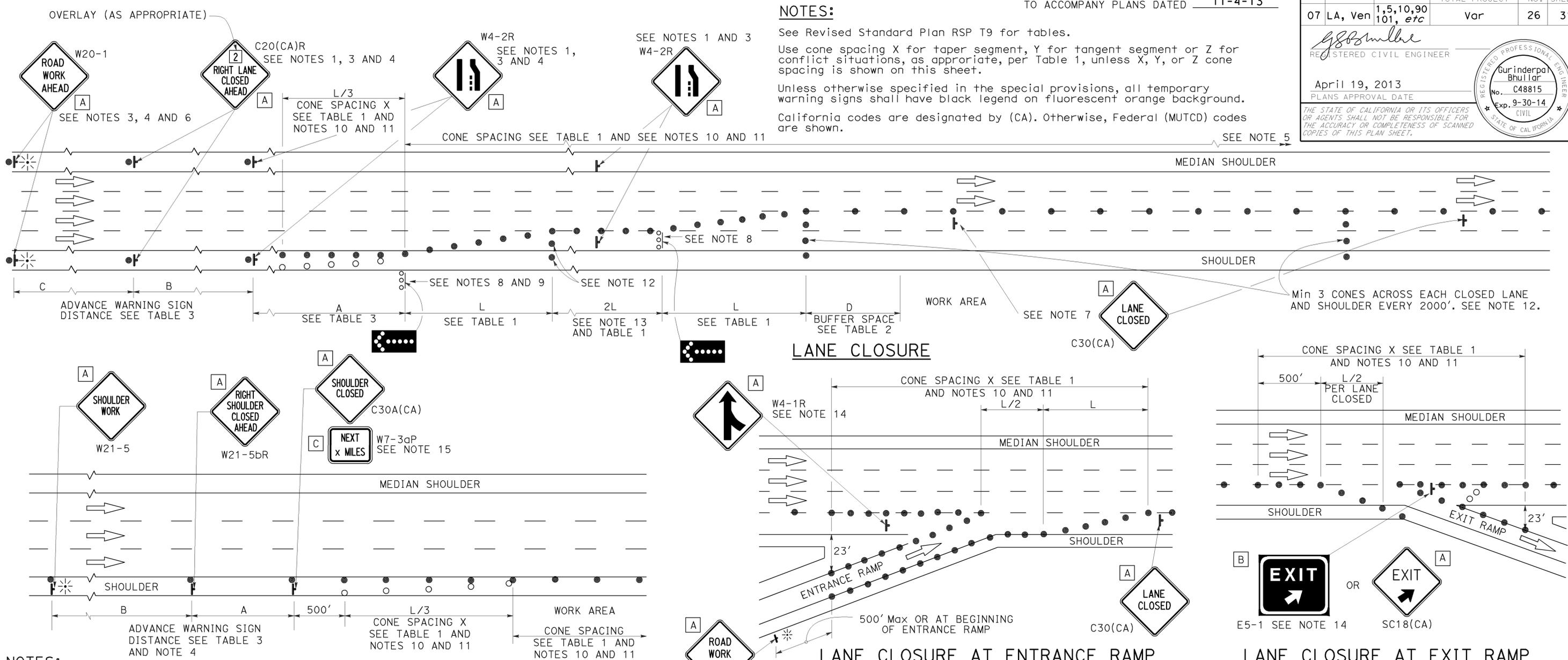
RSP D77B DATED APRIL 19, 2013 SUPERSEDES RSP D77B DATED JULY 20, 2012 AND STANDARD PLAN D77B DATED MAY 20, 2011 - PAGE 165 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP D77B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Ven	1,5,10,90 101, etc	Var	26	31

REGISTERED CIVIL ENGINEER
 April 19, 2013
 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.

REGISTERED PROFESSIONAL ENGINEER
 Gurinderpal Bhullar
 No. C48815
 Exp. 9-30-14
 CIVIL
 STATE OF CALIFORNIA



- NOTES:**
1. Median lane closures shall conform to the details as shown except that C20(CA)L and W4-2L signs shall be used.
 2. At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closures.
 3. Duplicate sign installations are not required:
 - a) On opposite shoulder if at least one-half of the available lanes remain open to traffic.
 - b) In the median if the width of the median shoulder is less than 8' and the outside lanes are to be closed.
 4. Each advance warning sign on each side of the roadway shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
 5. A G20-2 "END ROAD WORK" sign, with minimum size of 48" x 24" as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious or ends within a larger project's limits.

- SHOULDER CLOSURE**
6. If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT _____ MILES", use a C20(CA)L and W4-2L signs shall be used.
 7. Place a C30(CA) sign every 2000' throughout length of lane closure.
 8. One flashing arrow sign for each lane closed. The flashing arrow signs shall be Type I.
 9. A minimum 1500' of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at top of crest vertical curve or on a horizontal curve.
 10. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
 11. Portable delineators, placed at one-half the spacing indicated for traffic cones may be used instead of cones for daytime closures only.

- LANE CLOSURE AT ENTRANCE RAMP**
- LANE CLOSURE AT EXIT RAMP**
12. Unless otherwise specified in the special provisions, a minimum of 3 cones shall be placed transversely across each closed lane and shoulder at each location where a taper across a traffic lane ends and every 2000' as shown on the "Lane Closure" detail. Two Type II barricades may be used instead of the 3 cones. The transverse alignment of the cones or barricades on the closed shoulder may be shifted from the transverse alignment to provide access to the work.
 13. Unless otherwise specified in the special provisions, the 2L tangent shown along lane lines shall be used between the L tapers required for each closed traffic lane.
 14. Unless otherwise specified in the special provisions, the E5-1 or SC18(CA) and W4-1 signs shall be used as shown.
 15. A W7-3aP "NEXT _____ MILES" plaque must be used if the shoulder closure extends beyond the distance that can be perceived by road users.

LEGEND

- TRAFFIC CONE
- TRAFFIC CONE (OPTIONAL TAPER)
- † TEMPORARY TRAFFIC CONTROL SIGN
- FLASHING ARROW SIGN (FAS)
- FAS SUPPORT OR TRAILER
- ⚡ PORTABLE FLASHING BEACON

SIGN PANEL SIZE (Min)

A	48" x 48"
B	72" x 60"
C	36" x 30"

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

**TRAFFIC CONTROL SYSTEM
 FOR LANE CLOSURE ON
 FREEWAYS AND EXPRESSWAYS**

NO SCALE

RSP T10 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T10
 DATED MAY 20, 2011 - PAGE 237 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T10

2010 REVISED STANDARD PLAN RSP T10

TYPICAL RAMP CLOSURES

SIGN PANEL SIZE (Min)

- A 48" x 48"
- B 48" x 30"
- C 36" x 36"
- D 48" x 36"

LEGEND

- TRAFFIC CONE
- † TEMPORARY TRAFFIC CONTROL SIGN
- ‡ BARRICADES
- ⚡ PORTABLE FLASHING BEACON

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Ven	1,5,10,90 101, etc	Var	27	31

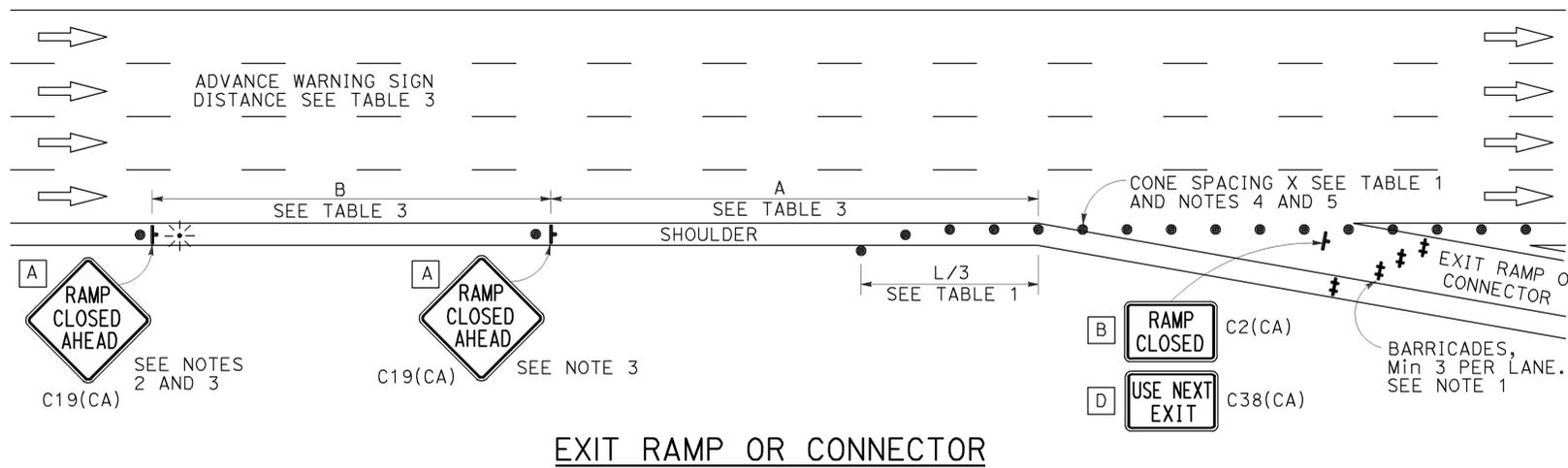
Gurinderpal Bhullar
 REGISTERED CIVIL ENGINEER
 April 19, 2013
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
 Gurinderpal Bhullar
 No. C48815
 Exp. 9-30-14
 CIVIL
 STATE OF CALIFORNIA

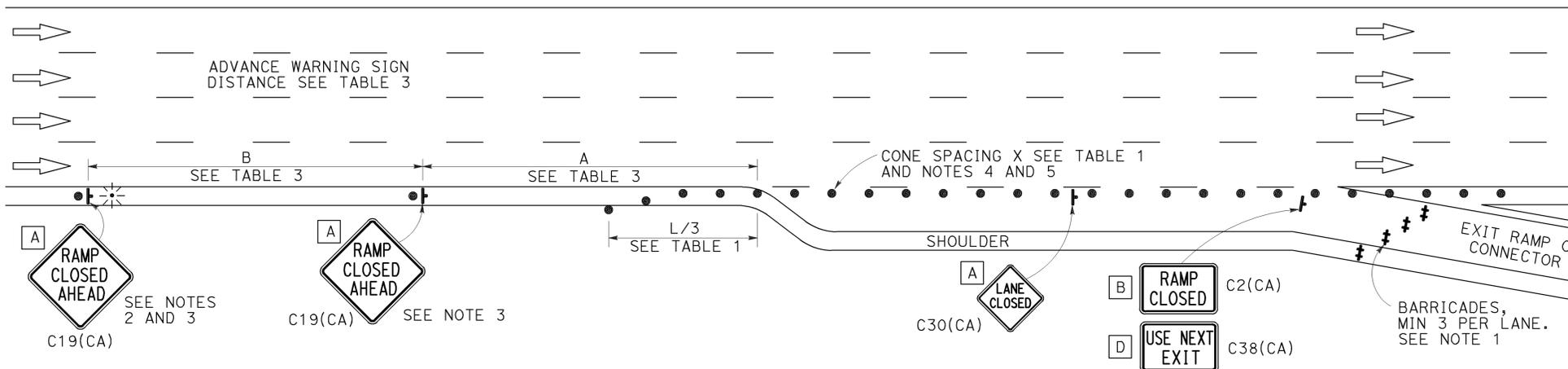
TO ACCOMPANY PLANS DATED 11-4-13

NOTES:

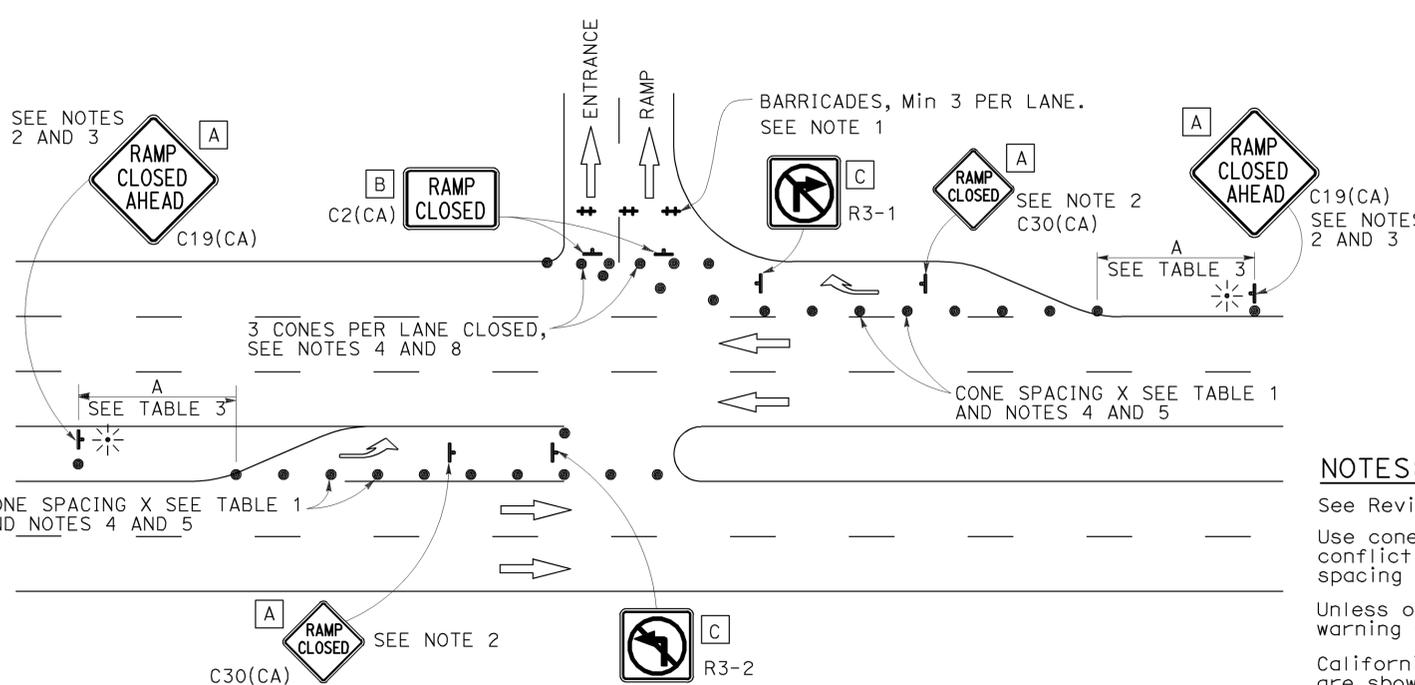
- Barricades shall be Type I, II, or III for closures lasting one week or less and Type III for closures lasting longer than one week.
- In addition to placing the C19(CA) "RAMP CLOSED AHEAD" and C30(CA) "RAMP CLOSED" signs, black on orange overlay plates with the word "CLOSED" may be mounted, as directed by the Engineer, on all guide signs that refer to the closed ramp. The letter size on the overlay shall be the same as the guide sign.
- Each advance C19(CA) "RAMP CLOSED AHEAD" sign shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. A flashing beacon shall be placed on top of the first C19(CA) sign during hours of darkness.
- All cones used for ramp closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
- Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime ramp closures only.
- At least one person shall be assigned to provide full time maintenance of traffic control devices, unless otherwise directed by the Engineer.
- The existing "EXIT" signs shall be covered during ramp closures.
- A minimum of 3 cones shall be placed transversely across each closed lane and shoulder.



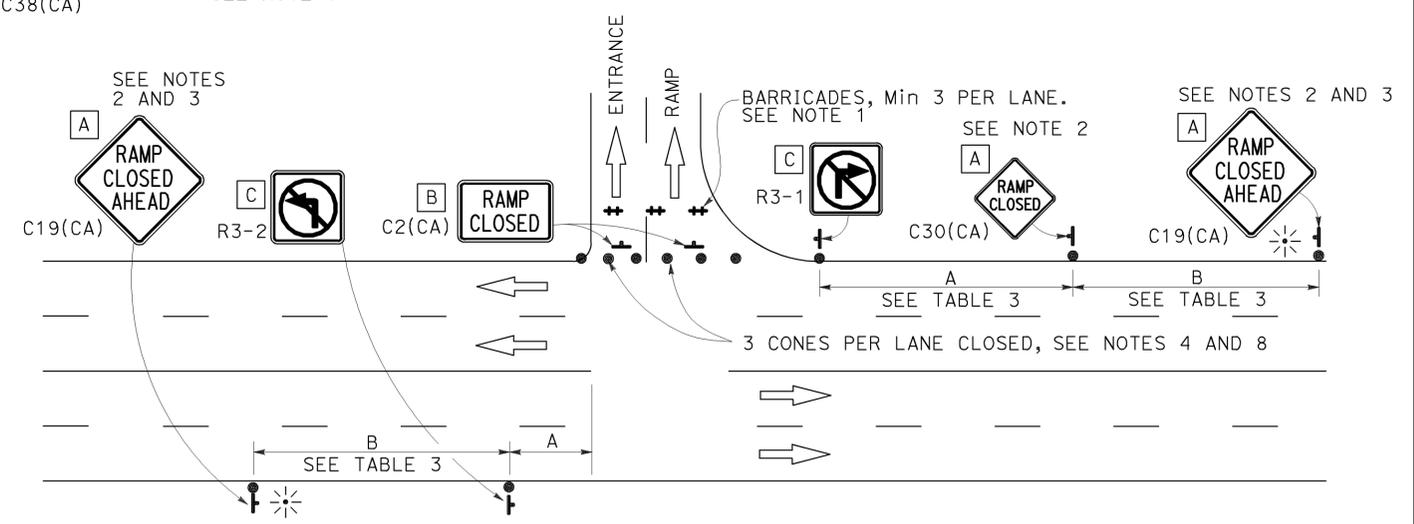
EXIT RAMP OR CONNECTOR



EXIT RAMP OR CONNECTOR WITH ADDITIONAL LANE



ENTRANCE RAMP WITH TURNING POCKETS



ENTRANCE RAMP WITHOUT TURNING POCKETS

NOTES:

- See Revised Standard Plan RSP T9 for tables.
- Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.
- Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on fluorescent orange background.
- California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**TRAFFIC CONTROL SYSTEM
 FOR RAMP CLOSURE**
 NO SCALE

RSP T14 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T14
 DATED MAY 20, 2011 - PAGE 242 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T14

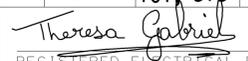
2010 REVISED STANDARD PLAN RSP T14

LEGEND:

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 TAPE
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
TSP	TELEPHONE SERVICE POINT

ABBREVIATIONS

APS	ACCESSIBLE PEDESTRIAN SIGNAL	M/M	MULTIPLE TO MULTIPLE TRANSFORMER
BBS	BATTERY BACKUP SYSTEM	Mtg	MOUNTING
BC	BOLT CIRCLE	MV	MERCURY VAPOR LIGHTING FIXTURE
BPB	BICYCLE PUSH BUTTON	MVDS	MICROWAVE VEHICLE DETECTION SYSTEM
C	CONDUIT	N	NEUTRAL (GROUNDED CONDUCTOR)
CB	CIRCUIT BREAKER	NB	NEUTRAL BUS
CCTV	CLOSED CIRCUIT TELEVISION	NC	NORMALLY CLOSE
Ck+	CIRCUIT	NO	NORMALLY OPEN
CMS	CHANGEABLE MESSAGE SIGN	P	CIRCUIT BREAKER'S POLE
C+id	CALTRANS IDENTIFICATION	PB	PULL BOX
Comm	COMMUNICATION	PBA	PUSH BUTTON ASSEMBLY
DLC	LOOP DETECTOR LEAD-IN CABLE	PEC	PHOTOELECTRIC CONTROL
EMS	EXTINGUISHABLE MESSAGE SIGN	Ped	PEDESTRIAN
EVUC	EMERGENCY VEHICLE UNIT CABLE	PEU	PHOTOELECTRIC UNIT
EVUD	EMERGENCY VEHICLE UNIT DETECTOR	PT	CONDUIT WITH PULL TAPE
FB	FLASHING BEACON	RE	RELOCATED EQUIPMENT
FBCA	FLASHING BEACON CONTROL ASSEMBLY	RM	RAMP METERING
FBS	FLASHING BEACON WITH SLIP BASE	RWIS	ROADSIDE WEATHER INFORMATION SYSTEM
FO	FIBER OPTIC	SB	SLIP BASE
G	EQUIPMENT GROUNDING CONDUCTOR	SIC	SIGNAL INTERCONNECT CABLE
GB	GROUND BUS	Sig	SIGNAL
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	SMA	SIGNAL MAST ARM
HAR	HIGHWAY ADVISORY RADIO	SNS	STREET NAME SIGN
Hex	HEXAGONAL	SP	SERVICE POINT
HPS	HIGH PRESSURE SODIUM	TDC	TELEPHONE DEMARCATION CABINET
IISNS	INTERNALLY ILLUMINATED STREET NAME SIGN	TMS	TRAFFIC MONITORING STATION
ISL	INDUCTION SIGN LIGHTING	TOS	TRAFFIC OPERATIONS SYSTEM
LED	LIGHT EMITTING DIODE	Veh	VEHICLE
LMA	LUMINAIRE MAST ARM	VIVDS	VIDEO IMAGE VEHICLE DETECTION SYSTEM
LPS	LOW PRESSURE SODIUM	WIM	WEIGH-IN-MOTION
Ltg	LIGHTING	Xfmr	TRANSFORMER
Lum	LUMINAIRE		
M	METERED		
MAT	MAST ARM MOUNTING TOP ATTACHMENT		
MAS	MAST ARM MOUNTING SIDE ATTACHMENT		

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Ven	1,5,10,90 101, etc	Var	28	31
 REGISTERED ELECTRICAL ENGINEER Theresa Gabriel No. E15129 Exp. 6-30-14 ELECTRICAL ENGINEER STATE OF CALIFORNIA					
July 19, 2013 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.					

TO ACCOMPANY PLANS DATED 11-4-13

SOFFIT AND WALL MOUNTED LUMINAIRES

-  PENDANT, 70 W HPS UNLESS OTHERWISE SPECIFIED
-  FLUSH, 70 W HPS UNLESS OTHERWISE SPECIFIED
-  WALL SURFACE, 70 W HPS UNLESS OTHERWISE SPECIFIED
-  EXISTING SOFFIT OR WALL LUMINAIRE TO REMAIN UNMODIFIED
-  EXISTING SOFFIT OR WALL LUMINAIRE TO BE MODIFIED AS SPECIFIED

NOTE:
Arrow indicates "street side" of luminaire.

COMMONLY USED SYMBOLS FOR UNITED STATES CUSTOMARY UNITS OF MEASUREMENT:

SYMBOL USED	DEFINITIONS
Ω	OHMS
min	MINUTE
s	SECOND
bps	BITS PER SECOND
Bps	BYTES PER SECOND
A	AMPERE
V	VOLT
V(dc)	VOLT (DIRECT CURRENT)
V(ac)	VOLT (ALTERNATING CURRENT)
FC	FOOT - CANDLE
W	WATTS
VA	VOLT-AMPERE
M	MEGA
k	KILO
m	MILLI
μ	MICRO
P	PICO
HZ	HERTZ

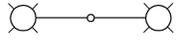
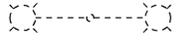
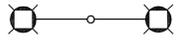
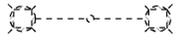
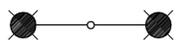
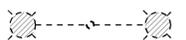
MISCELLANEOUS ELECTROLIERS

NEW	EXISTING	
		LUMINAIRE ON WOOD POLE
		NON-STANDARD ELECTROLIER (SEE PROJECT NOTES OR PROJECT PLANS)
		CITY ELECTROLIER
		ELECTROLIER FOUNDATION (FUTURE INSTALLATION)

NOTES:

- HPS luminaires shall be 310 W HPS when installed on Type 21, 21D, 30, 31 and 32 Standards, unless otherwise specified. HPS luminaires shall be 200 W when installed on other type standards or poles, unless otherwise specified.
- LED luminaires shall be 235 W when installed on Type 21, 21D, 30, 31 and 32 Standards, unless otherwise specified. LED luminaires shall be 165 W when installed on other type standards or poles, unless otherwise specified.
- Luminaires shall be the cutoff type, ANSI Type III medium cutoff lighting distribution, unless otherwise specified.

STANDARD ELECTROLIER

NEW	EXISTING	STANDARD TYPE
		15
		15D
		15 STRUCTURE
		15D STRUCTURE
		21
		21D
		21 STRUCTURE
		21D STRUCTURE
		30
		31
		32

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (LEGEND AND ABBREVIATIONS)

NO SCALE

RSP ES-1A DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-1A DATED MAY 20, 2011 - PAGE 425 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-1A

2010 REVISED STANDARD PLAN RSP ES-1A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA, Ven	1,5,10,90 101, etc	Var	29	31

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

Theresa Aziz Gabriel
No. E15129
Exp. 6-30-14
ELECTRICAL
STATE OF CALIFORNIA

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TO ACCOMPANY PLANS DATED 11-4-13

CONDUIT

SIGNAL EQUIPMENT

NEW	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 ATTACHED TO THE STRUCTURE OR SERVICE POLE

NEW	EXISTING	
		PEDESTRIAN SIGNAL HEAD "C" INDICATES COUNTDOWN PEDESTRIAN HEAD
		PUSH BUTTON ASSEMBLY POST
		PEDESTRIAN BARRICADE
		VEHICLE SIGNAL HEAD (WITH BACKPLATE AND 3-SECTIONS: RED, YELLOW AND GREEN)
		VEHICLE SIGNAL HEAD WITH ANGLE VISOR
		MODIFICATIONS OF BASIC SYMBOL: "L" INDICATES ALL NON-ARROW SECTIONS LOUVERED "LG" INDICATES LOUVERED GREEN SECTION ONLY "PV" INDICATES ALL 12" SECTIONS PROGRAMMED VISIBILITY "8" INDICATES ALL 8" SECTIONS (ONLY WHEN SPECIFIED)

SIGNAL EQUIPMENT Cont

NEW	EXISTING	
		GUARD POST
		TYPE 1 STANDARD WITH RAMP METERING SIGN
		OPTICAL DETECTOR FOR THE EMERGENCY VEHICLE DETECTION SYSTEM

SERVICE EQUIPMENT

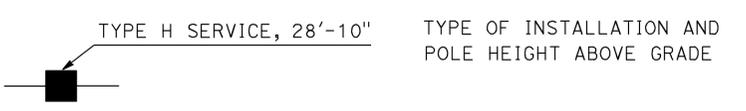
NEW	EXISTING	
---OH---	---oh---	OVERHEAD LINES
		WOOD POLE, "U" INDICATES UTILITY OWNED
		POLE GUY WITH ANCHOR
		UTILITY TRANSFORMER - GROUND MOUNTED
		SERVICE EQUIPMENT ENCLOSURE TYPE. DOOR INDICATES FRONT OF ENCLOSURE
		TELEPHONE DEMARCATION CABINET

		VEHICLE SIGNAL HEAD CONSISTING OF RED, YELLOW AND GREEN LEFT ARROW SECTIONS
		VEHICLE SIGNAL HEAD CONSISTING OF RED AND YELLOW SECTIONS WITH AN UP GREEN ARROW SECTION
		VEHICLE SIGNAL HEAD (5 SECTION) CONSISTING OF RED, YELLOW AND GREEN SECTIONS WITH YELLOW AND GREEN RIGHT ARROW SECTIONS
		TYPE 15TS STANDARD WITH VEHICLE SIGNAL HEAD AND LUMINAIRE
		TYPE 21TS STANDARD WITH VEHICLE SIGNAL HEAD AND LUMINAIRE
		STANDARD WITH LUMINAIRE AND SIGNAL MAST ARMS AND ATTACHED VEHICLE SIGNAL HEADS
		TYPE 1 STANDARD WITH ATTACHED VEHICLE SIGNAL HEADS
		STANDARD WITH A SIGNAL MAST ARM, ATTACHED VEHICLE SIGNAL HEADS AND INTERNALLY ILLUMINATED STREET NAME SIGN
		CONTROLLER ASSEMBLY. DOOR INDICATES FRONT OF CABINET

NOTES:

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

POLE-MOUNTED SERVICE DESIGNATION



FLASHING BEACON

NEW	EXISTING	
		FLASHING BEACON (ONE VEHICLE SIGNAL HEAD WITH BACKPLATE AND VISOR) "R" INDICATES RED INDICATION, "Y" INDICATES YELLOW INDICATION
		FLASHING BEACON WITH TYPE 15-FBS STANDARD AND A SIGN.
		FLASHING BEACON WITH TYPES 9, 9A OR 9B SIGN UNLESS OTHERWISE SPECIFIED OR INDICATED

ILLUMINATED OVERHEAD SIGN

NEW	EXISTING	
		SINGLE POST, SINGLE ILLUMINATED SIGN, BALANCED BUTTERFLY
		SINGLE POST, DOUBLE ILLUMINATED SIGN, BALANCED BUTTERFLY
		SINGLE POST, SINGLE ILLUMINATED SIGN, FULL CANTILEVER
		DOUBLE POST, SINGLE ILLUMINATED SIGN
		SINGLE ILLUMINATED SIGN MOUNTED ON STRUCTURE
		DOUBLE POST, SINGLE ILLUMINATED SIGN WITH ELECTROLIER

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(LEGEND AND ABBREVIATIONS)**

NO SCALE

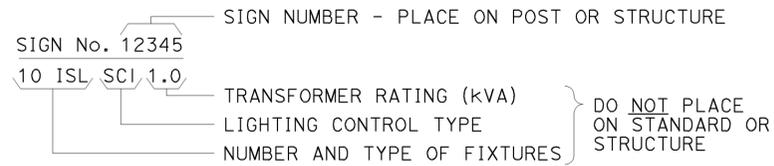
RSP ES-1B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-1B DATED MAY 20, 2011 - PAGE 426 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-1B

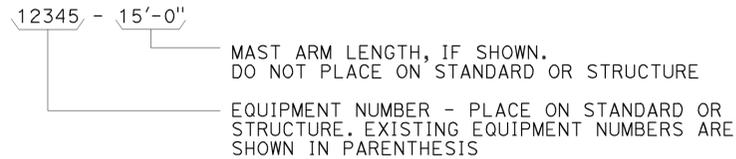
2010 REVISED STANDARD PLAN RSP ES-1B

EQUIPMENT IDENTIFICATION

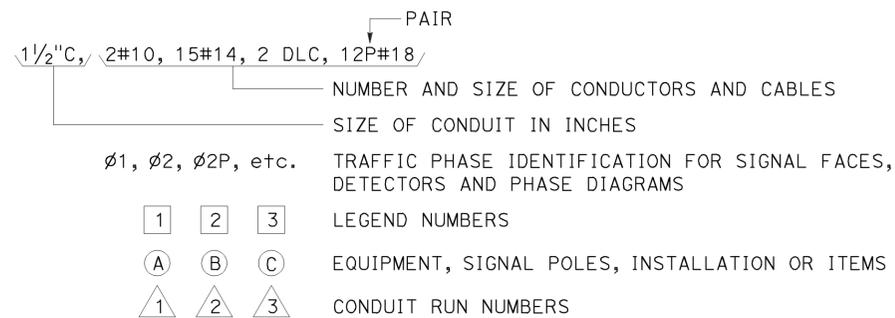
ILLUMINATED SIGN IDENTIFICATION NUMBER:



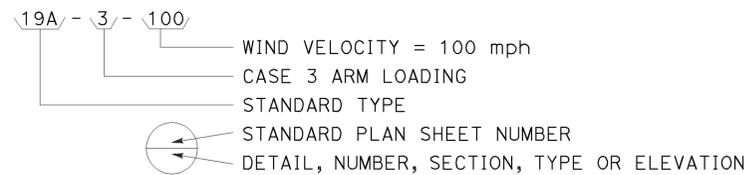
ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



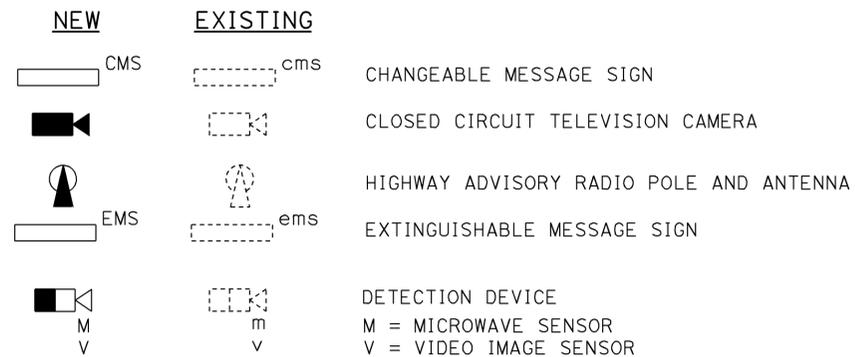
CONDUIT AND CONDUCTOR IDENTIFICATION:



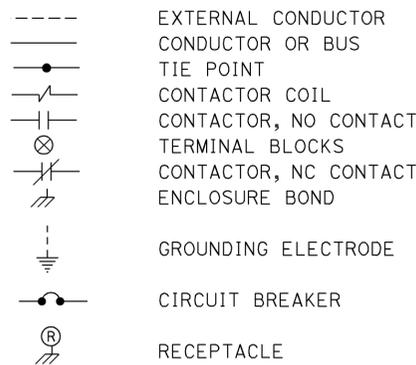
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



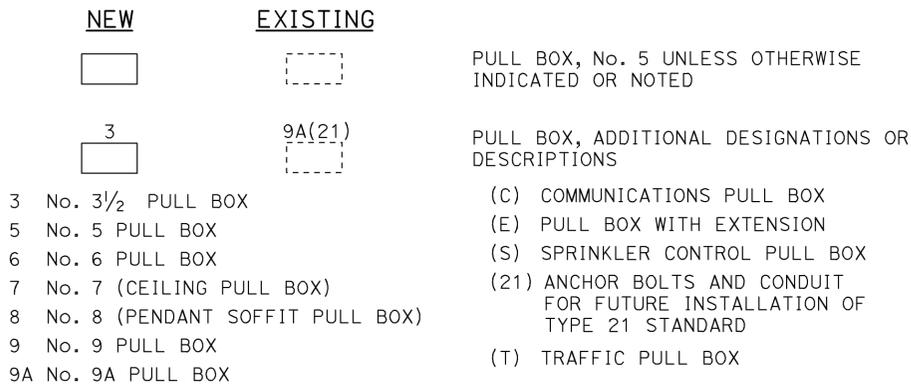
MISCELLANEOUS EQUIPMENT



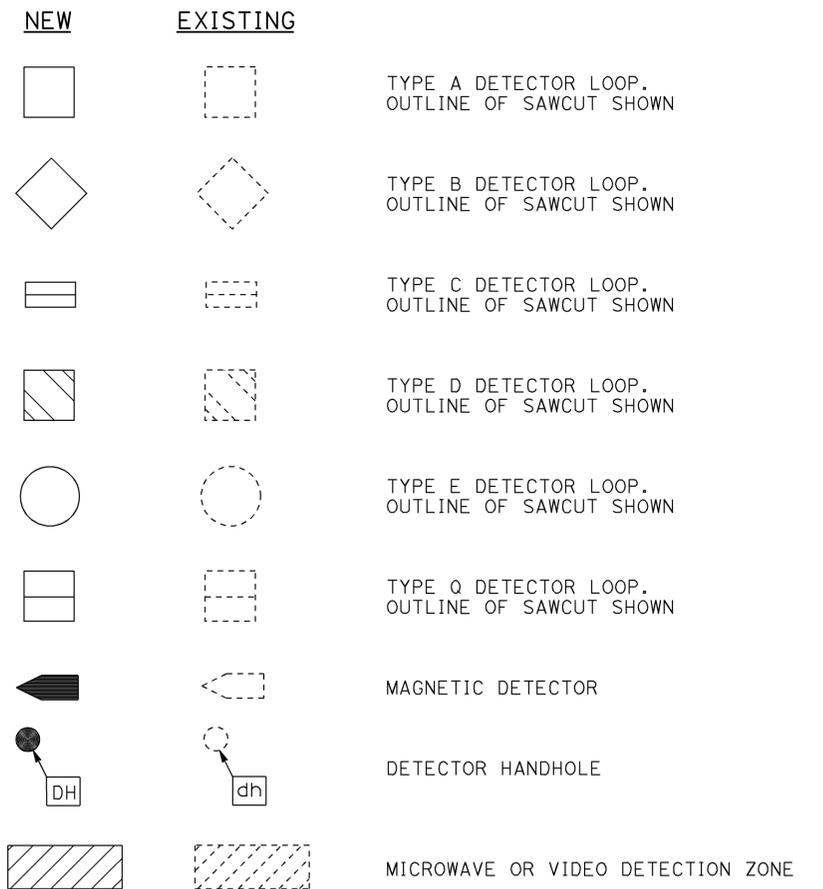
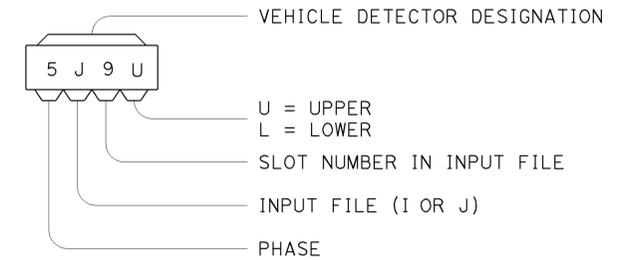
WIRING DIAGRAM LEGEND



PULL BOXES



VEHICLE DETECTORS



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (LEGEND AND ABBREVIATIONS)

NO SCALE

RSP ES-1C DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-1C
DATED MAY 20, 2011 - PAGE 427 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-1C

2010 REVISED STANDARD PLAN RSP ES-1C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA, Ven	1,5,10,90 101, etc	Var	31	31

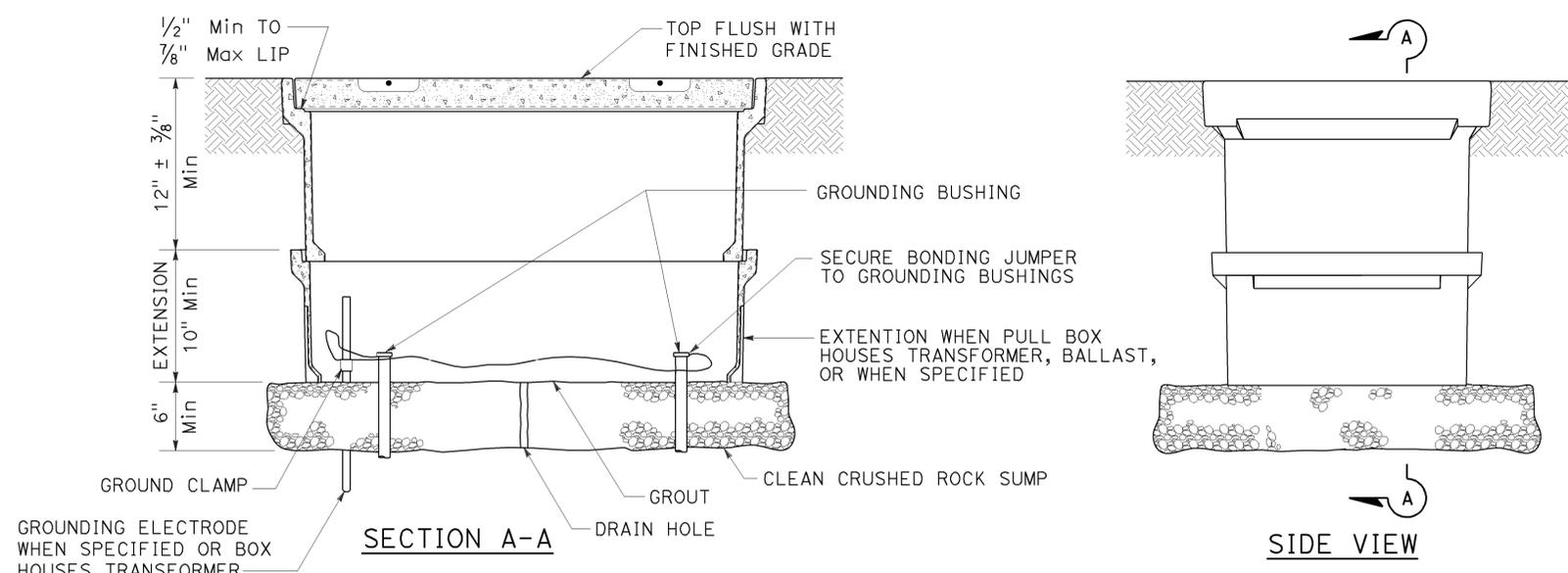
Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

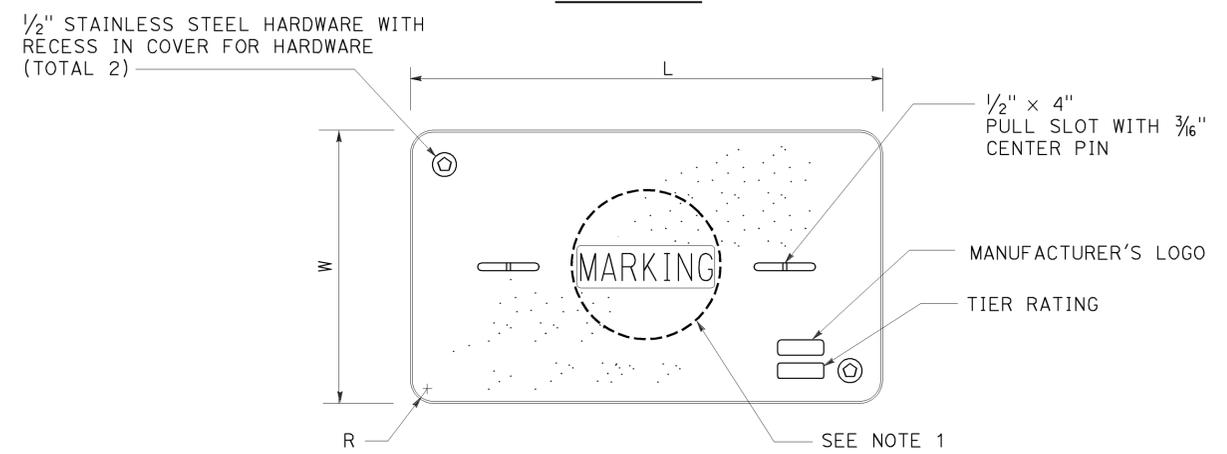
Theresa Aziz Gabriel
No. E15129
Exp. 6-30-14
ELECTRICAL
STATE OF CALIFORNIA

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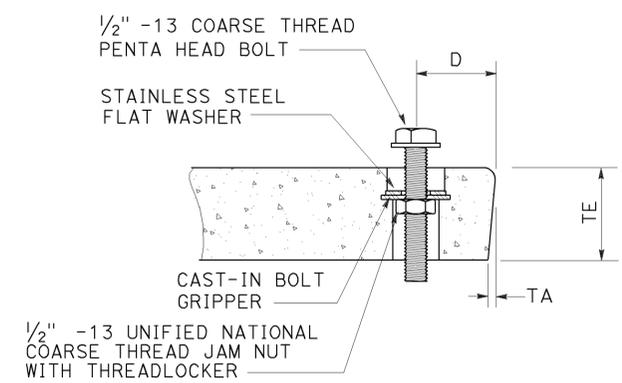
TO ACCOMPANY PLANS DATED 11-4-13



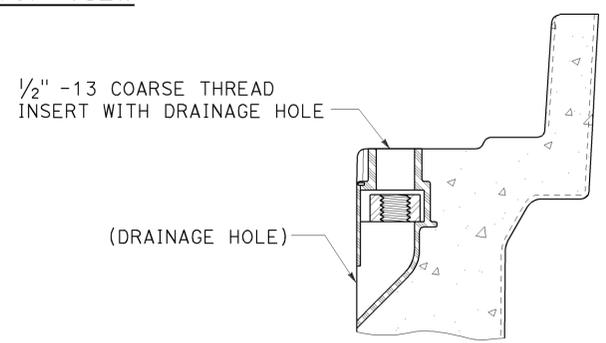
INSTALLATION DETAILS
DETAIL A



COVER TOP VIEW



TYPICAL COVER CAPTIVE BOLT
OR SIMILAR



TYPICAL THREADED INSERT
OR SIMILAR

NOTES:

- Pull box covers shall be marked as follows: "SERVICE" Service circuits between service point and service disconnect; "SPRINKLER-CONTROL" sprinkler control circuits, 50 V or less; "CALTRANS" on all pull boxes, except pull boxes marked "SPRINKLER-CONTROL"; and "TELEPHONE" Telephone service;
 - No. 3 1/2 pull box.
 - "SIGNAL" - Traffic signal circuits with or without lighting or sign lighting circuits.
 - "LIGHTING" - Lighting or sign lighting circuits where voltage is under 600 V.
 - No. 5, 6, 9 or 9A pull box.
 - "TRAFFIC SIGNAL" - Traffic signal circuits with or without lighting or sign lighting circuits.
 - "LIGHTING" - Lighting or sign lighting circuits where voltage is under 600 V.
 - "LIGHTING-HIGH VOLTAGE" - Lighting or sign lighting circuits where voltage is above 600 V.
 - "IRRIGATION" - Circuits to irrigation controller 120 V or more.
 - "RAMP METER" - Ramp meter circuits.
 - "COUNT STATION" - Count or speed monitor circuits.
 - "COMMUNICATIONS" - Communication circuits.
 - "TOS COMMUNICATIONS" - TOS communication line.
 - "TOS POWER" - TOS power.
 - "TDC POWER" - Telephone demarcation cabinet power.
 - "CCTV" - Closed circuit television circuits.
 - "TMS" - Traffic monitoring station circuits.
 - "CMS" - Changeable message sign circuits.
 - "HAR" - Highway advisory radio circuits.
 - "BOOSTER PUMP" - Booster pump circuit.
- The nominal dimensions of the opening in which the cover sets shall be the same as the cover dimensions except the length and width dimensions shall be 1/8" greater.
- Covers and boxes shall be interchangeable with California standard male and female gages. When interchanged with a standard male or female gage, the top surfaces shall be flush within 1/8". Top outside radius of covers and pull boxes shall have a 1/8" radius.
- Pull box extension may be another pull box as long as the bottom edge of the pull box can fit into the cover opening.
- All dimensions for the cover for non-traffic pull box are nominal values.

DIMENSION TABLE										
PULL BOX	PULL BOX			COVER						
	MINIMUM DEPTH BOX	MINIMUM DEPTH EXTENSION	MAXIMUM WEIGHT	L	W	R	TE	TA	D	MAXIMUM WEIGHT
No. 3 1/2	12"	N/A	40 lb	1' - 3 3/8"	10 1/8"	1 3/8"	2"	1/8"	1 3/4"	30 lb
No. 5	12"	10"	55 lb	1' - 11 1/4"	1' - 1 3/4"	1 3/8"	2"	1/8"	1 3/4"	60 lb
No. 6	12"	10"	70 lb	2' - 6 1/2"	1' - 5 1/2"	1 3/8"	2"	1/8"	2"	85 lb

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(NON-TRAFFIC PULL BOX)
NO SCALE

RSP ES-8A DATED JULY 19, 2013 SUPERSEDES RSP ES-8A DATED JANUARY 20, 2012 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-8A

2010 REVISED STANDARD PLAN RSP ES-8A