

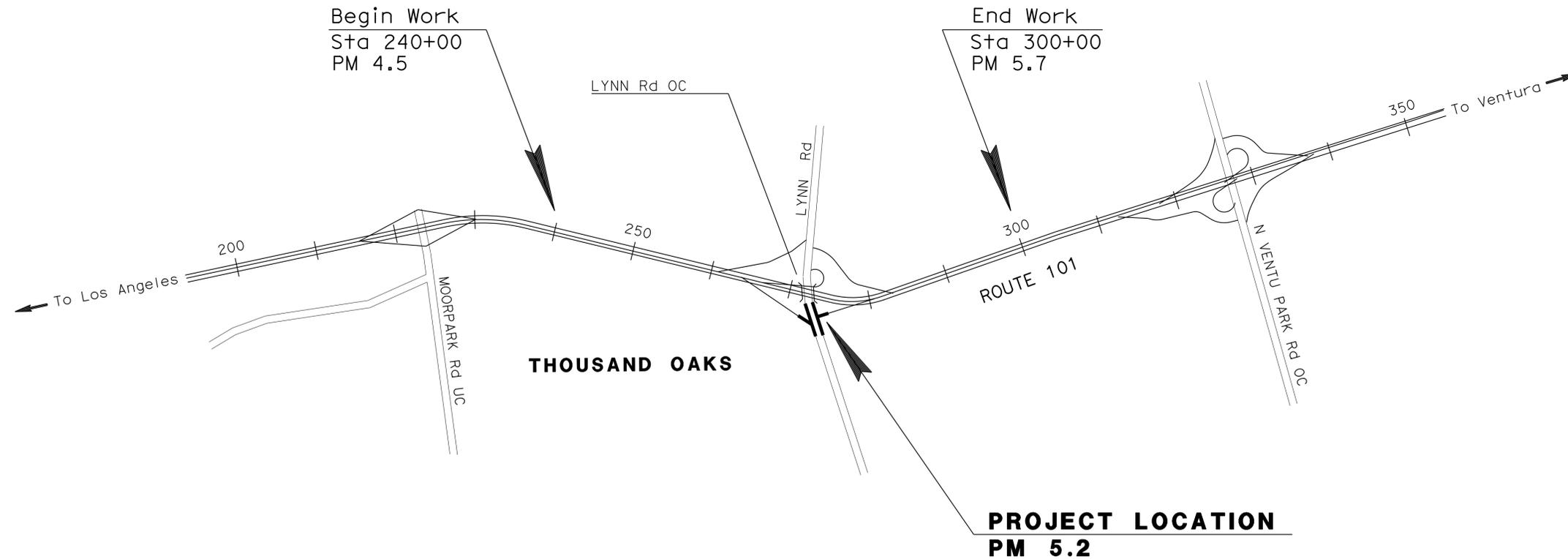
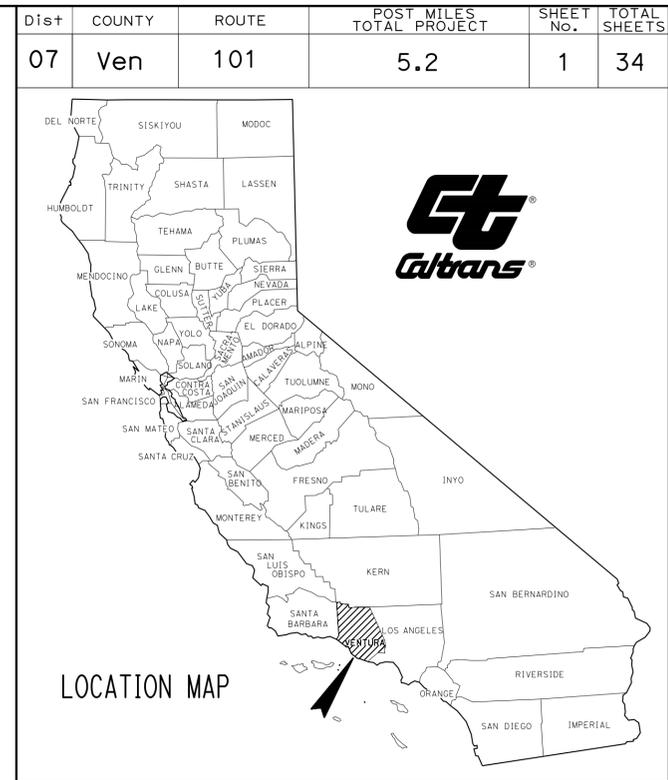
INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2	LAYOUT
3	CONSTRUCTION DETAILS
4	UTILITY PLANS
5-8	TRAFFIC HANDLING DETAILS
9	CONSTRUCTION AREA SIGNS
10	SUMMARY OF QUANTITIES
11-16	ELECTRICAL PLANS
17-34	REVISED AND NEW STANDARD PLANS

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

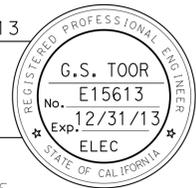
STATE OF CALIFORNIA **ACHSNHPG-Q101(238)E**  
**DEPARTMENT OF TRANSPORTATION**  
**PROJECT PLANS FOR CONSTRUCTION ON**  
**STATE HIGHWAY**  
**IN VENTURA COUNTY**  
**IN THOUSAND OAKS**  
**AT LYNN ROAD OVERCROSSING**

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010



PROJECT MANAGER  
**DAVID MIRAANEY**  
 DESIGN ENGINEER  
**GARY TOOR**

*G.S. Toor* 9/29/13  
 PROJECT ENGINEER DATE  
 REGISTERED ELECTRICAL ENGINEER  
 September 30, 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.



THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE BID BOOK.

NO SCALE

CONTRACT No.	<b>07-292504</b>
PROJECT ID	<b>0712000117</b>

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	101	5.2	2	34

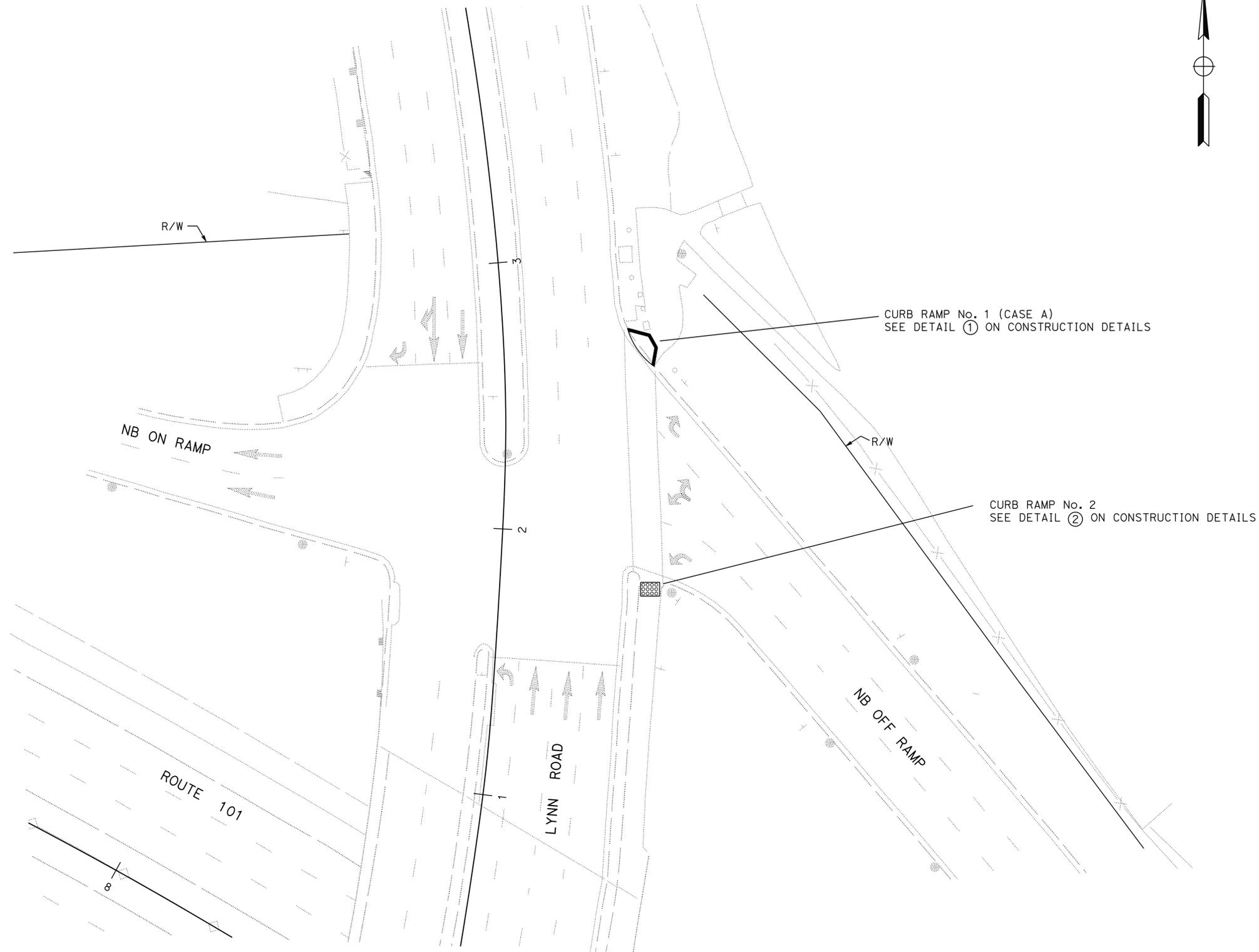
<i>Zhaib</i>	9/29/13
REGISTERED ELECTRICAL ENGINEER	DATE
9-30-13	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER  
 MOHAMMED HAIDER  
 No. 61335  
 Exp 6/30/15  
 CIVIL  
 STATE OF CALIFORNIA

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



**NOTE:**  
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT  
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** TRAFFIC DESIGN  
 FUNCTIONAL SUPERVISOR: MOHAMMED CHOWDHURY  
 CALCULATED/DESIGNED BY: PARESH PATEL  
 CHECKED BY: MOHAMMED HAIDER  
 REVISED BY: PARESH PATEL  
 DATE REVISED: MOHAMMED HAIDER

**LAYOUT**  
 SCALE: 1" = 20'

**L-1**

LAST REVISION: 00-00-00  
 DATE PLOTTED => 07-NOV-2013  
 TIME PLOTTED => 15:29

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	101	5.2	3	34

REGISTERED ELECTRICAL ENGINEER	DATE
<i>Zhaib</i>	9/29/13
PLANS APPROVAL DATE	
9-30-13	

REGISTERED PROFESSIONAL ENGINEER
MOHAMMED HAIDER
No. 61335
Exp 6/30/15
CIVIL
STATE OF CALIFORNIA

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

**NOTES:**

- ① INSTALL DETECTABLE WARNING SURFACE ON EXISTING SURFACE AS PER REVISED STANDARD PLAN A38A.

**LEGEND:**

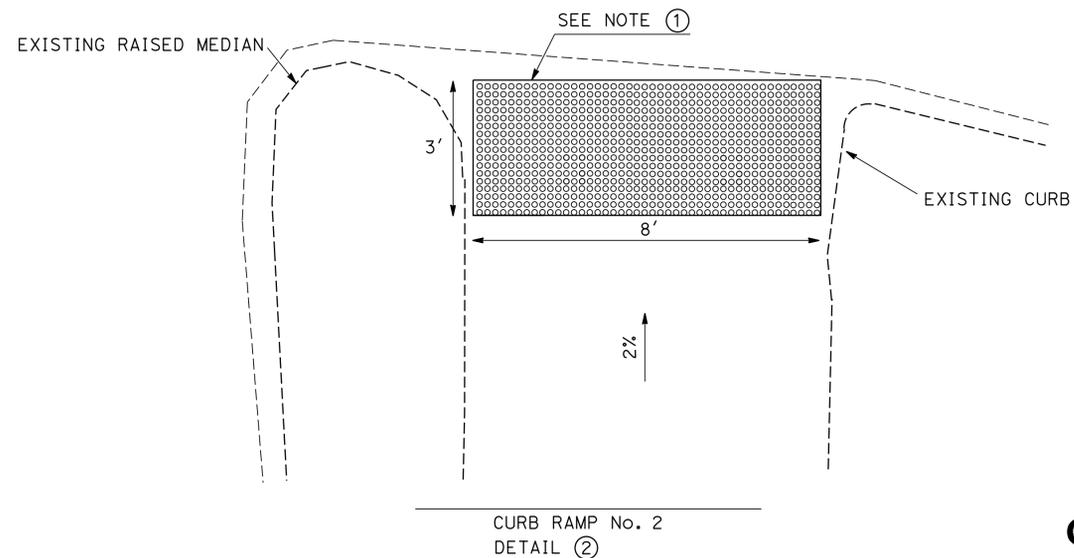
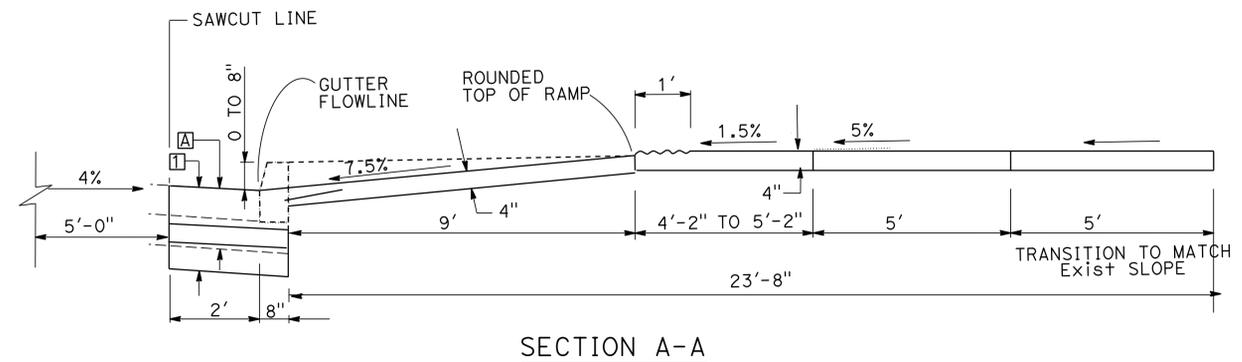
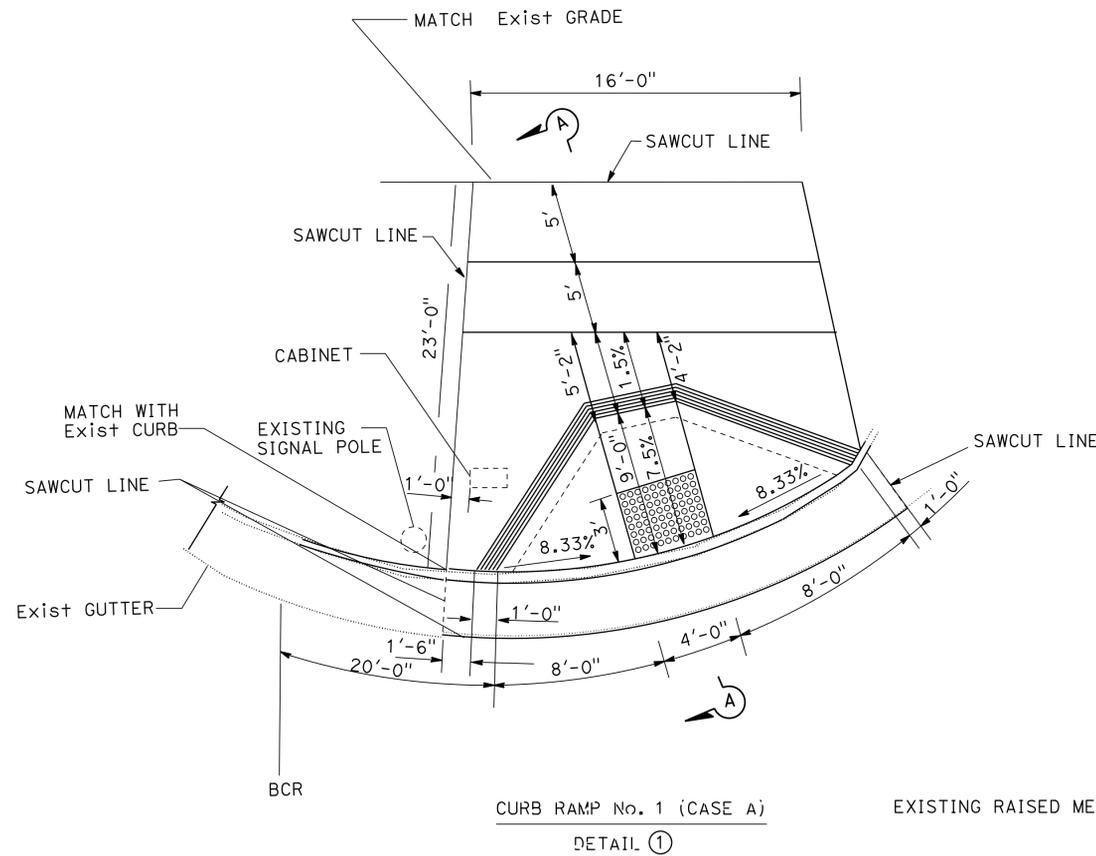


**Exist STRUCTURAL SECTION**

- [A] 0.67' PCC
- 0.67' CLASS 2 AB

**TYPICAL STRUCTURAL SECTION**

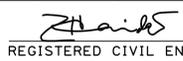
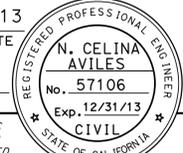
- [1] 0.85' MINOR CONCRETE
- 0.40' LEAN CONCRETE BASE
- 0.60' CLASS 3 AB



**CONSTRUCTION DETAILS**

NO SCALE

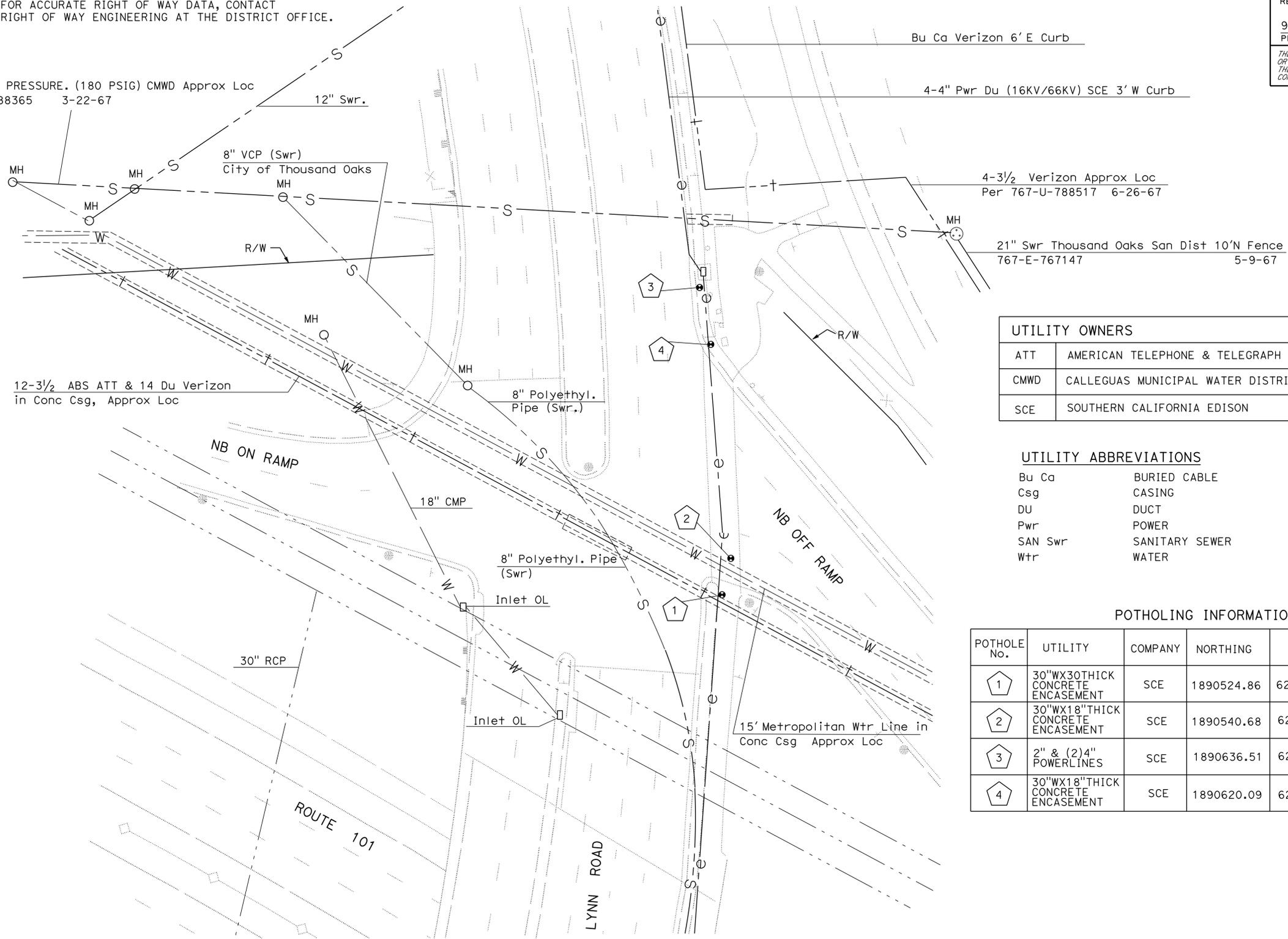
**C-1**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	101	5.2	4	34
			9/29/13		
REGISTERED CIVIL ENGINEER			DATE		
9-30-13			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>					

**NOTE:**

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

24" HIGH PRESSURE. (180 PSIG) CMWD Approx Loc  
767-U-788365 3-22-67



UTILITY OWNERS	
ATT	AMERICAN TELEPHONE & TELEGRAPH
CMWD	CALLEGUAS MUNICIPAL WATER DISTRICT
SCE	SOUTHERN CALIFORNIA EDISON

**UTILITY ABBREVIATIONS**

Bu Ca	BURIED CABLE
Csg	CASING
DU	DUCT
Pwr	POWER
SAN Swr	SANITARY SEWER
Wtr	WATER

**POTHOLING INFORMATION TABLE**

POTHOLE No.	UTILITY	COMPANY	NORTHING	EASTING	GROUND ELEVATION	DEPTH (FEET)
1	30"WX30"THICK CONCRETE ENCASEMENT	SCE	1890524.86	6292108.39	681.14	TOP 1.40 BOTTOM 4.16
2	30"WX18"THICK CONCRETE ENCASEMENT	SCE	1890540.68	6292109.35	680.62	TOP 1.34 BOTTOM 4.26
3	2" & (2)4" POWERLINES	SCE	1890636.51	6292102.87	677.06	TOP 6.42 BOTTOM 6.90
4	30"WX18"THICK CONCRETE ENCASEMENT	SCE	1890620.09	6292104.98	677.42	TOP 4.52 BOTTOM 5.48

**UTILITY PLAN**

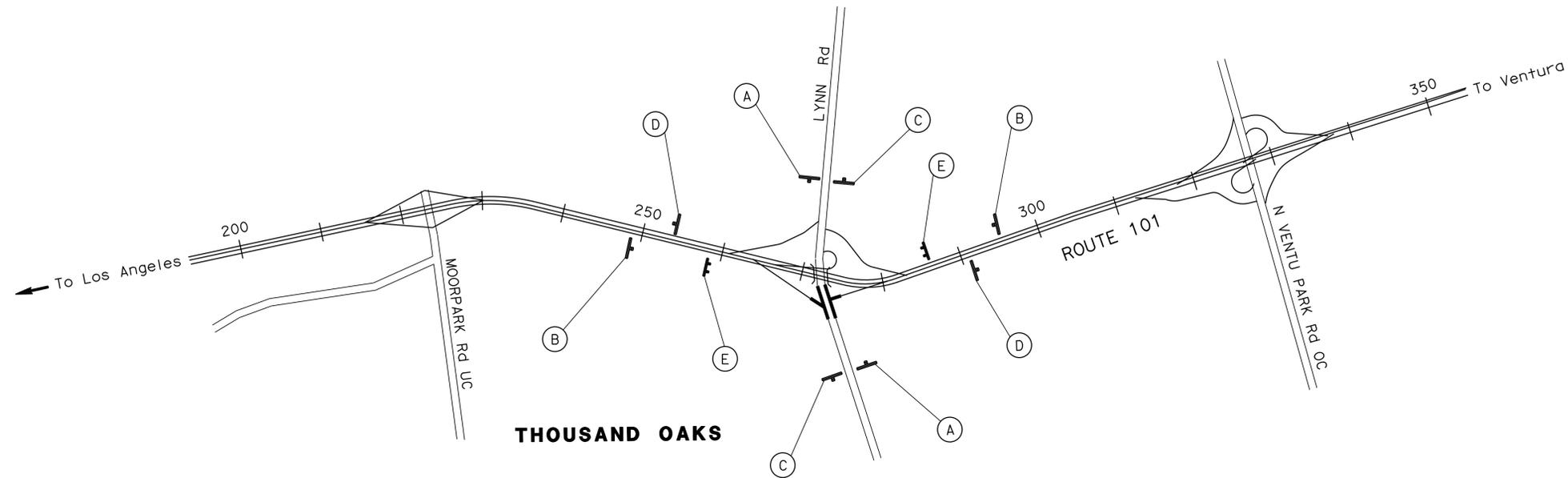
SCALE: 1" = 20'

**U-1**

APPROVED FOR UTILITY INFORMATION ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 **TRAFFIC DESIGN**  
 FUNCTIONAL SUPERVISOR: JERREL B. KAM  
 CHECKED BY: CELINA AVILES  
 DESIGNED BY: NASSER RAZFAR  
 REVISIONS: (None listed)  
 DATE REVISION: (None listed)  
 DATE REVISOR: (None listed)

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	101	5.2	5	34
REGISTERED CIVIL ENGINEER		DATE		MOHAMMED HAIDER	
9-30-13		9/29/13		No. 61335	
PLANS APPROVAL DATE				Exp. 6/30/15	
<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>					



STATIONARY MOUNTED CONSTRUCTION AREA SIGNS					
SIGN NUMBER	SIGN CODE	PANEL SIZE	SIGN MESSAGE	NUMBER OF POSTS AND SIZE	NUMBER OF SIGNS
A	W20-1	36" x 36"	ROAD WORK AHEAD	1 - 4" x 4"	2
B	W20-1	48" x 48"	ROAD WORK AHEAD	1 - 4" x 6"	2
C	G20-2	36" x 18"	END ROAD WORK	1 - 4" x 4"	2
D	G20-2	48" x 24"	END ROAD WORK	1 - 4" x 6"	2
E	C40A (CA)	144" x 60"	TRAFFIC FINES DOUBLED IN WORK ZONES	2 - 6" x 6"	2

NOTES: 1. LOCATIONS OF CONSTRUCTION AREA SIGNS SHOWN ARE APPROXIMATE.  
2. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.

## CONSTRUCTION AREA SIGN

NO SCALE

**CS-1**

APPROVED FOR CONSTRUCTION AREA SIGNS WORK ONLY

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

FUNCTIONAL SUPERVISOR  
MOHAMMED CHOWDHURY

CALCULATED-DESIGNED BY  
CHECKED BY

MOSTAFA ARYA  
MOHAMMED HAIDER

REVISED BY  
DATE REVISED

x

x

x

x

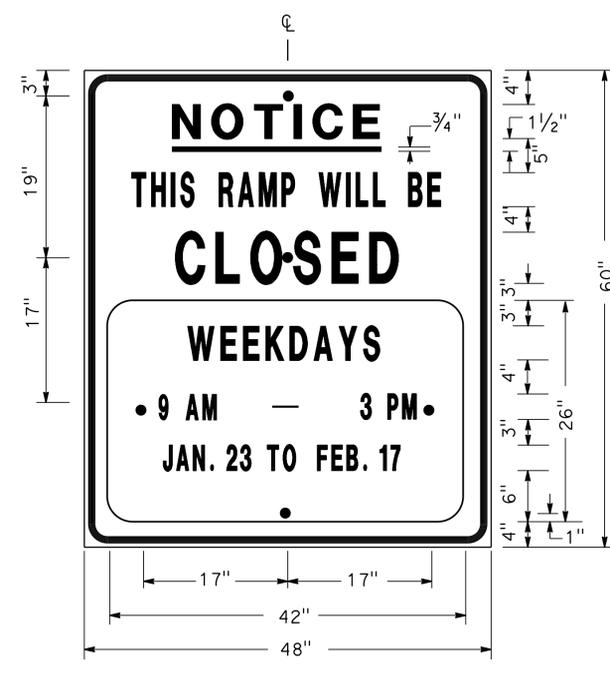
x

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 DTM  
 JOHN YANG  
 FUNCTIONAL SUPERVISOR  
 CHECKED BY  
 CALCULATED-DESIGNED BY  
 JOCELYN C CHIANG  
 REVISED BY  
 ALBERT K YU  
 DATE REVISED  
 3/12  
 JC

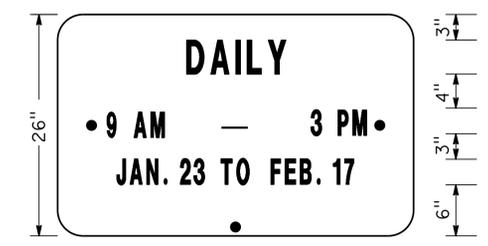
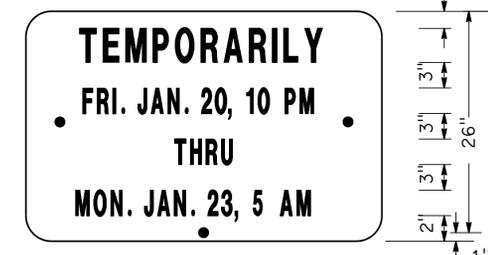
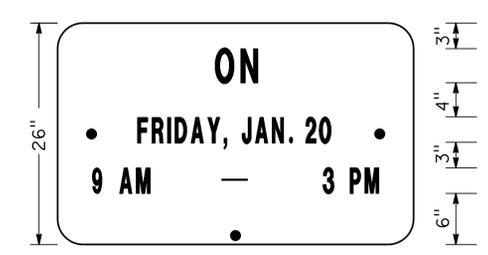
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	101	5.2	6	34

REGISTERED CIVIL ENGINEER DATE 05-08-13  
 9-30-13  
 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.

ALBERT K. YU  
 No. 43220  
 Exp 3-31-14  
 CIVIL  
 STATE OF CALIFORNIA



SIGN SP-1



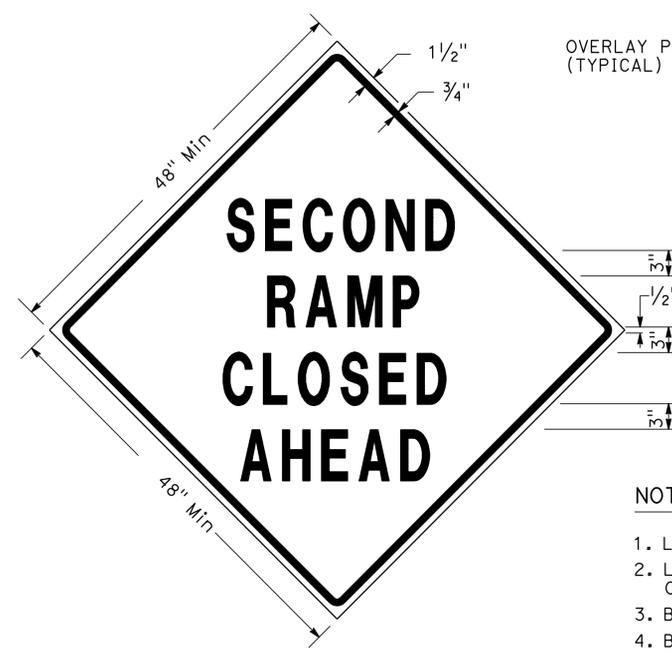
ALTERNATE OVERLAY PANELS (TYPICAL)

- NOTES: (SIGN SP-1)
- LETTERS AND BORDER SHALL BE BLACK ON REFLECTORIZED ORANGE BACKGROUND.
  - 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 7' ABOVE GROUND.

SIZE	BORDER WIDTH	MARGIN WIDTH	LETTER SIZE					CORNER RADIUS
			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



SIGN SP-5

- NOTES: (SIGNS SP-3 & SP-5)
- LETTERS - 6" SERIES D.
  - LETTERS AND BORDER SHALL BE BLACK ON REFLECTORIZED ORANGE BACKGROUND.
  - 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 7' ABOVE GROUND.
  - SIGN SP-5 SHALL BE USED IF THE OFF-RAMP TO BE CLOSED FOLLOWS A FREEWAY OFF-CONNECTOR.

**SPECIAL SIGNS FOR EXIT RAMP CLOSURES**



SIGN SP-4

- NOTES: (SIGN SP-4)
- LETTERS - 6" SERIES C.
  - LETTERS AND BORDER SHALL BE BLACK ON REFLECTORIZED WHITE BACKGROUND.
  - BOLT HOLES SHALL BE 3/8" DIAMETER.
  - 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**

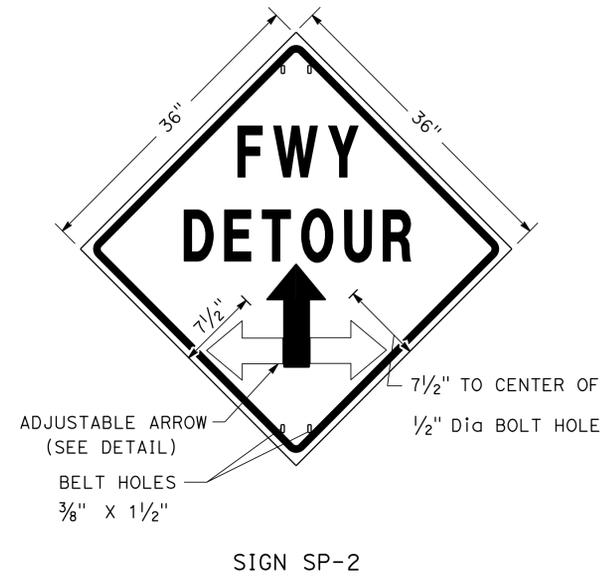
NO SCALE

**THD-1**

DATE PLOTTED => 07-NOV-2013 TIME PLOTTED => 15:29

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	101	5.2	7	34
<i>Albert K. Yu</i> 05-08-13 REGISTERED CIVIL ENGINEER DATE					
9-30-13 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>					

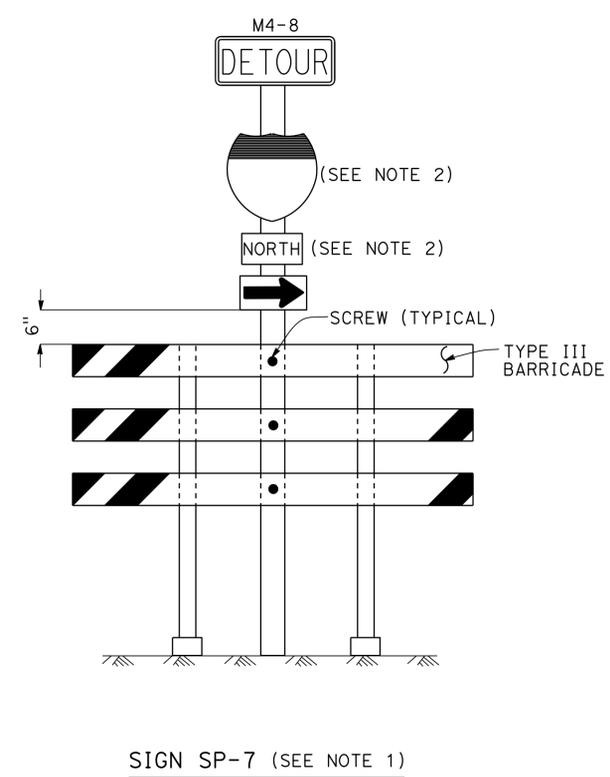
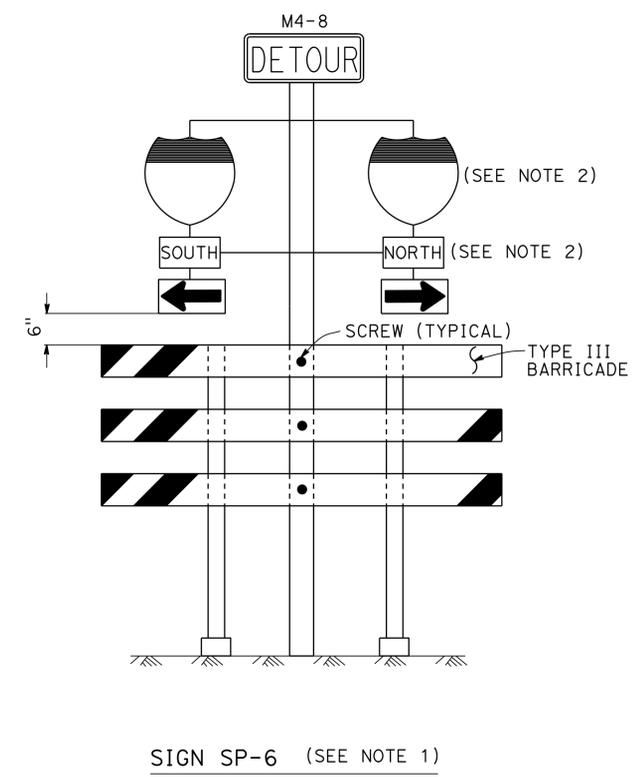
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 DTM  
 FUNCTIONAL SUPERVISOR  
 JOHN YANG  
 CHECKED BY  
 JOCELYN C CHIANG  
 REVISIONS  
 REVISOR  
 DATE  
 REVISIONS  
 REVISOR  
 DATE  
 REVISIONS  
 REVISOR  
 DATE



**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 7' ABOVE GROUND EXCEPT AS OTHERWISE SHOWN ON OTHER TRAFFIC HANDLING DETAILS PLANS.

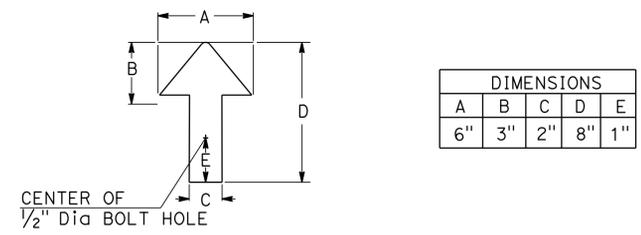
**ABBREVIATION**  
(CA) CALIFORNIA CODE



**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 MARKER [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**



**ADJUSTABLE ARROW DETAIL**

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

**THD-2**

LAST REVISION DATE PLOTTED => 07-NOV-2013  
 12-31-12 TIME PLOTTED => 15:29

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	101	5.2	8	34

REGISTERED CIVIL ENGINEER	DATE
ALBERT K. YU	05-08-13
No. 43220	
Exp. 3-31-14	
CIVIL	

9-30-13  
PLANS APPROVAL DATE

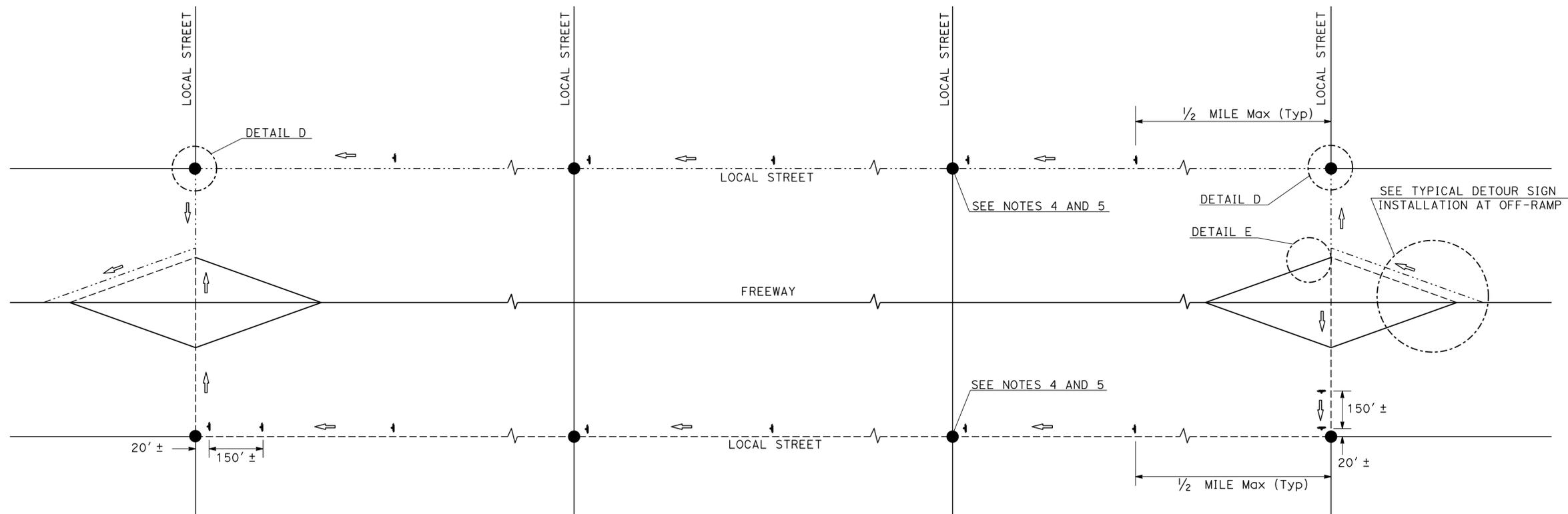
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**LEGEND**

- ↑ SIGN SP-2
- AND/OR DESIGNATED DETOUR ROUTE
- ⇨ DETOUR DIRECTION
- CONTROLLED INTERSECTION

**NOTES:**

1. SP-2 SIGNS MAY BE STRAPPED ON EXISTING ELECTROLIER, SIGNAL POST OR SIGN POST.
2. SP-2 SIGNS SHALL NOT BE INSTALLED ON BARRICADES EXCEPT AS OTHERWISE SHOWN.
3. SIGN LOCATIONS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.
4. SP-2 SIGNS SHALL BE POSTED AT EACH CONTROLLED INTERSECTION (EXCEPT AT COMMERCIAL PROPERTY, RESIDENTIAL COMPLEX OR T-INTERSECTION FROM ONE-WAY STREET) ALONG THE DESIGNATED DETOUR ROUTE.
5. UNLESS OTHERWISE SHOWN ON OTHER THD PLANS, WHEN CONTROLLED INTERSECTIONS ALONG THE DESIGNATED DETOUR ROUTE ARE CLOSELY SPACED, PLACE SP-2 SIGNS AT CONTROLLED INTERSECTIONS AT A DISTANCE NOT TO EXCEED 1/4 MILE FROM THE PRECEDING DETOUR SIGN.
6. EXCEPT AS OTHERWISE SHOWN ON OTHER PLANS OR SPECIFIED IN THE SPECIAL PROVISIONS, SP-2 SIGNS SHALL BE PLACED AS SHOWN ON THIS PLAN.



**TYPICAL DETOUR SIGN INSTALLATION ALONG DESIGNATED DETOUR ROUTE**

**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  
 JOHN YANG  
 CALCULATED-DESIGNED BY  
 ALBERT K YU  
 CHECKED BY  
 JOCELYN C CHIANG  
 REVISED BY  
 JC  
 DATE REVISED  
 3/12

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	101	5.2	9	34

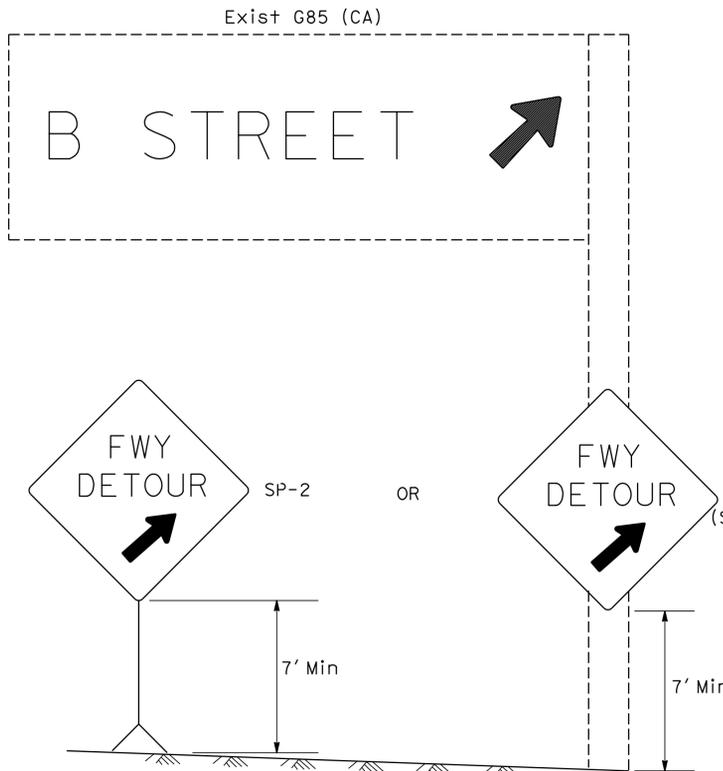
  

REGISTERED CIVIL ENGINEER	DATE
<i>Albert K. Yu</i>	05-08-13
PLANS APPROVAL DATE	
9-30-13	

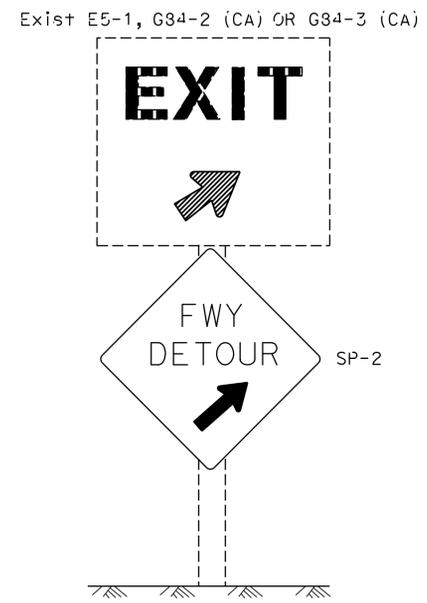
  

REGISTERED PROFESSIONAL ENGINEER	No.	Exp
ALBERT K. YU	43220	3-31-14
CIVIL		

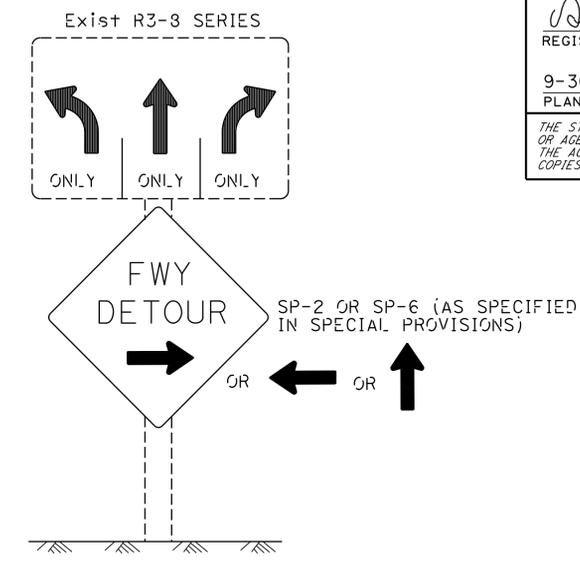
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



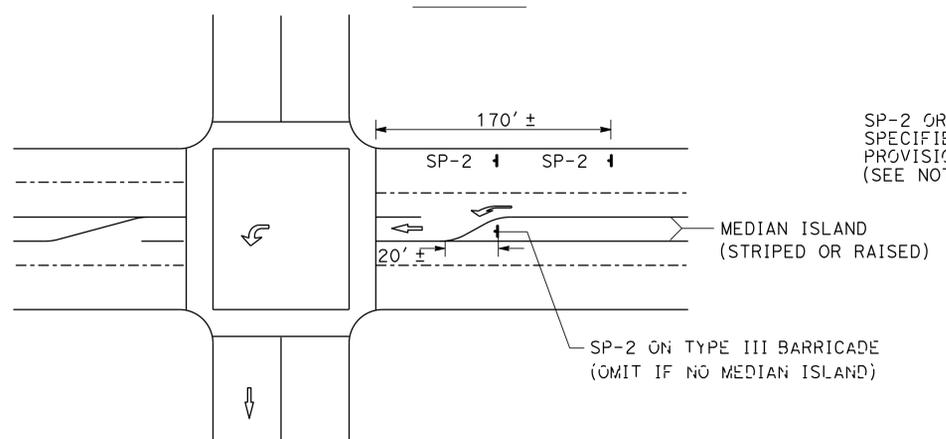
DETAIL A (SEE NOTE 3)



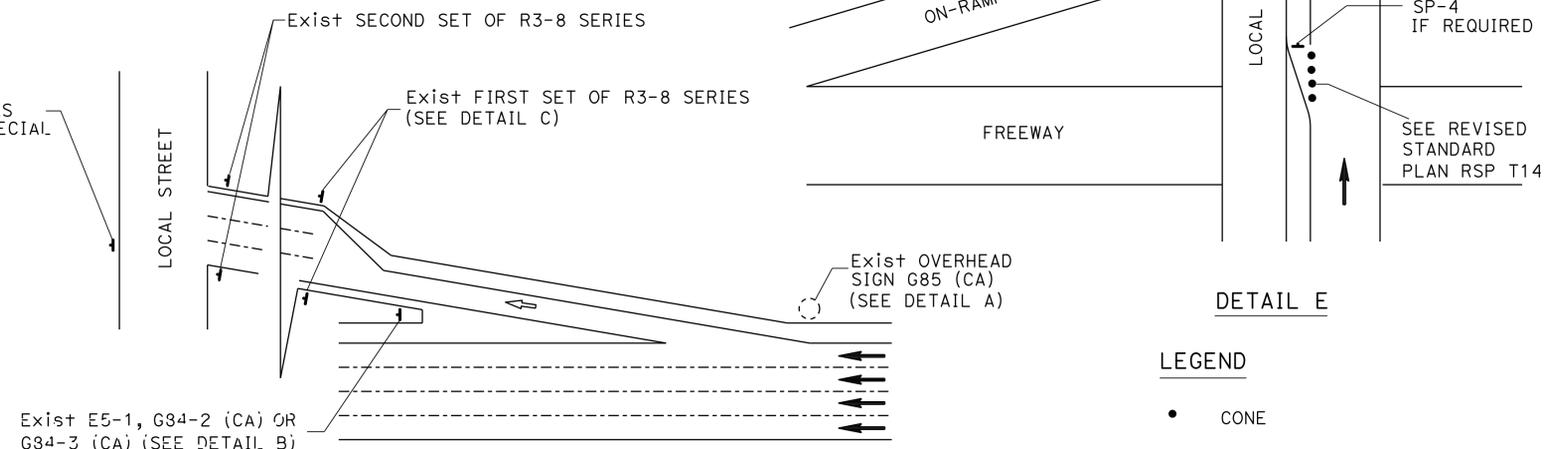
DETAIL B (SEE NOTE 3)



DETAIL C (SEE NOTES 4, 5, AND 6)



DETAIL D



DETAIL E

- LEGEND**
- CONE
  - ↑ PORTABLE SIGN
  - DIRECTION OF TRAVEL
  - ⇨ DETOUR DIRECTION
  - EXISTING OVERHEAD SIGN

**TYPICAL DETOUR SIGN INSTALLATION AT OFF-RAMP**

**SIGN CODE LEGEND**

XXYY-Y: FEDERAL SIGN CODE PER MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)  
 XXYY-Y (CA): CALIFORNIA SIGN CODE PER CALIFORNIA MUTCD

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

NO SCALE

**THD-4**

**NOTES: SIGN SP-2**

1. SP-2 SIGNS MAY BE STRAPPED ON EXISTING ELECTROLIER, SIGNAL POST OR SIGN POST.
2. SP-2 SIGNS SHALL NOT BE INSTALLED ON BARRICADES EXCEPT AS OTHERWISE SHOWN.
3. OMIT DETAILS A AND B FOR FULL FREEWAY CLOSURES.
4. SEE TRAFFIC HANDLING DETAILS-TRAFFIC CONTROL SYSTEM FOR RAMP CLOSURES, DETOUR SIGNS, AND MISCELLANEOUS DETAILS PLAN SHEET 2 OF 2 FOR SP-6 SIGN DETAILS.
5. IF R3-8 SERIES SIGNS ARE NOT PRESENT AT THE OFF-RAMP, SP-2 OR SP-6 SIGNS SHALL BE FASTENED ONTO EXISTING ELECTROLIER, SIGNAL POST OR SIGN POST.
6. EXCEPT FOR DETAILS A & B, OMIT SP-2 SIGNS IF RAMP HAS MANDATORY SINGLE MOVE.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 FUNCTIONAL SUPERVISOR: JOHN YANG  
 CHECKED BY: JOCELYN C CHIANG  
 REVISIONS: JC 3/12

DATE PLOTTED => 07-NOV-2013  
 TIME PLOTTED => 15:29  
 LAST REVISION 12-31-12



**NOTE:**  
FOR ACCURATE RIGHT OF WAY DATA, CONTACT  
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	101	5.2	11	34

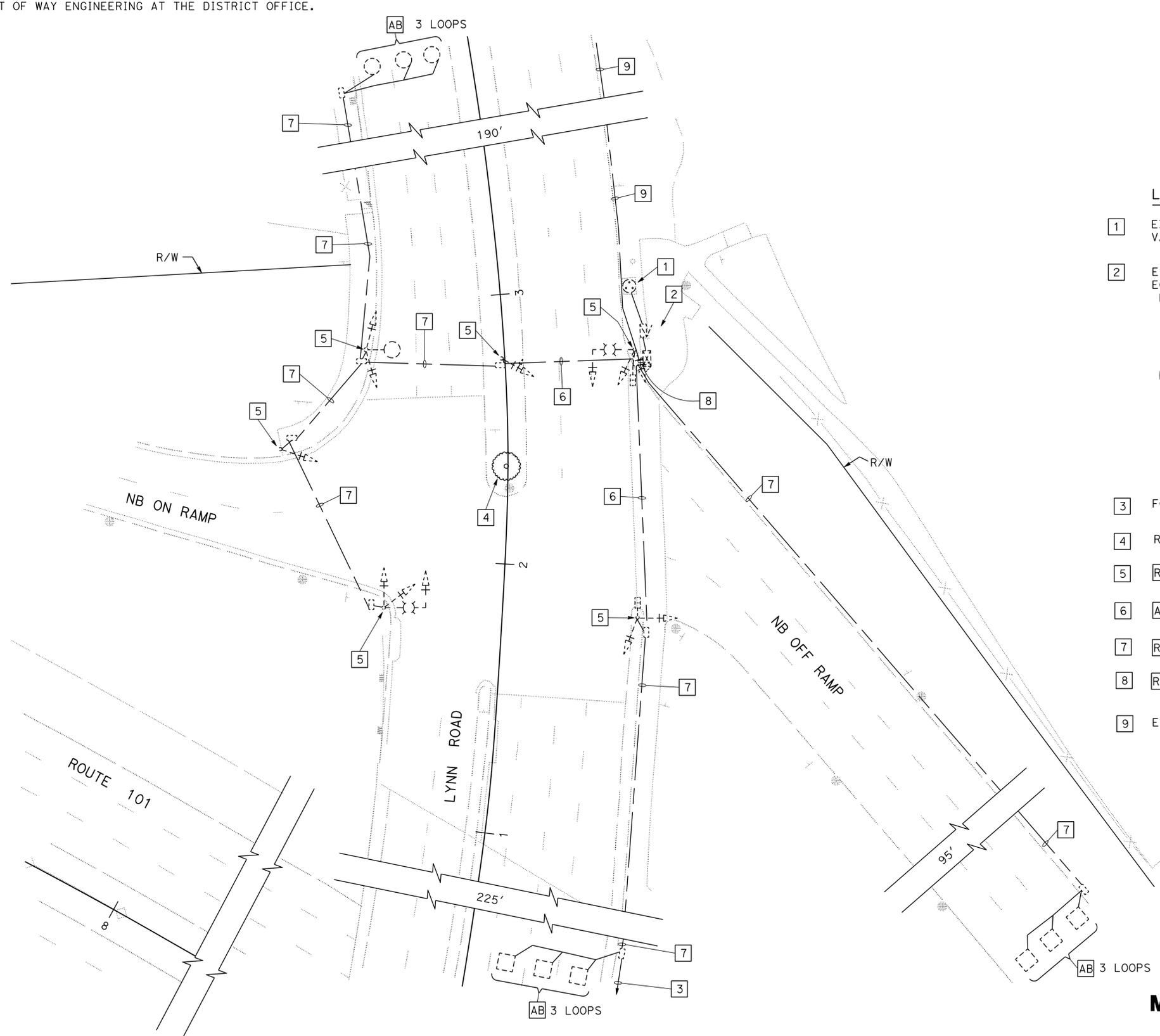
  

<i>G. S. Toor</i>	9/29/13
REGISTERED ELECTRICAL ENGINEER	DATE
9-30-13	
PLANS APPROVAL DATE	

G.S. TOOR
No. E15613
Exp. 12/31/13
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.



**LEGEND: (THIS SHEET)**

- 1 EXISTING SOUTHERN CALIFORNIA EDISON VAULT.  
VAULT #5027876
- 2 EXISTING 120 / 240 V TYPE III-CF SERVICE EQUIPMENT ENCLOSURE WITH THE FOLLOWING:  
METER 1  
100 A, 240 V, 2P, MAIN BREAKER  
3 - 30 A, 120 V, CB FOR RAMP METER  
20 A, 120 V, CB FOR TELEPHONE DEMARCATION CABINET  
CT ID No. 07-52-101-0004.900  
ADDRESS: 100 1/2 LYNN ROAD  
METER 2  
100 A, 240 V, 2P, MAIN BREAKER  
20 A, 120 V, 1P, CB FOR NB TRAFFIC SIGNAL  
20 A, 120 V, 1P, CB FOR SB TRAFFIC SIGNAL  
30 A, 120 V, 1P, CB FOR CONTROLLER  
20 A, 120 V, 1P, CB SAFETY LIGHTING  
CT ID No. 07-52-101-0004.901  
ADDRESS: 100 3/4 LYNN ROAD
- 3 FOR CONTINUATION, SEE SHEET E-4.
- 4 REMOVE EXISTING TREE.
- 5 RC SIGNAL STANDARD.
- 6 AB CONDUIT.
- 7 RC CONDUCTORS.
- 8 RC CONDUCTORS AND CONDUIT EXCEPT INTERCONNECT TO HILLCREST DRIVE.
- 9 EXISTING INTERCONNECT TO HILLCREST DRIVE.

**MODIFY SIGNAL AND LIGHTING  
(REMOVE)**

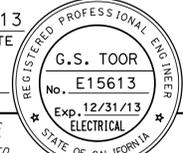
SCALE: 1" = 20'

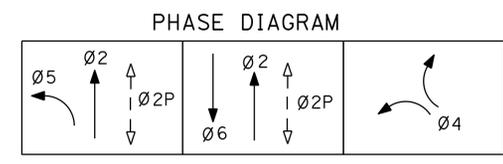
**E-1**

APPROVED FOR ELECTRICAL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** TRAFFIC DESIGN  
FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO  
DESIGNED BY: PARESH PATEL  
CHECKED BY: GARY TOOR  
REVISOR: GARY TOOR  
DATE REVISOR: 9/29/13

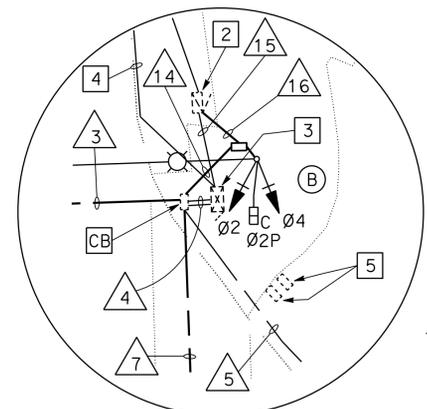
DATE PLOTTED => 07-NOV-2013  
TIME PLOTTED => 15:29  
LAST REVISION 00-00-00

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	101	5.2	12	34
 REGISTERED ELECTRICAL ENGINEER DATE 9/29/13					
9-30-13 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>					

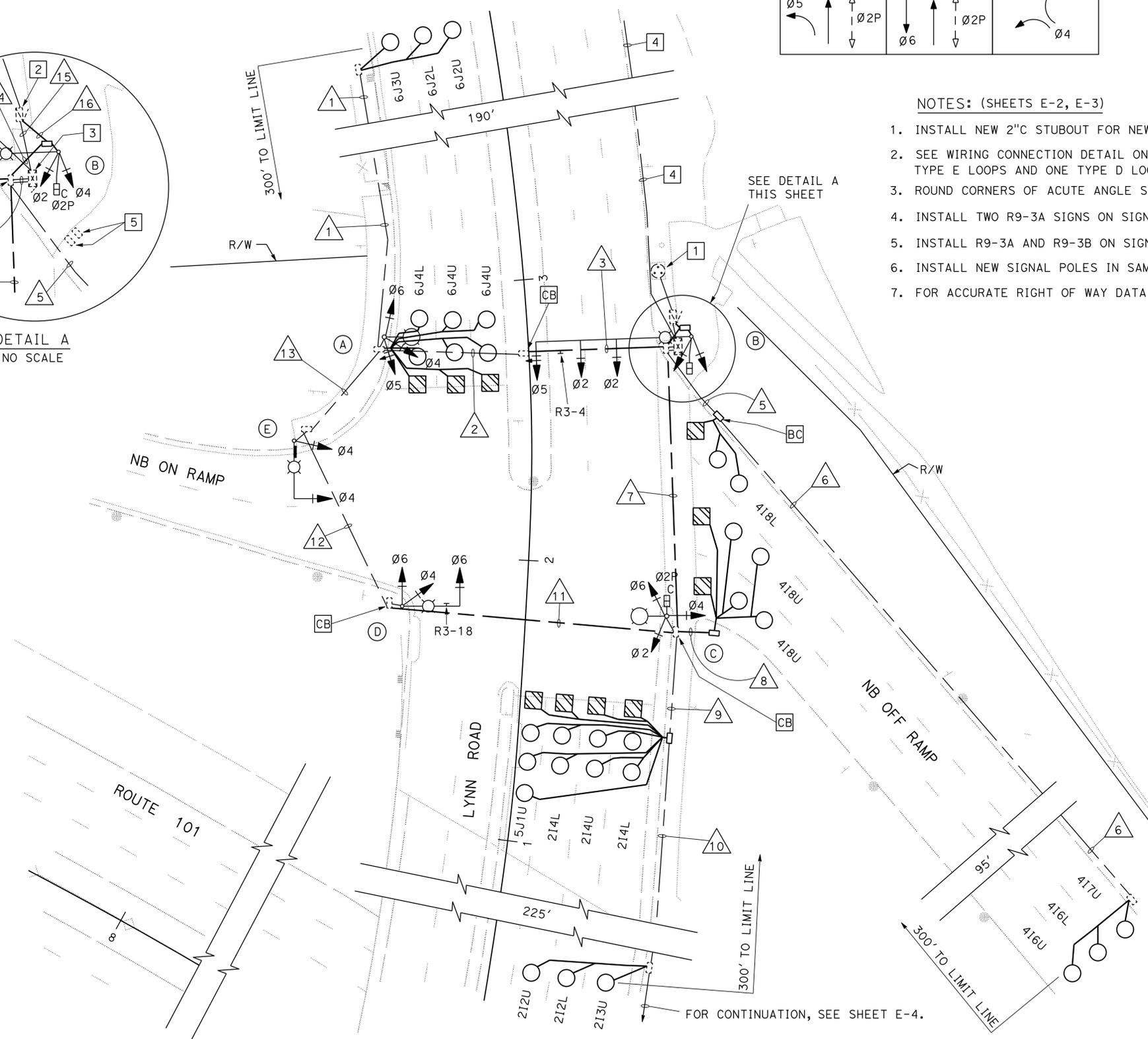


- NOTES: (SHEETS E-2, E-3)
- INSTALL NEW 2" C STUBOUT FOR NEW LOOP DETECTORS, AND ABANDON EXISTING ONE.
  - SEE WIRING CONNECTION DETAIL ON SHEET E-3 FOR ONE TYPE D LOOP WITH TWO TYPE E LOOPS AND ONE TYPE D LOOP WITH THREE TYPE E LOOPS.
  - ROUND CORNERS OF ACUTE ANGLE SAWCUTS.
  - INSTALL TWO R9-3A SIGNS ON SIGNAL POLES A, D AND E.
  - INSTALL R9-3A AND R9-3B ON SIGNAL POLES B AND C.
  - INSTALL NEW SIGNAL POLES IN SAME LOCATION AS EXISTING SIGNAL POLES.
  - FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

- LEGEND: (THIS SHEET)
- EXISTING SOUTHERN CALIFORNIA EDISON VAULT. VAULT #5027876
  - EXISTING 120 / 240 V TYPE III-CF SERVICE EQUIPMENT ENCLOSURE WITH THE FOLLOWING:  
 METER 1  
 100 A, 240 V, 2P, MAIN BREAKER  
 3 - 30 A, 120 V, CB FOR RAMP METER  
 20 A, 120 V, CB FOR TELEPHONE DEMARCATION CABINET  
 CT ID No. 07-52-101-0004.900  
 ADDRESS: 100 1/2 LYNN ROAD  
 METER 2  
 100 A, 240 V, 2P, MAIN BREAKER  
 20 A, 120 V, 1P, CB FOR NB TRAFFIC SIGNAL  
 20 A, 120 V, 1P, CB FOR SB TRAFFIC SIGNAL  
 30 A, 120 V, 1P, CB FOR CONTROLLER  
 20 A, 120 V, 1P, CB SAFETY LIGHTING  
 CT ID No. 07-52-101-0004.901  
 ADDRESS: 100 3/4 LYNN ROAD
  - INSTALL DEPARTMENT FURNISHED MODEL 2070 CONTROLLER UNIT, MODEL 2070-6B MODEM AND MODEL 400B MODEM. INSTALL BBS. INSTALL DEPARTMENT FURNISHED GLOBAL POSITIONING SYSTEM TIME BASE SYSTEM EQUIPMENT IN CABINET. FOR SERVICE EQUIPMENT DETAILS SEE SHEET E-5.
  - EXISTING 1/2" CONDUIT, INTERCONNECT TO HILLCREST DRIVE.
  - ADJUST TO GRADE EXISTING RAMP METERING PULL BOX.



DETAIL A  
NO SCALE



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**MODIFY SIGNAL AND LIGHTING**

SCALE: 1" = 20'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** TRAFFIC DESIGN  
 FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO  
 CALCULATED/DESIGNED BY: GARY TOOR  
 CHECKED BY: PARESH PATEL  
 REVISED BY: DATE REVISED

DATE PLOTTED => 07-NOV-2013  
 TIME PLOTTED => 15:29  
 00-00-00

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	101	5.2	13	34

9/29/13  
 REGISTERED ELECTRICAL ENGINEER DATE  
 9-30-13  
 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  
 G.S. TOOR  
 No. E15613  
 Exp. 12/31/13  
 ELECTRICAL  
 STATE OF CALIFORNIA

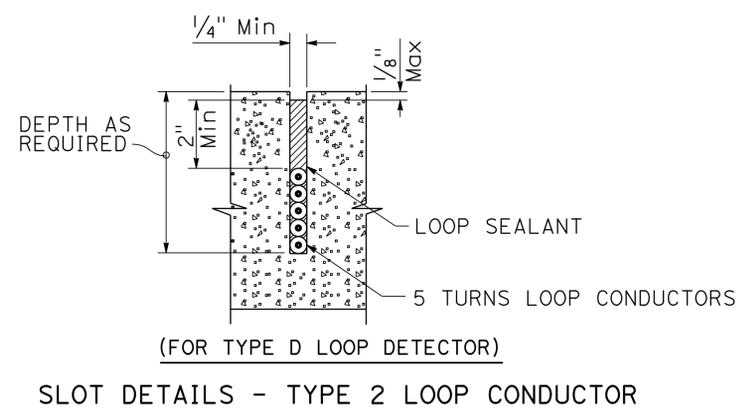
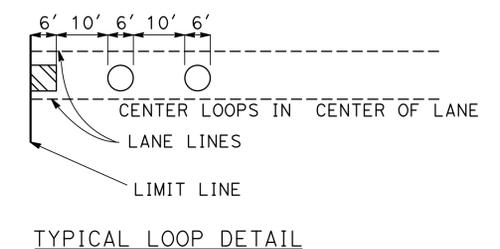
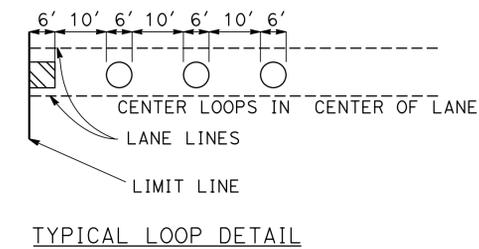
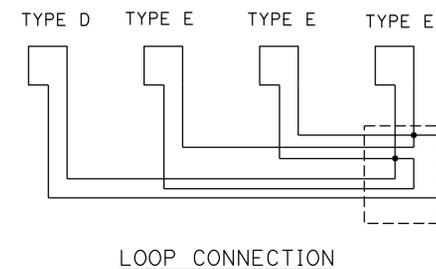
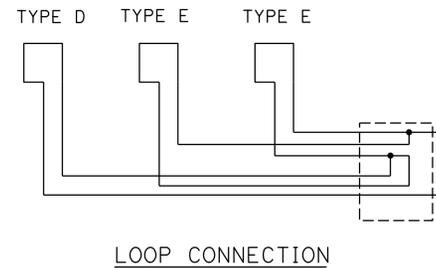
CONDUIT AND CONDUCTOR SCHEDULE

AWG OR CABLE	CONDUCTOR RUN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
28 CSC			2	2	2			2		6	3	2	2	2	1		
DLC	Ø 2				6			6		6							
	Ø 4				6	4	3	2	2								
	Ø 5				1			1		1							
	Ø 6	3	6	6	6												
	TOTAL	3	6	6	19	4	3	9	2	7	3						
#8	LUMINAIRE		2	2				2				2		2	2		2
	GROUND		1	1	1			1				1	1	1	1		1
	SERVICE															(E)2	
TOTAL		3	3	1			3				3	1	3	3	(E)2		
EXISTING CONDUIT SIZE		1 1/2"	3"			1 1/2"	1 1/2"			2"	2"		3"	2"		2"	
NEW CONDUIT SIZE			3"	2-3"			3"	2"			3"			2"		2"	

(E) - EXISTING

POLE AND EQUIPMENT SCHEDULE

No.	STANDARD		VEH SIG MTG		PED SIGNAL MTG	APS		LED LUMINAIRE	SPECIAL REQUIREMENTS IISNS
	TYPE	SMA	LMA	MAST ARM		POLE	Ø		
(A)	15TS		12'		SV-3-T			235 W	
(B)	29-5-100	55'	15'	3-MAS	SV-2-T	SP-1-T	←	235 W	
(C)	15TS		12'		SV-3-T	SP-1-T	→	235 W	
(D)	17-2-100	20'	12'	MAS	SV-2-T			235 W	
(E)	17-2-100	20'	12'	MAS	SV-1-T			235 W	Lynn Rd



**MODIFY SIGNAL AND LIGHTING**  
NO SCALE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	101	5.2	14	34

<i>G. Toor</i>	9/29/13
REGISTERED ELECTRICAL ENGINEER	DATE
9-30-13	
PLANS APPROVAL DATE	

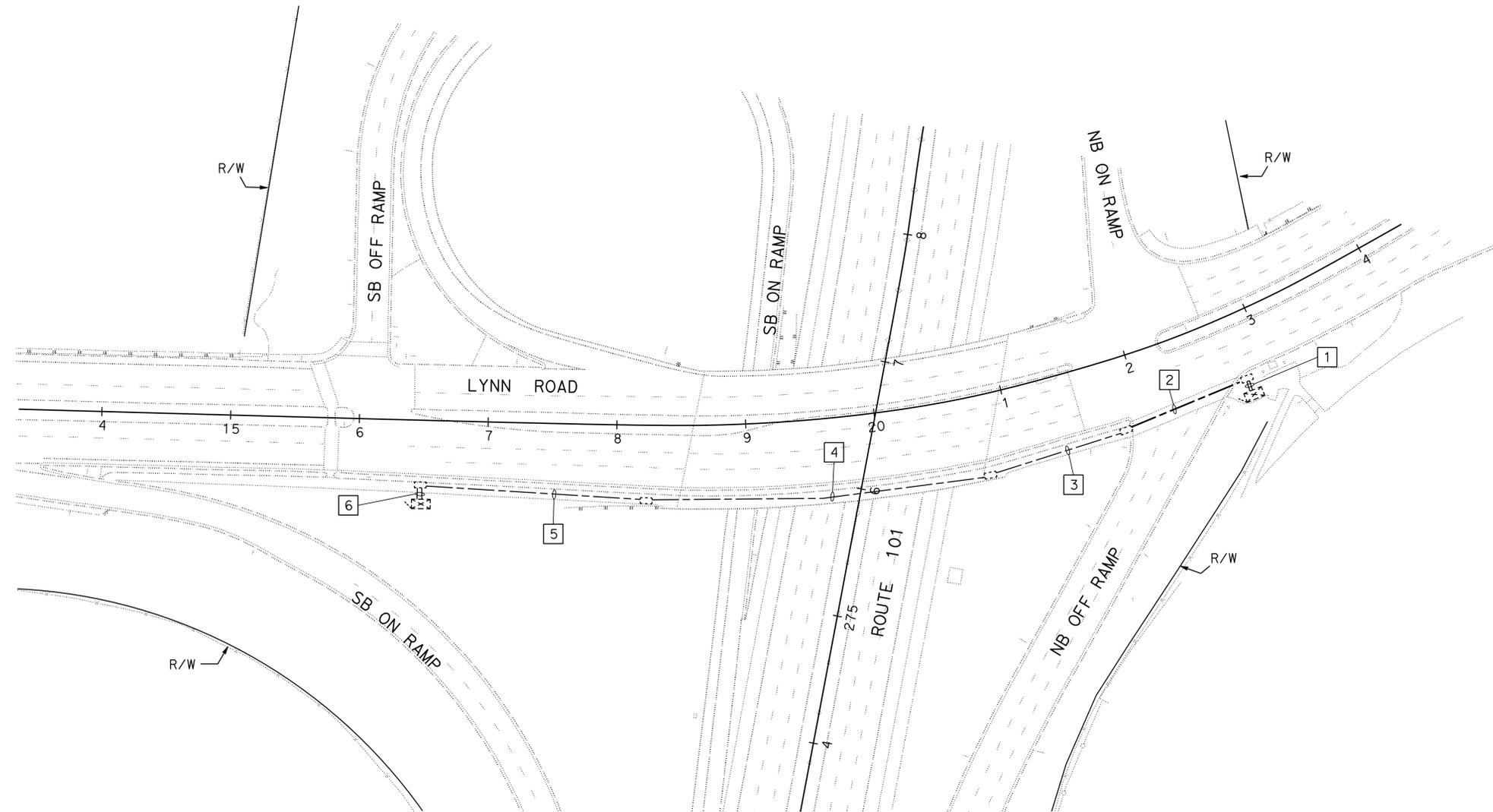
G.S. TOOR	
No. E15613	
Exp. 12/31/13	
ELECTRICAL	
STATE OF CALIFORNIA	

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**NOTE:**  
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

**LEGEND: (THIS SHEET)**

- 1 EXISTING 2-3"C, ADD 12SIC.
- 2 NEW 3"C, ADD 12SIC. SEE SHEET E-2 FOR CONDUIT INSTALLATION DETAIL.
- 3 EXISTING 2"C, ADD 12SIC.
- 4 EXISTING 1 1/2"C IN BRIDGE, ADD 12SIC.
- 5 EXISTING 2"C, RC sic, ADD 12SIC.
- 6 EXISTING 2-3"C, RC sic, ADD 12SIC.



**INTERCONNECTION CONDUIT AND CABLE**

SCALE: 1" = 50'

**E-4**

APPROVED FOR ELECTRICAL WORK ONLY

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

FUNCTIONAL SUPERVISOR  
OSWALD ELIZONDO

CALCULATED-DESIGNED BY  
CHECKED BY

PARESH PATEL  
GARY TOOR

REVISED BY  
DATE REVISED

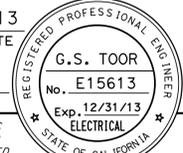
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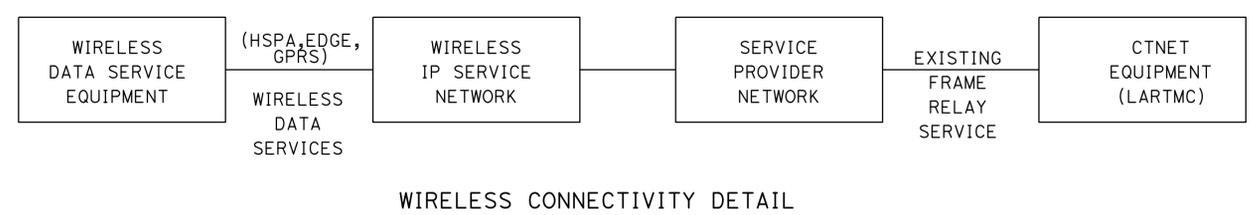
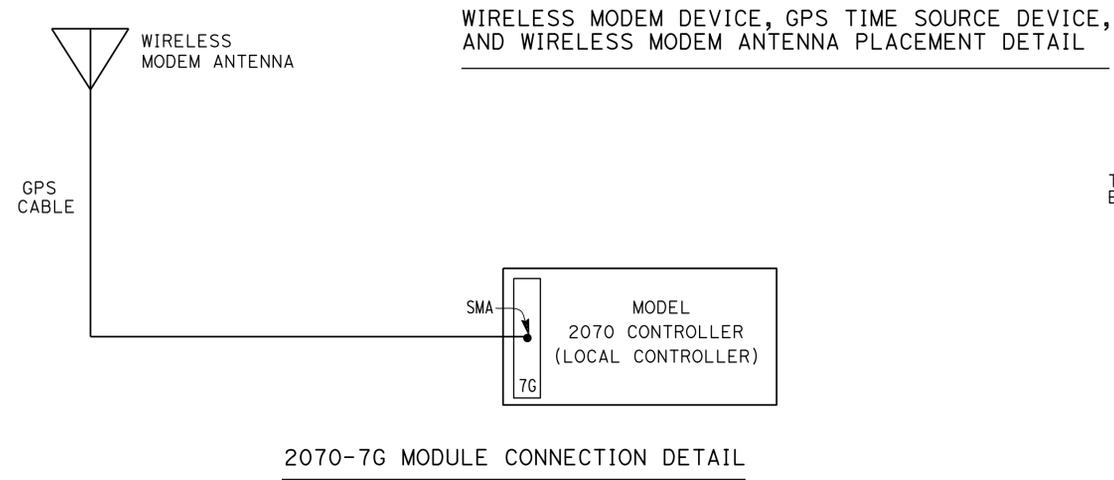
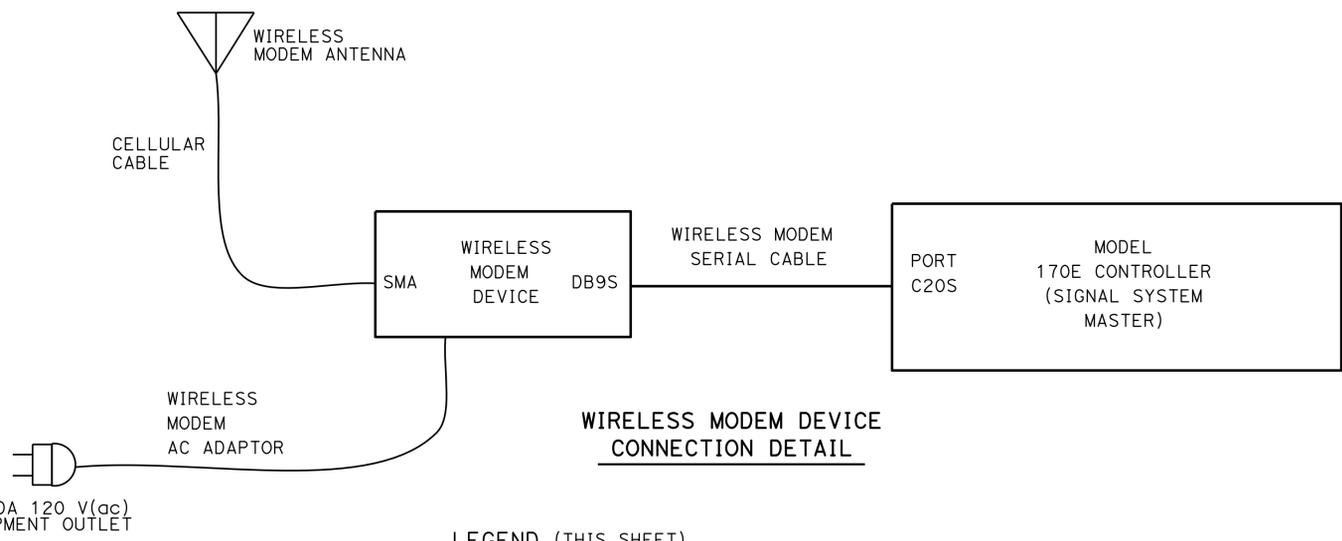
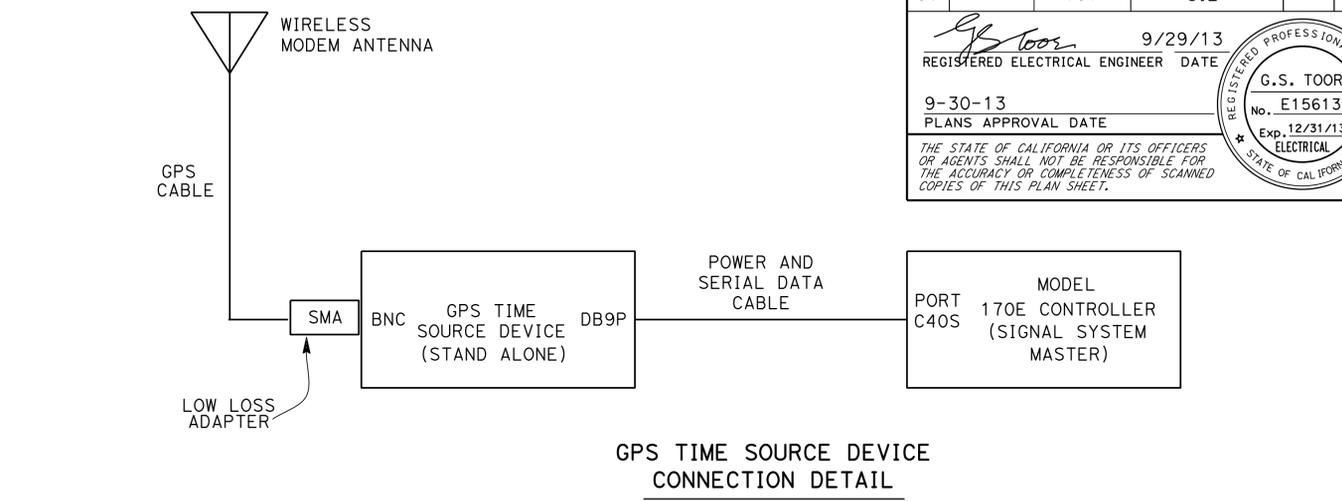
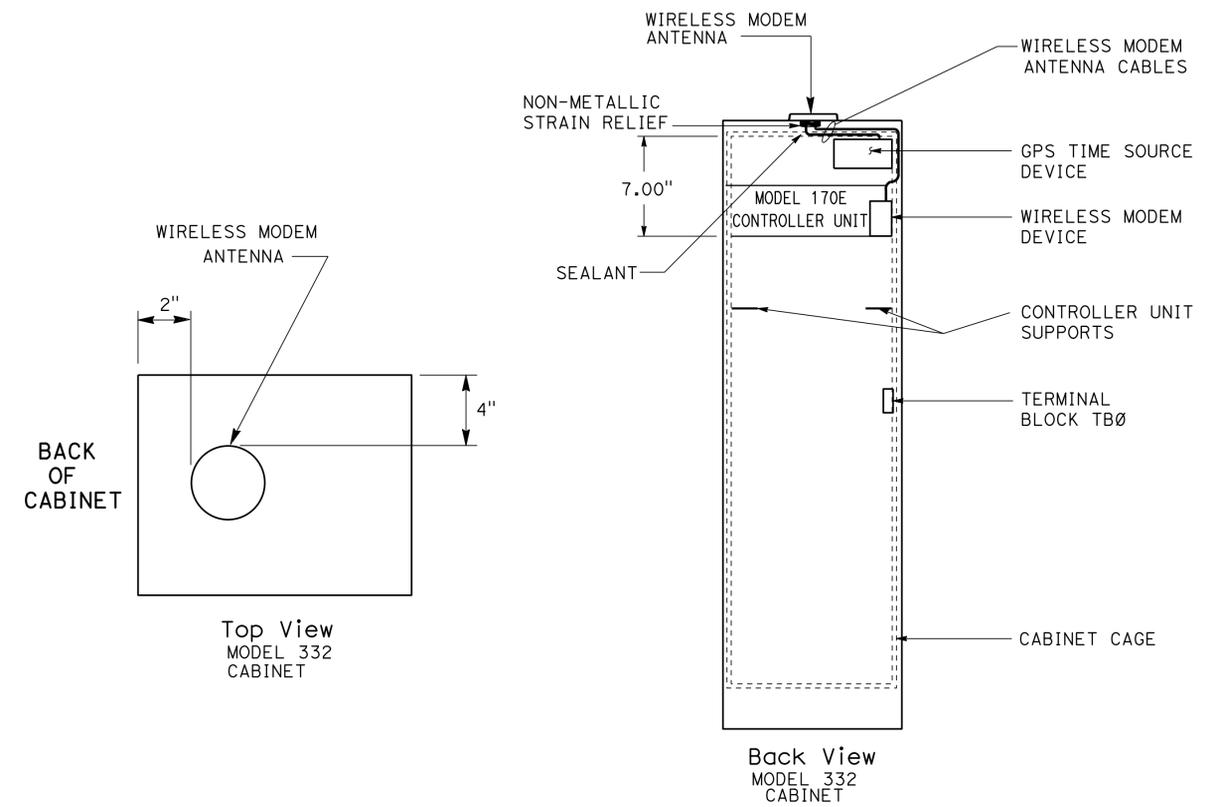
x

x

x

x

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	101	5.2	15	34
			9/29/13		
REGISTERED ELECTRICAL ENGINEER			DATE		
9-30-13			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>					



- LEGEND (THIS SHEET)**
- AC ALTERNATING CURRENT
  - V(AC) VOLTS ALTERNATING CURRENT
  - PDA POWER DISTRIBUTION ASSEMBLY
  - CTNET CALTRANS TRAFFIC SIGNAL NETWORK.
  - LARTMC LOS ANGELES REGIONAL TRANSPORTATION MANAGEMENT CENTER
  - GPRS GENERAL PACKET RADIO SERVICE
  - IP INTERNET PROTOCOL
  - GPS GLOBAL POSITIONING SYSTEM
  - EDGE ENHANCED DATA RATE FOR GLOBAL EVOLUTION
  - DB9P SERIES D SUBMINIATURE CONNECTOR, E SIZE SHELL, 9 PIN PLUG
  - DB9S SERIES D SUBMINIATURE CONNECTOR, E SIZE SHELL, 9 PIN SOCKET
  - TNC THREADED NEILL-CONCELMAN
  - SMA SUBMINIATURE VERSION A
  - BNC BAYONET NEILL-CONCELMAN
  - HSPA HIGH SPEED PACKET ACCESS

**MODIFY TRAFFIC SIGNAL  
(WIRELESS DATA SERVICE AND  
GPS TIME BASE SYSTEMS DETAILS)**  
NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** TRAFFIC DESIGN  
 FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO  
 DESIGNED BY: GARY TOOR  
 CHECKED BY:  
 REVISIONS:

LAST REVISION: 00-00-00   
 DATE PLOTTED => 07-NOV-2013   
 TIME PLOTTED => 15:29



	<b>M</b>	
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	
	<b>N</b>	
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	
	<b>O</b>	
Oblr	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	
	<b>P</b>	
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	

	<b>P continued</b>	
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	
	<b>Q</b>	
Qty	QUANTITY	
	<b>R</b>	
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	

	<b>S</b>	
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 THREE BEAM BARRIER	
Std	STANDARD	
Str	STRUCTURE	
Surf	SURFACING	
SW	SIDEWALK, SOUND WALL	
Swr	SEWER	
Sym	SYMMETRICAL	
S4S	SURFACE 4 SIDES	
	<b>T</b>	
T	SEMI-TANGENT	
Tan	TANGENT	
TBB	THREE BEAM BARRIER	
Tbr	TIMBER	
TC	TOP OF CURB	
TCB	TRAFFIC CONTROL BOX	
TCE	TEMPORARY CONSTRUCTION EASEMENT	
Tel	TELEPHONE	
Temp	TEMPORARY	
TG	TOP OF GRADE	
ToT	TOTAL	
TP	TELEPHONE POLE	
TPB	TREATED PERMEABLE BASE	
TPM	TREATED PERMEABLE MATERIAL	
Trans	TRANSITION	

	<b>T continued</b>	
TS	TRANSVERSE, TRAFFIC SIGNAL, TUBULAR STEEL TYPICAL	
Typ	TYPICAL	
	<b>U</b>	
UC	UNDERCROSSING	
UD	UNDERDRAIN	
UG	UNDERGROUND	
UON	UNLESS OTHERWISE NOTED	
UP	UNDERPASS	
	<b>V</b>	
V	VALVE, DESIGN SPEED	
Var	VARIABLE, VARIES	
VC	VERTICAL CURVE	
VCP	VITRIFIED CLAY PIPE	
Vert	VERTICAL	
Via	VIADUCT	
Vol	VOLUME	
	<b>W</b>	
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	
WWL	WINGWALL LAYOUT LINE	
	<b>X</b>	
X Sec	CROSS SECTION	
Xing	CROSSING	
	<b>Y</b>	
Yr	YEAR	
Yrs	YEARS	

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	101	5.2	17	34

*Grace M. Tsushima*  
 REGISTERED CIVIL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 Grace M. Tsushima  
 No. C49814  
 Exp. 9-30-14  
 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.

TO ACCOMPANY PLANS DATED 9-30-13

**UNIT OF MEASUREMENT SYMBOLS:**  
 Some of the symbols used in the project plan quantity tables and in the Bid Item List are:

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:

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 <sup>3</sup> , 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.

# 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

## NOTES:

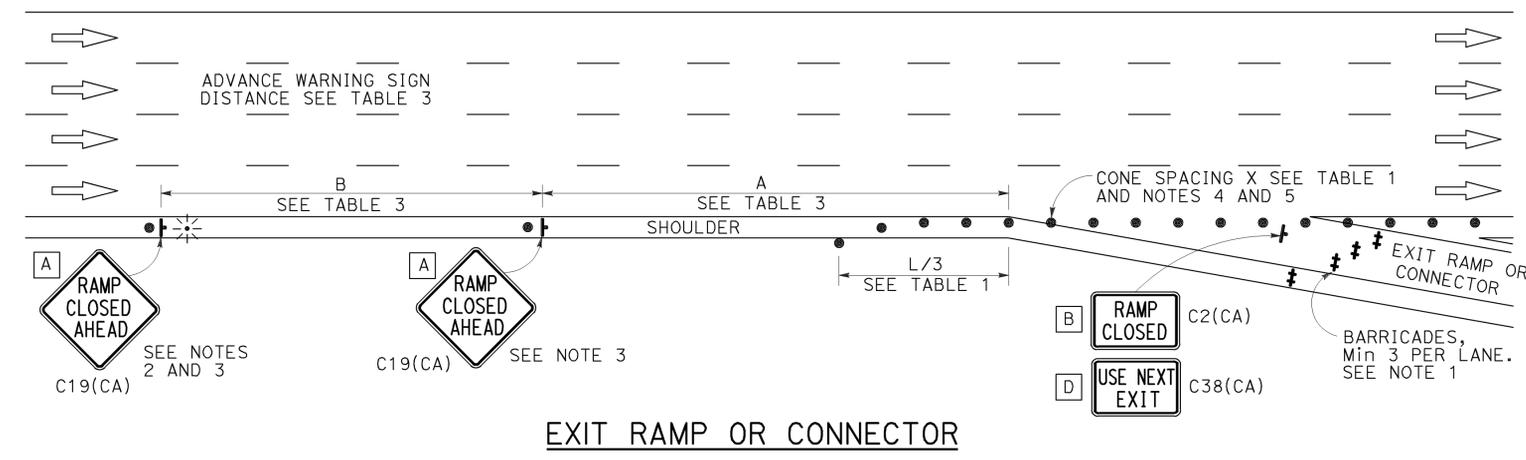
1. Barricades shall be Type I, II, or III for closures lasting one week or less and Type III for closures lasting longer than one week.
2. In addition to placing the C19(CA) "RAMP CLOSED AHEAD" and C30(CA) "RAMP CLOSED" signs, black on orange overlay plates with the word "CLOSED" may be mounted, as directed 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.
3. 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.
4. All cones used for ramp closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
5. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime ramp closures only.
6. At least one person shall be assigned to provide full time maintenance of traffic control devices, unless otherwise directed by the Engineer.
7. The existing "EXIT" signs shall be covered during ramp closures.
8. A minimum of 3 cones shall be placed transversely across each closed lane and shoulder.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	101	5.2	18	34

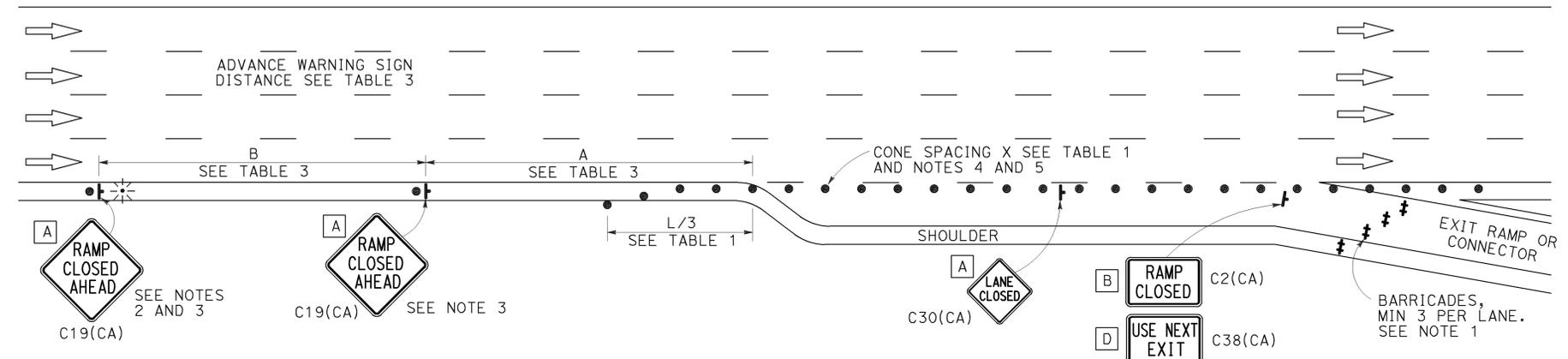
*gbsmlbr*  
 REGISTERED CIVIL ENGINEER  
 April 19, 2013  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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

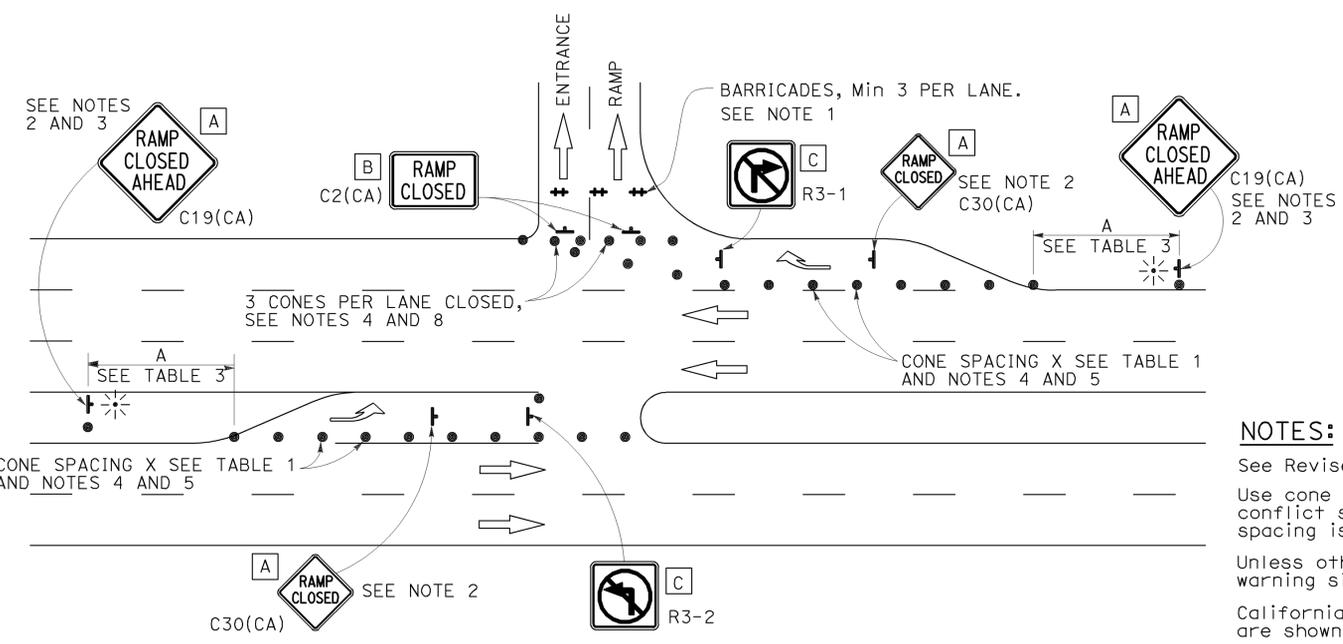
TO ACCOMPANY PLANS DATED 9-30-13



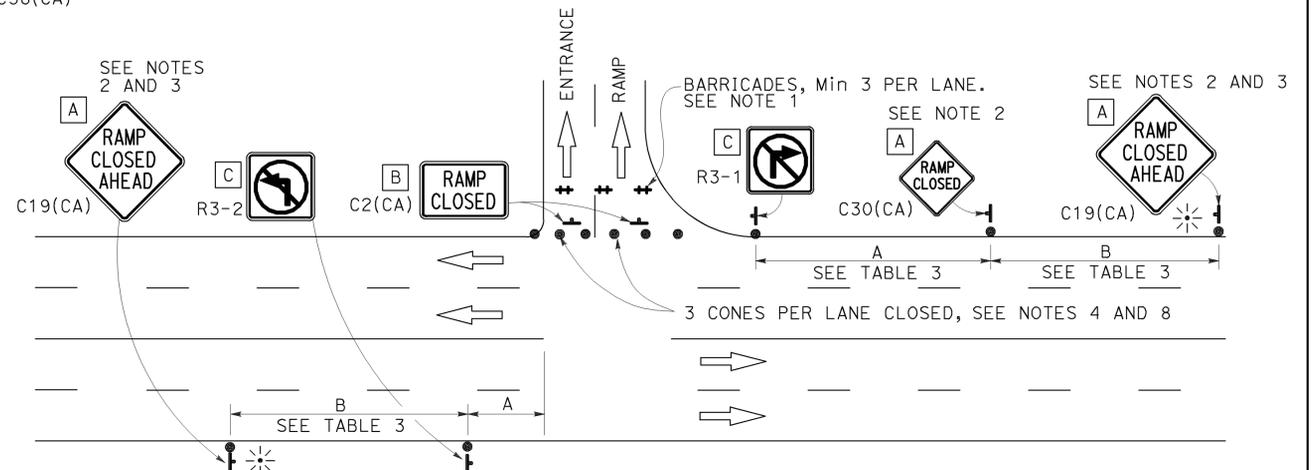
EXIT RAMP OR CONNECTOR



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

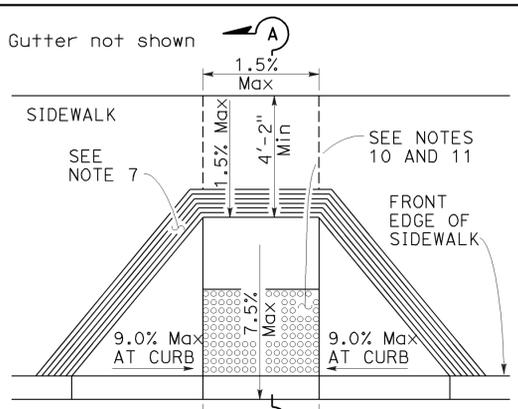
RSP T14 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T14  
 DATED MAY 20, 2011 - PAGE 242 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP T14**

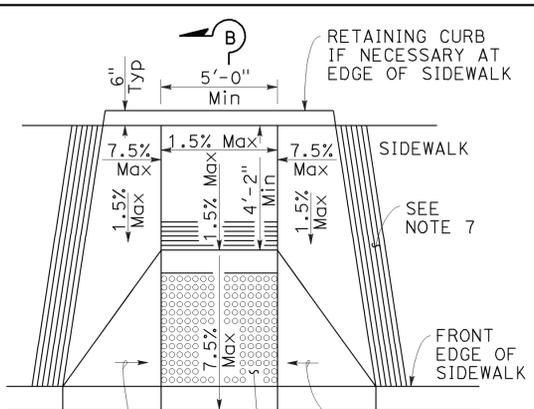
2010 REVISED STANDARD PLAN RSP T14

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	101	5.2	19	34

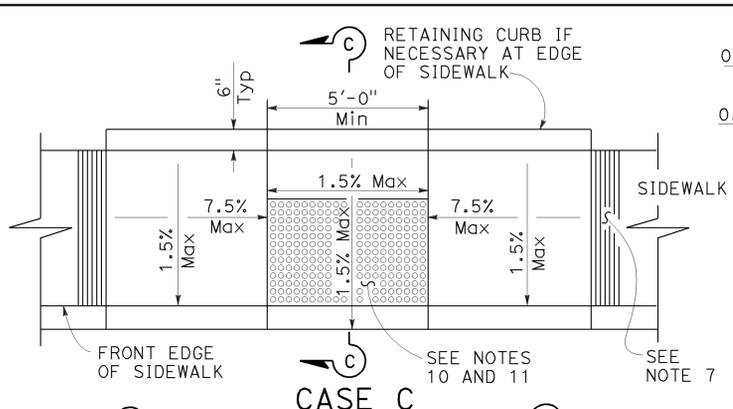
*H. David Cordova*  
 REGISTERED CIVIL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



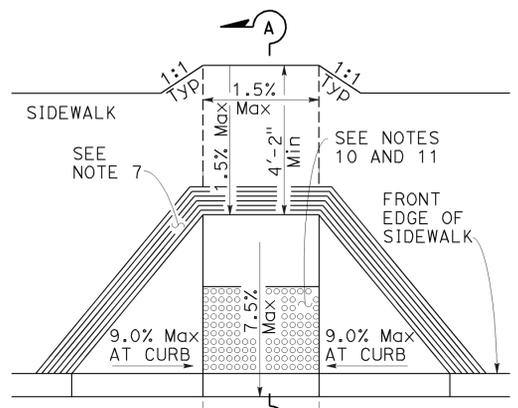
**CASE A**



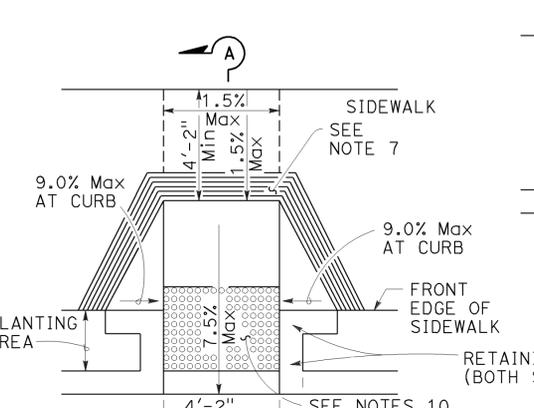
**CASE B**



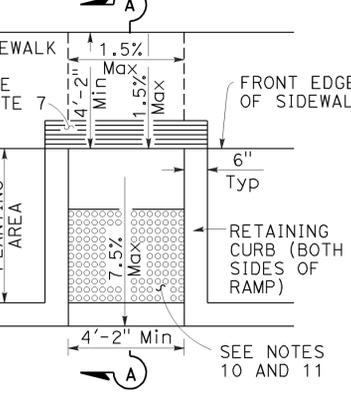
**CASE C**



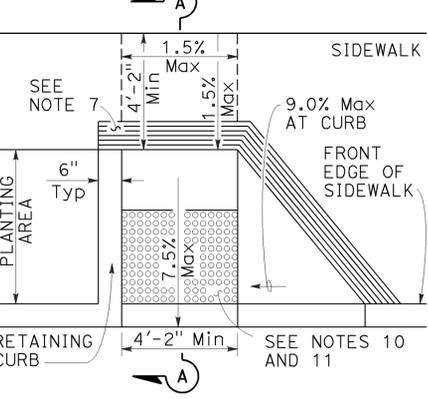
**CASE D**



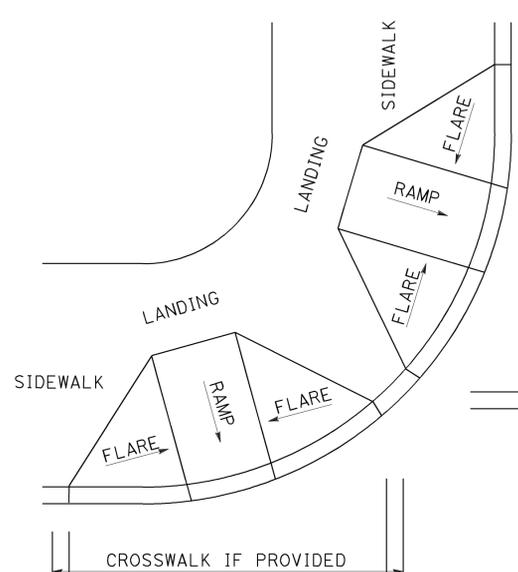
**CASE E**



**CASE F**

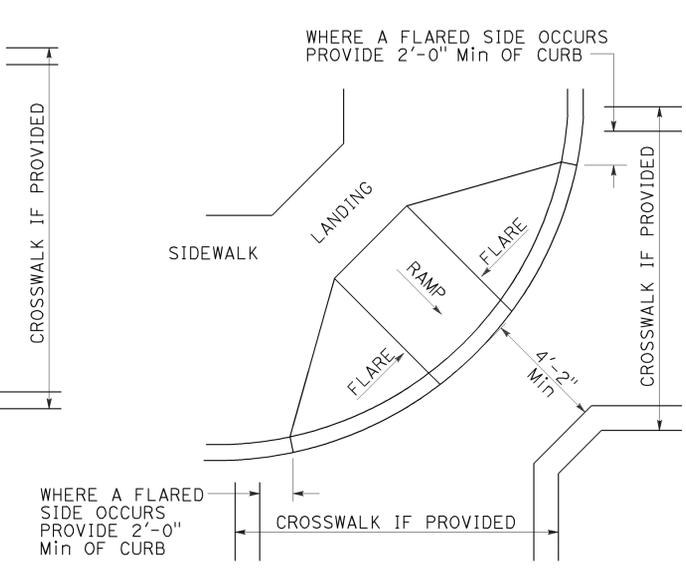


**CASE G**



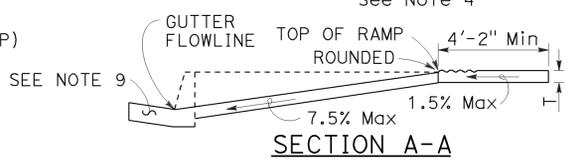
**DETAIL A**  
TYPICAL TWO-RAMP CORNER INSTALLATION

See Note 1

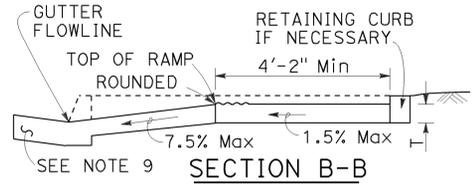


**DETAIL B**  
TYPICAL ONE-RAMP CORNER INSTALLATION

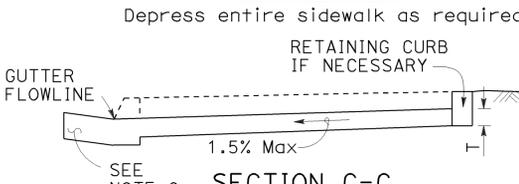
See Notes 1 and 3



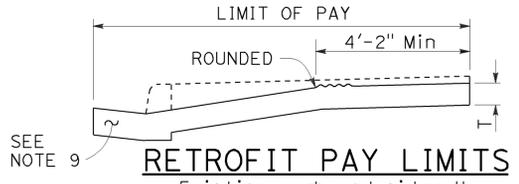
**SECTION A-A**



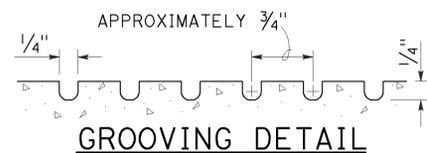
**SECTION B-B**



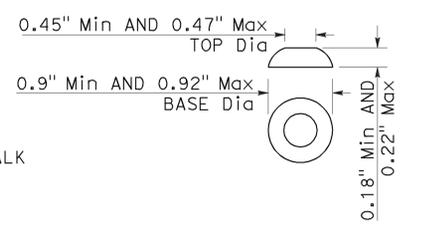
**SECTION C-C**



**RETROFIT PAY LIMITS**



**GROOVING DETAIL**



**RAISED TRUNCATED DOME**

**NOTES:**

1. As site conditions dictate, Case A through Case G curb ramps may be used for corner installations similar to those shown in Detail A and Detail B. The case of curb ramps used in Detail A do not have to be the same. Case A through Case G curb ramps also may be used at mid block locations, as site conditions dictate.
2. If distance from curb to back of sidewalk is too short to accommodate ramp and 4'-2" platform (landing) as shown in Case A, the sidewalk may be depressed longitudinally as in Case B, or C or may be widened as in Case D.
3. When ramp is located in center of curb return, crosswalk configuration must be similar to that shown for Detail B.
4. As site conditions dictate, the retaining curb side and the flared side of the Case G ramp shall be constructed in reversed position.
5. If located on a curve, the sides of the ramp need not be parallel, but the minimum width of the ramp shall be 4'-2".
6. Side slope of ramp flares vary uniformly from a maximum of 9.0% at curb to conform with longitudinal sidewalk slope adjacent to top of the ramp, except in Case C and Case F.
7. The curb ramp shall be outlined, as shown, with a 1'-0" wide border with 1/4" grooves approximately 3/4" on center. See grooving detail.
8. Transitions from ramps and landing to walks, gutters or streets shall be flush (no lip) and free of abrupt changes.
9. Counter slopes of adjoining gutters and road surfaces immediately adjacent to and within 24 inches of the curb ramp shall not be steeper than 1:20 (5.0%). Gutter pan slope shall not exceed 1" of depth for each 2'-0" of width.
10. Curb ramps shall have a detectable warning surface that extends the full width and 3'-0" depth of the ramp. Detectable Warning Surfaces shall conform to the details on this plan and the requirements in the Standard Specifications.
11. The edge of the detectable warning surface nearest the street shall be between 6" and 8" from the gutter flowline.
12. Sidewalk and ramp thickness, "T", shall be 3 1/2" minimum.
13. Utility pull boxes, manholes, vaults and all other utility facilities within the boundaries of the curb ramp will be relocated or adjusted to grade by the owner prior to, or in conjunction with, curb ramp construction.
14. Detectable warning surface may have to be cut to allow removal of utility covers while maintaining full detectable warning width and depth.



**RAISED TRUNCATED DOME PATTERN (IN-LINE) DETECTABLE WARNING SURFACE**

See Note 10

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**CURB RAMP DETAILS**  
NO SCALE

RSP A88A DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A88A DATED MAY 20, 2011 - PAGE 121 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A88A**

2010 REVISED STANDARD PLAN RSP A88A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	101	5.2	20	34

*Theresa Gabriel*  
 REGISTERED ELECTRICAL 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 9-30-13

**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
$\Omega$	OHMS
min	MINUTE
s	SECOND
bps	BITS PER SECOND
Bps	BYTES PER SECOND
A	AMPERE
V	VOLT
V <sub>(dc)</sub>	VOLT (DIRECT CURRENT)
V <sub>(ac)</sub>	VOLT (ALTERNATING CURRENT)
FC	FOOT - CANDLE
W	WATTS
VA	VOLT-AMPERE
M	MEGA
k	KILO
m	MILLI
$\mu$	MICRO
P	PICO
Hz	HERTZ

**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               |
| Ctid  | 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       |       |                                      |

**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	Ven	101	5.2	21	34

Theresa Gabriel  
 REGISTERED ELECTRICAL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE  
 No. E15129  
 Exp. 6-30-14  
 REGISTERED PROFESSIONAL ENGINEER  
 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.

TO ACCOMPANY PLANS DATED 9-30-13

### CONDUIT

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

### 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

### POLE-MOUNTED SERVICE DESIGNATION

	TYPE H SERVICE, 28'-10"	TYPE OF INSTALLATION AND POLE HEIGHT ABOVE GRADE
--	-------------------------	--

### 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

### SIGNAL EQUIPMENT

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)
		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

### SIGNAL EQUIPMENT Cont

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

### NOTES:

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

### 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**

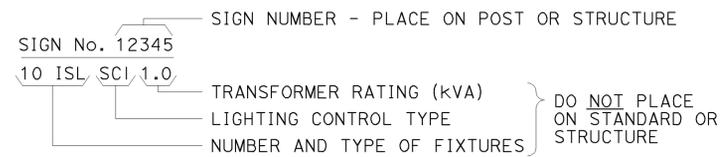
2010 REVISED STANDARD PLAN RSP ES-1B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	101	5.2	22	34

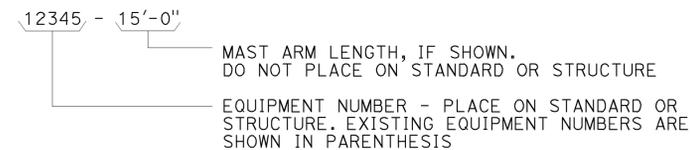
Theresa Gabriel  
 REGISTERED ELECTRICAL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE  
 No. E15129  
 Exp. 6-30-14  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

### EQUIPMENT IDENTIFICATION

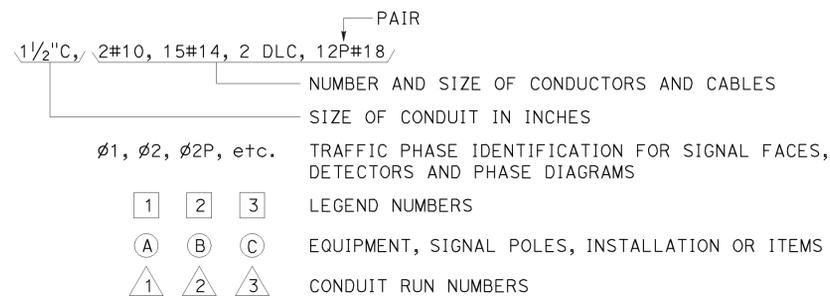
#### ILLUMINATED SIGN IDENTIFICATION NUMBER:



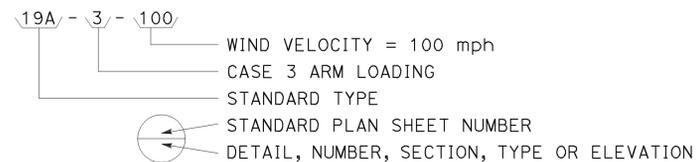
#### ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



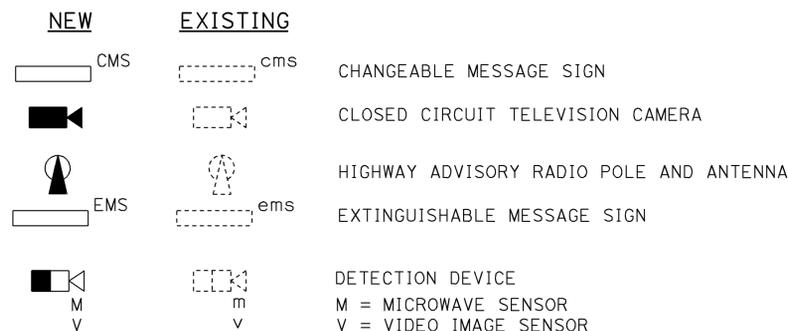
#### CONDUIT AND CONDUCTOR IDENTIFICATION:



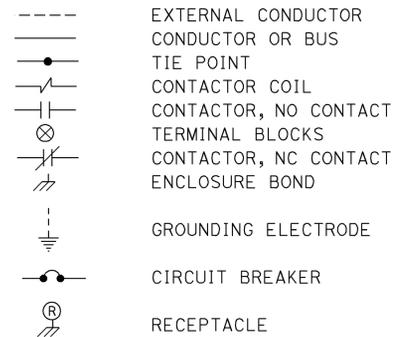
#### SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



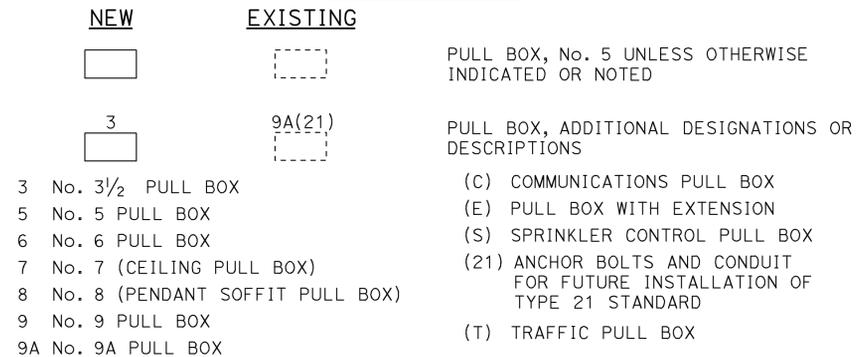
### MISCELLANEOUS EQUIPMENT



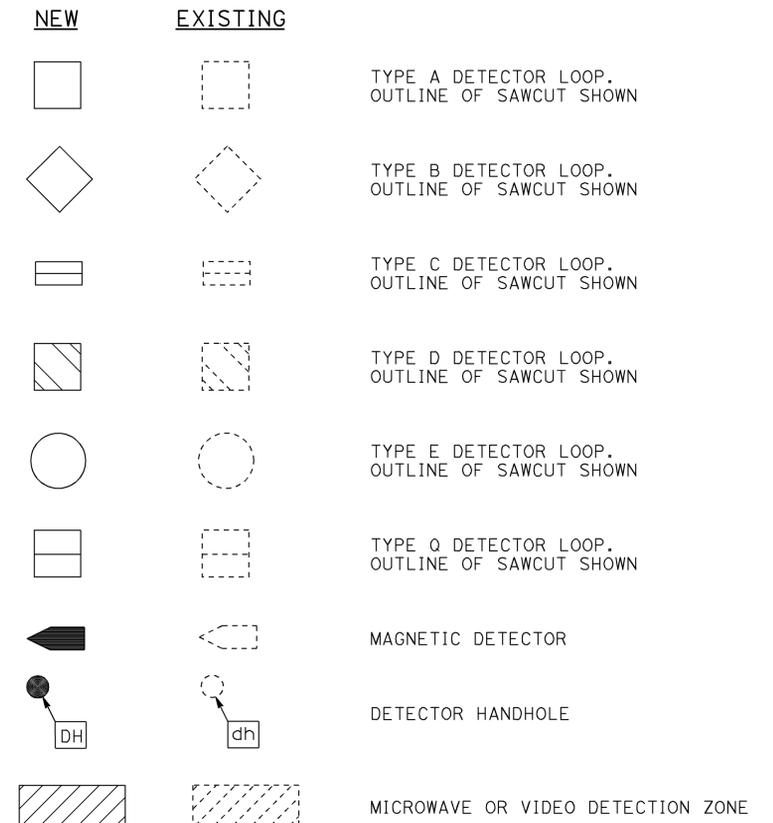
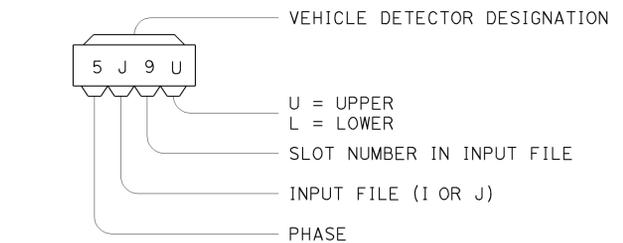
### WIRING DIAGRAM LEGEND



### 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.

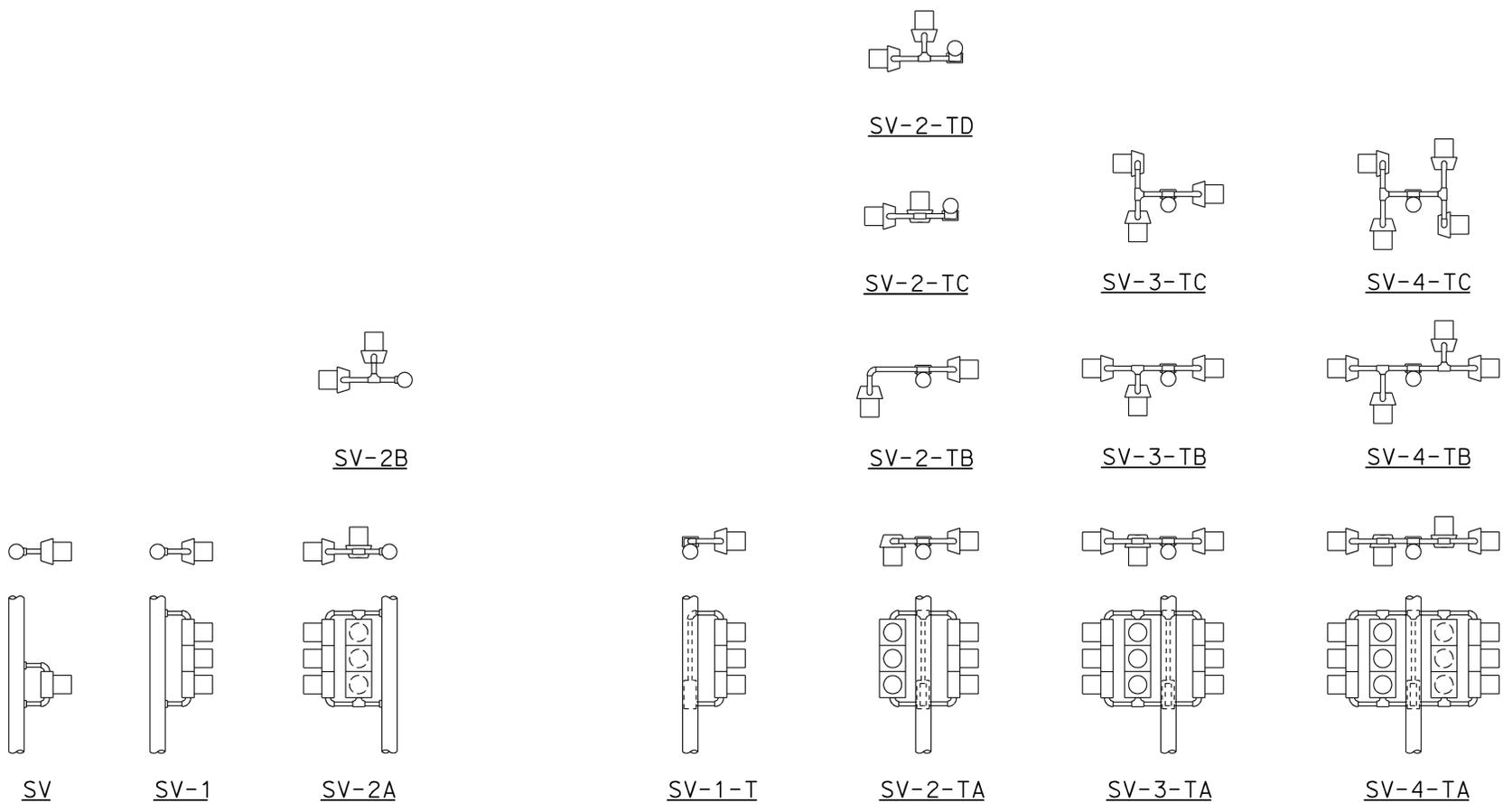
**REVISED STANDARD PLAN RSP ES-1C**

2010 REVISED STANDARD PLAN RSP ES-1C

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	101	5.2	23	34

*Theresa Gabriel*  
 REGISTERED ELECTRICAL 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 9-30-13



PLAN VIEW OF OTHER SIDE MOUNTINGS

**ABBREVIATIONS:**

- SV SIDE MOUNTED VEHICLE SIGNALS
- T TERMINAL COMPARTMENT
- TV TOP MOUNTED VEHICLE SIGNALS
- 1, 2, 3, 4 NUMBER OF SIGNAL FACES (3 - SECTION, UNLESS OTHERWISE INDICATED)
- A, B, C, D CONFIGURATION OF SIGNALS

**NOTES:**

1. Mountings shall be oriented to provide maximum horizontal clearance to adjacent roadway.
2. Bracket arms shall be long enough to permit proper alignment of signals and backplate installation.
3. See Standard Plans ES-4D and ES-4E for attachment fitting details.

PLAN VIEW OF TOP MOUNTINGS

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS  
 (VEHICULAR SIGNAL HEADS  
 AND MOUNTINGS)**

NO SCALE

RSP ES-4A DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-4A DATED MAY 20, 2011 - PAGE 443 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP ES-4A**

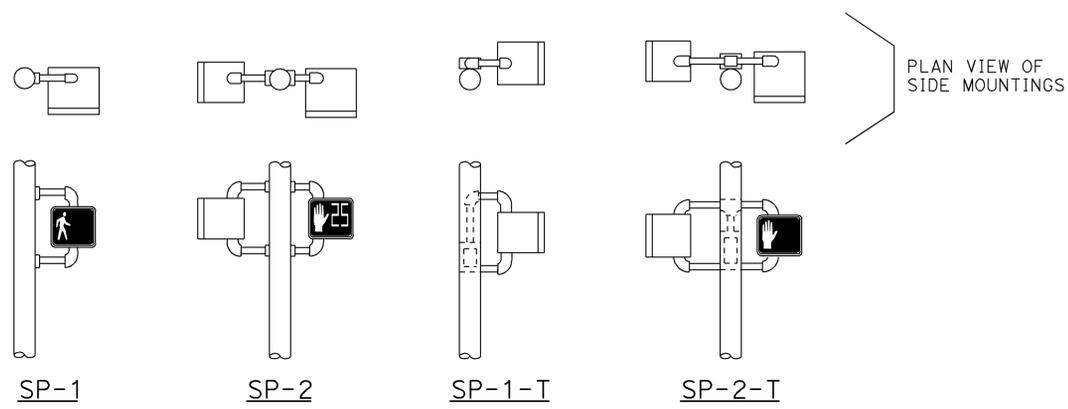
2010 REVISED STANDARD PLAN RSP ES-4A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	101	5.2	24	34

*Theresa Gabriel*  
 REGISTERED ELECTRICAL 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.

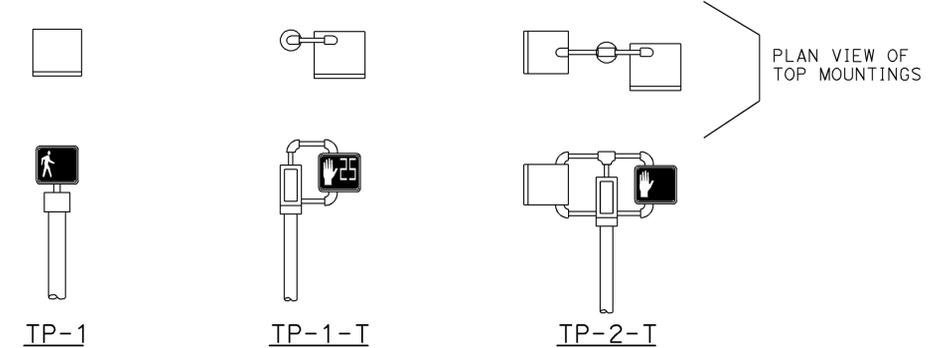


TO ACCOMPANY PLANS DATED 9-30-13



SP-1      SP-2      SP-1-T      SP-2-T

SIDE MOUNTINGS



TP-1      TP-1-T      TP-2-T

TOP MOUNTINGS

PEDESTRIAN SIGNALS AND MOUNTINGS

DETAIL A

NOTES:

1. Mounting shall be oriented to provide maximum horizontal clearance to adjacent roadway.
2. Bracket arms shall be long enough to permit proper alignment of signals.
3. See Standard Plan ES-4D for attachment fittings details.

ABBREVIATIONS:

- 1, 2 NUMBER OF SIGNAL FACES
- SP SIDE MOUNTED PEDESTRIAN SIGNAL
- T TERMINAL COMPARTMENT
- TP TOP MOUNTED PEDESTRIAN SIGNAL



PERSON WALKING INTERVAL      FLASHING UPRAISED HAND INTERVAL      STEADY UPRAISED HAND INTERVAL  
PEDESTRIAN SIGNAL MODULE WITH COUNTDOWN  
DETAIL B



RAMP METERING SIGN  
DETAIL D



PERSON WALKING INTERVAL      STEADY UPRAISED HAND INTERVAL  
PEDESTRIAN SIGNAL MODULE WITHOUT COUNTDOWN  
DETAIL C

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS  
 (PEDESTRIAN SIGNAL AND  
 RAMP METERING SIGN)**

NO SCALE

RSP ES-4B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-4B  
 DATED MAY 20, 2011 - PAGE 444 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP ES-4B**

2010 REVISED STANDARD PLAN RSP ES-4B

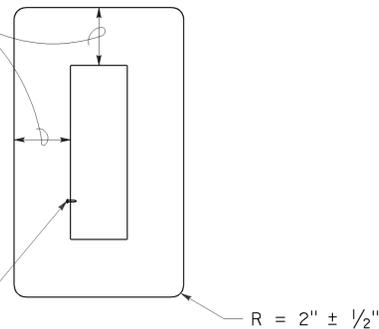


**TUNNEL**    **FULL CIRCLE**    **CAP OR CUT AWAY**    **LEFT ANGLE**  
 (Right angle is reversed of figure)

**VISORS**

8" ± 1/2" FOR 8" SECTIONS  
 5 1/2" ± 1/2" FOR 12" SECTIONS

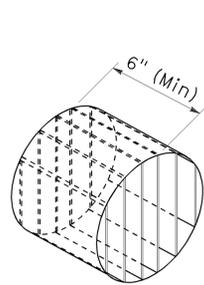
DRILL SIGNAL FACE AND ATTACH BACKPLATE WITH SIX 10-24 OR 10-32 SELF-TAPPING AND LOCKING STAINLESS STEEL MACHINE SCREWS AND FLAT WASHERS



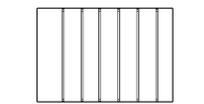
**8" AND 12" SECTIONS**

**BACKPLATE**

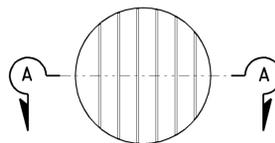
1/16" minimum thickness  
 3001-14 aluminum or plastic when specified



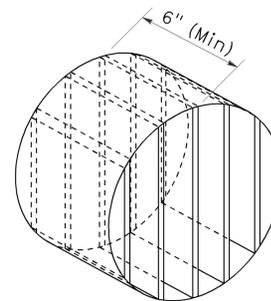
**ISOMETRIC VIEW**



**SECTION A-A**



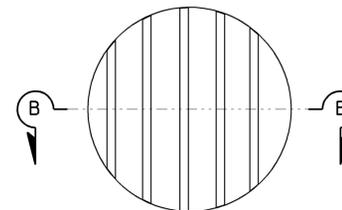
**8" DIAMETER FRONT VIEW**



**ISOMETRIC VIEW**



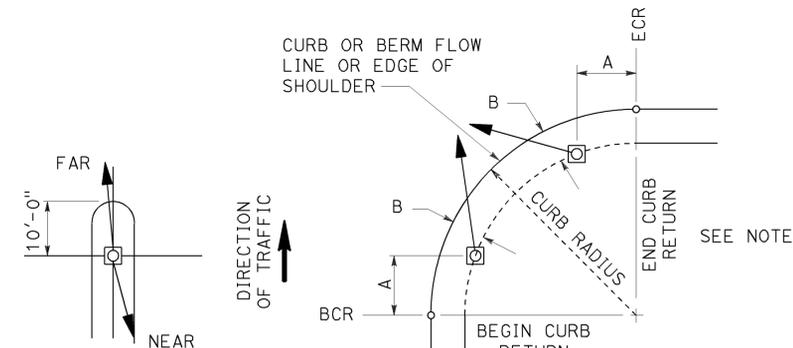
**SECTION B-B**



**12" DIAMETER FRONT VIEW**

**DIRECTIONAL LOUVER**

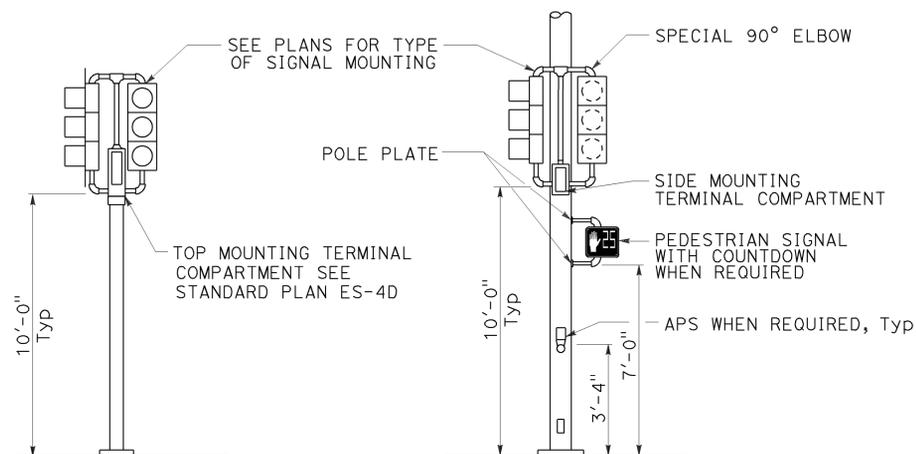
Directional louvers shall be oriented as directed by the Engineer and secured in place with one plated brass machine screw and nut.



**NOTES:**

1. Typical signal pole placement unless dimensioned on plans.
2. For A and B dimensions, see Pole Schedule, or as directed by the Engineer.

**SIGNAL STANDARD PLACEMENT DIMENSIONS AND EQUIPMENT LOCATIONS**

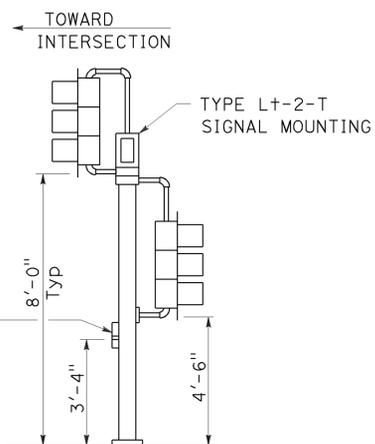


**TOP MOUNTED SIGNALS (TV)**

Type 1-A, 1-B, 1-C and 1-D standard as indicated on the plans

**SIDE MOUNTED SIGNALS (SV AND SP)**

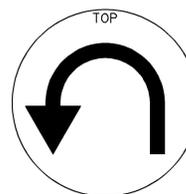
Normally used on standards with luminaire or signal mast arm



**LEFT TURN LANE SIGNAL**

Type 1-A, 1-B, 1-C and 1-D standard as indicated on plans

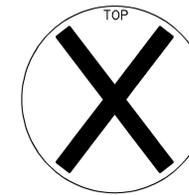
**TYPICAL SIGNAL INSTALLATIONS**



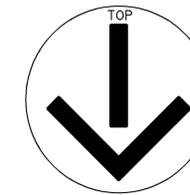
**U-TURN**



**BICYCLE**



**LANE CONTROL**



**LANE CONTROL**

**SIGNAL FACES**

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS (VEHICULAR SIGNAL HEADS AND MOUNTINGS)**

NO SCALE

RSP ES-4C DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-04C DATED MAY 20, 2011 - PAGE 445 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP ES-4C**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	101	5.2	25	34

Theresa Gabriel  
 REGISTERED ELECTRICAL ENGINEER

July 19, 2013  
 PLANS APPROVAL DATE

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

TO ACCOMPANY PLANS DATED 9-30-13

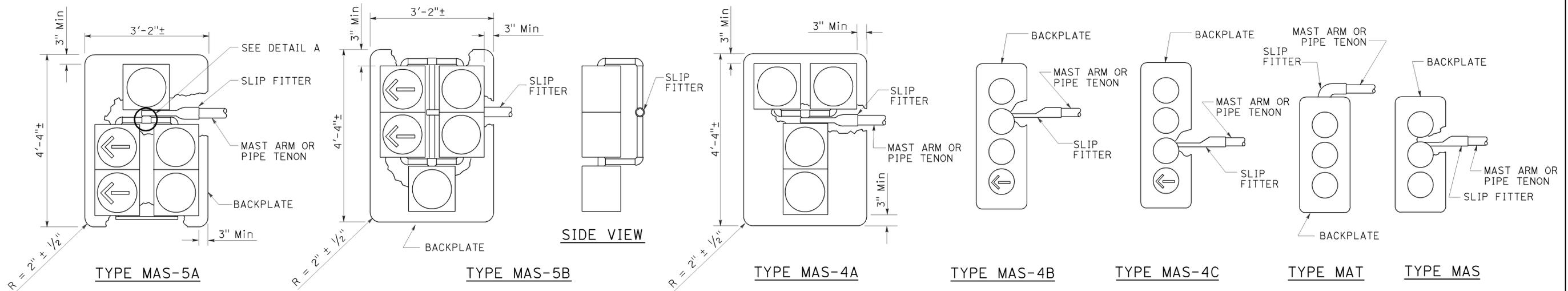
2010 REVISED STANDARD PLAN RSP ES-4C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	101	5.2	26	34

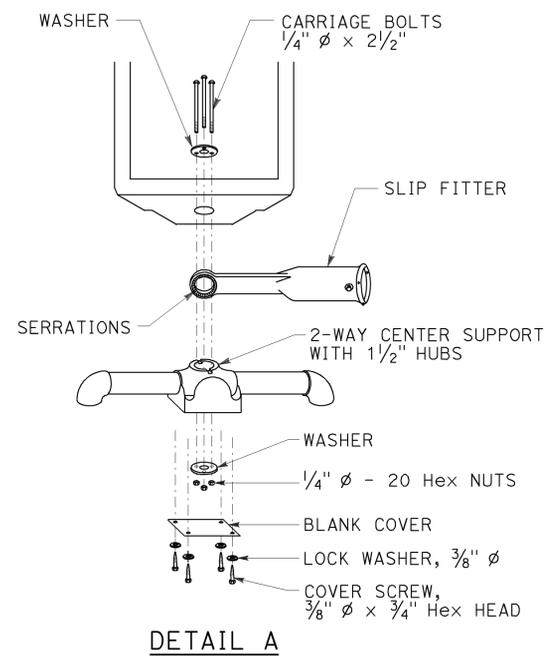
Theresa Gabriel  
 REGISTERED ELECTRICAL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



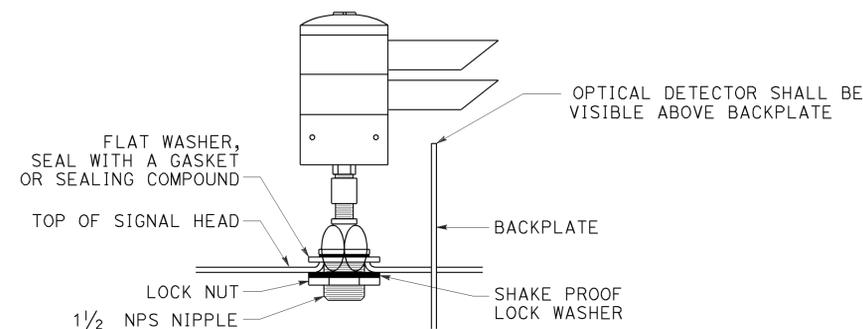
TO ACCOMPANY PLANS DATED 9-30-13



**MAST ARM MOUNTINGS**



**DETAIL A**



**OPTICAL DETECTOR MOUNTING FOR EMERGENCY VEHICLE DETECTION SYSTEM**

**DETAIL B**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS  
(VEHICULAR SIGNAL HEADS AND  
OPTICAL DETECTOR MOUNTING)**

NO SCALE

RSP ES-4E DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-4E DATED MAY 20, 2011 - 447 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP ES-4E**

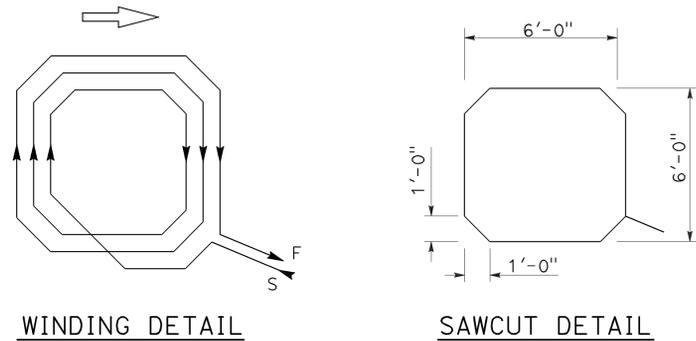
2010 REVISED STANDARD PLAN RSP ES-4E

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	101	5.2	27	34

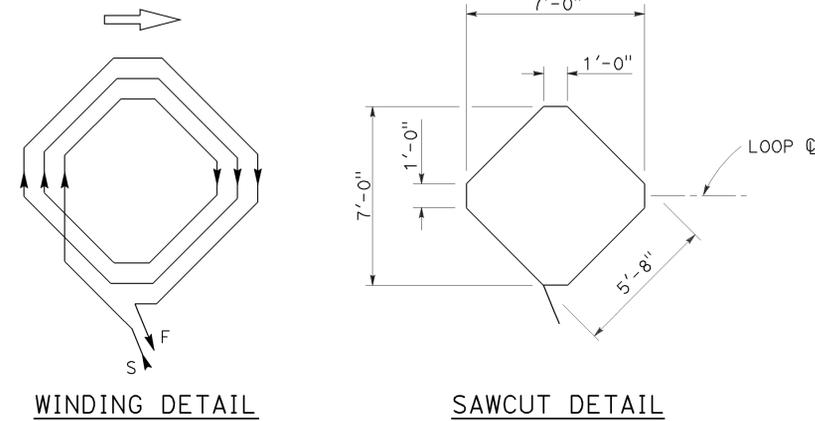
Theresa Gabriel  
 REGISTERED ELECTRICAL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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

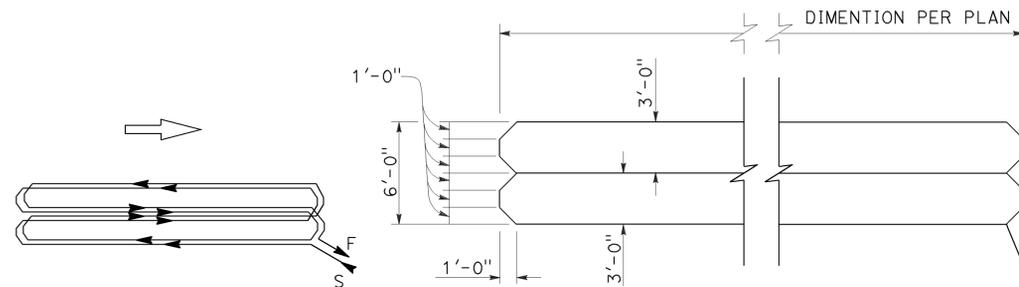
TO ACCOMPANY PLANS DATED 9-30-13



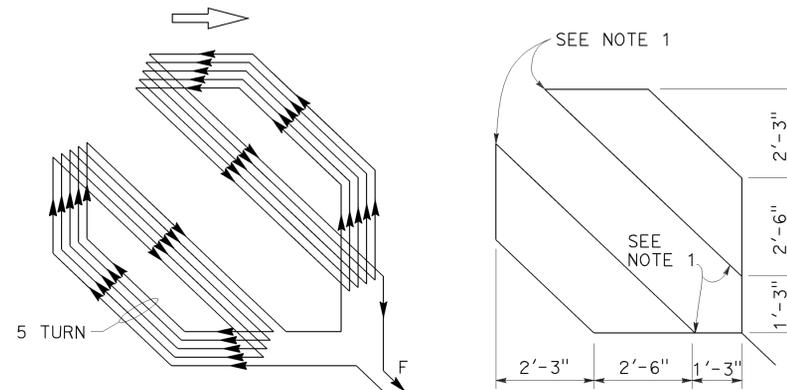
WINDING DETAIL  
SAWCUT DETAIL  
**TYPE A LOOP DETECTOR CONFIGURATION**



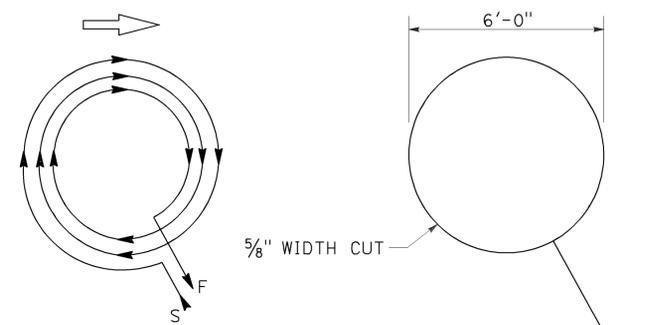
WINDING DETAIL  
SAWCUT DETAIL  
**TYPE B LOOP DETECTOR CONFIGURATION**



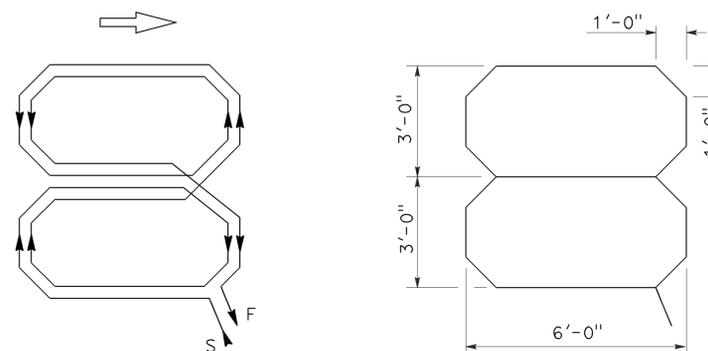
WINDING DETAIL  
SAWCUT DETAIL  
**TYPE C LOOP DETECTOR CONFIGURATION**



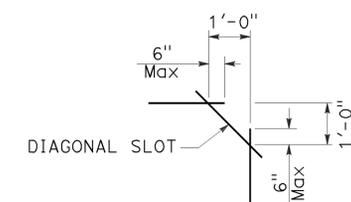
WINDING DETAIL  
SAWCUT DETAIL  
**TYPE D LOOP DETECTOR CONFIGURATION**



WINDING DETAIL  
SAWCUT DETAIL  
**TYPE E LOOP DETECTOR CONFIGURATION**



WINDING DETAIL  
SAWCUT DETAIL  
**TYPE Q LOOP DETECTOR CONFIGURATION**



**PLAN VIEW OF  
DIAGONAL SLOT  
AT CORNERS**

**NOTES:**

1. Round corners of acute angle sawcuts to prevent damage to conductors.
2. Typical distance separating loops from edge to edge is 10' for Type A, B, D and E installation in single lane.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS  
(DETECTORS)**

NO SCALE

RSP ES-5B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-5B  
DATED MAY 20, 2011 - PAGE 449 OF THE STANDARD PLANS BOOK DATED 2010.

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

2010 REVISED STANDARD PLAN RSP ES-5B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	101	5.2	28	34

Theresa Gabriel  
 REGISTERED ELECTRICAL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE

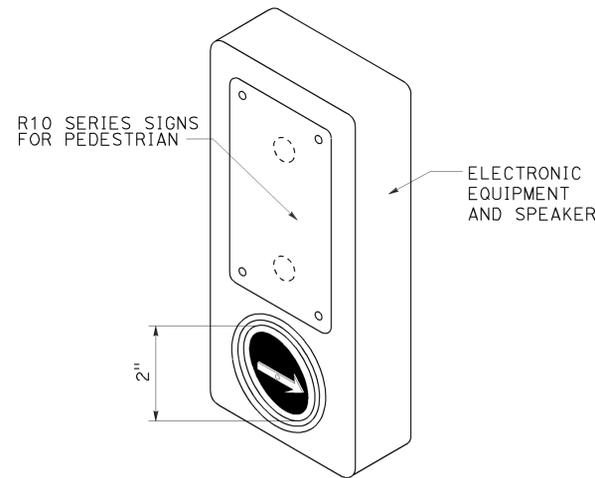
REGISTERED PROFESSIONAL ENGINEER  
 Theresa Aziz Gabriel  
 No. E15129  
 Exp. 6-30-14  
 ELECTRICAL  
 STATE OF CALIFORNIA

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TO ACCOMPANY PLANS DATED 9-30-13

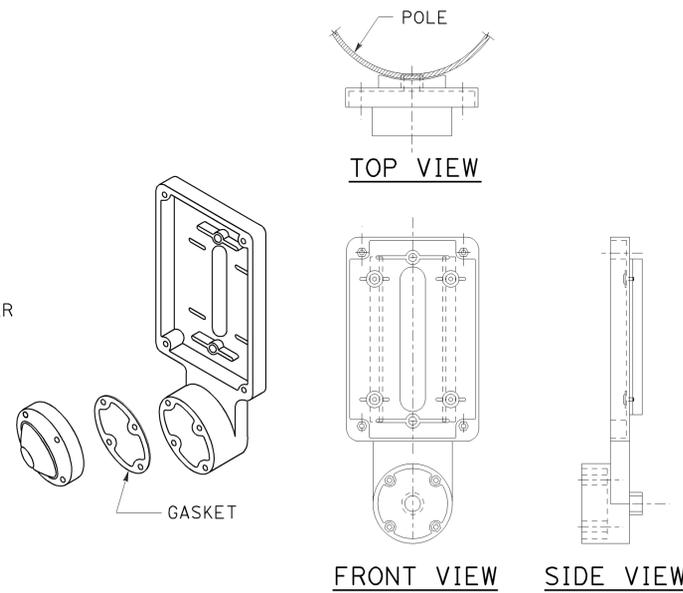
**NOTES:**

1. Back casting shape to fit curvature of pole.
2. Provide cover fitting for top of post, when PBA is mounted on push button assembly post.
3. Install push button on crosswalk side of standard.
4. Use R10 series regulatory signs and plaques for pedestrian and bicycle facilities.



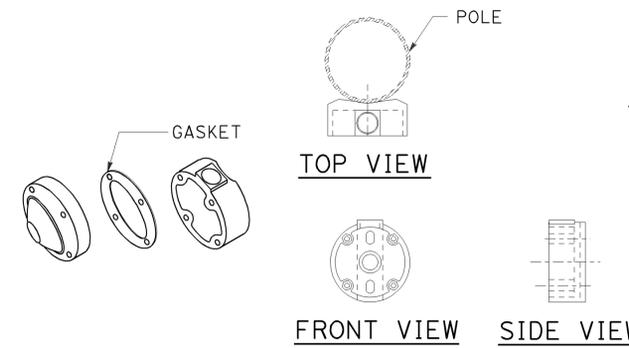
**ACCESSIBLE PEDESTRIAN SIGNAL**

**DETAIL A**  
(See note 1 to 4)



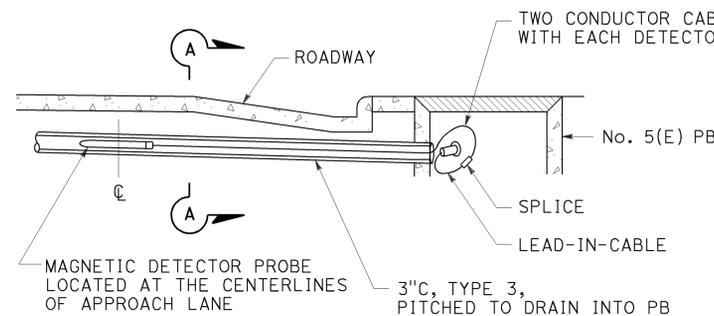
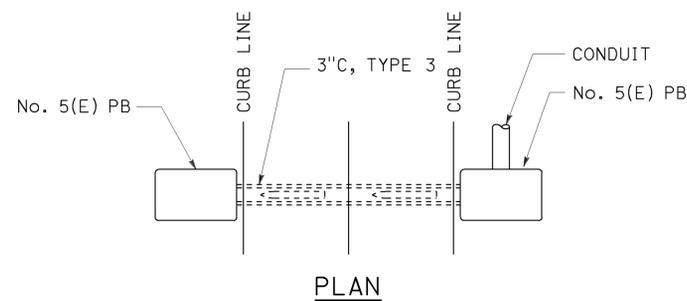
**TYPE B PUSH BUTTON ASSEMBLY**

**DETAIL B**  
(See note 1 to 4)



**TYPE C PUSH BUTTON ASSEMBLY**

**DETAIL C**  
(See note 1 to 4)

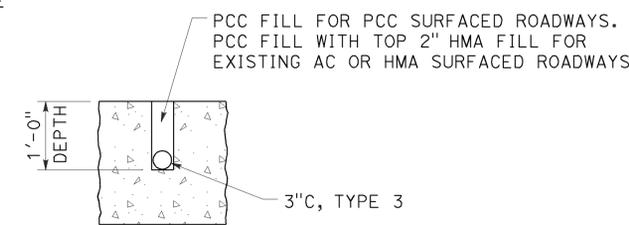


**ELEVATION**

**MAGNETIC VEHICLE DETECTOR**

**INSTALLATION DETAILS**

**DETAIL D**



**SECTION A-A**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS**  
**(ACCESSIBLE PEDESTRIAN SIGNAL,  
PUSH BUTTON ASSEMBLIES AND  
MAGNETIC VEHICLE DETECTOR)**

NO SCALE

RSP ES-5C DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-5C  
DATED MAY 20, 2011 - PAGE 450 OF THE STANDARD PLANS BOOK DATED 2010.

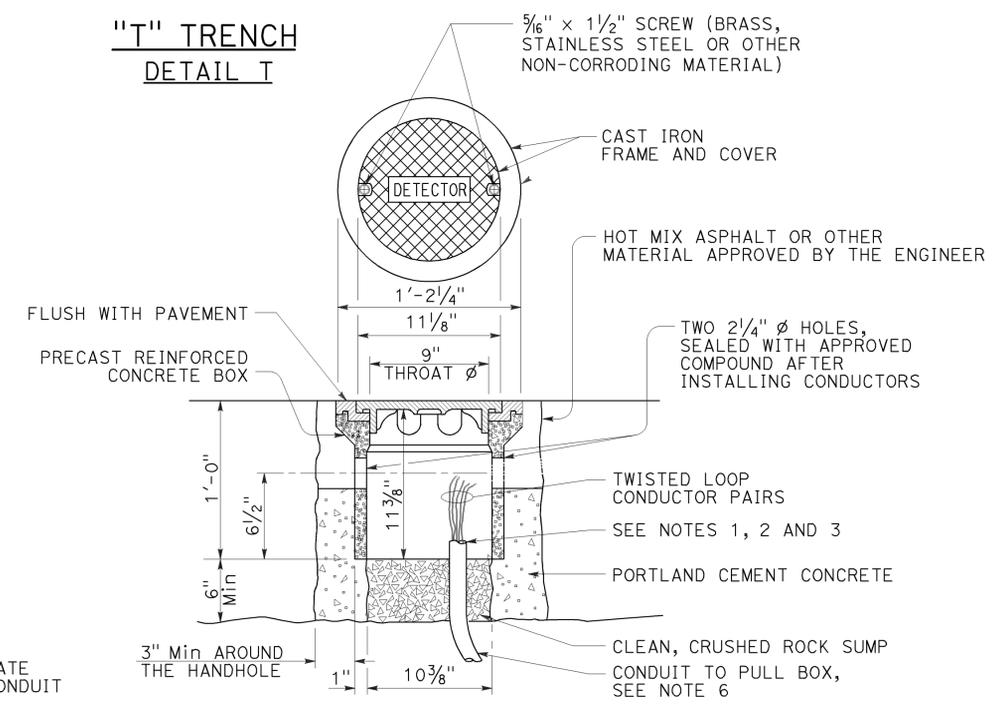
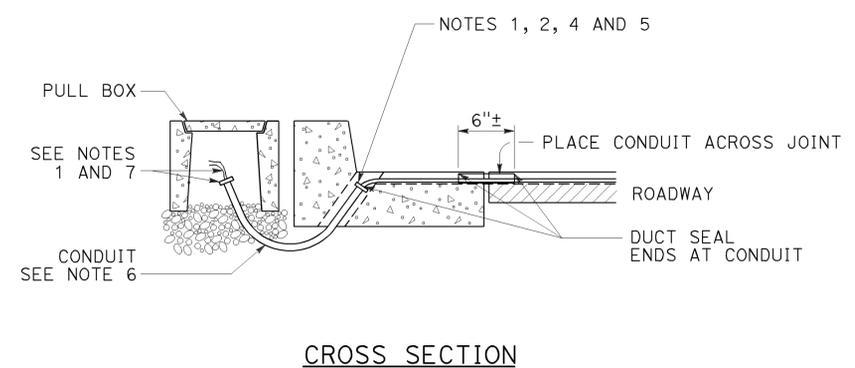
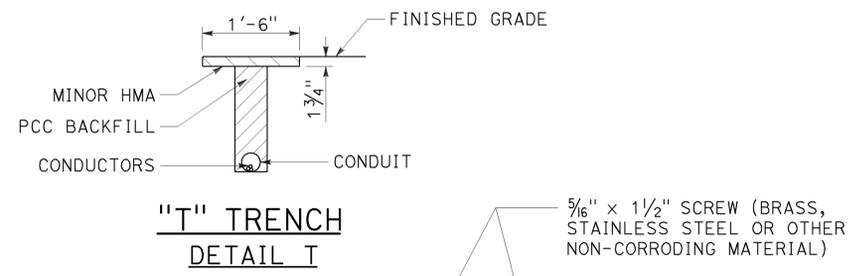
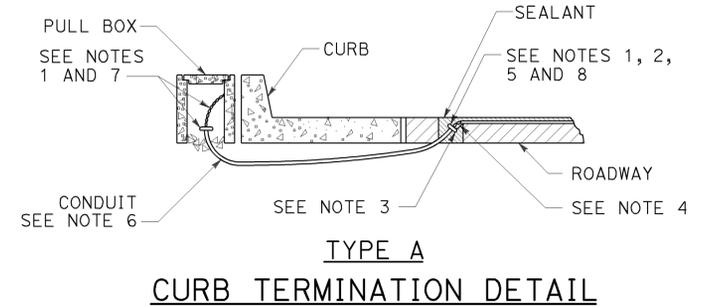
**REVISED STANDARD PLAN RSP ES-5C**

2010 REVISED STANDARD PLAN RSP ES-5C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven	101	5.2	29	34

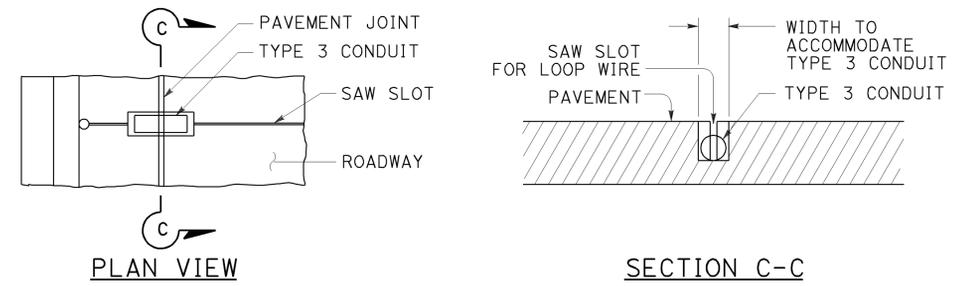
Theresa Gabriel  
 REGISTERED ELECTRICAL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED 9-30-13

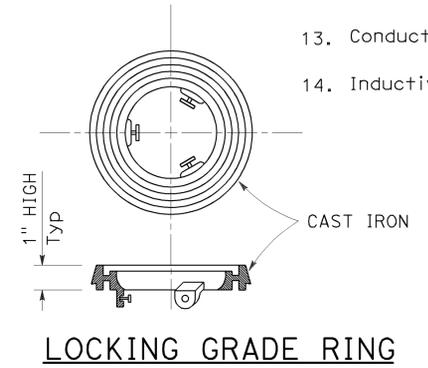
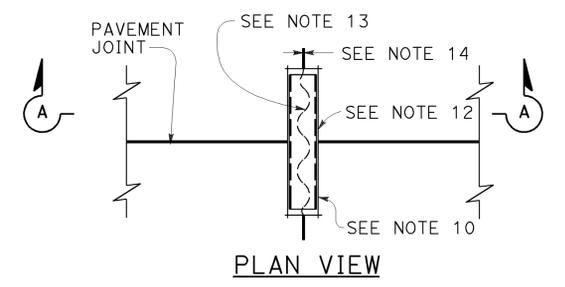
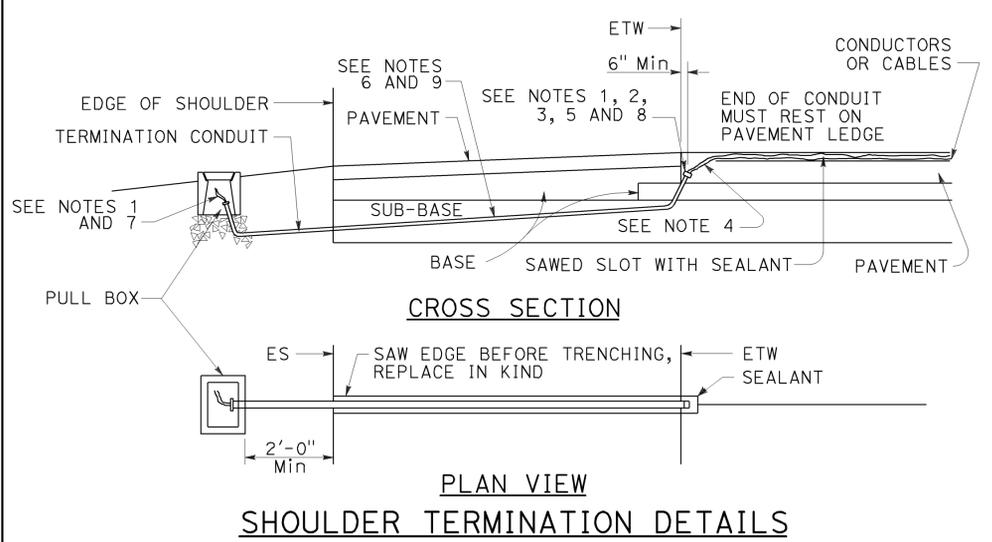
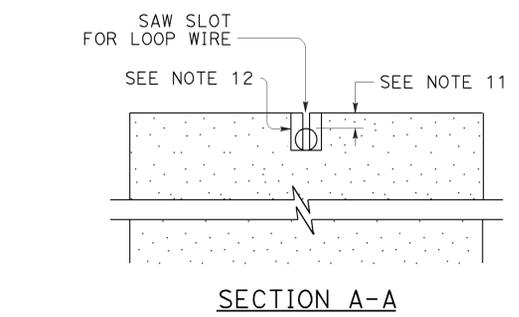


**NOTES:**

- Bushing shall be used at end of conduit.
- Tape detector conductors or cables 3" each side of bushings.
- Install duct seal compound to each end of termination conduit before installing sealant.
- Round all sharp edges where detector conductors or cables have to pass.
- End of conduit shall be 3/8" below roadway surface.
- Conduit size      Loop conductors  
   1"C minimum      1 to 2 pairs  
   1 1/2"C minimum    3 to 4 pairs  
   2"C minimum      5 or more pairs
- Splice detector conductors or cables to detector lead-in-cable.
- Location of detector handhole when shown on plans.
- When the shoulder and traveled way are paved with the same material and there is no joint between them, the conduit shall extend only 2'-0" into the shoulder pavement.
- 3/4"C, Type 3 conduit 6" long minimum, plug both ends with duct compound to keep out sealant.
- 1/2" Minimum between top of conduit and pavement surface.
- Sawcut shall not exceed 1" in width and 1/8" longer than conduit to be installed.
- Conductors with 1/2" minimum slack inside conduit.
- Inductive loop detector saw slot.



**TYPE B  
CURB TERMINATION DETAIL**



STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS  
 (CURB TERMINATION  
 AND HANDHOLE)**  
 NO SCALE

RSP ES-5D DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-5D DATED MAY 20, 2011 - PAGE 451 OF THE STANDARD PLANS BOOK DATED 2010.

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

2010 REVISED STANDARD PLAN RSP ES-5D

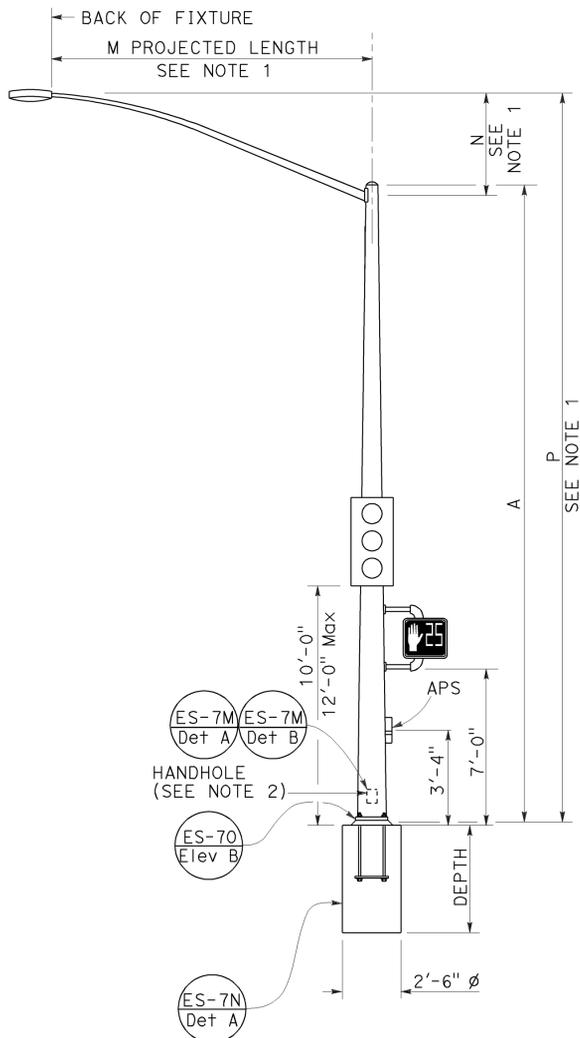
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	101	5.2	30	34

Stanley P. Johnson  
 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.

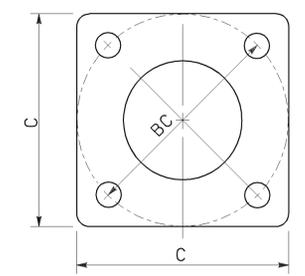
TO ACCOMPANY PLANS DATED 9-30-13

**NOTES:**

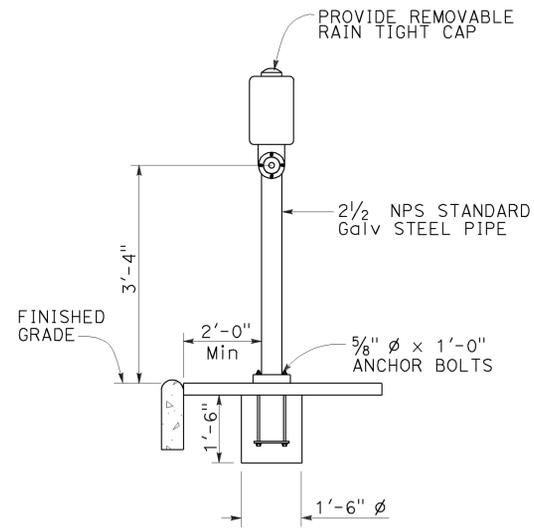
- For additional notes, details and data for Type 15TS and Type 21TS Standards, see Standard Plan ES-6A.
- Handhole shall be located on the downstream side of traffic.



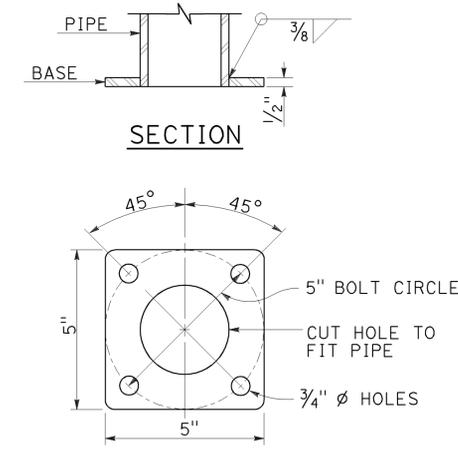
**TYPE 15TS AND 21TS STANDARD**  
**ELEVATION A**  
 (See Note 1)



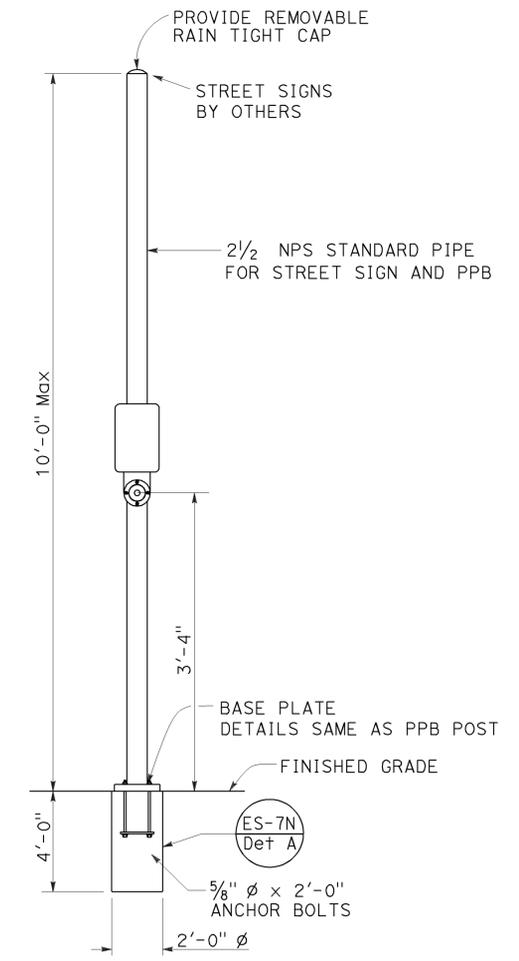
**BASE PLATE**  
**TYPE 15TS AND 21TS**  
**DETAIL A**



**PUSH BUTTON ASSEMBLY POST**  
**DETAIL B**



**BASE PLATE**  
**PBA POST**



**COMBINED STREET SIGN**  
**PUSH BUTTON ASSEMBLY POST**  
**DETAIL C**

POLE TYPE	POLE DATA			WALL THICKNESS	BASE PLATE DATA			CIDH DEPTH
	A HEIGHT	Min OD			C	BC = BOLT CIRCLE	THICKNESS	
15TS	30'-0"	8"	3 1/16"	0.1793"	1'-1 1/2"	1'-0"	1 1/2" ø x 42"	7'-6"
21TS	35'-0"	9 3/8"	3 3/16"		1'-3"	1'-2"		8'-6"

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS**  
**(SIGNAL AND LIGHTING STANDARD, TYPE TS, AND PUSH BUTTON ASSEMBLY POST)**  
 NO SCALE

RSP ES-7A DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-7A DATED MAY 20, 2011 - PAGE 462 OF THE STANDARD PLANS BOOK DATED 2010.

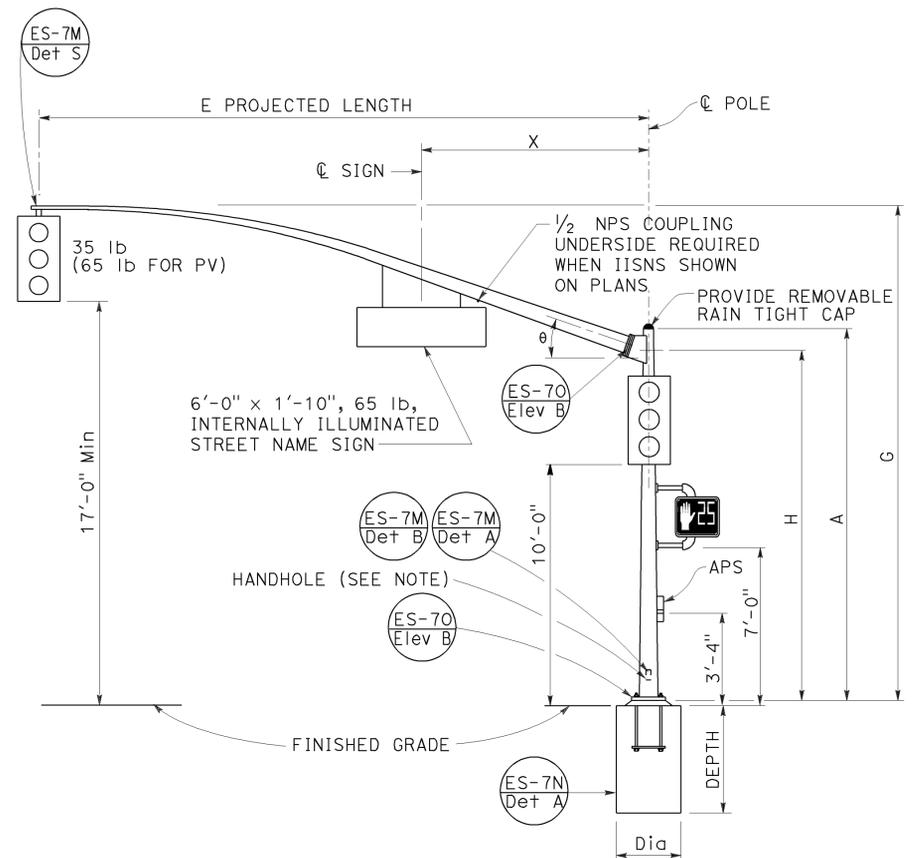
**REVISED STANDARD PLAN RSP ES-7A**

2010 REVISED STANDARD PLAN RSP ES-7A

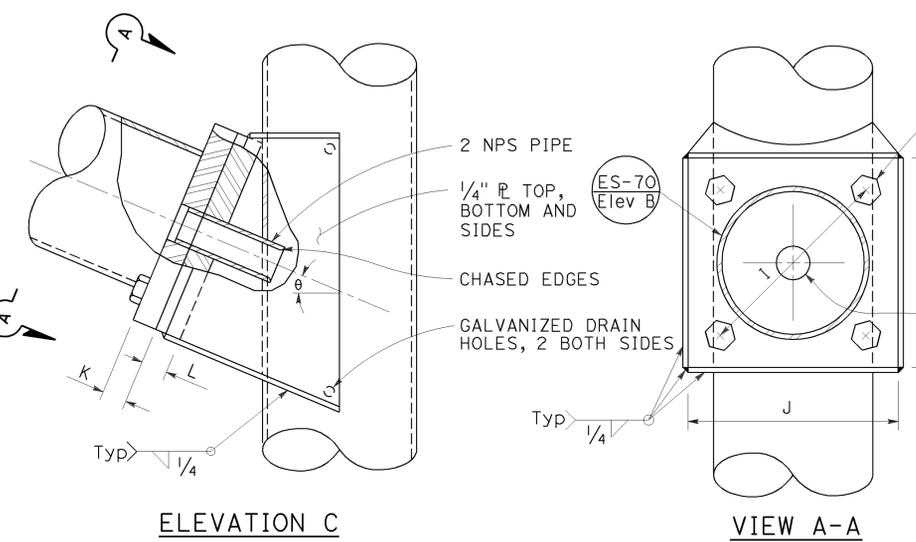
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	101	5.2	31	34

Stanley P. Johnson  
 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.

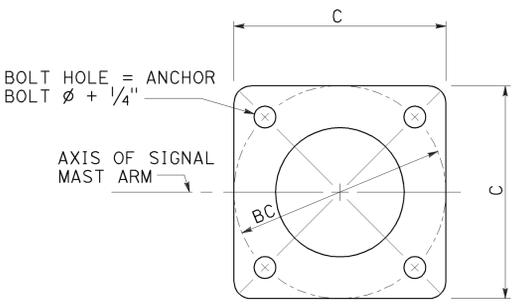
REGISTERED PROFESSIONAL ENGINEER  
 Stanley P. Johnson  
 No. C57793  
 Exp. 3-31-14  
 CIVIL  
 STATE OF CALIFORNIA



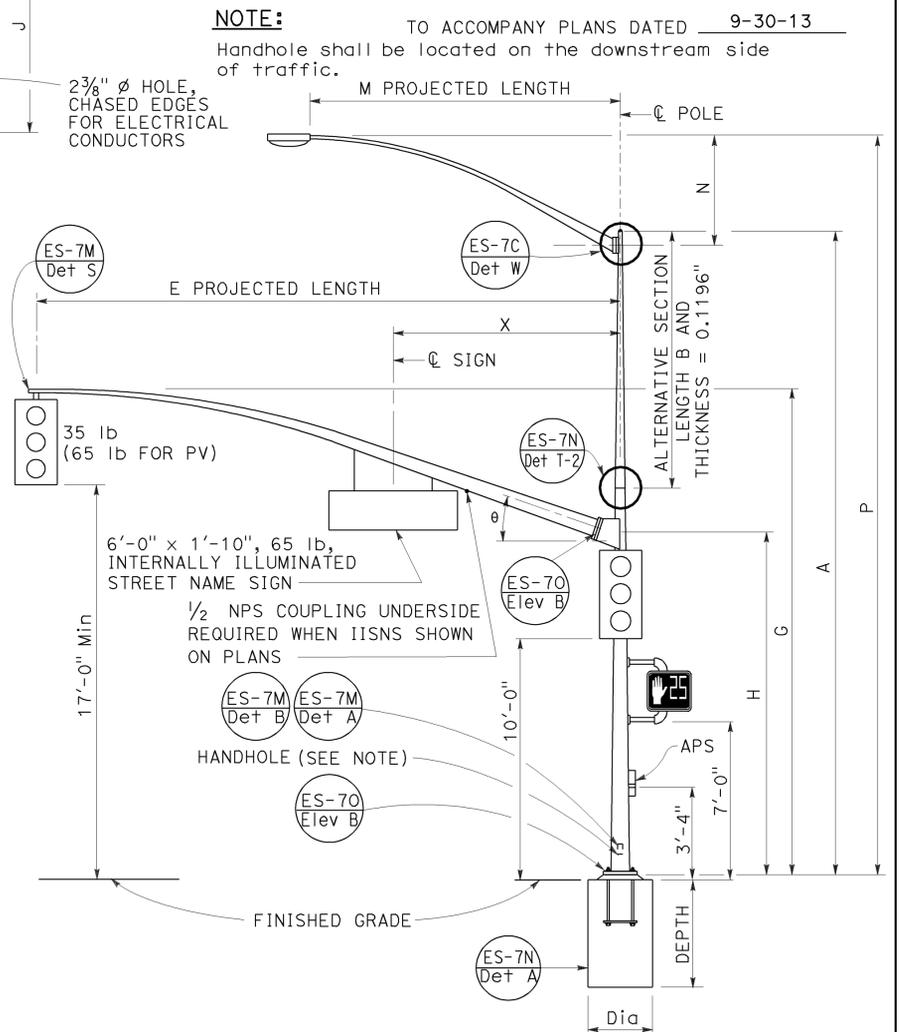
**TYPE 16-2-100, 18-2-100**  
ELEVATION A



**SIGNAL MAST ARM CONNECTION**  
DETAIL A



**BASE PLATE**  
DETAIL B



**TYPE 17-2-100, 17A-2-100, 19-2-100, 19A-2-100**  
ELEVATION B

E PROJECTED LENGTH	G MOUNTING HEIGHT	H	Min OD AT POLE	THICKNESS	I BOLT CIRCLE	HS CAP SCREWS	J PLATE SIZE	K MAST ARM THICKNESS	L POLE R THICKNESS	θ	X Max
15'-0"	21'-8"±	17'-6"	7 3/8"	0.1793"	12"	1 1/4"-7NC-3"	1'-0"	1 1/4"	1 1/2"	23°	10'-6"
20'-0"	21'-8"±	7 3/8"									
25'-0"	22'-8"±	7 3/8"									
30'-0"	23'-0"±	8"									

M PROJECTED LENGTH	N RISE	Min OD AT POLE	THICKNESS	P MOUNTING HEIGHT POLE	P MOUNTING HEIGHT POLE
6'-0"	2'-0"±	3 1/4"	0.1196"	30'-0"	35'-0"
8'-0"	2'-6"±	3 1/2"		31'-6"±	36'-6"±
10'-0"	3'-3"±	3 3/8"		32'-0"±	37'-0"±
12'-0"	4'-3"±	3 7/8"		32'-9"±	37'-9"±
15'-0"	4'-9"±	4 1/4"		33'-9"±	38'-9"±
				34'-3"±	39'-3"±

POLE TYPE	LOAD CASE	WIND VELOCITY (mph)	POLE DATA					BASE PLATE DATA				LUMINAIRE MAST ARM	SIGNAL MAST ARM	CIDH PILE FOUNDATION								
			A HEIGHT	Min OD		THICKNESS	ALTERNATIVE SECTION			C	BC = BOLT CIRCLE			THICKNESS	ANCHOR BOLT SIZE	DIAMETER	DEPTH	REINFORCED				
				BASE	TOP		B LENGTH	BOTTOM	TOP													
16-2-100	2	100	18'-6"	10 3/4"	8 1/16"	0.1793"	NONE	7 7/8"	6 7/16"	1'-5 1/2"	1'-5 1/2"	3"	1 1/2"Ø x 42"	NONE	15'-0", 20'-0"	2'-6"	9'-0"	YES				
17-2-100			30'-0"		6 7/16"		10'-0"												5 11/16"			
17A-2-100			35'-0"		5 11/16"		15'-0"												5 11/16"			
18-2-100			17'-0"		8 7/16"		NONE												1'-7"	1'-7"	2"Ø x 42"	25'-0", 30'-0"
19-2-100			30'-0"		6 7/16"		10'-0"												6 7/16"			
19A-2-100	35'-0"	5 11/16"	15'-0"	5 11/16"																		

□ INDICATES MAST ARM LENGTH TO BE USED UNLESS OTHERWISE NOTED ON PLANS.

**REVISED STANDARD PLAN RSP ES-7D**

RSP ES-7D DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-7D DATED MAY 20, 2011 - PAGE 465 OF THE STANDARD PLANS BOOK DATED 2010.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS**  
**(SIGNAL AND LIGHTING STANDARD, CASE 2 SIGNAL MAST ARM LOADING, WIND VELOCITY=100 MPH AND SIGNAL MAST ARM LENGTHS 15' TO 30')**  
NO SCALE

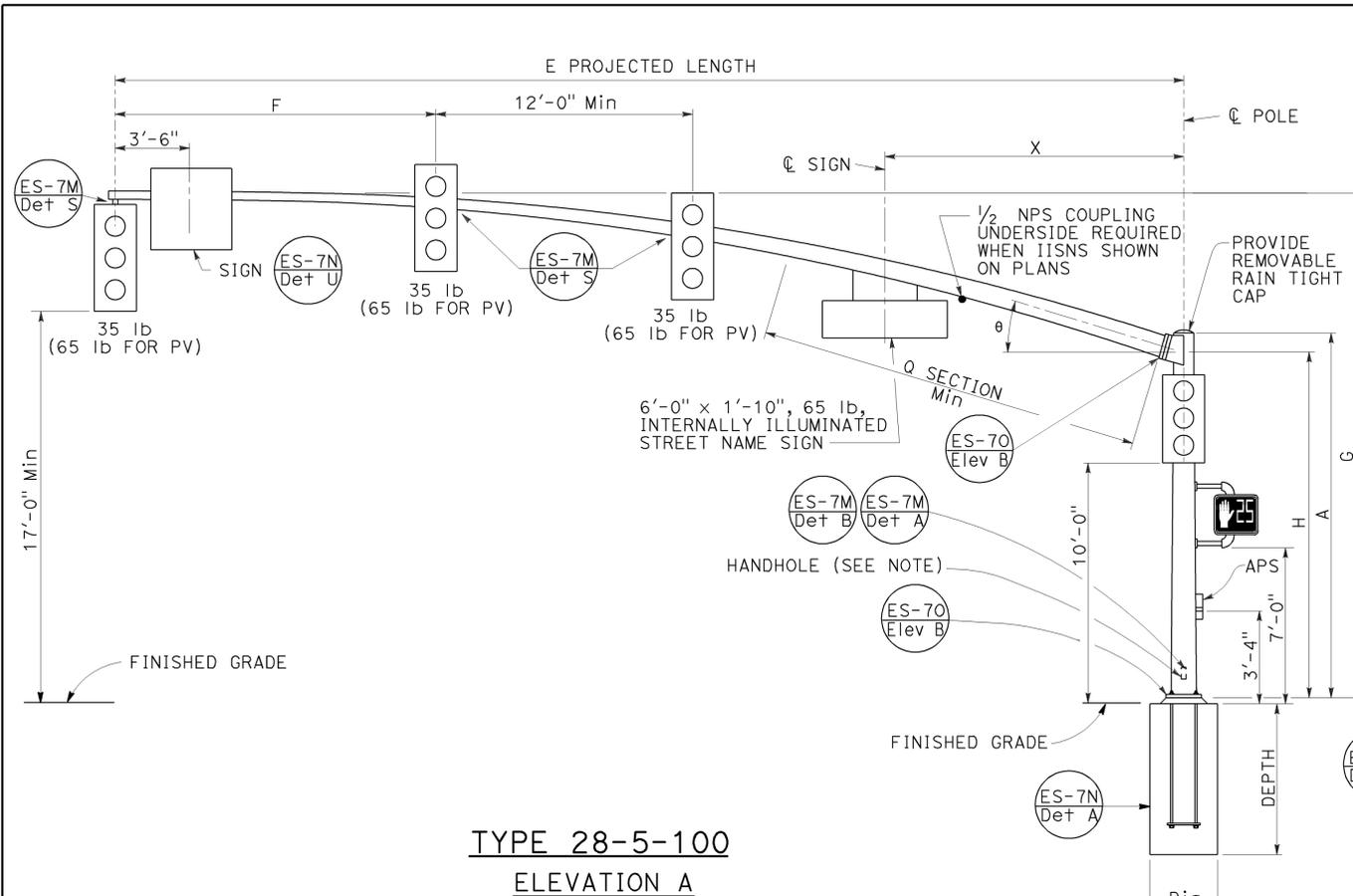
2010 REVISED STANDARD PLAN RSP ES-7D

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	101	5.2	32	34

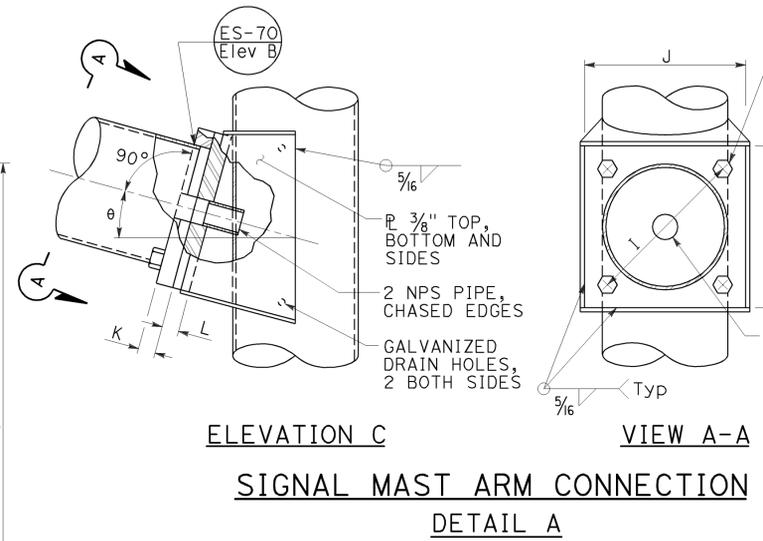
Stanley P. Johnson  
 REGISTERED CIVIL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.  
 REGISTERED PROFESSIONAL ENGINEER  
 Stanley P. Johnson  
 No. C57793  
 Exp. 3-31-14  
 CIVIL  
 STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 9-30-13

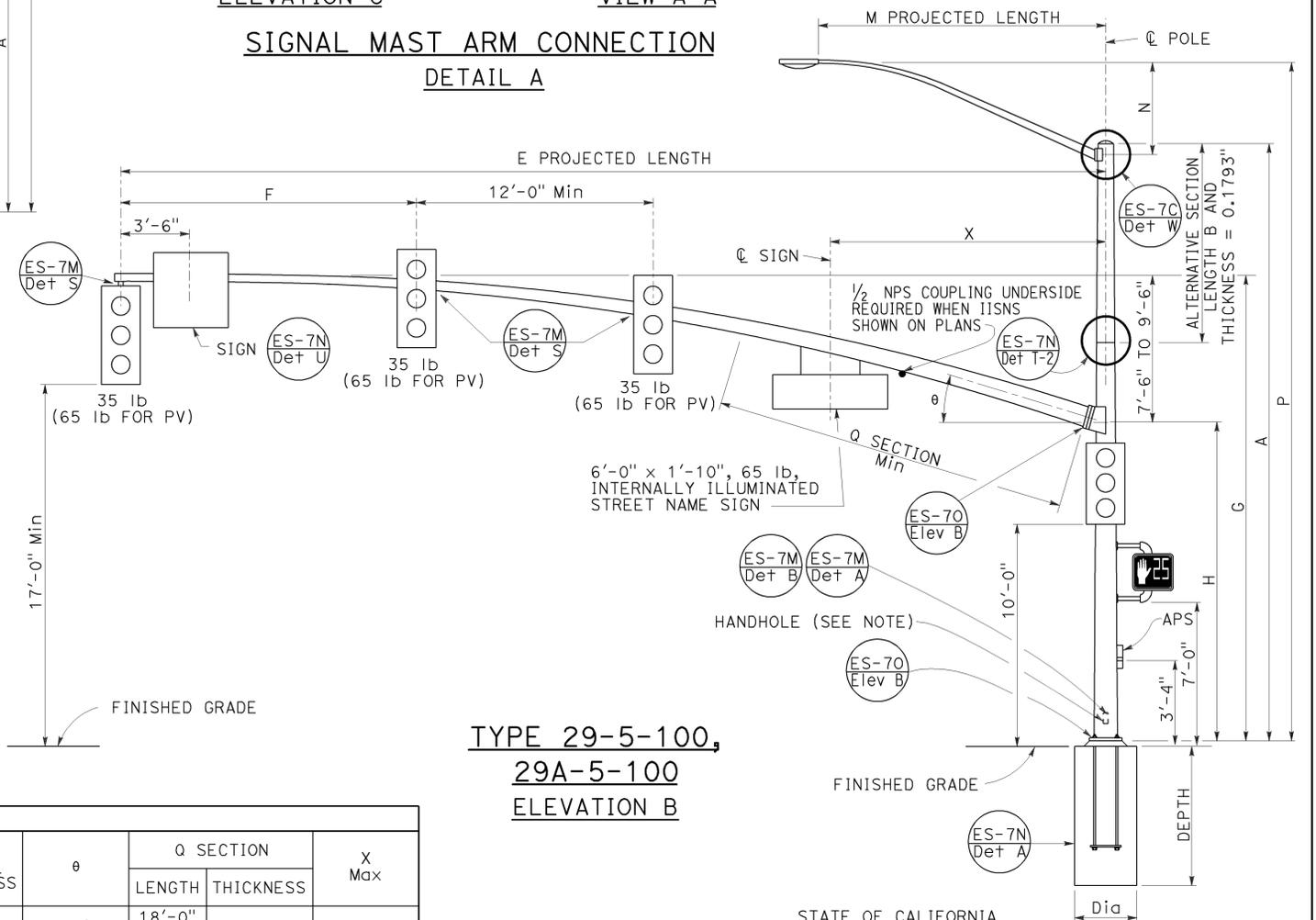
**NOTE:**  
 Handhole shall be located on the downstream side of traffic.



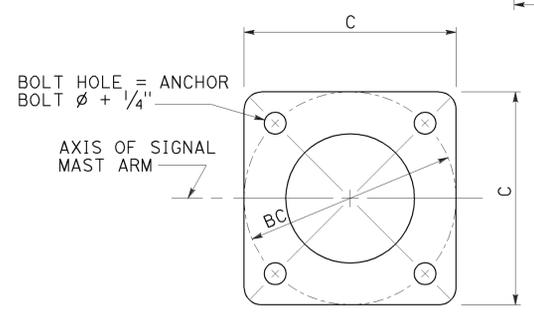
TYPE 28-5-100  
ELEVATION A



ELEVATION C  
VIEW A-A  
SIGNAL MAST ARM CONNECTION  
DETAIL A



TYPE 29-5-100,  
29A-5-100  
ELEVATION B



BASE PLATE  
DETAIL B

M PROJECTED LENGTH	N RISE	Min OD AT POLE	THICKNESS	P MOUNTING HEIGHT	
				30'-0" POLE	35'-0" POLE
6'-0"	2'-0"±	3/4"	0.1196"	31'-6"±	36'-6"±
8'-0"	2'-6"±	3/2"		32'-0"±	37'-0"±
10'-0"	3'-3"±	3 7/8"		32'-9"±	37'-9"±
12'-0"	4'-3"±	3 7/8"		33'-9"±	38'-9"±
15'-0"	4'-9"±	4 1/4"		34'-3"±	39'-3"±

E PROJECTED LENGTH	F Min SPACING	G MOUNTING HEIGHT	H	Min OD AT POLE	THICKNESS	I BOLT CIRCLE	HS CAP SCREWS	J PLATE SIZE	K MAST ARM P THICKNESS	L POLE P THICKNESS	θ	Q SECTION		X Max
												LENGTH	THICKNESS	
50'-0" 55'-0"	15'-0"	23'-7"± TO 25'-7"±	16'-0"	11 7/16" 1'-1/4"	0.1793"	16"	1 1/2"-6NC-3/4"	1'-4"	1 3/4"	1 3/4"	15°	18'-0" 23'-0"	0.2391"	14'-0"

POLE TYPE	LOAD CASE	WIND VELOCITY (mph)	POLE DATA				BASE PLATE DATA				LUMINAIRE MAST ARM	SIGNAL MAST ARM	CIDH PILE FOUNDATION											
			A HEIGHT	Min OD BASE	Min OD TOP	THICKNESS	ALTERNATIVE SECTION B LENGTH	BOTTOM	TOP	C			BC = BOLT CIRCLE	THICKNESS	ANCHOR BOLT SIZE	Dia	DEPTH	REINFORCED						
28-5-100	5	100	17'-0"	14"	11 9/16"	0.3125"	NONE	11 1/8"	9 1/16"	23"	21"	3"	2 1/2" Ø x 42"	NONE	50'-0" 55'-0"	3'-6"	12'-0"	YES						
29-5-100			30'-0"	14"	9 1/16"		10'-0"							11 1/8"					9 1/16"	23"	21"	3"	2 1/2" Ø x 42"	6'-15' 15'-0"
29A-5-100			35'-0"	14"	8 5/16"		15'-0"							11 1/8"					8 5/16"					

INDICATES MAST ARM LENGTH TO BE USED UNLESS OTHERWISE NOTED ON PLANS.

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS  
 (SIGNAL AND LIGHTING STANDARD,  
 CASE 5 SIGNAL MAST ARM LOADING,  
 WIND VELOCITY=100 MPH AND SIGNAL  
 MAST ARM LENGTHS 50' TO 55')**

NO SCALE

RSP ES-7G DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-7G DATED MAY 20, 2011 - PAGE 468 OF THE STANDARD PLANS BOOK DATED 2010.

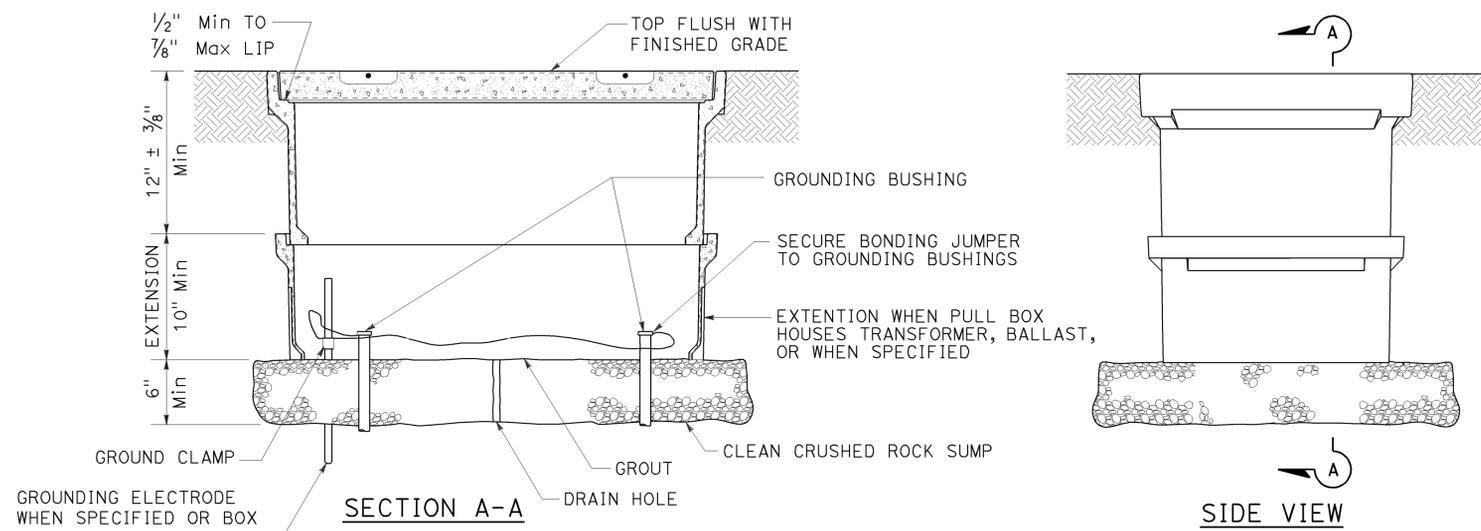
**REVISED STANDARD PLAN RSP ES-7G**

2010 REVISED STANDARD PLAN RSP ES-7G

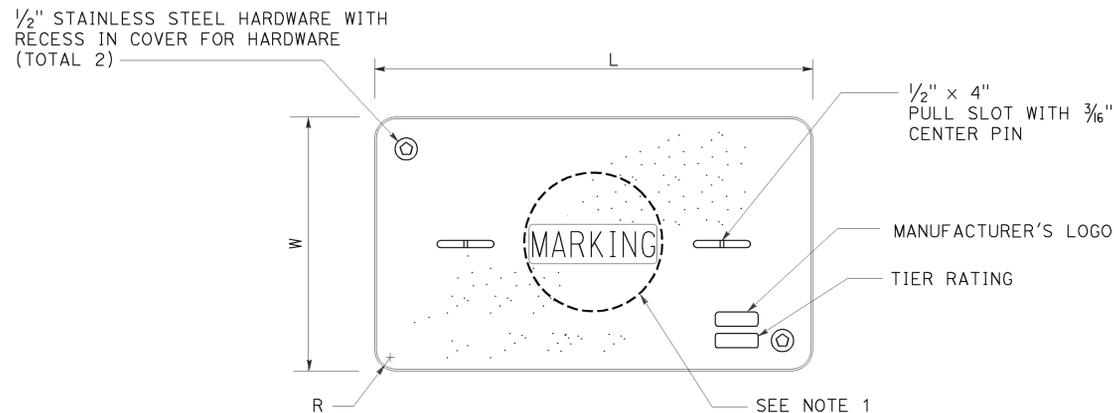
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven	101	5.2	33	34

Theresa Gabriel  
 REGISTERED ELECTRICAL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE  
 No. E15129  
 Exp. 6-30-14  
 ELECTRICAL  
 STATE OF CALIFORNIA

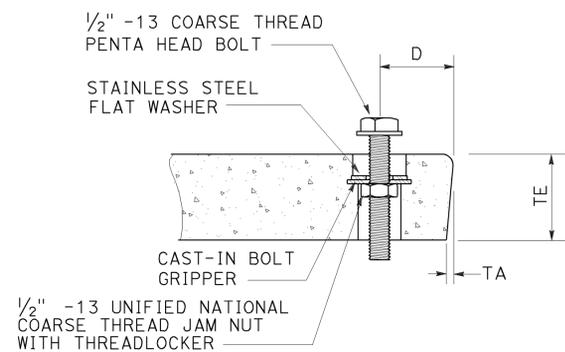
TO ACCOMPANY PLANS DATED 9-30-13



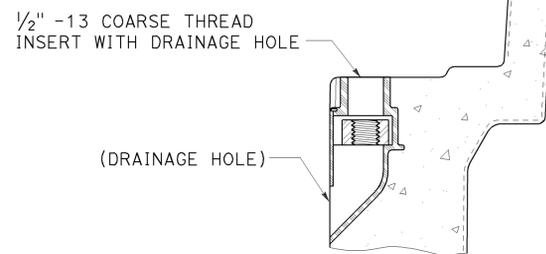
**INSTALLATION DETAILS  
DETAIL A**



**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

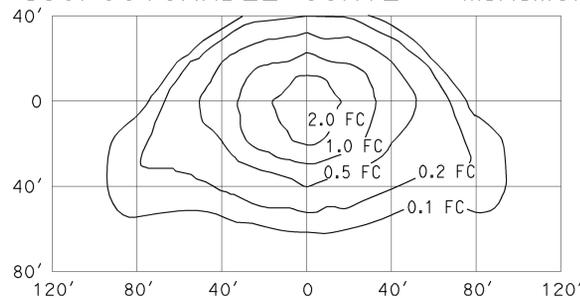
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	101	5.2	34	34

Theresa Gabriel  
 REGISTERED ELECTRICAL 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 9-30-13

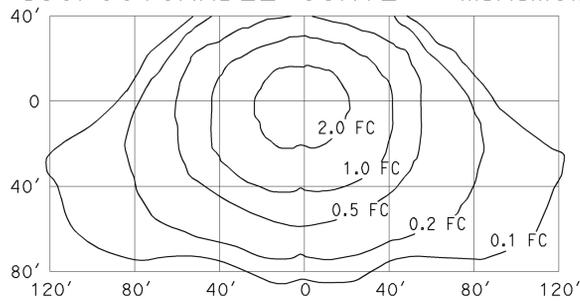
ISOFOOTCANDLE CURVE - MINIMUM



TYPE III MEDIUM CUTOFF

Cutoff Luminaire  
 34' Mounting Height  
 Lamp operated at 22,000 lm  
 200-W high pressure sodium lamp  
 ANSI Designation S66

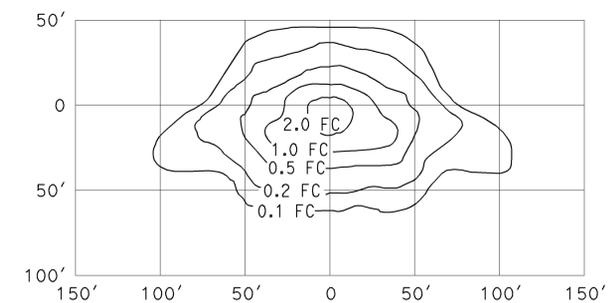
ISOFOOTCANDLE CURVE - MINIMUM



TYPE III MEDIUM CUTOFF

Cutoff Luminaire  
 40' Mounting Height  
 Lamp operated at 37,000 lm  
 310-W high pressure sodium lamp  
 ANSI Designation S67

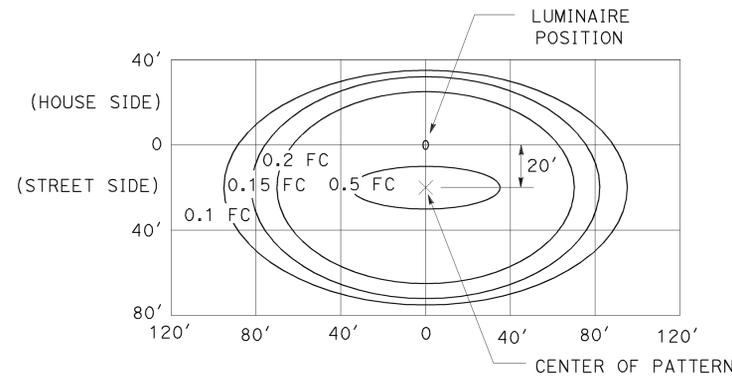
ISOFOOTCANDLE CURVE - MINIMUM



TYPE III MEDIUM CUTOFF

Cutoff Luminaire  
 30' Mounting Height  
 Lamp operated at 16,000 lm  
 150-W high pressure sodium lamp  
 ANSI Designation S55

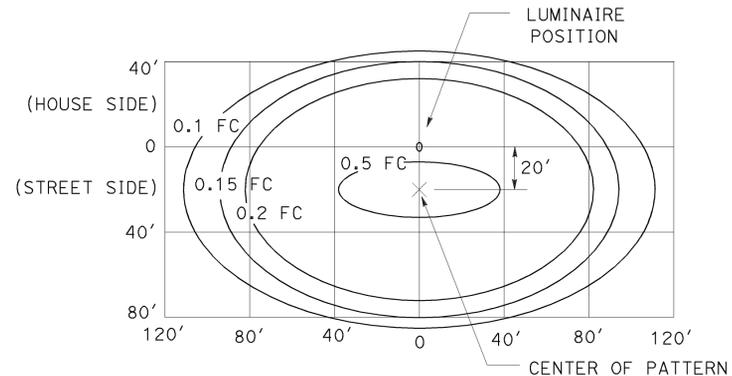
ISOFOOTCANDLE CURVE - MINIMUM



LED LUMINAIRE ROADWAY 1

165-W at 34' Mounting Height

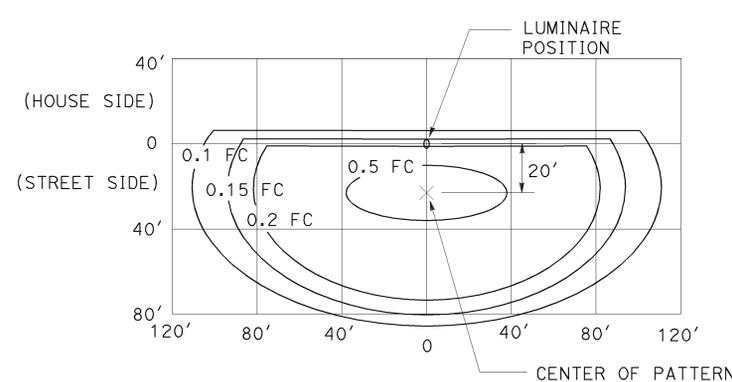
ISOFOOTCANDLE CURVE - MINIMUM



LED LUMINAIRE ROADWAY 2

235-W at 40' Mounting Height

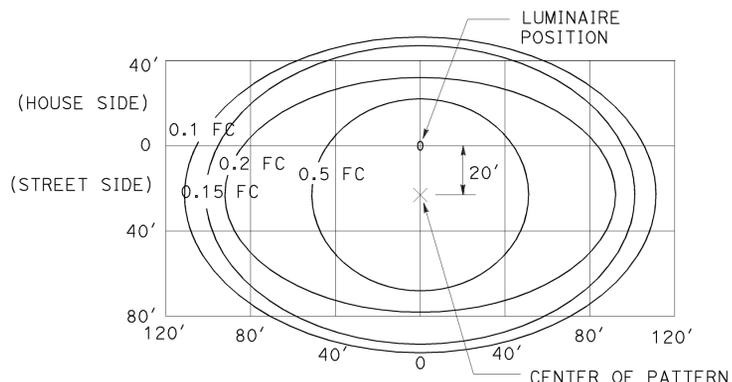
ISOFOOTCANDLE CURVE - MINIMUM



LED LUMINAIRE ROADWAY 3

235-W at 40' Mounting Height  
 with back side control

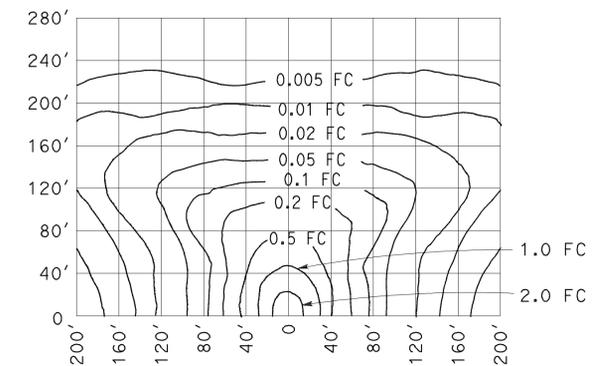
ISOFOOTCANDLE CURVE - MINIMUM



LED LUMINAIRE ROADWAY 4

300-W at 40' Mounting Height

ISOFOOTCANDLE CURVE - MINIMUM



LOW PRESSURE SODIUM LUMINAIRE

40' Mounting Height  
 Lamp operated at 33,000 lm  
 180-W low pressure sodium lamp

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS  
 (ISOFOOTCANDLE DIAGRAMS)**

NO SCALE

RSP ES-10A DATED JULY 19, 2013 SUPERSEDES RSP ES-10A DATED JULY 20, 2012 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP ES-10A**

2010 REVISED STANDARD PLAN RSP ES-10A