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

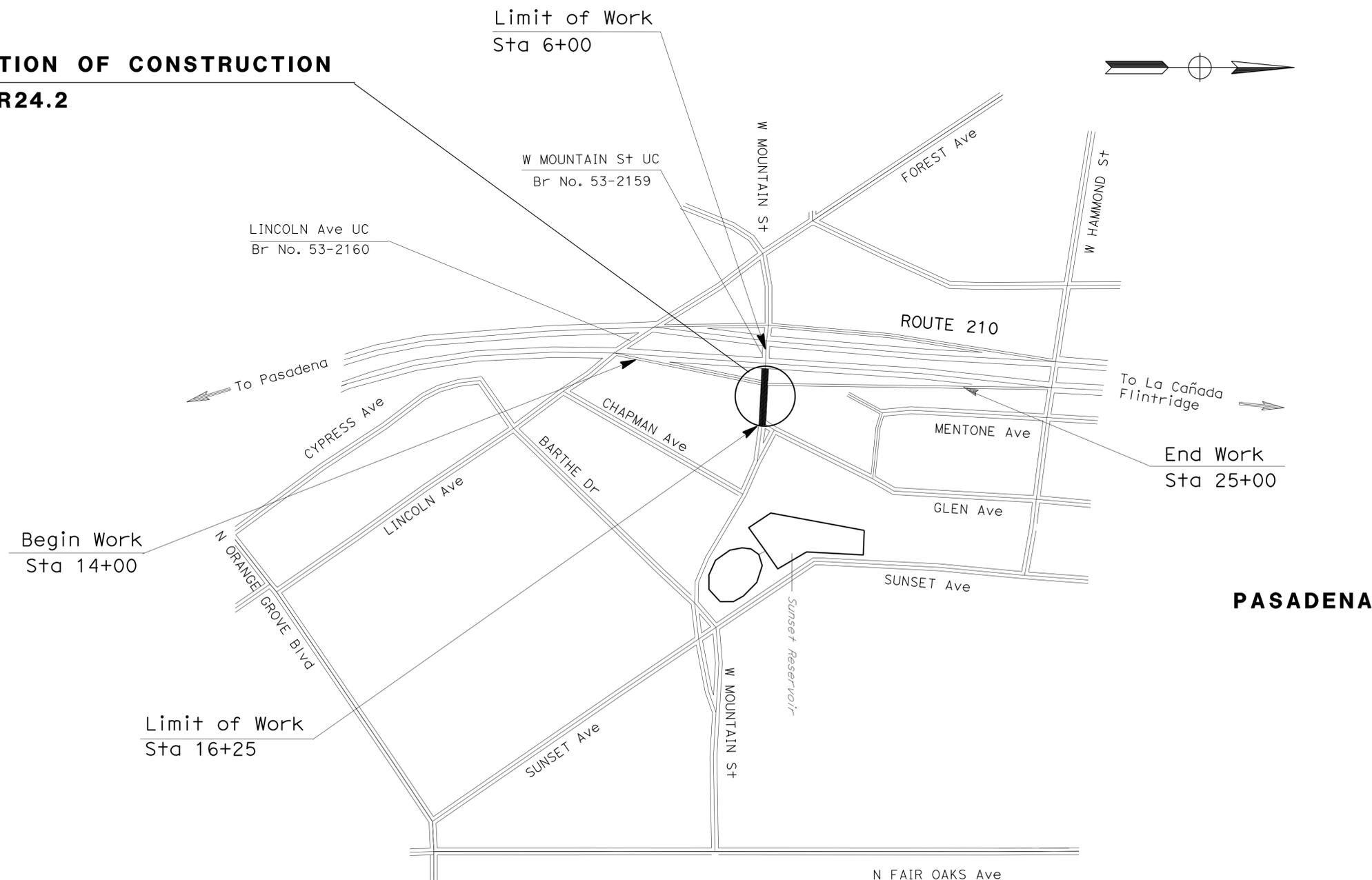
STATE OF CALIFORNIA **ACHSNHPIG-210-1(814)E**
DEPARTMENT OF TRANSPORTATION
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN LOS ANGELES COUNTY
IN PASADENA AT THE
WESTBOUND MOUNTAIN STREET ON/OFF RAMP

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	210	R24.2	1	36

LOCATION MAP

LOCATION OF CONSTRUCTION
PM R24.2



NO SCALE

PROJECT MANAGER
ADEL GIRCIJS
 DESIGN ENGINEER
CECILIO BURCIAGA

PROJECT ENGINEER DATE 2/7/13
 REGISTERED ELECTRICAL ENGINEER

March 11, 2013
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
CECILIO BURCIAGA
 No. E015302
 Exp. 03/31/15
 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.

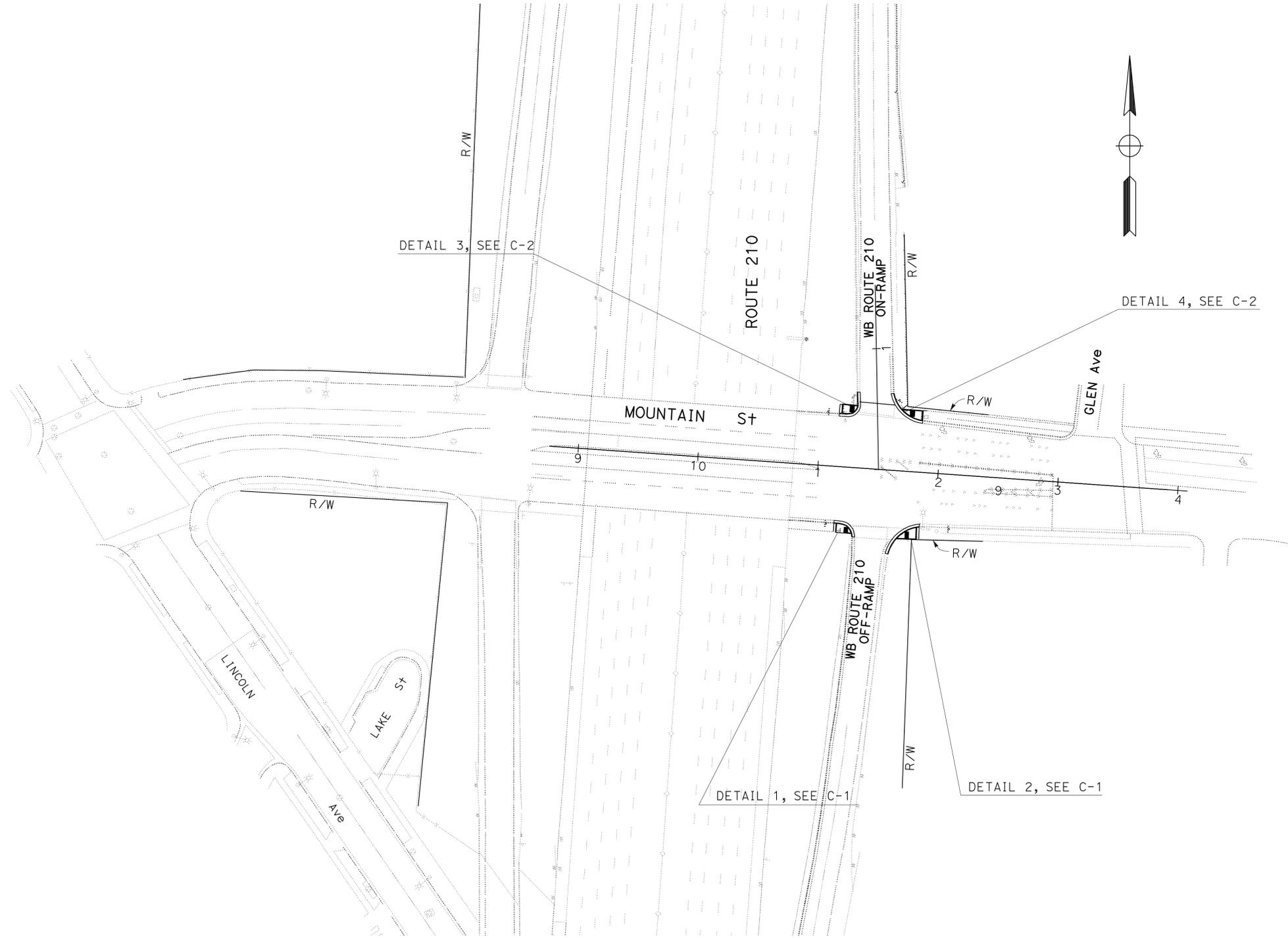
CONTRACT No.	07-4T5804
PROJECT ID	0712000128

DATE PLOTTED => 16-MAY-2013 TIME PLOTTED => 10:41 00-00-00

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	210	R24.2	2	36
			10/28/12	REGISTERED CIVIL ENGINEER DATE	
			3-11-13	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:

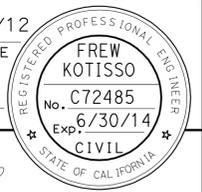
- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



LAYOUT
SCALE: 1" = 50'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISED BY
Caltrans	GRISH BIGLARIAN	SHAHAN PETROSIAN	DATE REVISED
TRAFFIC DESIGN			

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	210	R24.2	3	36
			10/28/12	REGISTERED CIVIL ENGINEER DATE	
			3-11-13	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.					

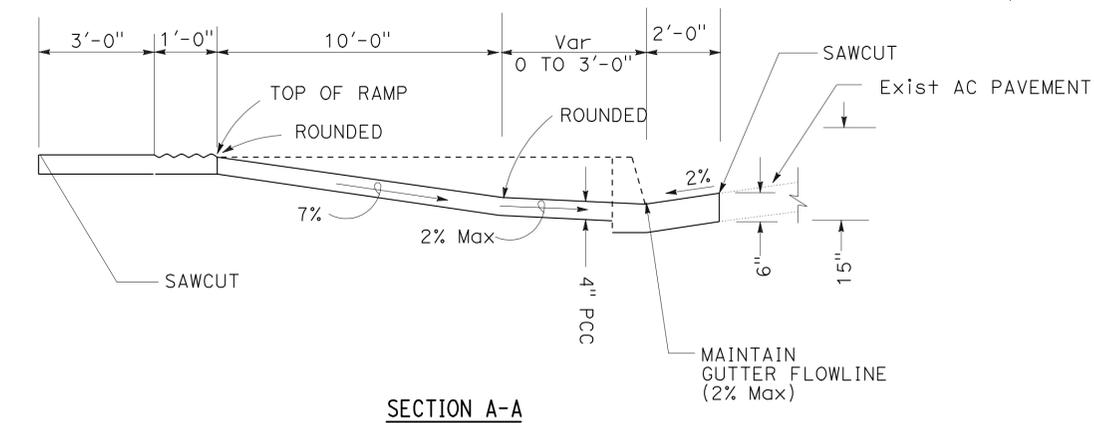
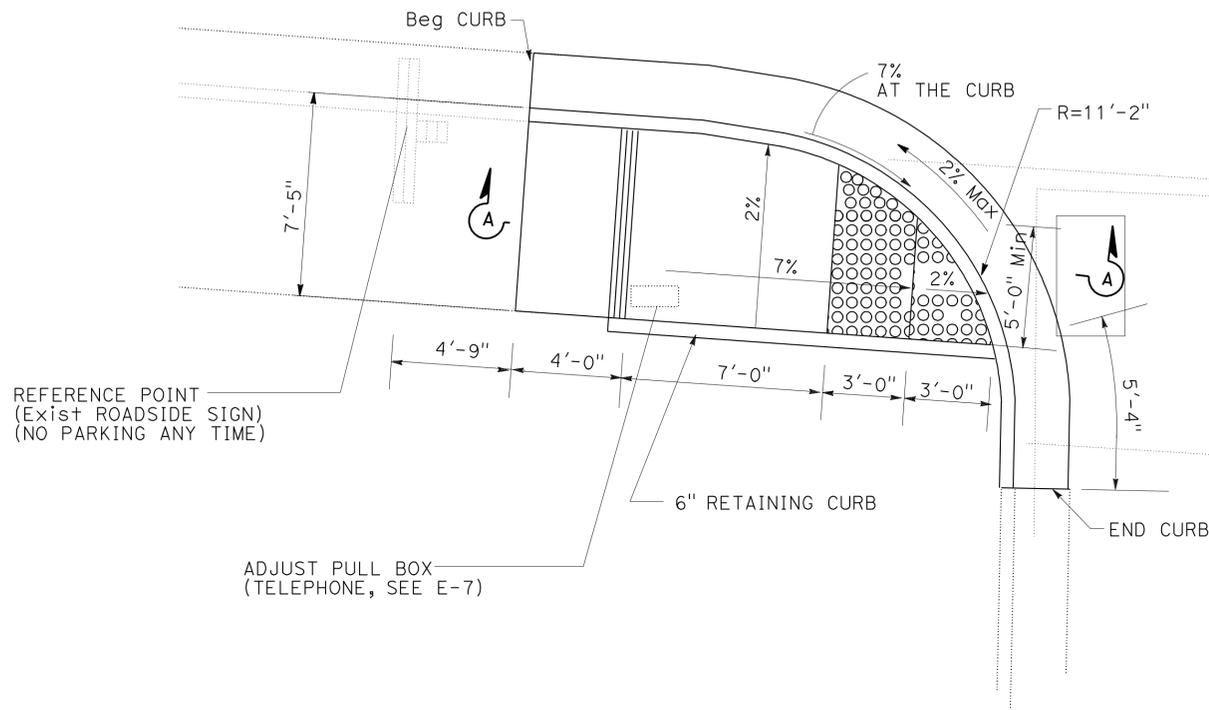


NOTES:

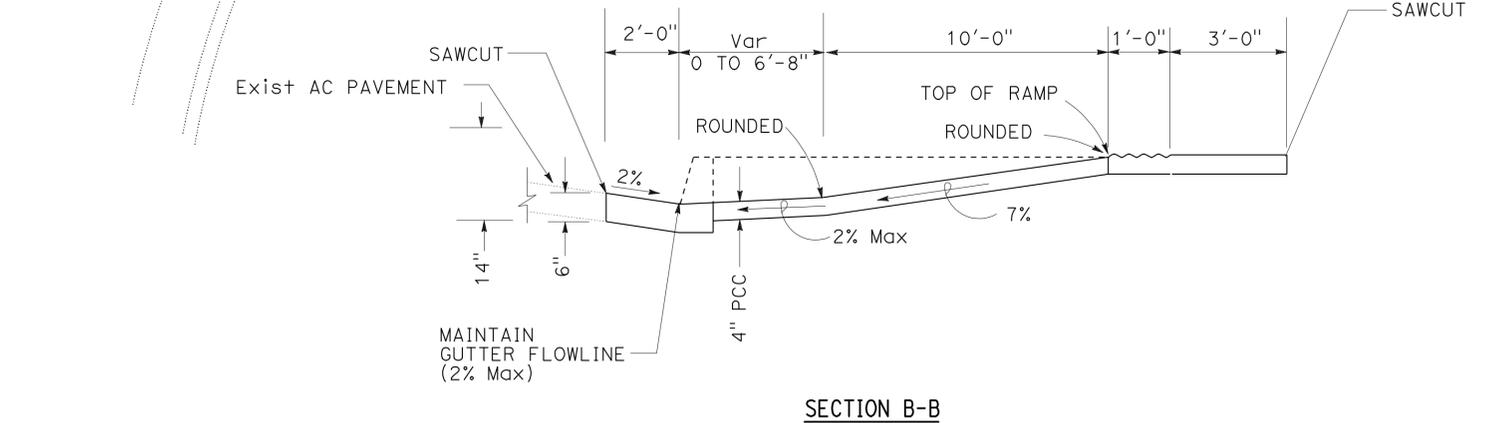
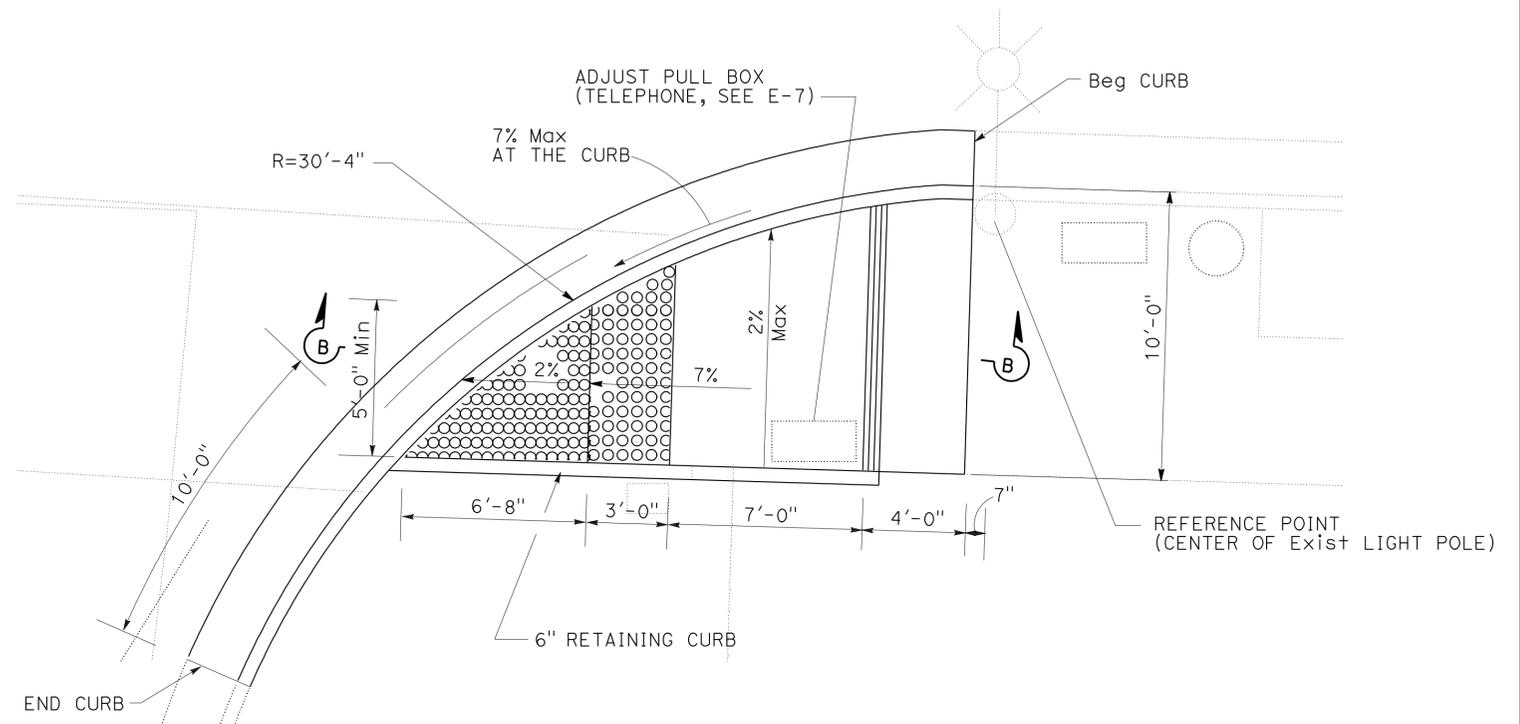
- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- GRADES SHOWN ON PLANS SHALL GOVERN OVER NUMBERS.

LEGEND:

- DETECTABLE WARNING SURFACE
- GROOVING



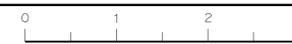
DETAIL 1 - CASE CM Mod



DETAIL 2 - CASE CM Mod

CONSTRUCTION DETAILS
NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 Frew Kottiso
 SHAHAN PETROSIAN
 GRISH BIGLIARTIAN
 TRAFFIC DESIGN

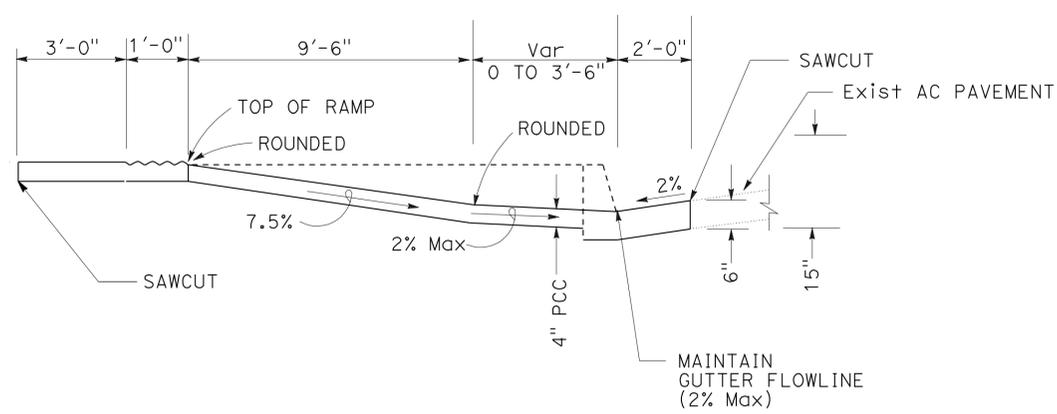
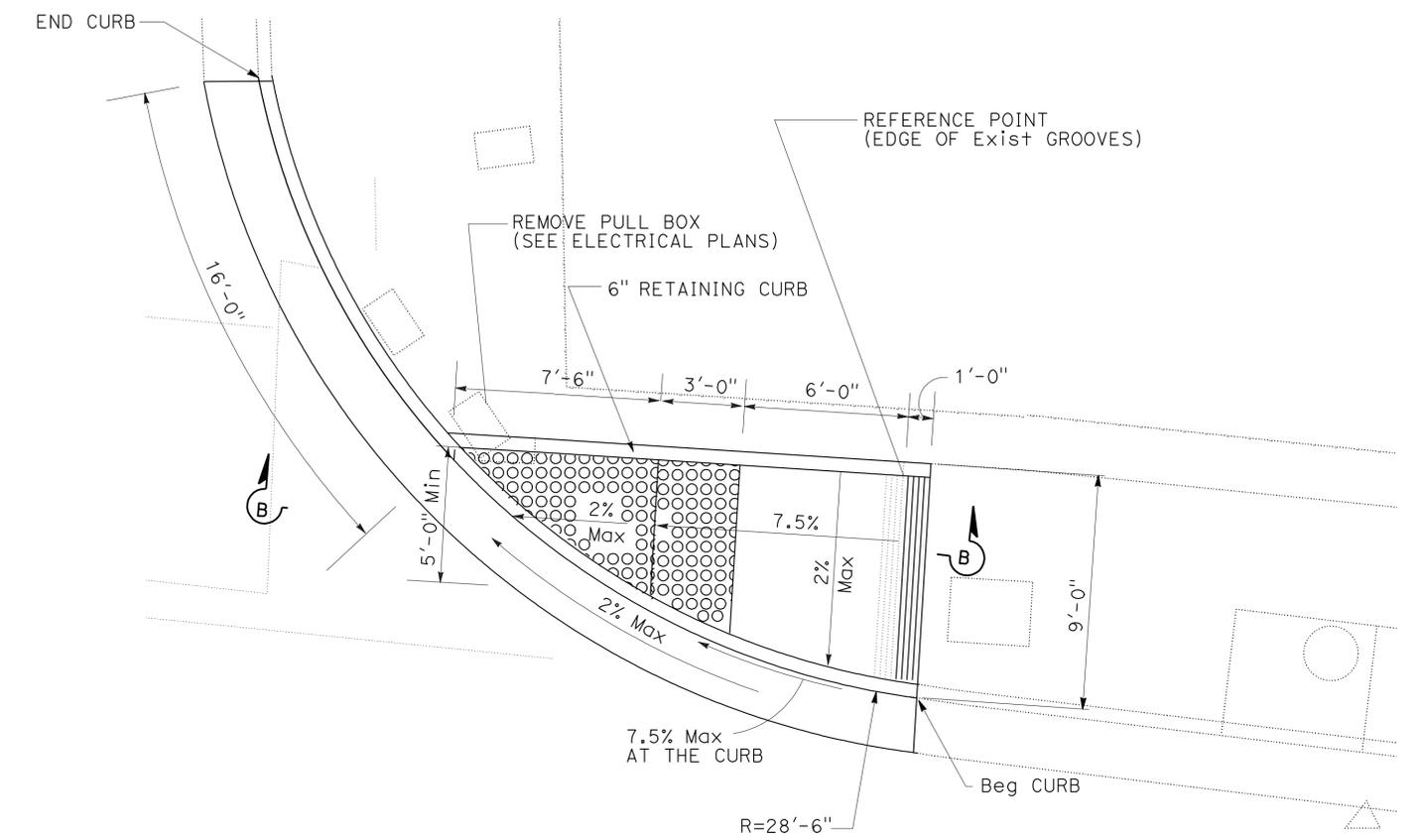
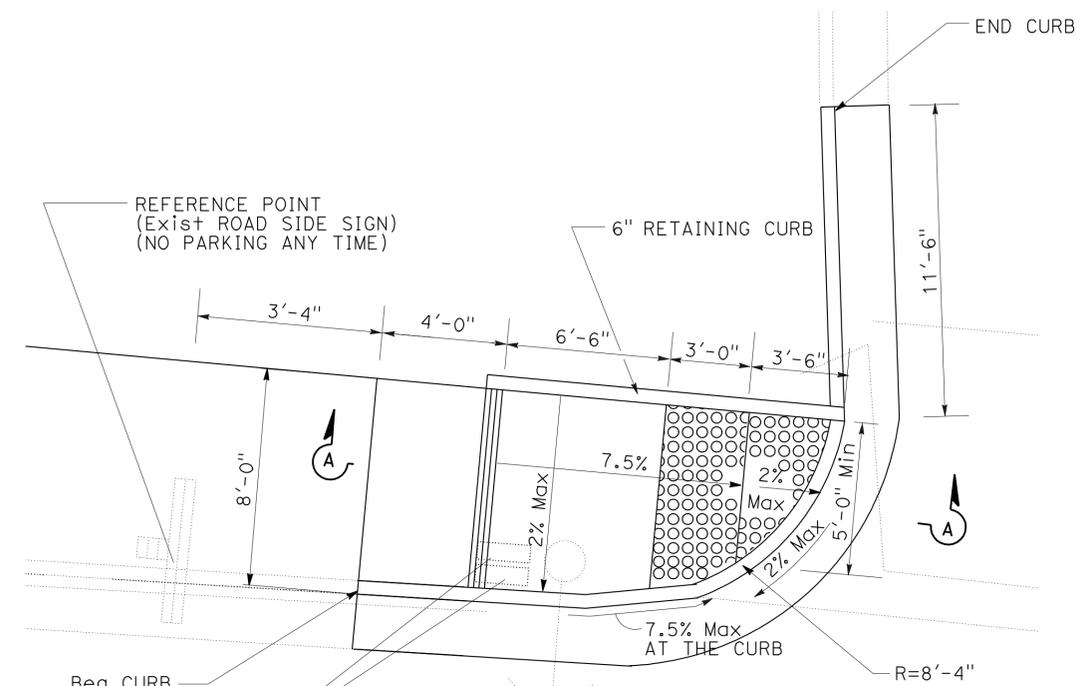


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	210	R24.2	4	36
			10/28/12	REGISTERED CIVIL ENGINEER DATE	
			3-11-13	PLANS APPROVAL DATE	
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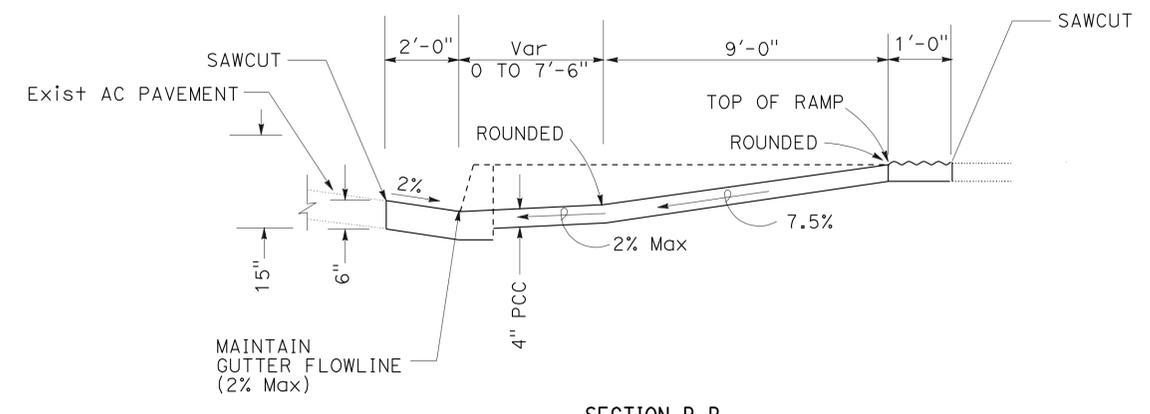
NOTES:

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- GRADES SHOWN ON PLANS SHALL GOVERN OVER NUMBERS.



SECTION A-A

DETAIL 3 - CASE CM Mod



SECTION B-B

DETAIL 4 - CASE CM Mod

CONSTRUCTION DETAILS
NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: GRISH BIGHLARIAN
 CALCULATED/DESIGNED BY: FREW KOTISSO
 CHECKED BY: SHAHAN PETROSIAN
 REVISED BY: DATE REVISIONS

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 UTILITIES
 JERREL B. KAM
 FUNCTIONAL SUPERVISOR
 RICKY LEE
 N. CELINA AVILES
 REVISIONS BY DATE

NOTES:
 1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
 2. UTILITY OWNERSHIP ON THIS PROJECT:
 WATER - PASADENA DEPARTMENT OF WATER & POWER
 GAS - SOUTHERN CALIFORNIA GAS (SCG)
 SEWER - LOS ANGELES COUNTY SANITARY SEWER (LA CO SAN Swr)
 ELECTRIC - PASADENA DEPARTMENT OF WATER & POWER
 TELEPHONE - AT&T

UTILITY ABBREVIATIONS

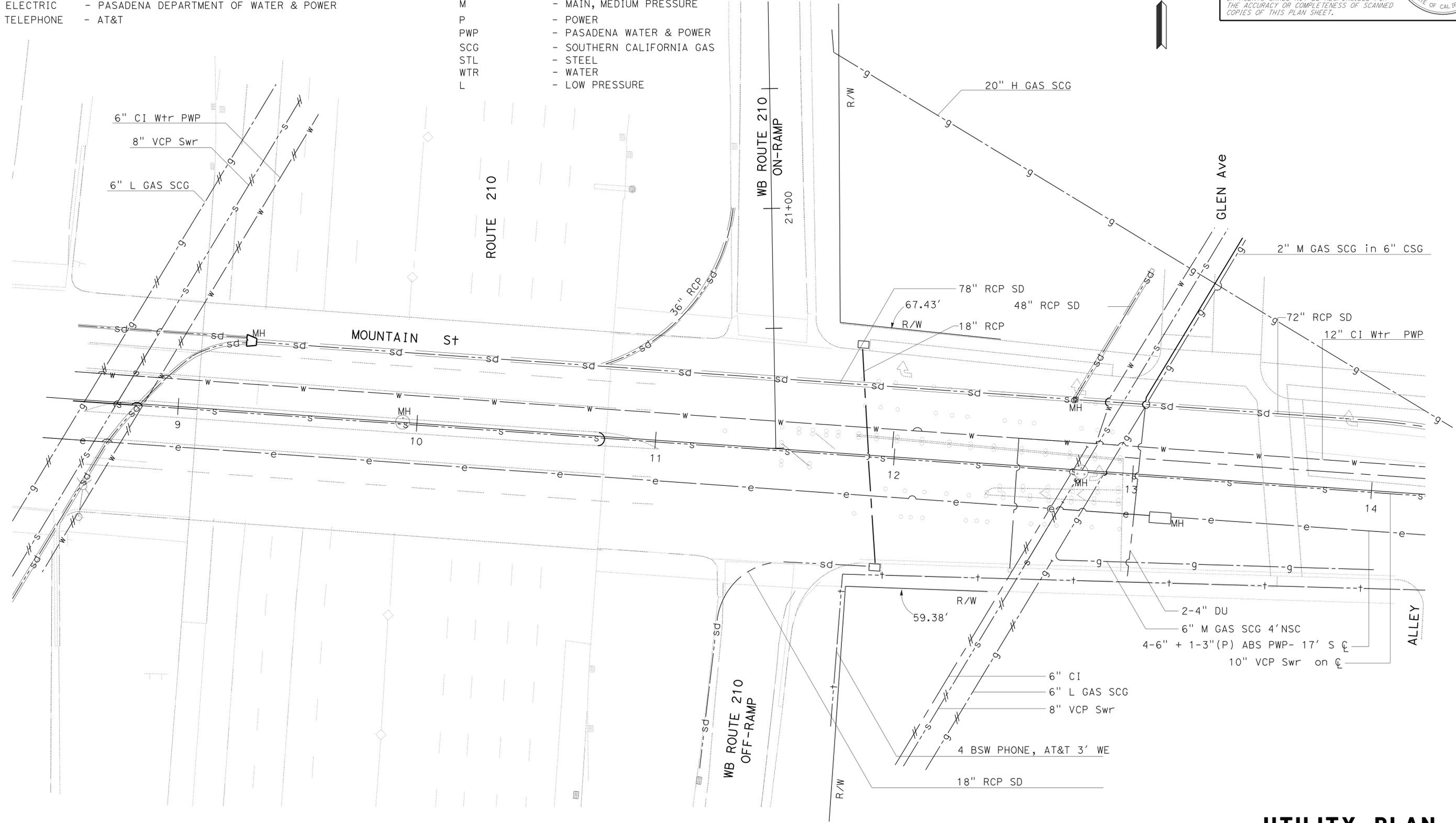
- ABS - ACRYLONITRILE - BUTADIENE - STYRENE PLASTIC
- AT&T - AMERICAN TELEPHONE & TELEGRAPH
- BSW - BURIED SERVICE WIRE
- DU - DUCT
- H - HIGH PRESSURE
- M - MAIN, MEDIUM PRESSURE
- P - POWER
- PWP - PASADENA WATER & POWER
- SCG - SOUTHERN CALIFORNIA GAS
- STL - STEEL
- WTR - WATER
- L - LOW PRESSURE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	210	R24.2	5	36

N. Celina Aviles 1/29/13
 REGISTERED CIVIL ENGINEER DATE
 3-11-13
 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
 N. CELINA AVILES
 No. C 57106
 Exp. 12/31/13
 CIVIL
 STATE OF CALIFORNIA



APPROVED FOR UTILITY INFORMATION ONLY

UTILITY PLAN
 SCALE: 1" = 20'

U-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	210	R24.2	6	36

10/28/12
 REGISTERED CIVIL ENGINEER DATE
 3-11-13
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 FREW KOTISSO
 No. C72485
 Exp. 6/30/14
 CIVIL
 STATE OF CALIFORNIA

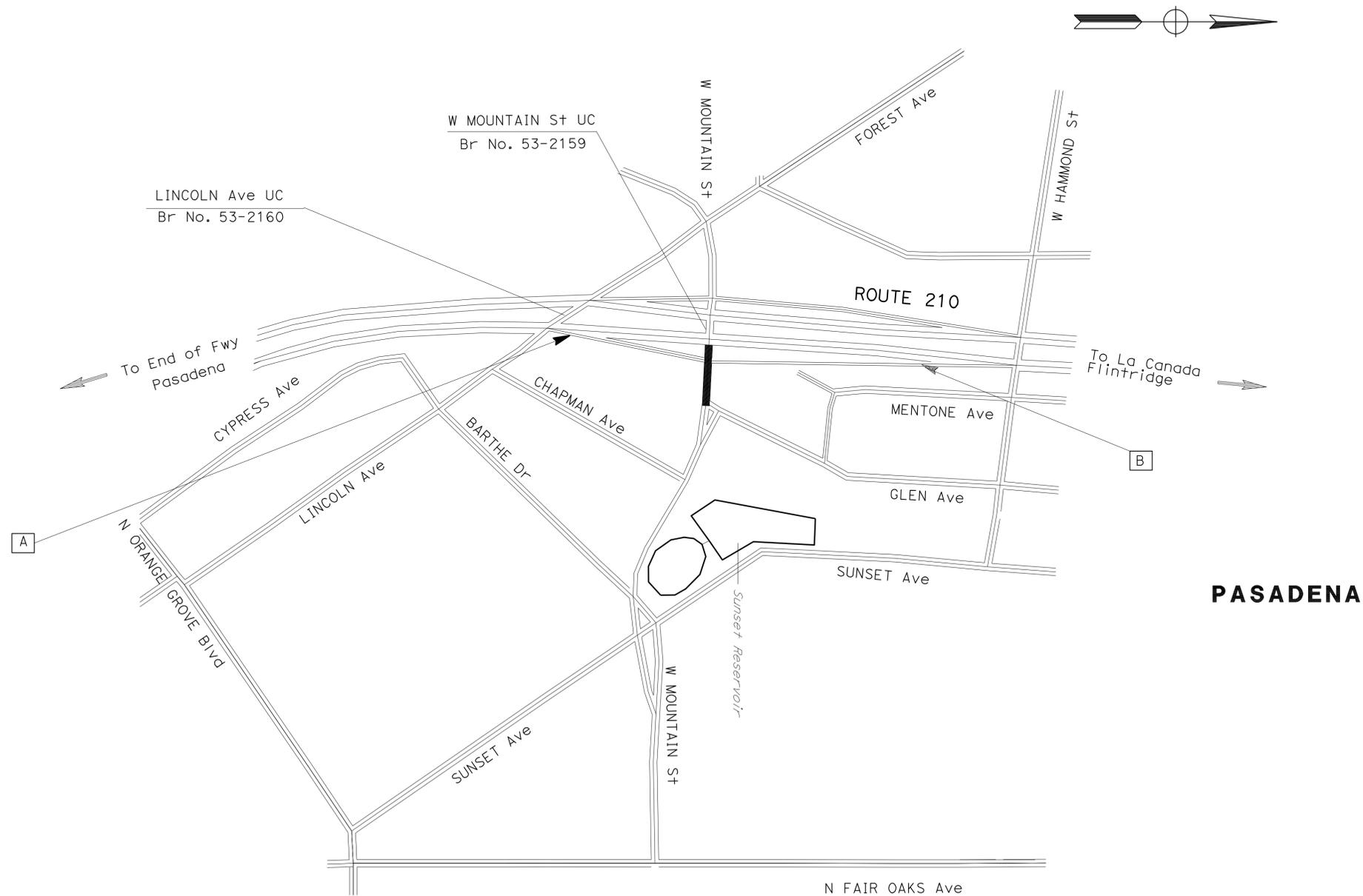
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

- EXACT SIGN LOCATIONS WILL BE DETERMINED BY THE ENGINEER.
- SIGN CODES PER MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No.	SIGN CODE		PANEL SIZE	SIGN MESSAGE	NUMBER OF POSTS AND SIZE	NUMBER OF SIGNS
	FEDERAL	CALIFORNIA				
A	W20-1		36" x 36"	ROAD WORK AHEAD	1 - 4" x 6"	1
B	G20-2		36" x 18"	END ROAD WORK	1 - 4" x 6"	1



CONSTRUCTION AREA SIGNS

NO SCALE

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

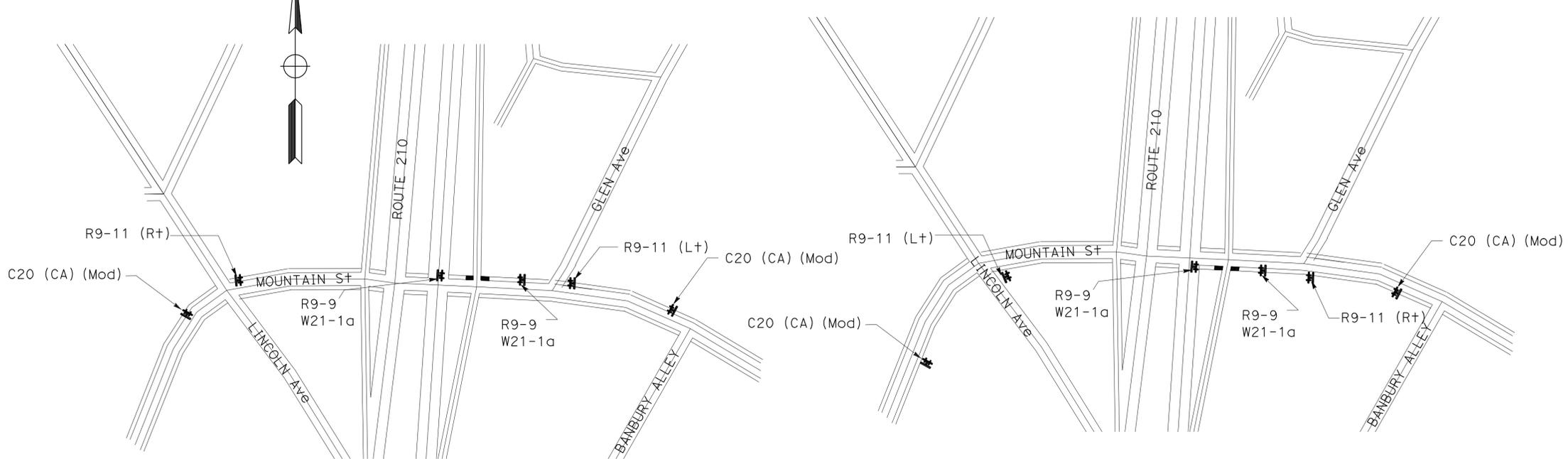
CS-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: GRISH BIGLARIAN
 FREW KOTISSO
 SHAHAN PETROSIAN

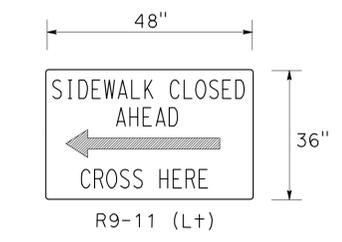
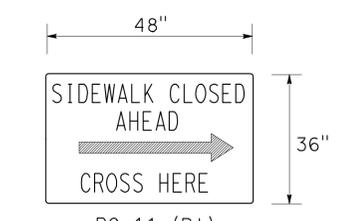
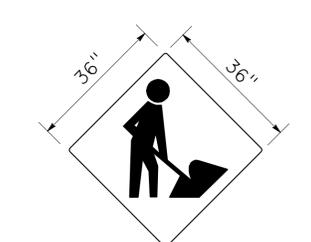
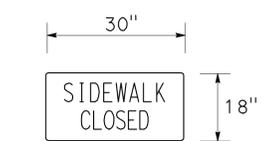
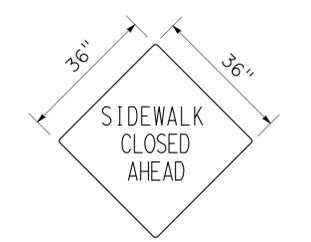
REVISOR: []
 DATE: []

DESIGNED BY: []
 CHECKED BY: []



**FOR CURB RAMP WORK ON
NW AND NE CORNERS OF THE ON RAMP**

**FOR CURB RAMP WORK ON
SW AND SE CORNERS OF THE OFF RAMP**



TRAFFIC HANDLING QUANTITIES

SIGNS					TYPE II BARRICADE
R9-9	R9-11(L+)	R9-11(R+)	C20(CA)(Mod)	W21-1a	
EA					EA
4	2	2	4	4	12

NOTES:

- EXACT SIGN LOCATIONS WILL BE DETERMINED BY THE ENGINEER.
- SEE TRAFFIC CONTROL SYSTEM PLAN (TCS) FOR LANE CLOSURE DETAILS.

LEGEND:

- WORKING AREA
- SIGN ON BARRICADE (TYPE II)

SIGN CODE:

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

**TRAFFIC HANDLING PLAN
FOR SIDEWALK CLOSURES**

NO SCALE

TH-1

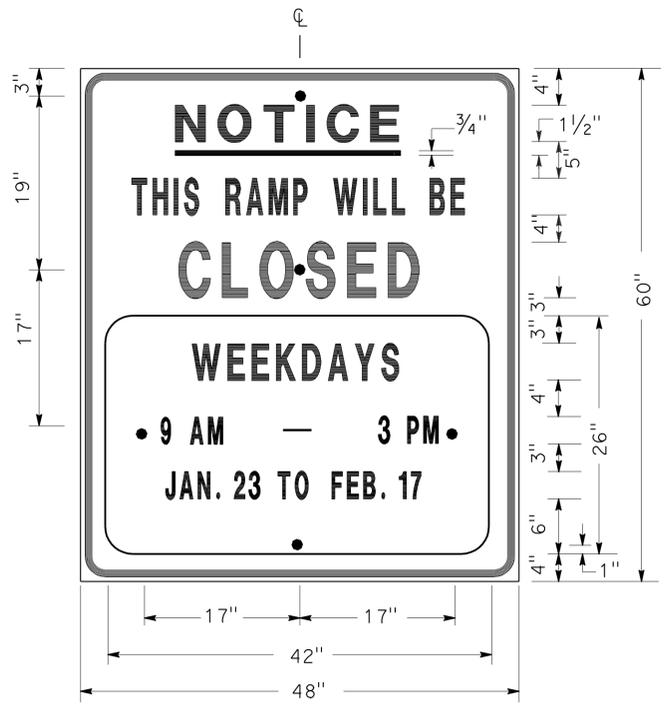
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
FUNCTIONAL SUPERVISOR: GRISH BIGLIARIAN
CALCULATED/DESIGNED BY: SHAHAN PETROSIAN
CHECKED BY: FREW KOTISSO
REVISED BY: DATE
DATE REVISION:

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	210	R24.2	8	36

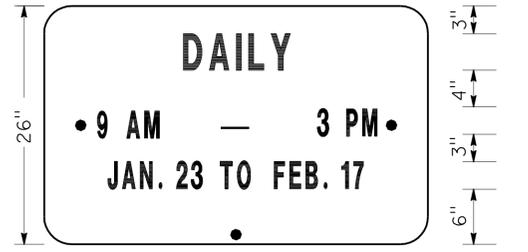
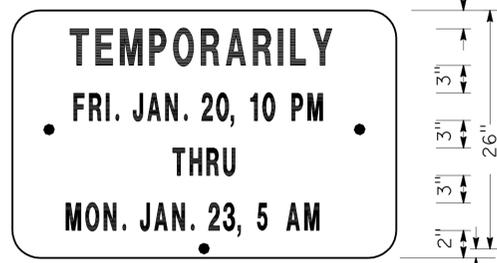
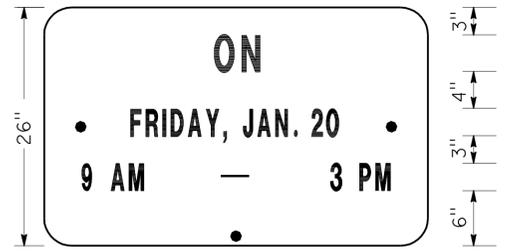
REGISTERED CIVIL ENGINEER DATE: 11-19-12
 3-11-13
 PLANS APPROVAL DATE

MARTIN OREGEL
 No. 56816
 Exp. 6-30-13
 CIVIL
 STATE OF CALIFORNIA

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SIGN SP-1



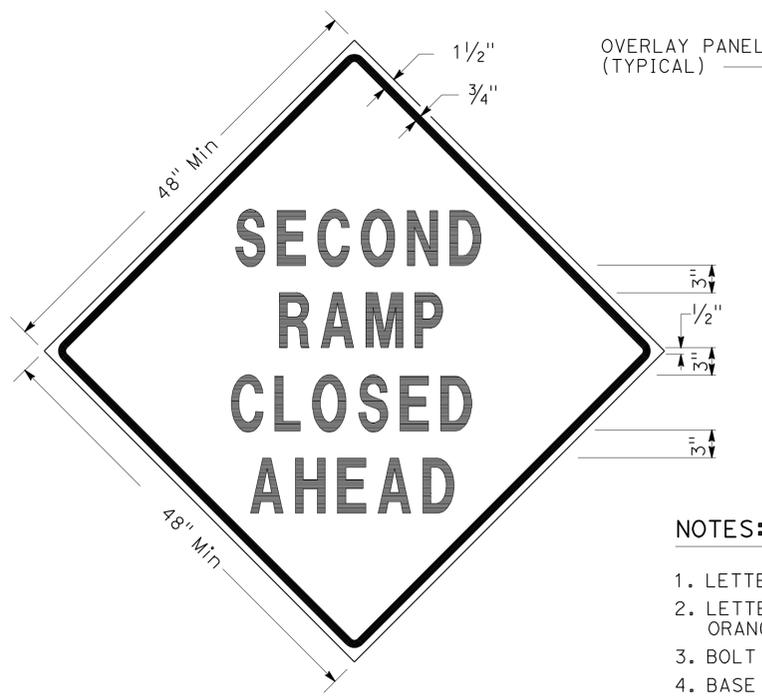
ALTERNATE OVERLAY PANELS (TYPICAL)

- 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 SHEET TCS-3.

SPECIAL SIGN FOR ENTRANCE RAMP CLOSURES

TRAFFIC HANDLING DETAILS FOR RAMP CLOSURES, DETOUR SIGNS, AND MISCELLANEOUS DETAILS

SHEET 1 OF 2

NO SCALE

THD-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	210	R24.2	10	36
<i>Martin Oregel</i> 11-19-12 REGISTERED CIVIL ENGINEER DATE					
3-11-13 PLANS APPROVAL DATE					
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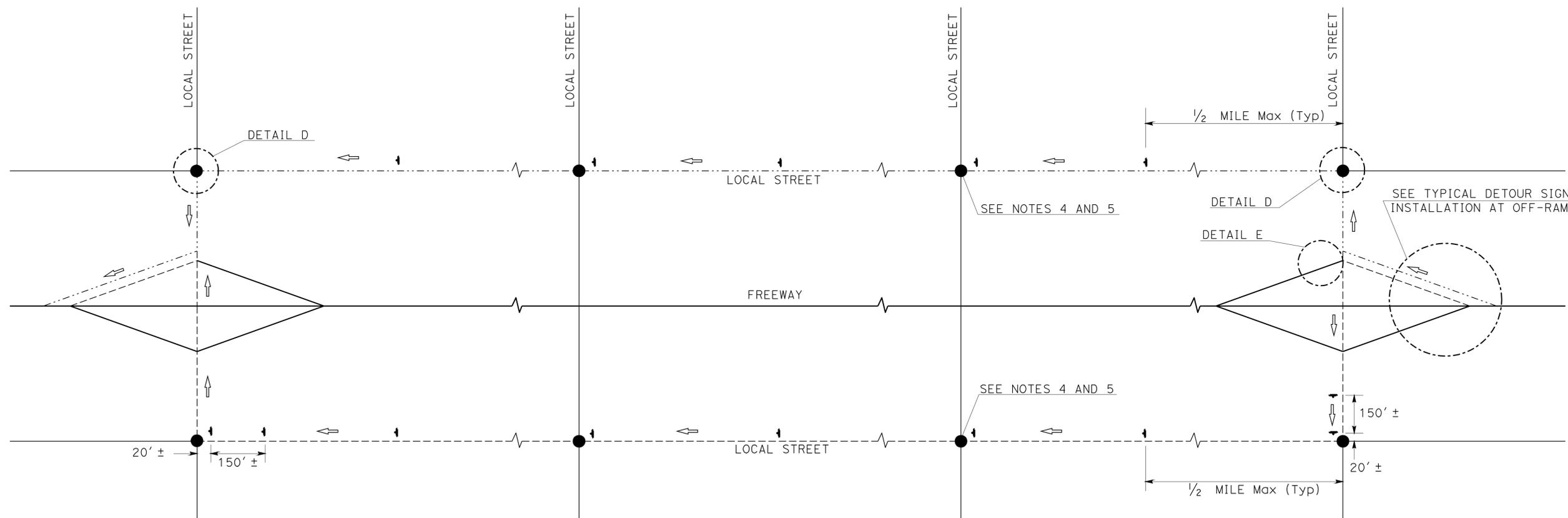


LEGEND

- ↑ 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
FOR DETOUR SIGN INSTALLATION
ALONG DESIGNATED DETOUR ROUTE
SHEET 1 OF 3**

NO SCALE

THD-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 FUNCTIONAL SUPERVISOR: MARTIN OREGEL
 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	LA	210	R24.2	11	36

REGISTERED CIVIL ENGINEER DATE 11-19-12
 3-11-13
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 MARTIN OREGEL
 No. 56816
 Exp. 6-30-13
 CIVIL
 STATE OF CALIFORNIA

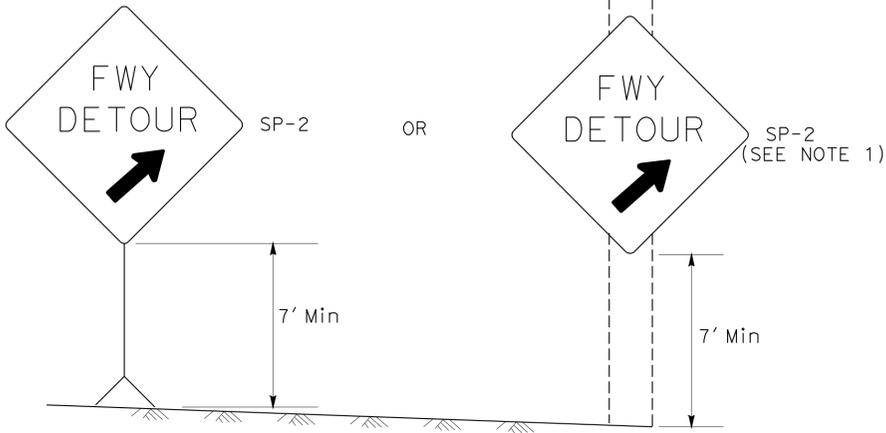
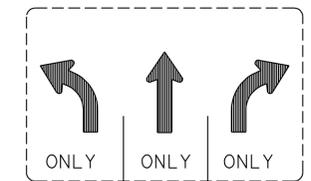
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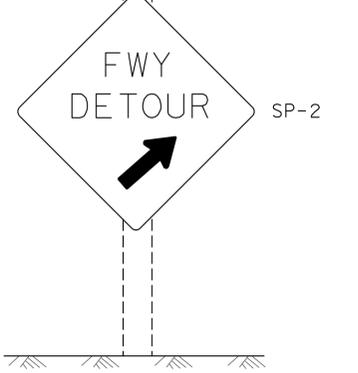
Exist E5-1, G84-2 (CA) OR G84-3 (CA)



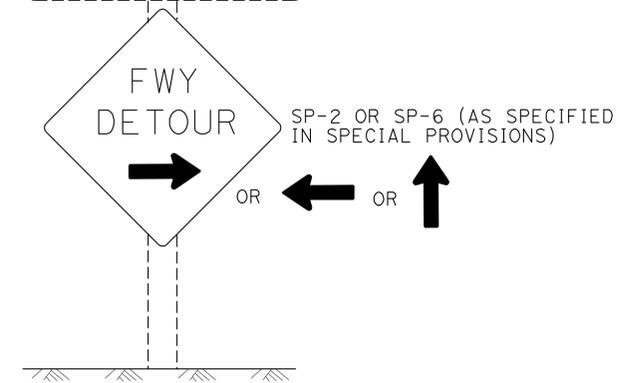
Exist R3-8 SERIES



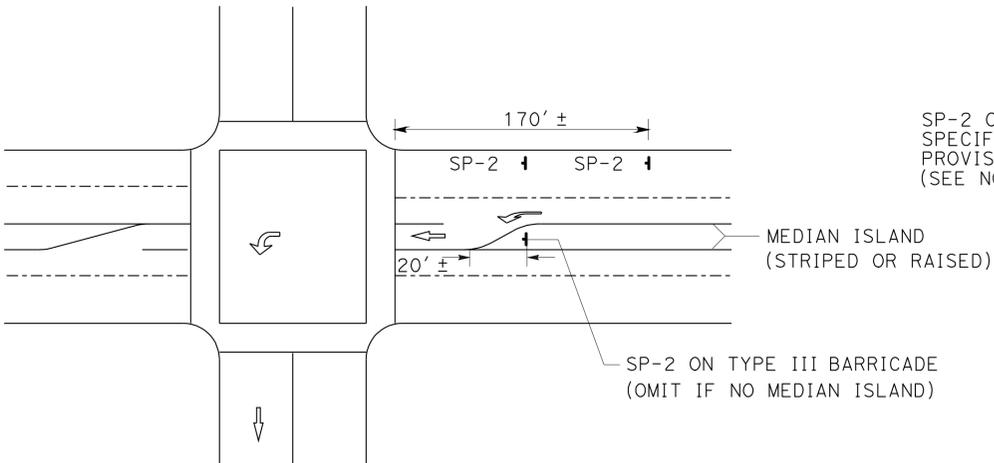
DETAIL A (SEE NOTE 3)



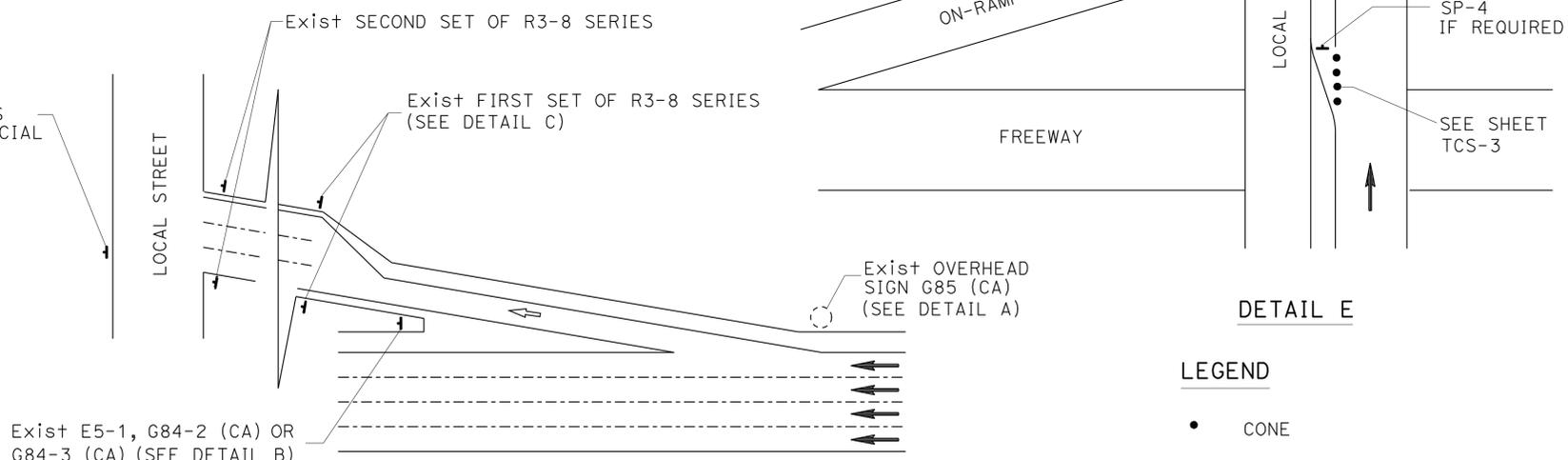
DETAIL B (SEE NOTE 3)



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 FOR DETOUR SIGN INSTALLATION ALONG DESIGNATED DETOUR ROUTE SHEET 2 OF 3

NO SCALE

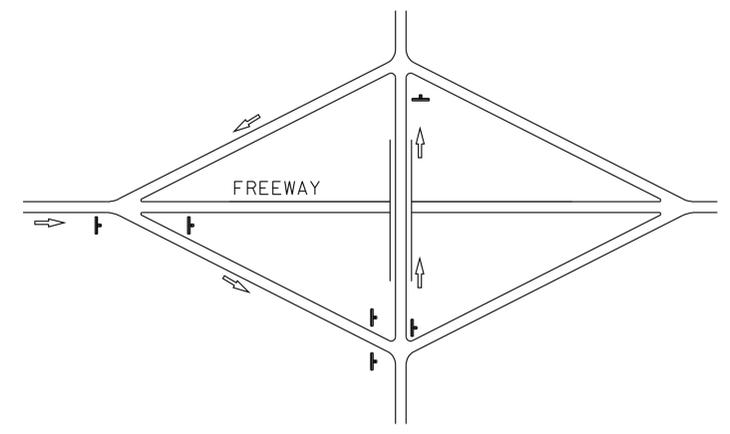
THD-4

NOTES: SIGN SP-2

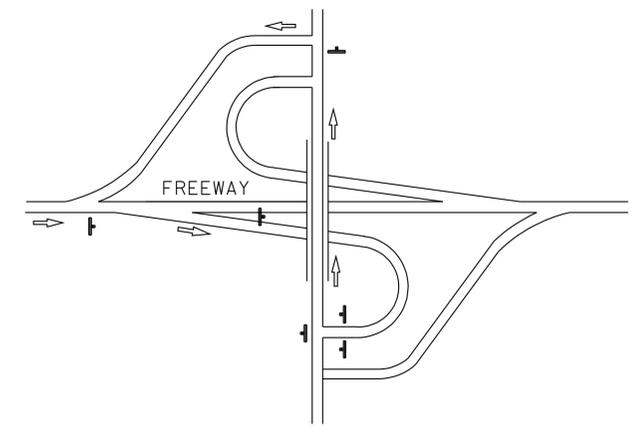
1. SP-2 SIGNS MAY BE STRAPPED ON EXISTING ELECTROLIER, SIGNAL POST OR SIGN POST.
2. SP-2 SIGNS SHALL NOT BE INSTALLED ON BARRICADES EXCEPT AS OTHERWISE SHOWN.
3. OMIT DETAILS A AND B FOR FULL FREEWAY CLOSURES.
4. SEE TRAFFIC HANDLING DETAILS-TRAFFIC CONTROL SYSTEM FOR RAMP CLOSURES, DETOUR SIGNS, AND 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
 DTIC
 FUNCTIONAL SUPERVISOR
 MARTIN OREGEL
 CHECKED BY
 ALBERT K YU
 REVISOR
 JOCELYN C CHIANG
 DATE REVISOR
 3/12
 DESIGNED BY
 JC

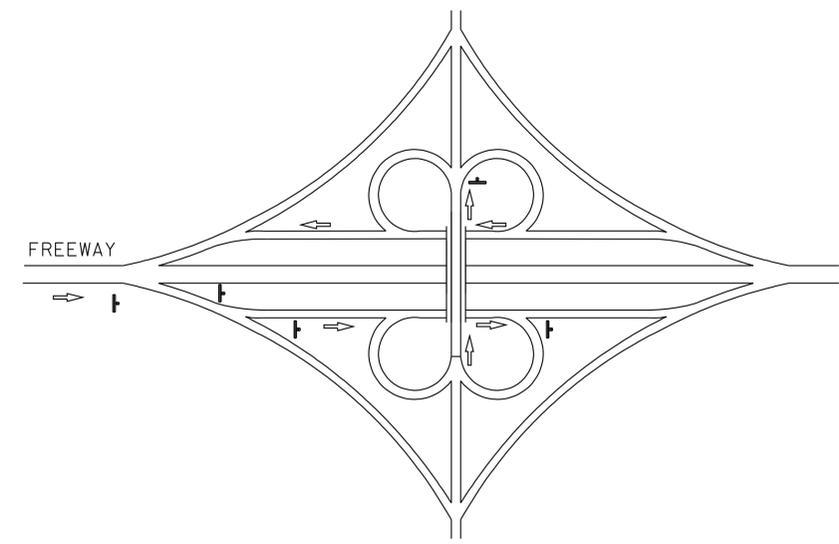
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DT M
 FUNCTIONAL SUPERVISOR
 MARTIN OREGEL
 REVISIONS: 3/12
 REVISED BY: JC
 ALBERT K YU
 JOCELYN C CHIANG
 CHECKED BY:



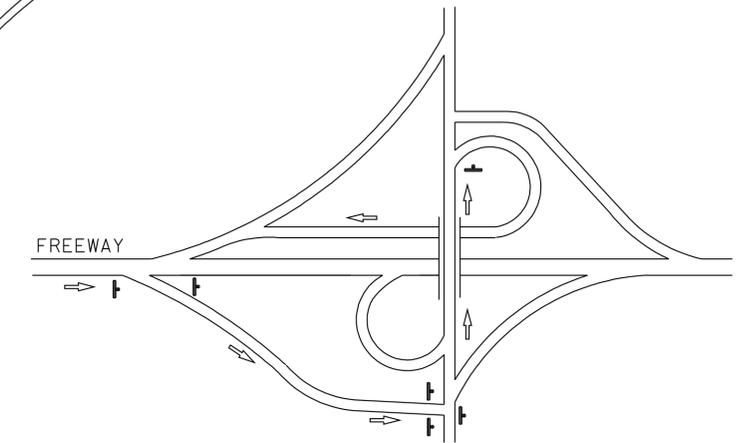
TYPE I



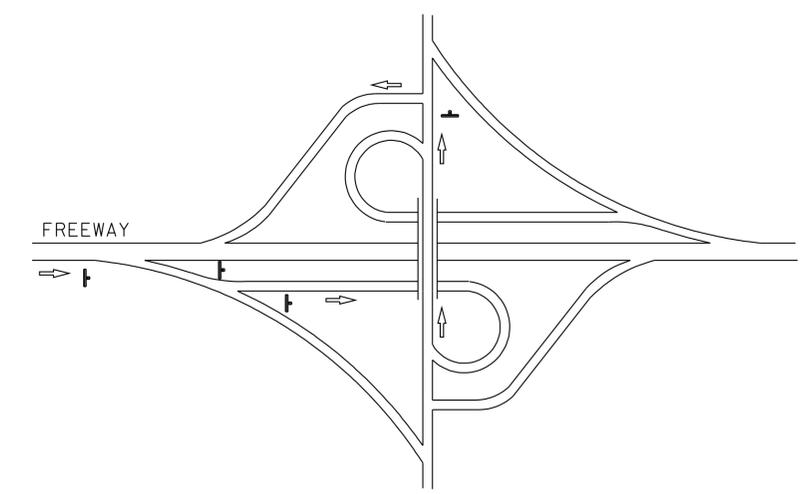
TYPE II



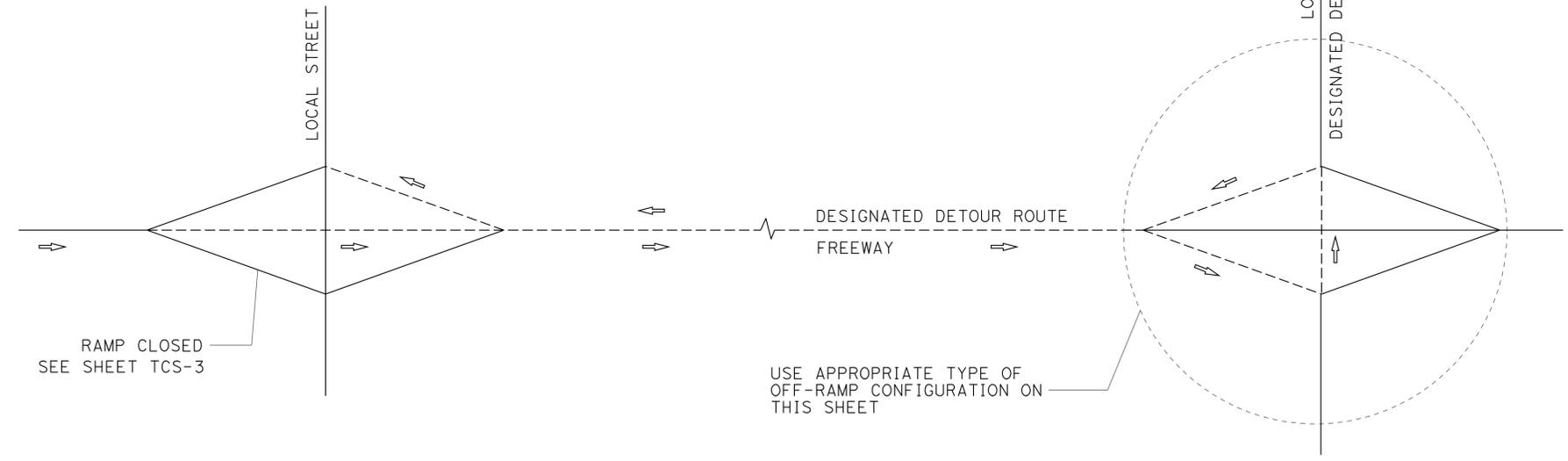
TYPE III



TYPE IV



TYPE V



TYPE OF OFF-RAMP CONFIGURATION	MINIMUM No. OF SP-2
TYPE I	6
TYPE II	6
TYPE III	5
TYPE IV	6
TYPE V	4

TYPICAL DETOUR SIGN INSTALLATION FOR OFF-RAMP CLOSURE

NOTES:

- FOR RAMP CONFIGURATIONS NOT SHOWN, THE EXACT LOCATIONS AND MINIMUM NUMBER OF SP-2 SIGNS WILL BE DETERMINED BY THE ENGINEER.
- SEE TRAFFIC HANDLING DETAILS-TRAFFIC CONTROL SYSTEM FOR RAMP CLOSURES, DETOUR SIGNS, AND MISCELLANEOUS DETAILS PLAN SHEET 2 OF 2 FOR SP-2 SIGN DETAILS.

LEGEND

- SIGN SP-2
- DETOUR DIRECTION
- DESIGNATED DETOUR ROUTE

**TRAFFIC HANDLING DETAILS
FOR DETOUR SIGN INSTALLATION
ALONG DESIGNATED DETOUR ROUTE
SHEET 3 OF 3**

NO SCALE

THD-5

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	210	R24.2	13	36

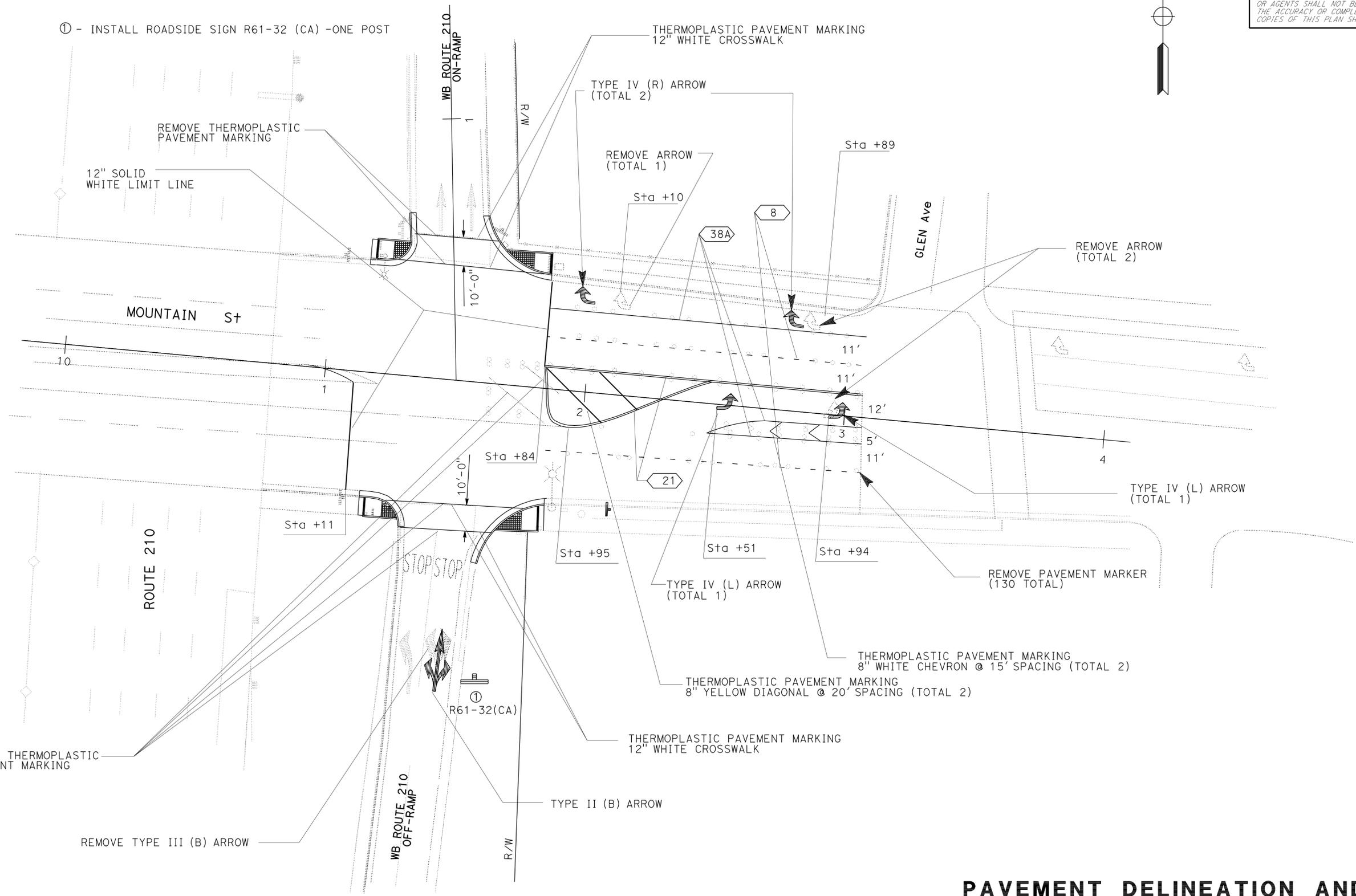
REGISTERED CIVIL ENGINEER	DATE
10/28/12	
3-11-13	PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
FREW KOTISSO
No. C72485
Exp. 6/30/14
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.

NOTES:

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- EXISTING UTILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.



① - INSTALL ROADSIDE SIGN R61-32 (CA) -ONE POST

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	TRAFFIC DESIGN
FUNCTIONAL SUPERVISOR	GRISH BIGLIARIAN
CALCULATED/DESIGNED BY	CHECKED BY
FREW KOTISSO	SHAHAN PETROSIAN
REVISED BY	DATE REVISED

PAVEMENT DELINEATION AND SIGN PLAN

APPROVED FOR PAVEMENT DELINEATION AND SIGN WORK ONLY

SCALE: 1" = 20'

PD-1

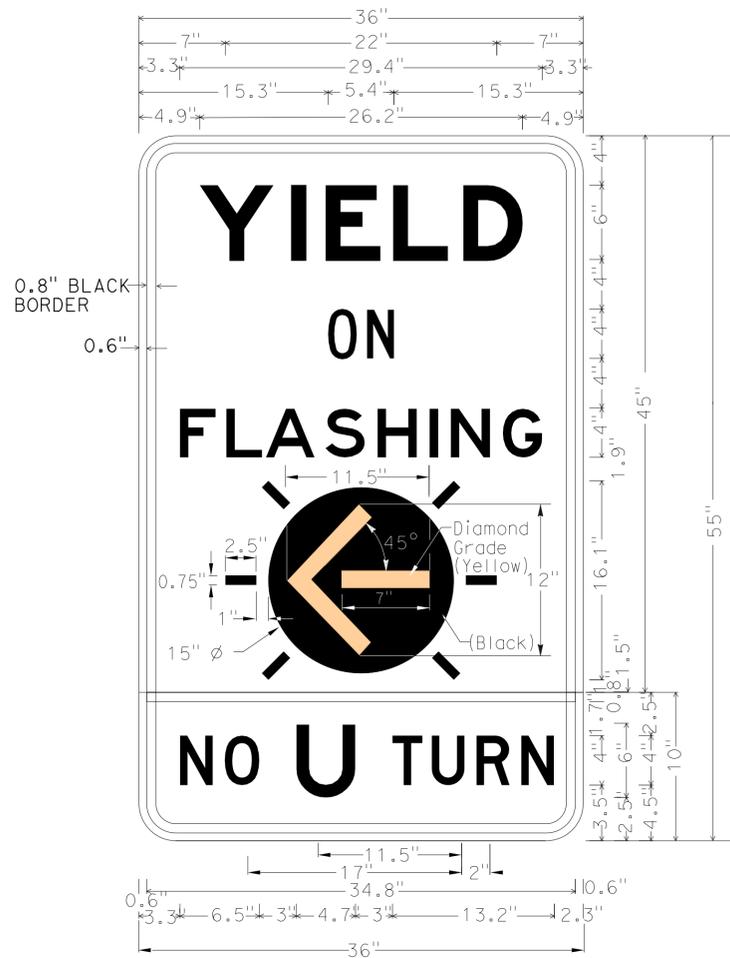


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	210	R24.2	14	36

01/28/13
 REGISTERED CIVIL ENGINEER DATE
 3-11-13
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
FREW KOTISSO
 No. C72485
 Exp 6/30/14
 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.



ZZZ; 3.0" Radius, 0.8" Border, 0.6" Indent, Black on White;
 [YIELD] E Mod; [ON] C; [FLASHING] E;
 Bot; 3.0" Radius, 0.8" Border, 0.6" Indent, Black on White;
 [NO] D; [U] E; [TURN] D;

R73-8 (Mod)
 NO SCALE

ROADSIDE SIGN QUANTITIES

SIGN No.	LOCATION		SIGN CODE	PANEL SIZE (L X D)	SINGLE FACED	SIGN FACING MATERIAL					FURNISH	INSTALL	
	STATION	DIRECTION				BACKGROUND		LEGEND		PREMIUM		SINGLE SHEET ALUMINUM SIGN	SIGN
						SHEETING COLOR	RETROREFLECTIVE ASTM TYPE	SHEETING COLOR	RETROREFLECTIVE ASTM TYPE		(0.063" - FRAMED)		* MAST-ARM HANGER METHOD
1	OFF RAMP	FNBT	R61-32(CA)	54 x 45	X	WHITE	III	BLACK	II	X	16.86	EA	1
100	13+73.8	FEBT	R73-8 (Mod)	55 x 36	X	WHITE	III	BLACK	II	X	13.75	1	1
TOTAL											30.61	1	1

* SEE STANDARD PLAN ES-7F & ES-7N (Det U)

SIGN DETAILS AND QUANTITIES
SD-1

APPROVED FOR SIGN WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans **TRAFFIC DESIGN**
 FUNCTIONAL SUPERVISOR: FARIBORZ M TEHRANI
 FREW KOTISSO, SHAHAN PETROSIAN
 REVISIONS: REVISED BY, DATE, REVISIONS

LAST REVISION DATE PLOTTED => 08-MAY-2013
 00-00-00 TIME PLOTTED => 12:45

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

REVISOR
 REVISED BY
 DATE REVISED

FREW KOTISSO
 SHAHAN PETROSJIAN

CALCULATED/DESIGNED BY
 CHECKED BY

FUNCTIONAL SUPERVISOR
 GRISH BIGLARIAN

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	210	R24.2	15	36

5/4/12
 REGISTERED CIVIL ENGINEER DATE

3-11-13
 PLANS APPROVAL DATE

FREW KOTISSO
 No. C72485
 Exp. 6/30/14
 CIVIL

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

ROADWAY QUANTITIES

SHEET No.	LOCATION	REMOVE CONCRETE	MINOR CONCRETE (CURB, SIDEWALK, AND CURB RAMP)	DETECTABLE WARNING SURFACE (N)	TEMPORARY DRAINAGE INLET PROTECTION
		CY	CY	SQFT	EA
C-1	OFF-RAMP FROM NB R+e 210 TO MOUNTAIN S+ (SW AND SE CORNERS)	14.0	14.0	30	1
C-2	ON-RAMP TO NB R+e 210 FROM MOUNTAIN S+ (NW AND NE CORNERS)	13.5	13.5	30	1
TOTAL		27.5	27.5	60	2

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

PAVEMENT DELINEATION QUANTITIES

SHEET No.	REMOVE PAVEMENT MARKER	REMOVE THERMOPLASTIC PAVEMENT MARKING	THERMOPLASTIC PAVEMENT MARKING						4" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 17-7)	4" THERMOPLASTIC TRAFFIC STRIPE	8" THERMOPLASTIC TRAFFIC STRIPE
			12" SOLID WHITE	8" SOLID WHITE (CHEVRON)	8" SOLID YELLOW (DIAGONAL)	ARROWS		Det 8	Det 21	Det 38A	
						TYPE II	TYPE IV				WHITE
EA	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	LF	LF	LF	
PD-1	130	303	253	16	34	59	60	244	206	240	
SUB TOTAL	130	303	253	16	34	119		244	206	240	
TOTAL	130	303	422					244	206	240	

SUMMARY OF QUANTITIES

Q-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: YI TSAU
 CALCULATED/DESIGNED BY: YI TSAU
 CHECKED BY: YI TSAU
 CECILIO BURCIAGA
 YI TSAU
 REVISOR: YI TSAU
 DATE REVISOR: YI TSAU

NOTE: (THIS SHEET)

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

LEGEND: (THIS SHEET ONLY)

- EXISTING MODEL 2070 CONTROLLER ASSEMBLY.
- EXISTING 1/2" C, 1-12 PAIR COMM CABLE, 1-48SMFO TO LINCOLN Ave TRAFFIC SIGNAL CABINET.
- EXISTING 2" C, 1-12 & 1-25 PAIR COMM CABLE, 1-48SMFO TO FAIROAKS Ave TRAFFIC SIGNAL CABINET AND FIBER SPLICE VAULT.
- EXISTING 1/2" C, 2#8 CONDUCTORS TO ONE STREET LIGHT.
- EXISTING 2" C, 1-25 PAIR COMM CABLE, 1-12SMFO TO CITY TRAFFIC SIGNAL SHOP.
- 2" C, 12CSC, 1#8(G) FOR INTERCONNECT TO CALTRANS' TRAFFIC SIGNAL CABINET (FOR REFERENCE ONLY. SEE INTERCONNECTION CONDUIT AND CABLE SHEET E-4 FOR INSTALLATION DETAILS)
- RS TYPE 19-2-100 SIGNAL STANDARD.
 RS SIGNAL HEADS ON MAST ARM. RL EQUIPMENT, CAMERA, AND LUMINAIRE HEAD FROM OLD SIGNAL STANDARD TO NEW TEMPORARY WOOD POLE ON SHEET E-3. INSTALL NEW SIGNAL STANDARD AT SAME LOCATION.
- RS SIGNAL HEAD. INSTALL NEW PROGRAMMED VISIBILITY SIGNAL HEAD.
- YIELD ON FLASHING YELLOW SIGN. SEE SHEET SD-1 FOR DETAILS.
- REUSE EXIST EQUIPMENT, CAMERA AND LUMINAIRE FROM THE TEMPORARY WOOD POLE TO THE NEW SIGNAL STANDARD.

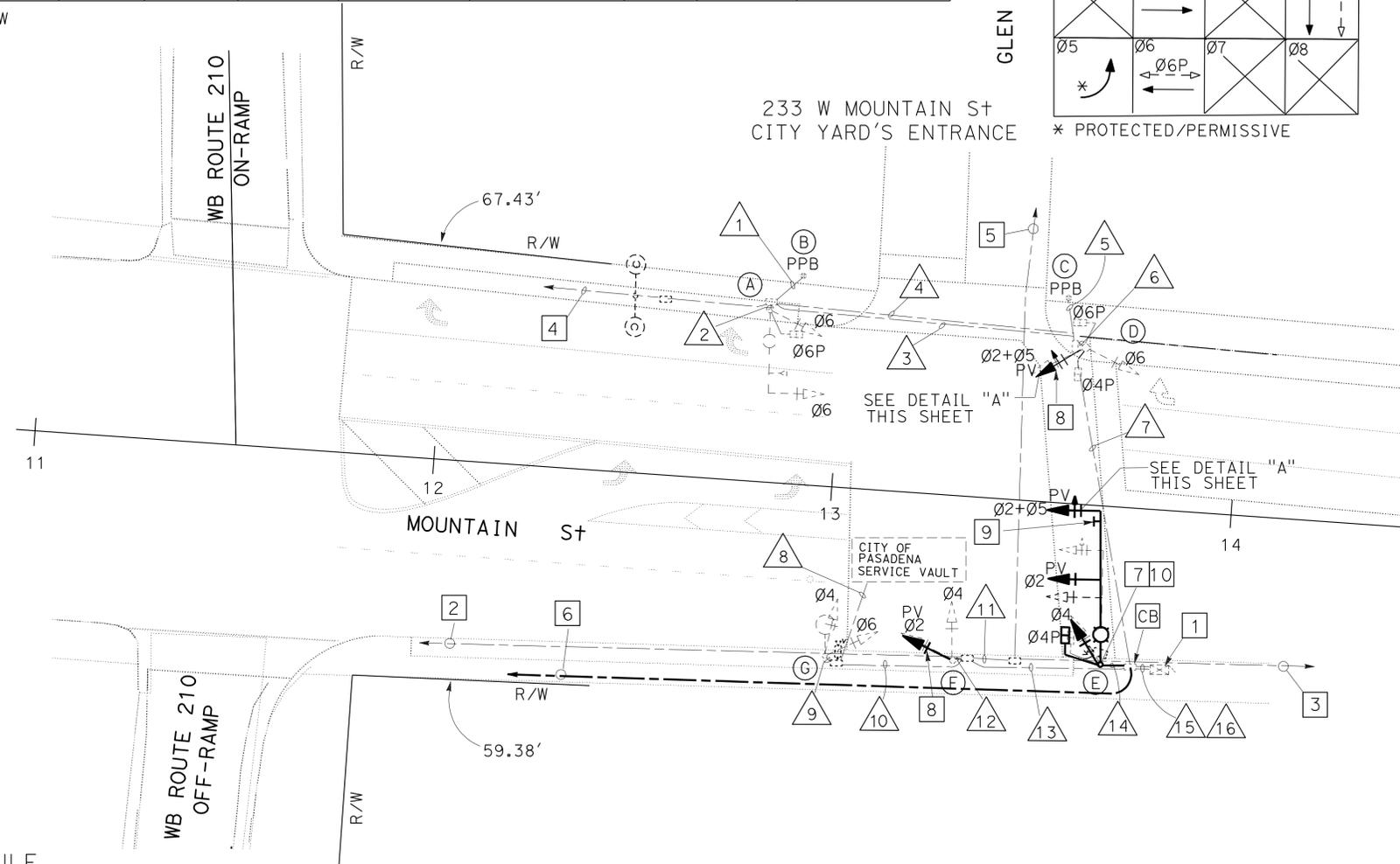
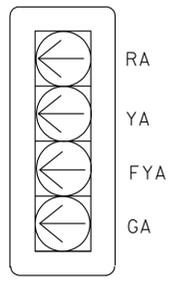
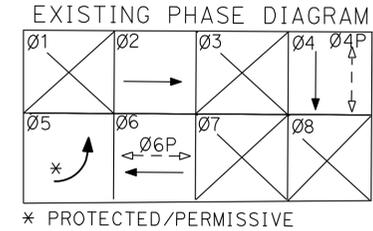
EXISTING POLE AND EQUIPMENT SCHEDULE

No.	Type	STANDARD		veh sig mtg		ped SIGNAL	ppb		hps LUMINAIRE
		SMA	LMA	Mast Arm	Pole	mtg	Ø	ARROW	
(A)	17-3-100	20'	6'	mas	SV-1-T	SP-1-T	-	-	250 W
(B)	PPB	-	-	-	-	-	6	→	-
(C)	PPB	-	-	-	-	-	6	←	-
(D)	1-A	-	-	-	TV-2-T (N)	SP-2-T	4	→	-
(E)	26-4-100 (N)	40'(N)	6'(N)	2-MAS(N)	SV-1-T	SP-1-T	4	←	250 W
(F)	1-A	-	-	-	TV-2-T	-	-	-	-
(G)	15TS	-	6'	-	SV-2-T	-	-	-	250 W

(N) - NEW

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	210	R24.2	17	36

REGISTERED ELECTRICAL ENGINEER DATE: 2/7/13
 C. BURCIAGA No. E015302 Exp. 3/31/15
 REGISTERED PROFESSIONAL ENGINEER STATE OF CALIFORNIA
 PLANS APPROVAL DATE: 3-11-13
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



EXISTING CONDUIT AND CONDUCTOR SCHEDULE

CONDUCTOR	CONDUCTOR RUN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
3CSC		1		1		1	1	3							1(N)	3(N)	
12CSC			1				1			1	1		1		2(N)	2(N)	
28CSC				1				1				1		1			2
SUBTOTAL		1	1	2	-	1	2	4	-	1	1	-	1	1	3	8	-
VIDEO DETECTION CABLE										1	1				1(R)		2
12 PR COMMUNICATIONS CABLE												1					
6 SINGLEMODE FIBER OPTIC												1		1			1
48 SINGLEMODE FIBER OPTIC												1					
#10	STREET LIGHTS		2							2					2(N)		
#8	STREET LIGHTS				2			2			3		3				
	CONTROLLER CABINET										2		2				2
#4	SERVICE							3									
	CONDUIT	1 1/2"	2"	2"	2"	1 1/2"	2"	3"	2 1/2"	2"	2 1/2"	1 1/2"	2"	2 1/2"	2 1/2"(N)	3"	3"

(N) - NEW (R) - REUSE

MOUNTAIN STREET AT CITY YARD

MODIFY SIGNAL AND LIGHTING (CITY)

SCALE: 1" = 20'

APPROVED FOR ELECTRICAL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: YI TSAU
 CALCULATED/DESIGNED BY: YI TSAU
 CHECKED BY: YI TSAU
 REVISED BY: CECILIO BURCIAGA
 DATE REVISED:

NOTE: (THIS SHEET)

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

LEGEND: (THIS SHEET ONLY)

- EXISTING MODEL 2070 CONTROLLER ASSEMBLY.
- EXISTING 1 1/2" C, 1-12 PAIR COMM CABLE, 1-48SMFO TO LINCOLN Ave TRAFFIC SIGNAL CABINET. **RC** LIGHT CONDUCTORS.
- EXISTING 2" C, 1-12 & 1-25 PAIR COMM CABLE, 1-48SMFO TO FAIROAKS Ave TRAFFIC SIGNAL CABINET AND FIBER SPLICE VAULT.
- EXISTING 1 1/2" C, 2#8 CONDUCTORS TO ONE STREET LIGHT.
- EXISTING 2" C, 1-25 PAIR COMM CABLE, 1-12SMFO TO CITY TRAFFIC SIGNAL SHOP.
- INSTALL 2" C, (RISER) 12CSC, 3CSC, 2#10, 1#8 (G).
- RS** SIGNAL HEAD. INSTALL 3 SECTION SIGNAL HEAD FOR TEMPORARY SIGNAL SYSTEM.
- REUSE EXIST EQUIPMENT, CAMERA AND LUMINAIRE FROM EXIST TYPE 19-2-100 SIGNAL STANDARD.

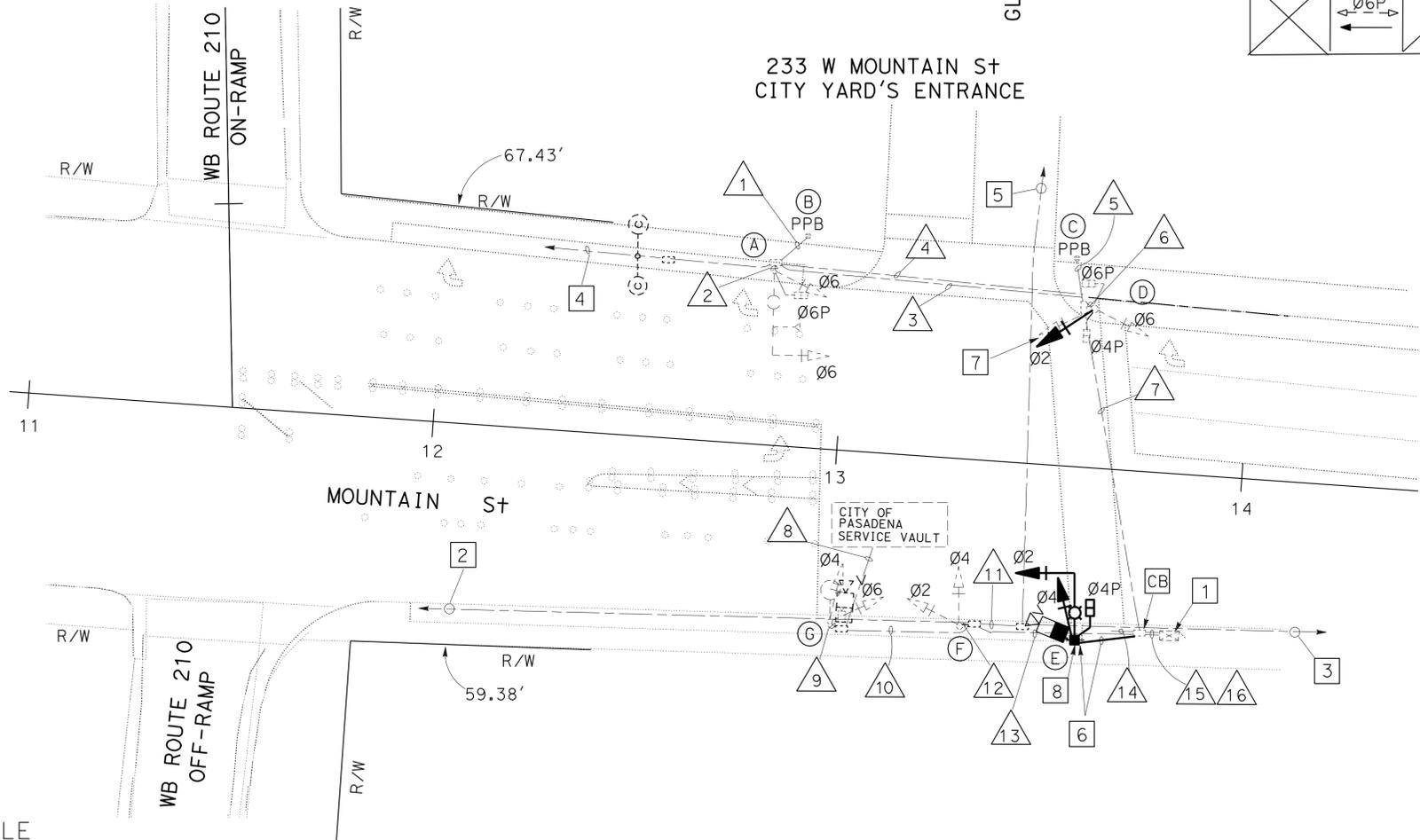
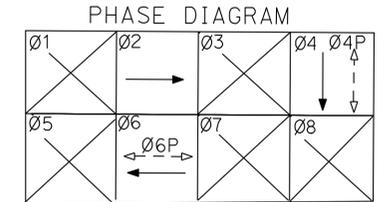
EXISTING POLE AND EQUIPMENT SCHEDULE

No.	TYPE	STANDARD		veh sig mtg		ped SIGNAL		ppb		hps LUMINAIRE
		SMA	LMA	MAST ARM	POLE	mtg	Ø	ARROW		
(A)	17-3-100	20'	6'	mas	SV-1-T	SP-1-T	-	-	250 W	
(B)	PPB	-	-	-	-	-	6	→	-	
(C)	PPB	-	-	-	-	-	6	←	-	
(D)	1-A	-	-	-	TV-2-T	SP-2-T	4	→	-	
(E)	WOOD POLE (N)	15'(N)	6'(N)	MAS (N)	SV-1-T(N)	SP-1-T (N)	4	←	250 W	
(F)	1-A	-	-	-	TV-2-T	-	-	-	-	
(G)	15TS	-	6'	-	SV-2-T	-	-	-	250 W	

(N) - NEW * SEE SES-2 PLANSHEET FOR WOOD POLE DETAILS.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	210	R24.2	18	36

REGISTERED ELECTRICAL ENGINEER DATE: 2/7/13
 C. BURCIAGA No. E015302 Exp. 3/31/15
 REGISTERED PROFESSIONAL ENGINEER STATE OF CALIFORNIA
 PLANS APPROVAL DATE: 3-11-13
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



EXISTING CONDUIT AND CONDUCTOR SCHEDULE

CONDUCTOR	CONDUCTOR RUN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
3CSC		1		1		1	1	3							1	4	
12CSC			1				1			1	1		1		2		
28CSC				1				1					1		2		
SUBTOTAL		1	1	2	-	1	2	4	-	1	1	-	1	1	3	6	-
VIDEO DETECTION CABLE										1	1			1	1		2
12 PR COMMUNICATIONS CABLE												1					
6 SINGLEMODE FIBER OPTIC												1		1			1
48 SINGLEMODE FIBER OPTIC												1					
#10	STREET LIGHTS		2							2					2		
#8	STREET LIGHTS				2				2								
#8	CONTROLLER CABINET										3			3			
#4	SERVICE								3								
PRE-EMPTION CABLE			1		1					1							
CONDUIT		1 1/2"	2"	2"	2"	1 1/2"	2"	3"	2 1/2"	2"	2 1/2"	1 1/2"	2"	2 1/2"	2 1/2"	3"	3"

MOUNTAIN STREET AT CITY YARD (TEMPORARY SIGNAL POLE)

MODIFY SIGNAL AND LIGHTING (CITY)

SCALE: 1" = 20'

E-3

APPROVED FOR ELECTRICAL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR	YI TSAU
CALCULATED/DESIGNED BY	CHECKED BY
CECILIO BURCIAGA	YI TSAU
REVISED BY	DATE REVISED

NOTE: (THIS SHEET)

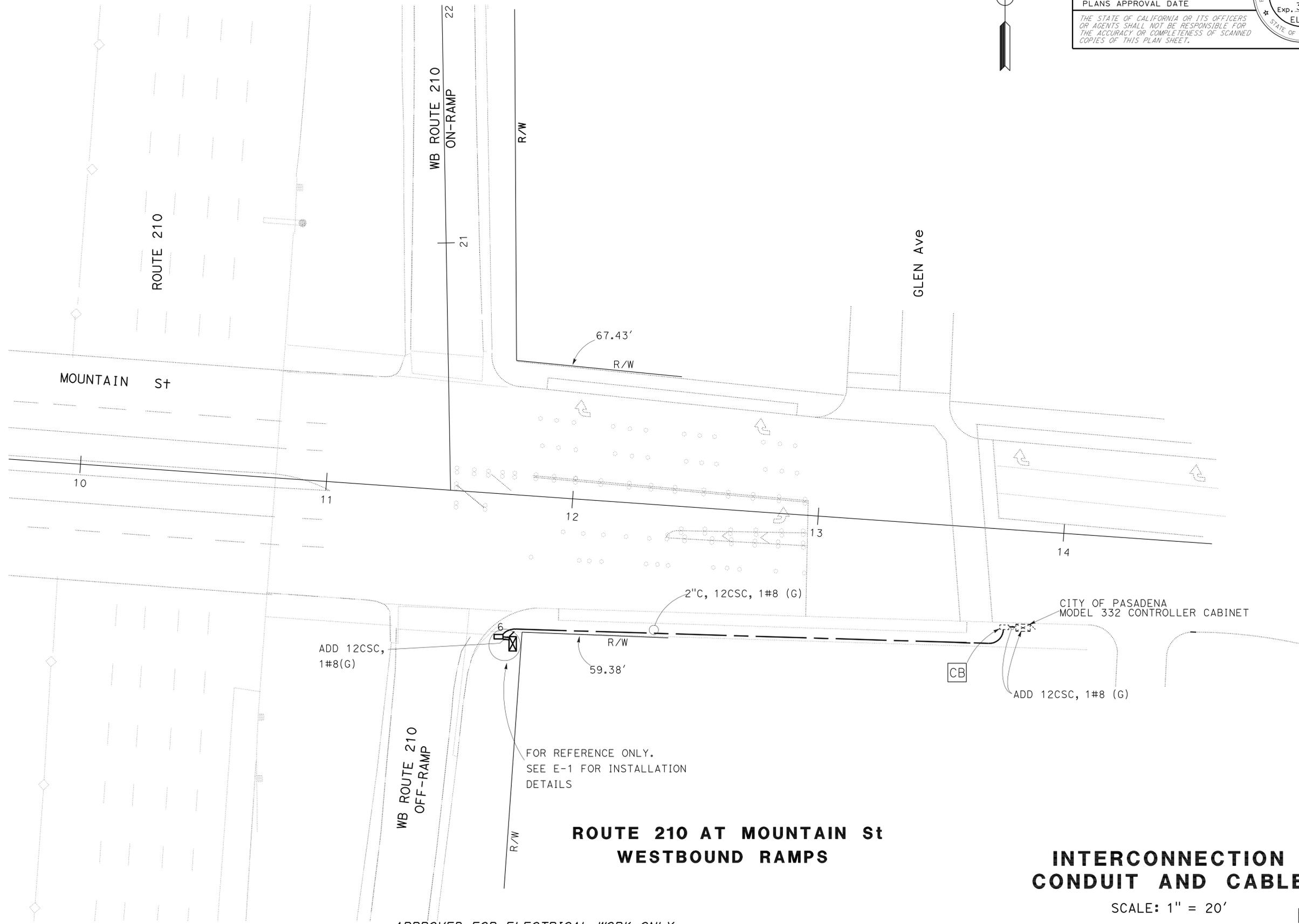
- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	210	R24.2	19	36

REGISTERED ELECTRICAL ENGINEER DATE: 2/7/13
 C. BURCIAGA
 No. E015302
 Exp. 3/31/15
 ELECT

PLANS APPROVAL DATE: 3-11-13

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



FOR REFERENCE ONLY.
 SEE E-1 FOR INSTALLATION
 DETAILS

**ROUTE 210 AT MOUNTAIN St
 WESTBOUND RAMPS**

**INTERCONNECTION
 CONDUIT AND CABLE**

SCALE: 1" = 20'

E-4

APPROVED FOR ELECTRICAL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: YI TSAU
 CALCULATED/DESIGNED BY: YI TSAU
 CHECKED BY: YI TSAU
 REVISIONS: REVISED BY: CECILIO BURCIAGA, DATE: 2/7/13

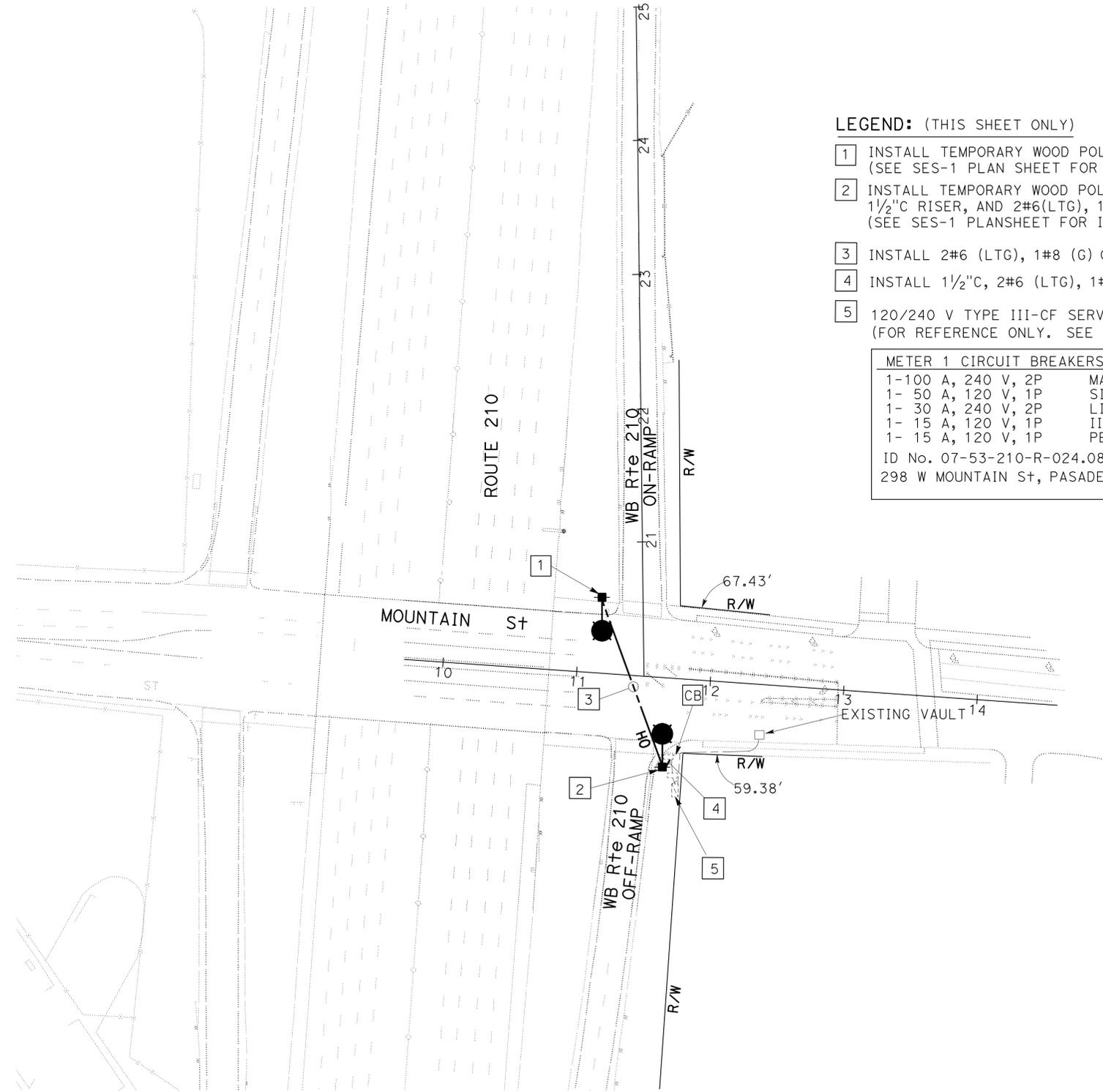
NOTES: (THIS SHEET)

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- RELOCATE LED LUMINAIRE HEADS TO NEW SIGNAL POLES WHEN NEW SIGNAL POLES ARE INSTALLED AND READY FOR TURN ON, OR AS DIRECTED BY THE ENGINEER.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	210	R24.2	21	36

REGISTERED ELECTRICAL ENGINEER: C. BURCIAGA
 No. E015302
 Exp. 3/31/15
 DATE: 2/7/13
 PLANS APPROVAL DATE: 3-11-13

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



LEGEND: (THIS SHEET ONLY)

- INSTALL TEMPORARY WOOD POLE WITH 6' LUMINAIRE ARM AND 235 W LED LUMINAIRE HEAD. (SEE SES-1 PLAN SHEET FOR INSTALLATION DETAILS)
- INSTALL TEMPORARY WOOD POLE WITH 6' LUMINAIRE ARM, 235 W LED LUMINAIRE HEAD, 1 1/2" C RISER, AND 2#6(LTG), 1#8(G). (SEE SES-1 PLANSHEET FOR INSTALLATION DETAILS)
- INSTALL 2#6 (LTG), 1#8 (G) OVERHEAD CONDUCTORS WITH 20' MINIMUM VERTICAL CLEARANCE.
- INSTALL 1 1/2" C, 2#6 (LTG), 1#8 (G).
- 120/240 V TYPE III-CF SERVICE EQUIPMENT ENCLOSURE (FOR REFERENCE ONLY. SEE E-1 FOR INSTALLATION DETAILS)

METER 1 CIRCUIT BREAKERS:		METER 2 CIRCUIT BREAKERS:	
1- 100 A, 240 V, 2P	MAIN	1- 100 A, 240 V, 2P	MAIN
1- 50 A, 120 V, 1P	SIGNAL	1- 30 A, 120 V, 1P	RAMP METER
1- 30 A, 240 V, 2P	LIGHTING	ADD 1- 30 A, 240 V, 2P	TEMPORARY LIGHTING
1- 15 A, 120 V, 1P	IISNS		
1- 15 A, 120 V, 1P	PEC		
ID No. 07-53-210-R-024.084		ID No. 07-53-210-R-024.086	
298 W MOUNTAIN St, PASADENA		298 1/2 W MOUNTAIN St, PASADENA	

**ROUTE 210 AT MOUNTAIN St
 WESTBOUND RAMPS**

LIGHTING (TEMPORARY)

SCALE: 1" = 50'

E-6

APPROVED FOR ELECTRICAL WORK ONLY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	210	R24.2	22	36

REGISTERED ELECTRICAL ENGINEER DATE 2/7/13
 C. BURCIAGA
 No. E015302
 Exp. 3/31/13
 ELECT

3-11-13
 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.



NOTE: (THIS SHEET)

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

LEGEND: (THIS SHEET)

- INSTALL "METER ON" SIGN ON 7' TYPE 1-A POLE.
- INSTALL 2 "METER ON" SIGNS ON 7' TYPE 1-A POLE.
- INSTALL 2"C, 2#12, 1#8 (G).
- 120/240 V SERVICE EQUIPMENT ENCLOSURE (SEE E-1 FOR INSTALLATION DETAILS)
- ADJUST PULL BOX FLUSH TO NEW CURB RAMP GRADE.

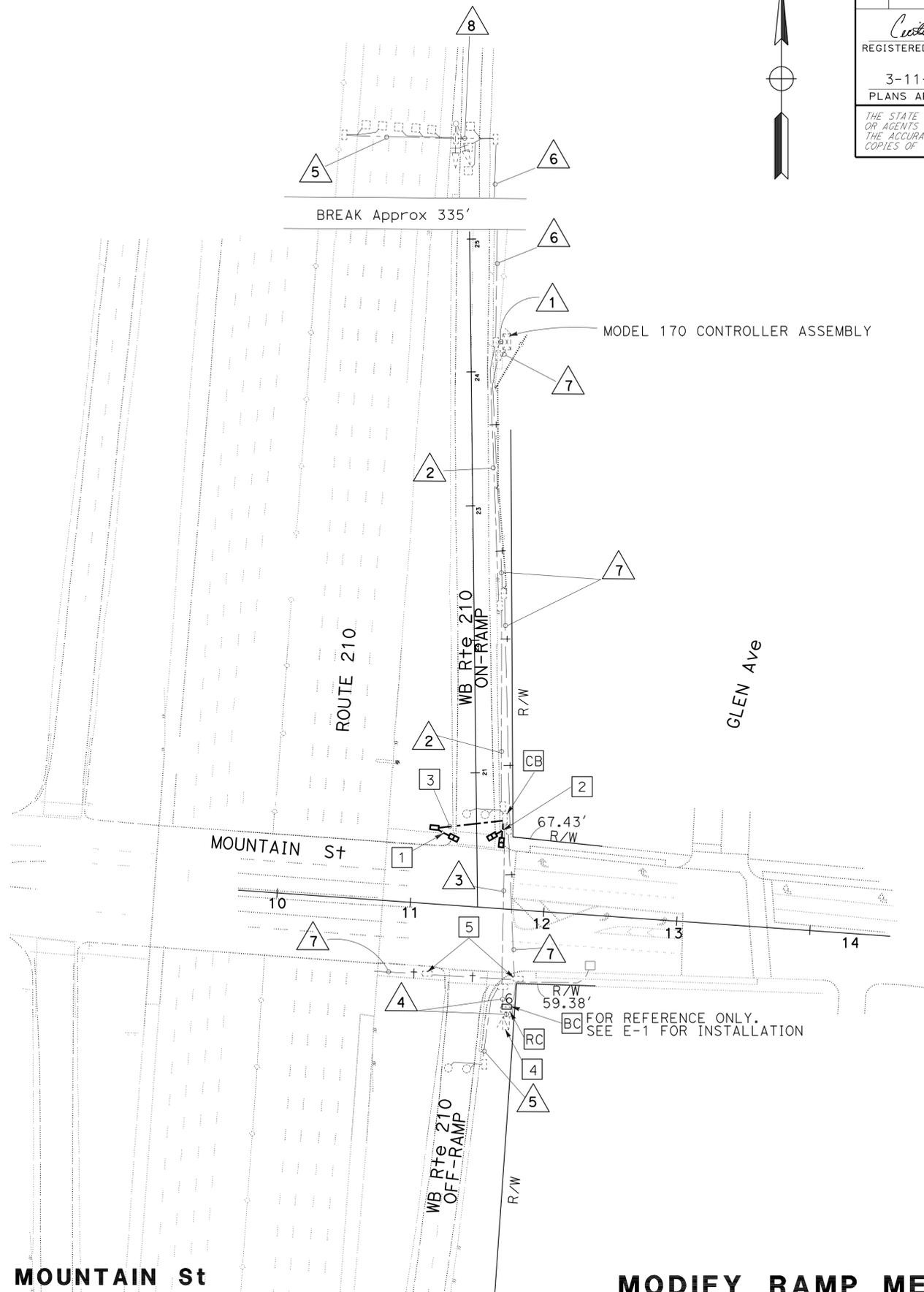
REVISOR	DATE	REVISION

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: YI TSAU
 CALCULATED/DESIGNED BY: CECILIO BURCIAGA
 CHECKED BY: YI TSAU

EXISTING CONDUIT AND CONDUCTOR SCHEDULE

CONDUCTOR	CIRCUIT	RUN NUMBER							
		NUMBER OF CONDUCTORS							
		1	2	3	4	5	6	7	8
#14	RAMP SIGNAL	3					3		3
	SPARES	3					3		3
#12	"METER ON" SIGN	2 (N)	2 (N)						
#10	SIGNAL COMMON	1					1		1
#8	SERVICE	2	2	2	2				
#8	EQUIPMENT GROUND	1 (N)	1 (N)						
4#18 TEL CABLE	TELEPHONE SERVICE							1	
2#12 dlc	DEMAND DETECTOR	1					1		
	PASSAGE DETECTOR	1					1		
	QUEUE DETECTOR	2	2						
	COUNT DETECTOR	7	2	2		2	5		5
	TOTAL dlc	11	4	2		2	7		5
CONDUIT SIZE		2-3"	2"	2"	2"	2"	2 1/2"	1"	2"

(N) - NEW



**ROUTE 210 AT MOUNTAIN St
WESTBOUND RAMPS**

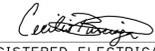
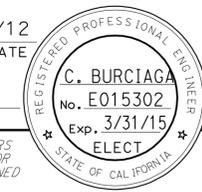
MODIFY RAMP METERING SYSTEM

SCALE: 1" = 50'

E-7

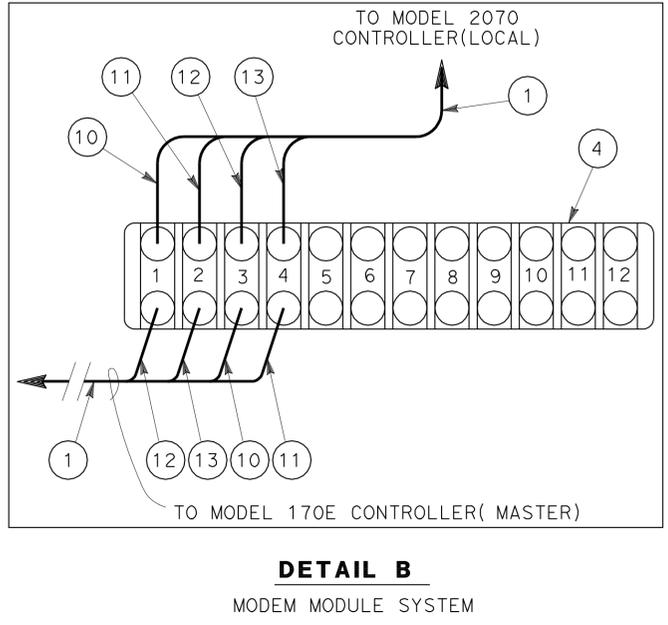
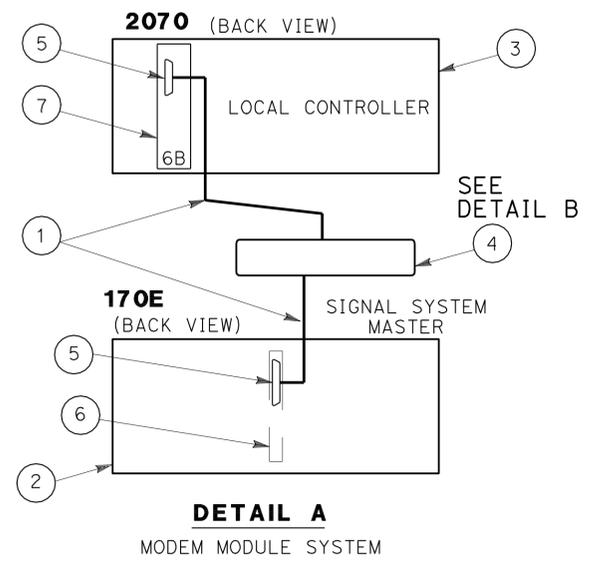
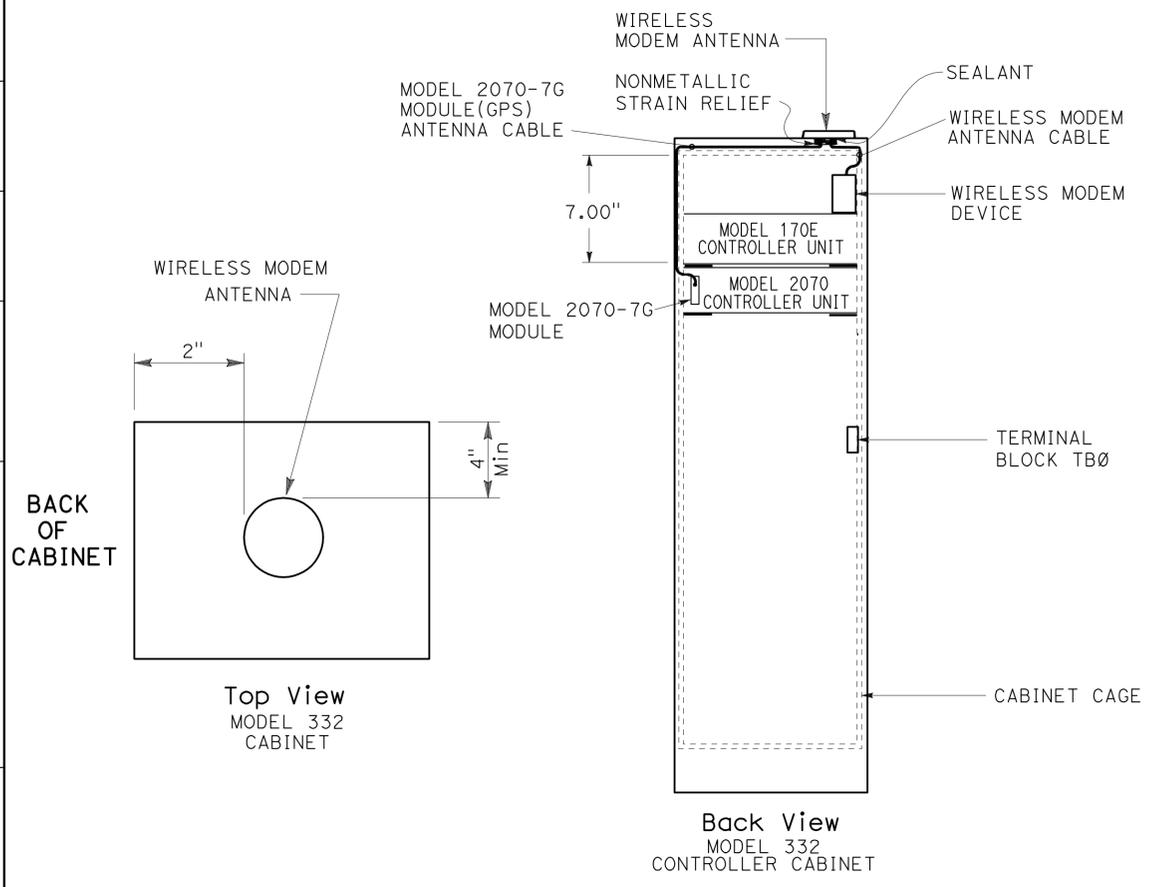
APPROVED FOR ELECTRICAL WORK ONLY



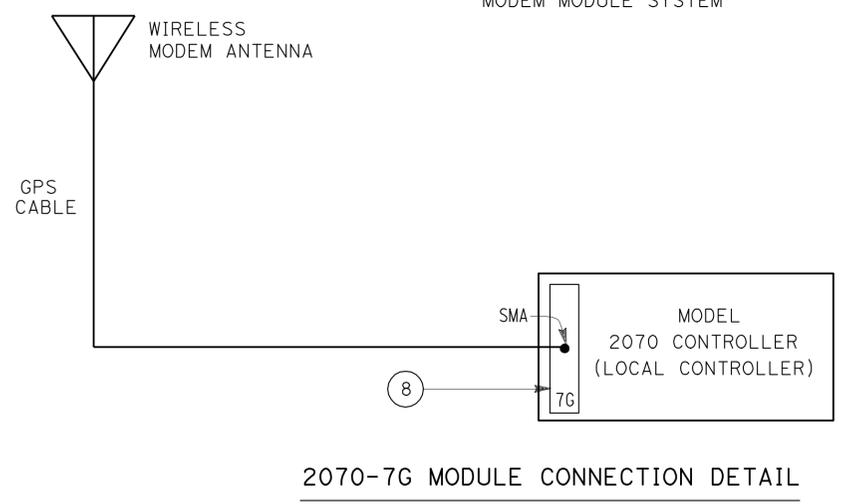
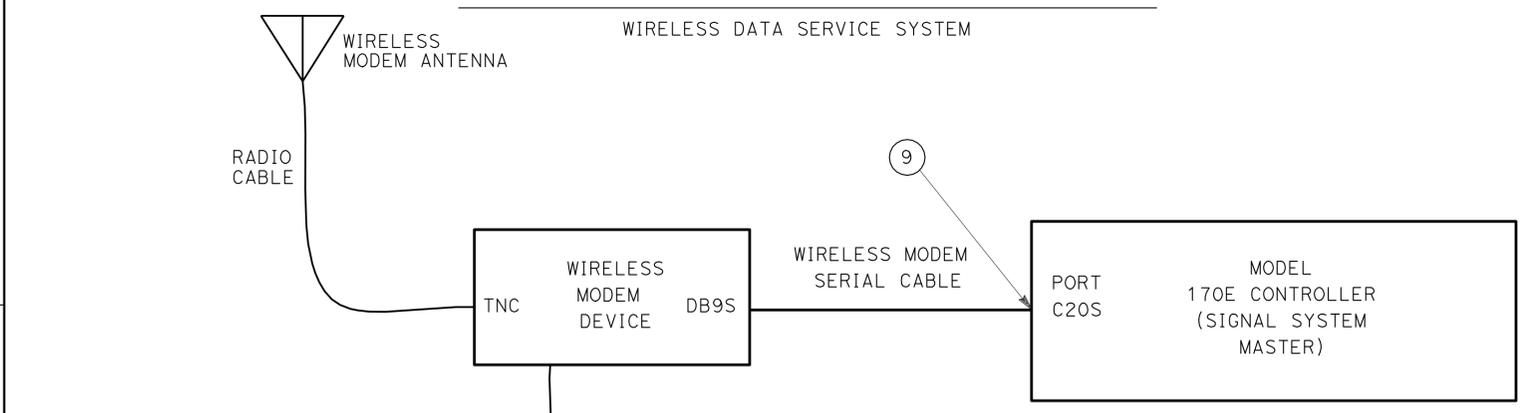
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	210	R24.2	23	36
			2/7/12	REGISTERED ELECTRICAL ENGINEER DATE	
3-11-13			PLANS APPROVAL DATE		
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					
					

LEGEND: (THIS SHEET)

- ① C2P MODEM INTERCONNECT HARNESS
- ② MODEL 170E CONTROLLER
- ③ MODEL 2070 CONTROLLER
- ④ TERMINAL BLOCK Ø (TBØ)
- ⑤ C2S PORT
- ⑥ MODEL 400B MODEM IN MODEM SLOT 1
- ⑦ MODEL 2070-6B MODEM IN SLOT A2
- ⑧ MODEL 2070-7G MODULE IN SLOT A1
- ⑨ CONNECTOR C2P
- ⑩ C2 A SIGNAL (AUDIO IN)
- ⑪ C2 B SIGNAL (AUDIO IN)
- ⑫ C2 C SIGNAL (AUDIO OUT)
- ⑬ C2 E SIGNAL (AUDIO OUT)

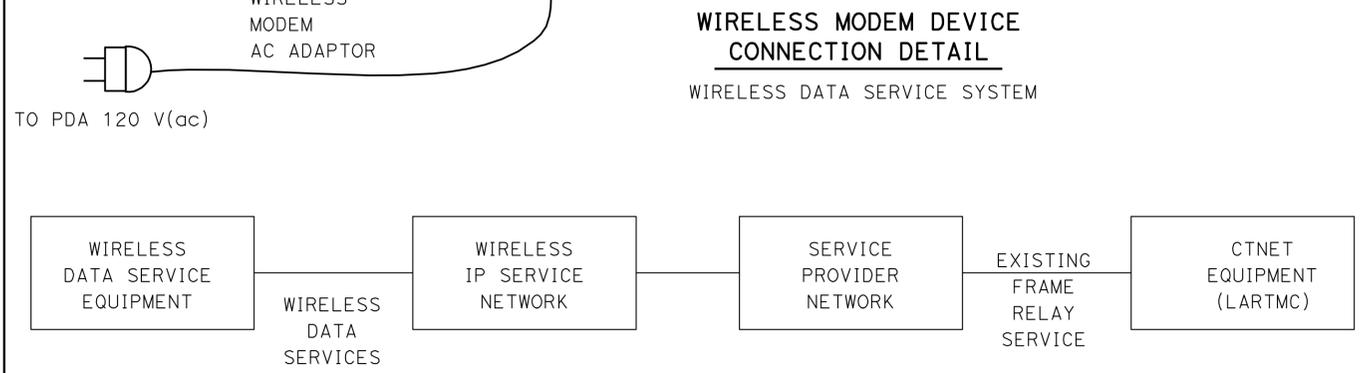


WIRELESS MODEM DEVICE, GPS TIME SOURCE DEVICE, AND WIRELESS MODEM ANTENNA PLACEMENT DETAIL



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
- IP INTERNET PROTOCOL
- GPS GLOBAL POSITIONING SYSTEM
- DB9S SERIES D SUBMINIATURE CONNECTOR, E SIZE SHELL, 9 PIN SOCKET
- TNC THREADED NEILL-CONCELMAN
- SMA SUBMINIATURE VERSION A
- BNC BAYONET NEILL-CONCELMAN
- C2P C2 PLUG
- C2S C2 SOCKET

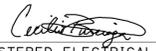
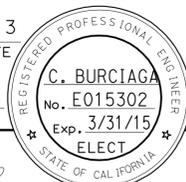


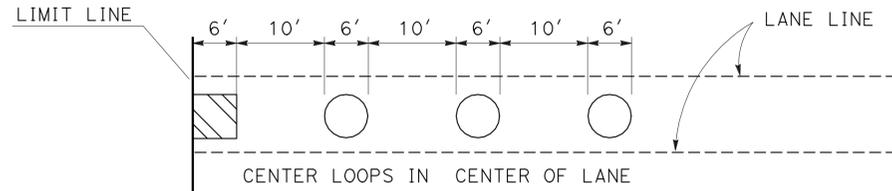
WIRELESS CONNECTIVITY DETAIL
WIRELESS DATA SERVICE SYSTEM

MODEL 2070-7G MODULE, WIRELESS DATA SERVICE AND MODEM MODULE SYSTEMS

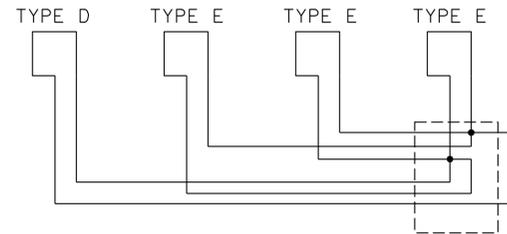
ELECTRICAL DETAILS
NO SCALE
E-8

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 CECILIO BURCIAGA
 YI TSAU
 YI TSAU
 YI TSAU
 TRAFFIC DESIGN

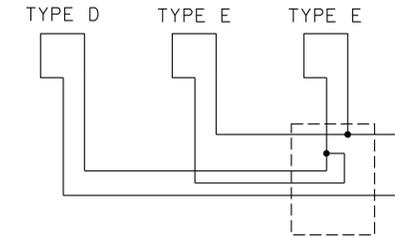
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	210	R24.2	24	36
			2/7/13	DATE	
REGISTERED ELECTRICAL ENGINEER					
3-11-13			PLANS APPROVAL DATE		
					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					



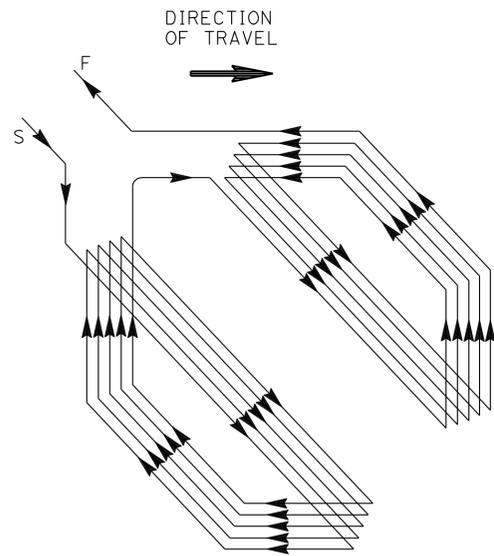
TYPICAL LOOP DETAIL



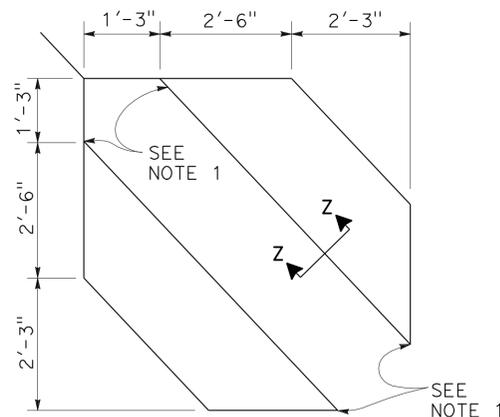
LOOP CONNECTION



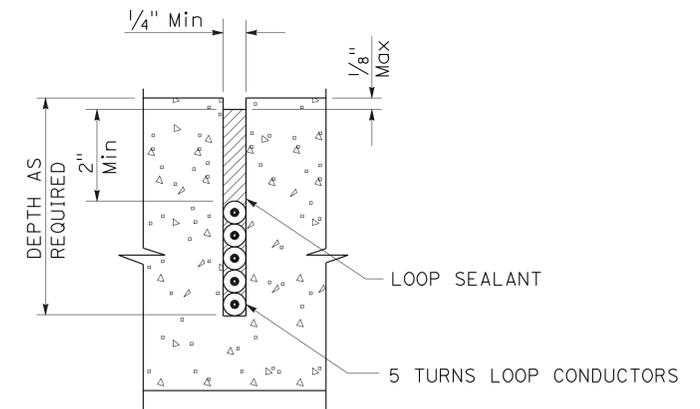
LOOP CONNECTION



WINDING DETAIL



SAWCUT DETAIL



SECTION Z-Z (FOR TYPE D LOOP DETECTOR)

TYPE D LOOP DETECTOR CONFIGURATION

SLOT DETAILS - TYPE 2 LOOP CONDUCTOR

NOTES:

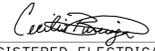
1. ROUND CORNERS OF ACUTE ANGLE SAWCUTS TO PREVENT DAMAGE TO CONDUCTORS.
2. USE SECTION Z-Z INSTEAD OF A-A IN ES-5A FOR TYPE D LOOP DETECTOR.
3. INSTALL 5 TURNS FOR ALL TYPE D LOOPS.

ELECTRICAL DETAILS

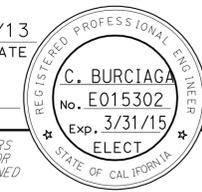
NO SCALE

E-9

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	210	R24.2	25	36

 2/7/13
 REGISTERED ELECTRICAL ENGINEER DATE
 3-11-13
 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.



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

SIGNAL AND LIGHTING

SHEET No.	TYPE 29A POLE (EA) (N)	TYPE 24A POLE (EA) (N)	TYPE 19A POLE (EA) (N)	TYPE 21TS POLE (EA) (N)	TYPE 1-A POLE (FT) (N)	SIGNAL HEAD (EA) (N)	PV SIGNAL HEAD (EA) (N)	PED SIGNAL HEAD (EA) (N)	APS (EA) (N)	SF 2070 ASSEMBLY (EA) (N)	BATTERY BACKUP (EA) (N)	TYPE E LOOP (EA) (N)	TYPE D LOOP (EA) (N)	STUB OUT (EA) (N)	#6 PB (EA) (N)	#5 PB (EA) (N)	3"C (FT) (N)	2"C (FT) (N)	28CSC (FT) (N)	9CSC (FT) (N)	3CSC (FT) (N)	#6 (FT) (N)	#10 (FT) (N)	#8G (FT) (N)	DLC (FT) (N)	CC (EA) (N)	IISNS (EA) (N)	235 W Lum HEAD (EA) (N)
E-1	1	1	1	1	1	11	3	4	4	1	1	28	9	6	5	5	385	470	740	40	40	60	520	560	2780	1	3	4
TOTAL	1	1	1	1	1	11	3	4	4	1	1	28	9	6	5	5	385	470	740	40	40	60	520	560	2780	1	3	4

INTERCONNECTION CONDUIT AND CABLE

SHEET No.	2"C (FT) (N)	#8G (FT) (N)	12CSC (FT) (N)
E-4	205	225	225
TOTAL	205	225	225

MODIFY LIGHTING (CITY)

SHEET No.	RS CITY Lgt POLE & RC FOUNDATION (EA) (N)	RC-pb (EA) (N)	AB-CONDUIT (FT) (N)	RC LIGHTING CONDUCTORS (FT) (N)
E-5	2	2	90	470
TOTAL	2	2	90	470

LIGHTING (TEMPORARY)

SHEET No.	Temp LIGHTING ON WOOD POLE (EA) (N) *	OH CONDUCTORS (2#6,1#8G) (FT) (N)	(2#6,1#8G) (FT) (N)	2"C (FT) (N)
E-6	2	135	55	10
TOTAL	2	135	55	10

* 235 W LED LUMINAIRE HEAD SHOWN ON SHEET E-1.

MODIFY RAMP METERING SYSTEM

SHEET No.	TYPE 1-A SIGNAL POLE & FOUNDATION (EA) (N)	METER-ON SIGN (EA) (N)	BORE 2"C (FT) (N)	#8 EGC (FT) (N)	#12 AWG (FT) (N)
E-7	2	3	50	400	800
TOTAL	2	3	50	400	800

ELECTRICAL QUANTITIES

E-10

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: YI TSAU
 CALCULATED/DESIGNED BY: CECILIO BURCIAGA
 CHECKED BY: YI TSAU
 REVISED BY: YI TSAU
 DATE REVISED:

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	210	R24.2	26	36

<i>C. Burciaga</i>	2/7/13
REGISTERED ELECTRICAL ENGINEER	DATE
3-11-13	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
C. BURCIAGA
No. E015302
Exp. 3/31/15
ELECT
STATE OF CALIFORNIA

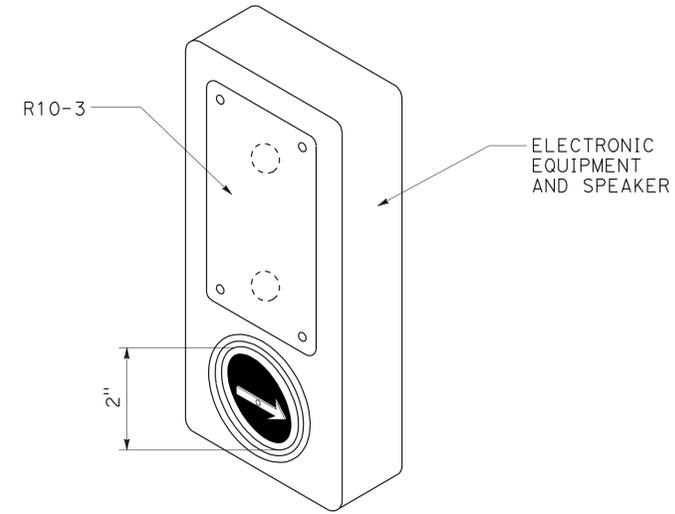
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



LEFT RIGHT BOTH

PEDESTRIAN PUSH BUTTON SIGNS (R10-3)

DETAIL A



ACCESSIBLE PEDESTRIAN SIGNAL

DETAIL B



PERSON WALKING INTERVAL



FLASHING UPRAISED HAND INTERVAL



STEADY UPRAISED HAND INTERVAL

PEDESTRIAN SIGNAL FACE

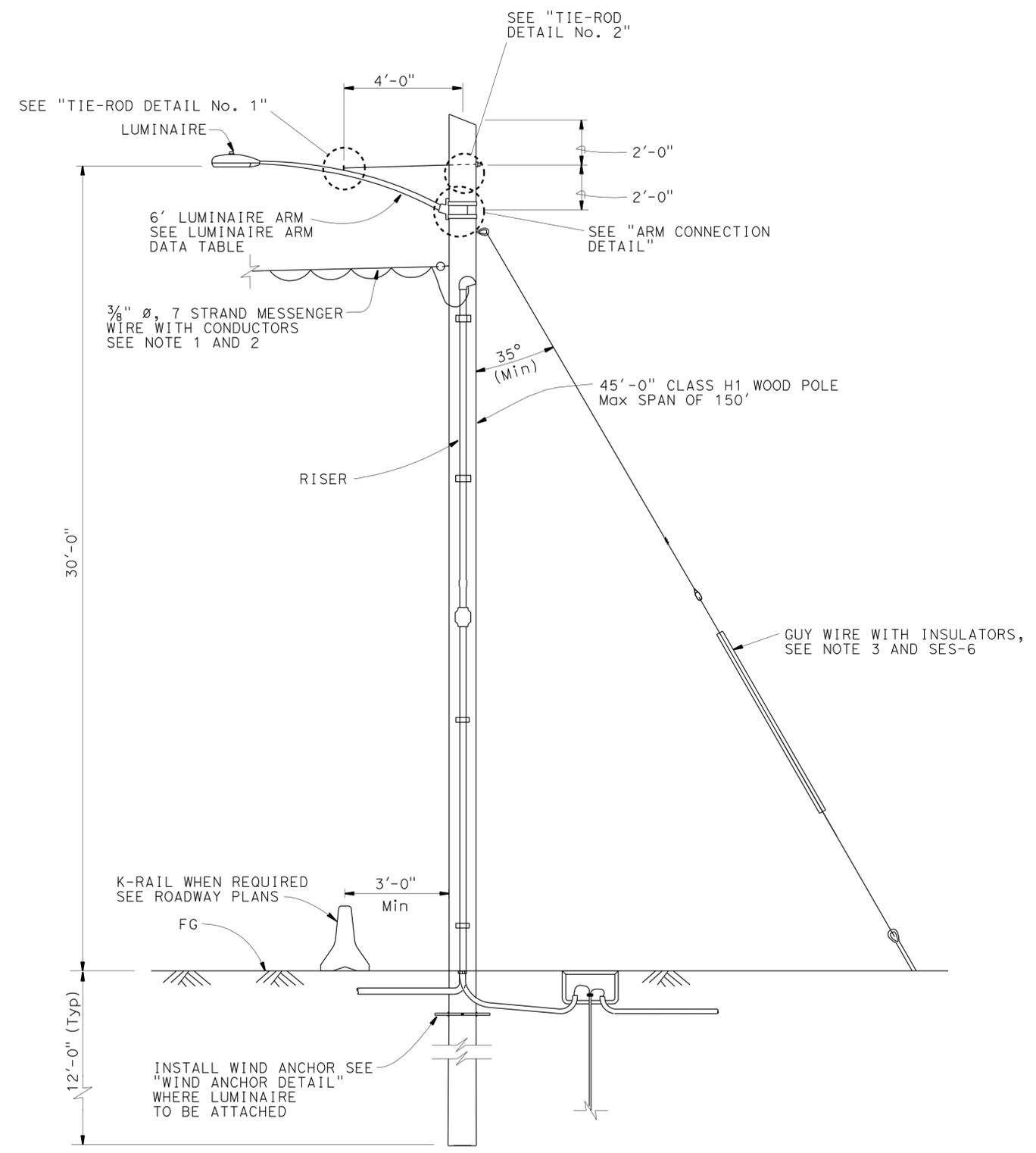
DETAIL C

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: YI TSAU
 CALCULATED/DESIGNED BY: YI TSAU
 CHECKED BY:
 REVISIONS:
 REVISION BY: _____ DATE: _____
 REVISION BY: _____ DATE: _____
 REVISION BY: _____ DATE: _____

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	210	R24.2	27	36
			DATE	1/24/13	
			REGISTERED CIVIL ENGINEER	TAMARA S. MARCHENKO	
			PLANS APPROVAL DATE	3-11-13	
			No.	C76837	
			Exp.	12/31/13	
			CIVIL	STATE OF CALIFORNIA	

LUMINAIRE ARM DATA			
Projected Length	N Rise	Min OD At Pole	Thickness
6'-0"	2'-0"	3/4"	0.1196"

Refer to SP ES-6A for Luminaire arm details



GENERAL NOTES:

- Applicable to all SES sheets
 - Design: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals dated 2009 and 2010 interim.
 - LOADING**
 - Wind Loadings: 100 MPH
 - UNIT STRESSES**
 - Timber Poles: Tapered treated round pole ASTM D2899 Standard
 - Fb = 1850 psi
 - Fv = 110 psi
 - E = 1500 x 10³ psi
 - TREATMENT**
 - To conform with Section 86 Standard Specifications 2010
 - SPECIFICATIONS**
 - Caltrans Standard Specifications 2010
 - ANSI 05 Wood Poles
 - ASTM A475 Utility Grade Wires
- All attachments shall be mounted with stainless steel straps or other manufacturers methods without drilling holes in pole, except as shown. Drilling through pole will require the Engineer's approval.
 - Foundation design is based on AASHTO 2009 article 13.6 Broms' approximate procedure assuming a cohesionless material. The angle of internal friction used is 30° and unit weight of soil used is 120 lb/ft³. The Contractor to verify actual soil condition.
 - If pole is located on or near a steep slope add 2 feet extra for embedment.
 - See Sheets SES-1 thru SES-6 for layout and details.
 - For details not shown, see "2010 STANDARD PLANS".
 - All temporary poles support OH Conductors. Attach luminaire arm and combination of attachments as specified at locations where indicated on Electrical Sheets.
 - Overhead line construction not specifically covered here shall conform with the provisions of General Order No. 95 of Public Utilities Commission.
 - Poles shall be protected from traffic.

NOTES:

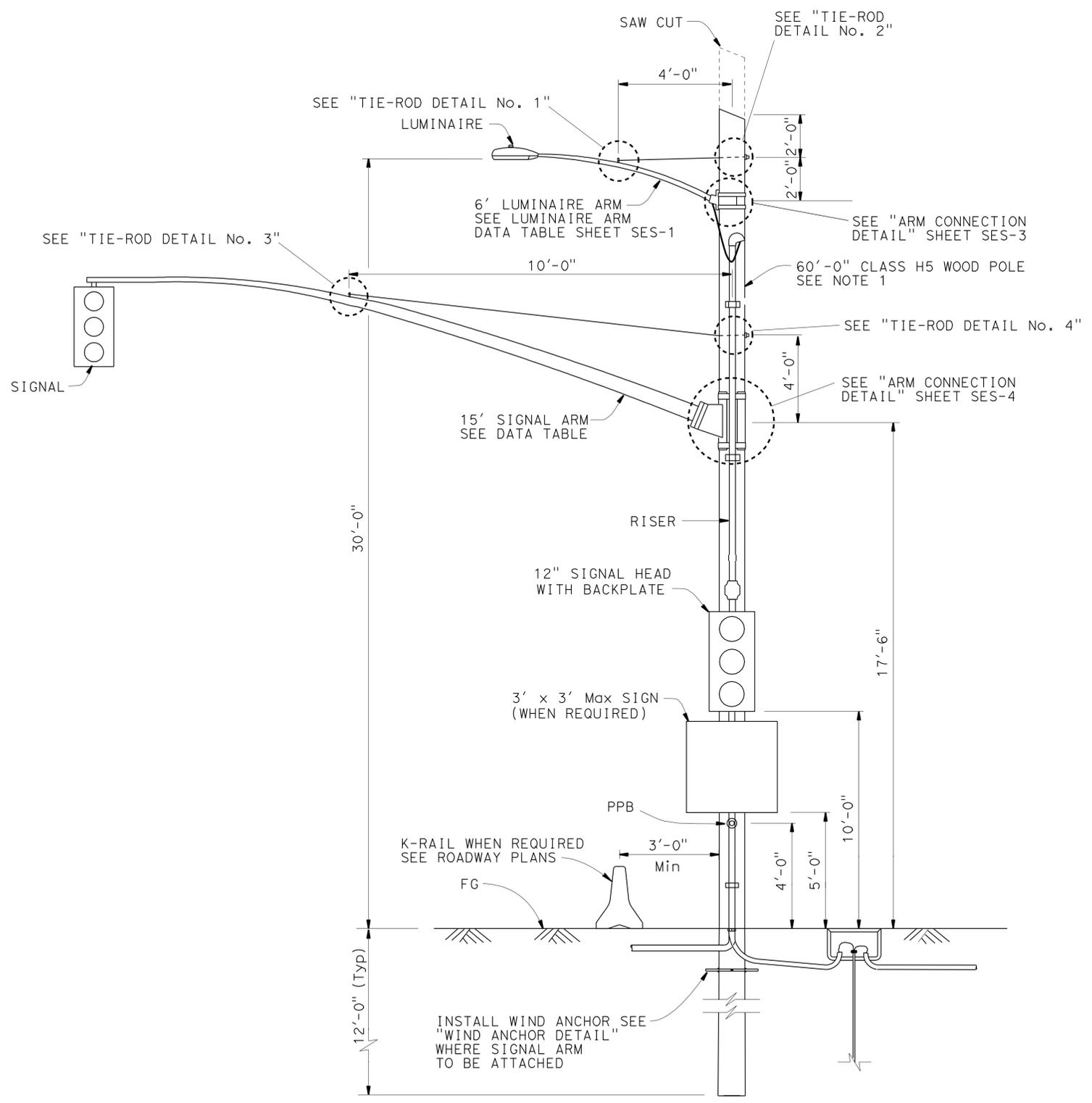
- All overhead cables shall be slack spanned with 20'-0" minimum overhead clearance.
- Conductors shall be suspended from span-wire as follows:
Main run 3/8" span-wire with 5% + 0.5% sag. Minimum breaking strength for wire connections shall be 11500 lb. No spare conductors allowed except as noted.
- Wood poles shall be stabilized using guy wires, breast blocks or rakes at each dead end, corner, drop or line deviation more than 15° from straight line. The direction of the guy shall counteract the resultant of unbalanced force applied to pole. Where space or conflict prevent guy installation, a diagonal brace shall be used. The brace shall be wood and shall be connected to the pole by means to satisfy structural and electrical requirements. The direction of the brace shall counteract the resultant of unbalanced horizontal force of 4000 pounds (Min) applied to the pole.
- Guy wire shall be attached to pole as nearly as practical to the messenger wire connection point, or 3'-0" Max otherwise, See Note 3.
- See sheets SES-3 and SES-6 for details.

WOOD POLE SUPPORT FOR OVERHEAD CONDUCTORS

NO SCALE

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

BRANCH CHIEF JOEL MAGANA	DESIGN	BY T MARCHENKO	CHECKED V LOPEZ	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN SPECIAL DESIGN BRANCH	BRIDGE NO.	N/A	TEMPORARY SIGNAL & LIGHTING WOOD POLE FOR OH & LIGHTING	SES-1
	DETAILS	BY H NGUYEN	CHECKED V LOPEZ			POST MILE	R24.2		
	QUANTITIES	BY	CHECKED X						



SIGNAL ARM DATA			
Projected Length	Mount Height	Min OD At Pole	Thickness
15'-0"	21'-8"±	7 3/8"	0.1196"

Refer to SP ES-7C for Signal arm details

NOTES:

- Sawcut wood pole 2' above luminaire tie-rod connection after luminaire arm installation is completed.
- See sheets SES-4 and SES-5 for details.

WOOD POLE SUPPORT FOR SIGNAL ARM

NO SCALE

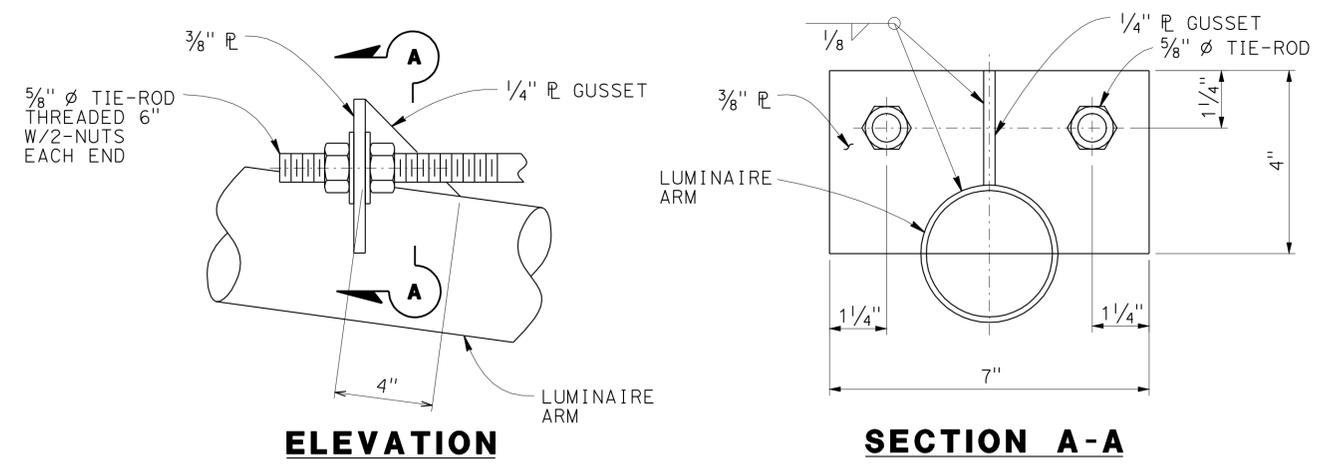
NOTE:
 THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

BRANCH CHIEF JOEL MAGANA	DESIGN BY T MARCHENKO	CHECKED V LOPEZ	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH	BRIDGE NO. N/A	TEMPORARY SIGNAL AND LIGHTING WOOD POLE FOR SIGNAL ARM	SES-2
	DETAILS BY H NGUYEN	CHECKED V LOPEZ			POST MILE R24.2		
	QUANTITIES BY	CHECKED X					

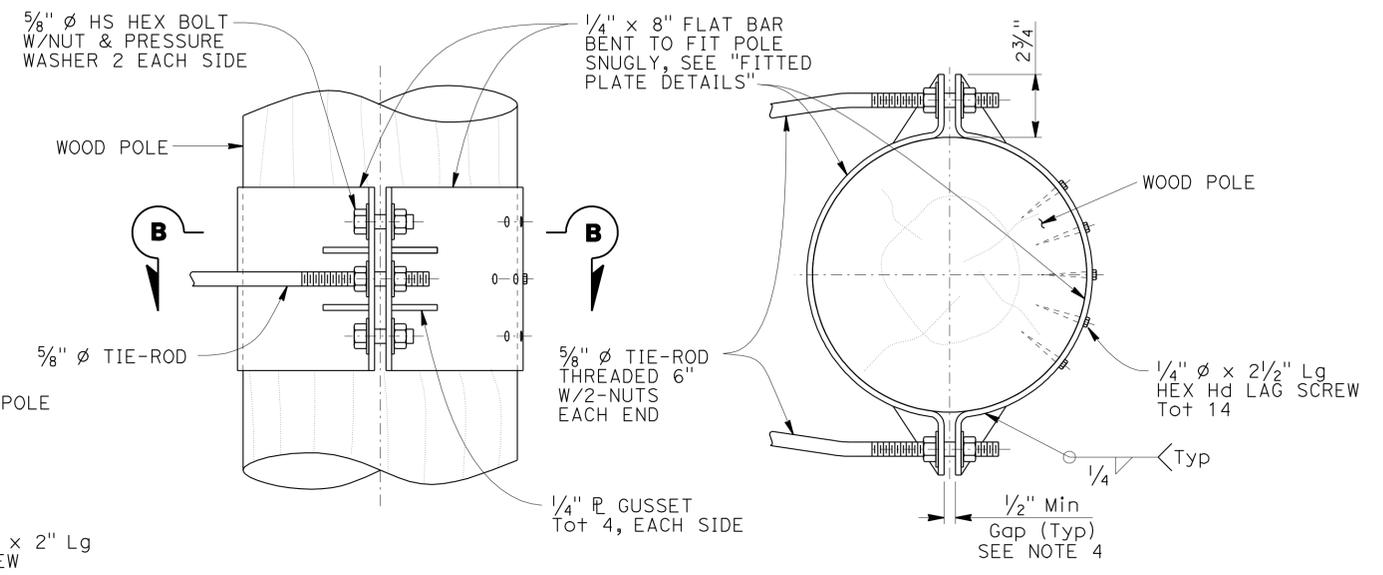
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07	LA	210	R24.2	29	36
			1/24/13		
REGISTERED CIVIL ENGINEER			DATE		
			3-11-13		
			PLANS APPROVAL DATE		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					

NOTES:

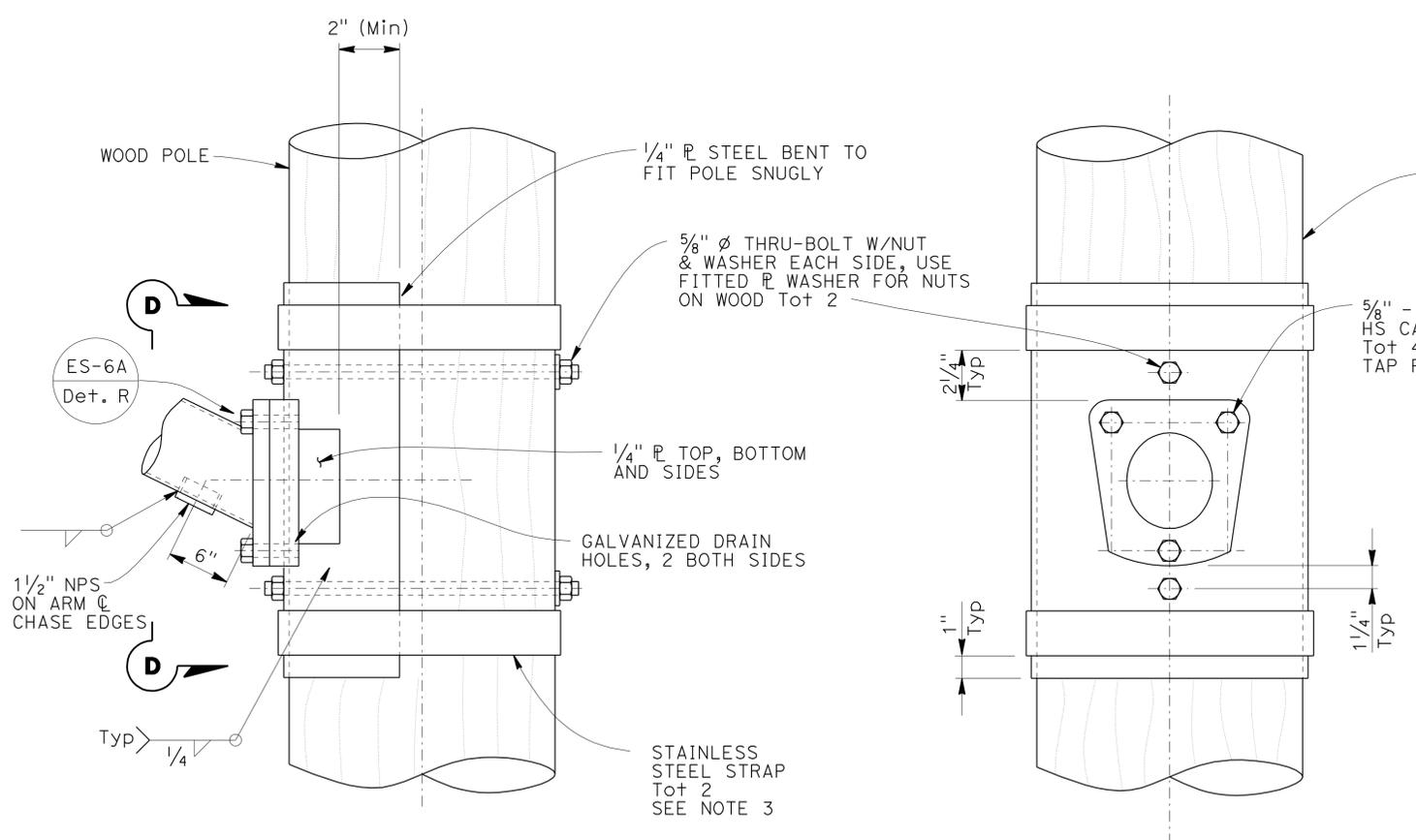
1. All hardware and steel shall be galvanized after fabrication.
2. Arm Base connection details shall be in compliance with Standard Plans Detail Sheet SP ES-6A with noted modifications.
3. 2000 lb Min breaking strength strap system shall be used for top and bottom of plate.
4. The Contractor to verify pole dimensions at Tie-Rod attachment height. Fabricate 8" flat bar with "L" Dimension to maintain an open gap between encasement in finished installation.



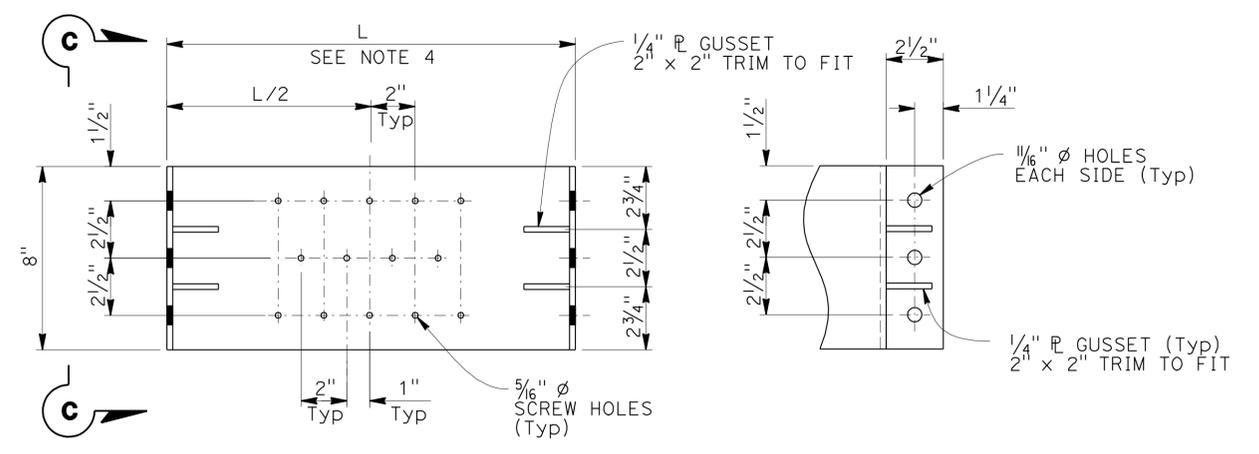
TIE-ROD DETAIL No. 1



TIE-ROD DETAIL No. 2



ARM CONNECTION DETAILS



FITTED PLATE DETAILS

Note: 2 Required (1 w/screw holes, 1 without)

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

NO SCALE

BRANCH CHIEF	DESIGN	BY T MARCHENKO	CHECKED V LOPEZ
	DETAILS	BY H NGUYEN	CHECKED V LOPEZ
	QUANTITIES	BY	CHECKED X

STATE OF CALIFORNIA	DIVISION OF ENGINEERING SERVICES	BRIDGE NO.	TEMPORARY SIGNAL AND LIGHTING
DEPARTMENT OF TRANSPORTATION	DESIGN AND TECHNICAL SERVICES	N/A	LUMINAIRE ARM MOUNTING DETAILS
	SPECIAL DESIGNS BRANCH	POST MILE	SES-3
		R24.2	

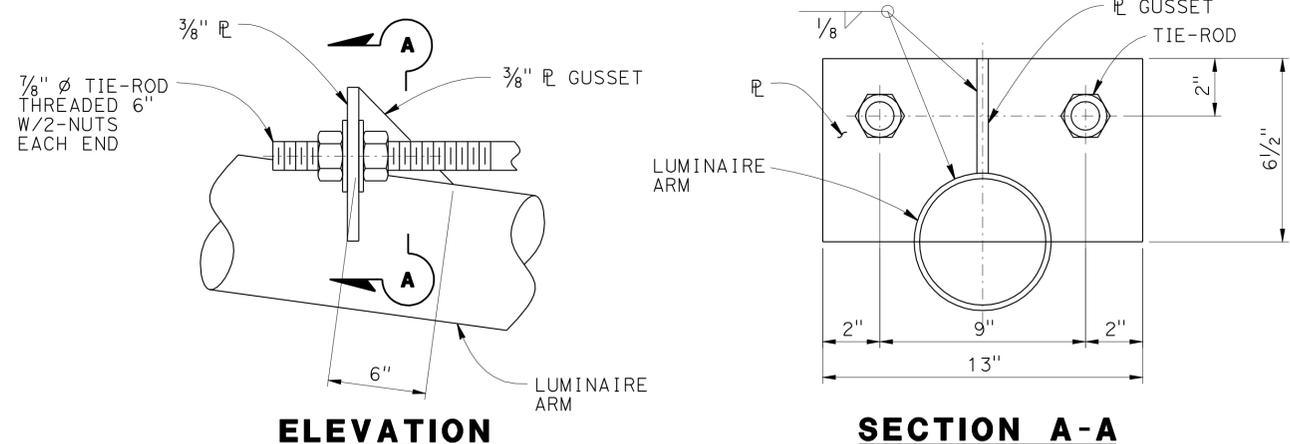
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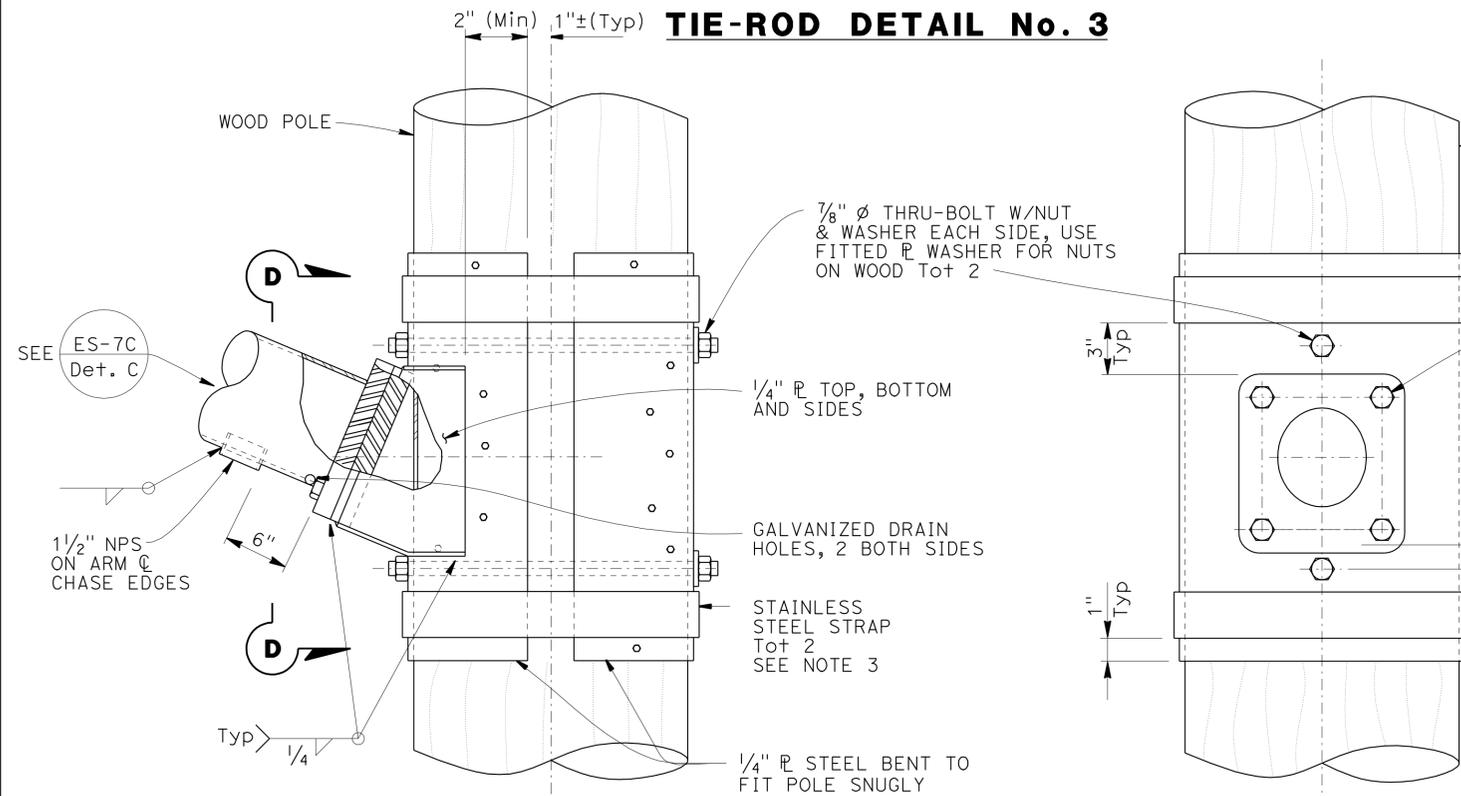
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	210	R24.2	30	36
REGISTERED CIVIL ENGINEER			DATE	1/24/13	
PLANS APPROVAL DATE			3-11-13		
REGISTERED PROFESSIONAL ENGINEER TAMARA S. MARCHENKO No. C76837 Exp. 12/31/13 CIVIL STATE OF CALIFORNIA					
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					

- NOTES:**
- All hardware and steel shall be galvanized after fabrication.
 - Arm Base connection details shall be in compliance with Standard Plans Detail Sheet SP ES-7C with noted modifications.
 - 5000 lb Min capacity strap system shall be used for top and bottom of plate.
 - The Contractor to verify pole dimensions at Tie-Rod attachment height. Fabricate 8" flat bar with "L" Dimension to maintain an open gap between encasement in finished installation.



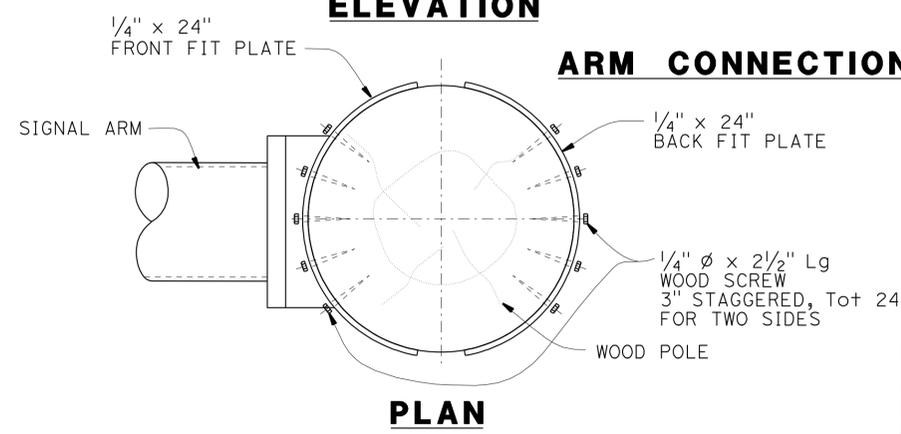
ELEVATION SECTION A-A

TIE-ROD DETAIL No. 3



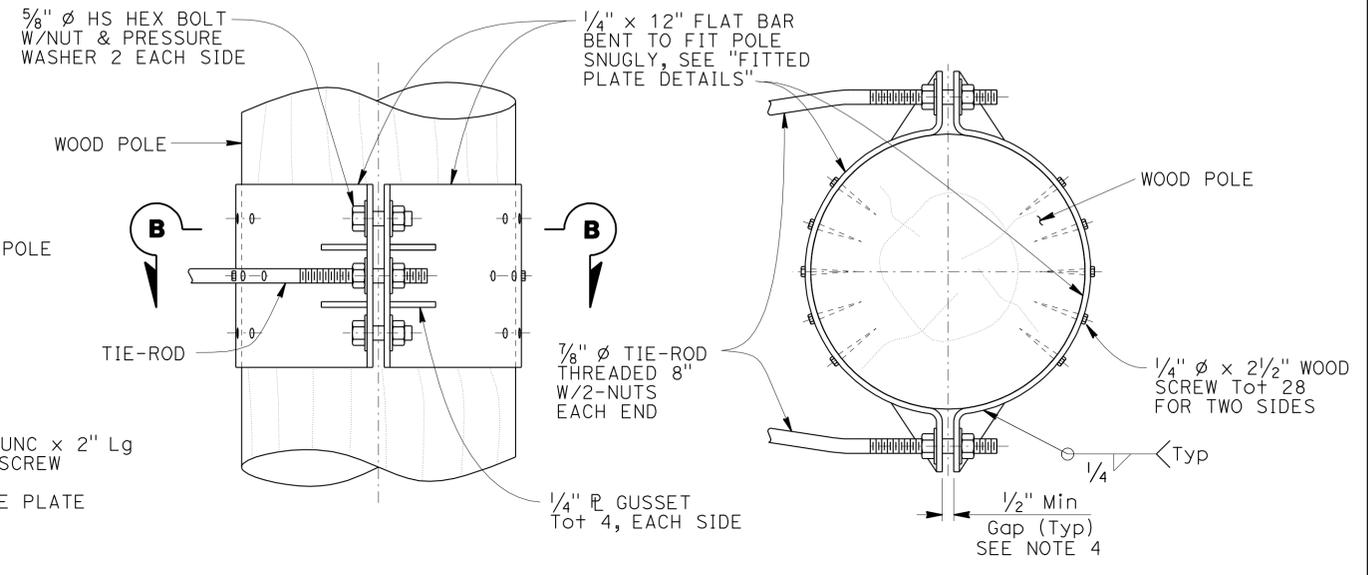
ELEVATION VIEW D-D

ARM CONNECTION DETAILS



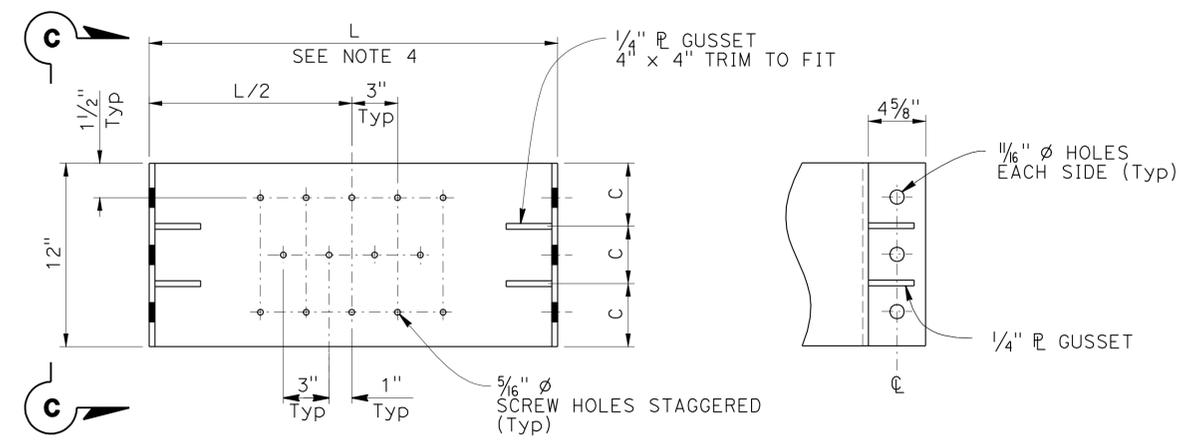
PLAN

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.



ELEVATION SECTION B-B

TIE-ROD DETAIL No. 4



ELEVATION VIEW C-C

FITTED PLATE DETAILS

BRANCH CHIEF	DESIGN	BY T MARCHENKO	CHECKED V LOPEZ
	DETAILS	BY H NGUYEN/S. JIANG	CHECKED V LOPEZ
	QUANTITIES	BY	CHECKED X

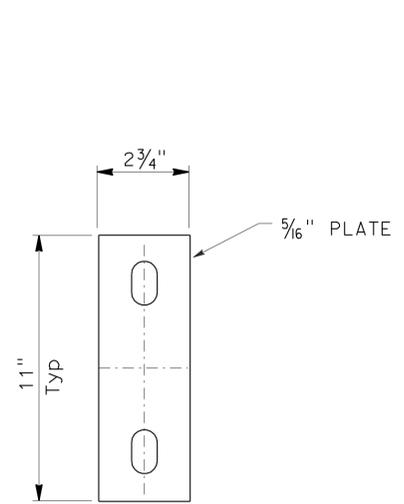
STATE OF CALIFORNIA	DIVISION OF ENGINEERING SERVICES	BRIDGE NO.	TEMPORARY SIGNAL AND LIGHTING
DEPARTMENT OF TRANSPORTATION	DESIGN AND TECHNICAL SERVICES	N/A	SIGNAL ARM MOUNTING DETAILS
	SPECIAL DESIGNS BRANCH	POST MILE	
		R24.2	

UNIT: 3619
PROJECT NUMBER & PHASE: 07120001281
CONTRACT NO.: 07-4T5801

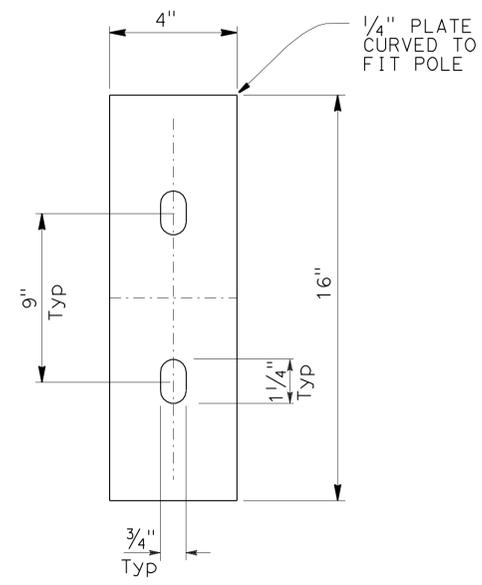
DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
1-15-13	4	6

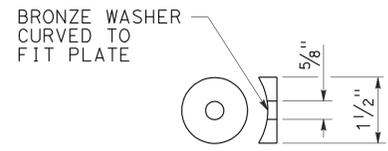
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	210	R24.2	31	36
			REGISTERED CIVIL ENGINEER	DATE	1/24/13
			PLANS APPROVAL DATE	3-11-13	
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					



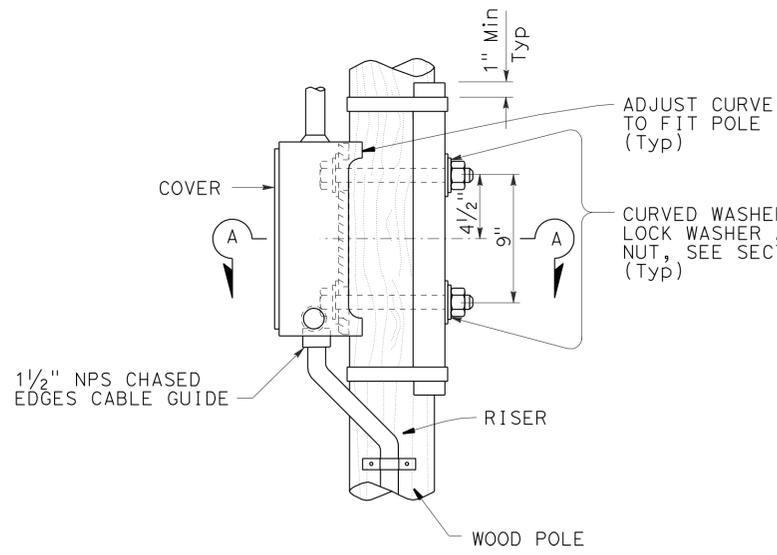
COMPARTMENT PLATE (MOD)



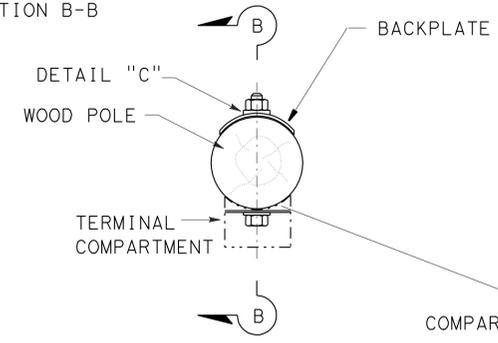
BACKPLATE



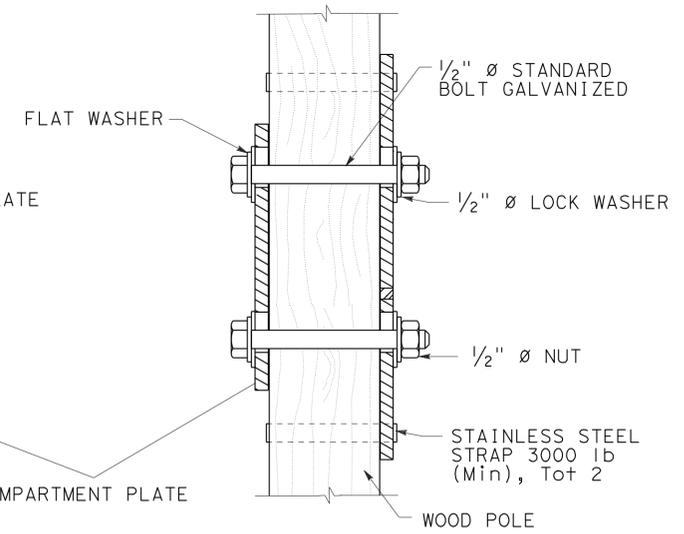
DETAIL "C"



**SIDE MOUNTING
TERMINAL COMPARTMENT**



SECTION A-A



SECTION B-B

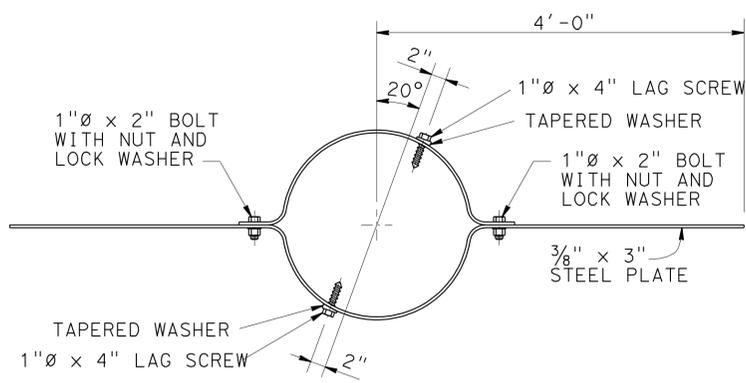
SIGNAL HEAD MOUNTING

For Details Not Shown See SP-ES-4D Sheet

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

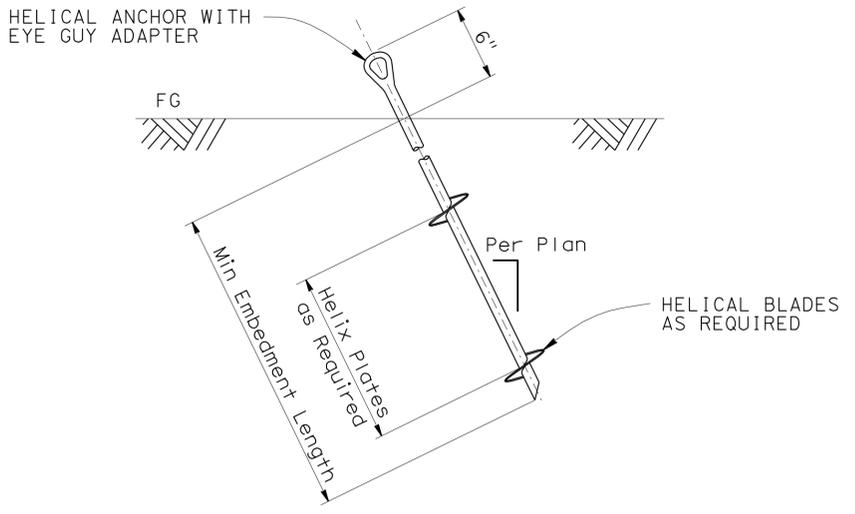
NO SCALE

BRANCH CHIEF _____ JOEL MAGANA	DESIGN BY T MARCHENKO	CHECKED V LOPEZ	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH	BRIDGE NO. N/A	TEMPORARY SIGNAL AND LIGHTING SIGNAL ON POLE DETAILS	SES-5
	DETAILS BY H NGUYEN	CHECKED V LOPEZ			POST MILE R24.2		
	QUANTITIES BY _____	CHECKED X					



WIND ANCHOR

To be installed perpendicular to luminaire arms and 2'-0" Min below grade



ALTERNATIVE GUY WIRE INSTALLATION DETAIL

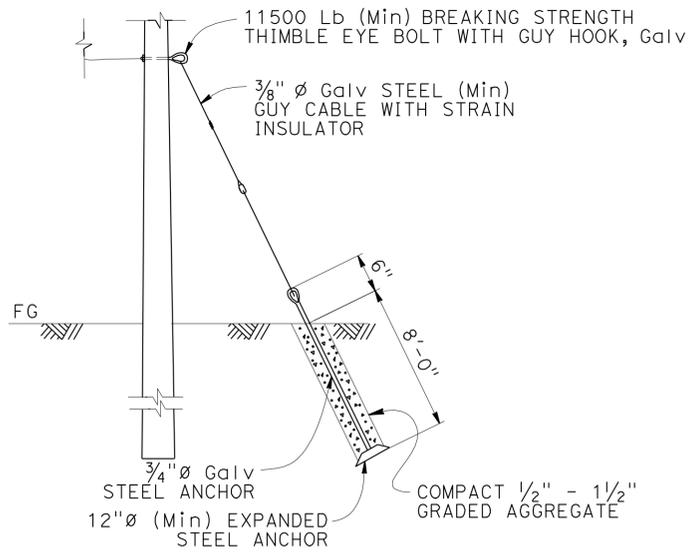
(See Helical Anchor Specifications Table)

HELICAL ANCHOR SPECIFICATIONS					
Anchor Location	Type	Helix Plate Diameter*	Allowable Min Tension Cap., "Q _a "	Embedment Length (Min)	Installation Torque (Min)**, "T"
Detail	Tension	12"	3800 lb	8'-0"	1150 Ft-lb

SPECIFICATION NOTES:

- During installation the torque will be continuously monitored and recorded. If a drop in torque is recorded, the anchor must then continue to be inserted past the soft soil layer until Minimum Installation Torque is achieved.
- Anchors and hardware to be installed per the manufacturers specifications.

* Number of helical plates is not specified; Contractors choice.
 ** Adjust accordingly if required, See Note 3.



GUY WIRE INSTALLATION DETAILS

NOTE:
 THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

NOTES:

- The Contractor to verify soil condition, slope, and adjust anchoring to satisfy basic design requirements per Note 7 on SES-1 sheet.
- Use of Alternative Guy Wire Installation Detail requires that the soil bearing capacity be verified by the Contractor.
- The Contractor shall determine the most appropriate value for k_t based on soil conditions and shall adjust the Minimum Installation Torque based on the revised k_t. A k_t value of 10 was assumed for the Minimum Installation Torque shown in the table.

The Helical Installation torque formula is Q_u = K_t*T where,

Q_u = Q_a*FS = Ultimate Helical Anchor Capacity (lb)
 FS = Factor of Safety = 3.0
 Q_a = Allowable Helical Anchor Capacity (lb)
 k_t = Empirical Torque Factor (ft⁻¹)
 T = Min Installation Torque (ft-lb)

- Requests made by Helical Anchor Installation Contractor to reduce the minimum embedment length and/or Helix diameter require the Engineer's approval.
- The Contractor shall locate and mark all of the substructures and utilities. Installation of anchors underneath utilities or subsurface structures is prohibited. Horizontal clearances of anchors shall be determined by the Inspector during construction.

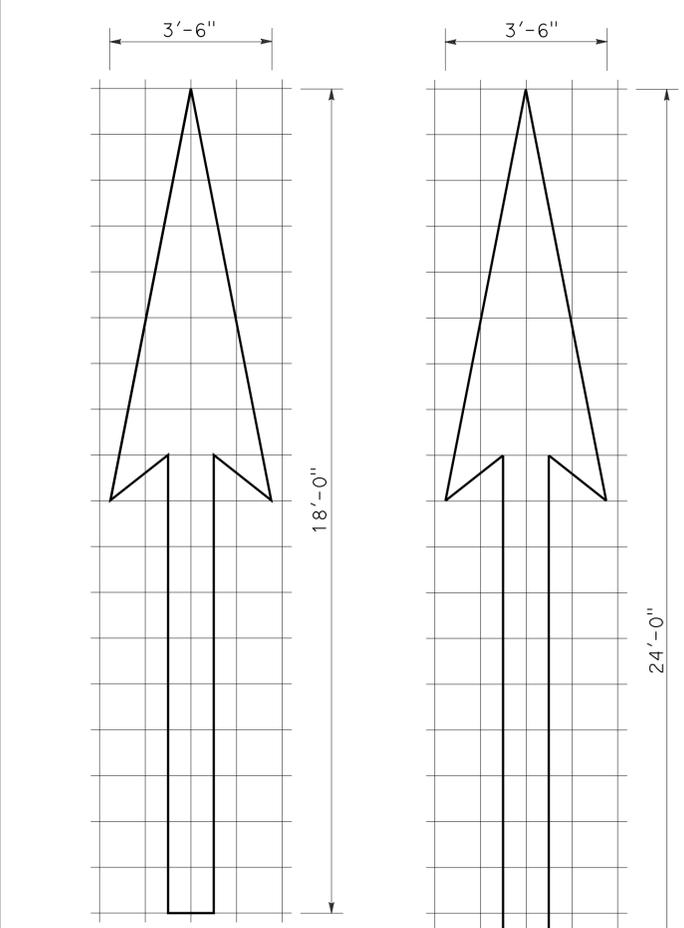
NO SCALE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	210	R24.2	33	36

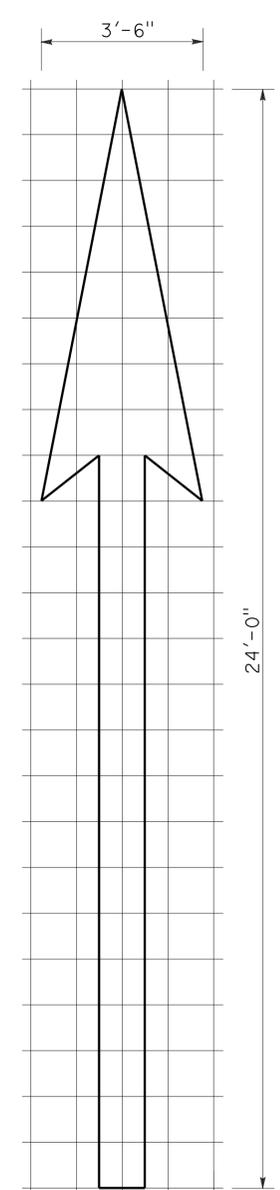
Roberto L. McLaughlin
 REGISTERED CIVIL ENGINEER
 April 20, 2012
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
 Roberto L. McLaughlin
 No. C40375
 Exp. 3-31-13
 CIVIL
 STATE OF CALIFORNIA

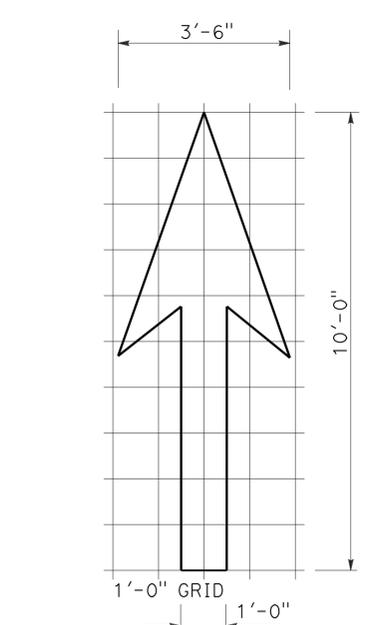
TO ACCOMPANY PLANS DATED 3-11-13



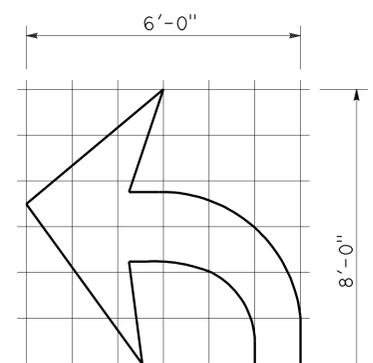
1'-0" GRID 1'-0"
A=25 ft²
TYPE I 18'-0" ARROW



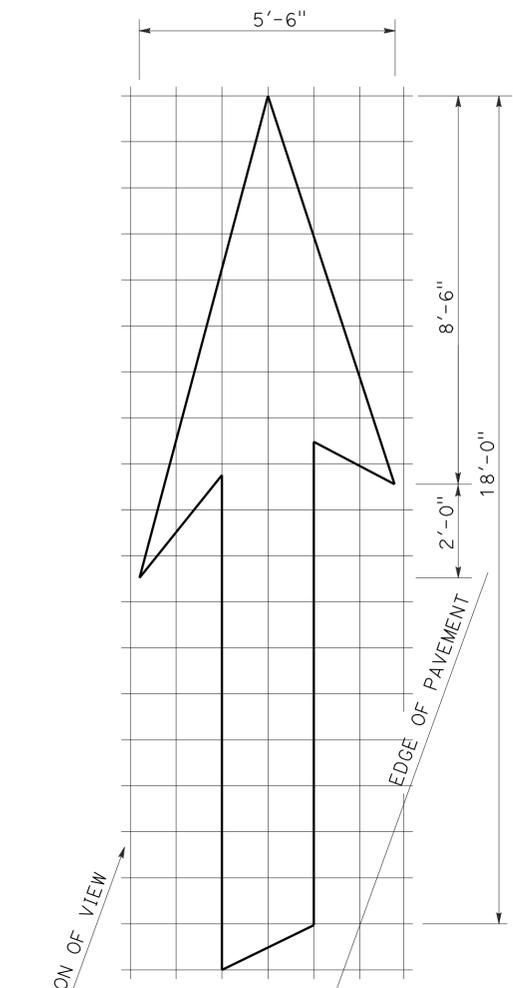
1'-0" GRID 1'-0"
A=31 ft²
TYPE I 24'-0" ARROW



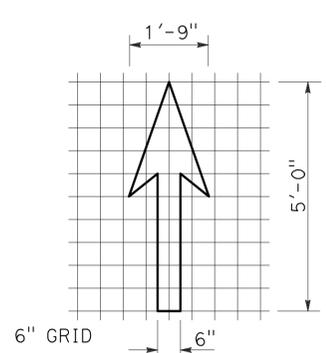
1'-0" GRID 1'-0"
A=14 ft²
TYPE I 10'-0" ARROW



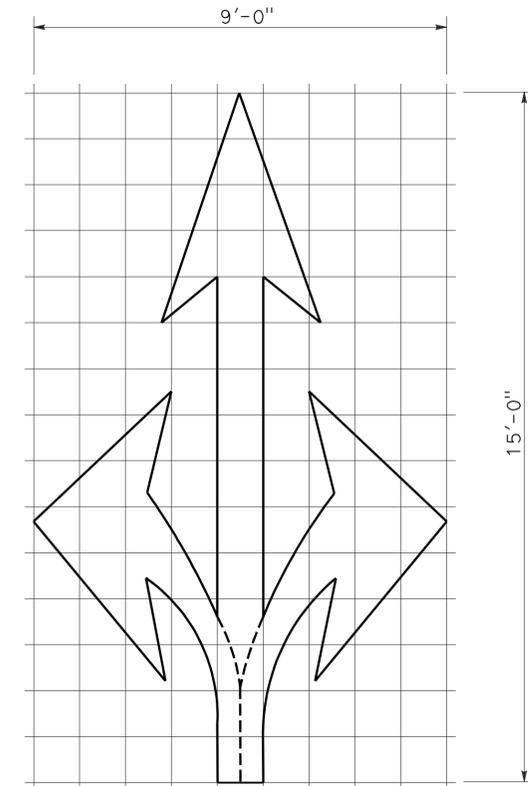
1'-0" GRID 1'-0"
A=15 ft²
TYPE IV (L) ARROW
(For Type IV (R) arrow, use mirror image)



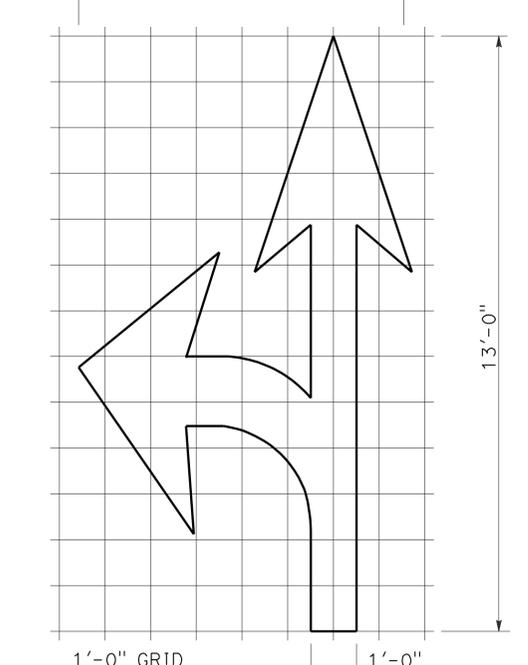
1'-0" GRID 20°
A=42 ft²
TYPE VI ARROW
Right lane drop arrow
(For left lane, use mirror image)



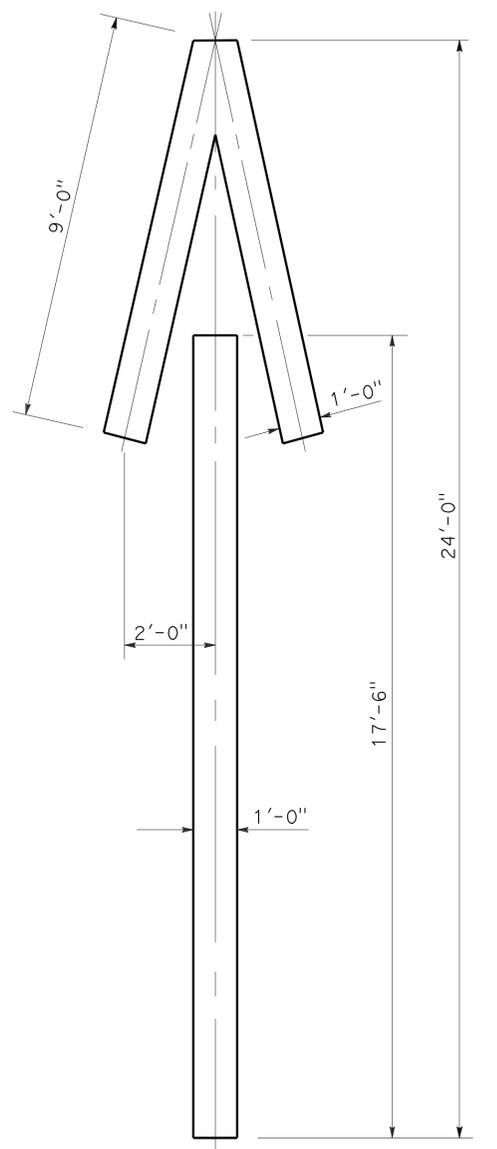
6" GRID 6"
A=3.5 ft²
BIKE LANE ARROW



1'-0" GRID 1'-0"
A=36 ft²
TYPE VIII ARROW



1'-0" GRID 1'-0"
A=27 ft²
TYPE VII (L) ARROW
(For Type VII (R) arrow, use mirror image)



A=33 ft²
TYPE V ARROW

NOTE:
Minor variations in dimensions may be accepted by the Engineer.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**PAVEMENT MARKINGS
ARROWS**
NO SCALE

RSP A24A DATED APRIL 20, 2012 SUPERSEDES STANDARD PLAN A24A DATED MAY 20, 2011 - PAGE 13 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A24A

2010 REVISED STANDARD PLAN RSP A24A

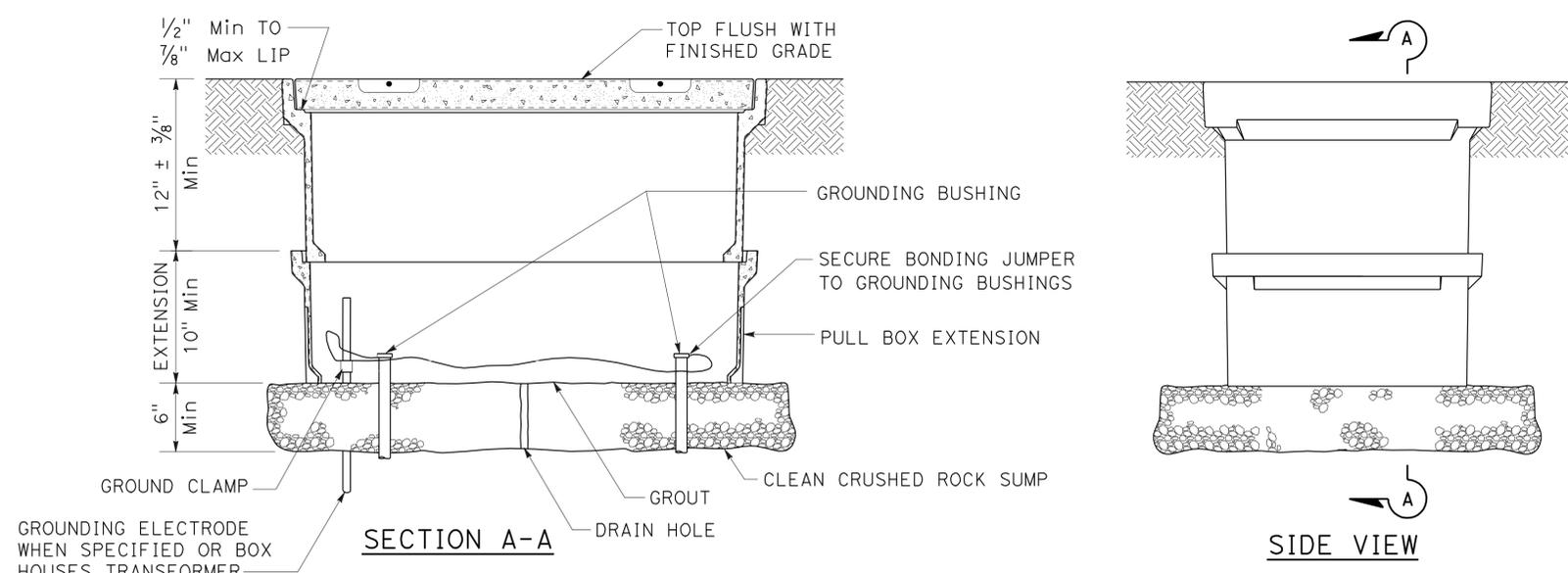
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	210	R24.2	34	36

Jeffery G. McRae
 REGISTERED ELECTRICAL ENGINEER
 No. E14512
 Exp. 6-30-12
 ELECTRICAL
 STATE OF CALIFORNIA

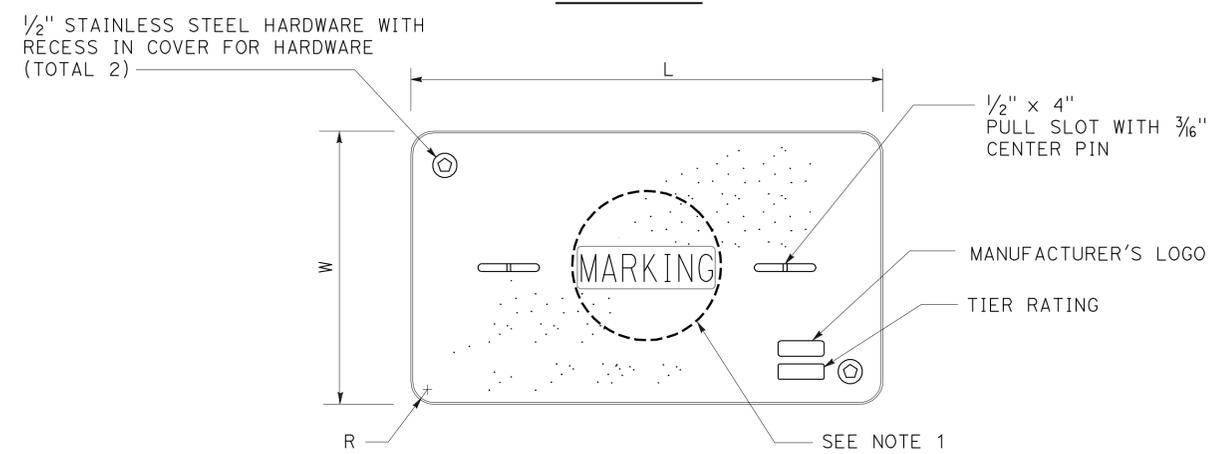
January 20, 2012
 PLANS APPROVAL DATE

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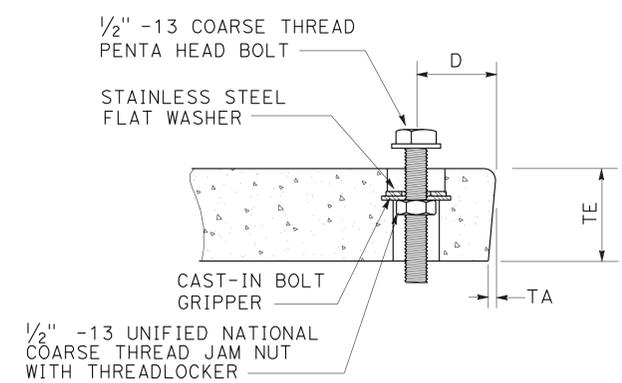
TO ACCOMPANY PLANS DATED 3-11-13



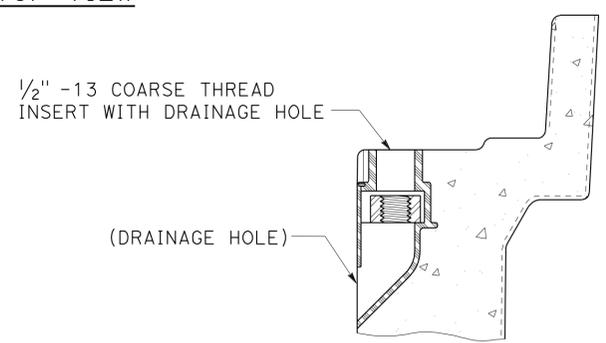
INSTALLATION DETAILS
DETAIL A



COVER TOP VIEW



TYPICAL COVER CAPTIVE BOLT
OR SIMILAR



TYPICAL THREADED INSERT
OR SIMILAR

NOTES ON PULL BOXES:

1. Pull box covers must 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;
 - A) No. 3 1/2 pull box.
 - 1) "SIGNAL" - Traffic signal circuits with or without street or sign lighting circuits.
 - 2) "ST LIGHTING" - Street or sign lighting circuits where voltage is under 600 V.
 - B) No. 5, 6, 9 or 9A pull box.
 - 1) "TRAFFIC SIGNAL" - Traffic signal circuits with or without street or sign lighting circuits.
 - 2) "STREET LIGHTING" - Street or sign lighting circuits where voltage is under 600 V.
 - 3) "STREET LIGHTING-HIGH VOLTAGE" - Street or sign lighting circuits where voltage is above 600 V.
 - 4) "IRRIGATION" - Circuits to irrigation controller 120 V or more.
 - 5) "RAMP METER" - Ramp meter circuits.
 - 6) "COUNT STATION" - Count or speed monitor circuits.
 - 7) "COMMUNICATIONS" - Communication circuits.
 - 8) "TOS COMMUNICATIONS" - TOS communication line.
 - 9) "TOS POWER" - TOS power.
 - 10) "TDC POWER" - Telephone demarcation cabinet power.
 - 11) "CCTV" - Closed circuit television circuits.
 - 12) "TMS" - Traffic monitoring station circuits.
 - 13) "CMS" - Changeable message sign circuits.
 - 14) "HAR" - Highway advisory radio circuits.
2. The nominal dimensions of the opening in which the cover sets must be the same as the cover dimensions (L and W) plus 1/8" or greater.
3. Covers and boxes must be interchangeable with California Standard. When interchanged with a standard, the top surfaces must be flush within 1/8". Top outside radius of covers and pull boxes must have a 1/8" radius.
4. Pull box extension may be another pull box as long as the bottom edge of the pull box can fit into the cover opening.

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
(PULL BOX)
 NO SCALE

RSP ES-8A DATED JANUARY 20, 2012 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

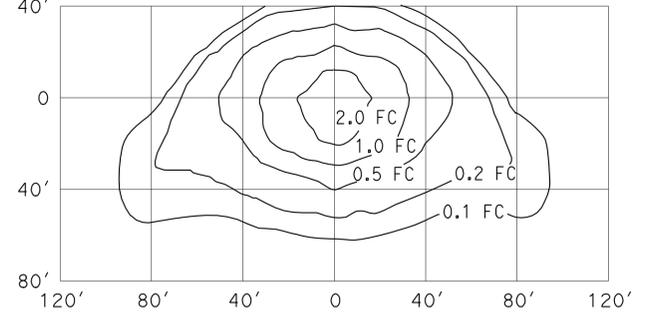
2010 REVISED STANDARD PLAN RSP ES-8A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	210	R24.2	35	36

Jeffery G. McRae
 REGISTERED ELECTRICAL ENGINEER
 July 20, 2012
 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 3-11-13

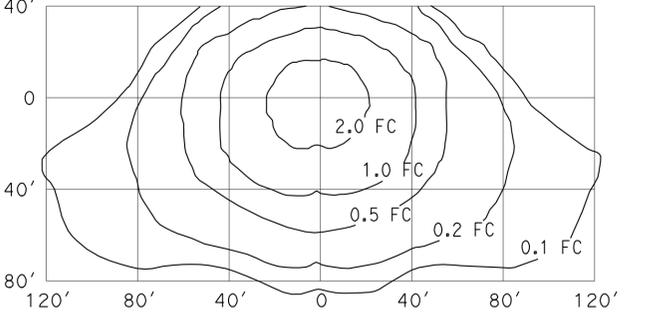
ISOFOOTCANDLE CURVE - MINIMUM



TYPE III MEDIUM CUTOFF

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

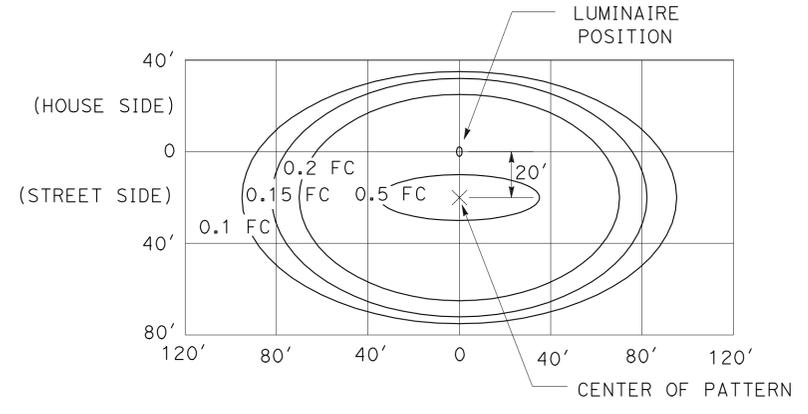
ISOFOOTCANDLE CURVE - MINIMUM



TYPE III MEDIUM CUTOFF

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

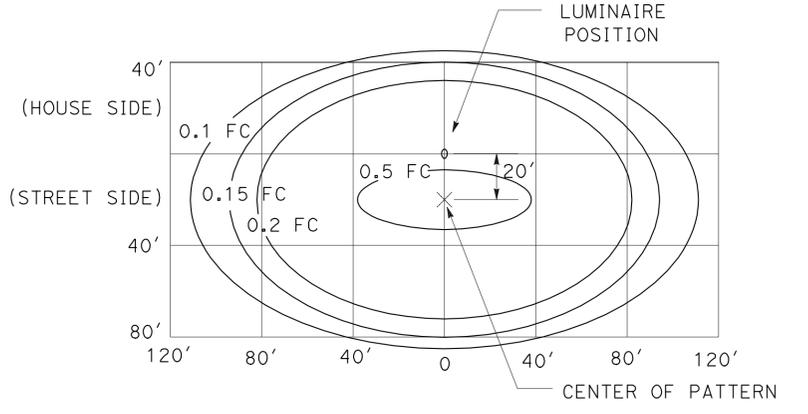
ISOFOOTCANDLE CURVE - MINIMUM



LED LUMINAIRE ROADWAY 1

200-W HPS Equivalent at 34' Mounting Height

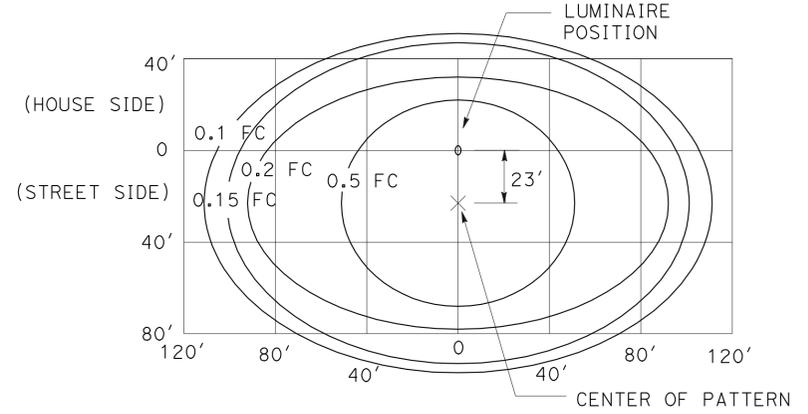
ISOFOOTCANDLE CURVE - MINIMUM



LED LUMINAIRE ROADWAY 2

310-W HPS Equivalent at 40' Mounting Height

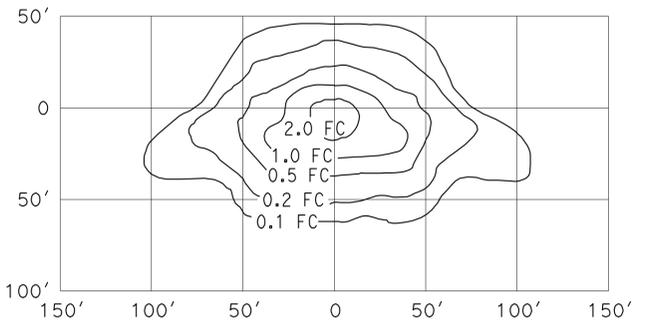
ISOFOOTCANDLE CURVE - MINIMUM



LED LUMINAIRE ROADWAY 4

400-W HPS Equivalent at 40' Mounting Height

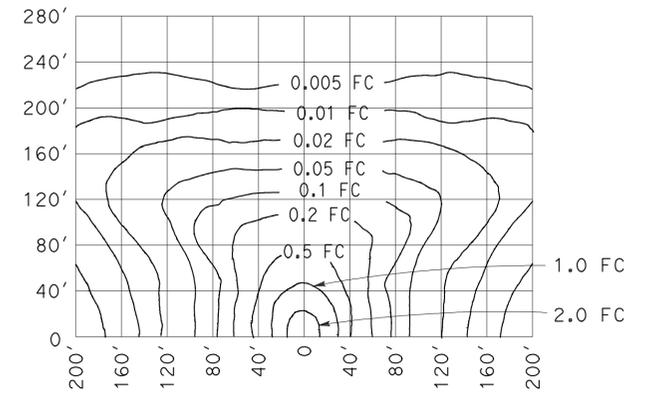
ISOFOOTCANDLE CURVE - MINIMUM



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



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 20, 2012 SUPPLEMENTS THE
 STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP ES-10A

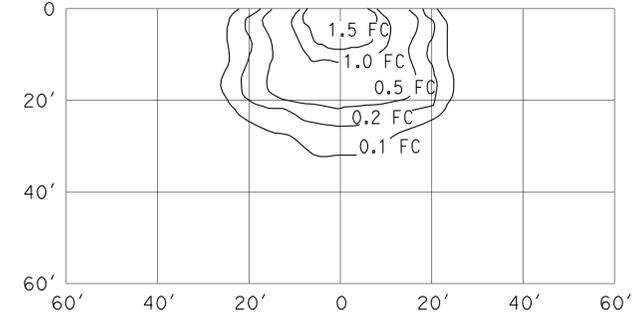
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	210	R24.2	36	36

Jeffery G. McRae
 REGISTERED ELECTRICAL ENGINEER
 July 20, 2012
 PLANS APPROVAL DATE
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TO ACCOMPANY PLANS DATED 3-11-13

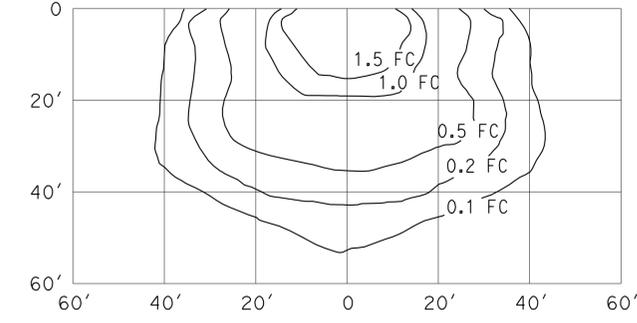
ISOFOOTCANDLE CURVE - MINIMUM



WALL LUMINAIRE

15' Mounting Height
 Lamp operated at 5,800 lm
 70-W high pressure sodium lamp
 ANSI Designation S62

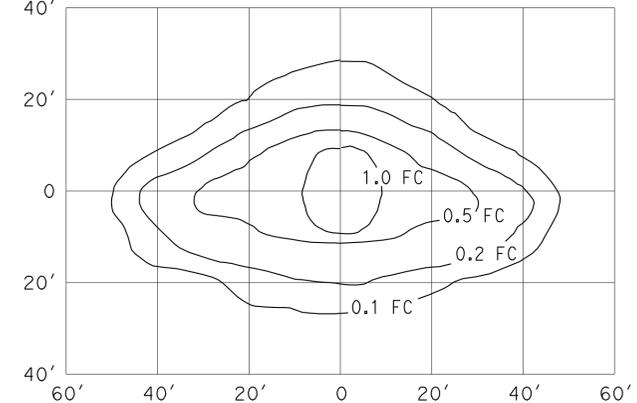
ISOFOOTCANDLE CURVE - MINIMUM



WALL LUMINAIRE

15' Mounting Height
 Lamp operated at 9,500 lm
 100-W high pressure sodium lamp
 ANSI Designation S54

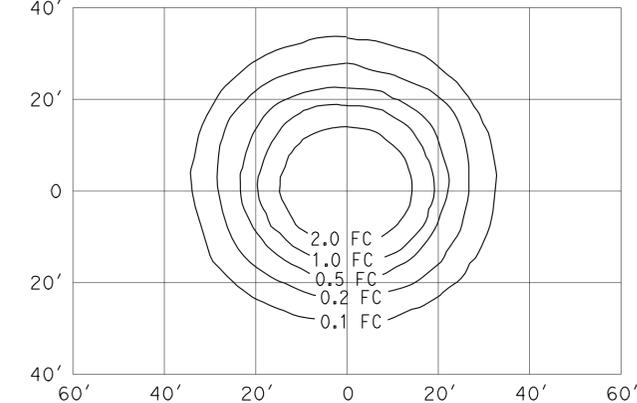
ISOFOOTCANDLE CURVE - MINIMUM



**PENDANT SOFFIT LUMINAIRE
 TYPE III SHORT**

17' Mounting Height
 Lamp operated at 5,800 lm
 70-W high pressure sodium lamp
 ANSI Designation S62

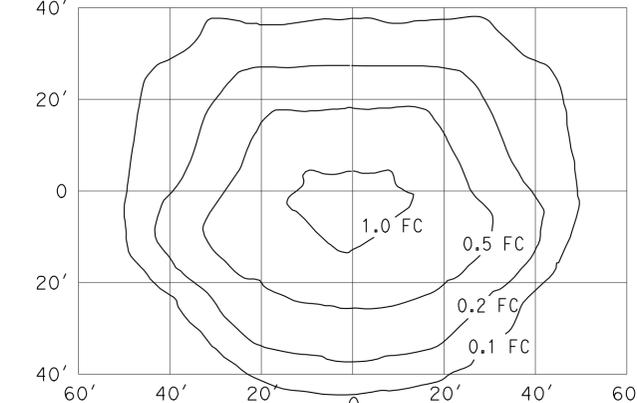
ISOFOOTCANDLE CURVE - MINIMUM



PENDANT SOFFIT LUMINAIRE

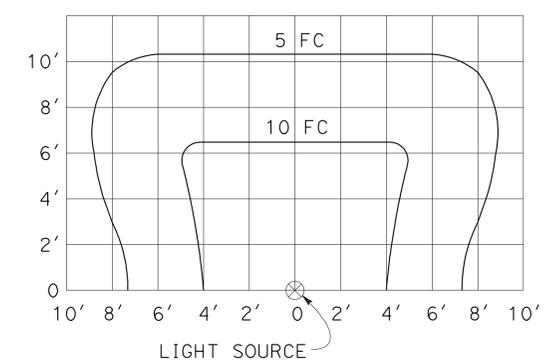
17' Mounting Height
 Lamp operated at 5,800 lm
 70-W high pressure sodium lamp
 ANSI Designation S62

ISOFOOTCANDLE CURVE - MINIMUM



FLUSH SOFFIT LUMINAIRE

17' Mounting Height
 Lamp operated at 5,800 lm
 70-W high pressure sodium lamp
 ANSI Designation S62



**SIGN LIGHTING FIXTURE
 ISOFOOTCANDLE DIAGRAM**

NOTES:

- Curves represent the minimum footcandle (FC) of initial illumination on a 10'-0" x 20'-0" panel.
- The FC shown are with the fixture attached to the light fixture mounting channel which places the center of the source 4'-8" in front of panel and 1'-0" below the bottom edge.
- Applicable lamp: 85-W fluorescent phosphor coated induction lamp.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
 (ISOFOOTCANDLE DIAGRAMS)**

NO SCALE

RSP ES-10B DATED JULY 20, 2012 SUPPLEMENTS THE
 STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP ES-10B