

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	1	74



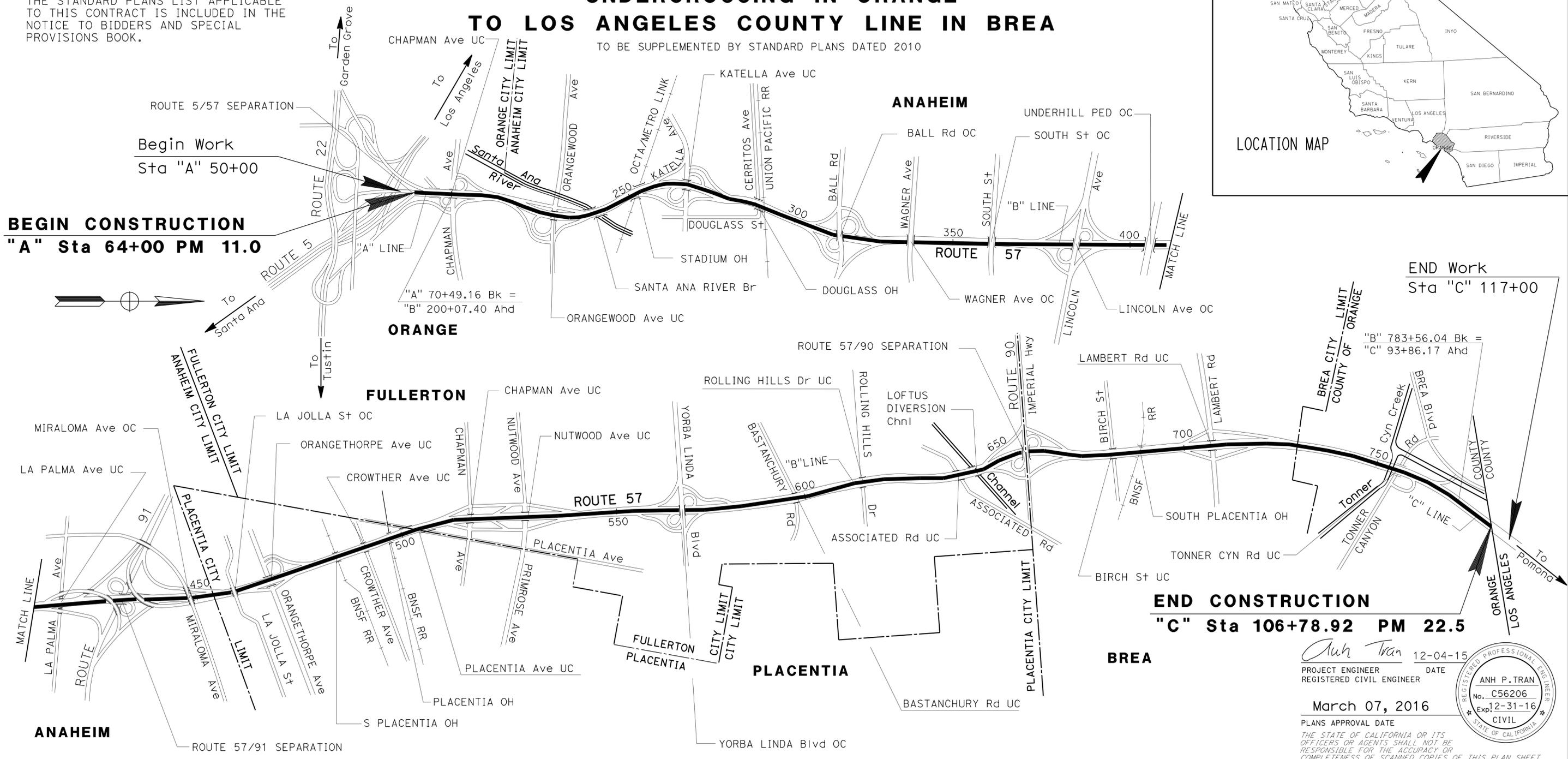
STATE OF CALIFORNIA ACNHP-P057(063)E  
**DEPARTMENT OF TRANSPORTATION**  
**PROJECT PLANS FOR CONSTRUCTION ON**  
**STATE HIGHWAY**  
**IN ORANGE COUNTY**  
**FROM 0.2 MILE SOUTH OF CHAPMAN AVENUE**  
**UNDERCROSSING IN ORANGE**  
**TO LOS ANGELES COUNTY LINE IN BREA**

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010

**INDEX OF PLANS**

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2-4	TYPICAL CROSS SECTIONS
5-9	CONSTRUCTION DETAILS
10	CONSTRUCTION AREA SIGNS
11-23	TRAFFIC HANDLING PLANS, DETAILS AND QUANTITIES
24-27	PAVEMENT DELINEATION DETAILS AND QUANTITIES
28-32	SIGN DETAILS AND QUANTITIES
33-34	SUMMARY OF QUANTITIES
35-56	ELECTRICAL PLANS
57-74	REVISED STANDARD PLANS

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



PROJECT MANAGER  
 MASSOUD TAJIK  
 DESIGN MANAGER  
 ANH P. TRAN

Anh Tran 12-04-15  
 PROJECT ENGINEER DATE  
 REGISTERED CIVIL ENGINEER  
 March 07, 2016  
 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 "NOTICE TO BIDDERS."

NO SCALE

LAST REVISION 12-01-15  
 DATE PLOTTED => 06-MAR-2016  
 TIME PLOTTED => 1:32:29

**NOTES:**

- DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
- SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.
- FOR TYPICAL DIMENSIONS OF INDIVIDUAL SLAB REPLACEMENT (RSC) AND REPAIR SPALLED SURFACE AREA, SEE SHEET C-5.
- FOR LOCATIONS OF INDIVIDUAL SLAB REPLACEMENT (RSC) AND REPAIR SPALLED SURFACE AREA, SEE SHEET Q-1 . THE EXACT LOCATIONS AND DIMENSIONS OF INDIVIDUAL SLAB REPLACEMENT (RSC) AND REPAIR SPALLED SURFACE AREA TO BE DETERMINED BY THE ENGINEER.
- CONFORM GRIND Exist Conc Pvmt FOR STRUCTURAL SECTION 1 SHALL BE APPLIED TO THE REPLACED CONCRETE SLABS, WITHIN THE LIMITS SHOWN IN THE TYPICAL CROSS SECTIONS ONLY, SEE SHEET Q-2.
- GRIND AND GROOVE Exist Conc Pvmt FOR STRUCTURAL SECTION 2 SHALL BE APPLIED TO ALL GENERAL PURPOSE LANES AND HOV LANE ON SB ROUTE 57, WITHIN THE LIMITS SHOWN IN THE TYPICAL CROSS SECTIONS EXCEPT ON BRIDGES AND ON ASPHALT CONCRETE PAVEMENT, SEE SHEET Q-2.

**ABBREVIATIONS:**

- HOV - HIGH OCCUPANCY VEHICLE  
 LBS - LIME TREATED BASEMENT SOIL  
 RMCTB - ROAD-MIXED CONCRETE TREATED BASE  
 RSC - RAPID STRENGTH CONCRETE

**LEGENDS:**

- x TYPICAL PAVEMENT STRUCTURE SECTION NUMBER

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	2	74

*Anh Tran* 12-04-15  
 REGISTERED CIVIL ENGINEER DATE

03-07-16  
 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.

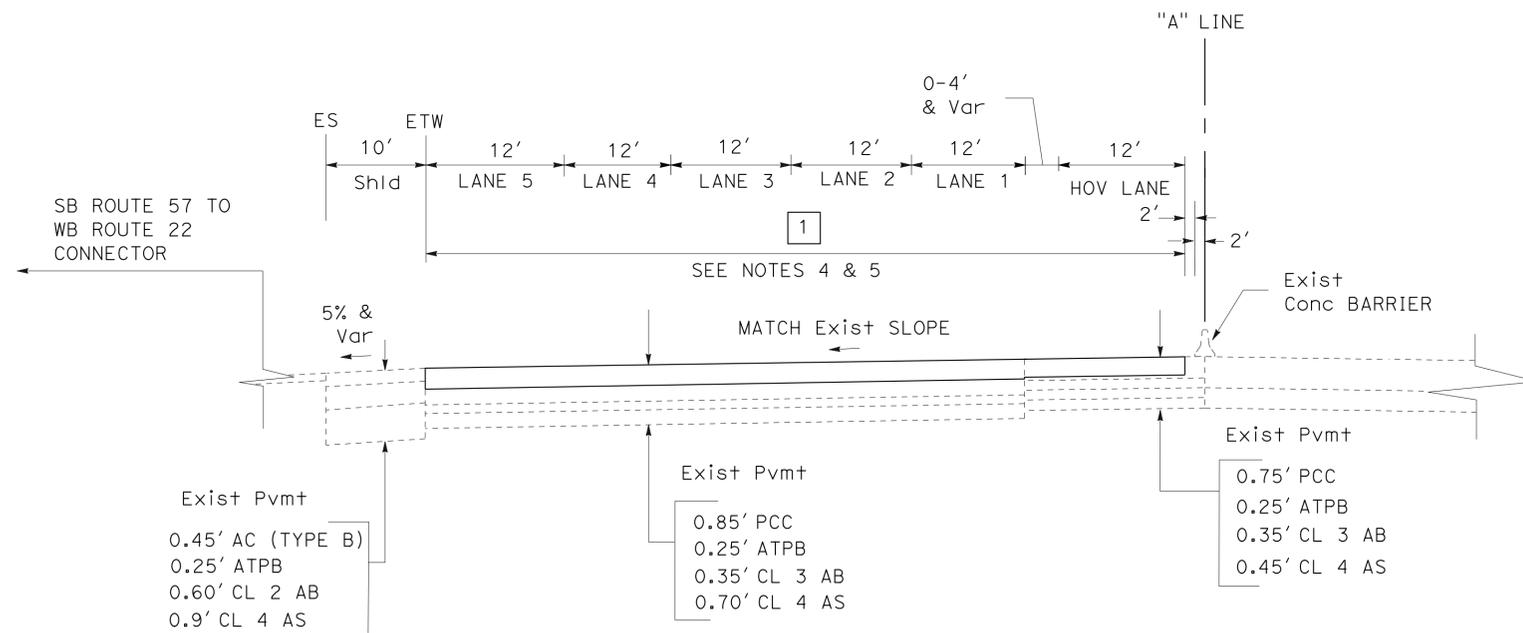
**PAVEMENT CLIMATE REGION:**

SOUTH COAST

**TYPICAL PAVEMENT STRUCTURE SECTIONS:**

- 1 GRIND Exist Conc Pvmt  
 INDIVIDUAL SLAB REPLACEMENT (RSC)
- 2 GROOVE Exist Conc Pvmt  
 GRIND Exist Conc Pvmt  
 INDIVIDUAL SLAB REPLACEMENT (RSC)

LANE No.	DEPTH OF INDIVIDUAL SLAB REPLACEMENT (RSC)
HOV	0.75'
1 & 2	0.65' - 0.85'
3 & 4	0.70' - 0.75'
5 & 6	0.85'



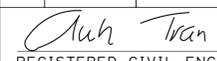
**TYPICAL CROSS SECTION**

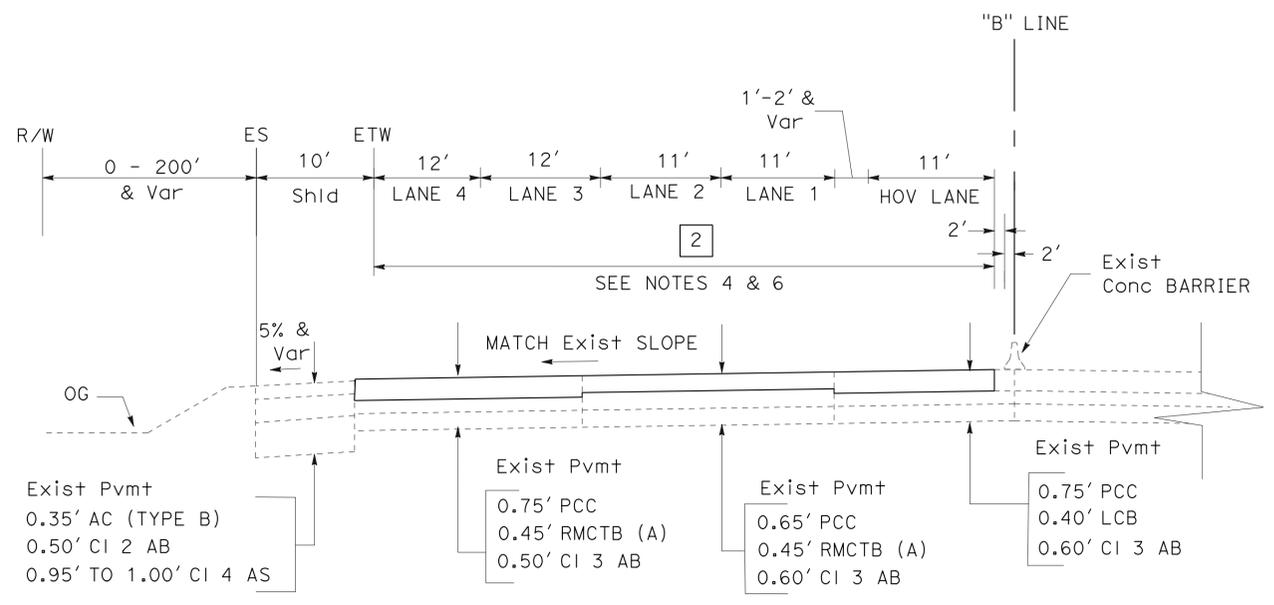
NO SCALE

**X-1**

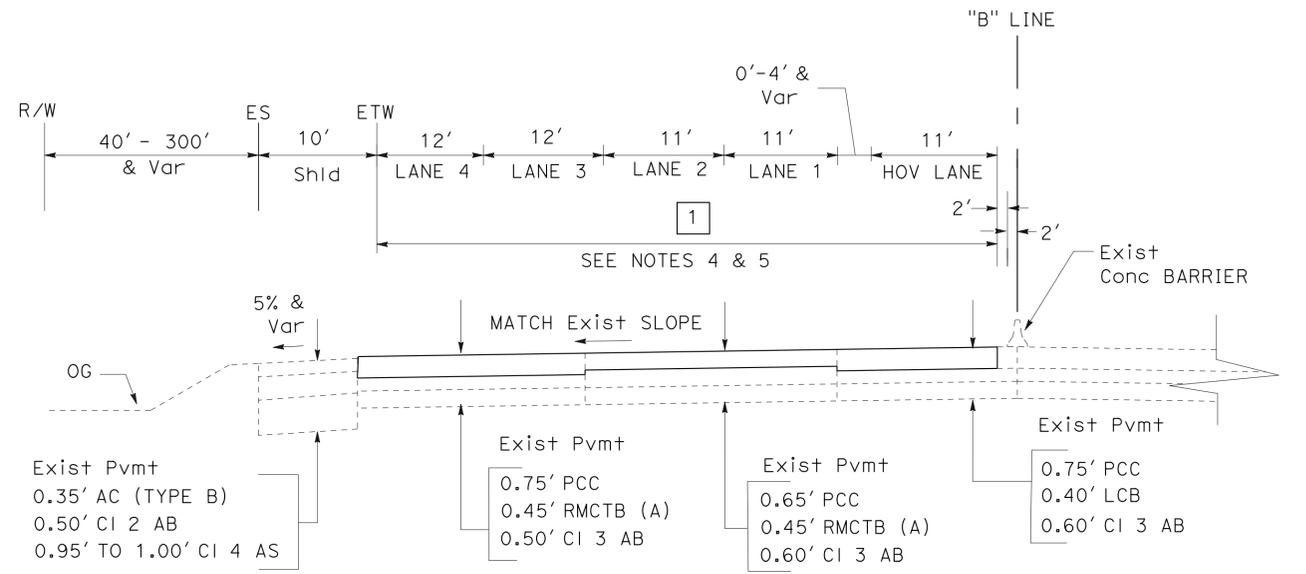
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 MAINTENANCE  
 FUNCTIONAL SUPERVISOR: MASSOUD TAJIK  
 PHAT TRAN  
 ANH TRAN  
 REVISOR: ANH TRAN  
 DATE: 12-01-15  
 CALCULATED/DESIGNED BY: [Blank]  
 CHECKED BY: [Blank]



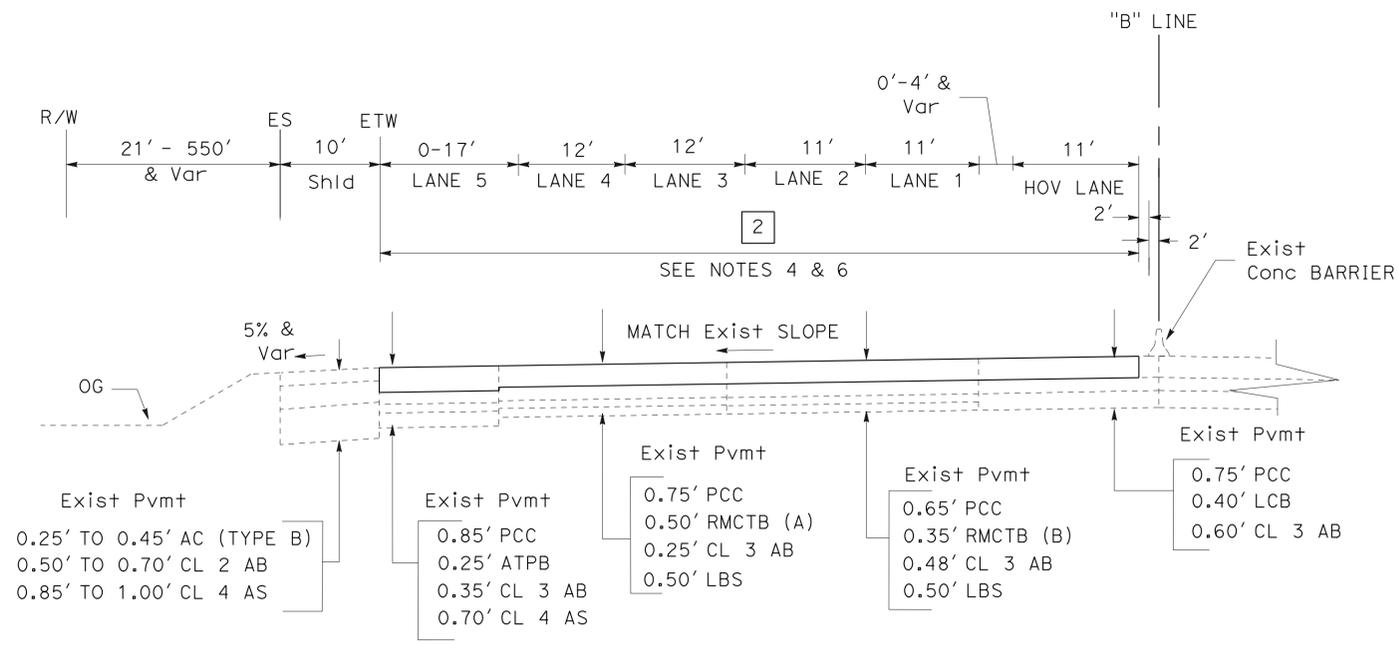
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	4	74
			12-04-15	DATE	
REGISTERED CIVIL ENGINEER					
03-07-16			PLANS APPROVAL DATE		
					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					



**SB ROUTE 57**  
 "B" 635+00 TO "B" 655+00  
 ASSOCIATED Rd UC TO  
 ROUTE 57/90 SEPARATION



**SB ROUTE 57**  
 "B" 655+00 TO "B" 782+40  
 ROUTE 57/90 SEPARATION TO  
 0.3 MILE SOUTH OF LOS ANGELES COUNTY LINE



**SB ROUTE 57**  
 "B" 491+00 TO "B" 635+00  
 CROWTHER AVE UC TO ASSOCIATED Rd UC

**TYPICAL CROSS SECTION**  
 NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 MAINTENANCE  
 FUNCTIONAL SUPERVISOR: MASSOUD TAJIK  
 PHAT TRAN  
 ANH TRAN  
 REVISOR: ANH TRAN  
 DATE: 12-01-15  
 CALCULATED/DESIGNED BY: ANH TRAN  
 CHECKED BY: ANH TRAN

LAST REVISION | DATE PLOTTED => 08-MAR-2016  
 12-01-15 | TIME PLOTTED => 1:31:30

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

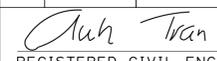
**NOTES:**

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- FOR LIMITS AND DETAILS OF CONFORM TO EXIST PAVEMENT AT BRIDGES, SEE SHEET C-5.
- EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.

**LEGEND:**

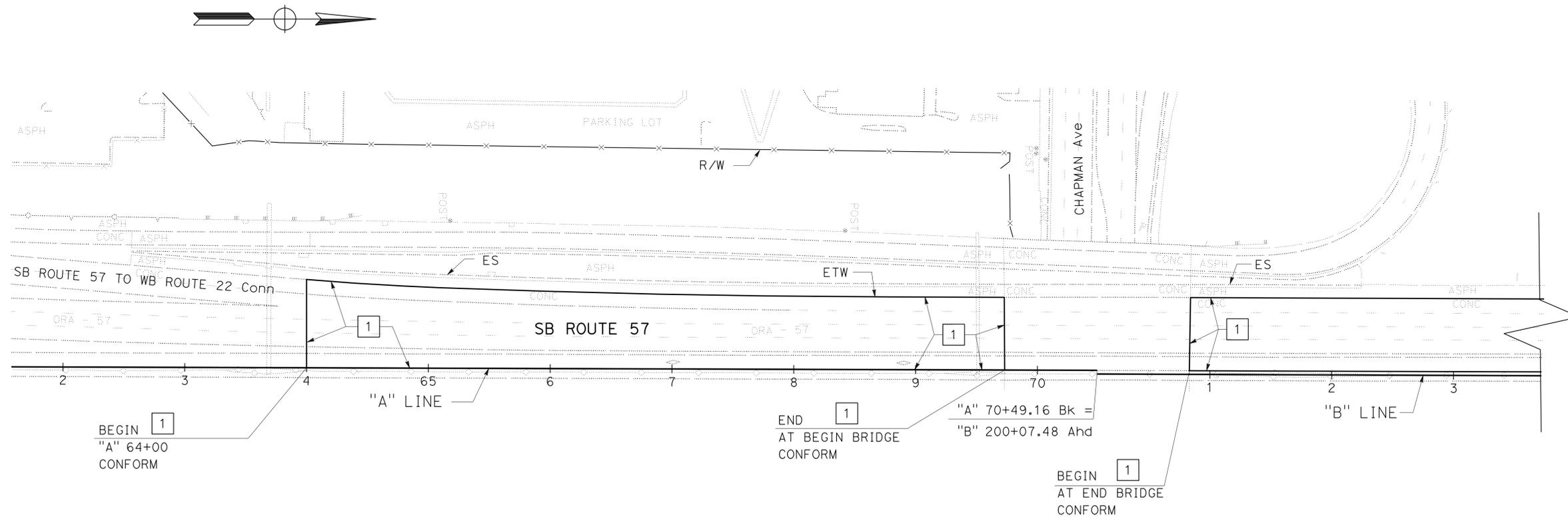
-  STRUCTURAL SECTION TYPE, SEE SHEET X-1
-  REPAIR SPALLED SURFACE AREA

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	5	74

 12-04-15  
 REGISTERED CIVIL ENGINEER DATE

03-07-16  
 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.

**CONSTRUCTION DETAILS**

SCALE: 1" = 50'

**C-1**



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

FUNCTIONAL SUPERVISOR  
 MASSOUD TAJIK

CALCULATED-DESIGNED BY  
 CHECKED BY

PHAT TRAN  
 ANH TRAN

REVISED BY  
 DATE REVISED

**NOTES:**

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.

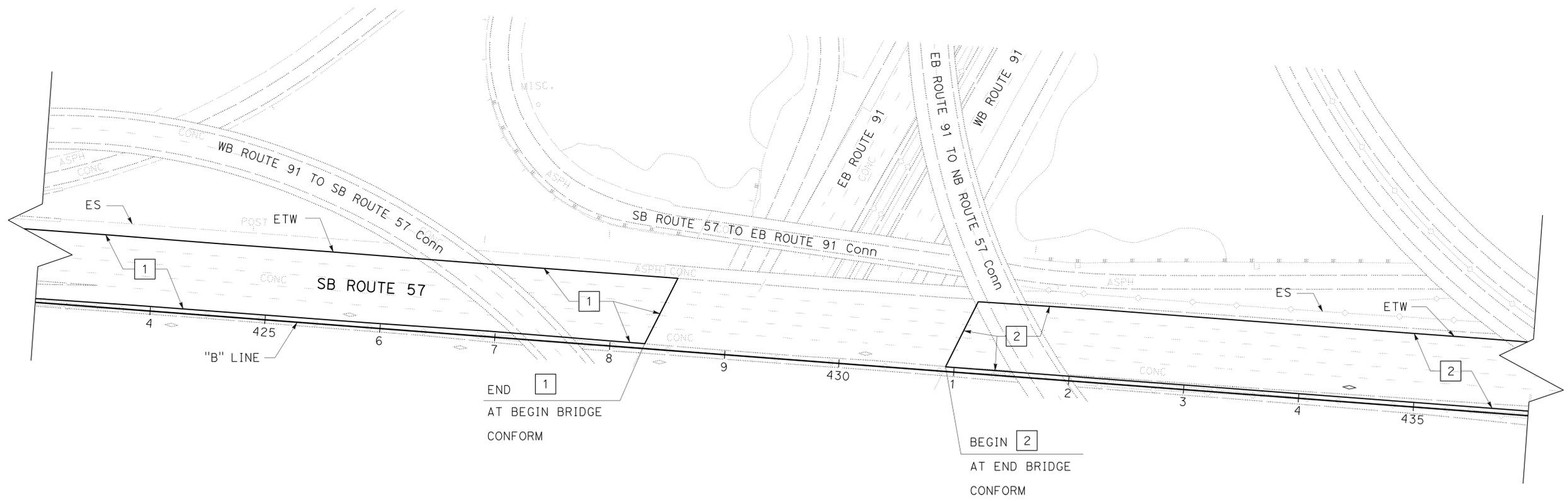
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	6	74

*Anh Tran* 12-04-15  
 REGISTERED CIVIL ENGINEER DATE

03-07-16  
 PLANS APPROVAL DATE

ANH P. TRAN  
 No. C56206  
 Exp. 12-31-16  
 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.



**CONSTRUCTION DETAILS**

SCALE: 1" = 50'

**C-2**



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	8	74

<i>Anh Tran</i>	12-04-15
REGISTERED CIVIL ENGINEER	DATE
03-07-16	
PLANS APPROVAL DATE	

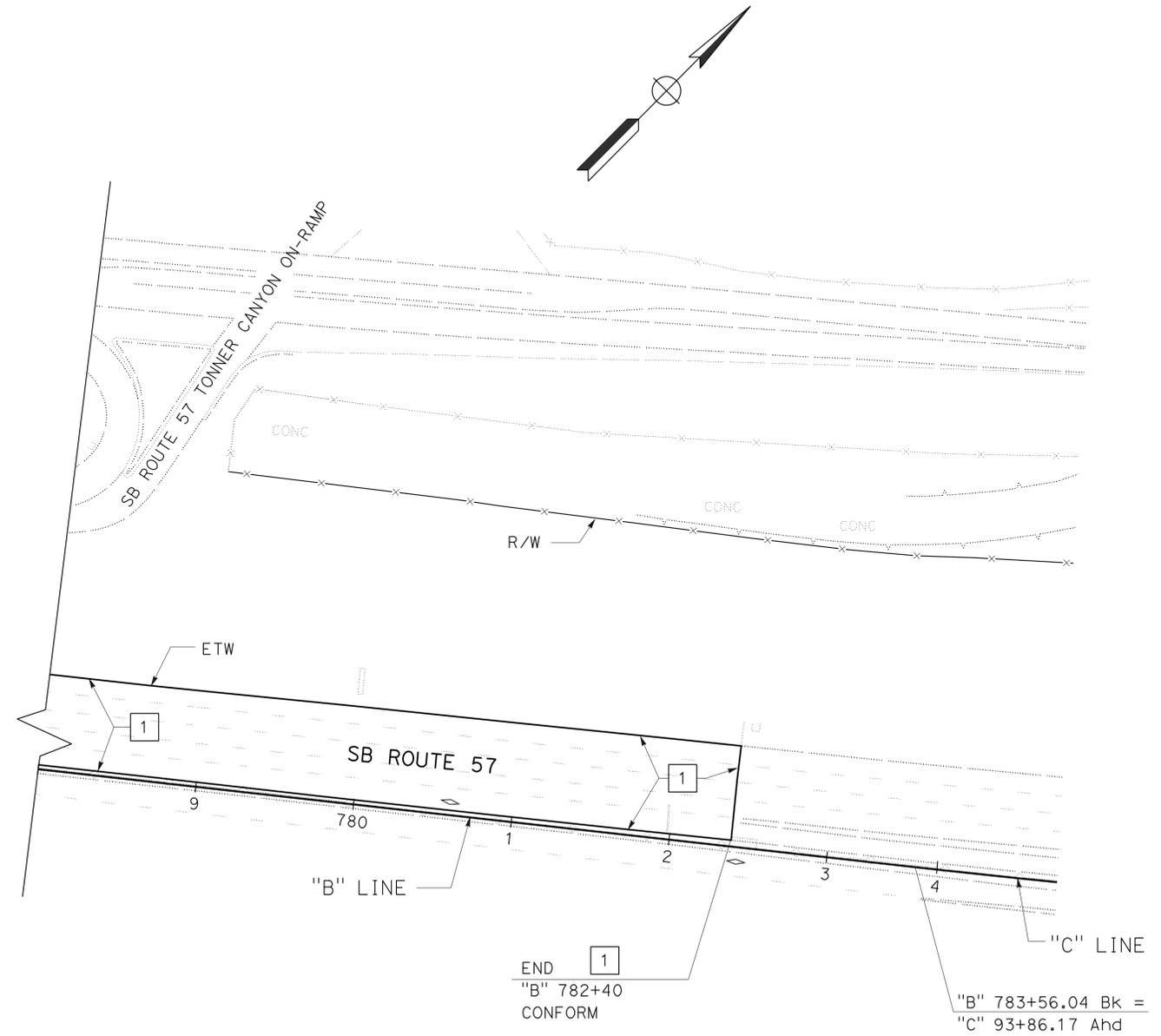
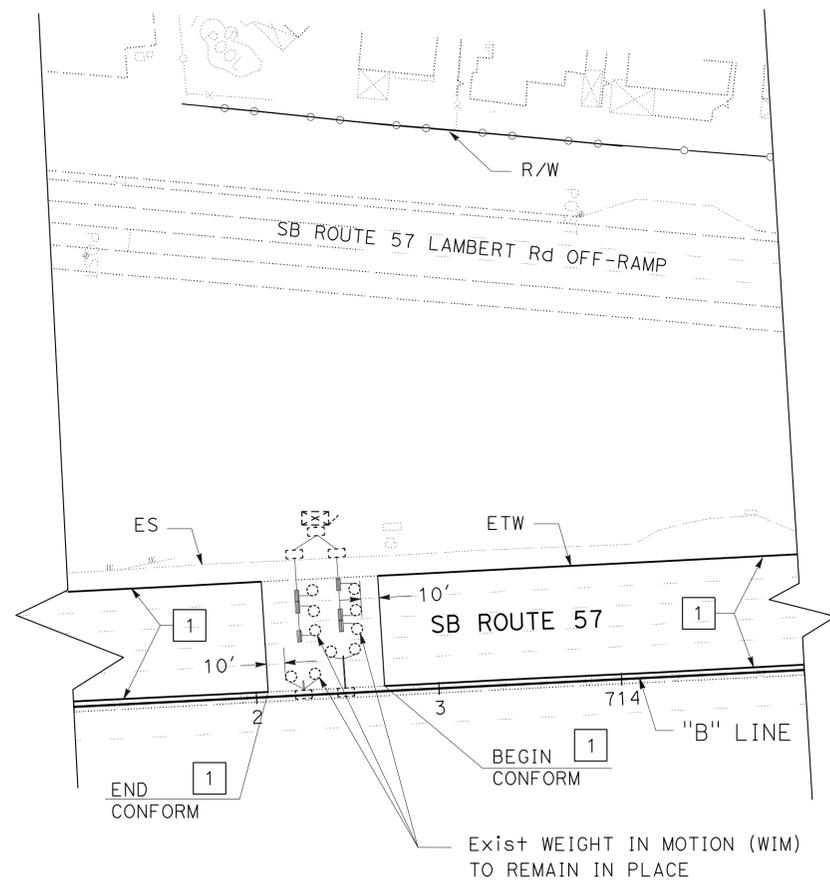
  

ANH P. TRAN
No. C56206
Exp. 12-31-16
CIVIL

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 UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.

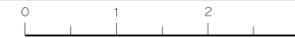


**CONSTRUCTION DETAILS**

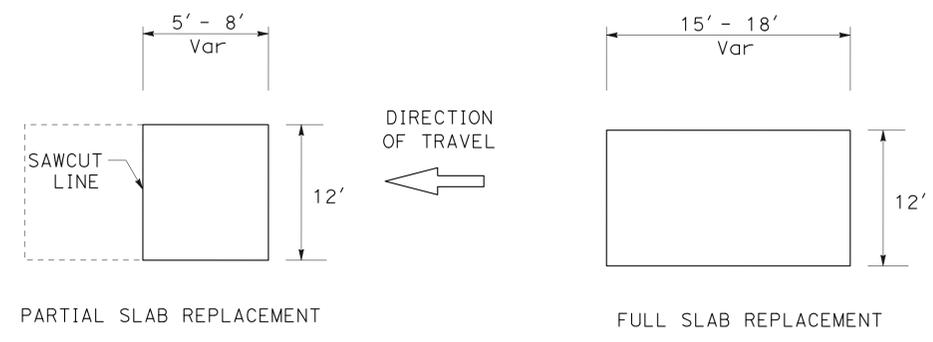
SCALE: 1" = 50'

**C-4**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	MAINTENANCE
FUNCTIONAL SUPERVISOR	MASSOUD TAJIK
CALCULATED/DESIGNED BY	CHECKED BY
PHAT TRAN	ANH TRAN
REVISOR	DATE
ANH TRAN	12-01-15

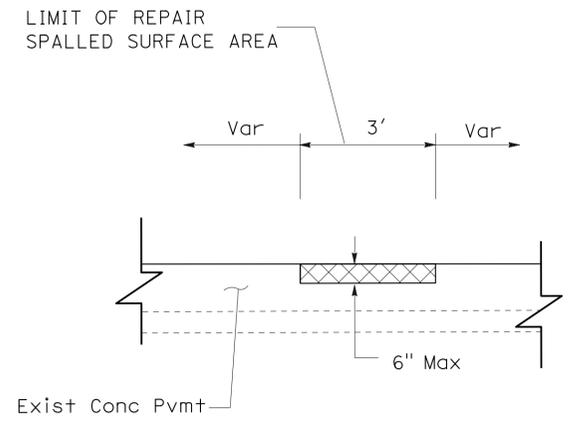


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	9	74
			<i>Anh Tran</i> 12-04-15 REGISTERED CIVIL ENGINEER DATE		
			03-07-16 PLANS APPROVAL DATE		
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

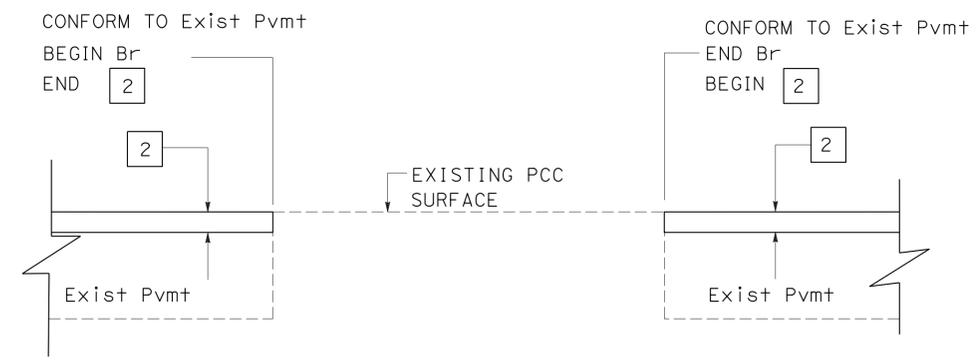


**DETAIL A**

TYPICAL INDIVIDUAL SLAB REPLACEMENT (RSC)

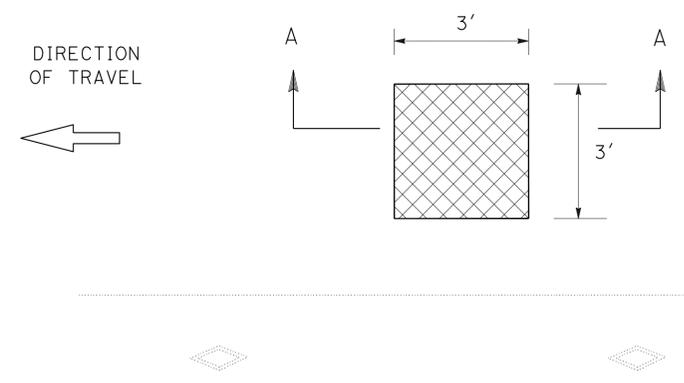


**SECTION A-A**



**DETAIL B**

TYPICAL LIMITS OF STRUCTURAL SECTION 2 AT BRIDGES



**DETAIL C**

TYPICAL REPAIR SPALLED SURFACE AREA

**CONSTRUCTION DETAILS**

NO SCALE

**C-5**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
**MAINTENANCE**  
 FUNCTIONAL SUPERVISOR: MASSOUD TAJIK  
 CALCULATED/DESIGNED BY: [Blank]  
 CHECKED BY: [Blank]  
 PHAT TRAN: ANH TRAN  
 REVISED BY: ANH TRAN  
 DATE REVISED: 12-01-15  
 USERNAME => s111173  
 DGN FILE => 1215000110ga005.dgn



UNIT 3064

PROJECT NUMBER & PHASE

12150001101

LAST REVISION | DATE PLOTTED => 08-MAR-2016  
 12-01-15 | TIME PLOTTED => 1:31:30

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** MAINTENANCE  
 FUNCTIONAL SUPERVISOR: MASSOUD TAJIK  
 PHAT TRAN  
 ANH TRAN  
 REVISOR: ANH TRAN  
 DATE: 12-01-15  
 CALCULATED/DESIGNED BY: ANH TRAN  
 CHECKED BY: ANH TRAN

**NOTE:**  
 LOCATIONS OF CONSTRUCTION AREA SIGNS ARE APPROXIMATE.  
 EXACT LOCATIONS TO BE DETERMINED BY THE ENGINEER.

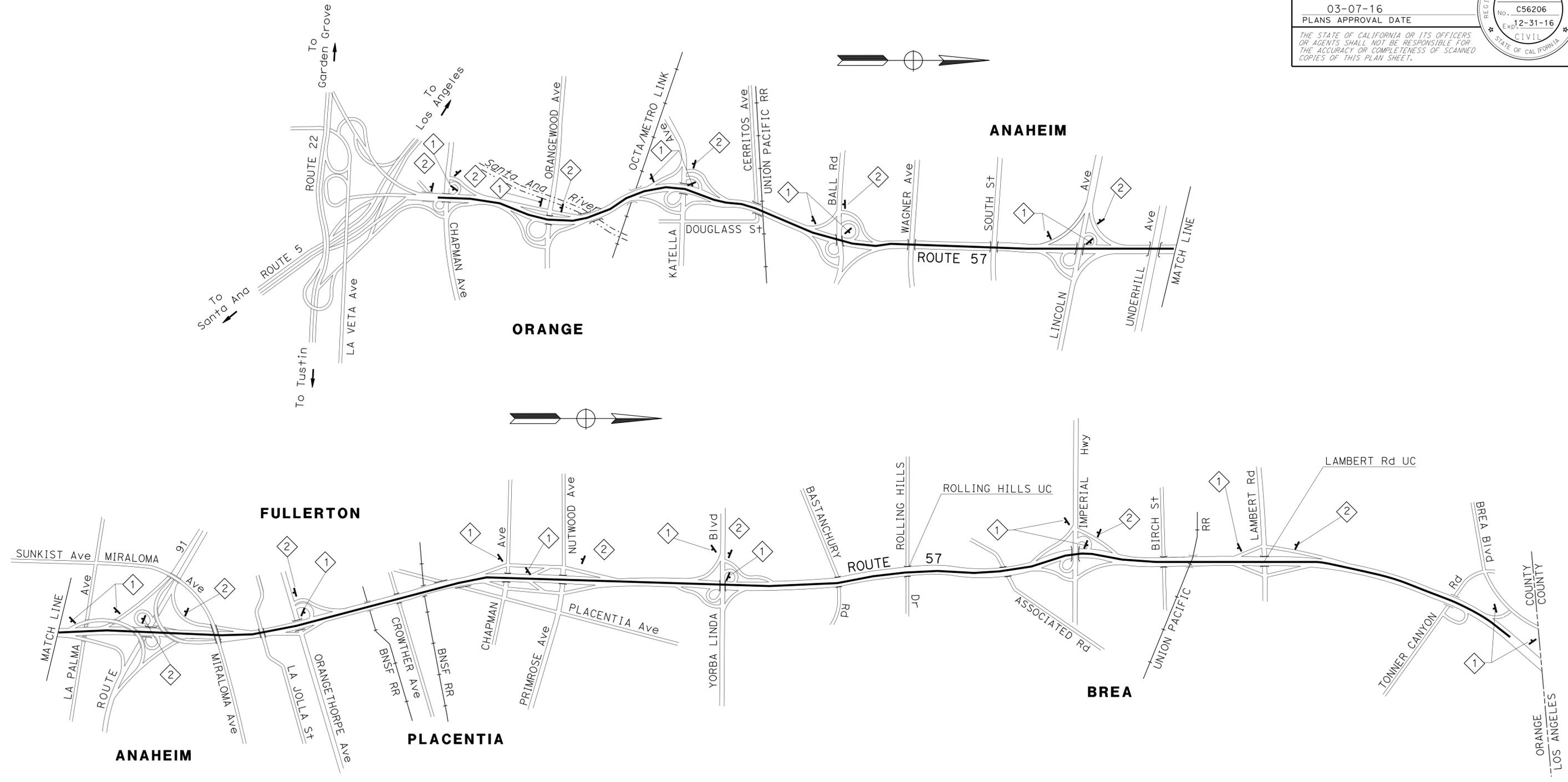
**LEGEND:**  
 [Diamond with X] CONSTRUCTION AREA SIGN  
 [Post with 1] CONSTRUCTION AREA SIGN, 1-POST

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	10	74

ANH P. TRAN  
 REGISTERED CIVIL ENGINEER  
 No. C56206  
 Exp. 12-31-16  
 CIVIL  
 STATE OF CALIFORNIA

12-04-15  
 REGISTERED CIVIL ENGINEER DATE  
 03-07-16  
 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.



STATIONARY MOUNTED CONSTRUCTION AREA SIGNS						
SIGN NUMBER	SIGN CODE	No. OF SIGNS	PANEL SIZE	WOOD POST		SIGN MESSAGE
				No. POST	POST SIZE	
1	W20-1	20	48" x 48"	2	4" x 6"	ROAD WORK AHEAD
2	G20-2	13	48" x 24"	2	4" x 6"	END ROAD WORK

FOR ADDITIONAL QUANTITIES OF CONSTRUCTION AREA SIGNS, SEE SHEET THQ-1.

**CONSTRUCTION AREA SIGNS**

NO SCALE

**CS-1**

APPROVED FOR CONSTRUCTION AREA SIGNS WORK ONLY

ANH TRAN  
12-01-15

REVISED BY  
DATE REVISED

PHAT TRAN  
ANH TRAN

CALCULATED-DESIGNED BY  
CHECKED BY

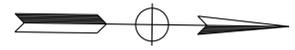
FUNCTIONAL SUPERVISOR  
MASSOUD TAJIK

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	11	74

**Anh Tran** 12-04-15  
 REGISTERED CIVIL ENGINEER DATE  
 03-07-16  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 ANH P. TRAN  
 No. C56206  
 Exp. 12-31-16  
 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. LOCATION OF CONSTRUCTION AREA SIGNS (DETOUR) AND PORTABLE CHANGEABLE MESSAGE SIGNS ARE APPROXIMATE. EXACT LOCATIONS TO BE DETERMINED BY THE ENGINEER.
2. CONSTRUCTION AREA SIGNS (DETOUR) SHALL BE LOCATED APPROXIMATELY 75 FEET AWAY FROM THE INTERSECTION.
3. EXACT MESSAGES ON PCMS TO BE DETERMINED BY THE ENGINEER.

**LEGEND:**

- PORTABLE CHANGEABLE MESSAGE SIGN
- DIRECTION OF TRAFFIC
- CONSTRUCTION AREA SIGNS (DETOUR)
- CONNECTOR/RAMPS/MAINLINE CLOSED

**CLOSURE #1:**

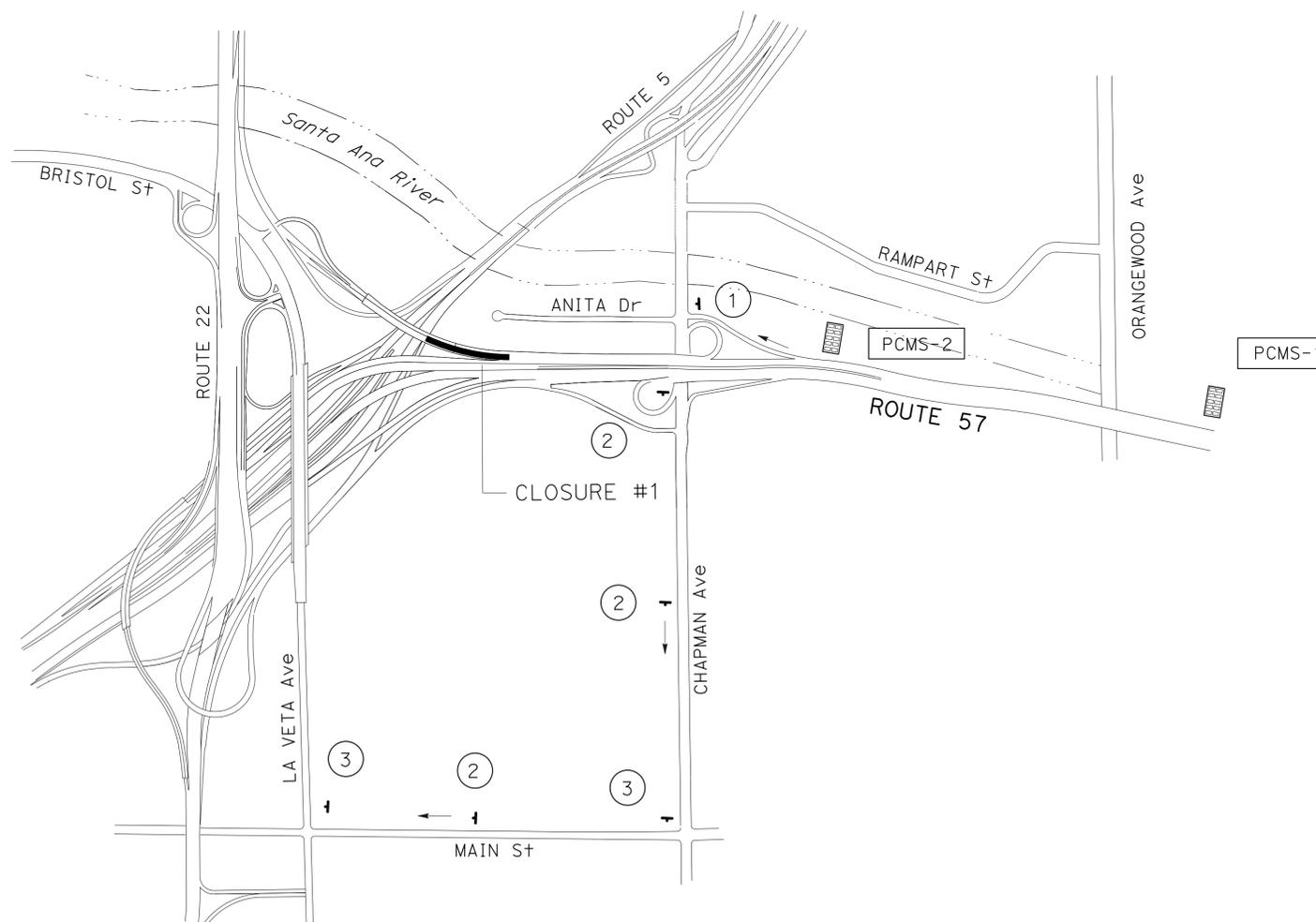
SB ROUTE 57 TO WB ROUTE 22 Conn

**DETOUR:**

- TO WB 22: EXIT CHAPMAN Ave OFF-RAMP, LEFT ON CHAPMAN Ave AND RIGHT ON MAIN St AND RIGHT ON LA VETA
- TO LA VETA Ave: EXIT CHAPMAN Ave OFF-RAMP, LEFT ON CHAPMAN Ave AND RIGHT ON MAIN St

**PORTABLE CHANGEABLE MESSAGE SIGN**

PCMS No.	MESSAGE	
	1ST FRAME	2ND FRAME
PCMS-1	WB 22 CLOSED CLOSED	USE CHAPMAN Ave EXIT
PCMS-2	DETOUR WB 22	EXIT HERE



**TRAFFIC HANDLING PLAN  
(DETOUR)**

NO SCALE

**TH-1**

APPROVED FOR TRAFFIC HANDLING WORK ONLY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	12	74
<i>Anh Tran</i> REGISTERED CIVIL ENGINEER			12-04-15 DATE		
03-07-16 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>					

**CLOSURE #2:**

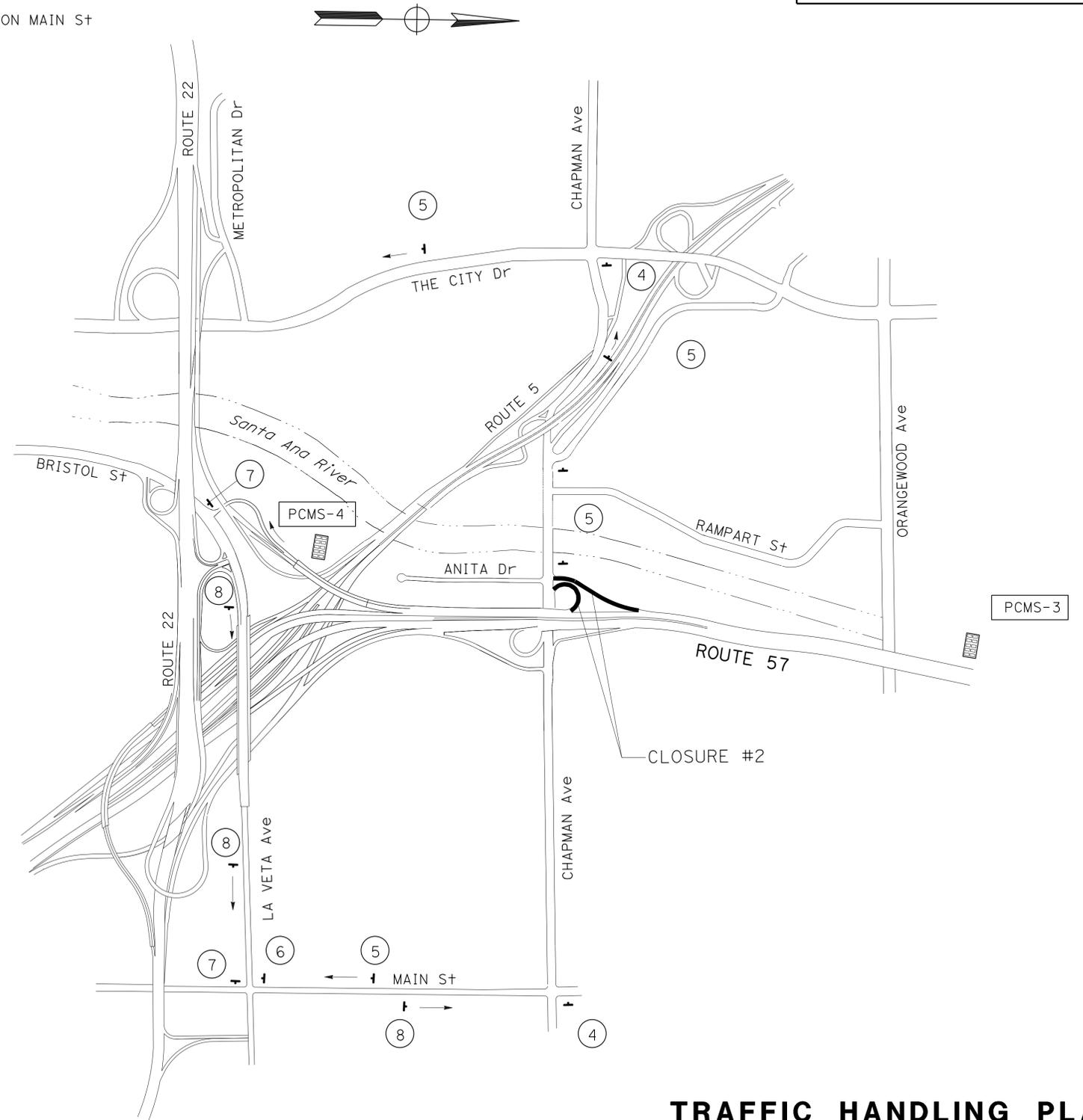
1. SB CHAPMAN Ave OFF-RAMP
2. SB CHAPMAN Ave LOOP ON-RAMP

**DETOUR:**

1. SB Rte 57 TO WB Rte 22, Exit LA VETA Ave/BRISTOL St OFF-RAMP, LEFT ON LA VETA Ave, AND LEFT ON MAIN St
2. WB ON CHAPMAN Ave AND LEFT ON THE CITY Dr

**PORTABLE CHANGEABLE MESSAGE SIGN**

PCMS No.	MESSAGE	
	1ST FRAME	2ND FRAME
PCMS-3	CHAPMAN Ave EXIT CLOSED	USE LA VETA/BRISTOL EXIT
PCMS-4	DETOUR CHAPMAN Ave	EXIT HERE



**TRAFFIC HANDLING PLAN  
(DETOUR)  
NO SCALE**

**TH-2**

APPROVED FOR TRAFFIC HANDLING WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 MAINTENANCE

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

ANH TRAN  
 12-01-15

REVISOR BY  
 DATE REVISED

KHALEDA AKANS  
 AHMED ABBAS

CALCULATED-DESIGNED BY  
 CHECKED BY

FUNCTIONAL SUPERVISOR  
 MASSOUD TAJIK

**CLOSURE #3:**

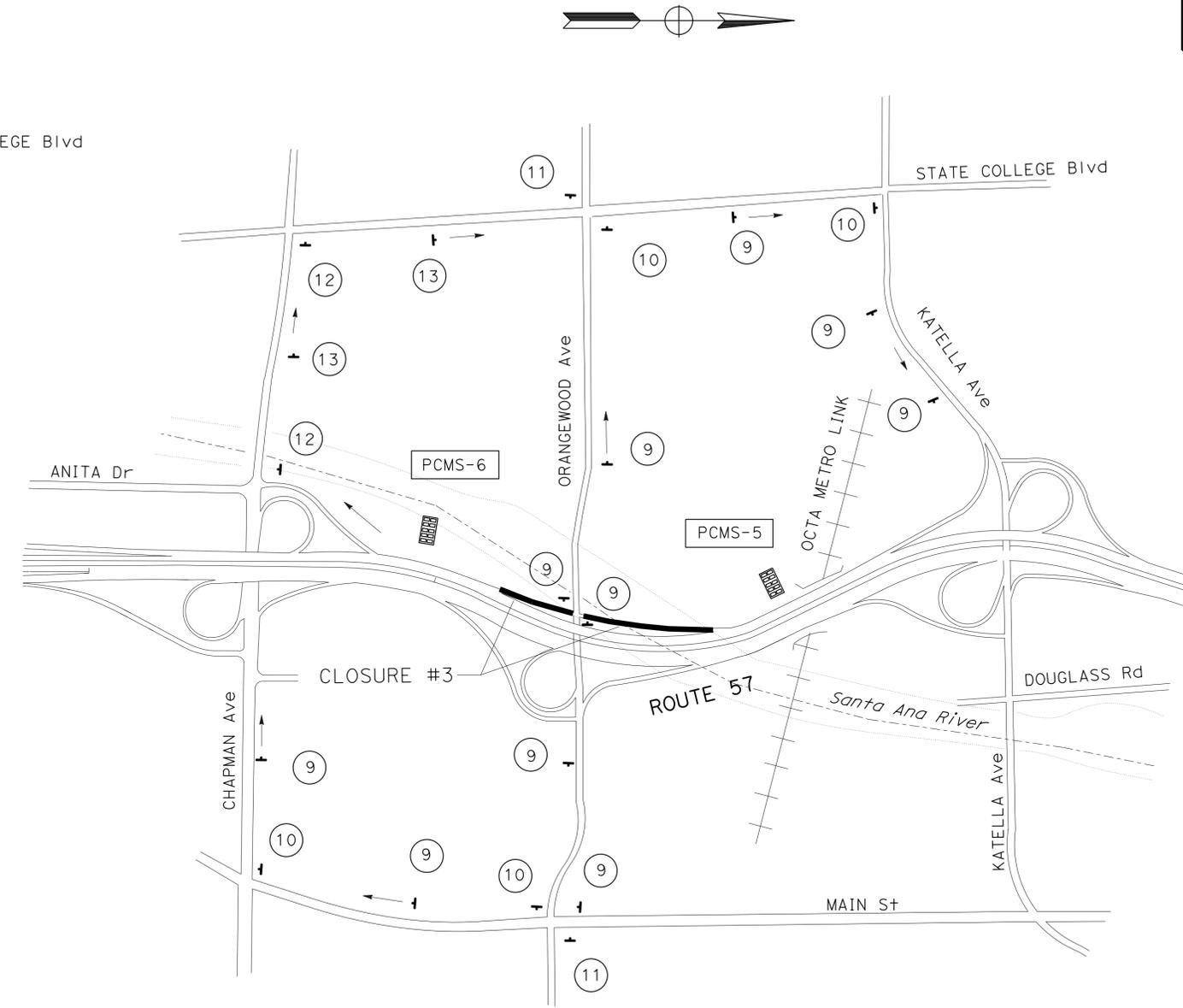
1. SB ROUTE 57 ORANGEWOOD Ave ON-RAMP
2. SB ROUTE 57 ORANGEWOOD Ave OFF-RAMP

**DETOUR:**

1. EB ORANGEWOOD Ave, RIGHT ON MAIN St AND RIGHT ON CHAPMAN Ave  
 WB ORANGEWOOD Ave, RIGHT ON STATE COLLEGE Blvd, AND RIGHT ON KATELLA Ave
2. EXIT CHAPMAN Ave OFF-RAMP, RIGHT ON CHAPMAN Ave AND RIGHT ON STATE COLLEGE Blvd

**PORTABLE CHANGEABLE MESSAGE SIGN**

PCMS No.	MESSAGE	
	1ST FRAME	2ND FRAME
PCMS-5	ORANGEWOOD Ave EXIT CLOSED	USE CHAPMAN Ave EXIT
PCMS-6	DETOUR ORANGEWOOD Ave	EXIT HERE



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	13	74

*Anh Tran* 12-04-15  
 REGISTERED CIVIL ENGINEER DATE

03-07-16  
 PLANS APPROVAL DATE

ANH P. TRAN  
 No. C56206  
 Exp. 12-31-16  
 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.

**TRAFFIC HANDLING PLAN  
 (DETOUR)**

NO SCALE

**TH-3**

APPROVED FOR TRAFFIC HANDLING WORK ONLY

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

ANH TRAN  
 09-01-10

REVISOR BY  
 DATE REVISED

KHALEDA AKANS  
 AHMED ABBAS

CALCULATED-DESIGNED BY  
 CHECKED BY

FUNCTIONAL SUPERVISOR  
 MASSOUD TAJIK

**CLOSURE #4:**

1. SB ROUTE 57 KATELLA Ave OFF-RAMP
2. SB ROUTE 57 KATELLA Ave LOOP ON-RAMP
3. SB ROUTE 57 KATELLA Ave ON-RAMP

**DETOUR:**

1. EXIT ORANGEWOOD Ave OFF-RAMP, RIGHT ON ORANGEWOOD Ave AND RIGHT ON STATE COLLEGE Blvd
2. WB ON KATELLA Ave, LEFT ON STATE COLLEGE Blvd AND LEFT ON ORANGEWOOD Ave
3. EB ON KATELLA Ave, RIGHT ON MAIN St AND RIGHT ON ORANGEWOOD Ave

**PORTABLE CHANGEABLE MESSAGE SIGN**

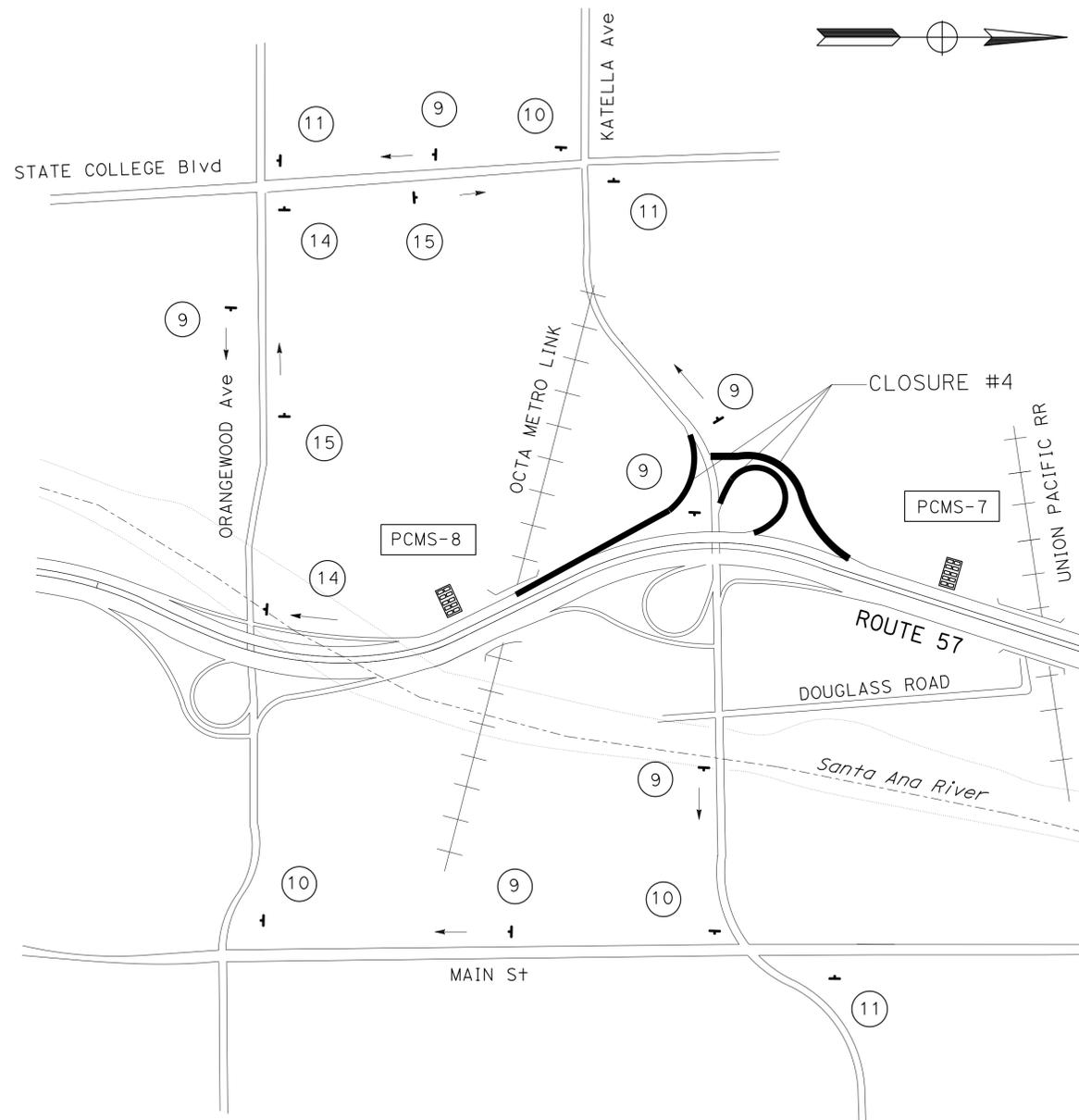
PCMS No.	MESSAGE	
	1ST FRAME	2ND FRAME
PCMS-7	KATELLA Ave EXIT CLOSED	USE ORANGEWOOD Ave EXIT
PCMS-8	DETOUR KATELLA Ave	EXIT HERE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	14	74

Anh Tran 12-04-15  
 REGISTERED CIVIL ENGINEER DATE  
 03-07-16  
 PLANS APPROVAL DATE

ANH P. TRAN  
 No. C56206  
 Exp. 12-31-16  
 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.



**TRAFFIC HANDLING PLAN  
 (DETOUR)**

NO SCALE

**TH-4**

APPROVED FOR TRAFFIC HANDLING WORK ONLY

**CLOSURE #5:**

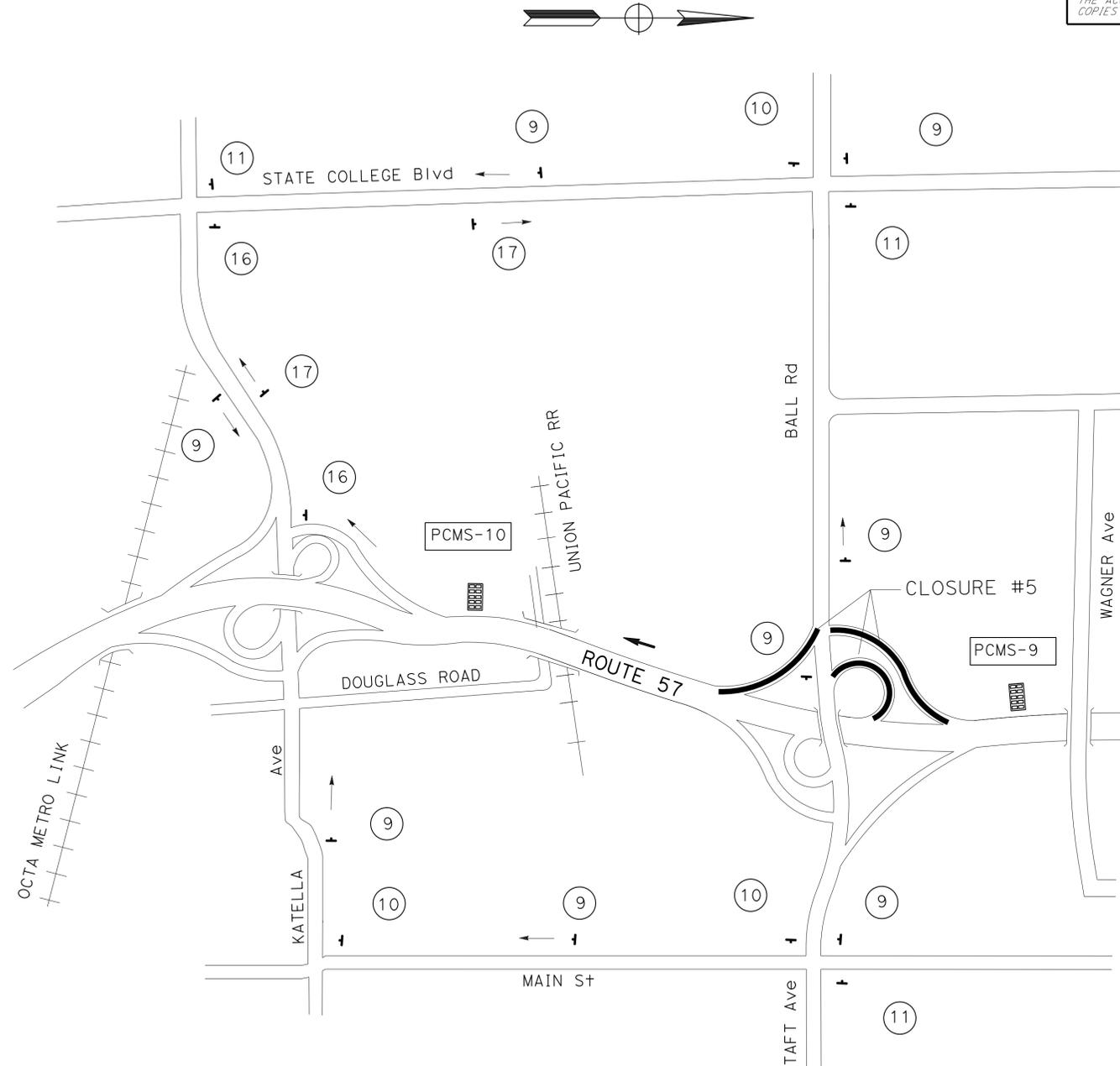
1. SB ROUTE 57 BALL Rd OFF-RAMP
2. SB ROUTE 57 BALL Rd LOOP ON-RAMP
3. SB ROUTE 57 BALL Rd ON-RAMP

**DETOUR:**

1. EXIT KATELLA Ave OFF-RAMP, RIGHT ON KATELLA Ave AND RIGHT ON STATE COLLEGE Blvd
2. WB BALL Rd, LEFT ON STATE COLLEGE Blvd AND LEFT ON KATELLA Ave
3. EB BALL Rd, RIGHT ON MAIN St AND RIGHT ON KATELLA Ave

**PORTABLE CHANGEABLE MESSAGE SIGN**

PCMS No.	MESSAGE	
	1ST FRAME	2ND FRAME
PCMS-9	BALL Rd EXIT CLOSED	USE KATELLA Ave EXIT
PCMS-10	DETOUR BALL Rd	EXIT HERE



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	15	74

*Anh Tran* 12-04-15  
 REGISTERED CIVIL ENGINEER DATE

03-07-16  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 ANH P. TRAN  
 No. C56206  
 Exp. 12-31-16  
 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.

**TRAFFIC HANDLING PLAN  
 (DETOUR)**

NO SCALE

**TH-5**

APPROVED FOR TRAFFIC HANDLING WORK ONLY

ANH TRAN  
 12-01-15

REVISOR BY  
 DATE REVISED

MIMI CHAU  
 ANH TRAN

CALCULATED-DESIGNED BY  
 CHECKED BY

FUNCTIONAL SUPERVISOR  
 MASSOUD TAJIK

**CLOSURE #6:**

1. SB ROUTE 57 LINCOLN Ave OFF-RAMP
2. SB ROUTE 57 LINCOLN Ave LOOP ON-RAMP
3. SB ROUTE 57 EB LINCOLN Ave ON-RAMP

**DETOUR:**

1. EXIT BALL Rd OFF-RAMP, RIGHT ON BALL Rd AND RIGHT ON STATE COLLEGE Blvd
2. WB LINCOLN Ave LEFT ON STATE COLLEGE Blvd AND LEFT ON BALL Rd
3. EB LINCOLN Ave RIGHT ON STATE COLLEGE Blvd LEFT AND ON BALL Rd

**PORTABLE CHANGEABLE MESSAGE SIGN**

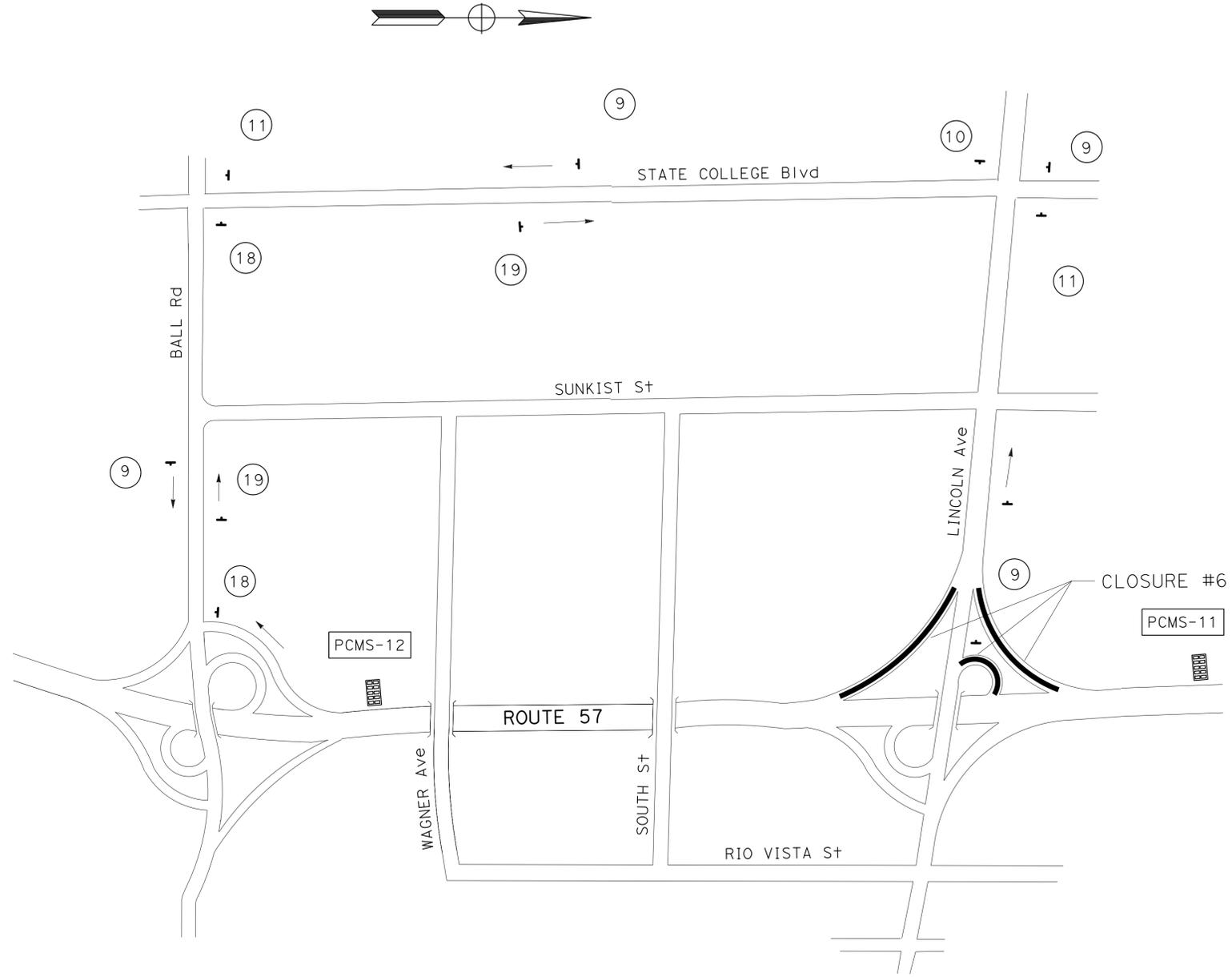
PCMS No.	MESSAGE	
	1ST FRAME	2ND FRAME
PCMS-11	LINCOLN Ave EXIT CLOSED	USE BALL Rd EXIT
PCMS-12	DETOUR LINCOLN Ave	EXIT HERE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	16	74

*Anh Tran* 12-04-15  
 REGISTERED CIVIL ENGINEER DATE  
 03-07-16  
 PLANS APPROVAL DATE

ANH P. TRAN  
 No. C56206  
 Exp. 12-31-16  
 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.



APPROVED FOR TRAFFIC HANDLING WORK ONLY

LAST REVISION  
 12-01-15  
 DATE PLOTTED => 08-MAR-2016  
 TIME PLOTTED => 13:30

ANH TRAN  
12-01-15

REVISOR BY  
DATE REVISED

MIMI CHAU  
ANH TRAN

CALCULATED-DESIGNED BY  
CHECKED BY

FUNCTIONAL SUPERVISOR  
MASSOUD TAJIK

MAINTENANCE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	17	74

*Anh Tran* 12-04-15  
 REGISTERED CIVIL ENGINEER DATE

03-07-16  
 PLANS APPROVAL DATE

ANH P. TRAN  
 No. C56206  
 Exp. 12-31-16  
 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.

**CLOSURES #7:**

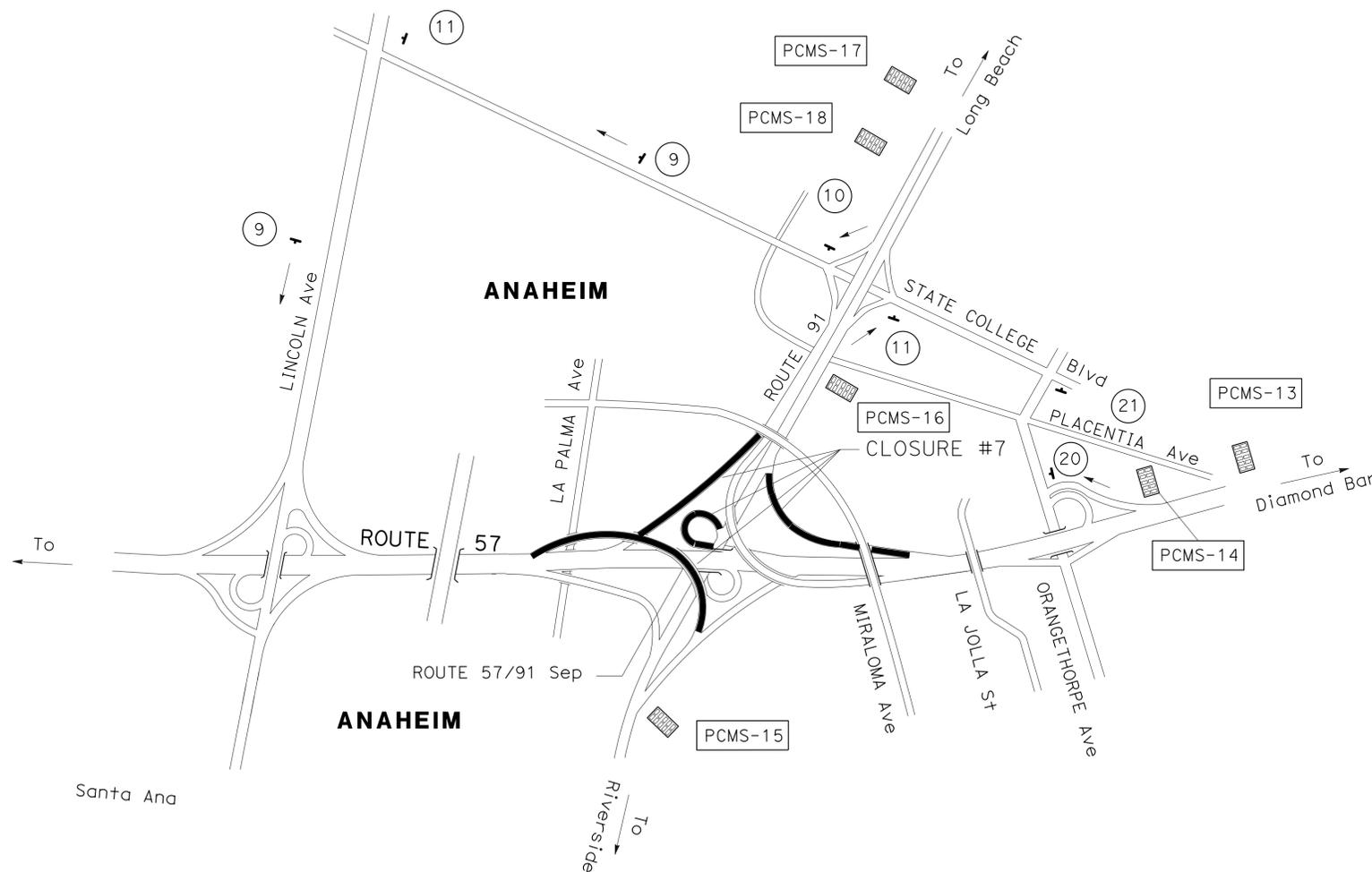
1. SB ROUTE 57 TO WB ROUTE 91 Conn
2. SB ROUTE 57 TO EB ROUTE 91 LOOP Conn
3. WB ROUTE 91 TO SB ROUTE 57 Conn
4. EB ROUTE 91 TO SB ROUTE 57 Conn

**DETOUR:**

- 1 & 2. Exit ORANGETHORPE Ave OFF-RAMP, RIGHT ON ORANGETHORPE Ave, AND LEFT ON STATE COLLEGE Blvd
3. Exit STATE COLLEGE Blvd OFF-RAMP, LEFT ON STATE COLLEGE Blvd, AND LEFT ON LINCOLN Ave
4. Exit STATE COLLEGE Blvd OFF-RAMP, RIGHT ON STATE COLLEGE Blvd, AND LEFT ON LINCOLN Ave

**PORTABLE CHANGEABLE MESSAGE SIGN**

PCMS No.	MESSAGE	
	1ST FRAME	2ND FRAME
PCMS-13	S 57 TO ROUTE 91 CLOSED	USE ORANGETHORPE Ave EXIT
PCMS-14	DETOUR ROUTE 91	EXIT HERE
PCMS-15	W 91 TO S 57 CLOSED	USE STATE COLLEGE Blvd EXIT
PCMS-16	DETOUR ROUTE 57	EXIT HERE
PCMS-17	E 91 TO S 57 CLOSED	USE STATE COLLEGE Blvd EXIT
PCMS-18	DETOUR ROUTE 57	EXIT HERE



**TRAFFIC HANDLING PLAN (DETOUR)**

NO SCALE

**TH-7**

APPROVED FOR TRAFFIC HANDLING WORK ONLY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	18	74
<i>Anh Tran</i> REGISTERED CIVIL ENGINEER DATE 12-04-15			ANH P. TRAN No. C56206 Exp. 12-31-16 CIVIL STATE OF CALIFORNIA		
03-07-16			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>					

**CLOSURE #8:**

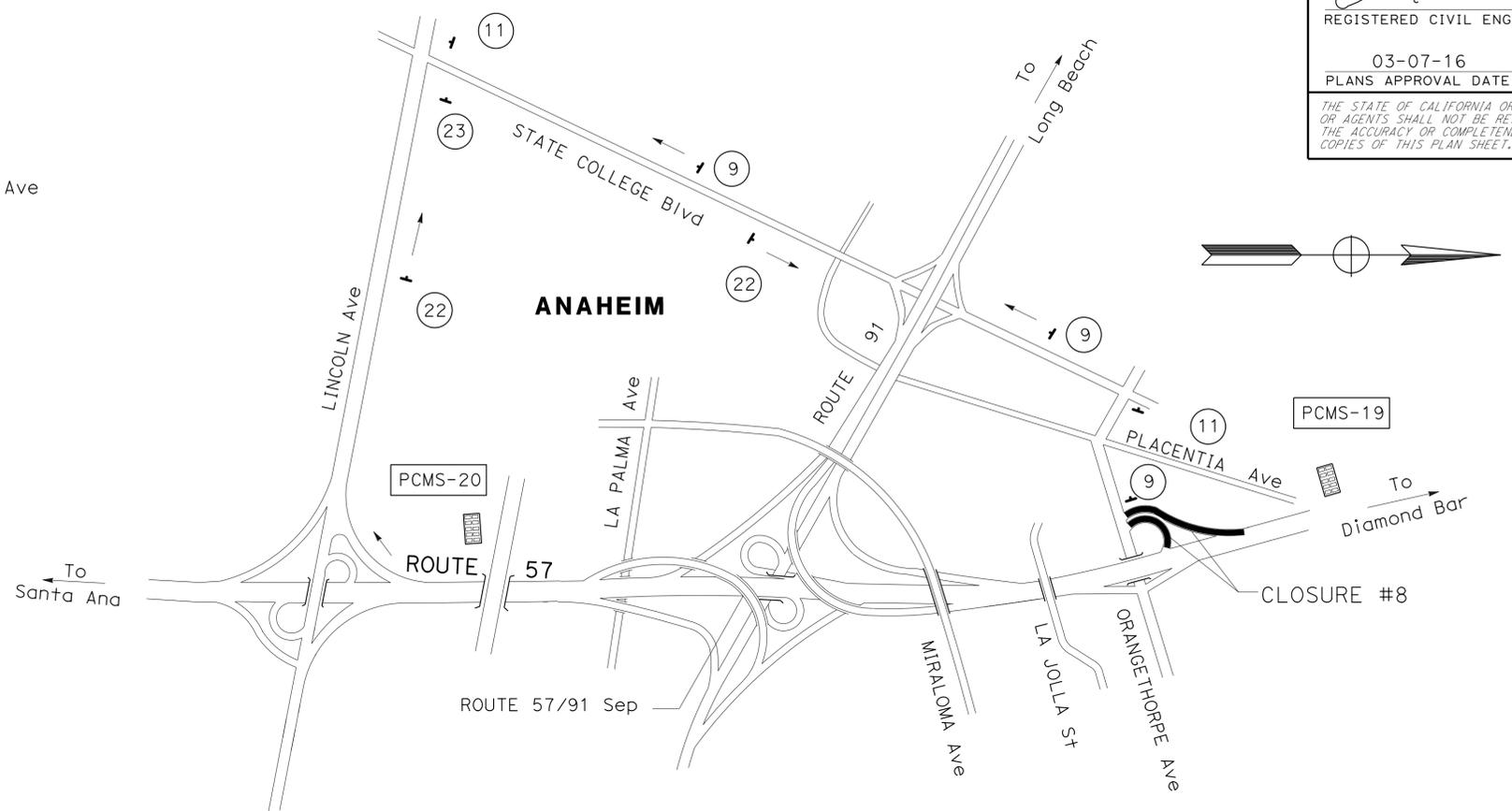
1. SB ROUTE 57 ORANGETHORPE Ave OFF-RAMP
2. SB ROUTE 57 ORANGETHORPE Ave LOOP ON-RAMP

**DETOUR:**

1. Exit LINCOLN Ave OFF-RAMP AND RIGHT ON STATE COLLEGE Blvd
2. WB ORANGETHORPE Ave, LEFT ON STATE COLLEGE Blvd, AND LEFT ON LINCOLN Ave

**PORTABLE CHANGEABLE MESSAGE SIGN**

PCMS No.	MESSAGE	
	1ST FRAME	2ND FRAME
PCMS-19	ORANGETHORPE Ave EXIT CLOSED	USE LINCOLN Ave EXIT
PCMS-20	DETOUR ORANGETHORPE Ave	EXIT HERE



**CLOSURE #9:**

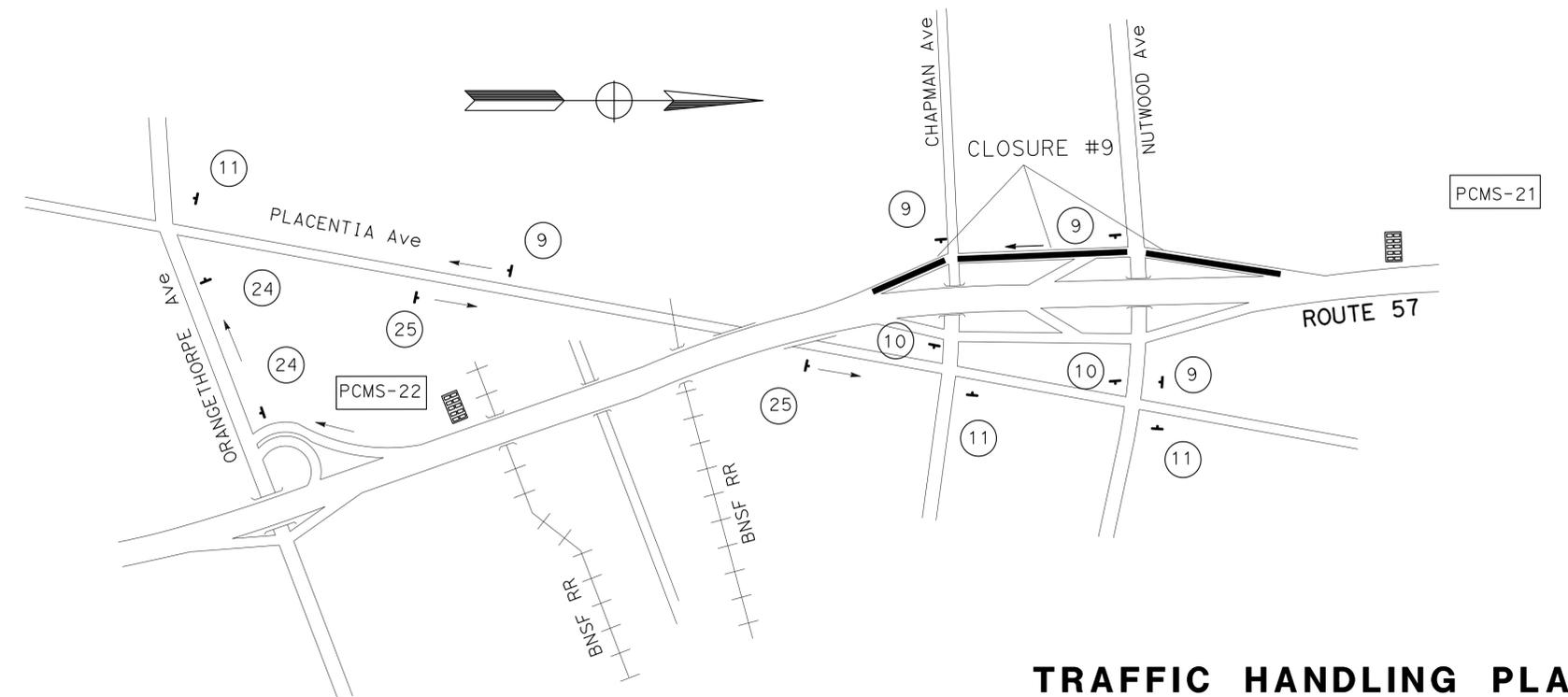
1. SB ROUTE 57 NUTWOOD Ave OFF-RAMP
2. SB ROUTE 57 NUTWOOD Ave SLIP-RAMP
3. SB ROUTE 57 CHAPMAN Ave ON-RAMP

**DETOUR:**

1. EXIT ORANGETHORPE Ave OFF-RAMP, RIGHT ON ORANGETHORPE Ave AND RIGHT ON PLACENTIA Ave
2. EB NUTWOOD Ave, RIGHT ON PLACENTIA Ave AND LEFT ON ORANGEWOOD Ave
3. EB CHAPMAN Ave, RIGHT ON PLACENTIA Ave AND LEFT ON ORANGEWOOD Ave

**PORTABLE CHANGEABLE MESSAGE SIGN**

PCMS No.	MESSAGE	
	1ST FRAME	2ND FRAME
PCMS-21	NUTWOOD/CHAPMAN EXIT CLOSED	USE ORANGETHORPE Ave EXIT
PCMS-22	DETOUR NUTWOOD/CHAPMAN	EXIT HERE



**TRAFFIC HANDLING PLAN (DETOUR)**

NO SCALE

TH-8

APPROVED FOR TRAFFIC HANDLING WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 MAINTENANCE  
 FUNCTIONAL SUPERVISOR: MASSOUD TAJIK  
 CALCULATED/DESIGNED BY: ANH TRAN  
 CHECKED BY: ANH TRAN  
 REVISOR: ANH TRAN  
 DATE REVISOR: 12-01-15  
 MIMI CHAU

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	19	74

ANH P. TRAN  
 REGISTERED CIVIL ENGINEER  
 No. C56206  
 Exp. 12-31-16  
 CIVIL  
 STATE OF CALIFORNIA

12-04-15  
 DATE  
 REGISTERED CIVIL ENGINEER

03-07-16  
 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.

**CLOSURE #10:**

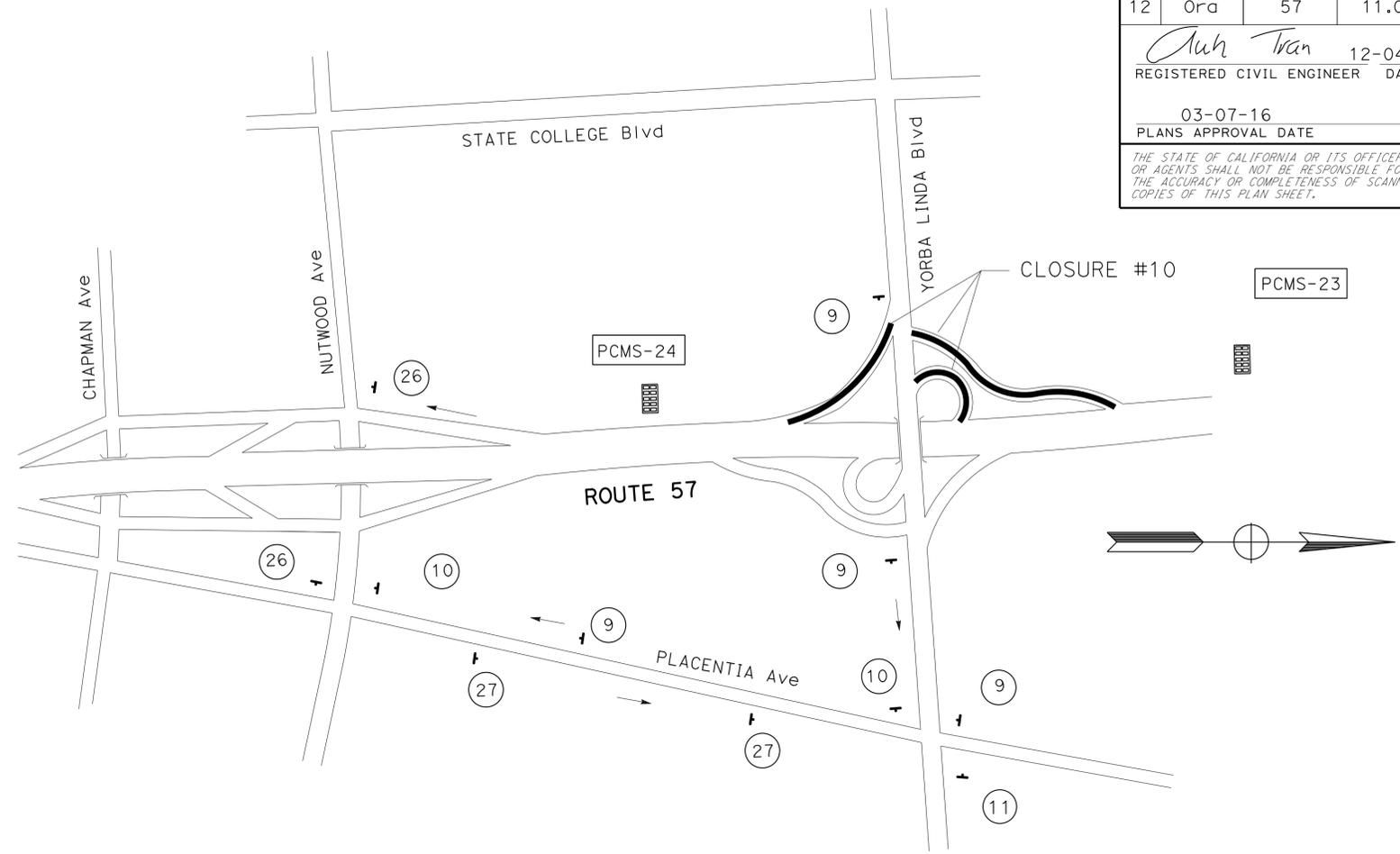
1. SB ROUTE 57 YORBA LINDA Blvd OFF-RAMP
2. SB ROUTE 57 YORBA LINDA Blvd LOOP ON-RAMP
3. SB ROUTE 57 YORBA LINDA ON-RAMP

**DETOUR:**

1. EXIT SB ROUTE 57 NUTWOOD Ave OFF-RAMP, LEFT ON NUTWOOD Ave AND LEFT ON PLACENTIA Ave
2. WB YORBA LINDA Blvd, LEFT ON PLACENTIA Ave AND RIGHT ON NUTWOOD Ave
3. EB YORBA LINDA Blvd, RIGHT ON PLACENTIA Ave AND RIGHT ON NUTWOOD Ave

**PORTABLE CHANGEABLE MESSAGE SIGN**

PCMS No.	MESSAGE	
	1ST FRAME	2ND FRAME
PCMS-23	YORBA LINDA Blvd EXIT CLOSED	USE NUTWOOD Ave EXIT
PCMS-24	DETOUR YORBA LINDA Blvd	EXIT HERE



**CLOSURE #11:**

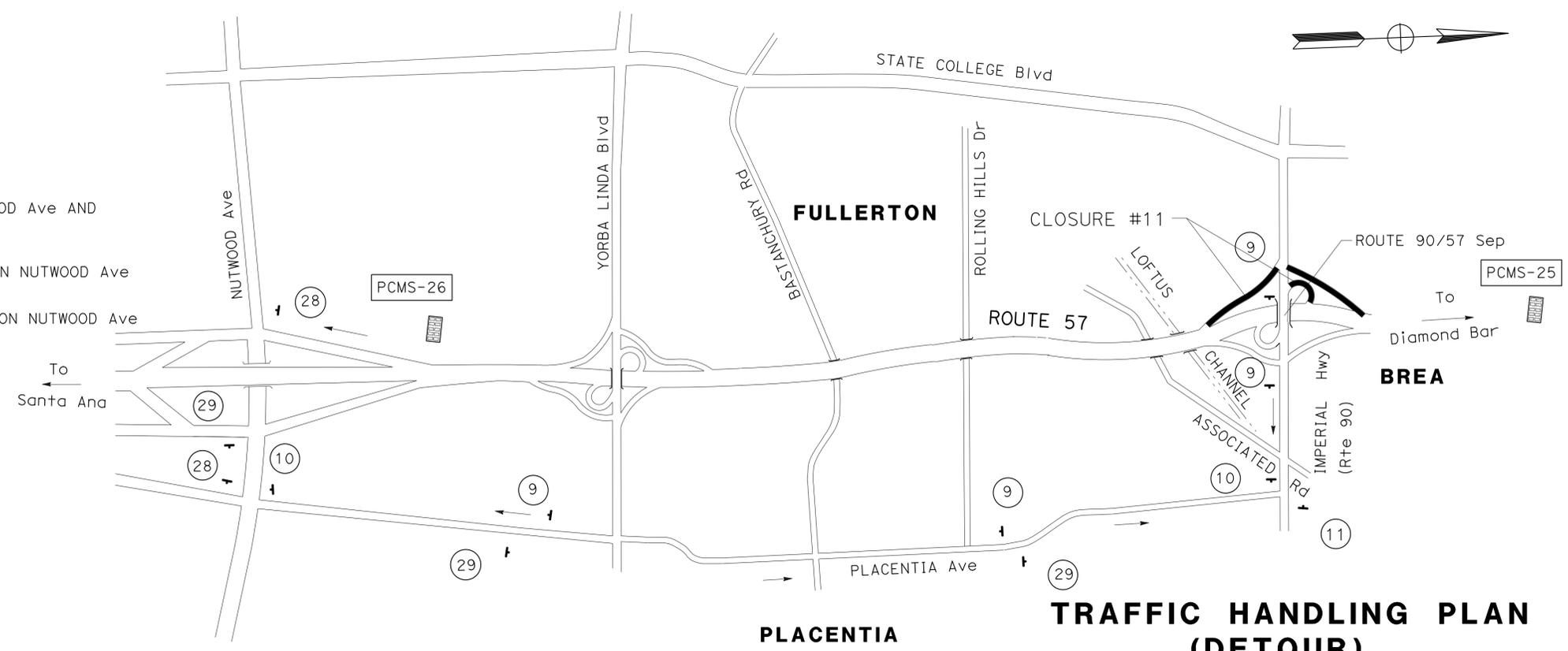
1. SB ROUTE 57 IMPERIAL Hwy (Rte 90) OFF-RAMP
2. SB ROUTE 57 IMPERIAL Hwy (Rte 90) LOOP ON-RAMP
3. SB ROUTE 57 IMPERIAL Hwy (Rte 90) ON-RAMP

**DETOUR:**

1. EXIT SB ROUTE 57 NUTWOOD Ave OFF-RAMP, LEFT ON NUTWOOD Ave AND LEFT ON PLACENTIA Ave
2. WB ON IMPERIAL Hwy, LEFT ON PLACENTIA Ave AND RIGHT ON NUTWOOD Ave
3. EB ON IMPERIAL Hwy, RIGHT ON PLACENTIA Ave AND RIGHT ON NUTWOOD Ave

**PORTABLE CHANGEABLE MESSAGE SIGN**

PCMS No.	MESSAGE	
	1ST FRAME	2ND FRAME
PCMS-25	IMPERIAL Hwy EXIT CLOSED	USE NUTWOOD Ave EXIT
PCMS-26	DETOUR IMPERIAL Hwy	EXIT HERE



**TRAFFIC HANDLING PLAN (DETOUR)**

NO SCALE

TH-9

APPROVED FOR TRAFFIC HANDLING WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 MAINTENANCE  
 PHAT TRAN  
 AHMED ABBAS  
 REVISOR  
 ANH TRAN  
 12-01-15  
 REVISION  
 DATE PLOTTED => 08-MAR-2016  
 12-01-15  
 TIME PLOTTED => 1:31:30

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	20	74

ANH P. TRAN  
 REGISTERED CIVIL ENGINEER  
 No. C56206  
 Exp. 12-31-16  
 CIVIL  
 STATE OF CALIFORNIA

12-04-15  
 DATE  
 03-07-16  
 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.

**CLOSURE #12:**

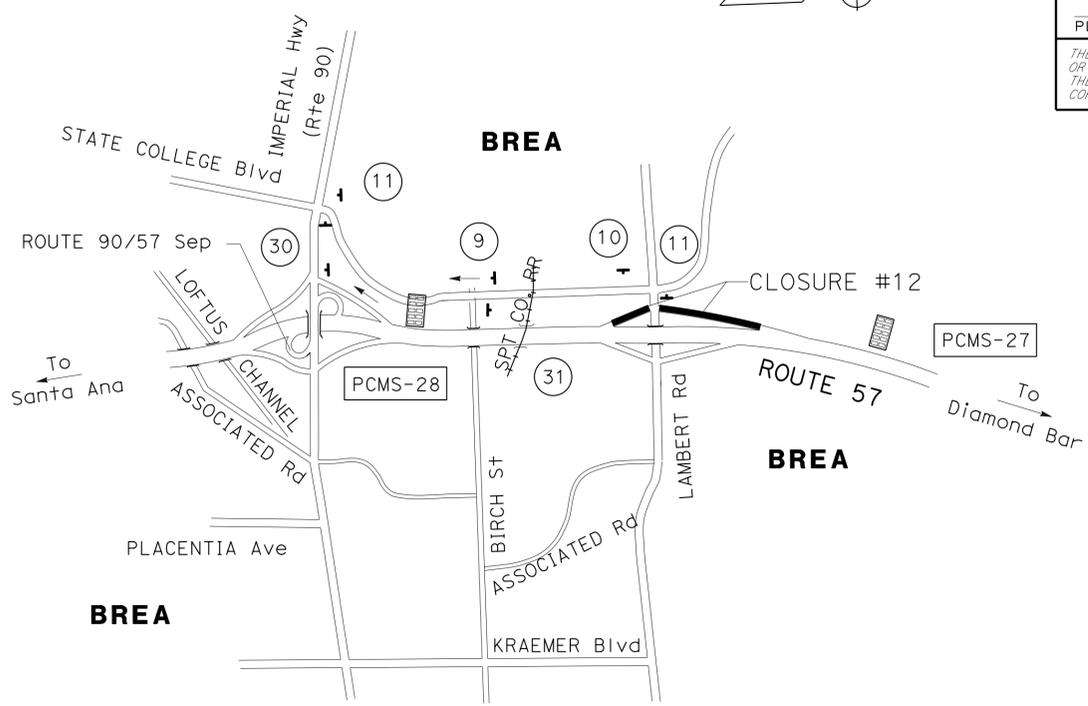
1. SB ROUTE 57 LAMBERT Rd OFF-RAMP
2. SB ROUTE 57 LAMBERT Rd ON-RAMP

**DETOUR:**

1. Exit IMPERIAL Hwy (Rte 90 )OFF-RAMP, RIGHT ON IMPERIAL Hwy AND RIGHT ON STATE COLLEGE Blvd
2. WB ON LAMBERT Rd, LEFT ON STATE COLLEGE Blvd AND LEFT ON IMPERIAL Hwy

**PORTABLE CHANGEABLE MESSAGE SIGN**

PCMS No.	MESSAGE	
	1ST FRAME	2ND FRAME
PCMS-27	LAMBERT Rd EXIT CLOSED	USE IMPERIAL Hwy EXIT
PCMS-28	DETOUR LAMBERT Rd	EXIT HERE

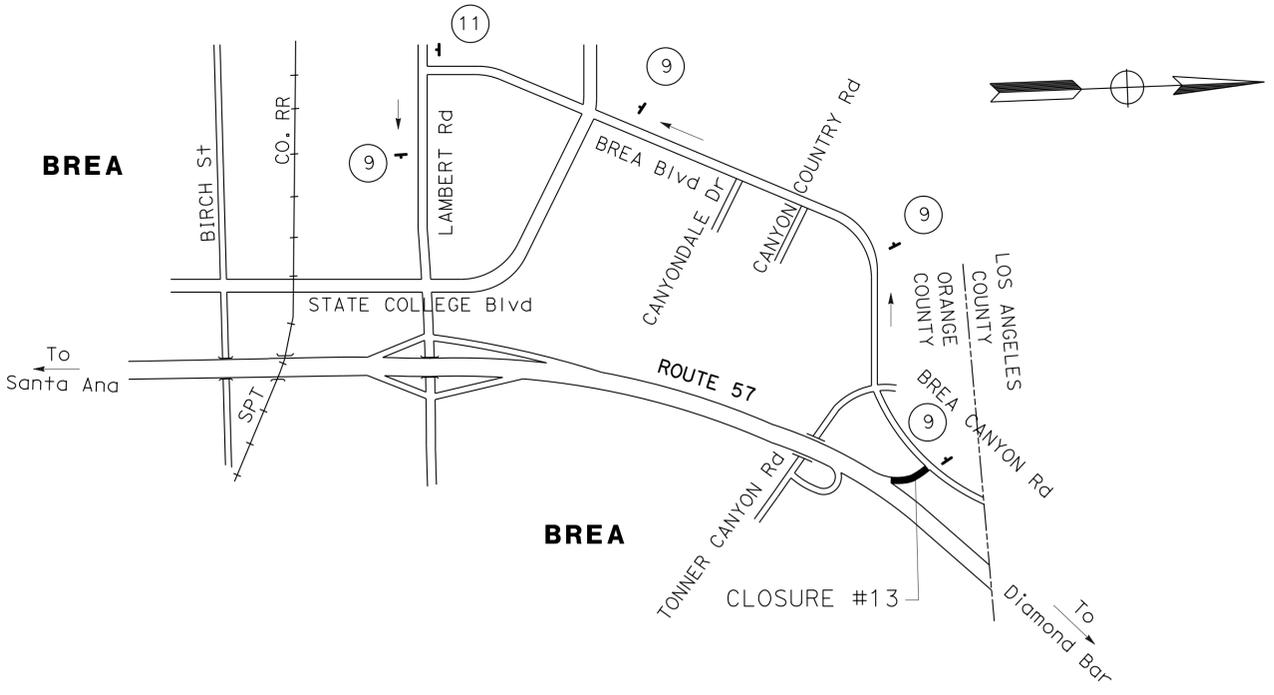


**CLOSURE #13:**

1. SB ROUTE 57 TONNER CANYON Rd ON-RAMP

**DETOUR:**

1. EB ON BREA Blvd AND LEFT ON LAMBERT Rd



**TRAFFIC HANDLING PLAN  
 (DETOUR)  
 NO SCALE**

APPROVED FOR TRAFFIC HANDLING WORK ONLY

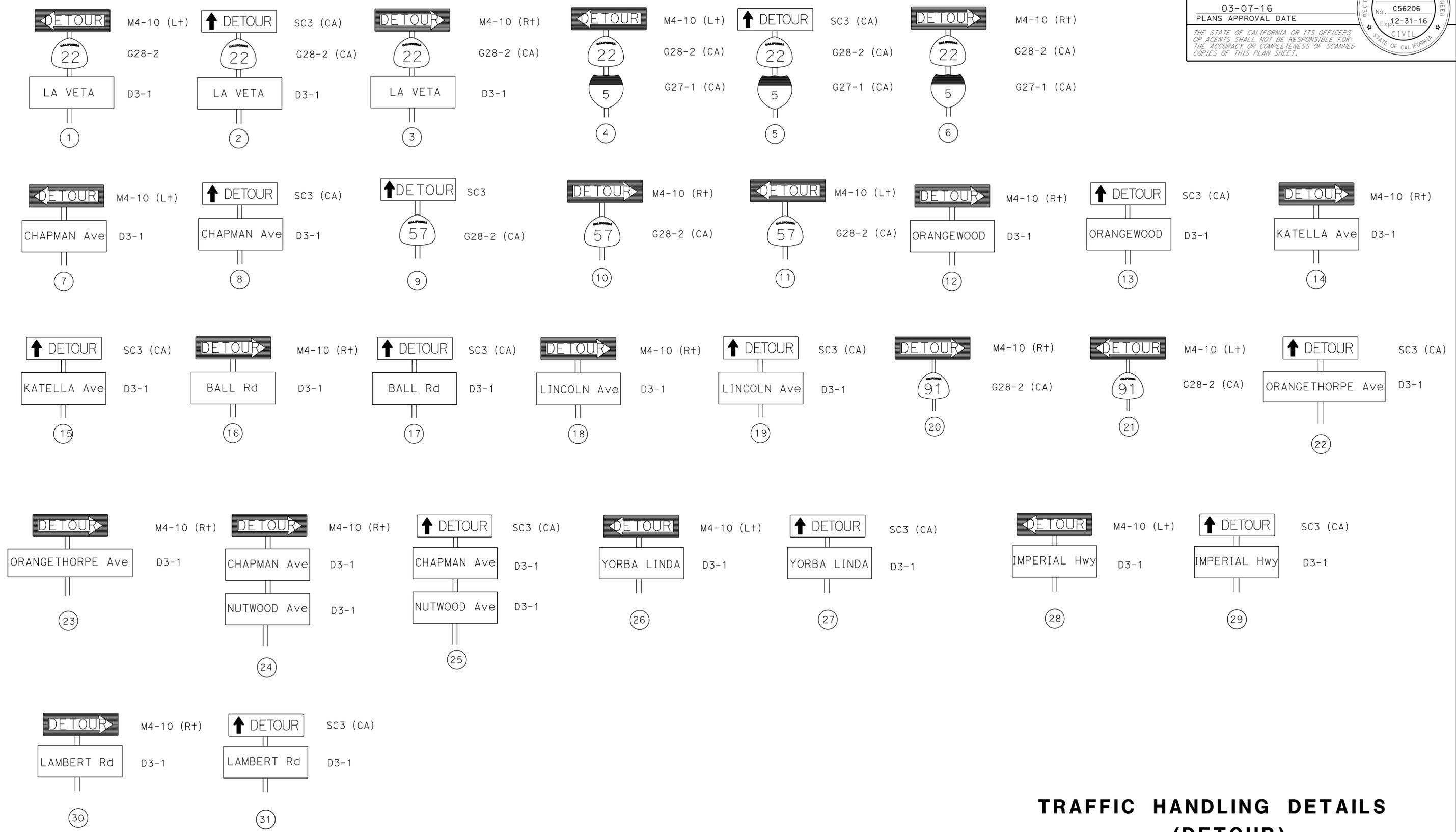
**TH-10**

LAST REVISION  
 12-01-15  
 DATE PLOTTED => 08-MAR-2016  
 TIME PLOTTED => 13:30

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	21	74

*Anh Tran* 12-04-15  
 REGISTERED CIVIL ENGINEER DATE  
 03-07-16  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 MAINTENANCE  
 FUNCTIONAL SUPERVISOR MASSOUD TAJIK  
 CALCULATED/DESIGNED BY PHAT TRAN  
 CHECKED BY ANH TRAN  
 REVISOR BY ANH TRAN  
 DATE REVISED 12-01-15



**TRAFFIC HANDLING DETAILS**  
**(DETOUR)**  
 NO SCALE

**THD-1**

LAST REVISION DATE PLOTTED 08-MAR-2016 TIME PLOTTED => 13:30

**NOTE:**

FOR ADDITIONAL QUANTITIES OF CONSTRUCTION AREA SIGNS, SEE SHEET CS-1.

**CONSTRUCTION AREA SIGNS (DETOUR)  
 STATIONARY MOUNTED**

SIGN No.	SIGN CODE	No. OF POST AND SIZE	No. OF SIGNS
1	M4-10 (L+)	1-4" X 6"	1
	G28-2		
	D3-1		
2	SC3 (CA)	1-4" X 6"	3
	G28-2		
	D3-1		
3	M4-10 (R+)	1-4" X 6"	2
	G28-2		
	D3-1		
4	M4-10 (L+)	1-4" X 6"	2
	G28-2		
5	SC3 (CA)	1-4" X 6"	5
	G28-2		
6	M4-10 (R+)	1-4" X 6"	1
	G28-2		
7	M4-10 (R+)	1-4" X 6"	2
	D3-1		
8	SC3 (CA)	1-4" X 6"	3
	D3-1		
9	SC3 (CA)	1-4" X 6"	51
	G28-2		
10	M4-10 (R+)	1-4" X 6"	19
	G28-2		
11	M4-10 (L+)	1-4" X 6"	21
	G28-2		
12	M4-10 (R+)	1-4" X 6"	2
	D3-1		
13	SC3 (CA)	1-4" X 6"	2
	D3-1		
14	M4-10 (R+)	1-4" X 6"	2
	D3-1		
15	SC3 (CA)	1-4" X 6"	2
	D3-1		
16	M4-10 (R+)	1-4" X 6"	2
	D3-1		

**CONSTRUCTION AREA SIGNS (DETOUR)  
 STATIONARY MOUNTED**

SIGN No.	SIGN CODE	No. OF POST AND SIZE	No. OF SIGNS
17	SC3 (CA)	1-4" X 6"	2
	D3-1		
18	M4-10 (R+)	1-4" X 6"	2
	D3-1		
19	SC3 (CA)	1-4" X 6"	2
	D3-1		
20	M4-10 (R+)	1-4" X 6"	1
	G28-2		
21	SC3 (CA)	1-4" X 6"	1
	G28-2		
22	SC3 (CA)	1-4" X 6"	2
	D3-1		
23	M4-10 (R+)	1-4" X 6"	1
	D3-1		
24	M4-10 (R+)	1-4" X 6"	2
	D3-1		
	D3-1		
25	SC3 (CA)	1-4" X 6"	2
	D3-1		
26	M4-10 (R+)	1-4" X 6"	2
	D3-1		
27	SC3 (CA)	1-4" X 6"	2
	D3-1		
28	M4-10 (R+)	1-4" X 6"	2
	D3-1		
29	SC3 (CA)	1-4" X 6"	3
	D3-1		
30	M4-10 (R+)	1-4" X 6"	2
	D3-1		
31	SC3 (CA)	1-4" X 6"	1
	D3-1		

**PORTABLE CHANGEABLE MESSAGE SIGN**

SHEET No.	PCMS
	EA
TH-1 TO TH-10 MAXIMUM No. OF PCMS REQUIRED	7

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	22	74

*Anh Tran* 12-04-15  
 REGISTERED CIVIL ENGINEER DATE  
 03-07-16  
 PLANS APPROVAL DATE  
 ANH P. TRAN  
 No. C56206  
 Exp. 12-31-16  
 CIVIL  
 STATE OF CALIFORNIA  
 REGISTERED PROFESSIONAL ENGINEER  
 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.

**TRAFFIC HANDLING QUANTITIES  
 (DETOUR) THQ-1**

**NOTES:**

- FOR DETAILS 13 Mod, 14 Mod, 42 Mod, AND 43 Mod, SEE PAVEMENT DELINEATION DETAIL SHEET PDD-2, EXCEPT THAT PAVEMENT MARKERS AND BLACK STRIPE ARE NOT TO BE USED IN Temp TRAFFIC STRIPE (PAINT).

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	23	74

*Anh Tran* 12-04-15  
 REGISTERED CIVIL ENGINEER DATE

03-07-16  
 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.

DIRECTION	LOCATION	STATION LIMITS	TEMPORARY TRAFFIC STRIPE (PAINT)											
			4"						8"					
			DETAIL 13 Mod	DETAIL 14 Mod	DETAIL 22	DETAIL 25	DETAIL 27B	DETAIL 37	DETAIL 36	DETAIL 36A	DETAIL 38B	DETAIL 43 Mod	DETAIL 42 Mod	
			BROKEN WHITE (36-12)		SOLID YELLOW		SOLID WHITE	BROKEN WHITE (12-3)	SOLID WHITE				BROKEN WHITE (36-12)	
			LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	
SOUTHBOUND ROUTE 57	0.2 MILE SOUTH OF CHAPMAN Ave UC TO CHAPMAN Ave UC	"A" 64+00 - "A" 70+49.16	900		2,600	649	649	400			450			
	CHAPMAN Ave UC TO ORANGEWOOD Ave UC	"B" 200+07.40 - "B" 230+00	8,290		12,000	2,993	2,993		350		150			
	ORANGEWOOD Ave UC TO KATELLA Ave UC	"B" 230+00 - "B" 269+00	11,250	450		3,900	3,750	1,250	800	300	450		3,900	
	KATELLA Ave UC TO DOUGLASS St OH	"B" 269+00 - "B" 291+30	6,240	450		2,230	2,230			400			2,230	
	DOUGLASS St OH TO BALL Rd OC	"B" 291+30 - "B" 314+30	6,900			2,300	2,300						2,300	
	BALL Rd OC TO WAGNER Ave OC	"B" 314+30 - "B" 340+90	7,530	450		2,660	2,310	1,190	350		300	2,660	2,660	
	WAGNER Ave OC TO SOUTH St OC	"B" 340+90 - "B" 367+40	8,000			2,650	2,650	2,610					2,650	
	SOUTH St OC TO LINCOLN Ave OC	"B" 367+40 - "B" 386+20	7,250			1,880	1,880				1,420		1,880	
	LINCOLN Ave OC TO ROUTE 57/91 SEPARATION	"B" 386+20 - "B" 429+60	16,760	600		4,340	4,340	1,150	600		300		1,680	
	ROUTE 57/91 SEPARATION TO LA JOLLA St OC	"B" 429+60 - "B" 458+00	9,360			2,820	2,820	480			300		2,820	
	LA JOLLA St OC TO ORANGETHORPE Ave UC	"B" 458+00 - "B" 472+30	5,800			1,450	1,450	1,450	800				30	
	ORANGETHORPE Ave UC TO PLACENTIA Ave UC	"B" 472+30 - "B" 506+50	9,810	450		3,420	3,420	170	300				3,420	
	PLACENTIA Ave UC TO CHAPMAN Ave UC	"B" 506+50 - "B" 520+20	4,110			1,370	1,540			200			1,370	
	CHAPMAN Ave UC TO NUTWOOD Ave UC	"B" 520+20 - "B" 534+50	4,290			1,430	1,430						1,430	
	NUTWOOD Ave UC TO YORBA LINDA Blvd OC	"B" 534+50 - "B" 574+30	11,490	450		3,980	3,980	1,750			300		3,980	
	YORBA LINDA Blvd OC TO BASTANCHURY Rd UC	"B" 574+30 - "B" 602+00	7,860	450		2,770	2,340		430				2,720	
	BASTANCHURY Rd UC TO ROLLING HILLS Dr UC	"B" 602+00 - "B" 627+20	7,110	450		2,520	2,520						2,520	
	ROLLING HILLS Dr UC TO ASSOCIATED Rd UC	"B" 627+20 - "B" 640+50	3,990			1,330	1,330						1,330	
	ASSOCIATED Rd UC TO ROUTE 57/90 SEPARATION	"B" 640+50 - "B" 655+00	4,320			1,440	800						1,440	
	ROUTE 57/90 SEPARATION TO BIRCH St UC	"B" 655+00 - "B" 682+50	7,830	600		2,760	2,760	2,150	720		120		2,760	
BIRCH St UC TO LAMBERT Rd UC	"B" 682+50 - "B" 709+50	5,100			2,700	2,700						2,700		
LAMBERT Rd UC TO TONNER CANYON Rd UC	"B" 709+50 - "B" 759+00	14,400	450		4,950	4,950		350				4,950		
TONNER CANYON Rd UC TO LOS ANGELES COUNTY LINE	"B" 759+00 - "C" 106+78.92	10,950	450	5,600	3,800	5,250						1,000		
	SUB-TOTAL		179,540	5,250	20,200	60,342	60,392	12,600	4,700	900	2,370	4,080	49,770	
	TOTAL *		400,144											

\* - QUANTITIES OF TEMPORARY TRAFFIC STRIPE (PAINT) ON BRIDGES AND ON ASPHALT CONCRETE PAVEMENT ARE INCLUDED.

**TRAFFIC HANDLING QUANTITIES**

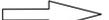
**THQ-2**

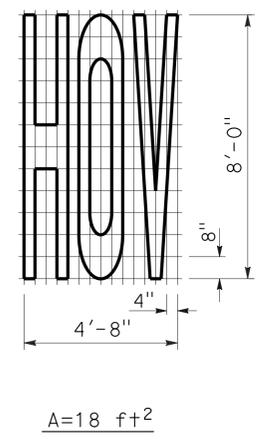
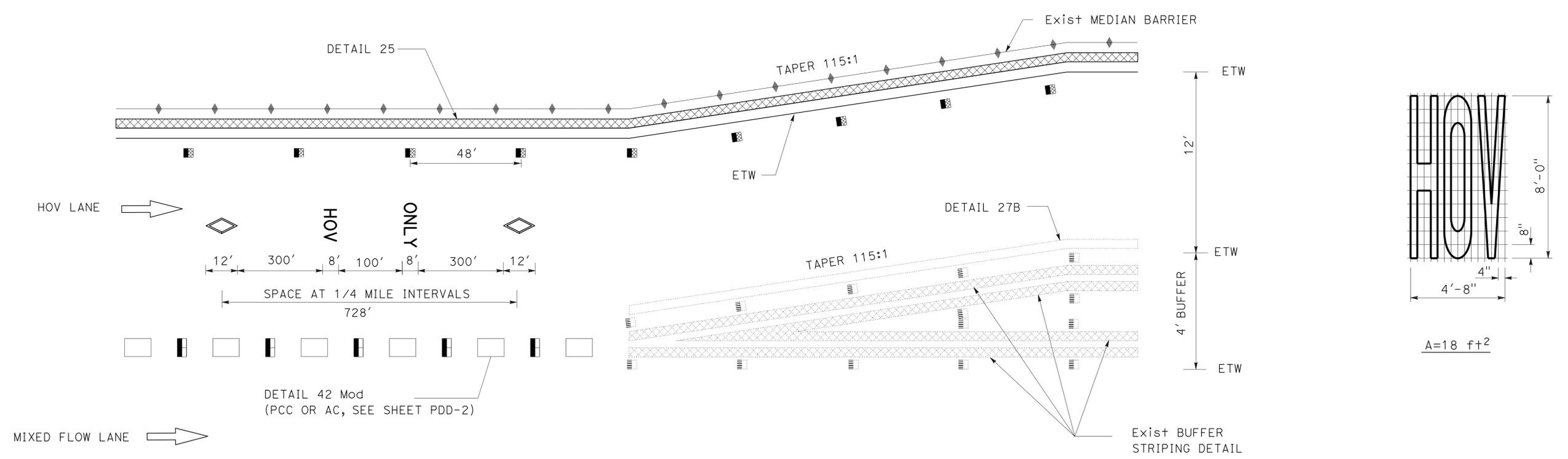
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	24	74
			12-04-15	DATE	
REGISTERED CIVIL ENGINEER			ANH P. TRAN		
No. C56206			Exp. 12-31-16		
PLANS APPROVAL DATE			03-07-16		
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

**NOTES:**

- SEE STANDARD PLANS FOR PAVEMENT MARKING SYMBOL AND WORD DETAILS NOT SHOWN.
- THERMOPLASTIC TRAFFIC STRIPES SHALL APPLY OVER TEMPORARY TRAFFIC STRIPES (PAINT) AT THE SAME LOCATIONS.
- EXISTING PAVEMENT DELINEATION SHALL BE REMOVED AND REPLACED AT THE SAME LOCATIONS, SEE SHEETS PDQ-1 & PDQ-2.

**LEGEND:**

-  4" BLACK PAINT TRAFFIC STRIPE (2-COAT)
-  4" WHITE THERMOPLASTIC TRAFFIC STRIPE (ENHANCE WET NIGHT VISIBILITY)
-  8" WHITE THERMOPLASTIC TRAFFIC STRIP (ENHANCE WET NIGHT VISIBILITY)
-  4" YELLOW THERMOPLASTIC TRAFFIC STRIPE (ENHANCE WET NIGHT VISIBILITY)
-  Direction of Travel



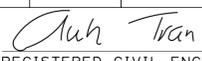
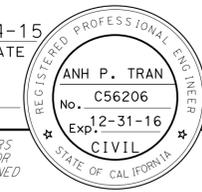
**DETAIL A**  
TAPER & HOV INGRESS/EGRESS DETAILS  
FOR SINGLE LANE HOV FACILITIES

**PAVEMENT DELINEATION  
DETAILS**  
NO SCALE

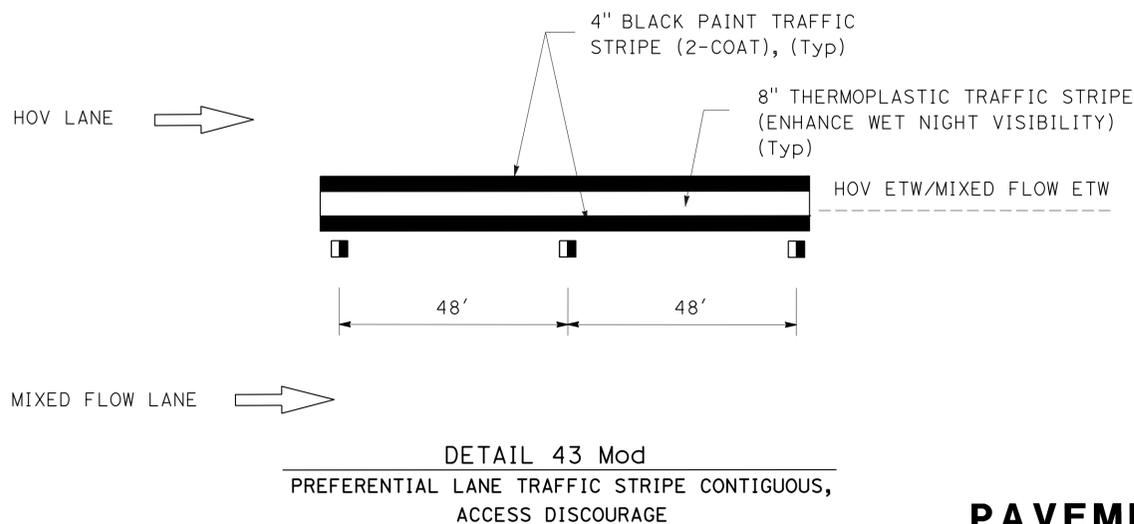
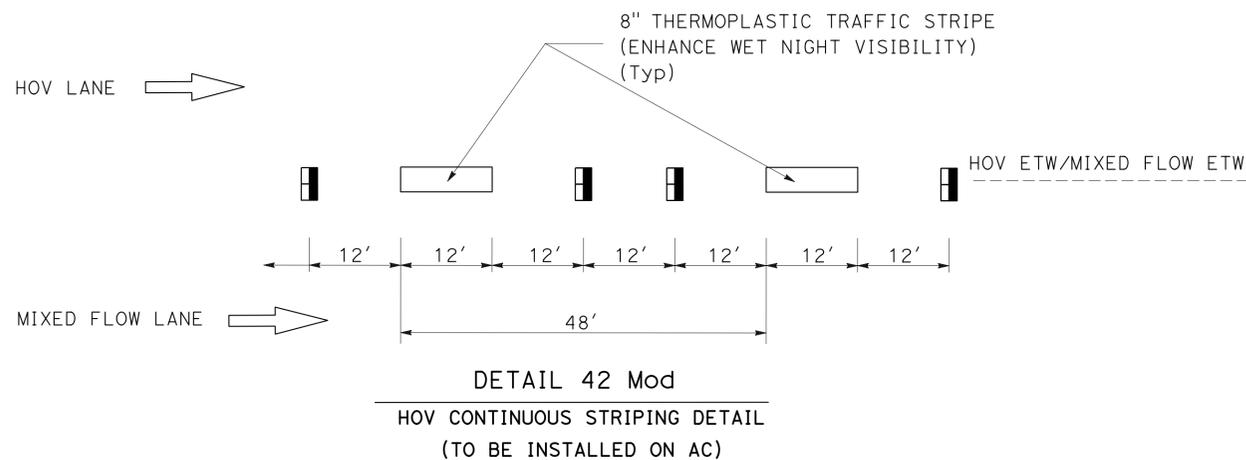
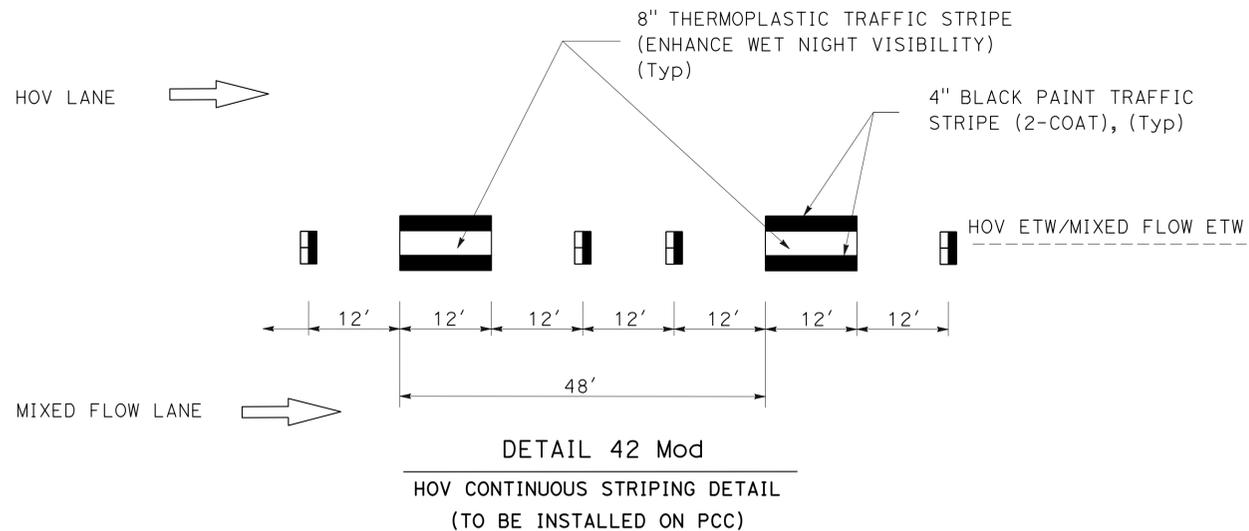
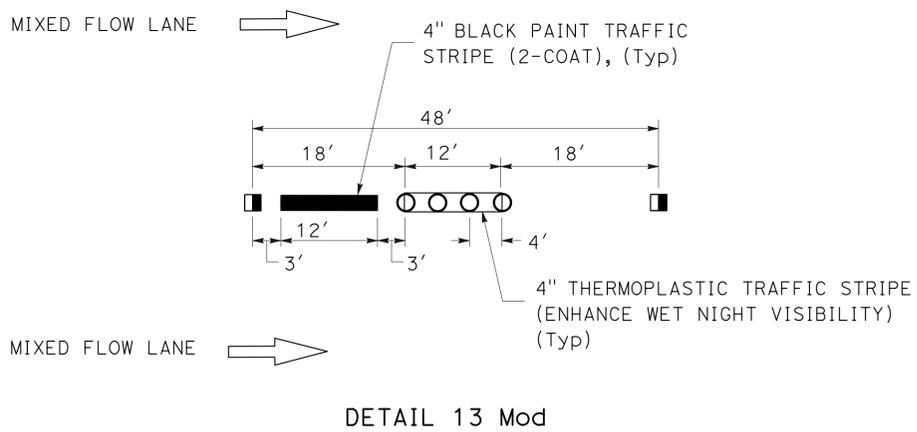
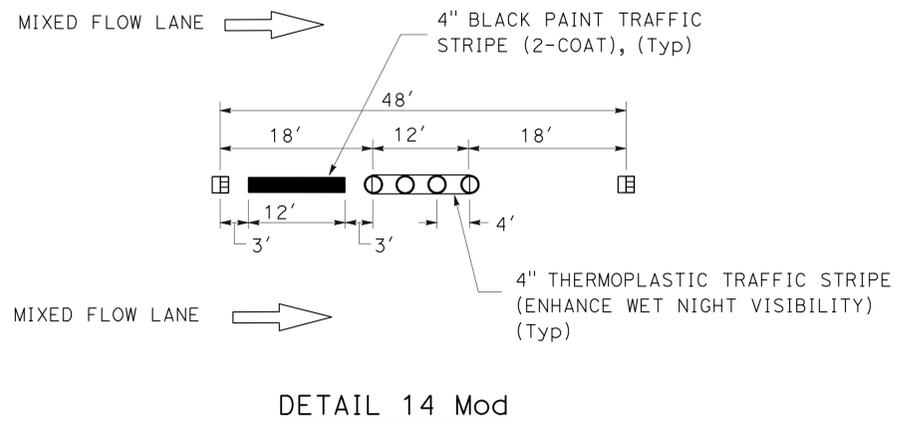
**PDD-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	MAINTENANCE
FUNCTIONAL SUPERVISOR	MASSOUD TAJIK
CALCULATED/DESIGNED BY	CHECKED BY
PHAT TRAN	ANH TRAN
REVISOR	DATE
ANH TRAN	12-01-15

LAST REVISION | DATE PLOTTED => 08-MAR-2016 | TIME PLOTTED => 1:31:30

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	25	74
			12-04-15	DATE	
REGISTERED CIVIL ENGINEER			DATE		
03-07-16			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>					
					

ANH TRAN	12-01-15
REVISOR	DATE
PHAT TRAN	ANH TRAN
CALCULATED/DESIGNED BY	CHECKED BY
FUNCTIONAL SUPERVISOR	MASSOUD TAJIK
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	<b>MAINTENANCE</b>



**PAVEMENT DELINEATION  
DETAILS**  
NO SCALE

**PDD-2**



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	27	74

12-04-15  
 REGISTERED CIVIL ENGINEER DATE  
 03-07-16  
 PLANS APPROVAL DATE

ANH P. TRAN  
 No. C56206  
 Exp. 12-31-16  
 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. THE EXACT LOCATIONS OF GUARD RAILING DELINEATOR, CONCRETE BARRIER MARKER, AND OBJECT MARKER (TYPE P) TO BE DETERMINED BY THE ENGINEER.

DIRECTION	LOCATION	STATION LIMITS	PAINT TRAFFIC STRIPE (2-COAT)				REMOVE THERMOPLASTIC TRAFFIC STRIPE	REMOVE YELLOW THERMOPLASTIC TRAFFIC STRIPE (HAZARDOUS WASTE)	REMOVE THERMOPLASTIC PAVEMENT MARKING	REMOVE PAVEMENT MARKER	CONCRETE BARRIER MARKER	GUARD RAILING DELINEATOR	OBJECT MARKER (TYPE P)
			DETAIL 13 Mod 4" BLACK	DETAIL 14 Mod 4" BLACK	DETAIL 42 Mod 4" BLACK	DETAIL 43 Mod 4" BLACK							
			LF	LF	LF	LF							
SOUTHBOUND ROUTE 57	0.2 MILE SOUTH OF CHAPMAN Ave UC TO CHAPMAN Ave UC	"A" 64+00 - "A" 70+49.16	900				4,534	3,249	62	370	1		
	CHAPMAN Ave UC TO ORANGEWOOD Ave UC	"B" 200+07.40 - "B" 230+00	8,290				18,065	14,993	62	1,981	6	20	3
	ORANGEWOOD Ave UC TO KATELLA Ave UC	"B" 230+00 - "B" 269+00	11,250	450	3,900		13,725	3,900	274	1,781	8	10	1
	KATELLA Ave UC TO DOUGLASS St OH	"B" 269+00 - "B" 291+30	6,240	450	2,230		5,818	2,230	62	956	5	10	1
	DOUGLASS St OH TO BALL Rd OC	"B" 291+30 - "B" 314+30	6,900		2,300		5,175	2,300	602	968	5	10	1
	BALL Rd OC TO WAGNER Ave OC	"B" 314+30 - "B" 340+90	7,530	450	2,660		7,411	2,660	124	1,160	6	50	1
	WAGNER Ave OC TO SOUTH St OC	"B" 340+90 - "B" 367+40	8,000		2,650		7,019	2,650	62	1,119	6	60	1
	SOUTH St OC TO LINCOLN Ave OC	"B" 367+40 - "B" 386+20	7,250		1,880		4,633	1,880	62	961	4	10	1
	LINCOLN Ave OC TO ROUTE 57/91 SEPARATION	"B" 386+20 - "B" 429+60	16,760	600	1,680	2,660	27,700	4,340	624	2,202	9		
	ROUTE 57/91 SEPARATION TO LA JOLLA Ave OC	"B" 429+60 - "B" 458+00	9,360		2,820		15,682	2,820	62	1,301	6	10	1
	LA JOLLA Ave OC TO ORANGETHORPE Ave UC	"B" 458+00 - "B" 472+30	5,800		30	1,420	13,615	1,450	62	744	3	10	1
	ORANGETHORPE Ave UC TO PLACENTIA Ave UC	"B" 472+30 - "B" 506+50	9,810	450	3,420		8,363	3,420	124	1,484	7		
	PLACENTIA Ave UC TO CHAPMAN Ave UC	"B" 506+50 - "B" 520+20	4,110		1,370		3,653	1,370		589	3		
	CHAPMAN Ave UC TO NUTWOOD Ave UC	"B" 520+20 - "B" 534+50	4,290		1,430		3,218	1,430	62	603	3	10	1
	NUTWOOD Ave UC TO YORBA LINDA Blvd OC	"B" 534+50 - "B" 574+30	11,490	450	3,980		10,255	3,980	124	1,681	8	60	7
	YORBA LINDA Blvd OC TO BASTANCHURY Rd UC	"B" 574+30 - "B" 602+00	7,860	450	2,720		6,638	2,770	62	1,196	6	30	2
	BASTANCHURY Rd UC TO ROLLING HILLS Dr UC	"B" 602+00 - "B" 627+20	7,110	450	2,520		5,670	2,520	62	1,060	5	10	1
	ROLLING HILLS Dr UC TO ASSOCIATED Rd UC	"B" 627+20 - "B" 640+50	3,990		1,330		2,993	1,330	62	564	3		
	ASSOCIATED Rd UC TO ROUTE 57/90 SEPARATION	"B" 640+50 - "B" 655+00	4,320		1,440		2,600	1,440	62	607	3		
	ROUTE 57/90 SEPARATION TO BIRCH St UC	"B" 655+00 - "B" 682+50	7,830	600	2,760		8,788	2,760	62	1,246	6	10	1
	BIRCH St UC TO LAMBERT Rd UC	"B" 682+50 - "B" 709+50	5,100		2,700		5,325	2,700	62	823	6	10	1
	LAMBERT Rd UC TO TONNER CANYON Rd UC	"B" 709+50 - "B" 759+00	5,400		1,800		11,838	4,950	248	1,303	10		
	TONNER CANYON Rd UC TO LOS ANGELES COUNTY LINE	"B" 759+00 - "C" 106+78.92	6,600	450	1,000		13,250	9,400	62	1,455	8	20	2
	<b>SUB-TOTAL</b>		166,190	4,800	46,620	4,080	205,968	80,542	3,050	26,154	127	340	26
	<b>TOTAL *</b>		221,690				205,968	80,542	3,050	26,154	127	340	26

\* - PAVEMENT DELINEATION ON BRIDGES AND ON ASPHALT CONCRETE PAVEMENT ARE INCLUDED.

**PAVEMENT DELINEATION QUANTITIES**

**PDQ-2**



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	29	74

*Anh Tran* 12-04-15  
 REGISTERED CIVIL ENGINEER DATE

03-07-16  
 PLANS APPROVAL DATE

ANH P. TRAN  
 No. C56206  
 Exp. 12-31-16  
 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:**

NEW SIGN PANELS SHALL REPLACE EXISTING SIGN PANELS AT THE SAME LOCATIONS.

**ABBREVIATIONS:**

- B - BLACK
- G - GREEN
- W - WHITE
- Y - YELLOW

**ROADSIDE SIGN QUANTITIES**

DIRECTION	SIGN CODE	PANEL SIZE W x D	SIGN AREA	REMOVE ROADSIDE SIGN (METAL POST)	REMOVE ROADSIDE SIGN (STRAP AND SADDLE BRACKET METHOD)	INSTALL SIGN (STRAP AND SADDLE BRACKET METHOD)	REMOVE ROADSIDE SIGN PANEL	INSTALL ROADSIDE SIGN PANEL ON EXISTING POST	SINGLE FACED	BACKGROUND		LEGEND		GRAFFITI FILM		FURNISH SINGLE SHEET ALUMINUM SIGN		FURNISH SINGLE SHEET ALUMINUM SIGN FOR RETRO-REFLECTIVE SHEETING (TYPE XI)	RETROREFLECTIVE SHEETING (TYPE XI)	SIGN LOCATION		
										SHEETING COLOR	RETRO-REFLECTIVE	SHEETING COLOR	RETRO-REFLECTIVE	STANDARD	PREMIUM	UNFRAMED	FRAMED				UNFRAMED	
		0.063"	0.063"	0.063"																		
		INCH x INCH	SQFT	EA	EA	EA	EA	EA		SQFT	SQFT	SQFT	SQFT									
SOUTHBOUND	R86-2				1															BETWEEN ROUTE 5/57 SEPARATION AND CHAPMAN Ave UC		
	R86-4 (CA)	30 x 66	13.75			1			X	B/W	VIII	B/W	X		X	13.75						
	G85-7				1																BETWEEN SANTA ANA RIVER AND ORANGEWOOD Ave UC	
	R93A (CA)	30 x 12	2.50			2			X	B/W	VIII	B/W	X		X	2.50						
	R93-2 (CA)	30 x 72	15.00						X	B/W	VIII	B/W	X		X	15.00						
	G86-8				1																SOUTH OF SANTA ANA RIVER	
	R86-4 (CA)	30 x 66	13.75			1			X	B/W	VIII	B/W	X		X	13.75						
	R93-2				1																	KATELLA Ave UC
	R93A (CA)	30 x 12	2.50			2			X	B/W	VIII	B/W	X		X	2.50						
	R93-2 (CA)	30 x 72	15.00						X	B/W	VIII	B/W	X		X	15.00						
	R93A (CA)	30 x 12	2.50			2			X	B/W	VIII	B/W	X		X	2.50						
	R93-2 (CA)	30 x 72	15.00						X	B/W	VIII	B/W	X		X	15.00						
	R93-2				1																	BETWEEN DOUGLAS Rd OH AND BALL Rd OC
	E8-5 Mod (TYPE A)	36 x 84	21.00			1			X	B/G	XI	W	X		X		21.00	21.00				
	SR50-2				1																	BALL Rd OC (MOUNT AT BRIDGE COLUMN)
	E8-6 Mod (TYPE A)	36 x 72	18.00			1			X	B/G	XI	W	X		X		18.00	18.00				
	R86-4 (CA)	30 x 66	13.75			1			X	B/W	VIII	B/W	X		X	13.75						(MOUNT AT THE OVERHEAD SIGN POST)
	R93-2				1																	
	SR50-2 (CA)	30 x 66	13.75			1			X	B/W	VIII	B/W	X		X	13.75						(\$490)
	R86-4 (CA)	30 x 66	13.75			1										13.75						
R93A (CA)	30 x 12	2.50			2			X	B/W	VIII	B/W	X		X	2.50							BETWEEN WAGNER Ave OC AND SOUTH STREET OC
R93-2 (CA)	30 x 72	15.00						X	B/W	VIII	B/W	X		X	15.00							
G28-2 (CA)	30 x 30 1/4	6.30				1	1	X	G	XI	W	X		X		6.30	6.30					
M3-3	30 x 15	3.10				1	1	X	G	XI	W	X		X		3.10	3.10					
SUBTOTAL (SHEET SQ-1)					8	14	2	2								138.75	48.40	48.40				

**SIGN QUANTITIES SQ-1**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	30	74

*Anh Tran* 12-04-15  
 REGISTERED CIVIL ENGINEER DATE

03-07-16  
 PLANS APPROVAL DATE

ANH P. TRAN  
 No. C56206  
 Exp. 12-31-16  
 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.

## ROADSIDE SIGN QUANTITIES

DIRECTION	SIGN CODE	PANEL SIZE W x D	SIGN AREA	REMOVE ROADSIDE SIGN (METAL POST)	REMOVE ROADSIDE SIGN (STRAP AND SADDLE BRACKET METHOD)	INSTALL SIGN (STRAP AND SADDLE BRACKET METHOD)	REMOVE ROADSIDE SIGN PANEL	INSTALL ROADSIDE SIGN PANEL ON EXISTING POST	SINGLE FACED	BACKGROUND		LEGEND		GRAFFITI FILM		FURNISH SINGLE SHEET ALUMINUM SIGN		FURNISH SINGLE SHEET ALUMINUM SIGN FOR RETRO-REFLECTIVE SHEETING (TYPE XI)	RETROREFLECTIVE SHEETING (TYPE XI)	SIGN LOCATION		
				EA	EA	EA	EA	EA		SHEETING COLOR	RETRO-REFLECTIVE	SHEETING COLOR	RETRO-REFLECTIVE	STANDARD	PREMIUM	UNFRAMED	FRAMED	UNFRAMED				
		INCH x INCH	SQFT	EA	EA	EA	EA	EA								EA	EA	EA			EA	EA
		0.063"	0.063"	0.063"	SQFT	SQFT	SQFT	SQFT														
SOUTHBOUND	R93-2				1																	
	R93A (CA)	30 x 12	2.50						X	B/W	VIII	B/W	X	X		2.50					BETWEEN LINCOLN Ave OC AND UNDERHILL Ave PEDESTRIAN OC	
	R93-2 (CA)	30 x 72	15.00			2			X	B/W	VIII	B/W	X	X		15.00						
	R86-2				1																	
	R86-4 (CA)	30 x 66	13.75			1			X	B/W	VIII	B/W	X	X		13.75					BETWEEN UNDERHILL Ave PEDESTRIAN OC AND LA PALMA Ave UC	
	R93-2				1																	
	R93A (CA)	30 x 12	2.50			2			X	B/W	VIII	B/W	X	X		2.50						ROUTE 57/91 SEPARATION (MOUNT AT BRIDGE COLUMN OF EB ROUTE 9 TO NB ROUTE 57 Conn)
	R93-2 (CA)	30 x 72	15.00						X	B/W	VIII	B/W	X	X		15.00						
	G85-7				1																	BETWEEN ROUTE 57/91 SEPARATION AND MIRALOMA Ave OC (MOUNT AT THE OVERHEAD SIGN POST)
	R86-4 (CA)	30 x 66	13.75			1			X	B/W	VIII	B/W	X	X		13.75						NORTH OF MIRALOMA Ave OC
	G86-8				1																	
	R93-2					1																
	R93A (CA)	30 x 12	2.50			2			X	B/W	VIII	B/W	X	X		2.50						BETWEEN LA JOLLA St OC AND ORANGETHROPE Ave UC (MOUNT AT THE OVERHEAD SIGN POST)
	R93-2 (CA)	30 x 72	15.00						X	B/W	VIII	B/W	X	X		15.00						
	G85-7					1																
	E8-5 Mod (TYPE B)	36 x 66	16.50			1			X	B/G	XI	W	X	X			16.50	16.50				BETWEEN PLACENTIA Ave UC AND PLACENTIA OH (RAIL ROAD)
	R86-2					1																
	E8-6 Mod (TYPE B)	36 x 60	15.00			1			X	B/G	XI	W	X	X			15.00	15.00				NORTH OF CHAPMAN Ave UC
	G85-7					1																
	R86-4 (CA)	30 x 66	13.75			1			X	B/W	VIII	B/W	X	X		13.75						BETWEEN CHAPMAN Ave UC AND NUTWOOD Ave UC (MOUNT AT THE OVERHEAD SIGN POST)
	R18A (CA)	66 x 48	22.00				1	1	X	W	VIII	B		X		22.00	22.00					NORTH OF NUTWOOD Ave OFF-RAMP
	SR50-2					1																
	SR50-2 (CA)	30 x 66	13.75			1			X	B/W	VIII	B/W	X	X		13.75						BETWEEN YORBA LINDA Ave OC AND BASTANCHURY Rd UC (\$490) (MOUNT AT THE OVERHEAD SIGN POST)
	G85-7					1																
R93-2					1																	
R93A (CA)	30 x 12	2.50			2			X	B/W	VIII	B/W	X	X		2.50							
R93-2 (CA)	30 x 72	15.00						X	B/W	VIII	B/W	X	X		15.00						BETWEEN BASTANCHURY Rd UC AND ROLLING HILLS Dr UC	
SUBTOTAL (SHEET SQ-2)				1	11	14	1	1							147.00	22.00	31.50	31.50				

## SIGN QUANTITIES SQ-2

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	31	74

*Anh Tran* 12-04-15  
 REGISTERED CIVIL ENGINEER DATE

03-07-16  
 PLANS APPROVAL DATE

ANH P. TRAN  
 No. C56206  
 Exp. 12-31-16  
 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.

## ROADSIDE SIGN QUANTITIES

DIRECTION	SIGN CODE	PANEL SIZE W x D	SIGN AREA	REMOVE	REMOVE	INSTALL	REMOVE	INSTALL	SINGLE FACED	BACKGROUND		LEGEND		GRAFFITI FILM		FURNISH SINGLE SHEET ALUMINUM SIGN		FURNISH SINGLE SHEET ALUMINUM SIGN FOR RETRO-REFLECTIVE SHEETING (TYPE XI)	RETROREFLECTIVE SHEETING (TYPE XI)	SIGN LOCATION									
				ROADSIDE SIGN (METAL POST)	ROADSIDE SIGN (STRAP AND SADDLE BRACKET METHOD)	ROADSIDE SIGN (STRAP AND SADDLE BRACKET METHOD)	ROADSIDE SIGN PANEL	ROADSIDE SIGN PANEL ON EXISTING POST		SHEETING COLOR	RETRO-REFLECTIVE	SHEETING COLOR	RETRO-REFLECTIVE	STANDARD	PREMIUM	UNFRAMED	FRAMED	UNFRAMED											
		EA	EA	EA	EA	EA								0.063"	0.063"	0.063"													
		EA	EA	EA	EA	EA								SQFT	SQFT	SQFT	SQFT												
SOUTHBOUND	R86-2				1																BETWEEN ASSOCIATED Rd UC AND ROUTE 57/90 SEPARATION (IMPERIAL Hwy)								
	R86-4 (CA)	30 x 66	13.75			1			X	B/W	VIII	B/W	X		X	13.75													
	R93-2				1																	BETWEEN ROUTE 57/90 SEPARATION (IMPERIAL Hwy) AND BIRCH St UC							
	R93A (CA)	30 x 12	2.50						X	B/W	VIII	B/W	X		X	2.50													
	R93-2 (CA)	30 x 72	15.00			2			X	B/W	VIII	B/W	X		X	15.00													
	R86-2				1																		NORTH OF BIRCH St UC						
	R86-4 (CA)	30 x 66	13.75			1			X	B/W	VIII	B/W	X		X	13.75													
	G85-7				1																				NORTH OF LAMBERT Rd UC				
	R93A (CA)	30 x 12	2.50						X	B/W	VIII	B/W	X		X	2.50													
	R93-2 (CA)	30 x 72	15.00			2			X	B/W	VIII	B/W	X		X	15.00													
	G28-2 (CA)	30 x 30 1/4	6.30					1	1	X	G	XI	W	X		X			6.30	6.30						SOUTH OF LAMBERT Rd ON-RAMP			
	M3-3	30 x 15	3.10					1	1	X	G	XI	W	X		X			3.10	3.10									
	G86-8				1																								
	R86-4 (CA)	30 x 66	13.75			1				X	B/W	VIII	B/W	X		X	13.75												
	R86-2				1																								
R93A (CA)	30 x 12	2.50							X	B/W	VIII	B/W	X		X	2.50													
R93-2 (CA)	30 x 72	15.00			2				X	B/W	VIII	B/W	X		X	15.00													
SUBTOTAL					6	9	2	2								93.75		9.40	9.40										
SUBTOTAL (SHEET SQ-2)				1	11	14	1	1								147.00	22.00	31.50	31.50										
SUBTOTAL (SHEET SQ-1)					8	14	2	2								138.75		48.40	48.40										
TOTAL				1	25	37	5	5								379.50	22.00	89.30	89.30										

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 MAINTENANCE  
 PHAT TRAN  
 ANH TRAN  
 REVISOR BY  
 DATE REVISOR  
 ANH TRAN  
 12-01-15  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 MASSOUD TAJIK  
 FUNCTIONAL SUPERVISOR  
 MASSOUD TAJIK

## SIGN QUANTITIES SQ-3

LAST REVISION | DATE PLOTTED => 08-MAR-2016  
 12-01-15 | TIME PLOTTED => 1:31:30





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

ANH TRAN  
 12-01-15

REVISOR BY  
 DATE REVISED

PHAT TRAN  
 ANH TRAN

CALCULATED-DESIGNED BY  
 CHECKED BY

FUNCTIONAL SUPERVISOR  
 MASSOUD TAJIK

MAINTENANCE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Orca	57	11.0/22.5	34	74

*Anh Tran* 12-04-15  
 REGISTERED CIVIL ENGINEER DATE

03-07-16  
 PLANS APPROVAL DATE

ANH P. TRAN  
 No. C56206  
 Exp. 12-31-16  
 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.

DIRECTION	LOCATION	STATION LIMITS	STRUCTURAL SECTION	GRIND EXISTING CONCRETE PAVEMENT	GROOVE EXISTING CONCRETE PAVEMENT
				SQYD	SQYD
SOUTHBOUND ROUTE 57	0.2 MILE SOUTH OF CHAPMAN Ave UC TO CHAPMAN Ave UC	"A" 64+00 - "A" 70+49.16	1	527	
	CHAPMAN Ave UC TO ORANGEWOOD Ave UC	"B" 200+07.40 - "B" 230+00		195	
	ORANGEWOOD Ave UC TO KATELLA Ave UC	"B" 230+00 - "B" 269+00		65	
	KATELLA Ave UC TO DOUGLASS St OH	"B" 269+00 - "B" 291+30		504	
	DOUGLASS St OH TO BALL Rd OC	"B" 291+30 - "B" 314+30		195	
	BALL Rd OC TO WAGNER Ave OC	"B" 314+30 - "B" 340+90		126	
	WAGNER Ave OC TO SOUTH St OC	"B" 340+90 - "B" 367+40		34	
	SOUTH St OC TO LINCOLN Ave OC	"B" 367+40 - "B" 386+20		195	
	LINCOLN Ave OC TO ROUTE 57/91 SEPARATION	"B" 386+20 - "B" 429+60		138	
	ROUTE 57/91 SEPARATION TO LA JOLLA St OC	"B" 429+60 - "B" 458+00		11,722	11,722
	LA JOLLA St OC TO ORANGETHORPE Ave UC	"B" 458+00 - "B" 472+30	15,767	15,767	
	ORANGETHORPE Ave UC TO PLACENTIA Ave UC	"B" 472+30 - "B" 506+50	20,469	20,469	
	PLACENTIA Ave UC TO CHAPMAN Ave UC	"B" 506+50 - "B" 520+20	9,095	9,095	
	CHAPMAN Ave UC TO NUTWOOD Ave UC	"B" 520+20 - "B" 534+50	9,383	9,383	
	NUTWOOD Ave UC TO YORBA LINDA Blvd OC	"B" 534+50 - "B" 574+30	32,744	32,744	
	YORBA LINDA Blvd OC TO BASTANCHURY Rd UC	"B" 574+30 - "B" 602+00	19,750	19,750	
	BASTANCHURY Rd UC TO ROLLING HILLS Dr UC	"B" 602+00 - "B" 627+20	17,504	17,504	
	ROLLING HILLS Dr UC TO ASSOCIATED Rd UC	"B" 627+20 - "B" 640+50	8,627	8,627	
	ASSOCIATED Rd UC TO ROUTE 57/90 SEPARATION (IMPERIAL Hwy)	"B" 640+50 - "B" 655+00	10,212	10,212	
	ROUTE 57/90 SEPARATION (IMPERIAL Hwy) TO BIRCH St UC	"B" 655+00 - "B" 682+50	401		
BIRCH St UC TO LAMBERT Rd UC	"B" 682+50 - "B" 709+50	146			
LAMBERT Rd UC TO TONNER CANYON Rd UC	"B" 709+50 - "B" 759+00	65			
TONNER CANYON Rd UC TO LOS ANGELES COUNTY LINE	"B" 759+00 - "B" 782+40	46			
TOTAL				157,910	155,273

**SUMMARY OF QUANTITIES**

**Q-2**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**® ELECTRICAL DESIGN

FUNCTIONAL SUPERVISOR  
 SHAHRAM SHARIARI

CALCULATED/DESIGNED BY  
 CHECKED BY

BARJESH SHARMA  
 VANESSA TRUONG

REVISED BY  
 DATE REVISED

B SHARMA  
 12/2015

**NOTE:**

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

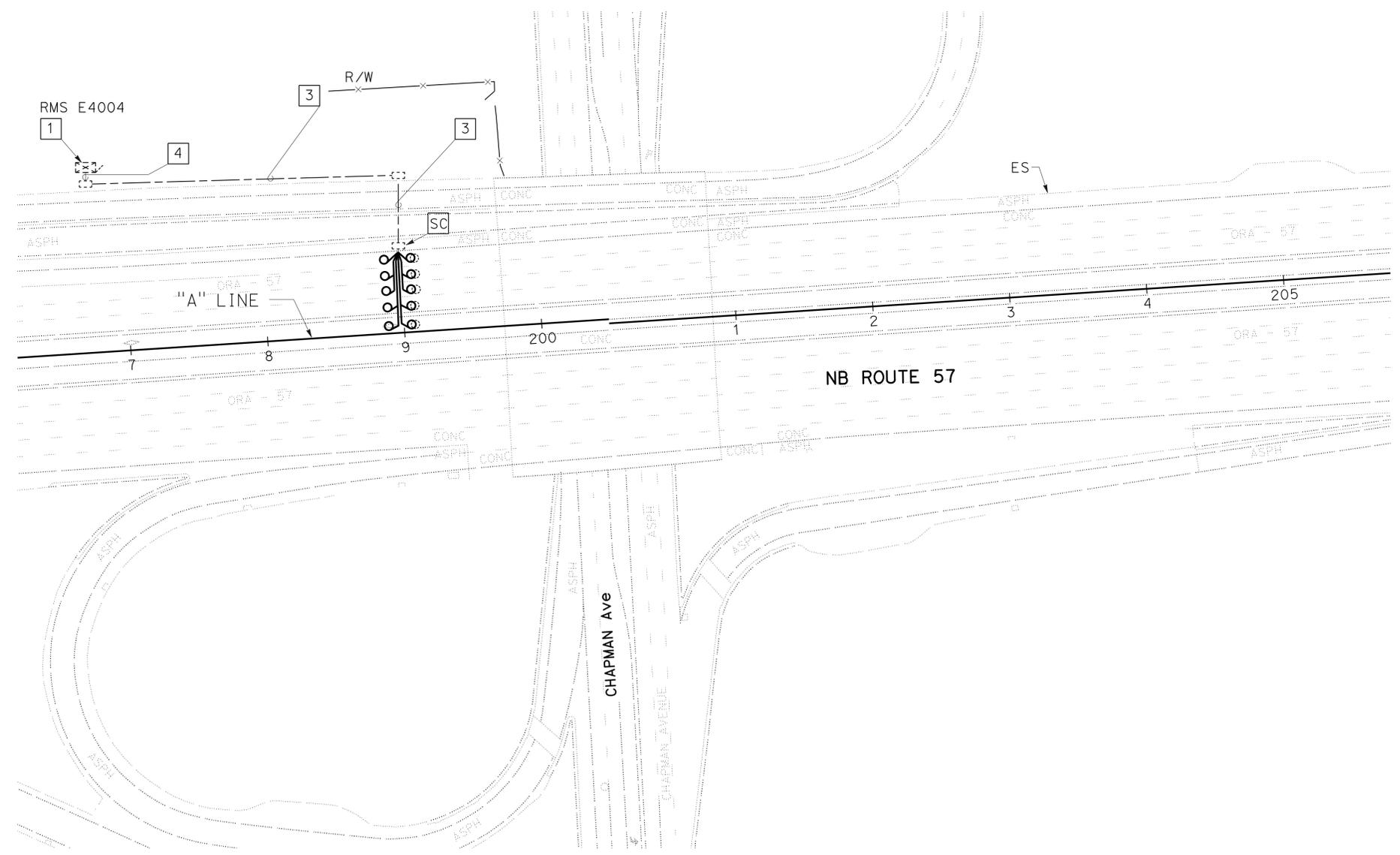
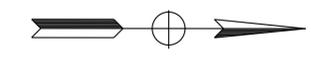
**NOTES: (SHEET E-1 TO E-21)**

- NO SPLICING ALLOWED IN MEDIAN.
- EXISTING CONDUIT AND DLC TO REMAIN.
- THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF EXISTING LOOPS PRIOR TO CUTTING NEW LOOPS AND REUSE EXISTING CONDUIT STUB OUT.
- LOOP DETECTORS SHALL BE INSTALLED AFTER THE PLACEMENT OF UPPERMOST LAYER OF NEW PAVEMENT, GRINDING AND GROOVING EXISTING CONCRETE PAVEMENT, AND AFTER APPLYING TRAFFIC STRIPES AND PAVEMENT MARKINGS.
- SPACING FOR DOUBLE LOOPS SHALL BE 20 FEET LEADING EDGE TO LEADING EDGE.
- AB** EXISTING LOOPS WHERE NEW LOOPS ARE CUT.

**LEGEND: (SHEET E-1 TO E-21)**

- EXISTING MODEL 170 CONTROLLER ASSEMBLY.
- EXISTING HANDHOLE OR TRAFFIC PULL BOX IN MEDIAN TO PROTECT IN PLACE.
- Exist 2" C, 5 DLC. INSTALL 5 DLC'S.
- Exist 3" C, 5 DLC. INSTALL 5 DLC'S.

Exist WIM



**INDUCTIVE LOOP DETECTOR**

SCALE: 1" = 50'

**E-1**

APPROVED FOR ELECTRICAL WORK ONLY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Orca	57	11.0/22.5	35	74

Barjesh K. Sharma 12-04-15  
 REGISTERED ELECTRICAL ENGINEER DATE

03-07-16  
 PLANS APPROVAL DATE

**B.K.SHARMA**  
 No. E 19299  
 Exp. 12/31/16  
 ELECTRICAL

REGISTERED PROFESSIONAL ENGINEER  
 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.

x  
x  
x  
x  
x  
x  
x

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

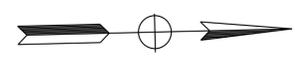
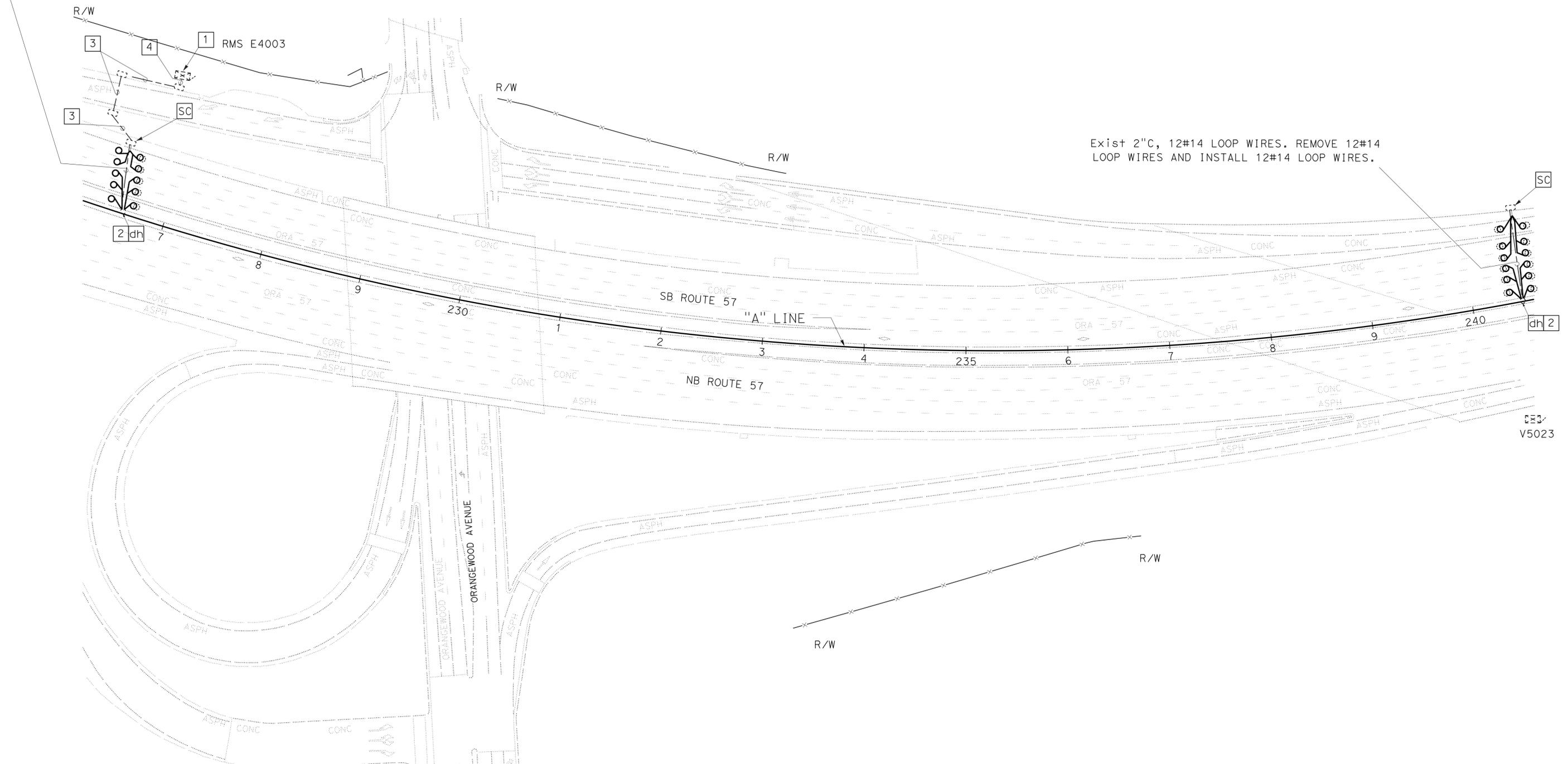
FUNCTIONAL SUPERVISOR: SHAHRAM SHARIARI  
 CALCULATED/DESIGNED BY: [Blank]  
 CHECKED BY: [Blank]  
 BARJESH SHARMA  
 VANESSA TRUONG  
 REVISED BY: B SHARMA  
 DATE REVISED: 12/2015

**NOTE:**

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

Exist 2"C, 6#14 LOOP WIRES. REMOVE 6#14 LOOP WIRES AND INSTALL 12#14 LOOP WIRES.

Exist 2"C, 12#14 LOOP WIRES. REMOVE 12#14 LOOP WIRES AND INSTALL 12#14 LOOP WIRES.



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Orca	57	11.0/22.5	36	74

Barjesh K. Sharma 12-04-15  
 REGISTERED ELECTRICAL ENGINEER DATE

03-07-16  
 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.

**B.K.SHARMA**  
 No. E 19299  
 Exp. 12/31/16  
 ELECTRICAL

FOR LEGEND AND NOTES SEE SHEET E-1  
 APPROVED FOR ELECTRICAL WORK ONLY

**INDUCTIVE LOOP DETECTOR**

SCALE: 1" = 50'

**E-2**

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

FUNCTIONAL SUPERVISOR: SHAHRAM SHARIARI  
 CALCULATED/DESIGNED BY: BARJESH SHARMA  
 CHECKED BY: VANESSA TRUONG  
 REVISED BY: B. SHARMA  
 DATE REVISED: 12/2015

**NOTE:**

1. 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
12	Ora	57	11.0/22.5	37	74

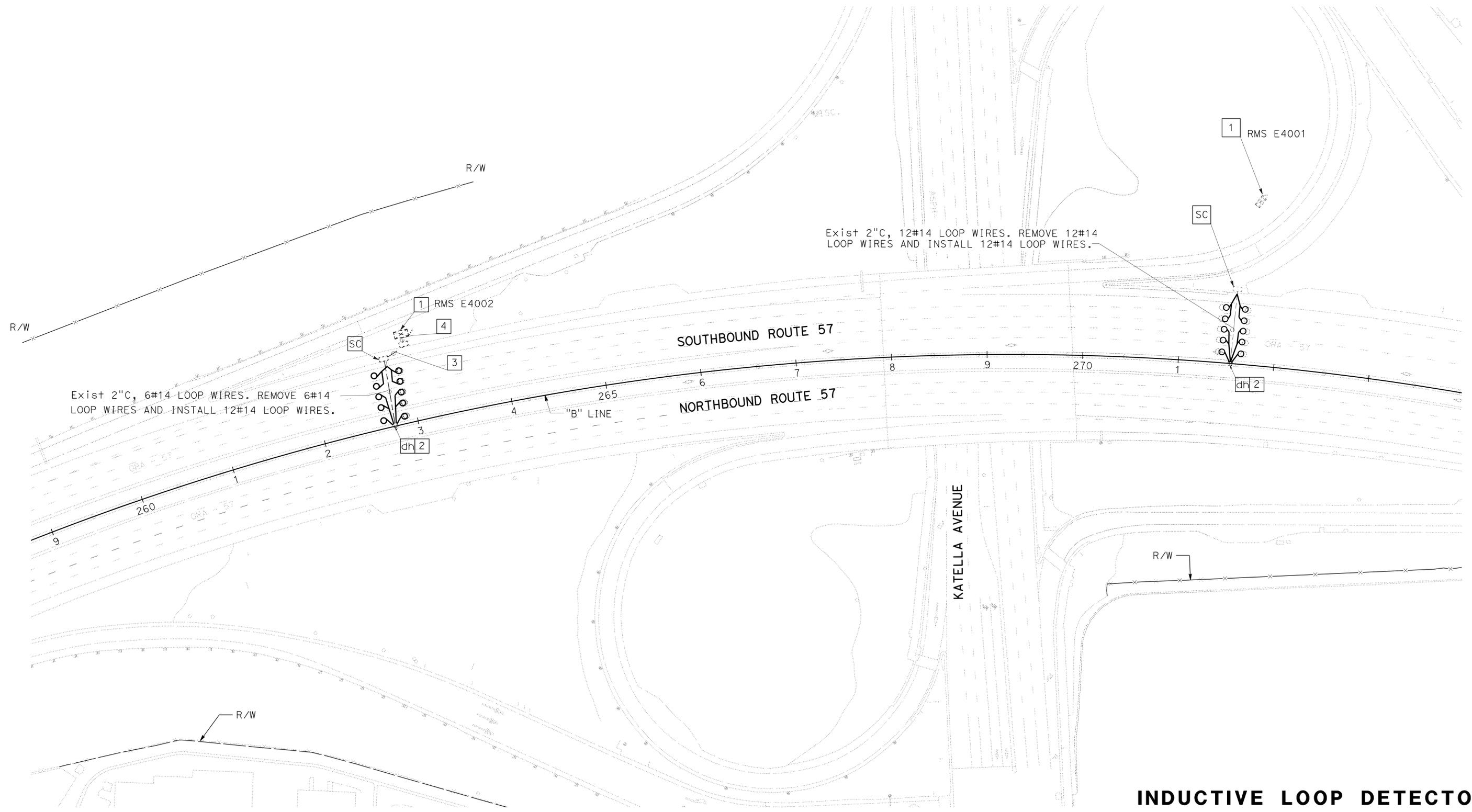
Barjesh K. Sharma 12-04-15  
 REGISTERED ELECTRICAL ENGINEER DATE

03-07-16  
 PLANS APPROVAL DATE

**B.K.SHARMA**  
 No. E 19299  
 Exp. 12/31/16  
 ELECTRICAL

REGISTERED PROFESSIONAL ENGINEER  
 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.



**INDUCTIVE LOOP DETECTOR**

SCALE: 1" = 50'

**E-3**

FOR LEGEND AND NOTES SEE SHEET E-1  
 APPROVED FOR ELECTRICAL WORK ONLY

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

FUNCTIONAL SUPERVISOR  
 SHAHRAM SHARIARI

CALCULATED/DESIGNED BY  
 CHECKED BY

BARJESH SHARMA  
 VANESSA TRUONG

REVISED BY  
 DATE REVISED

B SHARMA  
 12/2015

**NOTE:**

1. 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
12	Ora	57	11.0/22.5	38	74

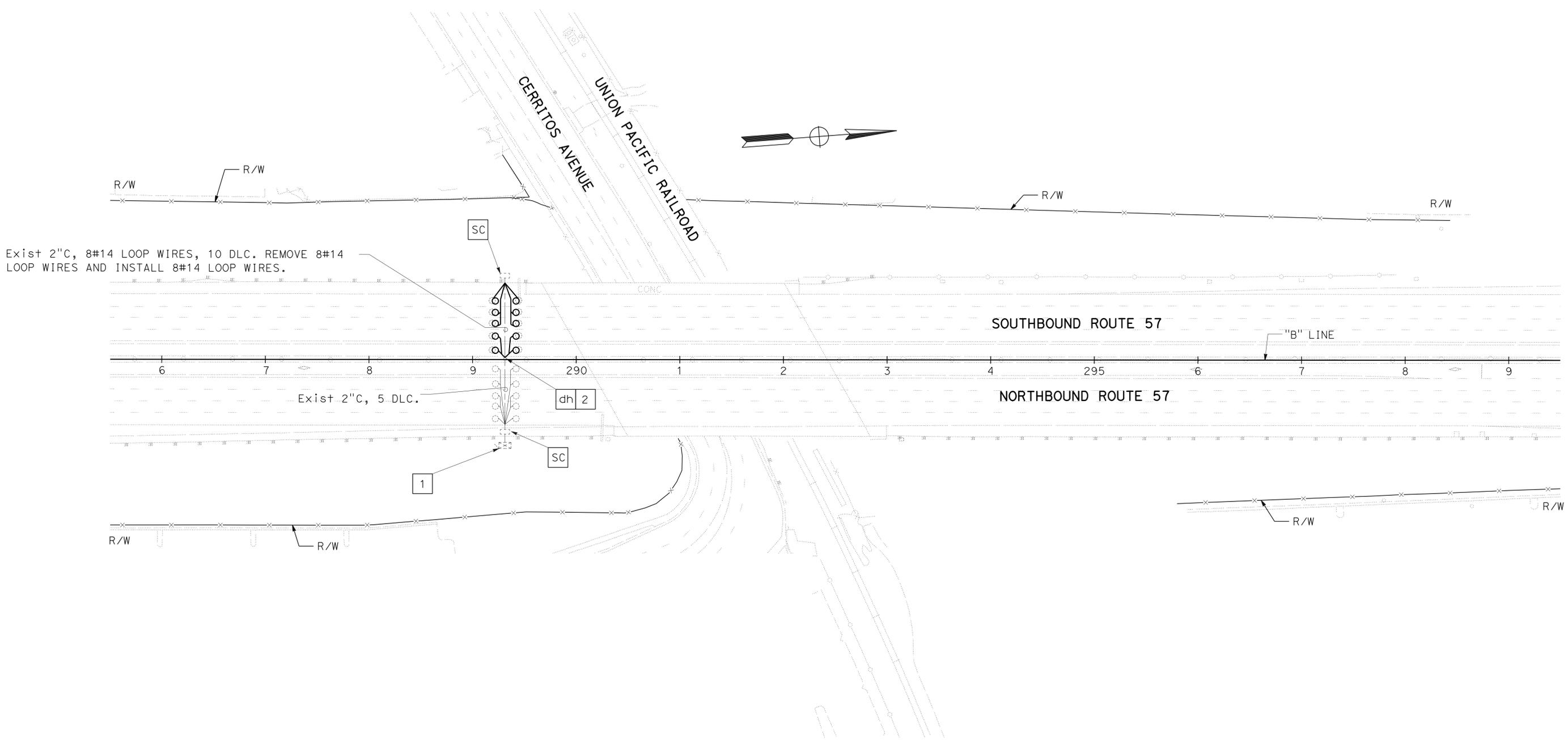
Barjesh K. Sharma 12-04-15  
 REGISTERED ELECTRICAL ENGINEER DATE

03-07-16  
 PLANS APPROVAL DATE

**B.K.SHARMA**  
 No. E 19299  
 Exp. 12/31/16  
 ELECTRICAL

REGISTERED PROFESSIONAL ENGINEER  
 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.



FOR LEGEND AND NOTES SEE SHEET E-1  
 APPROVED FOR ELECTRICAL WORK ONLY

**INDUCTIVE LOOP DETECTOR**  
 SCALE: 1" = 50'  
**E-4**

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

FUNCTIONAL SUPERVISOR  
 SHAHRAM SHARIARI

CALCULATED-DESIGNED BY  
 CHECKED BY

BARJESH SHARMA  
 VANESSA TRUONG

REVISED BY  
 DATE REVISED

B SHARMA  
 12/2015

**NOTE:**

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

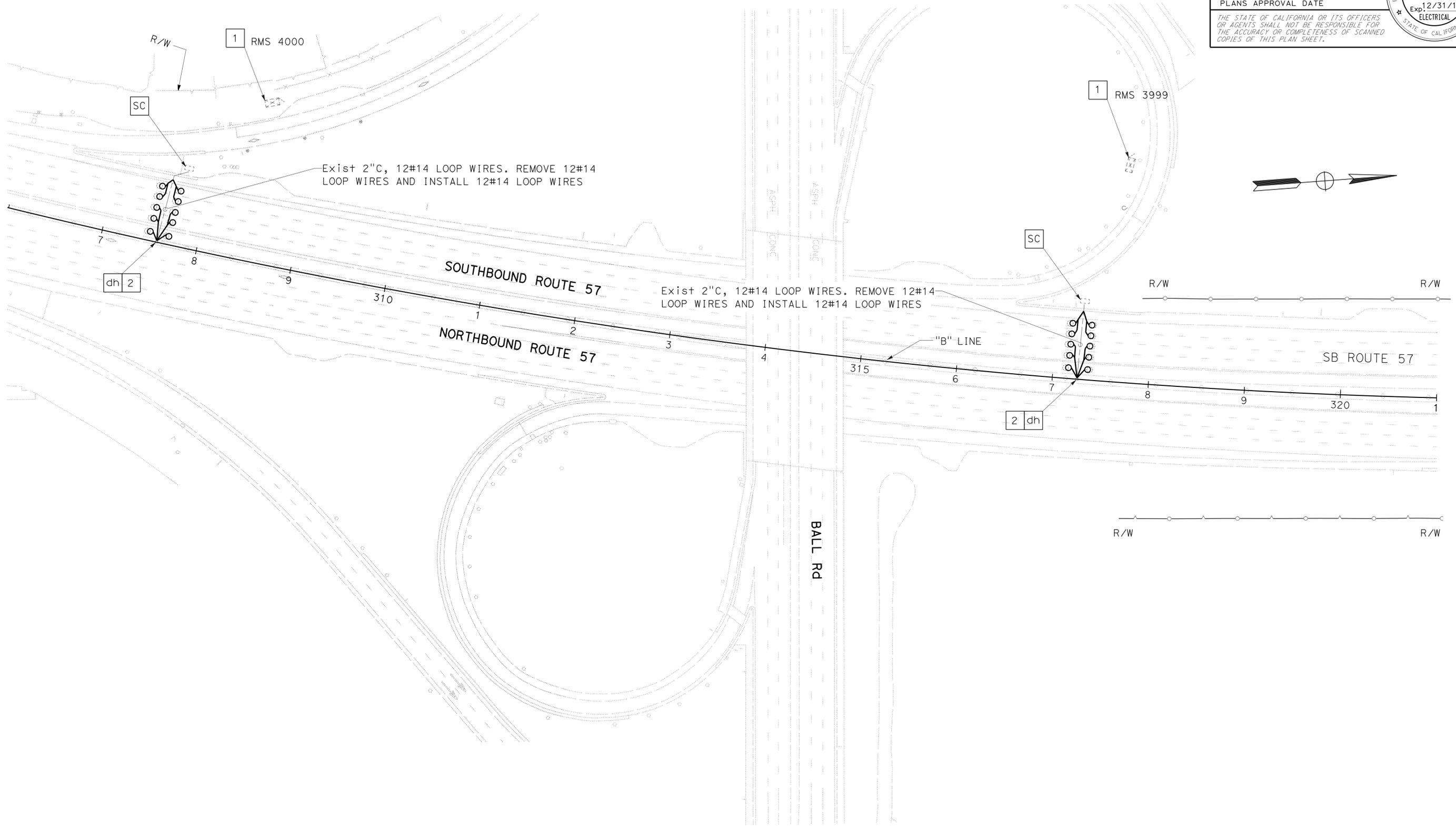
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Oran	57	11.0/22.5	39	74

Barjesh K. Sharma 12-04-15  
 REGISTERED ELECTRICAL ENGINEER DATE

03-07-16  
 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.

**B.K.SHARMA**  
 No. E 19299  
 Exp. 12/31/16  
 ELECTRICAL  
 STATE OF CALIFORNIA



**INDUCTIVE LOOP DETECTOR**  
 SCALE: 1" = 50'  
**E-5**

FOR LEGEND AND NOTES SEE SHEET E-1  
 APPROVED FOR ELECTRICAL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**® ELECTRICAL DESIGN

FUNCTIONAL SUPERVISOR  
 SHAHRAM SHARIARI

CALCULATED/DESIGNED BY  
 CHECKED BY

BARJESH SHARMA  
 VANESSA TRUONG

REVISED BY  
 DATE REVISED

B SHARMA  
 12/2015

**NOTE:**

1. 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
12	Oran	57	11.0/22.5	40	74

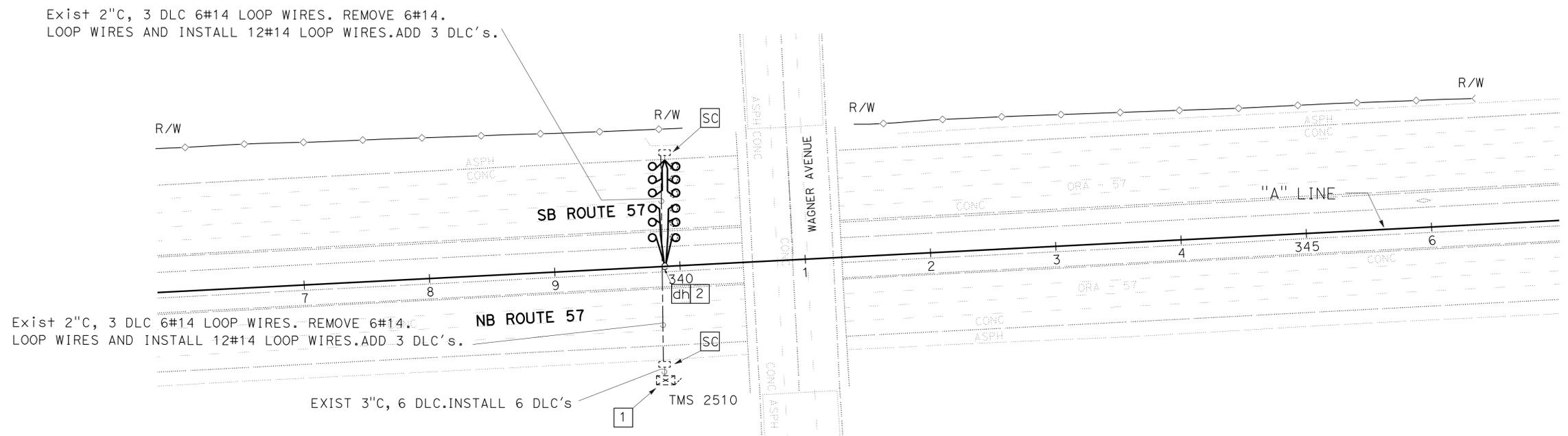
Barjesh K. Sharma 12-04-15  
 REGISTERED ELECTRICAL ENGINEER DATE

03-07-16  
 PLANS APPROVAL DATE

**B.K.SHARMA**  
 No. E 19299  
 Exp. 12/31/16  
 ELECTRICAL

REGISTERED PROFESSIONAL ENGINEER  
 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.



**INDUCTIVE LOOP DETECTOR**

SCALE: 1" = 50'

**E-6**

FOR LEGEND AND NOTES SEE SHEET E-1  
 APPROVED FOR ELECTRICAL WORK ONLY

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

FUNCTIONAL SUPERVISOR  
 SHAHRAM SHARIARI

CALCULATED/DESIGNED BY  
 CHECKED BY

BARJESH SHARMA  
 VANESSA TRUONG

REVISED BY  
 DATE REVISED

B SHARMA  
 12/2015

**NOTE:**

1. 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
12	Ora	57	11.0/22.5	41	74

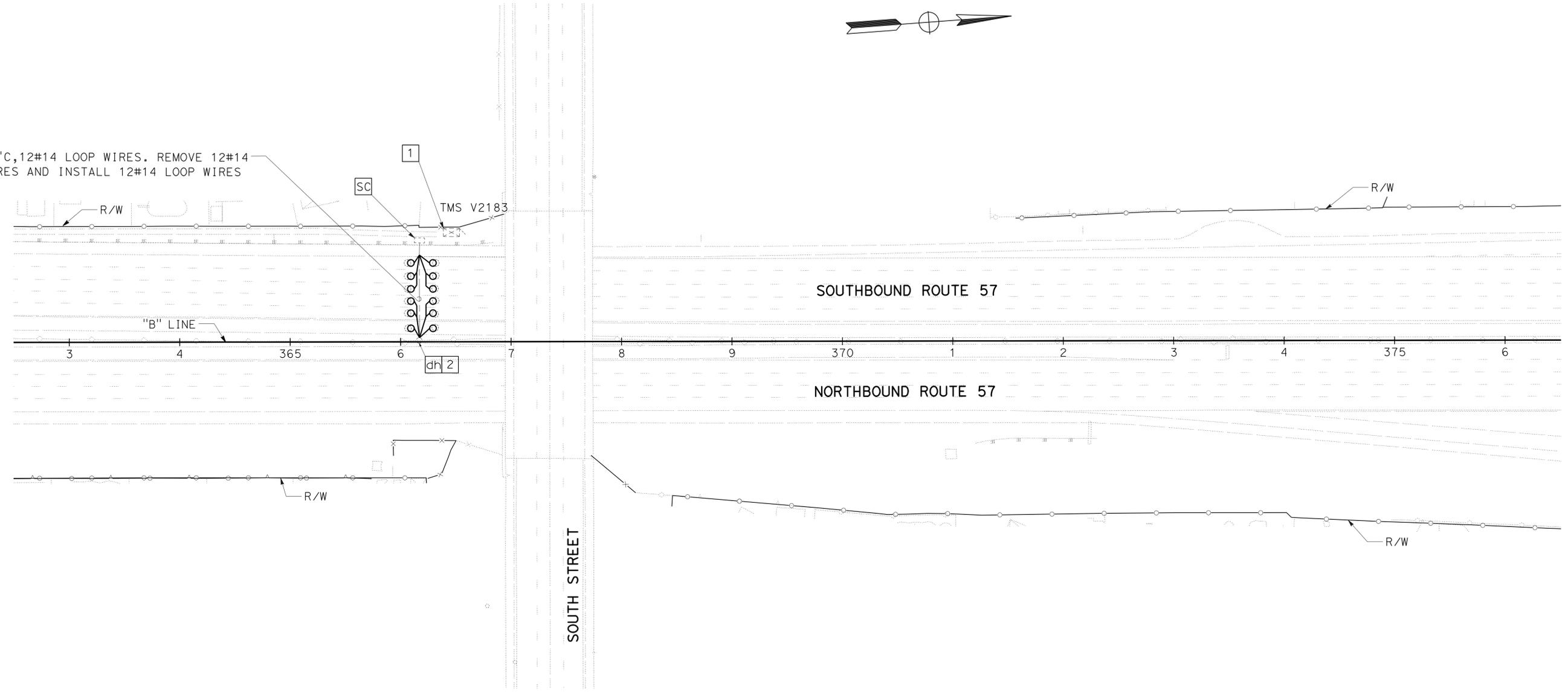
Barjesh K. Sharma 12-04-15  
 REGISTERED ELECTRICAL ENGINEER DATE

03-07-16  
 PLANS APPROVAL DATE

**B.K.SHARMA**  
 No. E 19299  
 Exp. 12/31/16  
 ELECTRICAL

REGISTERED PROFESSIONAL ENGINEER  
 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.



FOR LEGEND AND NOTES SEE SHEET E-1  
 APPROVED FOR ELECTRICAL WORK ONLY

**INDUCTIVE LOOP DETECTOR**

SCALE: 1" = 50'

**E-7**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**® ELECTRICAL DESIGN

REVISOR: B SHARMA  
 DATE: 12/2015

DESIGNER: BARJESH SHARMA  
 CHECKER: VANESSA TRUONG

FUNCTIONAL SUPERVISOR: SHAHRAM SHARIARI

**NOTE:**

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

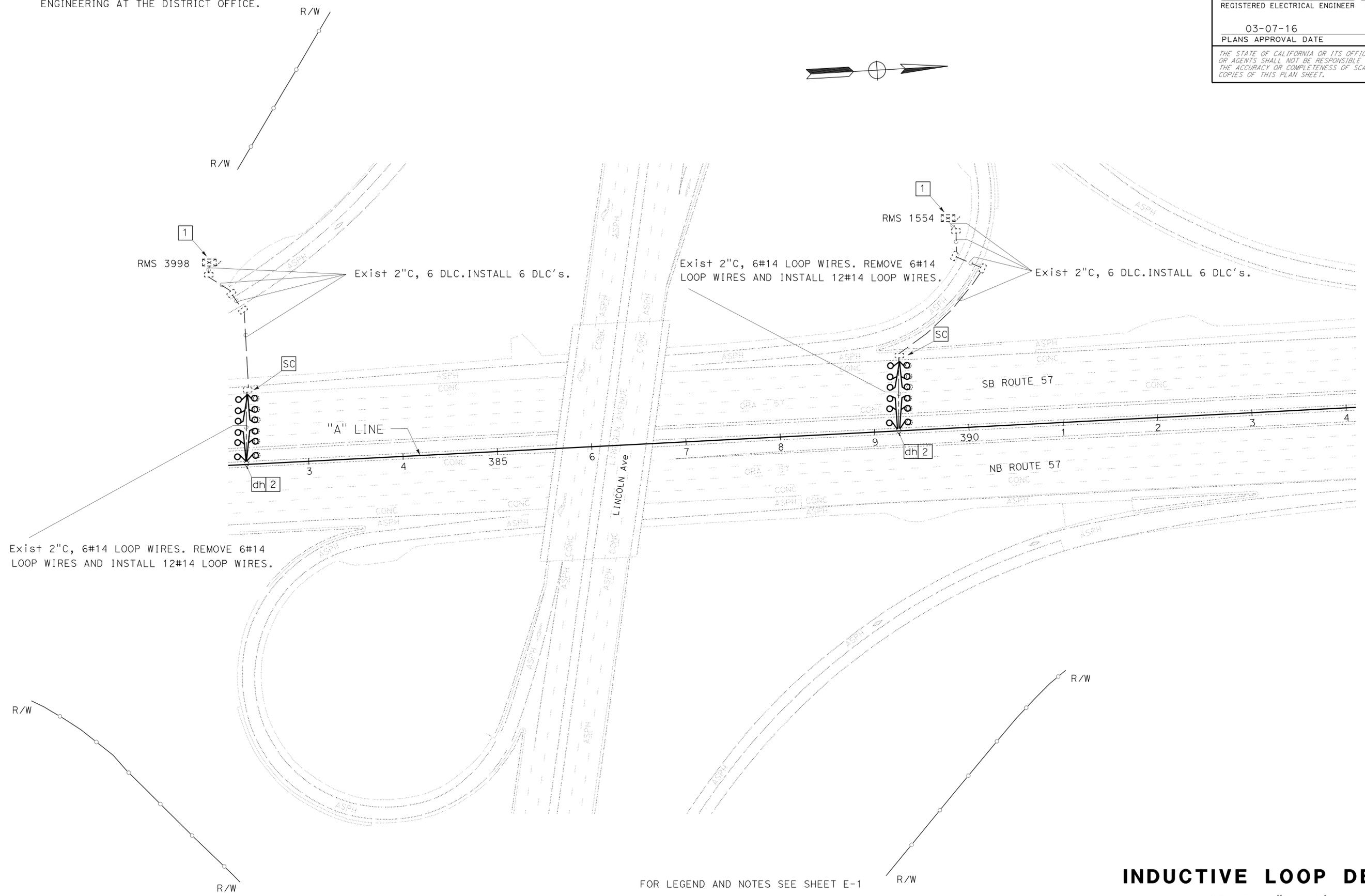
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	42	74

Barjesh K. Sharma 12-04-15  
 REGISTERED ELECTRICAL ENGINEER DATE

03-07-16  
 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.

**B.K.SHARMA**  
 No. E 19299  
 Exp. 12/31/16  
 ELECTRICAL  
 STATE OF CALIFORNIA



FOR LEGEND AND NOTES SEE SHEET E-1  
 APPROVED FOR ELECTRICAL WORK ONLY

**INDUCTIVE LOOP DETECTOR**  
 SCALE: 1" = 50'  
**E-8**

LAST REVISION | DATE PLOTTED => 08-MAR-2016  
 12-01-15 TIME PLOTTED => 13:30

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**® ELECTRICAL DESIGN

FUNCTIONAL SUPERVISOR  
 SHAHRAM SHARIARI

CALCULATED/DESIGNED BY  
 CHECKED BY

BARJESH SHARMA  
 VANESSA TRUONG

REVISED BY  
 DATE REVISED

B SHARMA  
 12/2015

**NOTE:**

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

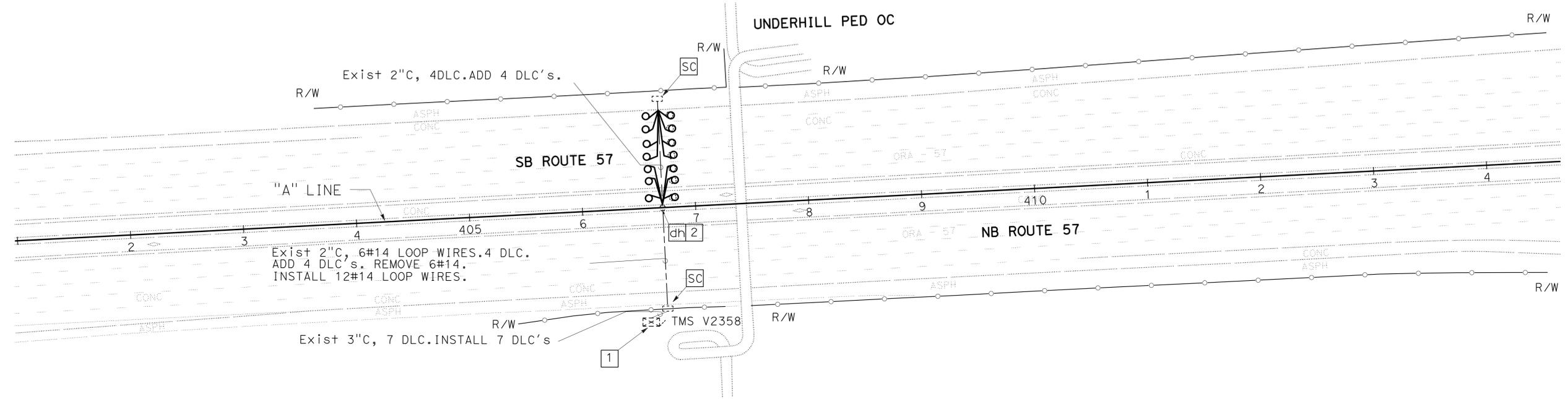
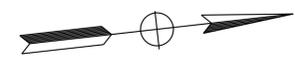
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	43	74

Barjesh K. Sharma 12-04-15  
 REGISTERED ELECTRICAL ENGINEER DATE

03-07-16  
 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.

**B.K.SHARMA**  
 No. E 19299  
 Exp. 12/31/16  
 ELECTRICAL  
 STATE OF CALIFORNIA



FOR LEGEND AND NOTES SEE SHEET E-1  
 APPROVED FOR ELECTRICAL WORK ONLY

**INDUCTIVE LOOP DETECTOR**

SCALE: 1" = 50'

**E-9**

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

FUNCTIONAL SUPERVISOR: SHAHRAM SHARIARI  
 CALCULATED/DESIGNED BY: [Blank]  
 CHECKED BY: [Blank]  
 BARJESH SHARMA  
 VANESSA TRUONG  
 REVISOR: B SHARMA  
 DATE: 12/2015

**NOTE:**

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

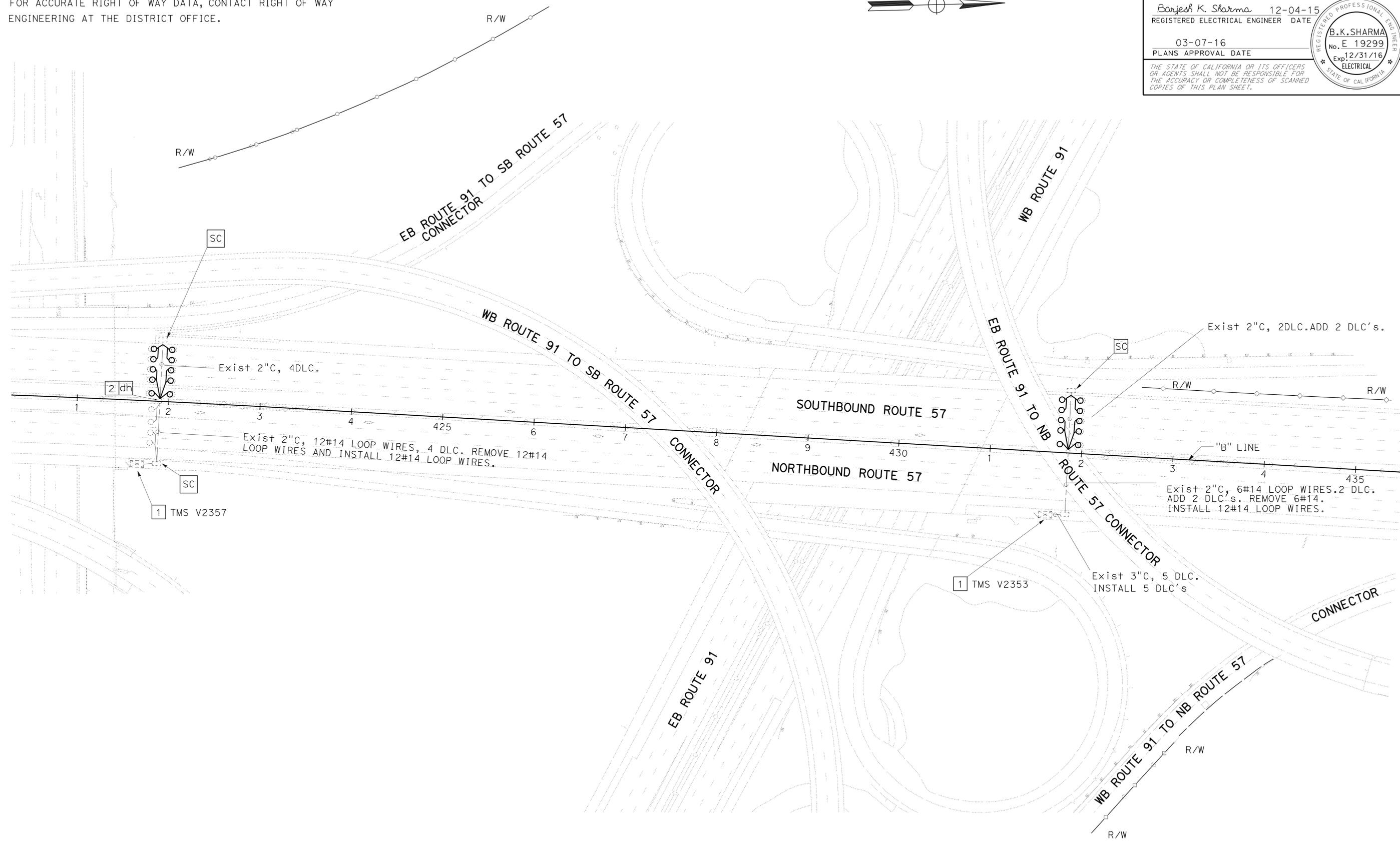
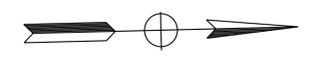
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Oran	57	11.0/22.5	44	74

Barjesh K. Sharma 12-04-15  
 REGISTERED ELECTRICAL ENGINEER DATE

03-07-16  
 PLANS APPROVAL DATE

**B.K.SHARMA**  
 No. E 19299  
 Exp. 12/31/16  
 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.



FOR LEGEND AND NOTES SEE SHEET E-1  
 APPROVED FOR ELECTRICAL WORK ONLY

**INDUCTIVE LOOP DETECTOR**

SCALE: 1" = 50'

**E-10**

LAST REVISION DATE PLOTTED => 08-MAR-2016 12-22-15 TIME PLOTTED => 13:30

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**® ELECTRICAL DESIGN

FUNCTIONAL SUPERVISOR  
 SHAHRAM SHARIARI

CALCULATED-DESIGNED BY  
 CHECKED BY

BARJESH SHARMA  
 VANESSA TRUONG

REVISED BY  
 DATE REVISED

B SHARMA  
 12/2015

**NOTE:**

1. 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
12	Oran	57	11.0/22.5	45	74

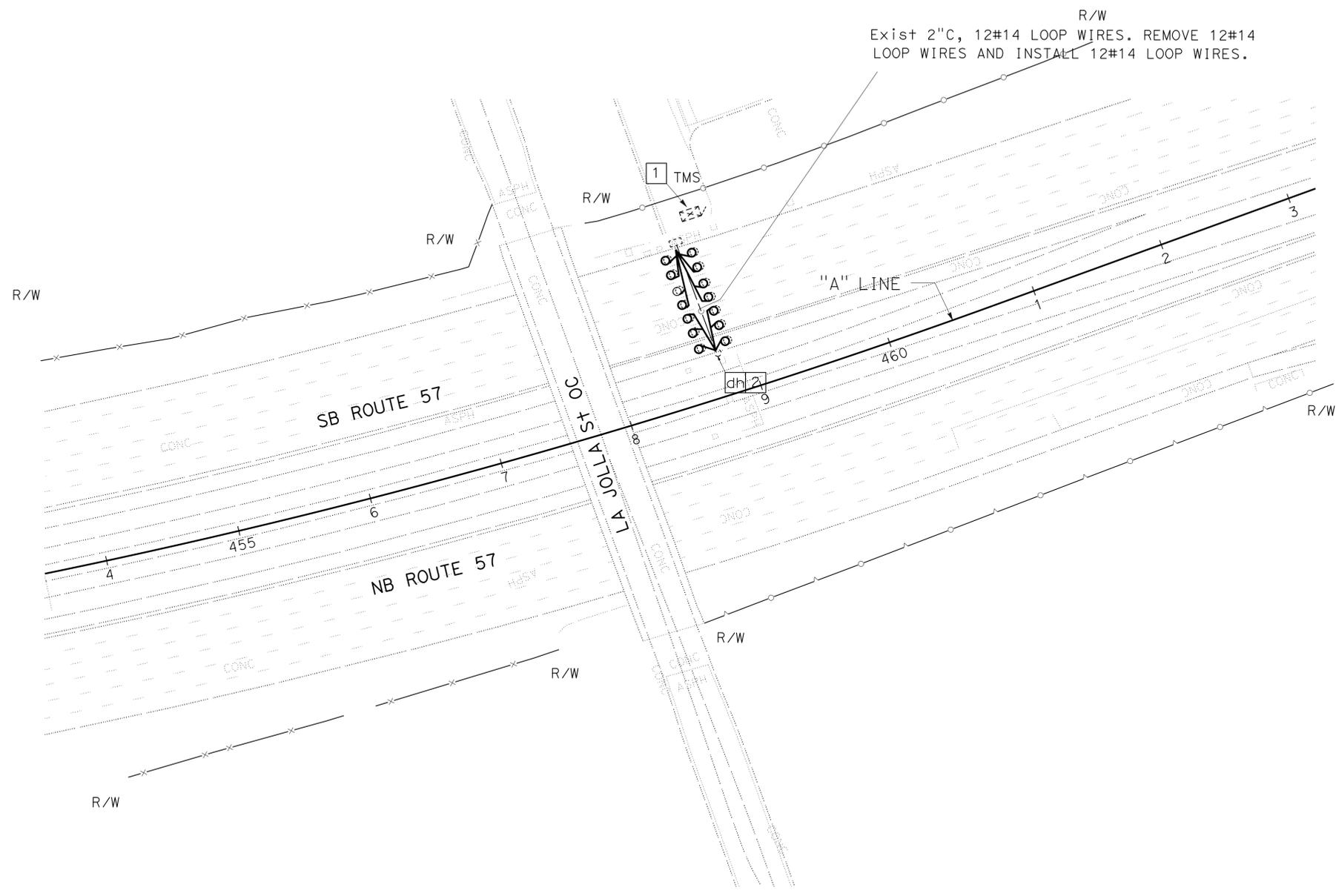
Barjesh K. Sharma 12-04-15  
 REGISTERED ELECTRICAL ENGINEER DATE

03-07-16  
 PLANS APPROVAL DATE

**B.K.SHARMA**  
 No. E 19299  
 Exp. 12/31/16  
 ELECTRICAL

REGISTERED PROFESSIONAL ENGINEER  
 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.



FOR LEGEND AND NOTES SEE SHEET E-1  
 APPROVED FOR ELECTRICAL WORK ONLY

**INDUCTIVE LOOP DETECTOR**

SCALE: 1" = 50'

**E-11**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** ELECTRICAL DESIGN  
 FUNCTIONAL SUPERVISOR: SHAHRAM SHARIARI  
 CALCULATED/DESIGNED BY: CHECKED BY:  
 BARJESH SHARMA VANESSA TRUONG  
 REVISED BY: DATE REVISED:  
 B SHARMA 12/2015

**NOTE:**

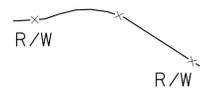
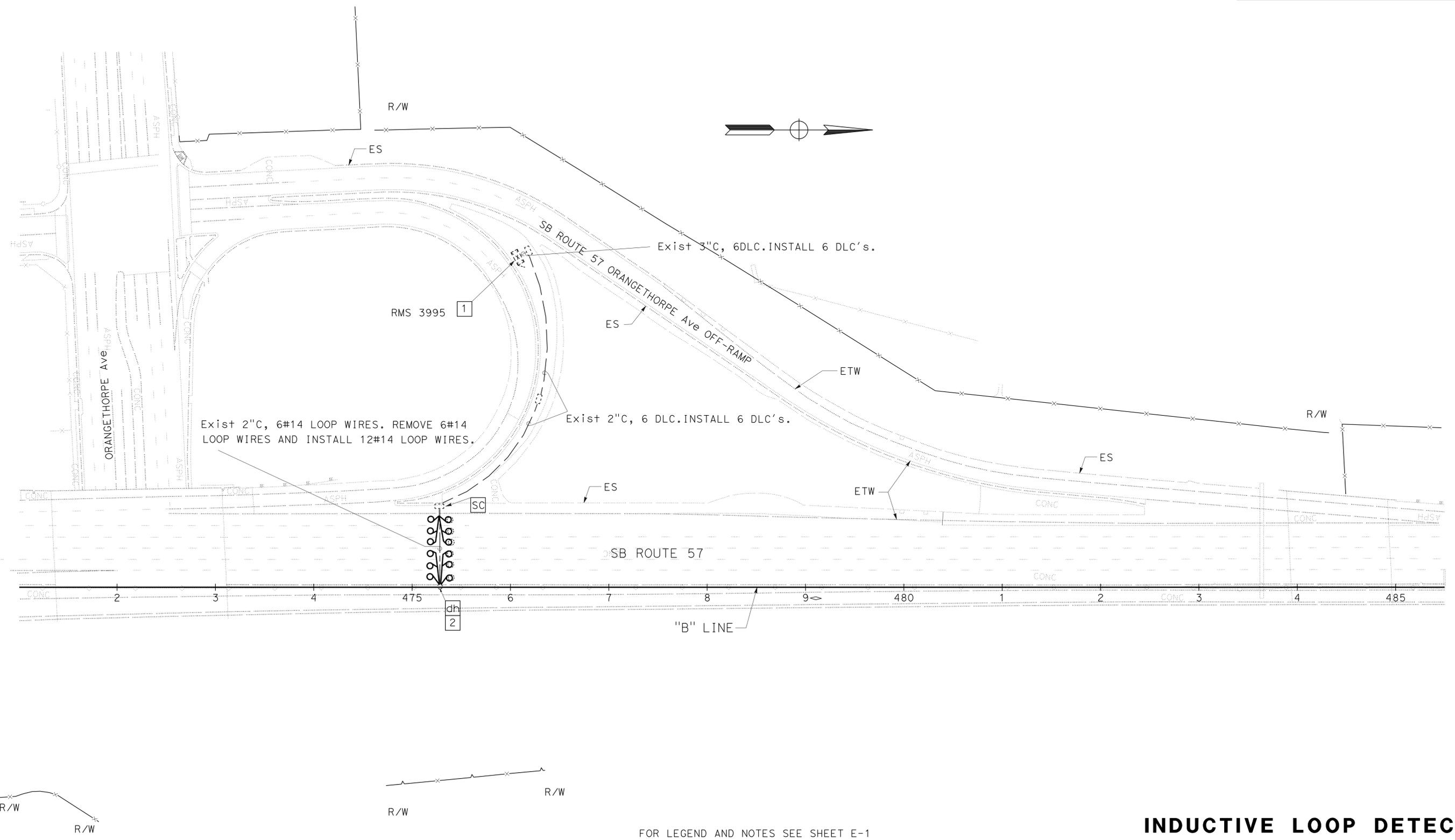
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Orca	57	11.0/22.5	46	74

Barjesh K. Sharma 12-04-15  
 REGISTERED ELECTRICAL ENGINEER DATE  
 03-07-16  
 PLANS APPROVAL DATE

**B.K.SHARMA**  
 No. E 19299  
 Exp. 12/31/16  
 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.



FOR LEGEND AND NOTES SEE SHEET E-1  
 APPROVED FOR ELECTRICAL WORK ONLY

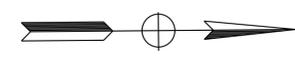
**INDUCTIVE LOOP DETECTOR**  
 SCALE: 1" = 50'  
**E-12**

LAST REVISION | DATE PLOTTED => 08-MAR-2016  
 12-01-15 | TIME PLOTTED => 1:3:50

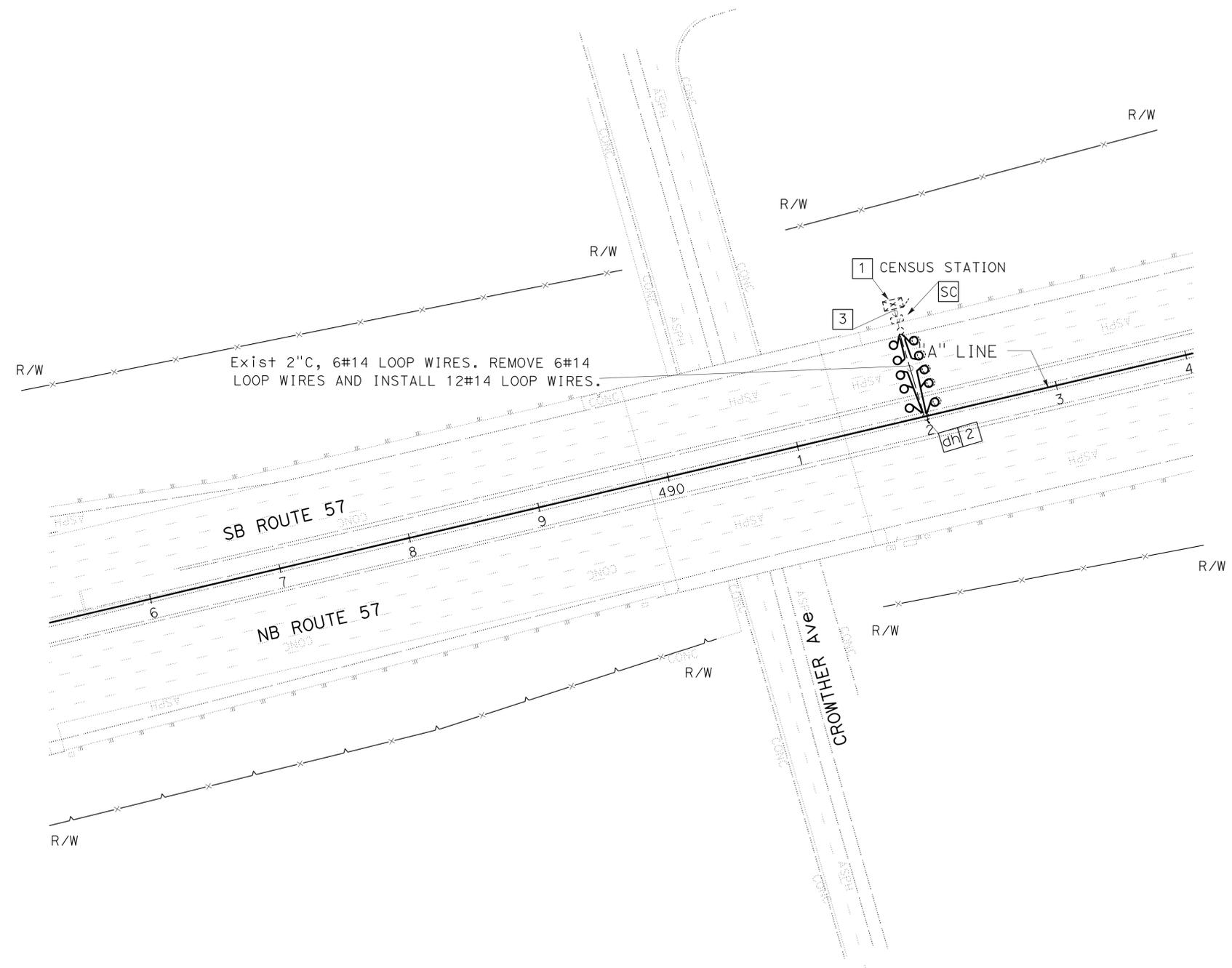
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	DESIGNED BY	REVISOR	DATE
<b>Caltrans</b> ELECTRICAL DESIGN	SHAHRAM SHARIARI	BARJESH SHARMA	B SHARMA	12/2015
		CHECKED BY	DATE REVISED	
		VANESSA TRUONG		

**NOTE:**

1. 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
12	Oran	57	11.0/22.5	47	74
Barjesh K. Sharma			12-04-15		
REGISTERED ELECTRICAL ENGINEER			DATE		
03-07-16					
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.					



Exist 2" C, 6#14 LOOP WIRES. REMOVE 6#14 LOOP WIRES AND INSTALL 12#14 LOOP WIRES.

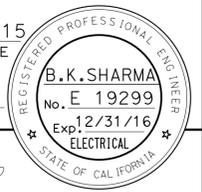
FOR LEGEND AND NOTES SEE SHEET E-1  
 APPROVED FOR ELECTRICAL WORK ONLY

**INDUCTIVE LOOP DETECTOR**

SCALE: 1" = 50'

**E-13**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	48	74
Barjesh K. Sharma			12-04-15	REGISTERED ELECTRICAL ENGINEER DATE	
03-07-16			PLANS APPROVAL DATE		
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					



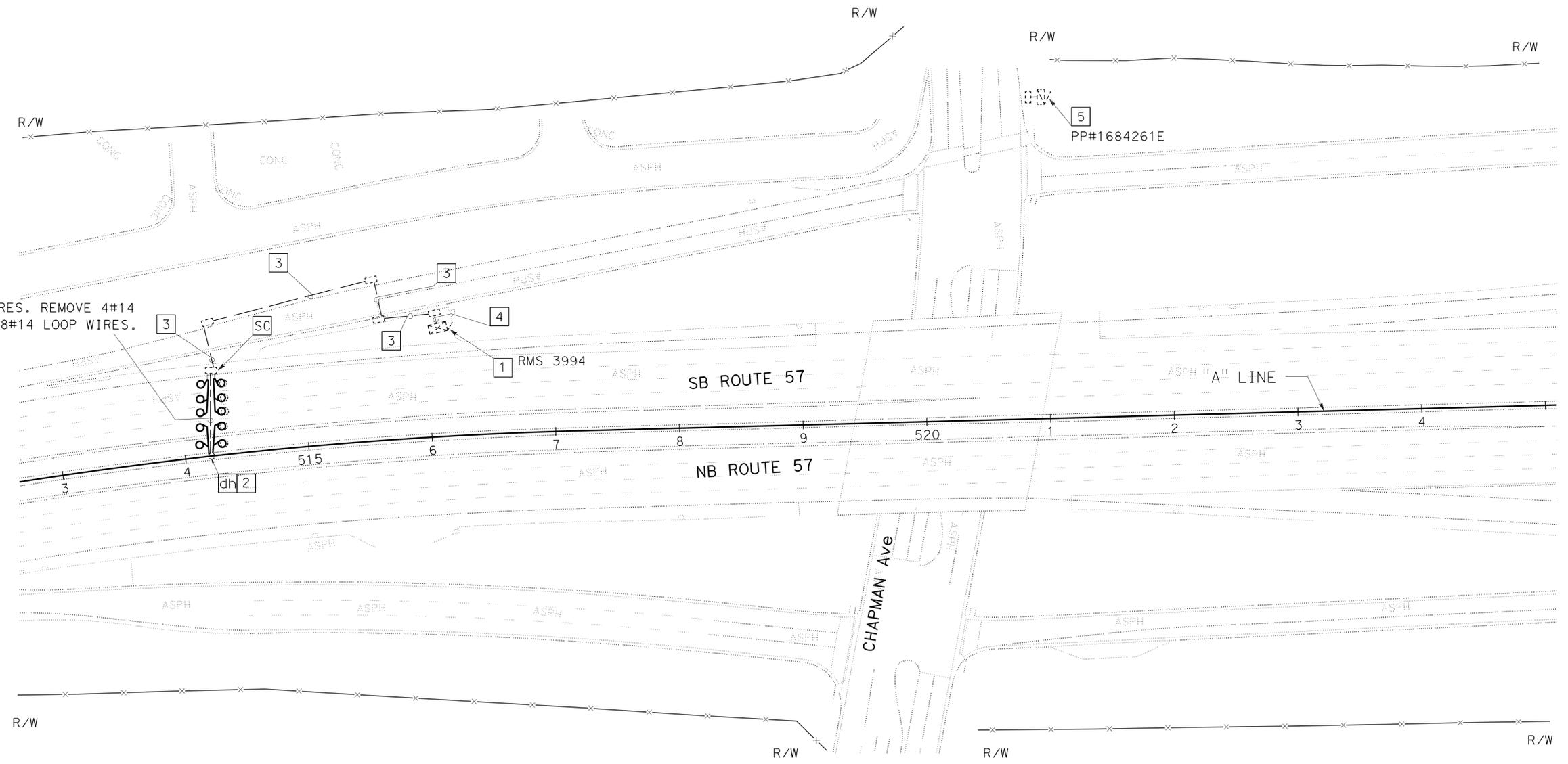
**NOTES:**

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



**LEGEND ( THIS SHEET ONLY):**

- 5 EXISTING 120/240 V TYPE III-CF SERVICE EQUIPMENT ENCLOSURE. ID# 07-55-057-0-017.200  
ID# 07-55-057-0-017.201
- METER No. 1 (SIGNAL): 1-1P-120 V - 40 A CB SIGNAL
- METER No. 2 (RAMP): 1-1P-120 V - 30 A CB FOR RAMP  
1-1P-120 V - 20 A CB FOR LIGHTING  
1-1P-120 V - 15 A CB FOR TEL DEMARCATION



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** ELECTRICAL DESIGN  
 FUNCTIONAL SUPERVISOR: SHAHRAM SHARIARI  
 CALCULATED/DESIGNED BY: VANESSA TRUONG  
 CHECKED BY: VANESSA TRUONG  
 REVISED BY: B. SHARMA  
 DATE REVISED: 12/2015

FOR LEGEND AND NOTES SEE SHEET E-1  
 APPROVED FOR ELECTRICAL WORK ONLY

**INDUCTIVE LOOP DETECTOR**

SCALE: 1" = 50'

**E-14**

LAST REVISION | DATE PLOTTED => 08-MAR-2016  
 12-01-15 | TIME PLOTTED => 1:31:30

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**® ELECTRICAL DESIGN

FUNCTIONAL SUPERVISOR  
 SHAHRAM SHARIARI

CALCULATED/DESIGNED BY  
 BARJESH SHARMA

CHECKED BY  
 VANESSA TRUONG

REVISOR BY  
 B. SHARMA

DATE REVISOR  
 12/2015

**NOTE:**

1. 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
12	Ora	57	11.0/22.5	49	74

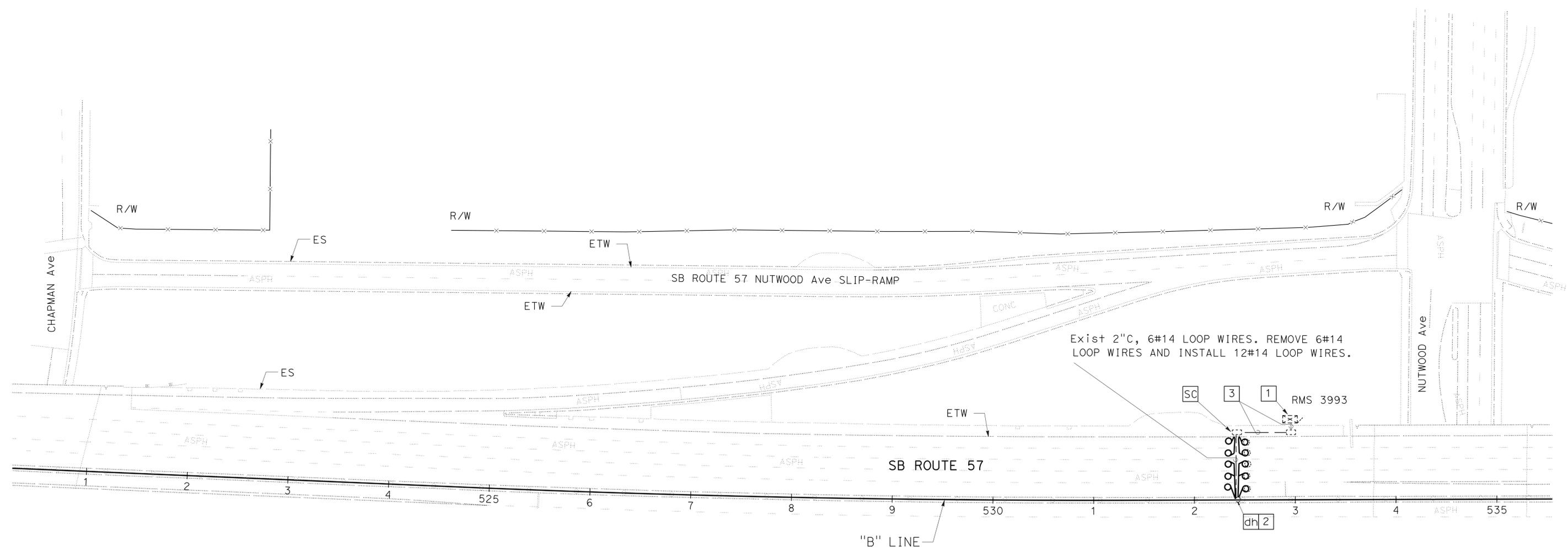
Barjesh K. Sharma 12-04-15  
 REGISTERED ELECTRICAL ENGINEER DATE

03-07-16  
 PLANS APPROVAL DATE

**B.K.SHARMA**  
 No. E 19299  
 Exp. 12/31/16  
 ELECTRICAL

REGISTERED PROFESSIONAL ENGINEER  
 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.



FOR LEGEND AND NOTES SEE SHEET E-1  
 APPROVED FOR ELECTRICAL WORK ONLY

**INDUCTIVE LOOP DETECTOR**

SCALE: 1" = 50'

**E-15**



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

FUNCTIONAL SUPERVISOR  
 SHAHRAM SHARIARI

CALCULATED/DESIGNED BY  
 CHECKED BY

BARJESH SHARMA  
 VANESSA TRUONG

REVISED BY  
 DATE REVISED

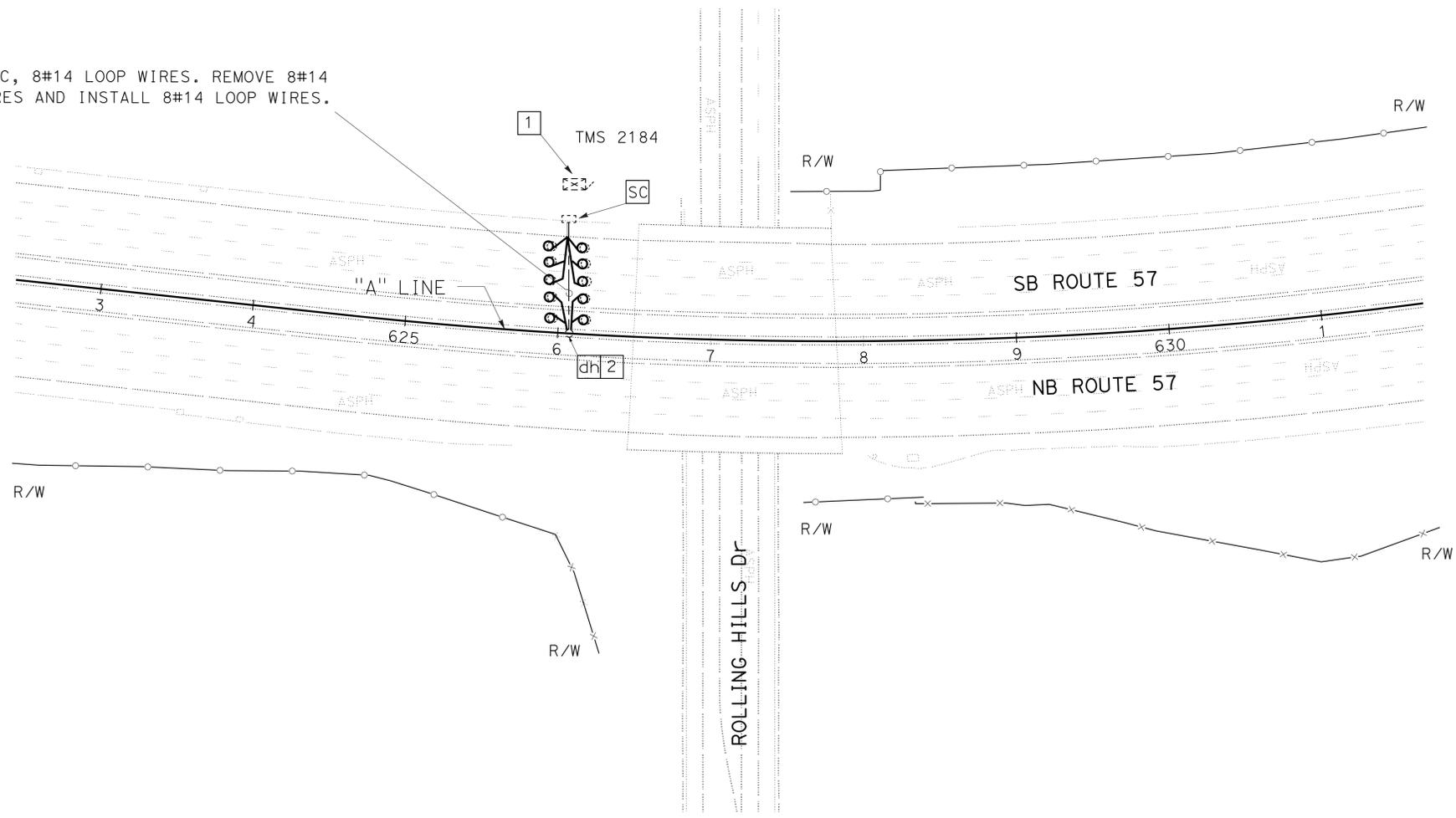
B SHARMA  
 12/2015

**NOTE:**

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



Exist 2" C, 8#14 LOOP WIRES. REMOVE 8#14 LOOP WIRES AND INSTALL 8#14 LOOP WIRES.



FOR LEGEND AND NOTES SEE SHEET E-1  
 APPROVED FOR ELECTRICAL WORK ONLY

**INDUCTIVE LOOP DETECTOR**  
 SCALE: 1" = 50'  
**E-17**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Oran	57	11.0/22.5	51	74

Barjesh K. Sharma 12-04-15  
 REGISTERED ELECTRICAL ENGINEER DATE

03-07-16  
 PLANS APPROVAL DATE

**B.K.SHARMA**  
 No. E 19299  
 Exp. 12/31/16  
 ELECTRICAL

REGISTERED PROFESSIONAL ENGINEER  
 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.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**® ELECTRICAL DESIGN

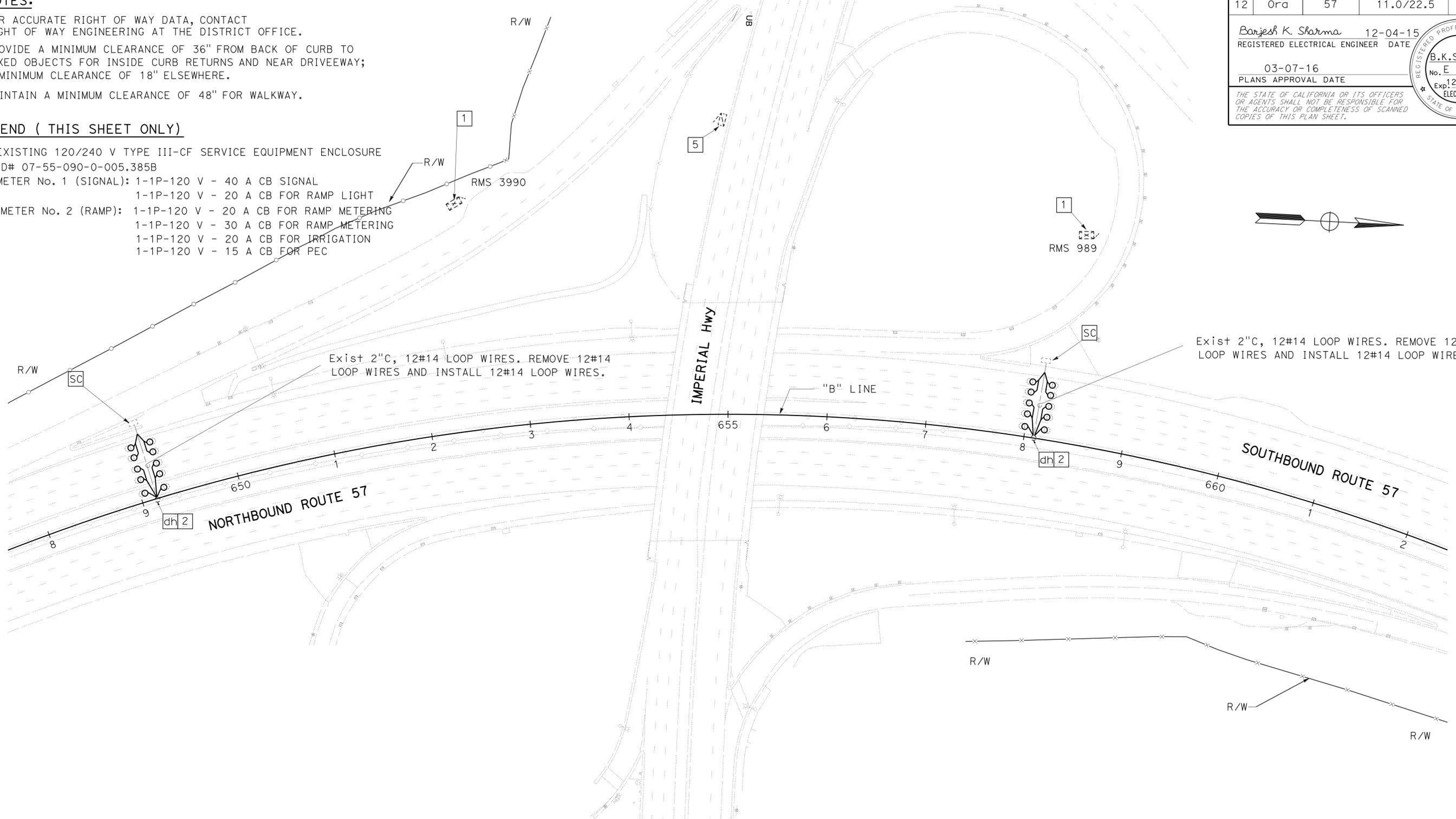
FUNCTIONAL SUPERVISOR: SHAHRAM SHARIARI  
 CALCULATED/DESIGNED BY: [Blank]  
 CHECKED BY: [Blank]  
 BARJESH SHARMA  
 VANESSA TRUONG  
 REVISED BY: B SHARMA  
 DATE REVISED: 12/2015

**NOTES:**

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- PROVIDE A MINIMUM CLEARANCE OF 36" FROM BACK OF CURB TO FIXED OBJECTS FOR INSIDE CURB RETURNS AND NEAR DRIVEWAY; A MINIMUM CLEARANCE OF 18" ELSEWHERE.
- MAINTAIN A MINIMUM CLEARANCE OF 48" FOR WALKWAY.

**LEGEND ( THIS SHEET ONLY)**

- 5 EXISTING 120/240 V TYPE III-CF SERVICE EQUIPMENT ENCLOSURE  
 ID# 07-55-090-0-005.385B  
 METER No. 1 (SIGNAL): 1-1P-120 V - 40 A CB SIGNAL  
 1-1P-120 V - 20 A CB FOR RAMP LIGHT  
 METER No. 2 (RAMP): 1-1P-120 V - 20 A CB FOR RAMP METERING  
 1-1P-120 V - 30 A CB FOR RAMP METERING  
 1-1P-120 V - 20 A CB FOR IRRIGATION  
 1-1P-120 V - 15 A CB FOR PEC



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Orca	57	11.0/22.5	52	74

Barjesh K. Sharma 12-04-15  
 REGISTERED ELECTRICAL ENGINEER DATE

03-07-16  
 PLANS APPROVAL DATE

**B.K.SHARMA**  
 No. E 19299  
 Exp. 12/31/16  
 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.



Exist 2"C, 12#14 LOOP WIRES. REMOVE 12#14 LOOP WIRES AND INSTALL 12#14 LOOP WIRES.

FOR LEGEND AND NOTES SEE SHEET E-1  
 APPROVED FOR ELECTRICAL WORK ONLY

**INDUCTIVE LOOP DETECTOR**

SCALE: 1" = 50'

**E-18**

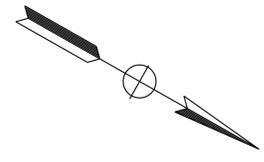
LAST REVISION DATE PLOTTED => 08-MAR-2016 12-01-15 TIME PLOTTED => 1:3:30

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

FUNCTIONAL SUPERVISOR: SHAHRAM SHARIARI  
 CALCULATED/DESIGNED BY: [Blank]  
 CHECKED BY: [Blank]  
 BARJESH SHARMA  
 VANESSA TRUONG  
 REVISED BY: [Blank]  
 DATE REVISED: [Blank]  
 B SHARMA  
 12/2015

**NOTE:**

1. 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
12	Orca	57	11.0/22.5	53	74

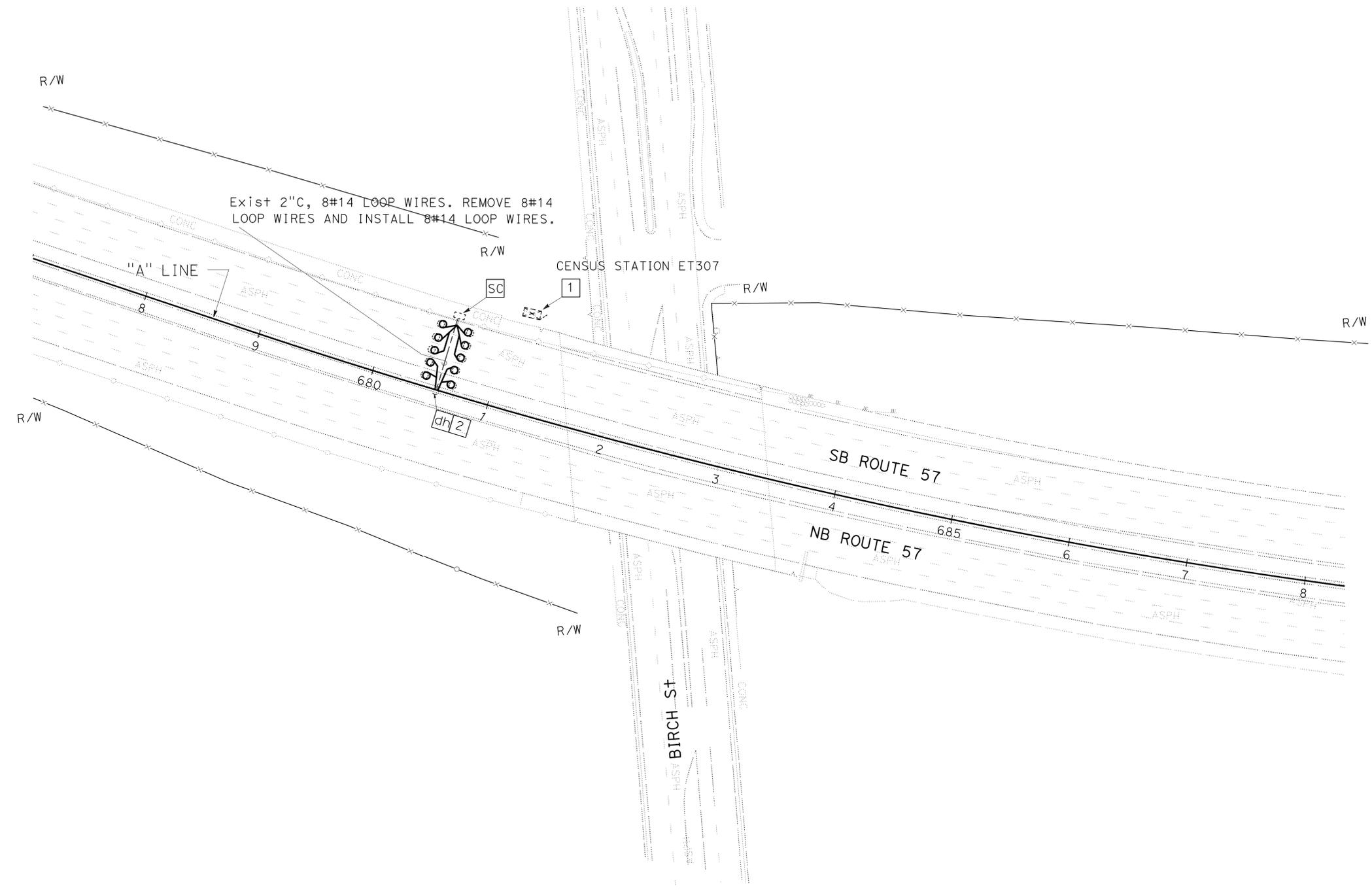
Barjesh K. Sharma 12-04-15  
 REGISTERED ELECTRICAL ENGINEER DATE

03-07-16  
 PLANS APPROVAL DATE

**B.K.SHARMA**  
 No. E 19299  
 Exp. 12/31/16  
 ELECTRICAL

REGISTERED PROFESSIONAL ENGINEER  
 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.



FOR LEGEND AND NOTES SEE SHEET E-1  
 APPROVED FOR ELECTRICAL WORK ONLY

**INDUCTIVE LOOP DETECTOR**  
 SCALE: 1" = 50'  
**E-19**

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

FUNCTIONAL SUPERVISOR  
 SHAHRAM SHARIARI

CALCULATED/DESIGNED BY  
 CHECKED BY

BARJESH SHARMA  
 VANESSA TRUONG

REVISED BY  
 DATE REVISED

B SHARMA  
 12/2015

**NOTE:**

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

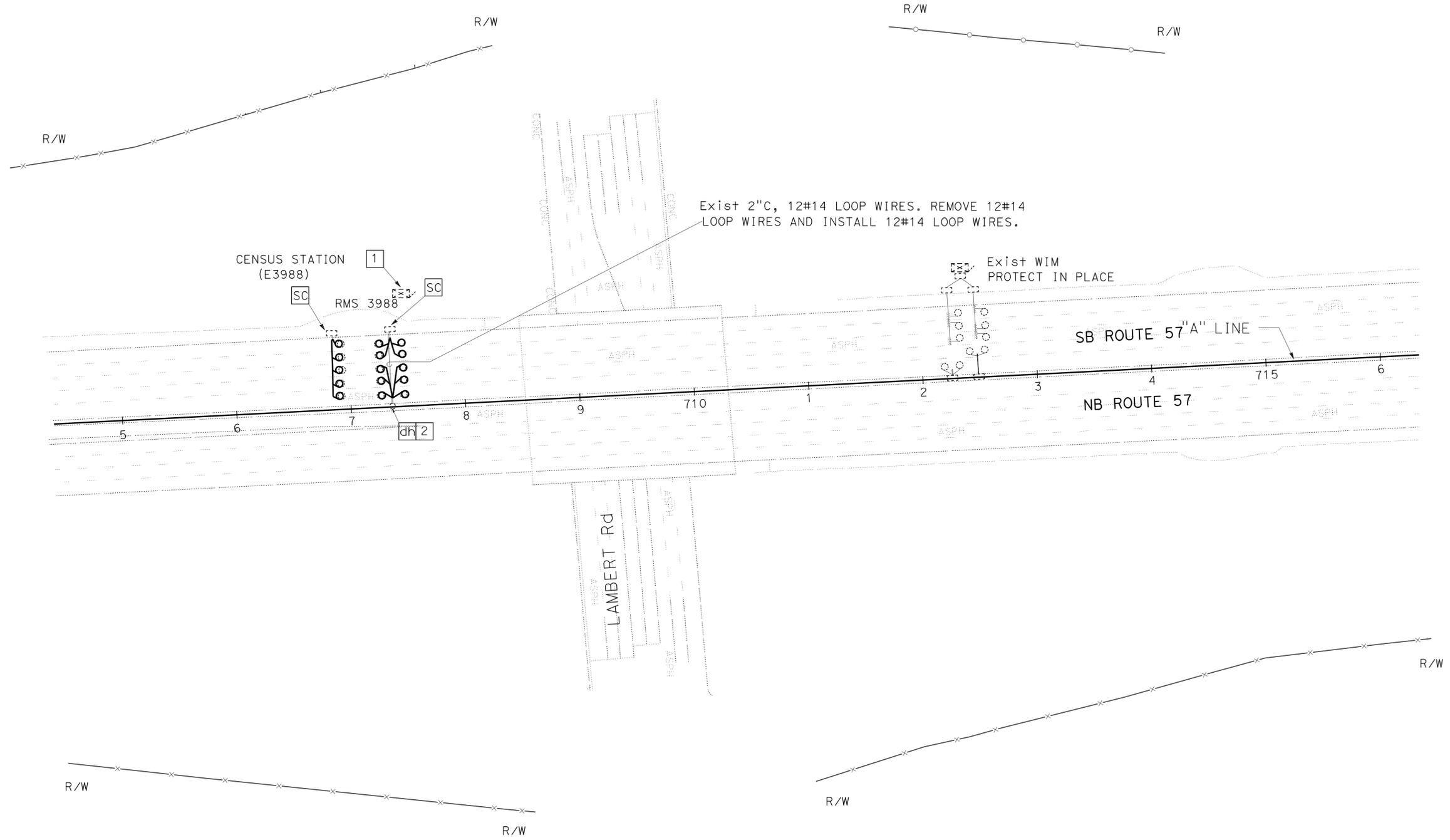
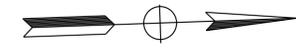
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	54	74

Barjesh K. Sharma 12-04-15  
 REGISTERED ELECTRICAL ENGINEER DATE

03-07-16  
 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.

**B.K.SHARMA**  
 No. E 19299  
 Exp. 12/31/16  
 ELECTRICAL  
 STATE OF CALIFORNIA



FOR LEGEND AND NOTES SEE SHEET E-1  
 APPROVED FOR ELECTRICAL WORK ONLY

**INDUCTIVE LOOP DETECTOR**

SCALE: 1" = 50'

**E-20**



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**® **ELECTRICAL DESIGN**

FUNCTIONAL SUPERVISOR  
 SHAHRAM SHAHRIARI

CALCULATED-DESIGNED BY  
 CHECKED BY

BARJESH SHARMA  
 VANESSA TRUONG

REVISED BY  
 DATE REVISED

08/2015  
 12/2015

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	56	74

Barjesh K. Sharma 12-04-15  
 REGISTERED ELECTRICAL ENGINEER DATE

03-07-16  
 PLANS APPROVAL DATE

**B.K.SHARMA**  
 No. E 19299  
 Exp. 12/31/16  
 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.

**INDUCTIVE LOOP DETECTOR**

SHEET No.	INDUCTIVE LOOP DETECTOR	DLC
	EA	FEET
E-1	10	1400
E-2	22	665
E-3	20	205
E-4	10	-
E-5	20	-
E-6	12	120
E-7	12	-
E-8	24	2010
E-9	14	245
E-10	20	125
E-11	14	-
E-12	12	1860
E-13	10	125
E-14	10	1200
E-15	10	-
E-16	22	2200
E-17	10	-
E-18	20	-
E-19	10	-
E-20	15	-
E-21	10	2400

**NOTE:** ITEMS SHOWN IN THIS TABLE ARE NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.

**ELECTRICAL QUANTITIES**  
 NO SCALE

**E-22**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	57	74

*Grace M. Tsushima*  
REGISTERED CIVIL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

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

TO ACCOMPANY PLANS DATED 03-07-16

**UNIT OF MEASUREMENT SYMBOLS:**

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

**TABLE A**

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

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

**TABLE B**

SYMBOL USED	DEFINITIONS
ksi	KIPS PER SQUARE INCH
ksf	KIPS PER SQUARE FOOT
psi	POUNDS PER SQUARE INCH
psf	POUNDS PER SQUARE FOOT
lb/ft <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.

**REVISED STANDARD PLAN RSP A10B**

	<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>
Obir	OBLITERATE
OC	OVERCROSSING
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OG	ORIGINAL GROUND
OGAC	OPEN GRADED ASPHALT CONCRETE
OGFC	OPEN GRADED FRICTION COURSE
OH	OVERHEAD
OHWM	ORDINARY HIGH WATER MARK
O-O	OUT TO OUT
Opp	OPPOSITE
OSD	OVERSIDE DRAIN
	<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
±	STATION LINE
SM	SELECTED MATERIAL
Spec	SPECIAL, SPECIFICATIONS
SPP	SLOTTED PLASTIC PIPE
SS	SLOPE STAKE
SSBM	STRAP AND SADDLE BRACKET METHOD
SSD	STRUCTURAL SECTION DRAIN
SSPA	STRUCTURAL STEEL PLATE ARCH
SSPP	STRUCTURAL STEEL PLATE PIPE
SSPPA	STRUCTURAL STEEL PLATE PIPE ARCH
SSRP	STEEL SPIRAL RIB PIPE
St	STREET
Sta	STATION
STBB	SINGLE THRIE BEAM BARRIER
Std	STANDARD
Str	STRUCTURE
Surf	SURFACING
SW	SIDEWALK, SOUND WALL
Swr	SEWER
Sym	SYMMETRICAL
S4S	SURFACE 4 SIDES
	<b>T</b>
T	SEMI-TANGENT
Tan	TANGENT
TBB	THRIE BEAM BARRIER
Tbr	TIMBER
TC	TOP OF CURB
TCB	TRAFFIC CONTROL BOX
TCE	TEMPORARY CONSTRUCTION EASEMENT
TeI	TELEPHONE
Temp	TEMPORARY
TG	TOP OF GRADE
Tot	TOTAL
TP	TELEPHONE POLE
TPB	TREATED PERMEABLE BASE
TPM	TREATED PERMEABLE MATERIAL
Trans	TRANSITION

	<b>T continued</b>
TS	TRANSVERSE, TRAFFIC SIGNAL, TUBULAR STEEL
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

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

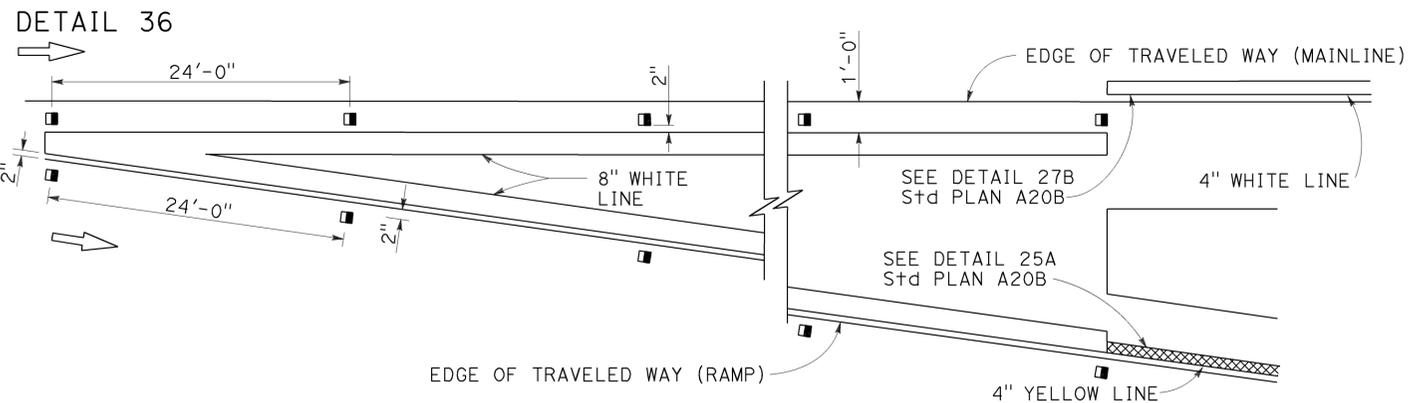
**ABBREVIATIONS  
(SHEET 2 OF 2)**

NO SCALE

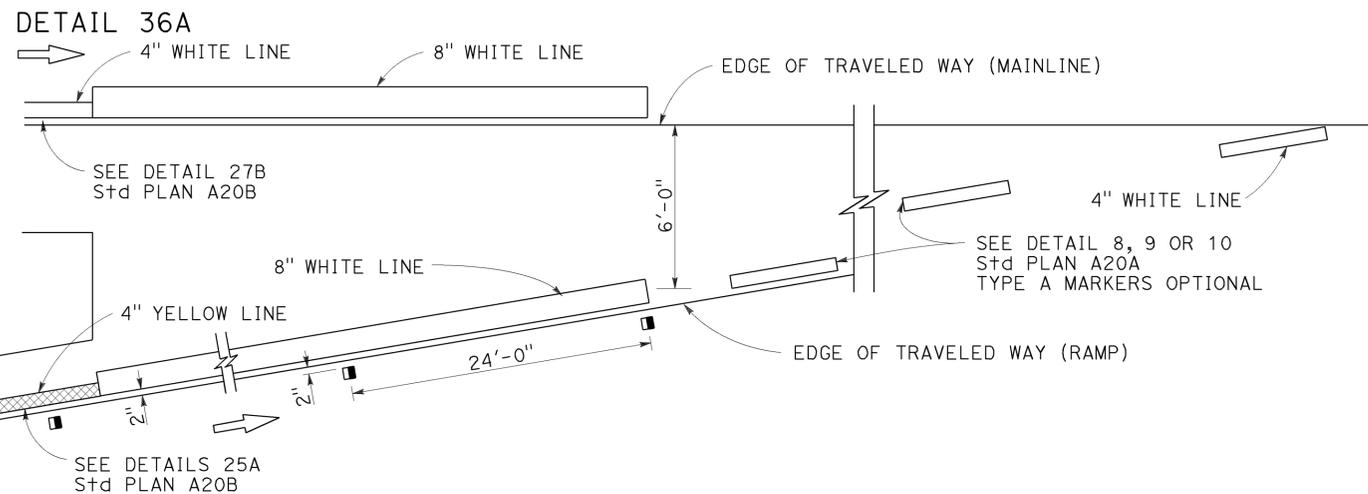
RSP A10B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A10B  
DATED MAY 20, 2011 - PAGE 2 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A10B**

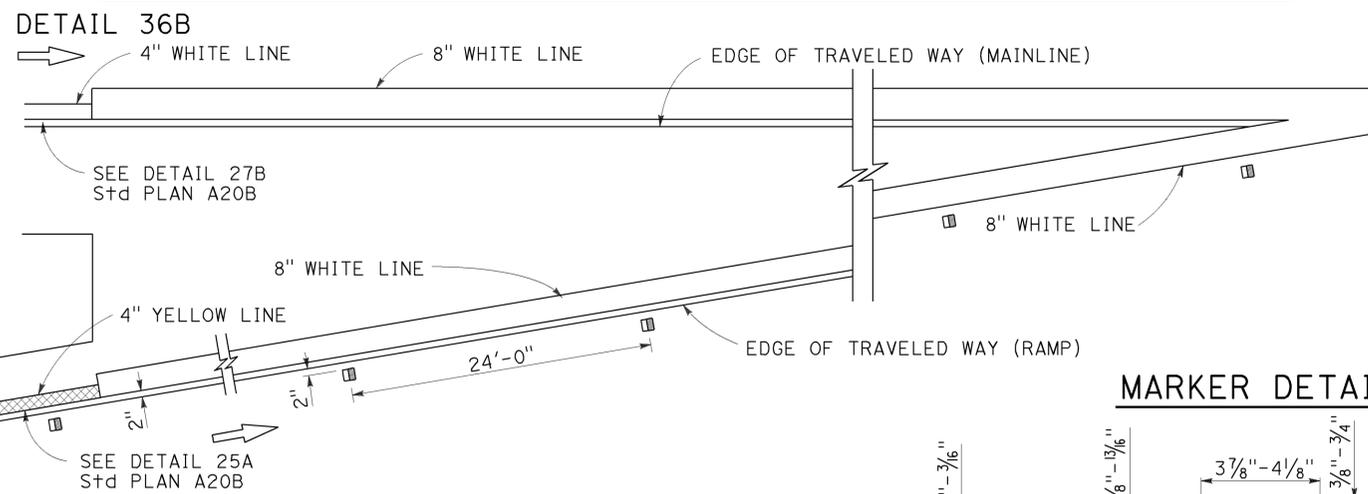
### EXIT RAMP NEUTRAL AREA (GORE) TREATMENT



### ENTRANCE RAMP NEUTRAL AREA (MERGE) TREATMENT



### ENTRANCE RAMP NEUTRAL AREA (ACCELERATION LANE) TREATMENT

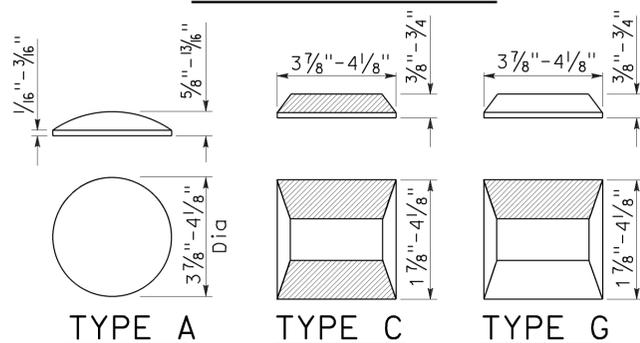


### MARKER DETAILS

#### LEGEND:

#### MARKERS

- TYPE A WHITE NON-REFLECTIVE
- ◻ TYPE C RED-CLEAR RETROREFLECTIVE
- TYPE G ONE-WAY CLEAR RETROREFLECTIVE



RETROREFLECTIVE FACE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	58	74

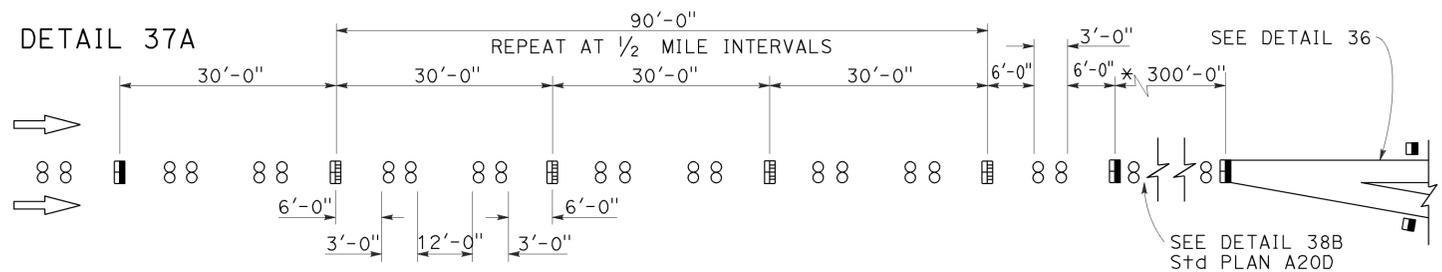
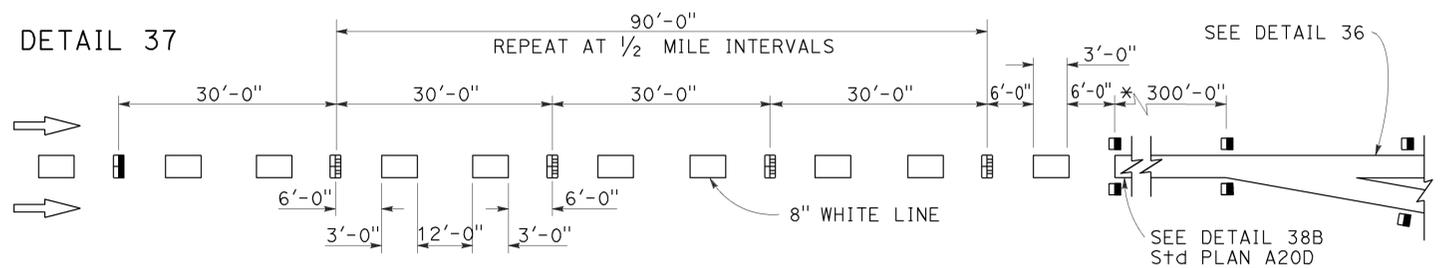
*Roberta L. McLaughlin*  
 REGISTERED CIVIL ENGINEER  
 No. C40375  
 Exp. 3-31-15  
 CIVIL  
 STATE OF CALIFORNIA

July 19, 2013  
PLANS APPROVAL DATE

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

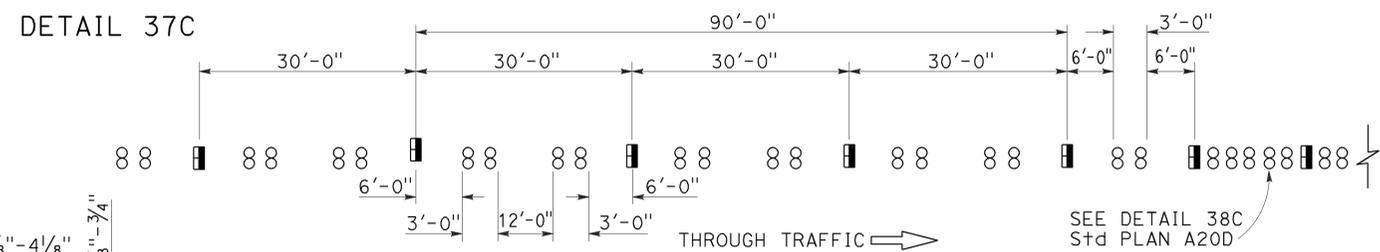
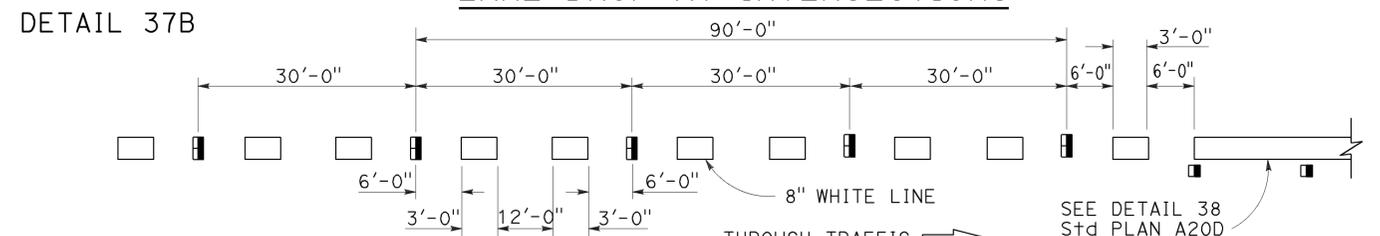
TO ACCOMPANY PLANS DATED 03-07-16

### LANE DROP AT EXIT RAMP



\* The solid channelizing line shown may be omitted on short auxiliary lanes where weaving length is critical.

### LANE DROP AT INTERSECTIONS



STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

## PAVEMENT MARKERS AND TRAFFIC LINE TYPICAL DETAILS

NO SCALE

RSP A20C DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A20C DATED MAY 20, 2011 - PAGE 11 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A20C**

2010 REVISED STANDARD PLAN RSP A20C

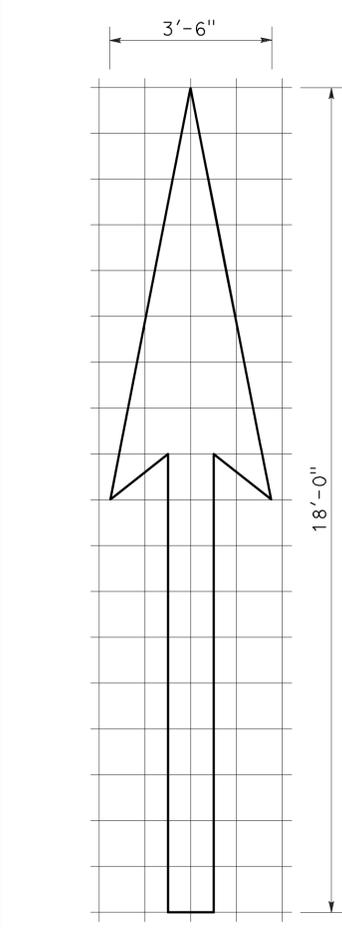
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	59	74

Registered Professional Engineer  
 Roberta L. McLaughlin  
 No. C40375  
 Exp. 3-31-13  
 CIVIL  
 STATE OF CALIFORNIA

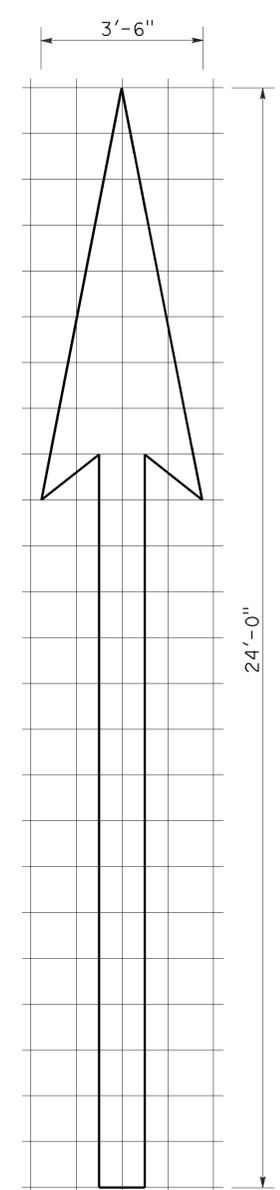
April 20, 2012  
 PLANS APPROVAL DATE

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.

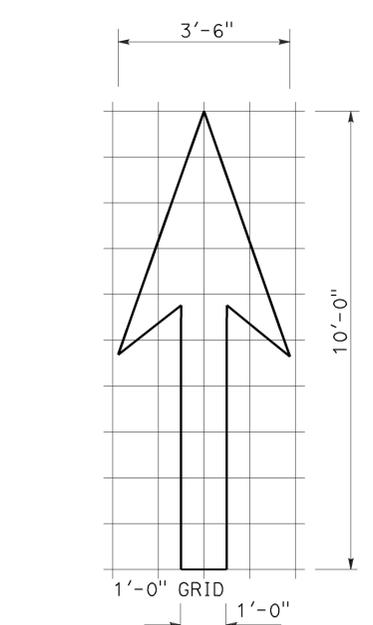
TO ACCOMPANY PLANS DATED 03-07-16



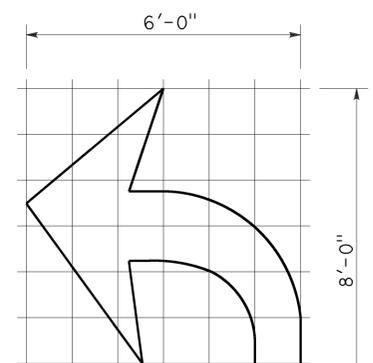
1'-0" GRID 1'-0"  
A=25 ft<sup>2</sup>  
**TYPE I 18'-0" ARROW**



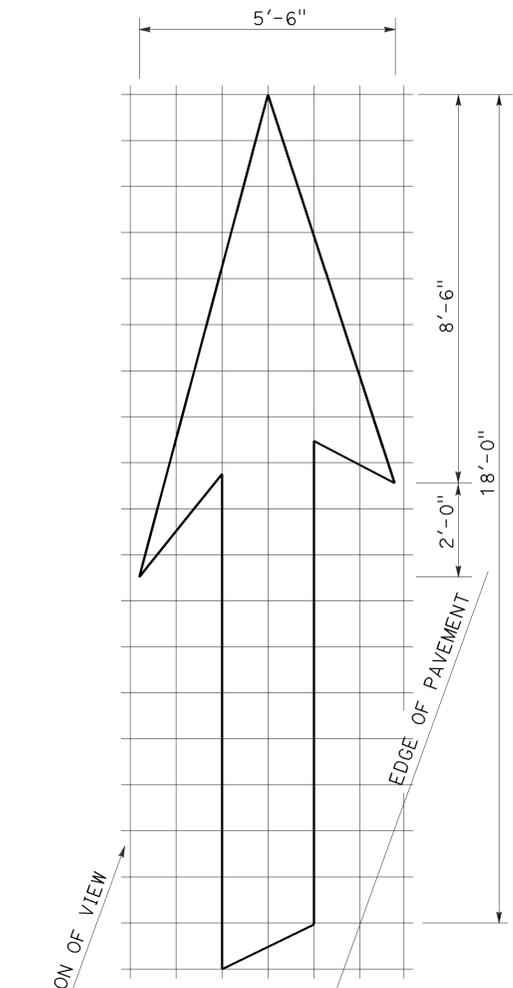
1'-0" GRID 1'-0"  
A=31 ft<sup>2</sup>  
**TYPE I 24'-0" ARROW**



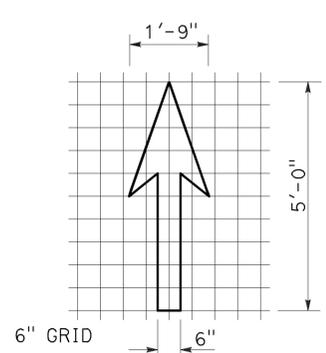
1'-0" GRID 1'-0"  
A=14 ft<sup>2</sup>  
**TYPE I 10'-0" ARROW**



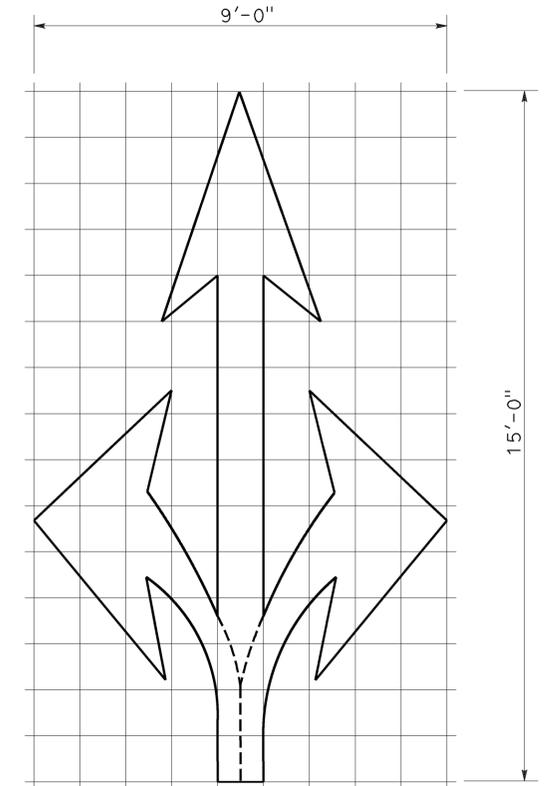
1'-0" GRID 1'-0"  
A=15 ft<sup>2</sup>  
**TYPE IV (L) ARROW**  
(For Type IV (R) arrow,  
use mirror image)



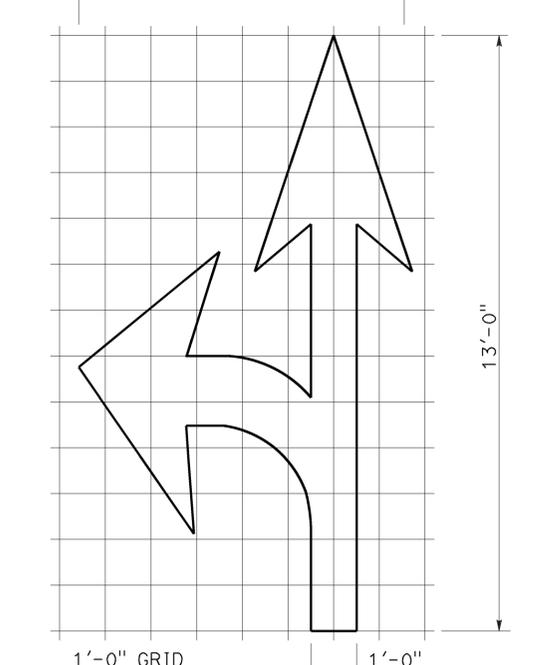
1'-0" GRID 20°  
A=42 ft<sup>2</sup>  
**TYPE VI ARROW**  
Right lane drop arrow  
(For left lane,  
use mirror image)



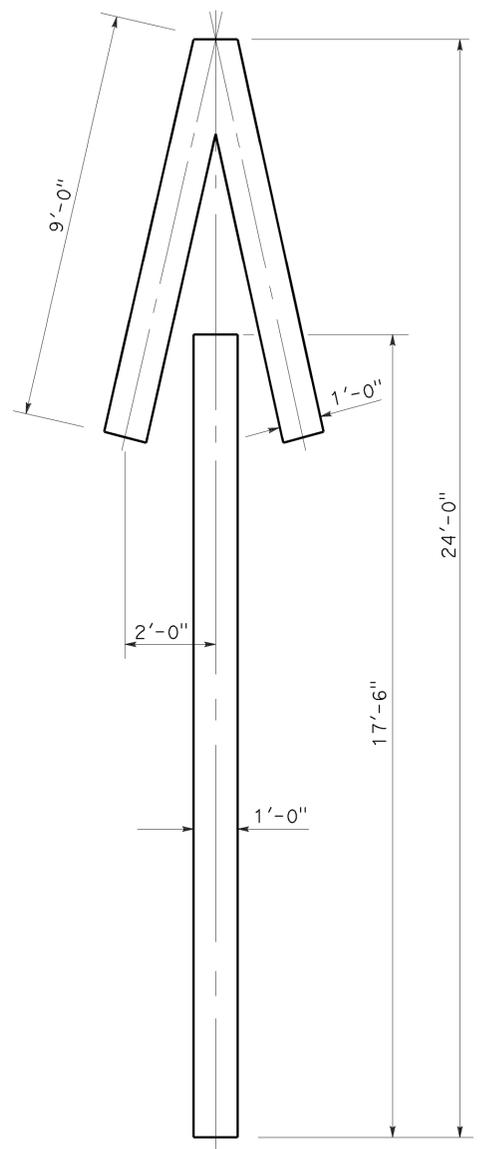
6" GRID 6"  
A=3.5 ft<sup>2</sup>  
**BIKE LANE ARROW**



1'-0" GRID 1'-0"  
A=36 ft<sup>2</sup>  
**TYPE VIII ARROW**



1'-0" GRID 1'-0"  
A=27 ft<sup>2</sup>  
**TYPE VII (L) ARROW**  
(For Type VII (R) arrow,  
use mirror image)



A=33 ft<sup>2</sup>  
**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**

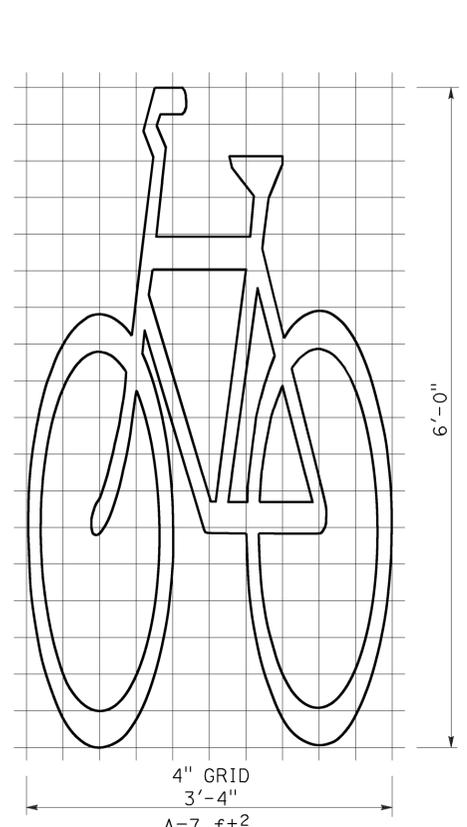
2010 REVISED STANDARD PLAN RSP A24A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	60	74

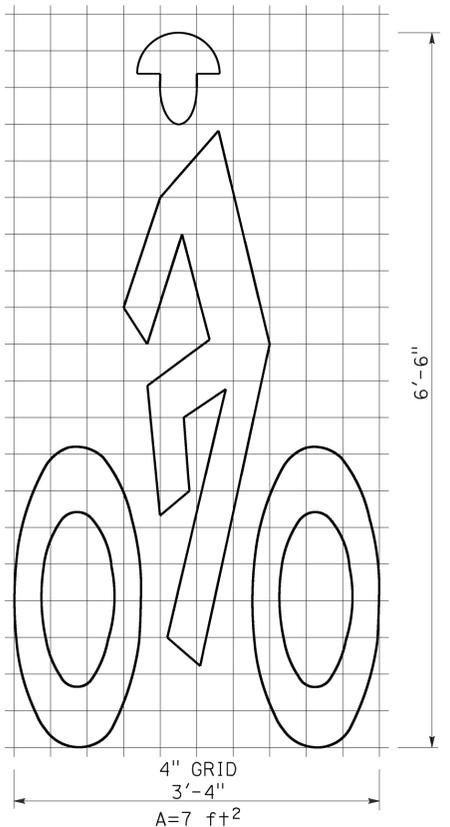
Registered Professional Engineer  
 Roberto L. McLaughlin  
 No. C40375  
 Exp. 3-31-13  
 CIVIL  
 STATE OF CALIFORNIA

October 19, 2012  
 PLANS APPROVAL DATE

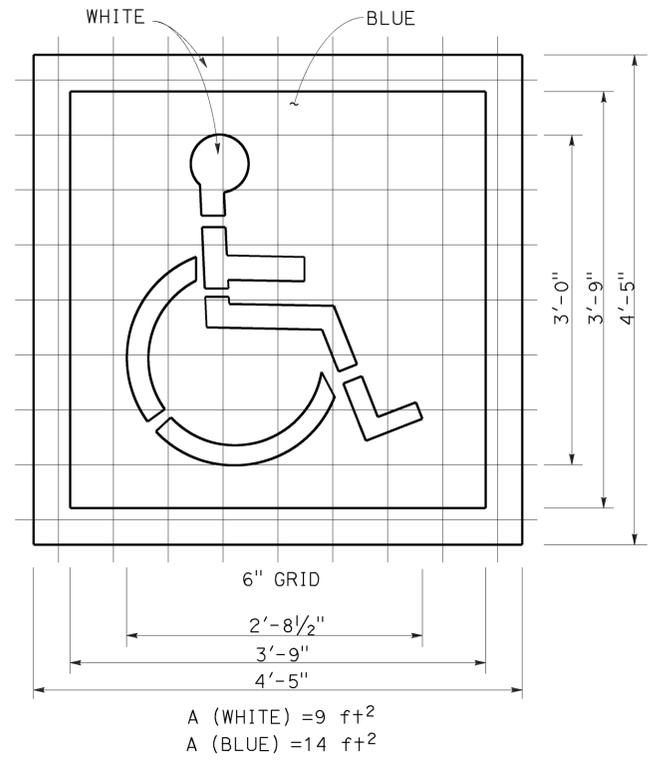
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



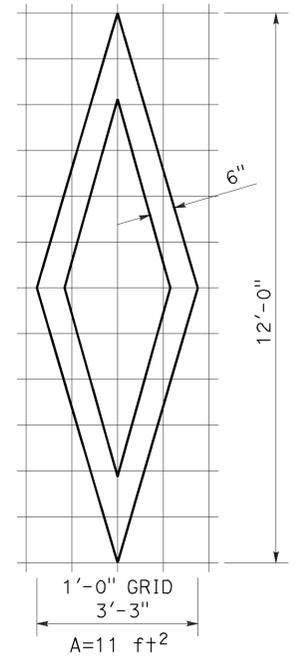
**BIKE LANE SYMBOL WITHOUT PERSON**



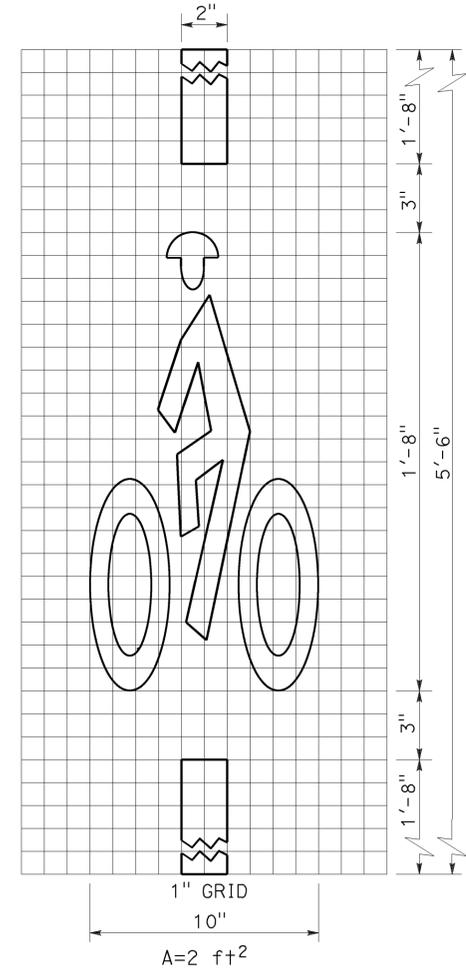
**BIKE LANE SYMBOL WITH PERSON**



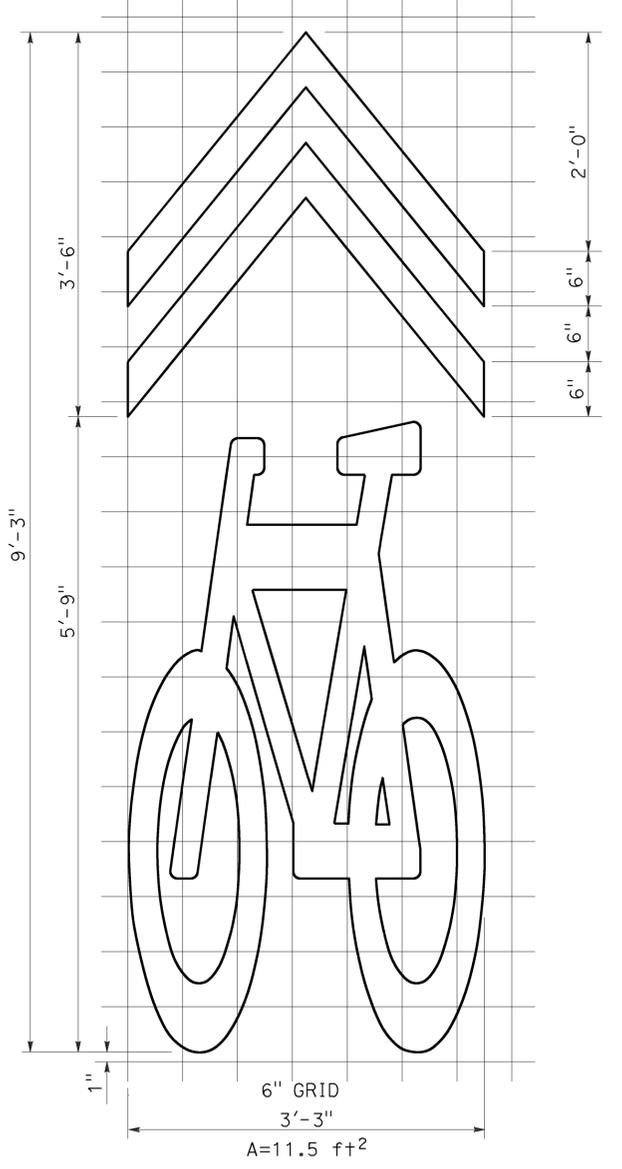
**INTERNATIONAL SYMBOL OF ACCESSIBILITY (ISA) MARKING**



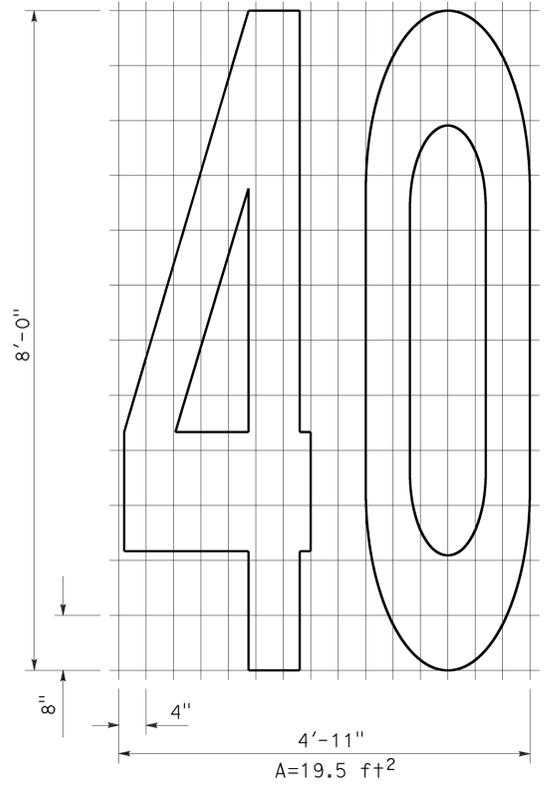
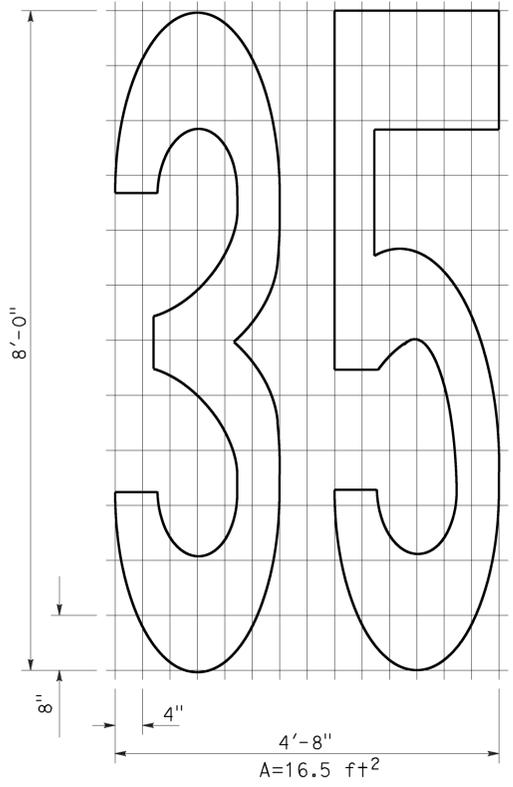
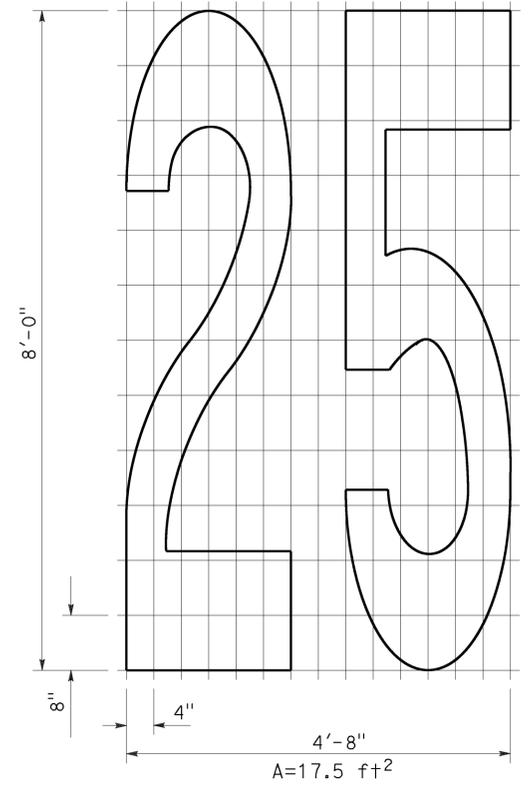
**DIAMOND SYMBOL**



**BICYCLE LOOP DETECTOR SYMBOL**



**SHARED ROADWAY BICYCLE MARKING**



**NUMERALS**

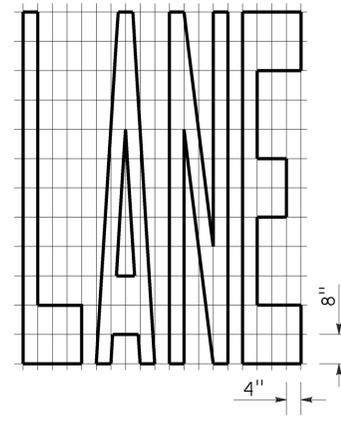
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**PAVEMENT MARKINGS  
 SYMBOLS AND NUMERALS**  
 NO SCALE

RSP A24C DATED OCTOBER 19, 2012 SUPERSEDES STANDARD PLAN A24C  
 DATED MAY 20, 2011 - PAGE 15 OF THE STANDARD PLANS BOOK DATED 2010.

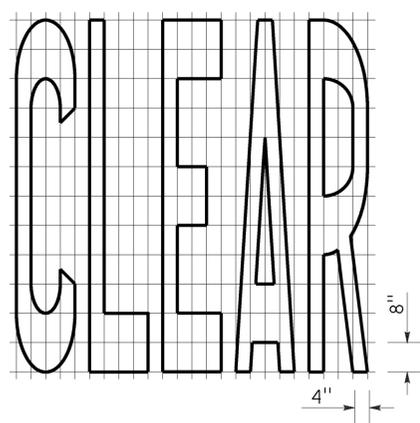
**REVISED STANDARD PLAN RSP A24C**

**2010 REVISED STANDARD PLAN RSP A24C**

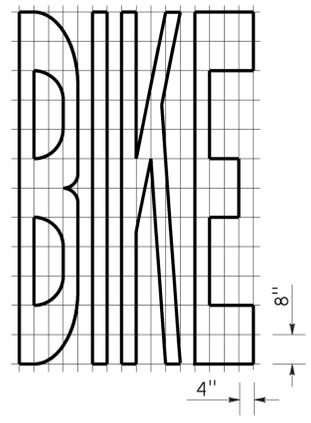
TO ACCOMPANY PLANS DATED 03-07-16



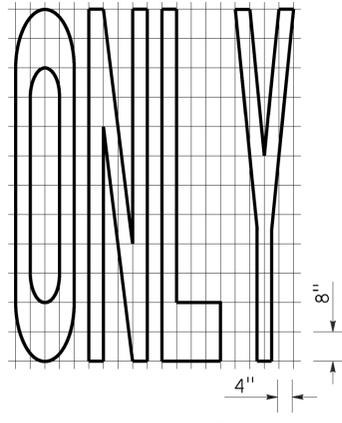
A=24 ft<sup>2</sup>



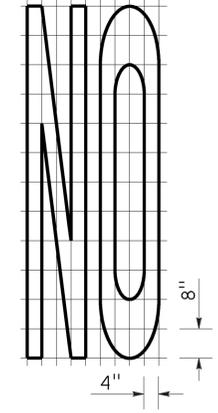
A=27 ft<sup>2</sup>



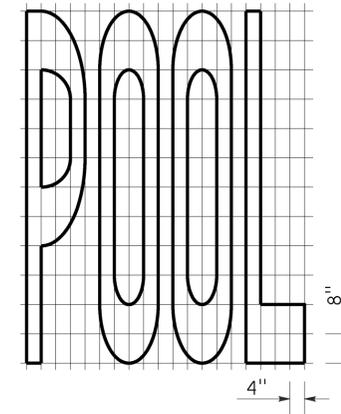
A=21 ft<sup>2</sup>



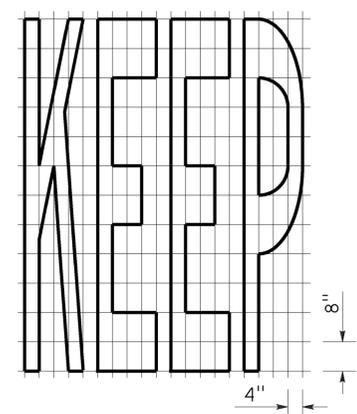
A=22 ft<sup>2</sup>



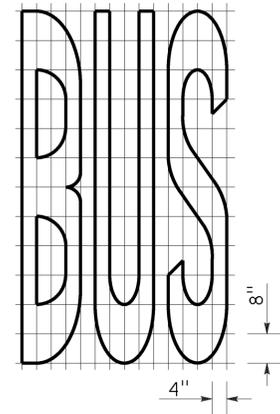
A=14 ft<sup>2</sup>



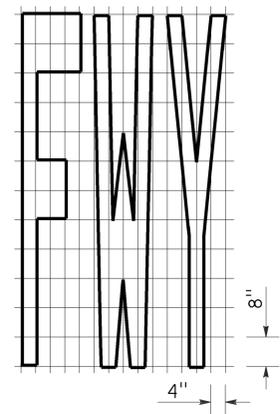
A=23 ft<sup>2</sup>



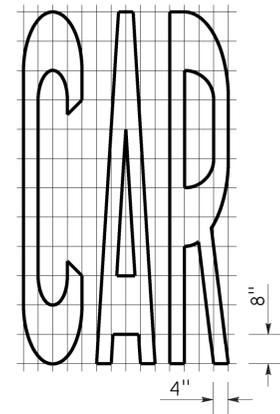
A=24 ft<sup>2</sup>



A=20 ft<sup>2</sup>

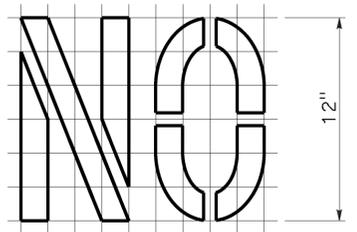


A=16 ft<sup>2</sup>



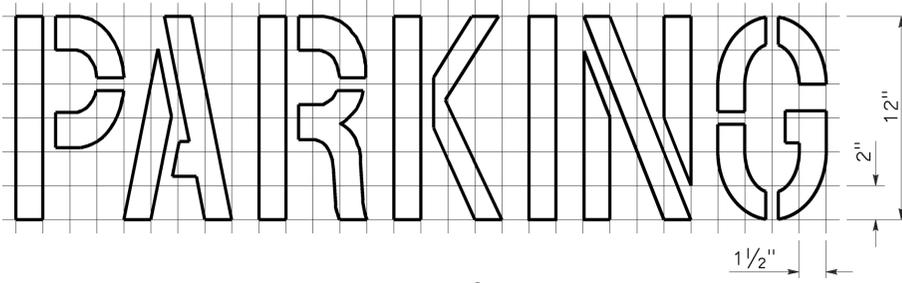
A=17 ft<sup>2</sup>

WORD MARKINGS			
ITEM	ft <sup>2</sup>	ITEM	ft <sup>2</sup>
LANE	24	NO	14
POOL	23	BIKE	21
CAR	17	BUS	20
CLEAR	27	ONLY	22
KEEP	24	FWY	16



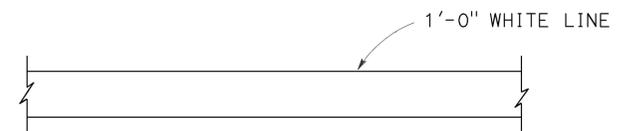
A=2 ft<sup>2</sup>

See Notes 6 and 7

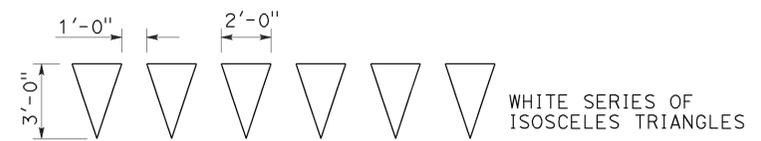


A=2 ft<sup>2</sup>

See Notes 6 and 7



LIMIT LINE (STOP LINE)



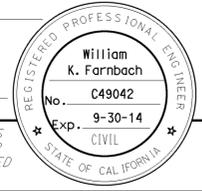
YIELD LINE

**NOTES:**

1. If a message consists of more than one word, it should read "UP", i.e., the first word should be nearest the driver.
2. The space between words should be at least four times the height of the characters for low speed roads, but not more than ten times the height of the characters. The space may be reduced appropriately where there is limited space because of local conditions.
3. Minor variations in dimensions may be accepted by the Engineer.
4. Portions of a letter, number or symbol may be separated by connecting segments not to exceed 2" in width.
5. The words "NO PARKING" pavement marking is to be used for parking facilities. For typical locations of markings, see Standard Plans A90A and A90B.
6. The words "NO PARKING", shall be painted in white letters no less than 1'-0" high on a contrasting background and located so that it is visible to traffic enforcement officials.

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**PAVEMENT MARKINGS  
 WORDS, LIMIT AND YIELD LINES**  
 NO SCALE

RSP A24E DATED JULY 20, 2012 SUPERSEDES STANDARD PLAN A24E  
 DATED MAY 20, 2011 - PAGE 17 OF THE STANDARD PLANS BOOK DATED 2010.



TO ACCOMPANY PLANS DATED 03-07-16

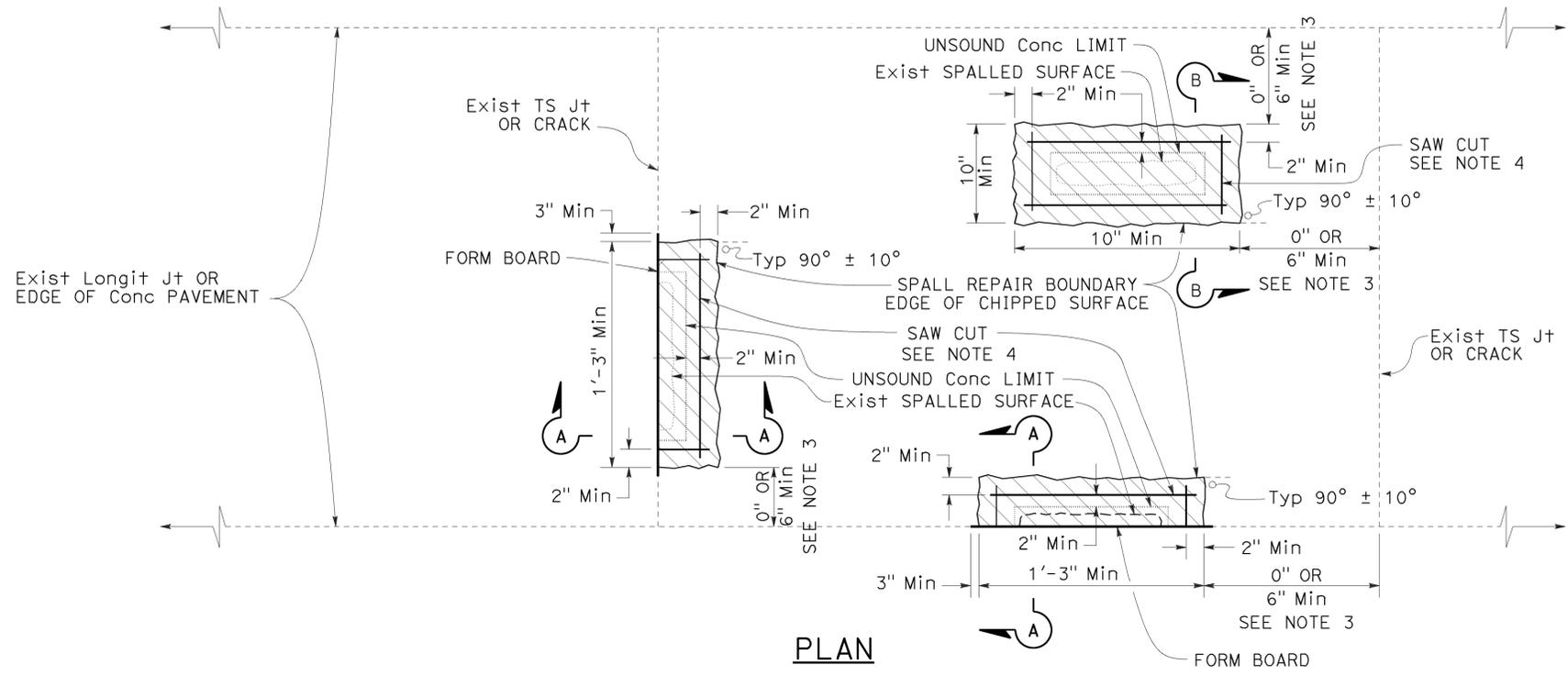
**LEGEND**



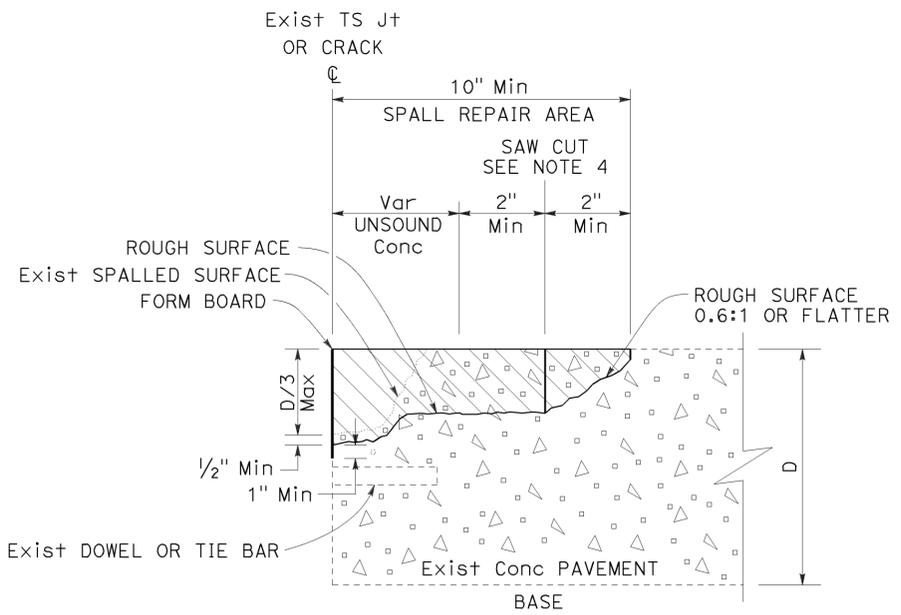
**NOTES:**

1. See Project Plans for spall repair locations.
2. Combine spall repair areas closer than 2' apart.
3. If the spall repair area is less than 6" from a joint, extend the repair to the joint.
4. Cut at least 2" beyond the rectangular limits of unsound concrete determined by the Engineer. Determine the saw cut depth using the following table:

Conc MATERIAL	SAW CUT DEPTH	
	Min	Max
FAST-SETTING	2"	3 1/2"
POLYESTER	1 1/2"	3 1/2"

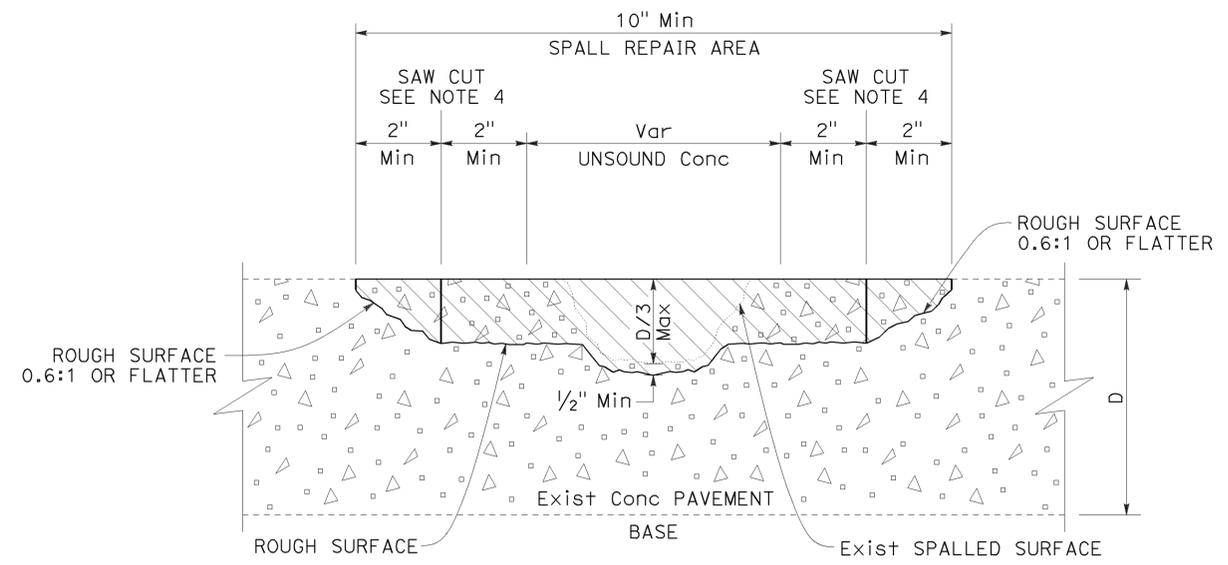


**PLAN**



**SECTION A-A**

**JOINT, CRACK, OR EDGE OF CONCRETE PAVEMENT REPAIR**



**SECTION B-B**

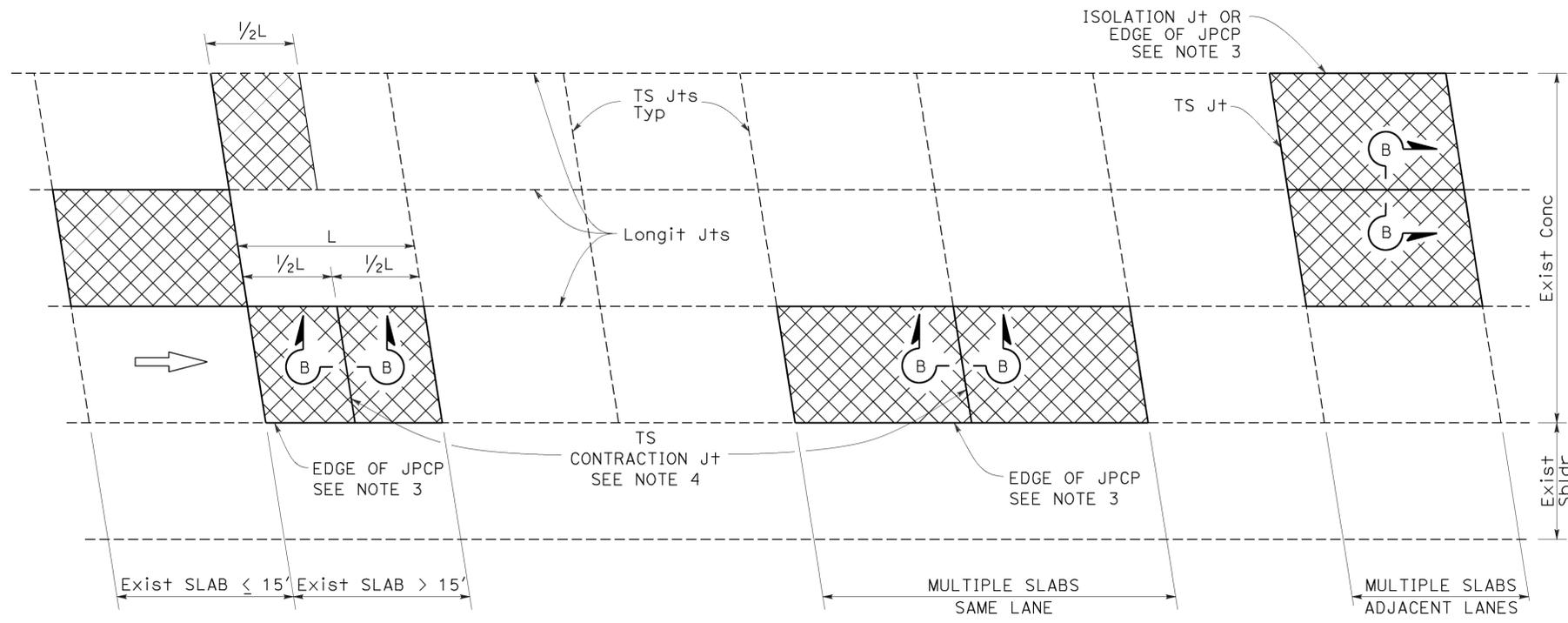
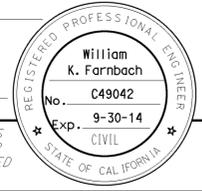
**MISCELLANEOUS SPALL REPAIR**

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**SPALL REPAIR**  
 NO SCALE

2010 REVISED STANDARD PLAN RSP P6

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	63	74

William K. Farnbach  
 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.



**PLAN**

**LEGEND:**

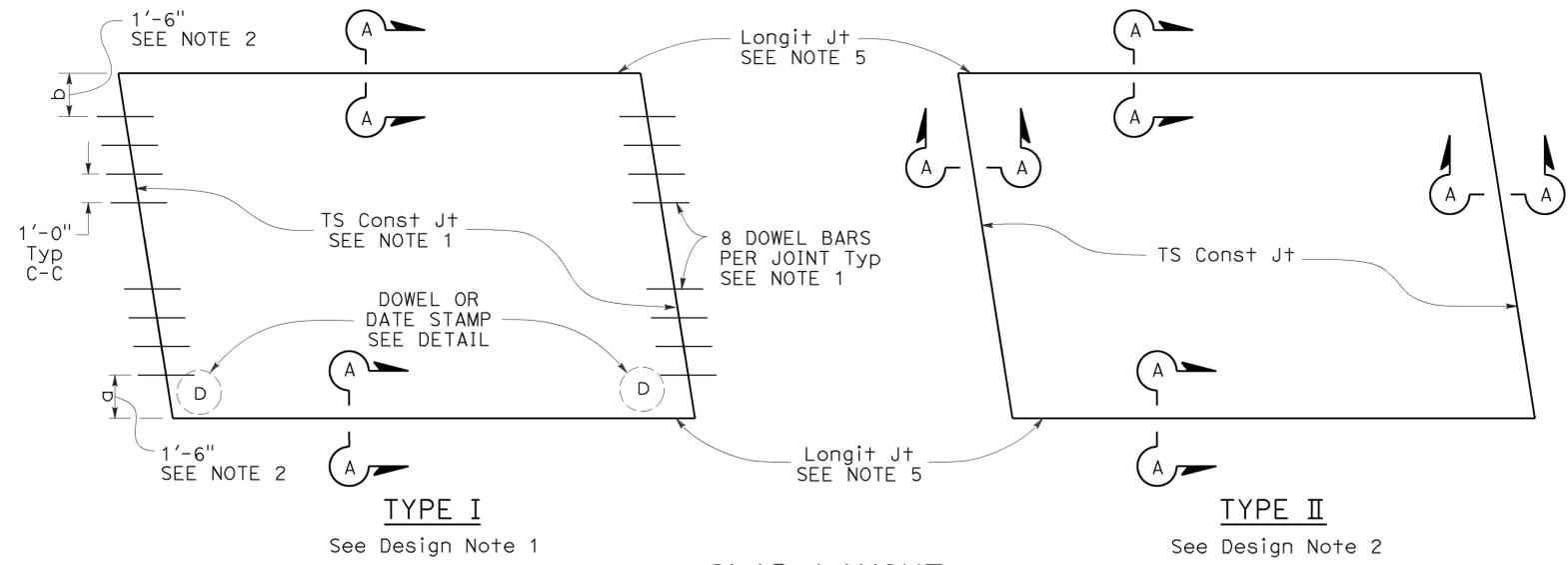
- RSC RAPID STRENGTH CONCRETE
- INDIVIDUAL SLAB REPLACEMENT WITH RSC

**NOTES:**

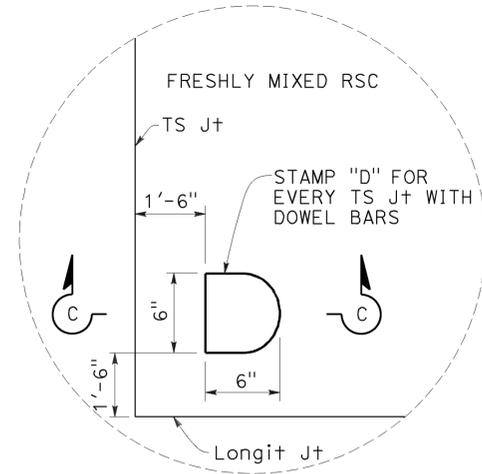
- For details not shown, see Revised Standard Plan RSP P10.
- Where the existing outside shoulder is asphalt concrete pavement, "a" = 1'-0" and "b" = 2'-0".
- Use side forms where edge of RSC pavement is adjacent to asphalt concrete.
- Transverse contraction joint to match skew of existing joint. Omit dowel bars.
- Do not place tie bars at longitudinal joints.

**DESIGN NOTES:**

- For concrete slab repair with at least 5 years design life.
- For short term repairs < 5 yrs design life or for slab replacements with cracking and seating.



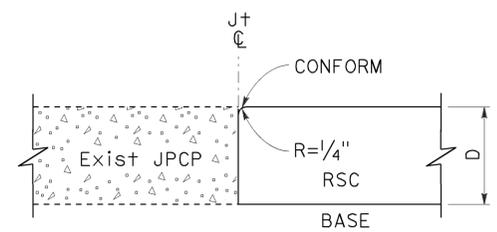
**SLAB LAYOUT**



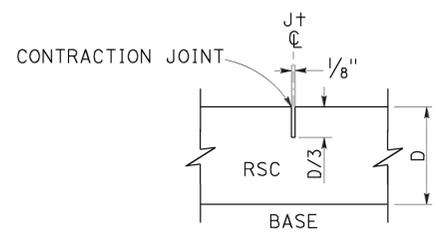
**DOWEL STAMP DETAIL**



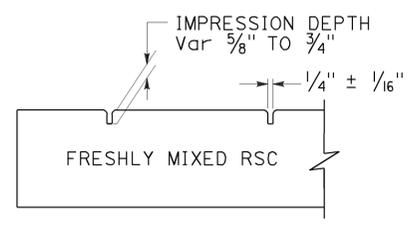
**DATE STAMP DETAIL**



**SECTION A-A**



**SECTION B-B**



**SECTION C-C**

**INDIVIDUAL SLAB REPLACEMENT WITH RAPID STRENGTH CONCRETE**

NO SCALE

RSP P8 DATED JULY 19, 2013 SUPERSEDES RSP P8 DATED APRIL 20, 2012 AND STANDARD PLAN P8 DATED MAY 20, 2011 - PAGE 130 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP P8**

2010 REVISED STANDARD PLAN RSP P8

TO ACCOMPANY PLANS DATED 03-07-16

TABLE 1

TAPER LENGTH CRITERIA AND CHANNELIZING DEVICE SPACING							
SPEED (S)	MINIMUM TAPER LENGTH * FOR WIDTH OF OFFSET 12 FEET (W)				MAXIMUM CHANNELIZING DEVICE SPACING		
	TANGENT 2L	MERGING L	SHIFTING L/2	SHOULDER L/3	X	Y	Z **
					TAPER	TANGENT	CONFLICT
mph	ft	ft	ft	ft	ft	ft	ft
20	160	80	40	27	20	40	10
25	250	125	63	42	25	50	12
30	360	180	90	60	30	60	15
35	490	245	123	82	35	70	17
40	640	320	160	107	40	80	20
45	1080	540	270	180	45	90	22
50	1200	600	300	200	50	100	25
55	1320	660	330	220	55	110	27
60	1440	720	360	240	60	120	30
65	1560	780	390	260	65	130	32
70	1680	840	420	280	70	140	35

\* - For other offsets, use the following merging taper length formula for L:  
 For speed of 40 mph or less,  $L = WS^2/60$   
 For speed of 45 mph or more,  $L = WS$

Where: L = Taper length in feet  
 W = Width of offset in feet  
 S = Posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph

\*\* - Use for taper and tangent sections where there are no pavement markings or where there is a conflict between existing pavement markings and channelizers (CA).

TABLE 2

LONGITUDINAL BUFFER SPACE AND FLAGGER STATION SPACING				
SPEED *	Min D **	DOWNGRADE Min D ***		
		-3%	-6%	-9%
		ft	ft	ft
20	115	116	120	126
25	155	158	165	173
30	200	205	215	227
35	250	257	271	287
40	305	315	333	354
45	360	378	400	427
50	425	446	474	507
55	495	520	553	593
60	570	598	638	686
65	645	682	728	785
70	730	771	825	891

\* - Speed is posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph  
 \*\* - Longitudinal buffer space or flagger station spacing  
 \*\*\* - Use on sustained downgrade steeper than -3 percent and longer than 1 mile.

TABLE 3

ADVANCE WARNING SIGN SPACING			
ROAD TYPE	DISTANCE BETWEEN SIGNS *		
	A	B	C
	ft	ft	ft
URBAN - 25 mph OR LESS	100	100	100
URBAN - MORE THAN 25 mph TO 40 mph	250	250	250
URBAN - MORE THAN 40 mph	350	350	350
RURAL	500	500	500
EXPRESSWAY / FREEWAY	1000	1500	2640

\* - The distances are approximate, are intended for guidance purposes only, and should be applied with engineering judgment. These distances should be adjusted by the Engineer for field conditions, if necessary, by increasing or decreasing the recommended distances.

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

## TRAFFIC CONTROL SYSTEM TABLES FOR LANE AND RAMP CLOSURES

NO SCALE

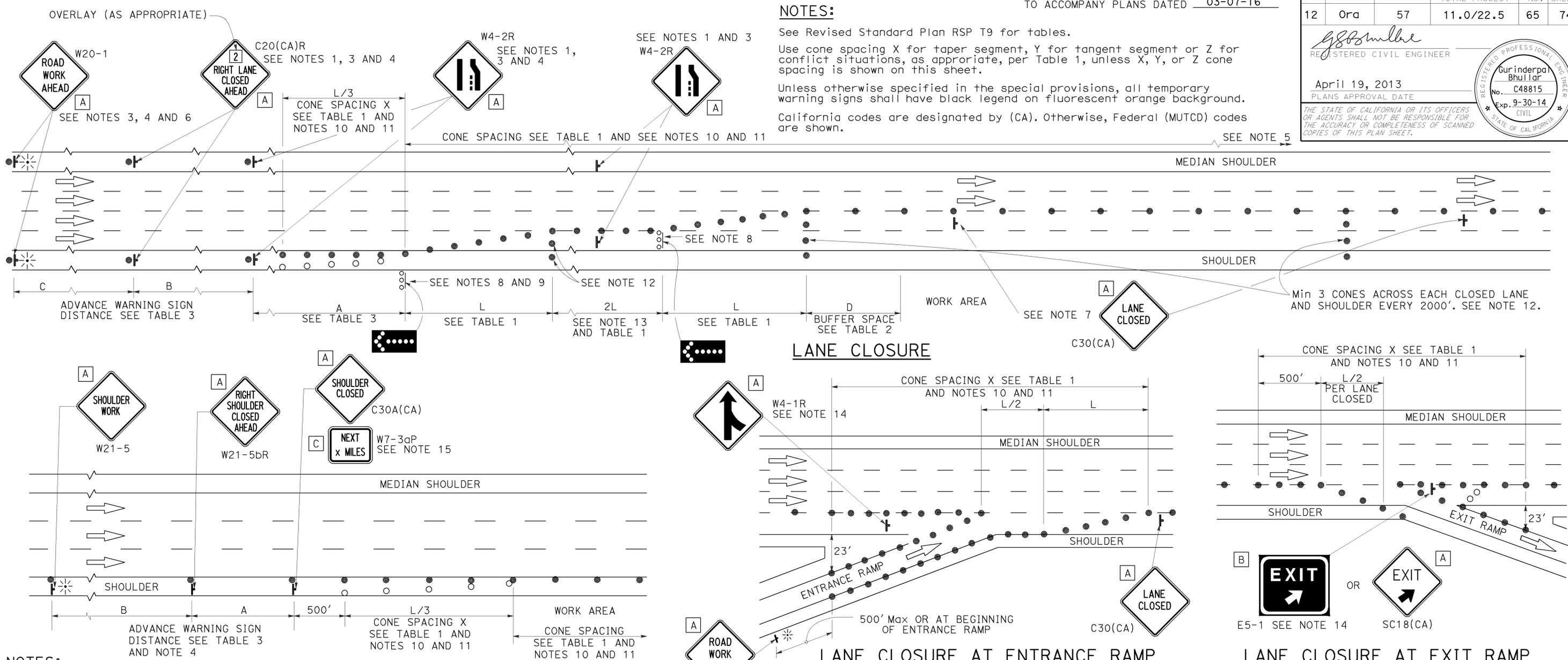
RSP T9 DATED JULY 19, 2013 SUPERSEDES RSP T9 DATED APRIL 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP T9

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	65	74

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

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



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

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

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

**LEGEND**

- TRAFFIC CONE
- TRAFFIC CONE (OPTIONAL TAPER)
- ⊥ TEMPORARY TRAFFIC CONTROL SIGN
- ⬢ FLASHING ARROW SIGN (FAS)
- ⊞ FAS SUPPORT OR TRAILER
- ⊛ PORTABLE FLASHING BEACON

**SIGN PANEL SIZE (Min)**

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

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

**REVISED STANDARD PLAN RSP T10**

2010 REVISED STANDARD PLAN RSP T10

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	66	74

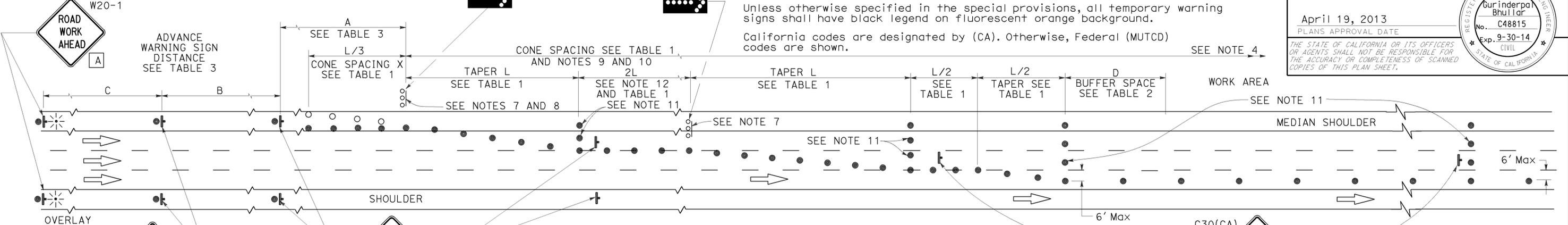
REGISTERED CIVIL ENGINEER  
 April 19, 2013  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 Gurinderpal Bhullar  
 No. C48815  
 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.

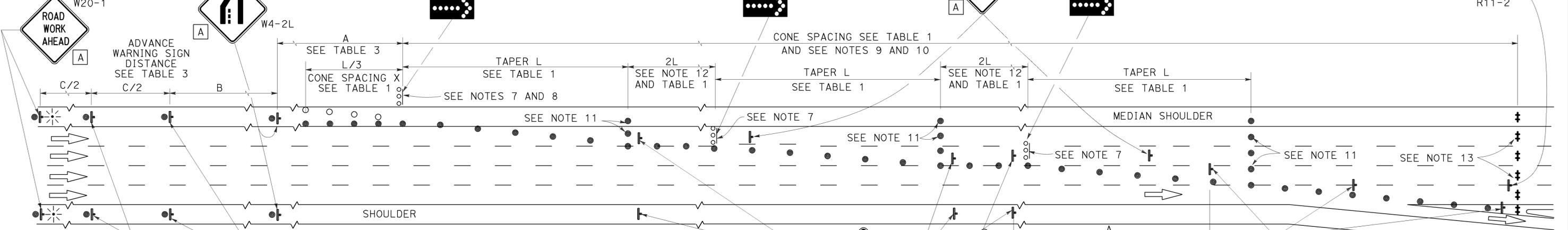
**NOTES:** See Revised Standard Plan RSP T9 for tables.  
 Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.  
 Unless otherwise specified in the special provisions, all temporary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

SEE NOTES 3 AND 5



**LANE CLOSURE WITH PARTIAL SHOULDER USE**

SEE NOTES 3 AND 5



**COMPLETE CLOSURE**

**NOTES:**

- Lane closures on the right side using partial median shoulder as a traffic lane shall conform to the details as shown except that C20(CA)R and W4-2R signs shall be used.
- At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closures.
- Each advance warning sign on each side of the roadway shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" X 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
- A G20-2 "END ROAD WORK" sign, with minimum size of 48" x 24" as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious or ends within a larger project's limits.
- If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT \_\_\_ MILES", use a C20(CA) sign for the first advance warning sign.
- Place a C30(CA) sign every 2000' throughout length of lane closure.
- One flashing arrow sign for each lane closed. The flashing arrow signs shall be Type I.
- A minimum 1500' of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at the top of crest vertical curve or on a horizontal curve.
- All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
- Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
- Unless otherwise specified in the special provisions, a minimum of 3 cones shall be placed transversely across each closed lane and shoulder at each location where a taper across a traffic lane ends and every 2000' as shown on the "Lane Closure With Partial Shoulder Use" detail. Two Type II barricades may be used instead of the 3 cones. The transverse alignment of the cones or barricades on the closed shoulder may be shifted from the transverse alignment to provide access to the work.
- Unless otherwise specified in the special provisions, the 2L tangent shown along lane lines shall be used between the L tapers required for each closed traffic lane.
- A minimum of Two Type II or III barricades shall be placed across each closed lane and shoulder at the location shown and every 2000' within the complete closure area. Within the complete closure area, the transverse alignment of the barricades on the closed shoulder may be shifted from the transverse alignment to provide access to the work.
- When specified in the special provisions, a W20-2 "DETOUR AHEAD" sign is to be used in place of the W20-3 "FREEWAY CLOSED AHEAD" sign.

**SIGN PANEL SIZE (Min)**

- A 48" x 48"
- B 48" x 18"
- C 48" x 30"

**LEGEND**

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

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**TRAFFIC CONTROL SYSTEM  
 FOR LANE CLOSURES ON  
 FREEWAYS AND EXPRESSWAYS**  
 NO SCALE

RSP T10A DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T10A DATED MAY 20, 2011 - PAGE 238 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP T10A**

2010 REVISED STANDARD PLAN RSP T10A

# TYPICAL RAMP CLOSURES

## SIGN PANEL SIZE (Min)

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

## LEGEND

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	67	74

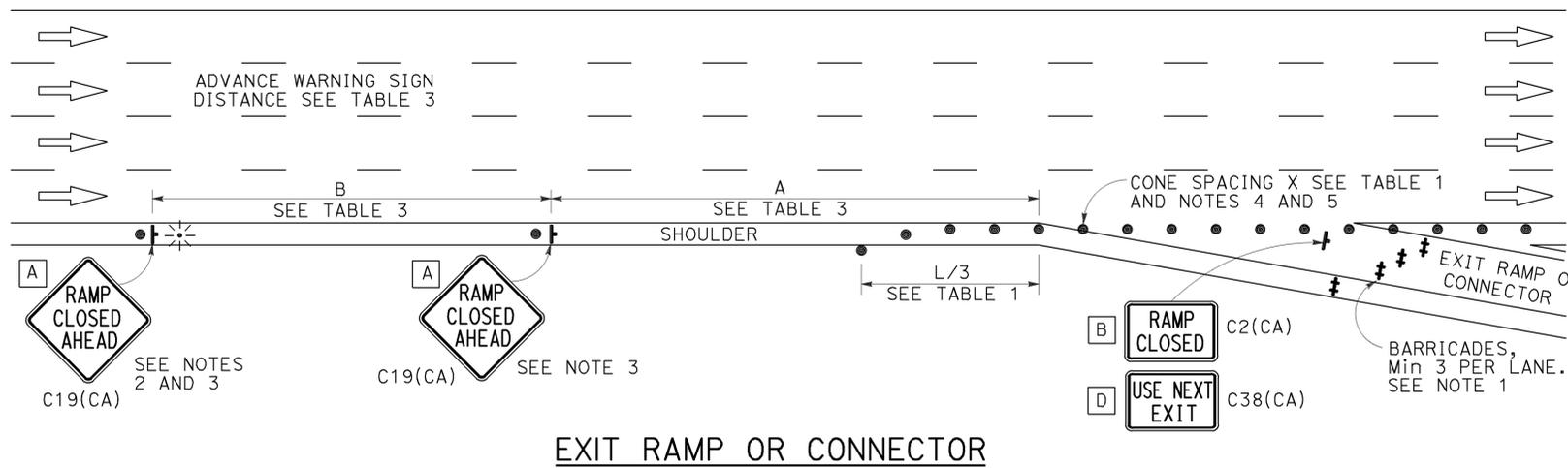
*Gurinderpal Bhullar*  
 REGISTERED CIVIL ENGINEER  
 April 19, 2013  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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

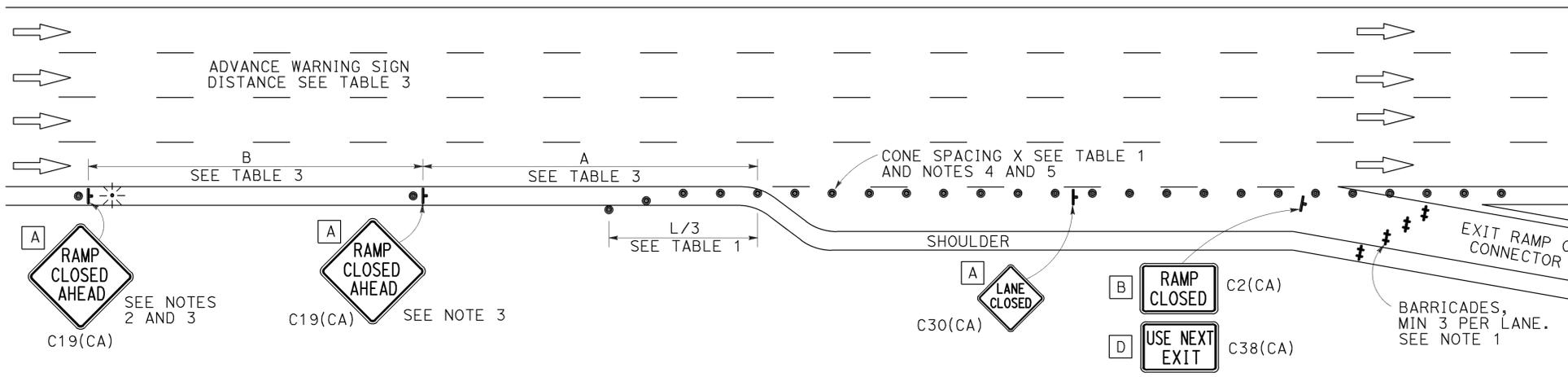
TO ACCOMPANY PLANS DATED 03-07-16

## NOTES:

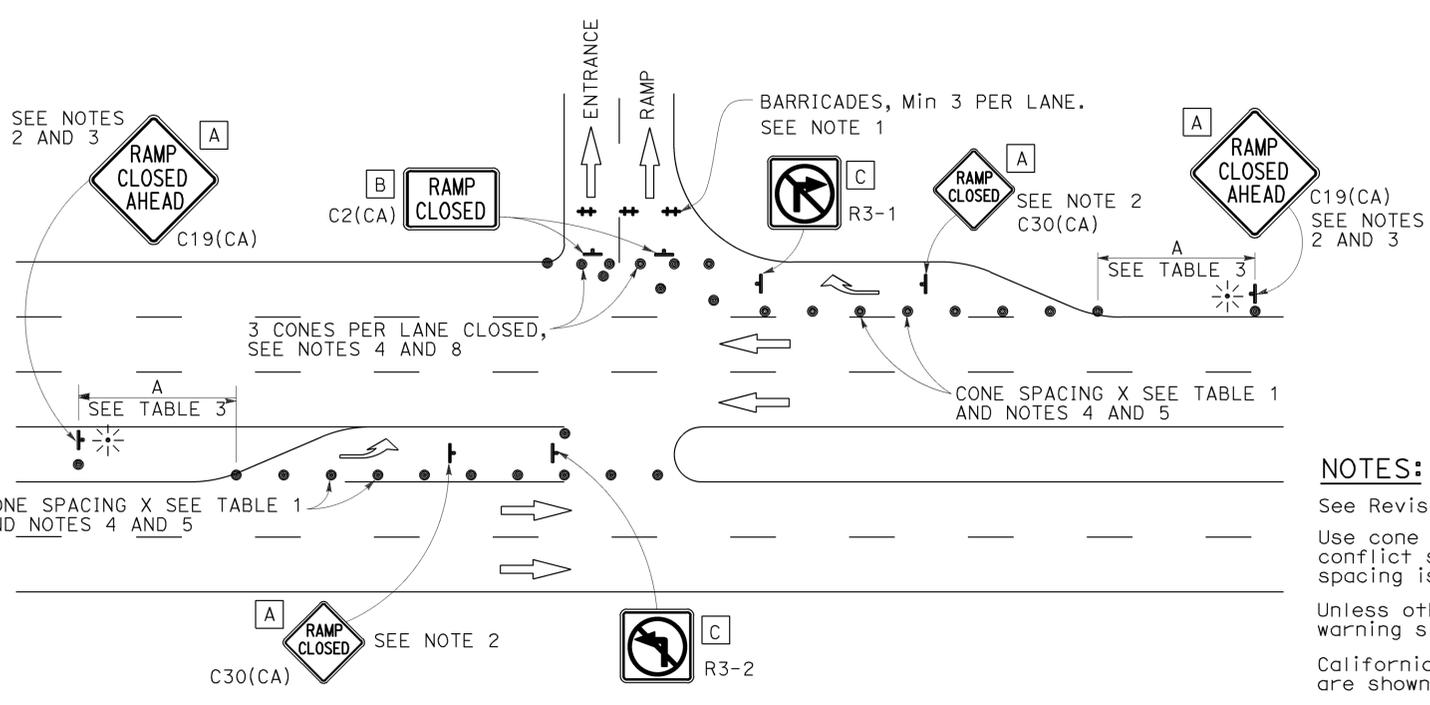
- Barricades shall be Type I, II, or III for closures lasting one week or less and Type III for closures lasting longer than one week.
- In addition to placing the C19(CA) "RAMP CLOSED AHEAD" and C30(CA) "RAMP CLOSED" signs, black on orange overlay plates with the word "CLOSED" may be mounted, as directed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



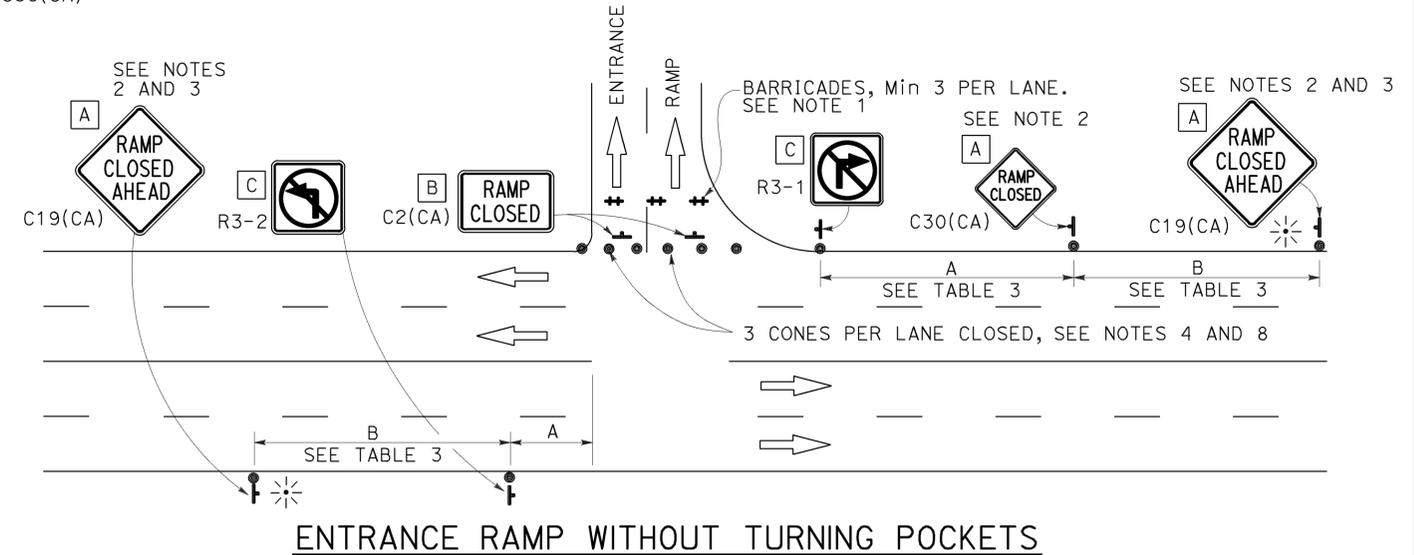
EXIT RAMP OR CONNECTOR



EXIT RAMP OR CONNECTOR WITH ADDITIONAL LANE



ENTRANCE RAMP WITH TURNING POCKETS



ENTRANCE RAMP WITHOUT TURNING POCKETS

## NOTES:

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

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

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

2010 REVISED STANDARD PLAN RSP T14

**LEGEND:**

<b>AB</b>	ABANDON. IF APPLIED TO CONDUIT, REMOVE CONDUCTORS
<b>BC</b>	INSTALL PULL BOX IN EXISTING CONDUIT RUN
<b>BP</b>	PEDESTRIAN BARRICADE, TYPE AS INDICATED ON PLAN
<b>CB</b>	INSTALL CONDUIT INTO EXISTING PULL BOX
<b>CC</b>	CONNECT NEW AND EXISTING CONDUIT. REMOVE EXISTING CONDUCTORS AND INSTALL CONDUCTORS AS INDICATED
<b>CF</b>	CONDUIT TO REMAIN FOR FUTURE USE. REMOVE CONDUCTORS. INSTALL PULL TAPE
<b>DH</b>	DETECTOR HANDHOLE
<b>FA</b>	FOUNDATION TO BE ABANDONED
<b>IS</b>	INSTALL SIGN ON SIGNAL MAST ARM
<b>NS</b>	NO SLIP BASE ON STANDARD
<b>PEC</b>	PHOTOELECTRIC CONTROL
<b>PEU</b>	PHOTOELECTRIC UNIT
<b>RC</b>	EQUIPMENT OR MATERIAL TO BE REMOVED AND BECOME THE PROPERTY OF THE CONTRACTOR
<b>RE</b>	REMOVE ELECTROLIER, FUSES AND BALLAST. TAPE ENDS OF CONDUCTORS
<b>RL</b>	RELOCATE EQUIPMENT
<b>RR</b>	REMOVE AND REUSE EQUIPMENT
<b>RS</b>	REMOVE AND SALVAGE EQUIPMENT
<b>SC</b>	SPLICE NEW TO EXISTING CONDUCTORS
<b>SD</b>	SERVICE DISCONNECT
<b>TSP</b>	TELEPHONE SERVICE POINT

**ABBREVIATIONS**

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

**MISCELLANEOUS ELECTROLIERS**

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

**NOTES:**

- 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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	68	74
 REGISTERED ELECTRICAL ENGINEER October 30, 2015 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>					
 REGISTERED PROFESSIONAL ENGINEER Theresa Gabriel No. E15129 Exp. 6-30-16 ELECTRICAL STATE OF CALIFORNIA					

TO ACCOMPANY PLANS DATED 03-07-16

**SOFFIT AND WALL-MOUNTED LUMINAIRES**

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

**NOTE:**

Arrow indicates "street side" of luminaire.

COMMONLY USED SYMBOLS FOR UNITED STATES CUSTOMARY UNITS OF MEASUREMENT:

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

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS (LEGEND AND ABBREVIATIONS)**

NO SCALE

RSP ES-1A DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-1A DATED JULY 19, 2013 AND 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
12	Ora	57	11.0/22.5	69	74

*Theresa Gabriel*  
REGISTERED ELECTRICAL ENGINEER

October 30, 2015  
PLANS APPROVAL DATE

Theresa  
Aziz Gabriel  
No. E15129  
Exp. 6-30-16  
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 03-07-16

**CONDUIT**

**SIGNAL EQUIPMENT**

NEW	EXISTING	
		LIGHTING CONDUIT, UNLESS OTHERWISE INDICATED OR NOTED
		TRAFFIC SIGNAL CONDUIT
		COMMUNICATION CONDUIT
		TELEPHONE CONDUIT
		FIRE ALARM CONDUIT
		FIBER OPTIC CONDUIT
		CONDUIT TERMINATION
		CONDUIT RISER ATTACHED TO THE STRUCTURE OR SERVICE POLE

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

**SIGNAL EQUIPMENT Cont**

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

**SERVICE EQUIPMENT**

NEW	EXISTING	
		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

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

**NOTES:**

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

**POLE-MOUNTED SERVICE DESIGNATION**

	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

**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 OCTOBER 30, 2015 SUPERSEDES RSP ES-1B DATED JULY 19, 2013 AND STANDARD PLAN ES-1B DATED MAY 20, 2011 - PAGE 426 OF THE STANDARD PLANS BOOK DATED 2010.

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

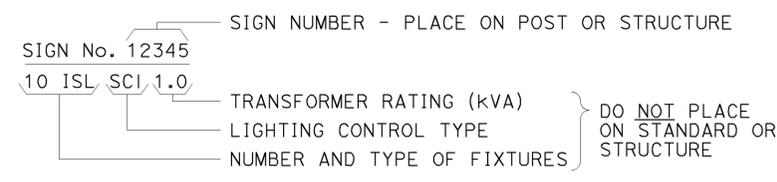
2010 REVISED STANDARD PLAN RSP ES-1B



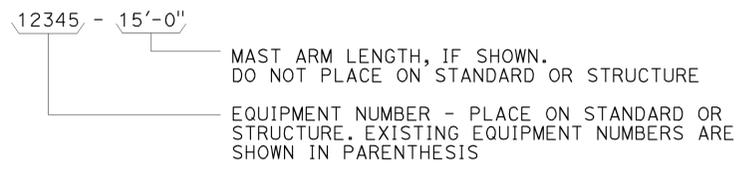
TO ACCOMPANY PLANS DATED 03-07-16

### EQUIPMENT IDENTIFICATION

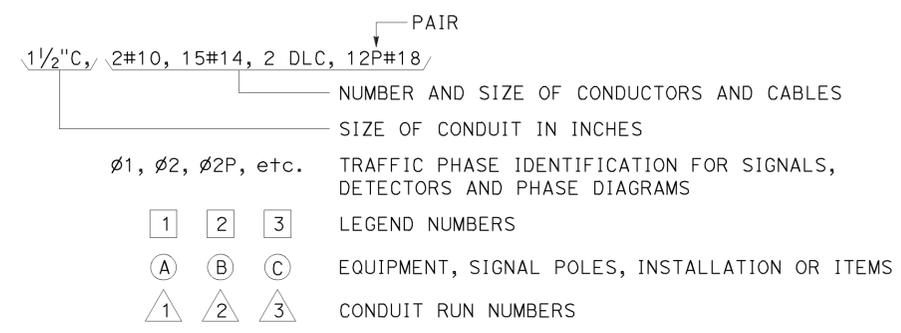
#### ILLUMINATED SIGN IDENTIFICATION NUMBER:



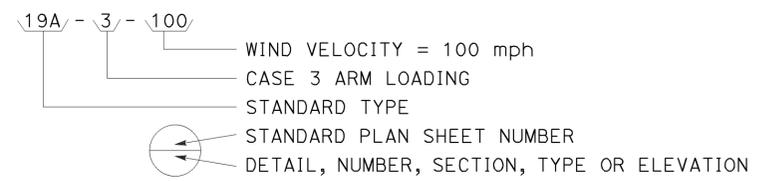
#### ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



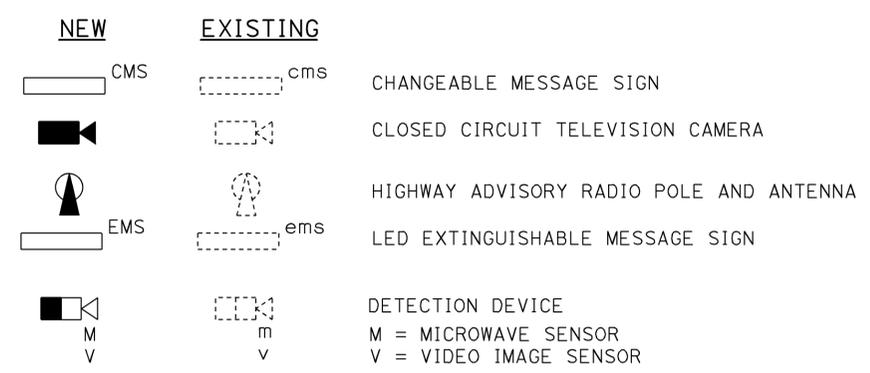
#### CONDUIT AND CONDUCTOR IDENTIFICATION:



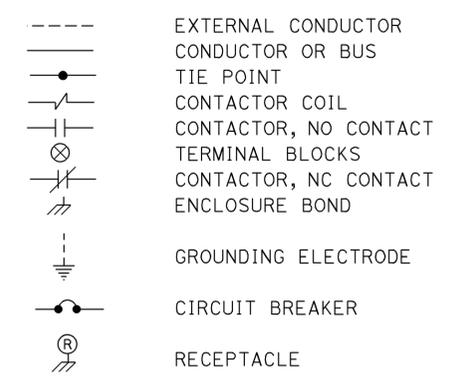
#### SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



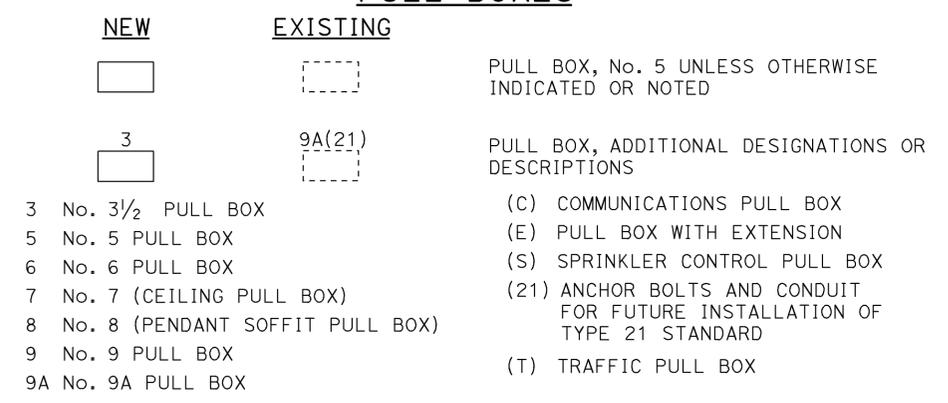
### MISCELLANEOUS EQUIPMENT



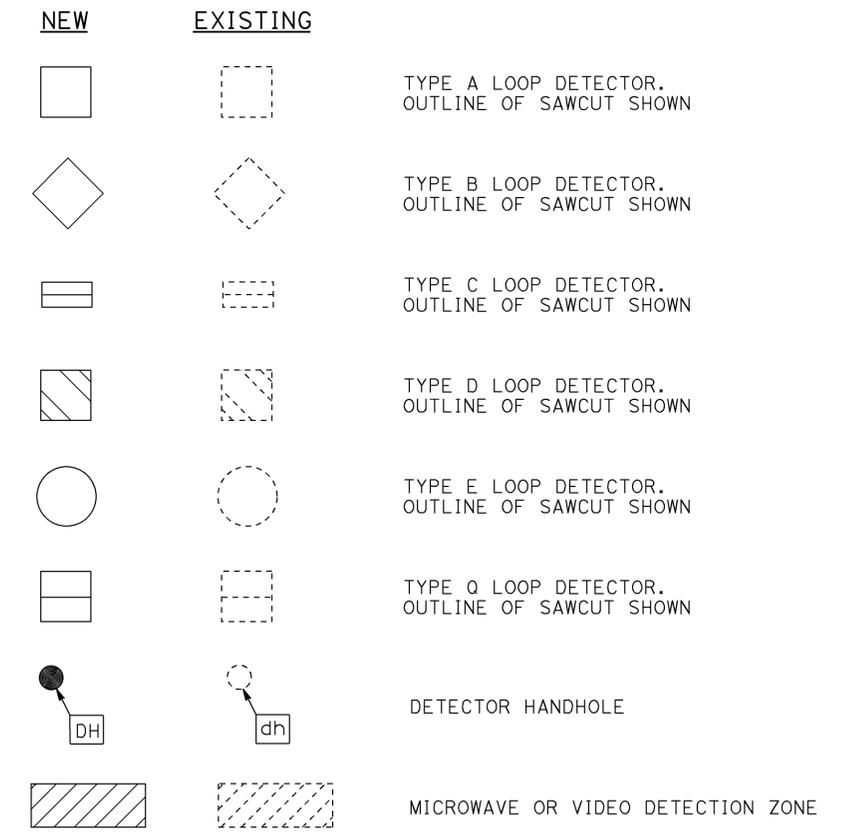
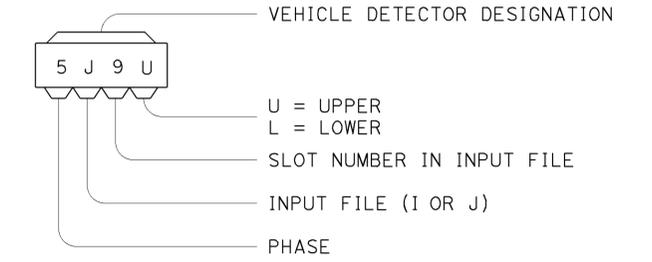
### WIRING DIAGRAM LEGEND



### PULL BOXES



### VEHICLE DETECTORS



STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

## ELECTRICAL SYSTEMS (LEGEND AND ABBREVIATIONS)

NO SCALE

RSP ES-1C DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-1C DATED JULY 19, 2013 AND STANDARD PLAN ES-1C DATED MAY 20, 2011 - PAGE 427 OF THE STANDARD PLANS BOOK DATED 2010.

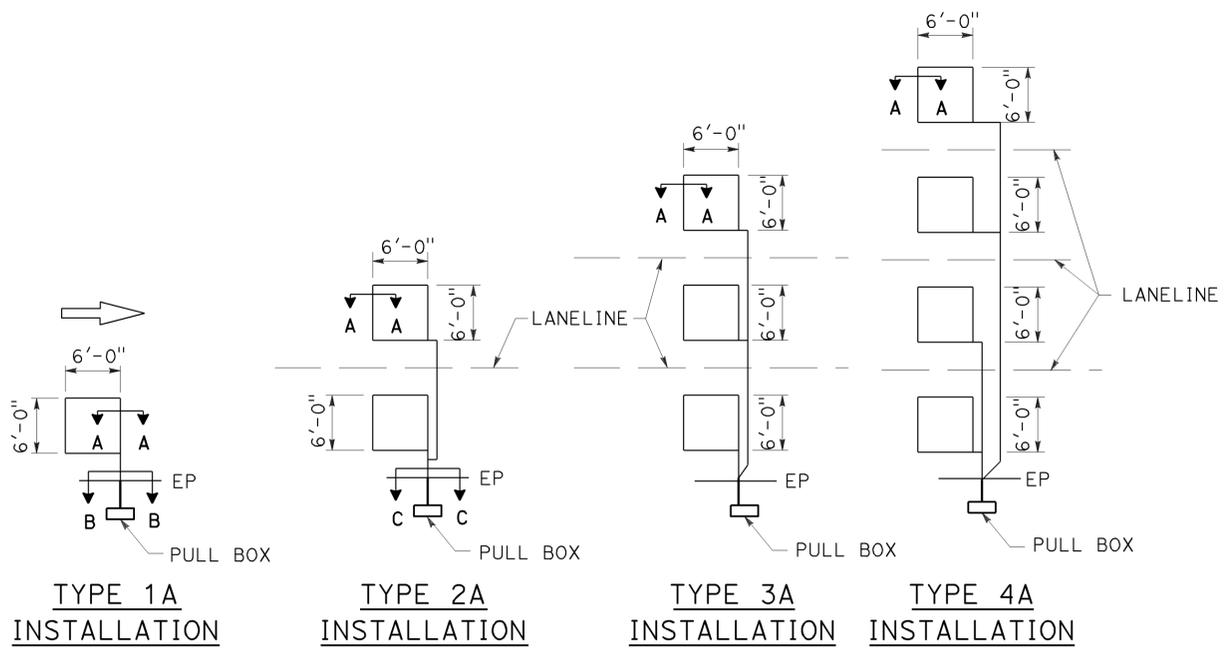
2010 REVISED STANDARD PLAN RSP ES-1C

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	71	74

Theresa Gabriel  
 REGISTERED ELECTRICAL ENGINEER  
 October 30, 2015  
 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.

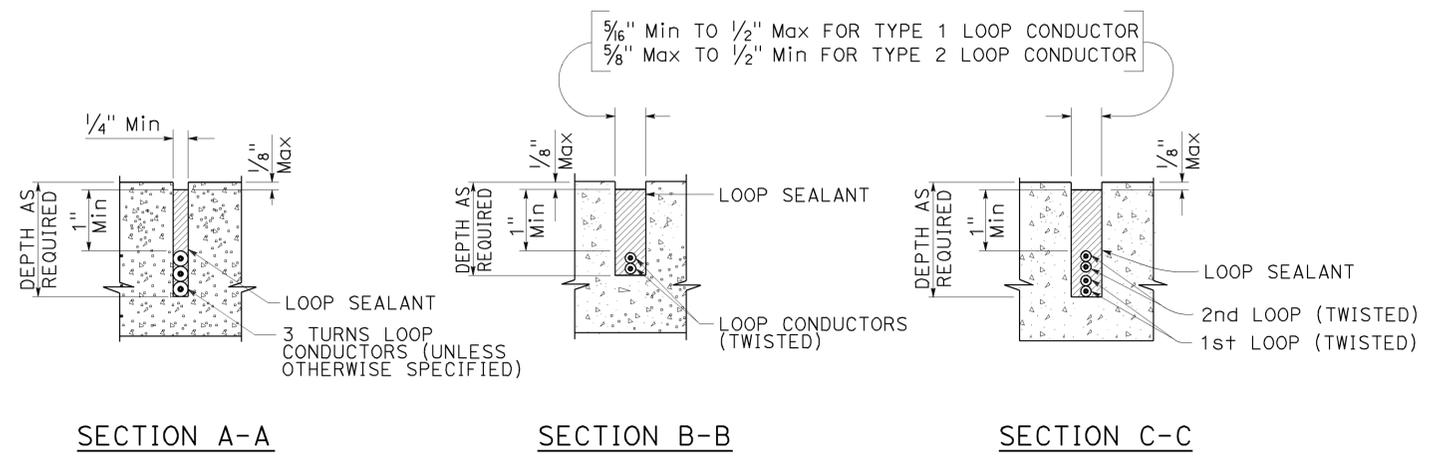


TO ACCOMPANY PLANS DATED 03-07-16

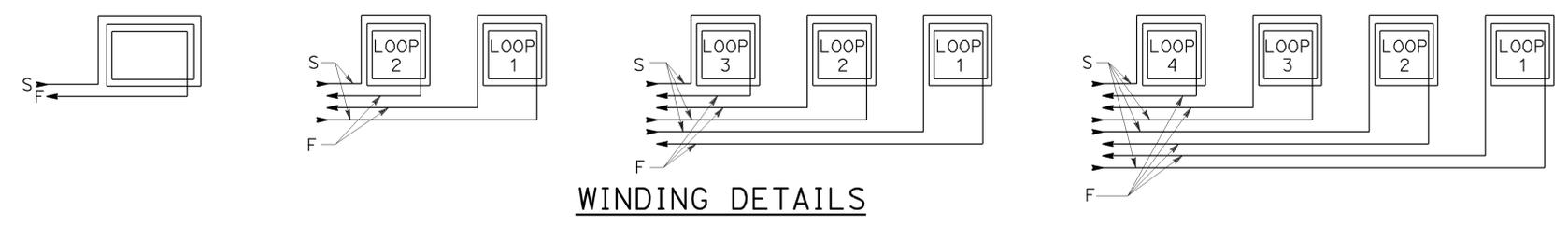


**SAWCUT DETAILS**

- Type A loop detector configurations illustrated
- 1A thru 4A = 1 Type A loop configuration in each lane.
  - 1B thru 4B = 1 Type B loop configuration in each lane.
  - 1C = 1 Type C loop configuration entering lanes as required.
  - 1D thru 4D = 1 Type D loop configuration in each lane.
  - 1E thru 4E = 1 Type E loop configuration in each lane.
  - 1Q thru 4Q = 1 Type Q loop configuration in each lane.
- Use Type A, B, C, D, E or Q loop detector configurations only when specified or shown on plans.

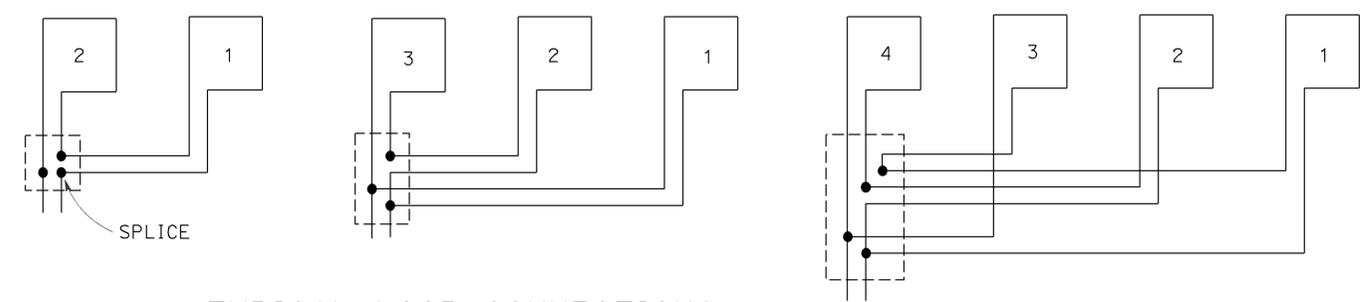


**SLOT DETAILS - TYPE 1 AND TYPE 2 LOOP CONDUCTOR**



**WINDING DETAILS**

**ABBREVIATIONS:**  
 S - START  
 F - FINISH



**TYPICAL LOOP CONNECTIONS**  
 Dashed lines represent the pull box

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS  
 (LOOP DETECTORS)**  
 NO SCALE

RSP ES-5A DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-5A DATED MAY 20, 2011 - PAGE 448 OF THE STANDARD PLANS BOOK DATED 2010.

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

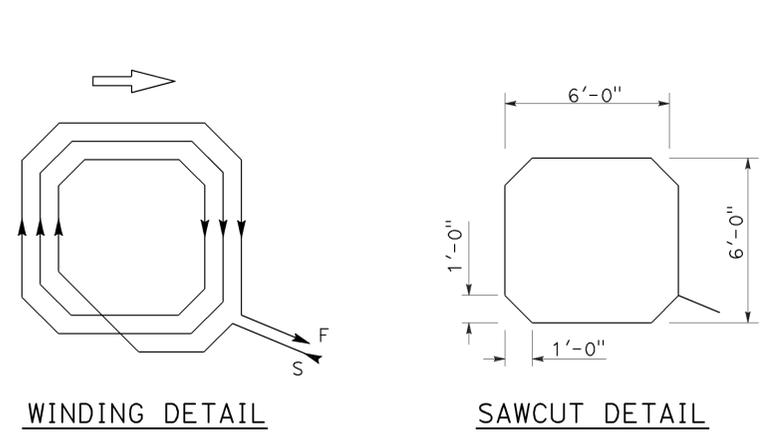
2010 REVISED STANDARD PLAN RSP ES-5A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	72	74

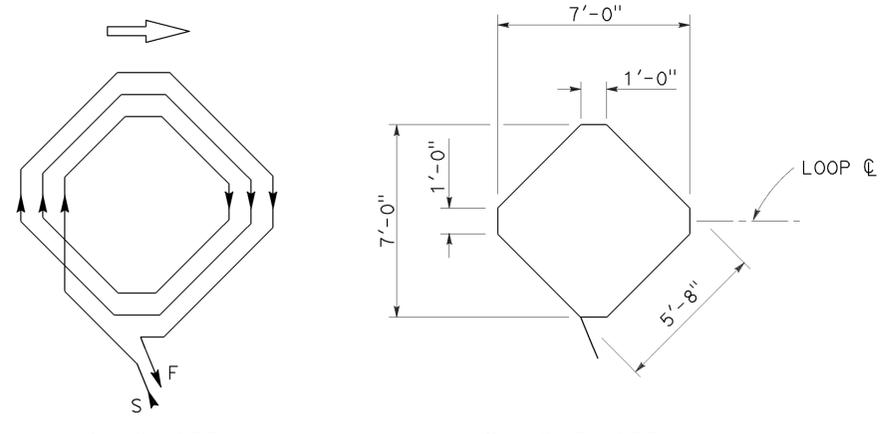
*Theresa Gabriel*  
 REGISTERED ELECTRICAL ENGINEER  
 October 30, 2015  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER  
 Theresa Aziz Gabriel  
 No. E15129  
 Exp. 6-30-16  
 ELECTRICAL  
 STATE OF CALIFORNIA

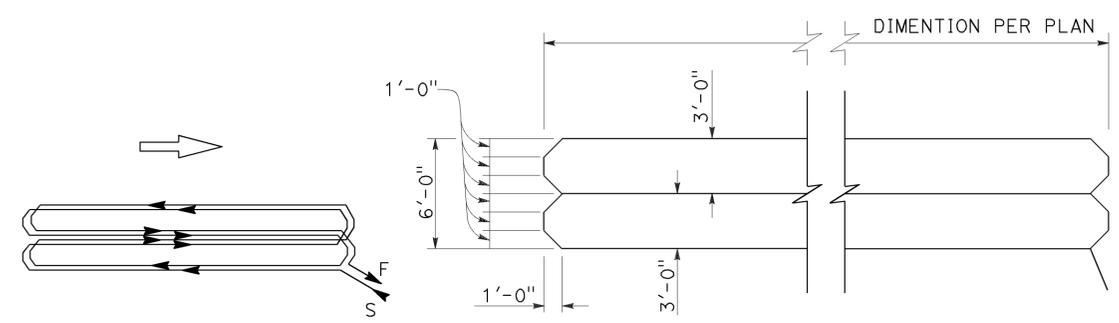
TO ACCOMPANY PLANS DATED 03-07-16



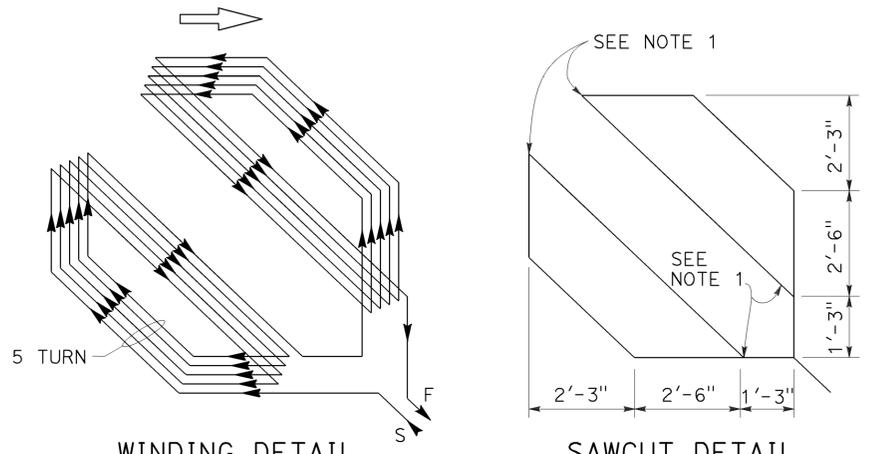
WINDING DETAIL  
SAWCUT DETAIL  
**TYPE A LOOP DETECTOR CONFIGURATION**



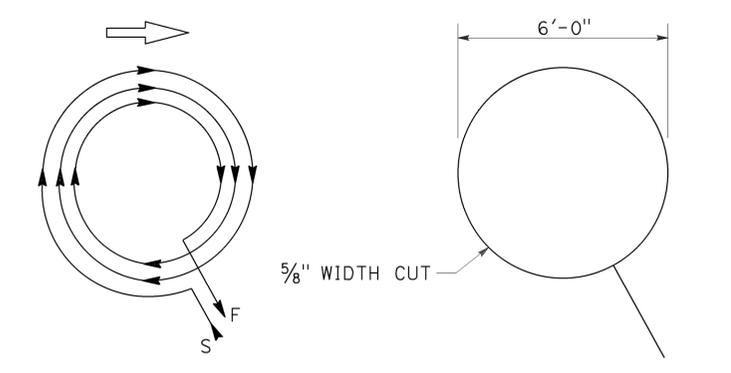
WINDING DETAIL  
SAWCUT DETAIL  
**TYPE B LOOP DETECTOR CONFIGURATION**



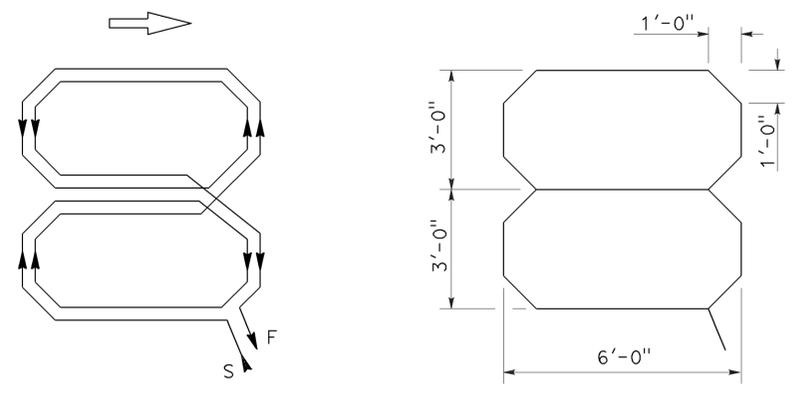
WINDING DETAIL  
SAWCUT DETAIL  
**TYPE C LOOP DETECTOR CONFIGURATION**



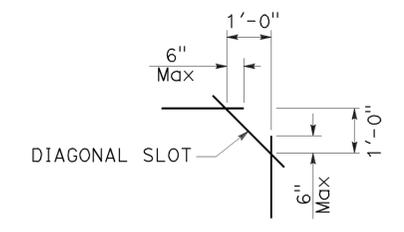
WINDING DETAIL  
SAWCUT DETAIL  
**TYPE D LOOP DETECTOR CONFIGURATION**



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.
  3. Use Type D loops for limit line detector installations in left turn and bicycle lanes.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS  
(DETECTORS)**  
NO SCALE

RSP ES-5B DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-5B DATED JULY 19, 2013 AND STANDARD PLAN ES-5B DATED MAY 20, 2011 - PAGE 449 OF THE STANDARD PLANS BOOK DATED 2010.

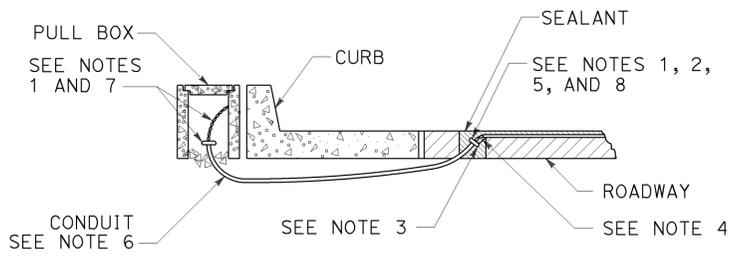
**2010 REVISED STANDARD PLAN RSP ES-5B**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	73	74

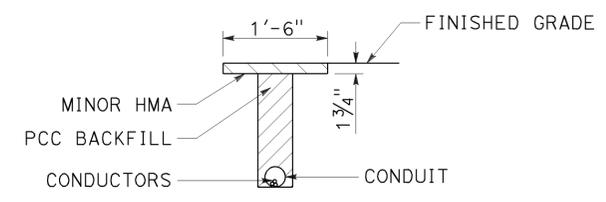
Theresa Gabriel  
 REGISTERED ELECTRICAL ENGINEER  
 October 30, 2015  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

Theresa  
 Aziz Gabriel  
 No. E15129  
 Exp. 6-30-16  
 ELECTRICAL  
 STATE OF CALIFORNIA

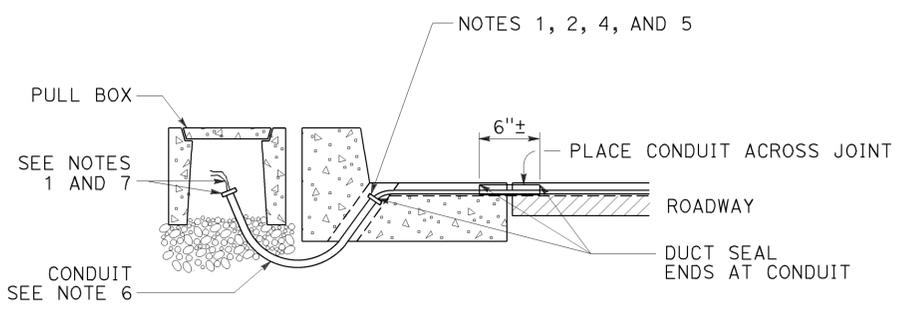
TO ACCOMPANY PLANS DATED 03-07-16



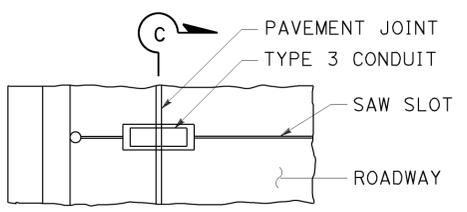
**TYPE A**  
**CURB TERMINATION DETAIL**



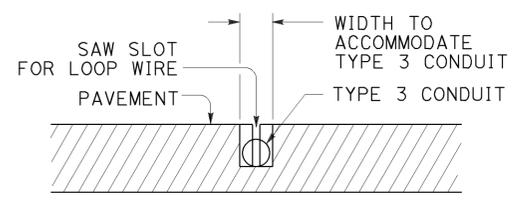
**"T" TRENCH**  
**DETAIL T**



**CROSS SECTION**

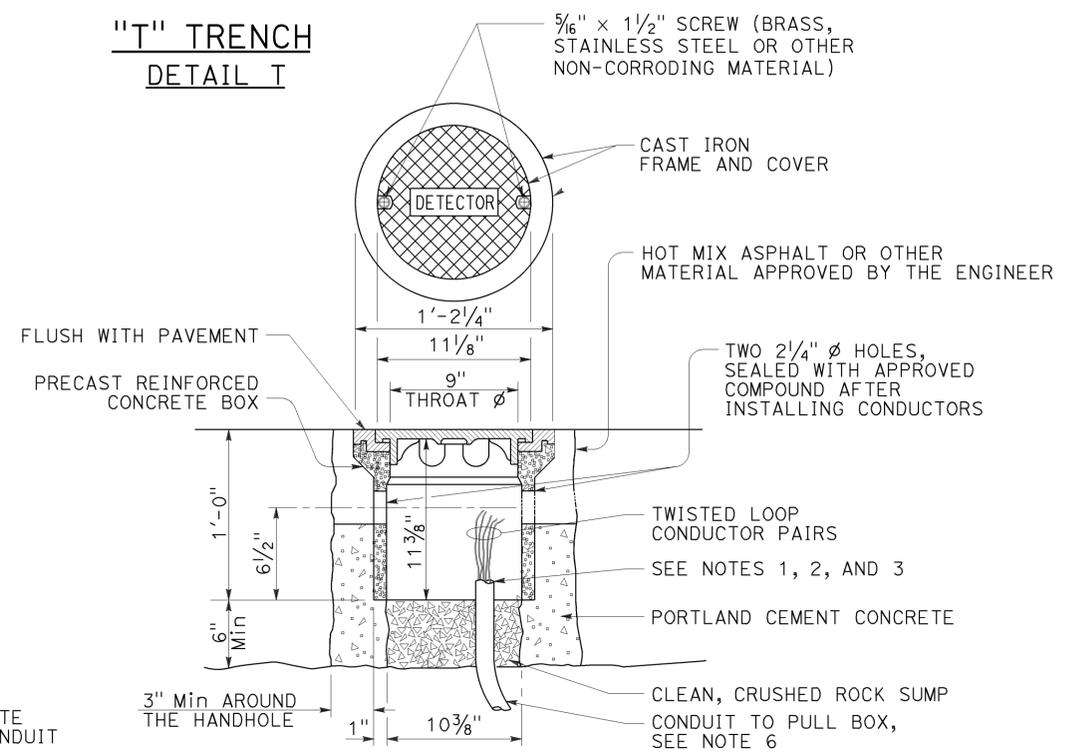


**PLAN VIEW**

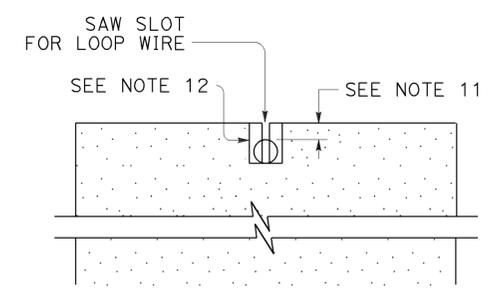


**SECTION C-C**

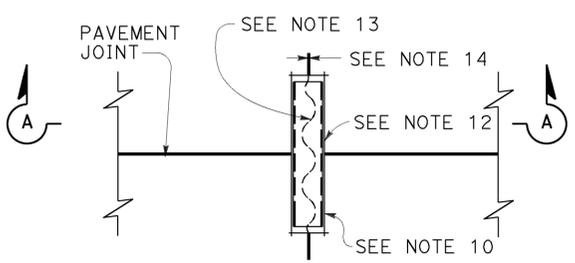
**TYPE B**  
**CURB TERMINATION DETAIL**



**DETECTOR HANDHOLE DETAIL**

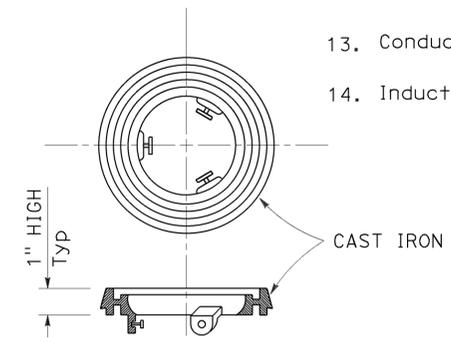


**SECTION A-A**



**PLAN VIEW**

**TYPICAL LOOP LEAD-IN DETAIL**  
**AT PAVEMENT JOINT**



**LOCKING GRADE RING**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS**  
**(CURB AND SHOULDER TERMINATION,**  
**TRENCH, AND HANDHOLE DETAILS)**

NO SCALE

RSP ES-5D DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-5D DATED JULY 19, 2013 AND 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

**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.

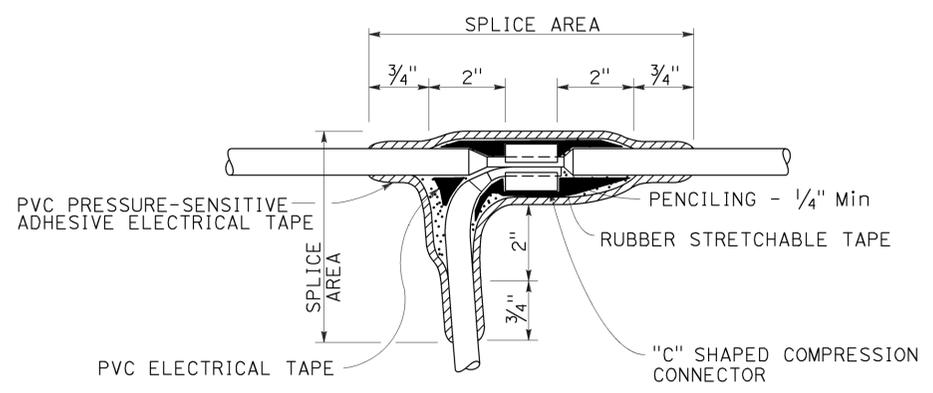
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	74	74

*Theresa Gabriel*  
 REGISTERED ELECTRICAL ENGINEER  
 Theresa  
 Aziz Gabriel  
 No. E15129  
 Exp. 6-30-16  
 ELECTRICAL  
 STATE OF CALIFORNIA

October 30, 2015  
 PLANS APPROVAL DATE

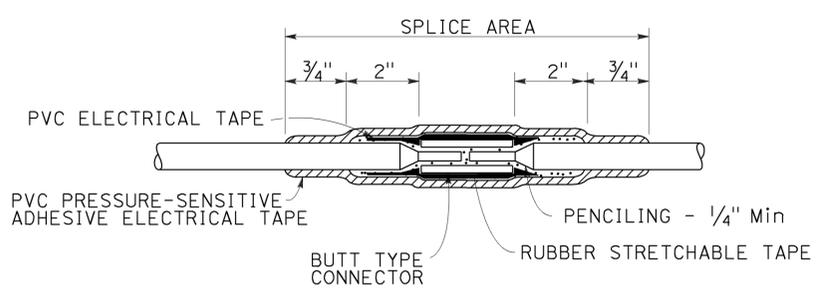
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED 03-07-16



**TYPE C SPLICE**

See Note 3

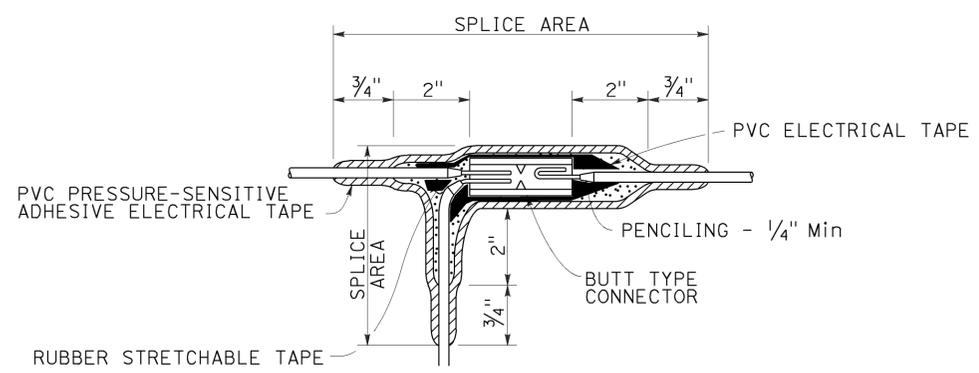


**TYPE S SPLICE**

See Note 4

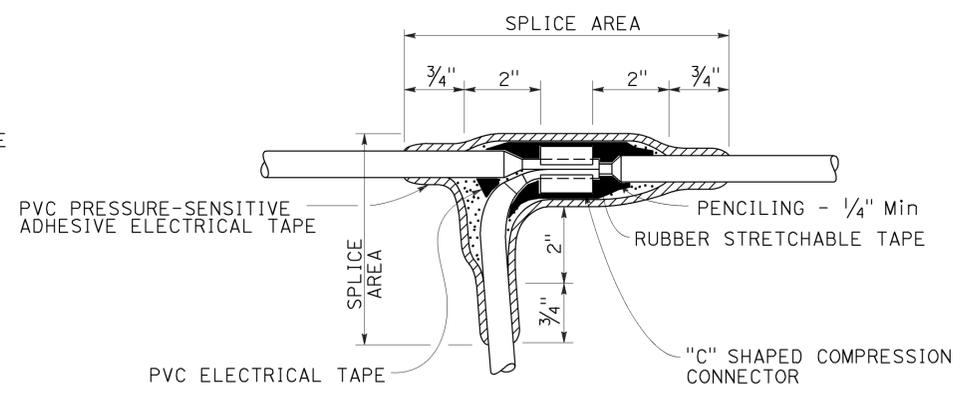
**NOTES:**

1. Dimensions are minimum.
2. Rubber tapes shall be rolled after application.
3. Between 1 free-end and 1 through conductor.
4. Between 2 free-end conductors.
5. Between 3 free-end conductors.



**TYPE ST SPLICE**

See Note 5



**TYPE T SPLICE**

See Note 5

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS  
 (SPLICING DETAILS)**

NO SCALE

RSP ES-13A DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-13A DATED MAY 20, 2011 - PAGE 491 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP ES-13A**

2010 REVISED STANDARD PLAN RSP ES-13A