Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	1	52

STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON

STATE HIGHWAY

IN ORANGE COUNTY

IN ORANGE, ANAHEIM, FULLERTON, PLACENTIA, AND BREA FROM 0.2 MILE NORTH OF ROUTE 5/57 SEPARATION TO LOS ANGELES COUNTY LINE

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

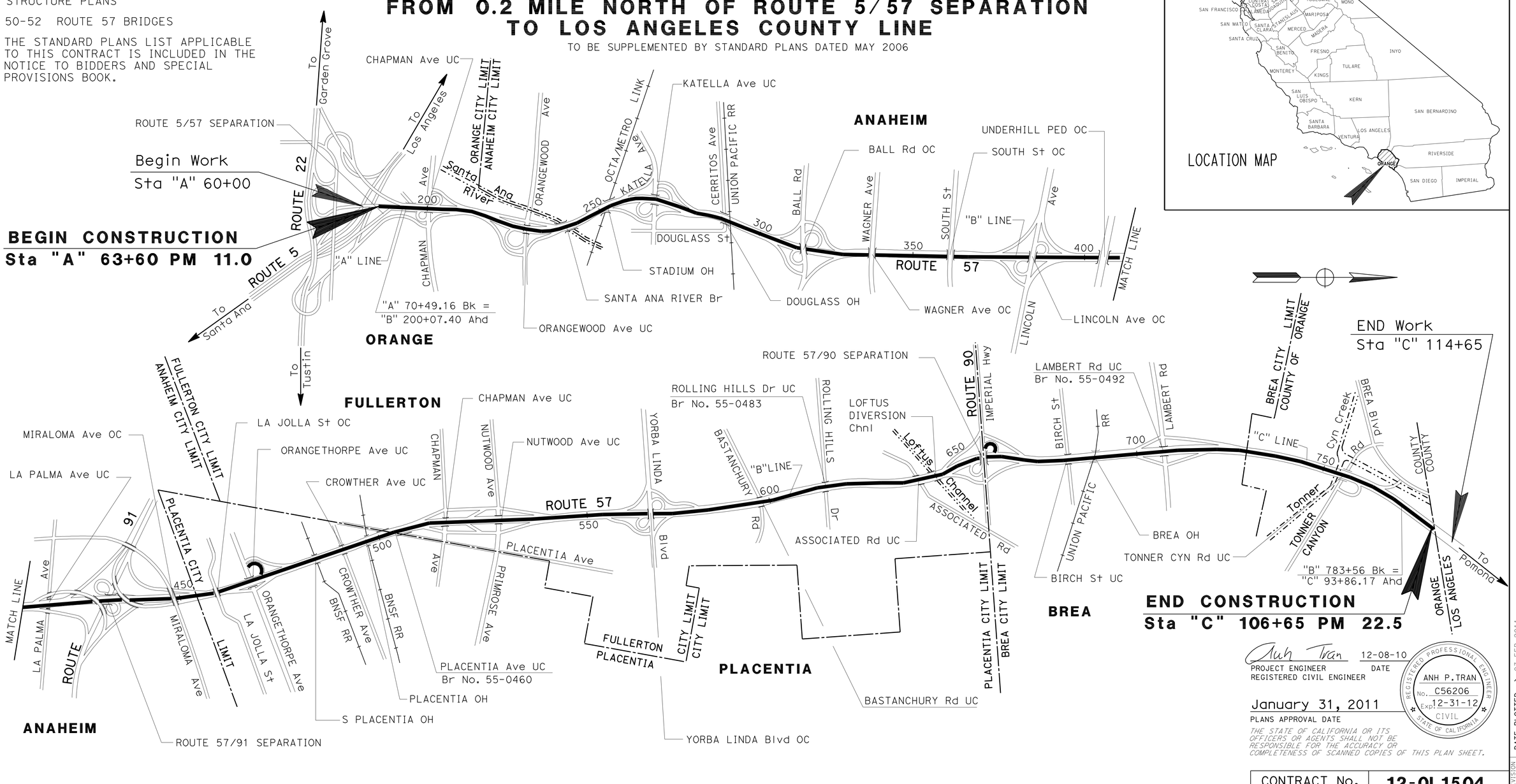
INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2-5	TYPICAL CROSS SECTIONS
6-7	CONSTRUCTION DETAILS
8	CONSTRUCTION AREA SIGNS
9-21	TRAFFIC HANDLING (DETOUR) PLANS AND QUANTITIES
22-23	PAVEMENT DELINEATION DETAILS AND QUANTITIES
24-25	SIGN QUANTITIES
26-30	SUMMARY OF QUANTITIES
31-38	ELECTRICAL PLANS
39-49	REVISED STANDARD PLANS

STRUCTURE PLANS

50-52 ROUTE 57 BRIDGES

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



Anh Tran 12-08-10
PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

January 31, 2011
PLANS APPROVAL DATE

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

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

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

NO SCALE

CONTRACT No.	12-0L1504
PROJECT ID	1200000638

PROJECT MANAGER MASSOUD TAJIK
DESIGN ENGINEER ANH P.TRAN

LAST REVISION 12-02-10
DATE PLOTTED => 03-FEB-2011
TIME PLOTTED => 06:18

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	2	52

Anh Tran 12-08-10
REGISTERED CIVIL ENGINEER DATE

1-31-11
PLANS APPROVAL DATE

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

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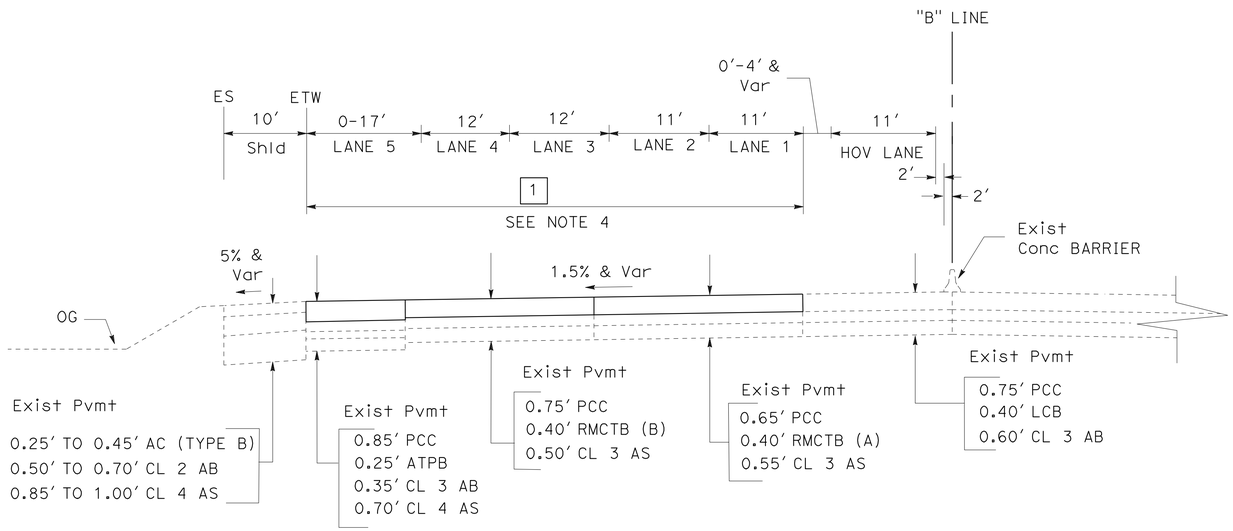
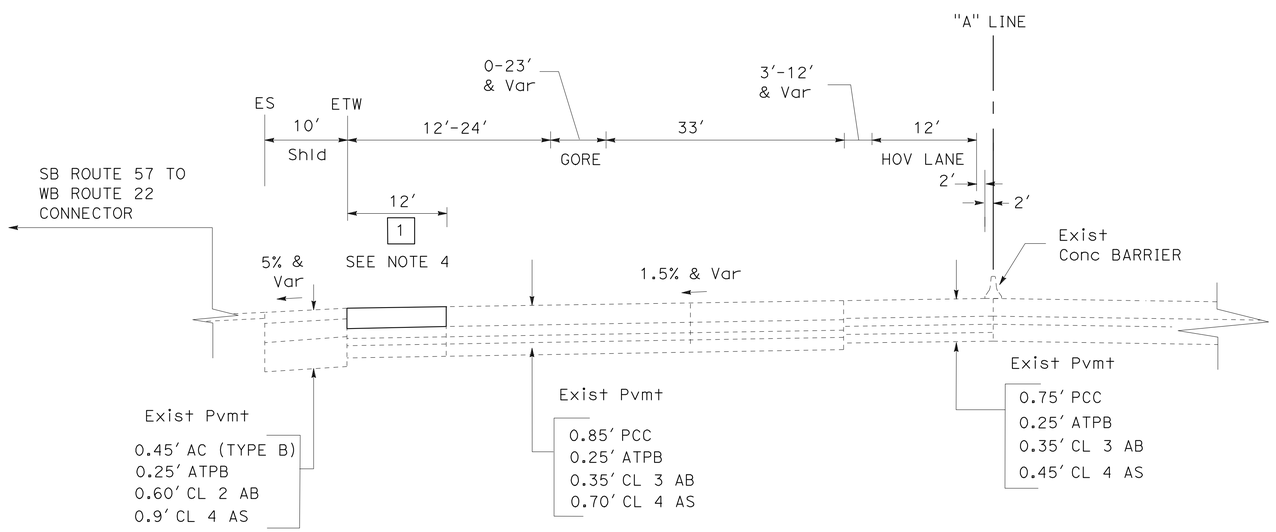


SB ROUTE 57

"B" 205+70 TO "B" 432+00
CHAPMAN Ave UC TO MIRALOMA Ave OC



SB ROUTE 57

"A" 63+60 TO "A" 66+80
SB ROUTE 57 TO HOV SB ROUTE 5

NOTES:

1. DIMENSIONS OF THE STRUCTURAL SECTIONS ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.
3. SEE CONSTRUCTION DETAILS FOR TYPICAL DIMENSIONS OF PARTIAL AND FULL SLAB REPLACEMENT.
4. SEE SUMMARY OF QUANTITIES FOR LOCATIONS OF REPLACE CONCRETE PAVEMENT. THE EXACT LOCATIONS AND DIMENSIONS OF CONCRETE SLAB TO BE REPLACED WILL BE DETERMINED BY THE ENGINEER.
5. REPLACED CONCRETE SLABS SHALL BE GROUNDED FIRST AND THEN GROVED.

ABBREVIATIONS:

HOV - HIGH OCCUPANCY VEHICLE

RMCTB - ROAD-MIXED CONCRETE TREATED BASE

LBS - LIME TREATED BASEMENT SOIL

STRUCTURAL SECTION TYPE:

1

GRIND Exist Conc Pvmt
REPLACE Conc Pvmt (RAPID STRENGTH Conc)

LANE No.	DEPTH OF REPLACE Conc Pvmt (RAPID STRENGTH Conc)
1 & 2	0.65'
3 & 4	0.75'
5	0.85'

2

GROOVE Exist Conc Pvmt
GRIND Exist Conc Pvmt
REPLACE Conc Pvmt (RAPID STRENGTH Conc)

LANE No.	DEPTH OF REPLACE Conc Pvmt (RAPID STRENGTH Conc)
1 & 2	0.65'
3 & 4	0.75'

3

0.2' RUBBERIZED HOT MIX ASPHALT (GAP GRADED)
0.2' COLD PLANE AC Pvmt

TYPICAL CROSS SECTION

NO SCALE

X-1

CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED	FUNCTIONAL SUPERVISOR
PHAT TRAN	ANH TRAN	ANH TRAN	11-18-10	MASSOUD TAJIK

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

LAST REVISION 11-18-10 | DATE PLOTTED => 03-FEB-2011 | TIME PLOTTED => 06:20

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	3	52

REGISTERED CIVIL ENGINEER 12-08-10 DATE

1-31-11
PLANS APPROVAL DATE

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

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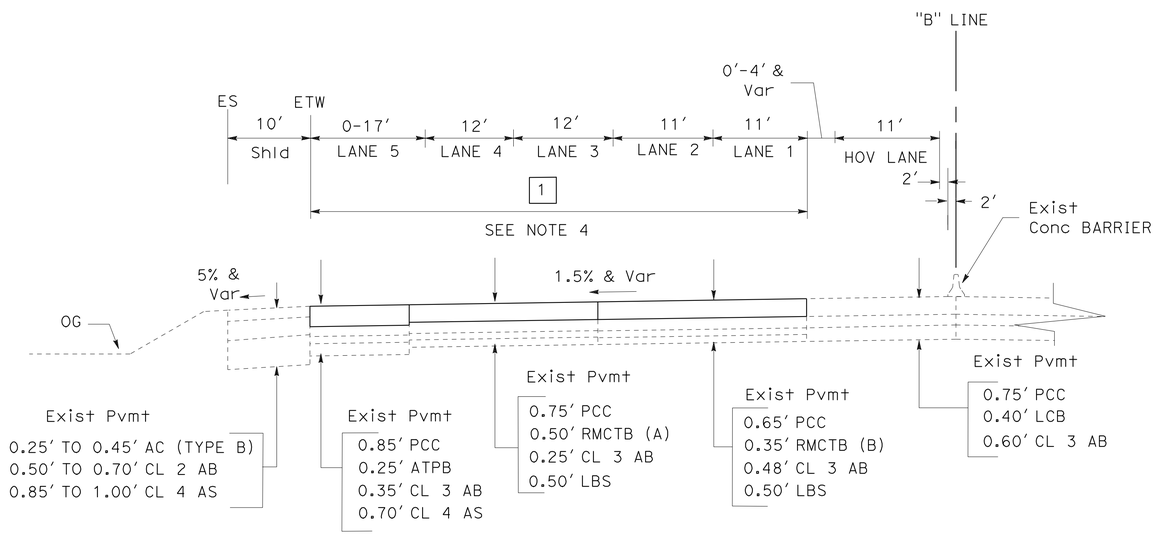
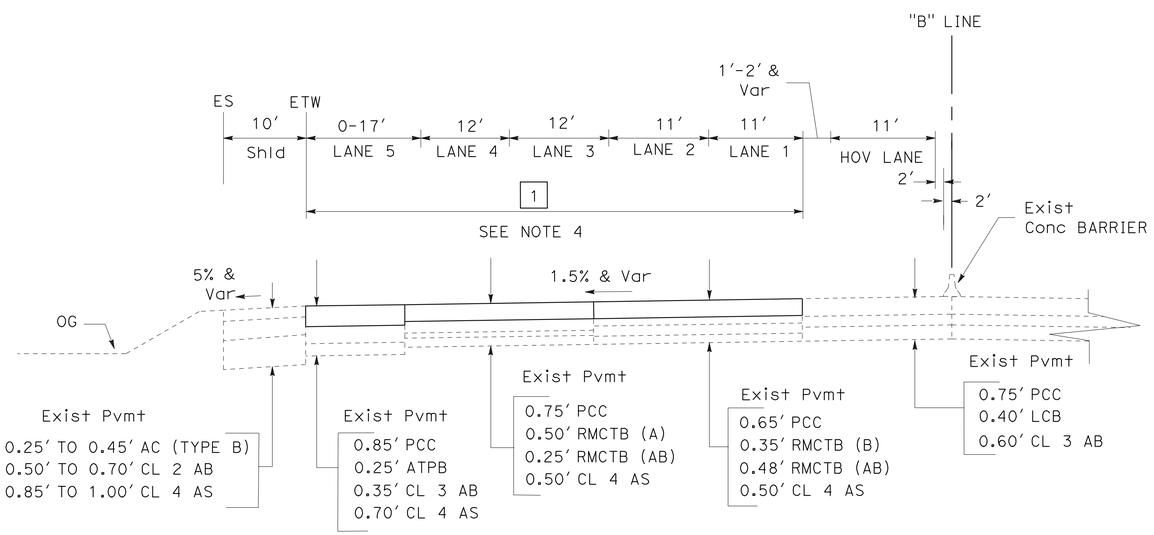


SB ROUTE 57

"B" 541+50 TO "B" 635+00
0.12 MILE NORTH OF NUTWOOD Ave UC
TO ASSOCIATED Rd UC



SB ROUTE 57

"B" 493+90 TO "B" 541+50
CROWTHER Ave UC TO
0.12 MILE NORTH OF NUTWOOD Ave UC

TYPICAL CROSS SECTION

NO SCALE

X-2

REVISED BY	DATE REVISED
ANH TRAN	11-18-10

CALCULATED-DESIGNED BY	CHECKED BY
PHAT TRAN	ANH TRAN

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
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LAST REVISION 11-18-10 | DATE PLOTTED => 03-FEB-2011 | TIME PLOTTED => 14:53

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	4	52

Anh Tran 12-08-10
REGISTERED CIVIL ENGINEER DATE

1-31-11
PLANS APPROVAL DATE

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

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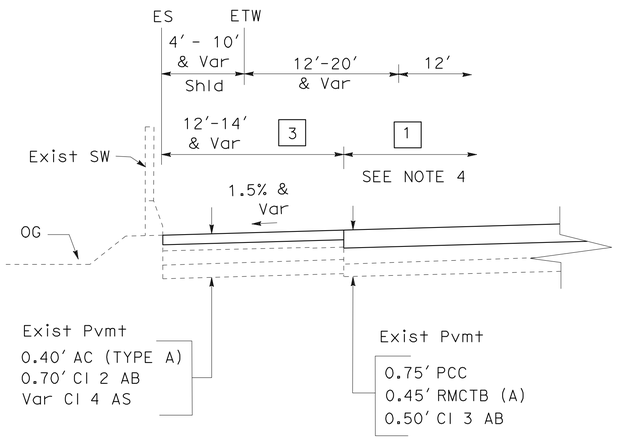
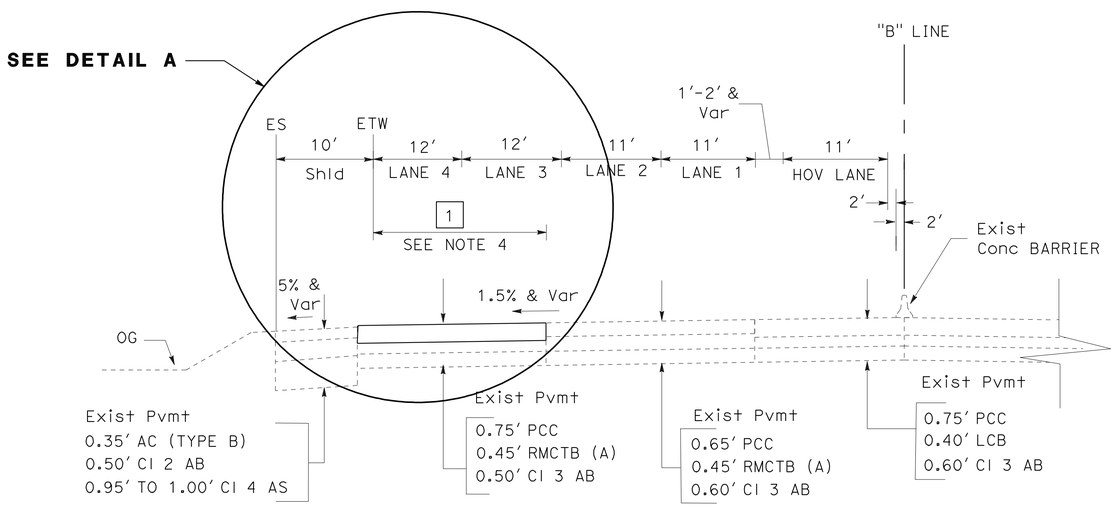


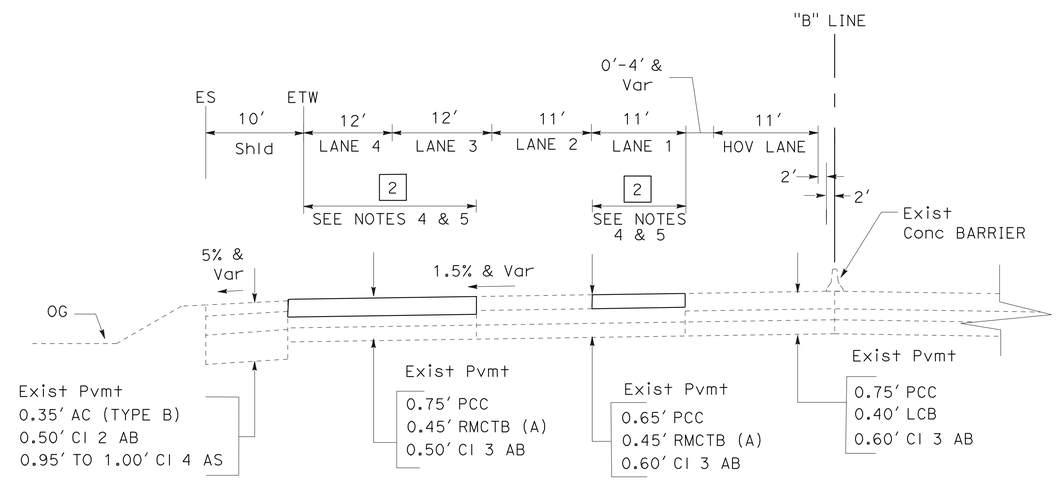
DETAIL A

"B" 641+00 TO "B" 645+50



SB ROUTE 57

"B" 635+00 TO "B" 655+50
ASSOCIATED Rd UC TO
ROUTE 57/90 SEPARATION



SB ROUTE 57

"B" 655+50 TO "B" 782+30
ROUTE 57/90 SEPARATION TO
0.25 MILE SOUTH OF LOS ANGELES COUNTY LINE

TYPICAL CROSS SECTION

NO SCALE

X-3

REVISED BY	DATE REVISED
ANH TRAN	11-18-10

CALCULATED-DESIGNED BY	CHECKED BY
PHAT TRAN	ANH TRAN

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

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LAST REVISION 11-18-10
DATE PLOTTED => 03-FEB-2011
TIME PLOTTED => 14:53

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	5	52

REGISTERED CIVIL ENGINEER 12-08-10 DATE

1-31-11
PLANS APPROVAL DATE

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

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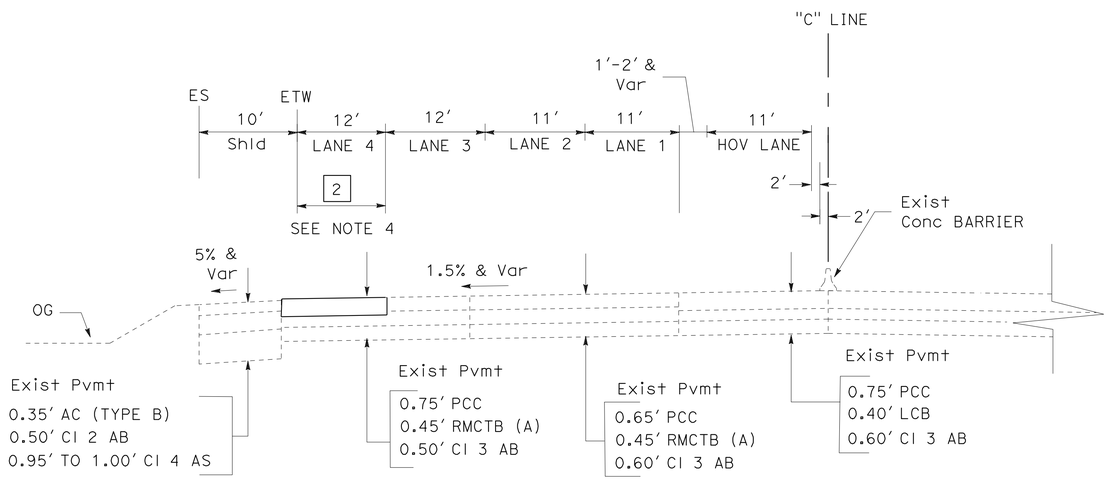
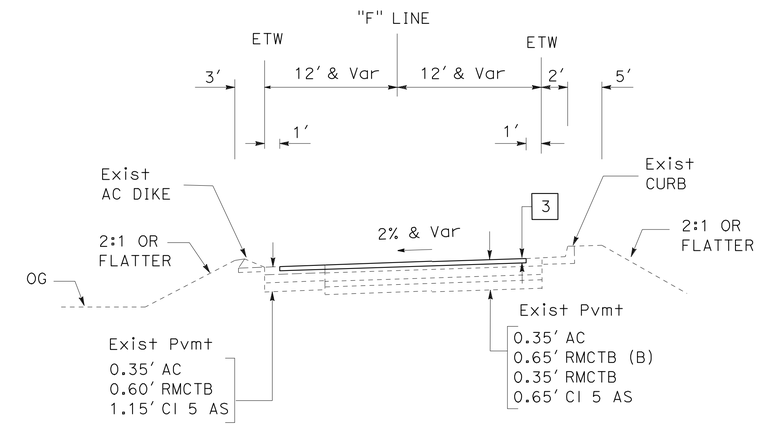


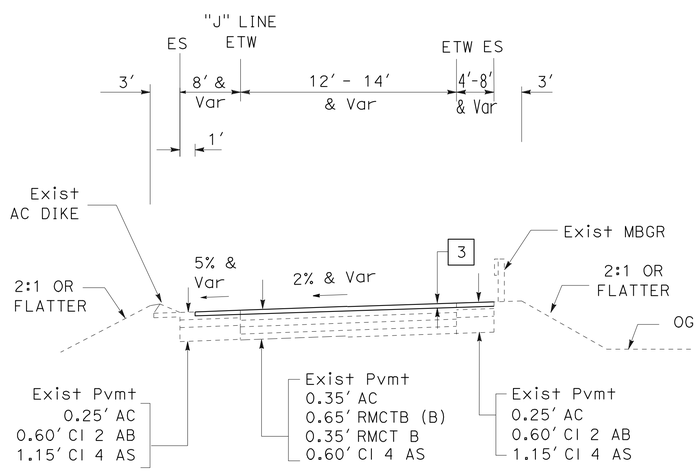
SB ROUTE 57

"C" 93+86.17 TO "C" 106+65
0.25 MILE SOUTH OF LOS ANGELES COUNTY LINE
TO LOS ANGELES COUNTY LINE



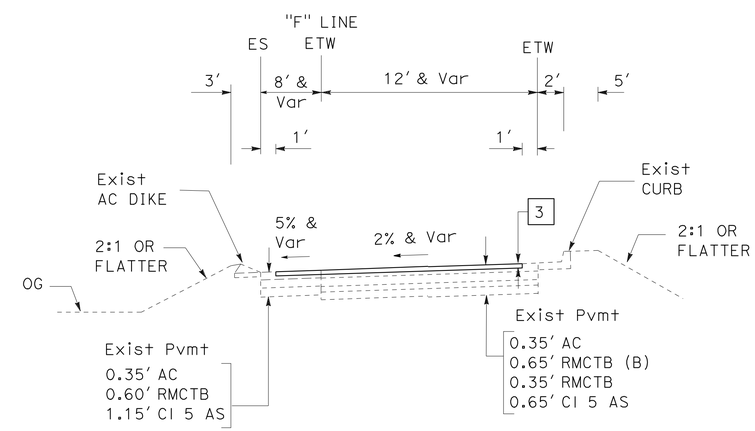
WB ORANGETHORPE Ave TO SB ROUTE 57 ON-RAMP

"F" 7+40 TO "F" 11+23



WB IMPERIAL HIGHWAY TO SB ROUTE 57 ON-RAMP

"J" 15+65 TO "J" 25+76.80



WB ORANGETHORPE Ave TO SB ROUTE 57 ON-RAMP

"F" 3+40 TO "F" 7+40

TYPICAL CROSS SECTION

NO SCALE

X-4

REVISED BY	DATE REVISED
ANH TRAN	11-18-10

CALCULATED-DESIGNED BY	CHECKED BY
PHAT TRAN	ANH TRAN

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE

LAST REVISION 11-18-10 | DATE PLOTTED => 03-FEB-2011 | TIME PLOTTED => 15:24

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	6	52

Anh Tran 12-08-10
REGISTERED CIVIL ENGINEER DATE

1-31-11
PLANS APPROVAL DATE

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

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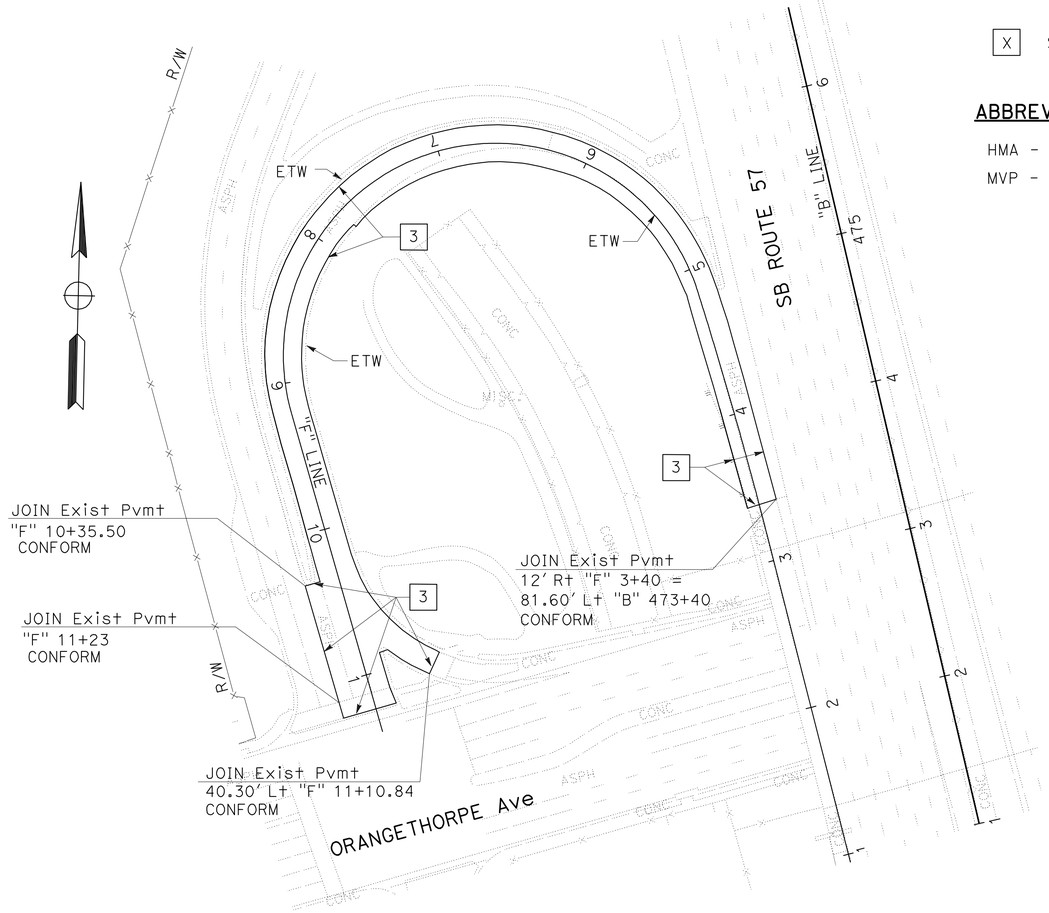
LEGEND:

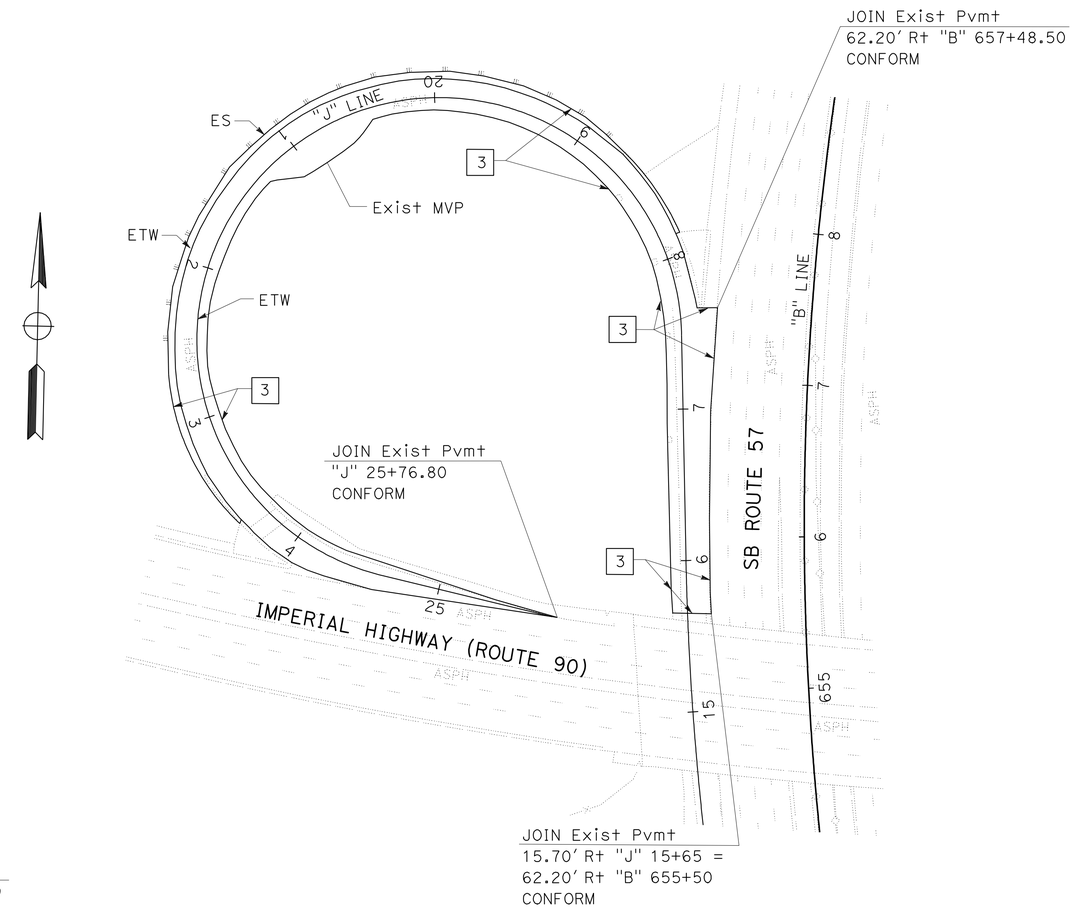
[X] STRUCTURAL SECTION TYPE, SEE SHEET X-1

ABBREVIATIONS:

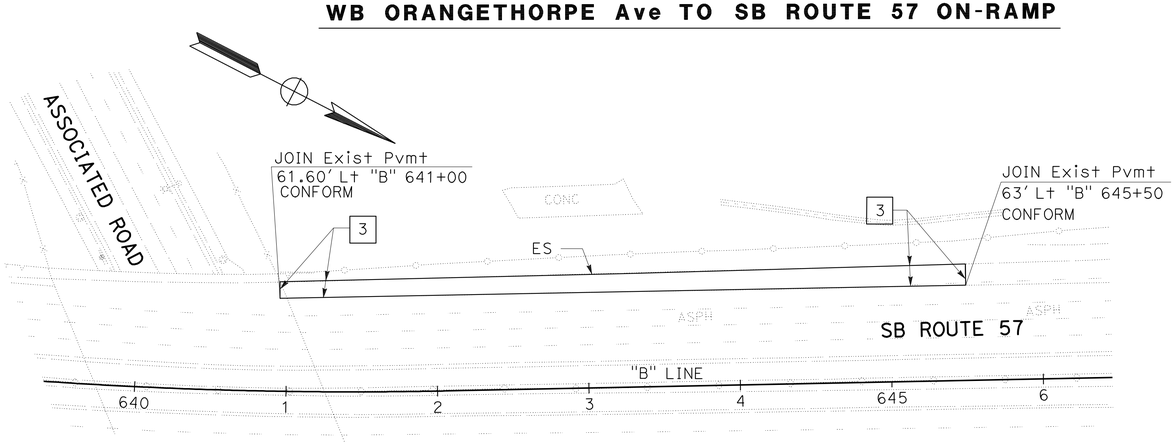
HMA - HOT MIX ASPHALT
MVP - MAINTENANCE VEHICLE PULLOUT



WB ORANGETHORPE Ave TO SB ROUTE 57 ON-RAMP



WB IMPERIAL HIGHWAY TO SB ROUTE 57 ON-RAMP



SB ROUTE 57

CONSTRUCTION DETAILS

SCALE: 1" = 50'

C-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
MAINTENANCE	MASSOUD TAJIK	KHALEDA AKANS	AHMED ABBAS	ANH TRAN	12-03-10

LAST REVISION 12-03-10 | DATE PLOTTED => 03-FEB-2011 TIME PLOTTED => 15:24

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	7	52

Anh Tran 12-08-10
REGISTERED CIVIL ENGINEER DATE

1-31-11
PLANS APPROVAL DATE

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

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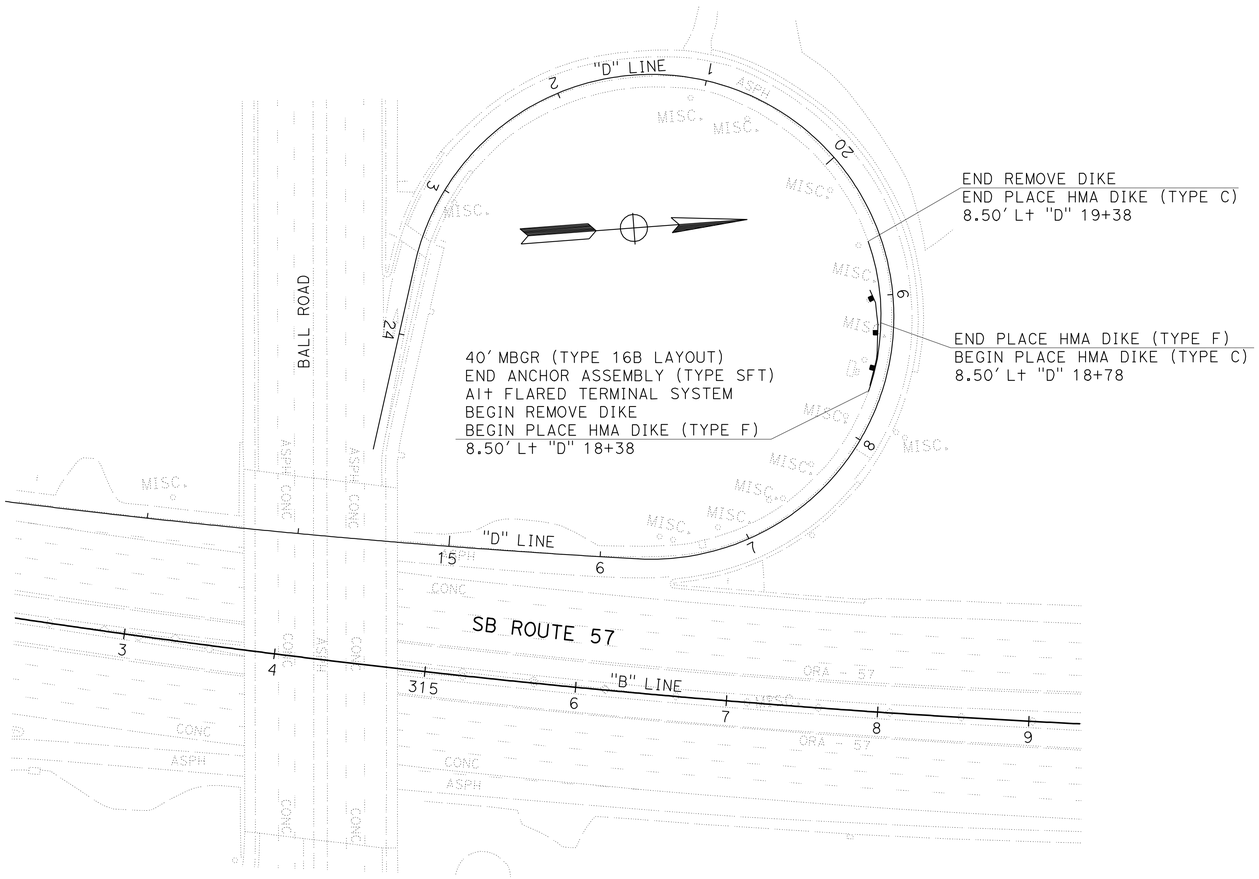
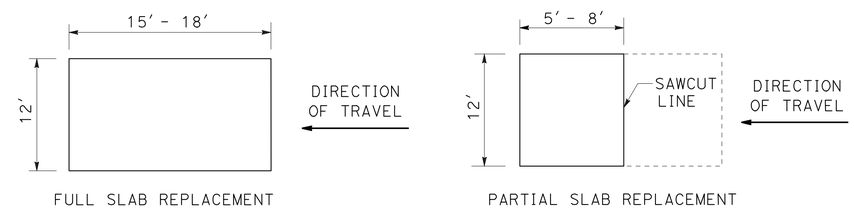


WB BALL ROAD TO SB ROUTE 57 ON-RAMP



TYPICAL SLAB DIMENSIONS

CONSTRUCTION DETAILS

SCALE: 1" = 50'

C-2

REVISED BY	DATE REVISED
ANH TRAN	11-18-10

PHAT TRAN	ANH TRAN
CALCULATED-DESIGNED BY	CHECKED BY

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

LAST REVISION 11-18-10
DATE PLOTTED => 03-FEB-2011
TIME PLOTTED => 06:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	8	52

Anh Tran 12-08-10
REGISTERED CIVIL ENGINEER DATE

1-31-11
PLANS APPROVAL DATE

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

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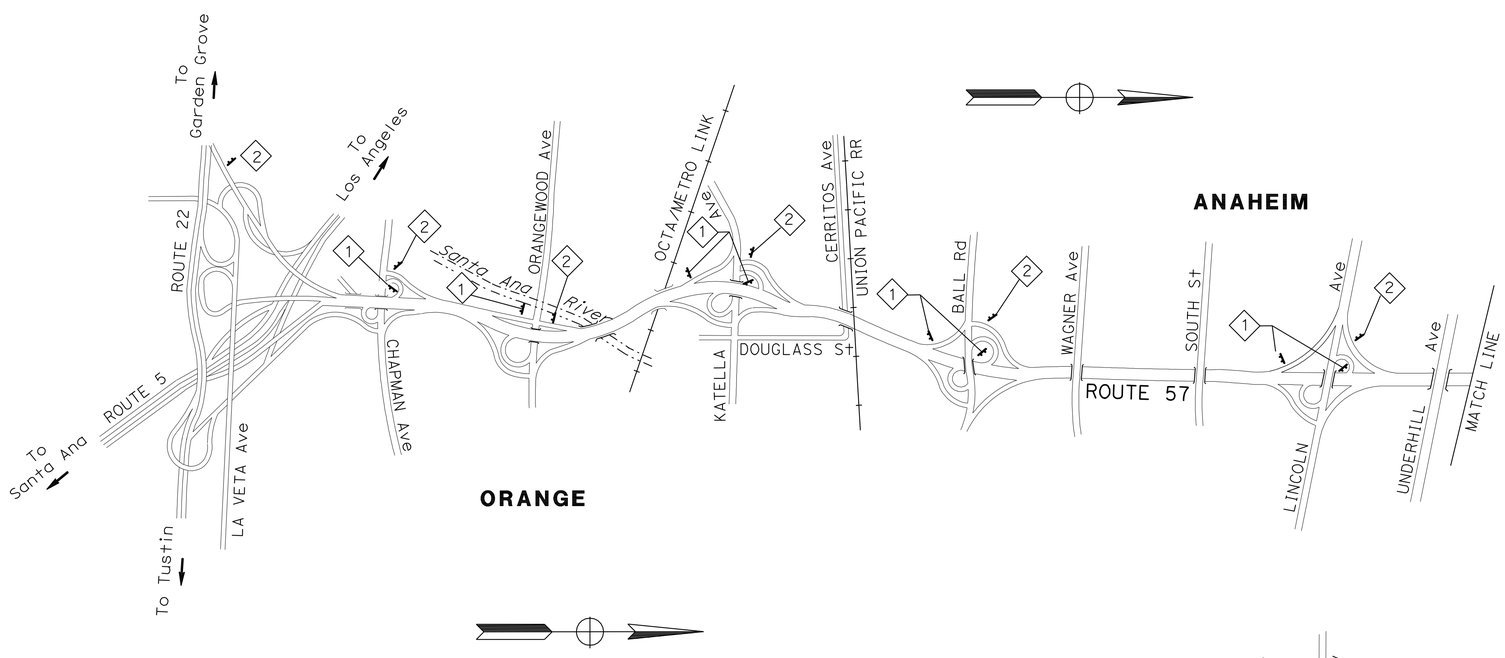
NOTE:

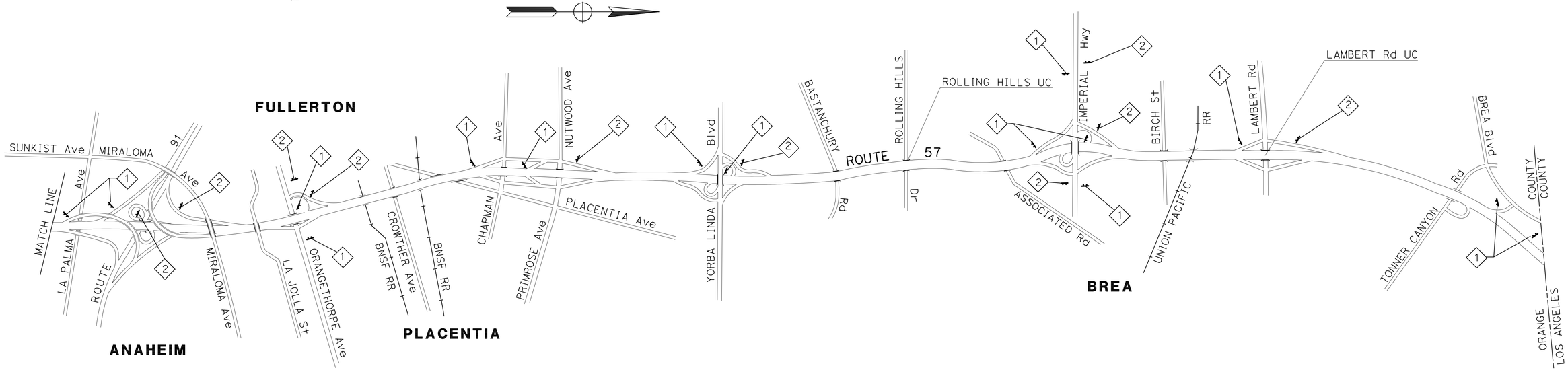
LOCATIONS OF CONSTRUCTION AREA SIGNS ARE APPROXIMATE.
EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.

LEGEND:

◇ CONSTRUCTION AREA SIGN

CONSTRUCTION AREA SIGN, 2-POST





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	23	48" x 48"	2	4" x 6"	ROAD WORK AHEAD
2	G20-2	16	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

THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGNS WORK ONLY.

REVISED BY	ANH TRAN
DATE REVISED	11-02-10
CALCULATED-DESIGNED BY	PHAT TRAN
CHECKED BY	ANH TRAN
FUNCTIONAL SUPERVISOR	MASSOUD TAJIK

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
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LAST REVISION 11-18-10
DATE PLOTTED => 03-FEB-2011
TIME PLOTTED => 06:51

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	9	52

REGISTERED CIVIL ENGINEER 12-08-10 DATE

1-31-11
PLANS APPROVAL DATE

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

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

NOTES:

1. LOCATION OF CONSTRUCTION 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. MESSAGES TO BE DISPLAYED ON THE PCMS SHALL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

ABBREVIATION:

PCMS - PORTABLE CHANGEABLE MESSAGE SIGN

LEGEND:

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

CLOSURE #1:

CONNECTOR - SB ROUTE 57 TO WB ROUTE 22

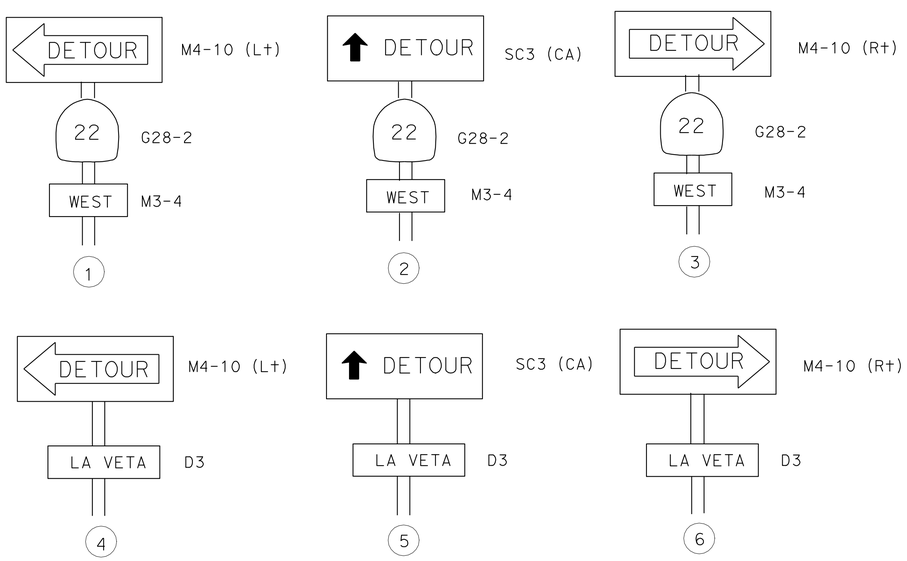
DETOUR:

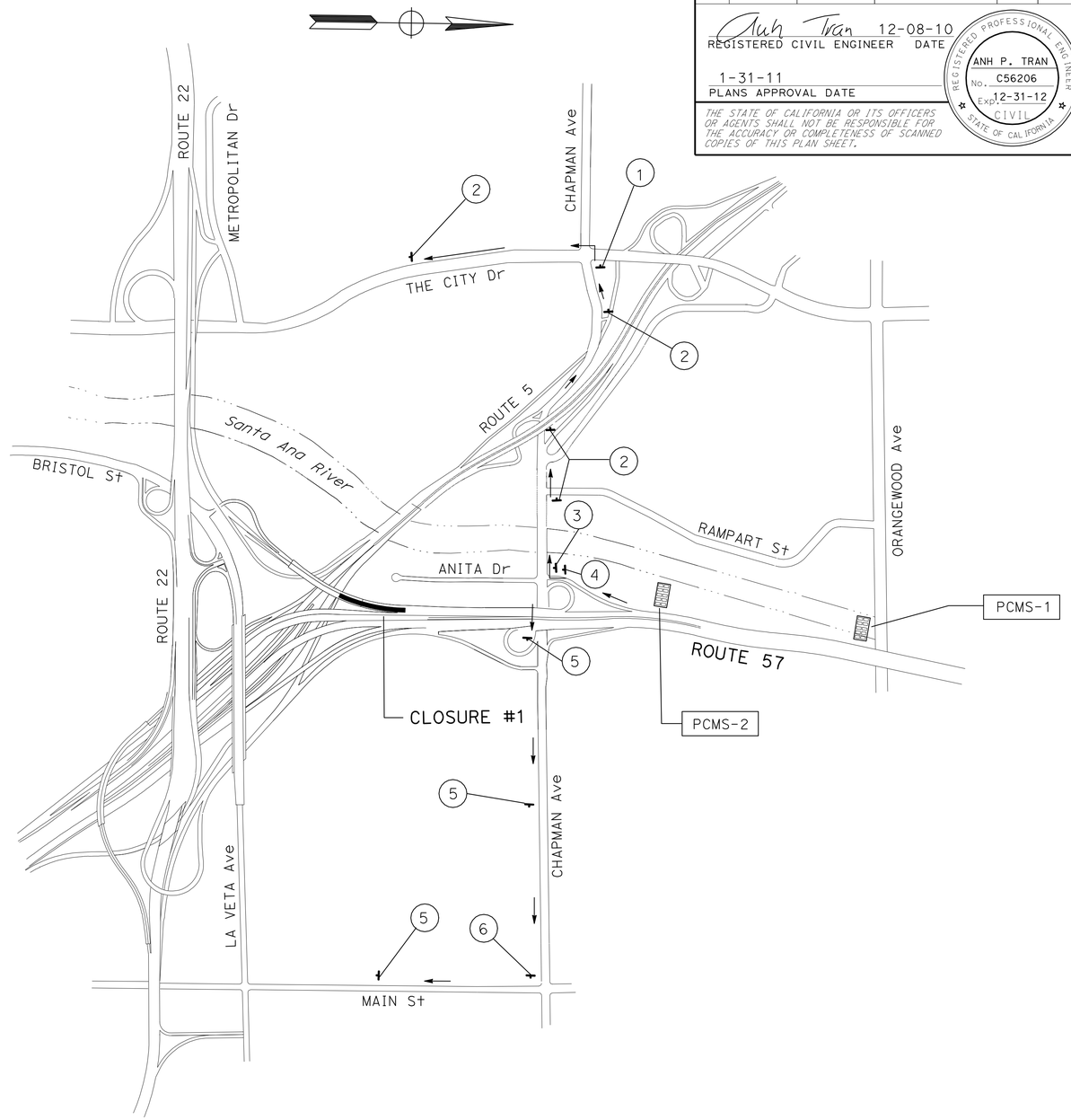
- TO WB 22: EXIT CHAPMAN Ave OFF-RAMP, RIGHT ON CHAPMAN Ave AND LEFT ON CITY DRIVE
- TO LA VETA Ave: EXIT CHAPMAN Ave OFF-RAMP, LEFT ON CHAPMAN Ave AND RIGHT ON MAIN St

NOTES:

DURING THE SB 57 TO WB 22 CONNECTOR CLOSURE, THE PCMS SHOULD READ AS FOLLOWS:

WB 22 CLOSED USE CHAPMAN Ave	WB 22 EXIT HERE
PCMS-1	PCMS-2





TRAFFIC HANDLING PLAN (DETOUR)

NO SCALE

TH-1

THIS PLAN ACCURATE FOR TRAFFIC HANDLING ONLY.

REVISED BY	DATE REVISED
ANH TRAN	11-18-10

CALCULATED-DESIGNED BY: PHAT TRAN
CHECKED BY: ANH TRAN
FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

LAST REVISION 11-18-10
DATE PLOTTED => 03-FEB-2011
TIME PLOTTED => 06:52

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	10	52

Anh Tran 12-08-10
REGISTERED CIVIL ENGINEER DATE

1-31-11
PLANS APPROVAL DATE

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

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

NOTES:

DURING THE SB 57 CHAPMAN Ave OFF-RAMP CLOSURE, THE PCMS SHOULD READ AS FOLLOWS:

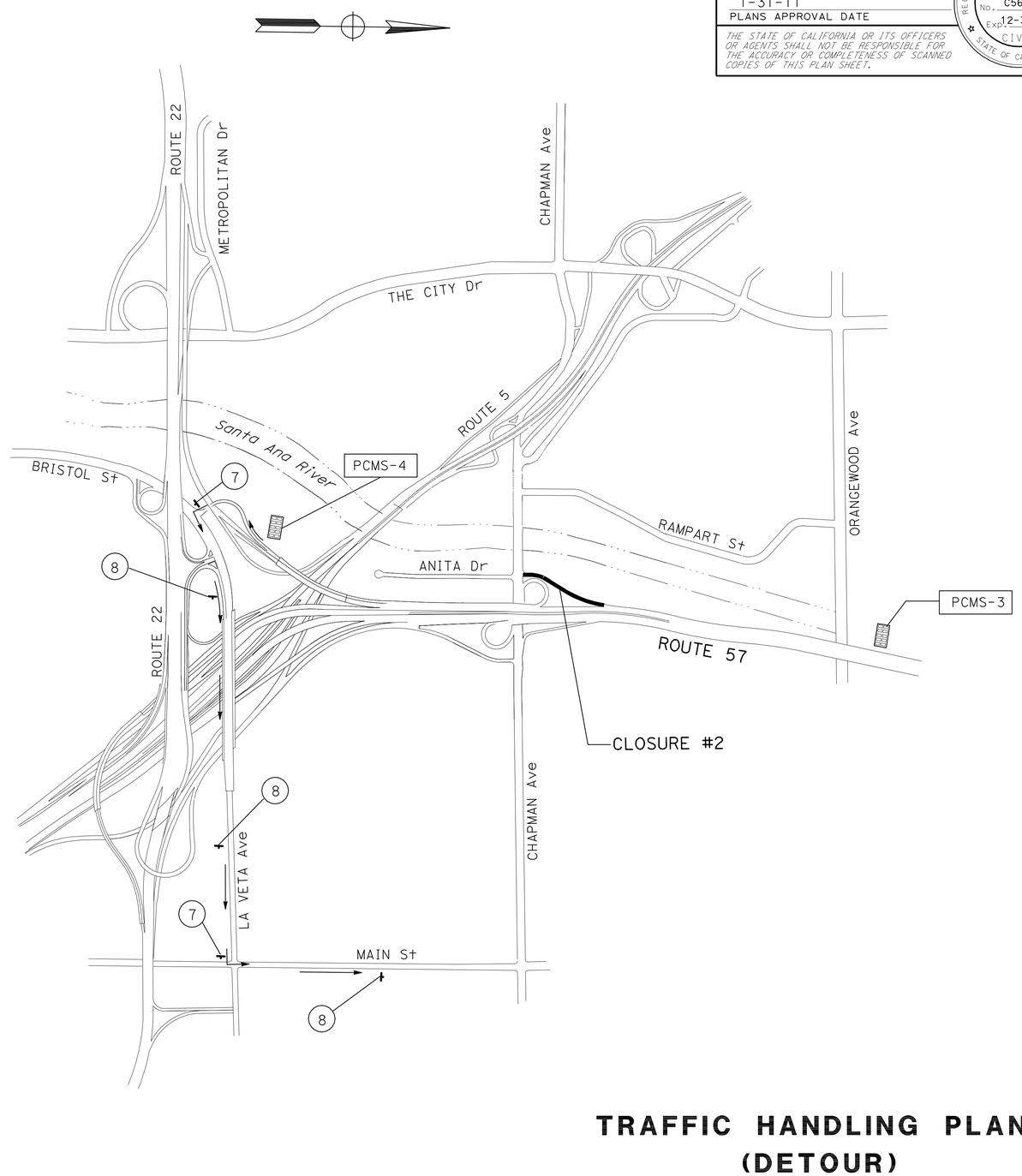
CHAPMAN Ave CLOSED USE LA VETA/BRISTOL	CHAPMAN Ave EXIT HERE
PCMS-3	PCMS-4

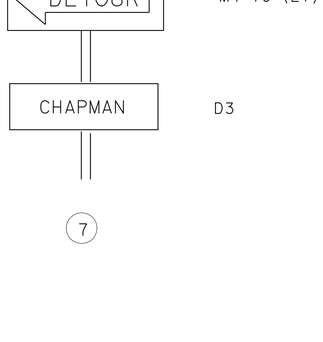
CLOSURE #2:

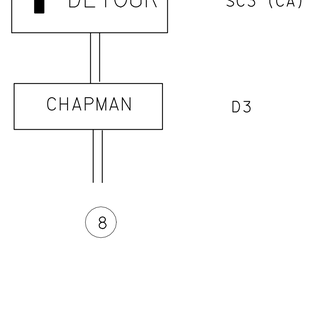
RAMP - CHAPMAN Ave OFF-RAMP

DETOUR:

SB Rte 57 TO WB Rte 22, Exit LA VETA Ave/BRISTOL St, LEFT ON LA VETA Ave, AND LEFT ON MAIN St







TRAFFIC HANDLING PLAN (DETOUR)

NO SCALE

TH-2

THIS PLAN ACCURATE FOR TRAFFIC HANDLING ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

CALCULATED-DESIGNED BY: PHAT TRAN
CHECKED BY: ANH TRAN

REVISED BY: ANH TRAN
DATE REVISED: 11-18-10

LAST REVISION 11-18-10
DATE PLOTTED => 03-FEB-2011
TIME PLOTTED => 06:52

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	11	52

REGISTERED CIVIL ENGINEER 12-08-10 DATE

1-31-11
PLANS APPROVAL DATE

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

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

NOTES:

DURING THE ORANGEWOOD Ave OFF-RAMP CLOSURE, THE PCMS SHOULD READ AS FOLLOWS:

ORANGEWOOD Ave CLOSED USE CHAPMAN Ave	ORANGEWOOD Ave EXIT HERE
PCMS-5	PCMS-6

CLOSURE #3:

RAMP - SB ROUTE 57 ORANGEWOOD Ave ON-RAMP

DETOUR:

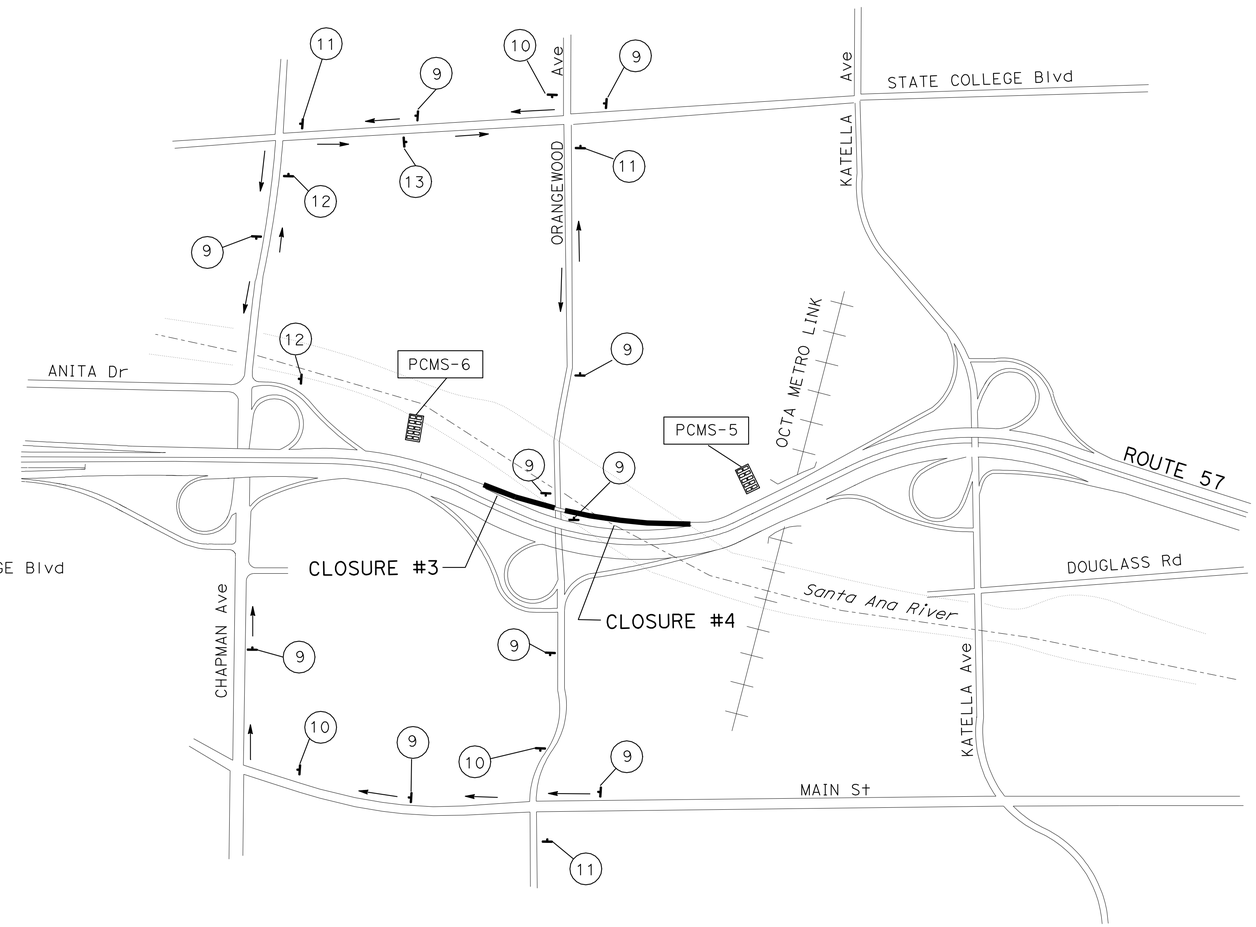
1. EB ORANGEWOOD Ave RIGHT ON MAIN St AND RIGHT ON CHAPMAN Ave
2. WB ORANGEWOOD Ave LEFT ON STATE COLLEGE Blvd, AND LEFT ON CHAPMAN Ave

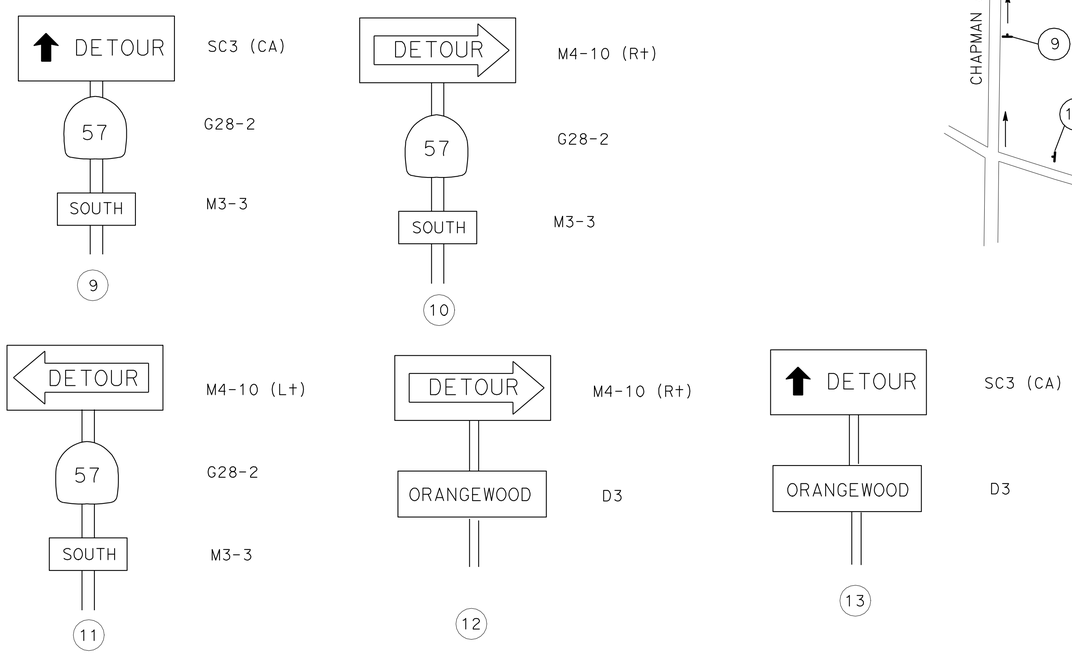
CLOSURE #4:

RAMP - SB ROUTE 57 ORANGEWOOD Ave OFF-RAMP

DETOUR:

EXIT CHAPMAN Ave OFF-RAMP, RIGHT ON CHAPMAN Ave AND RIGHT ON STATE COLLEGE Blvd





THIS PLAN ACCURATE FOR TRAFFIC HANDLING ONLY.

TRAFFIC HANDLING PLAN (DETOUR)

NO SCALE

TH-3

REVISED BY	DATE REVISED
ANH TRAN	11-18-10

CALCULATED-DESIGNED BY: KHALEDA AKANS
CHECKED BY: AHMED ABBAS
FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE

LAST REVISION 11-16-10 | DATE PLOTTED => 03-FEB-2011 | TIME PLOTTED => 06:52

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

Anh Tran 12-08-10
REGISTERED CIVIL ENGINEER DATE

1-31-11
PLANS APPROVAL DATE

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

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

NOTES:

DURING THE KATELLA Ave OFF-RAMP CLOSURE, THE PCMS SHOULD READ AS FOLLOWS:

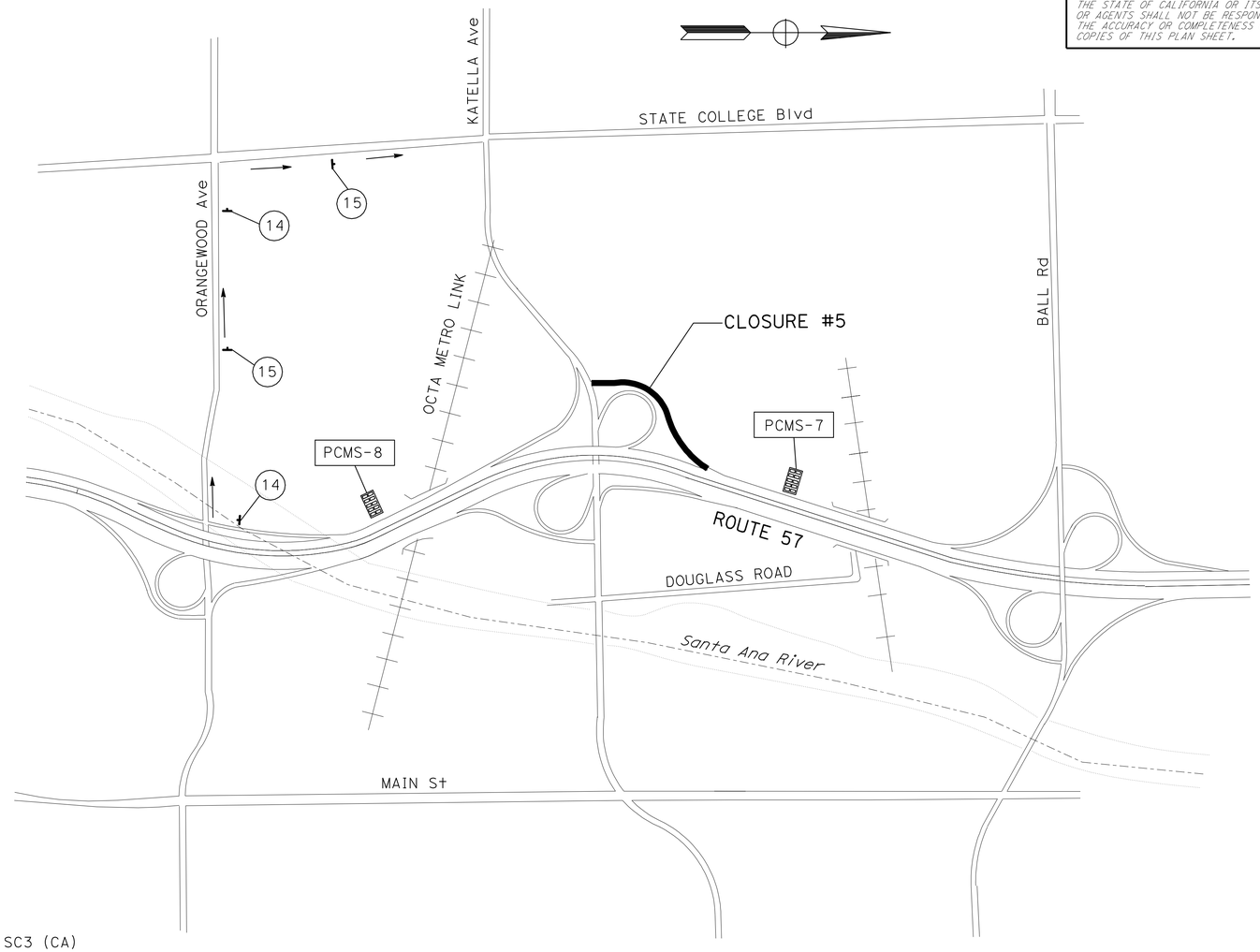
KATELLA Ave CLOSED USE ORANGEWOOD Ave	KATELLA Ave EXIT HERE
PCMS-7	PCMS-8

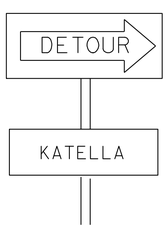
CLOSURE #5:

RAMP - KATELLA Ave OFF-RAMP

DETOUR:

EXIT ORANGEWOOD Ave OFF-RAMP, RIGHT ON ORANGEWOOD Ave AND RIGHT ON STATE COLLEGE Blvd

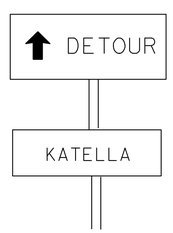




M4-10 (Rt)

D3

14



SC3 (CA)

D3

15

THIS PLAN ACCURATE FOR TRAFFIC HANDLING ONLY.

TRAFFIC HANDLING PLAN (DETOUR)

NO SCALE

TH-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
MAINTENANCE

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

CALCULATED-DESIGNED BY: KHALEDA AKANS
CHECKED BY: AHMED ABBAS

REVISED BY: ANH TRAN
DATE REVISED: 09-01-10

LAST REVISION 12-02-10
DATE PLOTTED => 03-FEB-2011
TIME PLOTTED => 06:52

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	13	52

Anh Tran 12-08-10
REGISTERED CIVIL ENGINEER DATE

1-31-11
PLANS APPROVAL DATE

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

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

NOTES:

DURING THE BALL Rd OFF-RAMP CLOSURE, THE PCMS SHOULD READ AS FOLLOWS:

BALL Rd CLOSED USE KATELLA Ave	BALL Rd EXIT HERE
PCMS-9	PCMS-10

CLOSURE #6:

RAMP - BALL Rd OFF-RAMP

DETOUR:

EXIT KATELLA Ave OFF-RAMP, RIGHT ON KATELLA Ave AND
RIGHT ON STATE COLLEGE Blvd

CLOSURE #7:

RAMP - BALL Rd LOOP ON-RAMP

DETOUR:

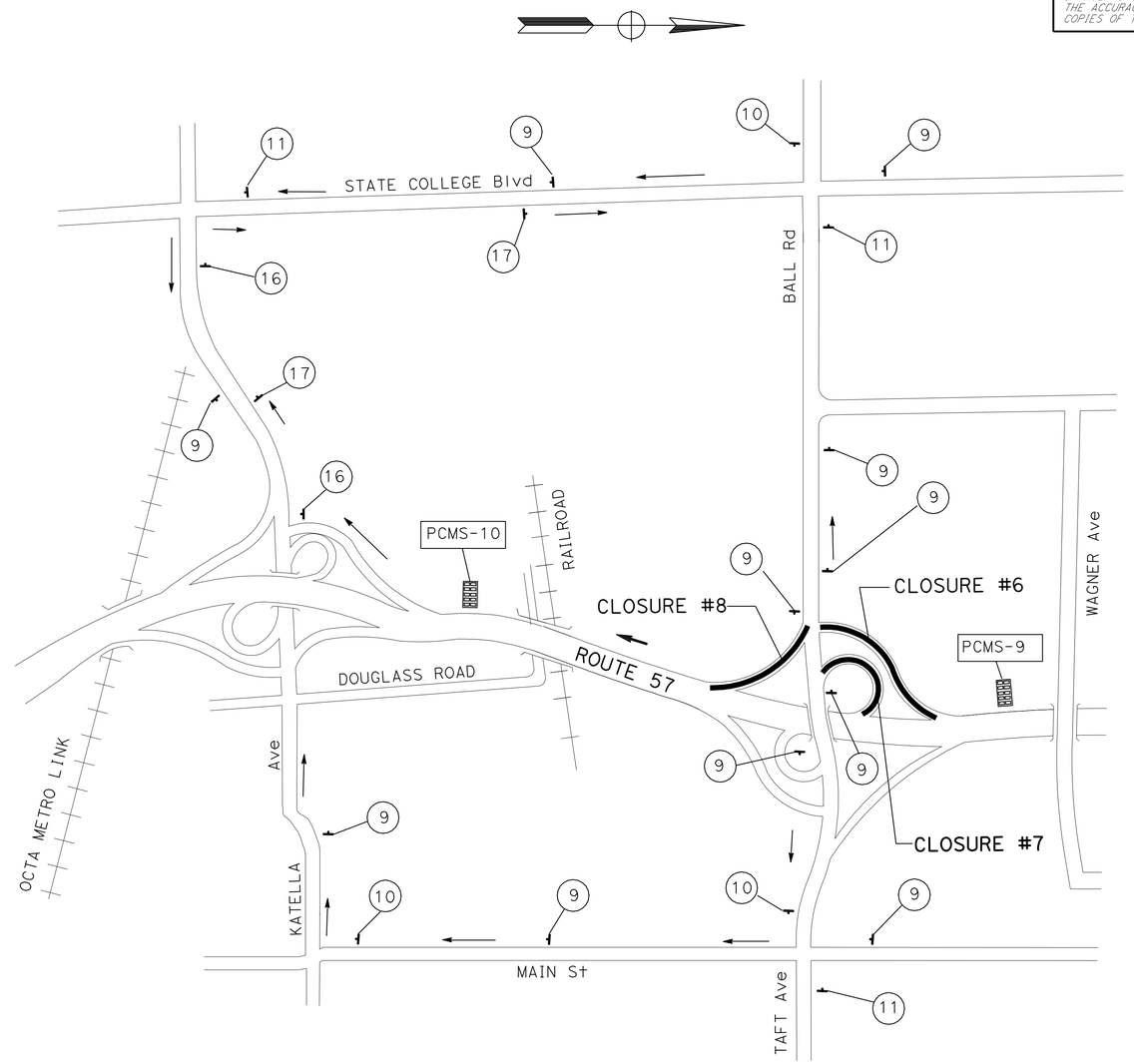
WB BALL Rd, LEFT ON STATE COLLEGE Blvd AND LEFT ON KATELLA Ave

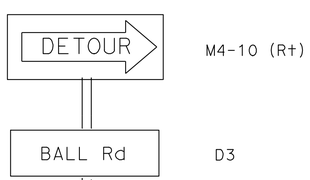
CLOSURE #8:

RAMP - BALL Rd ON-RAMP

DETOUR:

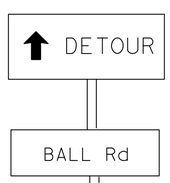
EB BALL Rd, RIGHT ON MAIN St AND RIGHT ON KATELLA Ave





M4-10 (Rt)

D3



SC3 (CA)

D3

THIS PLAN ACCURATE FOR TRAFFIC HANDLING ONLY.

TRAFFIC HANDLING PLAN (DETOUR)

NO SCALE

TH-5

CALCULATED-DESIGNED BY	KHALEDA AKANS
CHECKED BY	AHMED ABBAS
FUNCTIONAL SUPERVISOR	MASSOUD TAJIK
REVISED BY	ANH TRAN
DATE REVISED	09-01-10

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

LAST REVISION 11-16-10 | DATE PLOTTED => 03-FEB-2011 | TIME PLOTTED => 06:52

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	14	52

Anh Tran 12-08-10
REGISTERED CIVIL ENGINEER DATE

1-31-11
PLANS APPROVAL DATE

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

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

NOTES:

DURING THE LINCOLN Ave OFF-RAMP CLOSURE, THE PCMS SHOULD READ AS FOLLOWS:

LINCOLN Ave CLOSED USE BALL Rd	LINCOLN Ave EXIT HERE
PCMS-11	PCMS-12

CLOSURE #9:

RAMP - LINCOLN Ave OFF-RAMP

DETOUR:

EXIT BALL Rd OFF-RAMP, RIGHT ON BALL Rd AND
RIGHT ON STATE COLLEGE Blvd

CLOSURE #10:

RAMP - LINCOLN Ave LOOP ON-RAMP

DETOUR:

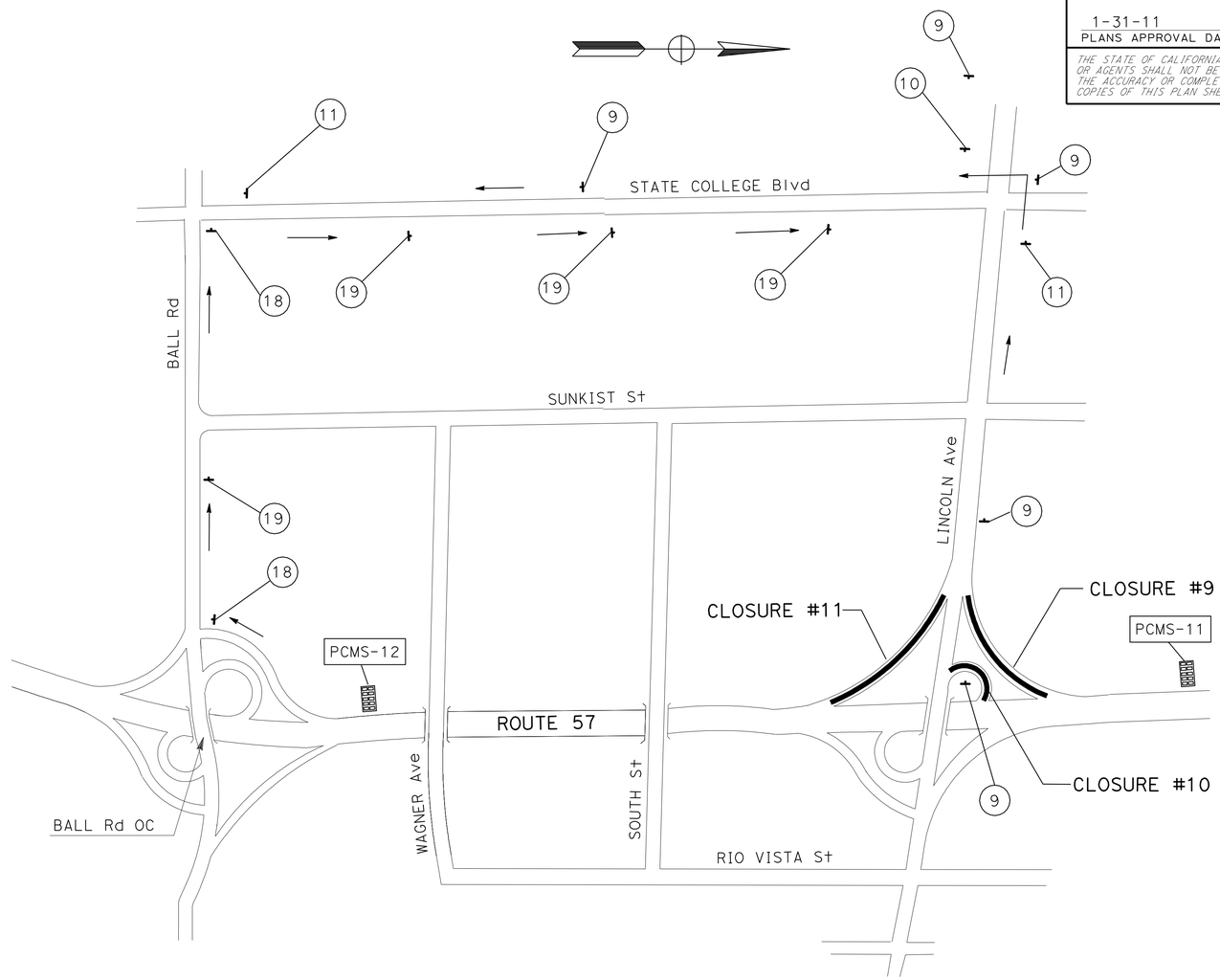
WB LINCOLN Ave LEFT ON STATE COLLEGE Blvd AND LEFT ON BALL Rd

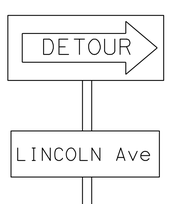
CLOSURE #11:

RAMP - EB LINCOLN Ave ON-RAMP

DETOUR:

EB LINCOLN Ave RIGHT ON STATE COLLEGE Blvd LEFT AND ON BALL Rd

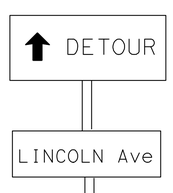




M4-10 (Rt)

D3

18



SC3 (CA)

D3

19

THIS PLAN ACCURATE FOR TRAFFIC HANDLING ONLY.

TRAFFIC HANDLING PLAN (DETOUR)

NO SCALE

TH-6

REVISED BY	DATE REVISED
ANH TRAN	11-18-10

CALCULATED-DESIGNED BY	CHECKED BY
MIMI CHAU	ANH TRAN

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans® MAINTENANCE

LAST REVISION 12-02-10 | DATE PLOTTED => 03-FEB-2011 | TIME PLOTTED => 14:54

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	15	52

Anh Tran 12-08-10
REGISTERED CIVIL ENGINEER DATE

1-31-11
PLANS APPROVAL DATE

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

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

CLOSURE #12:

RAMP - ORANGETHORPE Ave LOOP ON-RAMP

DETOUR:

1. WB ORANGETHORPE Ave, RIGHT ON PLACENTIA Ave, AND LEFT ON CHAPMAN Ave
2. EB ORANGETHORPE Ave, LEFT ON KRAEMER Blvd, AND LEFT ON CHAPMAN Ave

THIS PLAN ACCURATE FOR TRAFFIC HANDLING ONLY.

TRAFFIC HANDLING PLAN (DETOUR)

NO SCALE

TH-7

REVISED BY	DATE REVISED
ANH TRAN	11-18-10

CALCULATED-DESIGNED BY	CHECKED BY
MIMI CHAU	ANH TRAN

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
MAINTENANCE

LAST REVISION 12-02-10
DATE PLOTTED => 03-FEB-2011
TIME PLOTTED => 06:52

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	16	52

Anh Tran 12-08-10
REGISTERED CIVIL ENGINEER DATE

1-31-11
PLANS APPROVAL DATE

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

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

NOTES:

DURING THE SB ROUTE 57 TO EB & WB ROUTE 91 CONNECTOR CLOSURE, THE PCMS SHOULD READ AS FOLLOWS:

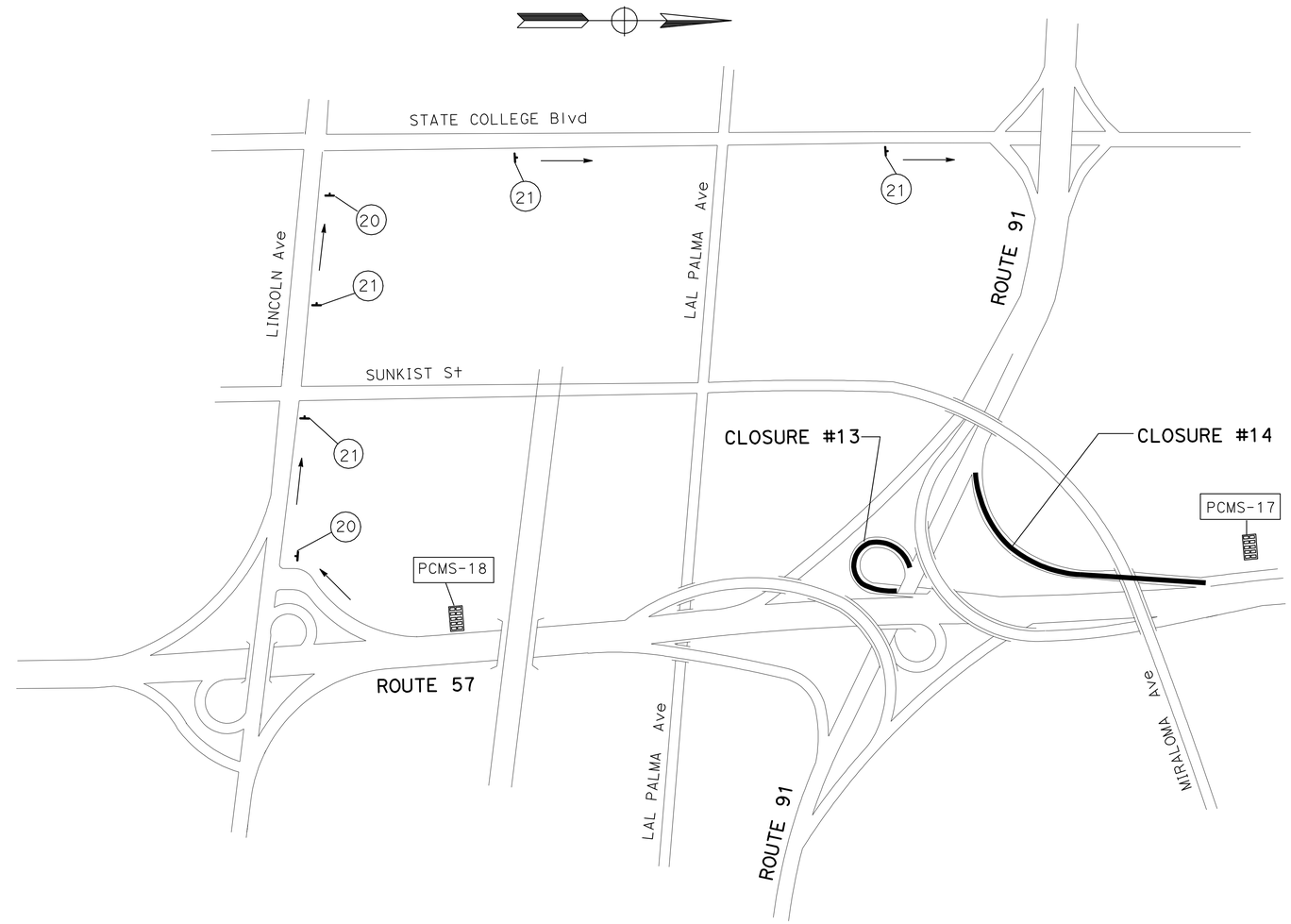
ROUTE 91 CONNECTORS CLOSED USE LINCOLN Ave	DETOUR ROUTE 91 EXIT HERE
PCMS-13	PCMS-14

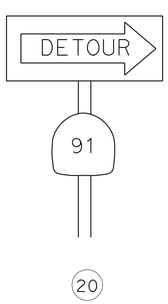
CLOSURE #13 & #14:

CONNECTORS - SB ROUTE 57 TO EB AND WB ROUTE 91

DETOUR:

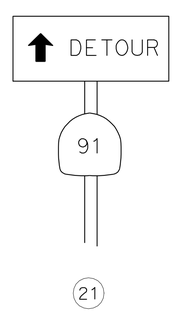
EXIT LINCOLN Ave OFF-RAMP, RIGHT ON LINCOLN Ave
AND RIGHT ON STATE COLLEGE Blvd





M4-10 (Rt)

G28-2



SC3 (CA)

G28-2

TRAFFIC HANDLING PLAN (DETOUR)

NO SCALE

TH-8

THIS PLAN ACCURATE FOR TRAFFIC HANDLING ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

CALCULATED-DESIGNED BY: MIMI CHAU
CHECKED BY: ANH TRAN

REVISED BY: ANH TRAN
DATE REVISED: 11-18-10

LAST REVISION 12-02-10
DATE PLOTTED => 03-FEB-2011
TIME PLOTTED => 07:00

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	17	52

Anh Tran 12-08-10
REGISTERED CIVIL ENGINEER DATE

1-31-11
PLANS APPROVAL DATE

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

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

NOTES:

1. CLOSURE #16 AND CLOSURE #17 SHALL NOT BE CLOSED AT THE SAME TIME.
2. DURING THE NUTWOOD Ave/ CHAPMAN Ave OFF-RAMP CLOSURE, THE PCMS SHOULD READ AS FOLLOWS:

NUTWOOD/CHAPMAN CLOSED USE ORANGETHORPE	NUTWOOD/CHAPMAN EXIT HERE
PCMS-15	PCMS-16

CLOSURE #15:

RAMP - NUTWOOD Ave OFF-RAMP

DETOUR:

EXIT ORANGETHORPE Ave OFF-RAMP, RIGHT ON ORANGETHORPE Ave AND RIGHT ON PLACENTIA Ave

CLOSURE #16:

RAMP - NUTWOOD Ave ON-RAMP

DETOUR:

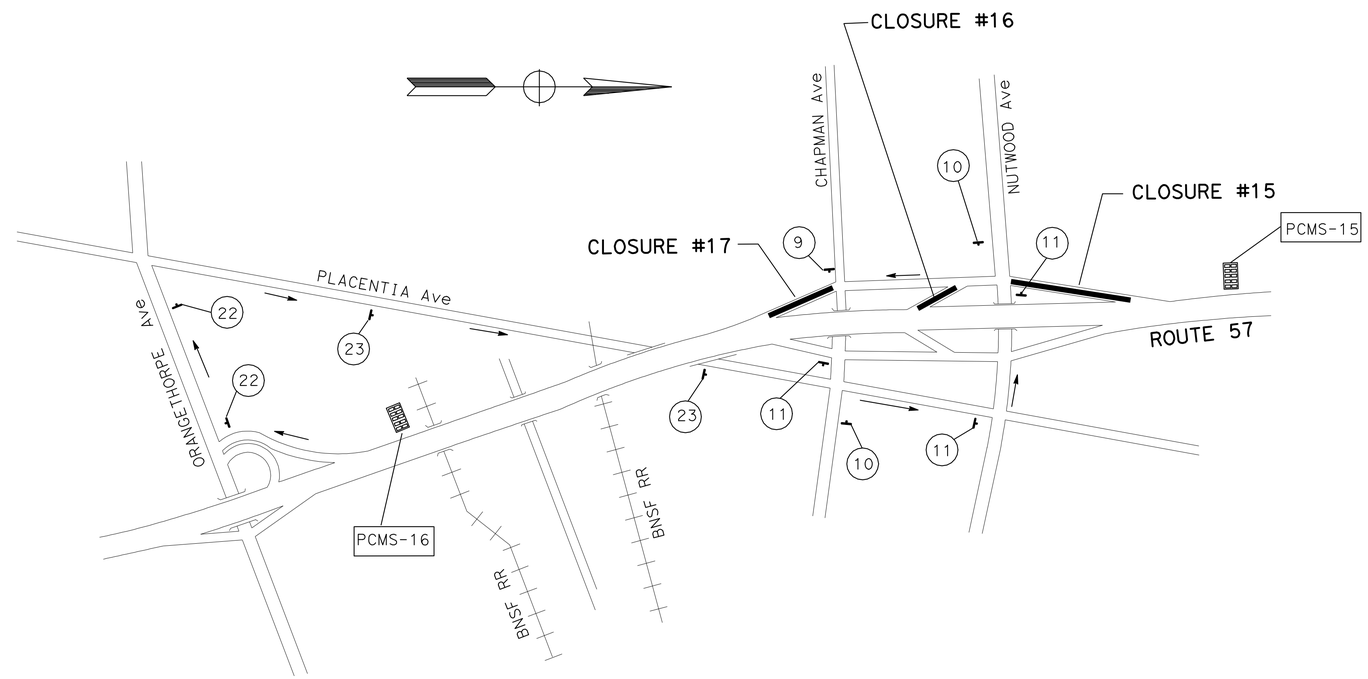
CONTINUE ON FRONTAGE ROAD TO CHAPMAN Ave ON-RAMP

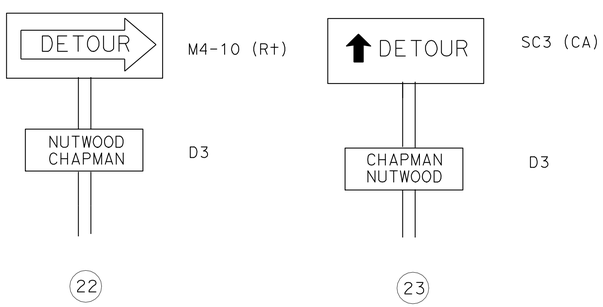
CLOSURE #17:

RAMP - CHAPMAN Ave ON-RAMP

DETOUR:

1. EB CHAPMAN Ave - LEFT ON PLACENTIA Ave AND LEFT ON NUTWOOD Ave
2. WB CHAPMAN Ave - RIGHT ON PLACENTIA Ave AND LEFT ON NUTWOOD Ave





THIS PLAN ACCURATE FOR TRAFFIC HANDLING ONLY.

TRAFFIC HANDLING PLAN (DETOUR)

NO SCALE

TH-9

REVISED BY	DATE REVISED
ANH TRAN	11-18-10

CALCULATED-DESIGNED BY: PHAT TRAN
CHECKED BY: AHMED ABBAS
FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

LAST REVISION 12-02-10 | DATE PLOTTED => 03-FEB-2011 | TIME PLOTTED => 07:00

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	18	52

REGISTERED CIVIL ENGINEER 12-08-10 DATE

1-31-11
PLANS APPROVAL DATE

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

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

NOTES:

DURING THE YORBA LINDA Blvd OFF-RAMP CLOSURE, THE PCMS SHOULD READ AS FOLLOWS:

YORBA LINDA Blvd CLOSED USE NUTWOOD Ave	YORBA LINDA Blvd EXIT HERE
PCMS-17	PCMS-18

CLOSURE #18:

RAMP - YORBA LINDA Blvd OFF-RAMP

DETOUR:

EXIT SB ROUTE 57 NUTWOOD Ave OFF-RAMP, RIGHT ON NUTWOOD Ave

AND RIGHT ON STATE COLLEGE Blvd

CLOSURE #19:

RAMP - YORBA LINDA Blvd LOOP ON-RAMP

DETOUR:

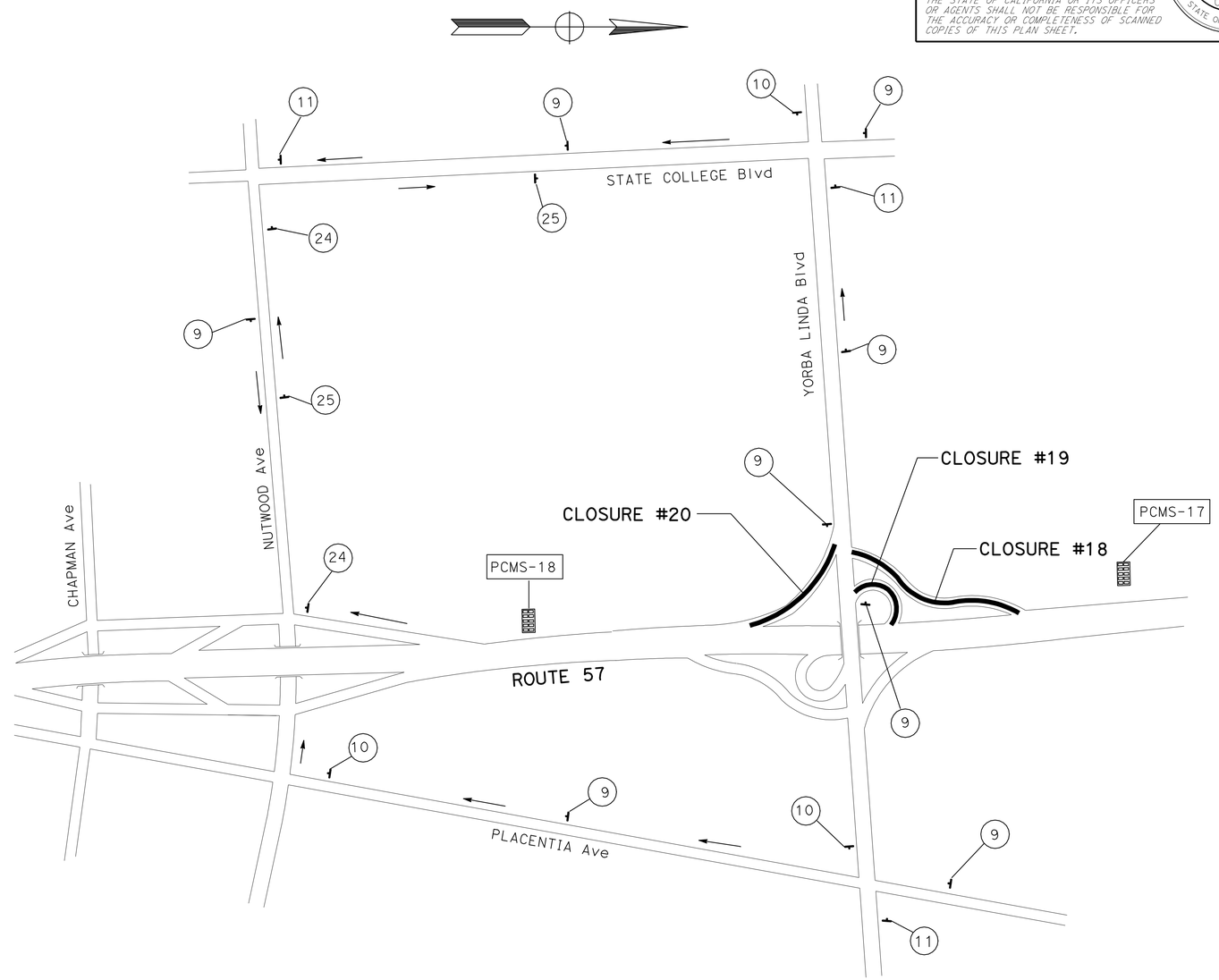
1. WB YORBA LINDA Blvd, LEFT ON PLACENTIA Ave AND RIGHT ON NUTWOOD Ave
2. WB YORBA LINDA Blvd, LEFT ON STATE COLLEGE Blvd AND LEFT ON NUTWOOD Ave

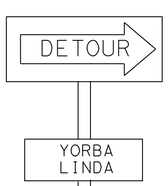
CLOSURE #20:

RAMP - YORBA LINDA ON-RAMP

DETOUR:

1. EB YORBA LINDA Blvd, RIGHT ON STATE COLLEGE Blvd AND LEFT ON NUTWOOD Ave
2. EB YORBA LINDA Blvd, RIGHT ON PLACENTIA Ave AND RIGHT ON NUTWOOD Ave

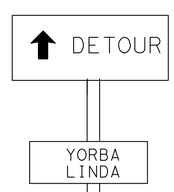




M4-10 (Rt)

D3

24



SC3 (CA)

D3

25

THIS PLAN ACCURATE FOR TRAFFIC HANDLING ONLY.

TRAFFIC HANDLING PLAN (DETOUR)

NO SCALE

TH-10

REVISED BY	DATE REVISED
ANH TRAN	11-18-10

CALCULATED-DESIGNED BY: PHAT TRAN
CHECKED BY: AHMED ABBAS
FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

LAST REVISION 12-02-10
DATE PLOTTED => 03-FEB-2011
TIME PLOTTED => 07:00

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	19	52

REGISTERED CIVIL ENGINEER 12-08-10 DATE

1-31-11
PLANS APPROVAL DATE

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

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

NOTES:

DURING THE IMPERIAL Hwy OFF-RAMP CLOSURE, THE PCMS SHOULD READ AS FOLLOWS:

IMPERIAL Hwy CLOSED USE YORBA LINDA Blvd	IMPERIAL Hwy EXIT HERE
PCMS-19	PCMS-20

CLOSURE #21:

RAMP - IMPERIAL Hwy OFF-RAMP

DETOUR:

EXIT YORBA LINDA Blvd OFF-RAMP, RIGHT ON YORBA LINDA Blvd AND RIGHT ON STATE COLLEGE Blvd

CLOSURE #22:

RAMP - IMPERIAL Hwy LOOP ON-RAMP

DETOUR:

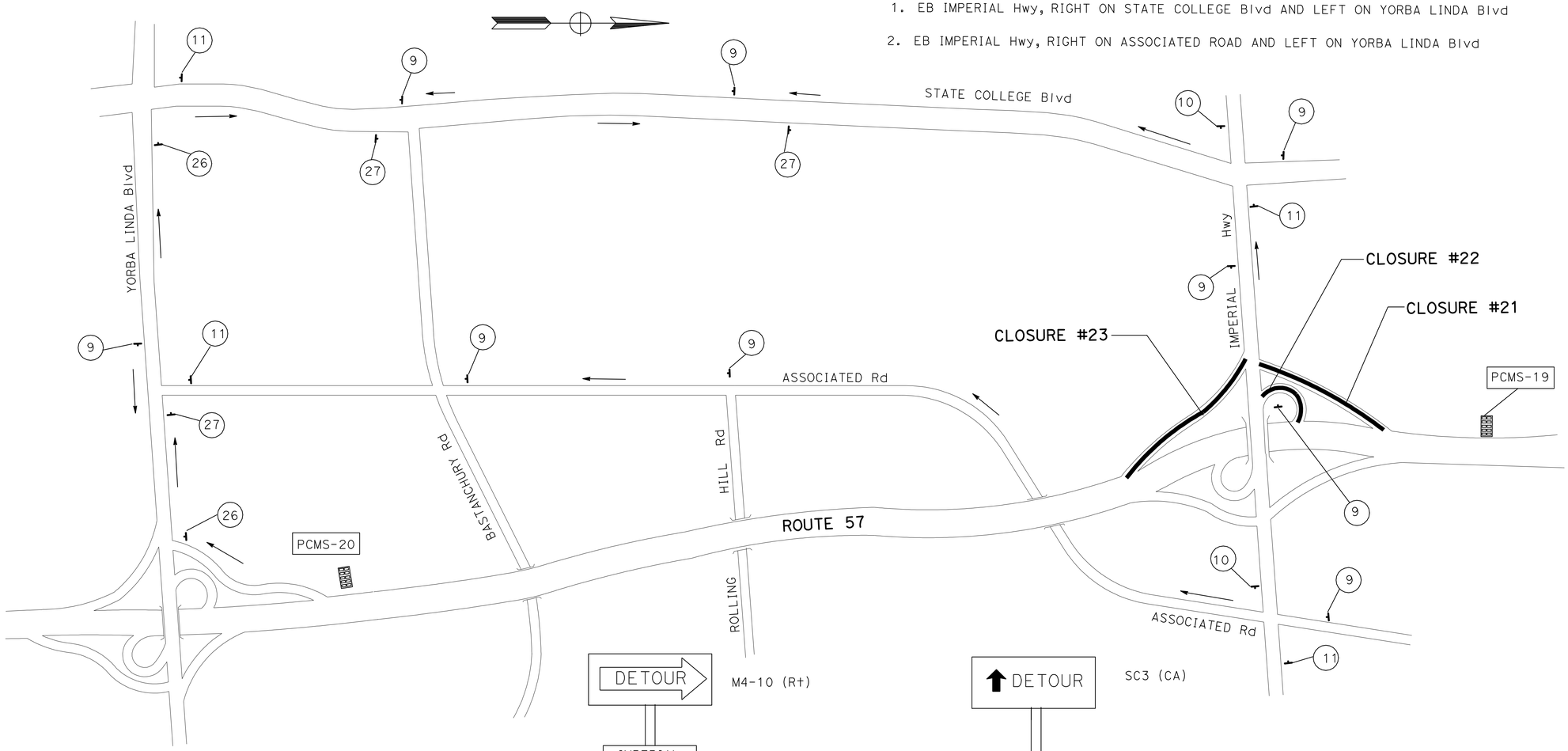
1. WB IMPERIAL Hwy, LEFT ON STATE COLLEGE Blvd AND LEFT ON YORBA LINDA Blvd
2. WB IMPERIAL Hwy, LEFT ON ASSOCIATED Rd AND LEFT ON YORBA LINDA Blvd

CLOSURE #23:

RAMP - IMPERIAL Hwy ON-RAMP

DETOUR:

1. EB IMPERIAL Hwy, RIGHT ON STATE COLLEGE Blvd AND LEFT ON YORBA LINDA Blvd
2. EB IMPERIAL Hwy, RIGHT ON ASSOCIATED ROAD AND LEFT ON YORBA LINDA Blvd



THIS PLAN ACCURATE FOR TRAFFIC HANDLING ONLY.

TRAFFIC HANDLING PLAN (DETOUR)

NO SCALE

TH-11

ANH TRAN	11-18-10		
REVISED BY	DATE REVISED		
PHAT TRAN	AHMED ABBAS		
CALCULATED-DESIGNED BY	CHECKED BY		
FUNCTIONAL SUPERVISOR	MASSOUD TAJIK		
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	MAINTENANCE	Caltrans	

LAST REVISION 12-02-10 | DATE PLOTTED => 03-FEB-2011 | TIME PLOTTED => 14:54

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	20	52

Anh Tran 12-08-10
REGISTERED CIVIL ENGINEER DATE

1-31-11
PLANS APPROVAL DATE

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

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

NOTES:

DURING THE LAMBERT Rd OFF-RAMP CLOSURE, THE PCMS SHOULD READ AS FOLLOWS:

LAMBERT Rd CLOSED USE IMPERIAL Hwy	LAMBERT Rd EXIT HERE
PCMS-21	PCMS-22

CLOSURE #24:

RAMP - LAMBERT Rd OFF-RAMP

DETOUR:

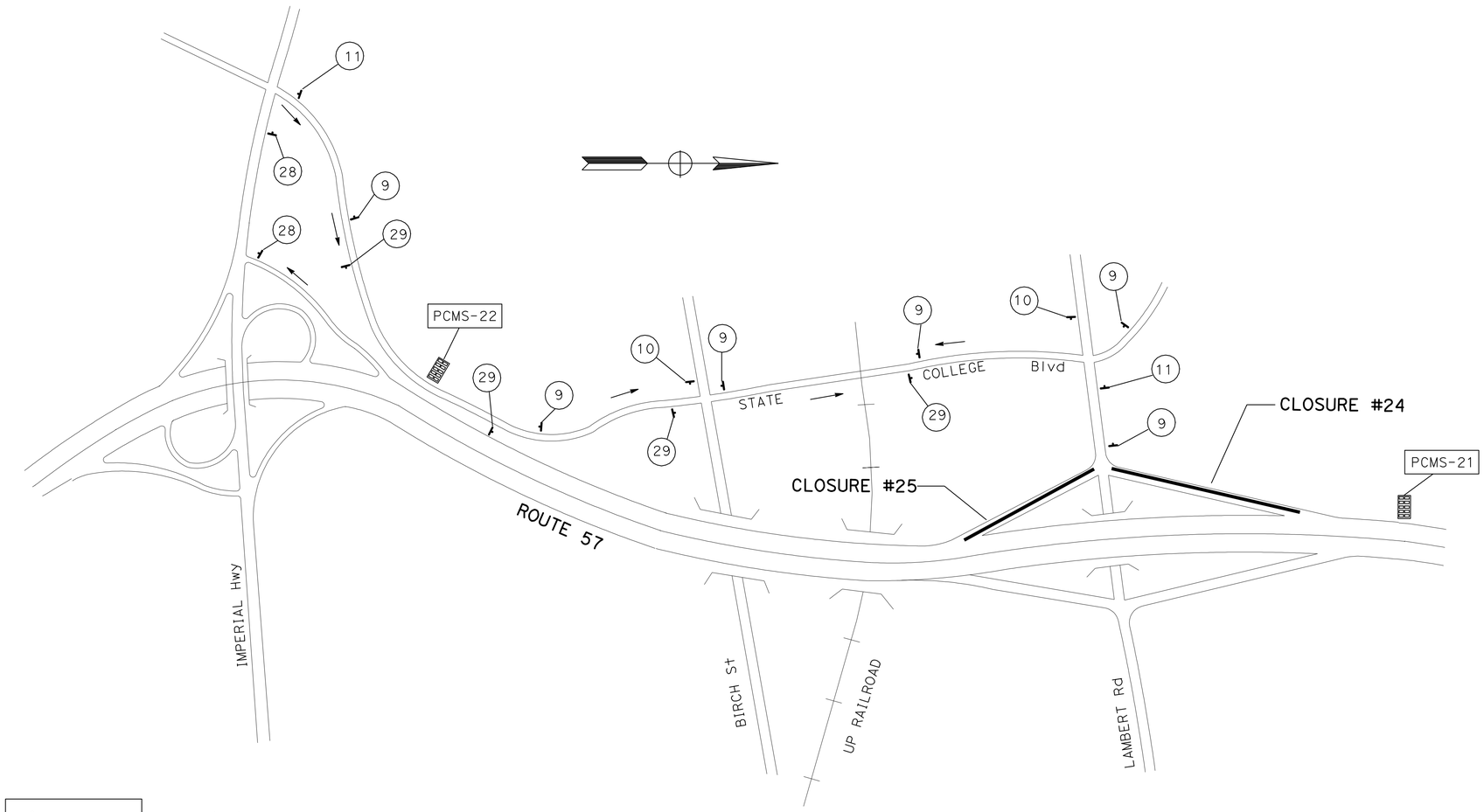
EXIT IMPERIAL Hwy OFF-RAMP, RIGHT ON IMPERIAL Hwy AND RIGHT ON STATE COLLEGE Blvd

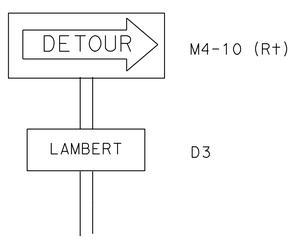
CLOSURE #25:

RAMP - LAMBERT Rd ON-RAMP

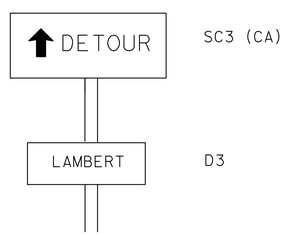
DETOUR:

1. EB LAMBERT Rd, RIGHT ON STATE COLLEGE Blvd AND LEFT ON IMPERIAL Hwy
2. WB LAMBERT Rd, LEFT ON STATE COLLEGE Blvd AND LEFT ON IMPERIAL HWY





28



29

THIS PLAN ACCURATE FOR TRAFFIC HANDLING ONLY.

TRAFFIC HANDLING PLAN (DETOUR)

NO SCALE

TH-12

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
MAINTENANCE

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK
CALCULATED-DESIGNED BY: KHALEDA AKANS
CHECKED BY: AHMED ABBAS
REVISED BY: ANH TRAN
DATE REVISED: 11-18-10

LAST REVISION 12-02-10
DATE PLOTTED => 02-FEB-2011
TIME PLOTTED => 14:19

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	21	52

Anh Tran 12-08-10
REGISTERED CIVIL ENGINEER DATE

1-31-11
PLANS APPROVAL DATE

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

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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 (Lt)	1-4" X 6"	1
	G28-2		
	M3-4		
2	SC3 (CA)	1-4" X 6"	4
	G28-2		
	M3-4		
3	M4-10 (Rt)	1-4" X 6"	1
	G28-2		
	M3-4		
4	M4-10 (Lt)	1-4" X 6"	1
	D3		
5	SC3 (CA)	1-4" X 6"	3
	D3		
6	M4-10 (Rt)	1-4" X 6"	1
	D3		
7	M4-10 (Lt)	1-4" X 6"	2
	D3		
8	SC3 (CA)	1-4" X 6"	3
	D3		
9	SC3 (CA)	1-4" X 6"	59
	G28-2		
	M3-3		
10	M4-10 (Rt)	1-4" X 6"	17
	G28-2		
	M3-3		
11	M4-10 (Lt)	1-4" X 6"	24
	G28-2		
	M3-3		
12	M4-10 (Rt)	1-4" X 6"	2
	D3		
13	SC3 (CA)	1-4" X 6"	1
	D3		
14	M4-10 (Rt)	1-4" X 6"	2
	D3		

CONSTRUCTION AREA SIGNS (DETOUR) STATIONARY MOUNTED

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

TRAFFIC HANDLING QUANTITIES (DETOUR)

THQ-1

REVISED BY	DATE REVISED
ANH TRAN	11-18-10

KHALEDA AKANS
AHMED ABBAS
CALCULATED-DESIGNED BY
CHECKED BY
FUNCTIONAL SUPERVISOR
MASSOUD TAJIK

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

LAST REVISION 12-02-10 | DATE PLOTTED => 03-FEB-2011 | TIME PLOTTED => 14:54

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	22	52

Anh Tran 12-08-10
REGISTERED CIVIL ENGINEER DATE

1-31-11
PLANS APPROVAL DATE

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

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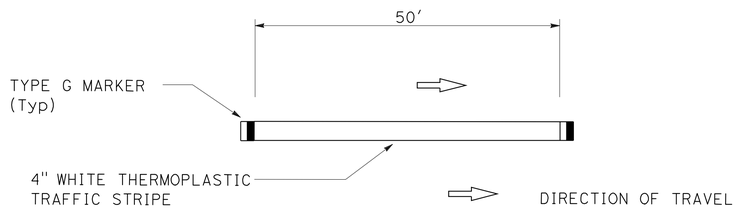
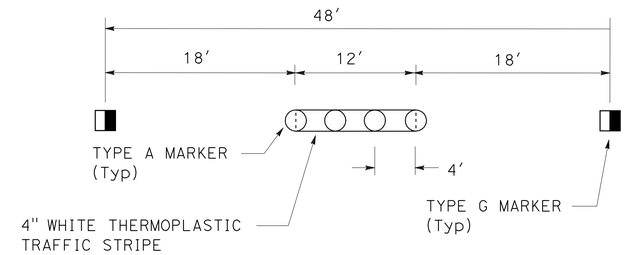
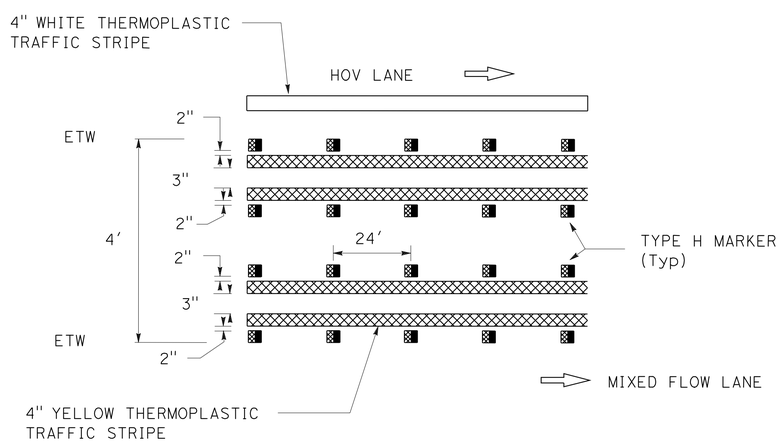


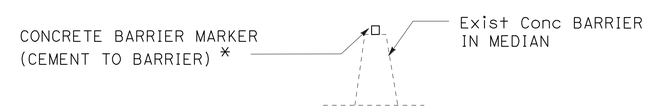
DETAIL A (ON-RAMP)



DETAIL 13 Mod



DETAIL B (HOV)



CONCRETE BARRIER MARKER

* EXACT LOCATION OF BARRIER MARKER WILL BE DETERMINED BY THE ENGINEER.

PAVEMENT DELINEATION DETAILS

NO SCALE

PDD-1

REVISED BY	DATE REVISED
ANH TRAN	11-18-10

CALCULATED-DESIGNED BY	CHECKED BY
PHAT TRAN	ANH TRAN

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

LAST REVISION 12-02-10
DATE PLOTTED => 02-FEB-2011
TIME PLOTTED => 14:19

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	23	52

Anh Tran 12-08-10
REGISTERED CIVIL ENGINEER DATE

1-31-11
PLANS APPROVAL DATE

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

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

LOCATION	THERMOPLASTIC TRAFFIC STRIPE									PAVEMENT MARKER				THERMOPLASTIC PAVEMENT MARKING					CONCRETE BARRIER MARKER	REMOVE YELLYOW THERMOPLASTIC TRAFFIC STRIPE (HAZARDOUS WASTE)	REMOVE PAVEMENT MARKER
	4"							8"		NON-REFLECTIVE	RETROREFLECTIVE										
	DETAIL 8	DETAIL 9	DETAIL 13 Mod	DETAIL A	DETAIL 27B	DETAIL B	DETAIL 25A	DETAIL 36	DETAIL 37	TYPE A	TYPE C	TYPE G	TYPE H	TYPE I ARROW	TYPE IV ARROW	12" SOLID WHITE DIAGONAL	LIMIT LINE	WORD			
	BROKEN WHITE (17-7)		BROKEN WHITE (36-12)	SOLID WHITE		SOLID YELLOW		SOLID WHITE	BROKEN WHITE (12-3)												
	LF	LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	SQFT	SQFT	SQFT	SQFT	SQFT	EA	LF	EA
SB ROUTE 57 TO HOV SB ROUTE 5			36		72				72	40	4	10							57		54
CHAPMAN Ave UC TO ORANGEWOOD Ave UC			78		18					36		7							61		43
KATELLA Ave UC TO CERRITOS Ave OH			132		36			18		40		11							127		51
CERRITOS Ave OH TO BALL Rd OC			310		126			18		76		20							49		96
BALL Rd OC TO WAGNER Ave OC			178		78	40				68		17	4						56	40	89
WAGNER Ave OC TO SOUTH St OC			18		18					4		1							54		5
SOUTH St OC TO LINCOLN Ave OC			40		20					16		4							39		20
LINCOLN Ave OC TO LA PALMA Ave UC			20							8		2							71		10
LA PALMA Ave UC TO ROUTE 57/91 SEPARATION			40		10	40				16		4	4						19	40	24
ROUTE 57/91 SEPARATION TO MIRALOMA Ave OC			66			40				20		5	4						34	40	29
WB ORANGETHORPE Ave TO SB ROUTE 57 ON-RAMP		275		50	760		670	268				17	28	93	126		140	24	1	670	45
CROWTHER Ave UC TO PLACENTIA Ave UC			144		36					32		8							127		40
PLACENTIA Ave UC TO CHAPMAN Ave UC			54		18					12		3							29		15
CHAPMAN Ave UC TO NUTWOOD Ave UC			234		82					64		16							30		80
NUTWOOD Ave UC TO YORBA LINDA Blvd OC			482		162			82	36	116	2	36							83		154
YORBA LINDA Blvd OC TO BASTANCHURY Rd UC			72		36			18		16		5							56		21
BASTANCHURY Rd UC TO ROLLING HILLS Dr UC			898		342	40				216		54	4						54	40	274
ROLLING HILLS Dr UC TO ASSOCIATED Rd UC			432		288					100		25							29		125
ASSOCIATED Rd UC TO ROUTE 57/90 SEPARATION (IMPERIAL Hwy)			262		154					64		16							30		80
WB IMPERIAL HIGHWAY TO SB ROUTE 57 ON-RAMP	110				935		695	96				4	29	31		77	46		10	695	33
SB ROUTE 57 "B" 641+00 TO "B" 645+50			450		450					38		9							10		47
ROUTE 57/90 SEPARATION (IMPERIAL Hwy) TO BIRCH St UC			648		198			162		144		36							57		180
BIRCH St UC TO LAMBERT Rd UC			438		190			10		105		29							56		138
TONNER CANYON Rd UC TO LOS ANGELES COUNTY LINE			48		28	40				16		4	4						149	40	20
SUBTOTAL	110	275	5080	50	4057	200	1365	672	108	1247	6	343	77	124	126	77	186	24	1288	1565	1673
TOTAL	385		5080		5672			672	108	1247		426				537			1288	1565	1673

PAVEMENT DELINEATION QUANTITIES

NO SCALE

PDQ-1

ANH TRAN	11-18-10
REVISED BY	DATE REVISED
PHAT TRAN	ANH TRAN
CALCULATED-DESIGNED BY	CHECKED BY
FUNCTIONAL SUPERVISOR	MASSOUD TAJIK

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans® **MAINTENANCE**

LAST REVISION 12-02-10 | DATE PLOTTED => 03-FEB-2011 | TIME PLOTTED => 07:21

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	24	52

REGISTERED CIVIL ENGINEER 12-08-10 DATE

1-31-11
PLANS APPROVAL DATE

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

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

DIRECTION	SIGN CODE	PANEL SIZE W x D	SIGN AREA	REMOVE ROADSIDE SIGN PANEL (N)	INSTALL ROADSIDE SIGN PANEL ON EXISTING POST	SINGLE FACED	BACKGROUND		LEGEND		GRAFFITI FILM		SINGLE SHEET ALUMINUM SIGN				SIGN LOCATION
													UNFRAMED		FRAMED		
							SHEETING COLOR	RETRO-REFLECTIVE	SHEETING COLOR	RETRO-REFLECTIVE	STANDARD	PREMIUM	0.063"	0.080"	0.063"	0.080"	
		INCH x INCH	SQFT	EA	EA								SQFT	SQFT	SQFT	SQFT	
SOUTHBOUND	R5-1A	36 x 24	6.00	1	1	X	Y	IX	B	X		X	6.00				ORANGEWOOD SB Rte 57 OFF-RAMP
	R5-1	36 x 36	9.00	1	1	X	R	IX	W	X		X	9.00				
	W13-2	48 x 60	20.00	1	1	X	Y	IX	B	X		X		20.00			
	G77-4	84 X 54	31.50	2	2	X	G	IV	W	X		X				63.00	FROM EB KATELLA Ave TO SB Rte 57 ON-RAMP ON SIDEWALK
	G92	48 x 30	10.00	1	4	X	G	IX	W	X		X		10.00			FROM EB KATELLA Ave TO SB Rte 57 ON-RAMP AT GORE AREA
	G28-2	24 x 25	4.20	1		X	G	III	W			X	4.20				
	M3-3	26 X 12	2.20	1		X	G	III	W			X	2.20				
	M6-2	21 x 15	2.20	1		X	G	III	W			X	2.20				
	R9-3	12 X 18	1.50	3	6	X	W	III	B	X		X	4.50				FROM EB KATELLA Ave TO SB Rte 57 ON-RAMP AT GORE AREA
	R9-3B	18 X 12	1.50	3		X	W	III	B	X		X	4.50				
	W11-2	36 x 36	9.00	1	1	X	Y	III	B	X		X	9.00				
	W13-2	48 x 60	20.00	1	1	X	Y	IX	B	X		X		20.00			KATELLA SB Rte 57 OFF-RAMP
	G92	48 x 30	10.00	1	4	X	G	IX	W	X		X		10.00			BALL SB Rte 57 ON-RAMP
	G28-2	24 x 25	4.20	1		X	G	III	W			X	4.20				
	M3-3	26 X 12	2.20	1		X	G	III	W			X	2.20				
	M6-2	21 x 15	2.20	1		X	G	III	W			X	2.20				
	G28-2	24 x 25	4.20	1	2	X	G	III	W			X	4.20				BALL SB Rte 57 ON-RAMP
	M3-3	26 X 12	2.20	1		X	G	III	W			X	2.20				
	G77-4	84 X 54	31.50	1	1	X	G	IV	W	X		X				31.50	E BALL Rd TO SB Rte 57 ON-RAMP AT GORE AREA
	R61	30 x 30	6.25	1	1	X	W	IX	B	X		X	6.25				BALL SB Rte 57 OFF-RAMP
	W13-2	48 x 60	20.00	1	1	X	Y	IX	B	X		X		20.00			BALL SB Rte 57 OFF-RAMP
	R9-3	12 X 18	1.50	3	6	X	W	III	B	X		X	4.50				LINCOLN Ave TO SB Rte 57 ON-RAMP AT GORE AREA
	R9-3B	18 X 12	1.50	3		X	W	III	B	X		X	4.50				
	W13-2	48 x 60	20.00	1	1	X	Y	IX	B	X		X		20.00			LINCOLN SB Rte 57 OFF-RAMP
	G77-4	84 X 54	31.50	1	1	X	G	IV	W	X		X				31.50	LINCOLN Ave TO SB Rte 57 ON-RAMP AT GORE AREA
	G92	48 x 30	10.00	1	4	X	G	IX	W	X		X		10.00			LINCOLN SB Rte 57 ON-RAMP
	G28-2	24 x 25	4.20	1		X	G	III	W			X	4.20				
	M3-3	26 X 12	2.20	1		X	G	III	W			X	2.20				
	M6-2	21 x 15	2.20	1		X	G	III	W			X	2.20				
	G92	48 x 30	10.00	1	4	X	G	IX	W	X		X		10.00			SB Rte 57 TO EB Rte 91 CONNECTOR
	G28-2	24 x 25	4.20	1		X	G	III	W			X	4.20				
	M3-3	26 X 12	2.20	1		X	G	III	W			X	2.20				
	M6-2	21 x 15	2.20	1		X	G	III	W			X	2.20				
	W13-3	48 x 60	20.00	1	1	X	Y	III	B	X		X		20.00			SB Rte 57 TO WB Rte 91 CONNECTOR
	SUBTOTAL (1)			43	43								89.05	140.00		126.00	

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

NOTE:

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

ABBREVIATIONS:

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

SIGN QUANTITIES

SQ-1

REVISED BY: ANH TRAN | DATE REVISED: 11-18-10
KHALEDA AKANS | AHMED ABBAS
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: MASSOUD TAJIK
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE

LAST REVISION | DATE PLOTTED => 02-FEB-2011 | TIME PLOTTED => 13:34
12-02-10

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	25	52

REGISTERED CIVIL ENGINEER 12-08-10 DATE

1-31-11
PLANS APPROVAL DATE

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

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													UNFRAMED		FRAMED		
							SHEETING COLOR	RETRO-REFLECTIVE	SHEETING COLOR	RETRO-REFLECTIVE	STANDARD	PREMIUM	0.063"	0.080"	0.063"	0.080"	
		INCH x INCH	SQFT	EA	EA								SQFT	SQFT	SQFT	SQFT	
SOUTHBOUND	G28-2	24 x 25	4.20	1	2	X	G	III	W			X	4.20				ORANGETHORPE SB Rte 57 ON-RAMP
	M3-3	26 X 12	2.20	1		X	G	III	W			X	2.20				
	R9-3	12 X 18	1.50	2	4	X	W	III	B	X		X	3.00				ORANGETHORPE Ave SB Rte 57 OFF-RAMP @ GORE AREA
	R9-3B	18 X 12	1.50	2		X	W	III	B	X		X	3.00				
	G77-4	84 X 84	49.00	2	2	X	G	IV	W	X		X				98.00	
	W13-2	48 x 60	20.00	1	1	X	Y	IX	B	X		X		20.00			ORANGETHORPE SB Rte 57 OFF-RAMP
	G28-2	24 x 25	4.20	1	2	X	G	III	W			X	4.20				CHAPMAN SB Rte 57 ON-RAMP
	M3-3	26 X 12	2.20	1		X	G	III	W			X	2.20				
	G77-4	72 x 72	36.00	1	1	X	G	IV	W	X		X			36.00		CHAPMAN Ave @ ENTRANCE TO SB Rte 57
	G77-4	72 x 72	36.00	1	1	X	G	IV	W	X		X			36.00		NUTWOOD SB Rte 57 ON-RAMP
	W11-2	36 x 36	9.00	1	1	X	Y	III	B	X		X	9.00				YORBA LINDA SB Rte 57 ON-RAMP
	G28-2	24 x 25	4.20	1	2	X	G	III	W			X	4.20				IMPERIAL SB Rte 57 ON-RAMP
	M3-3	26 X 12	2.20	1		X	G	III	W			X	2.20				
	W11-2	36 x 36	9.00	1	1	X	Y	III	B	X		X	9.00				IMPERIAL Hwy ON THE SIDEWALK BEFORE SB Rte 57 ON-RAMP ENTRANCE
	G77-4	72 x 108	54.00	1	1	X	G	IV	W	X		X				54.00	
	G92	48 x 30	10.00	1	4	X	G	IX	W	X		X		10.00			WB TONNER CANYON SB Rte 57 ON-RAMP
	G28-2	24 x 25	4.20	1		X	G	III	W			X	4.20				
	M3-3	26 X 12	2.20	1		X	G	III	W			X	2.20				
	M6-2	21 x 15	2.20	1		X	G	III	W			X	2.20				
	G77-4	84 x 48	28.00	2	2	X	G	IV	W	X		X				56.00	TONNER CANYON SB Rte 57 ON-RAMP @ ISLAND
	W4-1	48 x 48	16.00	1	1	X	Y	IX	B	X		X		16.00			TONNER CANYON SB Rte 57 ON-RAMP
	G92	48 x 30	10.00	1	4	X	G	IX	W	X		X		10.00			EB TONNER CANYON SB Rte 57 ON-RAMP
	G28-2	24 x 25	4.20	1		X	G	III	W			X	4.20				
	M3-3	26 X 12	2.20	1		X	G	III	W			X	2.20				
	M6-2	21 x 15	2.20	1		X	G	III	W			X	2.20				
SUB-TOTAL				29	29								60.40	56.00	72.00	208.00	
SUB-TOTAL (1)					43								89.05	140.00		126.00	
TOTAL					72								149.45	196.00	72.00	334.00	

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

SIGN QUANTITIES

SQ-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE

FUNCTIONAL SUPERVISOR: MASSOUD TAJIK
CALCULATED-DESIGNED BY: KHALEDA AKANS
CHECKED BY: AHMED ABBAS
REVISED BY: ANH TRAN
DATE REVISED: 11-18-10

LAST REVISION 12-02-10
DATE PLOTTED => 03-FEB-2011
TIME PLOTTED => 14:54

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	26	52

REGISTERED CIVIL ENGINEER 12-08-10 DATE

1-31-11
PLANS APPROVAL DATE

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

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

ABBREVIATIONS:

P - PARTIAL SLAB

F - FULL SLAB

REPLACE CONCRETE PAVEMENT

DIRECTION	LOCATION	NUMBER OF SLABS TO BE REPLACED (N)										REPLACE CONCRETE PAVEMENT (RAPID STRENGTH CONCRETE)	GROOVE EXIST CONCRETE PAVEMENT	GRIND EXIST CONCRETE PAVEMENT
		LANE 1		LANE 2		LANE 3		LANE 4		LANE 5				
		P	F	P	F	P	F	P	F	P	F	CY	SQYD	SQYD
SOUTHBOUND ROUTE 57	SB ROUTE 57 TO HOV SB ROUTE 5													
	63+68.68								1			6.6		27
	64+87.94								1			6.6		27
	65+07.95								1			6.6		27
	65+67.36								1			6.6		27
	66+73.66				1							5.7		27
	CHAPMAN Ave UC TO ORANGEWOOD Ave UC													
	205+78.69			1								2.9		12
	215+48.89			1		1		1				9.5		36
	231+06.12								1			6.6		27
	KATELLA Ave UC TO CERRITOS Ave OH													
	271+92.71								1			6.6		27
	273+70.64					1						3.3		12
	275+39.45					1						3.3		12
	275+96.38								1			6.6		27
	289+59.62						1		1			13.2		54
	289+79.96			1								2.9		12
	CERRITOS Ave OH TO BALL Rd OC													
	292+37.28						1					6.6		27
	292+57.22						1		1			13.2		54
	292+82.62								1			6.6		27
	292+95.09								1			6.6		27
	295+14.60			1								2.9		12
	300+06.66					1						3.3		12
	SUBTOTAL (1)			4	1	4	3	1	11			126.2		513

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

REPLACE CONCRETE PAVEMENT

DIRECTION	LOCATION	NUMBER OF SLABS TO BE REPLACED (N)										REPLACE CONCRETE PAVEMENT (RAPID STRENGTH CONCRETE)	GROOVE EXIST CONCRETE PAVEMENT	GRIND EXIST CONCRETE PAVEMENT
		LANE 1		LANE 2		LANE 3		LANE 4		LANE 5				
		P	F	P	F	P	F	P	F	P	F	CY	SQYD	SQYD
SOUTHBOUND ROUTE 57	CERRITOS Ave OH TO BALL Rd OC													
	306+19.61								1			6.6		27
	306+98.90								1			6.6		27
	307+42.04						1		1			13.2		54
	308+05.43						1					6.6		27
	308+27.38						1		1			13.2		54
	310+10.56								1			6.6		27
	BALL Rd OC TO WAGNER Ave OC													
	316+17.02								1			6.6		27
	319+28.76							1				3.3		12
	319+50.24							1				3.3		12
	319+63.22							1				3.3		12
	321+09.54			1								2.9		12
	321+44.52							1				3.3		12
	321+59.51							1				3.3		12
	322+54.20					1						3.3		12
	323+28.54	1										2.9		12
	330+63.02					1						3.3		12
	WAGNER Ave OC TO SOUTH St OC													
	344+69.14							1				3.3		12
	350+64.86			1								2.9		12
	366+32.43										1	7.5		27
	SUBTOTAL (2)	1		2		2	3	6	6		1	102.0		402

SUMMARY OF QUANTITIES

Q-1

ANH TRAN	11-18-10	REVISED BY	DATE REVISED
PHAT TRAN	ANH TRAN	CALCULATED-DESIGNED BY	CHECKED BY
FUNCTIONAL SUPERVISOR	MASSOUD TAJIK		

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	27	52

REGISTERED CIVIL ENGINEER DATE 12-08-10

1-31-11
PLANS APPROVAL DATE

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

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

REPLACE CONCRETE PAVEMENT

DIRECTION	STATION	NUMBER OF SLABS TO BE REPLACED (N) LANE 1 P	LANE 1 F	LANE 2 P	LANE 2 F	LANE 3 P	LANE 3 F	LANE 4 P	LANE 4 F	LANE 5 P	LANE 5 F	REPLACE CONCRETE PAVEMENT (RAPID STRENGTH CONCRETE) CY	GROOVE EXIST CONCRETE PAVEMENT SQYD	GRIND EXIST CONCRETE PAVEMENT SQYD
SOUTHBOUND ROUTE 57	SOUTH St OC TO LINCOLN Ave OC													
	370+98.36									1		3.8		12
	375+46.60									1		3.8		12
	384+68.74			1								2.9		12
	LINCOLN Ave OC TO LA PALMA Ave UC													
	400+60.62			1								2.9		12
	LA PALMA Ave UC TO ROUTE 57/91 SEPARATION													
	421+49.15	1										2.9		12
	428+34.65			1		1		1				9.5		36
	ROUTE 57/91 SEPARATION TO MIRALOMA Ave OC													
	431+00.21	1		1		1						9.1		36
	431+88.67						1					6.6		27
	CROWTHER Ave UC TO PLACENTIA Ave UC													
	493+98.77						1					6.6		27
	494+12.22						1		1			13.2		54
	494+27.98						1					6.6		27
	494+40.76						1		1			13.2		54
	PLACENTIA Ave UC TO CHAPMAN Ave UC													
	512+92.03						1					6.6		27
	518+58.65								1			6.6		27
	CHAPMAN Ave UC TO NUTWOOD Ave UC													
	521+47.18				1		1					12.3		54
	523+31.39						1		1			13.2		54
	524+01.94					1			1			9.9		39
	524+16.44								1			6.6		27
	SUBTOTAL (3)	2		4	1	3	8	1	6	2		136.3		549

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

REPLACE CONCRETE PAVEMENT

DIRECTION	STATION	NUMBER OF SLABS TO BE REPLACED (N) LANE 1 P	LANE 1 F	LANE 2 P	LANE 2 F	LANE 3 P	LANE 3 F	LANE 4 P	LANE 4 F	LANE 5 P	LANE 5 F	REPLACE CONCRETE PAVEMENT (RAPID STRENGTH CONCRETE) CY	GROOVE EXIST CONCRETE PAVEMENT SQYD	GRIND EXIST CONCRETE PAVEMENT SQYD
SOUTHBOUND ROUTE 57	CHAPMAN Ave UC TO NUTWOOD Ave UC													
	524+32.02							1				3.3		12
	525+09.08			1								2.9		12
	525+51.88			1								2.9		12
	528+08.90			1								2.9		12
	533+40.94								1			6.6		27
	NUTWOOD Ave UC TO YORBA LINDA Blvd OC													
	536+11.10								1			6.6		27
	538+17.59						1		1			13.2		54
	538+60.29								1			6.6		27
	538+78.32								1			6.6		27
	539+19.83						1		1			13.2		54
	539+40.27						1		1			13.2		54
	539+83.75						1		1			13.2		54
	541+25.57									1		3.8		12
	541+74.26								1			6.6		27
	542+33.16								1			6.6		27
	542+52.87								1			6.6		27
	542+94.71								1			6.6		27
	543+74.79								1			6.6		27
	544+17.94								1			6.6		27
	544+80.88						1					6.6		27
	545+76.93					1						3.3		12
	558+26.22					1						3.3		12
	559+87.79						1		1			13.2		54
	SUBTOTAL (4)			3		2	6	1	15	1		161.0		651

SUMMARY OF QUANTITIES

Q-2

REVISED BY	DATE REVISED
ANH TRAN	11-18-10

CALCULATED-DESIGNED BY: PHAT TRAN
CHECKED BY: ANH TRAN
FUNCTIONAL SUPERVISOR: MASSOUD TAJIK

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
MAINTENANCE

LAST REVISION 12-02-10
DATE PLOTTED => 02-FEB-2011
TIME PLOTTED => 14:29

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	28	52

REGISTERED CIVIL ENGINEER 12-08-10 DATE

1-31-11
PLANS APPROVAL DATE

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

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

REPLACE CONCRETE PAVEMENT

DIRECTION	STATION	NUMBER OF SLABS TO BE REPLACED (N) LANE 1 P	LANE 1 F	LANE 2 P	LANE 2 F	LANE 3 P	LANE 3 F	LANE 4 P	LANE 4 F	LANE 5 P	LANE 5 F	REPLACE CONCRETE PAVEMENT (RAPID STRENGTH CONCRETE) CY	GROOVE EXIST CONCRETE PAVEMENT SQYD	GRIND EXIST CONCRETE PAVEMENT SQYD
SOUTHBOUND ROUTE 57	NUTWOOD Ave UC TO YORBA LINDA Blvd OC													
	561+33.38						1					6.6		27
	562+75.30										1	7.5		27
	YORBA LINDA Blvd OC TO BASTANCHURY Rd UC													
	582+28.01								1			6.6		27
	593+57.68								1			6.6		27
	594+60.12						1		1			13.2		54
	BASTANCHURY Rd UC TO ROLLING HILLS Dr UC													
	603+76.12						1					6.6		27
	607+21.18	1										2.9		12
	607+52.38								1			6.6		27
	607+67.89					1						3.3		12
	608+75.57						1		1			13.2		54
	610+03.61						1		1			13.2		54
	610+69.44						1					6.6		27
	611+27.55						1					6.6		27
	613+40.97						1					6.6		27
	614+37.47						1		1			13.2		54
	614+64.69						1					6.6		27
	614+99.71						1		1			13.2		54
	615+42.25								1			6.6		27
	615+61.68								1			6.6		27
	616+05.01								1			6.6		27
	616+22.27								1			6.6		27
	616+39.55						1					6.6		27
	616+66.95								1			6.6		27
	616+85.70								1			6.6		27
	617+27.92								1			6.6		27
	617+48.35						1		1			13.2		54
	SUBTOTAL (5)	1				1	13		16		1	205.1		834

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

REPLACE CONCRETE PAVEMENT

DIRECTION	STATION	NUMBER OF SLABS TO BE REPLACED (N) LANE 1 P	LANE 1 F	LANE 2 P	LANE 2 F	LANE 3 P	LANE 3 F	LANE 4 P	LANE 4 F	LANE 5 P	LANE 5 F	REPLACE CONCRETE PAVEMENT (RAPID STRENGTH CONCRETE) CY	GROOVE EXIST CONCRETE PAVEMENT SQYD	GRIND EXIST CONCRETE PAVEMENT SQYD
SOUTHBOUND ROUTE 57	BASTANCHURY Rd UC TO ROLLING HILLS Dr UC													
	617+87.93								1			6.6		27
	618+08.78								1			6.6		27
	620+09.98					1						3.3		12
	623+06.76						1					6.6		27
	623+22.90						1					6.6		27
	623+70.76								1			6.6		27
	624+15.94						1		1			13.2		54
	624+76.92						1					6.6		27
	624+96.85						1					6.6		27
	626+23.97								1			6.6		27
	626+24.99					1						3.3		12
	ROLLING HILLS Dr UC TO ASSOCIATED Rd UC													
	630+12.97								1			6.6		27
	630+31.21								1			6.6		27
	631+09.92								1			6.6		27
	633+44.62						1		1			13.2		54
	633+87.76								1			6.6		27
	634+51.49						1		1			13.2		54
	634+68.60						1		1			13.2		54
	635+12.44								1			6.6		27
	635+30.59								1			6.6		27
	SUBTOTAL (6)					2	8		14			151.8		618

SUMMARY OF QUANTITIES

Q-3

REVISED BY	DATE REVISED	CALCULATED-DESIGNED BY	CHECKED BY	FUNCTIONAL SUPERVISOR
ANH TRAN	11-18-10	PHAT TRAN	ANH TRAN	MASSOUD TAJIK

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE

LAST REVISION 12-02-10 | DATE PLOTTED => 02-FEB-2011 | TIME PLOTTED => 14:29

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	29	52

REGISTERED CIVIL ENGINEER DATE 12-08-10

PLANS APPROVAL DATE 1-31-11

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

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

REPLACE CONCRETE PAVEMENT

DIRECTION	STATION	NUMBER OF SLABS TO BE REPLACED (N) LANE 1 P	LANE 1 F	LANE 2 P	LANE 2 F	LANE 3 P	LANE 3 F	LANE 4 P	LANE 4 F	LANE 5 P	LANE 5 F	REPLACE CONCRETE PAVEMENT (RAPID STRENGTH CONCRETE) CY	GROOVE EXIST CONCRETE PAVEMENT SQYD	GRIND EXIST CONCRETE PAVEMENT SQYD
SOUTHBOUND ROUTE 57	ROLLING HILLS Dr UC TO ASSOCIATED Rd UC													
	636+21.33								1			6.6		27
	636+37.97						1		1			13.2		54
	636+54.89								1			6.6		27
	637+05.98						1		1			13.2		54
	637+23.81						1					6.6		27
	637+35.62						1		1			13.2		54
	637+51.49						1					6.6		27
	638+32.81								1			6.6		27
	ASSOCIATED Rd UC TO ROUTE 57/90 SEPARATION (IMPERIAL Hwy)													
	645+27.50						1					6.6		27
	645+72.99						1					6.6		27
	647+10.86								1			6.6		27
	647+25.74							1				3.3		12
	649+34.99								1			6.6		27
	649+53.42								1			6.6		27
	651+76.32								1			6.6		27
	651+94.73								1			6.6		27
	653+00.13								1			6.6		27
	653+77.32								1			6.6		27
	654+20.38								1			6.6		27
	655+48.00						1					6.6		27
	ROUTE 57/90 SEPARATION (IMPERIAL Hwy) TO BIRCH St UC													
	655+60.46						1		1			13.2	54	54
	655+73.69								1			6.6	27	27
	SUBTOTAL (7)						9	1	16			168.3	81	687

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

REPLACE CONCRETE PAVEMENT

DIRECTION	STATION	NUMBER OF SLABS TO BE REPLACED (N) LANE 1 P	LANE 1 F	LANE 2 P	LANE 2 F	LANE 3 P	LANE 3 F	LANE 4 P	LANE 4 F	LANE 5 P	LANE 5 F	REPLACE CONCRETE PAVEMENT (RAPID STRENGTH CONCRETE) CY	GROOVE EXIST CONCRETE PAVEMENT SQYD	GRIND EXIST CONCRETE PAVEMENT SQYD
SOUTHBOUND ROUTE 57	ROUTE 57/90 SEPARATION (IMPERIAL Hwy) TO BIRCH St UC													
	655+86.48								1			6.6	27	27
	656+01.17						1		1			13.2	54	54
	656+20.94						1		1			13.2	54	54
	657+26.27						1		1			13.2	54	54
	657+44.80						1		1			13.2	54	54
	657+87.65						1		1			13.2	54	54
	658+05.44						1		1			13.2	54	54
	658+20.38								1			6.6	27	27
	658+49.23						1		1			13.2	54	54
	658+67.46						1		1			13.2	54	54
	658+92.69								1			6.6	27	27
	659+07.78						1		1			13.2	54	54
	659+27.67						1		1			13.2	54	54
	659+69.40						1		1			13.2	54	54
	660+49.33						1		1			13.2	54	54
	660+90.24						1		1			13.2	54	54
	661+07.37						1		1			13.2	54	54
	661+27.92						1		1			13.2	54	54
	681+15.75							1				3.3	12	12
	BIRCH St UC TO LAMBERT Rd UC													
	685+38.90								1			6.6	27	27
	686+03.37								1			6.6	27	27
	686+22.11						1		1			13.2	54	54
	686+65.23								1			6.6	27	27
	SUBTOTAL (8)						16	1	22			254.1	1038	1038

SUMMARY OF QUANTITIES

Q-4

REVISED BY	DATE REVISED	PHAT TRAN	ANH TRAN	CALCULATED-DESIGNED BY	CHECKED BY	FUNCTIONAL SUPERVISOR
ANH TRAN	11-18-10	ANH TRAN				MASSOUD TAJIK

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans® MAINTENANCE

LAST REVISION 12-02-10 | DATE PLOTTED => 02-FEB-2011 | TIME PLOTTED => 14:29

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	30	52

REGISTERED CIVIL ENGINEER DATE 12-08-10

PLANS APPROVAL DATE 1-31-11

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

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

REPLACE CONCRETE PAVEMENT

DIRECTION	STATION	NUMBER OF SLABS TO BE REPLACED (N)										REPLACE CONCRETE PAVEMENT (RAPID STRENGTH CONCRETE)	GROOVE EXIST CONCRETE PAVEMENT	GRIND EXIST CONCRETE PAVEMENT
		LANE 1		LANE 2		LANE 3		LANE 4		LANE 5				
		P	F	P	F	P	F	P	F	P	F	CY	SQYD	SQYD
SOUTHBOUND ROUTE 57	BIRCH St UC TO LAMBERT Rd UC													
	687+77.23						1					6.6	27	27
	689+01.80					1						3.3	12	12
	691+11.82						1					6.6	27	27
	691+74.90						1					6.6	27	27
	692+35.35								1			6.6	27	27
	693+19.56								1			6.6	27	27
	693+32.35								1			6.6	27	27
	693+39.97								1			6.6	27	27
	700+41.50						1					6.6	27	27
	700+63.18					1		1				6.6	24	24
	TONNER CANYON Rd UC TO LOS ANGELES COUNTY LINE													
	779+89.72	1										2.9	12	12
	782+16.04								1			6.6	27	27
	782+21.11					1		1				6.6	24	24
	106+58.62							1				3.3	12	12
SUBTOTAL		1				3	4	3	5			82.1	327	327
SUBTOTAL (8)							16	1	22			254.1	1038	1038
SUBTOTAL (7)							9	1	16			168.3	81	687
SUBTOTAL (6)						2	8		14			151.8		618
SUBTOTAL (5)		1				1	13		16		1	205.1		834
SUBTOTAL (4)				3		2	6	1	15	1		161.0		651
SUBTOTAL (3)		2		4	1	3	8	1	6	2		136.3		549
SUBTOTAL (2)		1		2		2	3	6	6		1	102.0		402
SUBTOTAL (1)				4	1	4	3	1	11			126.2		513
TOTAL												1386.9	1446	5619

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

RUBBERIZED HOT MIX ASPHALT PAVEMENT

LOCATION	COLD PLANE ASPHALT CONCRETE PAVEMENT	RUBBERIZED HOT MIX ASPHALT (GAP GRADED)	TACK COAT
	SQYD	TON	TON
WB ORANGETHORPE Ave TO SB ROUTE 57 ON-RAMP "F" 3+40 TO "F" 11+23	2430	306	1.3
WB IMPERIAL HIGHWAY TO SB ROUTE 57 ON-RAMP "J" 15+65 TO "J" 25+76.80	2640	333	1.4
SB ROUTE 57 "B" 641+00 TO "B" 645+50	680	85	0.5
TOTAL	5750	724	3.2

HMA DIKE AND MBGR

LOCATION	PLACE HOT MIX ASPHALT DIKE		HOT MIX ASPHALT (TYPE A)	REMOVE ASPHALT CONCRETE DIKE	METAL BEAM GUARD RAILING (WOOD POST)	ALTERNATIVE FLARED TERMINAL SYSTEM	END ANCHOR ASSEMBLY (TYPE SFT)
	TYPE C	TYPE F					
	LF	LF	TON	LF	LF	EA	EA
WB BALL ROAD TO SB ROUTE 57 ON-RAMP "D" 18+38 TO "D" 19+38	60	40	2	100	40	1	1
TOTAL	60	40	2	100	40	1	1

SUMMARY OF QUANTITIES

Q-5

REVISED BY ANH TRAN | DATE REVISED 08-31-10
CALCULATED-DESIGNED BY PHAT TRAN | CHECKED BY ANH TRAN
FUNCTIONAL SUPERVISOR MASSOUD TAJIK
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE

LAST REVISION 12-02-10 | DATE PLOTTED => 03-FEB-2011 | TIME PLOTTED => 07:27

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	31	52

12-08-10
REGISTERED ELECTRICAL ENGINEER DATE

1-31-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SHAHRAM SHAHRIARI
No. E13485
Exp. 9/30/12
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.

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

NOTES: (THIS SHEET)

1. EXISTING MODEL 170 CONTROLLER ASSEMBLY.
2. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF EXISTING LOOPS PRIOR TO CUTTING NEW LOOPS. INSTALL CONDUIT STUB OUT.
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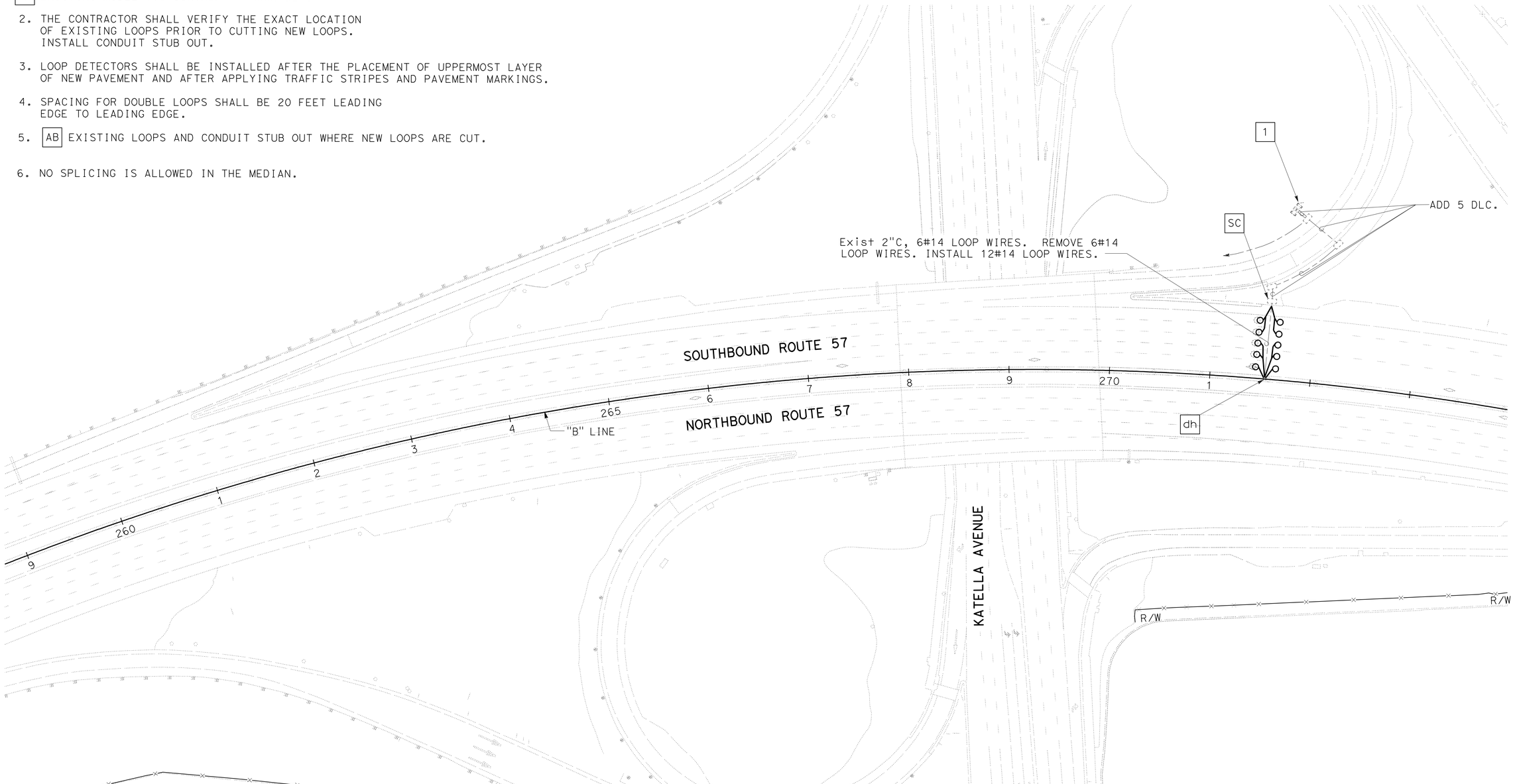

INDUCTIVE LOOP DETECTOR

SCALE: 1" = 50'

E-1

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

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

FUNCTIONAL SUPERVISOR: SHAHRAM SHAHRIARI
CALCULATED-DESIGNED BY: FRANCIS M. ALVIAR
CHECKED BY: VANESSA V. TRUONG
REVISED BY
DATE REVISED

LAST REVISION 11-18-10 | DATE PLOTTED => 02-FEB-2011 | TIME PLOTTED => 14:14

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	32	52

12-08-10
REGISTERED ELECTRICAL ENGINEER DATE

1-31-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SHAHRAM SHAHRIARI
No. E13485
Exp. 9/30/12
ELECTRICAL
STATE OF CALIFORNIA

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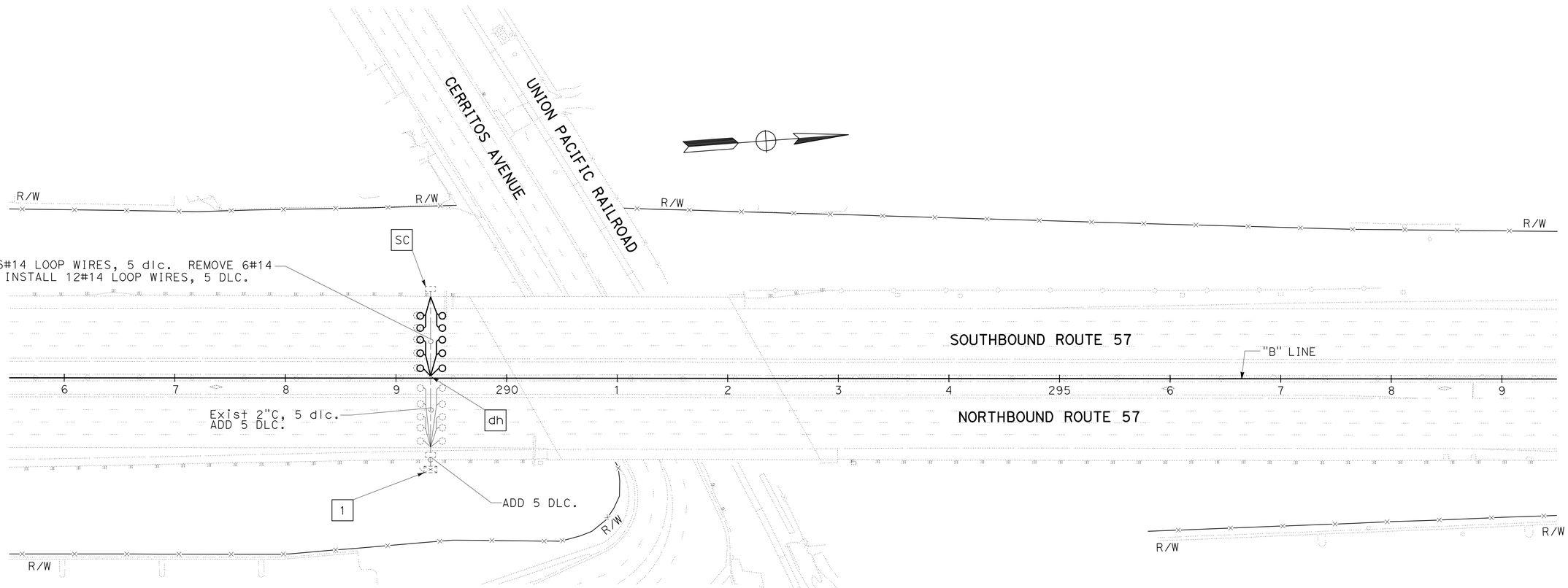

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INDUCTIVE LOOP DETECTOR

SCALE: 1" = 50'

E-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
ELECTRICAL DESIGN
FUNCTIONAL SUPERVISOR: SHAHRAM SHAHRIARI
CALCULATED-DESIGNED BY: FRANCIS M. ALVIAR
CHECKED BY: VANESSA V. TRUONG
REVISED BY
DATE REVISED

LAST REVISION 11-18-10
DATE PLOTTED => 02-FEB-2011
TIME PLOTTED => 14:17

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	33	52

12-08-10
REGISTERED ELECTRICAL ENGINEER DATE

1-31-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SHAHRAM SHAHRIARI
No. E13485
Exp. 9/30/12
ELECTRICAL
STATE OF CALIFORNIA

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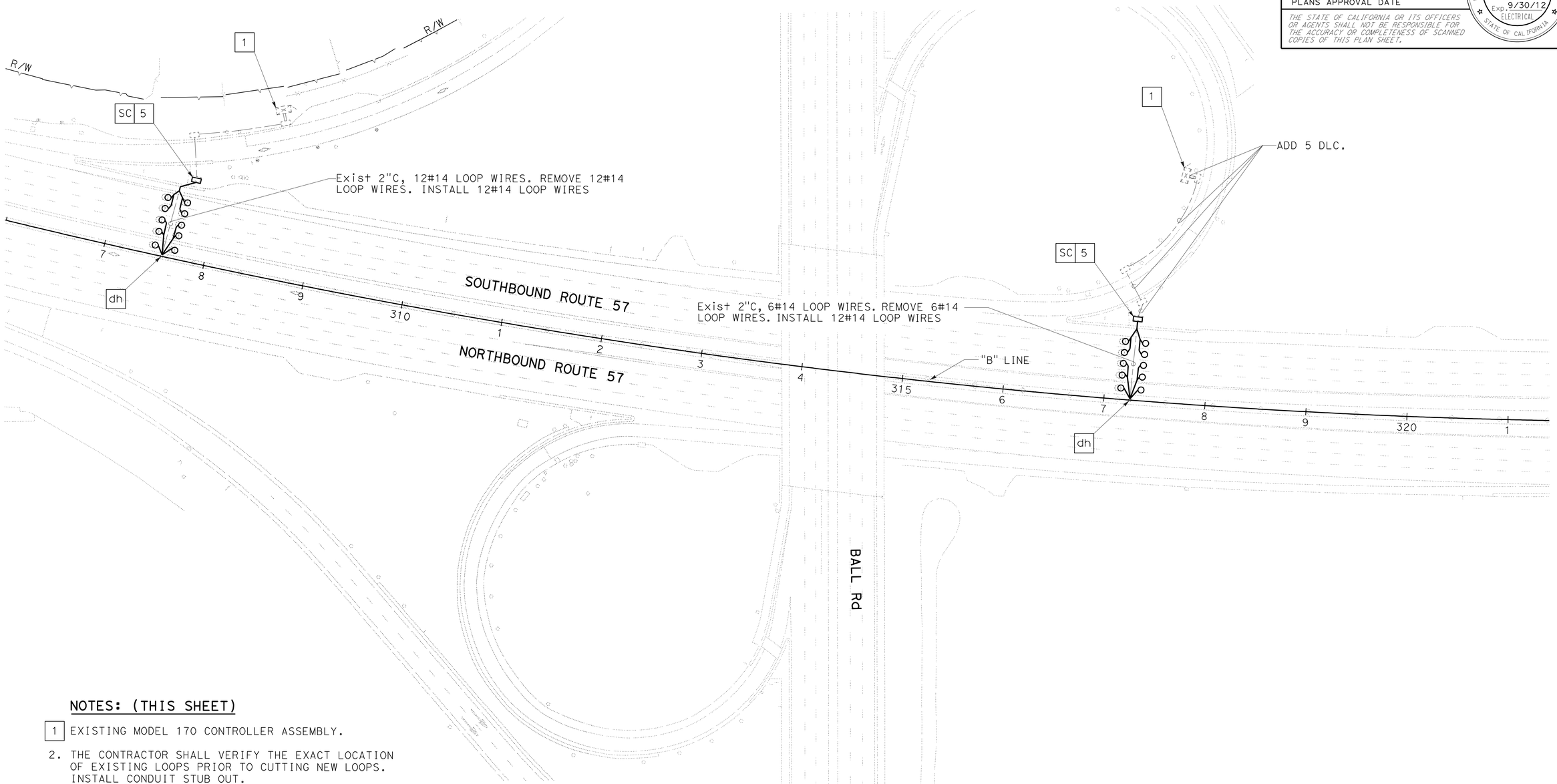

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THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

INDUCTIVE LOOP DETECTOR

SCALE: 1" = 50'

E-3

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

FUNCTIONAL SUPERVISOR: SHAHRAM SHAHRIARI
CALCULATED-DESIGNED BY: FRANCIS M. ALVIAR
CHECKED BY: VANESSA V. TRUONG
REVISED BY
DATE REVISED

LAST REVISION 11-18-10
DATE PLOTTED => 02-FEB-2011
TIME PLOTTED => 14:10

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	34	52

12-08-10
REGISTERED ELECTRICAL ENGINEER DATE

1-31-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SHAHRAM SHAHRIARI
No. E13485
Exp. 9/30/12
ELECTRICAL
STATE OF CALIFORNIA

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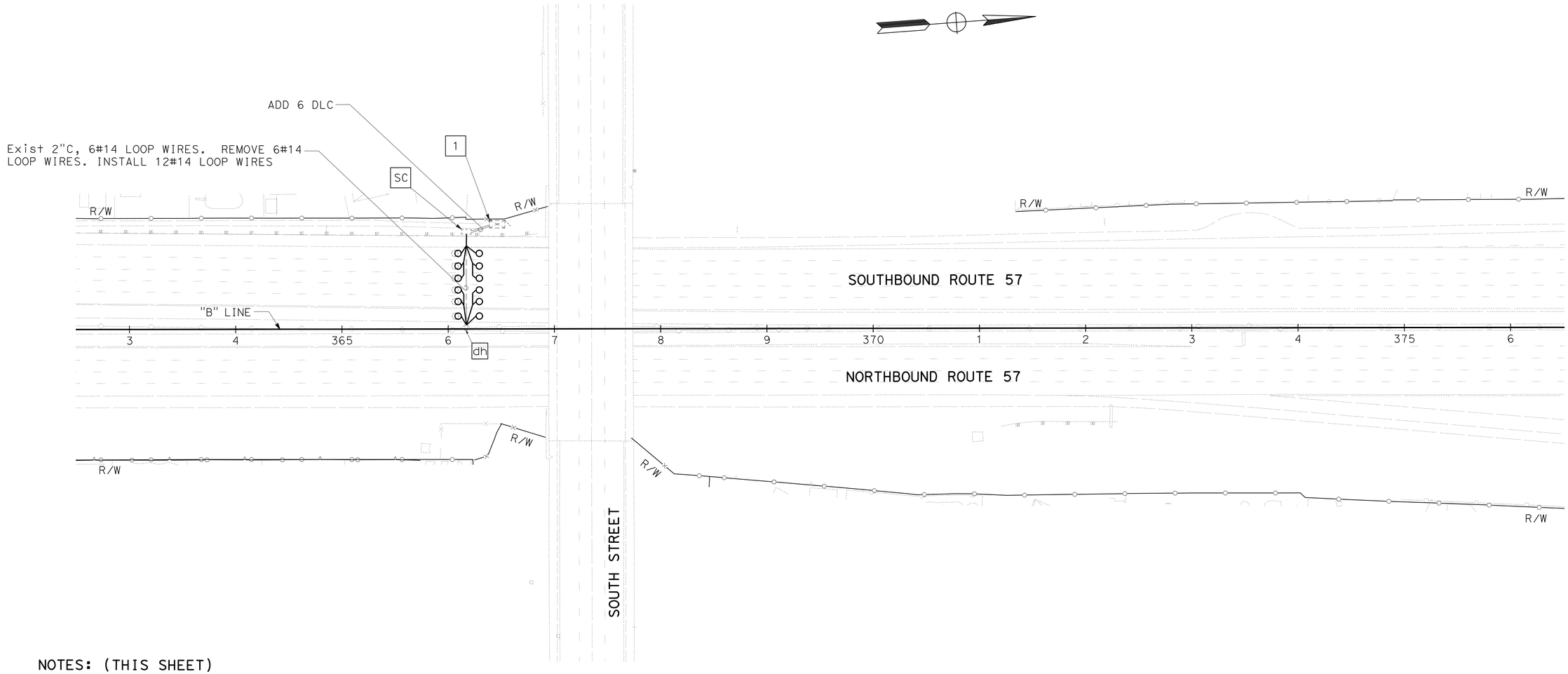

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INDUCTIVE LOOP DETECTOR

SCALE: 1" = 50'

E-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® ELECTRICAL DESIGN

FUNCTIONAL SUPERVISOR: SHAHRAM SHAHRIARI
CALCULATED-DESIGNED BY: FRANCIS M. ALVIAR
CHECKED BY: VANESSA V. TRUONG
REVISED BY
DATE REVISED

LAST REVISION 11-18-10
DATE PLOTTED => 03-FEB-2011
TIME PLOTTED => 07:32

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	35	52

12-08-10
REGISTERED ELECTRICAL ENGINEER DATE

1-31-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SHAHRAM SHAHRIARI
No. E13485
Exp. 9/30/12
ELECTRICAL
STATE OF CALIFORNIA

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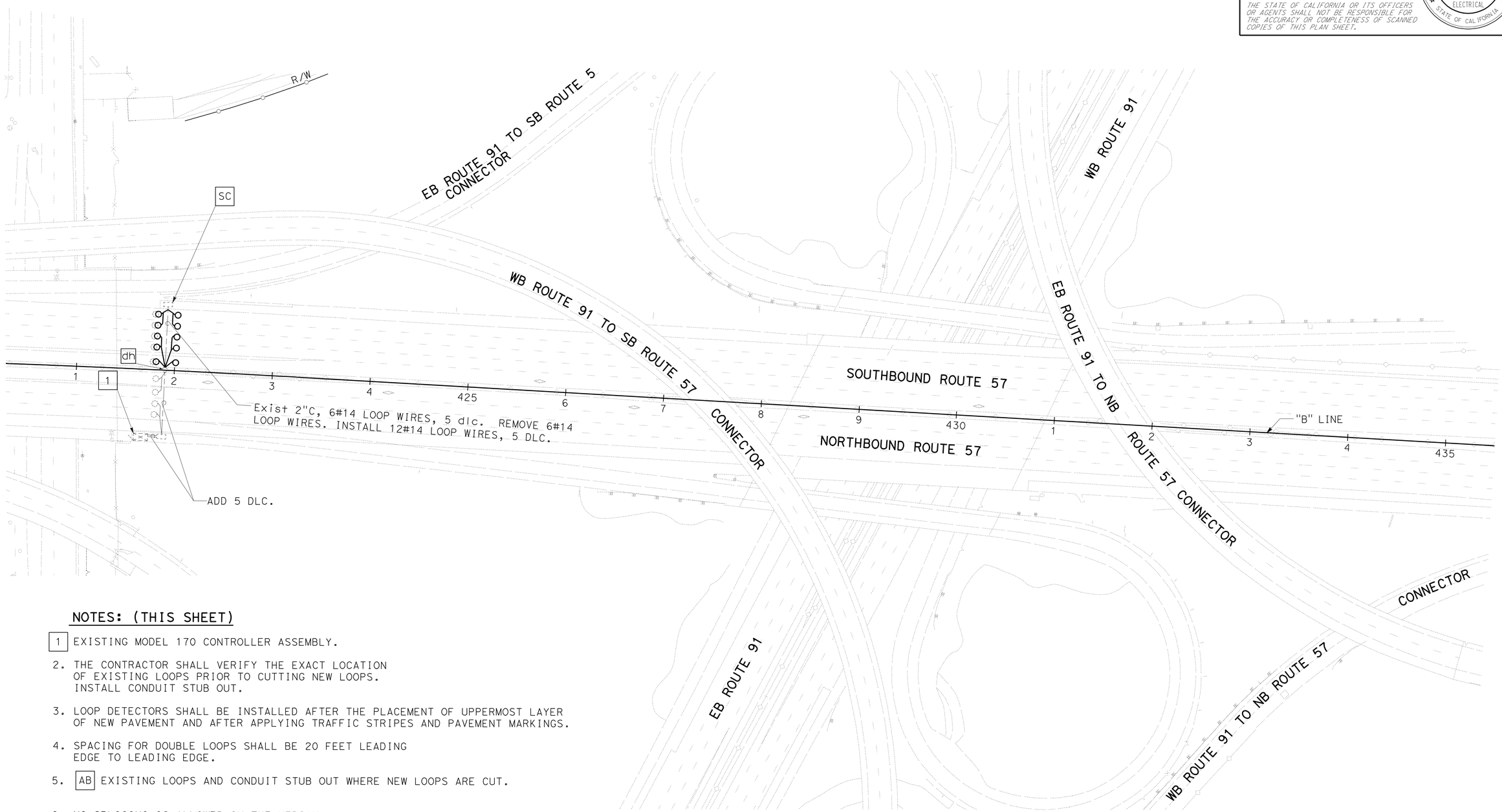

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INDUCTIVE LOOP DETECTOR

SCALE: 1" = 50'

E-5

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

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

FUNCTIONAL SUPERVISOR: SHAHRAM SHAHRIARI
CALCULATED-DESIGNED BY: FRANCIS M. ALVIAR
CHECKED BY: VANESSA V. TRUONG
REVISED BY
DATE REVISED

LAST REVISION 11-18-10 | DATE PLOTTED => 02-FEB-2011 | TIME PLOTTED => 14:06

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	36	52

12-08-10
REGISTERED ELECTRICAL ENGINEER DATE

1-31-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SHAHRAM SHAHRIARI
No. E13485
Exp. 9/30/12
ELECTRICAL
STATE OF CALIFORNIA

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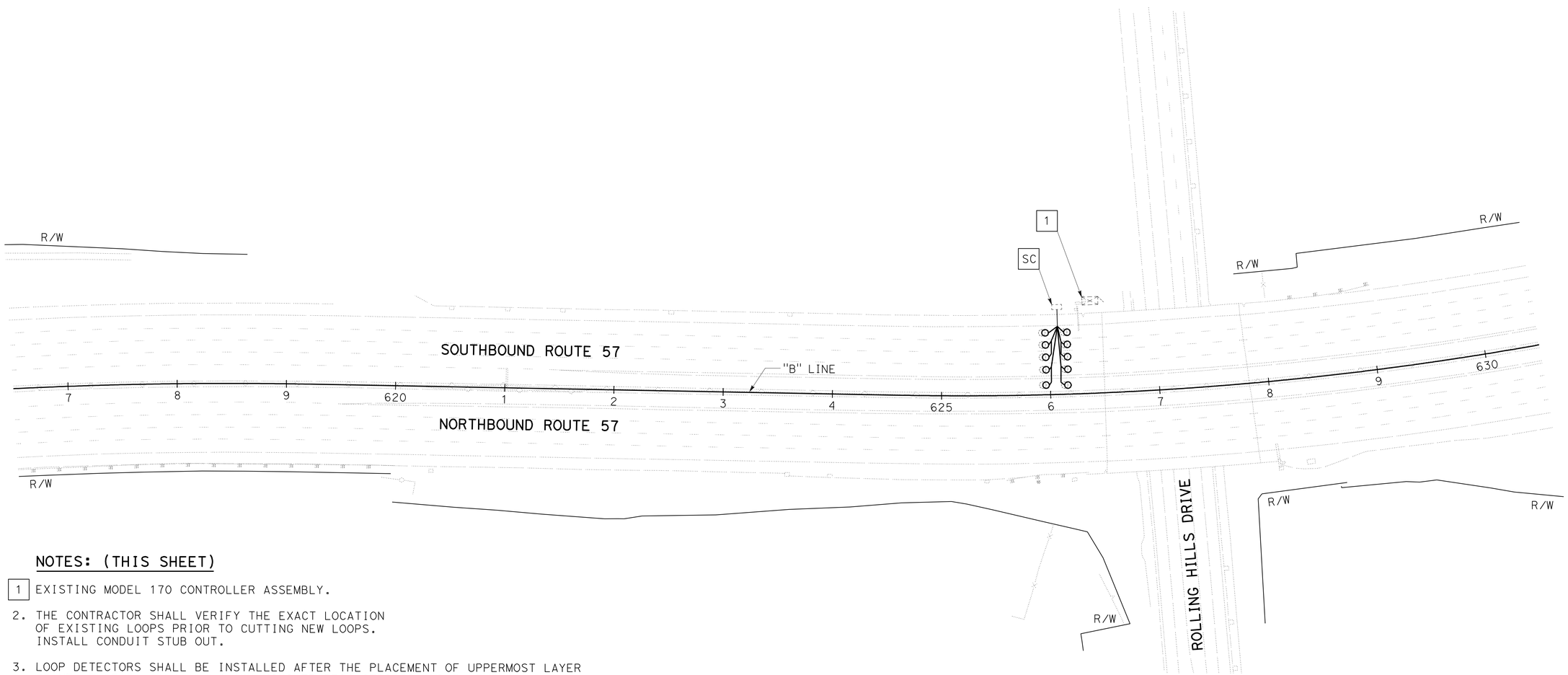

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INDUCTIVE LOOP DETECTOR

SCALE: 1" = 50'

E-6

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® ELECTRICAL DESIGN

FUNCTIONAL SUPERVISOR: SHAHRAM SHAHRIARI
CALCULATED-DESIGNED BY: FRANCIS M. ALVIAR
CHECKED BY: VANESSA V. TRUONG
REVISED BY
DATE REVISED

LAST REVISION DATE PLOTTED => 02-FEB-2011
TIME PLOTTED => 14:06
11-18-10

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	37	52

12-08-10
REGISTERED ELECTRICAL ENGINEER DATE

1-31-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SHAHRAM SHAHRIARI
No. E13485
Exp. 9/30/12
ELECTRICAL
STATE OF CALIFORNIA

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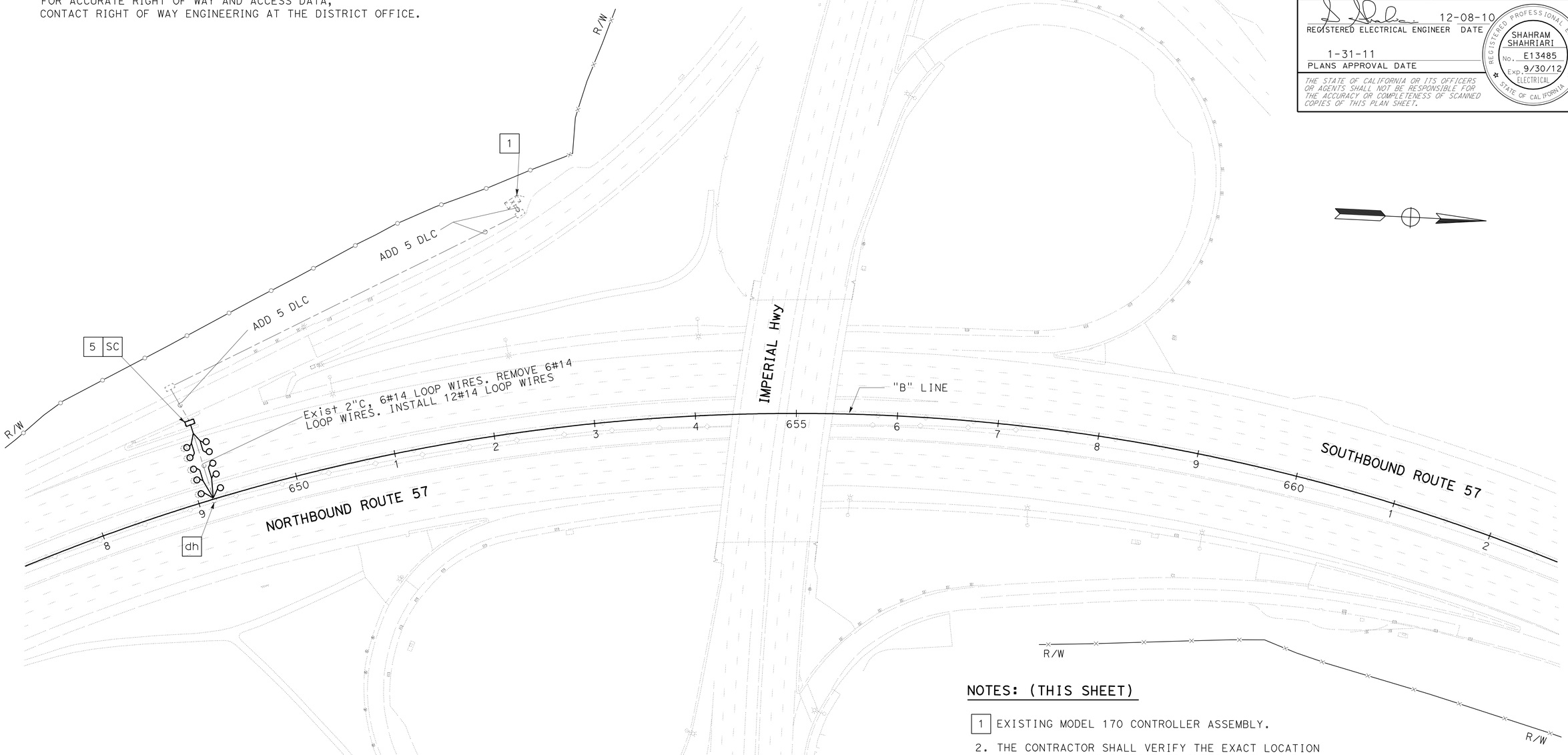

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INDUCTIVE LOOP DETECTOR

SCALE: 1" = 50'

E-7

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® ELECTRICAL DESIGN

FUNCTIONAL SUPERVISOR: SHAHRAM SHAHRIARI
CALCULATED-DESIGNED BY: FRANCIS M. ALVIAR
CHECKED BY: VANESSA V. TRUONG
REVISED BY
DATE REVISED

LAST REVISION 11-18-10
DATE PLOTTED => 02-FEB-2011
TIME PLOTTED => 14:06

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	57	11.0/22.5	38	52

REGISTERED ELECTRICAL ENGINEER 12-08-10 DATE

1-31-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER SHAHRAM SHAHRIARI No. E13485 Exp. 9/30/12 ELECTRICAL STATE OF CALIFORNIA

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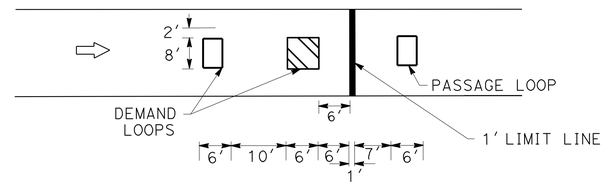
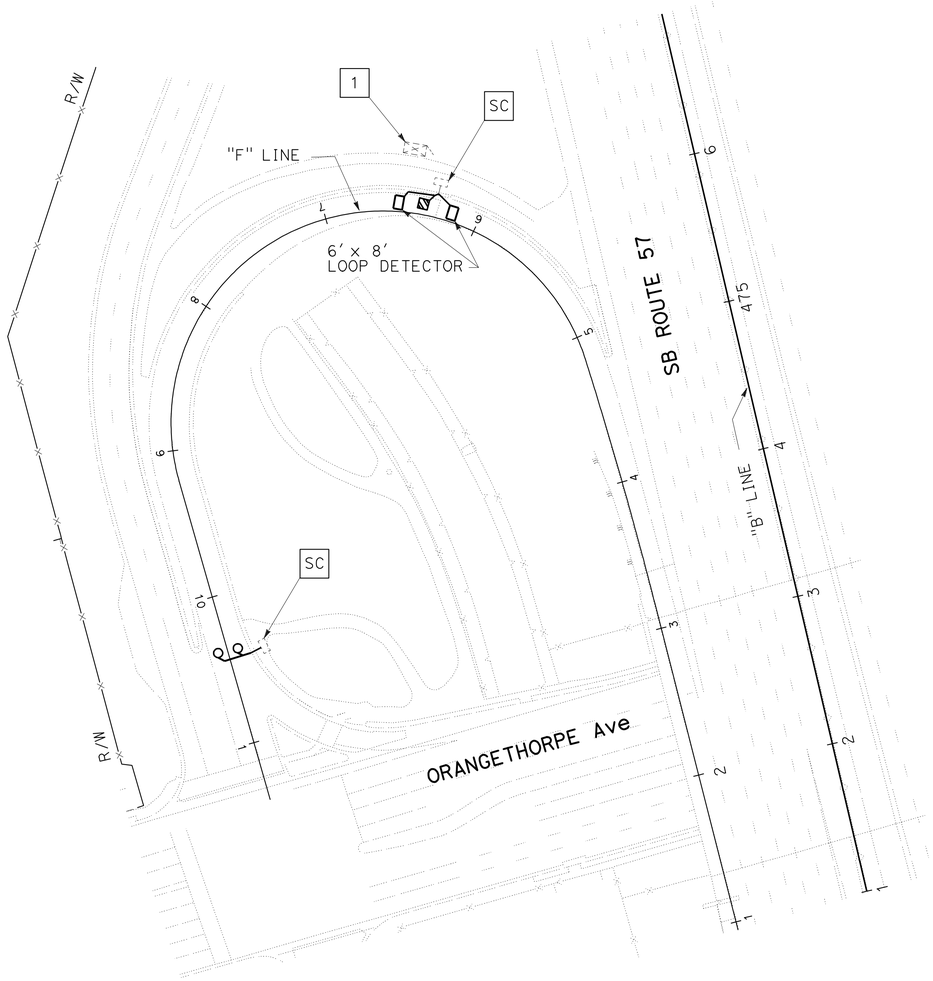
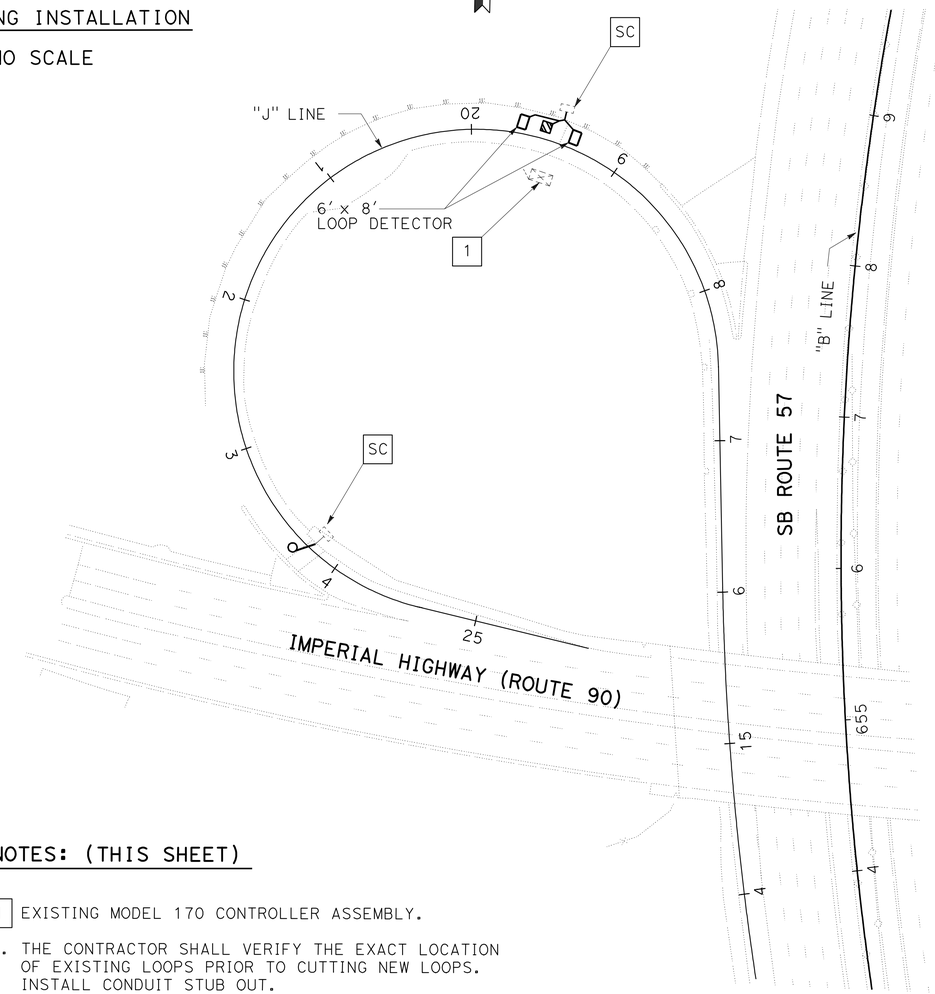


TYPICAL 1-LANE RAMP
METERING INSTALLATION
NO SCALE





NOTES: (THIS SHEET)

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INDUCTIVE LOOP DETECTOR

SCALE: 1" = 50'

E-8

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

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

FUNCTIONAL SUPERVISOR: SHAHRAM SHAHRIARI
CALCULATED-DESIGNED BY: FRANCIS M. ALVIAR
CHECKED BY: VANESSA V. TRUONG
REVISED BY
DATE REVISED

LAST REVISION 11-18-10
DATE PLOTTED => 02-FEB-2011
TIME PLOTTED => 14:06

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	57	11.0/22.5	39	52

REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Donald E. Howe
No. C46402
Exp. 3-31-09
CIVIL
STATE OF CALIFORNIA

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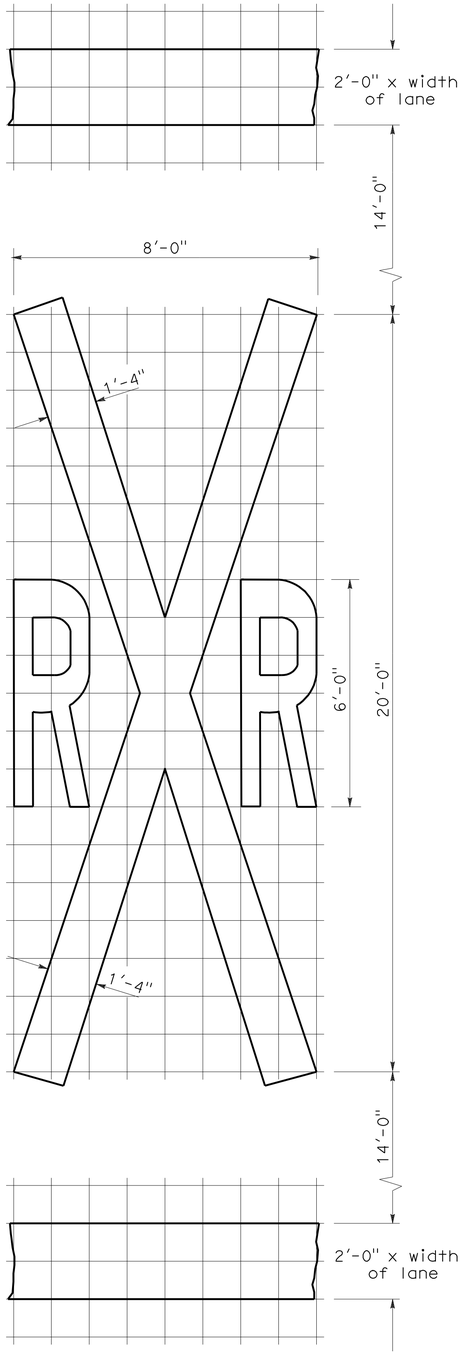
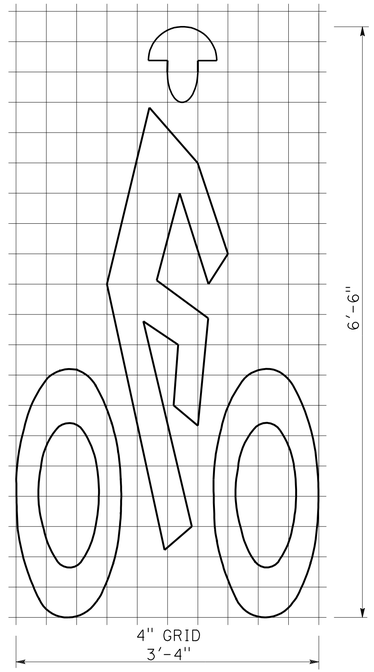
To accompany plans dated 1-31-11

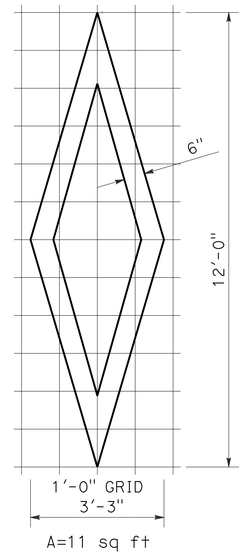


RAILROAD CROSSING SYMBOL

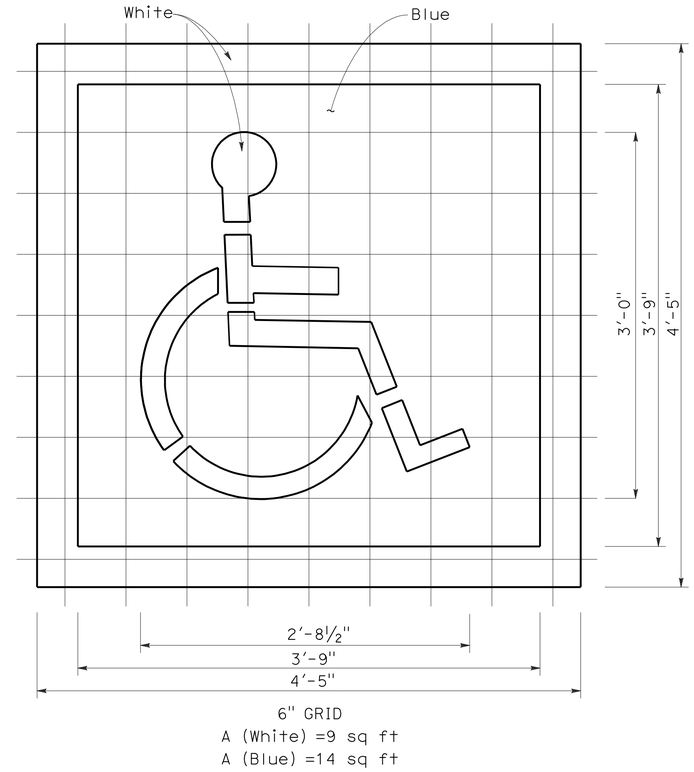
✳70 sq ft DOES NOT INCLUDE THE 2'-0" x VARIABLE WIDTH TRANSVERSE LINES.



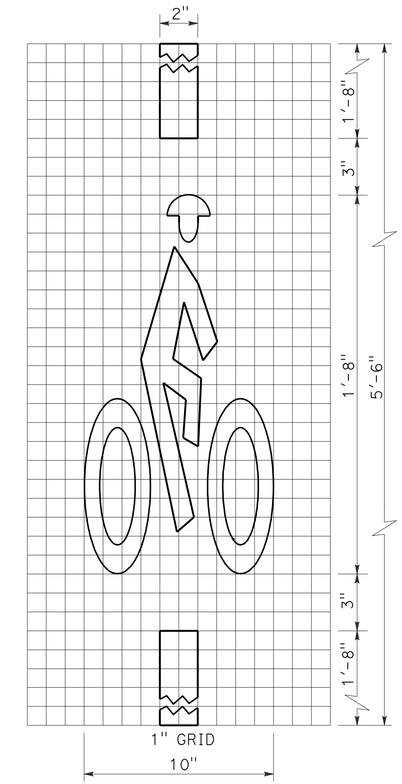
BIKE LANE SYMBOL



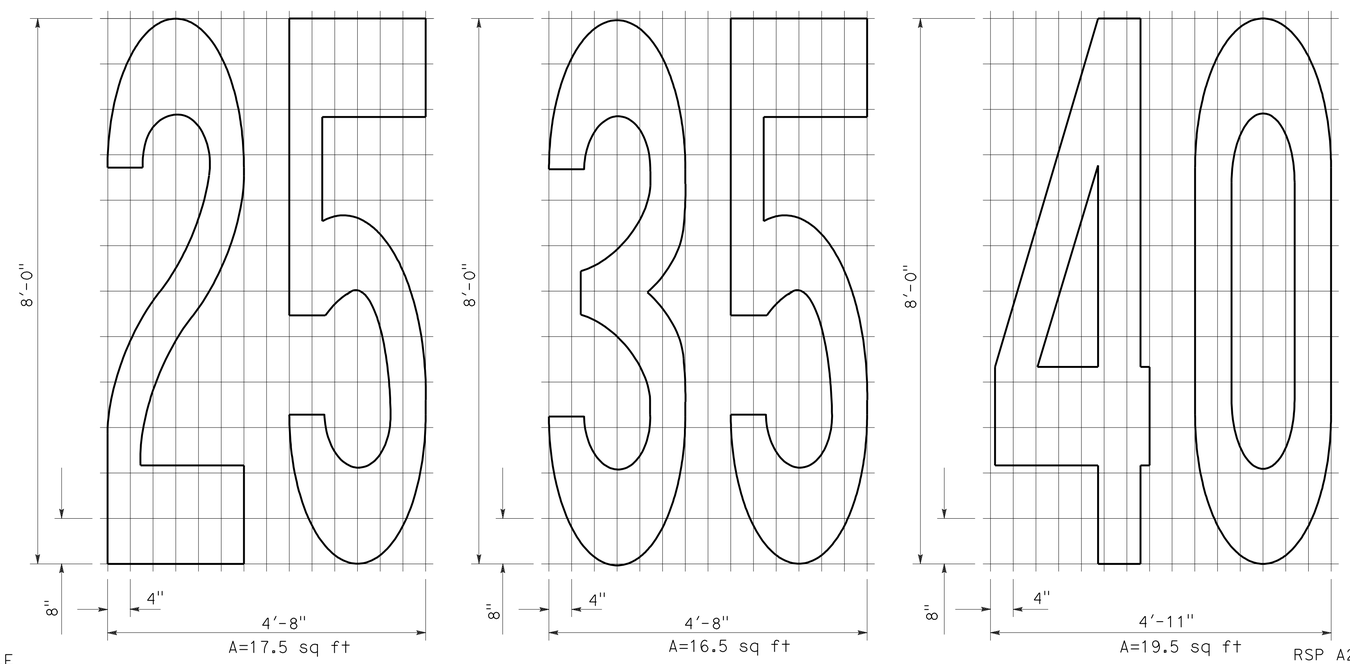
DIAMOND SYMBOL



INTERNATIONAL SYMBOL OF ACCESSIBILITY MARKING



BICYCLE LOOP DETECTOR SYMBOL



NUMERALS

NOTE:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS SYMBOLS AND NUMERALS

NO SCALE

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

REVISED STANDARD PLAN RSP A24C

2006 REVISED STANDARD PLAN RSP A24C

5-27-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	57	11.0/22.5	40	52

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

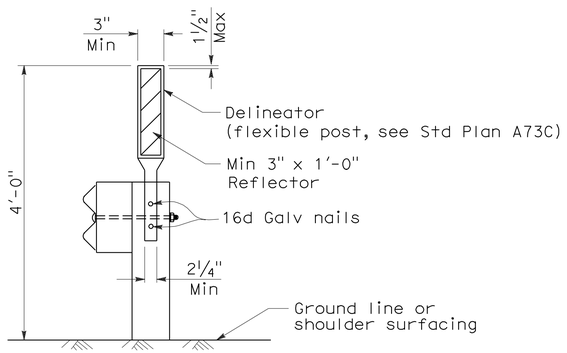
REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

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

To accompany plans dated 1-31-11

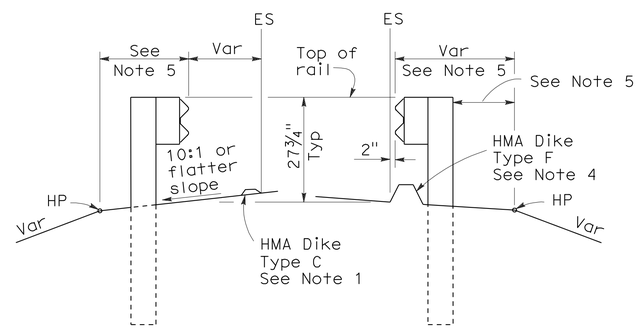
NOTES:

1. When necessary to place dike in front of face of guard railing, only Type C dike may be used. For dike details, see Standard Plan A87B.
2. For standard railing post embedment, see Standard Plans A77C3.
3. Guard railing delineation to be used where shown on the Project Plans.
4. When dike or curb is placed under guard railing, the maximum height of the dike or curb shall be 4". Mountable dike should not be used. For dike and curb details, see Revised Standard Plans RSP A87A and Standard Plan A87B.
5. For details of typical distance between the face of rail and hinge point, see Standard Plan A77C3.



GUARD RAILING DELINEATION

See Note 3



DIKE POSITIONING

See Note 1

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

METAL BEAM GUARD RAILING TYPICAL RAILING DELINEATION AND DIKE POSITIONING DETAILS

NO SCALE

RSP A77C4 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77C4
DATED MAY 1, 2006 - PAGE 47 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77C4

2006 REVISED STANDARD PLAN RSP A77C4

12-10-07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	57	11.0/22.5	41	52

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

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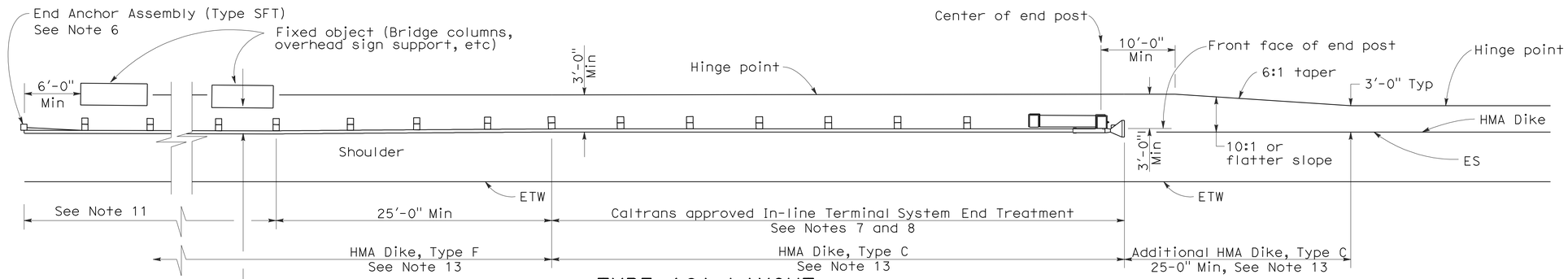
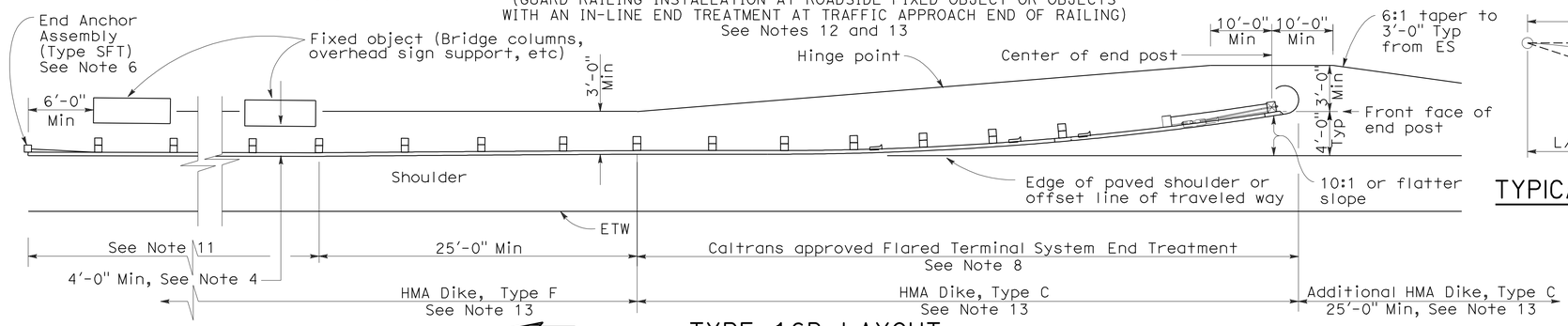
To accompany plans dated 1-31-11



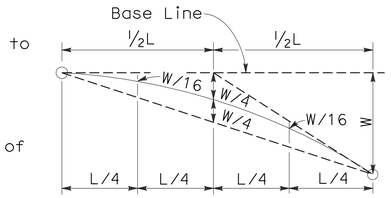
TYPE 16A LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH AN IN-LINE END TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Notes 12 and 13

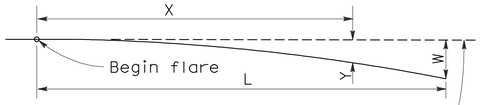


TYPE 16B LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH A FLARED END TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Notes 12 and 13



TYPICAL PARABOLIC LAYOUT

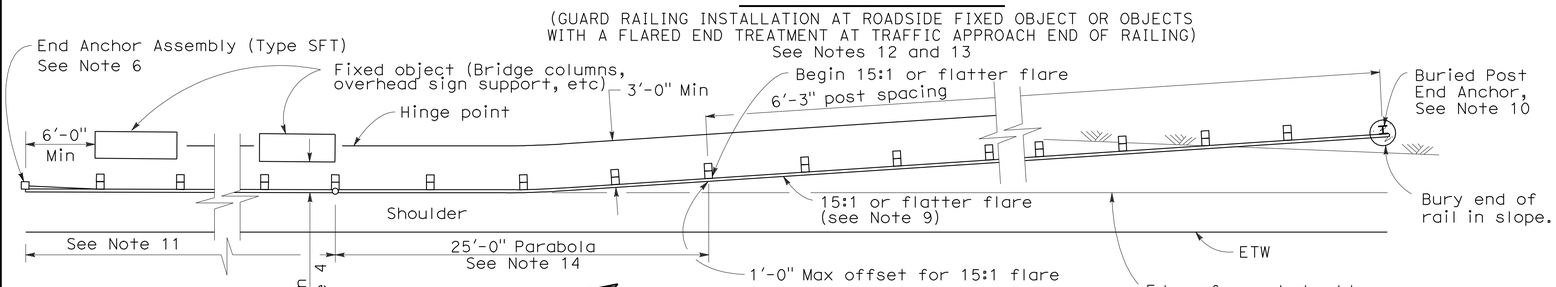


Base Line (Edge of paved shoulder or offset line of edge of traveled way)

$$Y = \frac{WX^2}{L^2}$$

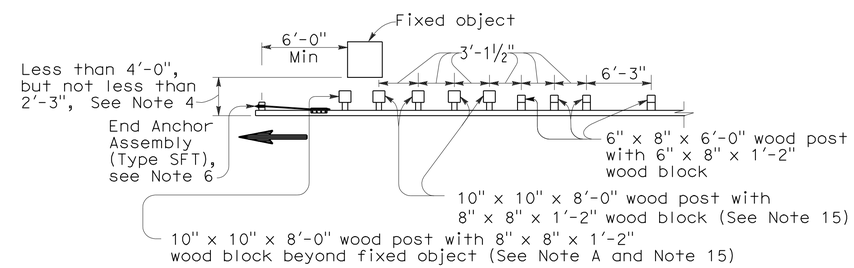
Y = Offset from base line
W = Maximum offset
X = Distance along base line
L = Length of flare

PARABOLIC FLARE OFFSETS



TYPE 16C LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH A BURIED END ANCHOR TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Notes 12 and 13



NOTE A: For a series of fixed objects (bridge columns, overhead sign supports, etc.) additional 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood blocks at 3'-1½" center to center spacing are to be used between fixed objects.

STRENGTHENED RAILING SECTIONS FOR FIXED OBJECT

Use strengthened railing sections with Types 16A, 16B or 16C Layouts where minimum clearance between the face of the guard railing and fixed object(s) is less than 4'-0", but not less than 2'-3". See Note 4

NOTES:

1. Line post, blocks and hardware to be used are shown on Revised Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
2. Guard railing post spacing to be 6'-3" center to center, except as otherwise noted.
3. Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks may be used for 6" x 8" x 6'-0" wood line posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
4. A 4'-0" minimum clearance is required between the face of the railing and the face of a fixed object located directly behind standard guard railing sections with post spacing of 6'-3". Construct guard railing as shown in the detail "Strengthened Railing Sections for Fixed Objects" on this plan, where the clearance between the face of the railing and the face of a fixed object is less than 4'-0", but not less than 2'-3". Where the clearance is less than 2'-3", a concrete wall or barrier should be constructed to shield the fixed object(s).
5. Direction of adjacent traffic indicated by ⟶.
6. For End Anchor Assembly (Type SFT) details, see Standard Plan A77H1.
7. In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
8. The type of terminal system to be used will be shown on the Project Plans.
9. The 15:1 or flatter flare used with Type 16C Layout is based on the edge of the paved shoulder or offset line of edge of the traveled way. The length of guard railing within the 15:1 or flatter flare is based on site conditions and should be a length equal to multiples of 12'-6".
10. For details of the Buried Post End Anchor used with Type 16C Layout, see Standard Plan A77I2.
11. As site conditions dictate, construct additional guard railing to shield fixed object(s). Additional guard railing length equal to multiples of 12'-6". Post spacing at 6'-3" except as specified in Note 4.
12. Layout Types 16A, 16B or 16C are typically used where guard railing is recommended to shield roadside fixed object(s) and a crashworthy end treatment is required for only one direction of traffic.
13. Where placement of dike is required with guard railing, see Revised Standard Plan RSP A77C4 for dike positioning details.
14. For typical flare offsets for 25'-0" length parabola with maximum offset of 1'-0", see Revised Standard Plan RSP A77E1.
15. W6 x 15 steel post, 8'-0" in length, with 8" x 8" x 1'-2" notched wood block or notched recycled plastic blocks may be used in place of the 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood block shown in the "Strengthened Railing Sections Detail".

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

METAL BEAM GUARD RAILING TYPICAL LAYOUTS FOR ROADSIDE FIXED OBJECTS

NO SCALE

RSP A77G3 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77G3 DATED MAY 1, 2006 - PAGE 61 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77G3

2006 REVISED STANDARD PLAN RSP A77G3

12-10-07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	57	11.0/22.5	42	52

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

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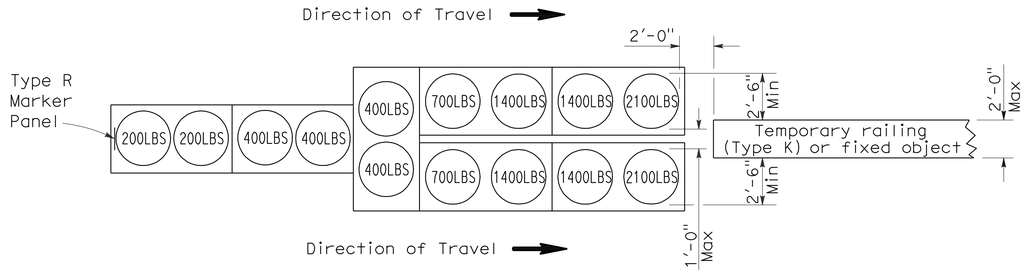
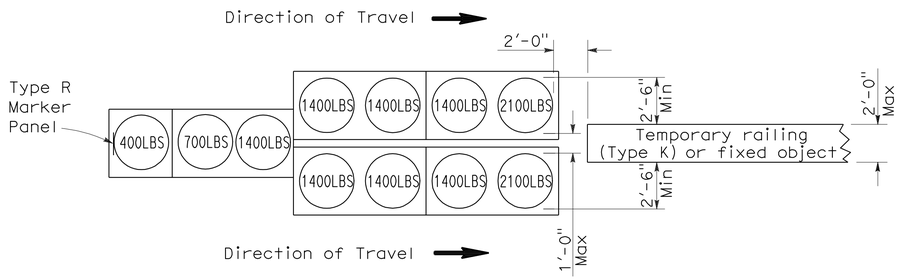
To accompany plans dated 1-31-11



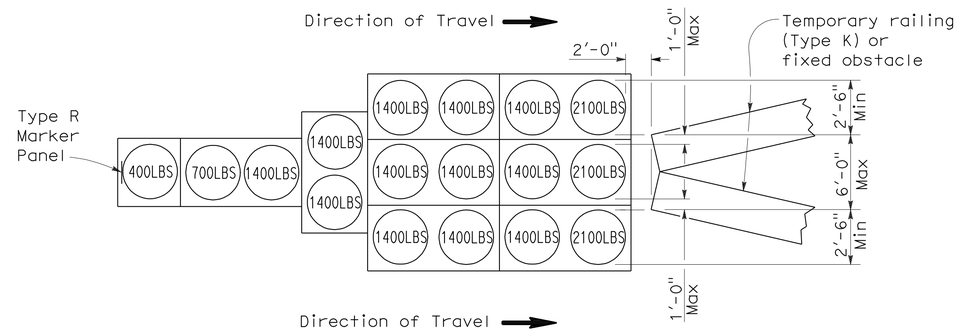
ARRAY 'TU14'

Approach speed 45 mph or more



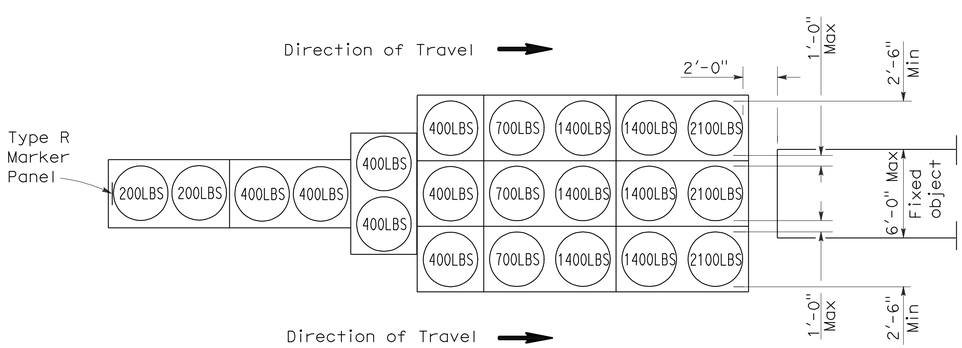
ARRAY 'TU11'

Approach speed less than 45 mph



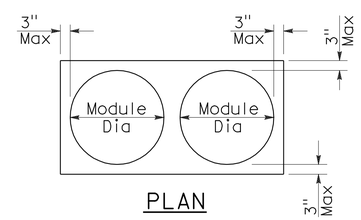
ARRAY 'TU17'

Approach speed less than 45 mph

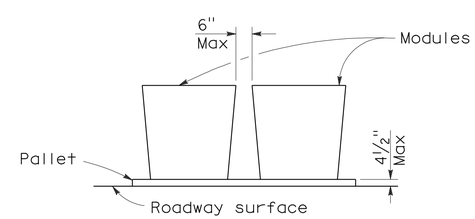


ARRAY 'TU21'

Approach speed 45 mph or more



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. Temporary crash cushion arrays shall not encroach on the traveled way.
4. Place the top of Type R marker panel 1" below the module lid.
5. Refer to Standard Plan A73B for marker details.
6. Approach speeds indicated conform to NCHRP 350 Report criteria.
7. Use of pallets is optional.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY CRASH CUSHION, SAND FILLED (UNIDIRECTIONAL)

NO SCALE

RSP T1A DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T1A
DATED MAY 1, 2006 - PAGE 211 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T1A

2006 REVISED STANDARD PLAN RSP T1A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	57	11.0/22.5	43	52

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

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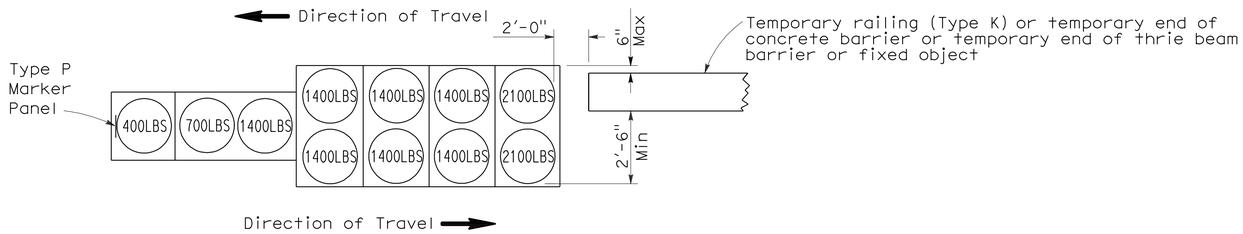
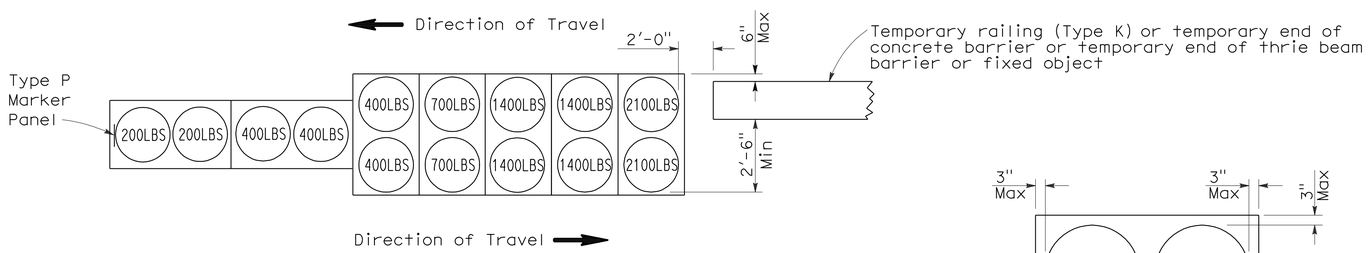
To accompany plans dated 1-31-11



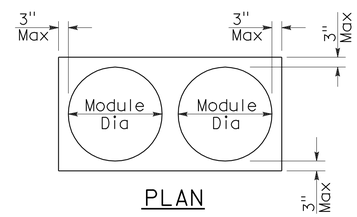
ARRAY 'TB11'

Approach speed less than 45 mph

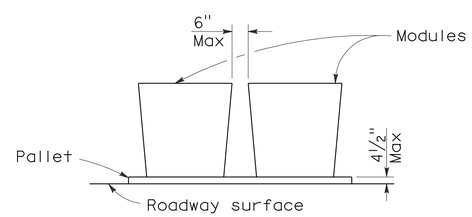


ARRAY 'TB14'

Approach speed 45 mph or more



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. Temporary crash cushion arrays shall not encroach on the traveled way.
4. Place the Type P marker panel so that the bottom of the panel rests upon the pallet.
5. Refer to Standard Plan A73B for marker details.
6. Approach speeds indicated conform to NCHRP 350 Report criteria.
7. Use of pallets is optional.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY CRASH CUSHION, SAND FILLED (BIDIRECTIONAL)

NO SCALE

RSP T1B DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T1B
DATED MAY 1, 2006 - PAGE 212 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T1B

2006 REVISED STANDARD PLAN RSP T1B

5-15-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	57	11.0/22.5	44	52

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

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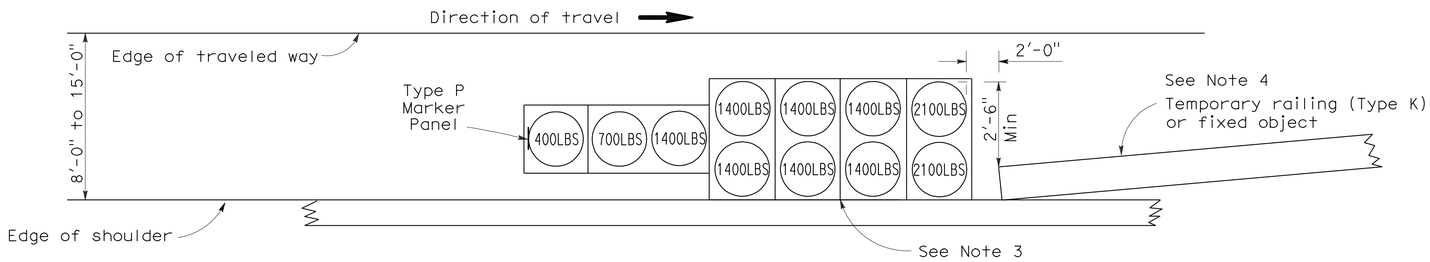
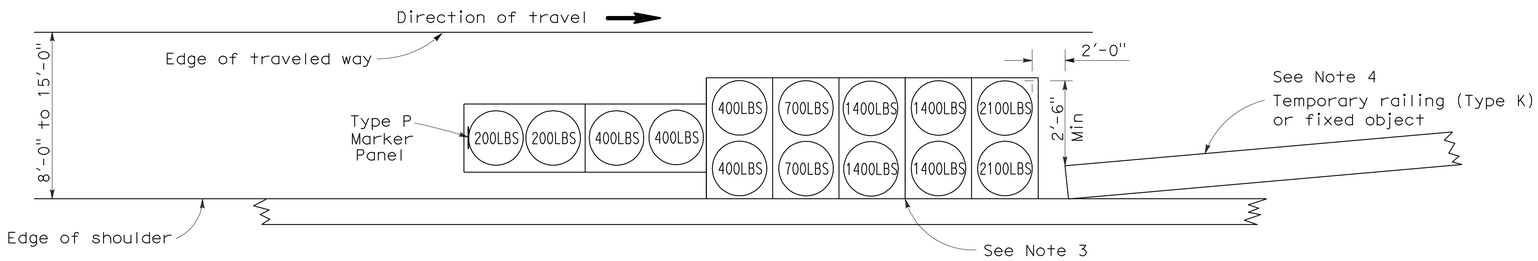
To accompany plans dated 1-31-11



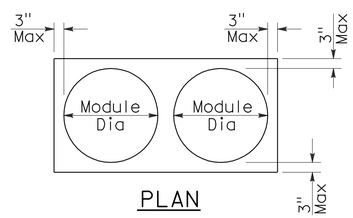
ARRAY 'TS11'

Approach speed less than 45 mph
See Note 9

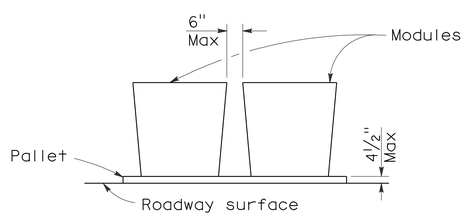


ARRAY 'TS14'

Approach speed 45 mph or more
See Note 9



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 11

NOTES:

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. The temporary crash cushion arrays shown on this plan shall be used only in locations where there will be traffic on one side of the temporary crash cushion array.
4. If the fixed object or approach end of the temporary railing is less than 15'-0" from the edge of traveled way, a temporary crash cushion is required in a construction or work zone.
5. Temporary crash cushion arrays shall not encroach on the traveled way.
6. Arrays for median shoulders shall conform to details shown on this plan for outside shoulders.
7. Place the Type P marker panel so that the bottom of the panel rests upon the pallet and faces traffic.
8. Refer to Standard Plan A73B for marker details.
9. For shoulder widths less than 8'-0", appropriate approved crash cushion protection, other than sand filled modules, shall be provided at fixed objects and at approach ends of temporary railing. The specific type of crash cushion shall be as shown on the project plans or as specified in the Special Provisions, or if not shown on the project plans or specified in the Special Provisions, shall be as approved by the Engineer.
10. Approach speeds indicated conform to NCHRP 350 Report criteria.
11. Use of pallets is optional.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY CRASH CUSHION, SAND FILLED (SHOULDER INSTALLATIONS)

NO SCALE

RSP T2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T2
DATED MAY 1, 2006 - PAGE 213 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T2

2006 REVISED STANDARD PLAN RSP T2

5-15-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	57	11.0/22.5	45	52

REGISTERED CIVIL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Efthymios Delis No. C51434 Exp. 6-30-08 CIVIL STATE OF CALIFORNIA

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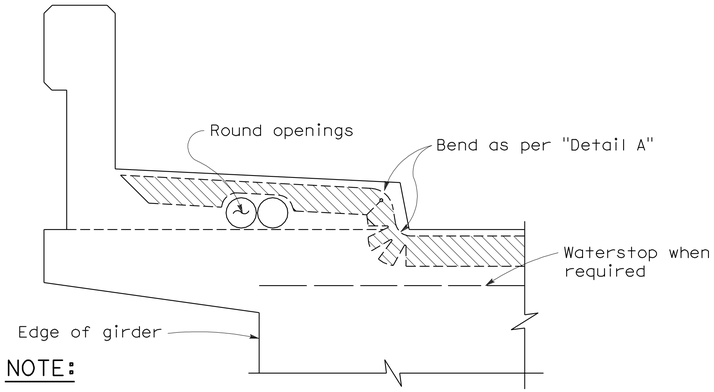
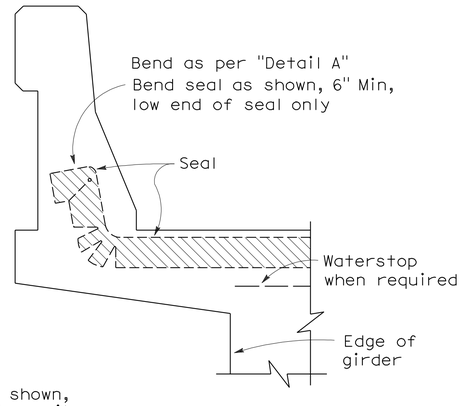
To accompany plans dated 1-31-11



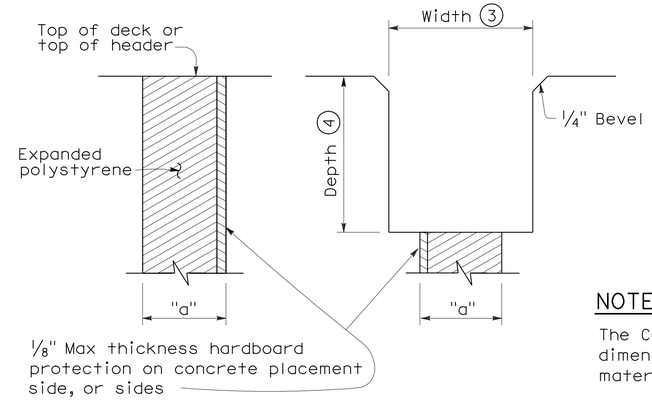
NOTE:

Type "B" seal shown. Type "A" seals to comform to the general path of seal shown, cuts for bending not required. Bend Type "A" seals 3" up into curb or barrier rail on only the low end of the seal.

CONCRETE BARRIER AND SIDEWALK



CONCRETE BARRIER

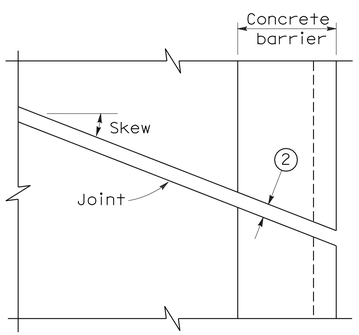


FORMING DETAIL SAWCUT DETAIL

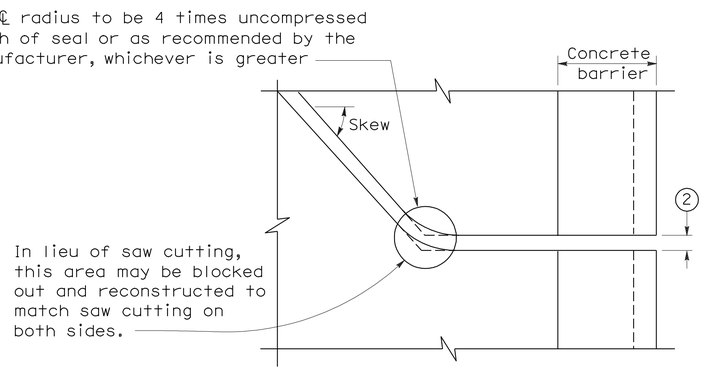
NOTE:

The Contractor shall verify all controlling field dimensions before ordering or fabricatiing any material.

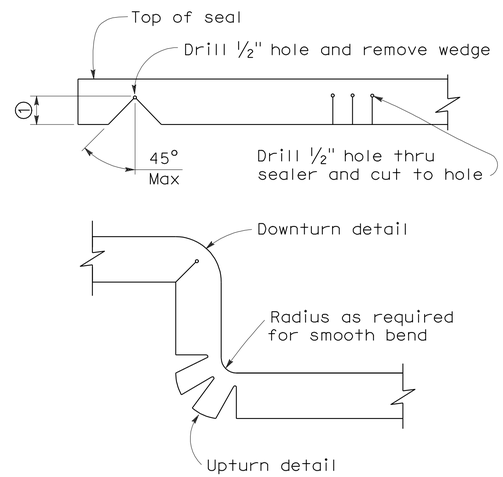
JOINT SEALS DETAILS



PLAN OF JOINT (SKEW ≤ 20°)



PLAN OF JOINT (SKEW > 20°)



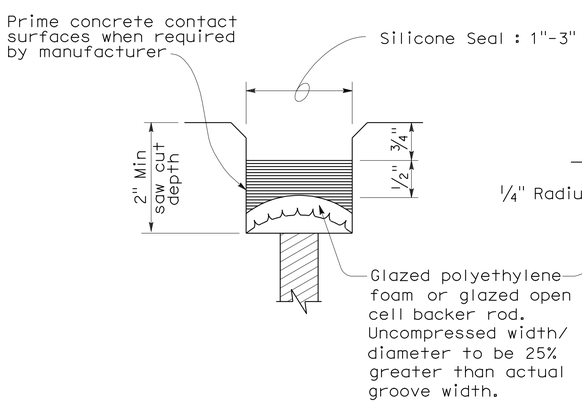
DETAIL A

NOTES:

1. Make smooth cuts from the bottom of seal to 1½" clear of top leaving at least one complete cell between the top of the cut and top of the seal. When necessary cut back of seal to clear conduit and round openings.
2. Opening in barrier to match width of sawn deck joint.
3. Sawcut groove widths shall be as ordered by the Engineer.
4. Depth of sawcut: Type A - Depth to be 2" minimum.
   Type B - Depth to be equal to or greater than the depth of seal measured along the contact surface, when compressed to minimum width position (W_2) plus dimensions shown.
5. MR (movement rating) as shown on other plan sheets.
6. Other depths must be approved by the Engineer.

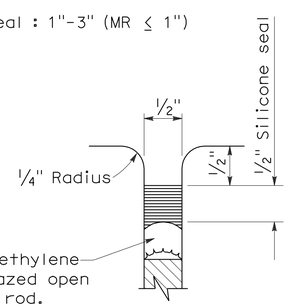
DIMENSIONS "a" OF JOINT REQUIRED

Movement Rating (MR) (5)	Bridge Type	"a" Dimension Deck Concrete Placed		
		Winter	Fall-Spring	Summer
2"	All except CIP/PS	1½"	1¼"	¾"
	CIP/PS	1¼"	1"	½"
1½"	All except CIP/PS	1¼"	1"	½"
	CIP/PS	1"	¾"	½"
1"	All except CIP/PS	1"	¾"	½"
	CIP/PS	¾"	½"	½"
½"	All except CIP/PS	¾"	¾"	½"
	CIP/PS	½"	½"	½"



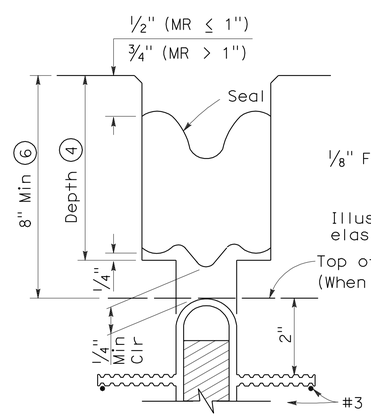
TYPE A SEAL

Movement rating : Silicone = 1" Max

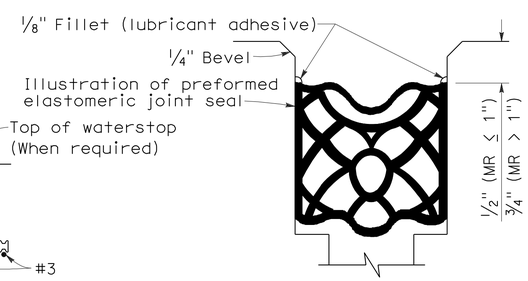


TYPE AL SEAL

Longitudinal joints only



TYPE B JOINT SEAL IN MINIMUM WIDTH POSITION (W_2)



TYPE B SEAL

Movement Rating ≤ 2"

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

JOINT SEALS (MAXIMUM MOVEMENT RATING = 2")

NO SCALE

RSP B6-21 DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN B6-21 DATED MAY 1, 2006 - PAGE 258 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP B6-21

2006 REVISED STANDARD PLAN RSP B6-21

5-8-07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	57	11.0/22.5	46	52

REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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

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

To accompany plans dated 1-31-11

2006 REVISED STANDARD PLAN RSP ES-1A

ELECTROLIERS

STANDARD TYPES
15, 15D
15 STRUCTURE
21, 21D STRUCTURE
30
31
32
35
36-20A

High mast light pole

Double Arm lighting standard

Existing electrolier

Electrolier foundation (Future installation)

NOTES:

1. Luminaires shall be 310 W HPS when installed on Type 21, 21D, 30, 31, 32, 35 and 36-20A Standards, unless otherwise specified. Luminaires shall be 200 W HPS when installed on other type standards or poles, unless otherwise specified.
2. Luminaires shall be the cutoff type, ANSI Type Ⅲ medium cutoff lighting distribution, unless otherwise specified.
3. Variations noted adjacent to symbol on project plans.

Electrolier (see project notes or project plans)

Luminaire on wood pole

STANDARD NOTES:

- AB — Abandon. If applied to conduit, remove conductors.
- BC — Install pull box in existing conduit run.
- BP — Pedestrian barricade, type as indicated on plan.
- CB — Install conduit into existing pull box.
- CC — Connect new and existing conduit. Remove existing conductors and install conductors as indicated.
- CF — Conduit to remain for future use. Remove conductors. Install pull wire or rope.
- DH — Detector handhole.
- FA — Foundation to be abandoned.
- IS — Install sign on signal mast arm.
- NS — No slip base on standard.
- PEC — Photoelectric control.
- PEU — Photoelectric unit.
- RC — Equipment or material to be removed and become the property of the Contractor.
- RE — Remove electrolier, fuses and ballast. Tape ends of conductors.
- RL — Relocate equipment.
- RR — Remove and reuse equipment.
- RS — Remove and salvage equipment.
- SC — Splice new to existing conductors.
- SD — Service disconnect.
- SF — Standard to remain for future use. Remove luminaire, pole conductors, fuses and ballast.
- TSP — Telephone service point.

ABBREVIATIONS AND EQUIPMENT DESIGNATIONS

PROPOSED	EXISTING	
BBS	bbs	Battery backup system
BC	bc	Bolt circle
C	C	Conduit
CCTV	cctv	Closed circuit television
CKT	ckt	Circuit
CMS	cms	Changeable message sign
DLC	dlc	Loop detector lead-in cable
EMS	ems	Extinguishable message sign
EVC	evc	Emergency vehicle cable
EVD	evd	Emergency vehicle detector
FB	fb	Flashing beacon
FBCA	fbca	Flashing beacon control assembly
FBS	fbs	Flashing beacon with slip base
FO	fo	Fiber optic
G	G	Ground (Equipment Grounding Conductor)
GFCI	GFCI	Ground fault circuit interrupt
HAR	har	Highway advisory radio
HEX	hex	Hexagonal
HPS	hps	High pressure sodium
IISNS	iisns	Internally illuminated street name sign
ISL	isl	Induction sign lighting
LED	led	Light emitting diode
LMA	lma	Luminaire mast arm
LPS	lps	Low pressure sodium
LTG	ltg	Lighting
LUM	lum	Luminaire
MAT	mat	Mast arm mounting vehicle signal faces, top attachment
MAS	mas	Mast arm mounting vehicle signal faces, side attachment
MAS-4A	mas-4A	Mast arm mounting vehicle signal faces, side attachment - 4 signal section
MAS-4B	mas-4B	
MAS-4C	mas-4C	
MAS-5A	mas-5A	Mast arm mounting vehicle signal faces, side attachment - 5 signal section
MAS-5B	mas-5B	
MC	mc	Mercury contactor
M/M	m/m	Multiple to multiple transformer
MT	mt	Conduit with pull wire or rope only
MTG	mtg	Mounting
	mv	Mercury vapor lighting fixture
N	N	Neutral (Grounded Conductor)
NC	NC	Normally closed
NO	NO	Normally open
PB	pb	Pull box
PEC	pec	Photoelectric control (Type Ⅰ, Ⅱ, Ⅲ, Ⅳ or Ⅴ as shown)
PED	ped	Pedestrian
PEU	peu	Photoelectric unit
PPB	ppb	Pedestrian push button
RL		Relocated equipment
RM	rm	Ramp metering
SB	sb	Slip base
SIC	sic	Signal interconnect cable
SIG	sig	Signal
SMA	sma	Signal mast arm
SNS	sns	Street name sign
SP	sp	Service point
TDC	tdc	Telephone demarcation cabinet
TMS	tms	Traffic monitoring station
TOS	tos	Traffic Operations System
VEH	veh	Vehicle
XFMR	xfmr	Transformer
COMM	comm	Communication
RWIS	rwis	Roadway weather information system

SOFFIT AND WALL MOUNTED LUMINAIRES

Pendant, 70 W HPS unless otherwise specified.

Flush, 70 W HPS unless otherwise specified.

Wall surface, 70 W HPS unless otherwise specified.

Existing soffit or wall luminaire to remain unmodified.

Existing soffit or wall luminaire to be modified as specified.

NOTE:

Arrow indicates "street side" of luminaire.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

RSP ES-1A DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-1A DATED MAY 1, 2006 - PAGE 400 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	57	11.0/22.5	47	52

REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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

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To accompany plans dated 1-31-11

CONDUIT

PROPOSED	EXISTING	
		Lighting Conduit, unless otherwise indicated or noted
		Traffic signal conduit
C	c	Communication conduit
T	t	Telephone conduit
F	f	Fire alarm conduit
FO	fo	Fiber optic conduit
		Conduit termination (RSP ES-9A C)
R	r	Conduit riser in/on structure or service pole

SERVICE EQUIPMENT

PROPOSED	EXISTING	
OH	oh	Overhead lines
U	U	Wood pole "U" indicates utility owned
		Pole guy with anchor
		Utility transformer - ground mounted
III		Service equipment enclosure type
		Service equipment enclosure door indicates front of enclosure
T	t	Telephone demarcation cabinet

POLE-MOUNTED SERVICE DESIGNATION

Type of installation

TYPE H SERVICE - 28'-10" ← Pole height above grade

ILLUMINATED OVERHEAD SIGN

PROPOSED	EXISTING	
		Overhead sign - Single post
		Overhead sign - Two post
		Overhead sign - Mounted on structure
		Overhead sign with electrolier

SIGNAL EQUIPMENT

PROPOSED	EXISTING	
		Pedestrian signal face
		Pedestrian push button post
		Pedestrian barricade
		Vehicle signal face (with backplate, 3-Section: red, yellow and green)
		Vehicle signal face with angle visors
PV	PV	Modifications of basic symbols: "L" indicates all non-arrow sections louvered "LG" indicates louvered green section only "PV" indicates 12" programmed visibility sections "8" indicates all 8" sections (only when specified)
		Type 15TS and Vehicle signal face
		Vehicle signal face with red, yellow and green left arrow sections
		Vehicle signal face with red and yellow sections and up green arrow
		Vehicle signal face (5 Section) with red, yellow and green sections and yellow and green right arrows
		Type 1 Standard and attached vehicle signal faces
		Standard with signal mast arm only and attached vehicle signal faces and internally illuminated street name sign
		Type 33 Standard, Left-turn vehicle signal face and sign
		Standard with luminaire and signal mast arms and attached vehicle signal faces
		Cantilever flashing beacon Type 9 Frame, with a sign unless otherwise specified or indicated
		Type 15-FBS Standard with two vehicle signal face sections with lens, backplate and visor with a sign
R	Y	Flashing beacon. One vehicle signal face section with lens, backplate and visor. "R" indicates red indication, "Y" indicates yellow indication
		Controller assembly. Door indicates front of cabinet

SIGNAL EQUIPMENT Cont

PROPOSED	EXISTING	
		Guard post
		Type 1 Standard with "Meter On" sign
		Emergency Vehicle detector

NOTES:

1. All signal sections shall be 12" unless shown otherwise.
2. Signal heads shall be provided with backplates unless shown otherwise.
3. Signal indication shall be LED.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1B

2006 REVISED STANDARD PLAN RSP ES-1B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	57	11.0/22.5	48	52

REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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

To accompany plans dated 1-31-11

EQUIPMENT IDENTIFICATION

ILLUMINATED SIGN IDENTIFICATION NUMBER:

Sign No. 12345 — Sign number - Place on post or structure

10 ISL SCI 1.0

- 1.0 — Transformer rating (kVA)
- SCI — Lighting control type
- ISL — Number and type of fixtures

Do NOT place on standard or structure

ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:

12345 - 15'-0"

- 15'-0" — Mast arm length, if shown. Do not place on standard or structure.
- 12345 — Equipment number - Place on standard or structure. Existing equipment numbers are shown in parenthesis

CONDUIT AND CONDUCTOR IDENTIFICATION:

1½"C, 2#10, 15#14, 2 DLC

- 2#10, 15#14, 2 DLC — Number and size of conductors and cables
- 1½"C — Size of conduit in inches

Ø1, Ø2, Ø2P, etc.	Traffic phase identification for signal faces, detectors and phase diagrams
1 2 3	Project note numbers
A B C	Equipment description, installation or item numbers
1 2 3	Conduit run numbers

SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):

19A - 3 - 100

- 100 — Wind velocity = 100 mph
- 3 — Case 3 arm loading
- 19A — Standard type
- Standard Plan sheet number
- Detail number or letter

MISCELLANEOUS EQUIPMENT

PROPOSED	EXISTING	
CMS	cms	Changeable message sign
		Closed circuit television camera
		Highway advisory radio pole and antenna
EMS	ems	Extinguishable message sign
M V	m v	Detection device M = Microwave sensor V = Video image sensor

WIRING DIAGRAM LEGEND

P	Pole
CB	Circuit breaker
A	Ampere
V	Volt
M	Metered
UM	Unmetered
NB	Neutral bus
GB	Ground bus
G	Equipment grounding conductor
N	Grounded conductor (Neutral)

- External conductor
- Conductor or bus
- Tie point
- Contactor coil
- Contactor, Contact NO
- Terminal blocks
- Contactor, Contact NC
- Enclosure bond
- Grounding electrode
- Circuit breaker
- Receptacle

PULL BOXES

PROPOSED EXISTING

Pull box-No. 5 unless otherwise indicated or noted.

3 — 9A(21)

Pull box-Additional designations or descriptions

3	= No. 3½ pull box
5	= No. 5 pull box
6	= No. 6 pull box
7	= No. 7 (Ceiling pull box)
8	= No. 8 (Pendant soffit pull box)
9	= No. 9 pull box
9A	= No. 9A pull box

(C) = Communications pull box
(E) = Pull box with extension
(S) = Sprinkler control pull box
(21) = Anchor bolts and conduit for future installation of Type 21 Standard
(T) = Traffic pull box

VEHICLE DETECTORS

5 J 9 U

- U = Upper
- L = Lower
- Slot number in input file
- Input file (I or J)
- Phase

PROPOSED	EXISTING	
		Type A detector loop. Outline of sawcut shown.
		Type B detector loop. Outline of sawcut shown.
		Type C detector loop. Outline of sawcut shown.
		Type D detector loop. Outline of sawcut shown.
		Type E detector loop. Outline of sawcut shown.
		Type Q detector loop. Outline of sawcut shown.
		Magnetic detector
DH	dh	Detector handhole
		Microwave or video detection zone

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

RSP ES-1C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1C DATED MAY 1, 2006 - PAGE 402 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1C

2006 REVISED STANDARD PLAN RSP ES-1C

7-10-07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	57	11.0/22.5	49	52

REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

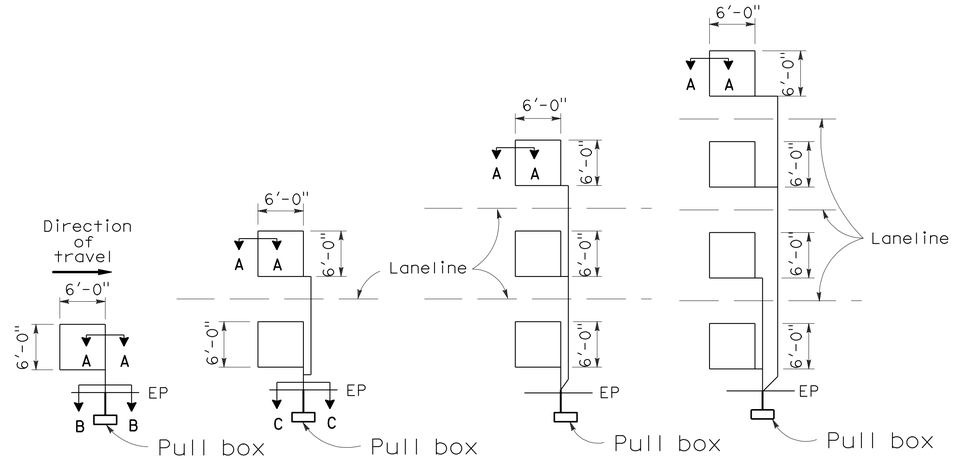
REGISTERED PROFESSIONAL ENGINEER Jeffery G. McRae No. E14512 Exp. 6-30-08 ELECTRICAL STATE OF CALIFORNIA

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

To accompany plans dated 1-31-11

LOOP INSTALLATION PROCEDURE

1. Loops shall be centered in lanes.
2. Saw slots in pavement for loop conductors as shown in details.
3. Distance between side of loop and a lead-in saw cut from adjacent detectors shall be 2'-0" minimum. Distance between lead-in saw cuts shall be 6" minimum.
4. Bottom of saw slot shall be smooth with no sharp edges.
5. Slots shall be washed until clean, blown out and thoroughly dried before installing loop conductors.
6. Adjacent loops on the same sensor unit channel shall be wound in opposite directions.
7. Identify and tag loop circuit pairs in the pull box with loop number, start (S) and finish (F) of conductor. Identify and tag lead-in-cable with sensor number and phase.
8. Install loop conductor in slot using a 3/16" to 1/4" thick wood paddle. Hold loop conductors with wood paddles (at the bottom of the sawed slot) during sealant placement.
9. No more than 2 twisted pairs shall be installed in one sawed slot.
10. Allow additional 5'-0" of slack length of conductor for the lead-in run to pull box.
11. The additional length of each conductor for each loop shall be twisted together into a pair (6 turns per 3'-4" minimum) before being placed in the slot and conduit leading to pull box.
12. Test each loop circuit for continuity, circuit resistance and insulation resistance at the pull box before filling slots.
13. Fill slots as shown in details.
14. Splice loop conductors to lead-in-cable. Splices shall be soldered.
15. End of lead-in-cable and Type 2 loop conductor shall be waterproofed prior to installing in conduit to prevent moisture from entering the cable.
16. Lead-in-cable shall not be spliced between the pull box and the controller cabinet terminals.
17. Test each loop circuit for continuity, circuit resistance and insulation resistance at the controller cabinet location.
18. Where loop conductors are not to be spliced to a lead-in-cable, the ends of the conductors shall be taped and waterproofed with electrical insulating coating.

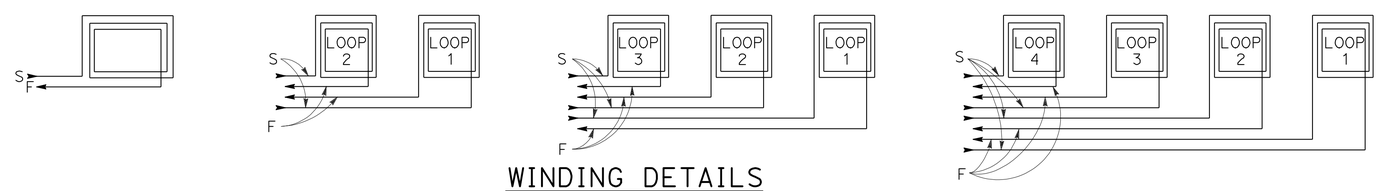


TYPE 1A INSTALLATION | TYPE 2A INSTALLATION | TYPE 3A INSTALLATION | TYPE 4A INSTALLATION

SAWCUT DETAILS

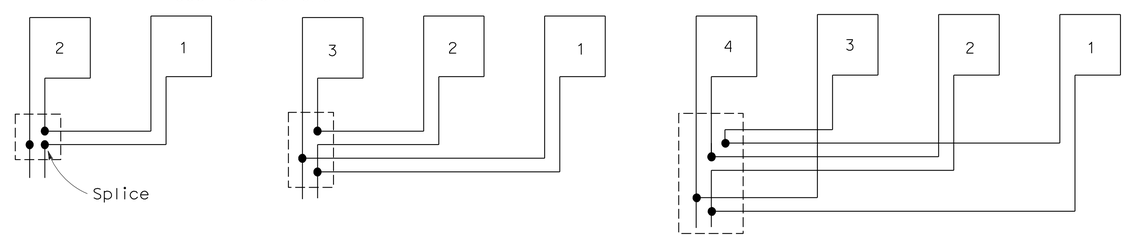
(Type A loop detector configurations illustrated)

1. 1A thru 4A = 1 Type A loop configuration in each lane.
2. 1B thru 4B = 1 Type B loop configuration in each lane.
3. 1C = 1 Type C loop configuration entering lanes as required.
4. 1D thru 4D = 1 Type D loop configuration in each lane.
5. 1E thru 4E = 1 Type E loop configuration in each lane.
6. 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)



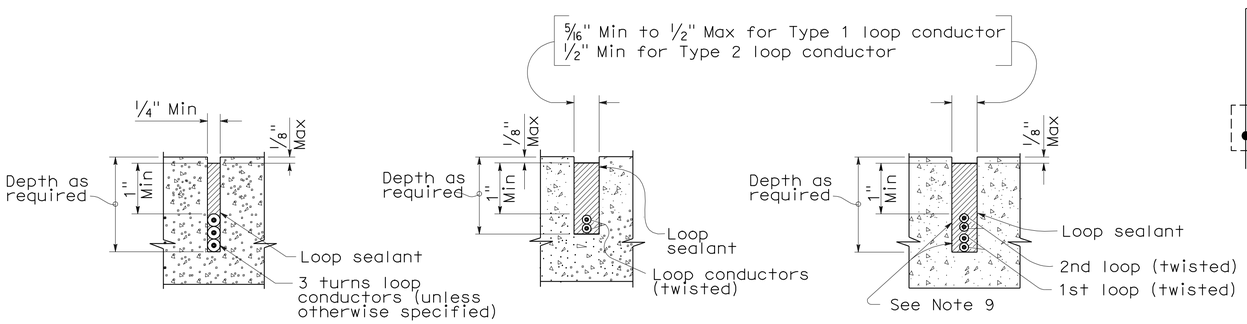
WINDING DETAILS

See Notes 6 and 7



TYPICAL LOOP CONNECTIONS

(Dashed lines represent the pull box)



SECTION A-A | SECTION B-B | SECTION C-C

SLOT DETAILS - TYPE 1 AND TYPE 2 LOOP CONDUCTOR

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (DETECTORS)

NO SCALE

RSP ES-5A DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-5A DATED MAY 1, 2006 - PAGE 423 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-5A

2006 REVISED STANDARD PLAN RSP ES-5A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	Ora	57	11.0/22.5	50	52

REGISTERED CIVIL ENGINEER — DATE 10/28/10

1-31-11
PLANS APPROVAL DATE

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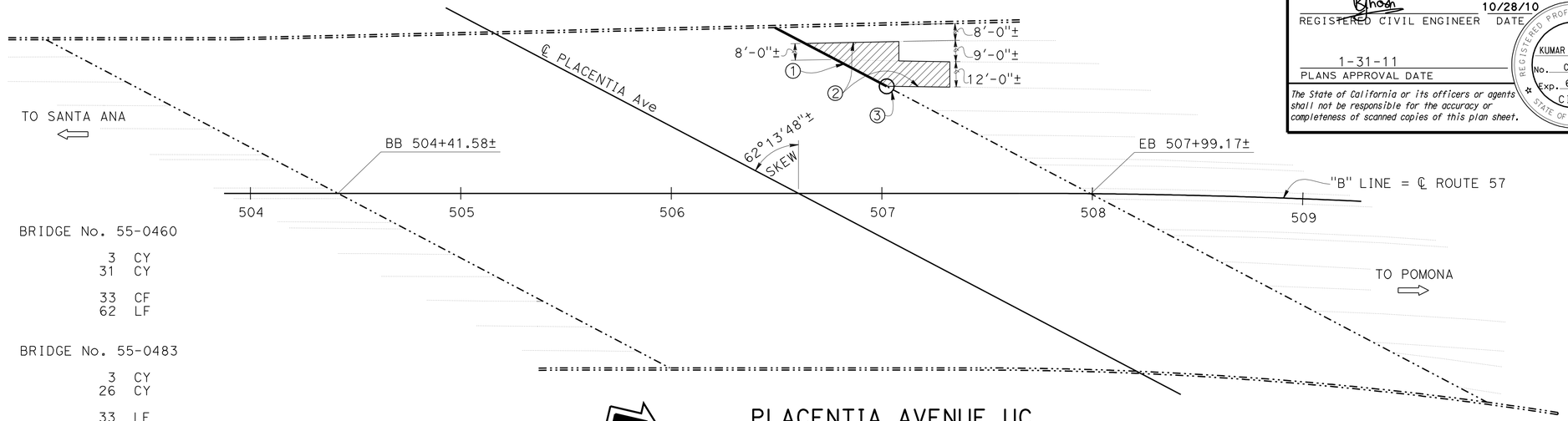
REGISTERED PROFESSIONAL ENGINEER — KUMAR K. GHOSH — No. C 72555 — Exp. 6/30/12 — CIVIL — STATE OF CALIFORNIA



PLACENTIA AVENUE UC

BRIDGE No. 55-0460 PM 17.02
1" = 30'

QUANTITIES

1 - PLACENTIA AVENUE UC	BRIDGE No. 55-0460	
AGGREGATE BASE (APPROACH SLAB)	3	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	31	CY
PAVING NOTCH EXTENSION	33	CF
JOINT SEAL (MR 1½")	62	LF
2 - ROLLING HILLS DRIVE UC	BRIDGE No. 55-0483	
AGGREGATE BASE (APPROACH SLAB)	3	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	26	CY
JOINT SEAL (MR 1")	33	LF
3 - LAMBERT ROAD UC	BRIDGE No. 55-0492	
AGGREGATE BASE (APPROACH SLAB)	5	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	52	CY
JOINT SEAL (MR 1")	34	LF
JOINT SEAL (MR 2")	34	LF

LEGEND:

① Install paving notch extension where new approach slab is placed.

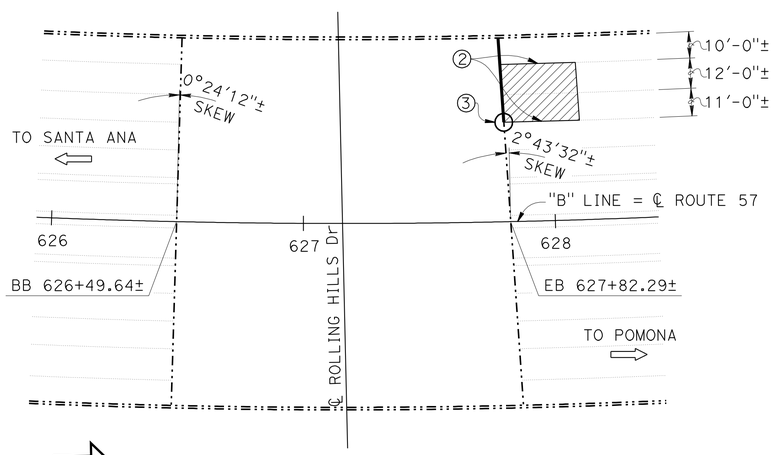
② Approach slab limits to match lane lines.

③ Type B Joint Splice

-·-·- Indicates existing structure.

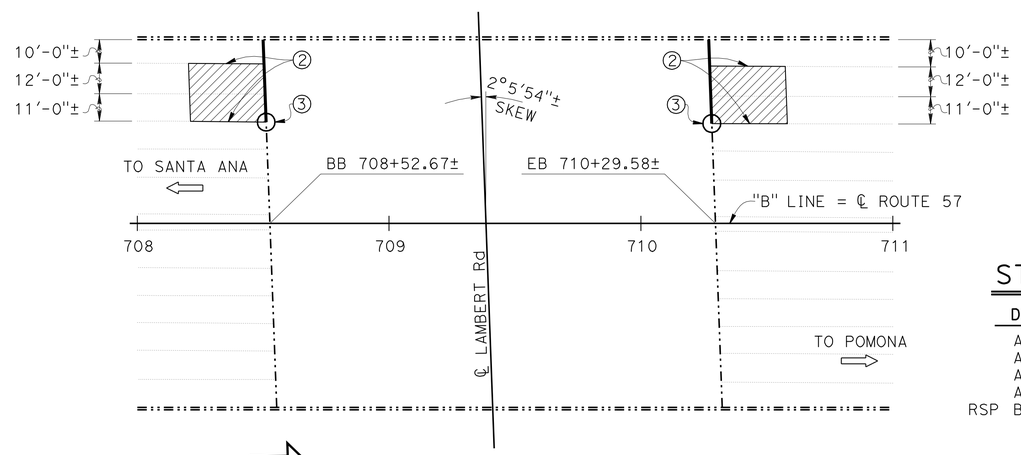
—— Indicates location of existing joint seal removal, and placement of new joint seal. For details, see "JOINT SEAL DETAILS" sheet.

▨ Indicates location and limits of new Structure Approach Type R(30D). See "STRUCTURE APPROACH TYPE R(30D)" sheet.



ROLLING HILLS DRIVE UC

BRIDGE No. 55-0483 PM 19.33
1" = 30'



LAMBERT ROAD UC

BRIDGE No. 55-0492 PM 20.88
1" = 30'

INDEX TO PLANS

SHEET NO.	TITLE
1	GENERAL PLAN
2	JOINT SEAL DETAILS
3	STRUCTURE APPROACH TYPE R(30D)

STANDARD PLANS DATED MAY 2006

DETAIL	DESCRIPTION
A10A	ACRONYMS AND ABBREVIATIONS (SHEET 1 OF 2)
A10B	ACRONYMS AND ABBREVIATIONS (SHEET 2 OF 2)
A10C	SYMBOLS (SHEET 1 OF 2)
A10D	SYMBOLS (SHEET 2 OF 2)
RSP B6-21	JOINT SEALS (MAXIMUM MOVEMENT RATING=2")

STANDARD PLAN SHEET NO.
DETAIL NO.

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

Chung-Yuan Wen
DESIGN ENGINEER

	BY	CHECKED
DESIGN	L. Sanchez-Manzo	K. Ghosh
DETAILS	T. Kusumi	L. Sanchez-Manzo
QUANTITIES	L. Sanchez-Manzo	K. Kim

LOAD & RESISTANCE FACTOR DESIGN — LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE

	BY	CHECKED
LAYOUT	T. Kusumi	L. Sanchez-Manzo
SPECIFICATIONS	R. Franti	PLANS AND SPECS COMPARED K. Ghosh

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 21

BRIDGE NO. VARIOUS
POST MILE VARIES

ROUTE 57 BRIDGES
GENERAL PLAN

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 12
EA OL1501

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 08-05-10 08-04-10 08-05-10 08-06-10 09-07-10 10-18-10 10-28-10

SHEET 1 OF 3

STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.07-24-06)

FILE => 12-o11501-a-gp01.dgn

USERNAME => trlim DATE PLOTTED => 02-FEB-2011 TIME PLOTTED => 13:55

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
12	Ora	57	11.0/22.5	51	52

REGISTERED CIVIL ENGINEER 10/28/10 DATE

1-31-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
KUMAR K. GHOSH
No. C 72555
Exp. 6/30/12
CIVIL
STATE OF CALIFORNIA

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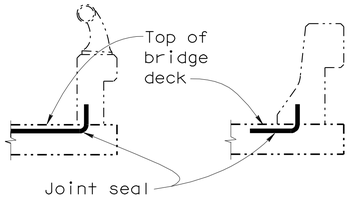


BARRIER RAIL

JOINT SEAL AT LOW SIDE OF DECK

Notes: Details shown for illustration purposes only. For use only where deck joint matches the sidewalk or curb joint.

The following notes apply to JOINT SEAL TYPE B:

1) Seal must satisfy both minimum Movement Rating (MR) and minimum W1 requirements.
2) Minimum W1 is the calculated maximum width of the joint based on field measurements. After the joints have been cleaned, minimum W1 is to be recalculated by the Engineer.
3) W1 shall be the smaller of the values determined as follows:
   A) 0.85 times the manufacturer's designed minimum uncompressed width of the seal.
   B) The width of the seal on the third successive test cycle of the pressure deflection test, when compressed to an average pressure of 3 psi.
4) Bend Type B joint seal 6" up into curb or rail on the low side of the deck where deck joint matches curb or rail joint.
5) For details not shown, see RSP B6-21

JOINT SEAL TABLE

LOCATION			ABUTMENT TYPE	MINIMUM "MR" (IN)	APPROXIMATE LENGTH (FT)
PLACENTIA AVE UC BRIDGE No. 55-0460	Abut 5	Lanes 4 & Ramp	Diaphragm	1.5	62
ROLLING HILLS DR UC BRIDGE No. 55-0483	Abut 2	Lanes 3 & 4	Diaphragm	1	33
LAMBERT RD UC BRIDGE No. 55-0492	Abut 1	Lanes 3 & 4	Diaphragm	1	34
	Abut 2	Lanes 3 & 4		2	34

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

	BY	CHECKED
DESIGN	L. Sanchez-Manzo	K. Ghosh
DETAILS	T. Kusumi	L. Sanchez-Manzo
QUANTITIES	L. Sanchez-Manzo	K. Kim

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 21

BRIDGE NO. VARIOUS
POST MILE VARIES

ROUTE 57 BRIDGES
JOINT SEAL DETAILS

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 10/25/05)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 12
EA OL1501

DISREGARD PRINTS BEARING EARLIER REVISION DATES
REVISION DATES: ~~08-06-09~~ ~~09-07-09~~ ~~10-18-09~~ 10-28-10

SHEET 2 OF 3

FILE => 12-ol1501-q-jnt_dt.dgn

USERNAME => tr1im DATE PLOTTED => 02-FEB-2011 TIME PLOTTED => 13:55

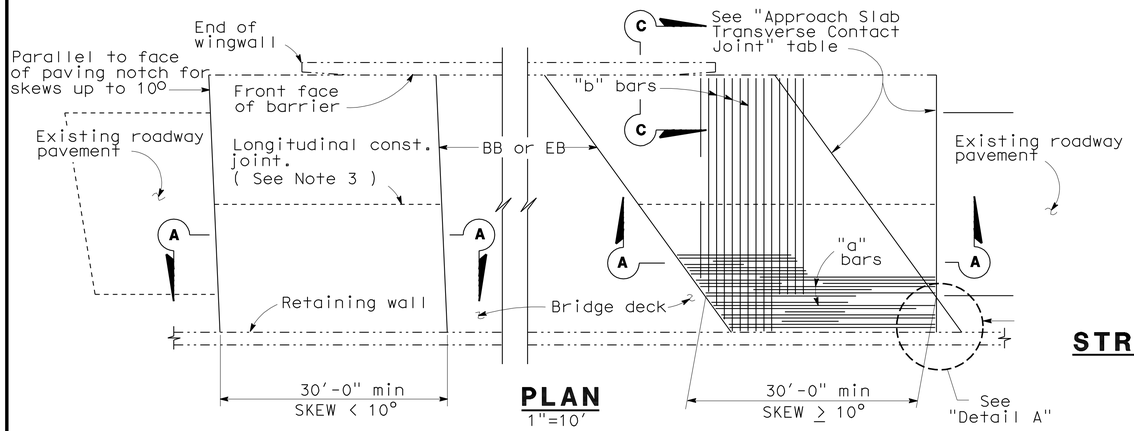
DIST.	COUNTY	ROUTE	MILE POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	57	11.0/22.5	52	52

REGISTERED ENGINEER - CIVIL 10/28/10

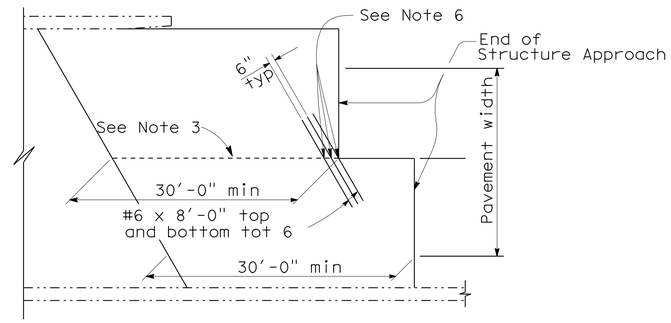
1-31-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER KUMAR K. GHOSH No. C 72555 Exp. 6/30/12 CIVIL STATE OF CALIFORNIA

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

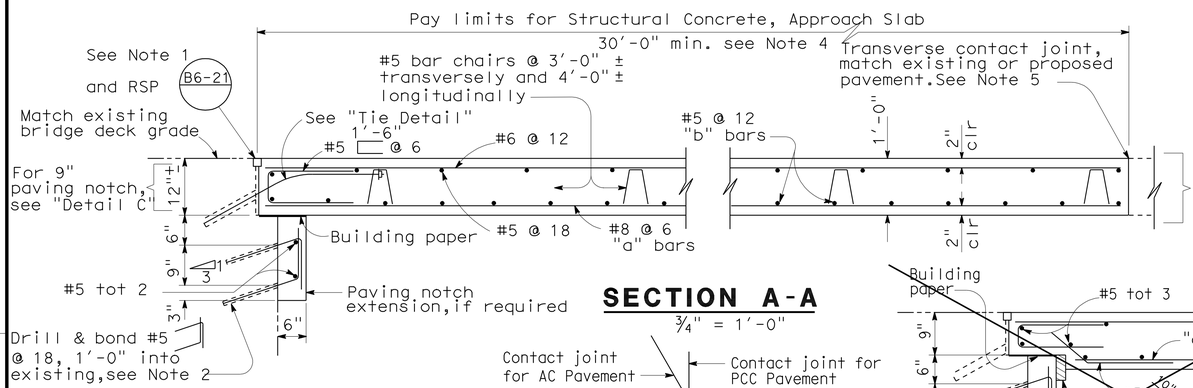


PLAN
1"=10'

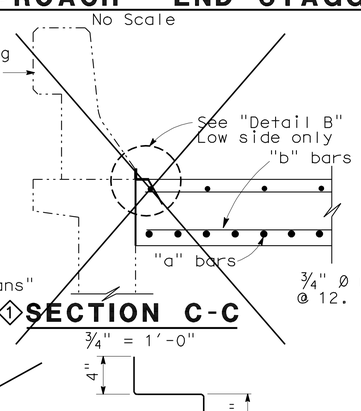


STRUCTURE APPROACH - END STAGGER DETAIL
No Scale

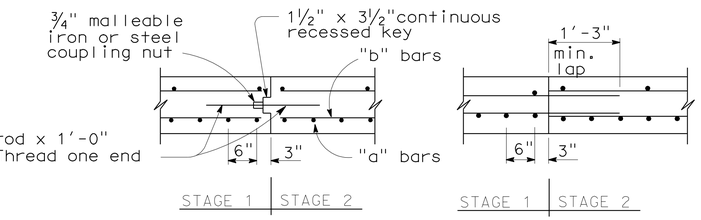
APPROACH SLAB TRANSVERSE CONTACT JOINT		
APPROACH SKEW	WITH AC ROADWAY PAVEMENT	WITH PCC ROADWAY PAVEMENT
< 10°	Parallel to face of paving notch	Parallel to face of paving notch
10° - 45°	Parallel to face of P N use (Detail A)	Stagger lines 24' to 36' apart
> 45°	Parallel to face of P N use (Detail A)	Stagger at each lane line

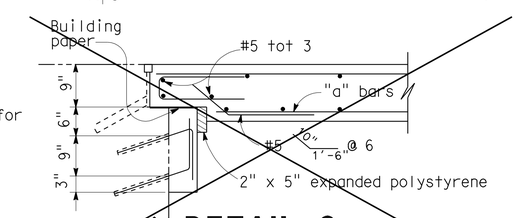


SECTION A-A
¾" = 1'-0"

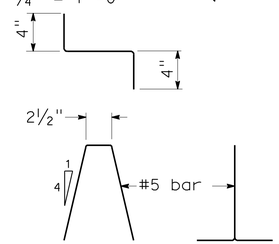


① SECTION C-C
¾" = 1'-0"

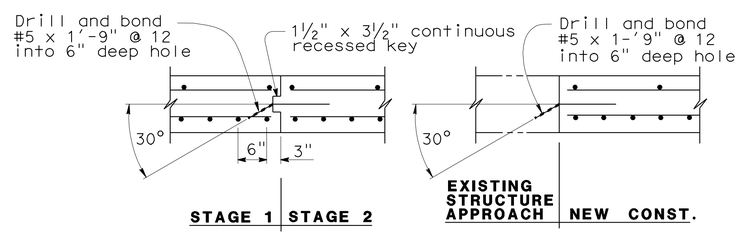




① DETAIL C
¾" = 1'-0"



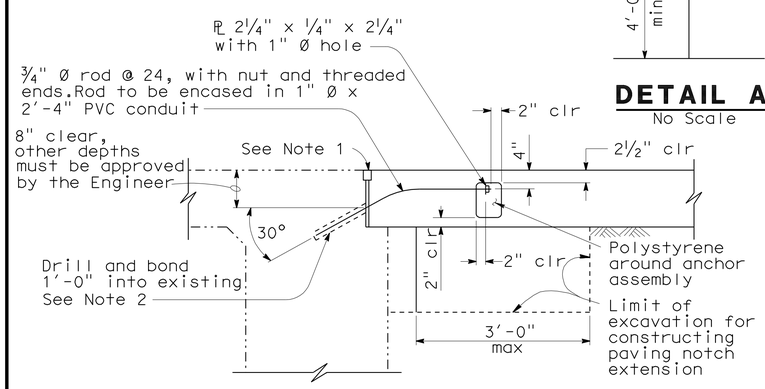
BAR CHAIR DETAIL
1½" = 1'-0"



LONGITUDINAL CONSTRUCTION JOINT ALTERNATIVES
¾" = 1'-0"

NOTES:

1. For details not shown or noted, see Structure Plans. Adjust bar reinforcement to clear a sawcut for sealed joint, when required.
2. Space to avoid existing prestress anchorages and main reinforcement.
3. Longitudinal construction joints, when permitted by the Engineer, shall be located on lane lines.
4. Transverse contact joint shall be a minimum of 5'-0" from an existing or constructed weakened plane joint.
5. For transverse contact joint with new PCC paving, refer to Standard Plan P10.
6. Couplers are required for stage construction.
7. End angle or plate at beginning of barrier transition, end of wingwall or end of structure approach as applicable.

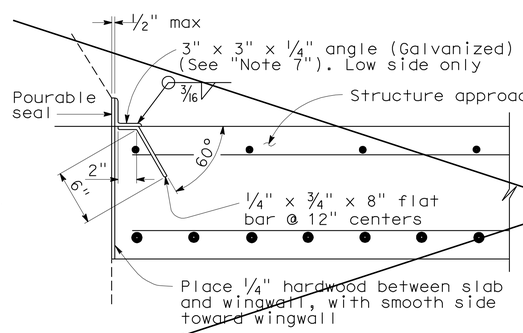


DETAIL A
No Scale

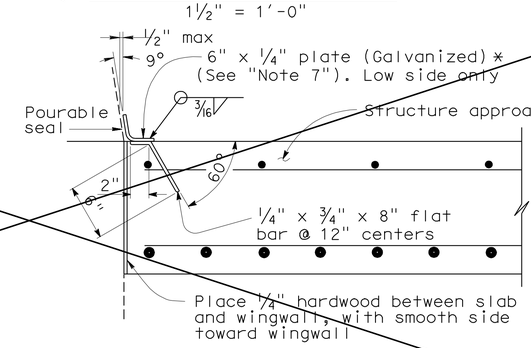
TIE DETAIL
¾" = 1'-0"

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

NOTE: For details not shown, see "Section A-A".



*(TO BE USED WITH TYPE 25 OR TYPE 27 CONCRETE BARRIER)



*(TO BE USED WITH TYPE 732 OR TYPE 736 CONCRETE BARRIER)

① DETAIL B
1½" = 1'-0"

STANDARD DRAWING				
RELEASE DATE 3/14/05	DESIGN	BY M.TRAFFALIS	CHECKED E.THORKILDSEN	RELEASED BY
FILE NO. xs3-140e	DETAILS	BY R.YEE	CHECKED E.THORKILDSEN	
	SUBMITTED	BY M.HA	DRAWING DATE REVISED	OFFICE CHIEF

① Deleted details

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE NO. VARIOUS
MILE POST VARIES

ROUTE 57 BRIDGES

STRUCTURE APPROACH TYPE R(30D)

DS OSD 2147A (ENGLISH) (REV. X/XX/XX)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 12
EA OL1501

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY) 08-02-10 08-04-10 08-05-10 08-06-10 09-07-10 10-18-10

SHEET 3 OF 3

USERNAME => trlim

12-ol1501-s-sad.dgn

DATE PLOTTED => 02-FEB-2011 TIME PLOTTED => 13:56