Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	0.3/7.8	1	48

ACIM-405-2(961)93E

STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON

STATE HIGHWAY

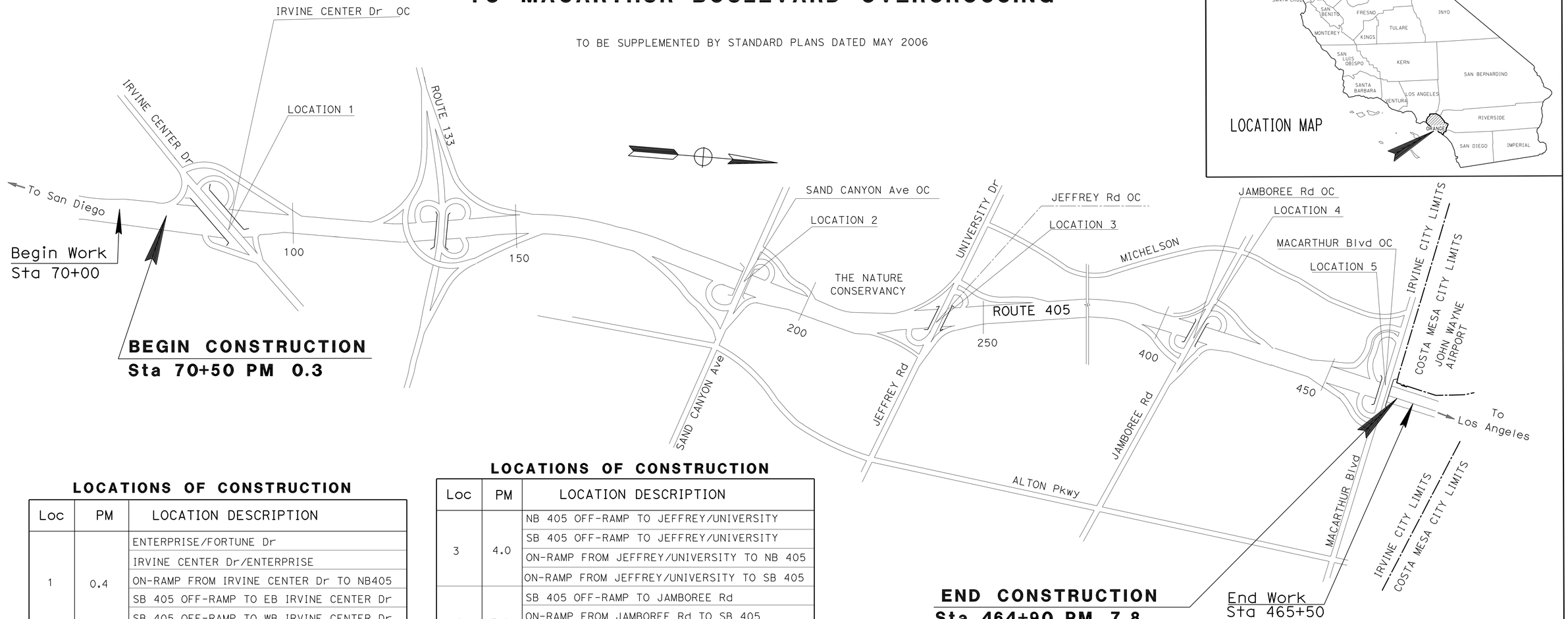
IN ORANGE COUNTY
IN IRVINE AT VARIOUS LOCATIONS
FROM IRVINE CENTER DRIVE OVERCROSSING
TO MACARTHUR BOULEVARD OVERCROSSING

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

INDEX OF PLANS

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

LOCATION MAP



LOCATIONS OF CONSTRUCTION

Loc	PM	LOCATION DESCRIPTION
1	0.4	ENTERPRISE/FORTUNE Dr
		IRVINE CENTER Dr/ENTERPRISE
		ON-RAMP FROM IRVINE CENTER Dr TO NB405
		SB 405 OFF-RAMP TO EB IRVINE CENTER Dr
		SB 405 OFF-RAMP TO WB IRVINE CENTER Dr
		ON-RAMP FROM IRVINE CENTER Dr TO SB405
2	2.9	NB 405 OFF-RAMP TO WB SAND CANYON Ave
		ON-RAMP FROM SAND CANYON Ave TO NB 405
		ON-RAMP FROM SAND CANYON Ave TO SB 405
		SB 405 OFF-RAMP TO SAND CANYON Ave

LOCATIONS OF CONSTRUCTION

Loc	PM	LOCATION DESCRIPTION
3	4.0	NB 405 OFF-RAMP TO JEFFREY/UNIVERSITY
		SB 405 OFF-RAMP TO JEFFREY/UNIVERSITY
		ON-RAMP FROM JEFFREY/UNIVERSITY TO NB 405
		ON-RAMP FROM JEFFREY/UNIVERSITY TO SB 405
4	7.0	SB 405 OFF-RAMP TO JAMBOREE Rd
		ON-RAMP FROM JAMBOREE Rd TO SB 405
		NB 405 OFF-RAMP TO JAMBOREE ROAD
		ON-RAMP FROM JAMBOREE Rd TO NB 405
5	7.8	ON-RAMP FROM MACARTHUR Blvd TO SB 405
		SB 405 OFF-RAMP TO MACARTHUR Blvd
		ON-RAMP FROM MACARTHUR Blvd TO NB 405
		NB 405 OFF-RAMP TO MACARTHUR Blvd

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

NO SCALE

PROJECT MANAGER: BOB BAZARGAN

DESIGN ENGINEER: CARMEL KALAPURAYIL

CarmelKalapurayil 11-14-11
PROJECT ENGINEER REGISTERED CIVIL ENGINEER — DATE

REGISTERED PROFESSIONAL ENGINEER — CARMEL KALAPURAYIL — No. C56654 — Exp. 06-30-13 — CIVIL — STATE OF CALIFORNIA

January 30, 2012
PLANS APPROVAL DATE

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

CONTRACT No.	12-0M1404
PROJECT ID	1200020300

LAST REVISION 11-09-11 DATE PLOTTED => 03-APR-2012 TIME PLOTTED => 09:27

BORDER LAST REVISED 7/2/2010 | CALTRANS WEB SITE IS: HTTP//WWW.DOT.CA.GOV/ | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | USERNAME => s121614 DGN FILE => 1200020300ab001.dgn | UNIT 2995 | PROJECT NUMBER & PHASE 12000203001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	0.3/7.8	2	48

Carmel Kalapurayil 11-14-11
REGISTERED CIVIL ENGINEER DATE

1-30-12
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
CARMEL KALAPURAYIL
No. C 56654
Exp. 6-30-13
CIVIL
STATE OF CALIFORNIA

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

NOTE:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.
3. FOR EACH CURB RAMP, SAWCUT AND REMOVE EXISTING SIDEWALK AND GUTTER, CURBRAMP, OR ISLAND PASSAGEWAY.
4. 4′ LANDING SHALL BE WITHIN THE CROSSWALK.
5. ALL CONFLICTING PAVEMENT MARKINGS SHALL BE REMOVED.
6. CROSSWALKS SHALL BE 10′ MINIMUM WIDTH, UNLESS OTHERWISE SHOWN.
7. FOR CASE C (Mod) CURB RAMPS, SEE C-1 DETAIL A.

LEGENDS:

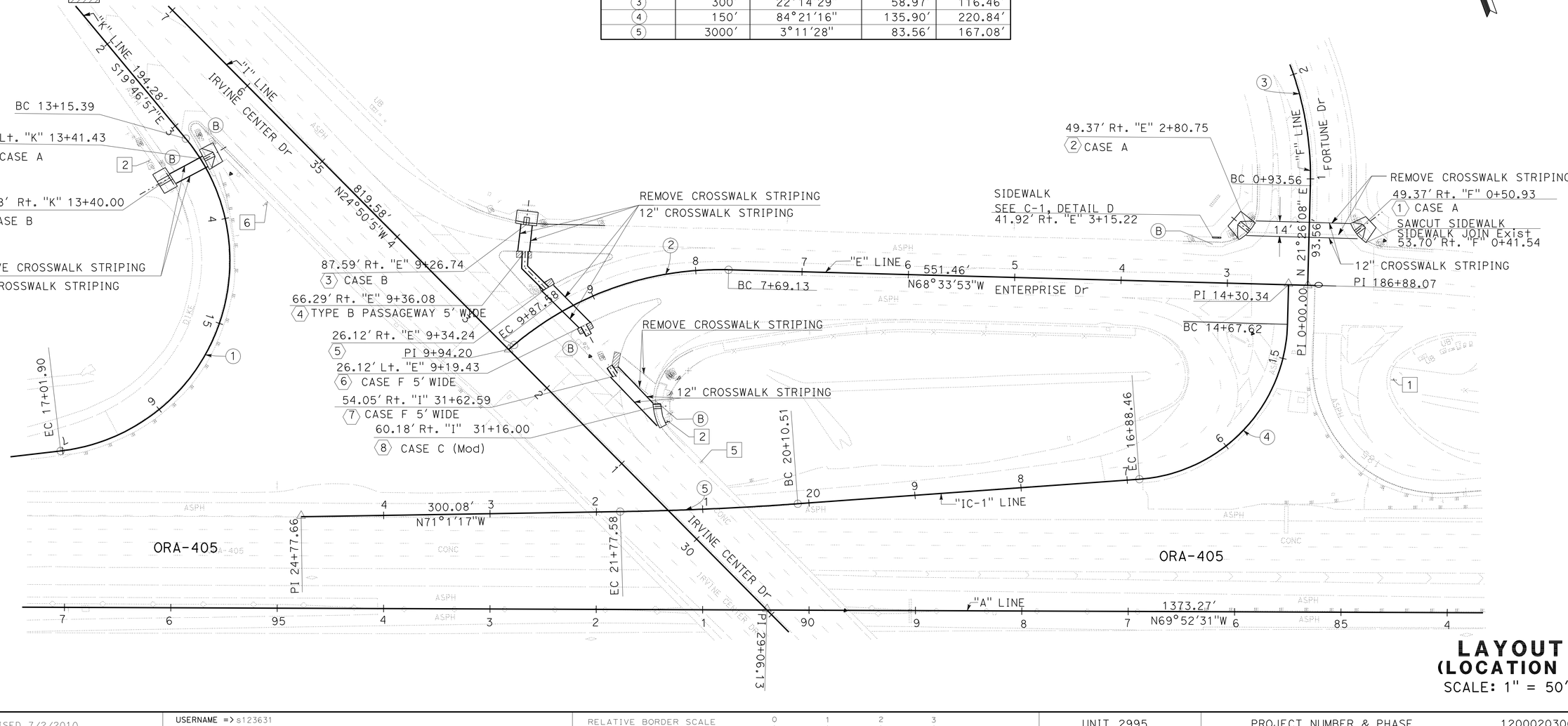
- [#] SIGN NUMBER
- EXISTING SURVEY MONUMENTS (TO BE PRESERVED)
- (B) TEMPORARY DRAINAGE INLET PROTECTION (TYPE VI)
- ⟨#⟩ CURB RAMP NUMBER
- CURB RAMP DETECTABLE WARNING SURFACE
- (#) CURVE NUMBER
- RECONSTRUCT MEDIAN ISLAND/MATCH EXISTING

ABBREVIATION:

DWS - DETECTABLE WARNING SURFACE

CURVE DATA

No. (#)	R	Δ	T	L
(1)	180′	123°1′48"	331.73′	386.51′
(2)	300′	41°43′17"	114.32′	218.45′
(3)	300′	22°14′29"	58.97′	116.46′
(4)	150′	84°21′16"	135.90′	220.84′
(5)	3000′	3°11′28"	83.56′	167.08′



LAYOUT (LOCATION 1)

SCALE: 1" = 50′

L-1

CARMEL KALAPURAYIL — RAJU VORA — REVISED BY — DATE REVISED
CALCULATED-DESIGNED BY — CHECKED BY
FUNCTIONAL SUPERVISOR — ANDREW OSHRIN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — DESIGN DIVISION
Caltrans

LAST REVISION — DATE PLOTTED => 01-FEB-2012 — TIME PLOTTED => 14:59

BORDER LAST REVISED 7/2/2010 | USERNAME => s123631 | DGN FILE => 1200020300ea001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2995 | PROJECT NUMBER & PHASE 12000203001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	0.3/7.8	3	48

Carmel Kalapurayil 11-14-11
REGISTERED CIVIL ENGINEER DATE

1-30-12
PLANS APPROVAL DATE

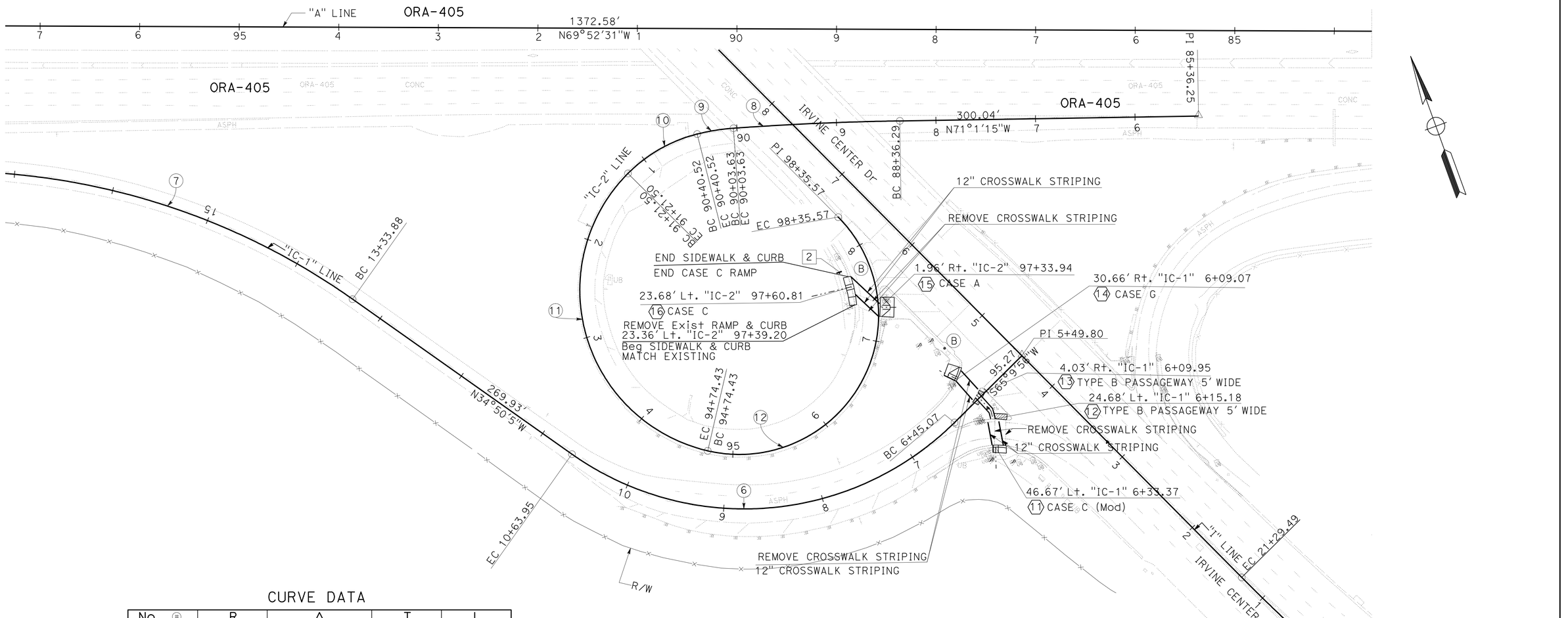
REGISTERED PROFESSIONAL ENGINEER
CARMEL KALAPURAYIL
No. C 56654
Exp. 6-30-13
CIVIL
STATE OF CALIFORNIA

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

2. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.



CURVE DATA

No. Ⓡ	R	Δ	T	L
6	300′	79°59′59"	251.73′	418.88′
7	700′	30°9′44"	188.63′	368.50′
8	3000′	3°11′46"	83.69′	167.34′
9	210′	10°3′52"	18.49′	36.89′
10	150′	30°55′59"	41.50′	80.98′
11	166′	121°48′48"	298.32′	352.92′
12	140′	147°48′05"	485.06′	361.15′

LAYOUT (LOCATION 1)

SCALE: 1" = 50′

L-2

CALCULATED-DESIGNED BY
CHECKED BY
REVISED BY
DATE REVISED

CARMEL KALAPURAYIL
RAJU VORA

FUNCTIONAL SUPERVISOR
ANDREW OSHRIN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
DESIGN DIVISION

LAST REVISION DATE PLOTTED => 01-FEB-2012
11-14-11 TIME PLOTTED => 14:59

BORDER LAST REVISED 7/2/2010

USERNAME => s123631
DGN FILE => 1200020300ea002.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 2995

PROJECT NUMBER & PHASE 12000203001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	0.3/7.8	4	48

Carmel Kalapurayil 11-14-11
REGISTERED CIVIL ENGINEER DATE

1-30-12
PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
CARMEL KALAPURAYIL
No. C 56654
Exp. 6-30-13
CIVIL
STATE OF CALIFORNIA

NOTES:

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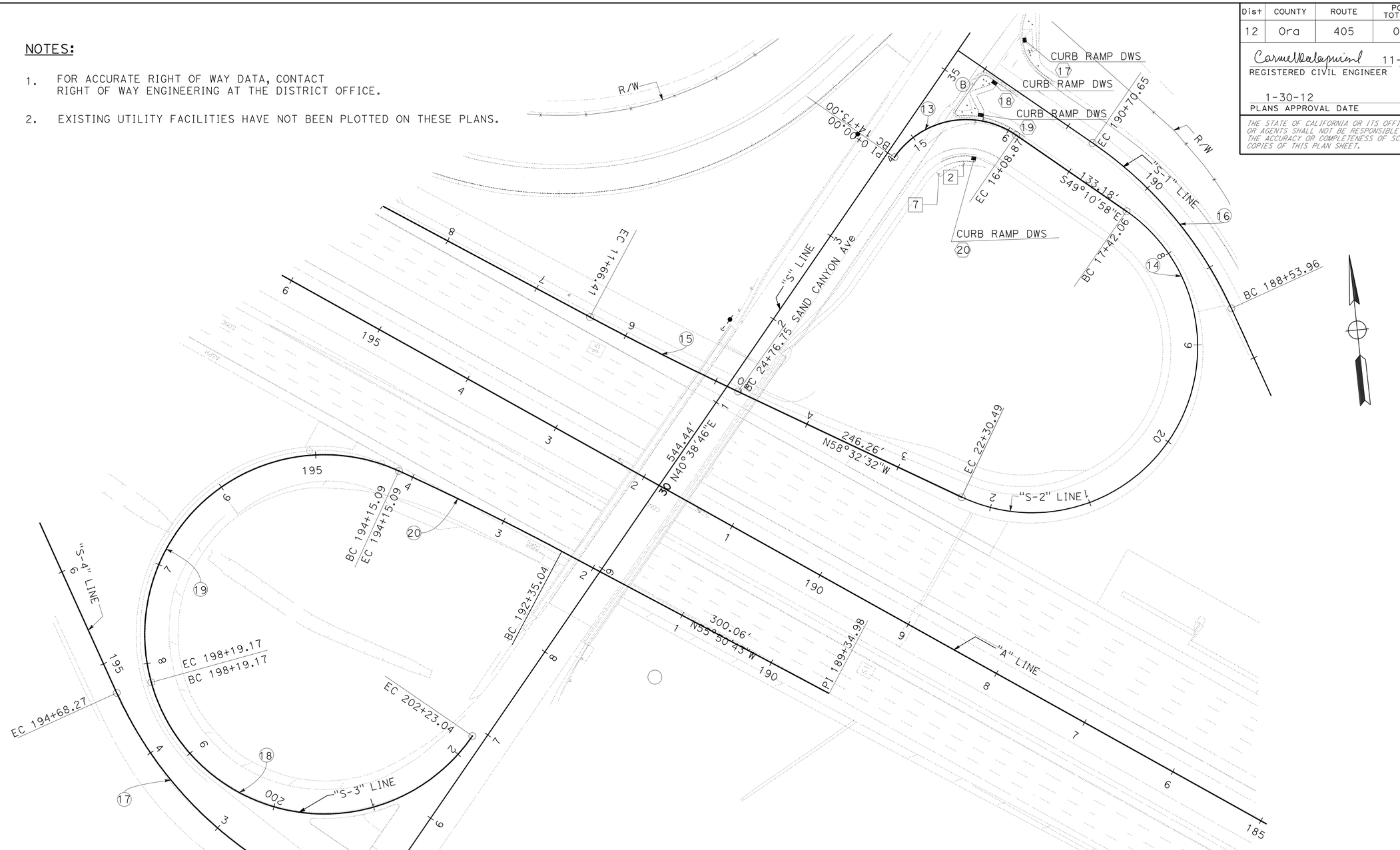

CURVE DATA

No. Ⓑ	R	Δ	T	L
13	87′	90°0′00"	86.58′	136.00′
14	164′	170°38′26"	2003.45′	488.43′
15	3280′	2°52′05"	82.11′	164.19′
16	400′	31°2′19"	111.08′	216.69′
17	390′	31°8′25"	108.67′	211.97′
18	178′	130°0′00"	381.72′	403.87′
19	178′	130°4′12"	382.33′	404.09′
20	3000′	3°26′19"	90.05′	180.05′

LAYOUT (LOCATION 2)

SCALE: 1" = 50′

L-3

CALCULATED-DESIGNED BY	CARMEL KALAPURAYIL	REVISED BY	
CHECKED BY	RAJU VORA	DATE REVISED	
FUNCTIONAL SUPERVISOR	ANDREW OSHRIN		

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN DIVISION

LAST REVISION 11-14-11
DATE PLOTTED => 01-FEB-2012
TIME PLOTTED => 14:59

BORDER LAST REVISED 7/2/2010
USERNAME => s123631
DGN FILE => 1200020300ea003.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2995
PROJECT NUMBER & PHASE 12000203001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	0.3/7.8	5	48

Carmel Kalapurayil 11-14-11
REGISTERED CIVIL ENGINEER DATE

1-30-12
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
CARMEL KALAPURAYIL
No. C 56654
Exp. 6-30-13
CIVIL
STATE OF CALIFORNIA

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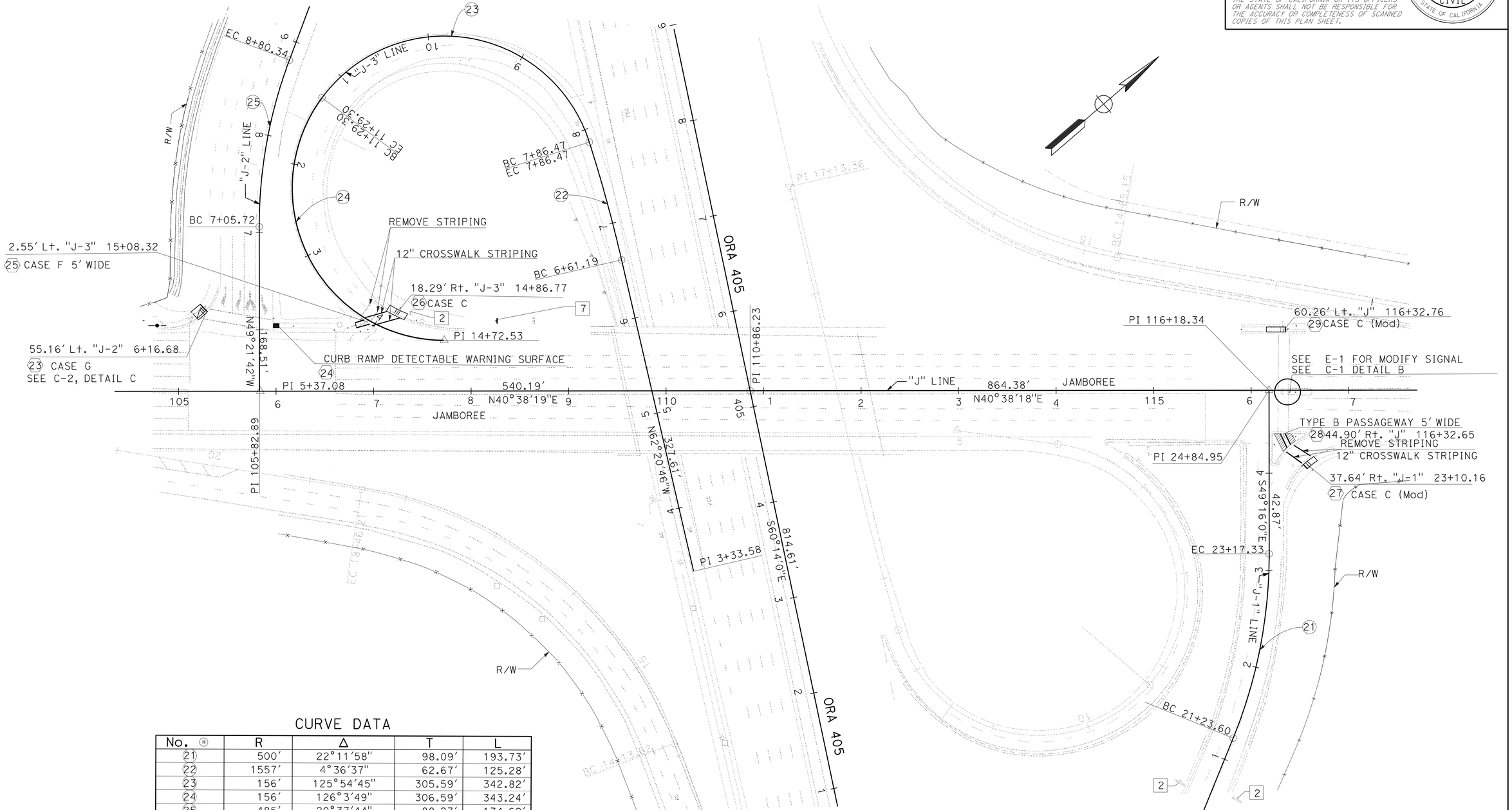

CURVE DATA

No. (#)	R	Δ	T	L
21	500'	22°11'58"	98.09'	193.73'
22	1557'	4°36'37"	62.67'	125.28'
23	156'	125°54'45"	305.59'	342.82'
24	156'	126°3'49"	306.59'	343.24'
25	485'	20°37'44"	88.27'	174.62'

LAYOUT
(LOCATION 4)
SCALE: 1" = 50'

L-4

CALCULATED-DESIGNED BY: CARMEL KALAPURAYIL
CHECKED BY: RAJU VORA
REVISED BY / DATE REVISED:
FUNCTIONAL SUPERVISOR: ANDREW OSHRIN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® DESIGN DIVISION

LAST REVISION: DATE PLOTTED => 01-FEB-2012
11-14-11 TIME PLOTTED => 14:59

BORDER LAST REVISED 7/2/2010 | USERNAME => s123631 | DGN FILE => 1200020300ea004.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2995 | PROJECT NUMBER & PHASE 12000203001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	0.3/7.8	6	48

Carmel Kalapurayil 11-14-11
REGISTERED CIVIL ENGINEER DATE

1-30-12
PLANS APPROVAL DATE

CARMEL KALAPURAYIL No. C 56654 Exp. 6-30-13 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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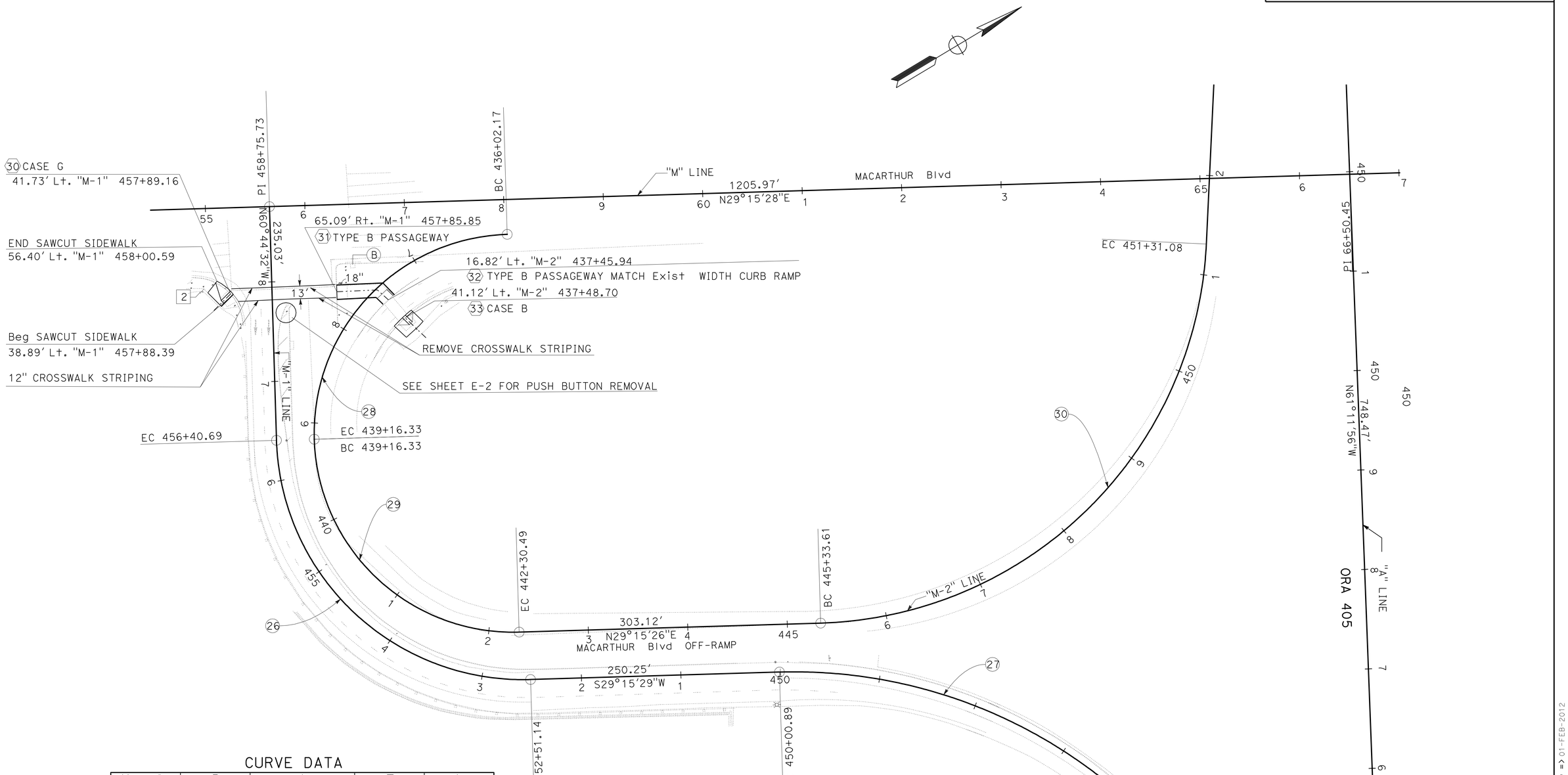

CURVE DATA

No. Ⓔ	R	Δ	T	L
26	248′	90°0′00"	248.00′	389.56′
27	500′	48°39′45"	226.09′	424.66′
28	200′	90°0′00"	200.00′	314.16′
29	200′	90°0′00"	200.00′	314.16′
30	400′	85°34′54"	370.29′	597.47′

LAYOUT
(LOCATION 5)
SCALE: 1" = 50′

L-5

CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED
CARMEL KALAPURAYIL | RAJU VORA
FUNCTIONAL SUPERVISOR: ANDREW OSHRIN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN DIVISION

LAST REVISION DATE PLOTTED => 01-FEB-2012
11-14-11 TIME PLOTTED => 14:59

BORDER LAST REVISED 7/2/2010 | USERNAME => s123631 | DGN FILE => 1200020300ea005.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2995 | PROJECT NUMBER & PHASE 12000203001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	0.3/7.8	7	48

Carmel Kalapurayil 11-14-11
REGISTERED CIVIL ENGINEER DATE

1-30-12
PLANS APPROVAL DATE

CARMEL KALAPURAYIL No. C 56654 Exp. 6-30-13 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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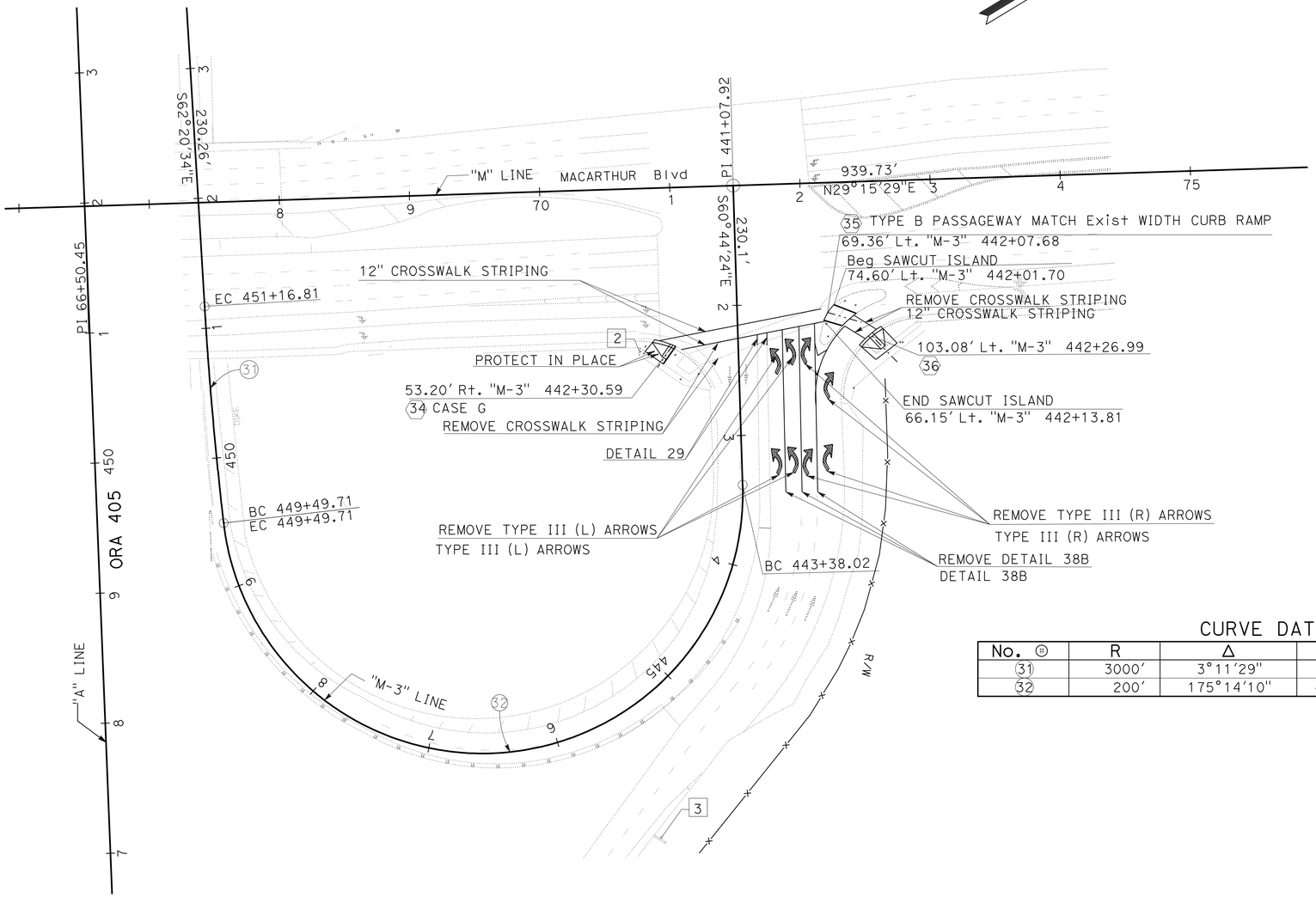

CURVE DATA

No. Ⓗ	R	Δ	T	L
31	3000′	3°11′29"	83.57′	167.10′
32	200′	175°14′10"	4807.93′	611.69′

LAYOUT
(LOCATION 5)
SCALE: 1" = 50′

L-6

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN DIVISION
FUNCTIONAL SUPERVISOR: ANDREW OSHRIN
CALCULATED-DESIGNED BY: CARMEL KALAPURAYIL
CHECKED BY: RAJU VORA
REVISED BY / DATE REVISED

LAST REVISION 11-14-11
DATE PLOTTED => 01-FEB-2012
TIME PLOTTED => 14:59

BORDER LAST REVISED 7/2/2010
USERNAME => s123631
DGN FILE => 1200020300ea006.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2995
PROJECT NUMBER & PHASE 12000203001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	0.3/7.8	8	48

CarmelKalapurayil 11-14-11
REGISTERED CIVIL ENGINEER DATE

1-30-12
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
CARMEL KALAPURAYIL
No. C 56654
Exp. 6-30-13
CIVIL
STATE OF CALIFORNIA

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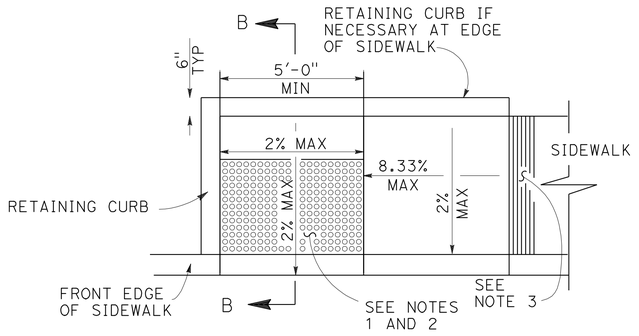
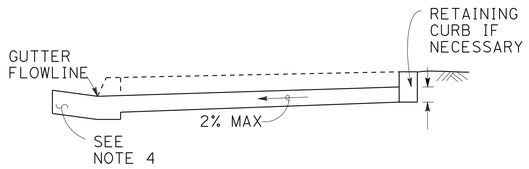
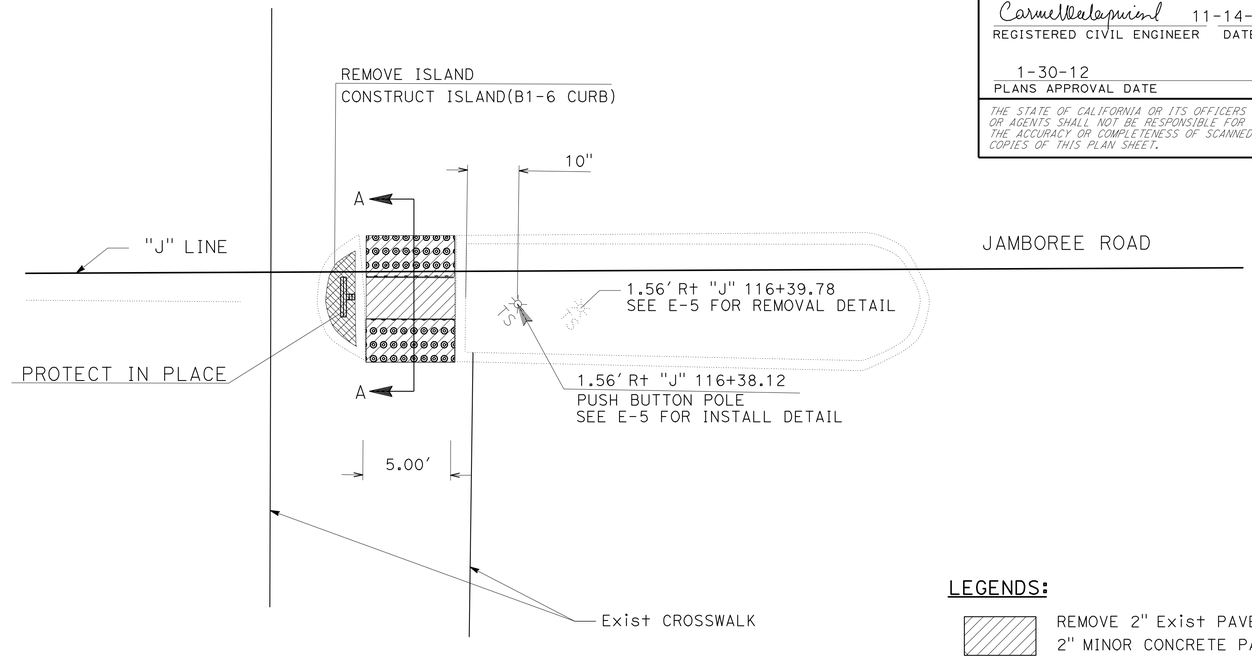


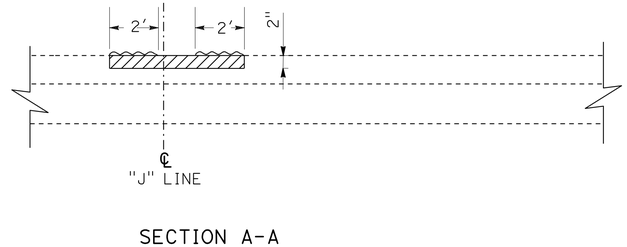
DETAIL A
CASE C (Mod)



SECTION B-B



DETAIL B



SECTION A-A

LEGENDS:

- REMOVE 2" Exist PAVEMENT
  2" MINOR CONCRETE PAVEMENT
- MINOR CONCRETE(MATCH EXISTING)
- DETECTABLE WARNING SURFACE(2' X 5')

NOTES:

1. THE EDGE OF THE DETECTABLE WARNING SURFACE NEAREST THE STREET SHALL BE BETWEEN 6" AND 8" FROM THE GUTTER FLOWLINE.
2. CURB RAMPS SHALL HAVE A DETECTABLE WARNING SURFACE THAT EXTENDS THE FULL WIDTH AND 3'-0" DEPTH OF THE RAMP. DETECTABLE WARNING SURFACES SHALL CONFORM TO THE DETAILS ON THIS PLAN AND THE REQUIREMENTS IN THE SPECIAL PROVISIONS.
3. THE CURB RAMP SHALL BE OUTLINED, AS SHOWN, WITH A 1'-0" WIDE BORDER WITH 1/4" GROOVES APPROXIMATELY 3/4" ON CENTER. SEE GROOVING DETAIL IN STANDARD PLAN RSP A88A.
4. MAXIMUM SLOPES OF ADJOINING GUTTERS, THE ROAD SURFACE IMMEDIATELY ADJACENT TO THE CURB RAMP OR ACCESSIBLE ROUTE SHALL NOT EXCEED 5 PERCENT WITHIN 4'-0" OF THE TOP AND BOTTOM OF THE CURB RAMP.

CONSTRUCTION DETAILS

NO SCALE

C-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN DIVISION
FUNCTIONAL SUPERVISOR: ANDREW OSHRIN
CALCULATED-DESIGNED BY: CARMEL KALAPURAYIL
CHECKED BY: RAJU VORA
REVISED BY
DATE REVISED

LAST REVISION DATE PLOTTED => 01-FEB-2012
11-14-11 TIME PLOTTED => 14:59

BORDER LAST REVISED 7/2/2010
USERNAME => s123631
DGN FILE => 12000203001gd001.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2995
PROJECT NUMBER & PHASE 12000203001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	0.3/7.8	9	48

Carmel Kalapurayil 11-14-11
REGISTERED CIVIL ENGINEER DATE

1-30-12
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
CARMEL KALAPURAYIL
No. C 56654
Exp. 6-30-13
CIVIL
STATE OF CALIFORNIA

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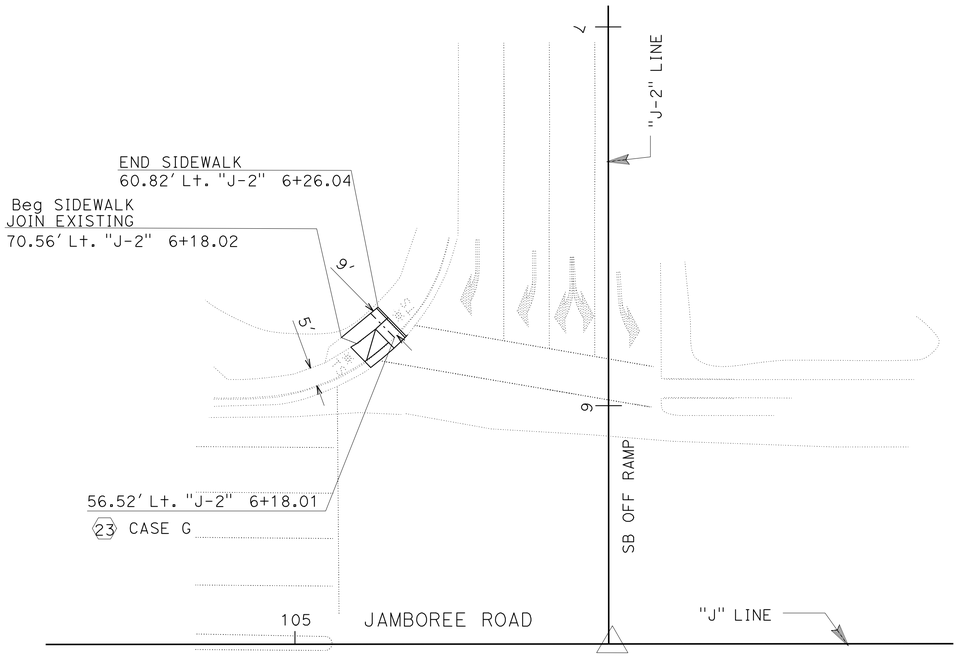
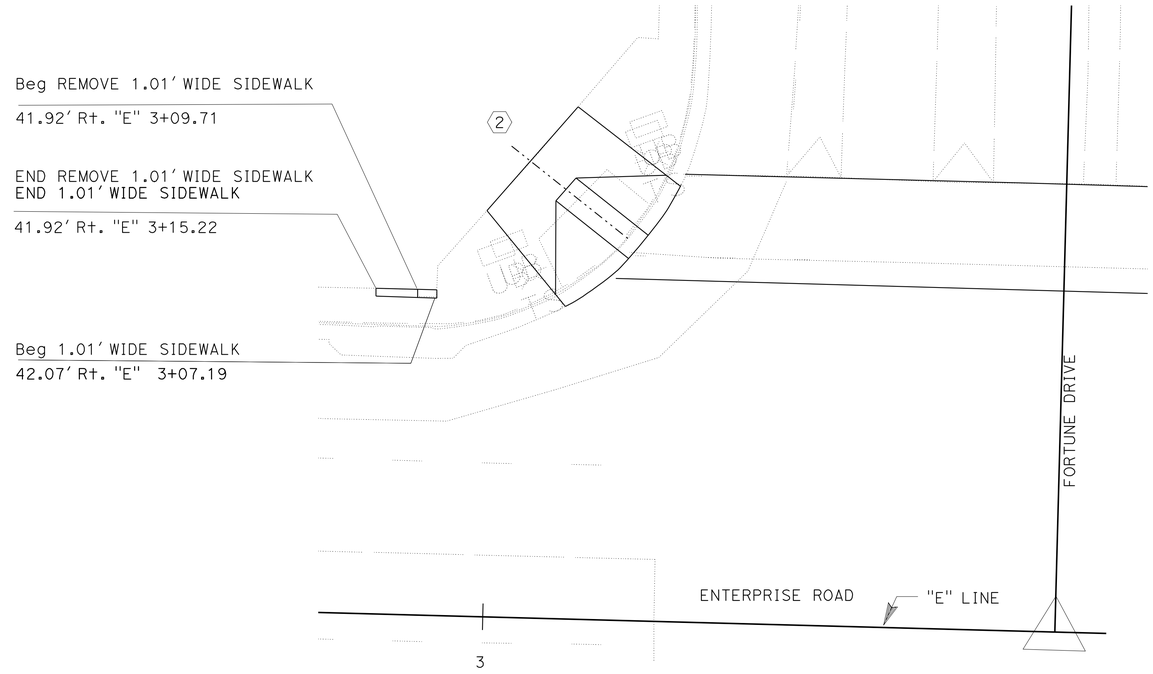


DETAIL C



DETAIL D

CONSTRUCTION DETAILS

NO SCALE

C-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN DIVISION
FUNCTIONAL SUPERVISOR: ANDREW OSHRIN
CALCULATED-DESIGNED BY: CARMEL KALAPURAYIL
CHECKED BY: RAJU VORA
REVISED BY
DATE REVISED

LAST REVISION | DATE PLOTTED => 01-FEB-2012
11-14-11 | TIME PLOTTED => 15:00

BORDER LAST REVISED 7/2/2010
USERNAME => s123631
DGN FILE => 1200020300ga002.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2995
PROJECT NUMBER & PHASE 12000203001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	0.3/7.8	10	48

Carmel Kalapurayil 11-14-11
REGISTERED CIVIL ENGINEER DATE

1-30-12
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
CARMEL KALAPURAYIL
No. C 56654
Exp. 6-30-13
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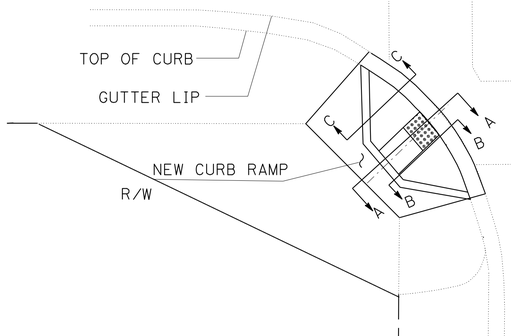
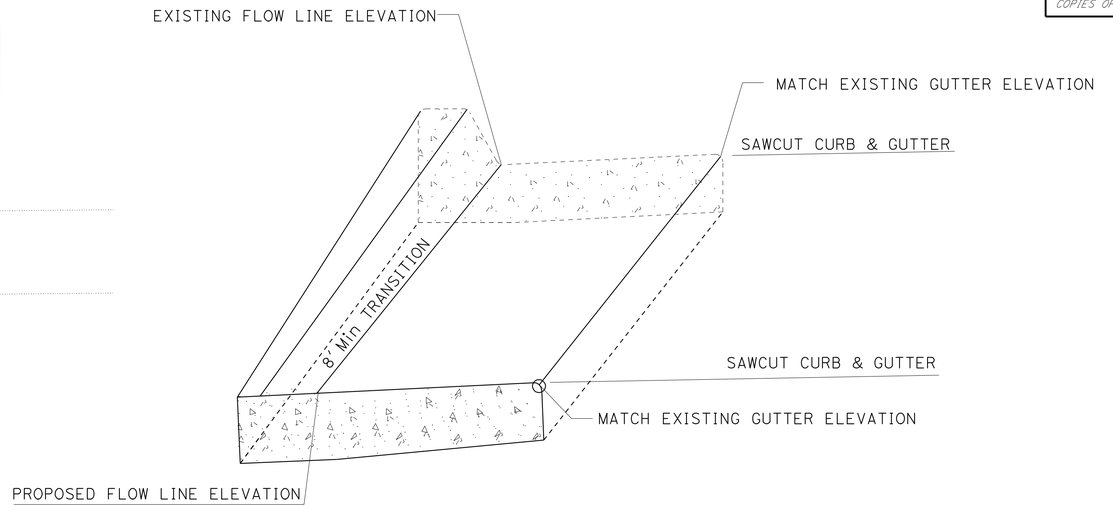


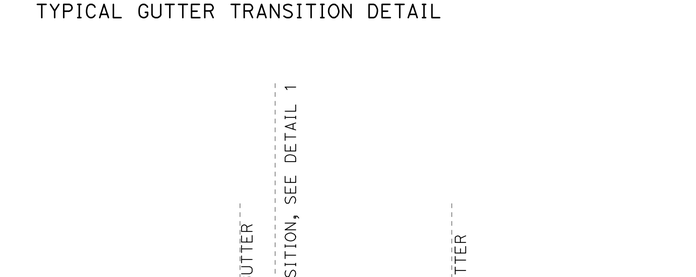
SEE DETAIL 1



DETAIL 1

TYPICAL GUTTER TRANSITION DETAIL

SECTION A-A



SECTION B-B/ SECTIONC-C

CONSTRUCTION DETAILS

NO SCALE

C-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
DESIGN DIVISION

FUNCTIONAL SUPERVISOR: ANDREW OSHRIN
CALCULATED-DESIGNED BY:
CHECKED BY:
CARMEL KALAPURAYIL / RAJU VORA
REVISED BY / DATE REVISED

LAST REVISION 11-14-11
DATE PLOTTED => 01-FEB-2012
TIME PLOTTED => 15:00

BORDER LAST REVISED 7/2/2010
USERNAME => s123631
DGN FILE => 1200020300ga003.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2995
PROJECT NUMBER & PHASE 12000203001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	0.3/7.8	11	48

Carmel Kalapurayil 11-14-11
REGISTERED CIVIL ENGINEER DATE

1-30-12
PLANS APPROVAL DATE

CARMEL KALAPURAYIL No. C 56654 Exp. 6-30-13 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

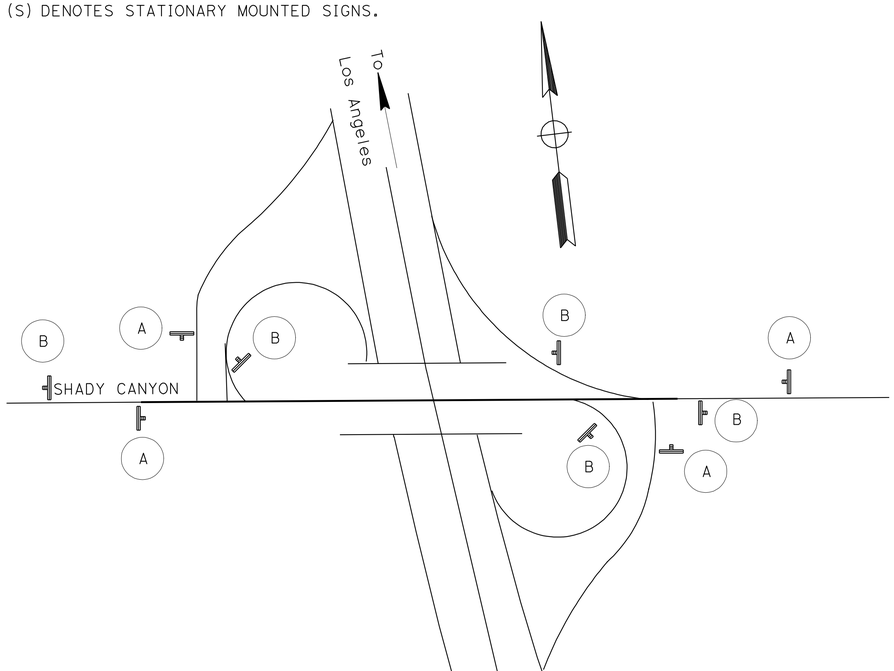
NOTE:

EXACT SIGN LOCATIONS TO BE DETERMINED BY THE ENGINEER.

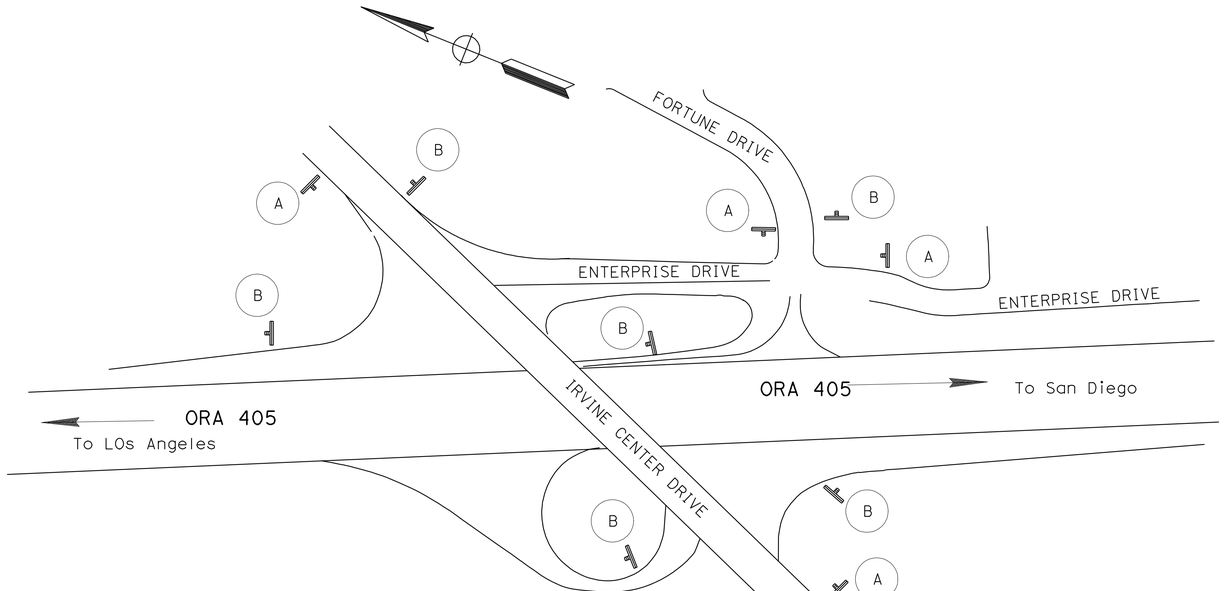
CONSTRUCTION AREA SIGNS

SIGN No.	SIGN CODE	PANEL SIZE (IN)	SIGN MESSAGE	No. OF POSTS AND SIZES (IN)	No. OF SIGNS
A	W20-1	36x36	ROAD WORK AHEAD	1- 4 x 4 (S)	19
B	G20-2	36x18	END ROAD WORK	1- 4 x 4 (S)	27

(S) DENOTES STATIONARY MOUNTED SIGNS.



SAND CANYON/SHADY CANYON



IRVINE CENTER DRIVE

CONSTRUCTION AREA SIGNS

NO SCALE

CS-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN DIVISION
FUNCTIONAL SUPERVISOR: ANDREW OSHRIN
CALCULATED-DESIGNED BY: CARMEL KALAPURAYIL
CHECKED BY: RAJU VORA
REVISED BY
DATE REVISED

LAST REVISION 11-14-11
DATE PLOTTED => 01-FEB-2012
TIME PLOTTED => 15:00

BORDER LAST REVISED 7/2/2010
USERNAME => s123631
DGN FILE => 12000203001a001.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2995
PROJECT NUMBER & PHASE 12000203001

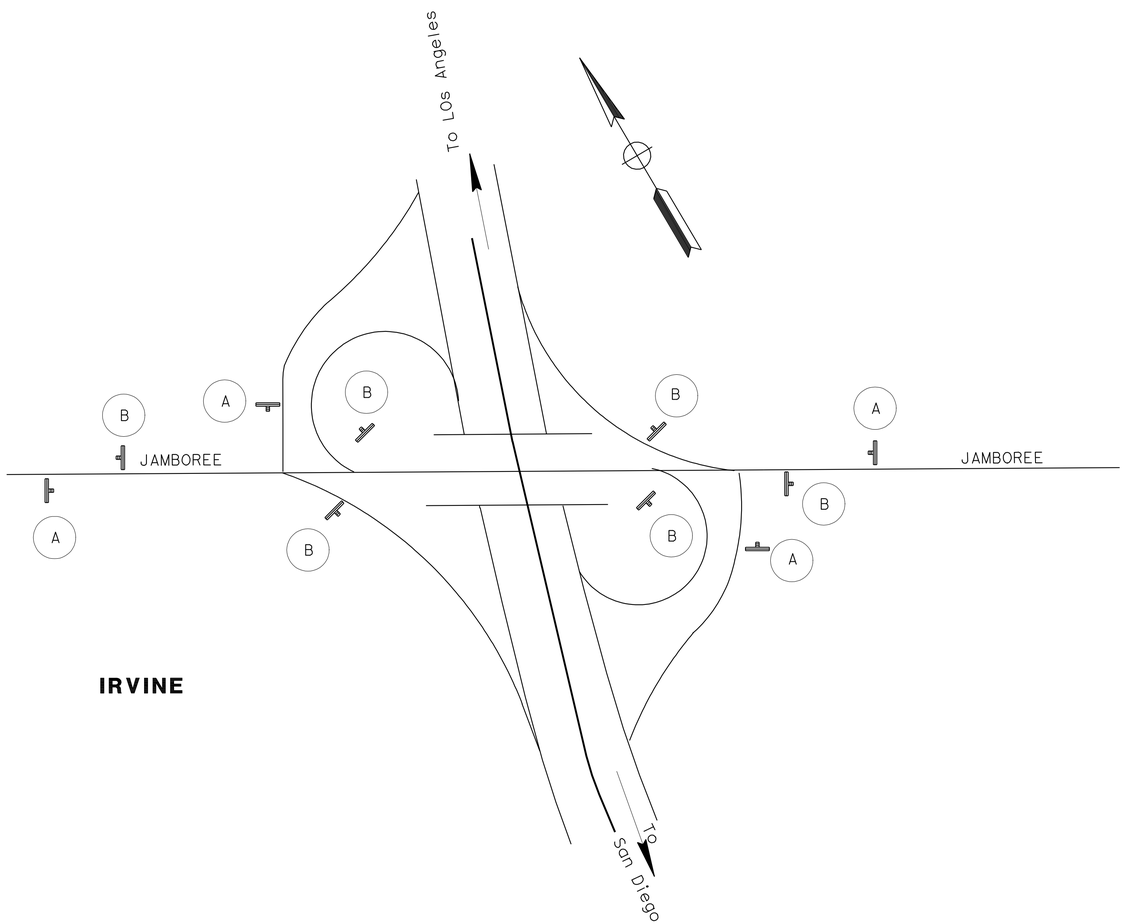
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	0.3/7.8	12	48

Carmel Kalapurayil 11-14-11
REGISTERED CIVIL ENGINEER DATE

1-30-12
PLANS APPROVAL DATE

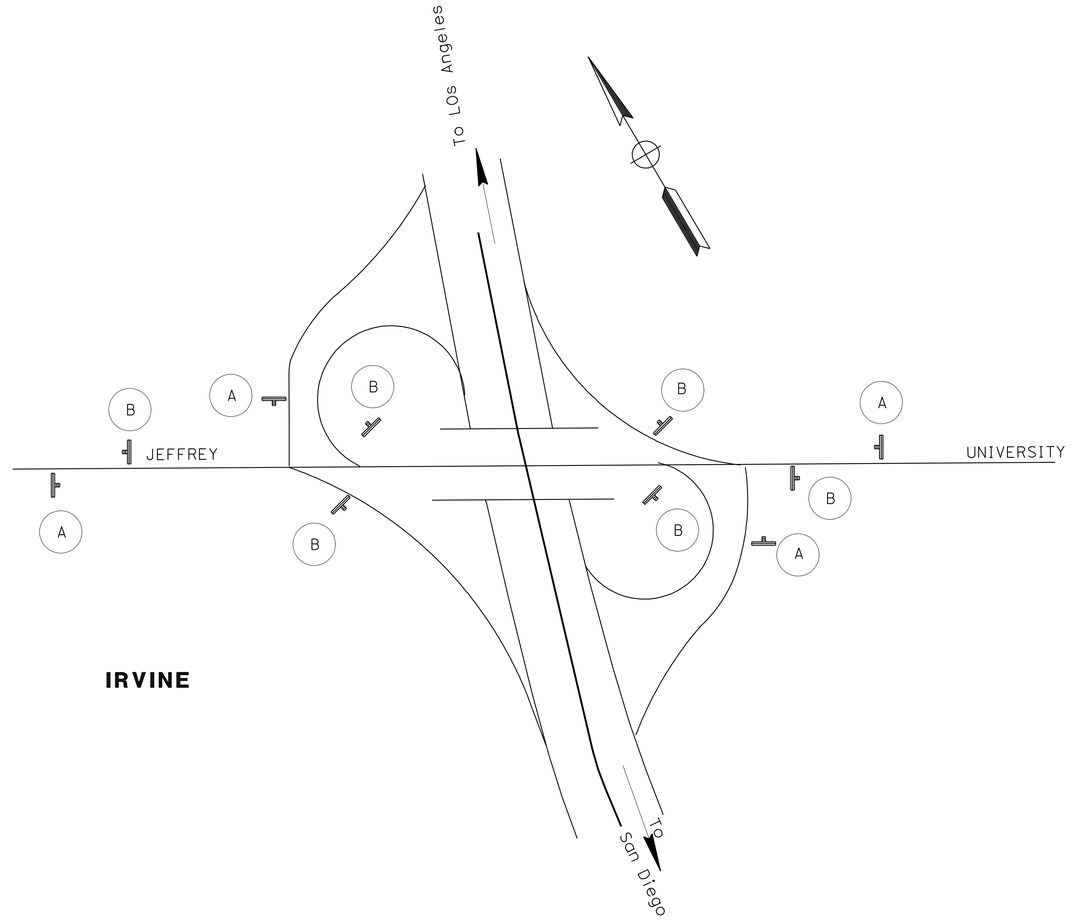
REGISTERED PROFESSIONAL ENGINEER
CARMEL KALAPURAYIL
No. C 56654
Exp. 6-30-13
CIVIL
STATE OF CALIFORNIA

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.



IRVINE

JAMBOREE Rd



IRVINE

JEFFREY Rd/UNIVERSITY Dr

CONSTRUCTION AREA SIGNS

NO SCALE

CS-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
DESIGN DIVISION

FUNCTIONAL SUPERVISOR: ANDREW OSHRIN
CALCULATED-DESIGNED BY: CARMEL KALAPURAYIL
CHECKED BY: RAJU VORA
REVISED BY
DATE REVISED

LAST REVISION: DATE PLOTTED => 01-FEB-2012
11-14-11 TIME PLOTTED => 15:00

BORDER LAST REVISED 7/2/2010

USERNAME => s123631
DGN FILE => 12000203001a002.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 2995

PROJECT NUMBER & PHASE 12000203001

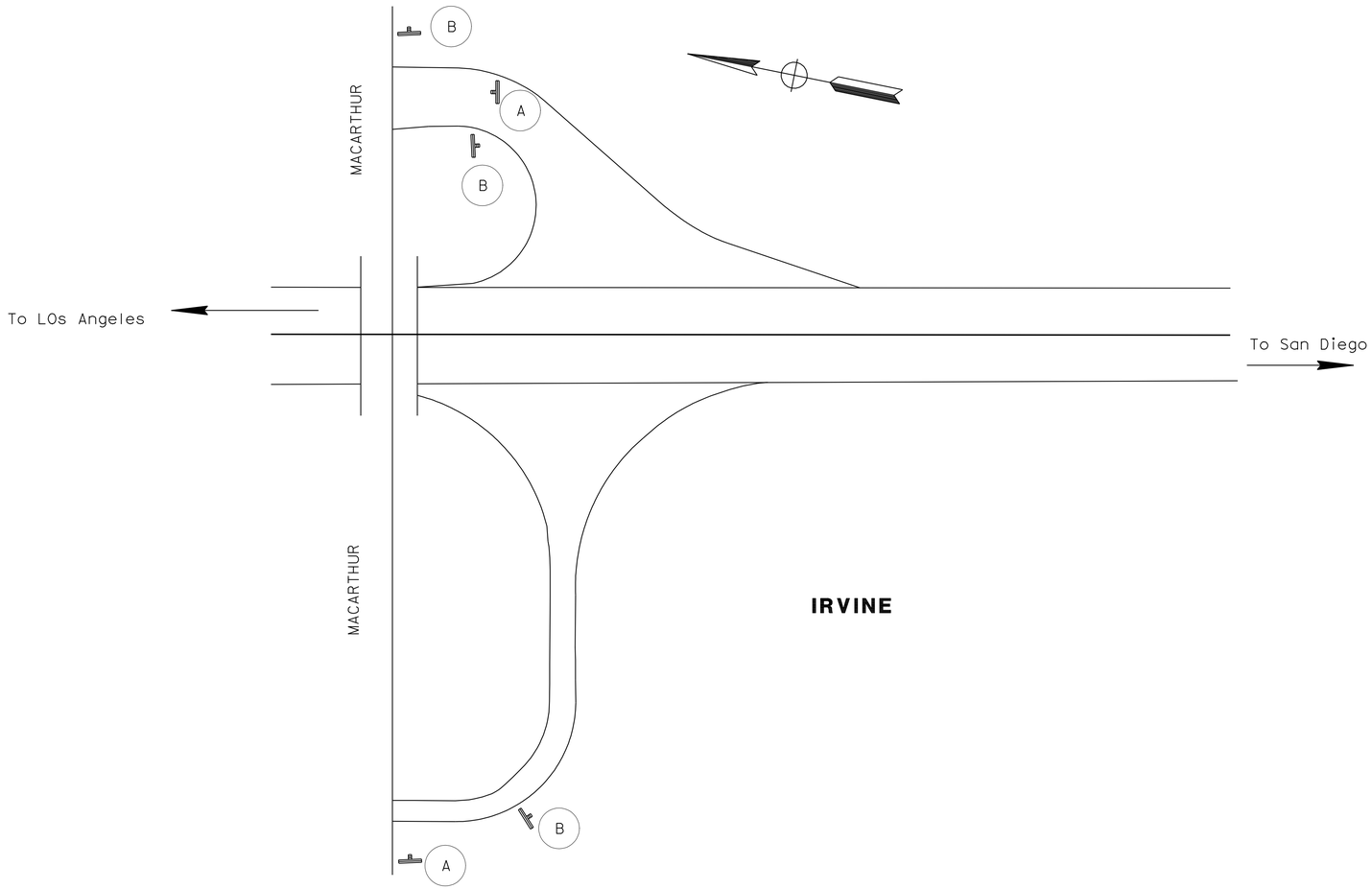
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	0.3/7.8	13	48

Carmel Kalapurayil 11-14-11
REGISTERED CIVIL ENGINEER DATE

1-30-12
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
CARMEL KALAPURAYIL
No. C 56654
Exp. 6-30-13
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.



MACARTHUR Blvd

CONSTRUCTION AREA SIGNS

NO SCALE

CS-3

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY: CARMEL KALAPURAYIL
CHECKED BY: RAJU VORA

FUNCTIONAL SUPERVISOR: ANDREW OSHRIN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
DESIGN DIVISION

LAST REVISION | DATE PLOTTED => 01-FEB-2012
11-14-11 | TIME PLOTTED => 15:00

BORDER LAST REVISED 7/2/2010

USERNAME => s123631
DGN FILE => 12000203001a003.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 2995

PROJECT NUMBER & PHASE 12000203001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	0.3/7.8	14	48

Carmel Kalapurayil 11-14-11
REGISTERED CIVIL ENGINEER DATE

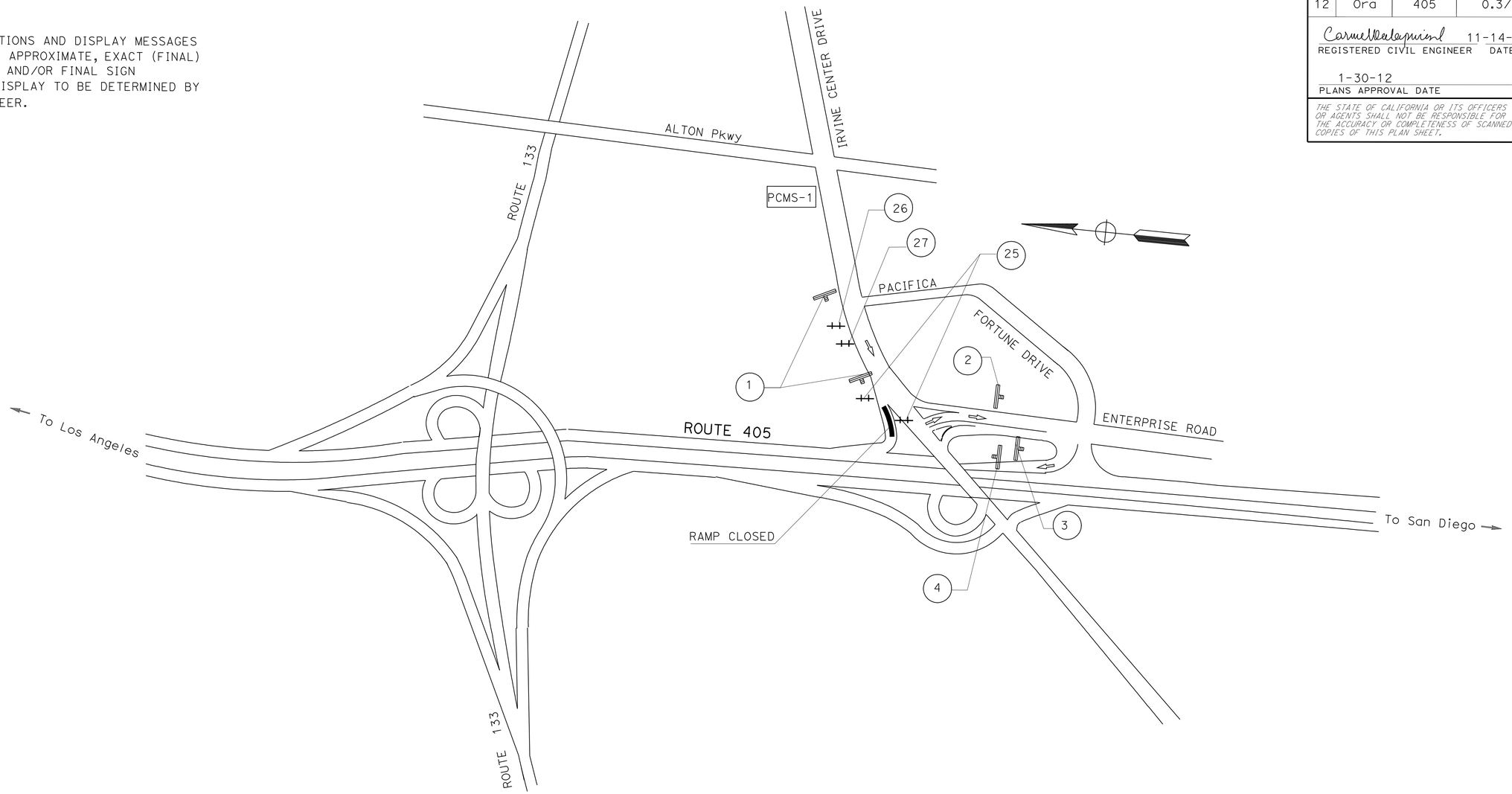
1-30-12
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
CARMEL KALAPURAYIL
No. C 56654
Exp. 6-30-13
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. SIGN LOCATIONS AND DISPLAY MESSAGES SHOWN ARE APPROXIMATE, EXACT (FINAL) LOCATIONS AND/OR FINAL SIGN MESSAGE/DISPLAY TO BE DETERMINED BY THE ENGINEER.



LEGEND:

PCMS PORTABLE CHANGEABLE MESSAGE SIGN
(X) CONSTRUCTION DETOUR SIGN NUMBER
⇨ DIRECTION OF TRAFFIC
1 POST CONSTRUCTION AREA SIGN

PCMS No.	FRAME	SIGN MESSAGE
PCMS-1	1st FRAME	NORTH 405 ON-RAMP CLOSED AT IRVINE CENTER DRIVE
	2nd FRAME	USE ENTERPRISE ROAD ON RAMP

TRAFFIC DETOUR PLAN:

NB ON-RAMP CLOSED AT IRVINE CENTER DRIVE
TURN LEFT ON ENTERPRISE ROAD TO NB 405

TRAFFIC HANDLING PLAN
(DETOUR)
(IRVINE CENTER DRIVE NB ON-RAMP CLOSED)

NO SCALE

TH-1

CALCULATED-DESIGNED BY: CARMEL KALAPURAYIL
CHECKED BY: RAJU VORA
FUNCTIONAL SUPERVISOR: ANDREW OSHRIN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® DESIGN DIVISION

REVISED BY | DATE REVISED

LAST REVISION | DATE PLOTTED => 02-FEB-2012
11-14-11 | TIME PLOTTED => 05:52

BORDER LAST REVISED 7/2/2010
USERNAME => s121614
DGN FILE => 1200020300md001.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2995
PROJECT NUMBER & PHASE 12000203001

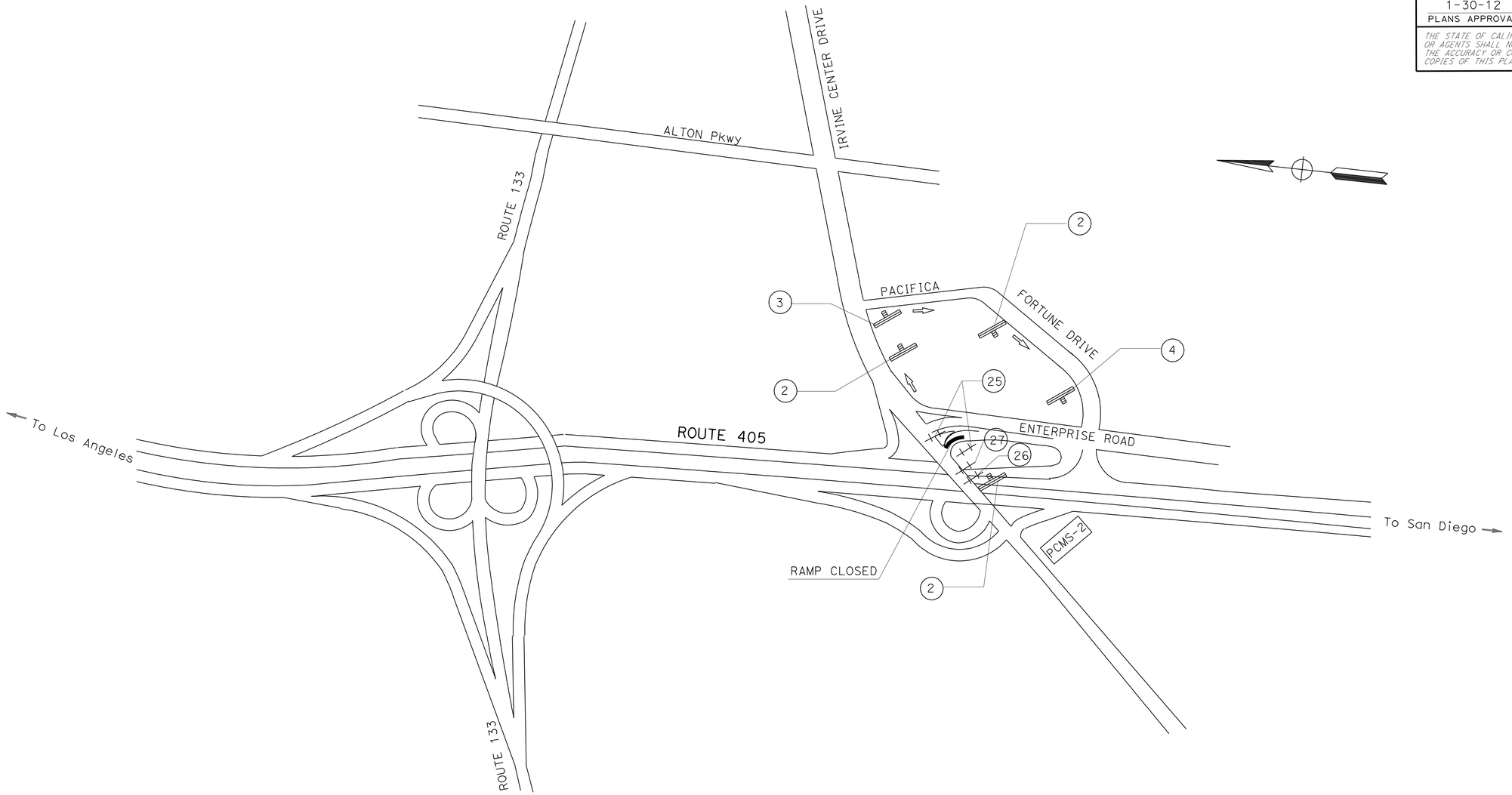
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	0.3/7.8	15	48

Carmel Kalapuraiyil 11-14-11
REGISTERED CIVIL ENGINEER DATE

1-30-12
PLANS APPROVAL DATE

CARMEL KALAPURAYIL No. C 56654 Exp. 6-30-13 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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



PCMS No.	FRAME	SIGN MESSAGE
PCMS-2	1st FRAME	NORTH 405 ON-RAMP CLOSED AT IRVINE CENTER DRIVE
	2nd FRAME	USE PACIFICA ROAD

TRAFFIC DETOUR PLAN:

NB ON-RAMP CLOSED AT IRVINE CENTER DRIVE

TURN RIGHT ON TO PACIFICA ROAD AND RIGHT ON FORTUNE DRIVE TO NB 405

TRAFFIC HANDLING PLAN
(DETOUR)
(IRVINE CENTER DRIVE NB ON-RAMP CLOSED)

NO SCALE

TH-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® DESIGN DIVISION

FUNCTIONAL SUPERVISOR: ANDREW OSHRIN
CALCULATED-DESIGNED BY: CARMEL KALAPURAYIL
CHECKED BY: RAJU VORA
REVISED BY
DATE REVISED

LAST REVISION: DATE PLOTTED => 02-FEB-2012, TIME PLOTTED => 05:52, 11-14-11

BORDER LAST REVISED 7/2/2010 | USERNAME => s121614 | DGN FILE => 1200020300md002.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2995 | PROJECT NUMBER & PHASE 12000203001

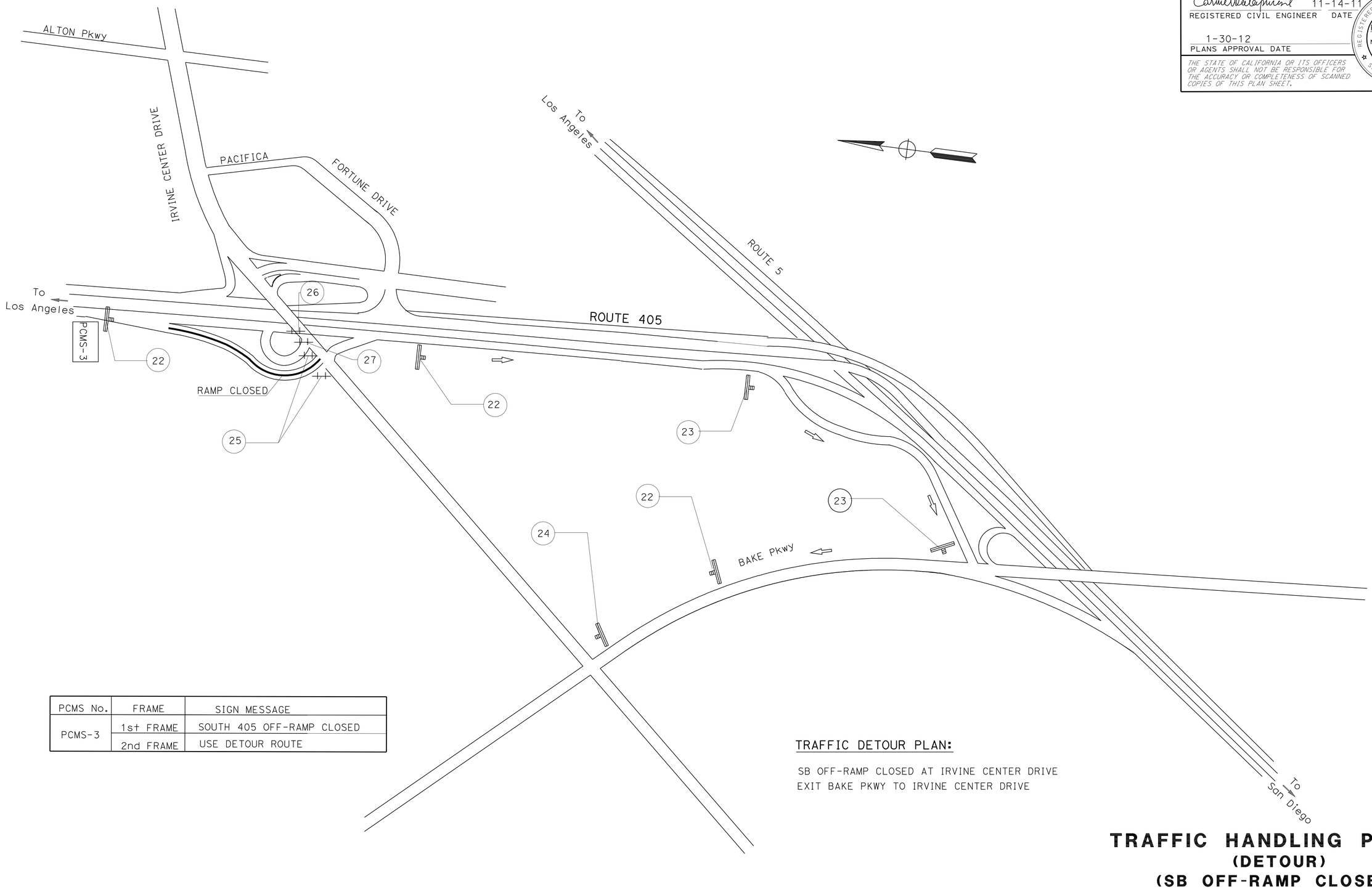
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	0.3/7.8	16	48

Carmel Kalapurayil 11-14-11
REGISTERED CIVIL ENGINEER DATE

1-30-12
PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER
CARMEL KALAPURAYIL
No. C 56654
Exp. 6-30-13
CIVIL
STATE OF CALIFORNIA



PCMS No.	FRAME	SIGN MESSAGE
PCMS-3	1st FRAME	SOUTH 405 OFF-RAMP CLOSED
	2nd FRAME	USE DETOUR ROUTE

TRAFFIC DETOUR PLAN:

SB OFF-RAMP CLOSED AT IRVINE CENTER DRIVE
EXIT BAKE PKWY TO IRVINE CENTER DRIVE

TRAFFIC HANDLING PLAN
(DETOUR)
(SB OFF-RAMP CLOSED)
NO SCALE

TH-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN DIVISION
FUNCTIONAL SUPERVISOR: ANDREW OSHRIN
CALCULATED-DESIGNED BY
CHECKED BY: RAJU VORA
REVISED BY: CARMEL KALAPURAYIL
DATE REVISED

LAST REVISION DATE PLOTTED => 02-FEB-2012
TIME PLOTTED => 05:53
11-14-11

BORDER LAST REVISED 7/2/2010
USERNAME => s121614
DGN FILE => 1200020300md003.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2995
PROJECT NUMBER & PHASE 12000203001

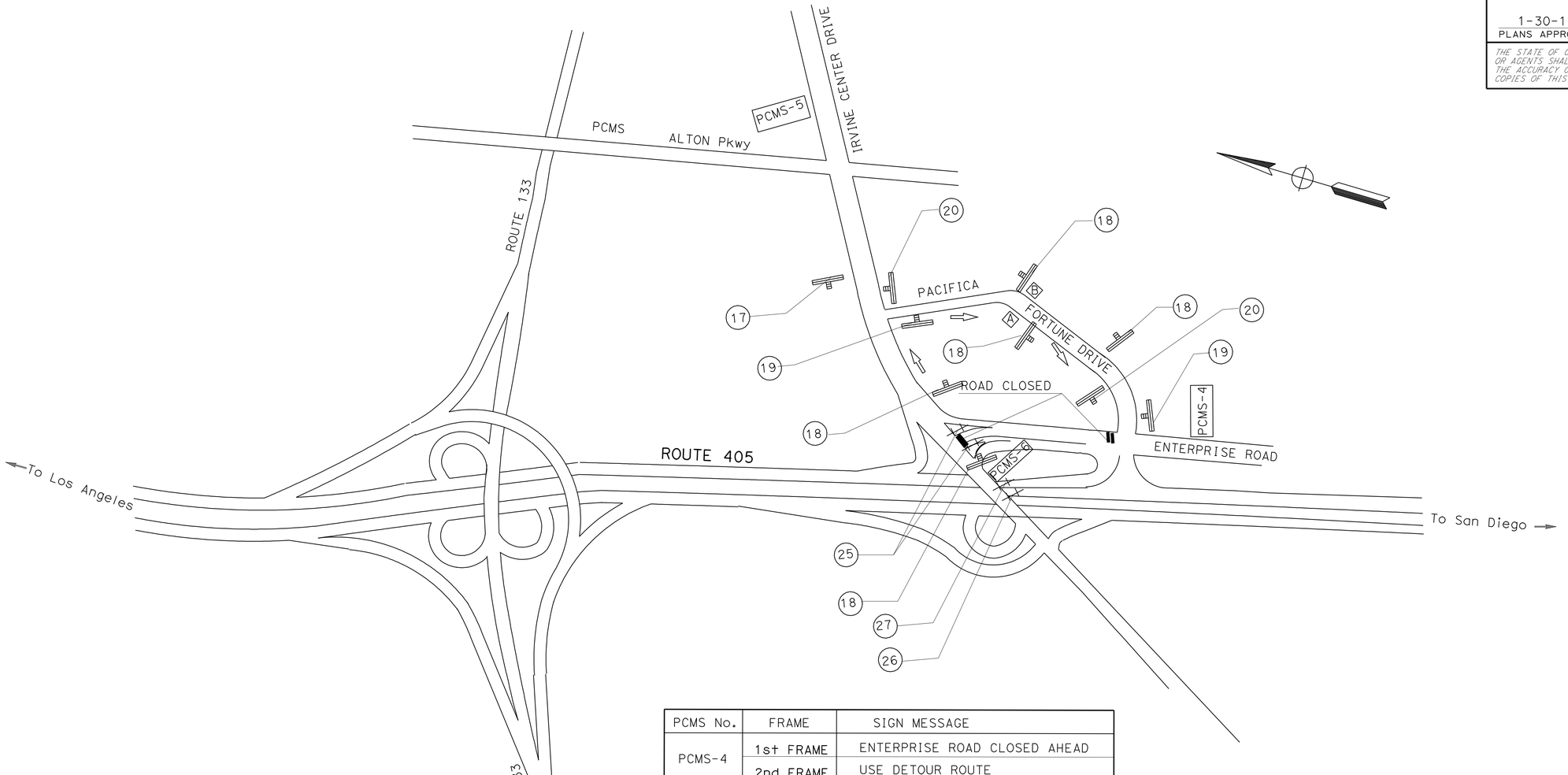
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	0.3/7.8	17	48

Carmel Kalapurayil 11-14-11
REGISTERED CIVIL ENGINEER DATE

1-30-12
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
CARMEL KALAPURAYIL
No. C 56654
Exp. 6-30-13
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.



PCMS No.	FRAME	SIGN MESSAGE
PCMS-4	1st FRAME	ENTERPRISE ROAD CLOSED AHEAD
	2nd FRAME	USE DETOUR ROUTE
PCMS-5	1st FRAME	ENTERPRISE ROAD CLOSED AHEAD
	2nd FRAME	USE DETOUR ROUTE
PCMS-6	1st FRAME	ENTERPRISE ROAD CLOSED AHEAD
	2nd FRAME	USE DETOUR ROUTE

TRAFFIC DETOUR PLAN:

ENTERPRISE ROAD CLOSED

Ⓐ TAKE PACIFICA ROAD TO FORTUNE DRIVE TO ENTERPRISE ROAD

Ⓑ TAKE FORTUNE DRIVE TO IRVINE CENTER DRIVE

TRAFFIC HANDLING PLAN
(DETOUR)
(ENTERPRISE ROAD CLOSED)

NO SCALE

TH-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN DIVISION

FUNCTIONAL SUPERVISOR: ANDREW OSHRIN
CALCULATED-DESIGNED BY: CARMEL KALAPURAYIL
CHECKED BY: RAJU VORA
REVISED BY
DATE REVISED

LAST REVISION
DATE PLOTTED => 01-FEB-2012
TIME PLOTTED => 14:56
11-14-11

BORDER LAST REVISED 7/2/2010
USERNAME => s114926
DGN FILE => 1200020300md004.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2995
PROJECT NUMBER & PHASE 12000203001

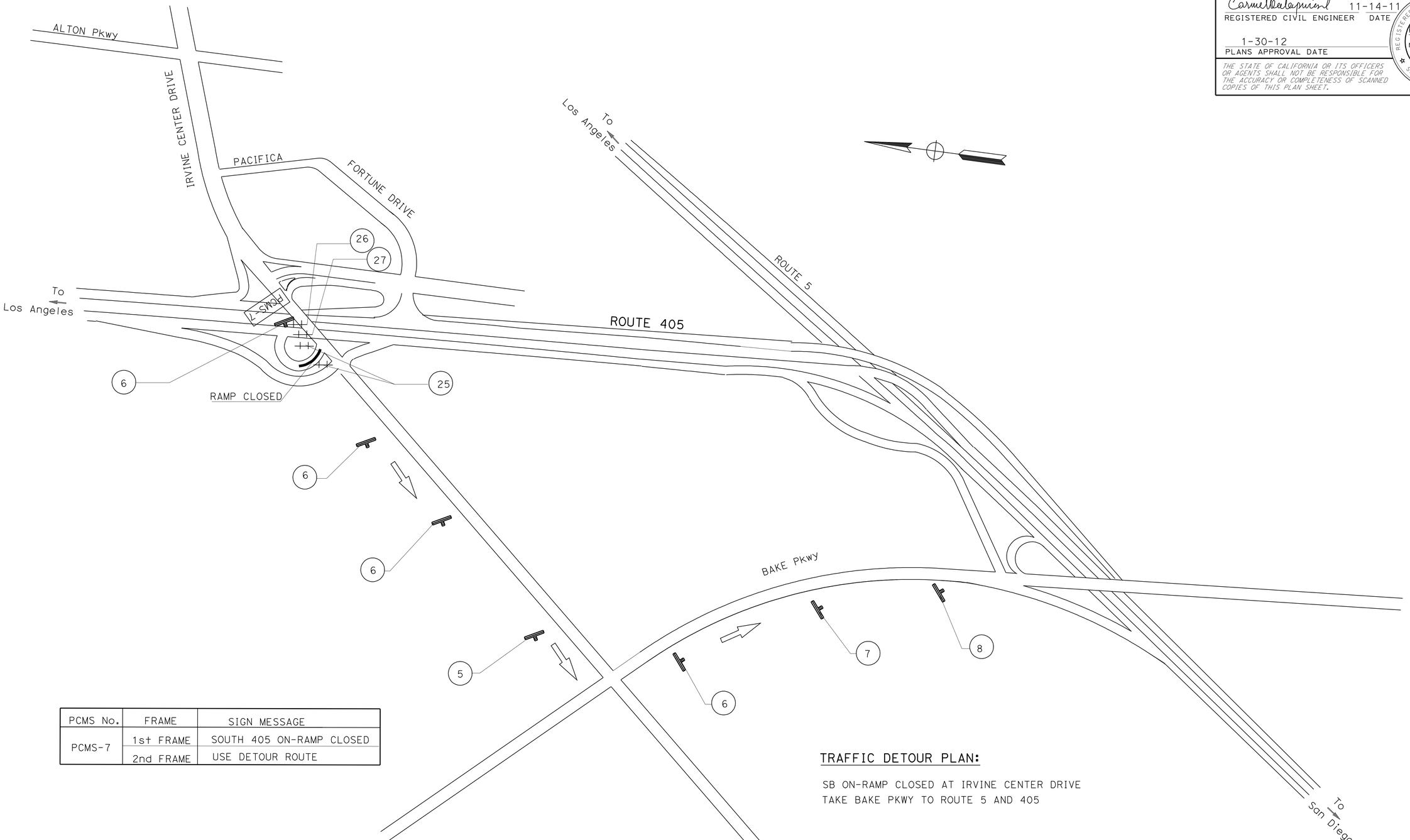
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	0.3/7.8	18	48

CarmelKalapurayil 11-14-11
REGISTERED CIVIL ENGINEER DATE

1-30-12
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
CARMEL KALAPURAYIL
No. C 56654
Exp. 6-30-13
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.



PCMS No.	FRAME	SIGN MESSAGE
PCMS-7	1st FRAME	SOUTH 405 ON-RAMP CLOSED
	2nd FRAME	USE DETOUR ROUTE

TRAFFIC DETOUR PLAN:

SB ON-RAMP CLOSED AT IRVINE CENTER DRIVE
TAKE BAKE PKWY TO ROUTE 5 AND 405

TRAFFIC HANDLING PLAN
(DETOUR)
(SB ON-RAMP CLOSED)

NO SCALE

TH-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN DIVISION
FUNCTIONAL SUPERVISOR: ANDREW OSHRIN
CALCULATED-DESIGNED BY: CARMEL KALAPURAYIL
CHECKED BY: RAJU VORA
REVISED BY
DATE REVISED

LAST REVISION | DATE PLOTTED => 02-FEB-2012
11-14-11 | TIME PLOTTED => 06:01

BORDER LAST REVISED 7/2/2010 | USERNAME => s121614 | DGN FILE => 1200020300md005.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2995 | PROJECT NUMBER & PHASE 12000203001

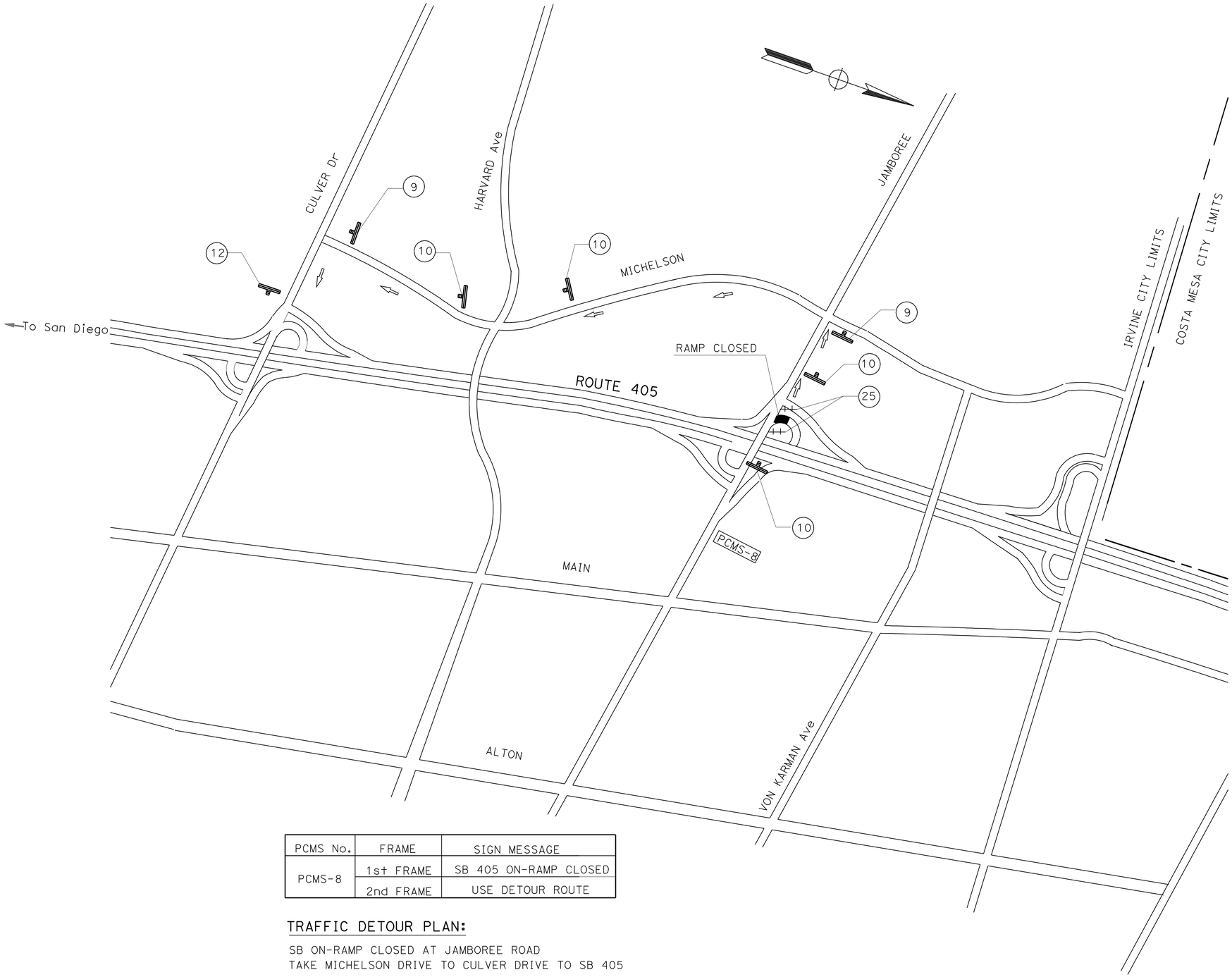
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	0.3/7.8	19	48

CarmelKalapurayil 11-14-11
REGISTERED CIVIL ENGINEER DATE

1-30-12
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
CARMEL KALAPURAYIL
No. C 56654
Exp. 6-30-13
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.



PCMS No.	FRAME	SIGN MESSAGE
PCMS-8	1st FRAME	SB 405 ON-RAMP CLOSED
	2nd FRAME	USE DETOUR ROUTE

TRAFFIC DETOUR PLAN:

SB ON-RAMP CLOSED AT JAMBOREE ROAD
TAKE MICHELSON DRIVE TO CULVER DRIVE TO SB 405

TRAFFIC HANDLING PLAN
(DETOUR)
SB ON-RAMP CLOSED

NO SCALE

TH-6

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® DESIGN DIVISION

FUNCTIONAL SUPERVISOR: ANDREW OSHRIN
CALCULATED-DESIGNED BY: CARMEL KALAPURAYIL
CHECKED BY: RAJU VORA
REVISED BY
DATE REVISED

LAST REVISION DATE PLOTTED => 02-FEB-2012
TIME PLOTTED => 06:01
11-14-11

BORDER LAST REVISED 7/2/2010
USERNAME => s121614
DGN FILE => 12000203001md006.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2995
PROJECT NUMBER & PHASE 12000203001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	0.3/7.8	20	48

Carmel Kalapurayil 11-14-11
REGISTERED CIVIL ENGINEER DATE

1-30-12
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
CARMEL KALAPURAYIL
No. C 56654
Exp. 6-30-13
CIVIL
STATE OF CALIFORNIA

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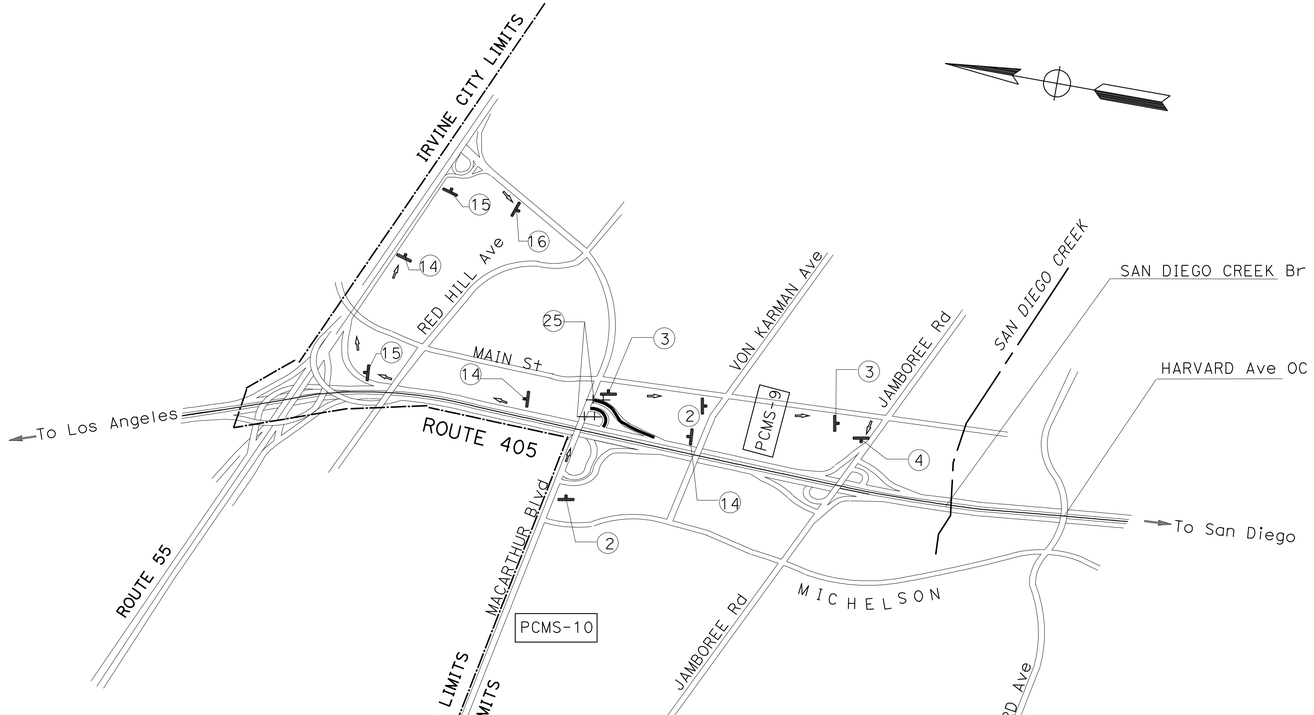


PCMS No.	FRAME	SIGN MESSAGE
PCMS-9	1st FRAME	MCARTHUR OFF-RAMP CLOSED
	2nd FRAME	USE NB 55
PCMS-10	1st FRAME	NB 405 ON-RAMP CLOSED
	2nd FRAME	USE MAIN STREET

TRAFFIC DETOUR PLAN:

NB 405 ON-RAMP CLOSED AT MACARTHUR Blvd
TURN RIGHT ON MAIN STREET, RIGHT ON JAMBOREE ROAD TO NB 405

NB 405 OFF-RAMP TO MACARTHUR CLOSED
TAKE ROUTE 55 NORTH TO MACARTHUR Blvd

TRAFFIC HANDLING PLAN
(DETOUR)
(NB 405 MACARTHUR OFF-RAMP AND NB405 ON-RAMP CLOSED)

NO SCALE

TH-7

THIS PLAN ACCURATE FOR TRAFFIC HANDLING (DETOUR) ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® DESIGN DIVISION
FUNCTIONAL SUPERVISOR: ANDREW OSHRIN
CALCULATED-DESIGNED BY: CARMEL KALAPURAYIL
CHECKED BY: RAJU VORA
REVISED BY
DATE REVISED

LAST REVISION DATE PLOTTED => 02-FEB-2012
11-14-11 TIME PLOTTED => 06:01

BORDER LAST REVISED 7/2/2010
USERNAME => s121614
DGN FILE => 1200020300md007.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2995
PROJECT NUMBER & PHASE 12000203001

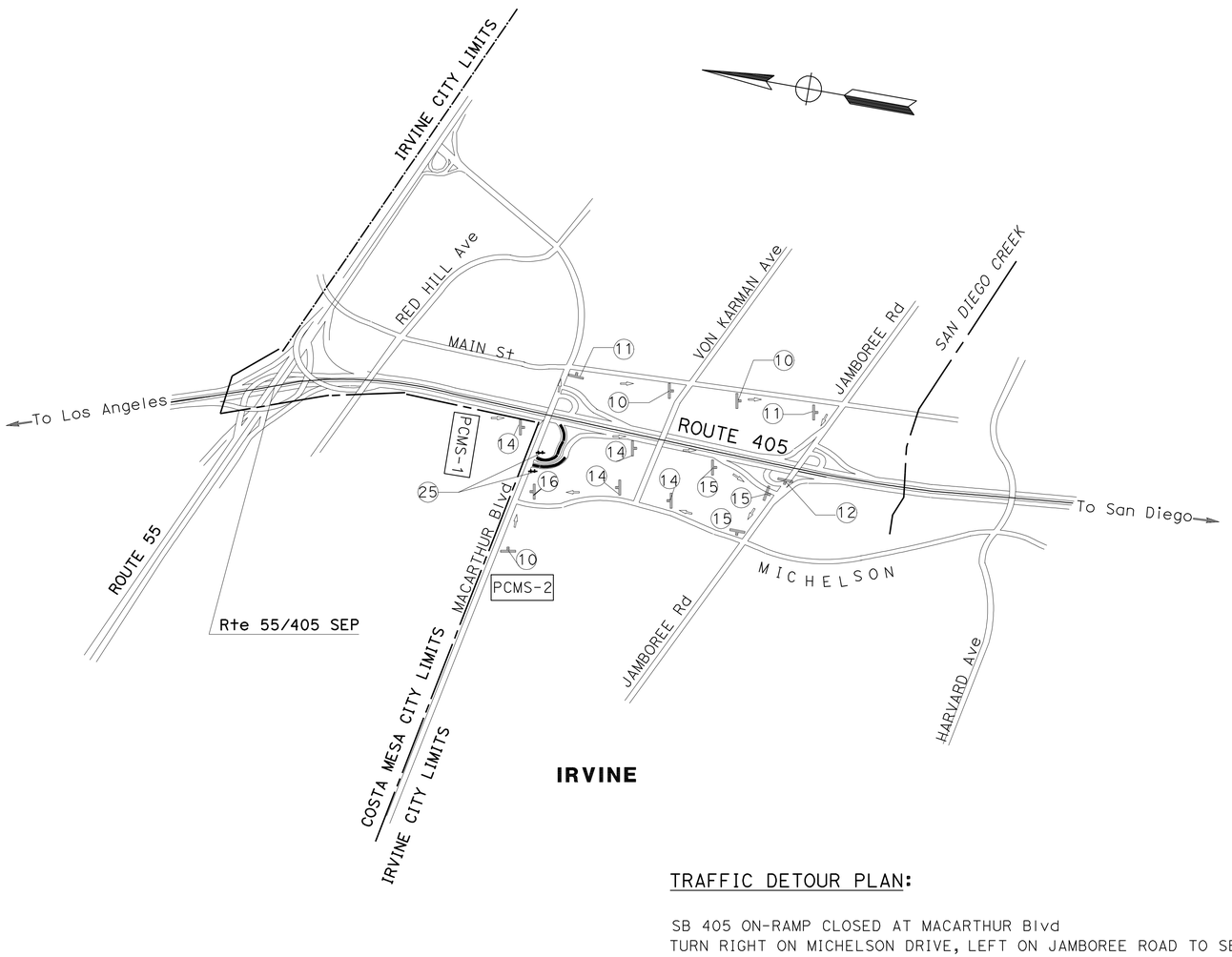
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	0.3/7.8	21	48

Carmel Kalapurayil 11-14-11
REGISTERED CIVIL ENGINEER DATE

1-30-12
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
CARMEL KALAPURAYIL
No. C 56654
Exp. 6-30-13
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.



PCMS No.	FRAME	SIGN MESSAGE
PCMS-11	1st FRAME	MCARTHUR OFF-RAMP CLOSED
	2nd FRAME	USE JAMBOREE ROAD
PCMS-12	1st FRAME	MCARTHUR OFF-RAMP CLOSED
	2nd FRAME	USE MICHELSON DRIVE

TRAFFIC DETOUR PLAN:

SB 405 ON-RAMP CLOSED AT MACARTHUR Blvd
TURN RIGHT ON MICHELSON DRIVE, LEFT ON JAMBOREE ROAD TO SB 405

SB 405 OFF-RAMP TO MACARTHUR CLOSED
EXIT ON JAMBOREE ROAD, TURN RIGHT ON TO MICHELSON DRIVE TO MACARTHUR Blvd

TRAFFIC HANDLING PLAN
(DETOUR)
(SB 405 MACARTHUR OFF-RAMP SB 405 ON-RAMP CLOSED)

NO SCALE

THIS PLAN ACCURATE FOR TRAFFIC HANDLING (DETOUR) ONLY.

TH-8

REVISED BY | DATE REVISED
CARMEL KALAPURAYIL | RAJU VORA
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR | ANDREW OSHRIN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | DESIGN DIVISION

LAST REVISION | DATE PLOTTED => 02-FEB-2012 | TIME PLOTTED => 06:01
11-14-11

BORDER LAST REVISED 7/2/2010 | USERNAME => s121614 | DGN FILE => 1200020300md008.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2995 | PROJECT NUMBER & PHASE 12000203001

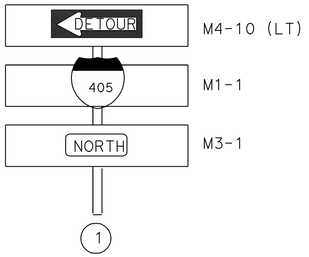
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	0.3/7.8	22	48

Carmel Kalapurayil 11-14-11
REGISTERED CIVIL ENGINEER DATE

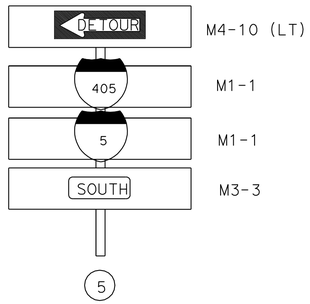
1-30-12
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
CARMEL KALAPURAYIL
No. C 56654
Exp. 6-30-13
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.



M4-10 (LT)
M1-1
M3-1
1



M4-10 (LT)
M1-1
M1-1
M3-3
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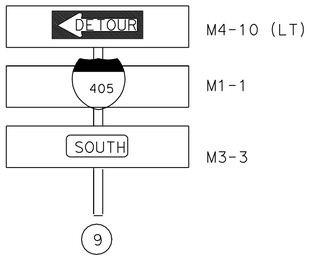

M4-10 (LT)
M1-1
M3-3
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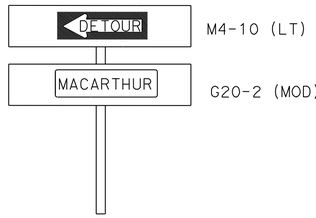
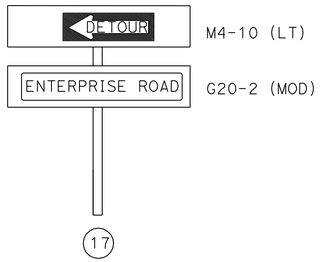


M4-10 (LT)
G20-2 (MOD)
13



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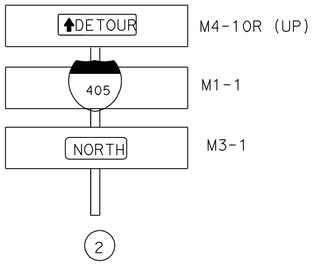
G20-2 (MOD)
17



M4-10R (UP)
M1-1
M3-1
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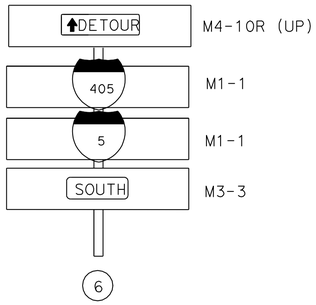
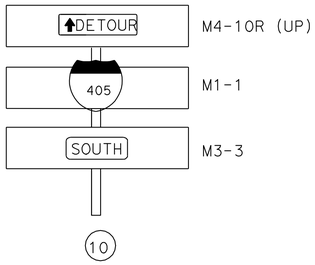


M4-10R (UP)
M1-1
M1-1
M3-3
6



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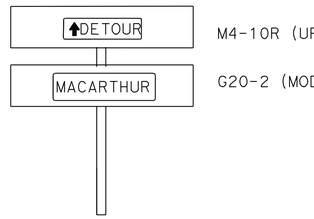
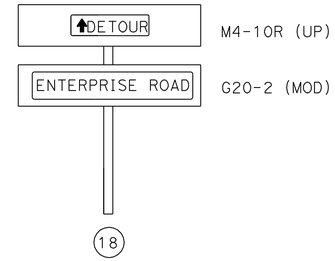
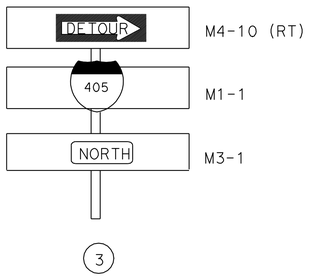
M1-1
M3-3
10



M4-10R (UP)
G20-2 (MOD)
14



M4-10R (UP)
G20-2 (MOD)
18



M4-10 (RT)
M1-1
M3-1
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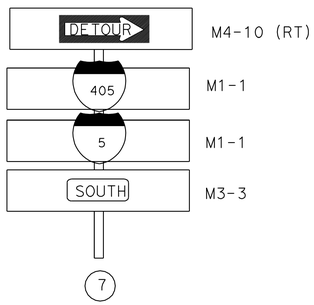

M4-10 (RT)
M1-1
M1-1
M3-3
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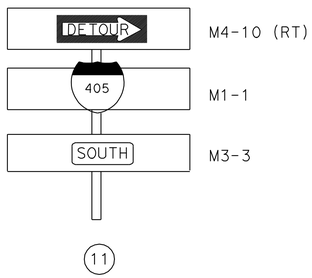

M4-10 (RT)
M1-1
M3-3
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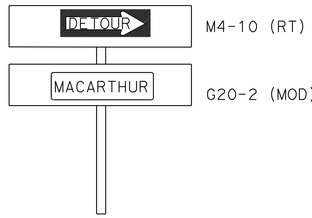

M4-10 (RT)
G20-2 (MOD)
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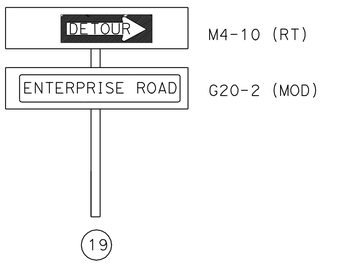
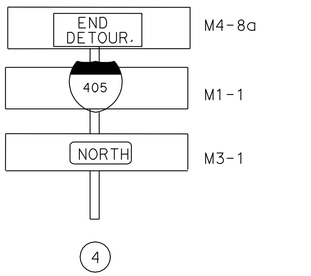


M4-10 (RT)
G20-2 (MOD)
19



M4-8a
M1-1
M3-1
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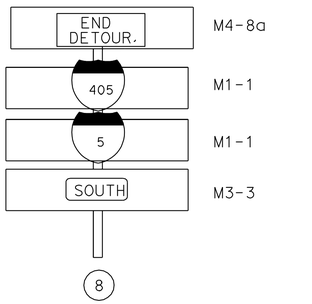

M4-8a
M1-1
M1-1
M3-3
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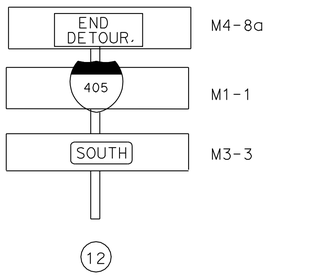

M4-8a
M1-1
M3-3
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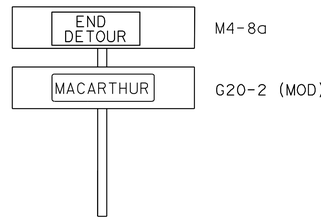
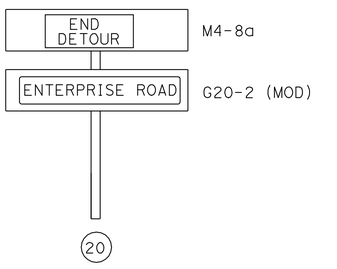


M4-8a
G20-2 (MOD)
16



M4-8a
G20-2 (MOD)
20

TRAFFIC HANDLING DETAILS

NO SCALE

THD-1

CALCULATED-DESIGNED BY
CHECKED BY
REVISED BY
DATE REVISED
CARMEL KALAPURAYIL
RAJU VORA
FUNCTIONAL SUPERVISOR
ANDREW OSHRIN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN DIVISION
Caltrans

LAST REVISION 11-14-11
DATE PLOTTED => 02-FEB-2012
TIME PLOTTED => 06:02

BORDER LAST REVISED 7/2/2010
USERNAME => s121614
DGN FILE => 1200020300me001.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2995
PROJECT NUMBER & PHASE 12000203001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	0.3/7.8	23	48

Carmel Kalapurayil 11-14-11
REGISTERED CIVIL ENGINEER DATE

1-30-12
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
CARMEL KALAPURAYIL
No. C 56654
Exp. 6-30-13
CIVIL
STATE OF CALIFORNIA

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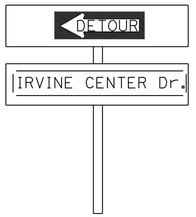
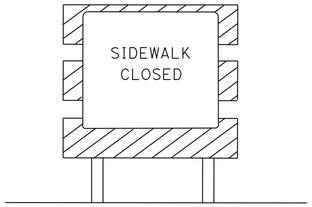


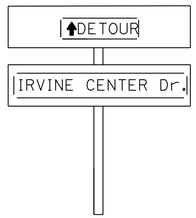
M4-10 (LT)
G20-2 (MOD)

21



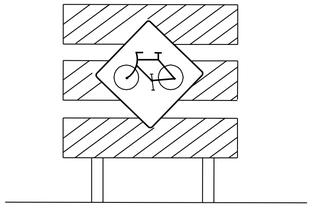
BARRICADE (TYPE II)
T20

25



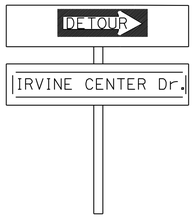
M4-10R (UP)
G20-2 (MOD)

22



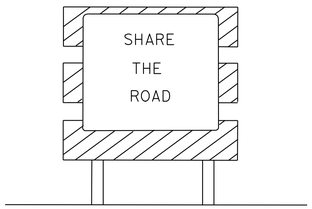
BARRICADE (TYPE II)
W11-1

26



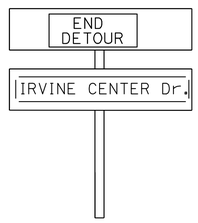
M4-10 (RT)
G20-2 (MOD)

23



BARRICADE (TYPE II)
W16-1

27



M4-8a
G20-2 (MOD)

24

TRAFFIC HANDLING DETAILS

NO SCALE

THD-2

CALCULATED-DESIGNED BY
CHECKED BY
REVISED BY
DATE REVISED
CARMEL KALAPURAYIL
RAJU VORA
FUNCTIONAL SUPERVISOR
ANDREW OSHRIN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
DESIGN DIVISION

LAST REVISION
DATE PLOTTED => 02-FEB-2012
TIME PLOTTED => 06:02
11-14-11

BORDER LAST REVISED 7/2/2010
USERNAME => s121614
DGN FILE => 1200020300me002.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2995
PROJECT NUMBER & PHASE 12000203001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	0.3/7.8	24	48

Carmel Kalapurayil 11-14-11
REGISTERED CIVIL ENGINEER DATE

1-30-12
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
CARMEL KALAPURAYIL
No. C 56654
Exp. 6-30-13
CIVIL
STATE OF CALIFORNIA

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

NOTE:

SIGNS SHOWN ON THIS SHEET ARE IN ADDITION TO THOSE SIGNS SHOWN ON SHEET CS-1.

CONSTRUCTION AREA SIGNS

SIGN No. OR TYPE	No. OF POST AND SIZE (in)	No. OF SIGNS IN EACH PLAN SHEET								No. OF SIGNS	REMARKS
		TH-1	TH-2	TH-3	TH-4	TH-5	TH-6	TH-7	TH-8		
(1)	1- 4 x 4	2								2	(S)
(2)	1- 4 x 4	1	3					2		6	(S)
(3)	1- 4 x 4	1	1					2		4	(S)
(4)	1- 4 x 4	1	1					1		3	(S)
(5)	1- 4 x 4					1				1	(S)
(6)	1- 4 x 4					4				4	(S)
(7)	1- 4 x 4					1				1	(S)
(8)	1- 4 x 4					1				1	(S)
(9)	1- 4 x 4						2			2	(S)
(10)	1- 4 x 4						4		3	7	(S)
(11)	1- 4 x 4								2	2	(S)
(12)	1- 4 x 4						1		1	2	(S)
(13)	1- 4 x 4										(S)
(14)	1- 4 x 4							3	4	7	(S)
(15)	1- 4 x 4							2	3	5	(S)
(16)	1- 4 x 4							1	1	2	(S)
(17)	1- 4 x 4				1					1	(S)
(18)	1- 4 x 4				5					5	(S)
(19)	1- 4 x 4				2					2	(S)
(20)	1- 4 x 4				2					2	(S)
(21)	1- 4 x 4										
(22)	1- 4 x 4				3					3	(S)
(23)	1- 4 x 4				2					2	(S)
(24)	1- 4 x 4				1					1	(S)
(25)		2	2	2	2	2	2	2	2	16	(B)
(26)		1	1	1	1					4	(B)
(27)		1	1	1	1					4	(B)

ABBREVIATION:

(S) STATIONARY MOUNTED SIGN

(B) MOUNTED ON TYPE II BARRICADE

TRAFFIC HANDLING QUANTITIES

NO SCALE

THQ-1

REVISED BY | DATE REVISED
CARMEL KALAPURAYIL | RAJU VORA
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR | ANDREW OSHRIN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® DESIGN DIVISION

LAST REVISION 11-14-11
DATE PLOTTED => 02-FEB-2012
TIME PLOTTED => 06:02

BORDER LAST REVISED 7/2/2010
USERNAME => s121614
DGN FILE => 1200020300mf001.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2995
PROJECT NUMBER & PHASE 12000203001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	0.3/7.8	25	48

Carmel Kalapurayil 11-14-11
REGISTERED CIVIL ENGINEER DATE

1-30-12
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
CARMEL KALAPURAYIL
No. C 56654
Exp. 6-30-13
CIVIL
STATE OF CALIFORNIA

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REMOVE CONCRETE

SHEET No.	LOCATION	REMOVE CONCRETE			
		CURB RAMP	SIDEWALK	ISLAND	CURB (TYPE A2-8)
		CY	CY	CY	CY
L-1	1	3.7	0.9		1.4
	2	4.0	0.1		1.3
	3	3.0			1.3
	4 AND 5	2.2		3.2	0.6
	6	2.1		0.6	0.2
	7	1.7			0.2
	8		1.5		1.3
	9	3.6			1.3
	10			3.0	1.3
L-2	11	2.0			0.8
	12 AND 13	2.0		2.6	0.8
	14	3.1			0.9
	15	3.5			1.2
	16	0.8			0.8
L-4	23	0.8			0.8
	24				
	25	1.2			0.1
	26	1.1	1.5		2.1
	27	1.1			0.8
	ISLAND			0.2	0.4
	28	3.0			1.1
	29	1.1			0.5
L-5	30		5.2		2.1
	31 AND 32			10.5	0.8
	33		3.8		1.2
L-6	34	4.6			1.8
	35			3.0	
	36		5.2		1.3
SUBTOTAL		44.6	20.1	23.1	26.4
TOTAL		114.2			

ROADWAY QUANTITIES

SHEET No.	LOCATION	MINOR CONCRETE (MISCELLANEOUS CONSTRUCTION)			
		CURB RAMP	SIDEWALK	ISLAND	CURB (TYPE A2-8)
		CY	CY	CY	CY
L-1	1	3.7	0.9		1.4
	2	4.0	0.2		1.3
	3	3.0			1.3
	4 AND 5	2.2		3.4	0.6
	6	2.1		0.7	0.2
	7	1.7			0.2
	8		1.5		1.3
	9	3.6			1.3
	10			3.2	1.3
L-2	11	2.0			0.8
	12 AND 13	2.0		2.7	0.8
	14	3.1			0.9
	15	3.5			1.2
	16	0.8			0.8
L-4	23	1.6			0.8
	24				
	25	1.2			0.1
	26	1.1	1.5		2.1
	27	1.1			0.8
	ISLAND			0.3	0.8
	28	3.0			1.1
	29	1.1			0.5
L-5	30		5.2		2.3
	31 AND 32			11.8	0.8
	33		3.8		1.2
L-6	34	4.6			1.8
	35			3.1	
	36		5.2		1.3
SUBTOTAL		45.4	20.2	25.2	26.8
TOTAL		117.6			

SHEET No.	LOCATION	CURB RAMP DETECTABLE WARNING SURFACE
		SQFT
L-3	17	12
	18	15
	19	15
	20	15
	21	12
	22	15
L-4	24	15
	DETAIL B	20
TOTAL		119

SUMMARY OF QUANTITIES

Q-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN DIVISION
FUNCTIONAL SUPERVISOR: ANDREW OSHRIN
CALCULATED-DESIGNED BY: CARMEL KALAPURAYIL
CHECKED BY: RAJU VORA
REVISED BY
DATE REVISED

LAST REVISION 11-14-11
DATE PLOTTED => 01-FEB-2012
TIME PLOTTED => 15:01

BORDER LAST REVISED 7/2/2010
USERNAME => s114937
DGN FILE => 1200020300pa001.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2995
PROJECT NUMBER & PHASE 12000203001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	0.3/7.8	26	48

Carmel Kalapurayil 11-14-11
REGISTERED CIVIL ENGINEER DATE

1-30-12
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
CARMEL KALAPURAYIL
No. C 56654
Exp. 6-30-13
CIVIL
STATE OF CALIFORNIA

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PAVEMENT DELINEATION QUANTITIES

SHEET No.	LOCATION	REMOVE THERMOPLASTIC PAVEMENT MARKING	THERMOPLASTIC PAVEMENT MARKING			REMOVE THERMOPLASTIC TRAFFIC STRIPE	THERMOPLASTIC TRAFFIC STRIPE		PAVEMENT MARKER (RETROREFLECTIVE)		REMOVE PAVEMENT MARKER
			12" CROSS WALK CHEVRONS	ARROWS			4"	8"			
				TYPE III (R)	TYPE III (L)		DETAIL 29	DETAIL 38B	TYPE D	TYPE G	TYPE G
		SQFT	SQFT	SQFT	SQFT	LF	LF	LF	EA	EA	EA
L-1	FROM (1) TO (2)	190	196								
	FROM (3) TO (4)	52	52								
	FROM (5) TO (6)	100	100								
	FROM (7) TO (8)	120	112								
L-2	FROM (11) TO (12)	52	48								
	FROM (13) TO (14)	50	94								
	FROM (15) TO (16)	40	75								
L-4	FROM (25) TO (26)	36	54								
L-5	FROM (30) TO (31)	204	206								
L-6	FROM (34) TO (35)	208	239								
	FROM (35) TO (36)	38	38								
	NB 405 MACARTHUR OFF-RAMP	360	24	168	168	407	32	407	4	40	40
SUBTOTAL		1450	1238	336		407	32	407	4	40	40
TOTAL		1450	1574			407	32	407	44		40

TEMPORARY WATER POLLUTION CONTROL QUANTITES

SHEET No.	LOCATION	TEMPORARY DRAINAGE INLET PROTECTION
		EA
L-1	(2)	1
	(6)	1
	(8)	1
	(9)	1
	(10)	1
L-2	(14)	2
	(16)	2
L-5	(31)	1
TOTAL		10

CARMEL KALAPURAYIL — CALCULATED-DESIGNED BY
RAJU VORA — CHECKED BY
REVISED BY — DATE REVISED
ANDREW OSHRIN — FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN DIVISION

SUMMARY OF QUANTITIES

Q-2

LAST REVISION | DATE PLOTTED => 02-FEB-2012
11-14-11 | TIME PLOTTED => 06:58

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	0.3/7.8	27	48

Carmel Kalapurayil 11-14-11
REGISTERED CIVIL ENGINEER DATE

1-30-12
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
CARMEL KALAPURAYIL
No. C 56654
Exp. 6-30-13
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.

MATERIAL SUMMARY-CONTRACTOR FURNISHED SIGNS

SHEET No.	SIGN No.	SIGN CODE	PANEL SIZE (inch x inch) X No. OF SIGN	SIGN AREA SQFT	SINGLE FACED	BACKGROUND SHEETING COLOR	BACKGROUND RETROREFLECTIVE ASTM TYPE	LEGEND SHEETING COLOR	LEGEND RETROREFLECTIVE ASTM TYPE	PROTECTIVE FILM STANDARD	ROADSIDE SIGN FURNISH SINGLE SHEET ALUMINUM SIGN (0.063" - UNFRAMED) SQFT
L-1	1	R61	(72 X 45) X 1	22.5	X	W	III	BLK	III	X	22.5
	2	W11-2	(48 X 48) X 2	16.0	X	YG	III	BLK	III	X	32.0
		W16-7P	(30 X 18) X 2	3.75	X	YG	III	BLK	III	X	7.5
	5	W11-1	(48 X 48) X 1	3.75	X	YG	III	BLK	III	X	16.0
	6	W11-1	(48 X 48) X 1	3.75	X	YG	III	BLK	III	X	16.0
		W16-1	(18 X 24) X 1	3.0	X	YG	III	BLK	III	X	3.0
L-2	2	W11-2	(48 X 48) X 2	16.0	X	YG	III	BLK	III	X	32.0
		W16-7P	(30 X 18) X 2	3.75	X	YG	III	BLK	III	X	7.5
L-3	2	W11-2	(48 X 48) X 1	16.0	X	YG	III	BLK	III	X	16.0
		W16-7P	(30 X 18) X 1	3.75	X	YG	III	BLK	III	X	3.75
	7	W11-2	(48 X 48) X 1	16.0	X	YG	III	BLK	III	X	16.0
L-4	7	W11-2	(48 X 48) X 1	16.0	X	YG	III	BLK	III	X	16.0
	2	W11-2	(48 X 48) X 1	16.0	X	YG	III	BLK	III	X	16.0
		W16-7P	(30 X 18) X 1	3.75	X	YG	III	BLK	III	X	3.75
	3	W3-3	(48 X 48) X 2	16.0	X	Y	III	R/Y/G	III	X	32.0
L-5	2	W11-2	(48 X 48) X 1	16.0	X	YG	III	BLK	III	X	16.0
		W16-7P	(30 X 18) X 1	3.75	X	YG	III	BLK	III	X	3.75
L-6	2	W11-2	(48 X 48) X 1	16.0	X	YG	III	BLK	III	X	16.0
		W16-7P	(30 X 18) X 1	3.75	X	YG	III	BLK	III	X	3.75
	4	R18A	(36 X 36) X 1	9.0	X	W	III	BLK	III	X	9.0
E-1	*	R9-3A	(24 X 18) X 8	3.0	X	W	III	BLK	III	X	24.0
		R9-3B	(24 X 24) X 8	4.0	X	W	III	R/BLK	III	X	32.0
E-3	*	R9-3A	(24 X 18) X 6	3.0	X	W	III	BLK	III	X	18.0
		R9-3B	(24 X 24) X 6	4.0	X	W	III	R/BLK	III	X	24.0
E-4	*	R9-3A	(24 X 18) X 4	3.0	X	W	III	BLK	III	X	12.0
		R9-3B	(24 X 24) X 4	4.0	X	W	III	R/BLK	III	X	16.0
E-5	*	R9-3A	(24 X 18) X 3	3.0	X	W	III	BLK	III	X	9.0
		R9-3B	(24 X 24) X 3	4.0	X	W	III	R/BLK	III	X	12.0
E-6	*	R9-3A	(24 X 18) X 6	3.0	X	W	III	BLK	III	X	18.0
		R9-3B	(24 X 24) X 6	4.0	X	W	III	R/BLK	III	X	24.0
* SEE ELECTRICAL PLANS TOTAL											493.5

LEGEND:

BLK - BLACK
W - WHITE
R - RED
Y - YELLOW
YG - FLUORESCENT YELLOW GREEN

SUMMARY OF QUANTITIES

Q-3

REVISED BY | DATE REVISED
CARMEL KALAPURAYIL | RAJU VORA
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR | ANDREW OSHRIN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® DESIGN DIVISION

LAST REVISION 11-14-11
DATE PLOTTED => 02-FEB-2012
TIME PLOTTED => 06:58

BORDER LAST REVISED 7/2/2010
USERNAME => s114640
DGN FILE => 1200020300pa003.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2995
PROJECT NUMBER & PHASE 12000203001

SIGN QUANTITIES

SHEET No.	LOCATION	SIGN No.	CODE	PANEL SIZE (INCH x INCH)	REMOVE ROADSIDE SIGN PANEL	INSTALL ROADSIDE SIGN PANEL ON EXISTING POST	REMOVE ROADSIDE SIGN (STRAP AND SADDLE BRACKET METHOD)	INSTALL SIGN (STRAP AND SADDLE BRACKET METHOD)	ROADSIDE SIGN - ONE POST
					EA	EA	EA	EA	EA
L-1	NB 405 IRVINE CENTER DRIVE OFF-RAMP	1	R61	72 x 45			1	1	
	WB IRVINE CENTER DRIVE ON-RAMP TO NB 405	2	W11-2	48 X 48					1
			W16-7P	30 x 18					
	EB IRVINE CENTER DRIVE ON-RAMP TO NB 405	2	W11-2	48 x 48	1	1			
			W16-7P	30 x 18	1	1			
	EB IRVINE CENTER DRIVE AT ENTERPRISE DRIVE	5	W11-1	48 x 48			1	1	
	WB IRVINE CENTER DRIVE AT ENTERPRISE DRIVE	6	W11-1	48 x 48	1	1			
			W16-1	18 x 24	1	1			
L-2	EB IRVINE CENTER DRIVE ON-RAMP TO SB 405	2	W11-2	48 x 48	1				1
			W16-7P	30 x 18					
L-3	EB SAND CANYON ON-RAMP TO NB 405	2	W11-2	48 x 48	1	1			
			W16-7P	30 x 18	1	1			
	EB SAND CANYON ON-RAMP TO NB 405	7	W11-2	48 x 48					1
L-4	WB JAMBOREE ON-RAMP TO SB 405	7	W11-2	48 x 48					1
	WB JAMBOREE ON-RAMP TO SB 405	2	W11-2	48 x 48	1	1			
			W16-7P	30 x 18	1	1			
	NB 405 JAMBOREE OFF-RAMP	3 X 2	W3-3	48 x 48	2	2			
L-5	EB MACARTHUR TO SB 405	2	W11-2	48 x 48	1	1			
			W16-7P	30 x 18	1	1			
	EB MACARTHUR TO NB 405	2	W11-2	48 x 48	1	1			
			W16-7P	30 x 18	1	1			
L-6	NB 405 MACARTHUR OFF-RAMP	4	R18A	36 x 36	1	1			
E-1	ENTERPRISE Dr AT FORTUNE Dr NE AND SE CORNERS	9	R9-3A	24 x 18	4	4			
			R9-3B	24 x 24		4			
	IRVINE CENTER DRIVE AT ENTERPRISE ROAD NE, NW, SE, SW CORNERS	9	R9-3A	24 x 18	4	4			
			R9-3B	24 x 24		4			
E-3	NB 405 ON/OFF-RAMP AT SAND CANYON ROAD	9	R9-3A	24 x 18	2	2			
			R9-3B	24 x 24	2	2			
	SB 405 ON/OFF-RAMP AT SAND CANYON ROAD	9 14	R9-3A	24 x 18	2	4			
			R9-3B	24 x 24	2	4			
E-4	NB 405 ON/OFF-RAMP AT UNIVERSITY JEFFERY Rd	14	R9-3A	24 x 18	2	2			
			R9-3B	24 x 24	2	2			
	SB 405 ON/OFF-RAMP AT UNIVERSITY JEFFERY Rd	9 14	R9-3A	24 x 18		2			
			R9-3B	24 x 24		2			
E-5	NB 405 ON/OFF-RAMP AT JAMBOREE ROAD/ SB 405 ON/OFF-RAMP AT JAMBOREE ROAD	9 15	R9-3A	24 x 18	1/4	4/4			
			R9-3B	24 x 24		4/4			
E-6	NB 405 ON/OFF-RAMP AT MACARTHUR Blvd	9	R9-3A	24 x 18	5	4			
			R9-3B	24 x 24		4			
	SB 405 ON/OFF-RAMP AT MACARTHUR Blvd	9	R9-3A	24 x 18	4	4			
			R9-3B	24 x 24	1	4			
TOTAL					51	83	2	2	4

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	0.3/7.8	28	48

Carmel Kalapurayil 11-14-11
REGISTERED CIVIL ENGINEER DATE

1-30-12
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
CARMEL KALAPURAYIL
No. C 56654
Exp. 6-30-13
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.

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY: CARMEL KALAPURAYIL
CHECKED BY: RAJU VORA

FUNCTIONAL SUPERVISOR: ANDREW OSHRIN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN DIVISION

SUMMARY OF QUANTITIES

Q-4

LAST REVISION | DATE PLOTTED => 02-FEB-2012
11-14-11 | TIME PLOTTED => 06:58

BORDER LAST REVISED 7/2/2010

USERNAME => s114640
DGN FILE => 1200020300pa004.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 2995

PROJECT NUMBER & PHASE 12000203001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	0.3/7.8	29	48

11-14-11
REGISTERED ELECTRICAL ENGINEER DATE

1-30-12
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
S. SHAHRIARI
No. E 13485
Exp. 9/30/12
ELECTRICAL
STATE OF CALIFORNIA

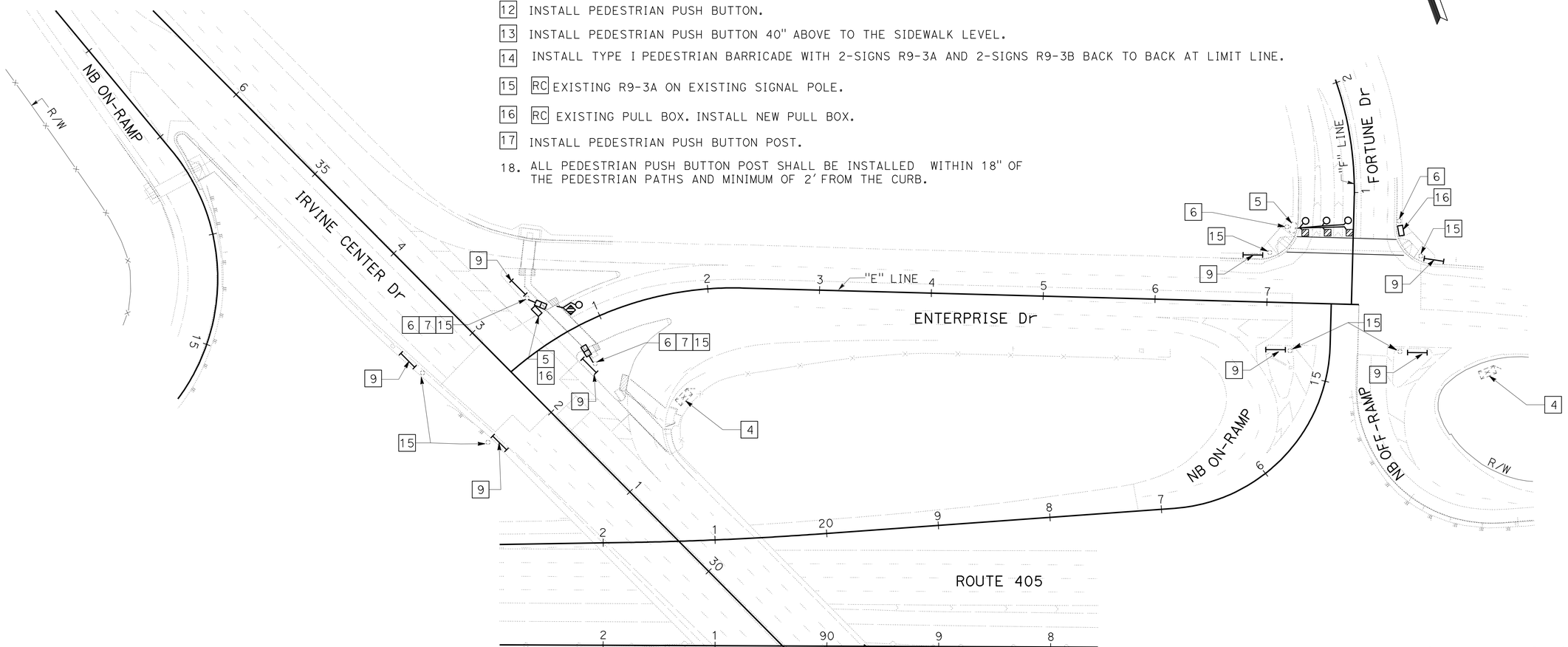
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:

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

PROJECT NOTE:

1. THE CONTRACTOR SHALL VERIFY EXACT LOCATION OF EXISTING LOOPS PRIOR TO CUTTING NEW LOOPS AND
   AB EXISTING CONDUIT STUB OUT, INSTALL NEW CONDUIT STUB OUT.
2. AB EXISTING LOOPS WHERE NEW LOOPS ARE CUT.
3. ALL NEW LOOPS SHALL BE INSTALLED AFTER THE FINAL PAVEMENT AND BEFORE PAVEMENT DELINEATION AND SHALL BE CUT 1' BEFORE LIMIT LINE.
4. EXISTING MODEL 170 CONTROLLER ASSEMBLY.
5. SPLICE NEW LOOP WIRES TO EXISTING DLC.
6. RC EXISTING PPB. INSTALL NEW PPB AT NEW HEIGHT. REFER TO ES-7A.
7. RC EXISTING PEDESTRIAN SIGNAL HEAD, INSTALL LED COUNT DOWN PEDESTRIAN SIGNAL HEAD.
8. RC EXISTING TYPE I PEDESTRIAN BARRICADE WITH SIGN R9-3A.
9. INSTALL TYPE I PEDESTRIAN BARRICADE WITH 2-SIGNS R9-3A AND 2-SIGNS R9-3B BACK TO BACK.
10. RC EXISTING PEDESTRIAN PUSH BUTTON POST. INSTALL PEDESTRIAN PUSH BUTTON POST.
11. RC EXISTING PEDESTRIAN PUSH BUTTON.
12. INSTALL PEDESTRIAN PUSH BUTTON.
13. INSTALL PEDESTRIAN PUSH BUTTON 40" ABOVE TO THE SIDEWALK LEVEL.
14. INSTALL TYPE I PEDESTRIAN BARRICADE WITH 2-SIGNS R9-3A AND 2-SIGNS R9-3B BACK TO BACK AT LIMIT LINE.
15. RC EXISTING R9-3A ON EXISTING SIGNAL POLE.
16. RC EXISTING PULL BOX. INSTALL NEW PULL BOX.
17. INSTALL PEDESTRIAN PUSH BUTTON POST.
18. ALL PEDESTRIAN PUSH BUTTON POST SHALL BE INSTALLED WITHIN 18" OF THE PEDESTRIAN PATHS AND MINIMUM OF 2' FROM THE CURB.



MODIFY SIGNAL
(LOCATION 1)

SCALE: 1" = 50'

APPROVED FOR ELECTRICAL WORK ONLY

E-1

CALCULATED-DESIGNED BY	CHECKED BY	FUNCTIONAL SUPERVISOR	REVISED BY	DATE REVISED
SOUDABEH AFRASIABI	SHAHRAM SHAHRIARI	SHAHRAM SHAHRIARI	10/11	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
ELECTRICAL DESIGN

LAST REVISION | DATE PLOTTED => 02-FEB-2012
11-14-11 | TIME PLOTTED => 06:25

BORDER LAST REVISED 7/2/2010 | USERNAME => s121614 | DGN FILE => 1200020300ua001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 3024 | PROJECT NUMBER & PHASE 12000203001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	0.3/7.8	30	48

11-14-11
REGISTERED ELECTRICAL ENGINEER DATE

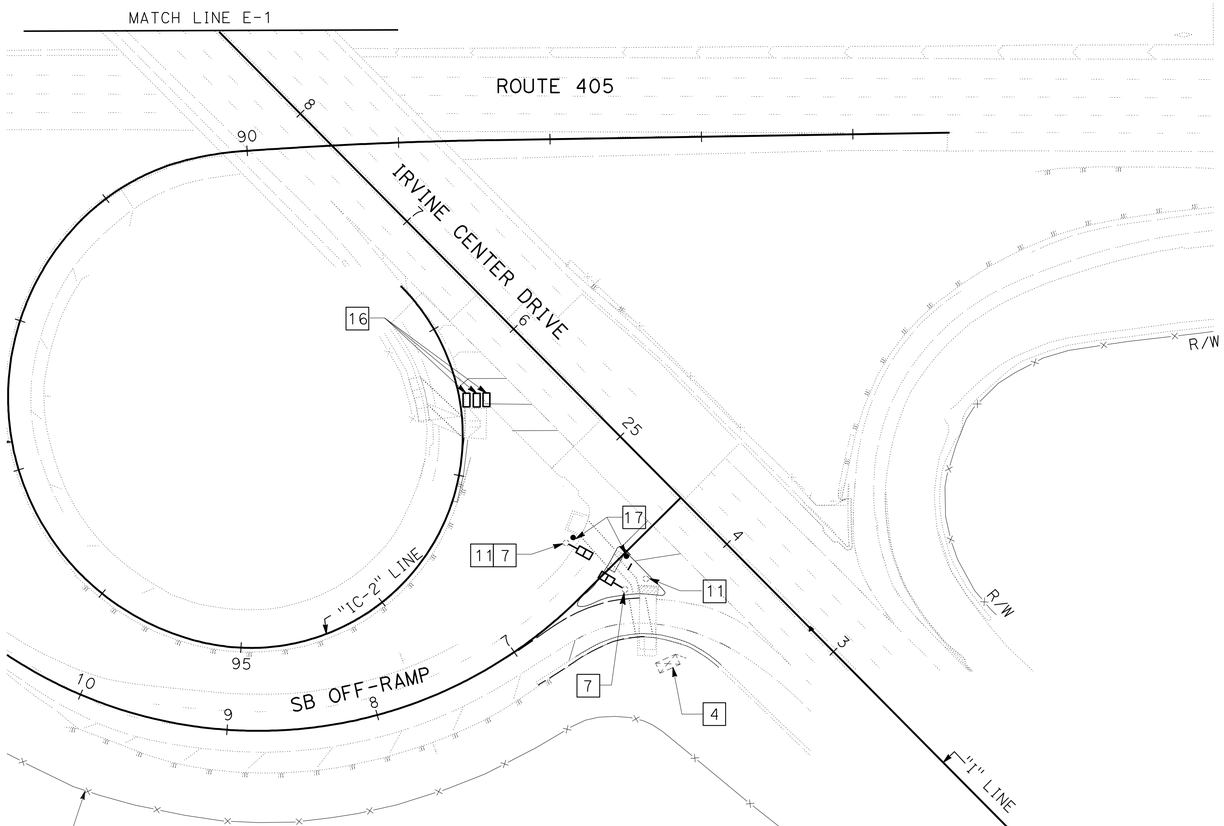
1-30-12
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
S. SHAHRIARI
No. E 13485
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 DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



FOR NOTES SEE SHEET E-1

APPROVED FOR ELECTRICAL WORK ONLY

MODIFY SIGNAL
(LOCATION 1)

SCALE: 1" = 50'

E-2

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: SOUDABEH AFRASIABI
CHECKED BY: SHAHRAM SHAHRIARI
FUNCTIONAL SUPERVISOR: SHAHRAM SHAHRIARI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® ELECTRICAL DESIGN

LAST REVISION | DATE PLOTTED => 02-FEB-2012
11-14-11 | TIME PLOTTED => 06:25

BORDER LAST REVISED 7/2/2010 | USERNAME => s121614 | DGN FILE => 1200020300ua002.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 3024 | PROJECT NUMBER & PHASE 12000203001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	0.3/7.8	31	48

11-14-11
REGISTERED ELECTRICAL ENGINEER DATE

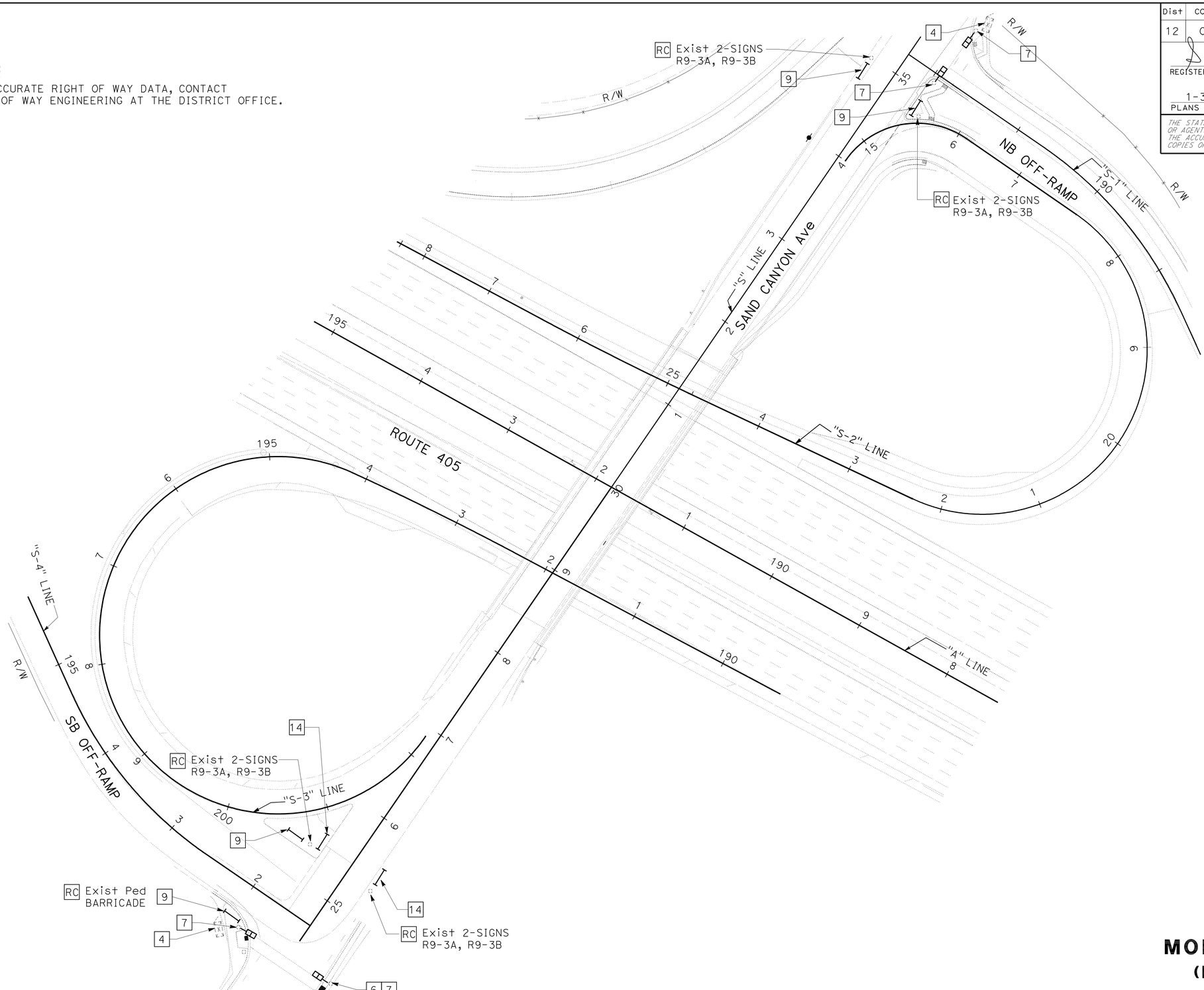
REGISTERED PROFESSIONAL ENGINEER
S. SHAHRIARI
No. E 13485
Exp. 9/30/12
ELECTRICAL
STATE OF CALIFORNIA

1-30-12
PLANS APPROVAL DATE

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

NOTE:

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



FOR NOTES SEE SHEET E-1

APPROVED FOR ELECTRICAL WORK ONLY

MODIFY SIGNAL
(LOCATION 2)

SCALE: 1" = 50'

E-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® ELECTRICAL DESIGN

FUNCTIONAL SUPERVISOR: SHAHRAM SHAHRIARI

CALCULATED-DESIGNED BY: SOUDABEH AFRASIABI
CHECKED BY: SHAHRAM SHAHRIARI

REVISED BY | DATE REVISED

LAST REVISION: DATE PLOTTED => 02-FEB-2012
11-14-11 TIME PLOTTED => 06:25

BORDER LAST REVISED 7/2/2010

USERNAME => s121614
DGN FILE => 1200020300ua003.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 3024

PROJECT NUMBER & PHASE 12000203001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	0.3/7.8	32	48

11-14-11
REGISTERED ELECTRICAL ENGINEER DATE

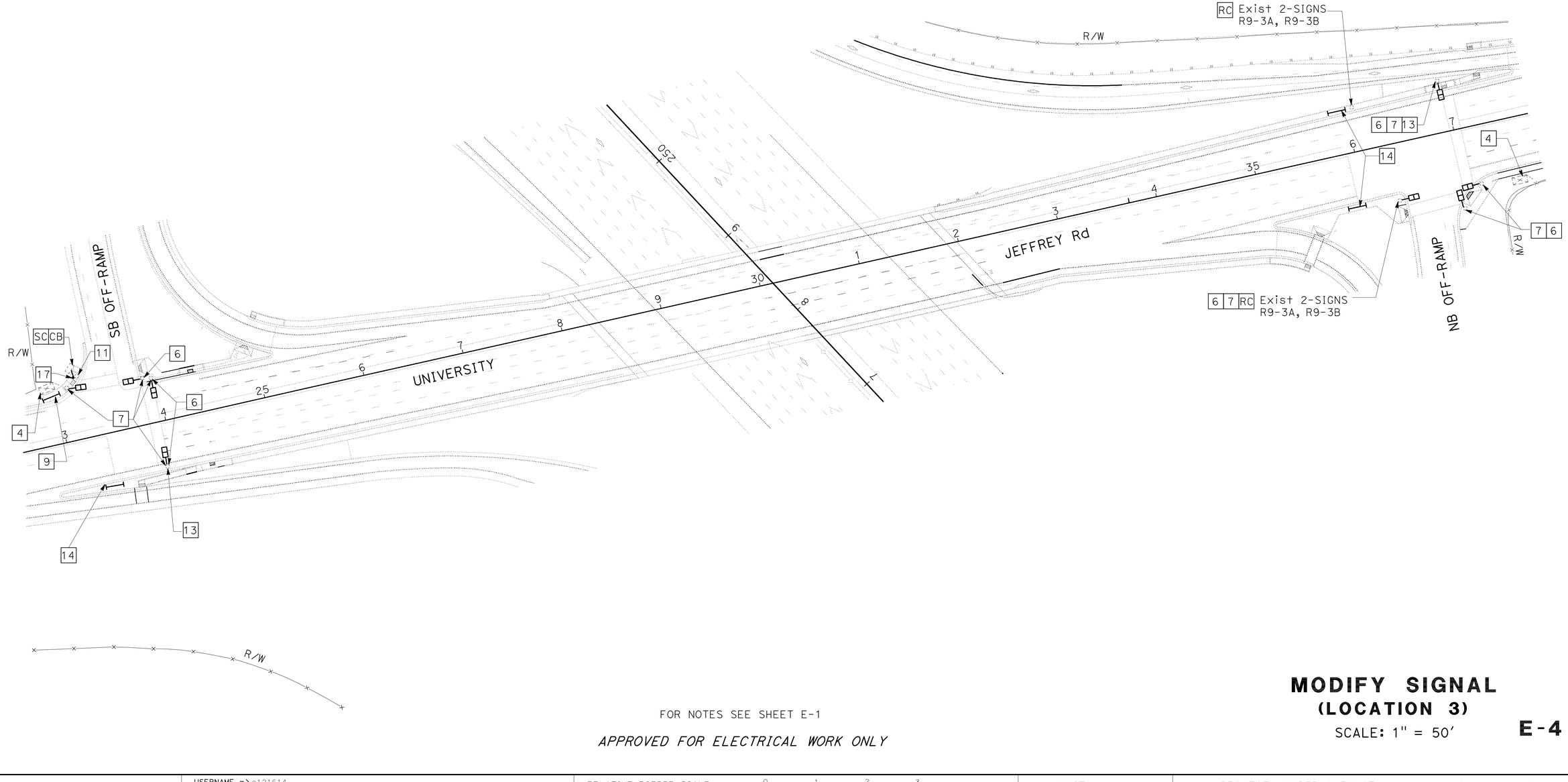
1-30-12
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
S. SHAHRIARI
No. E 13485
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 DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



FOR NOTES SEE SHEET E-1

APPROVED FOR ELECTRICAL WORK ONLY

MODIFY SIGNAL
(LOCATION 3)

SCALE: 1" = 50'

E-4

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

FUNCTIONAL SUPERVISOR: SHAHRAM SHAHRIARI
CALCULATED-DESIGNED BY: SOUDABEH AFRASIABI
CHECKED BY: SHAHRAM SHAHRIARI

REVISED BY	DATE REVISED

LAST REVISION | DATE PLOTTED => 02-FEB-2012
11-14-11 | TIME PLOTTED => 06:25

BORDER LAST REVISED 7/2/2010 | USERNAME => s121614 | DGN FILE => 1200020300ua004.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 3024 | PROJECT NUMBER & PHASE 12000203001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	0.3/7.8	33	48

11-14-11
REGISTERED ELECTRICAL ENGINEER DATE

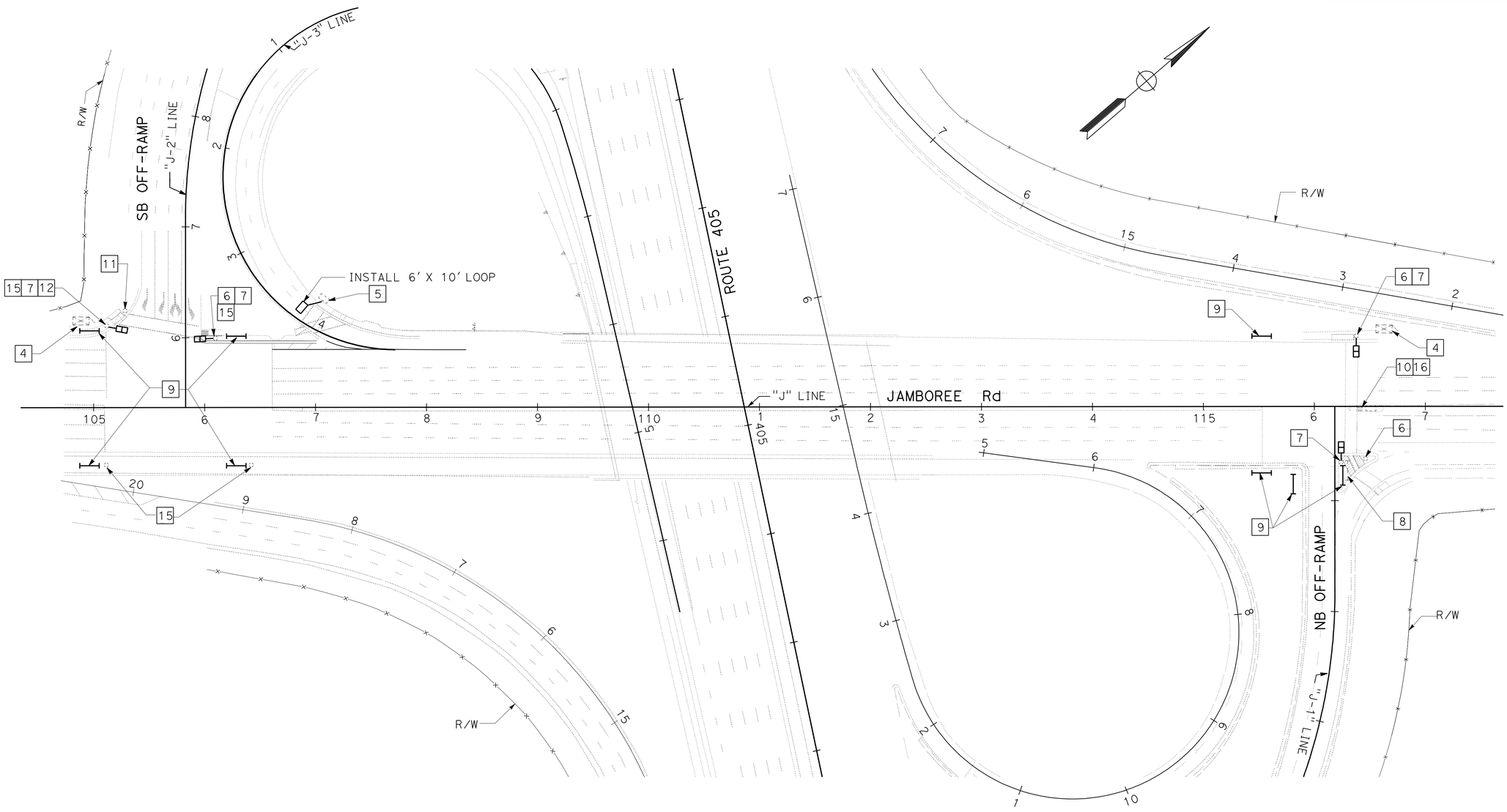
1-30-12
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
S. SHAHRIARI
No. E 13485
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 DATA, CONTACT
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



FOR NOTES SEE SHEET E-1

APPROVED FOR ELECTRICAL WORK ONLY

MODIFY SIGNAL
(LOCATION 4)

SCALE: 1" = 50'

E-5

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

FUNCTIONAL SUPERVISOR: SHAHRAM SHAHRIARI
CALCULATED-DESIGNED BY: SOUDABEH AFRASIABI
CHECKED BY: SHAHRAM SHAHRIARI
REVISED BY
DATE REVISED

LAST REVISION | DATE PLOTTED => 02-FEB-2012
11-14-11 | TIME PLOTTED => 06:25

BORDER LAST REVISED 7/2/2010 | USERNAME => s121614 | DGN FILE => 1200020300ua005.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 3024 | PROJECT NUMBER & PHASE 12000203001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	405	0.3/7.8	34	48

11-14-11
REGISTERED ELECTRICAL ENGINEER DATE

1-30-12
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
S. SHAHRIARI
No. E 13485
Exp. 9/30/12
ELECTRICAL
STATE OF CALIFORNIA

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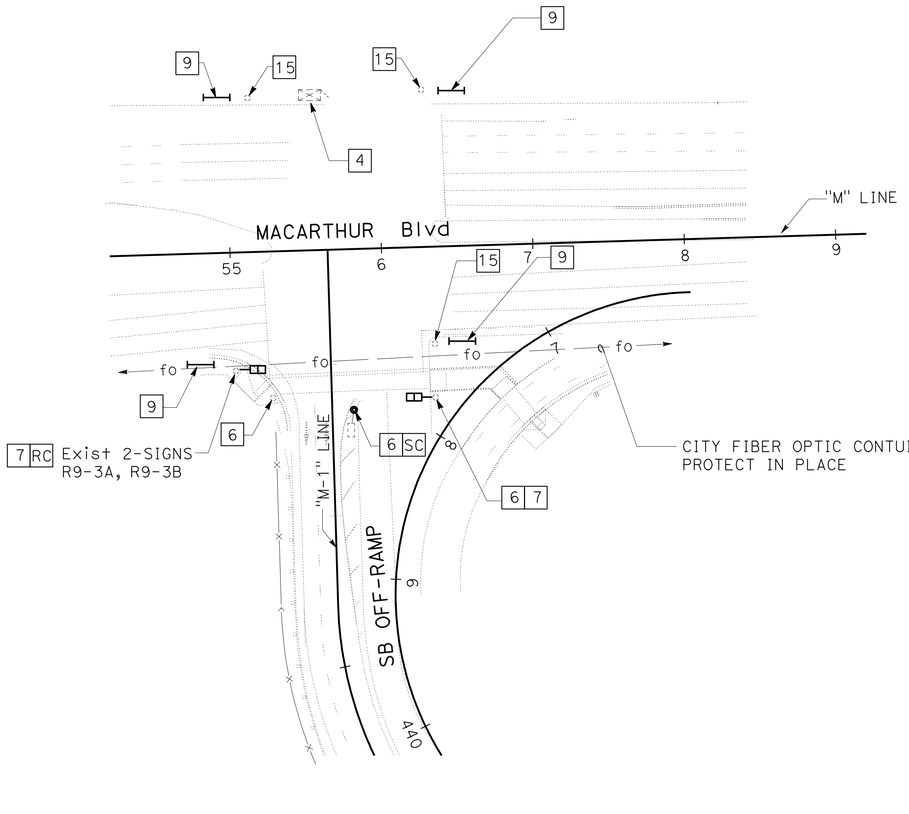
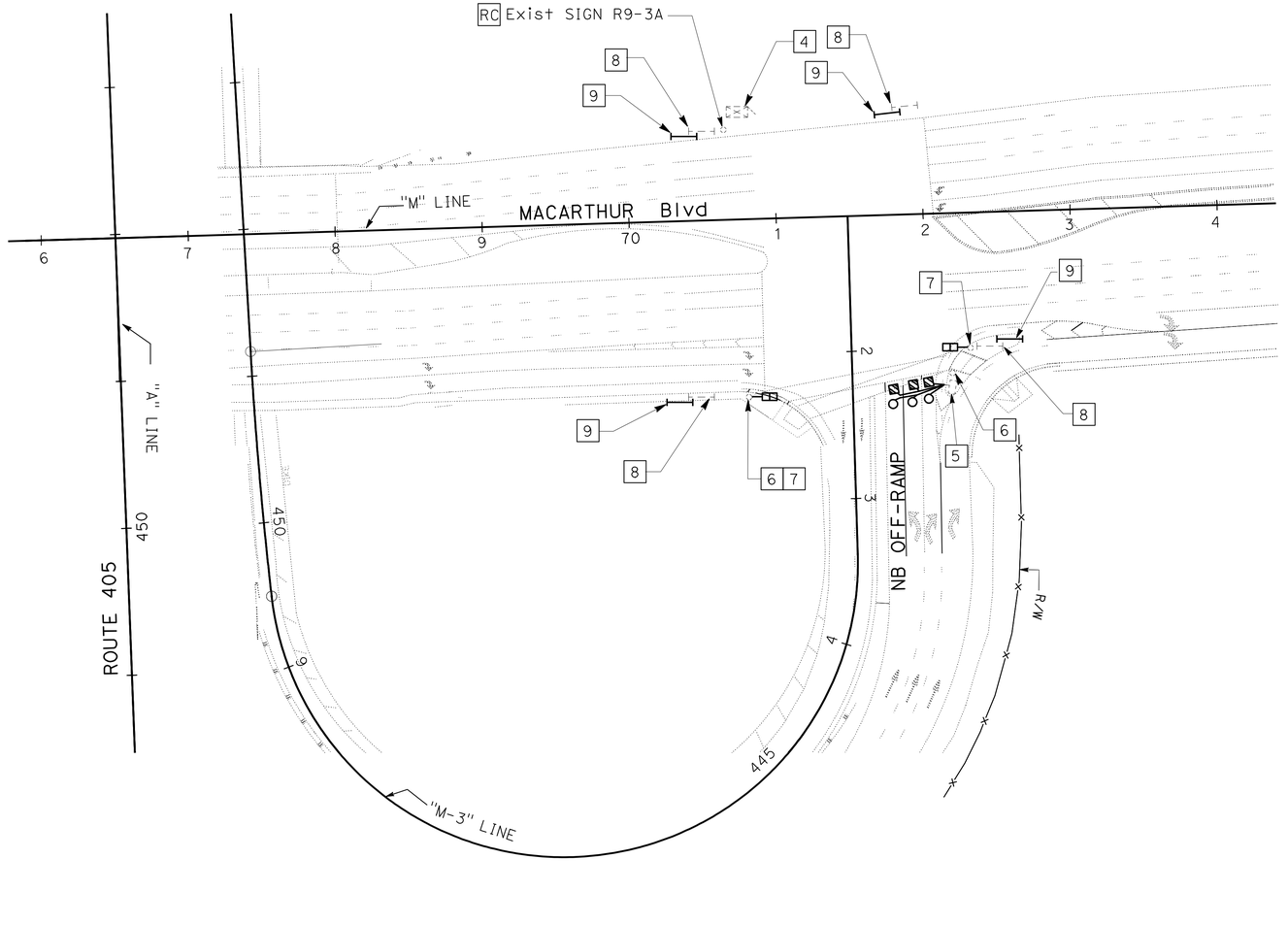
NOTE:

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





MODIFY SIGNAL
(LOCATION 5)

SCALE: 1" = 50'

FOR NOTES SEE SHEET E-1

APPROVED FOR ELECTRICAL WORK ONLY

E-6

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: SOUDABEH AFRASIABI
CHECKED BY: SHAHRAM SHAHRIARI
FUNCTIONAL SUPERVISOR: SHAHRAM SHAHRIARI

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® ELECTRICAL DESIGN

LAST REVISION | DATE PLOTTED => 01-FEB-2012
11-14-11 | TIME PLOTTED => 15:56

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	405	0.3/7.8	35	48

REGISTERED CIVIL ENGINEER

November 17, 2006
PLANS APPROVAL DATE

Michael Janzen No. 44788 Exp. 03-31-08 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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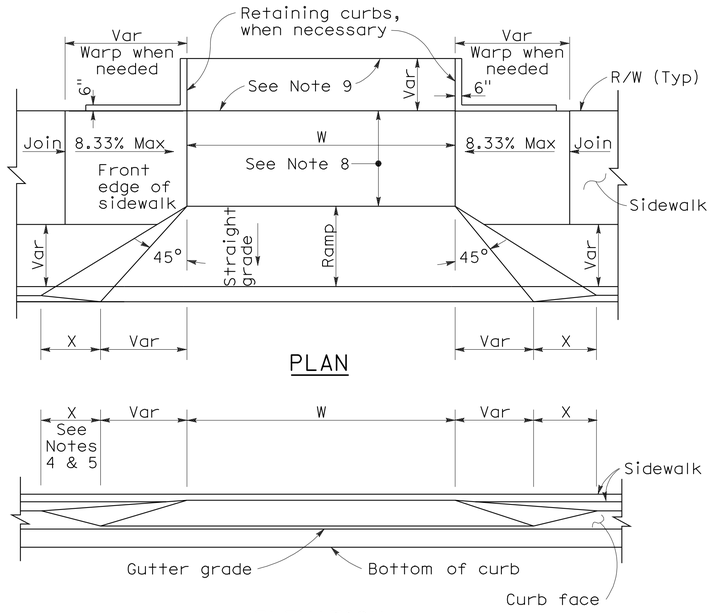
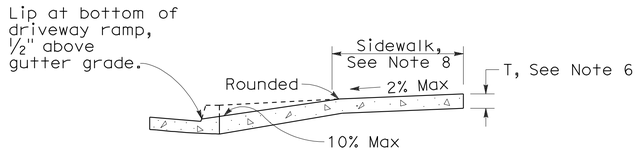
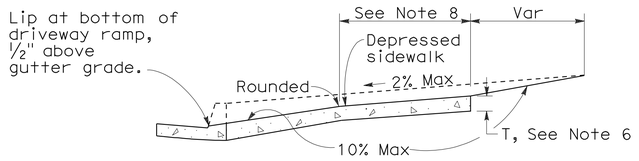
To accompany plans dated 1-30-12





CASE A

Typical driveway, sidewalk not depressed



CASE B

Driveway with depressed sidewalk

SECTIONS

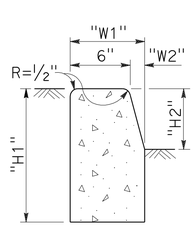
CURB QUANTITIES

TYPE	CUBIC YARDS PER LINEAR FOOT
A1-6	0.02585
A1-8	0.03084
A2-6	0.05903
A2-8	0.06379
A3-6	0.01036
A3-8	0.01435
B1-4	0.02185
B1-6	0.02930
B2-4	0.05515
B2-6	0.06171
B3-4	0.00641
B3-6	0.01074
B4	0.05709
D-4	0.04083
D-6	0.06804
E	0.06661

TABLE A

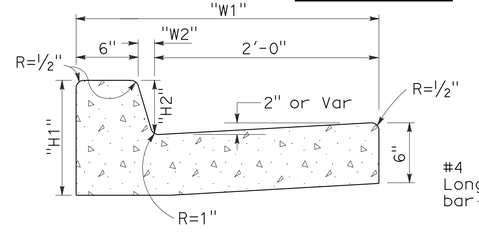
CURB TYPE	DIMENSIONS "H1"	"H2"	"W1"	"W2"
A1-6	1′-2"	6"	7½"	1½"
A1-8	1′-4"	8"	8"	2"
A2-6	1′-0"	6"	2′-7½"	1½"
A2-8	1′-2"	8"	2′-8"	2"
A3-6	6"	5"	7¼"	1¼"
A3-8	8"	7"	7¾"	1¾"
B1-4	1′-0"	4"	7½"	2½"
B1-6	1′-2"	6"	9"	4"
B2-4	10"	4"	2′-7½"	2½"
B2-6	1′-0"	6"	2′-9"	4"
B3-4	4"	3"	7"	2"
B3-6	6"	5"	8½"	3½"
D-4	10"	4"	1′-6"	1′-1"
D-6	1′-0"	6"	2′-2"	1′-8"

DRIVEWAYS



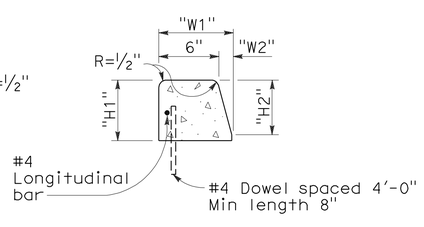
TYPE A1 CURBS

See Table A



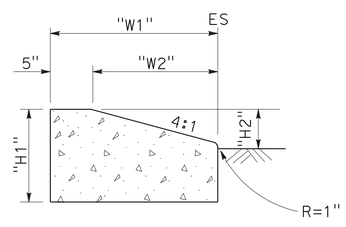
TYPE A2 CURBS

See Table A



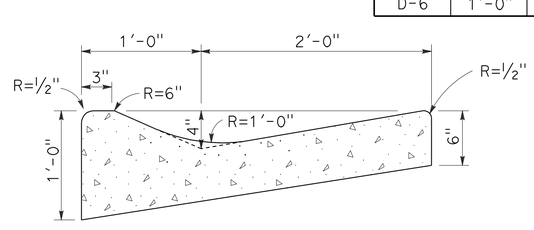
TYPE A3 CURBS

Superimposed on existing pavement
See Table A

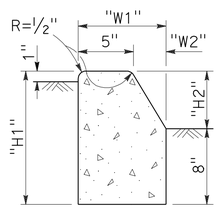


TYPE D CURBS

See Table A

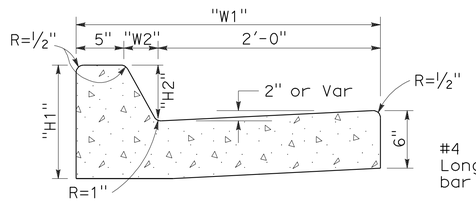


TYPE E CURB



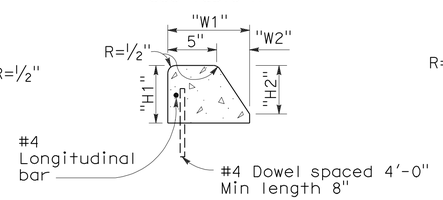
TYPE B1 CURBS

See Table A



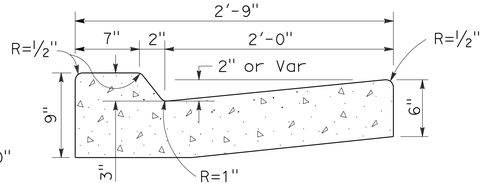
TYPE B2 CURBS

See Table A

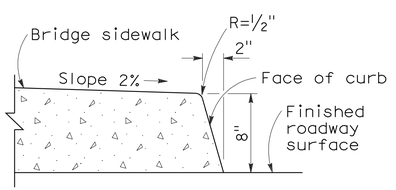


TYPE B3 CURBS

Superimposed on existing pavement
See Table A



TYPE B4 CURBS



TYPE H CURB

On Bridges

CURBS

NOTES:

1. Case A driveway section typically applies.
2. Use Case B driveway section when ramp slopes would exceed 10% in Case A.
3. Use Case B driveway section when sidewalk cross slope would exceed 2% in Case A.
4. X=3′-0" except for curb heights over 10" where 4:1 slopes shall be used on curb slope.
5. X is a variable when sidewalk is located where wheelchairs may traverse the surface. Slopes shall not exceed 8.33%.
6. Sidewalk and ramp thickness "T" at driveway shall be 4" for residental and 6" for commercial.
7. Difference in slope of the driveway ramp and the slope of a line between the gutter and a point on the roadway 5′-0" from gutter line shall not exceed 15%. Reduce driveway ramp slope, not gutter slope, where required.
8. Minimum width of clear passageway for sidewalk shall be 4′-0".
9. Retaining curbs and acquisition of construction easement may be necessary for narrow sidewalks or curb heights in excess of 6".
10. Across the pedestrian route at curb ramp locations, the gutter pan slope shall not exceed 1" of depth for each 2′-0" of width.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CURBS AND DRIVEWAYS

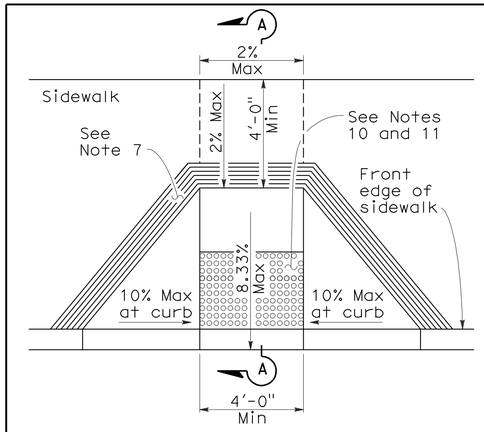
NO SCALE

RSP A87A DATED NOVEMBER 17, 2006 SUPERSEDES STANDARD PLAN A87A
DATED MAY 1, 2006 - PAGE 113 OF THE STANDARD PLANS BOOK DATED MAY 2006.

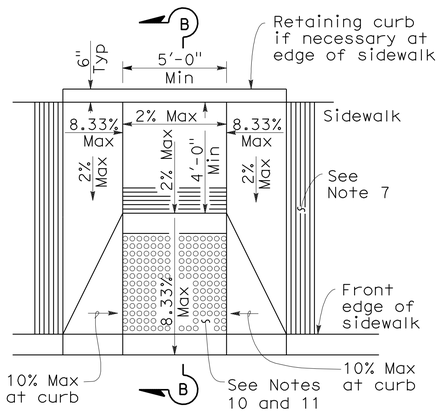
REVISED STANDARD PLAN RSP A87A

2006 REVISED STANDARD PLAN RSP A87A

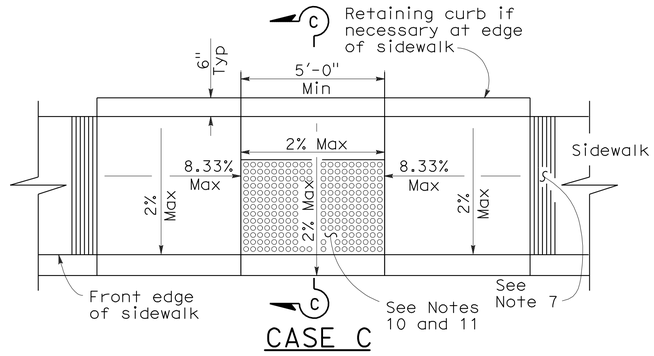
10-25-06



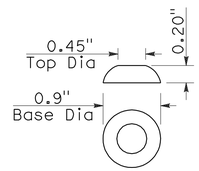
CASE A



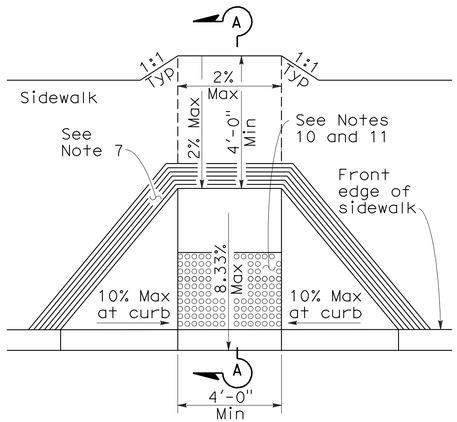
CASE B



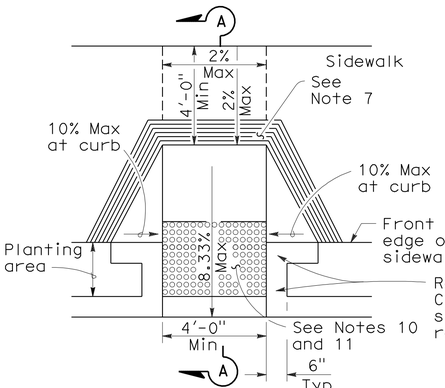
CASE C



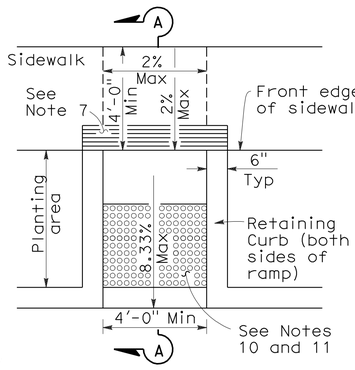
RAISED TRUNCATED DOME



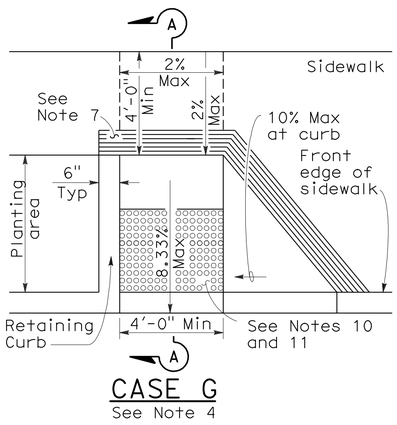
CASE D



CASE E



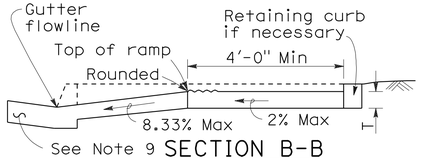
CASE F



CASE G

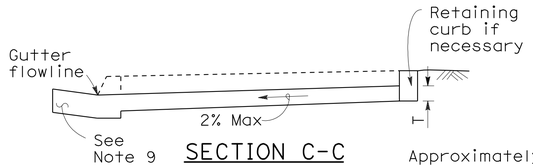
See Note 4

SECTION A-A

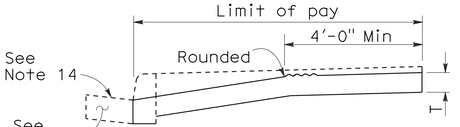


SECTION B-B

Depress entire sidewalk as required



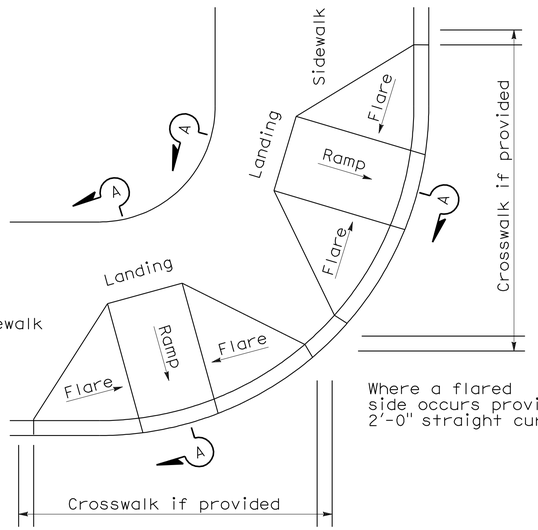
SECTION C-C



RETROFIT DETAIL

Existing curb and sidewalk

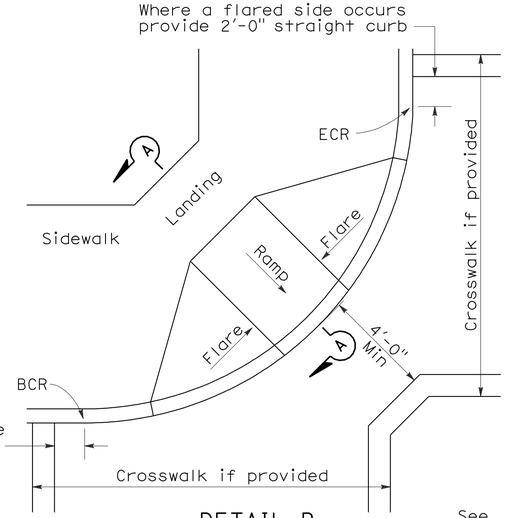
GROOVING DETAIL



DETAIL A

TYPICAL TWO-RAMP CORNER INSTALLATION

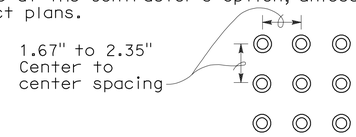
See Note 1



DETAIL B

TYPICAL ONE-RAMP CORNER INSTALLATION

See Notes 1 and 3



RAISED TRUNCATED DOME PATTERN (IN-LINE)

DETECTABLE WARNING SURFACE

See Note 10

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	405	0.3/7.8	36	48

H. David Cordova
REGISTERED CIVIL ENGINEER

Hector David Cordova No. C41957 Exp. 3-31-08 CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

September 1, 2006
PLANS APPROVAL DATE

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

To accompany plans dated 1-30-12

NOTES:

1. As site conditions dictate, Case A through Case G curb ramps may be used for corner installations similar to those shown in Detail A and Detail B. The case of curb ramps used in Detail A do not have to be the same. Case A through Case G curb ramps also may be used at mid block locations, as site conditions dictate.
2. If distance from curb to back of sidewalk is too short to accommodate ramp and 4'-0" platform (landing) as shown in Case A, the sidewalk may be depressed longitudinally as in Case B, or C or may be widened as in Case D.
3. When ramp is located in center of curb return, crosswalk configuration must be similar to that shown for Detail B.
4. As site conditions dictate, the retaining curb side and the flared side of the Case G ramp shall be constructed in reversed position.
5. If located on a curve, the sides of the ramp need not be parallel, but the minimum width of the ramp shall be 4'-0".
6. Side slope of ramp flares vary uniformly from a maximum of 10% at curb to conform with longitudinal sidewalk slope adjacent to top of the ramp, except in Case C and Case F.
7. The curb ramp shall be outlined, as shown, with a 1'-0" wide border with ¼" grooves approximately ¾" on center. See grooving detail.
8. Transitions from ramps and landing to walks, gutters or streets shall be flush and free of abrupt changes.
9. Maximum slopes of adjoining gutters, the road surface immediately adjacent to the curb ramp or accessible route shall not exceed 5 percent within 4'-0" of the top and bottom of the curb ramp.
10. Curb ramps shall have a detectable warning surface that extends the full width and 3'-0" depth of the ramp. Detectable Warning Surfaces shall conform to the details on this plan and the requirements in the Special Provisions.
11. The edge of the detectable warning surface nearest the street shall be between 6" and 8" from the gutter flowline.
12. Sidewalk and ramp thickness, "T", shall be 3½" minimum.
13. Utility pull boxes, manholes, vaults and all other utility facilities within the boundaries of the curb ramp will be relocated or adjusted to grade by the owner prior to, or in conjunction with, curb ramp construction.
14. For retrofit conditions, removal and replacement of curb apron will be at the Contractor's option, unless otherwise shown on project plans.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CURB RAMP DETAILS

NO SCALE

RSP A88A DATED SEPTEMBER 1, 2006 SUPERSEDES STANDARD PLAN A88A DATED MAY 1, 2006 - PAGE 115 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A88A

2006 REVISED STANDARD PLAN RSP A88A

8-3-06

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	405	0.3/7.8	37	48

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

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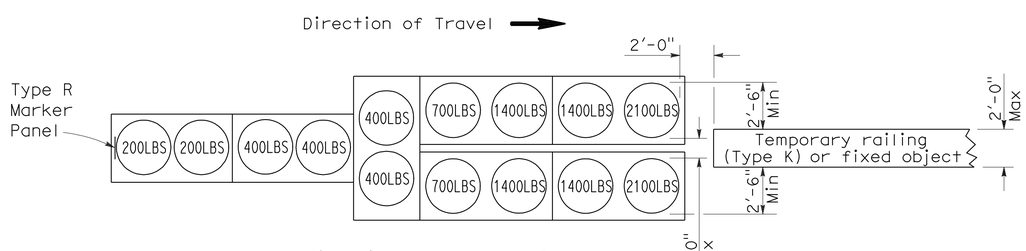
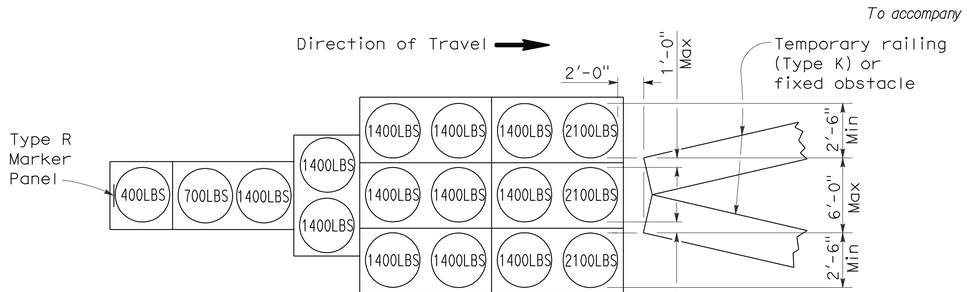
To accompany plans dated 1-30-12



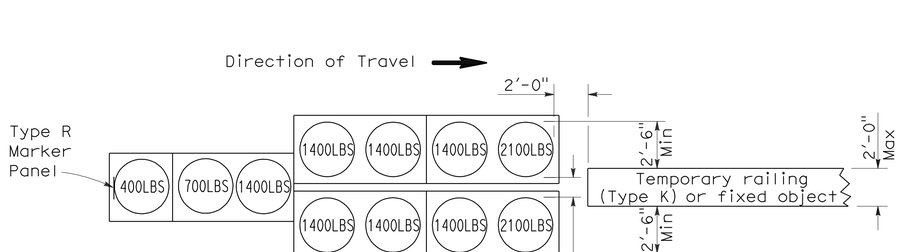
ARRAY 'TU14'

Approach speed 45 mph or more



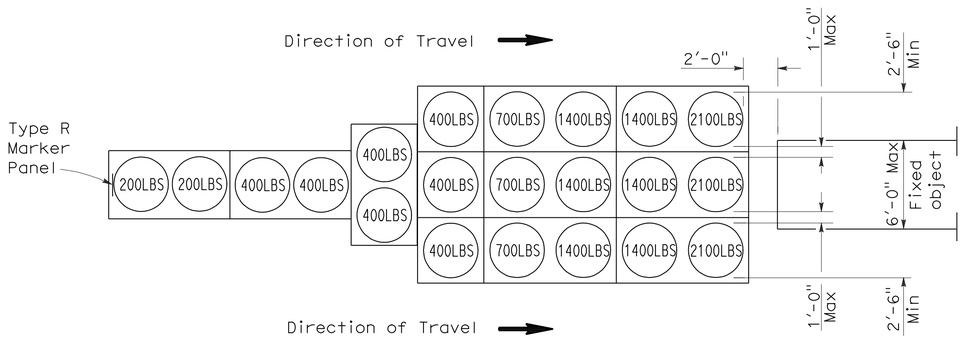
ARRAY 'TU17'

Approach speed less than 45 mph



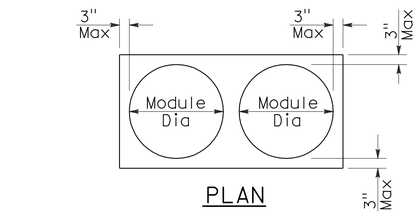
ARRAY 'TU11'

Approach speed less than 45 mph

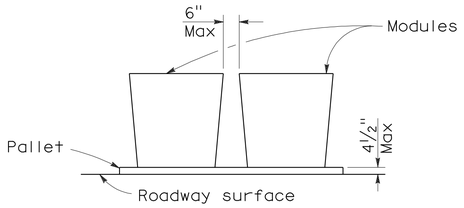


ARRAY 'TU21'

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

5-15-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	405	0.3/7.8	38	48

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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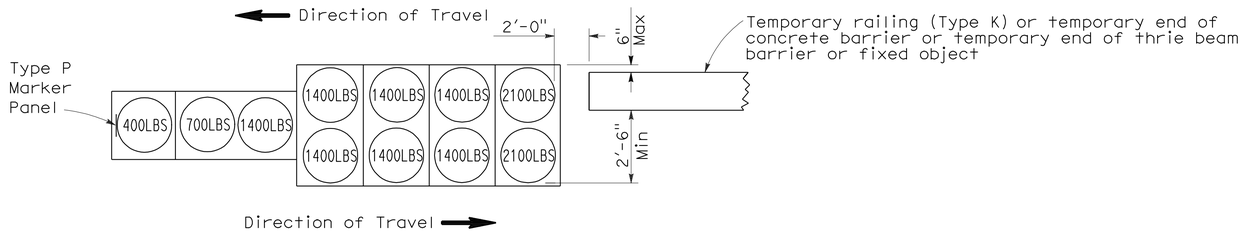
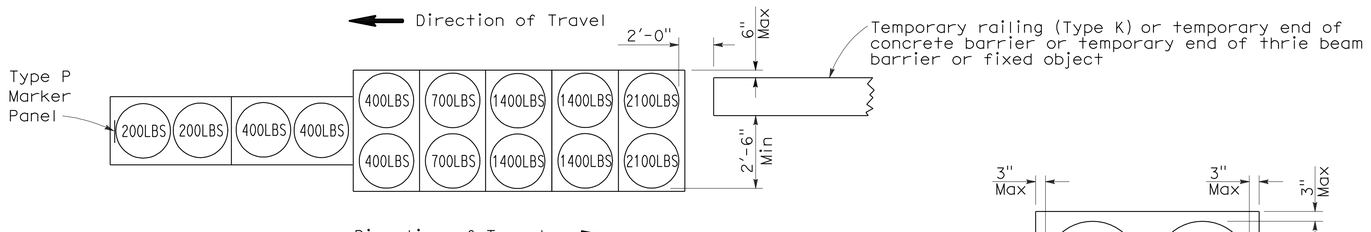
To accompany plans dated 1-30-12



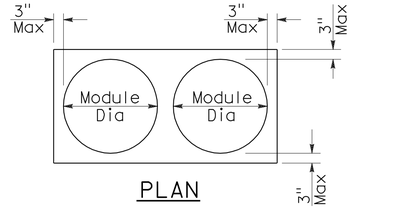
ARRAY 'TB11'

Approach speed less than 45 mph

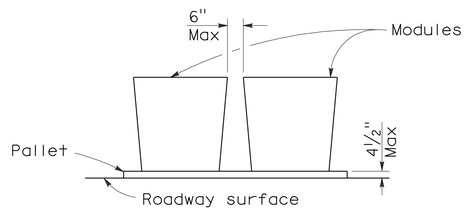


ARRAY 'TB14'

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	405	0.3/7.8	39	48

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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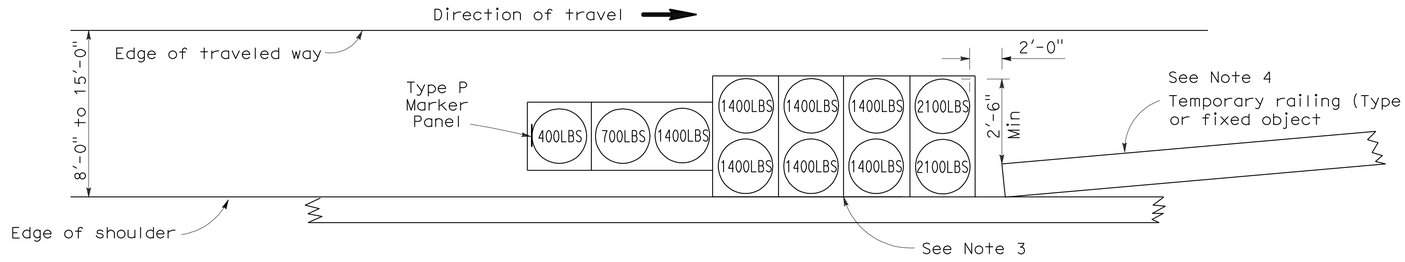
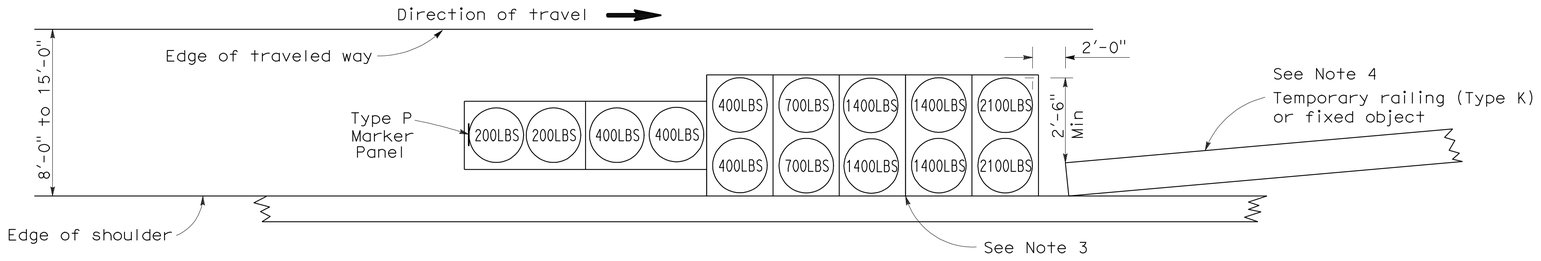
To accompany plans dated 1-30-12



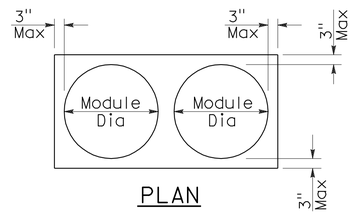
ARRAY 'TS11'

Approach speed less than 45 mph
See Note 9

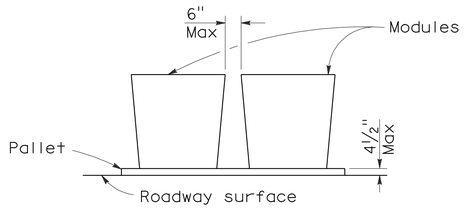


ARRAY 'TS14'

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	405	0.3/7.8	40	48

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-11
CIVIL
STATE OF CALIFORNIA

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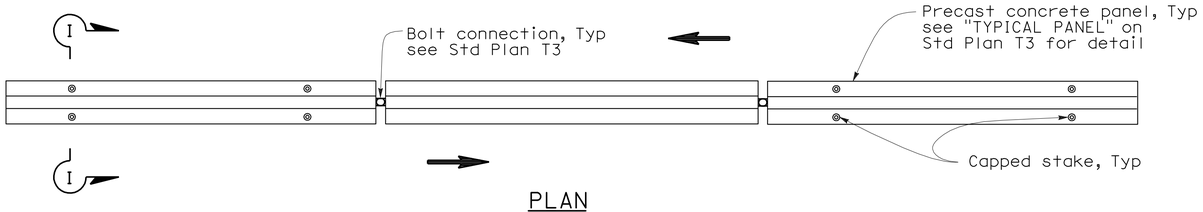
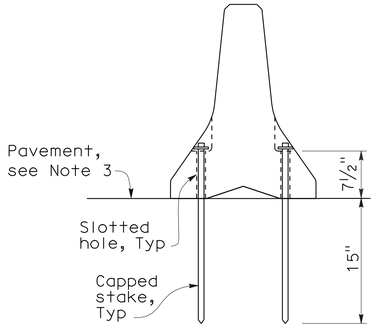
To accompany plans dated 1-30-12



PLAN

RAILING STAKING CONFIGURATION FOR TWO-WAY TRAFFIC

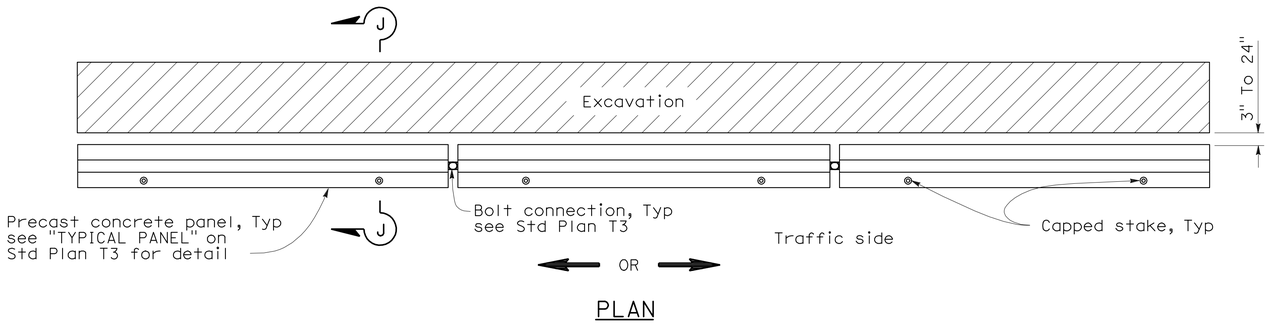
See Note 1



SECTION I-I

NOTES:

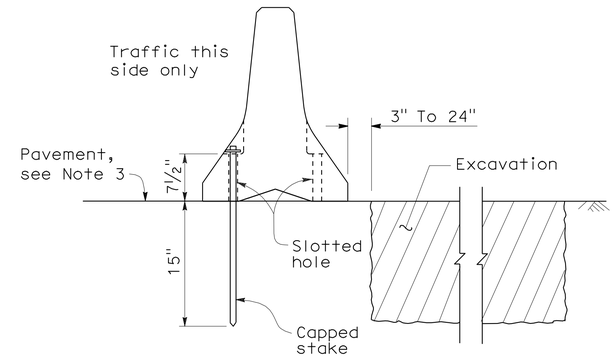
1. Where Type K Temporary Railing is placed as a temporary or long term barrier in two-way traffic on highways with less than 24" from the edge of traveled way, use four capped stakes per every other panel with end panels staked.
2. Where Type K Temporary Railing is placed 3" to 24" from the edge of an excavation on highways, use two capped stakes per panel along the traffic side.
3. Staked Type K Temporary Railing must be supported by at least 4" thick concrete, hot mix asphalt or existing asphalt concrete pavement.
4. The minimum yield strength for the washer must be 60,000 psi.
5. Direction of adjacent traffic indicated by ⟹.



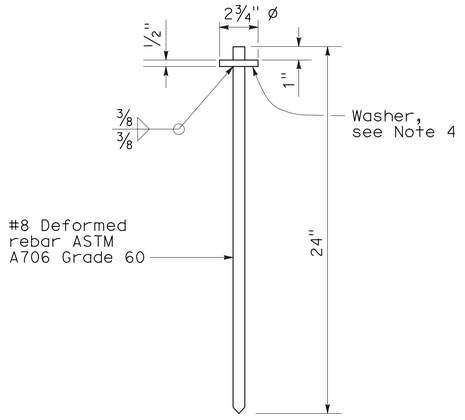
PLAN

RAILING STAKING CONFIGURATION ADJACENT TO AN EXCAVATION

See Note 2



SECTION J-J



CAPPED STAKE DETAIL

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY RAILING (TYPE K)

NO SCALE

NSP T3A DATED MAY 20, 2011 SUPPLEMENTS
THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP T3A

2006 NEW STANDARD PLAN NSP T3A

8-31-10

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	405	0.3/7.8	41	48

Robert B Schott
LICENSED LANDSCAPE ARCHITECT

August 15, 2008
PLANS Approval DATE

LICENSED LANDSCAPE ARCHITECT — Robert B. Schott 3035 — Signature — 11-04-08 Renewal Date — 08-11-08 Date — STATE OF CALIFORNIA

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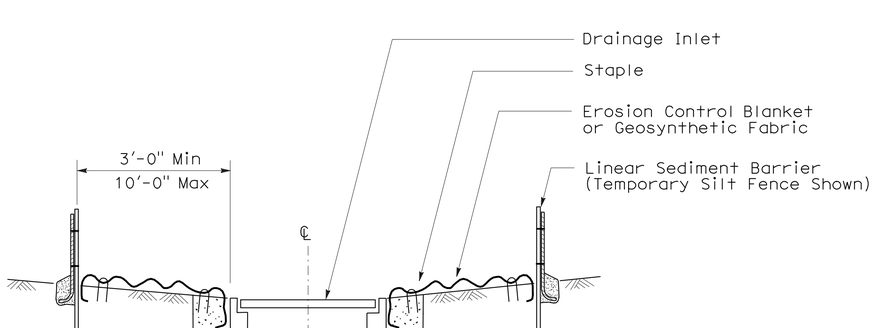
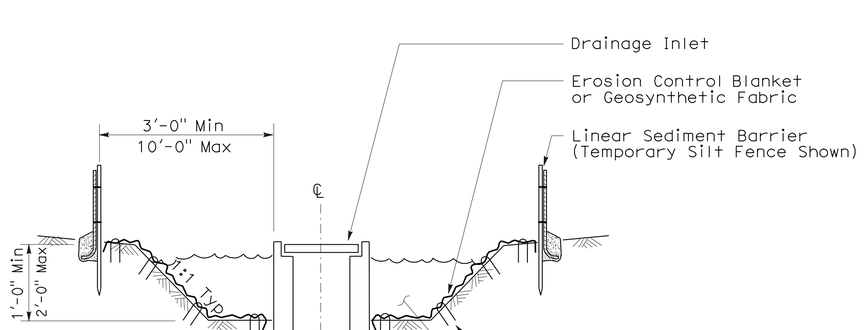
To accompany plans dated 1-30-12



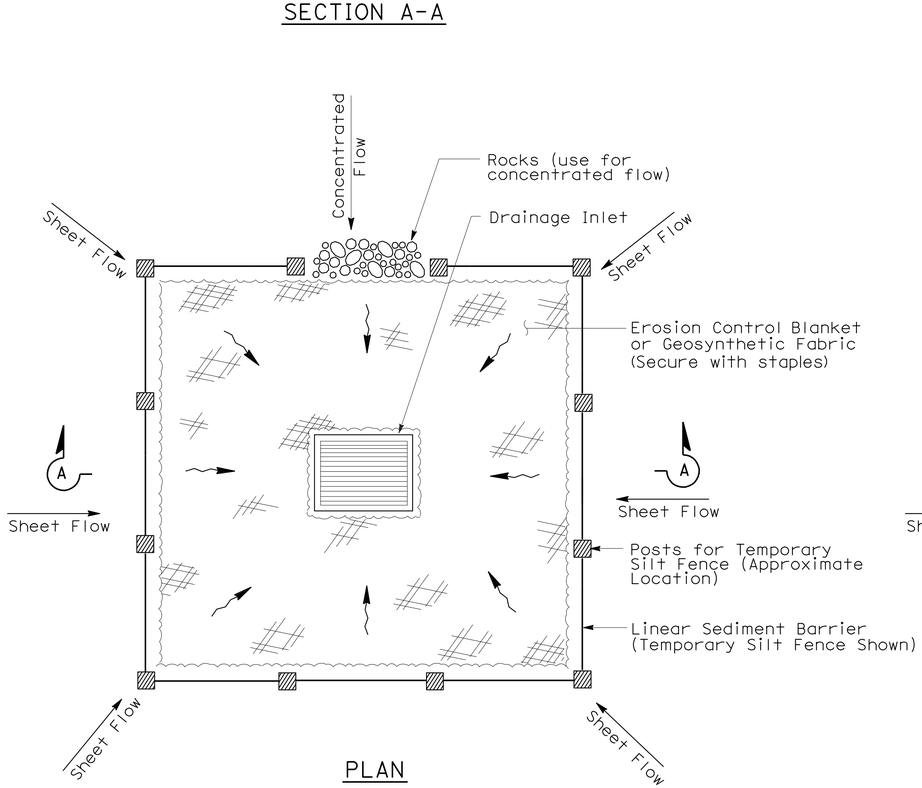
SECTION A-A



SECTION B-B

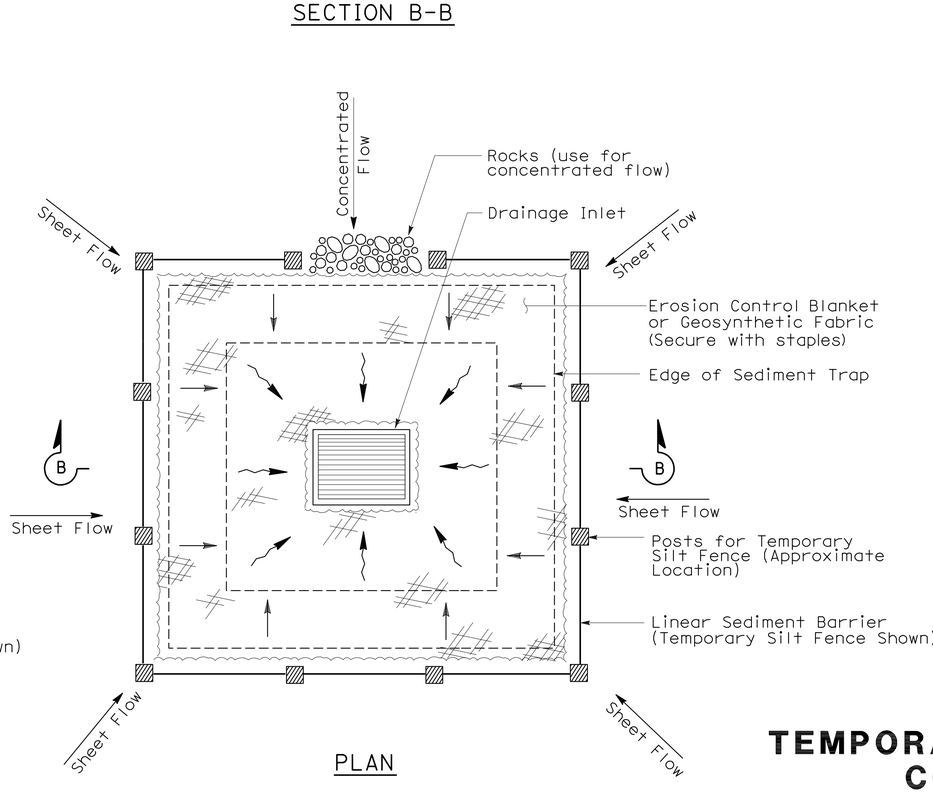
NOTES:

1. See Standard Plan T51 for Temporary Silt Fence.
2. Dimensions may vary to fit field conditions.



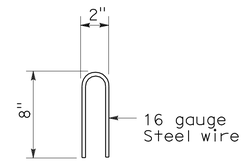
PLAN

TEMPORARY DRAINAGE INLET PROTECTION (TYPE 1)



PLAN

TEMPORARY DRAINAGE INLET PROTECTION (TYPE 2) (EXCAVATED SEDIMENT TRAP)



STAPLE DETAIL

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)

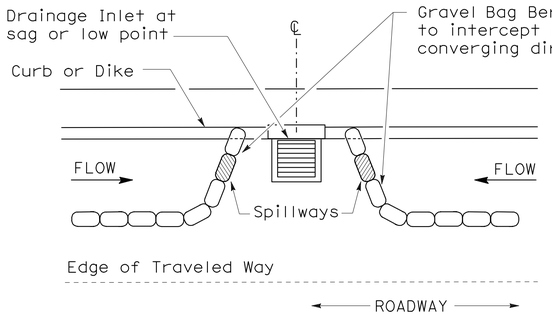
NO SCALE

NSP T61 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP T61

2006 NEW STANDARD PLAN NSP T61

7-11-08



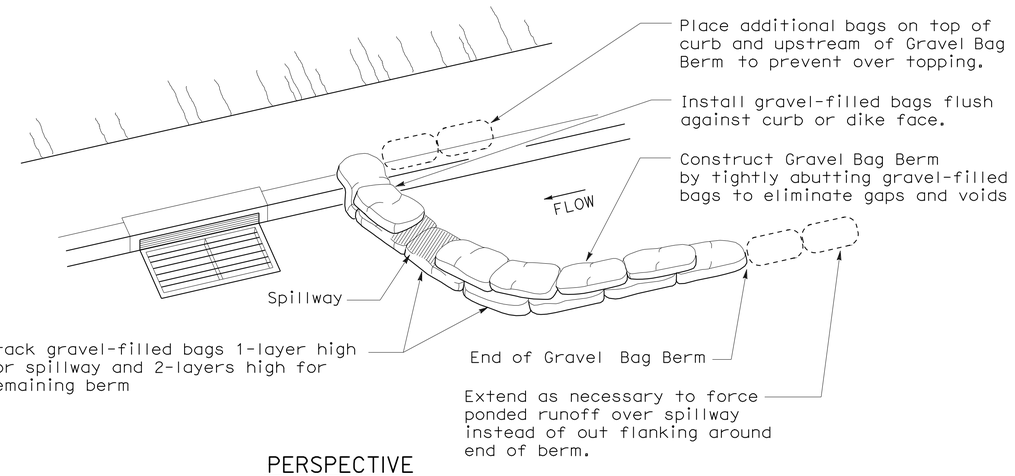
PLAN

CONFIGURATION FOR SAG POINT INLET (GRAVEL BAG BERM)

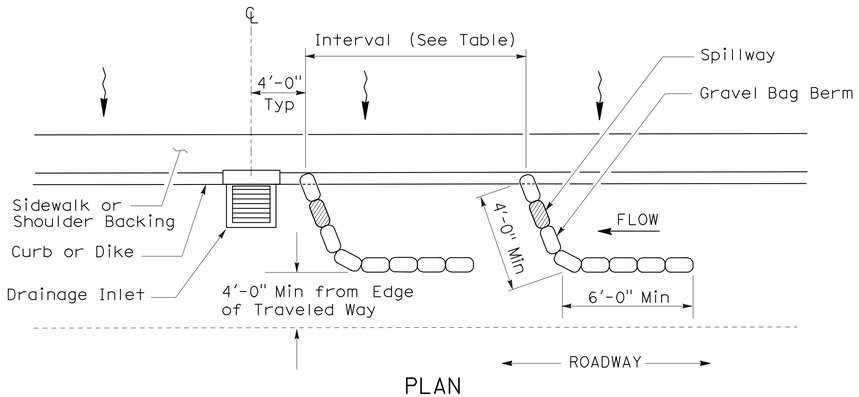
GRAVEL BAG BERM (TYPE 3A) SPACING TABLE

SLOPE OF ROADWAY (PERCENT)	1 to 3.9	4 to 5.9	6 to 7.9	8 to 10	10+
INTERVAL BETWEEN BERM	100′	75′	50′	25′	12′

For slope of less than 1%, install barriers only if erosion/sediment is prevalent

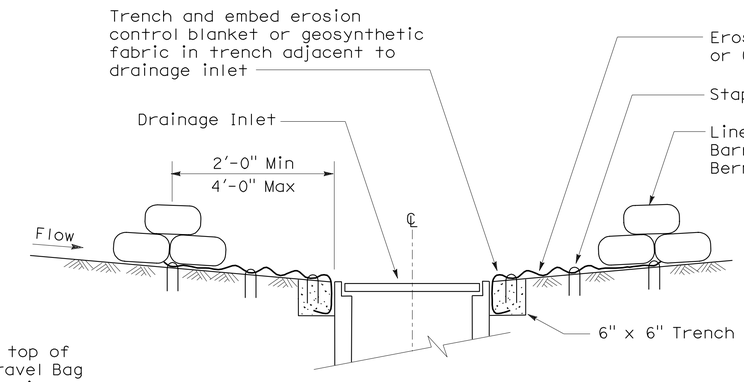


PERSPECTIVE

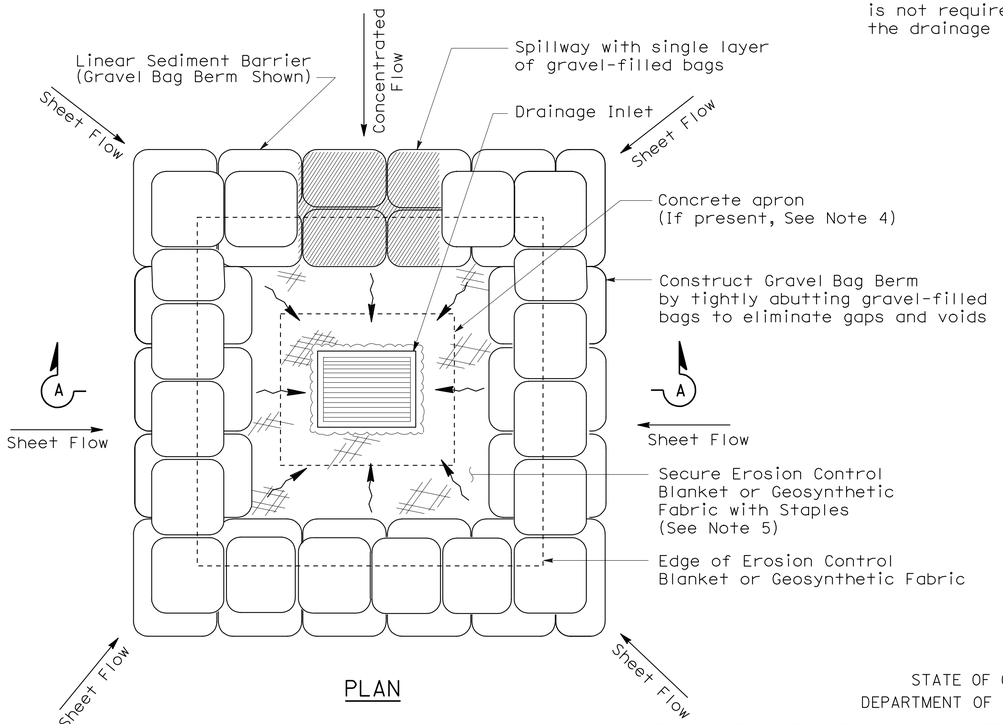


PLAN

TEMPORARY DRAINAGE INLET PROTECTION (TYPE 3A) (GRAVEL BAG BERM)



SECTION A-A

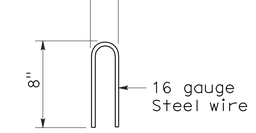


PLAN

TEMPORARY DRAINAGE INLET PROTECTION (TYPE 3B)

NOTES:

1. Place safety cones adjacent to drainage inlet protection.
2. Dimensions may vary to fit field conditions.
3. Install a minimum of 3 gravel bag berms upstream of each drainage inlet to be protected.
4. Position erosion control blanket or geosynthetic fabric at edge of concrete apron and secure in trench.
5. Erosion control blanket or geosynthetic fabric is not required if the area adjacent to the drainage inlet is vegetated or paved.



STAPLE DETAIL

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	405	0.3/7.8	42	48

Robert B Schott
LICENSED LANDSCAPE ARCHITECT

August 15, 2008
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT — Robert B. Schott, 3025 — Signature — 11-04-08 Renewal Date — 08-11-08 Date — STATE OF CALIFORNIA

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To accompany plans dated 1-30-12

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)

NO SCALE

NSP T62 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP T62

2006 NEW STANDARD PLAN NSP T62

7-11-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	405	0.3/7.8	43	48

Robert B Schott
LICENSED LANDSCAPE ARCHITECT

August 15, 2008
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT — Robert B. Schott 3835 — Signature Date 11-04-08 — Renewal Date 08-11-08 — STATE OF CALIFORNIA

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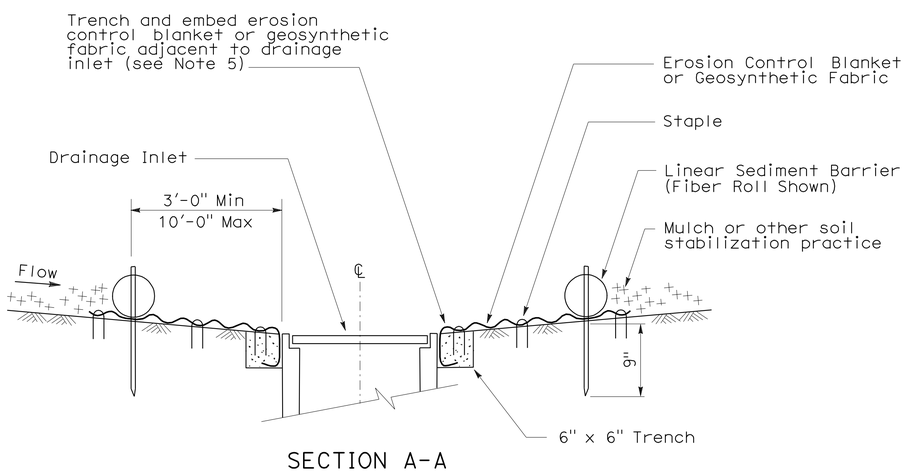
To accompany plans dated 1-30-12

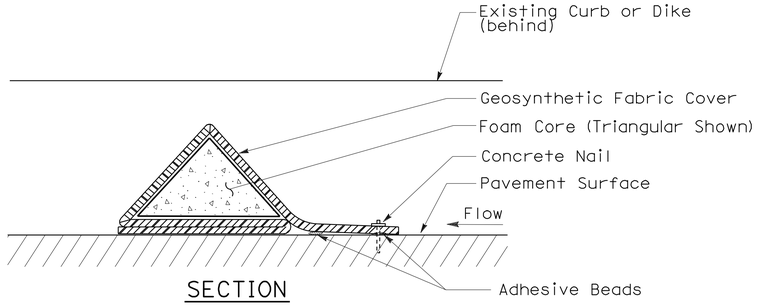
2006 NEW STANDARD PLAN NSP T63

FLEXIBLE SEDIMENT BARRIER SPACING TABLE

SLOPE OF ROADWAY (PERCENT)	0 to 0.9	1 to 1.9	2 to 2.9	3 to 4	5+
INTERVAL BETWEEN BARRIERS	50′	35′	30′	25′	20′
ANGLE FROM FACE OF CURB	70°	70°	70°	45°	45°
SUGGESTED BARRIER LENGTH	6′	6′	6′	6′	6′

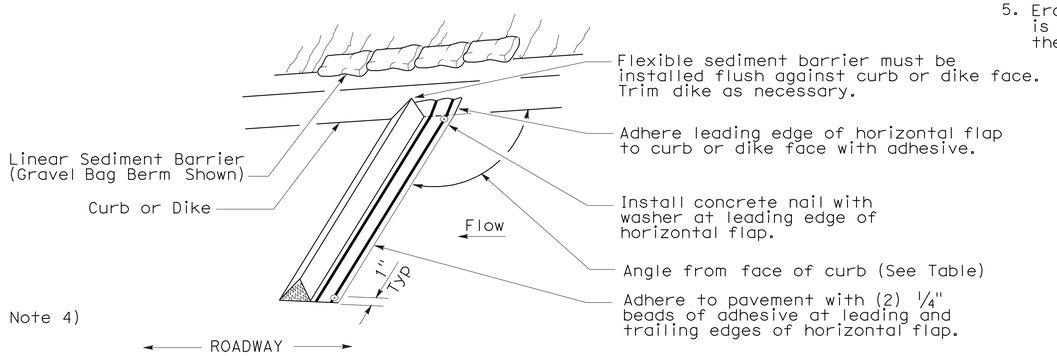


SECTION A-A



SECTION

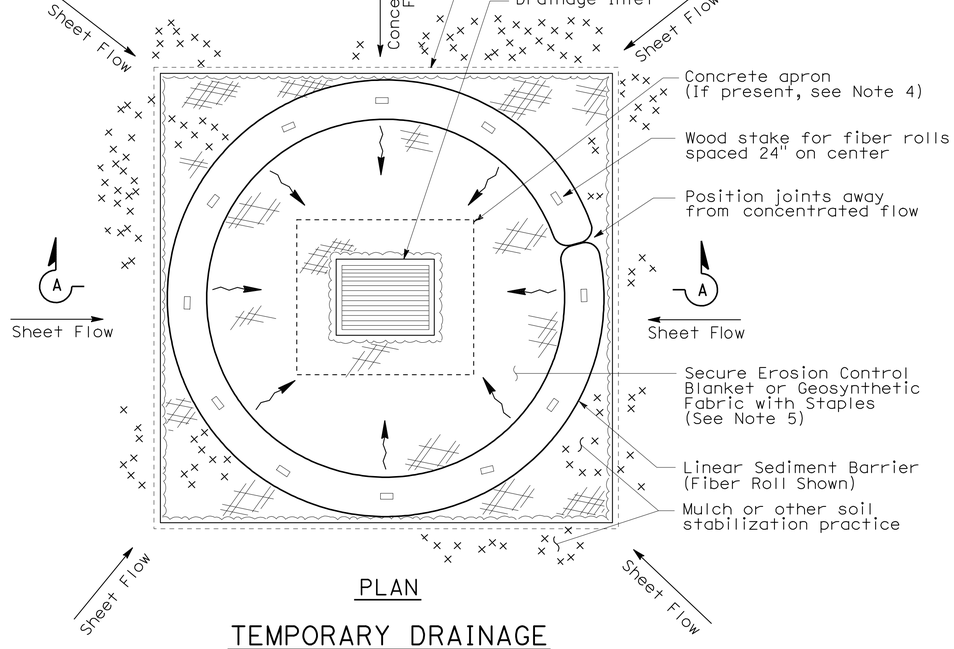
FLEXIBLE SEDIMENT BARRIER DETAIL (FOAM BARRIER SHOWN)



PERSPECTIVE

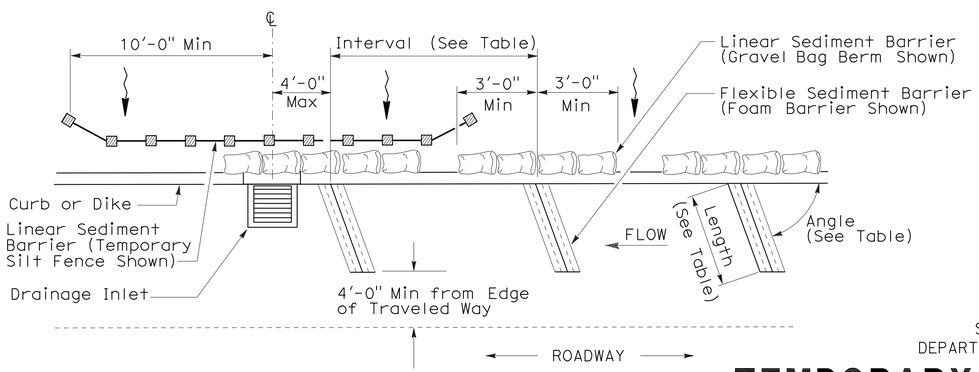
NOTES:

1. See Standard Plan T51 for Temporary Silt Fence.
2. Dimensions may vary to fit field conditions.
3. Install a minimum of 3 flexible sediment barriers upstream of each drainage inlet to be protected.
4. Position erosion control blanket or geosynthetic fabric at edge of concrete apron and secure in trench.
5. Erosion control blanket or geosynthetic fabric is not required if the area adjacent to the drainage inlet is vegetated.



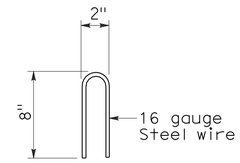
PLAN

TEMPORARY DRAINAGE INLET PROTECTION (TYPE 4A)



PLAN

TEMPORARY DRAINAGE INLET PROTECTION (TYPE 4B) FLEXIBLE SEDIMENT BARRIER



STAPLE DETAIL

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)

NO SCALE

NSP T63 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP T63

7-11-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	405	0.3/7.8	44	48

Robert B Schott
LICENSED LANDSCAPE ARCHITECT

August 15, 2008
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT — Robert B. Schott 3035 — Signature — 11-04-08 Renewal Date — 08-11-08 Date — STATE OF CALIFORNIA

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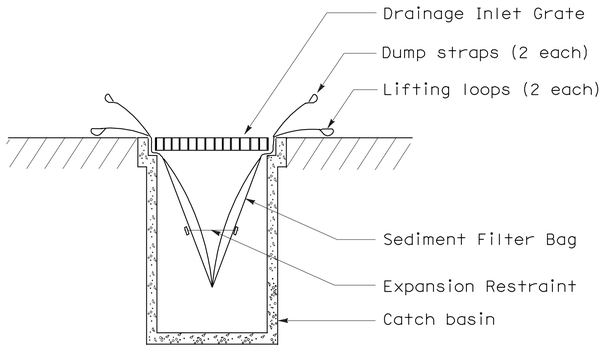
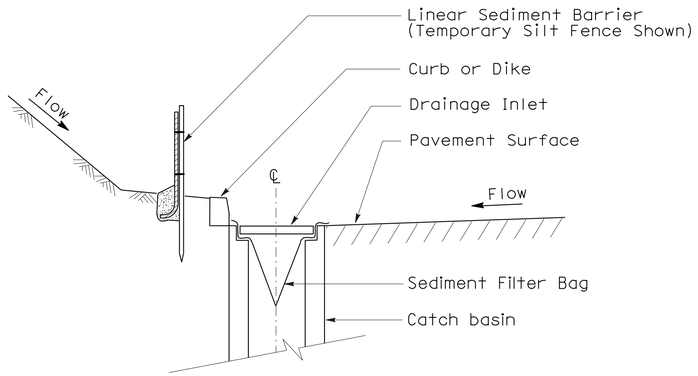
To accompany plans dated 1-30-12

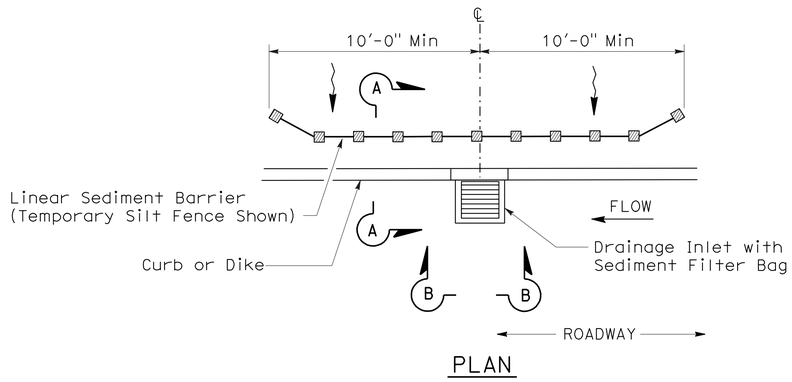


SECTION B-B

SEDIMENT FILTER BAG DETAIL

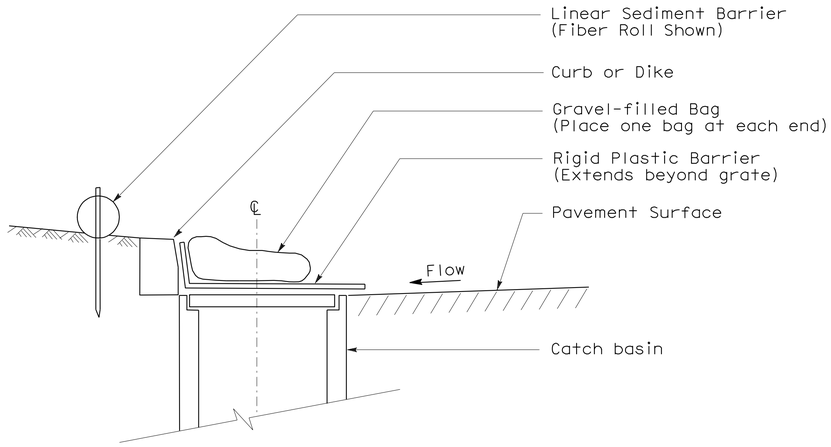


SECTION A-A



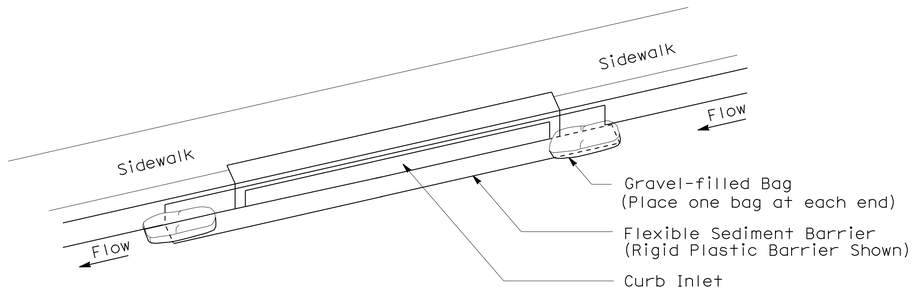
PLAN

TEMPORARY DRAINAGE INLET PROTECTION (TYPE 5) (SEDIMENT FILTER BAG)



SECTION

TEMPORARY DRAINAGE INLET PROTECTION (TYPE 6A) (CATCH BASIN WITH GRATE)



PERSPECTIVE

TEMPORARY DRAINAGE INLET PROTECTION (TYPE 6B) (CURB INLET WITHOUT GRATE)

NOTES:

1. See Standard Plan T51 for Temporary Silt Fence.
2. Dimensions may vary to fit field conditions.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)

NO SCALE

NSP T64 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP T64

2006 NEW STANDARD PLAN NSP T64

7-11-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	405	0.3/7.8	45	48

Jeffery G. McRae
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 1-30-12

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,
MAS-4B	mas-4B	side attachment - 4 signal section
MAS-4C	mas-4C	
MAS-5A	mas-5A	Mast arm mounting vehicle signal faces,
MAS-5B	mas-5B	side attachment - 5 signal section
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

2006 REVISED STANDARD PLAN RSP ES-1A

7-10-07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	405	0.3/7.8	46	48

Jeffery G. McRae
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 1-30-12

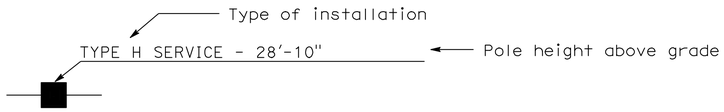
CONDUIT

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



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

7-10-07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	405	0.3/7.8	47	48

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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

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To accompany plans dated 1-30-12

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

Ⓐ Ⓑ Ⓒ — 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
3	9A(21)

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

Pull box-Additional designations or descriptions

- (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

- 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

VEHICLE DETECTORS

5 J 9 U
- Vehicle detector designation
- 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	405	0.3/7.8	48	48

Jeffery G. McRae
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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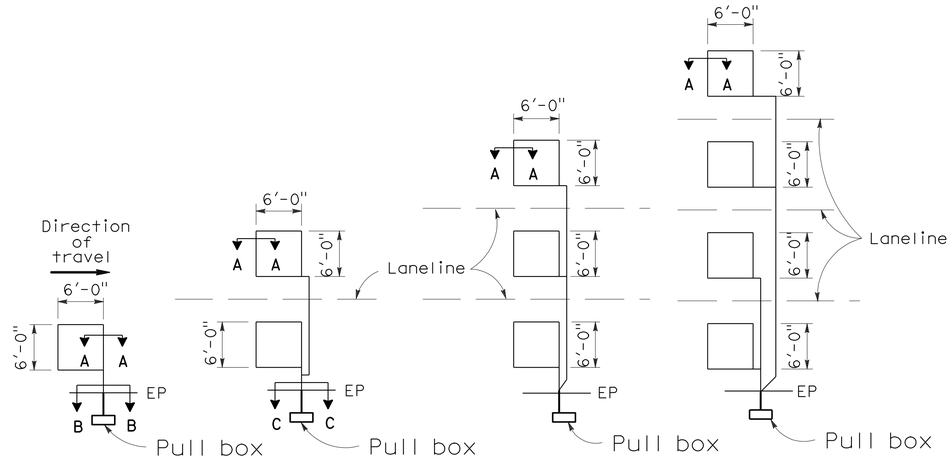
To accompany plans dated 1-30-12

LOOP INSTALLATION PROCEDURE

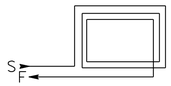
1. Loops shall be centered in lanes.
2. Saw slots in pavement for loop conductors as shown in details.
3. Distance between side of loop and a lead-in saw cut from adjacent detectors shall be 2'-0" minimum. Distance between lead-in saw cuts shall be 6" minimum.
4. Bottom of saw slot shall be smooth with 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.

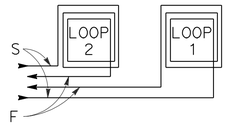


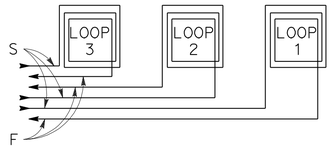
SAWCUT DETAILS

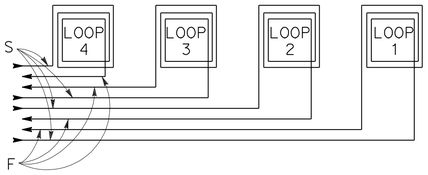
(Type A loop detector configurations illustrated)

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)



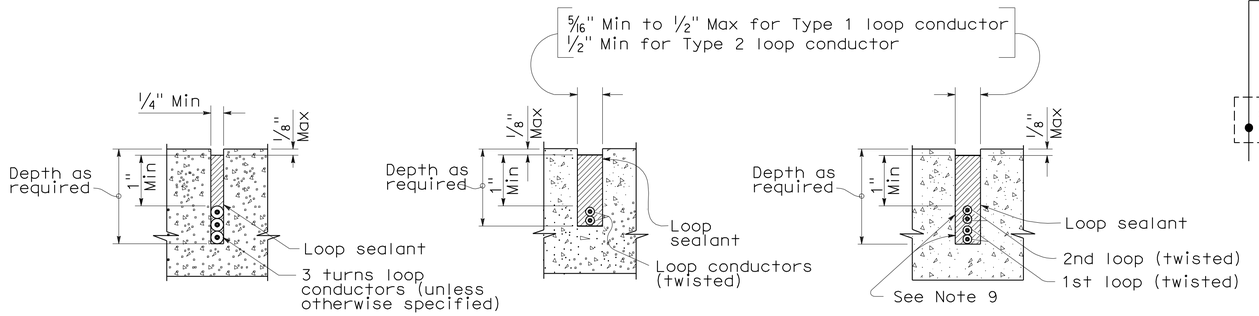






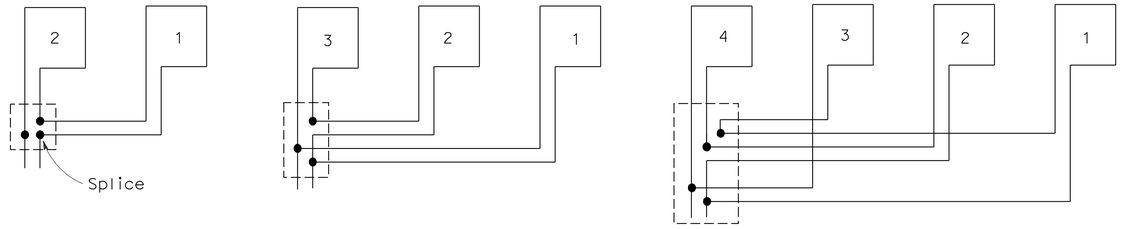
WINDING DETAILS

See Notes 6 and 7



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

SLOT DETAILS - TYPE 1 AND TYPE 2 LOOP CONDUCTOR



TYPICAL LOOP CONNECTIONS

(Dashed lines represent the pull box)

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

8-17-07