Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60	0.0/R6.9	1	58

NH-P060(139)E

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN LOS ANGELES COUNTY
IN LOS ANGELES, MONTEREY PARK AND MONTEBELLO
FROM SANTA FE AVENUE UNDERCROSSING
TO GREENWOOD AVENUE OVERCROSSING

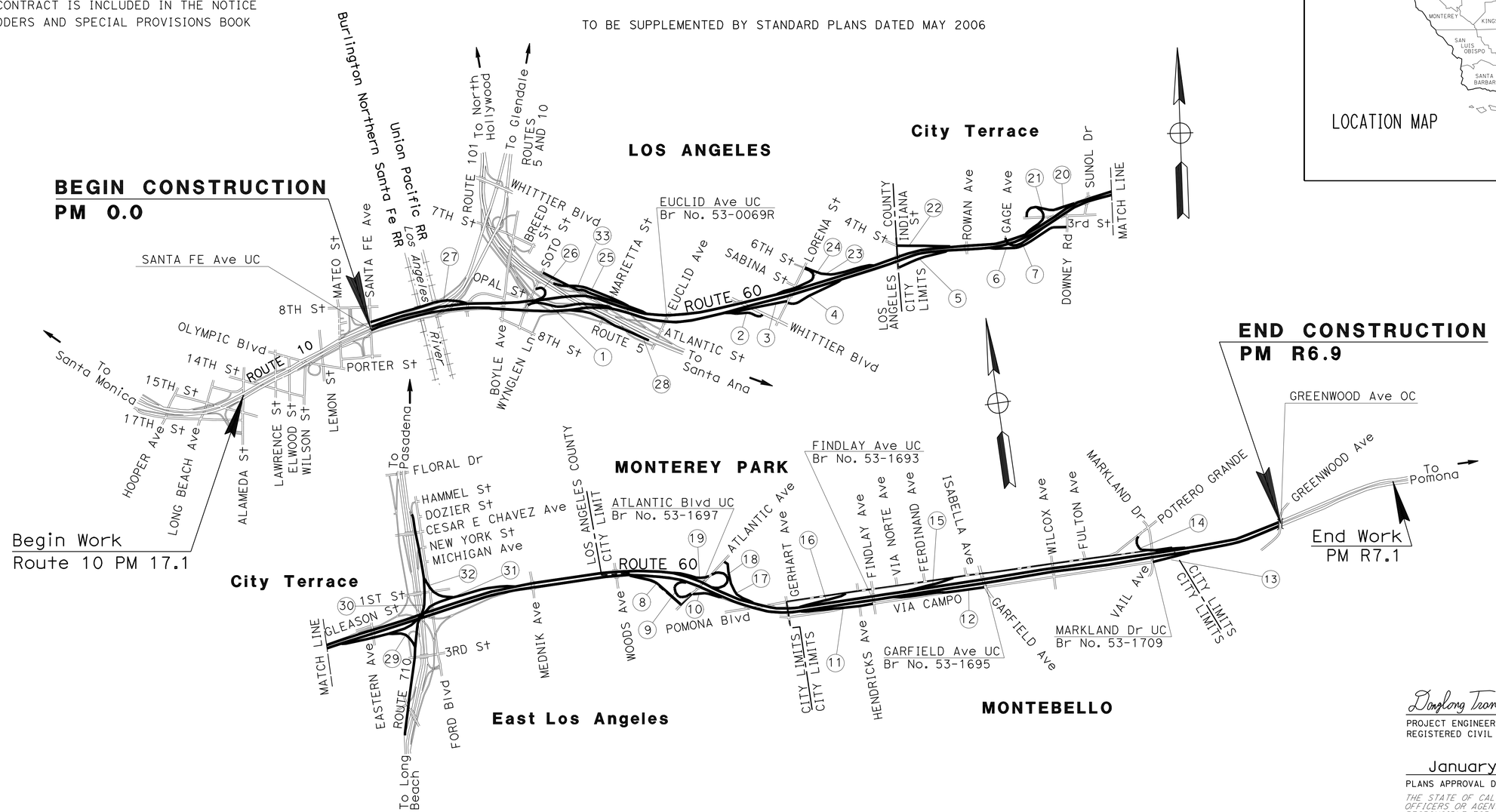
TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2	LOCATIONS OF CONSTRUCTION
3-7	TYPICAL CROSS SECTIONS
8-11	CONSTRUCTION DETAILS
12	CONSTRUCTION AREA SIGNS
13-19	TRAFFIC HANDLING DETAILS
20-30	PAVEMENT DELINEATION DETAILS AND QUANTITIES
31-33	SUMMARY OF QUANTITIES
34-38	ELECTRICAL PLANS
39-58	REVISED AND NEW STANDARD PLANS

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

LOCATION MAP



Danglong Tran 7-30-10
PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

January 3, 2011
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
DANGLONG TRAN
No. C70127
Exp. 9-30-12
CIVIL
STATE OF CALIFORNIA

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

PROJECT MANAGER: ZAREH SHAHBAZIAN
DESIGN ENGINEER: DANGLONG TRAN

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

NO SCALE

CONTRACT No.	07-251304
PROJECT ID	0700020153

LAST REVISION 00-00-00 DATE PLOTTED => 25-JAN-2011 TIME PLOTTED => 13:01

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60	0.0/R6.9	2	58

Danglong Tran 7-30-10
REGISTERED CIVIL ENGINEER DATE

1-3-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
DANGLONG TRAN
No. C70127
Exp. 9/30/12
CIVIL
STATE OF CALIFORNIA

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RAMP LOCATIONS

LOCATIONS		DESCRIPTION	PM
1	EB	ON RAMP FROM SOTO St	R0.6
2	EB	OFF RAMP TO WHITTIER Blvd	R1.2
3	EB	OFF RAMP TO LORENA St	R1.2
4	EB	ON RAMP FROM LORENA St	R1.6
5	EB	ON RAMP FROM INDIANA St	R2.1
6	EB	OFF RAMP TO DOWNEY Rd	R2.3
7	EB	ON RAMP FROM GAGE Ave	R2.4
8	EB	OFF RAMP TO ATLANTIC Ave	R4.2
9	EB	ON RAMP FROM SB ATLANTIC Ave	R4.4
10	EB	ON RAMP FROM NB ATLANTIC Ave	R4.6
11	EB	OFF RAMP TO FINDLAY Ave	R4.9
12	EB	OFF RAMP TO GARFIELD Ave/WILCOX Ave	R5.3
13	EB	ON RAMP FROM MARKLAND Dr	R6.4
14	WB	OFF RAMP TO POTRERO/MARKLAND Dr	R6.4
15	WB	ON RAMP FROM GARFIELD Ave/WILCOX Ave	R5.4
16	WB	ON RAMP FROM FINDLAY Ave	R4.9
17	WB	OFF RAMP TO ATLANTIC Ave	R4.7
18	WB	ON RAMP FROM NB ATLANTIC Ave	R4.5
19	WB	ON RAMP FROM SB ATLANTIC Ave	R4.3
20	WB	OFF RAMP TO DOWNEY Rd	R2.7
21	WB	ON RAMP FROM DOWNEY Rd	R2.5
22	WB	OFF RAMP TO INDIANA St	R2.1
23	WB	OFF RAMP TO LORENA St	R1.7
24	WB	ON RAMP FROM LORENA St	R1.5
25	WB	OFF RAMP TO SOTO St	R0.6
26	WB	ON RAMP FROM SOTO St	R0.4
27	WB	OFF RAMP TO SANTA FE/ MATEO St	0.1

CONNECTOR LOCATIONS

LOCATIONS		DESCRIPTION	PM
28	EB	Rte 60 TO SB Rte 5	R0.5
29	EB	Rte 60 TO SB Rte 710	R3.0
30	EB	Rte 60 TO NB Rte 710	R3.1
31	WB	Rte 60 TO SB Rte 710	R3.4
32	WB	Rte 60 TO NB Rte 710	R3.4
33	WB	Rte 60 TO NB Rte 101	R0.6

LOCATIONS OF CONSTRUCTION

LC-1

REVISED BY | DATE REVISED
DANGLONG TRAN | STEVE PHAM
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR | MANSOOR KHAN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF DESIGN B

LAST REVISION 00-00-00 | DATE PLOTTED => 25-JAN-2011 | TIME PLOTTED => 13:01

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60	0.0/R6.9	3	58

Danglong Tran 7-30-10
REGISTERED CIVIL ENGINEER DATE

1-3-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
DANGLONG TRAN
No. C70127
Exp. 9/30/12
CIVIL
STATE OF CALIFORNIA

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

NOTES:

1. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. SUPERELEVATIONS AS SHOWN OR AS DIRECTED BY THE ENGINEER.
3. FOR REPLACE CONCRETE PAVEMENT (RSC) LOCATIONS AND QUANTITIES SEE "SUMMARY OF QUANTITIES" SHEETS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.
4. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.
5. FOR ACCURATE RIGHT OF WAY AND ACCESS DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
6. DO NOT GRIND BRIDGE DECKS AND APPROACH SLABS.

ABBREVIATIONS:

HMA-B = HOT MIX ASPHALT (TYPE B)
LCBRS = LEAN CONCRETE BASE RAPID SETTING
RHMA-G = RUBBERIZED HOT MIX ASPHALT (GAP GRADED)
RSC = RAPID STRENGTH CONCRETE

EXISTING STRUCTURAL SECTIONS

A
- 0.75' PCC
- 0.33' CTB
- 0.25' UNTREATED BASE
- 0.67' SUBBASE M+I

B
- 1.00' PCC
- 0.33' UNTREATED BASE
- 0.67' SUBBASE M+I

C
- 1.00' AC
- 0.33' UNTREATED BASE
- 0.67' SUBBASE M+I

D
- 0.17' AC
- 0.67' PCC BASE
- 0.49' UNTREATED BASE
- 0.67' SUBBASE M+I

E
- 0.25' AC
- 1.08' & Var UNTREATED BASE
- 0.67' SUBBASE M+I

F
- 0.25' AC
- 0.50' & Var UNTREATED BASE
- 1.25' & Var SUBBASE M+I

G
- 0.67' PCC
- 0.33' CTB
- 0.33' UNTREATED BASE
- 0.67' SUBBASE M+I

H
- 0.65' PCC
- 0.50' PCC BASE
- 0.18' UNTREATED BASE
- 0.67' SUBBASE M+I

I
- 0.75' PCC
- 0.50' PCC BASE
- 0.75' SUBBASE M+I

J
- 0.50' AC
- 0.80' AB
- 0.70' SUBBASE M+I

K
- 0.35' AC
- 0.65' AB
- 1.00' & Var SUBBASE M+I

L
- 0.35' AC
- 0.55' AB

M
- 0.75' PCC
- 0.33' CTB
- 0.33' RM CTB
- 0.59' RM CTB

N
- 0.67' PCC
- 0.33' CTB
- 0.33' RM CTB
- 0.67' AS

O
- 0.33' AC
- 0.50' RM CTB
- 1.17' & Var AS OR SM

P
- 0.25' AC
- 0.50' RM CTB
- 1.25' AS

Q
- 0.67' PCC
- 0.33' CTB
- 0.42' RM CTB
- 0.58' AS OR SM

R
- 0.33' AC
- 0.67' CTB
- 0.42' RM CTB
- 0.58' AS OR SM

S
- 0.17' TO 0.33' AC
- 0.50' RM CTB
- 1.17' & Var AS OR SM

TYPICAL CROSS SECTIONS

X-1

REVISED BY | DATE REVISED
DANGLONG TRAN | STEVE PHAM
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR | MANSOOR KHAN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60	0.0/R6.9	4	58

Danglong Tran 7-30-10
REGISTERED CIVIL ENGINEER DATE

1-3-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
DANGLONG TRAN
No. C70127
Exp. 9/30/12
CIVIL
STATE OF CALIFORNIA

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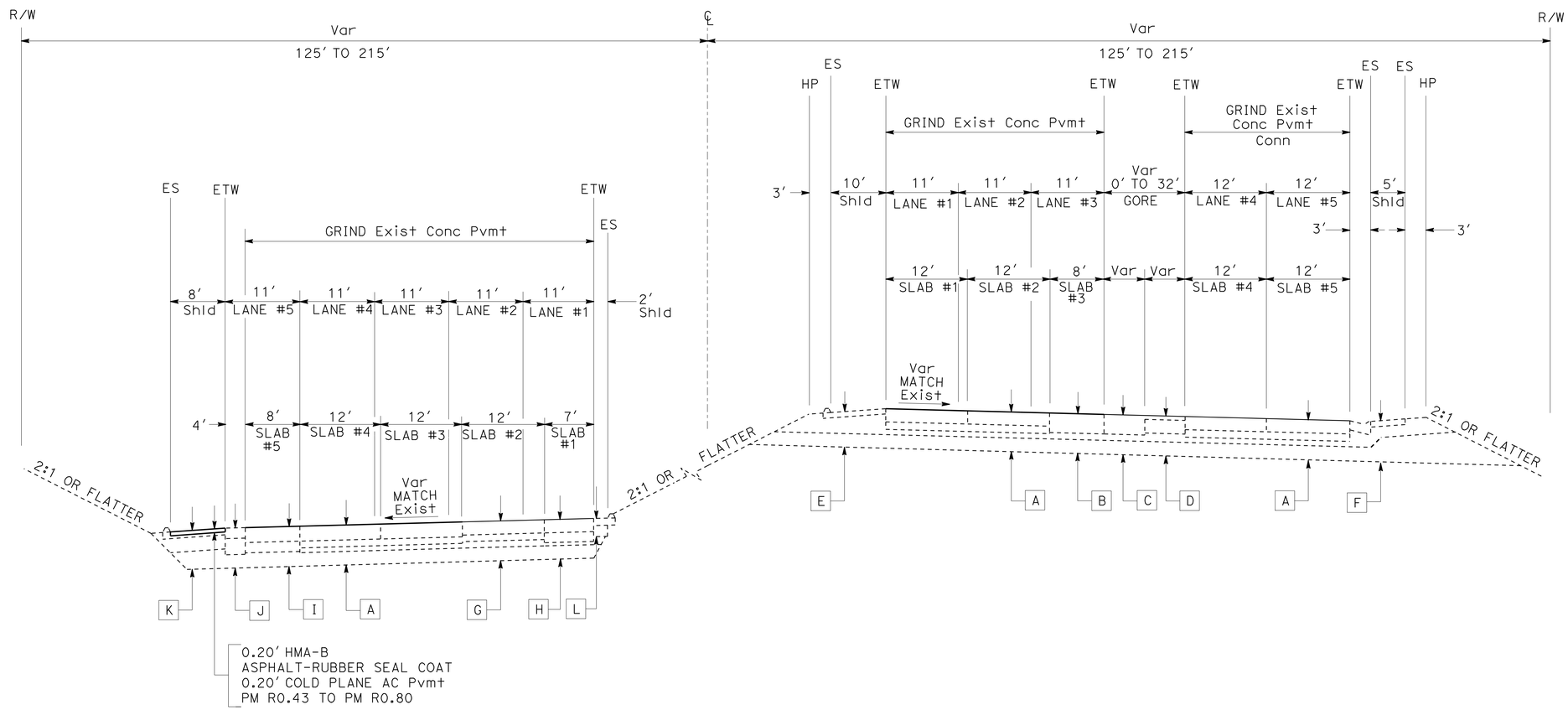

WESTBOUND
PM 0.08 TO PM R0.80

ROUTE 60

EASTBOUND
PM R0.41 TO PM R0.80

TYPICAL CROSS SECTIONS
NO SCALE

X-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF DESIGN B

FUNCTIONAL SUPERVISOR: MANSOOR KHAN
CALCULATED-DESIGNED BY: DANGLONG TRAN
CHECKED BY: STEVE PHAM
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 25-JAN-2011
TIME PLOTTED => 13:01

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60	0.0/R6.9	5	58

Danglong Tran 7-30-10
REGISTERED CIVIL ENGINEER DATE

1-3-11
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DANGLONG TRAN
No. C70127
Exp. 9/30/12
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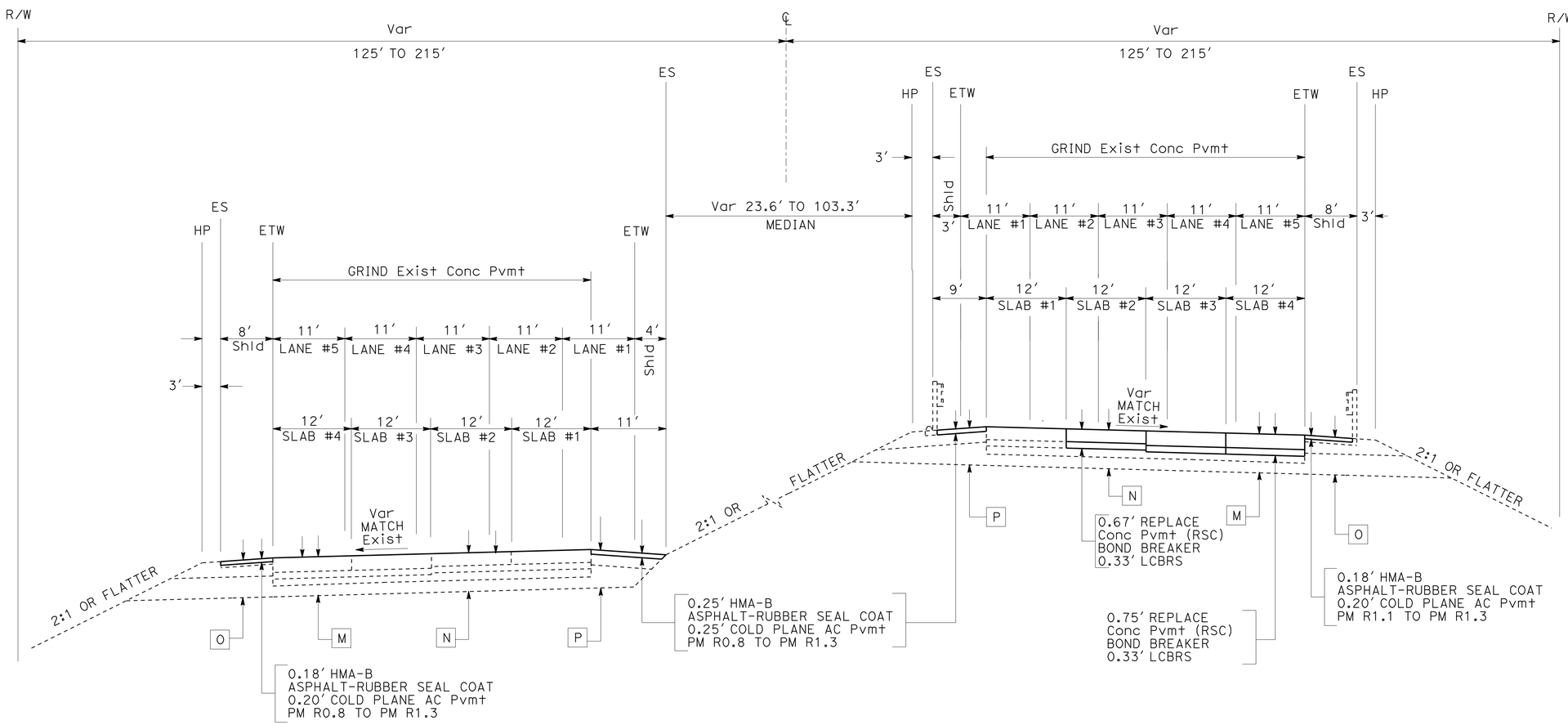

WESTBOUND
PM R0.8 TO PM R1.3

ROUTE 60

EASTBOUND
PM R0.8 TO PM R1.3

TYPICAL CROSS SECTIONS

NO SCALE

X-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF DESIGN B

FUNCTIONAL SUPERVISOR: MANSOOR KHAN
CALCULATED-DESIGNED BY: DANGLONG TRAN
CHECKED BY: STEVE PHAM
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 25-JAN-2011
TIME PLOTTED => 13:01

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60	0.0/R6.9	6	58

Danglong Tran 7-30-10
REGISTERED CIVIL ENGINEER DATE

1-3-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DANGLONG TRAN No. C70127 Exp. 9/30/12 CIVIL STATE OF CALIFORNIA

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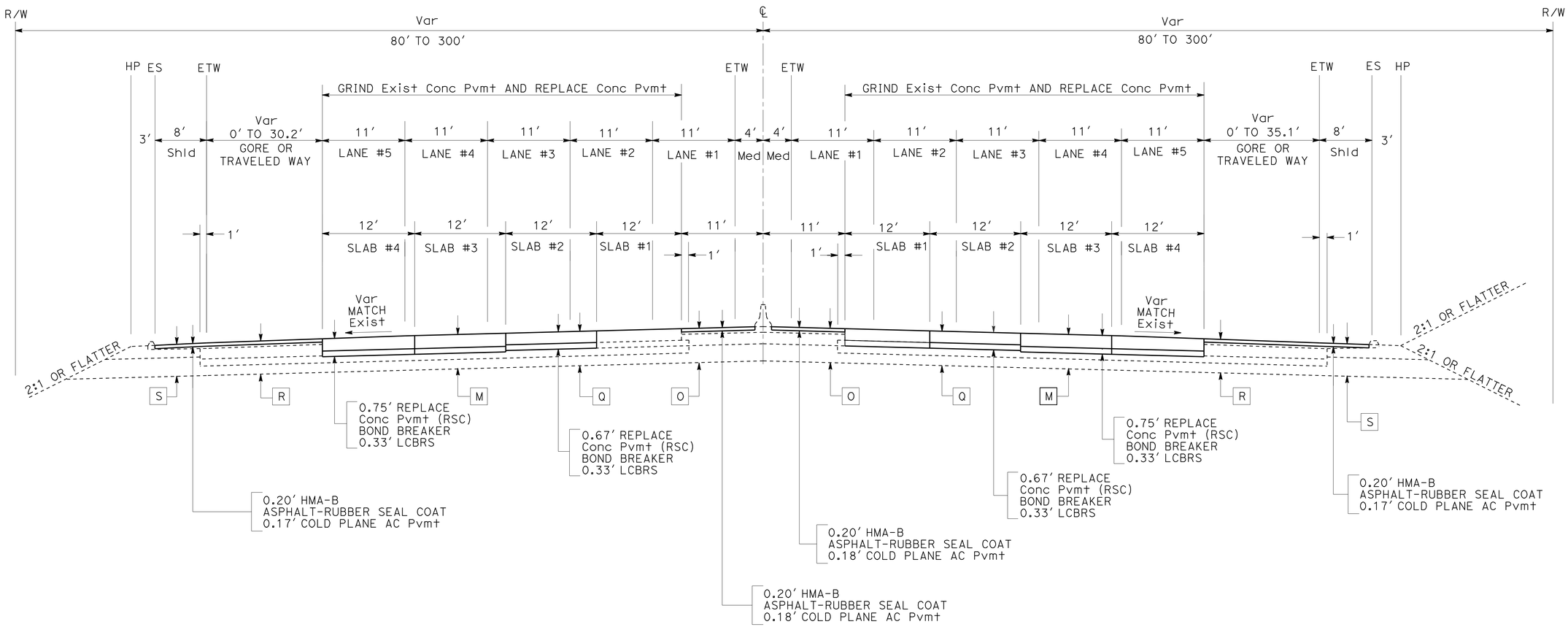

WESTBOUND
PM R1.3 TO PM R2.9
PM R3.4 TO PM R5.3
PM R6.4 TO PM R6.9

ROUTE 60

EASTBOUND
PM R1.3 TO PM R2.9
PM R3.8 TO PM R5.3
PM R6.6 TO PM R6.9

TYPICAL CROSS SECTIONS

NO SCALE

X-4

REVISED BY | DATE REVISED
DANGLONG TRAN | STEVE PHAM
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR | MANSOOR KHAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60	0.0/R6.9	7	58

Danglong Tran 7-30-10
REGISTERED CIVIL ENGINEER DATE

1-3-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
DANGLONG TRAN
No. C70127
Exp. 9/30/12
CIVIL
STATE OF CALIFORNIA

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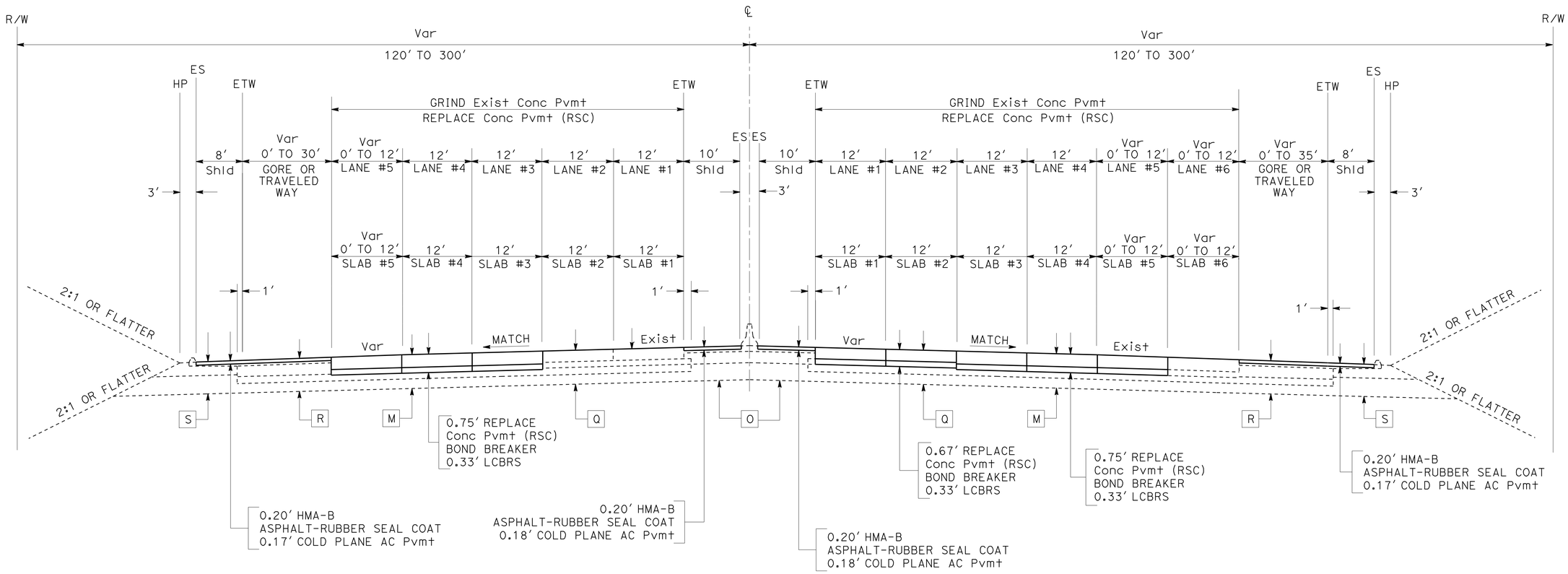

WESTBOUND
PM R2.9 TO PM R3.4
PM R5.3 TO PM R6.4

ROUTE 60

EASTBOUND
PM R2.9 TO PM R3.8
PM R5.3 TO PM R6.6

TYPICAL CROSS SECTIONS
NO SCALE

X-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF DESIGN B
FUNCTIONAL SUPERVISOR: MANSOOR KHAN
CALCULATED-DESIGNED BY: DANGLONG TRAN
CHECKED BY: STEVE PHAM
REVISED BY
DATE REVISED

LAST REVISION 00-00-00 | DATE PLOTTED => 25-JAN-2011 | TIME PLOTTED => 13:01

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60	0.0/R6.9	8	58

Danglong Tran 7-30-10
REGISTERED CIVIL ENGINEER DATE

1-3-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DANGLONG TRAN No. C70127 Exp. 9/30/12 CIVIL STATE OF CALIFORNIA

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NOTES:

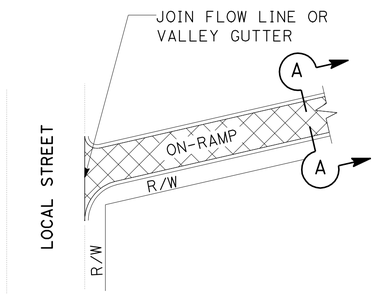
1. FOR ACCURATE RIGHT OF WAY AND ACCESS DATA, CONTACT RIGHT OF WAY ENGINEERING AT DISTRICT OFFICE.
2. EXACT PAVING LIMITS WILL BE DETERMINED BY THE ENGINEER.
3. OMIT COLD PLANING AC PAVEMENT ON BRIDGE DECKS, PCC PAVEMENT AND PCC RAMP TERMINI.

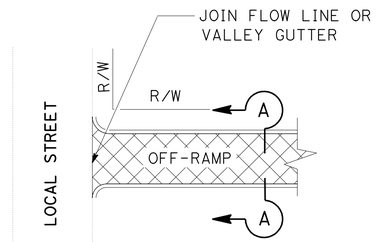
LEGEND:

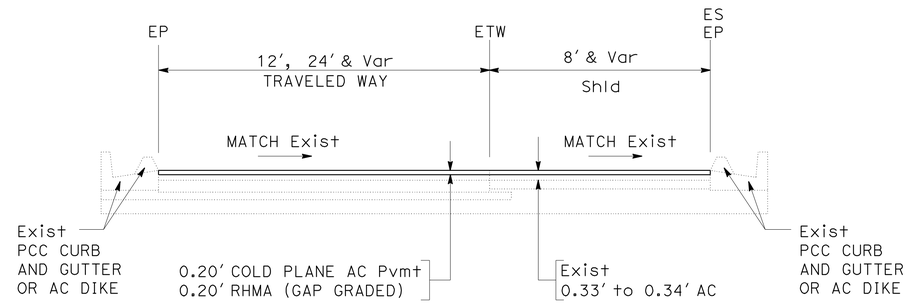
COLD PLANE AC PAVEMENT AND PLACE RHMA (GAP GRADED)

ABBREVIATION:

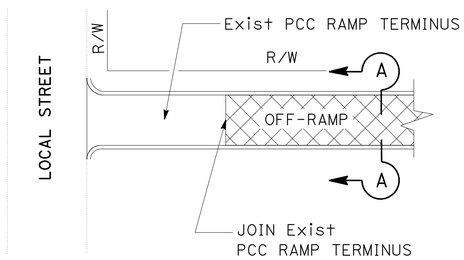
RHMA = RUBBERIZED HOT MIX ASPHALT (GAP GRADED)

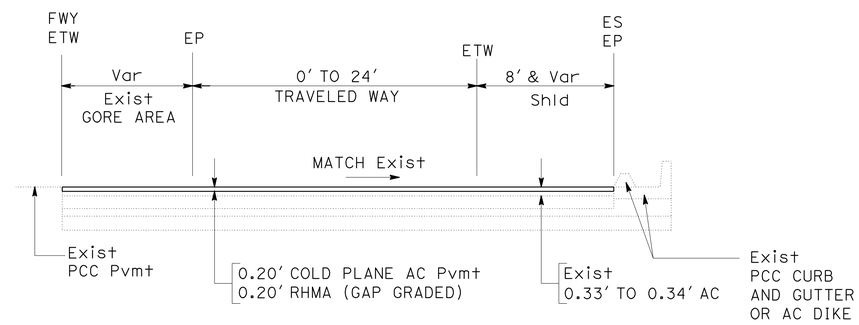




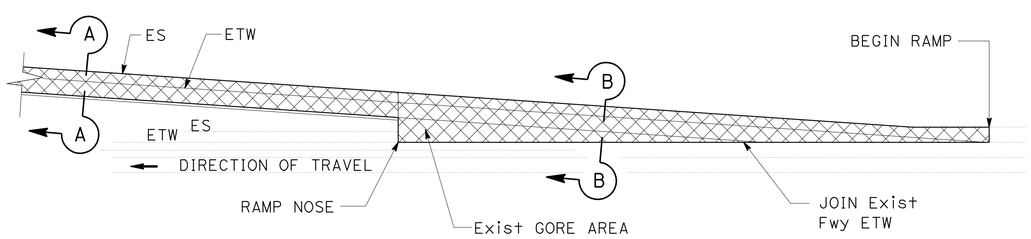


SECTION A-A

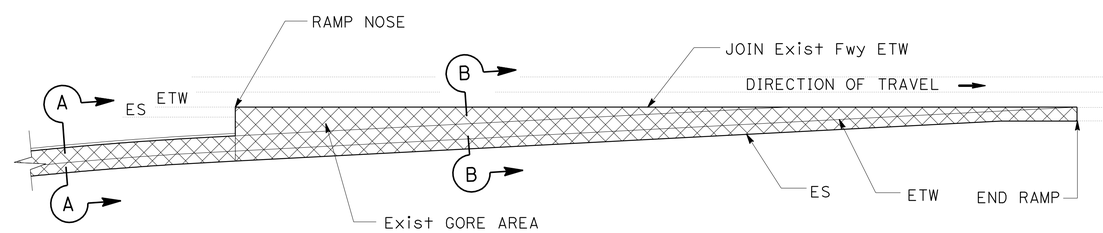




SECTION B-B



OFF-RAMP



ON-RAMP

TYPICAL RAMP PAVING DETAILS

CONSTRUCTION DETAILS

NO SCALE

C-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF DESIGN B

FUNCTIONAL SUPERVISOR: MANSOOR KHAN
CALCULATED-DESIGNED BY: DANGLONG TRAN
CHECKED BY: STEVE PHAM
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 25-JAN-2011
TIME PLOTTED => 13:01

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60	0.0/R6.9	9	58

Danglong Tran 7-30-10
REGISTERED CIVIL ENGINEER DATE

1-3-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DANGLONG TRAN No. C70127 Exp. 9/30/12 CIVIL STATE OF CALIFORNIA

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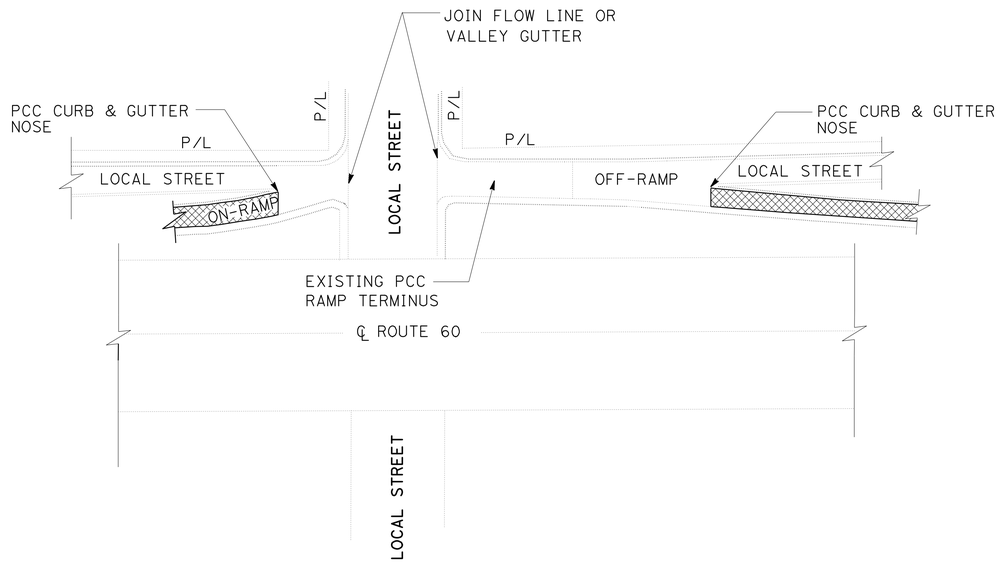
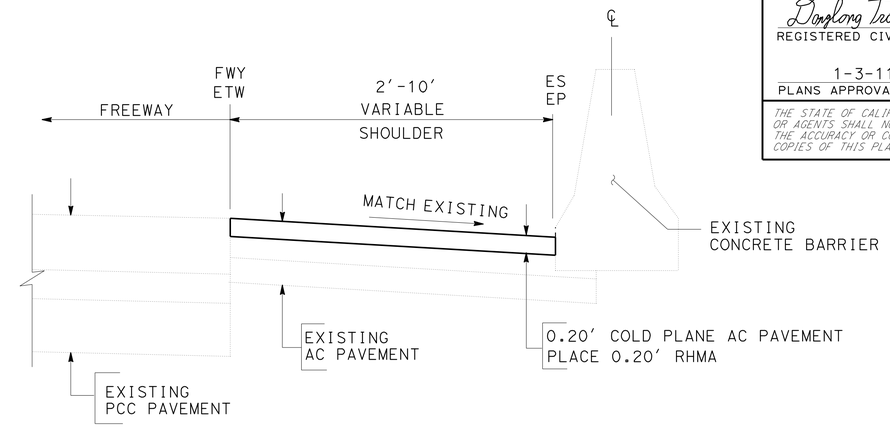
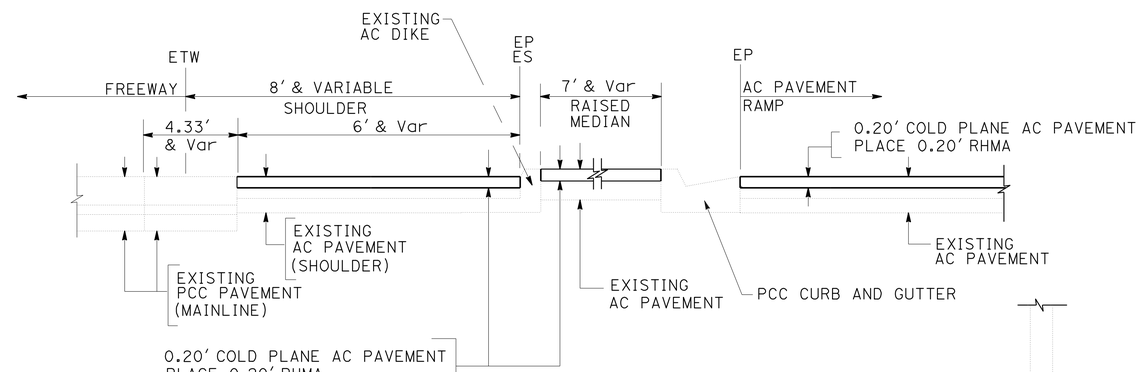


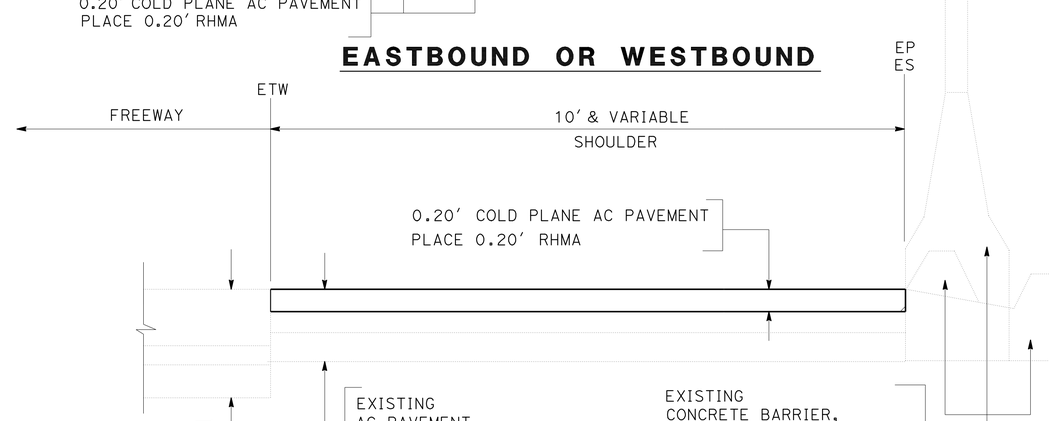
TYPICAL ON AND OFF RAMP PAVING LIMITS AT FRONTAGE ROAD



EASTBOUND OR WESTBOUND



EASTBOUND OR WESTBOUND



EASTBOUND OR WESTBOUND

CONSTRUCTION DETAILS

NO SCALE

C-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF DESIGN B

FUNCTIONAL SUPERVISOR: MANSOOR KHAN
CALCULATED-DESIGNED BY: DANGLONG TRAN
CHECKED BY: STEVE PHAM
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 25-JAN-2011
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60	0.0/R6.9	10	58

Danglong Tran 7-30-10
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1-3-11
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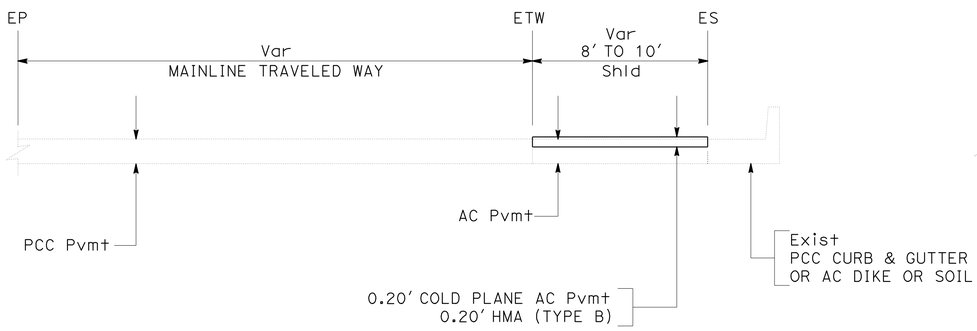
NOTE:

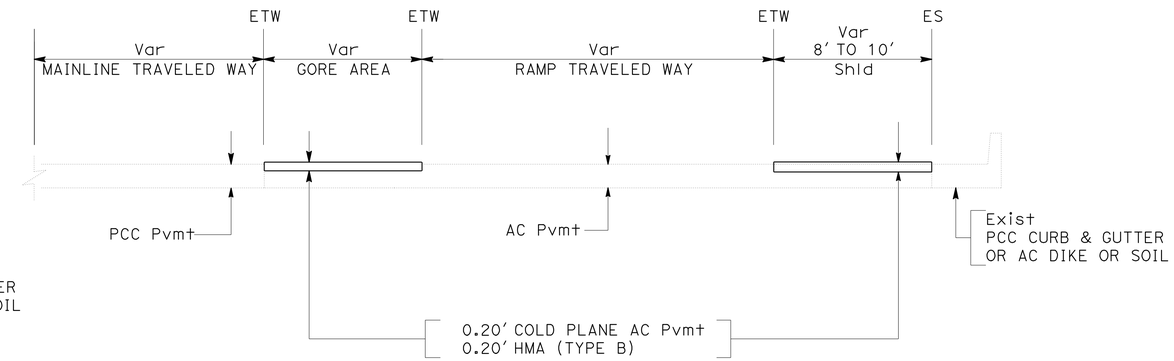
SEE THE TYPICAL CROSS SECTIONS AND SUMMARY OF QUANTITIES SHEETS FOR BEGIN / END LOCATIONS.

LEGEND:

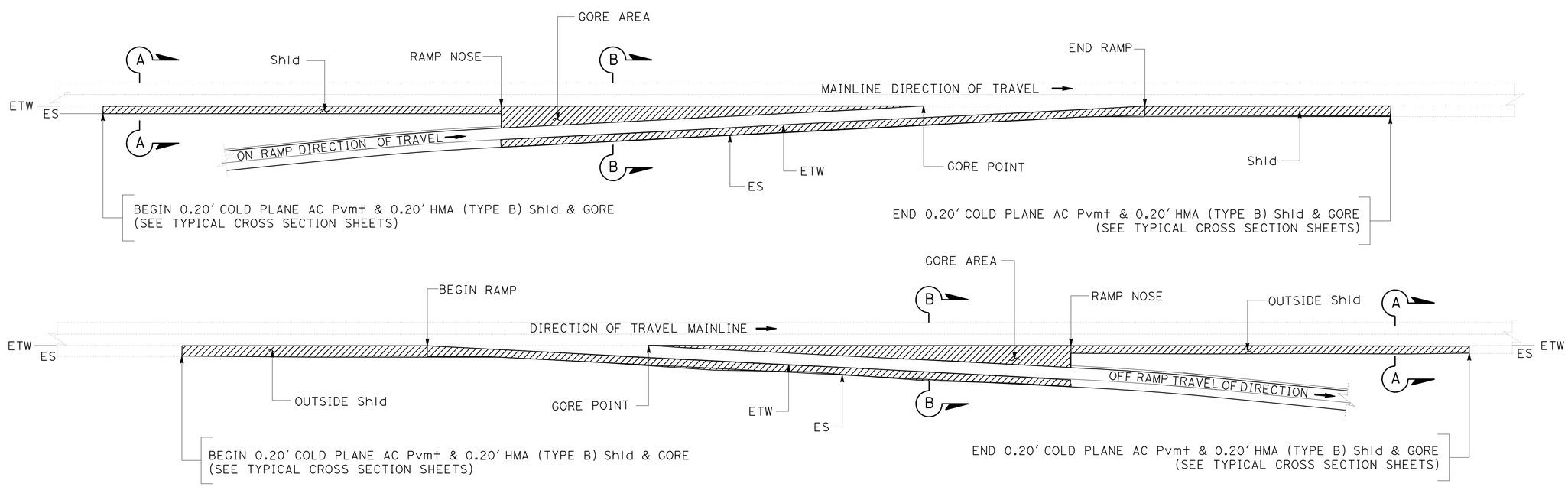
COLD PLANE AC Pvmt & HMA (TYPE B) OR RHMA (GAP GRADED) OVERLAY SHOULDER & GORE



SECTION A-A



SECTION B-B



TYPICAL SHOULDER & GORE AREA COLD PLANE AC & HMA OVERLAY

CONSTRUCTION DETAILS

NO SCALE

C-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF DESIGN B

FUNCTIONAL SUPERVISOR: MANSOOR KHAN
CALCULATED-DESIGNED BY: DANGLONG TRAN
CHECKED BY: STEVE PHAM
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 25-JAN-2011
TIME PLOTTED => 13:01

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60	0.0/R6.9	11	58

Danglong Tran 7-30-10
REGISTERED CIVIL ENGINEER DATE

1-3-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
DANGLONG TRAN
No. C70127
Exp. 9/30/12
CIVIL
STATE OF CALIFORNIA

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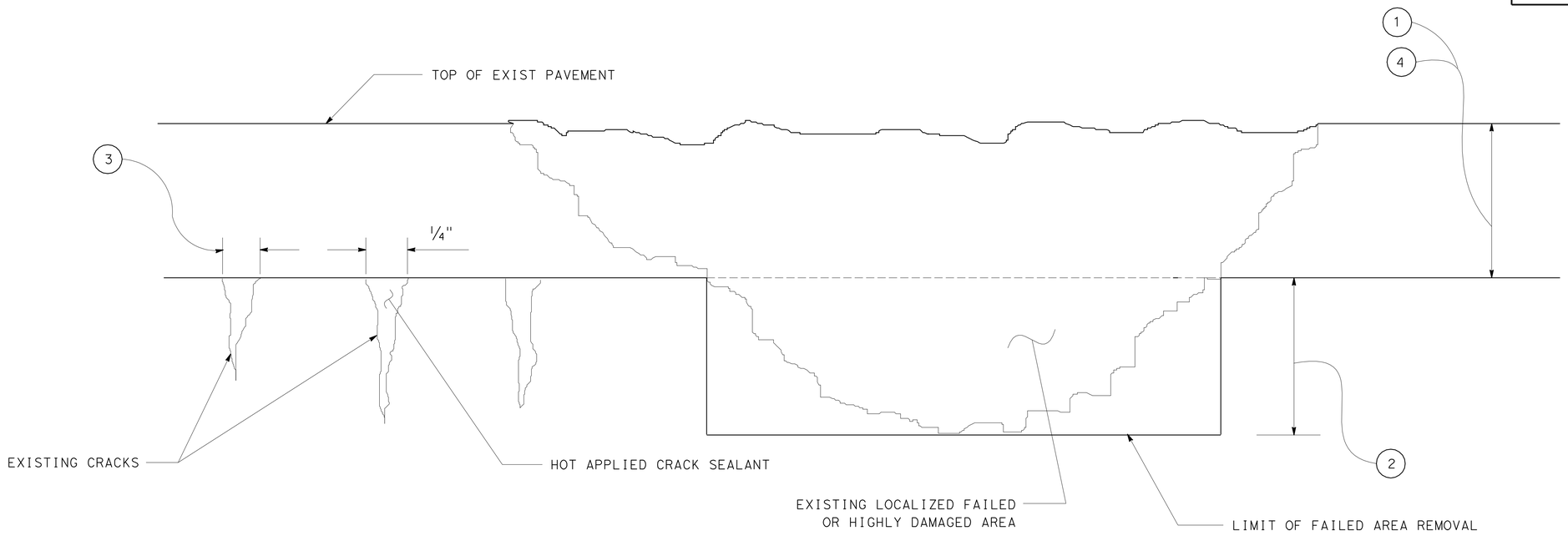

STEPS:
1. COLD PLANE THE PLANNED THICKNESS OF EXISTING AC PAVEMENT.
2. REMOVE LOCALIZED FAILED AREAS AND REPLACE WITH MINIMUM 0.15′ (2") HMA (TYPE B).
3. SEAL ALL CRACKS GREATER THAN 1/4" WITH HOT APPLIED CRACK SEALANT.
4. REPLACE AC SURFACING WITH THE PLANNED THICKNESS OF HMA OR RHMA-G AFTER CRACK SEALANT HAS BEEN APPLIED FOR THE EXISTING CRACKS AND LOCALIZED FAILED AREAS HAVE BEEN REPAIRED.

SEAL RANDOM CRACKS & REPAIR FAILED AREAS

CONSTRUCTION DETAILS

NO SCALE

C-4

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY	CHECKED BY
DANGLONG TRAN	STEVE PHAM

FUNCTIONAL SUPERVISOR: MANSOOR KHAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OFFICE OF DESIGN B

LAST REVISION 00-00-00 | DATE PLOTTED => 25-JAN-2011 | TIME PLOTTED => 13:01

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60	0.0/R6.9	12	58

REGISTERED CIVIL ENGINEER 7-30-10 DATE

1-3-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DANGLONG TRAN No. C70127 Exp. 9/30/12 CIVIL STATE OF CALIFORNIA

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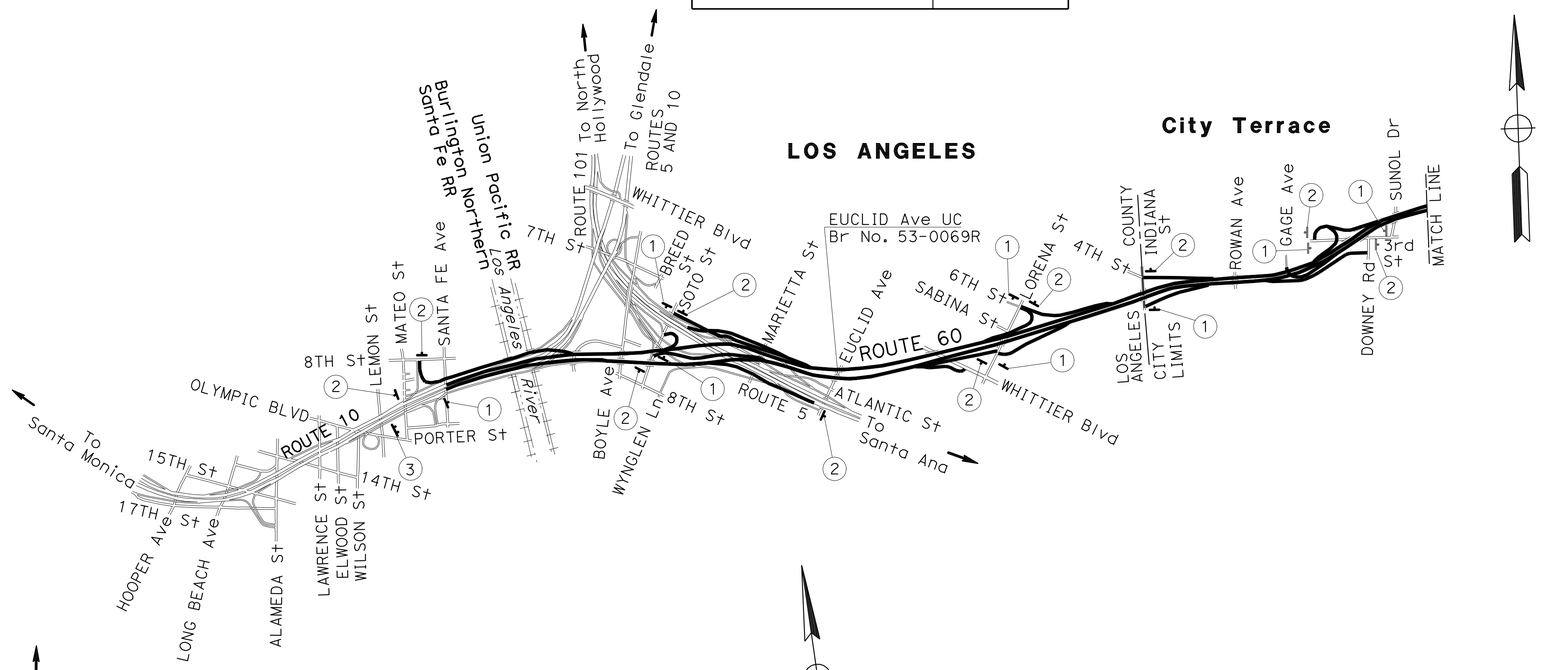
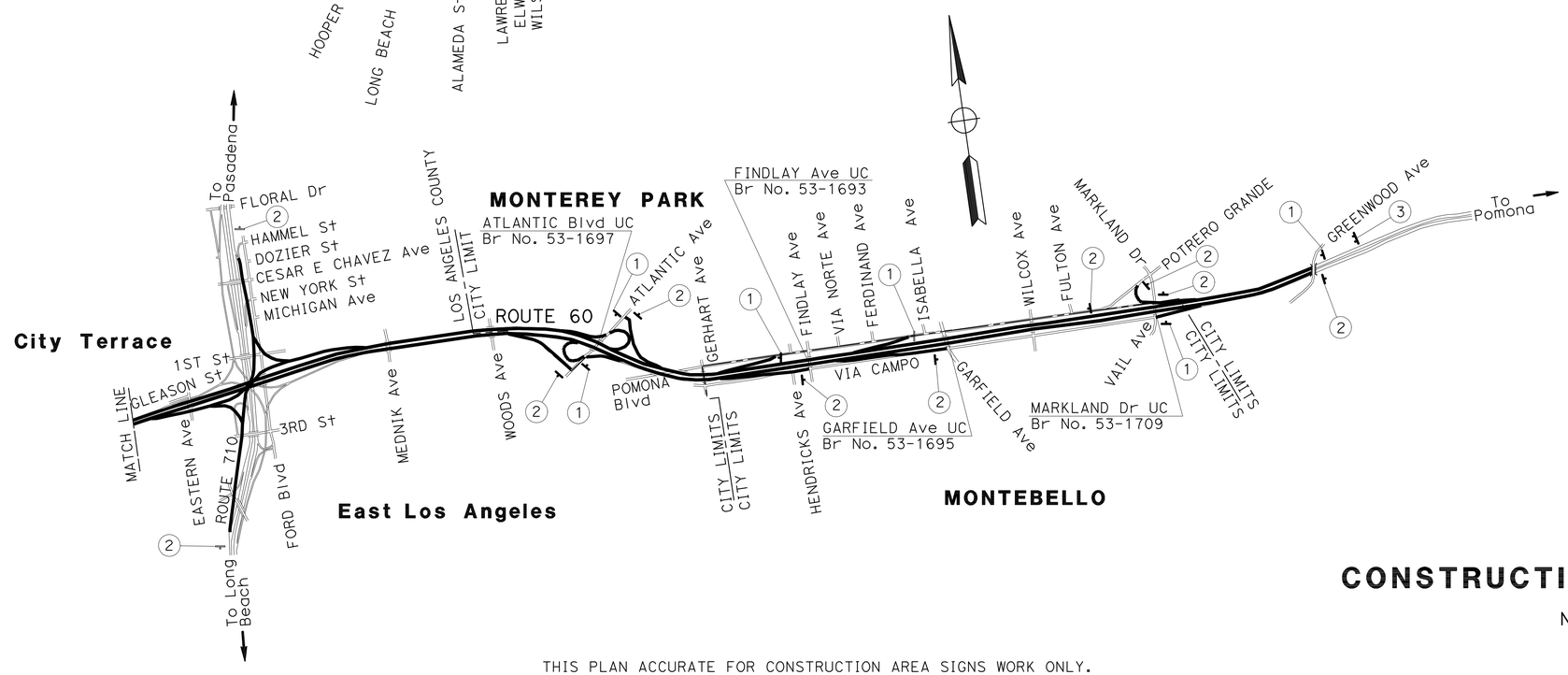
NOTE:

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

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN NUMBER	CODE	SIGN MESSAGE	PANEL SIZE	NUMBER OF POSTS AND SIZE	NUMBER OF SIGNS
1	W20-1	ROAD WORK AHEAD	48" x 48"	1 - 6" x 6"	14
2	G20-2	END ROAD WORK	48" x 24"	1 - 4" x 6"	20
3	C40(CA)	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	144" x 60"	2 - 6" x 8"	2
				TOTAL	36





THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGNS WORK ONLY.

CONSTRUCTION AREA SIGNS

NO SCALE

CS-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF DESIGN B

FUNCTIONAL SUPERVISOR: MANSOOR KHAN
CALCULATED-DESIGNED BY: DANGLONG TRAN
CHECKED BY: STEVE PHAM
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 25-JAN-2011
TIME PLOTTED => 13:01

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60	0.0/R6.9	13	58

REGISTERED CIVIL ENGINEER 7/14/10 DATE

1-3-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAISY VERGARA No. 62656 Exp. 6/30/12 CIVIL STATE OF CALIFORNIA

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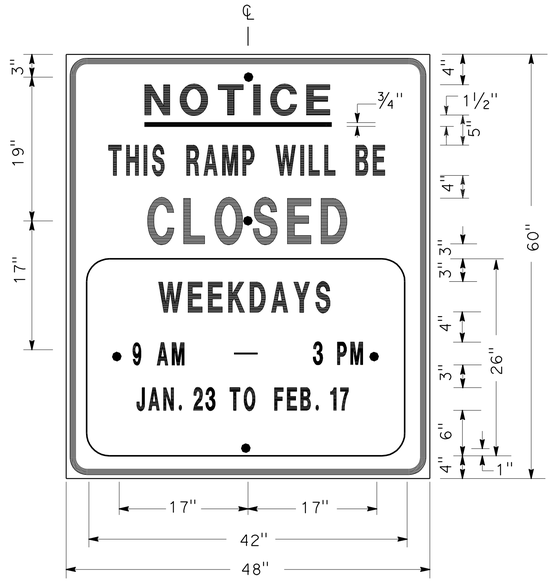
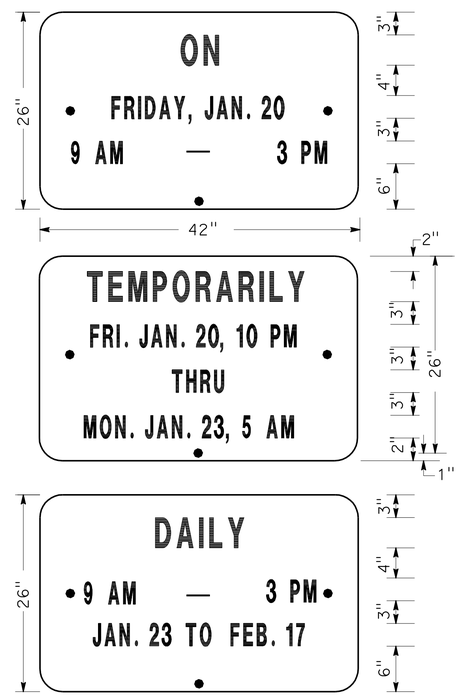


SIGN SP-1



ALTERNATE OVERLAY PANELS (TYPICAL)

SPECIAL ADVANCE NOTICE PUBLICITY SIGN

NOTES: (SIGN SP-1)

1. SIGNS SHALL HAVE ORANGE RETROREFLECTORIZED BACKGROUND WITH BLACK BORDER AND LETTERS.
2. BOLT HOLES SHALL BE 3/8" DIAMETER.
3. BASE MATERIAL SHALL BE ALUMINUM (MINIMUM 0.06").
4. SIGNS SHALL BE MOUNTED WITH BOTTOMS OF SIGNS A MINIMUM OF 6' ABOVE GROUND.

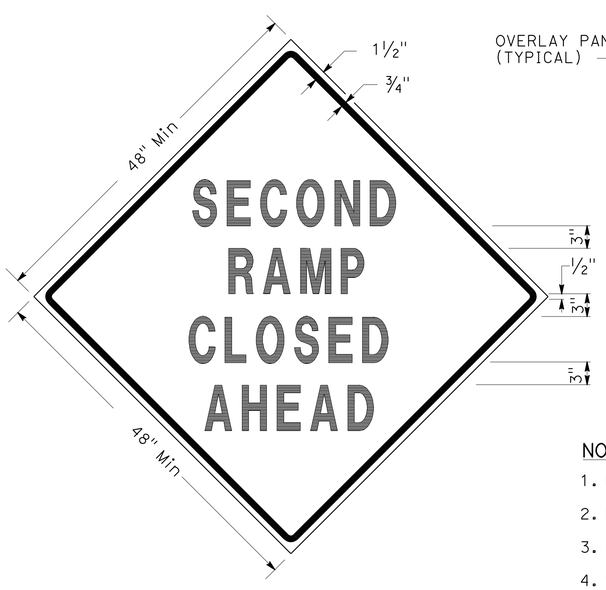
SIZE	BORDER WIDTH	MARGIN WIDTH	LETTER SIZE					CORNER RADIUS
			LINE 1	LINE 2*	LINE 3	LINE 4	LINE 5,6 & 7*	
48"x60"	1 1/4"	3/4"	4E	4D	6E	4D		3"
42"x26"	OVERLAY						3D	1 1/2"
* CONDENSED SPACING IF NECESSARY								

SIGN SP-4

NOTES: (SIGN SP-4)

1. LETTERS - 6" SERIES C.
2. LETTERS AND BORDERS - BLACK ON RETROREFLECTORIZED WHITE BACKGROUND.
3. BASE MATERIAL SHALL BE ALUMINUM (MINIMUM 0.06").
4. SIGNS SHALL BE PLACED AT RAMP ENTRANCES IN ADDITION TO SIGNS POSTED IN ACCORDANCE WITH STANDARD PLAN T14.

SPECIAL SIGN FOR ENTRANCE RAMP CLOSURES



SIGN SP-3

SIGN SP-5

NOTES: (SIGNS SP-3 & SP-5)

1. LETTERS - 6" SERIES D.
2. LETTERS AND BORDERS - BLACK ON RETROREFLECTORIZED ORANGE BACKGROUND.
3. BASE MATERIAL SHALL BE ALUMINUM (MINIMUM 0.06").
4. SIGNS SHALL BE MOUNTED WITH BOTTOMS OF SIGNS A MINIMUM OF 6' ABOVE GROUND.

SPECIAL SIGN FOR EXIT RAMP CLOSURES

TRAFFIC HANDLING DETAILS
TRAFFIC CONTROL SYSTEM FOR RAMP CLOSURES, DETOUR SIGNS AND MISCELLANEOUS DETAILS
SHEET 1 OF 2
NO SCALE
THD-1

JC	9/08	ALBERT K YU	JOCELYN C CHIANG
JC	8/08		
JC	7/08		
REVISED BY	DATE REVISED	CALCULATED-DESIGNED BY	CHECKED BY

FUNCTIONAL SUPERVISOR: MARTIN OREGEL

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DTM

LAST REVISION 00-00-00 | DATE PLOTTED => 25-JAN-2011 | TIME PLOTTED => 13:01

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60	0.0/R6.9	14	58

REGISTERED CIVIL ENGINEER 7/14/10 DATE

1-3-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAISY VERGARA No. 62656 Exp. 6/30/12 CIVIL STATE OF CALIFORNIA

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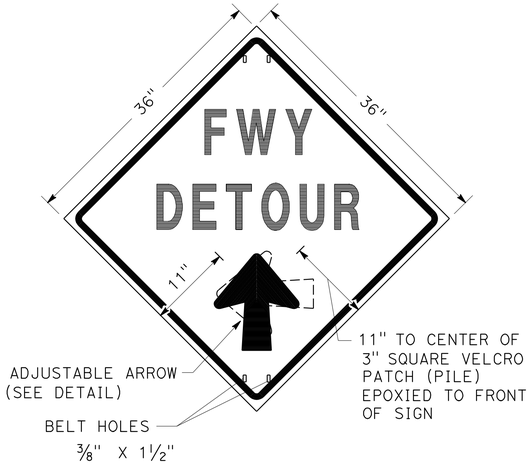
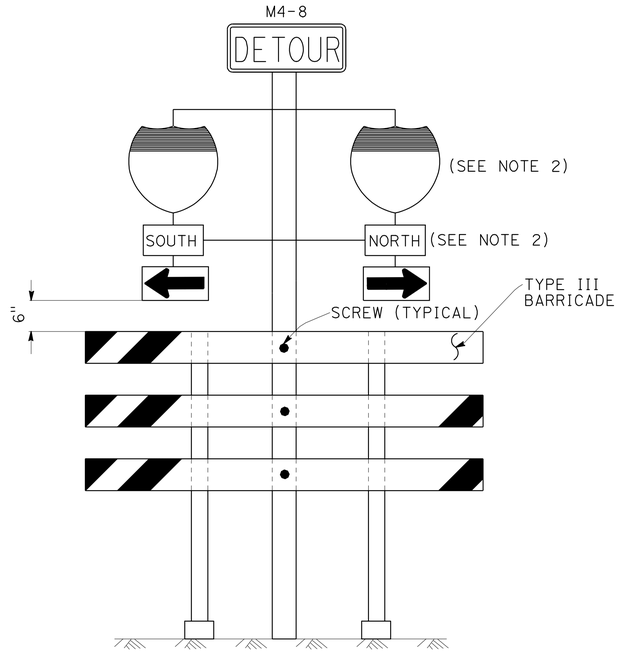
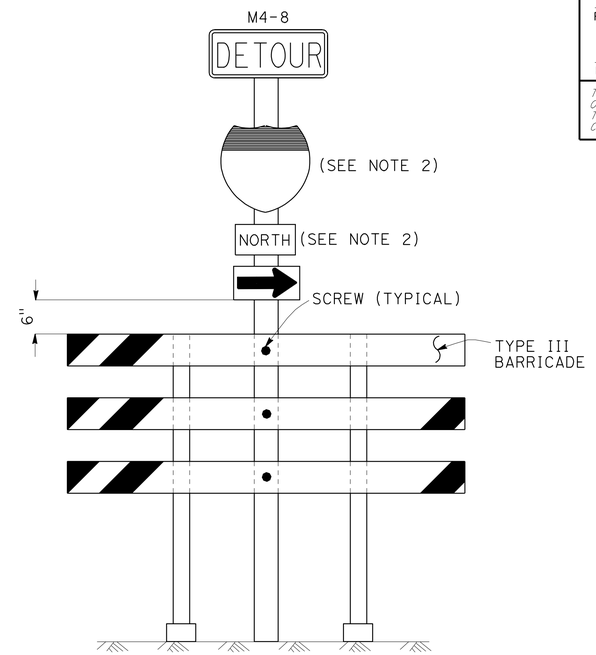


SIGN SP-2



SIGN SP-6 (SEE NOTE 1)



SIGN SP-7 (SEE NOTE 1)

NOTES: (SIGN SP-2)

1. LETTERS -6" SERIES E.
2. LETTERS, BORDER AND ARROW - BLACK ON RETROREFLECTORIZED ORANGE BACKGROUND.
3. BASE MATERIAL FOR SIGNS AND ARROWS SHALL BE ALUMINUM (MINIMUM 0.06").
4. BELTS (LUGGAGE STRAPS) SHALL BE 1" WIDE BY 48" LONG, MADE OF COTTON OR POLYPROPYLENE WEB MATERIAL.
5. SIGNS SHALL BE MOUNTED WITH BOTTOMS OF SIGNS A MINIMUM OF 6' ABOVE GROUND EXCEPT AS OTHERWISE SHOWN ON OTHER TRAFFIC HANDLING DETAILS PLANS.

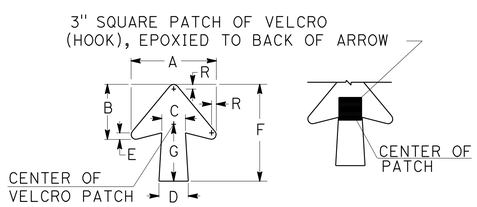
ABBREVIATION

(CA) CALIFORNIA CODE

NOTES: (SIGNS SP-6 & SP-7)

1. IN LIEU OF PLACING SIGNS ON TYPE III BARRICADES, SIGNS, INCLUDING POSTS, MAY BE PLACED INTO THE GROUND OR FASTENED ONTO ELECTROLIERS.
2. USE APPROPRIATE ROUTE SHIELD [G26-2(CA), G27-2(CA), G28-2(CA)] AND CARDINAL DIRECTION [NORTH (M3-1), SOUTH (M3-3), EAST (M3-2), WEST (M3-4)]

SPECIAL PORTABLE FREEWAY DETOUR SIGNS



DIMENSIONS							
A	B	C	D	E	F	G	R
11 1/4"	7 1/4"	3 1/8"	4"	7/8"	13"	7 1/2"	5/8"

SPECIAL PORTABLE FREEWAY DETOUR SIGN

ADJUSTABLE ARROW DETAIL

TRAFFIC HANDLING DETAILS

TRAFFIC CONTROL SYSTEM FOR RAMP CLOSURES, DETOUR SIGNS AND MISCELLANEOUS DETAILS

SHEET 2 OF 2

NO SCALE

THD-2

JC	9/08	
JC	7/08	
REVISED BY	DATE REVISED	
ALBERT K YU	JOCELYN C CHIANG	
CALCULATED-DESIGNED BY	CHECKED BY	
FUNCTIONAL SUPERVISOR	MARTIN OREGEL	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DTM

LAST REVISION 00-00-00 | DATE PLOTTED => 25-JAN-2011 | TIME PLOTTED => 13:01

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60	0.0/R6.9	15	58

REGISTERED CIVIL ENGINEER 7/14/10 DATE

1-3-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAISY VERGARA No. 62656 Exp. 6/30/12 CIVIL STATE OF CALIFORNIA

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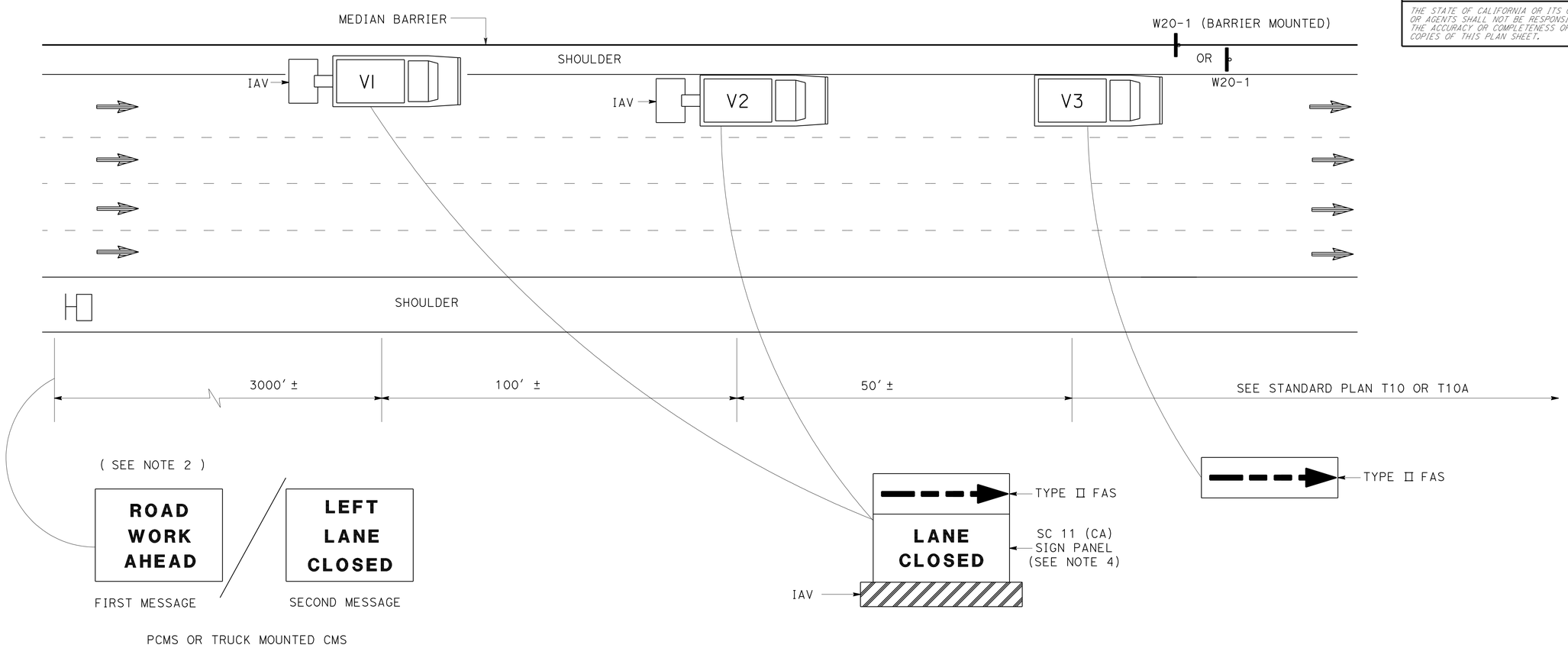

NOTES:

1. LANE CLOSURES SHALL NOT BE PLACED ON CREST VERTICAL CURVES OR ON HORIZONTAL CURVES.
2. PCMS SHALL BE ACTIVATED PRIOR TO TRAFFIC CONTROL ACTIVITIES ON THE LANE.
3. A MINIMUM SIGHT DISTANCE OF 1500′ SHALL BE PROVIDED IN ADVANCE OF PCMS.
4. VEHICLE-MOUNTED SIGN PANELS SHALL BE TYPE III OR IV RETROREFLECTORIZED SHEETING, BLACK ON WHITE OR BLACK ON ORANGE WITH 8" MINIMUM SERIES D LETTERS PER CALTRANS SIGN SPECIFICATIONS.

LEGEND

V1, V2	SHADOW VEHICLE
V3	WORK/APPLICATION VEHICLE
	PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)
	DIRECTION OF TRAVEL
	CONSTRUCTION AREA SIGN

ABBREVIATIONS

FAS	FLASHING ARROW SIGN
IAV	IMPACT ATTENUATOR VEHICLE
CMS	CHANGEABLE MESSAGE SIGN
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN
(CA)	CALIFORNIA CODE

TRAFFIC HANDLING DETAILS
TRAFFIC CONTROL SYSTEM FOR MEDIAN SHOULDERS LESS THAN 8 FEET

NO SCALE

THD-3

JC	9/08		
JC	7/08	REVISED BY	DATE REVISED
ALBERT K YU	JOCELYN C CHIANG	CALCULATED-DESIGNED BY	CHECKED BY
MARTIN OREGEL		FUNCTIONAL SUPERVISOR	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DTM

LAST REVISION 00-00-00 | DATE PLOTTED => 25-JAN-2011 | TIME PLOTTED => 13:01

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60	0.0/R6.9	16	58

REGISTERED CIVIL ENGINEER 7/14/10 DATE

1-3-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAISY VERGARA No. 62656 Exp. 6/30/12 CIVIL STATE OF CALIFORNIA

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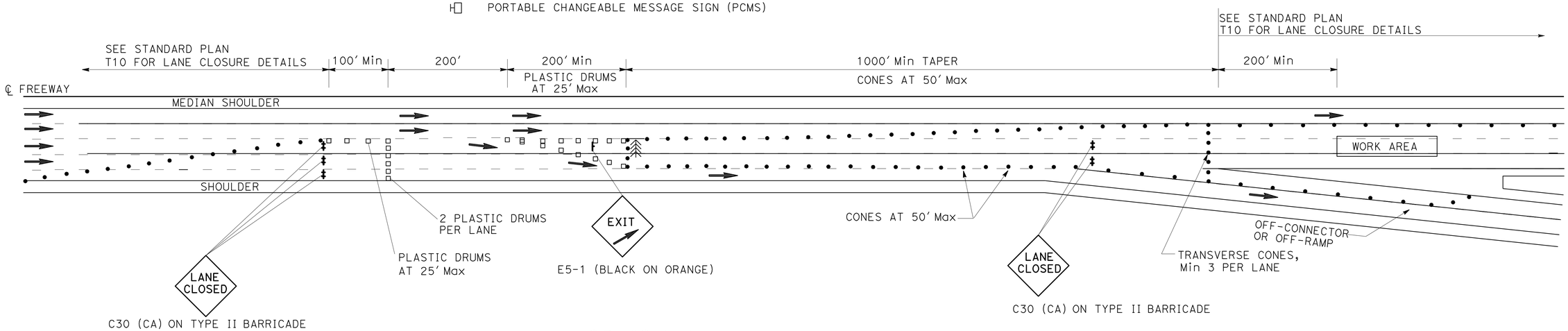
LEGEND

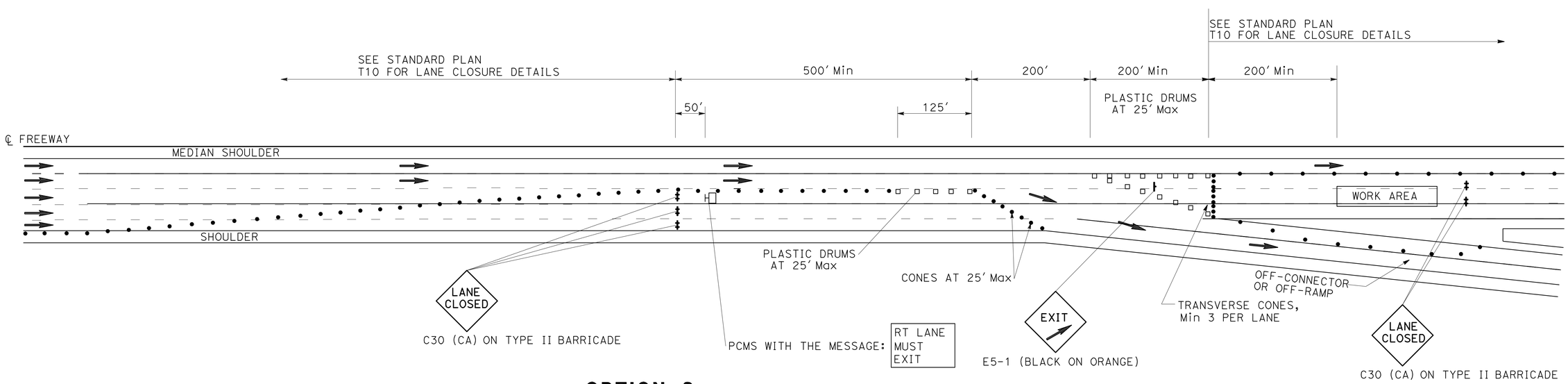
- CONE
- TRAFFIC PLASTIC DRUM
- FLASHING ARROW SIGN
- PORTABLE SIGN
- DIRECTION OF TRAVEL
- PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

ABBREVIATIONS

(CA) CALIFORNIA CODE



OPTION 1



OPTION 2

TRAFFIC HANDLING DETAILS

TRAFFIC CONTROL SYSTEM FOR SLIP-RAMP AT OFF-CONNECTOR OR OFF-RAMP

NO SCALE

THD-4

REVISED BY	DATE REVISED
JC	9/08
JC	7/08

CALCULATED-DESIGNED BY: ALBERT K YU
CHECKED BY: JOCELYN C CHIANG
FUNCTIONAL SUPERVISOR: MARTIN OREGEL

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® DTM

LAST REVISION 00-00-00
DATE PLOTTED => 25-JAN-2011
TIME PLOTTED => 13:02

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60	0.0/R6.9	17	58

REGISTERED CIVIL ENGINEER 7/14/10 DATE

1-3-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAISY VERGARA No. 62656 Exp. 6/30/12 CIVIL STATE OF CALIFORNIA

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NOTES:

1. WORDING DISPLAYED ON PCMS WILL BE APPROVED BY THE ENGINEER.
2. EXACT LOCATIONS OF PCMS WILL BE DETERMINED BY THE ENGINEER.
3. CHANGE PCMS MESSAGE AT THE BEGINNING OF CURE PERIOD TO REFLECT NUMBER OF CLOSED LANES.

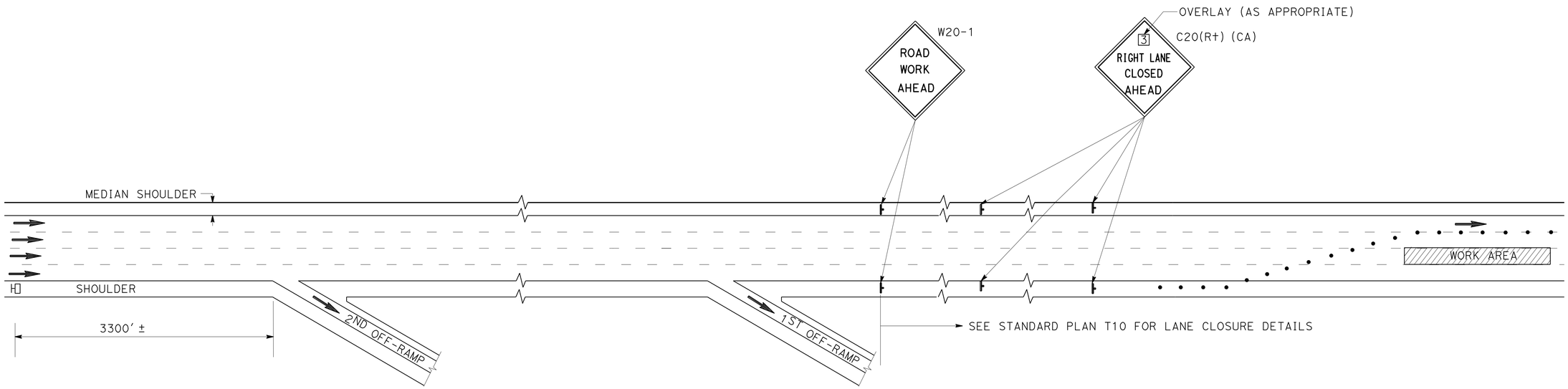
ABBREVIATIONS

PCMS PORTABLE CHANGEABLE MESSAGE SIGN

(CA) CALIFORNIA CODE

LEGEND

- CONE
- PORTABLE SIGN
- DIRECTION OF TRAVEL
- PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)
- (CA) CALIFORNIA CODE



FIRST FLASH MESSAGE	X (NO OF LANES)RIGHT/LEFT	1ST LINE (TYPICAL)
	LANES	2ND LINE (TYPICAL)
	CLOSED	3RD LINE (TYPICAL)
SECOND FLASH MESSAGE	A ST	LIMIT OF CLOSURE (TYPICAL)
	TO	
	B DR	LIMIT OF CLOSURE (TYPICAL)

WORDING FOR PORTABLE CHANGEABLE MESSAGE SIGN

TRAFFIC HANDLING DETAILS
TRAFFIC CONTROL SYSTEM FOR CONCRETE PAVEMENT AND APPROACH SLAB REPLACEMENT
NO SCALE

THD-5

REVISED BY	DATE REVISED
JC	9/08
JC	7/08

CALCULATED-DESIGNED BY: ALBERT K YU
CHECKED BY: JOCELYN C CHIANG
FUNCTIONAL SUPERVISOR: MARTIN OREGEL

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DTM

LAST REVISION 00-00-00
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07	LA	60	0.0/R6.9	18	58

D Vergara 7/14/10
REGISTERED CIVIL ENGINEER DATE

1-3-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
DAISY VERGARA
No. 62656
Exp. 6/30/12
CIVIL
STATE OF CALIFORNIA

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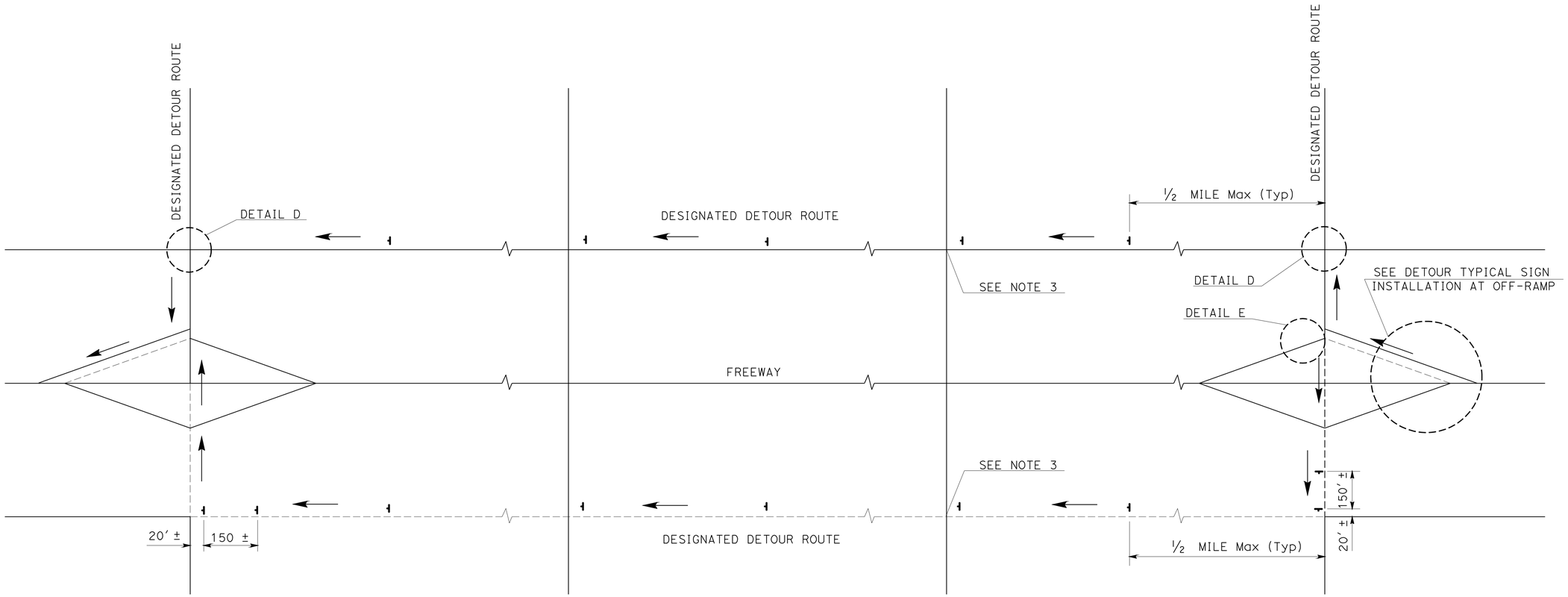

TYPICAL DETOUR SIGN INSTALLATION ALONG DESIGNATED DETOUR ROUTE

LEGEND

- SIGN SP-2
- AND/OR DESIGNATED DETOUR ROUTE
- DIRECTION OF TRAVEL

NOTES:

1. SP-2 SIGNS SHALL NOT BE INSTALLED ON BARRICADES EXCEPT AS OTHERWISE SHOWN.
2. SIGN LOCATIONS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.
3. SP-2 SIGNS SHALL BE POSTED AT SIGNALIZED INTERSECTIONS ALONG THE DESIGNATED DETOUR ROUTE OR ½ MILE MAXIMUM APART.

TRAFFIC HANDLING DETAILS

TRAFFIC CONTROL SYSTEM FOR DETOUR SIGN INSTALLATION ALONG DESIGNATED DETOUR ROUTE

SHEET 1 OF 2

NO SCALE

THD-6

CALCULATED-DESIGNED BY	ALBERT K YU	REVISED BY	JC
CHECKED BY	JOCELYN C CHIANG	DATE REVISED	9/08
FUNCTIONAL SUPERVISOR	MARTIN OREGEL		JC
			7/08

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DTM

LAST REVISION 00-00-00 | DATE PLOTTED => 25-JAN-2011 | TIME PLOTTED => 13:02

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07	LA	60	0.0/R6.9	19	58

REGISTERED CIVIL ENGINEER 7/14/10 DATE

1-3-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAISY VERGARA No. 62656 Exp. 6/30/12 CIVIL STATE OF CALIFORNIA

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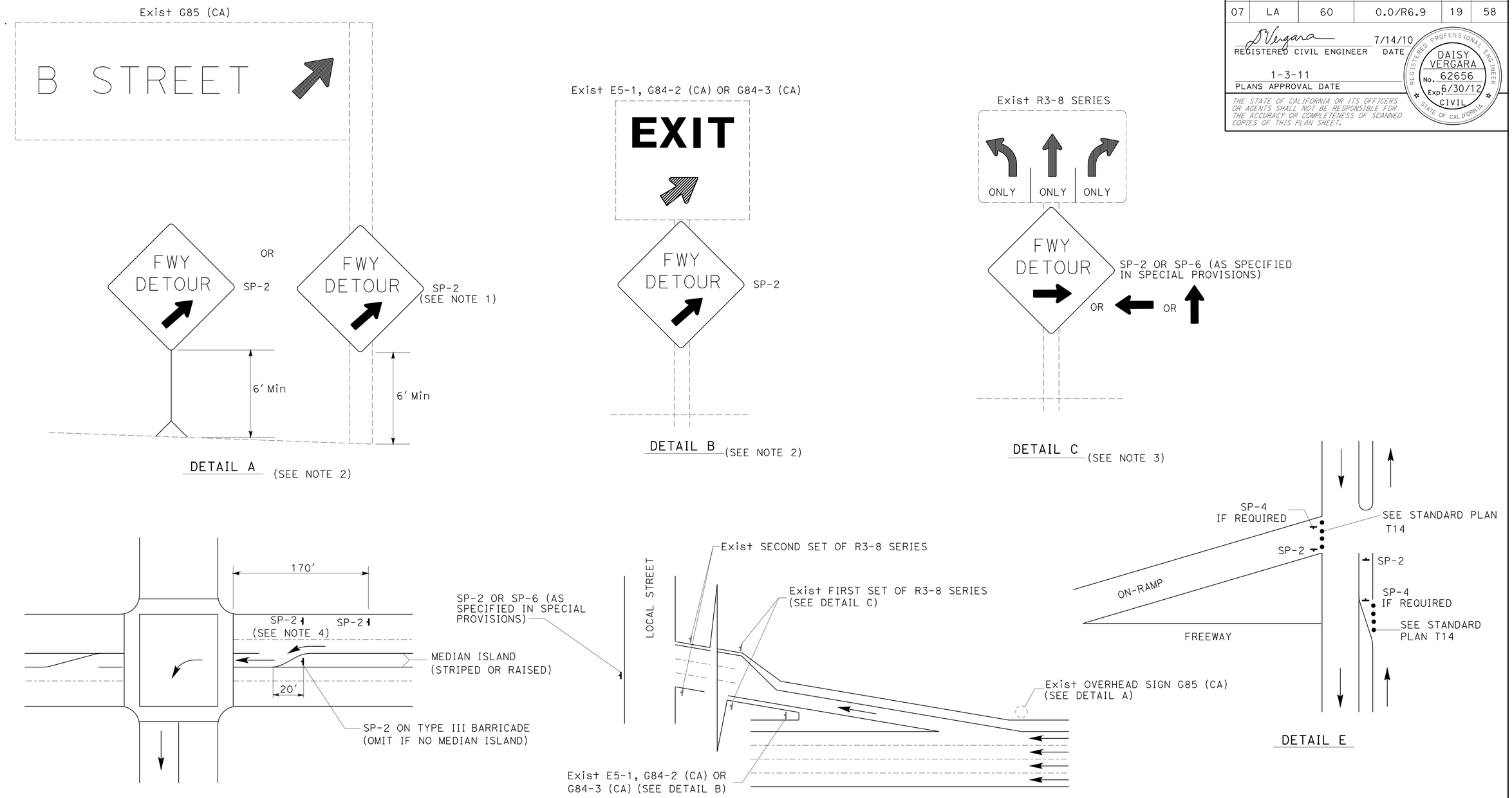

TYPICAL DETOUR SIGN INSTALLATION AT OFF-RAMP

NOTES:

1. SP-2 MAY BE STRAPPED ON EXISTING ELECTROLIER SIGNAL POSTS OR SIGN POSTS.
2. OMIT DETAIL A AND DETAIL B FOR FULL FREEWAY CLOSURES.
3. SEE TRAFFIC HANDLING DETAILS PLAN-TRAFFIC CONTROL SYSTEM FOR RAMP CLOSURES, DETOUR SIGNS AND MISCELLANEOUS DETAILS SHEET 2 OF 2 FOR SP-6.
4. OMIT IF MEDIAN ISLAND EXIST.

ABBREVIATIONS

(CA) CALIFORNIA CODE

LEGENDS

- CONE
- PORTABLE SIGN
- DIRECTION OF TRAVEL
- EXISTING OVERHEAD SIGN

TRAFFIC HANDLING DETAILS
TRAFFIC CONTROL SYSTEM FOR DETOUR SIGN INSTALLATION ALONG DESIGNATED DETOUR ROUTE
SHEET 2 OF 2
NO SCALE

THD-7

CALCULATED-DESIGNED BY	ALBERT K YU	REVISED BY	JC
CHECKED BY	JOCELYN C CHIANG	DATE REVISED	9/08
FUNCTIONAL SUPERVISOR	MARTIN OREGEL		JC 7/08

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DTM
Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => 25-JAN-2011 | TIME PLOTTED => 13:02

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07	LA	60	0.0/R6.9	20	58

Danglong Tran 7-30-10
REGISTERED CIVIL ENGINEER DATE

1-3-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DANGLONG TRAN No. C70127 Exp. 9/30/12 CIVIL STATE OF CALIFORNIA

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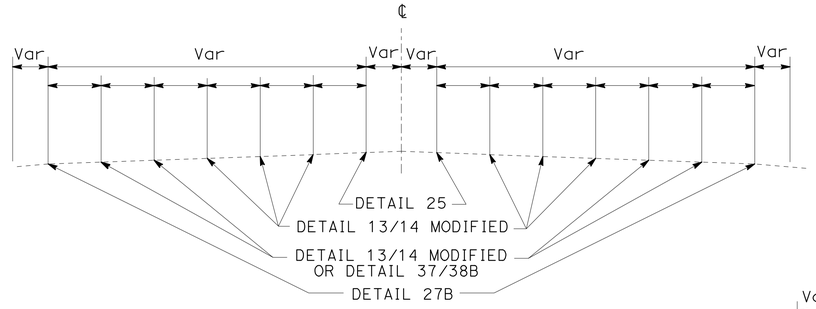
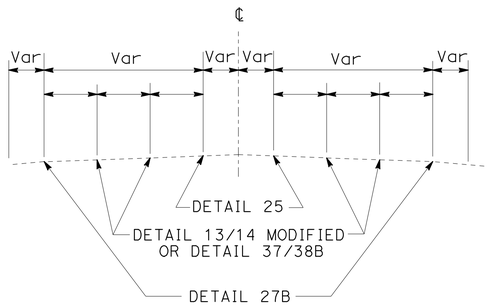
NOTE:

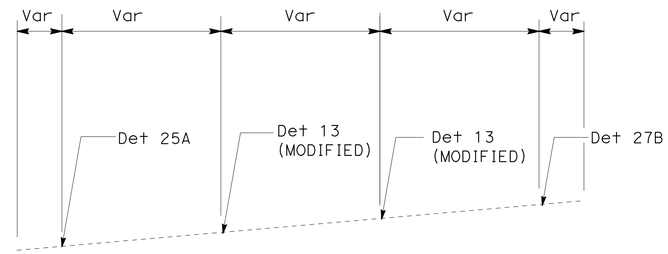
1. SEE PAVEMENT DELINEATION QUANTITIES FOR LOCATION AND TYPES OF REPLACE TRAFFIC STRIPES AND PAVEMENT MARKINGS.



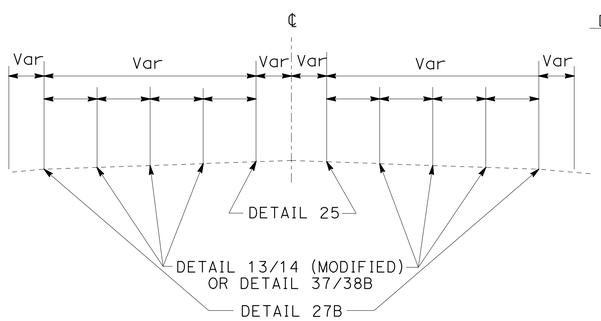
SIX-LANE FREEWAY SEGMENT



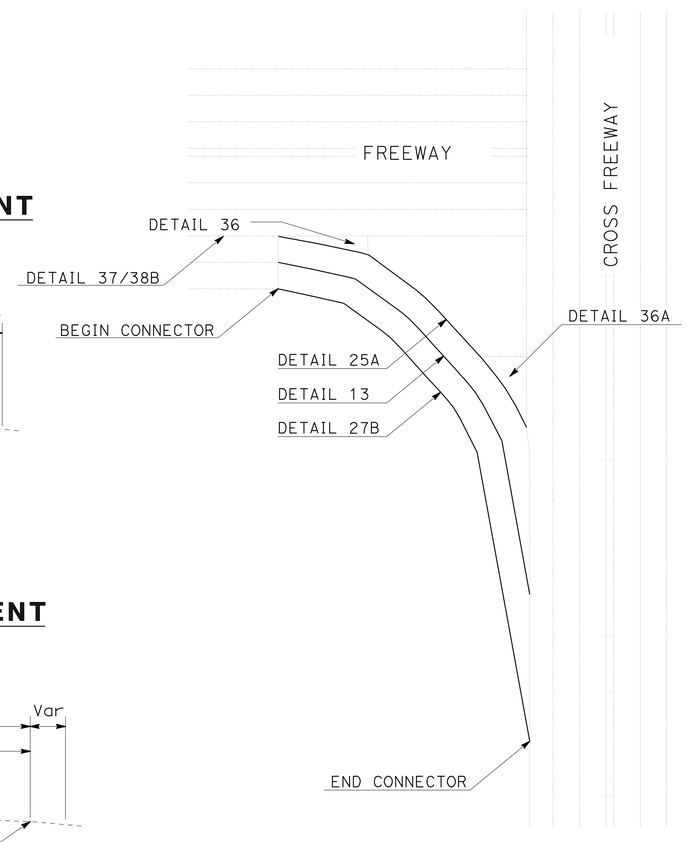
THREE-LANE FREEWAY SEGMENT



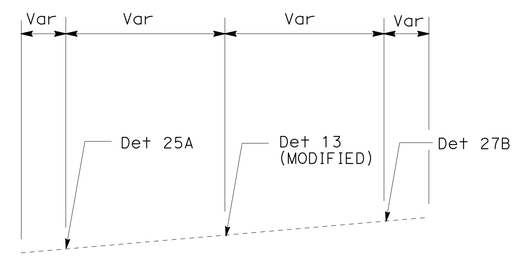
THREE-LANE CONNECTOR



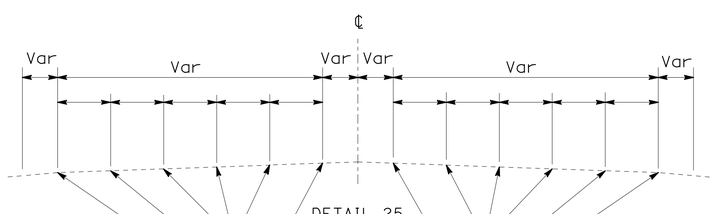
FOUR-LANE FREEWAY SEGMENT



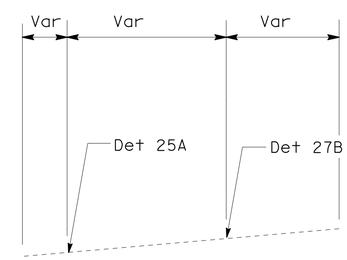
CONNECTOR



TWO-LANE CONNECTOR



FIVE-LANE FREEWAY SEGMENT



ONE-LANE CONNECTOR

PAVEMENT DELINEATION DETAILS

NO SCALE

PDD-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF DESIGN B

FUNCTIONAL SUPERVISOR: MANSOOR KHAN
CALCULATED-DESIGNED BY: DANGLONG TRAN
CHECKED BY: STEVE PHAM
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 25-JAN-2011
TIME PLOTTED => 13:02

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60	0.0/R6.9	21	58

Danglong Tran 7-30-10
REGISTERED CIVIL ENGINEER DATE

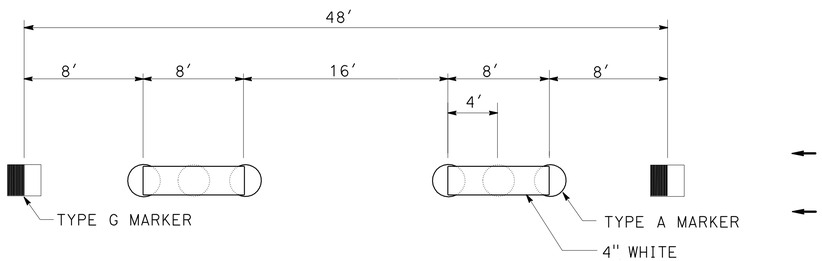
1-3-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
DANGLONG TRAN
No. C70127
Exp. 9/30/12
CIVIL
STATE OF CALIFORNIA

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

LEGEND:

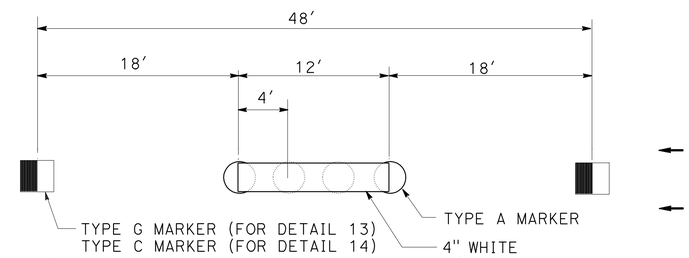
← DIRECTION OF TRAVEL



NOTE:

STRIPING CONSISTS OF DETAIL 10 WITH THE ADDITION OF A 4" THERMOPLASTIC STRIPE 8′ LONG ON TOP OF TYPE A NON-REFLECTIVE MARKERS.

DETAIL 10 (MODIFIED)



NOTE:

STRIPING CONSISTS OF DETAIL 13/14 WITH THE ADDITION OF A 4" WHITE THERMOPLASTIC STRIPE 12′ LONG ON TOP OF TYPE A NON-REFLECTIVE MARKERS.

DETAIL 13/14 (MODIFIED)

PAVEMENT DELINEATION DETAILS

NO SCALE

PDD-2

REVISED BY | DATE REVISED
DANGLONG TRAN | STEVE PHAM
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR
MANSOOR KHAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF DESIGN B

LAST REVISION 00-00-00 | DATE PLOTTED => 25-JAN-2011 | TIME PLOTTED => 13:02

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60	0.0/R6.9	22	58

Danglong Tran 7-30-10
REGISTERED CIVIL ENGINEER DATE

1-3-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
DANGLONG TRAN
No. C70127
Exp. 9/30/12
CIVIL
STATE OF CALIFORNIA

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FREEWAY PAVEMENT DELINEATION QUANTITIES

DIRECTION	POST MILE	THERMOPLASTIC TRAFFIC STRIPE								PAVEMENT MARKER (RETROREFLECTIVE)								PAVEMENT MARKER (NON-REFLECTIVE)	
				ENTRANCE RAMP GORE AREA DETAIL 36A		EXIT RAMP GORE AREA DETAIL 36													
		DETAIL 25	DETAIL 27B	DETAIL 8			DETAIL 38B	DETAIL 37	LANELINE DETAIL 13/14 (MODIFIED)	DETAIL 36A	DETAIL 36	DETAIL 37	DETAIL 37/38B	DETAIL 13 (MODIFIED)	DETAIL 25	DETAIL 37	DETAIL 14 (MODIFIED)	DETAIL 13/14 (MODIFIED)	
		4" THERMOPLASTIC TRAFFIC STRIPE	4" THERMOPLASTIC TRAFFIC STRIPE	4" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 17-7)	8" THERMOPLASTIC TRAFFIC STRIPE	8" THERMOPLASTIC TRAFFIC STRIPE	8" THERMOPLASTIC TRAFFIC STRIPE	8" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 12-3)	4"THERMOPLASTIC TRAFFIC STRIPE (BROKEN 36-12)	TYPE G	TYPE G	TYPE G	TYPE G	TYPE G	TYPE H	TYPE C	TYPE C	TYPE A	
		LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	
EB	0.41 / R0.80	2,070	2,070						4,134					86	43			344	
EB	R0.80 / R1.32	2,730	2,730			643			10,893		27			179	57		48	908	
EB	R1.32 / R2.91	8,400	8,400		791	1,884	614	1,496	35,912		78	46	52	704	175	4	44	2,992	
EB	R2.91 / R3.82	4,830	4,830		729				15,820					329	100			1,316	
EB	R3.82 / R5.30	7,810	7,810	200	555	2,189	991	3,947	28,609	8	91	128	42	516	163	4	80	2,384	
EB	R5.30 / R6.58	6,760	6,760	135	417	2,261			20,276	6	94			406	141		16	1,688	
EB	R6.58 / R6.9	5,320	5,320			952	315	2,799	18,636		40	89	26	340	111	4	48	1,552	
	EB Fwy SUBTOTAL									14	330	263	120	2,560		12	236		
	EB Fwy SUBTOTAL	37,920	37,920		2,492	7,929	1,920			3,287					790	248			
	EB Fwy TOTAL	75,840		335	12,341			8,242	134,280	4,325								11,184	

PAVEMENT DELINEATION QUANTITIES

PDQ-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF DESIGN B

FUNCTIONAL SUPERVISOR: MANSOOR KHAN
CALCULATED-DESIGNED BY: DANGLONG TRAN
CHECKED BY: STEVE PHAM
REVISED BY
DATE REVISED

LAST REVISION 00-00-00 | DATE PLOTTED => 25-JAN-2011 | TIME PLOTTED => 13:02

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60	0.0/R6.9	23	58

Danglong Tran 7-30-10
REGISTERED CIVIL ENGINEER DATE

1-3-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DANGLONG TRAN No. C70127 Exp. 9/30/12 CIVIL STATE OF CALIFORNIA

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FREEWAY PAVEMENT DELINEATION QUANTITIES

DIRECTION	POST MILE	THERMOPLASTIC TRAFFIC STRIPE								PAVEMENT MARKER (RETROREFLECTIVE)								PAVEMENT MARKER (NON-REFLECTIVE)
				ENTRANCE RAMP GORE AREA DETAIL 36A		EXIT RAMP GORE AREA DETAIL 36												
		DETAIL 25	DETAIL 27B	DETAIL 8			DETAIL 38B	DETAIL 37	LANELINE DETAIL 13/14 (MODIFIED)	DETAIL 36A	DETAIL 36	DETAIL 37	DETAIL 37/38B	DETAIL 13 (MODIFIED)	DETAIL 25	DETAIL 37	DETAIL 14 (MODIFIED)	DETAIL 13/14 (MODIFIED)
		4" THERMOPLASTIC TRAFFIC STRIPE	4" THERMOPLASTIC TRAFFIC STRIPE	4" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 17-7)	8" THERMOPLASTIC TRAFFIC STRIPE	8" THERMOPLASTIC TRAFFIC STRIPE	8" THERMOPLASTIC TRAFFIC STRIPE	8" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 12-3)	4"THERMOPLASTIC TRAFFIC STRIPE (BROKEN 36-12)	TYPE G	TYPE G	TYPE G	TYPE G	TYPE G	TYPE H	TYPE C	TYPE C	TYPE A
		LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA
WB	0.0.08 / R0.80	3,806	3,806	86	778	361	322	978	7,523	4	15	33	27	157	79			628
WB	R0.80 / R1.32	2,723	2,723						11,831					246	57			984
WB	R1.32 / R2.91	8,399	8,399	322	771	2,362	535	2,054	36,211	13	98	64	45	654	175	4	100	3,016
WB	R2.91 / R3.42	2,690	2,690		600				8,550					178	56			712
WB	R3.42 / R5.25	9,679	9,679	410	909	1,874	699	3,707	39,357	17	78	120	58	771	202	4	48	3,276
WB	R5.25 / R6.41	6,135	6,135		669				18,376					335	128		48	1,532
WB	R6.41 / R7.58	7,579	7,579	692	479	1057	299	2,408	31,680	29	44	76	25	660	158	4		2,640
	WB Fwy SUBTOTAL									63	235	293	155	3,001		12	196	
	WB Fwy SUBTOTAL	41,011	41,011	1,510	4,206	5,654	1,855			3,747					855	208		
	WB Fwy TOTAL	82,022			11,715			9,147	153,528	4,810								12,788
	SHEET PDQ-1	75,840		335	12,341			8,242	134,280	4,325								11,184
	EB & WB Fwy TOTAL	157,862		1,845	24,056			17,389	287,808	9,135								23,972

PAVEMENT DELINEATION QUANTITIES

PDQ-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF DESIGN B

FUNCTIONAL SUPERVISOR: MANSOOR KHAN
CALCULATED-DESIGNED BY: DANGLONG TRAN
CHECKED BY: STEVE PHAM
REVISED BY
DATE REVISED

LAST REVISION 00-00-00 | DATE PLOTTED => 25-JAN-2011 | TIME PLOTTED => 13:02

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60	0.0/R6.9	24	58

Danglong Tran 7-30-10
REGISTERED CIVIL ENGINEER DATE

1-3-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
DANGLONG TRAN
No. C70127
Exp. 9/30/12
CIVIL
STATE OF CALIFORNIA

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RAMP PAVEMENT DELINEATION QUANTITIES

DIRECTION	LOCATION	THERMOPLASTIC TRAFFIC STRIPE									PAVEMENT MARKER (NON-REFLECTIVE)	PAVEMENT MARKER (RETROREFLECTIVE)					
		DETAIL 25A	DETAIL 27B	DETAIL 36A DETAIL 8	DETAIL 36A	DETAIL 36	DETAIL 38	DETAIL 38B	DETAIL 10 (MODIFIED)	DETAIL 37		DETAIL 10 (MODIFIED)	DETAIL 36A	DETAIL 36	DETAIL 38	DETAIL 38B	DETAIL 25A	DETAIL 37
		4" THERMOPLASTIC TRAFFIC STRIPE	4" THERMOPLASTIC TRAFFIC STRIPE	4" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 17-7)	8" THERMOPLASTIC TRAFFIC STRIPE	8" THERMOPLASTIC TRAFFIC STRIPE	8" THERMOPLASTIC TRAFFIC STRIPE	8" THERMOPLASTIC TRAFFIC STRIPE	4" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 16-16)	8" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 12-3)	TYPE A	TYPE G	TYPE G	TYPE G	TYPE G	TYPE G	TYPE H	TYPE C
		LF	LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA
EB	SOTO St ON RAMP	520	1,047	118	150		110						6		5		22	
EB	LORENA St ON RAMP	848	1,807						512		66	22					54	
EB	INDIANA St ON RAMP	843	1,484		236			56		441			10			6	35	15
EB	DOWNEY ROAD OFF RAMP	1,788	2,315			457		315	1,654		33	210		19		26	74	
EB	GAGE St ON RAMP	1,109	1,770		207				887	1,460	18	114	9				46	49
EB	CESAR CHAVEZ OFF RAMP (FROM Conn TO NB Rte 710)	334	742			524	134		122		15	3		22	6		14	
EB	ATLANTIC Blvd OFF RAMP	1,123	3,022			620		310	1,380	1,285	27	174		26		26	47	43
EB	SB ATLANTIC Blvd ON RAMP	937	4,005	138	123		225			2,016			5		9		39	67
EB	NB ATLANTIC Blvd ON RAMP	636	1,176	118	82		86		364	118	8	48	3		4		26	4
EB	FINDLAY Ave OFF RAMP	989	1,215			675		315						28		26	41	
EB	GARFIELD Ave / WILCOX Ave OFF RAMP	989	1,102			986	611							41	25		41	
EB	MARKLAND Dr ON RAMP	679	1,609		337			71	268		33	6	14			6	28	
	EB RAMP SUBTOTAL	10,795	21,294		1,135	3,262	1,166	1,067				577	47	136	49	90		
	EB RAMP SUBTOTAL											899					467	178
	EB RAMP TOTAL	32,089		374	6,630				5,187	5,320	200	1,544						

PAVEMENT DELINEATION QUANTITIES

PDQ-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF DESIGN B

FUNCTIONAL SUPERVISOR: MANSOOR KHAN
CALCULATED-DESIGNED BY: DANGLONG TRAN
CHECKED BY: STEVE PHAM
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 25-JAN-2011
TIME PLOTTED => 13:02

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60	0.0/R6.9	25	58

Danglong Tran 7-30-10
REGISTERED CIVIL ENGINEER DATE

1-3-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DANGLONG TRAN No. C70127 Exp. 9/30/12 CIVIL STATE OF CALIFORNIA

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RAMP PAVEMENT DELINEATION QUANTITIES

DIRECTION	LOCATION	THERMOPLASTIC TRAFFIC STRIPE										PAVEMENT MARKER (NON-REFLECTIVE)		PAVEMENT MARKER (RETROREFLECTIVE)							
		DETAIL 25A	DETAIL 27B	DETAIL 36A		DETAIL 36	DETAIL 38	DETAIL 38B	DETAIL 37	DETAIL 10 (MODIFIED)	DETAIL 13 (MODIFIED)			DETAIL 10 (MODIFIED)	DETAIL 36A	DETAIL 36	DETAIL 13 (MODIFIED)	DETAIL 38	DETAIL 38B	DETAIL 37	DETAIL 25A
				DETAIL 8								DETAIL 10 (MODIFIED)	DETAIL 13 (MODIFIED)								
		4" THERMOPLASTIC TRAFFIC STRIPE	4" THERMOPLASTIC TRAFFIC STRIPE	4" THERMOPLASTIC (BROKEN 17-7)	8" THERMOPLASTIC TRAFFIC STRIPE	8" THERMOPLASTIC TRAFFIC STRIPE	8" THERMOPLASTIC TRAFFIC STRIPE	8" THERMOPLASTIC TRAFFIC STRIPE	8" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 12-3)	4" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 16-16)	4" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 36-12)	TYPE A	TYPE A	TYPE G	TYPE G	TYPE G	TYPE G	TYPE G	TYPE G	TYPE C	TYPE H
		LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
WB	SANTA FE Ave / MATEO St OFF RAMP			733		378		347	191							16			30	7	
WB	SOTO St ON RAMP	756	716																		48
WB	SOTO St OFF RAMP	437	935			556					99		8			24	3				19
WB	LORENA St ON RAMP	848	1,807																		53
WB	INDIANA St OFF RAMP	707	1470			856		386	327	489		63		11		36			34	11	30
WB	THIRD St ON RAMP	1,181	2,395	87	158				1,053	912		114		19	7					36	50
WB	DOWNEY ROAD OFF RAMP	918	2,213			579		378	583	893		114		19		25			32	20	39
WB	SB ATLANTIC Blvd ON RAMP	805	1,411	79	111		94	624							5			4	52		34
WB	NB ATLANTIC Blvd ON RAMP	742	4,046	68	87		118	496	3522						6			5	42	118	31
WB	ATLANTIC Blvd OFF RAMP	1,023	1,829			619		197	315	703		78		13		26			18	11	43
WB	FINDLAY Ave ON RAMP	940	1,317	130	106		193	504	489						5			9	42	17	40
WB	GARFIELD Ave / WILCOX Ave ON RAMP	832	1,668	172	103		56								5			3		4	35
WB	GARFIELD Ave / WILCOX Ave OFF RAMP	1,961	1,770			1,048	687	440								44		29	38		82
	WB RAMP SUBTOTAL	9,546	19,787																		
	WB RAMP SUBTOTAL				565	4,036	1,148	3,372				369	8	62	28	171	3	50	288		
	WB RAMP TOTAL	33,460		536	9,121				6,480	2,997	99	377		602						224	403
	SHEET PDQ-3	32,089		374	6,630				5,320	5,187		200		899						178	467
	EB & WB RAMP TOTAL	65,549		910	15,751				11,800	8,184	99	577		2,773							

PAVEMENT DELINEATION QUANTITIES
PDQ-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF DESIGN B

FUNCTIONAL SUPERVISOR: MANSOOR KHAN
CALCULATED-DESIGNED BY: DANGLONG TRAN
CHECKED BY: STEVE PHAM
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 25-JAN-2011
TIME PLOTTED => 13:02

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60	0.0/R6.9	26	58

Danglong Tran 7-30-10
REGISTERED CIVIL ENGINEER DATE

1-3-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
DANGLONG TRAN
No. C70127
Exp. 9/30/12
CIVIL
STATE OF CALIFORNIA

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RAMP PAVEMENT DELINEATION QUANTITES

DIRECTION	RAMP/LOCATION	THERMOPLASTIC PAVEMENT MARKING																
		WORDS AND CROSSWALK								ARROWS AND SYMBOLS								
		DIAGONAL STRIPE 1'	CROSSWALK & LIMIT LINE 1'	CAR A=17 SQFT	POOL A=23 SQFT	LANE A=24 SQFT	SIGNAL A=32 SQFT	AHEAD A=31 SQFT	STOP A=22 SQFT	TYPE I 18' A=25 SQFT	TYPE I 24' A=31 SQFT	TYPE II(L) A=45 SQFT	TYPE II(B) A=59 SQFT	TYPE III (L) A=42 SQFT	TYPE III(B) A=73 SQFT	TYPE III(R) A=42 SQFT	TYPE V A=33 SQFT	◇ A=11 SQFT
		SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT
EB	SOTO St ON RAMP	256	93							25	31							
EB	OFF RAMP TO WHITTIER Blvd	1,345	62					31	66		31			84		84		
EB	OFF RAMP TO LORENA St	1,345	97				64	62			62		108	84				
EB	ON RAMP FROM LORENA St	330	88								62							
EB	INDIANA St ON RAMP	335	120							50	62							
EB	DOWNEY ROAD OFF RAMP	163	55					62	88					84	146		66	
EB	GAGE St ON RAMP	181	112							50	62							
EB	CESAR CHAVEZ OFF RAMP (FROM Conn TO NB Rte 710)		112					31	66			90				84	33	
EB	ATLANTIC Blvd OFF RAMP	194	116				64	62						84	146	84	33	
EB	SB ATLANTIC Blvd ON RAMP	384	57							25	31							
EB	NB ATLANTIC Blvd ON RAMP		50	34	46	48				25	31							44
EB	FINDLAY Ave OFF RAMP	267															66	
EB	GARFIELD Ave / WILCOX Ave OFF RAMP	267															66	
EB	MARKLAND Dr ON RAMP	126								25	62							
	SUBTOTAL	5,193	962	34	46	48	128	248	220	200	434	90	108	336	292	252	264	44
	EB RAMP TOTAL	8,899																

PAVEMENT DELINEATION QUANTITIES

PDQ-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF DESIGN B

FUNCTIONAL SUPERVISOR: MANSOOR KHAN
CALCULATED-DESIGNED BY: DANGLONG TRAN
CHECKED BY: STEVE PHAM
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
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Danglong Tran 7-30-10
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RAMP PAVEMENT DELINEATION QUANTITIES

DIRECTION	RAMP/LOCATION	THERMOPLASTIC PAVEMENT MARKING																	
		WORDS AND CROSSWALK									ARROWS AND SYMBOLS								
		CHEVRON 1'	DIAGONAL STRIPE 1'	CROSSWALK & LIMIT LINE 1'	CAR A=17 SQFT	POOL A=23 SQFT	LANE A=24 SQFT	SIGNAL A=32 SQFT	AHEAD A=31 SQFT	STOP A=22 SQFT	TYPE I 24' A=31 SQFT	TYPE II(L) A=45 SQFT	TYPE II(R) A=45 SQFT	TYPE III (L) A=42 SQFT	TYPE III(B) A=73 SQFT	TYPE III(R) A=42 SQFT	TYPE IV(R) A=15 SQFT	TYPE V A=33 SQFT	◇ A=11 SQFT
		SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT
WB	SANTA FE Ave / MATEO St OFF RAMP									66				84		84		99	
WB	SOTO St ON RAMP			65															
WB	SOTO St OFF RAMP							64	62					84	73	84		33	
WB	LORENA St ON RAMP		674	83														33	
WB	LOREANA St OFF RAMP			77				64	62			90				84		66	
WB	INDIANA St OFF RAMP		155	82					62	88			90	84				33	
WB	THIRD St ON RAMP		198	90							62								
WB	DOWNEY ROAD OFF RAMP		93	81					62	88					146	42	15	66	
WB	SB ATLANTIC Blvd ON RAMP		140	150	34	46	48				31								44
WB	NB ATLANTIC Blvd ON RAMP	198	605	65	34	46	48				31						30		33
WB	ATLANTIC Blvd OFF RAMP		128	110				64	62			90	90					33	
WB	FINDLAY Ave ON RAMP		380		17	23	24				31								33
WB	GARFIELD Ave / WILCOX Ave ON RAMP		289								31								
WB	POTRERO / MARKLAND OFF RAMP	24	453	194				32	31									132	
	SUBTOTAL	222	3,115	997	85	115	120	224	372	242	186	180	180	252	219	294	45	396	110
	WB RAMP TOTAL	7,354																	
	SHEET SHEET PDQ-5	8,899																	
	EB & WB RAMP TOTAL	16,253																	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF DESIGN B

FUNCTIONAL SUPERVISOR: MANSOOR KHAN
CALCULATED-DESIGNED BY: DANGLONG TRAN
CHECKED BY: STEVE PHAM
REVISED BY
DATE REVISED

PAVEMENT DELINEATION QUANTITIES

PDQ-6

LAST REVISION 00-00-00 | DATE PLOTTED => 25-JAN-2011 | TIME PLOTTED => 13:02

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60	0.0/R6.9	28	58

Danglong Tran 7-30-10
REGISTERED CIVIL ENGINEER DATE

1-3-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
DANGLONG TRAN
No. C70127
Exp. 9/30/12
CIVIL
STATE OF CALIFORNIA

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

ROUTE 60 CONNECTORS

LOCATION	THERMOPLASTIC TRAFFIC STRIPE								PAVEMENT MARKER (RETROREFLECTIVE)							PAVEMENT MARKER (NON-REFLECTIVE)	THERMOPLASTIC PAVEMENT MARKING
	DETAIL 25A	DETAIL 27B	DETAIL 36A		DETAIL 36	DETAIL 38B	DETAIL 37	DETAIL 13 (MODIFIED)	DETAIL 36A	DETAIL 36	DETAIL 13/14 (MODIFIED)	DETAIL 38	DETAIL 38B	DETAIL 25A	DETAIL 37		CROSSWALK
			DETAIL 8													DETAIL 13 (MODIFIED)	
	4" THERMOPLASTIC STRIPE	4" THERMOPLASTIC STRIPE	4" (BROKEN 17-7)	8" THERMOPLASTIC STRIPE	8" THERMOPLASTIC STRIPE	8" THERMOPLASTIC STRIPE	8" (BROKEN 12-3)	4" (BROKEN 36-12)	TYPE G	TYPE G	TYPE G	TYPE G	TYPE G	TYPE H	TYPE C	TYPE A	1' CHEVRON
	LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	SQFT
EB Rte 60 TO SB Rte 5 Conn	450	1,016			1,149			1,024		48	22			19		85	
WB Rte 60 TO NB Rte 101 Conn	1,854	1,354			3,022	295	788	7,943		119	166	8	25	78	27	662	
EB Rte 60 TO SB Rte 710 Conn	1961	2,870			1,859			1,688		45	36	34		83		144	
EB Rte 60 TO NB Rte 710 Conn	4,124	41,520	126	87	1,551			983	4		21	53		172		82	110
WB Rte 60 TO SB Rte 710 Conn	2,755	2,755			662			3,144			66	28		58		264	
WB Rte 60 TO NB Rte 710 Conn	976	1,358			5,093							21		21			
SUBTOTAL	12,120	9,353							4	212	436	183	25	541	27		
ROUTE 60 CONNECTORS TOTAL	21,473		126		13,718		788	14,782	1,428							1,737	110

PAVEMENT DELINEATION QUANTITIES

PDQ-7

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF DESIGN B

FUNCTIONAL SUPERVISOR: MANSOOR KHAN
CALCULATED-DESIGNED BY: DANGLONG TRAN
CHECKED BY: STEVE PHAM
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 25-JAN-2011
TIME PLOTTED => 13:02

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60	0.0/R6.9	29	58

Danglong Tran 7-30-10
REGISTERED CIVIL ENGINEER DATE

1-3-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
DANGLONG TRAN
No. C70127
Exp. 9/30/12
CIVIL
STATE OF CALIFORNIA

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EXIT RAMP TERMINI PAVEMENT DELINEATION QUANTITIES

DIRECTION	LOCATION	TRAFFIC STRIPE					PAVEMENT MARKER (NON-REFLECTIVE)	PAVEMENT MARKER (RETROREFLECTIVE)		
		DETAIL 25A	DETAIL 27B	DETAIL 10 MODIFIED	DETAIL 38	DETAIL 38B	DETAIL 10 MODIFIED	DETAIL 10 MODIFIED	DETAIL 38B	DETAIL 25A
		4" THERMOPLASTIC TRAFFIC STRIPE	4" THERMOPLASTIC TRAFFIC STRIPE	4" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 16-16)	8" THERMOPLASTIC TRAFFIC STRIPE	8" THERMOPLASTIC TRAFFIC STRIPE	TYPE A	TYPE G	TYPE G	TYPE H
		LF	LF	LF	LF	LF	EA	EA	EA	EA
EB	WHITTIER Blvd OFF RAMP (BRANCH SEGMENT)	285	335			102			10	12
EB	LORENA St OFF RAMP (BRANCH SEGMENT)	175	164	65		110	12	2	10	8
	EB RAMP TERMINI SUBTOTAL	460	499	65		212	12	2	20	20
WB	SOTO St OFF RAMP	455	495	394		50	54	9	6	19
WB	WHITTIER Blvd / LORENA St OFF RAMP	432	436	367		50	54	9	6	18
	WB RAMP TERMINI SUBTOTAL	887	931	761		100	108	18	12	37
	EB & WB EXIT RAMP TERMINI SUBTOTAL	1,347	1,430					20	32	
								52		57
	EB & WB EXIT RAMP TERMINI TOTALS	2,777		826	312		120	109		

PAVEMENT DELINEATION QUANTITIES

PDQ-8

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF DESIGN B

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DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 25-JAN-2011
TIME PLOTTED => 13:02

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60	0.0/R6.9	30	58

REGISTERED CIVIL ENGINEER 7-30-10 DATE

1-3-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DANGLONG TRAN No. C70127 Exp. 9/30/12 CIVIL STATE OF CALIFORNIA

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EXIT RAMP TERMINI PAVEMENT DELINEATION QUANTITIES

DIRECTION	RAMP/LOCATION	THERMOPLASTIC PAVEMENT MARKINGS													
		WORDS AND CROSSWALK					ARROWS AND SYMBOLS								
		DIAGONAL STRIPE (12 INCH)	CROSSWALK & LIMIT LINE (12 INCH)	SIGNAL 32 SQFT	AHEAD A=31 SQFT	STOP A=22 SQFT	TYPE I (24 FT) A=31 SQFT	TYPE II (B) A=59 SQFT	TYPE II(L) A=45 SQFT	TYPE III (L) A=42 SQFT	TYPE III(B) A=73 SQFT	TYPE III(R) A=42 SQFT	TYPE IV(L) A=15 SQFT	TYPE IV(R) A=15 SQFT	TYPE V A=33 SQFT
		SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT
EB	WHITTIER Blvd OFF RAMP (BRANCH SEGMENT)	24	67		31	66				84		84			33
EB	LORENA St OFF RAMP (BRANCH SEGMENT)		95	64	62			118		84					33
	EB RAMP TERMINI SUBTOTAL	845													
WB	SOTO St OFF RAMP		91	64	62					84	146				
WB	WHITTIER Blvd / LORENA St OFF RAMP		84	64	62				90			84			66
	WB RAMP TERMINI SUBTOTAL	897													
	EB & WB EXIT RAMP TERMINI TOTALS	1,742													

PAVEMENT DELINEATION QUANTITIES

PDQ-9

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OFFICE OF DESIGN B

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DATE REVISED

LAST REVISION 00-00-00 | DATE PLOTTED => 25-JAN-2011 | TIME PLOTTED => 13:02

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60	0.0/R6.9	31	58

Danglong Tran 7-30-10
REGISTERED CIVIL ENGINEER DATE

1-3-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
DANGLONG TRAN
No. C70127
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STATE OF CALIFORNIA

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GRIND EXISTING CONCRETE PAVEMENT

DIRECTION	LOCATION	GRIND Exist Conc Pvmt
	PM	SQYD
EASTBOUND	0.41/ R0.80	3,008
EASTBOUND	R0.80 / R1.32	12,295
EASTBOUND	R1.32 / R2.91	42,074
EASTBOUND	R2.91 / R3.82	24,528
EASTBOUND	R3.82 / R5.30	38,021
EASTBOUND	R5.30 / R6.58	33,544
EASTBOUND	R6.58 / R6.9	8,981
SUBTOTAL (EB)		162,451
WESTBOUND	0.08 / R0.80	17,381
WESTBOUND	R0.80 / R1.32	12,239
WESTBOUND	R1.32 / R2.91	42,074
WESTBOUND	R2.91 / R3.42	12,238
WESTBOUND	R3.42 / R5.25	47,983
WESTBOUND	R5.25 / R6.41	30,220
WESTBOUND	R6.41 / R6.41	40,419
WESTBOUND	R6.41 / R6.9	5,308
SUBTOTAL (WB)		207,862

GRIND EXISTING CONCRETE PAVEMENT

LOCATION	PM	GRIND Exist Conc Pvmt
		SQYD
Rte 60 CONNECTORS:		
EB Rte 60 TO SB Rte 5 Conn	R0.5	3,808
WB Rte 60 TO NB Rte 101 Conn	R0.9	8,996
EB Rte 60 TO SB Rte 710 Conn (1)	R3.1	5,062
EB Rte 60 TO NB Rte 710 Conn	R3.1	6,897
WB Rte 60 TO SB Rte 710 Conn (2)	R3.4	5,324
WB Rte 60 TO NB Rte 710 Conn (3)	R3.4	1,078
SUBTOTAL (CONNECTORS)		31,165
TOTAL (EB Rte 60, WB Rte 60, & Rte 60 OFF Conn'S)		401,478

NOTES:

(1) BEGIN Conn AT EB60-NB710 Conn/EB60-SB710 Conn GORE NOSE.

(2) END Conn AT EB60-SB710 Conn/WB60-SB710 Conn GORE NOSE.

(3) BEGIN Conn AT WB60-SB710 Conn/WB60-NB710 Conn GORE NOSE.
END Conn AT EB60-NB710 Conn/WB60-NB710 Conn GORE NOSE.

REMOVE PAVEMENT MARKER

LOCATION	REMOVE Pvmt MARKER
PM	EA
0.0/ R6.9	39,851

SUMMARY OF QUANTITIES

Q-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF DESIGN B

FUNCTIONAL SUPERVISOR: MANSOOR KHAN
CALCULATED-DESIGNED BY: DANGLONG TRAN
CHECKED BY: STEVE PHAM
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 25-JAN-2011
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60	0.0/R6.9	32	58

Danglong Tran 10-29-10
REGISTERED CIVIL ENGINEER DATE

1-3-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DANGLONG TRAN No. C70127 Exp. 9/30/12 CIVIL STATE OF CALIFORNIA

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COLD PLANE AND RHMA-G OVERLAY FOR ON AND OFF RAMPS

DIRECTION	LOCATION PM	LOCATION RAMP	COLD PLANE ASPHALT Conc Pvmt SQYD	RUBBERIZED HOT MIX ASPHALT CONCRETE (GAP GRADED) TON	TACK COAT TON	REPLACE AC SURFACING (REPAIR FAILED AREAS) CY	CRACK TREATMENT LNMI
EB	R0.6	SOTO St ON RAMP	2,973	401	1.27	3	0.3
EB	R1.2	WHITTIER Blvd OFF RAMP	4,980	672	2.12	3	0.3
EB	R1.2	LORENA St OFF RAMP	2,400	324	1.02	3	0.3
EB	R1.6	LORENA St ON RAMP	2,645	357	1.13	3	0.3
EB	R2.1	INDIANA St ON RAMP	3,698	270	1.57	3	0.3
EB	R2.3	DOWNEY Rd OFF RAMP	5,900	404	2.51	3	0.3
EB	R2.5	GAGE St ON RAMP	5,372	589	2.29	3	0.3
EB	R4.2	ATLANTIC Blvd OFF RAMP	6,573	721	2.8	3	0.3
EB	R4.4	SB ATLANTIC Blvd ON RAMP	2,373	483	1.01	3	0.3
EB	R4.6	NB ATLANTIC Blvd ON RAMP	4,216	285	1.79	3	0.3
EB	R4.9	FINDLAY Ave OFF RAMP	3,518	257	1.5	3	0.3
EB	R5.3	GARFIELD Ave / WILCOX Ave OFF RAMP	3,567	261	1.52	3	0.3
EB	R6.4	MARKLAND Dr ON RAMP	3,623	265	1.54	3	0.3
EB SUBTOTAL			51,838	5,289	22.06	39	3.9
WB	R0.1	SANTA FE Ave / MATEO St OFF RAMP	1,884	193	0.8	3	0.3
WB	R0.4	SOTO St ON RAMP	1,228	166	0.52	3	0.3
WB	R0.6	SOTO St OFF RAMP	2,581	283	1.1	3	0.3
WB	R1.5	LORENA St ON RAMP	4,397	594	1.87	3	0.3
WB	R1.7	LORENA St OFF RAMP	4,452	601	1.89	3	0.3
WB	R2.1	INDIANA St OFF RAMP	4,260	239	1.81	3	0.3
WB	R2.4	THIRD St ON RAMP	5,695	416	2.42	3	0.3
WB	R2.7	DOWNEY Rd OFF RAMP	3,944	529	1.68	3	0.3
WB	R4.3	SB ATLANTIC Blvd ON RAMP	3,137	417	1.33	3	0.3
WB	R4.5	NB ATLANTIC Blvd ON RAMP	3,065	414	1.3	3	0.3
WB	R4.7	ATLANTIC Blvd OFF RAMP	4,455	263	1.9	3	0.3
WB	R4.9	FINDLAY Ave ON RAMP	3,223	236	1.37	3	0.3
WB	R5.4	GARFIELD Ave / WILCOX Ave ON RAMP	3,768	275	1.6	3	0.3
WB	R6.4	POTRERO Ave / MARKLAND Ave OFF RAMP	6,548	479	2.79	3	0.3
WB SUBTOTAL			52,637	5,105	22.4	42	4.2
TOTAL (EB & WB)			104,475	10,394	44.66	81	8.1

COLD PLANE & HMA-B OVERLAY FOR MAINLINE SHOULDER

DIRECTION	POST MILE FROM/TO	LOCATION	COLD PLANE ASPHALT Conc Pvmt SQYD	HOT MIX ASPHALT CONCRETE (TYPE B) TON	ASPHALT -RUBBER BINDER TON	SCREENINGS (HOT-APPLIED) TON	REPLACE AC SURFACING (REPAIR FAILED AREAS) CY	CRACK TREATMENT LNMI
EB	R1.1/R1.3	Rt Shld	939	158	2.6	18.78	3	0.2
EB	R0.8/R1.3	Lt Shld	2,640	446	7.3	52.8	3	0.5
EB	R1.3/R2.9	Rt Shld	7,509	1,014	20.77	150.18	3	1.6
EB	R3.8/R5.3	Rt Shld	7,040	950	19.47	140.8	3	1.5
EB	R6.6/R6.9	Rt Shld	1,408	190	3.89	28.16	3	0.3
EB	R1.3/R2.9	Lt Shld	10,325	1,394	28.56	206.5	3	1.6
EB	R3.8/R5.3	Lt Shld	9,680	1,307	26.77	193.6	3	1.5
EB	R6.6/R6.9	Lt Shld	1,936	261	5.35	38.72	3	0.3
EB	R2.9/R3.8	Rt Shld	4,224	570	11.68	84.48	3	0.9
EB	R5.3/R6.6	Rt Shld	6,101	824	16.88	122.02	3	1.3
EB	R2.9/R3.8	Lt Shld	5,280	713	14.6	105.6	3	0.9
EB	R5.3/R6.6	Lt Shld	7,627	1,030	21.1	152.54	3	1.3
EB SUBTOTAL			64,709	8,857	178.98	1,294.18	36	11.9
WB	R0.4/R0.8	Rt Shld	1,737	234	4.8	34.74	3	0.4
WB	R0.8/R1.3	Rt Shld	2,347	317	6.49	46.94	3	0.5
WB	R0.8/R1.3	Lt Shld	3,227	545	8.93	64.54	3	0.5
WB	R1.3/R2.9	Rt Shld	7,509	1,014	20.77	150.18	3	1.6
WB	R3.4/R5.3	Rt Shld	8,917	1,204	24.66	178.34	3	1.9
WB	R6.4/R6.9	Rt Shld	2,347	317	6.49	46.94	3	0.5
WB	R1.3/R2.9	Lt Shld	10,325	1,394	28.56	206.5	3	1.6
WB	R3.4/R5.3	Lt Shld	12,261	1,655	33.91	245.22	3	1.9
WB	R6.4/R6.9	Lt Shld	3,227	436	8.93	64.54	3	0.5
WB	R2.9/R3.4	Rt Shld	2,347	317	6.49	46.94	3	0.5
WB	R5.3/R6.4	Rt Shld	5,163	697	14.28	103.26	3	1.1
WB	R3.1/R3.4	Lt Shld	1,760	238	4.87	35.2	3	0.3
WB	R5.3/R6.4	Lt Shld	6,453	871	17.85	129.06	3	1.1
WB SUBTOTAL			67,620	9,239	187.03	1,352.4	39	12.4
TOTAL (EB & WB)			132,329	18,096	366.01	2,646.58	75	24.3

SUMMARY OF QUANTITIES

Q-2

REVISED BY | DATE REVISED
DANGLONG TRAN | STEVE PHAM
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR | MANSOOR KHAN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OFFICE OF DESIGN B

LAST REVISION 00-00-00 | DATE PLOTTED => 25-JAN-2011 | TIME PLOTTED => 13:02

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60	0.0/R6.9	33	58

Danglong Tran 10-29-10
REGISTERED CIVIL ENGINEER DATE

1-3-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
DANGLONG TRAN
No. C70127
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CIVIL
STATE OF CALIFORNIA

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ROADWAY QUANTITIES

DIRECTION	LOCATION	NUMBER OF SLABS TO BE REPLACED (N) SLAB NUMBER						REPLACE CONCRETE PAVEMENT (RAPID STRENGTH CONCRETE)	LEAN CONCRETE BASE (RAPID SETTING)	ROADWAY EXCAVATION	TIE BAR	DOWEL BAR	SEAL PAVEMENT JOINT
	PM	#1	#2	#3	#4	#5	#6	CY	CY	CY	EA	EA	LF
EB	0												
				3	1	1		25	11	11	55	110	395
EB	R1.25	WHITTIER Blvd UC											
				4	6	4		70	31	31	154	308	1,105
EB	R3.3	FORD Blvd UC											
			15	20	18			265	117	117	583	1,166	4,182
EB	R4.4	ATLANTIC Blvd UC											
				30	25			275	121	121	605	1,210	4,340
EB	R5.6	GARFIELD AVE UC											
				5	10			85	33	33	165	330	1,184
EB	R5.9	WILCOX Ave UC											
				22	28			250	110	110	550	1,100	3,945
EB	R6.9	GREENWOOD Ave OC											
SUBTOTAL			15	84	88	5		970	423	423	2,112	4,224	15,151

NOTES:

1. WEAKENED PLANE JOINT TO WEAKENED PLANE JOINT CONSTITUTES ONE SLAB.
2. (N): NOT A SEPARATE PAY ITEM. FOR INFORMATION ONLY.

ROADWAY QUANTITIES

DIRECTION	LOCATION	NUMBER OF SLABS TO BE REPLACED (N) SLAB NUMBER						REPLACE CONCRETE PAVEMENT (RAPID STRENGTH CONCRETE)	LEAN CONCRETE BASE (RAPID SETTING)	ROADWAY EXCAVATION	TIE BAR	DOWEL BAR	SEAL PAVEMENT JOINT
	PM	#1	#2	#3	#4	#5	#6	CY	CY	CY	EA	EA	LF
WB	0												
				3	2			25	11	11	55	110	395
WB	R1.9	INDIANA St OC											
				3	2			25	11	11	55	110	395
WB	R2.6	3RD St UC											
				5	5			50	22	22	110	220	789
WB	R3.2	ROUTE 60/710 SEPARATION											
				10	5			75	33	33	165	330	1,184
WB	R4.4	ATLANTIC Blvd UC											
				5	5			50	22	22	110	220	789
WB	R4.7	POMONA Blvd UC											
				5	10			75	33	33	165	330	1,184
WB	R5.2	FINDLAY Ave UC											
				10	20			150	66	66	330	660	2,367
WB	R5.6	GARFIELD Ave UC											
				10	30			200	88	88	440	880	3,156
WB	R5.9	WILCOX Ave UC											
				40	20			300	132	132	660	1,320	4,734
WB	R6.3	MARKLAND Ave UC											
				20	15			175	77	77	385	770	2,756
WB	R6.9	GREENWOOD Ave OC											
SUBTOTAL				111	114			1,125	495	495	2,475	4,950	17,749
TOTAL			15	195	202	5		2,095	918	918	4,587	9,174	32,900

SUMMARY OF QUANTITIES

Q-3

DANGLONG TRAN — REVISED BY
STEVE PHAM — DATE REVISED
CALCULATED-DESIGNED BY
CHECKED BY
FUNCTIONAL SUPERVISOR
MANSOOR KHAN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OFFICE OF DESIGN B

LAST REVISION 00-00-00
DATE PLOTTED => 25-JAN-2011
TIME PLOTTED => 13:02

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60	0.0/R6.9	34	58

REGISTERED CIVIL ENGINEER 7/22/10 DATE

1-3-11
PLANS APPROVAL DATE

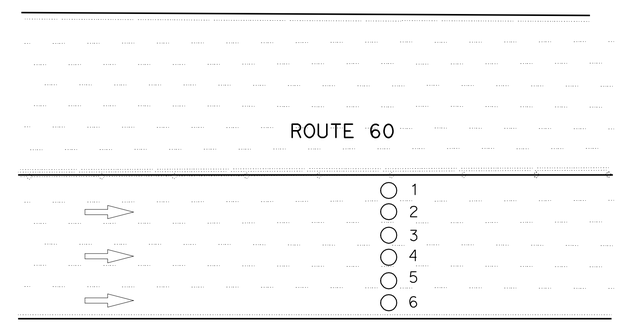
REGISTERED PROFESSIONAL ENGINEER CESAR HERNANDEZ No. E15805 Exp. 12/31/12 CIVIL STATE OF CALIFORNIA

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

EASTBOUND ROUTE 60 MAINLINE

PM	LOCATION	SEE DETAIL A ON THIS SHEET FOR TYPICAL LOCATION OF INDUCTIVE LOOP DETECTOR						No. OF STUBOUTS (REPLACE)
		1	2	3	4	5	6	
0.5	AT CONNECTOR 5 SPLIT	X	X	X				1
1.0	WEST OF EUCLID Ave	X	X	X	X	X		1
1.36	WEST OF WHITTER Blvd OFF-RAMP	X	X	X	X	X		1
1.7	AT LORENA St ON-RAMP	X	X	X	X	X		1
2.2	AT INDIANA ON-RAMP	X	X	X	X	X		1
2.6	AT GAGE / 3rd St ON-RAMP	X	X	X	X	X		1
3.1	WEST OF EASTERN Ave	X	X	X	X	X		1
3.5	EAST OF 710 INTERCHANGE	X	X	X	X			1
3.9	AT BELVEDERE POC	X	X	X	X	X	X	1
4.4	AT SB ATLANTIC ON-RAMP	X	X	X	X	X		1
4.6	AT NB ATLANTIC ON-RAMP	X	X	X	X	X	X	1
5.0	AT FINDLAY OFF-RAMP	X	X	X	X	X		1
5.5	AT GARFIELD OFF RAMP	X	X	X	X			1
6.0	EAST OF WILCOX Ave	X	X	X	X			1
6.4	AT MARKLAND Dr	X	X	X	X			1
6.9	WEST OF GREENWOOD Ave	X	X	X	X	X		1

X - ABANDON EXISTING LOOP. INSTALL TYPE E INDUCTIVE LOOP DETECTOR AT THE SAME LOCATION.



DETAIL A

TYPICAL INDUCTIVE LOOP DETECTOR CONFIGURATION (MAINLINE)

NOTES: (THIS SHEET)

1. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL LOCATE ALL EXISTING INDUCTIVE LOOP DETECTORS.
2. ABANDON EXISTING INDUCTIVE LOOP DETECTORS. INSTALL INDUCTIVE LOOP DETECTORS AT THE SAME LOCATION.
3. SPLICE LOOP DETECTOR CONDUCTORS TO EXISTING dlc IN ADJACENT PULL BOX.
4. ABANDON EXISTING RIGHT HAND SIDE SHOULDER STUBOUTS. INSTALL 1½" STUBOUT FOR INDUCTIVE LOOP DETECTORS.
5. TAG EXISTING dlc IN ADJACENT PULL BOX AND AT CONTROLLER CABINET.

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY

INDUCTIVE LOOP DETECTOR
(REPLACEMENT)

NO SCALE

E-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: HASSAN MANNAA
CALCULATED-DESIGNED BY: CH
CHECKED BY: CH
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 25-JAN-2011
TIME PLOTTED => 13:03

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60	0.0/R6.9	35	58

REGISTERED CIVIL ENGINEER 7/22/10 DATE

1-3-11
PLANS APPROVAL DATE

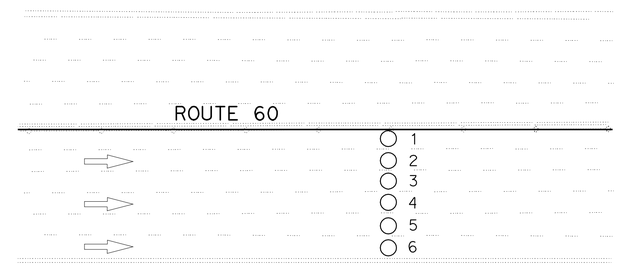
REGISTERED PROFESSIONAL ENGINEER CESAR HERNANDEZ No. E15805 Exp. 12/31/12 CIVIL STATE OF CALIFORNIA

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

WESTBOUND ROUTE 60 MAINLINE

PM	LOCATION	SEE DETAIL A ON THIS SHEET FOR TYPICAL LOCATION OF INDUCTIVE LOOP DETECTOR						No. OF STUBOUTS (REPLACE)
		1	2	3	4	5	6	
0.6	AT SOTO St ON-RAMP	X	X	X	X			1
0.9	WEST OF EUCLID Ave	X	X	X				1
1.4	EAST OF MARIETTA St	X	X	X	X	X		1
1.7	LORENA St ON-RAMP	X	X	X	X	X		2
2.2	INDIANA OFF-RAMP	X	X	X	X	X		1
2.7	AT GAGE / 3rd St ON-RAMP	X	X	X	X	X		1
3.2	WEST OF EASTERN Ave	X	X	X	X			1
3.5	EAST OF 710 INTERCHANGE	X	X	X	X			1
4.0	AT BELVEDERE POC	X	X	X	X	X	X	1
4.5	AT SB ATLANTIC ON-RAMP	X	X	X	X	X	X	1
4.6	AT NB ATLANTIC ON-RAMP	X	X	X	X	X		1
5.0	FINDLAY Ave ON-RAMP	X	X	X	X	X		1
5.5	AT GARFIELD ON-RAMP	X	X	X	X			1
6.0	EAST OF WILCOX Ave	X	X	X	X			1
6.4	AT MARKLAND Dr.	X	X	X	X			1
6.9	AT GREENWOOD Ave	X	X	X	X	X		1

X - ABANDON EXISTING LOOP. INSTALL TYPE E INDUCTIVE LOOP DETECTOR AT THE SAME LOCATION.



DETAIL A
TYPICAL INDUCTIVE LOOP DETECTOR CONFIGURATION (MAINLINE)

NOTES: (THIS SHEET)

1. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL LOCATE ALL EXISTING INDUCTIVE LOOP DETECTORS.
2. ABANDON EXISTING INDUCTIVE LOOP DETECTORS. INSTALL INDUCTIVE LOOP DETECTORS AT THE SAME LOCATION.
3. SPLICE LOOP DETECTOR CONDUCTORS TO EXISTING dlc IN ADJACENT PULL BOX.
4. ABANDON EXISTING RIGHT HAND SIDE SHOULDER STUBOUTS. INSTALL 1½" STUBOUT FOR INDUCTIVE LOOP DETECTORS.
5. TAG EXISTING dlc IN ADJACENT PULL BOX AND AT CONTROLLER CABINET.

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY

INDUCTIVE LOOP DETECTOR
(REPLACEMENT)
NO SCALE

E-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: HASSAN MANNAA
CALCULATED-DESIGNED BY: CH
CHECKED BY: CH
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 25-JAN-2011
TIME PLOTTED => 13:03

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60	0.0/R6.9	36	58

REGISTERED CIVIL ENGINEER 7/22/10 DATE

1-3-11
PLANS APPROVAL DATE

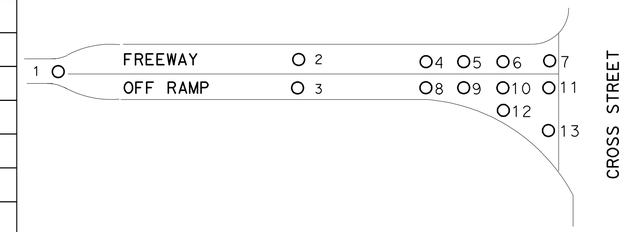
REGISTERED PROFESSIONAL ENGINEER CESAR HERNANDEZ No. E15805 Exp. 12/31/12 CIVIL STATE OF CALIFORNIA

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

RAMP LOCATIONS

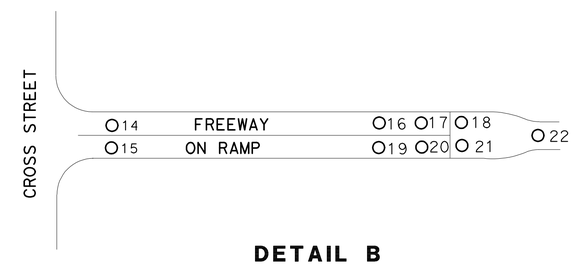
LOCATIONS		DESCRIPTION	PM	SEE TYPICAL DETAIL A, B and C ON THIS SHEET FOR LOCATION OF THE INDUCTIVE LOOP DETECTORS																														No. OF STUBOUTS (REPLACE)
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
1	EB	ON RAMP FROM SOTO St	R0.6															X				X	X	X	X									2
2	EB	OFF RAMP TO WHITTIER Blvd	R1.2	X																														1
3	EB	OFF RAMP TO LORENA St	R1.2	X	X	X			X	X			X	X	X	X																		3
4	EB	ON RAMP FROM LORENA St	R1.6															X				X	X	X	X									2
5	EB	ON RAMP FROM INDIANA St	R2.1																			X	X	X										1
6	EB	OFF RAMP TO DOWNEY Rd	R2.3	X																														1
7	EB	ON RAMP FROM GAGE Ave	R2.4																X	X	X	X	X	X	X									2
8	EB	OFF RAMP TO ATLANTIC Ave	R4.2		X	X			X	X			X	X	X	X																		2
9	EB	ON RAMP FROM SB ATLANTIC Ave	R4.4																							X		X	X	X				2
10	EB	ON RAMP FROM NB ATLANTIC Ave	R4.6																				X	X	X									1
11	EB	OFF RAMP TO FINDLAY Ave	R4.9	X																														1
12	EB	OFF RAMP TO GARFIELD Ave/WILCOX Ave	R5.3	X																														1
14	WB	OFF RAMP TO POTRERO/MARKLAND	R6.4	X			X	X	X	X			X	X	X	X																		2
16	WB	ON RAMP FROM FINDLAY Ave	R4.9															X	X	X	X	X												2
17	WB	OFF RAMP TO ATLANTIC Ave	R4.7		X	X			X	X			X	X																				2
18	WB	ON RAMP FROM NB ATLANTIC Ave	R4.5																							X	X	X	X	X				2
19	WB	ON RAMP FROM SB ATLANTIC Ave	R4.3															X				X	X	X	X									2
20	WB	OFF RAMP TO DOWNEY Rd	R2.7	X				X	X	X		X	X	X																				2
21	WB	ON RAMP FROM DOWNEY Rd	R2.5																									X	X	X	X	X	X	2
23	WB	OFF RAMP TO LORENA St	R1.7	X																														1
24	WB	ON RAMP FROM LORENA St	R1.5																							X		X	X	X				2

X - ABANDON EXISTING LOOP. INSTALL TYPE E LOOP DETECTOR AT THE SAME LOCATION.



DETAIL A

TYPICAL LOCATION OF THE OFF-RAMP LOOP DETECTORS



DETAIL B

TYPICAL LOCATION OF THE ON-RAMP LOOP DETECTORS

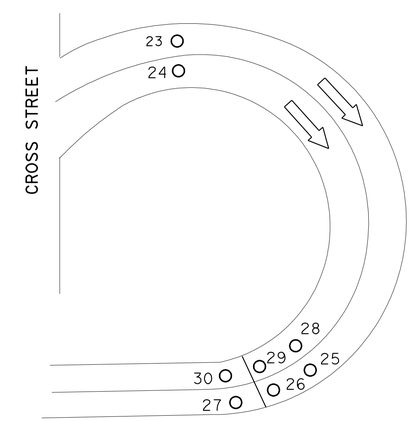
CONNECTOR LOCATIONS

LOCATIONS		DESCRIPTION	PM	SEE TYPICAL DETAIL D ON THIS SHEET FOR LOCATION OF THE INDUCTIVE LOOP DETECTORS					No. OF STUBOUTS (REPLACE)
				7	8	9	10	11	
29	EB	Rte 60 TO SB Rte 710	R3.0				X	X	1
30	EB	Rte 60 TO NB Rte 710	R3.1		X	X			1
31	WB	Rte 60 TO SB Rte 710	R3.4		X	X			1
32	WB	Rte 60 TO NB Rte 710	R3.4				X	X	1
33	WB	Rte 60 TO NB Rte 101	R0.6	X	X	X			1

X - ABANDON EXISTING LOOP. INSTALL TYPE E LOOP DETECTOR AT THE SAME LOCATION.

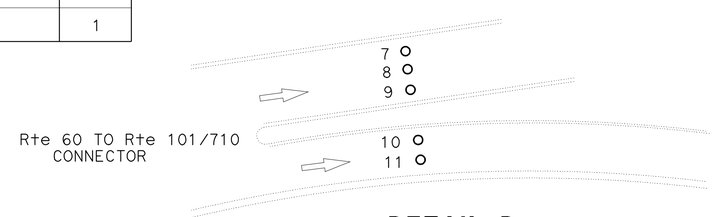
NOTES: (THIS SHEET)

1. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL LOCATE ALL EXISTING INDUCTIVE LOOP DETECTORS.
2. ABANDON EXISTING INDUCTIVE LOOP DETECTORS. INSTALL INDUCTIVE LOOP DETECTORS AT THE SAME LOCATION.
3. SPLICE LOOP DETECTOR CONDUCTORS TO EXISTING dlc IN ADJACENT PULL BOX.
4. ABANDON EXISTING STUBOUTS. INSTALL 1½" STUBOUT FOR INDUCTIVE LOOP DETECTORS.
5. TAG EXISTING dlc IN ADJACENT PULL BOX AND AT CONTROLLER CABINET.



DETAIL C

TYPICAL LOCATION OF THE ON-RAMP LOOP DETECTORS



DETAIL D

TYPICAL LOCATION OF CONNECTOR LOOP DETECTORS

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY

INDUCTIVE LOOP DETECTOR (REPLACEMENT)

NO SCALE

E-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
FUNCTIONAL SUPERVISOR HASSAN MANNAA
CALCULATED-DESIGNED BY CH CHECKED BY CH
REVISED BY DATE REVISED

LAST REVISION 00-00-00 DATE PLOTTED => 25-JAN-2011 TIME PLOTTED => 13:03

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60	0.0/R6.9	37	58

REGISTERED CIVIL ENGINEER 7/22/10 DATE

1-3-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER CESAR HERNANDEZ No. E15805 Exp. 12/31/12 CIVIL STATE OF CALIFORNIA

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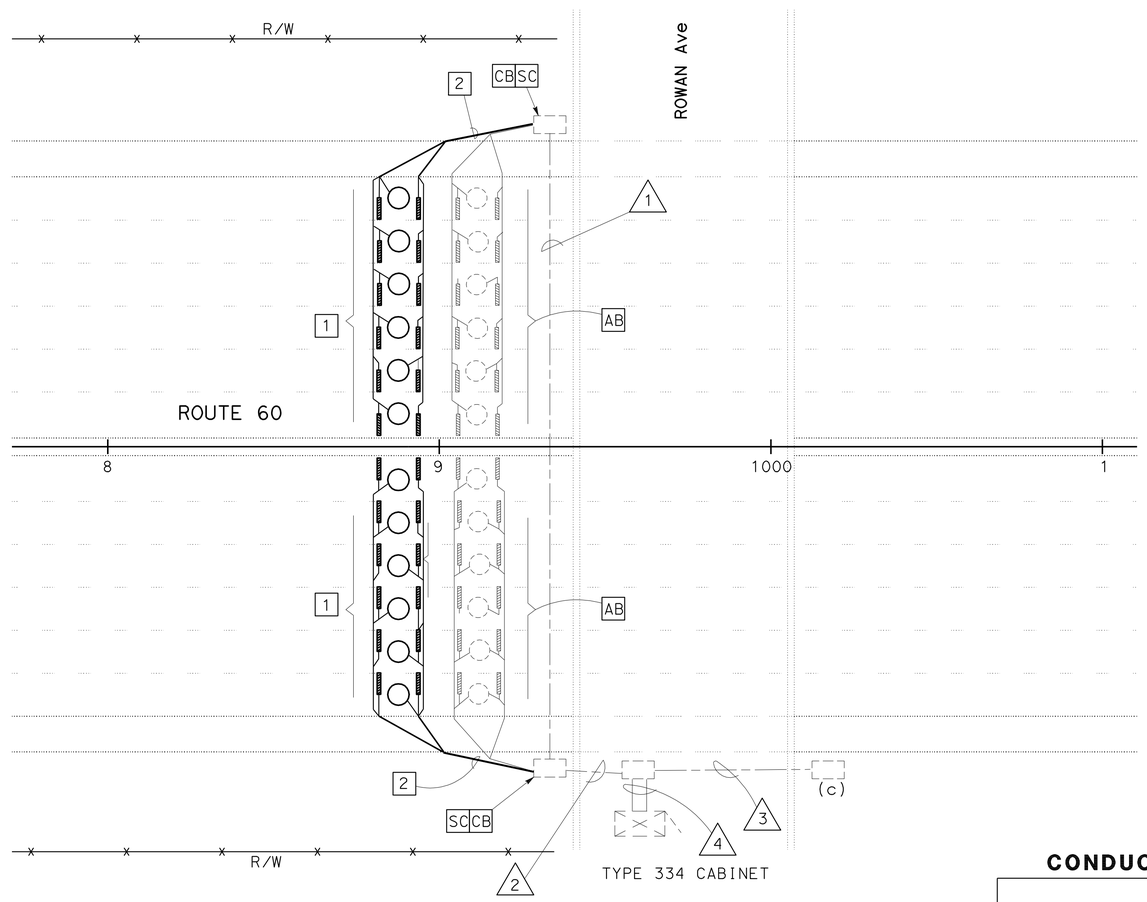
NOTE:

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



CONDUCTOR AND CONDUIT SCHEDULE (THIS SHEET ONLY)

CONDUCTOR TYPE	FUNCTION	RUN 1	RUN 2	RUN 3	RUN 4
6PR22 CABLE	DISTRIBUTION DATA/VOICE			1	1
DLC	DETECTOR LEAD IN CABLE	6	12		12
STC	SCREENED TRANSMISSION CABLE	12	24		24
	CONDUIT SIZE	4"	2"	2"	2"-3"

CONDUIT AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE NOTED

PROJECT NOTES: (THIS SHEET)

1. INSTALL 12 INDUCTIVE LOOP DETECTOR, 24 AXLE SENSORS. SEE SHEET E-5 FOR INSTALLATION DETAILS.
2. INSTALL 2" STUBOUT FOR LOOP DETECTORS AND PIEZO SENSORS.

NOTE: (THIS SHEET)

1. TAG EXISTING dlc IN ADJACENT PULL BOX AND AT CONTROLLER CABINET.

MODIFY AUTOMATIC VEHICLE CLASSIFICATION

NO SCALE

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY

E-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: HASSAN MANNAA
CALCULATED-DESIGNED BY: CH
CHECKED BY: CH
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 25-JAN-2011
TIME PLOTTED => 13:03

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	60	0.0/R6.9	38	58

REGISTERED CIVIL ENGINEER 7/22/10 DATE

1-3-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER CESAR HERNANDEZ No. E15805 Exp. 12/31/12 CIVIL STATE OF CALIFORNIA

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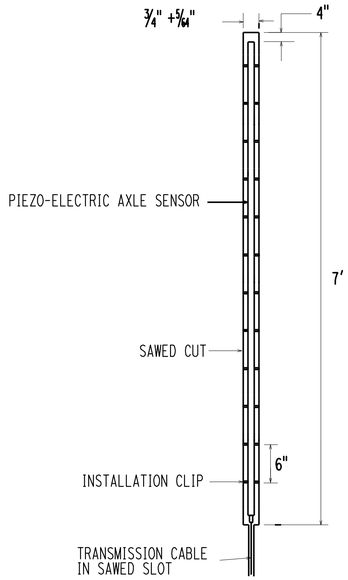
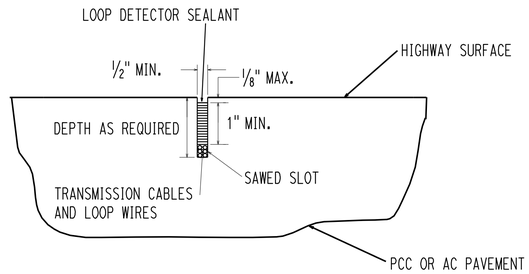
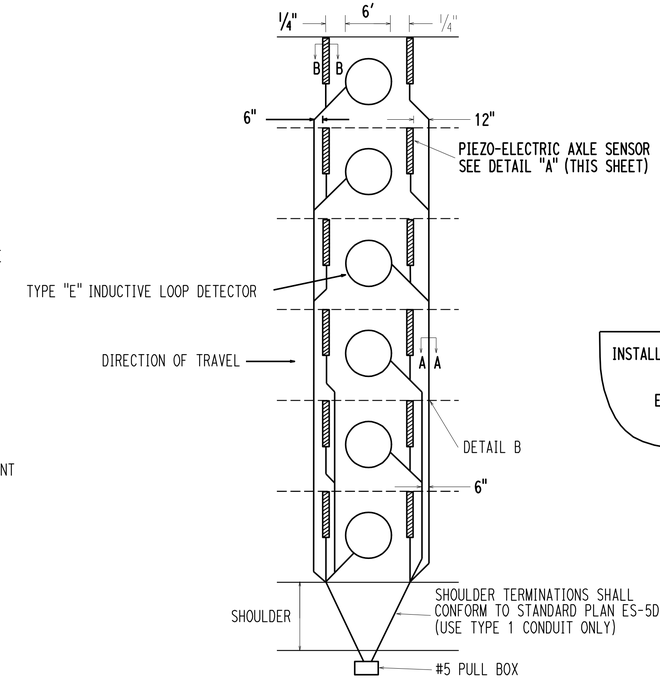


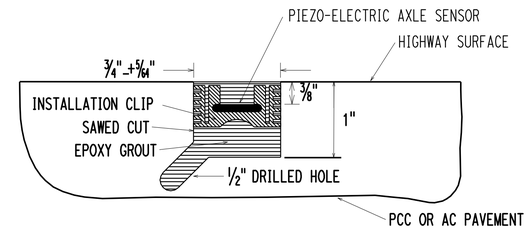
DETAIL "A"
NO SCALE



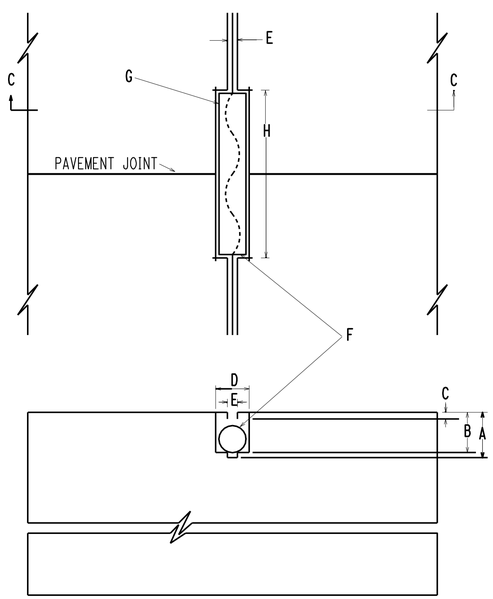
SECTION A-A
NO SCALE



TYPICAL AXLE SENSOR INSTALLATION
NO SCALE



SECTION B-B
NO SCALE



SECTION C-C

A. SAW CUT DEPTH TO ACCOMODATE SPECIFIED NUMBER OF CONDUCTORS WITH A MINIMUM OF 1" FROM TOP OF WIRE TO PAVEMENT SURFACE (3 1/4" MAX.).

B. SLOT SAW-CUT DEPTH TO ACCOMODATE 1" TYPE 3 CONDUIT WITH 1/2" MINIMUM FROM TOP OF CONDUIT TO PAVEMENT SURFACE.

C. 1/2" MINIMUM BETWEEN TOP OF CONDUIT AND PAVEMENT SURFACE.

D. SAW-CUT WIDTH TO ACCOMODATE 1" TYPE 3 CONDUIT WITH 1/8" CLEARANCE.

E. SAW-CUT 3/8" WIDE (MAX.).

F. 1" TYPE 3 CONDUIT, 6" LONG. PLUG BOTH ENDS WITH CAULKING COMPOUND TO KEEP OUT EPOXY.

G. CONDUCTORS WITH 1/2" MINIMUM SLACK INSIDE CONDUIT.

H. SAW-CUT LENGTH OF SLOT 1/8" LONGER THAN CONDUIT.

DETAIL B (TYPICAL LEAD-IN AT PAVEMENT JOINT)
NO SCALE

AXLE SENSOR INSTALLATION PROCEDURE

1. MARK THE POSITION OF THE AXLE SENSORS AS DIRECTED BY THE ENGINEER. AXLE SENSOR CHANNELS MUST BE PERPENDICULAR TO TRAFFIC.
2. MARK THE POSITION OF THE LOOP DETECTORS. THE DETECTORS SHALL BE CENTERED IN THE LANE AND BETWEEN THE AXLE SENSORS.
3. MARK THE HOME RUN CUTS AS SHOWN IN THE AXLE SENSOR INSTALLATION DETAIL.
4. USING A CONCRETE SAW CUT THE AXLE SENSOR CHANNELS 3/4" WIDE BY 1" DEEP IN A SINGLE PASS. CUTS SHALL BE STRAIGHT AND TRUE.
5. CUT THE LOOP DETECTORS AND HOME RUNS IN ACCORDANCE WITH CALTRANS SPECIFICATIONS.
6. DRILL 1/2" HOLES, 1" DEEP, AT A 45 DEGREE ANGLE AT THE BOTTOM CORNERS OF EACH CHANNEL. HOLES SHALL BE 12" APART AND ON ALTERNATING SIDES OF THE CHANNEL.
7. WASH OUT THE CHANNELS AND ALL SAW CUTS THOROUGHLY WITH HIGH PRESSURE WATER. DRY COMPLETELY WITH AN AIR COMPRESSOR. IN PCC PAVEMENT ONLY, WIPE OUT THE CHANNELS WITH LACQUER THINNER AND CLEAN COTTON RAGS.
8. PLACE 4" DUCT TAPE STRIPS ON THE PAVEMENT AROUND THE CHANNELS.
9. ENSURE THAT EACH SENSOR IS STRAIGHT AND FLAT. BEND EACH END DOWN SLIGHTLY AND PLACE THE INSTALLATION CLIPS ON THE SENSOR.
10. BLOCK OFF THE CABLE END OF THE CHANNEL WITH DUCT SEAL TO PREVENT THE GROUT FLOWING OUT OF THE CHANNEL.
11. PRE-MIX THE EPOXY GROUT UNTIL A UNIFORM CONSISTENCY IS OBTAINED, A MINIMUM OF 4 MINUTES, SCRAPING BOTH THE SIDES AND BOTTOM OF THE CONTAINER. ADD THE HARDENER POWDER AND MIX FOR 1 MINUTE.
12. WHILE WEARING PROTECTIVE GLOVES, HALF FILL THE CHANNEL WITH EPOXY GROUT. ENSURE THAT THE BOTTOM OF THE CHANNEL IS COMPLETELY COVERED, AND THAT THE HOLES DRILLED IN STEP 6 ARE FILLED.
13. PLACE THE SENSOR IN THE CHANNEL WITH THE BRASS ELEMENT 3/8" BELOW THE ROAD SURFACE, WITH NO VOIDS BENEATH THE SENSOR.
14. COMPLETELY FILL THE CHANNEL WITH GROUT. SMOOTH OUT THE GROUT ON TOP OF THE SENSOR TO ROAD LEVEL, WITH NO TROUGH ON TOP.
15. WHEN GROUT HAS BEGUN TO SET, REMOVE THE DUCT TAPE FROM THE PAVEMENT. REMOVE THE DUCT SEAL FROM THE END OF THE CHANNEL.
16. INSTALL THE LOOP DETECTORS AS PER CALTRANS SPECIFICATIONS.
17. INSTALL ALL LEAD-IN CABLES IN THE HOME RUN SLOTS, INSTALLING TYPE 3 CONDUIT AT THE EXPANSION JOINT CROSSINGS. PULL CABLES THROUGH STUB-OUT CONDUIT AND COIL IN PULL BOX.
18. SEAL ALL SAW CUTS. ELASTOMERIC SEALANT ONLY SHALL BE USED IN ALL CUTS CONTAINING SCREENED TRANSMISSION CABLE.
19. REMOVE ANY HIGH SPOTS IN THE EPOXY GROUT WITH A HAND GRINDER.
20. CLEAN UP THE SITE. WHEN ALL GROUT AND SEALANTS ARE COMPLETELY CURED, LANES MAY BE OPENED TO TRAFFIC.

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY

MODIFY AUTOMATIC VEHICLE CLASSIFICATION (DETAIL)

NO SCALE

E-5

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY	CHECKED BY
CH	CH

FUNCTIONAL SUPERVISOR: HASSAN MANNAA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN

LAST REVISION 00-00-00 | DATE PLOTTED => 25-JAN-2011 | TIME PLOTTED => 13:03

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	60	0.0/R6.9	39	58

REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

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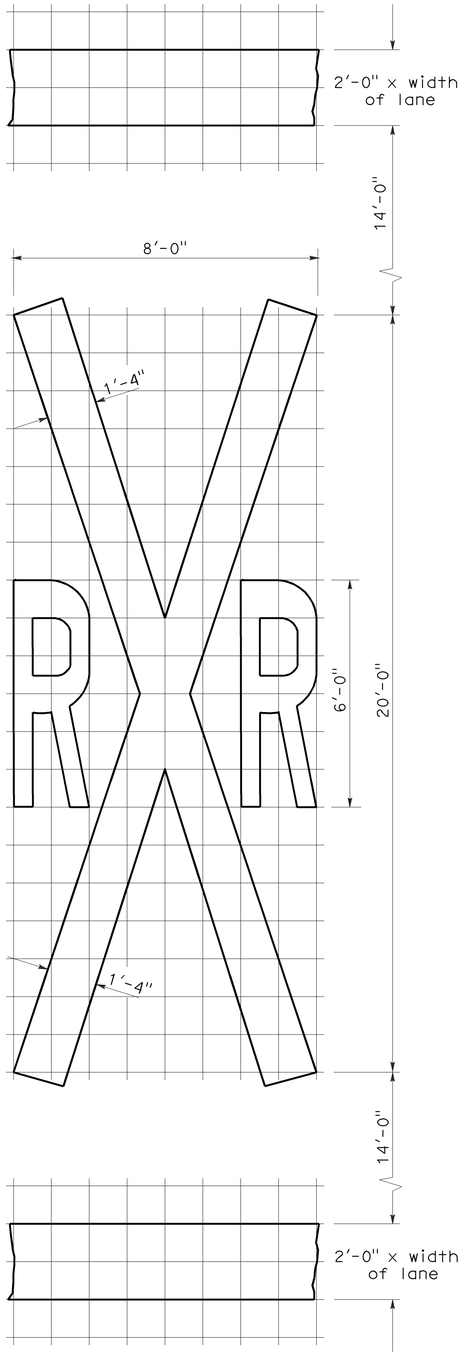
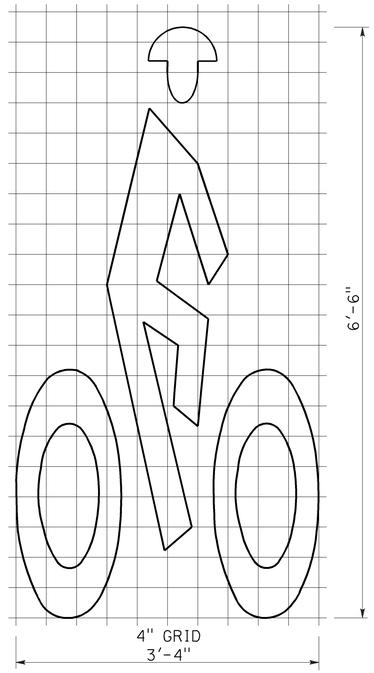
To accompany plans dated 1-3-11



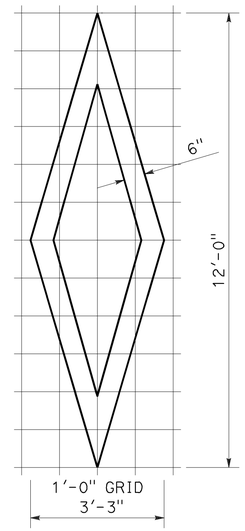
RAILROAD CROSSING SYMBOL

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



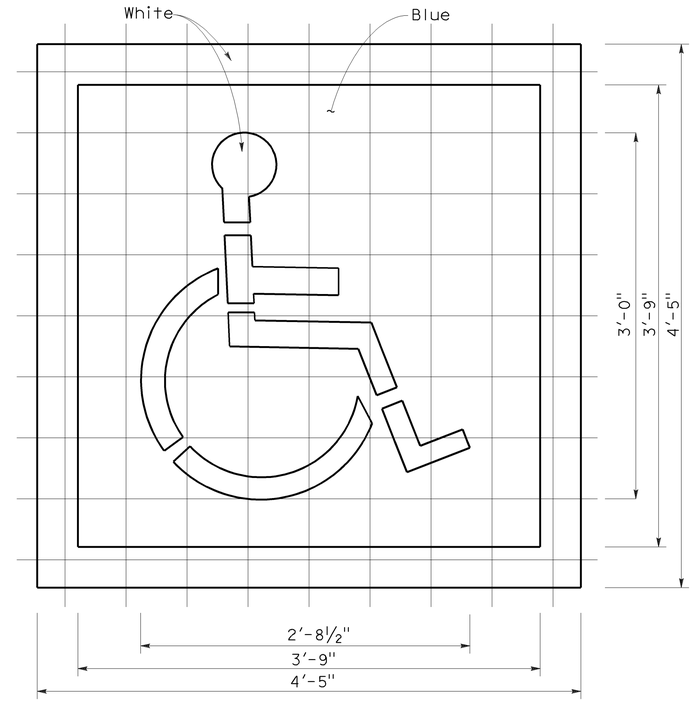
A=7 sq ft

BIKE LANE SYMBOL



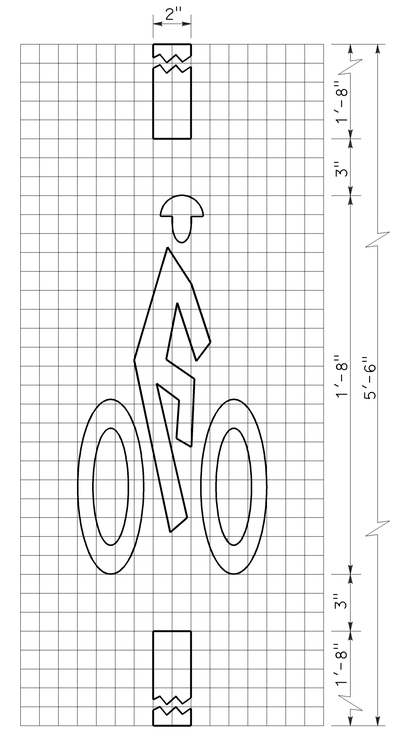
A=11 sq ft

DIAMOND SYMBOL



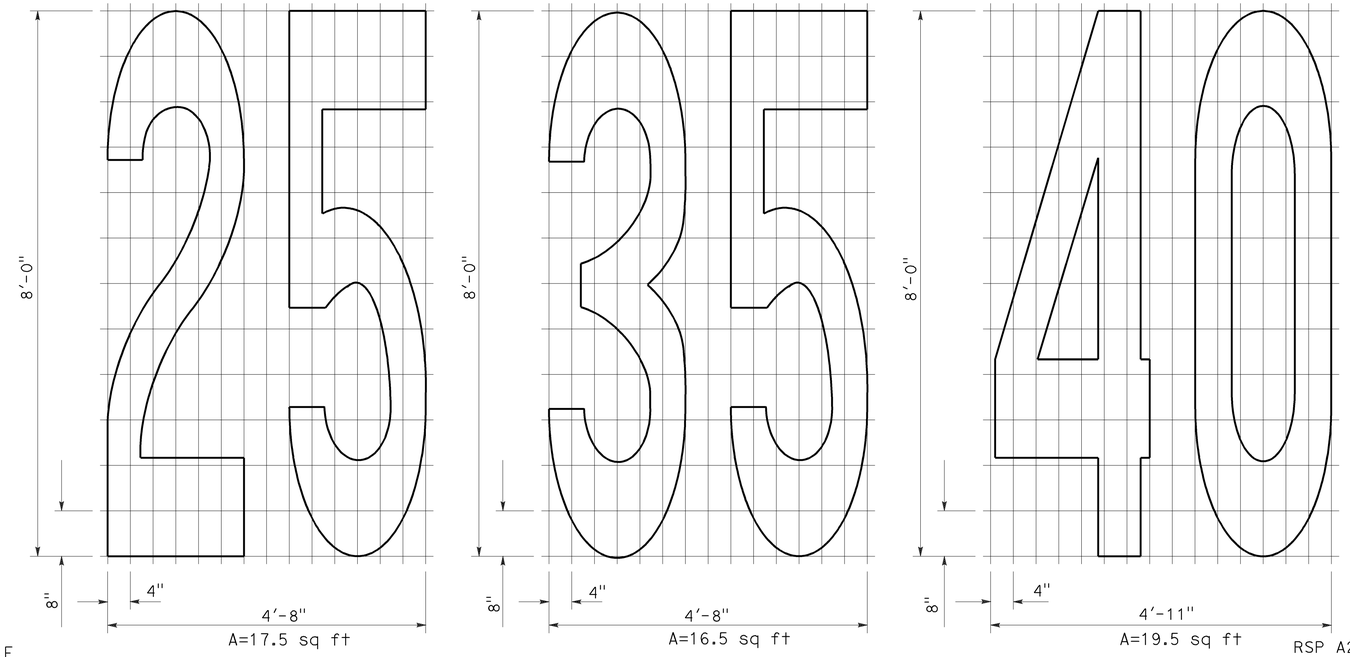
A (White) =9 sq ft
A (Blue) =14 sq ft

INTERNATIONAL SYMBOL OF ACCESSIBILITY MARKING



A=2 sq ft

BICYCLE LOOP DETECTOR SYMBOL



A=17.5 sq ft
A=16.5 sq ft
A=19.5 sq ft

NUMERALS

NOTE:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS SYMBOLS AND NUMERALS

NO SCALE

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

REVISED STANDARD PLAN RSP A24C

2006 REVISED STANDARD PLAN RSP A24C

5-27-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	60	0.0/R6.9	40	58

William K. Farnbach
REGISTERED CIVIL ENGINEER

May 15, 2009
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER William K. Farnbach No. C49042 Exp. 9-30-10 CIVIL STATE OF CALIFORNIA

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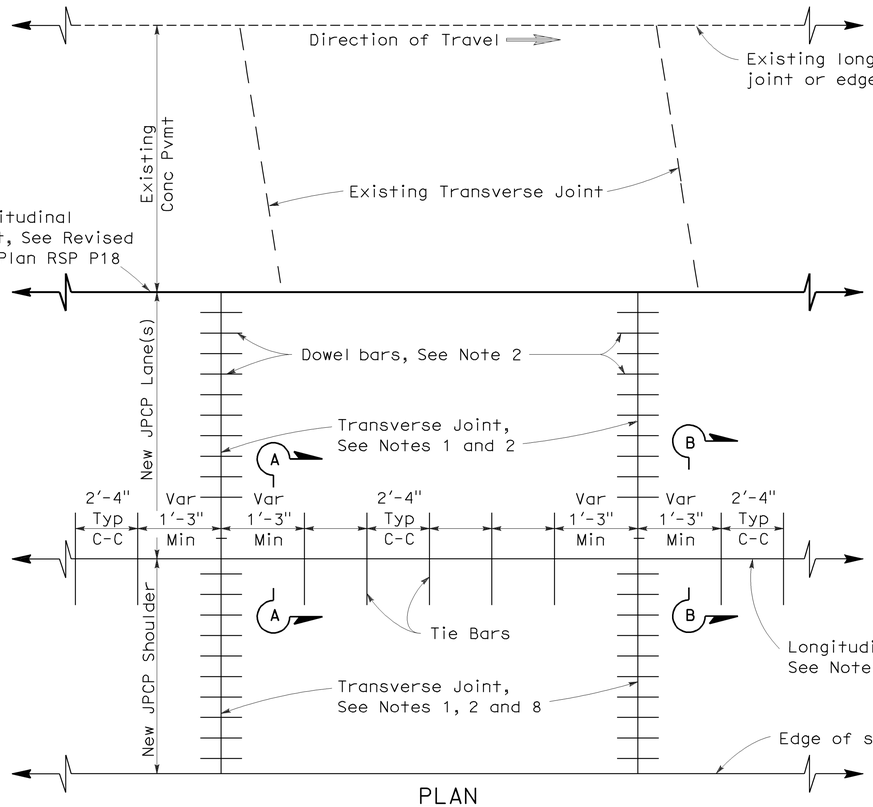
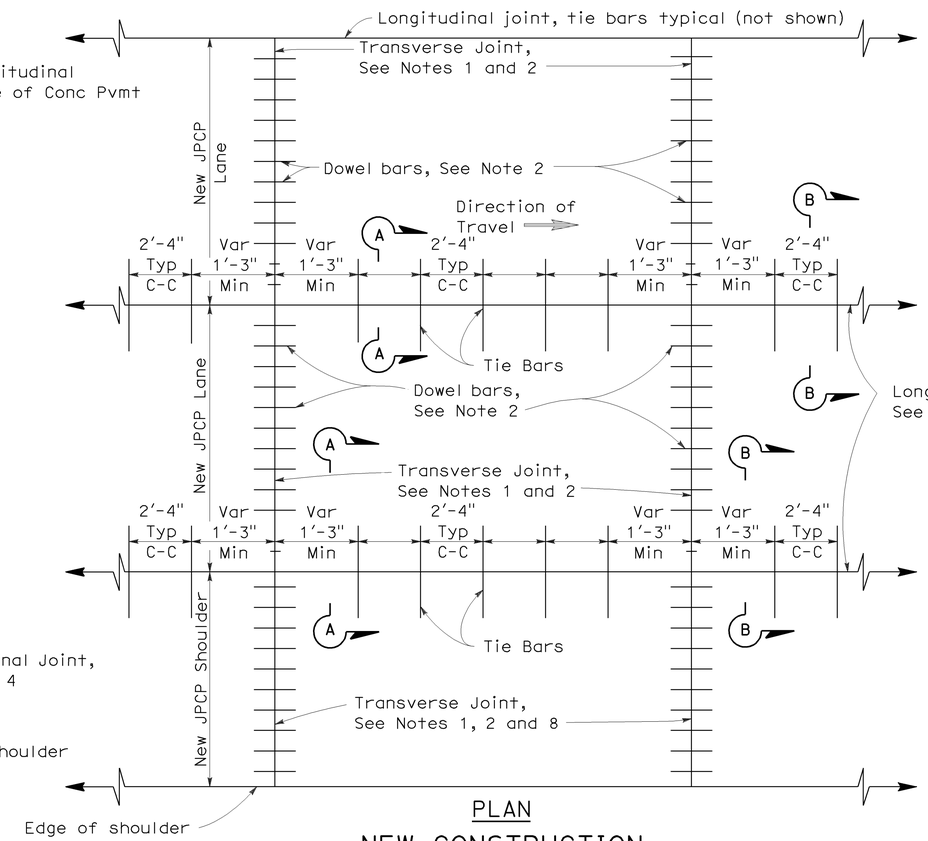
To accompany plans dated 1-3-11



PLAN

LANE/SHOULDER ADDITION OR RECONSTRUCTION

See Notes 6 and 7



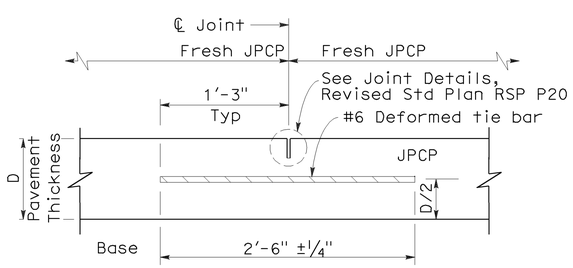
PLAN

NEW CONSTRUCTION

See Notes 6 and 7

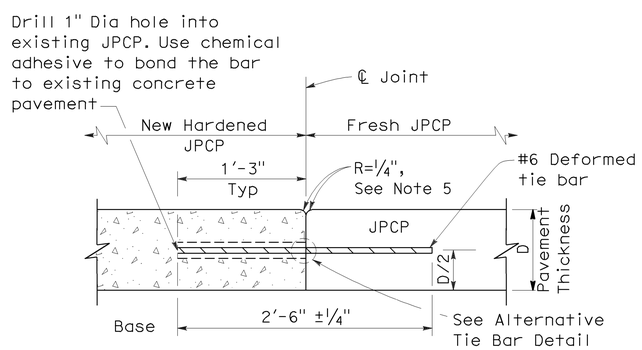
NOTES:

1. Transverse joints shall be constructed at right angles to the longitudinal pavement joints in new jointed plain concrete pavement and spaced at successive repeated intervals of 12', 15', 13' and 14'.
2. For transverse joint and dowel bar details not shown, See Revised Standard Plan RSP P10.
3. Construct longitudinal contraction joints as shown in Section A-A when more than one lane or shoulder widths are placed at one time. If constructing one lane at a time, use longitudinal construction joint, as shown in Section B-B.
4. For additional longitudinal joint details, see Revised Standard Plan RSP P18.
5. If fresh concrete is placed adjacent to existing concrete, the top corner of the new hardened concrete does not need to be rounded to the 1/4" radius as shown.
6. Joint spacing patterns do not apply to intersections.
7. Details can also apply to inside widening.
8. Dowel bars may be omitted from shoulders when the shoulder cross slope is not the same as the adjacent traffic lane.



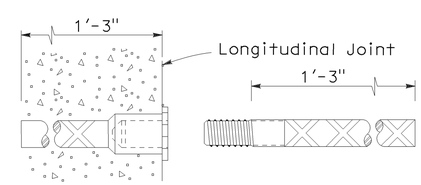
SECTION A-A

LONGITUDINAL CONTRACTION JOINT



SECTION B-B

LONGITUDINAL CONSTRUCTION JOINT



ALTERNATIVE TIE BAR SPLICE DETAIL

(Splice Coupler)

TIE BAR DETAILS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

JOINTED PLAIN CONCRETE PAVEMENT

NO SCALE

RSP P1 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P1
DATED MAY 1, 2006 - PAGE 119 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P1

2006 REVISED STANDARD PLAN RSP P1

5-8-09

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	60	0.0/R6.9	41	58

William K. Farnbach
REGISTERED CIVIL ENGINEER

June 5, 2009
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
William K. Farnbach
No. C49042
Exp. 9-30-10
CIVIL
STATE OF CALIFORNIA

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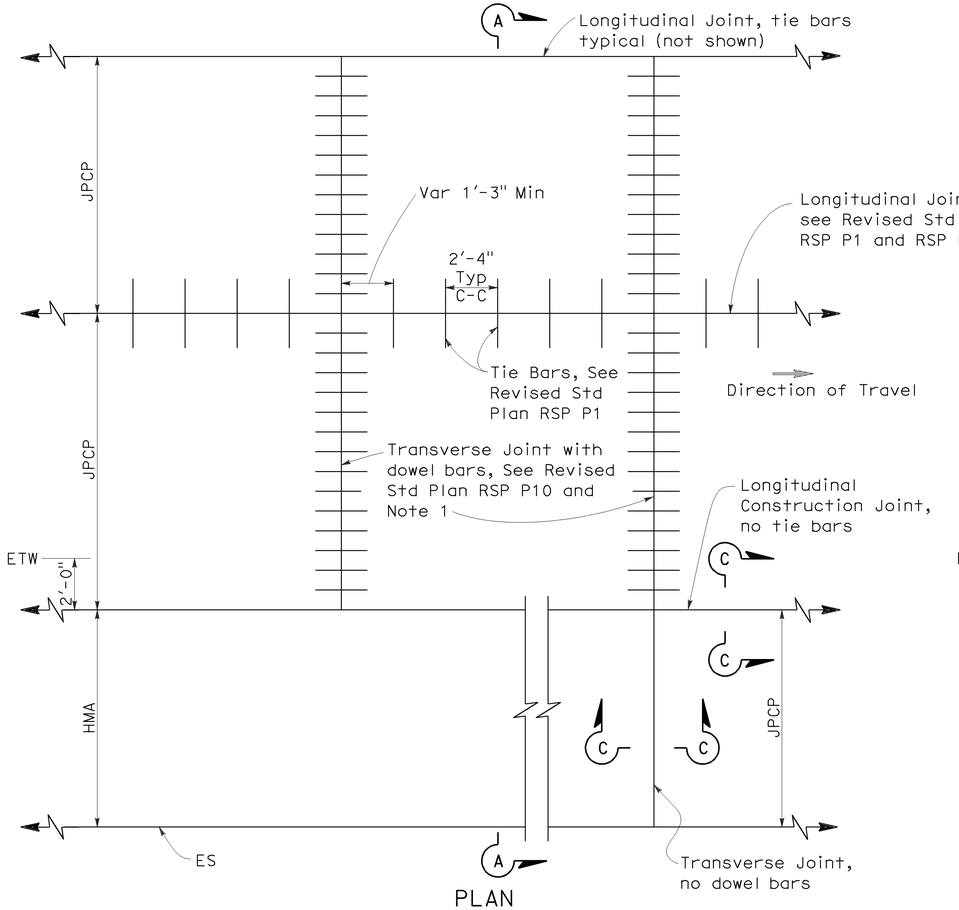
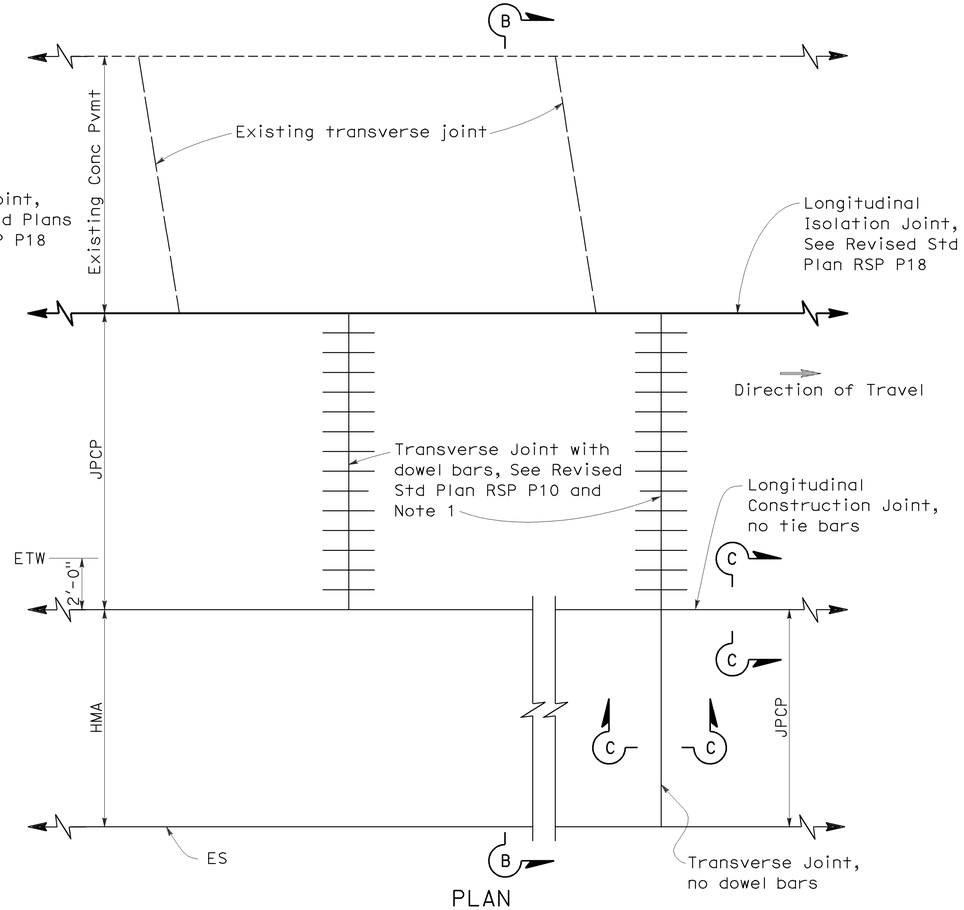
To accompany plans dated 1-3-11



PLAN

NEW CONSTRUCTION

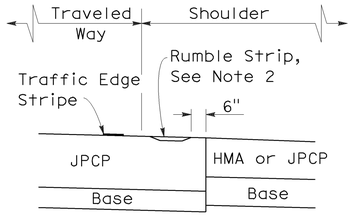


PLAN

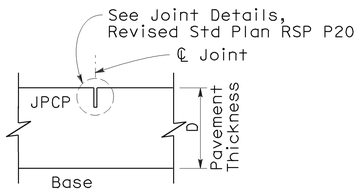
LANE/SHOULDER ADDITION OR RECONSTRUCTION

NOTES:

1. Transverse joints shall be constructed at right angles to the longitudinal pavement joints in new Jointed Plain Concrete Pavement and spaced at successive repeated intervals of 12', 15', 13' and 14'.
2. For locations of rumble strips, see project plans. For rumble strip details not shown, see Standard Plans A40A and A40B.
3. Joint spacing patterns do not apply to intersections.



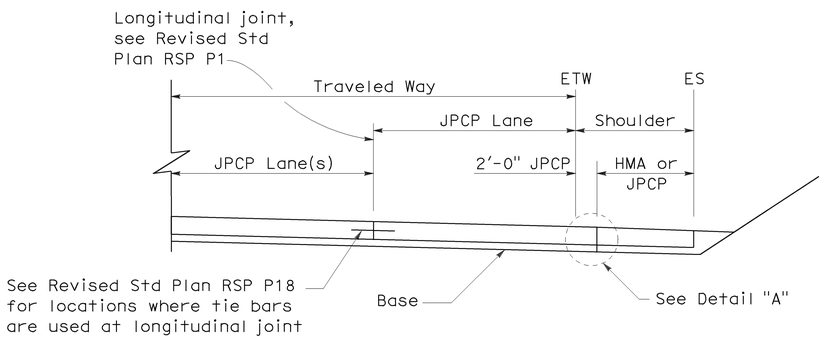
DETAIL "A"



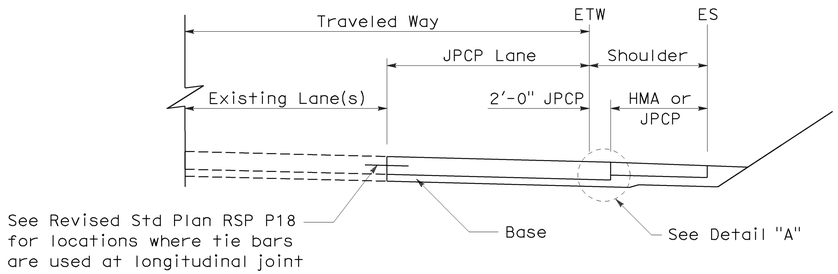
SECTION C-C

TRANSVERSE/LONGITUDINAL JOINT

(no dowel bars/tie bars)



SECTION A-A



SECTION B-B

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

JOINTED PLAIN CONCRETE PAVEMENT-WIDENED SLAB DETAILS

NO SCALE

RSP P2 DATED JUNE 5, 2009 SUPERCEDES STANDARD PLAN P2
DATED MAY 1, 2006 - PAGE 120 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P2

2006 REVISED STANDARD PLAN RSP P2

5-19-09

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	60	0.0/R6.9	42	58

William K. Farnbach
REGISTERED CIVIL ENGINEER

May 15, 2009
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER William K. Farnbach No. C49042 Exp. 9-30-10 CIVIL STATE OF CALIFORNIA

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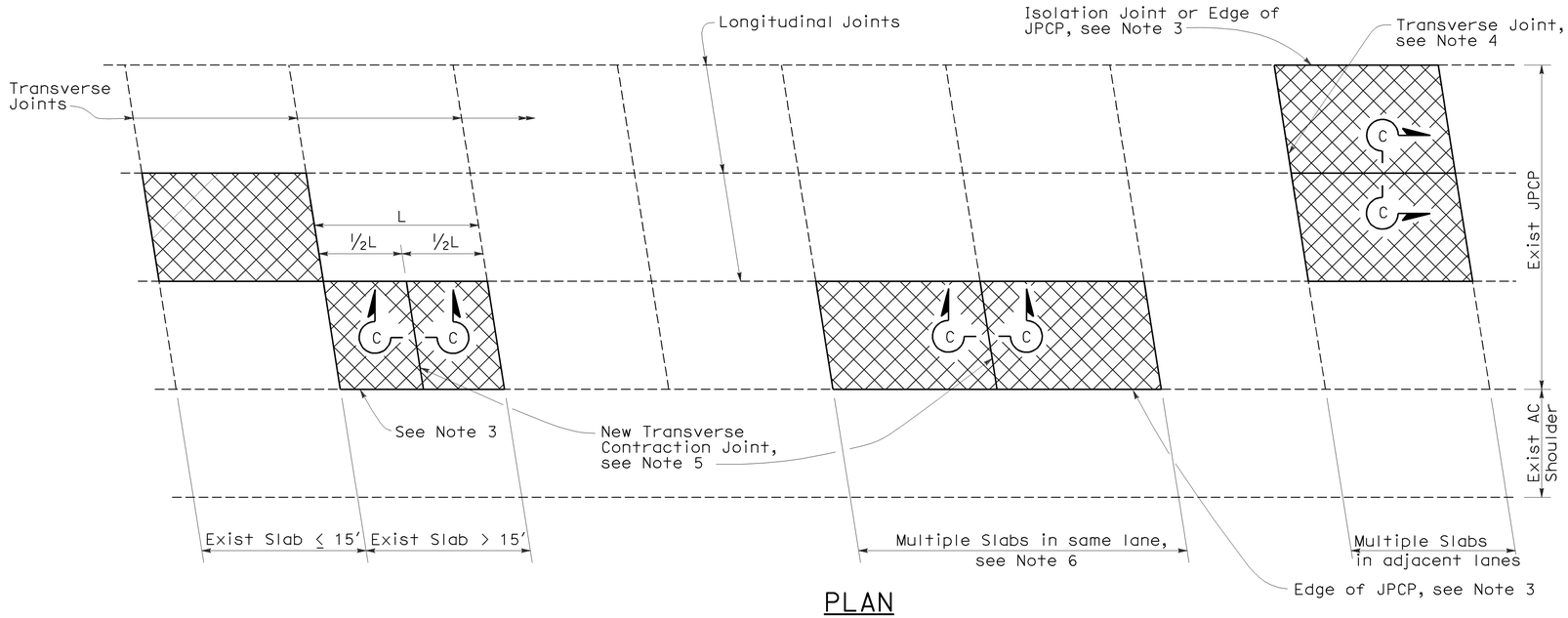
To accompany plans dated 1-3-11



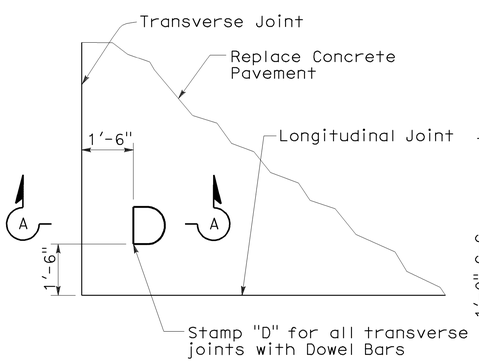
PLAN

NOTES:

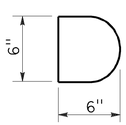
1. For details not shown, see Revised Standard Plan RSP P10.
2. Where the existing outer shoulder pavement is asphalt concrete pavement, the "a" dimension shall be 1′-0" and the "b" dimension shall be 2′-0".
3. Side forms shall be used where edge of pavement is adjacent to asphalt concrete.
4. For detail, see Transverse Construction Joint for existing concrete pavement detail on Revised Standard Plan RSP P10.
5. Transverse joint to match skew of existing joint. Omit dowel bars.
6. This Standard Plan only applicable when replacing multiple slabs in the same lane is less than 100′.

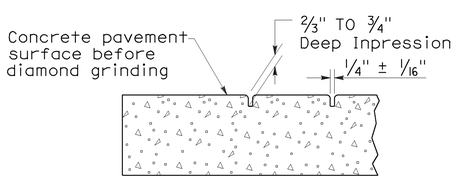
LEGEND

Replace Concrete Pavement (See Slab Layout Detail)

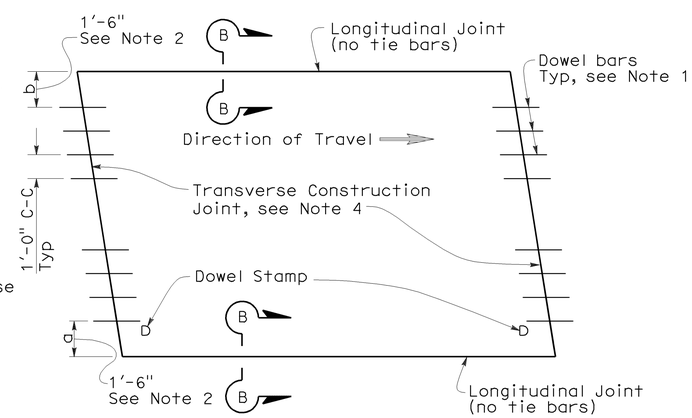


DOWEL STAMP DETAIL

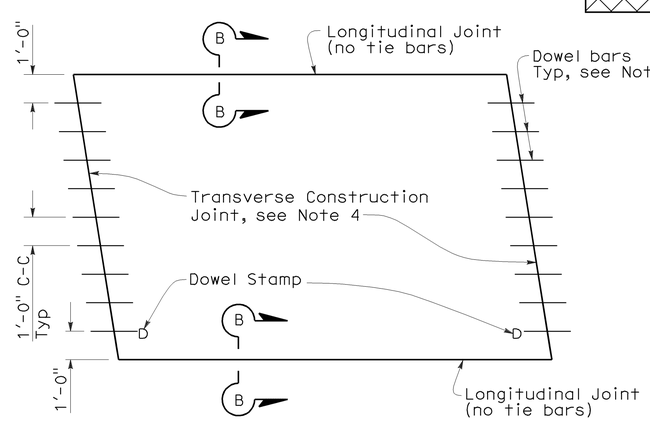




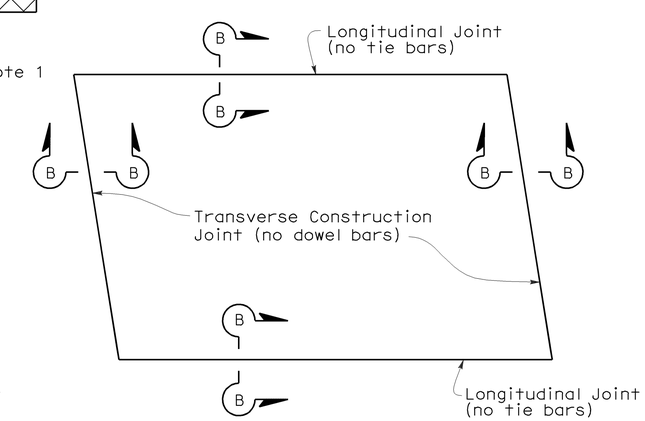
SECTION A-A



TYPE I
(traffic lane lines match longitudinal joints)

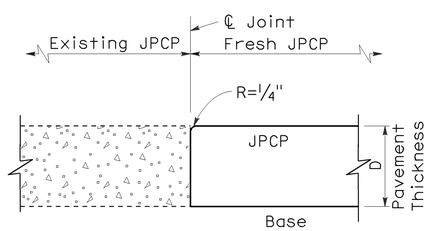


TYPE II
(traffic lane lines do not match longitudinal joints)

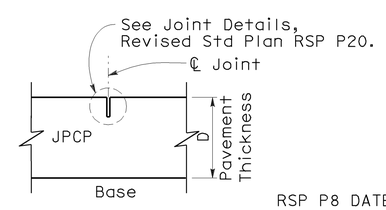


TYPE III
(for short term repairs < 5 yrs design life or for slab replacements with a cracking and seating operation)

SLAB LAYOUT



SECTION B-B



SECTION C-C

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

JOINTED PLAIN CONCRETE PAVEMENT-INDIVIDUAL SLAB REPLACEMENT

NO SCALE

RSP P8 DATED MAY 15, 2009 SUPERSEDES RSP P8 DATED SEPTEMBER 1, 2006 AND STANDARD PLAN P8 DATED MAY 1, 2006 - PAGE 123 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P8

2006 REVISED STANDARD PLAN RSP P8

5-8-09

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	60	0.0/R6.9	43	58

William K. Farnbach
REGISTERED CIVIL ENGINEER

May 15, 2009
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER William K. Farnbach No. C49042 Exp. 9-30-10 CIVIL STATE OF CALIFORNIA

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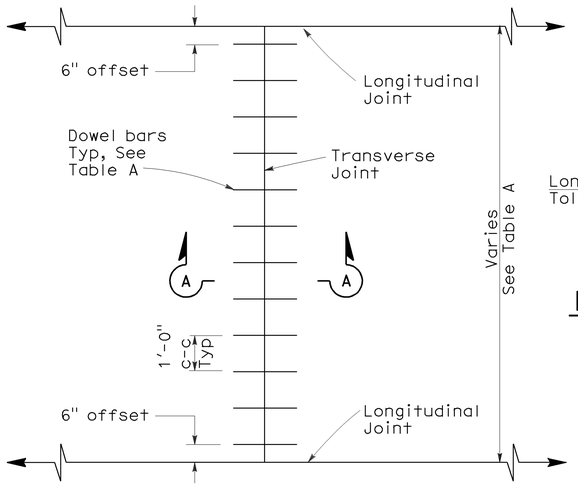
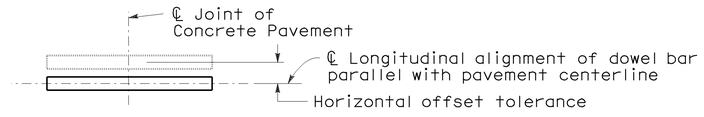
To accompany plans dated 1-3-11

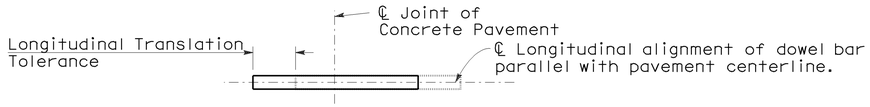


TRANSVERSE JOINT DOWEL BAR LAYOUT



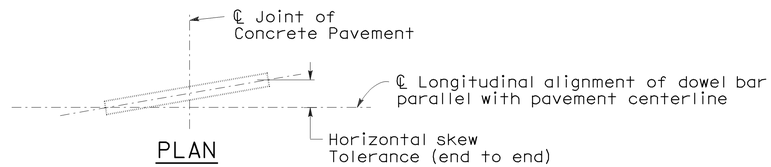
PLAN

HORIZONTAL OFFSET TOLERANCE



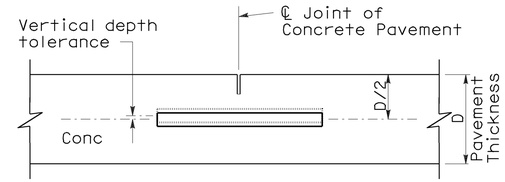
PLAN

LONGITUDINAL TRANSLATION TOLERANCE



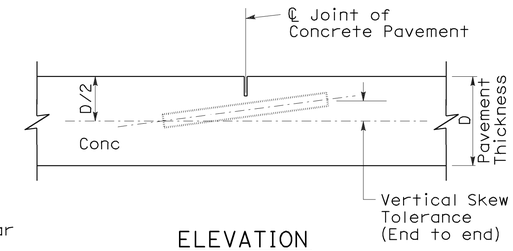
PLAN

HORIZONTAL SKEW TOLERANCE



ELEVATION

VERTICAL DEPTH TOLERANCE



ELEVATION

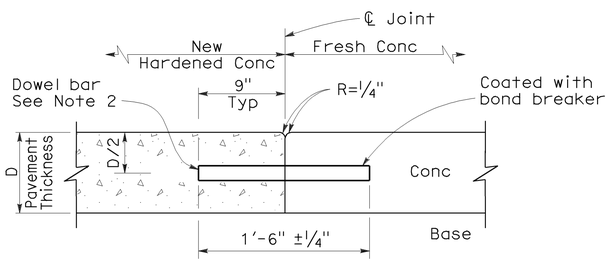
VERTICAL SKEW TOLERANCE

NOTES:

1. See Revised Standard Plan RSP P1 for typical dowel bar placement and locations.
2. 1½" Dia smooth dowel bars are to be used with a pavement thickness, D, equal to or greater than 0.70 feet. For pavement thickness, D, less than 0.70 feet, use 1¼" Dia smooth dowel bars.
3. For widths not shown, see Project Plans.
4. If fresh concrete pavement is placed adjacent to existing concrete pavement, the top corner of the existing concrete pavement does not need to be rounded to the ¼" radius, as shown.

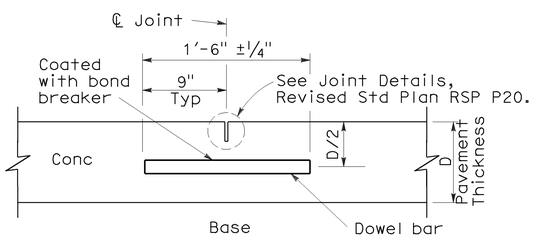
TABLE A (See Note 3)

Dowel Bar Transverse Spacing Table	
Width between Longitudinal Joints	Number of Dowels between Longitudinal Joints
14'-0"	14
13'-0"	13
12'-0"	12
11'-0"	11
10'-0"	10
8'-0"	8
5'-0"	5
4'-0"	4

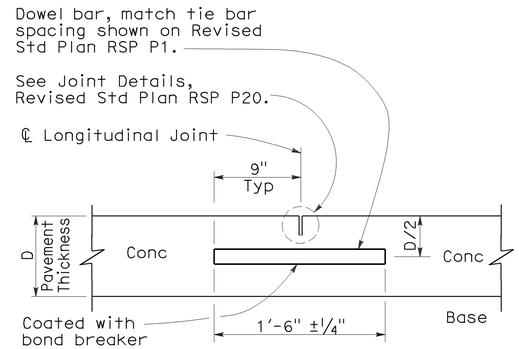


SECTION A-A

TRANSVERSE CONSTRUCTION JOINT DETAIL

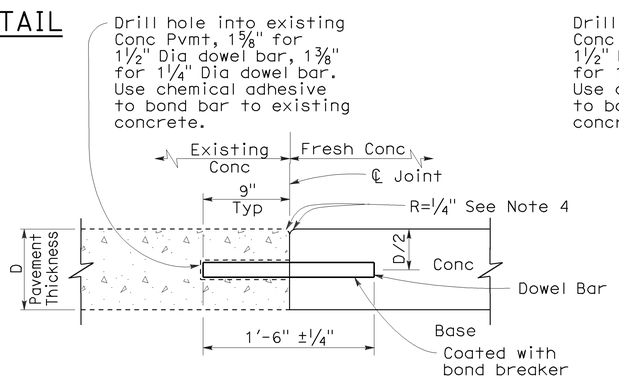


TRANSVERSE CONTRACTION JOINT



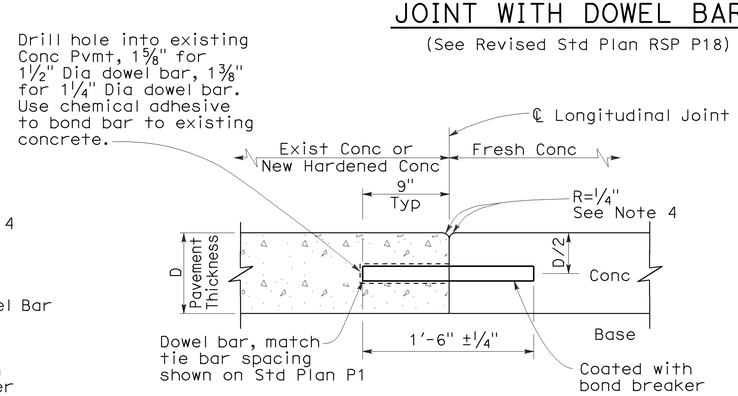
LONGITUDINAL CONTRACTION JOINT WITH DOWEL BARS

(See Revised Std Plan RSP P18)



TRANSVERSE CONSTRUCTION JOINT FOR EXISTING CONCRETE PAVEMENT

(Drill and bond locations)



LONGITUDINAL CONSTRUCTION JOINT WITH DOWEL BARS

(See Revised Std Plan RSP P18)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CONCRETE PAVEMENT-DOWEL BAR DETAILS

NO SCALE

RSP P10 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P10 DATED MAY 1, 2006 - PAGE 124 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P10

2006 REVISED STANDARD PLAN RSP P10

5-8-09

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	60	0.0/R6.9	44	58

William K. Farnbach
REGISTERED CIVIL ENGINEER

May 15, 2009
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
William K. Farnbach
No. C49042
Exp. 9-30-10
CIVIL
STATE OF CALIFORNIA

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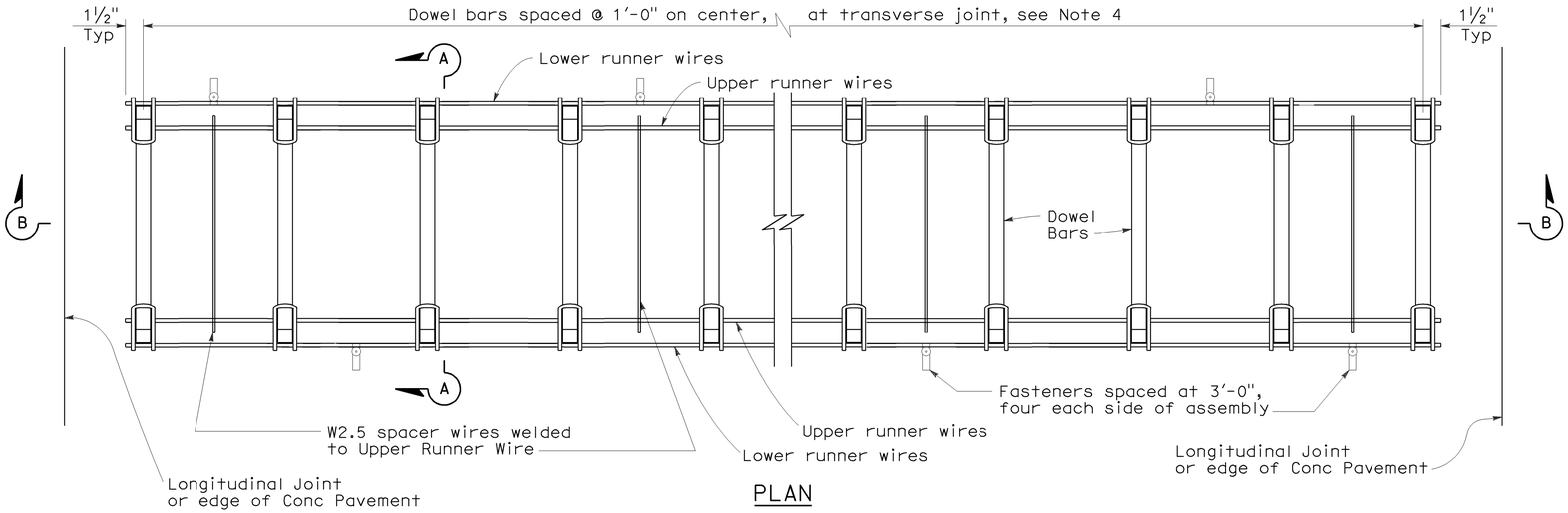
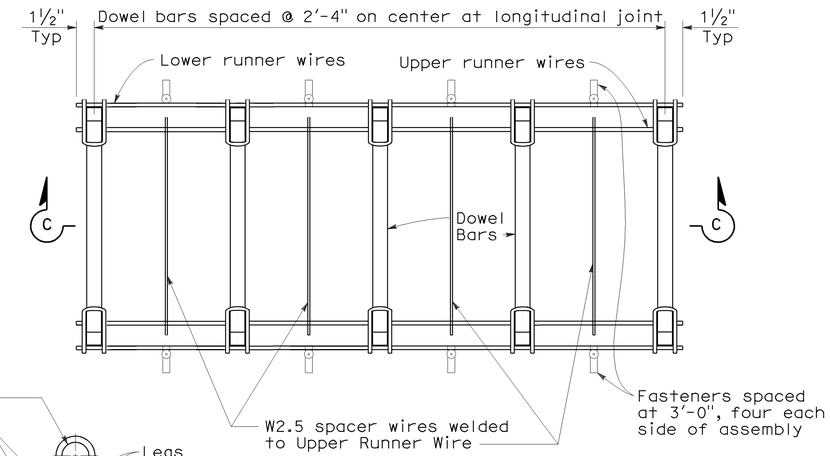
To accompany plans dated 1-3-11



PLAN

DOWEL BAR BASKET (TRANSVERSE JOINT)

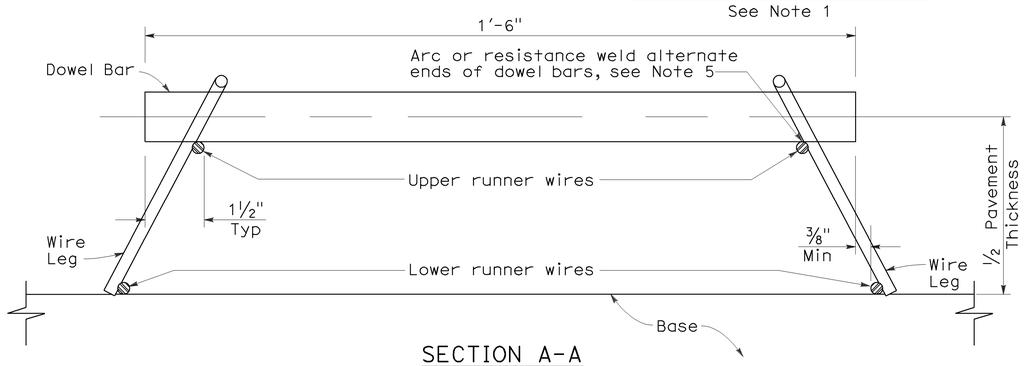
See Note 1



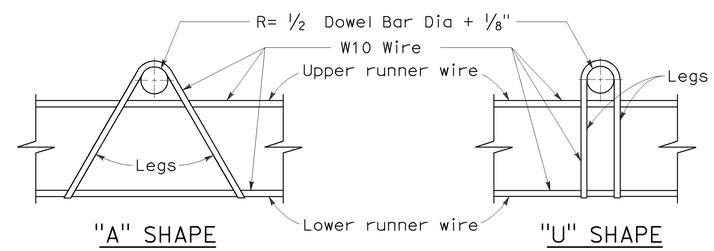
PLAN

DOWEL BAR BASKET (LONGITUDINAL JOINT)

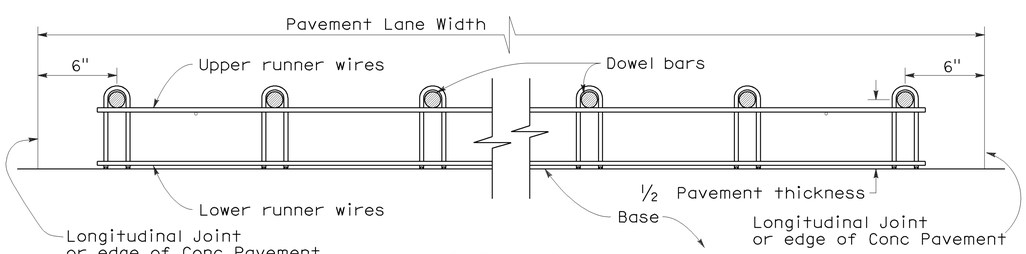
See Note 1



SECTION A-A

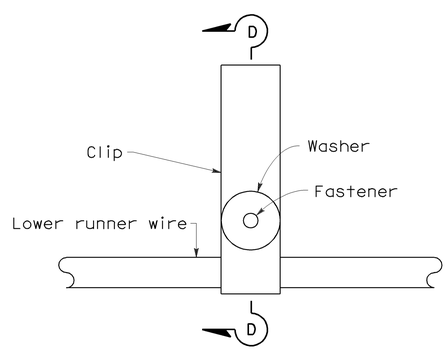


ASSEMBLY FRAME DETAILS

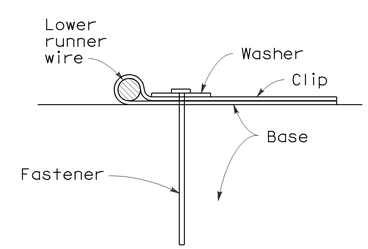


SECTION B-B

See Note 1

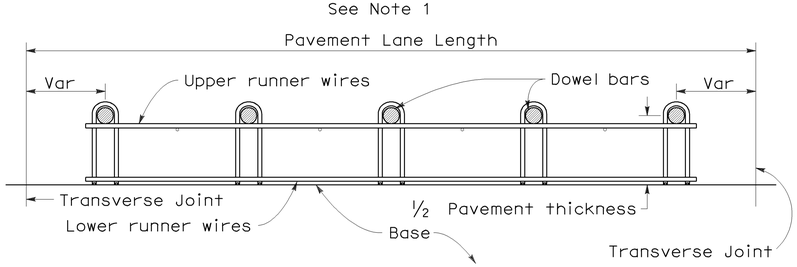


PLAN



SECTION D-D

FASTENER DETAIL



SECTION C-C

See Notes 1 and 4

NOTES:

1. "U" frame shape assembly shown. "U" frame shape or "A" frame shape are acceptable.
2. Wire sizes shown are minimum required.
3. All wire intersections are to be resistance welded.
4. Use tie bar spacing for longitudinal dowel bar locations. See Revised Std Plans RSPs P1, P2, and P3 for tie bar requirements.
5. Weld may be at top or bottom of dowel bar.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CONCRETE PAVEMENT-DOWEL BAR BASKET DETAILS

NO SCALE

RSP P12 DATED MAY 15, 2009 SUPERSEDES RSP P12 DATED NOVEMBER 17, 2006 AND STANDARD PLAN P12 DATED MAY 1, 2006 - PAGE 125 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P12

2006 REVISED STANDARD PLAN RSP P12

5-8-09

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	60	0.0/R6.9	45	58

William K. Farnbach
REGISTERED CIVIL ENGINEER

June 5, 2009
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
William K. Farnbach
No. C49042
Exp. 9-30-10
CIVIL
STATE OF CALIFORNIA

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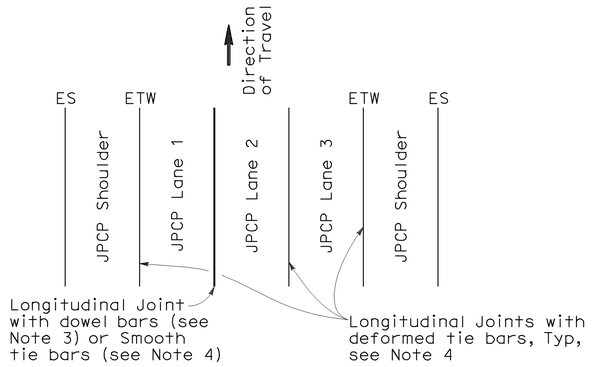
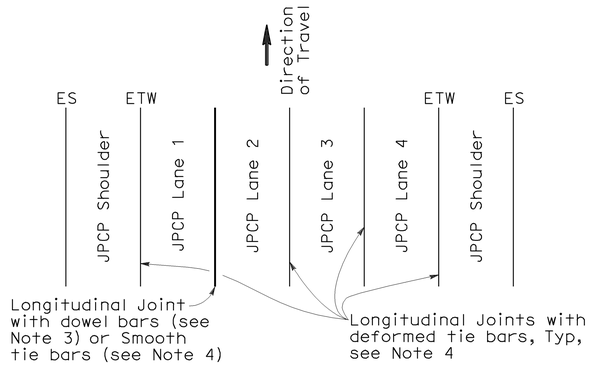
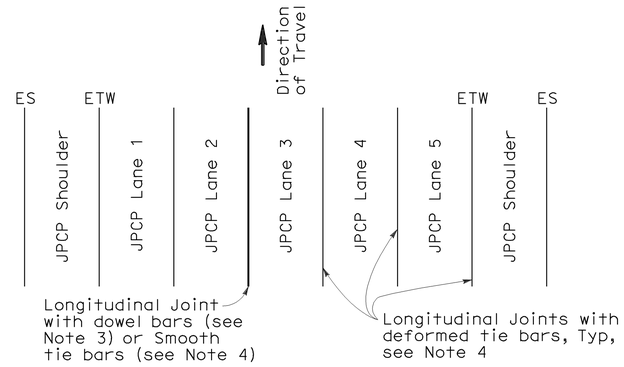
To accompany plans dated 1-3-11



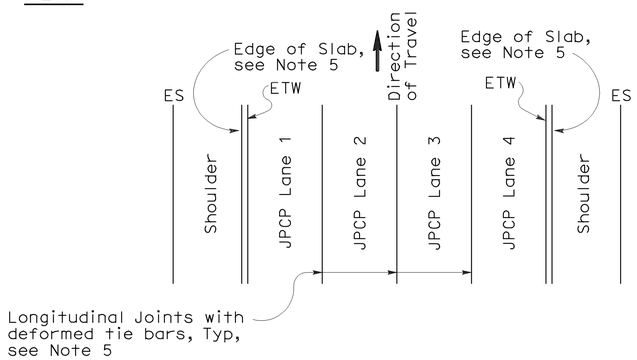
3 LANES WITH TIED CONCRETE SHOULDERS
PLAN



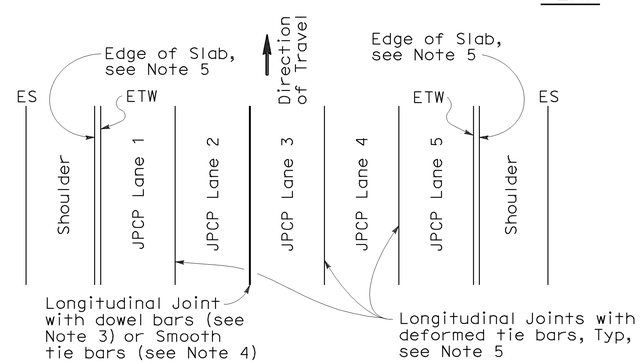
4 LANES WITH TIED CONCRETE SHOULDERS
PLAN



5 LANES WITH TIED CONCRETE SHOULDERS
PLAN



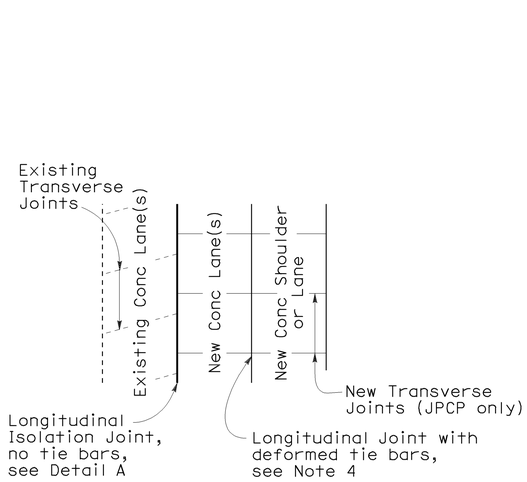
4 LANES OR LESS WITH WIDENED SLAB
PLAN



5 LANES WITH WIDENED SLAB
PLAN

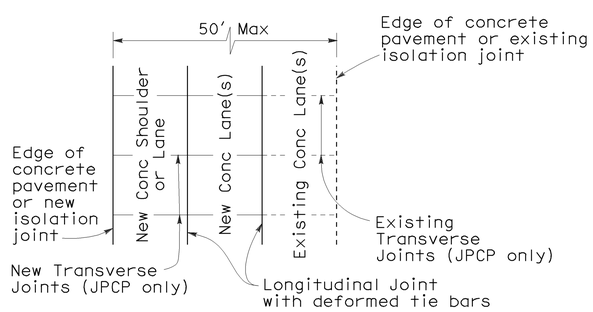
NEW CONSTRUCTION

Location of Longitudinal Joints
(For JPCP)



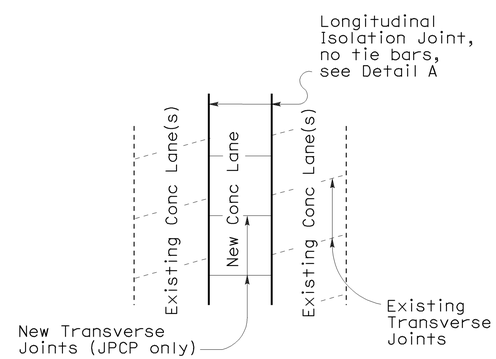
CASE 1
PLAN

Transverse Joints do not align between new and existing



CASE 2
PLAN

Transverse Joints align between new and existing



CASE 3 (INTERIOR LANE REPLACEMENT)
PLAN

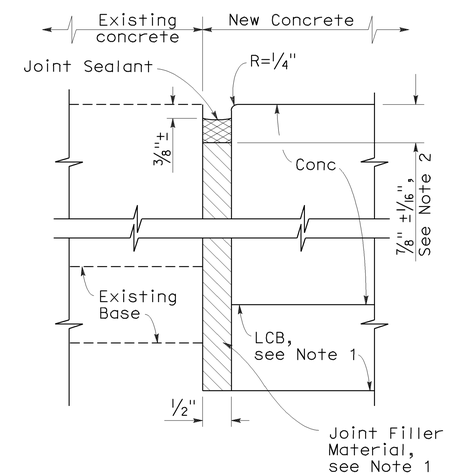
Transverse Joints do not align between new and existing

LANE/SHOULDER ADDITION OR RECONSTRUCTION

(For JPCP and CRCP)

NOTES:

1. Where Lean Concrete Base is not used as base material, the joint filler material used for the longitudinal isolation joint shall only extend to the bottom of the new concrete slab. See Detail A.
2. Use 5/8" ±1/16" dimension for silicone sealant.
3. See Revised Standard Plan RSP P10 for longitudinal joint with dowel bars.
4. See Revised Standard Plan RSP P1.
5. See Revised Standard Plan RSP P2.



DETAIL A

ISOLATION JOINT

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CONCRETE PAVEMENT-LANE SCHEMATICS AND ISOLATION JOINT DETAIL

NO SCALE

RSP P18 DATED JUNE 5, 2009 SUPERSEDES RSP P18 DATED MAY 15, 2009, RSP P18 DATED NOVEMBER 17, 2006 AND STANDARD PLAN P18 DATED MAY 1, 2006 - PAGE 127 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P18

2006 REVISED STANDARD PLAN RSP P18

5-14-09

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	60	0.0/R6.9	46	58

William K. Farnbach
REGISTERED CIVIL ENGINEER

May 15, 2009
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER William K. Farnbach No. C49042 Exp. 9-30-10 CIVIL STATE OF CALIFORNIA

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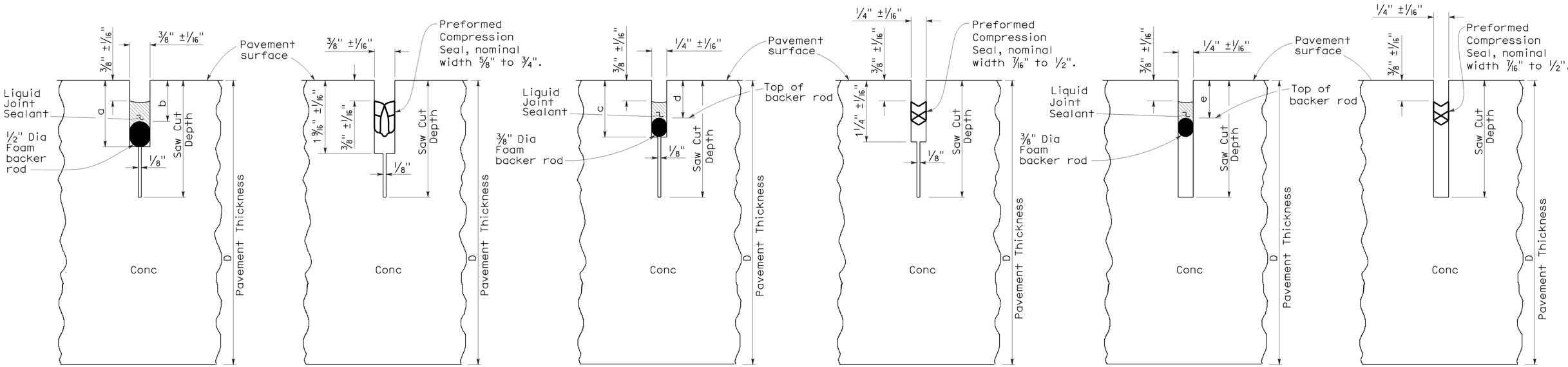
To accompany plans dated 1-3-11

2006 REVISED STANDARD PLAN RSP P20

NOTE:

1. Tie bars, dowel bars, and reinforcement are not shown in joint seal details, see Revised Standard Plans RSP P1, RSP P3, RSP P10, RSP P35, RSP P45, or RSP P46 as applicable.



LIQUID SEALANT — COMPRESSION SEAL

TYPE A1

Transverse Contraction Joints

LIQUID SEALANT — COMPRESSION SEAL

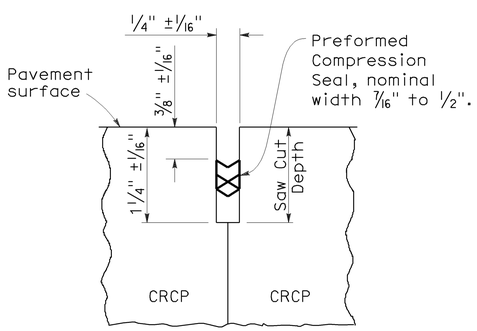
TYPE A2

Longitudinal Contraction Joints

LIQUID SEALANT — COMPRESSION SEAL

TYPE B

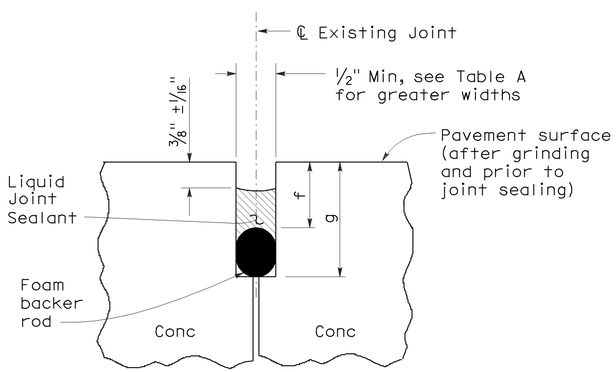
Longitudinal or Transverse Contraction Joint



COMPRESSION SEAL

TYPE C

Transverse and Longitudinal Construction Joints (For CRCP)



LIQUID SEALANT

TYPE R

Retrofit Transverse and Longitudinal Joints

LIQUID SEALANT RESERVOIR DEPTH

LIQUID SEALANT MATERIAL	3/8" Joint Width Type A1		1/4" Joint Width Type A2		1/4" Joint Width Type B
	DIMENSION		DIMENSION		DIMENSION
	a	b	c	d	e
SILCONE	1" ±1/16"	5/8" ±1/16"	15/16" ±1/16"	9/16" ±1/16"	9/16" ±1/16"
ASPHALT RUBBER	1 3/16" ±1/16"	3/4" ±1/16"	1 1/16" ±1/16"	11/16" ±1/16"	11/16" ±1/16"

TABLE A (TYPE R JOINT)

Sawn Joint Width	Backer Rod Diameter ± 1/16"	DIMENSION "f"	DIMENSION "g"
1"	1 5/16"	7/8"	2 1/4"
7/8"	1 3/16"	13/16"	2"
3/4"	1"	3/4"	1 3/4"
5/8"	7/8"	11/16"	1 1/2"
1/2"	11/16"	5/8"	1 1/4"

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CONCRETE PAVEMENT-JOINT DETAILS

NO SCALE

RSP P20 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P20
DATED MAY 1, 2006 - PAGE 128 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P20

5-8-09

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	60	0.0/R6.9	47	58

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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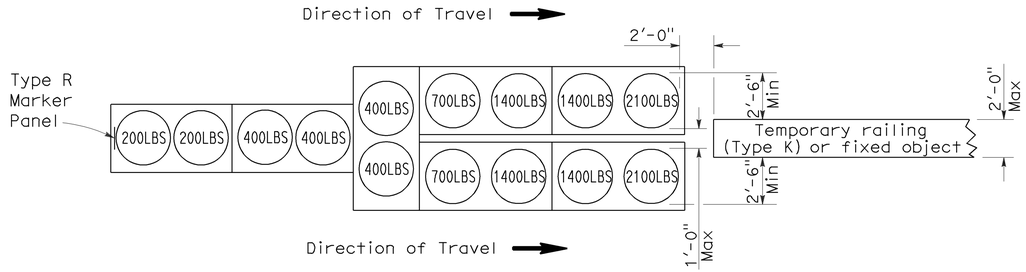
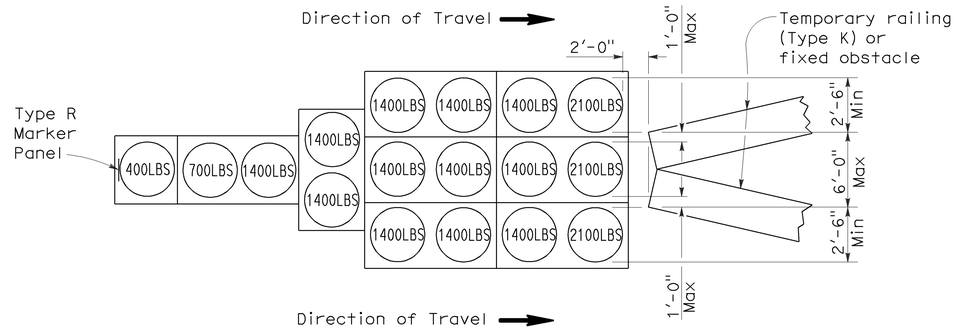
To accompany plans dated 1-3-11



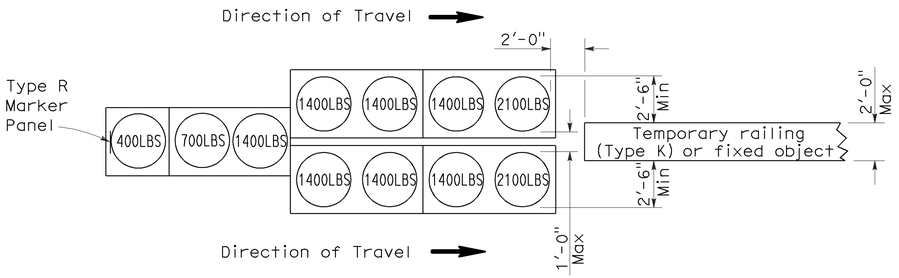
ARRAY 'TU14'

Approach speed 45 mph or more



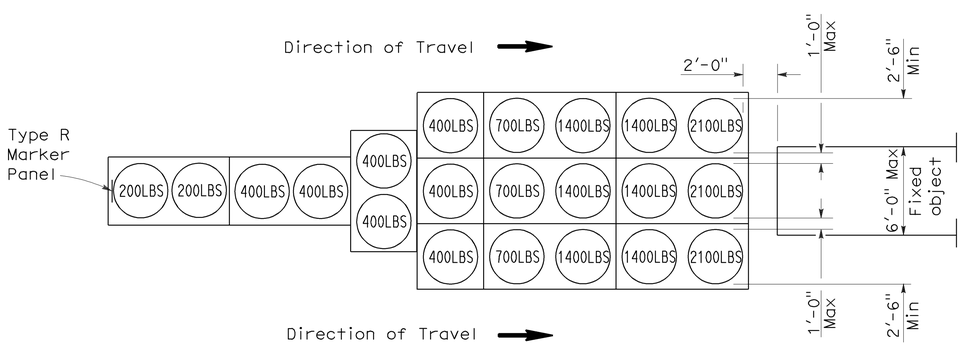
ARRAY 'TU17'

Approach speed less than 45 mph



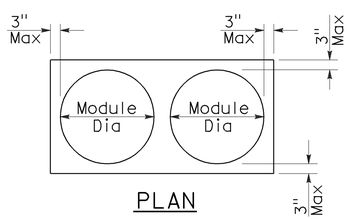
ARRAY 'TU11'

Approach speed less than 45 mph

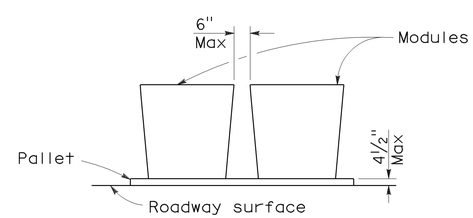


ARRAY 'TU21'

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	60	0.0/R6.9	48	58

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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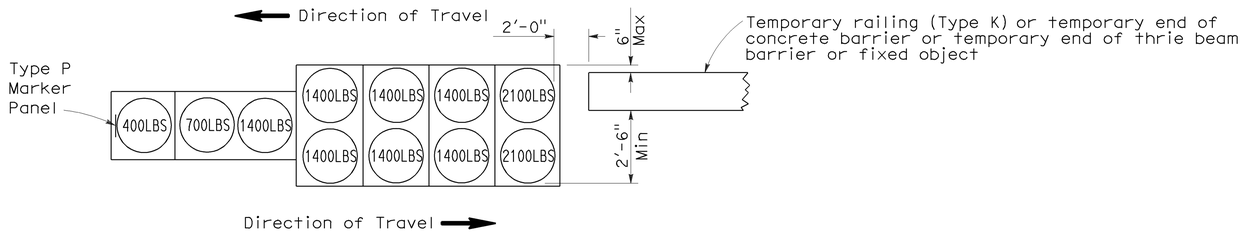
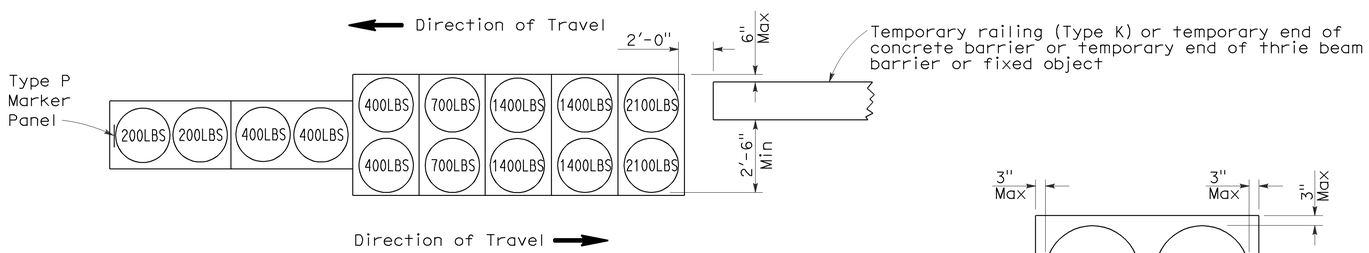
To accompany plans dated 1-3-11



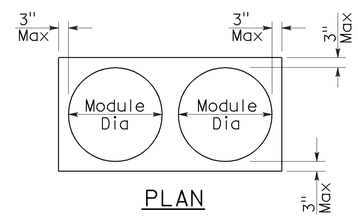
ARRAY 'TB11'

Approach speed less than 45 mph

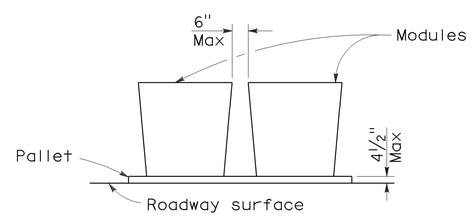


ARRAY 'TB14'

Approach speed 45 mph or more



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY CRASH CUSHION, SAND FILLED (BIDIRECTIONAL)

NO SCALE

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

REVISED STANDARD PLAN RSP T1B

2006 REVISED STANDARD PLAN RSP T1B

5-15-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	60	0.0/R6.9	49	58

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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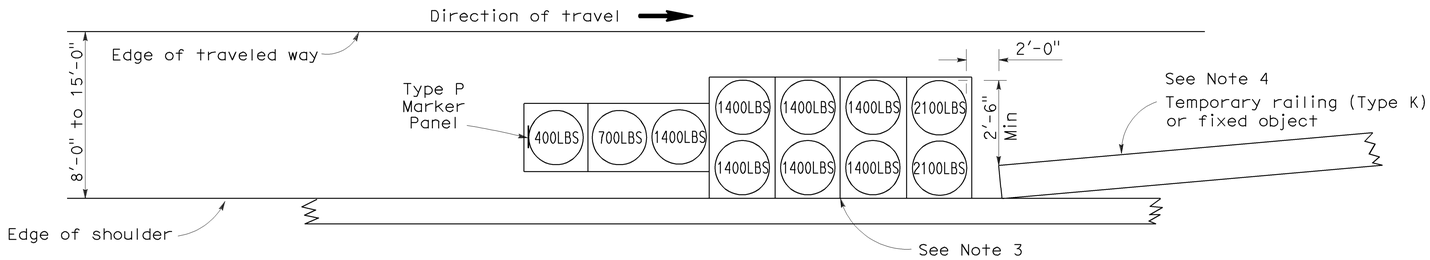
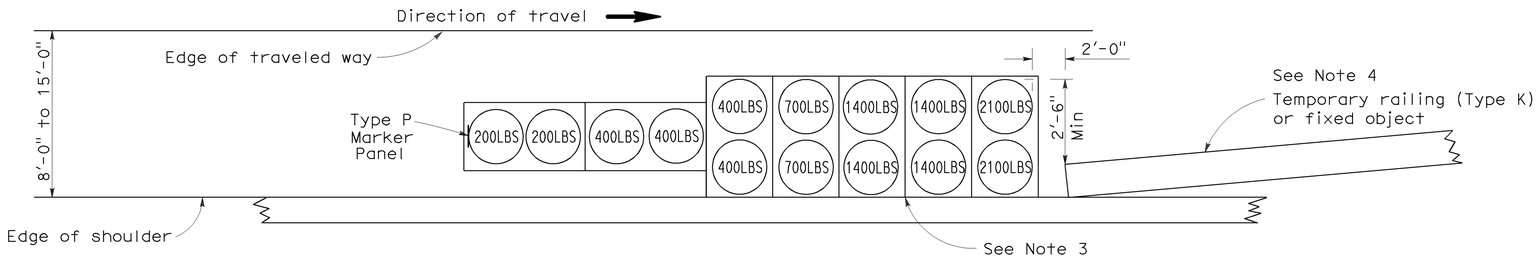
To accompany plans dated 1-3-11



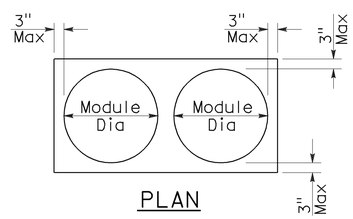
ARRAY 'TS11'

Approach speed less than 45 mph
See Note 9

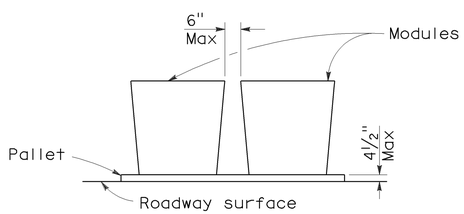


ARRAY 'TS14'

Approach speed 45 mph or more
See Note 9



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 11

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY CRASH CUSHION, SAND FILLED (SHOULDER INSTALLATIONS)

NO SCALE

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

REVISED STANDARD PLAN RSP T2

2006 REVISED STANDARD PLAN RSP T2

5-15-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	60	0.0/R6.9	50	58

Greg W. Edwards
REGISTERED CIVIL ENGINEER

November 17, 2006
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Greg W. Edwards
No. C36386
Exp. 6-30-08
CIVIL
STATE OF CALIFORNIA

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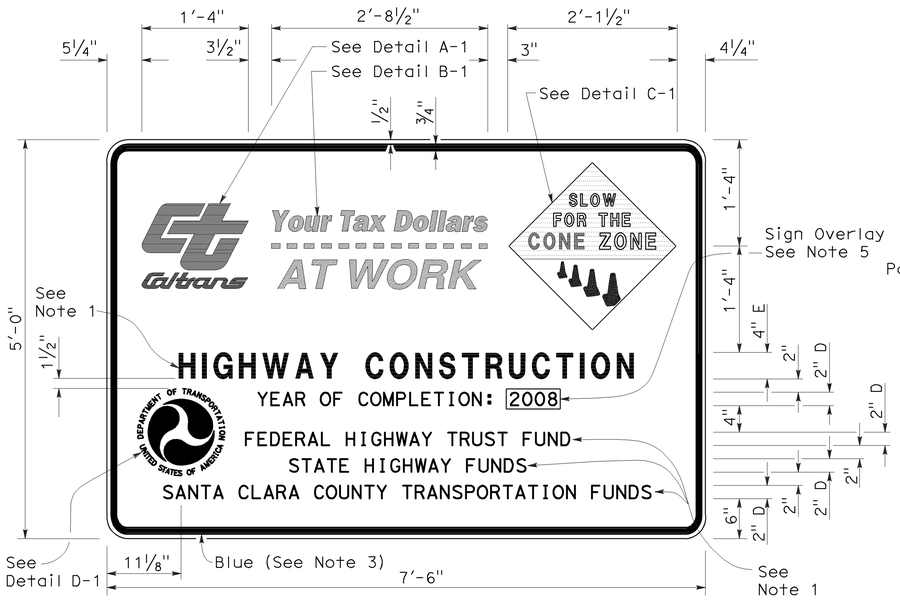
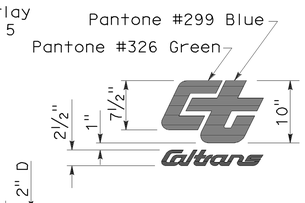
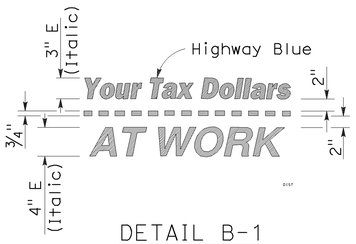
To accompany plans dated 1-3-11



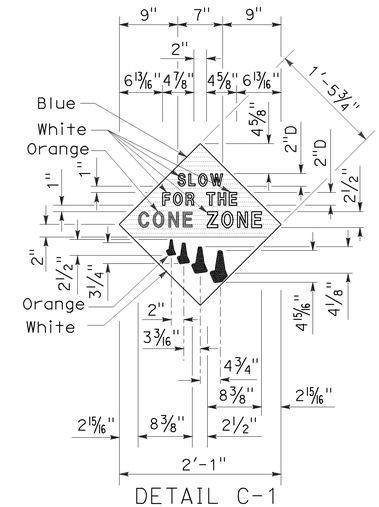
TYPE 1



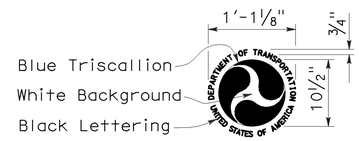
DETAIL A-1



DETAIL B-1
(See Note 3)



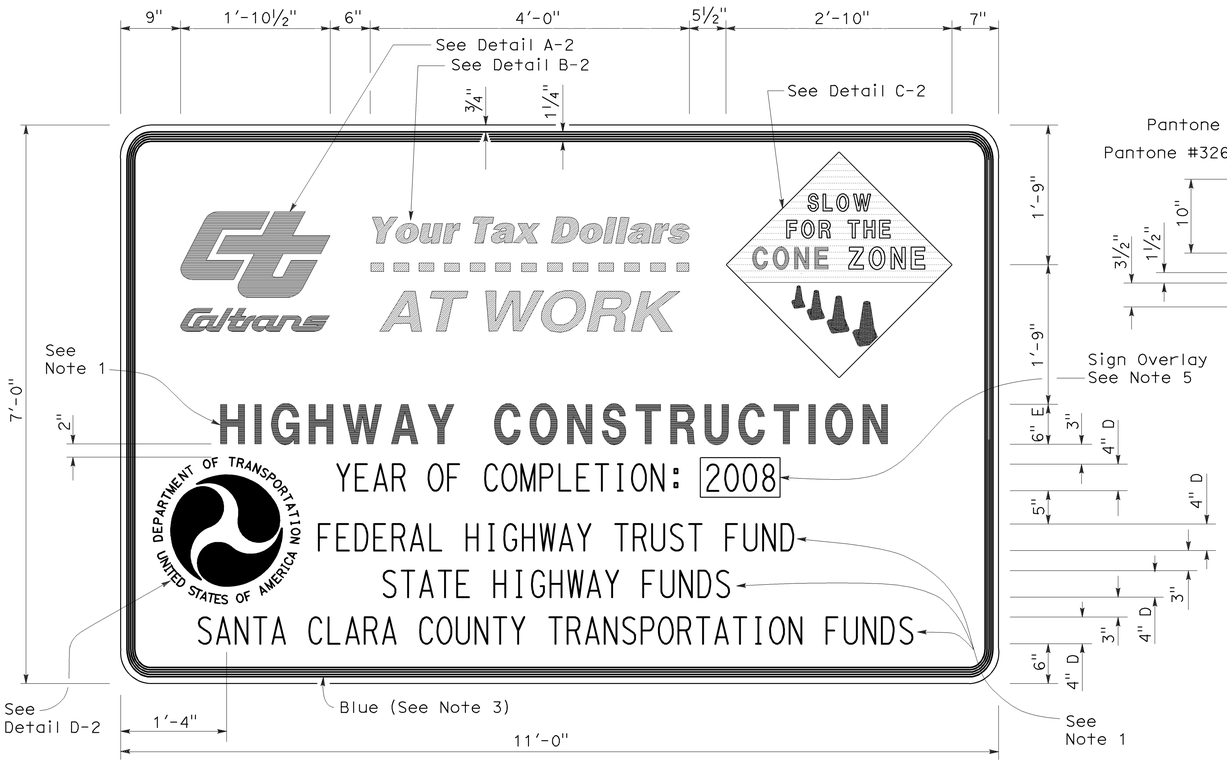
DETAIL C-1
(See Note 4)



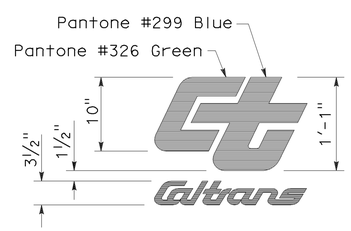
DETAIL D-1
(See Note 6)

NOTES:

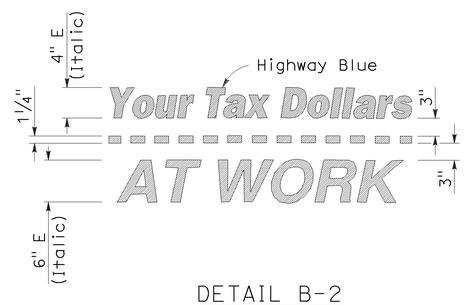
1. The sign messages shown for type of project and fund types are examples only. See the Special Provisions for the applicable type of project and fund type messages to be used.
2. Except as otherwise shown, the legend of sign shall be black on a white background (non-reflective).
3. The border of the signs and details "B-1" and "B-2" shall be blue (non-reflective).
4. The diamond in details "C-1" and "C-2" shall be blue for the background of message, " SLOW FOR THE CONE ZONE", and white background for the orange cones. The color and type of font for the "SLOW FOR THE CONE ZONE" message shall be: "SLOW" white D; "FOR THE" white D; "CONE" orange Arial font; "ZONE" white Arial font.
5. Year of completion of project construction shown on the overlay is an example only. See the Special Provisions.
6. Use when the Project involves Federal Highway Trust Fund.



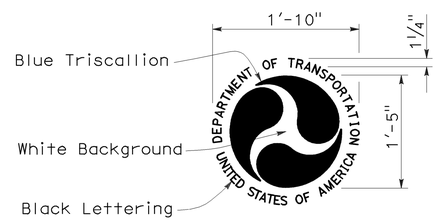
TYPE 2



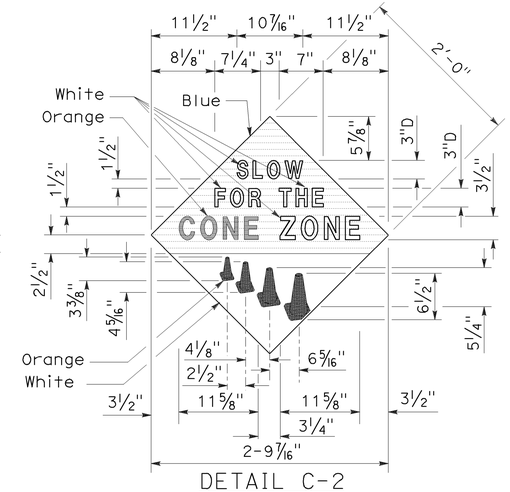
DETAIL A-2



DETAIL B-2
(See Note 3)



DETAIL D-2
(See Note 6)



DETAIL C-2
(See Note 4)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION PROJECT FUNDING IDENTIFICATION SIGNS

NO SCALE

RSP T7 DATED NOVEMBER 17, 2006 SUPERSEDES STANDARD PLAN T7
DATED MAY 1, 2006 - PAGE 217 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T7

2006 REVISED STANDARD PLAN RSP T7

9-7-06

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	60	0.0/R6.9	51	58

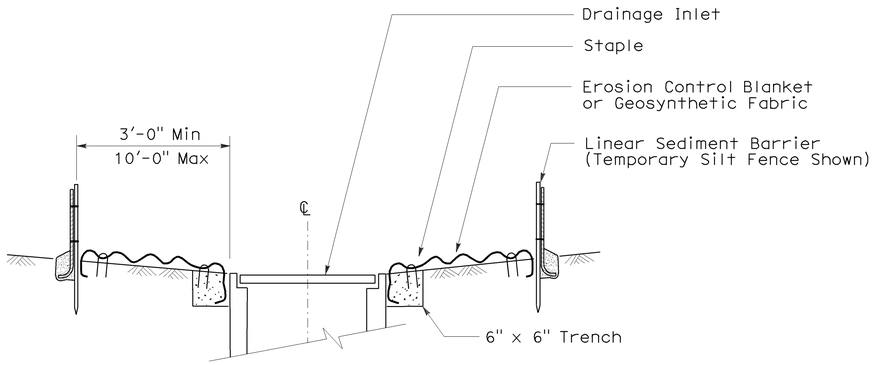
LICENSED LANDSCAPE ARCHITECT

August 15, 2008
PLANS Approval DATE

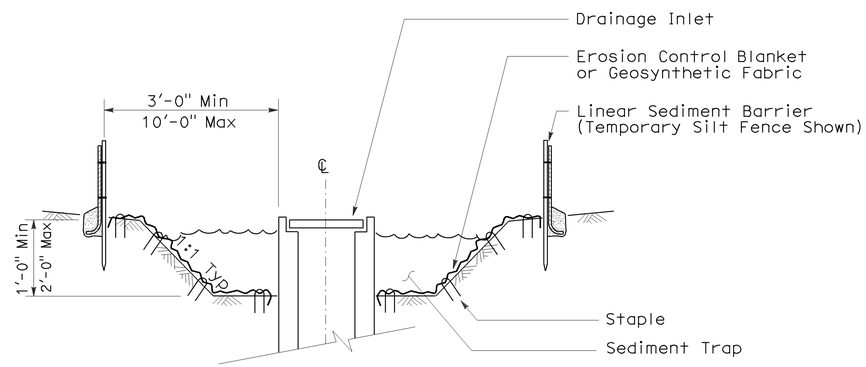
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

LICENSED LANDSCAPE ARCHITECT — Robert B. Schott — 3635 — Signature — 11-04-08 Renewal Date — 08-11-08 Date — STATE OF CALIFORNIA

To accompany plans dated 1-3-11



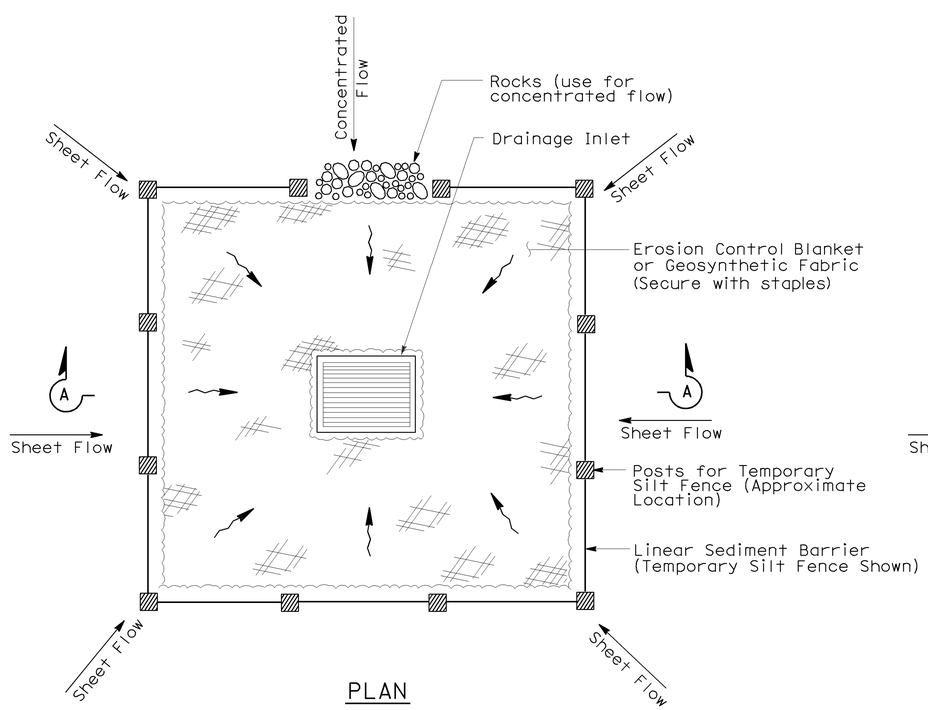
SECTION A-A



SECTION B-B

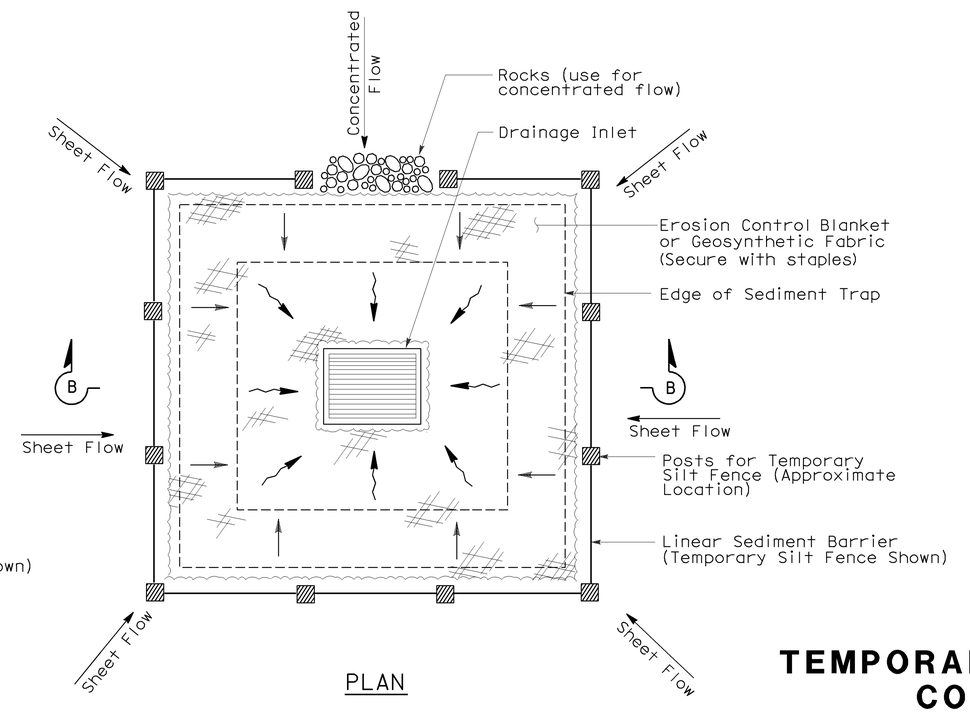
NOTES:

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



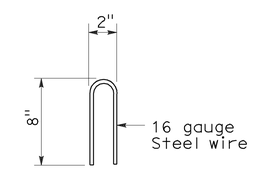
PLAN

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	60	0.0/R6.9	52	58

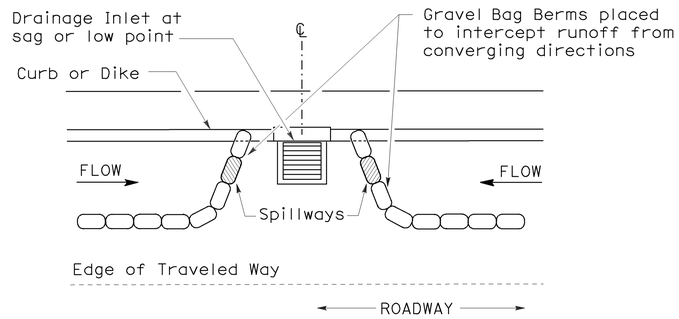
LICENSED LANDSCAPE ARCHITECT

August 15, 2008
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.

LICENSED LANDSCAPE ARCHITECT Robert B. Schott 3635 Signature 11-04-08 Renewal Date 08-11-08 Date STATE OF CALIFORNIA

To accompany plans dated 1-3-11



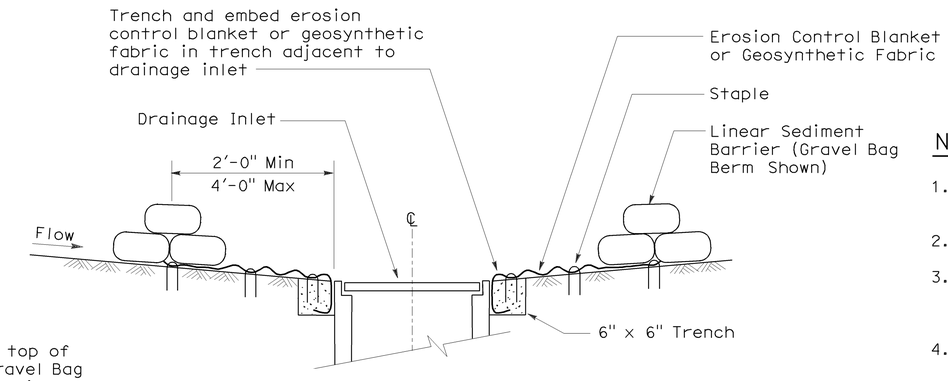
PLAN

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′

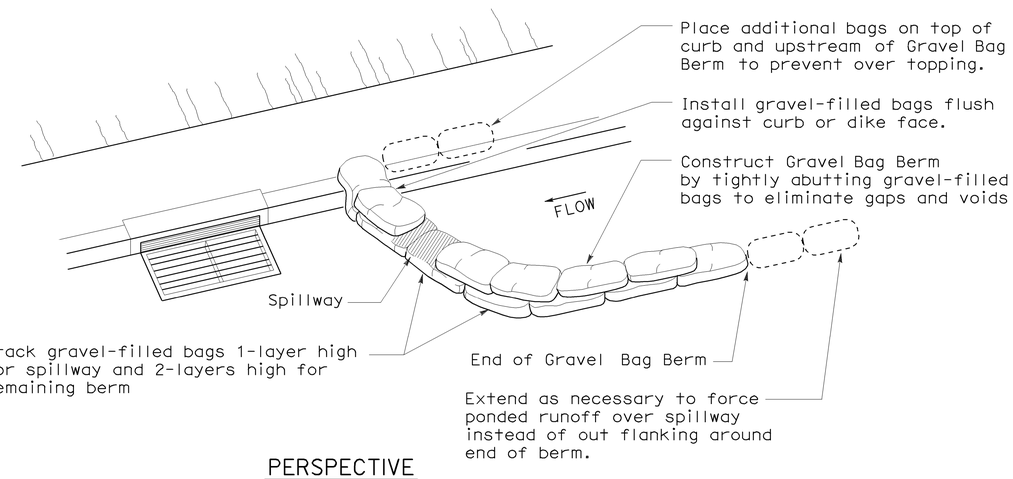
For slope of less than 1%, install barriers only if erosion/sediment is prevalent



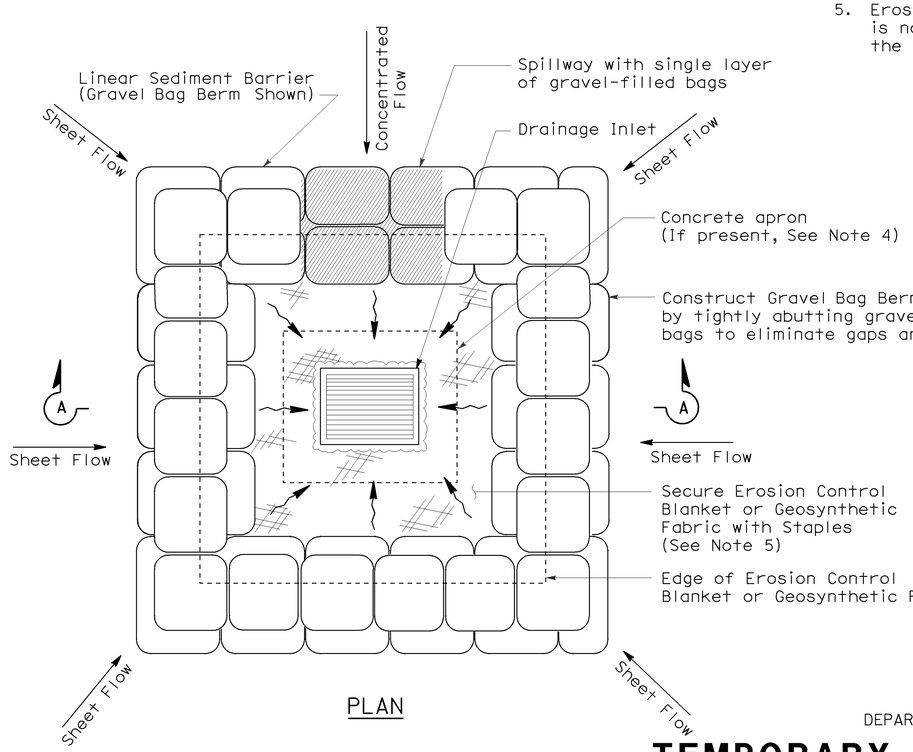
SECTION A-A

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.

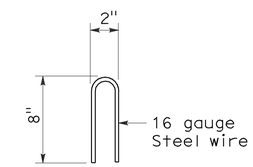


PERSPECTIVE

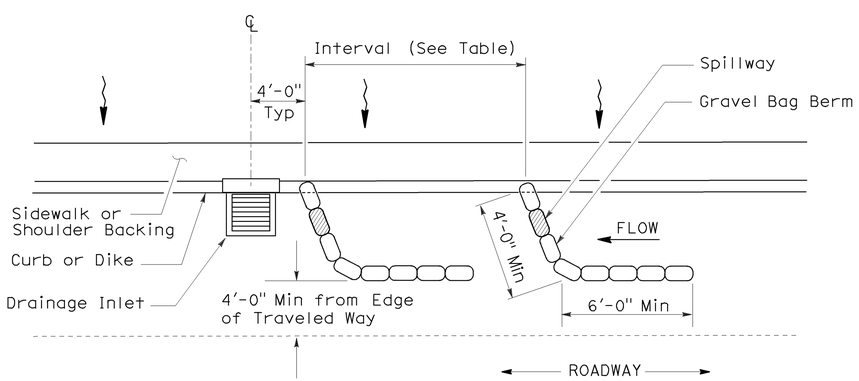


PLAN

TEMPORARY DRAINAGE INLET PROTECTION (TYPE 3B)



STAPLE DETAIL



PLAN

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

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
07	LA	60	0.0/R6.9	53	58

Robert B. Schott
LICENSED LANDSCAPE ARCHITECT

August 15, 2008
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT Robert B. Schott 3635 Signature 11-04-08 Renewal Date 08-11-08 Date STATE OF CALIFORNIA

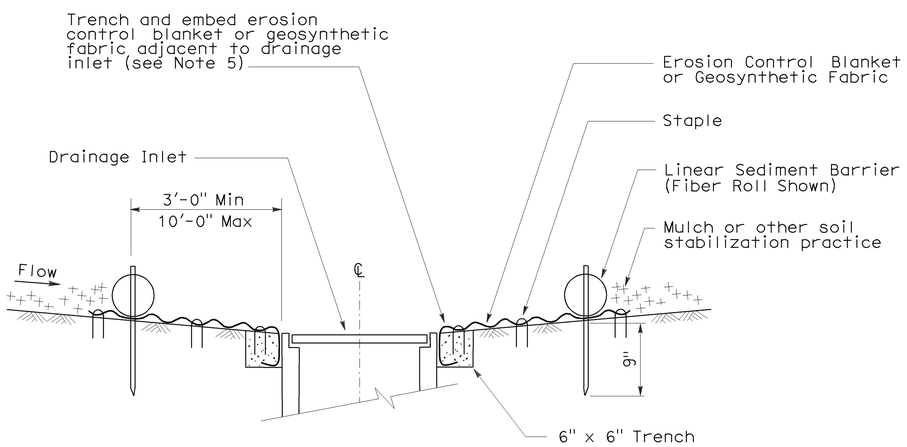
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 1-3-11

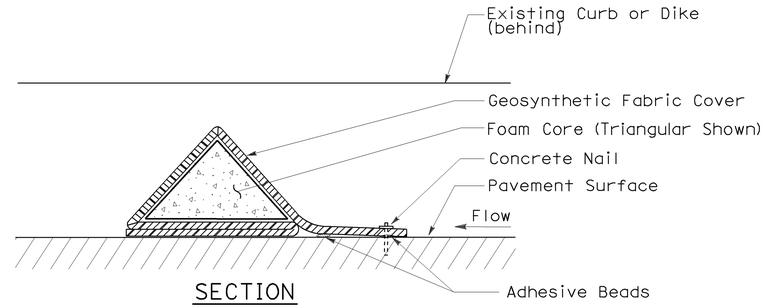
2006 NEW STANDARD PLAN NSP T63

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

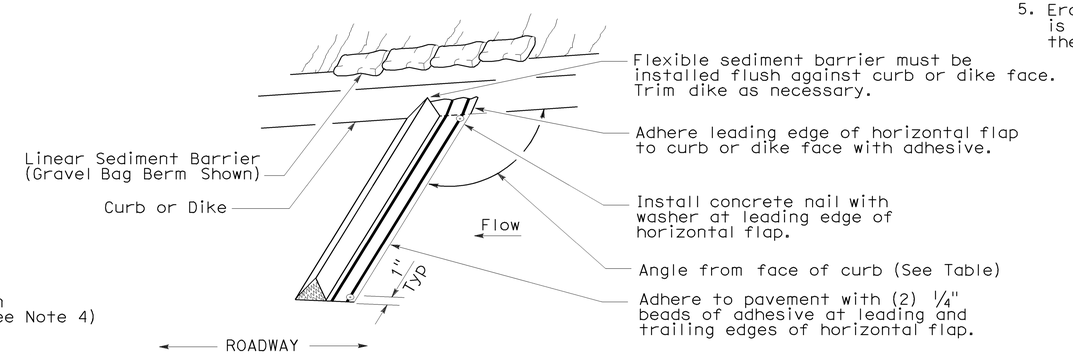


SECTION

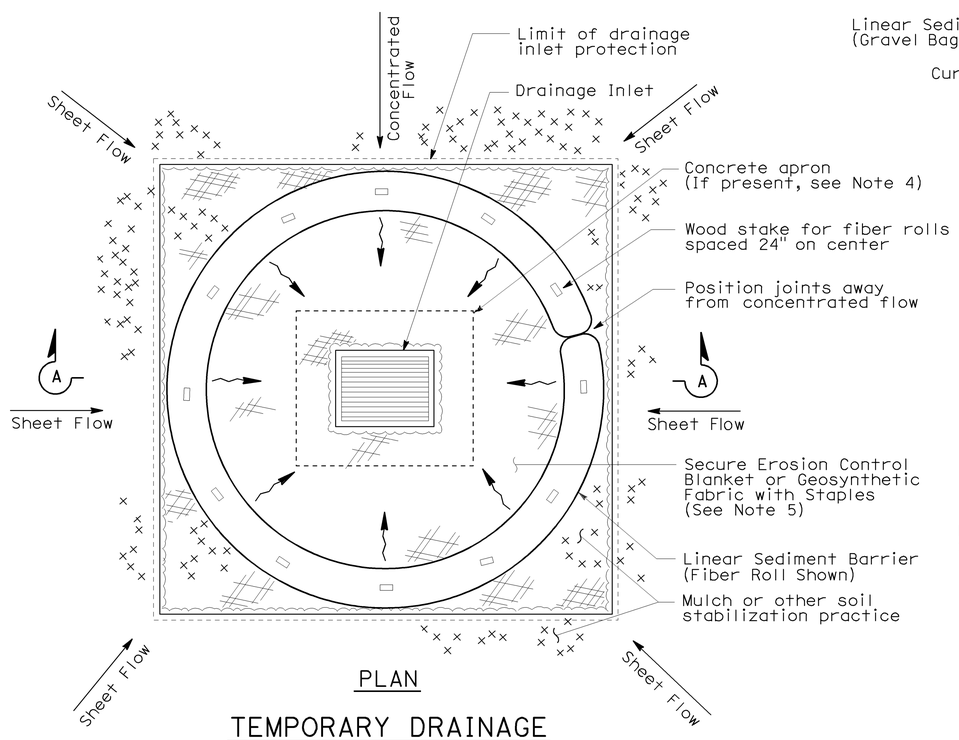
FLEXIBLE SEDIMENT BARRIER DETAIL (FOAM BARRIER SHOWN)

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.

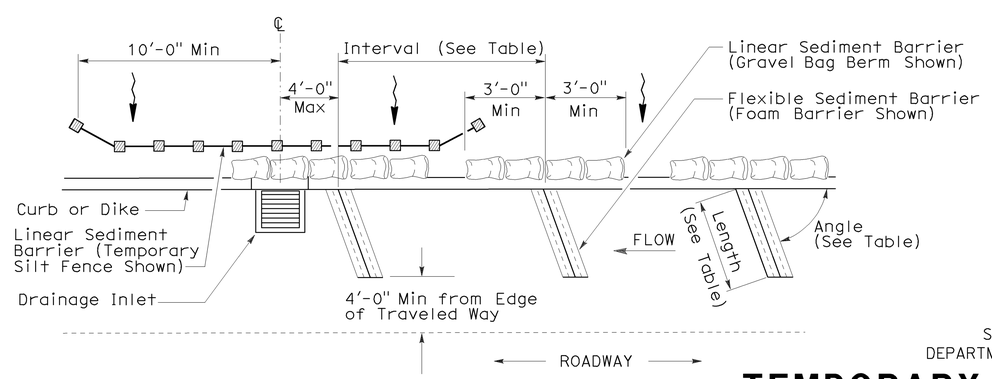


PERSPECTIVE



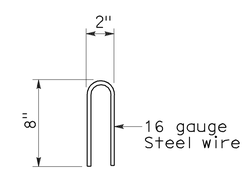
PLAN

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
07	LA	60	0.0/R6.9	54	58

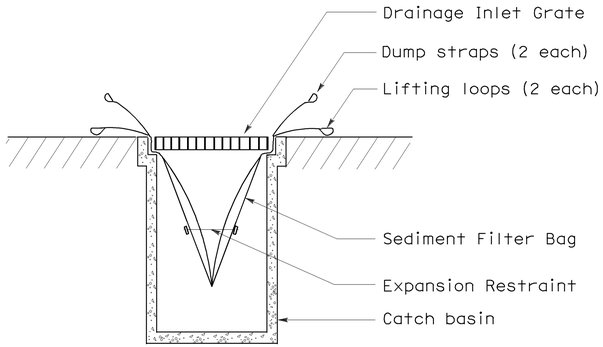
LICENSED LANDSCAPE ARCHITECT

August 15, 2008
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.

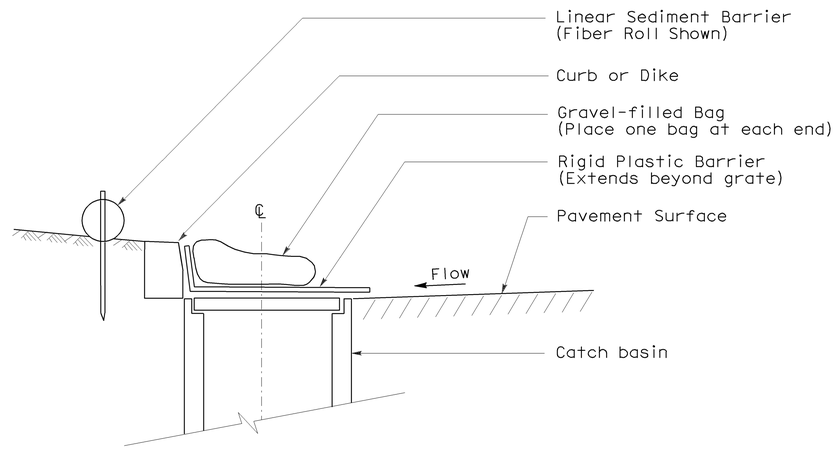
LICENSED LANDSCAPE ARCHITECT — Robert B. Schott — 3635 — Signature — 11-04-08 Renewal Date — 08-11-08 Date — STATE OF CALIFORNIA

To accompany plans dated 1-3-11



SECTION B-B

SEDIMENT FILTER BAG DETAIL

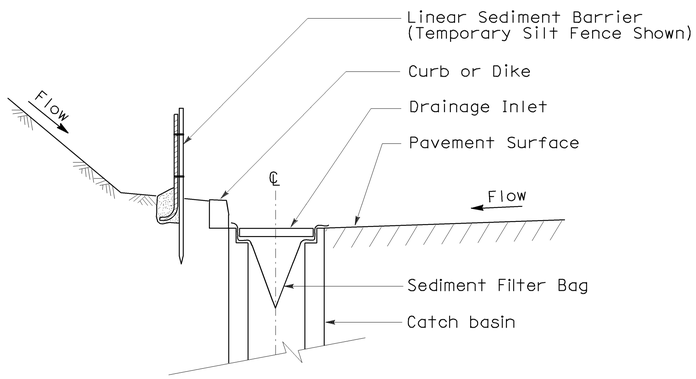


SECTION

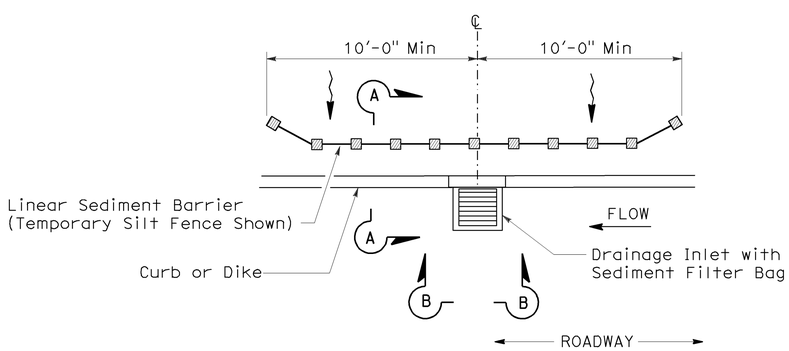
TEMPORARY DRAINAGE INLET PROTECTION (TYPE 6A) (CATCH BASIN WITH GRATE)

NOTES:

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

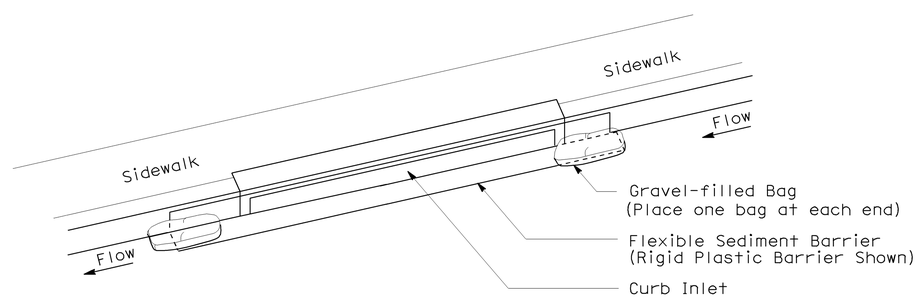


SECTION A-A



PLAN

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



PERSPECTIVE

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

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
07	LA	60	0.0/R6.9	55	58

REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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

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

To accompany plans dated 1-3-11

ELECTROLIERS

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

High mast light pole

Double Arm lighting standard

Existing electrolier

Electrolier foundation (Future installation)

NOTES:

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

Electrolier (see project notes or project plans)

Luminaire on wood pole

STANDARD NOTES:

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

ABBREVIATIONS AND EQUIPMENT DESIGNATIONS

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

SOFFIT AND WALL MOUNTED LUMINAIRES

Pendant, 70 W HPS unless otherwise specified.

Flush, 70 W HPS unless otherwise specified.

Wall surface, 70 W HPS unless otherwise specified.

Existing soffit or wall luminaire to remain unmodified.

Existing soffit or wall luminaire to be modified as specified.

NOTE:

Arrow indicates "street side" of luminaire.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

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

REVISED STANDARD PLAN RSP ES-1A

2006 REVISED STANDARD PLAN RSP ES-1A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	60	0.0/R6.9	56	58

REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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

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

To accompany plans dated 1-3-11

2006 REVISED STANDARD PLAN RSP ES-1B

CONDUIT

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

SERVICE EQUIPMENT

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

POLE-MOUNTED SERVICE DESIGNATION

Type of installation

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

ILLUMINATED OVERHEAD SIGN

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

SIGNAL EQUIPMENT

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

SIGNAL EQUIPMENT Cont

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

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

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

REVISED STANDARD PLAN RSP ES-1B

7-10-07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	60	0.0/R6.9	57	58

REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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

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

To accompany plans dated 1-3-11

EQUIPMENT IDENTIFICATION

ILLUMINATED SIGN IDENTIFICATION NUMBER:

Sign No. 12345

10 ISL SCI 1.0

- Sign number - Place on post or structure
- Transformer rating (kVA)
- Lighting control type
- Number and type of fixtures

Do NOT place on standard or structure

ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:

12345 - 15'-0"

- Mast arm length, if shown. Do not place on standard or structure.
- 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

- Number and size of conductors and cables
- Size of conduit in inches

ø1, ø2, ø2P, etc.	Traffic phase identification for signal faces, detectors and phase diagrams
1 2 3	Project note numbers
A B C	Equipment description, installation or item numbers
1 2 3	Conduit run numbers

SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):

19A - 3 - 100

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

MISCELLANEOUS EQUIPMENT

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

WIRING DIAGRAM LEGEND

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

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

PULL BOXES

PROPOSED EXISTING

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

3 9A(21)

Pull box-Additional designations or descriptions

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

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

VEHICLE DETECTORS

5 J 9 U

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

PROPOSED EXISTING

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

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

REVISED STANDARD PLAN RSP ES-1C

2006 REVISED STANDARD PLAN RSP ES-1C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	60	0.0/R6.9	58	58

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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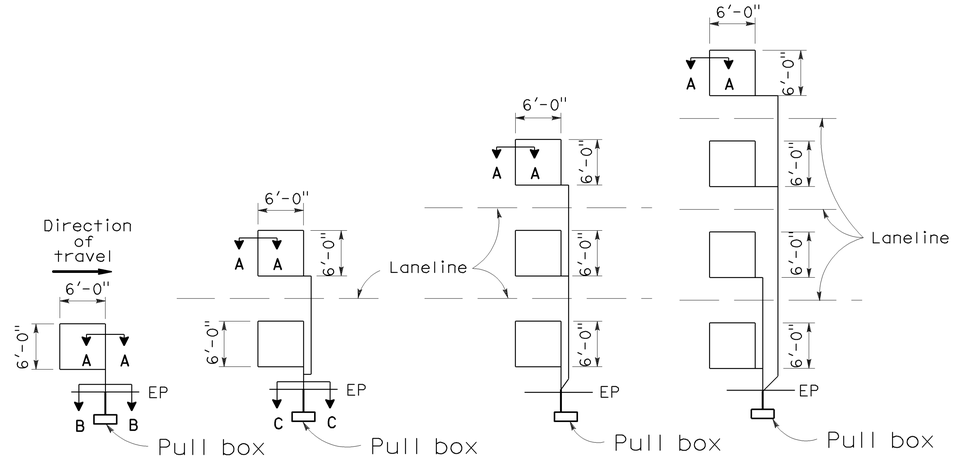
To accompany plans dated 1-3-11

2006 REVISED STANDARD PLAN RSP ES-5A

LOOP INSTALLATION PROCEDURE

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

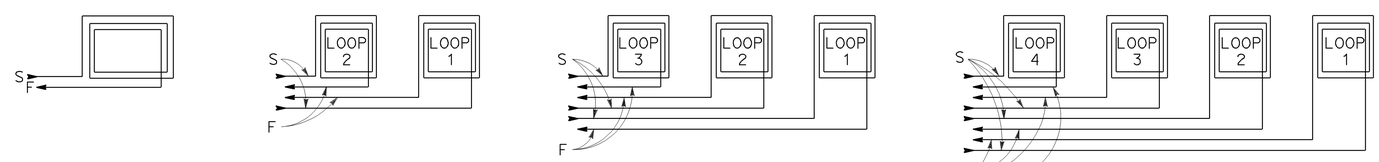


TYPE 1A INSTALLATION | TYPE 2A INSTALLATION | TYPE 3A INSTALLATION | TYPE 4A INSTALLATION

SAWCUT DETAILS

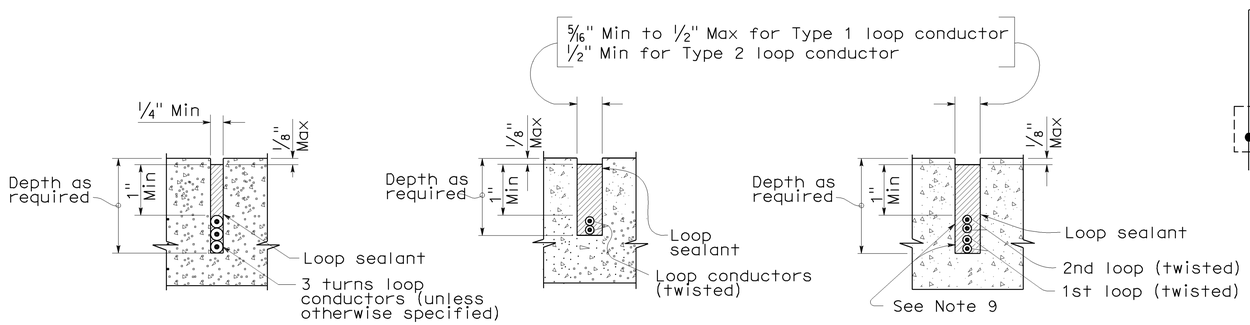
(Type A loop detector configurations illustrated)

1. 1A thru 4A = 1 Type A loop configuration in each lane.
2. 1B thru 4B = 1 Type B loop configuration in each lane.
3. 1C = 1 Type C loop configuration entering lanes as required.
4. 1D thru 4D = 1 Type D loop configuration in each lane.
5. 1E thru 4E = 1 Type E loop configuration in each lane.
6. 1Q thru 4Q = 1 Type Q loop configuration in each lane. (Use Type A, B, C, D, E or Q loop detector configurations only when specified or shown on plans)



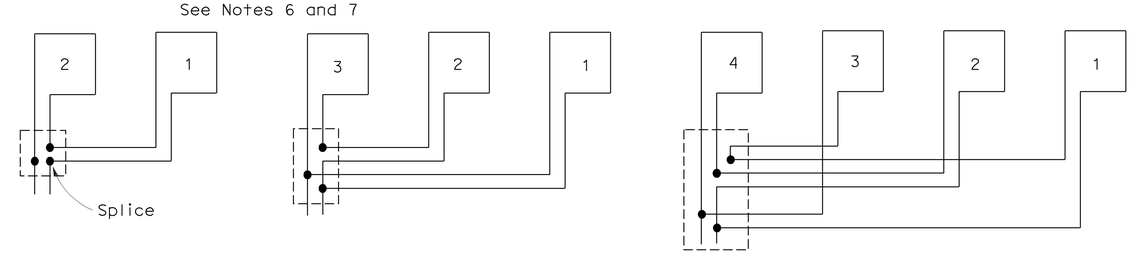
WINDING DETAILS

See Notes 6 and 7



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

8-17-07