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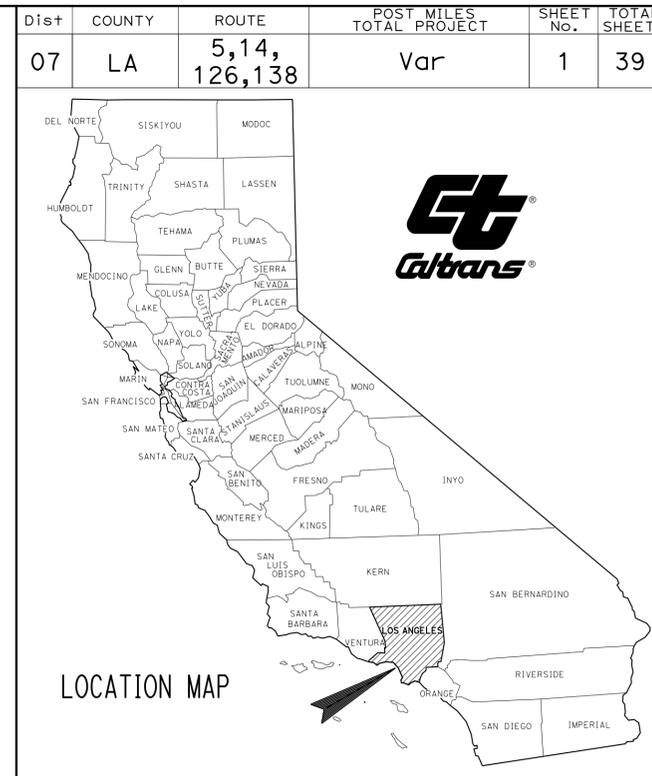
STRUCTURE PLANS

27-39	ROUTES 5, 14, 126, 138 BRIDGES
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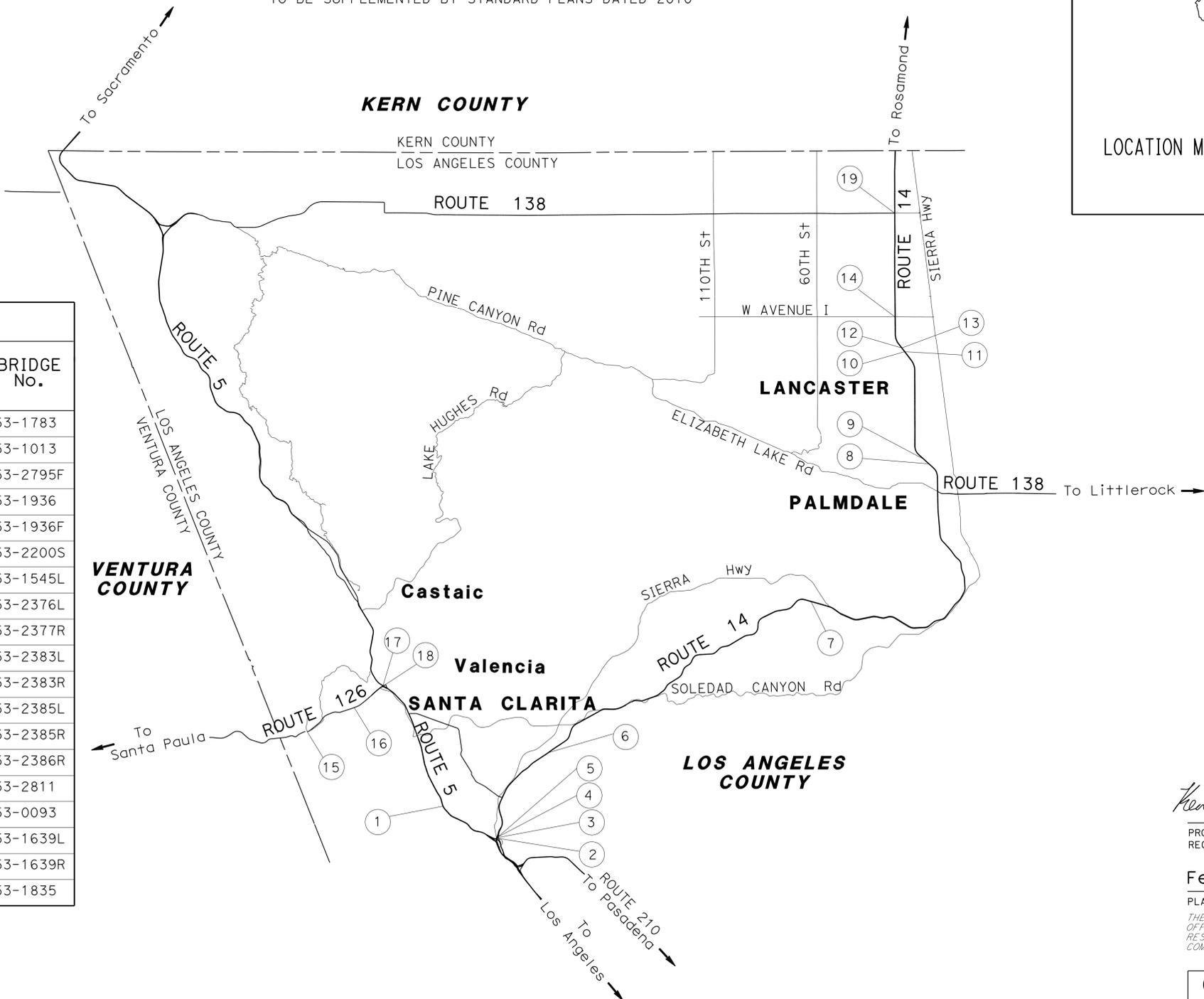
THE STANDARD PLANS LIST APPLICABLE TO THE CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISION BOOK.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
PROJECT PLANS FOR CONSTRUCTION ON  
STATE HIGHWAY  
IN LOS ANGELES COUNTY  
AT VARIOUS LOCATIONS

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010



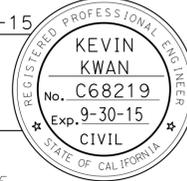
LOCATIONS OF CONSTRUCTION				
Loc No. (X)	ROUTE	PM	BRIDGE NAME	BRIDGE No.
1	5	R50.33	PICO LYONS OC	53-1783
2	14	24.30	SIERRA HIGHWAY OC	53-1013
3	14	R24.79	S14-S5 CONNECTOR OH	53-2795F
4	14	R25.13	SIERRA HIGHWAY UC	53-1936
5	14	R25.13	SIERRA HIGHWAY UC	53-1936F
6	14	R30.81	SIERRA HIGHWAY OFF-RAMP OC	53-2200S
7	14	45.73	PURITAN MINE ROAD UC	53-1545L
8	14	R61.37	RANCHO VISTA Blvd UC	53-2376L
9	14	R61.53	SOUTH AMARGOSA CREEK	53-2377R
10	14	R67.48	20TH STREET WEST UC	53-2383L
11	14	R67.48	20TH STREET WEST UC	53-2383R
12	14	R68.46	LANCASTER Blvd UC	53-2385L
13	14	R68.46	LANCASTER Blvd UC	53-2385R
14	14	R68.96	AVENUE "I" UC	53-2386R
15	126	R1.44	SAN MARTINEZ GRANDE	53-2811
16	126	R4.09	CASTAIC CREEK	53-0093
17	126	R5.66	FRONTAGE ROAD UC	53-1639L
18	126	R5.66	FRONTAGE ROAD UC	53-1639R
19	138	36.85	AVENUE D SEPARATION	53-1835



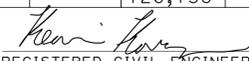
NO SCALE

PROJECT MANAGER: CHRISTIAN SAM  
 DESIGN MANAGER: HAMID SAADATNEJADI

*Kevin Kwan* 1-16-15  
 PROJECT ENGINEER DATE  
 REGISTERED CIVIL ENGINEER  
**February 9, 2015**  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



CONTRACT No.	<b>07-1W6404</b>
PROJECT ID	<b>0712000449</b>

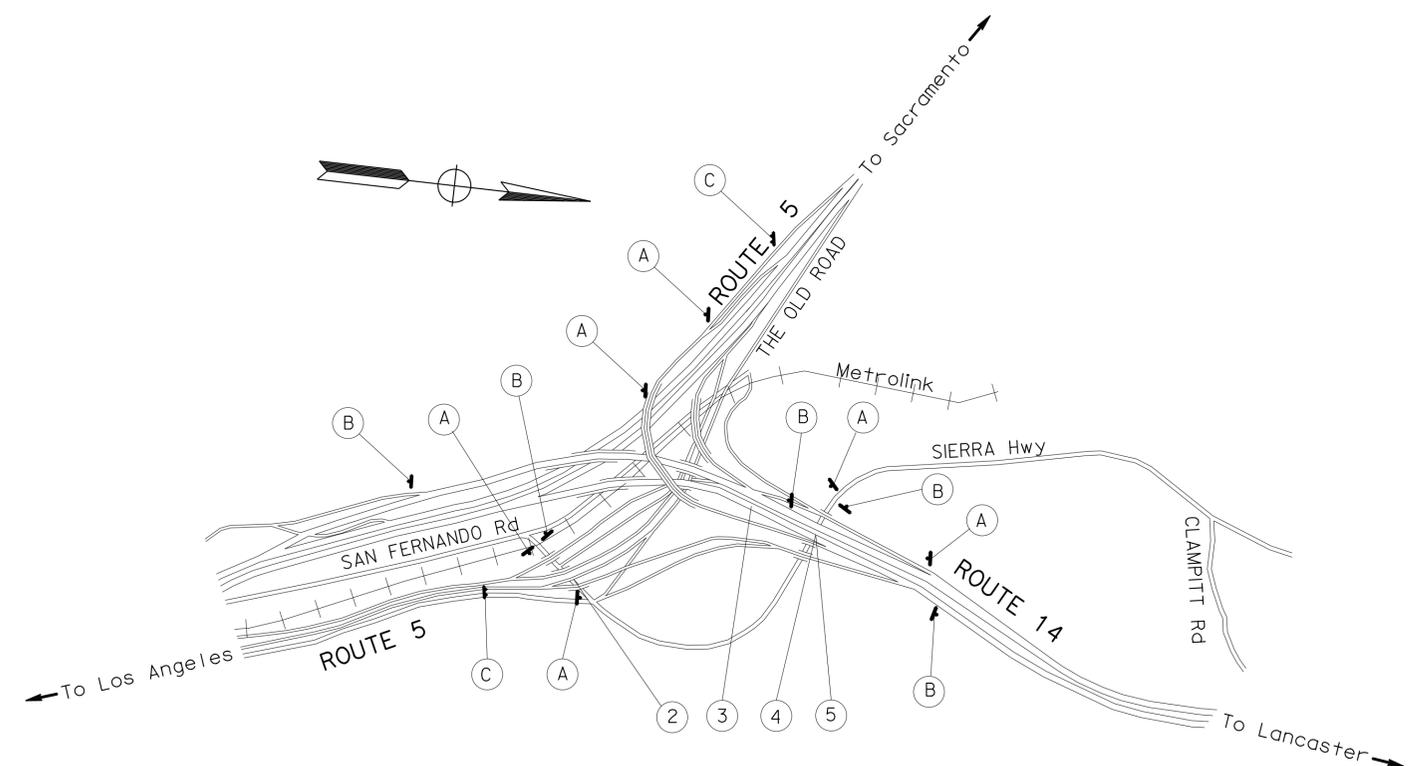
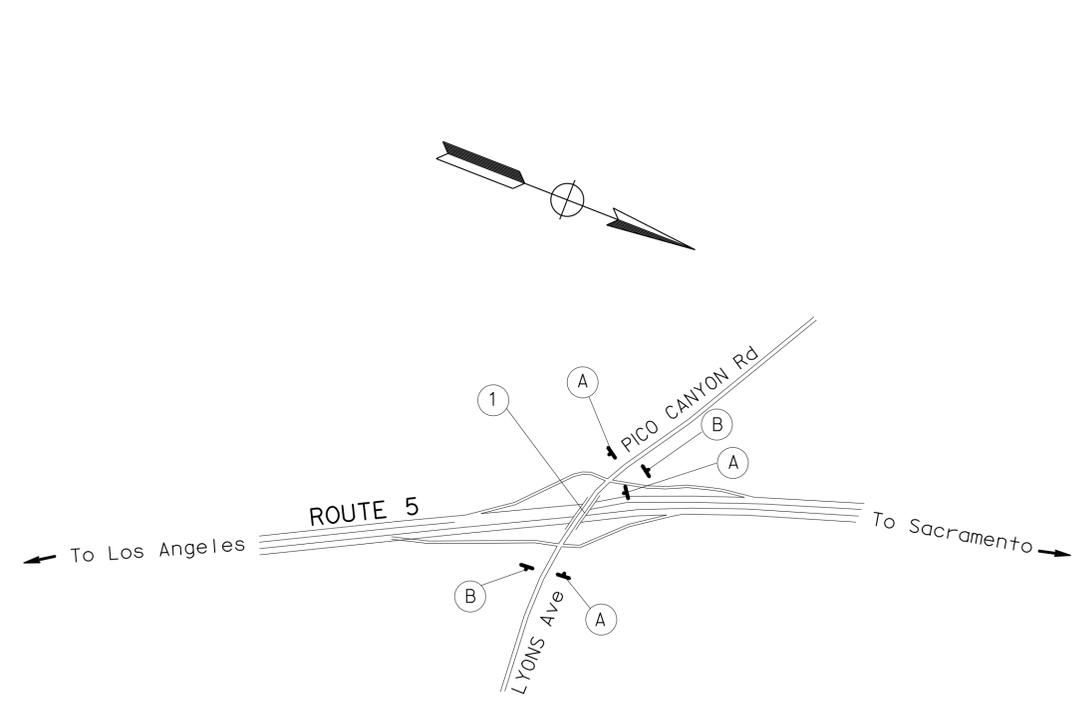
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,14, 126,138	Var	2	39
		 1-16-15 REGISTERED CIVIL ENGINEER DATE			
		2-9-15 PLANS APPROVAL DATE			
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

**NOTES:**

- EXACT LOCATION AND POSITION OF SIGNS WILL BE DETERMINED BY THE ENGINEER.
- C40 SIGNS MUST BE PLACED APPROXIMATELY 500 FEET IN ADVANCE OF W20-1 SIGNS OR AS DETERMINED BY THE ENGINEER.
- FOR ADDITIONAL CONSTRUCTION AREA SIGNS, SEE SHEETS CS-2 AND CS-3.

SIGN No. (X)	SIGN CODE		PANEL SIZE	SIGN MESSAGE	NUMBER OF POSTS AND SIZE	NUMBER OF SIGNS
	FEDERAL	CALIFORNIA				
A	W20-1		48" X 48"	ROAD WORK AHEAD	1 - 6" X 8"	26
B	G20-2		48" X 24"	END CONSTRUCTION	1 - 4" X 6"	24
C		C40	144" X 60"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	2 - 6" X 8"	8

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** MAINTENANCE ENGINEERING  
 FUNCTIONAL SUPERVISOR: HAMID SAADATNEJADI  
 CALCULATED/DESIGNED BY: AMBACHEW YIRGU  
 CHECKED BY: KEVIN KWAN  
 REVISED BY: DATE  
 REVISIONS:



**CONSTRUCTION AREA SIGNS**

NO SCALE

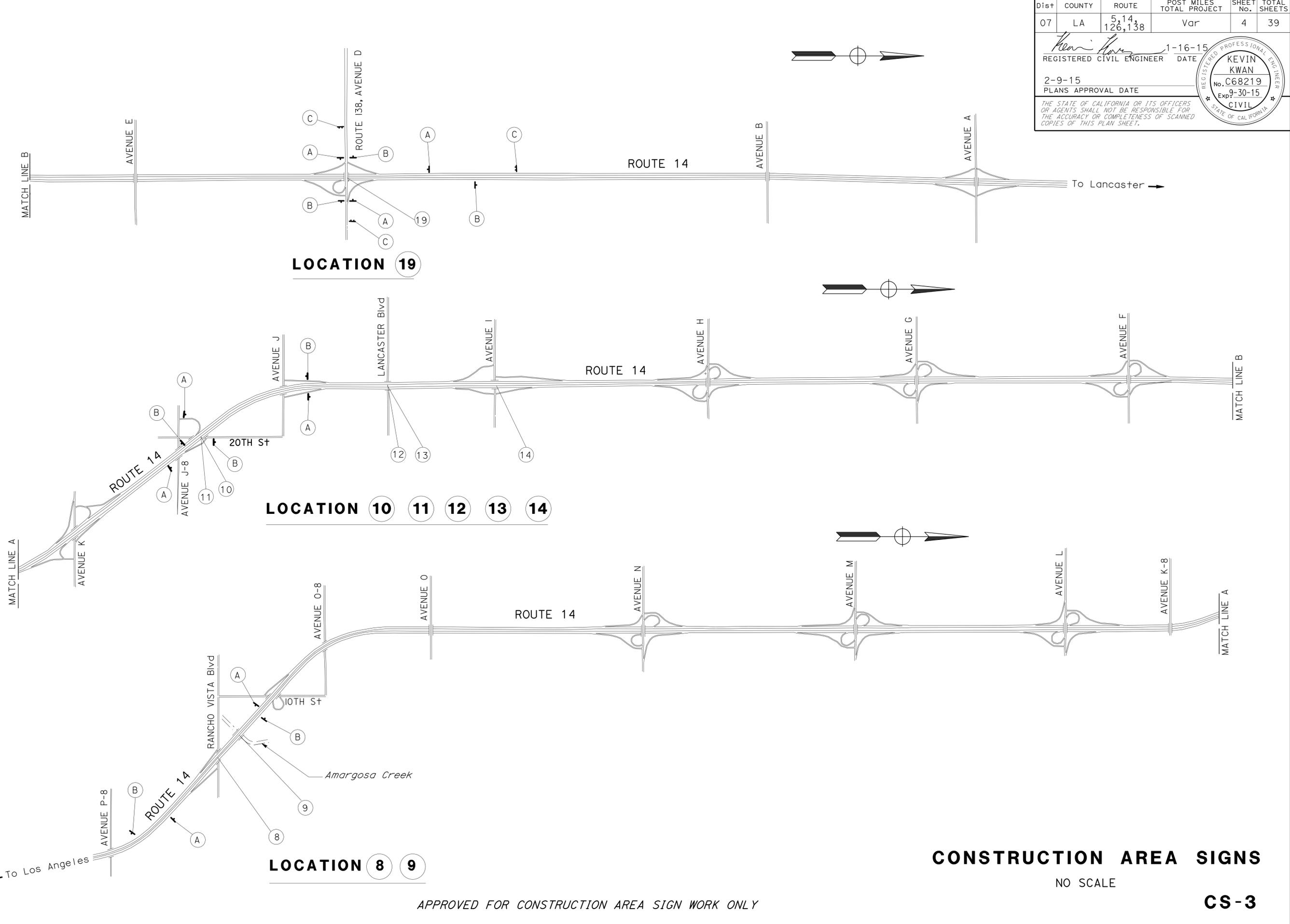
**CS-1**

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY



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

FUNCTIONAL SUPERVISOR: HAMID SAADATNEJADI  
 CALCULATED/DESIGNED BY: [blank]  
 CHECKED BY: [blank]  
 AMBACHEW YIRGU  
 KEVIN KWAN  
 REVISED BY: [blank]  
 DATE REVISED: [blank]



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,14, 126,138	Var	4	39

1-16-15  
 REGISTERED CIVIL ENGINEER DATE  
 2-9-15  
 PLANS APPROVAL DATE

KEVIN KWAN  
 No. C68219  
 Exp. 9-30-15  
 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.

**CONSTRUCTION AREA SIGNS**  
 NO SCALE  
**CS-3**

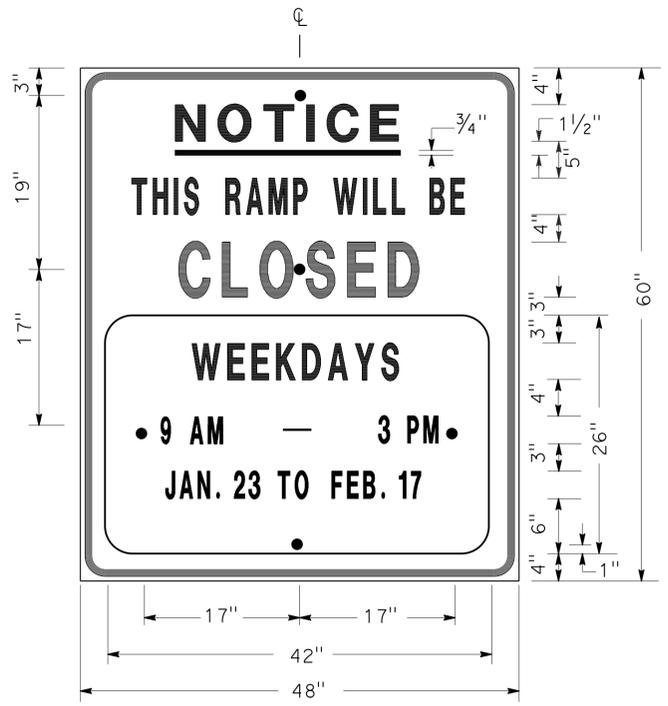
APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,14, 126,138	Var	5	39

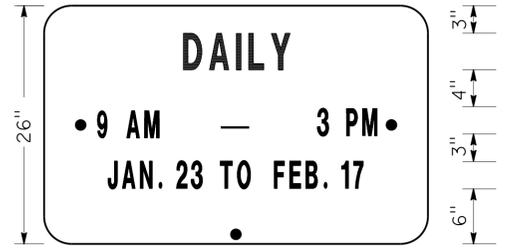
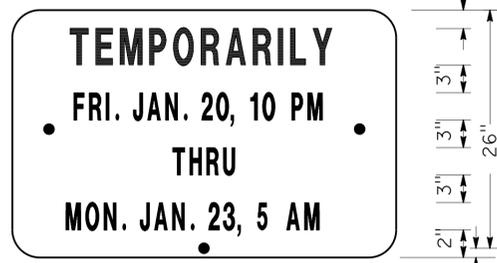
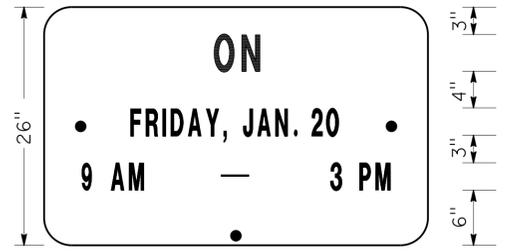
Ali B. Basmah 1-14-15  
 REGISTERED CIVIL ENGINEER DATE

2-9-15  
 PLANS APPROVAL DATE

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SIGN SP-1



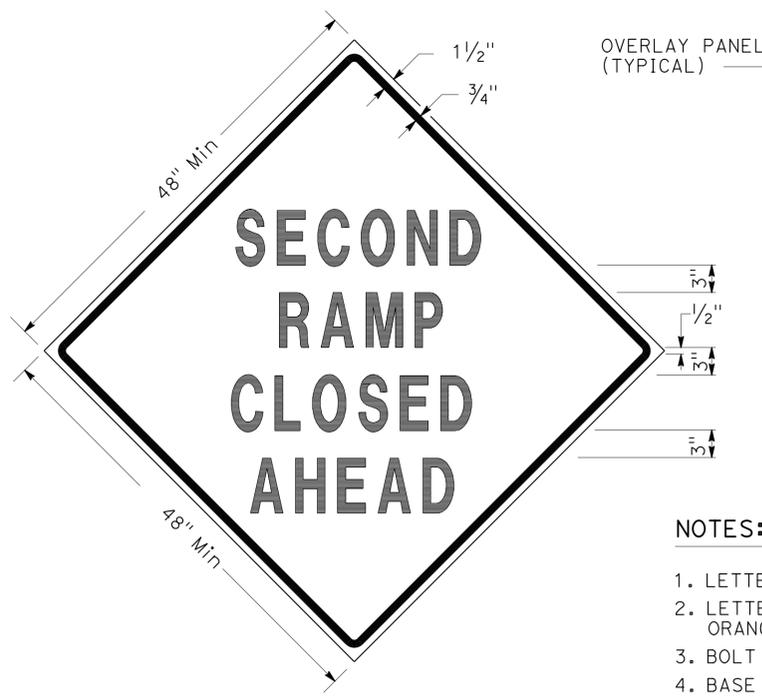
ALTERNATE OVERLAY PANELS (TYPICAL)

- NOTES: SIGN SP-1
- LETTERS AND BORDER MUST BE BLACK ON REFLECTORIZED ORANGE BACKGROUND.
  - BOLT HOLES MUST BE 3/8" DIAMETER.
  - BASE MATERIAL MUST BE ALUMINUM (MINIMUM 0.06").
  - SIGNS MUST BE MOUNTED WITH BOTTOMS OF SIGNS A MINIMUM OF 7' ABOVE GROUND.

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

\* CONDENSED SPACING IF NECESSARY

**SPECIAL ADVANCE NOTICE PUBLICITY SIGN**



SIGN SP-3



SIGN SP-5

- NOTES: SIGNS SP-3 & SP-5
- LETTERS - 6" SERIES D.
  - LETTERS AND BORDER MUST BE BLACK ON REFLECTORIZED ORANGE BACKGROUND.
  - BOLT HOLES MUST BE 3/8" DIAMETER.
  - BASE MATERIAL MUST BE ALUMINUM (MINIMUM 0.06").
  - SIGNS MUST BE MOUNTED WITH BOTTOMS OF SIGNS A MINIMUM OF 7' ABOVE GROUND.
  - SIGN SP-5 MUST BE USED IF THE OFF-RAMP TO BE CLOSED FOLLOWS A FREEWAY OFF-CONNECTOR.

**SPECIAL SIGNS FOR EXIT RAMP CLOSURES**



SIGN SP-4

- NOTES: SIGN SP-4
- LETTERS - 6" SERIES C.
  - LETTERS AND BORDER MUST BE BLACK ON REFLECTORIZED WHITE BACKGROUND.
  - BOLT HOLES MUST BE 3/8" DIAMETER.
  - BASE MATERIAL MUST BE ALUMINUM (MINIMUM 0.06").
  - SIGNS MUST BE PLACED AT RAMP ENTRANCES IN ADDITION TO SIGNS POSTED IN ACCORDANCE WITH REVISED STANDARD PLAN RSP T14.

**SPECIAL SIGN FOR ENTRANCE RAMP CLOSURES**

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

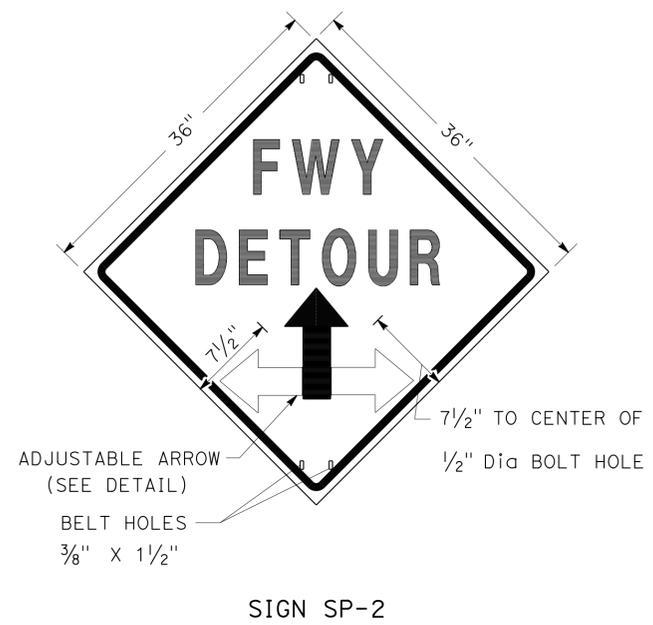
SHEET 1 OF 2

NO SCALE

THD-1

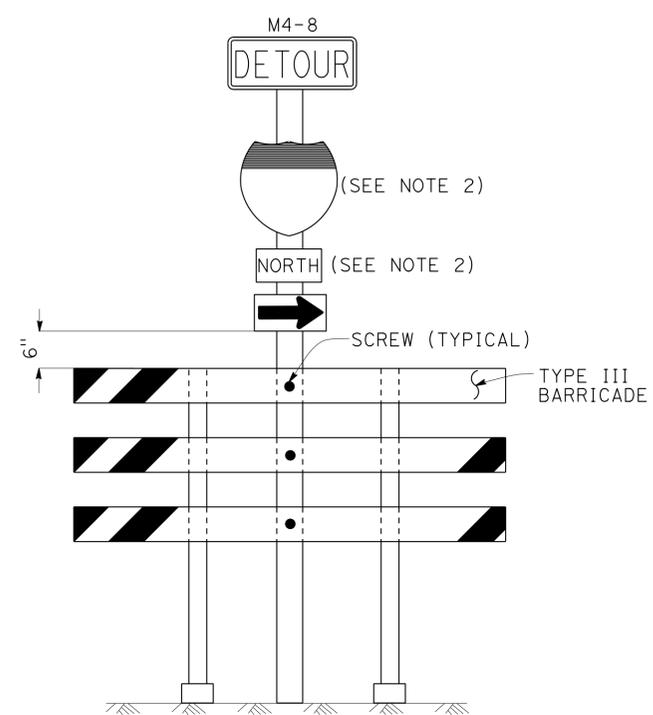
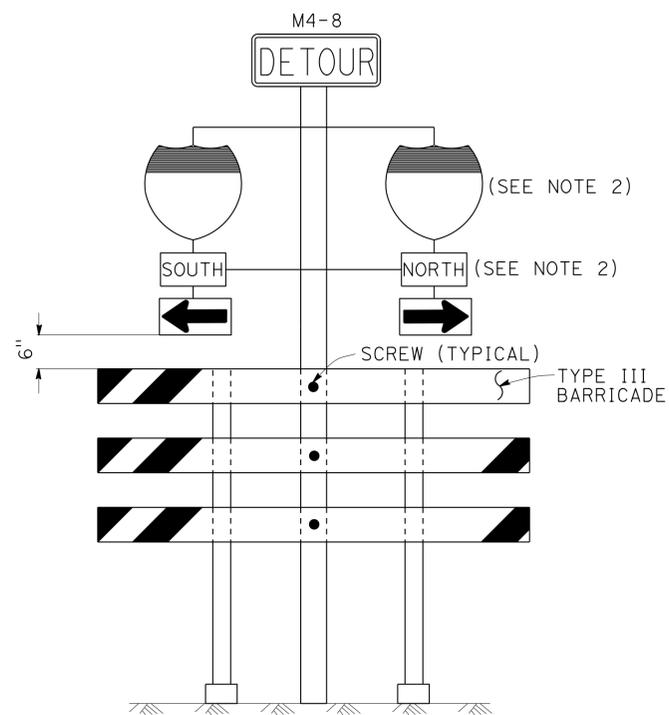
LAST REVISION DATE PLOTTED => 03-FEB-2015 02-09-15 TIME PLOTTED => 23:33

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 Et Caltrans®  
 DTM  
 FUNCTIONAL SUPERVISOR  
 SAM ESQUENAZI  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 REVISOR BY  
 DATE REVISED  
 JC  
 2/14



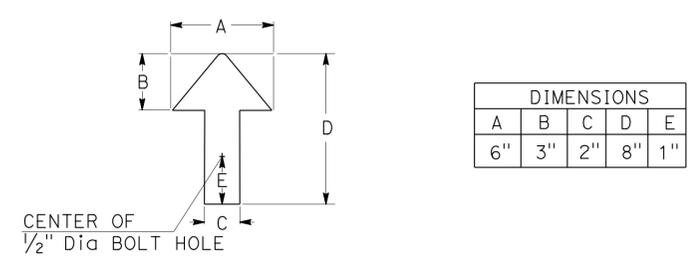
- NOTES:** SIGN SP-2
- LETTERS - 6" SERIES E.
  - LETTERS, BORDER AND ARROW - BLACK ON RETROREFLECTORIZED ORANGE BACKGROUND.
  - BASE MATERIAL FOR SIGNS AND ARROWS MUST BE ALUMINUM (MINIMUM 0.06").
  - BELTS (LUGGAGE STRAPS) MUST BE 1" WIDE BY 48" LONG, MADE OF COTTON OR POLYPROPYLENE WEB MATERIAL.
  - SIGNS MUST BE MOUNTED WITH BOTTOMS OF SIGNS A MINIMUM OF 7' ABOVE GROUND EXCEPT AS OTHERWISE SHOWN ON OTHER TRAFFIC HANDLING DETAILS PLANS.

**ABBREVIATION**  
(CA) CALIFORNIA CODE



- NOTES:** SIGNS SP-6 & SP-7
- IN LIEU OF PLACING SIGNS ON TYPE III BARRICADES, SIGNS, INCLUDING POSTS, MAY BE PLACED INTO THE GROUND OR FASTENED ONTO ELECTROLIERS.
  - USE APPROPRIATE ROUTE MARKER [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**

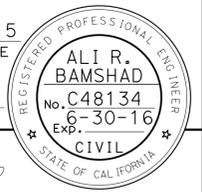


**TRAFFIC HANDLING DETAILS**  
**TRAFFIC CONTROL SYSTEM**  
**FOR RAMP CLOSURES, DETOUR SIGNS,**  
**AND MISCELLANEOUS DETAILS**  
**SHEET 2 OF 2**  
 NO SCALE

**THD-2**

LAST REVISION | DATE PLOTTED => 03-FEB-2015  
 02-09-15 TIME PLOTTED => 2:31:34

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,14, 126,138	Var	7	39
Ali Bamshad 1-14-15 REGISTERED CIVIL ENGINEER DATE					
2-9-15 PLANS APPROVAL DATE					
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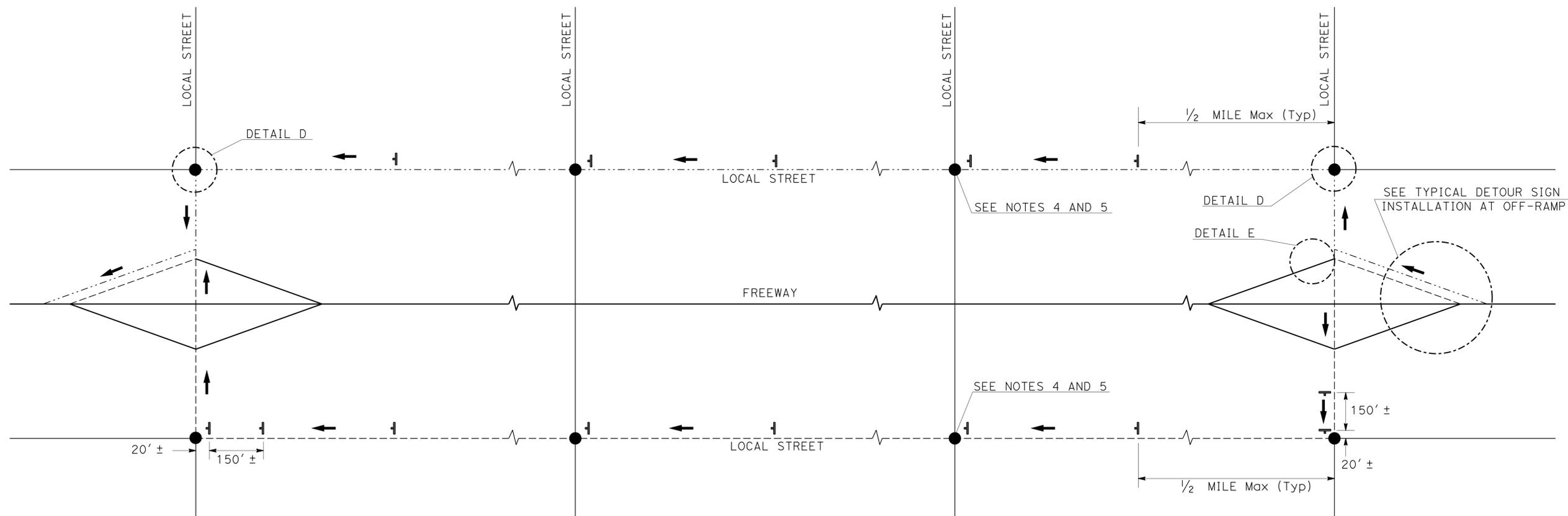


**LEGEND**

- ↓ SIGN SP-2
- AND/OR DESIGNATED DETOUR ROUTE
- DETOUR DIRECTION
- CONTROLLED INTERSECTION

**NOTES:**

1. SP-2 SIGNS MAY BE STRAPPED ON EXISTING ELECTROLIER, SIGNAL POST OR SIGN POST.
2. SP-2 SIGNS MUST NOT BE INSTALLED ON BARRICADES EXCEPT AS OTHERWISE SHOWN.
3. SIGN LOCATIONS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.
4. SP-2 SIGNS MUST BE POSTED AT EACH CONTROLLED INTERSECTION (EXCEPT AT COMMERCIAL PROPERTY, RESIDENTIAL COMPLEX OR T-INTERSECTION FROM ONE-WAY STREET) ALONG THE DESIGNATED DETOUR ROUTE.
5. UNLESS OTHERWISE SHOWN ON OTHER THD PLANS, WHEN CONTROLLED INTERSECTIONS ALONG THE DESIGNATED DETOUR ROUTE ARE CLOSELY SPACED, PLACE SP-2 SIGNS AT CONTROLLED INTERSECTIONS AT A DISTANCE NOT TO EXCEED 1/4 MILE FROM THE PRECEDING DETOUR SIGN.
6. EXCEPT AS OTHERWISE SHOWN ON OTHER PLANS OR SPECIFIED IN THE SPECIAL PROVISIONS, SP-2 SIGNS MUST BE PLACED AS SHOWN ON THIS PLAN.



**TYPICAL DETOUR SIGN INSTALLATION ALONG DESIGNATED DETOUR ROUTE**

**TRAFFIC HANDLING DETAILS  
TRAFFIC CONTROL SYSTEM  
FOR DETOUR SIGN INSTALLATION  
ALONG DESIGNATED DETOUR ROUTE  
SHEET 1 OF 3**

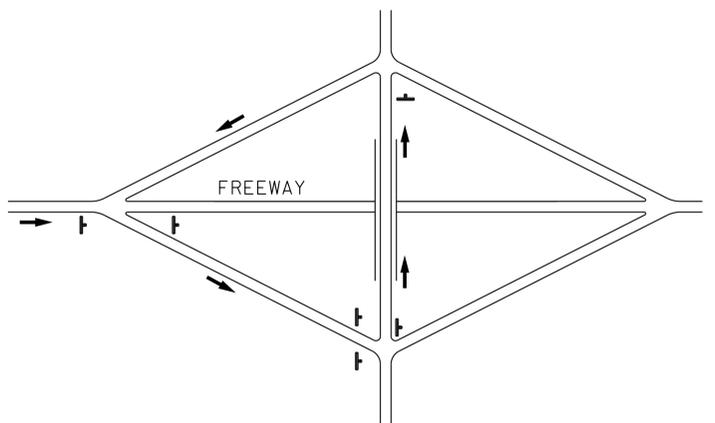
NO SCALE

**THD-3**

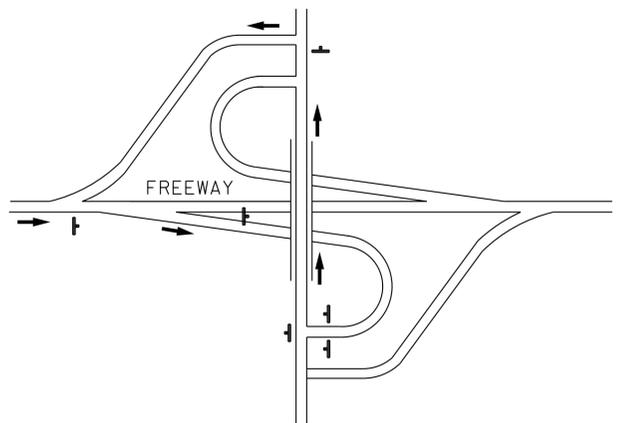
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 DT M  
 FUNCTIONAL SUPERVISOR  
 SAM ESQUENAZI  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 JOCELYN C CHIANG  
 REVISED BY  
 DATE REVISED  
 2/14  
 JC



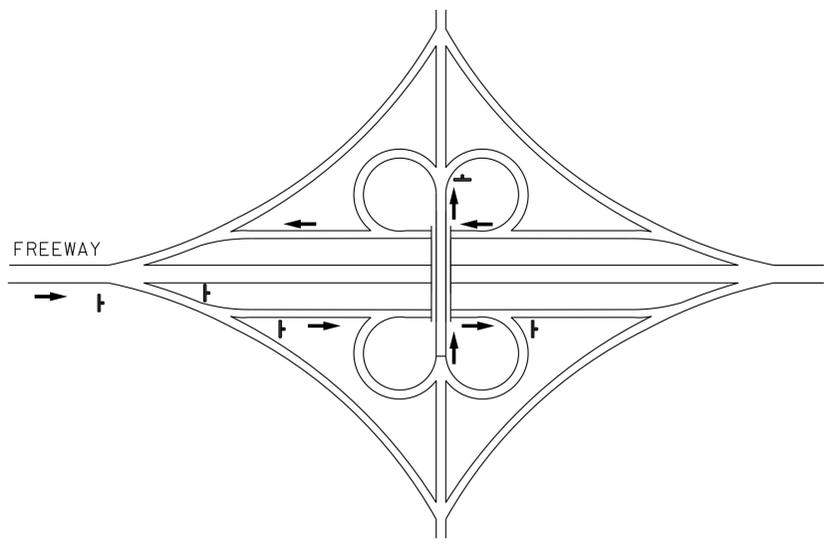
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**Caltrans**  
**DTM**  
 FUNCTIONAL SUPERVISOR: SAM ESQUENAZI  
 REVISIONS: JC 2/14  
 REVISOR: ALBERT K YU  
 CHECKER: JOCELYN C CHIANG  
 CALCULATED/DESIGNED BY: [Blank]  
 CHECKED BY: [Blank]



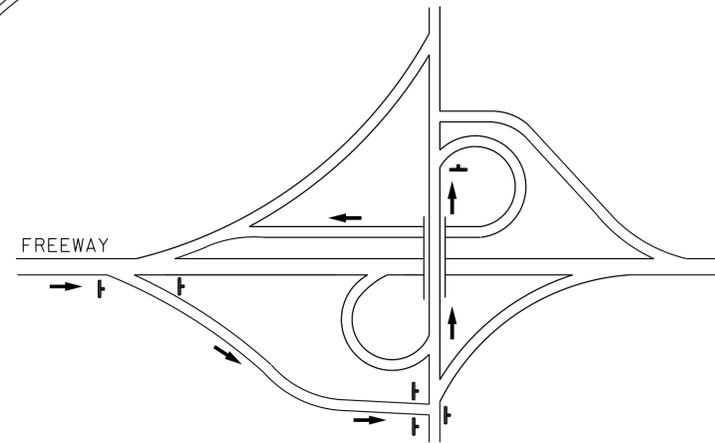
TYPE I



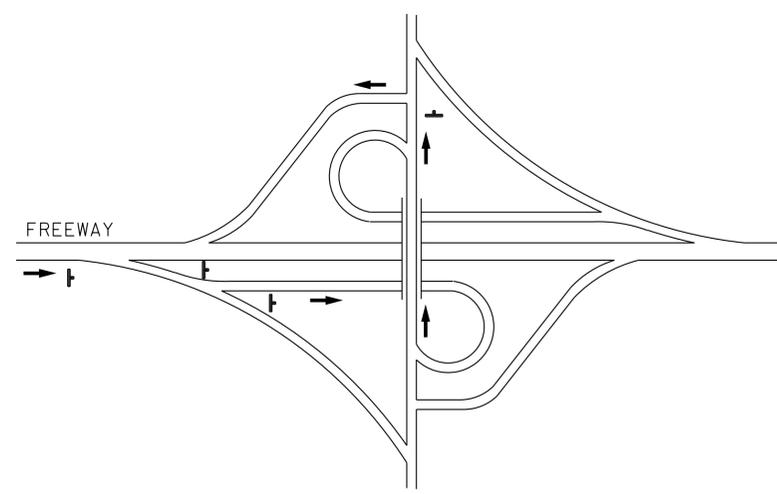
TYPE II



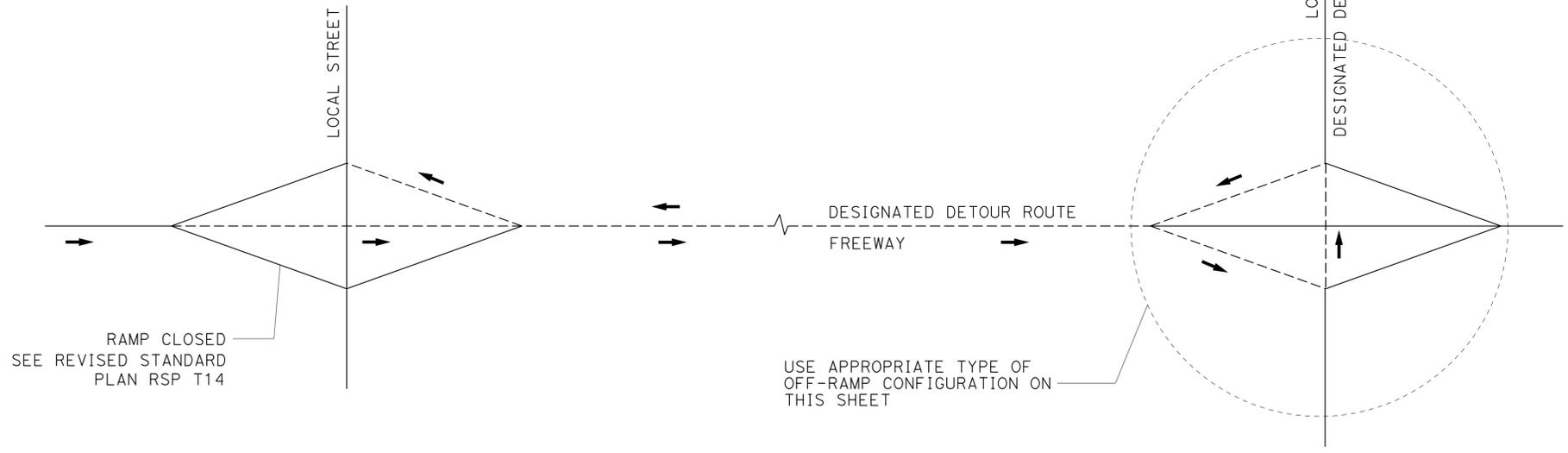
TYPE III



TYPE IV



TYPE V



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

**TYPICAL DETOUR SIGN INSTALLATION FOR OFF-RAMP CLOSURE**

**NOTES:**

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

**LEGEND**

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

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

NO SCALE

**THD-5**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,14, 126,138	Var	10	39

Ali Bamshad 1-14-15  
 REGISTERED CIVIL ENGINEER DATE  
 2-9-15  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 ALI R. BAMSHAD  
 No. C48134  
 Exp. 6-30-16  
 CIVIL  
 STATE OF CALIFORNIA

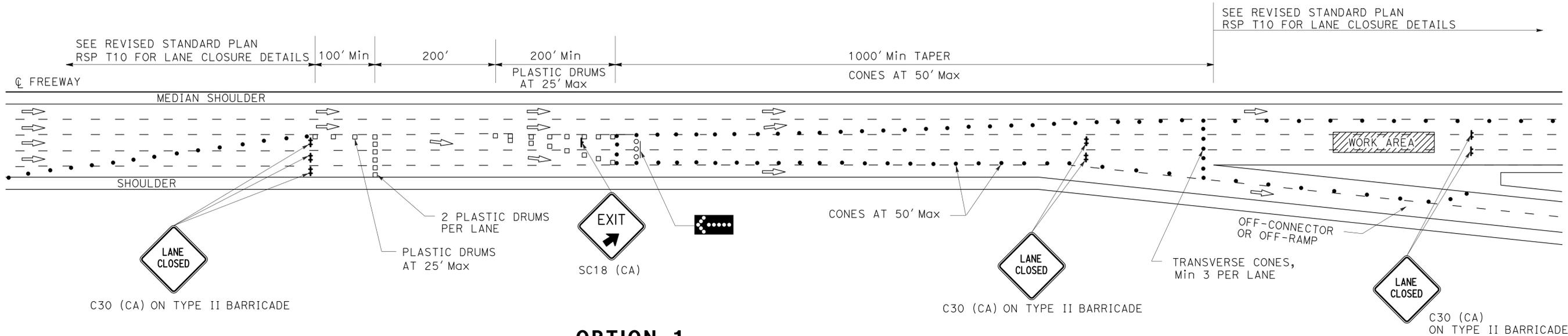
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**LEGEND**

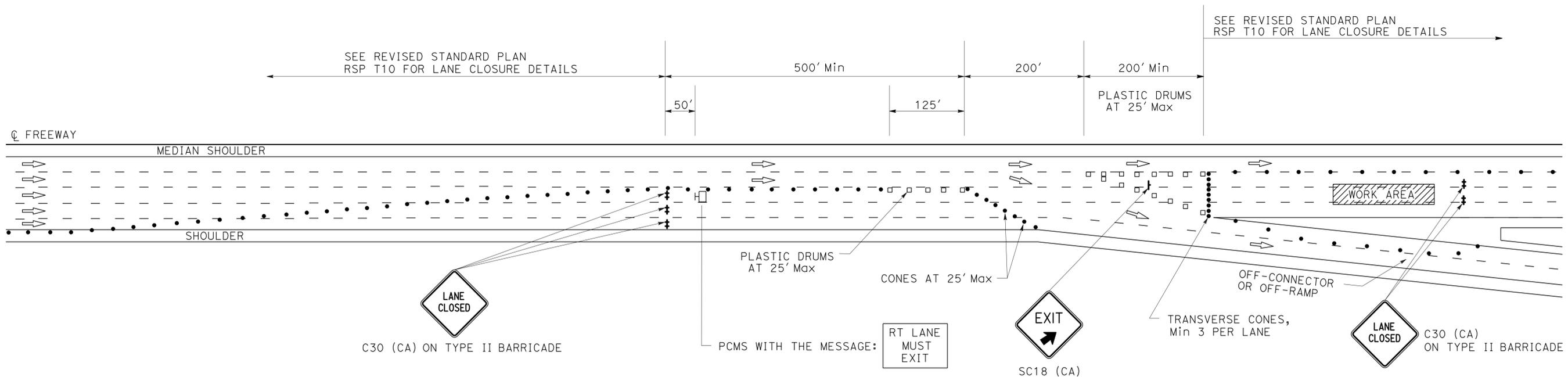
- TRAFFIC CONE
- TRAFFIC PLASTIC DRUM
- ⚡ TEMPORARY TRAFFIC CONTROL SIGN
- ⚡ BARRICADES
- ☐ PCMS
- ⬇ FLASHING ARROW SIGN (FAS)
- ⊖ FAS SUPPORT OR TRAILER

**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-6**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DTM

Caltrans

FUNCTIONAL SUPERVISOR: SAM ESQUENAZI

CALCULATED/DESIGNED BY: ALBERT K YU

CHECKED BY: JOCELYN C CHIANG

REVISOR: JC

DATE REVISED: 2/14

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,14, 126,138	Var	11	39

Ali Bamshad 1-14-15  
 REGISTERED CIVIL ENGINEER DATE  
 2-9-15  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 ALI R. BAMSHAD  
 No. C48134  
 Exp. 6-30-16  
 CIVIL  
 STATE OF CALIFORNIA

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

**NOTES:**

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

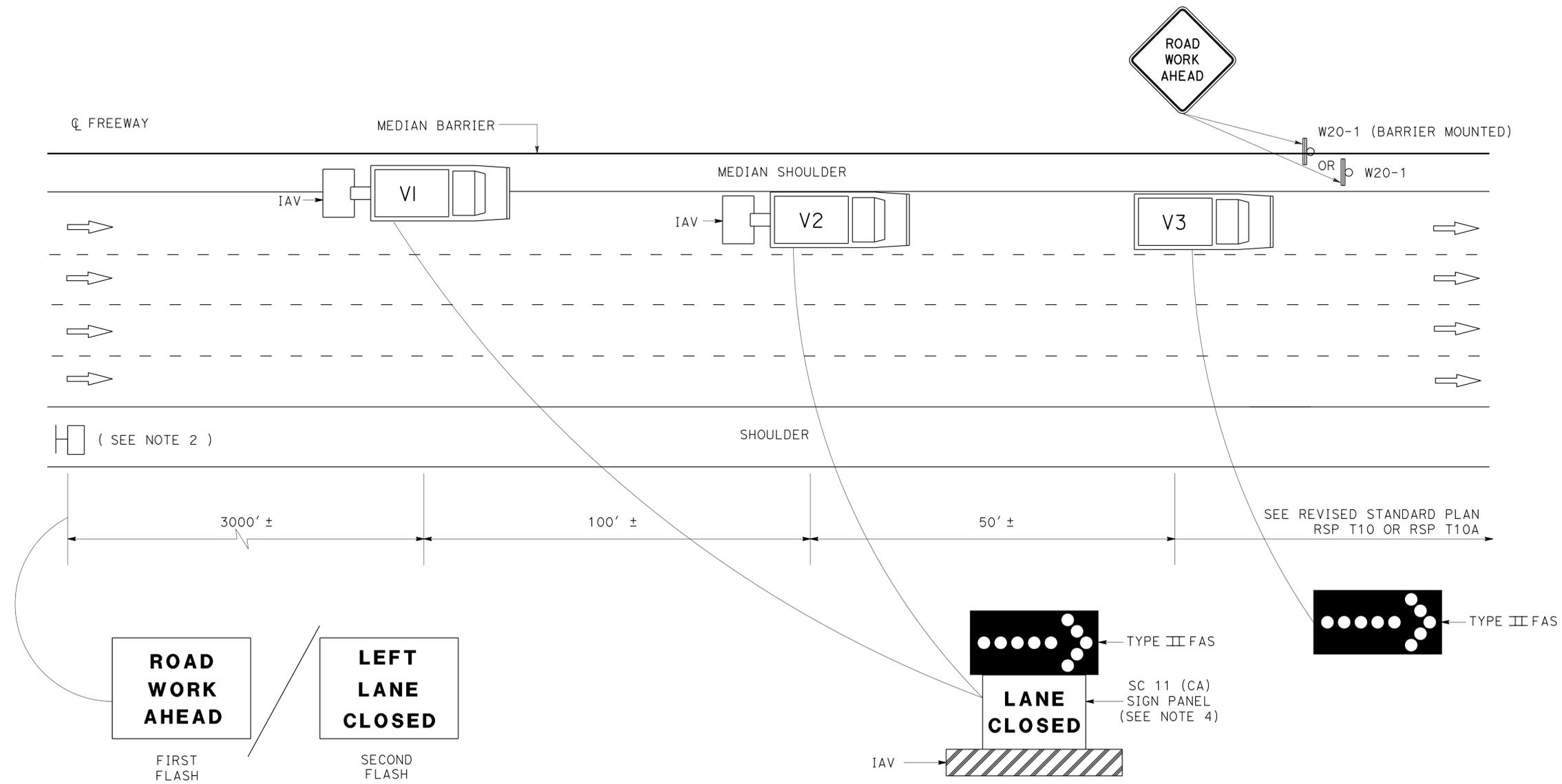
**LEGEND**

- V1, V2 SHADOW VEHICLES
- V3 WORK/APPLICATION VEHICLE
- PCMS
- TEMPORARY TRAFFIC CONTROL SIGN
- FLASHING ARROW SIGN (FAS)

**ABBREVIATIONS**

- IAV IMPACT ATTENUATOR VEHICLE
- (CA) CALIFORNIA CODE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 DT M  
 FUNCTIONAL SUPERVISOR SAM ESQUENAZI  
 CHECKED BY  
 REVISIONS: 2/14  
 REVISED BY JOCELYN C CHIANG  
 DESIGNED BY ALBERT K YU  
 CALCULATED BY  
 JC  
 DESIGNED BY



**PCMS OR TRUCK MOUNTED CMS MESSAGE**

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

NO SCALE

**THD-7**

LAST REVISION | DATE PLOTTED => 03-FEB-2015  
 02-09-15 | TIME PLOTTED => 2:31:34

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,14, 126,138	Var	12	39

Ali Bamshad 1-14-15  
 REGISTERED CIVIL ENGINEER DATE  
 2-9-15  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 ALI R. BAMSHAD  
 No. C48134  
 Exp. 6-30-16  
 CIVIL  
 STATE OF CALIFORNIA

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

**NOTES:**

- LANE CLOSURES MUST NOT BE PLACED ON CREST VERTICAL CURVES OR ON HORIZONTAL CURVES.
- PCMS MUST BE ACTIVATED PRIOR TO TRAFFIC CONTROL ACTIVITIES ON THE HOV LANE.
- A MINIMUM SIGHT DISTANCE OF 1500' MUST BE PROVIDED IN ADVANCE OF PCMS.
- VEHICLE-MOUNTED SIGN PANELS MUST BE TYPE III OR IV RETROREFLECTORIZED SHEETING, BLACK ON WHITE OR BLACK ON ORANGE WITH 8" MINIMUM SERIES D LETTERS PER CALTRANS SIGN SPECIFICATIONS.
- PLACE PCMS ON THE MEDIAN SHOULDER WHERE SUFFICIENT ROOM (SUCH AS CHP ENFORCEMENT AREAS) EXISTS.
- ADVANCE WARNING SIGN INSTALLATIONS MUST BE EQUIPPED WITH FLAGS FOR DAYTIME CLOSURES. TYPE B HIGH INTENSITY FLASHING WARNING LIGHTS MUST BE USED ON SP-16 SIGN DURING NIGHT LANE CLOSURES. FLAGS AND WARNING LIGHTS MUST BE ATTACHED TO SIGNS AS APPROVED BY THE ENGINEER.

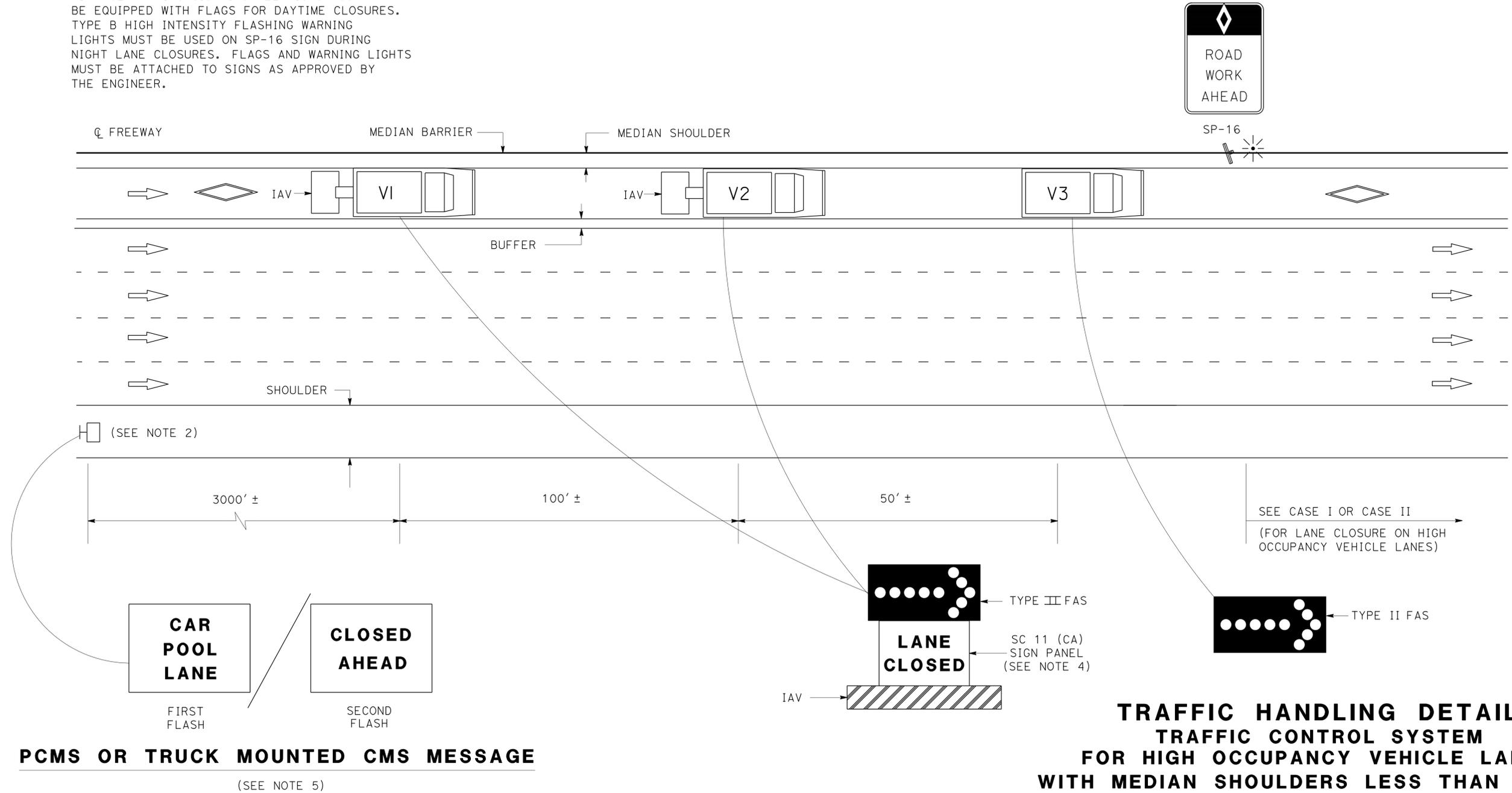
**LEGEND**

- V1, V2 SHADOW VEHICLES
- V3 WORK/APPLICATION VEHICLE
- PCMS
- PORTABLE FLASHING BEACON
- TEMPORARY TRAFFIC CONTROL SIGN
- FLASHING ARROW SIGN (FAS)

**ABBREVIATIONS**

- IAV IMPACT ATTENUATOR VEHICLE
- (CA) CALIFORNIA CODE
- CHP CALIFORNIA HIGHWAY PATROL

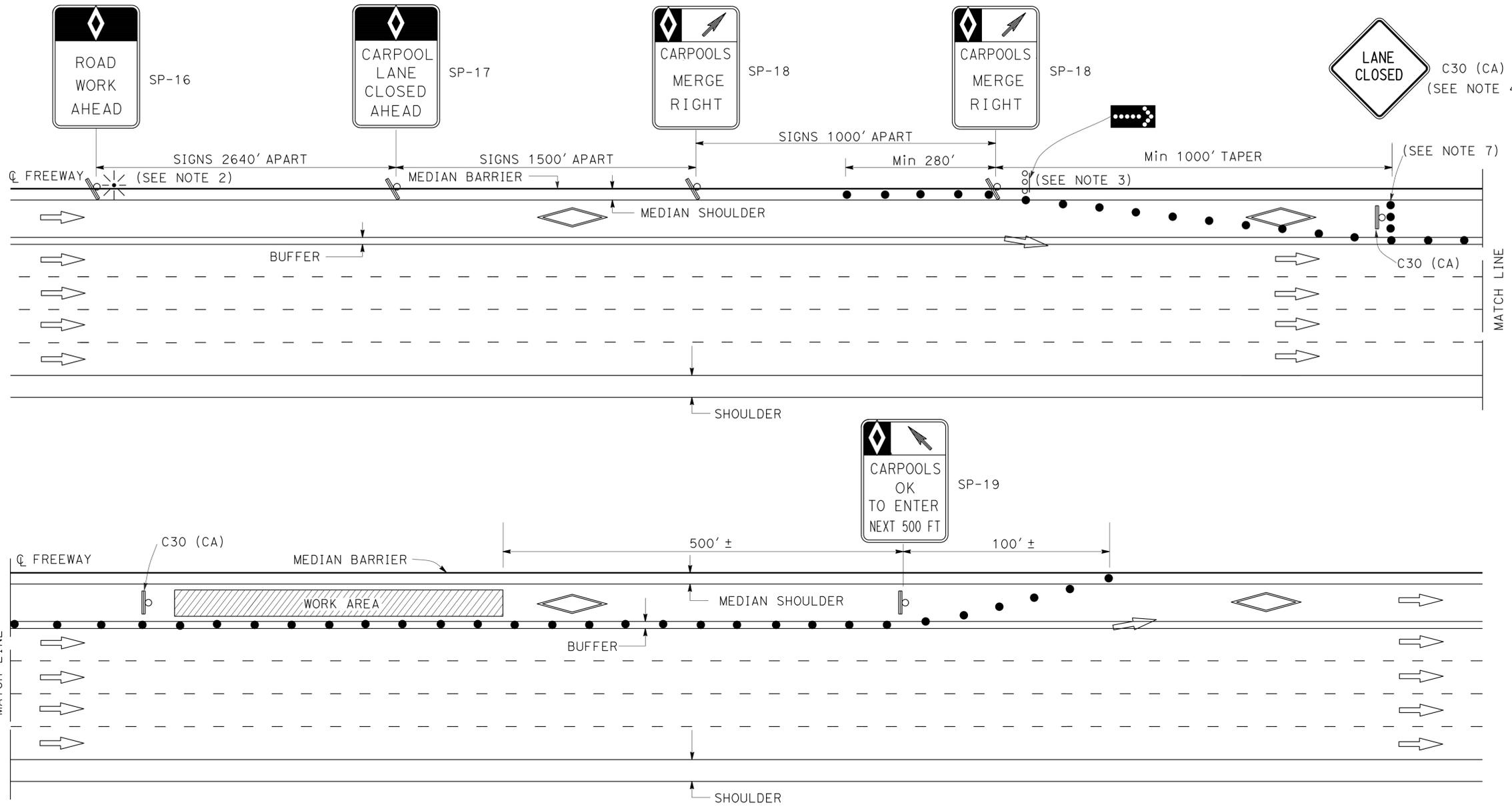
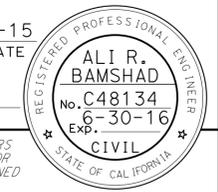
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 DTMT  
 FUNCTIONAL SUPERVISOR  
 SAM ESQUENAZI  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 JOCELYN C CHIANG  
 REVISED BY  
 DATE REVISED  
 2/14  
 JC



**TRAFFIC HANDLING DETAILS**  
**TRAFFIC CONTROL SYSTEM**  
**FOR HIGH OCCUPANCY VEHICLE LANES**  
**WITH MEDIAN SHOULDERS LESS THAN 8 FEET**  
 NO SCALE

**THD-8**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,14, 126,138	Var	13	39
Ali R. Bamshad 1-14-15 REGISTERED CIVIL ENGINEER DATE					
2-9-15 PLANS APPROVAL DATE					
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					



- LEGEND**
- TRAFFIC CONE
  - ☼ PORTABLE FLASHING BEACON
  - ⏏ TEMPORARY TRAFFIC CONTROL SIGN
  - ⦿ FLASHING ARROW SIGN (FAS)
  - ⦿ FAS SUPPORT OR TRAILER

**ABBREVIATIONS**

(CA) CALIFORNIA CODE

**SIGN PANEL**

SIZE (MIN)

SP-16	36" X 54"
SP-17	36" X 54"
SP-18	36" X 48"
SP-19	36" X 60"
C30 (CA)	30" X 30"
G20-2	48" X 24"

**NOTES: FOR CASE I AND CASE II**

1. AT LEAST ONE PERSON MUST BE ASSIGNED TO FULL TIME MAINTENANCE OF TRAFFIC CONTROL DEVICES ON NIGHT LANE CLOSURES OR DAY-TIME CLOSURES EXCEEDING 1 MILE LENGTH, INCLUDING TAPERS.
2. ADVANCE WARNING SIGN INSTALLATIONS MUST BE EQUIPPED WITH FLAGS FOR DAYTIME CLOSURES. TYPE B HIGH INTENSITY FLASHING WARNING LIGHTS MUST BE USED ON SP-16 SIGN DURING NIGHT LANE CLOSURES. FLAGS AND WARNING LIGHTS MUST BE ATTACHED TO SIGNS AS APPROVED BY THE ENGINEER.
3. THE FLASHING ARROW SIGN MUST BE TYPE I.
4. PLACE C30 (CA) SIGNS EVERY 2000' THROUGHOUT THE LENGTH OF LANE CLOSURE.
5. A MINIMUM 1500' OF SIGHT DISTANCE MUST BE PROVIDED WHERE POSSIBLE FOR VEHICLES APPROACHING THE FLASHING ARROW SIGN. LANE CLOSURES MUST NOT BE PLACED ON CREST VERTICAL CURVES OR ON HORIZONTAL CURVES.
6. PORTABLE DELINEATORS PLACED AT ONE-HALF THE SPACING INDICATED FOR TRAFFIC CONES MAY BE USED INSTEAD OF CONES FOR DAYTIME CLOSURES.
7. A MINIMUM OF 3 CONES MUST BE PLACED TRANSVERSELY ACROSS CLOSED LANES WHERE TAPERS END AND EVERY 2000'. TWO TYPE II BARRICADES MAY BE USED INSTEAD OF 3 CONES. THE ALIGNMENT OF CONES OR BARRICADES MAY BE SHIFTED FROM THE TRANSVERSE ALIGNMENT TO PROVIDE ACCESS TO WORK.
8. IF AN INGRESS/EGRESS AREA IS WITHIN 5250' UPSTREAM OR DOWNSTREAM OF THE WORK AREA, LANE CLOSURES MUST BE EXTENDED TO THAT AREA AS SHOWN IN CASE II.
9. SIGNS SP-16, 17, 18, AND 19 MAY BE OVERLAID ON EXISTING CARPOOL SIGNS IN MEDIANS AS APPROVED BY THE ENGINEER.
10. SIGNS SP-16, 17, 18, AND C30 (CA) MUST BE BLACK ON ORANGE BACKGROUND. SIGN SP-19 MUST BE BLACK ON WHITE BACKGROUND. DIAMONDS ON SIGNS MUST BE WHITE.
11. FOR CLOSURE OF LANE(S) ADJACENT TO HOV LANES, SEE CASE II.
12. THE MAXIMUM SPACING BETWEEN CONES MUST BE APPROXIMATELY 50' IN TAPERS AND 100' ON TANGENTS.

**TRAFFIC HANDLING DETAILS  
TRAFFIC CONTROL SYSTEM  
FOR HIGH OCCUPANCY VEHICLE LANES  
AT NON-INGRESS/EGRESS AREAS  
CASE I**

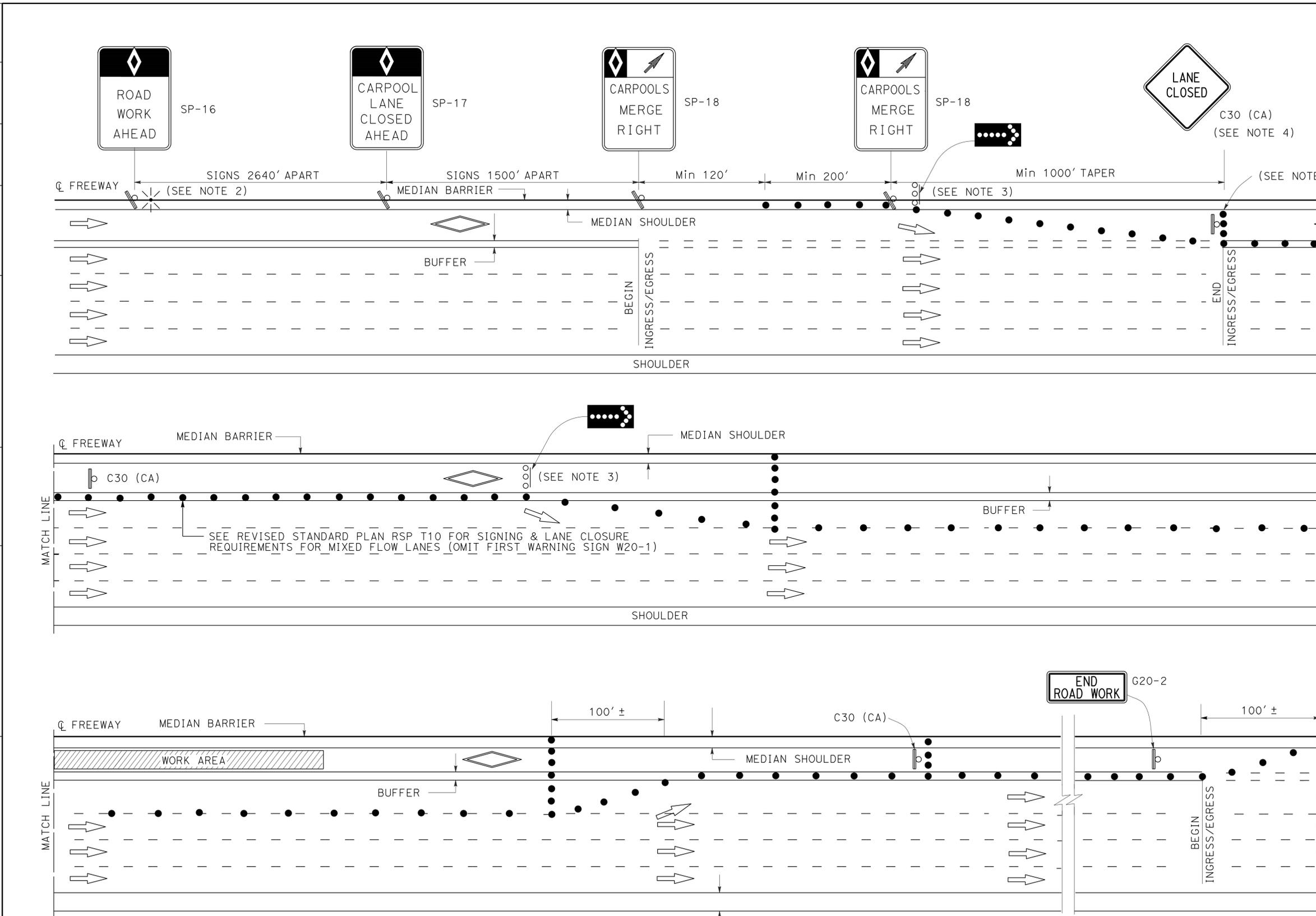
NO SCALE THD-9

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 Et Caltrans®  
 FUNCTIONAL SUPERVISOR: SAM ESQUENAZI  
 CHECKED BY: JOCELYN C CHIANG  
 REVISIONS: 2/14  
 DESIGNED BY: ALBERT K YU  
 DATE: 2/14

LAST REVISION: DATE PLOTTED => 03-FEB-2015  
 02-09-15 TIME PLOTTED => 2:31:34

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,14, 126,138	Var	14	39
Ali Bamshad 1-14-15 REGISTERED CIVIL ENGINEER DATE					
2-9-15 PLANS APPROVAL DATE					
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					
REGISTERED PROFESSIONAL ENGINEER ALI R. BAMSHAD No. C48134 Exp. 6-30-16 CIVIL STATE OF CALIFORNIA					

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



**NOTES:**

- SEE CASE I FOR NOTES, LEGEND, SIGN PANEL, AND ABBREVIATIONS FOR THIS SHEET.
- CLOSURES OF ONE MIXED FLOW TRAFFIC LANE ADJACENT TO HOV LANE SHOWN ON THIS SHEET. MULTIPLE MIXED FLOW LANE CLOSURES ARE SIMILAR.

**TRAFFIC HANDLING DETAILS  
 TRAFFIC CONTROL SYSTEM  
 FOR HIGH OCCUPANCY  
 VEHICLE LANES AND ADJACENT FREEWAY LANES  
 BETWEEN INGRESS/EGRESS AREAS  
 CASE II  
 NO SCALE  
 THD-10**

LAST REVISION DATE PLOTTED => 03-FEB-2015 02-09-15 TIME PLOTTED => 2:31:34

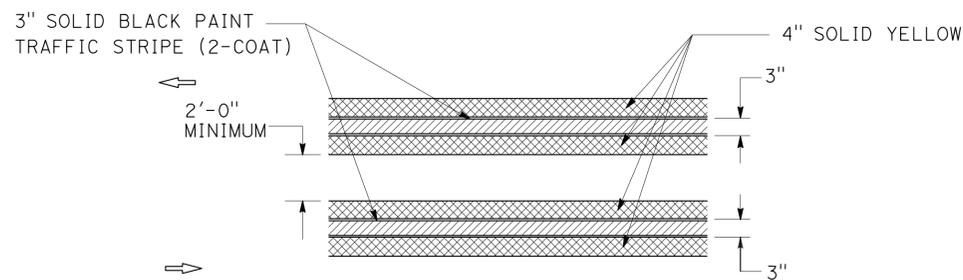


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,14, 126,138	Var	16	39

1-16-15  
 REGISTERED CIVIL ENGINEER DATE  
 2-9-15  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 KEVIN KWAN  
 No. C68219  
 Exp. 9-30-15  
 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.



**DETAIL 28**  
LOCATION 1

**PAVEMENT DELINEATION QUANTITIES**

Loc No. (X)	BRIDGE NAME	Rte	PM	THERMOPLASTIC TRAFFIC STRIPE														THERMOPLASTIC PAVEMENT MARKING			PAVEMENT MARKER											
				DETAIL No.														RETROREFLECTIVE			RETROREFLECTIVE											
				9	12	13/14 (Mod)	25/25A	27B	HOV BUFFER STRIPING DETAIL	4" SOLID WHITE	22	28	29	30 (Mod)	36/36A	8" SOLID WHITE	PAINT TRAFFIC STRIPE (2-COAT)									WORDS	TYPE IV, III, VI ARROWS	DIAGONAL WHITE/YELLOW	TYPE H	TYPE G	TYPE D	NON-REFLECTIVE TYPE A
				4" BROKEN WHITE (17-7)	4" BROKEN WHITE (36-12)	4" BROKEN WHITE (36-12)	4" SOLID YELLOW	4" SOLID WHITE			4" SOLID YELLOW	4" SOLID YELLOW	4" SOLID YELLOW	8" SOLID WHITE	EA			EA	EA	EA	EA	LF	LF	LF	SQFT							
11	20TH STREET WEST UC	14	R67.48			488	244	244												11	26		40		366	244						78
12	LANCASTER Blvd UC	14	R68.46			254	127	127												6	17		21		190	127						44
13	LANCASTER Blvd UC	14	R68.46			254	127	127												6	17		21		190	127						44
14	AVENUE "I" UC	14	R68.96			147	147	147										50		7	12		12		184	147				50	31	
15	SAN MARTINEZ GRANDE	126	R1.44			168		168													13	30		70	210	336						113
16	CASTAIC CREEK	126	R4.09			950		950					1,900								46	160		396	1,188	1,900						602
17	FRONTAGE ROAD UC	126	R5.66			316		158	158									120		8	19				237	158				120	27	
18	FRONTAGE ROAD UC	126	R5.66			316		316	158											14	46				869	316					60	
19	AVENUE D SEPARATION	138	36.85					476													6	81			476	952		300			87	
SUBTOTAL					1,750	1,143	1,119	2,555					952	2,236	316				470	52	202	271	94	466	3,910	4,307		300	170	1,086		
SHEET TOTAL						2,893									316			470			525		560		3,910	4,307		300	170	1,086		
SHEET TOTAL (FROM PDQ-1)				1,098		4,897									480	640	155				417		400		4,250	4,289	640		155	817		
GRAND TOTAL				1,098		7,790									796	640	625				942		960		8,160	8,596	640	300	325	1,903		

**PAVEMENT DELINEATION QUANTITIES**

NO SCALE

**PDQ-2**

	<b>M</b>	
Maint	MAINTENANCE	
Max	MAXIMUM	
MB	METAL BEAM	
MBB	METAL BEAM BARRIER	
MBGR	METAL BEAM GUARD RAILING	
Med	MEDIAN	
MGS	MIDWEST GUARDRAIL SYSTEM	
MH	MANHOLE	
Min	MINIMUM	
Misc	MISCELLANEOUS	
Misc I & S	MISCELLANEOUS IRON AND STEEL	
Mkr	MARKER	
Mod	MODIFIED, MODIFY	
Mon	MONUMENT	
MP	METAL PLATE	
MPGR	METAL PLATE GUARD RAILING	
MR	MOVEMENT RATING	
MSE	MECHANICALLY STABILIZED EMBANKMENT	
Mt	MOUNTAIN, MOUNT	
MtI	MATERIAL	
MVP	MAINTENANCE VEHICLE PULLOUT	
	<b>N</b>	
N	NORTH	
NB	NORTHBOUND	
No.	NUMBER (MUST HAVE PERIOD)	
Nos.	NUMBERS (MUST HAVE PERIOD)	
NPS	NOMINAL PIPE SIZE	
NS	NEAR SIDE	
NSP	NEW STANDARD PLAN	
NTS	NOT TO SCALE	
	<b>O</b>	
Obir	OBLITERATE	
OC	OVERCROSSING	
OD	OUTSIDE DIAMETER	
OF	OUTSIDE FACE	
OG	ORIGINAL GROUND	
OGAC	OPEN GRADED ASPHALT CONCRETE	
OGFC	OPEN GRADED FRICTION COURSE	
OH	OVERHEAD	
OHWM	ORDINARY HIGH WATER MARK	
O-O	OUT TO OUT	
Opp	OPPOSITE	
OSD	OVERSIDE DRAIN	
	<b>P</b>	
p	PAGE	
PAP	PERFORATED ALUMINUM PIPE	
PB	PULL BOX	
PC	POINT OF CURVATURE, PRECAST	
PCC	POINT OF COMPOUND CURVE, PORTLAND CEMENT CONCRETE	
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN	
PCP	PERFORATED CONCRETE PIPE, PRESTRESSED CONCRETE PIPE	
PCVC	POINT OF COMPOUND VERTICAL CURVE	
PEC	PERMIT TO ENTER AND CONSTRUCT	
Ped	PEDESTRIAN	
Ped OC	PEDESTRIAN OVERCROSSING	
Ped UC	PEDESTRIAN UNDERCROSSING	
Perm MtI	PERMEABLE MATERIAL	

	<b>P continued</b>	
PG	PROFILE GRADE	
PI	POINT OF INTERSECTION	
PJP	PARTIAL JOINT PENETRATION	
Pkwy	PARKWAY	
P, PL	PLATE	
P/L	PROPERTY LINE	
PM	POST MILE, TIME FROM NOON TO MIDNIGHT	
PN	PAVING NOTCH	
POC	POINT OF HORIZONTAL CURVE	
POT	POINT OF TANGENT	
POVC	POINT OF VERTICAL CURVE	
PP	PIPE PILE, PLASTIC PIPE, POWER POLE	
PPL	PREFORMED PERMEABLE LINER	
PPP	PERFORATED PLASTIC PIPE	
PRC	POINT OF REVERSE CURVE	
PRF	PAVEMENT REINFORCING FABRIC	
PRVC	POINT OF REVERSE VERTICAL CURVE	
PS&E	PLANS, SPECIFICATIONS AND ESTIMATES	
PS, P/S	PRESTRESSED	
PSP	PERFORATED STEEL PIPE	
PT	POINT OF TANGENCY	
PVC	POLYVINYL CHLORIDE	
Pvmt	PAVEMENT	
	<b>Q</b>	
Qty	QUANTITY	
	<b>R</b>	
R	RADIUS	
R & D	REMOVE AND DISPOSE	
R & S	REMOVE AND SALVAGE	
R/C	RATE OF CHANGE	
RCA	REINFORCED CONCRETE ARCH	
RCB	REINFORCED CONCRETE BOX	
RCP	REINFORCED CONCRETE PIPE	
RCPA	REINFORCED CONCRETE PIPE ARCH	
Rd	ROAD	
Reinf	REINFORCED, REINFORCEMENT, REINFORCING	
Rel	RELOCATE	
Repl	REPLACEMENT	
Ret	RETAINING	
Rev	REVISED, REVISION	
Rdwy	ROADWAY	
RHMA	RUBBERIZED HOT MIX ASPHALT	
Riv	RIVER	
RM	ROAD-MIXED	
RP	RADIUS POINT, REFERENCE POINT	
RR	RAILROAD	
RSP	ROCK SLOPE PROTECTION, REVISED STANDARD PLAN	
Rt	RIGHT	
Rte	ROUTE	
RW	REDWOOD, RETAINING WALL	
R/W	RIGHT OF WAY	
Rwy	RAILWAY	

	<b>S</b>	
S	SOUTH, SUPPLEMENT	
SAE	STRUCTURE APPROACH EMBANKMENT	
Salv	SALVAGE	
SAPP	STRUCTURAL ALUMINUM PLATE PIPE	
SB	SOUTHBOUND	
SC	SAND CUSHION	
SCSP	SLOTTED CORRUGATED STEEL PIPE	
SD	STORM DRAIN	
Sec	SECOND, SECTION	
Sep	SEPARATION	
SG	SUBGRADE	
Shld	SHOULDER	
Sht	SHEET	
Sim	SIMILAR	
±	STATION LINE	
SM	SELECTED MATERIAL	
Spec	SPECIAL, SPECIFICATIONS	
SPP	SLOTTED PLASTIC PIPE	
SS	SLOPE STAKE	
SSBM	STRAP AND SADDLE BRACKET METHOD	
SSD	STRUCTURAL SECTION DRAIN	
SSPA	STRUCTURAL STEEL PLATE ARCH	
SSPP	STRUCTURAL STEEL PLATE PIPE	
SSPPA	STRUCTURAL STEEL PLATE PIPE ARCH	
SSRP	STEEL SPIRAL RIB PIPE	
St	STREET	
Sta	STATION	
STBB	SINGLE THRIE BEAM BARRIER	
Std	STANDARD	
Str	STRUCTURE	
Surf	SURFACING	
SW	SIDEWALK, SOUND WALL	
Swr	SEWER	
Sym	SYMMETRICAL	
S4S	SURFACE 4 SIDES	
	<b>T</b>	
T	SEMI-TANGENT	
Tan	TANGENT	
TBB	THRIE BEAM BARRIER	
Tbr	TIMBER	
TC	TOP OF CURB	
TCB	TRAFFIC CONTROL BOX	
TCE	TEMPORARY CONSTRUCTION EASEMENT	
TeI	TELEPHONE	
Temp	TEMPORARY	
TG	TOP OF GRADE	
Tot	TOTAL	
TP	TELEPHONE POLE	
TPB	TREATED PERMEABLE BASE	
TPM	TREATED PERMEABLE MATERIAL	
Trans	TRANSITION	

	<b>T continued</b>	
TS	TRANSVERSE, TRAFFIC SIGNAL, TUBULAR STEEL	
Typ	TYPICAL	<b>U</b>
UC	UNDERCROSSING	
UD	UNDERDRAIN	
UG	UNDERGROUND	
UON	UNLESS OTHERWISE NOTED	
UP	UNDERPASS	<b>V</b>
V	VALVE, DESIGN SPEED	
Var	VARIABLE, VARIES	
VC	VERTICAL CURVE	
VCP	VITRIFIED CLAY PIPE	
Vert	VERTICAL	
Via	VIADUCT	
Vol	VOLUME	<b>W</b>
W	WEST, WIDTH	
WB	WESTBOUND	
WH	WEEP HOLE	
WM	WIRE MESH	
WS	WATER SURFACE	
WSP	WELDED STEEL PIPE	
Wt	WEIGHT	
WV	WATER VALVE	
WW	WINGWALL	
WWLOL	WINGWALL LAYOUT LINE	<b>X</b>
X Sec	CROSS SECTION	
Xing	CROSSING	<b>Y</b>
Yr	YEAR	
Yrs	YEARS	

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,14, 126,138	Var	17	39

*Grace M. Tsushima*  
REGISTERED CIVIL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 Grace M. Tsushima  
 No. C49814  
 Exp. 9-30-14  
 CIVIL  
 STATE OF CALIFORNIA

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TO ACCOMPANY PLANS DATED 2-9-15

**UNIT OF MEASUREMENT SYMBOLS:**

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

**TABLE A**

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

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

**TABLE B**

SYMBOL USED	DEFINITIONS
ksi	KIPS PER SQUARE INCH
ksf	KIPS PER SQUARE FOOT
psi	POUNDS PER SQUARE INCH
psf	POUNDS PER SQUARE FOOT
lb/ft <sup>3</sup> , pcf	POUNDS PER CUBIC FOOT
tsf	TONS PER SQUARE FOOT
mph, MPH *	MILES PER HOUR
∅	NOMINAL DIAMETER
oz	OUNCE
lb	POUND
kíp	1,000 POUNDS
cal	CALORIE
ft	FOOT OR FEET
gal	GALLON

\* For use on a sign panel only

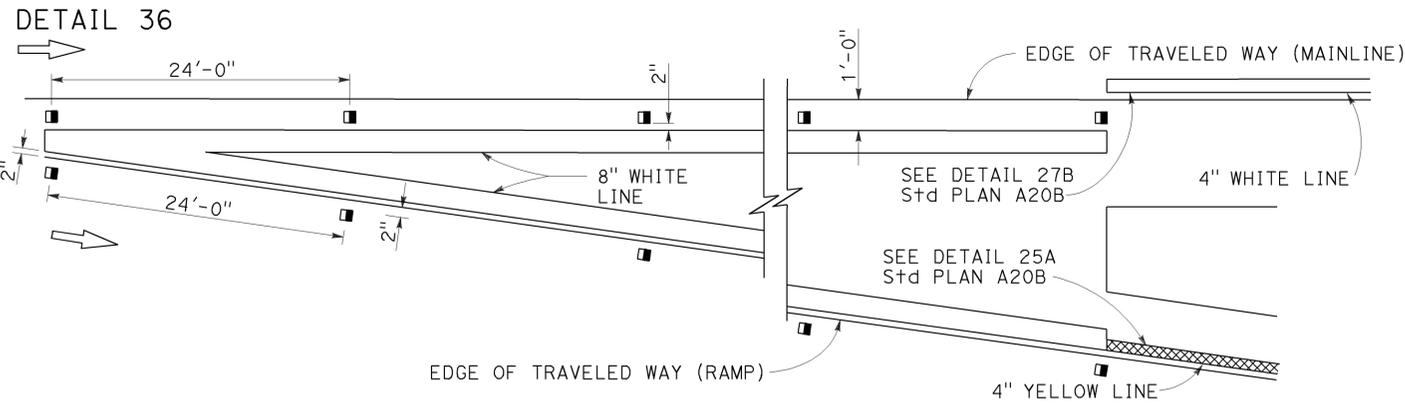
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**ABBREVIATIONS  
(SHEET 2 OF 2)**

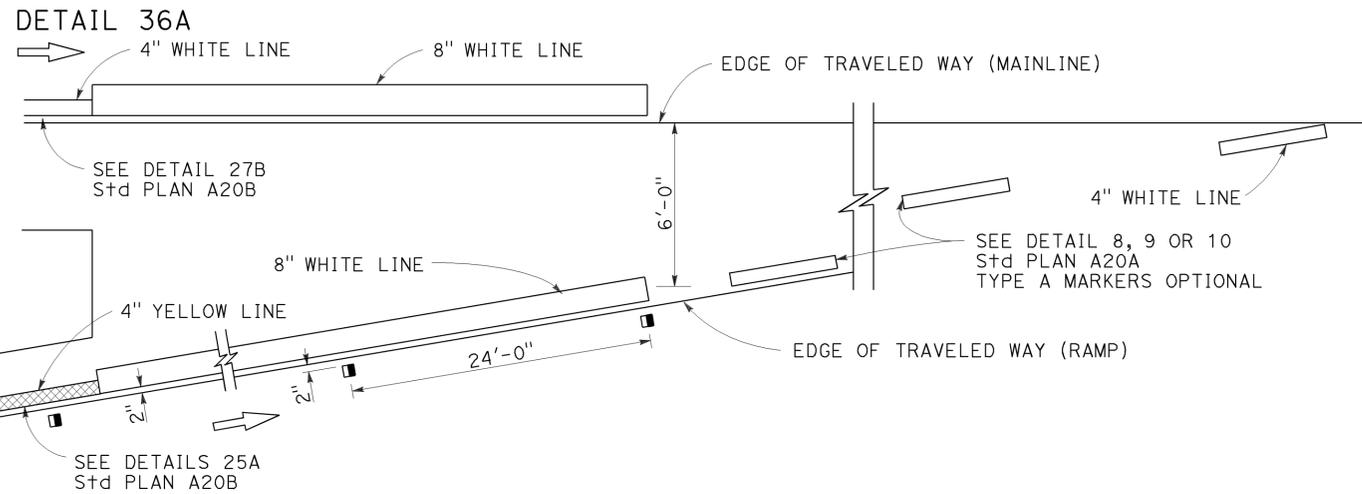
NO SCALE

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

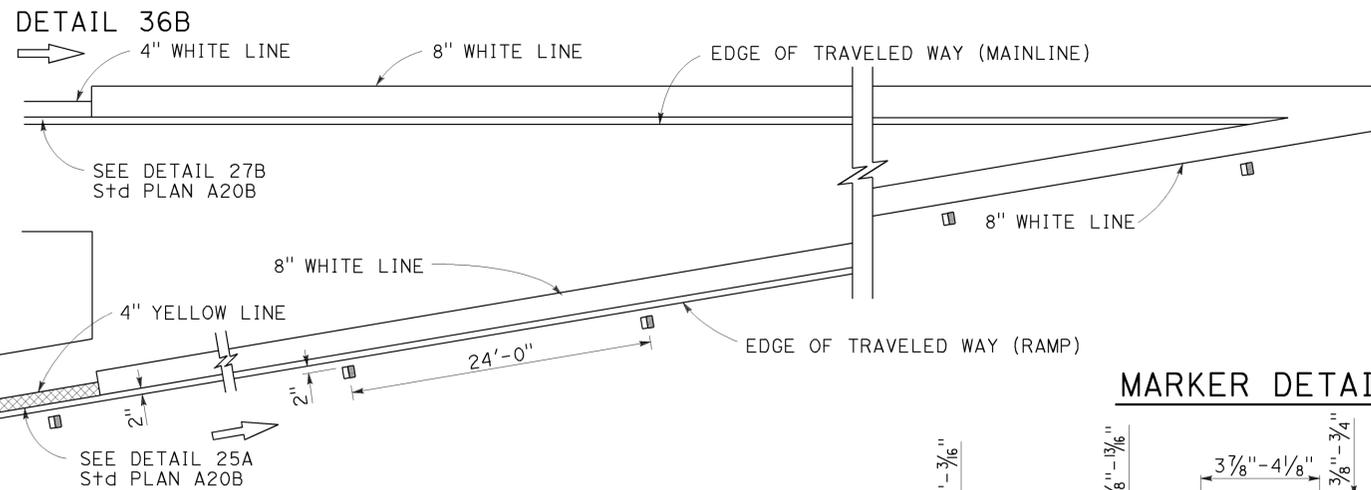
# EXIT RAMP NEUTRAL AREA (GORE) TREATMENT



# ENTRANCE RAMP NEUTRAL AREA (MERGE) TREATMENT



# ENTRANCE RAMP NEUTRAL AREA (ACCELERATION LANE) TREATMENT

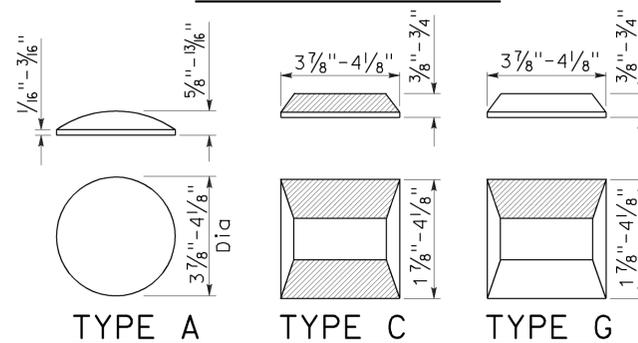


## MARKER DETAILS

### LEGEND:

#### MARKERS

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



RETROREFLECTIVE FACE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,14, 126,138	Var	18	39

*Roberta L. McLaughlin*  
 REGISTERED CIVIL ENGINEER

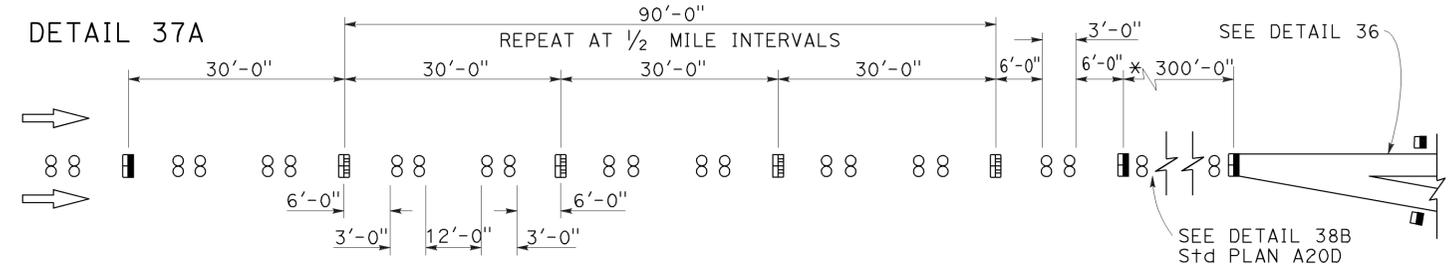
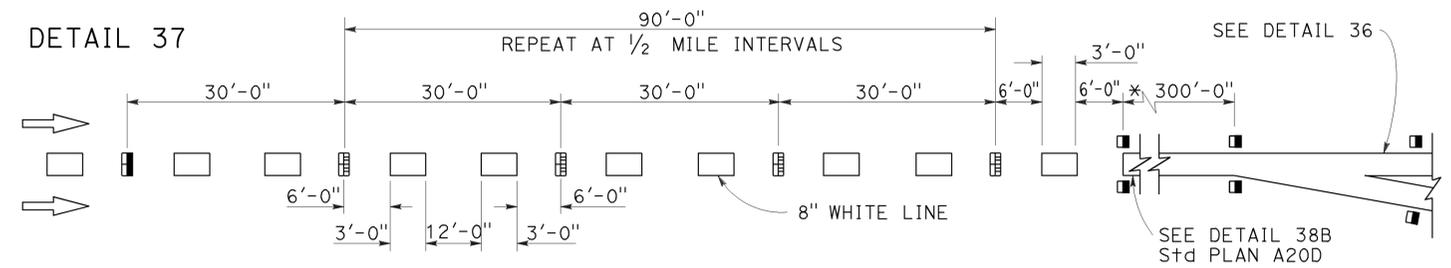
July 19, 2013  
 PLANS APPROVAL DATE

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

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

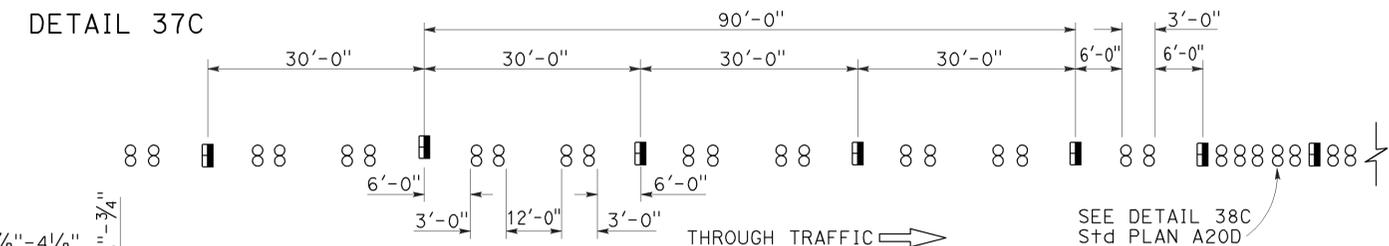
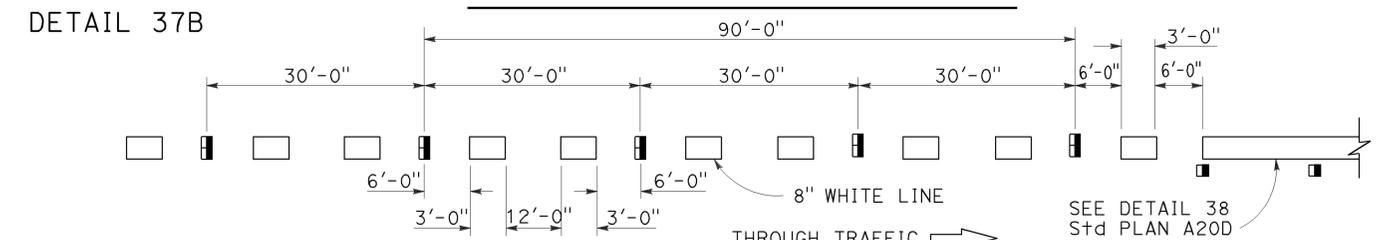
TO ACCOMPANY PLANS DATED 2-9-15

## LANE DROP AT EXIT RAMPS



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

## LANE DROP AT INTERSECTIONS



STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

## PAVEMENT MARKERS AND TRAFFIC LINE TYPICAL DETAILS

NO SCALE

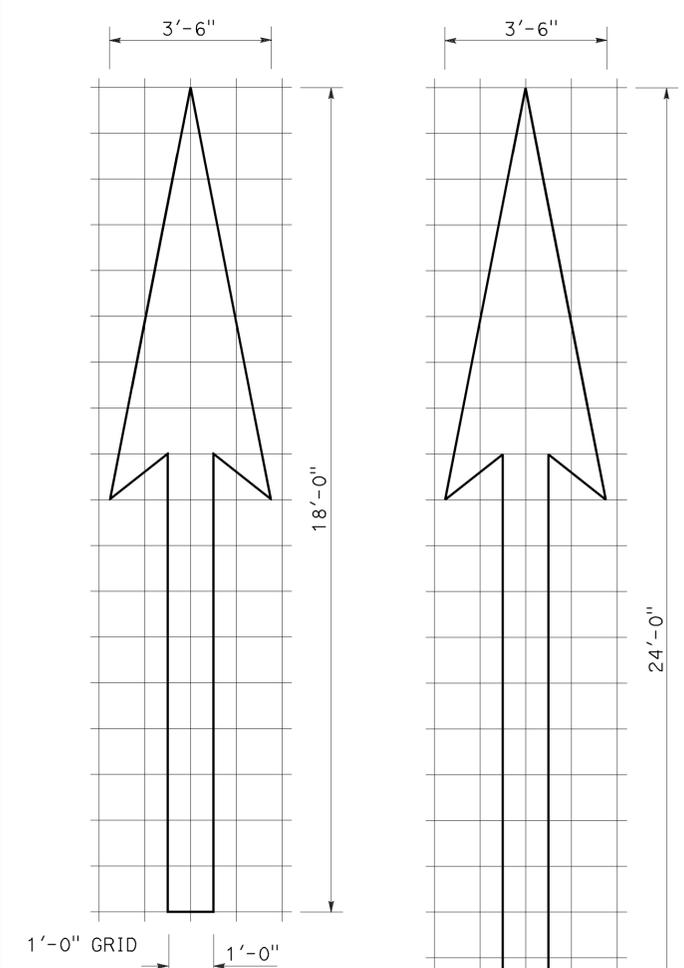
RSP A20C DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A20C DATED MAY 20, 2011 - PAGE 11 OF THE STANDARD PLANS BOOK DATED 2010.

## REVISED STANDARD PLAN RSP A20C

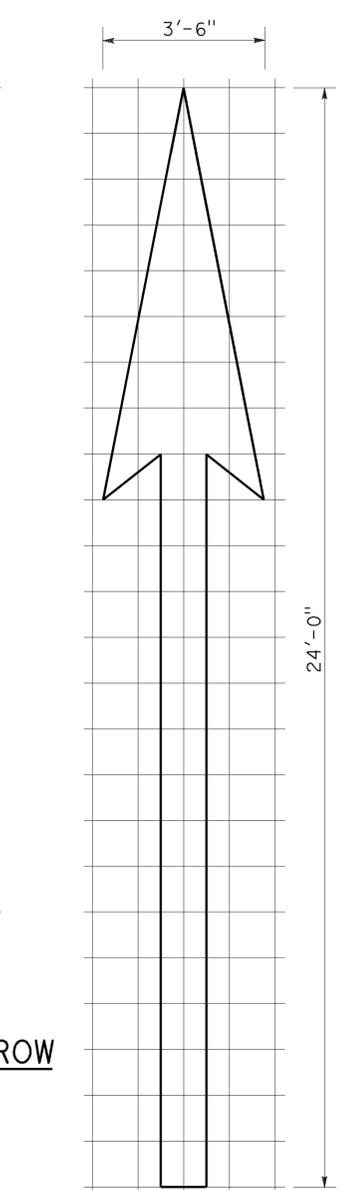
2010 REVISED STANDARD PLAN RSP A20C

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,14, 126,138	Var	19	39
REGISTERED CIVIL ENGINEER April 20, 2012 PLANS APPROVAL DATE <small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

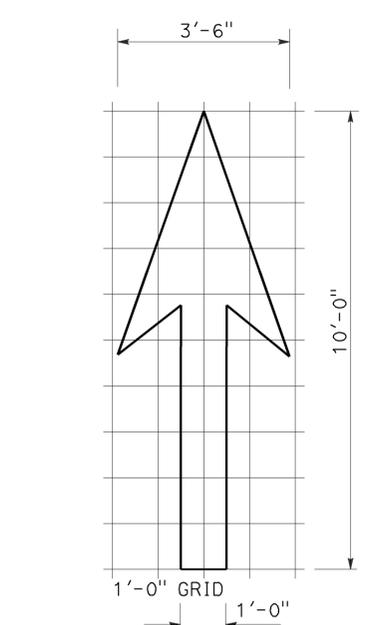
TO ACCOMPANY PLANS DATED 2-9-15



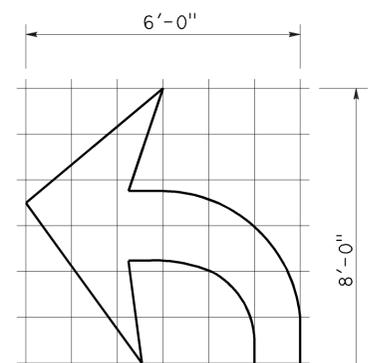
A=25 ft<sup>2</sup>  
**TYPE I 18'-0" ARROW**



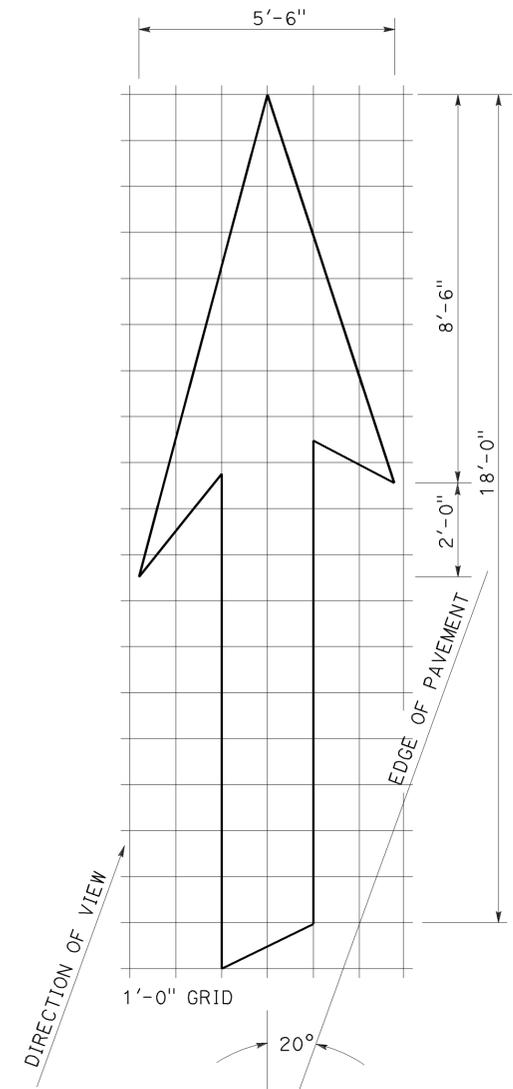
A=31 ft<sup>2</sup>  
**TYPE I 24'-0" ARROW**



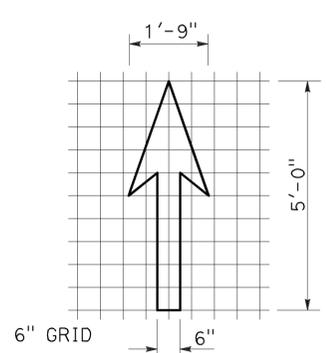
A=14 ft<sup>2</sup>  
**TYPE I 10'-0" ARROW**



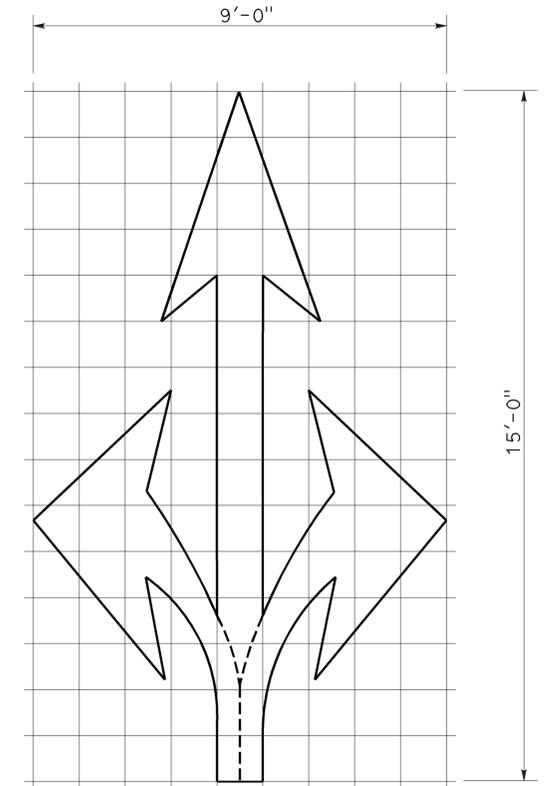
A=15 ft<sup>2</sup>  
**TYPE IV (L) ARROW**  
(For Type IV (R) arrow, use mirror image)



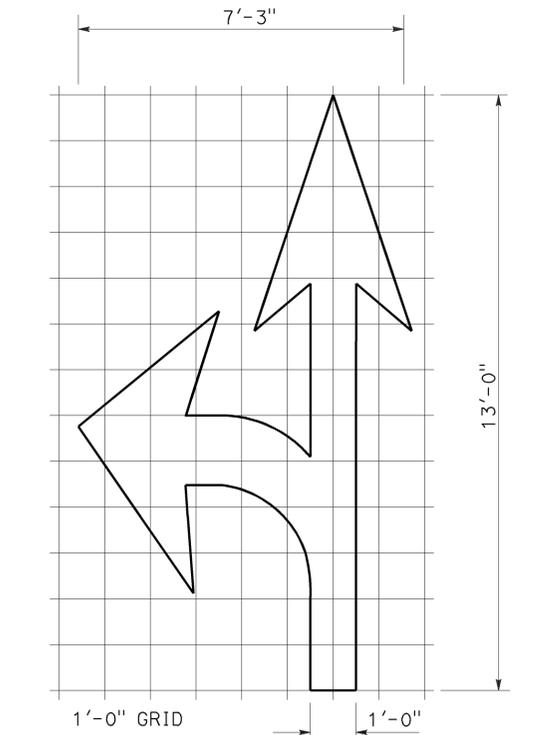
A=42 ft<sup>2</sup>  
**TYPE VI ARROW**  
Right lane drop arrow  
(For left lane, use mirror image)



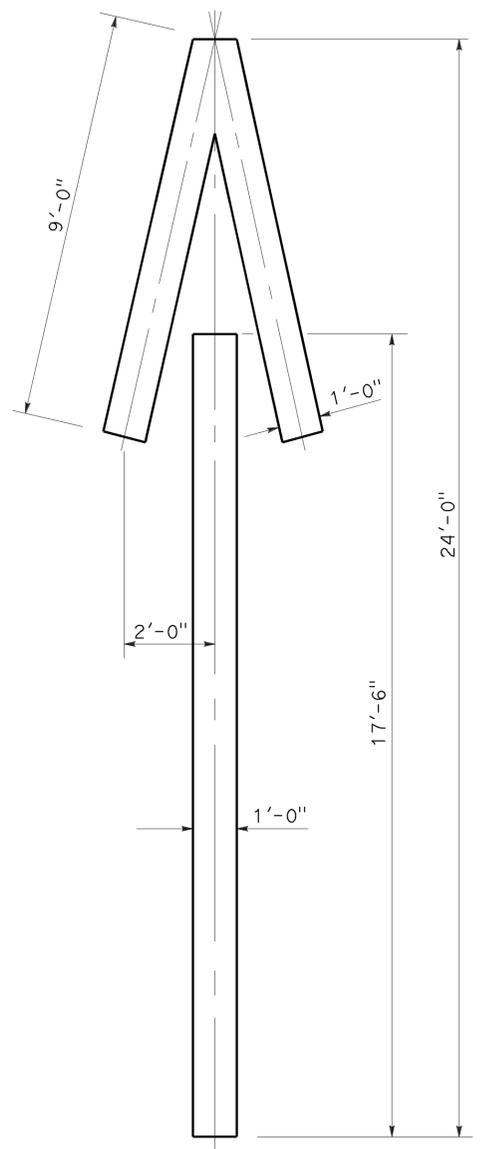
A=3.5 ft<sup>2</sup>  
**BIKE LANE ARROW**



A=36 ft<sup>2</sup>  
**TYPE VIII ARROW**



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



A=33 ft<sup>2</sup>  
**TYPE V ARROW**

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

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

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

**REVISED STANDARD PLAN RSP A24A**

**2010 REVISED STANDARD PLAN RSP A24A**

TO ACCOMPANY PLANS DATED 2-9-15

TABLE 1

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

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

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

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

TABLE 2

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

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

TABLE 3

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

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

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**TRAFFIC CONTROL SYSTEM TABLES  
 FOR LANE AND RAMP CLOSURES**  
 NO SCALE

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

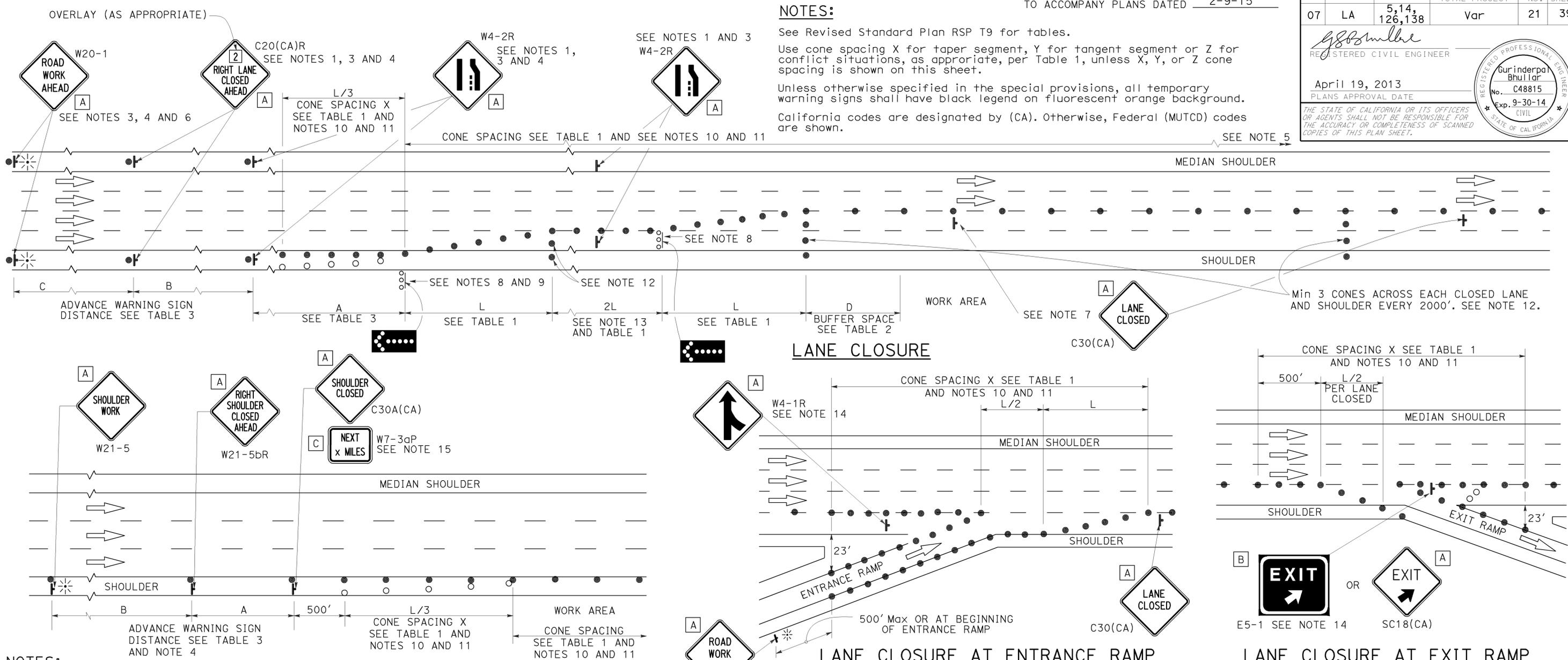
2010 REVISED STANDARD PLAN RSP T9

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,14, 126,138	Var	21	39

REGISTERED CIVIL ENGINEER  
 April 19, 2013  
 PLANS APPROVAL DATE

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

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



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

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

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

**LEGEND**

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

**SIGN PANEL SIZE (Min)**

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

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

**REVISED STANDARD PLAN RSP T10**

2010 REVISED STANDARD PLAN RSP T10

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,14, 126,138	Var	22	39

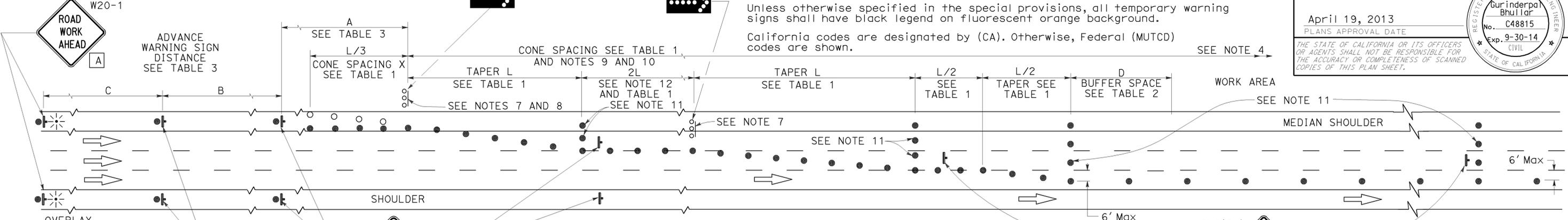
REGISTERED CIVIL ENGINEER  
 Gurinderpal Bhullar  
 No. C48815  
 Exp. 9-30-14  
 CIVIL  
 STATE OF CALIFORNIA

April 19, 2013  
 PLANS APPROVAL DATE

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

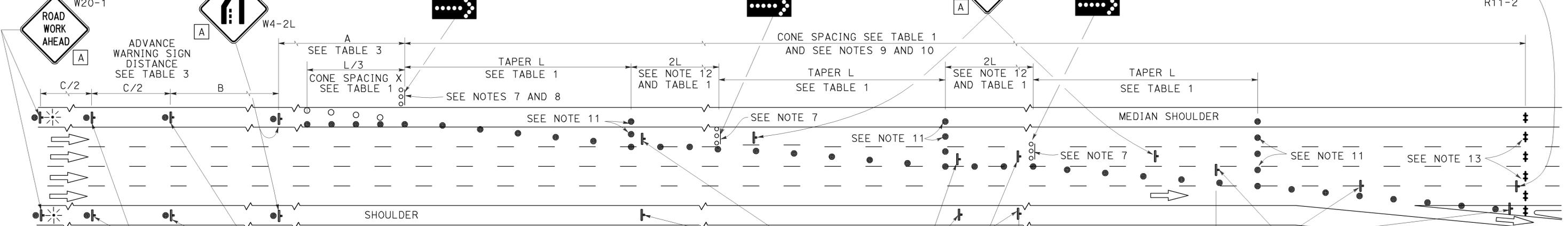
**NOTES:** See Revised Standard Plan RSP T9 for tables.  
 Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.  
 Unless otherwise specified in the special provisions, all temporary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

SEE NOTES 3 AND 5



**LANE CLOSURE WITH PARTIAL SHOULDER USE**

SEE NOTES 3 AND 5



**COMPLETE CLOSURE**

**NOTES:**

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

- Unless otherwise specified in the special provisions, the 2L tangent shown along lane lines shall be used between the L tapers required for each closed traffic lane.
- A minimum of Two Type II or III barricades shall be placed across each closed lane and shoulder at the location shown and every 2000' within the complete closure area. Within the complete closure area, the transverse alignment of the barricades on the closed shoulder may be shifted from the transverse alignment to provide access to the work.
- When specified in the special provisions, a W20-2 "DETOUR AHEAD" sign is to be used in place of the W20-3 "FREEWAY CLOSED AHEAD" sign.

**SIGN PANEL SIZE (Min)**

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

**LEGEND**

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

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

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

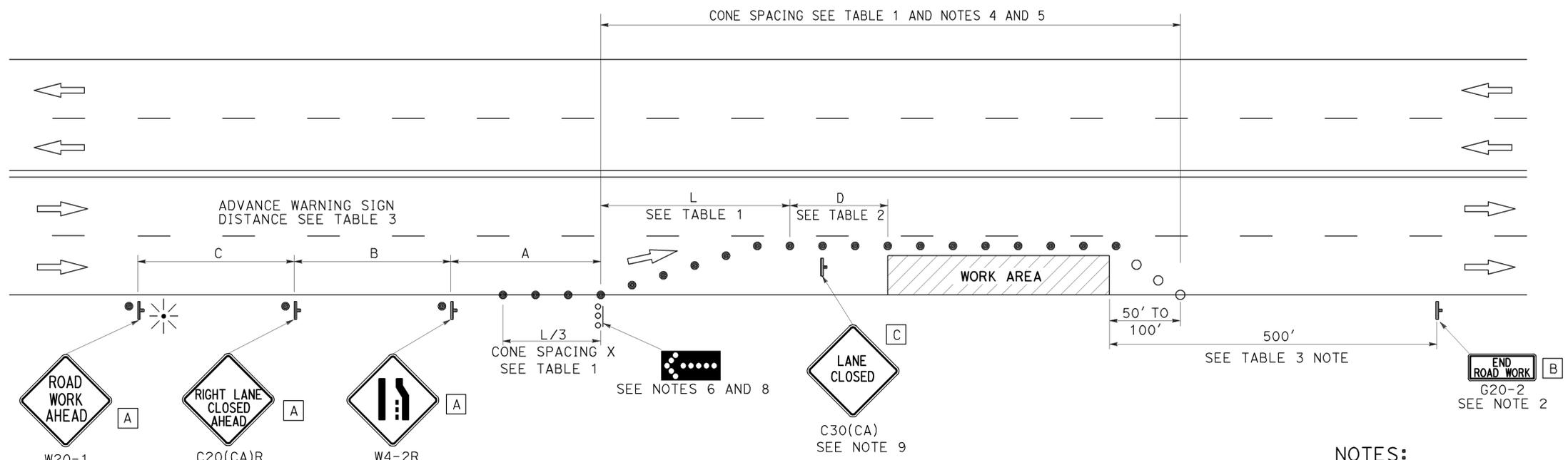
**REVISED STANDARD PLAN RSP T10A**

2010 REVISED STANDARD PLAN RSP T10A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,14, 126,138	Var	23	39

REGISTERED CIVIL ENGINEER  
 April 19, 2013  
 PLANS APPROVAL DATE  
 No. C48815  
 Exp. 9-30-14  
 CIVIL  
 STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 2-9-15



TYPICAL LANE CLOSURE

NOTES:

See Revised Standard Plan RSP T9 for tables.

Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.

Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on fluorescent orange background.

California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.

NOTES:

- Each advance warning sign shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
- A G20-2 "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious, or ends within a larger project's limits.
- If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT \_\_\_\_\_ MILES", use a C20(CA) sign for the first advance warning sign.
- All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
- Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
- Flashing arrow sign shall be either Type I or Type II.
- For approach speeds over 50 mph, use the "Traffic Control System for Lane Closure On Freeways And Expressways" plan for lane closure details and requirements.
- A minimum 1500' of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at the top of crest vertical curve or on a horizontal curve.
- Place a C30(CA) sign every 2000' throughout length of lane closure.
- Median lane closures shall conform to the details as shown except that C20(CA)L and W4-2L signs shall be used.
- At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closure unless, otherwise directed by the Engineer.

LEGEND

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

SIGN PANEL SIZE (Min)

- A 48" x 48"
- B 36" x 18"
- C 30" x 30"

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**TRAFFIC CONTROL SYSTEM  
FOR LANE CLOSURE ON  
MULTILANE CONVENTIONAL  
HIGHWAYS**

NO SCALE

RSP T11 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T11  
DATED MAY 20, 2011 - PAGE 239 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP T11**

2010 REVISED STANDARD PLAN RSP T11

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,14, 126,138	Var	24	39

Registered Civil Engineer  
 Gurinderpal Bhullar  
 No. C48815  
 Exp. 9-30-14  
 CIVIL  
 STATE OF CALIFORNIA

April 19, 2013  
 PLANS APPROVAL DATE

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**LEGEND**

- TRAFFIC CONE
- ⌋ TEMPORARY TRAFFIC CONTROL SIGN
- ⬢ FLASHING ARROW SIGN (FAS)
- FAS SUPPORT OR TRAILER
- ⊛ PORTABLE FLASHING BEACON

**SIGN PANEL SIZE (Min)**

- A 48" x 48"
- B 24" x 24"
- C 36" x 18"

**NOTES:**

See Revised Standard Plan RSP T9 for tables.

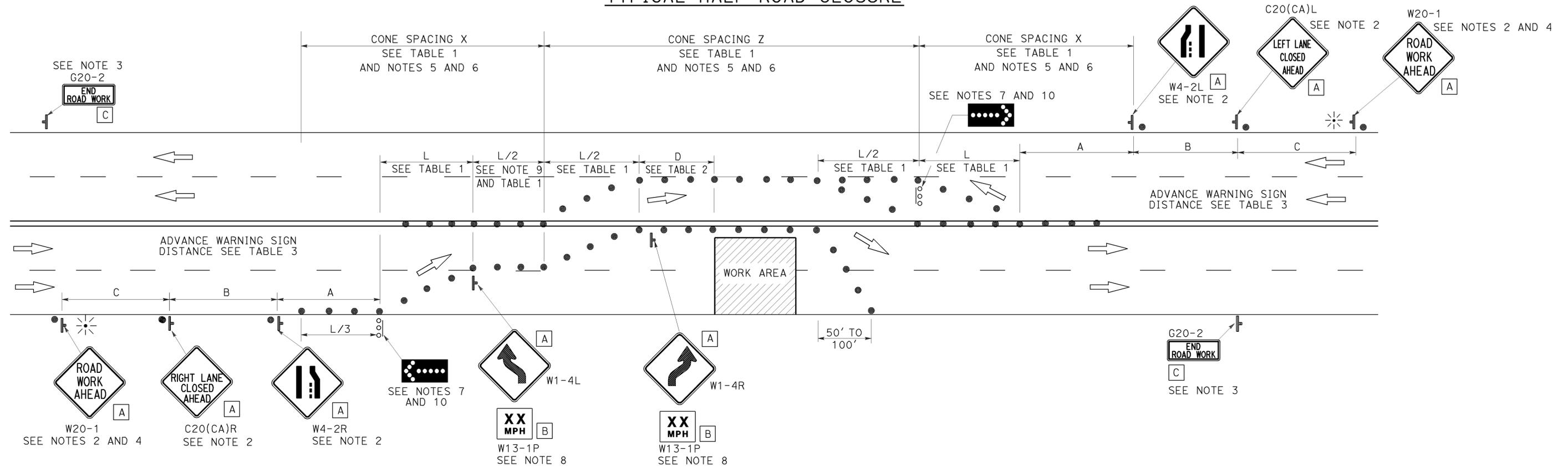
Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.

Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on fluorescent orange background.

California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.

TO ACCOMPANY PLANS DATED 2-9-15

**TYPICAL HALF ROAD CLOSURE**



**NOTES:**

1. At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closure unless, otherwise directed by the Engineer.
2. Each advance warning sign in each direction of travel shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
3. A G20-2 "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious, or ends within a larger project's limits.
4. If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT \_\_\_\_\_ MILES", use a C20(CA) sign for the first advance warning sign.
5. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
6. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
7. Flashing arrow signs shall be either Type I or Type II.
8. Advisory speed will be determined by the Engineer. The W13-1P Plaque will not be required when advisory speed is more than the posted or maximum speed limit.
9. Unless otherwise specified in the special provisions, the tangent (L/2) shall be used.
10. A minimum 1500' of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at the top of crest vertical curve or on a horizontal curve.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**TRAFFIC CONTROL SYSTEM  
FOR HALF ROAD CLOSURE ON  
MULTILANE CONVENTIONAL  
HIGHWAYS AND EXPRESSWAYS**

NO SCALE

RSP T12 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T12  
DATED MAY 20, 2011 - PAGE 240 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP T12**

2010 REVISED STANDARD PLAN RSP T12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,14, 126,138	Var	25	39

Devinder Singh  
 REGISTERED CIVIL ENGINEER  
 October 17, 2014  
 PLANS APPROVAL DATE  
 No. C50470  
 Exp. 6-30-15  
 CIVIL  
 STATE OF CALIFORNIA  
 REGISTERED PROFESSIONAL ENGINEER

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

**NOTES:**

See Revised Standard Plan RSP T9 for tables.

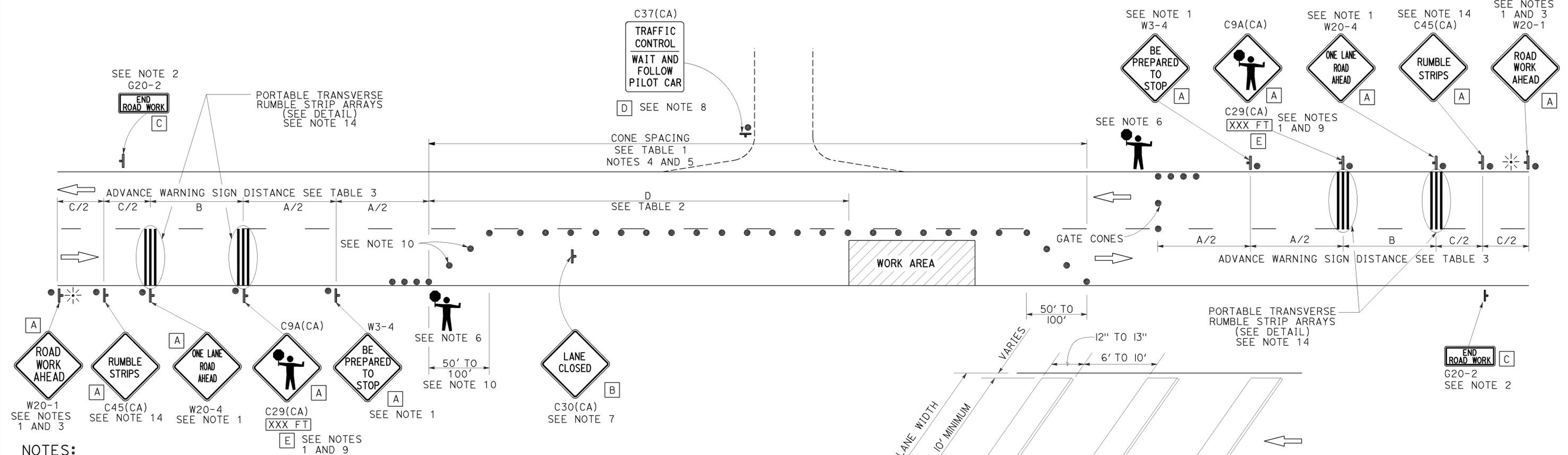
Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.

Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on fluorescent orange background.

California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.

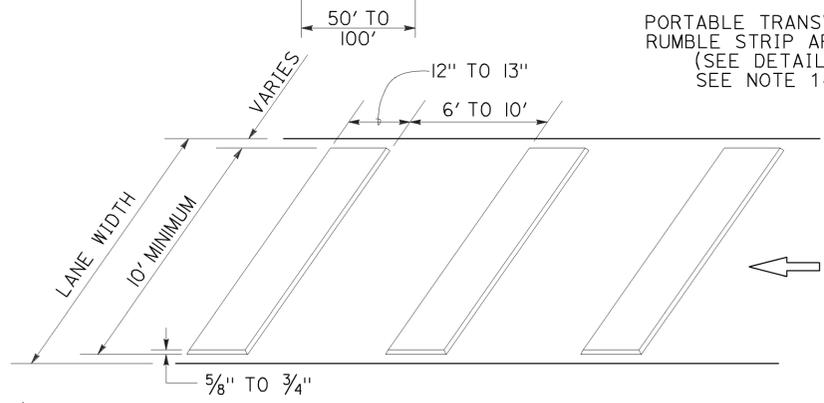
**TYPICAL LANE CLOSURE WITH REVERSIBLE CONTROL**

TO ACCOMPANY PLANS DATED 2-9-15



**NOTES:**

- Each advance warning sign in each direction of travel shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
- A G20-2 "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane control unless the end of work area is obvious, or ends within a larger project's limits.
- If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT \_\_\_\_\_ MILES", use a W20-4 sign for the first advance warning sign.
- All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
- Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
- Additional advance flaggers may be required. Flagger should stand in a conspicuous place, be visible to approaching traffic as well as approaching vehicles after the first vehicle has stopped. During the hours of darkness, the flagging-station and flagger shall be illuminated and clearly visible to approaching traffic. The illumination footprint of the lighting on the ground shall be at least 20' in diameter. Place a minimum of four cones at 50' intervals in advance of flagger station as shown.
- Place C30(CA) "LANE CLOSED" sign at 500' to 1000' intervals throughout extended work areas. They are optional if the work area is visible from the flagger station.
- When a pilot car is used, place a C37(CA) "TRAFFIC CONTROL-WAIT AND FOLLOW PILOT CAR" sign with black legend on white background at all intersections, driveways and alleys without a flagger within traffic control area. Signs shall be clean and visible at all times. Where traffic can not be effectively self-regulated, at least one flagger shall be used at each intersection within traffic control area.
- An optional C29(CA) sign may be placed below the C9A(CA) sign.
- Either traffic cones or barricades shall be placed on the taper. Barricades shall be Type I, II, or III.
- The color of the portable transverse rumble strips shall be black or orange. Use 2 arrays, each array shall consist of 3 rumble strips.
- Portable transverse rumble strips shall not be placed on sharp horizontal or vertical curves nor shall they be placed through pedestrian crossings.
- If the portable transverse rumble strips become out of alignment (skewed) by more than 6 inches, measured from one end to the other, they shall be readjusted to bring the placement back to the original location.
- Portable transverse rumble strips are not required if any one of the following conditions is satisfied:
  - Work duration occupies a location for four hours or less
  - Posted speed limit is below 45 MPH
  - Work is of emergency nature
  - Work zone is in snow or icy weather conditions



**PORTABLE TRANSVERSE RUMBLE STRIP ARRAY DETAIL**

**SIGN PANEL SIZE (Min)**

- A 48" x 48"
- B 30" x 30"
- C 36" x 18"
- D 36" x 42"
- E 20" x 7"

**LEGEND**

- TRAFFIC CONE
- ⊥ TEMPORARY TRAFFIC CONTROL SIGN
- ⚡ PORTABLE FLASHING BEACON
- 🚧 FLAGGER

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON TWO LANE CONVENTIONAL HIGHWAYS**

NO SCALE

RSP T13 DATED OCTOBER 17, 2014 SUPERSEDES RSP T13 DATED JULY 18, 2014 AND RSP T13 DATED APRIL 19, 2013 AND STANDARD PLAN T13 DATED MAY 20, 2011 - PAGE 241 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP T13**

2010 REVISED STANDARD PLAN RSP T13

# TYPICAL RAMP CLOSURES

## SIGN PANEL SIZE (Min)

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

## LEGEND

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

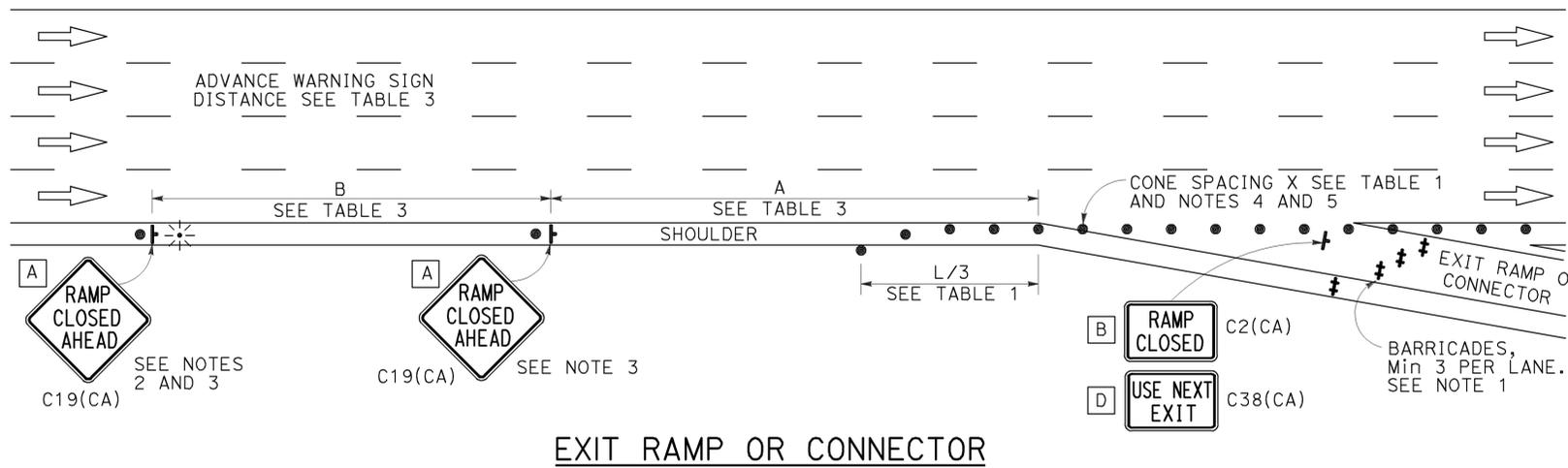
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5,14, 126,138	Var	26	39

*G. S. Miller*  
 REGISTERED CIVIL ENGINEER  
 April 19, 2013  
 PLANS APPROVAL DATE

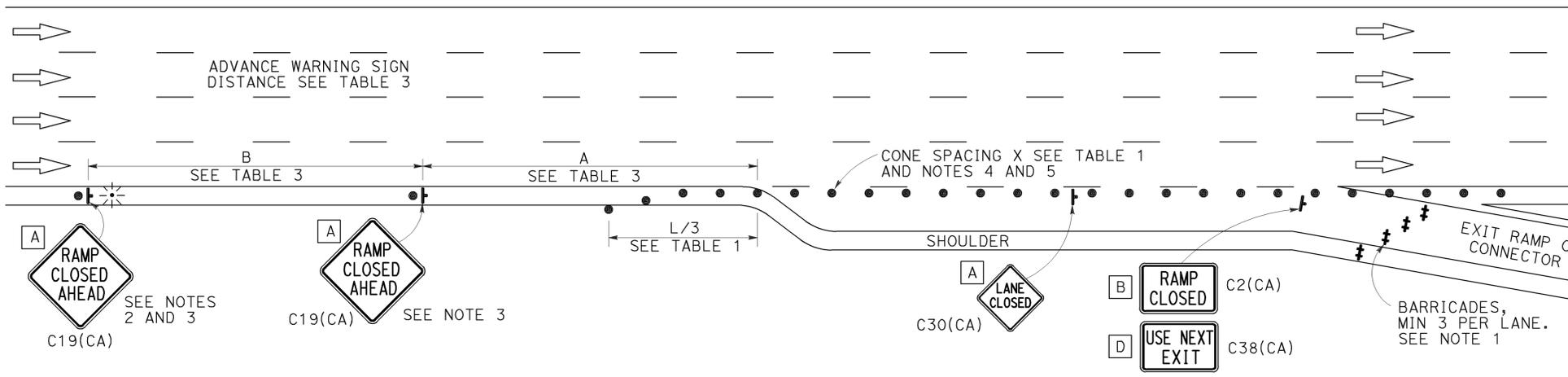
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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

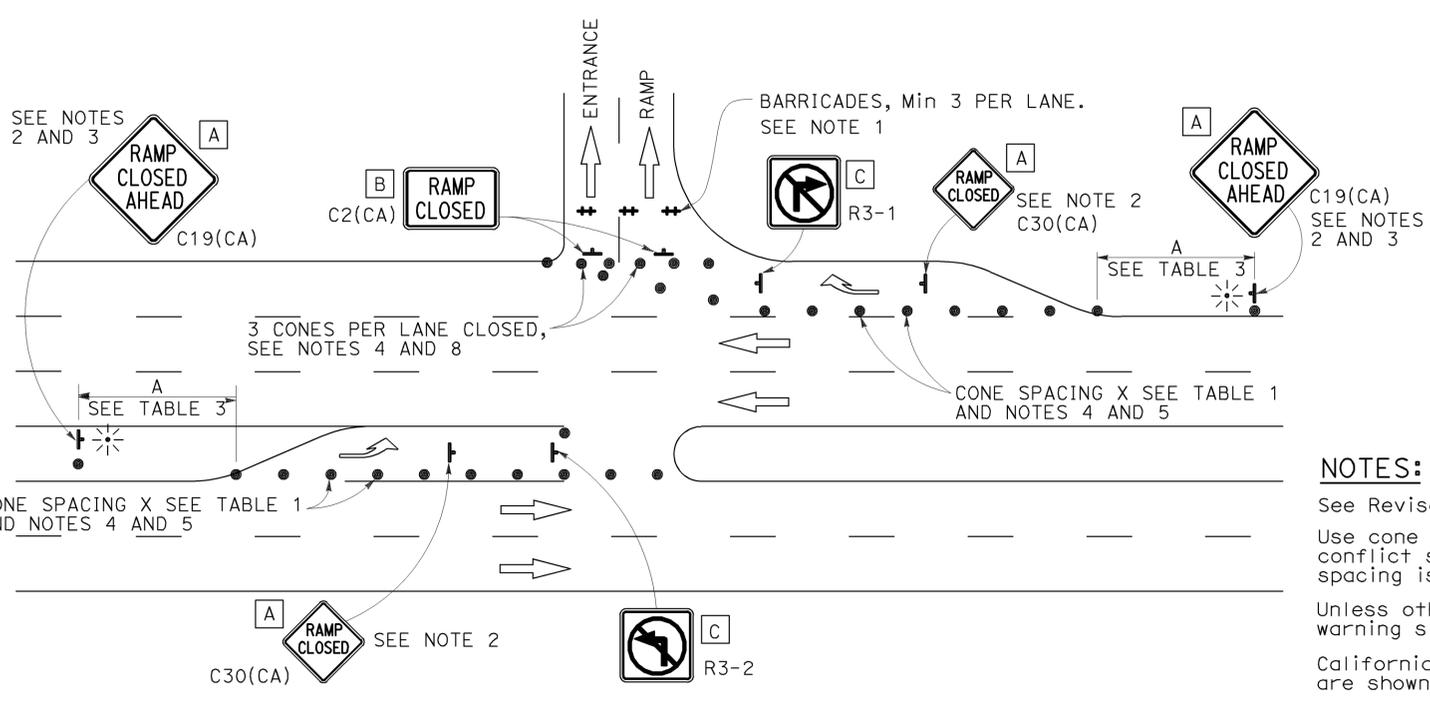
TO ACCOMPANY PLANS DATED 2-9-15



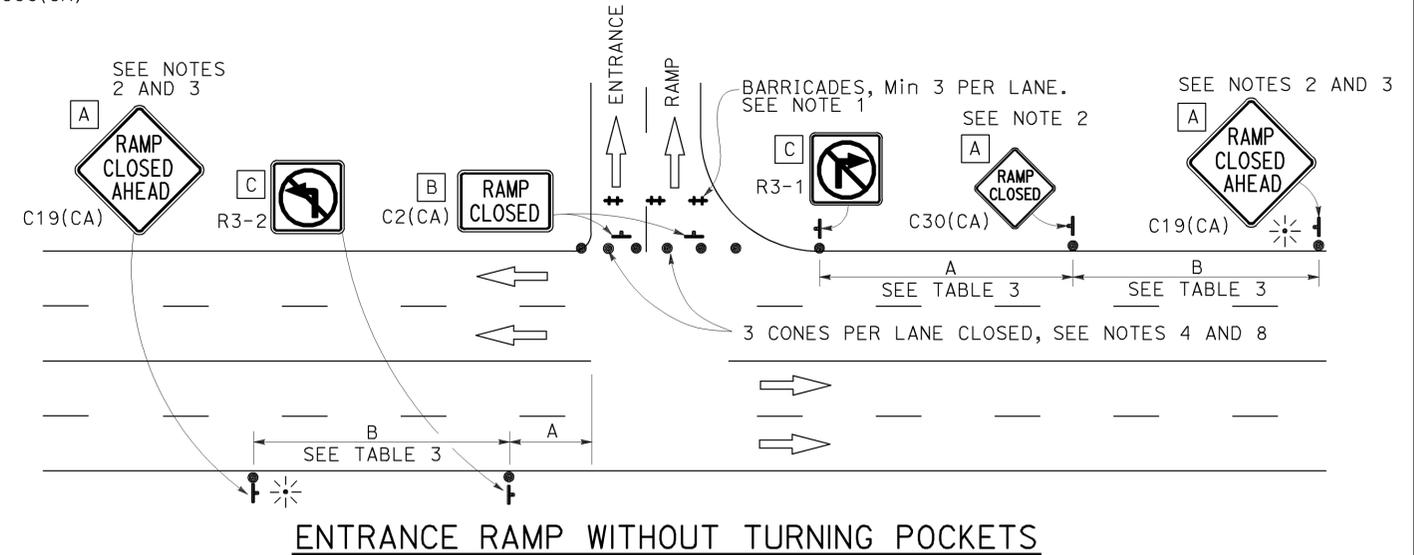
EXIT RAMP OR CONNECTOR



EXIT RAMP OR CONNECTOR WITH ADDITIONAL LANE



ENTRANCE RAMP WITH TURNING POCKETS



ENTRANCE RAMP WITHOUT TURNING POCKETS

## NOTES:

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

## NOTES:

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

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

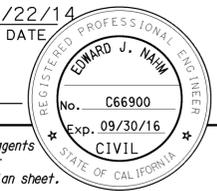
## TRAFFIC CONTROL SYSTEM FOR RAMP CLOSURE

NO SCALE

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

## REVISED STANDARD PLAN RSP T14

2010 REVISED STANDARD PLAN RSP T14

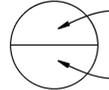
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5, 14, 126, 138	Var	27	39
			09/22/14		
REGISTERED CIVIL ENGINEER			DATE		
2-9-15			PLANS APPROVAL DATE		
					
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### INDEX TO PLANS

SHEET NO.	TITLE
1	GENERAL PLAN NO. 1
2	GENERAL PLAN NO. 2
3	GENERAL PLAN NO. 3
4	GENERAL PLAN NO. 4
5	GENERAL PLAN NO. 5
6	GENERAL PLAN NO. 6
7	GENERAL PLAN NO. 7
8	GENERAL PLAN NO. 8
9	GENERAL PLAN NO. 9
10	GENERAL PLAN NO. 10
11	MISCELLANEOUS DETAILS NO. 1
12	MISCELLANEOUS DETAILS NO. 2
13	STRUCTURE APPROACH SLAB TYPE (R30D)

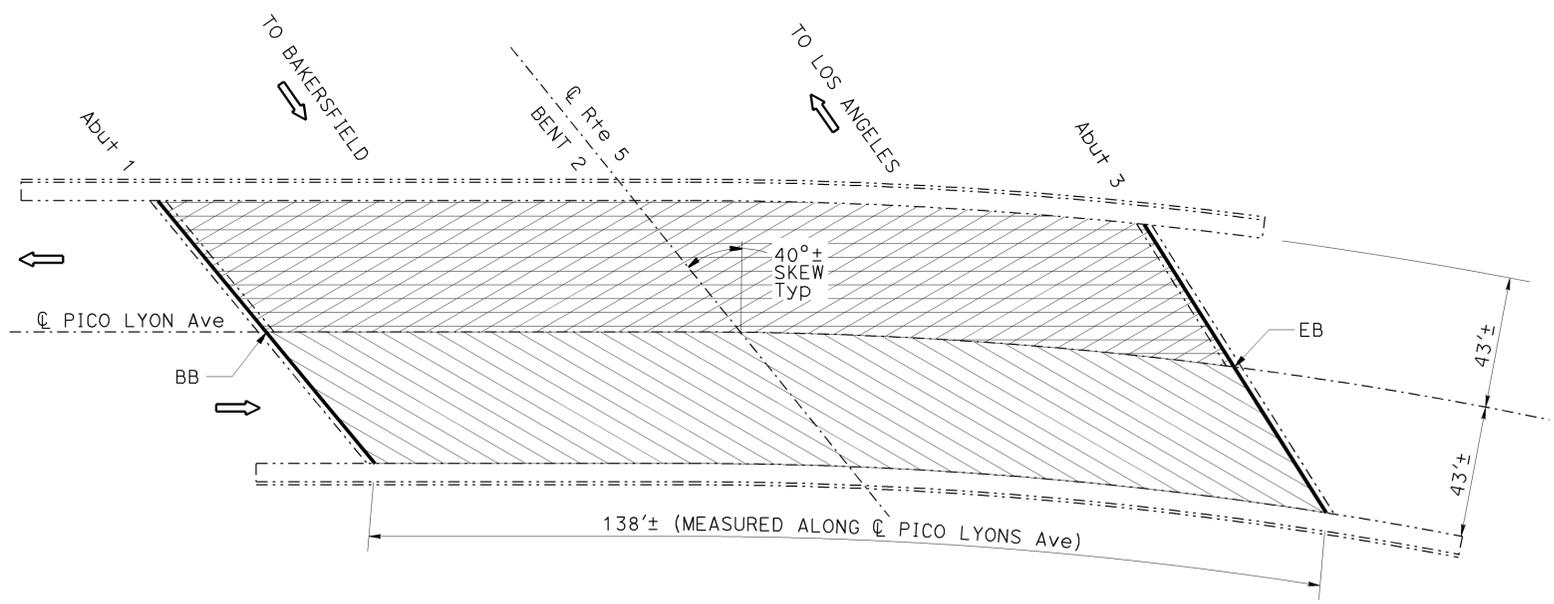
### STANDARD PLANS DATED 2010

SHEET NO.	TITLE
A10A	ABBREVIATIONS (SHEET 1 OF 2)
RSP A10B	ABBREVIATIONS (SHEET 2 OF 2)
A10C	LINES AND SYMBOLS (SHEET 1 OF 3)
A10D	LINES AND SYMBOLS (SHEET 2 OF 3)
A10E	LINES AND SYMBOLS (SHEET 3 OF 3)
B6-21	JOINT SEALS (MAXIMUM MOVEMENT RATING = 2")

 STANDARD PLAN SHEET No.  
 DETAIL No.

### LEGEND:

-  Indicates existing.
-  Indicates direction of traffic.
-  Indicates limits of existing AC 1 1/2" thick overlay removal.
-  Indicates limits of prepare concrete bridge deck surface and treat existing bridge deck with high molecular weight methacrylate.
-  Indicates limits of prepare concrete bridge deck surface, furnish and place new 1 1/2" thick min and varies polyester concrete overlay. Prior to placing new polyester concrete overlay, remove unsound concrete and patch with rapid setting concrete. Polyester concrete shall be placed in one lift. Survey grades of the existing bridge deck surface shall be provided prior to placing the polyester concrete overlay.
-  Indicates location of clean expansion joint and placement of new joint seal.



**PICO LYONS OC**  
 Br No. 53-1783, Rte 5, PM R50.33  
 1" = 30'

PICO LYONS OC

BR. NO. 53-1783

QUANTITIES	
	LUMP SUM
PUBLIC SAFETY PLAN	35 CF
RAPID SETTING CONCRETE (PATCH)	13,674 SQFT
REMOVE ASPHALT CONCRETE SURFACING	35 CF
REMOVE UNSOUND CONCRETE	27,348 SQFT
PREPARE CONCRETE BRIDGE DECK SURFACE	2,051 CF
FURNISH POLYESTER CONCRETE OVERLAY	13,674 SQFT
PLACE POLYESTER CONCRETE OVERLAY	13,674 SQFT
TREAT BRIDGE DECK	171 GAL
FURNISH BRIDGE DECK TREATMENT MATERIAL	226 LF
CLEAN EXPANSION JOINT	226 LF
JOINT SEAL (MR 2")	

**NOTE:**  
 1. For deck repair detail-overlay, see "MISCELLANEOUS DETAILS NO. 2" sheet.

**NOTE:**  
 THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL. EXISTING UTILITY FACILITIES ARE NOT INCLUDED ON THESE PLANS.

TONY D. BRAKE DESIGN ENGINEER	DESIGN	BY Edward Nahm	CHECKED Tony Brake	LOAD FACTOR DESIGN	BY Tom Dang	CHECKED Edward Nahm	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD  STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE NO.	Various  POST MILE  Varies	<b>RTE 5, 14, 126, 138 BRIDGES</b>  <b>GENERAL PLAN NO. 1</b>
	DETAILS	BY Tom Dang	CHECKED Edward Nahm	LAYOUT	BY Tom Dang	CHECKED Edward Nahm				
	QUANTITIES	BY Edward Nahm	CHECKED Ramesh Patel	SPECIFICATIONS	BY Karen Doll	CHECKED Karen Doll				

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5, 14, 126, 138	Var	28	39

09/22/14  
 REGISTERED CIVIL ENGINEER DATE  
 2-9-15  
 PLANS APPROVAL DATE  
 No. C66900  
 Exp. 09/30/16  
 CIVIL  
 STATE OF CALIFORNIA  
 REGISTERED PROFESSIONAL ENGINEER  
 EDWARD J. NAHM  
 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.

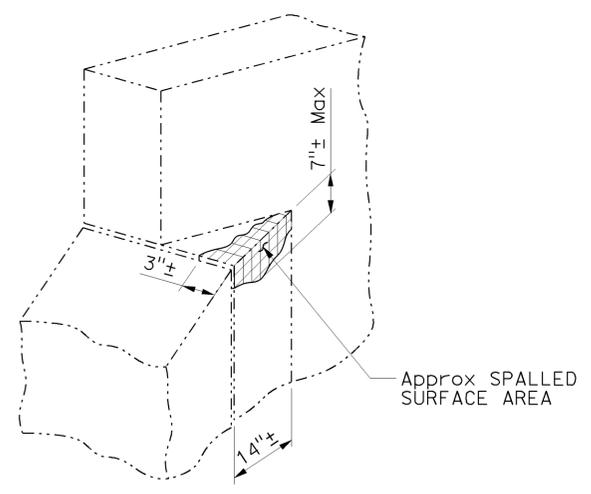
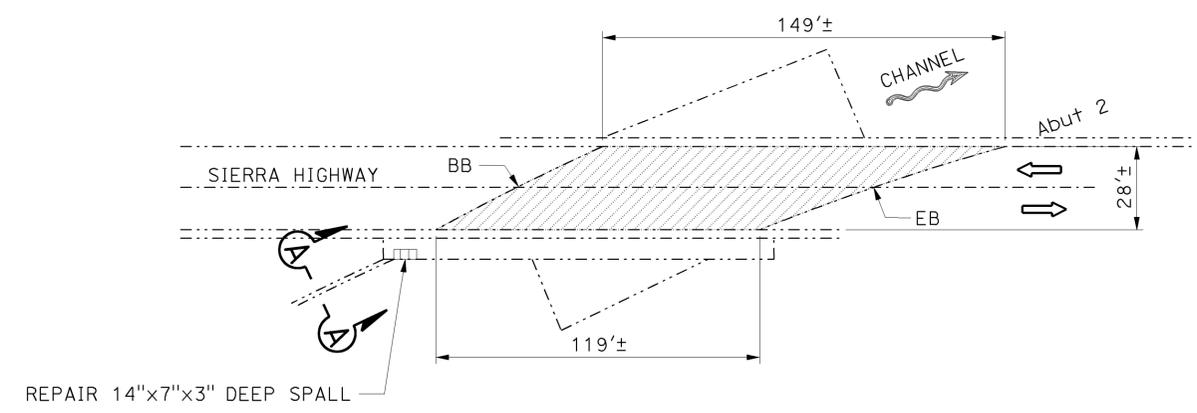
**LEGEND:**

- Indicates existing.
- ➔ Indicates direction of traffic.
- ▨ Indicates limits of prepare concrete bridge deck surface and treat existing bridge deck with high molecular weight methacrylate.
- ▩ Indicates repair spalled surface area.

SIERRA HIGHWAY OC BR. NO. 53-1013

QUANTITIES

REPAIR SPALLED SURFACE AREA	1	SQFT
PREPARE CONCRETE BRIDGE DECK SURFACE	3,752	SQFT
TREAT BRIDGE DECK	3,752	SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	47	GAL



**VIEW A-A**  
NO SCALE

**SIERRA HIGHWAY OC**  
Br No. 53-1013, Rte 14, PM 24.3  
1" = 20'

NOTE:  
THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL. EXISTING UTILITY FACILITIES ARE NOT INCLUDED ON THESE PLANS.

DESIGN ENGINEER <b>TONY D. BRAKE</b>	DESIGN	BY Edward Nahm	CHECKED Tony Brake	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
	DETAILS	BY Tom Dang	CHECKED Edward Nahm	LAYOUT	BY Tom Dang
	QUANTITIES	BY Edward Nahm	CHECKED Ramesh Patel	SPECIFICATIONS	BY Karen Doll

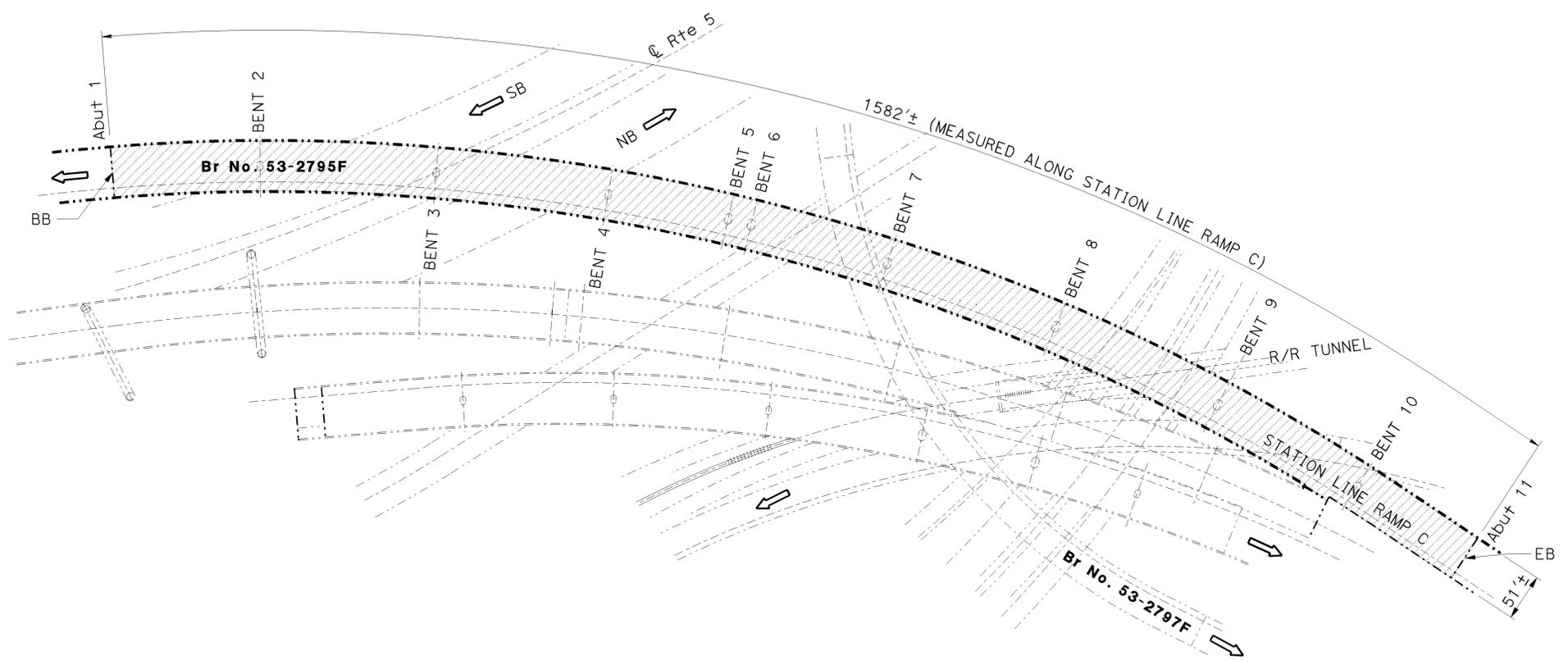
STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF MAINTENANCE	BRIDGE NO.	RTE 5, 14, 126, 138 BRIDGES GENERAL PLAN NO. 2
	STRUCTURE MAINTENANCE DESIGN	Various	
		Varies	

USERNAME => s129239 DATE PLOTTED => 02-DEC-2014 TIME PLOTTED => 09:23

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5, 14, 126, 138	Var	29	39
			09/22/14		
REGISTERED CIVIL ENGINEER			DATE		
2-9-15			PLANS APPROVAL DATE		
					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					

**LEGEND:**

- Indicates existing.
- Indicates direction of traffic.
- ▨ Indicates limits of prepare concrete bridge deck surface and treat existing bridge deck with high molecular weight methacrylate.



**S14-S5 CONNECTOR OH**  
 Br No. 53-2795F, Rte 14, PM R24.79  
 N.T.S.



S14-S5 CONNECTOR OH	BR. NO. 53-2795F
QUANTITIES	
PUBLIC SAFETY PLAN	LUMP SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	80,682 SQFT
TREAT BRIDGE DECK	80,682 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	1,009 GAL

NOTE:  
 THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL. EXISTING UTILITY FACILITIES ARE NOT INCLUDED ON THESE PLANS.

<b>TONY D. BRAKE</b> DESIGN ENGINEER	DESIGN	BY Edward Nahm	CHECKED Tony Brake	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
	DETAILS	BY Tom Dang	CHECKED Edward Nahm	LAYOUT	BY Tom Dang
	QUANTITIES	BY Edward Nahm	CHECKED Ramesh Patel	SPECIFICATIONS	BY Karen Doll

**STATE OF CALIFORNIA**  
 DEPARTMENT OF TRANSPORTATION

**DIVISION OF MAINTENANCE**  
 STRUCTURE MAINTENANCE DESIGN

**RTE 5, 14, 126, 138 BRIDGES**  
 GENERAL PLAN NO. 3

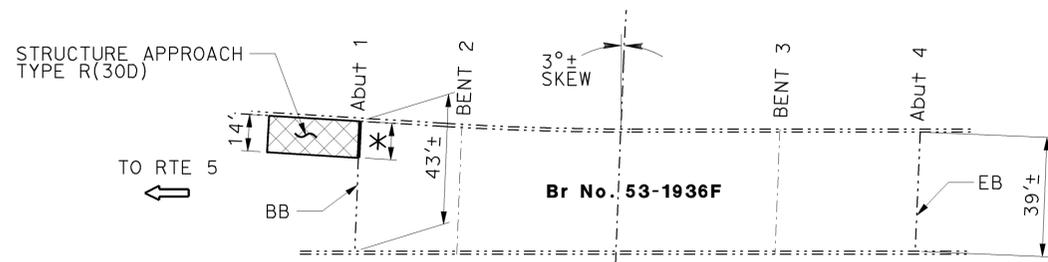
USERNAME => s129239 DATE PLOTTED => 02-DEC-2014 TIME PLOTTED => 09:23

SIERRA HIGHWAY UC

BR. NO. 53-1936F

QUANTITIES

STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	19	CY
PAVING NOTCH EXTENSION	11	CF
JOINT SEAL (MR 1")	14	LF



**LEGEND:**

- Indicates existing.
- ➔ Indicates direction of traffic.
- /— Indicates limit placement of new joint seal.
- ▨ Indicates limits of remove AC roadway and construct new Structure Approach Slabs Type R(30D). For detail see "STRUCTURE APPROACH SLAB TYPE R(30D)" sheet.
- ▩ Indicates limits of structure backfill on top of existing fill.
- \* Indicates limits of paving notch extension.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5, 14, 126, 138	Var	30	39

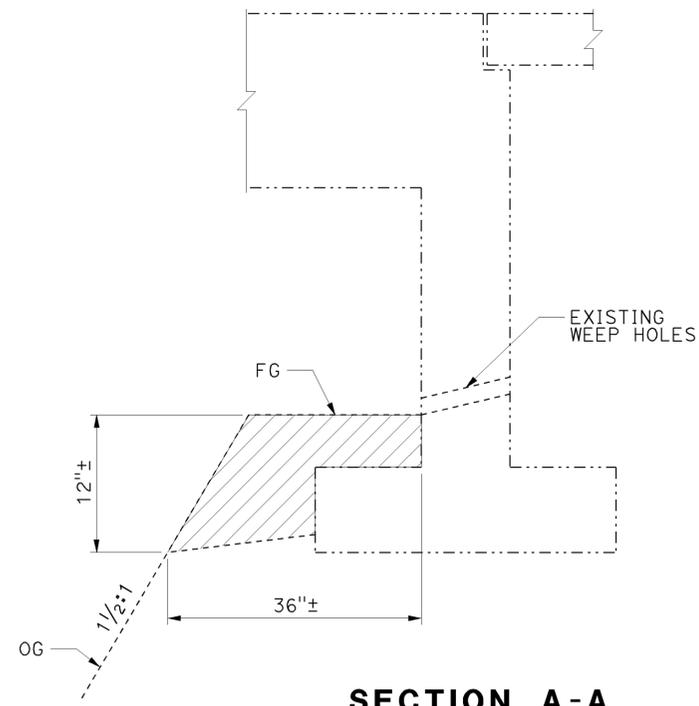
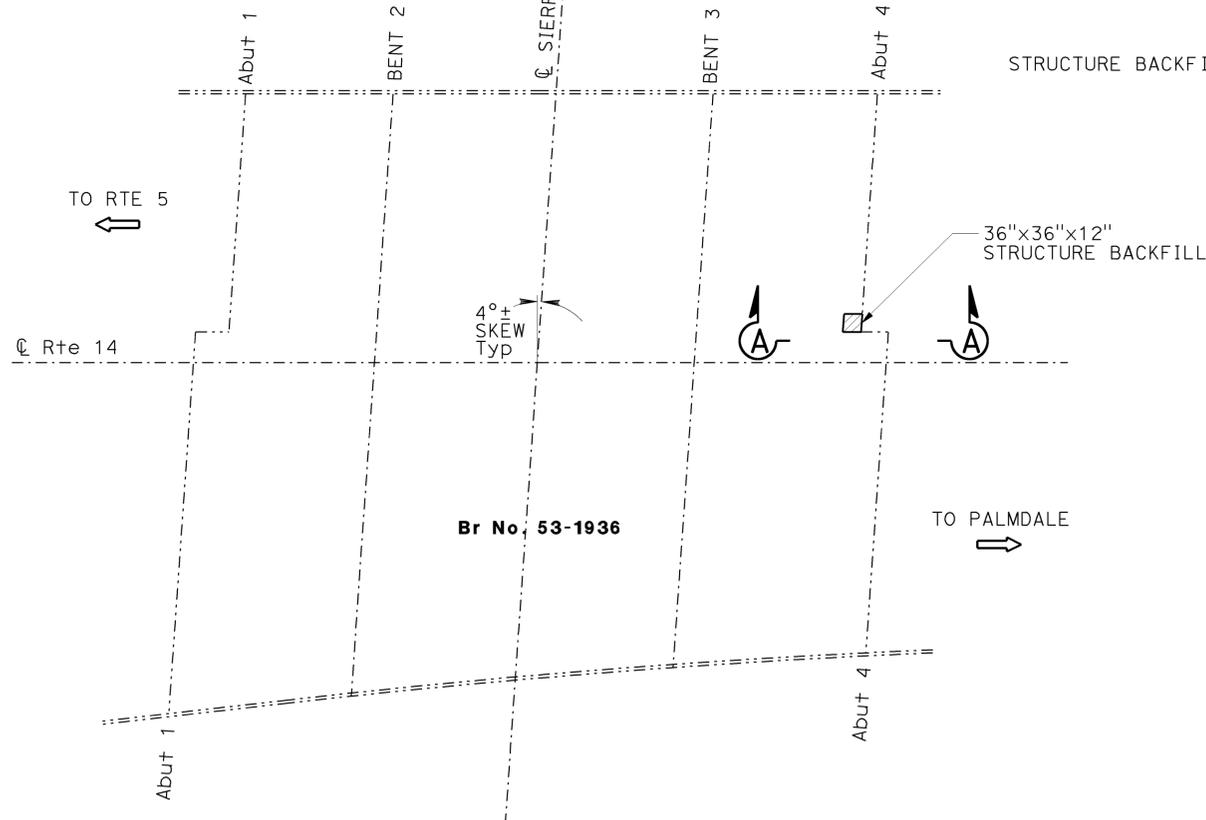
09/22/14  
 REGISTERED CIVIL ENGINEER DATE  
 2-9-15  
 PLANS APPROVAL DATE  
 No. C66900  
 Exp. 09/30/16  
 CIVIL  
 STATE OF CALIFORNIA  
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SIERRA HIGHWAY UC

BR. NO. 53-1936

QUANTITIES

STRUCTURE BACKFILL (BRIDGE)	1	CY
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**SECTION A-A**  
N.T.S.

**SIERRA HIGHWAY UC**

Br No. 53-1936 & 53-1936F, Rte 14, PM R25.13  
 1" = 30'

NOTE:  
 THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL. EXISTING UTILITY FACILITIES ARE NOT INCLUDED ON THESE PLANS.

DESIGN	BY Edward Nahm	CHECKED Tony Brake	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
DETAILS	BY Tom Dang	CHECKED Edward Nahm	LAYOUT	BY Tom Dang
QUANTITIES	BY Edward Nahm	CHECKED Ramesh Patel	SPECIFICATIONS	BY Karen Doll

STATE OF CALIFORNIA	DIVISION OF MAINTENANCE	BRIDGE NO.
DEPARTMENT OF TRANSPORTATION	STRUCTURE MAINTENANCE DESIGN	Various
		POST MILE
		Varies

RTE 5, 14, 126, 138 BRIDGES		
GENERAL PLAN NO. 4		

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5, 14, 126, 138	Var	31	39

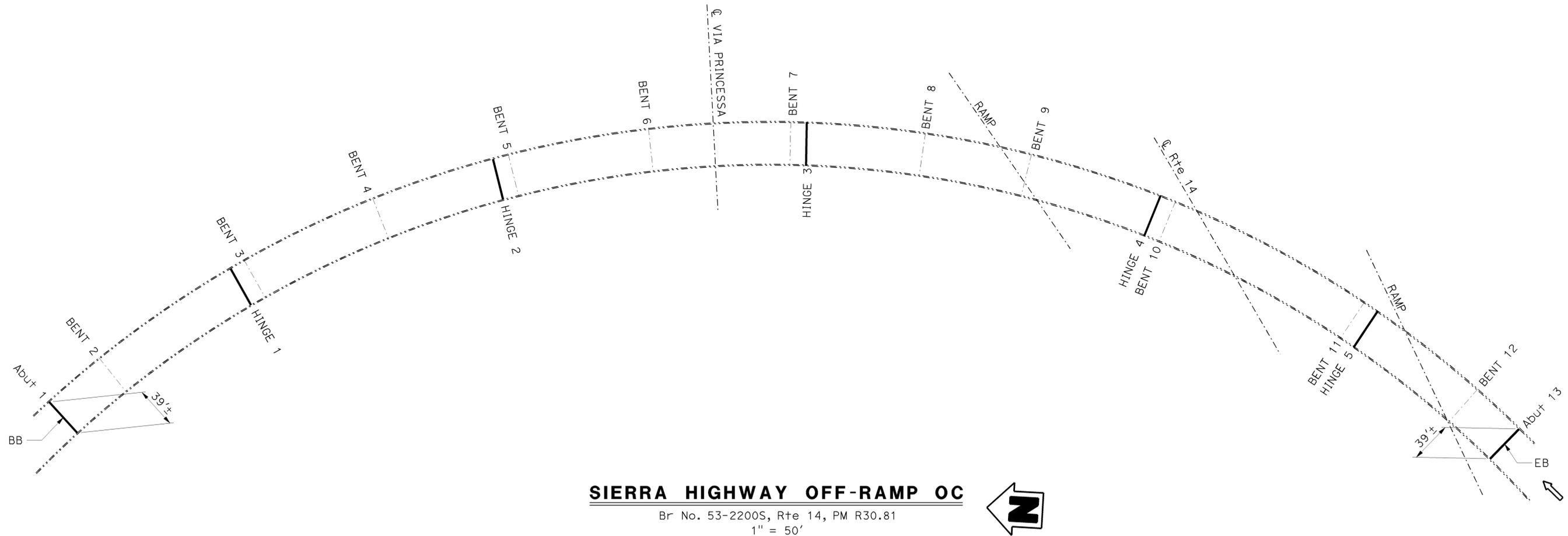
09/22/14  
 REGISTERED CIVIL ENGINEER DATE  
 2-9-15  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 EDWARD J. NAHM  
 No. C66900  
 Exp. 09/30/16  
 CIVIL  
 STATE OF CALIFORNIA

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**LEGEND:**

- Indicates existing.
- Indicates direction of traffic.
- / Indicates location of clean expansion joint and placement of new joint seal.



**SIERRA HIGHWAY OFF-RAMP OC**

Br No. 53-2200S, Rte 14, PM R30.81  
 1" = 50'



SIERRA HIGHWAY OFF-RAMP OC BR. NO. 53-2200S

QUANTITIES

CLEAN EXPANSION JOINT	273	LF
JOINT SEAL (MR 1")	78	LF
JOINT SEAL (MR 2")	195	LF

NOTE:  
 THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL. EXISTING UTILITY FACILITIES ARE NOT INCLUDED ON THESE PLANS.

DESIGN ENGINEER <b>TONY D. BRAKE</b>	DESIGN	BY Edward Nahm	CHECKED Tony Brake	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
	DETAILS	BY Tom Dang	CHECKED Edward Nahm	LAYOUT	BY Tom Dang
	QUANTITIES	BY Edward Nahm	CHECKED Ramesh Patel	SPECIFICATIONS	BY Karen Doll

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF MAINTENANCE STRUCTURE MAINTENANCE DESIGN	BRIDGE NO. Various
		POST MILE Varies
	RTE 5, 14, 126, 138 BRIDGES GENERAL PLAN NO. 5	

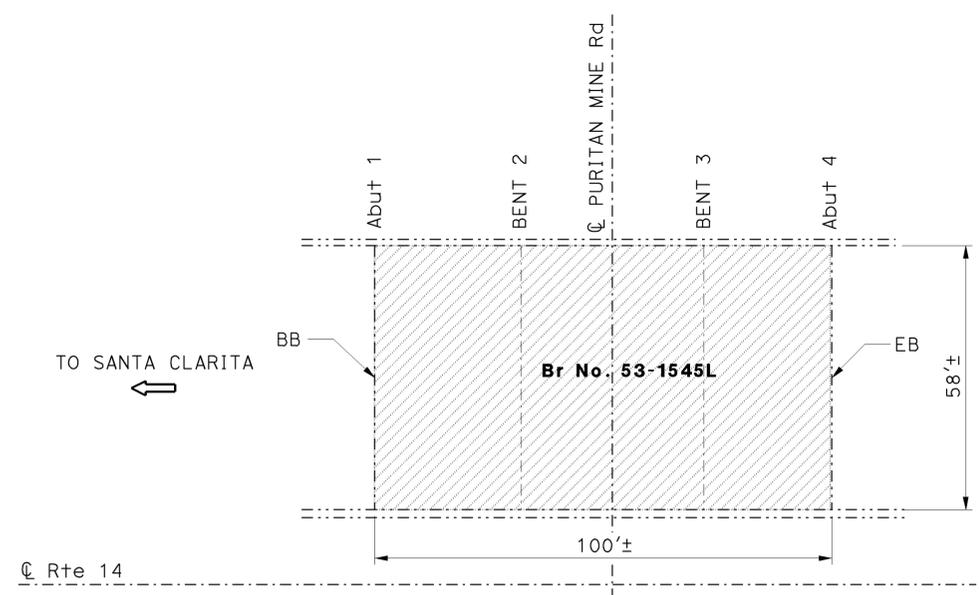
USERNAME => s129239 DATE PLOTTED => 02-DEC-2014 TIME PLOTTED => 09:23

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5, 14, 126, 138	Var	32	39
			09/22/14		
			REGISTERED CIVIL ENGINEER	DATE	
			2-9-15	PLANS APPROVAL DATE	
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**LEGEND:**

- Indicates existing.
- ➔ Indicates direction of traffic.
- ▨ Indicates limits of prepare concrete bridge deck surface and treat existing bridge deck with high molecular weight methacrylate.
- /— Indicates location of clean expansion joint and placement of new joint seal.



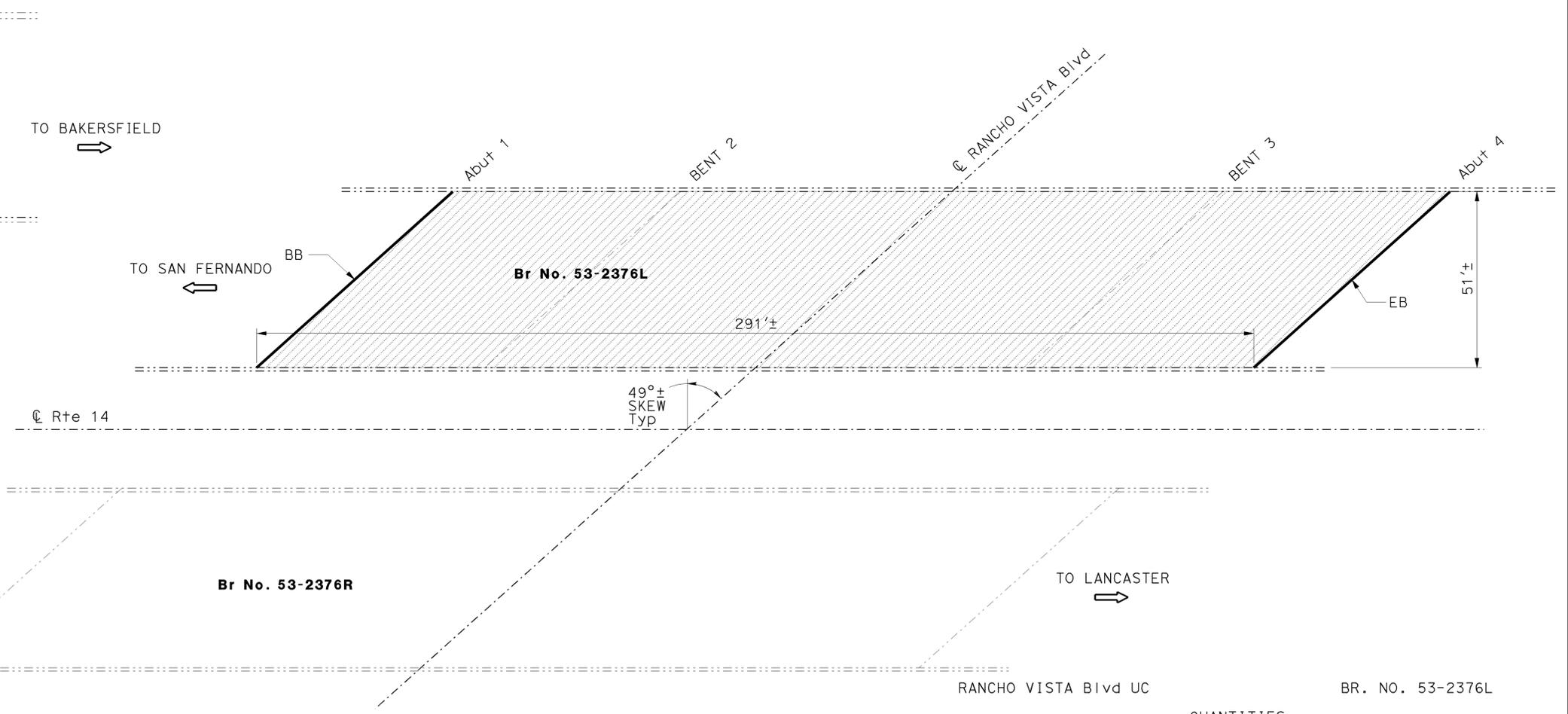
PURITAN MINE ROAD UC  
BR. NO. 53-1545L

QUANTITIES

PUBLIC SAFETY PLAN	LUMP	SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	5,800	SQFT
TREAT BRIDGE DECK	5,800	SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	73	GAL



**PURITAN MINE ROAD UC**  
Br No. 53-1545L, Rte 14, PM 45.73  
1" = 20'



**RANCHO VISTA Blvd UC**  
Br No. 53-2376L, Rte 14, PM R61.37  
1" = 20'

QUANTITIES

PUBLIC SAFETY PLAN	LUMP	SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	14,841	SQFT
TREAT BRIDGE DECK	14,841	SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	186	GAL
CLEAN EXPANSION JOINT	156	LF
JOINT SEAL (MR <sub>2</sub> )	156	LF

NOTE:  
THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL. EXISTING UTILITY FACILITIES ARE NOT INCLUDED ON THESE PLANS.

DESIGN	BY Edward Nahm	CHECKED Tony Brake	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
DETAILS	BY Tom Dang	CHECKED Edward Nahm	LAYOUT	BY Tom Dang
QUANTITIES	BY Edward Nahm	CHECKED Ramesh Patel	SPECIFICATIONS	BY Karen Doll

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE  
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various  
POST MILE Varies

**RTE 5, 14, 126, 138 BRIDGES**  
**GENERAL PLAN NO. 6**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5, 14, 126, 138	Var	33	39

09/22/14  
 REGISTERED CIVIL ENGINEER DATE  
 2-9-15  
 PLANS APPROVAL DATE  
 No. C66900  
 Exp. 09/30/16  
 CIVIL  
 STATE OF CALIFORNIA  
 REGISTERED PROFESSIONAL ENGINEER  
 EDWARD J. NAHM  
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**LEGEND:**

- Indicates existing.
- ➔ Indicates direction of traffic.
- ▨ Indicates limits of prepare concrete bridge deck surface and treat existing bridge deck with high molecular weight methacrylate.

SOUTH AMARGOSA CREEK BR. NO. 53-2377R

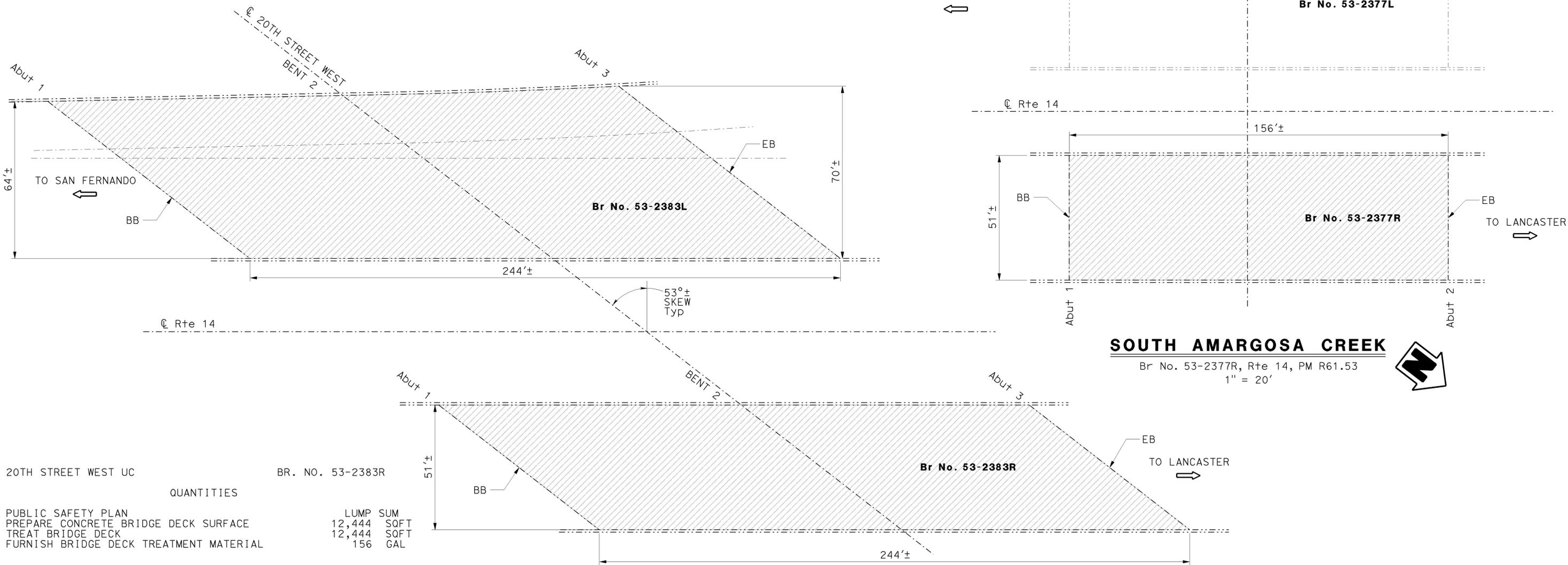
**QUANTITIES**

PUBLIC SAFETY PLAN	LUMP	SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	7,956	SQFT
TREAT BRIDGE DECK	7,956	SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	99	GAL

20TH STREET WEST UC BR. NO. 53-2383L

**QUANTITIES**

PUBLIC SAFETY PLAN	LUMP	SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	16,348	SQFT
TREAT BRIDGE DECK	16,348	SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	204	GAL



20TH STREET WEST UC BR. NO. 53-2383R

**QUANTITIES**

PUBLIC SAFETY PLAN	LUMP	SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	12,444	SQFT
TREAT BRIDGE DECK	12,444	SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	156	GAL

**20TH STREET WEST UC**

Br No. 53-2383L/R, Rte 14, PM R67.48  
1" = 20'

**SOUTH AMARGOSA CREEK**

Br No. 53-2377R, Rte 14, PM R61.53  
1" = 20'

NOTE:  
THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL. EXISTING UTILITY FACILITIES ARE NOT INCLUDED ON THESE PLANS.

DESIGN	BY Edward Nahm	CHECKED Tony Brake	LOAD FACTOR DESIGN	BY Tom Dang	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
DETAILS	BY Tom Dang	CHECKED Edward Nahm	LAYOUT	BY Tom Dang	CHECKED Edward Nahm
QUANTITIES	BY Edward Nahm	CHECKED Ramesh Patel	SPECIFICATIONS	BY Karen Doll	PLANS AND SPECS COMPARED Karen Doll

STATE OF CALIFORNIA	DIVISION OF MAINTENANCE	BRIDGE NO.
DEPARTMENT OF TRANSPORTATION	STRUCTURE MAINTENANCE DESIGN	Various
		POST MILE
		Varies

RTE 5, 14, 126, 138 BRIDGES	
GENERAL PLAN NO. 7	

USERNAME => s129239 DATE PLOTTED => 02-DEC-2014 TIME PLOTTED => 09:23

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5, 14, 126, 138	Var	34	39

09/22/14  
 REGISTERED CIVIL ENGINEER DATE  
 2-9-15  
 PLANS APPROVAL DATE  
 No. C66900  
 Exp. 09/30/16  
 CIVIL  
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LANCASTER Blvd UC

BR. NO. 53-2385L

QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	6,528 SQFT
TREAT BRIDGE DECK	6,528 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	82 GAL

**LEGEND:**

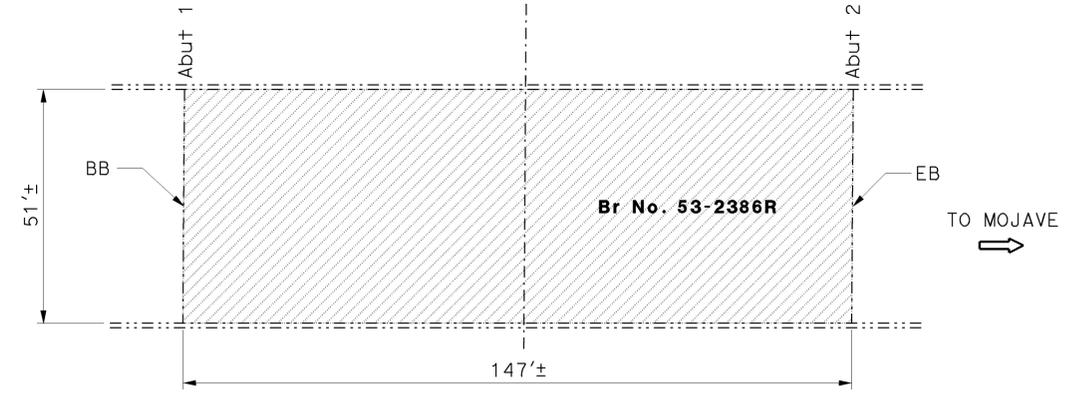
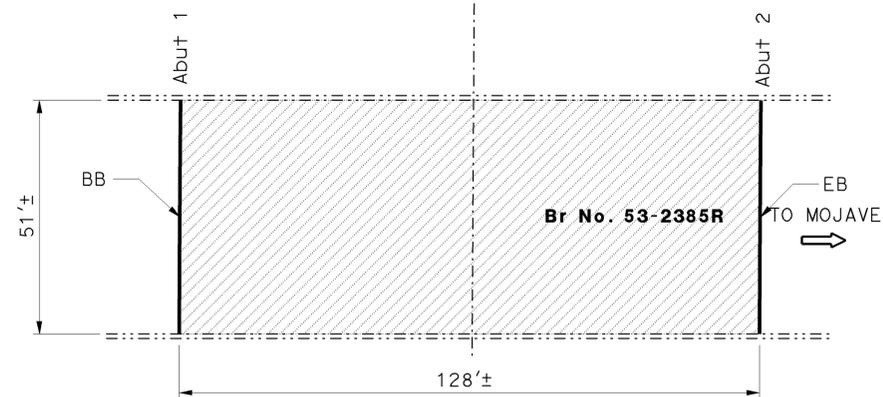
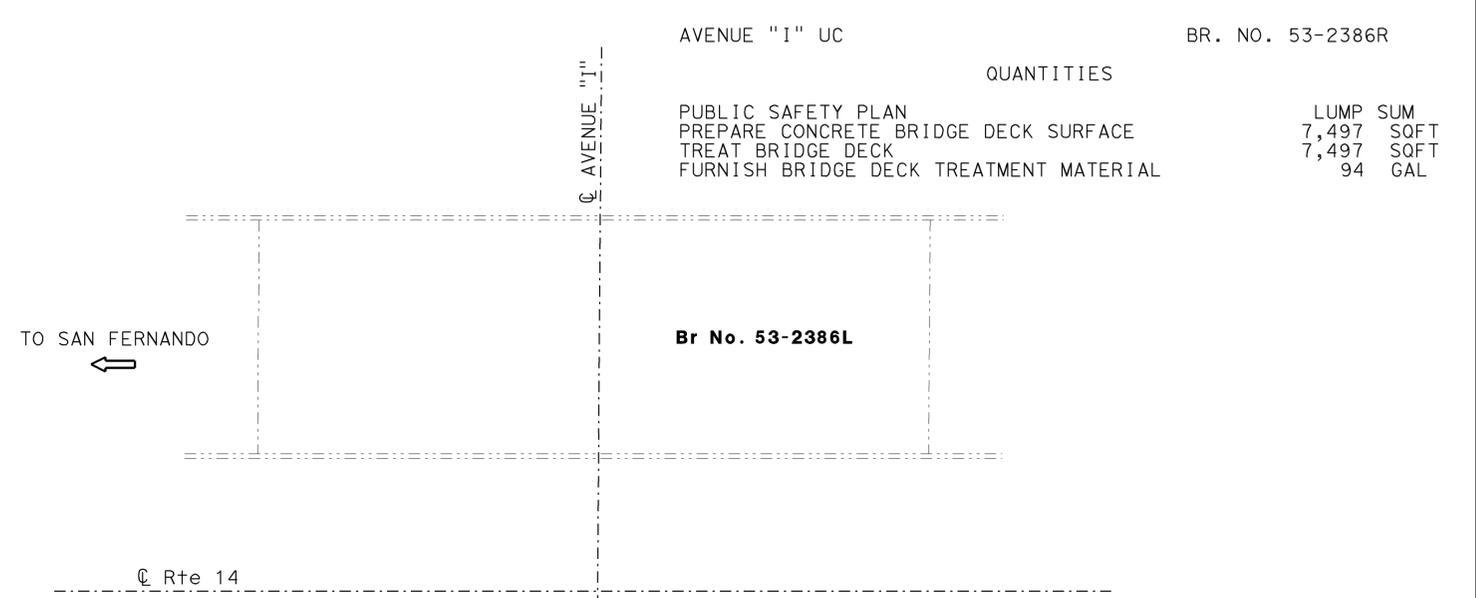
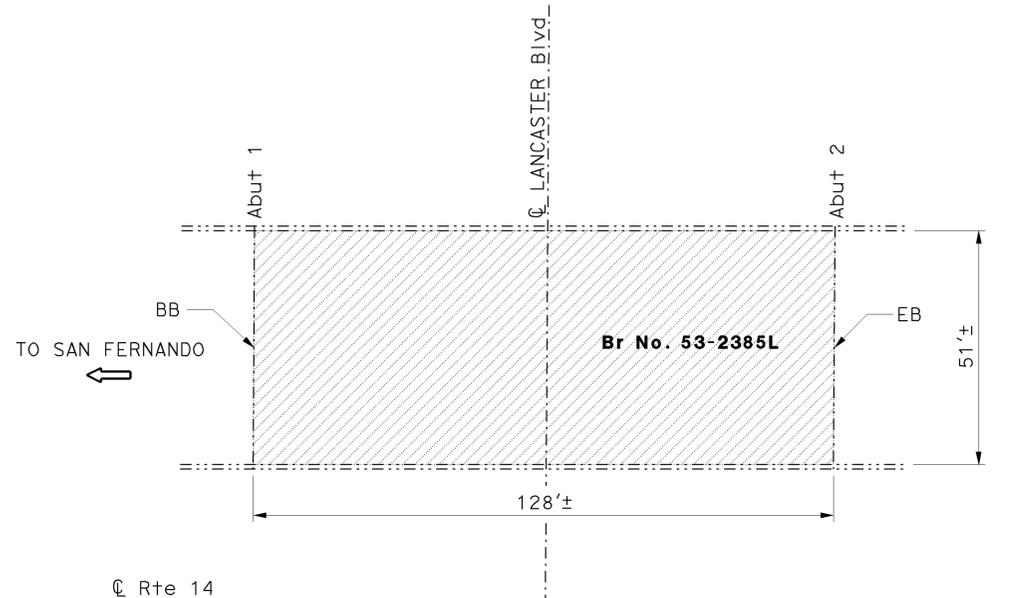
- Indicates existing.
- Indicates direction of traffic.
- ▨ Indicates limits of prepare concrete bridge deck surface and treat existing bridge deck with high molecular weight methacrylate.
- /— Indicates location of clean expansion joint and placement of new joint seal.

LANCASTER Blvd UC

BR. NO. 53-2385R

QUANTITIES

PUBLIC SAFETY PLAN	LUMP SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	6,528 SQFT
TREAT BRIDGE DECK	6,528 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	82 GAL
CLEAN EXPANSION JOINT	102 LF
JOINT SEAL (MR $\frac{1}{2}$ " )	102 LF



**LANCASTER BLVD UC**

Br No. 53-2385L/R, Rte 14, PM R68.46  
1" = 20'



**AVENUE "I" UC**

Br No. 53-2386R, Rte 14, PM R68.96  
1" = 20'



NOTE:  
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DESIGN	BY Edward Nahm	CHECKED Tony Brake	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
DETAILS	BY Tom Dang	CHECKED Edward Nahm	LAYOUT	BY Tom Dang
QUANTITIES	BY Edward Nahm	CHECKED Ramesh Patel	SPECIFICATIONS	BY Karen Doll

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE  
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO.  
Various  
POST MILE  
Varies

RTE 5, 14, 126, 138 BRIDGES  
GENERAL PLAN NO. 8

STRUCTURES MAINTENANCE GENERAL PLAN SHEET (ENGLISH) (REV. 09-01-10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

0 1 2 3

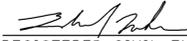
UNIT: 3489  
PROJECT NUMBER & PHASE: 0712000449 1 CONTRACT NO.: 07-1W6404

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES SHEET OF  
5-15-13 08 13

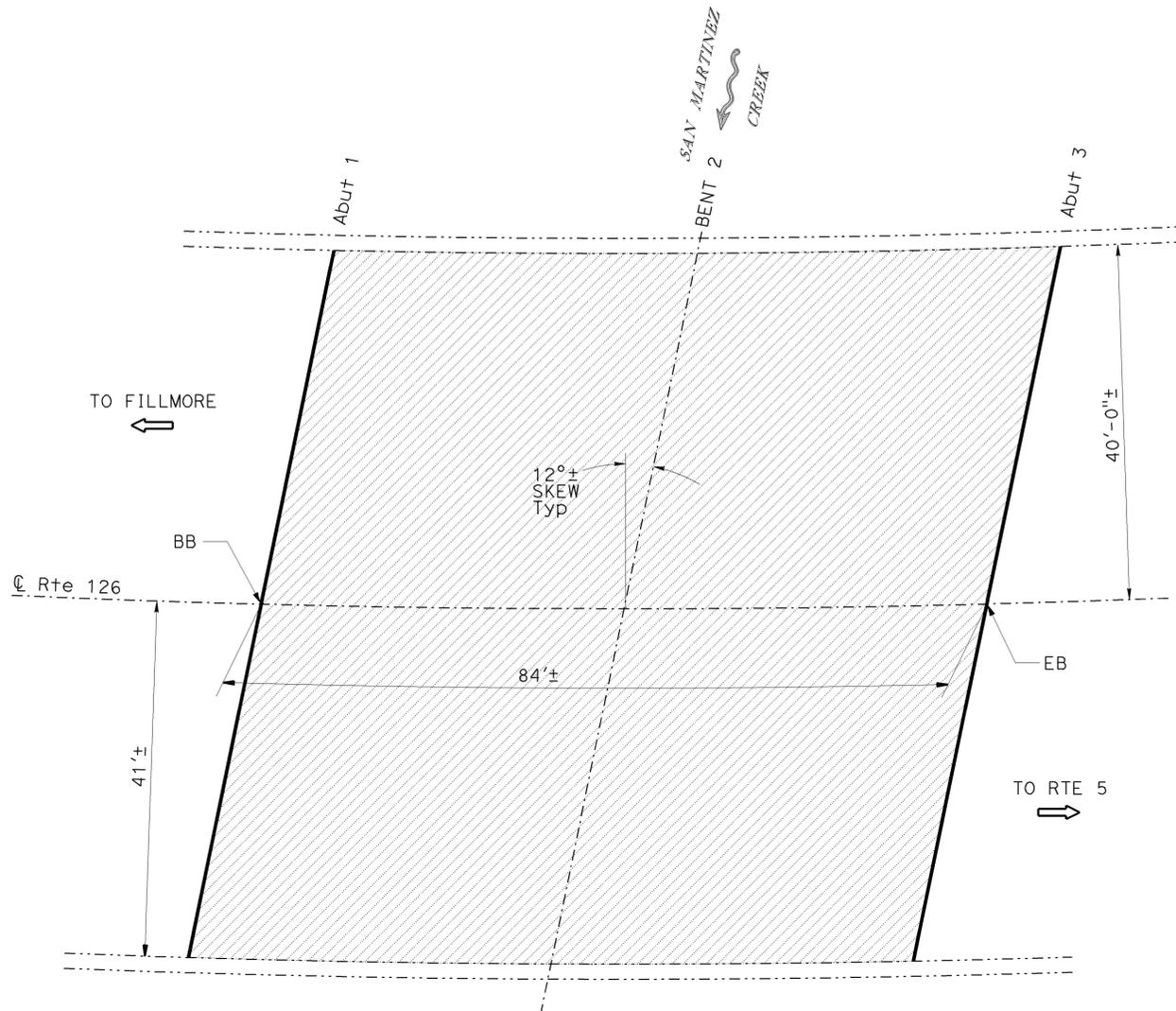
FILE => 07-1w6404-a-gp08.dgn

USERNAME => s129239 DATE PLOTTED => 02-DEC-2014 TIME PLOTTED => 09:23

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5, 14, 126, 138	Var	35	39
 REGISTERED CIVIL ENGINEER			DATE	09/22/14	
PLANS APPROVAL DATE			2-9-15		
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.					

**LEGEND:**

- Indicates existing.
- ➔ Indicates direction of traffic.
- ▨ Indicates limits of prepare concrete bridge deck surface and treat existing bridge deck with high molecular weight methacrylate.
- /— Indicates location of clean expansion joint and placement of new joint seal.



**SAN MARTINEZ GRANDE**

Br No. 53-2811, Rte 126, PM R1.44  
1" = 10'



SAN MARTINEZ GRANDE BR. NO. 53-2811

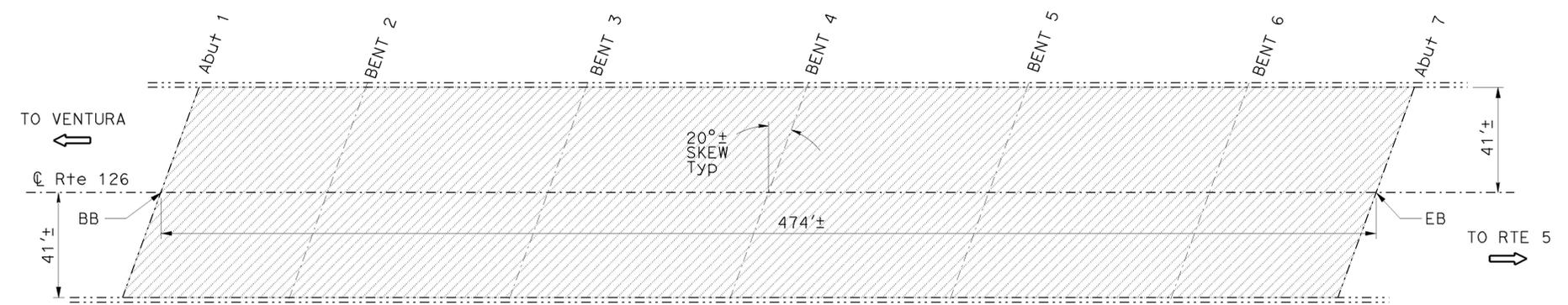
**QUANTITIES**

	LUMP	SUM
PUBLIC SAFETY PLAN		
PREPARE CONCRETE BRIDGE DECK SURFACE	6,804	SQFT
TREAT BRIDGE DECK	6,804	SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	85	GAL
CLEAN EXPANSION JOINT	166	LF
JOINT SEAL (MR 1/2")	166	LF

CASTAIC CREEK BR. NO. 53-0093

**QUANTITIES**

	LUMP	SUM
PUBLIC SAFETY PLAN		
PREPARE CONCRETE BRIDGE DECK SURFACE	38,868	SQFT
TREAT BRIDGE DECK	38,868	SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	486	GAL



**CASTAIC CREEK**

Br No. 53-0093, Rte 126, PM R4.09  
1" = 30'



NOTE:  
THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL. EXISTING UTILITY FACILITIES ARE NOT INCLUDED ON THESE PLANS.

TONY D. BRAKE DESIGN ENGINEER	DESIGN	BY Edward Nahm	CHECKED Tony Brake	LOAD FACTOR DESIGN	BY Tom Dang	CHECKED Edward Nahm
	DETAILS	BY Tom Dang	CHECKED Edward Nahm	LAYOUT	BY Tom Dang	CHECKED Edward Nahm
	QUANTITIES	BY Edward Nahm	CHECKED Ramesh Patel	SPECIFICATIONS	BY Karen Doll	CHECKED Karen Doll

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF MAINTENANCE	BRIDGE NO.	<b>RTE 5, 14, 126, 138 BRIDGES</b> <b>GENERAL PLAN NO. 9</b>
	STRUCTURE MAINTENANCE DESIGN	Various	
		Varies	

FRONTAGE ROAD UC BR. NO. 53-1639L

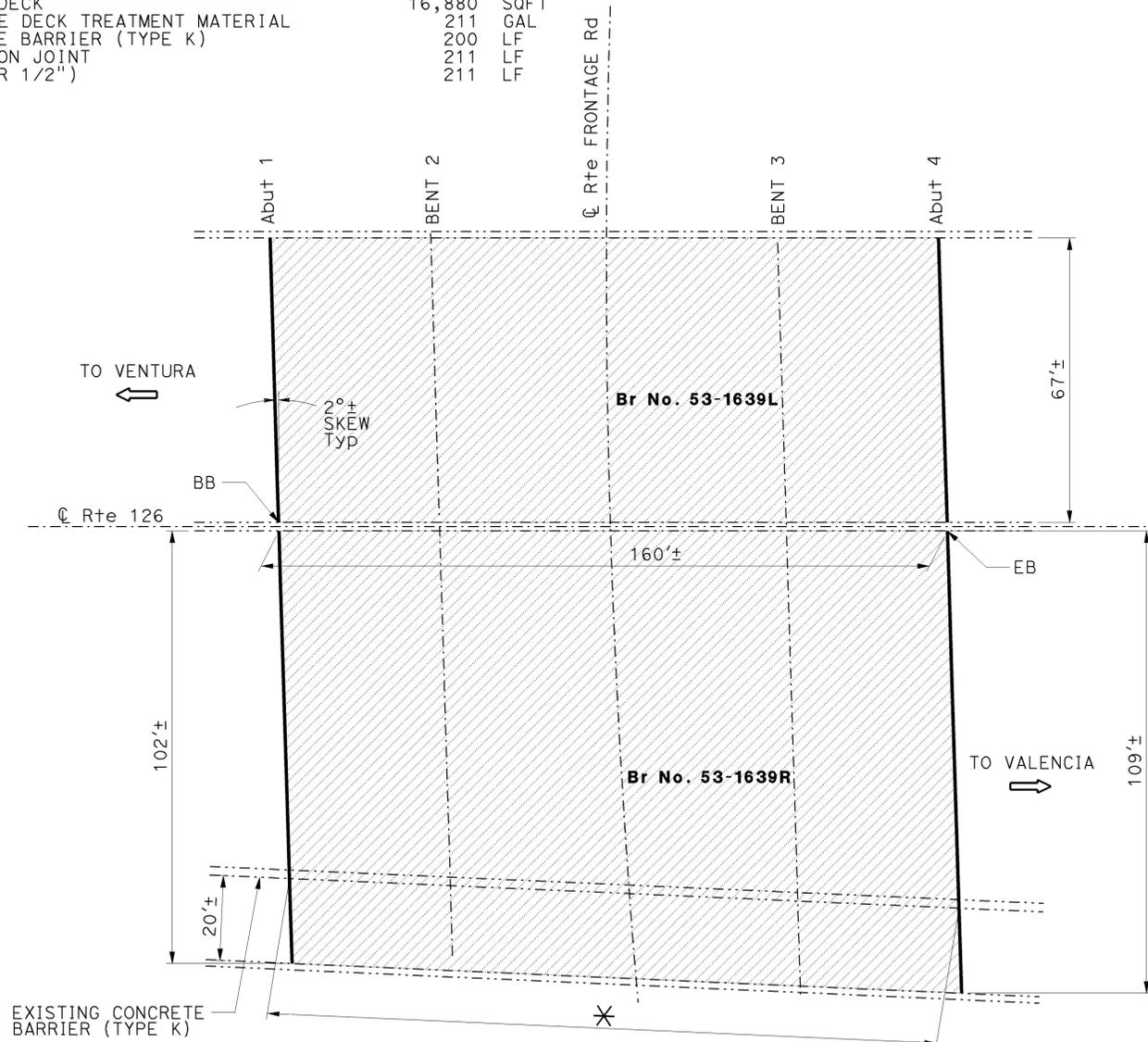
QUANTITIES

	LUMP	SUM
PUBLIC SAFETY PLAN	10,720	SQFT
PREPARE CONCRETE BRIDGE DECK SURFACE	10,720	SQFT
TREAT BRIDGE DECK	134	GAL
FURNISH BRIDGE DECK TREATMENT MATERIAL	134	LF
CLEAN EXPANSION JOINT	134	LF
JOINT SEAL (MR 1/2")	134	LF

FRONTAGE ROAD UC BR. NO. 53-1639R

QUANTITIES

	LUMP	SUM
PUBLIC SAFETY PLAN	16,880	SQFT
PREPARE CONCRETE BRIDGE DECK SURFACE	16,880	SQFT
TREAT BRIDGE DECK	211	GAL
FURNISH BRIDGE DECK TREATMENT MATERIAL	200	LF
RESET CONCRETE BARRIER (TYPE K)	211	LF
CLEAN EXPANSION JOINT	211	LF
JOINT SEAL (MR 1/2")	211	LF



**FRONTAGE ROAD UC**

Br No. 53-1639L/R, Rte 126, PM R5.66  
NO SCALE



NOTE:  
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DESIGN ENGINEER <b>TONY D. BRAKE</b>	DESIGN	BY Edward Nahm	CHECKED Tony Brake	LOAD FACTOR DESIGN	BY Tom Dang	CHECKED Edward Nahm
	DETAILS	BY Tom Dang	CHECKED Edward Nahm	LAYOUT	BY Tom Dang	CHECKED Edward Nahm
	QUANTITIES	BY Edward Nahm	CHECKED Ramesh Patel	SPECIFICATIONS	BY Karen Doll	CHECKED Karen Doll

STRUCTURES MAINTENANCE GENERAL PLAN SHEET (ENGLISH) (REV. 09-01-10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE  
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. Various  
POST MILE Varies

**RTE 5, 14, 126, 138 BRIDGES**  
**GENERAL PLAN NO. 10**

UNIT: 3489  
PROJECT NUMBER & PHASE: 0712000449 1 CONTRACT NO.: 07-1W6404

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
5-15-11	10	13

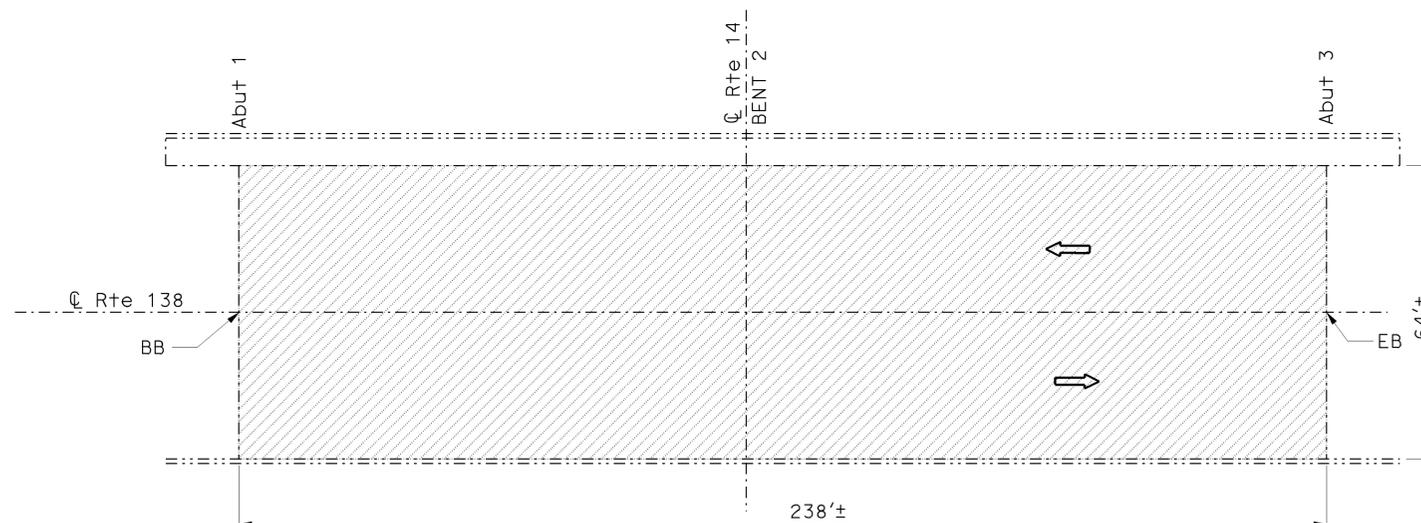
**LEGEND:**

- Indicates existing.
- ➔ Indicates direction of traffic.
- ▨ Indicates limits of prepare concrete bridge deck surface and treat existing bridge deck with high molecular weight methacrylate.
- /— Indicates location of clean expansion joint and placement of new joint seal.
- \* Limits of remove existing concrete barrier (Type K) prior to deck rehabilitation and joint seal installation. Reset back to original location after completion of work.

AVENUE D SEPARATION BR. NO. 53-1835

QUANTITIES

	LUMP	SUM
PUBLIC SAFETY PLAN	15,232	SQFT
PREPARE CONCRETE BRIDGE DECK SURFACE	15,232	SQFT
TREAT BRIDGE DECK	190	GAL
FURNISH BRIDGE DECK TREATMENT MATERIAL	190	GAL



**AVENUE D SEPARATION**

Br No. 53-1835, Rte 138, PM 36.85  
1" = 20'

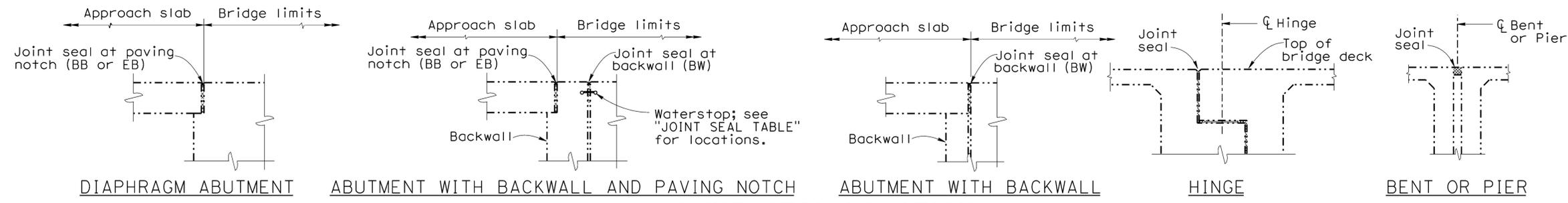


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DATE PLOTTED => 02-DEC-2014  
TIME PLOTTED => 09:24  
USERNAME => s129239

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	5, 14, 126, 138	Var	37	39

09/22/14  
 REGISTERED CIVIL ENGINEER DATE  
 2-9-15  
 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.

REGISTERED PROFESSIONAL ENGINEER  
 EDWARD J. NAHM  
 No. C66900  
 Exp. 09/30/16  
 CIVIL  
 STATE OF CALIFORNIA



**JOINT SEAL LOCATION**

NO SCALE

**NOTES:**

The following notes apply to JOINT SEAL TYPE A:

Install Joint Seal (MR = 1/2") or Silicone Joint Seal 3" up into curb or barrier rail on the low side of the deck where deck joint aligns with curb or barrier rail joint.

For details not shown see Standard Plans B6-21 sheet.

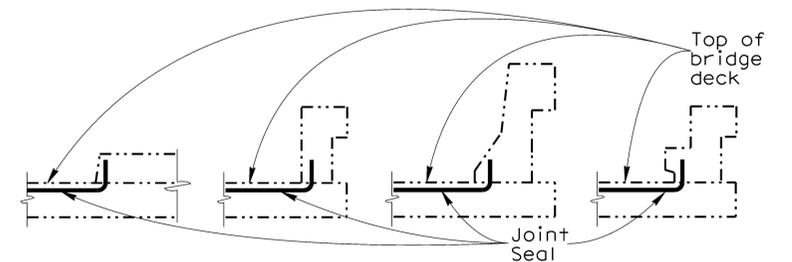
The following notes apply to JOINT SEAL TYPE B:

- 1) Seal must satisfy both minimum Movement Rating (MR) and minimum W1 requirements.
- 2) Minimum W1 is the calculated maximum width of the joint based on field measurements. After the joints have been cleaned, minimum W1 is to be recalculated by the Engineer.
- 3) W1 shall be the smaller of the values determined as follows:
  - A) 0.85 times the manufacturer's designed minimum uncompressed width of the seal.
  - B) The width of the seal on the third successive test cycle of the pressure deflection test, when compressed to an average pressure of 3.0 PSI.
- 4) Bend Type B joint seal 6 inches up into curb or rail on the low side of the deck where deck joint matches curb or rail joint.

For details not shown see Standard Plans B6-21 sheet.

JOINT SEAL TABLE								
BRIDGE NAME	BRIDGE NUMBER	LOCATION		MINIMUM "MR" (INCHES)	APPROX JOINT LENGTH (LF)	EXISTING WATERSTOP	APPROX DEPTH TO CLEAN EXP JOINT (INCHES)	LENGTH TO CLEAN EXP JOINT (LF)
		ABUT	BW					
PICO LYONS OC	53-1783	ABUT 1	Bw	2	113	YES	10	113
		ABUT 3	Bw	2	113	YES	10	117
SIERRA HIGHWAY UC	53-1936F	ABUT 1	PN	1	14	NO	12	14
SIERRA HIGHWAY OFF-RAMP OC	53-2200S	ABUT 1	PN	1	39	NO	12	39
		HINGE 1	DJ	2	39	YES	5	39
		HINGE 2	DJ	2	39	YES	5	39
		HINGE 3	DJ	2	39	YES	5	39
		HINGE 4	DJ	2	39	YES	5	39
RANCHO VISTA Blvd UC	53-2376L	ABUT 1	PN	1/2	78	NO	12	78
		ABUT 3	PN	1/2	78	NO	12	78
LANCASTER Blvd UC	53-2385R	ABUT 1	PN	1/2	51	NO	12	51
		ABUT 2	PN	1/2	51	NO	12	51
SAN MARTINEZ GRANDE	53-2811	ABUT 1	PN	1/2	83	NO	12	83
		ABUT 3	PN	1/2	83	NO	12	83
FRONTAGE ROAD UC	53-1639L	ABUT 1	PN	1/2	67	NO	12	67
		ABUT 4	PN	1/2	67	NO	12	67
	53-1639R	ABUT 1	PN	1/2	102	NO	12	102
		ABUT 4	PN	1/2	109	NO	12	109

PN = PAVING NOTCH  
 DJ = DECK JOINT  
 Bw = BACKWALL



**BARRIER RAIL**

**JOINT SEAL AT LOW SIDE OF DECK**

Note: Details shown for illustration purposes only.

For use only where deck joint matches the sidewalk, curb or barrier rail joint.

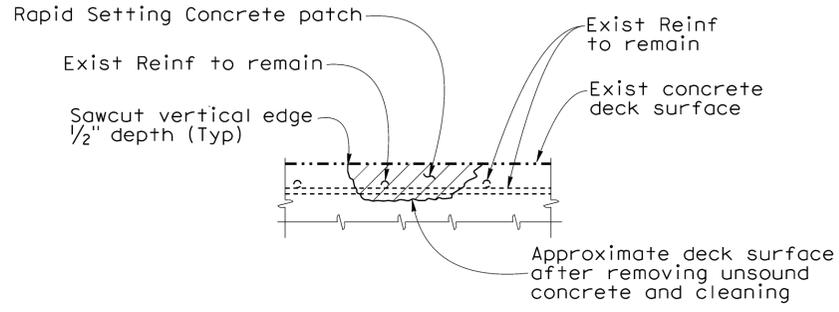
NOTE:  
 THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL. EXISTING UTILITY FACILITIES ARE NOT INCLUDED ON THESE PLANS.

DESIGN	BY	Edward Nahm	CHECKED	Tony Brake	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF MAINTENANCE STRUCTURE MAINTENANCE DESIGN	BRIDGE NO.	RTE 5, 14, 126, 138 BRIDGES		
	DETAILS	BY	Tom Dang	CHECKED			Edward Nahm		POST MILE	MISCELLANEOUS DETAILS NO. 1
	QUANTITIES	BY	Edward Nahm	CHECKED			Ramesh Patel		Varies	

STRUCTURES MAINTENANCE DETAIL SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3 UNIT: 3489 PROJECT NUMBER & PHASE: 0712000449 1 CONTRACT NO.: 07-1W6404 DISREGARD PRINTS BEARING EARLIER REVISION DATES 5-15-15 SHEET 11 OF 13

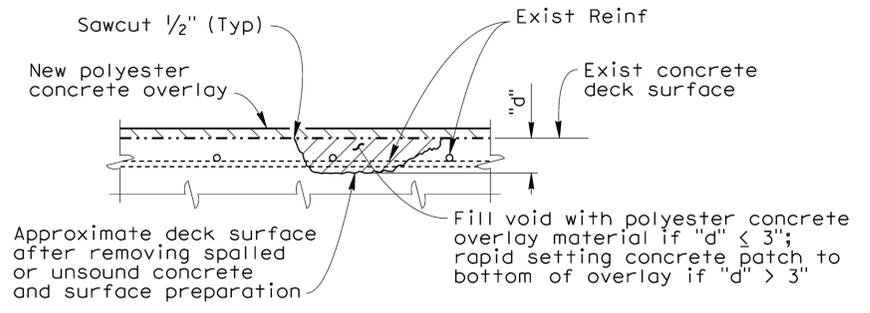
DECK REPAIR TABLE REMOVE UNSOUND CONCRETE AND RAPID SETTING CONCRETE (PATCH)			
BRIDGE NAME	BRIDGE NUMBER	APPROXIMATE AREA DAMAGED (%)	APPROXIMATE DEPTH (INCH)
PICO LYONS OC	53-1783	1	3

- NOTES:
- Existing reinforcement shall be protected in place during unsound concrete removal and patching operations.
  - It is responsibility of the Contractor to repair any reinforcement that is accidentally cut by saw cutting operations.
  - When existing transverse reinforcement is exposed in the deck surface, saw cutting may be waived with the approval of the Engineer.
  - The saw cut depth shall not exceed  $\frac{3}{4}$  inch or the concrete cover over the top steel reinforcing bars, whichever is less.
  - Remove unsound Portland Cement concrete and unsound concrete patches to expose sound, hard concrete substrate. Replace original deck surface with rapid setting concrete patch.



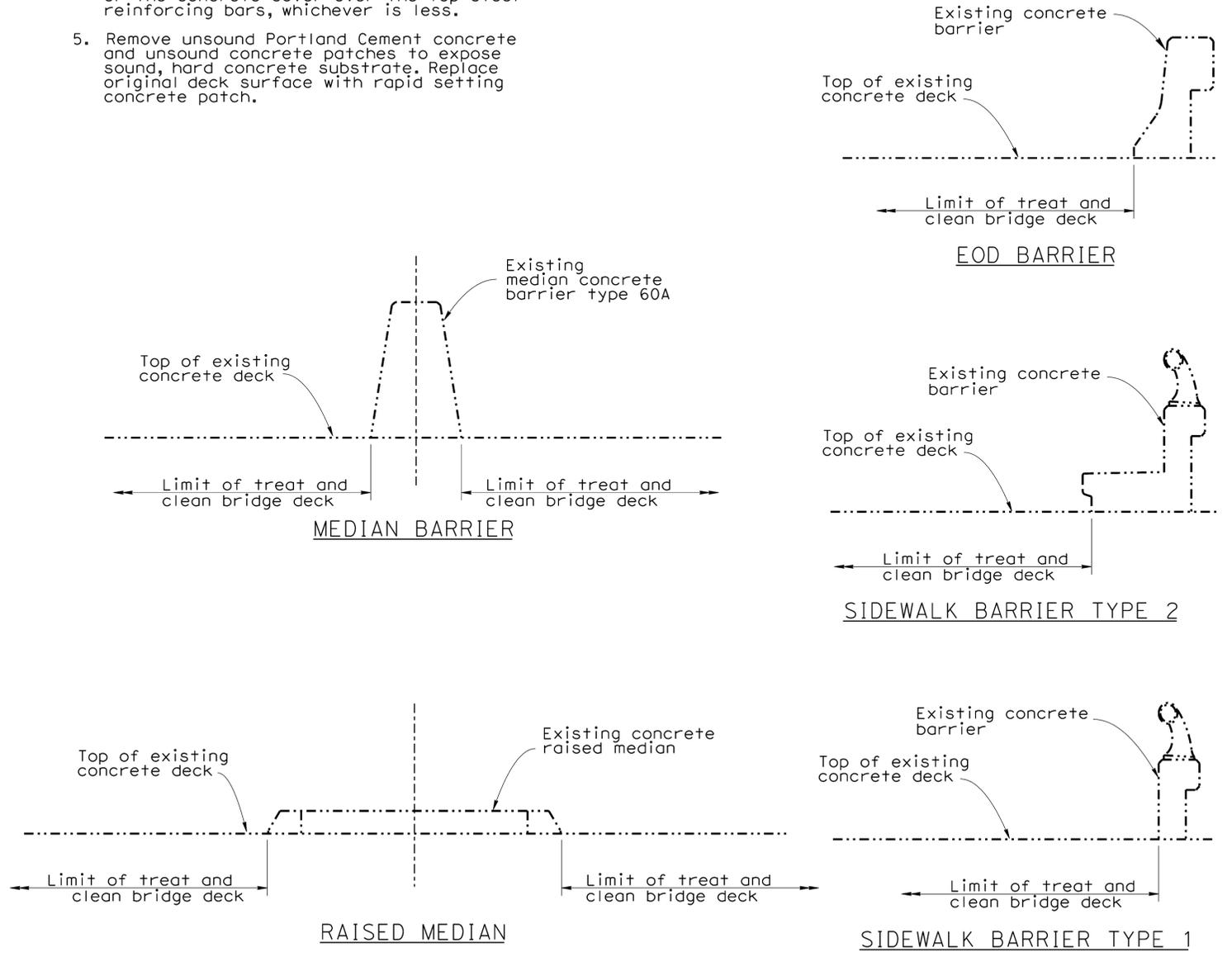
**DECK DAMAGE REPAIR DETAIL**

Location will be determined by the Engineer. Reinforcement may be encountered during deck concrete removal and is to remain undamaged.



**DECK REPAIR DETAIL - OVERLAY**

(Br No. 53-1783)  
Reinforcement may be encountered during deck concrete removal.

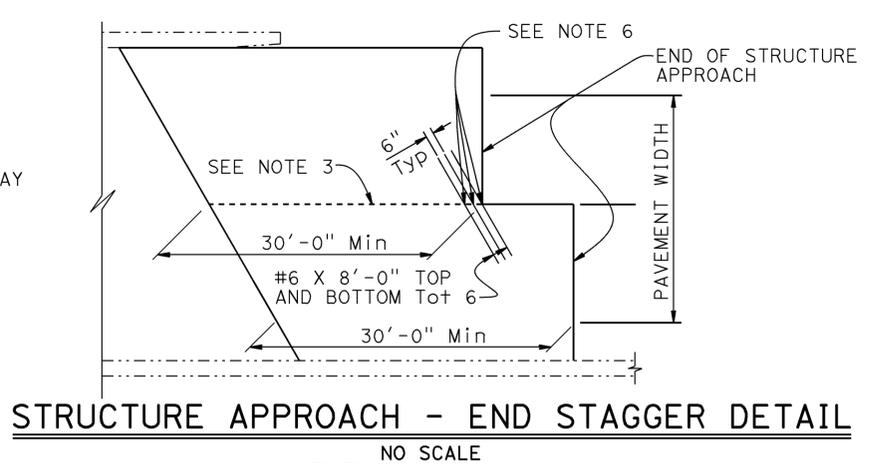
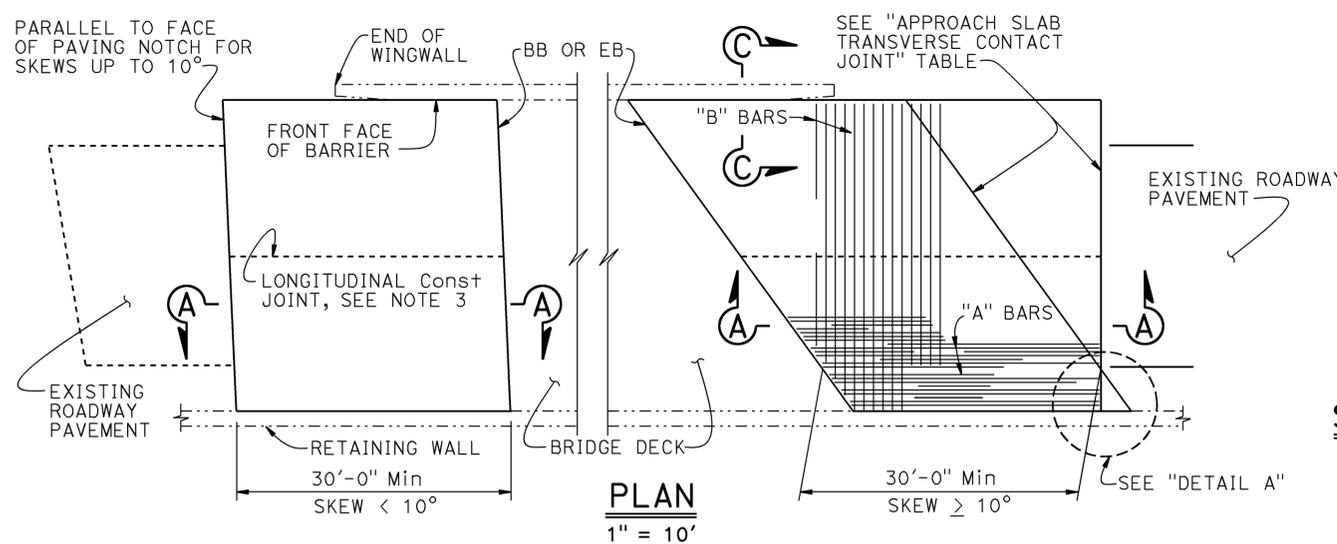


**TYPICAL LIMITS OF DECK WORK**

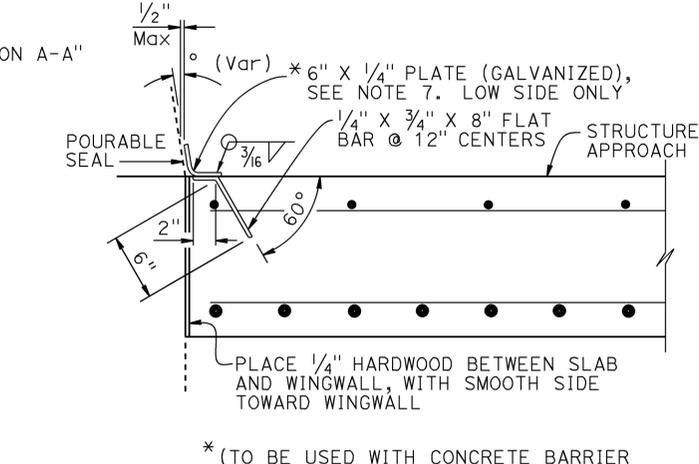
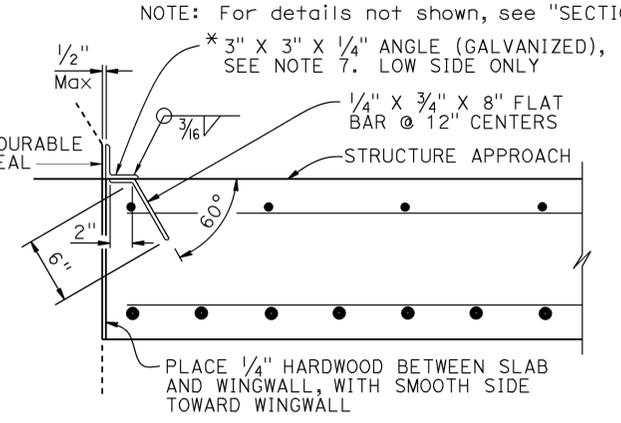
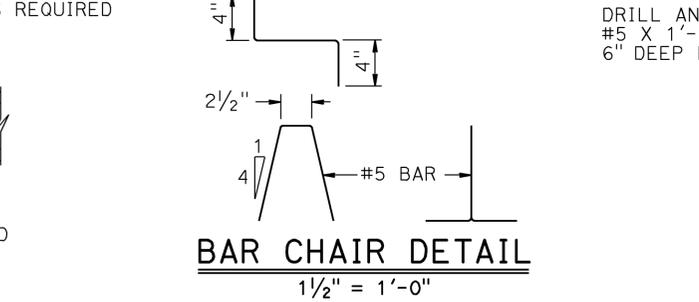
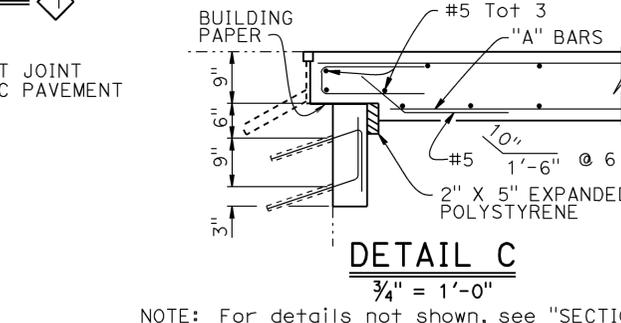
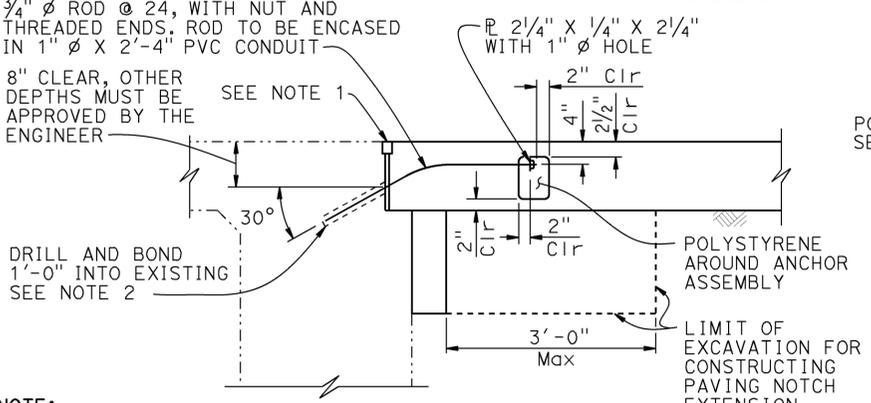
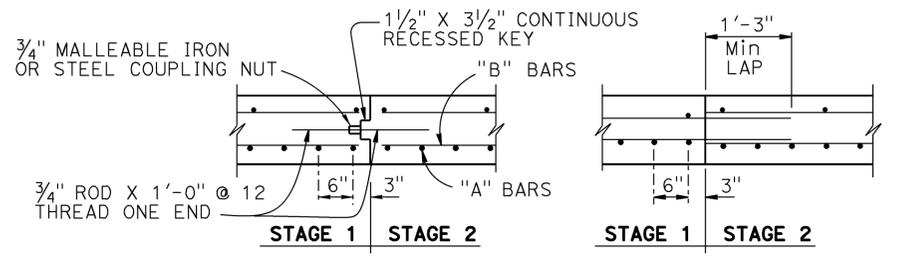
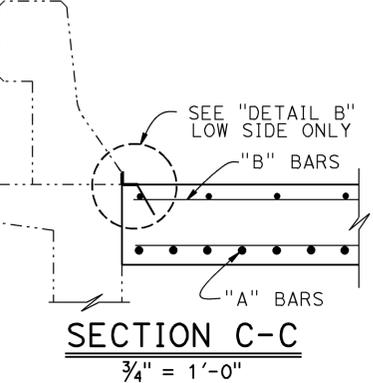
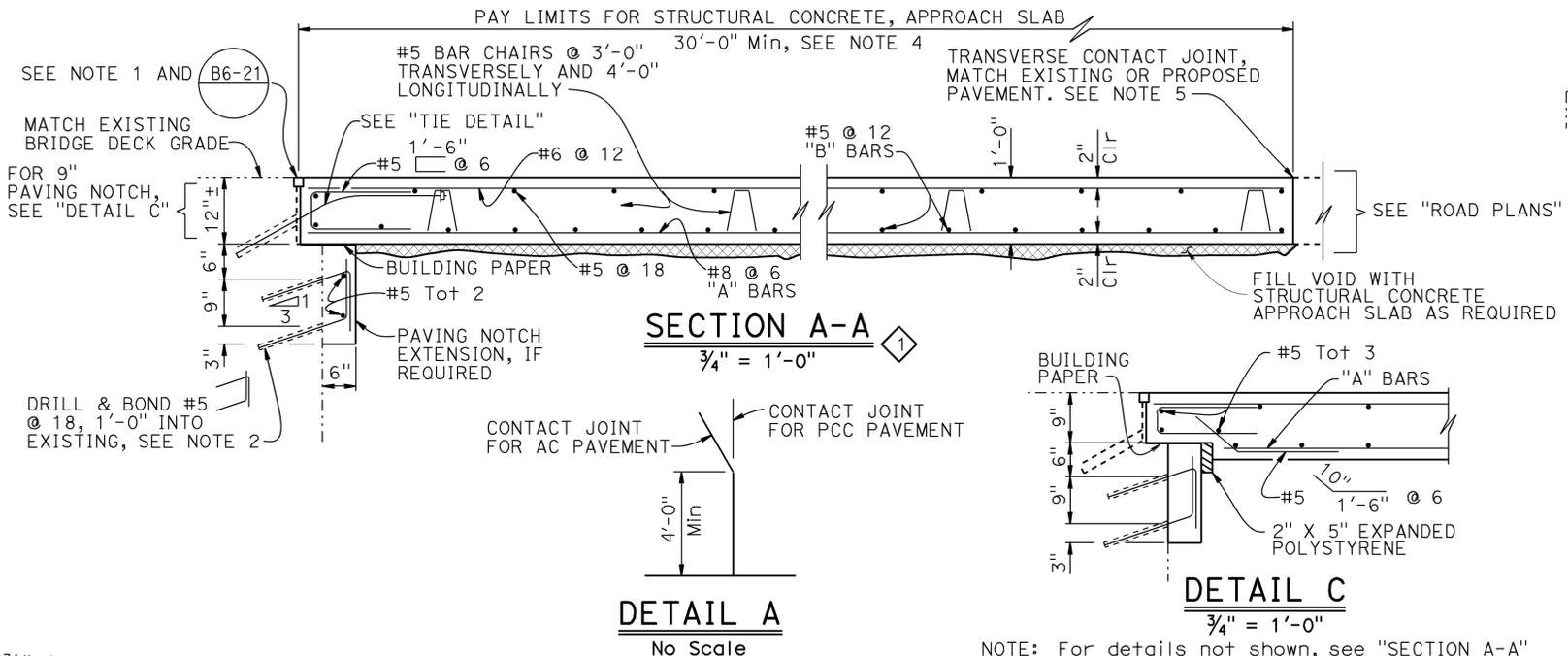
NO SCALE

NOTE:  
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STRUCTURES MAINTENANCE DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY Edward Nahm	CHECKED Tony Brake	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF MAINTENANCE STRUCTURE MAINTENANCE DESIGN	BRIDGE NO.	RTE 5, 14, 126, 138 BRIDGES	
	DETAILS	BY Tom Dang	CHECKED Edward Nahm			POST MILE		MISCELLANEOUS DETAILS NO. 2
	QUANTITIES	BY Edward Nahm	CHECKED Ramesh Patel			Varies		
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				UNIT: 3489 PROJECT NUMBER & PHASE: 0712000449 1	CONTRACT NO.: 07-1W6404	REVISION DATES	SHEET 12 OF 13	



APPROACH SLAB TRANSVERSE CONTACT JOINT		
APPROACH SKEW	WITH AC ROADWAY PAVEMENT	WITH PCC ROADWAY PAVEMENT
< 10°	PARALLEL TO FACE OF PN	PARALLEL TO FACE OF PAVING NOTCH
10° - 45°	PARALLEL TO FACE OF PN USE "DETAIL A"	STAGGER LINES 24' TO 36' APART
> 45°	PARALLEL TO FACE OF PN USE "DETAIL A"	STAGGER AT EACH LANE LINE



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

NOTE: THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL. EXISTING FACILITIES ARE NOT INCLUDED ON THESE PLANS.

REVISED STANDARD DRAWING  
 FILE NO. **xs3-150**  
 APPROVAL DATE July 2011

REVISED

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
 BRIDGE NO. Various  
 POST MILE Varies  
**RTE 5, 14, 126, 138 BRIDGES**  
**STRUCTURE APPROACH TYPE R(30D)**