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STRUCTURE PLANS

49-50	BEE CANYON CREEK, Br No. 55-003
51-61	S1 N5 CONNECTOR, BR No. 55-0620F

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

STATE OF CALIFORNIA ACIM-005-2(984)E
DEPARTMENT OF TRANSPORTATION
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN ORANGE COUNTY
IN SAN JUAN CAPISTRANO AND IRVINE
AT NORTHBOUND CAMINO LAS RAMBLAS LOOP ON RAMP
AND NEAR BEE CANYON CREEK

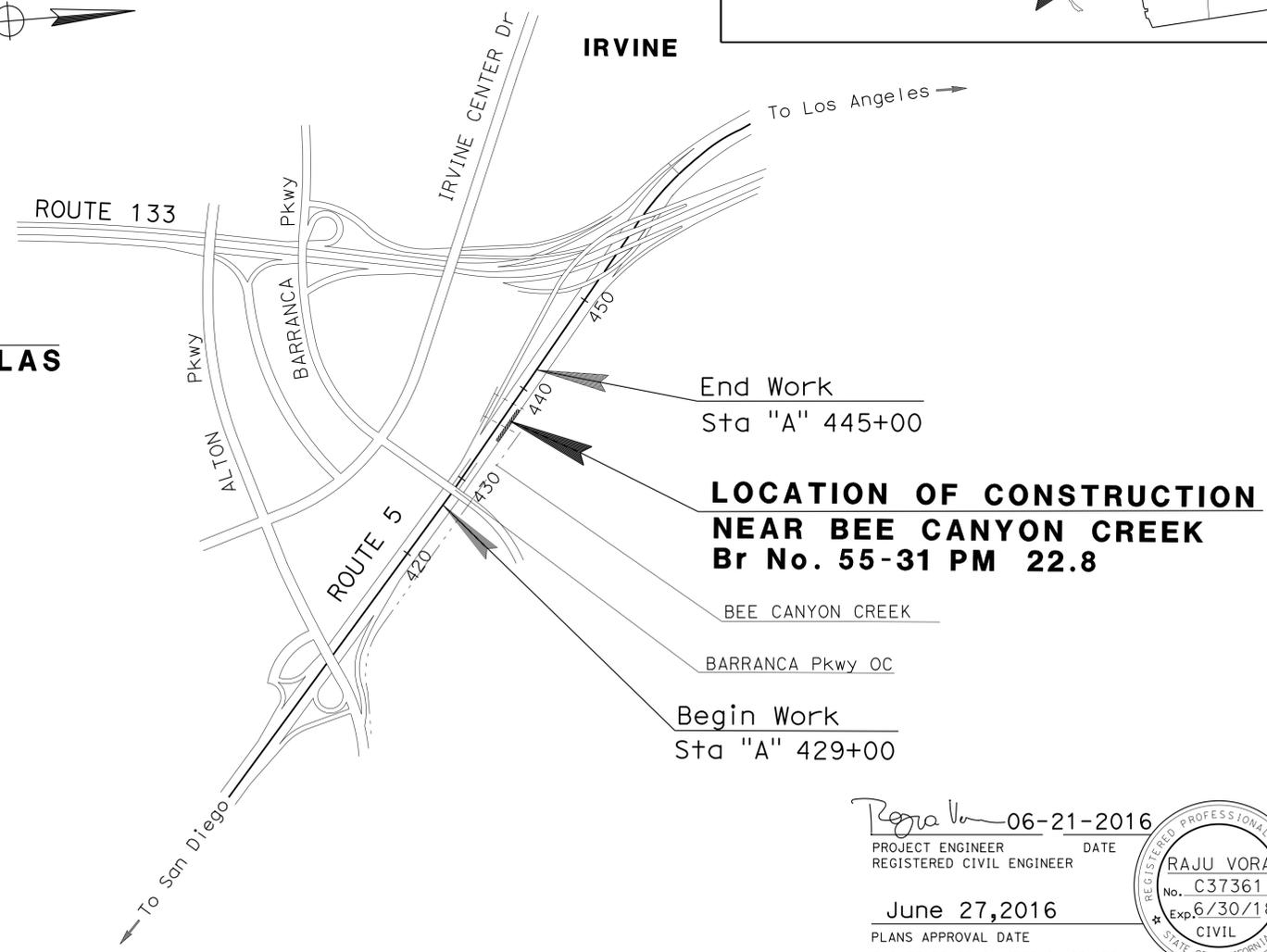
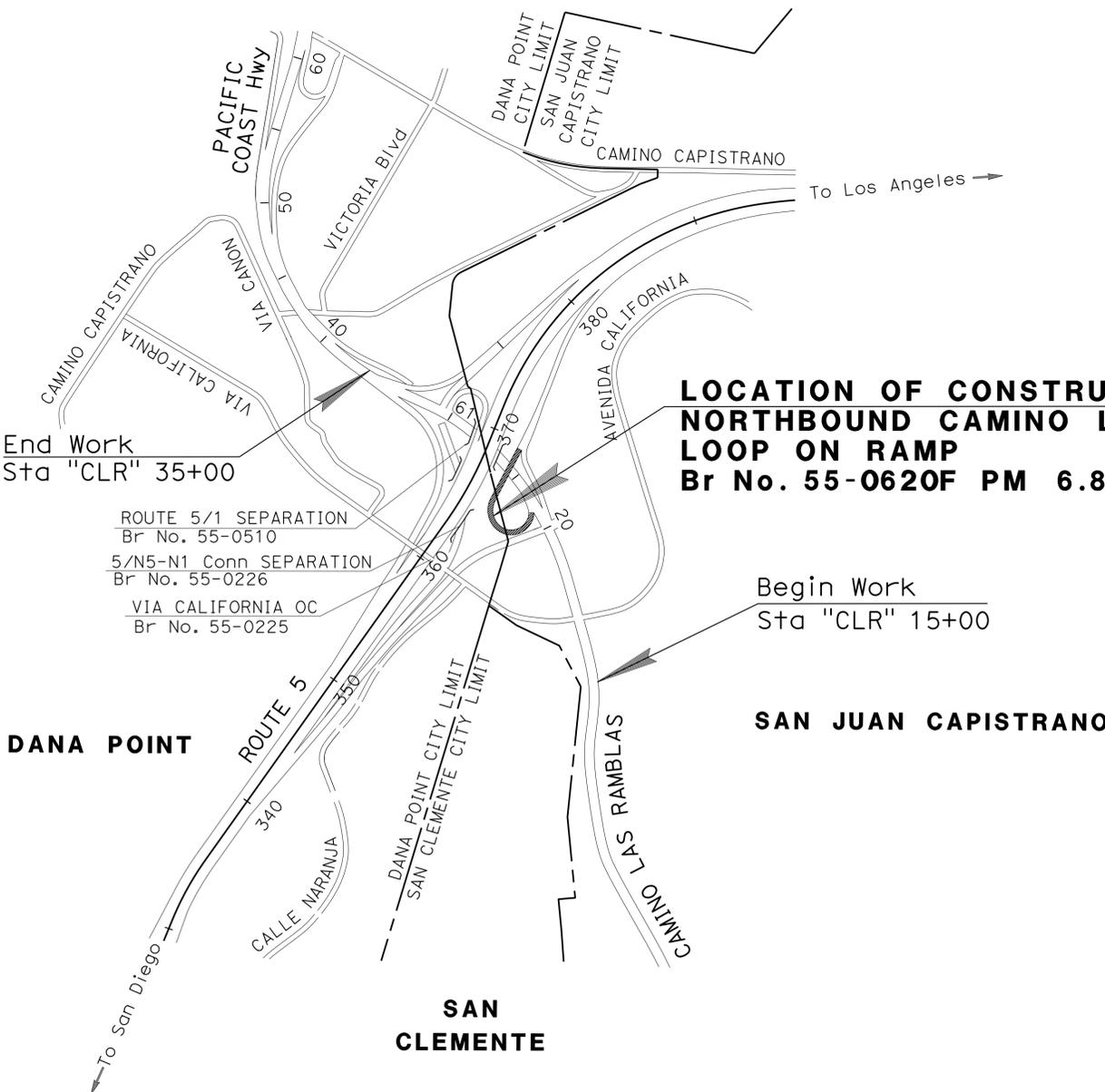
TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.8, 22.8	1	61

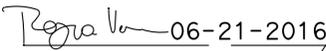




LOCATION MAP



PROJECT MANAGER BOB BAZARGAN	DESIGN MANAGER ANDREW OSHRIN
--	--


 PROJECT ENGINEER DATE
 REGISTERED CIVIL ENGINEER

June 27, 2016
 PLANS APPROVAL DATE

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



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

NO SCALE

LAST REVISION: 06-22-16 DATE PLOTTED => 01-AUG-2016 TIME PLOTTED => 15:27

NOTE:

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

ABBREVIATIONS:

AFTS ALTERNATIVE FLARED TERMINAL SYSTEM

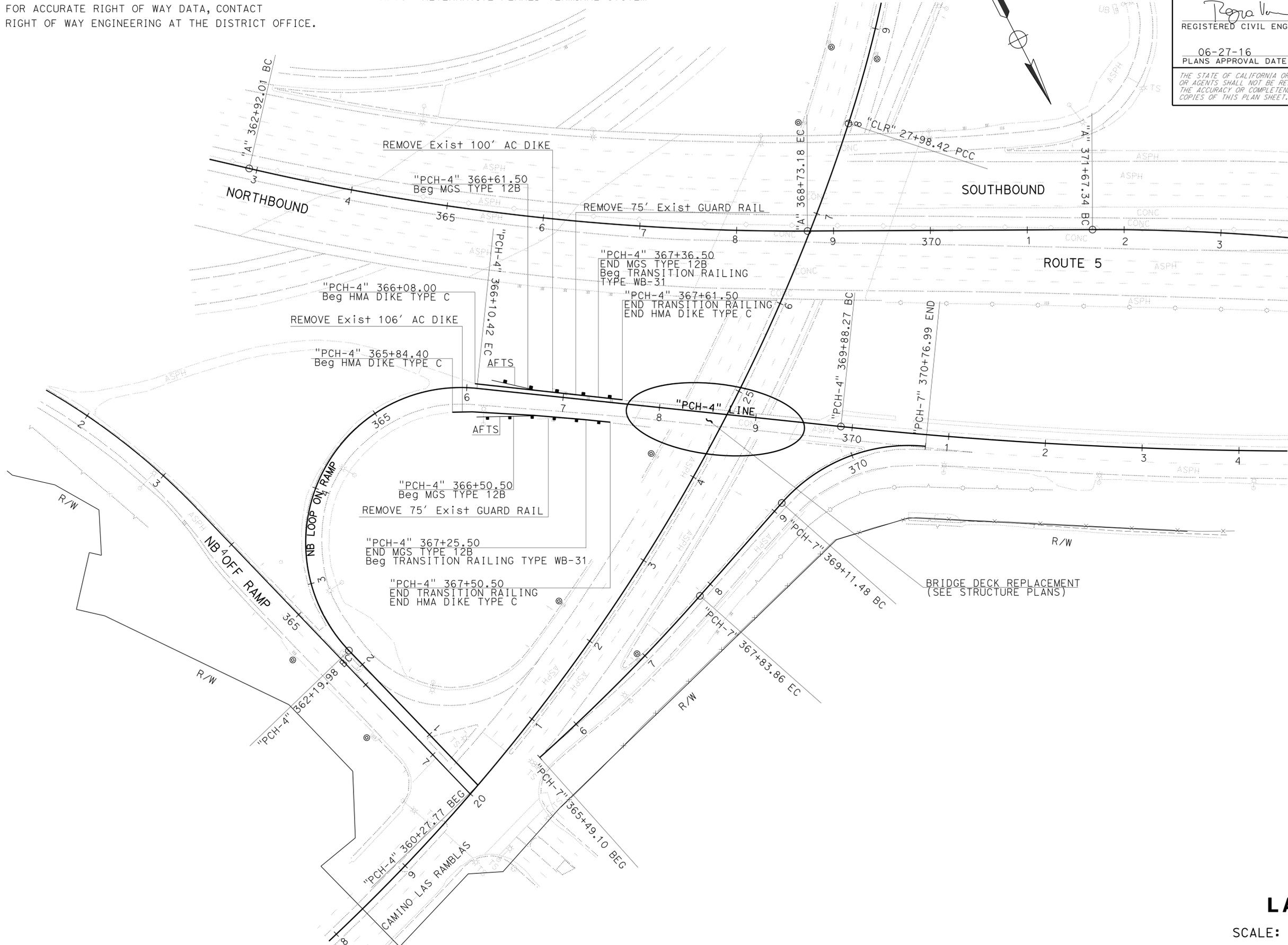
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.8, 22.8	2	61

RAJU VORA 06-21-16
 REGISTERED CIVIL ENGINEER DATE

06-27-16
 PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
 RAJU VORA
 No. C37361
 Exp. 06/30/18
 CIVIL
 STATE OF CALIFORNIA



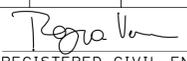
LAYOUT

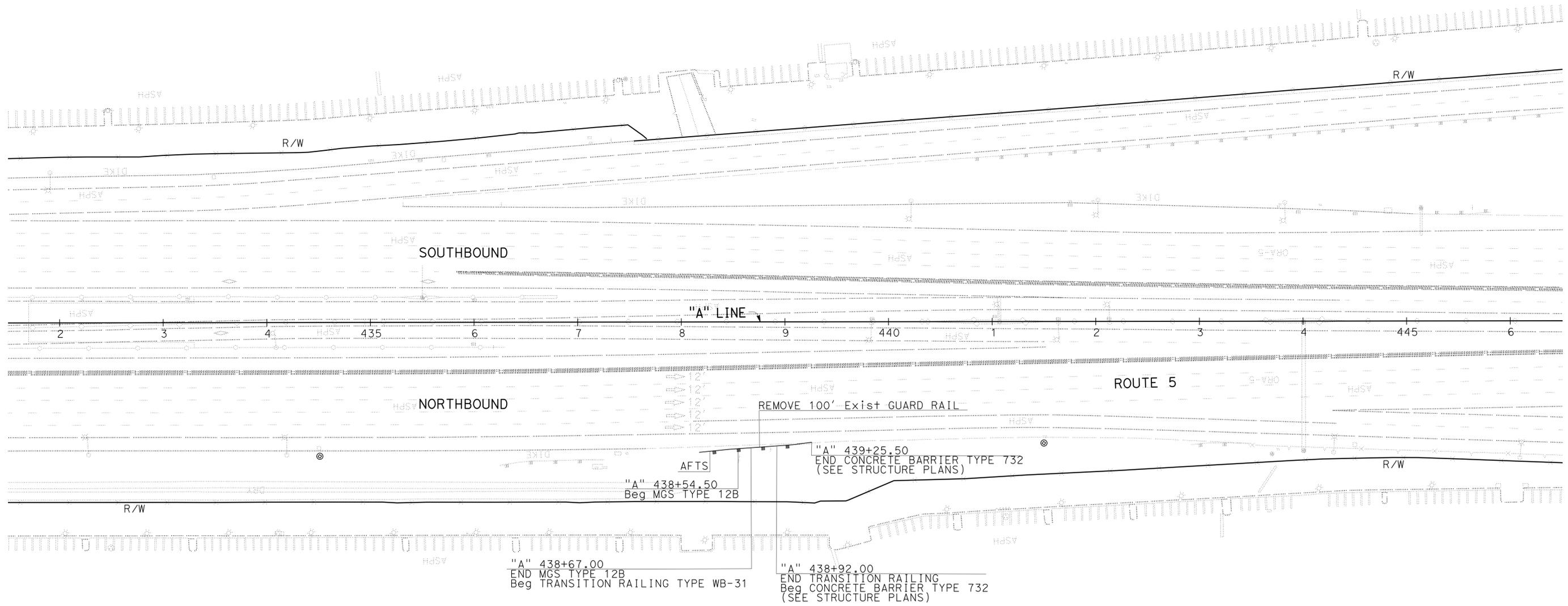
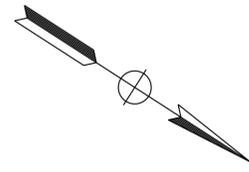
SCALE: 1" = 50'

L-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN BRANCH D
FUNCTIONAL SUPERVISOR	ANDREW OSHRIN
CALCULATED-DESIGNED BY	CHECKED BY
RAJU VORA	THUAN T. NGUYEN
REVISOR	DATE

LAST REVISION | DATE PLOTTED => 01-AUG-2016
 06-16-16 | TIME PLOTTED => 15:27

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.8, 22.8	3	61
			06-21-16	REGISTERED CIVIL ENGINEER DATE	
06-27-16			PLANS APPROVAL DATE		
					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN
FUNCTIONAL SUPERVISOR	ANDREW OSHRIN
CALCULATED/DESIGNED BY	CHECKED BY
THUAN NGUYEN	RAJU VORA
REVISED BY	DATE REVISED

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DESIGN BRANCH D

REVISOR BY
 DATE REVISED

THUAN T. NGUYEN
 RAJU VORA

CALCULATED/DESIGNED BY
 CHECKED BY

FUNCTIONAL SUPERVISOR
 ANDREW OSHRIN

NOTES:

1. For additional details not shown on this plan, refer to RSP A77L1 and RSP A77L2.
2. CRT post to be wood only.
3. Contractor shall use this detail when instructed by engineer.

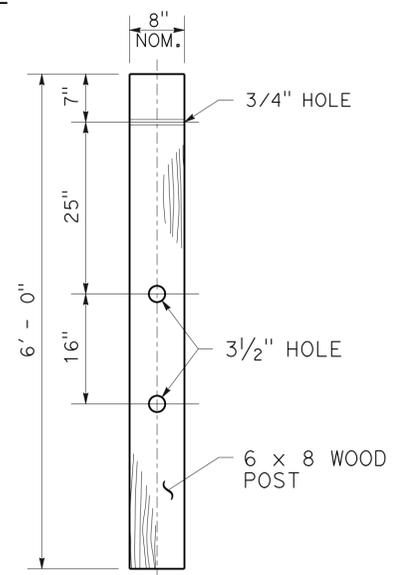
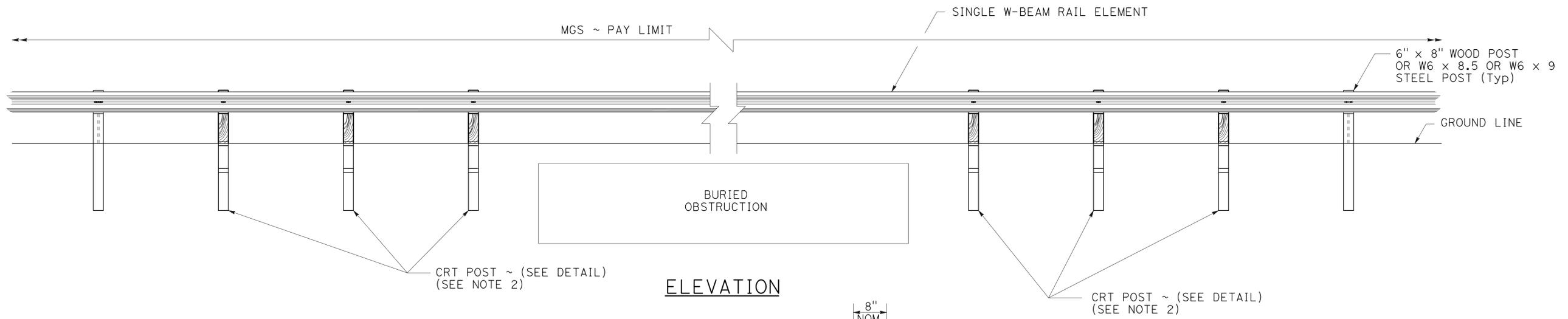
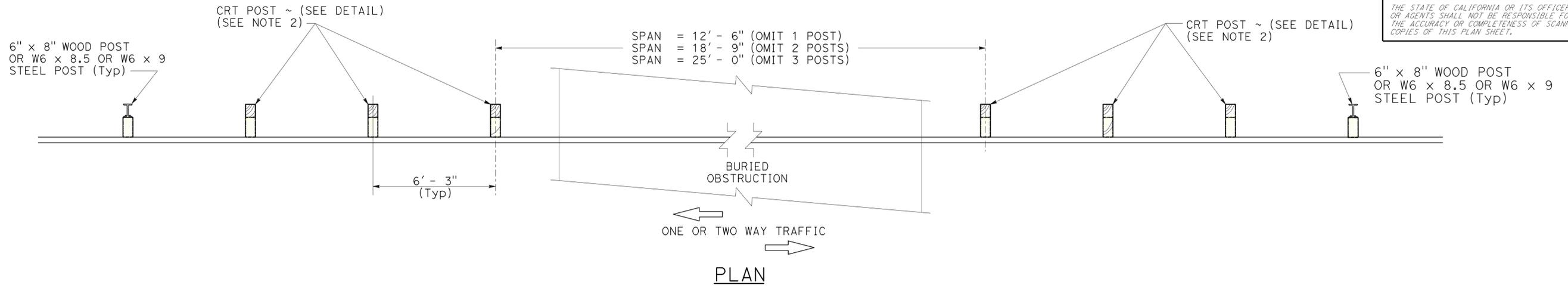
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	ORA	5	6.8, 22.8	4	61

06-21-16
 REGISTERED CIVIL ENGINEER DATE

06-27-16
 PLANS APPROVAL DATE

RAJU VORA
 No. C37361
 Exp. 6/30/18
 CIVIL

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MIDWEST GUARDRAIL SYSTEM DETAILS (CONSTRUCTION DETAILS)

NO SCALE

C-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.8, 22.8	5	61

Thuan N. Nguyen 06-21-16
 REGISTERED CIVIL ENGINEER DATE
 06-27-16
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 No. C67565
 Exp. 06/30/17
 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.

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN NUMBER	SIGN CODE	No. OF SIGNS	PANEL SIZE (in x in)	WOOD POST		SIGN MESSAGE
				No. POST	POST SIZE (in x in)	
①	W20-1	3	36" x 36"	1	4 x 4	ROAD WORK AHEAD
②	G20-2	3	36" x 24"	1	4 x 4	END ROAD WORK
③	C47B(CA)	2	144" x 96"	2	4 x 6	CONSTRUCTION FUNDING IDENTIFICATION SIGN

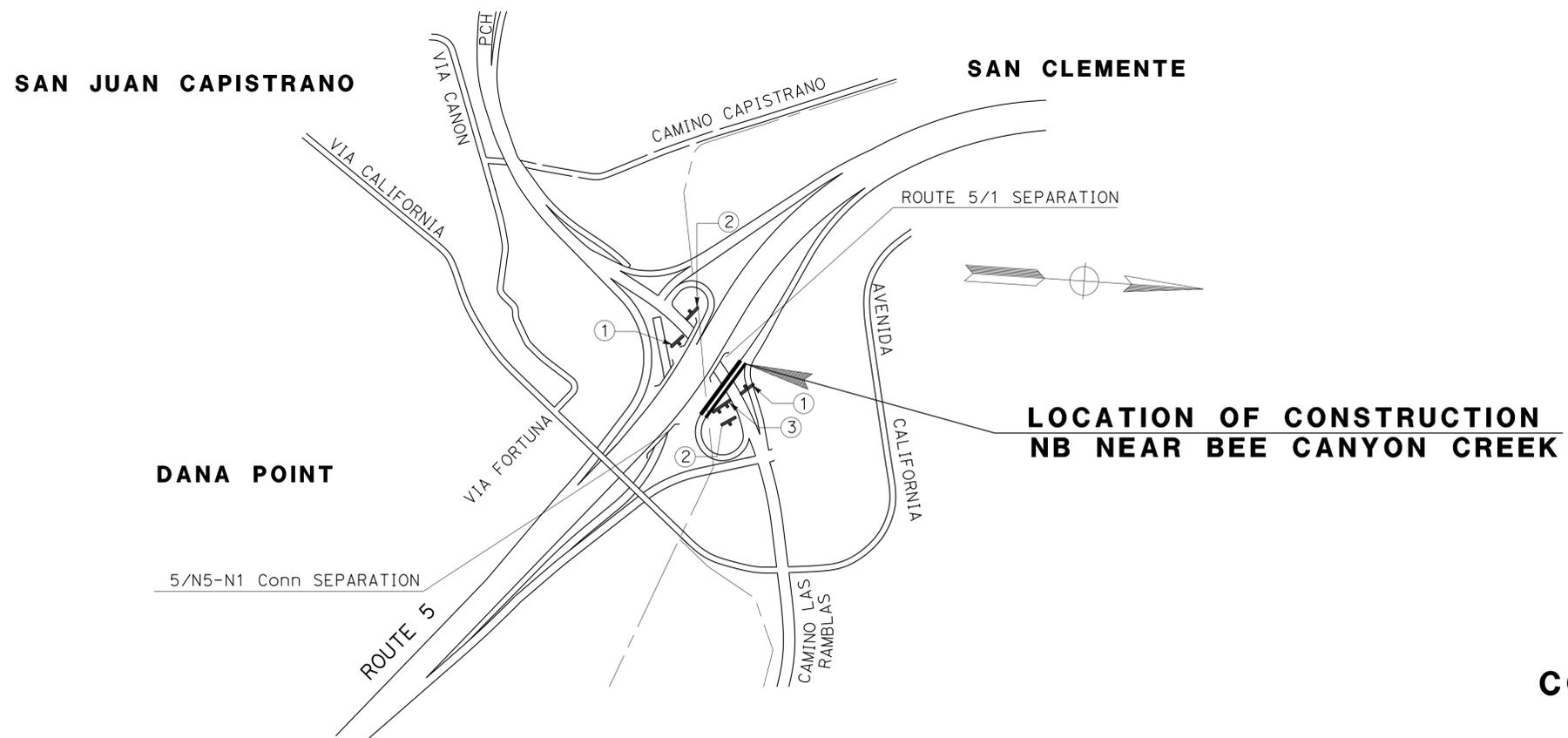
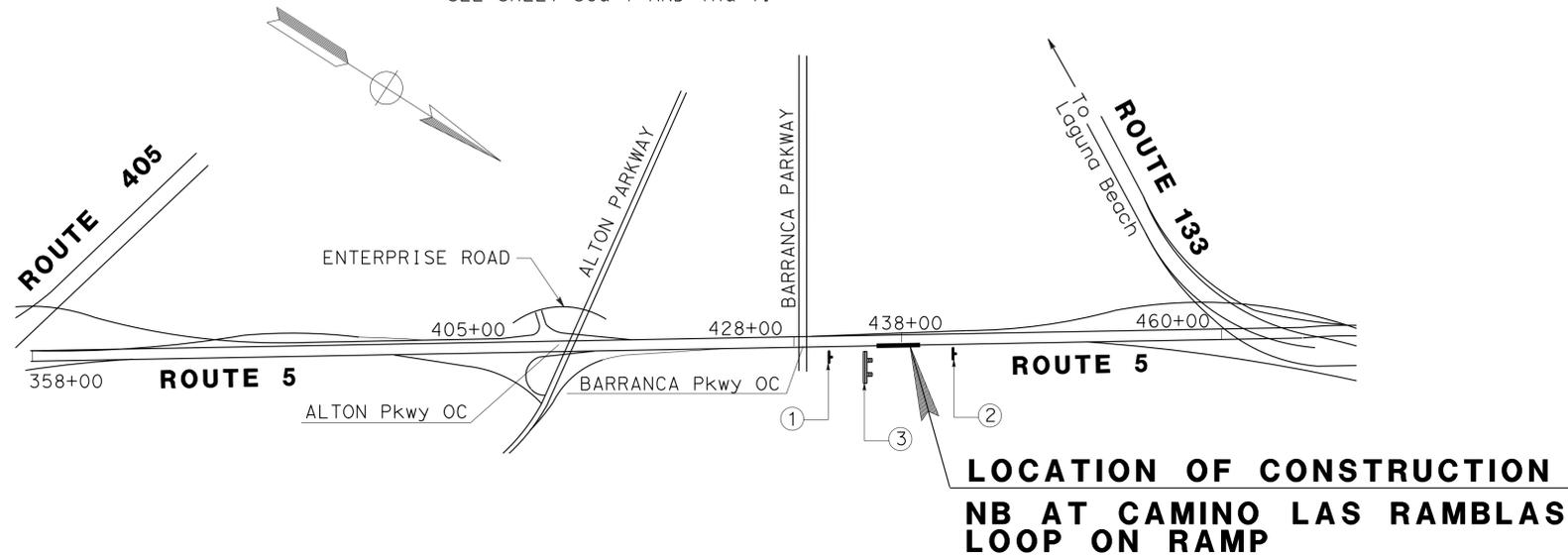
FOR ADDITIONAL QUANTITIES OF CONSTRUCTION AREA SIGNS, SEE SHEET SCQ-1 AND THQ-1.

NOTE:

SIGN LOCATIONS ARE APPROXIMATE, EXACT SIGN LOCATIONS TO BE DETERMINED BY THE ENGINEER.

LEGEND:

-  SIGN 1 POST
-  SIGN 2 POSTS
-  CONSTRUCTION AREA



CONSTRUCTION AREA SIGNS

NO SCALE

CS-1

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

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

NOTE:

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

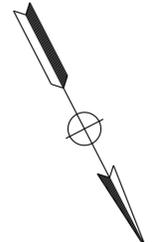
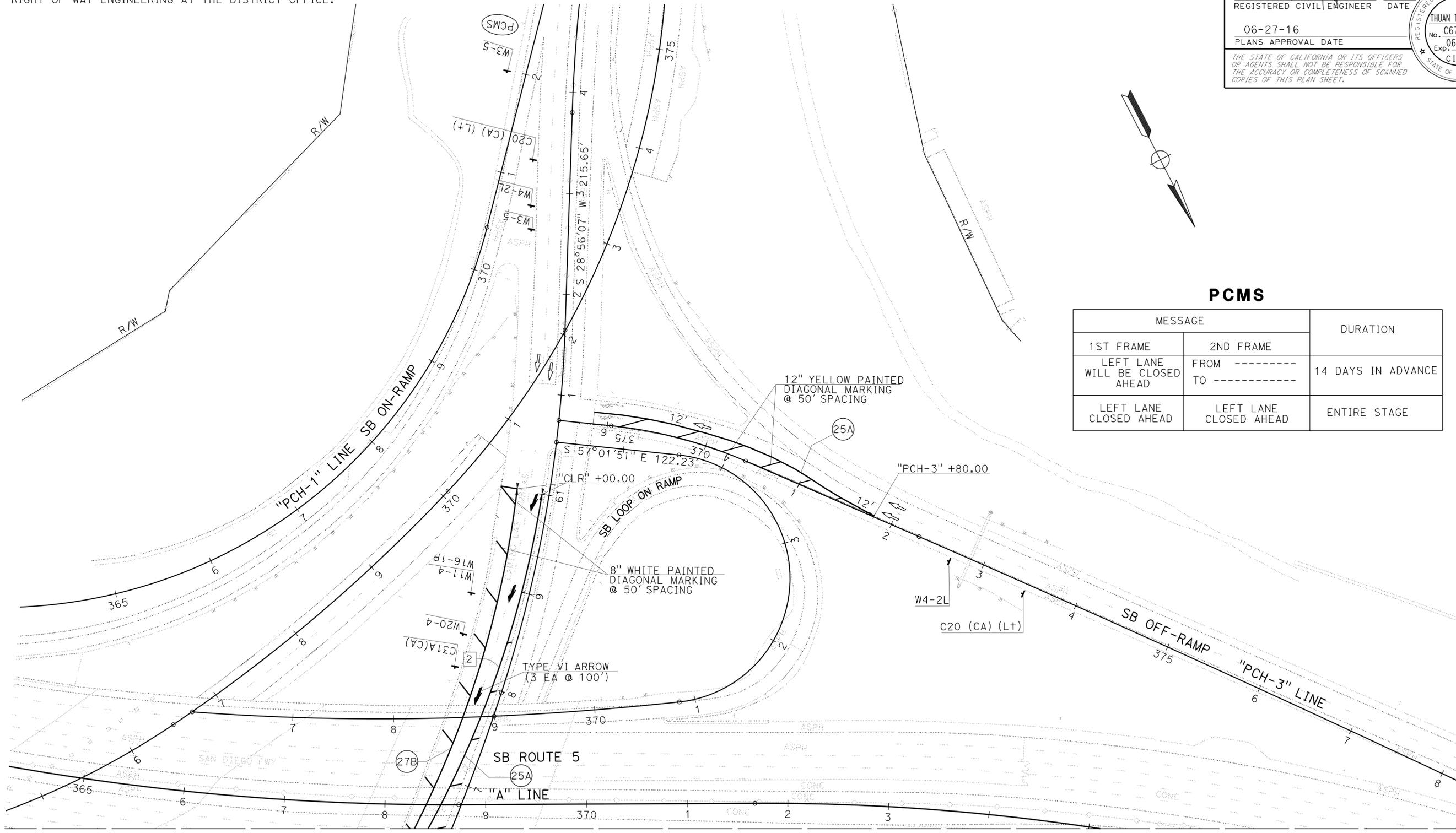
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.8, 22.8	7	61

Thuan T. Nguyen 06-21-16
 REGISTERED CIVIL ENGINEER DATE

06-27-16
 PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER
THUAN T. NGUYEN
 No. C67565
 Exp. 06/30/17
 CIVIL
 STATE OF CALIFORNIA



PCMS

MESSAGE		DURATION
1ST FRAME	2ND FRAME	14 DAYS IN ADVANCE
LEFT LANE WILL BE CLOSED AHEAD	FROM ----- TO -----	
LEFT LANE CLOSED AHEAD	LEFT LANE CLOSED AHEAD	ENTIRE STAGE

MATCH LINE SEE SHEET SC-1

STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN
STAGE 1
 SCALE: 1" = 50'
SC-2

APPROVED FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN
 FUNCTIONAL SUPERVISOR: ANDREW OSHRIN
 THUAN NGUYEN
 RAJU VORA
 REVISOR: THUAN NGUYEN
 DATE: 06-27-16
 DESIGNED BY: THUAN NGUYEN
 CHECKED BY: RAJU VORA

LAST REVISION DATE PLOTTED => 01-AUG-2016
 06-22-16 TIME PLOTTED => 15:27

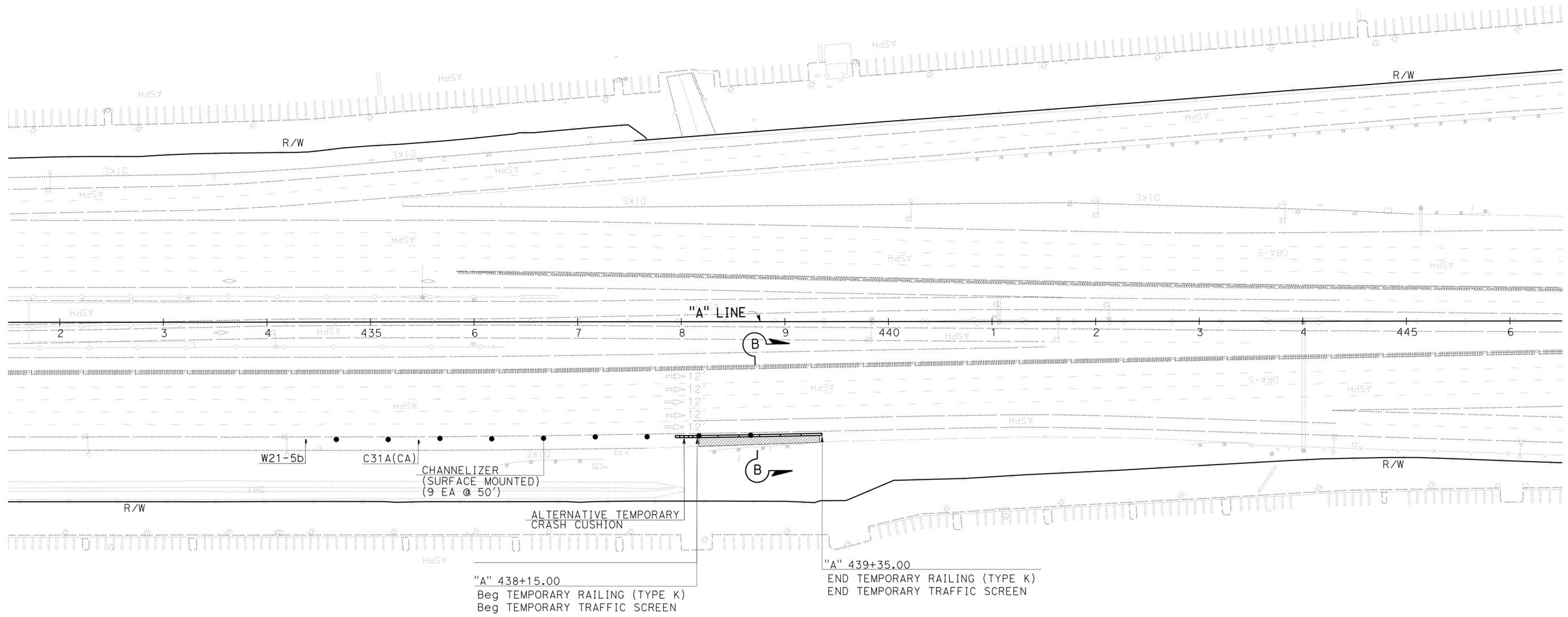
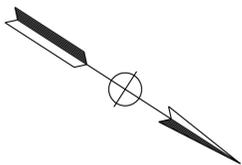
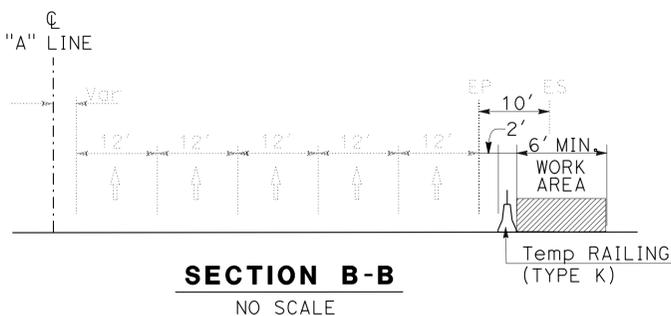
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	5	6.8, 22.8	8	61

Thuan T. Nguyen REGISTERED CIVIL ENGINEER No. C67565 Exp. 06/30/17 CIVIL	06-21-16 DATE 06-27-16 PLANS APPROVAL DATE
--	---

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NOTE:

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



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN
FUNCTIONAL SUPERVISOR	ANDREW OSHRIN
CALCULATED/DESIGNED BY	CHECKED BY
THUAN NGUYEN	RAJU VORA
REVISOR	DATE



**STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN
STAGE 2**

SCALE: 1" = 50'

SC-3

APPROVED FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY

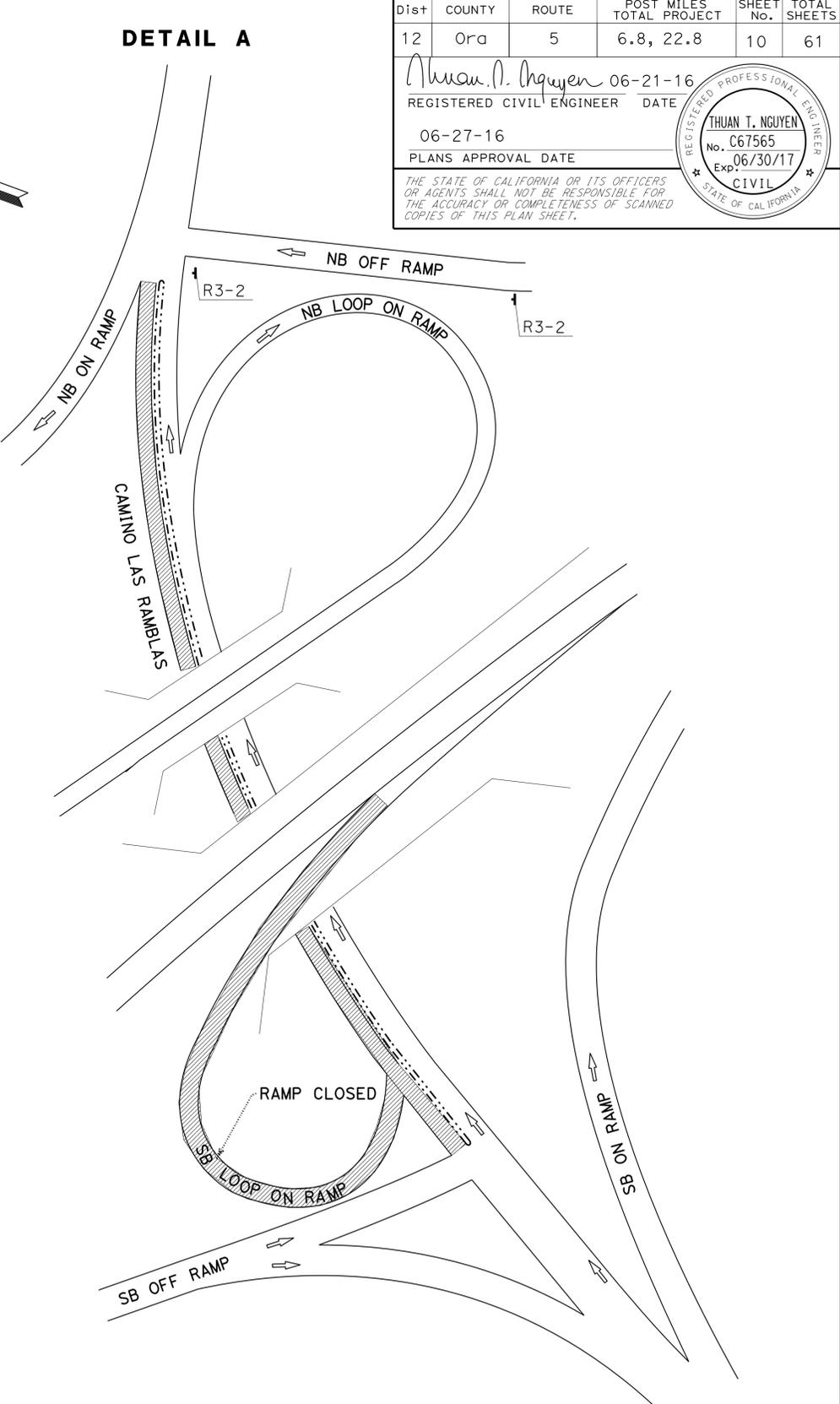
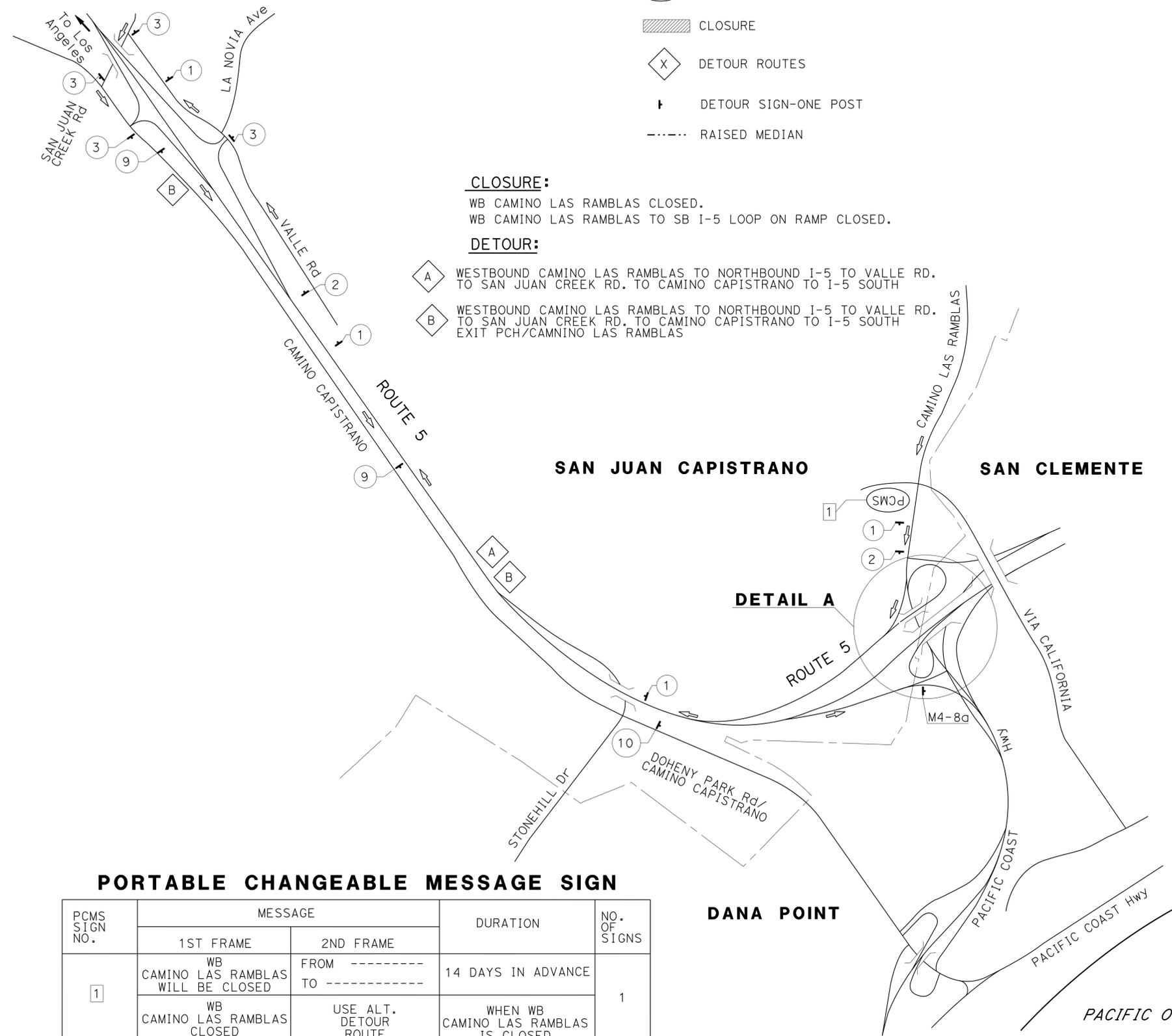
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DESIGN BRANCH D
 FUNCTIONAL SUPERVISOR: ANDREW OSHRIN
 THUAN NGUYEN RAJU VORA
 REVISIONS: [Grid with X's]

NOTES:
 1. SIGN LOCATIONS AND DISPLAY MESSAGES SHOWN ARE APPROXIMATE, EXACT (FINAL) LOCATIONS AND/OR FINAL SIGN MESSAGE/DISPLAY TO BE DETERMINED BY THE ENGINEER.
 2. THE EXACT PCMS LOCATION AND DISPLAY MESSAGE WILL BE DETERMINED BY THE ENGINEER

LEGEND:
 (XX) DETOUR SIGN No.
 [X] PCMS No.
 ⇨ DETOUR DIRECTION OF TRAFFIC
 (PCMS) PORTABLE CHANGEABLE MESSAGE SIGN
 [Hatched] CLOSURE
 (X) DETOUR ROUTES
 † DETOUR SIGN-ONE POST
 - - - - - RAISED MEDIAN

CLOSURE:
 WB CAMINO LAS RAMBLAS CLOSED.
 WB CAMINO LAS RAMBLAS TO SB I-5 LOOP ON RAMP CLOSED.

DETOUR:
 (A) WESTBOUND CAMINO LAS RAMBLAS TO NORTHBOUND I-5 TO VALLE RD. TO SAN JUAN CREEK RD. TO CAMINO CAPISTRANO TO I-5 SOUTH
 (B) WESTBOUND CAMINO LAS RAMBLAS TO NORTHBOUND I-5 TO VALLE RD. TO SAN JUAN CREEK RD. TO CAMINO CAPISTRANO TO I-5 SOUTH EXIT PCH/CAMINO LAS RAMBLAS



PORTABLE CHANGEABLE MESSAGE SIGN

PCMS SIGN NO.	MESSAGE		DURATION	NO. OF SIGNS
	1ST FRAME	2ND FRAME		
1	WB CAMINO LAS RAMBLAS WILL BE CLOSED	FROM ----- TO -----	14 DAYS IN ADVANCE	1
	WB CAMINO LAS RAMBLAS CLOSED	USE ALT. DETOUR ROUTE		

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.8, 22.8	10	61

Thuan T. Nguyen 06-21-16
 REGISTERED CIVIL ENGINEER DATE
 06-27-16
 PLANS APPROVAL DATE

THUAN T. NGUYEN
 No. C67565
 Exp. 06/30/17
 CIVIL
 STATE OF CALIFORNIA

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TRAFFIC HANDLING PLAN (DETOUR) TH-1
 NO SCALE

APPROVED FOR TRAFFIC HANDLING (DETOUR) WORK ONLY

LAST REVISION DATE PLOTTED => 01-AUG-2016 06-22-16 TIME PLOTTED => 15:27

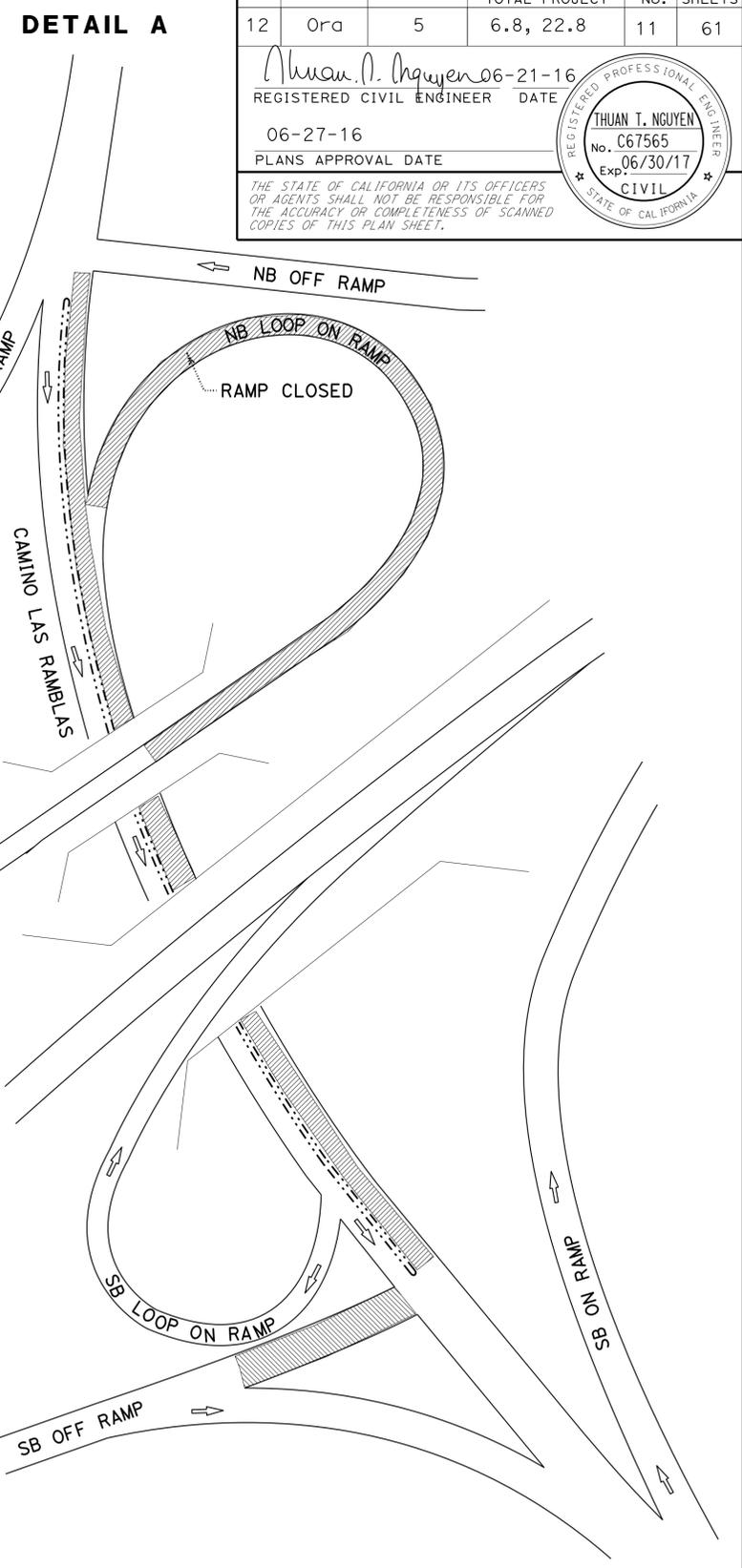
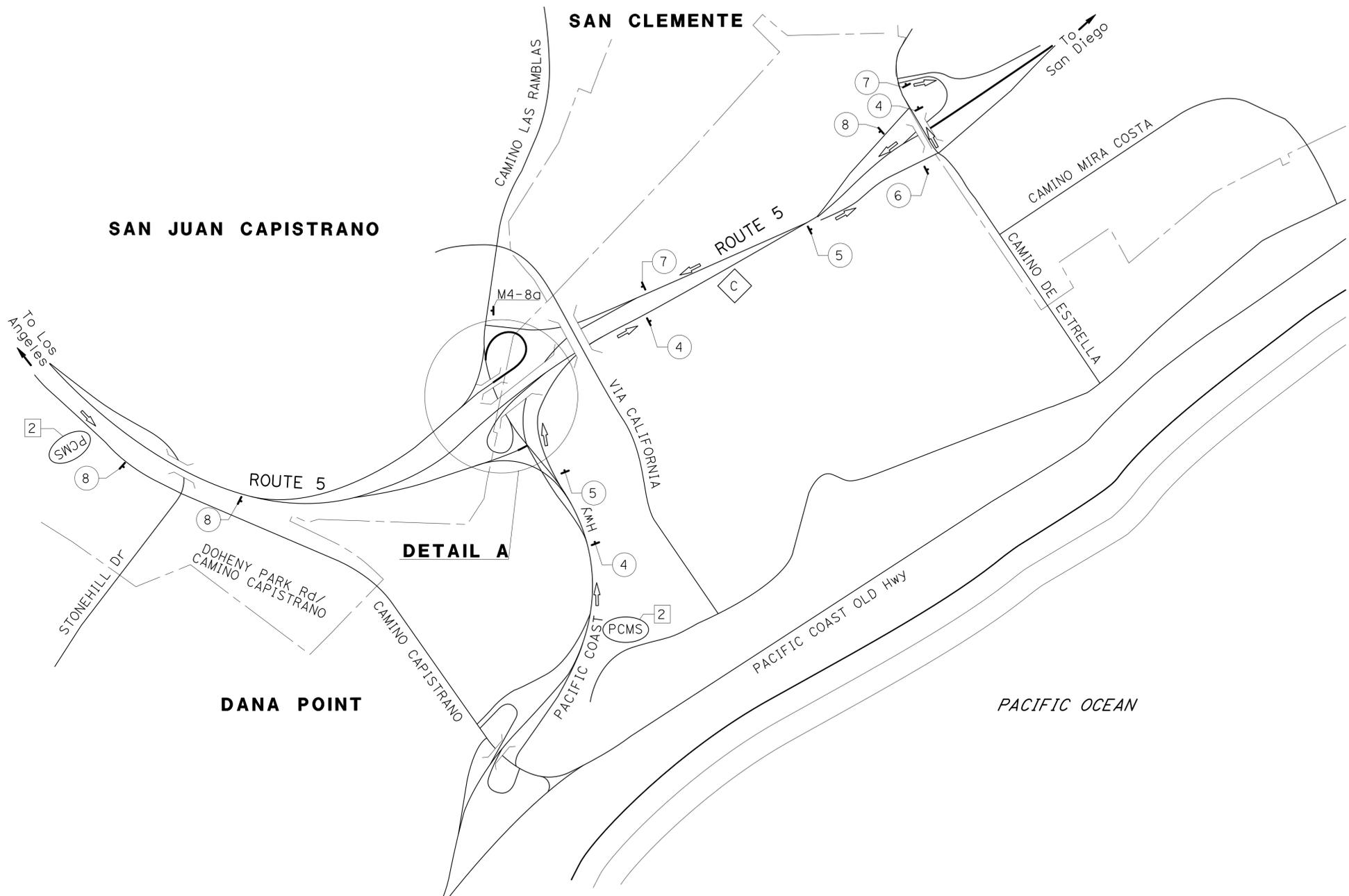
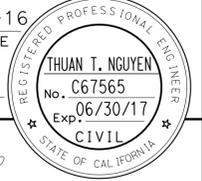
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DESIGN BRANCH D
 FUNCTIONAL SUPERVISOR: ANDREW OSHRIN
 CALCULATED/DESIGNED BY: CHECKED BY:
 THUAN NGUYEN RAJU VORA
 REVISED BY: DATE REVISED:

CLOSURE:
 EB CAMINO LAS RAMBLAS CLOSED.
 NB I-5 LOOP ON-RAMP CLOSED
 SB I-5 OFF-RAMP TO EB CAMINO LAS RAMBLAS CLOSED

DETOUR:
 C EASTBOUND CAMINO LAS RAMBLAS TO NORTHBOUND I-5 TO CAMINO DE ESTRELLA TO SB I-5 LOOP ON RAMP EXIT TO CAMINO LAS RAMBLAS.



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Orca	5	6.8, 22.8	11	61
Thuan T. Nguyen 06-21-16 REGISTERED CIVIL ENGINEER DATE				06-27-16 PLANS APPROVAL DATE	
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PORTABLE CHANGEABLE MESSAGE SIGN

PCMS SIGN NO.	MESSAGE		DURATION	NO. OF SIGNS
	1ST FRAME	2ND FRAME		
2	EB CAMINO LAS RAMBLAS WILL BE CLOSED	FROM ----- TO -----	14 DAYS IN ADVANCE	2
	EB CAMINO LAS RAMBLAS CLOSED	USE ALT. DETOUR ROUTE	WHEN EB CAMINO LAS RAMBLAS IS CLOSED	

APPROVED FOR TRAFFIC HANDLING (DETOUR) WORK ONLY

TRAFFIC HANDLING PLAN (DETOUR)
 NO SCALE **TH-2**

LAST REVISION | DATE PLOTTED => 01-AUG-2016 06-22-16 | TIME PLOTTED => 15:27

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Orca	5	6.8, 22.8	12	61

Thuan T. Nguyen 06-21-16
 REGISTERED CIVIL ENGINEER DATE
 06-27-16
 PLANS APPROVAL DATE

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

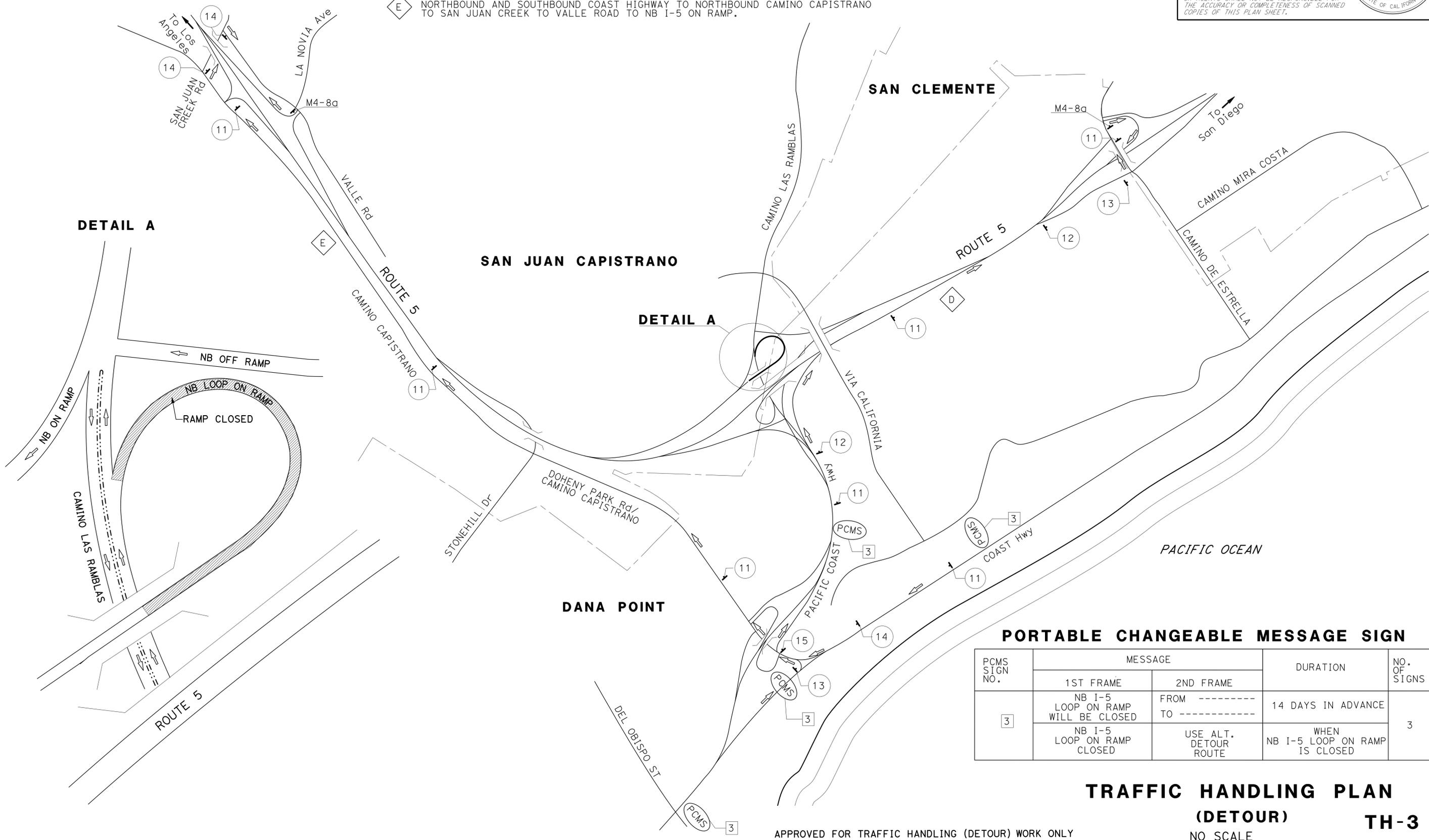
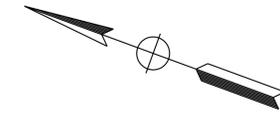
REGISTERED PROFESSIONAL ENGINEER
 THUAN T. NGUYEN
 No. C67565
 Exp. 06/30/17
 CIVIL
 STATE OF CALIFORNIA

CLOSURE:

NB I-5 LOOP ON-RAMP CLOSED

DETOUR:

- ◇ NORTHBOUND AND SOUTHBOUND COAST HIGHWAY TO SOUTHBOUND PACIFIC COAST HIGHWAY TO SB I-5 TO CAMINO DE ESTRELLA TO NB I-5 LOOP ON RAMP.
- ◇ NORTHBOUND AND SOUTHBOUND COAST HIGHWAY TO NORTHBOUND CAMINO CAPISTRANO TO SAN JUAN CREEK TO VALLE ROAD TO NB I-5 ON RAMP.



PORTABLE CHANGEABLE MESSAGE SIGN

PCMS SIGN NO.	MESSAGE		DURATION	NO. OF SIGNS
	1ST FRAME	2ND FRAME		
3	NB I-5 LOOP ON RAMP WILL BE CLOSED	FROM ----- TO -----	14 DAYS IN ADVANCE	3
	NB I-5 LOOP ON RAMP CLOSED	USE ALT. DETOUR ROUTE	WHEN NB I-5 LOOP ON RAMP IS CLOSED	

TRAFFIC HANDLING PLAN (DETOUR) TH-3

APPROVED FOR TRAFFIC HANDLING (DETOUR) WORK ONLY

NO SCALE

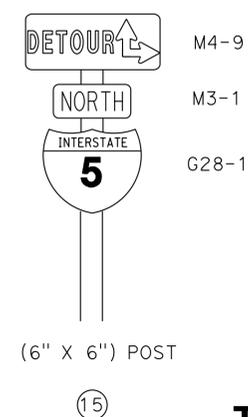
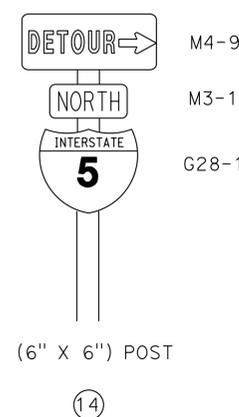
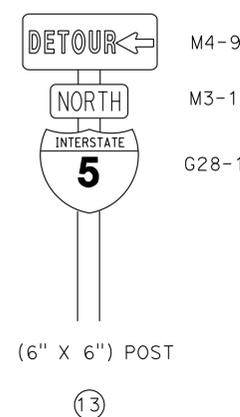
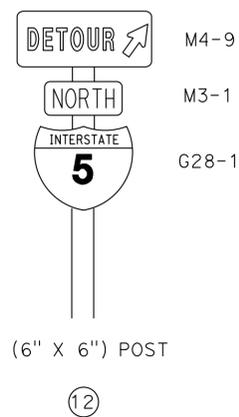
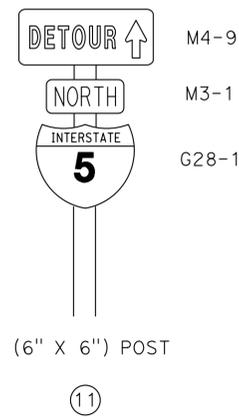
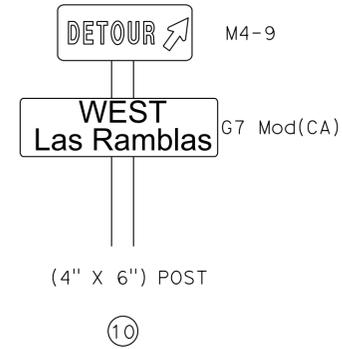
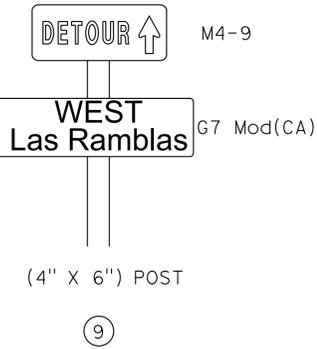
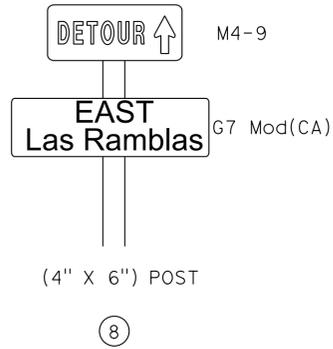
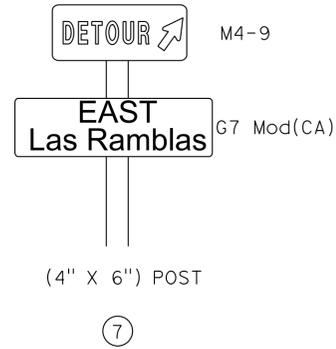
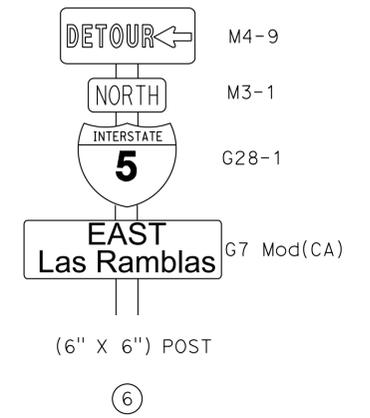
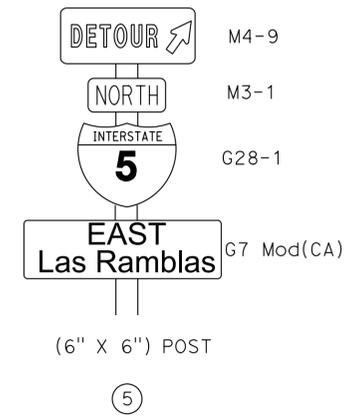
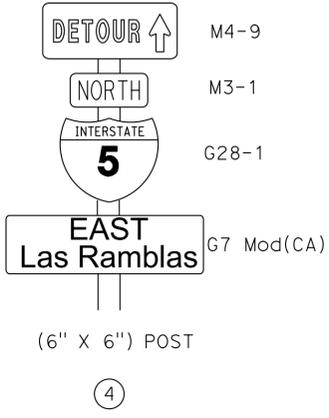
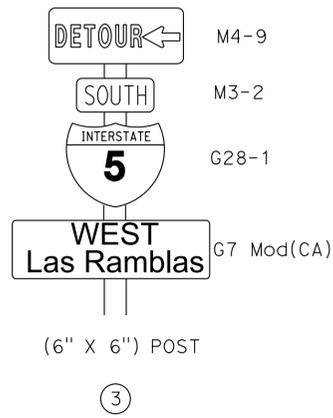
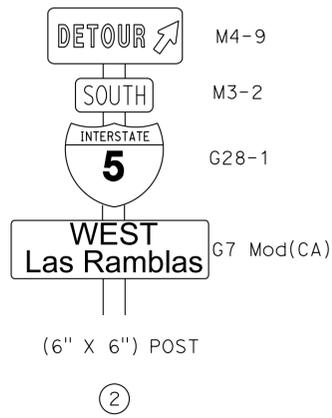
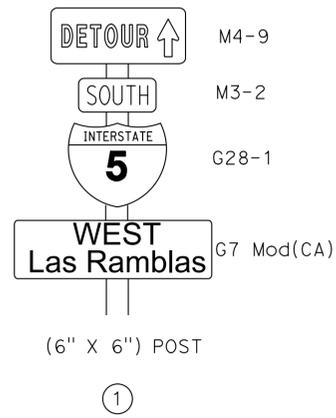
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 DESIGN BRANCH D
 FUNCTIONAL SUPERVISOR: ANDREW OSHRIN
 CALCULATED/DESIGNED BY: THUAN NGUYEN
 CHECKED BY: RAJU VORA
 REVISED BY: THUAN NGUYEN
 DATE REVISED:

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.8, 22.8	13	61

Thuan T. Nguyen 06-21-16
 REGISTERED CIVIL ENGINEER DATE
 06-27-16
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 No. C67565
 Exp. 06/30/17
 CIVIL
 STATE OF CALIFORNIA

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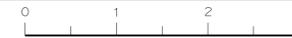
TRAFFIC HANDLING PLAN (DETOUR SIGNS)

NO SCALE

TH-4

APPROVED FOR DETOUR AND TRAFFIC HANDLING WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 Caltrans®
 DESIGN
 FUNCTIONAL SUPERVISOR ANDREW OSHRIN
 THUAN NGUYEN RAJU VORA
 REVISIONS BY DATE
 CALCULATED/DESIGNED BY CHECKED BY
 x
 x
 x
 x
 x



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.8, 22.8	14	61

06-23-16
 REGISTERED CIVIL ENGINEER DATE

06-27-16
 PLANS APPROVAL DATE

THUAN T. NGUYEN
 No. C67565
 Exp. 06/30/17
 CIVIL

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CONSTRUCTION AREA SIGN (DETOUR)

SHEET No.	SIGN	CODE	PANEL LABEL	No. OF POST AND SIZE	No. OF SIGNS	REMARKS
TH-1	①	M4-9	DETOUR ↑	1 - 6" x 6"	4	
		M3-2	SOUTH			
		G28-1	I-5			
		G7 Mod(CA)	WEST LAS RAMBLAS			
	②	M4-9	DETOUR ↗	1 - 6" x 6"	2	
		M3-2	SOUTH			
		G28-1	I-5			
	③	M4-9	DETOUR ←	1 - 6" x 6"	4	
		M3-2	SOUTH			
		G28-1	I-5			
⑨	M4-9	DETOUR ↑	1 - 4" x 6"	2		
	G7 Mod(CA)	WEST LAS RAMBLAS				
⑩	M4-9	DETOUR ↗	1 - 4" x 6"	1		
	G7 Mod(CA)	WEST LAS RAMBLAS				
TH-2	④	M4-9	DETOUR ↑	1 - 6" x 6"	3	
		M3-1	NORTH			
		G28-1	I-5			
		G7 Mod(CA)	EAST LAS RAMBLAS			
	⑤	M4-9	DETOUR ↗	1 - 6" x 6"	2	
		M3-1	NORTH			
		G28-1	I-5			
		G7 Mod(CA)	EAST LAS RAMBLAS			
	⑥	M4-9	DETOUR ←	1 - 6" x 6"	1	
		M3-1	NORTH			
		G28-1	I-5			
		G7 Mod(CA)	EAST LAS RAMBLAS			
⑦	M4-9	DETOUR ↗	1 - 4" x 6"	2		
	G7 Mod(CA)	EAST LAS RAMBLAS				
⑧	M4-9	DETOUR ↑	1 - 4" x 6"	3		
	G7 Mod(CA)	EAST LAS RAMBLAS				

CONSTRUCTION AREA SIGN (DETOUR) CONT

SHEET No.	SIGN	CODE	PANEL LABEL	No. OF POST AND SIZE	No. OF SIGNS	REMARKS
TH-3	⑪	M4-9	DETOUR ↑	1 - 6" x 6"	7	
		M3-1	NORTH			
		G28-1	I-5			
	⑫	M4-9	DETOUR ↗	1 - 6" x 6"	2	
		M3-1	NORTH			
		G28-1	I-5			
	⑬	M4-9	DETOUR ←	1 - 6" x 6"	2	
		M3-1	NORTH			
		G28-1	I-5			
	⑭	M4-9	DETOUR →	1 - 6" x 6"	3	
		M3-1	NORTH			
		G28-1	I-5			
	⑮	M4-9	DETOUR ↗	1 - 6" x 6"	1	
		M3-1	NORTH			
		G28-1	I-5			

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

STATIONARY MOUNTED TRAFFIC HANDLING (DETOUR) SIGNS

SIGN CODE	SIGN MESSAGE	PANEL SIZE (in x in)	WOOD POST		SHEET TH-1 EACH	SHEET TH-2 EACH	SHEET TH-3 EACH
			No. POST	POST SIZE (in x in)			
R3-2	NO LEFT TURN	48 x 48	1	4 x 6	2		
M4-8a	END DETOUR	24 x 18	1	4 x 6	1	1	2

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

PORTABLE CHANGEABLE MESSAGE SIGN

SHEET No.	PCMS 1	PCMS 2	PCMS 3
	EA	EA	EA
TH-1	1		
TH-2		2	
TH-3			3

TRAFFIC HANDLING QUANTITIES THQ-1

LAST REVISION DATE PLOTTED => 01-AUG-2016 06-22-16 TIME PLOTTED => 15:27

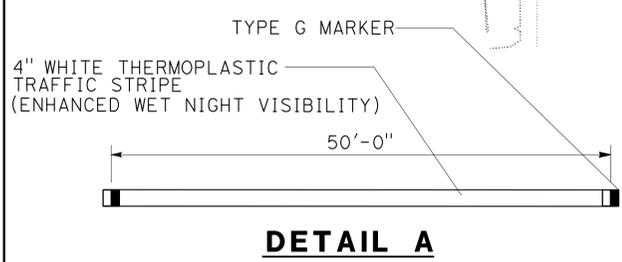
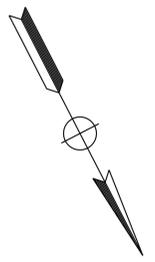
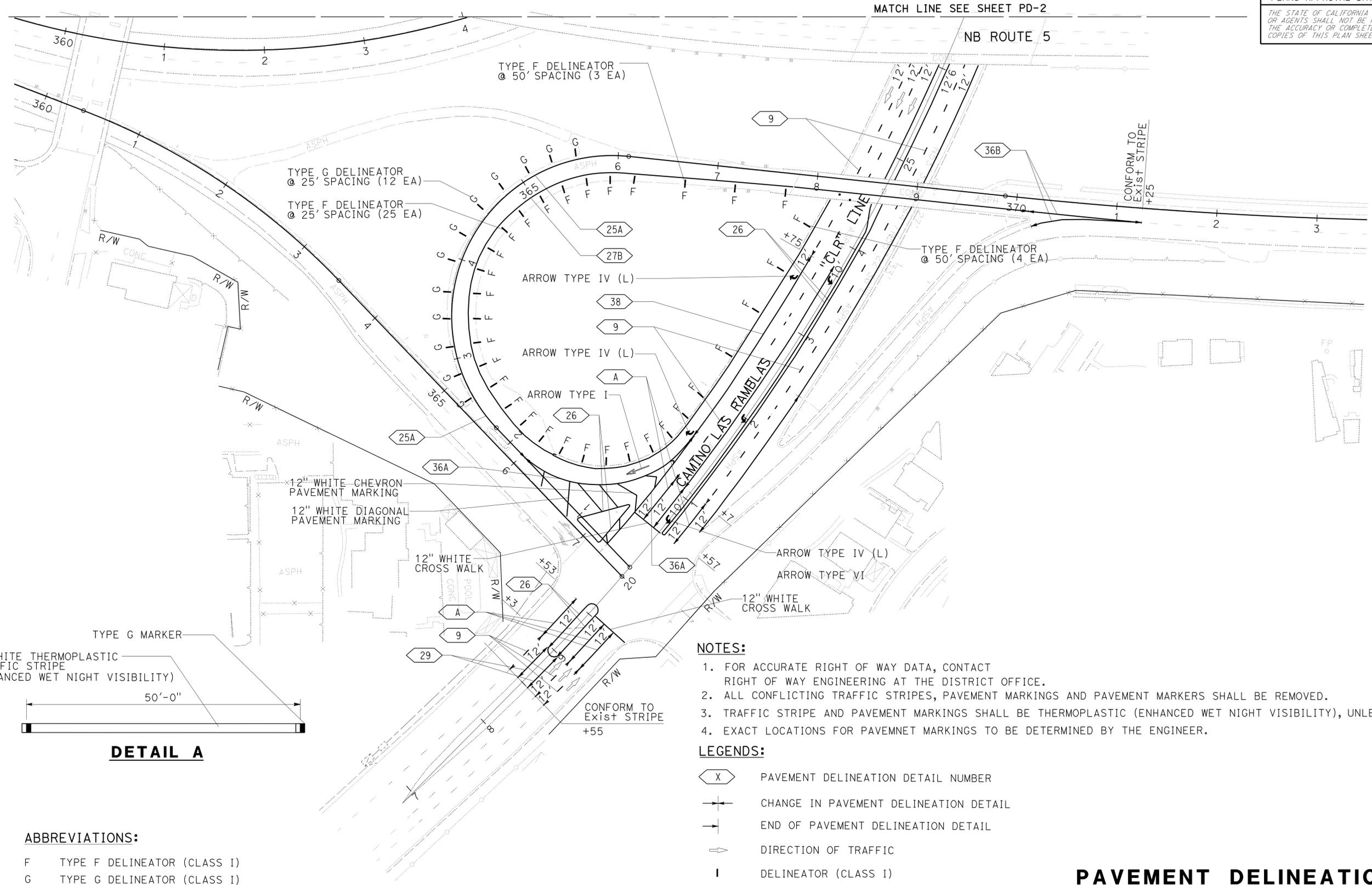
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.8, 22.8	15	61

K. Mazhar 06-23-16
 REGISTERED CIVIL ENGINEER DATE
 06-27-16
 PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER
 K. MAZHAR
 No. C48436
 Exp. 3-30-18
 CIVIL
 STATE OF CALIFORNIA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN
 FUNCTIONAL SUPERVISOR: KAMRAN MAZHAR
 CALCULATED/DESIGNED BY: CHECKED BY:
 RICHARD DANG KAMRAN MAZHAR
 REVISED BY: DATE REVISED:



- NOTES:**
- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
 - ALL CONFLICTING TRAFFIC STRIPES, PAVEMENT MARKINGS AND PAVEMENT MARKERS SHALL BE REMOVED.
 - TRAFFIC STRIPE AND PAVEMENT MARKINGS SHALL BE THERMOPLASTIC (ENHANCED WET NIGHT VISIBILITY), UNLESS OTHERWISE NOTED.
 - EXACT LOCATIONS FOR PAVEMENT MARKINGS TO BE DETERMINED BY THE ENGINEER.
- LEGENDS:**
- PAVEMENT DELINEATION DETAIL NUMBER
 - CHANGE IN PAVEMENT DELINEATION DETAIL
 - END OF PAVEMENT DELINEATION DETAIL
 - DIRECTION OF TRAFFIC
 - DELINEATOR (CLASS I)

ABBREVIATIONS:

F TYPE F DELINEATOR (CLASS I)

G TYPE G DELINEATOR (CLASS I)

PAVEMENT DELINEATION PLAN
 SCALE 1"=50'

APPROVED FOR PAVEMENT DELINEATION ONLY

PD-1

LAST REVISION DATE PLOTTED => 01-AUG-2016
 06-13-16 TIME PLOTTED => 15:27

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.8, 22.8	16	61

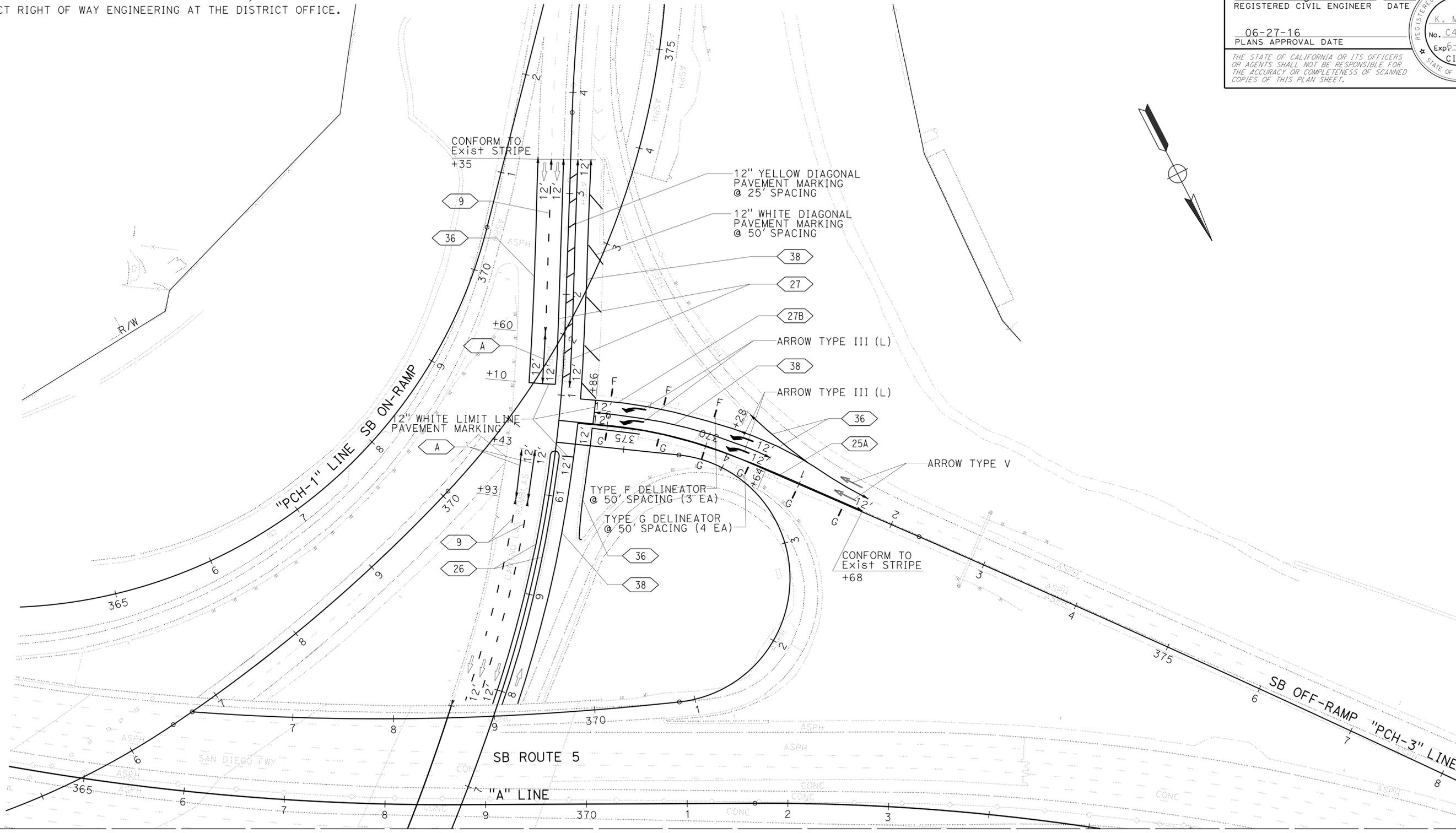
K. Mazhar 06-23-16
 REGISTERED CIVIL ENGINEER DATE

06-27-16
 PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
 K. MAZHAR
 No. C48436
 Exp. 30-18
 CIVIL
 STATE OF CALIFORNIA

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



MATCH LINE SEE SHEET PD-1

PAVEMENT DELINEATION PLAN
 SCALE 1"=50'

APPROVED FOR PAVEMENT DELINEATION ONLY

PD-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN
Caltrans	
FUNCTIONAL SUPERVISOR	KAMRAN MAZHAR
CALCULATED/DESIGNED BY	CHECKED BY
RICHARD DANG	KAMRAN MAZHAR
REVISED BY	DATE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.8, 22.8	17	61

K. Mazhar 06-23-16
REGISTERED CIVIL ENGINEER DATE

06-27-16
PLANS APPROVAL DATE

K. MAZHAR
No. C48436
Exp. 30-18
CIVIL

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PAVEMENT DELINEATION QUANTITIES

SHEET No.	LOCATION-DESCRIPTION	THERMOPLASTIC TRAFFIC STRIPE (ENHANCED WET NIGHT VISIBILITY)									THERMOPLASTIC CROSSWALK AND PAVEMENT MARKING (ENHANCED WET NIGHT VISIBILITY)				PAVEMENT MARKER			DELINEATOR CLASS I		REMOVE				
		4"									8"				RETRO-REFLECTIVE			TYPE F	TYPE G	THERMOPLASTIC TRAFFIC STRIPE (WHITE)	YELLOW THERMOPLASTIC TRAFFIC STRIPE (HAZARDOUS WASTE)	THERMOPLASTIC PAVEMENT MARKING	PAVEMENT MARKER	
		DETAIL 26 SOLID WHITE (N)	DETAIL 9 BROKEN WHITE (17-7)	DETAIL A SOLID WHITE	DETAIL 27B SOLID WHITE	DETAIL 27 SOLID YELLOW	DETAIL 29 SOLID YELLOW	DETAIL 25A SOLID YELLOW	DETAIL 36/36B SOLID WHITE	DETAIL 38 SOLID WHITE	ARROW	DIAGONAL / CHEVRON	CROSSWALK & LIMIT LINE	WORD	TYPE D	TYPE G	TYPE H							
LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	SQFT	SQFT	SQFT	SQFT	EA	EA	EA	EA	EA	EA	LF	LF	SQFT	EA	
PD-1	CAMINO LAS RAMBLAS NB ON-RAMP	130			1227			946	328		84	220				15	45		32	12	1555	946	304	60
	CAMINO LAS RAMBLAS "R" LINE	1235	1986	300			840		168	214	126		80		36	76	24				2668	840	206	136
PD-2	CAMINO LAS RAMBLAS SB OFF-RAMP "PCH-3" LINE				142			282		178	192		24			11	14		3	5	320	282	216	25
	CAMINO LAS RAMBLAS "R" LINE	782	850	150		442				221		190				16	31				1221	442	190	47
SUB-TOTAL		2147	2836	450	1369	442	840	1228	717	392	402	410	104		36	118	114	35	17	5764	2510	916	268	
TOTAL			2836		4329					1109		916			268			52		5764	2510	916	268	

(N) - NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY
FOR ADDITIONAL QUANTITIES OF PAVEMENT MAKER AND REMOVE OF PAVEMENT MARKER SEE SCQ-1

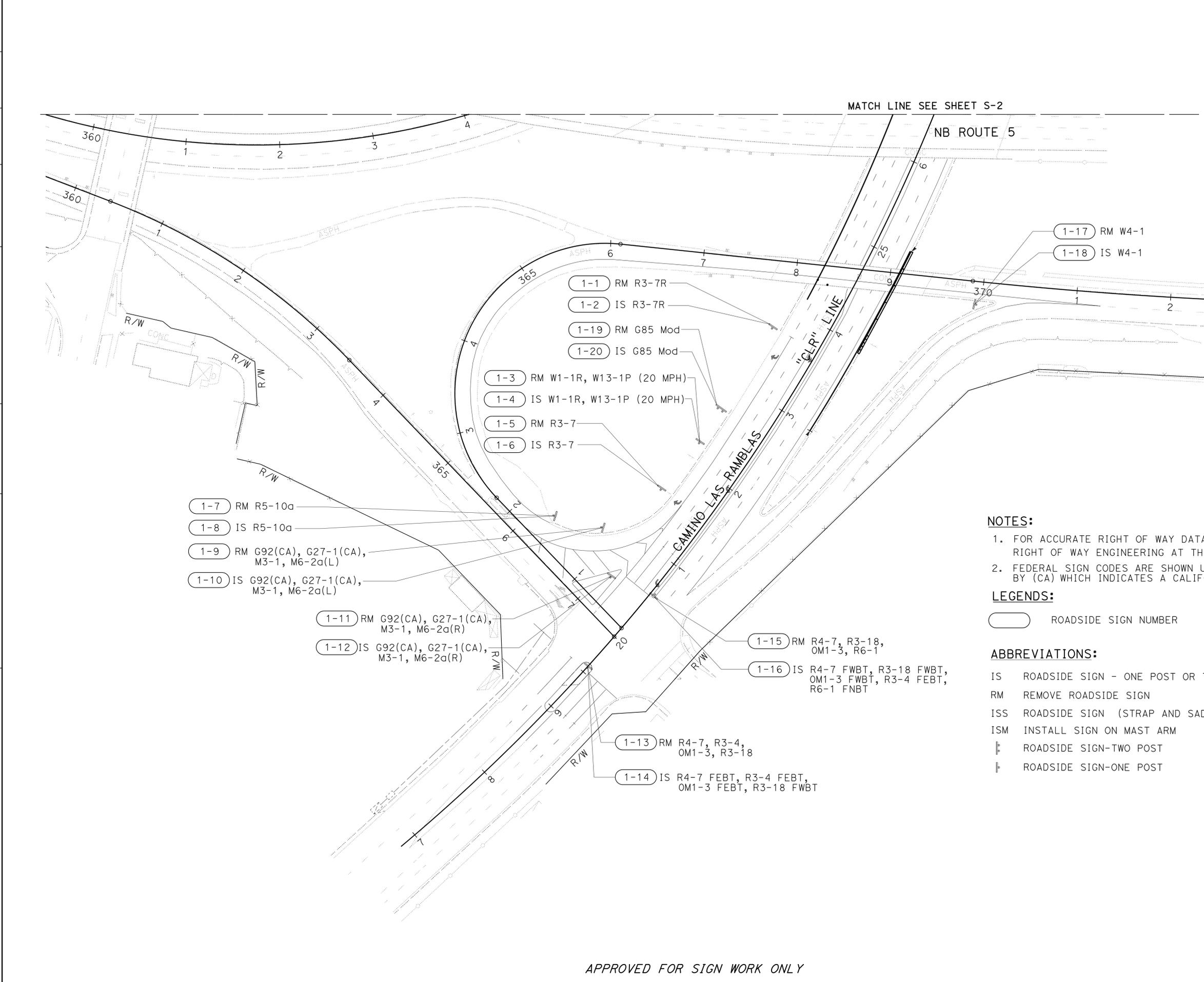
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN
FUNCTIONAL SUPERVISOR: KAMRAN MAZHAR
CALCULATED/DESIGNED BY: RICHARD DANG
CHECKED BY: KAMRAN MAZHAR
REVISED BY: RICHARD DANG
DATE REVISED: []

PAVEMENT DELINEATION QUANTITIES

NO SCALE

PDQ-1

LAST REVISION DATE PLOTTED => 01-AUG-2016
06-22-16 TIME PLOTTED => 15:27



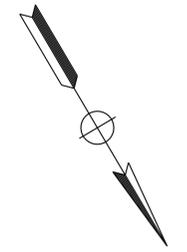
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.8, 22.8	18	61

K. Mazhar 06-23-16
 REGISTERED CIVIL ENGINEER DATE

06-27-16
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REGISTERED PROFESSIONAL ENGINEER
K. MAZHAR
 No. C48436
 Exp. 3-30-18
 CIVIL
 STATE OF CALIFORNIA



- 1-1 RM R3-7R
- 1-2 IS R3-7R
- 1-19 RM G85 Mod
- 1-20 IS G85 Mod
- 1-3 RM W1-1R, W13-1P (20 MPH)
- 1-4 IS W1-1R, W13-1P (20 MPH)
- 1-5 RM R3-7
- 1-6 IS R3-7
- 1-7 RM R5-10a
- 1-8 IS R5-10a
- 1-9 RM G92(CA), G27-1(CA), M3-1, M6-2a(L)
- 1-10 IS G92(CA), G27-1(CA), M3-1, M6-2a(L)
- 1-11 RM G92(CA), G27-1(CA), M3-1, M6-2a(R)
- 1-12 IS G92(CA), G27-1(CA), M3-1, M6-2a(R)
- 1-13 RM R4-7, R3-4, OM1-3, R3-18
- 1-14 IS R4-7 FEBT, R3-4 FEBT, OM1-3 FEBT, R3-18 FWBT
- 1-15 RM R4-7, R3-18, OM1-3, R6-1
- 1-16 IS R4-7 FWBT, R3-18 FWBT, OM1-3 FWBT, R3-4 FEBT, R6-1 FNBT
- 1-17 RM W4-1
- 1-18 IS W4-1

NOTES:

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- FEDERAL SIGN CODES ARE SHOWN UNLESS DESIGNATED BY (CA) WHICH INDICATES A CALIFORNIA CODE.

LEGENDS:

○ ROADSIDE SIGN NUMBER

ABBREVIATIONS:

- IS ROADSIDE SIGN - ONE POST OR TWO POSTS
- RM REMOVE ROADSIDE SIGN
- ISS ROADSIDE SIGN (STRAP AND SADDLE BRACKET METHOD)
- ISM INSTALL SIGN ON MAST ARM
- ⌋ ROADSIDE SIGN-TWO POST
- ⌋ ROADSIDE SIGN-ONE POST

APPROVED FOR SIGN WORK ONLY

SIGN PLAN
 SCALE 1"=50'

S-1

LAST REVISION DATE PLOTTED => 01-AUG-2016 06-22-16 TIME PLOTTED => 15:27

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN

FUNCTIONAL SUPERVISOR: KAMRAN MAZHAR
 CALCULATED/DESIGNED BY: RICHARD DANG
 CHECKED BY: KAMRAN MAZHAR
 REVISED BY: RICHARD DANG
 DATE REVISED: KAMRAN MAZHAR

NOTE:

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

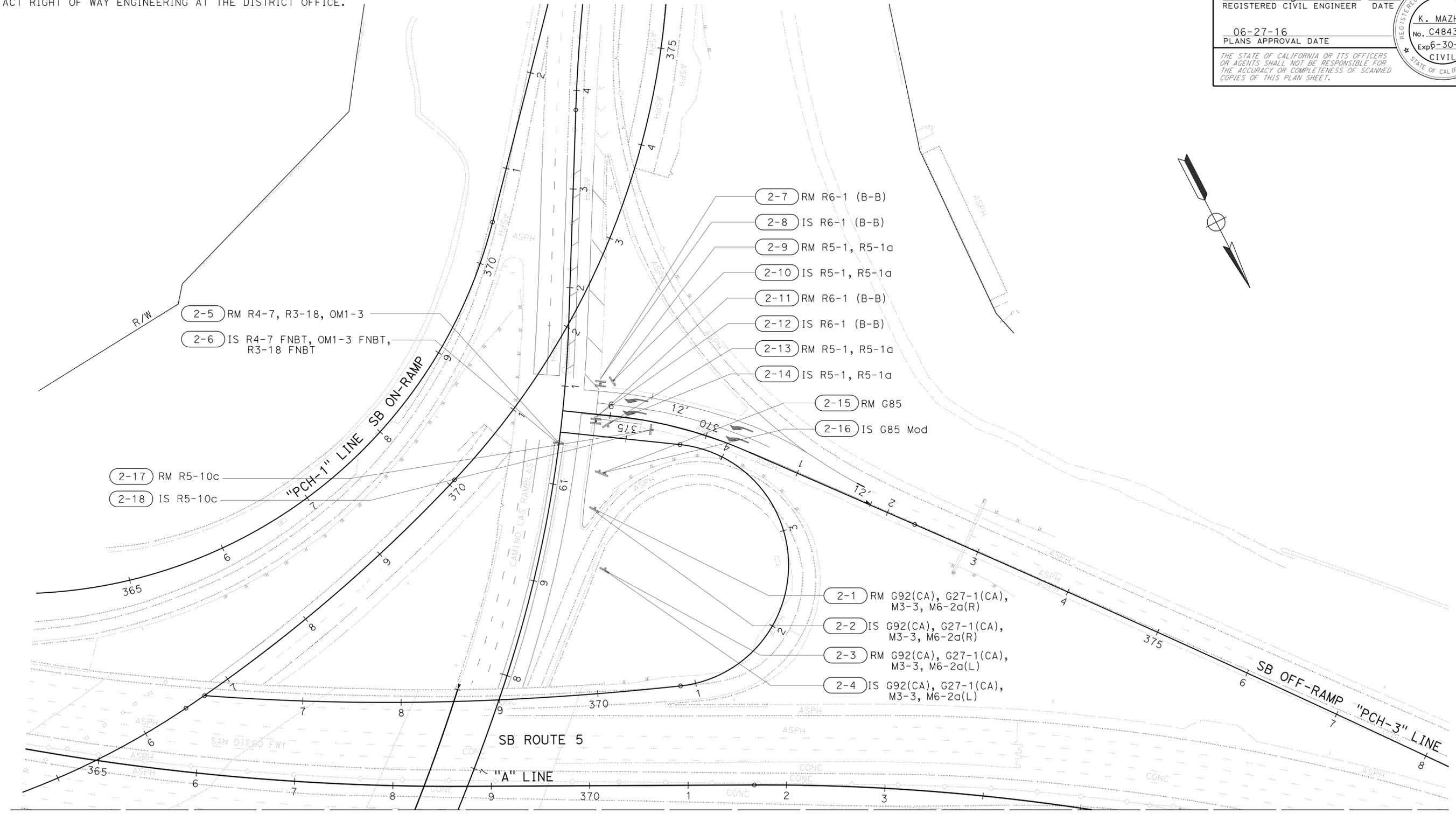
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.8, 22.8	19	61

K. Mazhar 06-23-16
 REGISTERED CIVIL ENGINEER DATE

06-27-16
 PLANS APPROVAL DATE

K. MAZHAR
 No. C48436
 Exp 6-30-18
 CIVIL

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MATCH LINE SEE SHEET S-1

SIGN PLAN
 SCALE 1"=50'

APPROVED FOR SIGN WORK ONLY

S-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	RICHARD DANG	REVISED BY	
Caltrans	KAMRAN MAZHAR	CHECKED BY	KAMRAN MAZHAR	DATE	
DESIGN					

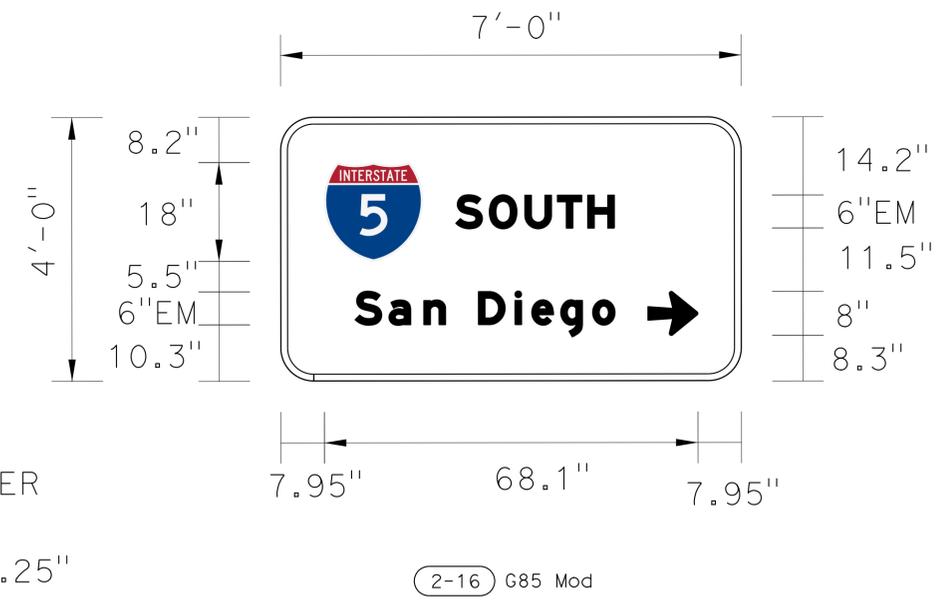
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.8, 22.8	20	61

K. Mazhar 06-23-16
 REGISTERED CIVIL ENGINEER DATE

06-27-16
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 No. C48436
 Exp 9-30-18
 CIVIL
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SIGN DETAILS
NO SCALE

SD-1

ROADSIDE SIGNS QUANTITIES

SHEET NO.	SIGN NO.	SIGN CODE	PANEL SIZE (L x H)	POST SIZE & LENGTH (N)		REMOVE ROADSIDE SIGN	ROADSIDE SIGN - ONE POST	ROADSIDE SIGN - TWO POST	TREATED WOOD WASTE	REMARK
				6" x 6"						
				INCHES	F+					
S-1	1-1	R3-7	EXISTING			1			115	
	1-2	R3-7	30 x 30	15			1			
	1-3	W1-1R	EXISTING			1			115	
		W13-1P	EXISTING							
	1-4	W1-1R	36 x 36	18			1			20 MPH
		W13-1P	24 x 24							
	1-5	R3-7	EXISTING			1			115	
	1-6	R3-7R	30 x 30	15			1			
	1-7	R5-10a	EXISTING			1			115	
	1-8	R5-10a	30 x 36				1			
	1-9	G92(CA)	EXISTING			1			154	
		G27-1(CA)	EXISTING							
		M3-1	EXISTING							
	1-10	G92(CA)	48 x 30	18				1		
		G27-1(CA)	28 x 25							
		M3-1	24 x 12							
		M6-2a(L)	21 x 15							
	1-11	G92(CA)	EXISTING			1			154	
G27-1(CA)		EXISTING								
M3-1		EXISTING								
M6-2a(R)		EXISTING								
1-12	G92(CA)	48 x 30	18				1			
	G27-1(CA)	28 x 25								
	M3-1	24 x 12								
	M6-2a(R)	21 x 15								
1-13	R4-7	EXISTING			1			154		
	R3-4	EXISTING								
	OM1-3	EXISTING								
	R3-18	EXISTING								
1-14	R4-7	24 x 30	18				1			
	R3-4	36 x 36								
	OM1-3	18 x 18								
	R3-18	36 x 36								
1-15	R4-7	EXISTING			1			154		
	R3-18	EXISTING								
	OM1-3	EXISTING								
	R6-1	EXISTING								
1-16	R4-7	24 x 30	18				1			
	R3-18	36 x 36								
	OM1-3	18 x 18								
	R6-1	36 x 12								
1-17	W4-1R	EXISTING			1			115		
1-18	W4-1R	48 x 48	15				1			

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

ROADSIDE SIGNS QUANTITIES (CONT)

SHEET NO.	SIGN NO.	SIGN CODE	PANEL SIZE (L x H)	POST SIZE & LENGTH (N)		REMOVE ROADSIDE SIGN	ROADSIDE SIGN - ONE POST	ROADSIDE SIGN - TWO POST	TREATED WOOD WASTE	REMARK
				6" x 6"						
				INCHES	F+					
S-1	1-19	G85	EXISTING			1			154	
	1-20	G85 Mod	84 x 48	18				1		20 MPH
S-2	2-1	G92(CA)	EXISTING			1			154	
		G27-1(CA)	EXISTING							
		M3-3	EXISTING							
		M6-2a(R)	EXISTING							
	2-2	G92(CA)	48 x 30	18				1		
		G27-1(CA)	28 x 25							
		M3-3	24 x 12							
		M6-2a(R)	21 x 15							
	2-3	G92(CA)	EXISTING			1			154	
		G27-1(CA)	EXISTING							
		M3-3	EXISTING							
		M6-2a(L)	EXISTING							
	2-4	G92(CA)	48 x 30	18				1		
		G27-1(CA)	28 x 25							
		M3-3	24 x 12							
		M6-2a(L)	21 x 15							
	2-5	R4-7	EXISTING			1			115	
		R3-18	EXISTING							
OM1-3		EXISTING								
2-6	R4-7	24 x 30	18				1			
	R3-18	36 x 36								
2-7	OM1-3	18 x 18								
	R6-1	EXISTING			1			60		
2-8	R6-1	36 x 12	7				1			
	R6-1	36 x 12								
2-9	R5-1	EXISTING			1			115		
	R5-1a	EXISTING								
2-10	R5-1	48 x 48	18				1			
	R5-1a	36 x 24								
2-11	R6-1	EXISTING			1			60		
	R6-1	EXISTING								
2-12	R6-1	36 x 12	7				1			
	R6-1	36 x 12								
2-13	R5-1	EXISTING			1			115		
	R5-1a	EXISTING								
2-14	R5-1	48 x 48	18				1			
	R5-1a	36 x 24								
2-15	G85	EXISTING			1			154		
2-16	G85 Mod	84 x 48	18					1		
2-17	R5-10c	EXISTING			1			115		
2-18	R5-10c	24 x 12	14				1			
TOTAL						19	17	2	2387	

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.8, 22.8	21	61

K. Mazhar 06-23-16
 REGISTERED CIVIL ENGINEER DATE

06-27-16
 PLANS APPROVAL DATE

K. MAZHAR
 No. C48436
 Exp-30-18
 CIVIL
 STATE OF CALIFORNIA

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SIGN QUANTITIES
 NO SCALE

SQ-1

MATERIAL SUMMARY (CONTRACTOR FURNISHED SIGNS)

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.8, 22.8	22	61

K. Mazhar 06-23-16
 REGISTERED CIVIL ENGINEER DATE

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ABBREVIATION:

- Y = YELLOW
- B = BLACK
- BL = BLUE
- R = RED
- W = WHITE
- Non = NON-REFLECTIVE
- N/A = NOT APPLICABLE

SHEET No.	SIGN No.	SIGN CODE	SIGN PANEL DIMENSION (L x H)	SINGLE FACED	SIGN FACING MATERIAL				ROADSIDE				RETROREFLECTIVE SHEETING (TYPE XI)		
					BACKGROUND		LEGEND		PROTECTIVE FILM		FURNISH SINGLE SHEET ALUMINUM SIGN	FURNISH SINGLE SHEET ALUMINUM SIGN FOR RETROREFLECTIVE SHEETING (TYPE XI)		FURNISH LAMINATED PANEL SIGN (1"-TYPE B)	
					SHEETING COLOR	RETROREFLECTIVE ASTM TYPE	SHEETING COLOR	RETROREFLECTIVE ASTM TYPE	STANDARD	PREMIUM	0.063"	0.063"		FOR REFLECTIVE SHEETING (TYPE XI)	
											UNFRAMED	UNFRAMED		SQFT	SQFT
	1-2	R3-7	30 x 30		W	VIII	B	VIII		X	6.25				
	1-4	W1-1R	36 x 36	x	Y	XI	B	XI		X		9.0	9.0		
		W13-1P	24 x 24	x	Y	XI	B	XI		X		4.0	4.0		
	1-6	R3-7R	30 x 30	x	W	VIII	B	VIII		X	6.25				
	1-8	R5-10a	30 x 36	x	W	VIII	B	VIII		X	7.5				
	1-10	G92(CA)	48 x 30	x	G	XI	W	XI		X		10.0	10.0		
		G27-1(CA)	28 x 25	x	BL/R	XI	W	XI		X		4.85	4.85		
		M3-1	24 x 12	x	BL	XI	W	XI		X		4.0	4.0		
		M6-2a(L)	21 x 15	x	BL	XI	W	XI		X		2.19	2.19		
	1-12	G92(CA)	48 x 30	x	G	XI	W	XI		X		10.0	10.0		
		G27-1(CA)	28 x 25	x	BL/R	XI	W	XI		X		4.85	4.85		
		M3-1	24 x 12	x	BL	XI	W	XI		X		4.0	4.0		
	1-14	M6-2a(R)	21 x 15	x	BL	XI	W	XI		X		2.19	2.19		
		R4-7	24 x 30	x	W	VIII	B	VIII		X	6.0				
		R3-4	36 x 36	x	W	VIII	B/R	VIII		X	9.0				
	1-16	OM1-3	18 x 18	x	Y	XI		XI		X		2.25	2.25		
		R3-18	36 x 36	x	W	VIII	B	VIII		X	9.0				
		R4-7	24 x 30	x	W	VIII	B	VIII		X	6.0				
	1-18	R3-18	36 x 36	x	W	VIII	B	VIII		X	9.0				
		OM1-3	18 x 18	x	Y	XI		XI		X		2.25	2.25		
	1-20	R6-1	36 x 12	x	B	VIII	W	VIII		X	3.0				
		W4-1R	48 x 48	x	Y	XI	B	XI		X		16.0	16.0		
	2-2	G85 Mod	84 x 48	x	G	XI	W	XI		X		28.0	28.0		
		G92(CA)	48 x 30	x	G	XI	W	XI		X		10.0	10.0		
		G27-1(CA)	28 x 25	x	BL/R	XI	W	XI		X		4.85	4.85		
		M3-3	24 x 12	x	BL	XI	W	XI		X		4.0	4.0		
	2-4	M6-2a(R)	21 x 15	x	BL	XI	W	XI		X		2.19	2.19		
		G92(CA)	48 x 30	x	G	XI	W	XI		X		10.0	10.0		
		G27-1(CA)	28 x 25	x	BL/R	XI	W	XI		X		4.85	4.85		
	2-6	M3-3	24 x 12	x	BL	XI	W	XI		X		4.0	4.0		
		M6-2a(L)	21 x 15	x	BL	XI	W	XI		X		2.19	2.19		
		R4-7	24 x 30	x	W	VIII	B	VIII		X	5.0				
	2-8	R3-18	36 x 36	x	W	VIII	B	VIII		X	9.0				
		OM1-3	18 x 18	x	Y	XI		XI		X		2.25	2.25		
	2-10	R6-1	36 x 12	x	B	VIII	W	VIII		X	3.0				
		R6-1	36 x 12	x	B	VIII	W	VIII		X	3.0				
	2-12	R5-1	48 x 48	x	W	VIII	R	VIII		X	16.0				
		R5-1a	36 x 24	x	W	VIII	R	VIII		X	6.0				
	2-14	R6-1	36 x 12	x	B	VIII	W	VIII		X	3.0				
		R6-1	36 x 12	x	B	VIII	W	VIII		X	3.0				
	2-16	R5-1	48 x 48	x	W	VIII	R	VIII		X	16.0				
		R5-1a	36 x 24	x	W	VIII	R	VIII		X	6.0				
	2-18	G85 Mod	84 x 48	x	G	XI	W	XI		X		28.0	28.0		
		R5-10c	24 x 12	x	W	VIII	B	VIII		X	2.0				
					SUBTOTAL							134.00	119.91	56.00	175.91

SIGN QUANTITIES (CONTRACTOR FURNISHED SIGNS) SQ-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN
 KAMRAN MAZHAR
 FUNCTIONAL SUPERVISOR
 KAMRAN MAZHAR
 CHECKED BY
 RICHARD DANG
 KAMRAN MAZHAR
 REVISED BY
 DATE REVISED

LAST REVISION DATE PLOTTED => 01-AUG-2016
 06-22-16 TIME PLOTTED => 15:27

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DESIGN BRANCH D
 FUNCTIONAL SUPERVISOR ANDREW OSHRIN
 CALCULATED/DESIGNED BY CHECKED BY
 THUAN NGUYEN RAJU VORA
 REVISED BY DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.8, 22.8	23	61

06-23-16
 REGISTERED CIVIL ENGINEER DATE
 06-27-16
 PLANS APPROVAL DATE

RAJU VORA
 No. C37361
 Exp. 6/30/18
 CIVIL

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ROADWAY QUANTITIES

SHEET	STATION	REMOVE GUARD RAIL	REMOVE AC DIKE	PLACE HOT MIX ASPHALT DIKE (TYPE C)	HOT MIX ASPHALT (TYPE A)
		LF	LF	LF	TON
L-1	"PCH-4" 360+27.77 To 374+50.00	150	206	320	1.0
L-2	"A" 438+50.00 To "A" 439+25.50	100	0	0	0
TOTAL		250	206	320	1.0

TEMPORARY WATER POLLUTION CONTROL QUANTITIES

SHEET	LOCATION	TEMPORARY DRAINAGE INLET PROTECTION
		EA
L-1	I-5/CAMINO LAS RAMBLAS	8
L-2	I-5/BEE CANYON CREEK	2
TOTAL		10

MIDWEST GUARDRAIL SYSTEM (WOOD POST WITH WOOD BLOCK)

SHEET	STATION	TREATED WOOD WASTE *	TRANSITION RAILING (TYPE WB-31)	MGS (WOOD POST)	ALTERNATIVE FLARED TERMINAL SYSTEM
		LB	EA	LF	EA
L-1	"PCH-4" 360+27.77 To 374+50.00				
L-1	"PCH-4" 365+84.40 To "PCH-4" 367+50.50	260	1	75	1
	"PCH-4" 366+08.00 To "PCH-4" 367+61.50	260	1	75	1
L-2	"A" 438+50.00 To "A" 439+25.50	260	1	12.5	1
SUBTOTAL FROM SHEET SQ-1		2387			
TOTAL		3167	3	162.5	3

* FOR ADDITIONAL QUANTITY SEE SHEET SQ-1

SUMMARY OF QUANTITIES

Q-1

	M	
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	
	N	
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	
	O	
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	
	P	
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	

	P continued	
PG	PROFILE GRADE	
PI	POINT OF INTERSECTION	
PJP	PARTIAL JOINT PENETRATION	
Pkwy	PARKWAY	
PL, PL	PLATE	
P/L	PROPERTY LINE	
PM	POST MILE, TIME FROM NOON TO MIDNIGHT	
PN	PAVING NOTCH	
POC	POINT OF HORIZONTAL CURVE	
POT	POINT OF TANGENT	
POVC	POINT OF VERTICAL CURVE	
PP	PIPE PILE, PLASTIC PIPE, POWER POLE	
PPL	PREFORMED PERMEABLE LINER	
PPP	PERFORATED PLASTIC PIPE	
PRC	POINT OF REVERSE CURVE	
PRF	PAVEMENT REINFORCING FABRIC	
PRVC	POINT OF REVERSE VERTICAL CURVE	
PS&E	PLANS, SPECIFICATIONS AND ESTIMATES	
PS, P/S	PRESTRESSED	
PSP	PERFORATED STEEL PIPE	
PT	POINT OF TANGENCY	
PVC	POLYVINYL CHLORIDE	
Pvmt	PAVEMENT	
	Q	
Qty	QUANTITY	
	R	
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	

	S	
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	
SL	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	
	T	
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	

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.8,22.8	24	61

Grace M. Tsushima
 REGISTERED CIVIL ENGINEER

July 19, 2013
 PLANS APPROVAL DATE

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

TO ACCOMPANY PLANS DATED 06-27-16

UNIT OF MEASUREMENT SYMBOLS:

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

TABLE A

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

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

TABLE B

SYMBOL USED	DEFINITIONS
ksi	KIPS PER SQUARE INCH
ksf	KIPS PER SQUARE FOOT
psi	POUNDS PER SQUARE INCH
psf	POUNDS PER SQUARE FOOT
lb/ft ³ , pcf	POUNDS PER CUBIC FOOT
tsf	TONS PER SQUARE FOOT
mph, MPH *	MILES PER HOUR
ø	NOMINAL DIAMETER
oz	OUNCE
lb	POUND
kip	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.

2010 REVISED STANDARD PLAN RSP A10B

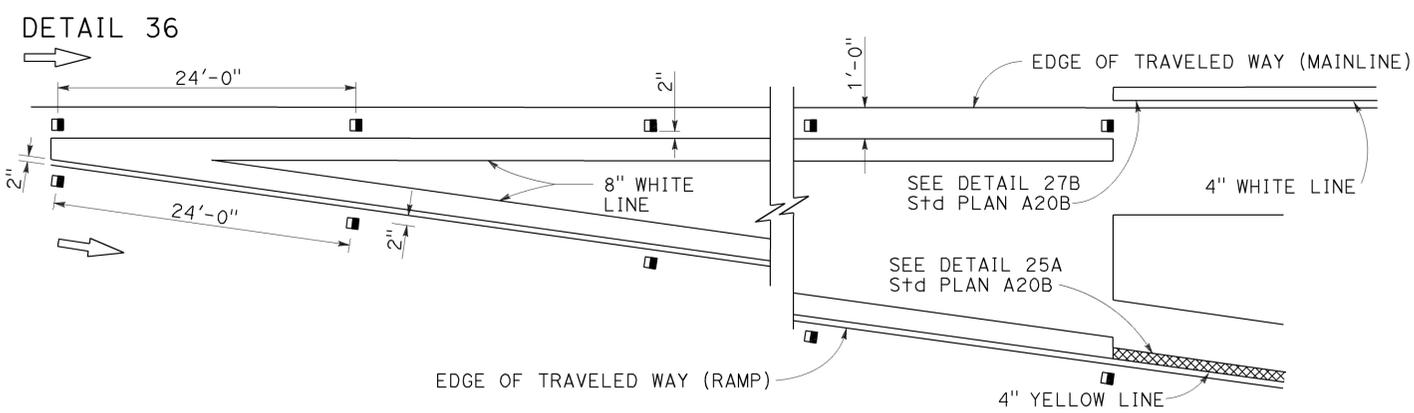
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.8,22.8	25	61

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

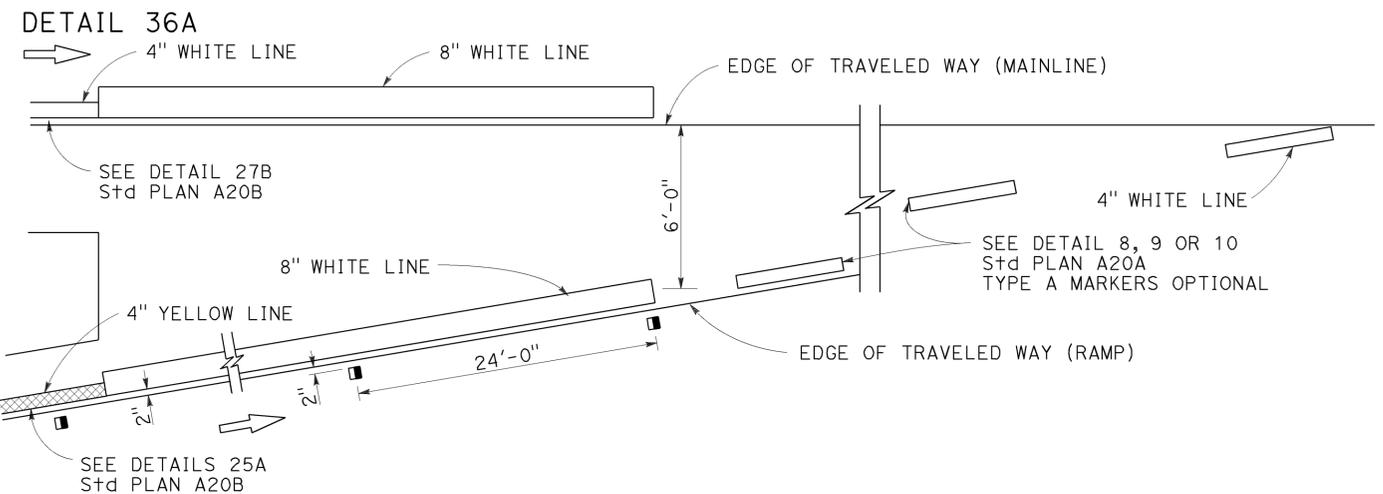
July 19, 2013
 PLANS APPROVAL DATE

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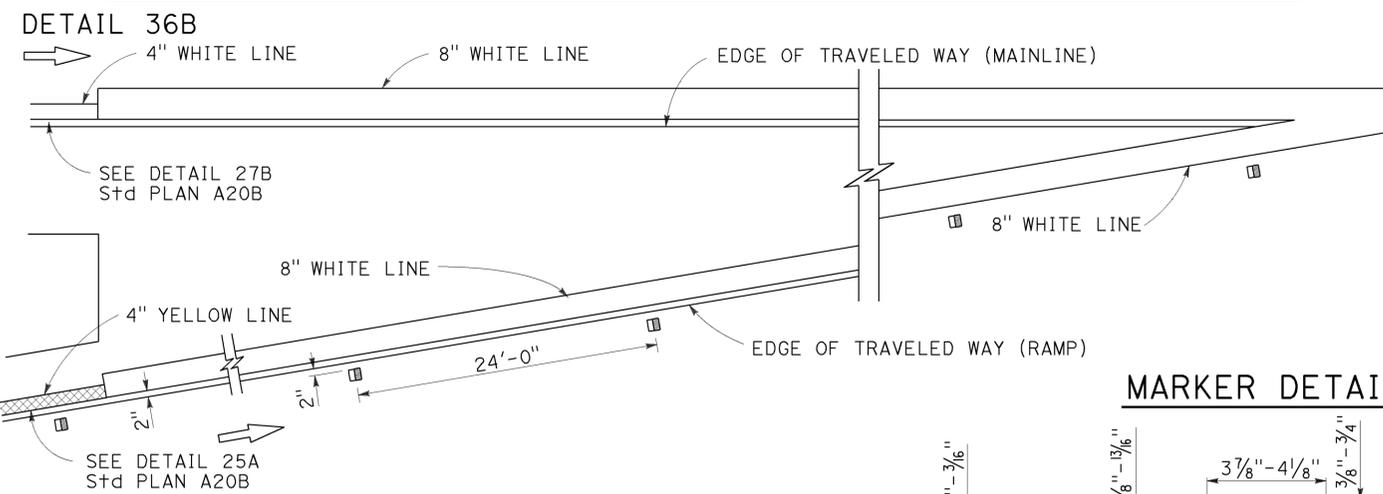
EXIT RAMP NEUTRAL AREA (GORE) TREATMENT



ENTRANCE RAMP NEUTRAL AREA (MERGE) TREATMENT



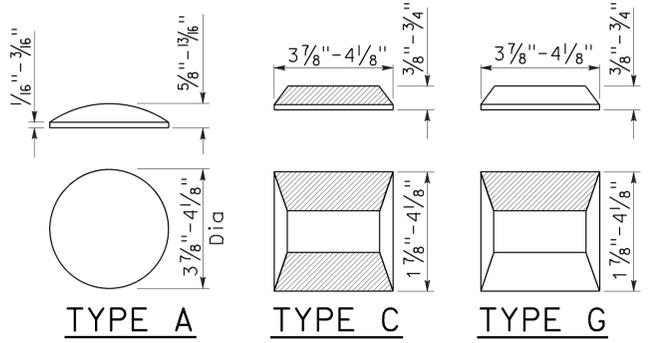
ENTRANCE RAMP NEUTRAL AREA (ACCELERATION LANE) TREATMENT



MARKER DETAILS

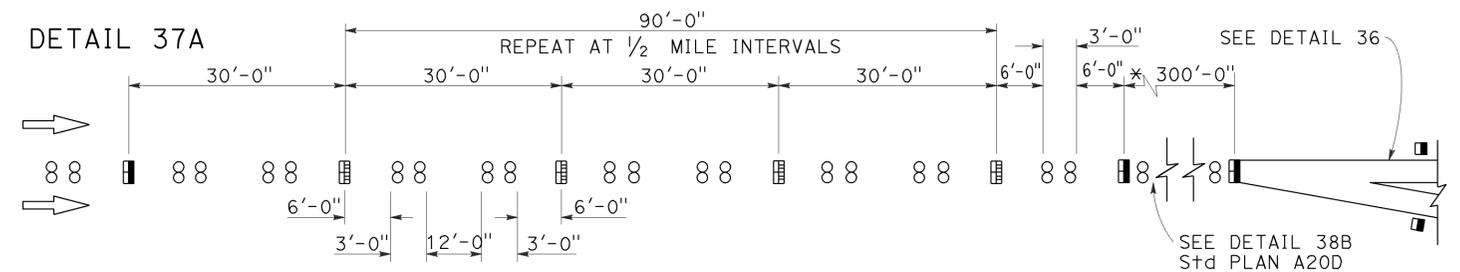
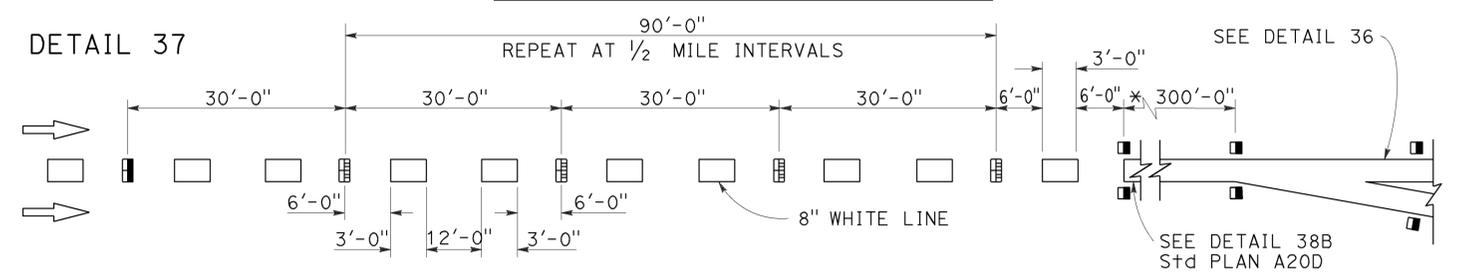
LEGEND:

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



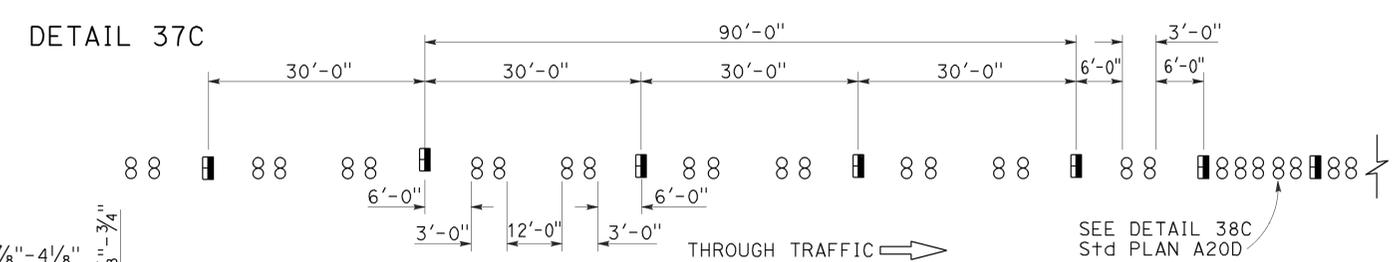
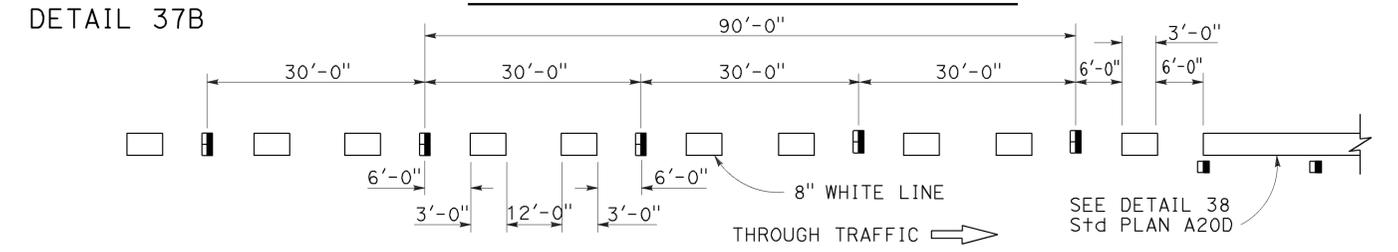
RETROREFLECTIVE FACE

LANE DROP AT EXIT RAMP



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

LANE DROP AT INTERSECTIONS



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**PAVEMENT MARKERS
 AND TRAFFIC LINE
 TYPICAL DETAILS**
 NO SCALE

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

REVISED STANDARD PLAN RSP A20C

2010 REVISED STANDARD PLAN RSP A20C

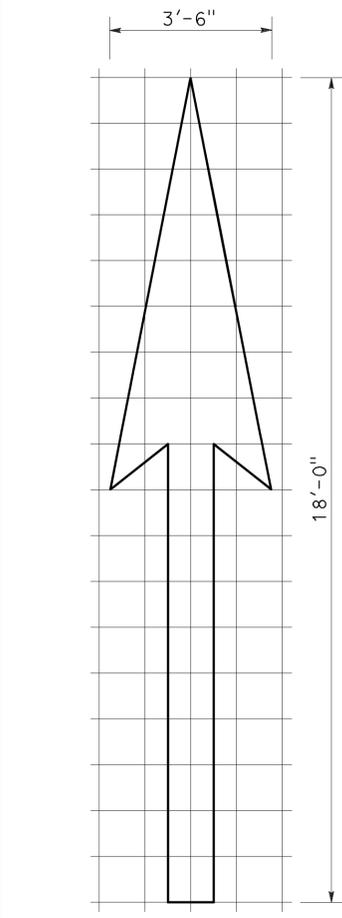
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.8,22.8	26	61

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

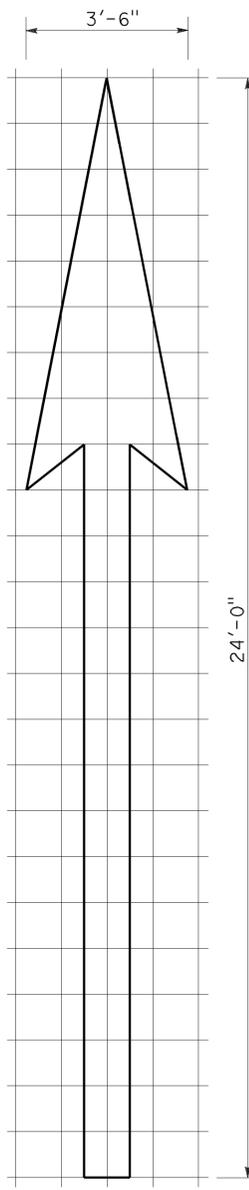
April 20, 2012
 PLANS APPROVAL DATE

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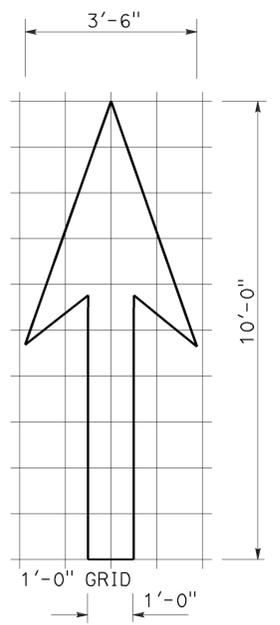
TO ACCOMPANY PLANS DATED 06-27-16



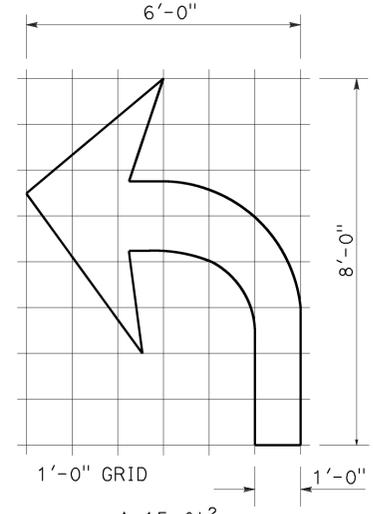
TYPE I 18'-0" ARROW
A=25 ft²



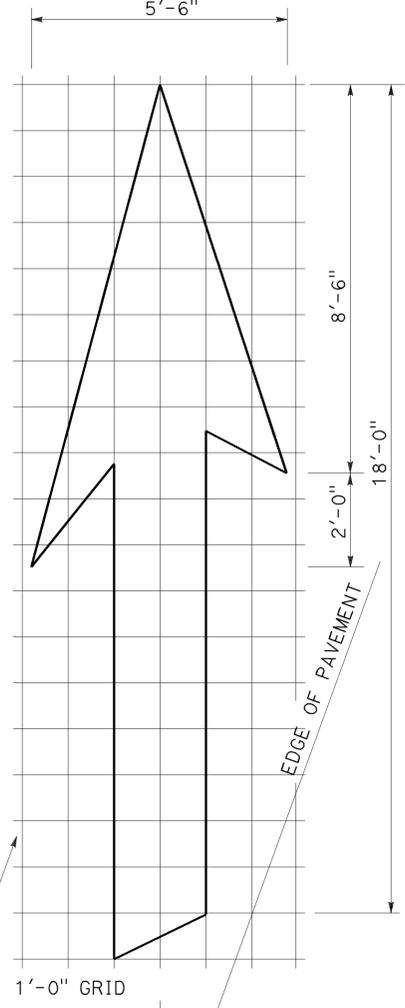
TYPE I 24'-0" ARROW
A=31 ft²



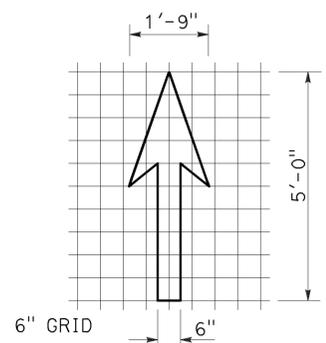
TYPE I 10'-0" ARROW
A=14 ft²



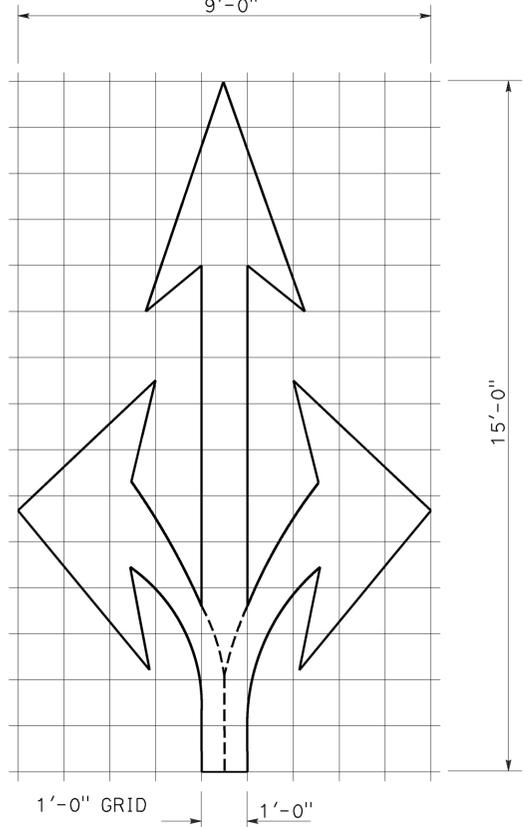
TYPE IV (L) ARROW
A=15 ft²
(For Type IV (R) arrow, use mirror image)



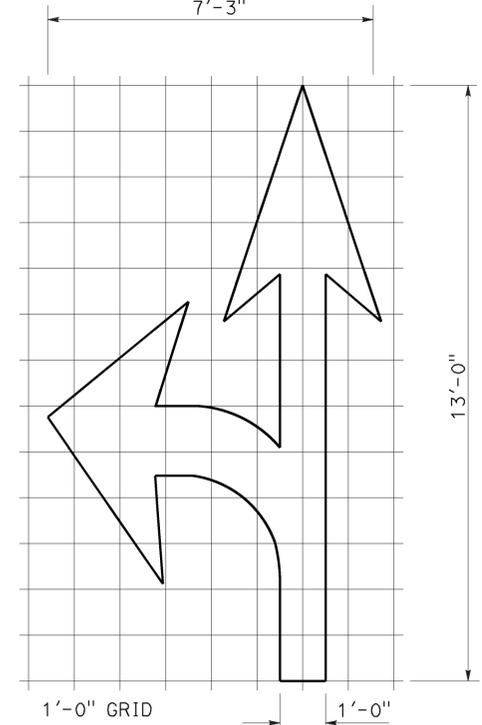
TYPE VI ARROW
A=42 ft²
Right lane drop arrow
(For left lane, use mirror image)



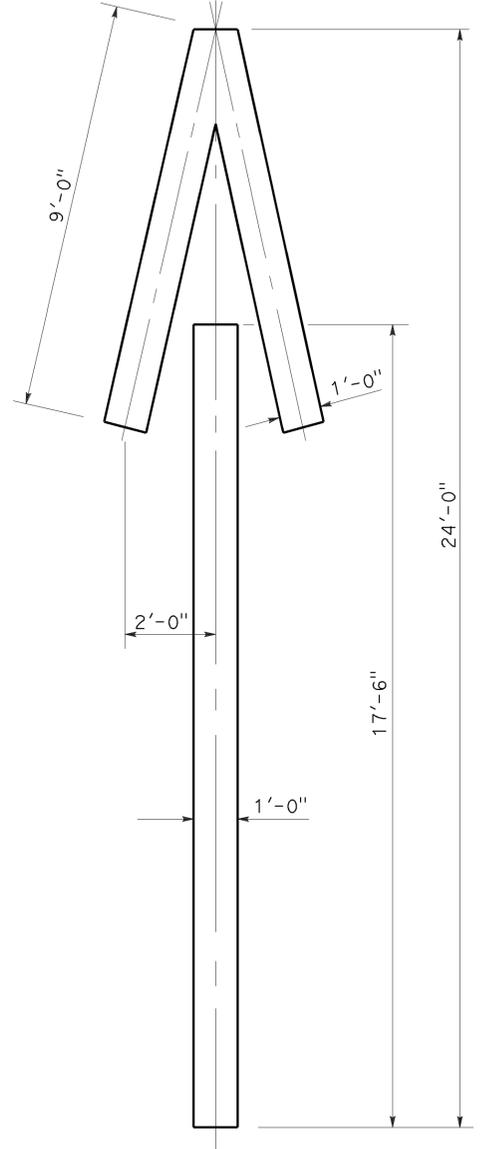
BIKE LANE ARROW
A=3.5 ft²



TYPE VIII ARROW
A=36 ft²



TYPE VII (L) ARROW
A=27 ft²
(For Type VII (R) arrow, use mirror image)



TYPE V ARROW
A=33 ft²

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

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

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

REVISED STANDARD PLAN RSP A24A

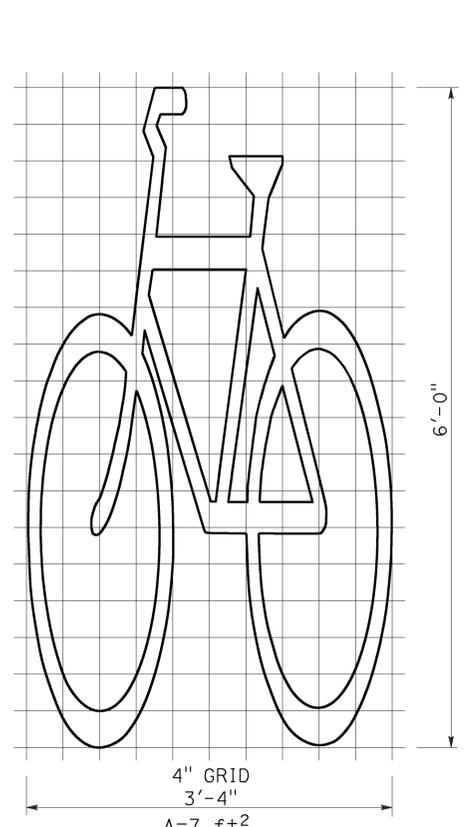
2010 REVISED STANDARD PLAN RSP A24A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.8,22.8	27	61

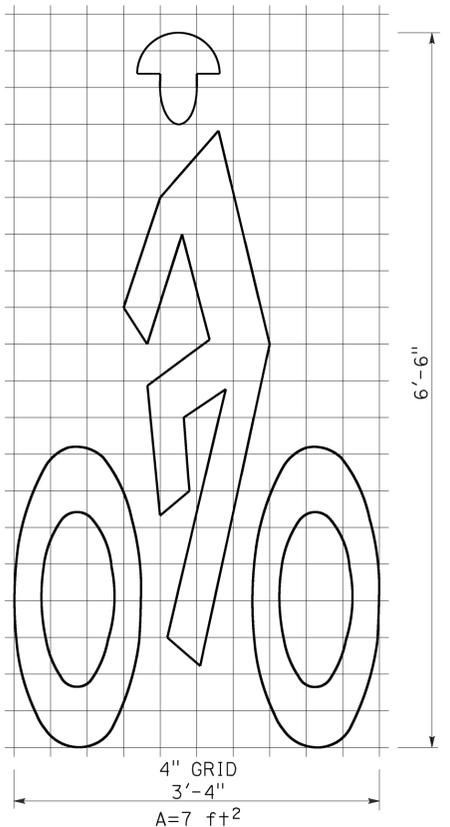
Registered Professional Engineer
 Roberto L. McLaughlin
 No. C40375
 Exp. 3-31-13
 CIVIL
 STATE OF CALIFORNIA

October 19, 2012
 PLANS APPROVAL DATE

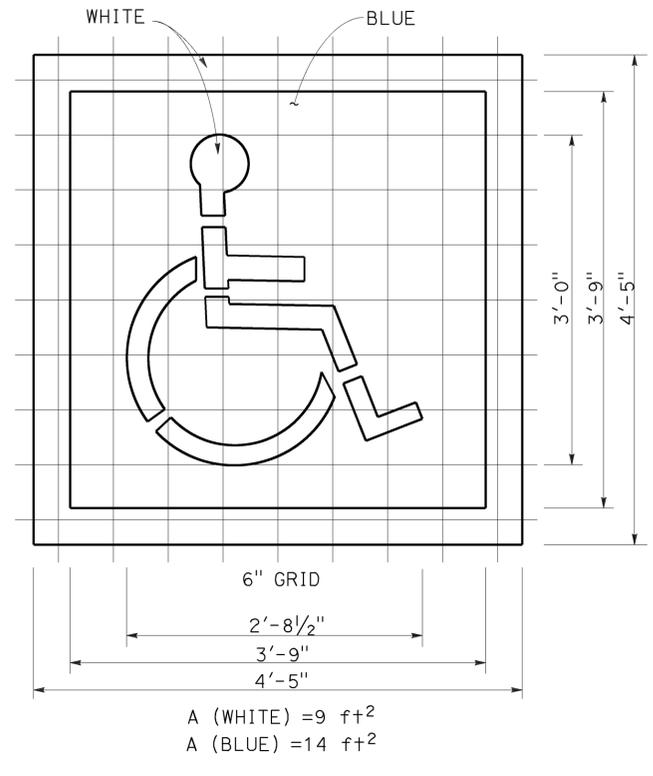
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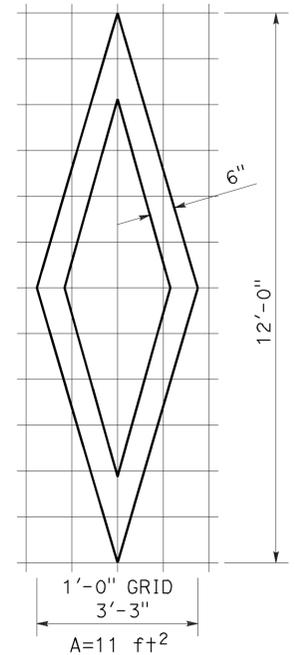
BIKE LANE SYMBOL WITHOUT PERSON



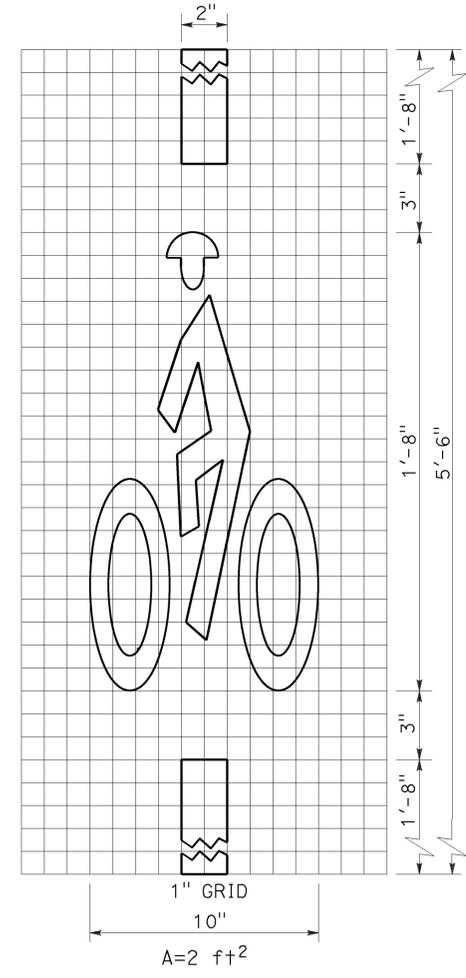
BIKE LANE SYMBOL WITH PERSON



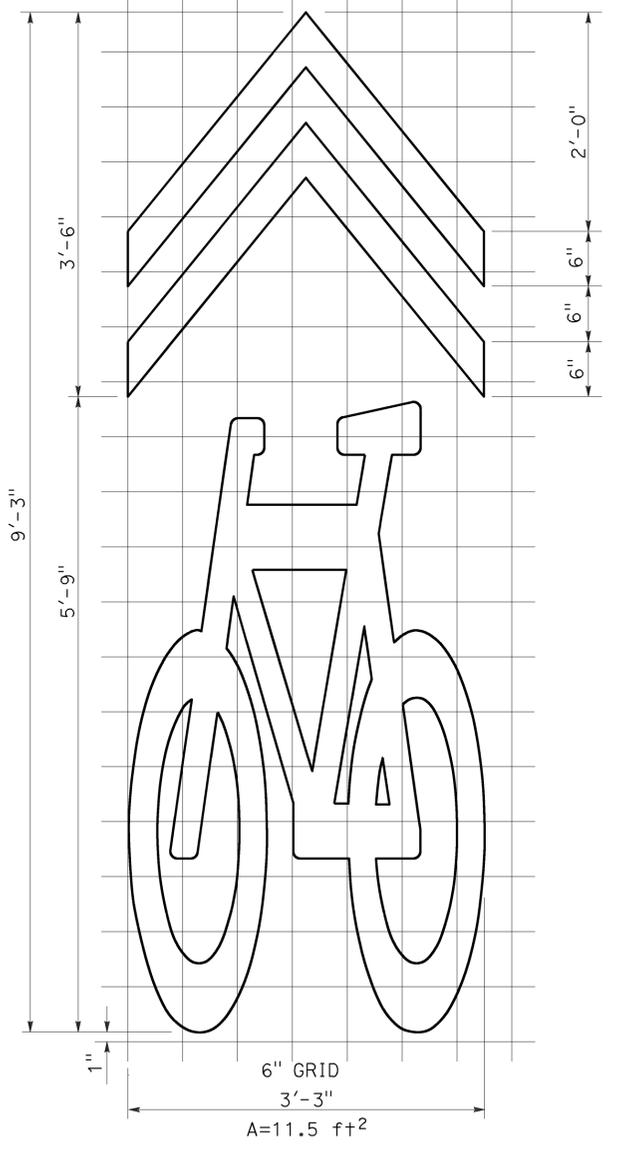
INTERNATIONAL SYMBOL OF ACCESSIBILITY (ISA) MARKING



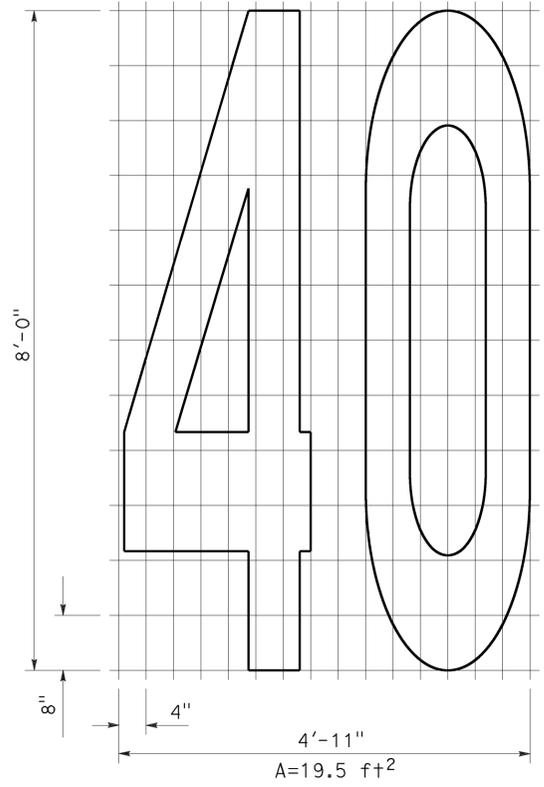
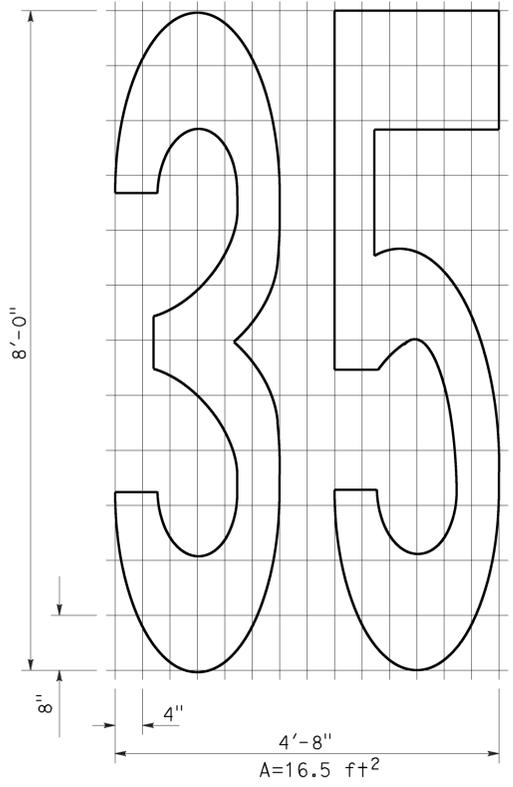
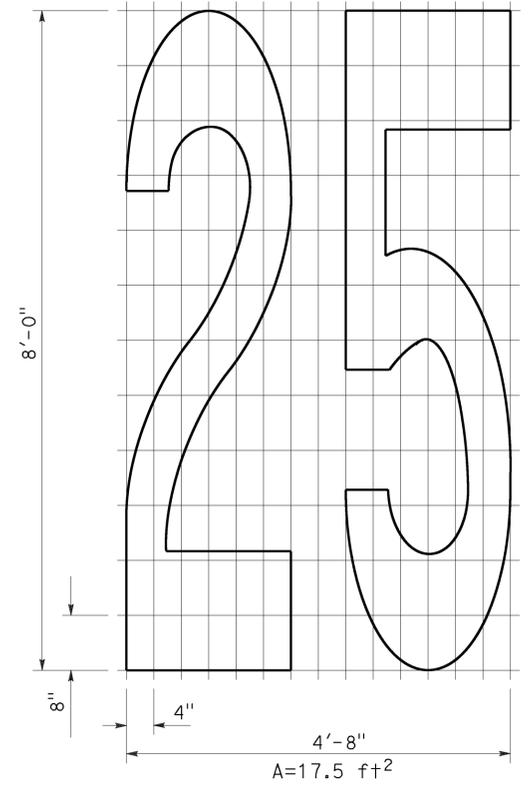
DIAMOND SYMBOL



BICYCLE LOOP DETECTOR SYMBOL



SHARED ROADWAY BICYCLE MARKING



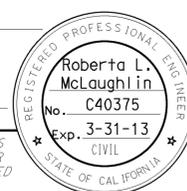
NUMERALS

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

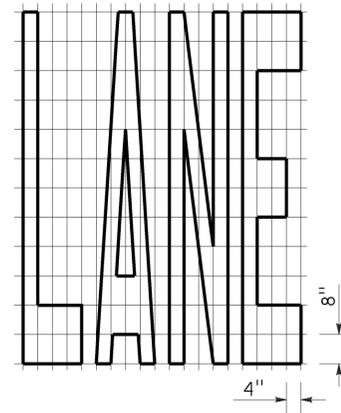
RSP A24C DATED OCTOBER 19, 2012 SUPERSEDES STANDARD PLAN A24C DATED MAY 20, 2011 - PAGE 15 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A24C

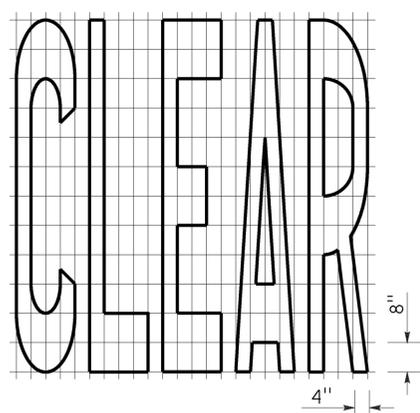
2010 REVISED STANDARD PLAN RSP A24C



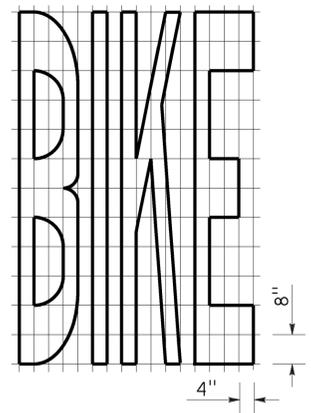
TO ACCOMPANY PLANS DATED 06-27-16



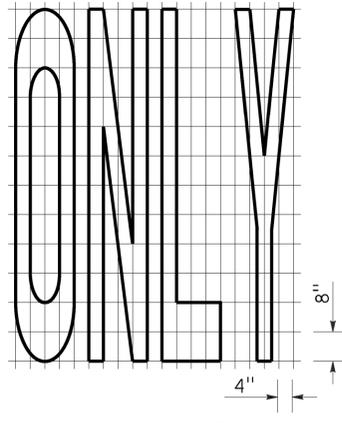
A=24 ft²



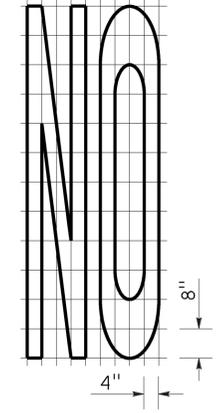
A=27 ft²



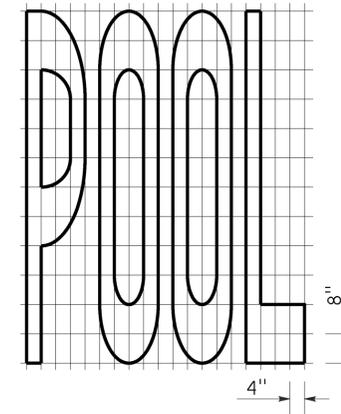
A=21 ft²



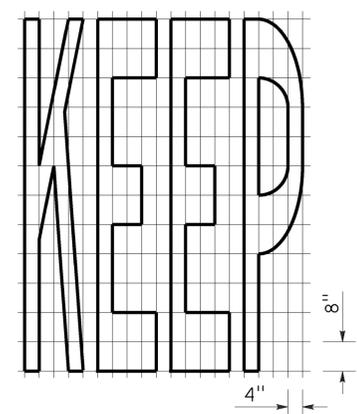
A=22 ft²



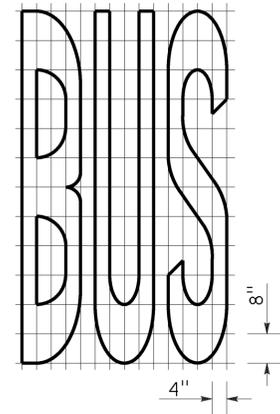
A=14 ft²



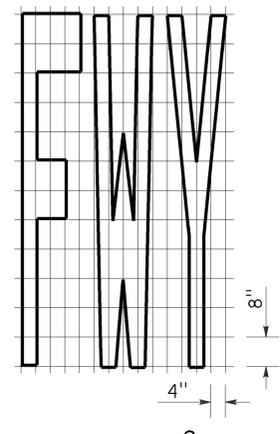
A=23 ft²



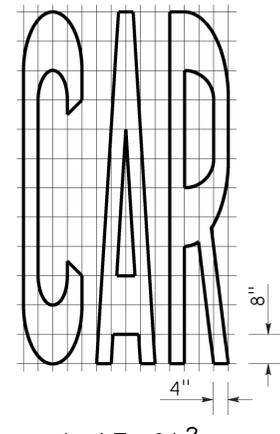
A=24 ft²



A=20 ft²

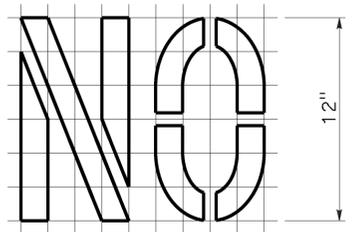


A=16 ft²



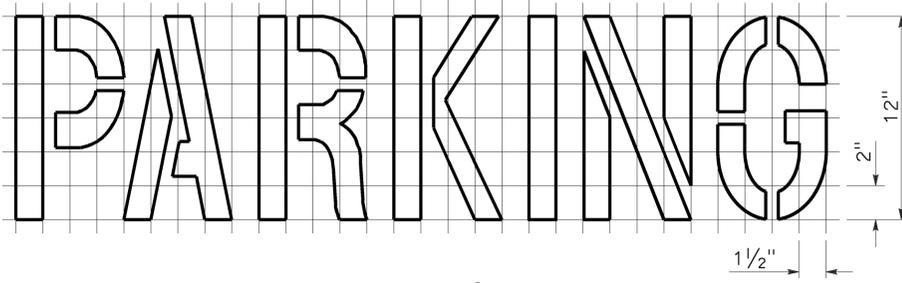
A=17 ft²

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



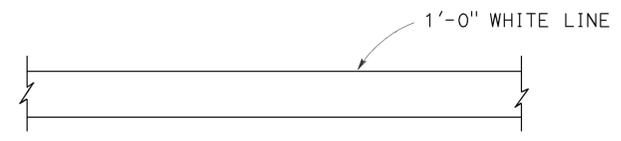
A=2 ft²

See Notes 6 and 7



A=2 ft²

See Notes 6 and 7



LIMIT LINE (STOP LINE)



YIELD LINE

NOTES:

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

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

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

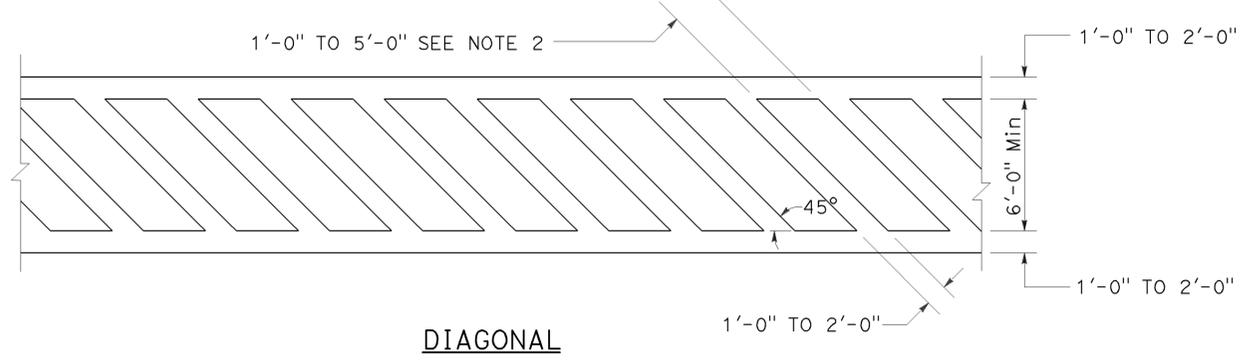
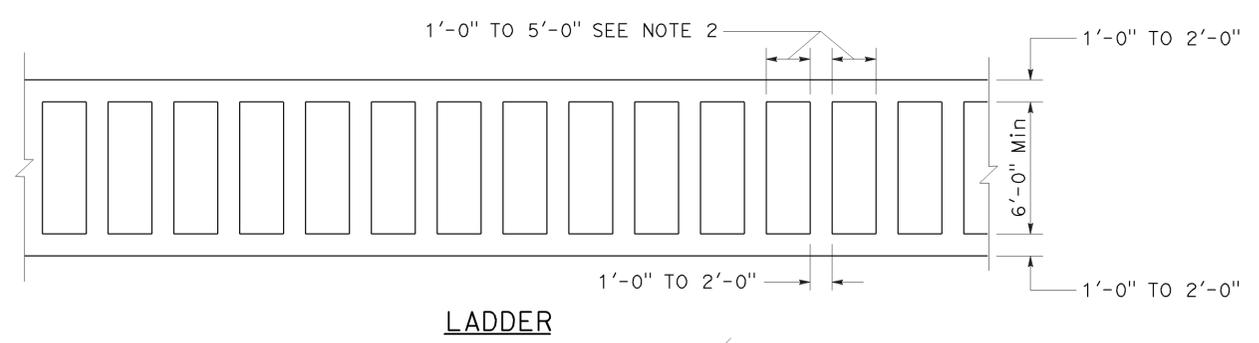
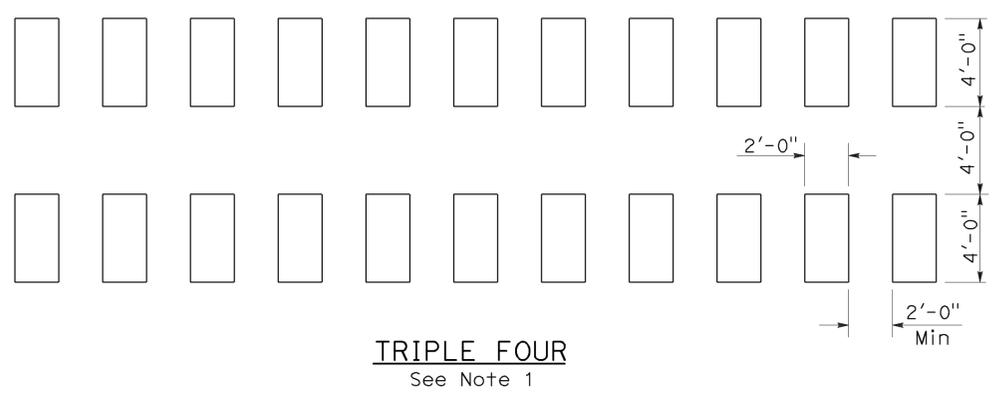
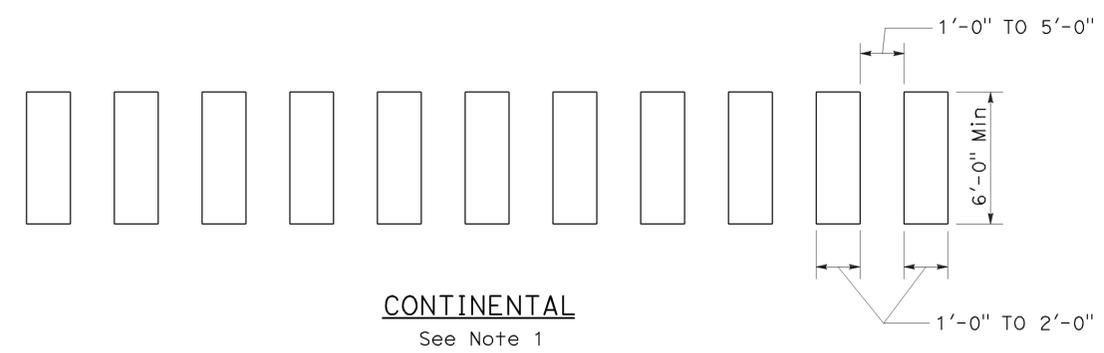
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.8,22.8	29	61

Roberta L. McLaughlin
 REGISTERED CIVIL ENGINEER
 July 20, 2012
 PLANS APPROVAL DATE

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TO ACCOMPANY PLANS DATED 06-27-16

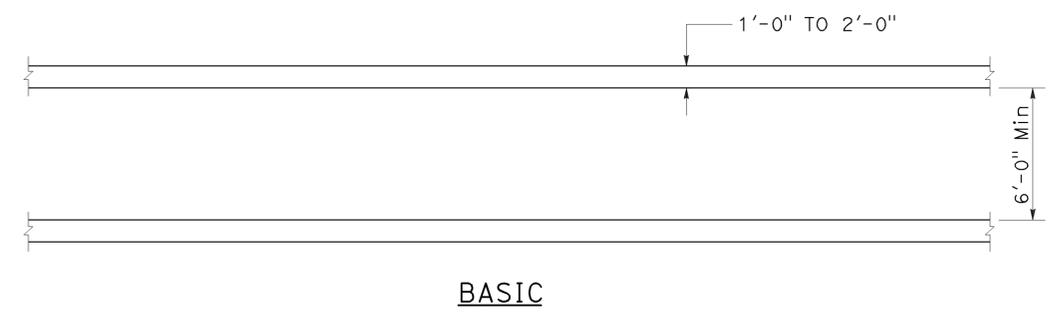
2010 REVISED STANDARD PLAN RSP A24F



HIGHER VISIBILITY CROSSWALKS

NOTES:

1. Spaces between markings should be placed in wheel tracks of each lane.
2. Spacings not to exceed 2.5 times width of longitudinal line.
3. All crosswalk markings must be white except for those near schools must be yellow.



BASIC

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**PAVEMENT MARKINGS
CROSSWALKS**

NO SCALE
RSP A24F DATED JULY 20, 2012 SUPPLEMENTS THE
STANDARD PLANS BOOK DATED 2010.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.8, 22.8	30	61

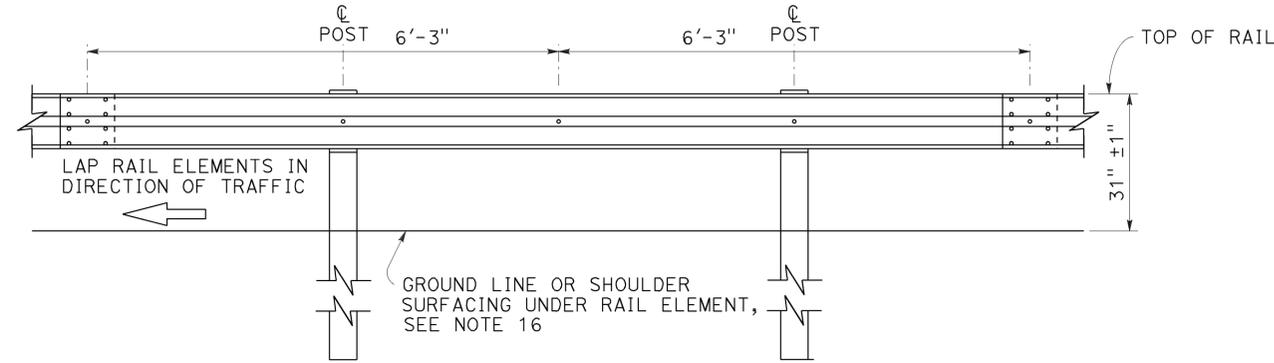
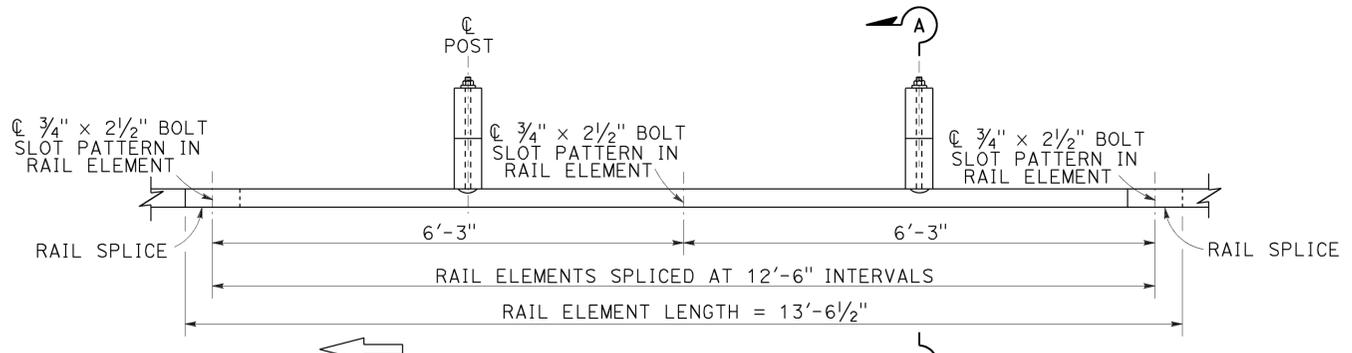
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

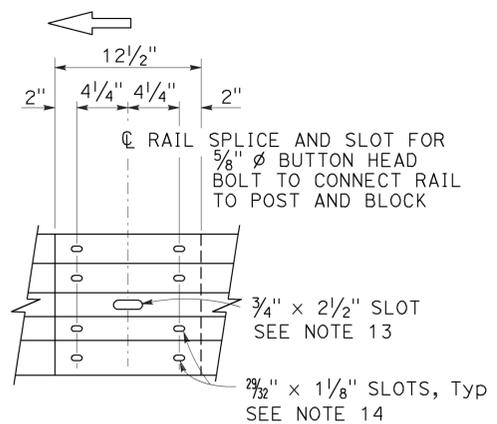
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REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA

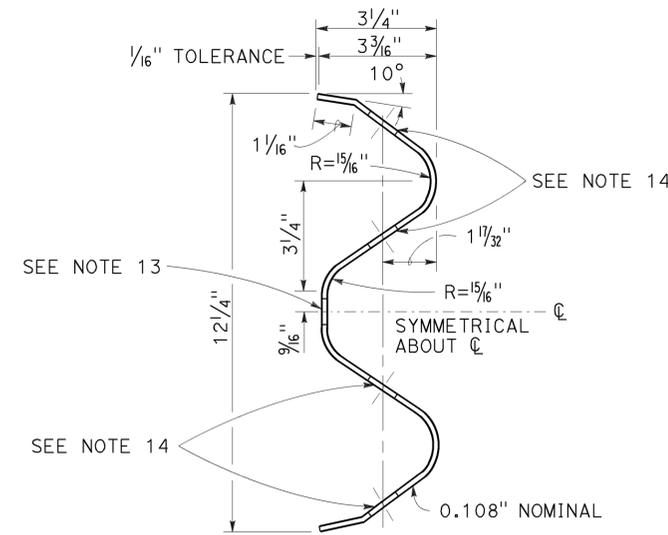
TO ACCOMPANY PLANS DATED 06-27-16



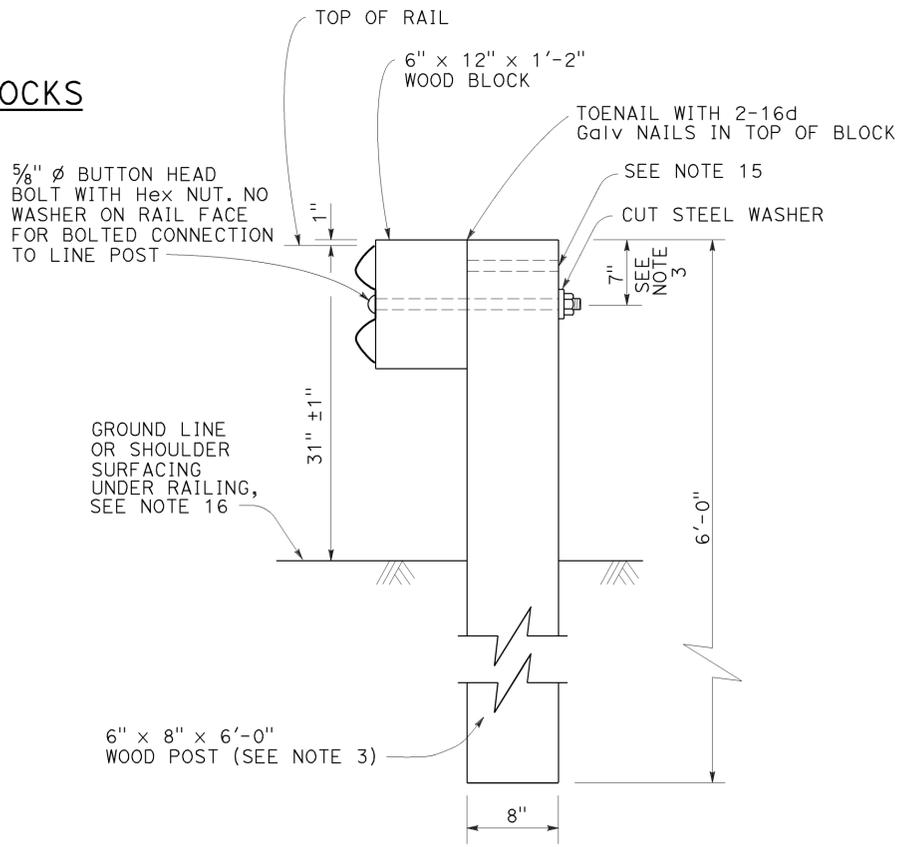
MIDWEST GUARDRAIL SYSTEM WITH WOOD POST AND BLOCKS



- Connect the over lapped end of the rail elements with $\frac{5}{8}$ " ϕ x $1\frac{3}{8}$ " button head oval shoulder splice bolts inserted into the $\frac{7}{32}$ " x $1\frac{1}{8}$ " slots and bolted together with $\frac{5}{8}$ " ϕ recessed hex nuts. Recess of hex nut points toward rail element. A total of 8 bolts and nuts are to be used at each rail splice connection.
- The ends of the rail elements are to be overlapped in the direction of traffic (see details).
- Where end cap is to be attached to the end of a rail element, a total of 4 of the above described splice bolts and nuts are to be used.



SECTION THRU RAIL ELEMENT



**SECTION A-A
TYPICAL WOOD LINE
POST INSTALLATION**

See Note 4

NOTES:

- For details of steel post installations, see Revised Standard Plan RSP A77L2.
- For details of standard hardware used to construct MGS, see Revised Standard Plan RSP A77M1.
- For details of wood posts and wood blocks used to construct MGS, see Revised Standard Plan RSP A77N1.
- For additional installation details, see Revised Standard Plan RSP A77N3.
- MGS post spacing to be 6'-3" center to center, except as otherwise noted.
- For MGS typical layouts, see the A77P, A77Q and A77R Series of Standard Plans.
- If railing is connected to terminal system end treatment, use 31" height terminal system end treatment.
- For MGS end anchor details, see Revised Standard Plans RSP A77S1 and RSP A77T2.
- For details of MGS transition to bridge railing, see Revised Standard Plan RSP A77U4.
- For additional details of MGS connection to bridge railing, see Revised Standard Plans RSP A77U1, RSP A77U2 and RSP A77V1.
- For MGS connection details to abutments and walls, see Revised Standard Plan RSP A77U3.
- For typical MGS delineation and dike positioning details, see Revised Standard Plan RSP A77N4.
- Slotted hole for bolted connection of rail element to block and post. See "Section Thru Rail Element".
- Slotted holes for splice bolts to overlap ends of rail element. See "Section Thru Rail Element".
- Additional hole in uppermost portion of line post is for potential future adjustments of railing height. See Revised Standard Plan RSP A77N1.
- Install posts in soil.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM
STANDARD RAILING SECTION
(WOOD POST WITH
WOOD BLOCK)**

NO SCALE

RSP A77L1 DATED JULY 19, 2013 SUPPLEMENTS STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77L1

2010 REVISED STANDARD PLAN RSP A77L1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.8,22.8	31	61

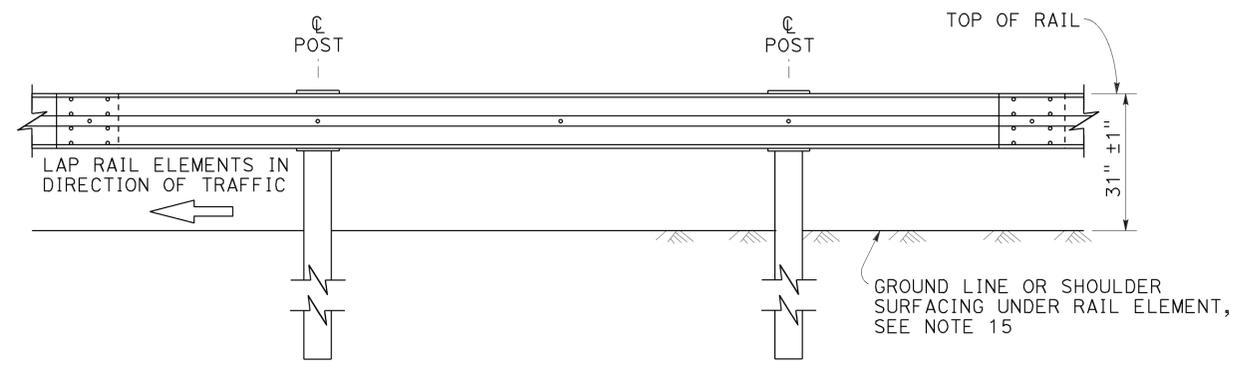
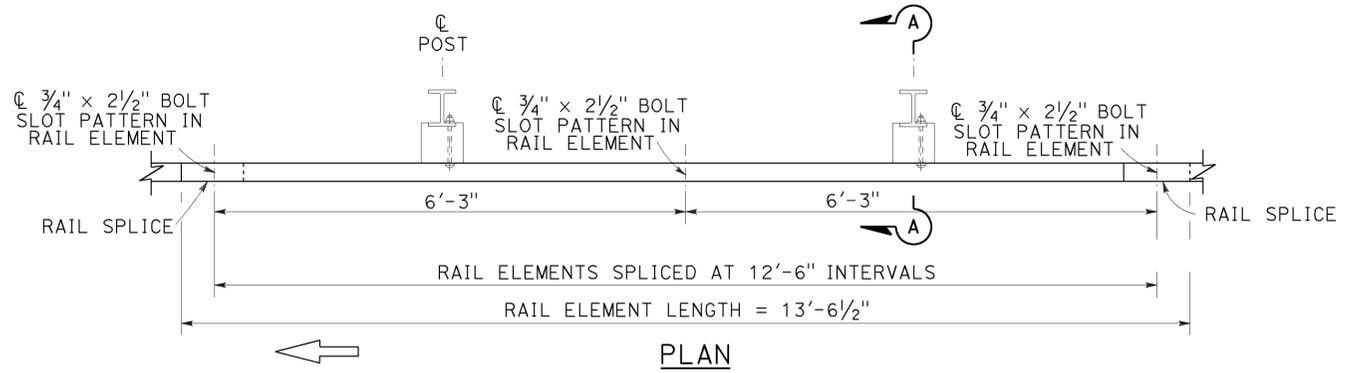
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

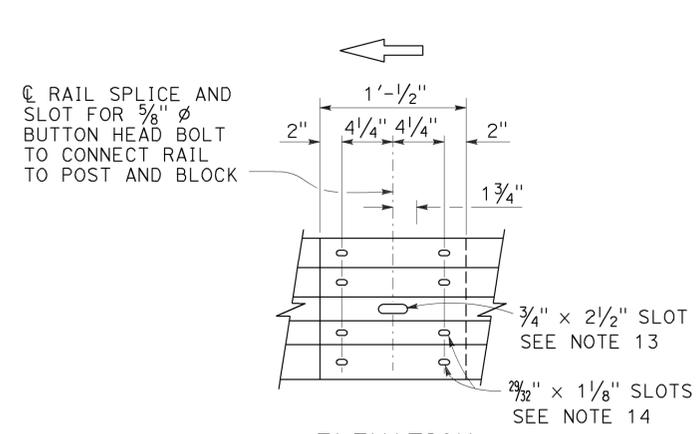
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA

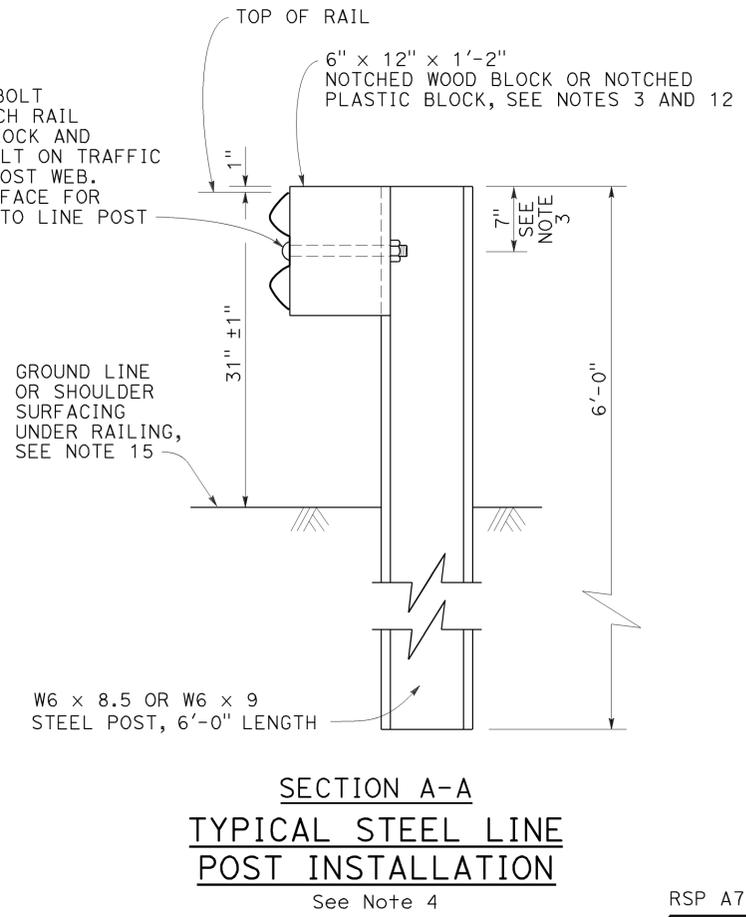
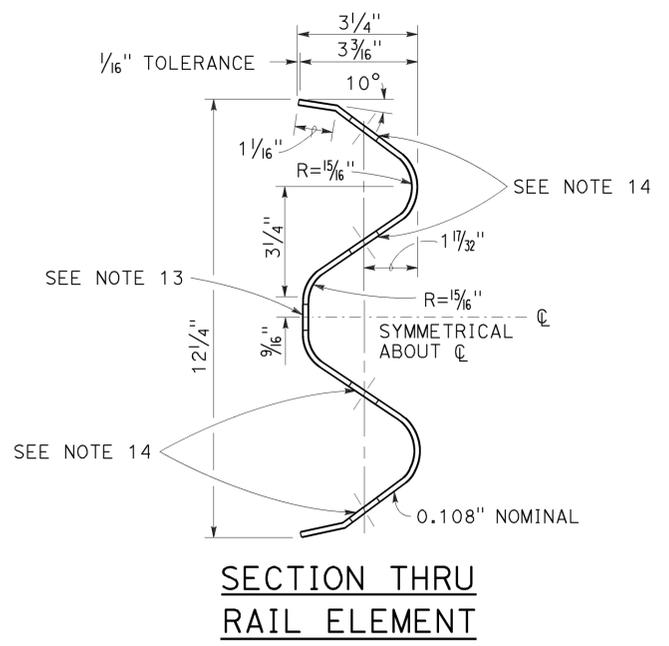
TO ACCOMPANY PLANS DATED 06-27-16



MIDWEST GUARDRAIL SYSTEM WITH STEEL POSTS AND NOTCHED WOOD OR NOTCHED RECYCLED PLASTIC BLOCKS



- Connect the overlapped end of the rail elements with 5/8" ϕ x 1 3/8" button head oval shoulder splice bolts inserted into the 7/32" x 1 1/8" slots and bolted together with 5/8" ϕ recessed hex nuts. Recess of hex nut points toward rail element. A total of 8 bolts and nuts are to be used at each rail splice connection.
- The ends of the rail elements are to be overlapped in the direction of traffic (see details).
- Where end cap is to be attached to the end of a rail element, a total of 4 of the above described splice bolts and nuts are to be used.



See Note 4

NOTES:

- For details of wood post installations, see Revised Standard Plan RSP A77L1.
- For details of standard hardware used to construct MGS, see Revised Standard Plan RSP A77M1.
- For details of steel posts and notched wood blocks used to construct MGS, see Revised Standard Plan RSP A77N2.
- For additional installation details, see Revised Standard Plan RSP A77N3.
- MGS post spacing to be 6'-3" center to center, except as otherwise noted.
- For MGS typical layouts, see the A77P, A77Q and A77R Series of Standard Plans.
- If railing is connected to terminal system end treatment, use 31" height terminal system end treatment.
- For MGS end anchor details, see Revised Standard Plans RSP A77S1 and RSP A77T2.
- For details of MGS transition to bridge railing, see Revised Standard Plan RSP A77U4.
- For additional details of MGS connection to bridge railings, see Revised Standard Plans RSP A77U1, RSP A77U2 and RSP A77V1.
- For dike positioning and MGS delineation details, see Revised Standard Plan RSP A77N4.
- Notched face of block faces steel post.
- Slotted hole for bolted connection of rail element to block and post. See "Section Thru Rail Element".
- Slotted holes for splice bolts to overlap ends of rail element. See "Section Thru Rail Element".
- Install posts in soil.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

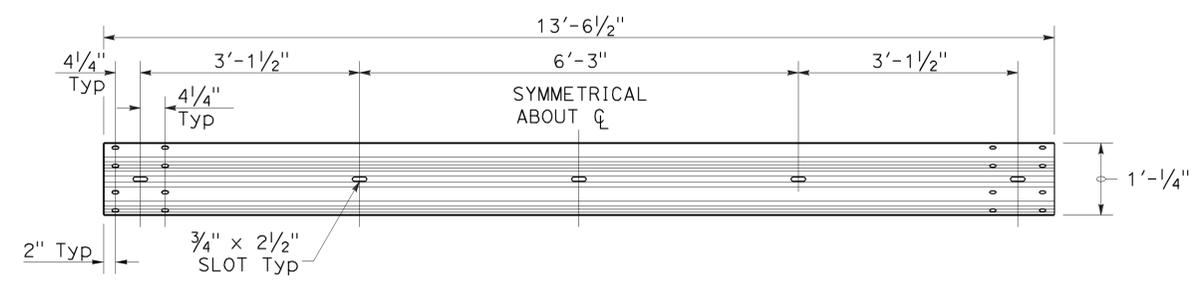
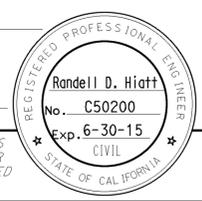
MIDWEST GUARDRAIL SYSTEM STANDARD RAILING SECTION (STEEL POST WITH NOTCHED WOOD OR NOTCHED RECYCLED PLASTIC BLOCK)

NO SCALE

RSP A77L2 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77L2

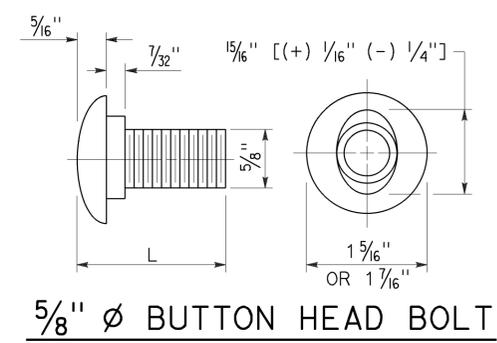
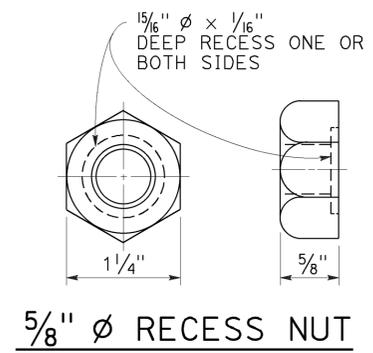
2010 REVISED STANDARD PLAN RSP A77L2



TYPICAL RAIL ELEMENT

NOTE:

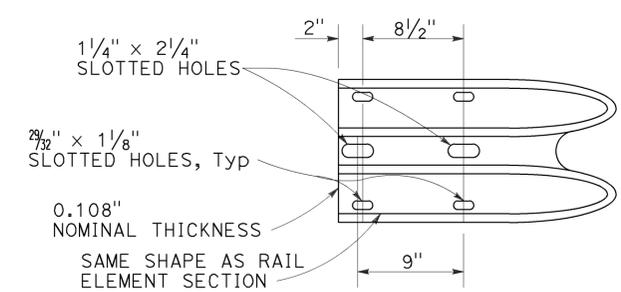
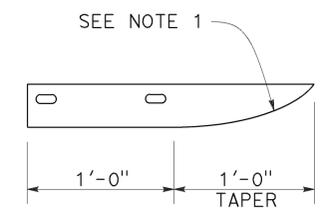
1. Slotted holes for splice bolts to overlap ends of rail element.



BUTTON HEAD BOLT

L	THREAD LENGTH
1 3/8"	FULL THREAD LENGTH
2"	FULL THREAD LENGTH
10"	4" Min THREAD LENGTH
18"	4" Min THREAD LENGTH
20"	4" Min THREAD LENGTH
22"	4" Min THREAD LENGTH
26"	4" Min THREAD LENGTH
36"	4" Min THREAD LENGTH
** 2 3/4"	2" Min THREAD LENGTH
** 19"	4" Min THREAD LENGTH

** For nested rail applications.



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM
STANDARD HARDWARE**

NO SCALE

RSP A77M1 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77M1

2010 REVISED STANDARD PLAN RSP A77M1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.8, 22.8	33	61

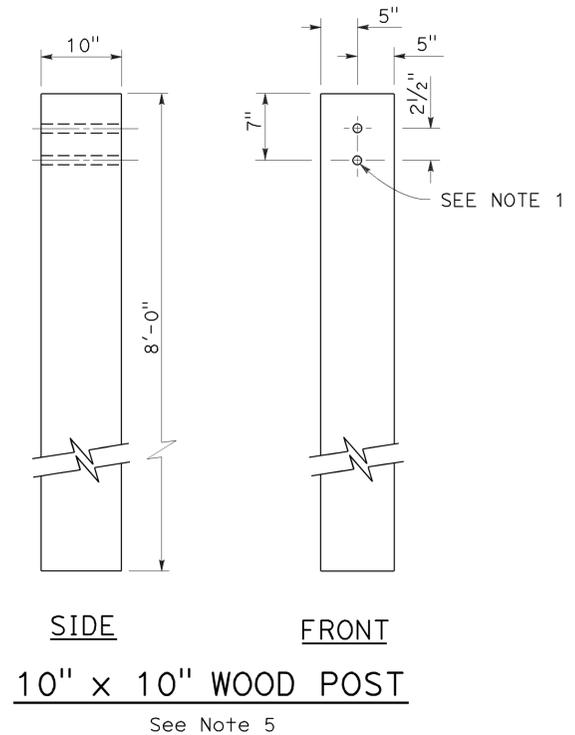
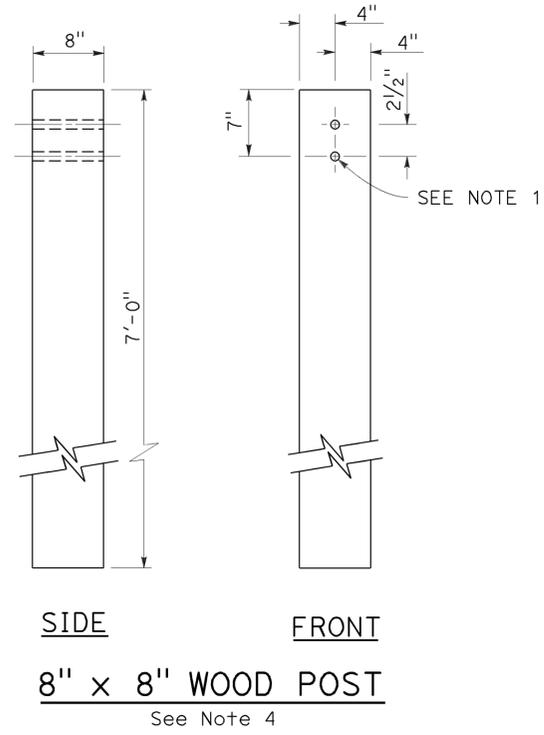
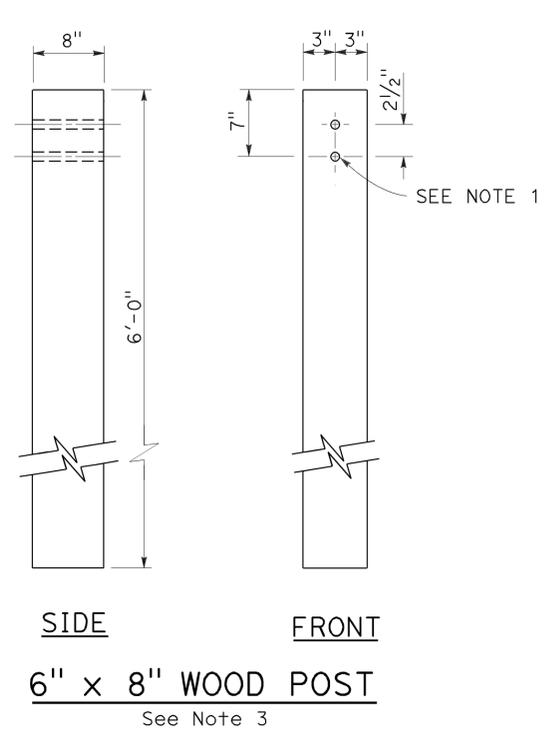
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

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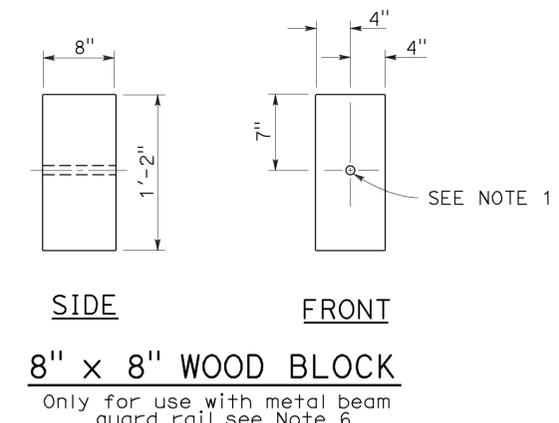
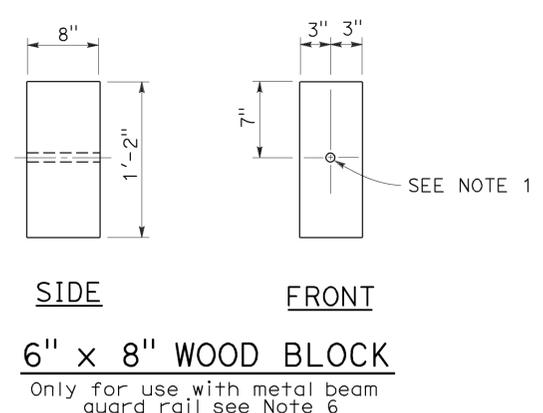
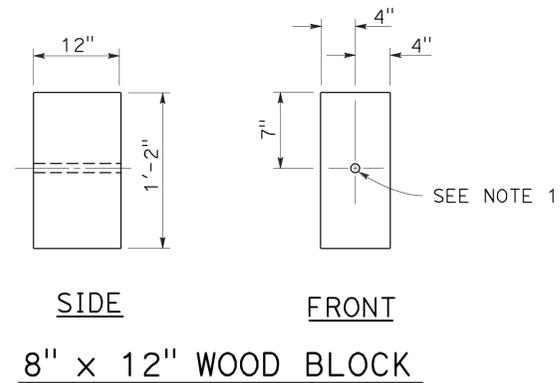
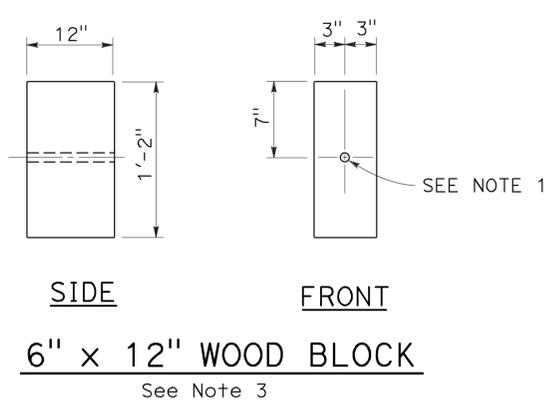
REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 06-27-16



NOTES:

1. All holes in wood posts and blocks shall be 3/4" Dia ± 1/16".
2. Dimensions shown for wood post are nominal.
3. This post and block combination used for standard line post sections of MGS.
4. This post and 8" x 12" block combination used for line post sections of MGS on narrow roadways.
5. This post and 8" x 12" block combination is typically used where strengthened line post sections of MGS are warranted to shield fixed objects.
6. See Revised Standard Plan RSP A77L3 for use of 6" x 8" and 8" x 8" wood blocks.



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM
WOOD POST AND
WOOD BLOCK DETAILS**

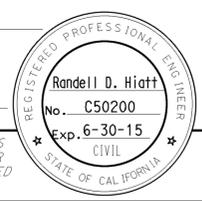
NO SCALE

RSP A77N1 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77N1

2010 REVISED STANDARD PLAN RSP A77N1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.8,22.8	34	61
<i>Randell D. Hiatt</i> REGISTERED CIVIL ENGINEER					
November 15, 2013 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>					

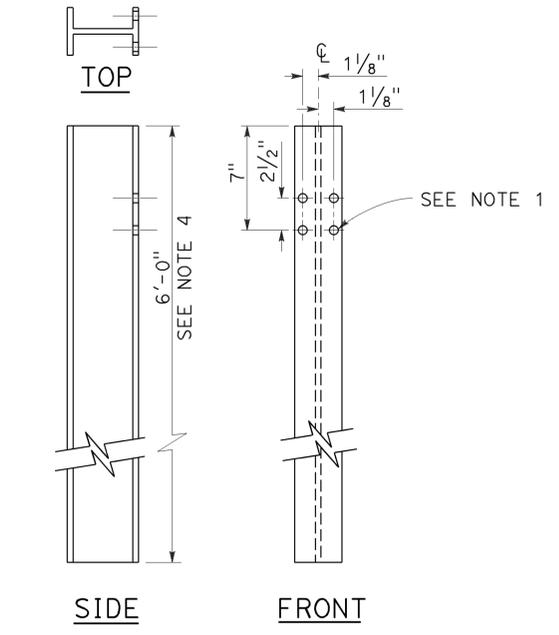


TO ACCOMPANY PLANS DATED 06-27-16

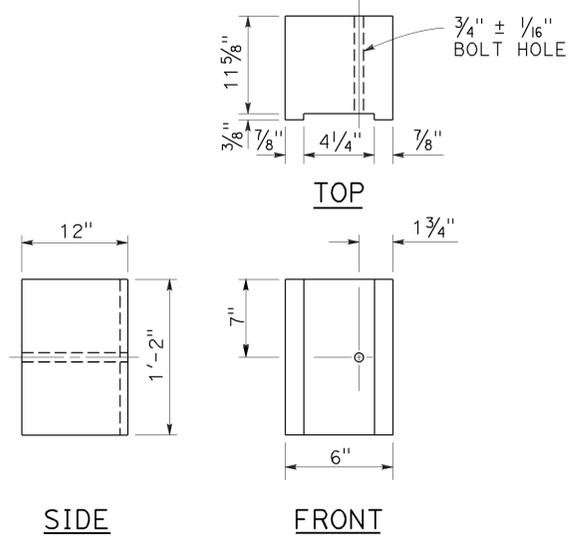
NOTES:

1. All holes in steel post shall be $\frac{13}{16}$ " Dia maximum.
2. Dimensions shown for wood block are nominal.
3. Notched face of block faces steel post.
4. 6'-0" length posts to be used for typical roadway installation. See Revised Standard Plan RSP A77N3.
5. See Revised Standard Plan RSP A77L3 for use of 6" x 8" and 8" x 8" notched wood blocks.
6. This post and 8" x 12" block combination to be used for line post sections of MGS on narrow roadways and where strengthened line post sections of MGS are warranted to shield fixed objects.

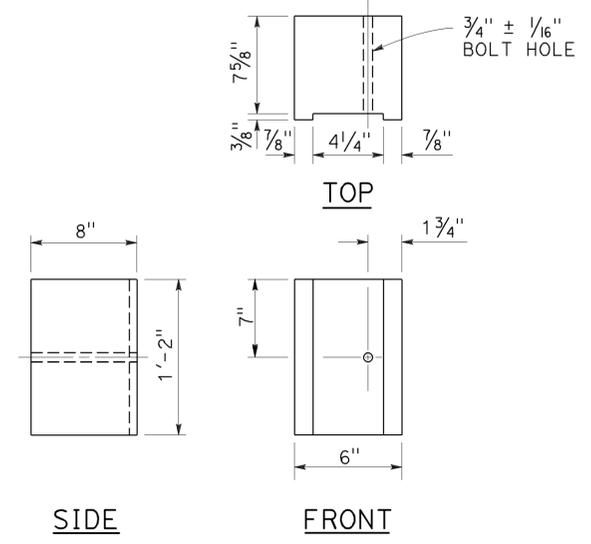
2010 REVISED STANDARD PLAN RSP A77N2



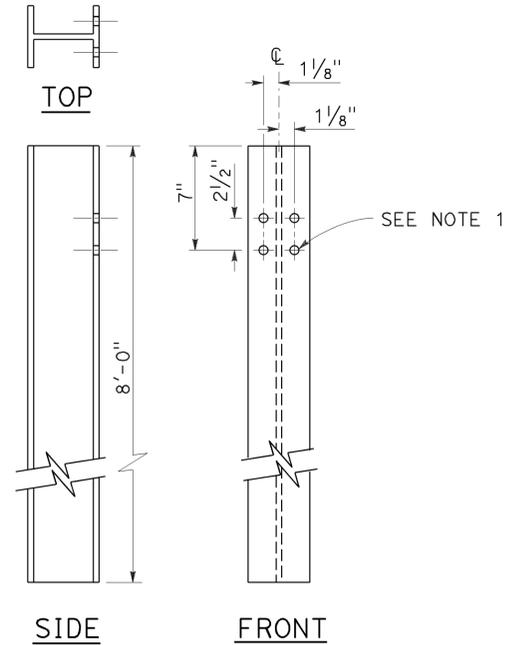
**W6 x 9 OR W6 x 8.5
STEEL POST**
See Note 4



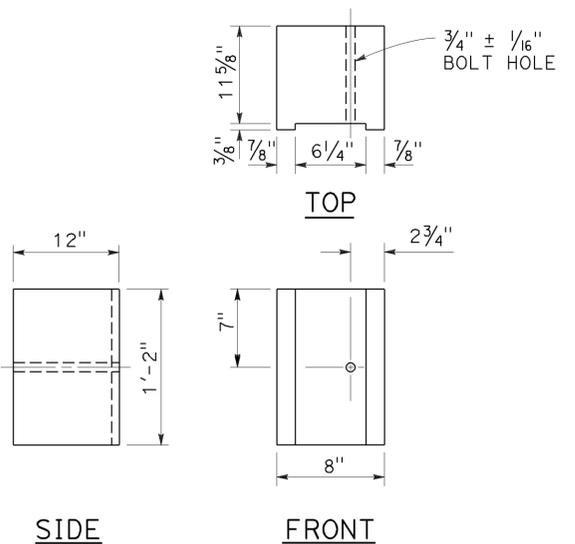
**6" x 12"
NOTCHED WOOD BLOCK**
See Notes 2 and 3



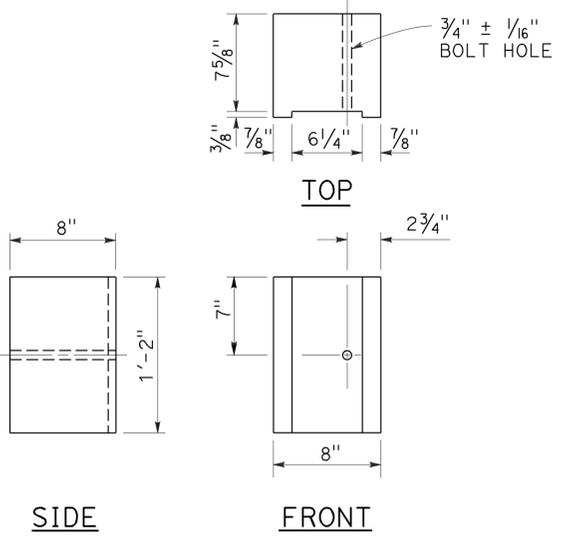
**6" x 8"
NOTCHED WOOD BLOCK**
Only for use with metal beam guard railing. See Note 5



**W6 x 15
STEEL POST**
See Note 6



**8" x 12"
NOTCHED WOOD BLOCK**
See Notes 2 and 3



**8" x 8"
NOTCHED WOOD BLOCK**
Only for use with metal beam guard railing. See Note 5

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**MIDWEST GUARDRAIL SYSTEM
STEEL POST AND
NOTCHED WOOD BLOCK DETAILS**

NO SCALE
RSP A77N2 DATED NOVEMBER 15, 2013 SUPERSEDES RSP A77N2
DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.
REVISED STANDARD PLAN RSP A77N2

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.8,22.8	35	61

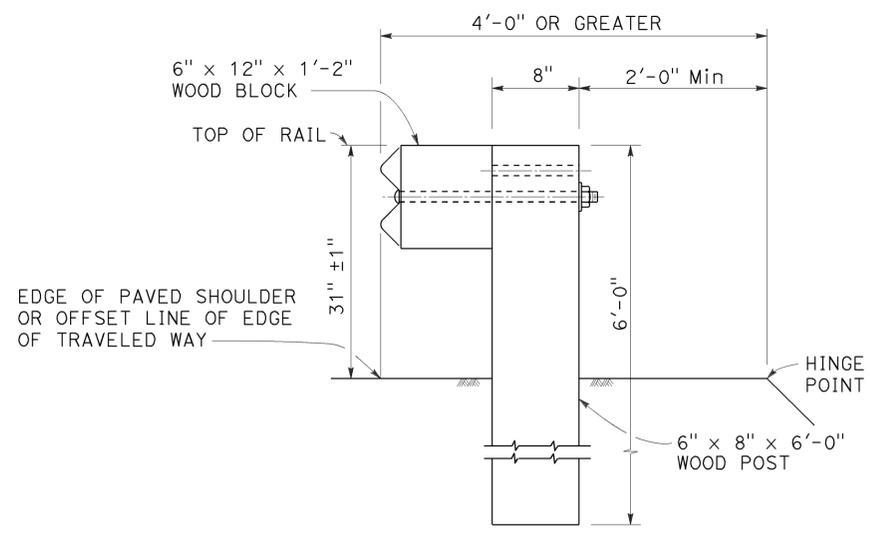
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

November 15, 2013
PLANS APPROVAL DATE

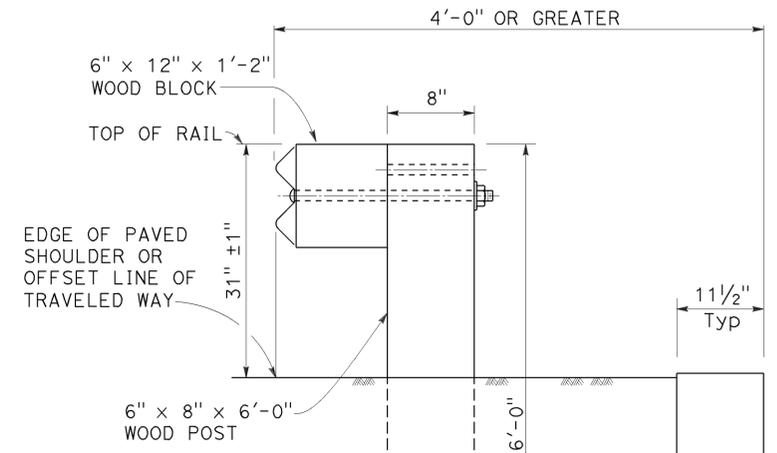
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NOV 15 2013
Randell D. Hiatt
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Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA

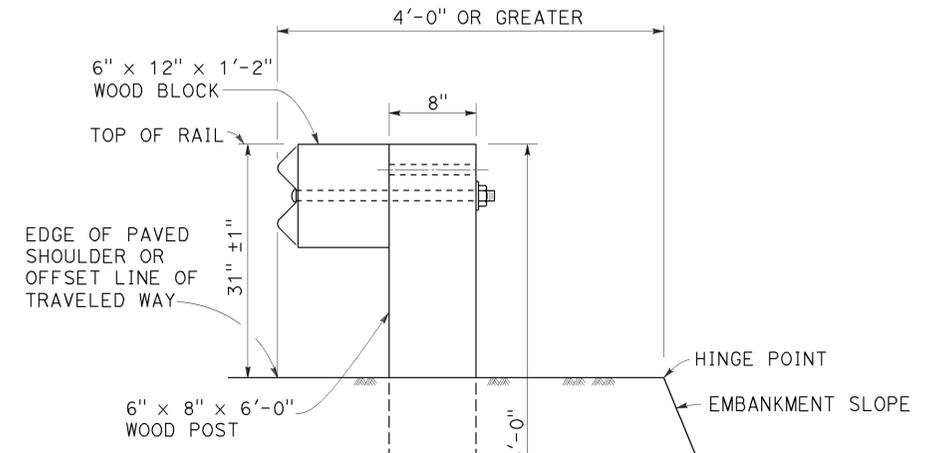
TO ACCOMPANY PLANS DATED 06-27-16



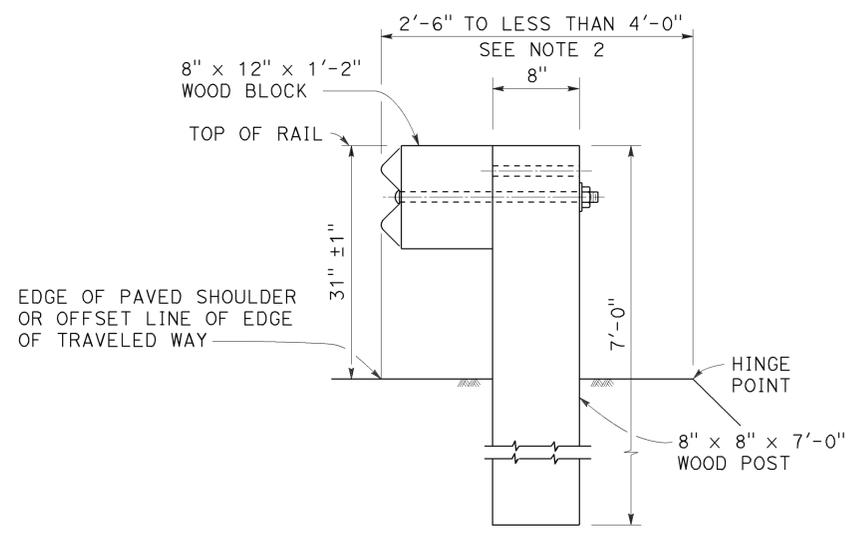
DETAIL A
TYPICAL ROADWAY
INSTALLATION
See Note 1



DETAIL C



DETAIL D



DETAIL B
NARROW ROADWAY
INSTALLATION
See Note 1

POST EMBEDMENT

INSTALLATION AT EARTH RETAINING WALLS

NOTES:

1. These installation details also applicable to steel line post installations. For Detail A, C, and D, where steel line post installations are constructed, W6 x 8.5 or W6 x 9 steel post, 6'-0" in length, with 6" x 12" x 1'-2" notched wood blocks or notched recycled plastic blocks are to be used in place of the size of wood post and wood block shown. For Detail B, where steel line post installations are constructed, W6 x 15 steel post, 8'-0" in length, with 8" x 12" x 1'-2" notched wood blocks or notched recycled plastic blocks are to be used in place of the size of wood post and wood block shown. For additional installation details, see Revised Standard Plan RSP A77L1 and RSP A77L2.
2. Where the distance between the face of the rail and the hinge point is less than 2'-6", see the Project Plans for special details.
3. For dike positioning with MGS installations, see Revised Standard Plan RSP A77N4.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

MIDWEST GUARDRAIL SYSTEM
TYPICAL LINE POST
EMBEDMENT AND
HINGE POINT OFFSET DETAILS

NO SCALE

RSP A77N3 DATED NOVEMBER 15, 2013 SUPERSEDES RSP A77N3
DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77N3

2010 REVISED STANDARD PLAN RSP A77N3

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.8,22.8	36	61

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

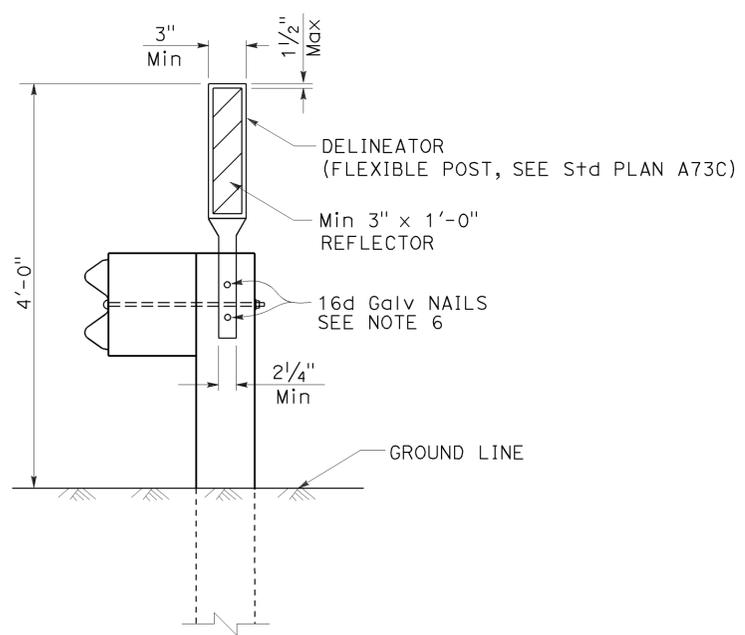
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Randell D. Hiatt
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STATE OF CALIFORNIA

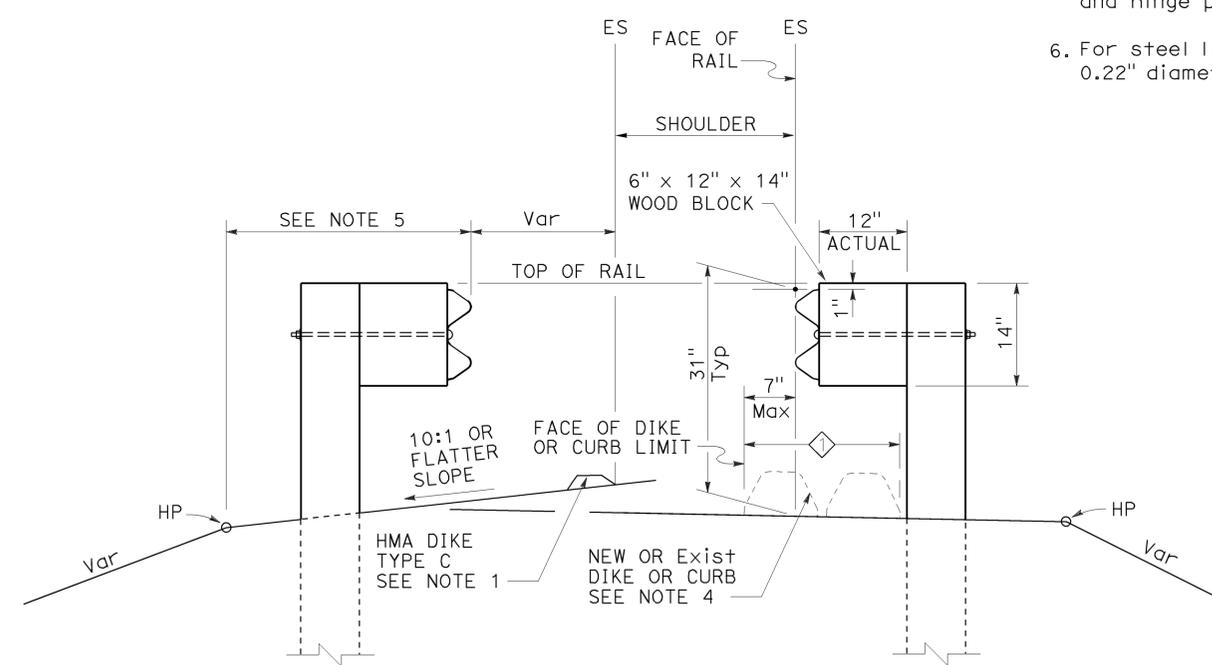
TO ACCOMPANY PLANS DATED 06-27-16

NOTES:

1. When necessary to place dike more than 7" in front of face of MGS, only Type C dike may be used. For dike details, see Revised Standard Plan RSP A87B.
2. For standard railing post embedment, see Revised Standard Plan RSP A77N3.
3. MGS delineation to be used where shown on the Project Plans.
4. When dike or curb is placed under MGS, the maximum height of the dike or curb shall be 6". Mountable dike should not be used. For dike and curb details, see Revised Standard Plans RSP A87A and RSP A87B.
5. For details of typical distance between the face of rail and hinge point, see Revised Standard Plan RSP A77N3.
6. For steel line posts, use 1/4" - 20 self-tapping screws in 0.22" diameter holes or 1/4" bolts in 3/32" diameter holes.



MGS DELINEATION
See Note 3



DIKE POSITIONING
See Note 1

◇ PERMISSIBLE DIKE OR CURB PLACEMENT AREA

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM
TYPICAL RAILING DELINEATION
AND DIKE POSITIONING DETAILS**

NO SCALE

RSP A77N4 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77N4

2010 REVISED STANDARD PLAN RSP A77N4

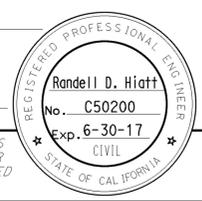
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.8,22.8	37	61

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

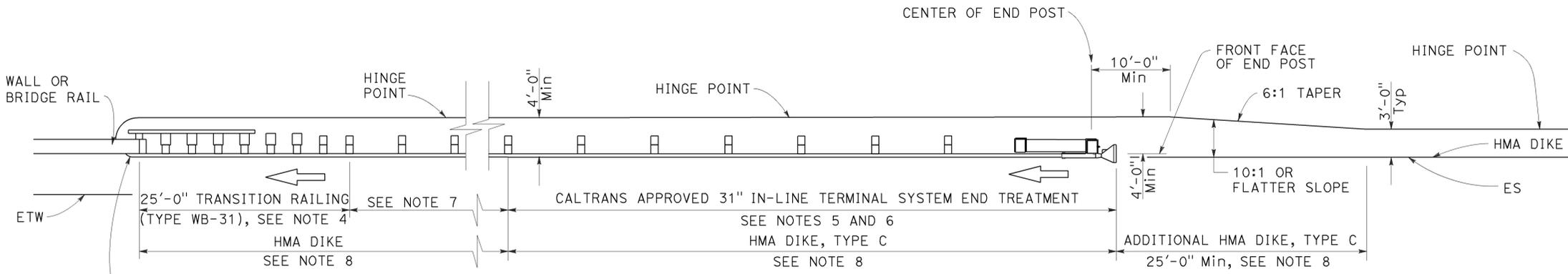
August 14, 2015
PLANS APPROVAL DATE

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TO ACCOMPANY PLANS DATED 06-27-16

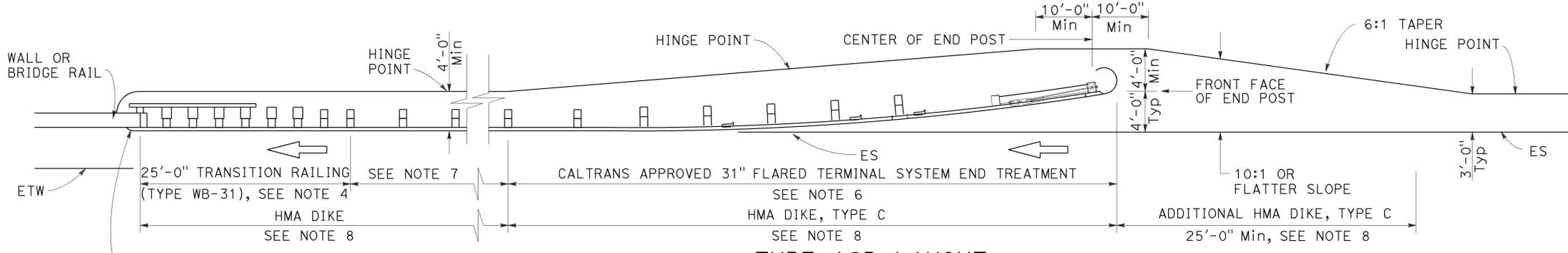


2010 REVISED STANDARD PLAN RSP A77Q1



TYPE 12A LAYOUT

(MGS installation at structure approach with 31" in-line end treatment at traffic approach end of railing)
See Note 9



TYPE 12B LAYOUT

(MGS installation at structure approach with 31" Flared end treatment at traffic approach end of railing)
See Note 9

NOTES:

- Line post, blocks and hardware to be used are shown on Revised Standard Plans RSP A77L1, RSP A77L2, RSP A77M1, RSP A77N1 and RSP A77N2.
- MGS post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 12" x 1'-2" wood blocks. W6 x 8.5 or W6 x 9 steel posts, 6'-0" in length, with 6" x 12" x 1'-2" notched wood blocks or plastic blocks may be used for 6" x 8" x 6'-0" wood posts with 6" x 12" x 1'-2" wood blocks where applicable and when specified.
- For Transition Railing (Type WB-31) details for Types 12A and 12B Layouts, see Revised Standard Plan RSP A77U4.
- 31" in-line terminal system end treatments are used where site conditions will not accommodate a 31" flared end treatment.
- The type of 31" terminal system end treatment to be used will be shown on the Project Plans.
- Dependent on site conditions (embankment height, side slopes, or other fixed objects), it may be advisable to construct additional guard railing (a length equal to multiples of 12'-6" with 6'-3" post spacing) between the transition railing and end treatment. A 12.5 degree angle of departure can be drawn on the Project Plans from the edge of traveled way through the outer most point of the fixed object to determine the additional length of railing needed.
- Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77N4 for dike positioning details.
- Type 12A or Type 12B Layouts are typically used:
 - To the right of approaching traffic, at the end of a structure, on two-lane conventional highway where the roadbed width across the structure is less than 40 feet.
 - To the left of approaching traffic, at the end of a structure, on two-lane conventional highway where the roadbed width across the structure is less than 40 feet.
 - To the right of approaching traffic at the end of each structure on multilane freeways or expressways with separate adjacent or parallel bridges.
 - To the right of approaching traffic at the end of the structure on multilane freeways or expressways with decked median on the bridge.
- See Revised Standard Plan RSP A77Q3 for typical layout used left of approaching traffic at the ends of each structure on multilane freeways or expressways with separate adjacent or parallel bridges.
- For additional details of typical connections to bridge rail, see Connection Detail AA on Revised Standard Plans RSP A77U1 and RSP A77U2 and Connection Detail FF on Revised Standard Plans RSP A77V1 and RSP A77V2.
- For additional details of a typical connection to walls or abutments, see Revised Standard Plan RSP A77U3.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM
TYPICAL LAYOUTS FOR
STRUCTURE APPROACH**

NO SCALE

RSP A77Q1 DATED AUGUST 14, 2015 SUPERSEDES RSP A77Q1 DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77Q1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.8,22.8	38	61

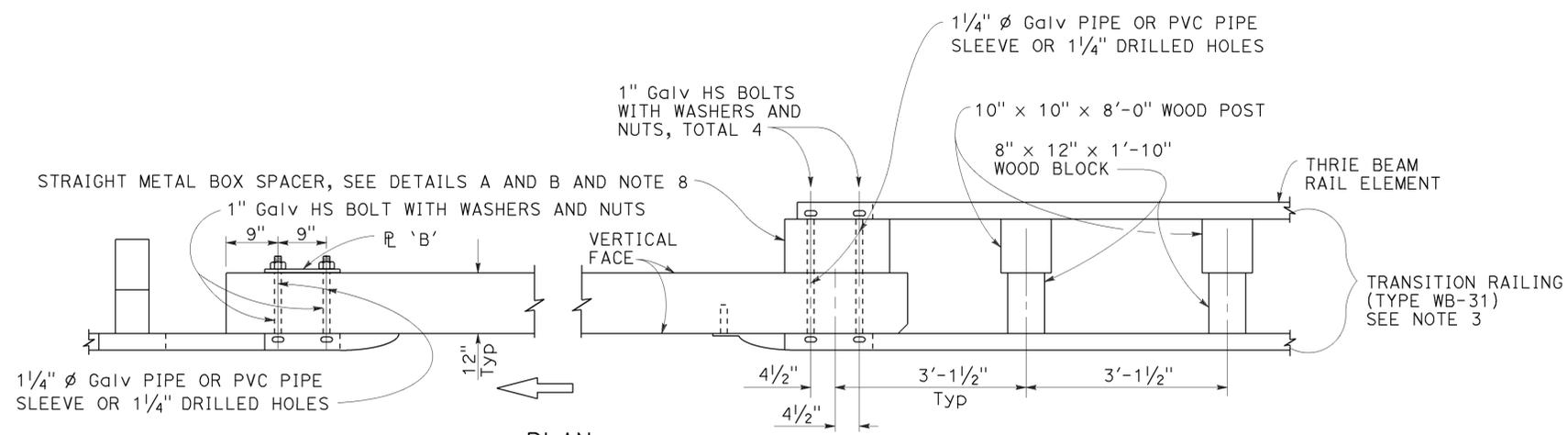
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

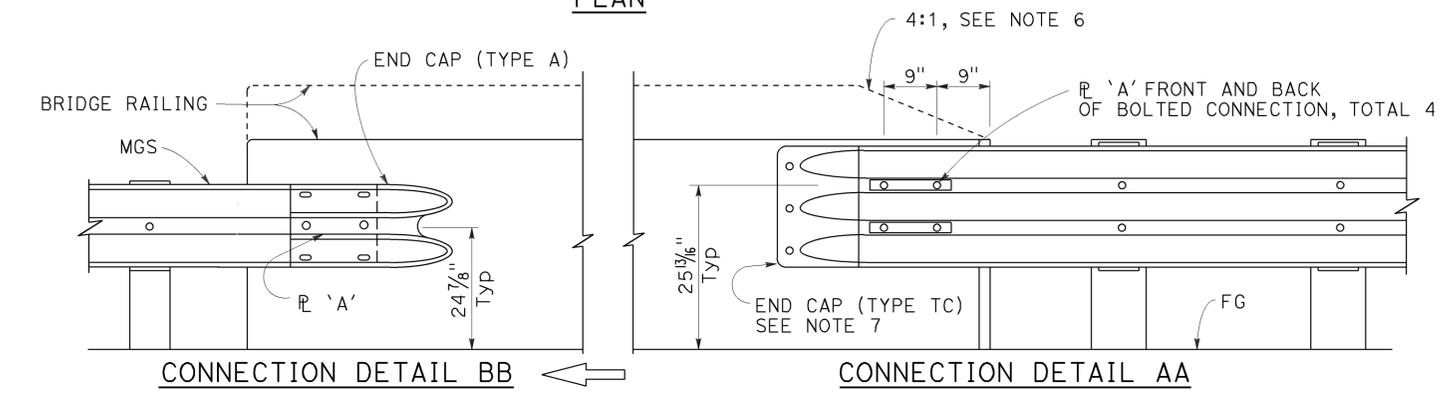
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REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED **06-27-16**



PLAN

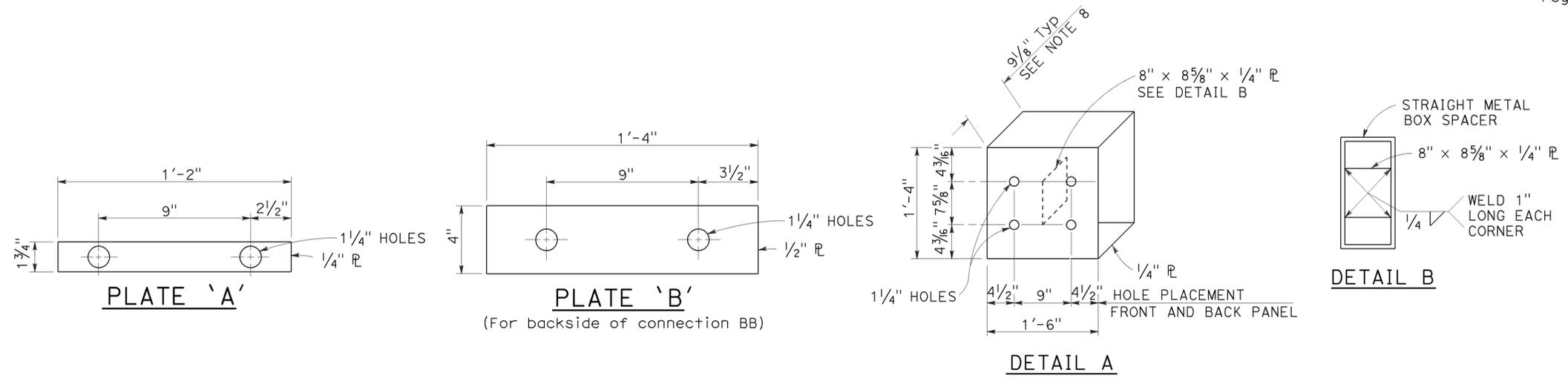


ELEVATION

MIDWEST GUARDRAIL SYSTEM CONNECTION TO BRIDGE RAILING WITHOUT SIDEWALK

NOTES:

1. See Revised Standard Plan RSP A77U2 for additional connection details to bridges without sidewalks.
2. Additional details of posts, blocks and hardware are shown on Revised Standard Plans RSP A77M1, RSP A77N1 and RSP A77N2.
3. For additional details of Transition Railing (Type WB-31), see Revised Standard Plan RSP A77U4. Transition Railing (Type WB-31) transitions the 12 gauge MGS railing section to a heavier gage nested thrie beam railing section which is connected to the concrete bridge railing.
4. For typical use of Connection Detail AA, see Layout Types 12A and 12B on Revised Standard Plan RSP A77Q1, Layout Types 12C and 12D on Revised Standard Plan RSP A77Q2, and Layout Type 12E on Revised Standard Plan RSP A77Q3.
5. For typical use of Connection Detail BB, see Layout Type 12D (structure departure railing connection) on Revised Standard Plan RSP A77Q2 and Layout Type 12DD on Revised Standard Plan RSP A77Q5.
6. Where the height of the bridge railing exceeds the height of the thrie beam railing by more than 1" at Connection Detail AA, taper the top of the end of the bridge railing at 4:1 to match the top elevation of the thrie beam rail.
7. For details of End Cap (Type TC), see Revised Standard Plan RSP A77U4.
8. See Revised Standard Plan RSP A77U4 for additional details regarding depth dimension for straight metal box spacer.



STRAIGHT METAL BOX SPACER

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
MIDWEST GUARDRAIL SYSTEM CONNECTIONS TO BRIDGE RAILINGS WITHOUT SIDEWALKS
DETAILS No. 1

NO SCALE

RSP A77U1 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

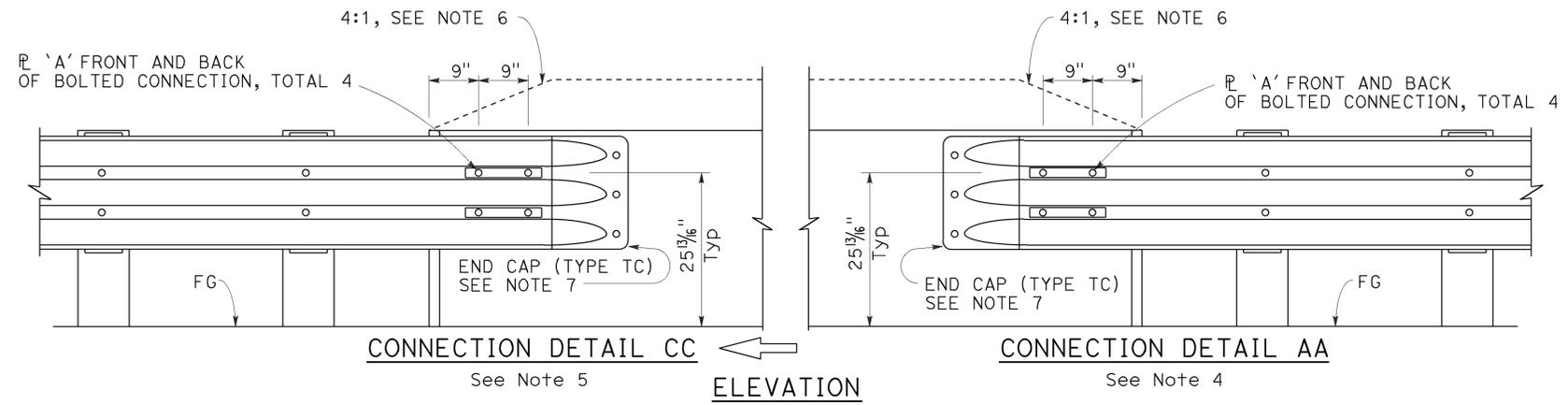
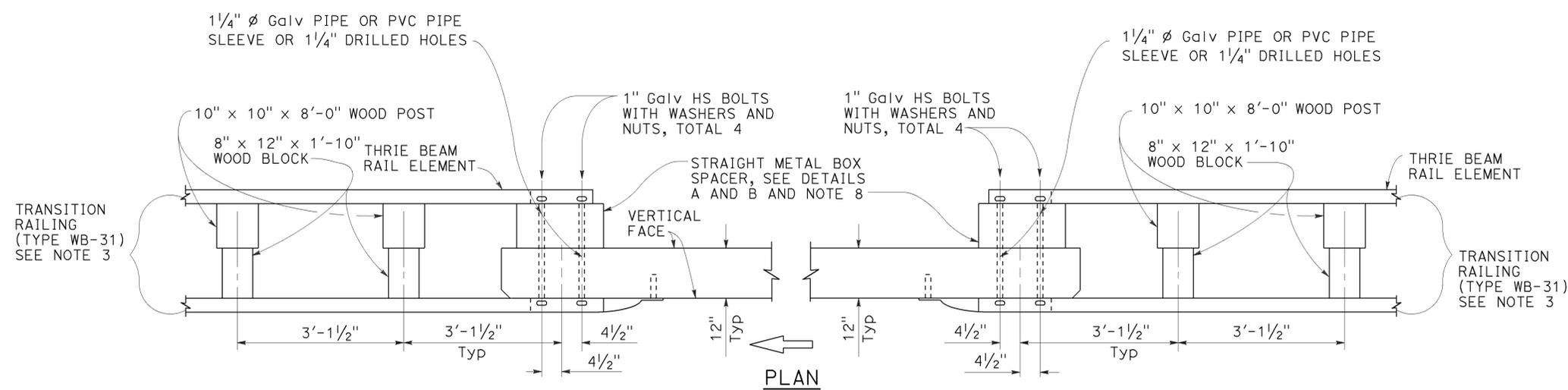
REVISED STANDARD PLAN RSP A77U1

2010 REVISED STANDARD PLAN RSP A77U1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.8,22.8	39	61
<i>Randell D. Hiatt</i> REGISTERED CIVIL ENGINEER					
July 19, 2013 PLANS APPROVAL DATE					
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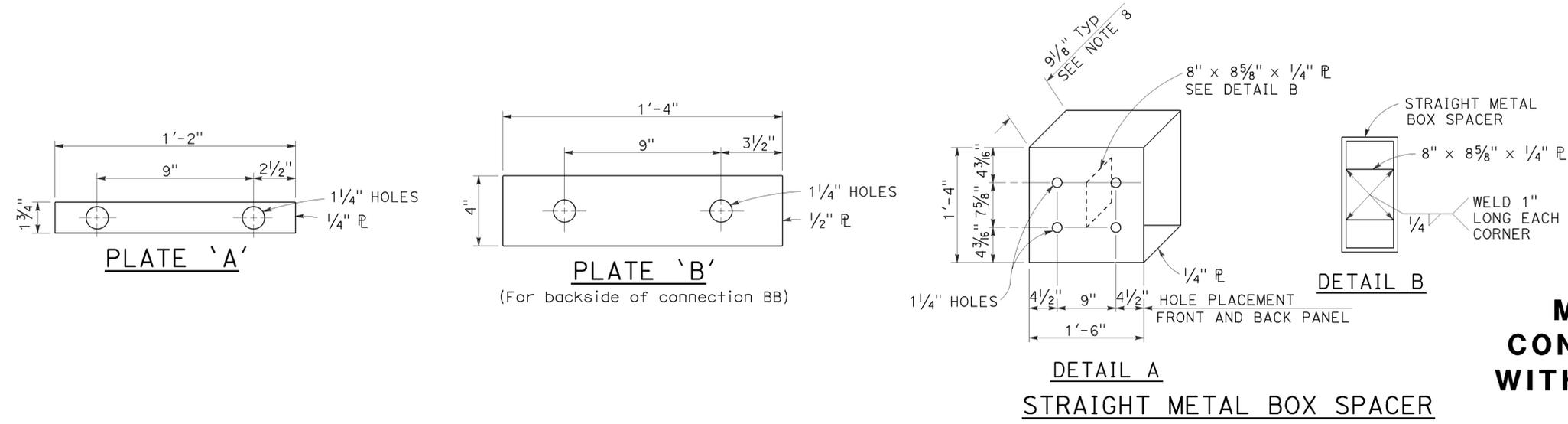
TO ACCOMPANY PLANS DATED **06-27-16**



MIDWEST GUARDRAIL SYSTEM CONNECTION TO BRIDGE RAILING WITHOUT SIDEWALK

NOTES:

1. See Revised Standard Plan RSP A77U1 for additional connection details to bridges without sidewalks.
2. Additional details of posts, blocks and hardware are shown on Revised Standard Plans RSP A77M1, RSP A77N1 and RSP A77N2.
3. For additional details of Transition Railing (Type WB-31), see Revised Standard Plan RSP A77U4. Transition Railing (Type WB-31) transitions the 12 gauge MGS railing section to a heavier gage nested thrie beam railing section which is connected to the concrete bridge railing.
4. For typical use of Connection Detail AA, see Layout Types 12A and 12B on Revised Standard Plan RSP A77Q1, Layout Types 12C and 12D on Revised Standard Plan RSP A77Q2, and Layout Type 12E on Revised Standard Plan RSP A77Q3.
5. For typical use of Connection Detail CC, see Layout Types 12AA and 12BB on Revised Standard Plan RSP A77Q4 and Layout Type 12CC on Revised Standard Plan RSP A77Q5.
6. Where the height of the bridge railing exceeds the height of the thrie beam railing by more than 1" at Connection Detail AA and connection Detail CC, taper the top of the end of the bridge railing at 4:1 to match the top elevation of the thrie beam railing.
7. For details of End Cap (Type TC), see Revised Standard Plan RSP A77U4.
8. See Revised Standard Plan RSP A77U4 for additional details regarding depth dimension for straight metal box spacer.



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**MIDWEST GUARDRAIL SYSTEM
 CONNECTIONS TO BRIDGE RAILINGS
 WITHOUT SIDEWALKS DETAILS No. 2**
 NO SCALE

RSP A77U2 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77U2

2010 REVISED STANDARD PLAN RSP A77U2

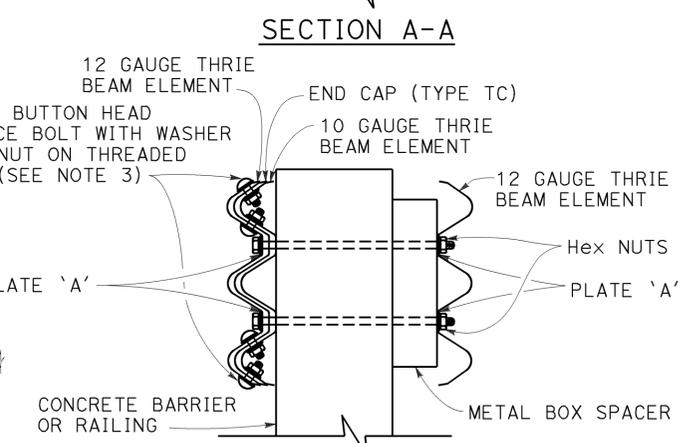
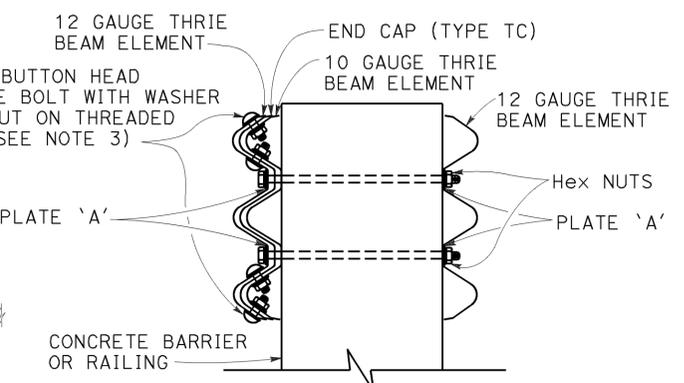
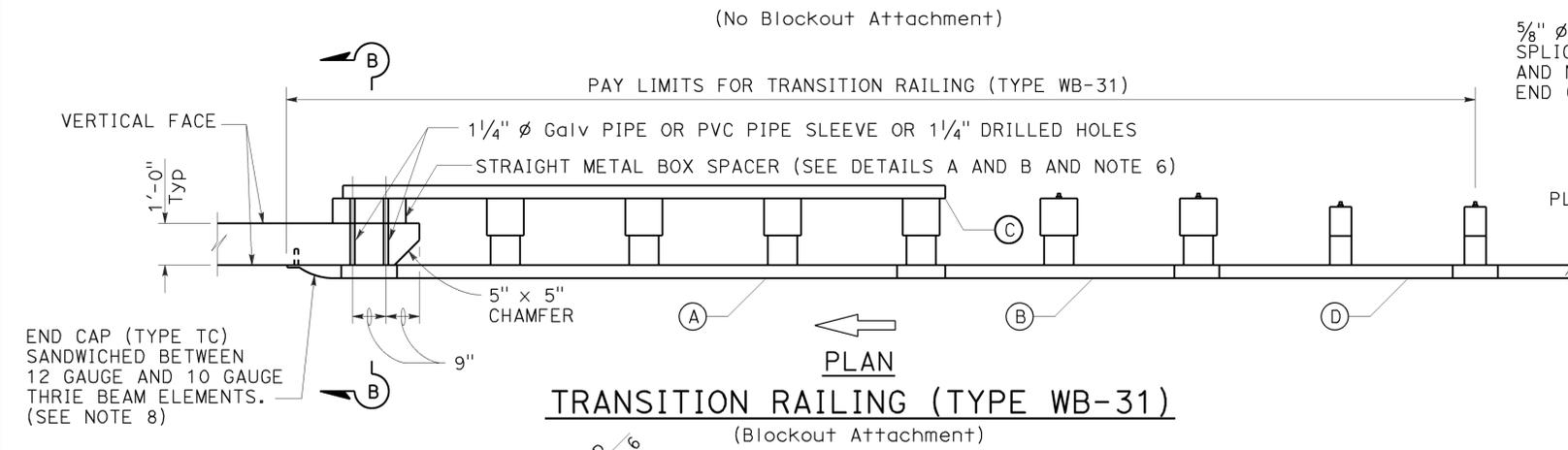
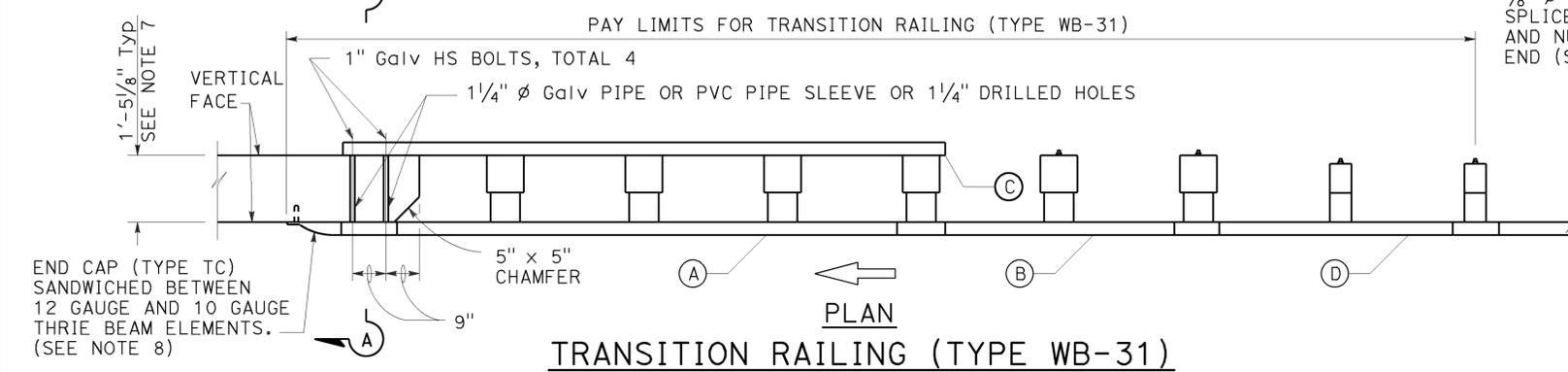
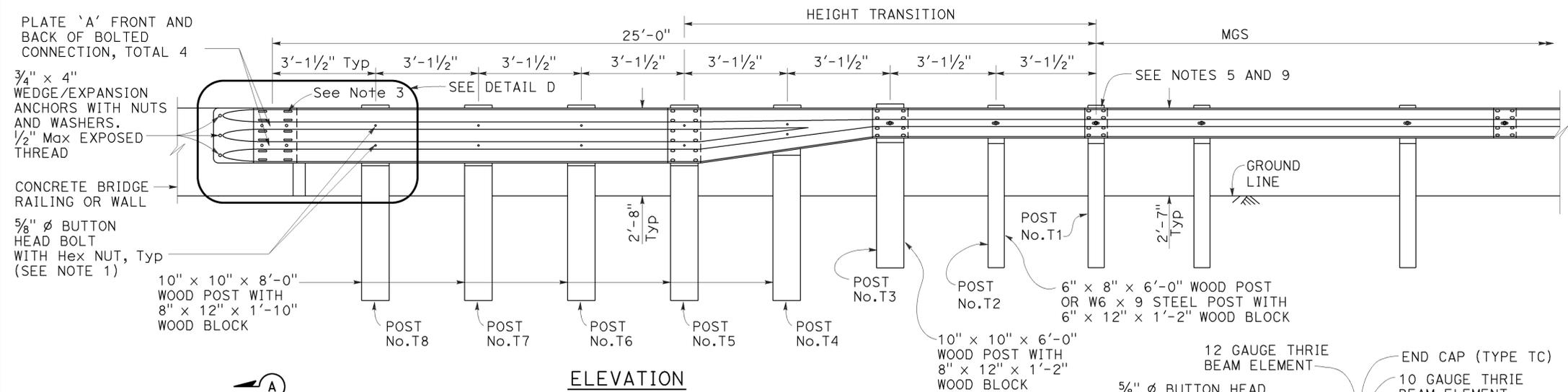
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.8,22.8	40	61

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

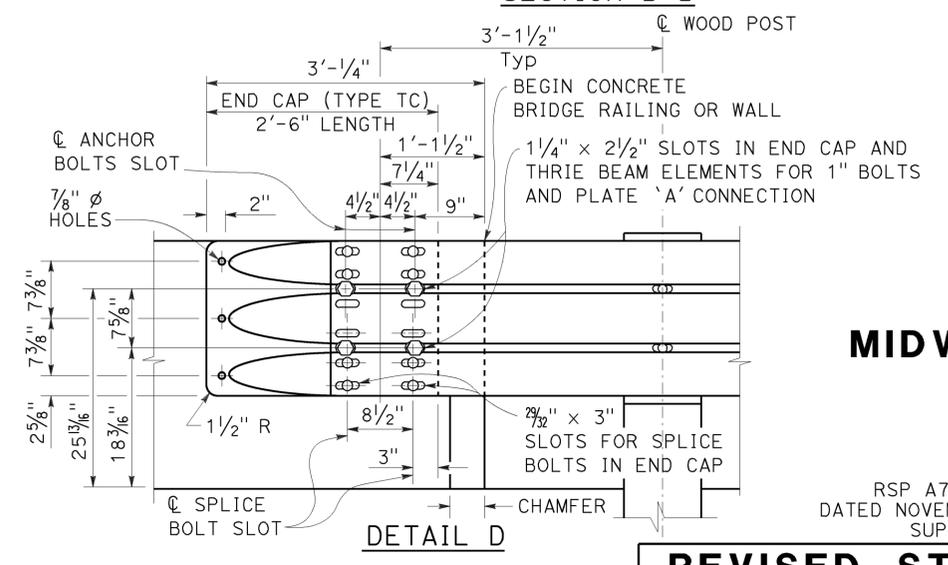
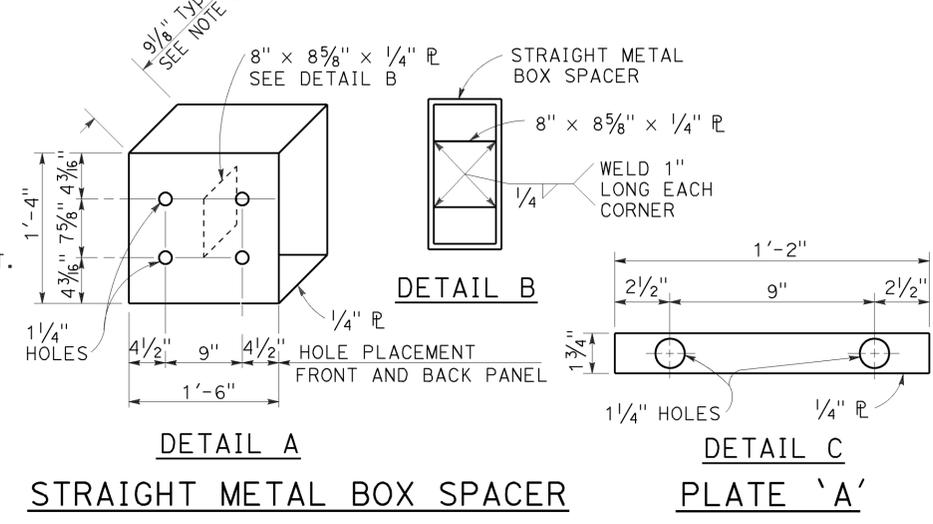
January 23, 2015
PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA



- LEGEND:**
- (A) NESTED THRIE BEAM ELEMENTS (ONE 12 GAUGE ELEMENT NESTED OVER ONE 10 GAUGE ELEMENT).
 - (B) ONE ASYMMETRICAL 10 GAUGE "W" BEAM TO THRIE BEAM ELEMENT.
 - (C) ONE 12 GAUGE THRIE BEAM ELEMENT.
 - (D) ONE 10 GAUGE "W" BEAM RAIL ELEMENT (7'-3 1/2" LENGTH)
- 10 GAUGE = 0.138" THICK
12 GAUGE = 0.108" THICK



- NOTES:** TO ACCOMPANY PLANS DATED **06-27-16**
1. Use 5/8" ϕ Button head bolts and hex nuts for connections to posts. No washer on rail face for bolted connections to post.
 2. The nested rail elements, end cap, and "W" beam to thrie beam element may be spliced together prior to bolting the elements to the wood post and concrete barrier or railing.
 3. Exterior splice bolt holes for rail element splices at Post No. T5 and the connection to the concrete barrier or railing shall be the standard 2 3/32" x 1 1/8" slot size. Interior splice bolt holes at these locations may be increased up to 1/4" ϕ . Only the top 4 and the bottom 4 splice bolts with washers and nuts are required for rail splices at Post No. T5 and the connection to the concrete barrier or railing.
 4. The top elevation of Posts No. T2 through No. T7 shall not project more than 1" above the top elevation of the rail element.
 5. Typically, the railing connected to Transition Railing (Type WB-31) will be either standard railing section of MGS with height transition ratio of 150:1 or a Caltrans approved 31" end treatment attached to Post No. T1.
 6. The depth of the metal box spacer varies from the 9/8" to 1 1/2" and is dependent on the width of the concrete railing or wall. The combined dimension for the depth of the metal box spacer plus the width of railing or wall is typically 21 1/8". Where the space between the backside of the concrete railing or wall and the rear thrie beam element is less than 1 1/2", metal plates similar to Plate 'A' are to be used as spacers.
 7. Where the width of the concrete railing or wall is greater than 17 1/8", wood blocks are to be used to fill the space created between the backside of Posts No. T5 through No. T8 and the rear thrie beam element. These wood blocks shall be 8" in width and 1'-2" in length. The dimension between the front thrie beam element and the rear thrie beam element is to match the width of the concrete railing or wall.
 8. End cap may be installed over 12 gauge and 10 gauge thrie beam elements where transition railing is installed on the departure end of bridge railing.
 9. Conform standard railing section height to 31" at Post No. T1 using height transition ratio of 150:1.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM
TRANSITION RAILING
(TYPE WB-31)**

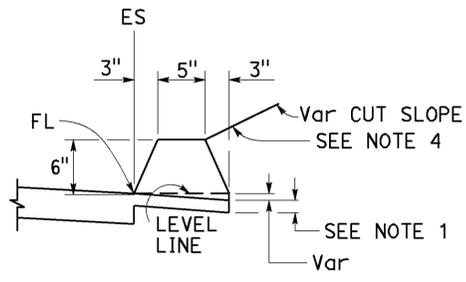
NO SCALE

RSP A77U4 DATED JANUARY 23, 2015 SUPERSEDES RSP A77U4 DATED NOVEMBER 15, 2013 AND RSP A77U4 DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

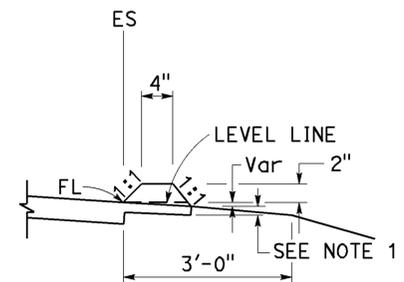
REVISED STANDARD PLAN RSP A77U4

2010 REVISED STANDARD PLAN RSP A77U4

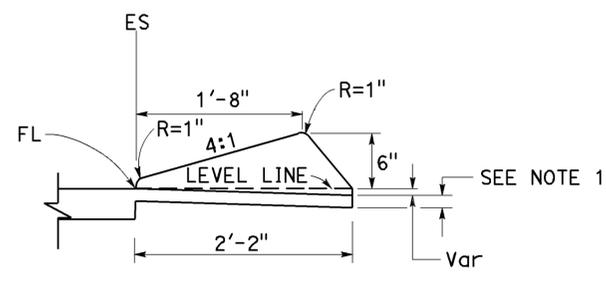
TO ACCOMPANY PLANS DATED 06-27-16



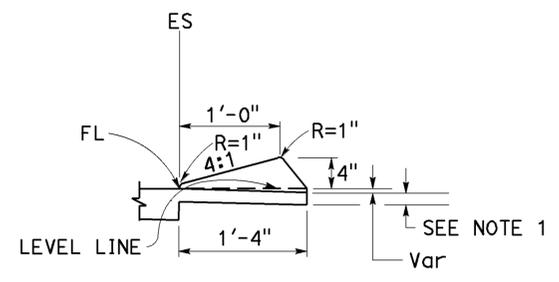
TYPE A
See Notes 3 and 5



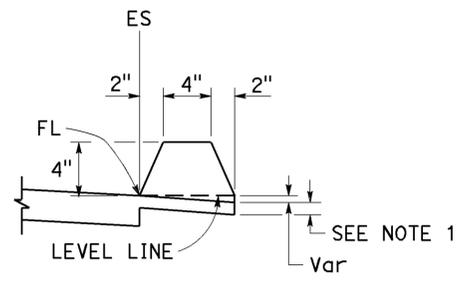
TYPE C



TYPE D

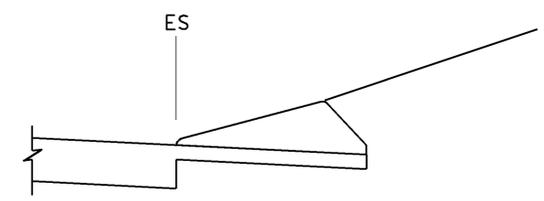


TYPE E

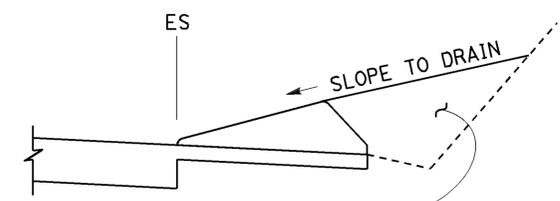


TYPE F
See Note 5

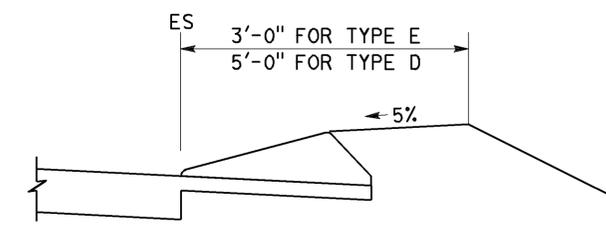
DIKES



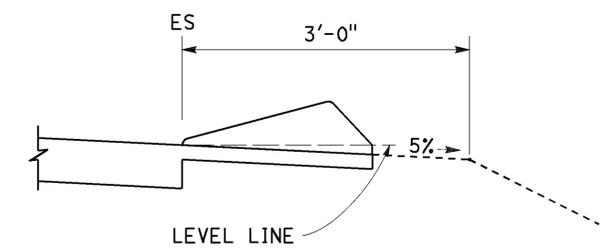
CASE C-1
Cut Slope



CASE C-2
Cut Slope



CASE F



CASE R
See Note 2

TYPE D AND E BACKFILL DETAILS

NOTES:

- For HMA shoulders only, extend top layer of HMA placed on the shoulder under dike with no joint at the ES. For projects with OGFC shoulders, do not extend OGFC under dike. See project plans for modified dike detail.
- Case R applies to retrofit only projects where restrictive conditions do not provide enough width for Case F backfill.
- Type A dike only to be used where restrictive slope conditions do not provide enough width to use Type D or Type E dike.
- Fill and compact with excavated material to top of dike.
- Use Type A or F dike, where dike is required with guardrail installations. See Revised Standard Plan RSP A77N4 for dike positioning details. See Revised Standard Plan RSP A77N3 for hinge point offsets with guardrail.

DIKE QUANTITIES

TYPE	CUBIC YARDS PER LINEAR FOOT
A	0.0135
C	0.0038
D	0.0293
E	0.0130
F	0.0066

Quantities based on 5% cross slope.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

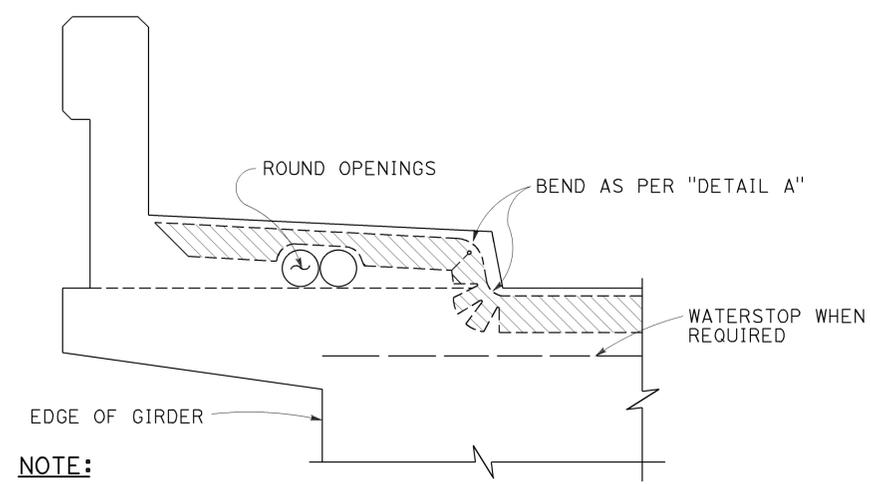
HOT MIX ASPHALT DIKES

NO SCALE

RSP A87B DATED JANUARY 15, 2016 SUPERSEDES RSP A87B DATED JULY 19, 2013 AND STANDARD PLAN A87B DATED MAY 20, 2011 - PAGE 120 OF THE STANDARD PLANS BOOK DATED 2010.

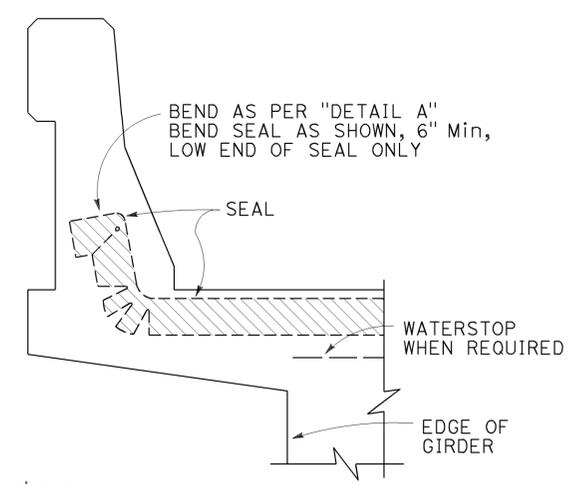
REVISED STANDARD PLAN RSP A87B

2010 REVISED STANDARD PLAN RSP A87B

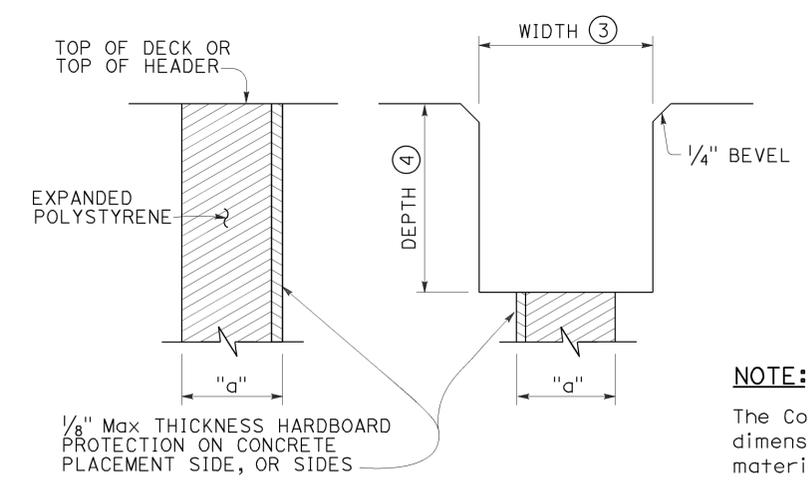


NOTE:
 Type "B" seal shown. Type "A" seals to conform to the general path of seal shown, cuts for bending not required. Bend type "A" seals 3" up into curb or barrier rail on only the low end of the seal.

CONCRETE BARRIER AND SIDEWALK



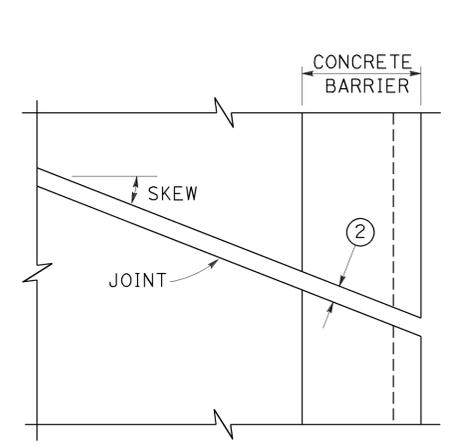
CONCRETE BARRIER



FORMING DETAIL SAWCUT DETAIL

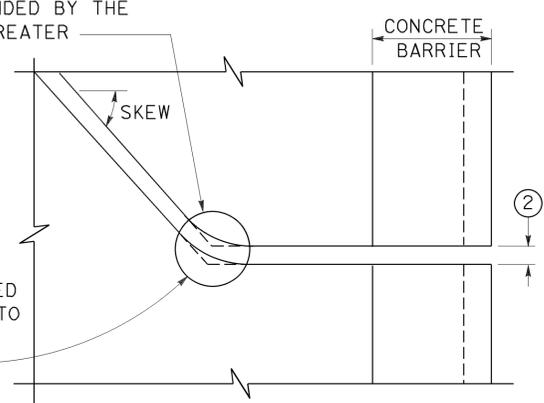
NOTE:
 The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

JOINT SEALS DETAILS



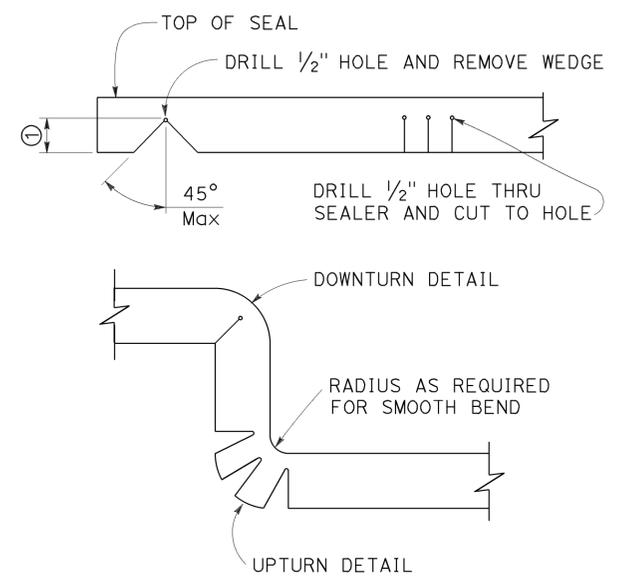
PLAN OF JOINT (SKEW ≤ 20°)

Min ϕ RADIUS TO BE 4 TIMES UNCOMPRESSED WIDTH OF SEAL OR AS RECOMMENDED BY THE MANUFACTURER, WHICHEVER IS GREATER



PLAN OF JOINT (SKEW > 20°)

IN LIEU OF SAW CUTTING, THIS AREA MAY BE BLOCKED OUT AND RECONSTRUCTED TO MATCH SAW CUTTING ON BOTH SIDES.

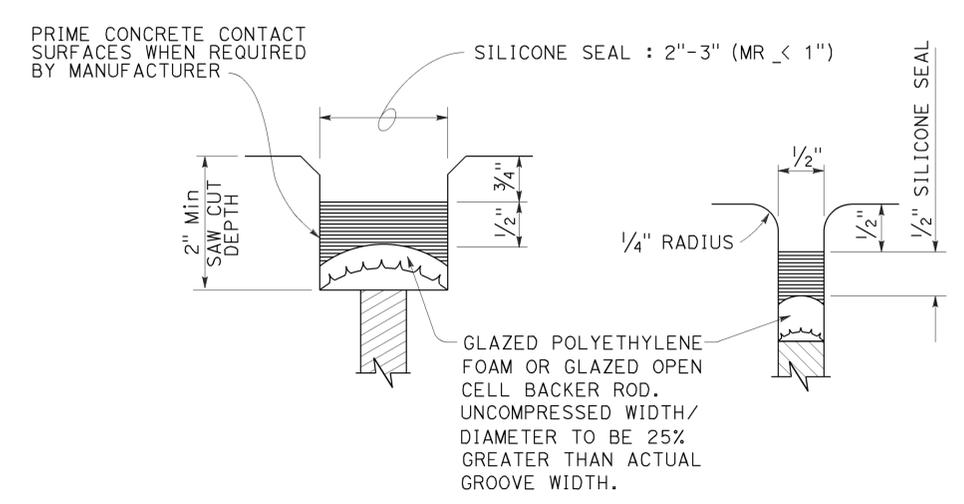


DETAIL A

- NOTES:**
- Make smooth cuts from the bottom of seal to 1/2" clear of top leaving at least one complete cell between the top of the cut and top of the seal. When necessary cut back of seal to clear conduit and round openings.
 - Opening in barrier to match width of sawn deck joint.
 - Sawcut groove widths shall be as ordered by the Engineer.
 - Depth of sawcut: Type A - Depth to be 2" minimum.
 Type B - Depth to be equal to or greater than the depth of seal measured along the contact surface, when compressed to minimum width position (W₂) plus dimensions shown.
 - MR (movement rating) as shown on other plan sheets.
 - Other depths must be approved by the Engineer.
 - A sidewalk joint shall be covered by an expansion joint armor.

DIMENSIONS "a" OF JOINT REQUIRED

MOVEMENT RATING (MR) (5)	BRIDGE TYPE	"a" DIMENSION		
		DECK CONCRETE PLACED		
		WINTER	FALL-SPRING	SUMMER
2"	ALL EXCEPT CIP/PS	1 1/2"	1 1/4"	3/4"
	CIP/PS	1 1/4"	1"	1/2"
1 1/2"	ALL EXCEPT CIP/PS	1 1/4"	1"	1/2"
	CIP/PS	1"	3/4"	1/2"
1"	ALL EXCEPT CIP/PS	1"	3/4"	1/2"
	CIP/PS	3/4"	1/2"	1/2"
1/2"	ALL EXCEPT CIP/PS	3/4"	3/4"	1/2"
	CIP/PS	1/2"	1/2"	1/2"

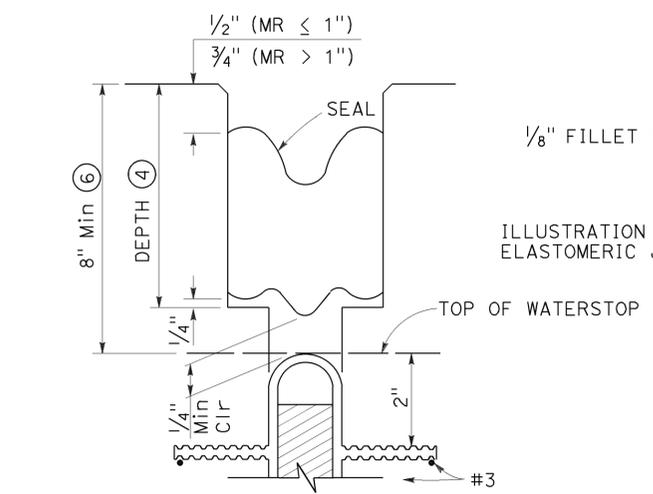


TYPE A SEAL

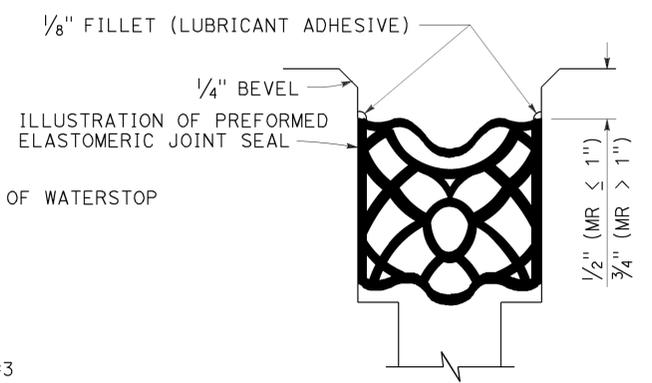
Movement rating : Silicone = 1" Max

TYPE AL SEAL

Longitudinal joints only



TYPE B JOINT SEAL IN MINIMUM WIDTH POSITION (W₂)



TYPE B SEAL

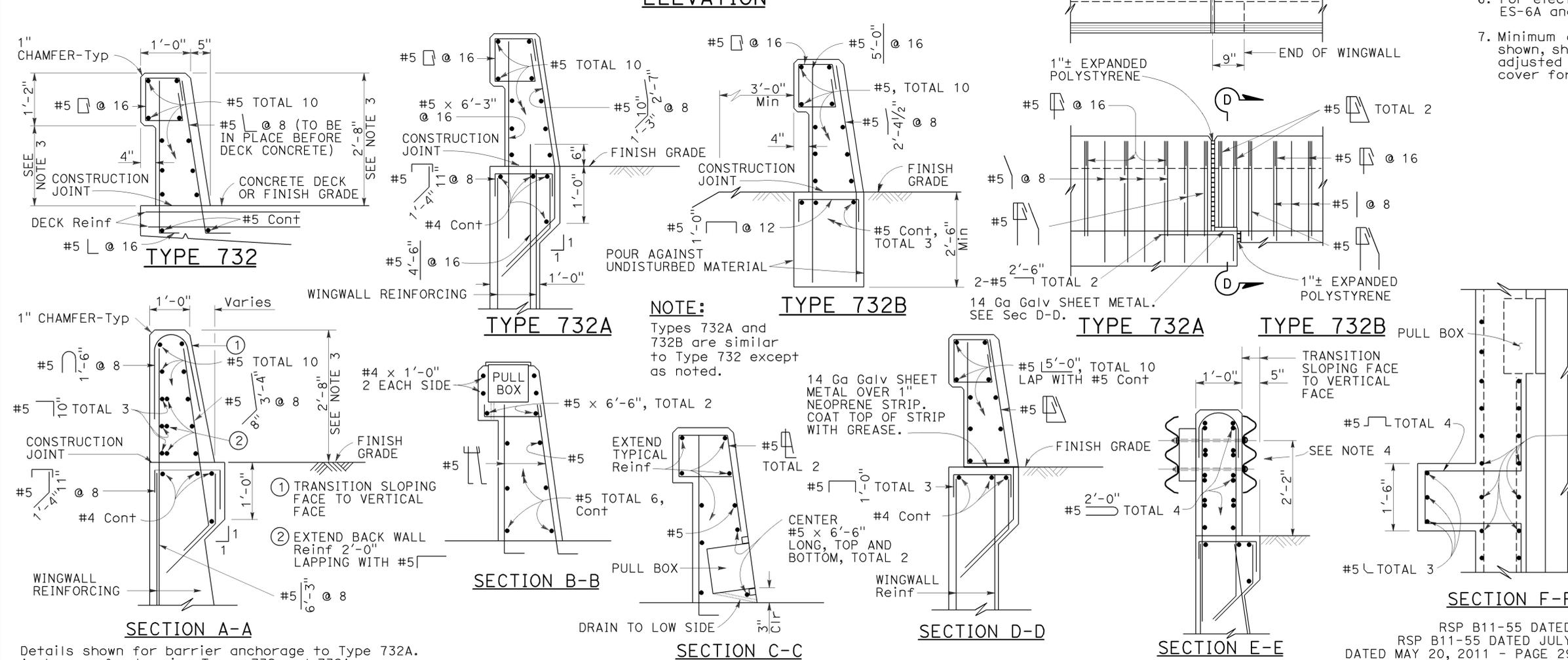
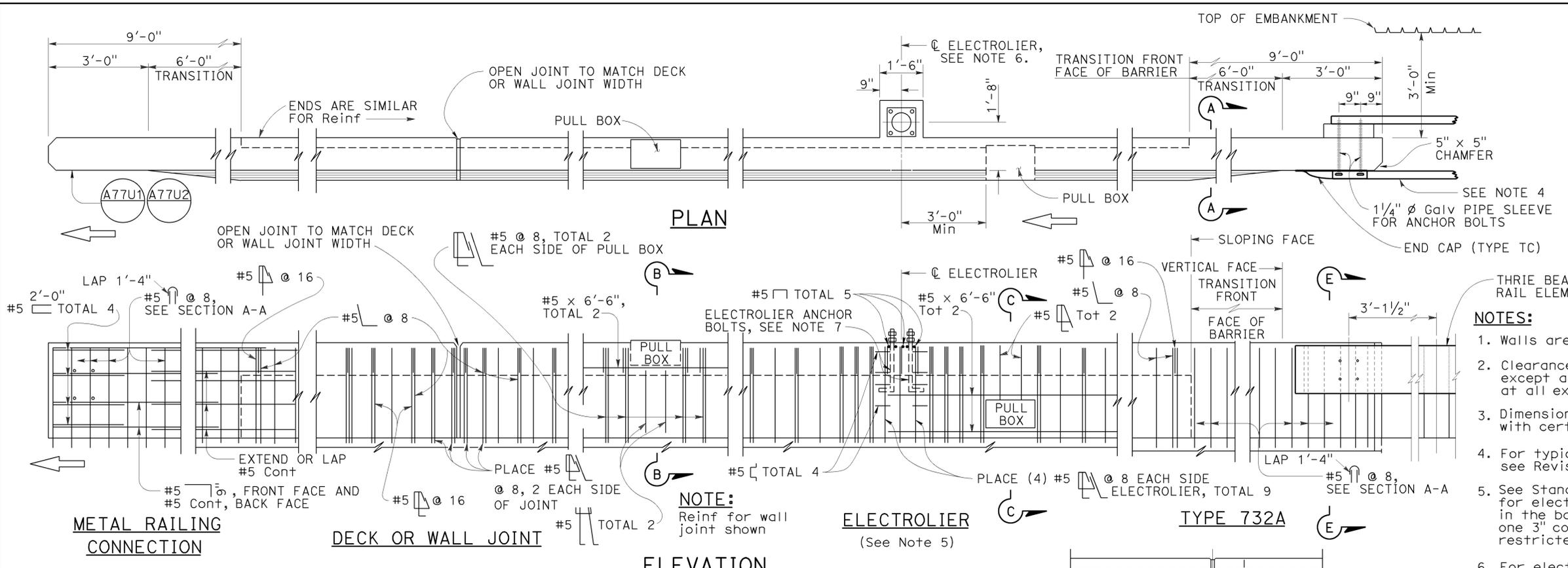
Movement Rating ≤ 2"

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
JOINT SEALS
(MAXIMUM MOVEMENT RATING = 2")

NO SCALE
 RSP B6-21 DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN B6-21 DATED MAY 20, 2011 - PAGE 283 OF THE STANDARD PLANS BOOK DATED 2010.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.8, 22.8	43	61

REGISTERED CIVIL ENGINEER
 November 15, 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
 Tillet Satter
 No. C42892
 Exp. 3-31-14
 CIVIL
 STATE OF CALIFORNIA



- NOTES:**
- Walls are to be backfilled before barrier is placed.
 - Clearance to reinforcing steel in barrier to be 1", except as noted. Longitudinal reinforcement to stop at all expansion joints.
 - Dimensions may vary with roadway cross slope and with certain thickness of surfacing. See Project Plans.
 - For typical metal railing connection details not shown, see Revised Standard Plans RSP A77U1 and RSP A77U2.
 - See Standard Plans ES-9A, ES-9B, ES-9C, ES-9D and ES-9E for electrical details. The maximum number of conduits in the barrier is limited to two 2" conduits along with one 3" conduit. When a 3" conduit is used, it is restricted to the base of the barrier.
 - For electrolier mounting details, See Standard Plans ES-6A and ES-6B.
 - Minimum concrete edge distance, to the reinforcing shown, shall be maintained. Edge distance may be adjusted to accommodate increase in concrete cover for architectural treatment.

Details shown for barrier anchorage to Type 732A. Anchorage for barrier Types 732 and 732A are similar to their respective details.

RSP B11-55 DATED NOVEMBER 15, 2013 SUPERSEDES RSP B11-55 DATED JULY 19, 2013 AND STANDARD PLAN B11-55 DATED MAY 20, 2011 - PAGE 297 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP B11-55

2010 REVISED STANDARD PLAN RSP B11-55

TO ACCOMPANY PLANS DATED 06-27-16

TABLE 1

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

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

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

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

TABLE 2

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

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

TABLE 3

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

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

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM TABLES FOR LANE AND RAMP CLOSURES

NO SCALE

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

2010 REVISED STANDARD PLAN RSP T9

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.8,22.8	45	61

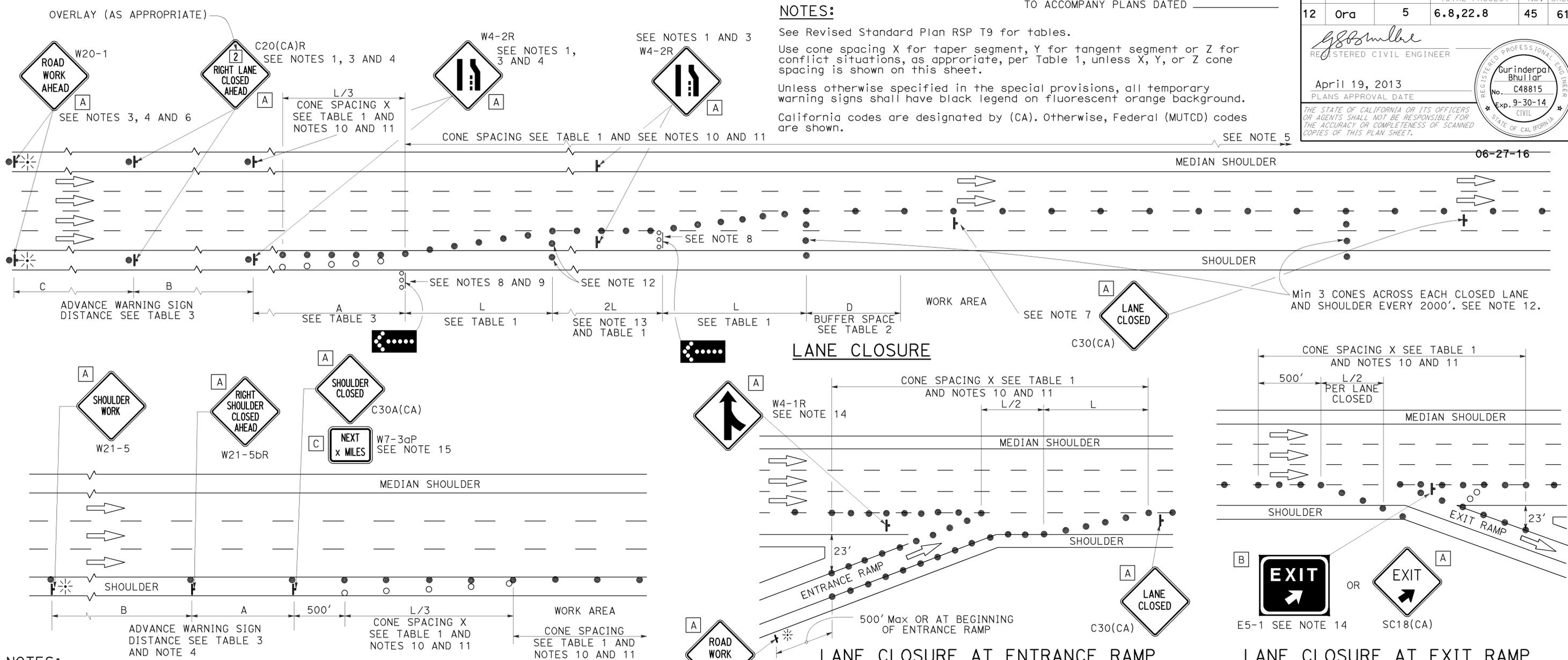
REGISTERED CIVIL ENGINEER
 April 19, 2013
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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

TO ACCOMPANY PLANS DATED _____

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:

- 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 closures.
- Duplicate sign installations are not required:
 - On opposite shoulder if at least one-half of the available lanes remain open to traffic.
 - In the median if the width of the median shoulder is less than 8' and the outside lanes are to be closed.
- 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.

SHOULDER CLOSURE

- 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 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.

LANE CLOSURE AT ENTRANCE RAMP

- 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.
- 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.
- Unless otherwise specified in the special provisions, the E5-1 or SC18(CA) and W4-1 signs shall be used as shown.
- A W7-3aP "NEXT _____ MILES" plaque must be used if the shoulder closure extends beyond the distance that can be perceived by road users.

LEGEND

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

SIGN PANEL SIZE (Min)

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

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON FREEWAYS AND EXPRESSWAYS

NO SCALE
 RSP T10 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T10 DATED MAY 20, 2011 - PAGE 237 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T10

2010 REVISED STANDARD PLAN RSP T10

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.8,22.8	46	61

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

April 19, 2013
 PLANS APPROVAL DATE

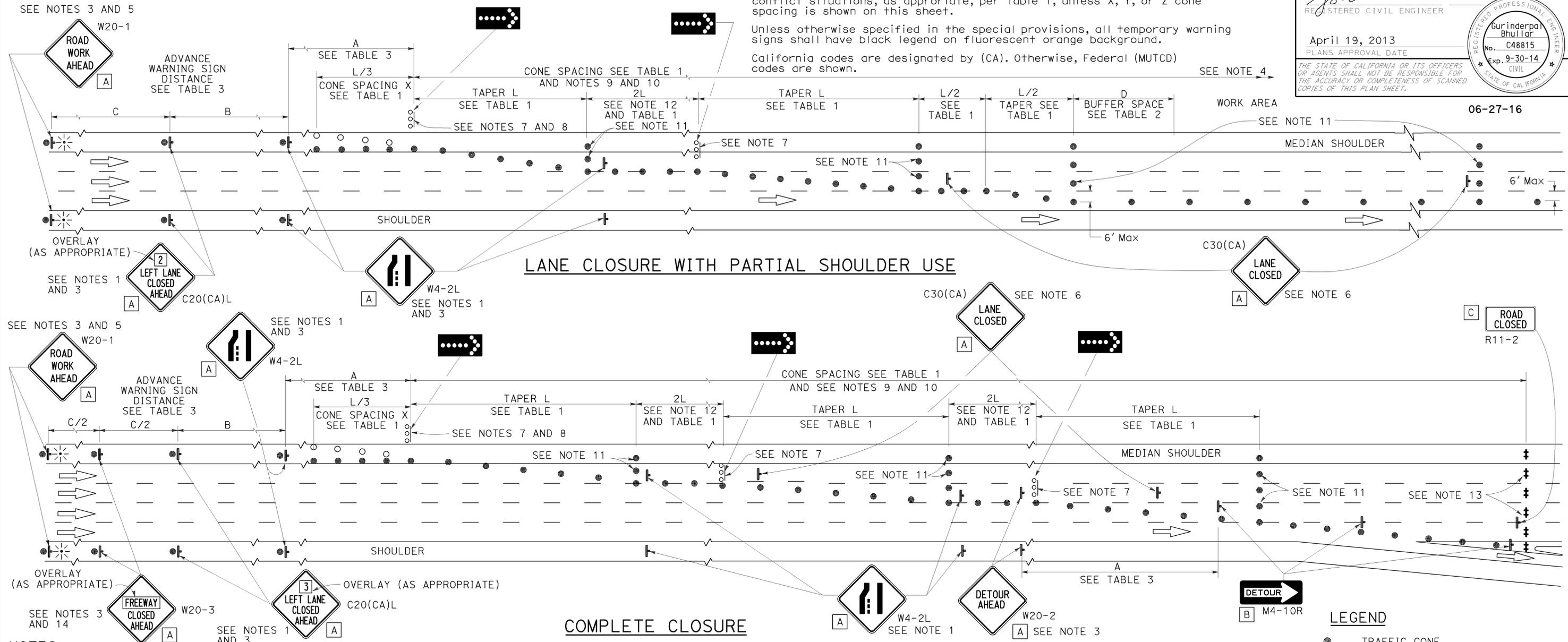
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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.



- 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**

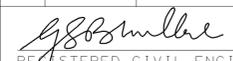
NO SCALE

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

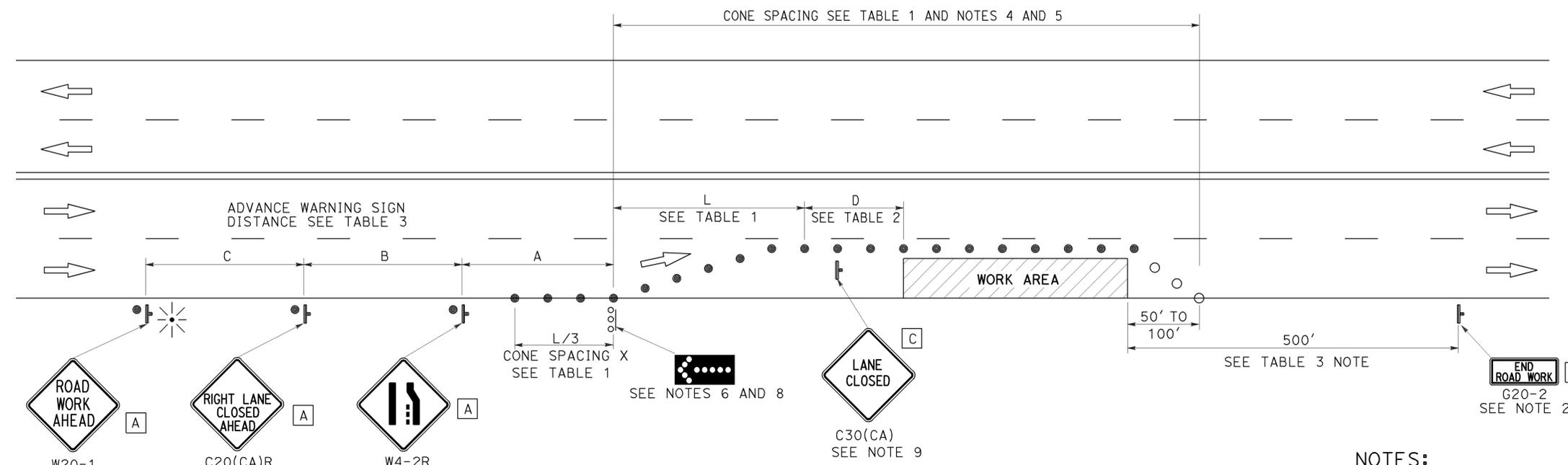
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.8,22.8	47	61


 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.

TO ACCOMPANY PLANS DATED 06-27-16

2010 REVISED STANDARD PLAN RSP T11



TYPICAL LANE CLOSURE

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.

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.

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

TYPICAL RAMP CLOSURES

SIGN PANEL SIZE (Min)

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

LEGEND

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	5	6.8,22.8	48	61

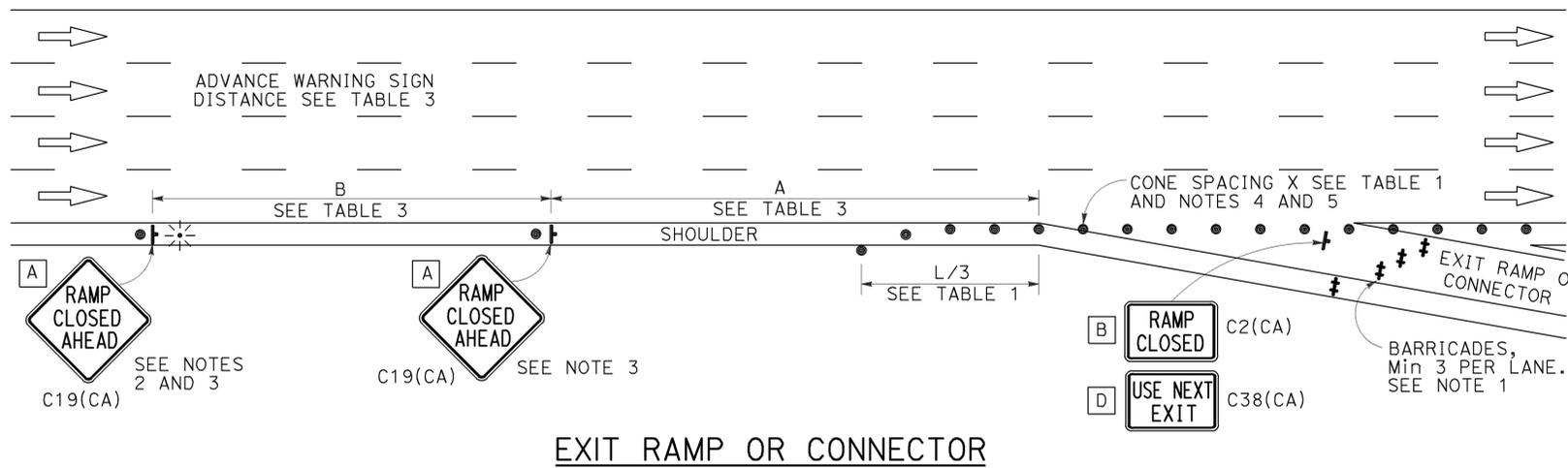
Gurinderpal Bhullar
 REGISTERED CIVIL ENGINEER
 April 19, 2013
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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

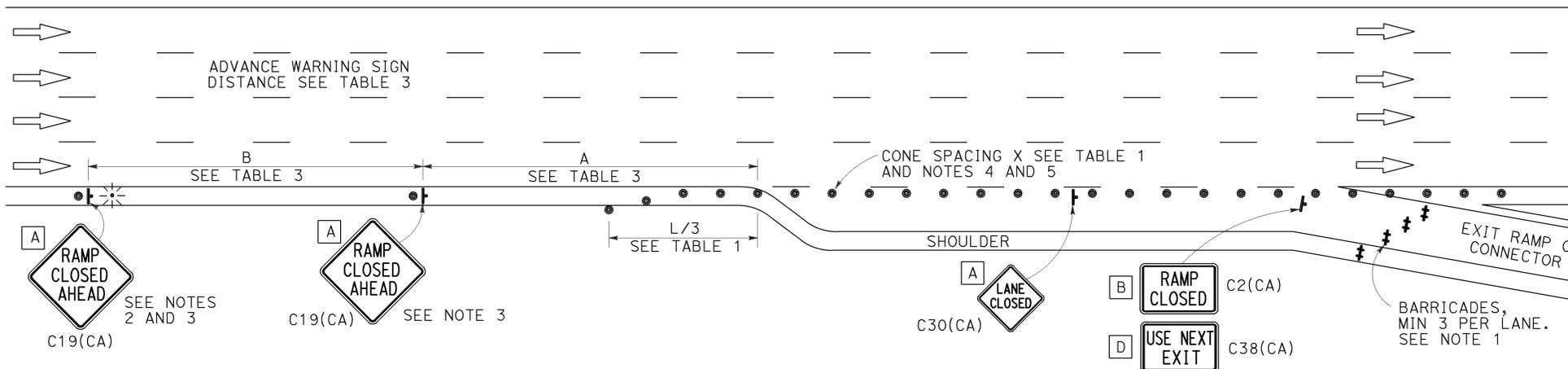
TO ACCOMPANY PLANS DATED **06-27-16**

NOTES:

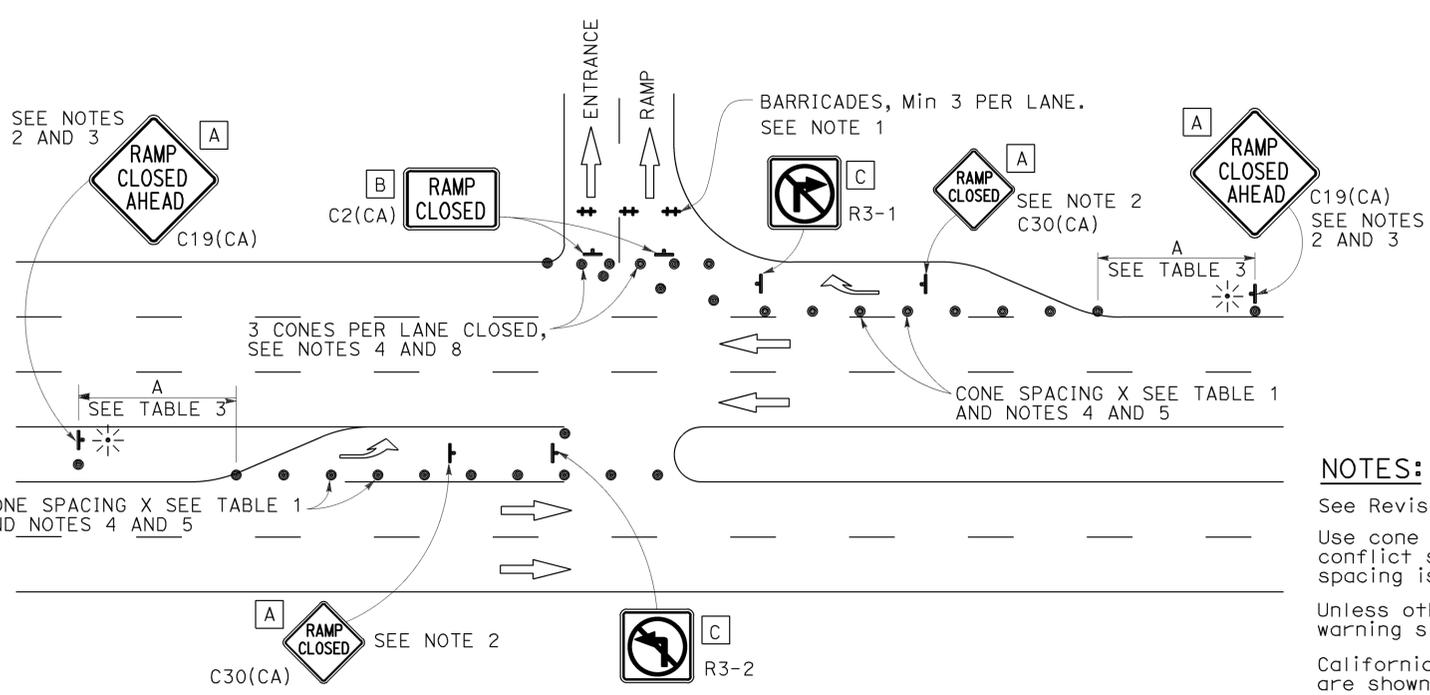
- Barricades shall be Type I, II, or III for closures lasting one week or less and Type III for closures lasting longer than one week.
- In addition to placing the C19(CA) "RAMP CLOSED AHEAD" and C30(CA) "RAMP CLOSED" signs, black on orange overlay plates with the word "CLOSED" may be mounted, as directed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



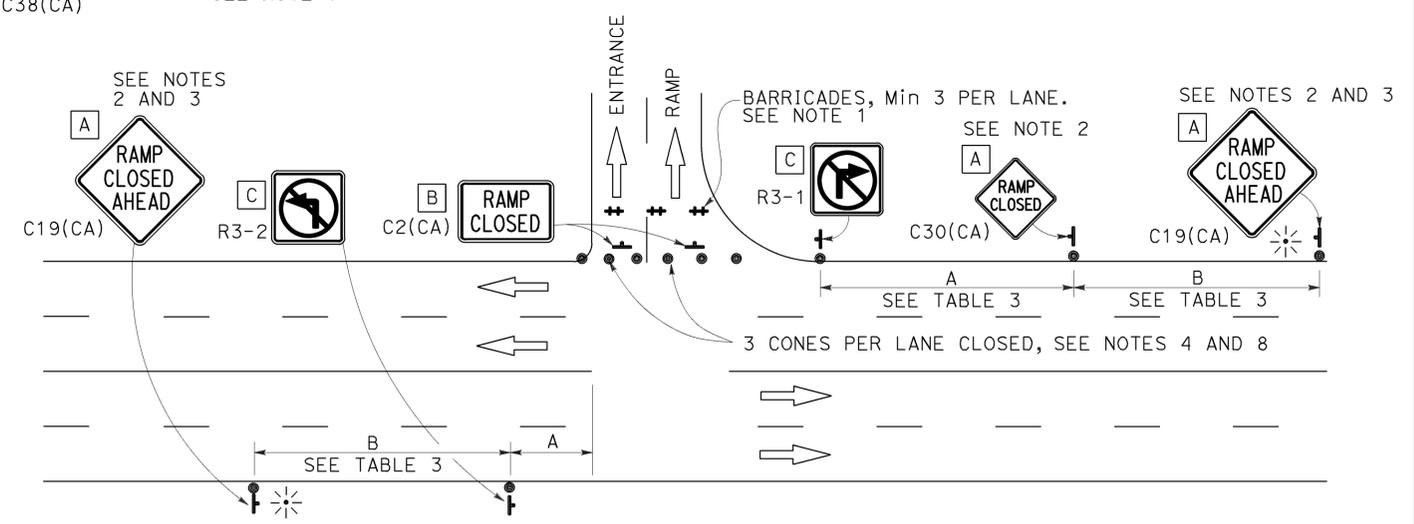
EXIT RAMP OR CONNECTOR



EXIT RAMP OR CONNECTOR WITH ADDITIONAL LANE



ENTRANCE RAMP WITH TURNING POCKETS



ENTRANCE RAMP WITHOUT TURNING POCKETS

NOTES:

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

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

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

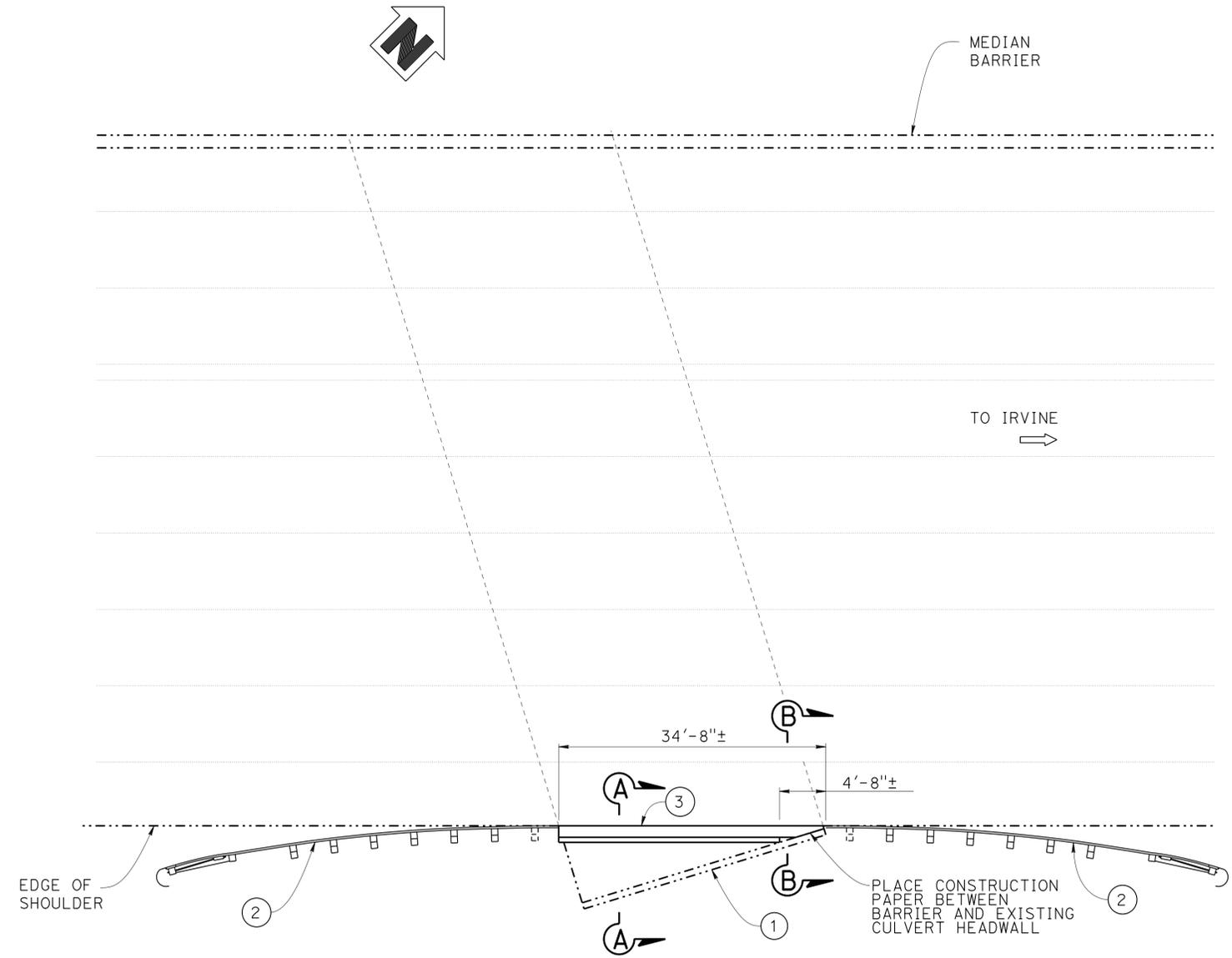
REVISED STANDARD PLAN RSP T14

2010 REVISED STANDARD PLAN RSP T14

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	ORA	1, 5	0.13/22.83	49	61
			REGISTERED CIVIL ENGINEER	DATE	
			06-27-16	PLANS APPROVAL DATE	
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.					

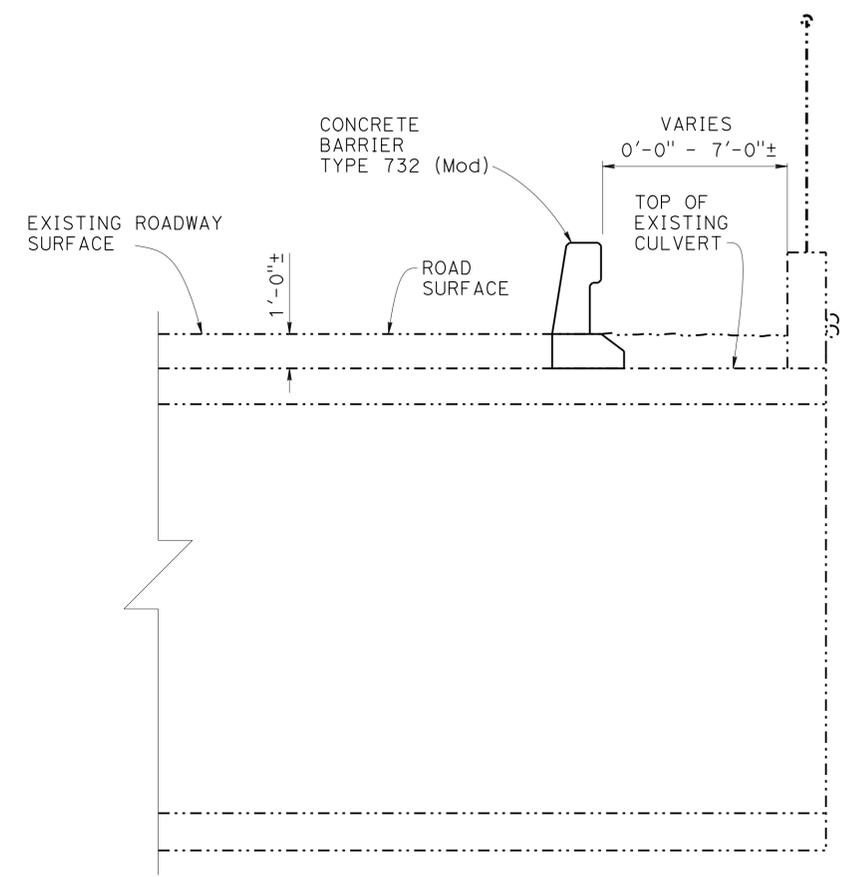
QUANTITIES
 CONCRETE BARRIER (TYPE 732 MODIFIED) 35 LF

- LEGEND:**
- ① Existing reinforced concrete Triple Box Culvert
 - ② Midwest Guardrail, See "Road Plans"
 - ③ Concrete Barrier Type 732 (Mod)

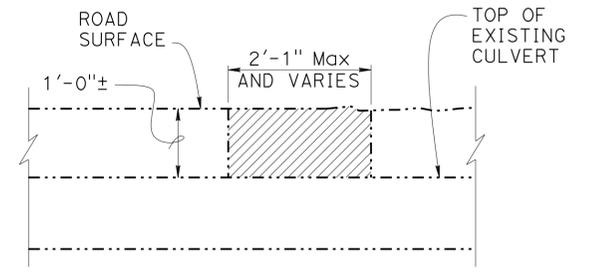


PLAN
 1" = 10'-0"

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



TYPICAL SECTION
 3/8" = 1'-0"



LEGEND:
 [Hatched Box] LIMITS OF AC PAVEMENT REMOVAL

PAVEMENT REMOVAL
 3/8" = 1'-0"

Douglas Wooten
 DESIGN ENGINEER

DESIGN	BY S. Galgiani	CHECKED L. Han	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE
DETAILS	BY D. Wooten	CHECKED L. Han	LAYOUT	BY S. Galgiani
QUANTITIES	BY S. Galgiani	CHECKED L. Han	SPECIFICATIONS	BY J. Jiang

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 14

BRIDGE NO. 55-0031
 POST MILE 22.83
BRIDGE BARRIER REPLACEMENT GENERAL PLAN

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	1, 5	0.33/22.83	50	61
			05-06-16	REGISTERED CIVIL ENGINEER DATE	
			06-27-16	PLANS APPROVAL DATE	
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.</small>					

INDEX TO PLANS

Sheet No.	Title
1.	GENERAL PLAN
2.	CONCRETE BARRIER TYPE 732 (MOD) DETAIL

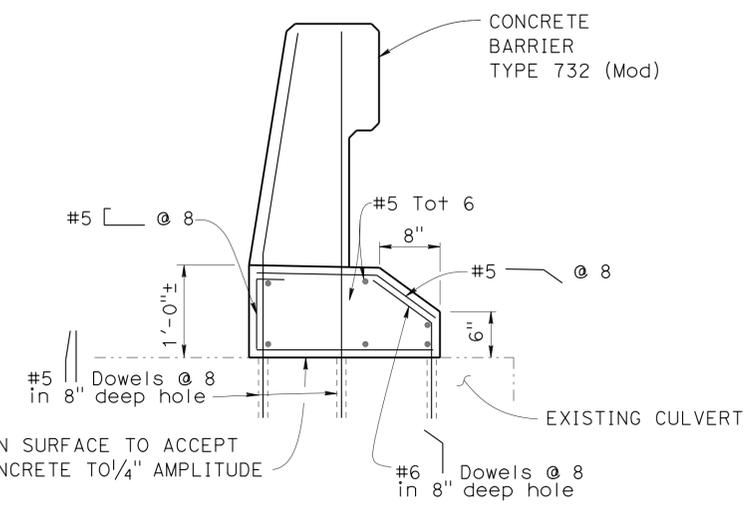
GENERAL NOTES

LOAD AND RESISTANCE FACTOR DESIGN

DESIGN:
AASHTO LRFD Bridge Design Specifications, 4th edition with the California Amendments, preface dated November 2011

SEISMIC DESIGN:
Caltrans Seismic Design Criteria (SDC), Version 1.7, July 2013

LIVE LOADING:
HL93 with "Low Boy" and permit design vehicle



PART TYPICAL SECTION A-A

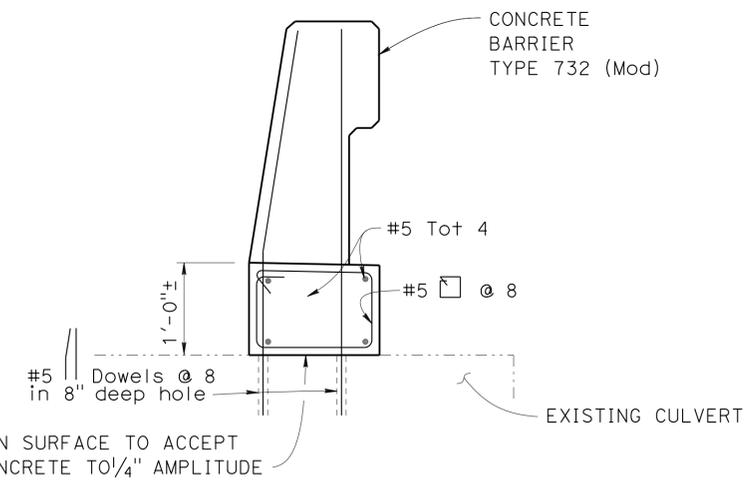
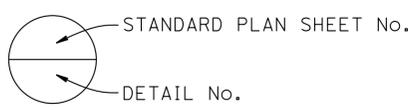
1" = 1'-0"

NOTE:

- For Concrete Barrier Reinf not shown, see 'STD PLAN B11-55'
- For Typical Metal Railing Connection not shown, see 'STD PLANS A77U1 and A77U2'

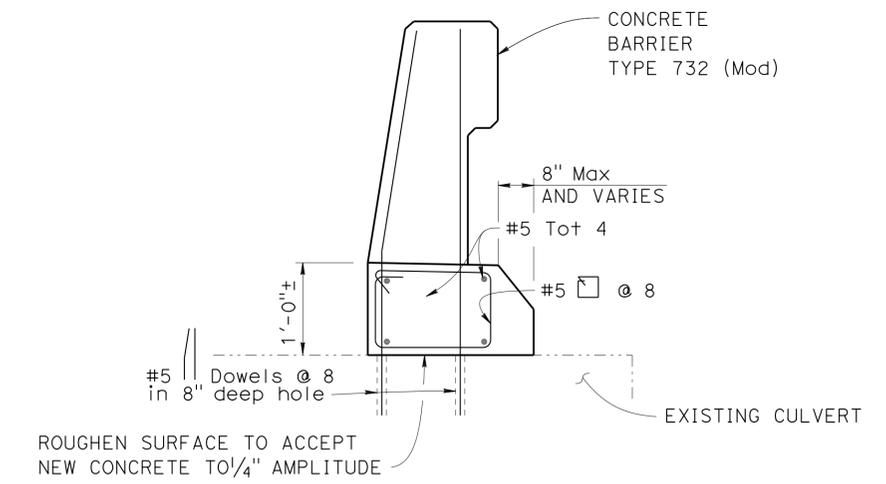
STANDARD PLANS DATED MAY 2010

A10A	ABBREVIATIONS (SHEET 1 OF 2)
A10B	ABBREVIATIONS (SHEET 2 OF 2)
A10C	LINES AND SYMBOLS (SHEET 1 OF 3)
RSP B11-55	CONCRETE BARRIER TYPE 732



PART TYPICAL SECTION B-B

1" = 1'-0"



TRANSITION SECTION

1" = 1'-0"

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

DESIGN	BY S. Galgiani	CHECKED L. Han
DETAILS	BY D. Wooten	CHECKED S. Galgiani
QUANTITIES	BY S. Galgiani	CHECKED L. Han

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 14

BRIDGE NO.	55-0031
POST MILE	22.83

BRIDGE BARRIER REPLACEMENT CONCRETE BARRIER TYPE 732 (MOD) DETAIL

REVISION DATES	SHEET	OF
1-18-16 1-28-16 12-24-15 1-17-16	2	2

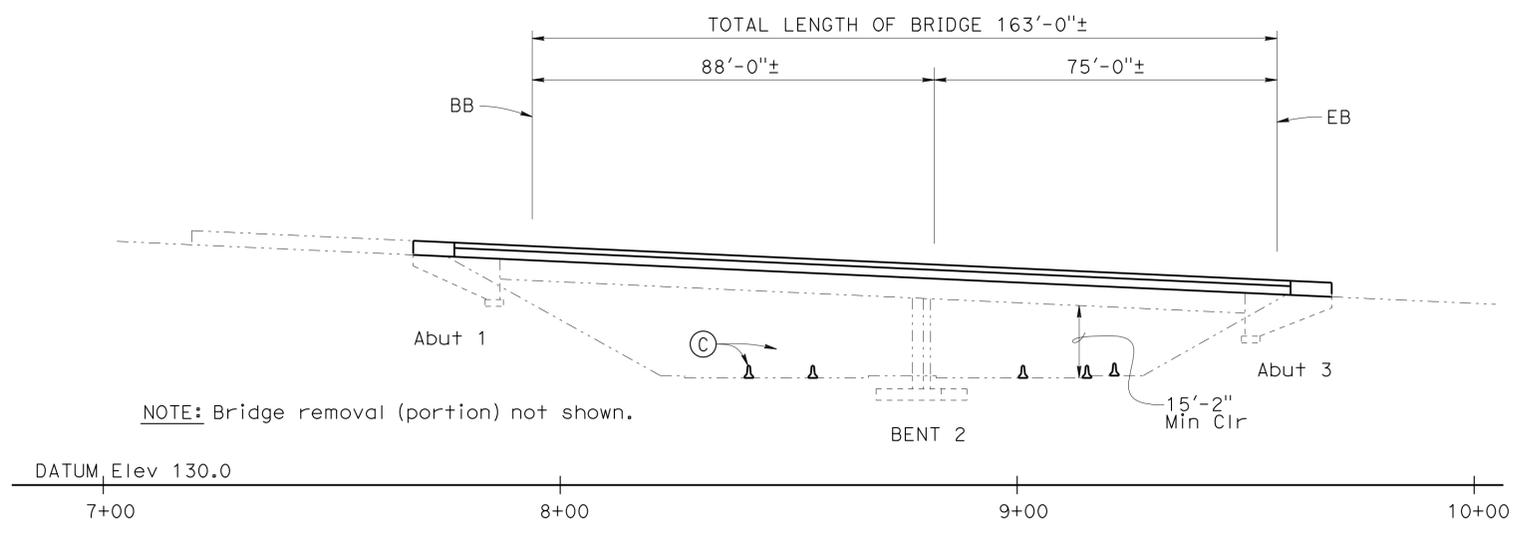
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	ORA	1, 5	0.13/22.83	51	61

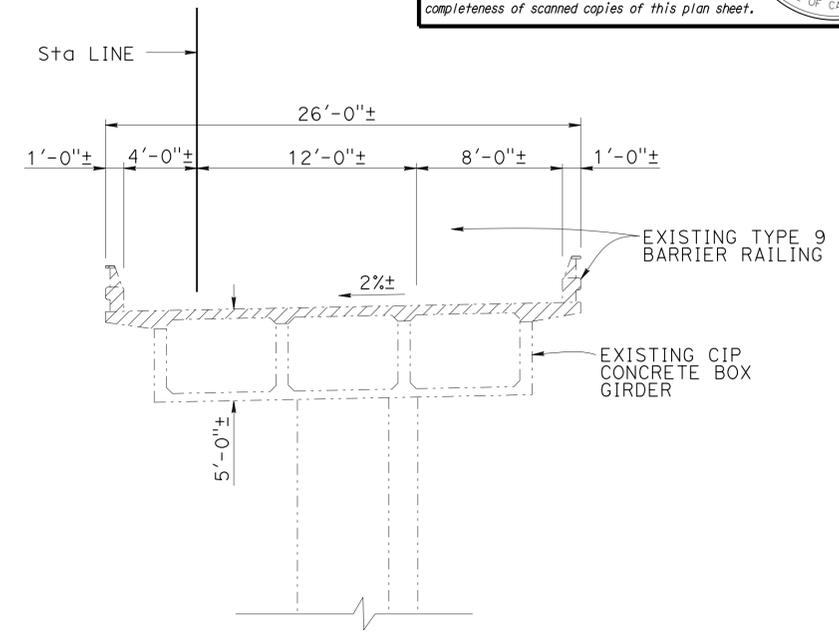
REGISTERED CIVIL ENGINEER **DOUGLAS DUNRUD** No. C47240 Exp. 12/31/17
 DATE 05-06-16
 PLANS APPROVAL DATE 06-27-16
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.

QUANTITIES

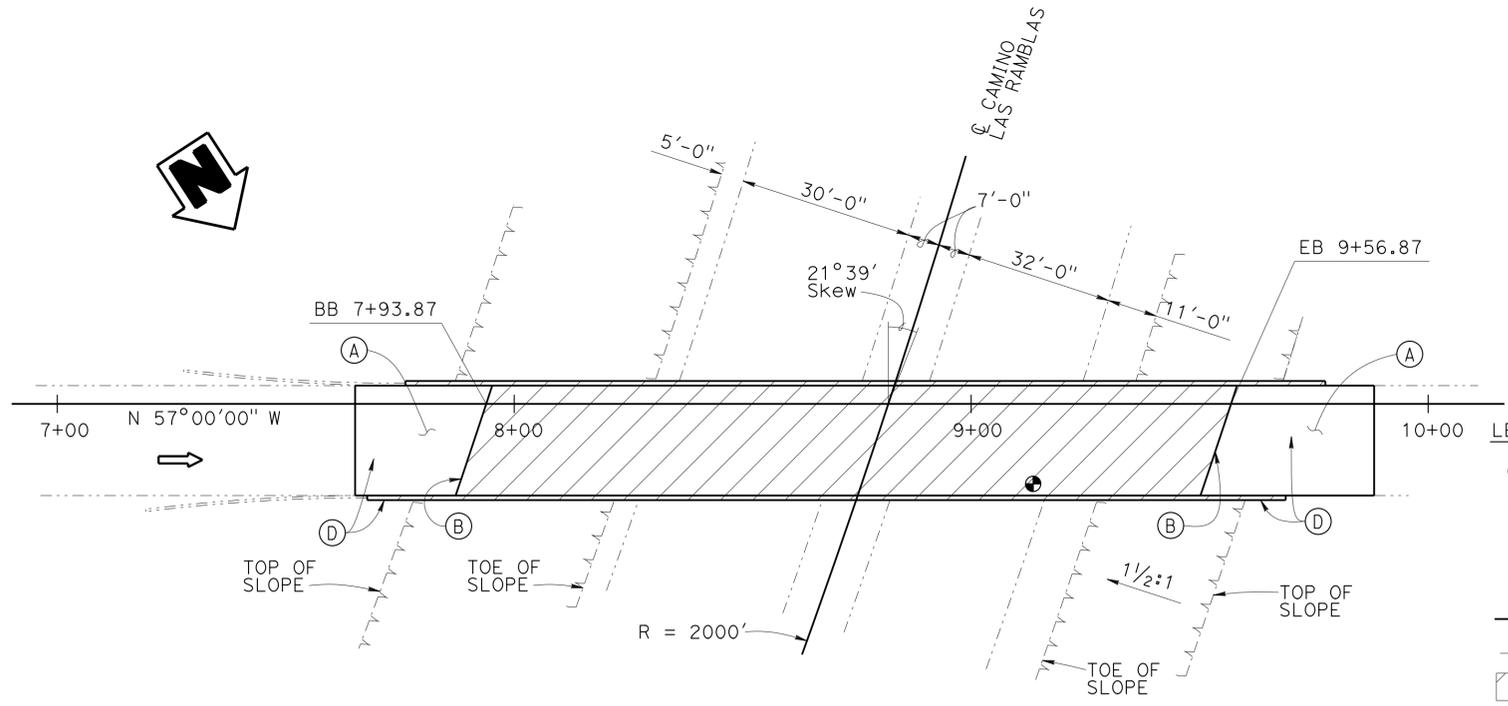
BRIDGE REMOVAL (PORTION)	LUMP	SUM
TEMPORARY SUPPORT	LUMP	SUM
STRUCTURAL CONCRETE, BRIDGE	21	CY
STRUCTURAL CONCRETE, BRIDGE (POLYMER FIBER)	107	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	88	CY
DRILL AND BOND DOWEL	187	LF
JOINT SEAL (MR 1")	56	LF
BAR REINFORCING STEEL (BRIDGE)	40,100	LB
HEADED BAR REINFORCEMENT	74	EA
CONCRETE BARRIER (TYPE 732 MODIFIED)	82	LF
CONCRETE BARRIER (TYPE 732)	326	LF



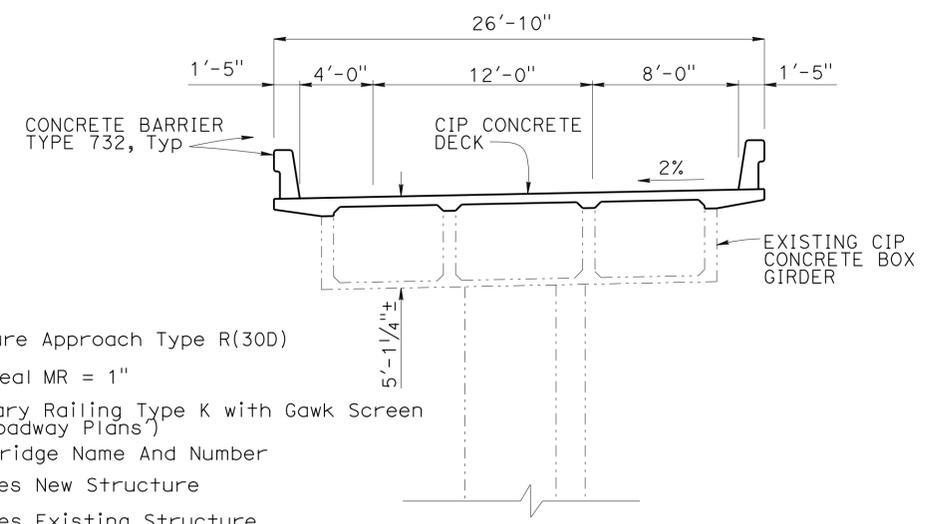
ELEVATION
1" = 20'-0"



TYPICAL SECTION REMOVAL
1" = 5'-0"



PLAN
1" = 20'-0"



TYPICAL SECTION
1" = 5'-0"

- LEGEND:
- (A) Structure Approach Type R(30D)
 - (B) Joint Seal MR = 1"
 - (C) Temporary Railing Type K with Gawk Screen (See Roadway Plans)
 - (D) Paint Bridge Name And Number
 - Indicates New Structure
 - - - Indicates Existing Structure
 - ▨ Bridge Removal (portion)
 - Point Of Minimum Vertical Clearance

NOTE: Traffic to be detoured around Construction for project duration.

DESIGN ENGINEER

DESIGN	BY S. Galgiani	CHECKED L. Han	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE
DETAILS	BY L. Xiong	CHECKED S. Galgiani	LAYOUT	BY S. Galgiani
QUANTITIES	BY L. Han	CHECKED S. Galgiani	SPECIFICATIONS	BY X

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
DESIGN BRANCH 14

BRIDGE NO.	55-0620F
POST MILE	0.13

S1-N5 CONNECTOR GENERAL PLAN

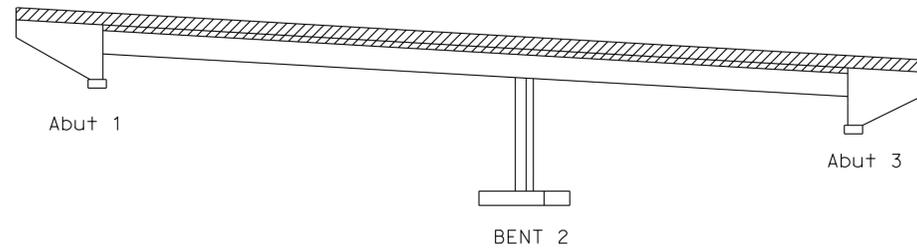
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	ORA	1, 5	0.13/22.83	52	61

REGISTERED CIVIL ENGINEER *Douglas P. Dunrud* DATE 05-06-16
 PLANS APPROVAL DATE 06-27-16
 REGISTERED PROFESSIONAL ENGINEER
 DOUGLAS DUNRUD
 No. C47240
 Exp. 12/31/17
 CIVIL
 STATE OF CALIFORNIA
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INDEX TO PLANS

SHEET	TITLE
1.	GENERAL PLAN
2.	INDEX TO PLANS
3.	DECK CONTOUR
4.	CONSTRUCTION DETAILS No.1
5.	CONSTRUCTION DETAILS No.2
6.	TYPICAL SECTION No.1
7.	TYPICAL SECTION No.2
8.	TEMPORARY SUPPORT DETAILS
9.	GIRDER LAYOUT
10.	ADDITIONAL DECK REINFORCEMENT
11.	APPROACH SLAB TYPE R (30D)



STRUCTURAL CONCRETE, BRIDGE
 (4,000 PSI AT 28 DAYS)

CONCRETE STRENGTH AND TYPE LIMITS

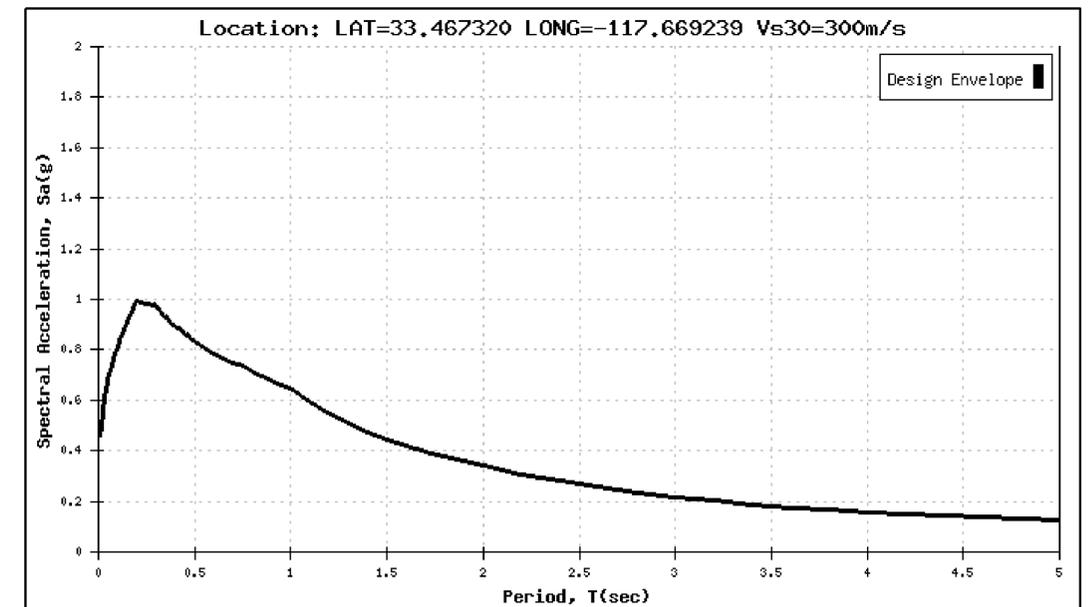
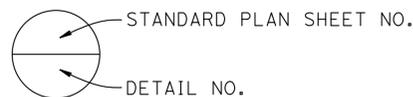
No Scale

GENERAL NOTES LOAD AND RESISTANCE FACTOR DESIGN

- DESIGN: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 4th Edition with California Amendments, preface dated November 2011
 SEISMIC DESIGN: Caltrans Seismic Design Criteria (SDC) Version 1.7, July 2013
 DEAD LOADING: Includes 35 psf for future wearing surfaces.
 LIVE LOADING: HL93 with "Low Boy" and permit design vehicle
 SEISMIC LOADING:
 REINFORCED CONCRETE: See "CONCRETE STRENGTH AND TYPE LIMITS"

STANDARD PLANS DATED MAY 2010

A10A	ACRONYMS AND ABBREVIATIONS (SHEET 1 OF 2)
RSP A10B	ACRONYMS AND ABBREVIATIONS (SHEET 2 OF 2)
A10C	SYMBOLS (SHEET 1 OF 2)
A10D	SYMBOLS (SHEET 2 OF 2)
B0-5	BRIDGE DETAILS
B6-21	JOINT SEALS (MAXIMUM MOVEMENT RATING=2")
B7-1	BOX GIRDER DETAILS
B11-55	CONCRETE BARRIER TYPE 732



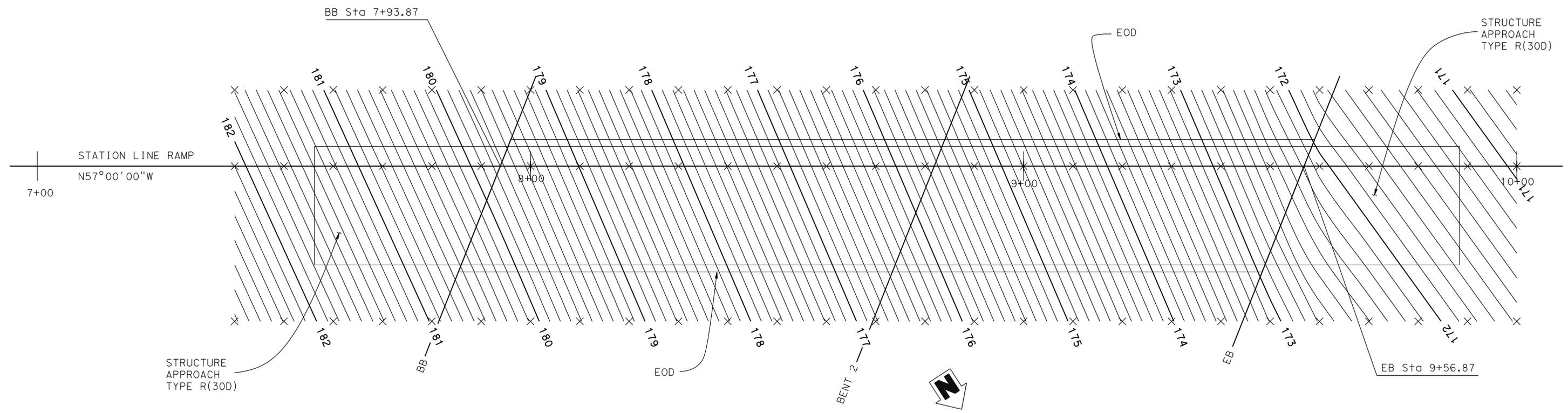
ACCELERATION RESPONSE SPECTRUM

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY S. Galgiani	CHECKED L. Han	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 14	BRIDGE NO.	S1-N5 CONNECTOR INDEX TO PLAN		
	DETAILS	BY L. Xiong	CHECKED S. Galgiani			55-0620F			
	QUANTITIES	BY S. Galgiani	CHECKED L. Han			POST MILE 0.13			
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS					UNIT: 3613	PROJECT NUMBER & PHASE: 1213000147	CONTRACT NO.: 12-0H5301	REVISION DATES	SHEET 2 OF 11
					DISREGARD PRINTS BEARING EARLIER REVISION DATES		10-14-15 11-24-15		

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	1, 5	0.13/22.83	53	61
			05-06-16		
REGISTERED CIVIL ENGINEER			DATE		
			06-27-16		
			PLANS APPROVAL DATE		

REGISTERED PROFESSIONAL ENGINEER
 DOUGLAS DUNRUD
 No. C47240
 Exp. 12/31/17
 CIVIL
 STATE OF CALIFORNIA

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DECK CONTOURS
1" = 10'-0"

- NOTES:**
1. X - 10' INTERVALS ALONG STATION LINE.
 2. CONTOUR INTERVAL = 0.1'.

DESIGN	BY S. Galsiani	CHECKED L. Han
DETAILS	BY D. Wooten	CHECKED S. Galsiani
QUANTITIES	BY L. Han	CHECKED S. Galsiani

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 14

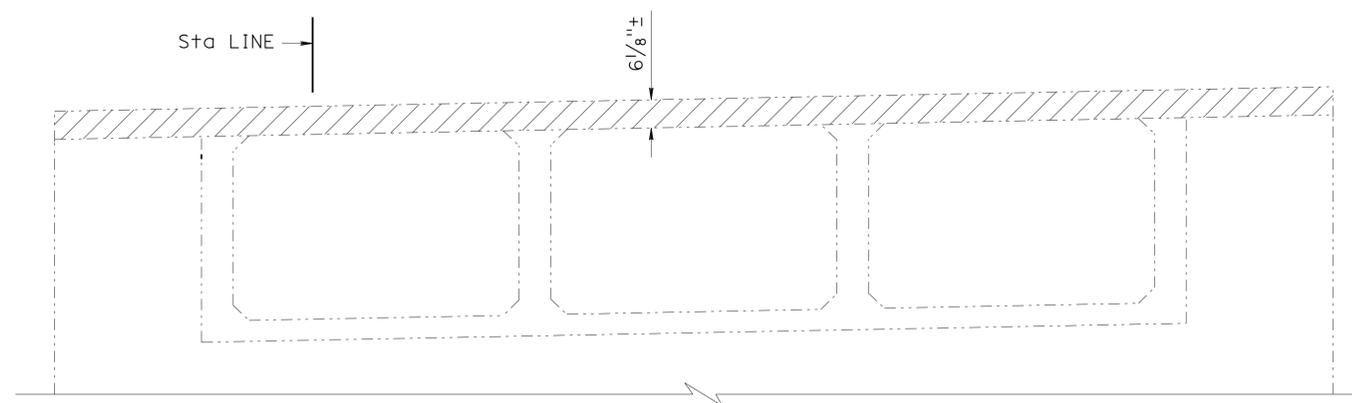
BRIDGE NO.	55-0620F
POST MILE	0.13

S1-N5 CONNECTOR
DECK CONTOURS

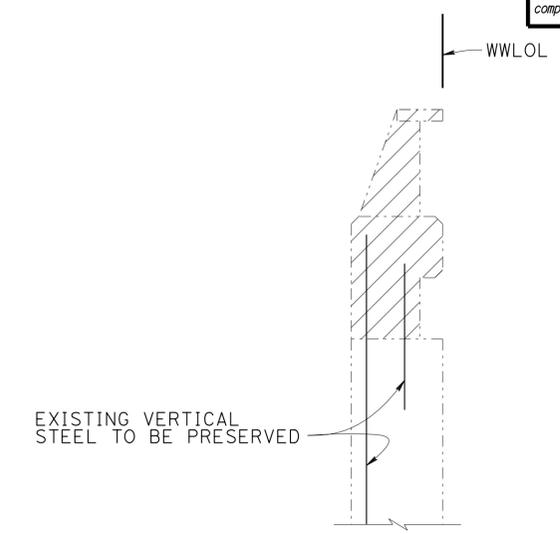


REVISION DATES		SHEET	OF
10-13-15	10-19-15	3	11

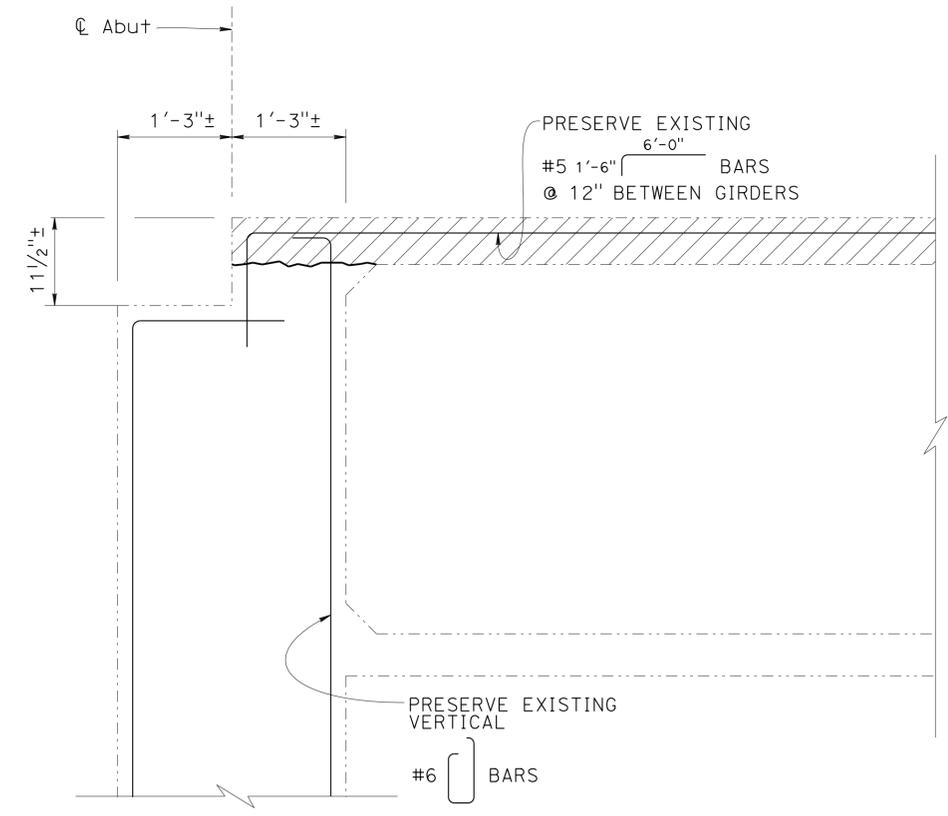
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12	ORA	1, 5	0.13/22.83	54	61
REGISTERED CIVIL ENGINEER			DATE	05-06-16	
PLANS APPROVAL DATE			06-27-16		
REGISTERED PROFESSIONAL ENGINEER DOUGLAS DUNRUD No. C47240 Exp. 12/31/17 CIVIL STATE OF CALIFORNIA					
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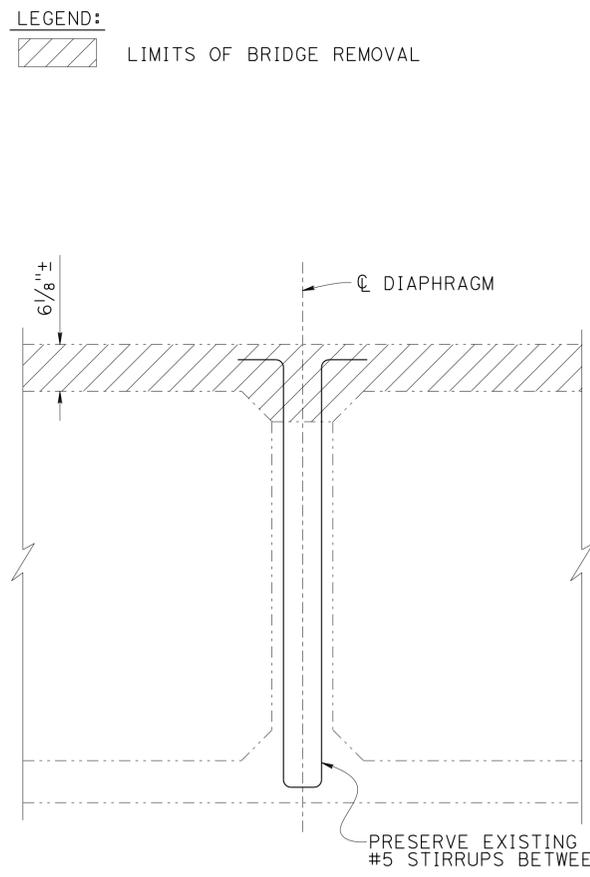
BRIDGE REMOVAL AT FACE OF ABUTMENT
1/2" = 1'-0"



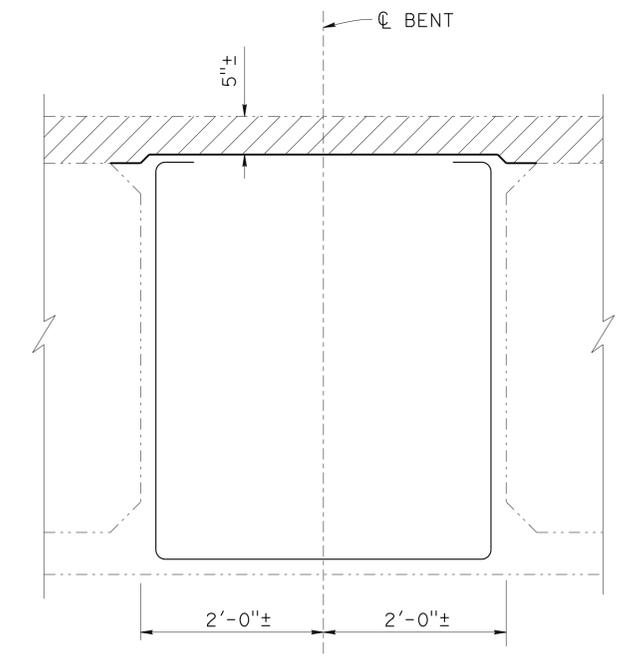
BRIDGE REMOVAL SECTION AT WINGWALL
1" = 1'-0"



BRIDGE REMOVAL SECTION AT ABUTMENT
1" = 1'-0"



BRIDGE REMOVAL SECTION AT INTERMEDIATE DIAPHRAGM
1" = 1'-0"



BRIDGE REMOVAL SECTION AT BENTCAP
1" = 1'-0"

LEGEND:
 LIMITS OF BRIDGE REMOVAL

NOTE: Existing Vertical Stem Bars to be preserved

NOTE: Existing Bent Cap Steel to be preserved

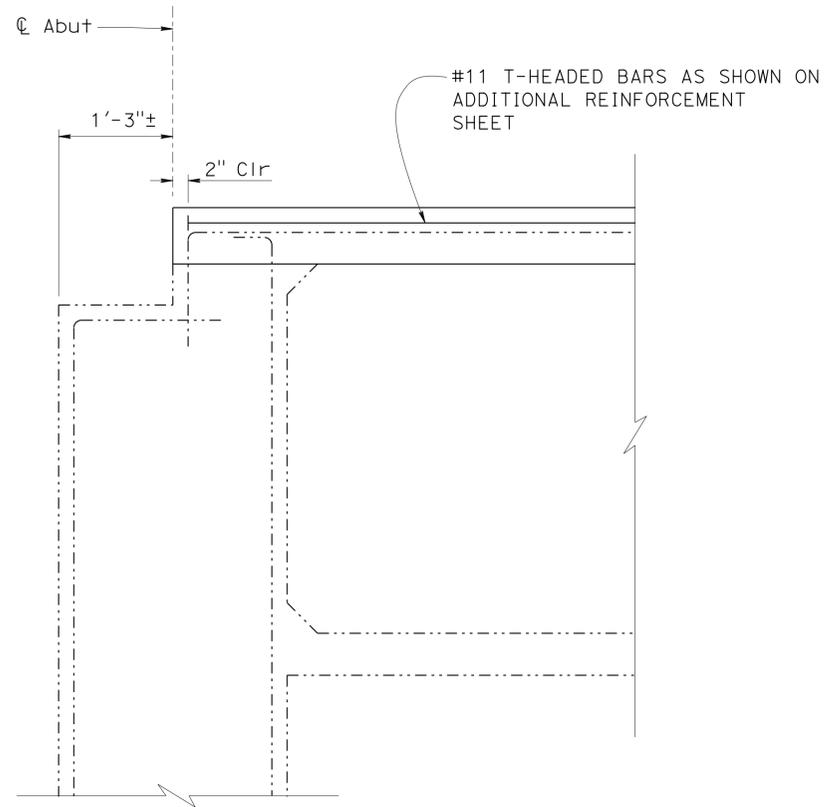
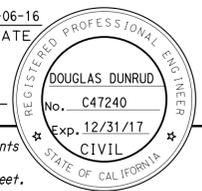
DESIGN	BY S. Galgiani	CHECKED L. Han
DETAILS	BY L. Xiong	CHECKED S. Galgiani
QUANTITIES	BY L. Han	CHECKED S. Galgiani

STATE OF CALIFORNIA	
DEPARTMENT OF TRANSPORTATION	

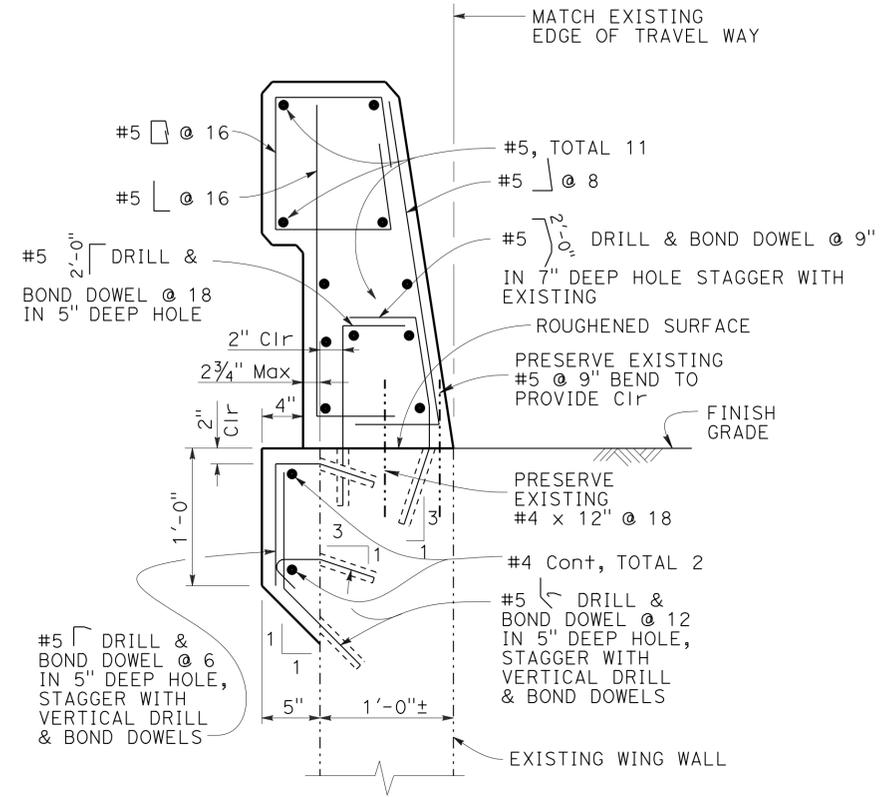
DIVISION OF ENGINEERING SERVICES	
STRUCTURE DESIGN	
DESIGN BRANCH 14	

BRIDGE NO.	S1-N5 CONNECTOR	
55-0620F		
POST MILE	CONSTRUCTION DETAILS NO. 1	
0.13		

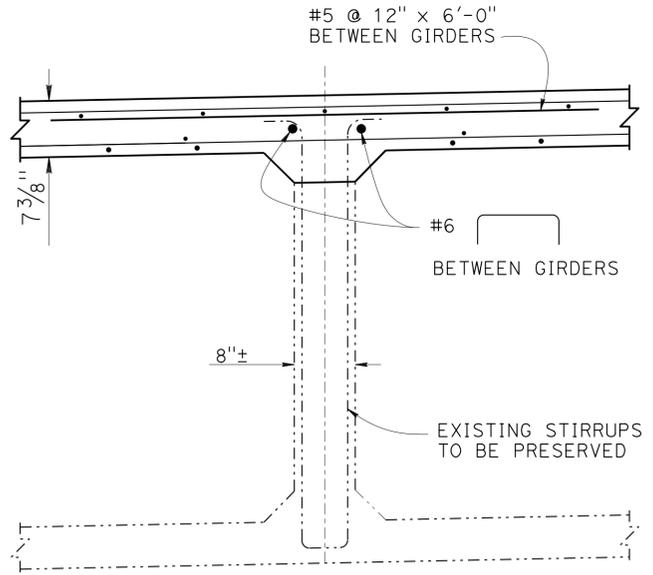
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	ORA	5	0.13/22.83	55	61
			05-06-16	DATE	
			06-27-16	DATE	
PLANS APPROVAL DATE					
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SECTION A-A
1" = 1'-0"



CONCRETE BARRIER TYPE 732 (Mod)
NO SCALE



INTERIOR DIAPHRAGM DETAIL
1" = 1'-0"

- NOTES:**
1. Avoid existing reinforcement when drilling.
 2. Clearance to reinforcing steel in barrier to be 1", except as noted. Longitudinal reinforcement to stop at all expansion joints.
 3. For typical metal railing connection details not shown, see Standard Plans A77J1 and A77J2.

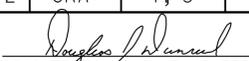
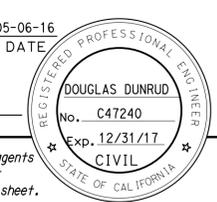
DESIGN	BY S. Galgiani	CHECKED L. Han
DETAILS	BY L. Xiong	CHECKED S. Galgiani
QUANTITIES	BY L. Han	CHECKED S. Galgiani

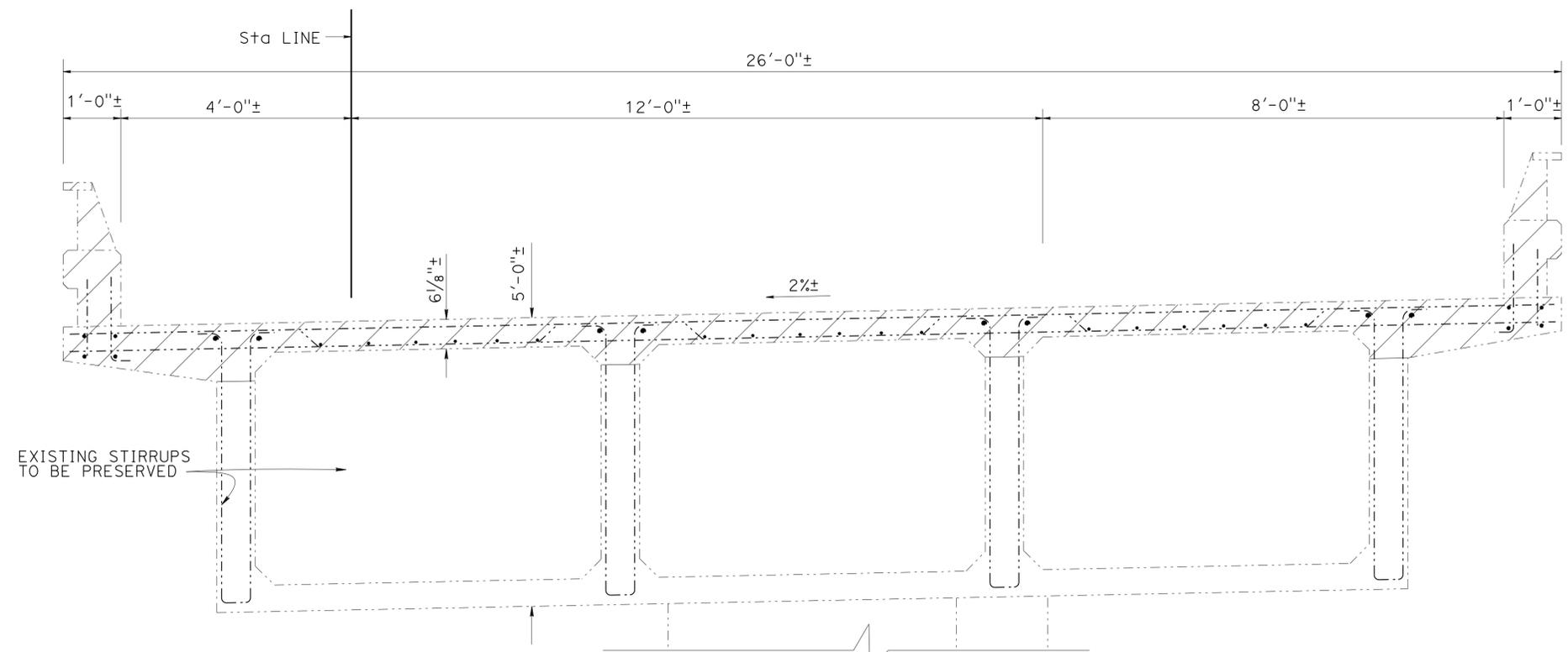
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH

BRIDGE NO.	55-0620F
POST MILE	0.13

S1-N5 CONNECTOR
CONSTRUCTION DETAILS NO. 2

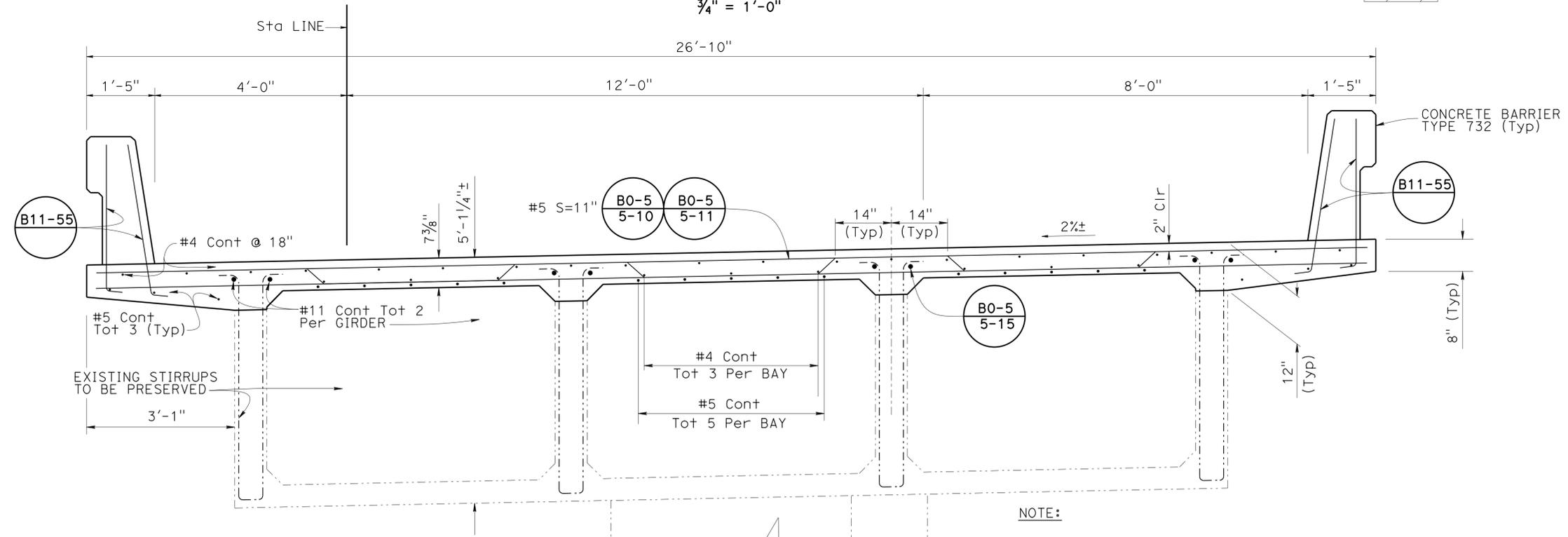
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	ORA	1, 5	0.13/22.83	56	61
 REGISTERED CIVIL ENGINEER			05-06-16 DATE		
06-27-16 PLANS APPROVAL DATE					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.</small>					



TYPICAL SECTION REMOVAL
3/4" = 1'-0"

- NOTE:**
- ALL TRANSVERSE AND LONGITUDINAL DECK STEEL TO BE REMOVED WITHIN BRIDGE REMOVAL LIMITS. EXISTING STIRRUPS TO BE PRESERVED.
 - See "ADDITIONAL DECK REINFORCEMENT" sheet for Additional Deck Steel

LEGEND:
 LIMITS OF DECK AND DECK REINFORCEMENT REMOVAL



TYPICAL SECTION (B7-1) (B0-5) (B11-55)
3/4" = 1'-0"

NOTE:

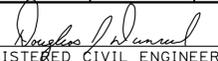
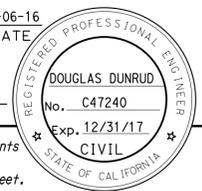
DESIGN	BY S. Galgiani	CHECKED L. Han
DETAILS	BY L. Xiong	CHECKED S. Galgiani
QUANTITIES	BY L. Han	CHECKED S. Galgiani

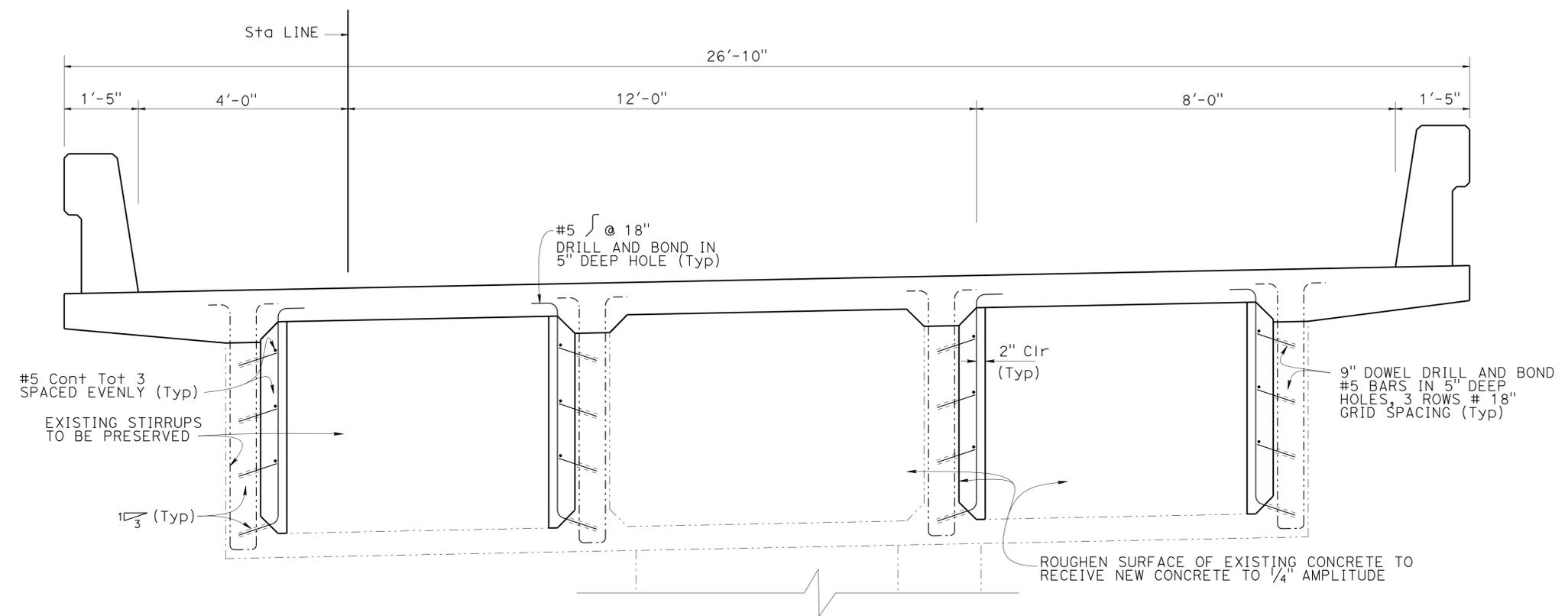
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 14

BRIDGE NO.	55-0620F
POST MILE	0.13

S1-N5 CONNECTOR
TYPICAL SECTION NO. 1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	ORA	1, 5	0.13/22.83	57	61
 REGISTERED CIVIL ENGINEER			05-06-16 DATE		
06-27-16 PLANS APPROVAL DATE			The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.		



- NOTE:**
1. Avoid Girder Reinforcement and start new hole if Girder Steel is encountered while drilling
 2. Deck Steel not shown

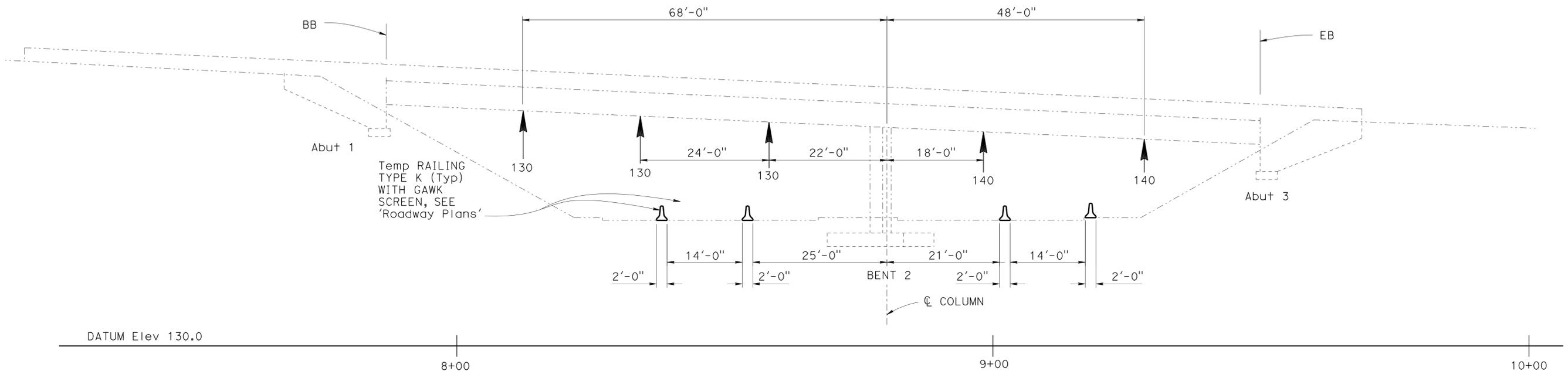
TYPICAL SECTION AT ABUTMENT ENDS
 $\frac{3}{4}'' = 1'-0''$

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY S. Galgiani	CHECKED L. Han	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 14	BRIDGE NO.	S1-N5 CONNECTOR	
	DETAILS	BY L. Xiong	CHECKED S. Galgiani			55-0620F	TYPICAL SECTION NO. 2	
	QUANTITIES	BY L. Han	CHECKED S. Galgiani			POST MILE 0.13	REVISION DATES: 10-13-15, 10-14-15, 11-24-15	
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS: 0 1 2 3					UNIT: 3613 PROJECT NUMBER & PHASE: 12130001471	CONTRACT NO.: 12-0H5301	DISREGARD PRINTS BEARING EARLIER REVISION DATES	SHEET 7 OF 11

USERNAME => s128284 DATE PLOTTED => 01-AUG-2016 TIME PLOTTED => 15:28

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	ORA	1, 5	0.13/22.83	58	61

REGISTERED CIVIL ENGINEER *Douglas Dunrud* DATE 05-06-16
 PLANS APPROVAL DATE 06-27-16
 REGISTERED PROFESSIONAL ENGINEER
 DOUGLAS DUNRUD
 No. C47240
 Exp. 12/31/17
 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.



↑ - INDICATES JACKING LOCATION AND JACKING FORCE IN KIPS

- NOTES:**
- Jacking Forces shown to be distributed evenly across entire soffit from Edge of Exterior Girder to Edge of Girder and parallel to Bridge Skew.
 - Dimensions to point of Jacking Force taken from centerline of Bent 2.
 - Traffic openings dimensions measured from centerline of Bent 2.

DESIGN	BY S. Galgiani	CHECKED L. Han
DETAILS	BY L. Xiong	CHECKED S. Galgiani
QUANTITIES	BY L. Han	CHECKED S. Galgiani

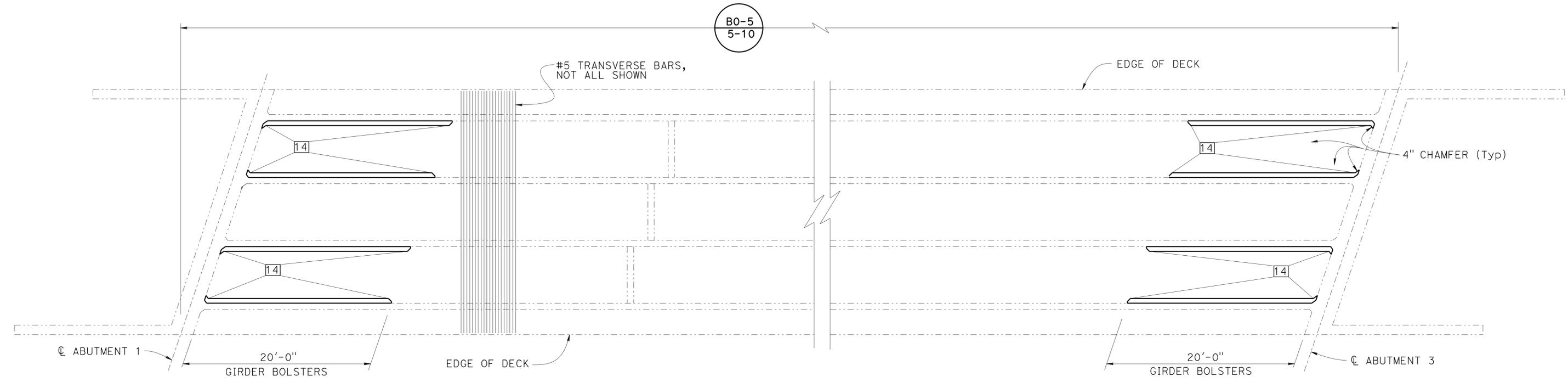
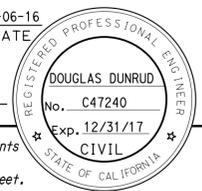
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
 STRUCTURE DESIGN
 DESIGN BRANCH 14

BRIDGE NO.	55-0620F
POST MILE	0.13

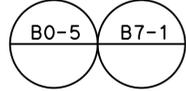
S1-N5 CONNECTOR
TEMPORARY SUPPORT DETAILS

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	ORA	1, 5	0.13/22.83	59	61
			05-06-16		
REGISTERED CIVIL ENGINEER			DATE		
			06-27-16		
			PLANS APPROVAL DATE		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.					



NOTE:
 All Transverse and Longitudinal Deck Reinforcement shall extend into End Diaphragm to within 2" Clearance from EB/BB

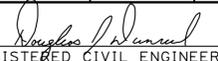
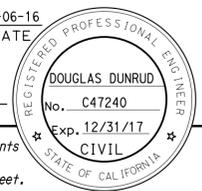
PLAN
 $\frac{3}{16}'' = 1'-0''$

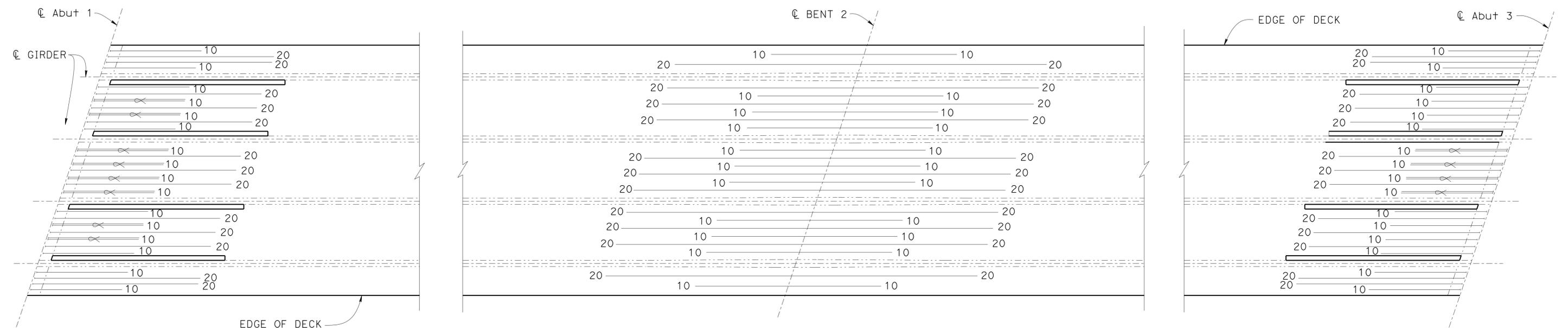


LEGEND:
 □ Indicates total width of Existing Girder and New Girder Bolster

DESIGN BY S. Galgiani		CHECKED L. Han	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 14	BRIDGE NO. 55-0620F	S1-N5 CONNECTOR GIRDER LAYOUT			
DETAILS BY L. Xiong		CHECKED S. Galgiani			POST MILE 0.13				
QUANTITIES BY L. Han		CHECKED S. Galgiani							
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	UNIT: 3613	PROJECT NUMBER & PHASE: 12130001471	CONTRACT NO.: 12-0H5301	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 9 OF 11

USERNAME => s128284 DATE PLOTTED => 01-AUG-2016 TIME PLOTTED => 15:28

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	ORA	1, 5	0.13/22.83	60	61
 REGISTERED CIVIL ENGINEER			05-06-16 DATE		
PLANS APPROVAL DATE 06-27-16					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.</small>					



NOTES:

1. All bars are #11, numbers at end of bars indicate distance in feet from C Bent and from C Abutment
2. Reinforcement shown is in addition to that shown on the "TYPICAL SECTION" sheet
3. No splices allowed in #11 Bars
4. All #11 Bars at Abutment Ends shall be T-Headed

TOP REINFORCEMENT

$\frac{3}{16}'' = 1'-0''$

LEGEND:

 Indicates Bundled #11 Bars

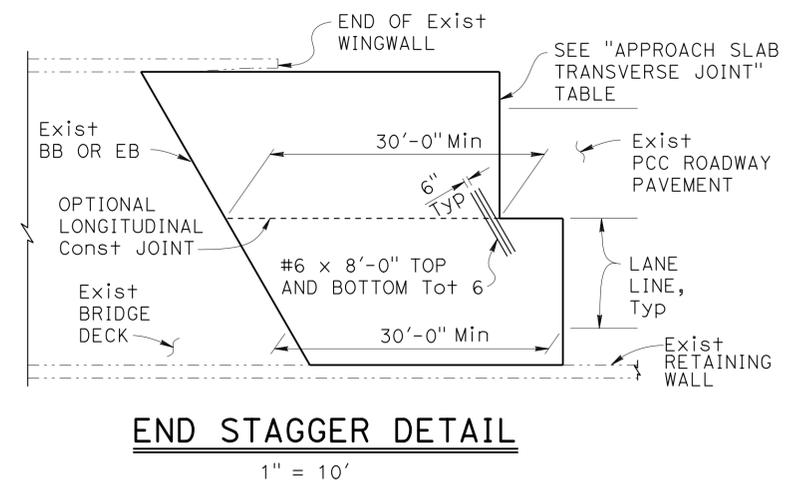
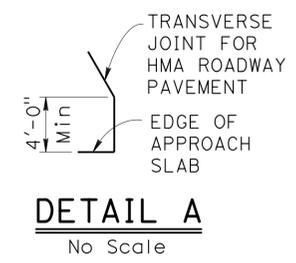
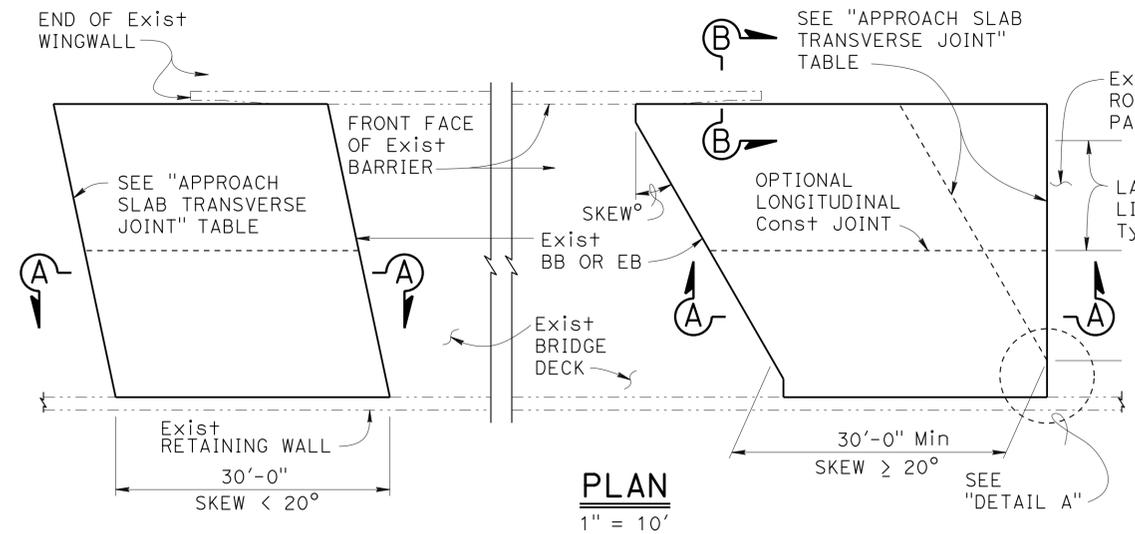
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	DESIGN	BY S. Galgiani	CHECKED L. Han	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 14	BRIDGE NO.	S1-N5 CONNECTOR							
	DETAILS	BY L. Xiong	CHECKED S. Galgiani			55-0620F	ADDITIONAL DECK REINFORCEMENT							
	QUANTITIES	BY L. Han	CHECKED S. Galgiani			POST MILE 0.13								
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS					UNIT: 3613 PROJECT NUMBER & PHASE: 12130001471	CONTRACT NO.: 12-0H5301	DISREGARD PRINTS BEARING EARLIER REVISION DATES	<table border="1"> <tr> <th>REVISION DATES</th> <th>SHEET</th> <th>OF</th> </tr> <tr> <td>10-13-15 12-1-15 01-04-16</td> <td>10</td> <td>11</td> </tr> </table>	REVISION DATES	SHEET	OF	10-13-15 12-1-15 01-04-16	10	11
REVISION DATES	SHEET	OF												
10-13-15 12-1-15 01-04-16	10	11												

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	ORA	1, 5	0.13	61	61

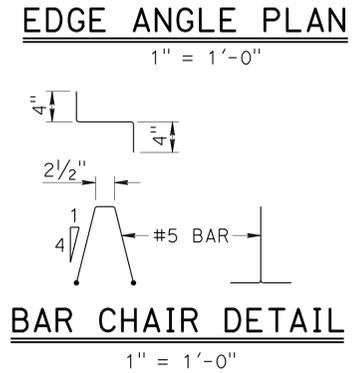
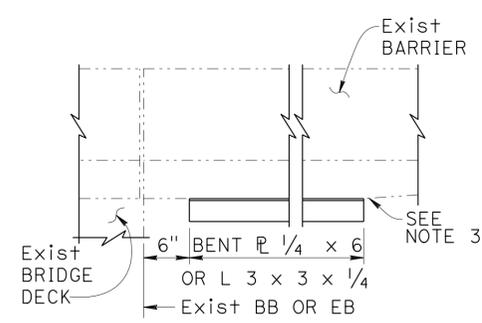
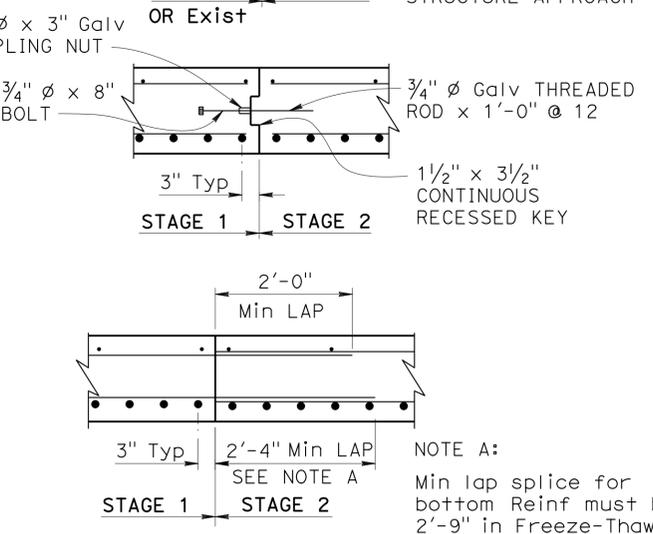
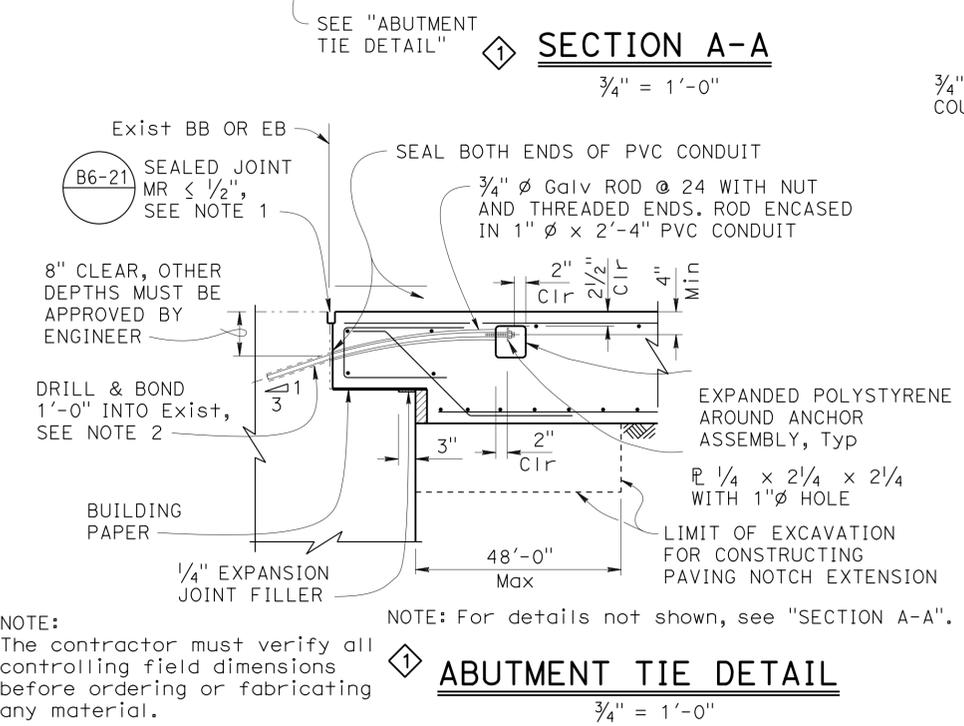
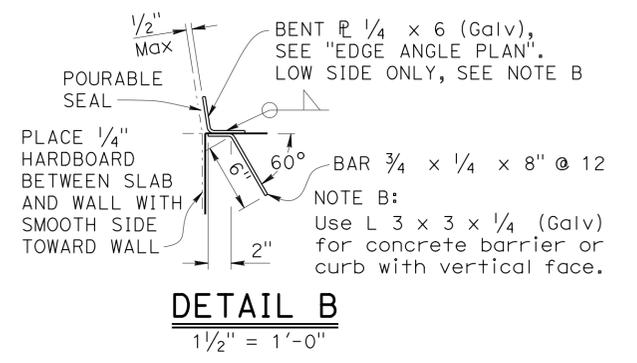
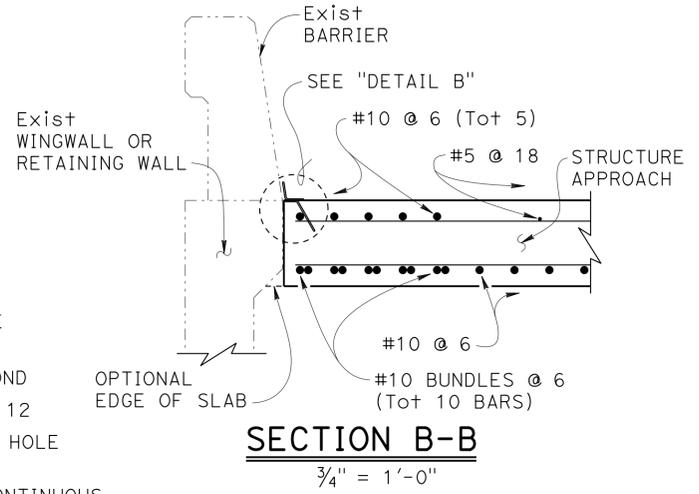
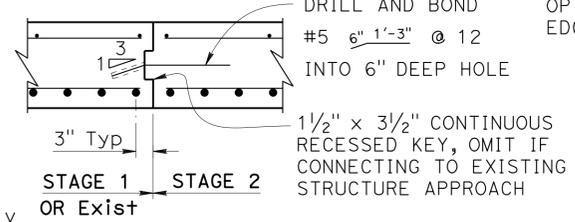
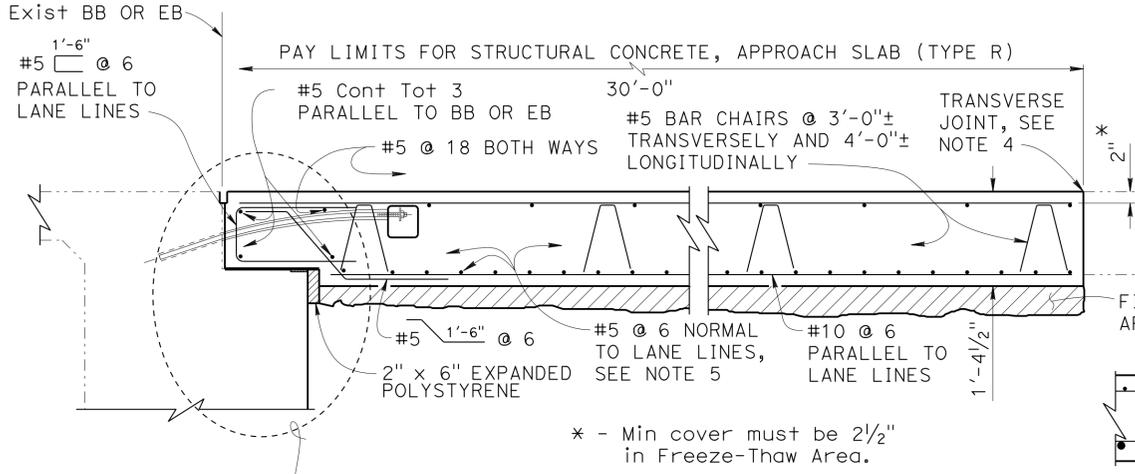
REGISTERED CIVIL ENGINEER
 DOUGLAS DUNRUD
 No. C47240
 Exp. 12/31/17
 CIVIL
 STATE OF CALIFORNIA

05-06-16
 DATE
 06-27-16
 PLANS APPROVAL DATE

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APPROACH SLAB TRANSVERSE JOINT		
APPROACH SKEW	WITH HMA ROADWAY PAVEMENT	WITH PCC ROADWAY PAVEMENT
< 20°	PARALLEL TO BB OR EB	PARALLEL TO BB OR EB
20° - 45°	PARALLEL TO BB OR EB USE "DETAIL A"	STAGGER AT LANE LINES 24' TO 36' APART, SEE "END STAGGER DETAIL"
> 45°	PARALLEL TO BB OR EB USE "DETAIL A"	STAGGER AT EACH LANE LINE, SEE "END STAGGER DETAIL"



DESIGN NOTES

DESIGN: AASHTO LRFD Bridge Design Specifications, 2012 Edition with Caltrans Amendments, preface dated January 2014
 LIMIT STATES: Service I, Strength I & II, Extreme II and Fatigue I ($\gamma_{FAT} = 1.0$)
 DEAD LOAD: Includes 35 psf for future wearing surface
 LIVE LOAD: HL93 and permit design load
 Equivalent strip width method: $W_1 = 12$ ft
 Slab span: $L_1 = 24.5$ ft
 REINFORCED CONCRETE:
 $f_y = 60$ ksi
 $f'_c = 3.6$ ksi
 $n = 8$

- NOTES:
- For details not shown, see other plan sheets. Adjust reinforcement to clear sawcut for sealed joint.
 - Space reinforcement to avoid existing prestress anchorages and other abutment reinforcement.
 - End the plate or edge angle at beginning of barrier transition, end of wingwall, or end of structure approach as applicable.
 - Transverse joint must be a minimum of 5'-0" from an existing or constructed weakened plane joint in approach PCC roadway pavement. Refer to Standard Plans P10 and P14.
 - At the Contractor's option, approach slab transverse reinforcement may be placed parallel to BB or EB. Spacing of transverse reinforcement is measured along \perp roadway.
- Indicates Existing Structure

STANDARD DRAWING	Modified Detail
FILE NO. xs3-150	APPROVAL DATE <u>January 2015</u>

STATE OF CALIFORNIA		DIVISION OF ENGINEERING SERVICES	
DEPARTMENT OF TRANSPORTATION		BRIDGE NO. 55-0620F	
		POST MILE 0.13	

S1-N5 CONNECTOR	
STRUCTURE APPROACH TYPE R (30D)	

UNIT: 3613	PROJECT NUMBER & PHASE: 12130001471	CONTRACT NO.: 12-0H5301
DISREGARD PRINTS BEARING EARLIER REVISION DATES		
REVISION DATES	SHEET	OF
10-19-15	11	11