INDEX OF PLANS

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

STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

ACNHP-010-5(050)E

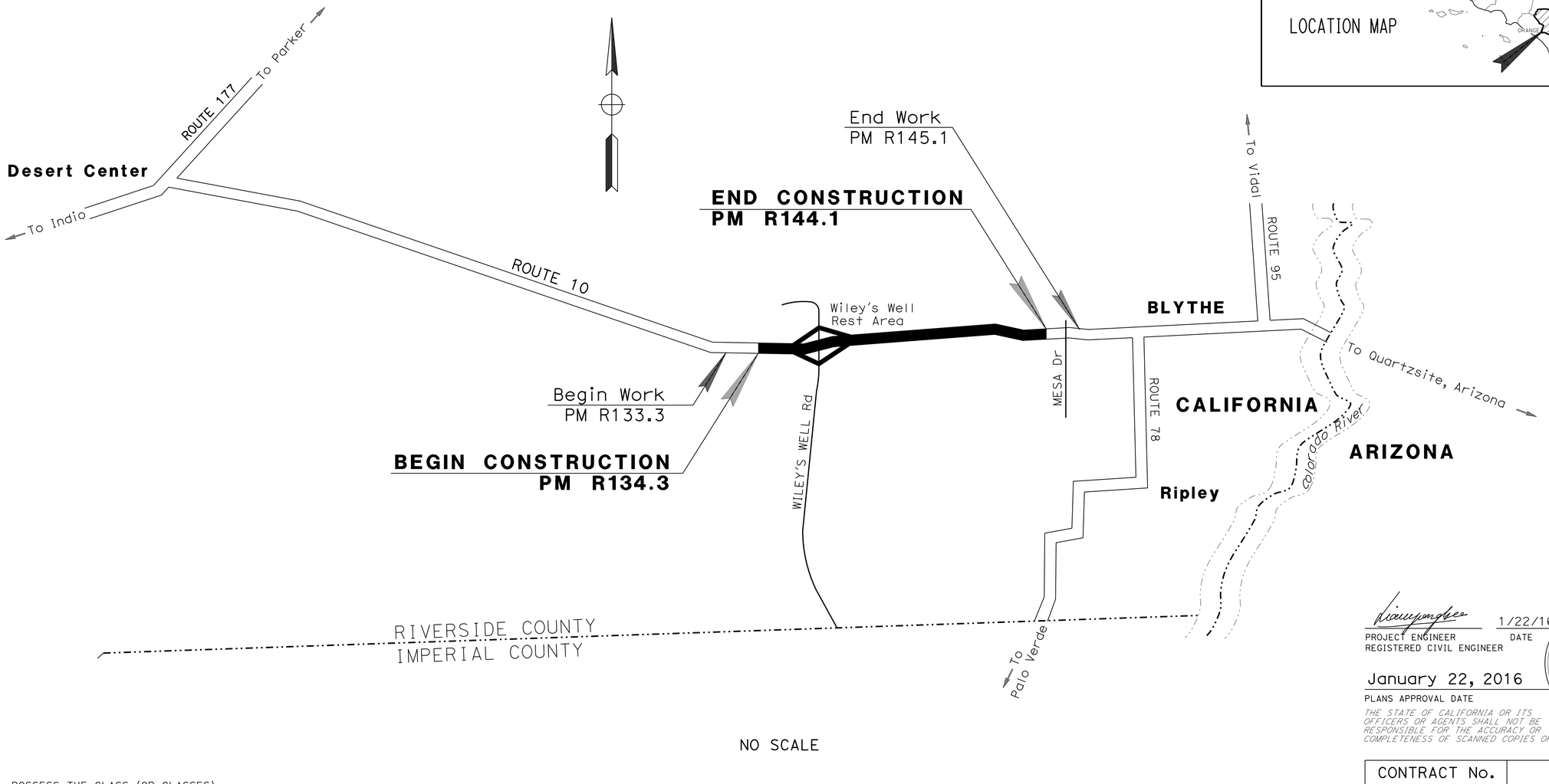
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	R134.3/R144.1	1	36

PROJECT PLANS FOR CONSTRUCTION ON STATE HIGHWAY

IN RIVERSIDE COUNTY FROM 0.7 MILE WEST OF WILEY'S WELL ROAD TO 1.0 MILE WEST OF MESA DRIVE

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010

LOCATION MAP



NO SCALE

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

PROJECT MANAGER: MICHAEL P. RISTIC

DESIGN MANAGER: YONGBEE LIAU

YONGBEE LIAU 1/22/16
PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

REGISTERED PROFESSIONAL ENGINEER — YONGBEE LIAU No. 75571 Exp. 6/30/16 CIVIL — STATE OF CALIFORNIA

January 22, 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.

CONTRACT No.	08-1G0804
PROJECT ID	0815000123

LAST REVISION 01-22-16

DATE PLOTTED => 03-FEB-2016
TIME PLOTTED => 11:02

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	R134.3/R144.1	2	36

1/22/16
REGISTERED CIVIL ENGINEER DATE

1/22/16
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
YONGBEE LIAU
No. 75571
Exp 6/30/16
CIVIL
STATE OF CALIFORNIA

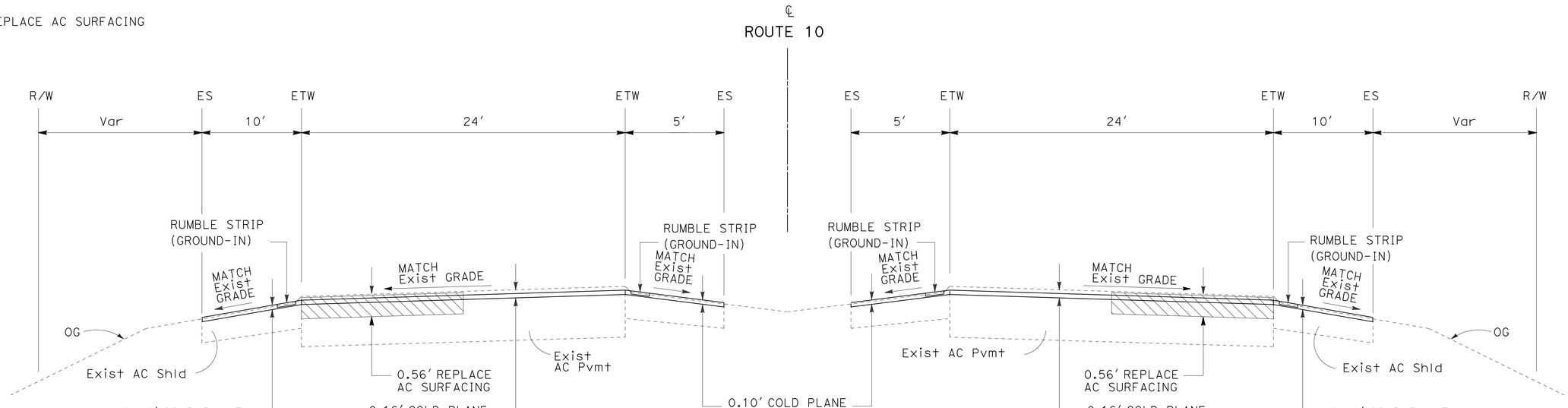
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. DIMENSIONS OF STRUCTURAL SECTIONS ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.
3. LOCALIZED REPLACE ASPHALT CONCRETE SURFACING SHALL BE PERFORMED PRIOR TO COLD PLANE/RHMA-G OVERLAY OPERATIONS.
4. LIMITS OF REPLACE ASPHALT CONCRETE SURFACING ARE LOCALIZED. EXACT LOCATIONS, LANE NUMBER, AND DIMENSIONS OF REPLACE ASPHALT
5. CONCRETE SURFACING SHALL BE DETERMINED BY THE ENGINEER.
6. NO COLD PLANE, ASPHALT SURFACING, OR FOG SEAL SHALL BE ALLOWED ON BRIDGES.
7. EXISTING UTILITY FACILITIES HAVE NOT BEEN INCLUDED ON THESE PLANS.
8. LANE, MEDIAN, AND SHOULDER WIDTHS SHOWN ARE APPROXIMATE.
9. CENTERLINE SHOWN IS APPROXIMATE.
10. EXISTING STRUCTURAL SECTIONS NOT SHOWN.

LEGEND:

REPLACE AC SURFACING



PM R134.3 TO PM R144.1

WB EXIT RAMP TO WILEY'S WELL ROAD
WB ENTRANCE RAMP FROM WILEY'S WELL ROAD

EB EXIT RAMP TO WILEY'S WELL ROAD
EB ENTRANCE RAMP FROM WILEY'S WELL ROAD

TYPICAL CROSS SECTION

NO SCALE **X-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: JIAN "JAMES" LAN

CALCULATED-DESIGNED BY: YONGBEE LIAU
CHECKED BY: LIAN "JAMES" LAN

REVISED BY | DATE REVISED

LAST REVISION: DATE PLOTTED => 03-FEB-2016
TIME PLOTTED => 11:02
01-22-16

BORDER LAST REVISED 7/2/2010

USERNAME => s110420
DGN FILE => 0815000123ca001.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 2341

PROJECT NUMBER & PHASE 08150001231

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	R134.3/R144.1	3	36

REGISTERED CIVIL ENGINEER — DATE 1/22/16

PLANS APPROVAL DATE 1/22/16

REGISTERED PROFESSIONAL ENGINEER
YONGBEE LIAU
No. 75571
Exp 6/30/16
CIVIL
STATE OF CALIFORNIA

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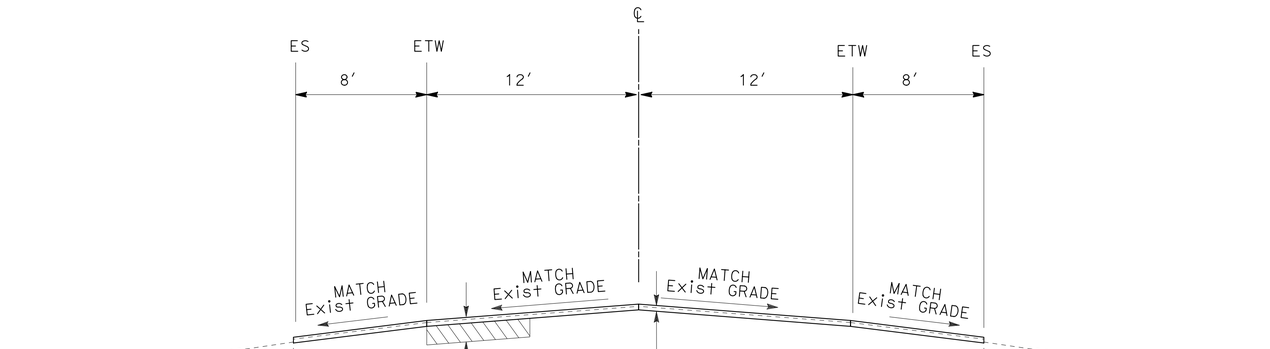

WILEY'S WELL ROAD

BETWEEN EB RAMPS AND WB RAMPS INTERSECTIONS

TYPICAL CROSS SECTION

NO SCALE **X-2**

CALCULATED-DESIGNED BY: YONGBEE LIAU
CHECKED BY: LIAN "JAMES" LAN
FUNCTIONAL SUPERVISOR: JIAN "JAMES" LAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE ENGINEERING

REVISED BY	DATE REVISED

LAST REVISION: DATE PLOTTED => 03-FEB-2016; TIME PLOTTED => 11:02; 01-22-16

BORDER LAST REVISED 7/2/2010

USERNAME => s110420
DGN FILE => 0815000123ca002.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 2341

PROJECT NUMBER & PHASE 08150001231

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	R134.3/R144.1	4	36

REGISTERED CIVIL ENGINEER 1/22/16 DATE

1/22/16
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
YONGBEE LIAU
No. 75571
Exp. 6/30/16
CIVIL
STATE OF CALIFORNIA

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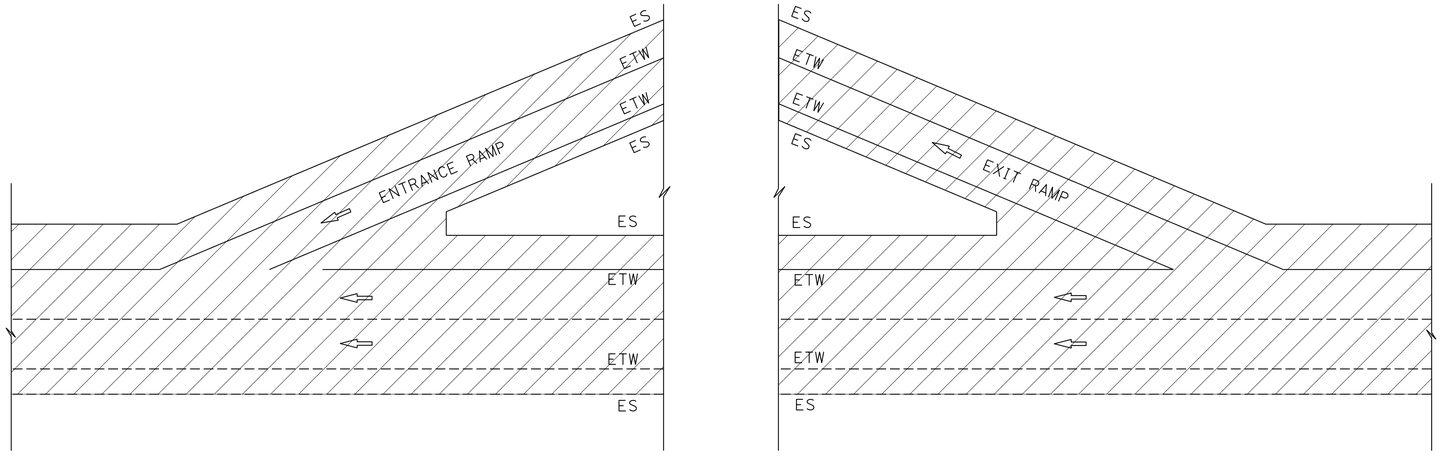
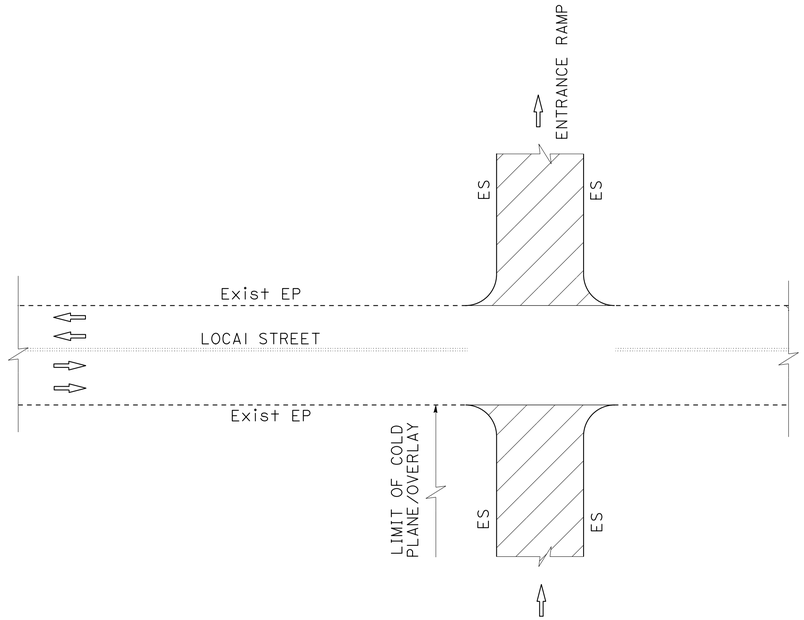
LEGEND:

LIMIT OF COLD PLANE AND OVERLAY



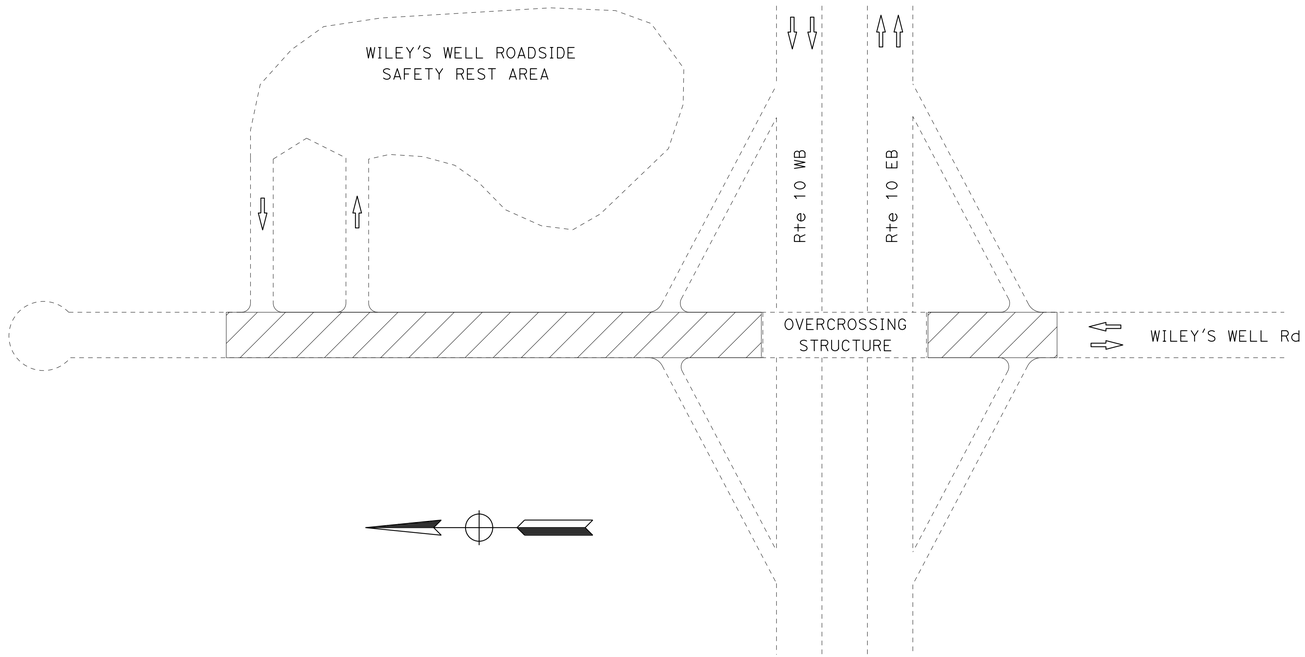
LIMITS OF COLD PLANE AND OVERLAY AT GORE AREA

WILEY'S WELL Rd (ALL RAMPS)



COLD PLANE/OVERLAY LIMITS OF WORK

EXIT AND ENTRANCE RAMPS AT LOCAl STREETS



WILEY'S WELL Rd PAVING LIMIT

CONSTRUCTION DETAILS

NO SCALE

C-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: JIAN "JAMES" LAN
CALCULATED-DESIGNED BY: YONGBEE LIAU
CHECKED BY: LIAN "JAMES" LAN
REVISED BY
DATE REVISED

LAST REVISION 01-22-16
DATE PLOTTED => 03-FEB-2016
TIME PLOTTED => 11:02

RUMBLE STRIP NOTES:

1. PLACE GROUND-IN INDENTATIONS RUMBLE STRIP PER STANDARD PLAN A40B.
2. LIMITS FOR BRIDGES AND RAMPS SHOWN ARE RELATIVE LIMITS OF RUMBLE STRIP AND FOR GENERAL INFORMATION ONLY.
3. LIMITS OF THE RUMBLE STRIPS AS SHOWN OR AS DIRECTED BY THE ENGINEER.

LEGEND:

RHMA-G — RUBBERIZED HOT MIX ASPHALT (GAP GRADED)

RUMBLE STRIP

RHMA-G

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	R134.3/R144.1	5	36

1/22/16
REGISTERED CIVIL ENGINEER DATE

1/22/16
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
YONGBEE LIAU
No. 75571
Exp 6/30/16
CIVIL
STATE OF CALIFORNIA

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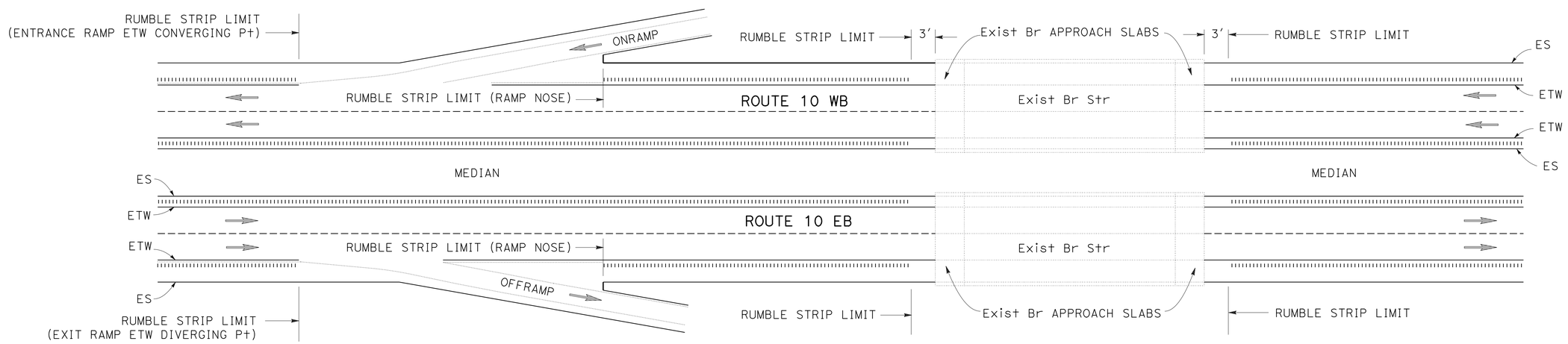
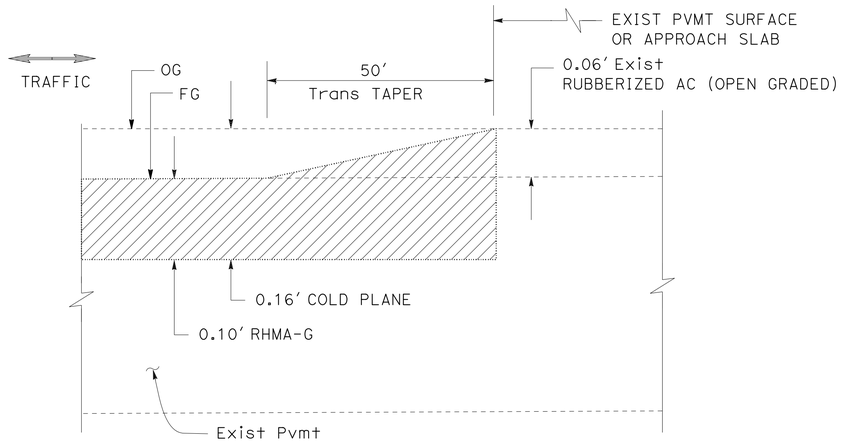


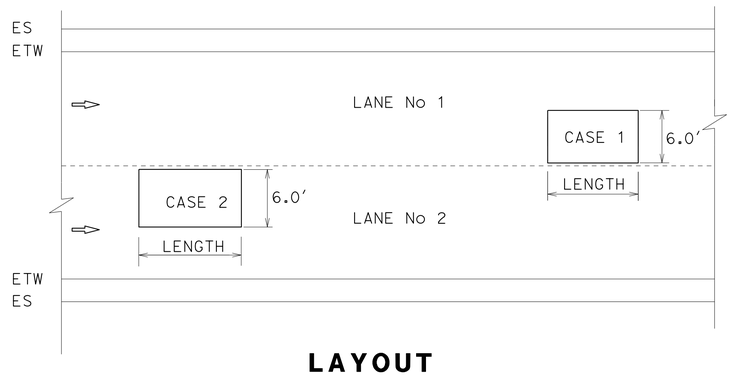
RUMBLE STRIP PLACEMENT

(AT RAMPS AND BRIDGES)



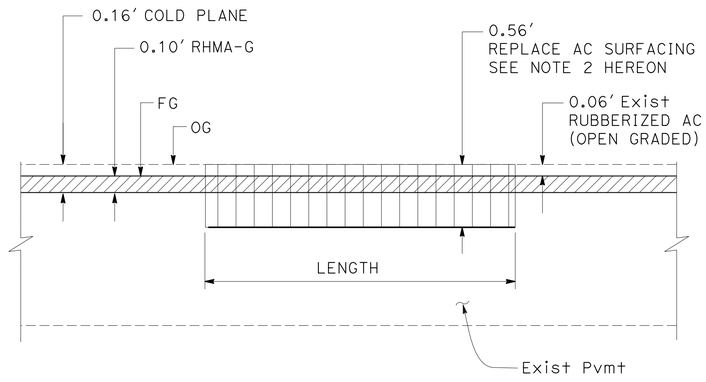
PAVEMENT CONFORM

BEGIN / END BRIDGE
BEGIN / END CONSTRUCTION



LAYOUT

CASE 1: RIGHT WHEEL TRACK
CASE 2: LEFT WHEEL TRACK



PROFILE

REPLACE ASPHALT CONCRETE SURFACING

1. LENGTH OF REPLACE ASPHALT SURFACING SHALL BE A MINIMUM LENGTH 50'
2. REPLACE ASPHALT CONCRETE URFACING SHALL BE PERFORMED PRIOR TO COLD PLANE/RHMA-G OVERLAY OPERATIONS.
3. TO REPLACE ASPHALT CONCRETE SURFACING FOR THE WIDTH OF AN ENTIRE LANE, COMBINE CASE 1 AND 2

CONSTRUCTION DETAILS

NO SCALE **C-2**

REVISED BY | DATE REVISED
CALCULATED-DESIGNED BY: YONGBEE LIAU | CHECKED BY: LIAN "JAMES" LAN
FUNCTIONAL SUPERVISOR: JIAN "JAMES" LAN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE ENGINEERING

LAST REVISION: DATE PLOTTED => 03-FEB-2016 TIME PLOTTED => 11:02
01-22-16

BORDER LAST REVISED 7/2/2010 | USERNAME => s110420 | DGN FILE => 0815000123ga002.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2341 | PROJECT NUMBER & PHASE 08150001231

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	R134.3/R144.1	6	36

REGISTERED CIVIL ENGINEER — DATE 1/22/16

PLANS APPROVAL DATE 1/22/16

REGISTERED PROFESSIONAL ENGINEER
YONGBEE LIAU
No. 75571
Exp 6/30/16
CIVIL
STATE OF CALIFORNIA

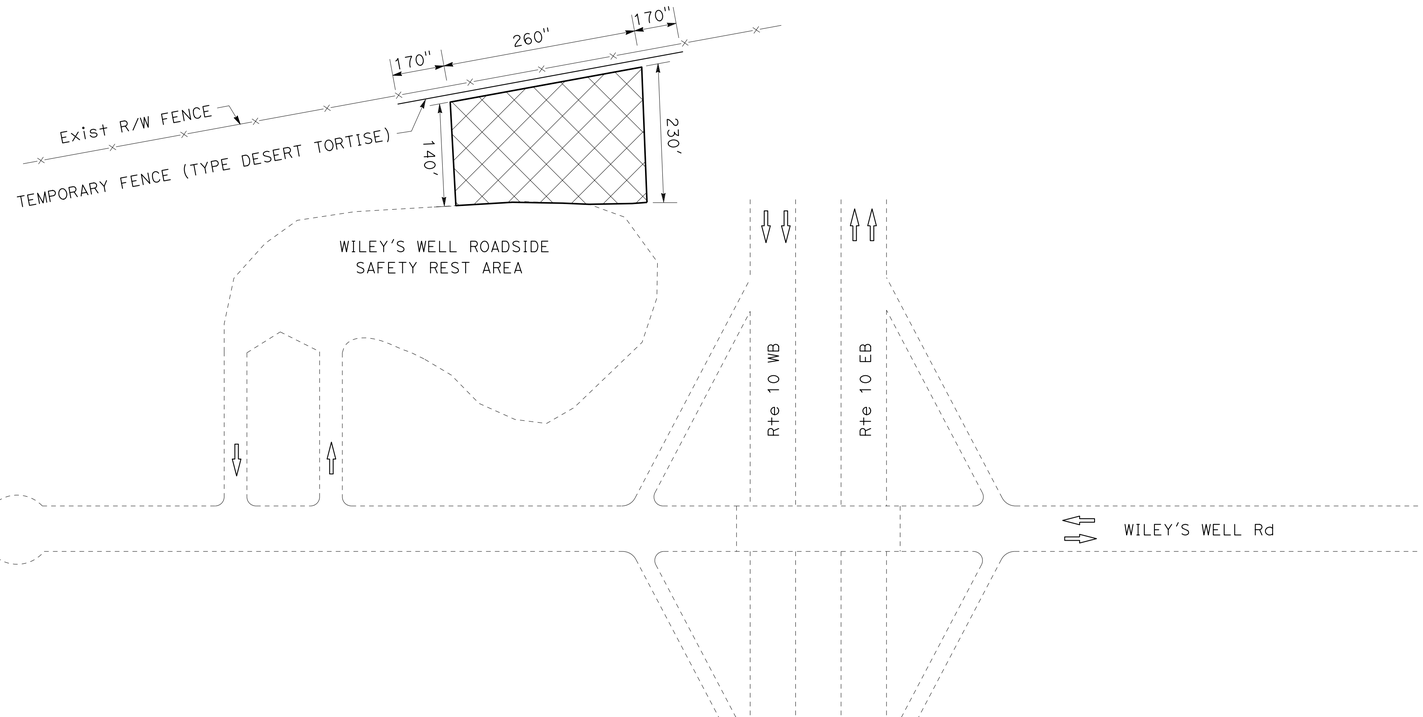
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:

DIMENSIONS SHOWN ARE APRROXIMATE. CONTRACTOR TO VERIFY IN FIELD.

LEGEND:

EQUIPMENT STAGING/STORAGE AREA



DESIGNATED EQUIPMENT STAGING/STORAGE AREA

WILEY'S WELL ROAD PM 135.1

CONSTRUCTION DETAILS

NO SCALE **C-3**

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY: YONGBEE LIAU
CHECKED BY: LIAN "JAMES" LAN
FUNCTIONAL SUPERVISOR: JIAN "JAMES" LAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

LAST REVISION: DATE PLOTTED => 03-FEB-2016 TIME PLOTTED => 11:02
01-22-16

BORDER LAST REVISED 7/2/2010 | USERNAME => s110420 | DGN FILE => 08150001231ga003.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2341 | PROJECT NUMBER & PHASE 08150001231

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	R134.3/R144.1	7	36

1/22/16
REGISTERED CIVIL ENGINEER DATE

1/22/16
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
YONGBEE LIAU
No. 75571
Exp 6/30/16
CIVIL
STATE OF CALIFORNIA

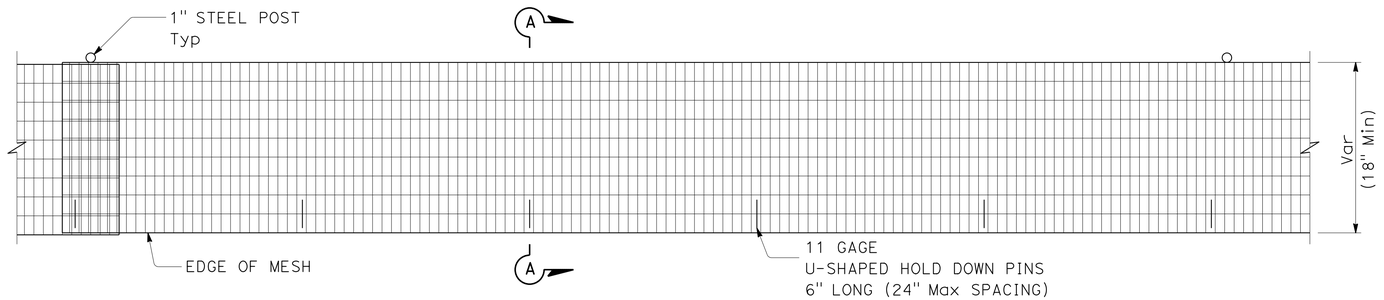
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LEGEND:

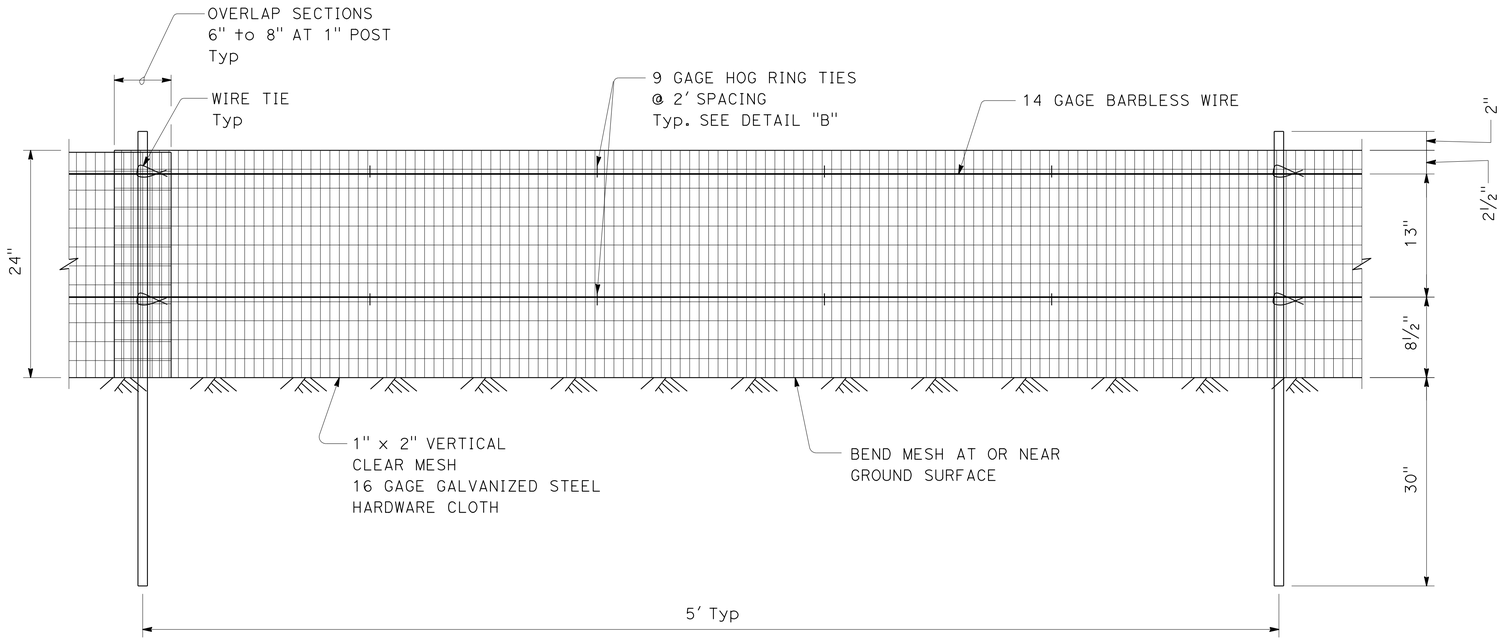
Desert Tortoise Habitat

NOTES:

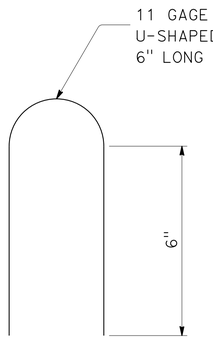
1. Exact locations for temporary desert tortoise fence shall be determined by the Engineer.
2. Horizontal portion of hardware cloth must be on habitat side of posts.



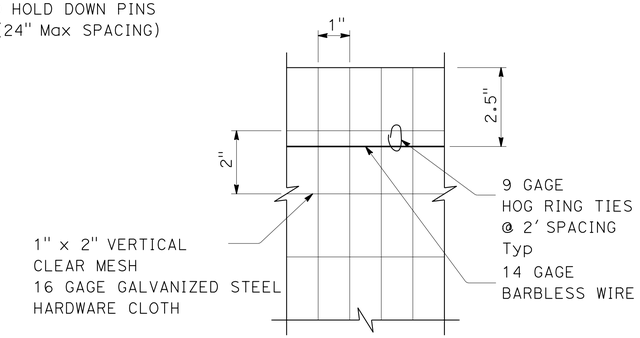
PLAN VIEW



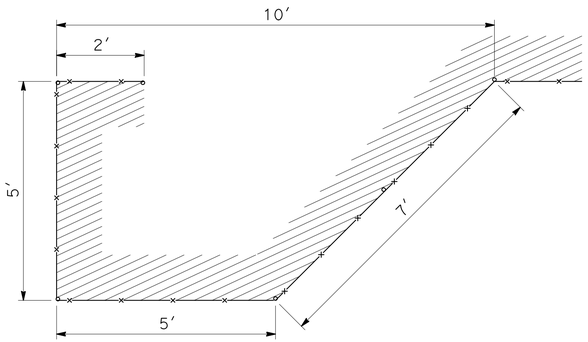
FRONT VIEW



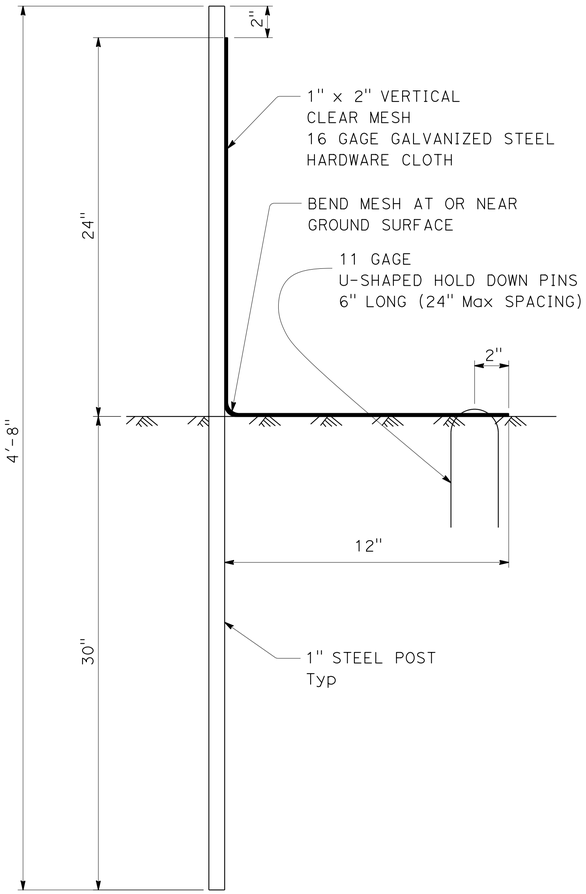
DETAIL "A"



DETAIL "B"



REDIRECTIONAL CONFIGURATION PLAN VIEW



SECTION A-A

CONSTRUCTION DETAILS
(TEMPORARY FENCE (TYPE DESERT TOROISE)

NO SCALE **C-4**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: JIAN "JAMES" LAN

CALCULATED-DESIGNED BY: LIAN "JAMES" LAN
CHECKED BY: YONGBEE LIAU

REVISED BY	DATE REVISED

LAST REVISION | DATE PLOTTED => 03-FEB-2016
01-22-16 | TIME PLOTTED => 11:02

BORDER LAST REVISED 7/2/2010

USERNAME => s110420
DGN FILE => 08150001231ga004.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 2341

PROJECT NUMBER & PHASE 08150001231

NOTE:
CONSTRUCTION AREA SIGN LOCATIONS SHOWN ARE APPROXIMATE.
EXACT LOCATIONS TO BE DETERMINED BY THE ENGINEER.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	R134.3/R144.1	8	36

Dean D To 1/22/16
REGISTERED CIVIL ENGINEER DATE

1/22/16
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Dean D To
No. 81698
Exp. 3/31/16
CIVIL
STATE OF CALIFORNIA

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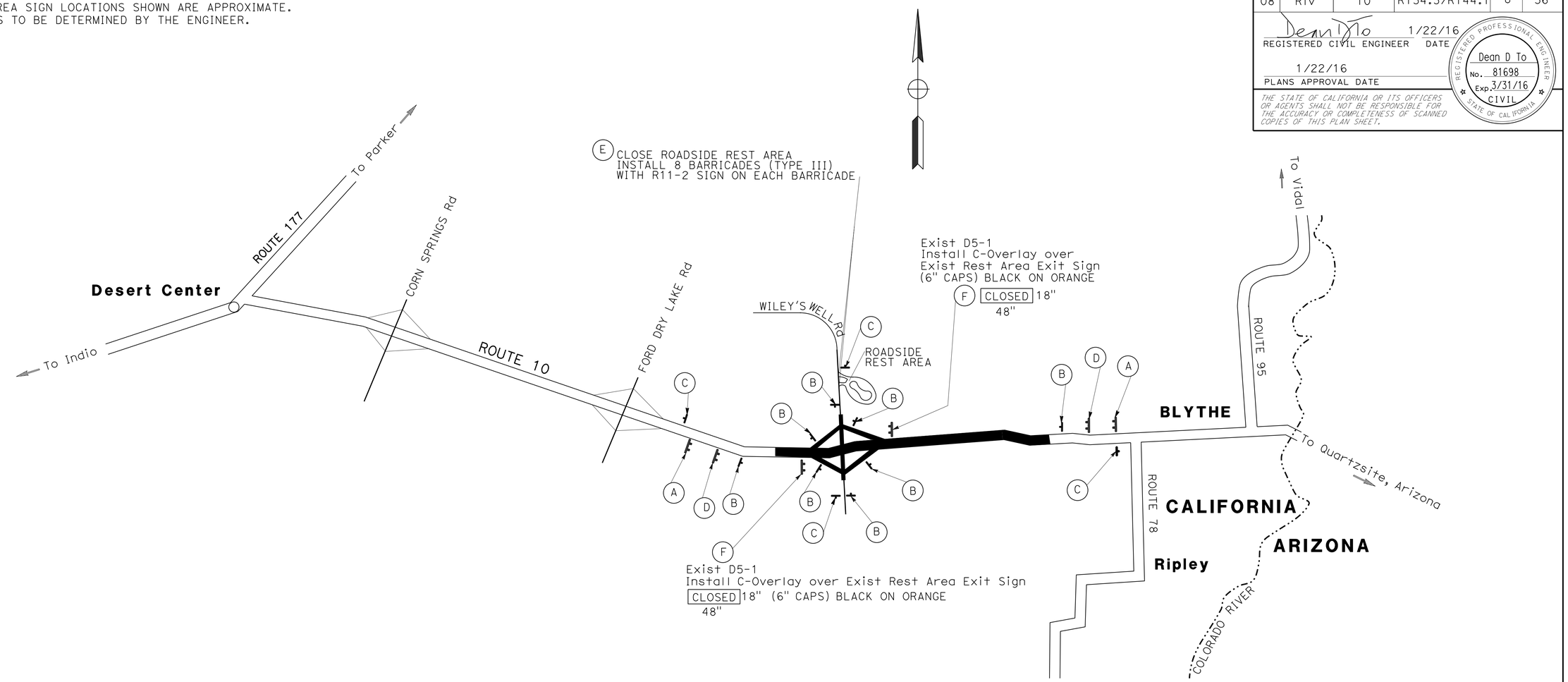


STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN LETTER	SIGN CODE		PANEL SIZE	SIGN MESSAGE	NUMBER OF POSTS AND SIZE	NUMBER OF SIGNS
	FEDERAL	CALIFORNIA				
A		C40	144" x 60"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	2 - 6" x 6"	2
B	W20-1	C23	48" x 48"	ROAD WORK AHEAD	1 - 6" x 6"	8
C	G20-2	C14	48" x 24"	END ROAD WORK	1 - 4" x 6"	4
D	G20-1	C11	90" x 48"	ROAD WORK NEXT 10 MILES	2 - 6" x 6"	2
E	R11-2		48" x 30"	ROAD CLOSED	MOUNT ON BARRICADE	8
F		C-OVERLAY	48" x 18"	CLOSED	MOUNT ON Exist. SIGN	2

PORTABLE CHANGEABLE MESSAGE SIGNS

(EA)
4

TYPE III BARRICADE

(EA)
8

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

CONSTRUCTION AREA SIGNS
NO SCALE **CS-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
TRAFFIC DESIGN
FUNCTIONAL SUPERVISOR: MARIO L AMANCIO
CALCULATED-DESIGNED BY: PATTI BARTOLI
CHECKED BY: DEAN TO
REVISED BY | DATE REVISED

LAST REVISION | DATE PLOTTED => 03-FEB-2016
01-22-16 | TIME PLOTTED => 11:02

BORDER LAST REVISED 7/2/2010
USERNAME => s110420
DGN FILE => 08150001231a001.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2285
PROJECT NUMBER & PHASE 08150001231

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	R134.3/R144.1	9	36

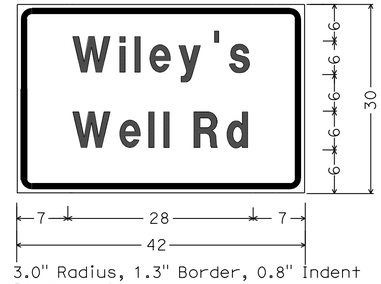
Dean D To 1/22/16
REGISTERED CIVIL ENGINEER DATE

1/22/16
PLANS APPROVAL DATE

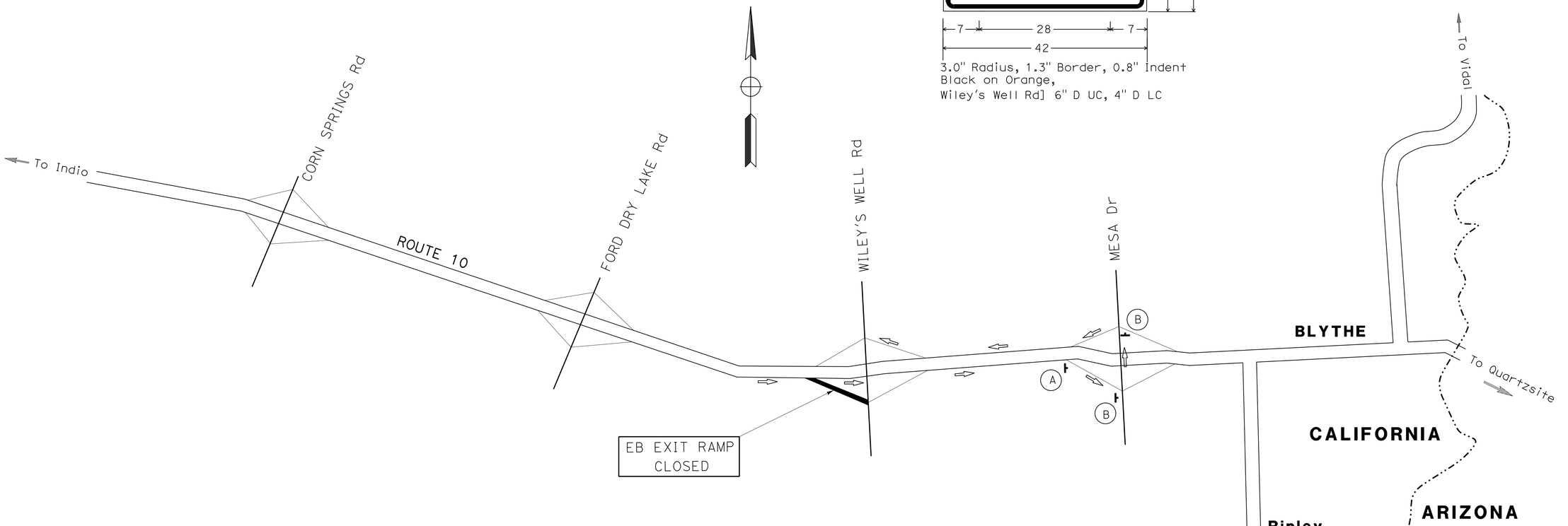
REGISTERED PROFESSIONAL ENGINEER
Dean D To
No. 81698
Exp. 3/31/16
CIVIL
STATE OF CALIFORNIA

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

D3-1



3.0" Radius, 1.3" Border, 0.8" Indent
Black on Orange,
Wiley's Well Rd] 6" D UC, 4" D LC



WILEY'S WELL ROAD EB EXIT RAMP DETOUR

REFER TO REVISED STANDARD PLAN T14 FOR RAMP CLOSURE

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN LETTER	SIGN CODE		PANEL SIZE	SIGN MESSAGE	NUMBER OF POSTS AND SIZE	NUMBER OF SIGNS
	FEDERAL	CALIFORNIA				
(A)	D3-1 M4-8 M6-2		42" x 30" 30" x 15" 21" x 15"	WILEY'S WELL RD DETOUR (DIAGONAL ARROW)	1 - 6" x 6"	1
(B)	D3-1 M4-10(LT)		42" x 30" 48" x 18"	WILEY'S WELL RD DETOUR (LEFT)	1 - 6" x 6"	2

APPROVED FOR MOTORIST INFORMATION WORK ONLY

MOTORIST INFORMATION PLAN

NO SCALE

MI-1

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: PATTI BARTOLI
CHECKED BY: DEAN TO
FUNCTIONAL SUPERVISOR: MARIO L AMANCIO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

LAST REVISION: DATE PLOTTED => 03-FEB-2016
01-22-16 TIME PLOTTED => 11:02

BORDER LAST REVISED 7/2/2010

USERNAME => s110420
DGN FILE => 08150001231b001.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 2285

PROJECT NUMBER & PHASE 08150001231

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	R134.3/R144.1	10	36

Dean D To 1/22/16
REGISTERED CIVIL ENGINEER DATE

1/22/16
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Dean D To
No. 81698
Exp. 3/31/16
CIVIL
STATE OF CALIFORNIA

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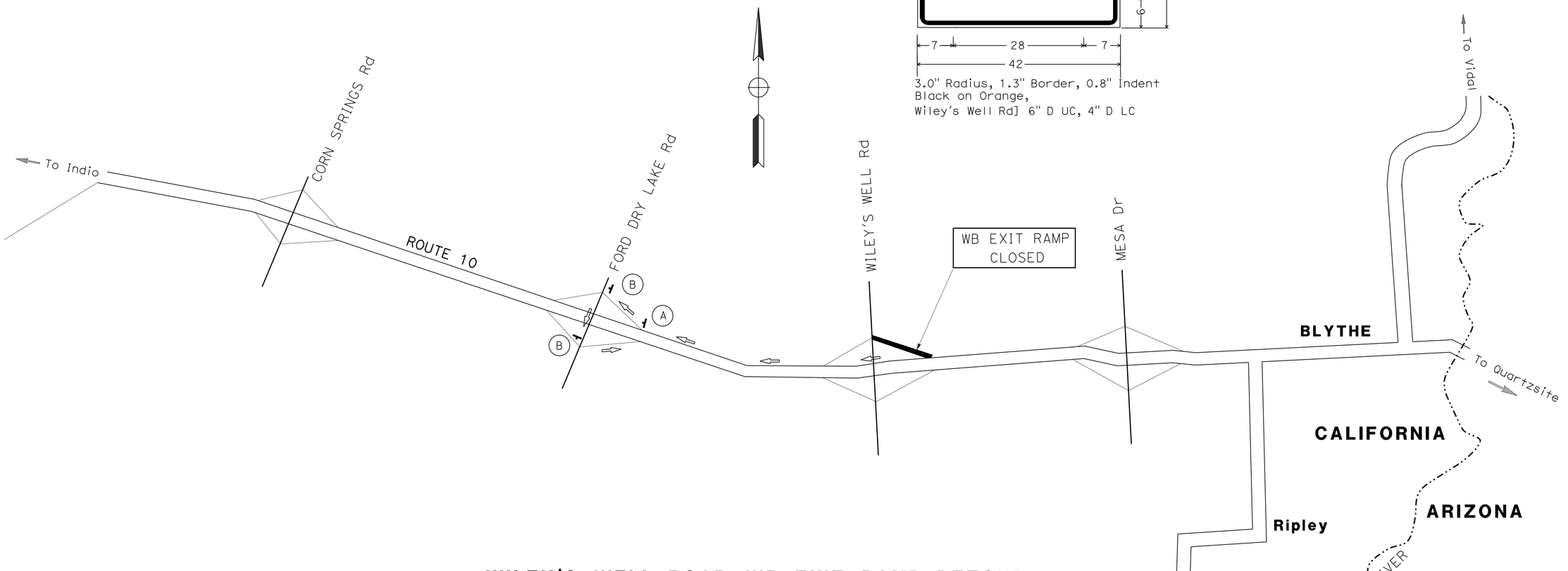
D3-1

3.0" Radius, 1.3" Border, 0.8" Indent
Black on Orange,
Wiley's Well Rd] 6" D UC, 4" D LC



WILEY'S WELL ROAD WB EXIT RAMP DETOUR

REFER TO REVISED STANDARD PLAN T14 FOR RAMP CLOSURE

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN LETTER	SIGN CODE		PANEL SIZE	SIGN MESSAGE	NUMBER OF POSTS AND SIZE	NUMBER OF SIGNS
	FEDERAL	CALIFORNIA				
(A)	D3-1 M4-8 M6-2		42" x 30" 30" x 15" 21" x 15"	WILEY'S WELL RD DETOUR (DIAGONAL ARROW)	1 - 6" x 6"	1
(B)	D3-1 M4-10(LT)		42" x 30" 48" x 18"	WILEY'S WELL RD DETOUR (LEFT)	1 - 6" x 6"	2

APPROVED FOR MOTORIST INFORMATION WORK ONLY

MOTORIST INFORMATION PLAN

NO SCALE **MI-2**

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: PATTI BARTOLI
CHECKED BY: DEAN TO
FUNCTIONAL SUPERVISOR: MARIO L AMANCIO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
TRAFFIC DESIGN

LAST REVISION 01-22-16
DATE PLOTTED => 03-FEB-2016
TIME PLOTTED => 11:02

BORDER LAST REVISED 7/2/2010
USERNAME => s110420
DGN FILE => 08150001231b002.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2285
PROJECT NUMBER & PHASE 08150001231

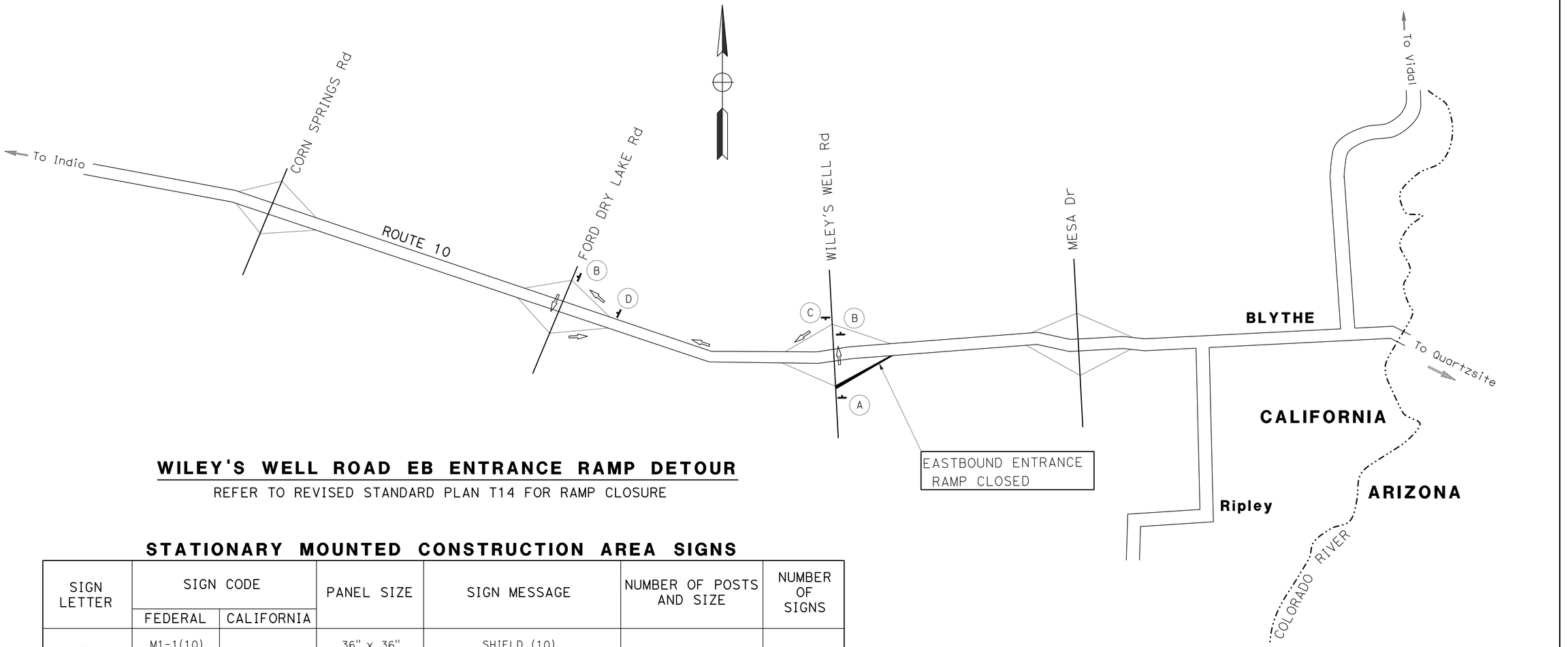
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	R134.3/R144.1	11	36

Dean D To 1/22/16
REGISTERED CIVIL ENGINEER DATE

1/22/16
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Dean D To
No. 81698
Exp. 3/31/16
CIVIL
STATE OF CALIFORNIA

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



WILEY'S WELL ROAD EB ENTRANCE RAMP DETOUR

REFER TO REVISED STANDARD PLAN T14 FOR RAMP CLOSURE

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN LETTER	SIGN CODE		PANEL SIZE	SIGN MESSAGE	NUMBER OF POSTS AND SIZE	NUMBER OF SIGNS
	FEDERAL	CALIFORNIA				
(A)	M1-1(10) M3-2	SC3	36" x 36" 30" x 15" 36" x 12"	SHIELD (10) EAST DETOUR (UP ARROW)	1 - 6" x 6"	1
(B)	M1-1(10) M3-2 M4-10(LT)		36" x 36" 30" x 15" 36" x 12"	SHIELD (10) EAST DETOUR (LEFT ARROW)	1 - 6" x 6"	2
(C)	M1-1(10) M3-2 M4-10(RT)		36" x 36" 30" x 15" 36" x 12"	SHIELD (10) EAST DETOUR (RIGHT ARROW)	1 - 6" x 6"	1
(D)	M1-1(10) M3-2 M6-2		36" x 36" 30" x 15" 21" x 15"	SHIELD (10) EAST (DIAGONAL ARROW)	1 - 6" x 6"	1

APPROVED FOR MOTORIST INFORMATION WORK ONLY

MOTORIST INFORMATION PLAN

NO SCALE

MI-3

CALCULATED-DESIGNED BY: PATTI BARTOLI
CHECKED BY: DEAN TO
REVISED BY
DATE REVISED
FUNCTIONAL SUPERVISOR: MARIO L AMANCIO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
TRAFFIC DESIGN
Caltrans

LAST REVISION | DATE PLOTTED => 03-FEB-2016
01-22-16 | TIME PLOTTED => 11:02

BORDER LAST REVISED 7/2/2010 | USERNAME => s110420 | DGN FILE => 08150001231b003.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2285 | PROJECT NUMBER & PHASE 08150001231

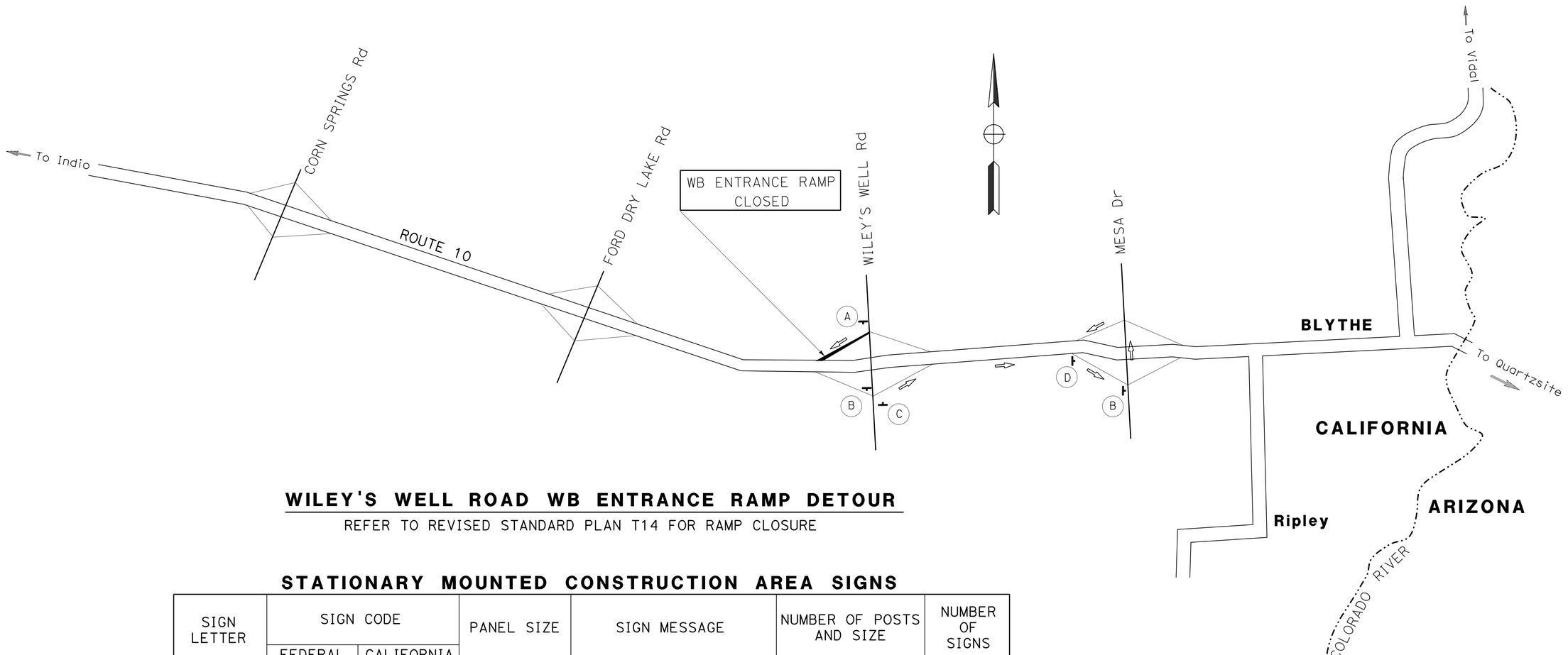
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	R134.3/R144.1	12	36

Dean D To 1/22/16
REGISTERED CIVIL ENGINEER DATE

1/22/16
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Dean D To
No. 81698
Exp. 3/31/16
CIVIL
STATE OF CALIFORNIA

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



WILEY'S WELL ROAD WB ENTRANCE RAMP DETOUR

REFER TO REVISED STANDARD PLAN T14 FOR RAMP CLOSURE

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN LETTER	SIGN CODE		PANEL SIZE	SIGN MESSAGE	NUMBER OF POSTS AND SIZE	NUMBER OF SIGNS
	FEDERAL	CALIFORNIA				
(A)	M1-1(10) M3-4	SC3	36" x 36" 30" x 15" 36" x 12"	SHIELD (10) EAST DETOUR (UP ARROW)	1 - 6" x 6"	1
(B)	M1-1(10) M3-4 M4-10(LT)		36" x 36" 30" x 15" 36" x 12"	SHIELD (10) EAST DETOUR (LEFT ARROW)	1 - 6" x 6"	2
(C)	M1-1(10) M3-4 M4-10(RT)		36" x 36" 30" x 15" 36" x 12"	SHIELD (10) EAST DETOUR (RIGHT ARROW)	1 - 6" x 6"	1
(D)	M1-1(10) M3-4 M6-2		36" x 36" 30" x 15" 21" x 15"	SHIELD (10) EAST (DIAGONAL ARROW)	1 - 6" x 6"	1

APPROVED FOR MOTORIST INFORMATION WORK ONLY

MOTORIST INFORMATION PLAN

NO SCALE **MI-4**

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: PATTI BARTOLI
CHECKED BY: DEAN TO
FUNCTIONAL SUPERVISOR: MARIO L AMANCIO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

LAST REVISION: DATE PLOTTED => 03-FEB-2016 TIME PLOTTED => 11:02
01-22-16

BORDER LAST REVISED 7/2/2010
USERNAME => s110420
DGN FILE => 08150001231b004.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2285
PROJECT NUMBER & PHASE 08150001231

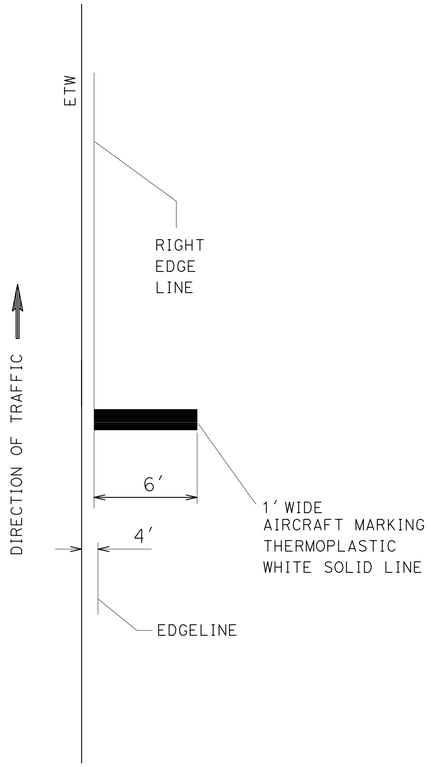
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	R134.3/R144.1	13	36

Dean D To 1/22/16
REGISTERED CIVIL ENGINEER DATE

1/22/16
PLANS APPROVAL DATE

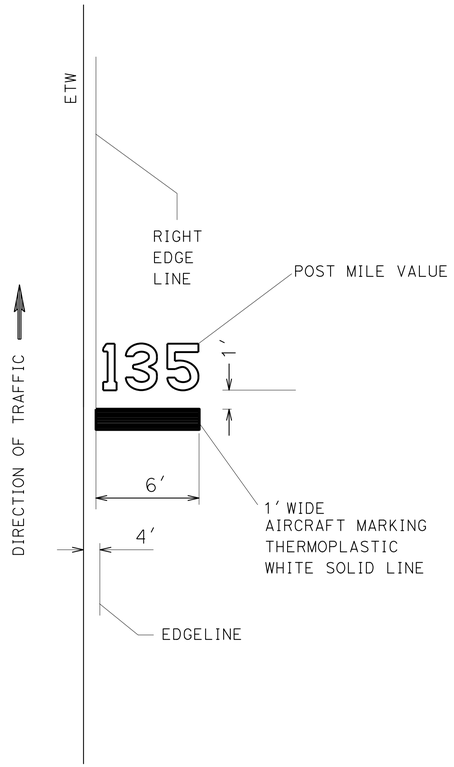
REGISTERED PROFESSIONAL ENGINEER — Dean D To, No. 81698, Exp. 3/31/16, CIVIL, STATE OF CALIFORNIA

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



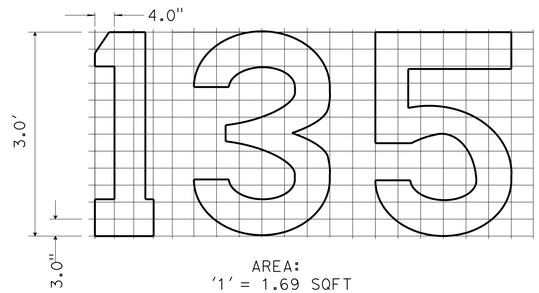
TYPICAL AIRCRAFT PAVEMENT MARKING

@ 1 MILE INTERVALS (FOR POSTMILES 136, 137, 138, 139, 141, 142, 143 AND 144)

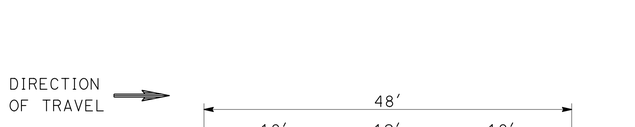


TYPICAL AIRCRAFT PAVEMENT MARKING

@ 5 MILE INTERVALS FOR POSTMILES 135 AND 140



AREA:
'1' = 1.69 SQFT
'3' = 3.21 SQFT
'5' = 3.51 SQFT

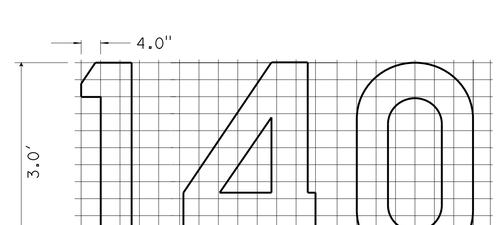


DETAIL 13M

● TYPE A MARKER WHITE NON-REFLECTIVE MARKER

◨ TYPE G MARKER CLEAR RETROREFLECTIVE MARKER

Notes:
1. Markers shall be installed before placing the stripe.
2. Stripe shall be sprayable thermoplastic.



AREA:
'1' = 1.69 SQFT
'4' = 3.19 SQFT
'0' = 3.10 SQFT

PAVEMENT DELINEATION DETAILS
PDD-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: MARIO L AMANCIO
CALCULATED-DESIGNED BY: PATTI BARTOLI
CHECKED BY: DEAN TO
REVISED BY
DATE REVISED

LAST REVISION DATE PLOTTED => 03-FEB-2016
01-22-16 TIME PLOTTED => 11:02

BORDER LAST REVISED 7/2/2010
USERNAME => s110420
DGN FILE => 0815000123nb001.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2285
PROJECT NUMBER & PHASE 08150001231

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	R134.3/R144.1	14	36

Dean D To 1/22/16
REGISTERED CIVIL ENGINEER DATE

1/22/16
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Dean D To — No. 81698 — Exp. 3/31/16 — CIVIL — STATE OF CALIFORNIA

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

PAVEMENT DELINEATION QUANTITIES

LOCATION/POSTMILE	DIRECTION	DETAIL No.	THERMOPLASTIC TRAFFIC STRIPE (SPRAYABLE)			PAVEMENT MARKER			THERMOPLASTIC PAVEMENT MARKING	REMARKS
			4" YELLOW	4" WHITE	8" WHITE	NON-REFLECTIVE	RETROREFLECTIVE			
						TYPE A	TYPE G	TYPE H		
			LF	LF	LF	EA	EA	EA	SQFT	
MAINLINE R134.3/R144.1	EB	DETAIL 13M		51,744		4,320	1,080			
	EB	DETAIL 25	51,744					1,080		
	EB	DETAIL 27B		51,744						
	WB	DETAIL 13M		51,744		4,320	1,080			
	WB	DETAIL 25	51,744					1,080		
	WB	DETAIL 13M		1,584		140	35			PM R143.8 - R144.1
	WB	TYPE VI ARROW							126	3 EACH
	WB	DETAIL 27B		51,744						
WILEY'S WELLS Rd EB EXIT RAMP	EB	DETAIL 25A	1,230					53		
	EB	DETAIL 27B		735						
	EB	DETAIL 38			690		30			
	EB	'STOP'							66	
	EB	'AHEAD'							31	
	EB	TYPE V ARROW							132	
	EB	LIMIT LINE							128	
WILEY'S WELLS Rd EB ENTRANCE RAMP	EB	DETAIL 8		190					190	
	EB	DETAIL 25A	790					34		
	EB	DETAIL 27B		1,700						
	EB	DETAIL 38			260		12			
	EB	TYPE I ARROW							31	
WILEY'S WELLS Rd WB EXIT RAMP	WB	DETAIL 25A	910					39		
	WB	DETAIL 27B		1,400						
	WB	DETAIL 38			675		30			
	WB	'STOP'							66	
	WB	'AHEAD'							31	
	WB	TYPE V ARROW							132	
	WB	LIMIT LINE							140	
WILEY'S WELLS Rd WB ENTRANCE RAMP	WB	DETAIL 8		190					190	
	WB	DETAIL 25A	752					33		
	WB	DETAIL 27B		1,700						
	WB	DETAIL 38			215		10			
	WB	TYPE I ARROW							31	
SUBTOTAL			107,170	214,475	1,840	8,780	2,277	2,319	1,294	

PATTI BARTOLI | DEAN TO | CALCULATED-DESIGNED BY | CHECKED BY
REVISED BY | DATE REVISED
FUNCTIONAL SUPERVISOR: MARIO L AMANCIO
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

LAST REVISION | DATE PLOTTED => 03-FEB-2016 | TIME PLOTTED => 11:02
01-22-16

PAVEMENT DELINEATION QUANTITIES
PDQ-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	R134.3/R144.1	15	36

Dean D To 1/22/16
REGISTERED CIVIL ENGINEER DATE

1/22/16
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Dean D To
No. 81698
Exp. 3/31/16
CIVIL
STATE OF CALIFORNIA

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

PAVEMENT DELINEATION QUANTITIES

LOCATION/POSTMILE	DIRECTION	DETAIL No.	THERMOPLASTIC TRAFFIC STRIPE (SPRAYABLE)			PAVEMENT MARKER			THERMOPLASTIC PAVEMENT MARKING	REMARKS
						NON-REFLECTIVE	RETROREFLECTIVE			
			4" YELLOW	4" WHITE	8" WHITE	TYPE A	TYPE G	TYPE H		
			LF	LF	LF	EA	EA	EA	SQFT	
WILEY'S WELL OC 56-0564	SB/NB	DETAIL 27B		2,200						
	SB/NB	DETAIL 21	1,100							
PM 135	EB	AIRCRAFT MARKING '135'							8.41	
PM 136	EB	AIRCRAFT MARKING '-'							6	
PM 137	EB	AIRCRAFT MARKING '-'							6	
PM 138	EB	AIRCRAFT MARKING '-'							6	
PM 139	EB	AIRCRAFT MARKING '-'							6	
PM 140	EB	AIRCRAFT MARKING '140'							7.98	
PM 141	EB	AIRCRAFT MARKING '-'							6	
PM 142	EB	AIRCRAFT MARKING '-'							6	
PM 143	EB	AIRCRAFT MARKING '-'							6	
PM 144	EB	AIRCRAFT MARKING '-'							6	
PM 135	WB	AIRCRAFT MARKING '135'							8.41	
PM 136	WB	AIRCRAFT MARKING '-'							6	
PM 137	WB	AIRCRAFT MARKING '-'							6	
PM 138	WB	AIRCRAFT MARKING '-'							6	
PM 139	WB	AIRCRAFT MARKING '-'							6	
PM 140	WB	AIRCRAFT MARKING '140'							7.98	
PM 141	WB	AIRCRAFT MARKING '-'							6	
PM 142	WB	AIRCRAFT MARKING '-'							6	
PM 143	WB	AIRCRAFT MARKING '-'							6	
PM 144	WB	AIRCRAFT MARKING '-'							6	
SUBTOTAL			1,100	2,200					129	
TOTAL			326,785			8,780	4,596		1,423	

PAVEMENT DELINEATION QUANTITIES
PDQ-2

CALCULATED-DESIGNED BY: PATTI BARTOLI
CHECKED BY: DEAN TO
REVISED BY
DATE REVISED
FUNCTIONAL SUPERVISOR: MARIO L AMANCIO
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

LAST REVISION DATE PLOTTED => 03-FEB-2016
TIME PLOTTED => 11:02
01-22-16

BORDER LAST REVISED 7/2/2010
USERNAME => s110420
DGN FILE => 0815000123nc002.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2285
PROJECT NUMBER & PHASE 08150001231

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	R134.3/R144.1	16	36

1/22/16
REGISTERED CIVIL ENGINEER DATE

1/22/16
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
YONGBEE LIAU
No. 75571
Exp 6/30/16
CIVIL
STATE OF CALIFORNIA

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

ROADWAY QUANTITIES

PM LOCATION			RHMA-G	COLD PLANE	TACK COAT	Shld RUMBLE STRIP (HMA, GROUND-IN IDENTATIONS)
DIRECTION	BEG PM	END PM	TON	SQYD	TON	Sta
10 EB	134.30	144.10	15639.6	222924	61.66	1029
10 WB	134.30	144.10	15639.6	222924	61.66	1029
RAMPS						
EB EXIT TO WILEY"S WELL Rd	13.822	14.055	228.8	3281	0.90	
EB ENTRANCE TO WILEY"S WELL Rd	14.055	14.322	262.2	3759	1.03	
WB EXIT TO WILEY"S WELL Rd	13.822	14.059	232.8	3337	0.92	
WB ENTRANCE TO WILEY"S WELL Rd	14.059	14.329	**265.2**	3802	1.05	
WILEY"S WELL Rd			187.1	2682	0.74	
		TOTAL	32455.3	462709	127.96	2058

REPLACE ASPHALT CONCRETE SURFACING

PM	DIRECTION	LANE # 1	LANE # 2	Lt WHEEL TRACK 6'	Rt WHEEL TRACK 6'	Entire Lane 12'	THICKNESS Ft	TACK COAT Ton	REPLACE AC Conc SURFACING CY
135.0	EB	X				420	0.56	0.133	104.5
135.0	EB		X			840	0.56	0.262	209.1
135.4	EB		X			420	0.56	0.133	104.5
135.5	EB		X		840		0.56	0.261	104.5
135.7	EB		X			420	0.56	0.133	104.5
135.8	EB		X		420		0.56	0.131	52.3
136.5	EB		X		420		0.56	0.131	52.3
136.7	EB		X		420		0.56	0.131	52.3
138.4	EB		X		420		0.56	0.131	52.3
139.00	EB		X		630		0.56	0.196	78.4
139.2	EB		X		840		0.56	0.261	104.5
141.25	EB		X	210			0.56	0.067	26.1
141.55	EB		X	210			0.56	0.067	26.1
141.75	WB		X		420		0.56	0.131	52.3
141.0	WB		X		210		0.56	0.067	26.1
139.35	WB		X		630		0.56	0.196	78.4
138.4	WB		X		1270		0.56	0.393	158.0
137.85	WB		X		420		0.56	0.131	52.3
137.7	WB	X		210			0.56	0.067	26.1
137.5	WB		X		1450		0.56	0.448	180.4
137.15	WB		X			210	0.56	0.068	52.3
137.05	WB		X			420	0.56	0.133	104.5
136.6	WB		X		420		0.56	0.131	52.3
136.5	WB		X			420	0.56	0.133	104.5
136.4	WB		X		840		0.56	0.261	104.5
135.95	WB		X		420		0.56	0.131	52.3
135.55	WB		X		630		0.56	0.196	78.4
135.1	WB	X				420	0.56	0.133	104.5
135.1	WB		X			420	0.56	0.133	104.5
WILEY"S WELL ROAD						320	0.56	0.102	79.6
WILEY"S WELL ROAD RAMPS									
EB EXIT RAMP				400	400		0.56	0.250	99.6
EB ENTRANCE RAMP				400	400		0.56	0.250	99.6
WB EXIT RAMP				400	400		0.56	0.250	99.6
WB ENTRANCE RAMP				400	400		0.56	0.250	99.6
					TOTAL			5.891	2881

* EXACT LOCATIONS, LANE NUMBER, AND DIMENSIONS OF REPLACE ASPHALT CONCRETE SURFACING SHALL BE DETERMINED BY THE ENGINEER.

WATER POLLUTION CONTROL QUANTITIES

DESCRIPTION	UNIT	QUANTITY
Temp SOIL BINDER	SQYD	4050
TEMPORARY FIBER ROLL	LF	800
TEMPORARY FENCE (TYPE DESERT TORTOISE)	LF	600

SUMMARY OF QUANTITIES
Q-1

REVISED BY | DATE REVISED
YONGBEE LIAU | LIAN "JAMES" LAN
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: JIAN "JAMES" LAN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE ENGINEERING

LAST REVISION DATE PLOTTED => 03-FEB-2016
01-22-16 TIME PLOTTED => 11:03

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	R134.3/R144.1	17	36

REGISTERED ELECTRICAL ENGINEER — 1/22/16 DATE

1/22/16
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — MITCHELL NGO No. 18920 Exp. 12-31-15 ELECTRICAL — STATE OF CALIFORNIA

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

NOTE: (THIS SHEET ONLY)

LOCATIONS ARE APPROXIMATE. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL VEHICLE SENSOR NODE LOCATIONS.

ABBREVIATIONS:

WVDS- WIRELESS VIDEO DETECTION SYSTEM
VSN- VEHICLE SENSOR NODE

LEGEND: (THIS SHEET ONLY)

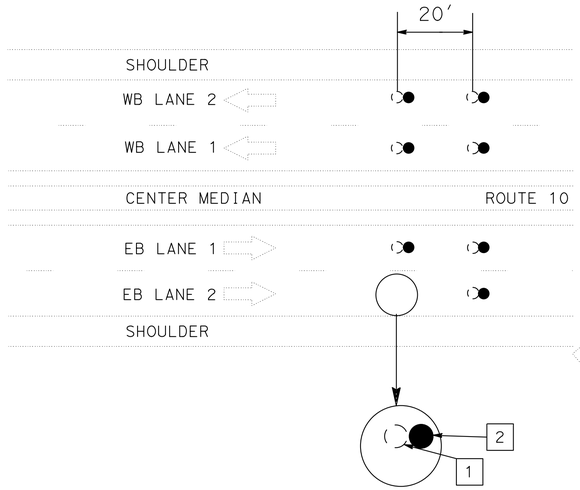
1 RC EXISTING VEHICLE SENSOR NODE SHOWN AS PER MANUFACTURER'S INSTRUCTION.

2 SEE E-4 FOR INSTALLATION DETAILS.

MVDS EQUIPMENT:

EXISTNG VSN

NEW VSN



EXISTING POLE MOUNTED WVDS

(* POLE PLACEMENT MAY BE IN EASTBOUND, WESTBOUND DIRECTION OR CENTER MEDIAN. SEE TABLE BELOW)

TYPICAL LAYOUT FOR LOCATIONS ① - ③

VEHICLE SENSOR NODES REPLACEMENT LOCATIONS

LOCATION	COUNTY	ROUTE	POSTMILE	APPROXIMATE LOCATION	WVDS LOCATION	DIRECTION AND LANE NUMBER	QUANTITY OF VSN TO BE RC
①	Riv	10	R136.8	1.7 MILE E/O WILEY WELL Rd.	CENTER MEDIAN	EB LANES 1-2; WB LANES 1-2	8
②			R139.3	4.2 MILE E/O WILEY WELL Rd.	CENTER MEDIAN	EB LANES 1-2; WB LANES 1-2	8
③			R141.9	6.8 MILE E/O WILEY WELL Rd.	CENTER MEDIAN	EB LANES 1-2; WB LANES 1-2	8
						TOTAL	24

APPROVED FOR ELECTRICAL WORK ONLY

VEHICLE SENSOR NODES REPLACEMENT

NO SCALE

E-1

REVISED BY | DATE REVISED
MITCHELL NGO | DAVID A GONZALEZ
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: DAVID A GONZALEZ
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® ELECTRICAL DESIGN

LAST REVISION 01-22-16 | DATE PLOTTED => 03-FEB-2016 | TIME PLOTTED => 11:03

BORDER LAST REVISED 7/2/2010 | USERNAME => s110420 | DGN FILE => 0815000123ua001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2292 | PROJECT NUMBER & PHASE 08150001231

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	R134.3/R144.1	18	36

REGISTERED ELECTRICAL ENGINEER — 1/22/16 DATE

1/22/16
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
MITCHELL NGO
No. 18920
Exp. 12-31-15
ELECTRICAL
STATE OF CALIFORNIA

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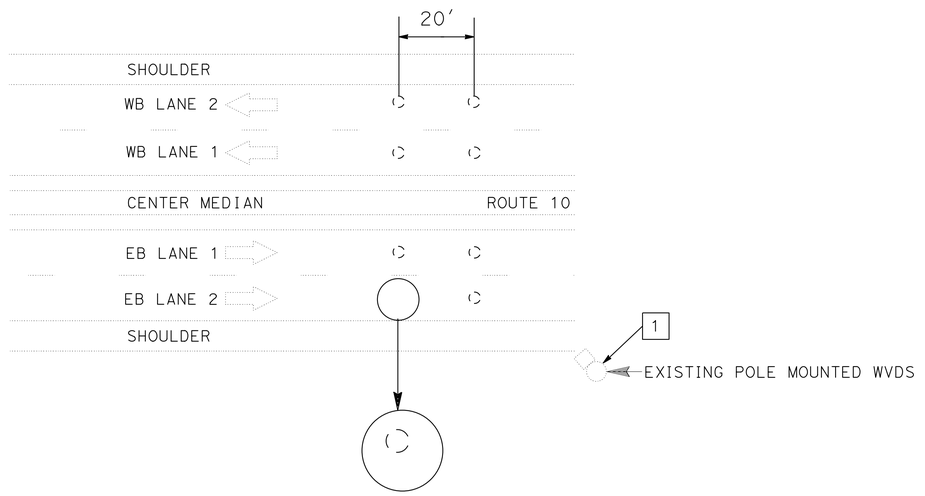
NOTE: (THIS SHEET ONLY)

LOCATIONS ARE APPROXIMATE. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL VEHICLE SENSOR NODE LOCATIONS.

LEGEND: (THIS SHEET ONLY)

1 INSTALL TEMPORARY MVDS ON EXISTING VDS POLE DURING CONSTRUCTION. SEE E-3 FOR DETAILS.



TYPICAL LAYOUT FOR LOCATIONS ① - ③

MICROWAVE VEHICLE DETECTION SYSTEM LOCATIONS

LOCATION	COUNTY	ROUTE	POSTMILE	APPROXIMATE LOCATION	WVDS LOCATION	DIRECTION AND LANE NUMBER	* MVDS LOCATIONS
①	Riv	10	R136.8	1.7 MILE E/O WILEY WELL Rd.	CENTER MEDIAN	EB LANES 1-2; WB LANES 1-2	1
②			R139.3	4.2 MILE E/O WILEY WELL Rd.	CENTER MEDIAN	EB LANES 1-2; WB LANES 1-2	1
③			R141.9	6.8 MILE E/O WILEY WELL Rd.	CENTER MEDIAN	EB LANES 1-2; WB LANES 1-2	1
						TOTAL	3

* POLE PLACEMENT MAY BE IN EASTBOUND, WESTBOUND DIRECTION OR CENTER MEDIAN.

DURING CONSTRUCTION (LOCATIONS 1 - 3)

APPROVED FOR ELECTRICAL WORK ONLY

MICROWAVE VEHICLE DETECTION SYSTEM

NO SCALE

E-2

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	R134.3/R144.1	19	36

1/22/16
REGISTERED ELECTRICAL ENGINEER DATE

1/22/16
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
MITCHELL NGO
No. 18920
Exp. 12-31-15
ELECTRICAL
STATE OF CALIFORNIA

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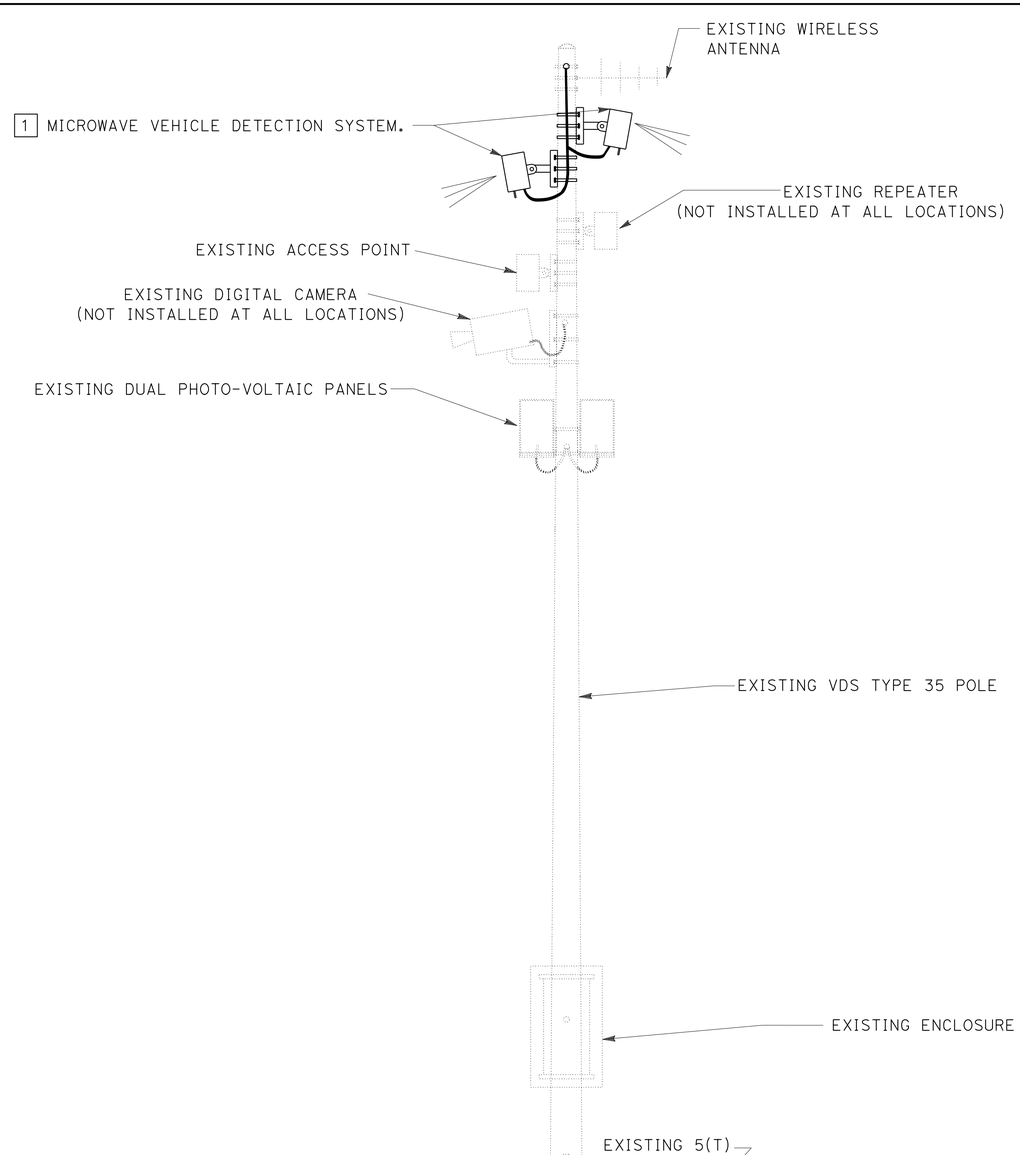
NOTES: (THIS SHEET ONLY)

THE MVDS MUST BE OPERATIONAL THROUGHOUT THE CONSTRUCTION PHASES.

LEGEND: (THIS SHEET ONLY)

1 INSTALL MICROWAVE VEHICLE DETECTION SYSTEM AND ROUTE CABLES INTO EXISTING EQUIPMENT ENCLOSURE PANEL. DISCONNECT WVDS CABLES AND CONNECT MVDS CABLES TO GPRS MODEM IN EXISTING CABINET. ADJUST VEHICLE DETECTION ZONE AS NECESSARY FOR EACH CONSTRUCTION PHASE. RS TEMPORARY MVDS AT THE END OF THE CONSTRUCTION PHASES WHEN WVDS SYSTEMS ARE FULLY OPERATIONAL.



DETAIL 'A'

VDS INSTALLED ON VDS TYPE 35 POLE
LOCATIONS 1 THROUGH 3

MICROWAVE VEHICLE DETECTION SYSTEM

(DURING CONSTRUCTION)

APPROVED FOR ELECTRICAL WORK ONLY

ELECTRICAL DETAILS

NO SCALE **E-3**

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: MITCHELL NGO
CHECKED BY: DAVID A GONZALEZ
FUNCTIONAL SUPERVISOR: DAVID A GONZALEZ

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® ELECTRICAL DESIGN

LAST REVISION 01-22-16
DATE PLOTTED => 03-FEB-2016
TIME PLOTTED => 11:03

BORDER LAST REVISED 7/2/2010
USERNAME => s110420
DGN FILE => 0815000123ua003.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2291
PROJECT NUMBER & PHASE 08150001231

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	R134.3/R144.1	20	36

REGISTERED ELECTRICAL ENGINEER — 1/22/16 DATE

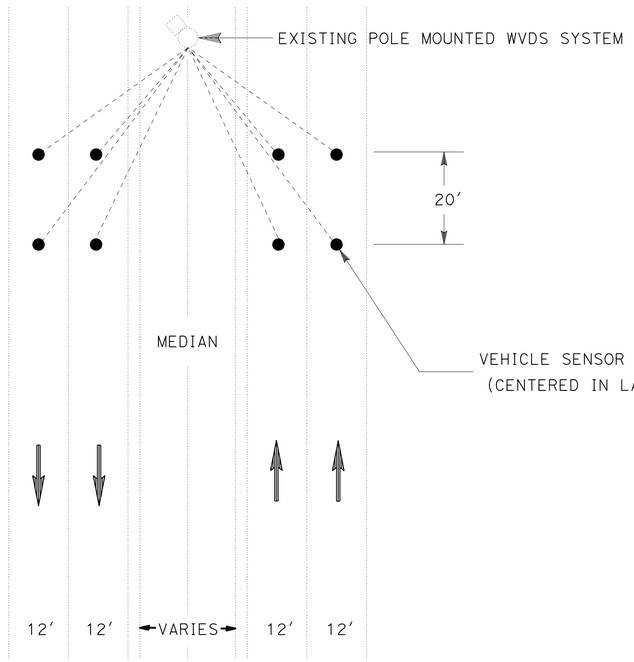
1/22/16
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
MITCHELL NGO
No. 18920
Exp. 12-31-15
ELECTRICAL
STATE OF CALIFORNIA

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

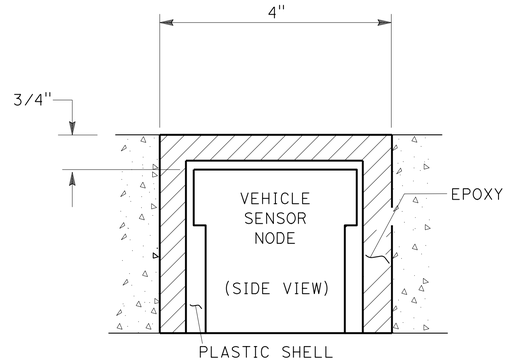
NOTES: WIRELESS VEHICLE DETECTOR SENSOR (INSTALLATION PROCEDURE)

INSTALL VSN PER MANUFACTURER RECOMMENDATION.



DETAIL 'B'

VEHICLE DETECTOR SENSOR NODE PLACEMENT DETAIL



DETAIL 'C'

VEHICLE SENSOR NODE INSTALLED IN ROADWAY

(VEHICLE SENSOR NODES INSTALLATION)

APPROVED FOR ELECTRICAL WORK ONLY

ELECTRICAL DETAILS

NO SCALE **E-4**

LAST REVISION | DATE PLOTTED => 03-FEB-2016
01-22-16 | TIME PLOTTED => 11:03

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Caltrans® **ELECTRICAL DESIGN**

FUNCTIONAL SUPERVISOR: DAVID A GONZALEZ

CALCULATED-DESIGNED BY: MITCHELL NGO
CHECKED BY: DAVID A GONZALEZ

REVISED BY | DATE REVISED

BORDER LAST REVISED 7/2/2010

USERNAME => s110420
DGN FILE => 0815000123ua004.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 2291

PROJECT NUMBER & PHASE 08150001231

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	R134.3/R144.1	21	36

REGISTERED ELECTRICAL ENGINEER — 1/22/16 DATE

1/22/16
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
MITCHELL NGO
No. 18920
Exp. 12-31-15
ELECTRICAL
STATE OF CALIFORNIA

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

NOTES:

THE QUANTITIES SHOWN IN TABLES ARE NOT SEPARATE PAY ITEMS, FOR INFORMATION ONLY.
FOR COMPLETE ELECTRICAL WORK SEE ELECTRICAL PLAN SHEETS.

VEHICLE SENSOR NODES REPLACEMENT

SHEET No.	VEHICLE SENSOR NODE
	EA
E-1	24

MICROWAVE VEHICLE DETECTION SYSTEM

SHEET No.	MICROWAVE VEHICLE DETECTION SYSTEM
	EA
E-2	3

ELECTRICAL QUANTITIES

NO SCALE

E-5

REVISED BY | MITCHELL NGO
DATE REVISED | DAVID A GONZALEZ
CALCULATED-DESIGNED BY
CHECKED BY
FUNCTIONAL SUPERVISOR | DAVID A GONZALEZ

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® ELECTRICAL DESIGN

LAST REVISION 01-22-16
DATE PLOTTED => 03-FEB-2016
TIME PLOTTED => 11:03

BORDER LAST REVISED 7/2/2010
USERNAME => s110420
DGN FILE => 0815000123ua005.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2291
PROJECT NUMBER & PHASE 08150001231

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
Mtl	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

Oblr	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 Mtl	PERMEABLE MATERIAL

P continued

PG	PROFILE GRADE
PI	POINT OF INTERSECTION
PJP	PARTIAL JOINT PENETRATION
Pkwy	PARKWAY
℄,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
℄	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
Tel	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
WWLOL	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
08	Riv	10	R134.3/R144.1	22	36

Grace M. Tsushima
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

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

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TO ACCOMPANY PLANS DATED 1-22-16

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.

REVISED STANDARD PLAN RSP A10B

2010 REVISED STANDARD PLAN RSP A10B

6-7-13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	R134.3/R144.1	23	36

Roberta L. McLaughlin
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

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

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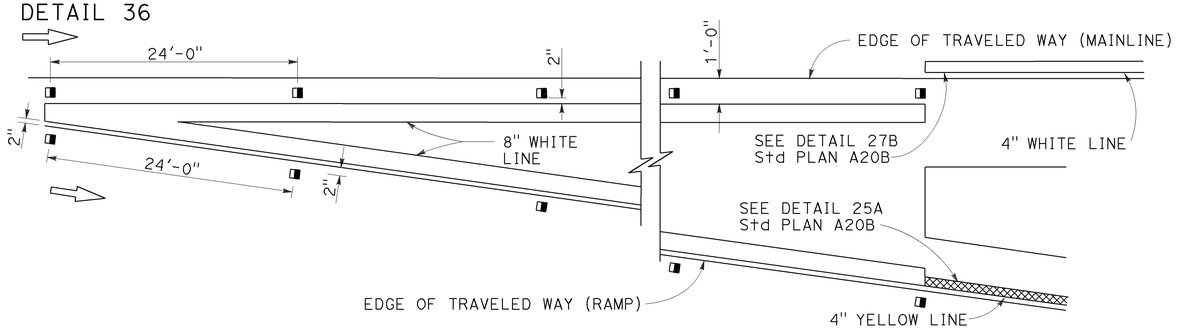
TO ACCOMPANY PLANS DATED 1-22-16

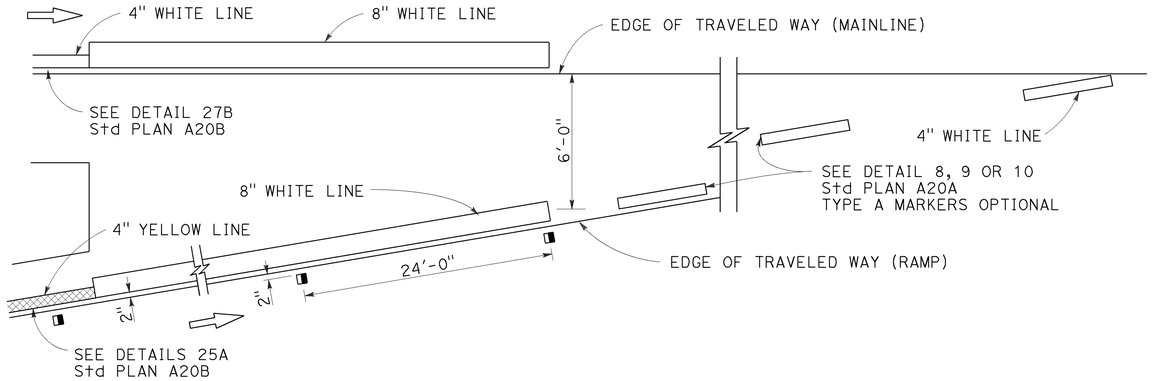
EXIT RAMP NEUTRAL AREA (GORE) TREATMENT

DETAIL 36



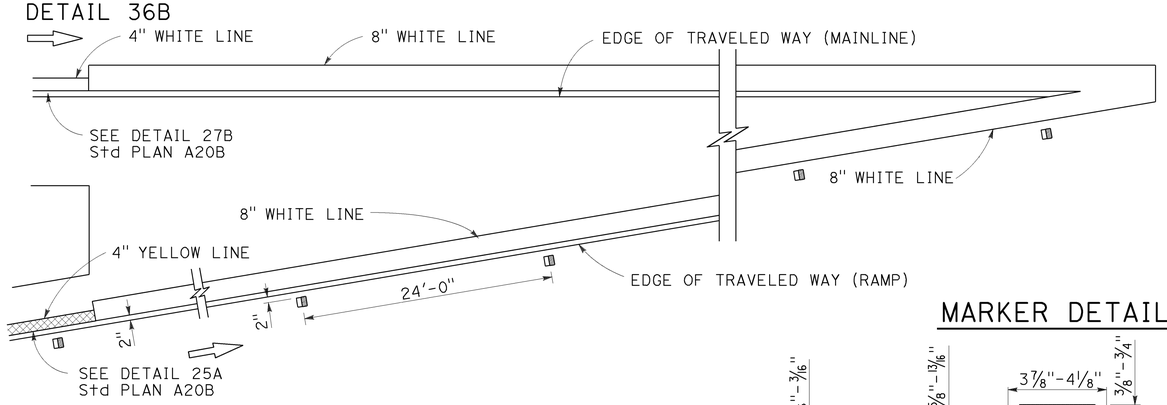
ENTRANCE RAMP NEUTRAL AREA (MERGE) TREATMENT

DETAIL 36A



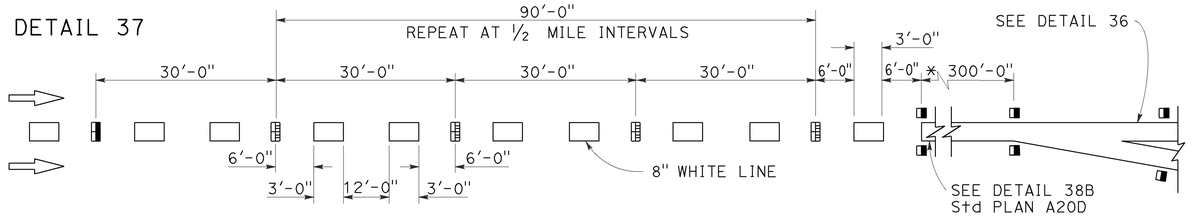
ENTRANCE RAMP NEUTRAL AREA (ACCELERATION LANE) TREATMENT

DETAIL 36B

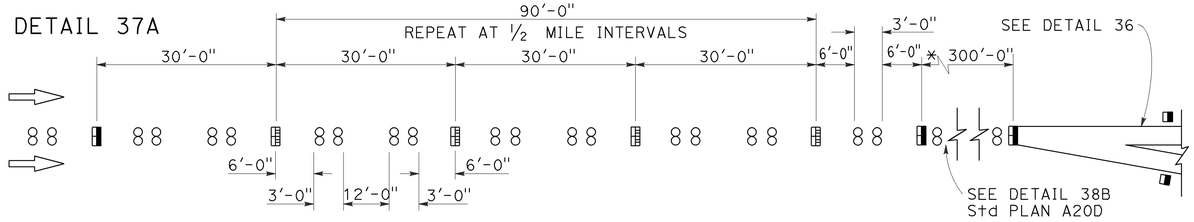


LANE DROP AT EXIT RAMPS

DETAIL 37



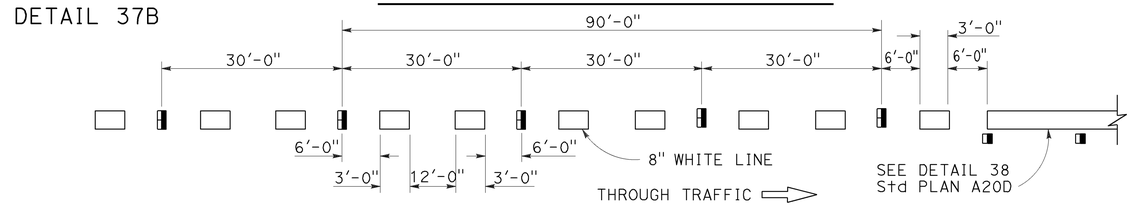
DETAIL 37A



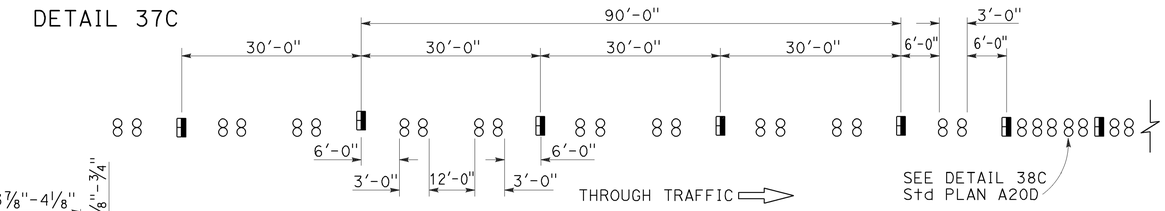
* The solid channelizing line shown may be omitted on short auxiliary lanes where weaving length is critical.

LANE DROP AT INTERSECTIONS

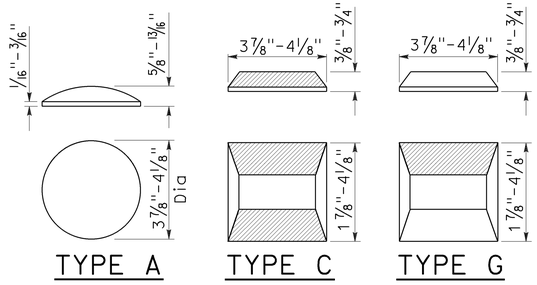
DETAIL 37B



DETAIL 37C



MARKER DETAILS



LEGEND:

MARKERS

- ○ TYPE A WHITE NON-REFLECTIVE
- ▦ TYPE C RED-CLEAR RETROREFLECTIVE
- ◨ TYPE G ONE-WAY CLEAR RETROREFLECTIVE

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

4-29-13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	R134.3/R144.1	24	36

Roberta L. McLaughlin
REGISTERED CIVIL ENGINEER

April 20, 2012
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Roberta L. McLaughlin
No. C40375
Exp. 3-31-13
CIVIL
STATE OF CALIFORNIA

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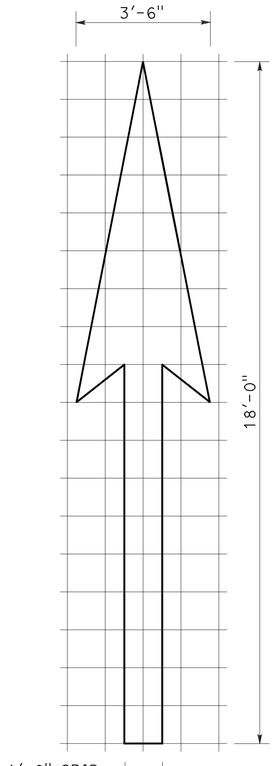
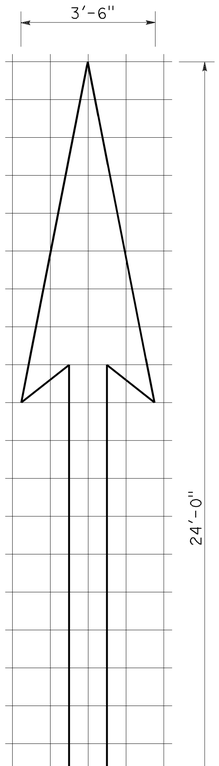
TO ACCOMPANY PLANS DATED 1-22-16

2010 REVISED STANDARD PLAN RSP A24A



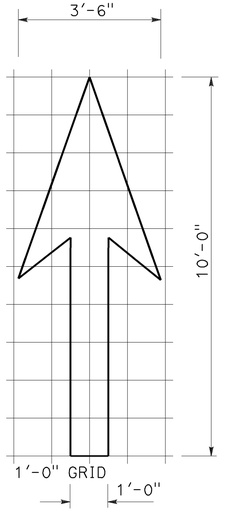
A=25 ft²

TYPE I 18'-0" ARROW



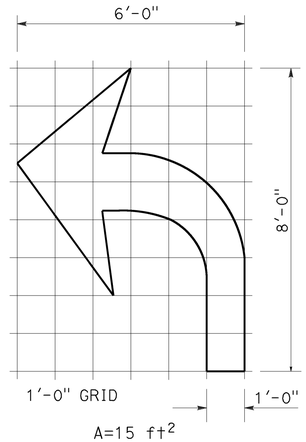
A=31 ft²

TYPE I 24'-0" ARROW



A=14 ft²

TYPE I 10'-0" ARROW

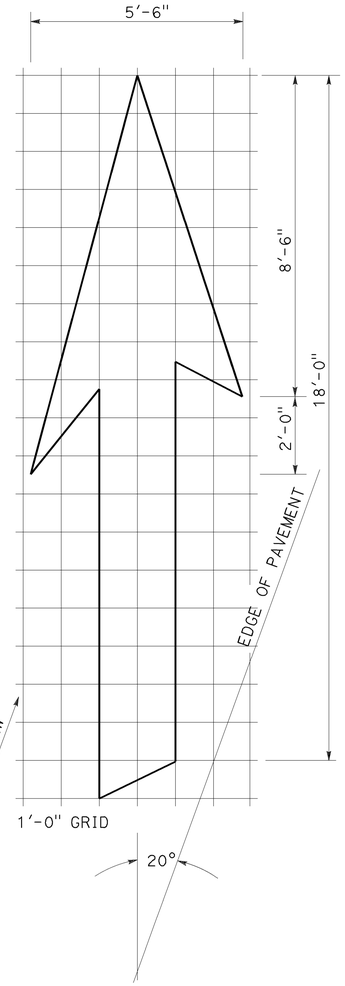


A=15 ft²

TYPE IV (L) ARROW

(For Type IV (R) arrow, use mirror image)

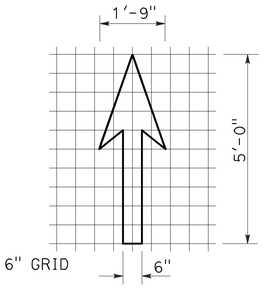
NOTE:
Minor variations in dimensions may be accepted by the Engineer.



A=42 ft²

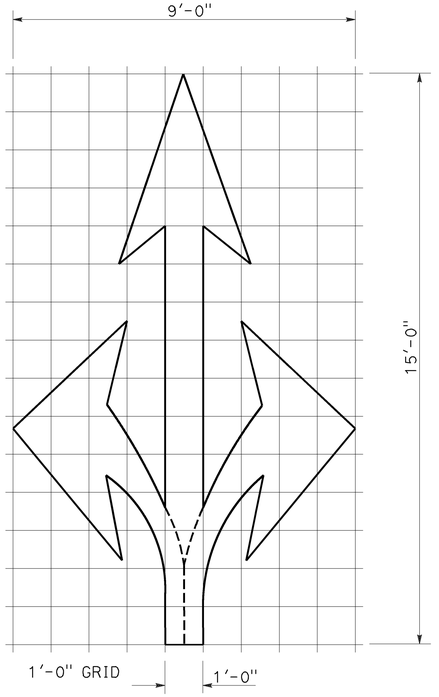
TYPE VI ARROW

Right lane drop arrow (For left lane, use mirror image)



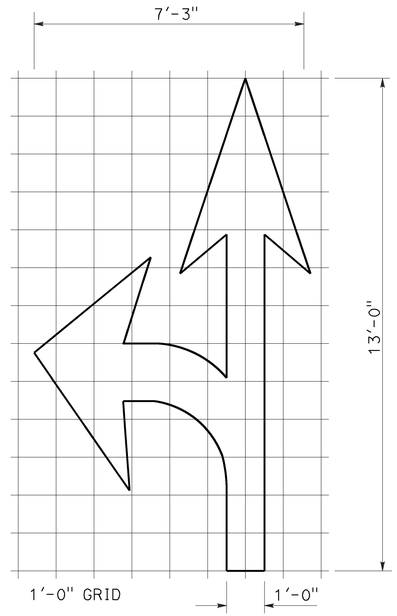
A=3.5 ft²

BIKE LANE ARROW



A=36 ft²

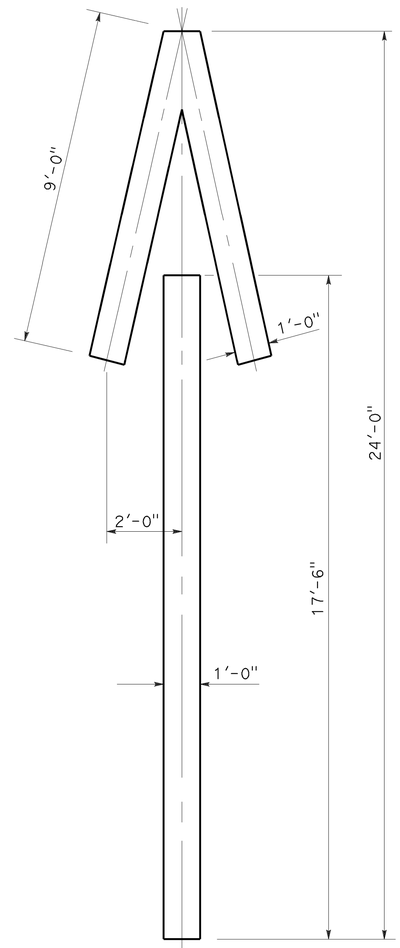
TYPE VIII ARROW



A=27 ft²

TYPE VII (L) ARROW

(For Type VII (R) arrow, use mirror image)



A=33 ft²

TYPE V ARROW

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

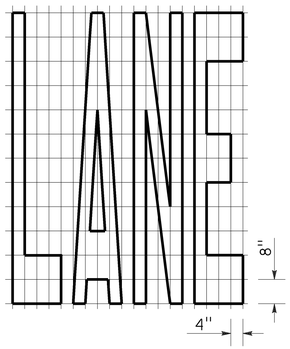
PAVEMENT MARKINGS ARROWS

NO SCALE

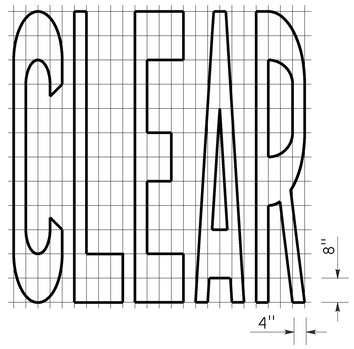
RSP A24A DATED APRIL 20, 2012 SUPERSEDES STANDARD PLAN A24A DATED MAY 20, 2011 - PAGE 13 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A24A

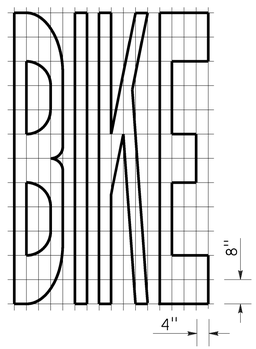
3-14-12



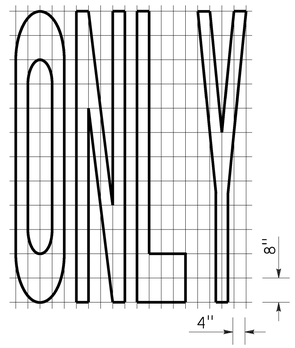
A=24 ft²



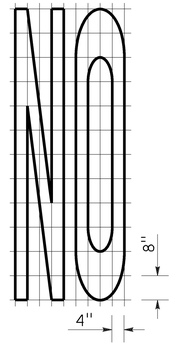
A=27 ft²



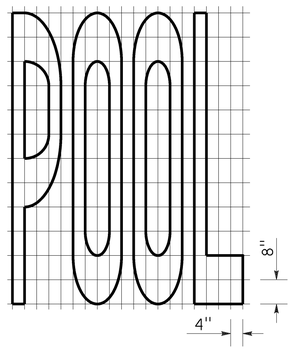
A=21 ft²



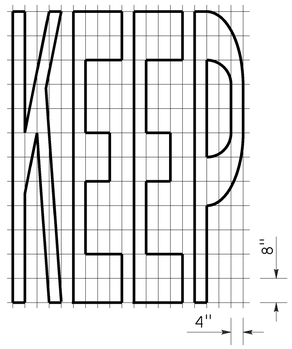
A=22 ft²



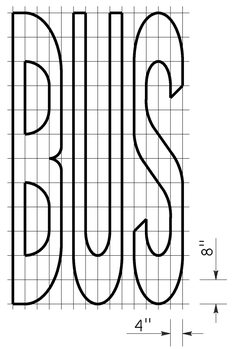
A=14 ft²



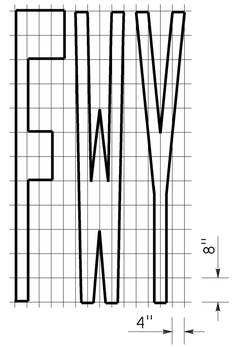
A=23 ft²



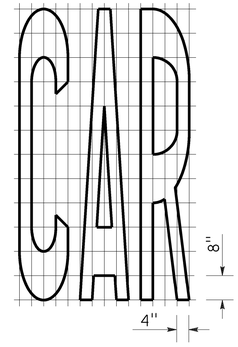
A=24 ft²



A=20 ft²



A=16 ft²



A=17 ft²

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	R134.3/R144.1	25	36

Roberta L. McLaughlin
REGISTERED CIVIL ENGINEER

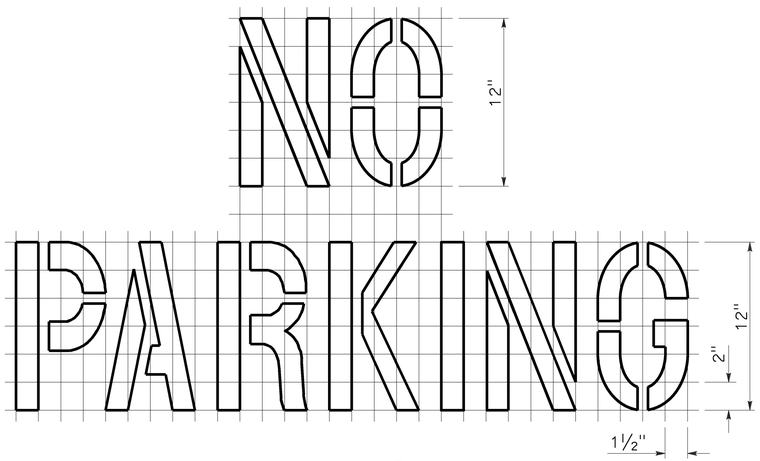
July 20, 2012
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Roberta L. McLaughlin
No. C40375
Exp. 3-31-13
CIVIL
STATE OF CALIFORNIA

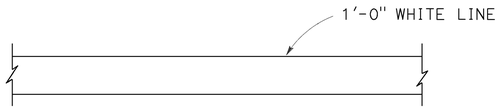
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED 1-22-16

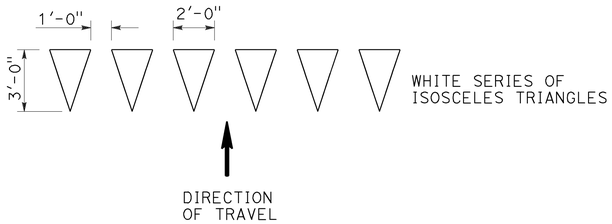
WORD MARKINGS			
ITEM	ft²	ITEM	ft²
LANE	24	NO	14
POOL	23	BIKE	21
CAR	17	BUS	20
CLEAR	27	ONLY	22
KEEP	24	FWY	16



A=2 ft²
See Notes 6 and 7



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.

REVISED STANDARD PLAN RSP A24E

2010 REVISED STANDARD PLAN RSP A24E

6-12-12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	R134.3/R144.1	26	36

REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

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

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

TO ACCOMPANY PLANS DATED 1-22-16

2010 REVISED STANDARD PLAN RSP T9

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		
					X	Y	Z **
	TANGENT 2L	MERGING L	SHIFTING L/2	SHOULDER L/3	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%
mph	ft	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 recommmended 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.

REVISED STANDARD PLAN RSP T9

4-30-13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	R134.3/R144.1	27	36

REGISTERED CIVIL ENGINEER

April 19, 2013
PLANS APPROVAL DATE

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

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

TO ACCOMPANY PLANS DATED 1-22-16

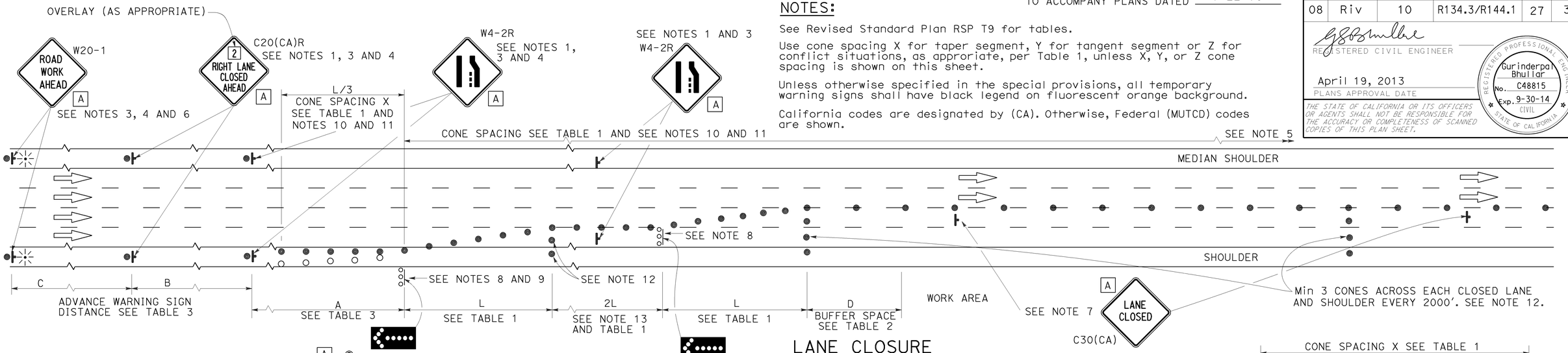
NOTES:

See Revised Standard Plan RSP T9 for tables.

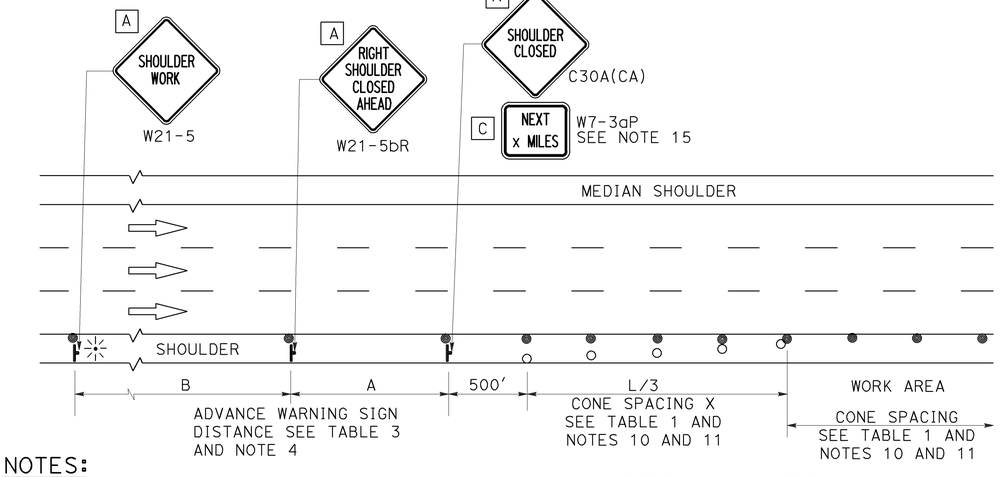
Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as approriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.

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

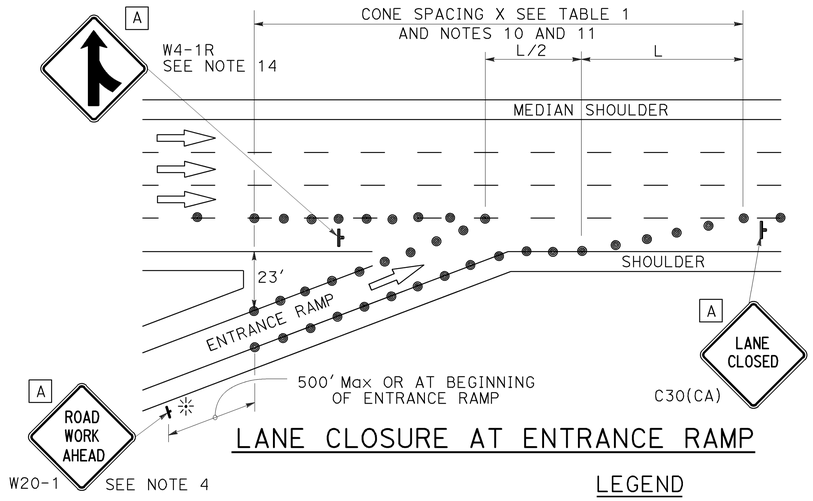
California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.



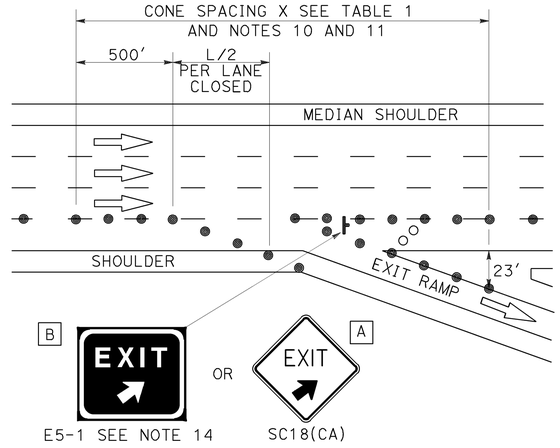
LANE CLOSURE



SHOULDER CLOSURE



LANE CLOSURE AT ENTRANCE RAMP



LANE CLOSURE AT EXIT RAMP

NOTES:

1. Median lane closures shall conform to the details as shown except that C20(CA)L and W4-2L signs shall be used.
2. At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closures.
3. Duplicate sign installations are not required:
   a) On opposite shoulder if at least one-half of the available lanes remain open to traffic.
   b) In the median if the width of the median shoulder is less than 8' and the outside lanes are to be closed.
4. Each advance warning sign on each side of the roadway shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
5. A G20-2 "END ROAD WORK" sign, with minimum size of 48" x 24" as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious or ends within a larger project's limits.
6. 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.
7. Place a C30(CA) sign every 2000' throughout length of lane closure.
8. One flashing arrow sign for each lane closed. The flashing arrow signs shall be Type I.
9. A minimum 1500' of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at top of crest vertical curve or on a horizontal curve.
10. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
11. Portable delineators, placed at one-half the spacing indicated for traffic cones may be used instead of cones for daytime closures only.
12. Unless otherwise specified in the special provisions, a minimum of 3 cones shall be placed transversely across each closed lane and shoulder at each location where a taper across a traffic lane ends and every 2000' as shown on the "Lane Closure" detail. Two Type II barricades may be used instead of the 3 cones. The transverse alignment of the cones or barricades on the closed shoulder may be shifted from the transverse alignment to provide access to the work.
13. Unless otherwise specified in the special provisions, the 2L tangent shown along lane lines shall be used between the L tapers required for each closed traffic lane.
14. Unless otherwise specified in the special provisions, the E5-1 or SC18(CA) and W4-1 signs shall be used as shown.
15. A W7-3aP "NEXT___ MILES" plaque must be used if theshoulder closure extends beyond the distance that can be perceived by road users.

LEGEND

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

SIGN PANEL SIZE (Min)

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON FREEWAYS AND EXPRESSWAYS

NO SCALE

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

REVISED STANDARD PLAN RSP T10

2010 REVISED STANDARD PLAN RSP T10

12-18-12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	R134.3/R144.1	28	36

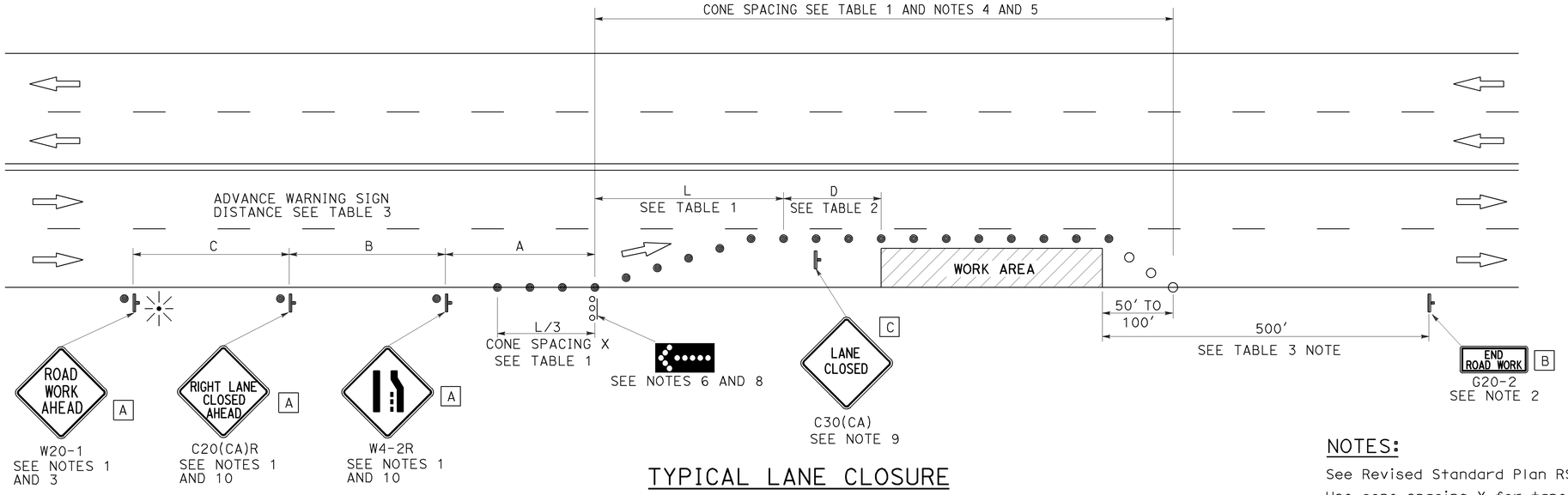
REGISTERED CIVIL ENGINEER

April 19, 2013
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Gurinderpal Bhullar
No. C48815
Exp. 9-30-14
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.

TO ACCOMPANY PLANS DATED 1-22-16



TYPICAL LANE CLOSURE

NOTES:

See Revised Standard Plan RSP T9 for tables.

Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as approriate, 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" × 48"
- B 36" × 18"
- C 30" × 30"

NOTES:

1. 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.
2. 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.
3. 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.
4. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
5. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
6. Flashing arrow sign shall be either Type I or Type II.
7. 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.
8. 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.
9. Place a C30(CA) sign every 2000' throughout length of lane closure.
10. Median lane closures shall conform to the details as shown except that C20(CA)L and W4-2L signs shall be used.
11. 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.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON MULTILANE CONVENTIONAL HIGHWAYS

NO SCALE

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

REVISED STANDARD PLAN RSP T11

2010 REVISED STANDARD PLAN RSP T11

4-2-13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	R134.3/R144.1	29	36

Devinder Singh
REGISTERED CIVIL ENGINEER

October 30, 2015
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Devinder Singh — No. C50470 — Exp. 6-30-17 — 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.

TO ACCOMPANY PLANS DATED 1-22-16

NOTES:

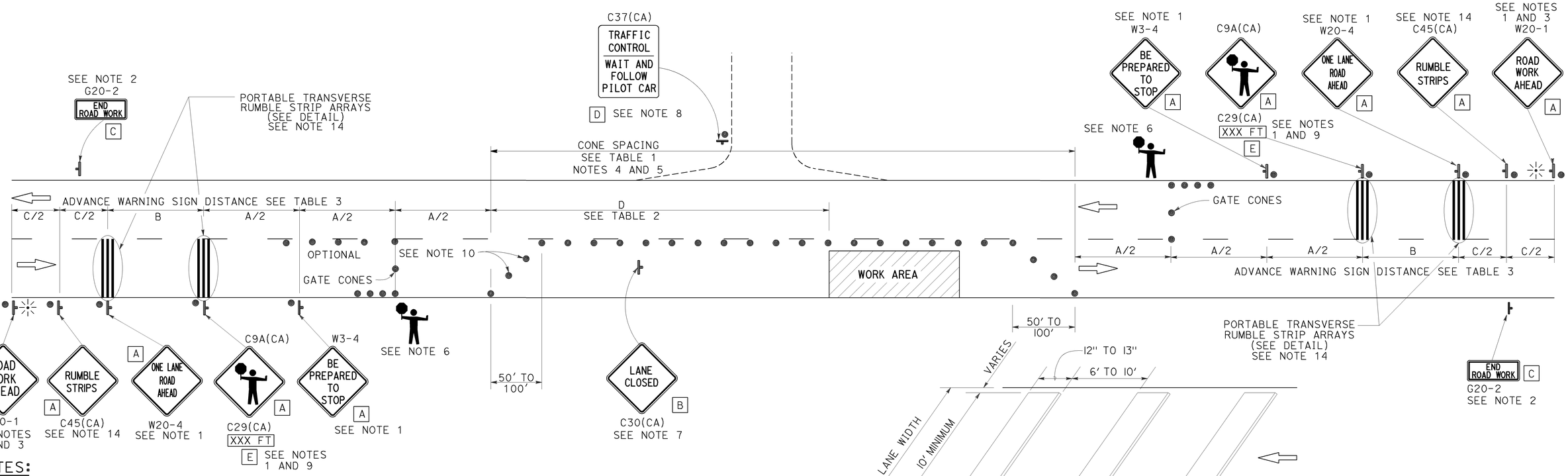
See Revised Standard Plan RSP T9 for tables.

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

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

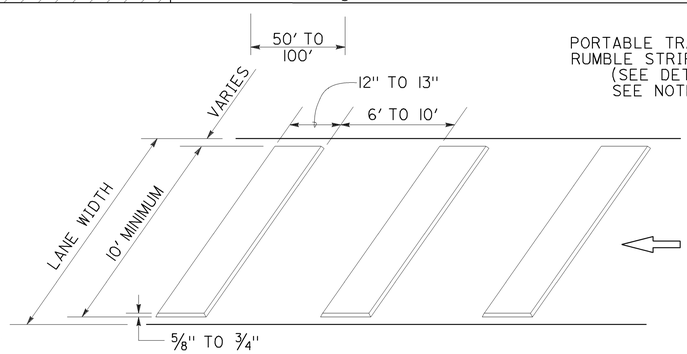
California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.

TYPICAL LANE CLOSURE WITH REVERSIBLE CONTROL



NOTES:

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



PORTABLE TRANSVERSE RUMBLE STRIP ARRAY DETAIL

SIGN PANEL SIZE (Min)

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

LEGEND

- TRAFFIC CONE
- TEMPORARY TRAFFIC CONTROL SIGN
- PORTABLE FLASHING BEACON
- FLAGGER

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON TWO LANE CONVENTIONAL HIGHWAYS

NO SCALE

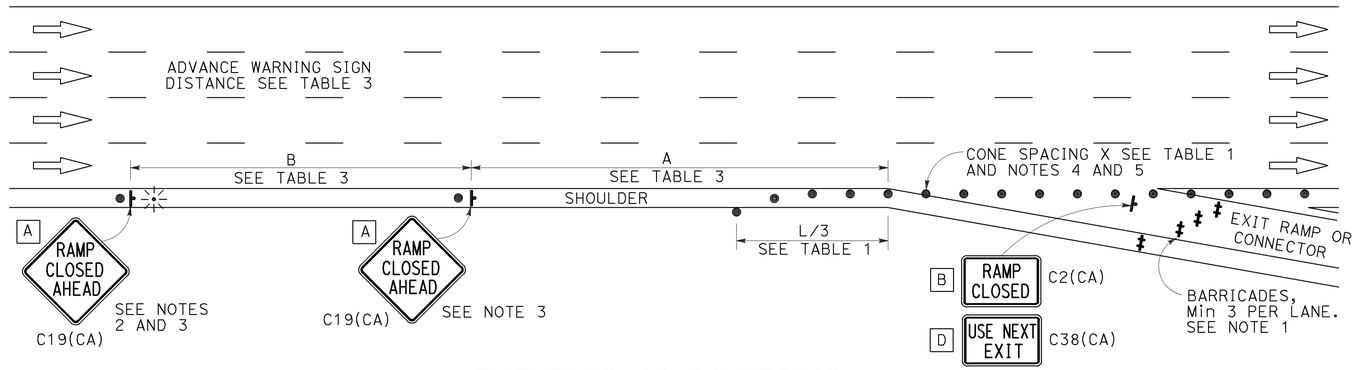
RSP T13 DATED OCTOBER 30, 2015 SUPERSEDES RSP T13 DATED OCTOBER 17, 2014, RSP T13 DATED JULY 18, 2014 AND RSP T13 DATED APRIL 19, 2013 AND STANDARD PLAN T13 DATED MAY 20, 2011 - PAGE 241 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T13

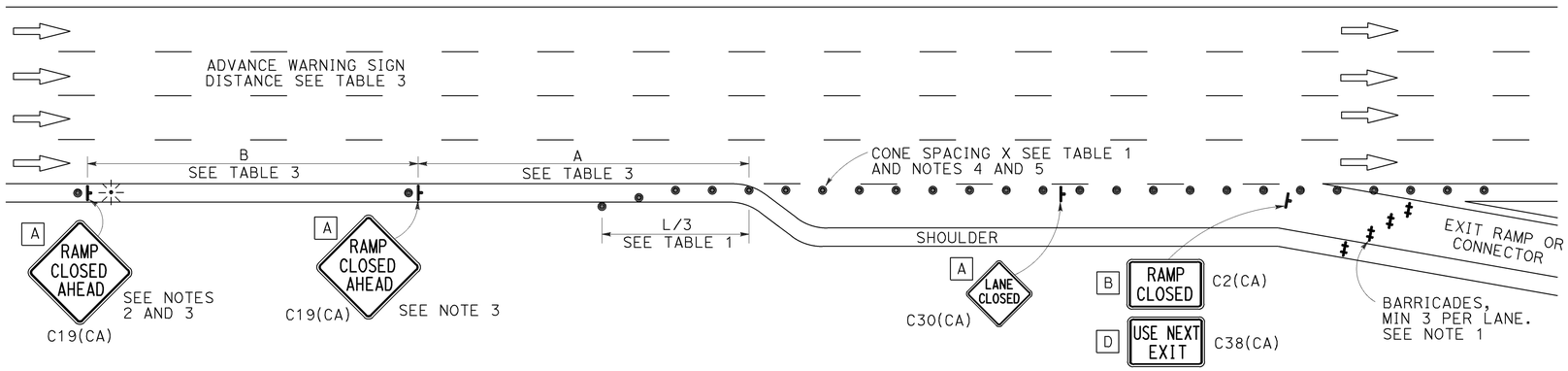
2010 REVISED STANDARD PLAN RSP T13

10-13-15

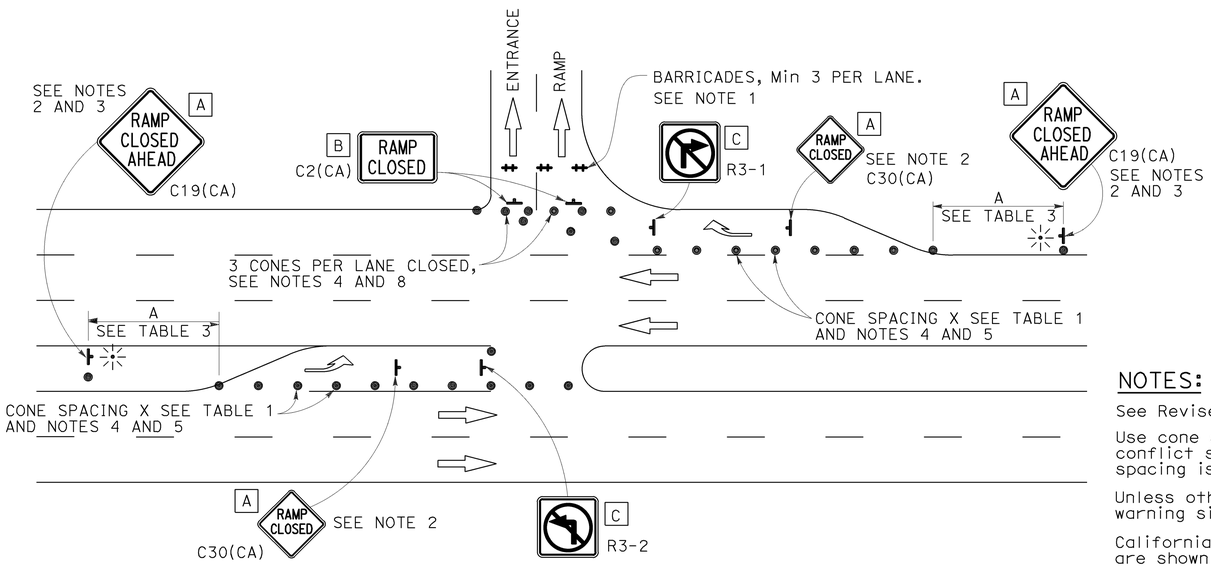
TYPICAL RAMP CLOSURES



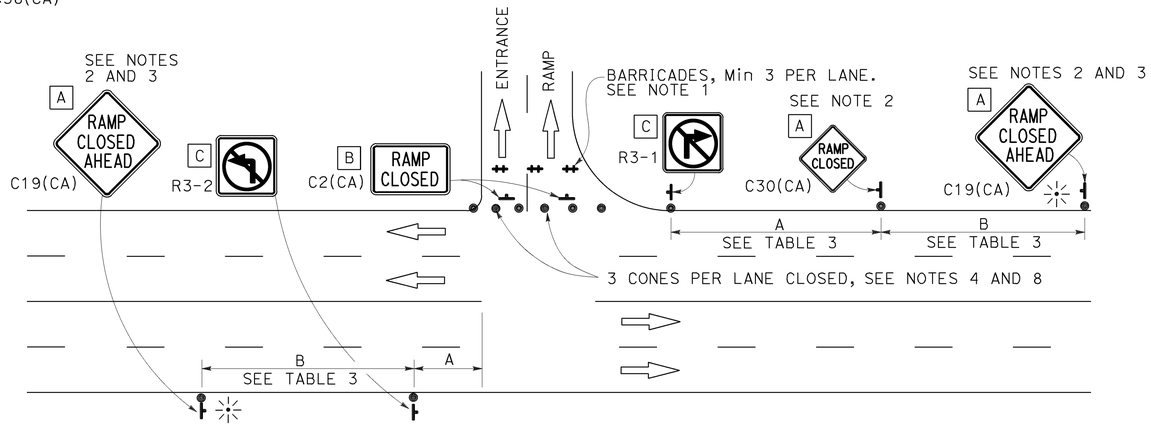
EXIT RAMP OR CONNECTOR



EXIT RAMP OR CONNECTOR WITH ADDITIONAL LANE



ENTRANCE RAMP WITH TURNING POCKETS



ENTRANCE RAMP WITHOUT TURNING POCKETS

SIGN PANEL SIZE (Min)

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

LEGEND

- TRAFFIC CONE
- TEMPORARY TRAFFIC CONTROL SIGN
- BARRICADES
- PORTABLE FLASHING BEACON

NOTES:

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

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 approriate, 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.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	R134.3/R144.1	30	36

REGISTERED CIVIL ENGINEER

April 19, 2013
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Gurinderpal Bhullar
No. C48815
Exp. 9-30-14
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.

TO ACCOMPANY PLANS DATED 1-22-16

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

12-18-12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	R134.3/R144.1	31	36

REGISTERED CIVIL ENGINEER

April 19, 2013
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Gurinderpal Bhullar
No. C48815
Exp. 9-30-14
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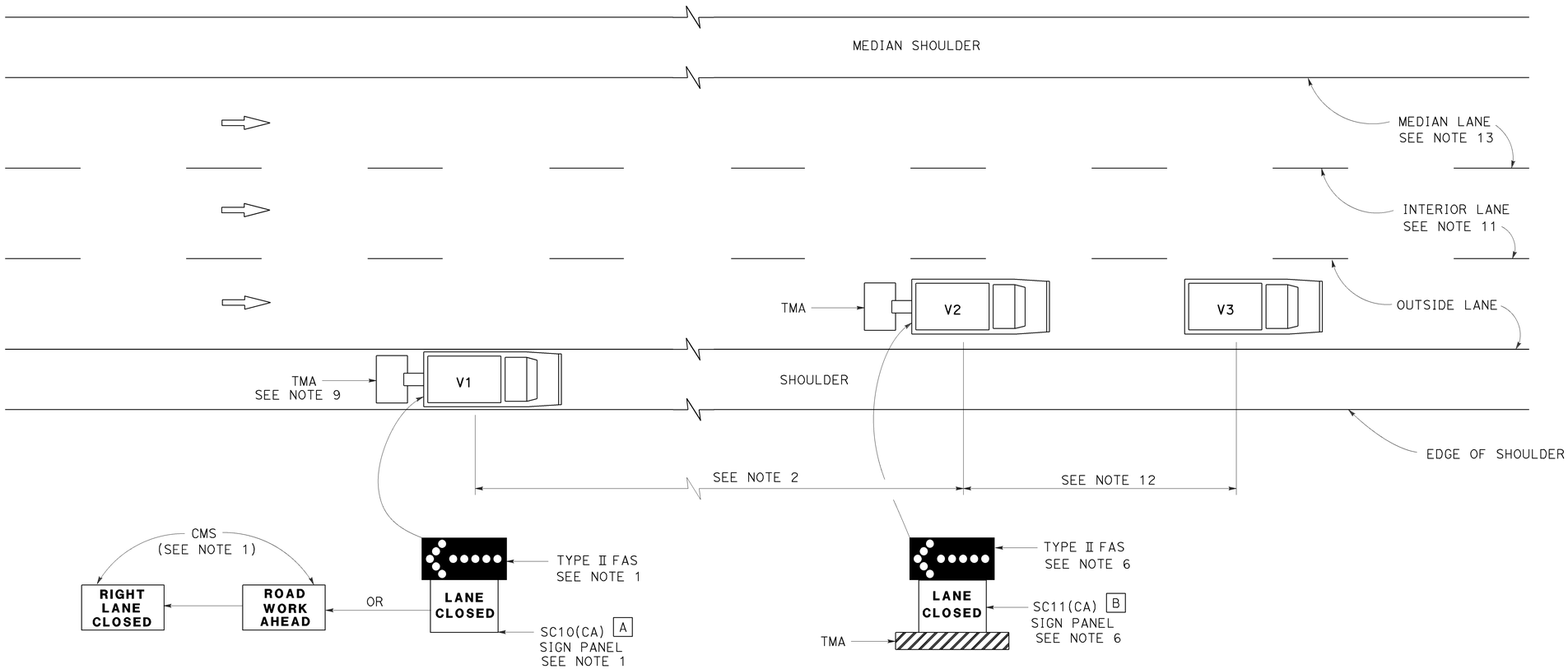
TO ACCOMPANY PLANS DATED 1-22-16



MOVING LANE CLOSURE ON MEDIAN LANE OR OUTSIDE LANE OF MULTILANE HIGHWAYS

SIGN PANEL SIZE (Min)

A 66" x 36"

B 54" x 42"

LEGEND

V1	SIGN VEHICLE
V2	SHADOW VEHICLE
V3	WORK/APPLICATION VEHICLE
	FLASHING ARROW SIGN (FAS)
CMS	CHANGEABLE MESSAGE SIGN
TMA	TRUCK-MOUNTED ATTENUATOR

NOTES:

1. Either a changeable message sign or a SC10(CA) sign panel and a Type II flashing arrow sign shall be mounted on the rear of sign vehicle V1. The changeable message sign shall be sequenced to show the "ROAD WORK AHEAD" message first, followed by the "RIGHT LANE CLOSED" message. For median lane closure, the flashing arrow symbol shall be reversed with the arrowhead on the right and the changeable message sign shall show "LEFT LANE CLOSED".
2. If traffic queues develop, sign vehicle V1 should be positioned upstream from the end of queue. Sign vehicle V1 shall be positioned where highly visible when shoulders are not available.
3. A minimum sight distance of 1500′ should be provided in advance of sign vehicle V1.
4. Sign vehicle V1 should remain at the beginning of horizontal or vertical curves until the other vehicles (V2 and V3) are far enough beyond the curve to resume the minimum sight distance of 1500′.
5. Vehicle-mounted sign panels shall have Type III or above retroreflective sheeting, black on white, or black on fluorescent orange, with 6" minimum series D letters per Caltrans sign specifications.
6. Shadow vehicle V2 shall be equipped with a truck-mounted attenuator. The sign panel shown and a Type II flashing arrow sign shall be mounted on the rear of shadow vehicle V2. For median lane closure the flashing arrow sign symbol shall be displayed with the arrowhead on the right.
7. All vehicles used for lane closures shall be equipped with two-way radios, and the vehicle operators shall maintain communication during the work or application operation.
8. All vehicles shall be equipped with flashing or rotating amber lights.
9. If sign vehicle V1 encroaches into the traffic lane due to insufficient shoulder width, sign vehicle V1 shall be equipped with a truck-mounted attenuator. Sign vehicle V1 shall stay as close to the edge of shoulder as practicable.
10. Where workers would be on foot in the work area, a stationary type lane closure (Revised Standard Plan T10, T11, etc., as applicable) shall be used instead of this plan.
11. For moving lane closure on interior lane of multilane highways, use Revised Standard Plan T16.
12. The spacing between work vehicle(s) and the shadow vehicles, and between each shadow vehicle should be minimized to deter road users from driving in between.
13. When the work/application vehicle V3 occupies the median lane, sign vehicle V1 should drive in the median shoulder and indicate left lane closed ahead.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR MOVING LANE CLOSURE ON MULTILANE HIGHWAYS

NO SCALE

RSP T15 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T15
DATED MAY 20, 2011 - PAGE 243 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T15

2010 REVISED STANDARD PLAN RSP T15

12-18-12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	R134.3/R144.1	32	36

REGISTERED CIVIL ENGINEER

April 19, 2013
PLANS APPROVAL DATE

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

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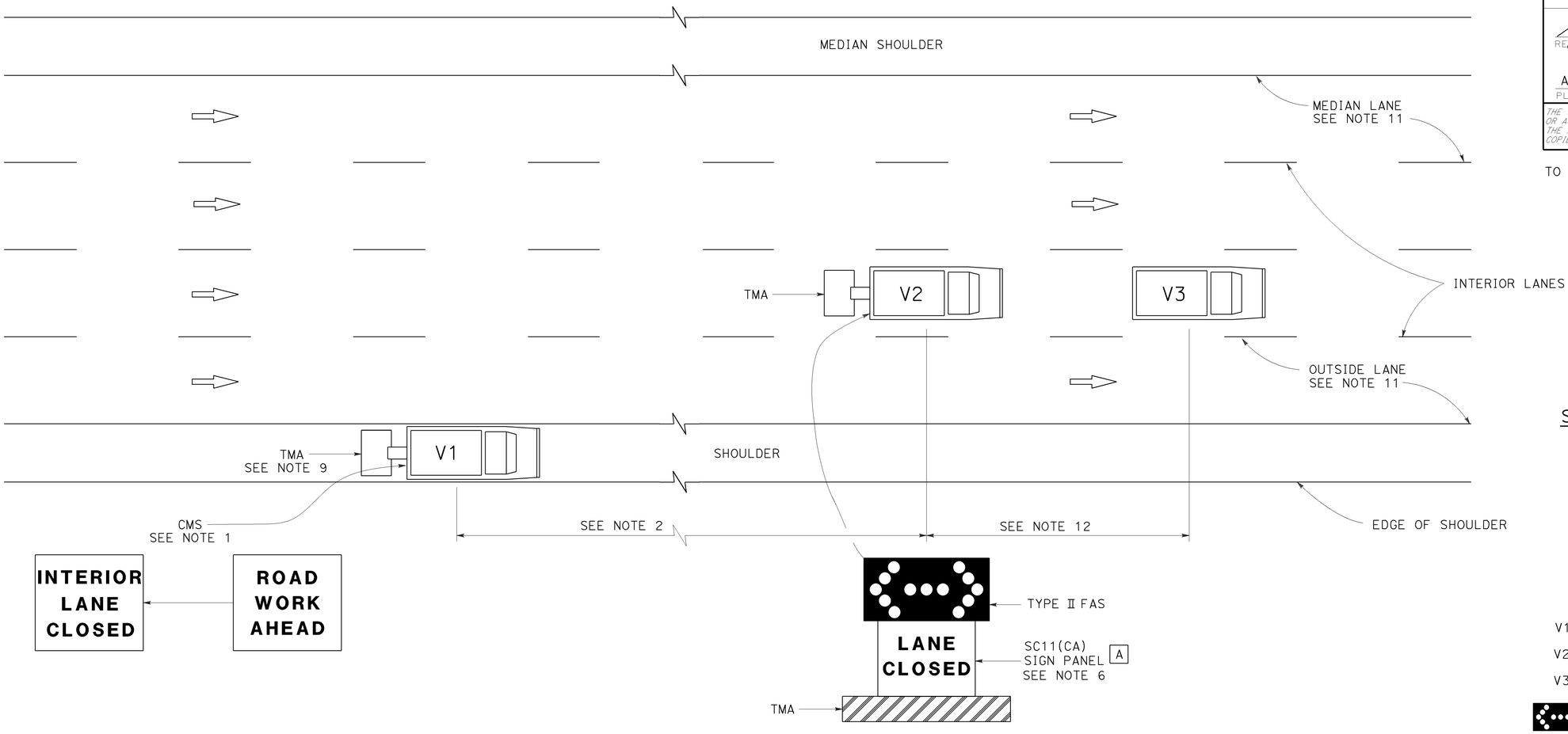
TO ACCOMPANY PLANS DATED 1-22-16



MOVING LANE CLOSURE ON INTERIOR LANE OF MULTILANE HIGHWAYS

SIGN PANEL SIZE (Min)

A 54" x 42"

LEGEND

V1	SIGN VEHICLE
V2	SHADOW VEHICLE
V3	WORK/APPLICATION VEHICLE
	FLASHING ARROW SIGN (FAS) IN FLASHING DOUBLE ARROW MODE
CMS	CHANGEABLE MESSAGE SIGN
TMA	TRUCK-MOUNTED ATTENUATOR

NOTES:

1. A changeable message sign shall be mounted on the rear of sign vehicle V1. The changeable message sign shall be sequenced to show the "ROAD WORK AHEAD" message first, followed by the "INTERIOR LANE CLOSED" message. The message "CENTER LANE CLOSED" may be used in place of the "INTERIOR LANE CLOSED" message.
2. If traffic queues develop, sign vehicle V1 should be positioned upstream from the end of queue. Sign vehicle V1 shall be positioned where highly visible when shoulders are not available.
3. A minimum sight distance of 1500′ should be provided in advance of sign vehicle V1.
4. Sign vehicle V1 should remain at the beginning of horizontal or vertical curves until the other vehicles (V2 and V3) are far enough beyond the curve to resume the minimum sight distance of 1500′.
5. Vehicle-mounted sign panels shall have Type III or above retroreflective sheeting, black on white, or black on fluorescent orange, with 6" minimum series D letters per Caltrans sign specifications.
6. Shadow vehicle V2 shall be equipped with a truck-mounted attenuator. The sign panel shown and a Type II flashing arrow sign shall be mounted on the rear of shadow vehicle V2.
7. All vehicles used for lane closures shall be equipped with two-way radios, and the vehicle operators shall maintain communication during the work or application operation.
8. All vehicles shall be equipped with flashing or rotating amber lights.
9. If sign vehicle V1 encroaches into the traffic lane due to insufficient shoulder width, sign vehicle V1 shall be equipped with a truck-mounted attenuator. Sign vehicle V1 shall stay as close to the edge of shoulder as practicable.
10. Where workers would be on foot in the work area, a stationary type lane closure (Revised Standard Plan T10, T11 etc., as applicable) shall be used instead of this plan.
11. For moving lane closure on median lane or outside lane of multilane highways, use Revised Standard Plan T15.
12. The spacing between work vehicle(s) and the shadow vehicles, and between each shadow vehicle should be minimized to deter road users from driving in between.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR MOVING LANE CLOSURE ON MULTILANE HIGHWAYS

NO SCALE

RSP T16 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T16
DATED MAY 20, 2011 - PAGE 244 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T16

2010 REVISED STANDARD PLAN RSP T16

12-18-12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	R134.3/R144.1	33	36

REGISTERED CIVIL ENGINEER

April 19, 2013
PLANS APPROVAL DATE

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

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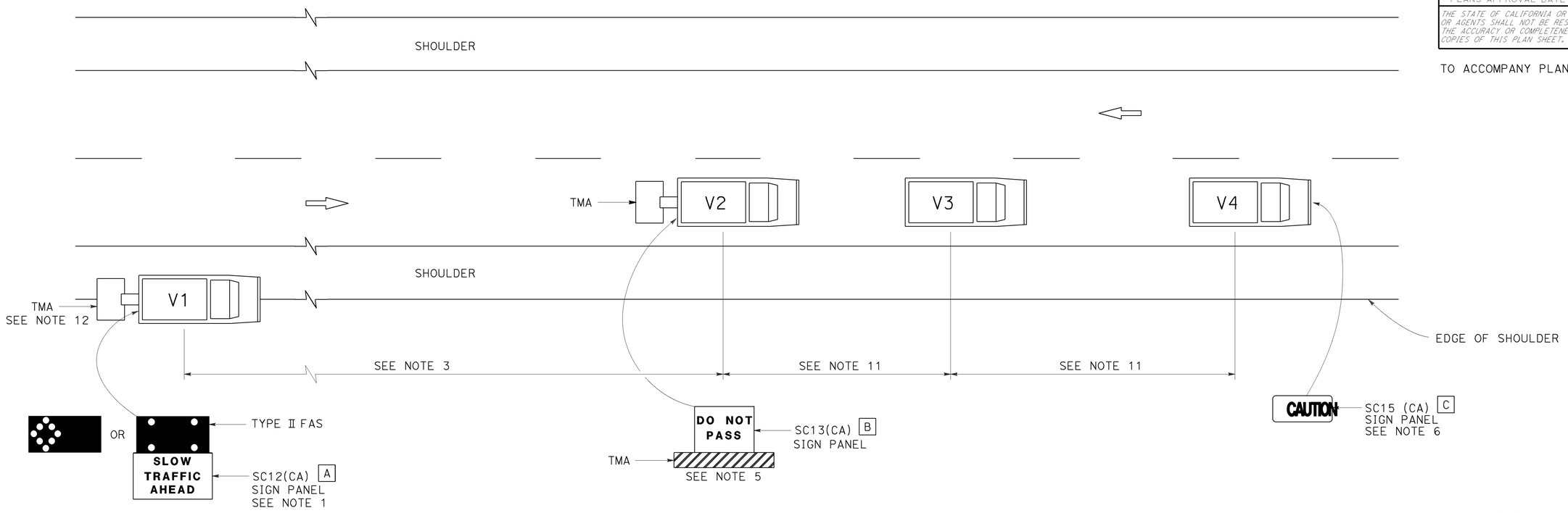
TO ACCOMPANY PLANS DATED 1-22-16



NOTES:

1. Either a changeable message sign or a SC12(CA) "SLOW TRAFFIC AHEAD" sign shall be mounted on the rear of sign vehicle V1. The changeable message sign shall be sequenced to show the "CAUTION" message first, follow by the "SLOW TRAFFIC AHEAD" message. A Type II flashing arrow sign may be used with the SC12(CA) sign panel.
2. Sign vehicle V1 should be positioned where highly visible when shoulders are not available.
3. If traffic queues develop, sign vehicle V1 should be positioned upstream from the end of queue.
4. Vehicle-mounted sign panels shall have Type III or above retroreflective sheeting, black on white, or black on fluorescent orange, with 6" minimum series D letters per Caltrans sign specifications.
5. Shadow vehicle shall be equipped with a truck-mounted attenuator. The sign panel shown shall be mounted on the rear of shadow vehicle V2. The message "LANE CLOSED" may be used in place of the "DO NOT PASS" message.
6. The sign panel shown shall be mounted on the front of sign vehicle V4, facing opposing traffic.
7. All vehicles shall be equipped with flashing or rotating amber lights.
8. Sign vehicle V4 will not be required when the work and vehicles V2 and V3 are 2' or more from the centerline of the highway during the work or application operations.
9. All vehicles used for lane closures shall be equipped with two-way radios and the vehicle operators shall maintain communication during the work or application operation.
10. This plan shall not be used where workers would be on foot in the work area. Use a stationary type lane closure (Revised Standard Plan T13) for this condition.
11. Minimize spacing between vehicles V2 and V3 and vehicles V3 and V4 to deter road users from driving in between them.
12. If sign vehicle V1 encroaches into the traffic lane due to insufficient shoulder width, sign vehicle V1 shall be equipped with a truck-mounted attenuator. Sign vehicle V1 shall stay as close to the edge of shoulder as practicable.

LEGEND

V1	SIGN VEHICLE
V2	SHADOW VEHICLE
V3	WORK/APPLICATION VEHICLE
V4	SIGN VEHICLE
TMA	TRUCK-MOUNTED ATTENUATOR
	FLASHING ARROW SIGN (FAS) IN FLASHING CAUTION MODE
	FLASHING ARROW SIGN (FAS) IN ALTERNATING DIAMOND CAUTION

SIGN PANEL SIZE (Min)

A	72" x 42"
B	54" x 42"
C	54" x 24"

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR MOVING LANE CLOSURE ON TWO LANE HIGHWAYS

NO SCALE

RSP T17 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T17
DATED MAY 20, 2011 - PAGE 245 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T17

2010 REVISED STANDARD PLAN RSP T17

12-18-12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	R134.3/R144.1	34	36

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

Theresa Aziz Gabriel No. E15129 Exp. 6-30-16 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

October 30, 2015
PLANS APPROVAL DATE

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

TO ACCOMPANY PLANS DATED 1-22-16

LEGEND:

AB	ABANDON. IF APPLIED TO CONDUIT, REMOVE CONDUCTORS
BC	INSTALL PULL BOX IN EXISTING CONDUIT RUN
BP	PEDESTRIAN BARRICADE, TYPE AS INDICATED ON PLAN
CB	INSTALL CONDUIT INTO EXISTING PULL BOX
CC	CONNECT NEW AND EXISTING CONDUIT. REMOVE EXISTING CONDUCTORS AND INSTALL CONDUCTORS AS INDICATED
CF	CONDUIT TO REMAIN FOR FUTURE USE. REMOVE CONDUCTORS. INSTALL PULL TAPE
DH	DETECTOR HANDHOLE
FA	FOUNDATION TO BE ABANDONED
IS	INSTALL SIGN ON SIGNAL MAST ARM
NS	NO SLIP BASE ON STANDARD
PEC	PHOTOELECTRIC CONTROL
PEU	PHOTOELECTRIC UNIT
RC	EQUIPMENT OR MATERIAL TO BE REMOVED AND BECOME THE PROPERTY OF THE CONTRACTOR
RE	REMOVE ELECTROLIER, FUSES AND BALLAST. TAPE ENDS OF CONDUCTORS
RL	RELOCATE EQUIPMENT
RR	REMOVE AND REUSE EQUIPMENT
RS	REMOVE AND SALVAGE EQUIPMENT
SC	SPLICE NEW TO EXISTING CONDUCTORS
SD	SERVICE DISCONNECT
TSP	TELEPHONE SERVICE POINT

ABBREVIATIONS

AC+	UNDERGROUNDED CONDUCTOR
APS	ACCESSIBLE PEDESTRIAN SIGNAL
Batt	BATTERY
BBS	BATTERY BACKUP SYSTEM
BC	BOLT CIRCLE
Blk	BLACK
BP	BYPASS
BPB	BICYCLE PUSH BUTTON
C	CONDUIT
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
Ckt	CIRCUIT
CMS	CHANGEABLE MESSAGE SIGN
Ctid	CALTRANS IDENTIFICATION
Comm	COMMUNICATION
Cntl	CONTROL
DF	DEPARTMENT-FURNISHED
DLC	LOOP DETECTOR LEAD-IN CABLE
EMS	EXTINGUISHABLE MESSAGE SIGN
EVUC	EMERGENCY VEHICLE UNIT CABLE
EVUD	EMERGENCY VEHICLE UNIT DETECTOR
FB	FLASHING BEACON
FBCA	FLASHING BEACON CONTROL ASSEMBLY
FBS	FLASHING BEACON WITH SLIP BASE
FO	FIBER OPTIC
G	EQUIPMENT GROUNDING CONDUCTOR
GB	GROUND BUS
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
Grn	GREEN
HAR	HIGHWAY ADVISORY RADIO
Hex	HEXAGONAL
HPS	HIGH PRESSURE SODIUM
IISNS	INTERNALLY ILLUMINATED STREET NAME SIGN
ISL	INDUCTION SIGN LIGHTING
LED	LIGHT EMITTING DIODE
LMA	LUMINAIRE MAST ARM
LPS	LOW PRESSURE SODIUM
Ltg	LIGHTING
Lum	LUMINAIRE
M	METERED
MAT	MAST ARM MOUNTING TOP ATTACHMENT
MAS	MAST ARM MOUNTING SIDE ATTACHMENT
MBPS	MANUAL BYPASS SWITCH
M/M	MULTIPLE TO MULTIPLE TRANSFORMER
Mtg	MOUNTING
MV	MERCURY VAPOR LIGHTING FIXTURE
MVDS	MICROWAVE VEHICLE DETECTION SYSTEM
N	NEUTRAL (GROUNDED CONDUCTOR)
NB	NEUTRAL BUS
NC	NORMALLY CLOSE
NO	NORMALLY OPEN
P	CIRCUIT BREAKER'S POLE
PB	PULL BOX
PBA	PUSH BUTTON ASSEMBLY
PEC	PHOTOELECTRIC CONTROL
Ped	PEDESTRIAN
PEU	PHOTOELECTRIC UNIT
PT	CONDUIT WITH PULL TAPE
PTR	POWER TRANSFER RELAY
RE	RELOCATED EQUIPMENT
RM	RAMP METERING
RWIS	ROADSIDE WEATHER INFORMATION SYSTEM
SB	SLIP BASE
SIC	SIGNAL INTERCONNECT CABLE
Sig	SIGNAL
SMA	SIGNAL MAST ARM
SNS	STREET NAME SIGN
SP	SERVICE POINT
TB	TERMINAL BOARD
TDC	TELEPHONE DEMARCATION CABINET
Temp	TEMPERATURE
TMS	TRAFFIC MONITORING STATION
TOS	TRAFFIC OPERATIONS SYSTEM
UPS	UNINTERRUPTABLE POWER SUPPLY
UPSC	UNINTERRUPTABLE POWER SUPPLY CONTROLLER
Veh	VEHICLE
VIVDS	VIDEO IMAGE VEHICLE DETECTION SYSTEM
Wht	WHITE
WIM	WEIGH-IN-MOTION
Xfmr	TRANSFORMER

SOFFIT AND WALL-MOUNTED LUMINAIRES

- PENDANT SOFFIT LUMINAIRE, 70 W HPS UNLESS OTHERWISE SPECIFIED
- FLUSH-MOUNTED SOFFIT LUMINAIRE, 70 W HPS UNLESS OTHERWISE SPECIFIED
- WALL-MOUNTED LUMINAIRE, 70 W HPS UNLESS OTHERWISE SPECIFIED
- EXISTING SOFFIT OR WALL-MOUNTED LUMINAIRE TO REMAIN UNMODIFIED
- (M) EXISTING SOFFIT OR WALL-MOUNTED LUMINAIRE TO BE MODIFIED AS SPECIFIED

NOTE:
Arrow indicates "street side" of luminaire.

MISCELLANEOUS ELECTROLIERS

NEW	EXISTING	
		LUMINAIRE ON WOOD POLE
		NON-STANDARD ELECTROLIER (SEE PROJECT LEGEND)
C	C	CITY ELECTROLIER
EF	EF	ELECTROLIER FOUNDATION (FUTURE INSTALLATION)

NOTES:

1. LED luminaires shall be 235 W when installed on Type 21, 21D, 30, 31 and 32 Standards, unless otherwise specified. LED luminaires shall be 165 W when installed on other type standards or poles, unless otherwise specified.
2. Luminaires shall be the cutoff type, ANSI Type III medium cutoff lighting distribution, unless otherwise specified.

STANDARD ELECTROLIER

NEW	EXISTING	STANDARD TYPE
		15
		15D
S	S	15 STRUCTURE
S S	S S	15D STRUCTURE
		21
		21D
		21 STRUCTURE
		21D STRUCTURE
		30
		31
		32

COMMONLY USED SYMBOLS FOR UNITED STATES CUSTOMARY UNITS OF MEASUREMENT:

SYMBOL	DEFINITIONS
Ω	OHMS
min	MINUTE
s	SECOND
bps	BITS PER SECOND
Bps	BYTES PER SECOND
A	AMPERE
V	VOLT
$V_{(dc)}$	VOLT (DIRECT CURRENT)
$V_{(ac)}$	VOLT (ALTERNATING CURRENT)
FC	FOOT - CANDLE
W	WATTS
VA	VOLT-AMPERE
M	MEGA
k	KILO
m	MILLI
μ	MICRO
P	PICO
Hz	HERTZ

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (LEGEND AND ABBREVIATIONS)

NO SCALE

RSP ES-1A DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-1A DATED JULY 19, 2013 AND STANDARD PLAN ES-1A DATED MAY 20, 2011 - PAGE 425 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-1A

2010 REVISED STANDARD PLAN RSP ES-1A

9-29-15

CONDUIT

NEW	EXISTING	
		LIGHTING CONDUIT, UNLESS OTHERWISE INDICATED OR NOTED
		TRAFFIC SIGNAL CONDUIT
C	c	COMMUNICATION CONDUIT
T	t	TELEPHONE CONDUIT
F	f	FIRE ALARM CONDUIT
FO	fo	FIBER OPTIC CONDUIT
		CONDUIT TERMINATION
R	r	CONDUIT RISER ATTACHED TO THE STRUCTURE OR SERVICE POLE

SERVICE EQUIPMENT

NEW	EXISTING	
OH	oh	OVERHEAD LINES
U	U	WOOD POLE, "U" INDICATES UTILITY OWNED
		POLE GUY WITH ANCHOR
		UTILITY TRANSFORMER - GROUND MOUNTED
III	III	SERVICE EQUIPMENT ENCLOSURE TYPE. DOOR INDICATES FRONT OF ENCLOSURE
T	t	TELEPHONE DEMARCATION CABINET

POLE-MOUNTED SERVICE DESIGNATION

TYPE H SERVICE, 28'-10" — TYPE OF INSTALLATION AND POLE HEIGHT ABOVE GRADE

FLASHING BEACON

NEW	EXISTING	
R	R	FLASHING BEACON (ONE VEHICLE SIGNAL HEAD WITH BACKPLATE AND VISOR) "R" INDICATES RED INDICATION, "Y" INDICATES YELLOW INDICATION
Y Y	Y Y	FLASHING BEACON WITH TYPE 15-FBS STANDARD AND A SIGN.
R R	R R	FLASHING BEACON WITH TYPES 9, 9A OR 9B SIGN UNLESS OTHERWISE SPECIFIED OR INDICATED

SIGNAL EQUIPMENT

NEW	EXISTING	
		PEDESTRIAN SIGNAL HEAD
		PUSH BUTTON ASSEMBLY POST
		PEDESTRIAN BARRICADE
		VEHICLE SIGNAL HEAD (WITH BACKPLATE AND 3-SECTIONS: RED, YELLOW AND GREEN)
		VEHICLE SIGNAL HEAD WITH ANGLE VISOR
PV	PV	MODIFICATIONS OF BASIC SYMBOL: "L" INDICATES ALL NON-ARROW SECTIONS LOUVERED "LG" INDICATES LOUVERED GREEN SECTION ONLY "PV" INDICATES ALL 12" SECTIONS PROGRAMMED VISIBILITY "8" INDICATES ALL 8" SECTIONS (ONLY WHEN SPECIFIED)
		VEHICLE SIGNAL HEAD CONSISTING OF RED, YELLOW AND GREEN LEFT ARROW SECTIONS
		VEHICLE SIGNAL HEAD CONSISTING OF RED AND YELLOW SECTIONS WITH AN UP GREEN ARROW SECTION
		VEHICLE SIGNAL HEAD (5 SECTION) CONSISTING OF RED, YELLOW AND GREEN SECTIONS WITH YELLOW AND GREEN RIGHT ARROW SECTIONS
		TYPE 15TS STANDARD WITH VEHICLE SIGNAL HEAD AND LUMINAIRE
		TYPE 21TS STANDARD WITH VEHICLE SIGNAL HEAD AND LUMINAIRE
		STANDARD WITH LUMINAIRE AND SIGNAL MAST ARMS AND ATTACHED VEHICLE SIGNAL HEADS
		TYPE 1 STANDARD WITH ATTACHED VEHICLE SIGNAL HEADS
		STANDARD WITH A SIGNAL MAST ARM, ATTACHED VEHICLE SIGNAL HEADS AND INTERNALLY ILLUMINATED STREET NAME SIGN
		CONTROLLER ASSEMBLY. DOOR INDICATES FRONT OF CABINET

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	R134.3/R144.1	35	36

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

Theresa Aziz Gabriel No. E15129 Exp. 6-30-16 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

October 30, 2015
PLANS APPROVAL DATE

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TO ACCOMPANY PLANS DATED 1-22-16

SIGNAL EQUIPMENT Cont

NEW	EXISTING	
		GUARD POST
		TYPE 1 STANDARD WITH RAMP METERING SIGN
		OPTICAL DETECTOR FOR THE EMERGENCY VEHICLE DETECTION

NOTES:

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

ILLUMINATED OVERHEAD SIGN

NEW	EXISTING	
		SINGLE POST, SINGLE ILLUMINATED SIGN, BALANCED BUTTERFLY
		SINGLE POST, DOUBLE ILLUMINATED SIGN, BALANCED BUTTERFLY
		SINGLE POST, SINGLE ILLUMINATED SIGN, FULL CANTILEVER
		DOUBLE POST, SINGLE ILLUMINATED SIGN
		SINGLE ILLUMINATED SIGN MOUNTED ON STRUCTURE
		DOUBLE POST, SINGLE ILLUMINATED SIGN WITH ELECTROLIER

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (LEGEND AND ABBREVIATIONS)

NO SCALE

RSP ES-1B DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-1B DATED JULY 19, 2013 AND STANDARD PLAN ES-1B DATED MAY 20, 2011 - PAGE 426 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-1B

2010 REVISED STANDARD PLAN RSP ES-1B

8-19-15

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	R134.3/R144.1	36	36

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

October 30, 2015
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Theresa Aziz Gabriel — No. E15129 — Exp. 6-30-16 — ELECTRICAL — STATE OF CALIFORNIA

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TO ACCOMPANY PLANS DATED 1-22-16

EQUIPMENT IDENTIFICATION

ILLUMINATED SIGN IDENTIFICATION NUMBER:

SIGN No. 12345
10 ISL SCI 1.0

- SIGN NUMBER - PLACE ON POST OR STRUCTURE
- TRANSFORMER RATING (kVA)
- LIGHTING CONTROL TYPE
- NUMBER AND TYPE OF FIXTURES

DO NOT PLACE ON STANDARD OR STRUCTURE

ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:

12345 - 15'-0"

- MAST ARM LENGTH, IF SHOWN. DO NOT PLACE ON STANDARD OR STRUCTURE
- EQUIPMENT NUMBER - PLACE ON STANDARD OR STRUCTURE. EXISTING EQUIPMENT NUMBERS ARE SHOWN IN PARENTHESIS

CONDUIT AND CONDUCTOR IDENTIFICATION:

1½"C, 2#10, 15#14, 2 DLC, 12P#18 (PAIR)

- NUMBER AND SIZE OF CONDUCTORS AND CABLES
- SIZE OF CONDUIT IN INCHES
- ø1, ø2, ø2P, etc. — TRAFFIC PHASE IDENTIFICATION FOR SIGNALS, DETECTORS AND PHASE DIAGRAMS
- 1 2 3 — LEGEND NUMBERS
- (A) (B) (C) — EQUIPMENT, SIGNAL POLES, INSTALLATION OR ITEMS
- 1 2 3 — CONDUIT RUN NUMBERS

SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):

19A - 3 - 100

- WIND VELOCITY = 100 mph
- CASE 3 ARM LOADING
- STANDARD TYPE
- STANDARD PLAN SHEET NUMBER
- DETAIL, NUMBER, SECTION, TYPE OR ELEVATION

MISCELLANEOUS EQUIPMENT

NEW	EXISTING	
CMS	cms	CHANGEABLE MESSAGE SIGN
		CLOSED CIRCUIT TELEVISION CAMERA
		HIGHWAY ADVISORY RADIO POLE AND ANTENNA
EMS	ems	LED EXTINGUISHABLE MESSAGE SIGN
M V	m v	DETECTION DEVICE M = MICROWAVE SENSOR V = VIDEO IMAGE SENSOR

WIRING DIAGRAM LEGEND

- EXTERNAL CONDUCTOR
- CONDUCTOR OR BUS
- TIE POINT
- CONTACTOR COIL
- CONTACTOR, NO CONTACT
- TERMINAL BLOCKS
- CONTACTOR, NC CONTACT
- ENCLOSURE BOND
- GROUNDING ELECTRODE
- CIRCUIT BREAKER
- RECEPTACLE

PULL BOXES

NEW	EXISTING	
		PULL BOX, No. 5 UNLESS OTHERWISE INDICATED OR NOTED
3	9A(21)	PULL BOX, ADDITIONAL DESIGNATIONS OR DESCRIPTIONS

3 No. 3½ PULL BOX
5 No. 5 PULL BOX
6 No. 6 PULL BOX
7 No. 7 (CEILING PULL BOX)
8 No. 8 (PENDANT SOFFIT PULL BOX)
9 No. 9 PULL BOX
9A No. 9A PULL BOX

(C) COMMUNICATIONS PULL BOX
(E) PULL BOX WITH EXTENSION
(S) SPRINKLER CONTROL PULL BOX
(21) ANCHOR BOLTS AND CONDUIT FOR FUTURE INSTALLATION OF TYPE 21 STANDARD
(T) TRAFFIC PULL BOX

VEHICLE DETECTORS

5 J 9 U

- VEHICLE DETECTOR DESIGNATION
- U = UPPER, L = LOWER
- SLOT NUMBER IN INPUT FILE
- INPUT FILE (I OR J)
- PHASE

NEW	EXISTING	
		TYPE A LOOP DETECTOR. OUTLINE OF SAWCUT SHOWN
		TYPE B LOOP DETECTOR. OUTLINE OF SAWCUT SHOWN
		TYPE C LOOP DETECTOR. OUTLINE OF SAWCUT SHOWN
		TYPE D LOOP DETECTOR. OUTLINE OF SAWCUT SHOWN
		TYPE E LOOP DETECTOR. OUTLINE OF SAWCUT SHOWN
		TYPE Q LOOP DETECTOR. OUTLINE OF SAWCUT SHOWN
DH	dh	DETECTOR HANDHOLE
		MICROWAVE OR VIDEO DETECTION ZONE

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REVISED STANDARD PLAN RSP ES-1C

2010 REVISED STANDARD PLAN RSP ES-1C

8-19-15