

INDEX OF PLANS

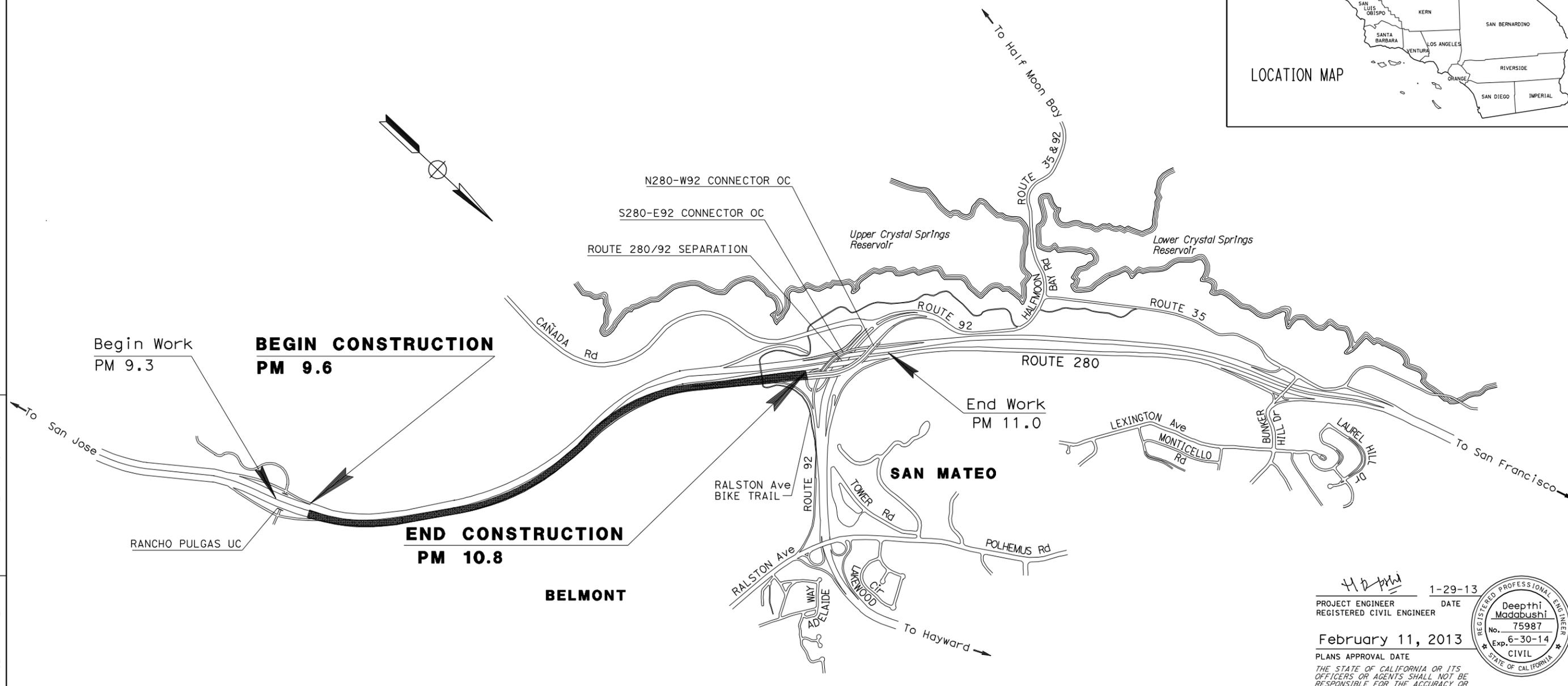
SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2	TYPICAL CROSS SECTIONS
3 & 4	CONSTRUCTION DETAILS
5	CONSTRUCTION AREA SIGNS
6-8	MOTORIST INFORMATION PLANS AND QUANTITIES
9	PAVEMENT DELINEATION QUANTITIES
10	SUMMARY OF QUANTITIES
11	ELECTRICAL PLANS
12-15	TRAFFIC CONTROL SYSTEM

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

PROJECT PLANS FOR CONSTRUCTION ON  
STATE HIGHWAY  
IN SAN MATEO COUNTY  
NEAR BELMONT  
FROM 0.2 MILE NORTH OF RANCHO PULGAS UNDERCROSSING  
TO ROUTE 280/92 SEPARATION

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2010



Begin Work  
PM 9.3

**BEGIN CONSTRUCTION**  
PM 9.6

End Work  
PM 11.0

**END CONSTRUCTION**  
PM 10.8

PROJECT MANAGER  
RAMSES SARGISS

DESIGN ENGINEER  
VIJITH THILAKARATNE

PROJECT ENGINEER DATE  
REGISTERED CIVIL ENGINEER

February 11, 2013

PLANS APPROVAL DATE

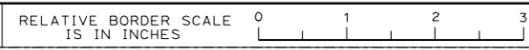
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CONTRACT No.	<b>04-4G4104</b>
PROJECT ID	<b>0412000450</b>

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

NO SCALE



USERNAME => s136183  
DGN FILE => 0412000450ab001.dgn

UNIT 0976 PROJECT NUMBER & PHASE 04120004501

BORDER LAST REVISED 7/2/2010 CALTRANS WEB SITE IS: HTTP://WWW.DOT.CA.GOV/

DATE PLOTTED => 11-FEB-2013  
TIME PLOTTED => 08:34

LAST REVISION  
01-29-13

FUNCTIONAL SUPERVISOR VIJITH THILAKARATNE	DESIGNED BY BINH HONG	REVISOR DM	DATE 1/29/13
CHECKED BY	DESIGNED BY	REVISOR	DATE
DESIGNED BY	DESIGNED BY	REVISOR	DATE

**NOTES**

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
3. EXISTING UTILITY FACILITIES ARE NOT PLOTTED ON THESE PLANS.

**ABBREVIATIONS**

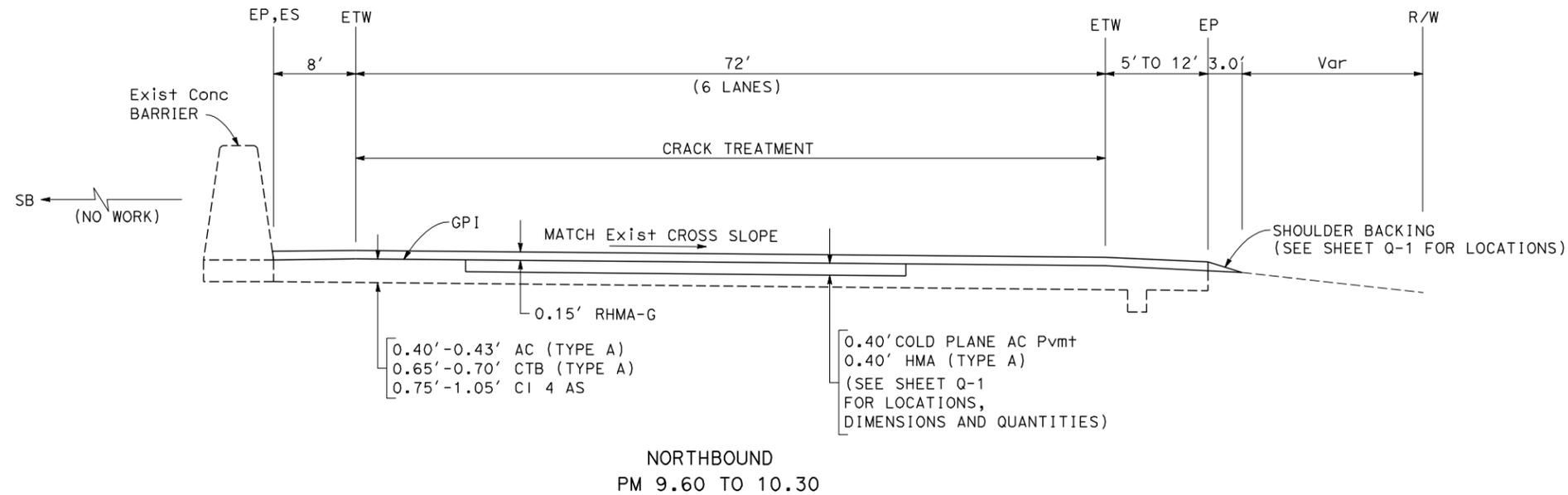
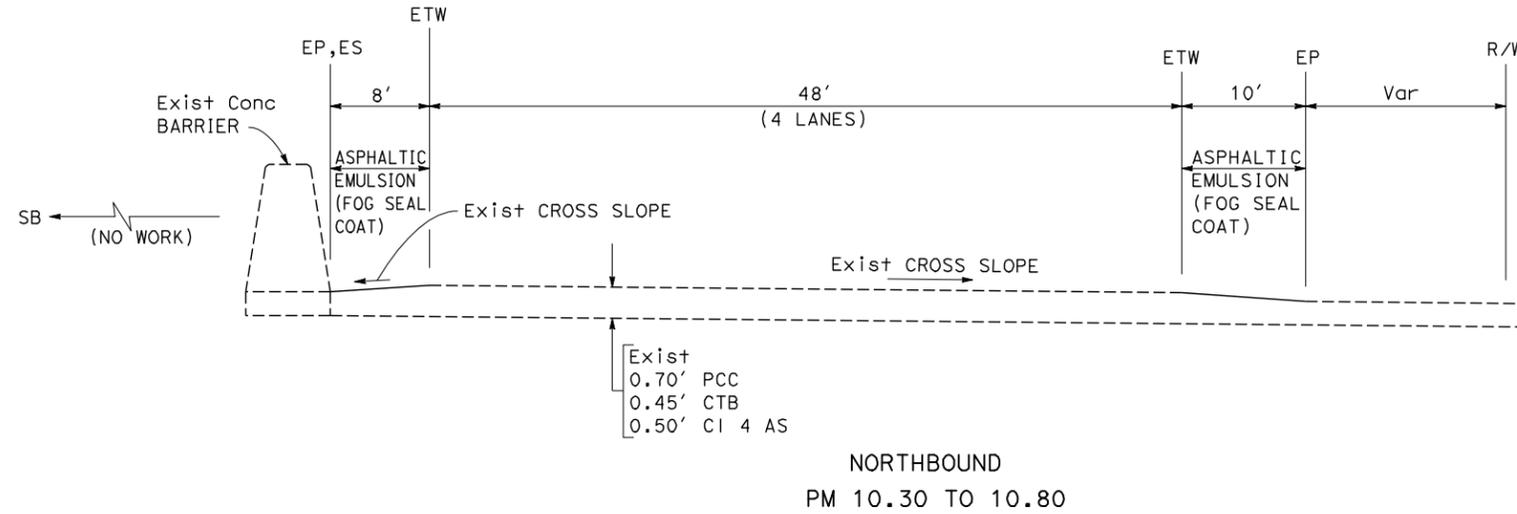
- GPI GEOSYNTHETIC PAVEMENT INTERLAYER (PAVING FABRIC)  
 RHMA-G RUBBERIZED HOT MIX ASPHALT (GAP GRADED)

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	280	9.6/10.8	2	15

1/29/13  
 REGISTERED CIVIL ENGINEER DATE  
 2-11-13  
 PLANS APPROVAL DATE

Deepthi Madabushi  
 No. 75987  
 Exp. 6-30-14  
 CIVIL  
 STATE OF CALIFORNIA

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**TYPICAL CROSS SECTIONS**  
 NO SCALE

**X-1**

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

FUNCTIONAL SUPERVISOR  
 VIJITH THILAKARATNE

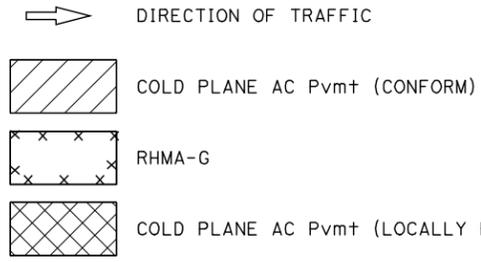
CALCULATED-DESIGNED BY  
 CHECKED BY

DEEPTHI MADABUSHI  
 BINH HONG

REVISOR BY  
 DATE REVISED

DM  
 1/29/13

**LEGEND**



**ABBREVIATIONS**

GPI GEOSYNTHETIC PAVEMENT INTERLAYER (PAVING FABRIC)

RHMA-G RUBBERIZED HOT MIX ASPHALT (GAP GRADED)

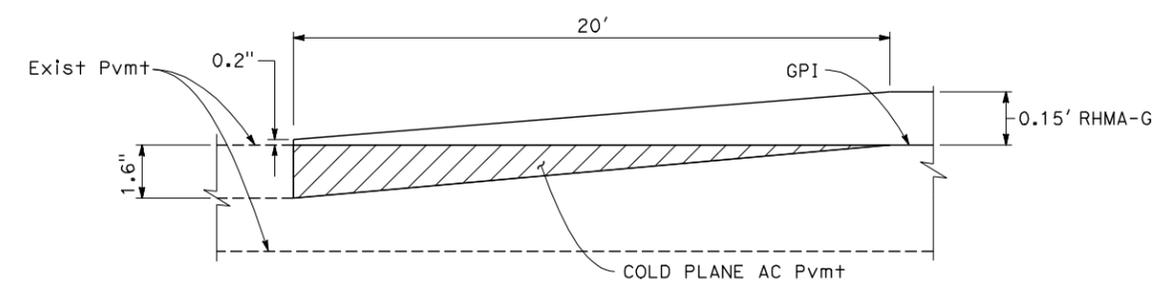
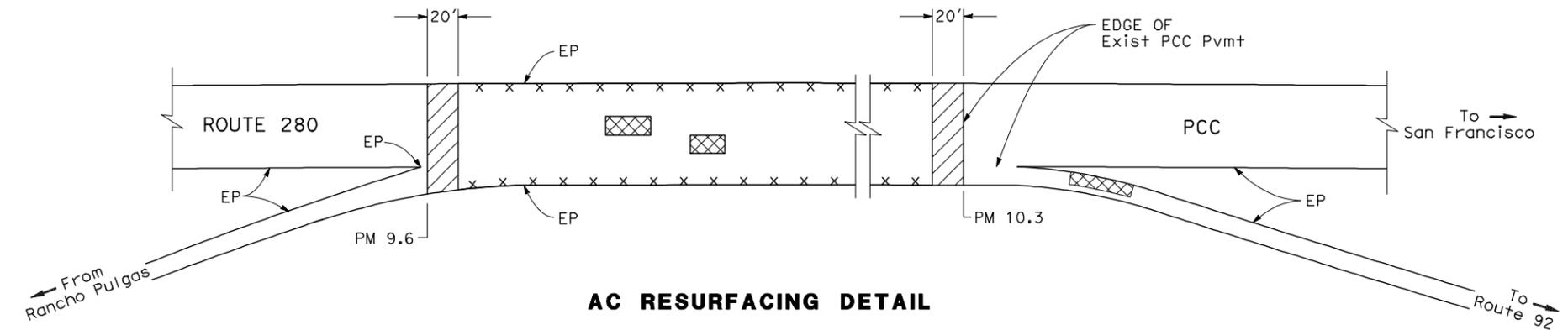
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	280	9.6/10.8	3	15

1/29/13  
 REGISTERED CIVIL ENGINEER DATE

2-11-13  
 PLANS APPROVAL DATE

Deepthi Madabushi  
 No. 75987  
 Exp. 6-30-14  
 CIVIL  
 STATE OF CALIFORNIA

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**CONSTRUCTION DETAILS**

NO SCALE

**C-1**

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

FUNCTIONAL SUPERVISOR  
 VIJITH THILAKARATNE

DESIGNED BY  
 DEEPTHI MADABUSHI

CHECKED BY  
 BINH HONG

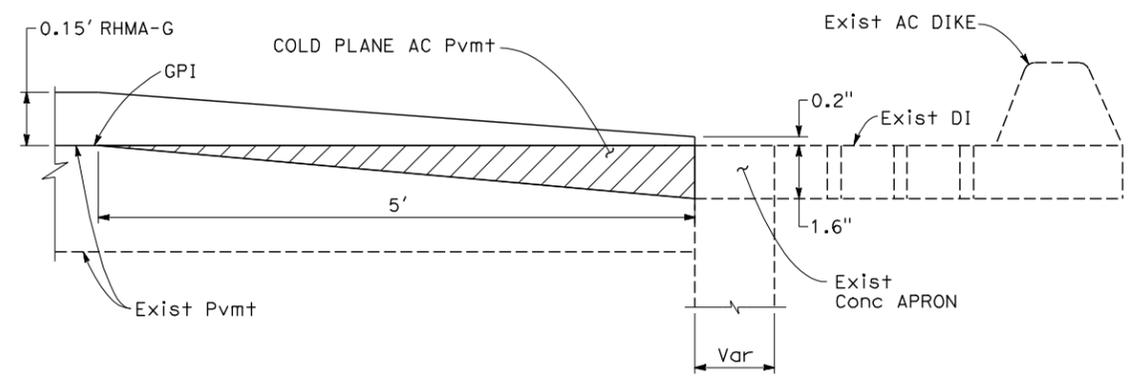
REVISOR  
 DM

DATE REVISION  
 1/29/13

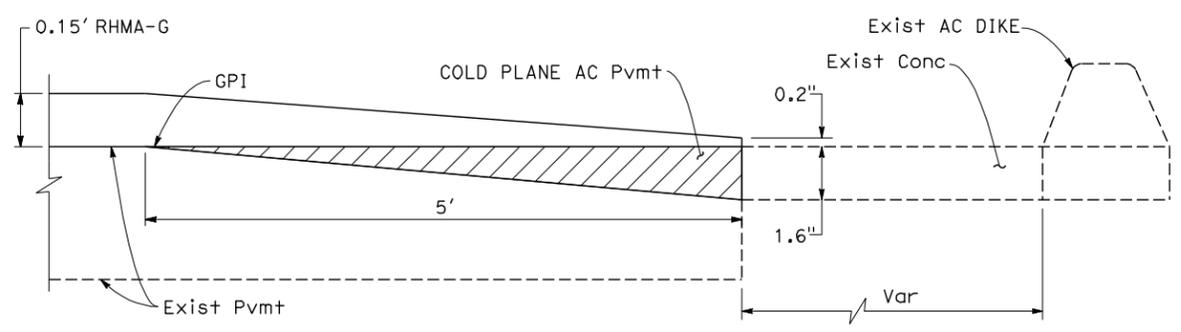
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04	SM	280	9.6/10.8	4	15

H. D. P. M.  
 1/29/13  
 REGISTERED CIVIL ENGINEER DATE  
 2-11-13  
 PLANS APPROVAL DATE  
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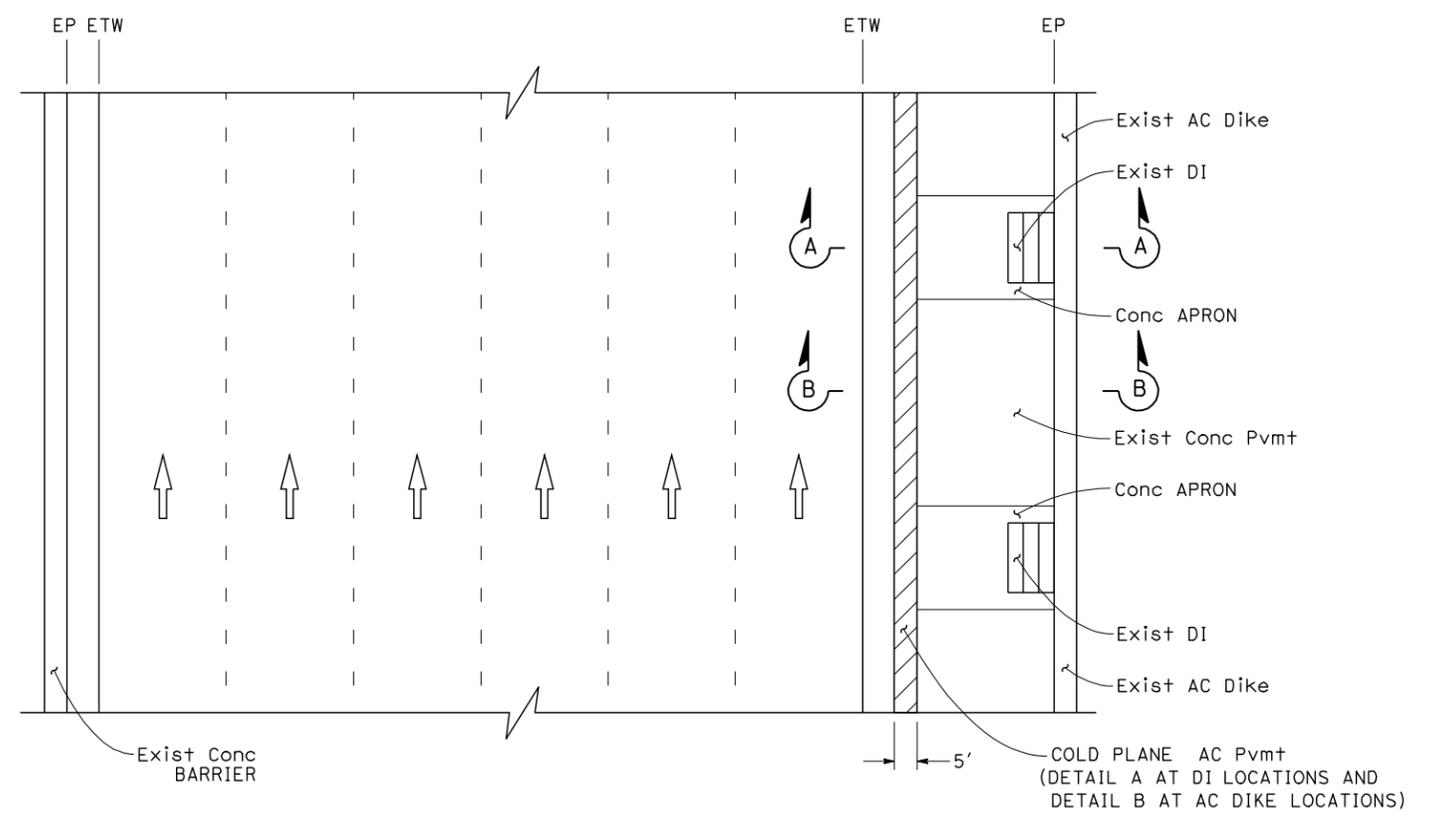
REGISTERED PROFESSIONAL ENGINEER  
**Deepthi Madabushi**  
 No. 75987  
 Exp. 6-30-14  
 CIVIL  
 STATE OF CALIFORNIA



SECTION A-A  
**PAVING CONFORM AT DRAINAGE INLET (TYPICAL)**



SECTION B-B  
**PAVING CONFORM AT AC DIKE (TYPICAL)**



**PAVING CONFORM AT DRAINAGE INLET AND AC DIKE**

**CONSTRUCTION DETAILS**  
 NO SCALE  
**C-2**

DATE PLOTTED => 11-FEB-2013  
 TIME PLOTTED => 08:35  
 LAST REVISION  
 01-29-13

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

FUNCTIONAL SUPERVISOR  
 ROLAND AU-YEUNG

REVISOR  
 DEEPTHI MADABUSHI

DATE REVISOR  
 1/29/13

DESIGNED BY  
 BINH HONG

CHECKED BY

DM

DATE REVISOR

**NOTE**

LOCATION OF CONSTRUCTION AREA SIGNS ARE APPROXIMATE.  
 EXACT LOCATIONS TO BE DETERMINED BY THE ENGINEER.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	280	9.6/10.8	5	15

REGISTERED CIVIL ENGINEER DATE 1/31/13  
 PLANS APPROVAL DATE 2-11-13  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER

Jerilyn L. Struven

No. 49964

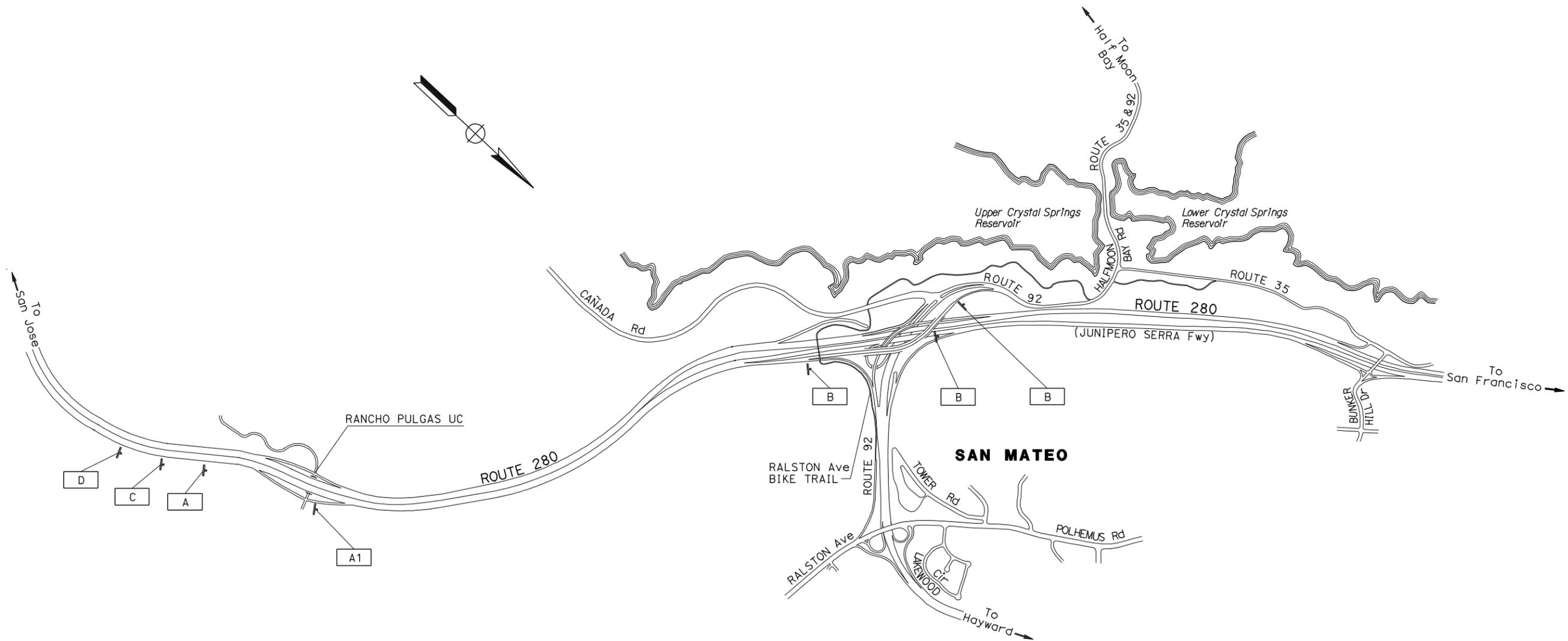
Exp. 2-31-14

CIVIL

STATE OF CALIFORNIA

**LEGEND**

- X CONSTRUCTION AREA SIGN LETTER
- No. CONSTRUCTION AREA SIGN NUMBER



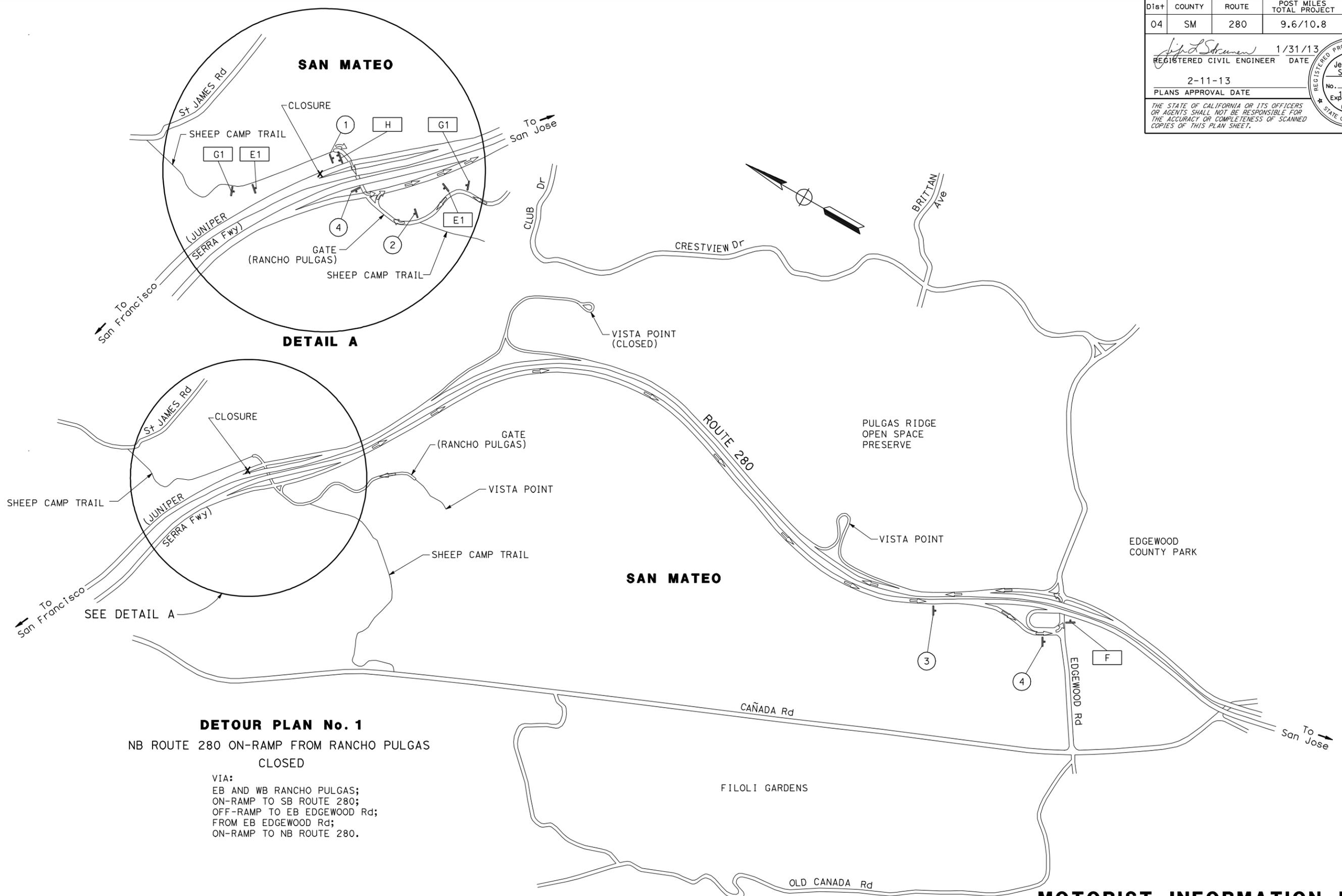
**CONSTRUCTION AREA SIGNS**

NO SCALE

**CS-1**

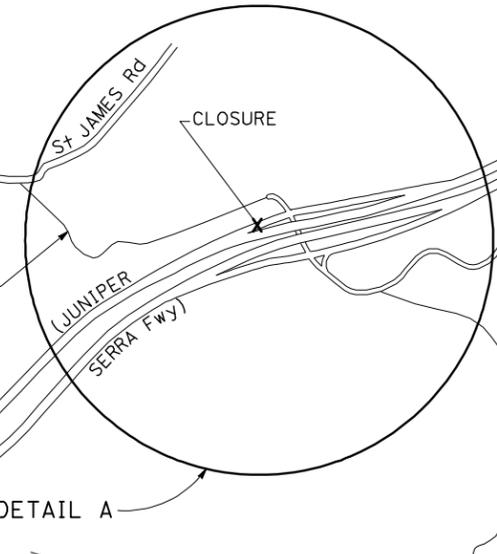
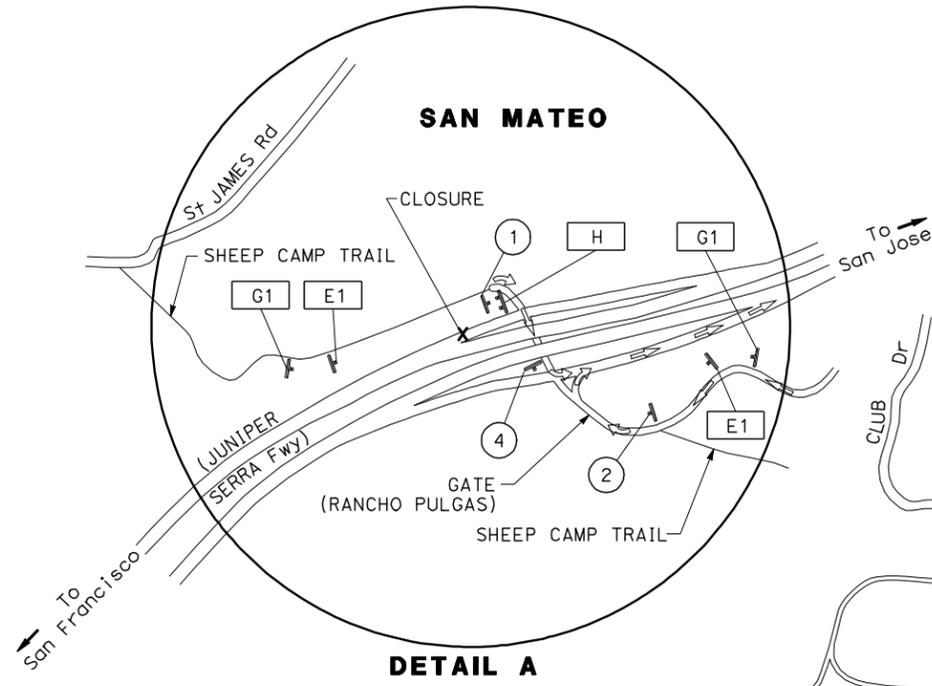
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	280	9.6/10.8	6	15
<i>Jeryl L. Struven</i> REGISTERED CIVIL ENGINEER			1/31/13	DATE	
2-11-13 PLANS APPROVAL DATE					
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					
REGISTERED PROFESSIONAL ENGINEER <i>Jeryl L. Struven</i> No. 49964 Exp. 2-31-14 CIVIL STATE OF CALIFORNIA					

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 FUNCTIONAL SUPERVISOR: ROLAND AU-YEUNG  
 CHECKED BY: BINH HONG  
 REVISIONS: 1/29/13  
 DM: 1/29/13



**DETOUR PLAN No. 1**  
 NB ROUTE 280 ON-RAMP FROM RANCHO PULGAS  
 CLOSED

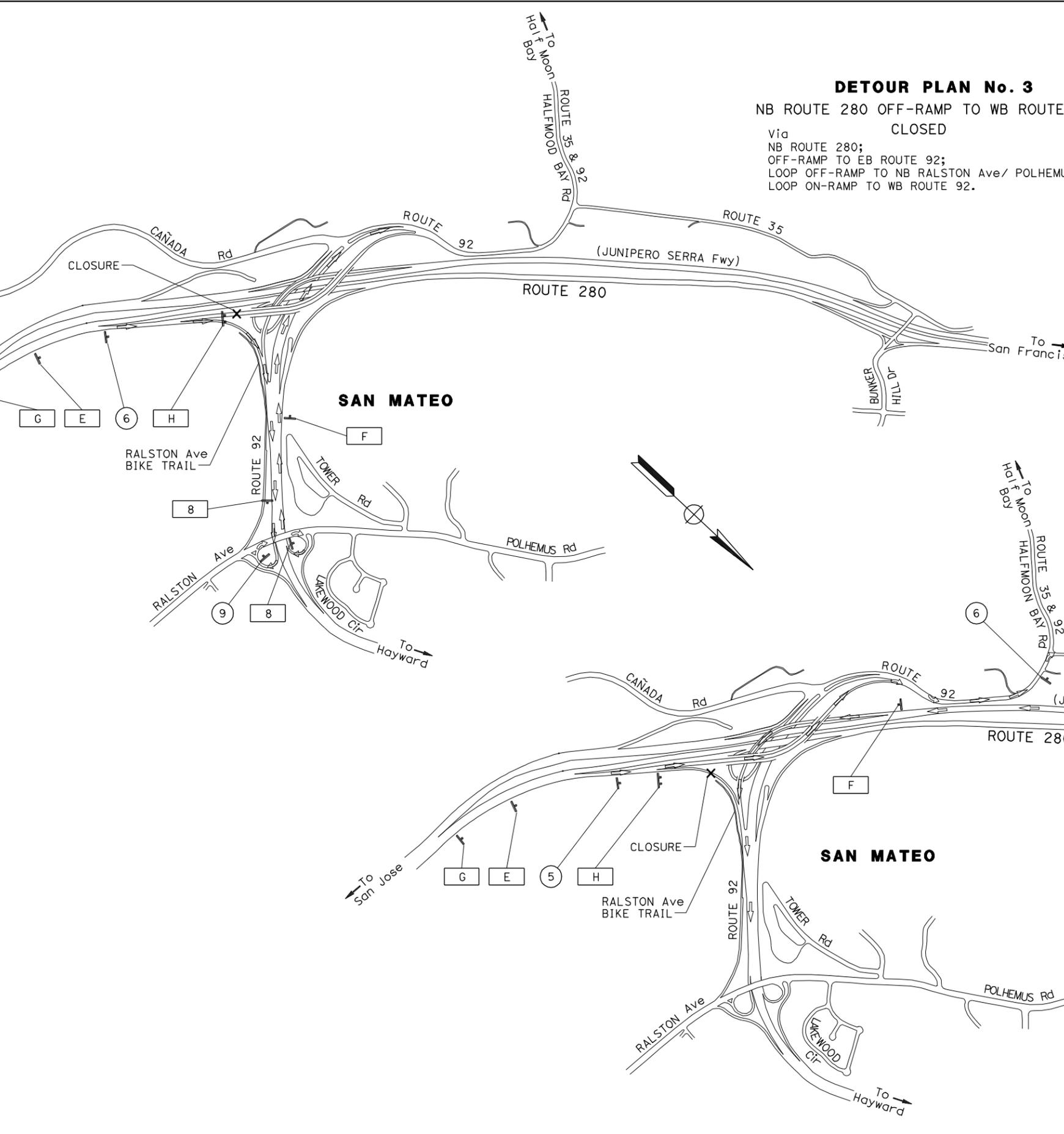
VIA:  
 EB AND WB RANCHO PULGAS;  
 ON-RAMP TO SB ROUTE 280;  
 OFF-RAMP TO EB EDGEWOOD Rd;  
 FROM EB EDGEWOOD Rd;  
 ON-RAMP TO NB ROUTE 280.



**MOTORIST INFORMATION PLAN**  
 NO SCALE  
**MI-1**

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

FUNCTIONAL SUPERVISOR: ROLAND AU-YEUNG  
 CALCULATED/DESIGNED BY: CHECKED BY:  
 DEEPTHI MADABUSHI: BINH HONG  
 REVISED BY: DATE REVISED:  
 DM: 1/29/13



**DETOUR PLAN No. 3**  
 NB ROUTE 280 OFF-RAMP TO WB ROUTE 92  
 CLOSED  
 Via  
 NB ROUTE 280;  
 OFF-RAMP TO EB ROUTE 92;  
 LOOP OFF-RAMP TO NB RALSTON Ave/ POLHEMUS Rd;  
 LOOP ON-RAMP TO WB ROUTE 92.

**DETOUR PLAN No. 2**  
 NB ROUTE 280 OFF-RAMP TO EB ROUTE 92  
 CLOSED  
 Via  
 NB ROUTE 280;  
 OFF-RAMP TO WB ROUTE 92;  
 WB ROUTE 92;  
 NB ROUTE 35;  
 ON-RAMP TO SB ROUTE 280;  
 OFF-RAMP TO EB ROUTE 92.

**MOTORIST INFORMATION PLAN**  
 NO SCALE  
**MI-2**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	280	9.6/10.8	7	15

1/31/13  
 REGISTERED CIVIL ENGINEER DATE  
 2-11-13  
 PLANS APPROVAL DATE  
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REGISTERED PROFESSIONAL ENGINEER  
 Jerilyn L. Struven  
 No. 49964  
 Exp. 2-31-14  
 CIVIL  
 STATE OF CALIFORNIA

LAST REVISION 01-29-13 DATE PLOTTED => 11-FEB-2013 TIME PLOTTED => 08:35

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

FUNCTIONAL SUPERVISOR  
 ROLAND AU-YEUNG

CALCULATED-DESIGNED BY  
 CHECKED BY

DEEPTHI MADABUSHI  
 BINH HONG

REVISED BY  
 DATE REVISED

DM  
 1/29/13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	280	9.6/10.8	8	15

*Jerilyn L. Struven* 1/31/13  
 REGISTERED CIVIL ENGINEER DATE  
 2-11-13  
 PLANS APPROVAL DATE

Jerilyn L. Struven  
 No. 49964  
 Exp. 2-31-14  
 CIVIL  
 STATE OF CALIFORNIA

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**STATIONARY MOUNTED CONSTRUCTION AREA SIGNS**

SIGN No.	SIGN CODE	SIGN MESSAGE	PANEL SIZE	NUMBER OF POSTS AND SIZE	NUMBER OF SIGNS
A	W20-1	ROAD WORK AHEAD	48" x 48"	1 - 4" x 6"	1
A1	W20-1	ROAD WORK AHEAD	36" x 36"	1 - 4" x 6"	1
B	G20-2	END ROAD WORK	36" x 18"	1 - 4" x 4"	3
C	C40(CA)	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	72" x 36"	2 - 4" x 6"	1
D	G20-1(1.5)	ROAD CONSTRUCTION NEXT 1.5 MILES	60" x 36"	2 - 4" x 4"	1
E	W20-1	DETOUR AHEAD	48" x 48"	1 - 4" x 6"	2
E1	W20-1	DETOUR AHEAD	36" x 36"	1 - 4" x 6"	1
F	M4-8A	END DETOUR	24" x 18"	1 - 4" x 4"	3
G	W20-3	RAMP CLOSED AHEAD	48" x 48"	1 - 4" x 6"	1
G1	M3-2	RAMP CLOSED AHEAD	36" x 36"	1 - 4" x 6"	2
H	SC6-4(CA)	RAMP CLOSED (WITH DATE AND TIME)	60" x 48"	2 - 4" x 6"	3
SUBTOTAL					19

**STATIONARY MOUNTED CONSTRUCTION AREA SIGNS**

SIGN No.	SIGN CODE	SIGN MESSAGE	PANEL SIZE	NUMBER OF POSTS AND SIZE	NUMBER OF SIGNS
①	SC3(CA) G47(CA) M1-4(101)	DETOUR(STRAIGHT AHEAD ARROW) NORTH US ROUTE SHIELD(280)	36" x 12" 21" x 9" 28" x 24"	1 - 4" x 6"	2
②	M4-8 G47(CA) M1-4(101) G34(R+)(CA)	DETOUR NORTH US ROUTE SHIELD(280) RIGHT ARROW	30" x 15" 26" x 12" 35" x 30" 26" x 18"	1 - 4" x 6"	2
③	M4-8 G47(CA) M1-4(101) G44(R)(CA)	DETOUR NORTH US ROUTE SHIELD(280) UPRIGHT DIAGONAL ARROW	30" x 15" 26" x 12" 35" x 30" 26" x 18"	1 - 6" x 6"	1
④	M4-8 G47(CA) M1-4(101) G34(L+)(CA)	DETOUR NORTH US ROUTE SHIELD(280) LEFT ARROW	30" x 15" 26" x 12" 35" x 30" 26" x 18"	1 - 4" x 6"	2
⑤	SC3(CA) G28-1(CA) G49(CA)	DETOUR(STRAIGHT AHEAD ARROW) STATE SHIELD(92) EAST	48" x 18" 24" x 25" 26" x 12"	1 - 6" x 6"	1
⑥	M4-8 G28-1(CA) G49(CA) G44(R)(CA)	DETOUR STATE SHIELD(92) EAST UPRIGHT DIAGONAL ARROW	24" x 12" 28" x 25" 21" x 9" 21" x 15"	1 - 6" x 6"	1
⑦	M4-8 G28-1(CA) G49(CA) G34(R+)(CA)	DETOUR STATE SHIELD(92) EAST RIGHT ARROW	24" x 12" 28" x 25" 21" x 9" 21" x 15"	1 - 6" x 6"	2
⑧	M4-8 G28-1(CA) G50(CA) G44(R)(CA)	DETOUR STATE SHIELD(92) WEST UPRIGHT DIAGONAL ARROW	24" x 12" 28" x 25" 21" x 9" 21" x 15"	1 - 6" x 6"	1
⑨	M4-8 G28-1(CA) G50(CA) G34(R+)(CA)	DETOUR STATE SHIELD(92) WEST RIGHT ARROW	24" x 12" 28" x 25" 21" x 9" 21" x 15"	1 - 6" x 6"	2
SUBTOTAL					14
TOTAL					33

**MOTORIST INFORMATION QUANTITIES**  
**MIQ-1**

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

FUNCTIONAL SUPERVISOR  
 VIJITH THILAKARATNE

CALCULATED-DESIGNED BY  
 CHECKED BY

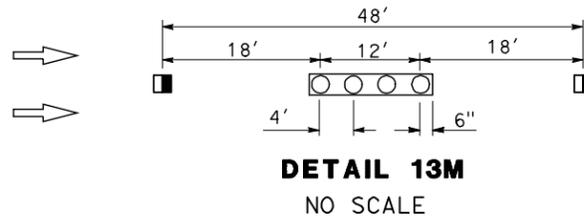
DEEPTHI MADABUSHI  
 BINH HONG

REVISED BY  
 DATE REVISED

DM  
 1/29/13

**NOTES**

1. APPLY 4" WHITE THERMOPLASTIC TRAFFIC STRIPE AFTER INSTALLING PAVEMENT MARKERS.
2. ALL EXISTING PAVEMENT DELINEATIONS WILL BE REPLACED IN KIND AND AT SAME LOCATIONS AS EXISTING.



**LEGEND**

- TYPE A WHITE NON-REFLECTIVE MARKER
- TYPE G ONE-WAY CLEAR RETROREFLECTIVE MARKER
- ▬ 4" WHITE THERMOPLASTIC TRAFFIC STRIPE
- ➔ DIRECTION OF TRAVEL

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	280	9.6/10.8	9	15

1/29/13  
 REGISTERED CIVIL ENGINEER DATE

2-11-13  
 PLANS APPROVAL DATE

Deepthi Madabushi  
 No. 75987  
 Exp. 6-30-14  
 CIVIL  
 STATE OF CALIFORNIA

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**TRAFFIC STRIPES, PAVEMENT MARKINGS, AND PAVEMENT MARKERS**

PM	DIRECTION	DETAIL No.	REMOVE PAVEMENT MARKER	REMOVE THERMOPLASTIC TRAFFIC STRIPE		PAVEMENT MARKER			THERMOPLASTIC TRAFFIC STRIPE					
				4" YELLOW	4" WHITE	NON-REFLECTIVE TYPE A	RETROFLECTIVE		4" YELLOW	4" WHITE	4" WHITE (BROKEN 35'-13')	8" WHITE		
							TYPE G	TYPE H						
			EA	LF	EA			LF						
9.6 TO 10.3	NB	13M	1926		5005	1540	386				18480			
		25	78	3696					78	3696				
		27B			3696						3696			
		36	20						20				440	
SUBTOTAL			2024	3696	8701	1540	386	98	3696	3696	18480	440		
TOTAL			2024	3696	8701	1540	484		7392		18480	440		

**PAVEMENT DELINEATION QUANTITIES  
 PDQ-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 DESIGN  
 FUNCTIONAL SUPERVISOR  
 VIJITH THILAKARATNE  
 CALCULATED-DESIGNED BY  
 CHECKED BY  
 DEEPTHI MADABUSHI  
 BINH HONG  
 REVISED BY  
 DATE REVISED  
 DM  
 1/29/13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	280	9.6/10.8	10	15

1/29/13  
 REGISTERED CIVIL ENGINEER DATE  
 2-11-13  
 PLANS APPROVAL DATE

Deepthi Madabushi  
 No. 75987  
 Exp. 6-30-14  
 CIVIL  
 STATE OF CALIFORNIA

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**COLD PLANE AC PAVEMENT (LOCALLY FAILED AREAS)**

DIRECTION	PM	LANE 1 (N)	LANE 2 (N)	LANE 3 (N)	LANE 4 (N)	LANE 5 (N)	LANE 6 (N)	*COLD PLANE AC PAVEMENT	*HMA (TYPE A)	*TACK COAT
		LF						SQYD	TON	
NB	9.8	1200	1200					3200	861.9	2.1
	10.1					80		107	28.7	0.1
	10.2		80					107	28.7	0.1
	10.2					220	220	587	158.0	0.4
	10.2	100	100					267	71.8	0.2
	10.3			120				160	43.1	0.1
	10.3					120		160	43.1	0.1
	10.3						20	27	7.2	0.0
	10.3						350	467	125.7	0.3
	10.4						200	267	71.8	0.2
SUBTOTAL								5349	1440	3.6

\* = SEE ROADWAY QUANTITIES SUMMARY TABLE FOR PROJECT TOTAL QUANTITY  
 (N) = NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY

**ROADWAY QUANTITIES SUMMARY**

DIRECTION	PM	LOCATION	HMA (TYPE A)	RHMA-G	TACK COAT	COLD PLANE AC PAVEMENT	SHOULDER BACKING	GEOSYNTHETIC INTERLAYER PAVEMENT (PAVING FABRIC)	ASPHALTIC EMULSION (FOG SEAL COAT)
			TON			SQYD	TON	SQYD	TON
NB	9.6 TO 10.3	MAIN LINES		3733	24.6		66.2	36960	
		CONFORMS AT BEGIN/END				400			
		CONFORMS AT MEDIAN BARRIER				2053			
	9.8 TO 10.0	CONFORMS AT DI/AC DIKE				440			
	10.3 TO 10.8	SHOULDERS							1.3
SUBTOTAL				3733	24.6	2893	66.2		1.3
SUBTOTAL (LOCALLY FAILED AREAS)			1440		3.6	5349			
TOTAL			1440	3733	28.2	8242	66.2	36960	1.3

**SUMMARY OF QUANTITIES**

**Q-1**



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SM	280	9.6/10.8	11	15

<i>Kenneth Y. Xu</i>	1/30/13
REGISTERED ELECTRICAL ENGINEER	DATE
Kenneth Y. Xu	
No. 15219	
Exp. 6-30-14	
ELECT	

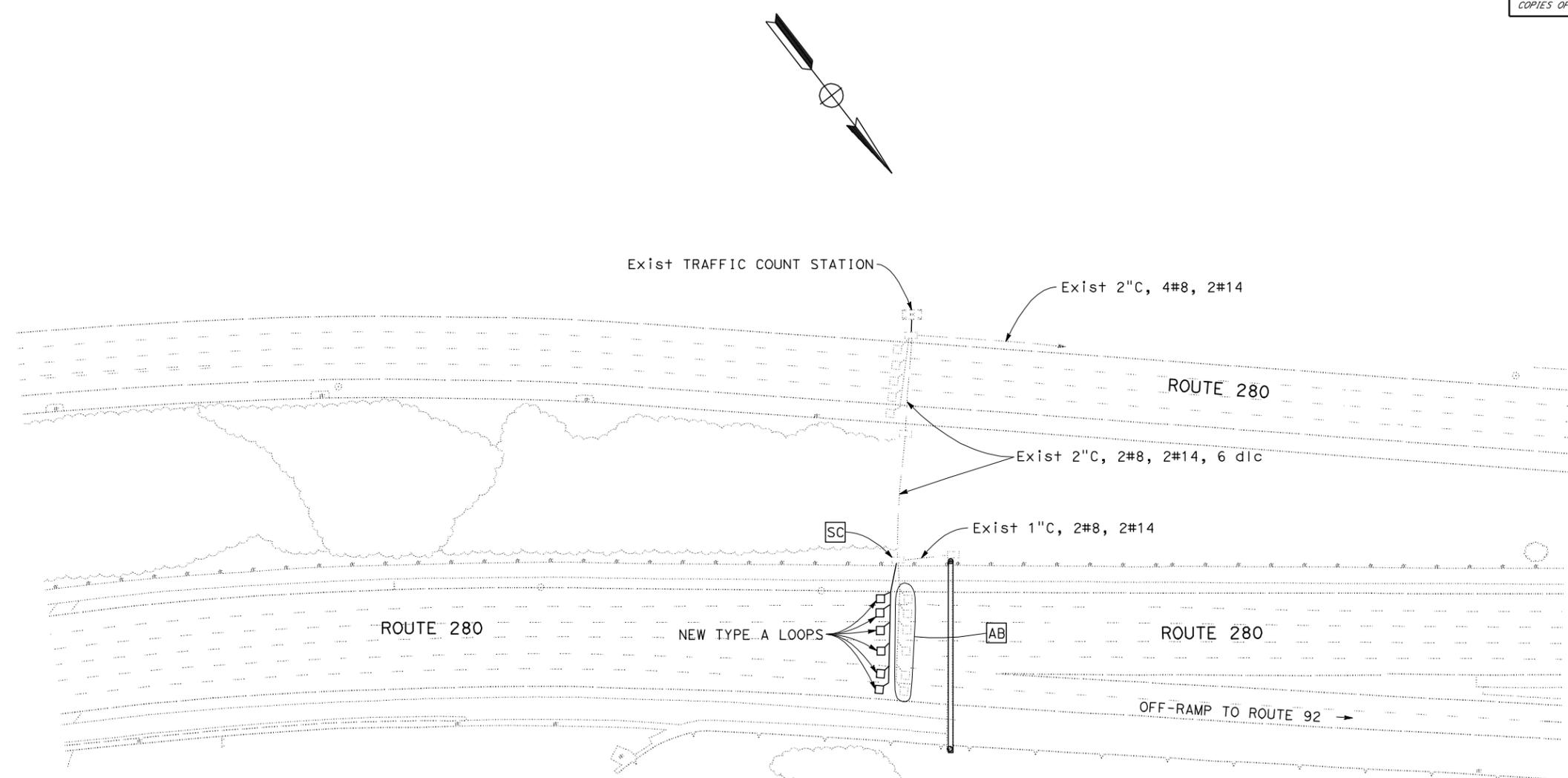
2-11-13  
PLANS APPROVAL DATE

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**NOTE:**

FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
**ELECTRICAL**  
 FUNCTIONAL SUPERVISOR  
 ELAINE WONG  
 CALCULATED-DESIGNED BY  
 CHECKED BY  
 KENNETH Y. XU  
 ELAINE WONG  
 REVISED BY  
 DATE REVISED  
 KYX  
 1/30/13



**MODIFY INDUCTIVE LOOP DETECTOR**

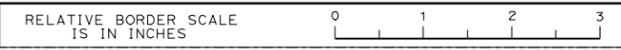
NO SCALE

APPROVED FOR ELECTRICAL WORK ONLY

**E-1**

BORDER LAST REVISED 7/2/2010

USERNAME => s136183  
DGN FILE => 0412000450u001.dgn



UNIT 0976

PROJECT NUMBER & PHASE

04120004501

LAST REVISION  
 01-30-13  
 DATE PLOTTED => 11-FEB-2013  
 TIME PLOTTED => 08:35



# TYPICAL RAMP CLOSURES

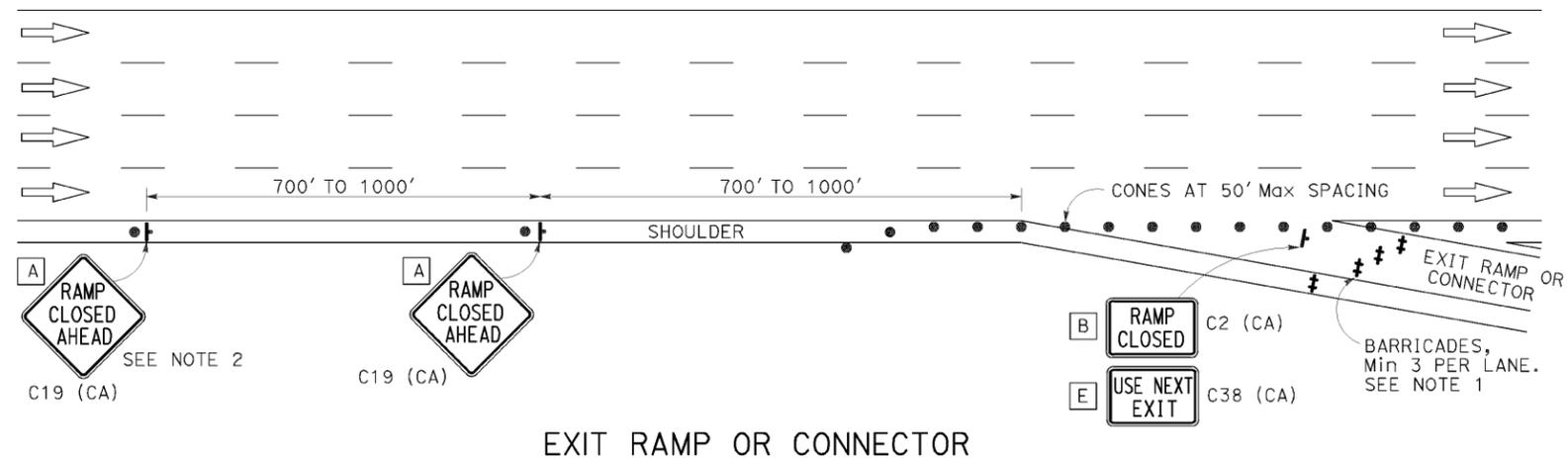
## SIGN PANEL SIZE (Min)

- A 48" x 48"
- B 48" x 30"
- C 30" x 30"
- D 48" x 48" - SPEED OF 50 mph OR MORE  
36" x 36" - SPEED LESS THAN 50 mph
- E 48" x 36"

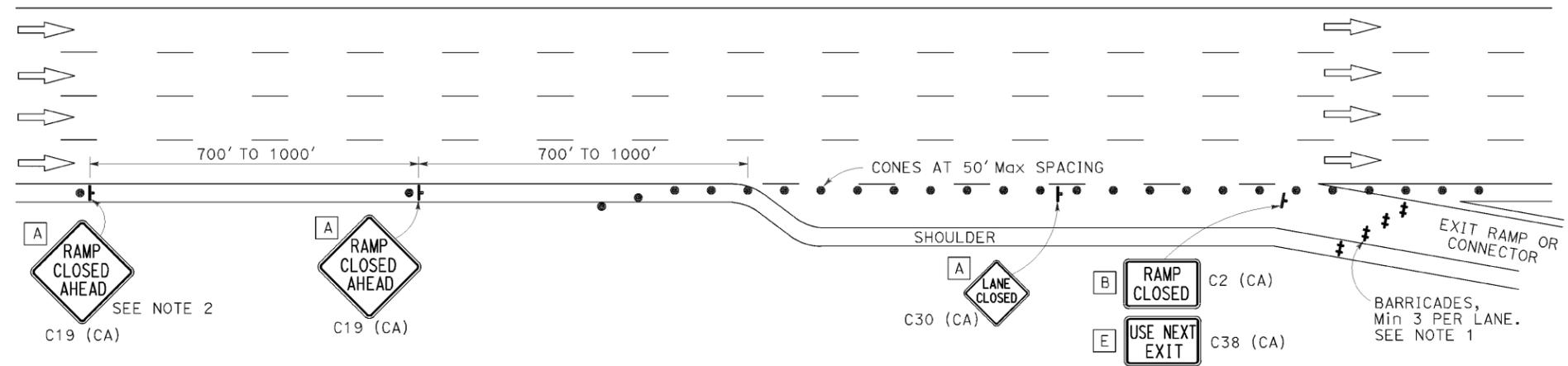
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SM	280	9.6/10.8	13	15

REGISTERED CIVIL ENGINEER: *ggsmlbr*  
 DATE: 12-7-12  
 PLANS APPROVAL DATE: 2-11-13  
 REGISTERED PROFESSIONAL ENGINEER: Gurinderpal Bhullar  
 No. C48815  
 Exp. 9-30-14  
 CIVIL  
 STATE OF CALIFORNIA

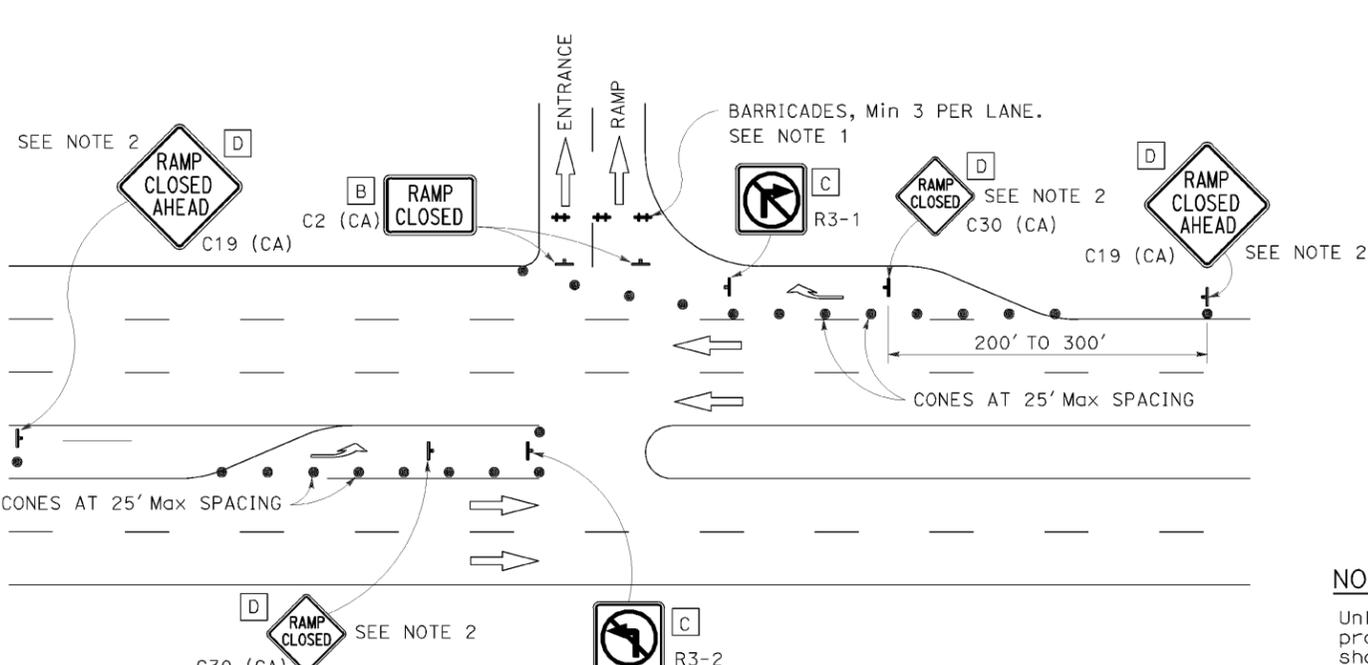
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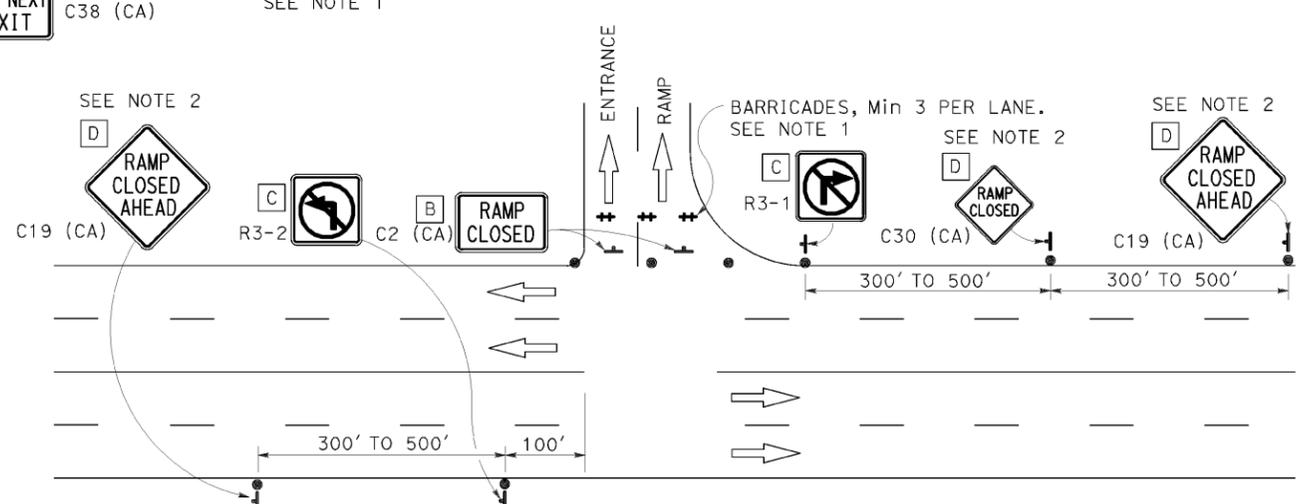
EXIT RAMP OR CONNECTOR



EXIT RAMP OR CONNECTOR WITH ADDITIONAL LANE



ENTRANCE RAMP WITH TURNING POCKETS



ENTRANCE RAMP WITHOUT TURNING POCKETS

## LEGEND

- TRAFFIC CONE
- † TEMPORARY SIGN
- ‡ BARRICADES

## NOTES:

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

## NOTES:

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

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

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

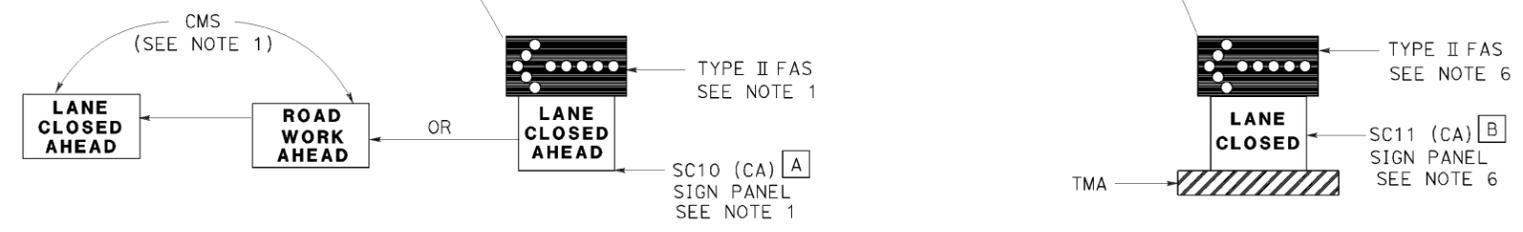
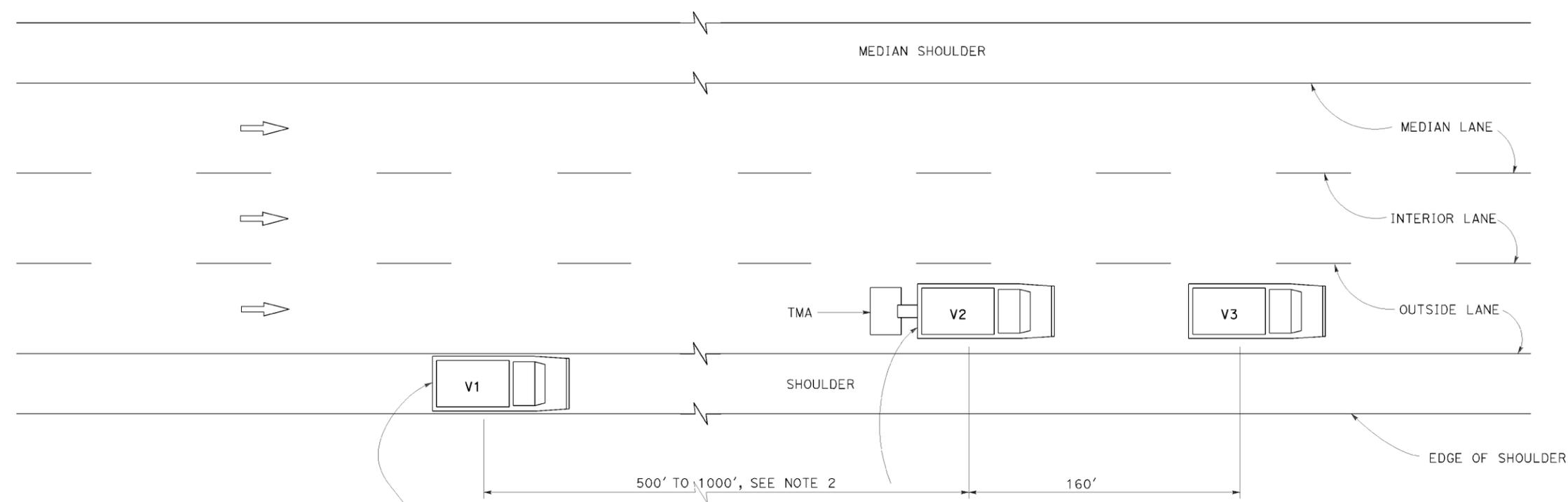
# TRAFFIC CONTROL SYSTEM FOR RAMP CLOSURE

NO SCALE

TCS-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 Functional Supervisor: \_\_\_\_\_  
 Calculated/Designed By: \_\_\_\_\_  
 Checked By: \_\_\_\_\_  
 Revised By: \_\_\_\_\_  
 Date Revised: \_\_\_\_\_

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SM	280	9.6/10.8	14	15
 REGISTERED CIVIL ENGINEER			12-7-12	DATE	
PLANS APPROVAL DATE 2-11-13					
					
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**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

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

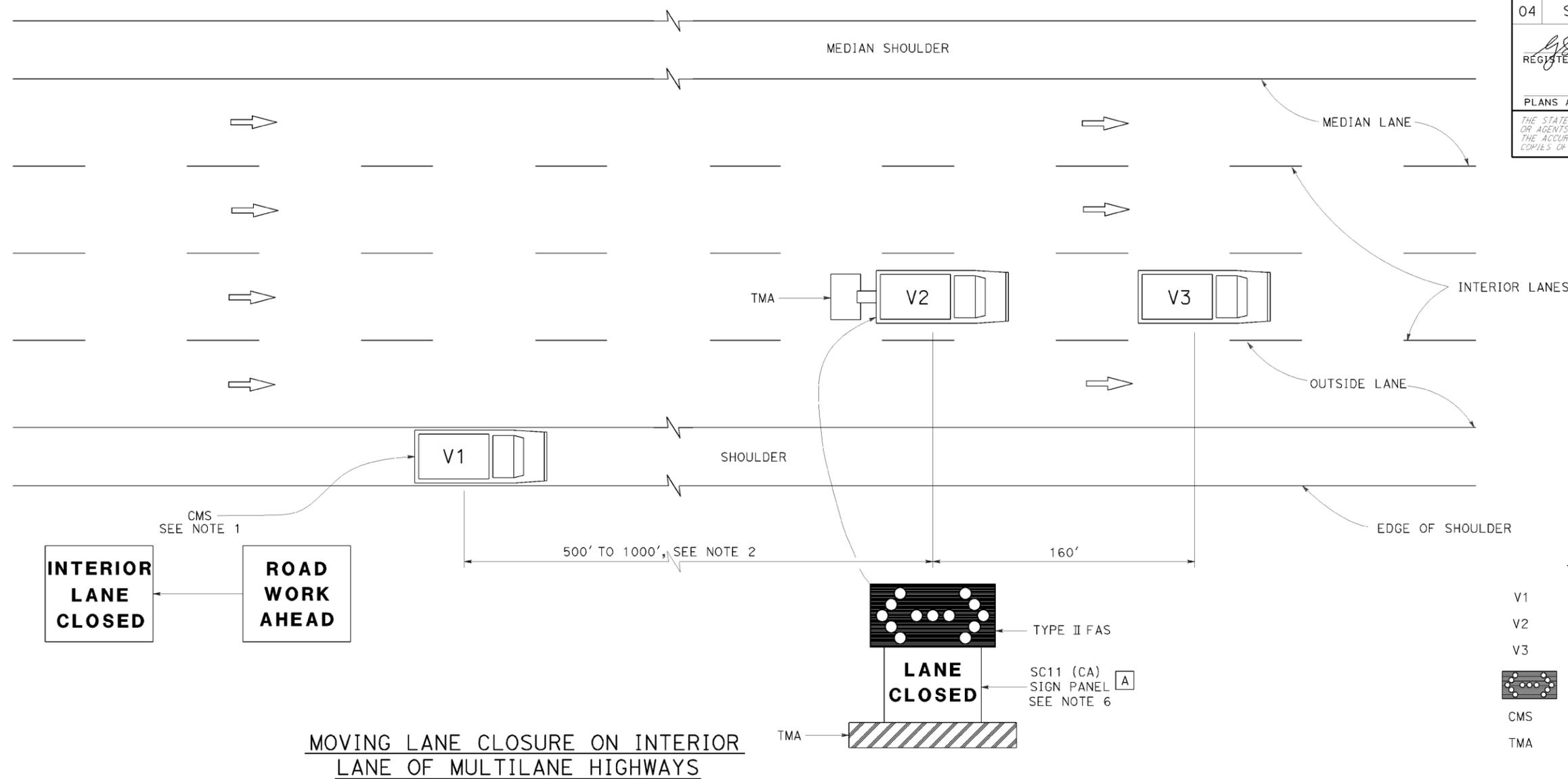
**NOTES:**

- 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. A Type II flashing arrow sign shall be mounted on the rear of sign vehicle V1 and used with the SC10 (CA) sign panel. A Type II flashing arrow sign will not be required with the changeable message sign provided the flashing arrow sign symbol is displayed on the changeable message sign board. The changeable message sign shall be sequenced to show the "ROAD WORK AHEAD" message first, followed by the "LANE CLOSED AHEAD" message and then the flashing arrow sign symbol. For median lane closure, the flashing arrow symbol shall be reversed with the arrowhead on the right.
- 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.
- A minimum sight distance of 1500' should be provided in advance of sign vehicle V1.
- 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'.
- Vehicle-mounted sign panels shall be Type III, IV, VII, VIII or IX retroreflective sheeting, black on white, black on orange, or black on fluorescent orange, with 6" minimum series D letters per Caltrans sign specifications.
- Gross Vehicle Weight of shadow vehicle V2 shall be a minimum of 20,000 pounds and 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.
- 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.
- Where sufficient shoulder width is not available, sign vehicle V1 may encroach into the traffic lane staying as close to the edge of shoulder as practicable. Both V1 and V2 shall be equipped with a truck-mounted attenuator. The Gross Vehicle Weight of V1 and V2 shall be at least 20,000 pounds, respectively.
- When multiple work vehicles are used in close proximity to each other, only one shadow vehicle is required, and spacing between work vehicles shall be minimized in order to deter traffic from entering the closed lane.

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**TRAFFIC CONTROL SYSTEM  
 FOR MOVING LANE CLOSURE  
 ON MULTILANE HIGHWAYS  
 (OUTSIDE AND MEDIAN LANES)**  
 NO SCALE  
**TCS-3**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 Caltrans®  
 FUNCTIONAL SUPERVISOR  
 CALCULATED-DRAWN BY  
 CHECKED BY  
 REVISOR BY  
 DATE REVISOR  
 DATE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SM	280	9.6/10.8	15	15
 REGISTERED CIVIL ENGINEER			12-7-12	DATE	
PLANS APPROVAL DATE 2-11-13					
					
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**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

**MOVING LANE CLOSURE ON INTERIOR LANE OF MULTILANE HIGHWAYS**

**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 be Type III, IV, VII, VIII, or IX retroreflective sheeting, black on white, black on orange, or black on fluorescent orange, with 6" minimum series D letters per Caltrans sign specifications.
6. Gross Vehicle Weight of shadow vehicle V2 shall be a minimum of 20,000 pounds and 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. Where sufficient shoulder width is not available, sign vehicle V1 may encroach into the traffic lane staying as close to the edge of shoulder as practicable. Both V1 and V2 shall be equipped with a truck-mounted attenuator. The Gross Vehicle Weight of V1 and V2 shall be at least 20,000 pounds, respectively.
10. When multiple work vehicles are used in close proximity to each other, only one shadow vehicle is required, and spacing between work vehicles shall be minimized in order to deter traffic from entering the closed lane.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**TRAFFIC CONTROL SYSTEM  
FOR MOVING LANE CLOSURE  
ON MULTILANE HIGHWAYS  
(INTERIOR LANES)**

NO SCALE

**TCS-4**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 Caltrans®  
 REVISIONS:  
 00-00-00 TIME PLOTTED => 09:45  
 DATE PLOTTED => 10-DEC-2012

