

INDEX OF PLANS

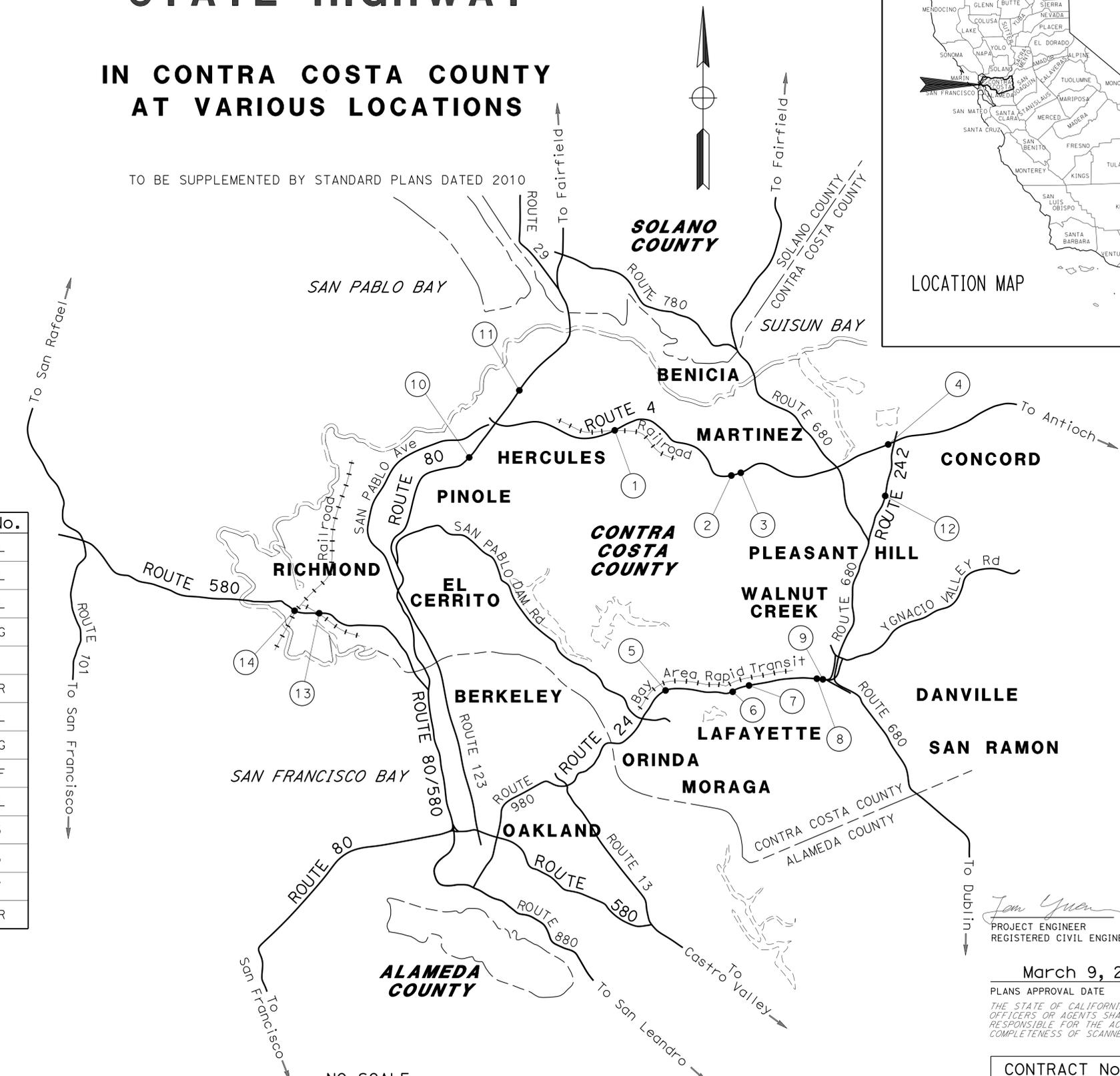
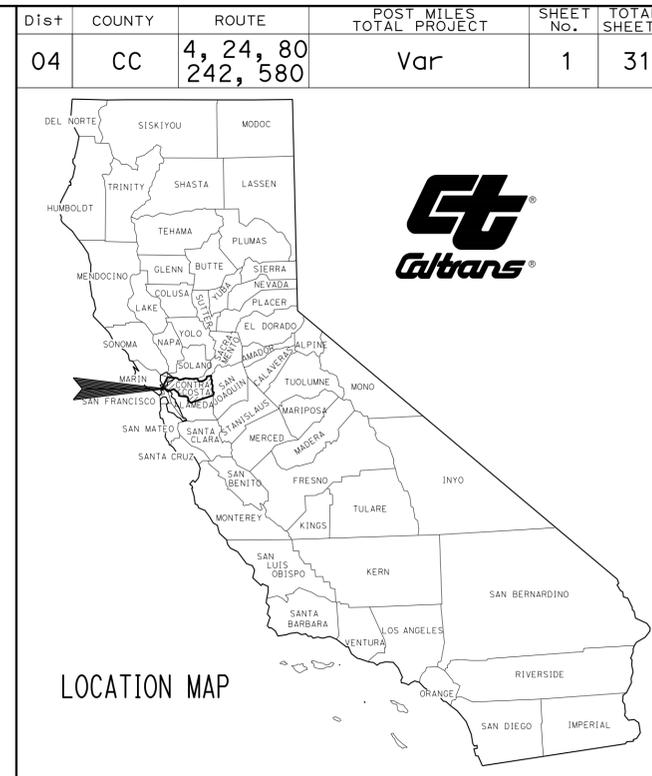
SHEET No.	DESCRIPTION
1	TITLE SHEET AND LOCATION MAP
2-8	CONSTRUCTION AREA SIGNS
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10-14	REVISED STANDARD PLANS
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31	STRIP JOINT SEAL ASSEMBLY MAXIMUM MOVEMENT RATING = 4"

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 CONTRA COSTA COUNTY
AT VARIOUS LOCATIONS

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010



LOCATIONS OF CONSTRUCTION

LOCATION	ROUTE	PM	BRIDGE NAME	BRIDGE No.
1	4	3.7	CHRISTIE OH	28-0360L
2	4	R8.6	ALHAMBRA AVENUE UC	28-0214L
3	4	R8.8	ALHAMBRA WAY UC	28-0216L
4	4	R14.5	E4-S242 CONNECTOR OC	28-0260G
5	24	R3.5	ST STEPHENS DRIVE OC	28-0111
6	24	R6.0	HAPPY VALLEY ROAD UC	28-0132R
7	24	R6.3	OAK HILL ROAD UC	28-0133L
8	24	8.9	E24-N680 CONNECTOR OC	28-0126G
9	24	9.1	S680-W24 CONNECTOR OC	28-0126F
10	80	6.0	HILLTOP DRIVE OC (NORTH)	28-0281L
11	80	11.7	OLEUM REFINERY ROAD No. 3 UC	28-0155
12	242	R1.6	BUCHANAN FIELD VIADUCT	28-0186
13	580	R4.1	SOUTH SECOND STREET OH	28-0277
14	580	R4.8	RAILROAD AVENUE OH	28-0056R

PROJECT MANAGER
RAMSES SARGISS

DESIGN MANAGER
VIJITH THILAKARATNE

Jan Yuan 2/27/15
PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

March 9, 2015
PLANS APPROVAL DATE

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



CONTRACT No.	04-4H8404
PROJECT ID	0413000291

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 FUNCTIONAL SUPERVISOR: LOURDES DAVID
 CHECKED BY: JERI-PAUL FABIAN
 CLAUDIA FANG
 REVISED BY: CF
 DATE REVISED: 10/2/14

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	4, 24, 80 242, 580	Var	2	31

Claudia K. Fang 3/6/15
 REGISTERED CIVIL ENGINEER DATE
 3-9-15
 PLANS APPROVAL DATE

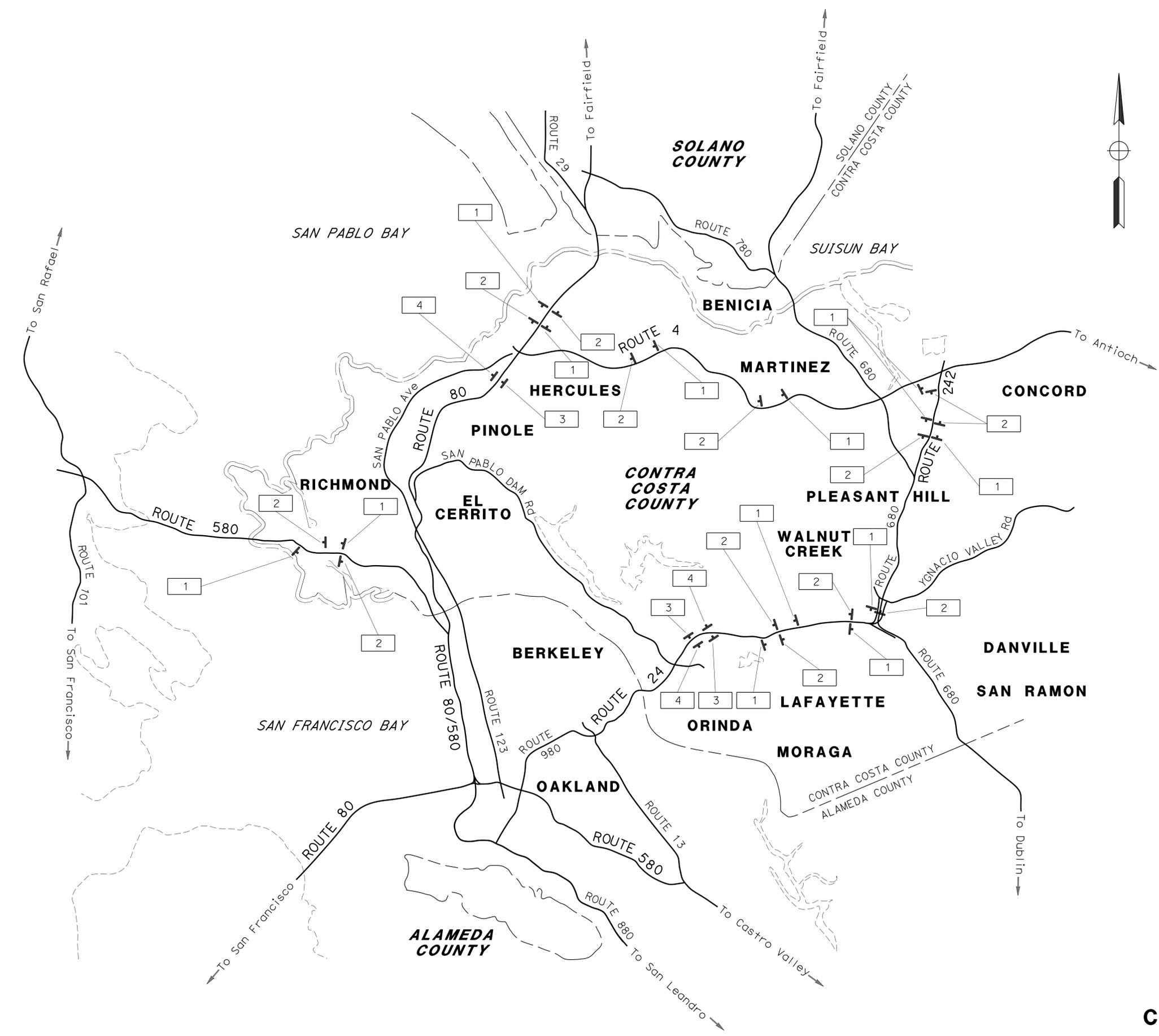
REGISTERED PROFESSIONAL ENGINEER
 Claudia K. Fang
 No. 80493
 Exp. 3-31-17
 CIVIL
 STATE OF CALIFORNIA

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

LEGEND:

[No.] CONSTRUCTION AREA SIGNS
 (No.) CONSTRUCTION LOCATION NUMBER

NOTE:
 EXACT LOCATION AND POSITION OF CONSTRUCTION AREA SIGNS TO BE DETERMINED BY THE ENGINEER.



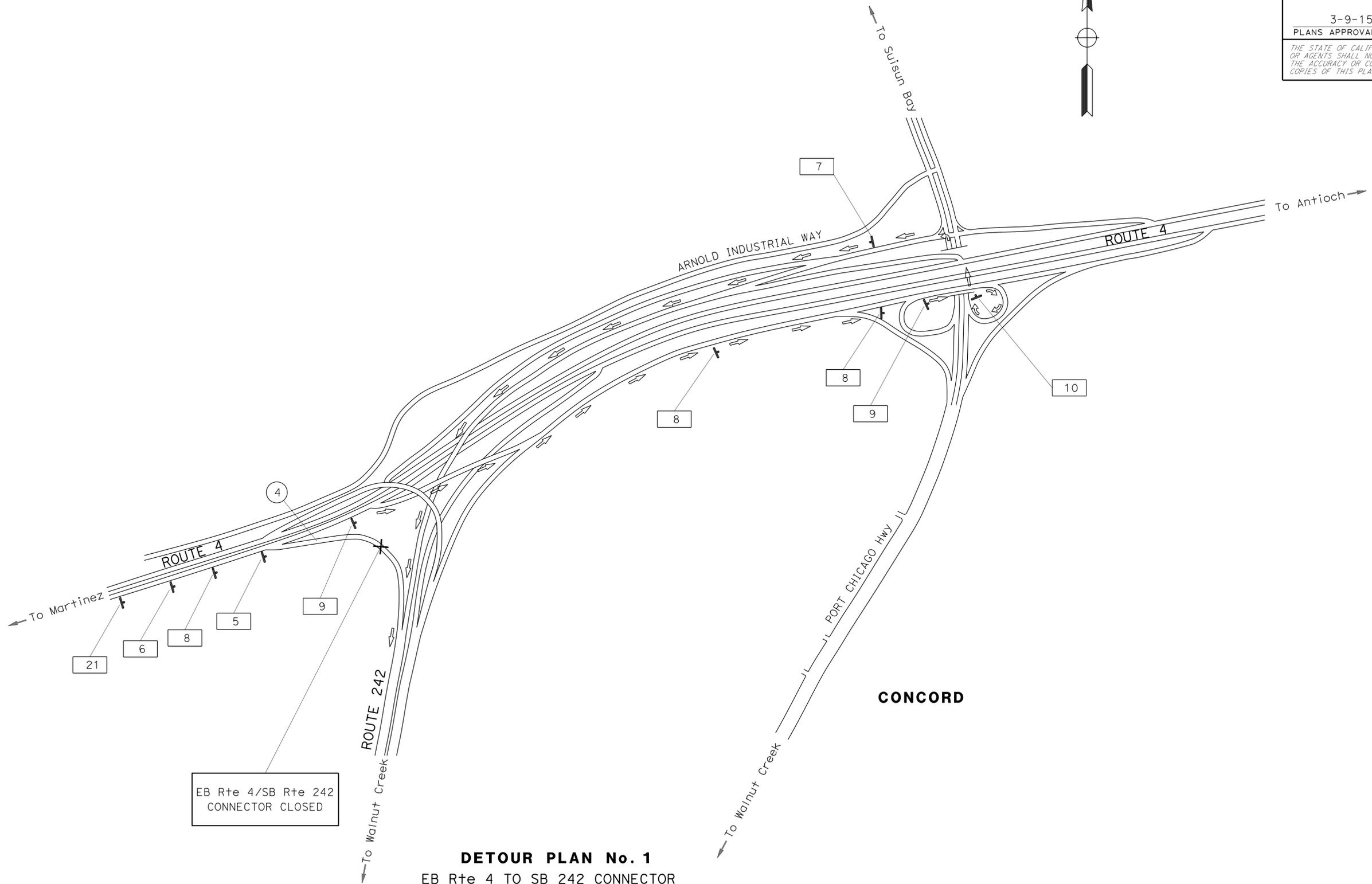
CONSTRUCTION AREA SIGNS
 NO SCALE

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

CS-1

LAST REVISION DATE PLOTTED => 13-MAR-2015 10-02-14 TIME PLOTTED => 12:50

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	4, 24, 80 242, 580	Var	3	31
<i>Claudia K. Fang</i> REGISTERED CIVIL ENGINEER			3/6/15 DATE		
3-9-15 PLANS APPROVAL DATE			<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>		



EB Rte 4/SB Rte 242
CONNECTOR CLOSED

DETOUR PLAN No. 1
 EB Rte 4 TO SB 242 CONNECTOR

- VIA:
- EB Rte 4
 - PORT CHICAGO Hwy OFF-RAMP
 - NB PORT CHICAGO Hwy
 - WB Rte 4 ON-RAMP
 - WB Rte 4 TO SB Rte 242 CONNECTOR

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

FOR NOTE AND LEGEND,
SEE SHEET CS-1

CONSTRUCTION AREA SIGNS
 NO SCALE

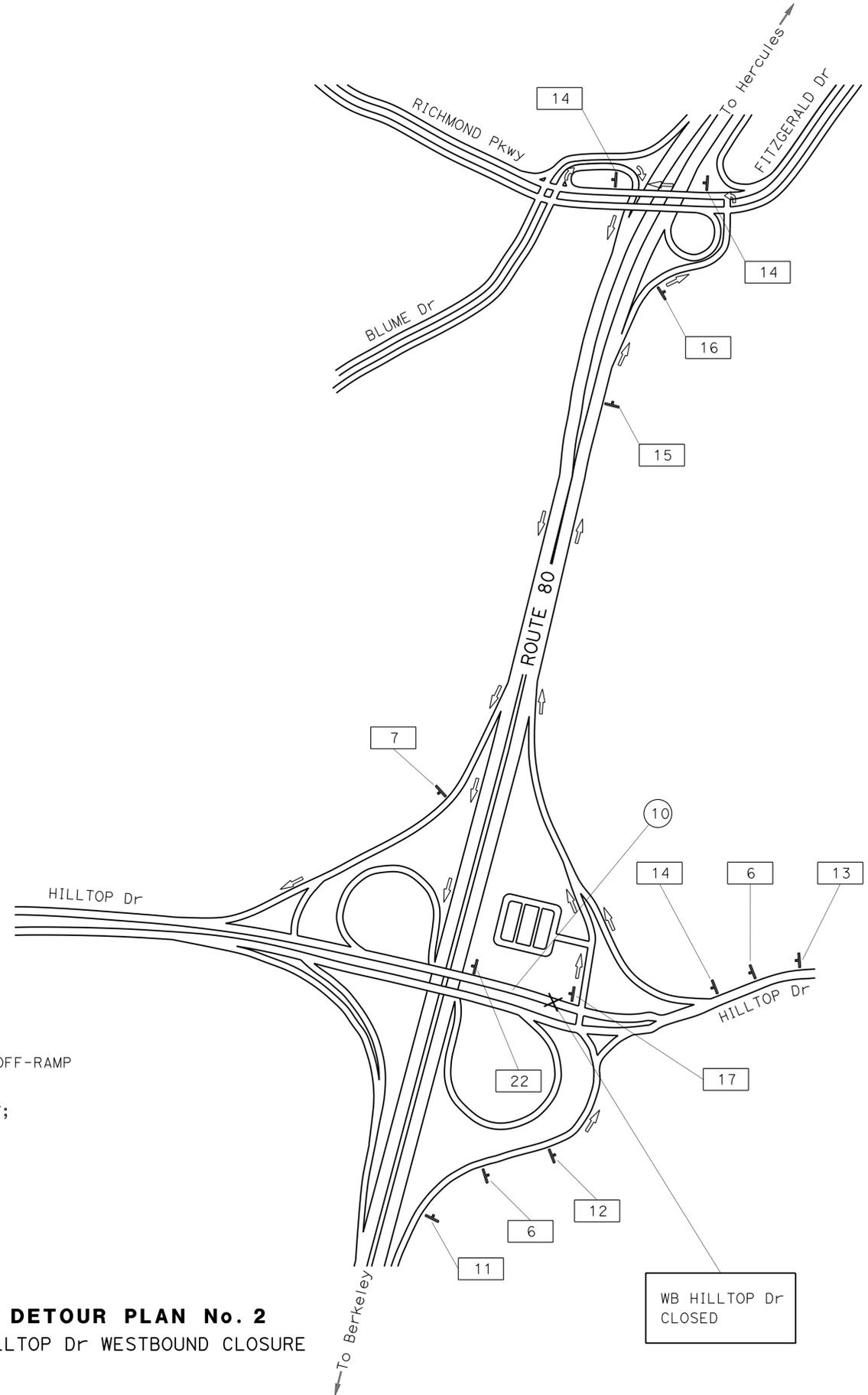
CS-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	REVISOR	DATE
Caltrans	LOURDES DAVID	CLAUDIA FANG	12/22/14
TRAFFIC		JERI-PAUL FABIAN	CF
		CHECKED BY	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 FUNCTIONAL SUPERVISOR: LOURDES DAVID
 CLAUDIA FANG
 JERI-PAUL FABIAN
 CF
 4/2/14

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	4, 24, 80 242, 580	Var	4	31

Claudia K. Fang 3/6/15
 REGISTERED CIVIL ENGINEER DATE
 3-9-15
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

FOR WB HILLTOP Dr TRAFFIC
 COMING FROM THE EB Rte 80 OFF-RAMP
 VIA ON-RAMP TO EB Rte 80;
 TAKE THE RICHMOND Pkwy EXIT;
 WB RICHMOND Pkwy;
 TAKE THE WB Rte 80 ON-RAMP
 TAKE THE HILLTOP Dr EXIT

FOR WB Rte 80 TRAFFIC ON HILLTOP Dr:
 TAKE THE EB Rte 80 ON-RAMP;
 TAKE THE RICHMOND Pkwy EXIT;
 WB RICHMOND Pkwy;
 TAKE THE WB Rte 80 ON-RAMP

DETOUR PLAN No. 2
 HILLTOP Dr WESTBOUND CLOSURE

WB HILLTOP Dr
 CLOSED

CONSTRUCTION AREA SIGNS
 NO SCALE

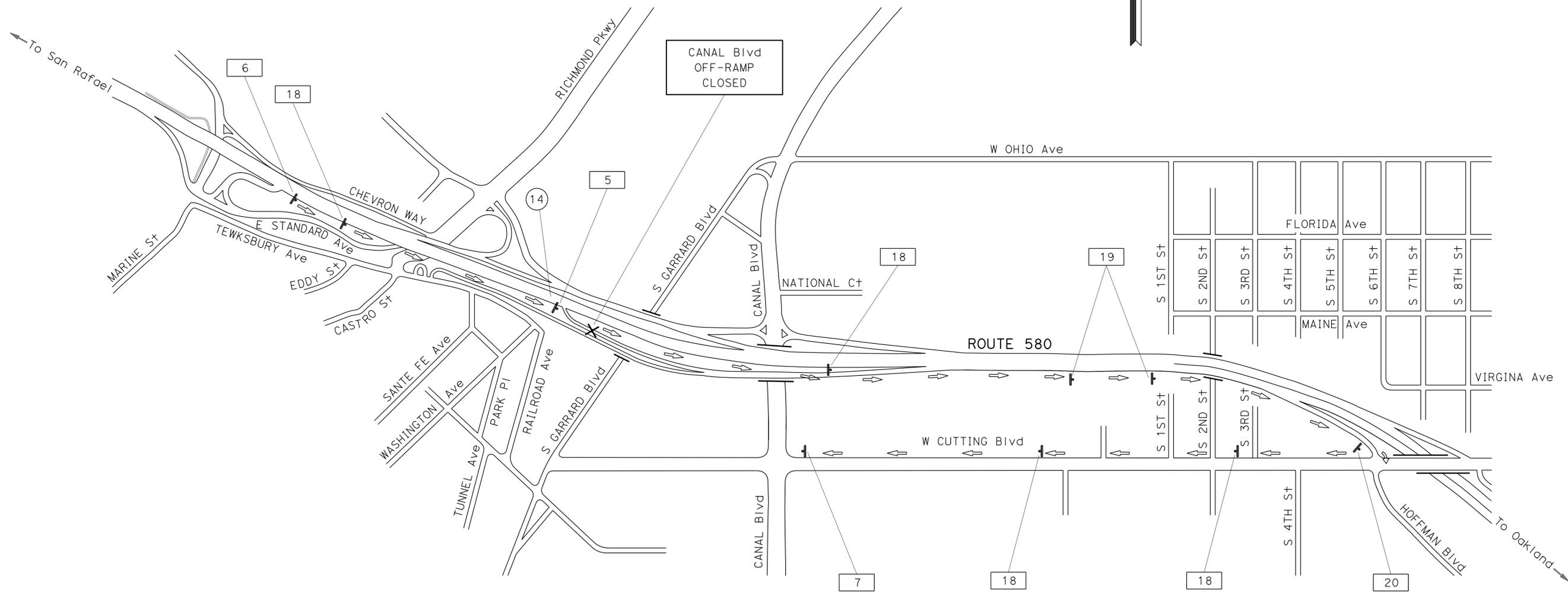
APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

FOR NOTE AND LEGEND,
 SEE SHEET CS-1

CS-3

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	4, 24, 80 242, 580	Var	5	31
<i>Claudia K. Fang</i> REGISTERED CIVIL ENGINEER			3/6/15 DATE		
3-9-15 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 TRAFFIC
 FUNCTIONAL SUPERVISOR: LOURDES DAVID
 CALCULATED/DESIGNED BY: CLAUDIA FANG
 CHECKED BY: JERI-PAUL FABIAN
 REVISED BY: CF
 DATE REVISED: 12/22/14



DETOUR PLAN No. 3
CANAL Blvd OFF-RAMP CLOSURE

VIA: CONTINUE ON EB Rte 580;
 TAKE THE CUTTING Blvd EXIT;
 WB CUTTING Blvd;
 NB CANAL Blvd

CONSTRUCTION AREA SIGNS
 NO SCALE

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

FOR NOTE AND LEGEND,
 SEE SHEET CS-1

CS-4

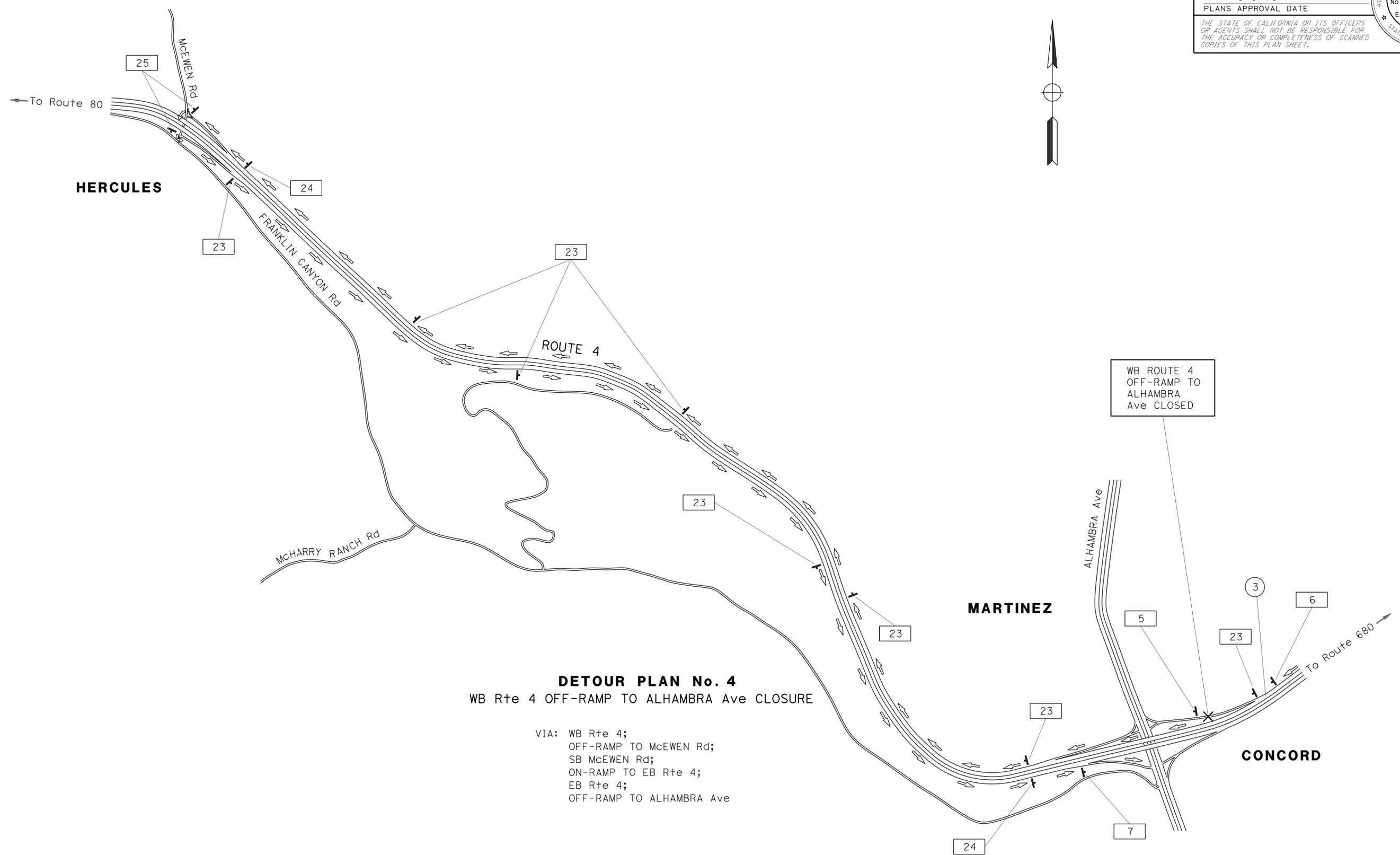
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	4, 24, 80 242, 580	Var	6	31

Claudia K. Fang 3/6/15
 REGISTERED CIVIL ENGINEER DATE
 3-9-15
 PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER
 Claudia K. Fang
 No. 80493
 Exp. 3-31-17
 CIVIL
 STATE OF CALIFORNIA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CLAUDIA FANG	REVISOR	DATE
Caltrans	JERI-PAUL FABIAN	CF	2/23/15
FUNCTIONAL SUPERVISOR	CHECKED BY		
LOURDES DAVID			
TRAFFIC			



DETOUR PLAN No. 4
 WB Rte 4 OFF-RAMP TO ALHAMBRA Ave CLOSURE

VIA: WB Rte 4;
 OFF-RAMP TO McEWEN Rd;
 SB McEWEN Rd;
 ON-RAMP TO EB Rte 4;
 EB Rte 4;
 OFF-RAMP TO ALHAMBRA Ave

CONSTRUCTION AREA SIGNS
 NO SCALE

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

FOR NOTE AND LEGEND,
 SEE SHEET CS-1

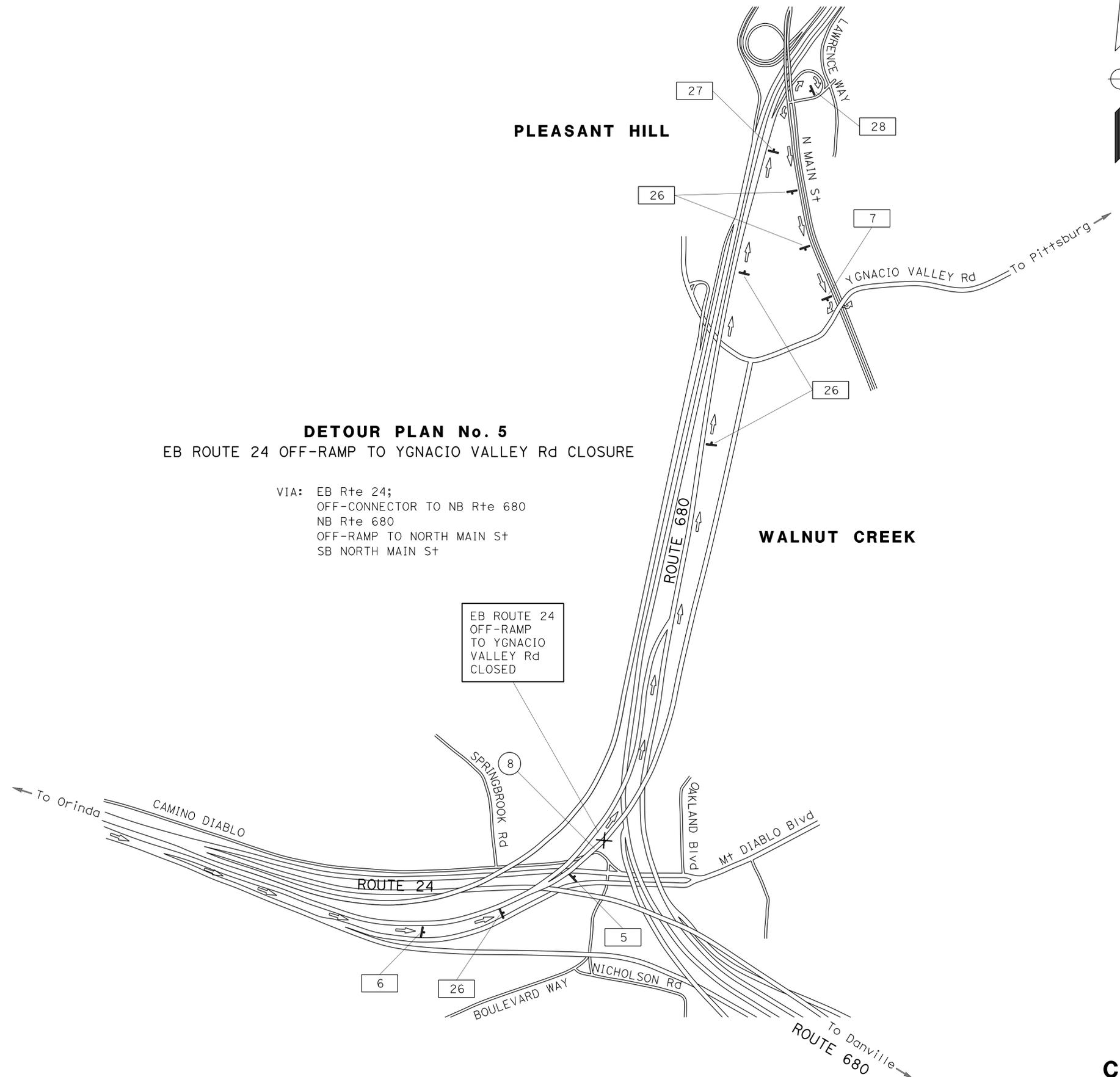
CS-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	CLAUDIA FANG	REVISED BY	CF
Caltrans	LOURDES DAVID	CHECKED BY	JERI-PAUL FABIAN	DATE REVISED	2/23/15
TRAFFIC					

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	4, 24, 80 242, 580	Var	7	31
		REGISTERED CIVIL ENGINEER		DATE	
		3-9-15		PLANS APPROVAL DATE	
		3/6/15		DATE	

Claudia K. Fang
REGISTERED CIVIL ENGINEER
No. 80493
Exp. 3-31-17
CIVIL

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.



DETOUR PLAN No. 5
EB ROUTE 24 OFF-RAMP TO YGNACIO VALLEY Rd CLOSURE

VIA: EB Rte 24;
OFF-CONNECTOR TO NB Rte 680
NB Rte 680
OFF-RAMP TO NORTH MAIN ST
SB NORTH MAIN ST

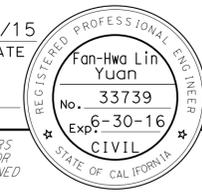
EB ROUTE 24
OFF-RAMP
TO YGNACIO
VALLEY Rd
CLOSED

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

FOR NOTE AND LEGEND,
SEE SHEET CS-1

CONSTRUCTION AREA SIGNS
NO SCALE

CS-6

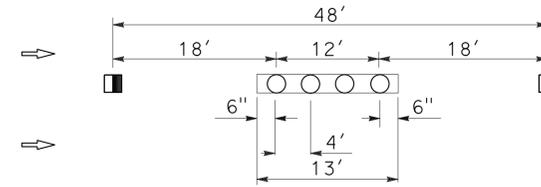
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	4, 24, 80 242, 580	Var	9	31
<i>Jon Yuan</i> 3/6/15 REGISTERED CIVIL ENGINEER DATE					
3-9-15			PLANS APPROVAL DATE		
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

LEGEND:

- TYPE A WHITE NON-REFLECTIVE MARKER
- TYPE G ONE-WAY CLEAR RETROREFLECTIVE MARKER
- ▭ 4" WHITE THERMOPLASTIC TRAFFIC STRIPE

NOTES:

- INSTALL 4" WHITE THERMOPLASTIC TRAFFIC STRIPE AFTER INSTALLING PAVEMENT MARKERS.
- ALL EXISTING PAVEMENT DELINEATION SHALL BE REPLACED AT THE SAME LOCATIONS AS EXISTING.
- PAVEMENT DELINEATION SHALL NOT BE REMOVED AT MORE THAN 2 LOCATIONS AT THE SAME TIME. TEMPORARY PAVEMENT DELINEATION FOR THIS REQUIREMENT SHALL BE PAINTED TRAFFIC STRIPE OR PERMANENT PAVEMENT DELINEATION.



DETAIL 13M (SEE NOTE 1)

TRAFFIC STRIPES, PAVEMENT MARKINGS AND PAVEMENT MARKERS

LOCATION	BRIDGE NAME	BRIDGE No.	DETAIL No.	REMOVE				THERMOPLASTIC TRAFFIC STRIPE				PAVEMENT MARKER			THERMOPLASTIC PAVEMENT MARKING		
				THERMOPLASTIC TRAFFIC STRIPE (WHITE)	YELLOW THERMOPLASTIC TRAFFIC STRIPE (HAZARDOUS WASTE)	PAVEMENT MARKER	THERMOPLASTIC PAVEMENT MARKING	4" WHITE	4" YELLOW	4" WHITE (BROKEN 35-13)	8" WHITE	NON-REFLECTIVE		RETROREFLECTIVE			
												TYPE A	TYPE G			TYPE H	
				LF	EA	SQFT	LF	EA	SQFT								
1	CHRISTIE OH	28-0360L	13M									76	19				
			25	247	860						860	860			19		
			27B	860													
2	ALHAMBRA Ave UC	28-0214L	13M	104								20	5				
			25		172										5		
			27B	172							172	172					
3	ALHAMBRA WAY UC	28-0216L	13M	130								40	10				
			36	336										14			
			CHEVRON LINE				90										90
			25		191											5	
10	HILLTOP DRIVE OC (NORTH)	28-0281L	13M	91								28	7				
			25		286										7		
			27B	286							286	286					
SUBTOTAL				2417	1509	255	90	1509	1509	1872	336	164	55	36	90		
TOTAL				2417	1509	255	90	3018	3018	1872	336	164	91	36	90		

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION DESIGN
 Caltrans
 FUNCTIONAL SUPERVISOR VIJITH THILAKARATNE
 CALCULATED/DESIGNED BY NGOC TRAN
 CHECKED BY FANHWA YUAN
 REVISOR DATE 2/23/15
 FY 2/23/15

PAVEMENT DELINEATION QUANTITIES PDQ-1



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

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

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

	T continued	
TS	TRANSVERSE, TRAFFIC SIGNAL, TUBULAR STEEL	
Typ	TYPICAL	U
UC	UNDERCROSSING	
UD	UNDERDRAIN	
UG	UNDERGROUND	
UON	UNLESS OTHERWISE NOTED	
UP	UNDERPASS	V
V	VALVE, DESIGN SPEED	
Var	VARIABLE, VARIES	W
VC	VERTICAL CURVE	
VCP	VITRIFIED CLAY PIPE	
Vert	VERTICAL	
Via	VIADUCT	
Vol	VOLUME	
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
04	CC	4,24,80 242,580	Var	10	31

Grace M. Tsushima
 REGISTERED CIVIL ENGINEER

July 19, 2013
 PLANS APPROVAL DATE

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

TO ACCOMPANY PLANS DATED 3-9-15

UNIT OF MEASUREMENT SYMBOLS:

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

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:

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
∅	NOMINAL DIAMETER
oz	OUNCE
lb	POUND
kíp	1,000 POUNDS
cal	CALORIE
ft	FOOT OR FEET
gal	GALLON

* For use on a sign panel only

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

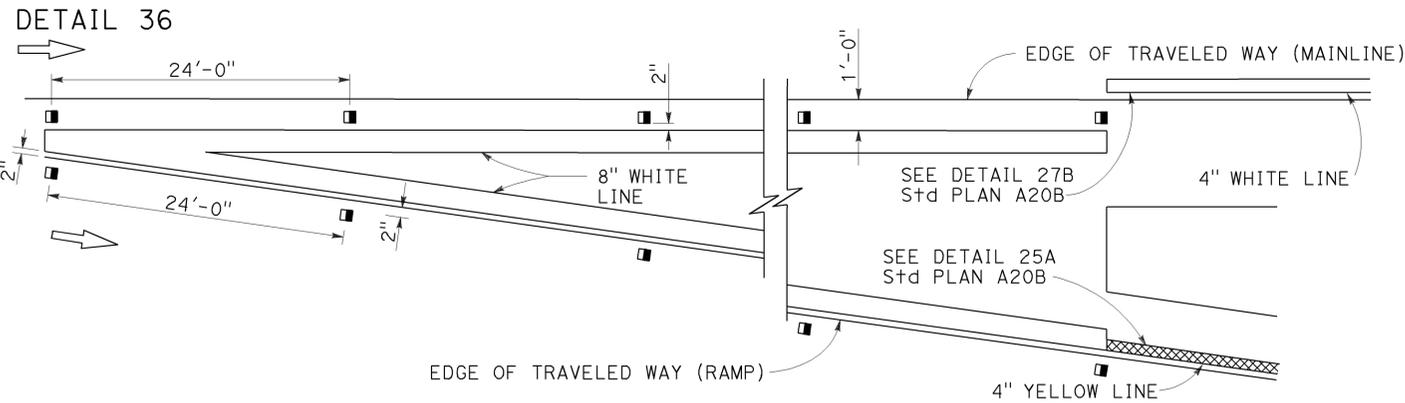
ABBREVIATIONS (SHEET 2 OF 2)

NO SCALE

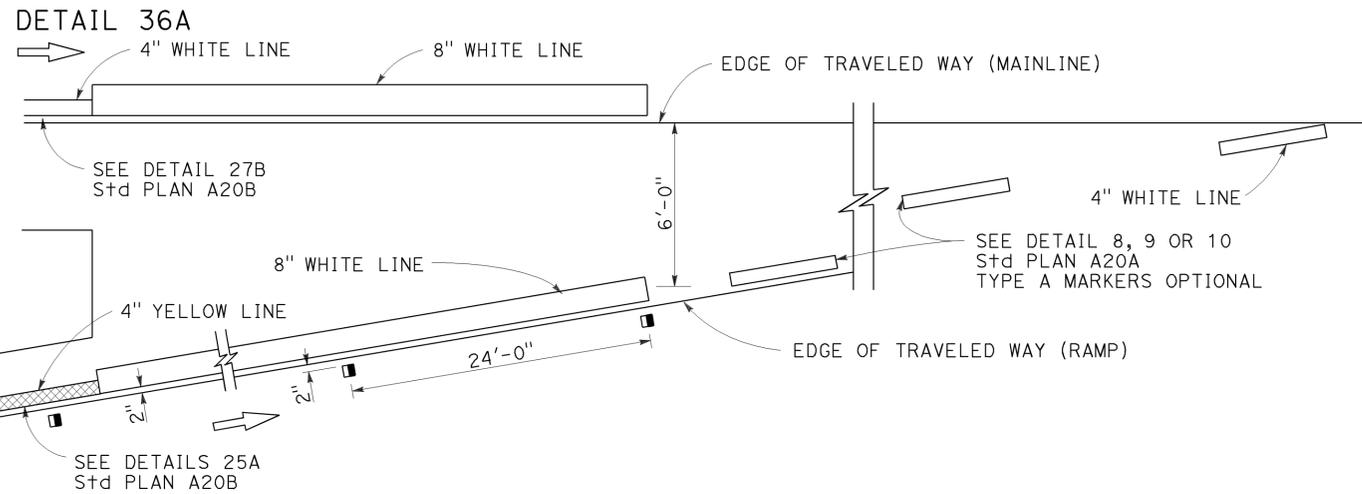
RSP A10B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A10B
DATED MAY 20, 2011 - PAGE 2 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP A10B

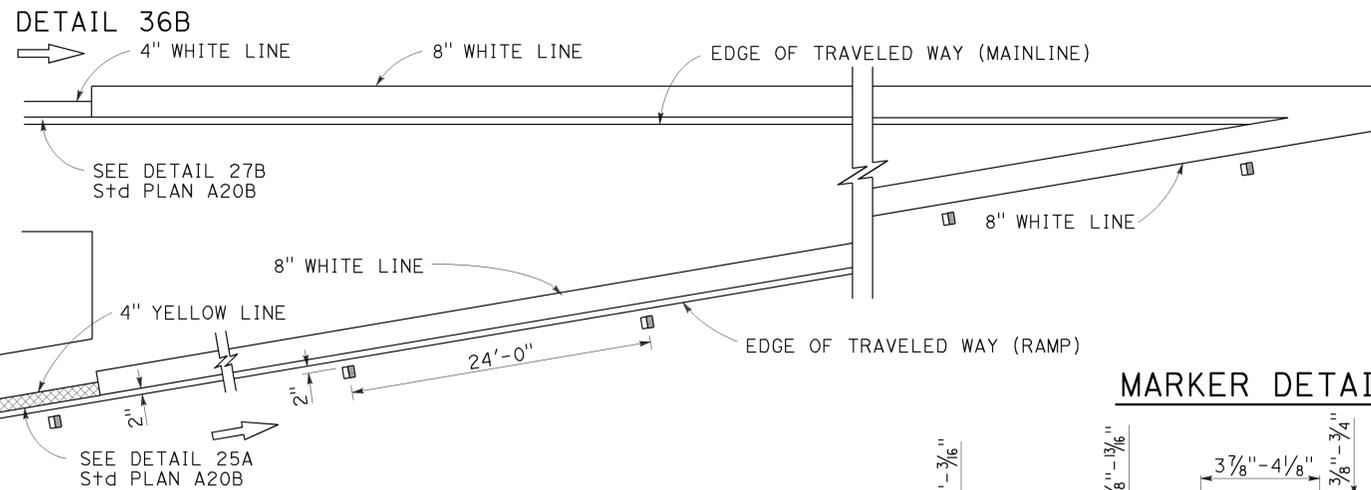
EXIT RAMP NEUTRAL AREA (GORE) TREATMENT



ENTRANCE RAMP NEUTRAL AREA (MERGE) TREATMENT



ENTRANCE RAMP NEUTRAL AREA (ACCELERATION LANE) TREATMENT

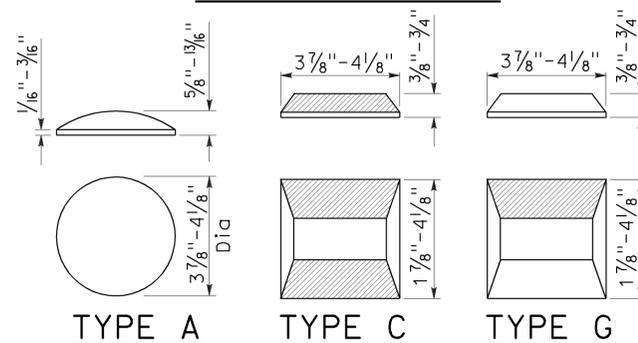


MARKER DETAILS

LEGEND:

MARKERS

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



RETROREFLECTIVE FACE

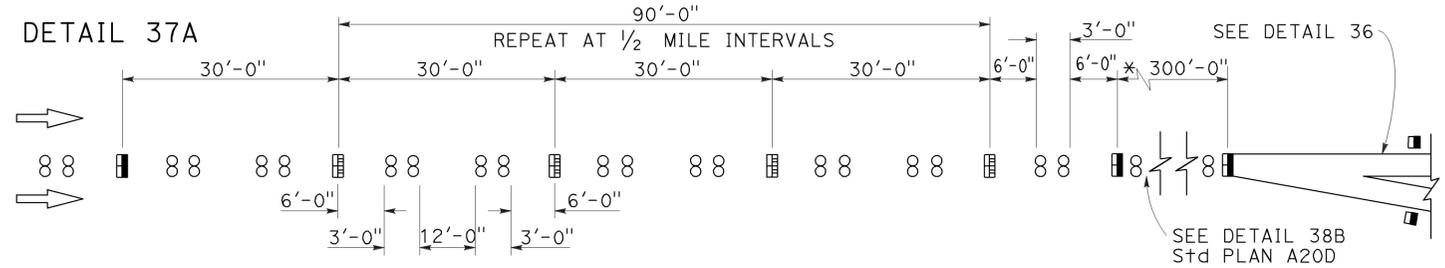
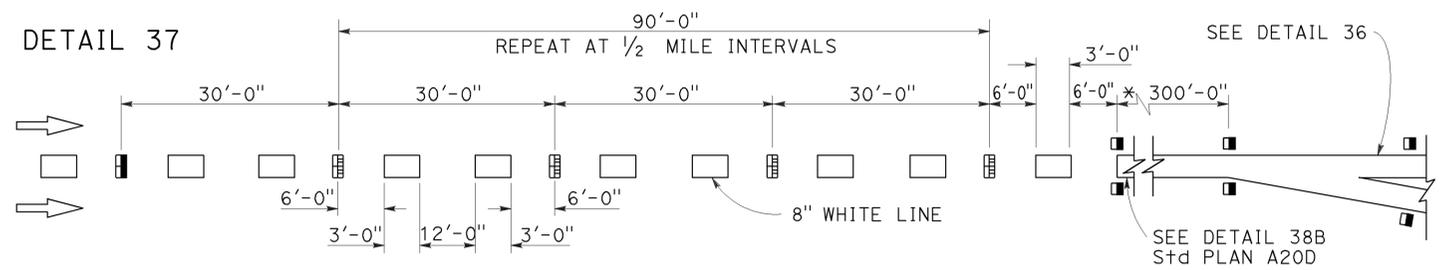
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	4,24,80 242,580	Var	11	31

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

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

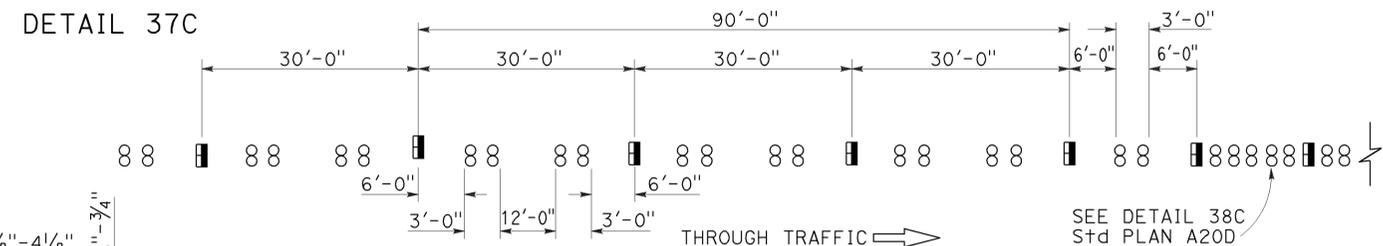
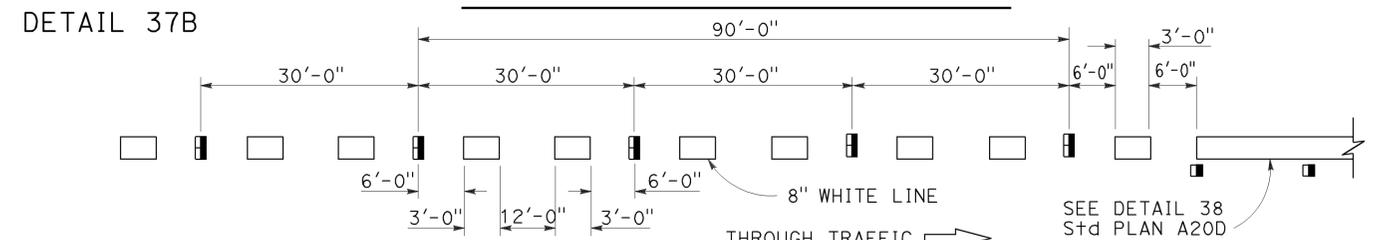
TO ACCOMPANY PLANS DATED 3-9-15

LANE DROP AT EXIT RAMPS



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

LANE DROP AT INTERSECTIONS



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKERS AND TRAFFIC LINE TYPICAL DETAILS

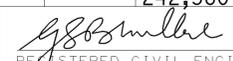
NO SCALE

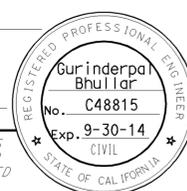
RSP A20C DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A20C DATED MAY 20, 2011 - PAGE 11 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A20C

2010 REVISED STANDARD PLAN RSP A20C

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	4,24,80 242,580	Var	12	31


 REGISTERED CIVIL ENGINEER
 July 19, 2013
 PLANS APPROVAL DATE



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

TO ACCOMPANY PLANS DATED 3-9-15

TABLE 1

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

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

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

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

TABLE 2

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

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

TABLE 3

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

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

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**TRAFFIC CONTROL SYSTEM TABLES
 FOR LANE AND RAMP CLOSURES**

NO SCALE

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

REVISED STANDARD PLAN RSP T9

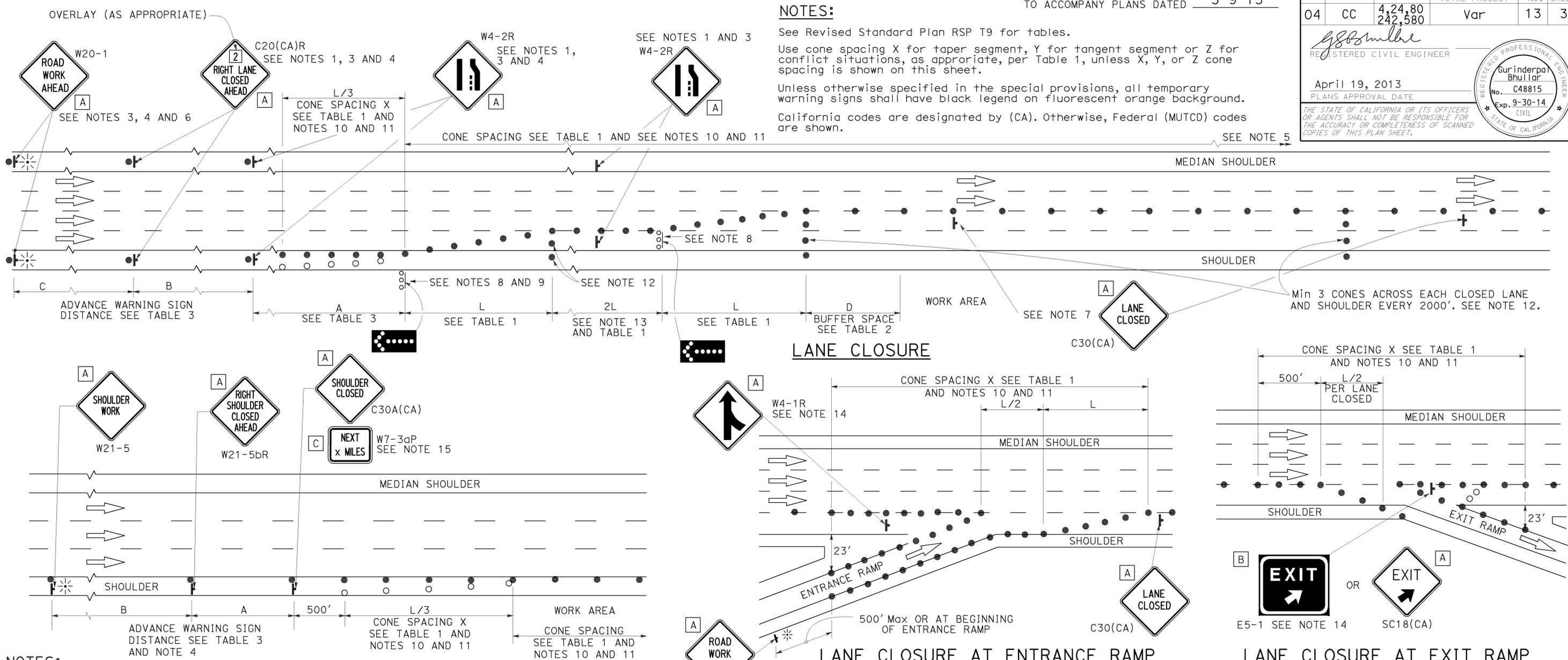
2010 REVISED STANDARD PLAN RSP T9

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	4,24,80 242,580	Var	13	31

REGISTERED CIVIL ENGINEER
 April 19, 2013
 PLANS APPROVAL DATE

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

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



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

- SHOULDER CLOSURE**
6. If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT x MILES", use a C20(CA)L and W4-2L signs shall be used.
 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.

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

LEGEND

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

SIGN PANEL SIZE (Min)

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

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

REVISED STANDARD PLAN RSP T10

2010 REVISED STANDARD PLAN RSP T10

TYPICAL RAMP CLOSURES

SIGN PANEL SIZE (Min)

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

LEGEND

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	4,24,80 242,580	Var	14	31

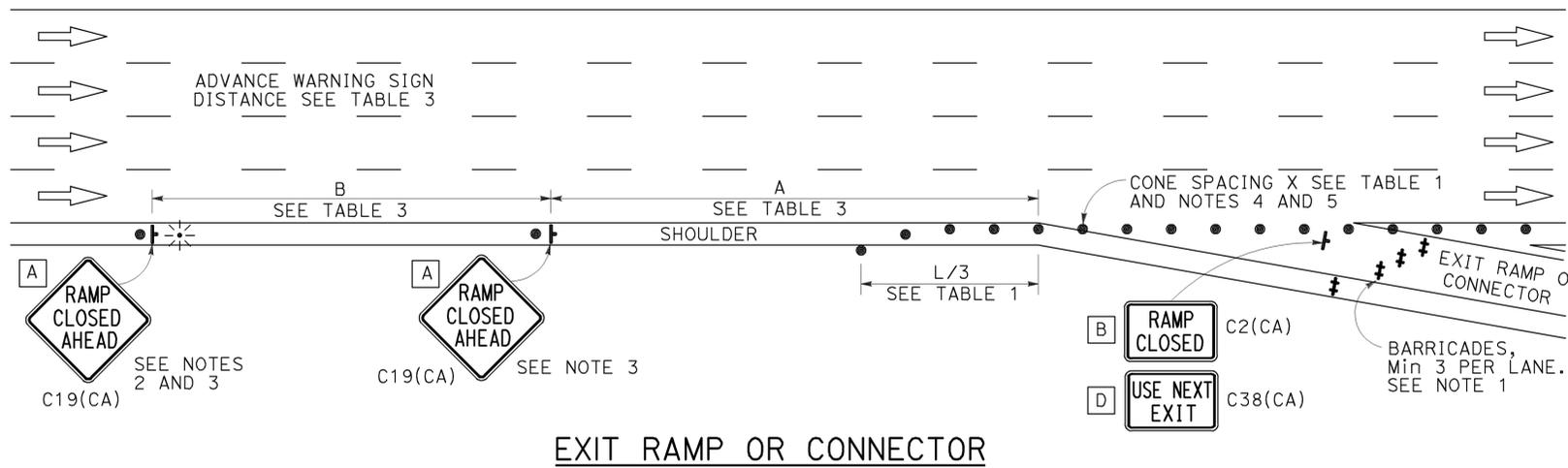
G. S. Miller
 REGISTERED CIVIL ENGINEER
 April 19, 2013
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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

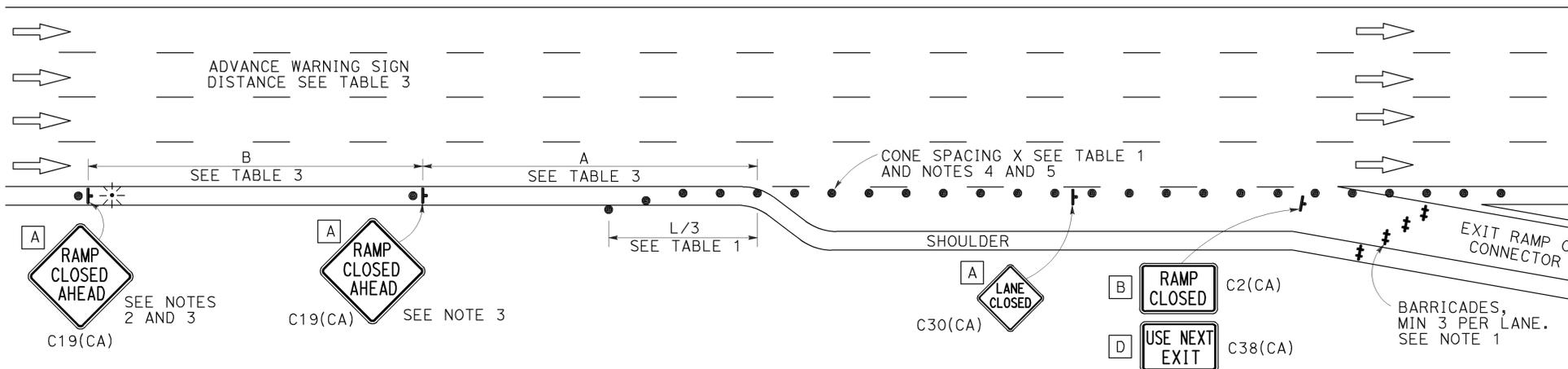
TO ACCOMPANY PLANS DATED 3-9-15

NOTES:

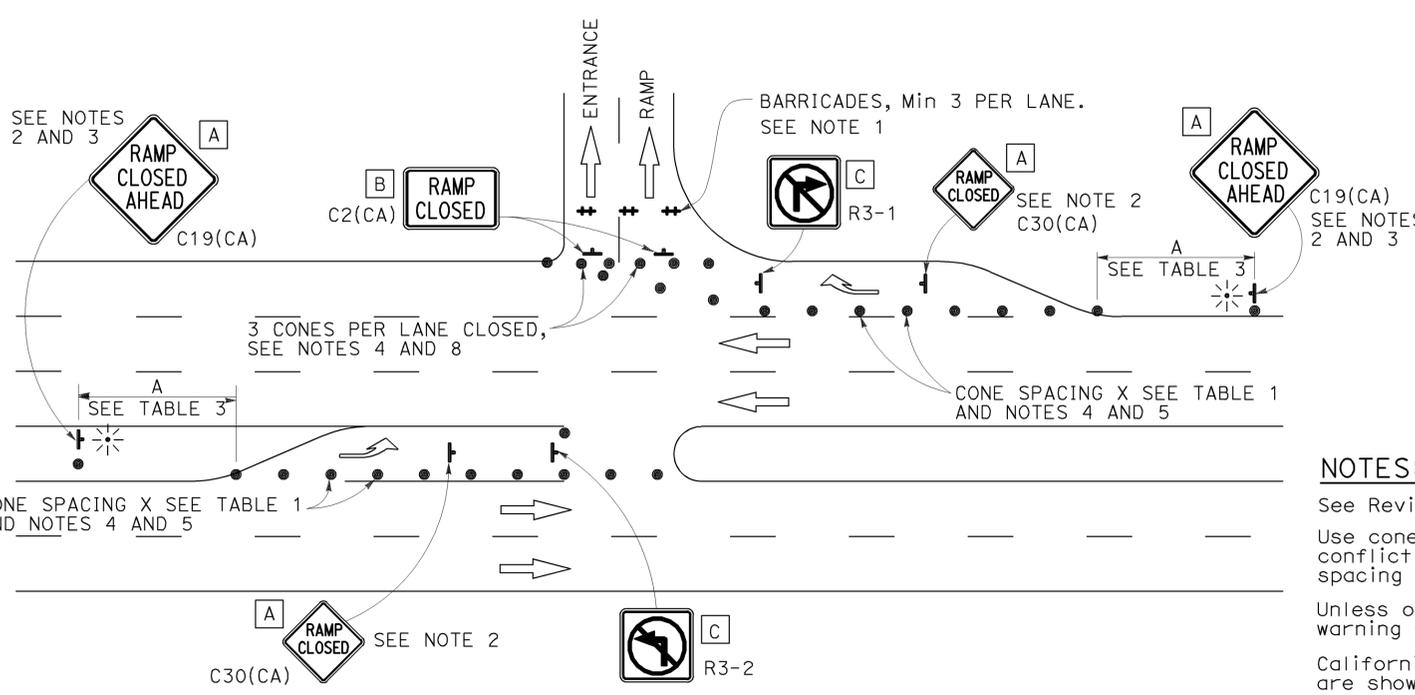
- Barricades shall be Type I, II, or III for closures lasting one week or less and Type III for closures lasting longer than one week.
- In addition to placing the C19(CA) "RAMP CLOSED AHEAD" and C30(CA) "RAMP CLOSED" signs, black on orange overlay plates with the word "CLOSED" may be mounted, as directed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



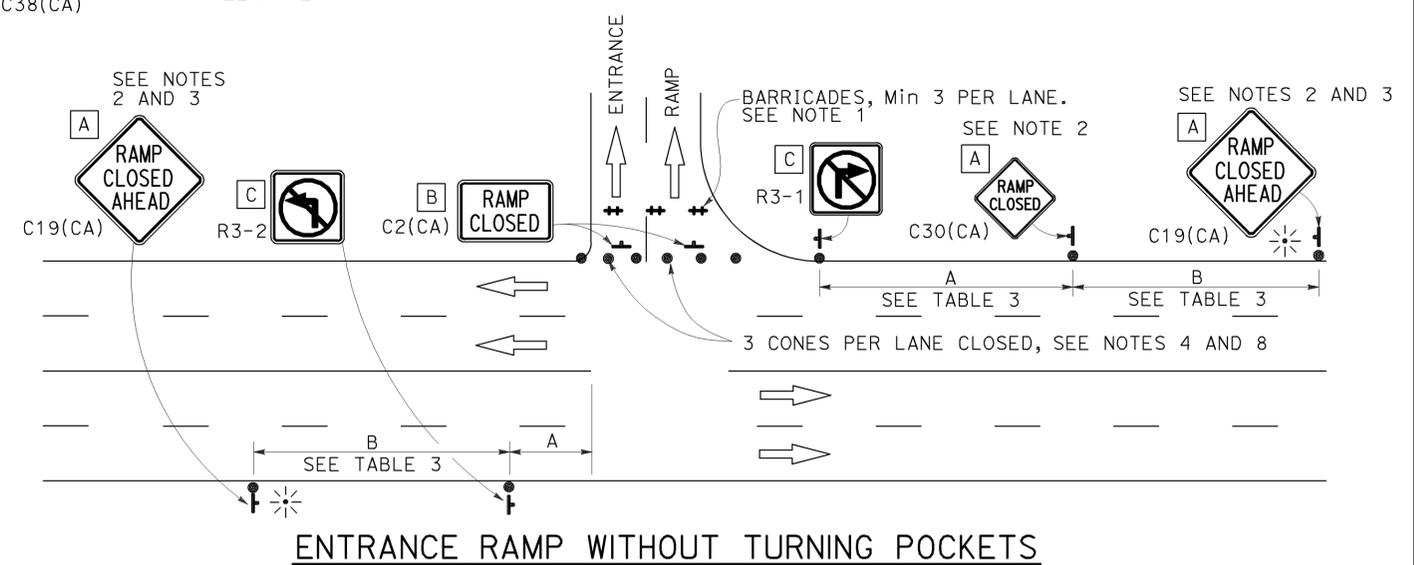
EXIT RAMP OR CONNECTOR



EXIT RAMP OR CONNECTOR WITH ADDITIONAL LANE



ENTRANCE RAMP WITH TURNING POCKETS



ENTRANCE RAMP WITHOUT TURNING POCKETS

NOTES:

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

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

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

REVISED STANDARD PLAN RSP T14

2010 REVISED STANDARD PLAN RSP T14

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	4,24,80 242,580	Var	15	31

REGISTERED CIVIL ENGINEER DATE 12-8-14

PLANS APPROVAL DATE 3-9-15

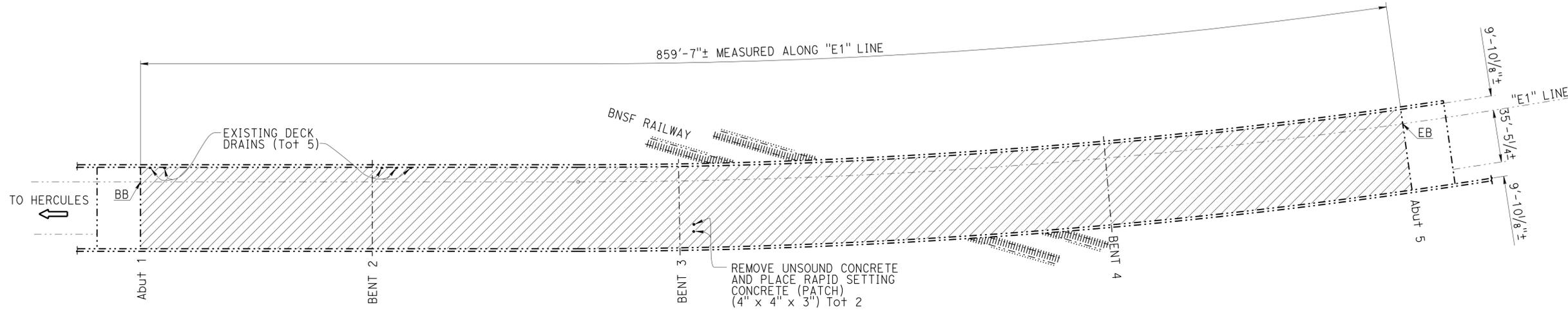
DIOSDADO ACOPA
No. 52003
Exp. 12-31-16
CIVIL
STATE OF CALIFORNIA

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NOTE: (APPLY TO ALL SHEETS)
 ----- Indicates existing.

NOTES: (APPLY TO THIS SHEET ONLY)

 Indicates limits of prepare concrete bridge deck surface and treat bridge deck with high molecular weight methacrylate.



CHRISTIE OVERHEAD
 Br. No. 28-0360L, ROUTE 4, PM 3.66
 1" = 40'

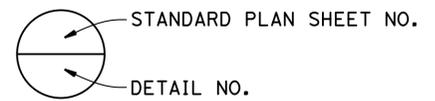
CHRISTIE OVERHEAD	BRIDGE NO 28-0360L
QUANTITIES	
RAPID SETTING CONCRETE (PATCH)	0.1 CF
REMOVE UNSOUND CONCRETE	0.1 CF
PREPARE CONCRETE BRIDGE DECK SURFACE	47,380 SQFT
TREAT BRIDGE DECK	47,380 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	526 GAL

INDEX TO PLANS

	TITLE
1	GENERAL PLAN NO. 1
2	GENERAL PLAN NO. 2
3	GENERAL PLAN NO. 3
4	GENERAL PLAN NO. 4
5	GENERAL PLAN NO. 5
6	GENERAL PLAN NO. 6
7	GENERAL PLAN NO. 7
8	GENERAL PLAN NO. 8
9	GENERAL PLAN NO. 9
10	GENERAL PLAN NO. 10
11	GENERAL PLAN NO. 11
12	JOINT SEAL DETAILS NO. 1
13	JOINT SEAL DETAILS NO. 2
14	JOINT SEAL DETAILS NO. 3
15	JOINT SEAL DETAILS NO. 4
16	JOINT SEAL DETAILS NO. 5
17	STRIP JOINT SEAL ASSEMBLY MAXIMUM MOVEMENT RATING = 4"

STANDARD PLANS 2010

SHEET NO.	TITLE
A10A	ABBREVIATIONS (SHEET 1 OF 2)
RSP A10B	ABBREVIATIONS (SHEET 2 OF 2)
B6-21	JOINT SEALS (MAXIMUM MOVEMENT RATING = 2")



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

Matthew Lee 12-8-14
 DESIGN ENGINEER

DESIGN	BY D. Acoba	CHECKED M. Hashimoto	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
DETAILS	BY Dale Kubochi	CHECKED M. Hashimoto	LAYOUT	BY Dale Kubochi
QUANTITIES	BY D. Acoba	CHECKED M. Hashimoto	SPECIFICATIONS	BY Jennifer Ramirez

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
 STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. VARIOUS
 POST MILE VARIES
ROUTES 4, 24, 80, 242, 580 BRIDGES
GENERAL PLAN NO. 1

USERNAME => s126849 DATE PLOTTED => 13-MAR-2015 TIME PLOTTED => 12:51

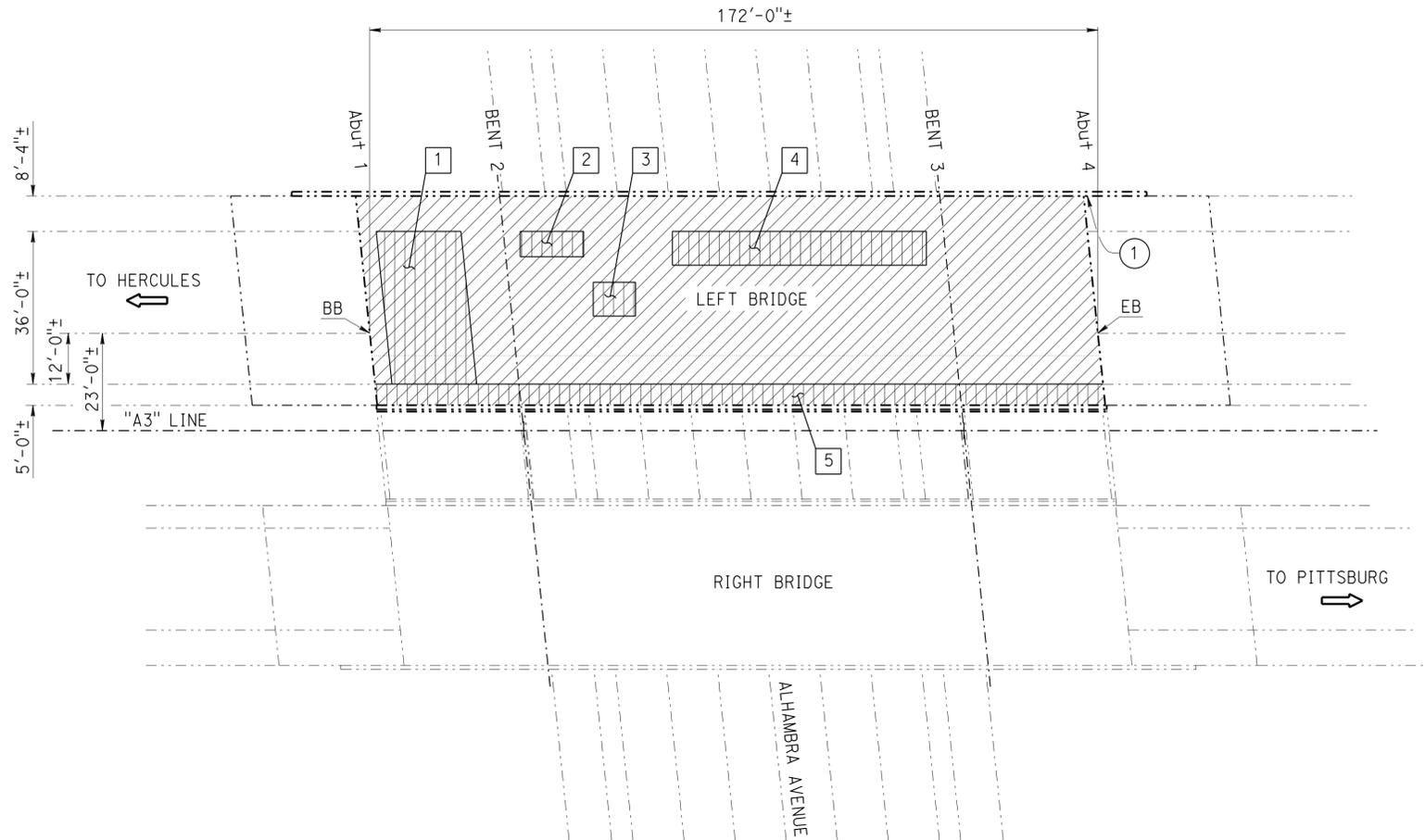
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	4,24,80 242,580	Var	16	31

REGISTERED CIVIL ENGINEER DATE 12-8-14

PLANS APPROVAL DATE 3-9-15

REGISTERED PROFESSIONAL ENGINEER
DIOSDADO ACOPA
No. 52003
Exp. 12-31-16
CIVIL
STATE OF CALIFORNIA

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LOCATION	LENGTH (F±)	AVERAGE WIDTH (F±)
1	36	20
2	15	6
3	10	8
4	60	8
5	172	5
6	160	16

- NOTES: (APPLY TO THIS SHEET ONLY)
- Indicates limits of prepare concrete bridge deck surface and treat bridge deck with high molecular weight methacrylate.
 - Indicates limits of remove 1/2"± AC surfacing, see "Table"
 - ① Paint "ALHAMBRA AVENUE UNDERCROSSING", "Br. No. 28-0214L", "PM R8.55" and "1967".

ALHAMBRA AVENUE UNDERCROSSING
Br. No. 28-0214L, ROUTE 4, PM R8.55
1" = 20'

ALHAMBRA AVENUE UNDERCROSSING BRIDGE NO 28-0214L

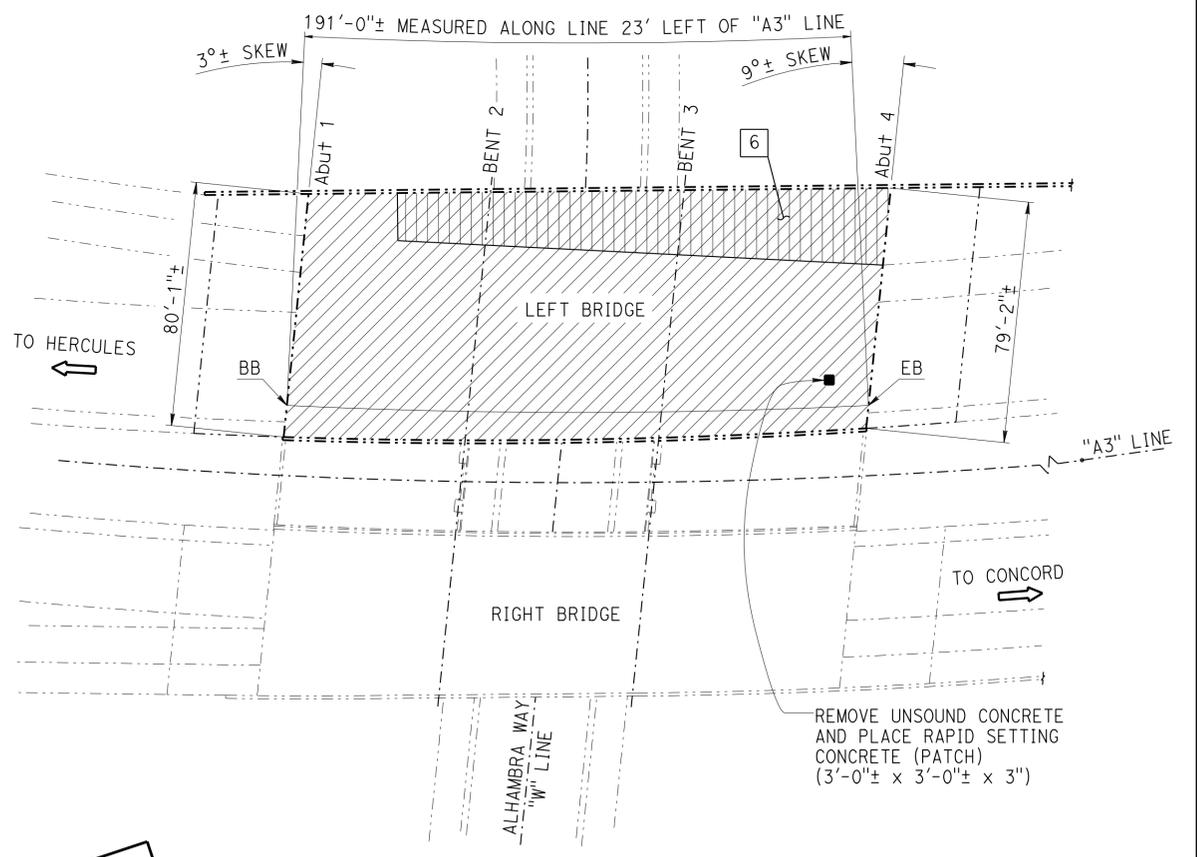
QUANTITIES

REMOVE ASPHALT CONCRETE SURFACING	2,230	SQFT
PREPARE CONCRETE BRIDGE DECK SURFACE	8,485	SQFT
TREAT BRIDGE DECK	8,485	SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	94	GAL
PAINT BRIDGE IDENTIFICATION	1	EA

ALHAMBRA WAY UNDERCROSSING BRIDGE NO 28-0216L

QUANTITIES

RAPID SETTING CONCRETE (PATCH)	2.3	CF
REMOVE ASPHALT CONCRETE SURFACING	2,560	SQFT
REMOVE UNSOUND CONCRETE	2.3	CF
PREPARE CONCRETE BRIDGE DECK SURFACE	15,204	SQFT
TREAT BRIDGE DECK	15,204	SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	169	GAL
PAINT BRIDGE IDENTIFICATION	1	EA



ALHAMBRA WAY UNDERCROSSING
Br. No. 28-0216L, ROUTE 4, PM R8.75
1" = 30'

REMOVE UNSOUND CONCRETE AND PLACE RAPID SETTING CONCRETE (PATCH) (3'-0"± x 3'-0"± x 3")

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

 DESIGN ENGINEER 12-8-14	DESIGN	BY D. Acoba	CHECKED M. Hashimoto	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF MAINTENANCE STRUCTURE MAINTENANCE DESIGN	BRIDGE NO.	VARIOUS	ROUTES 4, 24, 80, 242, 580 BRIDGES GENERAL PLAN NO. 2
	DETAILS	BY Dale Kubochi	CHECKED M. Hashimoto	LAYOUT	BY Dale Kubochi			POST MILE	VARIES	
	QUANTITIES	BY D. Acoba	CHECKED M. Hashimoto	SPECIFICATIONS	BY Jennifer Ramirez			PLANS AND SPECS COMPARED	Jennifer Ramirez	

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

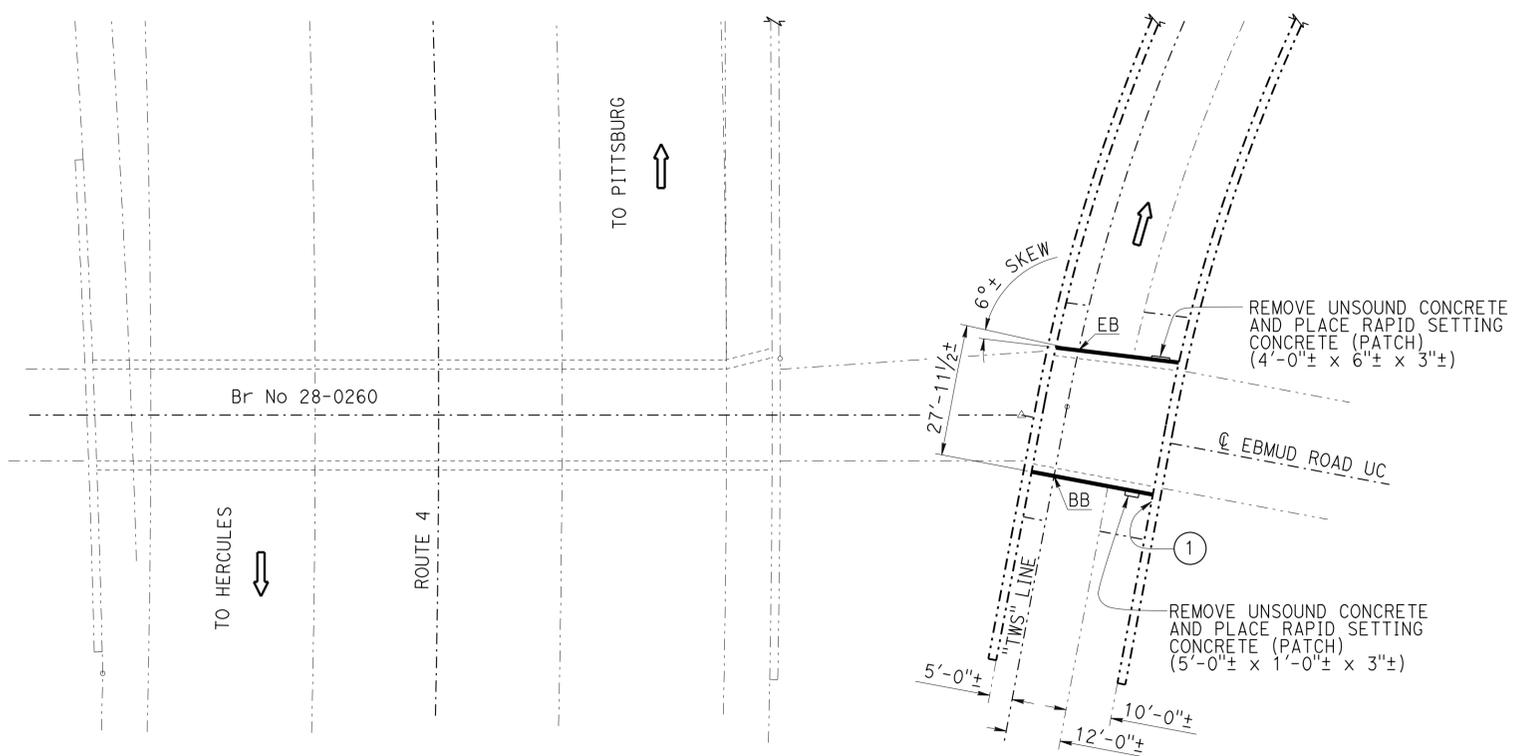
UNIT: 3488 PROJECT NUMBER & PHASE: 0413000291 CONTRACT NO.: 04-4H8401

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
11-26-14 12-29-14 1-8-15	2	17

FILE => 04-4h8401-a-gp02.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	4,24,80 242,580	Var	17	31
REGISTERED CIVIL ENGINEER			DATE	12-8-14	
PLANS APPROVAL DATE			3-9-15		
REGISTERED PROFESSIONAL ENGINEER DIOSDADO ACOBA No. 52003 Exp. 12-31-16 CIVIL STATE OF CALIFORNIA					
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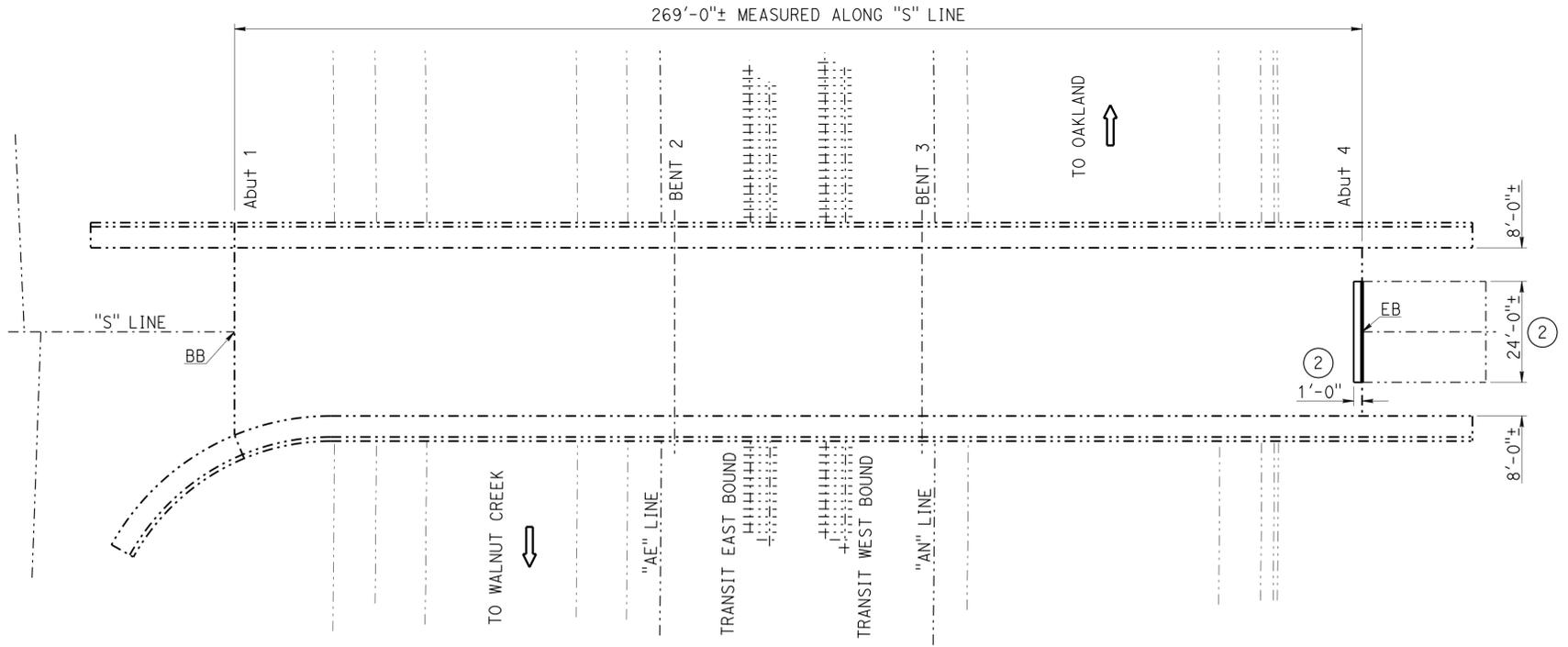


E4-S242 CONNECTOR OVERCROSSING

Br. No. 28-0260G, ROUTE 4, PM R14.45
1" = 20'

- NOTES:** (APPLY TO THIS SHEET ONLY)
- Indicates limits of clean expansion joint and install new joint seal. For details, see "JOINT SEAL DETAILS NO. 5" sheet.
 - ① Paint "E4-S242 CONNECTOR OVERCROSSING", "Br. No. 28-0260G", "PM R14.45" and "1978".
 - ② Indicates limits of 1 1/4"± remove AC surfacing and construct a 1 1/4"± thick polyester concrete expansion dam.

E4-S242 CONNECTOR OVERCROSSING	BRIDGE NO 28-0260G
QUANTITIES	
RAPID SETTING CONCRETE (PATCH)	1.8 CF
REMOVE UNSOUND CONCRETE	1.8 CF
PAINT BRIDGE IDENTIFICATION	1 EA
CLEAN EXPANSION JOINT	55 LF
JOINT SEAL (MR 1/2")	55 LF



ST. STEPHENS DRIVE OVERCROSSING

POLYESTER CONCRETE EXPANSION DAM	2.5 CF
CLEAN EXPANSION JOINT	24 LF
JOINT SEAL (MR 2")	24 LF

ST. STEPHENS DRIVE OVERCROSSING

Br. No. 28-0111, ROUTE 24, PM R3.47
1" = 20'

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

 DESIGN ENGINEER 12-8-14	DESIGN	BY D. Acoba	CHECKED M. Hashimoto	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
	DETAILS	BY Dale Kubochi	CHECKED M. Hashimoto	LAYOUT	BY Dale Kubochi
	QUANTITIES	BY D. Acoba	CHECKED M. Hashimoto	SPECIFICATIONS	BY Jennifer Ramirez

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF MAINTENANCE STRUCTURE MAINTENANCE DESIGN	BRIDGE NO.	ROUTES 4, 24, 80, 242, 580 BRIDGES GENERAL PLAN NO. 3
		VARIOUS	
		POST MILE	
		VARIES	

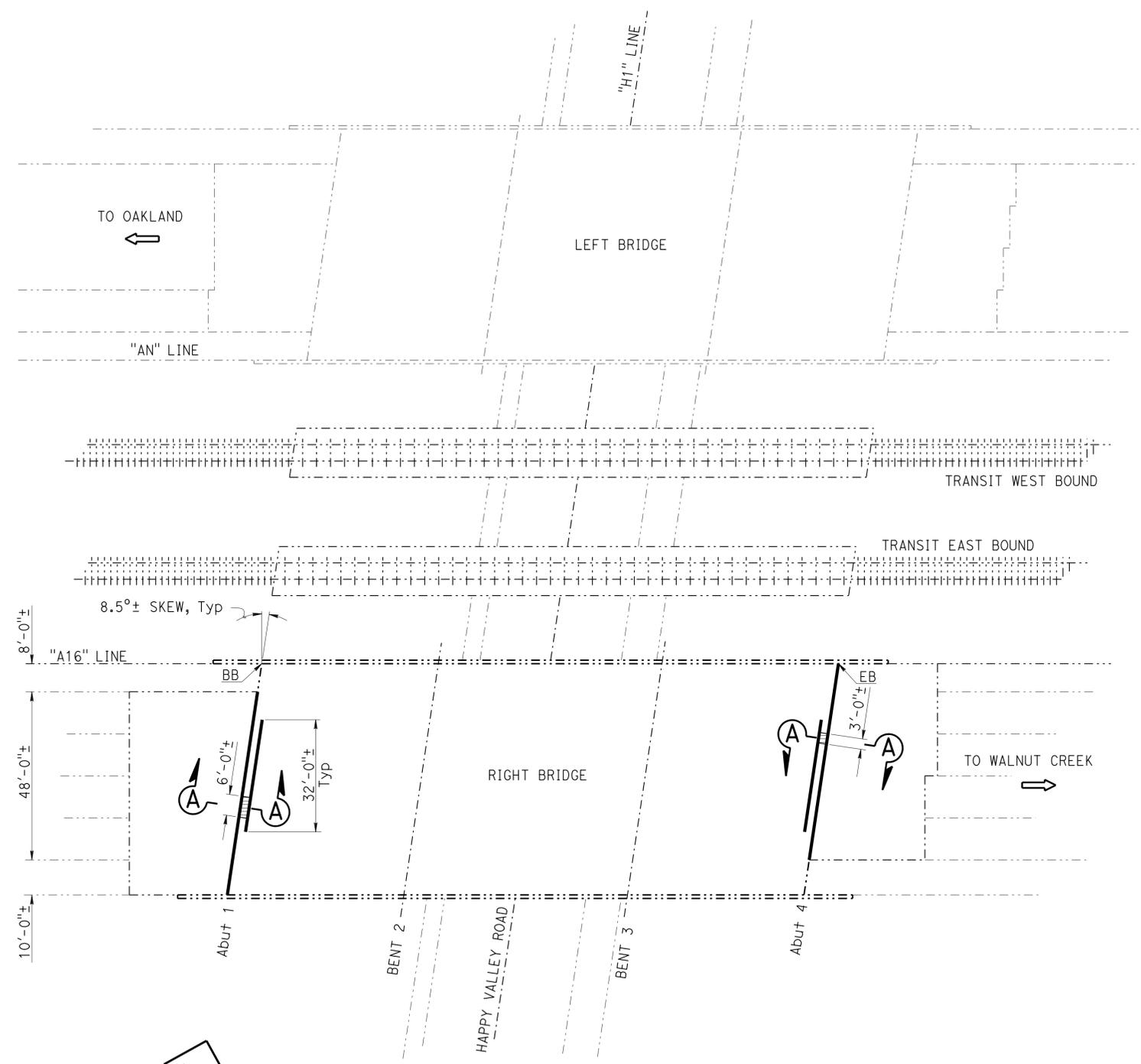
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	4,24,80 242,580	Var	18	31

REGISTERED CIVIL ENGINEER DATE 12-8-14

PLANS APPROVAL DATE 3-9-15

DIOSDADO ACOPA
No. 52003
Exp. 12-31-16
CIVIL
STATE OF CALIFORNIA

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- NOTES:** (APPLY TO THIS SHEET ONLY)
- Indicates limits of clean expansion joint and install new joint seal. For details, see "JOINT SEAL DETAILS NO. 5" sheet.
 - Indicates limits of reconstruct abutment backwall. For details, see "Section A-A" on "JOINT DETAILS NO. 1" sheet.



HAPPY VALLEY ROAD UNDERCROSSING
Br. No. 28-0132R, ROUTE 24, PM R5.97
1" = 20'

HAPPY VALLEY ROAD UNDERCROSSING BRIDGE NO 28-0132R

QUANTITIES

BRIDGE REMOVAL (PORTION), LOCATION A	LUMP SUM
STRUCTURAL CONCRETE, BRIDGE	0.2 CY
CLEAN EXPANSION JOINT	183 LF
JOINT SEAL (MR 1/2")	65 LF
JOINT SEAL (MR 1")	59 LF
JOINT SEAL (MR 2")	59 LF

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

 DESIGN ENGINEER 12-8-14	DESIGN	BY D. Acoba	CHECKED M. Hashimoto	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
	DETAILS	BY Dale Kubochi	CHECKED M. Hashimoto	LAYOUT	BY Dale Kubochi
	QUANTITIES	BY D. Acoba	CHECKED M. Hashimoto	SPECIFICATIONS	BY Jennifer Ramirez

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. VARIOUS
POST MILE VARIES

ROUTES 4, 24, 80, 242, 580 BRIDGES
GENERAL PLAN NO. 4

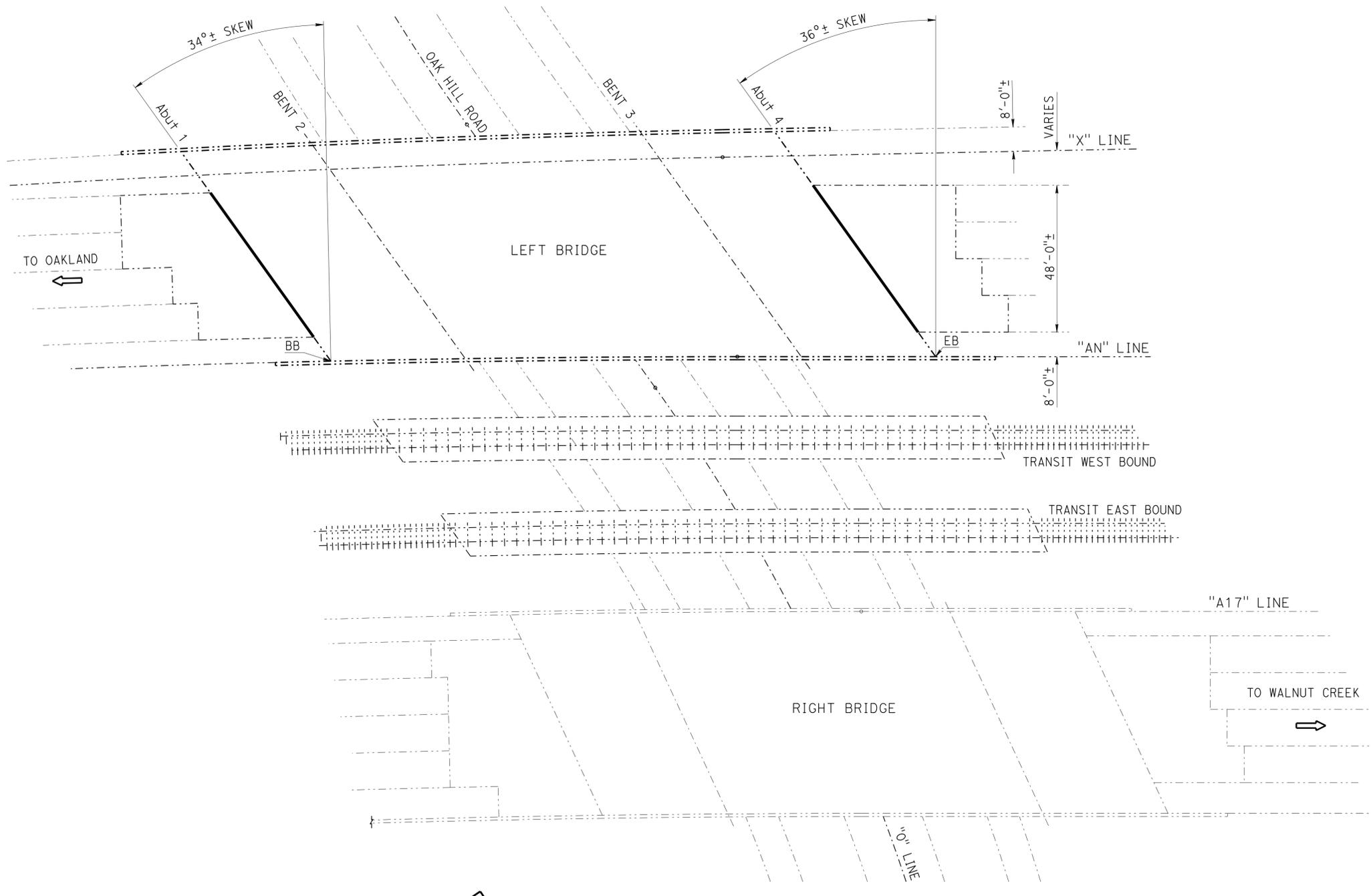
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	4,24,80 242,580	Var	19	31

REGISTERED CIVIL ENGINEER DATE 12-8-14

PLANS APPROVAL DATE 3-9-15

REGISTERED PROFESSIONAL ENGINEER
DIOSDADO ACOBA
No. 52003
Exp. 12-31-16
CIVIL
STATE OF CALIFORNIA

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NOTES: (APPLY TO THIS SHEET ONLY)

Indicates limits of clean expansion joint and install new joint seal. For details, see "JOINT SEAL DETAILS NO. 5" sheet.



OAK HILL ROAD UNDERCROSSING

Br. No. 28-0133L, ROUTE 24, PM R6.26
1" = 20'

OAK HILL ROAD UNDERCROSSING	BRIDGE NO 28-0133L
QUANTITIES	
CLEAN EXPANSION JOINT	118 LF
JOINT SEAL (MR 1")	118 LF

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

 DESIGN ENGINEER 12-8-14	DESIGN	BY D. Acoba	CHECKED M. Hashimoto	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
	DETAILS	BY Dale Kubochi	CHECKED M. Hashimoto	LAYOUT	BY Dale Kubochi
	QUANTITIES	BY D. Acoba	CHECKED M. Hashimoto	SPECIFICATIONS	BY Jennifer Ramirez

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO.	VARIOUS	ROUTES 4, 24, 80, 242, 580 BRIDGES GENERAL PLAN NO. 5
POST MILE	VARIES	
BRIDGE NO.	VARIOUS	

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	4,24,80 242,580	Var	20	31
REGISTERED CIVIL ENGINEER			DATE	12-8-14	
PLANS APPROVAL DATE			3-9-15		
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.					

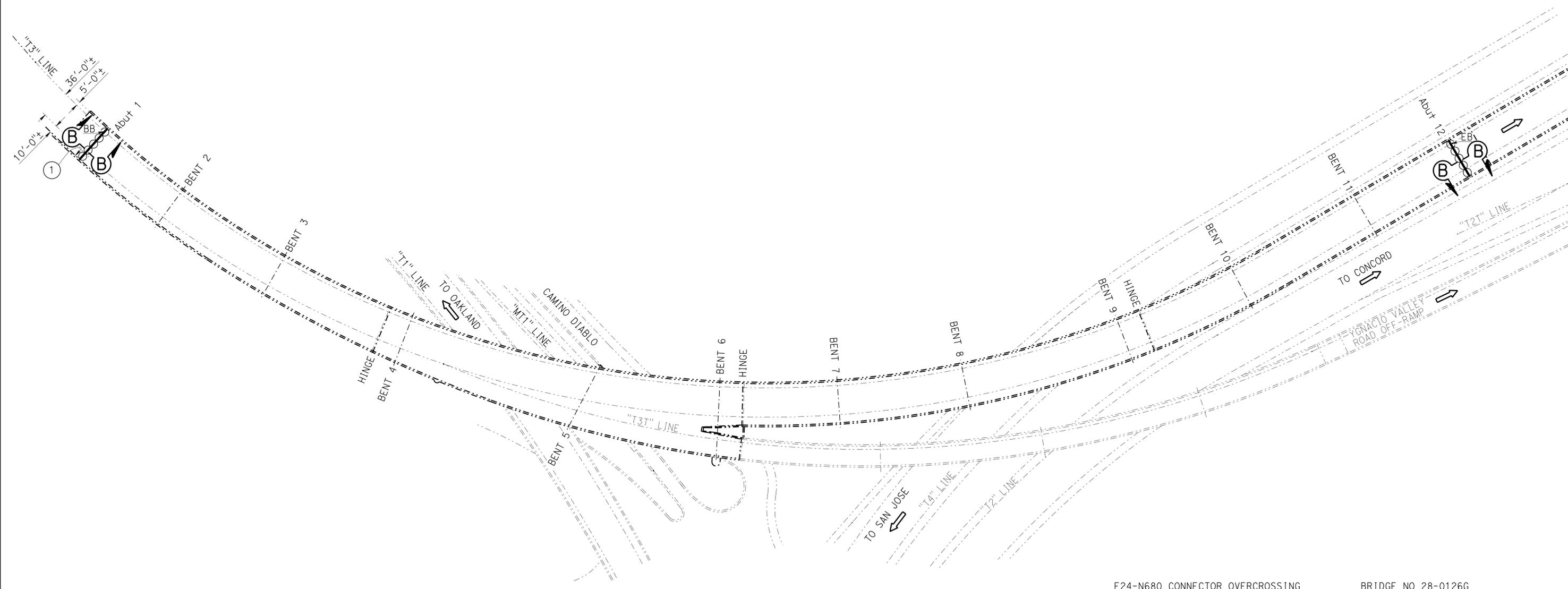


NOTES: (APPLY TO THIS SHEET ONLY)

Indicates limits of existing joint seal assembly removal and placement of new joint seal assembly.

For "Section B-B" see "JOINT SEAL DETAILS NO. 1" sheet.

① Paint "E24-N680 CONNECTOR OVERCROSSING", "Br. No. 28-0126G", "PM 8.86" and "1998".



E24 - N680 CONNECTOR OVERCROSSING

Br. No. 28-0126G, ROUTE 24, PM 8.86
1" = 60'

E24-N680 CONNECTOR OVERCROSSING BRIDGE NO 28-0126G

QUANTITIES

PAIN BRIDGE IDENTIFICATION	1 EA
BRIDGE REMOVAL (PORTION), LOCATION B	LUMP SUM
STRUCTURAL CONCRETE, BRIDGE	6 CY
JOINT SEAL ASSEMBLY (MR 2 1/2")	52 LF
JOINT SEAL ASSEMBLY (MR 3")	52 LF
BAR REINFORCING STEEL (BRIDGE)	504 LB

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

 DESIGN ENGINEER 12-8-14	DESIGN	BY D. Acoba	CHECKED M. Hashimoto	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
	DETAILS	BY Dale Kubochi	CHECKED M. Hashimoto	LAYOUT	BY Dale Kubochi
	QUANTITIES	BY D. Acoba	CHECKED M. Hashimoto	SPECIFICATIONS	BY Jennifer Ramirez

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. VARIOUS
POST MILE VARIES

ROUTES 4, 24, 80, 242, 580 BRIDGES
GENERAL PLAN NO. 6

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

UNIT: 3488
PROJECT NUMBER & PHASE: 0413000291

CONTRACT NO.: 04-4H8401

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
11-29-14 12-29-14 1-8-15 2-10-15	6	17

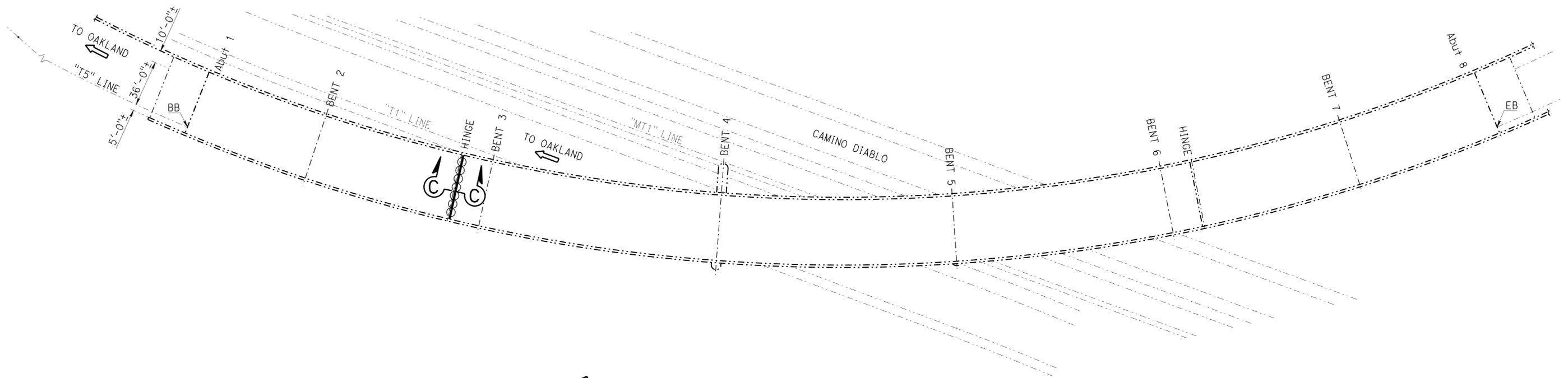
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	4,24,80 242,580	Var	21	31

REGISTERED CIVIL ENGINEER DATE 12-8-14
 PLANS APPROVAL DATE 3-9-15
 REGISTERED PROFESSIONAL ENGINEER
 DIOSDADO ACOBA
 No. 52003
 Exp. 12-31-16
 CIVIL
 STATE OF CALIFORNIA
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NOTES: (APPLY TO THIS SHEET ONLY)

 Indicates limits of existing joint seal assembly removal and placement of new joint seal assembly.

For "Section C-C" see "JOINT SEAL DETAILS NO. 2" sheet.



S680 - W24 CONNECTOR OVERCROSSING
 Br. No. 28-0126F, ROUTE 24, PM 9.10
 1" = 40'

S680-W24 CONNECTOR OVERCROSSING	BRIDGE NO 28-0126F
QUANTITIES	
BRIDGE REMOVAL (PORTION), LOCATION C	LUMP SUM
STRUCTURAL CONCRETE, BRIDGE	3.3 CY
JOINT SEAL ASSEMBLY (MR 4")	52 LF
BAR REINFORCING STEEL (BRIDGE)	253 LB

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

Matthew Lee 12-8-14
 DESIGN ENGINEER

DESIGN	BY D. Acoba	CHECKED M. Hashimoto	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
DETAILS	BY Dale Kubochi	CHECKED M. Hashimoto	LAYOUT	BY Dale Kubochi
QUANTITIES	BY D. Acoba	CHECKED M. Hashimoto	SPECIFICATIONS	BY Jennifer Ramirez

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

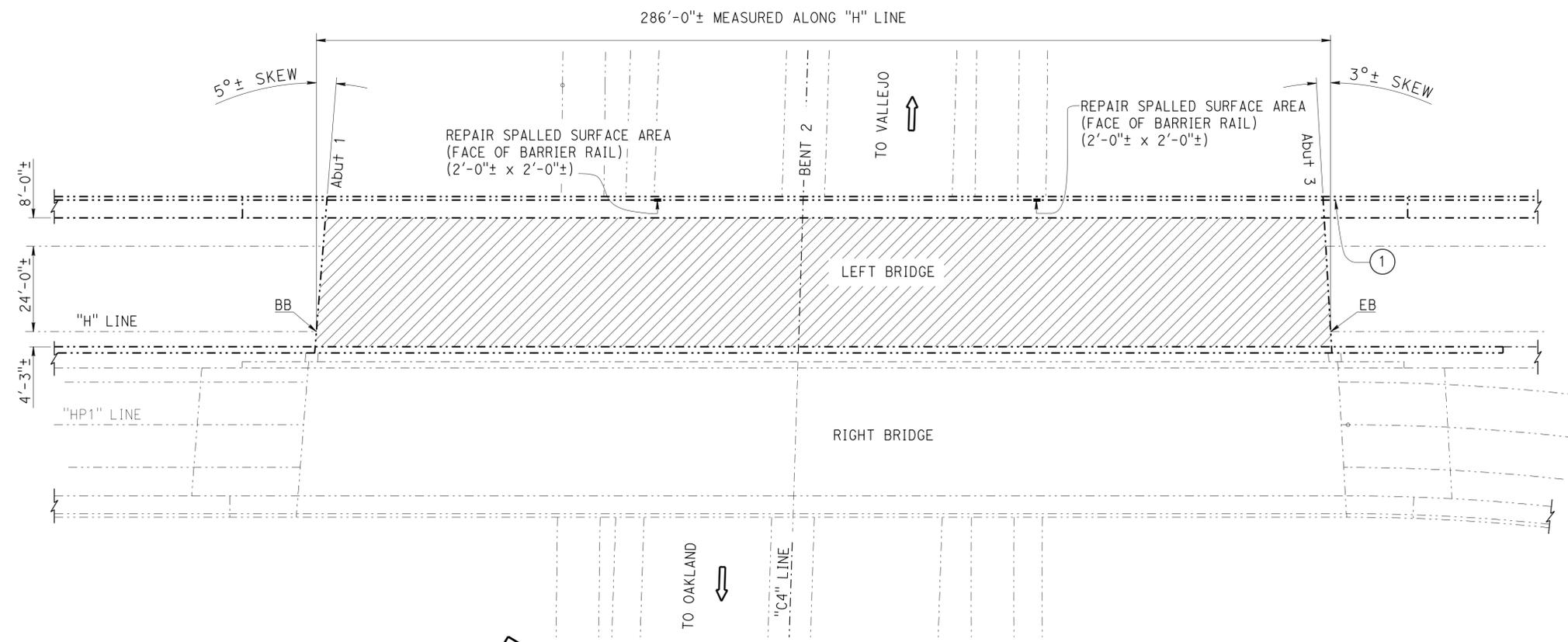
DIVISION OF MAINTENANCE
 STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. VARIOUS
 POST MILE VARIES
ROUTES 4, 24, 80, 242, 580 BRIDGES
GENERAL PLAN NO. 7

USERNAME => s126849 DATE PLOTTED => 13-MAR-2015 TIME PLOTTED => 12:51

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	4,24,80 242,580	Var	22	31

REGISTERED CIVIL ENGINEER: *[Signature]* DATE: 12-8-14
 PLANS APPROVAL DATE: 3-9-15
 REGISTERED PROFESSIONAL ENGINEER: DIOSDADO ACOBA
 No. 52003
 Exp. 12-31-16
 CIVIL
 STATE OF CALIFORNIA
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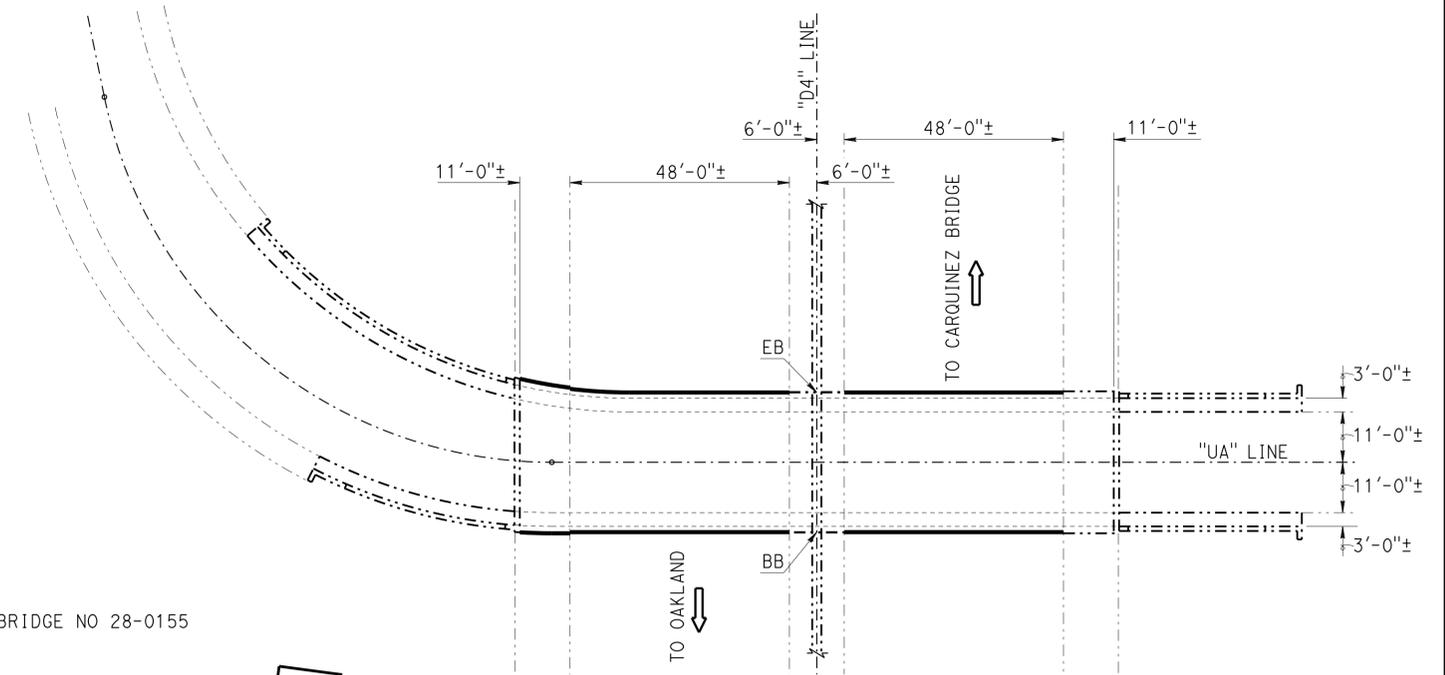
HILLTOP DRIVE OVERCROSSING
 Br. No. 28-0281L, ROUTE 80, PM 5.99
 1" = 20'

- NOTES: (APPLY TO THIS SHEET ONLY)
- Indicates limits of clean expansion joint and install new joint seal. For details, see "JOINT SEAL DETAILS NO. 5" sheet.
 - ▨ Indicates limits of prepare concrete bridge deck surface and treat bridge deck with high molecular weight methacrylate.
 - ① Paint "HILLTOP DRIVE OVERCROSSING", "Br. No. 28-0281L", "PM 5.99" and "1977".

HILLTOP DRIVE OVERCROSSING BRIDGE NO 28-0281L

QUANTITIES

PAINT BRIDGE IDENTIFICATION	1	EA
REPAIR SPALLED SURFACE AREA	8	SQFT
PREPARE CONCRETE BRIDGE DECK SURFACE	10,368	SQFT
TREAT BRIDGE DECK	10,368	SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	115	GAL



OLEUM REFINERY ROAD NO. 3 UNDERCROSSING
 Br. No. 28-0155, ROUTE 80, PM 11.69
 1" = 20'

OLEUM REFINERY ROAD NO. 3 UNDERCROSSING BRIDGE NO 28-0155

QUANTITIES

CLEAN EXPANSION JOINT	216	LF
JOINT SEAL (MR 1/2")	216	LF

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

<i>[Signature]</i> DESIGN ENGINEER	DESIGN	BY D. Acoba	CHECKED M. Hashimoto	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
	DETAILS	BY Dale Kubochi	CHECKED M. Hashimoto	LAYOUT	BY Dale Kubochi
	QUANTITIES	BY D. Acoba	CHECKED M. Hashimoto	SPECIFICATIONS	BY Jennifer Ramirez

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. VARIOUS
 POST MILE VARIOUS

ROUTES 4, 24, 80, 242, 580 BRIDGES
GENERAL PLAN NO. 8

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	4,24,80 242,580	Var	23	31

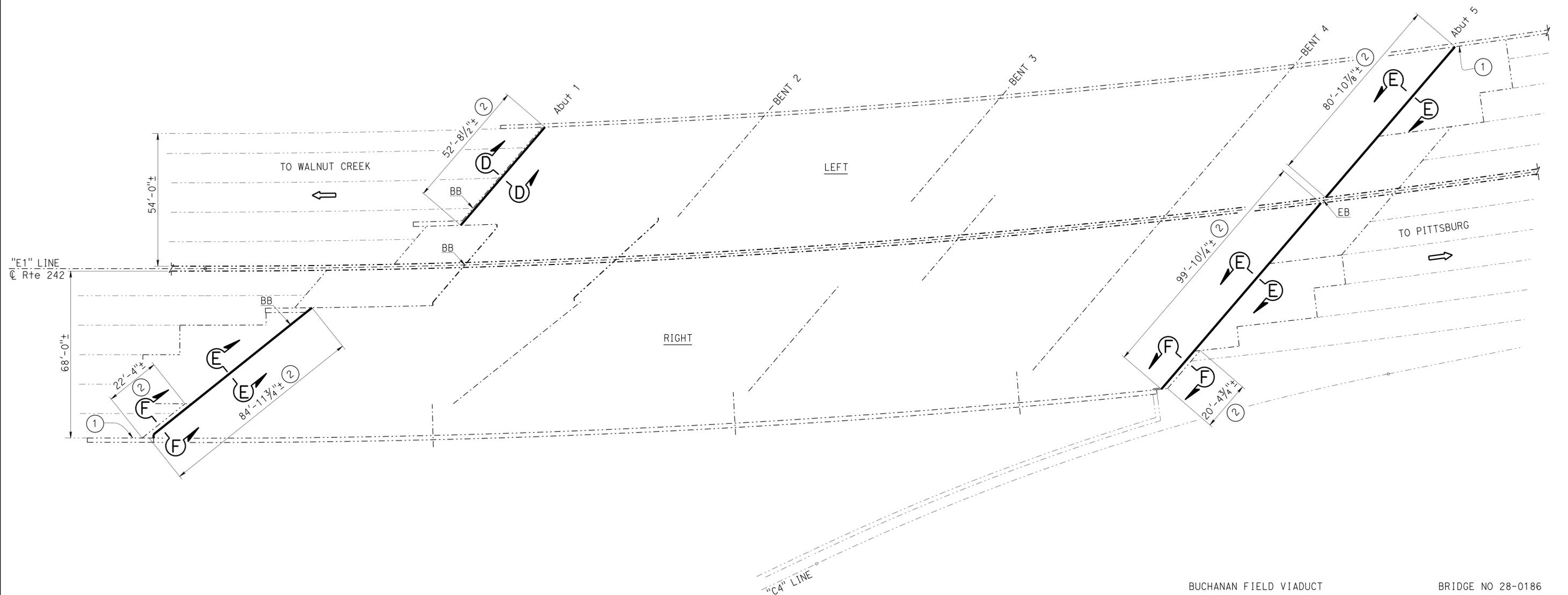
REGISTERED CIVIL ENGINEER	DATE
<i>[Signature]</i>	12-8-14
PLANS APPROVAL DATE	
	3-9-15

REGISTERED PROFESSIONAL ENGINEER	
DIOSDADO ACOBA	
No. 52003	
Exp. 12-31-16	
CIVIL	

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NOTES: (APPLY TO THIS SHEET ONLY)

- Indicates limits of clean expansion joint and install new joint seal. For details, see "JOINT SEAL DETAILS NO. 5" sheet.
- ① Paint "BUCHANAN FIELD VIADUCT", "Br. No. 28-0186", "PM 1.61" and "1963".
- ② Indicates limits of remove existing concrete and place structure concrete, bridge. For "Section D-D", "Section E-E" and "Section F-F", see "JOINT SEAL DETAILS NO. 3" sheet.



BUCHANAN FIELD VIADUCT
 Br. No. 28-0186, ROUTE 242, PM 1.61
 1" = 20'

BUCHANAN FIELD VIADUCT	BRIDGE NO 28-0186
QUANTITIES	
PAINT BRIDGE IDENTIFICATION	2 EA
BRIDGE REMOVAL (PORTION), LOCATION D	LUMP SUM
STRUCTURAL CONCRETE, BRIDGE	11 CY
CLEAN EXPANSION JOINT	320 LF
BONDED JOINT SEAL (MR 2")	320 LF
BAR REINFORCING STEEL (BRIDGE)	2,246 LB

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

<i>[Signature]</i> DESIGN ENGINEER	DESIGN	BY D. Acoba	CHECKED M. Hashimoto	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
	DETAILS	BY Dale Kubochi	CHECKED M. Hashimoto	LAYOUT	BY Dale Kubochi
	QUANTITIES	BY D. Acoba	CHECKED M. Hashimoto	SPECIFICATIONS	BY Jennifer Ramirez

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
 STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. VARIOUS
POST MILE VARIES

ROUTES 4, 24, 80, 242, 580 BRIDGES
GENERAL PLAN NO. 9

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	4,24,80 242,580	Var	24	31

REGISTERED CIVIL ENGINEER DATE 12-8-14

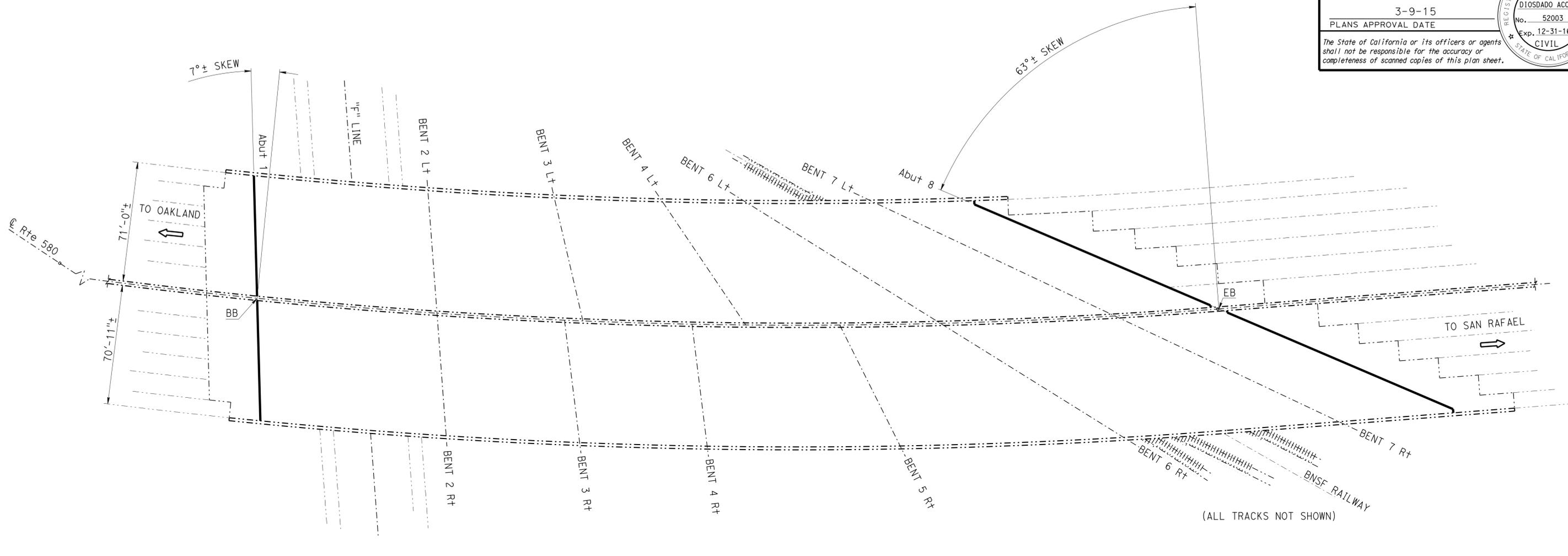
PLANS APPROVAL DATE 3-9-15

REGISTERED PROFESSIONAL ENGINEER
DIOSDADO ACOPA
No. 52003
Exp. 12-31-16
CIVIL
STATE OF CALIFORNIA

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NOTES: (APPLY TO THIS SHEET ONLY)

Indicates limits of clean expansion joint and install new joint seal. For details, see "JOINT SEAL DETAILS NO. 5" sheet.



SOUTH SECOND STREET OVERHEAD

Br. No. 28-0277, ROUTE 580, PM R4.09
1" = 30'

SOUTH SECOND STREET OVERHEAD		BRIDGE NO 28-0277	
QUANTITIES			
CLEAN EXPANSION JOINT		458	LF
JOINT SEAL (MR 2")		144	LF
BONDED JOINT SEAL (MR 2")		314	LF

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

Matthew W. Lee 12-8-14
DESIGN ENGINEER

DESIGN	BY D. Acoba	CHECKED M. Hashimoto	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
DETAILS	BY Dale Kubochi	CHECKED M. Hashimoto	LAYOUT	BY Dale Kubochi
QUANTITIES	BY D. Acoba	CHECKED M. Hashimoto	SPECIFICATIONS	BY Jennifer Ramirez

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. VARIOUS
POST MILE VARIES

ROUTES 4, 24, 80, 242, 580 BRIDGES
GENERAL PLAN NO. 10

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



UNIT: 3488
PROJECT NUMBER & PHASE: 0413000291

CONTRACT NO.: 04-4H8401

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
11-27-14 10-29-14 1-8-15	10	17

NOTES: (APPLY TO THIS SHEET ONLY)

 Indicates limits of existing joint seal assembly removal and placement of new joint seal assembly.

For "Section G-G" see "JOINT SEAL DETAILS NO. 4" sheet.

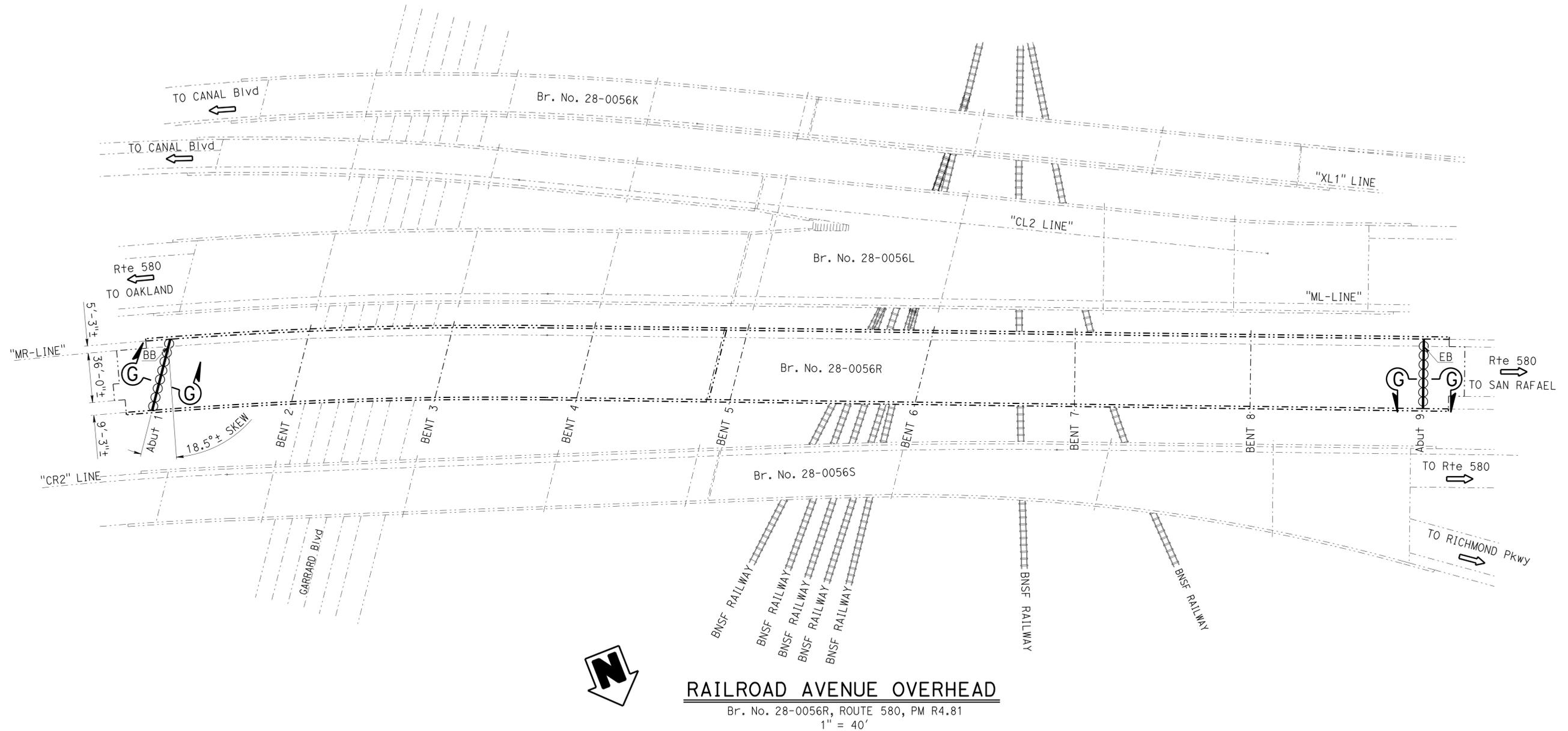
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	4,24,80 242,580	Var	25	31

REGISTERED CIVIL ENGINEER DATE 12-8-14

PLANS APPROVAL DATE 3-9-15

REGISTERED PROFESSIONAL ENGINEER
DIOSDADO ACOPA
No. 52003
Exp. 12-31-16
CIVIL
STATE OF CALIFORNIA

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RAILROAD AVENUE OVERHEAD

Br. No. 28-0056R, ROUTE 580, PM R4.81
1" = 40'

RAILROAD AVENUE OVERHEAD BRIDGE NO 28-0056R

QUANTITIES

BRIDGE REMOVAL (PORTION), LOCATION E	LUMP SUM
STRUCTURAL CONCRETE, BRIDGE	7 CY
JOINT SEAL ASSEMBLY (MR 2 1/2")	53 LF
JOINT SEAL ASSEMBLY (MR 3")	51 LF
BAR REINFORCING STEEL (BRIDGE)	464 LB

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

 12-8-14
DESIGN ENGINEER

DESIGN	BY D. Acoba	CHECKED M. Hashimoto	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
DETAILS	BY Dale Kubochi	CHECKED M. Hashimoto	LAYOUT	BY Dale Kubochi
QUANTITIES	BY D. Acoba	CHECKED M. Hashimoto	SPECIFICATIONS	BY Jennifer Ramirez

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

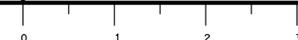
DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. VARIOUS
POST MILE VARIES

ROUTES 4, 24, 80, 242, 580 BRIDGES
GENERAL PLAN NO. 11

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



UNIT: 3488
PROJECT NUMBER & PHASE: 0413000291

CONTRACT NO.: 04-4H8401

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
11-27-14 12-29-14 1-15 2-10-15	11	17

FILE => 04-4h8401-a-gp11.dgn

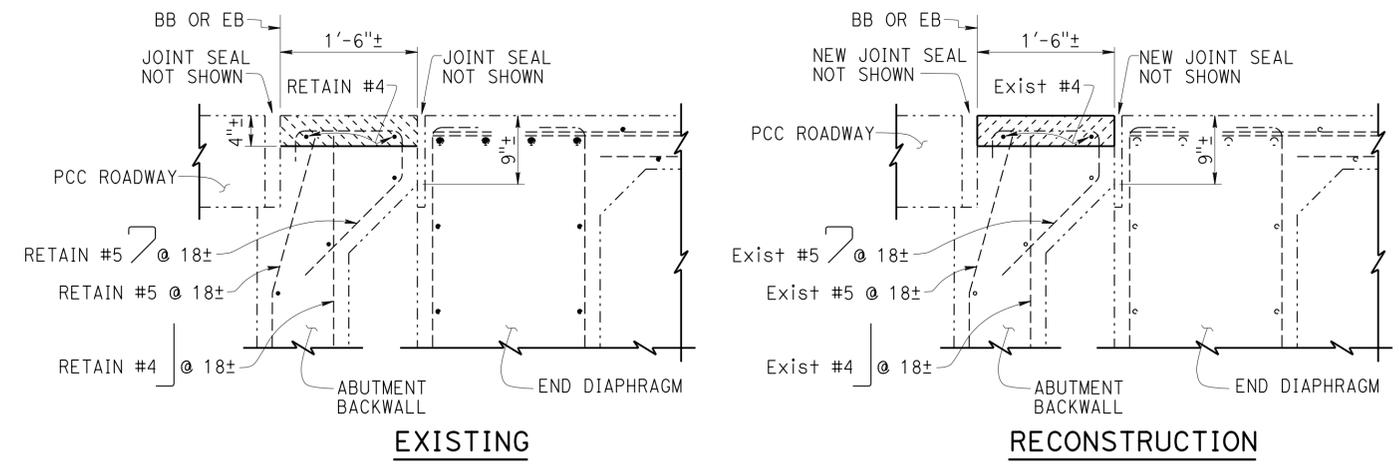
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	4,24,80 242,580	Var	26	31

REGISTERED CIVIL ENGINEER DATE 12-8-14
 PLANS APPROVAL DATE 3-9-15
 DIOSDADO ACOBA No. 52003 Exp. 12-31-16 CIVIL
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

NOTES: (APPLY TO THIS SHEET ONLY)

-  Indicates limits of bridge removal (portion).
-  Indicates limits of structural concrete, bridge.

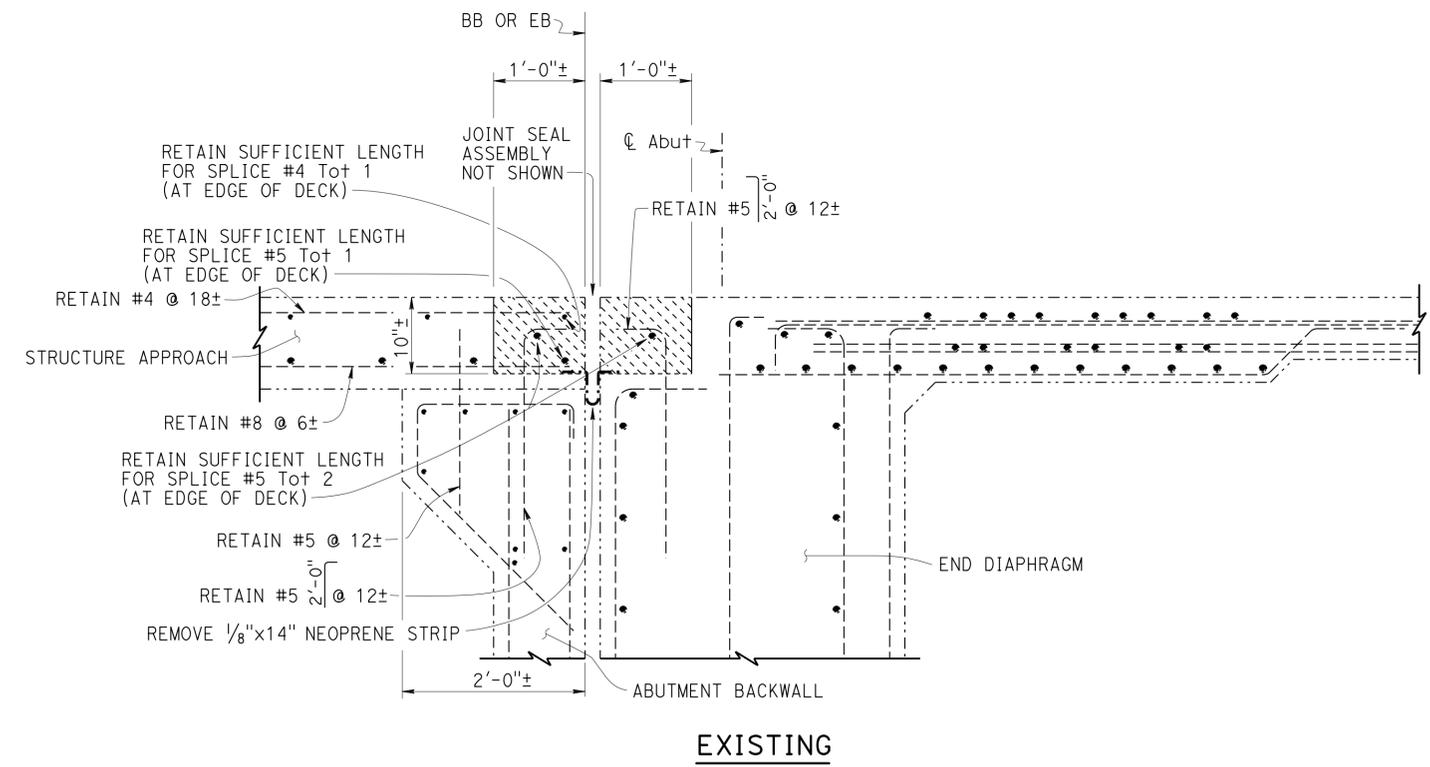


SECTION A-A
1" = 1'-0"
(Br. No. 28-0132R)

Note: Abutment 1 shown, Abutment 4 similar.

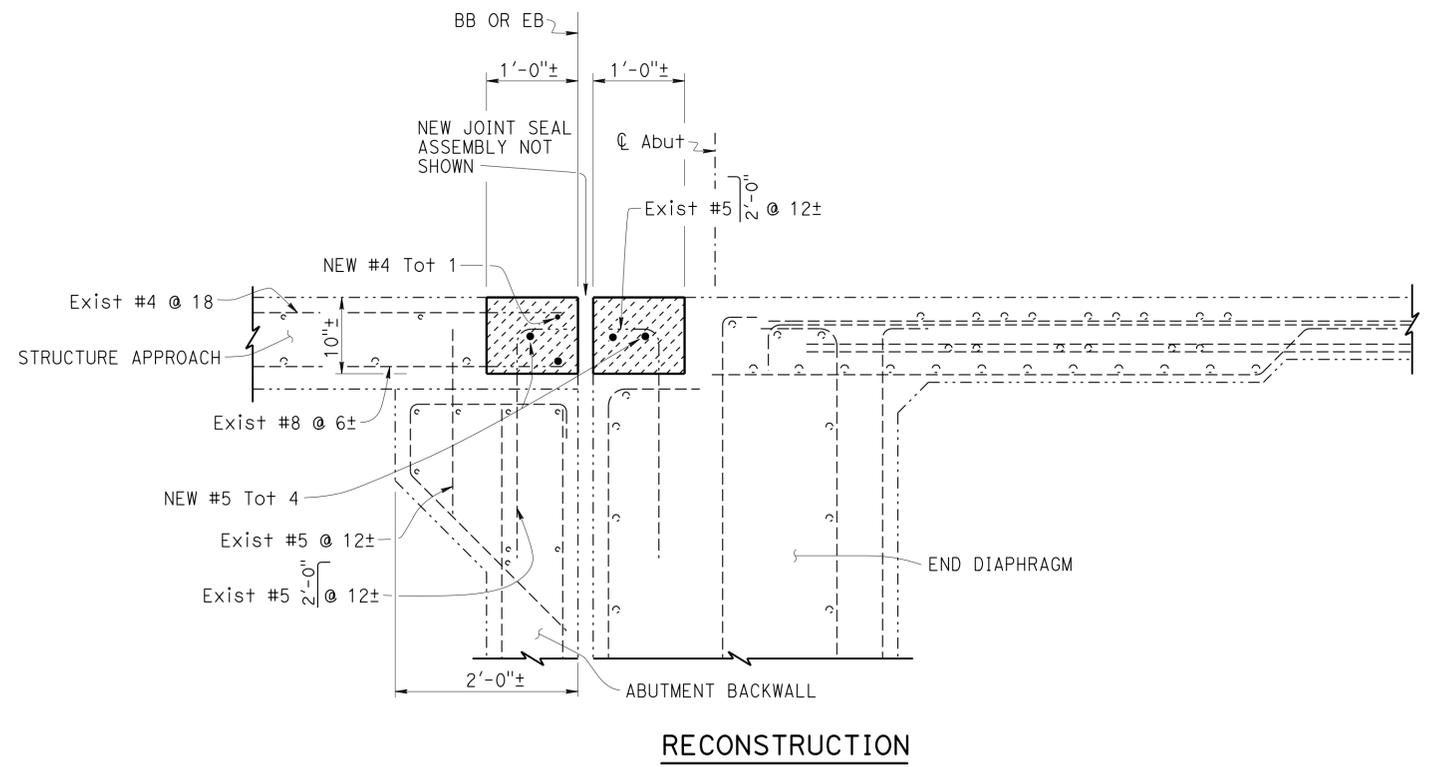
**GENERAL NOTES
LOAD FACTOR DESIGN**

- DESIGN: BRIDGE DESIGN SPECIFICATIONS (1996 AASHTO with Interims and Revisions by CALTRANS)
- DEAD LOAD: Includes 35 psf for future wearing surface.
- LIVE LOADING: HS20-44 and alternative permit design load.
- REINFORCED CONCRETE: $f_y = 60,000$ psi
 $f'_c = 3,600$ psi
 $n = 9$



SECTION B-B
1" = 1'-0"
(Br. No. 28-0126G)

Note: Abutment 1 shown, Abutment 12 similar.



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

DESIGN	BY D. Acoba	CHECKED M. Hashimoto
DETAILS	BY Dale Kubochi	CHECKED M. Hashimoto
QUANTITIES	BY D. Acoba	CHECKED M. Hashimoto

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. VARIOUS
POST MILE VARIES

ROUTES 4, 24, 80, 242, 580 BRIDGES
JOINT SEAL DETAILS NO. 1

USERNAME => 8126849 DATE PLOTTED => 12:51 TIME PLOTTED => 13-MAR-2015

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	4,24,80 242,580	Var	27	31

REGISTERED CIVIL ENGINEER DATE 12-8-14

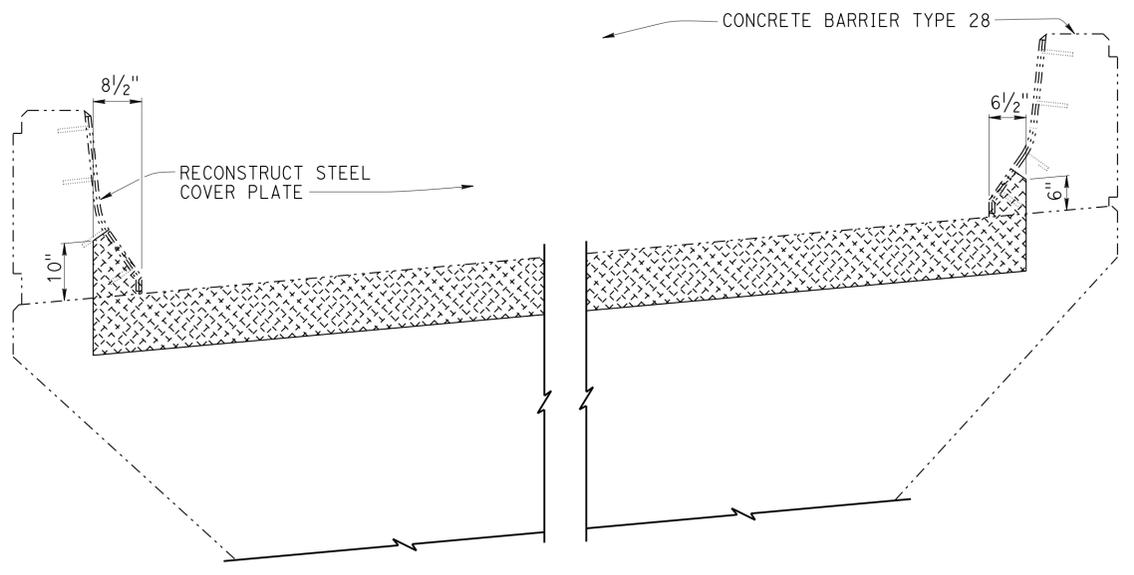
PLANS APPROVAL DATE 3-9-15

DIOSDADO ACOBA
No. 52003
Exp. 12-31-16
CIVIL
STATE OF CALIFORNIA

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NOTES: (APPLY TO THIS SHEET ONLY)

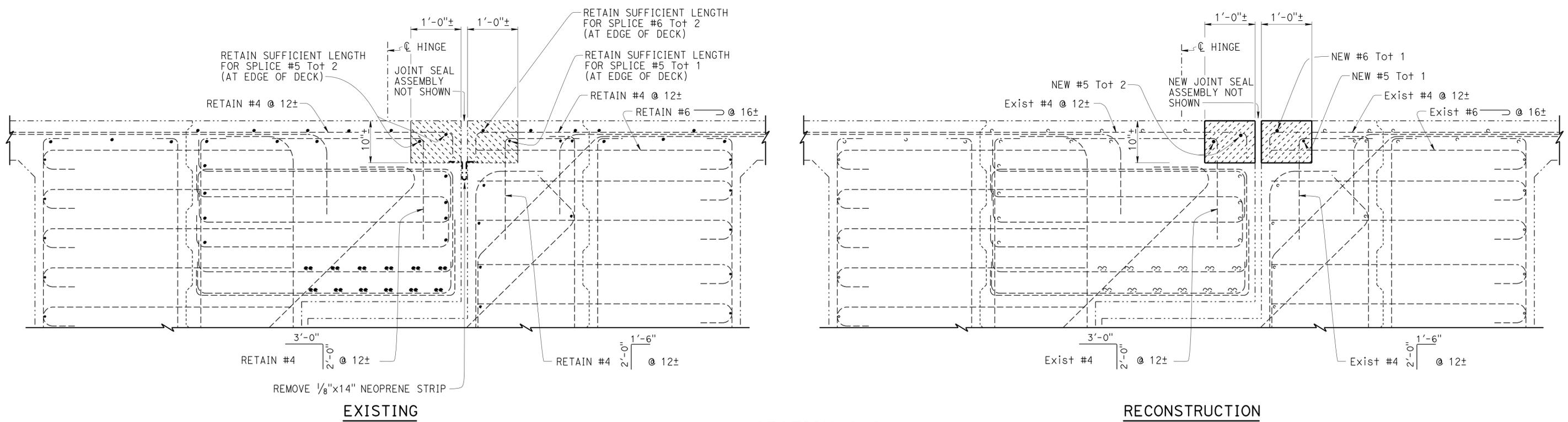
-  Indicates limits of bridge removal (portion).
-  Indicates limits of structural concrete, bridge.



LOW SIDE OF DECK HIGH SIDE OF DECK

PART TYPICAL

$\frac{3}{4}" = 1'-0"$
(Br. No. 28-0126F AND 28-0126G)



SECTION C-C

$1" = 1'-0"$
(Br. No. 28-0126F)

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

DESIGN	BY D. Acoba	CHECKED M. Hashimoto
DETAILS	BY Dale Kubochi	CHECKED M. Hashimoto
QUANTITIES	BY D. Acoba	CHECKED M. Hashimoto

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

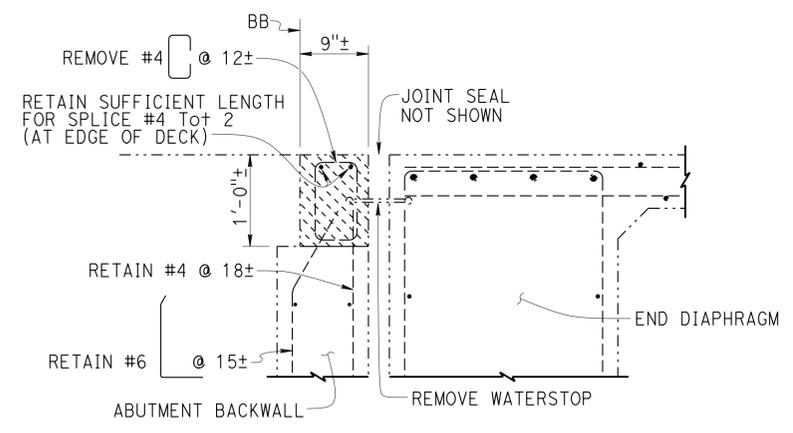
BRIDGE NO. VARIOUS
POST MILE VARIES

ROUTES 4, 24, 80, 242, 580 BRIDGES
JOINT SEAL DETAILS NO. 2

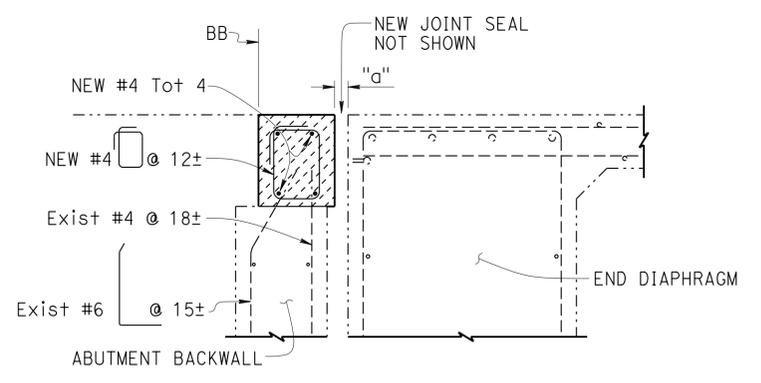
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	4,24,80 242,580	Var	28	31
REGISTERED CIVIL ENGINEER				DATE	
PLANS APPROVAL DATE				12-8-14	
DIOSDADO ACOBA				No. 52003	
CIVIL				Exp. 12-31-16	
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					

NOTES: (APPLY TO THIS SHEET ONLY)

-  Indicates limits of bridge removal (portion).
-  Indicates limits of structural concrete, bridge.

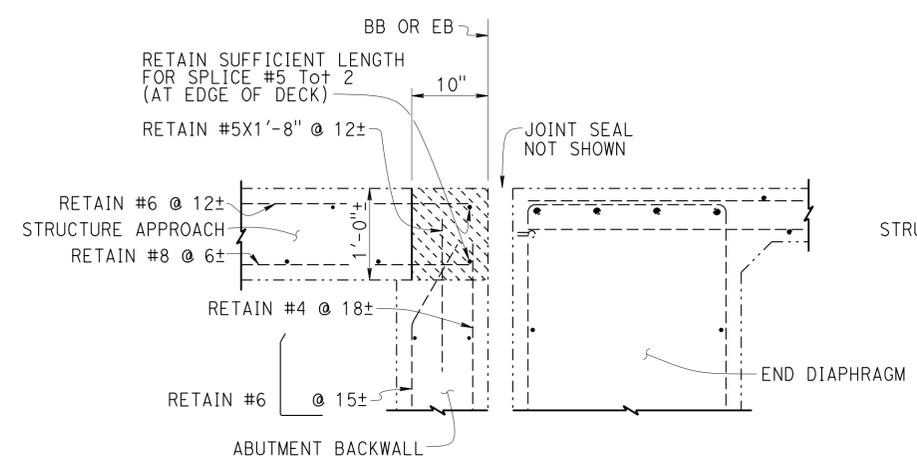


EXISTING

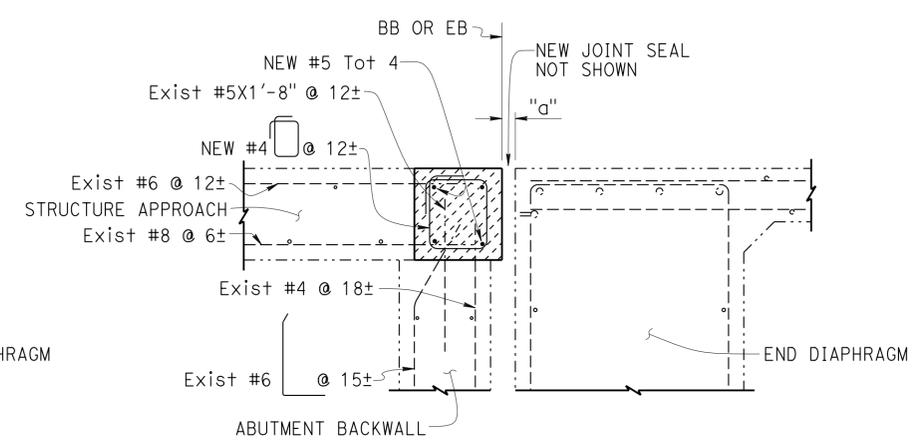


RECONSTRUCTION

SECTION D-D
1" = 1'-0"
(Br. No. 28-0186)

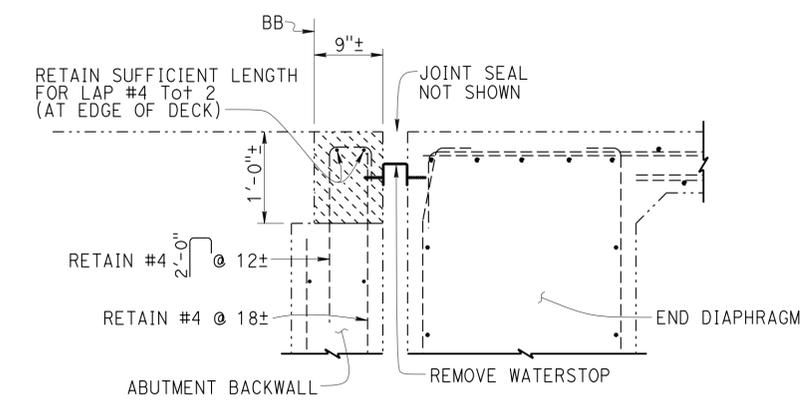


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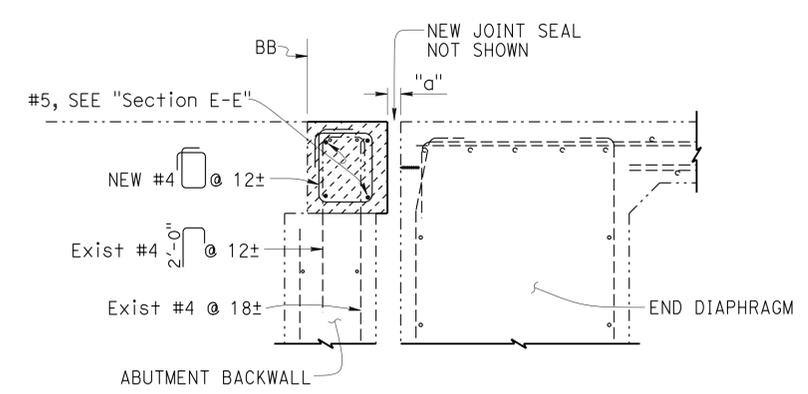


RECONSTRUCTION

SECTION E-E
1" = 1'-0"
(Br. No. 28-0186)



EXISTING



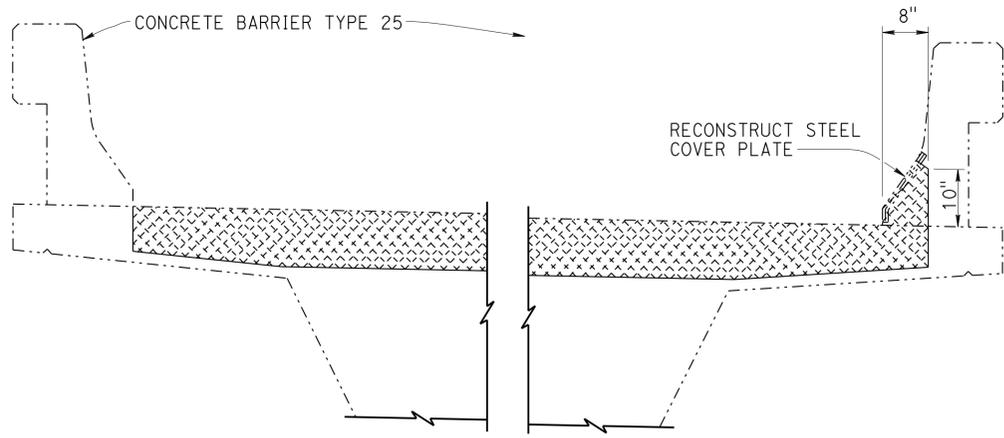
RECONSTRUCTION

SECTION F-F
1" = 1'-0"
(Br. No. 28-0186)

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

DESIGN	BY D. Acoba	CHECKED M. Hashimoto	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE NO.	ROUTE 65, 99, 178, 223 BRIDGES
DETAILS	BY Dale Kubochi	CHECKED M. Hashimoto		VARIOUS	
QUANTITIES	BY D. Acoba	CHECKED M. Hashimoto		VARIES	
STRUCTURES MAINTENANCE DETAIL SHEET (ENGLISH) (REV. 09-01-10)			UNIT: 3488 PROJECT NUMBER & PHASE: 0413000291	CONTRACT NO.: 04-4H8401	DISREGARD PRINTS BEARING EARLIER REVISION DATES
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS			0 1 2 3	REVISION DATES	SHEET 14 OF 17
			FILE => 04-4h8401-j-jt-de+03.dgn	11-24-14 12-29-14	

USERNAME => 8126849 DATE PLOTTED => 12:51 TIME PLOTTED =>



HIGH SIDE OF DECK LOW SIDE OF DECK

PART TYPICAL

3/4" = 1'-0"
(Br. No. 28-0056R)

NOTES: (APPLY TO THIS SHEET ONLY)

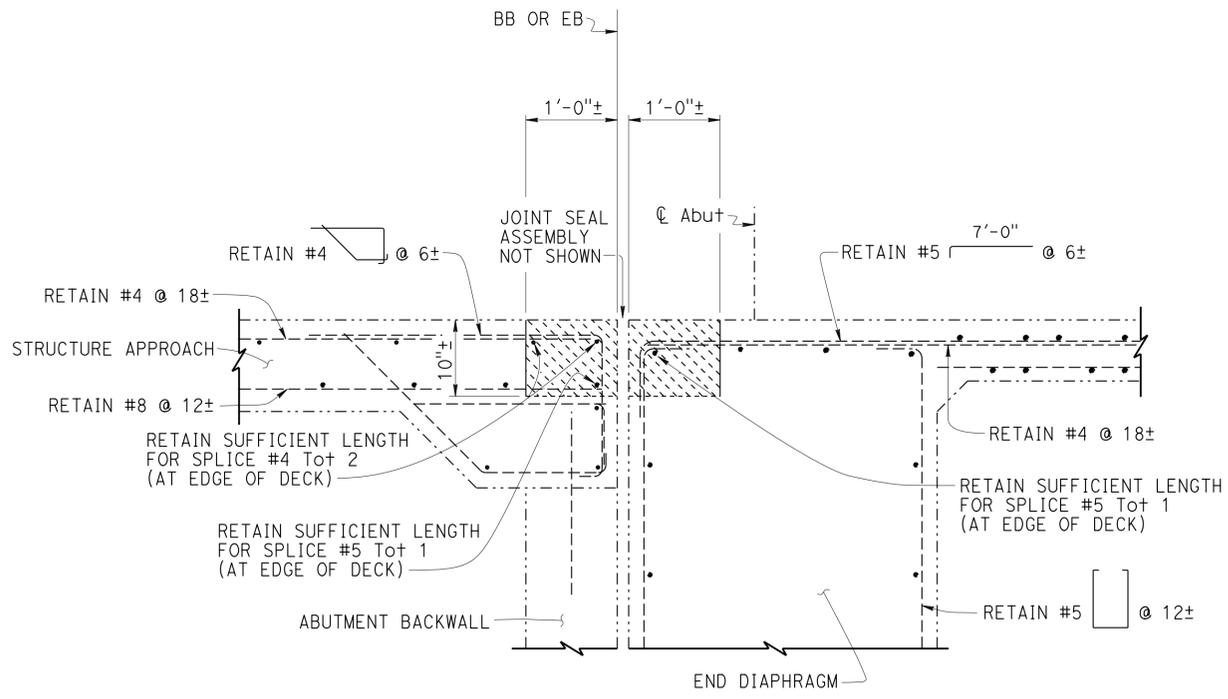
- Indicates limits of bridge removal (portion).
- Indicates limits of structural concrete, bridge.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	4,24,80 242,580	Var	29	31

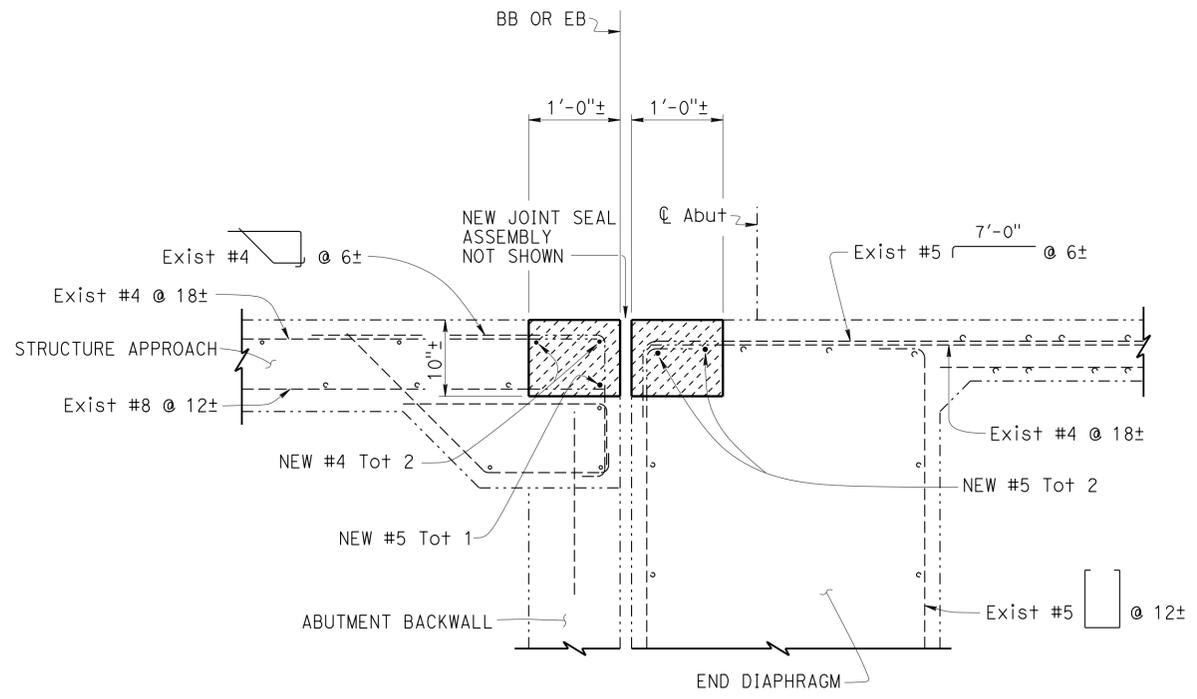
12-8-14
REGISTERED CIVIL ENGINEER DATE

3-9-15
PLANS APPROVAL DATE

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EXISTING



RECONSTRUCTION

SECTION G-G

1" = 1'-0"
(Br. No. 28-0056R)

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

DESIGN	BY D. Acoba	CHECKED M. Hashimoto
DETAILS	BY Dale Kubochi	CHECKED M. Hashimoto
QUANTITIES	BY D. Acoba	CHECKED M. Hashimoto

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO.
VARIOUS
POST MILE
VARIES

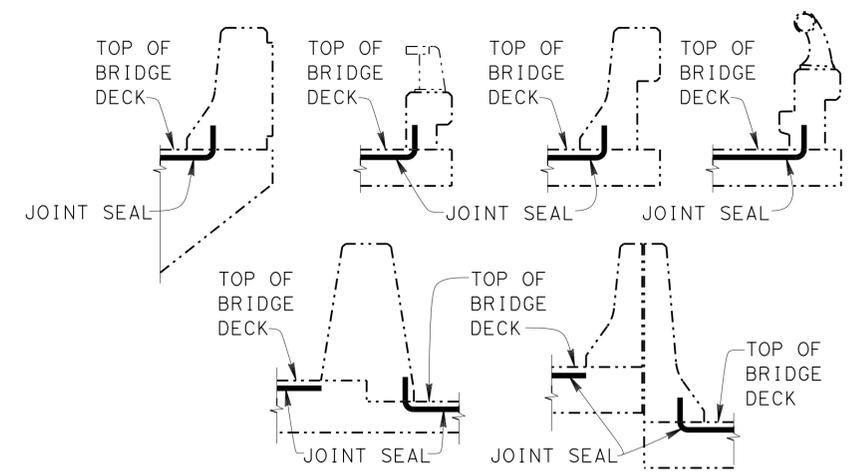
ROUTE 65, 99, 178, 223 BRIDGES
JOINT SEAL DETAILS NO. 4

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	4,24,80 242,580	Var	30	31
 REGISTERED CIVIL ENGINEER			12-8-14	DATE	
3-9-15			PLANS APPROVAL DATE		
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.					

JOINT SEAL TABLE							
BRIDGE NAME	BRIDGE NUMBER	LOCATION	MINIMUM "MR" (INCHES)	APPROXIMATE LENGTH (FEET)	EXISTING WATERSTOP	APPROX DEPTH TO CLEAN EXP JOINT (INCHES)	
E4-S242 CONNECTOR OVERCROSSING	28-0260G	Abut 1	BB	1/2	28	NO	12
		Abut 2	EB	1/2	28	NO	12
ST. STEPHENS DRIVE OVERCROSSING	28-0111	Abut 4	EB	2	24	NO	12
HAPPY VALLEY ROAD UNDERCROSSING	28-0132R	Abut 1	BB	2	59	NO	12
			BW	1/2	33	NO	9
		Abut 4	BW	1/2	33	NO	9
OAK HILL ROAD UNDERCROSSING	28-0133L	Abut 1	BB	1**	58	NO	12
		Abut 4	EB	1**	60	NO	12
E24-N680 CONNECTOR OVERCROSSING	28-0126G	Abut 1	BB	2 1/2	52	NO	12
		Abut 12	EB	3	52	NO	12
S680-W24 CONNECTOR OVERCROSSING	28-0126F	Hinge near Bent 3	H	4	52	NO	12
OLEUM REFINERY ROAD NO. 3 UNDERCROSSING	28-0155	Abut 1	BB	1/2	108	NO	12
		Abut 2	EB	1/2	108	NO	12
BUCHANAN FIELD VIADUCT	28-0186	Abut 1 (Lt)	BW	2 *	54	YES	6
		Abut 1 (Rt)	BB	2 *	85	NO	12
		Abut 5 (Lt)	EB	2 *	81	NO	12
		Abut 5 (Rt)	EB	2 *	100	NO	12
SOUTH SECOND STREET OVERHEAD	28-0277	Abut 1 (Lt)	BB	2	72	YES	6
		Abut 1 (Rt)	BB	2	72	NO	12
		Abut 8 (Lt)	EB	2 *	157	NO	12
		Abut 8 (Rt)	EB	2 *	157	NO	12
RAILROAD AVENUE OVERHEAD	28-0056R	Abut 1	BB	2 1/2	53	YES	12
		Abut 9	EB	3 1/2	51	YES	12

LEGEND:
 BW - Abutment backwall joint
 BB - Beginning of bridge
 EB - End of bridge
 H - Hinge joint
 PN - Paving Notch
 * - Use bonded joint seal
 ** - Use silicon seal only

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



BARRIER RAIL
JOINT SEAL AT LOW SIDE OF DECK

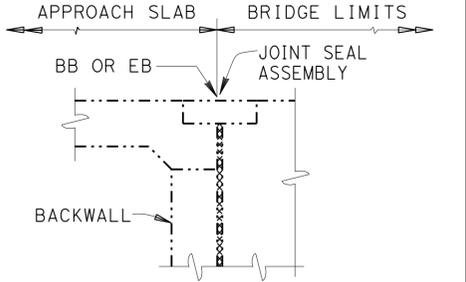
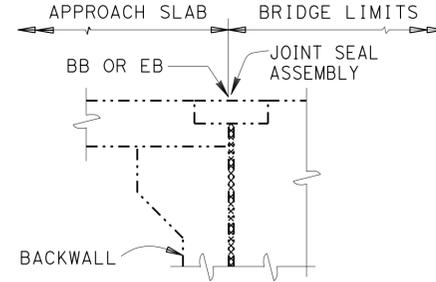
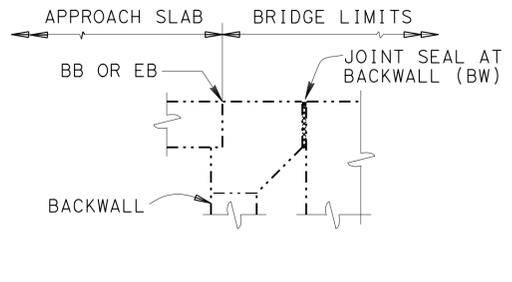
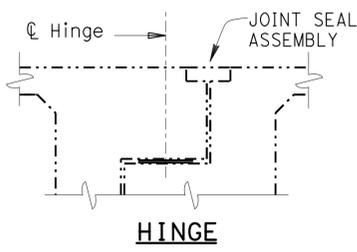
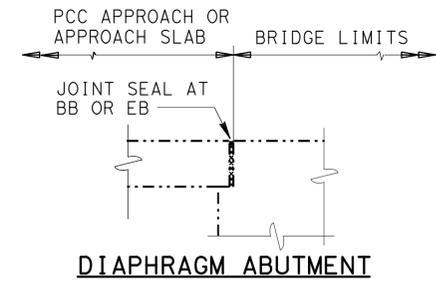
Notes: Details shown for illustration purposes only. For use only where deck joint matches the sidewalk, curb or barrier rail joint.

TEMPORARY DECK PLATE LOAD CRITERIA		
MOMENT DEMAND/FOOT (kips-ft/ft)	BOLT SHEAR/FOOT (kips/ft)	BOLT TENSION (kips) / bolt
11	8	8

Plate deflection shall not exceed s/300 (s = span of plate).
 Maximum anchor bolt spacing = 1'-0".

- The following notes apply to **JOINT SEAL TYPE B**:
- Seal must satisfy both minimum Movement Rating (MR) and minimum W1 requirements.
 - Minimum W1 is the calculated maximum width of the joint based on field measurements. After the joints have been cleaned, minimum W1 is to be calculated by the Engineer.
 - W1 shall be the smaller of the values determined as follows:
 - 0.85 times the manufacturer's designed minimum uncompressed width of the seal.
 - The width of the seal on the third successive test cycle of the pressure deflection test, when compressed to an average pressure of 3 psi.
 - Bend Type B joint seal 6" up into curb or rail on the low side of the deck where deck joint matches curb or rail joint.
 - For details not shown, see **B6-21**

- The following notes apply to **JOINT SEAL TYPE A**:
- Install Type A joint seal 3" up into rail on the low side of deck where joint matches curb or rail joint.
 - For details not shown, see **B6-21**



JOINT SEAL LOCATION

DESIGN	BY D. Acoba	CHECKED M. Hashimoto
DETAILS	BY Dale Kubochi	CHECKED M. Hashimoto
QUANTITIES	BY D. Acoba	CHECKED M. Hashimoto

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
 STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. VARIOUS
 POST MILE VARIES

ROUTES 4, 24, 80, 242, 580 BRIDGES
JOINT SEAL DETAILS NO. 5

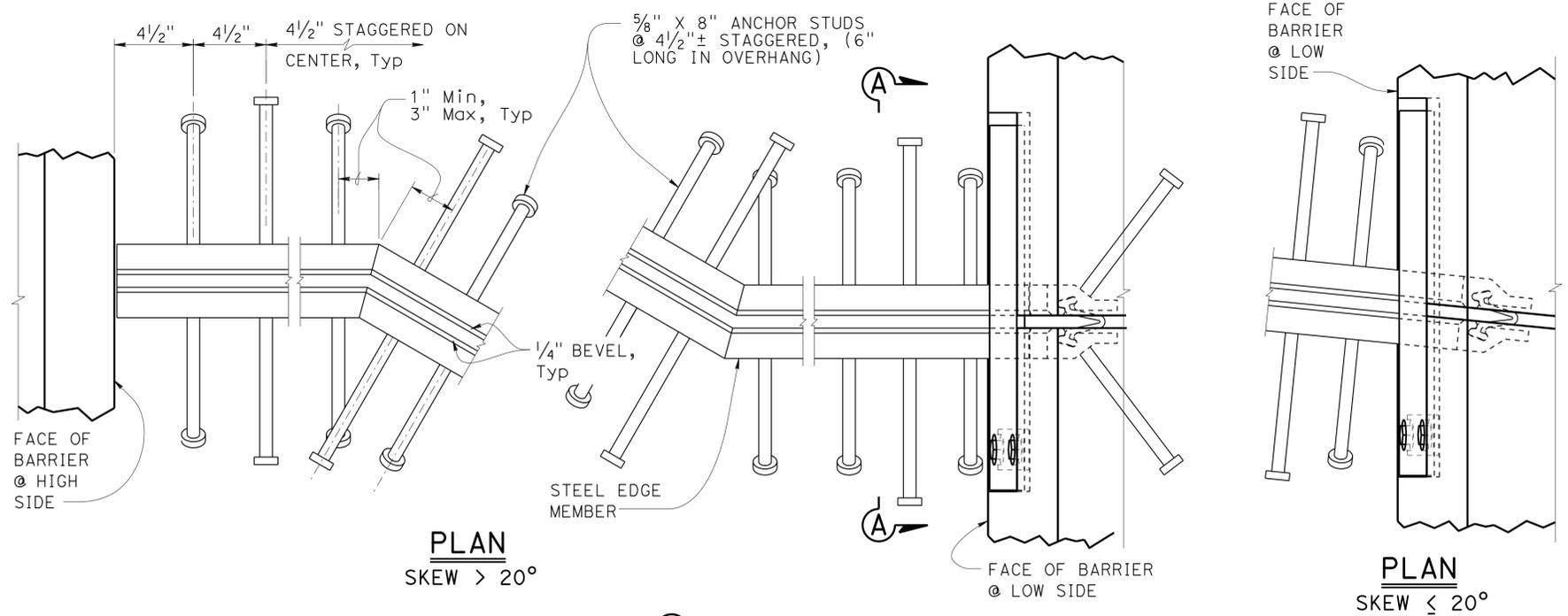
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	CC	4,24,80 242,580	Var	31	31

REGISTERED CIVIL ENGINEER DATE 12-8-14

PLANS APPROVAL DATE 3-9-15

DIOSDADO ACOBA
No. 52003
Exp. 12-31-16
CIVIL
STATE OF CALIFORNIA

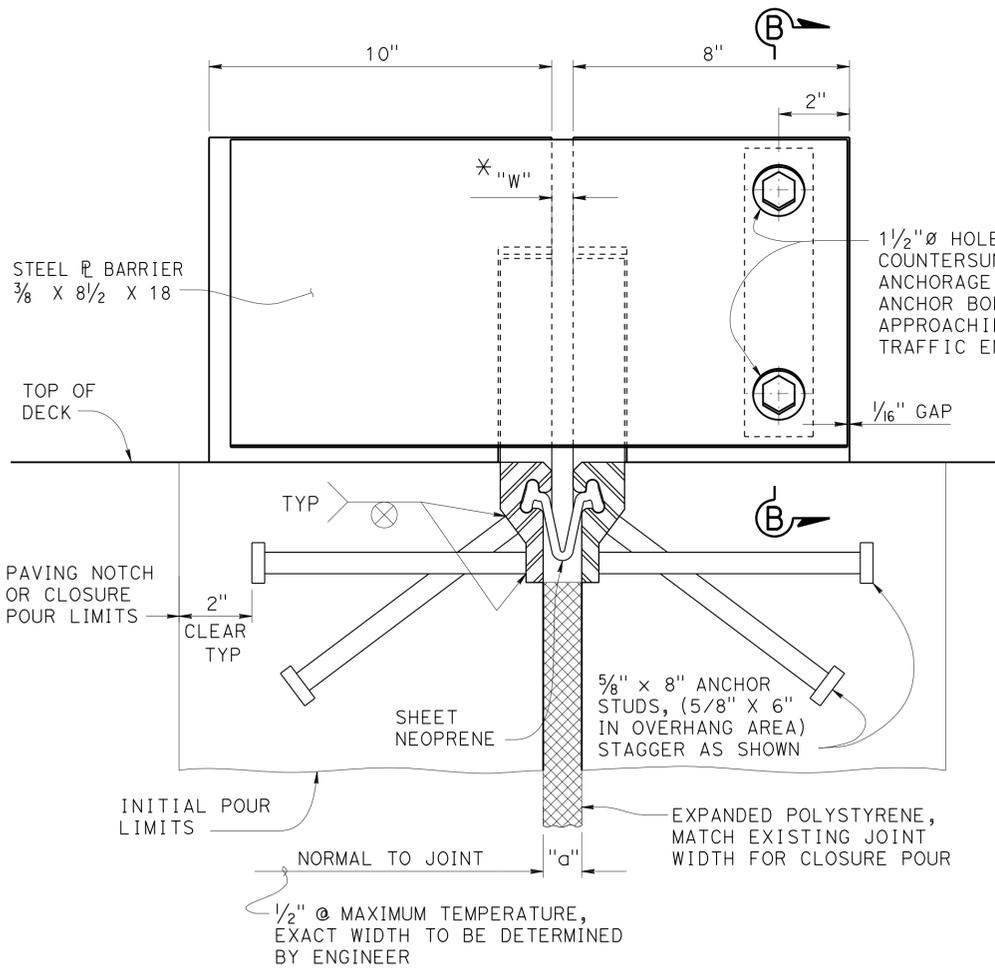
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SCHEMATIC STEEL EDGE MEMBER



- NOTES:
- Alternatively, fillet or complete penetration welds may be used at anchor studs.
 - Alternate types of anchor studs must be authorized.
 - Joint seal assembly to be used in conjunction with closure pour. (See other sheets for limits). Closure pour must not be placed until final deck surface is within the tolerances specified.
 - Use joint at crown of roadway, at any change in traverse slope in deck and at changes in horizontal direction. Place other joints at or near lanes. All metal parts to be painted or galvanized after fabrication.
 - Sheet Neoprene must be fabricated in one continuous piece and shall be fabricated to bend around corners. Field splices of the neoprene are not allowed.
 - Insert assembly or expansion anchorage for 5/8" x 1 3/4" bolts. Use installation bolts extended 1/2" minimum past nut and coat with bond breaker, after concrete has cured, remove installation bolts, install HS bolts and sheet neoprene.
 - Sidewalk Detail similar to Barrier Detail on low side at both sides if the roadway is crowned or if the difference in elevation between the ends of the seal is 0.5' or less.
 - a_c, a_s, are the thermal expansion coefficients for concrete and steel respectively.
 - Anchor studs must conform to ASTM 108.



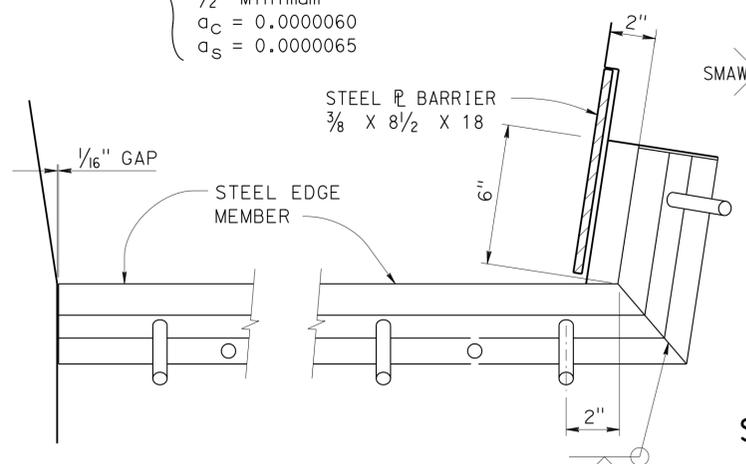
SECTION A-A



JOINT INFORMATION				"a" DIMENSIONS		
BRIDGE NUMBER	LOCATION	MOVEMENT RATING (MR)	SKEW	WINTER	SPRING & FALL	SUMMER
28-0126G	Abut 1	2 1/2		2 7/8	1 3/4	1/2
	Abut 12	3		3 3/4	2 7/8	1/2
28-0126F	Hinge near Bent 3	4		4	2 1/2	1/2
28-0056R	Abut 1	2 1/2	18.5	2 7/8	1 3/4	1/2
	Abut 9	3 1/2		4	2 3/8	1/2

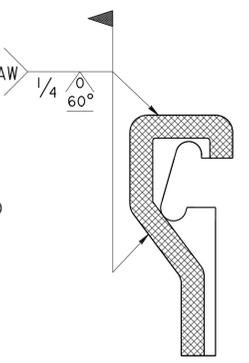
* TO SET MINIMUM JOINT OPENING "W"

$$"W" = \begin{cases} \frac{1}{2} + [(Max\ Str\ temperature\ in\ ^\circ F) - (actual\ Str\ temperature\ in\ ^\circ F)] * (a_c\ or\ a_s) * (12) * (contributory\ L\ in\ feet) \\ \frac{1}{2} \text{ Minimum} \\ a_c = 0.0000060 \\ a_s = 0.0000065 \end{cases}$$

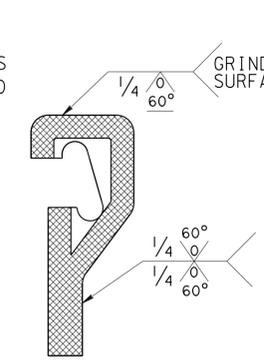


BARRIER DETAIL HIGH SIDE

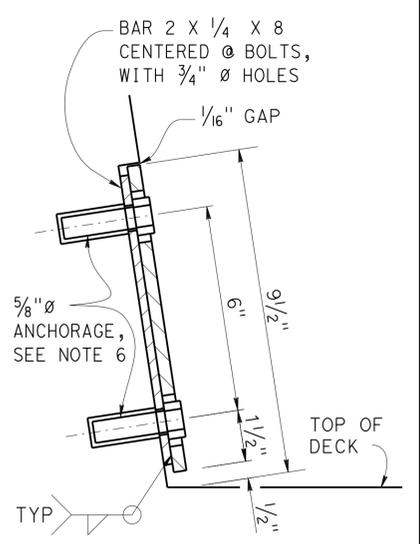
BARRIER DETAIL LOW SIDE



SCHEMATIC FIELD WELD DETAIL



SCHEMATIC SHOP WELD DETAIL



SECTION B-B

SPECIAL DETAILS

NO SCALE

ROUTES 4, 24, 80, 242, 580 BRIDGES

STRIP JOINT SEAL ASSEMBLY
MAXIMUM MOVEMENT RATING = 4"

REVISED STANDARD DRAWING

FILE NO. **xs8-010**

APPROVAL DATE July 2014

MODIFIED TABLE

MODIFIED NOTES

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE NO. VARIOUS

POST MILE VARIES

REVISION DATES

11-26-14	12-29-14
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SHEET 17 OF 17