

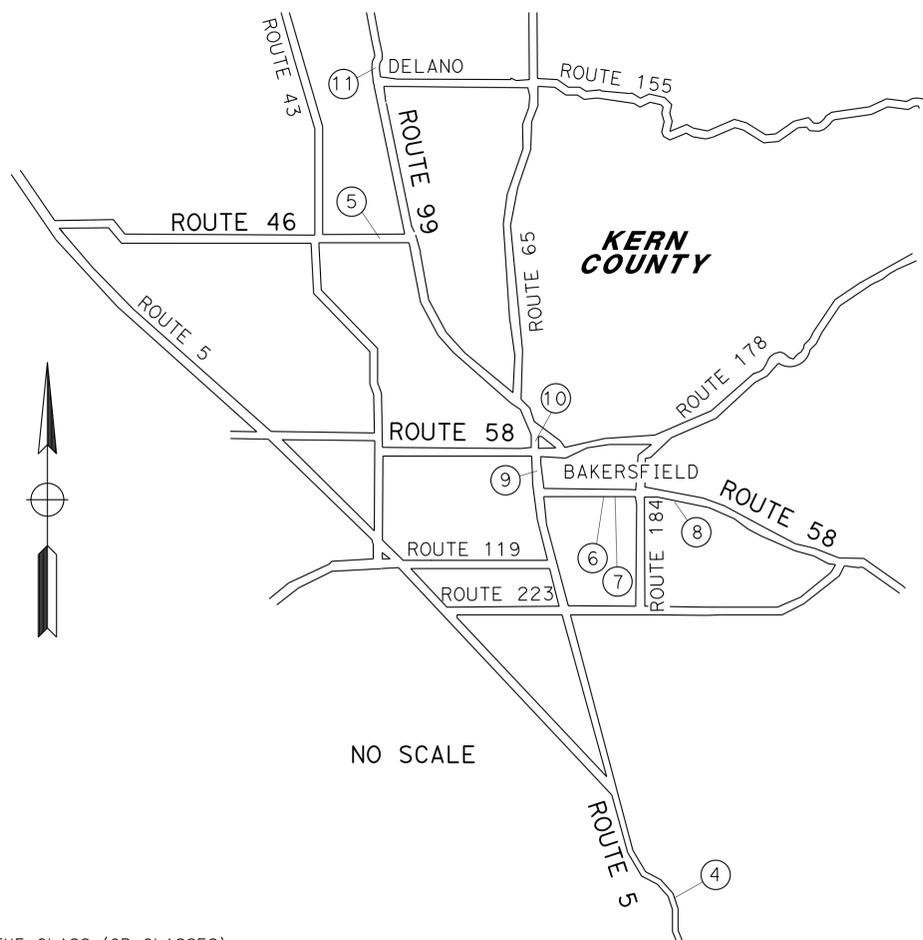
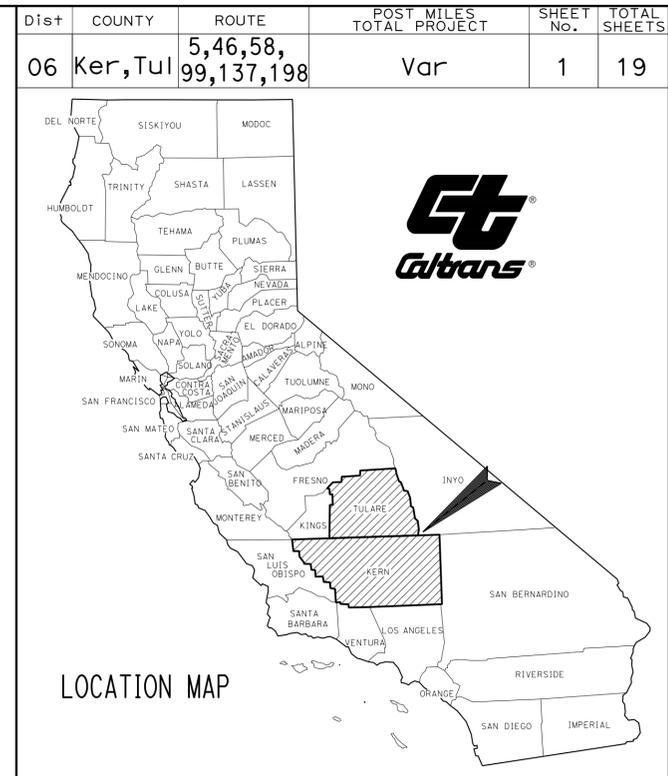
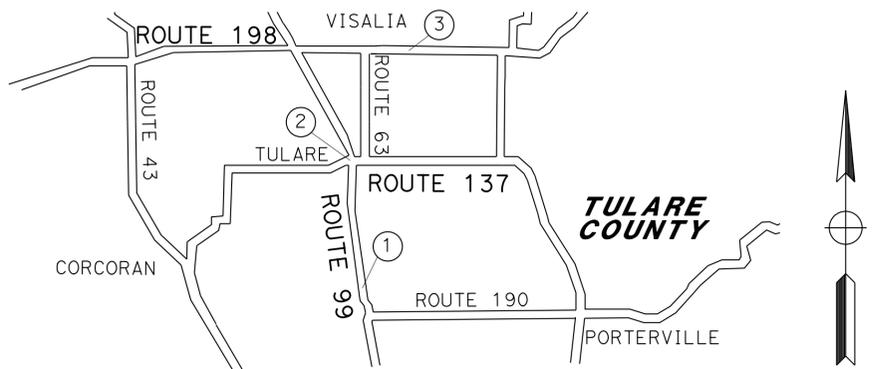
INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2-3	CONSTRUCTION AREA SIGNS
4	PAVEMENT DELINEATION QUANTITIES
5-12	REVISED STANDARD PLANS
13-19	STRUCTURE PLANS

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 KERN AND TULARE COUNTIES  
AT  
VARIOUS LOCATIONS

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010



LOCATIONS OF CONSTRUCTION

Loc No. #	COUNTY	ROUTE	PM	STRUCTURE NAME	BRIDGE No.
1	Tul	99	18.95	TIPTON OVERPASS/6th St OC	46-0188
2	Tul	137	16.63	ROUTE 137/99 SEPARATION	46-0150L/R
3	Tul	198	R10.73	BEN MADDOX WAY OC	46-0200
4	Ker	5	4.07	LEBEC ROAD OC	50-0271
5	Ker	46	56.29	FRIANT-KERN CANAL	50-0146
6	Ker	58	R55.20	BAKERSFIELD CORRAL OH	50-0383L/R
7	Ker	58	R55.92	WASHINGTON St OC	50-0391
8	Ker	58	R60.45	VINELAND ROAD OC	50-0360
9	Ker	99	24.78	BAKERSFIELD YARD OH	50-0239
10	Ker	99	26.78	AIRPORT Dr ON RAMP SEPARATION	50-0266
11	Ker	99	56.54	CECIL Ave OC	50-0213

PROJECT MANAGER  
BILL MOSES

DESIGN MANAGER  
FRANK GONZALEZ

NO SCALE

  
 PROJECT ENGINEER  
 REGISTERED CIVIL ENGINEER  
 DATE 1-7-16  
 SHUE X. VUE  
 No. 63657  
 Exp. 9-30-16  
 CIVIL  
 STATE OF CALIFORNIA

January 25, 2016  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

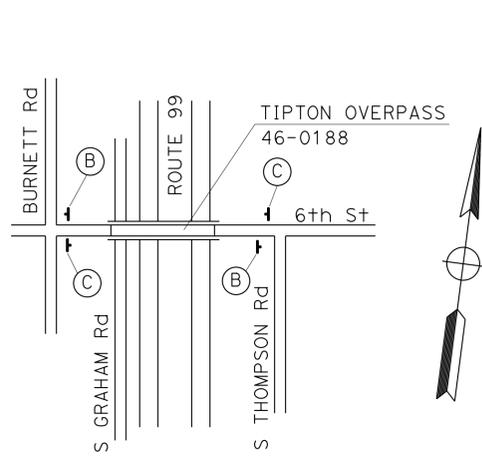
THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

CONTRACT No. **06-0S6004**  
 PROJECT ID **0614000256**

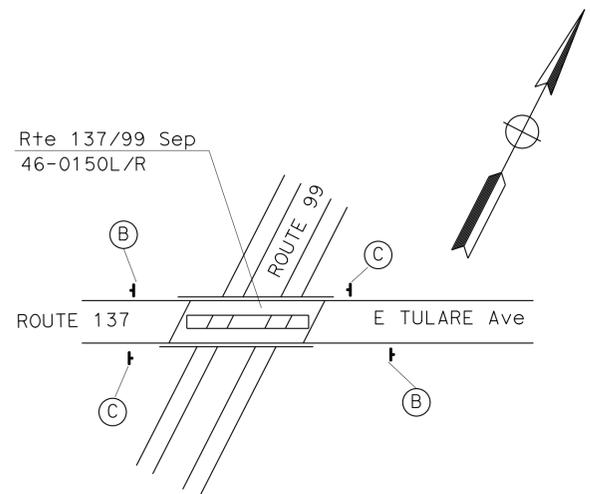
### STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No. (X)	SIGN CODE	PANEL SIZE	SIGN MESSAGE	No. POST AND SIZE	No. OF SIGNS
A	W20-1	48" x 48"	ROAD WORK AHEAD	1 - 4" x 6"	8
B	G20-2	36" x 18"	END ROAD WORK	1 - 4" x 4"	26
C	W20-1	36" x 36"	ROAD WORK AHEAD	1 - 4" x 6"	18

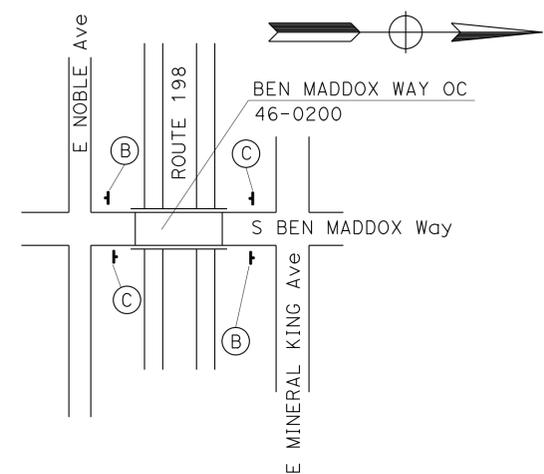
NOTE: EXACT SIGN LOCATIONS TO BE DETERMINED BY THE ENGINEER.



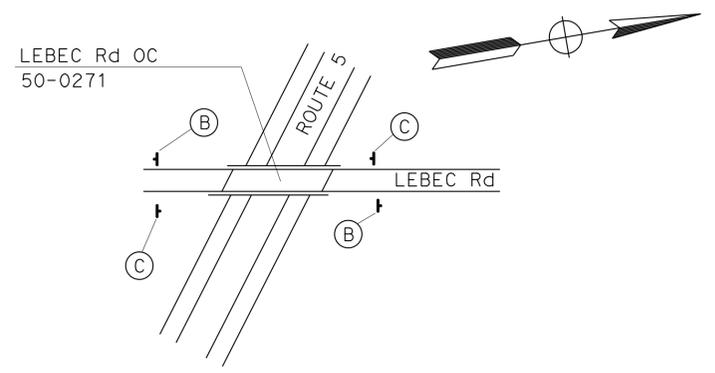
**LOCATION 1**  
Tul Rte 99 PM 18.95



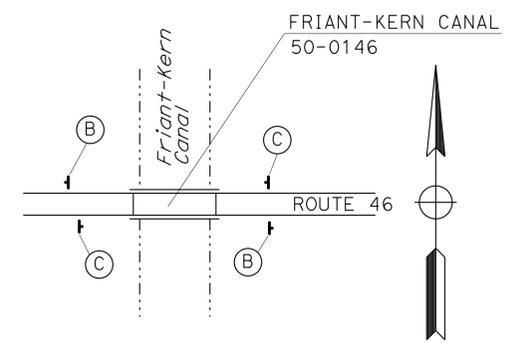
**LOCATION 2**  
Tul Rte 137 PM 16.63



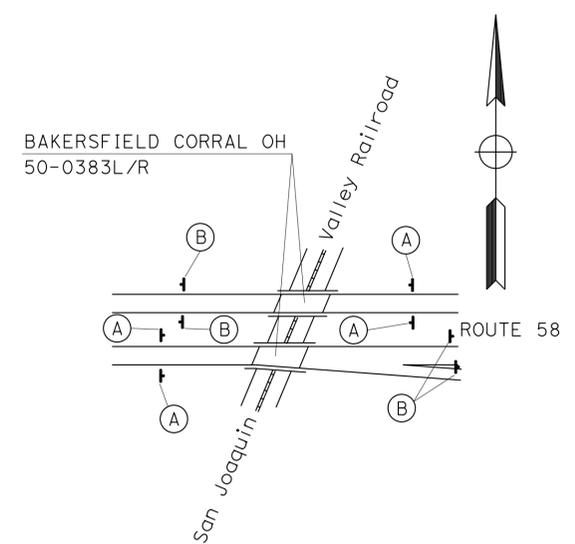
**LOCATION 3**  
Tul Rte 198 PM R10.73



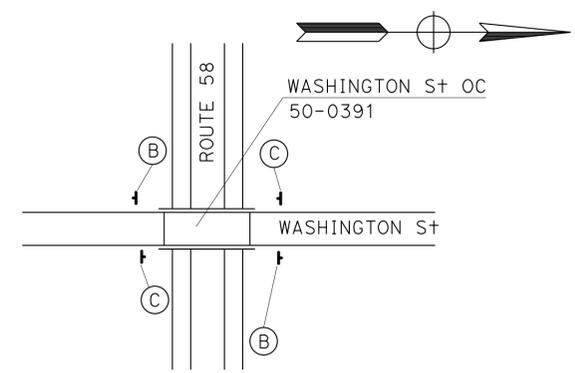
**LOCATION 4**  
Ker Rte 5 PM 4.07



**LOCATION 5**  
Ker Rte 46 PM 56.29



**LOCATION 6**  
Ker Rte 58 PM R55.20



**LOCATION 7**  
Ker Rte 58 PM R55.92

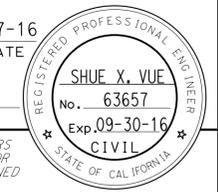
### CONSTRUCTION AREA SIGNS CS-1

NO SCALE

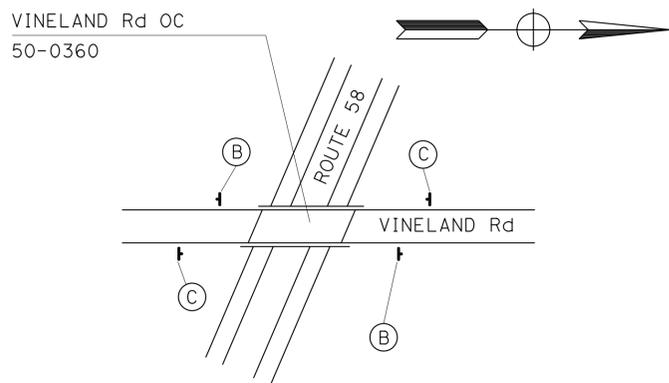
APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** MAINTENANCE DESIGN  
 FUNCTIONAL SUPERVISOR FRANK GONZALEZ  
 CALCULATED/DESIGNED BY SHUE X. VUE  
 CHECKED BY LEE XIONG  
 REVISED BY DATE  
 REVISIONS: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

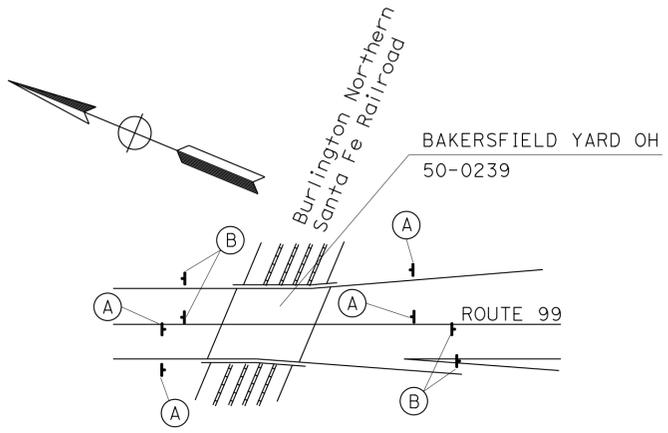
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Ker, Tul	5,46,59, 99,137,198	Var	3	19
REGISTERED CIVIL ENGINEER			DATE	1-7-16	
PLANS APPROVAL DATE			1-25-16		
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					



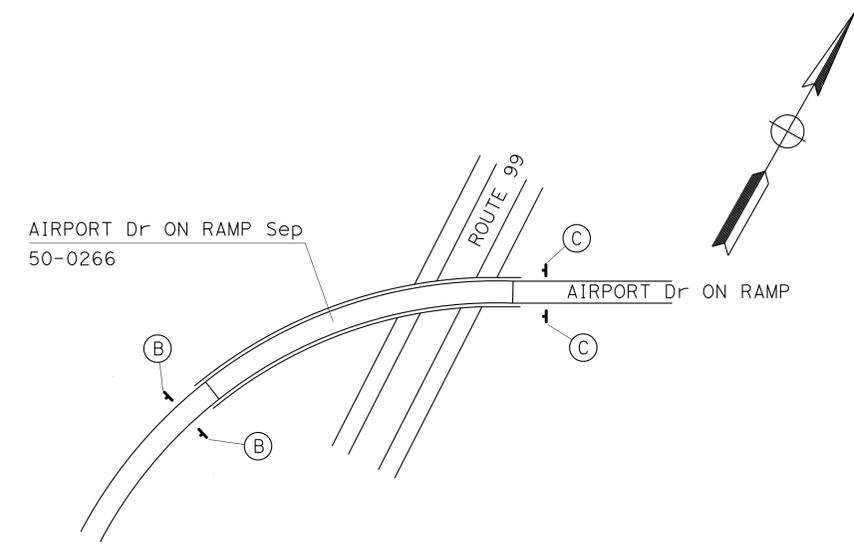
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	SHUE VUE	REVISOR
<b>Caltrans</b> MAINTENANCE DESIGN	FRANK GONZALEZ	CHECKED BY	LEE XIONG	DATE REVISOR



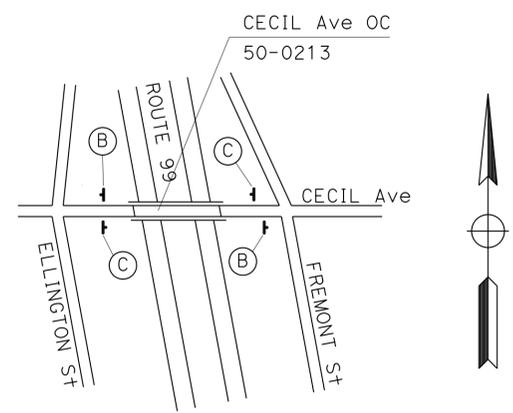
**LOCATION 8**  
Ker Rte 58 PM R60.45



**LOCATION 9**  
Ker Rte 99 PM 24.78



**LOCATION 10**  
Ker Rte 99 PM 26.78



**LOCATION 11**  
Ker Rte 99 PM 56.54

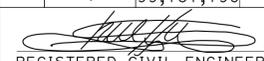
**CONSTRUCTION AREA SIGNS**  
**CS-2**

NO SCALE

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Ker, Tul	5,46,58, 99,137,198	Var	4	19


 REGISTERED CIVIL ENGINEER DATE 1-7-16  
 1-25-16  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 SHUE X. VUE  
 No. 63657  
 Exp. 09-30-16  
 CIVIL  
 STATE OF CALIFORNIA

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

### PAVEMENT DELINEATION QUANTITIES

Loc No. Ⓝ	DETAIL No.	PAVEMENT MARKER (RETROREFLECTIVE)			THERMOPLASTIC TRAFFIC STRIPE					REMOVE PAVEMENT MARKER	REMOVE THERMOPLASTIC TRAFFIC STRIPE	THERMOPLASTIC PAVEMENT MARKING		REMOVE THERMOPLASTIC PAVEMENT MARKING	
		TYPE D (YELLOW TWO WAY)	TYPE G (CLEAR ONE WAY)	TYPE H (YELLOW ONE WAY)	4" SOLID	4" (BROKEN 17 - 7)	4" (BROKEN 36 - 12)	8" SOLID	8" (BROKEN 12 - 3)	EA	LF	DESCRIPTION	SQFT	DESCRIPTION	SQFT
		EA	EA	EA	LF	LF	LF	LF	LF	EA	LF				
1	21				24										
3	9		10			418			10	122	4-TYPE 1 ARROW 18'-0"	100	4-TYPE 1 ARROW 18'-0"	100	
	37B		42					42	240	2-TYPE 3 (R) ARROW	84	2-TYPE 3 (R) ARROW	84		
	38		3				30	3	60						
4	21				8										
5	6							3							
	27B				3										
	12		8			330									
6	25A			15	330										
	27B				330										
	36		4				60								
7	21				452					452					
8	21				412										
9	12		53			2472									
	25A			36	824										
	27B				824										
	36		6				100								
11	36B		3		36			36							
	9		9			386									
	22	18			386					386					
SUBTOTAL		18	138	51	3629	804	2805	226	597	55	1260	184		184	
TOTAL			207		3629	804	2805	226	597	55	1260	184		184	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** MAINTENANCE DESIGN  
 SHUE VUE  
 LEE XIONG  
 CALCULATED-DESIGNED BY  
 CHECKED BY  
 FUNCTIONAL SUPERVISOR  
 FRANK GONZALEZ

## PAVEMENT DELINEATION QUANTITIES PDQ-1

LAST REVISION | DATE PLOTTED => 04-FEB-2016  
 12-18-15 | TIME PLOTTED => 11:24

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

	<b>P continued</b>	
PG	PROFILE GRADE	
PI	POINT OF INTERSECTION	
PJP	PARTIAL JOINT PENETRATION	
Pkwy	PARKWAY	
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	
	<b>Q</b>	
Qty	QUANTITY	
	<b>R</b>	
R	RADIUS	
R & D	REMOVE AND DISPOSE	
R & S	REMOVE AND SALVAGE	
R/C	RATE OF CHANGE	
RCA	REINFORCED CONCRETE ARCH	
RCB	REINFORCED CONCRETE BOX	
RCP	REINFORCED CONCRETE PIPE	
RCPA	REINFORCED CONCRETE PIPE ARCH	
Rd	ROAD	
Reinf	REINFORCED, REINFORCEMENT, REINFORCING	
Rel	RELOCATE	
Repl	REPLACEMENT	
Ret	RETAINING	
Rev	REVISED, REVISION	
Rdwy	ROADWAY	
RHMA	RUBBERIZED HOT MIX ASPHALT	
Riv	RIVER	
RM	ROAD-MIXED	
RP	RADIUS POINT, REFERENCE POINT	
RR	RAILROAD	
RSP	ROCK SLOPE PROTECTION, REVISED STANDARD PLAN	
Rt	RIGHT	
Rte	ROUTE	
RW	REDWOOD, RETAINING WALL	
R/W	RIGHT OF WAY	
Rwy	RAILWAY	

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

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Ker, Tul	5,46,58, 99,137,198	Var	5	19

*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 1-25-16

**UNIT OF MEASUREMENT SYMBOLS:**  
Some of the symbols used in the project plan quantity tables and in the Bid Item List are:

**TABLE A**

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

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

**TABLE B**

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

\* For use on a sign panel only

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

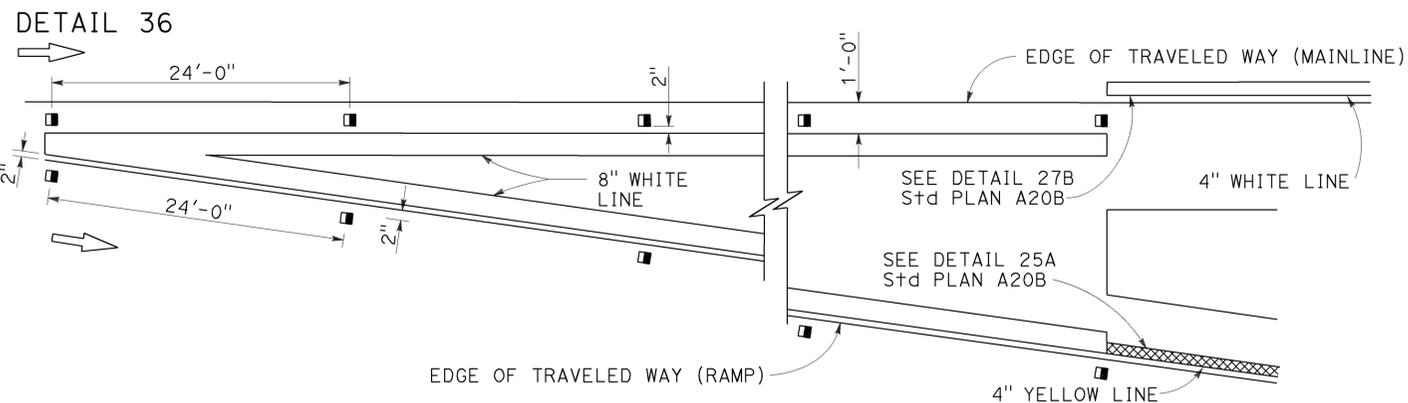
**ABBREVIATIONS  
(SHEET 2 OF 2)**

NO SCALE

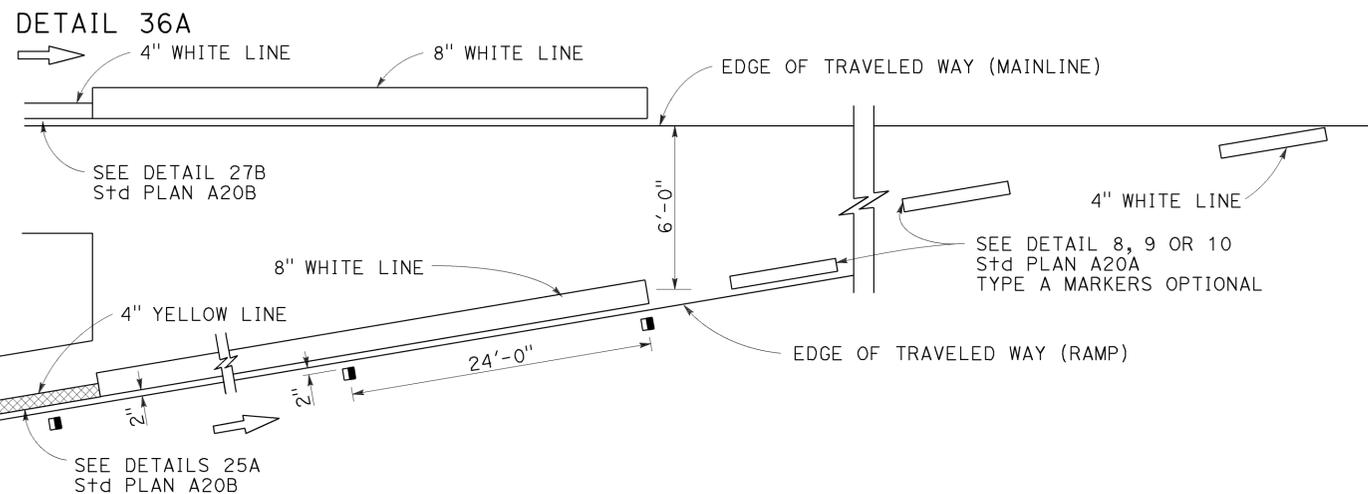
RSP A10B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A10B  
DATED MAY 20, 2011 - PAGE 2 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP A10B

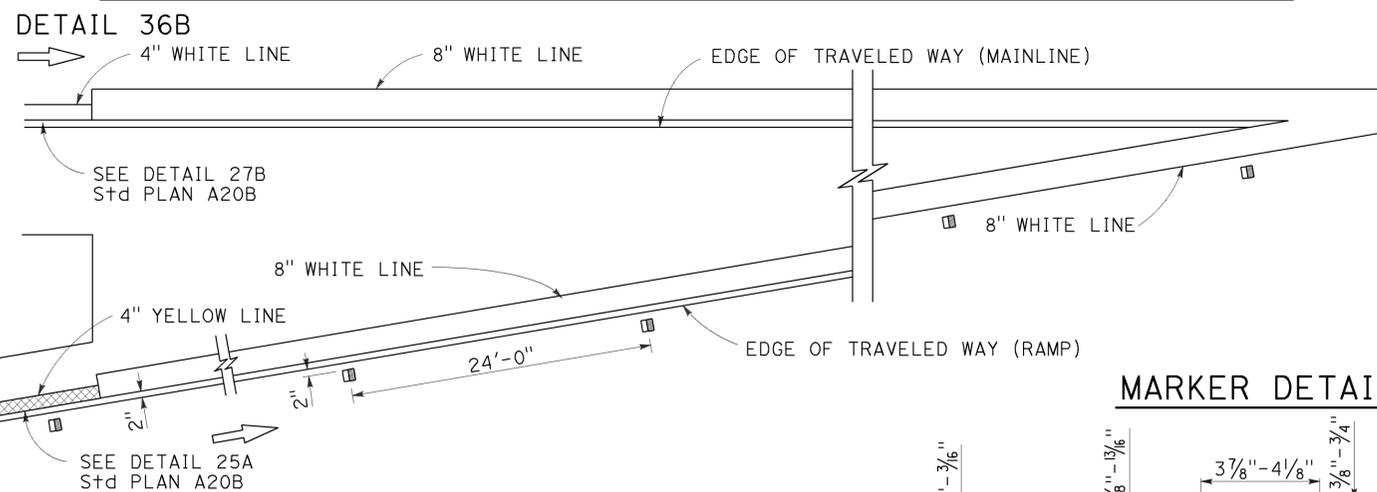
### EXIT RAMP NEUTRAL AREA (GORE) TREATMENT



### ENTRANCE RAMP NEUTRAL AREA (MERGE) TREATMENT



### ENTRANCE RAMP NEUTRAL AREA (ACCELERATION LANE) TREATMENT

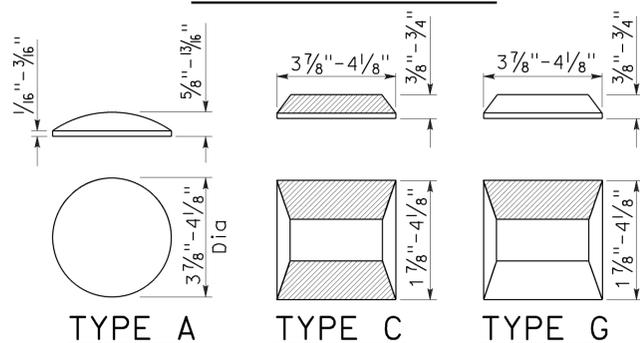


### MARKER DETAILS

#### 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
06	Ker, Tul	5,46,58, 99,137,198	Var	6	19

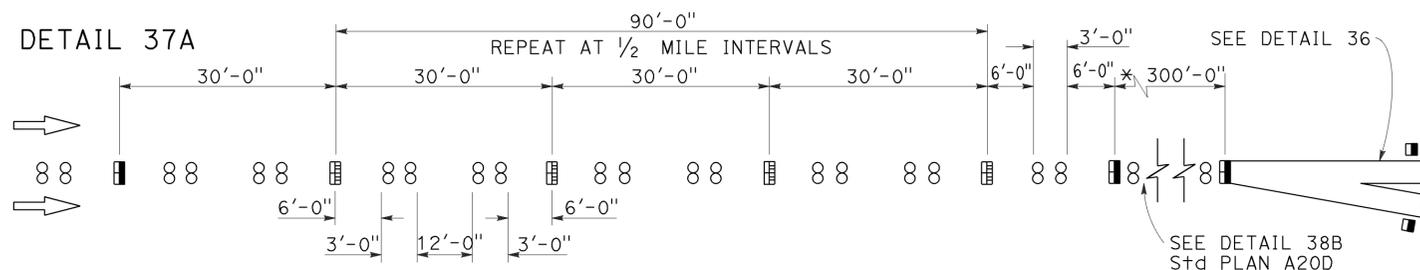
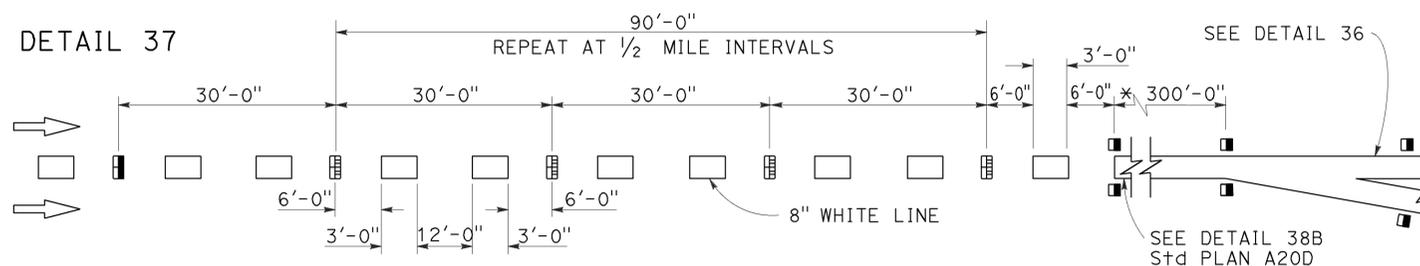
REGISTERED CIVIL ENGINEER  
 Roberta L. McLaughlin  
 No. C40375  
 Exp. 3-31-15  
 CIVIL  
 STATE OF CALIFORNIA

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.

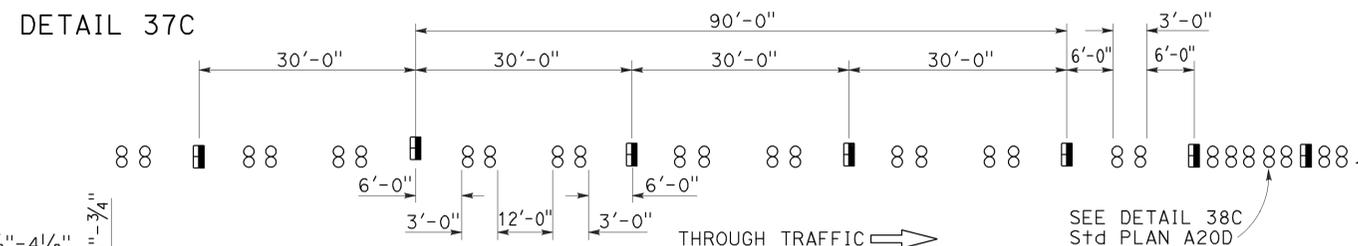
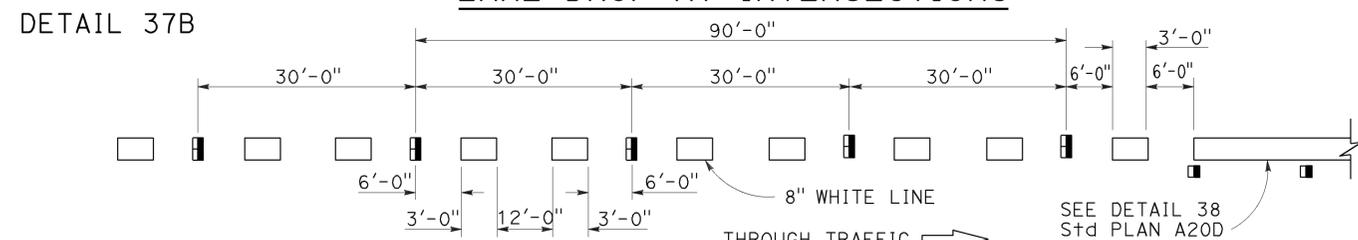
TO ACCOMPANY PLANS DATED 1-25-16

### LANE DROP AT EXIT RAMP



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

### LANE DROP AT INTERSECTIONS



STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

### PAVEMENT MARKERS AND TRAFFIC LINE TYPICAL DETAILS

NO SCALE

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

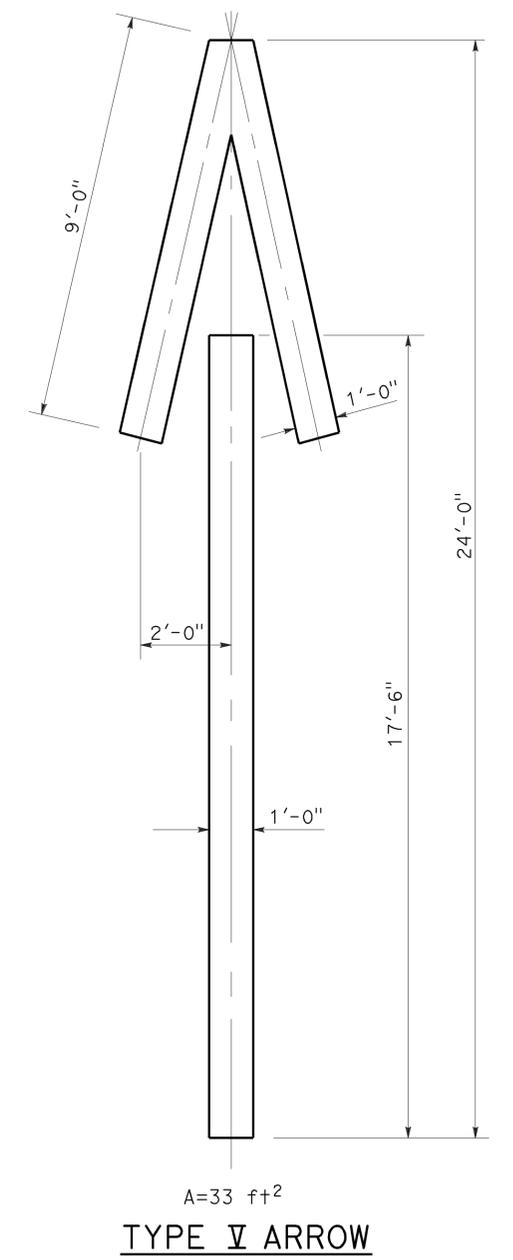
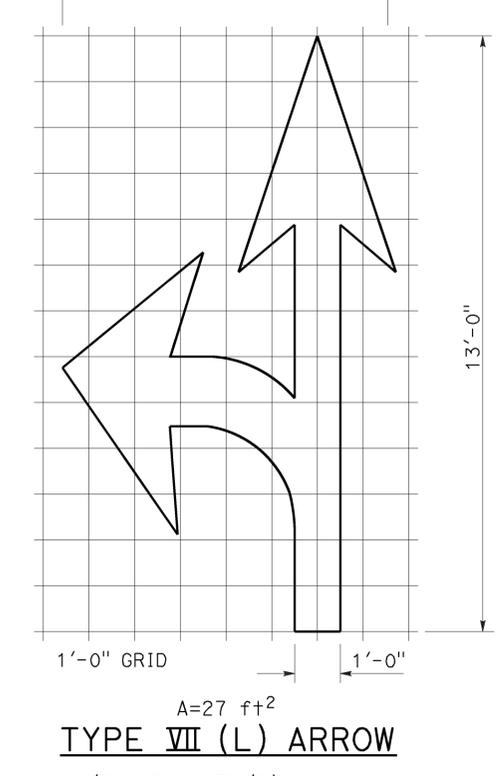
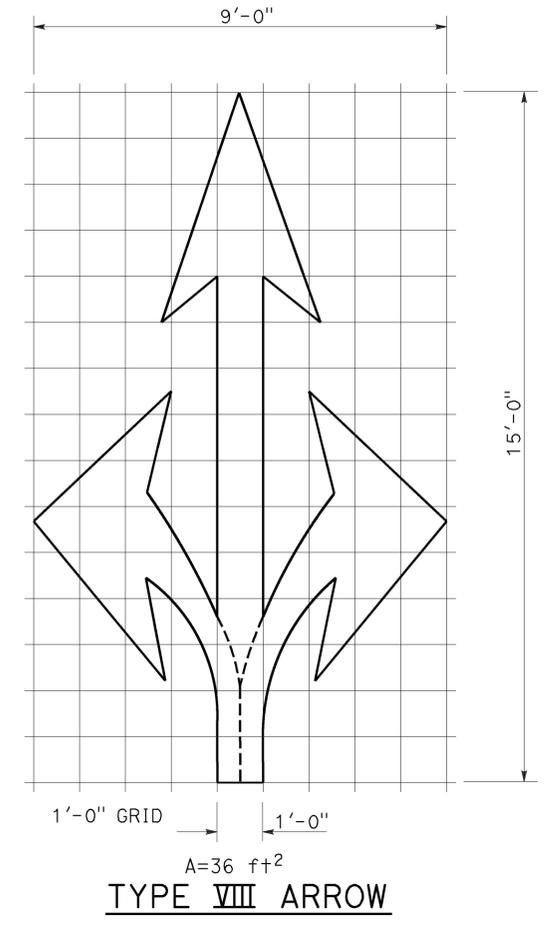
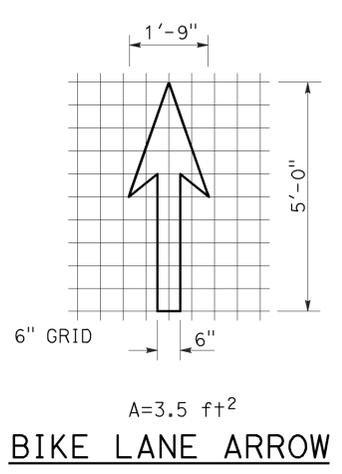
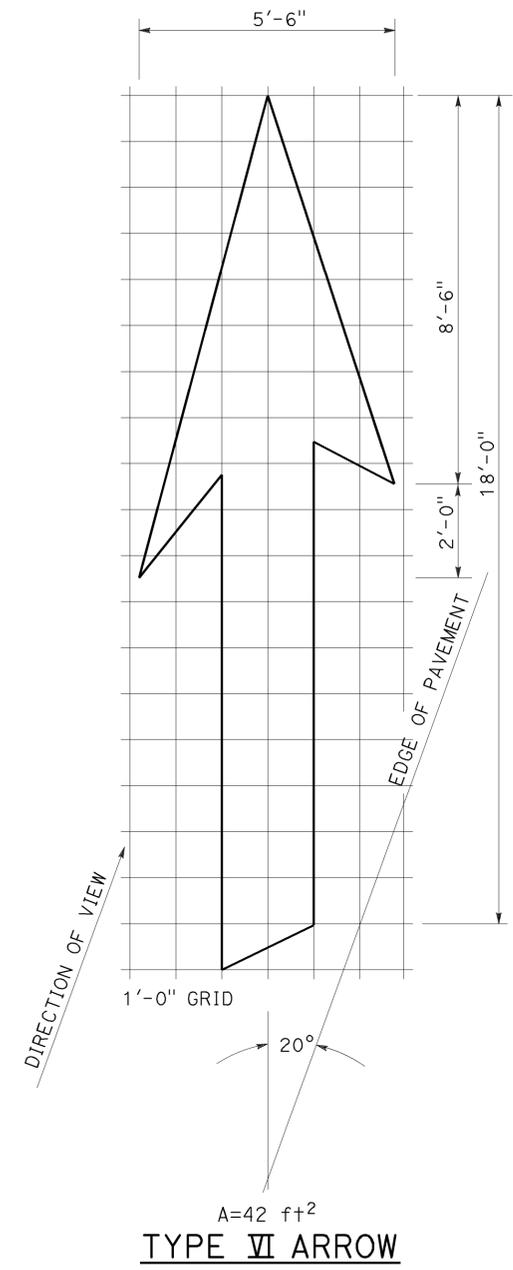
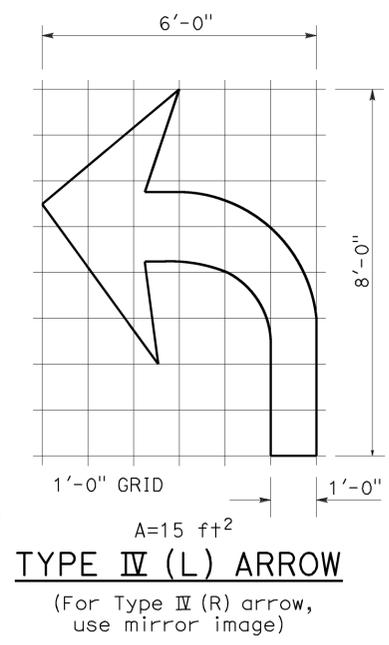
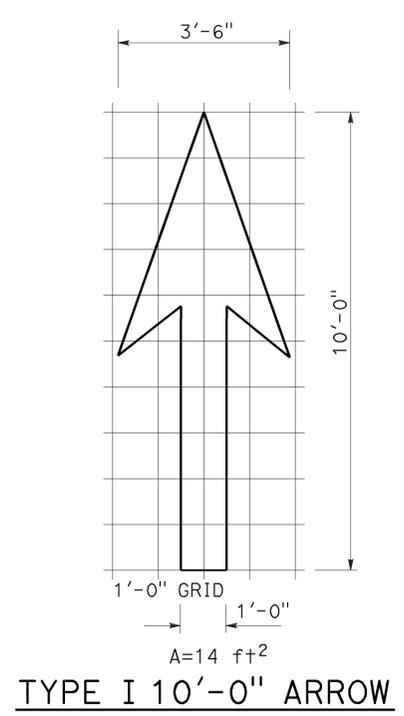
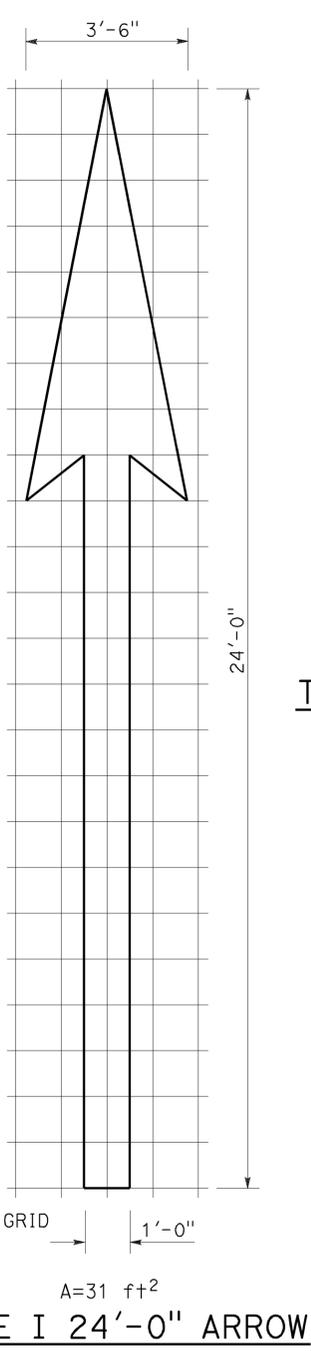
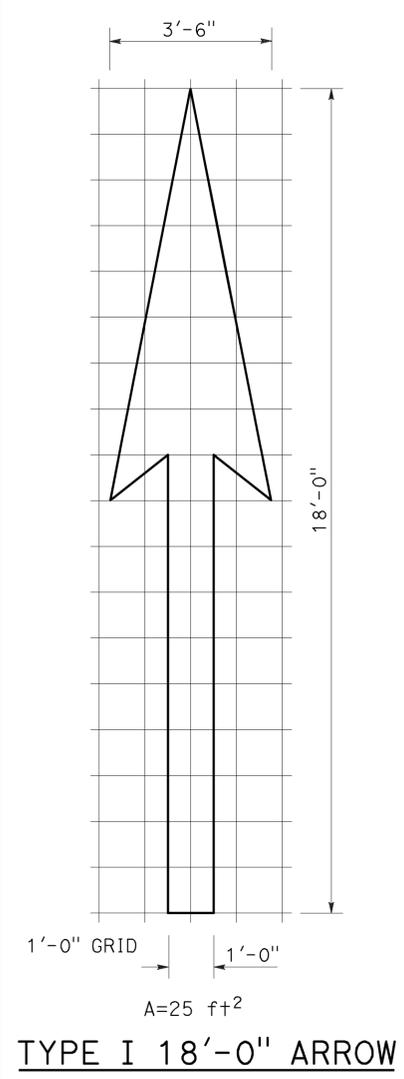
### REVISED STANDARD PLAN RSP A20C

2010 REVISED STANDARD PLAN RSP A20C

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Ker, Tul	5,46,58, 99,137,198	Var	7	19
REGISTERED CIVIL ENGINEER <i>Roberta L. McLaughlin</i> No. C40375 Exp. 3-31-13 CIVIL STATE OF CALIFORNIA					
April 20, 2012 PLANS APPROVAL DATE					
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					

TO ACCOMPANY PLANS DATED 1-25-16

2010 REVISED STANDARD PLAN RSP A24A



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

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

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

**REVISED STANDARD PLAN RSP A24A**

TO ACCOMPANY PLANS DATED 1-25-16

TABLE 1

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

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

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

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

TABLE 2

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

\* - Speed is posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph

\*\* - Longitudinal buffer space or flagger station spacing

\*\*\* - Use on sustained downgrade steeper than -3 percent and longer than 1 mile.

TABLE 3

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

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

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

**TRAFFIC CONTROL SYSTEM TABLES  
 FOR LANE AND RAMP CLOSURES**

NO SCALE

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

2010 REVISED STANDARD PLAN RSP T9

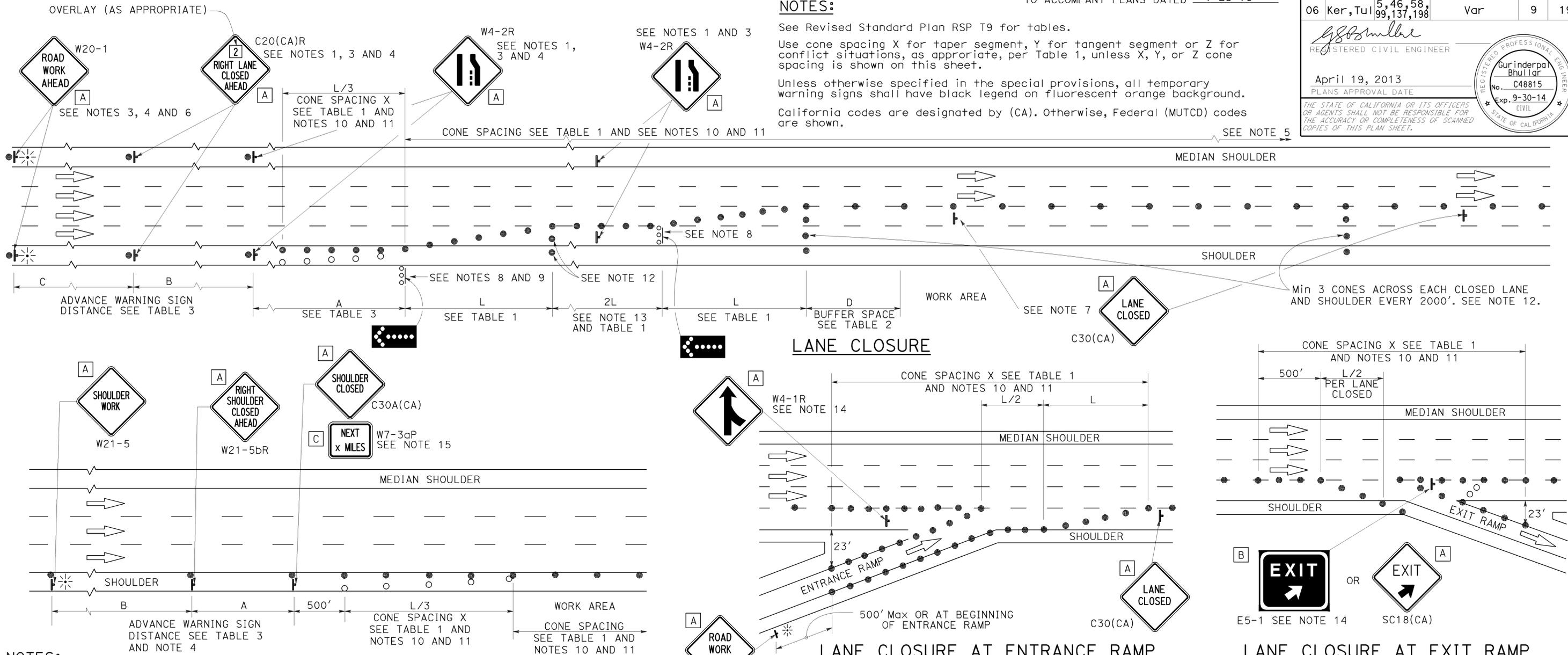
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Ker, Tul	5,46,58, 99,137,198	Var	9	19

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

TO ACCOMPANY PLANS DATED 1-25-16

**NOTES:**

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



**NOTES:**

1. 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 \_\_\_\_\_ 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 \_\_\_\_\_ MILES" plaque must be used if the shoulder closure extends beyond the distance that can be perceived by road users.

**LEGEND**

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

**SIGN PANEL SIZE (Min)**

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

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

NO SCALE

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

**REVISED STANDARD PLAN RSP T10**

2010 REVISED STANDARD PLAN RSP T10

**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.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Ker, Tul	5, 46, 58, 99, 137, 198	Var	10	19

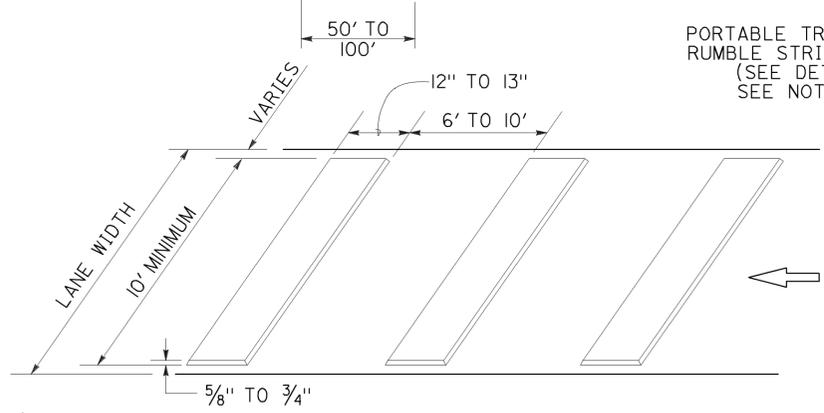
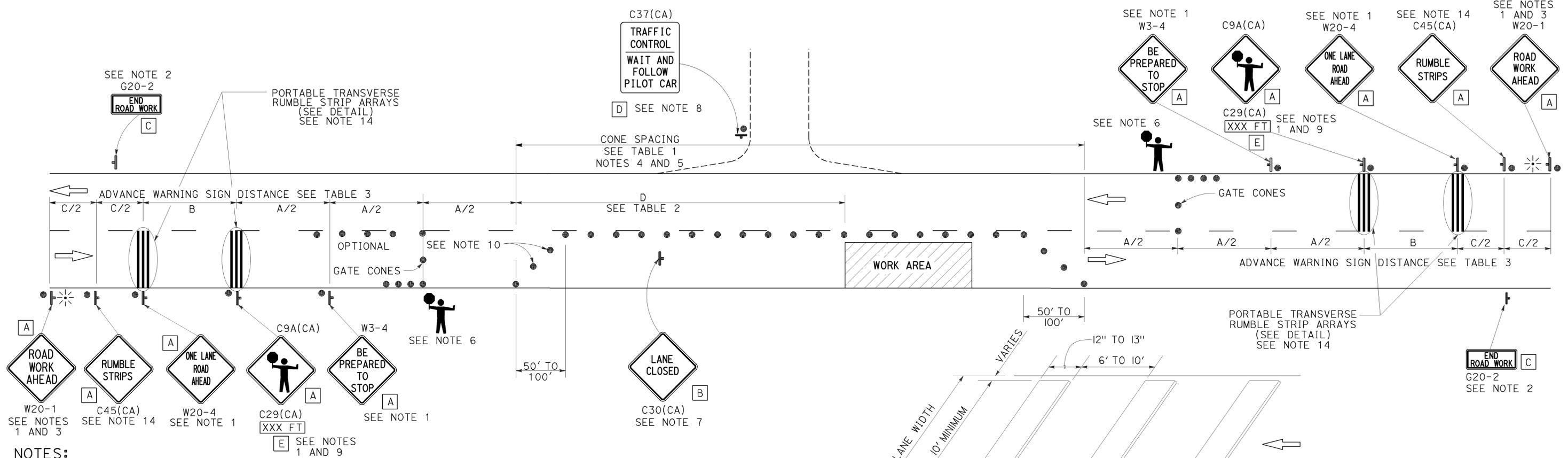
*Devinder Singh*  
 REGISTERED CIVIL ENGINEER  
 No. C50470  
 Exp. 6-30-17  
 CIVIL  
 STATE OF CALIFORNIA

October 30, 2015  
 PLANS APPROVAL DATE

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

**TYPICAL LANE CLOSURE WITH REVERSIBLE CONTROL**

TO ACCOMPANY PLANS DATED 1-25-16



**NOTES:**

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

**LEGEND**

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

**SIGN PANEL SIZE (Min)**

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

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

NO SCALE

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

**REVISED STANDARD PLAN RSP T13**

2010 REVISED STANDARD PLAN RSP T13

# 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
06	Ker, Tul	5,46,58,99,137,198	Var	11	19

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

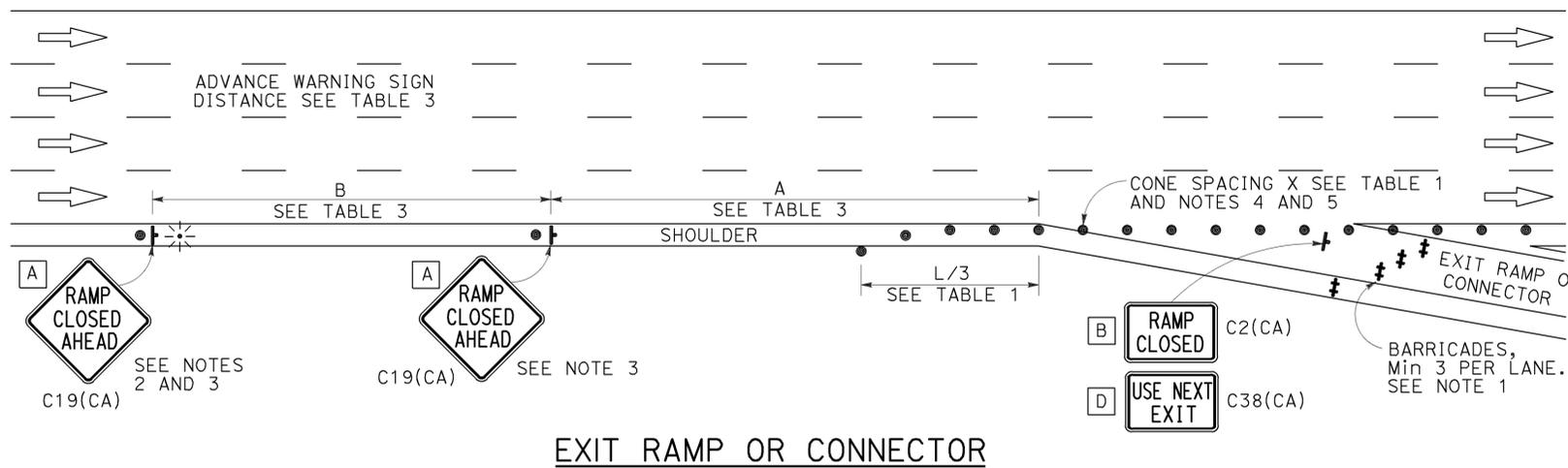
April 19, 2013  
 PLANS APPROVAL DATE

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

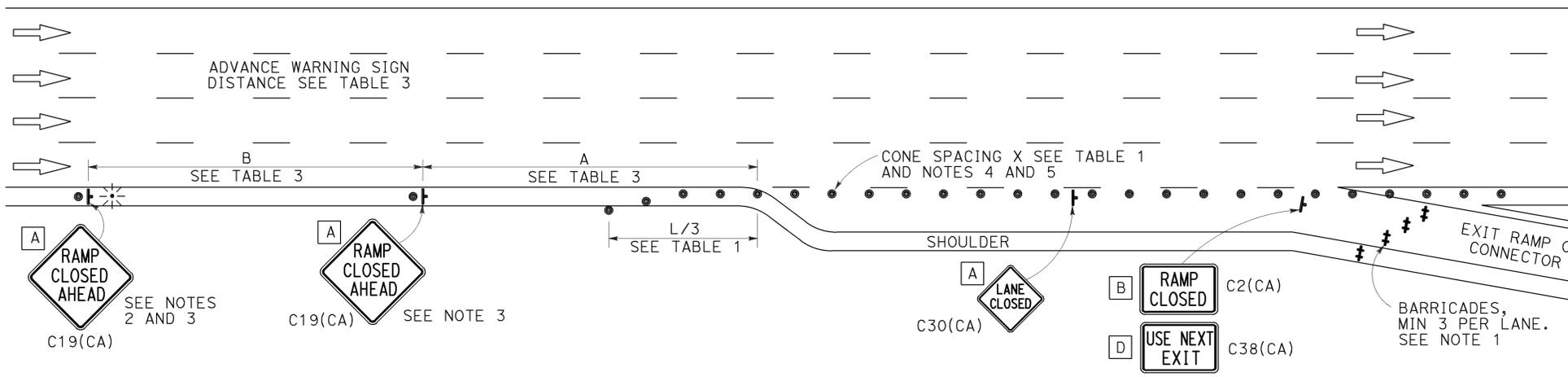
TO ACCOMPANY PLANS DATED 1-25-16

## NOTES:

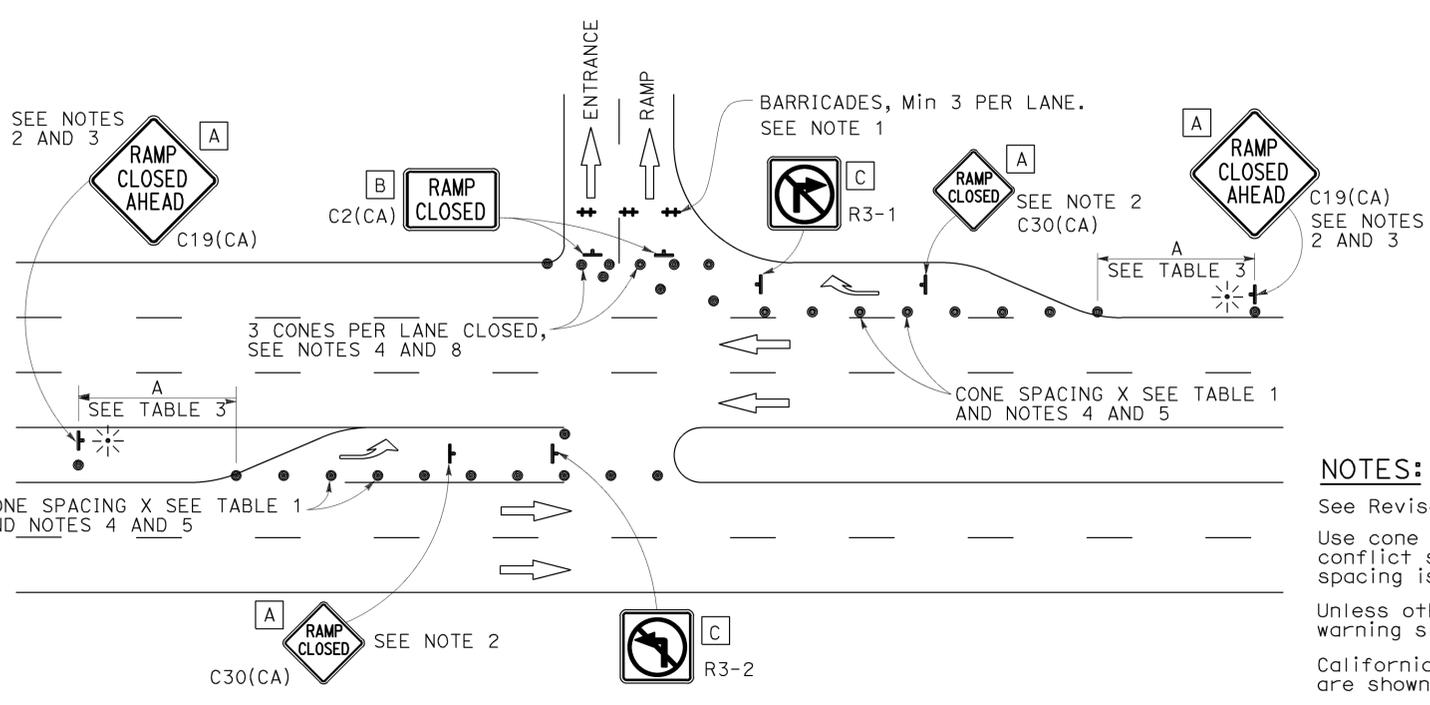
- Barricades shall be Type I, II, or III for closures lasting one week or less and Type III for closures lasting longer than one week.
- In addition to placing the C19(CA) "RAMP CLOSED AHEAD" and C30(CA) "RAMP CLOSED" signs, black on orange overlay plates with the word "CLOSED" may be mounted, as directed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



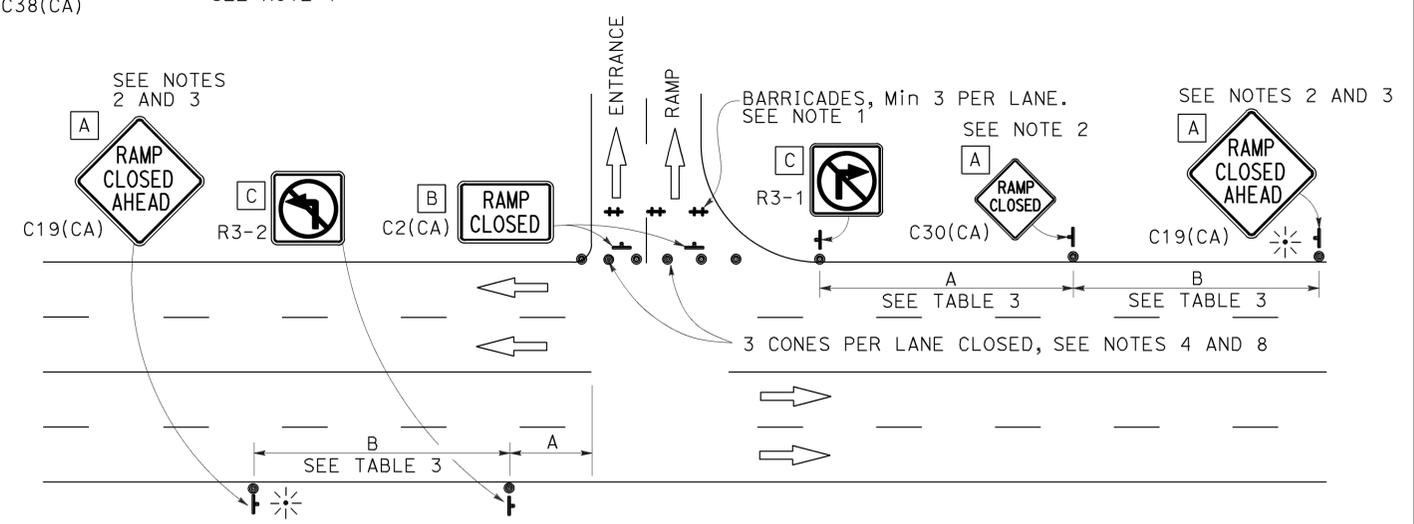
EXIT RAMP OR CONNECTOR



EXIT RAMP OR CONNECTOR WITH ADDITIONAL LANE



ENTRANCE RAMP WITH TURNING POCKETS



ENTRANCE RAMP WITHOUT TURNING POCKETS

## NOTES:

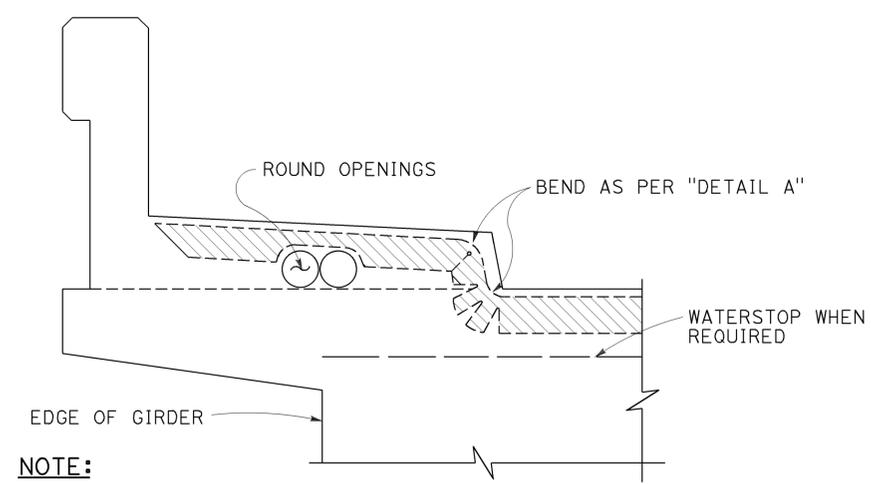
- See Revised Standard Plan RSP T9 for tables.
- Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.
- Unless otherwise specified in the special provisions, all temporary warning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

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

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

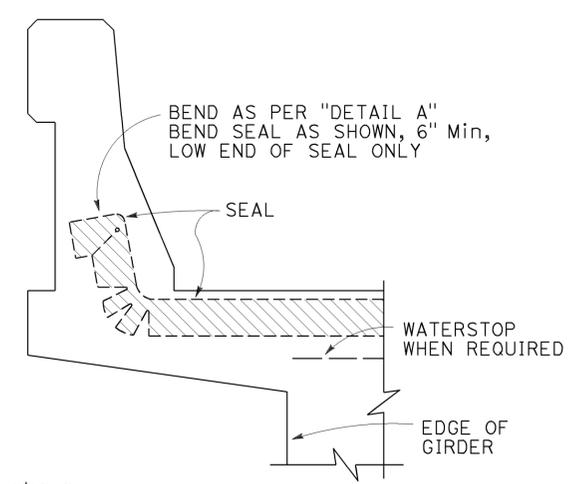
**REVISED STANDARD PLAN RSP T14**

2010 REVISED STANDARD PLAN RSP T14

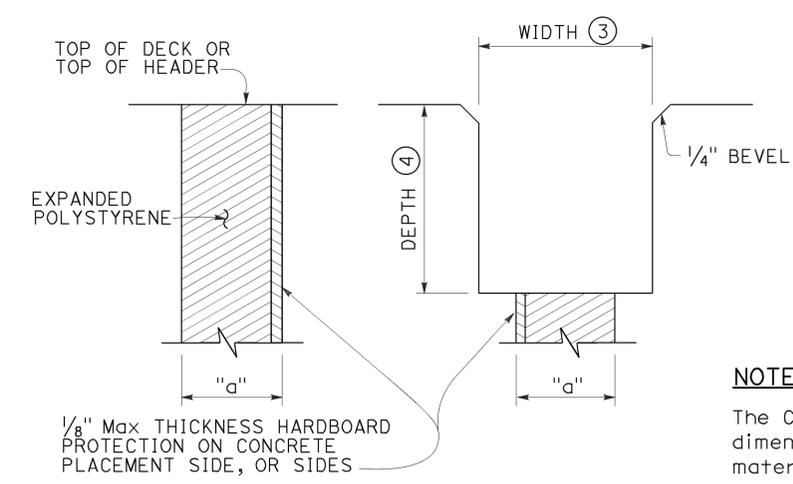


**NOTE:**  
 Type "B" seal shown. Type "A" seals to conform to the general path of seal shown, cuts for bending not required. Bend type "A" seals 3" up into curb or barrier rail on only the low end of the seal.

**CONCRETE BARRIER AND SIDEWALK**



**CONCRETE BARRIER**

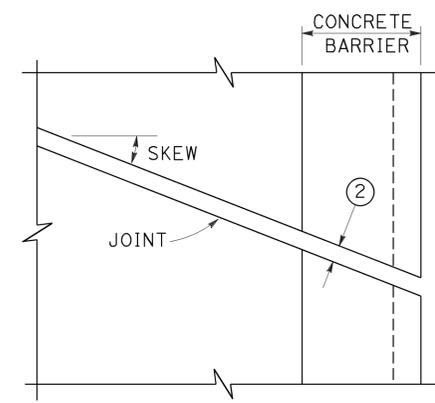


**FORMING DETAIL SAWCUT DETAIL**

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

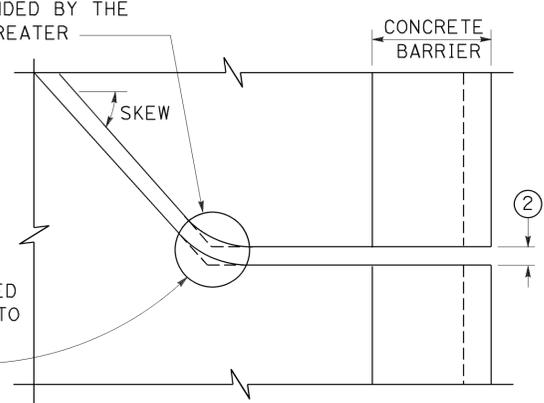
**JOINT SEALS DETAILS**

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

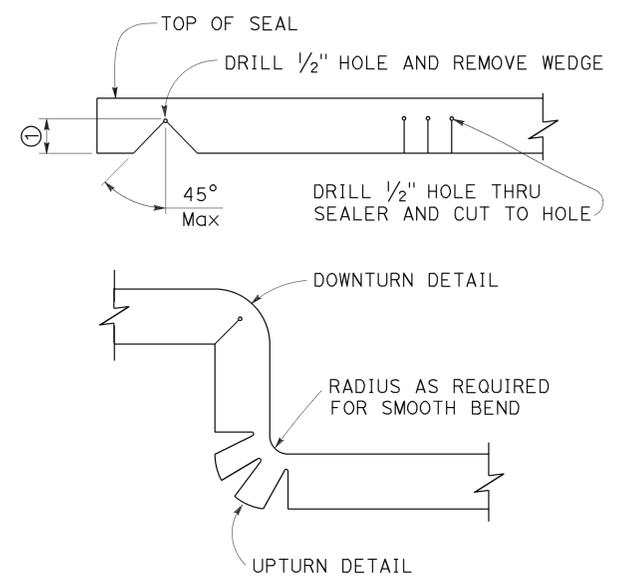


**PLAN OF JOINT (SKEW  $\leq 20^\circ$ )**

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



**PLAN OF JOINT (SKEW  $> 20^\circ$ )**

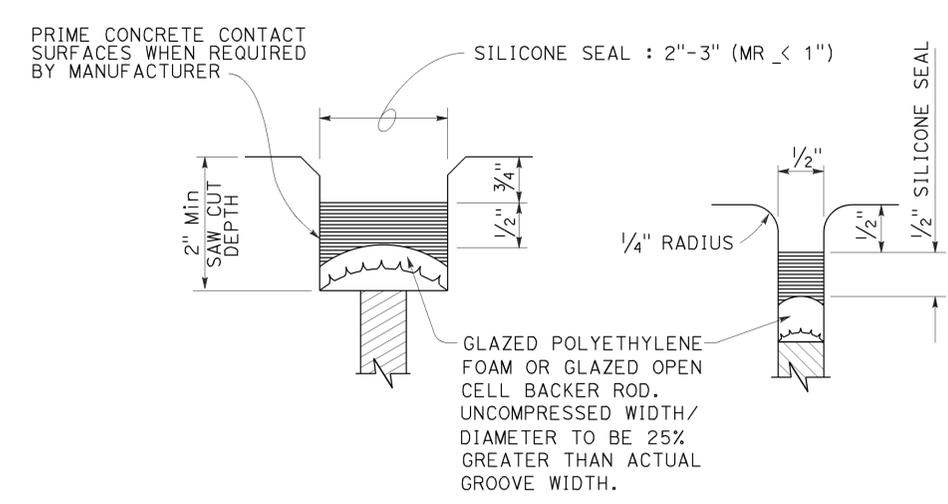


**DETAIL A**

- NOTES:**
- Make smooth cuts from the bottom of seal to 1 1/2" clear of top leaving at least one complete cell between the top of the cut and top of the seal. When necessary cut back of seal to clear conduit and round openings.
  - Opening in barrier to match width of sawn deck joint.
  - Sawcut groove widths shall be as ordered by the Engineer.
  - Depth of sawcut: Type A - Depth to be 2" minimum.  
 Type B - Depth to be equal to or greater than the depth of seal measured along the contact surface, when compressed to minimum width position ( $W_2$ ) plus dimensions shown.
  - MR (movement rating) as shown on other plan sheets.
  - Other depths must be approved by the Engineer.
  - A sidewalk joint shall be covered by an expansion joint armor.

**DIMENSIONS "a" OF JOINT REQUIRED**

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

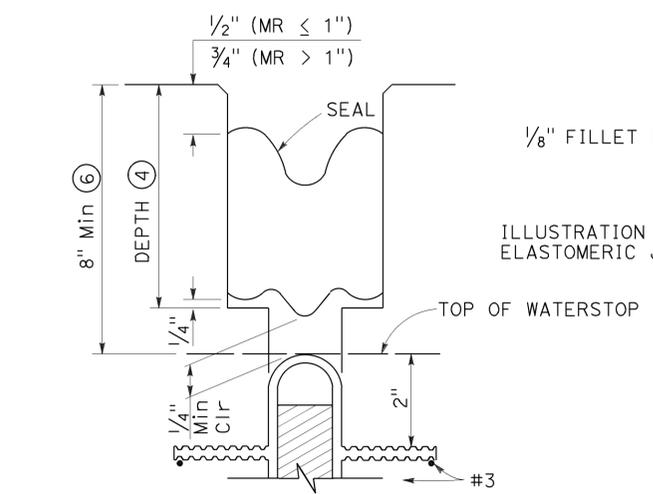


**TYPE A SEAL**

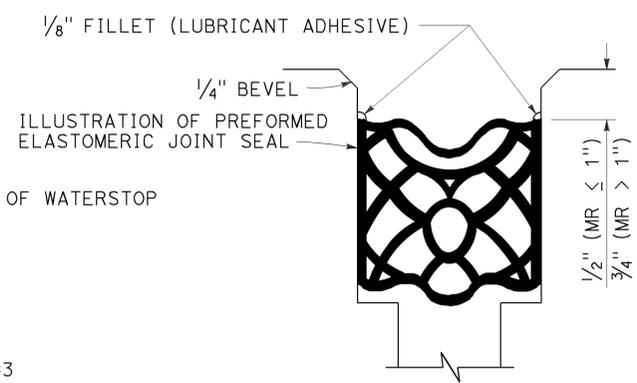
Movement rating : Silicone = 1" Max

**TYPE AL SEAL**

Longitudinal joints only



**TYPE B JOINT SEAL IN MINIMUM WIDTH POSITION ( $W_2$ )**

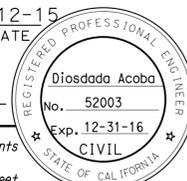


**TYPE B SEAL**

Movement Rating  $\leq 2$ "

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

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Ker, Tul	5,46,58,99,137,198	Var	13	19
REGISTERED CIVIL ENGINEER			DATE	11-12-15	
PLANS APPROVAL DATE			1-25-16		
					
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.					

**INDEX TO PLANS**

SHEET NO.	TITLE
1	GENERAL PLAN NO.1
2	GENERAL PLAN NO.2
3	GENERAL PLAN NO.3
4	GENERAL PLAN NO.4
5	GENERAL PLAN NO.5
6	JOINT SEAL DETAILS NO.1
7	JOINT SEAL DETAILS NO.2

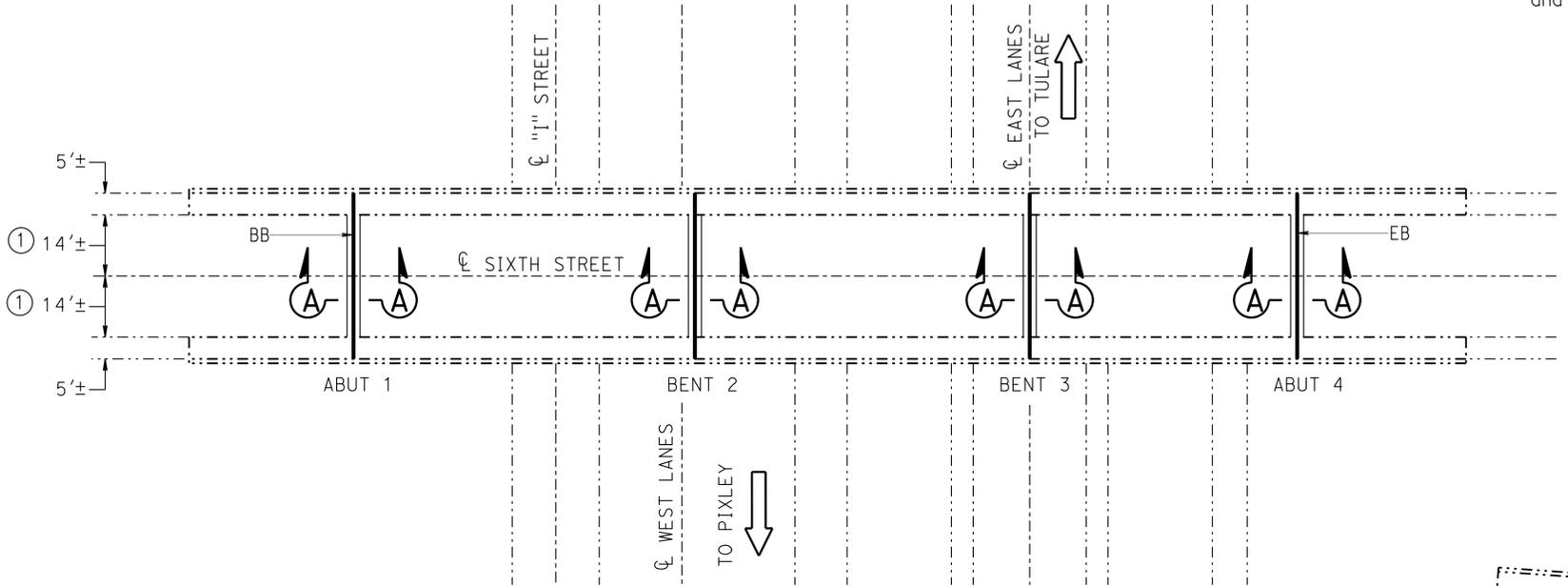
**STANDARD PLANS 2010**

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

NOTES: (APPLY TO THIS SHEET ONLY)

- Indicates existing.
- Indicates limits of clean expansion joint and install new joint seal. For details, see "JOINT SEAL DETAILS NO.1" sheet.
- ① Indicates limits of remove 2 1/2"± thick AC surfacing and construct 2 1/2"± thick polyester concrete expansion dam. For SECTION A-A, see "JOINT SEAL DETAILS NO.2" sheet.
- Indicates approximate location of remove unsound concrete and rapid setting concrete (patch). For details, see "TABLE" and "JOINT SEAL DETAILS NO.1" sheet.

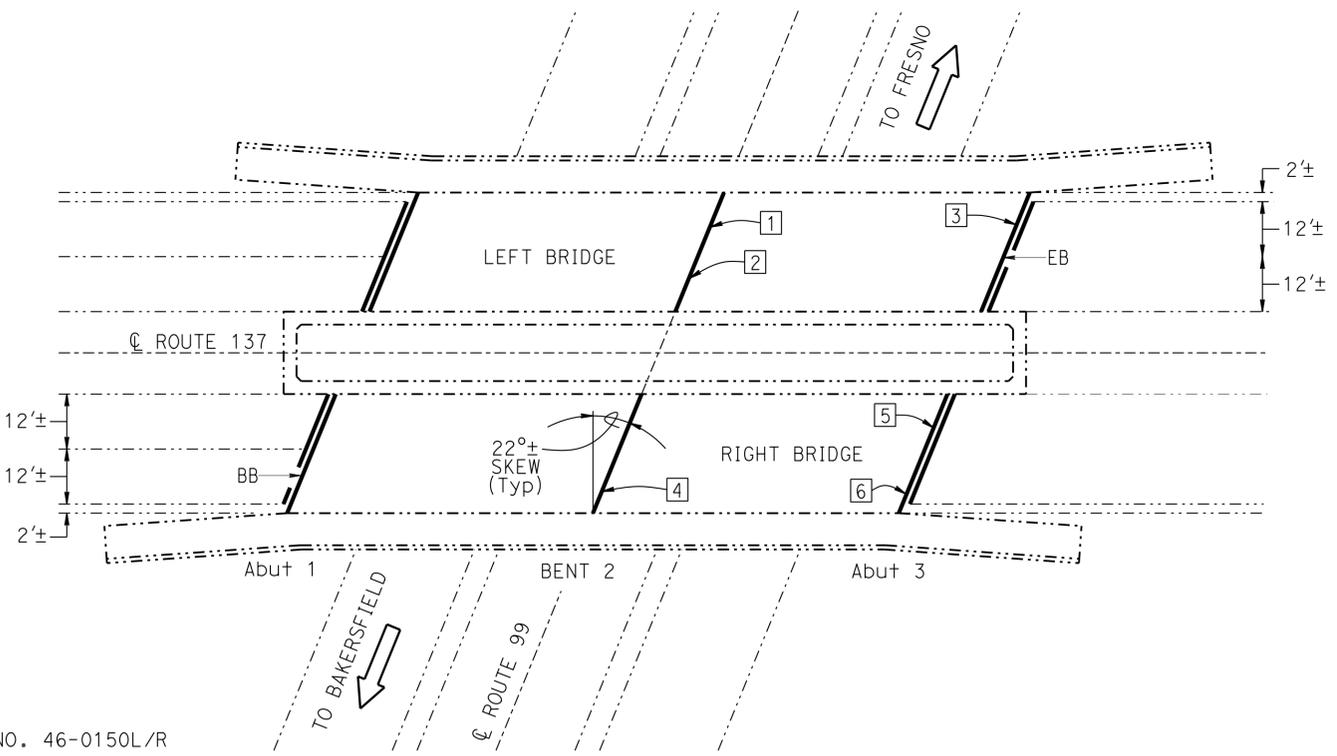
LOCATION	TABLE	
	REMOVE UNSOUND CONCRETE	
	RAPID SETTING CONCRETE (PATCH)	
	LENGTH (Ft) x WIDTH (Ft)	
①	3 X 1	
②	2 X 1	
③	1 X 1	
④	0.7 X 0.7	
⑤	1 X 1	
⑥	2 X 0.5	



**TIPTON OVERPASS**  
BR. NO. 46-0188, TUL, ROUTE 99, PM 18.95  
1"=20'

TIPTON OVERPASS BRIDGE NO. 46-0188

QUANTITIES		
POLYESTER CONCRETE EXPANSION DAM	70	CF
CLEAN EXPANSION JOINT	156	LF
JOINT SEAL (MR 1 1/2")	78	LF
JOINT SEAL (MR 1")	78	LF



**ROUTE 137/99 SEPARATION**  
BR. NO. 46-0150L/R, TUL, ROUTE 137, PM 16.63  
1' = 20'

ROUTE 137/99 SEPARATION BRIDGE NO. 46-0150L/R

QUANTITIES		
RAPID SETTING CONCRETE (PATCH)	2	CF
REMOVE UNSOUND CONCRETE	2	CF
CLEAN EXPANSION JOINT	282	LF
JOINT SEAL (MR 1 1/2")	224	LF
JOINT SEAL (MR 1")	58	LF

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

 DESIGN ENGINEER	DESIGN	BY D. ACOBA	CHECKED M. HASHIMOTO	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF MAINTENANCE	BRIDGE NO.	<b>ROUTE 5,46,58,99,137 &amp; 198 BRIDGES</b> <b>GENERAL PLAN NO. 1</b>	
	DETAILS	BY N. KELLEY	CHECKED M. HASHIMOTO	LAYOUT	BY N. KELLEY		CHECKED D. ACOBA	STRUCTURE MAINTENANCE DESIGN		VARIES
	QUANTITIES	BY D. ACOBA	CHECKED M. HASHIMOTO	SPECIFICATIONS	BY TANYA KERSHELL		PLANS AND SPECS COMPARED TANYA KERSHELL	VARIOUS		VARIOUS

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Ker, Tul	5,46,58,99,137,198	Var	14	19

11-12-15  
REGISTERED CIVIL ENGINEER DATE

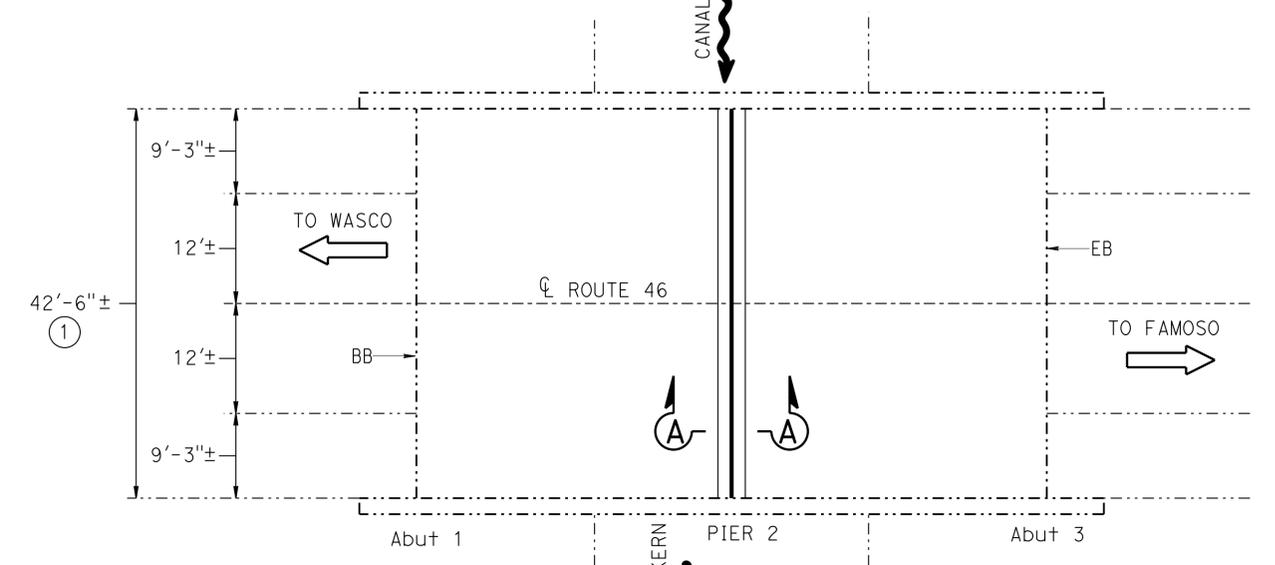
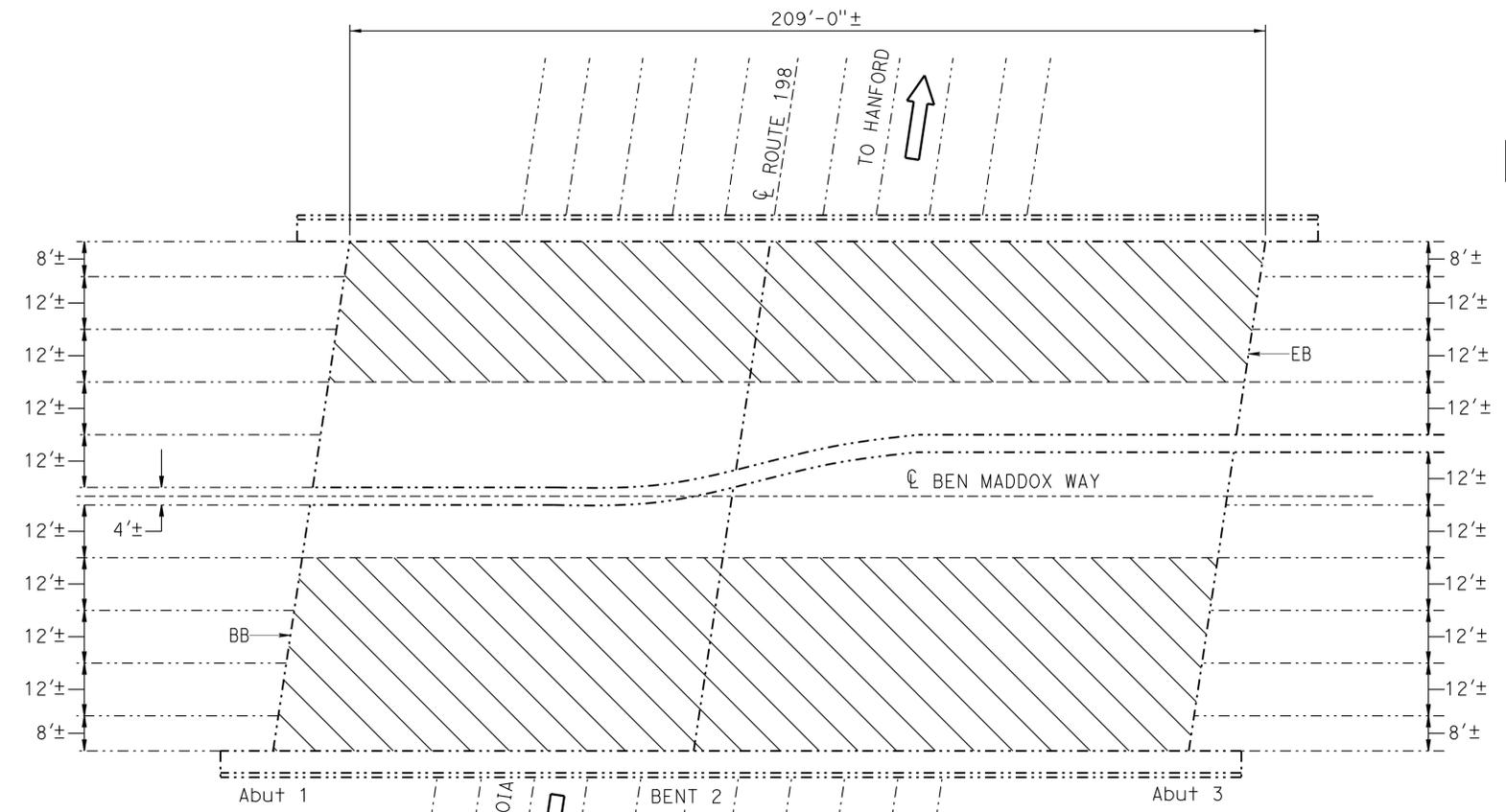
1-25-16  
PLANS APPROVAL DATE

Diosdada Acoba  
No. 52003  
Exp. 12-31-16  
CIVIL  
STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.

NOTES: (APPLY TO THIS SHEET ONLY)

- Indicates existing.
- Indicates limits of clean expansion joint and install new joint seal. For details, see "JOINT SEAL DETAILS NO.1" sheet.
- ▨ Indicates limits of prepare concrete bridge deck surface and treat bridge deck with methacrylate.
- ① Indicates limits of remove AC surfacing and construct polyester concrete expansion dam. For SECTION A-A, see "JOINT SEAL DETAILS NO.2" sheet.



**BEN MADDOX WAY OVERCROSSING**

BR. NO. 46-0200, TUL, ROUTE 198, PM R10.73  
1' = 20'

BEN MADDOX WAY OVERCROSSING  
QUANTITIES  
PUBLIC SAFETY PLAN  
PREPARE CONCRETE BRIDGE DECK SURFACE  
TREAT BRIDGE DECK  
FURNISH BRIDGE DECK TREATMENT MATERIAL

BRIDGE NO. 46-0200  
QUANTITIES  
LUMP SUM  
15,884 SQFT  
15,884 SQFT  
176 GAL

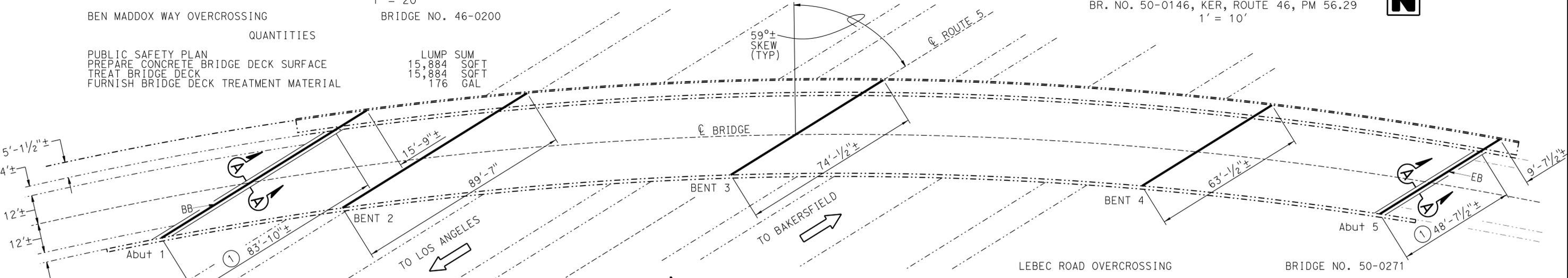
FRIANT - KERN CANAL

BRIDGE NO. 50-0146

QUANTITIES  
POLYESTER CONCRETE EXPANSION DAM 32 CF  
CLEAN EXPANSION JOINT 44 LF  
JOINT SEAL (MR 1/2") 44 LF

**FRIANT - KERN CANAL**

BR. NO. 50-0146, KER, ROUTE 46, PM 56.29  
1' = 10'



**LEBEC ROAD OVERCROSSING**

BR. NO. 50-0271, KER, ROUTE 5, PM 4.07  
1' = 20'

QUANTITIES  
POLYESTER CONCRETE EXPANSION DAM 61 CF  
CLEAN EXPANSION JOINT 389 LF  
JOINT SEAL (MR 1/2") 160 LF  
JOINT SEAL (MR 1/4") 64 LF  
BONDED JOINT SEAL (MR 2") 165 LF

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

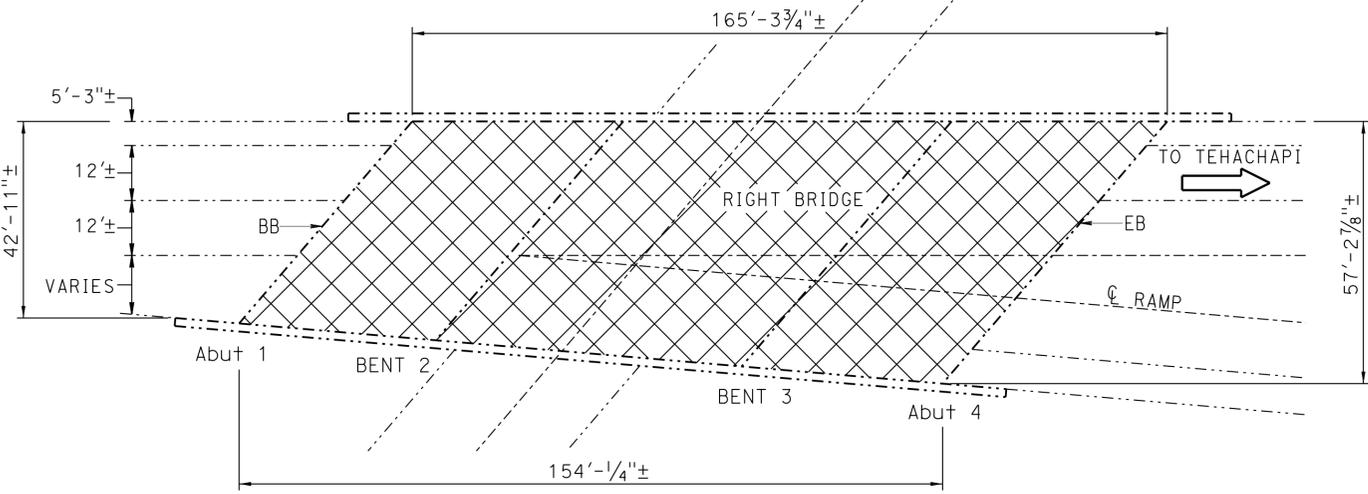
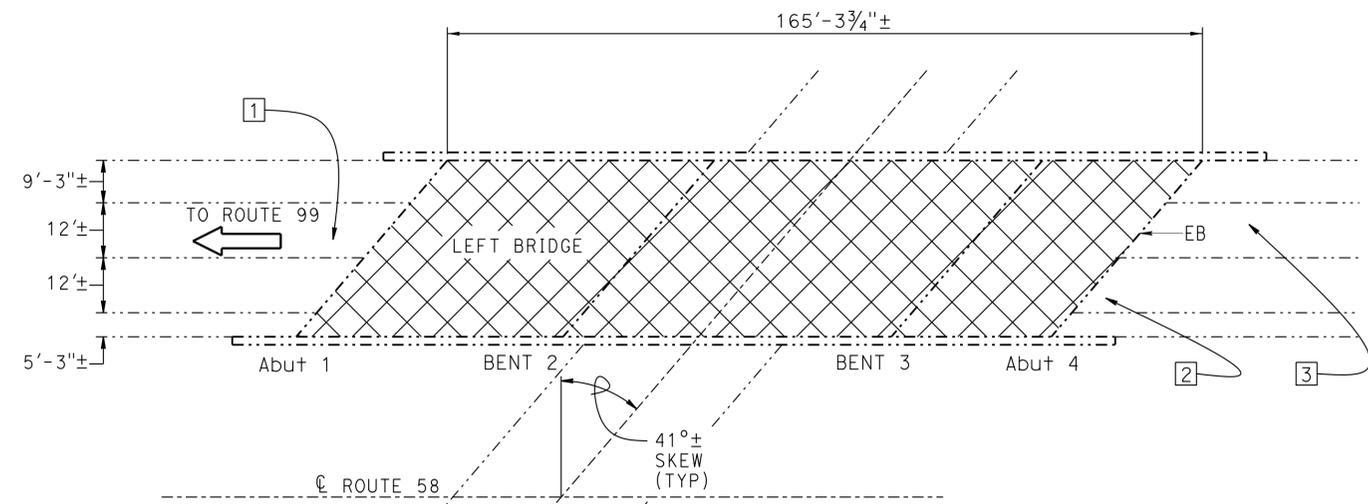
DESIGN ENGINEER  
11-12-15

DESIGN	BY D. ACOBA	CHECKED M. HASHIMOTO	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
DETAILS	BY N. KELLEY	CHECKED M. HASHIMOTO	LAYOUT	BY N. KELLEY
QUANTITIES	BY D. ACOBA	CHECKED M. HASHIMOTO	SPECIFICATIONS	BY TANYA KERSHELL

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE  
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. VARIES  
POST MILE VARIOUS  
**ROUTE 5,46,58,99,137 & 198 BRIDGES**  
**GENERAL PLAN NO. 2**



- NOTES: (APPLY TO THIS SHEET ONLY)
- Indicates existing.
  - Indicates limits of clean expansion joint and install new joint seal. For details, see "JOINT SEAL DETAILS NO.1" sheet.
  - ▨ Indicates limits of prepare concrete bridge deck surface and treat bridge deck with methacrylate.
  - ▧ Indicates limits of remove 1/2" chip seal.
  - ② ▭ Indicates limits of retain AC surfacing (2'-0" x 34'-0" x 1/2")
  - Indicates approximate location of remove unsound concrete and rapid setting concrete (patch). For details, see "TABLE" and "JOINT SEAL DETAILS NO.1" sheet.

**BAKERSFIELD CORRAL OVERHEAD**

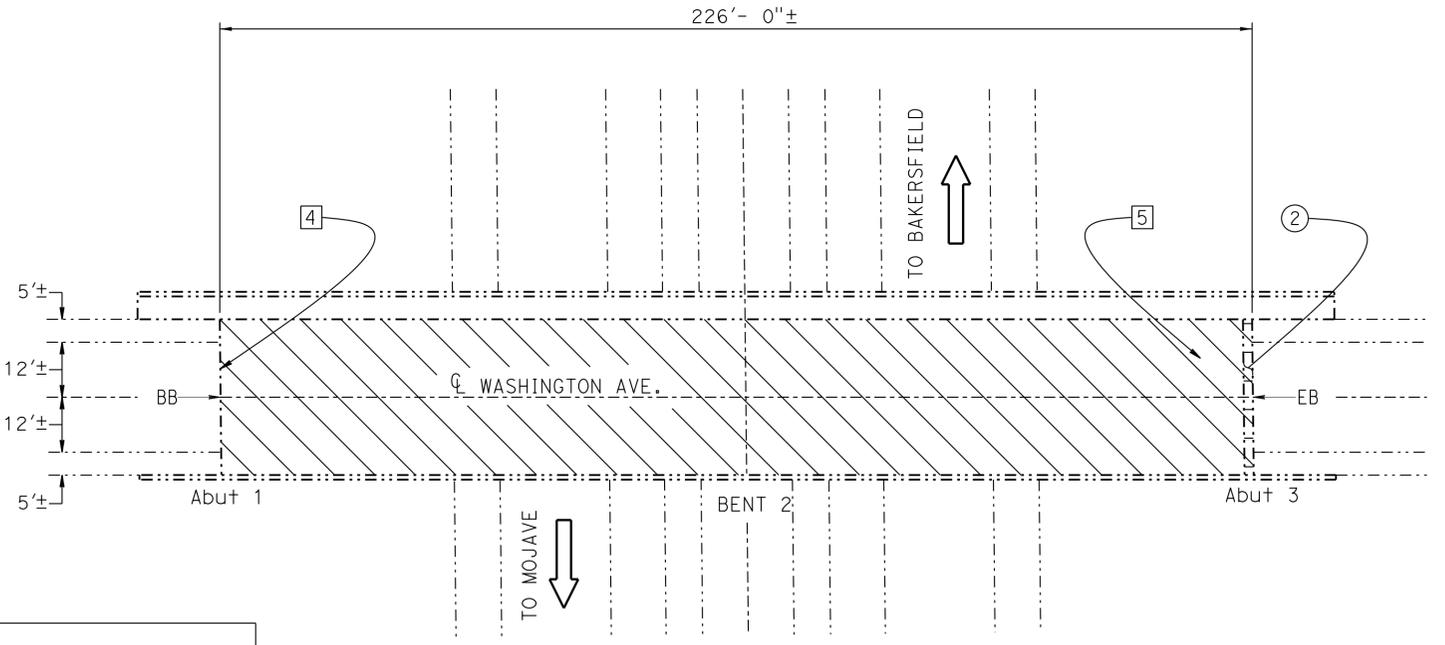
BR. NO. 50-0383L/R, KER, ROUTE 58, PM R55.20  
 1' = 20'  
 BAKERFIELD CORRAL OVERHEAD BRIDGE NO. 50-0383L/R

QUANTITIES

	LUMP	SUM
PUBLIC SAFETY PLAN	1	CF
RAPID SETTING CONCRETE (PATCH)	1	CF
REMOVE UNSOUND CONCRETE	14,360	SQFT
PREPARE CONCRETE BRIDGE DECK SURFACE	14,360	SQFT
TREAT BRIDGE DECK	191	GAL
FURNISH BRIDGE DECK TREATMENT MATERIAL	14,360	SQFT
REMOVE CHIP SEAL		

LOCATION	TABLE	
	REMOVE UNSOUND CONCRETE	RAPID SETTING CONCRETE (PATCH)
	LENGTH (Ft) x WIDTH (Ft)	
①	1 X 1	
②	1 X 1	
③	3 X 1	
④	2 X 0.5	
⑤	2 X 1	

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



**WASHINGTON STREET OVERCROSSING**

BR. NO. 50-0391, KER, ROUTE 58, PM R55.92  
 1' = 20'  
 WASHINGTON STREET OVERCROSSING BRIDGE NO. 50-0391

QUANTITIES

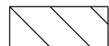
	LUMP	SUM
PUBLIC SAFETY PLAN	1	CF
RAPID SETTING CONCRETE (PATCH)	1	CF
REMOVE UNSOUND CONCRETE	7,684	SQFT
PREPARE CONCRETE BRIDGE DECK SURFACE	7,684	SQFT
TREAT BRIDGE DECK	85	GAL
FURNISH BRIDGE DECK TREATMENT MATERIAL		

INCOMPLETE PLAN FOR DESIGN STUDY PRINTED  
 DATE: 04-FEB-2016  
 Office of Structure Design  
 STATE OF CALIFORNIA

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Ker, Tul	5,46,58,99,137,198	Var	16	19
			11-12-15	REGISTERED CIVIL ENGINEER DATE	
			1-25-16	PLANS APPROVAL DATE	
REGISTERED PROFESSIONAL ENGINEER Diosdada Acoba No. 52003 Exp. 12-31-16 CIVIL STATE OF CALIFORNIA					
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.					

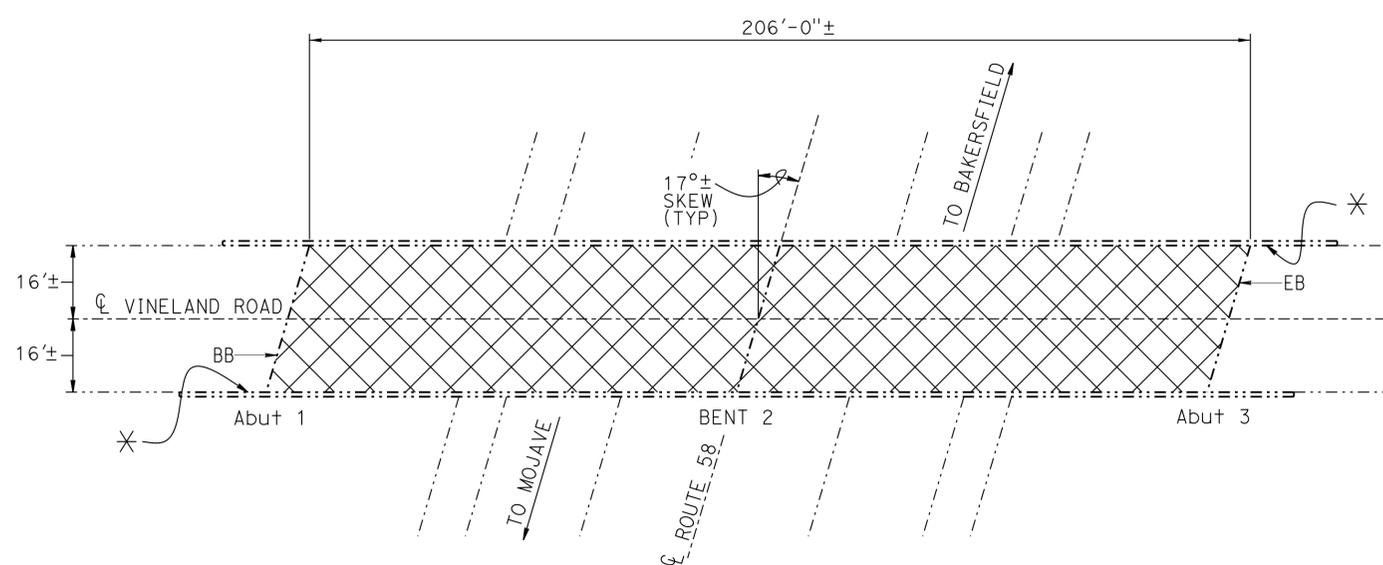
NOTES: (APPLY TO THIS SHEET ONLY)

----- Indicates existing.

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

 Indicates limits of remove 1/2"± chip seal.

\* Paint "VINELAND ROAD OVERCROSSING" "Br No. 50-0360" "PM R60.45" and "1970".



### VINELAND ROAD OVERCROSSING

BR. NO. 50-0360, KER, ROUTE 58, PM R60.45  
1' = 20'

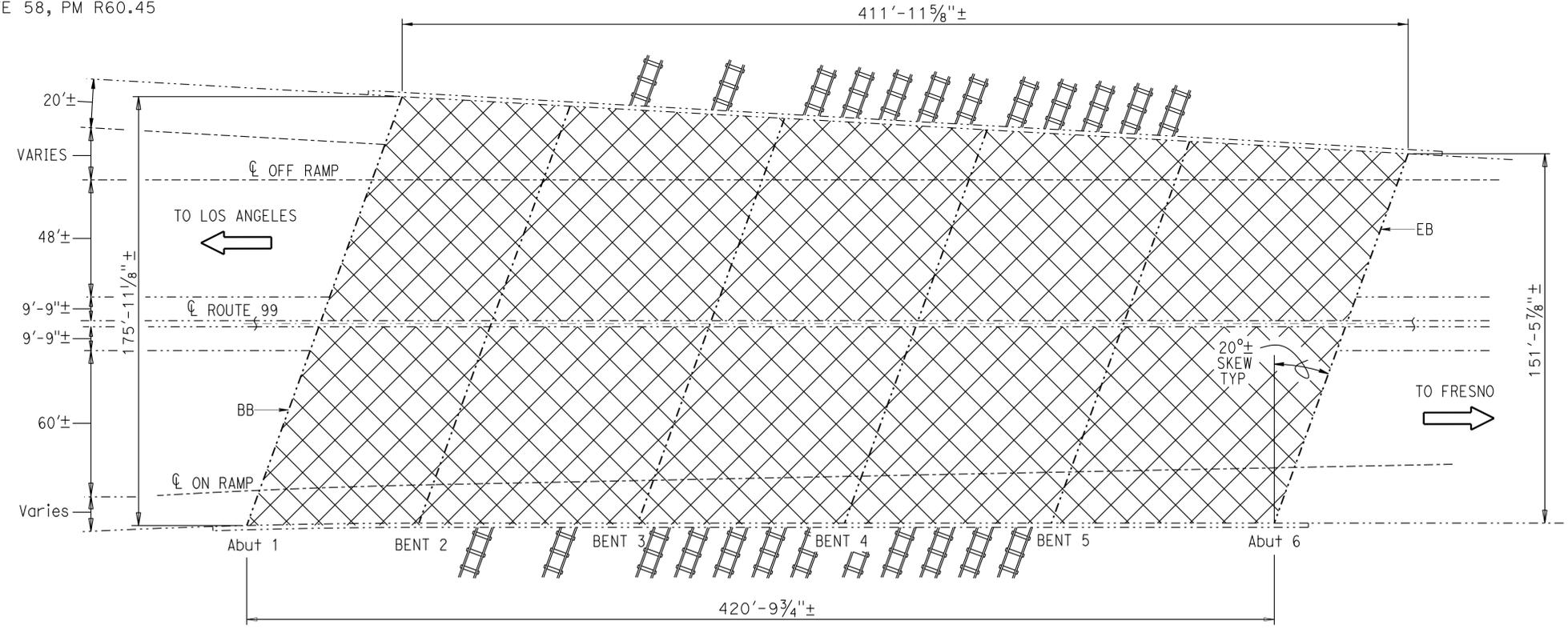
VINELAND ROAD OVERCROSSING

BRIDGE NO. 50-0360

#### QUANTITIES

PUBLIC SAFETY PLAN  
PREPARE CONCRETE BRIDGE DECK SURFACE  
TREAT BRIDGE DECK  
FURNISH BRIDGE DECK TREATMENT MATERIAL  
REMOVE CHIP SEAL

LUMP	SUM
6,592	SOFT
6,592	SOFT
88	GAL
6,592	SOFT



### BAKERSFIELD YARD OVERHEAD

BR. NO. 50-0239, KER, ROUTE 99, PM 24.78  
1"=30'

BAKERSFIELD YARD OVERHEAD

BRIDGE NO. 50-0239

#### QUANTITIES

PUBLIC SAFETY PLAN  
PREPARE CONCRETE BRIDGE DECK SURFACE  
TREAT BRIDGE DECK  
FURNISH BRIDGE DECK TREATMENT MATERIAL  
REMOVE CHIP SEAL

LUMP	SUM
68,167	SOFT
68,167	SOFT
909	GAL
68,167	SOFT

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

*Matthew W. Lee*  
DESIGN ENGINEER 11-12-15

DESIGN	BY D. ACOBA	CHECKED M. HASHIMOTO
DETAILS	BY N. KELLEY	CHECKED M. HASHIMOTO
QUANTITIES	BY D. ACOBA	CHECKED M. HASHIMOTO

LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
LAYOUT	BY N. KELLEY
SPECIFICATIONS	BY TANYA KERSHELL

CHECKED D. ACOBA	PLANS AND SPECS COMPARED TANYA KERSHELL
------------------	---

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE  
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO.	VARIES
POST MILE	VARIOUS

**ROUTE 5,46,58,99,137 & 198 BRIDGES**  
**GENERAL PLAN NO. 4**

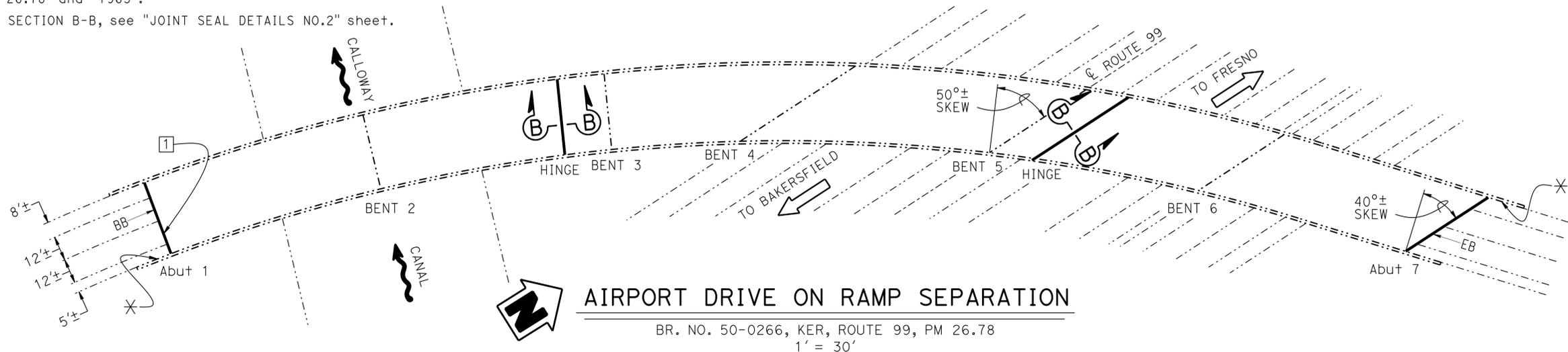
NOTES: (APPLY TO THIS SHEET ONLY)

- - - - - Indicates existing.
- Indicates limits of clean expansion joint and install new joint seal. For details, see "JOINT SEAL DETAILS NO.1" sheet.
-  Indicates limits of prepare concrete bridge deck surface and treat bridge deck with methacrylate.
- Indicates approximate location of remove unsound concrete and rapid setting concrete (patch). For details, see "TABLE" and "JOINT SEAL DETAILS NO.1" sheet.
- \* Paint "AIRPORT DRIVE ON RAMP SEPARATION" "Br No. 50-0266" "PM 26.78" and "1963".  
For SECTION B-B, see "JOINT SEAL DETAILS NO.2" sheet.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Ker, Tul	5,46,58,99,137,198	Var	17	19
			11-12-15	REGISTERED CIVIL ENGINEER DATE	
			1-25-16	PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER  
 Diosdada Acoba  
 No. 52003  
 Exp. 12-31-16  
 CIVIL  
 STATE OF CALIFORNIA

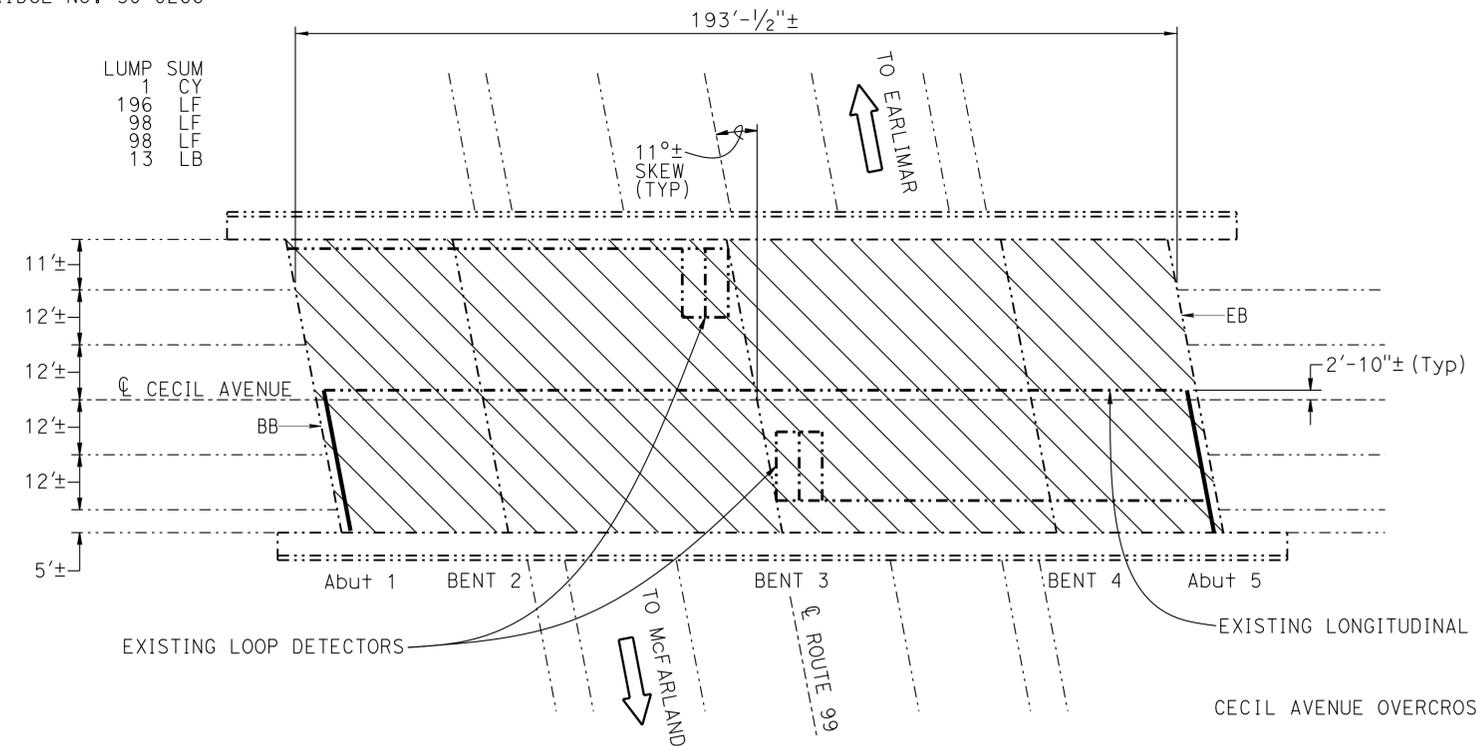
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.



AIRPORT DRIVE ON RAMP SEPARATION  
BRIDGE NO. 50-0266

QUANTITIES

BRIDGE REMOVAL (PORTION)	LUMP	SUM	
STRUCTURAL CONCRETE, BRIDGE	1	CY	
CLEAN EXPANSION JOINT	196	LF	
BONDED JOINT SEAL (MR 1")	98	LF	
BONDED JOINT SEAL (MR 2")	98	LF	
BAR REINFORCING STEEL (BRIDGE)	13	LB	



CECIL AVENUE OVERCROSSING  
BRIDGE NO. 50-0213

QUANTITIES

PREPARE CONCRETE BRIDGE DECK SURFACE	12,355	SQFT
TREAT BRIDGE DECK	12,355	SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	137	GAL
CLEAN EXPANSION JOINT	66	LF
JOINT SEAL (MR 1/2")	66	LF

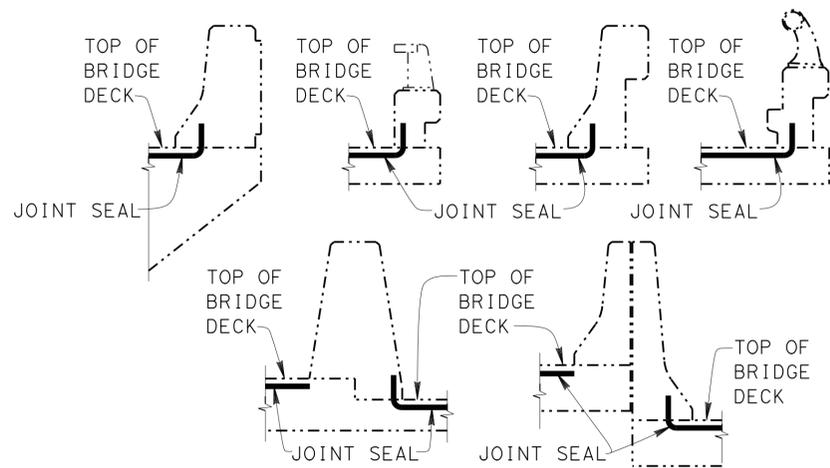
LOCATION	TABLE	
	REMOVE UNSOUND CONCRETE	
	RAPID SETTING CONCRETE (PATCH)	
	LENGTH (F+) x WIDTH (F+)	
1	4 X 0.5	

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

 DESIGN ENGINEER 11-12-15	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	BRIDGE NO.	<b>ROUTE 5,46,58,99,137 &amp; 198 BRIDGES</b>  <b>GENERAL PLAN NO. 5</b>	
	DETAILS	BY N. KELLEY	CHECKED M. HASHIMOTO	LAYOUT	BY N. KELLEY		CHECKED D. ACOBA		VARIES
	QUANTITIES	BY D. ACOBA	CHECKED M. HASHIMOTO	SPECIFICATIONS	BY TANYA KERSHELL		PLANS AND SPECS COMPARED TANYA KERSHELL		POST MILE

# JOINT SEAL TABLE

BRIDGE NAME	BRIDGE NUMBER	LOCATION	MINIMUM "MR" (INCHES)	APPROXIMATE LENGTH (FEET)	EXISTING WATERSTOP	APPROX DEPTH TO CLEAN EXP JOINT (INCHES)	
TIPTON OVERPASS	46-0188	Abut 1	BW	1/2	39	YES	6
		BENT 2	JT	1	39	YES	6
		BENT 3	JT	1	39	YES	6
		Abut 4	BW	1/2	39	YES	6
ROUTE 137/99 SEPARATION	46-0150	Abut 1L	PN	1/2	27	NO	12
		Abut 1L	BW	1/2	29	NO	12
		BENT 2L	JT	1	29	NO	12
		Abut 3L	BW	1/2	29	NO	12
		Abut 3L	PN	1/2	27	NO	12
		Abut 1R	PN	1/2	27	NO	12
		Abut 1R	BW	1/2	29	NO	12
		BENT 2R	JT	1	29	NO	12
		Abut 3R	BW	1/2	29	NO	12
		Abut 3R	PN	1/2	27	NO	12
LEBEC ROAD OVERCROSSING	50-0271	Abut 1	BW	1/2	101	YES	6
		BENT 2	JT	2*	90	NO	12
		BENT 3	JT	2*	75	NO	12
		BENT 4	JT	1	64	NO	12
		Abut 5	BW	1/2	59	YES	6
FRIANT-KERN CANAL	50-0146	PIER 2	JT	1/2	44	NO	12
AIRPORT DRIVE ON RAMP SEPARATION	50-0266	Abut 1	BW	1*	49	YES	6
		HINGE NEAR BENT 3	H	2*	49	YES	7
		HINGE NEAR BENT 5	H	2*	49	YES	7
		Abut 7	BW	1*	49	YES	6
CECIL AVENUE OVERCROSSING	50-0213	Abut 1	BW	1/2	33	YES	7
		Abut 5	BW	1/2	33	YES	7

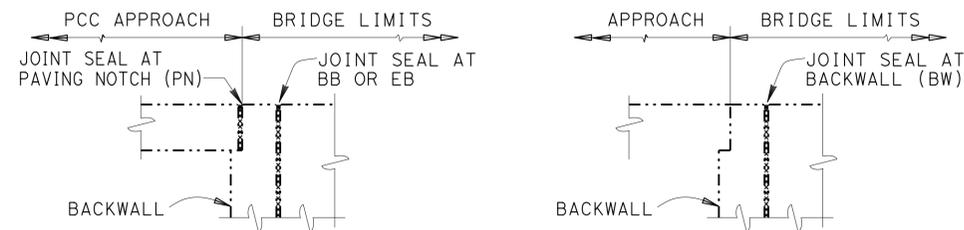
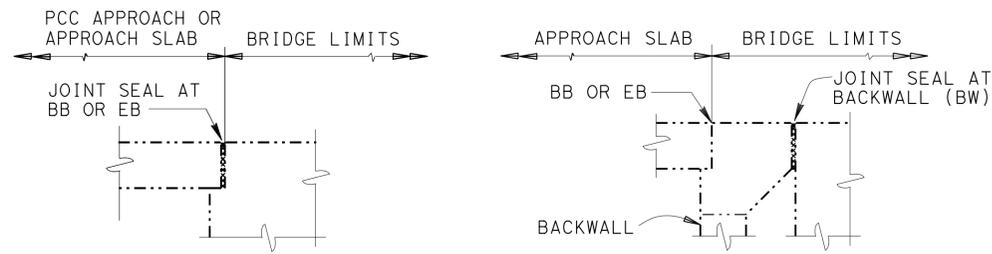


Notes: Details shown for illustration purposes only. For use only where deck joint matches the sidewalk, curb or barrier rail joint.

- 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

**LEGEND:**  
 PN = Paving Notch  
 BW = Abutment Backwall Joint  
 JT = Expansion Joint  
 H = Hinge  
 \* = Use Bonded Joint Seal



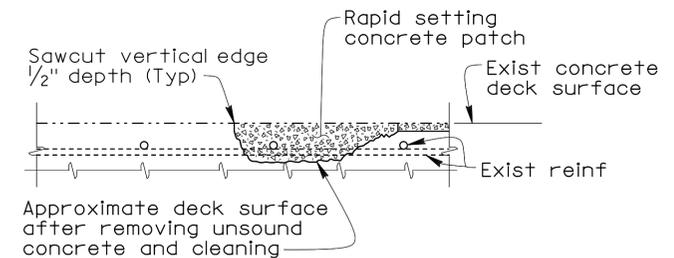
**JOINT SEAL LOCATION**

**TEMPORARY DECK PLATE LOAD CRITERIA**

MOMENT DEMAND/FOOT (Kips-ft/ft)	BOLT SHEAR/FOOT (Kips/ft)	BOLT TENSION (Kips)
15.6	7.8	10.4

Plate deflection shall not exceed  $s/300$  ( $s$  = span).  
 Maximum spacing of anchorage = 12 in.

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



Note: Locations to be determined by the Engineer. Reinforcement may be encountered during deck concrete removal.

NO SCALE

DESIGN	BY D. ACOBA	CHECKED M. HASHIMOTO
DETAILS	BY N. KELLEY	CHECKED M. HASHIMOTO
QUANTITIES	BY D. ACOBA	CHECKED M. HASHIMOTO

**STATE OF CALIFORNIA**  
 DEPARTMENT OF TRANSPORTATION

**DIVISION OF MAINTENANCE**  
 STRUCTURE MAINTENANCE DESIGN

BRIDGE NO.	VARIES
POST MILE	VARIOUS

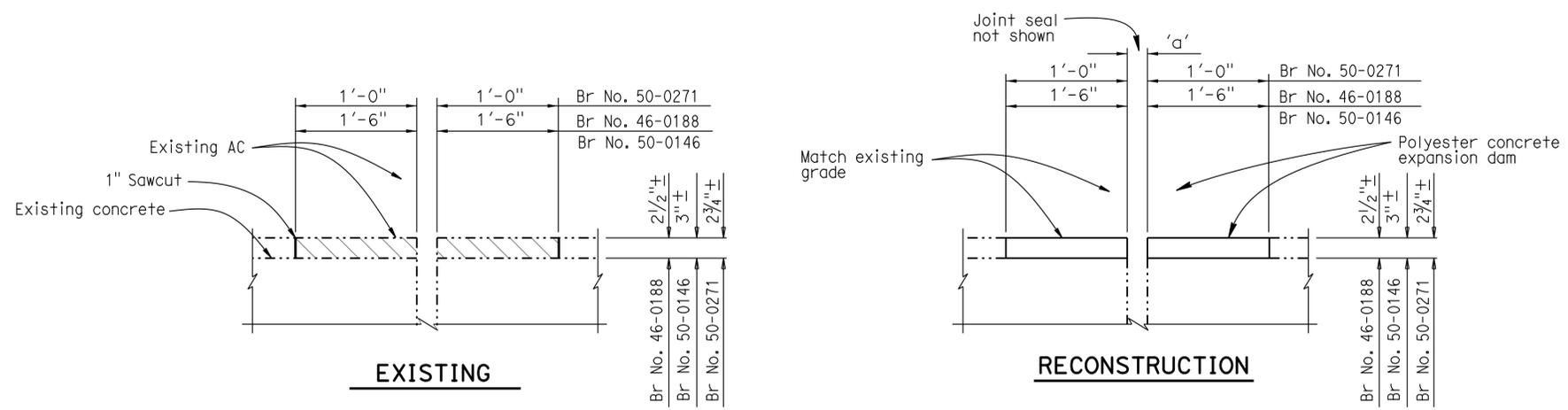
**ROUTE 5, 46, 58, 99, 137 & 198 BRIDGES**

**JOINT SEAL DETAILS NO.1**

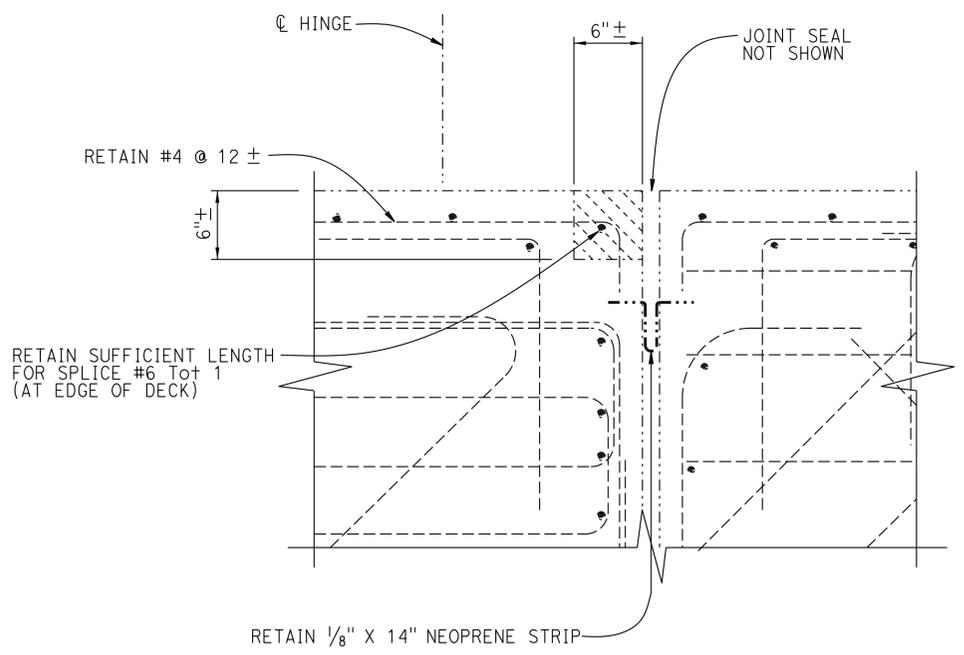
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Ker, Tul	5,46,58,99,137,198	Var	19	19
REGISTERED CIVIL ENGINEER			DATE	11-12-15	
PLANS APPROVAL DATE			1-25-16		
REGISTERED PROFESSIONAL ENGINEER Diosdada Acoba No. 52003 Exp. 12-31-16 CIVIL STATE OF CALIFORNIA					
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.					

NOTES: (APPLY TO THIS SHEET ONLY)

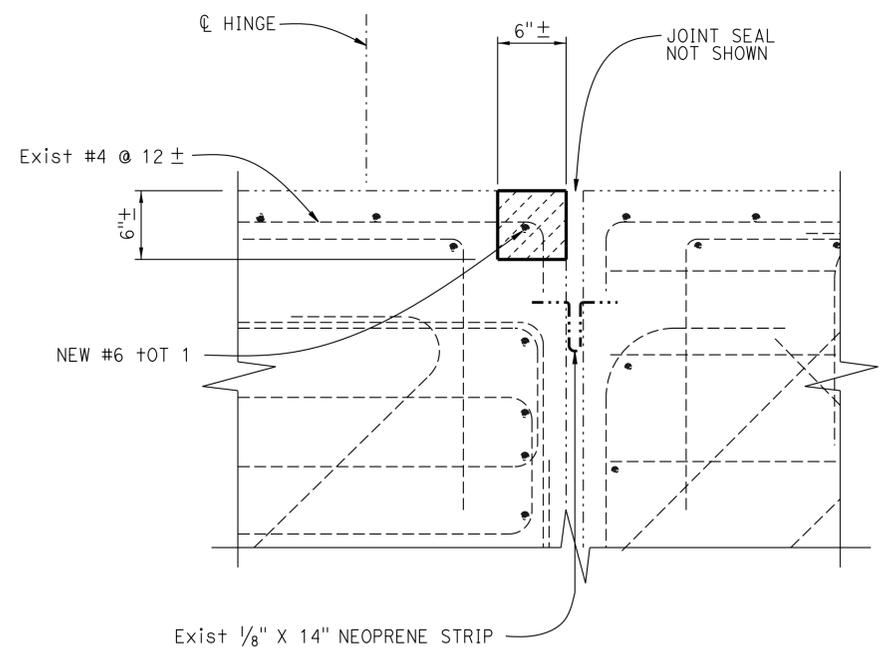
-  Indicates limits of bridge removal (portion).
-  Indicates limits of structural concrete, bridge.



**SECTION A-A**  
 NO SCALE  
 Br No. 46-0188  
 Br No. 50-0146  
 Br No. 50-0271



**EXISTING**



**RECONSTRUCTION**

**SECTION B-B**  
 NO SCALE  
 (Br No. 50-0266)

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

DESIGN	BY D. ACOBA	CHECKED M. HASHIMOTO
DETAILS	BY N. KELLEY	CHECKED M. HASHIMOTO
QUANTITIES	BY D. ACOBA	CHECKED M. HASHIMOTO

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE  
 STRUCTURE MAINTENANCE DESIGN

BRIDGE NO.	VARIES
POST MILE	VARIOUS

**ROUTE 5,46,58,99,137 & 198 BRIDGES**  
**JOINT SEAL DETAILS NO.2**