Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Tuo	108	R11.3/R21.0	1	20

INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2	TYPICAL CROSS SECTIONS
3-4	CONSTRUCTION DETAILS
5	CONSTRUCTION AREA SIGNS
6	PAVEMENT DELINEATION AND SIGN QUANTITIES
7-8	SIGN PLANS
9-10	SUMMARY OF QUANTITIES
11-20	REVISED STANDARD PLANS

THIS STANDARD PLANS LIST APPLICABLE TO THIS CONNTRACT IS INCLUDED IN THE NOTICE TO CONTRACTORS AND SPECIAL PROVISIONS BOOK

STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

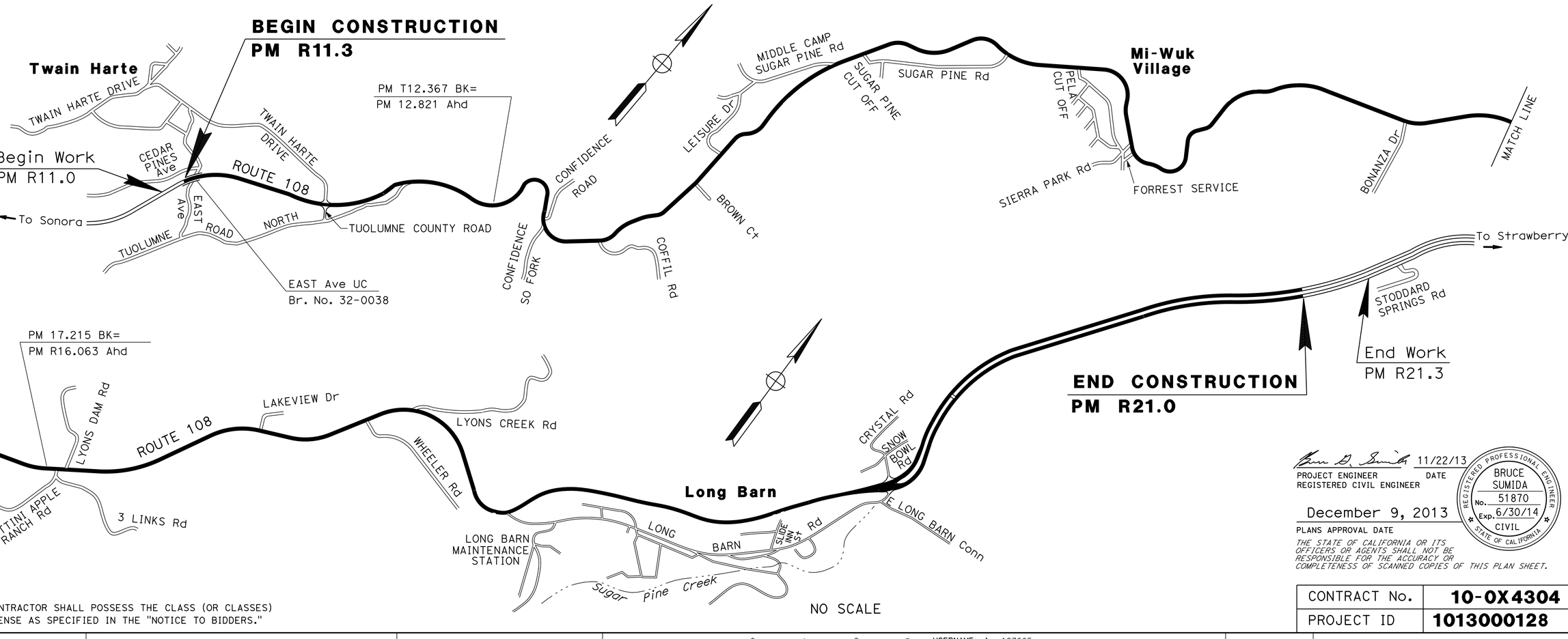
PROJECT PLANS FOR CONSTRUCTION ON

STATE HIGHWAY

IN TUOLUMNE COUNTY
AT AND NEAR TWAIN HARTE
FROM EAST AVENUE UNDERCROSSING
TO 0.6 MILE WEST OF STODDARD SPRINGS ROAD

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010

LOCATION MAP



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

PROJECT MANAGER: ALVIN MANGINDIN

DESIGN ENGINEER: ALVIN MANGINDIN

11/22/13
PROJECT ENGINEER — DATE
REGISTERED CIVIL ENGINEER

BRUCE SUMIDA
No. 51870
Exp. 6/30/14
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

December 9, 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.

CONTRACT No.	10-0X4304
PROJECT ID	1013000128

LAST REVISION 11-13-13

DATE PLOTTED => 09-DEC-2013
TIME PLOTTED => 08:22

BORDER LAST REVISED 9/30/2012 | CALTRANS WEB SITE IS: HTTP//WWW.DOT.CA.GOV/ | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | USERNAME => s127685 | DGN FILE => a0x430ab001.dgn | UNIT 2593 | PROJECT NUMBER & PHASE 10130001281

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Tuo	108	R11.3/R21.0	2	20

REGISTERED CIVIL ENGINEER — 11/22/13 DATE

12/9/13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — BRUCE SUMIDA — No. 51870 — Exp 6/30/14 — CIVIL — STATE OF CALIFORNIA

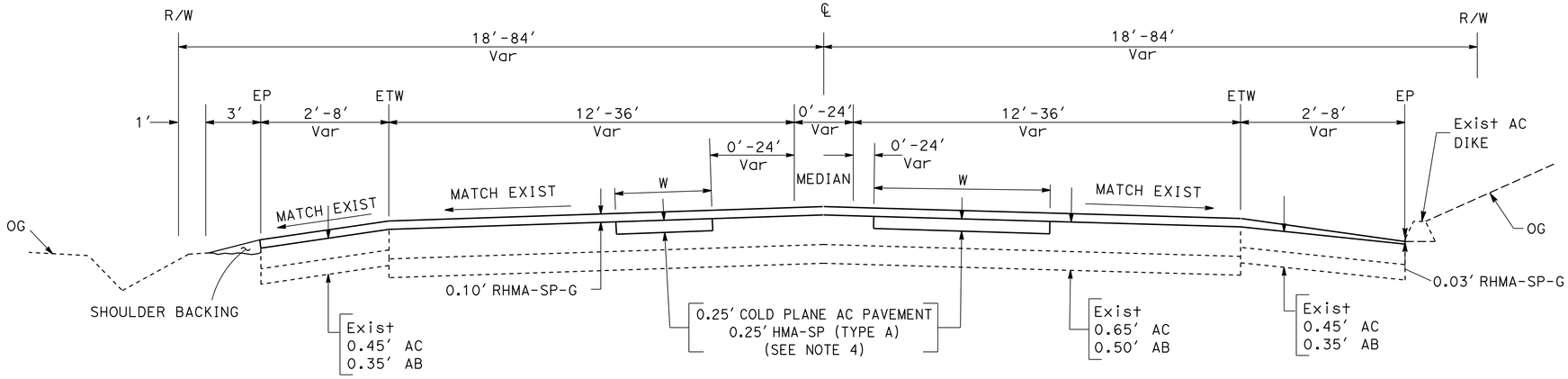
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

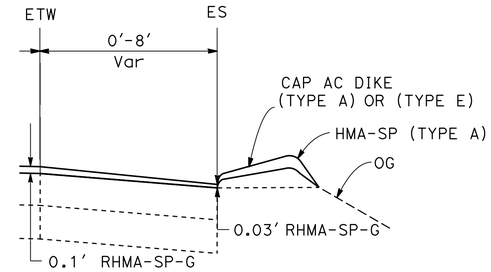
1. DIMENSIONS OF PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
3. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.
4. FOR COLD PLANE AC PAVEMENT DIMENSIONS AND LOCATIONS, SEE SUMMARY OF QUANTITIES SHEETS.
5. FOR CAP AC DIKE LOCATIONS, SEE CAP AC DIKE QUANTITIES TABLE ON SUMMARY OF QUANTITIES SHEETS.
6. FOR MBGR LOCATIONS, SEE CONFORM TAPER AT MBGR QUANTITIES TABLE ON SUMMARY OF QUANTITIES SHEETS.

ABBREVIATIONS:

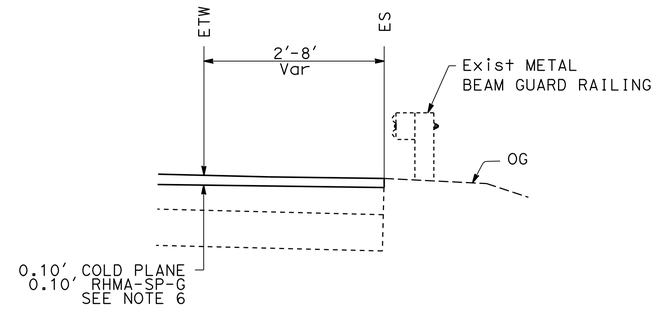
RHMA-SP-G - RUBBERIZED HOT MIX ASPHALT, SUPERPAVE (GAP GRADED)
HMA-SP (TYPE A) - HOT MIX ASPHALT, SUPERPAVE (TYPE A)



ROUTE 108
PM R11.3/R21.0



CAP AC DIKE



CONFORM TAPER AT MBGR

TYPICAL CROSS SECTIONS

NO SCALE

X-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — MAINTENANCE
FUNCTIONAL SUPERVISOR: ALVIN MANGINDIN
CALCULATED-DESIGNED BY: BRUCE SUMIDA
CHECKED BY: DONALD EMUKPOERUO
REVISED BY: BS — DATE REVISED: 11/19/13

LAST REVISION: 00-00-00
DATE PLOTTED => 09-DEC-2013
TIME PLOTTED => 11:17

BORDER LAST REVISED 7/2/2010
USERNAME => s127685
DGN FILE => a0x430ca001.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2593
PROJECT NUMBER & PHASE 10130001281

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Tuo	108	R11.3/R21.0	3	20

REGISTERED CIVIL ENGINEER — 11/22/13 DATE

BRUCE SUMIDA No. 51870 Exp. 6/30/14 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

12/9/13
PLANS APPROVAL DATE

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

LEGEND:

- COLD PLANE AC PAVEMENT RHMA-SP-G
- COLD PLANE AC PAVEMENT HMA-SP (TYPE A)
- HMA-SP (TYPE A)
- REMOVE AC SURFACING RHMA-SP-G

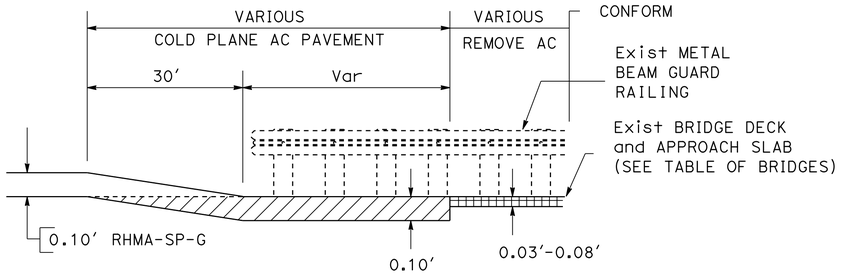
ABBREVIATIONS:

RHMA-SP-G - RUBBERIZED HOT MIX ASPHALT, SUPERPAVE (GAP GRADED)

HMA-SP (TYPE A) - HOT MIX ASPHALT, SUPERPAVE (TYPE A)

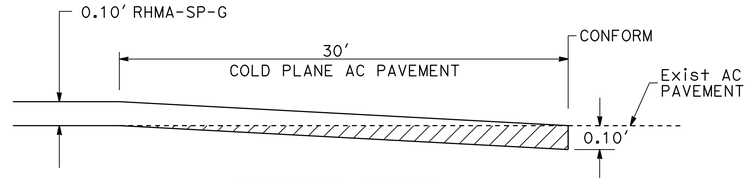
TABLE OF BRIDGES

Co	PM	BRIDGE NAME	BRIDGE No.
Tuo	R11.3	EAST AVENUE UC	32-0038

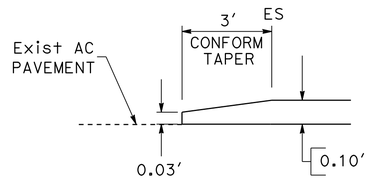


CONFORM TAPER AT APPROACH/DEPARTURE BRIDGE DECK

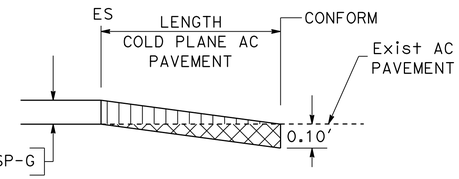
SEE SUMMARY OF QUANTITIES (CONFORM TAPER TABLE)



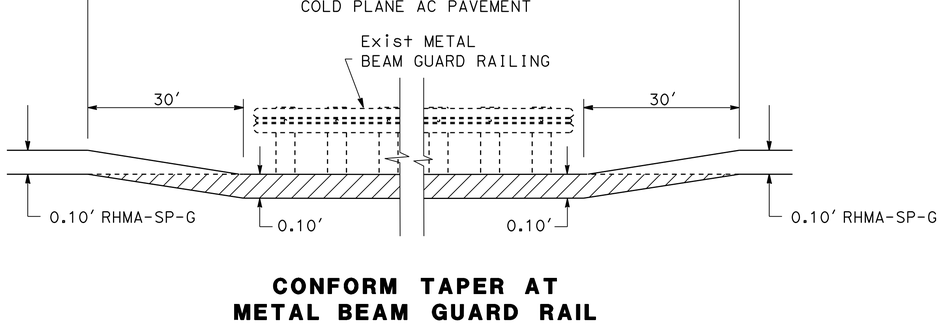
CONFORM TAPER AT EXISTING AC PAVEMENT



PRIVATE DRIVEWAY CONFORM TAPER

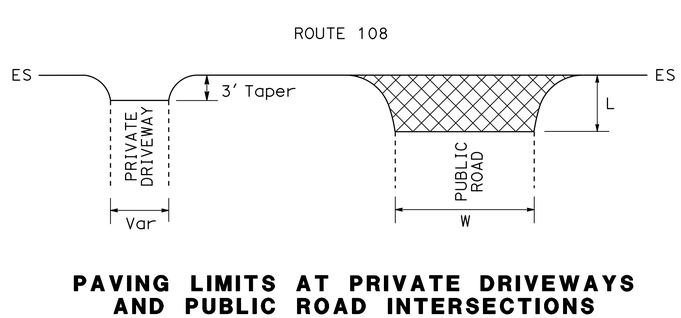


PUBLIC ROAD CONFORM TAPER



CONFORM TAPER AT METAL BEAM GUARD RAIL

SEE SUMMARY OF QUANTITIES (CONFORM TAPER AT MBGR TABLE)



PAVING LIMITS AT PRIVATE DRIVEWAYS AND PUBLIC ROAD INTERSECTIONS

SEE CONSTRUCTION DETAILS (PRIVATE DRIVEWAYS TABLE) AND SUMMARY OF QUANTITIES (CONFORM AT PUBLIC ROAD INTERSECTIONS TABLE)

CONSTRUCTION DETAILS

NO SCALE

C-1

REVISED BY	DATE REVISED
BS	11/13/13

CALCULATED-DESIGNED BY: BRUCE SUMIDA
CHECKED BY: DONALD EMUKPOERUO
FUNCTIONAL SUPERVISOR: ALVIN MANGINDIN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
MAINTENANCE

LAST REVISION 00-00-00
DATE PLOTTED => 09-DEC-2013
TIME PLOTTED => 08:22

BORDER LAST REVISED 7/2/2010
USERNAME => s127685
DGN FILE => a0x430ga001.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2593
PROJECT NUMBER & PHASE 10130001281

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Tuo	108	R11.3/R21.0	4	20

11/22/13
REGISTERED CIVIL ENGINEER DATE

12/9/13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
BRUCE SUMIDA
No. 51870
Exp. 6/30/14
CIVIL
STATE OF CALIFORNIA

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

PRIVATE DRIVEWAYS

PM	SIDE	WIDTH
R12.10	L†	90′
T12.20	L†	60′
T12.20	R†	80′
T12.30	L†	40′
T12.33	R†	70′
T12.35	R†	200′
12.85	L†	20′
13.25	R†	70′
13.55	R†	25′
13.70	R†	200′
13.74	L†	33′
13.75	R†	120′
13.95	L†	50′
13.95	R†	200′
14.15	L†	60′
14.15	R†	200′
14.37	L†	100′
14.40	L†	80′
14.45	L†	60′
14.95	L†	20′
15.02	R†	25′
15.05	R†	60′
15.30	L†	50′
15.32	L†	90′
15.35	L†	70′
15.35	R†	100′
15.45	R†	180′
15.55	L†	120′
15.85	L†	80′

PRIVATE DRIVEWAYS

PM	SIDE	WIDTH
15.85	R†	80′
16.15	L†	80′
16.15	R†	25′
16.25	L†	90′
16.44	L†	25′
16.45	R†	100′
16.51	R†	70′
16.52	R†	70′
16.53	L†	12′
16.55	L†	20′
16.55	R†	200′
16.65	L†	80′
16.65	R†	150′
16.65	L†	80′
16.65	R†	150′
16.69	L†	50′
16.72	L†	30′
16.73	L†	15′
16.75	L†	53′
16.83	L†	51′
16.85	L†	30′
16.93	R†	80′
16.95	L†	26′
16.95	R†	120′
17.05	R†	70′
R16.40	R†	100′
R16.80	L†	80′
R16.90	R†	100′
R18.60	L†	60′
R19.7	L†	135′
R19.78	R†	40′

NOTE: PRIVATE DRIVEWAY WIDTHS AND LOCATIONS ARE APPROXIMATE. ACTUAL LOCATIONS AND WIDTHS SHALL BE DETERMINED BY THE ENGINEER.

CONSTRUCTION DETAILS

NO SCALE

C-2

REVISED BY	DATE REVISED
BS	10/25/13

CALCULATED-DESIGNED BY: BRUCE SUMIDA
CHECKED BY: DONALD EMUKPOERUO
FUNCTIONAL SUPERVISOR: ALVIN MANGINDIN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE

LAST REVISION 00-00-00
DATE PLOTTED => 09-DEC-2013
TIME PLOTTED => 08:22

BORDER LAST REVISED 7/2/2010
USERNAME => s127685
DGN FILE => a0x430ga002.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2593
PROJECT NUMBER & PHASE 10130001281

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Tuo	108	R11.3/R21.0	5	20

REGISTERED CIVIL ENGINEER 11/22/13 DATE

12/9/13
PLANS APPROVAL DATE

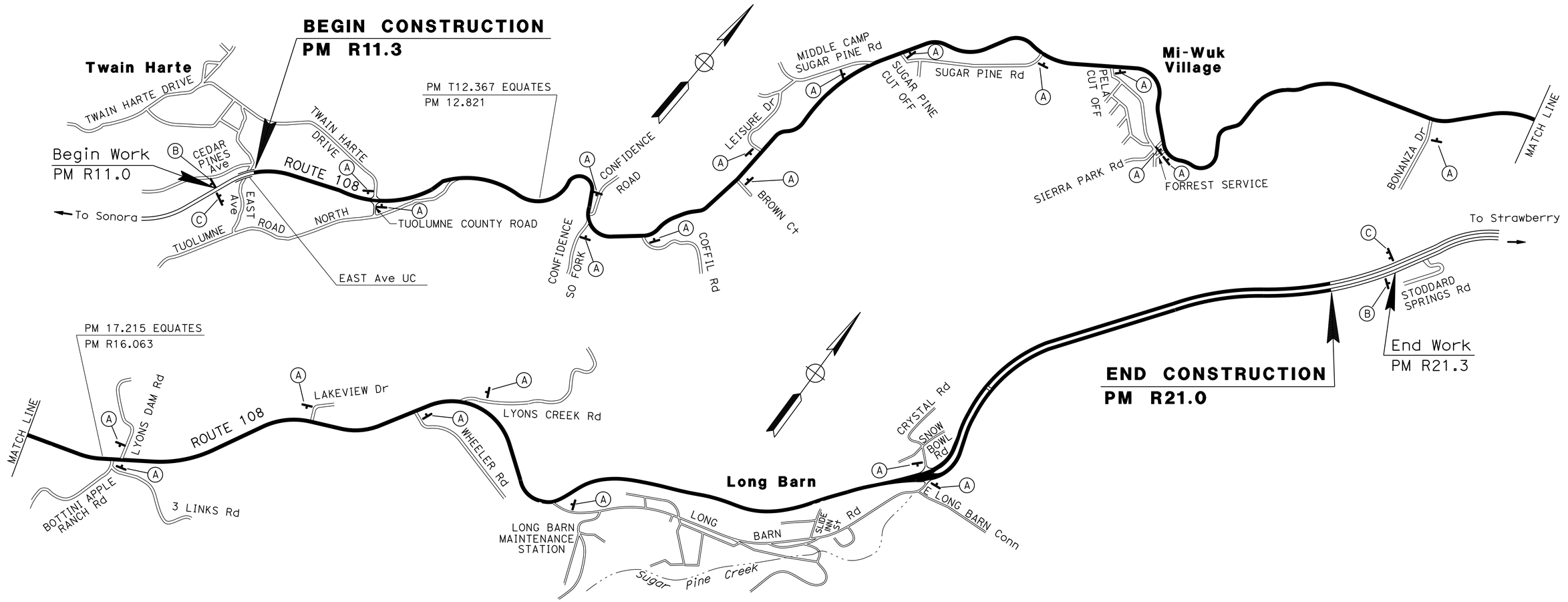
REGISTERED PROFESSIONAL ENGINEER BRUCE G. SUMIDA No. 51870 Exp. 6/30/14 CIVIL STATE OF CALIFORNIA

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

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No. (X)	SIGN CODE FEDERAL	PANEL SIZE	SIGN MESSAGE	No. OF POSTS AND SIZE	No. OF SIGNS
A	W20-1	36" x 36"	ROAD WORK AHEAD	1 - 4" x 6"	22
B	G20-2	36" x 18"	END ROAD WORK	1 - 4" x 4"	2
C	G20-1	60" x 36"	ROAD WORK NEXT 10 MILES	2 - 4" x 6"	2

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



APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

CONSTRUCTION AREA SIGNS

NO SCALE

CS-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MAINTENANCE

FUNCTIONAL SUPERVISOR: ALVIN MANGINDIN
CALCULATED-DESIGNED BY: BRUCE SUMIDA
CHECKED BY: DONALD EMUKPOERUO
REVISED BY: BS
DATE REVISED: 11/20/13

LAST REVISION 00-00-00
DATE PLOTTED => 09-DEC-2013
TIME PLOTTED => 08:22

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Tuo	108	R11.3/R21.0	6	20

REGISTERED CIVIL ENGINEER — DATE 11/22/13

BRUCE SUMIDA No. 51870 Exp 6/30/14 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

12/9/13
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.

REMOVE PAVEMENT DELINEATION QUANTITIES

LOCATION	REMOVE THERMOPLASTIC PAVEMENT MARKING	REMOVE YELLOW THERMOPLASTIC TRAFFIC STRIPE (HAZADOUS WASTE)			REMOVE THERMOPLASTIC TRAFFIC STRIPE
		DETAIL 21	DETAIL 24	DETAIL 28	DETAIL 38A
POSTMILE	SQFT	LF			LF
R11.3/R21.0	2668	89,148	16,980	17,741	1816
TOTAL	2668	123,869			1816

PAVEMENT DELINEATION QUANTITIES

LOCATION	THERMOPLASTIC TRAFFIC STRIPE (SPRAYABLE)							THERMOPLASTIC PAVEMENT MARKING					
	4" WHITE			8" WHITE	4" YELLOW			LIMIT LINE (WHITE)	STOP	TYPE I 18'-0" ARROW	TYPE III (L) ARROW	TYPE V ARROW	TYPE VI ARROW
	DETAIL 11	DETAIL 27B	DETAIL 27C	DETAIL 38A	DETAIL 21	DETAIL 24	DETAIL 28						
POSTMILE	LF							SQFT					
R11.3/R21.0	23,338	109,307	599	1,816	89,148	16,980	17,741	629	484	25	294	858	378
TOTAL	258,929							2668					

ROADSIDE SIGN QUANTITIES

SIGN NUMBER (No.)	SIGN CODE	SIGN PANEL SIZE	SINGLE FACED	BACKGROUND		LEGEND		PROTECTIVE FILM		FURNISH SINGLE SHEET ALUMINUM SIGN, (0.063"-UNFRAMED)	"C" DIM IN FEET	POST SIZE AND LENGTH	ROADSIDE SIGN	REMOVE ROADSIDE SIGN	RESET ROADSIDE SIGN	TREATED WOOD WASTE	DESCRIPTION
				SHEETING COLOR	RETRO-REFLECTIVE ASTM TYPE	SHEETING COLOR	RETRO-REFLECTIVE ASTM TYPE	STANDARD	PREMIUM				ONE POST				
	FEDERAL	INCHES								SQFT		4" x 6"	EACH	EACH	EACH	LB	
1	R4-1	24 x 30	X	WHITE	III	BLACK	NONE	X		5.0	5	14′	1				DO NOT PASS
2	R4-7														1		
	OM1-3																
3	W4-2													1		112	
	R4-1																
4	W4-2L	30 x 30	X	YELLOW	IX	BLACK	NONE		X	6.3	5	14′	1				LANE ENDS SYMBOL
5	W9-1R	36 x 36	X	YELLOW	IX	BLACK	NONE		X	9.0	5	16′	1				RIGHT LANE ENDS
6	W9-1L	36 x 36	X	YELLOW	IX	BLACK	NONE		X	9.0	5	16′	1				LEFT LANE ENDS
7	W4-2R	30 x 30	X	YELLOW	IX	BLACK	NONE		X	6.3	5	14′	1				LANE ENDS SYMBOL
8	W4-2													1		112	
	R4-1																
9	R4-1	24 x 30	X	WHITE	III	BLACK	NONE	X		5.0	5	14′	1				DO NOT PASS
10	R4-7														1		
	OM1-3																
11	R5-1														1		
	R5-1a																
12	R4-1	24 x 30	X	WHITE	III	BLACK	NONE	X		5.0	5	14′	1				DO NOT PASS
13	W4-2													1		112	
	R4-1																
14	W4-2													1		112	
	R4-1																
15	W4-2L	30 x 30	X	YELLOW	IX	BLACK	NONE		X	6.3	5	14′	1				LANE ENDS SYMBOL
16	W9-1L	36 x 36	X	YELLOW	IX	BLACK	NONE		X	9.0	5	16′	1				LEFT LANE ENDS
TOTAL										60.9			9	4	3	448	

NOTES:
1. EXACT LOCATION AND POSITION OF ROADSIDE SIGNS TO BE DETERMINED BY THE ENGINEER.
2. POST LENGTHS GIVEN ARE APPROXIMATE.
3. "C" DIM = VERTICAL CLEARANCE TO BOTTOM OF SIGN PANEL.

PAVEMENT DELINEATION QUANTITIES AND SIGN QUANTITIES

PDQ-1

REVISED BY: BS — DATE REVISED: 11/19/13
CALCULATED-DESIGNED BY: BRUCE SUMIDA
CHECKED BY: DONALD EMUKPOERUO
FUNCTIONAL SUPERVISOR: ALVIN MANGINDIN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — MAINTENANCE
Caltrans

LAST REVISION: DATE PLOTTED => 09-DEC-2013; TIME PLOTTED => 08:47; 00-00-00

BORDER LAST REVISED 7/2/2010 | USERNAME => s127685 | DGN FILE => a0x430nc001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2593 | PROJECT NUMBER & PHASE 10130001281

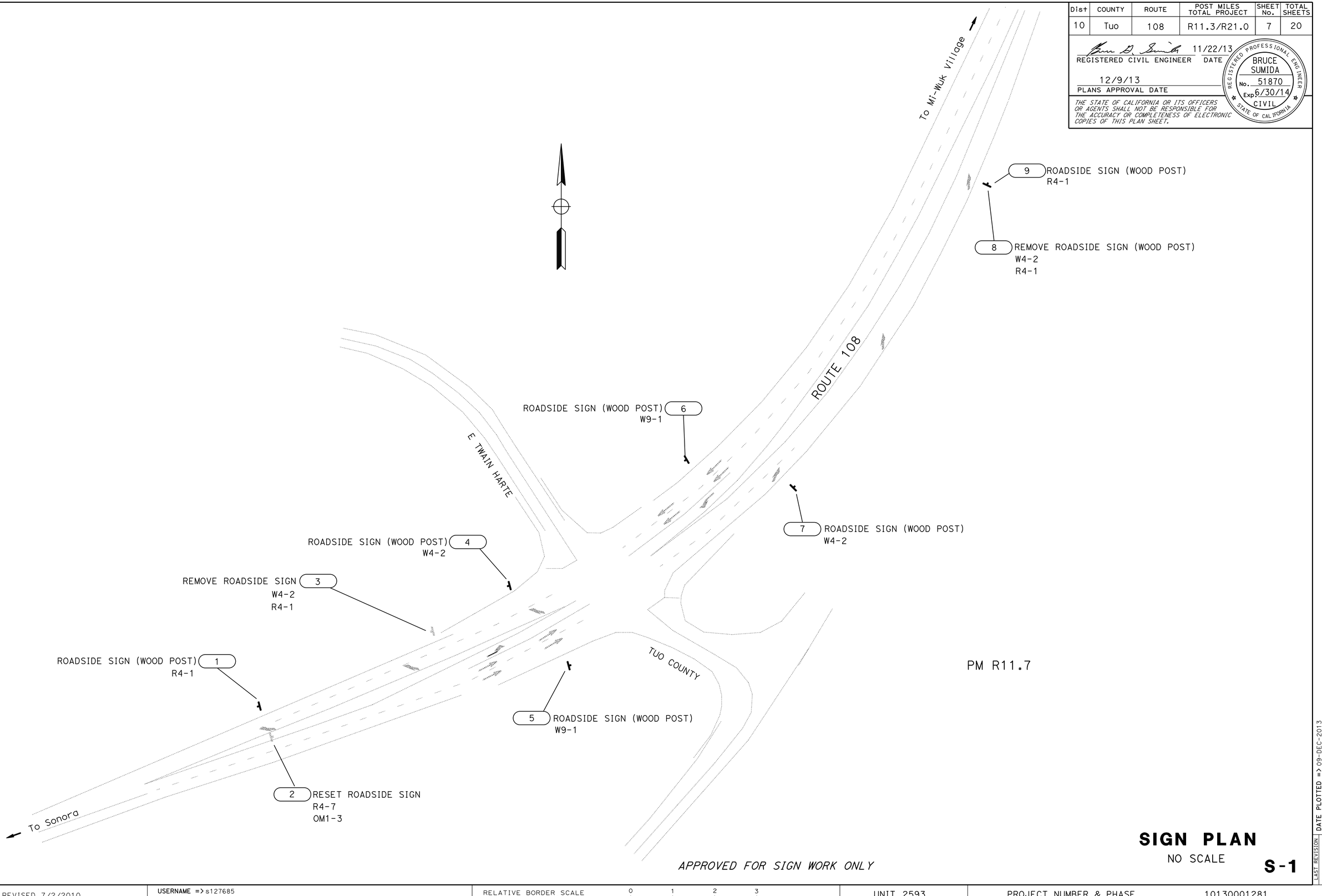
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Tuo	108	R11.3/R21.0	7	20

REGISTERED CIVIL ENGINEER — 11/22/13 DATE

12/9/13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
BRUCE SUMIDA
No. 51870
Exp 6/30/14
CIVIL
STATE OF CALIFORNIA

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



APPROVED FOR SIGN WORK ONLY

SIGN PLAN

NO SCALE

S-1

	REVISED BY	BS
	DATE REVISED	11/7/13

CALCULATED-DESIGNED BY: BRUCE SUMIDA
CHECKED BY: DONALD EMUKPOERUO

FUNCTIONAL SUPERVISOR: ALVIN MANGINDIN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE

LAST REVISION 00-00-00
DATE PLOTTED => 09-DEC-2013
TIME PLOTTED => 08:22

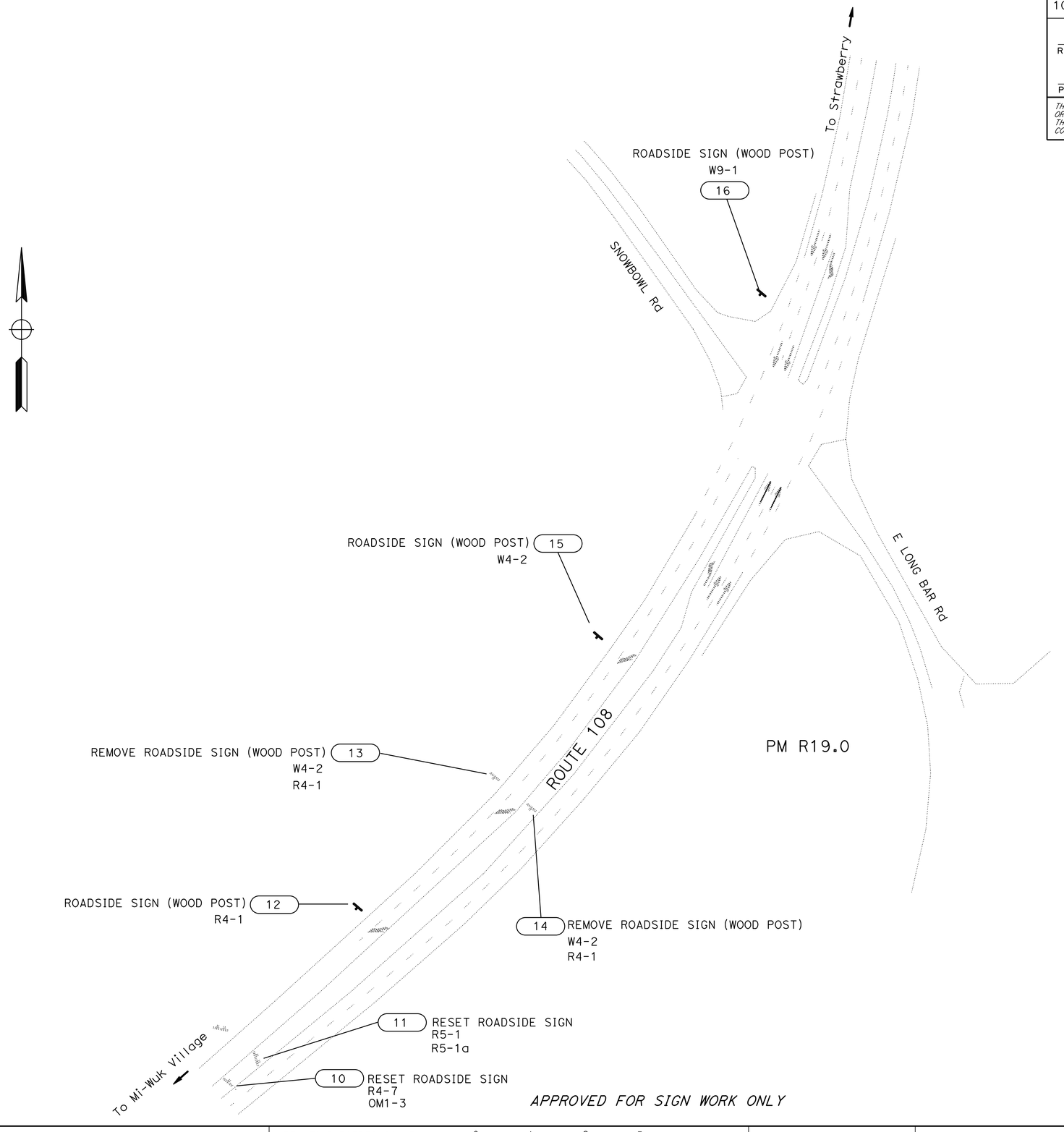
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Tuo	108	R11.3/R21.0	8	20

REGISTERED CIVIL ENGINEER — 11/22/13 DATE

12/9/13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — BRUCE SUMIDA — No. 51870 — Exp 6/30/14 — CIVIL — STATE OF CALIFORNIA

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



APPROVED FOR SIGN WORK ONLY

SIGN PLAN

NO SCALE

S-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
MAINTENANCE

FUNCTIONAL SUPERVISOR: ALVIN MANGINDIN

CALCULATED-DESIGNED BY: BRUCE SUMIDA
CHECKED BY: DONALD EMUKPOERUO

REVISED BY	DATE REVISED
BS	11/7/13

LAST REVISION 00-00-00
DATE PLOTTED => 09-DEC-2013
TIME PLOTTED => 08:22

BORDER LAST REVISED 7/2/2010
USERNAME => s127685
DGN FILE => a0x430oa002.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2593
PROJECT NUMBER & PHASE 10130001281

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Tuo	108	R11.3/R21.0	9	20

11/22/13
REGISTERED CIVIL ENGINEER DATE

12/9/13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
BRUCE SUMIDA
No. 51870
Exp 6/30/14
CIVIL
STATE OF CALIFORNIA

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

ABBREVIATIONS:

RHMA-SP-G - RUBBERIZED HOT MIX ASPHALT, SUPERPAVE (GAP GRADED)
HMA-SP (TYPE A) - HOT MIX ASPHALT, SUPERPAVE (TYPE A)

NOTES:

1. * - TOTAL INCLUDED IN ROADWAY QUANTITIES TABLE.
2. (N) - NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.

CONFORM TAPER AT PUBLIC ROAD INTERSECTIONS QUANTITIES

LOCATION			LENGTH (N)	WIDTH (N)	COLD PLANE AC Pvm†	HMA-SP (TYPE A)
PM	SIDE	DESCRIPTION			SQYD	TON
R11.75	L†	TWAIN HARTE Rd	24′	65′	173	9
R11.75	R†	TUOLUMNE COUNTY Rd	36′	58′	232	13
13.07	L†	CONFIDENCE Rd	25′	61′	169	9
13.11	R†	CONFIDENCE SOUTH FORK Rd	22′	35′	86	5
13.40	R†	COFFILL Rd	23′	30′	77	4
13.74	R†	BROWN Ct	22′	23′	56	3
13.88	L†	LEISURE Dr	27′	60′	180	10
14.25	L†	MIDDLE CP SUGAR PINE Rd	42′	18′	84	5
14.35	R†	SUGAR PINE CUT OFF	13′	36′	52	3
14.83	R†	SUGAR PINE Rd	26′	27′	78	4
15.06	R†	PELA CUT OFF	26′	29′	84	5
15.53	R†	SIERRA Rd	30′	32′	107	6
15.56	R†	FOREST SERVICE Rd	22′	40′	98	5
16.61	R†	BONANZA Dr	21′	40′	93	5
R16.09	L†	LYONS DAM Rd	30′	70′	233	13
R16.09	R†	BOTTANI APPLE RANCH Rd	15′	40′	67	4
R16.64	L†	LAKEVIEW Dr	30′	26′	87	5
R17.03	R†	WHEELER Rd	26′	50′	144	8
R17.25	L†	LYONS CREEK Rd	21′	53′	124	7
R17.70	R†	W LONG BARN CONN	23′	32′	82	5
R19.03	L†	SNOWBALL Rd	31′	70′	241	13
R19.03	R†	E LONG BARN Rd	27′	102′	306	17
				TOTAL	2,853*	158*

CONFORM TAPER QUANTITIES

LOCATION		LENGTH (N)	WIDTH (N)	COLD PLANE AC Pvm†	RHMA-SP-G
PM	DESCRIPTION			SQYD	TON
R21.0	R†e 108 (END CONSTRUCTION)	30′	48′	160*	11*

CAP AC DIKE QUANTITIES

LOCATION		CAP AC DIKE	HMA-SP (TYPE A)	DIKE TYPE
PM TO PM	SIDE	LF	TON	
16.07 TO 16.17	WB	534	9	A
16.43 TO 16.50	WB	370	7	A
16.77 TO 17.01	WB	1,247	20	E
17.48 TO 17.83	WB	1,843	31	A
18.16 TO 18.33	WB	898	15	E
18.38 TO 18.57	WB	993	17	A
16.18 TO 16.29	EB	597	10	A
16.43 TO 16.61	EB	951	16	A
16.61 TO 16.73	EB	634	11	E
17.11 TO 17.44	EB	1,711	28	E
17.87 TO 17.95	EB	423	7	E
18.06 TO 18.33	EB	1,416	23	E
18.57 TO 18.85	EB	1,479	24	E
	TOTAL	13,096	218*	

CONFORM TAPER AT MBGR QUANTITIES

LOCATION	LENGTH (N)	WIDTH (N)	COLD PLANE AC Pvm†	RHMA-SP-G
PM TO PM			SQYD	TON
R11.35 TO R11.38	158′	40′	704	47
R11.74 TO R11.81	370′	72′	2,957	197
15.36 TO 15.41	243′	40′	1,079	72
R17.62 TO R17.71	491′	40′	2,182	145
		TOTAL	6,922*	461*

SUMMARY OF QUANTITIES
Q-1

REVISED BY	DATE REVISED
BS	11/20/13

BRUCE SUMIDA
DONALD EMUKPOERUO
CALCULATED-DESIGNED BY
CHECKED BY
FUNCTIONAL SUPERVISOR
ALVIN MANGINDIN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE

LAST REVISION DATE PLOTTED => 09-DEC-2013
00-00-00 TIME PLOTTED => 08:22

BORDER LAST REVISED 7/2/2010
USERNAME => s127685
DGN FILE => a0x430pq001.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2593
PROJECT NUMBER & PHASE 10130001281

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Tuo	108	R11.3/R21.0	10	20

REGISTERED CIVIL ENGINEER — 11/22/13 DATE

12/9/13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — BRUCE SUMIDA — No. 51870 — Exp 6/30/14 — CIVIL — STATE OF CALIFORNIA

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DIGOUT QUANTITIES

LOCATION		LENGTH (N)	WIDTH (N)	COLD PLANE AC Pvmt	HMA-SP (TYPE A)
PM TO PM	SIDE			SQYD	TON
R11.737 TO R11.767	EB/WB	160′	50′	889	148
R11.737 TO R11.767	EB/WB	160′	100′	1,778	296
R11.98 TO R12.02	EB	232′	4′	103	17
R12.045 TO R12.055	EB	55′	5′	31	5
R12.047 TO R12.057	EB	60′	4′	27	4
12.89 TO 12.91	EB	125′	5′	69	12
14.58 TO 14.61	EB	175′	4′	78	13
14.69 TO 14.71	EB	100′	12′	133	22
15.89 TO 15.91	EB	100′	12′	133	22
15.91 TO 15.92	EB	65′	5′	36	6
16.82 TO 16.88	EB	300′	12′	400	67
R18.91 TO R18.99	EB	440′	12′	587	98
R18.99 TO R19.00	EB	75′	14′	117	19
R19.43 TO R19.56	EB	665′	5′	369	62
R19.63 TO R19.77	EB	750′	12′	1,000	167
R19.93 TO R20.07	EB	750′	12′	1,000	167
R20.31 TO R20.73	EB	2200′	12′	2,933	488
T12.37 TO 12.87	WB	285′	4′	127	21
14.64 TO 14.66	WB	130′	12′	173	29
R18.97 TO R19.12	WB	770′	4′	342	57
R19.35 TO R19.45	WB	510′	4′	227	38
R19.76 TO R19.83	WB	390′	4′	173	29
R19.88 TO R19.92	WB	230′	4′	102	17
R20.25 TO R20.35	WB	550′	4′	244	41
R20.53 TO R20.57	WB	210′	4′	93	16
R20.78 TO R20.82	WB	200′	4′	89	15
			TOTAL	11,253*	1876*

ACTUAL LOCATIONS AND DIMENSIONS OF DIGOUTS MAY VARY IN THE FIELD AND WILL BE DETERMINED BY THE ENGINEER.

EAST AVENUE UNDERCROSSING QUANTITIES

LOCATION	LENGTH (N)	WIDTH (N)	REMOVE AC SURFACING	RHMA-SP-G
PM TO PM			SQFT	TON
R11.30 TO R11.35	264′	40′	10,560	47*

ROADWAY QUANTITIES

LOCATION	COLD PLANE AC PAVEMENT	RUBBERIZED HOT MIX ASPHALT, SUPERPAVE (GAP GRADED)	HOT MIX ASPHALT, SUPERPAVE (TYPE A)	TACK COAT	SHOULDER BACKING
	SQYD	TON	TON	TON	TON
PM R11.35/R21.0		19,300		121	782
EAST Ave UC		47			
DIGOUTS	11,253		1876	4	
CONFORM TAPERS AT MBGR	6,922	461		3	
CONFORM TAPERS AT PUBLIC ROAD INTERSECTIONS	2,853		158	2	
CONFORM TAPERS AT PRIVATE DRIVEWAYS	1,532	66		1	
CONFORM TAPERS	160	11		1	
CAP AC DIKE			218	1	
TOTAL	22,720	19,885	2252	133	782

SUMMARY OF QUANTITIES
Q-2

REVISED BY	DATE REVISED
BS	11/20/13

CALCULATED-DESIGNED BY: BRUCE SUMIDA
CHECKED BY: DONALD EMUKPOERUO
FUNCTIONAL SUPERVISOR: ALVIN MANGINDIN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE

LAST REVISION 00-00-00
DATE PLOTTED => 09-DEC-2013
TIME PLOTTED => 08:22

BORDER LAST REVISED 7/2/2010
USERNAME => s127685
DGN FILE => a0x430pa002.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2593
PROJECT NUMBER & PHASE 10130001281

M

Maint	MAINTENANCE
Max	MAXIMUM
MB	METAL BEAM
MBB	METAL BEAM BARRIER
MBGR	METAL BEAM GUARD RAILING
Med	MEDIAN
MGS	MIDWEST GUARDRAIL SYSTEM
MH	MANHOLE
Min	MINIMUM
Misc	MISCELLANEOUS
Misc I & S	MISCELLANEOUS IRON AND STEEL
Mkr	MARKER
Mod	MODIFIED, MODIFY
Mon	MONUMENT
MP	METAL PLATE
MPGR	METAL PLATE GUARD RAILING
MR	MOVEMENT RATING
MSE	MECHANICALLY STABILIZED EMBANKMENT
Mt	MOUNTAIN, MOUNT
Mtl	MATERIAL
MVP	MAINTENANCE VEHICLE PULLOUT

N

N	NORTH
NB	NORTHBOUND
No.	NUMBER (MUST HAVE PERIOD)
Nos.	NUMBERS (MUST HAVE PERIOD)
NPS	NOMINAL PIPE SIZE
NS	NEAR SIDE
NSP	NEW STANDARD PLAN
NTS	NOT TO SCALE

O

Oblr	OBLITERATE
OC	OVERCROSSING
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OG	ORIGINAL GROUND
OGAC	OPEN GRADED ASPHALT CONCRETE
OGFC	OPEN GRADED FRICTION COURSE
OH	OVERHEAD
OHWM	ORDINARY HIGH WATER MARK
O-O	OUT TO OUT
Opp	OPPOSITE
OSD	OVERSIDE DRAIN

P

P	PAGE
PAP	PERFORATED ALUMINUM PIPE
PB	PULL BOX
PC	POINT OF CURVATURE, PRECAST
PCC	POINT OF COMPOUND CURVE, PORTLAND CEMENT CONCRETE
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN
PCP	PERFORATED CONCRETE PIPE, PRESTRESSED CONCRETE PIPE
PCVC	POINT OF COMPOUND VERTICAL CURVE
PEC	PERMIT TO ENTER AND CONSTRUCT
Ped	PEDESTRIAN
Ped OC	PEDESTRIAN OVERCROSSING
Ped UC	PEDESTRIAN UNDERCROSSING
Perm Mtl	PERMEABLE MATERIAL

P continued

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

Q

Qty	QUANTITY

R

R	RADIUS
R & D	REMOVE AND DISPOSE
R & S	REMOVE AND SALVAGE
R/C	RATE OF CHANGE
RCA	REINFORCED CONCRETE ARCH
RCB	REINFORCED CONCRETE BOX
RCP	REINFORCED CONCRETE PIPE
RCPA	REINFORCED CONCRETE PIPE ARCH
Rd	ROAD
Reinf	REINFORCED, REINFORCEMENT, REINFORCING
Rel	RELOCATE
Repl	REPLACEMENT
Ret	RETAINING
Rev	REVISED, REVISION
Rdwy	ROADWAY
RHMA	RUBBERIZED HOT MIX ASPHALT
Riv	RIVER
RM	ROAD-MIXED
RP	RADIUS POINT, REFERENCE POINT
RR	RAILROAD
RSP	ROCK SLOPE PROTECTION, REVISED STANDARD PLAN
Rt	RIGHT
Rte	ROUTE
RW	REDWOOD, RETAINING WALL
R/W	RIGHT OF WAY
Rwy	RAILWAY

S

S	SOUTH, SUPPLEMENT
SAE	STRUCTURE APPROACH EMBANKMENT
Salv	SALVAGE
SAPP	STRUCTURAL ALUMINUM PLATE PIPE
SB	SOUTHBOUND
SC	SAND CUSHION
SCSP	SLOTTED CORRUGATED STEEL PIPE
SD	STORM DRAIN
Sec	SECOND, SECTION
Sep	SEPARATION
SG	SUBGRADE
Shld	SHOULDER
Sht	SHEET
Sim	SIMILAR
℄	STATION LINE
SM	SELECTED MATERIAL
Spec	SPECIAL, SPECIFICATIONS
SPP	SLOTTED PLASTIC PIPE
SS	SLOPE STAKE
SSBM	STRAP AND SADDLE BRACKET METHOD
SSD	STRUCTURAL SECTION DRAIN
SSPA	STRUCTURAL STEEL PLATE ARCH
SSPP	STRUCTURAL STEEL PLATE PIPE
SSPPA	STRUCTURAL STEEL PLATE PIPE ARCH
SSRP	STEEL SPIRAL RIB PIPE
St	STREET
Sta	STATION
STBB	SINGLE THRIE BEAM BARRIER
Std	STANDARD
Str	STRUCTURE
Surf	SURFACING
SW	SIDEWALK, SOUND WALL
Swr	SEWER
Sym	SYMMETRICAL
S4S	SURFACE 4 SIDES

T

T	SEMI-TANGENT
Tan	TANGENT
TBB	THRIE BEAM BARRIER
Tbr	TIMBER
TC	TOP OF CURB
TCB	TRAFFIC CONTROL BOX
TCE	TEMPORARY CONSTRUCTION EASEMENT
Tel	TELEPHONE
Temp	TEMPORARY
TG	TOP OF GRADE
Tot	TOTAL
TP	TELEPHONE POLE
TPB	TREATED PERMEABLE BASE
TPM	TREATED PERMEABLE MATERIAL
Trans	TRANSITION

T continued

TS	TRANSVERSE, TRAFFIC SIGNAL, TUBULAR STEEL
Typ	TYPICAL

U

UC	UNDERCROSSING
UD	UNDERDRAIN
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
UP	UNDERPASS

V

V	VALVE, DESIGN SPEED
Var	VARIABLE, VARIES
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
Vert	VERTICAL
Via	VIADUCT
Vol	VOLUME

W

W	WEST, WIDTH
WB	WESTBOUND
WH	WEEP HOLE
WM	WIRE MESH
WS	WATER SURFACE
WSP	WELDED STEEL PIPE
Wt	WEIGHT
WV	WATER VALVE
WW	WINGWALL
WWLOL	WINGWALL LAYOUT LINE

X

X Sec	CROSS SECTION
Xing	CROSSING

Y

Yr	YEAR
Yrs	YEARS

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Tuo	108	R11.3/R21.0	11	20

Grace M. Tsushima
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

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

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TO ACCOMPANY PLANS DATED 12/9/13

UNIT OF MEASUREMENT SYMBOLS:

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

TABLE A

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

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

TABLE B

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

* For use on a sign panel only

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ABBREVIATIONS (SHEET 2 OF 2)

NO SCALE

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

REVISED STANDARD PLAN RSP A10B

2010 REVISED STANDARD PLAN RSP A10B

6-7-13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Tuo	108	R11.3/R21.0	12	20

REGISTERED CIVIL ENGINEER

April 20, 2012
PLANS APPROVAL DATE

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

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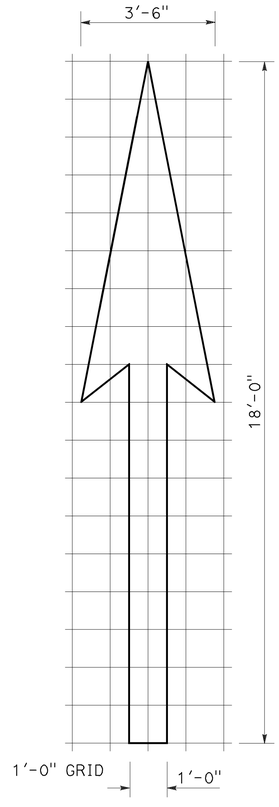
TO ACCOMPANY PLANS DATED 12/9/13

2010 REVISED STANDARD PLAN RSP A24A



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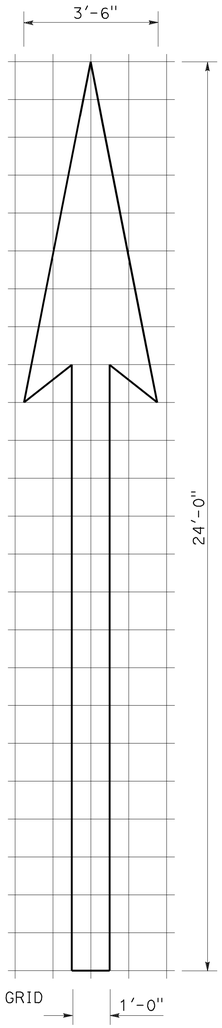
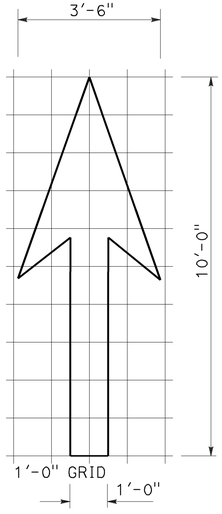


A=31 ft²

TYPE I 24'-0" ARROW



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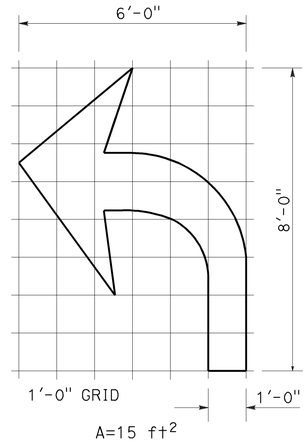

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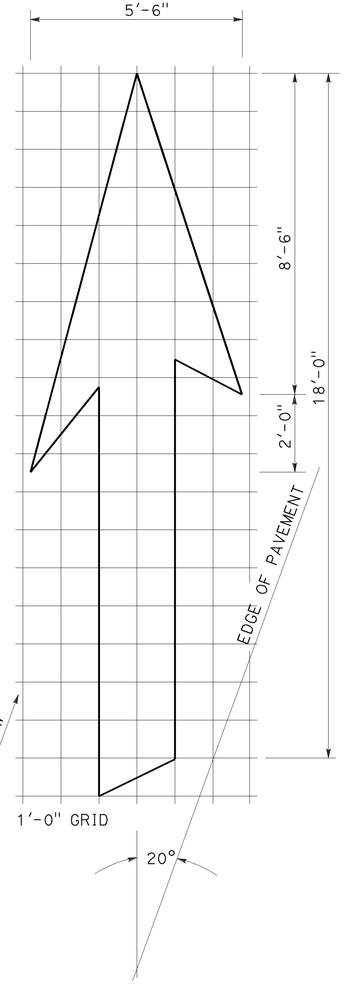
TYPE IV (L) ARROW

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



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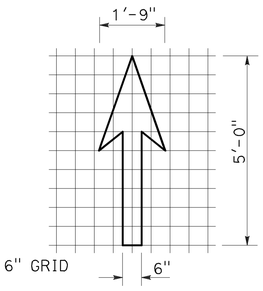
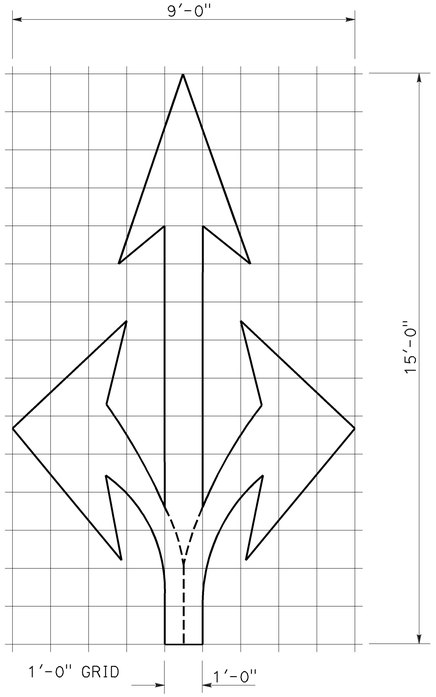
TYPE VI ARROW

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



A=3.5 ft²

BIKE LANE ARROW



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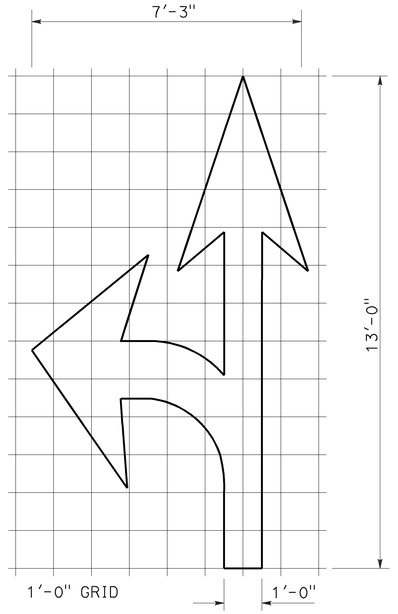
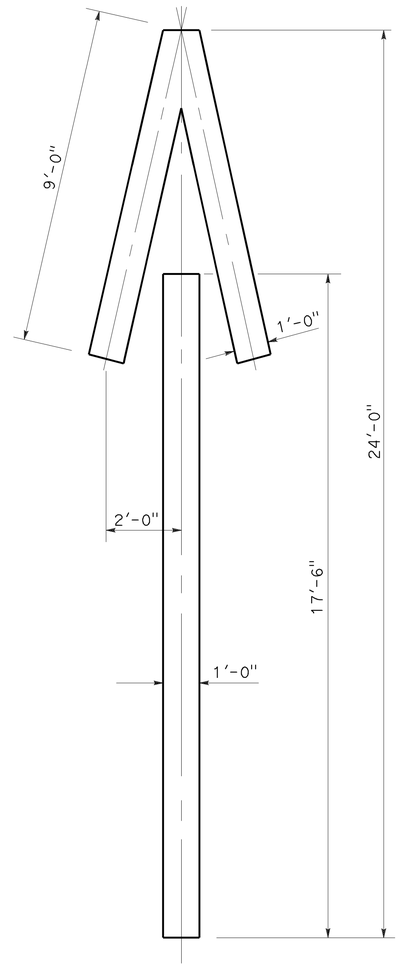
TYPE VIII ARROW



A=27 ft²

TYPE VII (L) ARROW

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



A=33 ft²

TYPE V ARROW

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

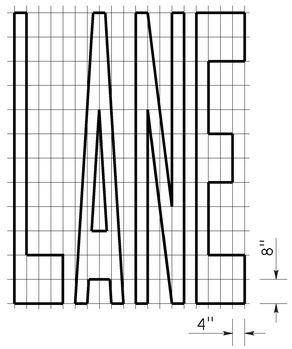
PAVEMENT MARKINGS ARROWS

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

3-14-12



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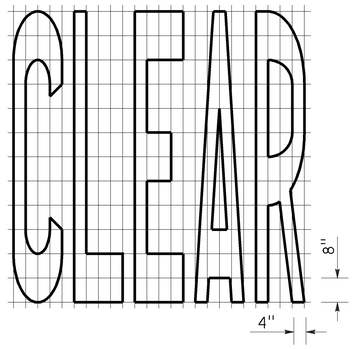

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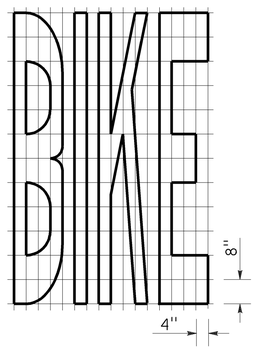

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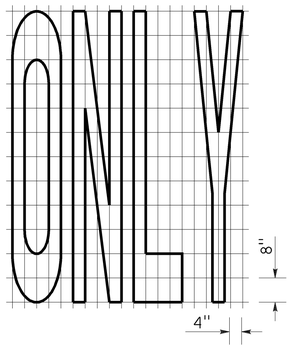

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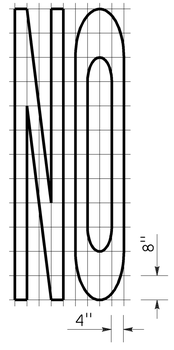

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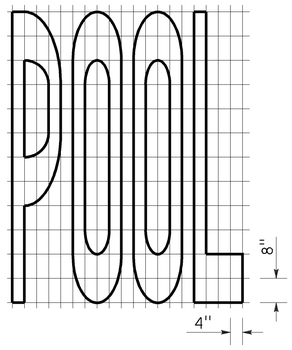

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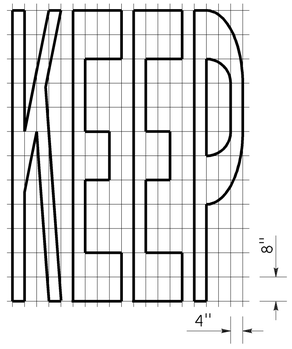

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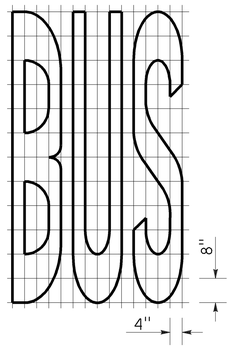

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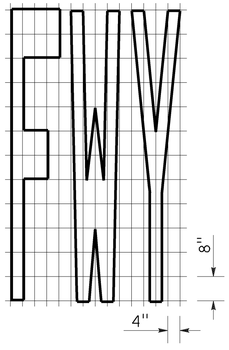

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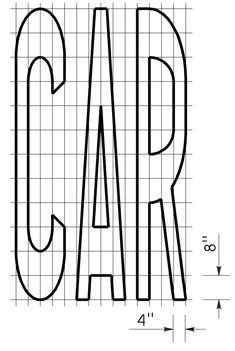

A=17 ft²

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Tuo	108	R11.3/R21.0	13	20

Roberta L. McLaughlin
REGISTERED CIVIL ENGINEER

July 20, 2012
PLANS APPROVAL DATE

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

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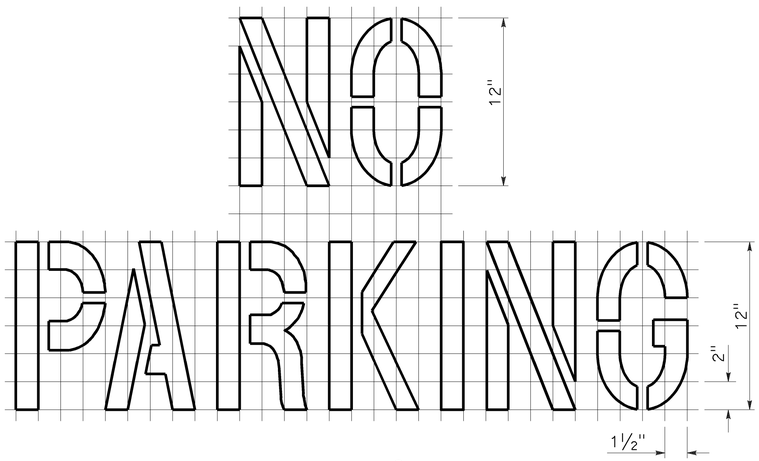
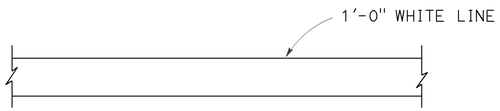
TO ACCOMPANY PLANS DATED 12/9/13

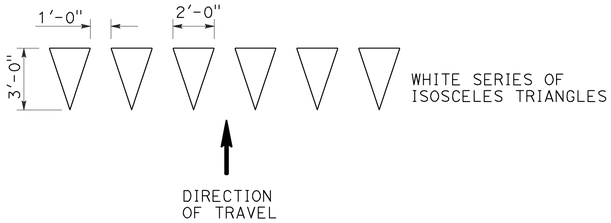
WORD MARKINGS			
ITEM	ft²	ITEM	ft²
LANE	24	NO	14
POOL	23	BIKE	21
CAR	17	BUS	20
CLEAR	27	ONLY	22
KEEP	24	FWY	16



A=2 ft²
See Notes 6 and 7



LIMIT LINE (STOP LINE)



YIELD LINE

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS WORDS, LIMIT AND YIELD LINES

NO SCALE

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

REVISED STANDARD PLAN RSP A24E

2010 REVISED STANDARD PLAN RSP A24E

6-12-12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Tuo	108	R11.3/R21.0	14	20

REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Michael Janzen
No. 44788
Exp. 03-31-14
CIVIL
STATE OF CALIFORNIA

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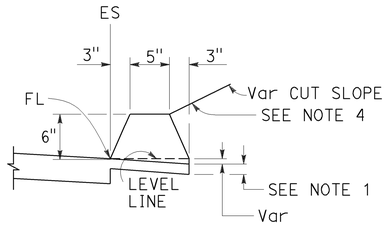
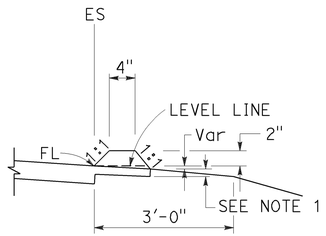
TO ACCOMPANY PLANS DATED 12/9/13

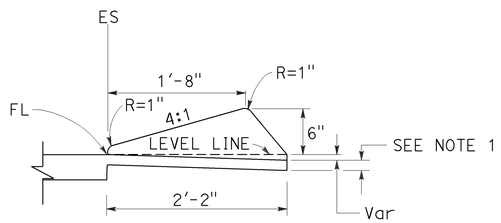
2010 REVISED STANDARD PLAN RSP A87B



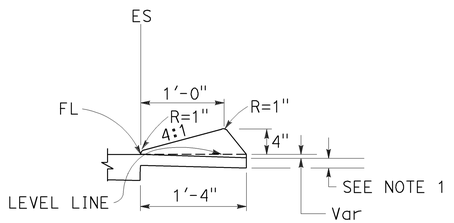
TYPE A
See Note 3



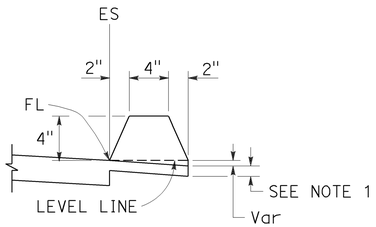
TYPE C



TYPE D

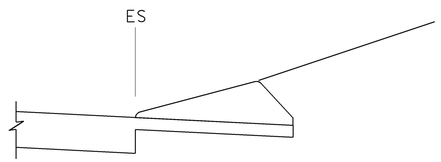


TYPE E

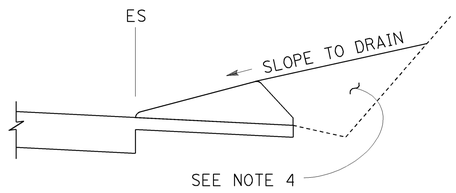


TYPE F
See Note 5

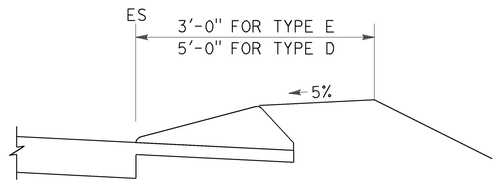
DIKES



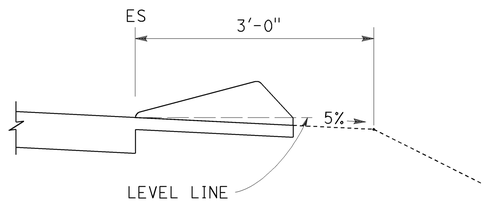
CASE C-1
Cut Slope



CASE C-2
Cut Slope



CASE F



CASE R
See Note 2

TYPE D AND E BACKFILL DETAILS

NOTES:

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

DIKE QUANTITIES

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

Quantities based on 5% cross slope.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

HOT MIX ASPHALT DIKES

NO SCALE

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

REVISED STANDARD PLAN RSP A87B

6-27-13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Tuo	108	R11.3/R21.0	15	20

REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

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

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TO ACCOMPANY PLANS DATED 12/9/13

TABLE 1

TAPER LENGTH CRITERIA AND CHANNELIZING DEVICE SPACING

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

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

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

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

TABLE 2

LONGITUDINAL BUFFER SPACE AND FLAGGER STATION SPACING

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

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

** - Longitudinal buffer space or flagger station spacing

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

TABLE 3

ADVANCE WARNING SIGN SPACING

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

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

2010 REVISED STANDARD PLAN RSP T9

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM TABLES FOR LANE AND RAMP CLOSURES

NO SCALE

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

REVISED STANDARD PLAN RSP T9

4-30-13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Tuo	108	R11.3/R21.0	16	20

REGISTERED CIVIL ENGINEER

April 19, 2013
PLANS APPROVAL DATE

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

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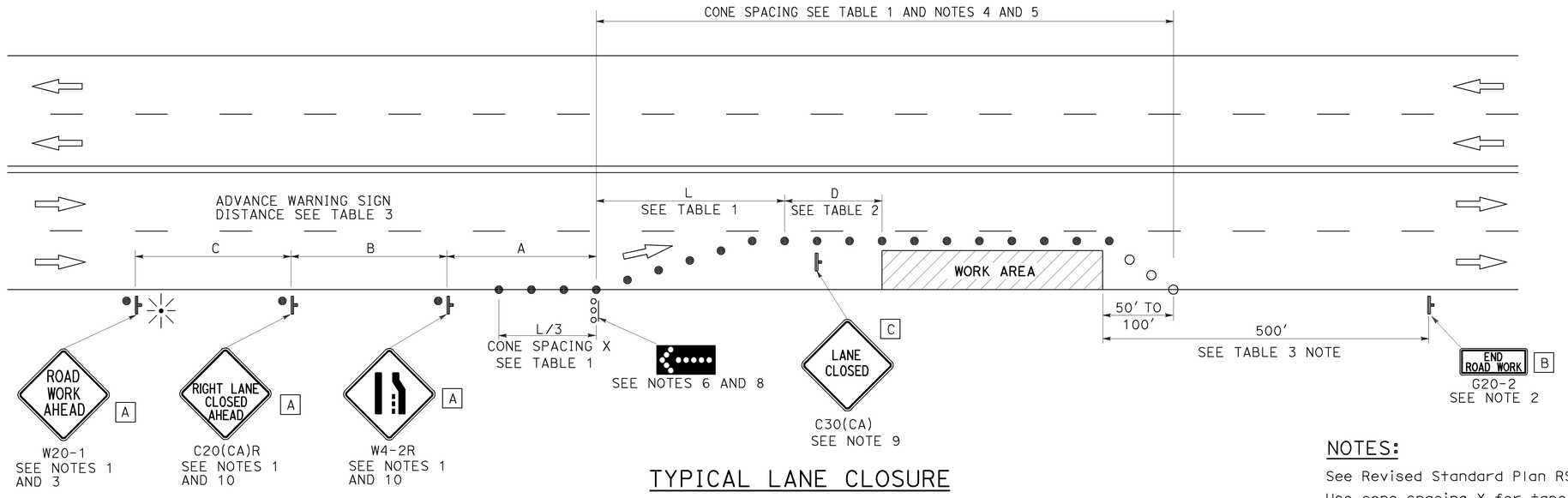
TO ACCOMPANY PLANS DATED 12/9/13



TYPICAL LANE CLOSURE

NOTES:

See Revised Standard Plan RSP T9 for tables.

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

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

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

NOTES:

1. Each advance warning sign shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
2. A G20-2 "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious, or ends within a larger project's limits.
3. If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT _____ MILES", use a C20(CA) sign for the first advance warning sign.
4. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
5. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
6. Flashing arrow sign shall be either Type I or Type II.
7. For approach speeds over 50 mph, use the "Traffic Control System for Lane Closure On Freeways And Expressways" plan for lane closure details and requirements.
8. A minimum 1500' of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at the top of crest vertical curve or on a horizontal curve.
9. Place a C30(CA) sign every 2000' throughout length of lane closure.
10. Median lane closures shall conform to the details as shown except that C20(CA)L and W4-2L signs shall be used.
11. At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closure unless, otherwise directed by the Engineer.

LEGEND

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

SIGN PANEL SIZE (Min)

- A 48" x 48"
- B 36" x 18"
- C 30" x 30"

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON MULTILANE CONVENTIONAL HIGHWAYS

NO SCALE

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

REVISED STANDARD PLAN RSP T11

2010 REVISED STANDARD PLAN RSP T11

4-2-13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Tuo	108	R11.3/R21.0	17	20

REGISTERED CIVIL ENGINEER

April 19, 2013
PLANS APPROVAL DATE

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

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TO ACCOMPANY PLANS DATED 12/9/13

NOTES:

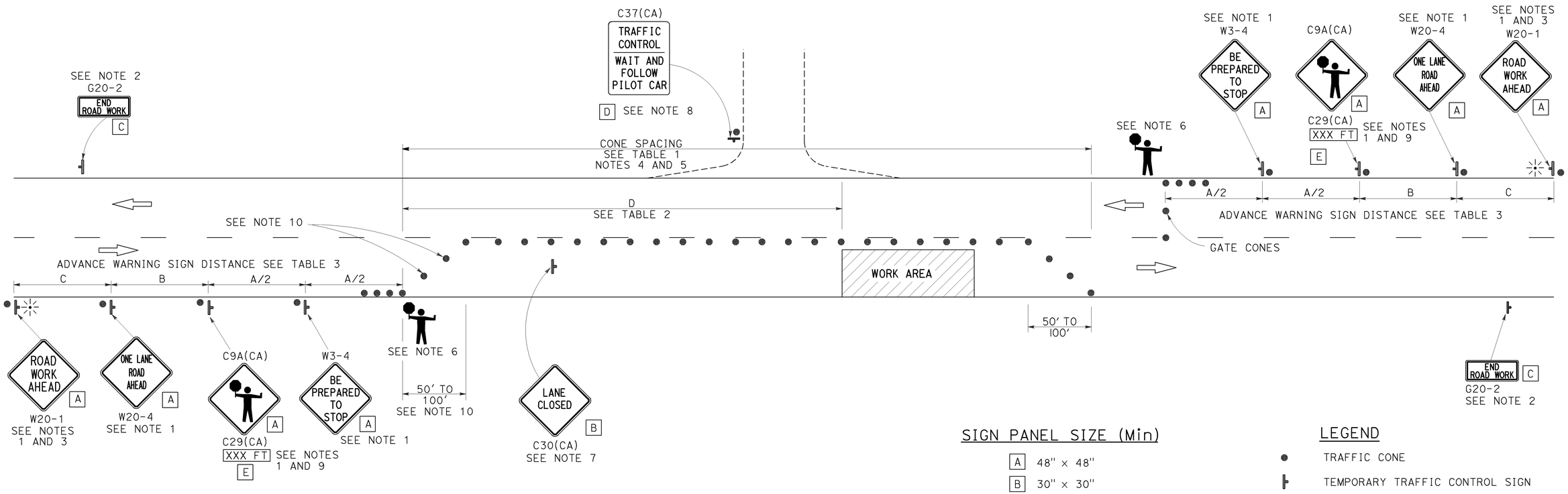
See Revised Standard Plan RSP T9 for tables.

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

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

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

TYPICAL LANE CLOSURE WITH REVERSIBLE CONTROL



NOTES:

1. Each advance warning sign in each direction of travel shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
2. A G20-2 "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane control unless the end of work area is obvious, or ends within a larger project's limits.
3. If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT _____ MILES", use a W20-4 sign for the first advance warning sign.
4. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
5. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
6. Additional advance flaggers may be required. Flagger should stand in a conspicuous place, be visible to approaching traffic as well as approaching vehicles after the first vehicle has stopped. During the hours of darkness, the flagging-station and flagger shall be illuminated and clearly visible to approaching traffic. The illumination footprint of the lighting on the ground shall be at least 20' in diameter. Place a minimum of four cones at 50' intervals in advance of flagger station as shown.
7. Place C30(CA) "LANE CLOSED" sign at 500' to 1000' intervals throughout extended work areas. They are optional if the work area is visible from the flagger station.
8. When a pilot car is used, place a C37(CA) "TRAFFIC CONTROL-WAIT AND FOLLOW PILOT CAR" sign with black legend on white background at all intersections, driveways and alleys without a flagger within traffic control area. Signs shall be clean and visible at all times. Where traffic can not be effectively self-regulated, at least one flagger shall be used at each intersection within traffic control area.
9. An optional C29(CA) sign may be placed below the C9A(CA) sign.
10. Either traffic cones or barricades shall be placed on the taper. Barricades shall be Type I, II, or III.

SIGN PANEL SIZE (Min)

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

LEGEND

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON TWO LANE CONVENTIONAL HIGHWAYS

NO SCALE

RSP T13 DATED APRIL 19, 2013 SUPERSEDES 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

4-2-13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Tuo	108	R11.3/R21.0	18	20

REGISTERED CIVIL ENGINEER

April 19, 2013
PLANS APPROVAL DATE

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

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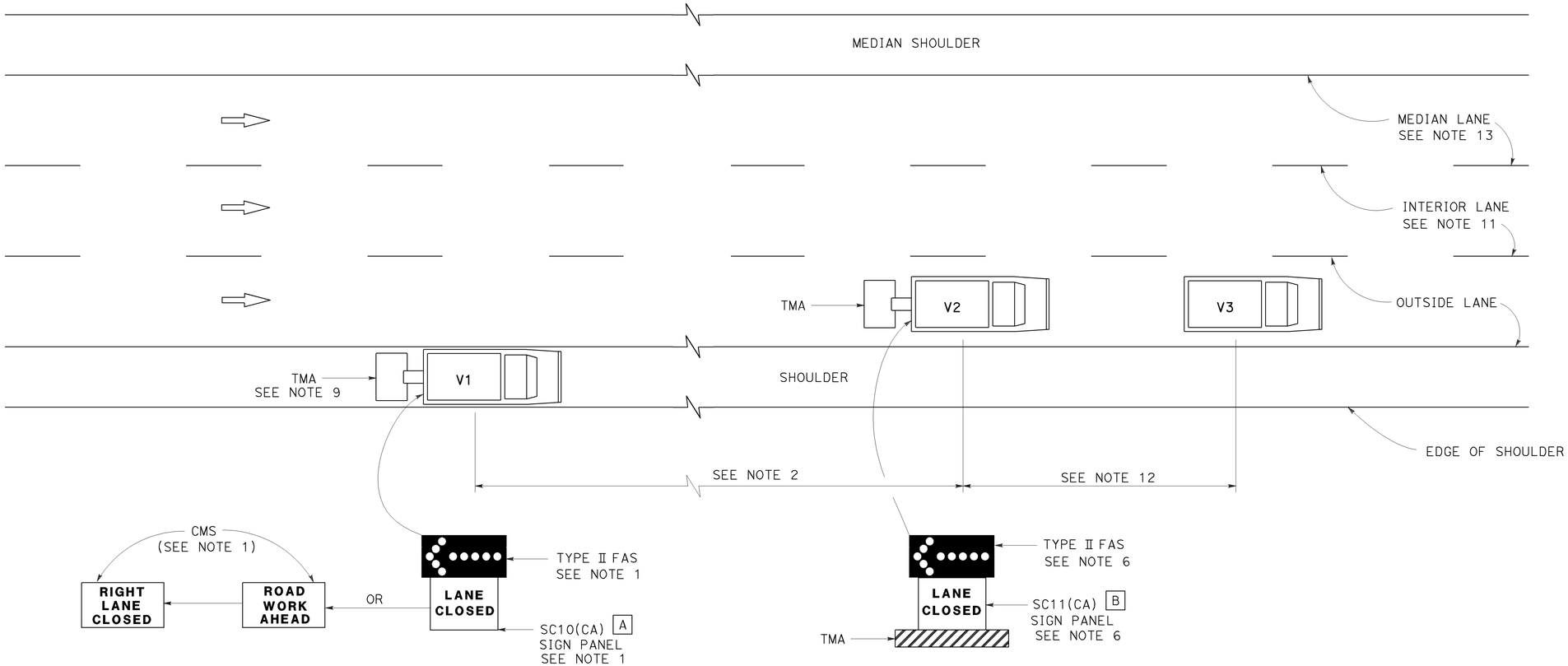
TO ACCOMPANY PLANS DATED 12/9/13



SIGN PANEL SIZE (Min)

A 66" x 36"

B 54" x 42"

LEGEND

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

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

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR MOVING LANE CLOSURE ON MULTILANE HIGHWAYS

NO SCALE

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

REVISED STANDARD PLAN RSP T15

2010 REVISED STANDARD PLAN RSP T15

12-18-12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Tuo	108	R11.3/R21.0	19	20

REGISTERED CIVIL ENGINEER

April 19, 2013
PLANS APPROVAL DATE

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

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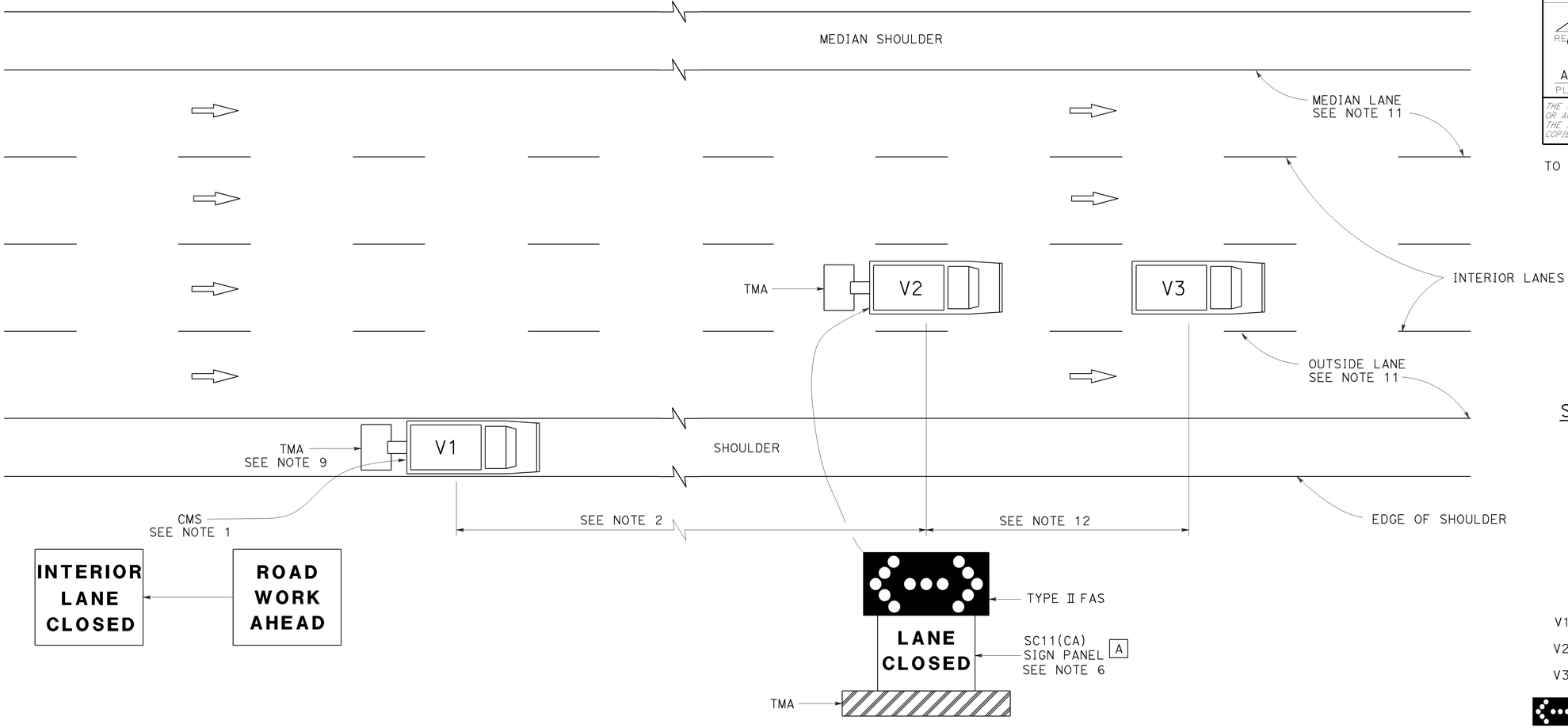
TO ACCOMPANY PLANS DATED 12/9/13



MOVING LANE CLOSURE ON INTERIOR LANE OF MULTILANE HIGHWAYS

SIGN PANEL SIZE (Min)

A 54" x 42"

LEGEND

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

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR MOVING LANE CLOSURE ON MULTILANE HIGHWAYS

NO SCALE

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

REVISED STANDARD PLAN RSP T16

2010 REVISED STANDARD PLAN RSP T16

12-18-12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Tuo	108	R11.3/R21.0	20	20

REGISTERED CIVIL ENGINEER

April 19, 2013
PLANS APPROVAL DATE

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

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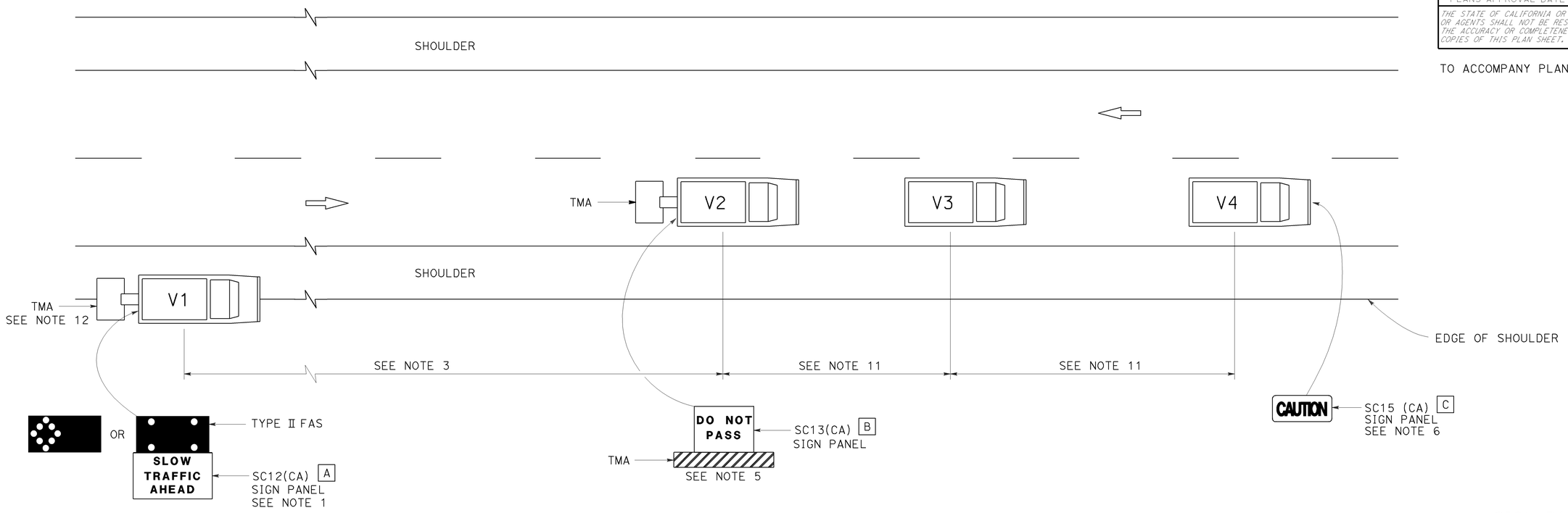
TO ACCOMPANY PLANS DATED 12/9/13



NOTES:

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

LEGEND

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

SIGN PANEL SIZE (Min)

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR MOVING LANE CLOSURE ON TWO LANE HIGHWAYS

NO SCALE

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

REVISED STANDARD PLAN RSP T17

2010 REVISED STANDARD PLAN RSP T17

12-18-12