Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev, Pla	65,80, 174	Var	1	19

INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2	CONSTRUCTION DETAILS
3-4	CONSTRUCTION AREA SIGNS
5	PAVEMENT DELINEATION QUANTITIES
6-13	TRAFFIC CONTROL SYSTEM

STRUCTURE PLANS

14-19	ROUTE 65, 80 AND 174 BRIDGES

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

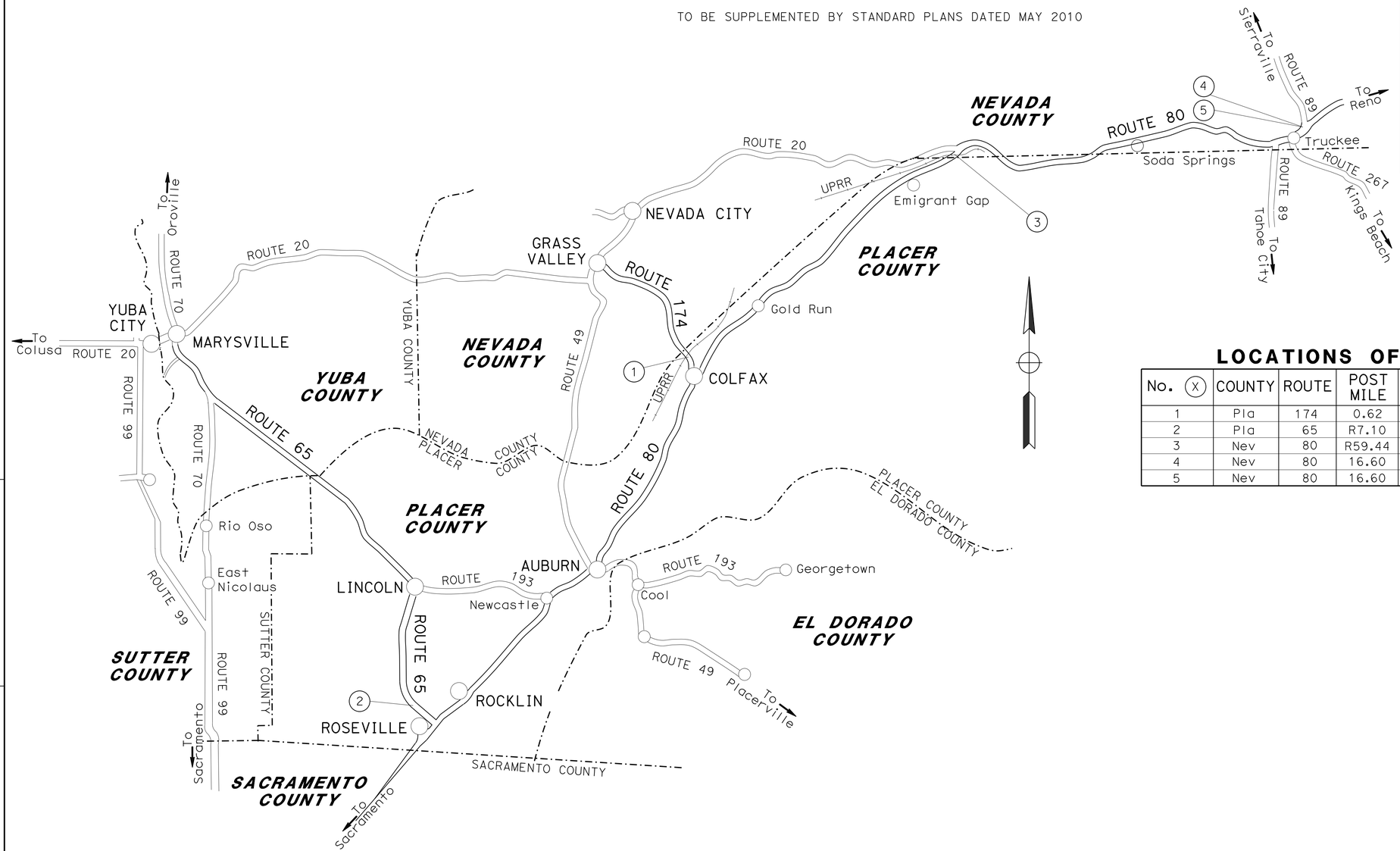
STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON STATE HIGHWAY

IN NEVADA AND PLACER COUNTIES AT VARIOUS LOCATIONS

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2010



NO SCALE

LOCATIONS OF CONSTRUCTION

No. (X)	COUNTY	ROUTE	POST MILE	BRIDGE NUMBER	STRUCTURE NAME
1	Pla	174	0.62	19-0055	COLFAX OH
2	Pla	65	R7.10	19-0178	PLEASANT GROVE Blvd OC
3	Nev	80	R59.44	17-0023L	YUBA PASS SOH
4	Nev	80	16.60	17-0099R	Rte EB I80/267-89 Sep
5	Nev	80	16.60	17-0099L	Rte WB I80/267-89 Sep

PROJECT MANAGER: RONALD S. SYKES

DESIGN ENGINEER: RONALD S. SYKES

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

D. S. Lamb 12-18-12
PROJECT ENGINEER / REGISTERED CIVIL ENGINEER — DATE

REGISTERED PROFESSIONAL ENGINEER — DAVID S LAMB No. C53386 Exp. 6-30-13 CIVIL — STATE OF CALIFORNIA

April 1, 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.	03-4M5004
PROJECT ID	0312000007

LAST REVISION: DATE PLOTTED => 09-APR-2013 TIME PLOTTED => 11:01
00-00-00

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev, Pla	65,80, 174	Var	2	19

D. S. Lamb 12-18-12
REGISTERED CIVIL ENGINEER DATE

4-1-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
DAVID S. LAMB
No. C53386
Exp. 9-30-13
CIVIL
STATE OF CALIFORNIA

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

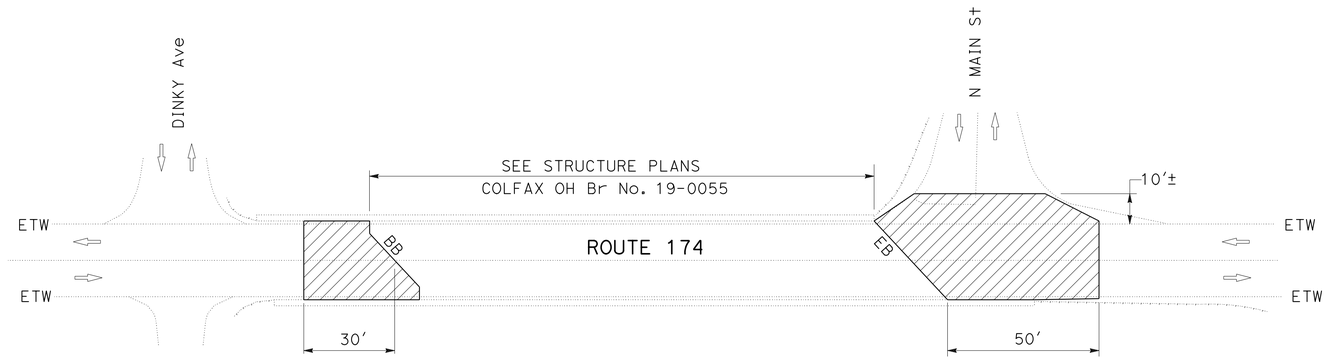
ROADWAY QUANTITIES

LOCATION No.	BRIDGE No.	STRUCTURE NAME	HMA (TYPE A)	COLD PLANE ASPHALT CONCRETE PAVEMENT
			TON	SQYD
1	19-0055	COLFAX OH	35	330
		TOTAL	35	330

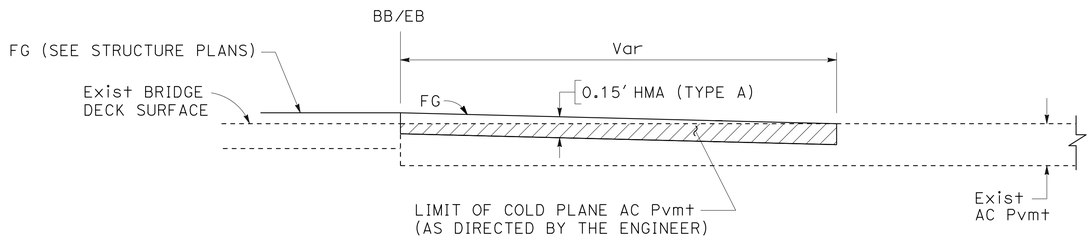
LEGEND:

COLD PLANE AC Pvmt

DIRECTION OF TRAFFIC



PLAN



PROFILE

LOCATION 1

PAVEMENT CONFORM AT BRIDGE APPROACH/DEPARTURE

NO SCALE

CONSTRUCTION DETAILS AND SUMMARY OF QUANTITIES

C-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
MAINTENANCE
FUNCTIONAL SUPERVISOR: RONALD S. SYKES
CALCULATED-DESIGNED BY: SHAHRAM RAISI
CHECKED BY
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 09-APR-2013
TIME PLOTTED => 11:01

BORDER LAST REVISED 7/1/2010
USERNAME => s125660
DGN FILE => 0312000007ga001.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0484
PROJECT NUMBER & PHASE 03120000071

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev, Pla	65,80, 174	Var	3	19

Kris M. Albers 12-31-12
REGISTERED CIVIL ENGINEER DATE

4-1-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
KRIS M. ALBERS
No. 49986
Exp. 06-30-13
CIVIL
STATE OF CALIFORNIA

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

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

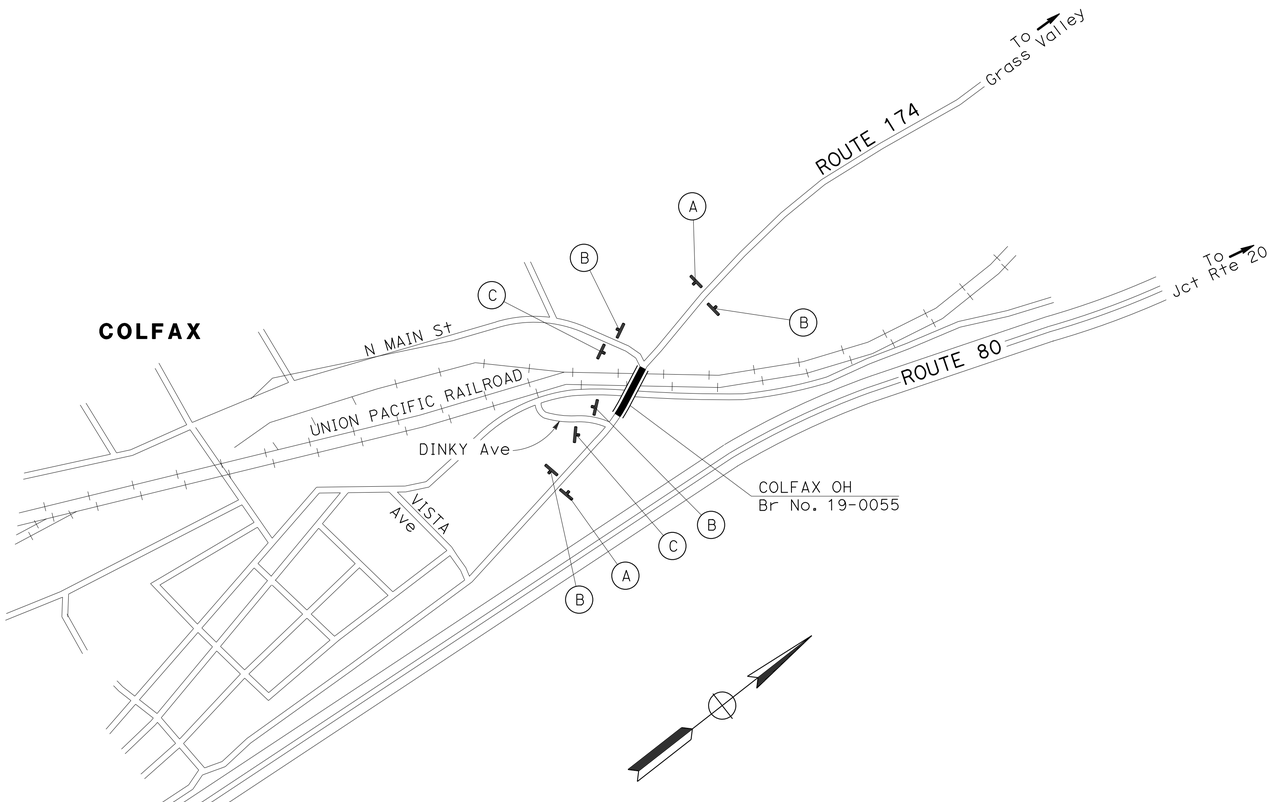
SIGN LETTER	SIGN CODE		PANEL SIZE	SIGN MESSAGE	NUMBER OF POST AND SIZE	NUMBER OF SIGNS
	FEDERAL	CALIFORNIA				
A	W20-1	C23	48" x 48"	ROAD WORK AHEAD	1 - 6" x 6"	6
B	G20-2	C14	36" x 18"	END ROAD WORK	1 - 4" x 4"	7
C	W20-1	C23	36" x 36"	ROAD WORK AHEAD	1 - 4" x 6"	2
D	W20-1	C23	60" x 60"	ROAD WORK AHEAD	2 - 4" x 6"	2
E		C14	48" x 24"	END ROAD WORK	1 - 4" x 6"	4

NOTE:

1. EXACT SIGN LOCATION TO BE DETERMINED BY THE ENGINEER.

LEGEND:

(X) CONSTRUCTION AREA SIGN LETTER



LOCATION 1

COLFAX OH
Pla 174 PM 0.62
Br No. 19-0055

CONSTRUCTION AREA SIGNS

NO SCALE

CS-1

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
TRAFFIC
FUNCTIONAL SUPERVISOR: ARSHAD IQBAL
CALCULATED-DESIGNED BY
CHECKED BY
JACK KEMMERLY
REVISED BY: X
DATE REVISED

LAST REVISION DATE PLOTTED => 09-APR-2013
TIME PLOTTED => 11:01
11-2-12

BORDER LAST REVISED 7/2/2010
USERNAME => s125660
DGN FILE => 03120000071a001.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0390
PROJECT NUMBER & PHASE 03120000071

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev, Pla	65,80, 174	Var	4	19

Kris M. Albers 12-31-12
REGISTERED CIVIL ENGINEER DATE

4-1-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
KRIS M. ALBERS
No. 49986
Exp. 06-30-13
CIVIL
STATE OF CALIFORNIA

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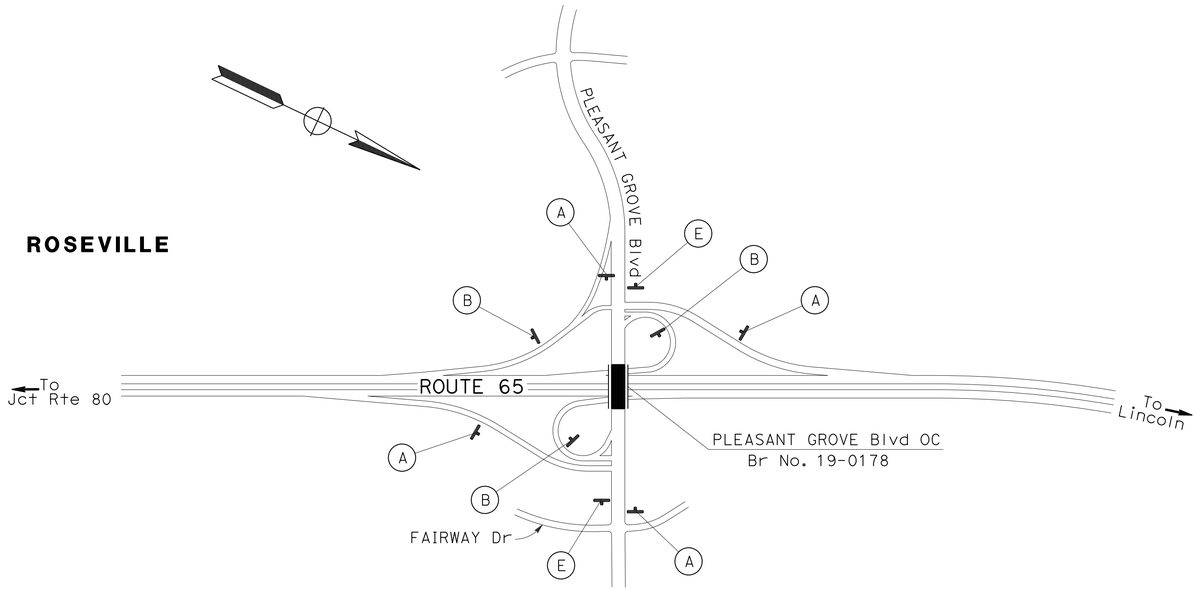
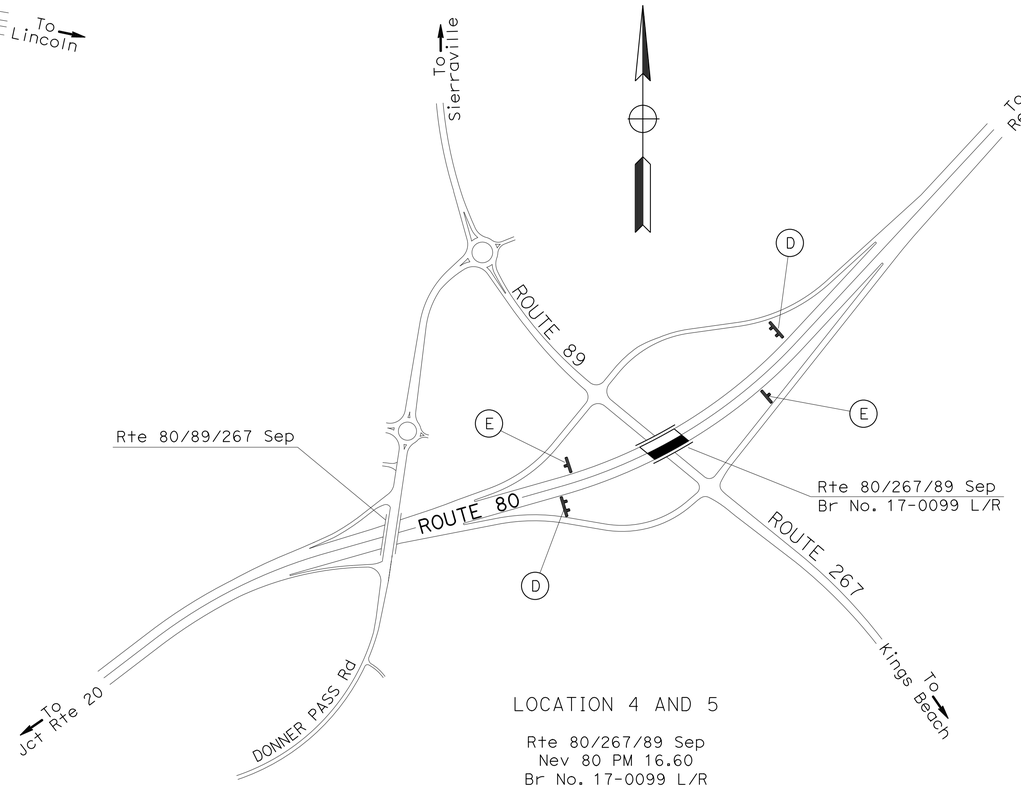
ROSEVILLE



LOCATION 2

PLEASANT GROVE Blvd OC
Pla 65 PM R7.10
Br No. 19-0178



LOCATION 4 AND 5

Rte 80/267/89 Sep
Nev 80 PM 16.60
Br No. 17-0099 L/R

TRUCKEE

CONSTRUCTION AREA SIGNS

NO SCALE

CS-2

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
TRAFFIC

FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISED BY	DATE REVISED
ARSHAD IQBAL	CHECKED BY	JACK KEMMERLY	X

LAST REVISION 11-2-12
DATE PLOTTED => 09-APR-2013
TIME PLOTTED => 11:01

BORDER LAST REVISED 7/2/2010 | USERNAME => s125660 | DGN FILE => 03120000071a002.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0390 | PROJECT NUMBER & PHASE 03120000071

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev, Pla	65,80, 174	Var	5	19

Kris M. Albers 12-31-12
REGISTERED CIVIL ENGINEER DATE

4-1-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
KRIS M. ALBERS
No. 49986
Exp. 06-30-13
CIVIL
STATE OF CALIFORNIA

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

REMOVE YELLOW THERMOPLASTIC TRAFFIC STRIPE (HAZARDOUS WASTE)

LOCATION	DESCRIPTION	
	CENTERLINE	MEDIAN ISLAND
	LF	LF
1	1,000	
2		1,120
SUBTOTAL	1,000	1,120
TOTAL	2,120	

REMOVE THERMOPLASTIC TRAFFIC STRIPE

LOCATION	DESCRIPTION	
	RIGHT EDGELINE	BIKE LANE LINE
	LF	LF
1	1,000	
2	60	660
SUBTOTAL	1,060	660
TOTAL	1,720	

PAVEMENT DELINEATION QUANTITIES

LOCATION	4" THERMOPLASTIC TRAFFIC STRIPE			6" THERMOPLASTIC TRAFFIC STRIPE	4" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 12-3)	4" THERMOPLASTIC TRAFFIC STRIPE (RECESSED, BROKEN 36-12)	4" TWO-COMPONENT PAINT TRAFFIC STRIPE		PAVEMENT MARKER (RETROREFLECTIVE)		PAVEMENT MARKER (NON-REFLECTIVE)	THERMOPLASTIC PAVEMENT MARKING
	DETAIL 21	DETAIL 27B	DETAIL 29	DETAIL 39	DETAIL 27C	DETAIL 11	DETAIL 24	DETAIL 27B	TYPE D	TYPE G	TYPE A	LIMIT LINE
	LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	SQFT
1	1,200	1,120			75							35
2		60	1,120	440					26	14	48	
4						280	280	280				
SUBTOTAL	1,200	1,180	1,120				280	280	26	14		
TOTAL	3,500			440	75	280	560		40		48	35

NOTES:

1. THE NON-REFLECTIVE PAVEMENT MARKERS WILL BE USED AT LOCATION 2 FOR THE DETAIL 13.

PAVEMENT DELINEATION QUANTITIES

PDQ-1

REVISED BY | DATE REVISED
JACK KEMMERLY | X
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: ARSHAD IQBAL
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
TRAFFIC
Caltrans

LAST REVISION 10-25-12 | DATE PLOTTED => 09-APR-2013 | TIME PLOTTED => 11:01

BORDER LAST REVISED 7/2/2010 | USERNAME => s125660 | DGN FILE => 0312000007nc001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0390 | PROJECT NUMBER & PHASE 03120000071

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev, Pla	65,80, 174	Var	6	19

REGISTERED CIVIL ENGINEER — 12-7-12 DATE

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

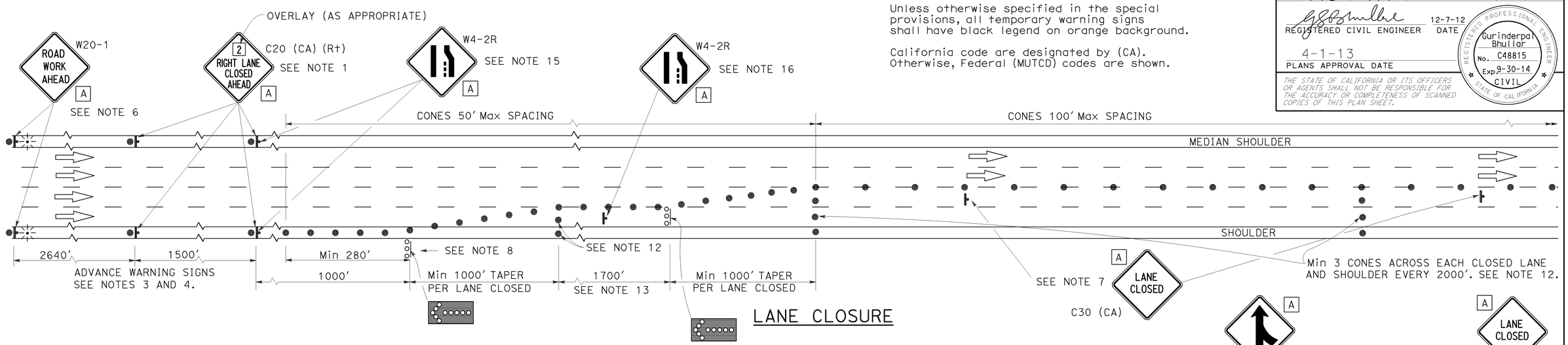
4-1-13
PLANS APPROVAL DATE

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.

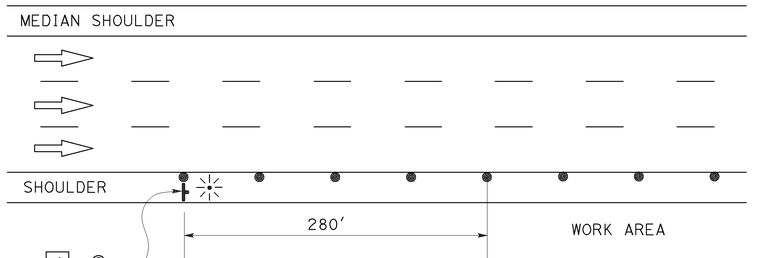
NOTES:

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

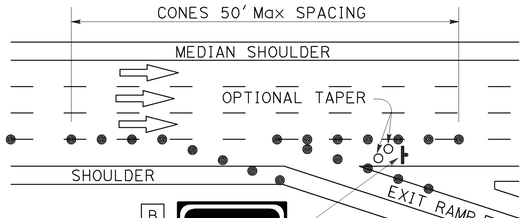
California code are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.



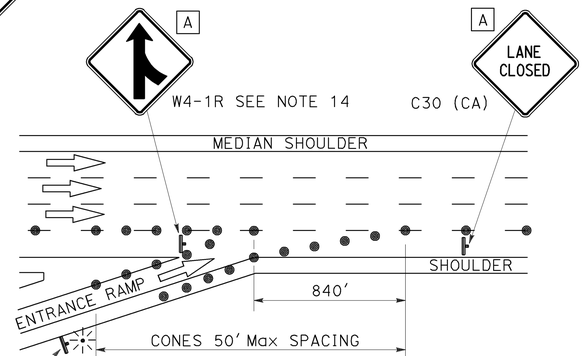
LANE CLOSURE



SHOULDER CLOSURE



LANE CLOSURE AT EXIT RAMP



LANE CLOSURE AT ENTRANCE RAMP

NOTES:

1. Median lane closures shall conform to the details for outside lane closures except that C20 (CA) (Lt) 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 C14 (CA) "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.
6. If the W20-1 sign would follow within 2000' of a stationary W20-1 or C11 (CA) "ROAD WORK NEXT _____ MILES", use a C20 (CA) sign for the first advance warning sign.
7. Place a C30 (CA) sign every 2000' throughout length of lane closure.
8. One flashing arrow sign for each lane closed. The first flashing arrow sign shall be Type I. All others may be either Type I or Type II.
9. A minimum 1500' of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at top of crest vertical curve or on a horizontal curve.
10. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
11. Portable delineators, placed at one-half the spacing indicated for traffic cones may be used instead of cones for daytime closures only.
12. Unless otherwise specified in the special provisions, a minimum of 3 cones shall be placed transversely across each closed lane and shoulder at each location where a taper across a traffic lane ends and every 2000' as shown on the "Lane Closure" detail. Two Type II barricades may be used instead of the 3 cones. The transverse alignment of the cones or barricades on the closed shoulder may be shifted from the transverse alignment to provide access to the work.
13. Unless otherwise specified in the special provisions, the 1700' tangent shown along lane lines shall be used between the 1000' tapers required for each closed traffic lane.
14. Unless otherwise specified in the special provisions, the G84 (CA) and W4-1 signs shall be used as shown.
15. When specified in the special provisions, a W4-2 "LANE ENDS" symbol sign is to be used in place of the C20 (CA) "RIGHT LANE CLOSED AHEAD" sign.
16. The W4-2 "LANE ENDS" symbol sign shown at this location is to be used where the W4-2 sign is used as advance warning as described in Note 15.

SIGN PANEL SIZE (Min)

A	48" × 48"
B	54" × 48"

LEGEND

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON FREEWAYS AND EXPRESSWAYS

NO SCALE

TCS-1

REVISED BY | DATE REVISED
CALCULATED- | DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION | DATE PLOTTED => 10-DEC-2012
00-00-00 | TIME PLOTTED => 09:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev, Pla	65,80, 174	Var	7	19

REGISTERED CIVIL ENGINEER — 12-7-12 DATE

4-1-13
PLANS APPROVAL DATE

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

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

TYPICAL LANE CLOSURE

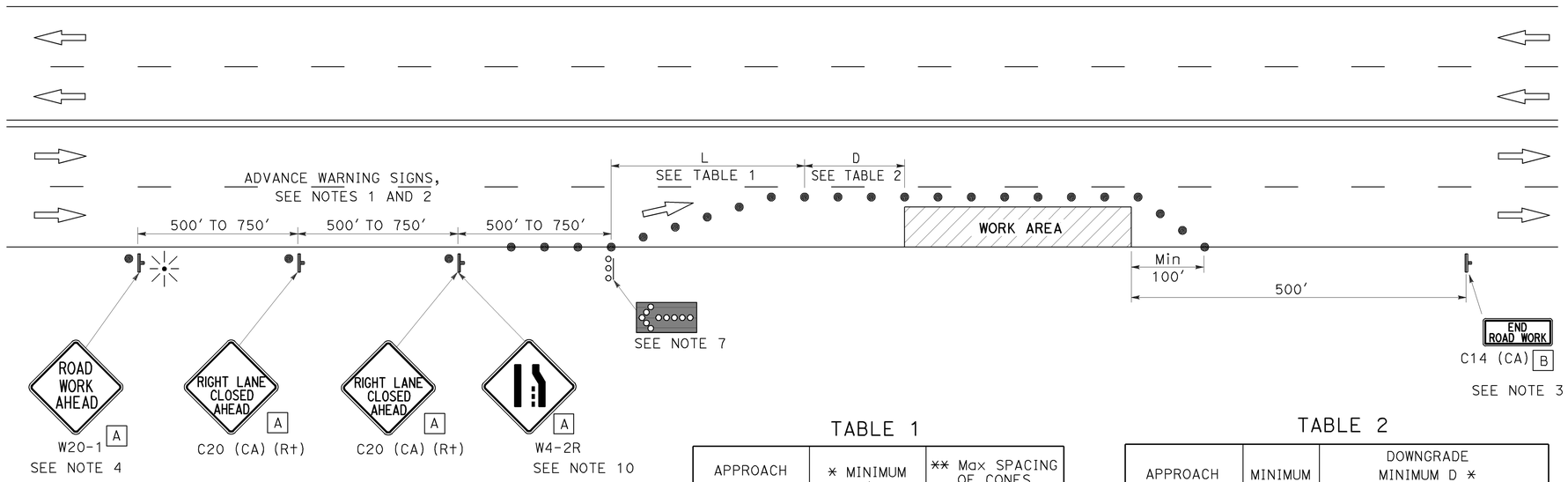


TABLE 1

APPROACH SPEED	* MINIMUM L	** Max SPACING OF CONES ALONG TAPER
mph	ft	ft
20 AND BELOW	80	20
25	125	25
30	180	30
35	245	35
40	320	40
45	540	45
50	600	50
Over 50	SEE NOTE 9	

* USE L FOR LANE WIDTHS LESS THAN OR EQUAL TO 12′.
** SEE NOTE 8.

TABLE 2

APPROACH SPEED	MINIMUM D	DOWNGRADE MINIMUM D *		
		-3%	-6%	-9%
mph	ft	ft	ft	ft
25 AND BELOW	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
OVER 50	SEE NOTE 9			

* USE ON SUSTAINED DOWNGRADE STEEPER THAN -3 PERCENT AND LONGER THAN 1 MILE.

NOTES:

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

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

LEGEND

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

SIGN PANEL SIZE (Min)

- A 36" x 36"
- B 36" x 18"

NOTES:

1. Where approach speeds are low, advance warning signs may be placed at 300′ spacing and placed closer in urban areas.
2. 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.
3. A C14 (CA) "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.
4. If the W20-1 sign would follow within 2000′ of a stationary W20-1 or C11 (CA) "ROAD WORK NEXT _____ MILES", use a C20 (CA) sign for the first advance warning sign.
5. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
6. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
7. Flashing arrow sign shall be either Type I or Type II.
8. The maximum spacing between cones along a tangent shall be 50′ and along a taper shall be approximately as shown in Table 1.
9. 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.
10. When specified in the special provisions, a W4-2 "LANE ENDS" symbol sign is to be used in place of the C20 (CA) "RIGHT LANE CLOSED AHEAD" sign.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON MULTILANE CONVENTIONAL HIGHWAYS

NO SCALE

TCS-2

LAST REVISION 00-00-00 | DATE PLOTTED => 10-DEC-2012 | TIME PLOTTED => 09:45

REVISED BY | DATE REVISED | CALCULATED-DESIGNED BY | CHECKED BY | FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans®

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev, Pla	65,80, 174	Var	8	19

REGISTERED CIVIL ENGINEER — 12-7-12 DATE

4-1-13
PLANS APPROVAL DATE

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

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

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans®

LEGEND

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

TABLE 1

APPROACH SPEED	* MINIMUM L	** Max SPACING OF CONES ALONG TAPER
mph	ft	ft
20 and below	80	20
25	125	25
30	180	30
35	245	35
40	320	40
45	540	45
50	600	50
OVER 50	SEE NOTE 11	

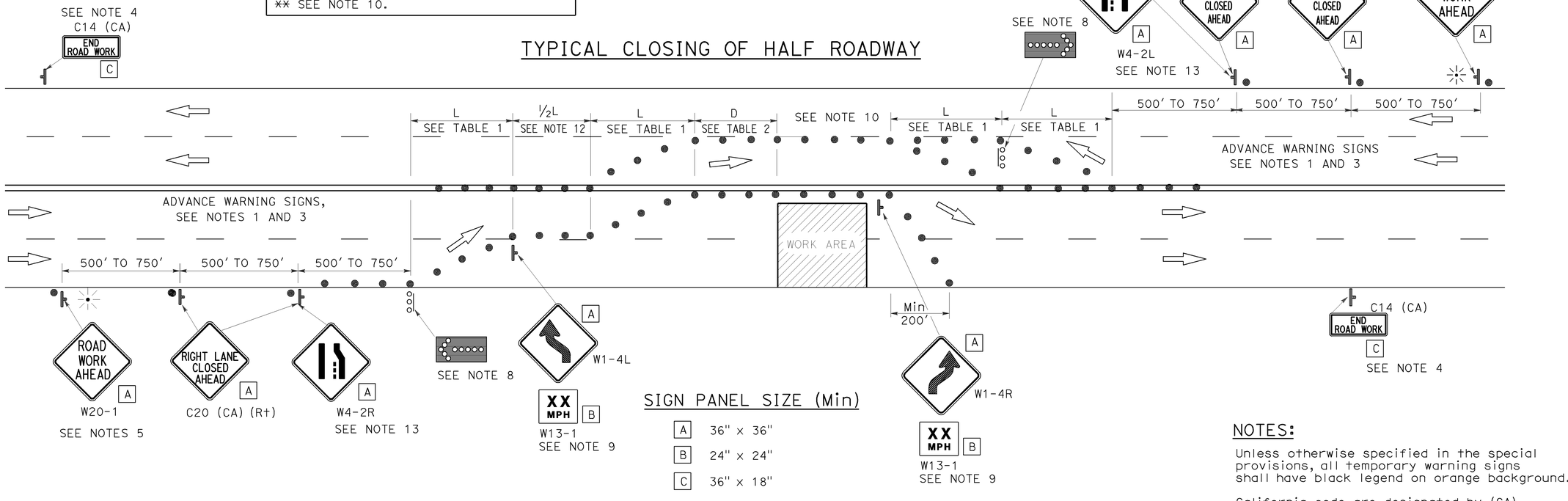
* USE L FOR LANE WIDTHS LESS THAN OR EQUAL TO 12'.
** SEE NOTE 10.

TABLE 2

APPROACH SPEED	MINIMUM D	DOWNGRADE MINIMUM D *		
		-3%	-6%	-9%
mph	ft	ft	ft	ft
25 AND BELOW	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
OVER 50	SEE NOTE 11			

* USE ON SUSTAINED DOWNGRADE STEEPER THAN -3 PERCENT AND LONGER THAN 1 MILE.

TYPICAL CLOSING OF HALF ROADWAY



SIGN PANEL SIZE (Min)

- A — 36" x 36"
- B — 24" x 24"
- C — 36" x 18"

NOTES:

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

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

NOTES:

1. Where Approach speeds are low, advance warning signs may be placed at 300' spacing and placed closer in urban areas.
2. 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.
3. 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.
4. A C14 (CA) "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.
5. If the W20-1 sign would follow within 2000' of a stationary W20-1 or C11 (CA) "ROAD WORK NEXT _____ MILES", use a C20 (CA) sign for the first advance warning sign.
6. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
7. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
8. Flashing arrow signs shall be either Type I or Type II.
9. Advisory speed will be determined by the Engineer. The W13-1 Sign will not be required when advisory speed is more than the posted or maximum speed limit.
10. The maximum spacing between cones along a tangent shall be 50' and along a taper shall be approximately as shown in Table 1.
11. 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.
12. Unless otherwise specified in the special provisions, the (½ L) shown between the two (L) lane closure tapers shall be used.
13. When specified in the special provisions, a W4-2 "Lane Ends" symbol sign is to be used in place of the C20 (CA) "RIGHT (LEFT) LANE CLOSED AHEAD" sign.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON MULTILANE CONVENTIONAL HIGHWAYS

NO SCALE

TCS-3

LAST REVISION: DATE PLOTTED => 10-DEC-2012
00-00-00 TIME PLOTTED => 09:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev, Pla	65,80, 174	Var	9	19

REGISTERED CIVIL ENGINEER — 12-7-12 DATE

4-1-13
PLANS APPROVAL DATE

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

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REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

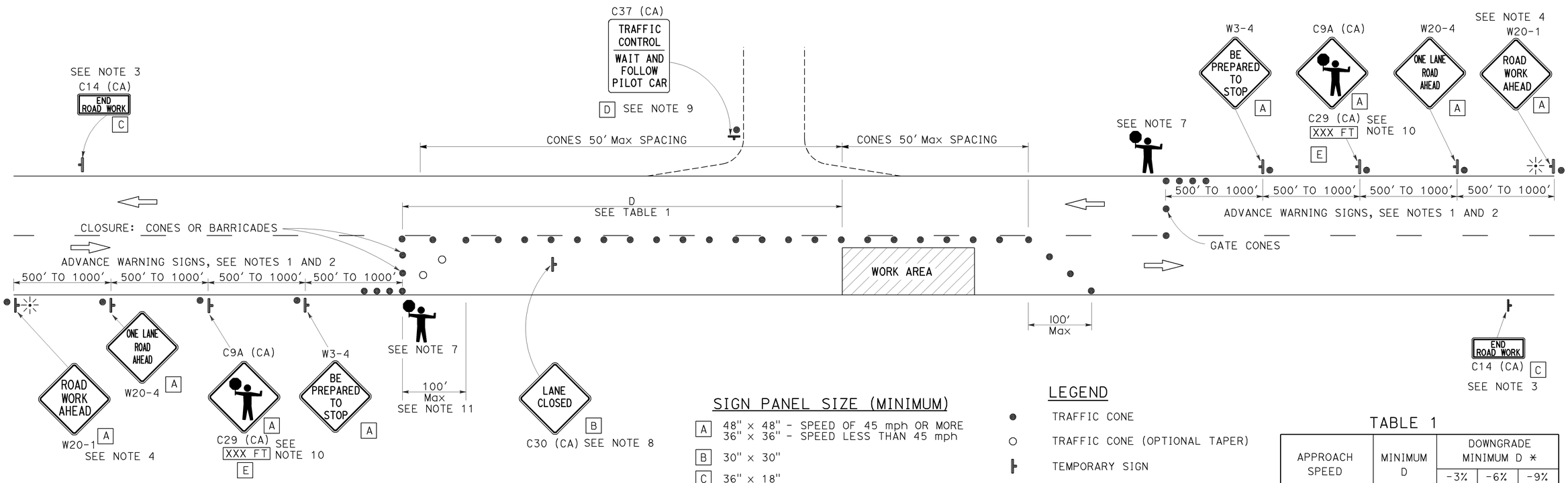
Caltrans

NOTES:

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

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

TYPICAL LANE CLOSURE WITH REVERSIBLE CONTROL



SIGN PANEL SIZE (MINIMUM)

- A — 48" x 48" - SPEED OF 45 mph OR MORE; 36" x 36" - SPEED LESS THAN 45 mph
- B — 30" x 30"
- C — 36" x 18"
- D — 36" x 42"
- E — 36" x 9"

LEGEND

- TRAFFIC CONE
- TRAFFIC CONE (OPTIONAL TAPER)
- TEMPORARY SIGN
- PORTABLE FLASHING BEACON
- FLAGGER

TABLE 1

APPROACH SPEED	MINIMUM D	DOWNGRADE MINIMUM D *		
		-3%	-6%	-9%
mph	ft	ft	ft	ft
25 AND BELOW	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

* USE ON SUSTAINED DOWNGRADE STEEPER THAN -3 PERCENT AND LONGER THAN 1 MILE.

NOTES:

1. Where approach speeds are low, advance warning signs may be placed at 300' spacing, and closer in urban areas.
2. 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.
3. A C14 (CA) "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.
4. If the W20-1 sign would follow within 2000' of a stationary W20-1 or C11 (CA) "ROAD WORK NEXT _____MILES", use a W20-4 sign for the first advance warning sign.
5. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
6. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
7. 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.
8. 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.
9. When a pilot car is used, place a C37 (CA) "TRAFFIC CONTROL-WAIT AND FOLLOW PILOT CAR" sign at all intersections within traffic control area. Signs shall be clean and visible at all times.
10. An optional C29 (CA) sign may be placed below the C9A (CA) sign.
11. Traffic cones or barricades may be placed on the optional taper as shown, barricades shall be Type I, II, or III.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON TWO LANE CONVENTIONAL HIGHWAYS

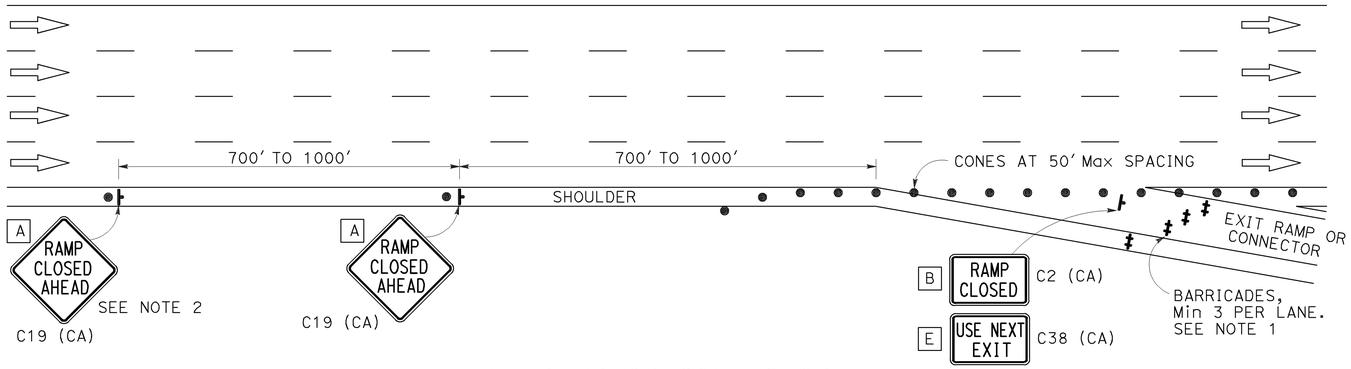
NO SCALE

TCS-4

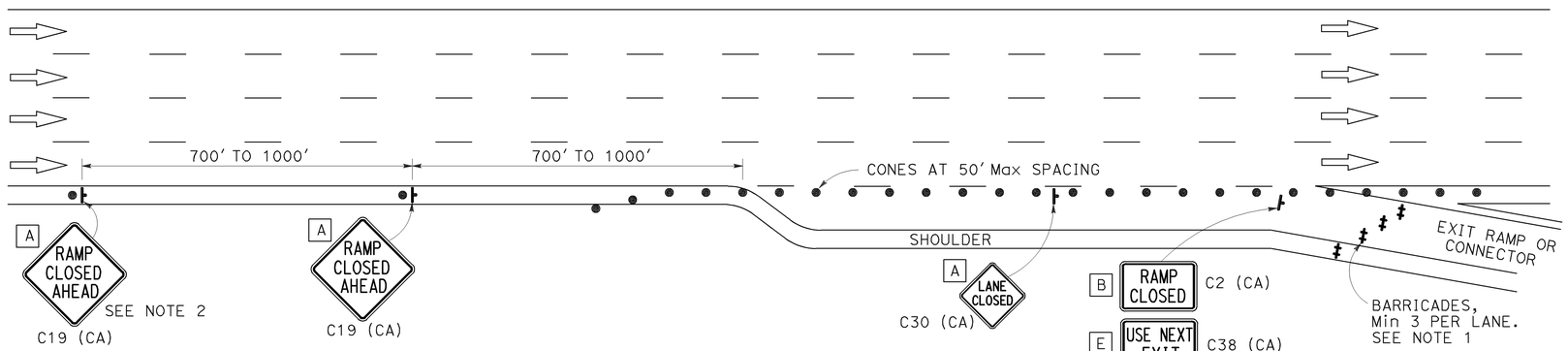
LAST REVISION | DATE PLOTTED => 10-DEC-2012 | TIME PLOTTED => 09:45 | 00-00-00

BORDER LAST REVISED 7/2/2010 | USERNAME => s114640 | DGN FILE => tcs13.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0484 | PROJECT NUMBER & PHASE 03120000071

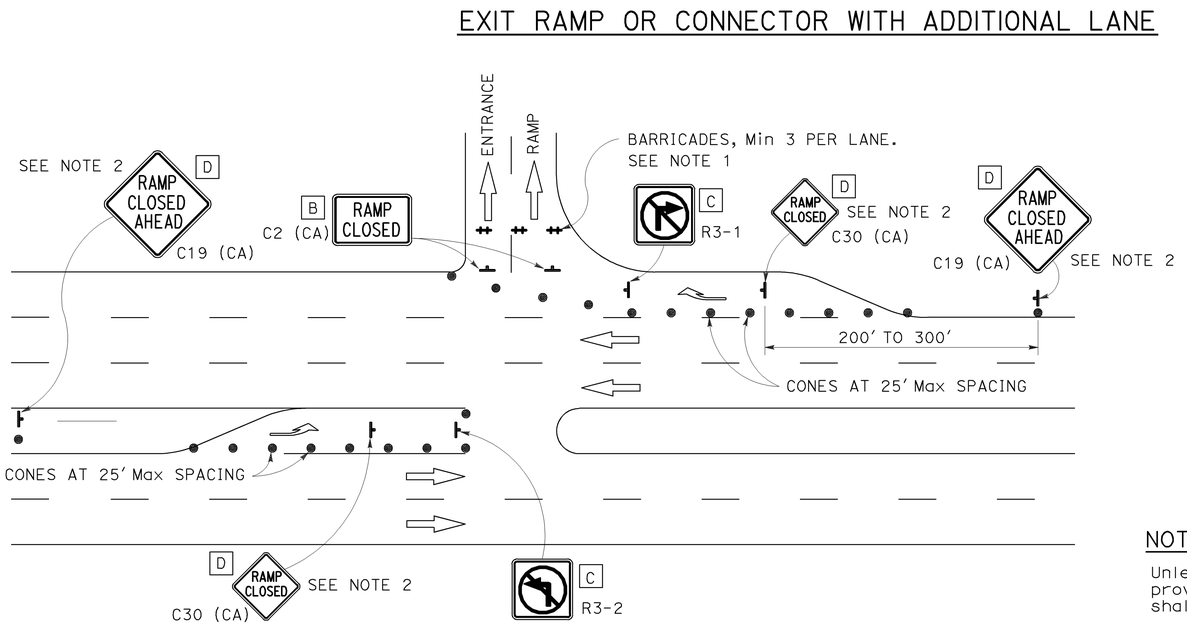
TYPICAL RAMP CLOSURES



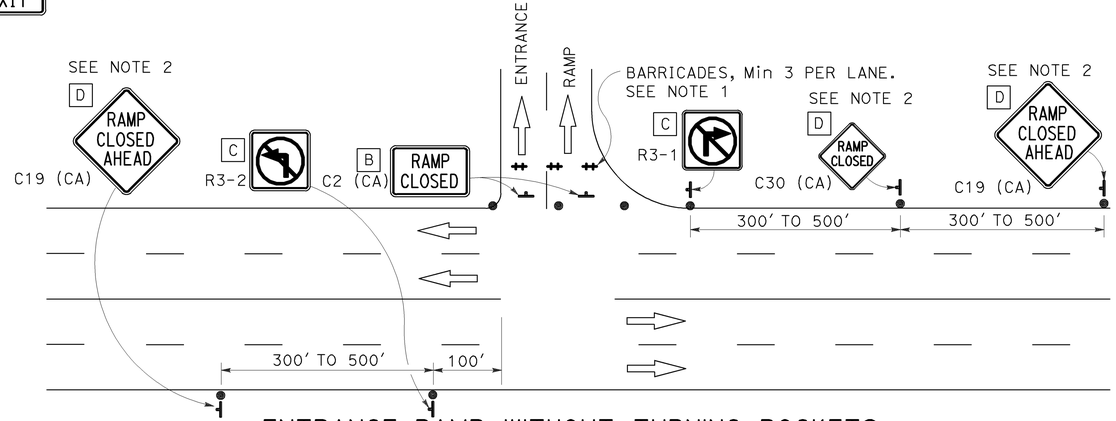
EXIT RAMP OR CONNECTOR



EXIT RAMP OR CONNECTOR WITH ADDITIONAL LANE



ENTRANCE RAMP WITH TURNING POCKETS



ENTRANCE RAMP WITHOUT TURNING POCKETS

SIGN PANEL SIZE (Min)

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

LEGEND

- TRAFFIC CONE
- TEMPORARY SIGN
- BARRICADES

NOTES:

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

NOTES:

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

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev, Pla	65,80, 174	Var	10	19

REGISTERED CIVIL ENGINEER — 12-7-12 DATE

4-1-13
PLANS APPROVAL DATE

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

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STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR RAMP CLOSURE

NO SCALE

TCS-5

REVISED BY | DATE REVISED | CALCULATED-DESIGNED BY | CHECKED BY | FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION | DATE PLOTTED => 10-DEC-2012 | 00-00-00 | TIME PLOTTED => 09:45

BORDER LAST REVISED 7/2/2010 | USERNAME => s114640 | DGN FILE => tcs14.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0484 | PROJECT NUMBER & PHASE 03120000071

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev, Pla	65,80, 174	Var	11	19

REGISTERED CIVIL ENGINEER — 12-7-12 DATE

4-1-13
PLANS APPROVAL DATE

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

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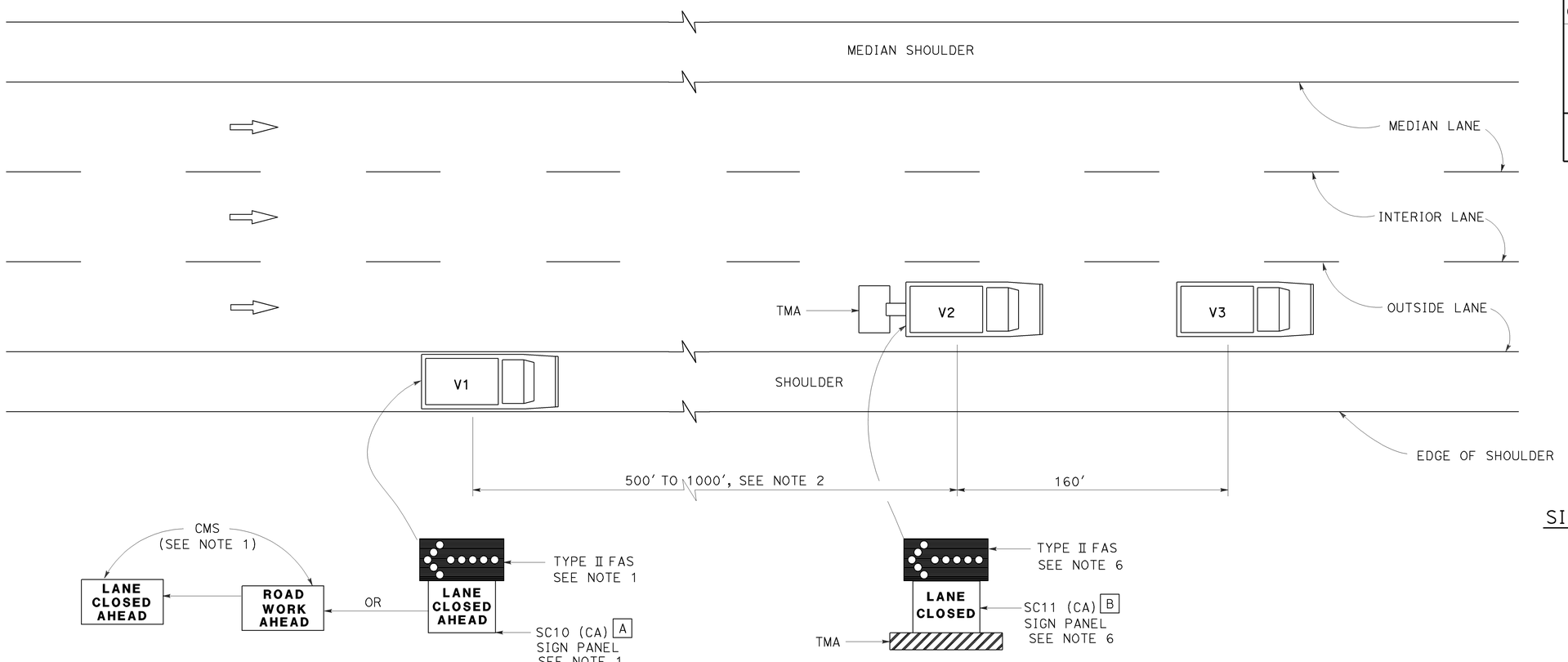

SIGN PANEL SIZE (Min)

A 66" x 36"

B 54" x 42"

LEGEND

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

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

NOTES:

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. A Type II flashing arrow sign shall be mounted on the rear of sign vehicle V1 and used with the SC10 (CA) sign panel. A Type II flashing arrow sign will not be required with the changeable message sign provided the flashing arrow sign symbol is displayed on the changeable message sign board. The changeable message sign shall be sequenced to show the "ROAD WORK AHEAD" message first, followed by the "LANE CLOSED AHEAD" message and then the flashing arrow sign symbol. For median lane closure, the flashing arrow symbol shall be reversed with the arrowhead on the right.
2. If traffic queues develop, sign vehicle V1 should be positioned upstream from the end of queue. Sign vehicle V1 shall be positioned where highly visible when shoulders are not available.
3. A minimum sight distance of 1500′ should be provided in advance of sign vehicle V1.
4. Sign vehicle V1 should remain at the beginning of horizontal or vertical curves until the other vehicles (V2 and V3) are far enough beyond the curve to resume the minimum sight distance of 1500′.
5. Vehicle-mounted sign panels shall be Type III, IV, VII, VIII or IX retroreflective sheeting, black on white, black on orange, or black on fluorescent orange, with 6" minimum series D letters per Caltrans sign specifications.
6. Gross Vehicle Weight of shadow vehicle V2 shall be a minimum of 20,000 pounds and shall be equipped with a truck-mounted attenuator. The sign panel shown and a Type II flashing arrow sign shall be mounted on the rear of shadow vehicle V2. 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.
9. Where sufficient shoulder width is not available, sign vehicle V1 may encroach into the traffic lane staying as close to the edge of shoulder as practicable. Both V1 and V2 shall be equipped with a truck-mounted attenuator. The Gross Vehicle Weight of V1 and V2 shall be at least 20,000 pounds, respectively.
10. When multiple work vehicles are used in close proximity to each other, only one shadow vehicle is required, and spacing between work vehicles shall be minimized in order to deter traffic from entering the closed lane.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR MOVING LANE CLOSURE ON MULTILANE HIGHWAYS (OUTSIDE AND MEDIAN LANES)

NO SCALE

TCS-6

REVISED BY | DATE REVISED
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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION | DATE PLOTTED => 10-DEC-2012 | TIME PLOTTED => 09:45
00-00-00

BORDER LAST REVISED 7/2/2010 | USERNAME => s114640 | DGN FILE => tcs15.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0484 | PROJECT NUMBER & PHASE 03120000071

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev, Pla	65,80, 174	Var	12	19

REGISTERED CIVIL ENGINEER — 12-7-12 DATE

4-1-13
PLANS APPROVAL DATE

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

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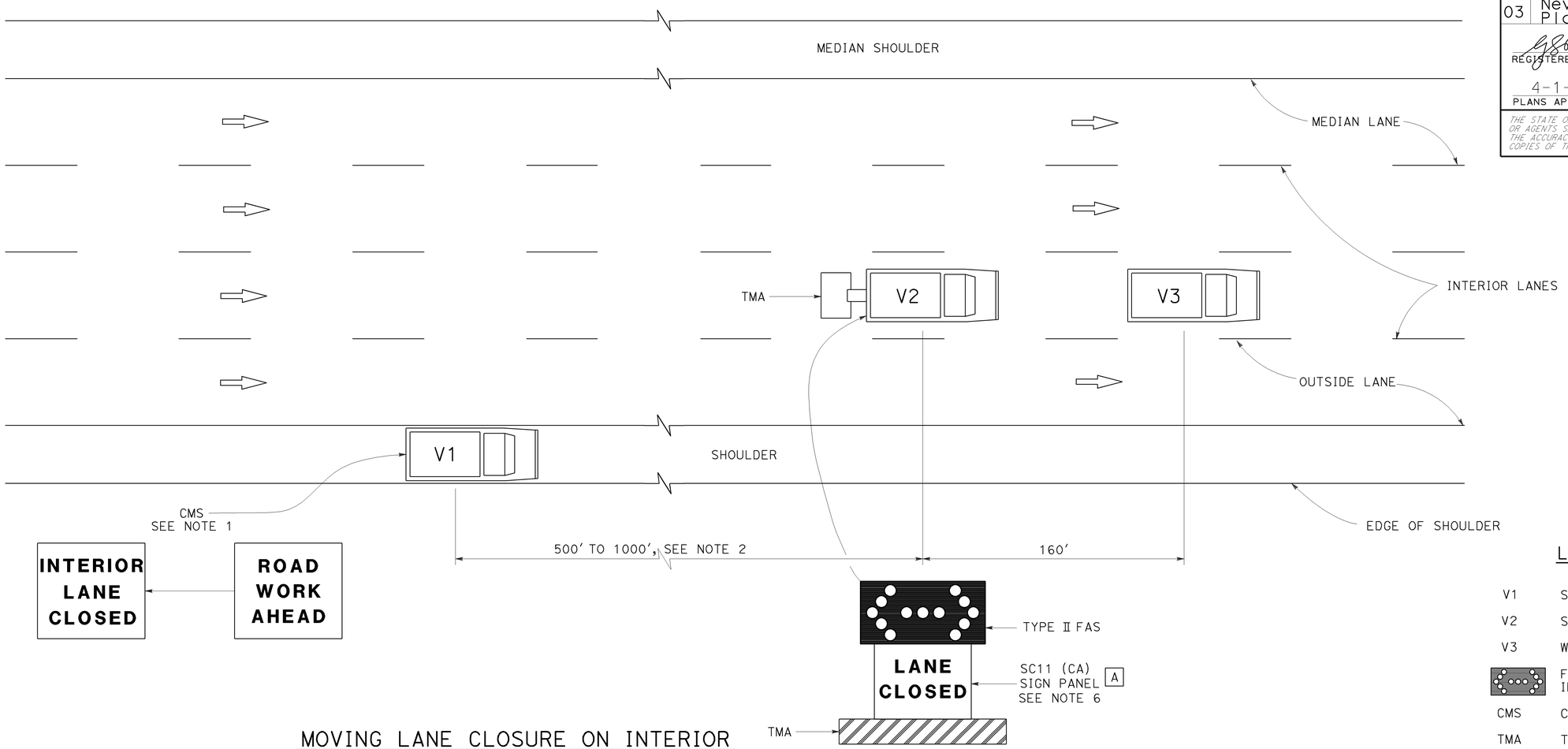

MOVING LANE CLOSURE ON INTERIOR LANE OF MULTILANE HIGHWAYS

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 be Type III, IV, VII, VIII, or IX retroreflective sheeting, black on white, black on orange, or black on fluorescent orange, with 6" minimum series D letters per Caltrans sign specifications.
6. Gross Vehicle Weight of shadow vehicle V2 shall be a minimum of 20,000 pounds and shall be equipped with a truck-mounted attenuator. The sign panel shown and a Type II flashing arrow sign shall be mounted on the rear of shadow vehicle V2.
7. All vehicles used for lane closures shall be equipped with two-way radios, and the vehicle operators shall maintain communication during the work or application operation.
8. All vehicles shall be equipped with flashing or rotating amber lights.
9. Where sufficient shoulder width is not available, sign vehicle V1 may encroach into the traffic lane staying as close to the edge of shoulder as practicable. Both V1 and V2 shall be equipped with a truck-mounted attenuator. The Gross Vehicle Weight of V1 and V2 shall be at least 20,000 pounds, respectively.
10. When multiple work vehicles are used in close proximity to each other, only one shadow vehicle is required, and spacing between work vehicles shall be minimized in order to deter traffic from entering the closed lane.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

TCS-7

REVISED BY | DATE REVISED | CALCULATED-DESIGNED BY | CHECKED BY | FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev, Pla	65,80, 174	Var	13	19

REGISTERED CIVIL ENGINEER — 12-7-12 DATE

4-1-13
PLANS APPROVAL DATE

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

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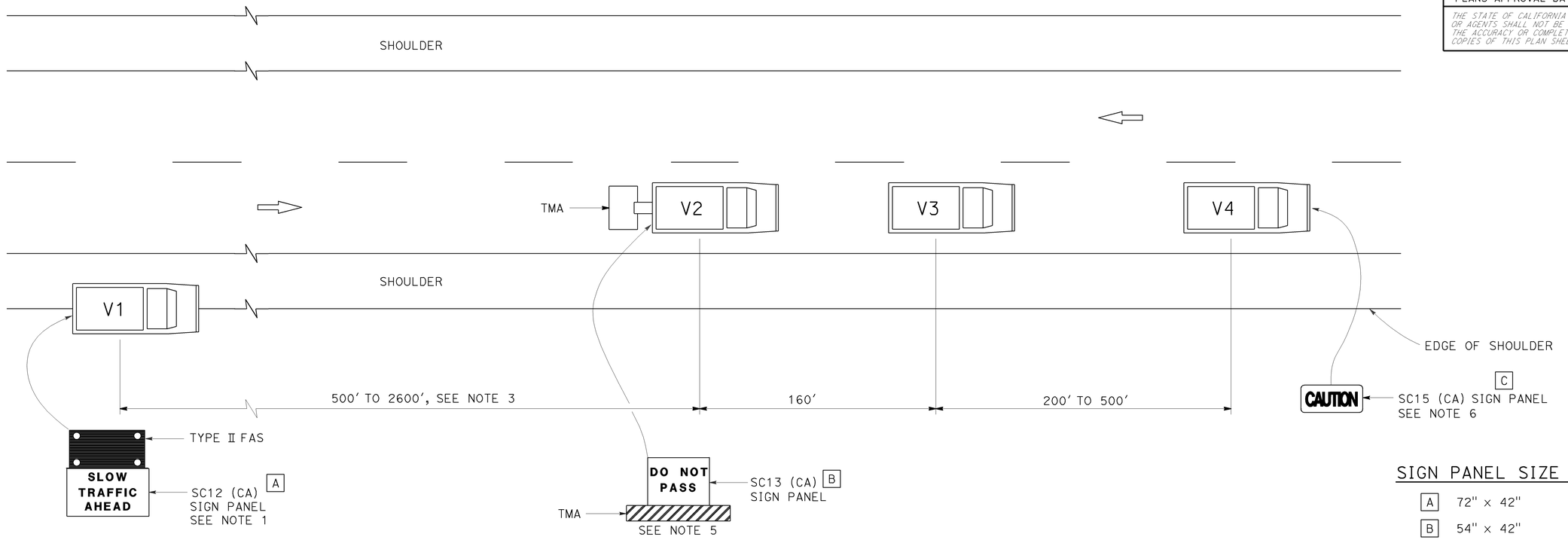

SIGN PANEL SIZE (Min)

A	72" × 42"
B	54" × 42"
C	54" × 24"

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

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. 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 be Type III, IV VII, VIII or IX retroreflective sheeting, black on white, black on orange, or black on fluorescent orange, with 6" minimum series D letters per Caltrans sign specifications.
5. Gross Vehicle Weight of shadow vehicle shall be a minimum of 20,000 pounds and 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. When multiple work vehicles are used in close proximity to each other, only one shadow vehicle is required and spacing between work vehicles shall be minimized in order to deter traffic from entering the closed lane.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR MOVING LANE CLOSURE ON TWO LANE HIGHWAYS

NO SCALE

TCS-8

REVISED BY | DATE REVISED
CALCULATED- | DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION | DATE PLOTTED => 10-DEC-2012 | TIME PLOTTED => 09:45
00-00-00

BORDER LAST REVISED 7/2/2010 | USERNAME => s114640 | DGN FILE => tcs17.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0484 | PROJECT NUMBER & PHASE 03120000071

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	NEV,PLA	65,80,174	VAR	14	19

REGISTERED CIVIL ENGINEER — 8-28-12 DATE

4-1-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — BRIAN P. NGUYEN No. 68270 Exp. 9-30-13 CIVIL — STATE OF CALIFORNIA

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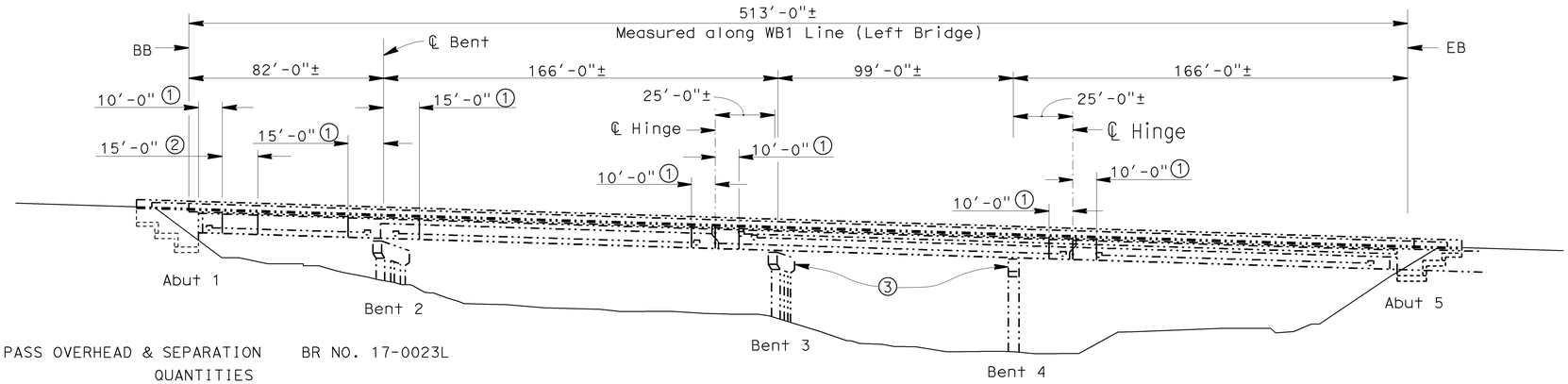


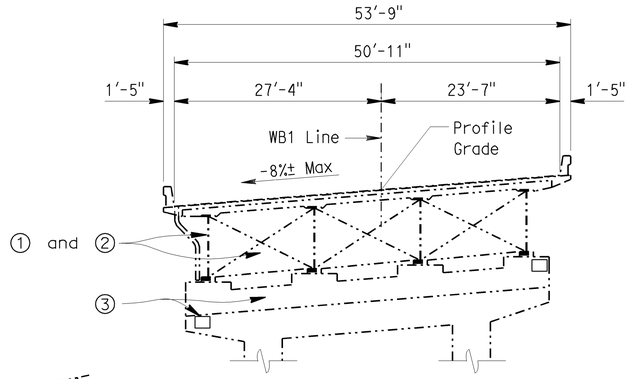
YUBA PASS OVERHEAD & SEPARATION BR NO. 17-0023L

QUANTITIES

REPAIR SPALLED SURFACE AREA	26	SQFT
CLEAN STRUCTURAL STEEL (EXISTING BRIDGE)	LUMP	SUM
PAINT STRUCTURAL STEEL (EXISTING BRIDGE)	LUMP	SUM
SPOT BLAST CLEAN AND PAINT UNDERCOAT	11,980	SQFT

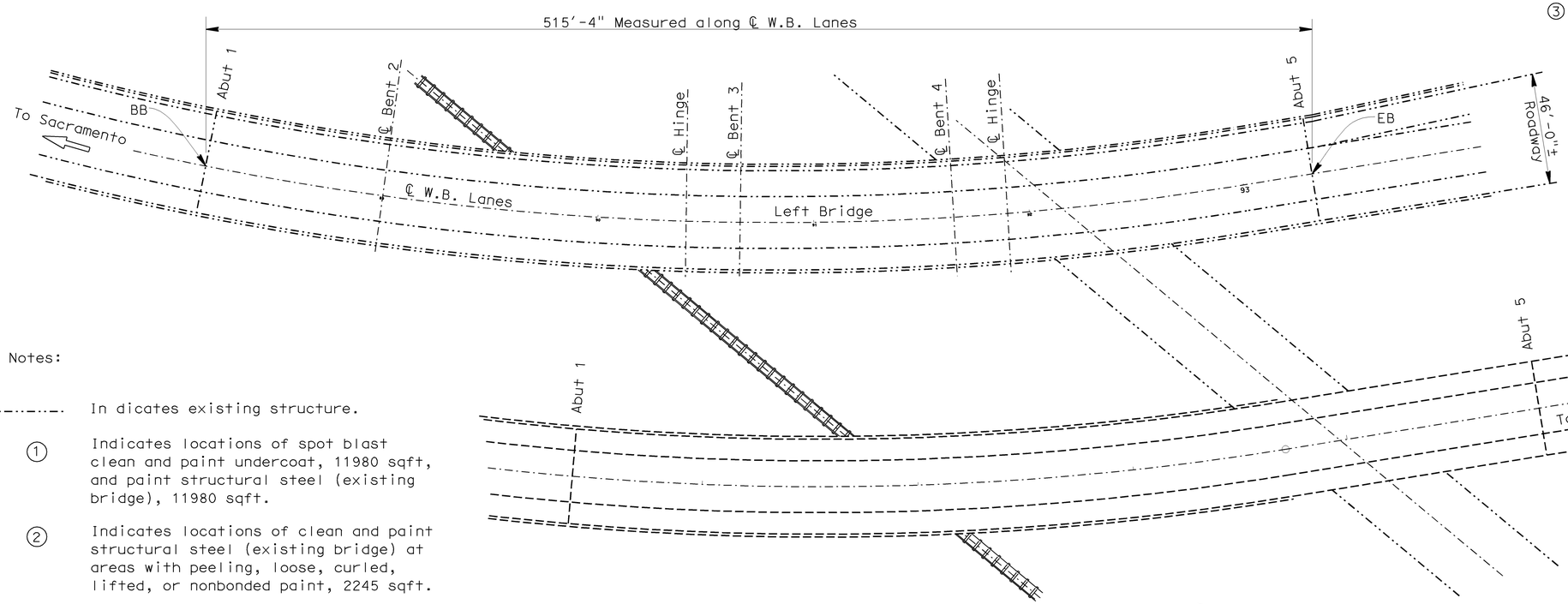
ELEVATION - LEFT BRIDGE

1" = 30'



TYPICAL SECTION

1" = 10'



YUBA PASS OVERHEAD & SEPARATION

BR. NO. 17-0023L, RTE 80, NEV, PM R59.44
1"=30'

Notes:

- - - - - - - In dicates existing structure.

① Indicates locations of spot blast clean and paint undercoat, 11980 sqft, and paint structural steel (existing bridge), 11980 sqft.

② Indicates locations of clean and paint structural steel (existing bridge) at areas with peeling, loose, curled, lifted, or nonbonded paint, 2245 sqft.

③ Indicates limits of repair spalled surface area. For details see "MISCELLANEOUS DETAILS" sheet.

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

INDEX TO PLANS

SHEET NO.	TITLE
1	GENERAL PLAN NO. 1
2	GENERAL PLAN NO. 2
3	GENERAL PLAN NO. 3
4	JOINT SEAL DETAILS
5	SNOW PLOW DEFLECTOR DETAILS
6	MISCELLANEOUS DETAILS

Standard Plan Sheet No.
Detail No.

STANDARD PLANS DATED 2010

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

Michael J. Lee 8-28-12
DESIGN ENGINEER

DESIGN	BY Brian Nguyen	CHECKED Charles Hutchinson	LAYOUT	BY Trung Lam	CHECKED Brian Nguyen	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF MAINTENANCE STRUCTURE MAINTENANCE DESIGN	BRIDGE NO. VARIOUS	ROUTE 65, 80 & 174 BRIDGES
DETAILS	BY Trung Lam	CHECKED Charles Hutchinson						POST MILE VARIES	GENERAL PLAN NO. 1
QUANTITIES	BY Brian Nguyen	CHECKED Charles Hutchinson	SPECIFICATIONS	BY Dave Klein	PLANS AND SPECIFICATIONS COMPARED Dave Klein				

STRUCTURES MAINTENANCE GENERAL PLAN & DETAIL SHEET (ENGLISH) (REV. 10/17/07)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3488
PROJECT NUMBER & PHASE: 0312000007 1
CONTRACT NUMBER: 03-4M5001

DISREGARD PRINTS BEARING EARLIER REVISION DATES → REVISION DATES: 4-04-13 | 02-25-13 | 8-28-12 | 10-25-12 | 01-07-13

SHEET 1 OF 6

FILE => 03-4m5001_01_gp1.dgn

USERNAME => s122289 DATE PLOTTED => 04-APR-2013 TIME PLOTTED => 13:09

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	NEV,PLA	65,80,174	VAR	15	19

REGISTERED CIVIL ENGINEER — 8-28-12 DATE

BRIAN P. NGUYEN No. 68270 Exp. 9-30-13 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

4-1-13
PLANS APPROVAL DATE

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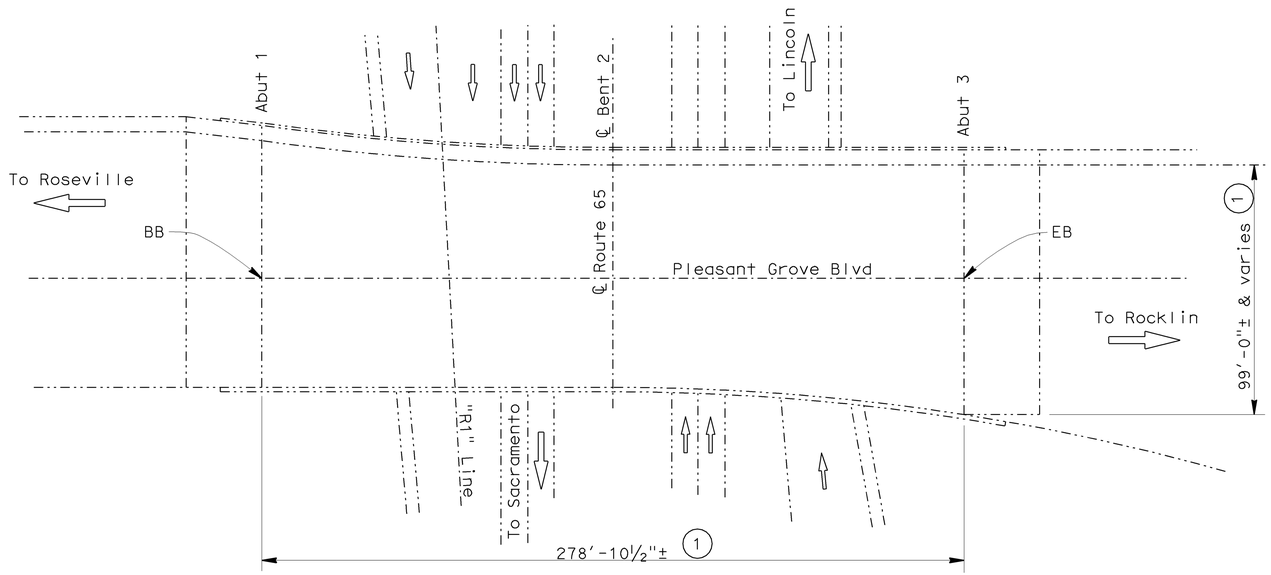


PLEASANT GROVE BLVD. OC

BR. NO. 19-0178, RTE 65, PLA, PM R7.1
1"=30'

Notes:

Indicates existing structure.

(1) Indicates limits of prepare and treat bridge deck with high molecular weight methacrylate.

(2) Indicates approximately drainage location. For details see "DECK DRAIN DETAIL" on MISCELLANEOUS DETAILS sheet.

Indicates limits of remove unsound concrete, place rapid setting concrete patches, prepare concrete bridge deck surfaces, and place ¾" polyester concrete overlay. For details, see "JOINT SEAL DETAILS" sheet.

Indicates limits of remove existing AC surfacing, AC thickness varies from ½" to 4"±, remove unsound concrete, place rapid concrete setting patches, prepare concrete bridge deck surfaces, and place ¾" polyester concrete overlay match new polyester deck grade. For details, see "JOINT SEAL DETAILS" sheet.

PLEASANT GROVE BLVD OC BR NO. 19-0178

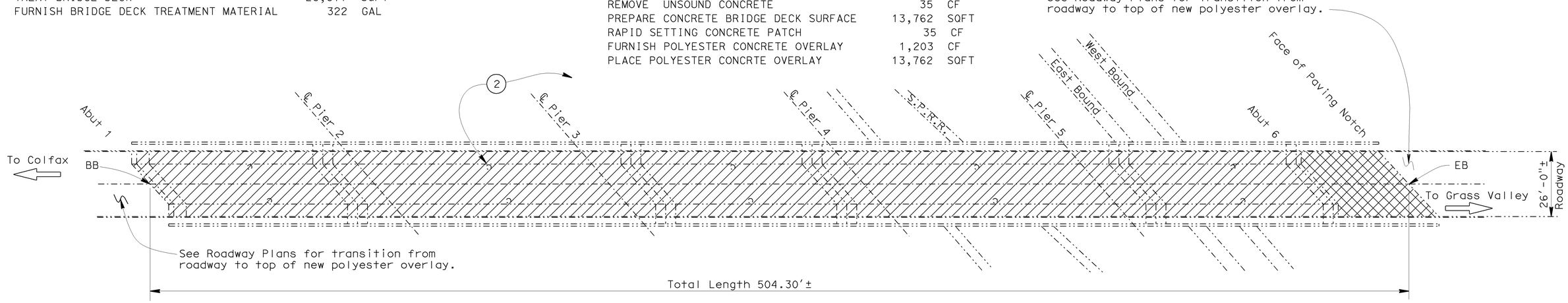
QUANTITIES

PREPARE CONCRETE BRIDGE DECK SURFACE	28,871	SQFT
TREAT BRIDGE DECK	28,871	SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	322	GAL

COLFAX OVERHEAD BR NO. 19-0055

QUANTITIES

PUBLIC SAFETY PLAN	LUMP	SUM
REMOVE ASPHALT CONCRETE SURFACING	1,066	SQFT
REMOVE UNSOUND CONCRETE	35	CF
PREPARE CONCRETE BRIDGE DECK SURFACE	13,762	SQFT
RAPID SETTING CONCRETE PATCH	35	CF
FURNISH POLYESTER CONCRETE OVERLAY	1,203	CF
PLACE POLYESTER CONCRTE OVERLAY	13,762	SQFT



COLFAX OVERHEAD

BR. NO. 19-0055, RTE 174, PLA, PM 0.62
1"=20'

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

Michael J. Lee 8-28-12 DESIGN ENGINEER	DESIGN	BY Brian Nguyen	CHECKED Charles Hutchinson	LAYOUT	BY Trung Lam	CHECKED Brian Nguyen	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF MAINTENANCE STRUCTURE MAINTENANCE DESIGN
	DETAILS	BY Trung Lam	CHECKED Charles Hutchinson					BRIDGE NO. VARIOUS
	QUANTITIES	BY Brian Nguyen	CHECKED Charles Hutchinson	SPECIFICATIONS	BY Dave Klein	PLANS AND SPECIFICATIONS COMPARED Dave Klein		POST MILE VARIES

ROUTE 65, 80 & 174 BRIDGES

GENERAL PLAN NO. 2

STRUCTURES MAINTENANCE GENERAL PLAN & DETAIL SHEET (ENGLISH) (REV. 10/17/07)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3488
PROJECT NUMBER & PHASE: 0312000007 1 CONTRACT NUMBER: 03-4M5001

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES					SHEET	OF
4-04-13	02-25-13	6-13-12	6-20-12	7-02-12	2	6

FILE => 03-4m5001_02_gp2.dgn

USERNAME => s1212289 DATE PLOTTED => 04-APR-2013 TIME PLOTTED => 13:10

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	NEV,PLA	65,80,174	VAR	16	19

REGISTERED CIVIL ENGINEER — 8-28-12 DATE

4-1-13 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — BRIAN P. NGUYEN No. 68270 Exp. 9-30-13 CIVIL — STATE OF CALIFORNIA

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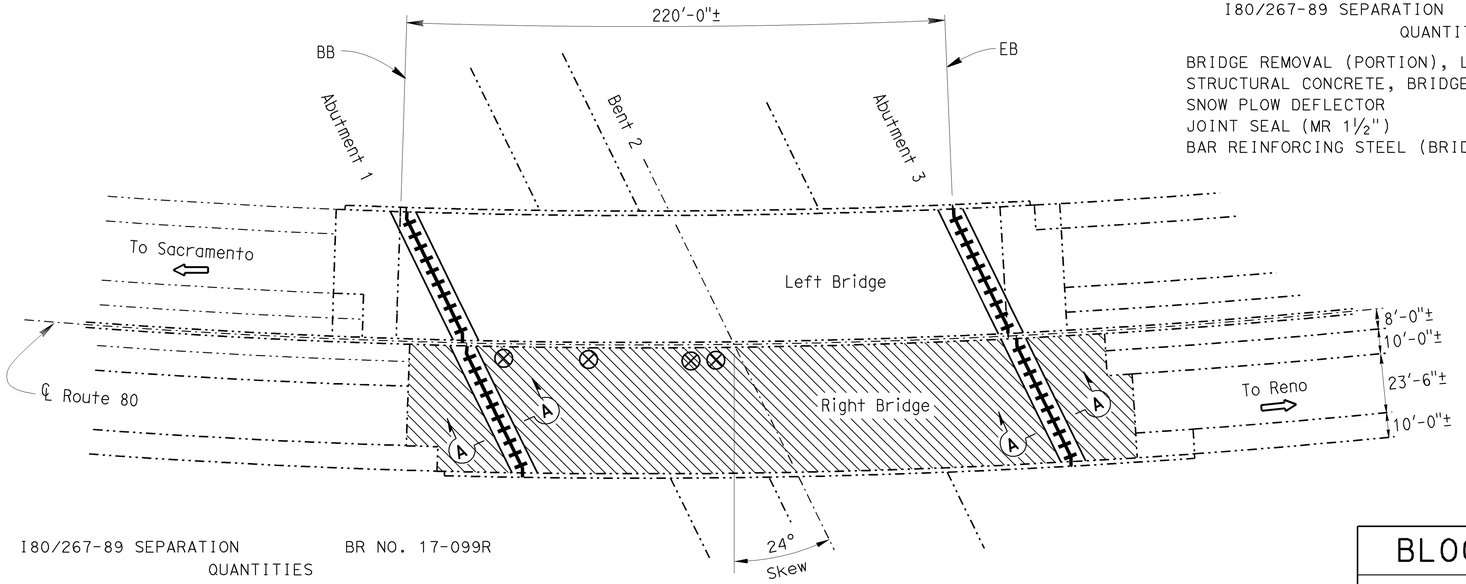


I80/267-89 SEPARATION BR NO. 17-099L

QUANTITIES

BRIDGE REMOVAL (PORTION), LOCATION B	LUMP SUM	
STRUCTURAL CONCRETE, BRIDGE	9	CY
SNOW PLOW DEFLECTOR	22	EA
JOINT SEAL (MR 1½")	114	LF
BAR REINFORCING STEEL (BRIDGE)	475	LB

I80/267-89 SEPARATION BR NO. 17-099R

QUANTITIES

REMOVE POLYESTER CONCRETE OVERLAY	13,894	SQFT
REMOVE UNSOUND CONCRETE	35	CF
PREPARE CONCRETE BRIDGE DECK SURFACE	13,894	SQFT
BRIDGE REMOVAL (PORTION), LOCATION A	LUMP SUM	
STRUCTURAL CONCRETE, BRIDGE	9	CY
RAPID SETTING CONCRETE PATCH	35	CF
FURNISH POLYESTER CONCRETE OVERLAY	1,042	CF
PLACE POLYESTER CONCRETE OVERLAY	13,894	SQFT
SNOW PLOW DEFLECTOR	22	EA
JOINT SEAL (MR 1½")	113	LF
BAR REINFORCING STEEL (BRIDGE)	475	LB

ROUTE 80/267/89 SEPARATION

BR NO. 17-0099L/R, NEV, ROUTE 80, PM 16.6
1" = 30'

BLOCKOUT TABLE

BRIDGE NUMBER	LOCATION	BLOCKOUT (inch) X	BLOCKOUT (inch) Y
17-0099L	Abut 1	15½	14¼
	Abut 3	14¼	17¾
17-0099R	Abut 1	15¾	15¾
	Abut 3	15½	16½

NOTES:

(APPLY TO THIS SHEET ONLY)

Indicates limits of remove ¾"± polyester concrete overlay, remove unsound concrete, place rapid setting concrete patches, prepare concrete bridge deck surfaces, and place ¾" polyester concrete overlay. For details, see "JOINT SEAL DETAILS" sheet.

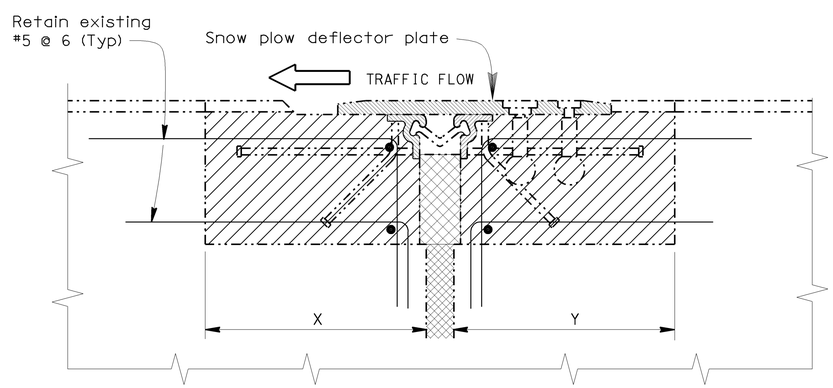
Indicates limits of install joint seal and snow plow deflectors. For details, see "JOINT SEAL DETAILS" and "SNOW PLOW DEFLECTOR DETAILS" sheets.

Indicates limits of bridge removal (Portion).

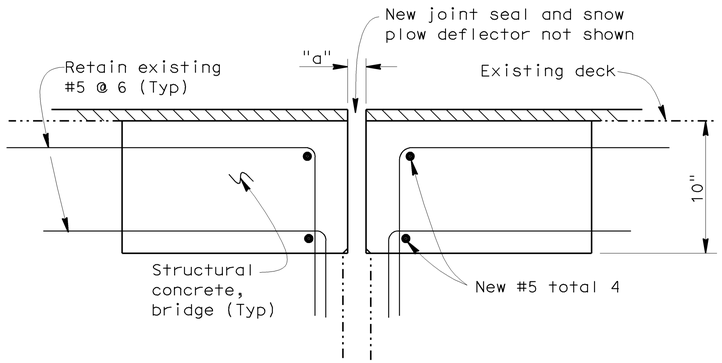
⊗ Approximately drainage location. For details, see "MISCELLANEOUS DETAILS" sheet.

TEMPORARY DECK PLATE

MOMENT DEMAND/FOOT (kip-ft/ft)	BOLT SHEAR/FOOT (kip/ft)	BOLT TENSION (Kip)
10	8	8



EXISTING



RECONSTRUCTION

RECONSTRUCTION JOINT

(SECTION A-A)

NO SCALE

NOTES:
1. Plate deflection shall not exceed s/300. (s = span [FT])
2. Minimum plate thickness shall be equal or greater than 1½".
3. Maximum anchorage spacing shall not exceed 9".
4. Anchorage washer shall be neoprene or similar.

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

GENERAL NOTES
LOAD FACTOR DESIGN

DESIGN:	BRIDGE DESIGN SPECIFICATIONS (1996 AASHTO with Interims and Revisions by CALTRANS)
DEAD LOAD:	Includes 35 psf for future wearing surface.
LIVE LOADING:	HS20-44 and alternative and permit design load.
REINFORCED CONCRETE:	fy = 60,000 psi f'c = 3600 psi n = 8

Michael J. Lee 8-28-12
DESIGN ENGINEER

DESIGN	BY Brian Nguyen	CHECKED Charles Hutchinson	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD		
DETAILS	BY Trung Lam	CHECKED Charles Hutchinson	LAYOUT	BY Trung Lam	CHECKED Brian Nguyen	
QUANTITIES	BY Brian Nguyen	CHECKED Charles Hutchinson	SPECIFICATIONS	BY Dave Klein	PLANS AND SPECS COMPARED Dave Klein	

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO.	ROUTE 65, 80 & 174 BRIDGES
VARIOUS	
POST MILE	GENERAL PLAN NO. 3
VARIES	

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3488
PROJECT NUMBER & PHASE: 0312000007 1
CONTRACT NUMBER: 03-4M5001

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES					SHEET	OF
4-04-13	02-14-13	02-25-13	8-28-12	10-25-12	3	6

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USERNAME => s1212289 DATE PLOTTED => 04-APR-2013 TIME PLOTTED => 13:10

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	NEV,PLA	65,80,174	VAR	17	19

REGISTERED CIVIL ENGINEER — 8-28-12 DATE

4-1-13 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — BRIAN P. NGUYEN No. 68270 Exp. 9-30-13 CIVIL — STATE OF CALIFORNIA

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JOINT SEAL TABLE

BRIDGE NAME	BRIDGE NUMBER	LOCATION		MINIMUM "MR" (inch)	APPROXIMATE LENGTH (feet)	EXISTING WATERSTOP
ROUTE EB 180/ 267/89 SEPARATION	17-0099L	Abut 1	BB	1½	56	No
		Abut 3	EB	1½	55	No
	17-0099R	Abut 1	BB	1½	56	No
		Abut 3	EB	1½	55	No

LEGEND:

BB = Begining of Bridge

EB = End of Bridge

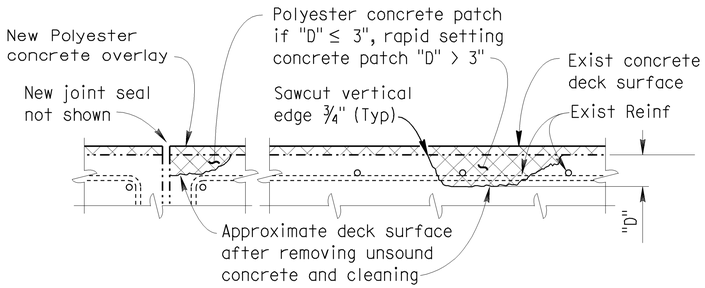
Indicates limits of remove existing polyester overlay.

Indicates limits of new polyester overlay.

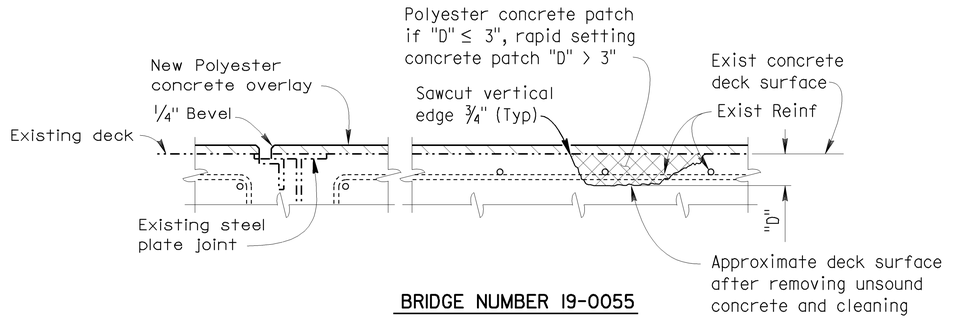
DECK REPAIR TABLE

REMOVE UNSOUND CONCRETE AND RAPID SETTING CONCRETE (PATCH)			
BRIDGE NAME	BRIDGE NUMBER	APPROXIMATE AREA DAMAGED (percent)	APPROXIMATE DEPTH (inches)
COLFAX OVERHEAD	19-0055	1	3
ROUTE EB 180/ 267/89 SEPARATION	17-0099R	1	3

Location to be determined by the Engineer.



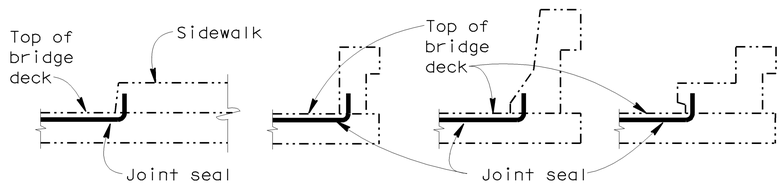
BRIDGE NUMBER 17-0099R



BRIDGE NUMBER 19-0055

JOINT AND DECK REPAIR DETAIL

LOCATIONS TO BE DETERMINED BY THE ENGINEER.
REINFORCEMENT MAY BE ENCOUNTERED
DURING DECK CONCRETE REMOVAL.
NO SCALE



SIDEWALK — BARRIER RAIL

JOINT SEAL AT LOW SIDE OF DECK

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

NOTE:
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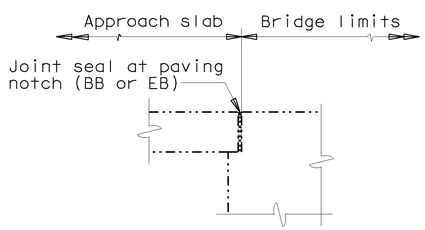
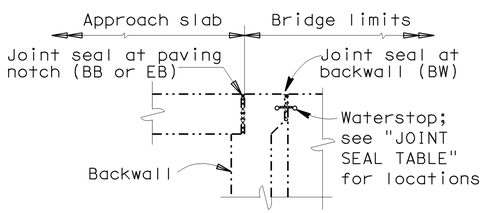
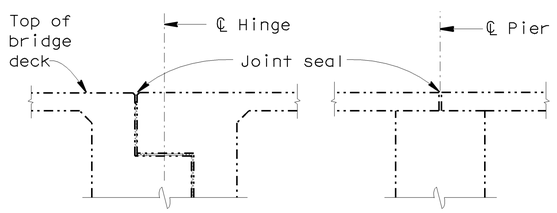


DIAPHRAGM ABUTMENT



ABUTMENT WITH BACKWALL



HINGE — PIER

JOINT SEAL LOCATION

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

The following notes apply to JOINT SEAL TYPE B:

1) Seal must satisfy both minimum Movement Rating (MR) and minimum WI requirements.
2) Minimum WI is the calculated maximum width of the joint based on field measurements. After the joints have been cleaned, minimum WI is to be recalculated by the Engineer.
3) WI shall be the smaller of the values determined as follows:
   A) 0.85 times the manufacturer's designed minimum uncompressed width of the seal.
   B) 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.
4) 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.
5) For details not shown see B6-21

DESIGN	BY Brian Nguyen	CHECKED Charles Hutchinson	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF MAINTENANCE STRUCTURE MAINTENANCE DESIGN	BRIDGE NO. VARIOUS	ROUTE 65, 80 & 174 BRIDGES
DETAILS	BY Trung Lam	CHECKED Charles Hutchinson			POST MILE VARIES	JOINT SEAL DETAILS
QUANTITIES	BY Brian Nguyen	CHECKED Charles Hutchinson				

STRUCTURES MAINTENANCE GENERAL PLAN & DETAIL SHEET (ENGLISH) (REV. 10/17/07)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3488
PROJECT NUMBER & PHASE: 0312000007 1 CONTRACT NUMBER: 03-4M5001

DISREGARD PRINTS BEARING EARLIER REVISION DATES → REVISION DATES: 4-04-13 | 02-25-13 | 8-28-12 | 10-25-12 | 01-11-13

SHEET 4 OF 6

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	NEV,PLA	65,80,174	VAR	18	19

REGISTERED CIVIL ENGINEER — DATE 8-28-12

PLANS APPROVAL DATE 4-1-13

REGISTERED PROFESSIONAL ENGINEER — BRIAN P. NGUYEN — No. 68270 — Exp. 9-30-13 — CIVIL — STATE OF CALIFORNIA

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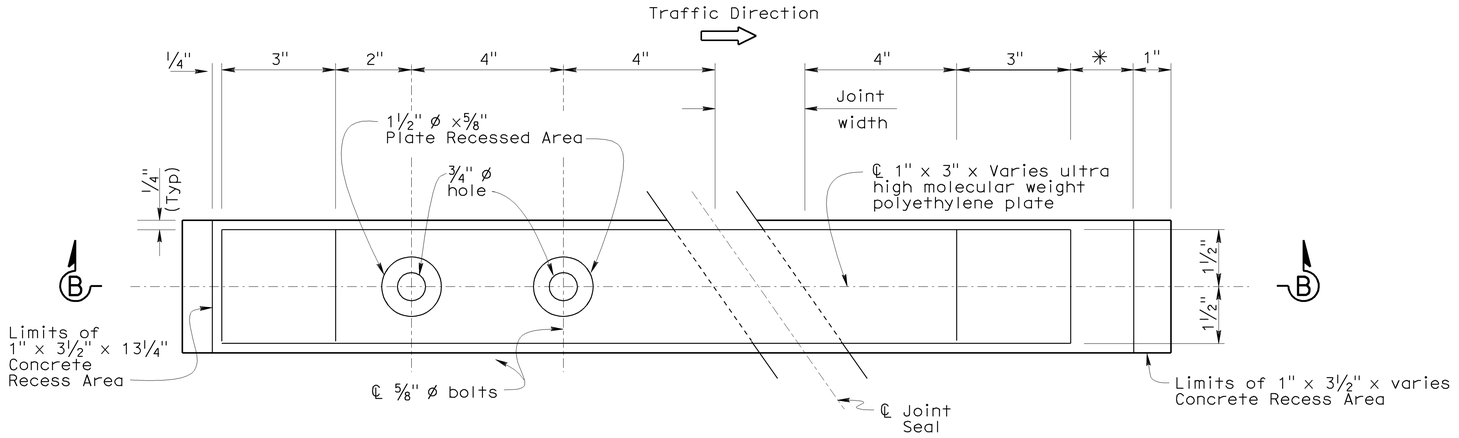
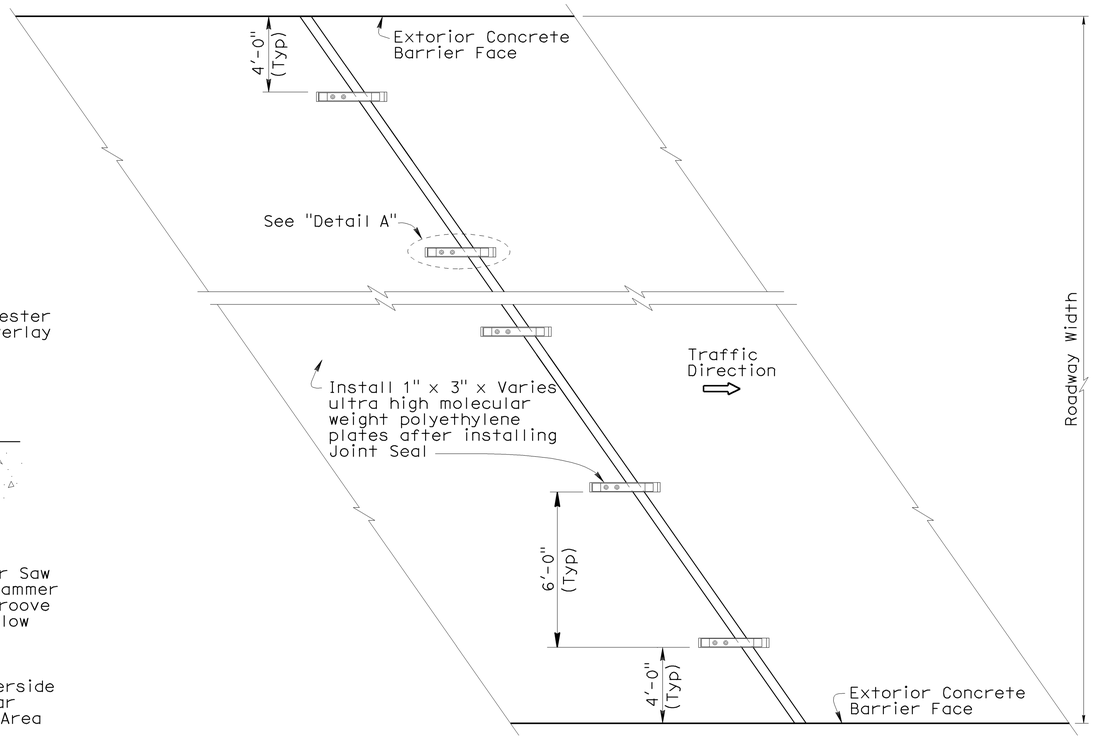


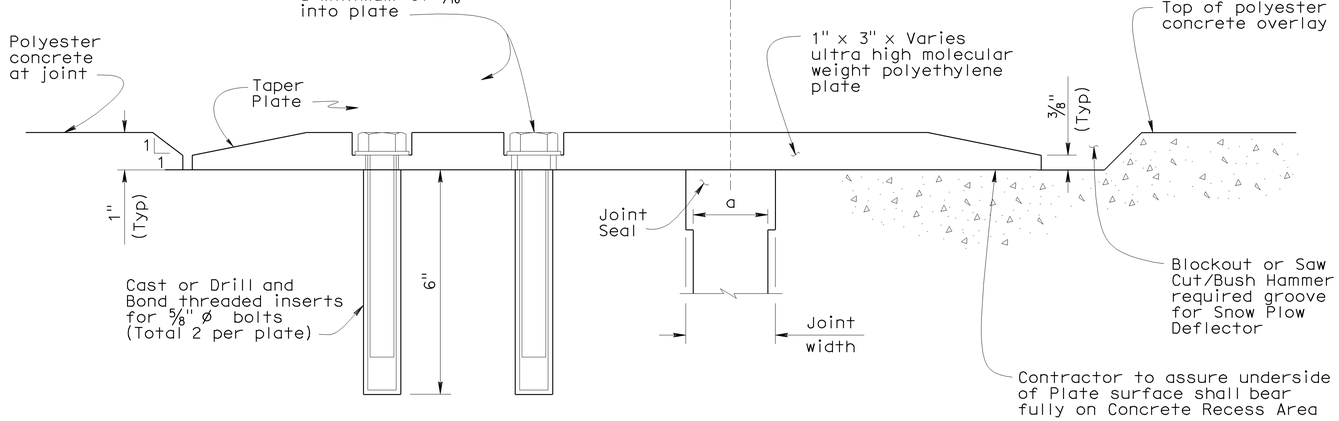
DETAIL A

6"=1'-0"



SNOW PLOW DEFLECTOR PLAN

½"=1'-0"
(Applies to bridge 17-0099L/R)



SECTION B-B

6"=1'-0"

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

	BY	CHECKED
DESIGN	Brian Nguyen	Charles Hutchinson
DETAILS	Trung Lam	Charles Hutchinson
QUANTITIES	Brian Nguyen	Charles Hutchinson

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. VARIOUS
POST MILE VARIES

ROUTE 65, 80 & 174 BRIDGES

SNOW PLOW DEFLECTOR DETAILS

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3488
PROJECT NUMBER & PHASE: 0312000007 1
CONTRACT NO.: 03-4M5001

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES					SHEET	OF
4-04-13	3-28-12	10-25-12	01-01-13		5	6

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	NEV,PLA	65,80,174	VAR	19	19

8-28-12
REGISTERED CIVIL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER
BRIAN P. NGUYEN
No. 68270
Exp. 9-30-13
CIVIL
STATE OF CALIFORNIA

4-1-13
PLANS APPROVAL DATE

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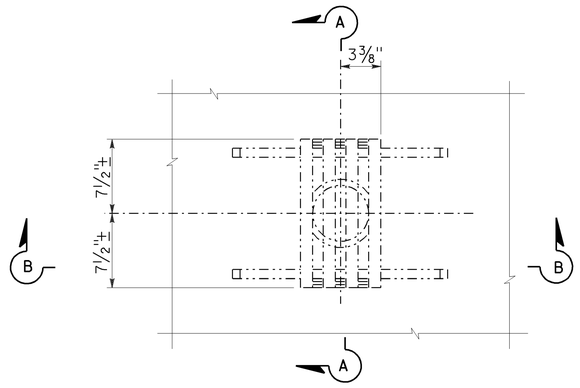
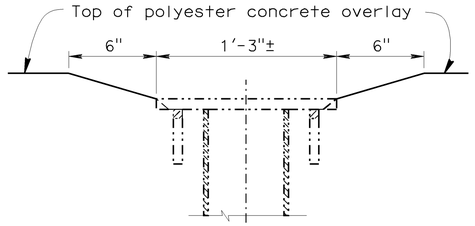


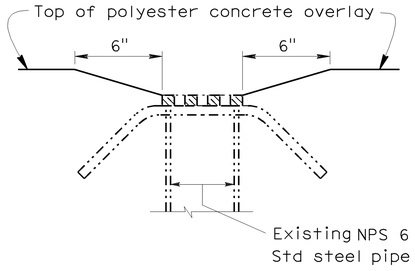
PLAN

BENT CAP REPAIR		
LOCATION	AREA	DEPTH
BENT 3 CAP	3′ x 2′	3"
BENT 4 CAP	5′ x 4′	3"

Exact location to be determined by the Engineer.



SECTION A-A



SECTION B-B

DECK DRAIN - POLYESTER CONCRETE OVERLAY

NO SCALE

(BRIDGE NO. 19-0055 SHOWN, BRIDGE NO. 17-0099 L/R SIMILAR)

Retain all existing drainages.

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

DESIGN	BY Brian Nguyen	CHECKED Charles Hutchinson	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF MAINTENANCE STRUCTURE MAINTENANCE DESIGN	BRIDGE NO. VARIOUS
DETAILS	BY Trung Lam	CHECKED Charles Hutchinson			POST MILE VARIES
QUANTITIES	BY Brian Nguyen	CHECKED Charles Hutchinson			

ROUTE 65, 80 & 174 BRIDGES
MISCELLANEOUS DETAILS

STRUCTURES MAINTENANCE GENERAL PLAN & DETAIL SHEET (ENGLISH) (REV. 10/17/07)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3488
PROJECT NUMBER & PHASE: 0312000007 1 CONTRACT NUMBER: 03-4M5001

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES					SHEET	OF
4-04-13	8-28-12	10-25-12	01-07-13		6	6

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