Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	But,Gle, Pla,Sut, Yub	32,65,70, 99,149,162	Var	1	22

INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2	CONSTRUCTION AREA SIGNS
3	PAVEMENT DELINEATION DETAILS
4	PAVEMENT DELINEATION QUANTITIES
5-10	REVISED STANDARD PLANS
STRUCTURE PLANS	
11-22	ROUTE 32, 65, 70, 99, 149 AND 162 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

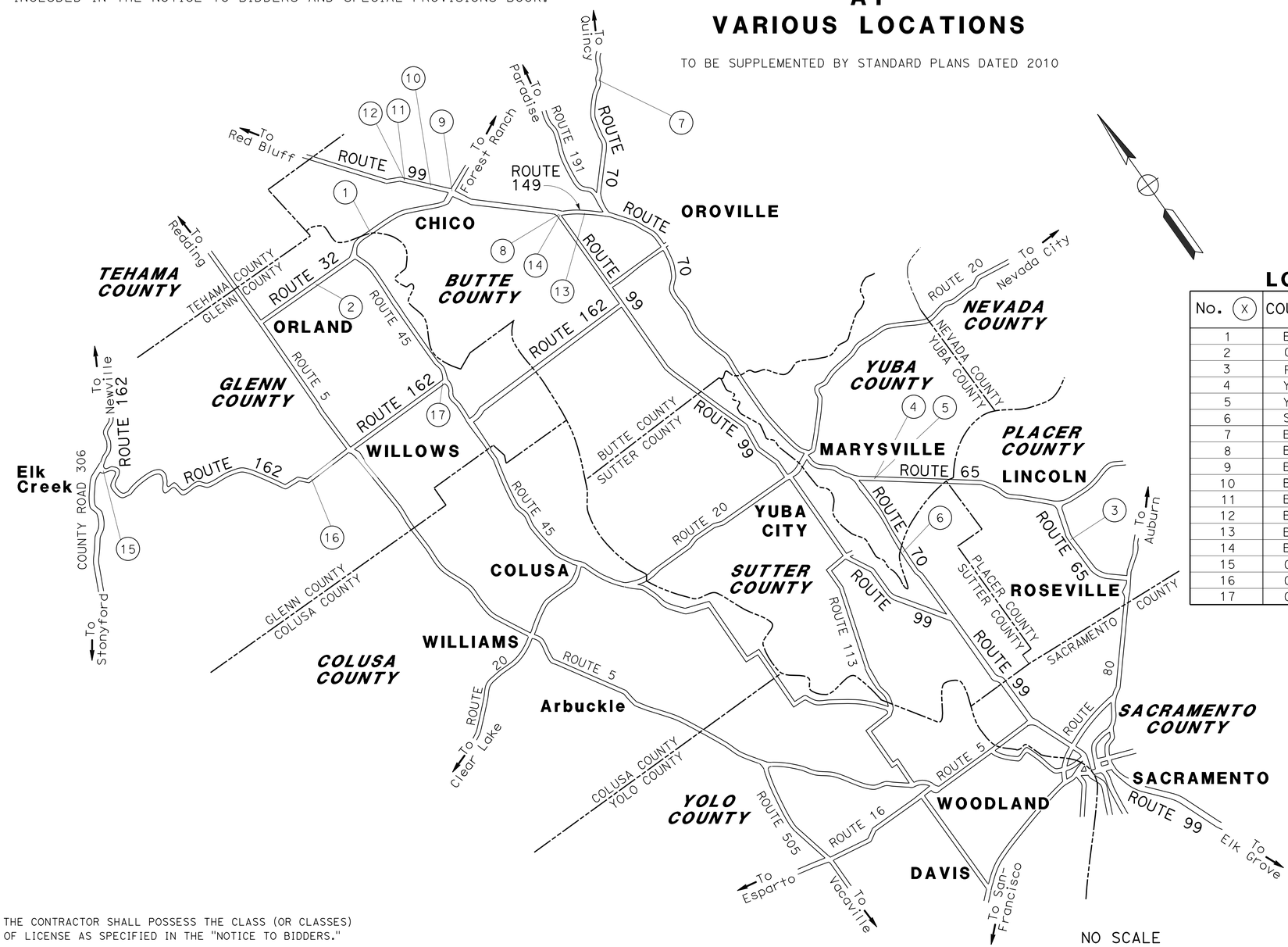
PROJECT PLANS FOR CONSTRUCTION ON

STATE HIGHWAY

IN BUTTE, GLENN, PLACER, SUTTER AND YUBA COUNTIES AT VARIOUS LOCATIONS

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010

LOCATION MAP



NO SCALE

LOCATIONS OF CONSTRUCTION

No. (X)	COUNTY	ROUTE	POST MILE	BRIDGE NUMBER	STRUCTURE NAME
1	But	32	0.01	12-0054	SACRAMENTO RIVER (GIANELLI)
2	Gle	32	R5.230	11-0029	STONY CREEK
3	Pla	65	M8.150	19-0153S	BLUE OAKS Blvd OFF RAMP Sep
4	Yub	65	R7.610	16-0046R	REEDS CREEK
5	Yub	65	R7.610	16-0046L	REEDS CREEK
6	Sut	70	8.09	18-0001R	BEAR RIVER
7	But	70	40.99	12-0038	NORTH FORK FEATHER RIVER
8	But	99	R21.92	12-0198	NORTH HWY 99/HWY 149 Sep
9	But	99	R32.440	12-0150R	ROUTE 99/32 Sep (NORTH)
10	But	99	R33.870	12-0154R	LINDO CHANNEL
11	But	99	R34.630	12-0157L	NORTH CHICO OC
12	But	99	R34.630	12-0157R	NORTH CHICO OC
13	But	149	M3.500	12-0070L	DRY CREEK
14	But	149	M4.800	12-0197G	NB 149 TO SB 99 CONNECTOR Sep
15	Gle	162	R45.130	11-0087	STONY CREEK
16	Gle	162	60.76	11-0096	TEHAMA COLUSA CANAL
17	Gle	162	76.25	11-0035	PRINCETON CODORA CANAL

PROJECT MANAGER: RONALD S. SYKES

DESIGN ENGINEER: RONALD S. SYKES

D. S. Lamb 2-3-14
PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

REGISTERED PROFESSIONAL ENGINEER DAVID S. LAMB No. C53386 Exp. 6-30-15 CIVIL STATE OF CALIFORNIA

February 3, 2014
PLANS APPROVAL DATE

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

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

CONTRACT No.	03-4M6804
PROJECT ID	0313000024

LAST REVISION 10-16-13 DATE PLOTTED => 11-FEB-2014 TIME PLOTTED => 15:09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	But,Gle, Pla,Sut,Yub	32, 65, 70 99, 149, 162	Var	2	22

Kris M. Albers 1-28-14
REGISTERED CIVIL ENGINEER DATE

2-3-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
KRIS M. ALBERS
No. 49986
Exp. 6-30-15
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.

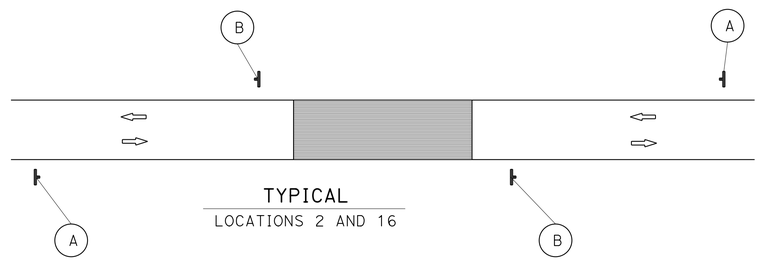
STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN LETTER	SIGN CODE FEDERAL	SIGN CODE CALIFORNIA	PANEL SIZE	SIGN MESSAGE	NUMBER OF POST AND SIZE	NUMBER OF SIGNS
A	W20-1	C23	48" x 48"	ROAD WORK AHEAD	1 - 6" x 6"	14
B	G20-2	C14	36" x 18"	END ROAD WORK	1 - 4" x 4"	13
C	G20-2	C14	48" x 24"	END ROAD WORK	1 - 4" x 6"	10
D	W20-1	C23	60" x 60"	ROAD WORK AHEAD	2 - 4" x 6"	20

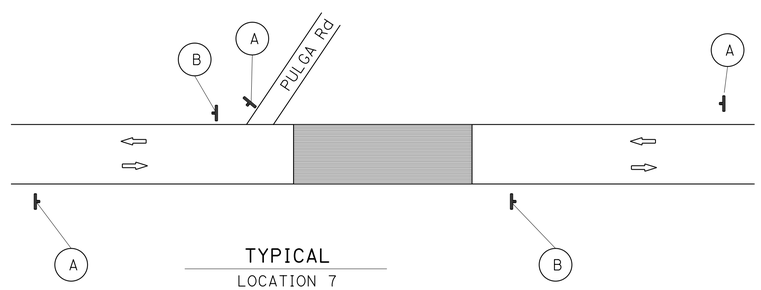
NOTE:
EXACT SIGN LOCATION TO BE DETERMINED BY THE ENGINEER.

LEGEND

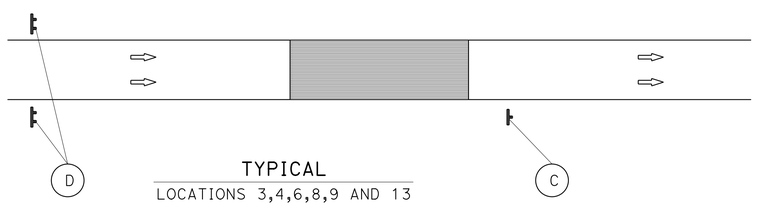
(X) CONSTRUCTION AREA SIGN LETTER



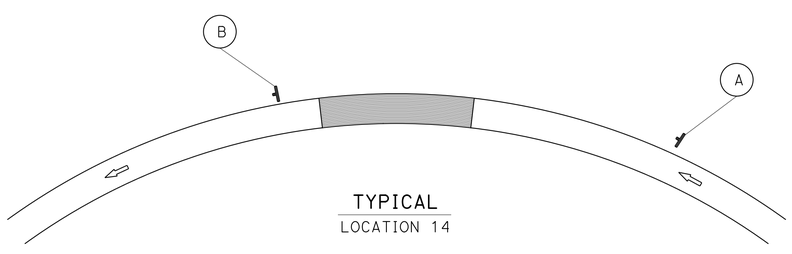
TYPICAL
LOCATIONS 2 AND 16



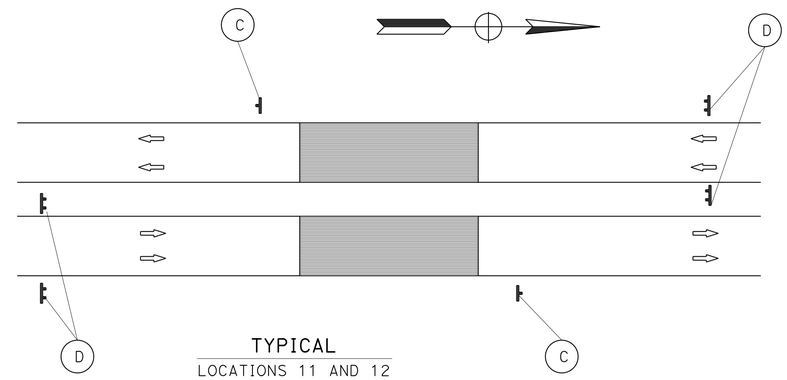
TYPICAL
LOCATION 7



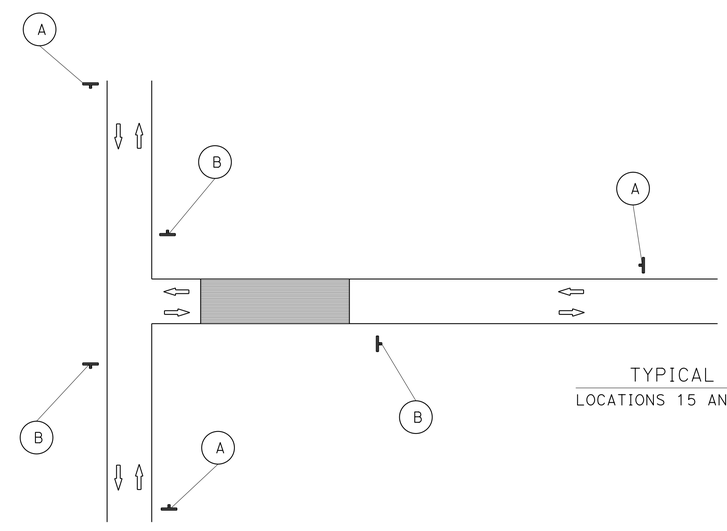
TYPICAL
LOCATIONS 3,4,6,8,9 AND 13



TYPICAL
LOCATION 14



TYPICAL
LOCATIONS 11 AND 12



TYPICAL
LOCATIONS 15 AND 17

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

CONSTRUCTION AREA SIGNS
NO SCALE

CS-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
TRAFFIC

FUNCTIONAL SUPERVISOR: SERGIO ACEVES
CALCULATED-DESIGNED BY: CHUCK COOK
CHECKED BY: KRIS ALBERS
REVISED BY
DATE REVISED

LAST REVISION 12-17-13
DATE PLOTTED => 11-FEB-2014
TIME PLOTTED => 15:09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	But,Gle, Pla,Sut,Yub	32, 65, 70 99, 149, 162	Var	3	22

Kris M. Albers 1-28-14
REGISTERED CIVIL ENGINEER DATE

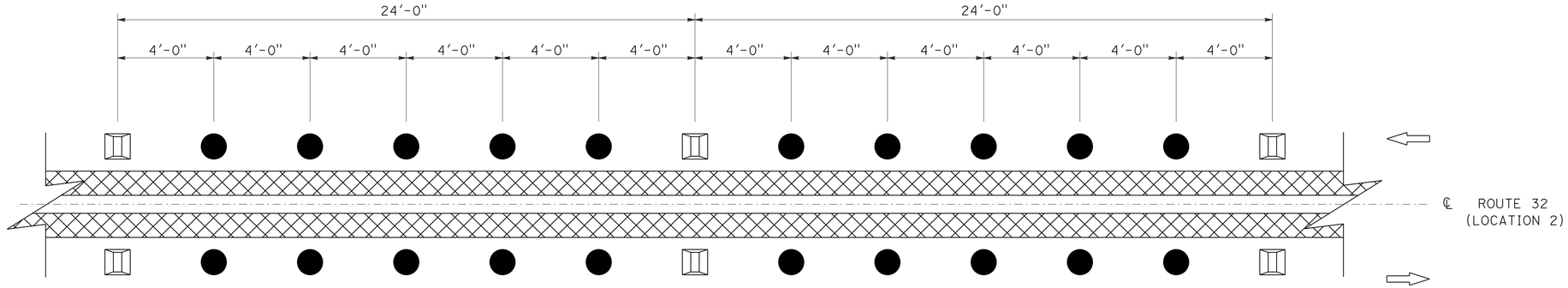
2-3-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
KRIS M. ALBERS
No. 49986
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA

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

LEGEND

- BLACK NON-REFLECTIVE MARKER
- TYPE D TWO-WAY YELLOW RETROREFLECTIVE MARKER
- 4" YELLOW STRIPE



DETAIL 22(Mod) (TYPICAL)
BRIDGE CENTERLINE DETAIL

PAVEMENT DELINEATION DETAILS

PDD-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
TRAFFIC

FUNCTIONAL SUPERVISOR: SERGIO ACEVES
CALCULATED-DESIGNED BY: CHUCK COOK
CHECKED BY: KRIS ALBERS
REVISED BY
DATE REVISED

LAST REVISION 12-17-13
DATE PLOTTED => 11-FEB-2014
TIME PLOTTED => 10:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	But,Gle, Pla,Sut,Yub	32, 65, 70 99, 149, 162	Var	4	22

Kris M. Albers 1-28-14
REGISTERED CIVIL ENGINEER DATE

2-3-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER KRIS M. ALBERS No. 49986 Exp. 6-30-15 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.

4" PERMANENT TAPE TRAFFIC STRIPE

LOCATION	DETAIL NUMBER		
	25	25A	27B
	LF	LF	LF
3		206	206
6	1,556		1,556
8		773	773
9	169		169
11	172		172
12	172		172
13	210		210
14		844	844
SUBTOTAL	2,279	1,823	4,102
TOTAL	8,204		

4" PERMANENT TAPE TRAFFIC STRIPE (BROKEN 36-12)

LOCATION	DETAIL NUMBER
	12
	LF
3	206
6	1556
8	773
9	169
11	172
12	172
13	210
TOTAL	3258

4" THERMOPLASTIC TRAFFIC STRIPE

LOCATION	DETAIL NUMBER			
	22	22(Mod)	25	27B
	LF	LF	LF	LF
2		3,046		3,046
4			162	162
7	1,362			1,362
15	732			732
16				142
17	70			70
SUBTOTAL	2,164	3,046	162	5,514
TOTAL	10,886			

4" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 36-12)

LOCATION	DETAIL NUMBER	
	6	12
	LF	LF
4		162
16	71	
SUBTOTAL	71	162
TOTAL	233	

PAVEMENT MARKER

LOCATION NUMBER	RETROREFLECTIVE			NON-REFLECTIVE
	TYPE D (EACH)	TYPE G (EACH)	TYPE H (EACH)	TYPE A - BLACK (EACH)
2	128			640
3		6	10	
4		5	5	
6		34	34	
7				
8		18	34	
9		5	5	
11		5	5	
12		5	5	
13		6	6	
14			37	
15	32			
16	3			
17	4			
SUBTOTAL	167	84	141	640
TOTAL	392			640

REMOVE THERMOPLASTIC TRAFFIC STRIPE

LOCATION NUMBER	LEFT EDGELINE	LANELINE	RIGHT EDGELINE
	LF	LF	LF
2			3,046
3		52	206
6	1,556	389	1,556
7			1,362
8	773	199	773
13	210	53	211
14	844		844
15			732
16			142
17			70
SUBTOTAL	3,383	693	8,942
TOTAL	13,018		

REMOVE YELLOW THERMOPLASTIC TRAFFIC STRIPE (HAZARDOUS WASTE)

LOCATION NUMBER	LEFT EDGELINE	CENTERLINE
	LF	LF
2		3046
3	206	
7		1362
15		732
16		24
17		70
SUBTOTAL	206	5234
TOTAL	5440	

PAVEMENT DELINEATION QUANTITIES

PDQ-1

REVISED BY | DATE REVISED
CHUCK COOK | KRIS ALBERS
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR
SERGIO ACEVES

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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TRAFFIC

LAST REVISION 12-17-13 | DATE PLOTTED => 11-FEB-2014 | TIME PLOTTED => 10:13

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
ℙ,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
03	But,Gle, Pla,Sut, Yub	32,65,70, 99,149,162	Var	5	22

Grace M. Tsushima
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

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

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TO ACCOMPANY PLANS DATED 2-3-14

2010 REVISED STANDARD PLAN RSP A10B

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

6-7-13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	But,Gle, Pla,Sut, Yub	32,65,70, 99,149,162	Var	6	22

REGISTERED CIVIL ENGINEER

April 19, 2013
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.

TO ACCOMPANY PLANS DATED 2-3-14

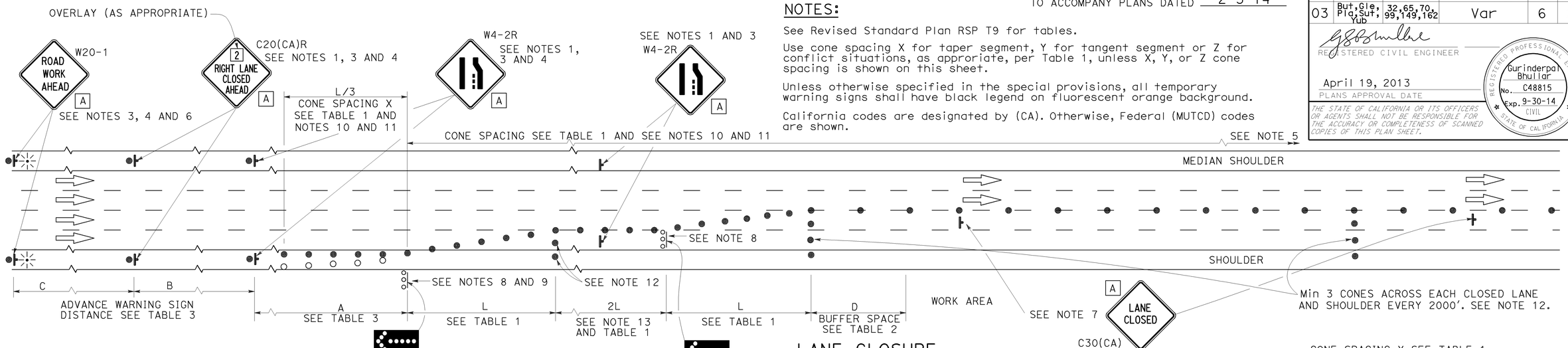
NOTES:

See Revised Standard Plan RSP T9 for tables.

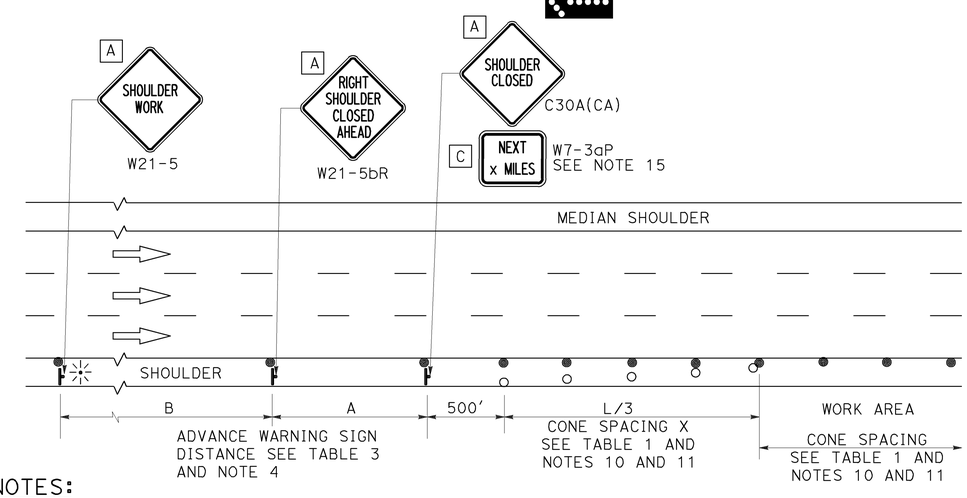
Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as approriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.

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

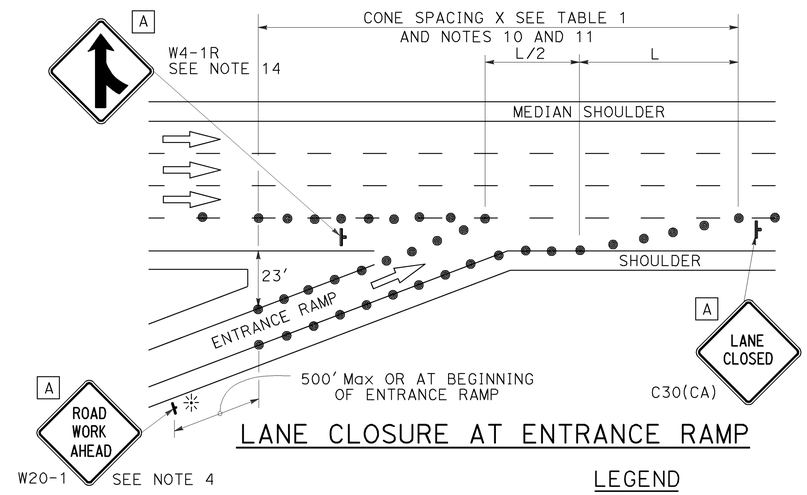
California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.



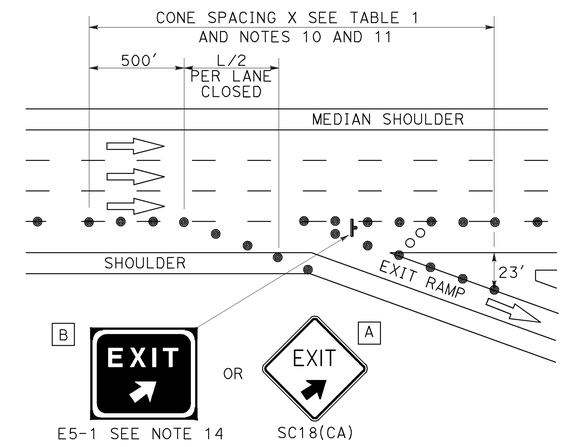
LANE CLOSURE



SHOULDER CLOSURE



LANE CLOSURE AT ENTRANCE RAMP



LANE CLOSURE AT EXIT RAMP

NOTES:

1. Median lane closures shall conform to the details as shown except that C20(CA)L and W4-2L signs shall be used.
2. At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closures.
3. Duplicate sign installations are not required:
   a) On opposite shoulder if at least one-half of the available lanes remain open to traffic.
   b) In the median if the width of the median shoulder is less than 8' and the outside lanes are to be closed.
4. Each advance warning sign on each side of the roadway shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
5. A G20-2 "END ROAD WORK" sign, with minimum size of 48" x 24" as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious or ends within a larger project's limits.
6. If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT _____ MILES", use a C20(CA) 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 flashing arrow signs shall be Type I.
9. A minimum 1500' of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at top of crest vertical curve or on a horizontal curve.
10. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
11. Portable delineators, placed at one-half the spacing indicated for traffic cones may be used instead of cones for daytime closures only.
12. Unless otherwise specified in the special provisions, a minimum of 3 cones shall be placed transversely across each closed lane and shoulder at each location where a taper across a traffic lane ends and every 2000' as shown on the "Lane Closure" detail. Two Type II barricades may be used instead of the 3 cones. The transverse alignment of the cones or barricades on the closed shoulder may be shifted from the transverse alignment to provide access to the work.
13. Unless otherwise specified in the special provisions, the 2L tangent shown along lane lines shall be used between the L tapers required for each closed traffic lane.
14. Unless otherwise specified in the special provisions, the E5-1 or SC18(CA) and W4-1 signs shall be used as shown.
15. A W7-3aP "NEXT____MILES" plaque must be used if theshoulder closure extends beyond the distance that can be perceived by road users.

LEGEND

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

SIGN PANEL SIZE (Min)

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON FREEWAYS AND EXPRESSWAYS

NO SCALE

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

REVISED STANDARD PLAN RSP T10

2010 REVISED STANDARD PLAN RSP T10

12-18-12

TO ACCOMPANY PLANS DATED 2-3-14

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	But,Gle, Pla,Sut, Yub	32,65,70, 99,149,162	Var	7	22

REGISTERED CIVIL ENGINEER

April 19, 2013
PLANS APPROVAL DATE

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

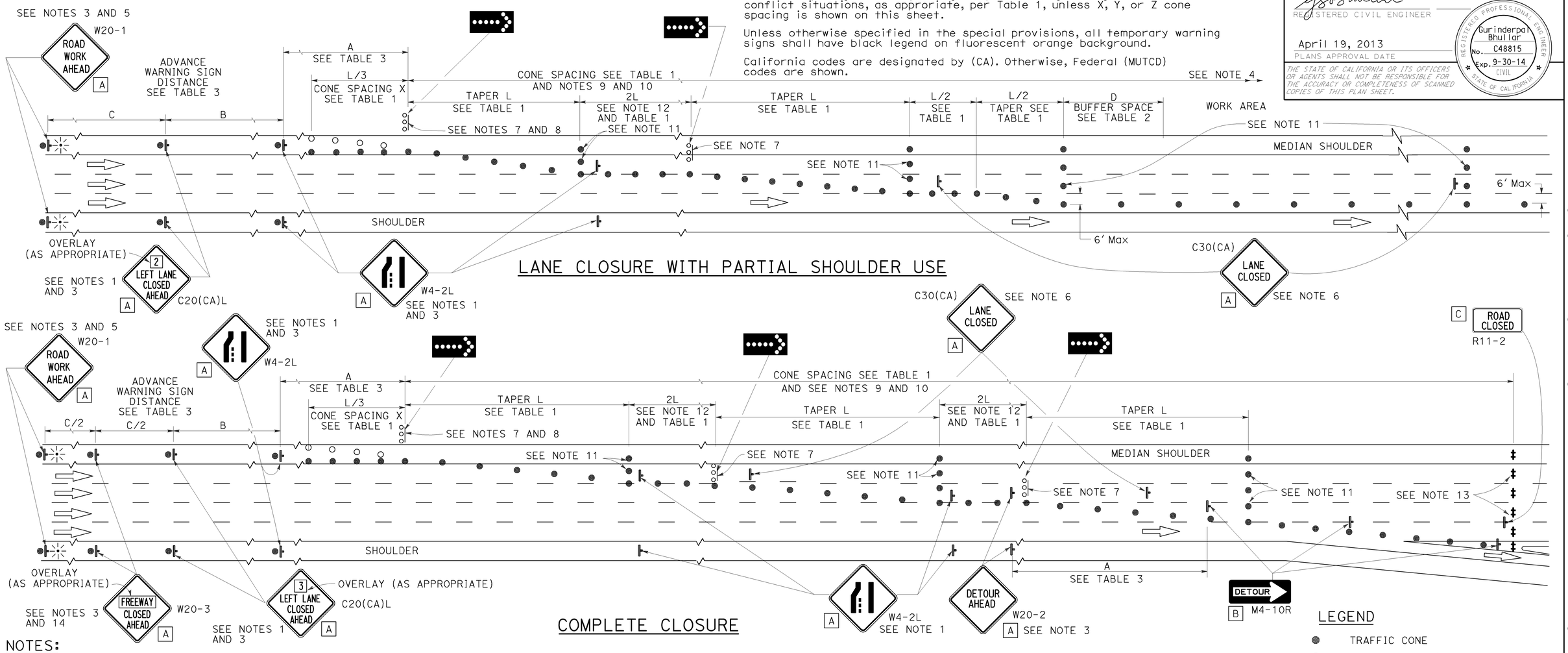
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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.



LANE CLOSURE WITH PARTIAL SHOULDER USE

COMPLETE CLOSURE

NOTES:

1. Lane closures on the right side using partial median shoulder as a traffic lane shall conform to the details as shown except that C20(CA)R and W4-2R 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. 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.
4. A G20-2 "END ROAD WORK" sign, with minimum size of 48" x 24" as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious or ends within a larger project's limits.
5. 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.
6. Place a C30(CA) sign every 2000' throughout length of lane closure.
7. One flashing arrow sign for each lane closed. The flashing arrow signs shall be Type I.
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. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
10. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
11. 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 With Partial Shoulder Use" 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.
12. Unless otherwise specified in the special provisions, the 2L tangent shown along lane lines shall be used between the L tapers required for each closed traffic lane.
13. A minimum of Two Type II or III barricades shall be placed across each closed lane and shoulder at the location shown and every 2000' within the complete closure area. Within the complete closure area, the transverse alignment of the barricades on the closed shoulder may be shifted from the transverse alignment to provide access to the work.
14. When specified in the special provisions, a W20-2 "DETOUR AHEAD" sign is to be used in place of the W20-3 "FREEWAY CLOSED AHEAD" sign.

SIGN PANEL SIZE (Min)

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

LEGEND

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURES ON FREEWAYS AND EXPRESSWAYS

NO SCALE

RSP T10A DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T10A DATED MAY 20, 2011 - PAGE 238 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T10A

2010 REVISED STANDARD PLAN RSP T10A

12-18-12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	But,Gle, Pla,Sut, Yub	32,65,70, 99,149,162	Var	8	22

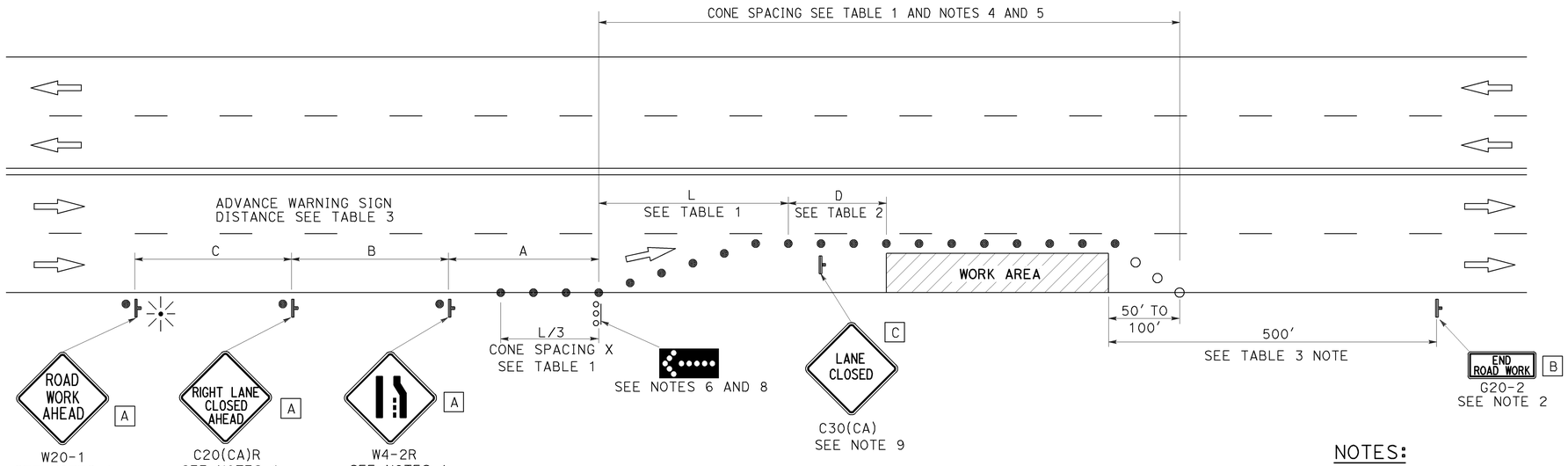
REGISTERED CIVIL ENGINEER

April 19, 2013
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.

TO ACCOMPANY PLANS DATED 2-3-14



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
03	But,Gle, Pla,Sut, Yub	32,65,70, 99,149,162	Var	9	22

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 2-3-14

2010 REVISED STANDARD PLAN RSP T13

NOTES:

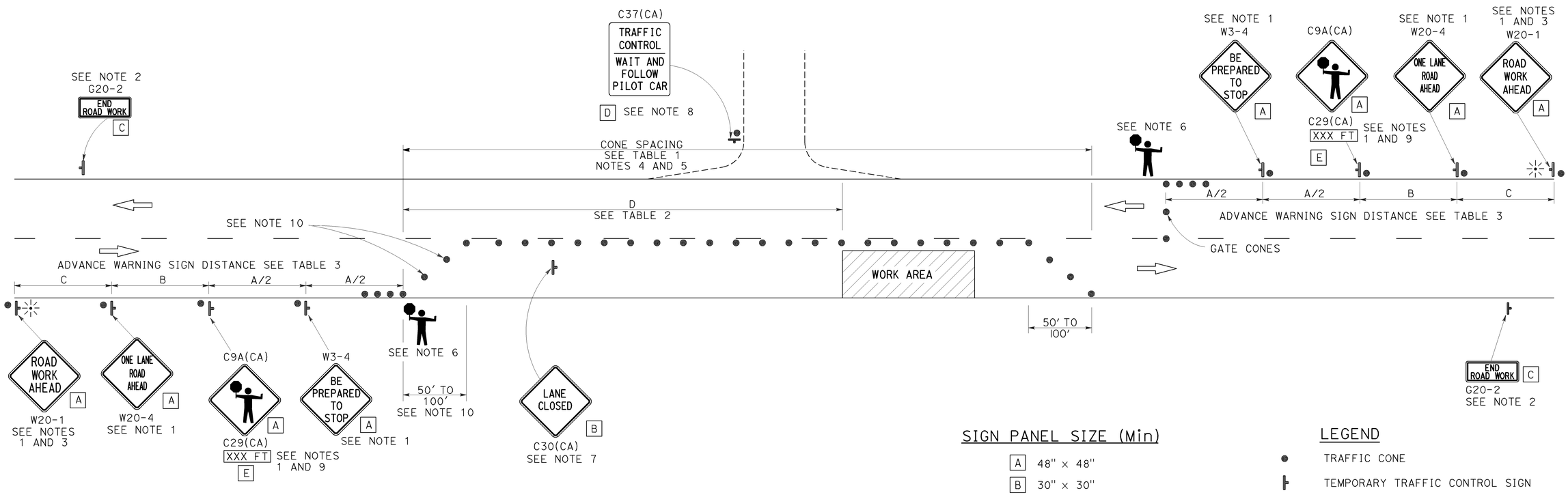
See Revised Standard Plan RSP T9 for tables.

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



SIGN PANEL SIZE (Min)

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

LEGEND

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

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.

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

4-2-13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	But,Gle, Pla,Sut, Yub	32,65,70, 99,149,162	Var	10	22

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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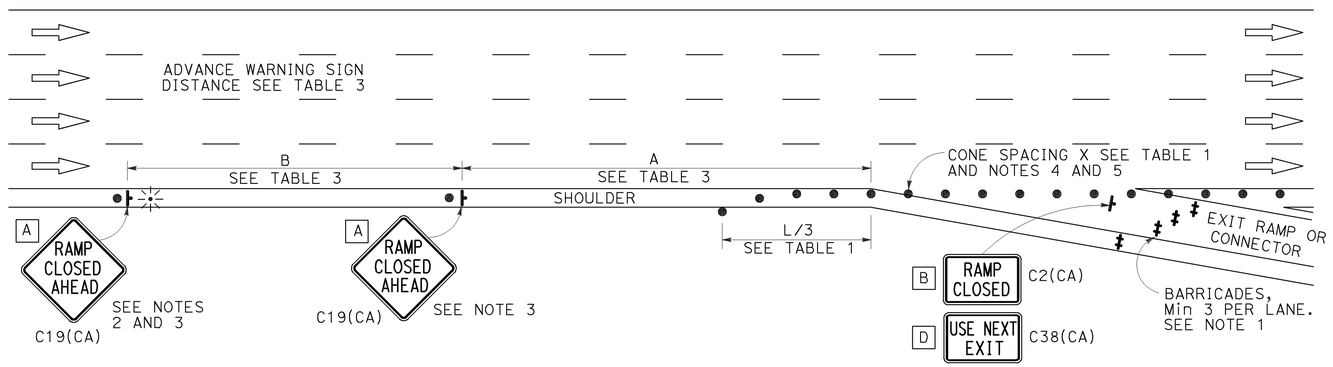
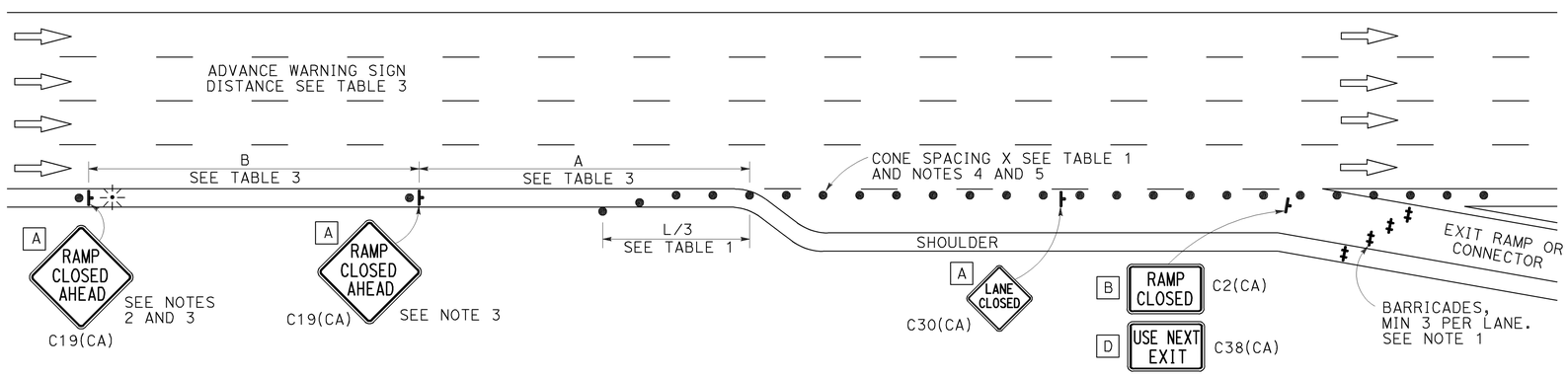
TO ACCOMPANY PLANS DATED 2-3-14

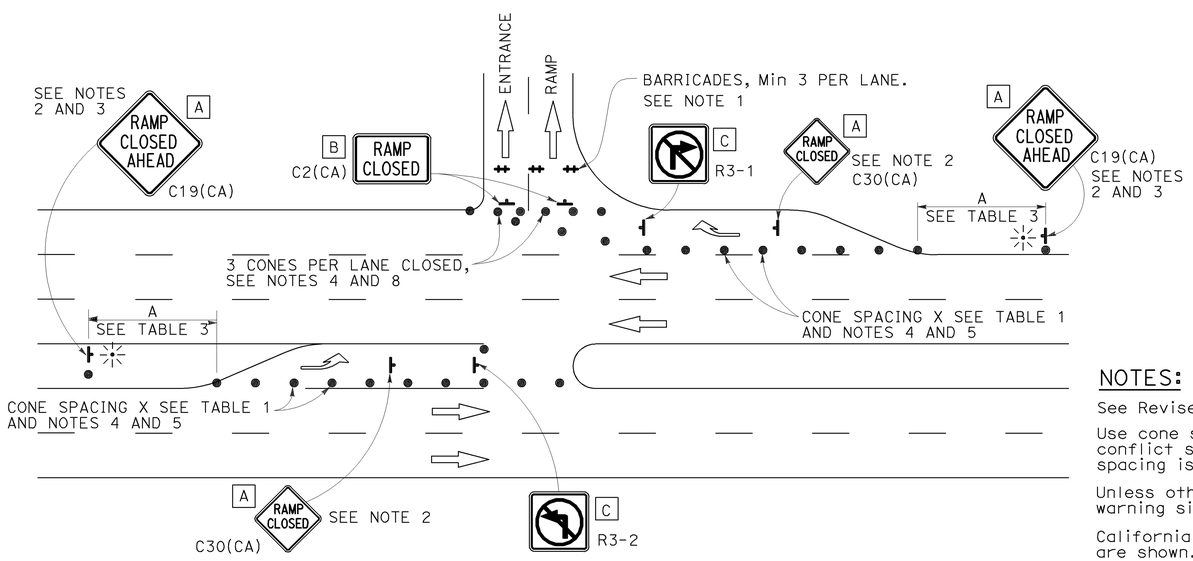
TYPICAL RAMP CLOSURES



EXIT RAMP OR CONNECTOR



EXIT RAMP OR CONNECTOR WITH ADDITIONAL LANE



ENTRANCE RAMP WITH TURNING POCKETS

SIGN PANEL SIZE (Min)

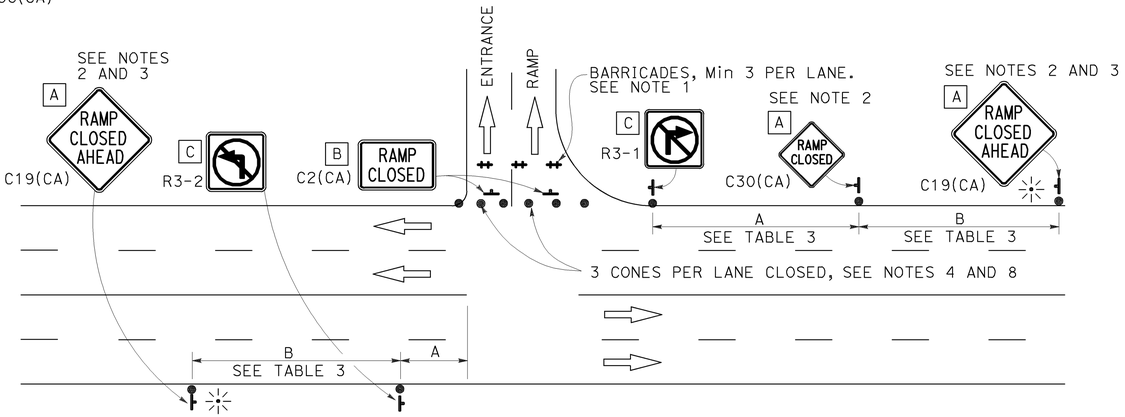
- A 48" × 48"
- B 48" × 30"
- C 36" × 36"
- D 48" × 36"

LEGEND

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

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. A flashing beacon shall be placed on top of the first C19(CA) sign during hours of darkness.
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" signs shall be covered during ramp closures.
8. A minimum of 3 cones shall be placed transversely across each closed lane and shoulder.



ENTRANCE RAMP WITHOUT TURNING POCKETS

NOTES:

See Revised Standard Plan RSP T9 for tables.

Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as 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.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR RAMP CLOSURE

NO SCALE

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

REVISED STANDARD PLAN RSP T14

2010 REVISED STANDARD PLAN RSP T14

12-18-12

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Gle, But, Yub Sut, Pla	32, 65, 70, 99, 149,162	Var	11	22

Peter B. Kang 10-02-13
REGISTERED CIVIL ENGINEER DATE

2-3-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
PETER B. KANG
No. C 70336
Exp. 9-30-14
CIVIL
STATE OF CALIFORNIA

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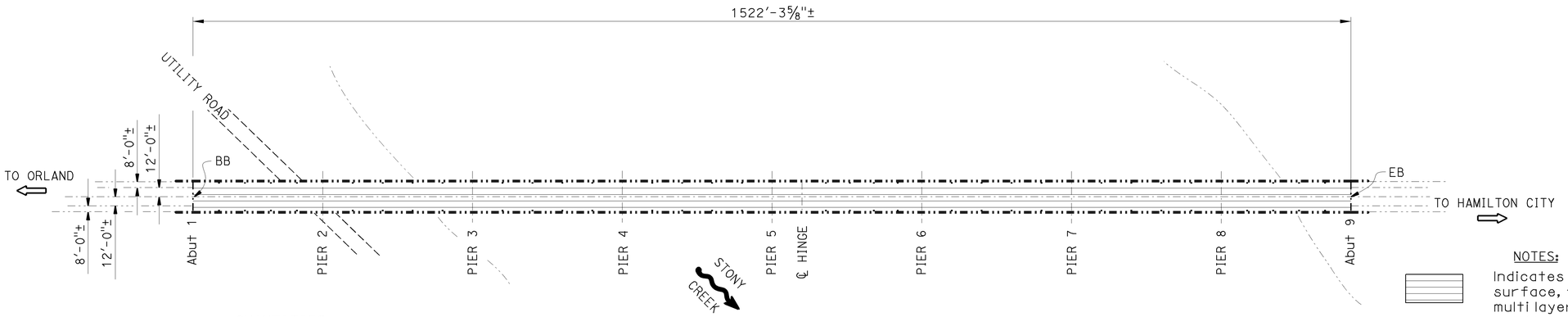


QUANTITIES

STONY CREEK BRIDGE NO. 11-0029

RAPID SETTING CONCRETE (PATCH)	152	CF
REMOVE UNSOUND CONCRETE	152	CF
PREPARE CONCRETE BRIDGE DECK SURFACE	60,895	SQFT
MULTILAYER POLYMER OVERLAY	60,895	SQFT

STONY CREEK

Br No. 11-0029, Gle, ROUTE 32, PM R5.23
1"=80'

NOTES: (APPLY TO THIS SHEET ONLY)

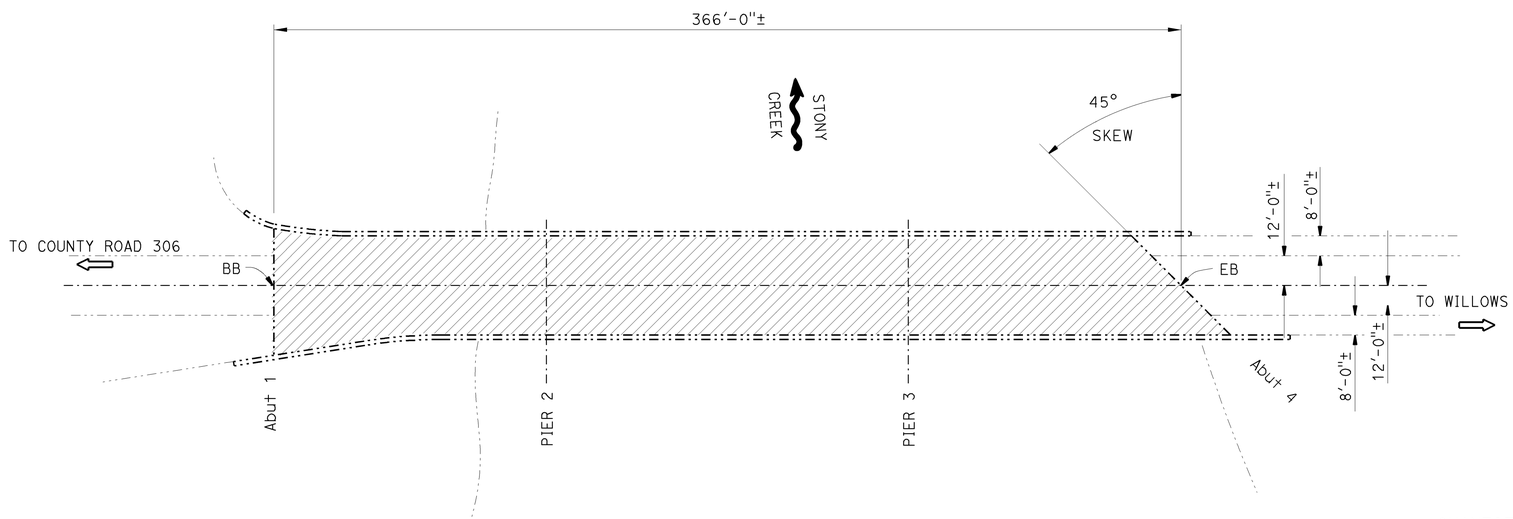
Indicates limits of prepared concrete bridge deck surface, furnish and place new 3/8" minimum multilayer polymer overlay. Prior to placing new multilayer polymer overlay, remove unsound concrete and patch with rapid setting concrete as shown on "DECK REPAIR DETAIL - OVERLAY" on "JOINT SEAL DETAILS NO. 2" sheet.

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

NOTES: (APPLY TO ALL SHEETS)

Indicates existing.

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



STANDARD PLANS DATED 2010

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

STANDARD PLAN SHEET NO.
DETAIL NO.

INDEX TO PLANS

SHEET NO.	TITLE
1	GENERAL PLAN NO. 1
2	GENERAL PLAN NO. 2
3	GENERAL PLAN NO. 3
4	GENERAL PLAN NO. 4
5	GENERAL PLAN NO. 5
6	GENERAL PLAN NO. 6
7	GENERAL PLAN NO. 7
8	GENERAL PLAN NO. 8
9	GENERAL PLAN NO. 9
10	JOINT SEAL DETAILS NO. 1
11	JOINT SEAL DETAILS NO. 2
12	JOINT SEAL DETAILS NO. 3

QUANTITIES

STONY CREEK BRIDGE NO. 11-0087

PREPARE CONCRETE BRIDGE DECK SURFACE	14,790	SQFT
TREAT BRIDGE DECK	14,790	SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	165	GAL

STONY CREEK

Br No. 11-0087, Gle, ROUTE 162, PM R45.13
1"=30'

Matthew Lee 10-02-13
DESIGN ENGINEER

	BY	CHECKED
DESIGN	PETER KANG	TIM CAMPBELL
DETAILS	DAVID KISH	TIM CAMPBELL
QUANTITIES	PETER KANG	TIM CAMPBELL

LOAD FACTOR DESIGN — LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
LAYOUT — BY DAVID KISH — CHECKED TIM CAMPBELL
SPECIFICATIONS — BY MARY KOPSA — PLANS AND SPECS COMPARED MARY KOPSA

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. VARIOUS
POST MILE VARIES

ROUTE 32, 65, 70, 99, 149 & 162 BRIDGES
GENERAL PLAN NO. 1

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: 0313000024
CONTRACT NO.: 03-4M6801

DISREGARD PRINTS BEARING EARLIER REVISION DATES
REVISION DATES 10-02-13

SHEET 1 OF 12

FILE => 03-4m6801_gp01.dgn

USERNAME => s109618 DATE PLOTTED => 11-FEB-2014 TIME PLOTTED => 08:19

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Gle, But, Yub Sut, Pla	32, 65, 70, 99, 149, 162	Var	12	22

REGISTERED CIVIL ENGINEER 10-02-13 DATE

2-3-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER PETER B. KANG No. C 70336 Exp. 9-30-14 CIVIL STATE OF CALIFORNIA

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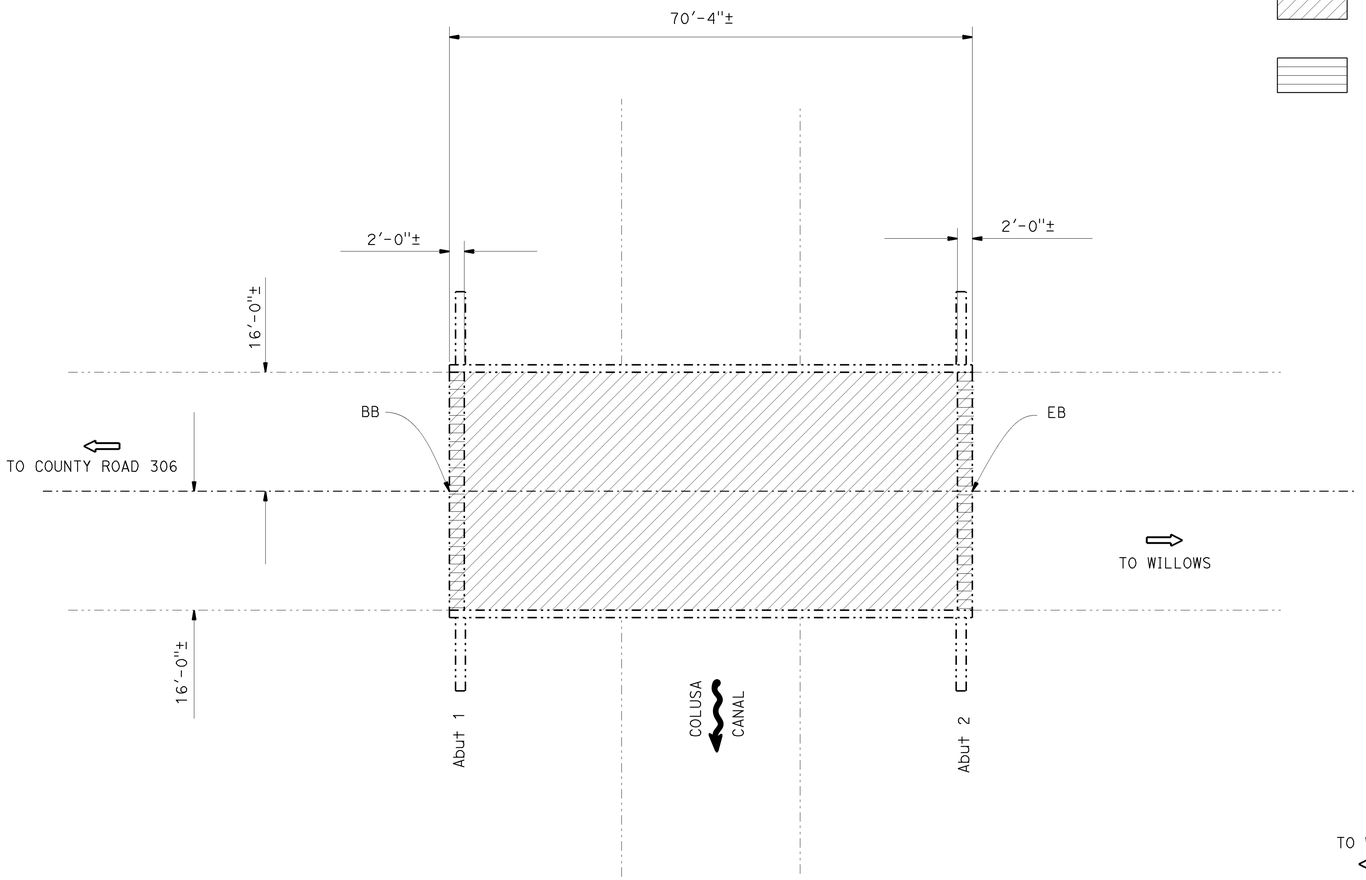
NOTES: (APPLY TO THIS SHEET ONLY)

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

Indicates limits of remove existing ½"± depth chip seal.



TEHAMA-COLUSA CANAL

Br No. 11-0096, Gle, ROUTE 162, PM 60.76
1"=10'

QUANTITIES

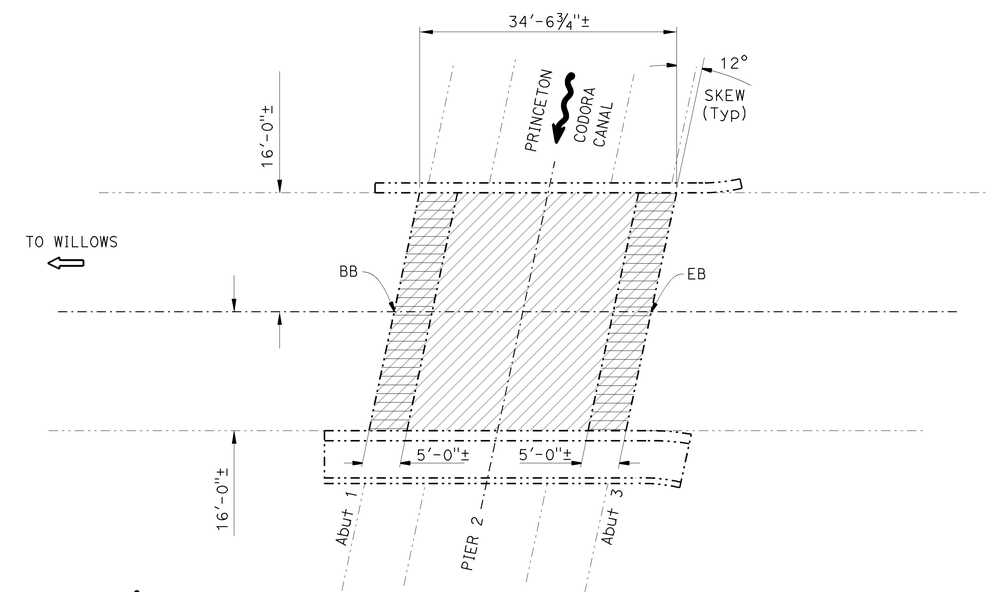
TEHAMA-COLUSA CANAL BRIDGE NO. 11-0096

PREPARE CONCRETE BRIDGE DECK SURFACE	2,251	SQFT
TREAT BRIDGE DECK	2,251	SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	25	GAL
REMOVE CHIP SEAL	128	SQFT

QUANTITIES

PRINCETON-CODORA CANAL BRIDGE NO. 11-0035

PUBLIC SAFETY PLAN	LUMP	SUM
PREPARE CONCRETE BRIDGE DECK SURFACE	1,106	SQFT
TREAT BRIDGE DECK	1,106	SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	13	GAL
REMOVE CHIP SEAL	320	SQFT



PRINCETON-CODORA CANAL

Br No. 11-0035, Gle, ROUTE 162, PM 76.25
1"=10'

DESIGN ENGINEER 10-02-13	DESIGN	BY PETER KANG	CHECKED TIM CAMPBELL	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	
	DETAILS	BY DAVID KISH	CHECKED TIM CAMPBELL	LAYOUT	BY DAVID KISH	CHECKED TIM CAMPBELL
	QUANTITIES	BY PETER KANG	CHECKED TIM CAMPBELL	SPECIFICATIONS	BY MARY KOPSA	PLANS AND SPECS COMPARED MARY KOPSA

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. VARIOUS
POST MILE VARIES

ROUTE 32, 65, 70, 99, 149 & 162 BRIDGES
GENERAL PLAN NO. 2

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: 0313000024
CONTRACT NO.: 03-4M6801

DISREGARD PRINTS BEARING EARLIER REVISION DATES 10-02-13

REVISION DATES | SHEET 2 OF 12

FILE => 03-4m6801_gp02.dgn

USERNAME => s109618 DATE PLOTTED => 11-FEB-2014 TIME PLOTTED => 08:19

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Gle, But, Yub Sut, Pla	32, 65, 70, 99, 149, 162	Var	13	22

Peter B. Kang 10-02-13
REGISTERED CIVIL ENGINEER DATE

2-3-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
PETER B. KANG
No. C 70336
Exp. 9-30-14
CIVIL
STATE OF CALIFORNIA

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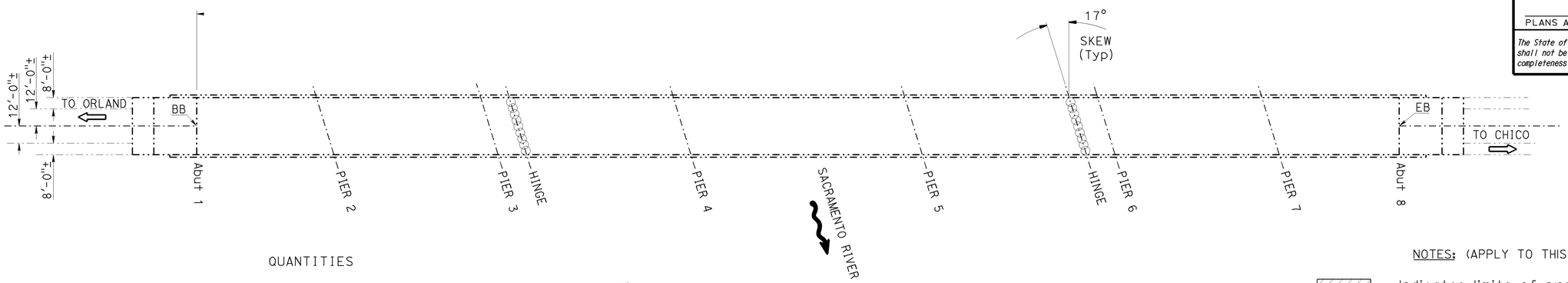


QUANTITIES

SACRAMENTO RIVER (GIANELLI) BRIDGE NO. 12-0054

BRIDGE REMOVAL (PORTION)	LUMP SUM
STRUCTURAL CONCRETE, BRIDGE	6 CY
JOINT SEAL ASSEMBLY (MR 4")	86 LF

SACRAMENTO RIVER (GIANELLI)

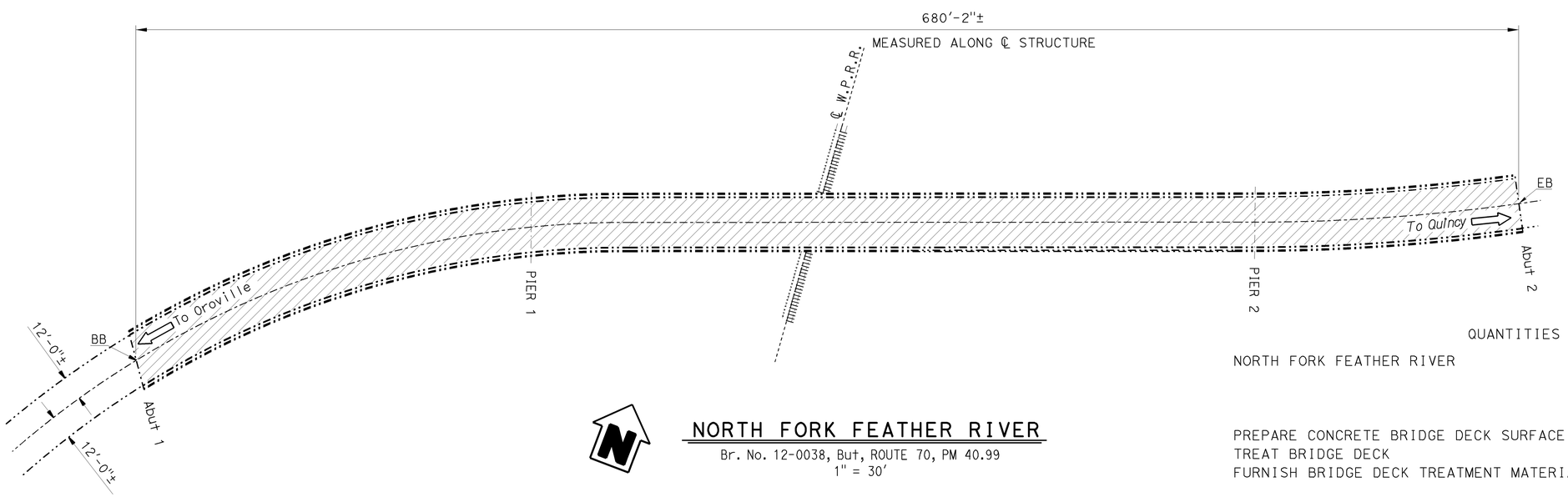
Br. No. 12-0054, But, ROUTE 32, PM 0.01
1" = 40'

NOTES: (APPLY TO THIS SHEET ONLY)

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

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

- For details, see "JOINT SEAL DETAILS NO. 1" sheet.



QUANTITIES

NORTH FORK FEATHER RIVER BRIDGE NO. 12-0038

PREPARE CONCRETE BRIDGE DECK SURFACE	16,324 SQFT
TREAT BRIDGE DECK	16,324 SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	182 GAL

NORTH FORK FEATHER RIVER

Br. No. 12-0038, But, ROUTE 70, PM 40.99
1" = 30'

Matthew Wilke 10-02-13
DESIGN ENGINEER

	BY	CHECKED			
DESIGN	PETER KANG	TIM CAMPBELL	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	
DETAILS	DAVID KISH	TIM CAMPBELL	LAYOUT	DAVID KISH	TIM CAMPBELL
QUANTITIES	PETER KANG	TIM CAMPBELL	SPECIFICATIONS	MARY KOPSA	PLANS AND SPECS COMPARED MARY KOPSA

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. VARIOUS
POST MILE VARIES

ROUTE 32, 65, 70, 99, 149 & 162 BRIDGES
GENERAL PLAN NO. 3

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: 0313000024
CONTRACT NO.: 03-4M6801

DISREGARD PRINTS BEARING EARLIER REVISION DATES → 10-02-13

REVISION DATES				SHEET	OF
10-02-13				3	12

FILE => 03-4m6801_gp03.dgn

USERNAME => s109618 DATE PLOTTED => 11-FEB-2014 TIME PLOTTED => 08:20

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Gle, But, Yub Sut, Pla	32, 65, 70, 99, 149, 162	Var	14	22

Peter B. Kang 10-02-13
REGISTERED CIVIL ENGINEER DATE

2-3-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
PETER B. KANG
No. C 70336
Exp. 9-30-14
CIVIL
STATE OF CALIFORNIA

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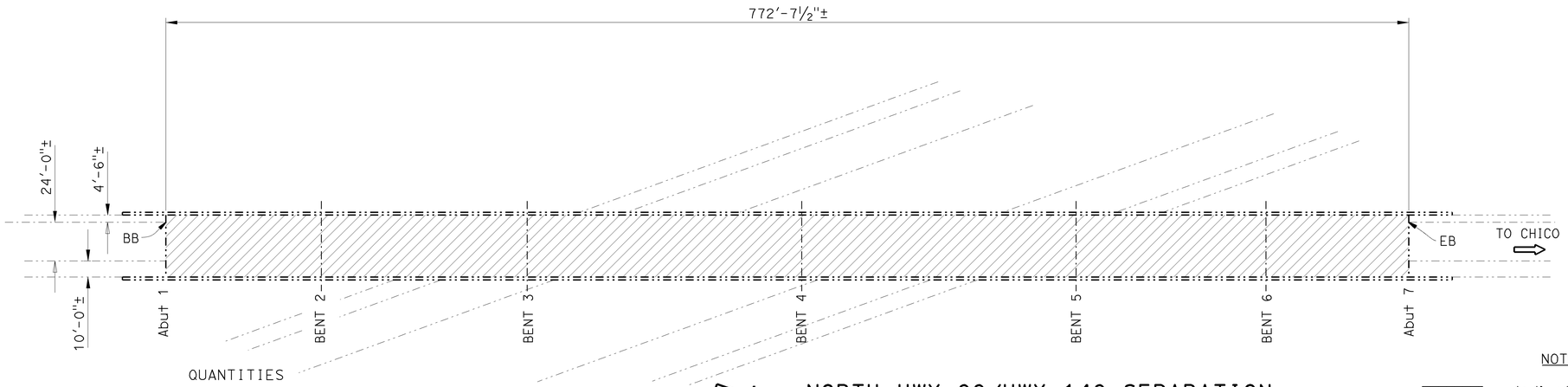


QUANTITIES

NORTH HWY/HWY 149 SEP BRIDGE NO. 12-0198

NORTH HWY 99/HWY 149 SEPARATION

Br. No. 12-0198, But, ROUTE 99, PM R21.92
1" = 40'

PREPARE CONCRETE BRIDGE DECK SURFACE	29,747	SQFT
TREAT BRIDGE DECK	29,747	SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	331	GAL

NOTES: (APPLY TO THIS SHEET ONLY)

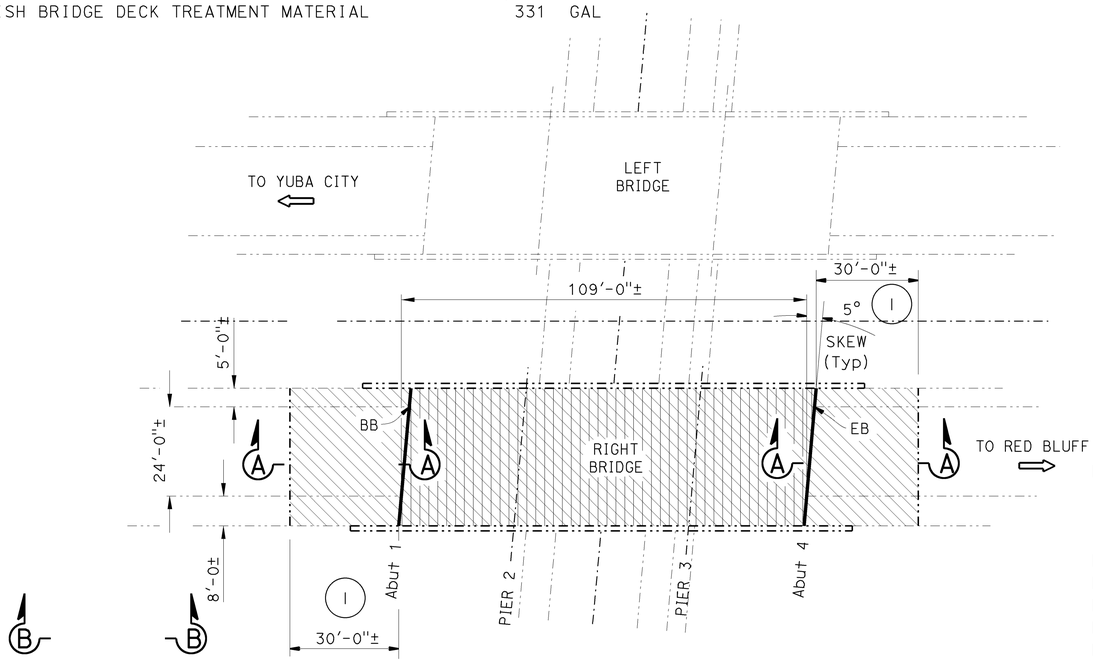
Indicates limits of remove existing ¾"± depth AC overlay.

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

Indicates limits of prepare concrete bridge deck surface, furnish and place new 1" minimum depth polyester concrete overlay. Prior to placing new polyester concrete overlay, remove unsound concrete, patch with rapid setting concrete as shown on the "DECK REPAIR DETAIL-OVERLAY" on "JOINT SEAL DETAILS NO. 2 sheet.

Indicates limits of existing joint seal removal and placement of new joint seal. For details, see "JOINT SEAL DETAILS NO. 2" sheet.

(1) Limits of grind existing concrete approach to conform to existing pavement. For details, see "SECTION A-A" on "JOINT SEAL DETAILS NO. 2" sheet.



ROUTE 99/32 SEPARATION (NORTH)

Br. No. 12-0150R, But, ROUTE 99, PM R32.44
1" = 20'

QUANTITIES

ROUTE 99/32 SEP (NORTH) BRIDGE NO. 12-0150R

RAPID SETTING CONCRETE (PATCH)	16	CF
REMOVE ASPHALT CONCRETE SURFACING	4,033	SQFT
REMOVE UNSOUND CONCRETE	16	CF
PREPARE CONCRETE BRIDGE DECK SURFACE	6,253	SQFT
FURNISH POLYESTER CONCRETE OVERLAY	626	CF
PLACE POLYESTER CONCRETE OVERLAY	6,253	SQFT
GRIND EXISTING BRIDGE DECK	247	SQYD
CLEAN EXPANSION JOINT	76	LF
JOINT SEAL (MR 1")	76	LF

Matthew Wilson 10-02-13
DESIGN ENGINEER

	BY	CHECKED			
DESIGN	PETER KANG	TIM CAMPBELL	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	
DETAILS	DAVID KISH	TIM CAMPBELL	LAYOUT	DAVID KISH	TIM CAMPBELL
QUANTITIES	PETER KANG	TIM CAMPBELL	SPECIFICATIONS	MARY KOPSA	PLANS AND SPECS COMPARED MARY KOPSA

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. VARIOUS
POST MILE VARIES

ROUTE 32, 65, 70, 99, 149 & 162 BRIDGES
GENERAL PLAN NO. 4

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: 0313000024 CONTRACT NO.: 03-4M6801

DISREGARD PRINTS BEARING EARLIER REVISION DATES 10-02-13

REVISION DATES | SHEET 4 OF 12

FILE => 03-4m6801_gp04.dgn

USERNAME => s109618 DATE PLOTTED => 11-FEB-2014 TIME PLOTTED => 08:21

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Gle, But, Yub Sut, Pla	32, 65, 70, 99, 149, 162	Var	15	22

Peter B. Kang 10-02-13
REGISTERED CIVIL ENGINEER DATE

2-3-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
PETER B. KANG
No. C 70336
Exp. 9-30-14
CIVIL
STATE OF CALIFORNIA

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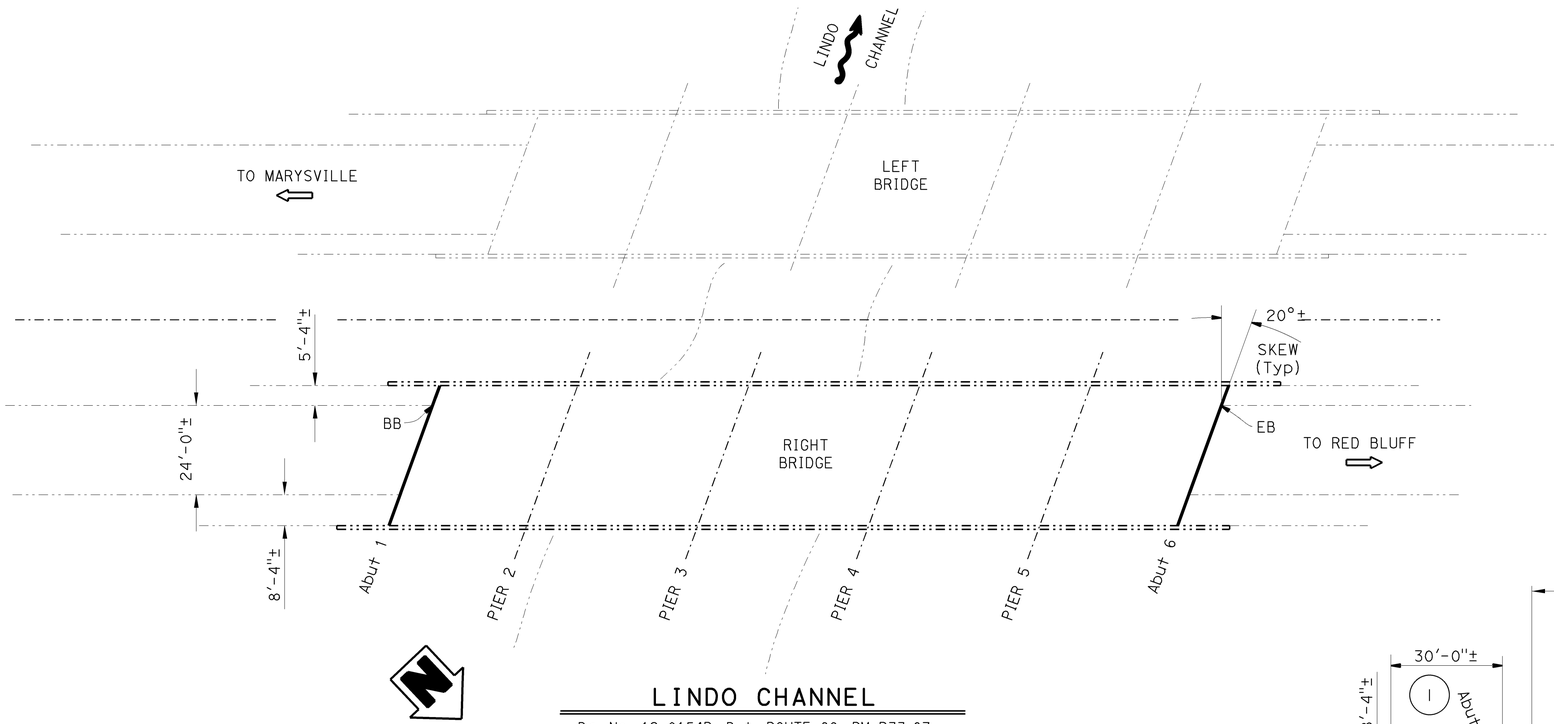


LINDO CHANNEL

Br. No. 12-0154R, But, ROUTE 99, PM R33.87
1" = 20'

QUANTITIES

LINDO CHANNEL	BRIDGE NO. 12-0154R
CLEAN EXPANSION JOINT	82 LF
JOINT SEAL (MR 1")	82 LF

NOTES: (APPLY TO THIS SHEET ONLY)

Indicates limits of remove existing ¾"± depth AC overlay.

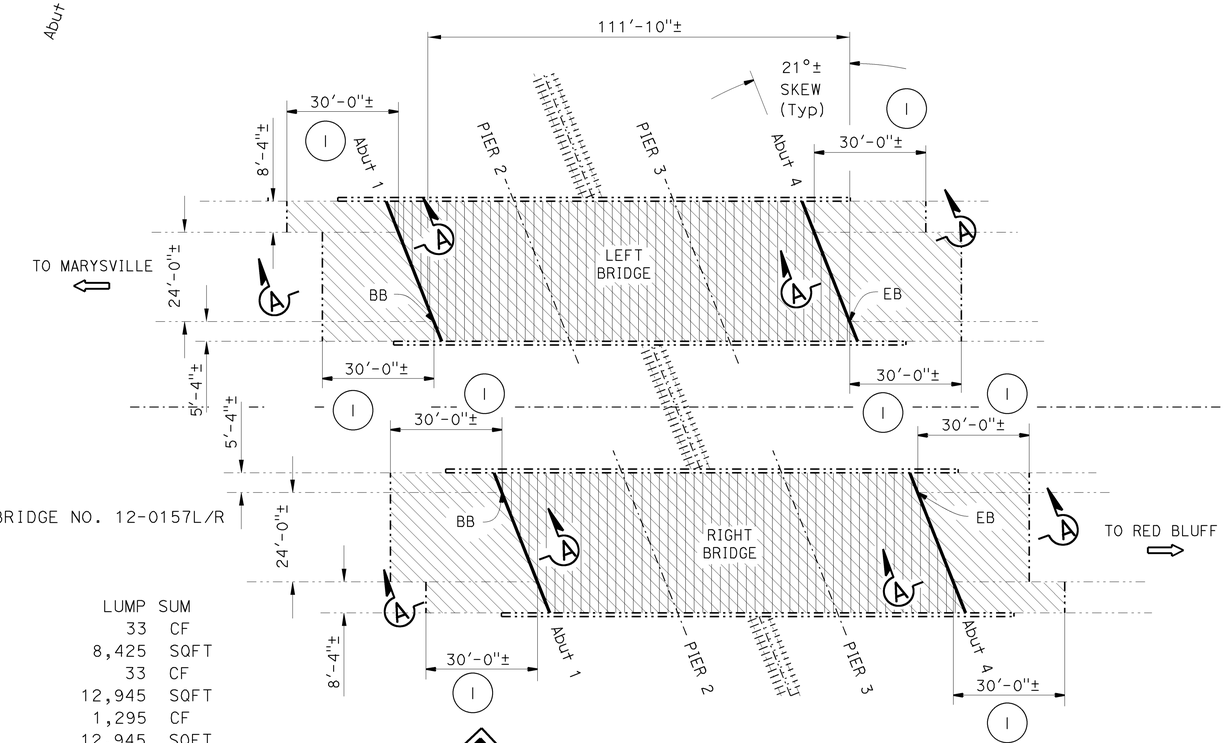
Indicates limits of prepare concrete bridge deck surface, furnish and place new 1" minimum depth polyester concrete overlay. Prior to placing new polyester concrete overlay, remove unsound concrete, patch with rapid setting concrete as shown on the "DECK REPAIR DETAIL-OVERLAY" on "JOINT SEAL DETAILS NO. 1 sheet.

Indicates limits of existing joint seal removal and placement of new joint seal. For details, see "JOINT SEAL DETAILS NO. 2" sheet.

(1) Limits of grind existing concrete approach to conform to existing pavement. For details, see "SECTION A-A" on "JOINT SEAL DETAILS NO. 2" sheet.

QUANTITIES

NORTH CHICO OC	BRIDGE NO. 12-0157L/R
PUBLIC SAFETY PLAN	LUMP SUM
RAPID SETTING CONCRETE (PATCH)	33 CF
REMOVE ASPHALT CONCRETE SURFACING	8,425 SQFT
REMOVE UNSOUND CONCRETE	33 CF
PREPARE CONCRETE BRIDGE DECK SURFACE	12,945 SQFT
FURNISH POLYESTER CONCRETE OVERLAY	1,295 CF
PLACE POLYESTER CONCRETE OVERLAY	12,945 SQFT
GRIND EXISTING BRIDGE DECK	502 SQYD
CLEAN EXPANSION JOINT	164 LF
JOINT SEAL (MR 1")	164 LF



NORTH CHICO OVERCROSSING

Br. No. 12-0157R/L, But, ROUTE 99, PM R34.63
1" = 20'

Matthew Lee 10-02-13 DESIGN ENGINEER	DESIGN	BY PETER KANG	CHECKED TIM CAMPBELL	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	
	DETAILS	BY DAVID KISH	CHECKED TIM CAMPBELL	LAYOUT	BY DAVID KISH	CHECKED TIM CAMPBELL
	QUANTITIES	BY PETER KANG	CHECKED TIM CAMPBELL	SPECIFICATIONS	BY MARY KOPSA	PLANS AND SPECS COMPARED MARY KOPSA

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. VARIOUS
POST MILE VARIES

ROUTE 32, 65, 70, 99, 149 & 162 BRIDGES
GENERAL PLAN NO. 5

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: 0313000024
CONTRACT NO.: 03-4M6801

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES 10-02-13 | SHEET 5 | OF 12

FILE => 03-4m6801_gp05.dgn

USERNAME = s109618 DATE PLOTTED => 11-FEB-2014 TIME PLOTTED => 08:22

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Gle, But, Yub Sut, Pla	32, 65, 70, 99, 149, 162	Var	16	22

Peter B. Kang 10-02-13
REGISTERED CIVIL ENGINEER DATE

2-3-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
PETER B. KANG
No. C 70336
Exp. 9-30-14
CIVIL
STATE OF CALIFORNIA

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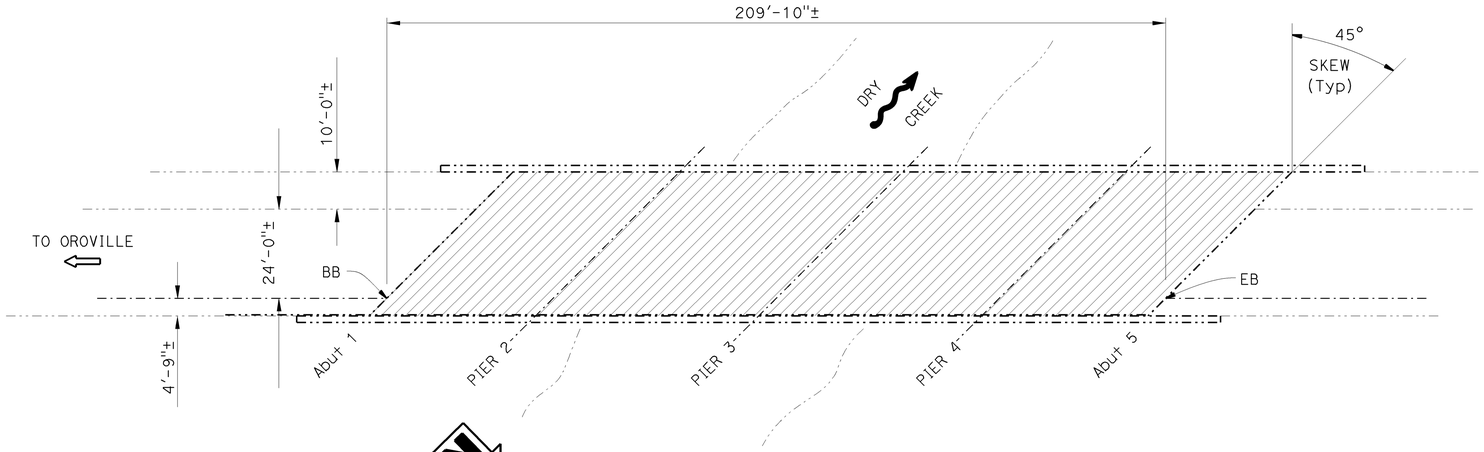
NOTES: (APPLY TO THIS SHEET ONLY)

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



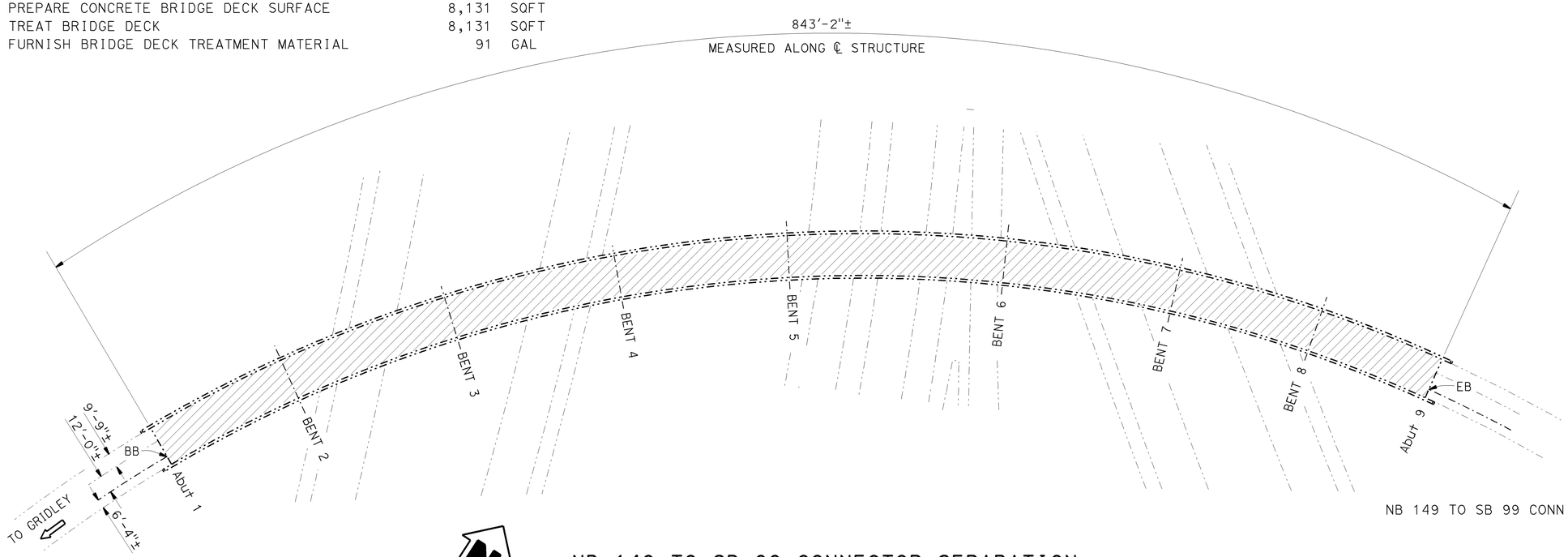
DRY CREEK

Br. No. 12-0070L, But, ROUTE 149, PM R3.50
1" = 20'

QUANTITIES

DRY CREEK BRIDGE NO. 12-0070L

PREPARE CONCRETE BRIDGE DECK SURFACE	8,131	SQFT
TREAT BRIDGE DECK	8,131	SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	91	GAL



NB 149 TO SB 99 CONNECTOR SEPARATION

Br. No. 12-0197G, But, ROUTE 149, PM R4.80
1" = 40'

QUANTITIES

NB 149 TO SB 99 CONN SEP BRIDGE NO. 12-0197G

PREPARE CONCRETE BRIDGE DECK SURFACE	23,679	SQFT
TREAT BRIDGE DECK	23,679	SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	264	GAL

Matthew Wilkes 10-02-13
DESIGN ENGINEER

	BY	CHECKED			
DESIGN	PETER KANG	TIM CAMPBELL	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD	
DETAILS	DAVID KISH	TIM CAMPBELL	LAYOUT	DAVID KISH	TIM CAMPBELL
QUANTITIES	PETER KANG	TIM CAMPBELL	SPECIFICATIONS	MARY KOPSA	PLANS AND SPECS COMPARED MARY KOPSA

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. VARIOUS
POST MILE VARIES

ROUTE 32, 65, 70, 99, 149 & 162 BRIDGES
GENERAL PLAN NO. 6

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: 0313000024
CONTRACT NO.: 03-4M6801

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 10-02-13

SHEET 6 OF 12

FILE => 03-4m6801_gp06.dgn

USERNAME => s109618 DATE PLOTTED => 11-FEB-2014 TIME PLOTTED => 08:22

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Gle, But, Yub Sut, Pla	32, 65, 70, 99, 149, 162	Var	17	22

Peter B. Kang 10-02-13
REGISTERED CIVIL ENGINEER DATE

2-3-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
PETER B. KANG
No. C 70336
Exp. 9-30-14
CIVIL
STATE OF CALIFORNIA

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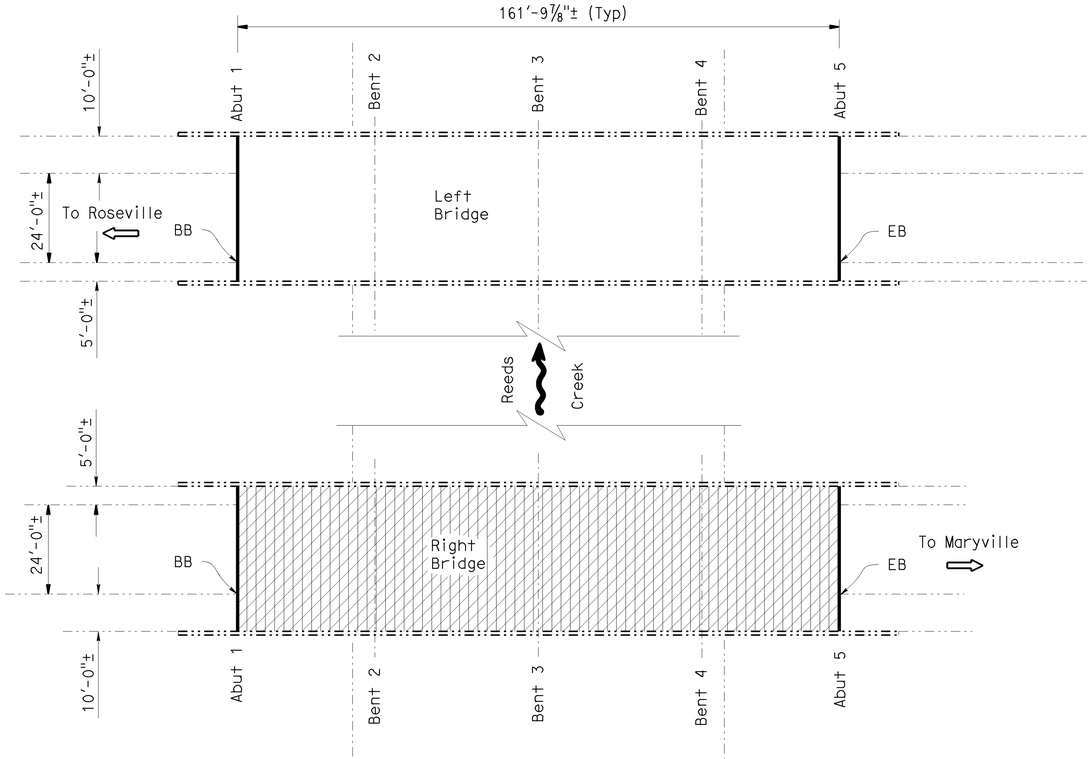

REEDS CREEK

Br No. 16-0046R/L, Yub, ROUTE 65, Yub, PM R7.61
1" = 20'

NOTES: (APPLY TO THIS SHEET ONLY)

Indicates limits of remove existing ¾"± depth AC overlay.

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

Indicates limits of existing joint seal removal and placement of new joint seal. For details, see "JOINT SEAL DETAILS NO. 2" sheet.

QUANTITIES

REEDS CREEK BRIDGE NO. 16-0046L/R

REMOVE ASPHALT CONCRETE SURFACING	6,312	SQFT
PREPARE CONCRETE BRIDGE DECK SURFACE	6,312	SQFT
TREAT BRIDGE DECK	6,312	SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	71	GAL
CLEAN EXPANSION JOINT	160	LF
JOINT SEAL (MR 1/2")	160	LF

Matthew Lee 10-02-13
DESIGN ENGINEER

	BY	CHECKED
DESIGN	PETER KANG	TIM CAMPBELL
DETAILS	DAVID KISH	TIM CAMPBELL
QUANTITIES	PETER KANG	TIM CAMPBELL

LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD		
LAYOUT	BY DAVID KISH	CHECKED TIM CAMPBELL	
SPECIFICATIONS	BY MARY KOPSA	PLANS AND SPECS COMPARED MARY KOPSA	

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. VARIOUS
POST MILE VARIES

ROUTE 32, 65, 70, 99, 149 & 162 BRIDGES
GENERAL PLAN NO. 7

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: 0313000024
CONTRACT NO.: 03-4M6801

DISREGARD PRINTS BEARING EARLIER REVISION DATES → 10-02-13

REVISION DATES				SHEET	OF
10-02-13				7	12

FILE => 03-4m6801_gp07.dgn

USERNAME => s109618 DATE PLOTTED => 11-FEB-2014 TIME PLOTTED => 08:23

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Gle, But, Yub Sut, Pla	32, 65, 70, 99, 149, 162	Var	18	22

Peter B. Kang 10-02-13
REGISTERED CIVIL ENGINEER DATE

2-3-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
PETER B. KANG
No. C 70336
Exp. 9-30-14
CIVIL
STATE OF CALIFORNIA

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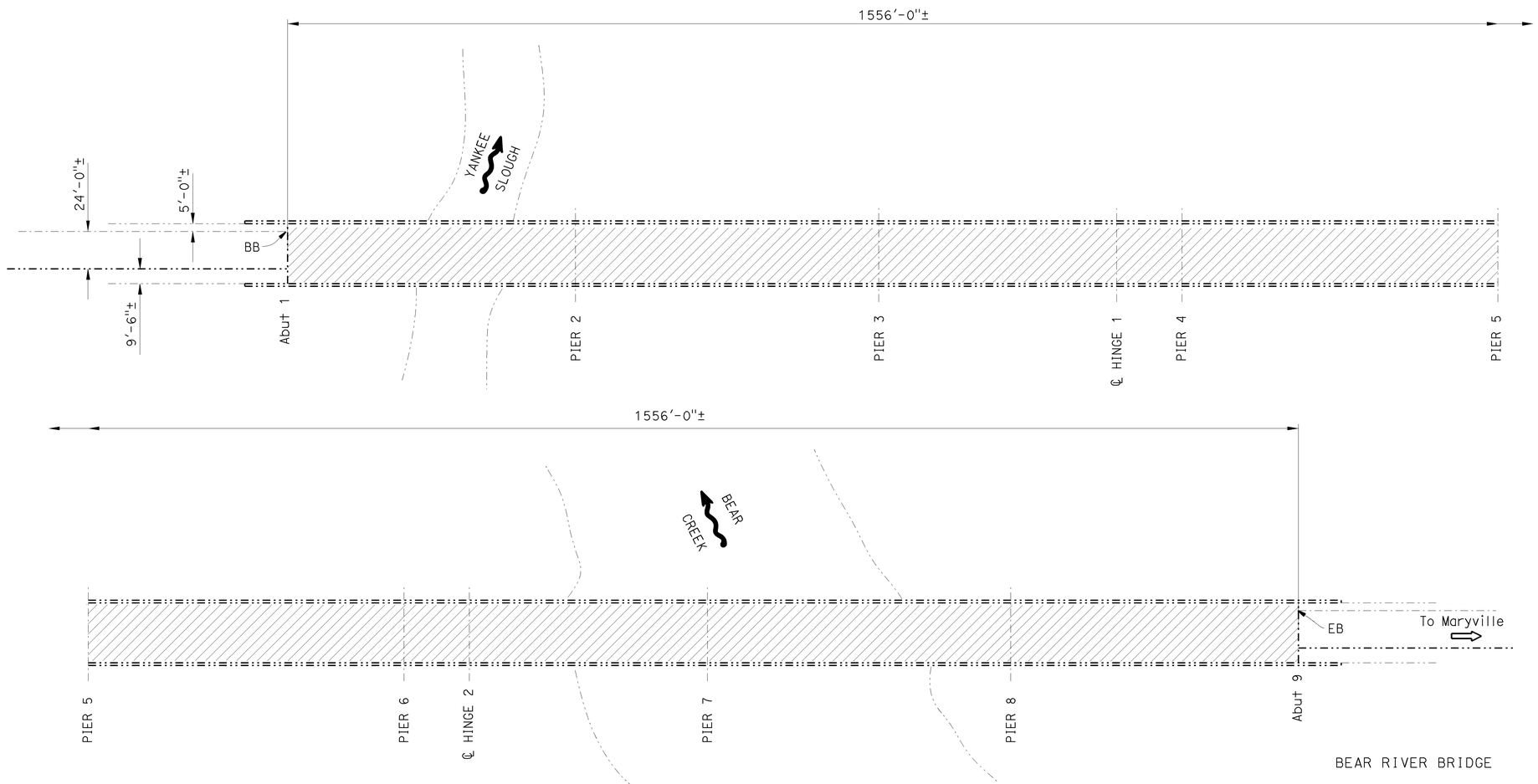
NOTES: (APPLY TO THIS SHEET ONLY)

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



BEAR RIVER

Br No. 18-0001R, Sut, ROUTE 70, PM 8.09
1" = 40'

QUANTITIES

BEAR RIVER BRIDGE — BRIDGE NO. 18-0001R

PREPARE CONCRETE BRIDGE DECK SURFACE	59,906	SQFT
TREAT BRIDGE DECK	59,906	SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	666	GAL

Matthew Wikes 10-02-13
DESIGN ENGINEER

	BY	CHECKED
DESIGN	PETER KANG	TIM CAMPBELL
DETAILS	DAVID KISH	TIM CAMPBELL
QUANTITIES	PETER KANG	TIM CAMPBELL

LOAD FACTOR DESIGN — LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
LAYOUT — BY DAVID KISH — CHECKED TIM CAMPBELL
SPECIFICATIONS — BY MARY KOPSA — PLANS AND SPECS COMPARED MARY KOPSA

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. VARIOUS
POST MILE VARIES

ROUTE 32, 65, 70, 99, 149 & 162 BRIDGES
GENERAL PLAN NO. 8

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: 0313000024
CONTRACT NO.: 03-4M6801

DISREGARD PRINTS BEARING EARLIER REVISION DATES
REVISION DATES 10-02-13

SHEET 8 OF 12

FILE => 03-4m6801_gp08.dgn

USERNAME => s109618 DATE PLOTTED => 11-FEB-2014 TIME PLOTTED => 08:24

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Gle, But, Yub Sut, Pla	32, 65, 70, 99, 149, 162	Var	19	22

REGISTERED CIVIL ENGINEER 10-02-13 DATE

2-3-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER PETER B. KANG No. C 70336 Exp. 9-30-14 CIVIL STATE OF CALIFORNIA

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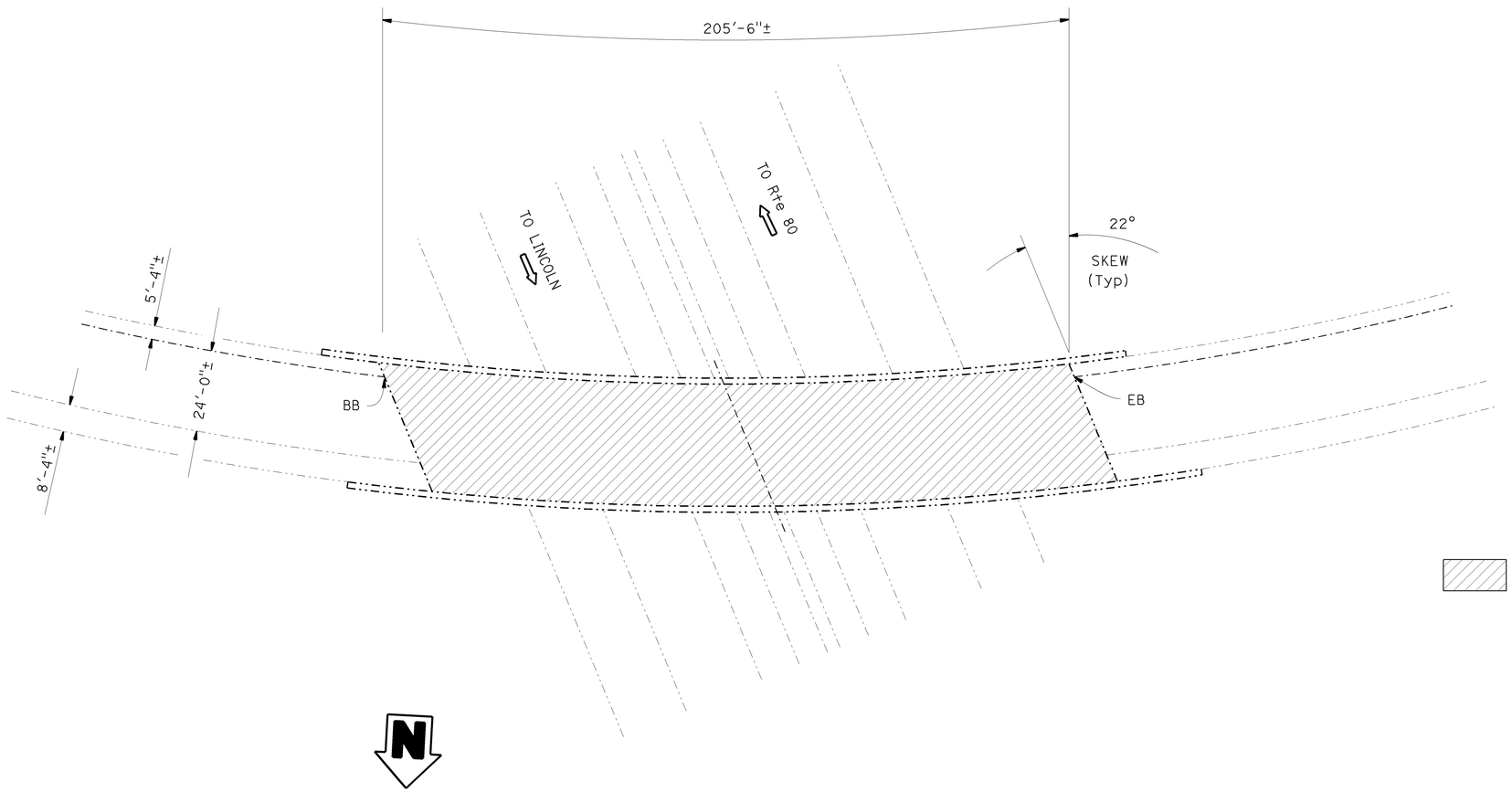

NOTES: (APPLY TO THIS SHEET ONLY)

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

BLUE OAKS BLVD OFF-RAMP SEPARATION

Br No. 19-0153S, Pla, ROUTE 65, PM M8.15
1"=20'

QUANTITIES

BLUE OAKS BLVD OFF-RAMP SEP BRIDGE NO. 19-0153S

PREPARE CONCRETE BRIDGE DECK SURFACE	7,741	SQFT
TREAT BRIDGE DECK	7,741	SQFT
FURNISH BRIDGE DECK TREATMENT MATERIAL	86	GAL

10-02-13 DESIGN ENGINEER	DESIGN	BY PETER KANG	CHECKED TIM CAMPBELL	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
	DETAILS	BY DAVID KISH	CHECKED TIM CAMPBELL	LAYOUT	BY DAVID KISH / CHECKED TIM CAMPBELL
	QUANTITIES	BY PETER KANG	CHECKED TIM CAMPBELL	SPECIFICATIONS	BY MARY KOPSA / PLANS AND SPECS COMPARED MARY KOPSA

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. VARIOUS
POST MILE VARIES

ROUTE 32, 65, 70, 99, 149 & 162 BRIDGES
GENERAL PLAN NO. 9

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: 0313000024
CONTRACT NO.: 03-4M6801

DISREGARD PRINTS BEARING EARLIER REVISION DATES → REVISION DATES 10-02-13

SHEET 9 OF 12

FILE => 03-4m6801_gp09.dgn

USERNAME => s109618 DATE PLOTTED => 11-FEB-2014 TIME PLOTTED => 08:24

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Gle, But, Yub Sut, Pla	32, 65, 70, 99, 149, 162	Var	20	22

REGISTERED CIVIL ENGINEER 10-02-13 DATE

2-3-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER PETER B. KANG No. C 70336 Exp. 9-30-14 CIVIL STATE OF CALIFORNIA

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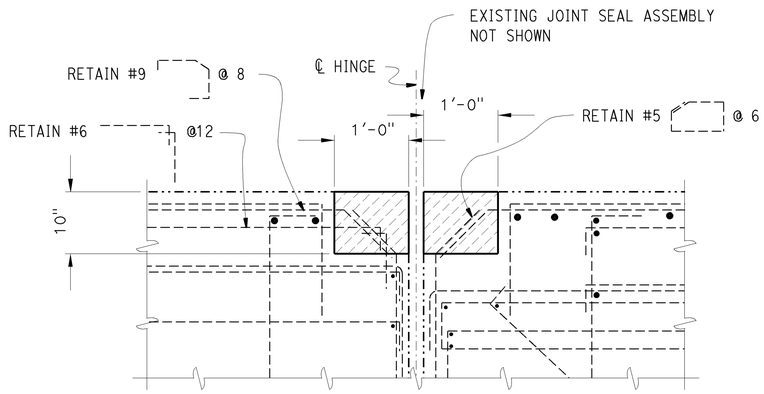

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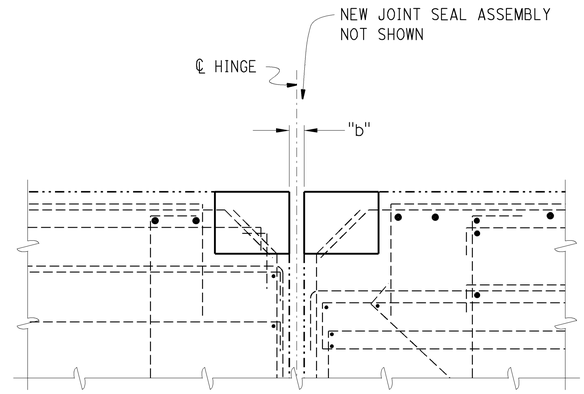


RECONSTRUCTION

SECTION B-B

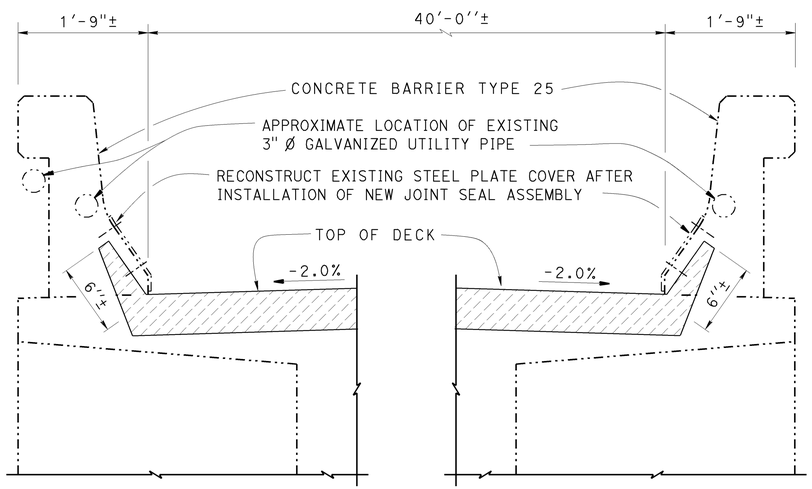
1" = 1'-0"

NOTES: (APPLY TO THIS SHEET ONLY)

Indicates limits of remove existing concrete and joint seal assembly. Retain existing reinforcing steel as noted.

"b" Reconstructed gap width as determined by Engineer.

\- For additional details, see "JOINT SEAL DETAILS NO. 3" sheet.



PARTIAL TYPICAL SECTION (HINGE)

1"=1'-0"

SACRAMENTO RIVER (GIANELLI) Br. NO. 12-0054

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 = 3,600 psi
n = 9

TEMPORARY DECK PLATE LOAD CRITERIA

MOMENT DEMAND/FOOT (kips-ft/ft)	BOLT SHEAR/FOOT (kips/ft)	BOLT TENSION (kips) / bolt
18.41	16	8

Plate deflection shall not exceed s/12 inches (s = span of plate).
Maximum anchor bolt spacing = 1'-0".

DESIGN	BY PETER KANG	CHECKED TIM CAMPBELL	
DETAILS	BY DAVID KISH	CHECKED TIM CAMPBELL	
QUANTITIES	BY PETER KANG	CHECKED TIM CAMPBELL	

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. VARIOUS
POST MILE VARIES

ROUTE 32, 65, 70, 99, 149 & 162 BRIDGES
JOINT SEAL DETAILS NO.1

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: 0313000024
CONTRACT NO.: 03-4M6801

DISREGARD PRINTS BEARING EARLIER REVISION DATES 10-02-13

REVISION DATES | SHEET 10 | OF 12

FILE => 03-4m6801_ndet01.dgn

USERNAME => s109618 DATE PLOTTED => 11-FEB-2014 TIME PLOTTED => 08:25

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Gle, But, Yub Sut, Pla	32, 65, 70, 99, 149, 162	Var	21	22

Peter B. Kang 10-02-13
REGISTERED CIVIL ENGINEER DATE

2-3-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
PETER B. KANG
No. C 70336
Exp. 9-30-14
CIVIL
STATE OF CALIFORNIA

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BRIDGE NO.	BRIDGE NAME	LOCATION		MINIMUM "MR" (INCHES)	APPROX LENGTH (FEET)	EXISTING WATERSTOP	APPROX DEPTH TO CLEAN EXP JOINT (INCHES)
12-0054	SACRAMENTO RIVER (GIANELLI)	SPAN 3	H	4	43	YES	
		SPAN 5	H	4	43	YES	
12-0150R	ROUTE 99/32 SEPARATION (NORTH)	* Abut 1	BB	1	38	NO	12
		* Abut 4	EB	1	38	NO	12
12-0154R	LINDO CHANNEL	* Abut 1	BB	1	41	NO	12
		* Abut 6	EB	1	41	NO	12
12-0157L	NORTH CHICO OVERCROSSING	* Abut 1	BB	1	41	NO	12
		* Abut 4	EB	1	41	NO	12
12-0157R	NORTH CHICO OVERCROSSING	* Abut 1	BB	1	41	NO	12
		* Abut 4	EB	1	41	NO	12
16-0046L	REEDS CREEK	Abut 1	BB	1/2	40	NO	12
		Abut 5	EB	1/2	40	NO	12
16-0046R	REEDS CREEK	Abut 1	BB	1/2	40	NO	12
		Abut 5	EB	1/2	40	NO	12

NOTES:

BB - Paving notch at beginning of bridge
EB - Paving notch at end of bridge
H - Hinge Joint
* - Type B joint Seal

The following notes apply to JOINT SEAL TYPE B

1) Seal must satisfy both minimum Movement Rating (MR) and minimum W1 requirements.
2) Minimum W1 is the calculated maximum width of the joint based on field measurements. After the joints have been cleaned, minimum W1 is to be calculated by the Engineer.
3) W1 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

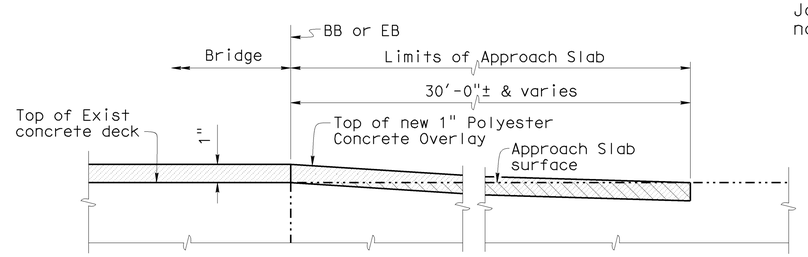
NOTES: (APPLY TO THIS SHEET ONLY)

Indicates limits of grind concrete surfacing.

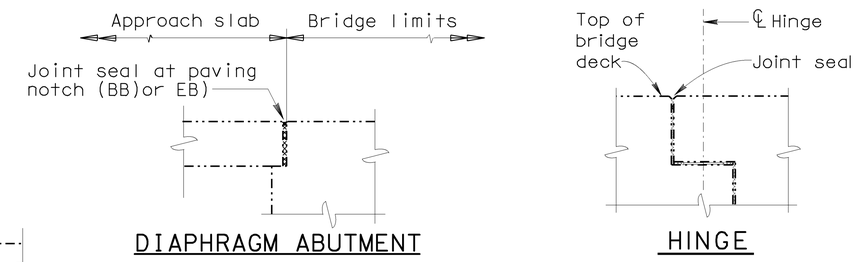
Indicates limits of prepare concrete bridge deck surface, furnish and place new 1" minimum depth polyester concrete overlay.

DECK REPAIR TABLE
REMOVE UNSOUND CONCRETE AND RAPID SETTING CONCRETE (PATCH)

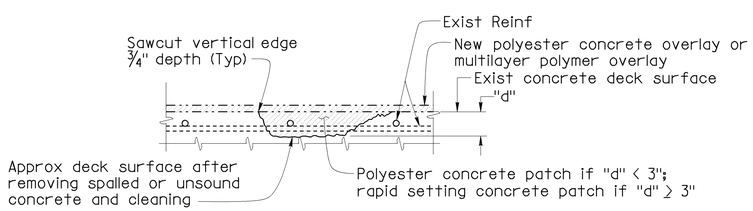
BRIDGE NAME	BRIDGE NUMBER	APPROXIMATE AREA DAMAGED (PERCENT)	APPROXIMATE DEPTH (INCHES)
STONY CREEK	11-0029	1	3
ROUTE 99/32 SEPARATION (NORTH)	12-0150R	1	3
NORTH CHICO OVERCROSSING	12-0157L	1	3
NORTH CHICO OVERCROSSING	12-0157R	1	3



SECTION A-A
No Scale



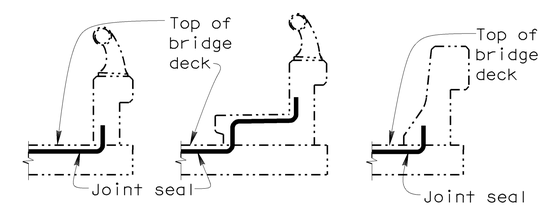
JOINT SEAL AT LOCATION



DECK REPAIR DETAIL - OVERLAY

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

NO SCALE



BARRIER RAIL

JOINT SEAL AT LOW SIDE OF DECK

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

	BY	CHECKED
DESIGN	PETER KANG	TIM CAMPBELL
DETAILS	DAVID KISH	TIM CAMPBELL
QUANTITIES	PETER KANG	TIM CAMPBELL

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. VARIOUS
POST MILE VARIES

ROUTE 32, 65, 70, 99, & 162 BRIDGES
JOINT SEAL DETAILS NO.2

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: 0313000024
CONTRACT NO.: 03-4M6801

DISREGARD PRINTS BEARING EARLIER REVISION DATES 10-02-13

REVISION DATES | SHEET 11 | OF 12

FILE => 03-4m6801_ndet02.dgn

USERNAME => s109618 DATE PLOTTED => 11-FEB-2014 TIME PLOTTED => 08:25

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Gle, But, Yub Sut, Pla	32, 65, 70, 99, 149, 162	Var	22	22

REGISTERED CIVIL ENGINEER 10-02-13 DATE

2-3-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER PETER B. KANG No. C 70336 Exp. 9-30-14 CIVIL STATE OF CALIFORNIA

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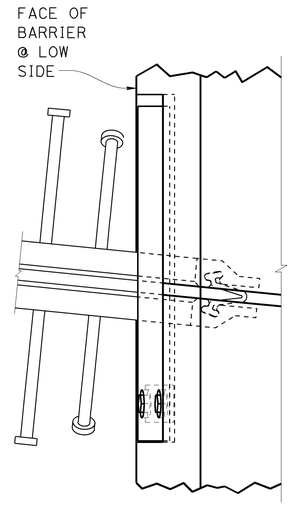
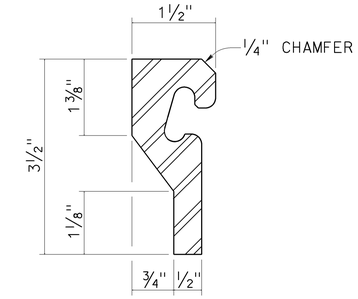


PLAN

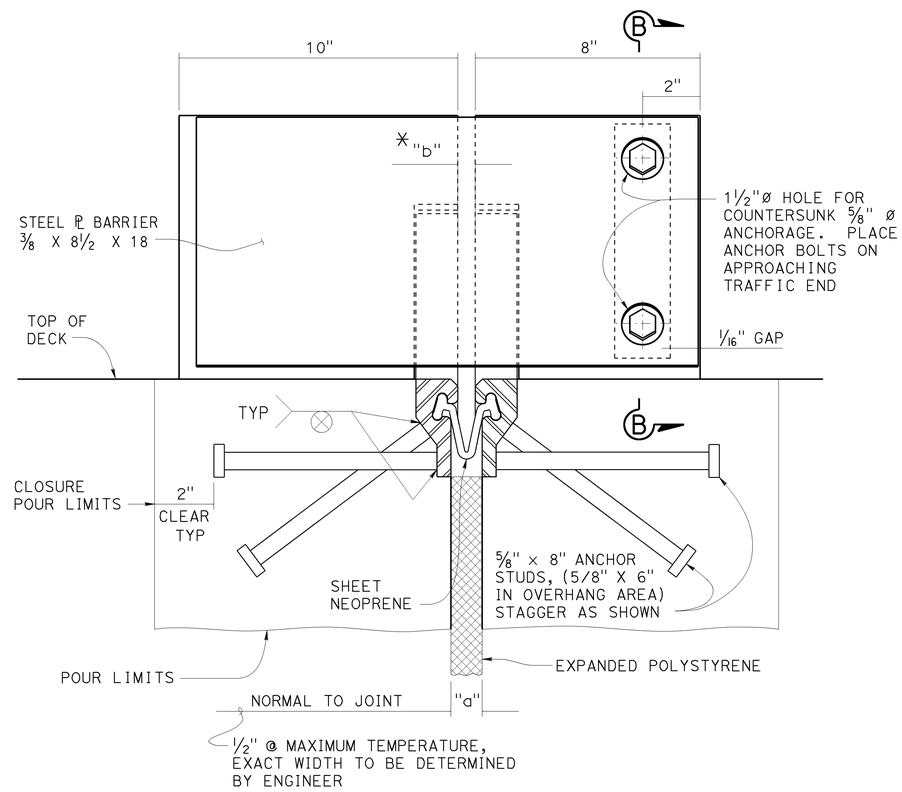
SKEW ≤ 20°



STEEL EDGE MEMBER

NOTES:

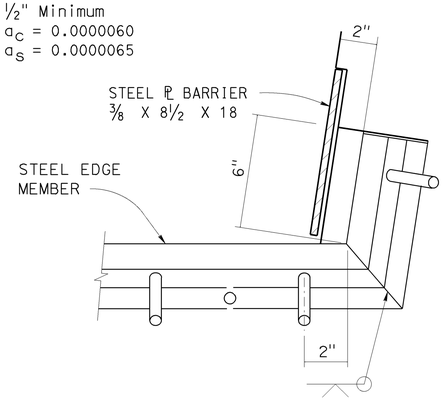
1. Full penetration welds may be substituted for arc stud welds on all anchor studs.
2. Alternate types of anchor studs may be permitted subject to the approval by the Engineer
3. Joint seal assembly to be used in conjunction with closure pour. (See other sheets for limits).
4. Use joint at crown of roadway, at any change in traverse slope in deck and at changes in horizontal direction. Place other joints at or near lanes. All metal parts to be painted or galvanized after fabrication
5. Sheet Neoprene shall be fabricated in one continuous piece and shall be fabricated to bend around corners. Field splices of the neoprene are not allowed.
6. Insert assembly or expansion anchorage for ⅝" x 1¾" bolts. Use installation bolts extended ½" minimum past nut and coat with bond breaker, after concrete has cured, remove installation bolts, install A325 bolts and sheet neoprene
7. a_c, are the thermal expansion coefficients for concrete and steel respectively.



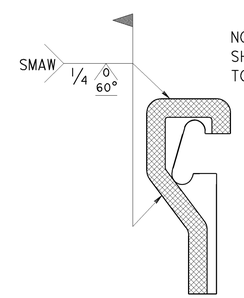
SECTION A-A

* TO SET MINIMUM JOINT OPENING "b"

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

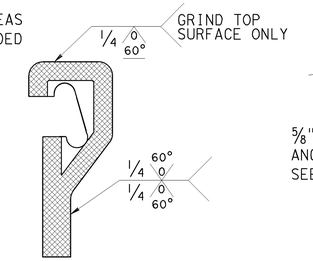


BARRIER DETAIL LOW SIDE

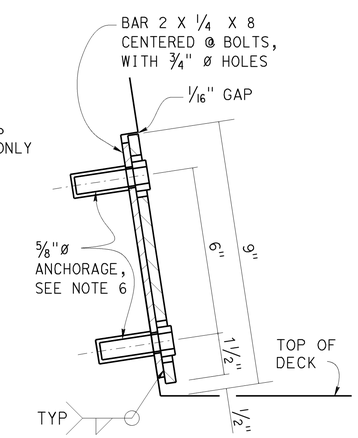


NOTE:
SHADED AREAS TO BE WELDED

FIELD WELD DETAIL



SHOP WELD DETAIL



SECTION B-B

NO SCALE

	BY	CHECKED
DESIGN	PETER KANG	TIM CAMPBELL
DETAILS	DAVID KISH	TIM CAMPBELL
QUANTITIES	PETER KANG	TIM CAMPBELL

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. VARIOUS
POST MILE VARIES

ROUTE 32, 65, 70, 99, & 162 BRIDGES
JOINT SEAL DETAILS NO.3

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: 0313000024
CONTRACT NO.: 03-4M6801

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES 10-02-13

SHEET 12 OF 12

FILE => 03-4m6801_ndet03.dgn

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