Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon	1	67.9	1	12

INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2	UTILITY PLANS
3	CONSTRUCTION AREA SIGNS
4-6	REVISED STANDARD PLANS
STRUCTURE PLANS	
7-12	MALPASO CREEK REPAIR

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

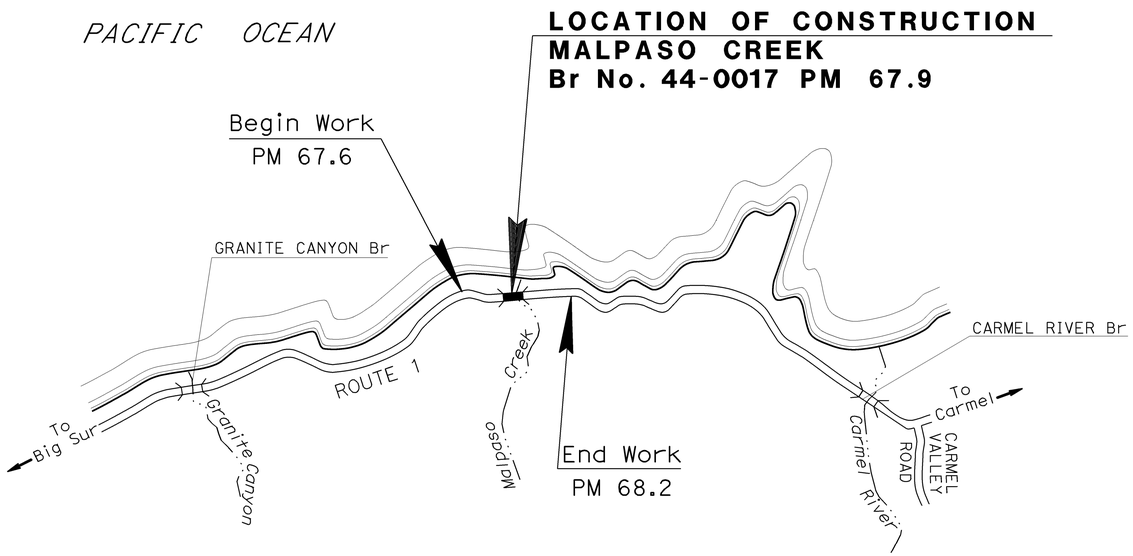
PROJECT PLANS FOR CONSTRUCTION ON

STATE HIGHWAY

IN MONTEREY COUNTY
ABOUT 14 MILES SOUTH OF CARMEL
AT MALPASO CREEK BRIDGE

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010

LOCATION MAP



NO SCALE

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

PROJECT MANAGER: KELLY J. McCLAIN

DESIGN ENGINEER: KELLY J. McCLAIN

2-18-14
PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

February 18, 2014
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
K.L.McKINLEY
No. 49413
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.

CONTRACT No.	05-1A8904
PROJECT ID	0512000036

LAST REVISION 02-18-14

DATE PLOTTED => 14-FEB-2014
TIME PLOTTED => 14:38

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon	1	67.9	2	12

REGISTERED CIVIL ENGINEER 2-18-14 DATE

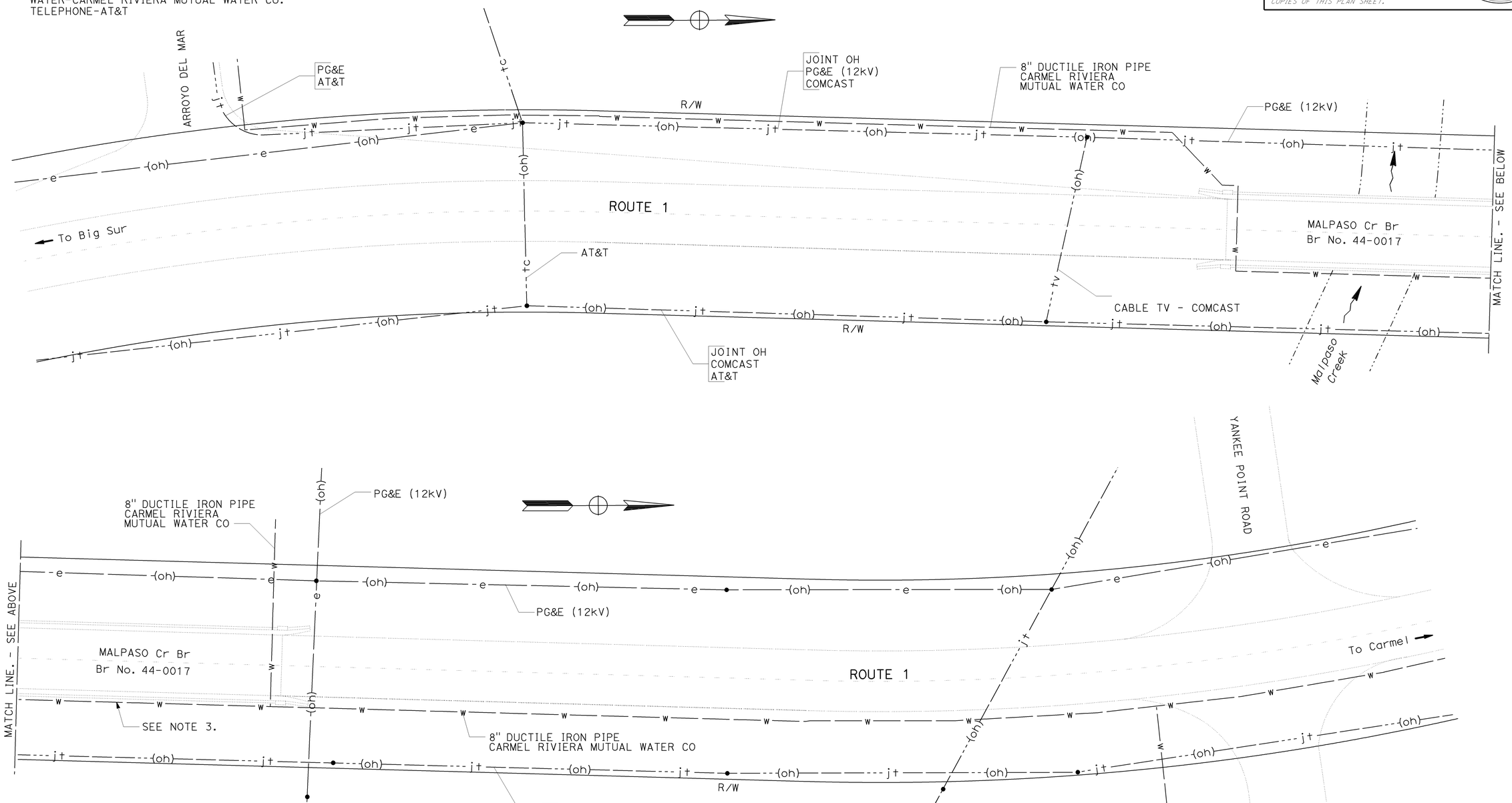
2-18-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER K.L.McKINLEY No. 49413 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:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. UTILITIES SHOWN ON THIS PLAN ARE EXISTING AND ARE FOR INFORMATION PURPOSES ONLY.
3. 8" DUCTILE IRON PIPE LINE SUSPENDED FROM BRIDGE.
4. UTILITY OWNERSHIP ON THIS PROJECT AS SHOWN:
   CABLE TV-COMCAST
   ELECTRICAL-PG&E
   WATER-CARMEL RIVIERA MUTUAL WATER Co.
   TELEPHONE-AT&T



APPROVED FOR UTILITY WORK ONLY

UTILITY PLAN

NO SCALE

U-1

REVISED BY | DATE REVISED
KELLY L McKINLEY | KELLY J. McCLAIN
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR
KELLY J. McCLAIN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE DESIGN

LAST REVISION 02-18-14 | DATE PLOTTED => 14-FEB-2014 | TIME PLOTTED => 14:15

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon	1	67.9	3	12

REGISTERED CIVIL ENGINEER 2-18-14 DATE

2-18-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER K.L.McKINLEY No. 49413 Exp. 9-30-14 CIVIL STATE OF CALIFORNIA

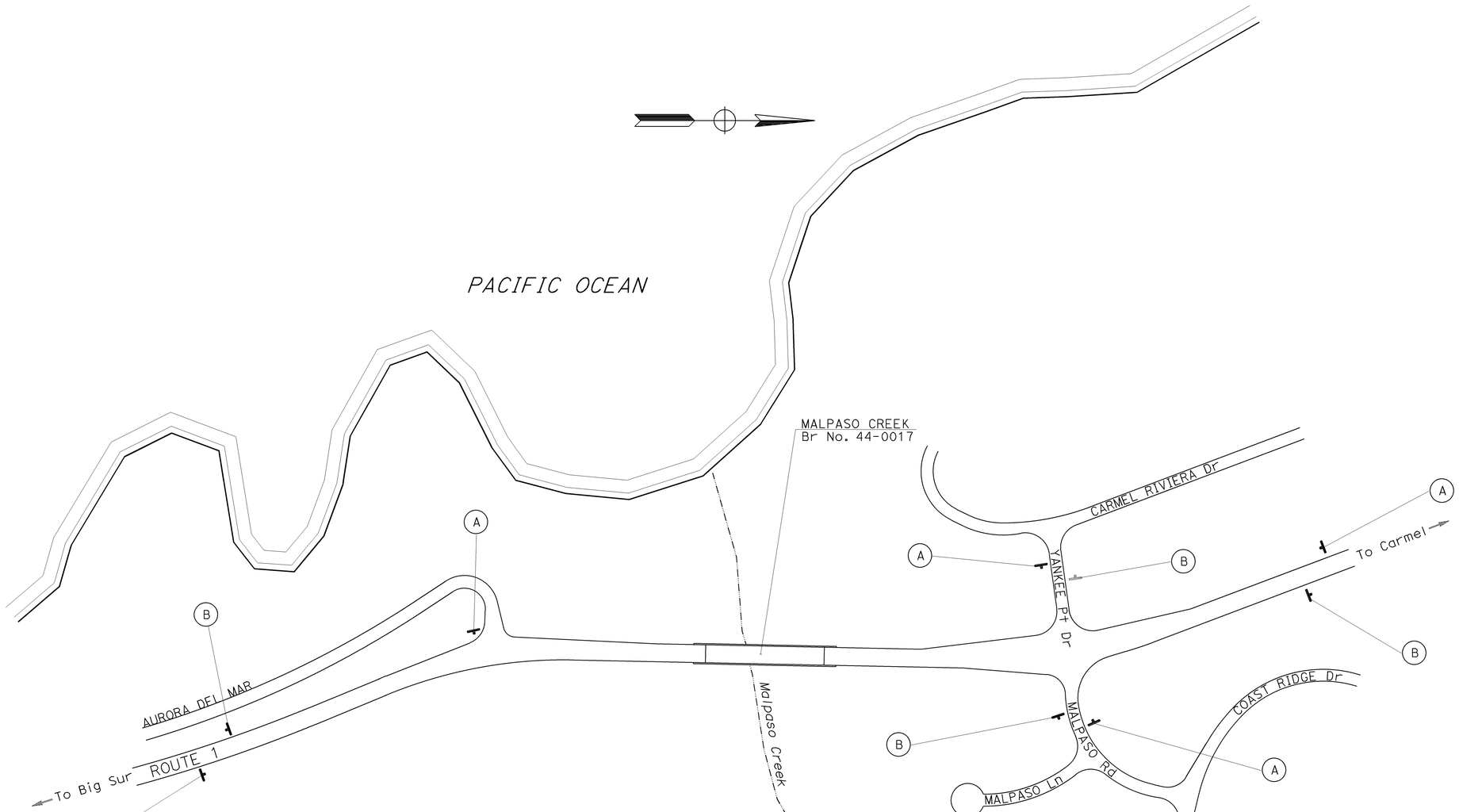
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. EXACT LOCATION OF CONSTRUCTION AREA SIGNS TO BE DETERMINED BY THE ENGINEER.
2. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THIS PLAN.

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No. (X)	SIGN CODE		PANEL SIZE	SIGN MESSAGE	No. OF POSTS AND SIZE	NUMBER OF SIGNS
	FEDERAL	CALIFORNIA				
A	W20-1		36" x 36"	ROAD WORK AHEAD	1 - 4" x 6"	5
B	G20-2		36" x 18"	END ROAD WORK	1 - 4" x 6"	4



APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

CONSTRUCTION AREA SIGNS

NO SCALE

CS-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE DESIGN

FUNCTIONAL SUPERVISOR: KELLY J.McCLAIN

CALCULATED-DESIGNED BY: KELLY L.McKINLEY
CHECKED BY: KELLY J.McCLAIN

REVISED BY
DATE REVISED

LAST REVISION 01-29-14 | DATE PLOTTED => 14-FEB-2014 | TIME PLOTTED => 14:38

M

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

N

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

O

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

P

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

P continued

PG	PROFILE GRADE
PI	POINT OF INTERSECTION
PJP	PARTIAL JOINT PENETRATION
Pkwy	PARKWAY
ℙL,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
05	Mon	1	67.9	4	12

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 2-18-14

UNIT OF MEASUREMENT SYMBOLS:

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

TABLE A

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

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

TABLE B

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

* For use on a sign panel only

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ABBREVIATIONS (SHEET 2 OF 2)

NO SCALE

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

REVISED STANDARD PLAN RSP A10B

2010 REVISED STANDARD PLAN RSP A10B

6-7-13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon	I	67.9	5	12

REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

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

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TO ACCOMPANY PLANS DATED 2-18-14

TABLE 1

TAPER LENGTH CRITERIA AND CHANNELIZING DEVICE SPACING

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

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

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

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

TABLE 2

LONGITUDINAL BUFFER SPACE AND FLAGGER STATION SPACING

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

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

** - Longitudinal buffer space or flagger station spacing

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

TABLE 3

ADVANCE WARNING SIGN SPACING

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

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM TABLES FOR LANE AND RAMP CLOSURES

NO SCALE

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

REVISED STANDARD PLAN RSP T9

2010 REVISED STANDARD PLAN RSP T9

4-30-13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon	1	67.9	6	12

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 2-18-14

NOTES:

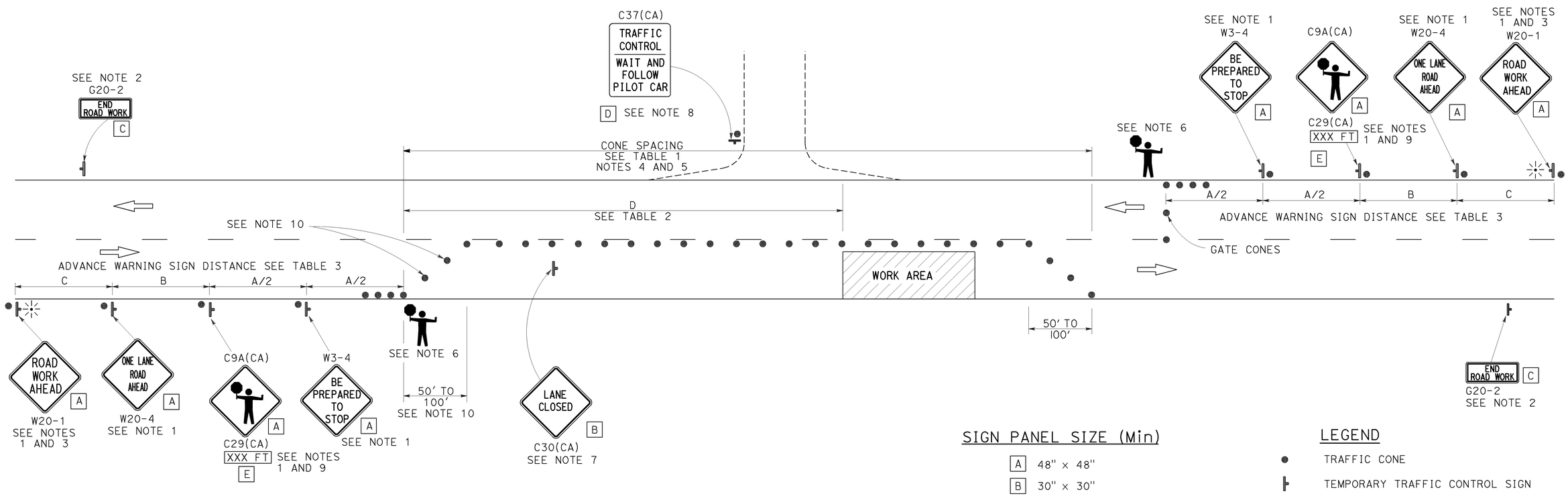
See Revised Standard Plan RSP T9 for tables.

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.

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

2010 REVISED STANDARD PLAN RSP T13

4-2-13

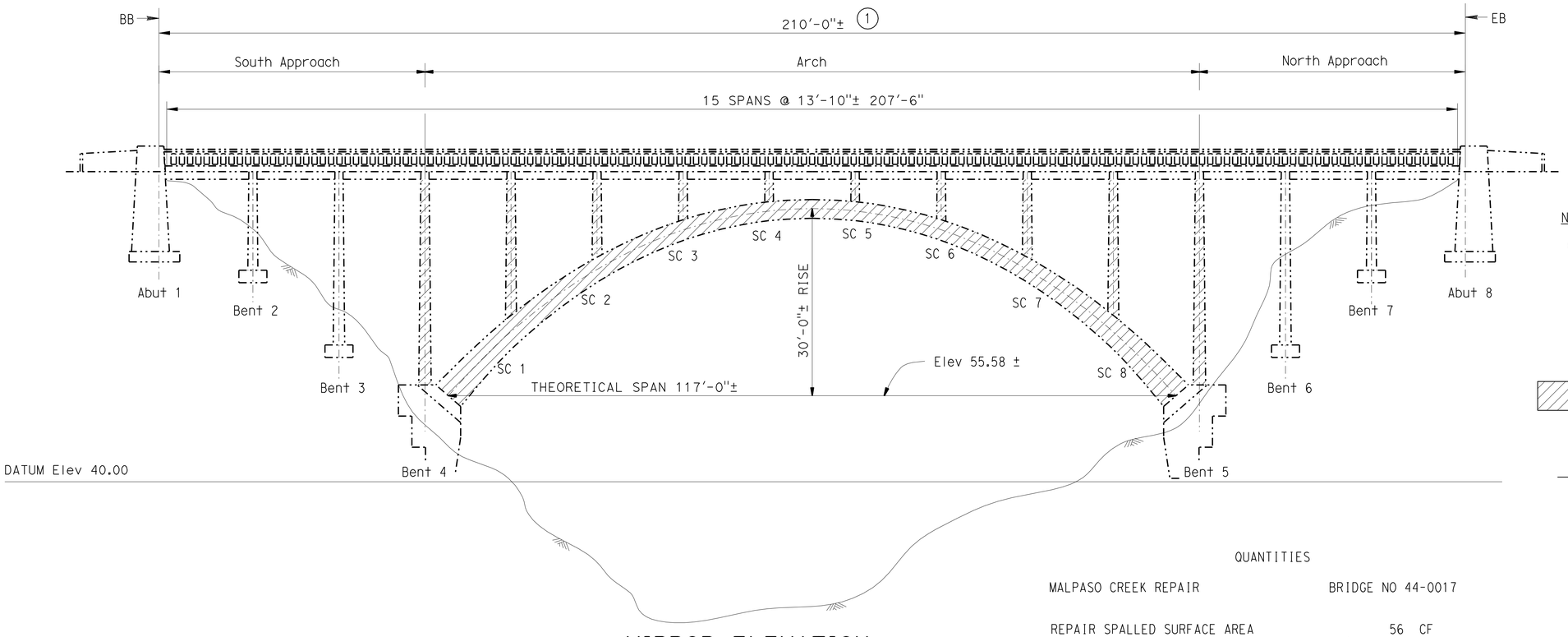
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon	1	67.9	7	12

Tim Campbell 12-04-13
REGISTERED CIVIL ENGINEER DATE

2-18-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER TIM CAMPBELL No. 63268 Exp. 06-30-14 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.



MIRROR ELEVATION

1" = 10'

Note: SC = SPANDREL COLUMN

NOTES: (APPLY TO THIS SHEET ONLY)

1 Indicates limits of repair spalled surface area and place galvanic anodes. See SPALL LOCATION TABLE NO. 1 and SPALL LOCATION TABLE NO. 2 sheets for spall locations. For spall repair details and galvanic anode locations see "CONCRETE SPALL REPAIR DETAILS" on MISCELLANEOUS DETAILS NO. 2 and MISCELLANEOUS DETAILS NO. 3 sheets.

Indicates limits of treat concrete with electrochemical chloride extraction and apply silane waterproofing treatment. (ocean side only)

For additional arch span details, see "PARTIAL ELEVATION (ARCH SPAN)" on "MISCELLANEOUS DETAILS NO. 1" sheet.

QUANTITIES

MALPASO CREEK REPAIR BRIDGE NO 44-0017

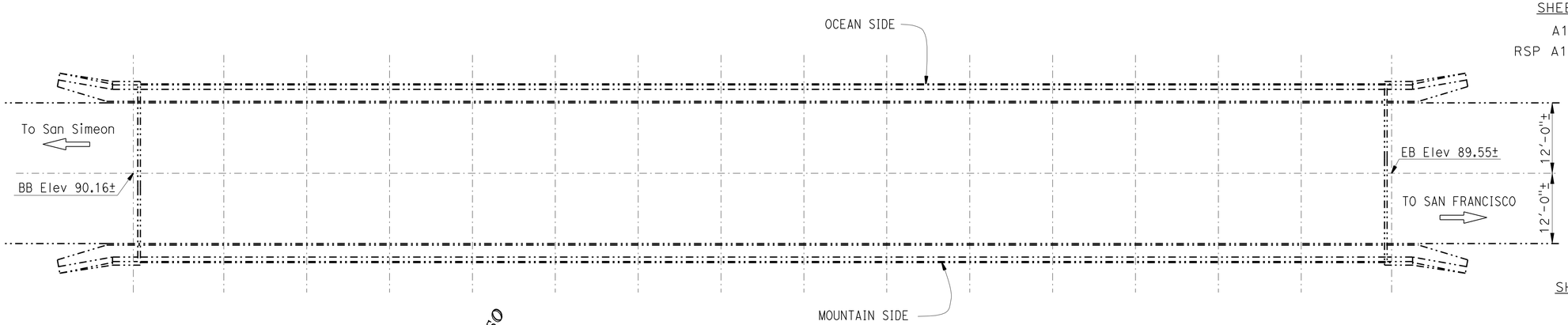
REPAIR SPALLED SURFACE AREA	56	CF
DRILL AND BOND DOWEL (CHEMICAL ADHESIVE)	15	EA
GALVANIC ANODES	204	EA
BAR REINFORCING STEEL (STAINLESS STEEL)	20	LB
SILANE WATERPROOFING TREATMENT	2,716	SQFT
ELECTROCHEMICAL CHLORIDE EXTRACTION	LUMP	SUM

NOTES: (APPLY TO ALL SHEETS)

Indicates existing.

STANDARD PLANS DATED 2010

SHEET NO.	TITLE
A10A	ABBREVIATIONS (SHEET 1 OF 2)
RSP A10B	ABBREVIATIONS (SHEET 2 OF 2)



INDEX TO PLANS

SHEET NO.	TITLE
1	GENERAL PLAN
2	SPALL LOCATION TABLE NO. 1
3	SPALL LOCATION TABLE NO. 2
4	MISCELLANEOUS DETAILS NO. 1
5	MISCELLANEOUS DETAILS NO. 2
6	MISCELLANEOUS DETAILS NO. 3

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

MALPASO CREEK

PLAN

1" = 10'

Matthew A. Lee 12-4-13
DESIGN ENGINEER

	BY	CHECKED
DESIGN	TIMOTHY CAMPBELL	MIKE HASHIMOTO
DETAILS	DAVID KISH	MIKE HASHIMOTO
QUANTITIES	TIMOTHY CAMPBELL	MIKE HASHIMOTO

LOAD FACTOR DESIGN — LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
LAYOUT — BY DAVID KISH — CHECKED MIKE HASHIMOTO
SPECIFICATIONS — BY DAVE KLEIN — PLANS AND SPECS COMPARED DAVE KLEIN

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. 44-0017
POST MILE 67.9

MALPASO CREEK REPAIR
GENERAL PLAN

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3466
PROJECT NUMBER & PHASE: 0512000036
CONTRACT NO.: 05-1A8901

DISREGARD PRINTS BEARING EARLIER REVISION DATES 10-17-13

SHEET 1 OF 6

FILE => 01-1a8901_agp01.dgn

USERNAME => s124428 DATE PLOTTED => 18-FEB-2014 TIME PLOTTED => 12:42

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon	1	67.9	8	12

Tim Campbell 12-04-13
REGISTERED CIVIL ENGINEER DATE

2-18-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER TIM CAMPBELL No. 63268 Exp. 06-30-14 CIVIL STATE OF CALIFORNIA

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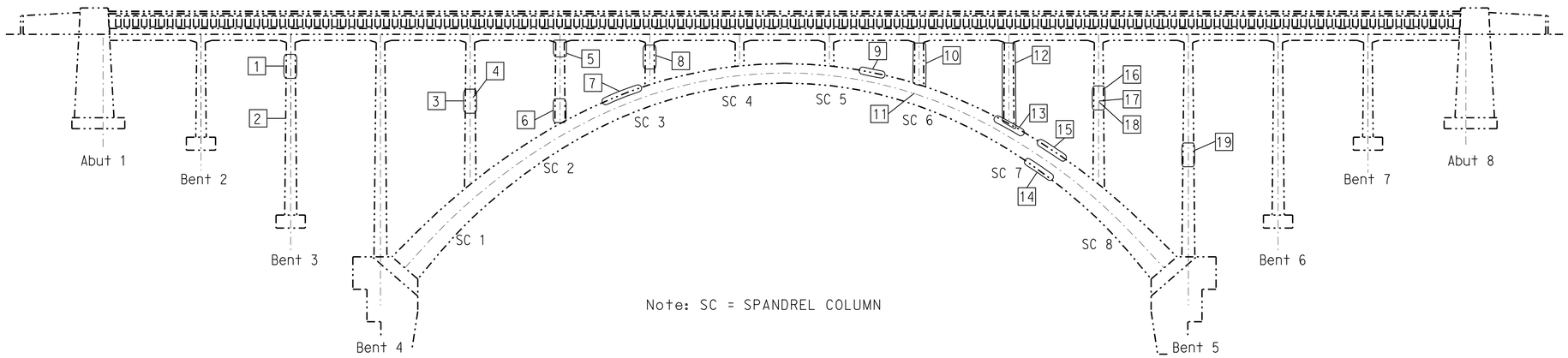


RIGHT SIDE ELEVATION SPALL MAP

1" = 10'

NOTES: (APPLY TO THIS SHEET ONLY)

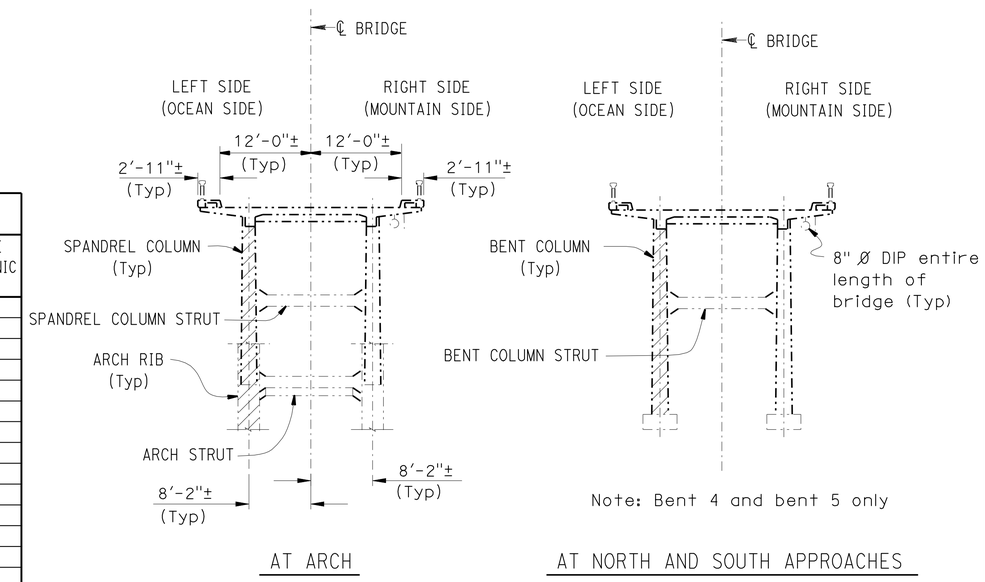
Indicates limits of treat concrete with electrochemical chloride extraction, and apply silane waterproofing treatment. (ocean side only)

For spall repair details. See "CONCRETE SPALL REPAIR DETAILS" on "MISCELLANEOUS DETAILS NO. 2" and "MISCELLANEOUS DETAILS NO. 3" sheets.

REPAIR SPALLED SURFACE AREA TABLE (RIGHT SIDE OF BRIDGE)

LOCATION	DESCRIPTION	APPROXIMATE LENGTH (feet)	APPROXIMATE WIDTH (feet)	APPROXIMATE DEPTH (inches)	APPROXIMATE VOLUME (cubic feet)	APPROXIMATE NO. OF GALVANIC ANODES
1	Bent 3 column, interior face, 2' below soffit	5.00	1.00	3.00	1.3	5
2	Bent 3 Column Strut, top face, at bent column intersection	1.00	1.00	3.00	0.3	1
3	Spandrel Column 1, downstation interior corner, at spandrel column intersection	2.50	0.67	3.00	0.4	2
4	Spandrel Column 1 Strut, top downstation corner, at spandrel column intersection	2.50	1.00	3.00	0.6	3
5	Spandrel Column 2, interior face, near the soffit	2.00	1.00	3.00	0.5	2
6	Spandrel Column 2, interior face, at arch rib intersection	5.00	1.00	3.00	1.3	5
7	Arch Rib, top interior corner, at Spandrel Column 3	10.00	2.00	4.50	7.5	20
8	Spandrel Column 3, downstation face, at mid spandrel column height	2.00	2.00	3.00	1.0	4
9	Arch Rib, top interior corner, between Spandrel Columns 5 and 6	4.00	2.00	4.50	3.0	8
10	Spandrel Column 6, interior face, full height	6.00	1.00	3.00	1.5	6
11	Arch Strut, upstation face, at right arch rib intersection	1.50	0.50	3.00	0.2	1
12	Spandrel Column 7, interior face, full height	12.00	1.50	3.00	4.5	18
13	Arch Rib, top interior corner, at Spandrel Column 7	5.00	1.50	4.50	2.8	8
14	Arch Rib, bottom face, between Spandrel Columns 7 and 8	5.00	2.75	3.00	3.4	14
15	Arch Rib, top interior corner, between Spandrel Columns 7 and 8	5.00	2.00	4.50	3.8	10
16	Spandrel Column 8, downstation interior corner, at spandrel column strut	2.50	1.00	3.00	0.6	3
17	Spandrel Column 8 Strut, top face, at spandrel column intersection	1.50	1.00	3.00	0.4	2
18	Spandrel Column 8 strut, top upstation corner, between right and left spandrel columns	10.00	0.50	3.00	1.3	5
19	Bent 5 Column, upstation interior corner, at column strut	5.00	1.00	3.00	1.3	5

Total Volume = 35.5



TYPICAL SECTION

1" = 10'

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

DESIGN	BY TIMOTHY CAMPBELL	CHECKED MIKE HASHIMOTO	
DETAILS	BY DAVID KISH	CHECKED MIKE HASHIMOTO	
QUANTITIES	BY TIMOTHY CAMPBELL	CHECKED MIKE HASHIMOTO	

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. 44-0017
POST MILE 67.9

MALPASO CREEK REPAIR
SPALL LOCATION TABLE NO. 1

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3466
PROJECT NUMBER & PHASE: 0512000036
CONTRACT NO.: 05-1A8901

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES 10-17-13

SHEET 2 OF 6

FILE => 01-1a8901_det01.dgn

USERNAME => s124428 DATE PLOTTED => 18-FEB-2014 TIME PLOTTED => 12:42

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon	1	67.9	9	12

Tim Campbell 12-04-13
REGISTERED CIVIL ENGINEER DATE

2-18-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER TIM CAMPBELL No. 63268 Exp. 06-30-14 CIVIL STATE OF CALIFORNIA

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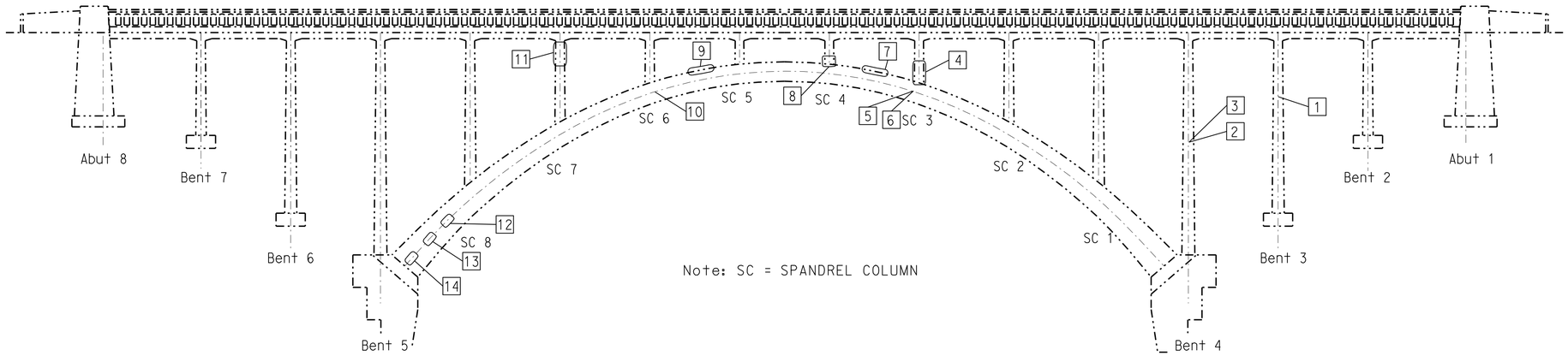


LEFT SIDE ELEVATION SPALL MAP

1" = 10'

NOTES: (APPLY TO THIS SHEET ONLY)

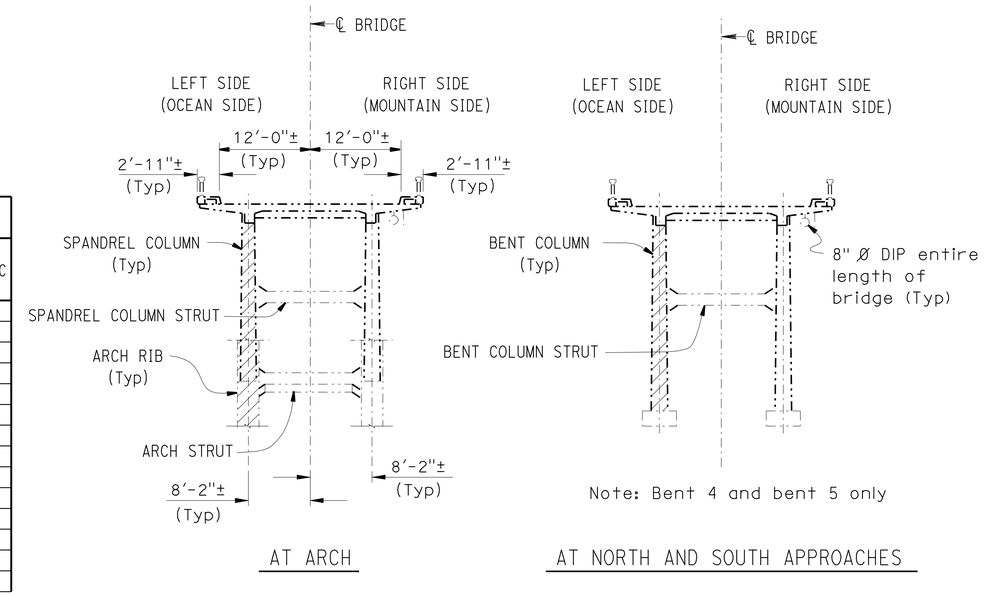
Indicates limits of treat concrete with electrochemical chloride extraction, and apply silane waterproofing treatment. (ocean side only)

For spall repair details. See "CONCRETE SPALL REPAIR DETAILS" on "MISCELLANEOUS DETAILS NO. 2" and "MISCELLANEOUS DETAILS NO. 3" sheets.

REPAIR SPALLED SURFACE AREA TABLE (LEFT SIDE OF BRIDGE)

LOCATION	DESCRIPTION	APPROXIMATE LENGTH (feet)	APPROXIMATE WIDTH (feet)	APPROXIMATE DEPTH (inches)	APPROXIMATE VOLUME (cubic feet)	APPROXIMATE NO. OF GALVANIC ANODES
1	Bent 3 Column Strut, top upstation corner, at bent column intersection	3.00	1.00	3.00	0.8	3
2	Bent 4 Column Strut, top upstation corner, at bent column intersection	2.50	1.00	3.00	0.6	3
3	Bent 4 Column Strut, top upstation corner, 4' from bent column intersection	3.00	1.00	3.00	0.8	3
4	Spandrel Column 3, exterior face, at arch rib intersection	3.00	1.00	3.00	0.8	3
5	Arch Strut, bottom upstation corner, between right and left spandrel columns	10.00	1.50	3.00	3.8	15
6	Arch Strut, top face, between right and left spandrel columns	10.00	2.75	3.00	6.9	28
7	Arch Rib, top face, between Spandrel Columns 3 and 4	2.50	2.00	3.00	1.3	5
8	Spandrel Column 4, exterior face, at arch rib intersection	1.50	1.00	3.00	0.4	2
9	Arch Rib, top face, between Spandrel Columns 5 and 6	3.00	1.50	3.00	1.1	5
10	Arch Strut, top downstation face, midway between right and left arch ribs	7.00	1.50	3.00	2.6	11
11	Spandrel Column 7, downstation face, near the soffit	1.00	1.00	3.00	0.3	1
12	Arch Rib, exterior face, between Spandrel Column 8 and Bent 5	1.00	1.00	3.50	0.3	1
13	Arch Rib, exterior face, between Spandrel Column 8 and Bent 5	1.00	1.00	3.50	0.3	1
14	Arch Rib, exterior face, between Spandrel Column 8 and Bent 5	1.00	1.00	3.50	0.3	1

Total Volume = 20.0



TYPICAL SECTION

1" = 10'

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

	BY	CHECKED
DESIGN	TIMOTHY CAMPBELL	MIKE HASHIMOTO
DETAILS	DAVID KISH	MIKE HASHIMOTO
QUANTITIES	TIMOTHY CAMPBELL	MIKE HASHIMOTO

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. 44-0017
POST MILE 67.9

MALPASO CREEK REPAIR
SPALL LOCATION TABLE NO. 2

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

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3466
PROJECT NUMBER & PHASE: 0512000036
CONTRACT NO.: 05-1A8901

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 10-17-13

SHEET 3 OF 6

FILE => 01-1a8901_det02.dgn

USERNAME => s124428 DATE PLOTTED => 18-FEB-2014 TIME PLOTTED => 12:42

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon	1	67.9	10	12

Tim Campbell 12-04-13
REGISTERED CIVIL ENGINEER DATE

2-18-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER TIM CAMPBELL No. 63268 Exp. 06-30-14 CIVIL STATE OF CALIFORNIA

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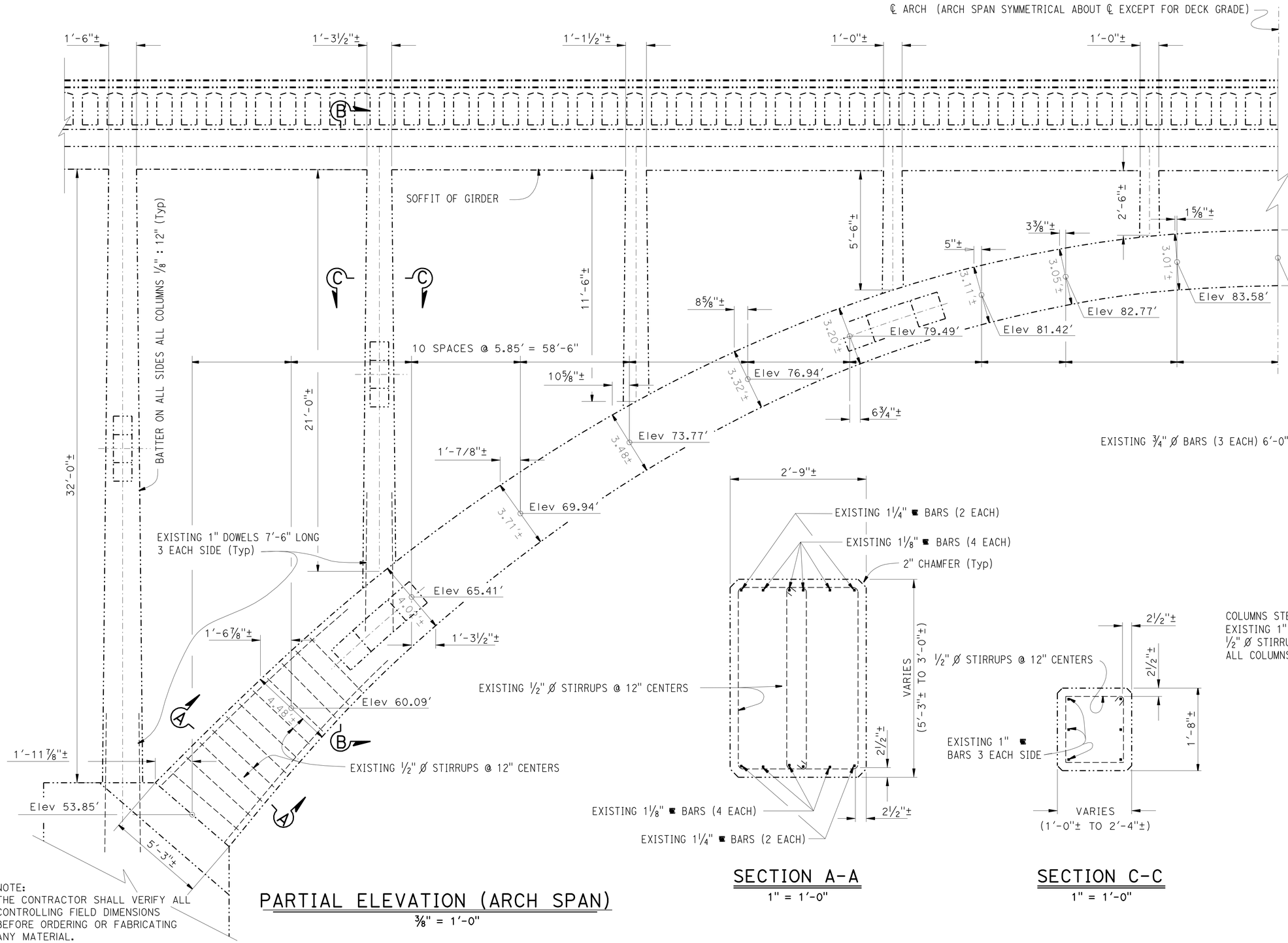

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

PARTIAL ELEVATION (ARCH SPAN)
⅜" = 1'-0"

SECTION A-A
1" = 1'-0"

SECTION C-C
1" = 1'-0"

SECTION B-B
½" = 1'-0"

	BY	CHECKED
DESIGN	TIMOTHY CAMPBELL	MIKE HASHIMOTO
DETAILS	DAVID KISH	MIKE HASHIMOTO
QUANTITIES	TIMOTHY CAMPBELL	MIKE HASHIMOTO

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. 44-0017
POST MILE 67.9

MALPASO CREEK REPAIR
MISCELLANEOUS 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: 3466
PROJECT NUMBER & PHASE: 0512000036
CONTRACT NO.: 05-1A8901

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES 10-17-13

SHEET 4 OF 6

FILE => 01-1a8901_det03.dgn

USERNAME => s124428 DATE PLOTTED => 18-FEB-2014 TIME PLOTTED => 12:42

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon	1	67.9	11	12

Tim Campbell 12-04-13
REGISTERED CIVIL ENGINEER DATE

2-18-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER TIM CAMPBELL No. 63268 Exp. 06-30-14 CIVIL STATE OF CALIFORNIA

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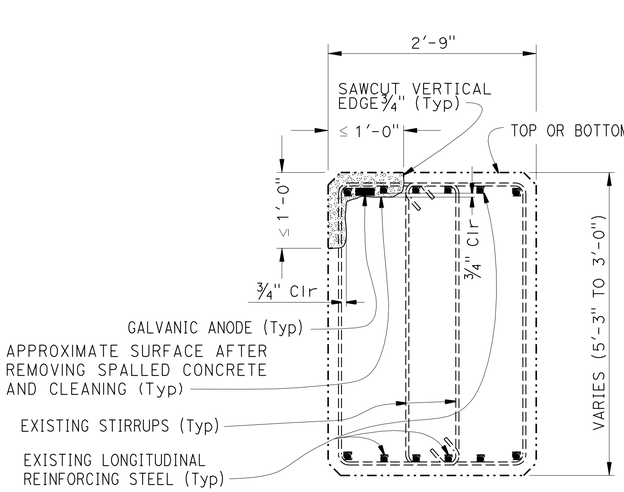
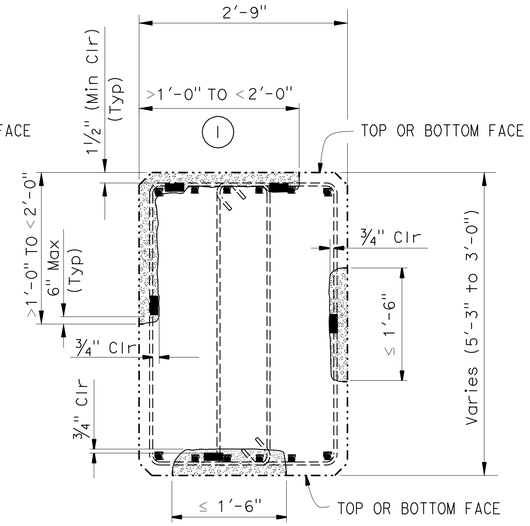
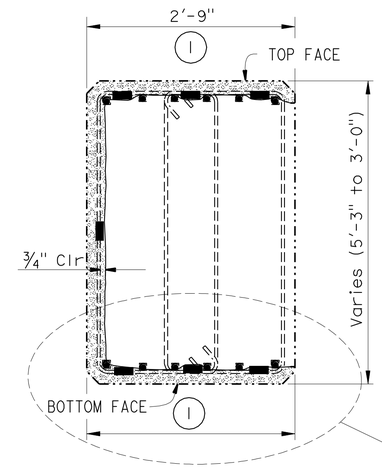
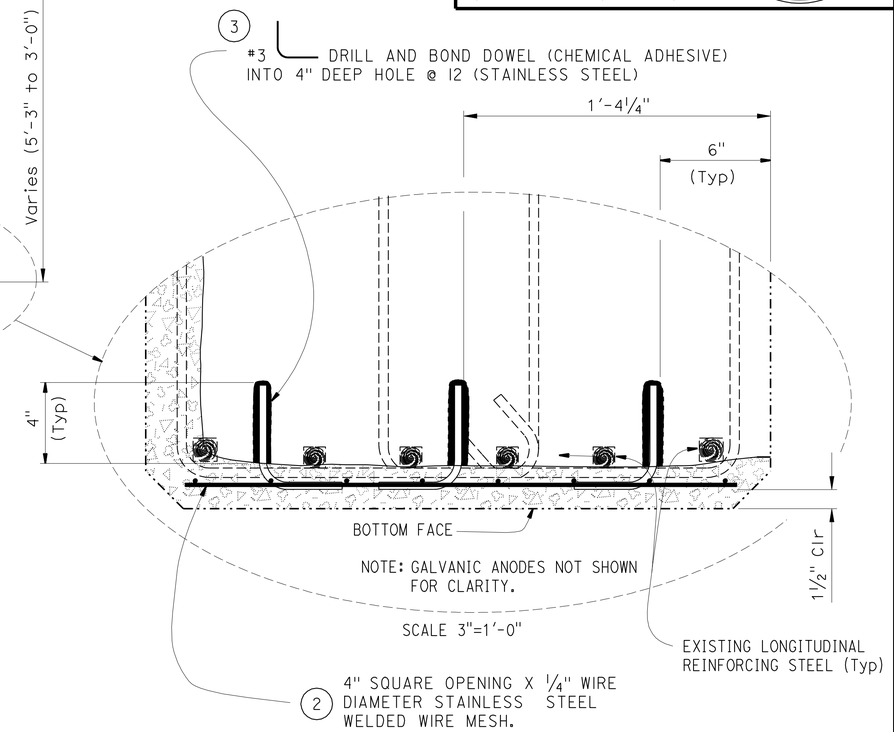
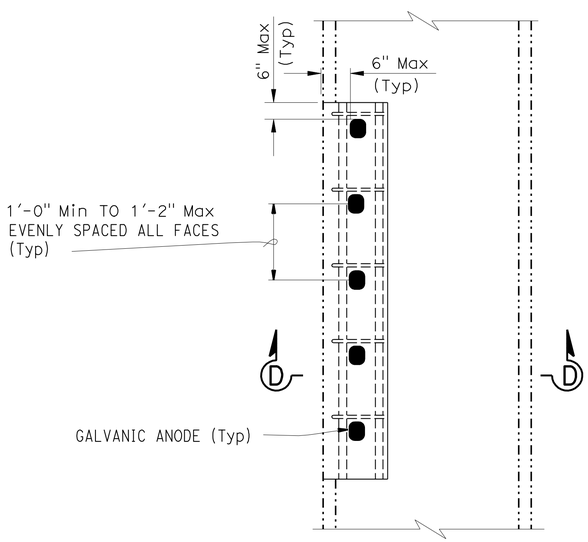






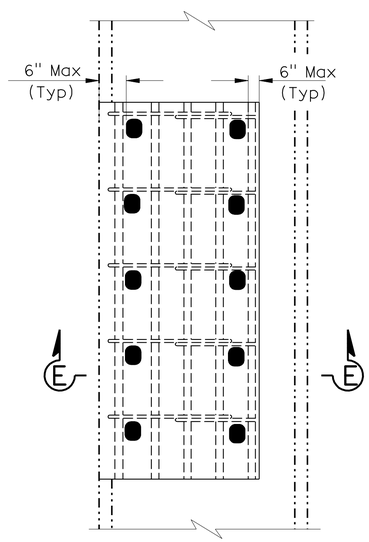


SECTION D-D



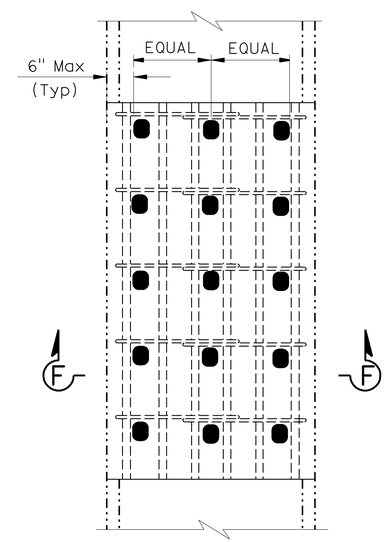
CORNER REPAIR

SECTION E-E



PARTIAL FACE REPAIR

SECTION F-F



FULL FACE REPAIR

CONCRETE SPALL REPAIR DETAILS
(ARCH RIB)

NOTES: (APPLY TO THIS SHEET ONLY)

- Indicates limits of repair spalled surface area. Prior to filling spalled surface area place galvanic anodes.
- All patching material shall match color and texture of original structure
- All galvanic anodes shall be installed with embedding mortar.
- (1) Indicates limits of remove spalled concrete to a depth not greator than the top of the existing longitudinal reinforcing steel.
- (2) Provide a minimum of two electrical connections between the welded wire mesh and the existing reinforcing steel per repair location.
- (3) Tie each dowel to the welded wire mesh with stainless steel wire.

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

SCALE 1"=1'-0" EXCEPT WHERE NOTED

	BY	CHECKED
DESIGN	TIMOTHY CAMPBELL	MIKE HASHIMOTO
DETAILS	DAVID KISH	MIKE HASHIMOTO
QUANTITIES	TIMOTHY CAMPBELL	MIKE HASHIMOTO

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. 44-0017
POST MILE 67.9

MALPASO CREEK REPAIR
MISCELLANEOUS 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: 3466
PROJECT NUMBER & PHASE: 0512000036
CONTRACT NO.: 05-1A8901

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES 10-17-13

SHEET 5 OF 6

FILE => 01-1a8901_det04.dgn

USERNAME => s124428 DATE PLOTTED => 18-FEB-2014 TIME PLOTTED => 12:42

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon	1	67.9	12	12

Tim Campbell 12-04-13
REGISTERED CIVIL ENGINEER DATE

2-18-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
TIM CAMPBELL
No. 63268
Exp. 06-30-14
CIVIL
STATE OF CALIFORNIA

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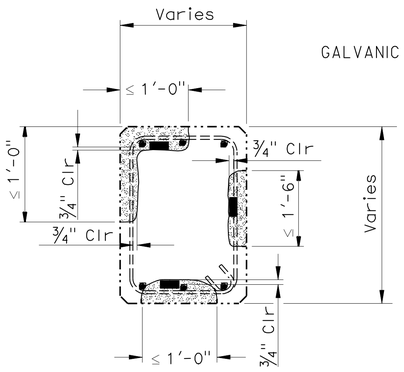
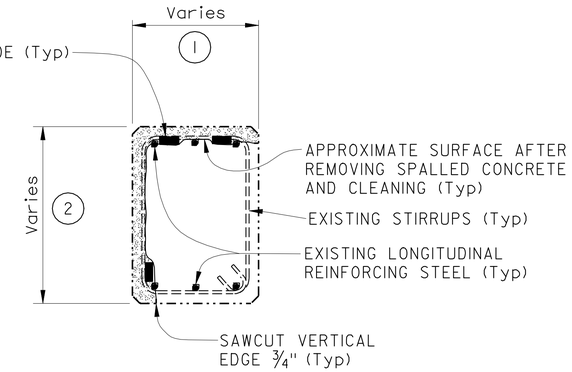
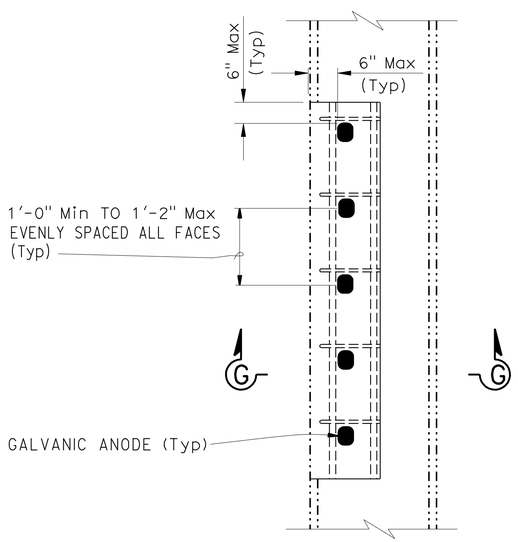


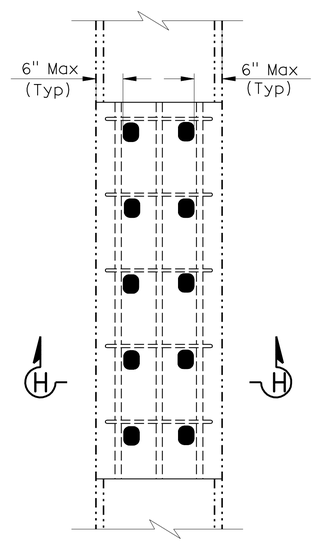
SECTION G-G



SECTION H-H



CORNER REPAIR



FULL FACE REPAIR

NOTES: (APPLY TO THIS SHEET ONLY)

Indicates limits of repair spalled surface area. Prior to filling spalled surface area place galvanic anodes.

- All patching material shall match color and texture of original structure

- All galvanic anodes shall be installed with embedding mortar.

(1) Indicates limits of remove spalled concrete to a depth not greator than the top of the existing longitudinal reinforcing steel.

(2) Indicates limits of remove spalled concrete to a depth not greator than the bottom of the existing stirrups.

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

CONCRETE SPALL REPAIR DETAILS

(BENT COLUMN, BENT COLUMN STRUT, SPANDREL COLUMN, SPANDREL COLUMN STRUT AND ARCH RIB STRUT)

SCALE 1"=1'-0"

	BY	CHECKED
DESIGN	TIMOTHY CAMPBELL	MIKE HASHIMOTO
DETAILS	DAVID KISH	MIKE HASHIMOTO
QUANTITIES	TIMOTHY CAMPBELL	MIKE HASHIMOTO

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. 44-0017
POST MILE 67.9

MALPASO CREEK REPAIR
MISCELLANEOUS 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: 3466
PROJECT NUMBER & PHASE: 0512000036
CONTRACT NO.: 05-1A8901

DISREGARD PRINTS BEARING EARLIER REVISION DATES → 10-17-13

REVISION DATES | SHEET 6 | OF 6

FILE => 01-1a8901_det05.dgn

USERNAME => s124428 DATE PLOTTED => 18-FEB-2014 TIME PLOTTED => 12:43