

INDEX OF PLANS

SHEET NO.	DESCRIPTION
1	TITLE SHEET AND LOCATION MAP
2	TYPICAL CROSS SECTION
3 - 9	CONSTRUCTION DETAILS
10	CONSTRUCTION AREA SIGNS
11	PAVEMENT DELINEATION QUANTITIES
12	SUMMARY OF QUANTITIES
13	INDUCTIVE LOOP DETECTORS (REPLACE)
14 - 23	REVISED AND NEW STANDARD PLANS

STATE OF CALIFORNIA  
**DEPARTMENT OF TRANSPORTATION**  
**PROJECT PLANS FOR CONSTRUCTION ON**  
**STATE HIGHWAY**

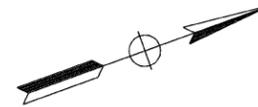
**IN NAPA COUNTY**  
**IN CALISTOGA**  
**FROM JUNCTION ROUTE 128**  
**TO 0.2 MILE NORTH OF SILVERADO TRAIL**

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

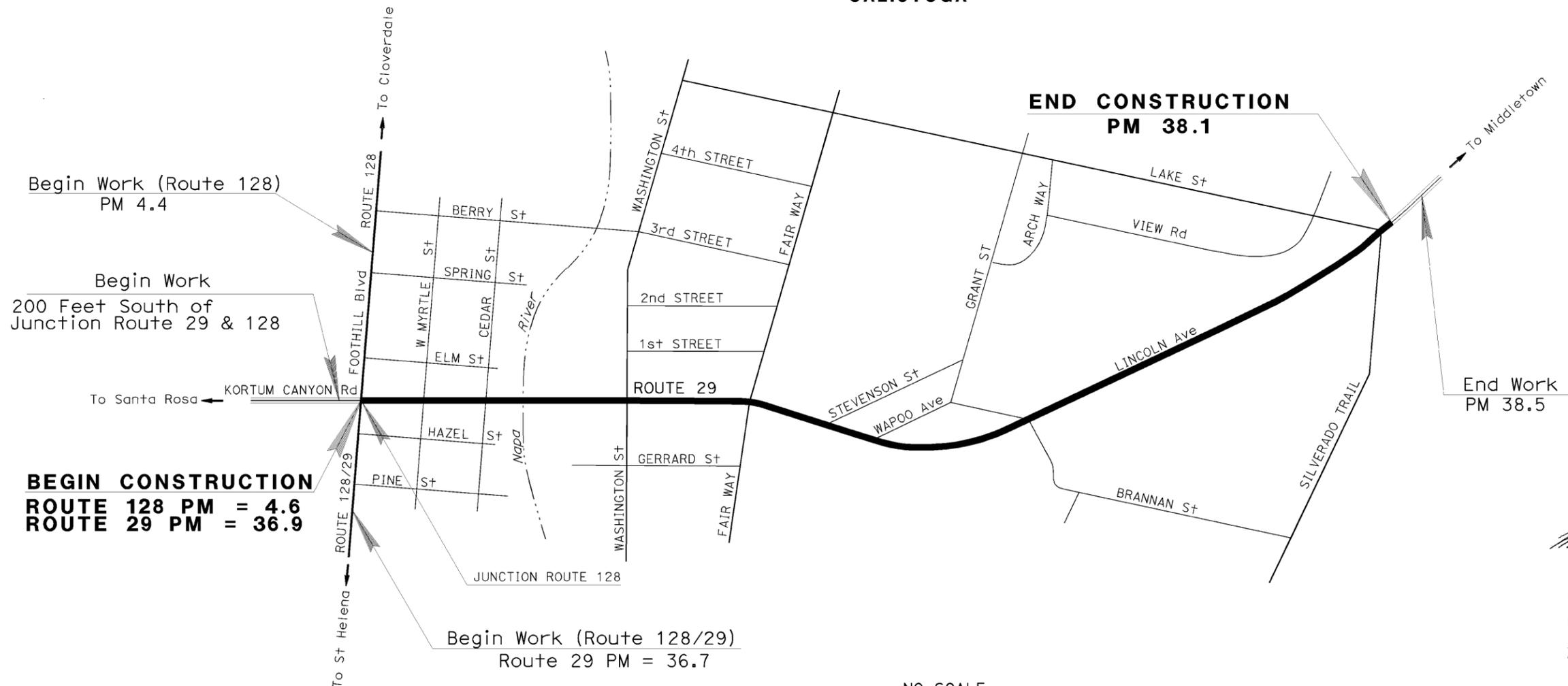
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Napa	29	36.9/38.1	1	23

**Caltrans**

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



**CALISTOGA**



NO SCALE

PROJECT MANAGER  
**KELLY HIRSCHBERG**

DESIGN ENGINEER  
**STEWART LEE**

*Marcus Chan* 9-23-11  
 PROJECT ENGINEER DATE  
 REGISTERED CIVIL ENGINEER  
**September 26, 2011**  
 PLANS APPROVAL DATE

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

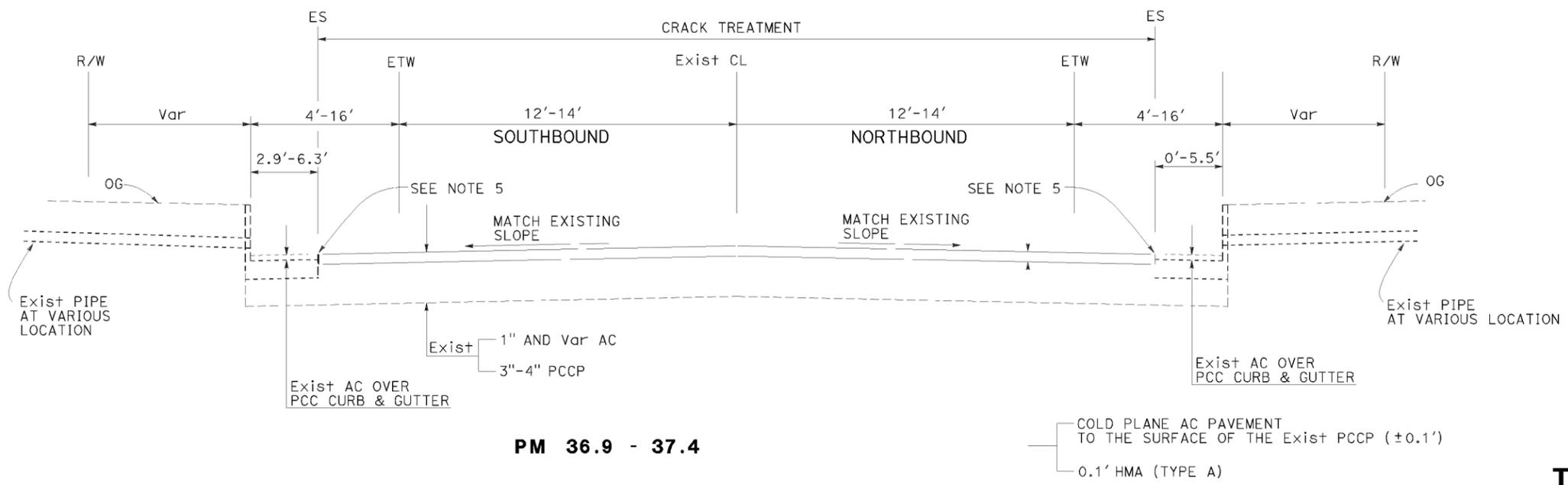
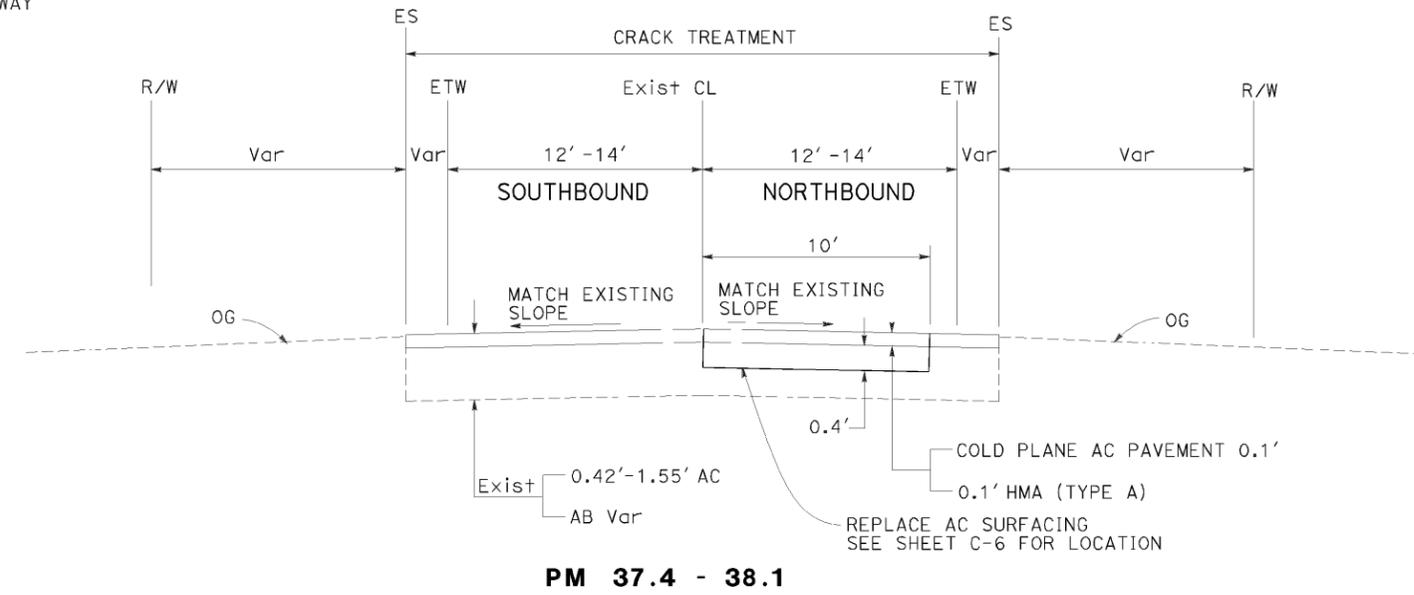
CONTRACT No.	<b>04-0G5304</b>
PROJECT ID	<b>0400000339</b>

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Stantec**  
 DESIGN  
 FUNCTIONAL SUPERVISOR: STEWART LEE  
 CALCULATED-DESIGNED BY: NAZEER BABACARKHIAL  
 CHECKED BY: NAZEER BABACARKHIAL  
 REVISED BY: MARCUS CHAN  
 DATE REVISED: -

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Nap	29	36.9/38.1	2	23
			9-23-11	REGISTERED CIVIL ENGINEER DATE	
REGISTERED CIVIL ENGINEER <b>Marcus Chan</b> No. 30284 Exp. 3-31-12 CIVIL STATE OF CALIFORNIA					
9-26-2011			PLANS APPROVAL DATE		
<small>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.</small>					

**ABBREVIATION:**  
 PCCP PORTLAND CEMENT CONCRETE PAVEMENT

- NOTES:**
1. DIMENSION OF THE STRUCTURAL SECTIONS ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
  2. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.
  3. EXIST UTILITY FACILITIES ARE NOT SHOWN.
  4. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
  5. CONFORM HMA TO EDGE OF PCC GUTTER, SEE SHEET C-7.



**TYPICAL CROSS SECTIONS**  
 NO SCALE

**X-1**

DATE PLOTTED => 30-SEP-2011 TIME PLOTTED => 10:22

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Stantec**  
 DESIGN

FUNCTIONAL SUPERVISOR  
 STEWART LEE

CHECKED BY  
 NAZEER BABACARKHIAL

DESIGNED BY  
 MARCUS CHAN

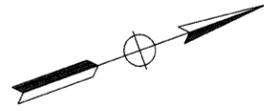
REVISED BY  
 DATE REVISED

**NOTES:**

1. THE ESA BOUNDARIES SHOWN ARE APPROXIMATE; THE DEPARTMENT MARKS THE EXACT BOUNDARIES ON THE GROUND.
2. FOR CONFORM DETAILS, SEE SHEET C-7.
3. ACCESS TO ALL DRIVEWAYS MUST BE PROVIDED AT ALL TIME.
4. FOR ACCURATE RIGHT OF WAY AND ACCESS DATA CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

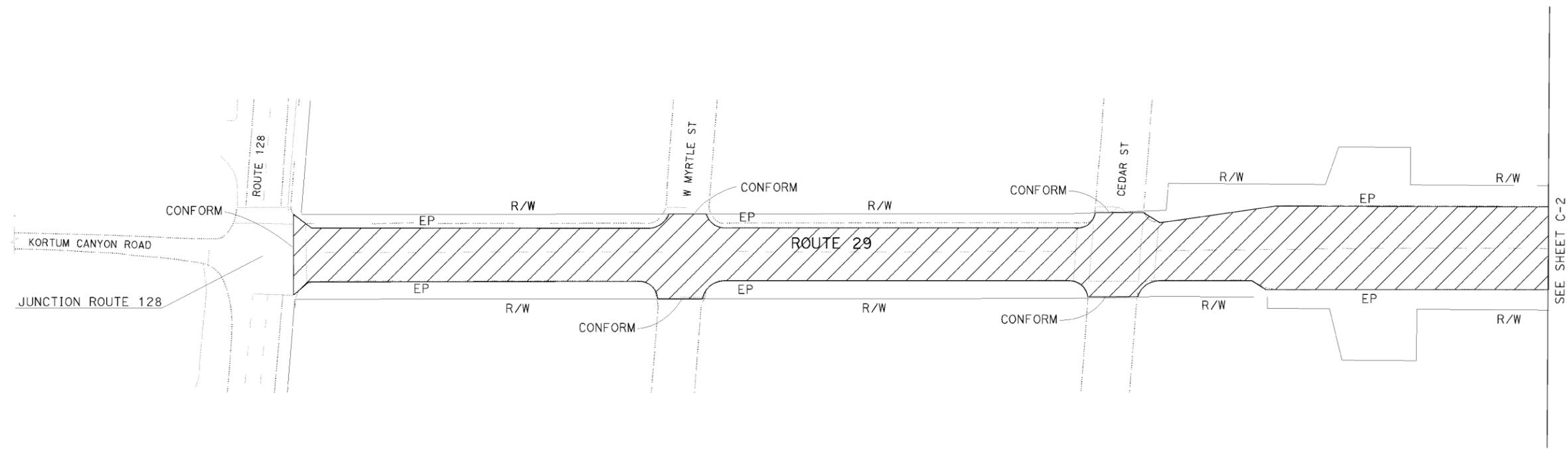
**LEGEND:**

-  ENVIRONMENTALLY SENSITIVE AREA (ESA)/ ARCHAEOLOGICAL MONITORING AREA (AMA)
-  COLD PLANE AC PAVEMENT (SEE SHEET X-1 FOR DEPTH INFORMATION) 0.1' HMA (TYPE A)
-  REPLACE AC SURFACING



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Nap	29	36.9/38.1	3	23

REGISTERED CIVIL ENGINEER DATE 9-23-11  
 Marcu Chan  
 No. 30284  
 Exp. 3-31-12  
 PLANS APPROVAL DATE 9-26-2011  
 REGISTERED PROFESSIONAL ENGINEER  
 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.



SEE SHEET C-2

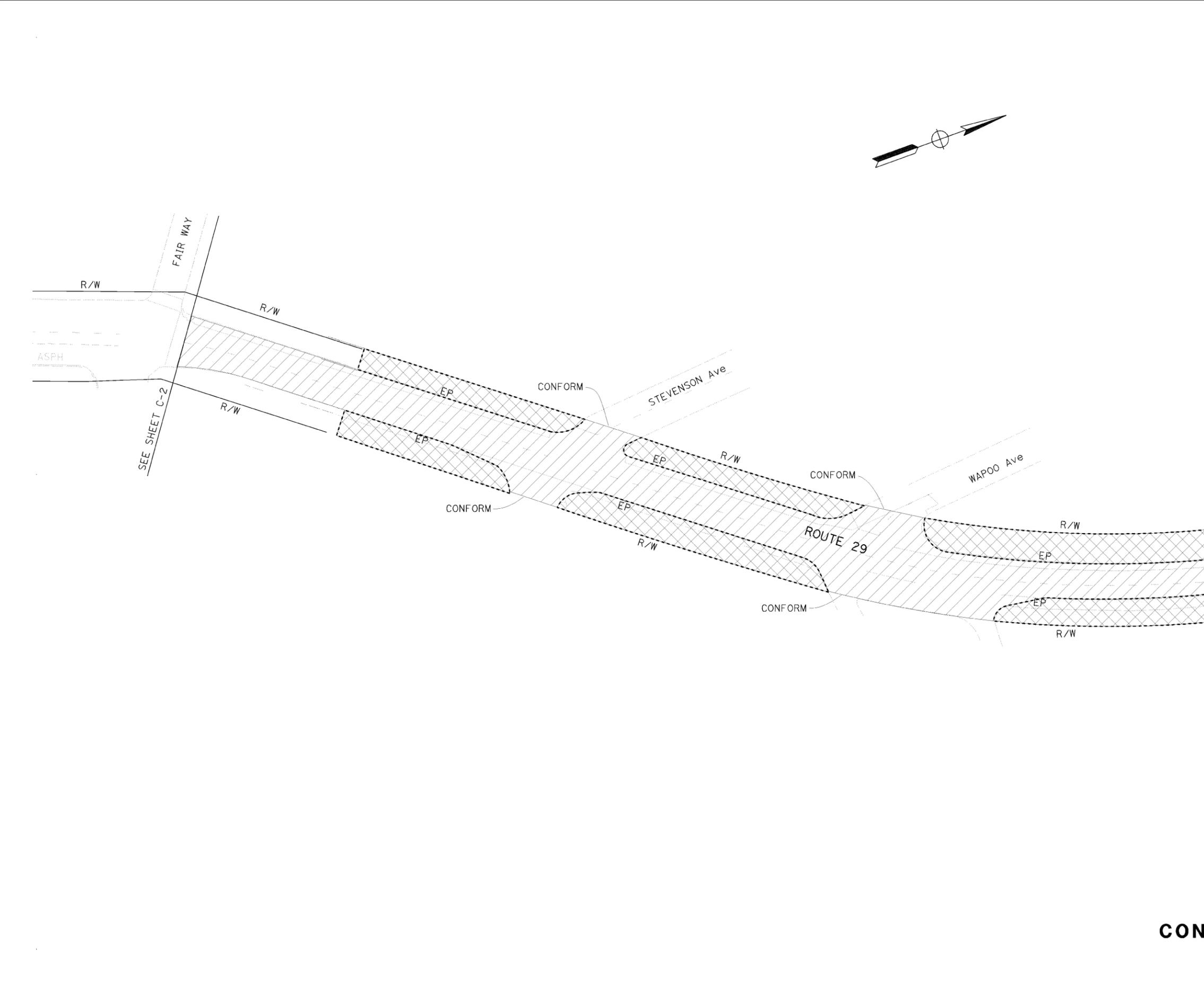
**CONSTRUCTION DETAILS**  
 NO SCALE

**C-1**

DATE PLOTTED => 30-SEP-2011 TIME PLOTTED => 10:23



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Stantec**  
**DESIGN**



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Nap	29	36.9/38.1	5	23

*Marcus Chan* 9-23-11  
 REGISTERED CIVIL ENGINEER DATE  
 9-26-2011  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
**Marcus Chan**  
 No. 30284  
 Exp. 3-31-12  
 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.

REVISIONS:  
 1. BY: NAZEER BABACARKHIAL  
 2. BY: MARCUS CHAN  
 3. BY: STEWART LEE  
 4. BY: NAZEER BABACARKHIAL  
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 99. BY: NAZEER BABACARKHIAL  
 100. BY: NAZEER BABACARKHIAL

**CONSTRUCTION DETAILS**  
 NO SCALE

**C-3**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 DESIGN

FUNCTIONAL SUPERVISOR  
 STEWART LEE

CALCULATED-DESIGNED BY  
 CHECKED BY  
 MARCUS CHAN  
 NAZEER BABACARKHIAL

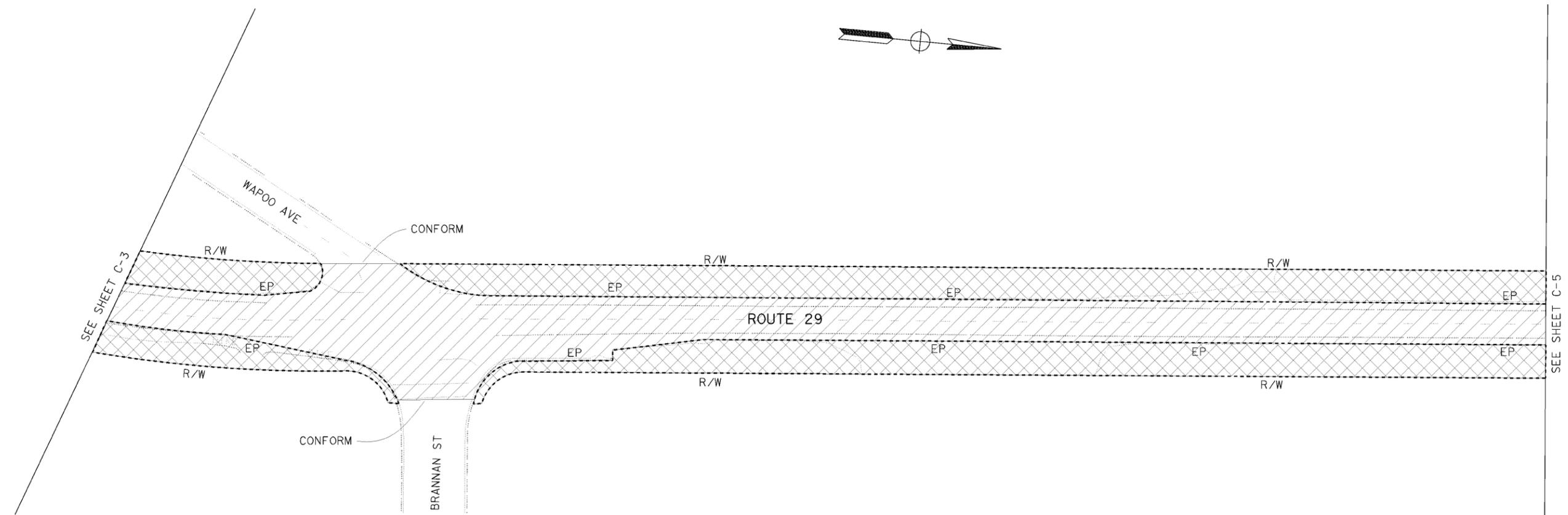
REVISED BY  
 DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Nap	29	36.9/38.1	6	23

*Marcus Chan* 9-23-11  
 REGISTERED CIVIL ENGINEER DATE  
 9-26-2011  
 PLANS APPROVAL DATE

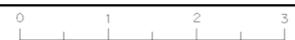
REGISTERED PROFESSIONAL ENGINEER  
 Marcus Chan  
 No. 30284  
 Exp. 3-31-12  
 CIVIL  
 STATE OF CALIFORNIA

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.



**CONSTRUCTION DETAILS**  
 NO SCALE

**C-4**

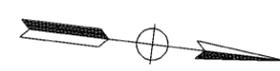
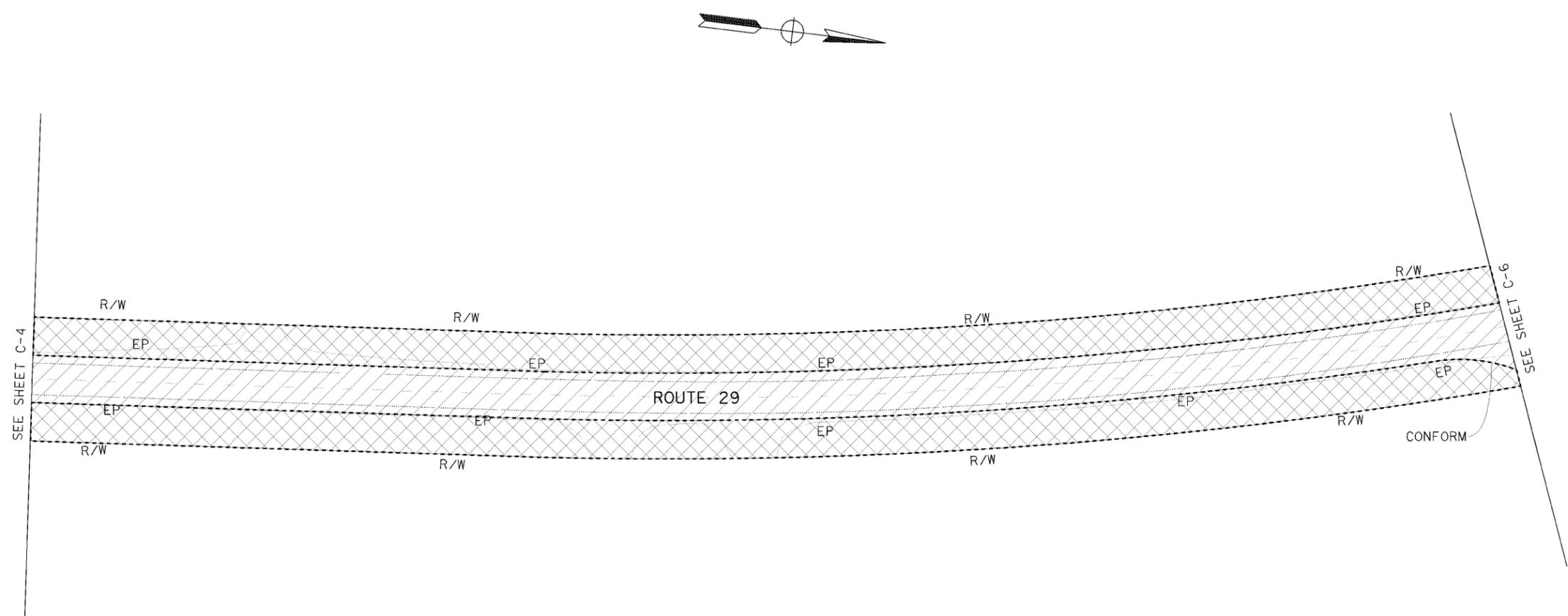


FUNCTIONAL SUPERVISOR	CHECKED BY	DESIGNED BY	REVISIONS
STEWART LEE	NAZEER BABACARKHIAL	MARCUS CHAN	
			REVISED BY
			DATE
			REVISED
			DATE
			REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Nap	29	36.9/38.1	7	23

*Marcus Chan* 9-23-11  
 REGISTERED CIVIL ENGINEER DATE  
 9-26-2011  
 PLANS APPROVAL DATE

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**CONSTRUCTION DETAILS**  
 NO SCALE

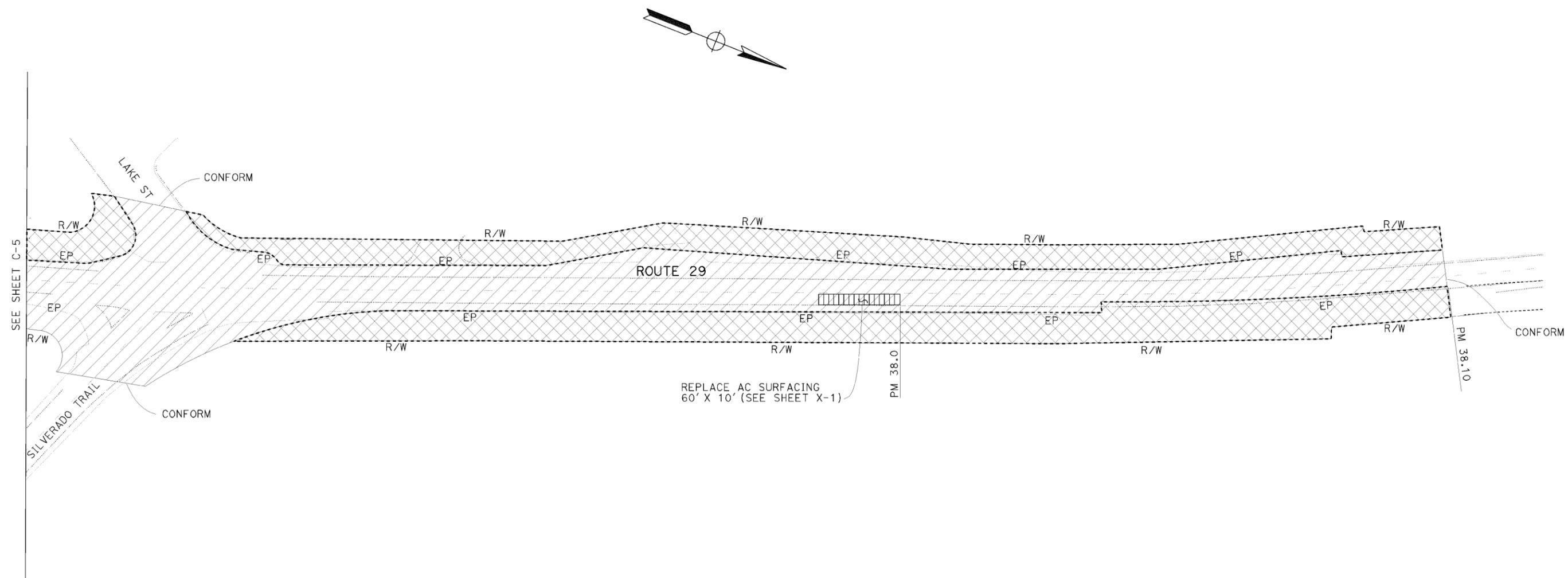
**C-5**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Nap	29	36.9/38.1	8	23

*Marcus Chan* 9-23-11  
 REGISTERED CIVIL ENGINEER DATE  
 9-26-2011  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 No. 30284  
 Exp. 3-31-12  
 CIVIL  
 STATE OF CALIFORNIA

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**CONSTRUCTION DETAILS**  
 NO SCALE

**C-6**

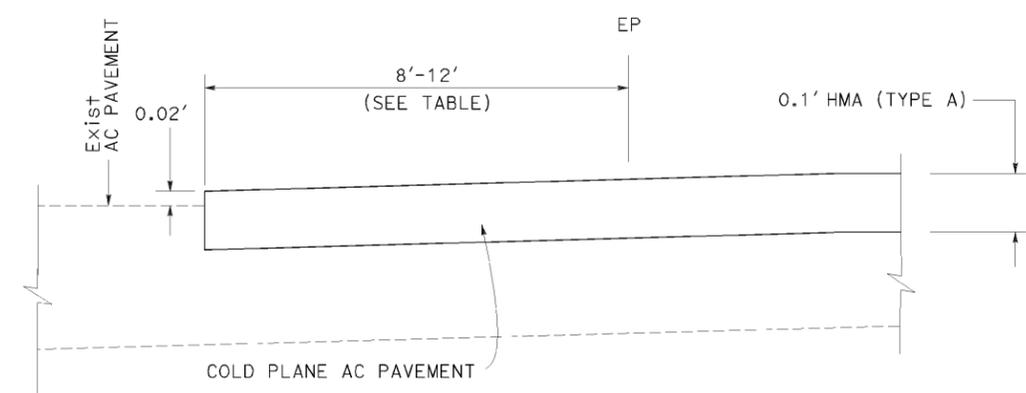
DATE PLOTTED => 30-SEP-2011 TIME PLOTTED => 10:27

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Nap	29	36.9/38.1	9	23

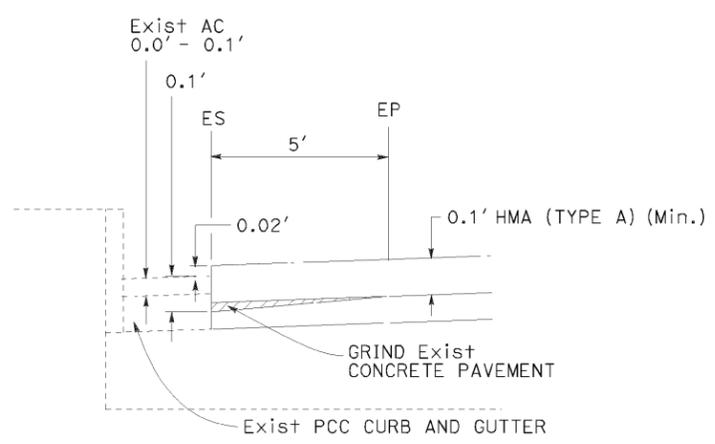
9-23-11  
 REGISTERED CIVIL ENGINEER DATE  
 9-26-2011  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 No. 30284  
 Exp. 3-31-12  
 CIVIL  
 STATE OF CALIFORNIA

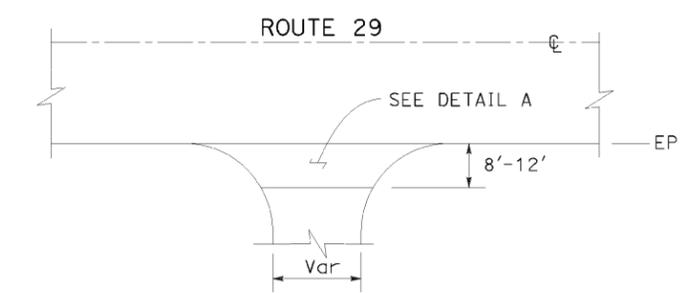
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



**DETAIL A**  
PAVING CONFORM AT BEGIN, END AND AT INTERSECTIONS



**PAVING CONFORM AT CURB AND GUTTER**

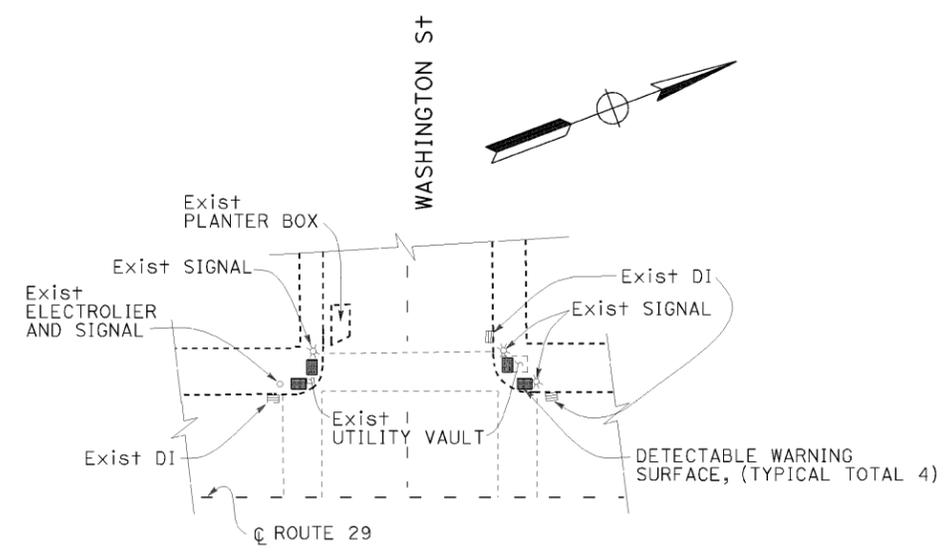


**PAVING CONFORM AT INTERSECTION**

**PAVING CONFORM LIMITS AT INTERSECTION (N)**

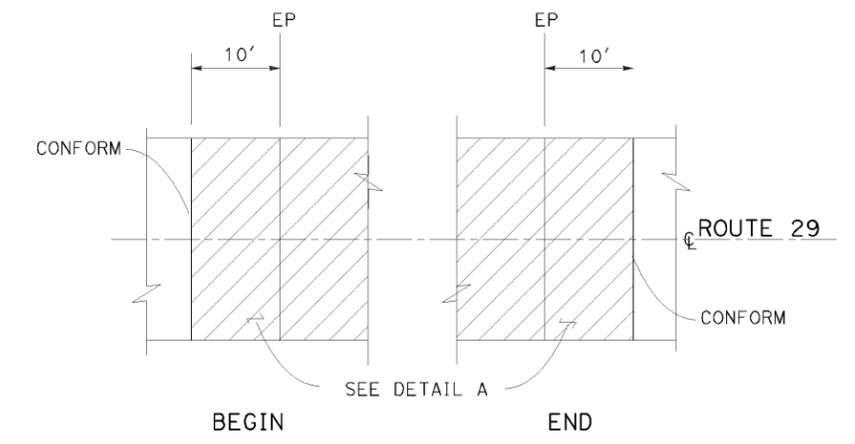
PM	LOCATION	DIRECTION	DISTANCE * FROM ES
	INTERSECTION OF NAPA 29 AND		
36.90	NAPA 128	NB	10
		SB	10
36.96	MYRTLE STREET	NB	12
		SB	8
37.01	CEDAR STREET	NB	11
		SB	10
37.26	FAIR WAY	NB	10
		SB	8
37.34	STEVENSON STREET	NB	10
		SB	8
37.39	WAPOO AVENUE	NB	10
		SB	10
37.53	BRANNAN STREET WAPOO AVENUE	NB	10
		SB	10
37.91	SILVERADO TRAIL	NB	10
		SB	10
38.10		NB	10
		SB	10

(N) FOR INFORMATION ONLY  
 (\* LENGTH OF CONFORM FOR DRIVEWAYS NOT SHOWN SHALL BE 10')



**ROUTE 29 & WASHINGTON STREET INTERSECTION**

NOTE: SEE RSP A88A FOR DETAILS NOT SHOWN.



**PAVING CONFORM AT BEGIN AND END CONSTRUCTION**

**CONSTRUCTION DETAILS**  
NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 DESIGN  
 STUART LEE  
 FUNCTIONAL SUPERVISOR  
 CHECKED BY  
 NAZEER BABACARHIAL  
 MARCUS CHAN  
 REVISIONS BY  
 DATE REVISIONS

DATE PLOTTED => 30-SEP-2011  
 TIME PLOTTED => 10:28  
 LAST REVISION  
 09-23-11

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 TRAFFIC

FUNCTIONAL SUPERVISOR  
 ROLAND AU-YEUNG

CHECKED BY

DESIGNED BY

HENRY TAN

REVISOR BY  
 DATE

REVISED BY  
 DATE

**STATIONARY MOUNTED CONSTRUCTION AREA SIGNS**

SIGN No.	MUTCD CODE	MESSAGE	PANEL SIZE	NUMBER OF POST AND SIZE	No OF SIGNS
A	W20-1	ROAD WORK AHEAD	36" X 36"	(ONE) 4" X 6"	4
B	G20-2	END ROAD WORK	36" X 18"	(ONE) 4" X 4"	4

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Nap	29	36.9/38.1	10	23

REGISTERED CIVIL ENGINEER DATE 9-23-11

PLANS APPROVAL DATE 9-26-2011

RoJand Au-Yeung  
 No. 34304  
 Exp. 9-30-13  
 CIVIL  
 STATE OF CALIFORNIA

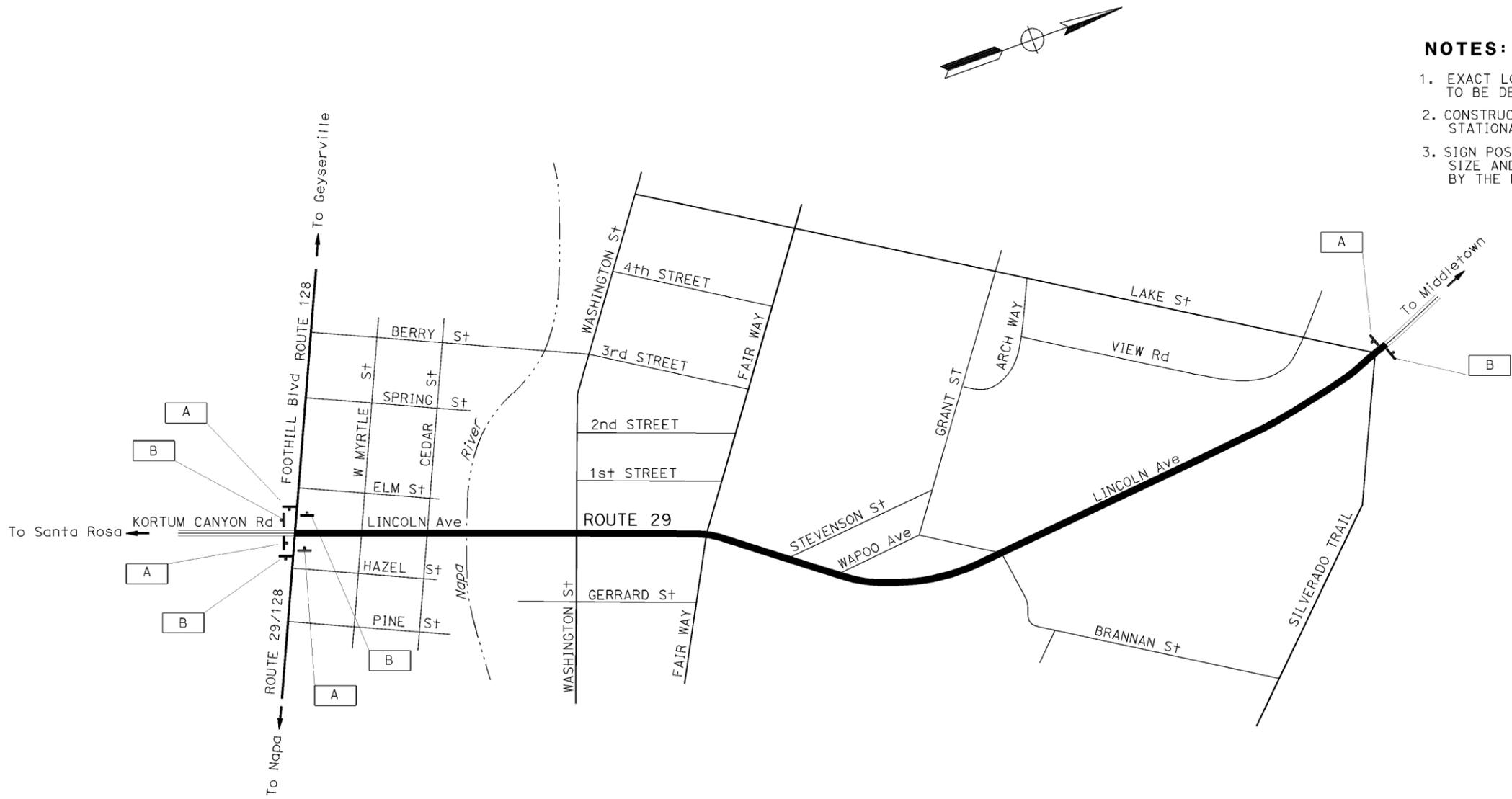
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**LEGEND:**

No. CONSTRUCTION AREA SIGN

**NOTES:**

- EXACT LOCATION AND POSITION OF SIGNS TO BE DETERMINED BY THE ENGINEER.
- CONSTRUCTION AREA SIGNS TO BE STATIONARY MOUNTED.
- SIGN POST LENGTH ARE APPROXIMATE, EXACT SIZE AND LENGTH TO BE DETERMINED BY THE ENGINEER.



**CONSTRUCTION AREA SIGNS**  
 NO SCALE

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

**CS-1**

DATE PLOTTED => 30-SEP-2011  
 TIME PLOTTED => 10:30  
 LAST REVISION 09-12-11

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Nap	29	36.9/38.1	11	23

*Marcus Chan* 9-23-11  
 REGISTERED CIVIL ENGINEER DATE  
 9-26-2011  
 PLANS APPROVAL DATE

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### PAVEMENT DELINEATION QUANTITIES

PM	LOCATION	DIRECTION	DETAIL No.	THERMOPLASTIC TRAFFIC STRIPE			REMOVE THERMOPLASTIC TRAFFIC STRIPE (N)		THERMOPLASTIC PAVEMENT MARKING							PAVEMENT MARKER (RETRO-REFLECTIVE)		REMOVE PAVEMENT MARKER EA	REMOVE PAVEMENT MARKING (N) SQFT
				4" WHITE SOLID LF	4" WHITE BROKEN LF	4" YELLOW SOLID LF	4" WHITE LF	4" YELLOW LF	STOP BAR 12"	STOP	STOP AHEAD	YIELD	TYPE III ARROW (L)	ADA		TYPE			
														WHITE	BLUE	D	H		
				SQFT															
36.90-36.96	NAPA 128/29 TO MYRTLE STREET	NB	22			510		510	76	22							24	24	98
		SB							56	44									100
36.96-37.01	MYRTLE STREET TO CEDAR STREET	NB	22			506		506	108	22							24	24	130
		SB							99	22									121
37.01-37.14	CEDAR STREET TO WASHINGTON STREET	NB	22,29	370		1472	370	1472	180				42	9	14	64	64	236	
		SB		300			300		178					9	14				192
37.14-37.26	WASHINGTON STREET TO FAIR WAY	NB	22,29	430		1544	430	1544	48				42	9	14	68	68	104	
		SB		379			379		118	22				42	9	14			196
37.26-37.34	FAIR WAY TO STEVENSON STREET	NB	22			680		680	50							32	32	50	
		SB							70	22								92	
37.34-37.39	STEVENSON STREET TO WAPOO AVENUE	NB	22			412		412								20	20	57	
		SB							35	22								62	
37.39-37.53	WAPOO AVENUE TO BRANNEN STREET	NB	8,22,27B	723	60	1446	783	1446	40	22						64	64	57	
		SB	8,27B	723	110		833		35	22								57	
37.53-37.91	BRANNAN STREET TO SILVERADO TRAIL	NB	22			340		340	76	66		24				16	16	166	
		NB	19,27B	1924		2540	1924	2540								28	54	82	
		NB	6			484		484								11	11		
		SB	27B	1924			1924		24	44									68
37.91-38.10	SILVERADO TRAIL TO PM 38.1	NB	22,27B	106		212	106	212								12	12		
		SB	27B	106			106		24	44	53							121	
SUBTOTAL				6,985	170	10,146	7,155	10,146	1,217	374	53	24	126	36	56	363	54	417	1,850
TOTAL						17,301		17,301					1,886			417	417	1,850	

(N) FOR INFORMATION ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Stantec**  
 DESIGN  
 FUNCTIONAL SUPERVISOR: STEWART LEE  
 CHECKED BY: NAZEER BABACARHIAL  
 CALCULATED-DESIGNED BY: MARCUS CHAN  
 REVISED BY: DATE REVISED:

## PAVEMENT DELINEATION QUANTITIES

### PDQ-1

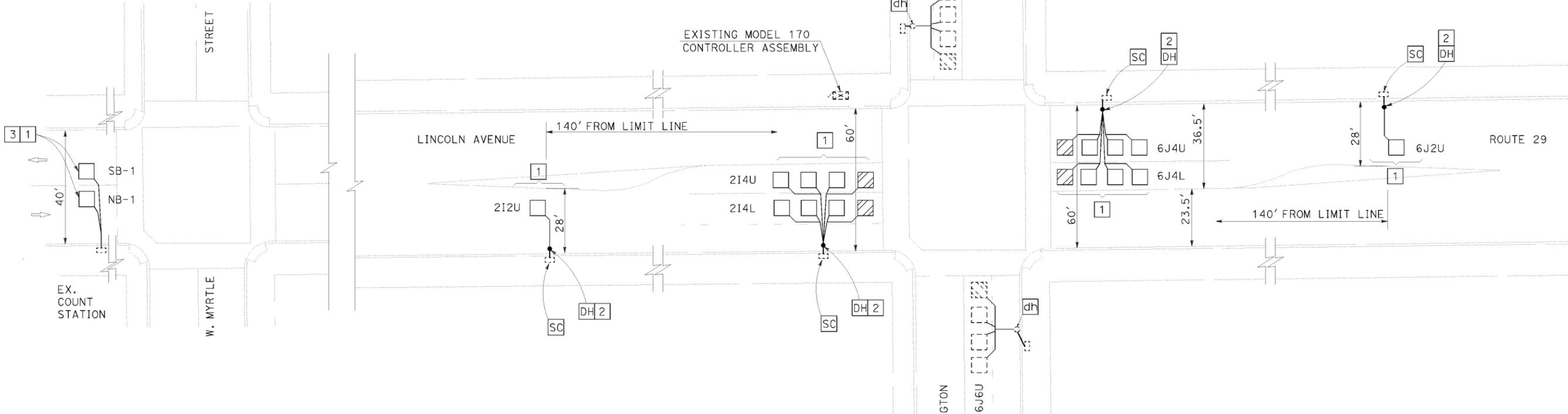
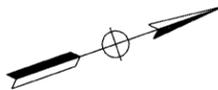


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Nap	29	36.9/38.1	13	23
<i>Elaine Wong</i> REGISTERED ELECT ENGINEER DATE 9-23-11			Elaine T. Wong No. 13753 Exp. 6-30-13 ELECT		
PLANS APPROVAL DATE 9-26-2011			THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.		

STEADY DEMAND SEQUENCE →



EXISTING TRAFFIC PHASE DIAGRAM  
(NO CHANGE)



**GENERAL NOTES:**

1. ALL EXISTING ELECTRICAL EQUIPMENT NOT SHOWN ON THE PLAN FOR CLARITY PURPOSE SHALL REMAIN IN PLACE UNDISTURBED.
2. WHERE ONE OR MORE TRAFFIC SIGNAL DETECTOR(S) CONSIST OF A SEQUENCE OF 4 LOOPS IN A SINGLE LANE, THE FRONT LOOP CLOSEST TO THE LIMIT LINE OR CROSSWALK SHALL BE LOCATED 1 FOOT FROM THE LINE. THE SET OF 3 LOOPS OR 4 LOOPS ASSIGNED TO THE SAME LOOP DETECTOR LEAD-IN CABLE (DLC) SHALL BE CONNECTED IN SERIES FOR TRAFFIC SIGNAL SYSTEM ONLY AND NOT FOR RAMP METERINGSYSTEM.
3. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE LOOP DETECTORS TO BE REPLACED PRIOR REPAVING.
4. ALL LOOP DETECTORS AT EACH LOCATION SHALL BE REPLACED AND TESTED WITHIN THE TIME ALLOTTED FOR TRAFFIC SIGNAL SYSTEM SHUTDOWN AT THAT LOCATION.
5. ABANDON EXISTING LOOPS IN PLACE WHEN CUTTING NEW REPLACEMENT LOOPS. SPLICE NEW DETECTOR CONDUCTORS TO CORRESPONDING DLC IN TERMINATION PULL BOX. VERIFY IDENTIFICATION OF DLC BEFORE CONNECTING TO THE CORRESPONDING LOOP DETECTORS.
6. THE CONTRACTOR SHALL PROVIDE TWO REPORTS PER LOCATION ON THE STATUS OF EACH DETECTOR LOOP REPLACEMENT SHOWING CONTINUITY AND INSULATION RESISTANCE READINGS. DETECTOR LOOP REPLACEMENT SHOWING CONTINUITY AND INSULATION RESISTANCE READINGS. THE REPORTS SHALL BE SUBMITTED TO THE ENGINEER, ONE BEFORE STARTING WORK AND THE OTHER AFTER WORK HAS BEEN COMPLETED AT EACH LOCATION.

**PROJECT NOTES:**

- 1 AB EXISTING DETECTORS AND INSTALL NEW DETECTORS IN KIND.
- 2 ADJUST DETECTOR HANDHOLE TO GRADE AS NEEDED.
- 3 APPROXIMATELY 83 FEET SOUTH OF THE CENTER LINE OF W. MYRTLE STREET AND WASHINGTON AVENUE. TERMINATE LOOP CONDUCTORS IN PULL BOX.

**INDUCTIVE LOOP DETECTORS  
(REPLACE)  
NO SCALE**

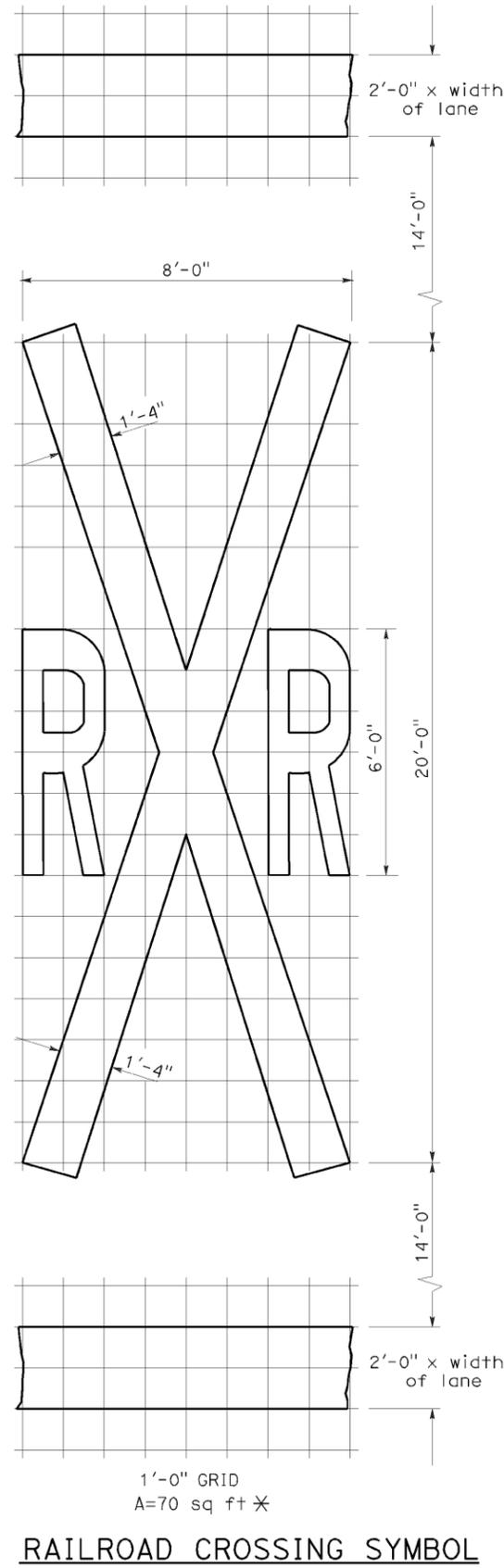
APPROVED FOR ELECTRICAL WORK ONLY

**E-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 ELECTRICAL  
 FUNCTIONAL SUPERVISOR LAI HONG CHIU  
 CALCULATED-DESIGNED BY NASRIN GHARIB  
 CHECKED BY E.T. WONG  
 REVISED BY DATE REVISION  
 BORDER LAST REVISED 7/2/2010

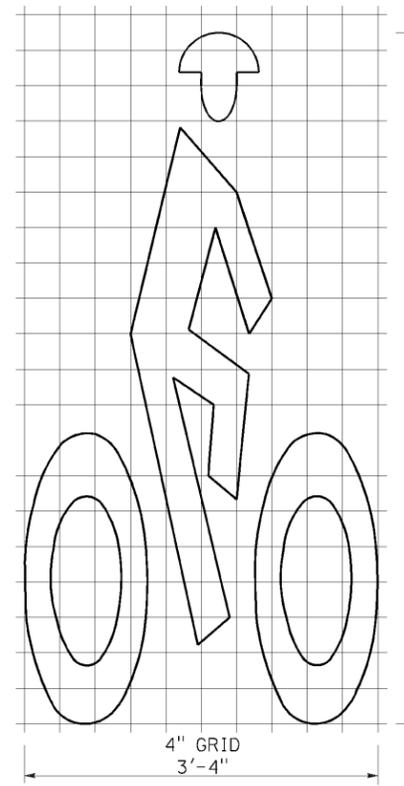
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Nap	29	36.9/38.1	14	23

Donald E. Howe  
 REGISTERED CIVIL ENGINEER  
 June 6, 2008  
 PLANS APPROVAL DATE  
 No. C46402  
 Exp. 3-31-09  
 CIVIL  
 STATE OF CALIFORNIA

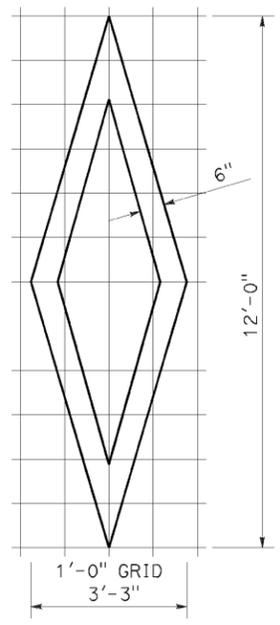


**RAILROAD CROSSING SYMBOL**

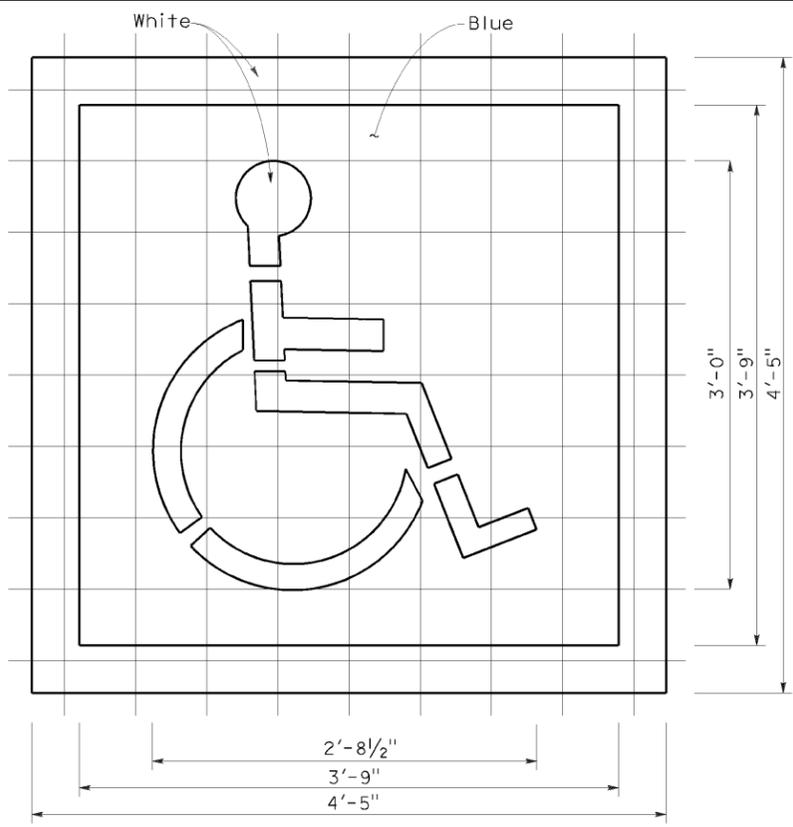
\*70 sq ft DOES NOT INCLUDE THE 2'-0" x VARIABLE WIDTH TRANSVERSE LINES.



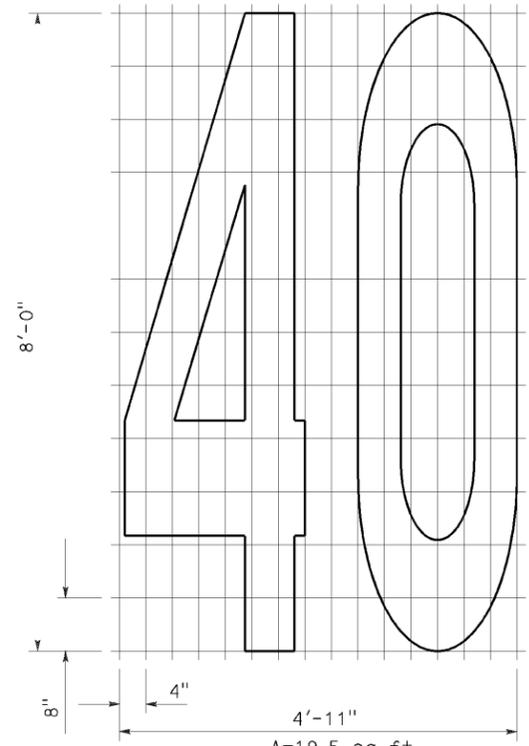
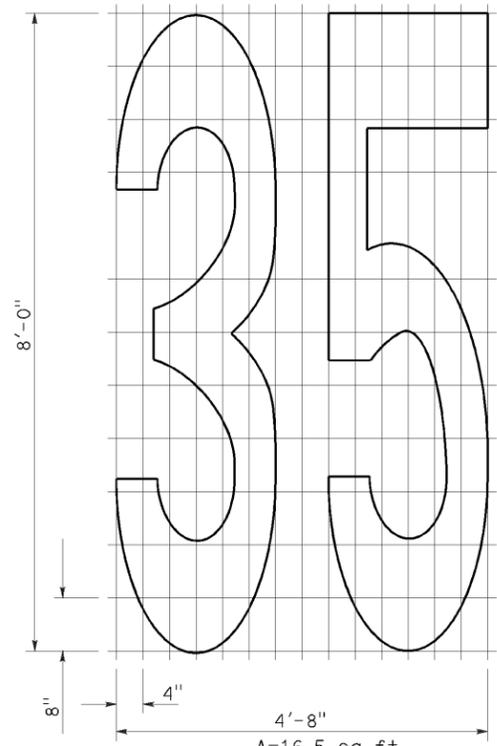
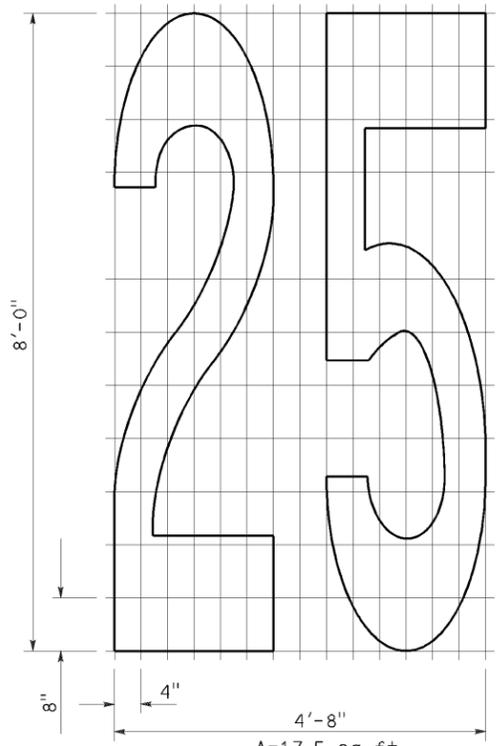
**BIKE LANE SYMBOL**



**DIAMOND SYMBOL**

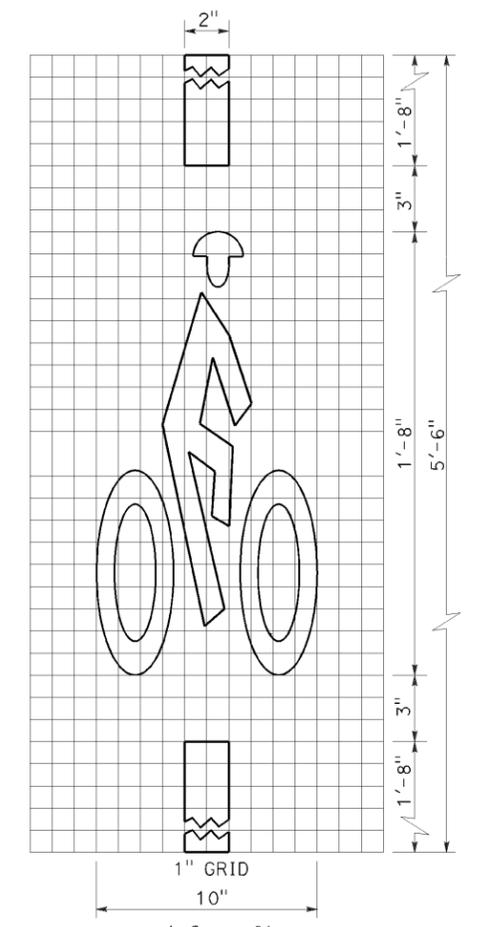


**INTERNATIONAL SYMBOL OF ACCESSIBILITY MARKING**



**NUMERALS**

To accompany plans dated 9-26-11



**BICYCLE LOOP DETECTOR SYMBOL**

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

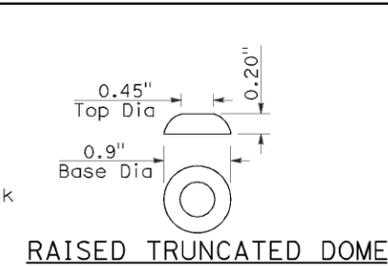
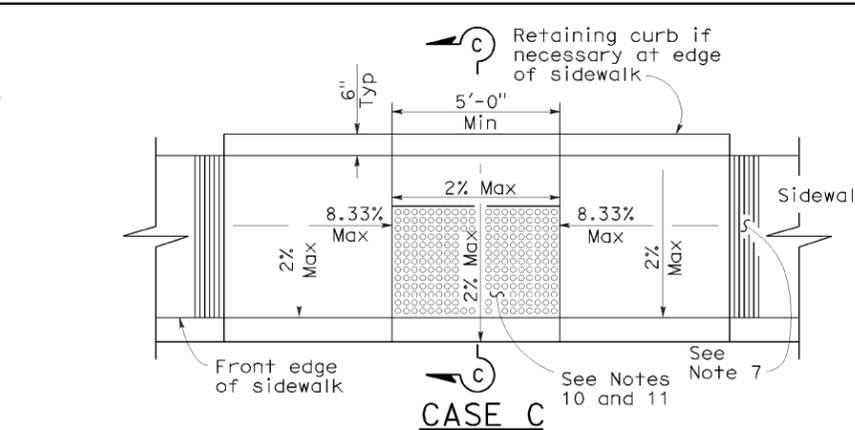
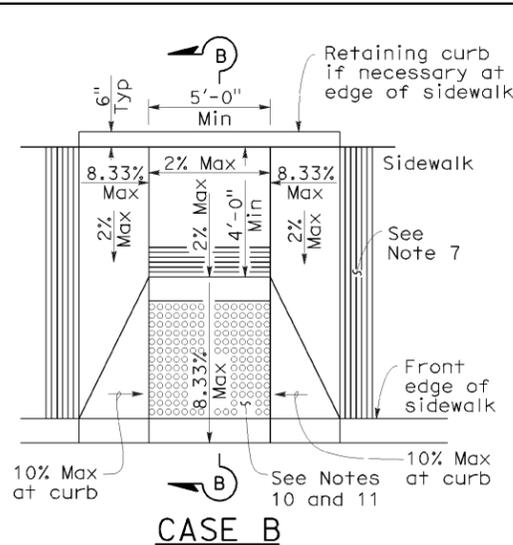
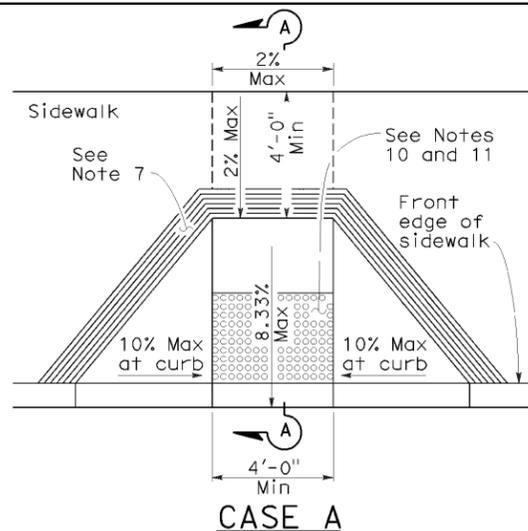
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**PAVEMENT MARKINGS SYMBOLS AND NUMERALS**  
NO SCALE

**2006 REVISED STANDARD PLAN RSP A24C**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Nap	29	36.9/38.1	15	23

H. David Cordova  
 REGISTERED CIVIL ENGINEER  
 No. C41957  
 Exp. 3-31-08  
 CIVIL  
 STATE OF CALIFORNIA

September 1, 2006  
 PLANS APPROVAL DATE  
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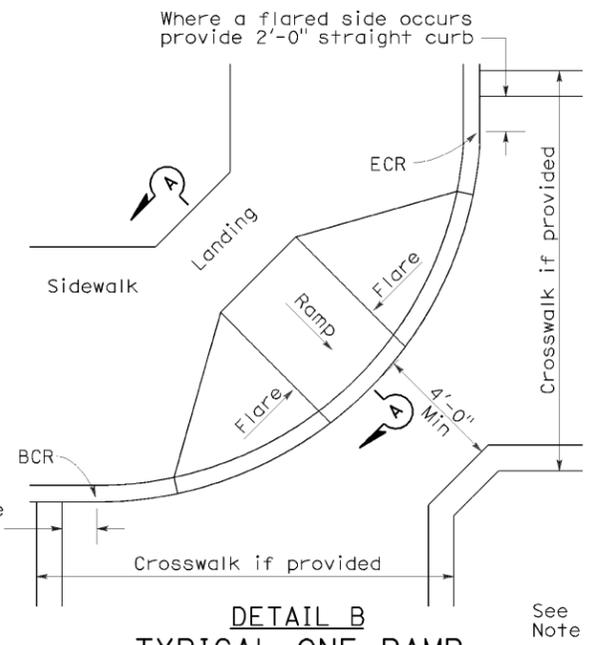
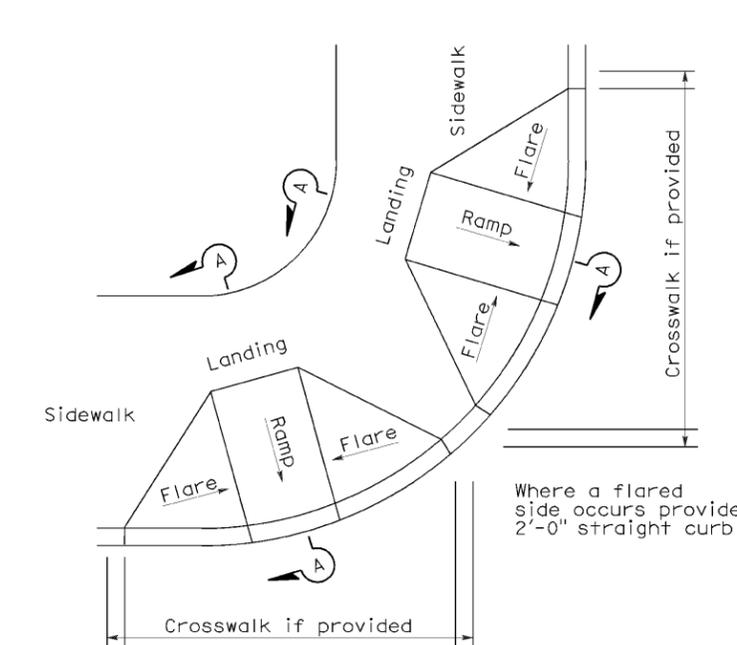
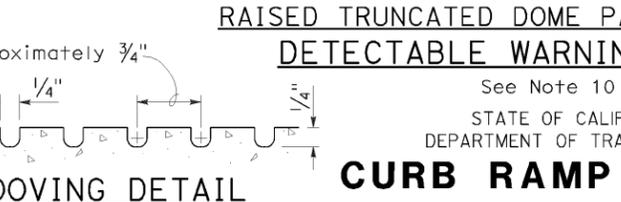
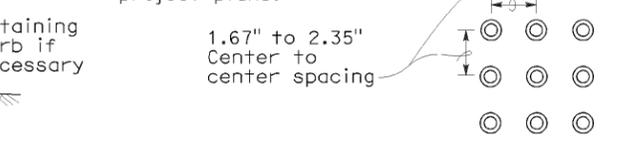
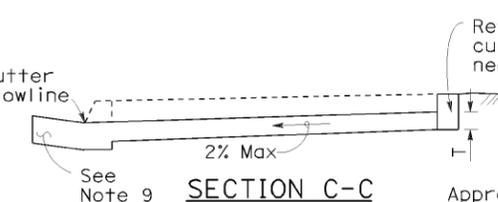
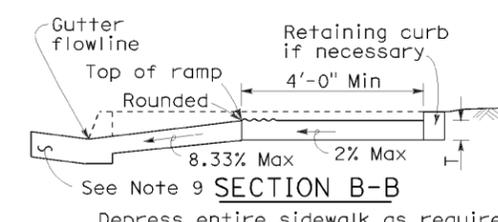
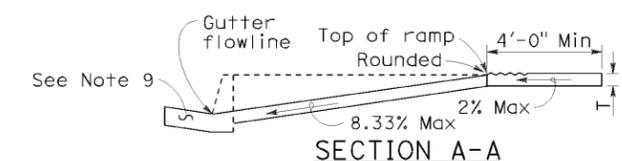
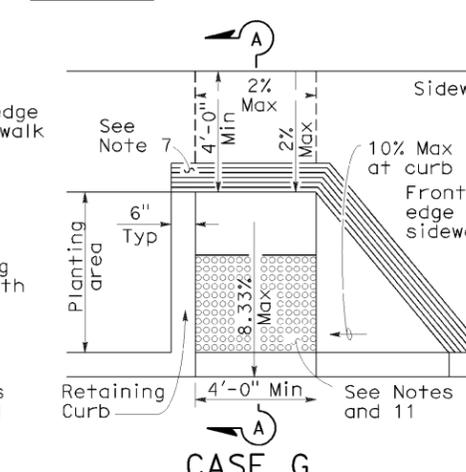
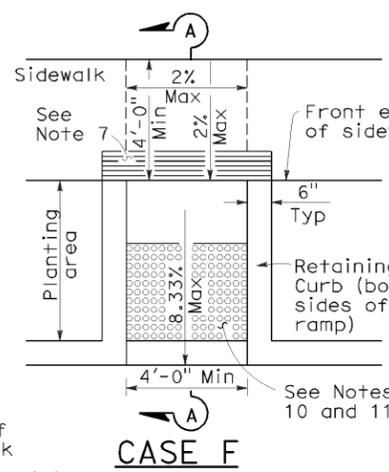
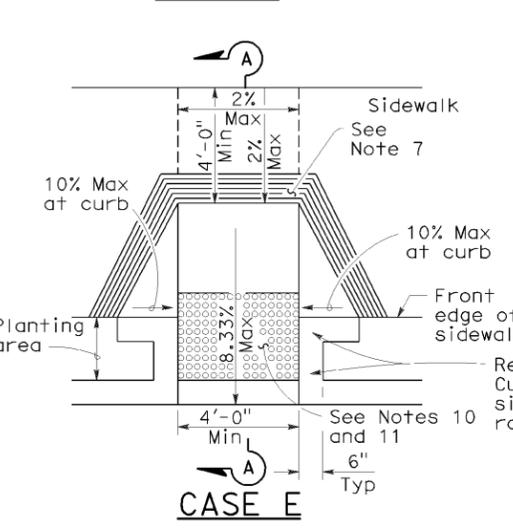
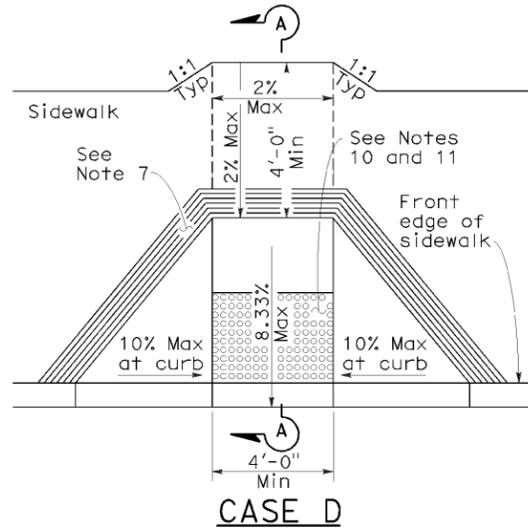


RAISED TRUNCATED DOME

NOTES:

To accompany plans dated 9-26-11

- As site conditions dictate, Case A through Case G curb ramps may be used for corner installations similar to those shown in Detail A and Detail B. The case of curb ramps used in Detail A do not have to be the same. Case A through Case G curb ramps also may be used at mid block locations, as site conditions dictate.
- If distance from curb to back of sidewalk is too short to accommodate ramp and 4'-0" platform (landing) as shown in Case A, the sidewalk may be depressed longitudinally as in Case B, or C or may be widened as in Case D.
- When ramp is located in center of curb return, crosswalk configuration must be similar to that shown for Detail B.
- As site conditions dictate, the retaining curb side and the flared side of the Case G ramp shall be constructed in reversed position.
- If located on a curve, the sides of the ramp need not be parallel, but the minimum width of the ramp shall be 4'-0".
- Side slope of ramp flares vary uniformly from a maximum of 10% at curb to conform with longitudinal sidewalk slope adjacent to top of the ramp, except in Case C and Case F.
- The curb ramp shall be outlined, as shown, with a 1'-0" wide border with 1/4" grooves approximately 3/4" on center. See grooving detail.
- Transitions from ramps and landing to walks, gutters or streets shall be flush and free of abrupt changes.
- Maximum slopes of adjoining gutters, the road surface immediately adjacent to the curb ramp or accessible route shall not exceed 5 percent within 4'-0" of the top and bottom of the curb ramp.
- Curb ramps shall have a detectable warning surface that extends the full width and 3'-0" depth of the ramp. Detectable Warning Surfaces shall conform to the details on this plan and the requirements in the Special Provisions.
- The edge of the detectable warning surface nearest the street shall be between 6" and 8" from the gutter flowline.
- Sidewalk and ramp thickness, "T", shall be 3/2" minimum.
- Utility pull boxes, manholes, vaults and all other utility facilities within the boundaries of the curb ramp will be relocated or adjusted to grade by the owner prior to, or in conjunction with, curb ramp construction.
- For retrofit conditions, removal and replacement of curb apron will be at the Contractor's option, unless otherwise shown on project plans.



DETAIL A  
TYPICAL TWO-RAMP CORNER INSTALLATION  
See Note 1

DETAIL B  
TYPICAL ONE-RAMP CORNER INSTALLATION  
See Notes 1 and 3

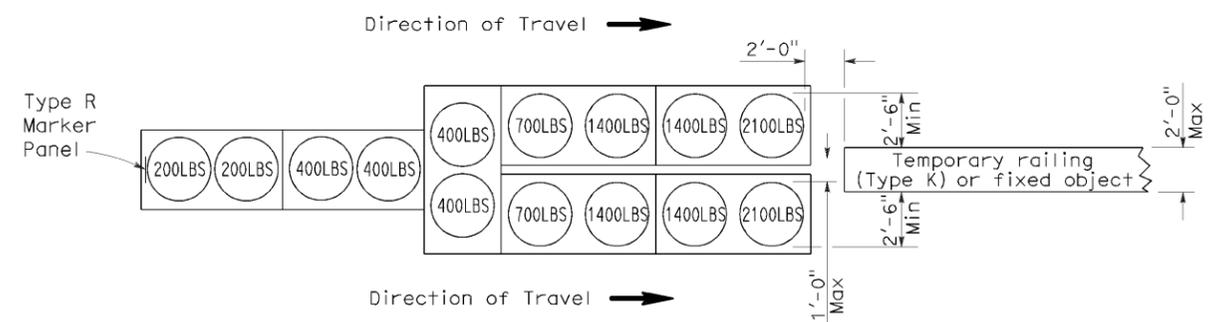
RETROFIT DETAIL  
Existing curb and sidewalk  
See Note 14  
See Note 9

RAISED TRUNCATED DOME PATTERN (IN-LINE)  
DETECTABLE WARNING SURFACE  
See Note 10  
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
CURB RAMP DETAILS  
NO SCALE

2006 REVISED STANDARD PLAN RSP A88A

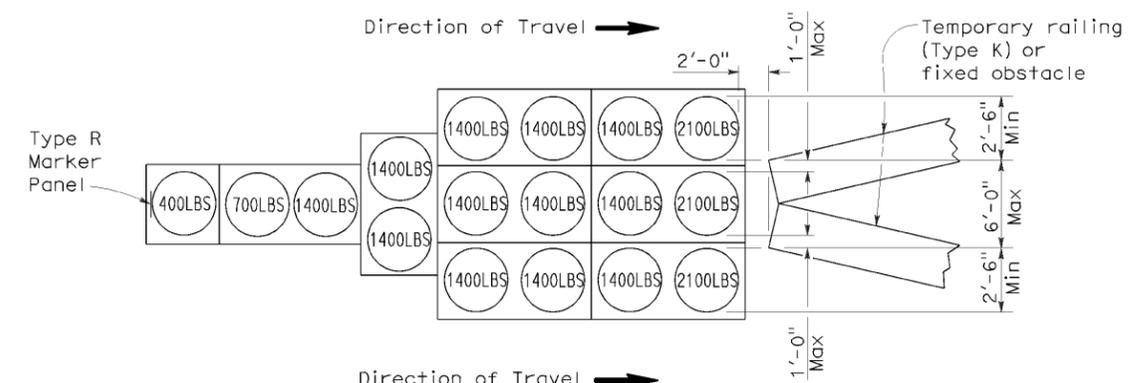
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Nap	29	36.9/38.1	16	23
<p><i>Randell D. Hiatt</i> REGISTERED CIVIL ENGINEER</p> <p>June 6, 2008 PLANS APPROVAL DATE</p> <p><i>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</i></p>					

To accompany plans dated 9-26-11



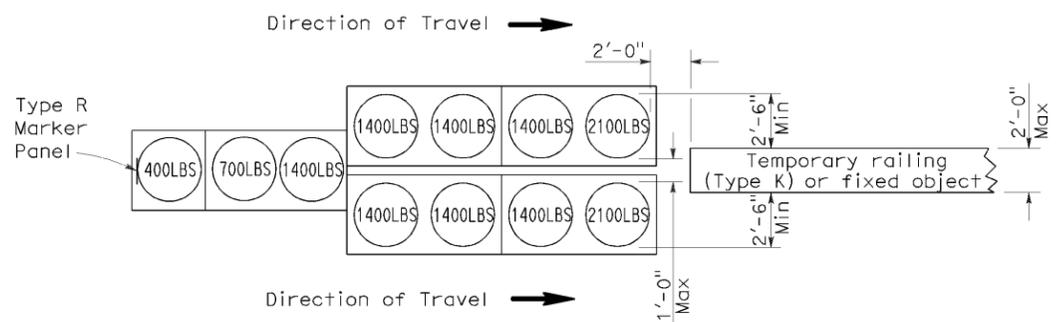
**ARRAY 'TU14'**

Approach speed 45 mph or more



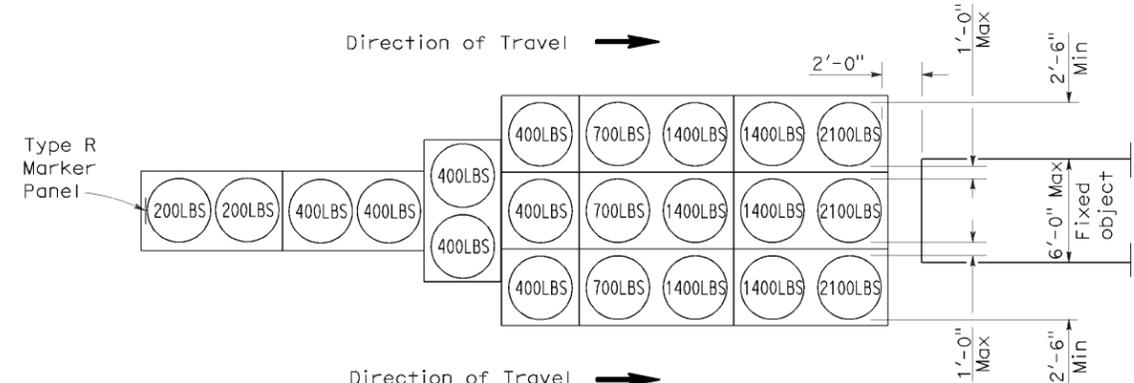
**ARRAY 'TU17'**

Approach speed less than 45 mph



**ARRAY 'TU11'**

Approach speed less than 45 mph

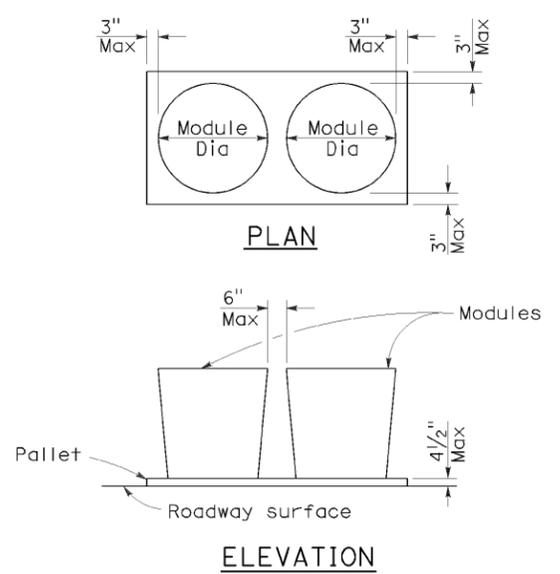


**ARRAY 'TU21'**

Approach speed 45 mph or more

**NOTES:**

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. Temporary crash cushion arrays shall not encroach on the traveled way.
4. Place the top of Type R marker panel 1" below the module lid.
5. Refer to Standard Plan A73B for marker details.
6. Approach speeds indicated conform to NCHRP 350 Report criteria.
7. Use of pallets is optional.



**CRASH CUSHION PALLET DETAIL**  
See Note 7

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**TEMPORARY CRASH CUSHION,  
SAND FILLED  
(UNIDIRECTIONAL)**

NO SCALE

RSP T1A DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T1A DATED MAY 1, 2006 - PAGE 211 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP T1A**

2006 REVISED STANDARD PLAN RSP T1A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Nap	29	36.9/38.1	17	23

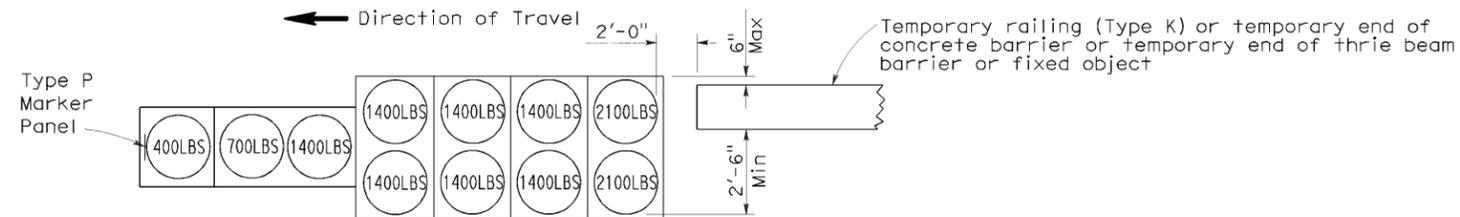
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER  
*Randell D. Hiatt*  
No. C50200  
Exp. 6-30-09  
CIVIL  
STATE OF CALIFORNIA

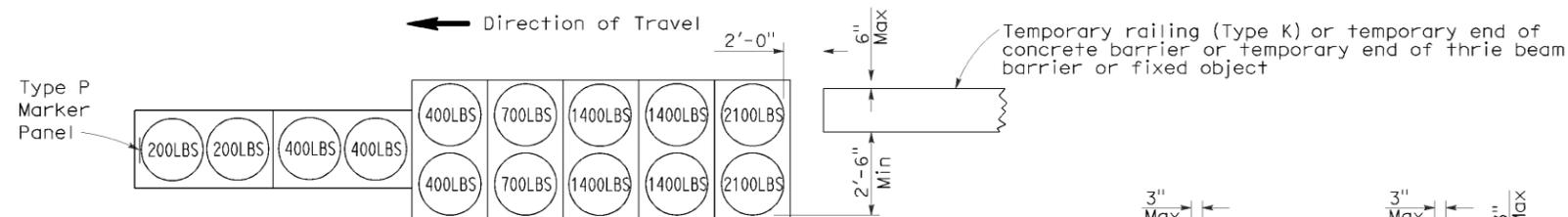
To accompany plans dated 9-26-11



Direction of Travel ←

Direction of Travel →

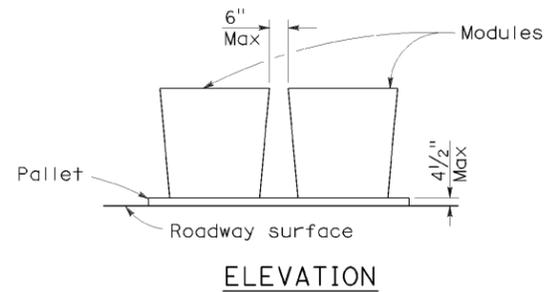
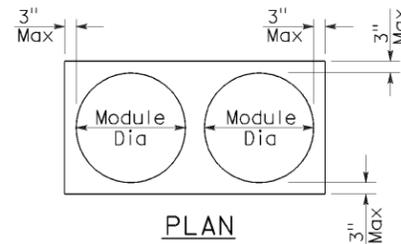
**ARRAY 'TB11'**  
Approach speed less than 45 mph



Direction of Travel ←

Direction of Travel →

**ARRAY 'TB14'**  
Approach speed 45 mph or more



**CRASH CUSHION PALLET DETAIL**  
See Note 7

**NOTES:**

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. Temporary crash cushion arrays shall not encroach on the traveled way.
4. Place the Type P marker panel so that the bottom of the panel rests upon the pallet.
5. Refer to Standard Plan A73B for marker details.
6. Approach speeds indicated conform to NCHRP 350 Report criteria.
7. Use of pallets is optional.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**TEMPORARY CRASH CUSHION,  
SAND FILLED  
(BIDIRECTIONAL)**

NO SCALE

RSP T1B DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T1B  
DATED MAY 1, 2006 - PAGE 212 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP T1B**

2006 REVISED STANDARD PLAN RSP T1B

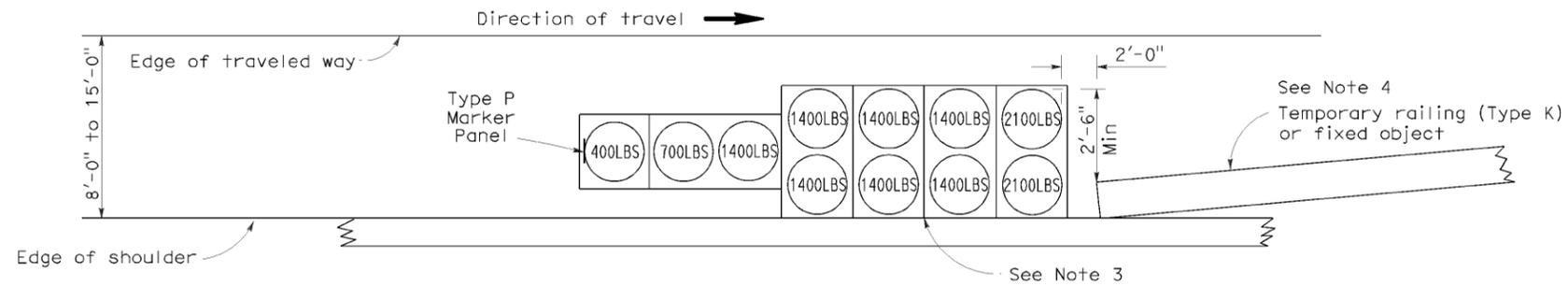
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Nap	29	36.9/38.1	18	23

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

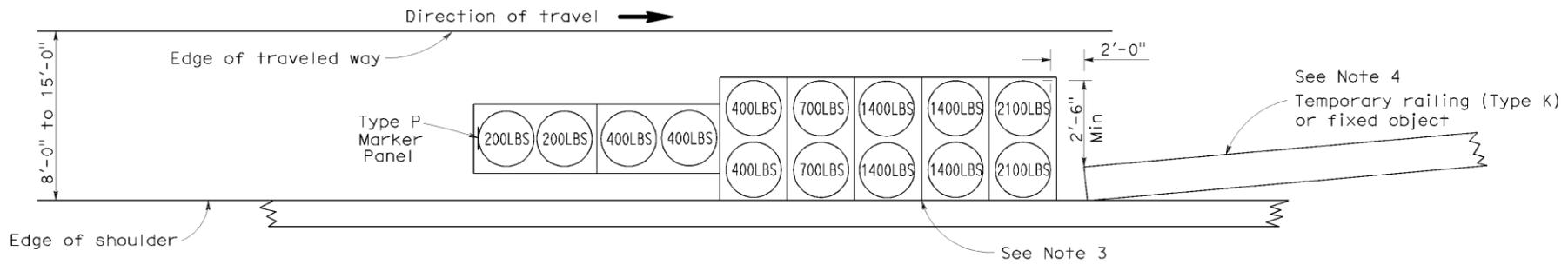
June 6, 2008  
PLANS APPROVAL DATE

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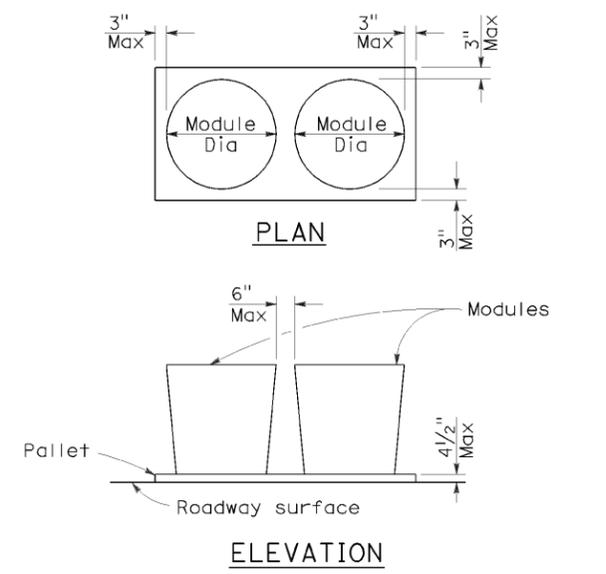
To accompany plans dated 9-26-11



**ARRAY 'TS11'**  
Approach speed less than 45 mph  
See Note 9



**ARRAY 'TS14'**  
Approach speed 45 mph or more  
See Note 9



**CRASH CUSHION PALLET DETAIL**  
See Note 11

**NOTES:**

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. The temporary crash cushion arrays shown on this plan shall be used only in locations where there will be traffic on one side of the temporary crash cushion array.
4. If the fixed object or approach end of the temporary railing is less than 15'-0" from the edge of traveled way, a temporary crash cushion is required in a construction or work zone.
5. Temporary crash cushion arrays shall not encroach on the traveled way.
6. Arrays for median shoulders shall conform to details shown on this plan for outside shoulders.
7. Place the Type P marker panel so that the bottom of the panel rests upon the pallet and faces traffic.
8. Refer to Standard Plan A73B for marker details.
9. For shoulder widths less than 8'-0", appropriate approved crash cushion protection, other than sand filled modules, shall be provided at fixed objects and at approach ends of temporary railing. The specific type of crash cushion shall be as shown on the project plans or as specified in the Special Provisions, or if not shown on the project plans or specified in the Special Provisions, shall be as approved by the Engineer.
10. Approach speeds indicated conform to NCHRP 350 Report criteria.
11. Use of pallets is optional.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**TEMPORARY CRASH CUSHION,  
SAND FILLED  
(SHOULDER INSTALLATIONS)**

NO SCALE

RSP T2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T2  
DATED MAY 1, 2006 - PAGE 213 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP T2**

2006 REVISED STANDARD PLAN RSP T2

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEET'S
04	Nap	29	36.9/38.1	19	23

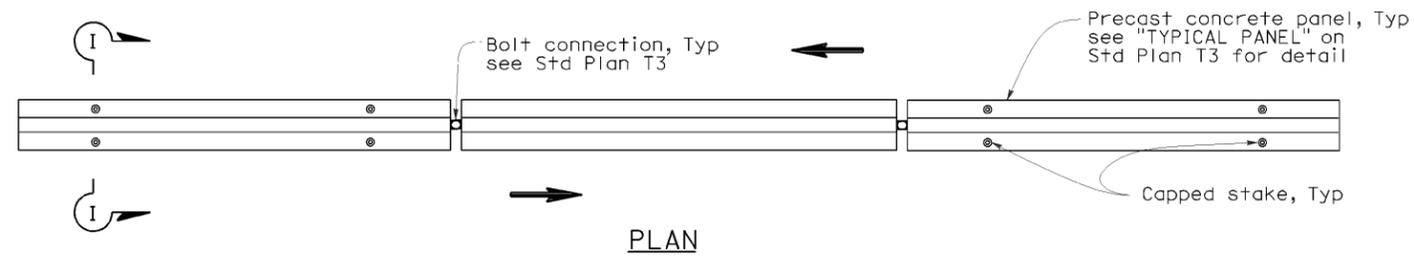
Randell D. Hiatt  
REGISTERED CIVIL ENGINEER

May 20, 2011  
PLANS APPROVAL DATE

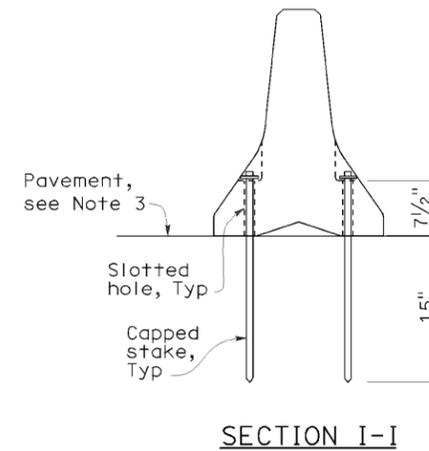
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REGISTERED PROFESSIONAL ENGINEER  
Randell D. Hiatt  
No. C50200  
Exp. 6-30-11  
CIVIL  
STATE OF CALIFORNIA

To accompany plans dated 9-26-11



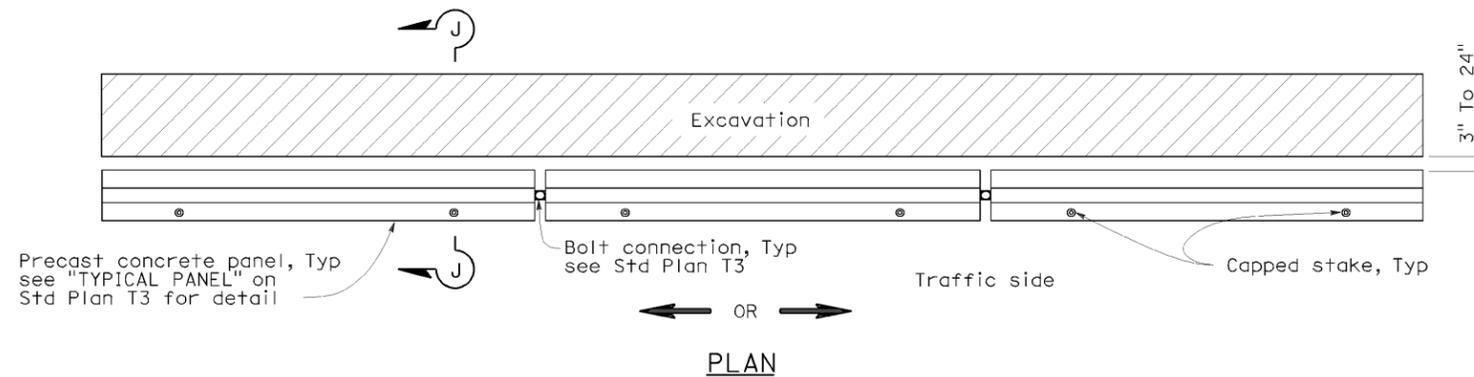
**RAILING STAKING CONFIGURATION FOR TWO-WAY TRAFFIC**  
See Note 1



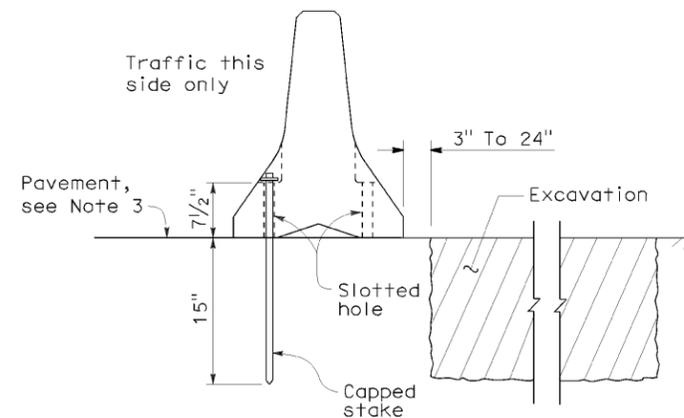
**SECTION I-I**

**NOTES:**

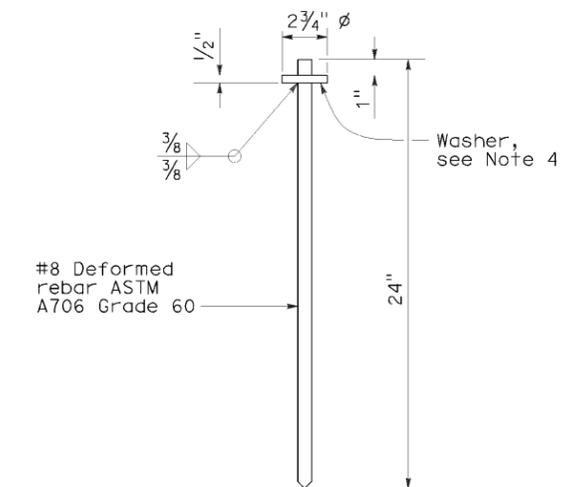
1. Where Type K Temporary Railing is placed as a temporary or long term barrier in two-way traffic on highways with less than 24" from the edge of traveled way, use four capped stakes per every other panel with end panels staked.
2. Where Type K Temporary Railing is placed 3" to 24" from the edge of an excavation on highways, use two capped stakes per panel along the traffic side.
3. Staked Type K Temporary Railing must be supported by at least 4" thick concrete, hot mix asphalt or existing asphalt concrete pavement.
4. The minimum yield strength for the washer must be 60,000 psi.
5. Direction of adjacent traffic indicated by  $\Rightarrow$ .



**RAILING STAKING CONFIGURATION ADJACENT TO AN EXCAVATION**  
See Note 2



**SECTION J-J**



**CAPPED STAKE DETAIL**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**TEMPORARY RAILING  
(TYPE K)**  
NO SCALE

NSP T3A DATED MAY 20, 2011 SUPPLEMENTS  
THE STANDARD PLANS BOOK DATED MAY 2006.

**NEW STANDARD PLAN NSP T3A**

2006 NEW STANDARD PLAN NSP T3A

# ELECTROLIERS

STANDARD TYPES	Symbol	Description
15, 15D		High mast light pole
15 STRUCTURE		Double Arm lighting standard
21, 21D STRUCTURE		Existing electrolier
30		Electrolier foundation (Future installation)

### NOTES:

- Luminaires shall be 310 W HPS when installed on Type 21, 21D, 30, 31, 32, 35 and 36-20A Standards, unless otherwise specified. Luminaires shall be 200 W HPS when installed on other type standards or poles, unless otherwise specified.
- Luminaires shall be the cutoff type, ANSI Type III medium cutoff lighting distribution, unless otherwise specified.
- Variations noted adjacent to symbol on project plans.

- Electrolier (see project notes or project plans)
- Luminaire on wood pole

### STANDARD NOTES:

- AB** Abandon. If applied to conduit, remove conductors.
- BC** Install pull box in existing conduit run.
- BP** Pedestrian barricade, type as indicated on plan.
- CB** Install conduit into existing pull box.
- CC** Connect new and existing conduit. Remove existing conductors and install conductors as indicated.
- CF** Conduit to remain for future use. Remove conductors. Install pull wire or rope.
- DH** Detector handhole.
- FA** Foundation to be abandoned.
- IS** Install sign on signal mast arm.
- NS** No slip base on standard.
- PEC** Photoelectric control.
- PEU** Photoelectric unit.
- RC** Equipment or material to be removed and become the property of the Contractor.
- RE** Remove electrolier, fuses and ballast. Tape ends of conductors.
- RL** Relocate equipment.
- RR** Remove and reuse equipment.
- RS** Remove and salvage equipment.
- SC** Splice new to existing conductors.
- SD** Service disconnect.
- SF** Standard to remain for future use. Remove luminaire, pole conductors, fuses and ballast.
- TSP** Telephone service point.

# ABBREVIATIONS AND EQUIPMENT DESIGNATIONS

## PROPOSED EXISTING

BBS	bbs	Battery backup system
BC	bc	Bolt circle
C	C	Conduit
CCTV	cctv	Closed circuit television
CKT	ckt	Circuit
CMS	cms	Changeable message sign
DLC	dlc	Loop detector lead-in cable
EMS	ems	Extinguishable message sign
EVC	evc	Emergency vehicle cable
EVD	evd	Emergency vehicle detector
FB	fb	Flashing beacon
FBCA	fbcA	Flashing beacon control assembly
FBS	fbs	Flashing beacon with slip base
FO	fo	Fiber optic
G	G	Ground (Equipment Grounding Conductor)
GFCI	GFCI	Ground fault circuit interrupt
HAR	har	Highway advisory radio
HEX	hex	Hexagonal
HPS	hps	High pressure sodium
IISNS	iisns	Internally illuminated street name sign
ISL	isl	Induction sign lighting
LED	led	Light emitting diode
LMA	lma	Luminaire mast arm
LPS	lps	Low pressure sodium
LTG	ltg	Lighting
LUM	lum	Luminaire
MAT	mat	Mast arm mounting vehicle signal faces, top attachment
MAS	mas	Mast arm mounting vehicle signal faces, side attachment
MAS-4A	mas-4A	Mast arm mounting vehicle signal faces, top attachment
MAS-4B	mas-4B	Mast arm mounting vehicle signal faces, side attachment - 4 signal section
MAS-4C	mas-4C	Mast arm mounting vehicle signal faces, side attachment - 4 signal section
MAS-5A	mas-5A	Mast arm mounting vehicle signal faces, top attachment
MAS-5B	mas-5B	Mast arm mounting vehicle signal faces, side attachment - 5 signal section
MC	mc	Mercury contactor
M/M	m/m	Multiple to multiple transformer
MT	mt	Conduit with pull wire or rope only
MTG	mtg	Mounting
	mv	Mercury vapor lighting fixture
N	N	Neutral (Grounded Conductor)
NC	NC	Normally closed
NO	NO	Normally open
PB	pb	Pull box
PEC	pec	Photoelectric control (Type I, II, III, IV or V as shown)
PED	ped	Pedestrian
PEU	peu	Photoelectric unit
PPB	ppb	Pedestrian push button
RL		Relocated equipment
RM	rm	Ramp metering
SB	sb	Slip base
SIC	sic	Signal interconnect cable
SIG	sig	Signal
SMA	sma	Signal mast arm
SNS	sns	Street name sign
SP	sp	Service point
TDC	tdc	Telephone demarcation cabinet
TMS	tms	Traffic monitoring station
TOS	tos	Traffic Operations System
VEH	veh	Vehicle
XFMR	xfmr	Transformer
COMM	comm	Communication
RWIS	rwis	Roadway weather information system

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Nap	29	36.9/38.1	20	23

REGISTERED ELECTRICAL ENGINEER  
 No. E14512  
 Exp. 6-30-08  
 STATE OF CALIFORNIA

October 5, 2007  
 PLANS APPROVAL DATE

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To accompany plans dated 9-26-11

## SOFFIT AND WALL MOUNTED LUMINAIRES

- Pendant, 70 W HPS unless otherwise specified.
- Flush, 70 W HPS unless otherwise specified.
- Wall surface, 70 W HPS unless otherwise specified.
- Existing soffit or wall luminaire to remain unmodified.
- Existing soffit or wall luminaire to be modified as specified.

### NOTE:

Arrow indicates "street side" of luminaire.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

## ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

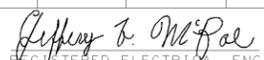
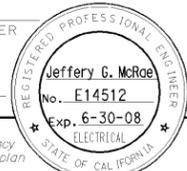
NO SCALE

RSP ES-1A DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-1A DATED MAY 1, 2006 - PAGE 400 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP ES-1A**

2006 REVISED STANDARD PLAN RSP ES-1A

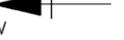
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Nap	29	36.9/38.1	21	23

  
 REGISTERED ELECTRICAL ENGINEER  
 October 5, 2007  
 PLANS APPROVAL DATE  
  
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

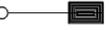
### CONDUIT

PROPOSED	EXISTING	
---	---	Lighting Conduit, unless otherwise indicated or noted
---	---	Traffic signal conduit
-C-	-c-	Communication conduit
-T-	-t-	Telephone conduit
-F-	-f-	Fire alarm conduit
-FO-	-fo-	Fiber optic conduit
---	---	Conduit termination 
		Conduit riser in/on structure or service pole

### SIGNAL EQUIPMENT

PROPOSED	EXISTING	
		Pedestrian signal face
		Pedestrian push button post
		Pedestrian barricade
		Vehicle signal face (with backplate, 3-Section: red, yellow and green)
		Vehicle signal face with angle visors
		Modifications of basic symbols: "L" Indicates all non-arrow sections lowered "LG" Indicates lowered green section only "PV" Indicates 12" programmed visibility sections "8" indicates all 8" sections (only when specified)

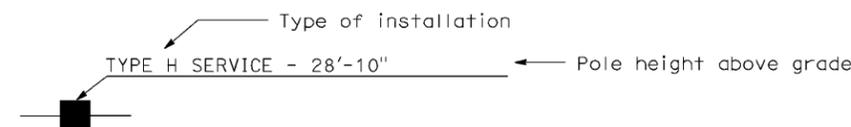
### SIGNAL EQUIPMENT Cont

PROPOSED	EXISTING	
		Guard post
		Type 1 Standard with "Meter On" sign
		Emergency Vehicle detector

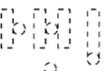
### SERVICE EQUIPMENT

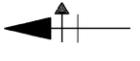
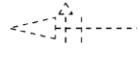
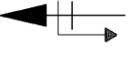
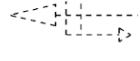
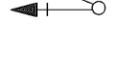
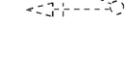
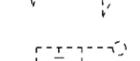
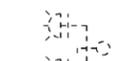
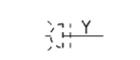
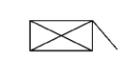
PROPOSED	EXISTING	
---OH	---oh	Overhead lines
		Wood pole "U" indicates utility owned
		Pole guy with anchor
		Utility transformer - ground mounted
		Service equipment enclosure type
		Service equipment enclosure door indicates front of enclosure
		Telephone demarcation cabinet

### POLE-MOUNTED SERVICE DESIGNATION



### ILLUMINATED OVERHEAD SIGN

PROPOSED	EXISTING	
		Overhead sign - Single post
		Overhead sign - Two post
		Overhead sign - Mounted on structure
		Overhead sign with electrolier

		Type 15TS and Vehicle signal face
		Vehicle signal face with red, yellow and green left arrow sections
		Vehicle signal face with red and yellow sections and up green arrow
		Vehicle signal face (5 Section) with red, yellow and green sections and yellow and green right arrows
		Type 1 Standard and attached vehicle signal faces
		Standard with signal mast arm only and attached vehicle signal faces and internally illuminated street name sign
		Type 33 Standard, Left-turn vehicle signal face and sign
		Standard with luminaire and signal mast arms and attached vehicle signal faces
		Cantilever flashing beacon Type 9 Frame, with a sign unless otherwise specified or indicated
		Type 15-FBS Standard with two vehicle signal face sections with lens, backplate and visor with a sign
		Flashing beacon. One vehicle signal face section with lens, backplate and visor. "R" indicates red indication, "Y" indicates yellow indication
		Controller assembly. Door indicates front of cabinet

### NOTES:

1. All signal sections shall be 12" unless shown otherwise.
2. Signal heads shall be provided with backplates unless shown otherwise.
3. Signal indication shall be LED.

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS  
 (SYMBOLS AND ABBREVIATIONS)**

NO SCALE

RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP ES-1B**

2006 REVISED STANDARD PLAN RSP ES-1B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Nap	29	36.9/38.1	22	23

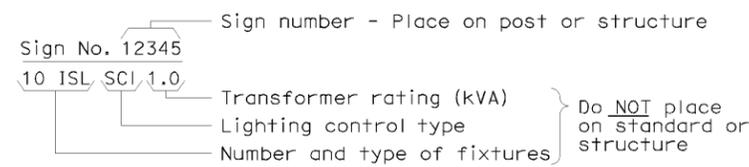
Jeffrey G. McRae  
 REGISTERED ELECTRICAL ENGINEER  
 No. E14512  
 Exp. 6-30-08  
 ELECTRICAL  
 STATE OF CALIFORNIA

October 5, 2007  
 PLANS APPROVAL DATE

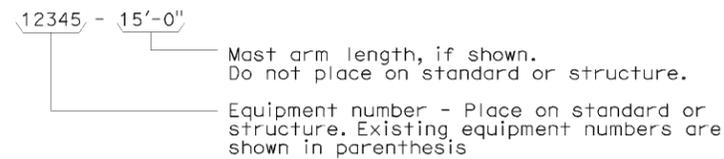
To accompany plans dated 9-26-11

### EQUIPMENT IDENTIFICATION

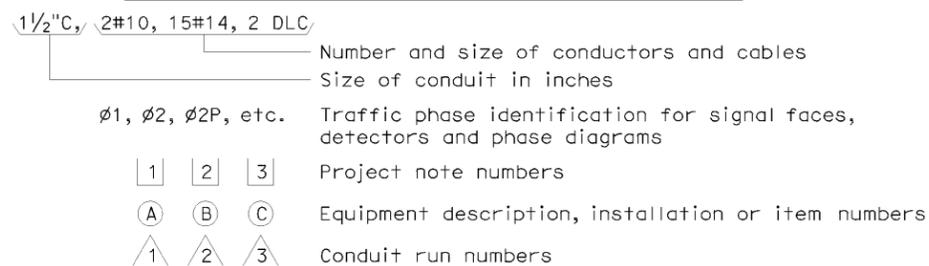
#### ILLUMINATED SIGN IDENTIFICATION NUMBER:



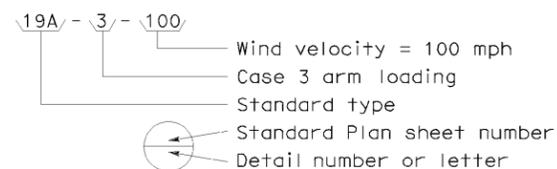
#### ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



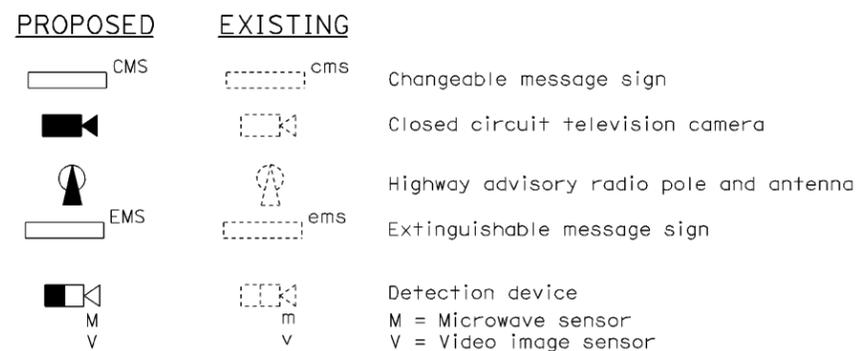
#### CONDUIT AND CONDUCTOR IDENTIFICATION:



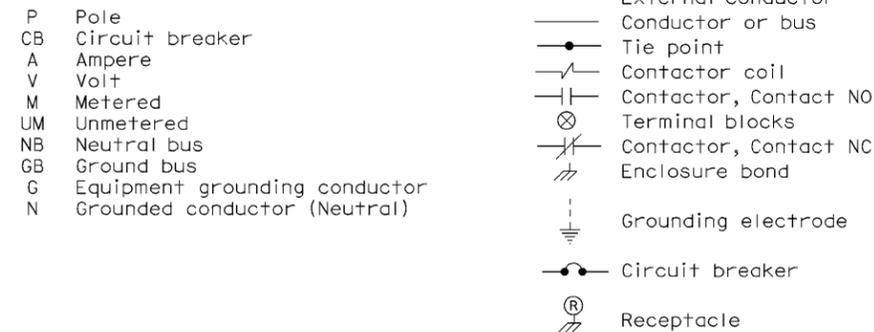
#### SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



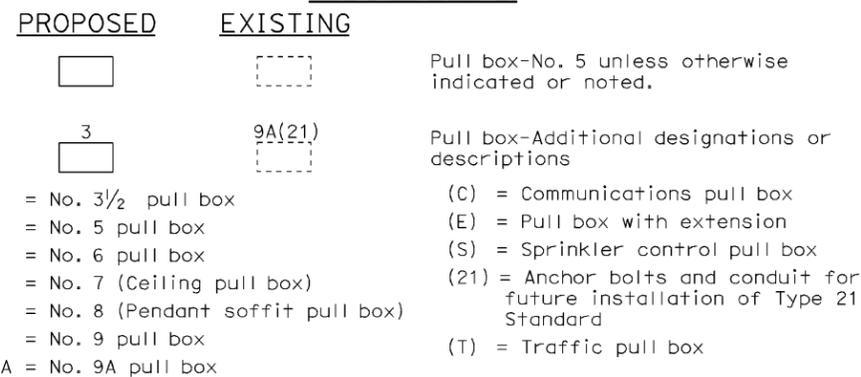
### MISCELLANEOUS EQUIPMENT



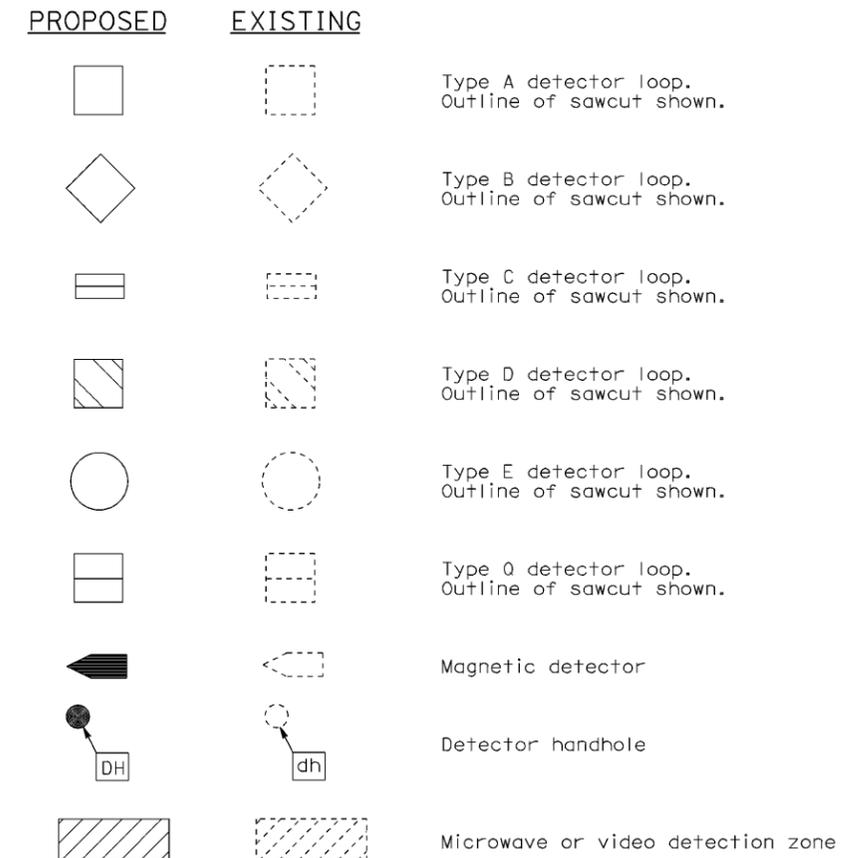
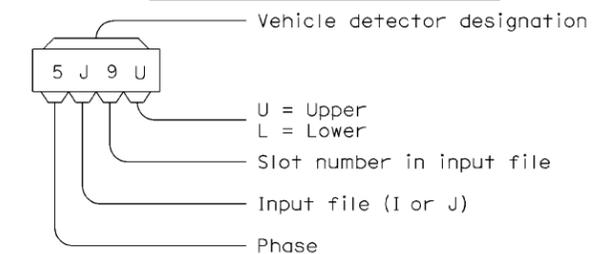
### WIRING DIAGRAM LEGEND



### PULL BOXES



### VEHICLE DETECTORS



STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

## ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

RSP ES-1C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1C  
DATED MAY 1, 2006 - PAGE 402 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP ES-1C**

2006 REVISED STANDARD PLAN RSP ES-1C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Nap	29	36.9/38.1	23	23

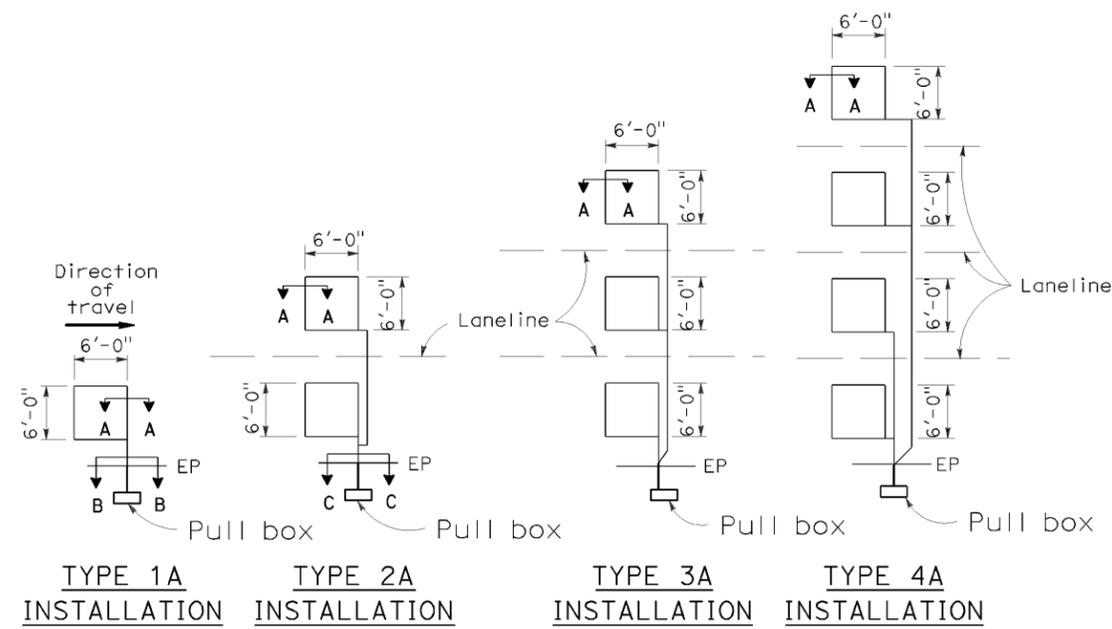
Jeffrey G. McRae  
 REGISTERED ELECTRICAL ENGINEER  
 No. E14512  
 Exp. 6-30-08  
 ELECTRICAL  
 STATE OF CALIFORNIA

October 5, 2007  
 PLANS APPROVAL DATE  
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To accompany plans dated 9-26-11

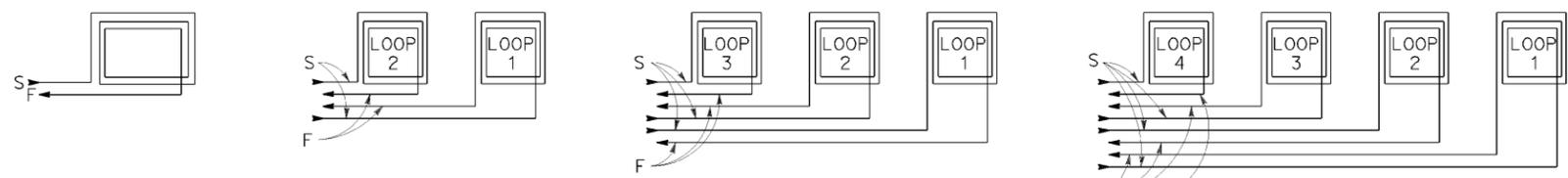
## LOOP INSTALLATION PROCEDURE

1. Loops shall be centered in lanes.
2. Saw slots in pavement for loop conductors as shown in details.
3. Distance between side of loop and a lead-in saw cut from adjacent detectors shall be 2'-0" minimum. Distance between lead-in saw cuts shall be 6" minimum.
4. Bottom of saw slot shall be smooth with no sharp edges.
5. Slots shall be washed until clean, blown out and thoroughly dried before installing loop conductors.
6. Adjacent loops on the same sensor unit channel shall be wound in opposite directions.
7. Identify and tag loop circuit pairs in the pull box with loop number, start (S) and finish (F) of conductor. Identify and tag lead-in-cable with sensor number and phase.
8. Install loop conductor in slot using a 3/16" to 1/4" thick wood paddle. Hold loop conductors with wood paddles (at the bottom of the sawed slot) during sealant placement.
9. No more than 2 twisted pairs shall be installed in one sawed slot.
10. Allow additional 5'-0" of slack length of conductor for the lead-in run to pull box.
11. The additional length of each conductor for each loop shall be twisted together into a pair (6 turns per 3'-4" minimum) before being placed in the slot and conduit leading to pull box.
12. Test each loop circuit for continuity, circuit resistance and insulation resistance at the pull box before filling slots.
13. Fill slots as shown in details.
14. Splice loop conductors to lead-in-cable. Splices shall be soldered.
15. End of lead-in-cable and Type 2 loop conductor shall be waterproofed prior to installing in conduit to prevent moisture from entering the cable.
16. Lead-in-cable shall not be spliced between the pull box and the controller cabinet terminals.
17. Test each loop circuit for continuity, circuit resistance and insulation resistance at the controller cabinet location.
18. Where loop conductors are not to be spliced to a lead-in-cable, the ends of the conductors shall be taped and waterproofed with electrical insulating coating.



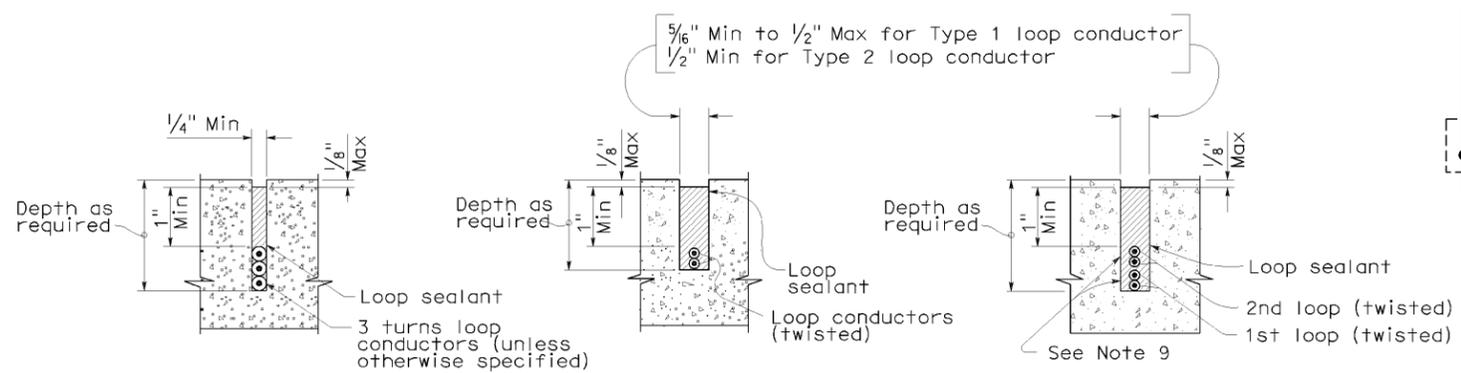
### SAWCUT DETAILS

- (Type A loop detector configurations illustrated)
1. 1A thru 4A = 1 Type A loop configuration in each lane.
  2. 1B thru 4B = 1 Type B loop configuration in each lane.
  3. 1C = 1 Type C loop configuration entering lanes as required.
  4. 1D thru 4D = 1 Type D loop configuration in each lane.
  5. 1E thru 4E = 1 Type E loop configuration in each lane.
  6. 1Q thru 4Q = 1 Type Q loop configuration in each lane.
- (Use Type A, B, C, D, E or Q loop detector configurations only when specified or shown on plans)

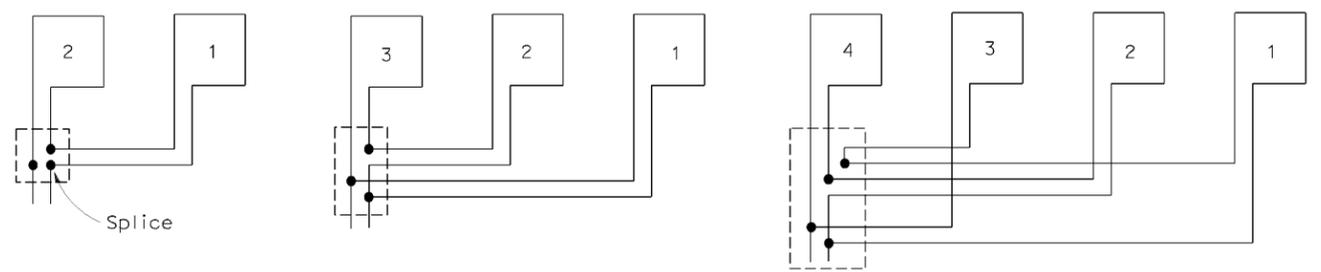


### WINDING DETAILS

See Notes 6 and 7



SECTION A-A    SECTION B-B    SECTION C-C  
 SLOT DETAILS - TYPE 1 AND TYPE 2 LOOP CONDUCTOR



### TYPICAL LOOP CONNECTIONS

(Dashed lines represent the pull box)

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

## ELECTRICAL SYSTEMS (DETECTORS)

NO SCALE

RSP ES-5A DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-5A DATED MAY 1, 2006 - PAGE 423 OF THE STANDARD PLANS BOOK DATED MAY 2006.

## REVISED STANDARD PLAN RSP ES-5A

2006 REVISED STANDARD PLAN RSP ES-5A