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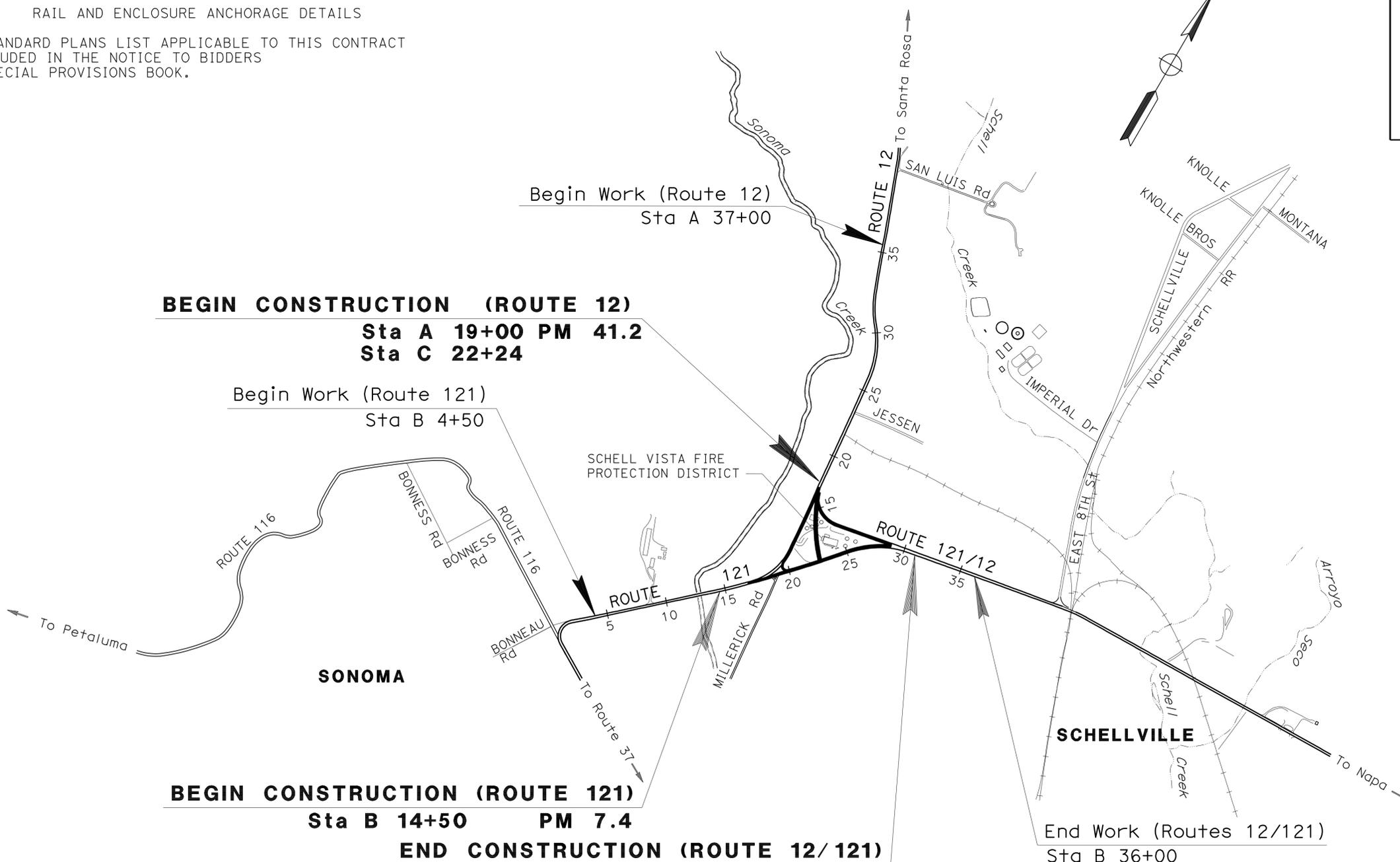
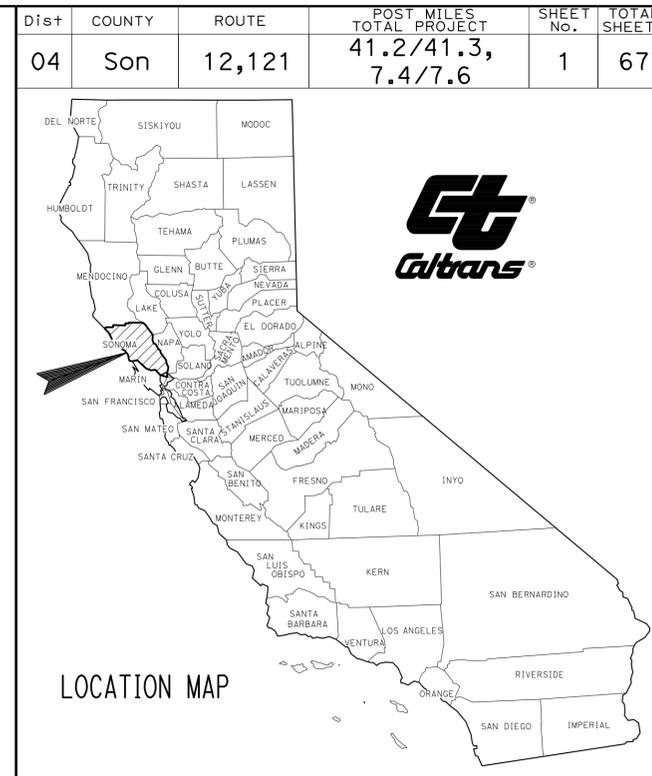
THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

HSSTP-X097(041)E

PROJECT PLANS FOR CONSTRUCTION ON  
STATE HIGHWAY  
IN SONOMA COUNTY  
AT SCHELLVILLE ON ROUTE 12  
FROM 0.6 MILE SOUTH OF SAN LUIS ROAD  
TO 0.3 MILE WEST OF MILLERICK ROAD ON ROUTE 121  
AND 0.2 MILE WEST OF EAST EIGHTH STREET  
ON ROUTE 12/121 JUNCTION

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006



PROJECT MANAGER	ERIC SCHEN
DESIGN ENGINEER	PATRICK YIP

 11-8-10  
 PROJECT ENGINEER DATE  
 REGISTERED CIVIL ENGINEER  
 May 9, 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.	04-1A6204
PROJECT ID	0400000498

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	2	67

REGISTERED CIVIL ENGINEER	DATE
5-9-11	11-8-10
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER	No.
Patrick Yip	44277
Exp.	6-30-11
CIVIL	

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:**
- DIMENSIONS OF THE STRUCTURAL SECTION ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
  - SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.
  - ASPHALT CONCRETE SURFACING AND CRACK SEAL TO BE COMPLETED PRIOR TO PLACING HOT MIX ASPHALT.
  - MBGR, HMA DIKE SEE SUMMARY OF QUANTITIES SHEET FOR TYPE, STATION LIMITS AND LOCATION.

**ABBREVIATIONS:**  
HMA-A = HOT MIX ASPHALT (TYPE A)  
AS(4) = CLASS 4 AGGREGATE SUBBASE

**TYPICAL STRUCTURAL SECTION NOTES:**

- No. STRUCTURAL SECTION NUMBER.
- 1 TRAVELED WAY SECTION  
0.2' COLD PLANE AC  
0.25' HMA-A
- 2 TRAVELED WAY & SHOULDER SECTION  
1.25' HMA-A  
0.5' AS (4)
- 3 TRAVELED WAY SECTION Var 0'-0.15' HMA-A

**ROUTE 121 DESIGN DESIGNATION**

ADT (2010)	18348	D (PM)	0.55
ADT (2030)	25971	T	N/A
DHV (2030) (PM)	2198	V	50 MPH
ESAL (20 YRS)	5307000	20 Yr TI	11
2008 TRUCK% = 7.86			

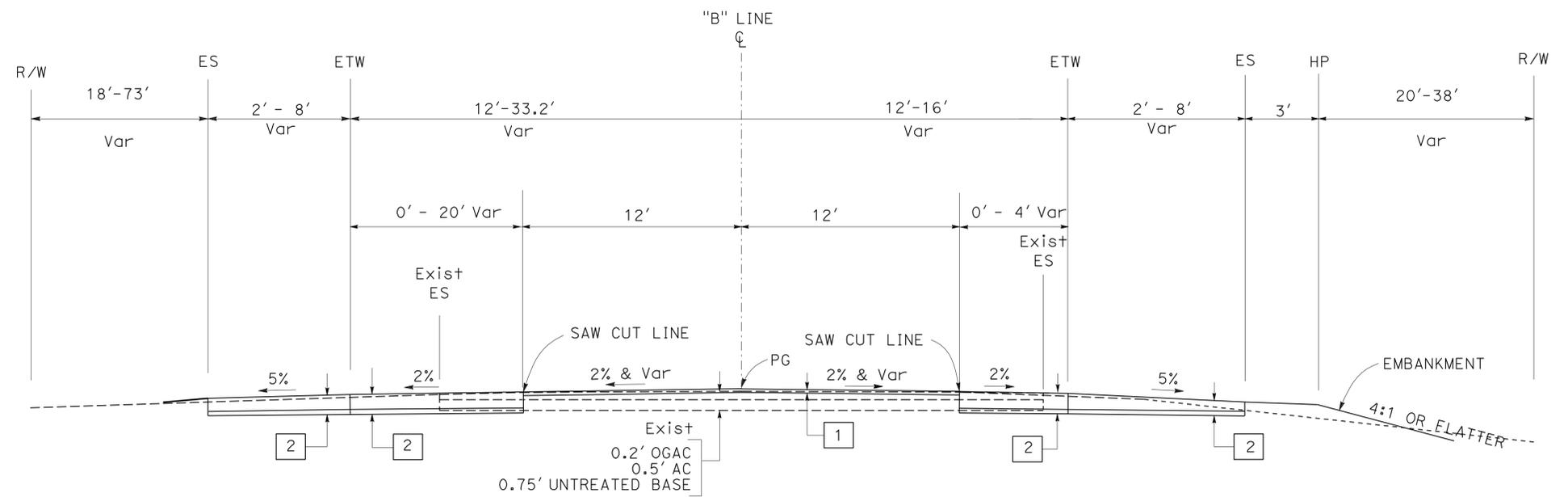
NOTE: ADT & DHV VOLUMES ARE TWO VOLUMES  
N/A = DATA NOT AVAILABLE

**ROUTE 12 DESIGN DESIGNATION**

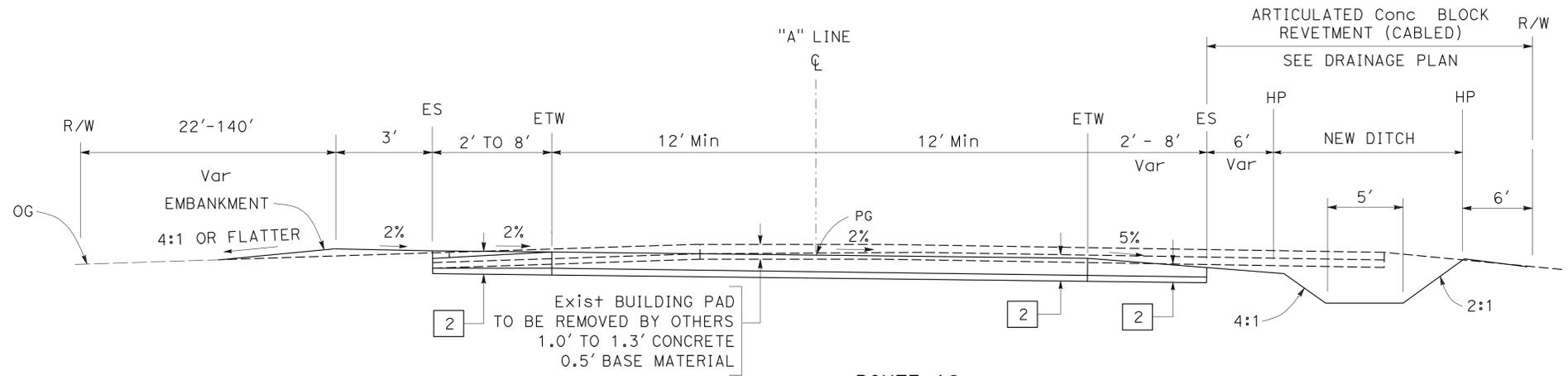
ADT (2010)	5760	B (PM)	0.61
ADT (2030)	8153	T	N/A
DHV (2030) (PM)	747	V	45 MPH
ESAL (20 Yrs)	784000	20 Yr TI	8.5
2008 TRUCK % = 3.39			

NOTE: ADT & DHV VOLUMES ARE TWO VOLUMES  
N/A = DATA NOT AVAILABLE

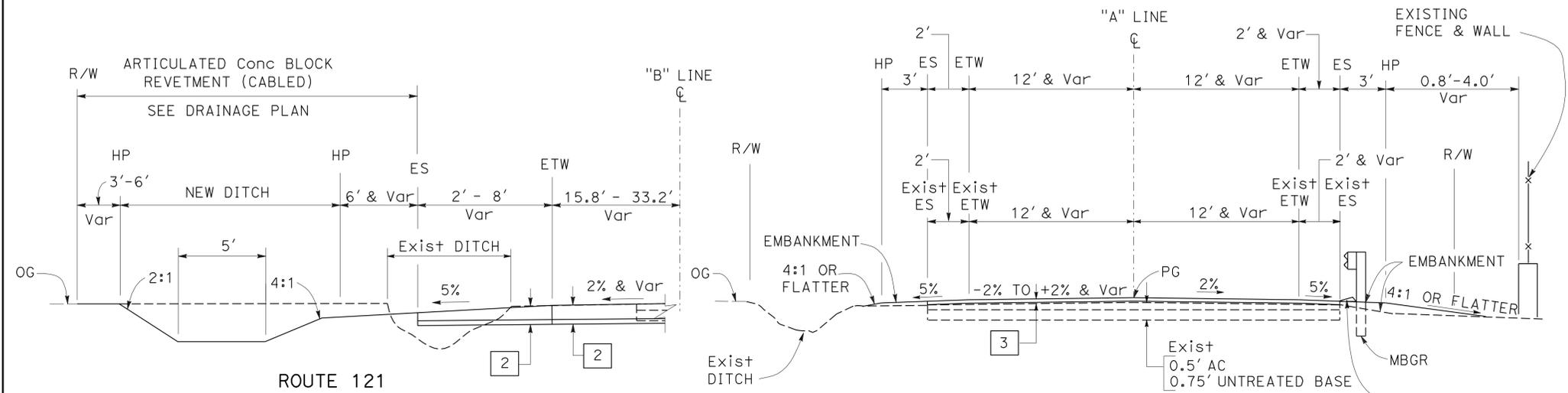
**TYPICAL CROSS SECTIONS**  
NO SCALE



**ROUTE 121**  
Sta "B" 14+50 TO 28+48.00



**ROUTE 12**  
Sta "A" 10+00.00 TO 14+81.92



**ROUTE 121**  
Sta "B" 23+86 TO 27+50

**ROUTE 12**  
Sta "A" 14+81.92 TO 18+42.00

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
DESIGN  
FUNCTIONAL SUPERVISOR: GEORGE LO  
CALCULATED/DESIGNED BY: [blank]  
CHECKED BY: [blank]  
REVISOR: STEPHEN WONG  
DATE: [blank]  
REVISOR: PATRICK YIP  
DATE: [blank]

USERNAME => s135318  
DGN FILE => 41a620ca001.dgn

RELATIVE BORDER SCALE IS IN INCHES  
0 1 2 3

UNIT 0746

PROJECT NUMBER & PHASE

04000004981

**X-1**

LAST REVISION | DATE PLOTTED => 17-MAY-2011  
01-05-11 | TIME PLOTTED => 11:43

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	3	67

REGISTERED CIVIL ENGINEER	DATE
5-9-11	11-8-10
PLANS APPROVAL DATE	

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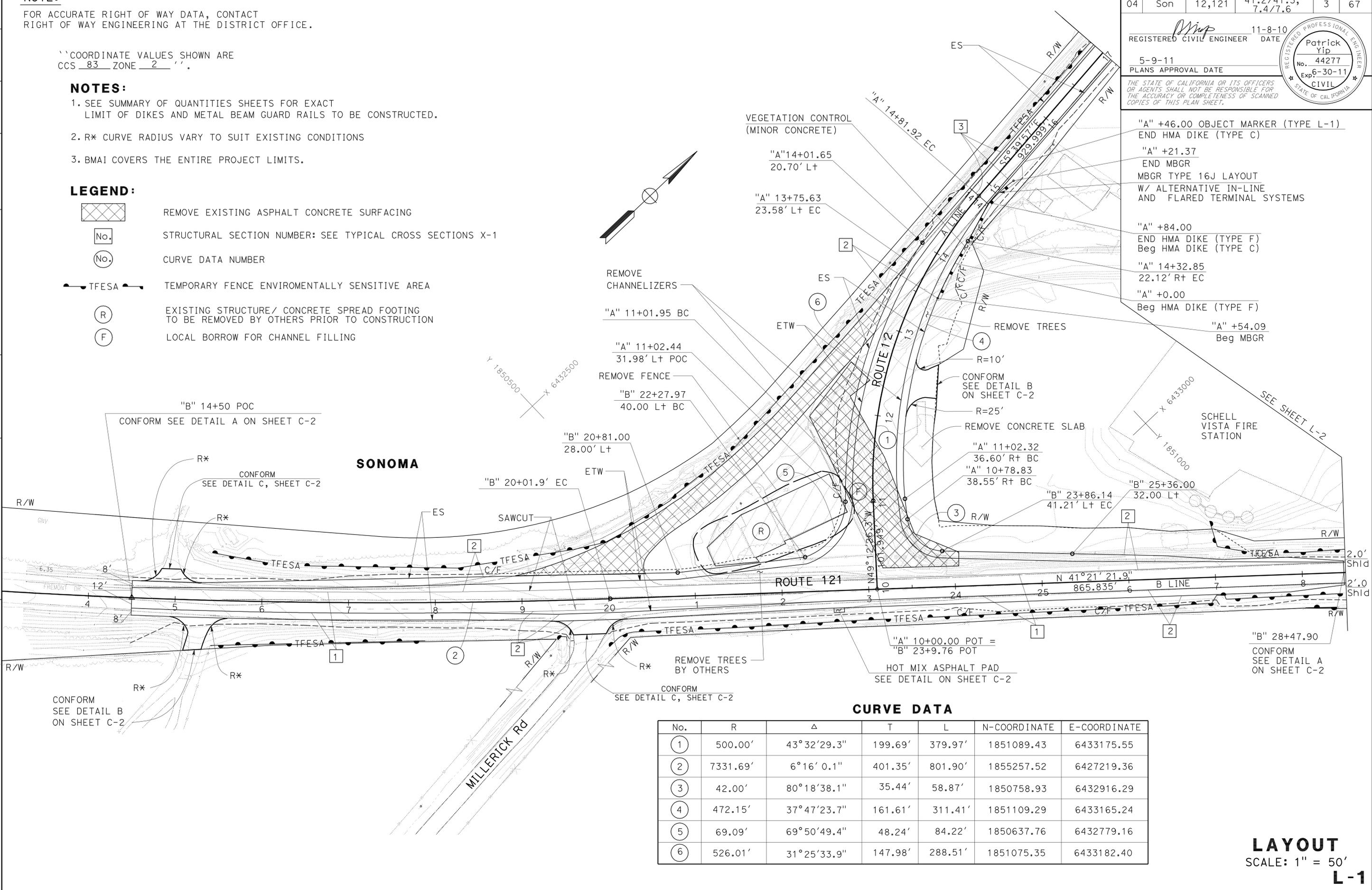
**NOTE:**  
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

COORDINATE VALUES SHOWN ARE CCS 83 ZONE 2

- NOTES:**
- SEE SUMMARY OF QUANTITIES SHEETS FOR EXACT LIMIT OF DIKES AND METAL BEAM GUARD RAILS TO BE CONSTRUCTED.
  - R\* CURVE RADIUS VARY TO SUIT EXISTING CONDITIONS
  - BMAI COVERS THE ENTIRE PROJECT LIMITS.

**LEGEND:**

- REMOVE EXISTING ASPHALT CONCRETE SURFACING
- STRUCTURAL SECTION NUMBER: SEE TYPICAL CROSS SECTIONS X-1
- CURVE DATA NUMBER
- TFESA TEMPORARY FENCE ENVIRONMENTALLY SENSITIVE AREA
- EXISTING STRUCTURE/ CONCRETE SPREAD FOOTING TO BE REMOVED BY OTHERS PRIOR TO CONSTRUCTION
- LOCAL BORROW FOR CHANNEL FILLING



**CURVE DATA**

No.	R	Δ	T	L	N-COORDINATE	E-COORDINATE
1	500.00'	43° 32' 29.3"	199.69'	379.97'	1851089.43	6433175.55
2	7331.69'	6° 16' 0.1"	401.35'	801.90'	1855257.52	6427219.36
3	42.00'	80° 18' 38.1"	35.44'	58.87'	1850758.93	6432916.29
4	472.15'	37° 47' 23.7"	161.61'	311.41'	1851109.29	6433165.24
5	69.09'	69° 50' 49.4"	48.24'	84.22'	1850637.76	6432779.16
6	526.01'	31° 25' 33.9"	147.98'	288.51'	1851075.35	6433182.40

**LAYOUT**  
SCALE: 1" = 50'  
**L-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 DESIGN  
 GEORGE LO  
 FUNCTIONAL SUPERVISOR  
 STEPHEN WONG  
 PATRICK YIP  
 REVISOR  
 DATE REVISOR  
 DATE REVISOR

FUNCTIONAL SUPERVISOR	GEORGE LO
CALCULATED/DESIGNED BY	STEPHEN WONG
CHECKED BY	PATRICK YIP
REVISOR	DATE

**NOTE:**  
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT  
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	4	67

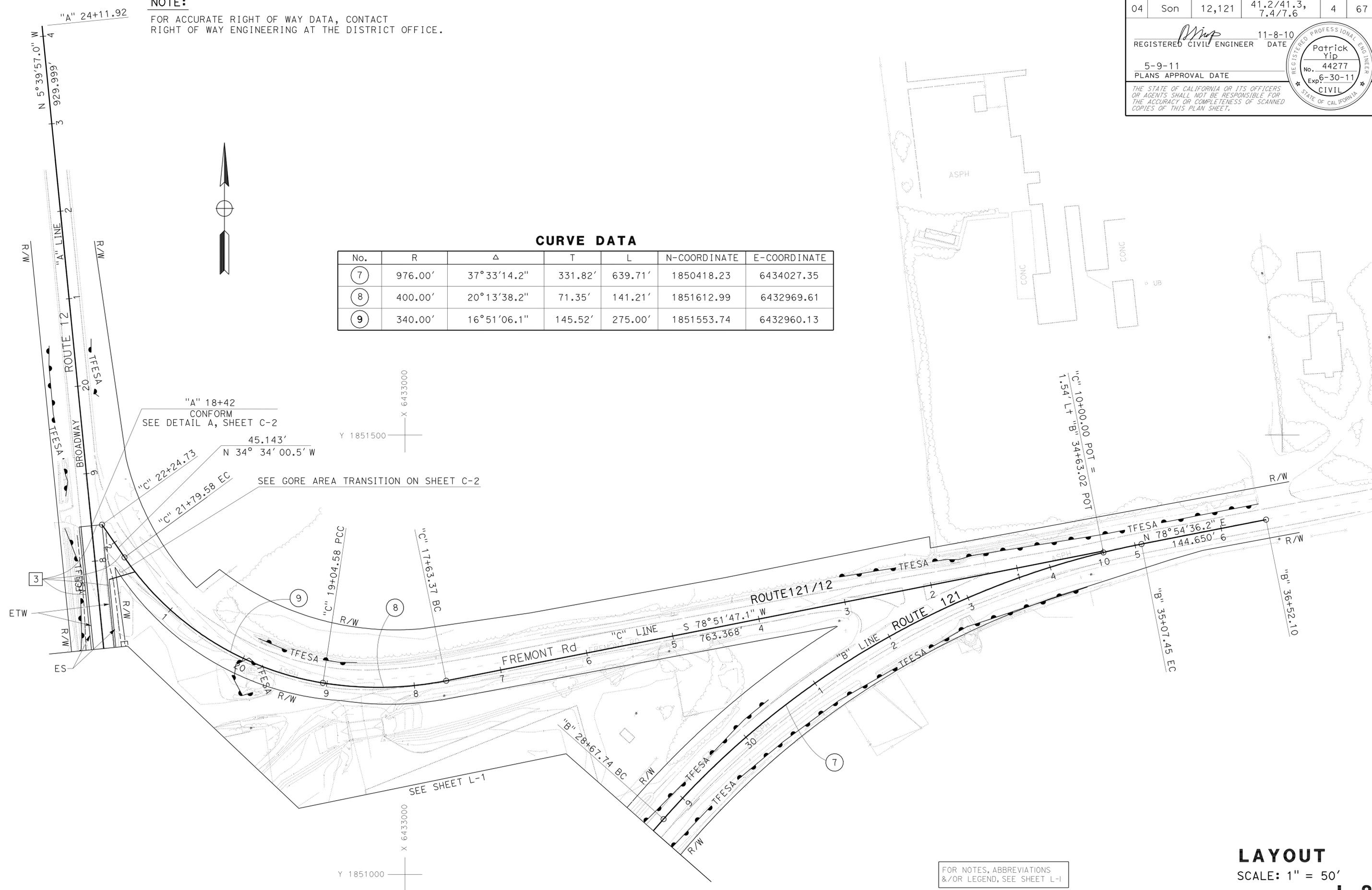
REGISTERED CIVIL ENGINEER DATE 11-8-10  
 5-9-11  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 Patrick Yip  
 No. 44277  
 Exp. 6-30-11  
 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.

**CURVE DATA**

No.	R	Δ	T	L	N-COORDINATE	E-COORDINATE
7	976.00'	37°33'14.2"	331.82'	639.71'	1850418.23	6434027.35
8	400.00'	20°13'38.2"	71.35'	141.21'	1851612.99	6432969.61
9	340.00'	16°51'06.1"	145.52'	275.00'	1851553.74	6432960.13



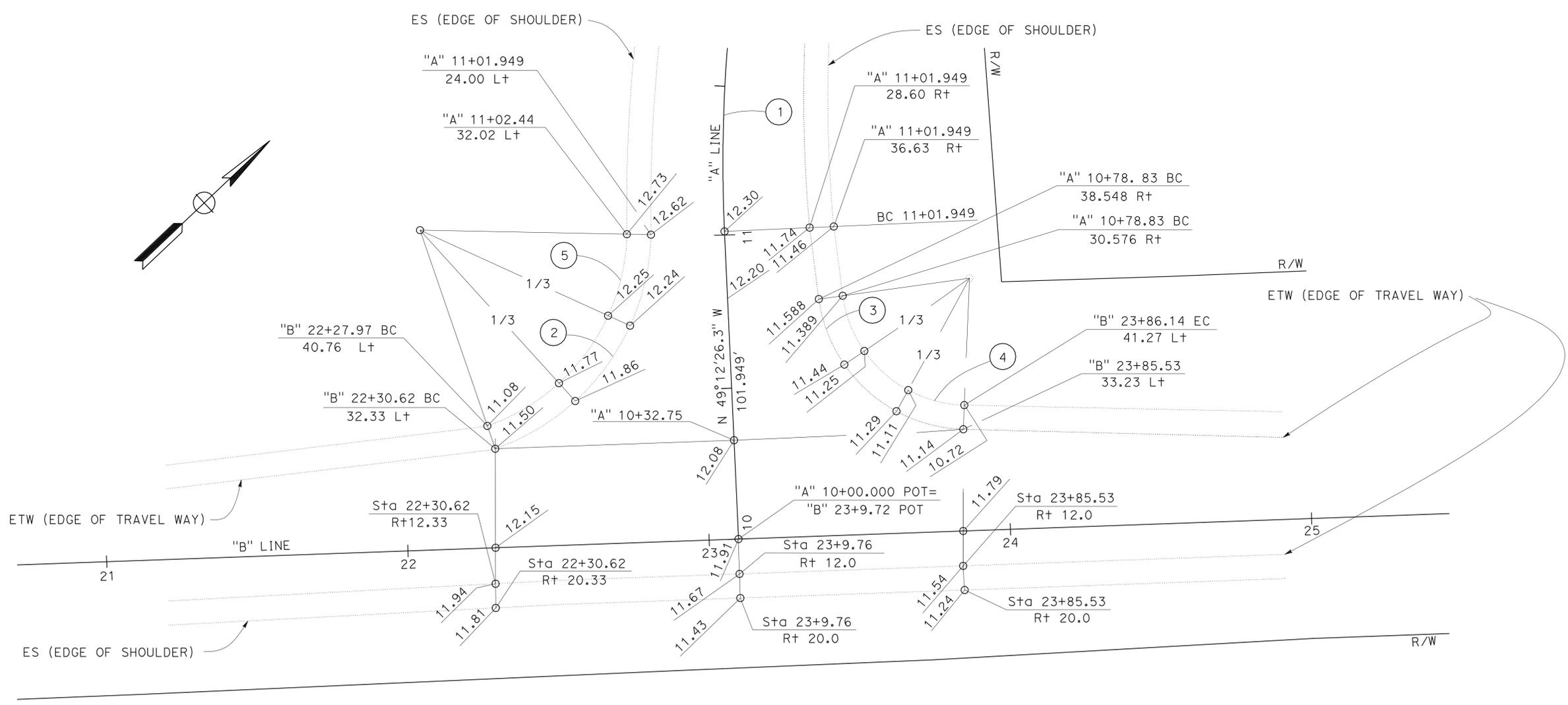
FOR NOTES, ABBREVIATIONS  
 &/OR LEGEND, SEE SHEET L-1

**LAYOUT**  
 SCALE: 1" = 50'  
**L-2**



**CURVE DATA**

No.	R	Δ	T	L	N-COORDINATE	E-COORDINATE
①	500.00'	43°32'29.3"	199.69'	379.971'	1851089.43	6433175.55
②	77.0'	69°50'49"	53.83'	93.98'	1850637.7551	6432779.1564
③	50.00'	80°18'38"	42.19'	70.08'	1850758.9258	6432916.2946
④	42'	80°18'38"	35.44'	58.87'	1850758.9258	6432916.2946
⑤	69'	69°50'49"	48.24'	84.22'	1850637.7551	6432779.1564



**INTERSECTION (PAVEMENT ELEVATION)**  
SCALE: 1"=20'

**CONSTRUCTION DETAIL**  
SCALE AS SHOWN

**C-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 DESIGN  
 FUNCTIONAL SUPERVISOR: GEORGE LO  
 CALCULATED/DESIGNED BY: [Blank]  
 CHECKED BY: [Blank]  
 REVISIONS BY: STEPHEN WONG, PATRICK YIP  
 DATE REVISIONS: [Blank]

LAST REVISION: [Blank]  
 DATE PLOTTED => 17-MAY-2011  
 TIME PLOTTED => 11:43

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	7	67

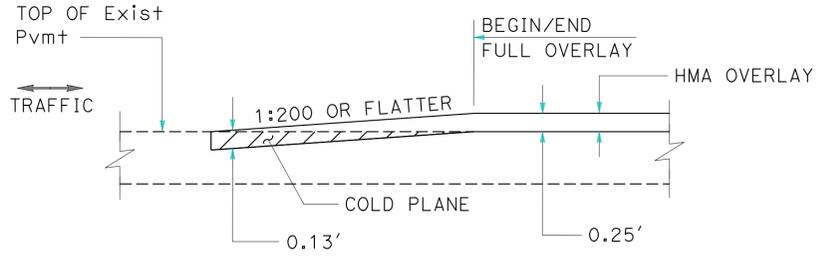
  

REGISTERED CIVIL ENGINEER	DATE
11-8-10	
5-9-11	
PLANS APPROVAL DATE	

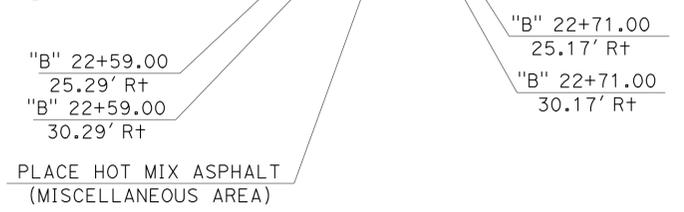
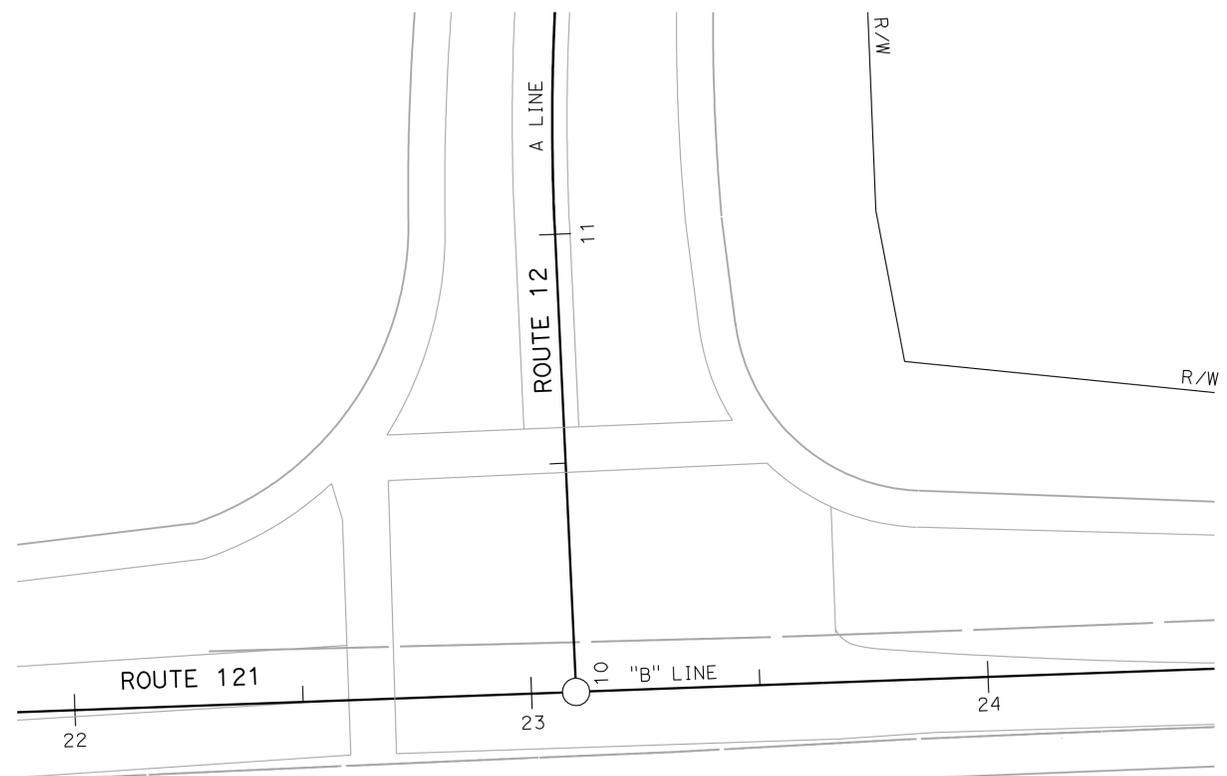
  

REGISTERED PROFESSIONAL ENGINEER	No.	44277
Exp.	6-30-11	
CIVIL		

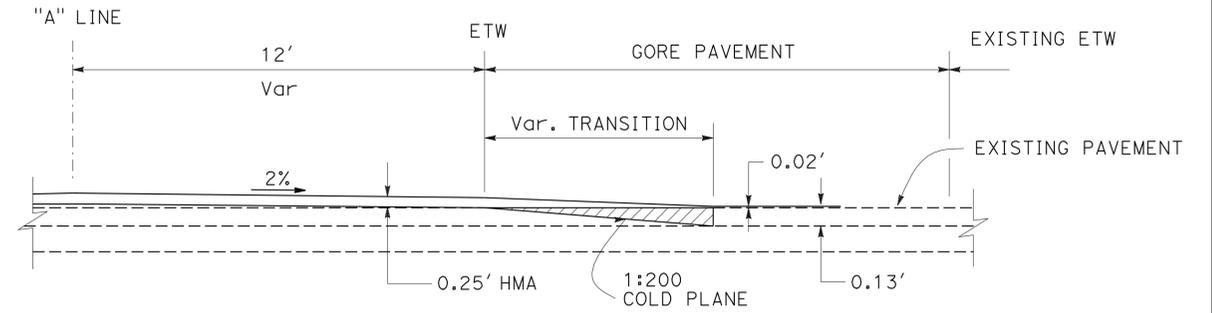
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



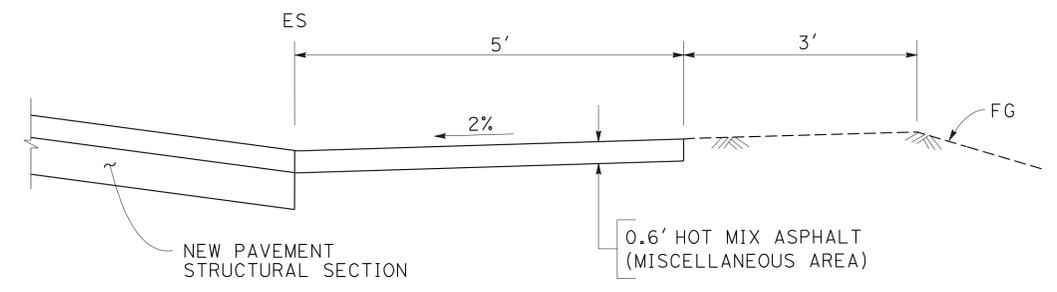
**TRAVERSE HMA TAPER TO EXISTING HMA PAVEMENT  
DETAIL A**



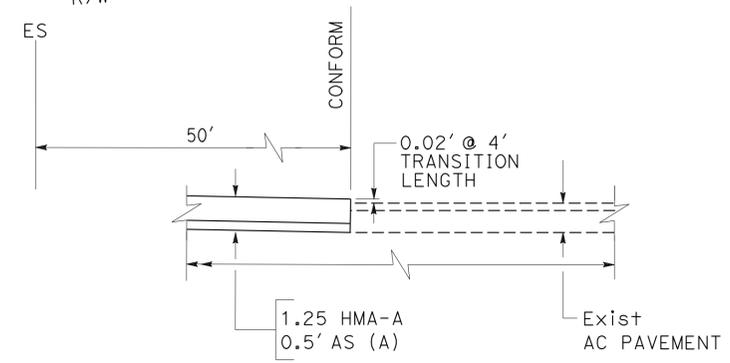
**HOT MIX ASPHALT PAD  
SCALE: 1" = 20'**



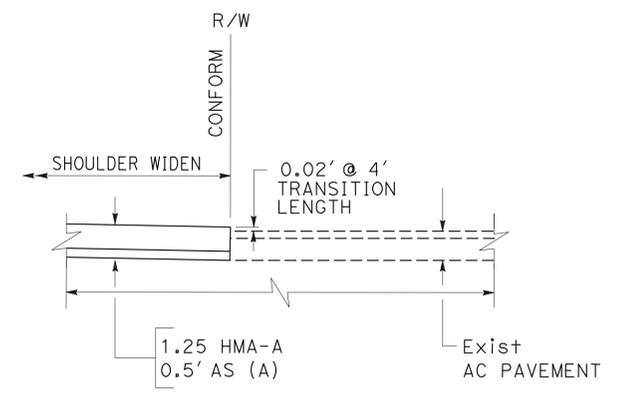
**GORE AREA TRANSITION**



**TYPICAL CROSS SECTION  
HOT MIX ASPHALT PADS**



**DETAIL C  
PAVEMENT DRIVEWAY TRANSITION**



**DETAIL B**

**CONSTRUCTION DETAIL  
SCALE AS SHOWN**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
DESIGN  
Caltrans

FUNCTIONAL SUPERVISOR: GEORGE LO  
CALCULATED/DESIGNED BY: [blank]  
CHECKED BY: [blank]  
DESIGNED BY: PATRICK YIP  
REVISOR: STEPHEN WONG  
DATE REVISION: [blank]

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	8	67

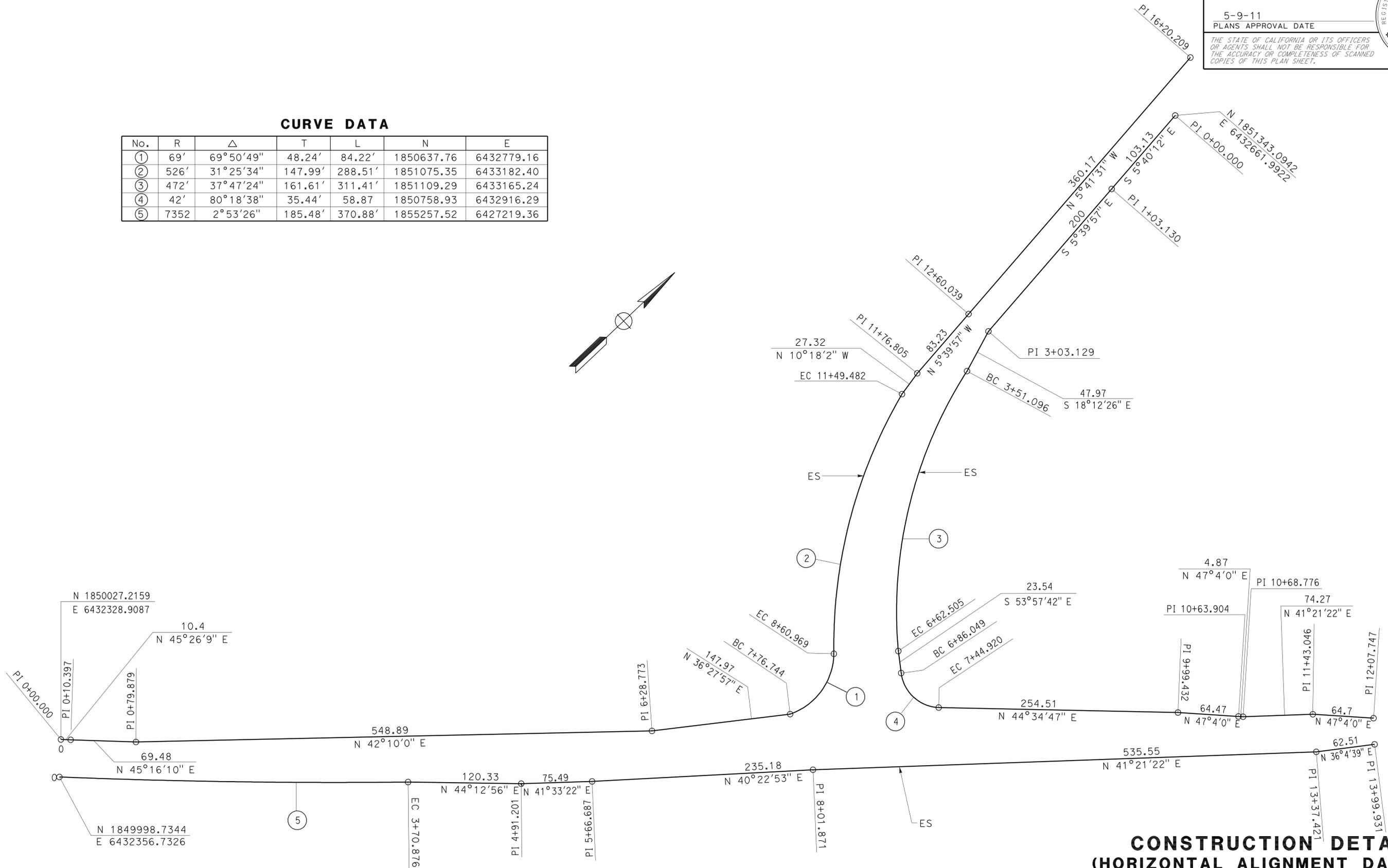
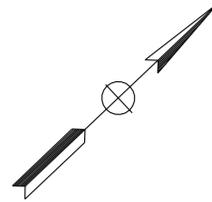
REGISTERED CIVIL ENGINEER DATE 11-8-10  
 5-9-11  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 Patrick Yip  
 No. 44277  
 Exp. 6-30-11  
 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.

**CURVE DATA**

No.	R	Δ	T	L	N	E
①	69'	69°50'49"	48.24'	84.22'	1850637.76	6432779.16
②	526'	31°25'34"	147.99'	288.51'	1851075.35	6433182.40
③	472'	37°47'24"	161.61'	311.41'	1851109.29	6433165.24
④	42'	80°18'38"	35.44'	58.87'	1850758.93	6432916.29
⑤	7352'	2°53'26"	185.48'	370.88'	1855257.52	6427219.36



**CONSTRUCTION DETAILS  
(HORIZONTAL ALIGNMENT DATA FOR  
EDGE OF SHOULDER)**

SCALE: 1" = 50'

**C-3**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 DESIGN  
 FUNCTIONAL SUPERVISOR: GEORGE LO  
 CALCULATED/DESIGNED BY: [Blank]  
 CHECKED BY: [Blank]  
 REVISIONS:  
 REVISOR: STEPHEN WONG  
 DATE: [Blank]  
 REVISOR: PATRICK YIP  
 DATE: [Blank]

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	9	67

Jennifer Egan  
 LICENSED LANDSCAPE ARCHITECT  
 5-9-11  
 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.

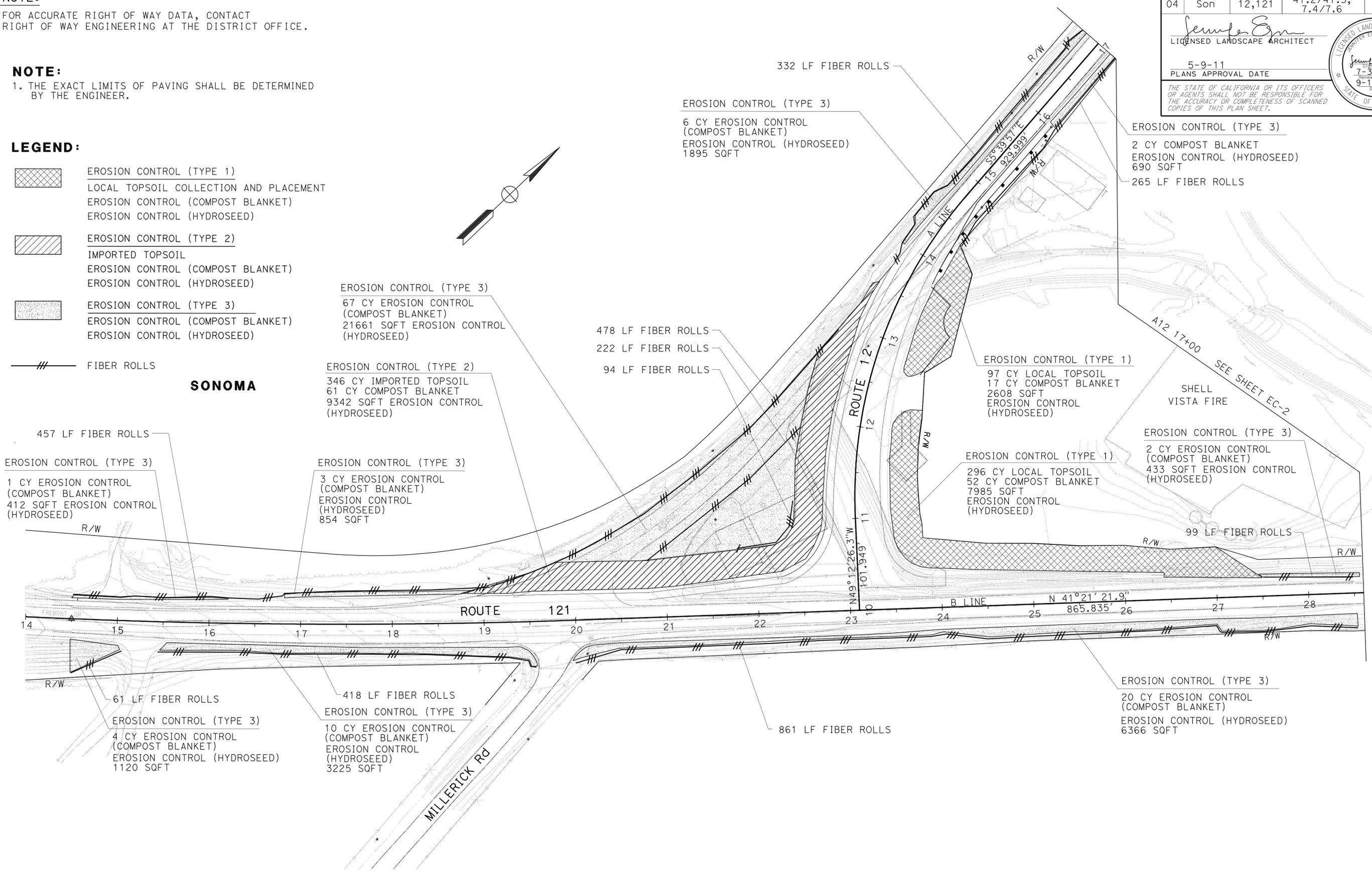
**NOTE:**  
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

**NOTE:**  
1. THE EXACT LIMITS OF PAVING SHALL BE DETERMINED BY THE ENGINEER.

**LEGEND:**

- EROSION CONTROL (TYPE 1)  
LOCAL TOPSOIL COLLECTION AND PLACEMENT  
EROSION CONTROL (COMPOST BLANKET)  
EROSION CONTROL (HYDROSEED)
- EROSION CONTROL (TYPE 2)  
IMPORTED TOPSOIL  
EROSION CONTROL (COMPOST BLANKET)  
EROSION CONTROL (HYDROSEED)
- EROSION CONTROL (TYPE 3)  
EROSION CONTROL (COMPOST BLANKET)  
EROSION CONTROL (HYDROSEED)
- FIBER ROLLS

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION WATER QUALITY  
 SENIOR LANDSCAPE ARCHITECT DAVID W. YAM  
 JENNIFER EGAWA ALEX MCDONALD  
 REVISOR BY DATE  
 CALCULATED/DESIGNED BY CHECKED BY  
 BORDER LAST REVISED 7/2/2010  
 USERNAME => s135318  
 DGN FILE => 41a620ge001.dgn  
 RELATIVE BORDER SCALE IS IN INCHES  
 UNIT 0792  
 PROJECT NUMBER & PHASE 04000004981



**EROSION CONTROL PLAN**  
SCALE: 1"=50'

**EC-1**

THIS PLAN ACCURATE FOR EROSION CONTROL WORK ONLY.

LAST REVISION DATE PLOTTED => 17-MAY-2011  
 01-05-11 TIME PLOTTED => 11:43

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** WATER QUALITY

SENIOR LANDSCAPE ARCHITECT	DAVID W. YAM	CALCULATED/DESIGNED BY	JENNIFER EGAWA	REVISOR	
		CHECKED BY	ALEX MCDONALD	DATE	

**NOTE:**  
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT  
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

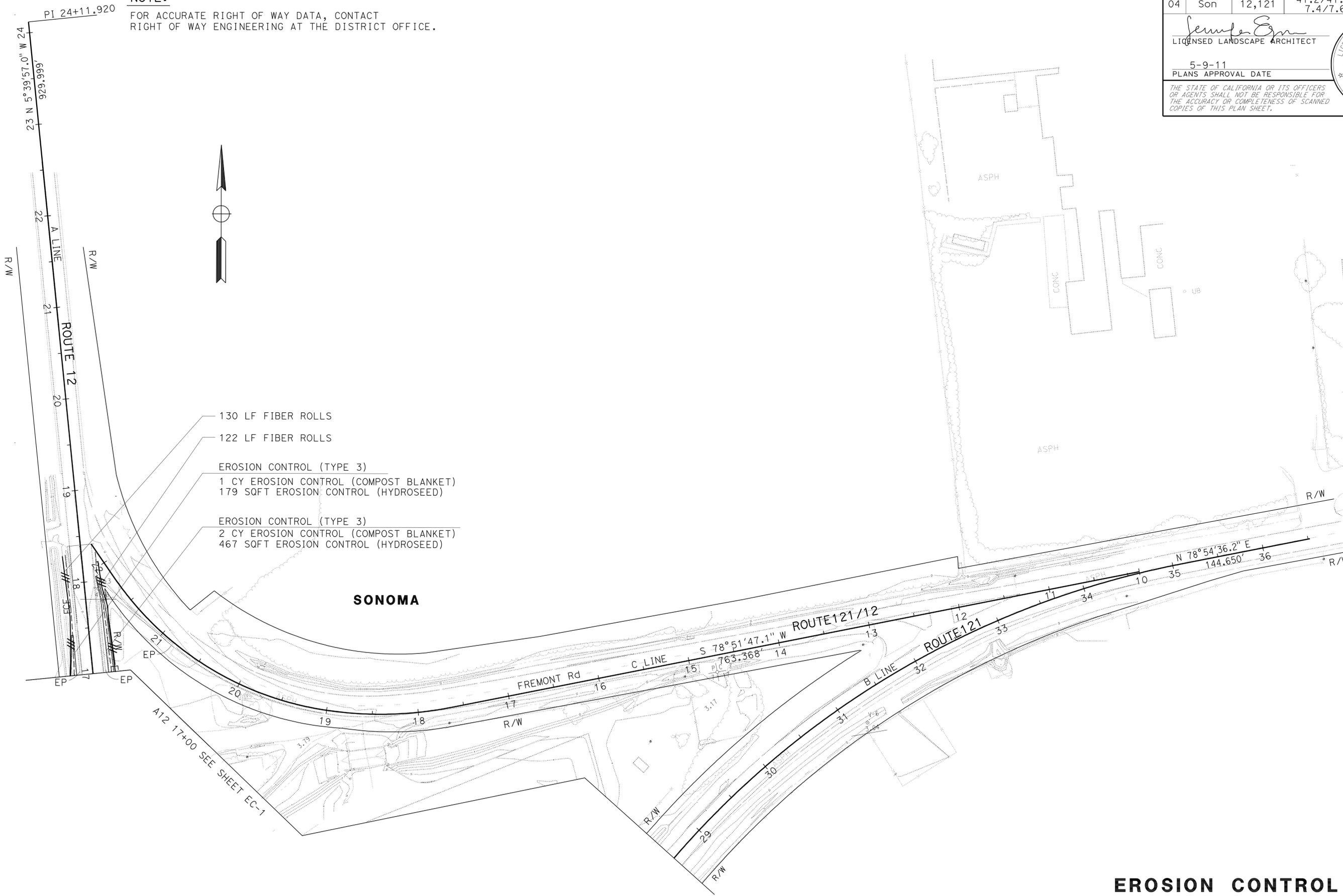
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	10	67

*Jennifer Egawa*  
 LICENSED LANDSCAPE ARCHITECT

5-9-11  
 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.

*Jennifer Egawa*  
 LICENSED LANDSCAPE ARCHITECT  
 REGISTERED EXAMINER NO. 5000  
 SIGNATURE  
 7-31-12  
 EXPIRES  
 9-14-10  
 DATE  
 STATE OF CALIFORNIA



**EROSION CONTROL PLAN**  
 SCALE: 1"=50'

**EC-2**

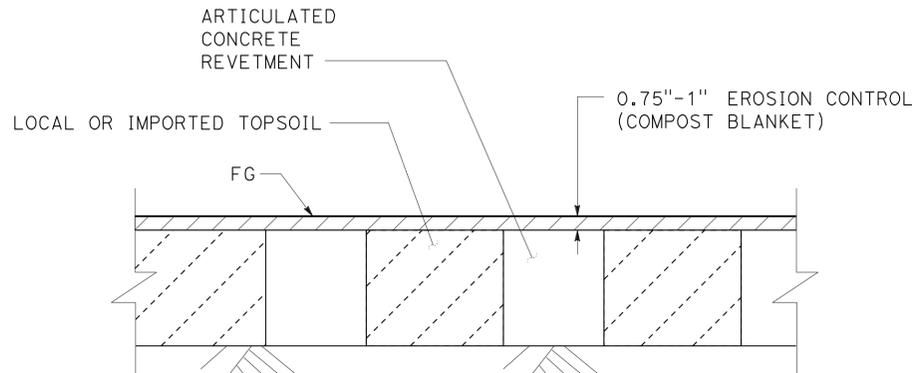
THIS PLAN ACCURATE FOR EROSION CONTROL WORK ONLY.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	11	67

*Jennifer Egawa*  
 LICENSED LANDSCAPE ARCHITECT  
 5-9-11  
 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.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** WATER QUALITY  
 SENIOR LANDSCAPE ARCHITECT DAVID W. YAM  
 CALCULATED/DESIGNED BY CHECKED BY  
 JENNIFER EGAWA ALEX MCDONALD  
 REVISED BY DATE REVISED



SECTION

**LOCAL TOPSOIL AND COMPOST BLANKET PLACEMENT IN  
ARTICULATED CONCRETE REVETMENT**

**EROSION CONTROL QUANTITIES**

SHEET NUMBER	EROSION CONTROL (COMPOST BLANKET)	EROSION CONTROL (HYDROSEED)	LOCAL TOPSOIL (N)	IMPORTED TOPSOIL	FIBER ROLLS
	CY	SQFT	CY	CY	LF
EC-1	245	55901	393	346	3287
EC-2	3	646	-	-	252
<b>TOTAL</b>	<b>248</b>	<b>56547</b>	<b>393</b>	<b>346</b>	<b>3539</b>

(N) DENOTES NOT A SEPARATE PAY ITEM

**EROSION CONTROL DETAILS  
AND QUANTITIES**

NO SCALE

**ECD-1**

THIS PLAN ACCURATE FOR EROSION CONTROL WORK ONLY.



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	12	67

Charlotte A. Cashin 11-8-10  
 REGISTERED CIVIL ENGINEER DATE  
 5-9-11  
 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.

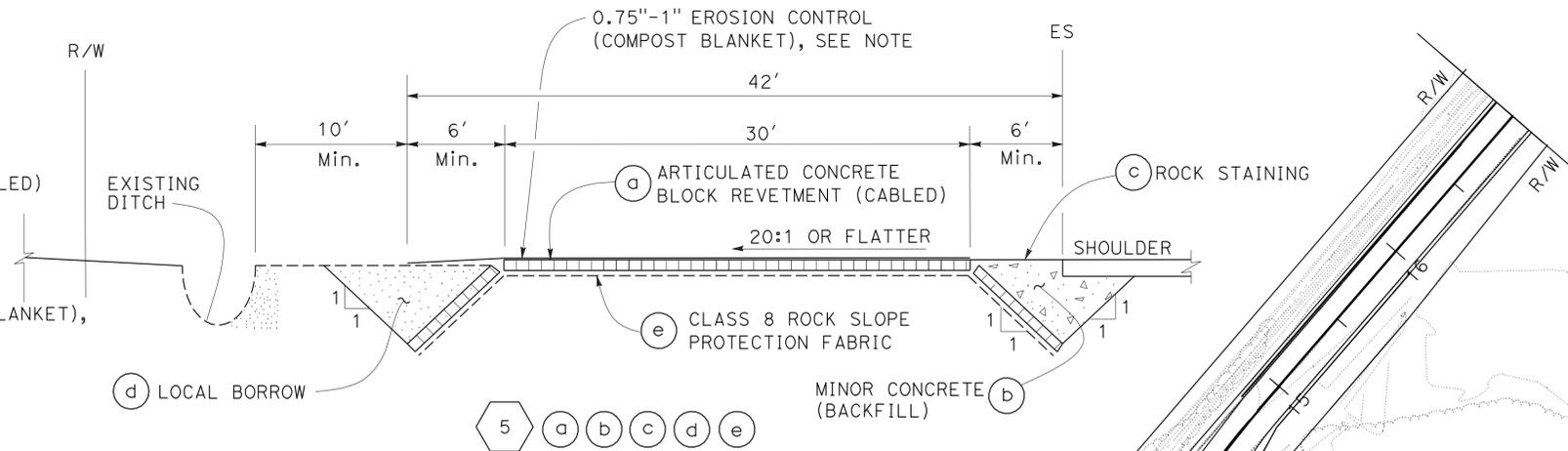
**NOTE:**  
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

**LEGEND:**

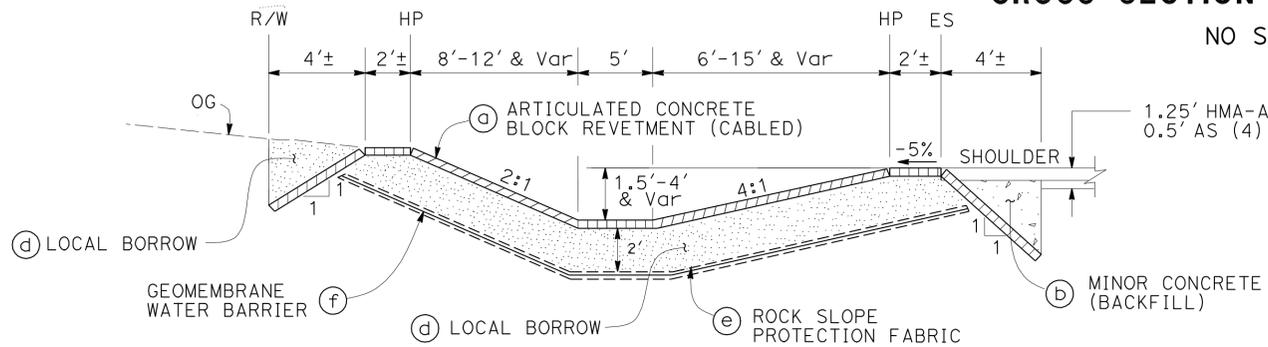
ARTICULATED CONCRETE BLOCK REVETMENT (CABLED)

**NOTE:**

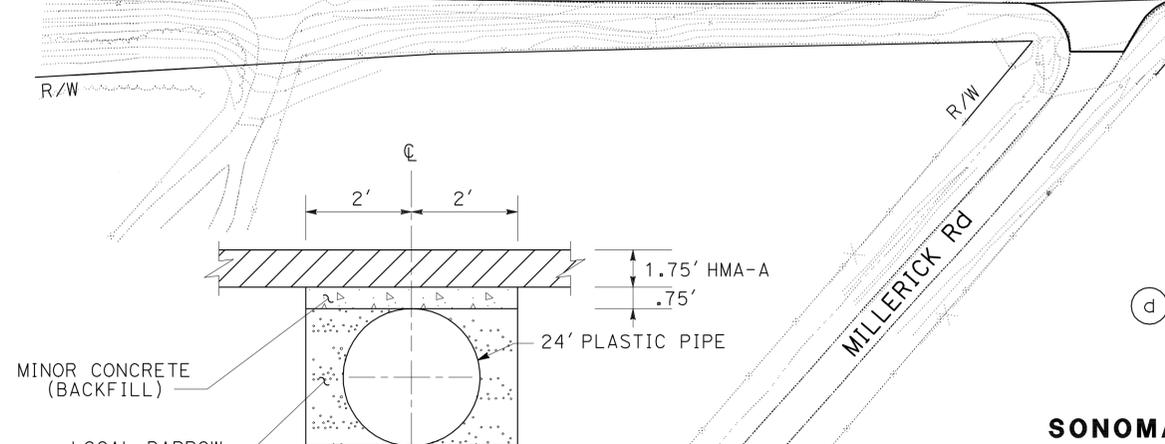
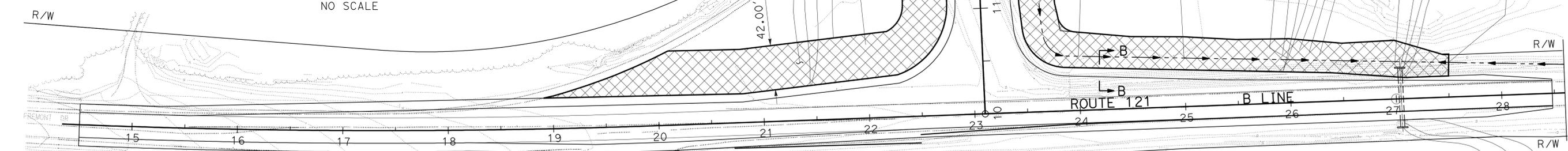
1. FOR THE QUANTITIES OF EROSION CONTROL (COMPOST BLANKET), SEE ECQ-1 SHEET.



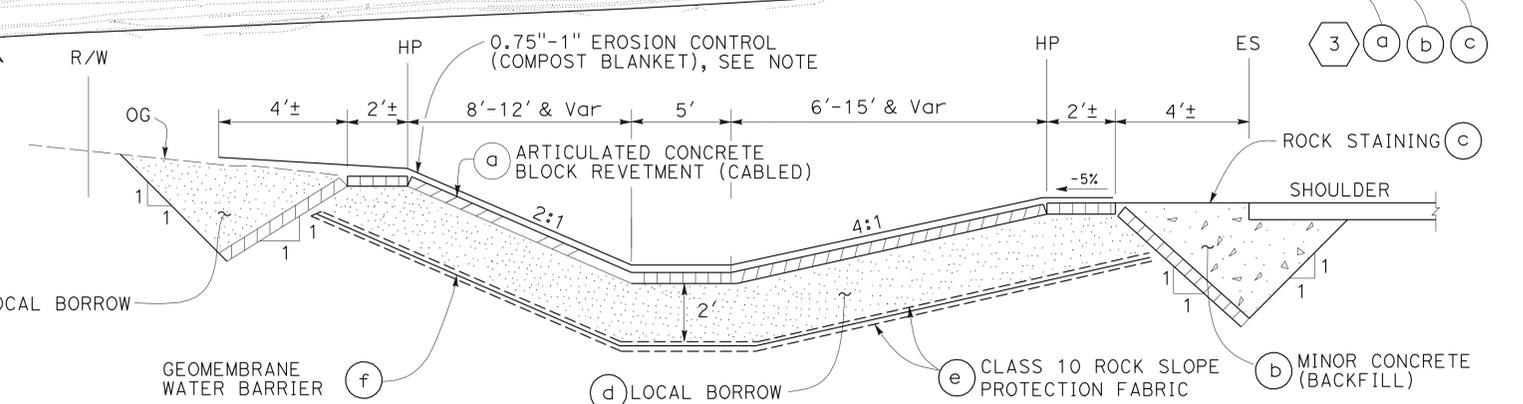
**ARTICULATED CONCRETE BLOCK REVETMENT (CABLED) CROSS SECTION A-A (TYPICAL)**  
NO SCALE



**ARTICULATED CONCRETE BLOCK REVETMENT (CABLED) CROSS SECTION B-B (TYPICAL) Sta: FROM 23+85 TO 27+50**  
NO SCALE



**MINIMUM COVER FOR CONSTRUCTION LOAD**  
NO SCALE



**ARTICULATED CONCRETE BLOCK REVETMENT (CABLED) CROSS SECTION B-B (TYPICAL)**  
NO SCALE

**DRAINAGE PLAN**  
SCALE: 1"=50'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 DESIGN  
 FUNCTIONAL SUPERVISOR: GEORGE LO  
 CALCULATED/DESIGNED BY: CHARLOTTE CASHIN  
 CHECKED BY: PATRICK YIP  
 REVISED BY: DATE REVISED:

SONOMA



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	14	67

REGISTERED CIVIL ENGINEER DATE 11-8-10  
 5-9-11 PLANS APPROVAL DATE  
 Patrick Yip  
 No. 44277  
 Exp. 6-30-11  
 CIVIL  
 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:**

- JOINTS FOR CULVERTS AND DRAINAGE PIPES SHALL BE STANDARD.
- FOR MINOR CONCRETE (MINOR STRUCTURE), SEE THE MINOR CONCRETE (MINOR STRUCTURAL) QUANTITIES TABLE ON Q-1 SHEET FOR THE GRAND TOTAL.

# DRAINAGE QUANTITIES

DRAINAGE SYSTEM No. 	DRAINAGE UNIT 															DESCRIPTION	STATION	DRAINAGE PLAN SHEET No. 	DRAINAGE SYSTEM No. 	DRAINAGE UNIT 		
		CY	CY	LB	CY	CY	LF	EA	SQYD		SQFT	(N)	EA	LF								
1	a																	24" PLASTIC FES	52.00' R+ "A" LINE 12+16.00	D-1	1	a
	b				6		90											24" PLASTIC PIPE (SMOOTH INTERIOR)				b
	c																	24" PLASTIC FES	44.61' R+ "A" LINE 13+06.00			c
	d																185	12" PLASTIC PIPE	4.75' R+ "A" LINE 12+85.00			d
2	a	2.0																TYPE D WINGWALL	28.86' L+ "B" LINE 27+04.27	D-1	2	a
	b		59.2	384														8' LONG 4' x 2' RCB CULVERT, CLASS 2 CONCRETE				b
	c																1	REMOVE HEADWALL	20.86' L+ "B" LINE 27+04.40			c
3	a	2.0																TYPE D WINGWALL	26.58' R+ "B" LINE 27+05.13	D-1	3	a
	b		44.4	288														6' LONG 4' x 2' RCB CULVERT, CLASS 2 CONCRETE				b
	c																1	REMOVE HEADWALL	20.58' R+ "B" LINE 27+05.04			c
4	a					1480			2960									ARTICULATED CONCRETE BLOCK REVETMENT AND DITCH		D-1	4	a
	b					398												MINOR CONCRETE (BACKFILL)				b
	c											2540						ROCK STAINING				c
	d													1994				BACKFILL WITH NATIVE MATERIAL 85% COMPACTION				d
	e									5140								CLASS 10 ROCK SLOPE PROTECTION FABRIC				e
	f												2570					GEOMEMBRANE WATER BARRIER				f
5	a								2810									ARTICULATED CONCRETE BLOCK REVETMENT		D-1	5	a
	b					952												MINOR CONCRETE (BACKFILL)				b
	c												4000					ROCK STAINING				c
	d														746			BACKFILL WITH NATIVE MATERIAL 85% COMPACTION				d
	e									2850								CLASS 8 ROCK SLOPE PROTECTION FABRIC				e
GRAND TOTAL	4.0	103.6	672	1350	1480	90	2	5770	5140	2850	2570	6540	2740	2	185							

(N) NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.  
 \* SEE NOTE 2.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
  
 DESIGN  
 FUNCTIONAL SUPERVISOR: GEORGE LO  
 CALCULATED/DESIGNED BY: CHARLOTTE CASHIN  
 CHECKED BY: CHARLOTTE CASHIN  
 REVISED BY: DATE REVISED:



**NOTE:**  
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

- NOTES:**
- LOCATIONS OF UTILITY FACILITIES SHOWN ON THESE PLANS ARE APPROXIMATE AND SHALL BE BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
  - ALL ELEVATIONS SHOWN REFER TO THE TOP OF THE PIPE ELEVATION UNLESS OTHERWISE INDICATED.

**LEGEND:**

DESCRIPTION	SYMBOL	OWNERSHIP
TELEPHONE CABLE	(OH)	AT&T
ELECTRICAL CONDUIT	(OH)	PG&E
GAS PIPE LINE	(UG)	PG&E
POTHOLE	⊙	

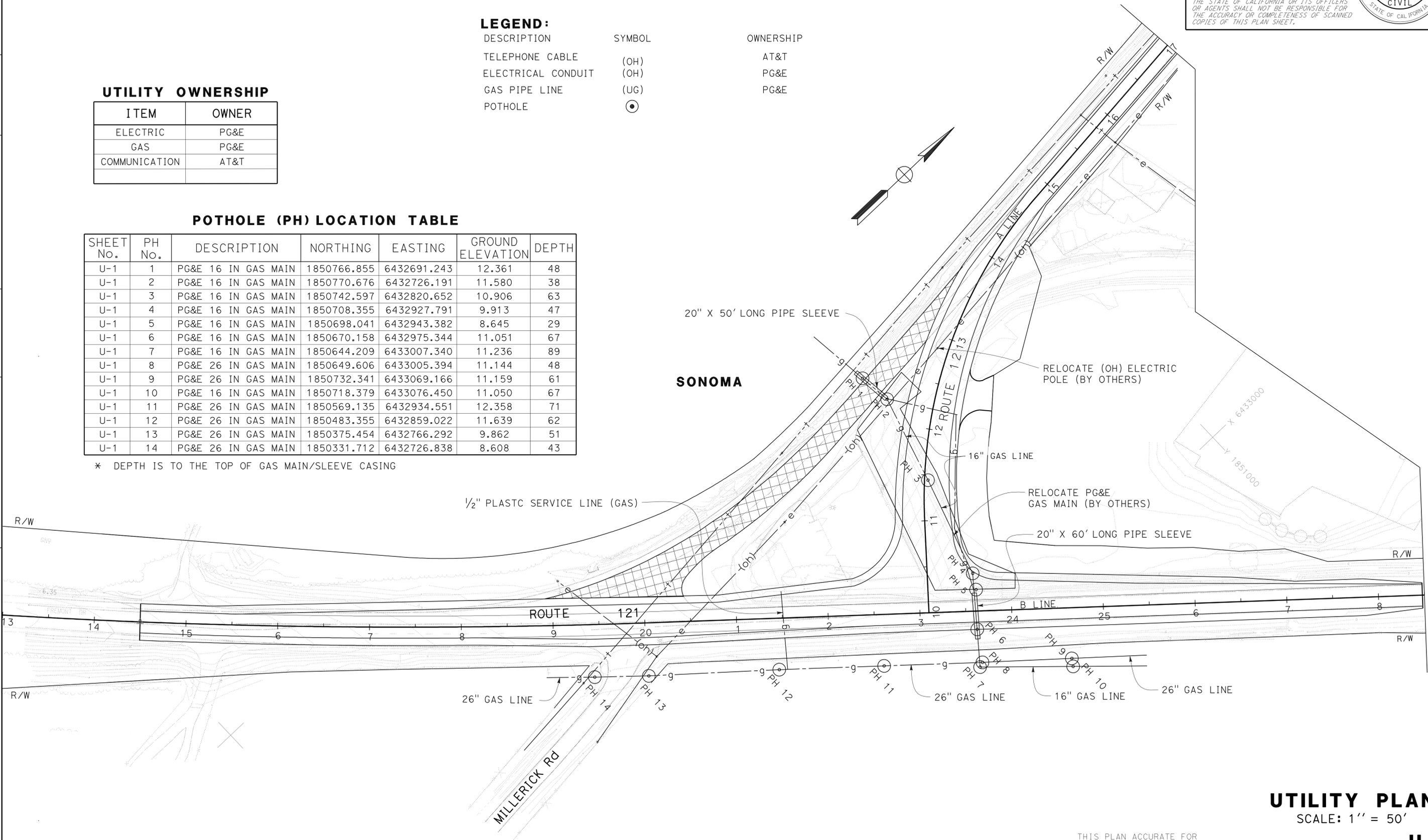
**UTILITY OWNERSHIP**

ITEM	OWNER
ELECTRIC	PG&E
GAS	PG&E
COMMUNICATION	AT&T

**POT HOLE (PH) LOCATION TABLE**

SHEET No.	PH No.	DESCRIPTION	NORTHING	EASTING	GROUND ELEVATION	DEPTH
U-1	1	PG&E 16 IN GAS MAIN	1850766.855	6432691.243	12.361	48
U-1	2	PG&E 16 IN GAS MAIN	1850770.676	6432726.191	11.580	38
U-1	3	PG&E 16 IN GAS MAIN	1850742.597	6432820.652	10.906	63
U-1	4	PG&E 16 IN GAS MAIN	1850708.355	6432927.791	9.913	47
U-1	5	PG&E 16 IN GAS MAIN	1850698.041	6432943.382	8.645	29
U-1	6	PG&E 16 IN GAS MAIN	1850670.158	6432975.344	11.051	67
U-1	7	PG&E 16 IN GAS MAIN	1850644.209	6433007.340	11.236	89
U-1	8	PG&E 26 IN GAS MAIN	1850649.606	6433005.394	11.144	48
U-1	9	PG&E 26 IN GAS MAIN	1850732.341	6433069.166	11.159	61
U-1	10	PG&E 16 IN GAS MAIN	1850718.379	6433076.450	11.050	67
U-1	11	PG&E 26 IN GAS MAIN	1850569.135	6432934.551	12.358	71
U-1	12	PG&E 26 IN GAS MAIN	1850483.355	6432859.022	11.639	62
U-1	13	PG&E 26 IN GAS MAIN	1850375.454	6432766.292	9.862	51
U-1	14	PG&E 26 IN GAS MAIN	1850331.712	6432726.838	8.608	43

\* DEPTH IS TO THE TOP OF GAS MAIN/SLEEVE CASING



**UTILITY PLAN**  
 SCALE: 1" = 50'

**U-1**

THIS PLAN ACCURATE FOR UTILITY WORK ONLY

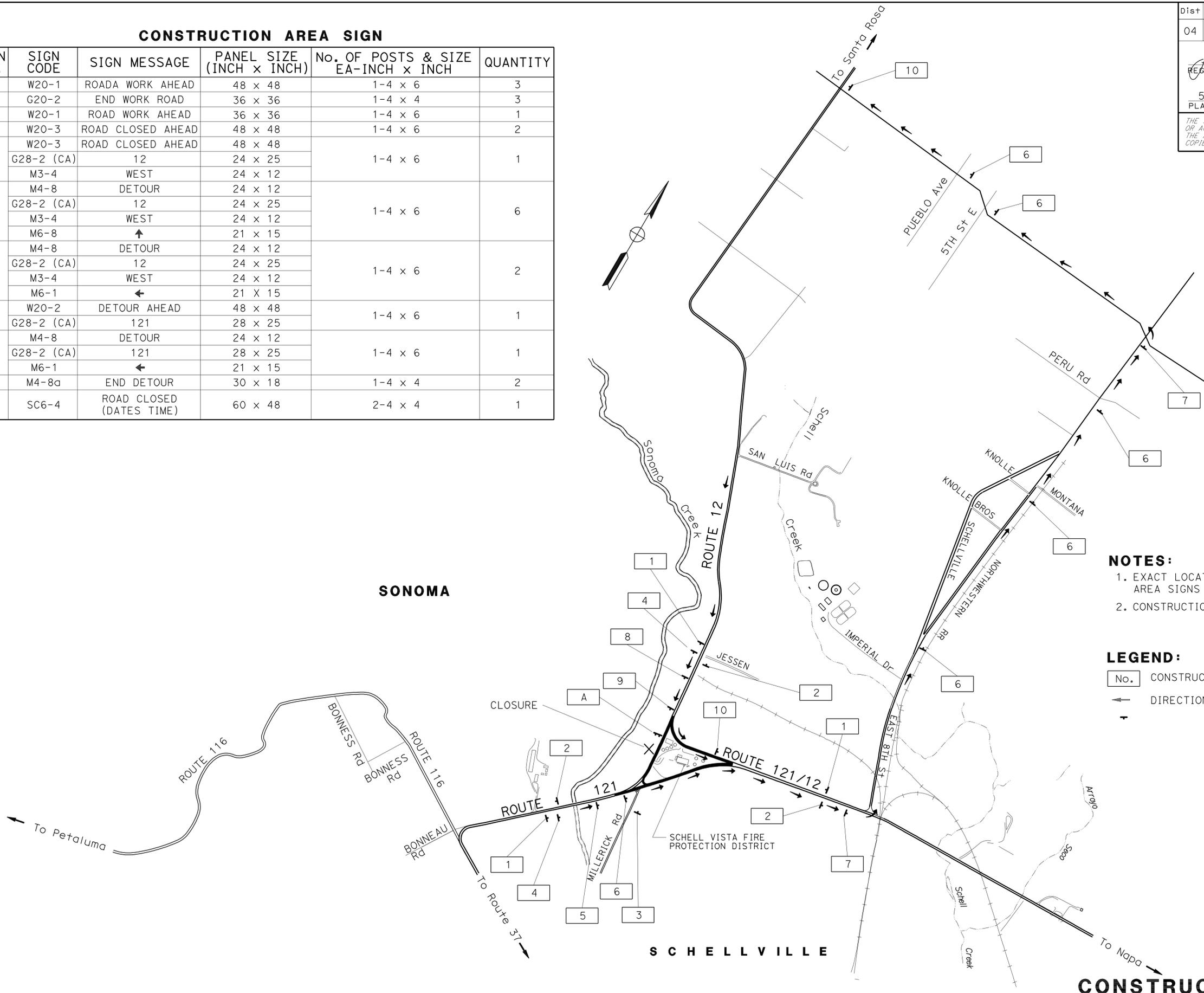
**CONSTRUCTION AREA SIGN**

SIGN No.	SIGN CODE	SIGN MESSAGE	PANEL SIZE (INCH x INCH)	No. OF POSTS & SIZE EA-INCH x INCH	QUANTITY
1	W20-1	ROAD WORK AHEAD	48 x 48	1-4 x 6	3
2	G20-2	END WORK ROAD	36 x 36	1-4 x 4	3
3	W20-1	ROAD WORK AHEAD	36 x 36	1-4 x 6	1
4	W20-3	ROAD CLOSED AHEAD	48 x 48	1-4 x 6	2
5	W20-3	ROAD CLOSED AHEAD	48 x 48	1-4 x 6	1
	G28-2 (CA)	12	24 x 25		
6	M3-4	WEST	24 x 12	1-4 x 6	6
	M4-8	DETOUR	24 x 12		
	G28-2 (CA)	12	24 x 25		
7	M3-4	WEST	24 x 12	1-4 x 6	2
	M6-8	↑	21 x 15		
	M4-8	DETOUR	24 x 12		
8	G28-2 (CA)	121	28 x 25	1-4 x 6	1
	M3-4	WEST	24 x 12		
	M6-1	←	21 x 15		
9	G28-2 (CA)	121	28 x 25	1-4 x 6	1
	M3-4	WEST	24 x 12		
	M6-1	←	21 x 15		
10	M4-8a	END DETOUR	30 x 18	1-4 x 4	2
A	SC6-4	ROAD CLOSED (DATES TIME)	60 x 48	2-4 x 4	1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	16	67

REGISTERED CIVIL ENGINEER  
 11-9-10 DATE  
 5-9-11 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.

REGISTERED PROFESSIONAL ENGINEER  
 Jerilyn L. Struven  
 No. 49964  
 Exp. 12-31-12  
 CIVIL  
 STATE OF CALIFORNIA



- NOTES:**
1. EXACT LOCATIONS AND POSITION OF CONSTRUCTION AREA SIGNS TO BE DETERMINED BY THE ENGINEER.
  2. CONSTRUCTION AREA SIGNS TO BE STATIONARY MOUNTED.

- LEGEND:**
- [No.] CONSTRUCTION AREA SIGN
  - ← DIRECTION OF TRAFFIC

**CONSTRUCTION AREA SIGNS**  
NO SCALE

THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGN WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 FUNCTIONAL SUPERVISOR: JERILYN L. STRUVEN  
 REVISIONS: [Blank]  
 CALCULATED/DESIGNED BY: [Blank]  
 CHECKED BY: [Blank]  
 HERMINIO RUIDERA  
 STEPHEN WONG  
 REVISOR: [Blank]  
 DATE: [Blank]

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	17	67

REGISTERED CIVIL ENGINEER	DATE
<i>Patrick Yip</i>	11-8-10
PLANS APPROVAL DATE	
5-9-11	

REGISTERED PROFESSIONAL ENGINEER  
 Patrick Yip  
 No. 44277  
 Exp. 6-30-11  
 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.

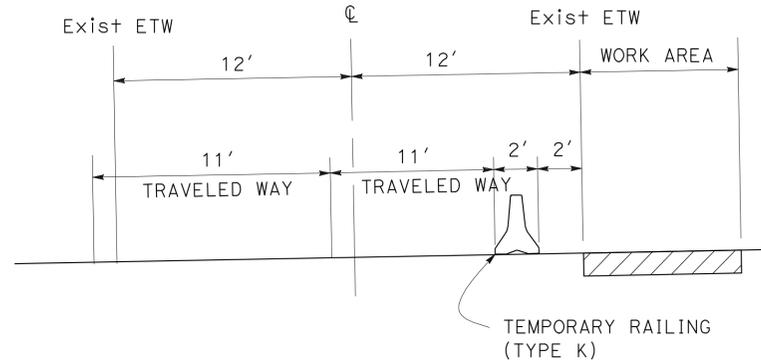
**NOTE:**  
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

**LEGEND:**

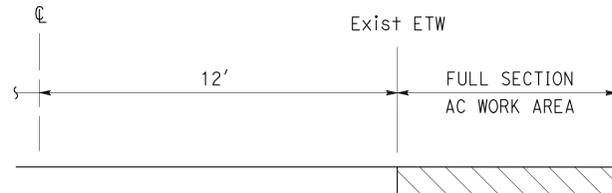
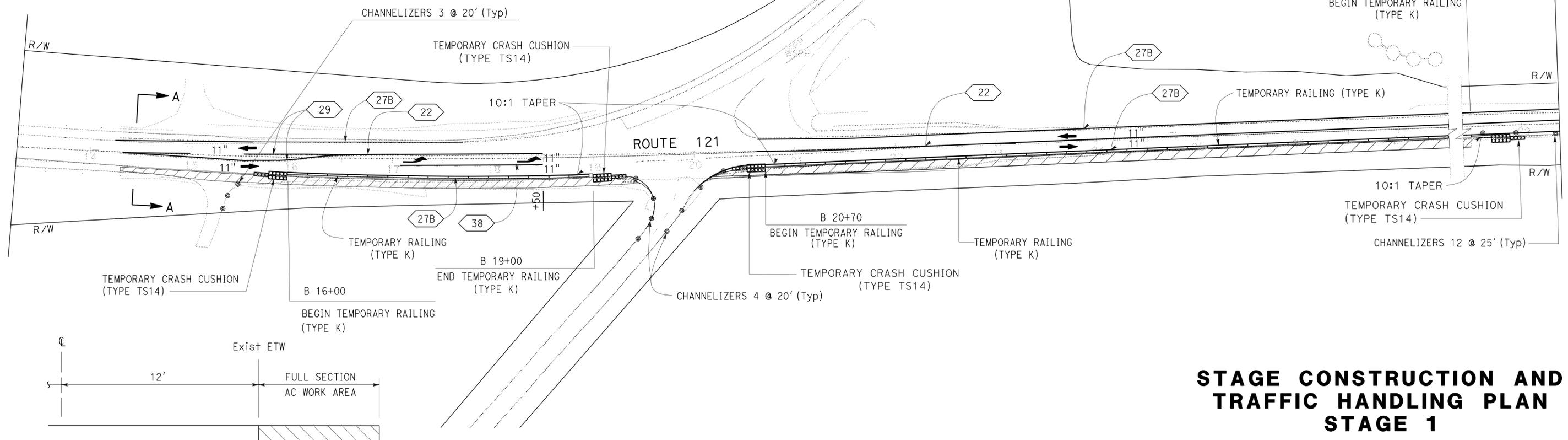
- CONSTRUCT THIS STAGE
- DIRECTION OF TRAFFIC
- TEMPORARY RAILING (TYPE K)
- TEMPORARY PAVEMENT DELINEATOR DETAIL NUMBERS
- CHANNELIZER

**STAGE 1 CONSTRUCTION:**

1. BEGIN CONSTRUCTION OF WIDENING IN ROUTE 121; SHIFT TRAFFIC TO THE NORTHERN SIDE OF THE ROUTE 121 BY TEMPORARY STRIPPING.
2. PLACE CONCRETE BARRIER (TYPE K) AND TEMPORARY CRASH CUSHION AS SHOWN IN THE PLAN.
3. CONSTRUCT 8' SHOULDER WIDENING AS SHOWN IN TYPICAL CROSSSECTION.
4. REMOVE CONCRETE BARRIER (TYPE K) AND TEMPORARY CRASH CUSHION.



**TYPICAL CROSS SECTION**



**SECTION A-A**  
NO SCALE

**STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN**  
**STAGE 1**

SCALE: 1" = 50'

**SC-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 DESIGN  
 FUNCTIONAL SUPERVISOR: GEORGE LO  
 CALCULATED/DESIGNED BY: VIRGILIO DE CASTRO  
 CHECKED BY: PATRICK YIP  
 REVISOR: VIRGILIO DE CASTRO  
 DATE: 7/2/2010

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

FUNCTIONAL SUPERVISOR  
 GEORGE LO

REVISOR  
 VIRGILIO DE CASTRO

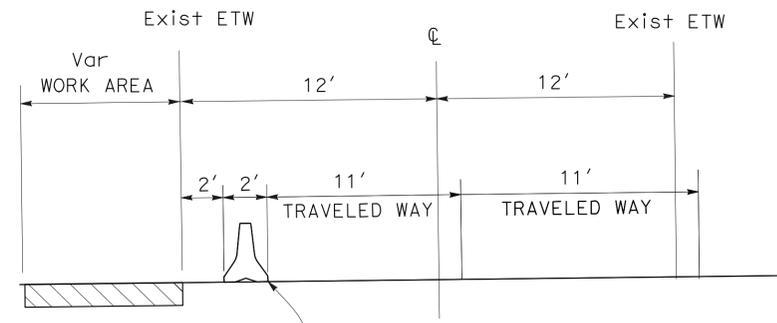
DESIGNER  
 PATRICK YIP

DATE PLOTTED => 19-MAY-2011  
 TIME PLOTTED => 06:04

**NOTE:**  
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT  
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

**STAGE 2 CONSTRUCTION:**

1. BEGIN CONSTRUCTION OF NEW ALIGNMENT OF THE ROUTE 121; SHIFT TRAFFIC TO THE SOUTHERN SIDE OF THE ROUTE 121 ON THE NEW SHOULDER AREA BY TEMPORARY STRIPPING
2. PROVIDE 24 HOURS ACCESS FROM FIRE STATION PARKING LOT TO ROUTE 12 AND ROUTE 121 FOR EMERGENCY VEHICLES FOR BOTH DRIVEWAYS OF THE FIRE STATION.
3. PLACE CONCRETE BARRIER (TYPE K) AND TEMPORARY CRASH CUSHIONS AS SHOWN IN THE PLAN.
4. RECONSTRUCT DITCH AT THE NORTHERN SIDE OF THE ROUTE 121.
5. REMOVE AC SURFACING IN THE BIG CHANNEL BETWEEN ROUTE 12 AND ROUTE 121. BACKFILL THE LOCAL BORROW TO THE CHANNEL AND THE VICINITY AREA ACCORDING TO THE GRADING PLAN.
6. CONSTRUCT NEW ALIGNMENT A-LINE AND WIDENING THE NORTHERN SIDE OF THE ROUTE 121 FROM STA 21+50 TO STA 28+48.
7. RECONSTRUCT DRIVEWAY FOR FIRE STATION NEAR A-LINE STA 12+30.
8. CONSTRUCT ELECTRICAL ITEM WORKS.
9. LAYOUT TRAFFIC STRIPPING FOR OPENING A-LINE TO PUBLIC.



**SECTION A-A**  
 NO SCALE

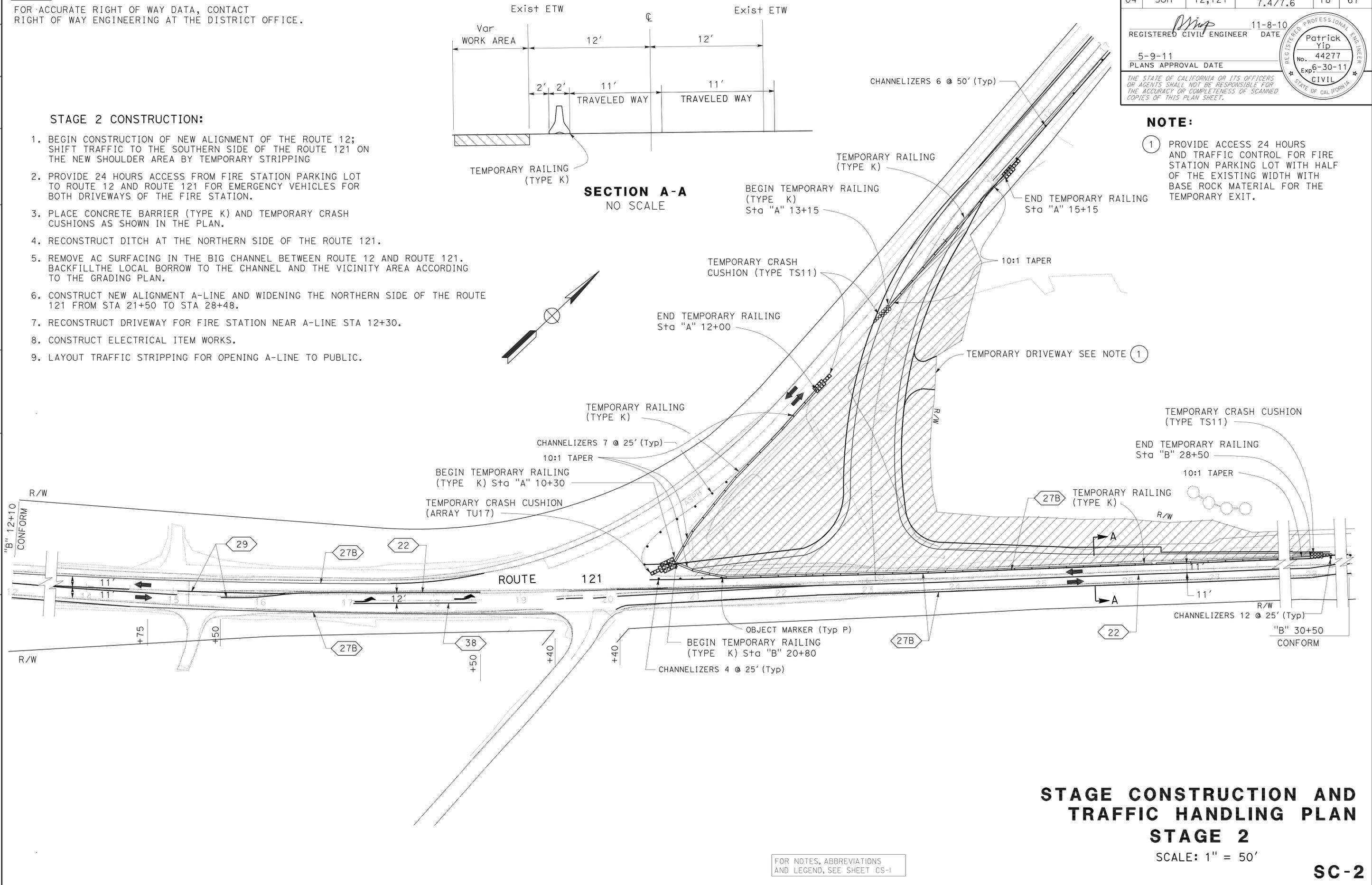
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	18	67

REGISTERED CIVIL ENGINEER DATE 11-8-10  
 Patrick Yip  
 No. 44277  
 Exp. 6-30-11  
 CIVIL

PLANS APPROVAL DATE 5-9-11

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.

**NOTE:**  
 1 PROVIDE ACCESS 24 HOURS AND TRAFFIC CONTROL FOR FIRE STATION PARKING LOT WITH HALF OF THE EXISTING WIDTH WITH BASE ROCK MATERIAL FOR THE TEMPORARY EXIT.



**STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN**  
**STAGE 2**  
 SCALE: 1" = 50'  
**SC-2**

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET CS-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	19	67

REGISTERED CIVIL ENGINEER	DATE
11-8-10	
5-9-11	PLANS APPROVAL DATE

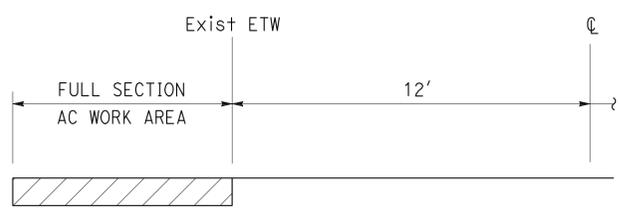
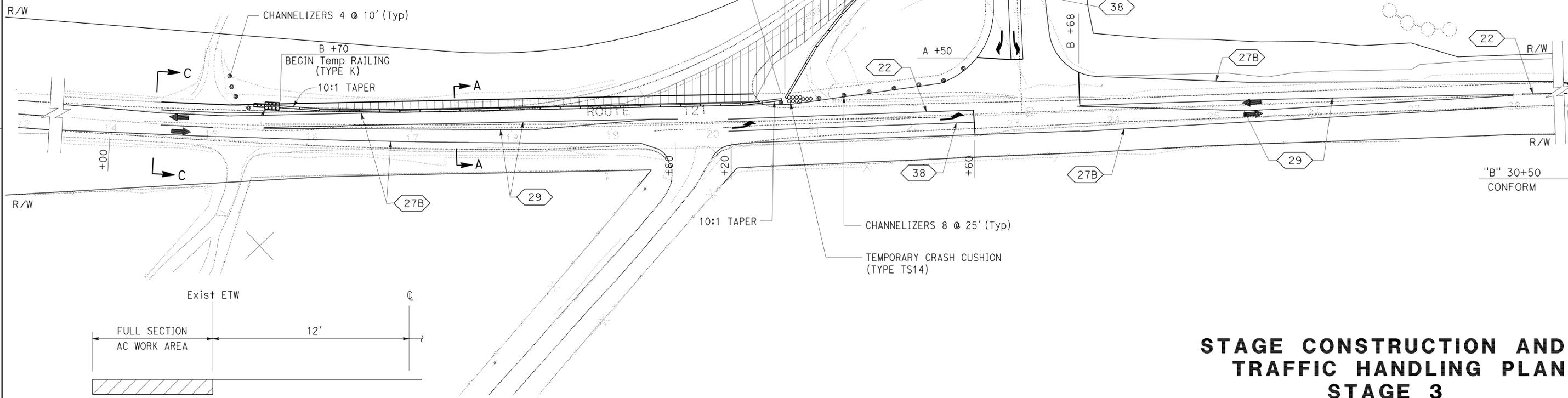
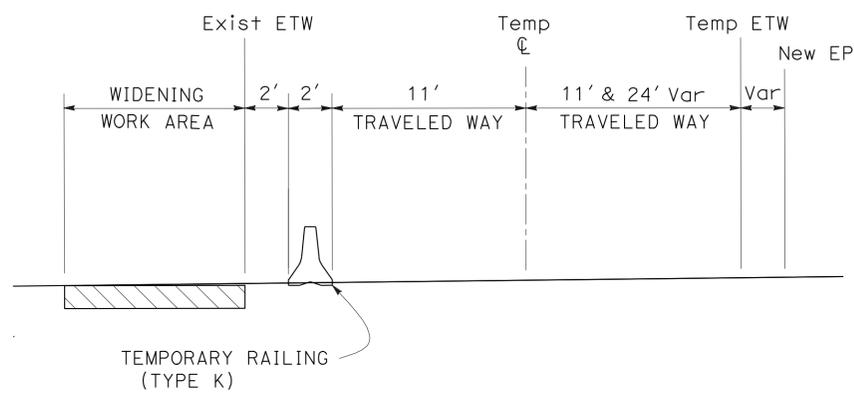
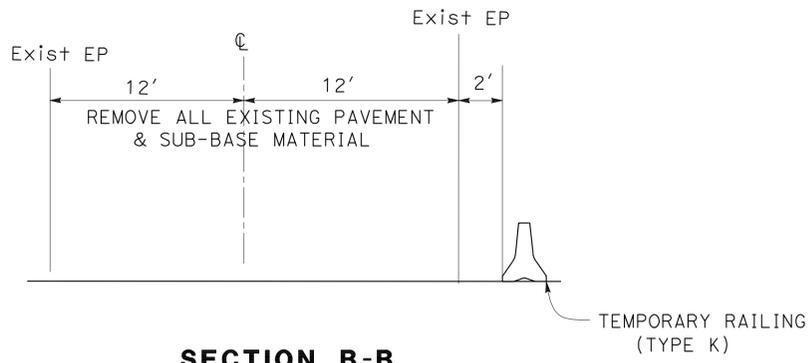
REGISTERED PROFESSIONAL ENGINEER	No.	44277
Exp.	6-30-11	
CIVIL		

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.

**NOTE:**  
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

**STAGE 3 CONSTRUCTION:**

1. PLACE CONCRETE BARRIER (TYPE K) AND TEMPORARY CRASH CUSHION AS SHOWN IN THE PLAN TO SHIFT TRAFFIC TO THE NEW ALIGNMENT OF THE ROUTE 12.
2. BEGIN REMOVAL THE SURFACE AC AND SUBBASE OF THE OLD ROUTE 12.
3. CONSTRUCT 8' SHOULDER WIDENING AS SHOWN IN TYPICAL CROSS SECTION ON NORTHERN SIDE OF 121 FROM STA 16+00 TO STA 20+70
4. COLD PLANNING THE EXISTING PAVEMENT BEFORE OVERLAY THE FINAL LIFT OF AC ON ROUTE 121 FOR RESTRIPPING THE ROAD SURFACE.



**STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN  
STAGE 3**

SCALE: 1" = 50'

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET CS-1

**SC-3**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 DESIGN  
 FUNCTIONAL SUPERVISOR: GEORGE LO  
 CALCULATED/DESIGNED BY: VIRGILIO DE CASTRO  
 CHECKED BY: PATRICK YIP  
 REVISOR: VIRGILIO DE CASTRO  
 DATE: 7/2/2010

USERNAME => fmmikes1  
DGN FILE => 41a620ma003.dgn



UNIT 0746

PROJECT NUMBER & PHASE

04000004981

LAST REVISION: 01-05-11  
 DATE PLOTTED => 19-MAY-2011  
 TIME PLOTTED => 06:04

## STAGE CONSTRUCTION PAVEMENT DELINEATION QUANTITIES

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	20	67

11-8-10  
DATE

REGISTERED CIVIL ENGINEER

5-9-11  
PLANS APPROVAL DATE

Patrick Yip  
No. 44277  
Exp. 6-30-11  
CIVIL

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.

SHEET No.	LOCATION	STATION LIMITS	DETAIL NUMBER	LENGTH	REMOVE				TEMPORARY				CHANNELIZER (SURFACED MOUNTED)			
					THERMOPLASTIC TRAFFIC STRIPE		TRAFFIC STRIPE (PAINT)		PAVEMENT MARKER	TRAFFIC STRIPE (PAINT)				PAVEMENT MARKER		PAVEMENT MARKING (PAINT)
					4" SOLID YELLOW	4" SOLID WHITE	4" SOLID	8" SOLID		4" SOLID YELLOW	4" SOLID WHITE	8" SOLID WHITE		TYPE D	TYPE G	
					HAZARDOUS WASTE											
LF				EA	LF			EA		SQFT	EA					
SC 1	L+	"B" Sta. 12+10 TO 18+10	27B	600		600										
SC 1	MEDIAN	"B" Sta. 12+10 TO 14+10	22	200	400				20	400			20			
SC 1	MEDIAN	"B" Sta. 14+10 TO 16+50	29	240	960				22	960			22			
SC 1	MEDIAN	"B" Sta. 16+50 TO 18+50	22	200	400				20	400			20			
SC 1	MEDIAN	"B" Sta. 17+05 TO 18+50	38	145		145			7			145	7			
SC 1	R+	"B" Sta. 12+10 TO 14+70	27B	260		260				260						
SC 1	R+	"B" Sta. 16+00 TO 19+00	27B	300		300				300						
SC 1	L+	"B" Sta. 20+70 TO 30+50	27B	980		980				980						
SC 1	MEDIAN	"B" Sta. 20+70 TO 30+50	22	980	1960				84	1960			84			
SC 1	R+	"B" Sta. 20+70 TO 30+50	27B	980		980				980						
SC 1	MEDIAN	"B" Sta. 17+05 TO 18+50	TYPE III (L)	2 EA									84			
SC 1		VARIOUS													23	
<b>SUBTOTAL</b>						<b>3720</b>	<b>3265</b>		<b>153</b>	<b>3720</b>	<b>3120</b>	<b>145</b>	<b>146</b>	<b>7</b>	<b>84</b>	<b>23</b>
SC 2	L+	"B" Sta. 12+10 TO 18+50	27B	640						640						
SC 2	MEDIAN	"B" Sta. 12+10 TO 14+10	22	200						400			20			
SC 2	MEDIAN	"B" Sta. 14+10 TO 16+50	29	240						960			22			
SC 2	MEDIAN	"B" Sta. 16+50 TO 18+50	22	200						400			20			
SC 2	MEDIAN	"B" Sta. 17+05 TO 18+50	38	145								145	7			
SC 2	R+	"B" Sta. 12+10 TO 15+00	27B	290						290						
SC 2	R+	"B" Sta. 15+50 TO 19+40	27B	390						390						
SC 2	L+	"B" Sta. 20+50 TO 30+50	27B	1000						1000						
SC 2	MEDIAN	"B" Sta. 19+40 TO 30+50	22	1110						2220			96			
SC 2	R+	"B" Sta. 20+20 TO 30+50	27B	1030						1030						
SC 2	MEDIAN	"B" Sta. 17+05 TO 18+50	TYPE III (L)	2 EA									84			
SC 2		VARIOUS													29	
<b>SUBTOTAL</b>						<b>3980</b>	<b>3350</b>			<b>3980</b>	<b>3350</b>	<b>145</b>	<b>158</b>	<b>7</b>	<b>84</b>	<b>29</b>
SC 3	L+	"B" Sta. 12+10 TO 14+50	27B	240						240						
SC 3	L+	"B" Sta. 15+70 TO 22+60	27B	690						690						
SC 3	MEDIAN	"B" Sta. 12+10 TO 15+00	22	290						580			26			
SC 3	MEDIAN	"B" Sta. 15+50 TO 19+60	29	410						1640			36			
SC 3	MEDIAN	"B" Sta. 20+20 TO 22+60	22	240						480			22			
SC 3	MEDIAN	"B" Sta. 20+20 TO 22+60	38	240								240	11			
SC 3	R+	"B" Sta. 12+10 TO 19+60	27B	750						750						
SC 3	L+	"B" Sta. 23+68 TO 30+50	27B	682						682						
SC 3	MEDIAN	"B" Sta. 23+68 TO 28+50	29	482						1928			64	42		
SC 3	MEDIAN	"B" Sta. 28+50 TO 30+50	22	200						580			20			
SC 3	R+	"B" Sta. 20+20 TO 30+50	27B	1030						1030						
SC 3	L+	"A" Sta. 10+50 TO 15+50	27B	500						500						
SC 3	MEDIAN	"A" Sta. 10+50 TO 12+00	38	150								150	8			
SC 3	MEDIAN	"A" Sta. 10+50 TO 15+50	22	500						1000			78			
SC 3	R+	"A" Sta. 10+50 TO 15+50	27B	500						500						
SC 3	MEDIAN	"B" Sta. 20+10 TO 22+50	TYPE III (L)	2 EA									84			
SC 3	MEDIAN	"A" Sta. 10+50 TO 12+00	TYPE III (R)	2 EA									84			
SC 3	MEDIAN	"A" Sta. 10+50 TO 12+00	TYPE III (L)	2 EA									84			
SC 3	R+	"B" Sta. 22+60	12" STOP LINE	22									22			
SC 3	L+	"B" Sta. 23+65	12" STOP LINE	30									30			
SC 3	L+	"A" Sta. 10+50	12" STOP LINE	32									32			
SC 3		VARIOUS													22	
<b>SUBTOTAL</b>									<b>153</b>	<b>6208</b>	<b>4392</b>	<b>390</b>	<b>246</b>	<b>61</b>	<b>336</b>	<b>22</b>
<b>TOTAL</b>						<b>3720 *</b>	<b>3265</b>		<b>153 *</b>		<b>25450</b>		<b>625</b>	<b>504</b>	<b>74</b>	

NOTE \* FOR THE GRAND TOTAL OF REMOVE THERMOPLASTIC TRAFFIC STRIPE AND REMOVE PAVEMENT MARKERS, SEE THE PAVEMENT DELINEATION TABLE IN THE PDQ-2 SHEET

## STAGE CONSTRUCTION QUANTITIES SCQ-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	21	67

REGISTERED CIVIL ENGINEER DATE 11-8-10  
 5-9-11  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 Patrick Yip  
 No. 44277  
 Exp. 6-30-11  
 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.

### TEMPORARY CRASH CUSHION MODULE

SHEET No.	TYPE	STATION LIMITS	LOCATION	QUANTITY
				EA
SC 1	TS 14	"B" 16+00	RIGHT SHOULDER	14
SC 1	TS 14	"B" 19+00	RIGHT SHOULDER	14
SC 1	TS 14	"B" 20+70	RIGHT SHOULDER	14
SC 1	TS 14	"B" 28+50	RIGHT SHOULDER	14
SUBTOTAL				56
SC 2	TU 17	"B" 20+50	LEFT SHOULDER	17
SC 2	TS 11	"B" 28+50	LEFT SHOULDER	11
SC 2	TS 11	"A" 12+00	RIGHT SHOULDER	11
SC 2	TS 11	"A" 13+15	RIGHT SHOULDER	11
SC 2	TS 11	"A" 15+15	RIGHT SHOULDER	11
SUBTOTAL				61
SC 3	TS 14	"B" 15+70	LEFT SHOULDER	14
SC 3	TS 14	"B" 20+70	LEFT SHOULDER	14
SC 3	TS 11	"A" 13+30	LEFT SHOULDER	11
SUBTOTAL				39
TOTAL				156

### TEMPORARY RAILING (TYPE K)

SHEET No.	STATION LIMITS	LOCATION	LENGTH
			FT
SC1	"B" 16+00 TO 19+00	RIGHT SHOULDER	300
SC1	"B" 20+70 TO 28+50	RIGHT SHOULDER	780
SUBTOTAL			1080
SC2	"B" 20+80 TO 28+50	LEFT SHOULDER	780
SC2	"A" 10+30 TO 12+00	LEFT SHOULDER	280
SC2	"A" 13+15 TO 15+15	LEFT SHOULDER	200
SUBTOTAL			1260
SC3	"B" 13+70 TO 14+50		
SC3	"B" 15+70 TO 20+70	LEFT SHOULDER	500
SC3	"A" 10+10 TO 15+30	LEFT SHOULDER	520
SUBTOTAL			1020
TOTAL			3360

## STAGE CONSTRUCTION QUANTITIES

### SCQ-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 DESIGN  
 FUNCTIONAL SUPERVISOR: GEORGE LO  
 CALCULATED/DESIGNED BY: VIRGILIO DE CASTRO  
 CHECKED BY: PATRICK YIP  
 REVISOR: VIRGILIO DE CASTRO  
 DATE: 7/2/2010



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	23	67

REGISTERED CIVIL ENGINEER	DATE	11-8-10
5-9-11	PLANS APPROVAL DATE	

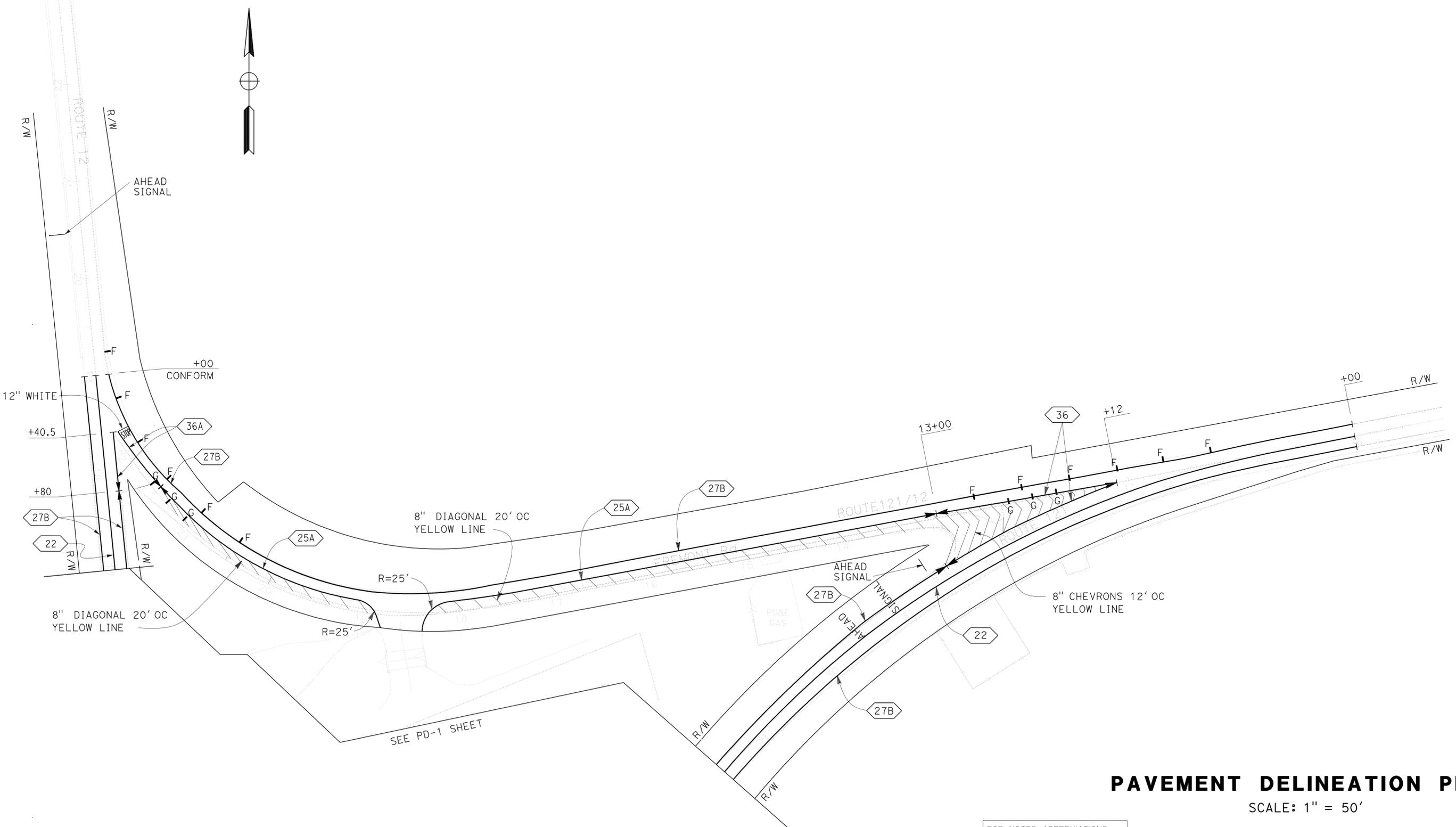
  

REGISTERED PROFESSIONAL ENGINEER Patrick Yip No. 44277 Exp. 6-30-11 CIVIL
---

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.

**NOTE:**  
FOR ACCURATE RIGHT OF WAY DATA, CONTACT  
RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	REVISOR	DATE
Caltrans	GEORGE LO	STEPHEN WONG	
	TRAFFIC	PATRICK YIP	
		CALCULATED/DESIGNED BY	CHECKED BY



**PAVEMENT DELINEATION PLAN**  
SCALE: 1" = 50'

FOR NOTES, ABBREVIATIONS  
&/OR LEGEND, SEE SHEET L-1

**PD-2**

LAST REVISION: 01-05-11 DATE PLOTTED => 17-MAY-2011 TIME PLOTTED => 11:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	24	67

REGISTERED CIVIL ENGINEER DATE 11-8-10  
 5-9-11  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 Patrick Yip  
 No. 44277  
 Exp. 6-30-11  
 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.

### PAVEMENT DELINEATION

SHEET No.	STATION LIMITS	DETAIL No. OR PAVEMENT MARKING	LENGTH	THERMOPLASTIC TRAFFIC STRIPE			RETROREFLECTIVE PAVEMENT MARKER			THERMOPLASTIC PAVEMENT MARKING	DELINEATOR (CLASS 1)	
				4" YELLOW	4" WHITE	8" WHITE	TYPE D	TYPE G	TYPE H		TYPE F	TYPE G
				FT	LF	EA	SQFT	EA				
PD-1	B LINE 14+50 TO 19+60 Rt	27B	510		510							
PD-1, 2	B LINE 20+00 TO 36+00 Rt	27B	1600		1600							
PD-1	B LINE 14+50 TO 15+05	29	55	220			8					
PD-1	B LINE 15+05 TO 15+55	29	50	200	one side detail 29 only		4					
PD-1	B LINE 15+55 TO 19+40	29	385	1540			36					
PD-1	B LINE 19+40 TO 19+67	22	27	54			6					
PD-1	B LINE 20+15 TO 22+60	22	245	490			24					
PD-1	B LINE 20+15 TO 22+60	38	245			245		12				
PD-1	B LINE 23+67 TO 28+11	29	444	1776			40					
PD-1, 2	B LINE 28+11 TO 36+00	22	789	1578			68					
PD-1	B LINE 14+50 TO 22+60 Lt	27B	810		810							
PD-1, 2	A LINE 10+50 TO 19+00 Lt	27B	850		850							
PD-1, 2	A LINE 10+58 TO 19+00	22	842	1684			74					
PD-1, 2	A LINE 10+50 TO 18+80 Rt	27B	830		830							
PD-1, 2	B LINE 23+50 TO 32+30 Lt	27B	880		880							
PD-1	A LINE 10+58 TO 19+00	38	842			842		37				
PD-1	B LINE 21+15 TO 24+50									7		
PD-1	A LINE 11+00 TO 11+60									4		
PD-2	C LINE 10+00 TO 22+00									12	6	
PD-2	C LINE 09+00 TO A LINE 19+00	27B	2280		2280							
PD-2	C LINE 12+30 TO 18+40 Lt	25A	610	610					27			
PD-2	C LINE 18+80 TO 21+54 Lt	25A	274	274					13			
PD-2	C LINE 11+12 TO 12+30	36	118			236		12				
PD-2	A LINE 17+80 TO 18+40.5	36A	60.5		62	30		3				
PD-1	B LINE 22+60	2 x 12" LIMIT LINE	60							120		
PD-1	B LINE 23+67	1 x 12" LIMIT LINE	28							28		
PD-1	A LINE 10+58	2 x 12" LIMIT LINE	80							160		
PD-2	C LINE 22+15	1 x 12" LIMIT LINE	12							12		
PD-2	C LINE 12+30 TO 21+54	8" DIAGONAL 20' OC WHITE LINE	585							390		
PD-2	C LINE 11+12 TO 12+30	8" CHEVRONS 12' OC WHITE LINE	375							246		
PD-1	A LINE 10+58	TYPE III (L)	2 EA							84		
PD-1	A LINE 10+58	TYPE III (R)	2 EA							84		
PD-1	B LINE 20+15 TO 22+60	TYPE III (L)	2 EA							84		
PD-2	C LINE 22+15	STOP	1 EA							22		
PQ-1	MILLERICK Rd	STOP								22		
PQ-1	MILLERICK Rd	1 x 12" LIMIT LINE								12		
PD-1	A LINE 14+00	SIGNAL AHEAD	1 EA							63		
PD-1	B LINE 14+00	SIGNAL AHEAD	1 EA							63		
PD-2	B LINE 31+00	SIGNAL AHEAD	1 EA							63		
SUBTOTAL				8426	7822	1353	260	64	40	1453	23	6
TOTAL					16248	1353		364		1453		29

### PAVEMENT DELINEATION QUANTITIES

NO SCALE

PDQ-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

**Caltrans**

DESIGN

FUNCTIONAL SUPERVISOR: GEORGE LO

DESIGNED BY: STEPHEN WONG

CHECKED BY: PATRICK YIP

REVISOR: REVISOR BY DATE

REVISOR: REVISOR BY DATE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	25	67

*Patrick Yip* 11-8-10  
 REGISTERED CIVIL ENGINEER DATE  
 5-9-11  
 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.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 FUNCTIONAL SUPERVISOR: GEORGE LO  
 CALCULATED/DESIGNED BY: [Blank]  
 CHECKED BY: [Blank]  
 REVISIONS: [Blank]  
 REVISIONS: [Blank]  
 REVISIONS: [Blank]  
 REVISIONS: [Blank]

REVISIONS: [Blank]  
 REVISIONS: [Blank]

REVISIONS: [Blank]  
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REVISIONS: [Blank]  
 REVISIONS: [Blank]

REVISIONS: [Blank]  
 REVISIONS: [Blank]

REVISIONS: [Blank]  
 REVISIONS: [Blank]

### PAVEMENT DELINEATION

SHEET No.	STATION LIMITS	DETAIL No. OR PAVEMENT MARKING	LENGTH	REMOVE		PAVEMENT MARKER	PAVEMENT MARKING
				THERMOPLASTIC TRAFFIC STRIPE			
				4" SOLID YELLOW (HAZARDOUS WASTE)	4" SOLID WHITE		
				LF		EA	SQFT
PD-1, 2	A LINE 15+30 TO 18+41 R+	27B	311		311		
PD-1, 2	A LINE 15+30 TO 19+00 L+	27B	370		370		
PD-1, 2	A LINE 15+30 TO 19+00	22	370	740		62	
PD-2	B LINE 30+50 TO 36+00 R+	27B	550		550		
PD-2	B LINE 30+50 TO 33+50 L+	27B	300		300		
PD-2	B LINE 30+50 TO 36+00	22	550	1100		94	
PD-2	C LINE 09+00 TO A LINE 19+00	27B	2280		2280		
PD-2	C LINE 12+30 TO A LINE 22+20	22	990	1980		170	
PD-2	DIAGONAL WHITE LINE						150
SUBTOTAL				3820	3811	326	150
FROM STAGE CONSTRUCTION PAVEMENT DELINEATION QUANTITIES				3720	3265	153	
GRANDTOTAL				7540	7076	479	150

## PAVEMENT DELINEATION QUANTITIES

NO SCALE

**PDQ-2**

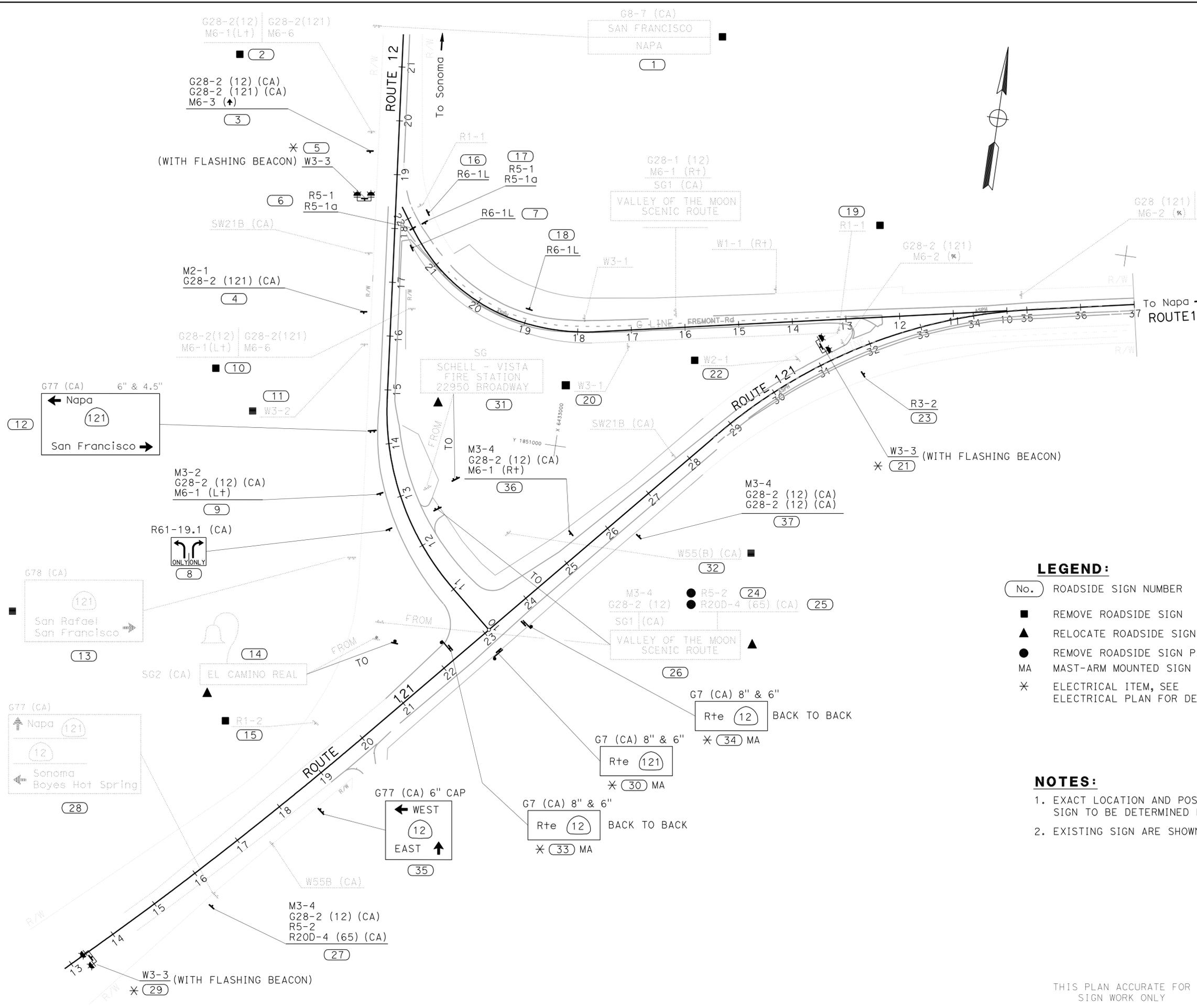
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	26	67

11-9-10  
 REGISTERED CIVIL ENGINEER DATE  
 5-9-11  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 Jerilyn L. Struven  
 No. 49964  
 Exp. 2-31-12  
 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.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 FUNCTIONAL SUPERVISOR: JERILYN L. STRUVEN  
 CALCULATED/DESIGNED BY: HERMINIO RUIDERA / CHECKED BY: STEPHEN WONG  
 REVISOR: / DATE: /  
 TRAFFIC



- LEGEND:**
- No. (in circle) ROADSIDE SIGN NUMBER
  - REMOVE ROADSIDE SIGN
  - ▲ RELOCATE ROADSIDE SIGN
  - REMOVE ROADSIDE SIGN PANEL
  - MA MAST-ARM MOUNTED SIGN
  - \* ELECTRICAL ITEM, SEE ELECTRICAL PLAN FOR DETAILS

- NOTES:**
1. EXACT LOCATION AND POSITION OF ROADSIDE SIGN TO BE DETERMINED BY THE ENGINEER.
  2. EXISTING SIGN ARE SHOWN ON DROP-OUT.

**SIGN PLAN**  
NO SCALE

**S-1**

LAST REVISION: DATE PLOTTED => 17-MAY-2011    TIME PLOTTED => 11:45



### ROADSIDE SIGN QUANTITIES

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	28	67

*Jerilyn L. Struven*  
REGISTERED CIVIL ENGINEER

11-9-10  
DATE

5-9-11  
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.

SIGN No.	SIGN CODE	PANEL SIZE (IN)	POST SIZE AND LENGTH (IN)			ROADSIDE SIGN		REMOVE ROADSIDE SIGN	REMOVE ROADSIDE SIGN PANEL	RELOCATE ROADSIDE SIGN			REMARKS
			4 x 4	4 x 6	6 x 8	ONE POST	TWO POST			METAL POST	ONE POST	TWO POST	
			EA										
1	G8-7 (CA)						1						
2	G28-2(12)(CA)						1						
	M6-1(L+)												
	G28-2(121)(CA)												
	M6-6												
3	G28-2(12)(CA)	24 x 25		18'-0"		1							
	G28-2(121)(CA)	28 x 25											
	M6-3 (↕)	21 x 15											
4	M2-1	21 x 15		15'-0"		1							
	G28-2(121)(CA)	28 x 25											
5	W3-3	36 x 36										ELECTRICAL PAY ITEM	
6	R5-1	36 x 36		14'-3"		1							
	R5-1a	36 x 18											
7	R6-1L	36 x 12	11'-6"			1							
8	R61-19.1(CA)	30 x 24	12'-6"			1							
9	M3-2	24 x 12		16'-0"		1							
	G28-2(12)(CA)	24 x 25											
	M6-1(L+)	21 x 15											
10	G28-2(12)(CA)						1						
	M6-1(L+)												
	G28-2(12)(CA)												
	M6-6(↔)												
11	W3-2					1							
12	G77 (CA)	90 x 48		15'-6"			1						
13	G78 (CA)						1						
14	SG 2 (CA)							1					
15	R1-2						1						
16	R6-1L	36 x 12	11'-6"			1							
	R5-1	36 x 36		14'-3"		1							
17	R5-1a	36 x 18											
	R6-1L	36 x 12	11'-6"			1							
19	R1-1						1						
20	W3-1						1						
21	W3-3	36 x 36										ELECTRICAL PAY ITEM	
22	W2-1						1						
23	R3-2	24 x 24	12'-6"			1							
24	R5-2							1					
25	R20D-4 (65)							1					
26	M3-4									1			
	G28-2 (12)												
	SG1( CA)												
27	M3-4	24 x 12		18'-0"		1							
	G28-2(12)(CA)	24 x 25											
	R5-2	24 x 24											
	R20D-4 (65)	24 x 6											
28	G77 (CA)						1						
29	W3-3	36 x 36										ELECTRICAL PAY ITEM	
30	G7(CA)	72 x 24										ELECTRICAL PAY ITEM	
31	SG												
32	W55B (CA)						1						
33	G7(CA)	72 x 24										ELECTRICAL PAY ITEM	
34	G7(CA)	72 x 24										ELECTRICAL PAY ITEM	
35	G77(CA)	36 x 48		15'-6"		1							
	M3-4	24 x 12											
36	G28-2(12)(CA)	24 x 25		16'-0"		1							
	M6-1(R+)	21 x 15											
37	G28-2(12)(CA)	24 x 25		15'-6"		1							
	G28-2(121)(CA)	28 x 25											
TOTAL						14	1	11	2	1	1	1	

**SIGN QUANTITIES**  
NO SCALE

**SQ-1**

REVISOR

REVISION

REVISION

DATE

DESIGNED BY

DATE

REVISION

DATE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	29	67

*J. L. Struven* 11-9-10  
 REGISTERED CIVIL ENGINEER DATE

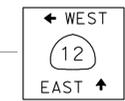
5-9-11  
 PLANS APPROVAL DATE

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.

REGISTERED PROFESSIONAL ENGINEER  
 No. 49964  
 Exp. 2-31-12  
 CIVIL  
 STATE OF CALIFORNIA

### CONTRACTOR FURNISHED SIGN PANEL MATERIAL SUMMARY

SIGN No.	SIGN CODE	SIGN SIZE (IN)	SIGN AREA (SQFT)	SINGLE FACED	DOUBLE FACED	BACKGROUND		LEGEND		GRAPHIC FILM PREMIUM	ROADSIDE SIGNS		DESCRIPTIONS/REMARKS
						SHEETING COLOR	RETROREFLECTIVE ASTM TYPE	SHEETING COLOR	RETROREFLECTIVE ASTM TYPE		SINGLE SHEET		
											FRAMED ALUMINUM	UNFRAMED ALUMINUM	
											0.080"	0.063"	
											SQFT		
3	G28-2(12)(CA)	24 x 25	4.16	X		GREEN	III	WHITE	III	X		4.16	ROUTE SHIELD 12
	G28-2(121)(CA)	28 x 25	4.85	X		GREEN	III	WHITE	III	X		4.85	ROUTE SHIELD 121
	M6-3 (▲)	21 x 15	2.19	X		GREEN	III	WHITE	III	X		2.19	UP ARROW
4	M2-1	21 x 15	2.19	X		GREEN	III	WHITE	III	X		2.19	JCT
	G28-2(121)(CA)	28 x 25	4.85	X		GREEN	III	WHITE	III	X		4.85	ROUTE SHIELD 121
5	W3-3	36 x 36	9.00	X		YELLOW	III	BLACK	PLAIN	X		9.00	SIGNAL AHEAD SYMBOL
6	R5-1	36 x 36	9.00	X		WHITE	III	BLACK	PLAIN	X		9.00	DO NOT ENTER
	R5-1a	36 x 18	4.50	X		WHITE	III	BLACK	PLAIN	X		4.50	WRONG WAY
7	R6-1L	36 x 12	3.00	X		WHITE	III	BLACK	PLAIN	X		3.00	ONE WAY (LEFT)
	M3-2	24 x 12	2.00	X		GREEN	III	WHITE	III	X		2.00	EAST
	G28-2(12)(CA)	24 x 25	4.16	X		GREEN	III	WHITE	III	X		4.16	ROUTE SHIELD 12
	M6-3(L+)	21 x 15	2.15	X		GREEN	III	WHITE	III	X		2.15	LEFT ARROW
12	G77(CA)	90 x 48	30.00	X		GREEN	III	WHITE	III	X	30.00		←
16	R6-1L	36 x 12	3.00	X		WHITE	III	BLACK	PLAIN	X		3.00	ONE WAY (LEFT)
17	R5-1	36 x 36	9.00	X		WHITE	III	BLACK	PLAIN	X		9.00	DO NOT ENTER
	R5-1a	36 x 18	4.50	X		WHITE	III	BLACK	PLAIN	X		4.50	WRONG WAY
18	R6-1L	36 x 12	3.00	X		WHITE	III	BLACK	PLAIN	X		3.00	ONE WAY (LEFT)
21	W3-3	36 x 36	9.00	X		YELLOW	III	BLACK	PLAIN	X		9.00	SIGNAL AHEAD SYMBOL
23	R3-2	24 x 24	4.00	X		WHITE	III	RED	PLAIN	X		4.00	NO LEFT TURN SYMBOL
	M3-4	24 x 12	2.00	X		GREEN	III	WHITE	III	X		2.00	WEST
	G28-2(12)(CA)	24 x 25	4.16	X		GREEN	III	WHITE	III	X		4.16	ROUTE SHIELD 12
	R5-2	24 x 24	4.00	X		WHITE	III	BLACK/RED	PLAIN	X		4.00	TRUCK SYMBOL
	R20D-4(65)(CA)	24 x 6	1.00	X		WHITE	III	BLACK	PLAIN	X		1.00	OVER 65 FT LONG
29	W3-3	36 x 36	9.00	X		YELLOW	III	BLACK	PLAIN	X		9.00	SIGNAL AHEAD SYMBOL
30	G7(CA)	72 x 24	12.00	X		GREEN	III	WHITE	III	X	12.00		ROUTE SHIELD 121
33	G7(CA)	72 x 24	12.00	X		GREEN	III	WHITE	III	X	12.00		ROUTE SHIELD 12
34	G7(CA)	72 x 24	12.00	X		GREEN	III	WHITE	III	X	12.00		ROUTE SHIELD 12
35	G77(CA)	72 x 24	12.00	X		GREEN	III	WHITE	III	X	12.00		←
	M3-4	24 x 12	2.00	X		GREEN	III	WHITE	III	X		2.00	WEST
	G28-2(12)(CA)	24 x 25	4.16	X		GREEN	III	WHITE	III	X		4.16	ROUTE SHIELD 12
	M6-1(R+)	21 x 15	2.15	X		GREEN	III	WHITE	III	X		2.15	RIGHT ARROW
	G28-2(12)(CA)	24 x 25	4.16	X		GREEN	III	WHITE	III	X		4.16	ROUTE SHIELD 12
	G28-2(121)(CA)	28 x 25	4.85	X		GREEN	III	WHITE	III	X		4.85	ROUTE SHIELD 121
<b>TOTAL</b>											66.00	77.38	



## SIGN QUANTITIES

NO SCALE

THIS PLAN ACCURATE FOR  
SIGN QUANTITIES WORK ONLY

**SQ-2**

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

FUNCTIONAL SUPERVISOR  
 ROLAND AU-YEUNG

CALCULATED/DESIGNED BY  
 CHECKED BY

HERMINIO RUIDERA  
 JERILYN STRUVEN

REVISED BY  
 DATE REVISED

**CONTROLLER AND SERVICE EQUIPMENT ENCLOSURE**

ITEM	UNIT	QUANTITY
PIPE HANDRAILING	LF	60

**LEGEND:**

(N) NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	30	67

11-8-10  
 REGISTERED CIVIL ENGINEER DATE  
 5-9-11  
 PLANS APPROVAL DATE

Patrick Yip  
 No. 44277  
 Exp. 6-30-11  
 CIVIL

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

**ROADWAY QUANTITY SUMMARY**

DESCRIPTION OR CITY LIMITS	HMA (TYPE A)	TACK COAT	AS (CL 4)
	TON		CY
A 10+50 TO 18+50	2150	3.4	480
B 14+50 TO 28+50	4440	8.4	750
HMA DIKE	0.8 *		
COLD PLANNING	6.2		
PLACE HMA (MISCELLANEOUS AREA)	23	0.2	
<b>TOTAL</b>	<b>6620.0</b>	<b>12.0</b>	<b>1230</b>

**HMA DIKE AND REMOVE AC DIKE**

STATION LIMITS	HMA (TYPE C)	HMA DIKE (TYPE F)	HMA (TYPE A)
	LF		TON
A 14+00 TO 14+84.12		85	0.6
B 14+04.12 TO 15+46.37	63		0.2
AC DIKE			
<b>TOTAL</b>	<b>63</b>	<b>85</b>	<b>0.8*</b>

\* SEE ROADWAY QUANTITY SUMMARY TABLE FOR PROJECT GRAND TOTAL

**TEMPORARY WATER POLLUTION CONTROL SUMMARY**

DESCRIPTIONS	UNIT	QUANTITY
TEMPORARY FENCE (TYPE ESA)	LF	4,600
TEMPORARY FIBER ROLL	LF	4,000
TEMPORARY SILT FENCE	LF	1,000
TEMPORARY CONSTRUCTION ENTRANCE	EA	12
TEMPORARY COVER	SQYD	500
TEMPORARY CHECK DAM	LF	250
MOVE-IN/MOVE-OUT (TEMPORARY EROSION CONTROL)	EA	2
TEMPORARY HYDRAULIC MULCH (BONDED FIBER MATRIX)	SQYD	5,000
TEMPORARY CONCRETE WASHOUT (PORTABLE)	LS	LS
RAIN EVENT ACTION PLAN	EA	32
STORM WATER ANNUAL REPORT	EA	3
STORM WATER SAMPLING AND ANALYSIS DAY	EA	15
CONSTRUCTION SITE MANAGEMENT	LS	LS
PREPARE STORM WATER POLLUTION PREVENTION PLAN	LS	LS
STREET SWEEPING	LS	LS

**REPLACE ASPHALT CONCRETE SURFACING**

SHEET	STATION LIMITS	VOLUME CY
L-2	A 18+30 TO 18+70	34
<b>TOTAL</b>		<b>34</b>

**EARTH WORK**

STATION LIMITS	ROADWAY EXCAVATION	EMBANKMENT (N)	LOCAL BORROW (N)
		CY	
A 10+50 TO 18+50	2218	1115	
B 14+50 TO 28+50	3688	1257	
FROM DRAINAGE PLAN			1412
<b>TOTAL</b>	<b>5906</b>	<b>2372</b>	<b>1412</b>

**REMOVE BASE AND SURFACING**

STATION LIMITS	CY
EXISTING ROUTE 12	834
EXISTING LINE CHANNEL	817
<b>TOTAL</b>	<b>1651</b>

**COLD PLANE ASPHALT CONCRETE PAVEMENT**

STATION LIMITS	AREA
	SQYD
A 12+50 TO 12+65 DRIVEWAY	116
B 14+50 TO 28+48	4470
MILLER ROAD	128
<b>TOTAL</b>	<b>4714</b>

**REMOVE FENCE**

STATION LIMITS	UNIT	QUANTITY
B 21+00 TO 22+80	LF	400

**REMOVE CONCRETE**

STATION LIMITS	UNIT	QUANTITY
A 11+40 TO 12+20	CY	50

**MINOR CONCRETE (MINOR STRUCTURE)**

DESCRIPTION	VOLUME
	CY
ELECTRICAL CABINET FOUNDATION	
TYPE III AF PEDESTAL MODIFIED	3.5
TYPE 3332 PEDESTAL MODIFIED	7.6
SUBTOTAL	11.1
FROM DRAINAGE PLAN	4.0
<b>GRAND TOTAL</b>	<b>15.1</b>

**MBGR**

SHEET No.	STATION	ROUTE	DIRECTION	MBGR (WOOD POST)	ALTERNATE IN-LINE TERMINAL SYSTEM	END ANCHOR ASSEMBLY (TYPE SFT)
L-1	FROM Sta 13+54 TO 15+22	12	N/B	75	1	1

**PLACE HOT MIX ASPHALT (MISCELLANEOUS AREA)**

STATION LIMITS	PLACE HOT MIX ASPHALT (MISCELLANEOUS AREA)
	SQYD
B 22+59 TO 22+71	6.6
<b>TOTAL</b>	<b>6.6</b>

**REMOVE EXISTING CHANNELIZERS**

STATION LIMITS	UNIT	QUANTITY
A 11+50 TO 12+00	EA	25

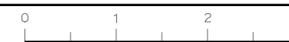
**REMOVE ROCK SLOPE PROTECTION**

STATION LIMITS	UNIT	QUANTITY
A 13+00 TO 13+30	CY	20

**SUMMARY OF QUANTITIES**  
NO SCALE

**Q-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 DESIGN  
 FUNCTIONAL SUPERVISOR: GEORGE LO  
 CALCULATED/DESIGNED BY: STEPHEN WONG  
 CHECKED BY: PATRICK YIP  
 REVISIONS: REVISOR: DATE: REVISIONS: REVISOR: DATE:



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	31	67

*Martin A. Hogan*  
LICENCED LANDSCAPE ARCHITECT

5-9-11  
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.

**ABBREVIATIONS**

AMEND — amendment	Min — minimum
B & B — balled and burlapped	NCN — no common name
Dia — diameter	No. — number
EA — each	Pkt — packet
lb — pound	PLT ESTB — plant establishment
oz. — ounce	Pvmt — pavement
Ft — foot/feet	R/W — right of way
SQFT — square feet	SF — state furnished
CF — cubic feet	TRVD — traveled
Max — maximum	

**PLANT LIST AND PLANTING SPECIFICATIONS**

PLANT GROUP	PLANT No.	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY EACH	HOLE SIZE (INCH)		BASIN TYPE	IRON SULFATE ①	SOIL AMEND ①	COMMERCIAL FERTILIZER ①		BASIN MULCH	STAKING	PLANTING LIMITS						REMARKS	
							Dia	DEPTH				PLANTING	PLT ESTB			MINIMUM DISTANCE (F+) FROM				ON CENTER (F+)			
																TRVD WAY	PVMT	FENCE	WALL		PAVED DITCH		EARTH DITCH
B	1.		<u>QUERCUS LOBATA</u>	VALLEY OAK	No. 5	6	②	②	II	-	2 CF	3 oz	-	2 CF	⑥	30	-	20	15	15	22	-	TREE
	2.		<u>PLATANUS RACEMOSA</u>	CALIFORNIA SYCAMORE	No. 5	6	②	②	II	-	2 CF	3 oz	-	2 CF	⑥	40	-	20	20	10	12	-	TREE

**APPLICABLE WHEN CIRCLED:**

- ① - Quantities shown are "per plant" unless shown as SQFT or SQYD application rates.
- ② - Sufficient to receive root ball.
- 3 - Does not apply to mulch areas.
- 4 - As shown on plans.
- 5 - Unless otherwise shown on plans.
- ⑥ - See detail.
- 7 - See Special Provisions.

**NOTE:**

Underlined portions of botanical name indicate abbreviations used on Planting Plans.

**PLANT LIST  
PL-1**





**PROJECT NOTES:**

- 1 INSTALL STATE-FURNISHED MODEL 2070 CONTROLLER ASSEMBLY IN A MODEL 332 CABINET.
- 2 INSTALL 2"C, 3#2 (120/240 V SERVICE), CONDUCTORS SHALL BE CONTINUOUS RUN BY PG&E.
- 3 INSTALL 1½"C, 3#14 (120 V PEU).
- 4 INSTALL PULL BOX PER SERVICE UTILITY REQUIREMENTS.
- 5 COVER SHALL BE MARKED AS "CALTRANS/PG&E".
- 6 INSTALL TIME-OF-USE METER TYPE III-AF SERVICE EQUIPMENT ENCLOSURE PER SERVICE WIRING DIAGRAM ON E-6. PROVIDE EQUIPMENT ITEMS 1 THROUGH 9, 20 THROUGH 24, 28 THROUGH 30. ITEM 23 SHALL BE 15 A, 120 V, 1P, CB AND MARKED "FLASHING BEACON ROUTE 121 NB." ITEM 20 SHALL BE MARKED "FLASHING BEACON ROUTE 12 SB", ITEM 24 SHALL BE MARKED "FLASHING BEACON ROUTE 121 SB". ITEMS NOT IN USE SHALL BE MARKED "SPARE" FOR FUTURE USE.
- 7 INSTALL 2½"C, 2#6 (120 V SERVICE TO CONTROLLER),  
2#6 (120 V FLASHING BEACON ROUTE 12 SB),  
2#6 (120 V FLASHING BEACON ROUTE 121 NB),  
2#6 (120 V FLASHING BEACON ROUTE 121 SB),  
8#8 (240 V LIGHTING),  
3#14 (120 V PEU).
- 8 INSTALL 2½"C, 2#6 (120 V SERVICE TO CONTROLLER),  
2#6 (120 V FLASHING BEACON ROUTE 12 SB),  
2#6 (120 V FLASHING BEACON ROUTE 121 NB),  
2#6 (120 V FLASHING BEACON ROUTE 121 SB),  
8#8 (240 V LIGHTING).
- 9 INSTALL 1½"C, 2#6 (120 V FLASHING BEACON ROUTE 121 NB), 3 DLC.
- 10 INSTALL 1½"C, 2#6 (120 V FLASHING BEACON ROUTE 121 NB), 1 DLC.
- 11 INSTALL 1½"C, 2#6 (120 V FLASHING BEACON ROUTE 121 NB).
- 12 INSTALL 1½"C, 2#6 (120 V FLASHING BEACON ROUTE 12 SB), 1 DLC.
- 13 INSTALL 1½"C, 2#6 (120 V FLASHING BEACON ROUTE 12 SB).
- 14 INSTALL 1½"C, 2#6 (120 V FLASHING BEACON ROUTE 121 SB), 1 DLC.
- 15 INSTALL 1½"C, 2#6 (120 V FLASHING BEACON ROUTE 121 SB).
- 16 FOR POLE FOUNDATION, SEE TABLE BELOW.
- 17 INSTALL MODIFIED STANDARD WITH LUMINAIRE MAST ARM TURNED 90 DEGREES AT HEIGHT A AND PERPENDICULAR TO THE POLE/SIGNAL MAST ARM. SEE E-4 AND ES-7F.
- 18 INSTALL TYPE H SERVICE. CONDUIT BEND RADIUS SHALL MEET SERVICE UTILITY REQUIREMENTS.
- 19 INSTALL 3"C, MT.
- 20 INSTALL TYPE 1-B STANDARD WITH PEU, SEE DETAILS ON ES-7N.
- 21 INSTALL 1½"C, 2#6 (120 V FLASHING BEACON ROUTE 121 SB), 3 DLC.
- 22 INSTALL TYPE 15-FBS STANDARD WITH TWO YELLOW FLASHING BEACONS. SEE DETAILS ON ES-7J AND ES-3B.
- 23 INSTALL 3 ADDITIONAL TBO TERMINAL BLOCK ON SERVICE PANEL No.1 FOR SIGNAL PHASE TERMINAL.
- 24 INSTALL 1 ADDITIONAL TERMINAL LANDING LUG FOR LIGHTING TERMINAL.
- 25 SEE STRUCTURE PLAN FOR RAISED FOUNDATION (PART OF ROADWAY BID ITEM).

- 26  RS EXISTING FIRE STATION LIGHTING.
- 27  INSTALL ¾"C, 2#10 (120 V PARKING LOT LIGHTING).

**GENERAL NOTES:**

- 1. THERE SHALL BE NO CONDUCTOR SPLICING DONE AT THE PULL BOX WITHIN THE FLOODING ZONE (SEE E-4)
- 2. NO ABOVE GROUND ELECTRICAL WORK SHALL BE PERFORMED ON ANY SYSTEM WITHIN THE PROJECT SITE UNTIL ALL CONTRACTOR-FURNISHED ELECTRICAL MATERIALS FOR THAT INDIVIDUAL SYSTEM HAVE BEEN TESTED AND DELIVERED TO THE CONTRACTOR.
- 3. THE NEUTRAL CONDUCTOR SHALL RUN FROM THE SERVICE EQUIPMENT ENCLOSURE TO THE CONTROLLER CABINET WITHOUT SPLICING TO ANY OTHER NEUTRAL CONDUCTOR.
- 4. THE CLEARANCE BETWEEN THE BOTTOM OF THE LOWEST CIRCUIT BREAKER AND THE BOTTOM OF THE SERVICE EQUIPMENT ENCLOSURE FOR A TYPE III-A SERVICE SHALL BE 24 INCHES MINIMUM.
- 5. NO OVERHEAD SIGN PANEL SHALL BE INSTALLED UNTIL THE OVERHEAD SIGN LIGHTING IS COMPLETELY OPERATIONAL.
- 6. 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 METERING SYSTEM.
- 7. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED INSIDE STATE OR LOCAL AGENCY RIGHT OF WAY.
- 8. SIGNAL NEUTRAL SPLICING SHALL BE DONE AT THE TERMINAL COMPARTMENT.

**ABBREVIATION:**

CTID CALTRANS IDENTIFICATION

**LEGEND:**

- EXISTING FIRE STATION SIGN LIGHT
- EXISTING FIRE STATION PARKING LOT LIGHTING

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	33	67

*E. T. Wong* 11-9-10  
 REGISTERED ELECTRICAL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER  
 No. 13753  
 Exp. 6-30-11  
 ELECT  
 STATE OF CALIFORNIA

5-9-11  
 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.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 ELECTRICAL  
 FUNCTIONAL SUPERVISOR  
 ELAINE WONG  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 WILLIAM WONG  
 ELAINE WONG  
 REVISED BY  
 DATE REVISED

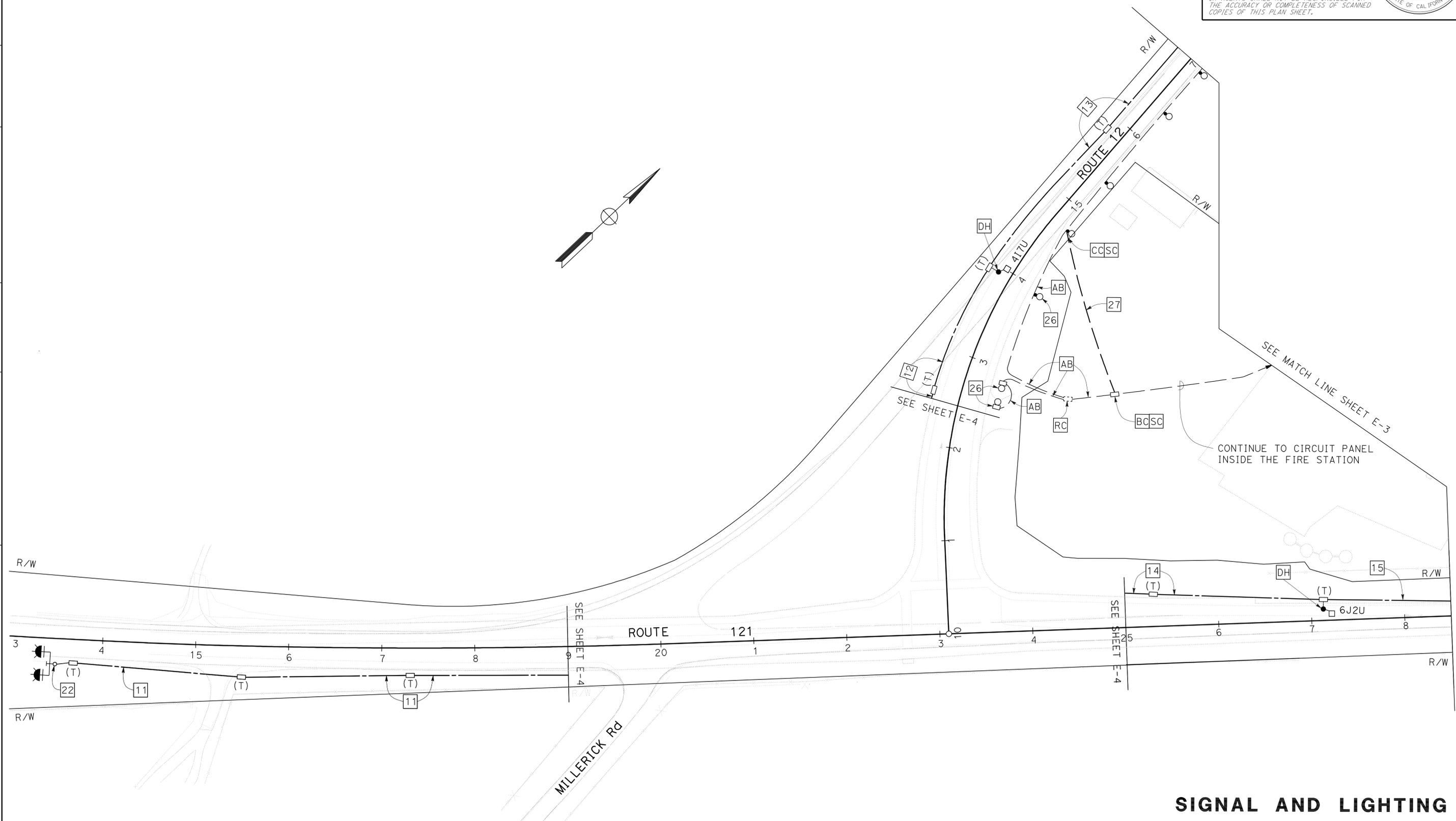
LAST REVISION      DATE PLOTTED => 17-MAY-2011      TIME PLOTTED => 11:45

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 ELECTRICAL  
 FUNCTIONAL SUPERVISOR: ELAINE WONG  
 CALCULATED/DESIGNED BY: WILLIAM WONG  
 CHECKED BY: ELAINE WONG  
 REVISED BY: DATE REVISED

**NOTE:**  
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT  
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	34	67

*Elaine Wong* 11-9-10  
 REGISTERED ELECTRICAL ENGINEER DATE  
 5-9-11  
 PLANS APPROVAL DATE  
 E.T. Wong  
 No. 13753  
 Exp. 6-30-11  
 ELECT  
 REGISTERED PROFESSIONAL ENGINEER  
 STATE OF CALIFORNIA  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



FOR NOTES, ABBREVIATIONS  
 AND LEGEND, SEE SHEET E-1

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY

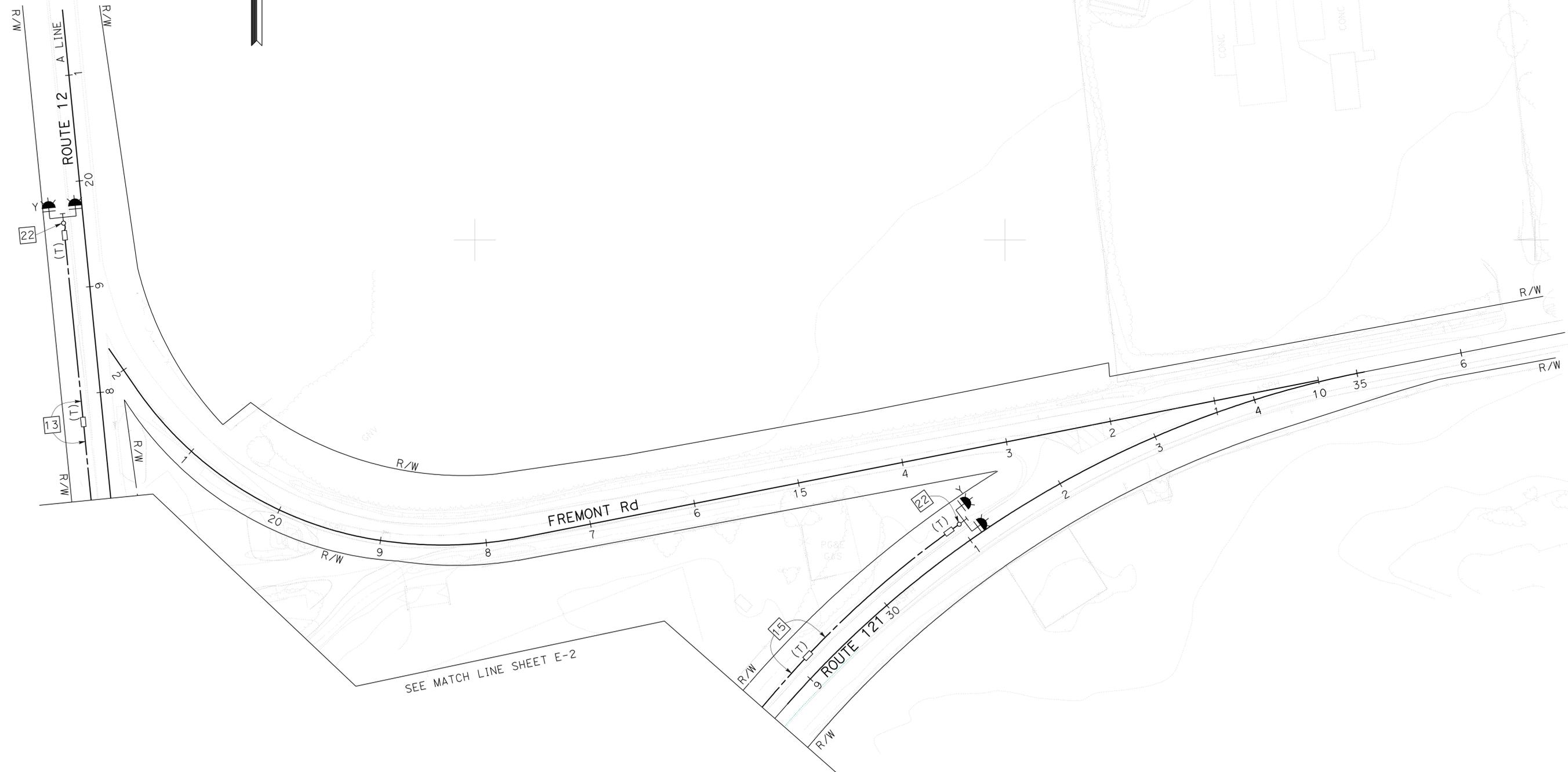
**SIGNAL AND LIGHTING**  
 SCALE: 1" = 50'

**E-2**

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

FUNCTIONAL SUPERVISOR	ELAINE WONG
CALCULATED/DESIGNED BY	WILLIAM WONG
CHECKED BY	ELAINE WONG
REVISOR	DATE

**NOTE:**  
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT  
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



SEE MATCH LINE SHEET E-2

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	35	67

*Elaine Wong* 11-9-10  
 REGISTERED ELECTRICAL ENGINEER DATE

5-9-11  
 PLANS APPROVAL DATE

E.T. Wong  
 No. 13753  
 Exp. 6-30-11  
 ELECT

REGISTERED PROFESSIONAL ENGINEER  
 STATE OF CALIFORNIA

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**SIGNAL AND LIGHTING**  
 SCALE: 1" = 50'

**E-3**

FOR NOTES, ABBREVIATIONS AND LEGEND, SEE SHEET E-1

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY

LAST REVISION | DATE PLOTTED => 17-MAY-2011  
 01-05-11 | TIME PLOTTED => 11:46



CONDUCTOR SCHEDULE									
CONDUCTOR DESIGNATION	NUMBER OF CONDUCTORS								
	RUN NUMBER								
	1	2	3	4	5	6	7	8	9
No. 14 CONDUCTORS									
Ø2	3	6	6	6	6	6			
Ø4	3	6	6	6	9	9			
Ø5	3	3	3	3	6	6	3	3	
Ø6				3	6	6	3	3	
Ø4P		2	2	2	4	4	2		
Ø6P					4	4	2	2	
PPB (Ø4P)		1	1	1	2	2			
PPB (Ø6P)					2	2	2	1	
PPB NEUTRAL		1	1	1	4	4	2	1	
SPARES	3	3	3	3	6	6	3	3	
TOTAL No. 14	12	22	22	25	49	49	17	13	
No. 8 CONDUCTORS									
240 V LIGHTING	2	4	4	6	8		2	2	
TOTAL No. 8	2	4	4	6	8		2	2	
No. 6 CONDUCTORS									
120 V SERVICE TO CONTROLLER						2			
SIGNAL NEUTRAL	1	1	1	1	2	2	1	1	
120 V FB ROUTE 12 SB					2	2			
120 V FB ROUTE 121 NB			2	2	2				
120 V FB ROUTE 121 SB					2	2	2		
TOTAL No. 6	1	1	3	3	8	4	5	3	
DETECTOR CABLES									
2I2L			1	1	1	1			
2I2U			1	1	1	1			
2I4U			1	1	1	1			
4I7L					1	1	1		
4I7U					1	1	1		
4I8L					1	1	1		
4I8U					1	1	1		
5J1L			1	1	1	1			
5J1U			1	1	1	1			
6J2U					1	1	1	1	
6J4L					1	1	1	1	
6J4U					1	1	1	1	
TOTAL DLC CABLES			5	5	12	12	7	3	
CONDUIT SIZE (INCHES)									
	2	2 1/2	2-3	2-3		2-3	2-3		
			2-3/2, 1-3						

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	37	67
			11-9-10		
REGISTERED ELECTRICAL ENGINEER DATE			E. T. Wong		
5-9-11			No. 13753		
PLANS APPROVAL DATE			Exp. 6-30-11		
			ELECT		
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.					

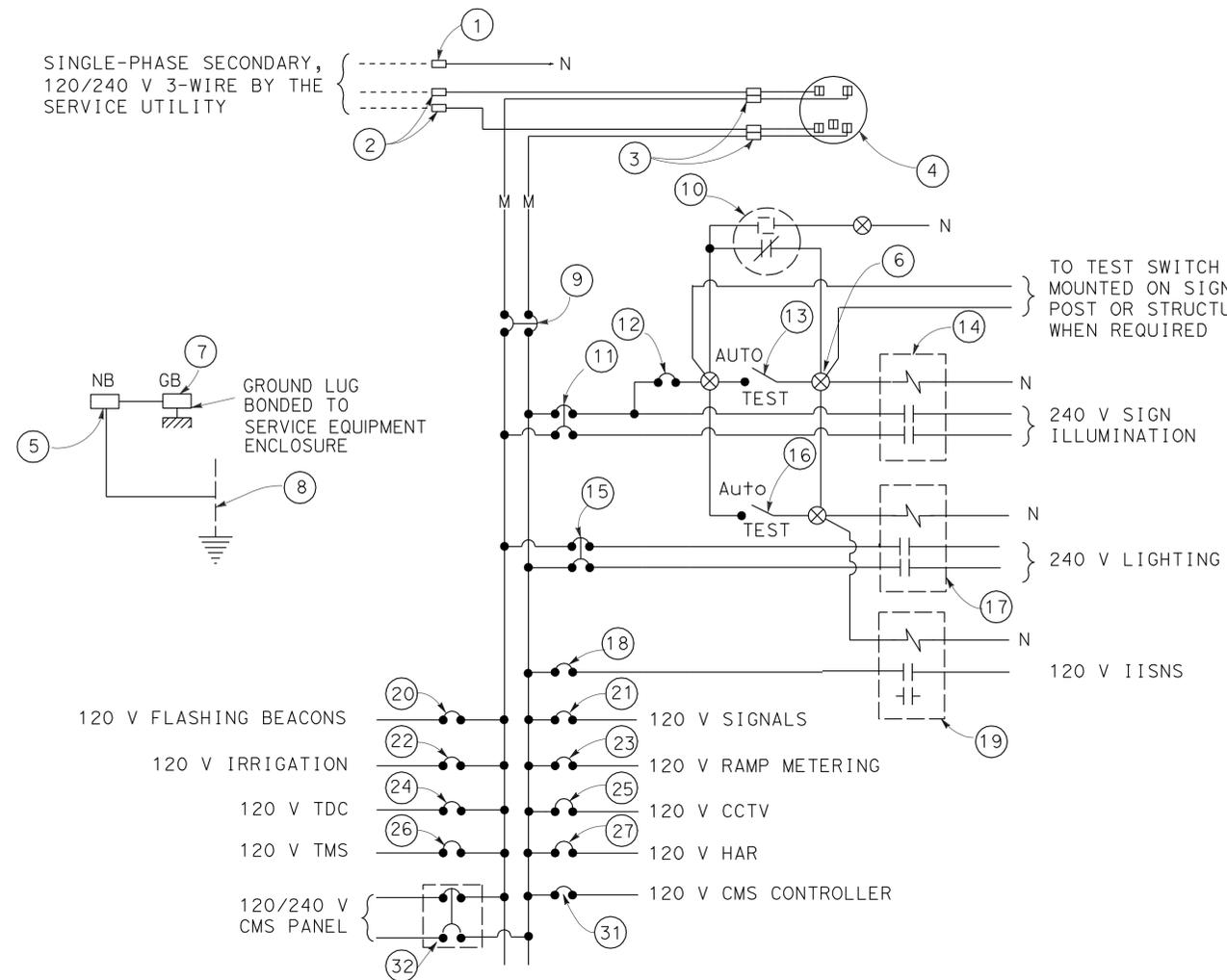
POLE AND EQUIPMENT SCHEDULE									
LOCATION	STANDARD			Veh SIGNAL MOUNTING		PED SIGNAL MOUNTING	PPB Ø	HPS LUMINAIRE (WATTS)	SPECIAL REQUIREMENT *
	TYPE	SMA (FT)	LMA (FT)	MAST ARM	POLE				
(A)	24-4-100 (Mod)	35	15	MAS MAS	SV-2-TB			200	16 INSTALL SNS, SEE SIGNING PLANS.
(B)	24-4-100 (Mod)	30	15	MAS	SV-2-TB	SP-1-T	4	200	16 17 INSTALL SNS, SEE SIGNING PLANS.
(C)	19-4-100 (Mod)	30	15	MAS	SV-1-T			200	16 INSTALL SNS, SEE SIGNING PLANS.
(D)	1-B (Mod)				TV-1-T	SP-1-T	4		16
(E)	1-B (Mod)					TP-1-T	6		16
(F)	15TS (Mod)				SV-2-TB	SP-1-T	6	200	16

\* OTHER REQUIREMENTS ARE COVERED BY NOTES, LEGEND, SPECIAL PROVISIONS, AND STANDARD SPECIFICATIONS. FOR TYPE OF STANDARD, VEHICLE AND PEDESTRIAN SIGNAL MOUNTING, SEE STANDARD PLANS.

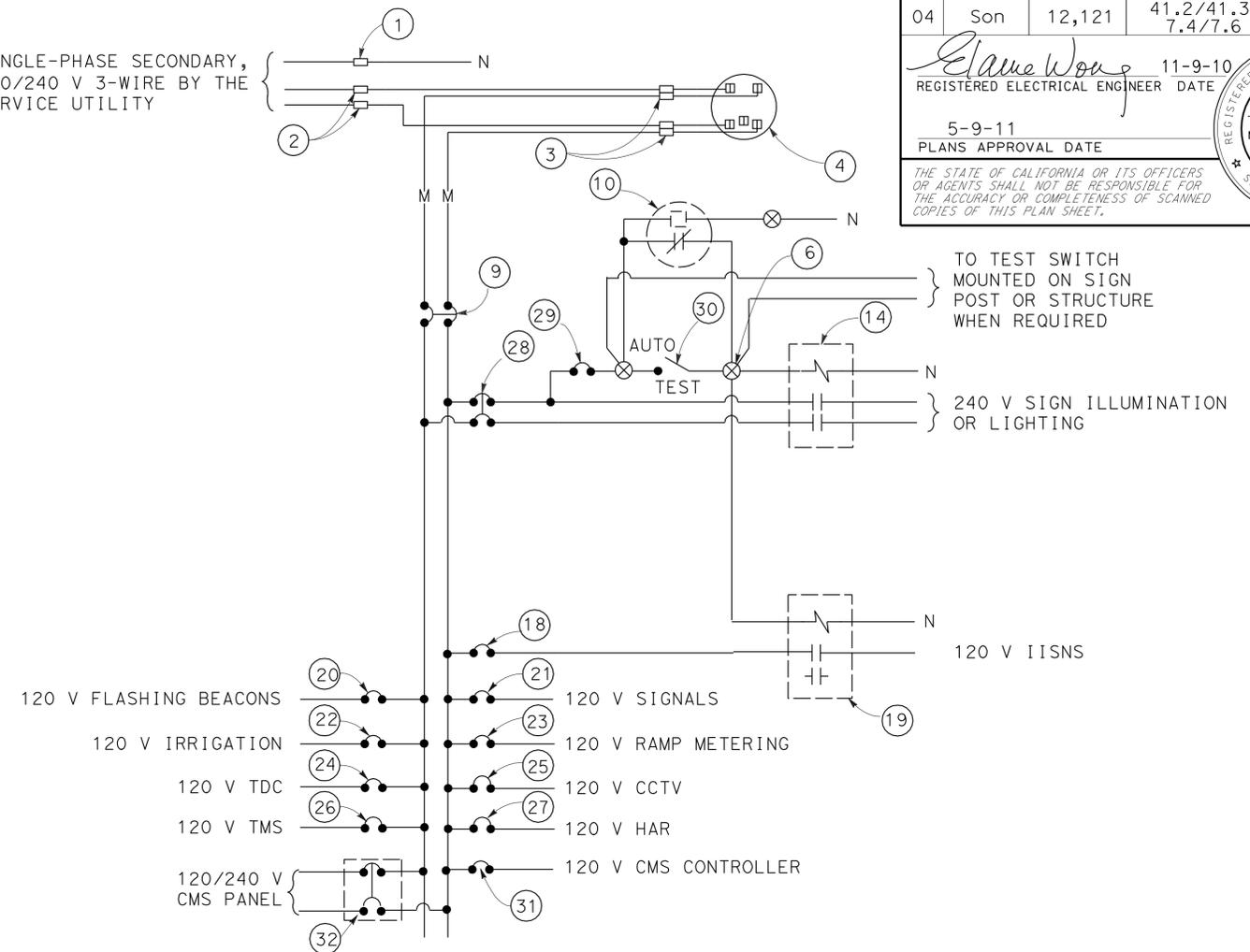
SIGNAL AND LIGHTING POLE FOUNDATION			
LOCATION	TYPE	FOUNDATION TYPE	LENGTH OF CIDH PILES (FEET)
(A)	24-4-100 (Mod)	36" CIDH PILES	13.5
(B)	24-4-100 (Mod)	36" CIDH PILES	13.5
(C)	19-4-100 (Mod)	36" CIDH PILES	13.5
(D)	1-B (Mod)	24" CIDH PILES	4.5
(E)	1-B (Mod)	24" CIDH PILES	4.5
(F)	15TS (Mod)	30" CIDH PILES	7.5

### SIGNAL AND LIGHTING (CONDUCTOR, POLE AND EQUIPMENT SCHEDULES)

E-5



**120/240 V SERVICE WIRING DIAGRAM (TYPICAL)**  
 (FOR CIRCUITS WITH BOTH SIGN ILLUMINATION AND LIGHTING)



**120/240 V SERVICE WIRING DIAGRAM (TYPICAL)**  
 (FOR CIRCUIT ONLY WITH SIGN ILLUMINATION OR LIGHTING)

**TYPE III-A SERVICE (120/240 V) EQUIPMENT LEGEND**

ITEM No.	COMPONENT	NAMEPLATE DESCRIPTION
①	NEUTRAL LUG	
②	LANDING LUG	
③	TEST BYPASS FACILITY	
④	METER SOCKET AND SUPPORT	
⑤	NEUTRAL BUS	
⑥	TERMINAL BLOCK	
⑦	GROUND BUS	
⑧	GROUNDING ELECTRODE	
⑨	100 A, 240 V, 2P, CB	MAIN BREAKER
⑩	PHOTOELECTRIC UNIT (NOTE 7)	
⑪	30 A, 240 V, 2P, CB	SIGN ILLUMINATION
⑫	15 A, 120 V, 1P, CB	SIGN ILLUMINATION AND LIGHTING CONTROL
⑬	15 A, 1P, TEST SWITCH	SIGN ILLUMINATION TEST SWITCH
⑭	30 A, 2PNO, CONTACTOR	SIGN ILLUMINATION
⑮	30 A, 240 V, 2P, CB	LIGHTING
⑯	15 A, 1P, TEST SWITCH	LIGHTING TEST SWITCH

ITEM No.	COMPONENT	NAMEPLATE DESCRIPTION
⑰	30 A, 2PNO, CONTACTOR	LIGHTING
⑱	15 A, 120 V, 1P, CB	IISNS
⑲	30 A, 2PNO, CONTACTOR	IISNS
⑳	15 A, 120 V, 1P, CB	FLASHING BEACON
㉑	50 A, 120 V, 1P, CB	SIGNALS
㉒	20 A, 120 V, 1P, CB	IRRIGATION
㉓	30 A, 120 V, 1P, CB	RAMP METERING
㉔	15 A, 120 V, 1P, CB	TELEPHONE DEMARCATION CABINET
㉕	30 A, 120 V, 1P, CB	CCTV
㉖	30 A, 120 V, 1P, CB	TMS
㉗	30 A, 120 V, 1P, CB	HAR
㉘	30 A, 240 V, 2P, CB	SIGN ILLUMINATION *
㉙	15 A, 120 V, 1P, CB	SIGN ILLUMINATION CONTROL *
㉚	15 A, 1P, TEST SWITCH	SIGN ILLUMINATION TEST SWITCH *
㉛	30 A, 120 V, 1P, CB	CMS CONTROLLER
㉜	30 A, 240 V, 2P, CB	CMS PANEL

\* FOR LIGHTING CIRCUIT, WORDS OF "SIGN ILLUMINATION" IN NAMEPLATE DESCRIPTION SHALL BE CHANGED TO "LIGHTING".

**LEGEND:**  
 (SEE ES-1A & ES-1C)

- NOTES: (FOR SERVICE EQUIPMENT)**
- VOLTAGE RATINGS OF SERVICE EQUIPMENT SHALL CONFORM TO THE SERVICE VOLTAGES INDICATED ON THE PLANS.
  - UNLESS OTHERWISE INDICATED ON THE PLANS, ALL SERVICE EQUIPMENT ITEMS SHALL BE PROVIDED FOR EACH SERVICE EQUIPMENT ENCLOSURE AS SHOWN.
  - ITEM NO. ① AND ⑤ SHALL BE ISOLATED FROM THE CABINET.
  - METER SOCKETS SHALL BE 5 CLIP TYPE.
  - SERVICE UTILITY WILL INSTALL THE TIME-OF-USE METER IF APPLICABLE.
  - UNLESS OTHERWISE NOTED, THE MAXIMUM NUMBER OF SINGLE-POLE CB SPACES IN THE ENCLOSURE IS FOURTEEN.
  - PHOTOELECTRIC CONTROL SHALL BE TYPE II.

**ELECTRICAL DETAILS**  
**(SERVICE EQUIPMENT AND TYPICAL WIRING DIAGRAM TYPE III-A SERIES)**

NO SCALE

**E-6**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 ELECTRICAL  
 FUNCTIONAL SUPERVISOR  
 ELAINE WONG  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 WILLIAM WONG  
 ELAINE WONG  
 REVISED BY  
 DATE REVISED

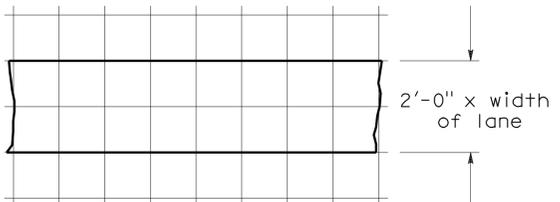
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 01-05-11 TIME PLOTTED => 11:46

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	39	67

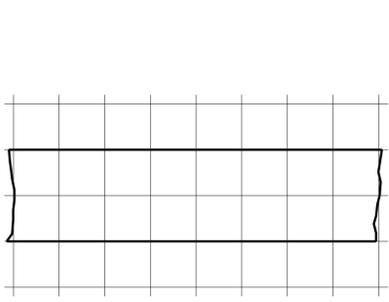
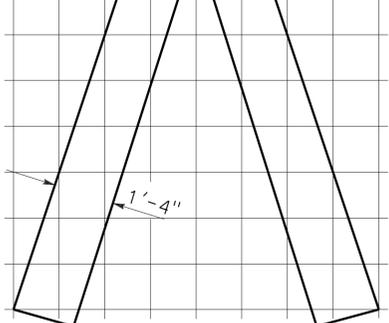
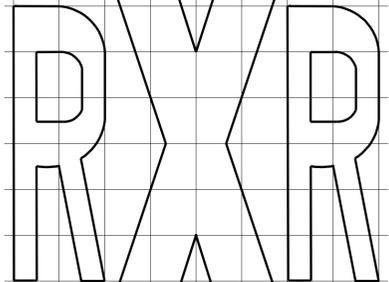
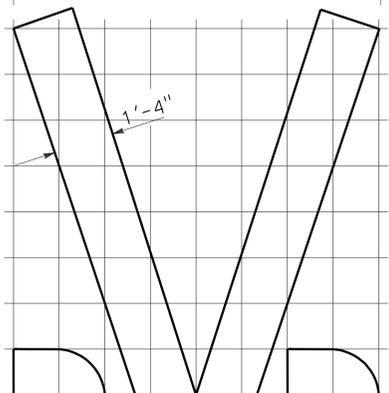
Donald E. Howe  
 REGISTERED CIVIL ENGINEER  
 June 6, 2008  
 PLANS APPROVAL DATE  
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REGISTERED PROFESSIONAL ENGINEER  
 Donald E. Howe  
 No. C46402  
 Exp. 3-31-09  
 CIVIL  
 STATE OF CALIFORNIA

To accompany plans dated 5-9-11



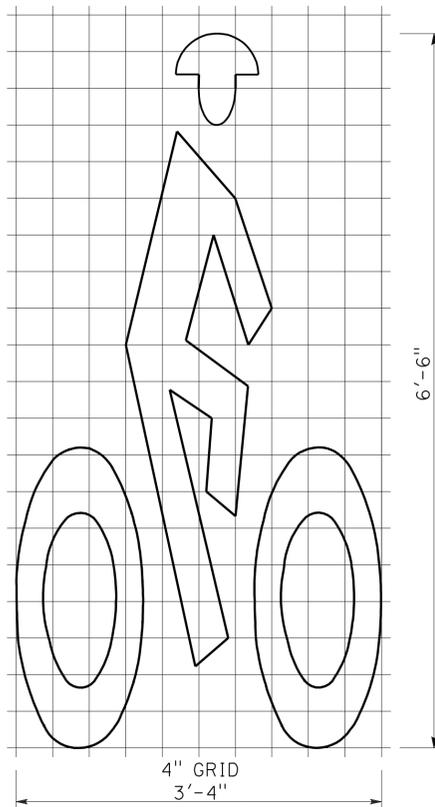
8'-0"



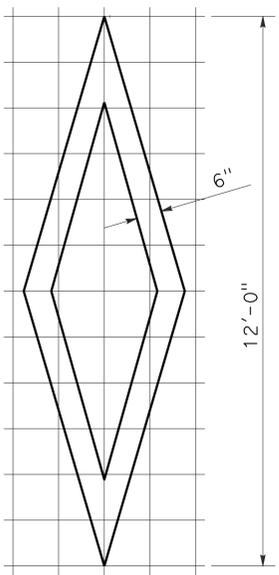
1'-0" GRID  
A=70 sq ft \*

**RAILROAD CROSSING SYMBOL**

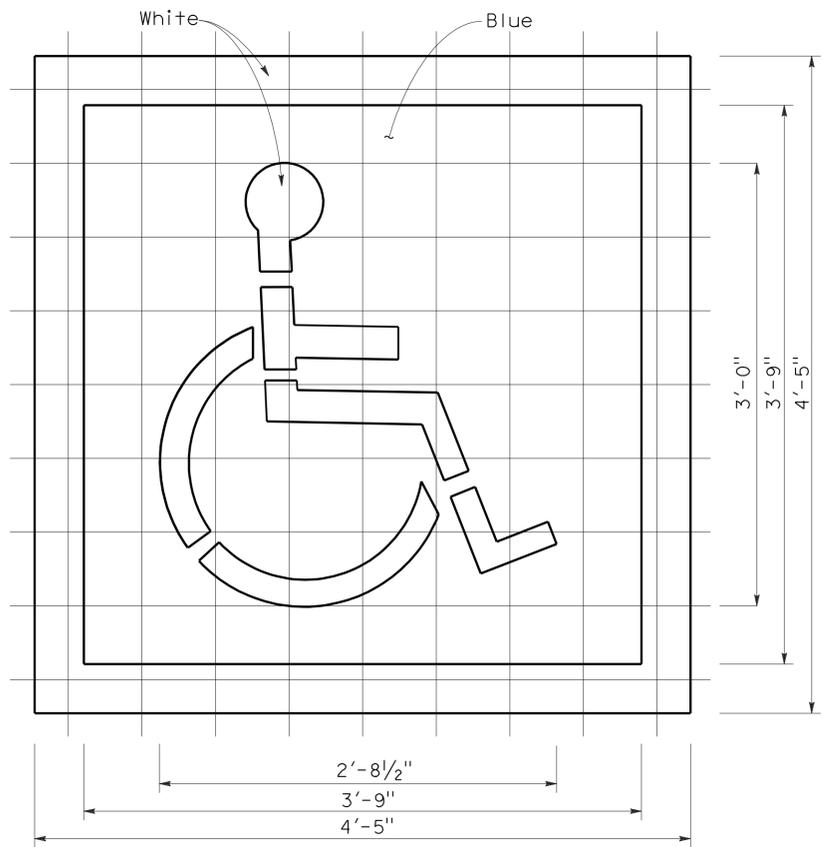
\*70 sq ft DOES NOT INCLUDE THE 2'-0" x VARIABLE WIDTH TRANSVERSE LINES.



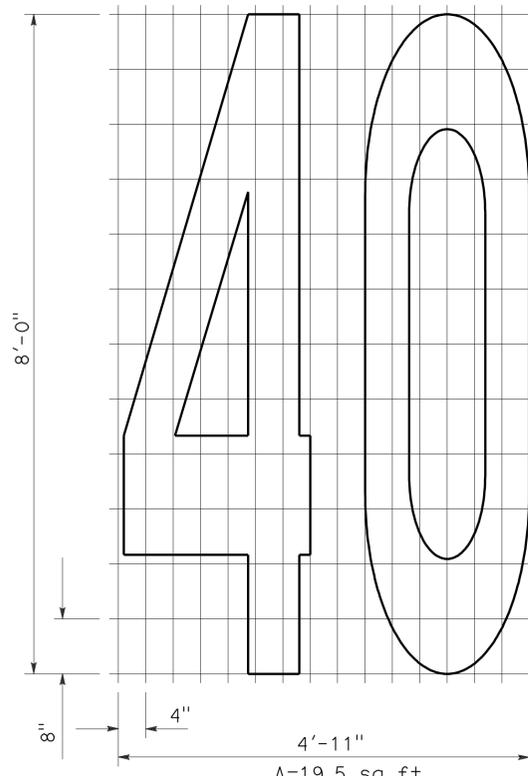
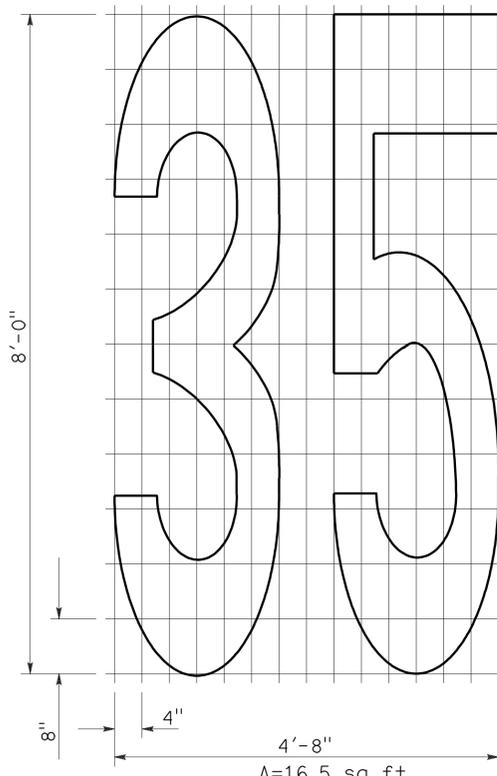
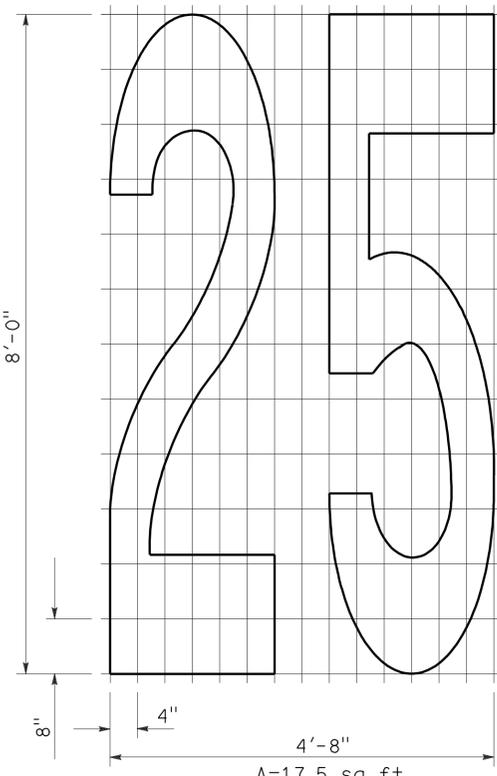
**BIKE LANE SYMBOL**



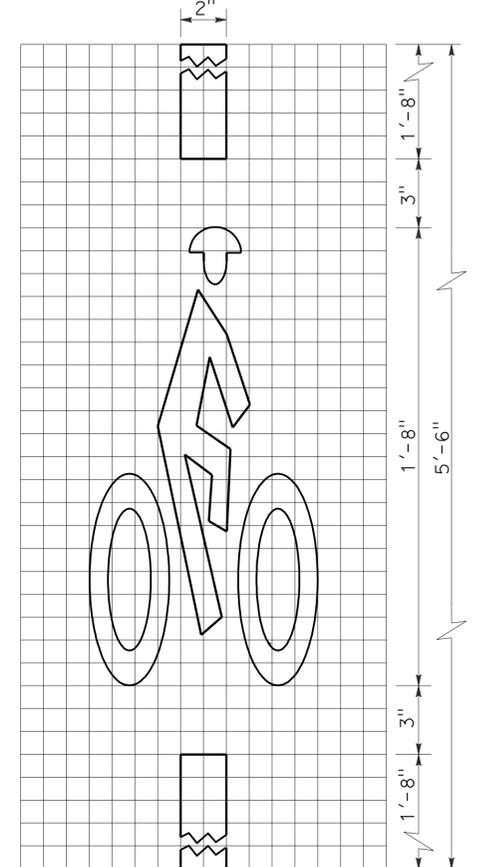
**DIAMOND SYMBOL**



**INTERNATIONAL SYMBOL OF ACCESSIBILITY MARKING**



**NUMERALS**



**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	Son	12,121	41.2/41.3, 7.4/7.6	40	67

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

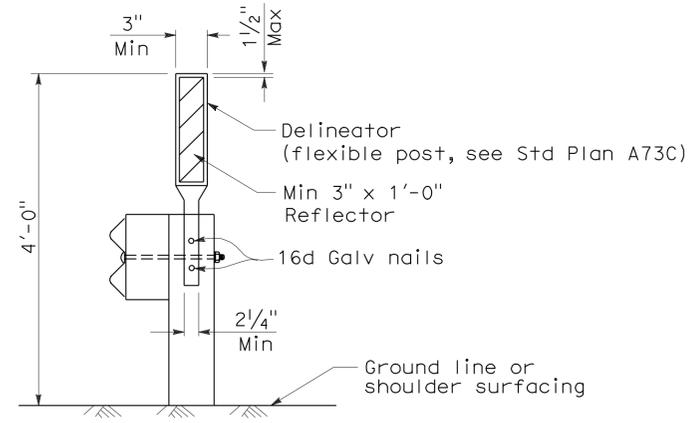
June 6, 2008  
PLANS APPROVAL DATE

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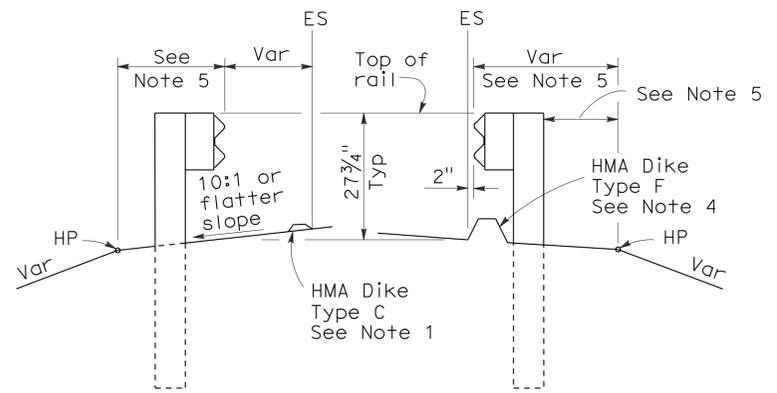
To accompany plans dated 5-9-11

**NOTES:**

1. When necessary to place dike in front of face of guard railing, only Type C dike may be used. For dike details, see Standard Plan A87B.
2. For standard railing post embedment, see Standard Plans A77C3.
3. Guard railing delineation to be used where shown on the Project Plans.
4. When dike or curb is placed under guard railing, the maximum height of the dike or curb shall be 4". Mountable dike should not be used. For dike and curb details, see Revised Standard Plans RSP A87A and Standard Plan A87B.
5. For details of typical distance between the face of rail and hinge point, see Standard Plan A77C3.



**GUARD RAILING DELINEATION**  
See Note 3



**DIKE POSITIONING**  
See Note 1

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING  
TYPICAL RAILING DELINEATION  
AND DIKE POSITIONING DETAILS**

NO SCALE

RSP A77C4 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77C4  
DATED MAY 1, 2006 - PAGE 47 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP A77C4**

2006 REVISED STANDARD PLAN RSP A77C4

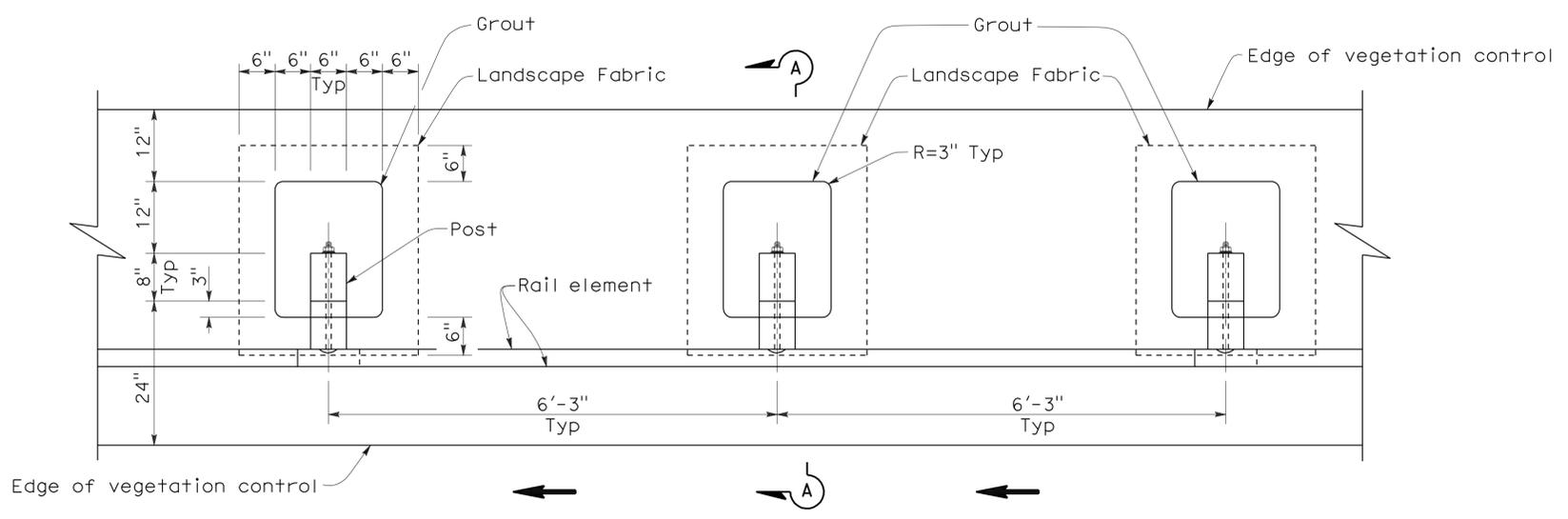
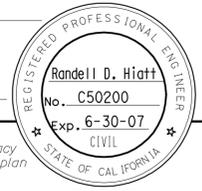
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	41	67

Randell D. Hiatt  
REGISTERED CIVIL ENGINEER

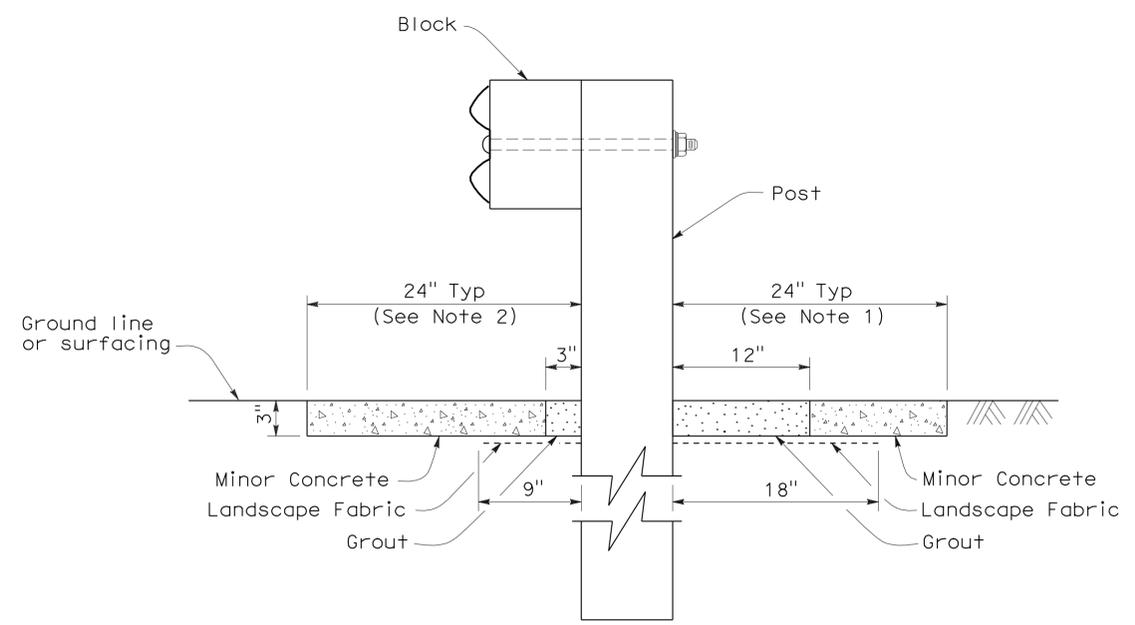
October 20, 2006  
PLANS APPROVAL DATE

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To accompany plans dated 5-9-11



PLAN



SECTION A-A

NOTES:

1. Where the distance between back of post and hinge point is less than 24", vegetation control to be constructed flush with the back edge of the post.
2. Where dike is constructed under railing, construct vegetation control to back edge of dike. Where paved shoulder is constructed within 24" in front of the post, construct vegetation control to the edge of paved shoulder.
3. Direction of adjacent traffic indicated by ←.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING  
TYPICAL VEGETATION CONTROL  
STANDARD RAILING SECTION**

NO SCALE

NSP A77C5 DATED OCTOBER 20, 2006 SUPPLEMENTS THE STANDARD  
PLANS BOOK DATED MAY 2006.

**NEW STANDARD PLAN NSP A77C5**

2006 NEW STANDARD PLAN NSP A77C5

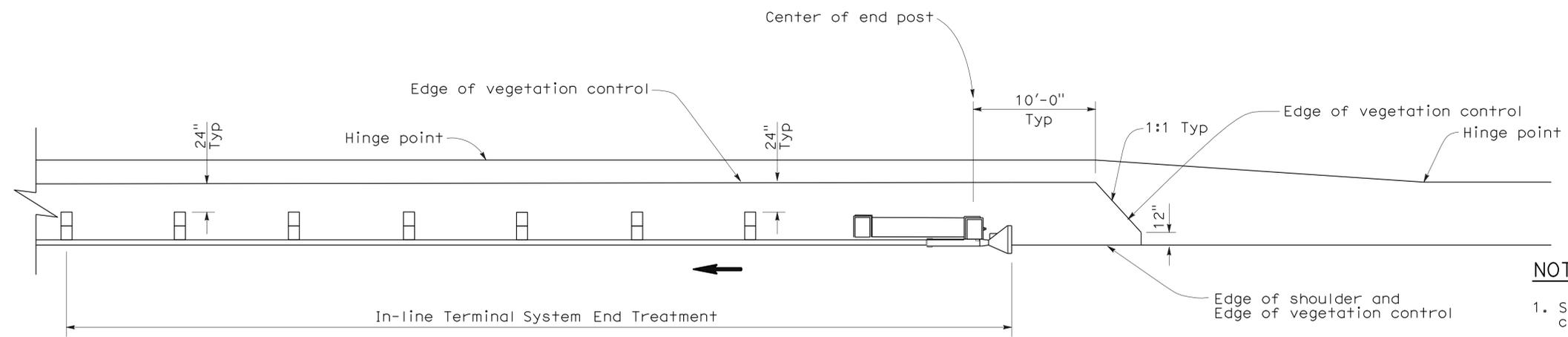
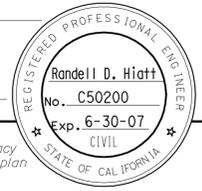
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	42	67

Randell D. Hiatt  
REGISTERED CIVIL ENGINEER

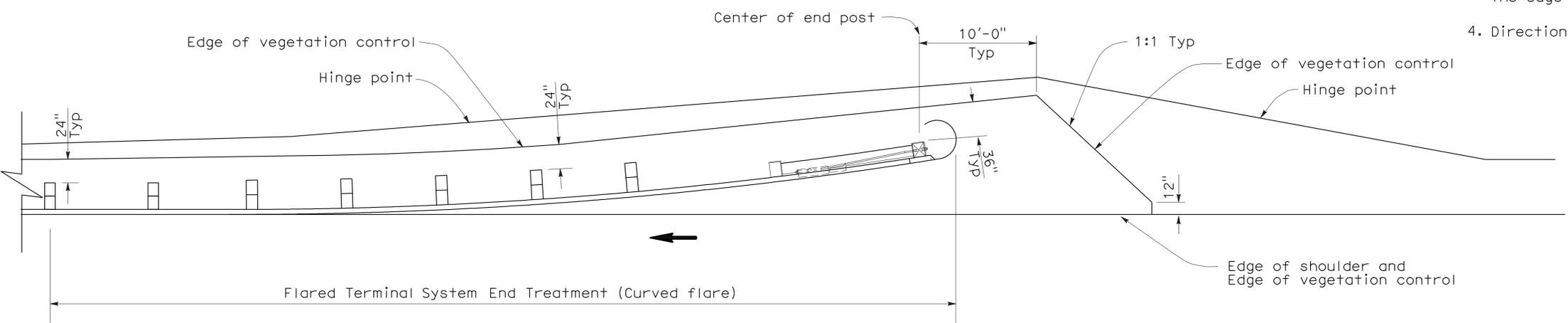
October 20, 2006  
PLANS APPROVAL DATE

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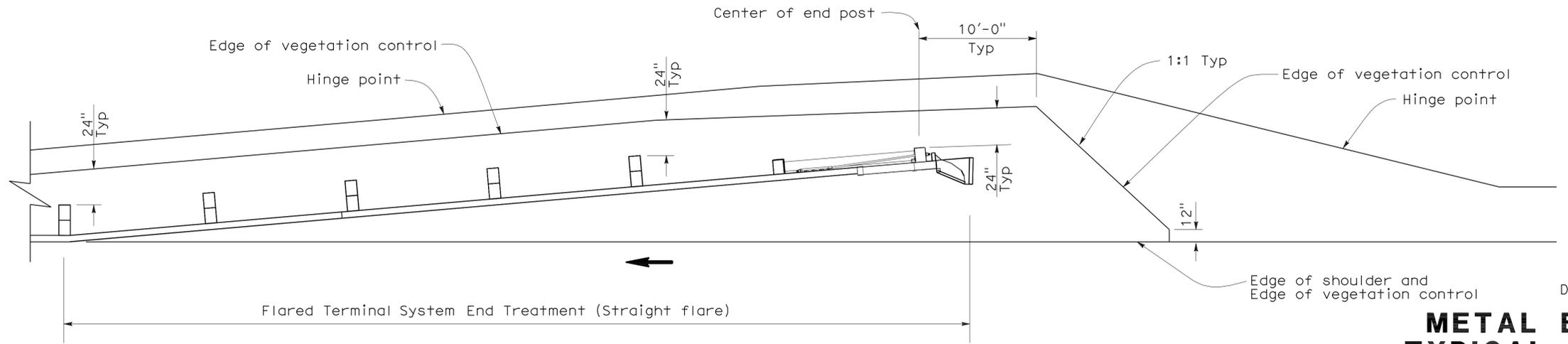
To accompany plans dated 5-9-11



PLAN



PLAN



PLAN

**NOTES:**

1. See New Standard Plan NSP A77C5 for additional vegetation control details.
2. Where the distance between back of post and hinge point is less than 24", vegetation control to be constructed flush with the back edge of the post.
3. Where dike is constructed under railing, construct vegetation control to back edge of dike. Where paved shoulder is constructed within 24" in front of the post, construct vegetation control to the edge of paved shoulder.
4. Direction of adjacent traffic indicated by ←.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING  
TYPICAL VEGETATION CONTROL  
FOR TERMINAL SYSTEM END TREATMENTS**

NO SCALE  
NSP A77C6 DATED OCTOBER 20, 2006 SUPPLEMENTS THE STANDARD  
PLANS BOOK DATED MAY 2006.

**NEW STANDARD PLAN NSP A77C6**

2006 NEW STANDARD PLAN NSP A77C6

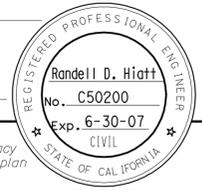
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	43	67

Randell D. Hiatt  
REGISTERED CIVIL ENGINEER

October 20, 2006  
PLANS APPROVAL DATE

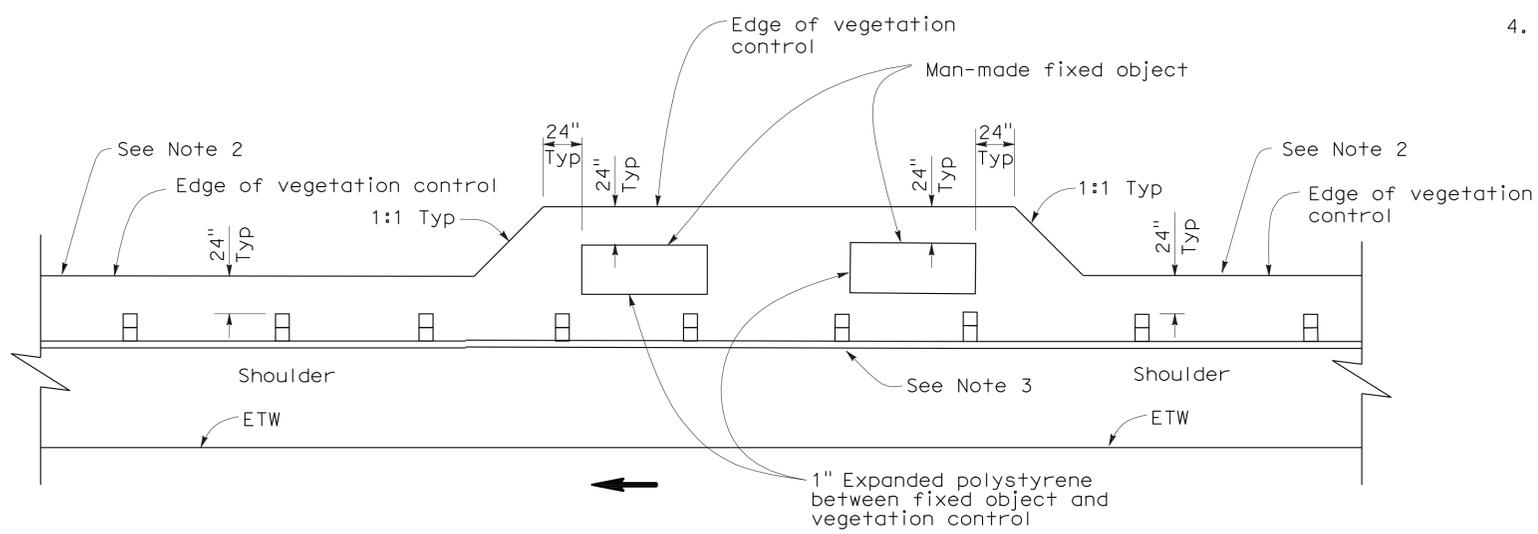
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To accompany plans dated 5-9-11



**NOTES:**

1. See New Standard Plan NSP A77C5 for additional vegetation control details.
2. Where the distance between back of post and hinge point is less than 24", vegetation control to be constructed flush with the back edge of the post.
3. Where dike is constructed under railing, construct vegetation control to back edge of dike. Where paved shoulder is constructed within 24" in front of the post, construct vegetation control to the edge of paved shoulder.
4. Direction of adjacent traffic indicated by ←.



**PLAN**  
FIXED OBJECT(S) ON SHOULDER

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING  
TYPICAL VEGETATION CONTROL  
AT FIXED OBJECT**

NO SCALE  
NSP A77C8 DATED OCTOBER 20, 2006 SUPPLEMENTS THE STANDARD  
PLANS BOOK DATED MAY 2006.

**NEW STANDARD PLAN NSP A77C8**

2006 NEW STANDARD PLAN NSP A77C8

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	44	67

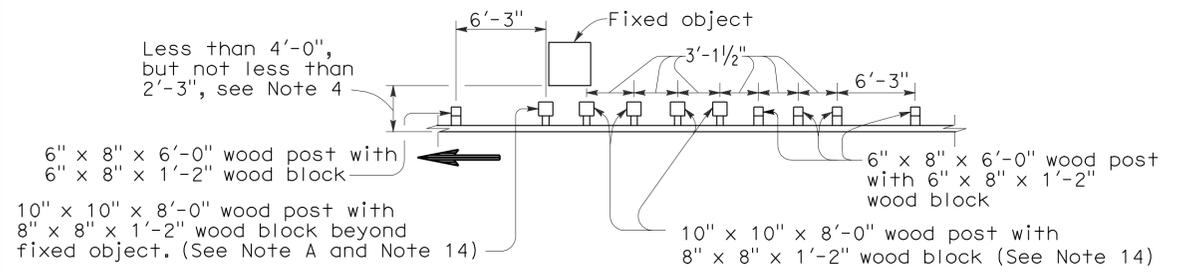
**Randell D. Hiatt**  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

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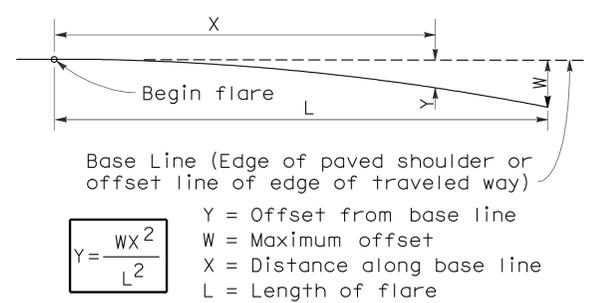
To accompany plans dated 5-9-11

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

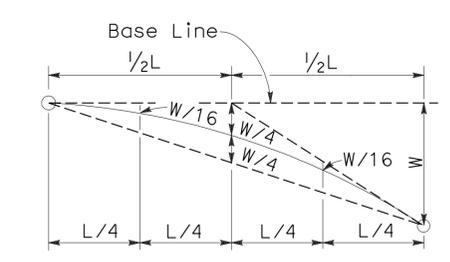


Note A. For a series of fixed objects (bridge columns, overhead sign supports, etc.) additional 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood blocks at 3'-1/2" center to center spacing are to be used between fixed object(s).

**STRENGTHENED RAILING SECTIONS FOR FIXED OBJECT**

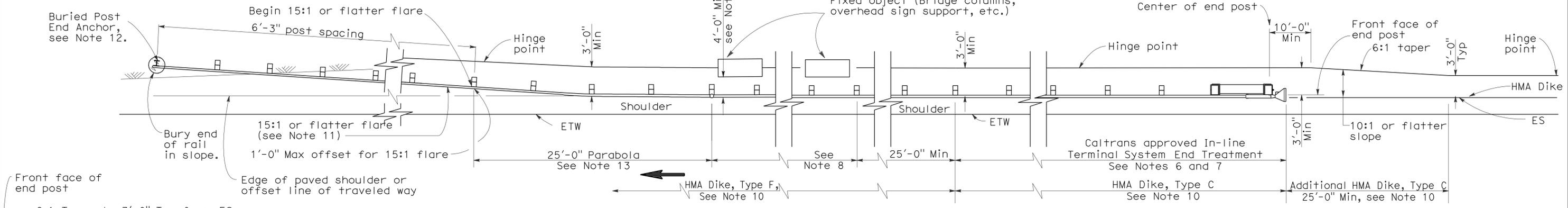


**PARABOLIC FLARE OFFSETS**



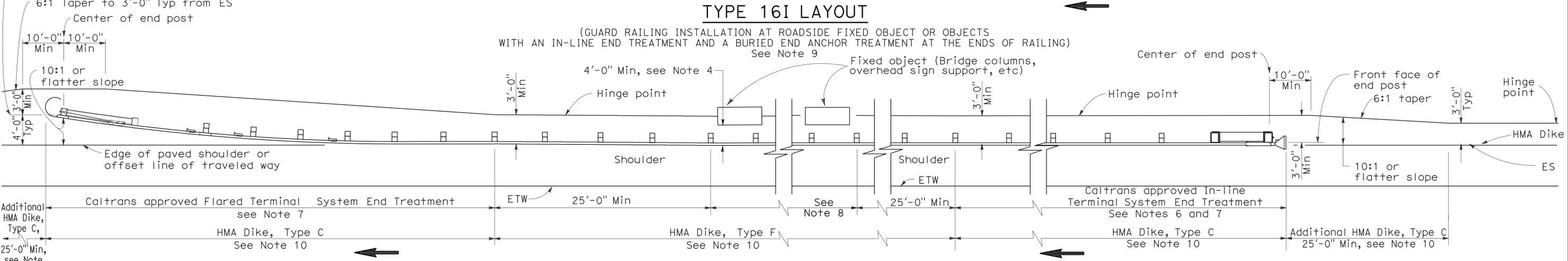
**TYPICAL PARABOLIC LAYOUT**

Use strengthened railing sections with Layout Types 16I or 16J Layouts where minimum clearance between the face of the guard railing and fixed object(s) is less than 4'-0", but not less than 2'-3". See Note 4.



**TYPE 16I LAYOUT**

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH AN IN-LINE END TREATMENT AND A BURIED END ANCHOR AT THE ENDS OF RAILING) See Note 9



**TYPE 16J LAYOUT**

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH AN IN-LINE END TREATMENT AND A FLARED END TREATMENT AT THE ENDS OF RAILING) See Note 9

**NOTES:**

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard railing post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks may be used for 6" x 8" x 6'-0" wood posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- A 4'-0" minimum clearance is required between the face of the railing and the face of a fixed object located directly behind standard guard railing sections with post spacing at 6'-3". Construct guard railing as shown in the detail "Strengthened Railing Sections for Fixed Objects" on this plan, where the clearance between the face of the railing and the face of a fixed object is less than 4'-0", but not less than 2'-3". Where the clearance is less than 2'-3", a concrete wall or barrier should be constructed to shield the fixed object(s).
- Direction of adjacent traffic indicated by →.

- In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
- The type of terminal system to be used will be shown on the Project Plans.
- As site conditions dictate, construct additional guard railing to shield fixed object(s). Additional guard railing length equal to multiples of 12'-6". Post spacing at 6'-3", except as specified in Note 4.
- Layout Types 16D through 16L, shown on the A77G Series of Revised Standard Plans, are typically used where guard railing is recommended to shield roadside fixed object(s) and a crashworthy end treatment is required for both directions of traffic.
- Where placement of dike is required with guard railing, see Revised Standard Plan RSP A77C4 for dike positioning details.
- The 15:1 or flatter flare for the buried post anchor is based on the edge of the paved shoulder or offset line of edge of the traveled way. The length of guard railing within the 15:1 or flatter flare is based on site conditions and should be a length equal to multiples of 12'-6".

- For details of Buried Post End Anchor details, see Standard Plan A77I2.
- For typical flare offsets for 25'-0" length parabola with maximum offset of 1'-0", see Revised Standard RSP Plan A77E1.
- W6 x 15 steel post, 8'-0" in length, with 8" x 8" x 1'-2" notched wood block or notched recycled plastic blocks may be used in place of the 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood block shown in the "Strengthened Railing Sections Detail".

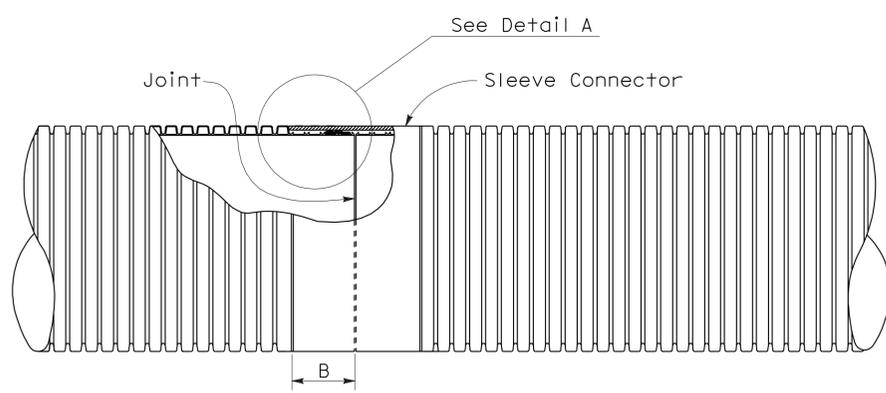
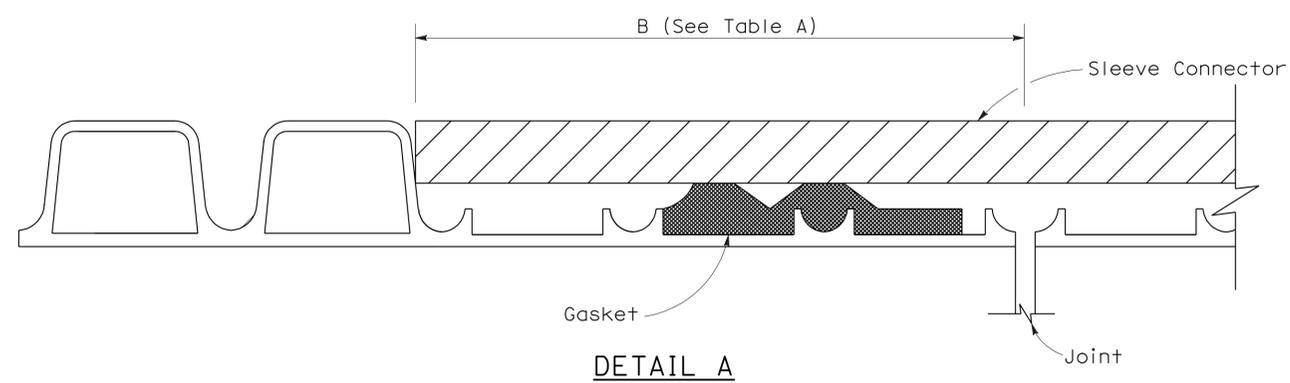
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**METAL BEAM GUARD RAILING**  
**TYPICAL LAYOUTS FOR**  
**ROADSIDE FIXED OBJECTS**  
NO SCALE

RSP A77G7 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77G7  
DATED MAY 1, 2006 - PAGE 65 OF THE STANDARD PLANS BOOK DATED MAY 2006.

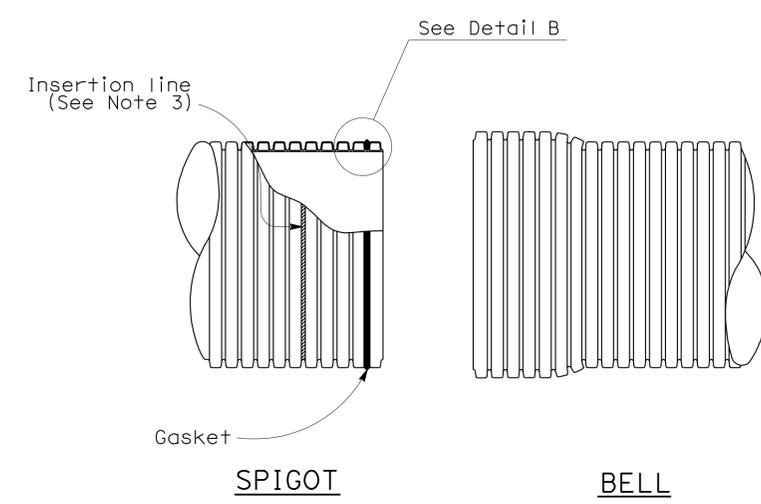
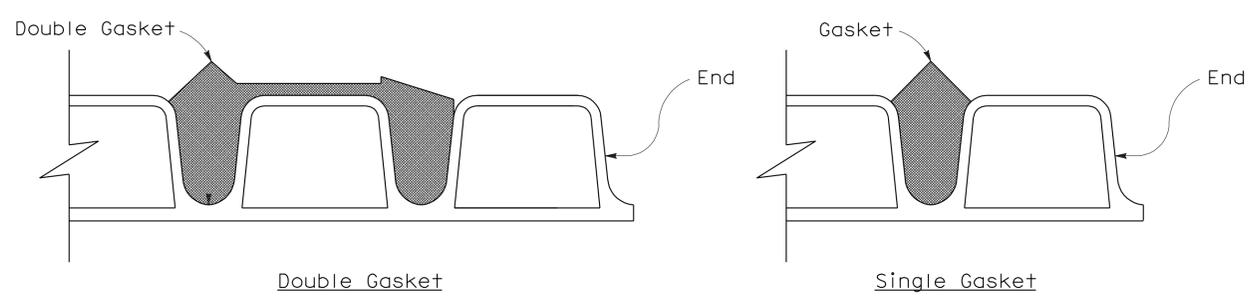
**REVISED STANDARD PLAN RSP A77G7**

2006 REVISED STANDARD PLAN RSP A77G7

To accompany plans dated 5-9-11

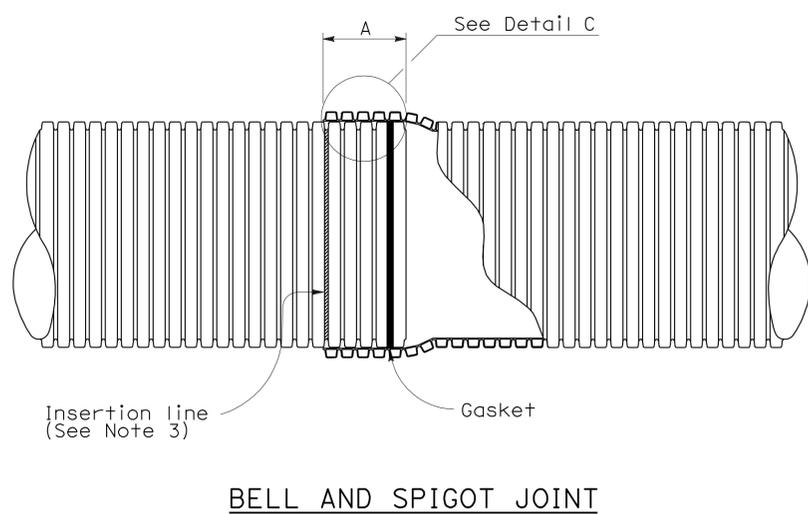
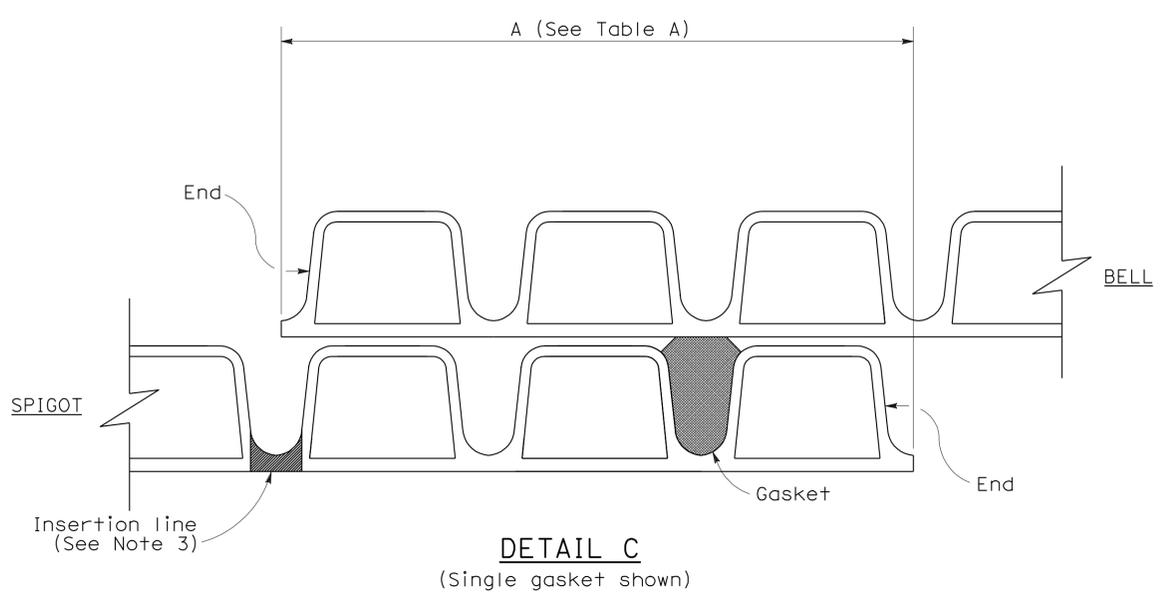


- NOTES:**
- For pipe sections installed on straight alignment, the pipe sections shall be joined to achieve maximum joint overlap at all points on the periphery as indicated in Table A where the plans call for positive or watertight joints. Maximum joint overlap is recommended where the plans call for standard joints, but in no case shall the joint overlap be less than 3/2".
  - For pipe sections installed on curved alignment, the maximum angle of deflection from straight alignment at any joint shall not exceed two degrees. Where the plans call for watertightness, field testing for compliance is required. Where plans call for positive joints, the pipe sections shall be joined to achieve Table A Dimensions on one side of the joint. Joints classified as standard shall have no less than 3/2" joint overlap at any point on the periphery.
  - Factory applied insertion line limit shall be placed on spigot.
  - Liner insert to be used inside of existing pipe.



**TABLE A**

JOINT OVERLAP DIMENSIONS		
PIPE Dia (NOMINAL)	A	B
12"	5 3/4"	4 1/4"
15"	6 3/4"	5 5/8"
18"	6 3/4"	5 5/8"
21"	8 1/2"	5 5/8"
24"	8 1/2"	6 1/8"
30"	8 1/2"	7 1/8"
36"	8 1/2"	8 1/8"

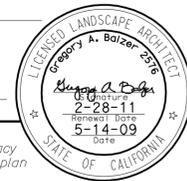


STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**CORRUGATED POLYVINYL CHLORIDE PIPE  
 WITH SMOOTH INTERIOR  
 STANDARD AND POSITIVE JOINTS**  
 NO SCALE  
 NSP D97I DATED MARCH 7, 2008 SUPPLEMENTS THE STANDARD  
 PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP D97I

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	46	67

*Gregory A. Balzer*  
 LICENSED LANDSCAPE ARCHITECT  
 June 5, 2009  
 PLANS APPROVAL DATE  
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To accompany plans dated 5-9-11

2006 REVISED STANDARD PLAN RSP H1

**A**

AB aggregate base  
 ABS acrylonitrile-butadiene-styrene  
 AC asphalt concrete  
 Adj adjacent/adjustable  
 AIC auxiliary irrigation controller  
 Alt alternative  
 AMEND amendment  
 ARV air release valve  
 AUTO automatic  
 AUX auxiliary  
 AVB atmospheric vacuum breaker

**B**

B&B balled and burlapped  
 B/B brass/bronze  
 B/B/PL brass/bronze/plastic  
 B/PL brass/plastic  
 BFM bonded fiber matrix  
 Bit Ctd bituminous coated  
 BP booster pump  
 BPA backflow preventer assembly  
 BPAE backflow preventer assembly in enclosure  
 BPE backflow preventer enclosure  
 BV ball valve

**C**

CAP corrugated aluminum pipe  
 CARV combination air release valve  
 CCA cam coupler assembly  
 CEC controller enclosure cabinet  
 CHDPE corrugated high density polyethylene  
 CL chain link  
 CNC control and neutral conductors  
 Conc concrete  
 Cond conduit  
 CSP corrugated steel pipe  
 CST center strip  
 CV check valve

**D**

Dia diameter  
 DIP ductile iron pipe  
 DN diameter nominal

**E**

EA each  
 Elect electric/electrical  
 Elev elevation  
 ENCL enclosure  
 EP edge of pavement  
 ES edge of shoulder  
 EST end strip  
 ESTB establishment  
 ETW edge of traveled way

**F**

F full circle  
 F/P full/part circle  
 FAU filter assembly unit  
 FCV flow control valve  
 FERT fertilizer  
 FG finished grade  
 FIPT female iron pipe thread  
 FIS fertilizer injector system  
 FL flow line  
 FM flow monitor  
 FS flow sensor  
 Ft foot/feet  
 FV flush valve

**G**

GAL Gallon(s)  
 Galv galvanized  
 GARV garden valve  
 GPH gallons per hour  
 GPM gallons per minute  
 GSP galvanized steel pipe  
 GV gate valve

**H**

H half circle  
 HB hose bib  
 HDPE high density polyethylene  
 HP horsepower/hinge point  
 HPL high pressure line  
 Hwy highway

**I**

IC irrigation controller  
 ICC irrigation controller(s) in controller enclosure cabinet  
 ID inside diameter  
 In inches  
 IFS irrigation filtration system  
 IPS iron pipe size  
 IPT iron pipe thread  
 Irr irrigation

**L**

L length  
 LF linear foot

**M**

Max maximum  
 MBGR metal beam guard railing  
 MCV manual control valve  
 MIC master irrigation controller  
 Min minimum  
 MIPT male iron pipe thread  
 Misc miscellaneous  
 Mtl material  
 MVP maintenance vehicle pullout

**N**

NCN no common name  
 NL nozzle line  
 No. number  
 NPT national pipe thread

**O**

O/C on center  
 OD outside diameter  
 Oz ounce

**P**

P part circle  
 PB pull box  
 PCC portland cement concrete  
 PE polyethylene  
 Pkt packet  
 PL plastic  
 PLT plant/planting  
 PLT ESTB plant establishment  
 PM post mile  
 PR pressure rated  
 PRLV pressure relief valve  
 PSFM polymer stabilized fiber matrix  
 PSI pounds per square inch  
 PRV pressure reducing valve  
 PVC polyvinyl chloride  
 Pvmt pavement

**Q**

Q quarter circle  
 QCV quick coupling valve

**R**

R radius  
 RCP reinforced concrete pipe  
 RCV remote control valve  
 RCVM remote control valve (master)  
 RCVMF remote control valve (master) w/ flow meter  
 RCW recycled/reclaimed water  
 RECP rolled erosion control product  
 REQ required  
 R/W right of way

**S**

S slip  
 SCC sprinkler control conduit  
 SCH schedule  
 SF state-furnished  
 Shld shoulder  
 SQFT square foot/feet  
 SQYD square yard(s)  
 SST side strip  
 Sta station  
 Std standard  
 SW sidewalk/sound wall

**T**

T third circle/thread  
 TLS truck loading standpipe  
 TQ three quarter circle  
 TRM turf reinforcement mat  
 TRVD traveled  
 TT two third circle  
 Typ typical

**U**

UG underground

**V**

VAU valve assembly unit

**W**

W width  
 W/ with  
 WM water meter  
 WS wye strainer  
 WSP welded steel pipe  
 WWM welded wire mesh

**NOTE:**  
 FOR ADDITIONAL ABBREVIATIONS,  
 SEE STANDARD PLANS A10A AND A10B.

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**PLANTING AND IRRIGATION  
 ABBREVIATIONS**

NO SCALE  
 RSP H1 DATED JUNE 5, 2009 SUPERSEDES STANDARD PLAN H1  
 DATED MAY 1, 2006 - PAGE 201 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP H1**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	47	67

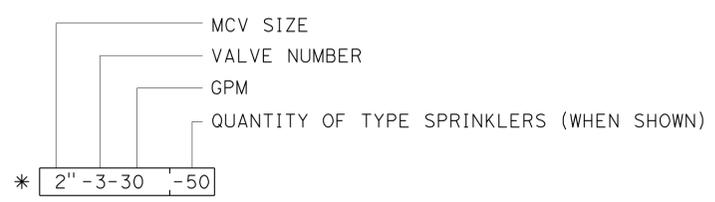
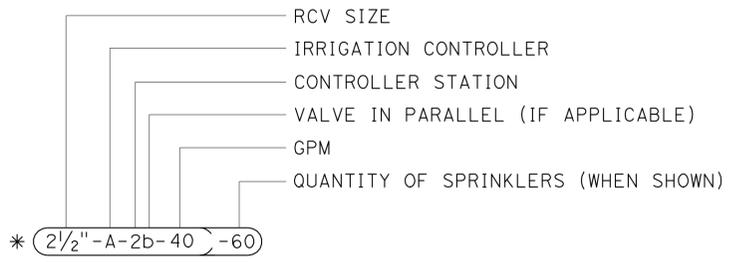
*Gregory A. Balzer*  
 LICENSED LANDSCAPE ARCHITECT  
 June 5, 2009  
 PLANS APPROVAL DATE  
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 5-9-11

EXISTING	PROPOSED	ITEM DESCRIPTION
		WATER METER (WM)
		BACKFLOW PREVENTER ASSEMBLY (BPA)
		BACKFLOW PREVENTER ASSEMBLY IN ENCLOSURE (BPAE)
		BACKFLOW PREVENTER ENCLOSURE (BPE)
		BOOSTER PUMP (BP)
		TRUCK LOADING STANDPIPE (TLS)
		FLOW SENSOR (FS)
		MASTER IRRIGATION CONTROLLER (MIC)
		AUXILIARY IRRIGATION CONTROLLER (AIC)
		IRRIGATION CONTROLLER (IC)/ IRRIGATION CONTROLLER (IC) (BATTERY) IRRIGATION CONTROLLER (IC) (SOLAR)
		IRRIGATION CONTROLLER(S) IN CONTROLLER ENCLOSURE CABINET (ICC)
		CONTROL AND NEUTRAL CONDUCTORS (CNC)
		SPRINKLER CONTROL CONDUIT (SCC)
		IRRIGATION CROSSOVER
		EXTEND IRRIGATION CROSSOVER
		IRRIGATION SLEEVE
		DUCTILE IRON PIPE (SUPPLY LINE) (MAIN) (DIP)
		GALVANIZED STEEL PIPE (SUPPLY LINE) (MAIN) (GSP)
		GALVANIZED STEEL PIPE (SUPPLY LINE) (LATERAL) (GSP)
		PLASTIC PIPE (PR 200) (SUPPLY LINE) (MAIN)
		PLASTIC PIPE (PR 200) (SUPPLY LINE) (LATERAL)
		PLASTIC PIPE (IRRIGATION LINE)
		REMOTE CONTROL VALVE (RCV) REMOTE CONTROL VALVE (MASTER) (RCVM) REMOTE CONTROL VALVE (MASTER) W/FLOW METER (RCVMF)
		MANUAL CONTROL VALVE (MCV)
		VALVE ASSEMBLY UNIT (VAU)
		WYE STRAINER (WS)
		FILTER ASSEMBLY UNIT (FAU)
		GATE VALVE (GV)
		BALL VALVE (BV)

EXISTING	PROPOSED	ITEM DESCRIPTION
		QUICK COUPLING VALVE (QCV)
		CAM COUPLER ASSEMBLY (CCA)
		PRESSURE REDUCING VALVE (PRV)
		PRESSURE RELIEF VALVE (PRLV)
		FLOW CONTROL VALVE (FCV)
		COMBINATION AIR RELEASE VALVE (CARV)
		CHECK VALVE (CV)
		FLUSH VALVE (FV)
		NOZZLE LINE W/TURNING UNION
		IRRIGATION SYSTEM
		IRRIGATION SYSTEM TO BE REMOVED
		CHAIN LINK GATE
		QUICK COUPLING VALVE W/SPRINKLER PROTECTOR
		SPRINKLER W/SPRINKLER PROTECTOR
		CONNECT TO EXISTING SYSTEM
		CAP
		CAP EXISTING

**VALVE CODE**



\* VALVE CODES FOR EXISTING VALVES ARE SHOWN IN A DASHED ENCLOSURE.

**PLANTING AND IRRIGATION SYMBOLS**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

NO SCALE

RSP H2 DATED JUNE 5, 2009 SUPERSEDES RSP H2 DATED MARCH 7, 2008 AND STANDARD PLAN H2 DATED MAY 1, 2006 - PAGE 202 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP H2**

2006 REVISED STANDARD PLAN RSP H2

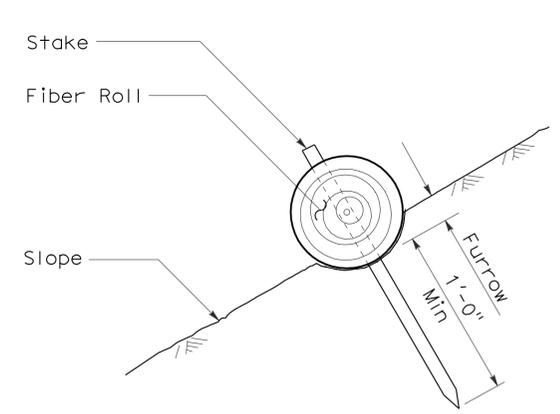
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	48	67

*Gregory A. Balzer*  
 LICENSED LANDSCAPE ARCHITECT  
 April 3, 2009  
 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.

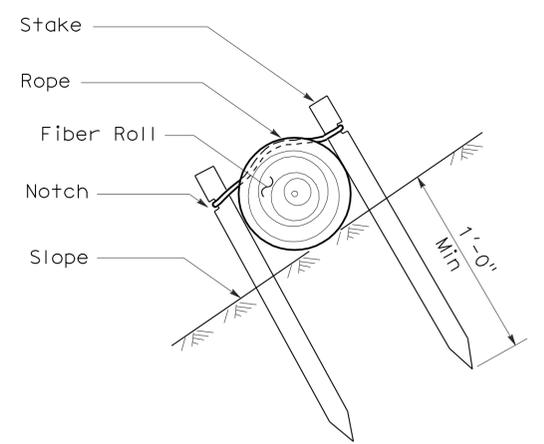
To accompany plans dated 5-9-11

**NOTES:**

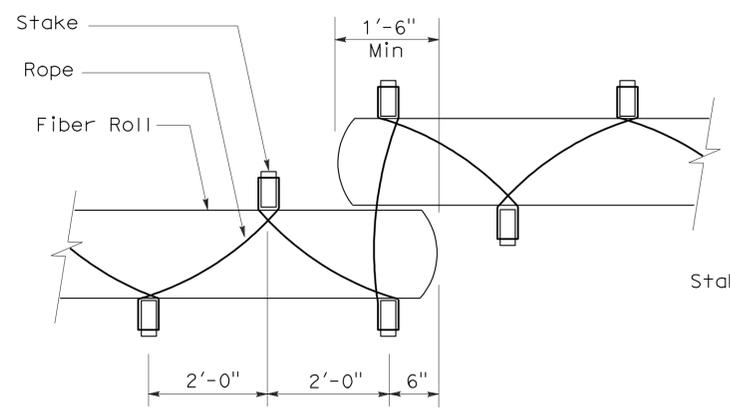
1. Fiber roll spacing varies depending upon slope inclination.
2. Installations shown in the perspectives are for slope inclination of 10:1 and steeper.



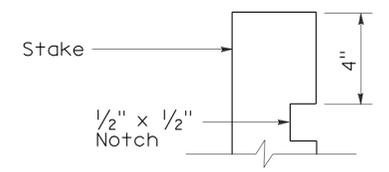
**SECTION**  
**FIBER ROLL**  
**(TYPE 1)**



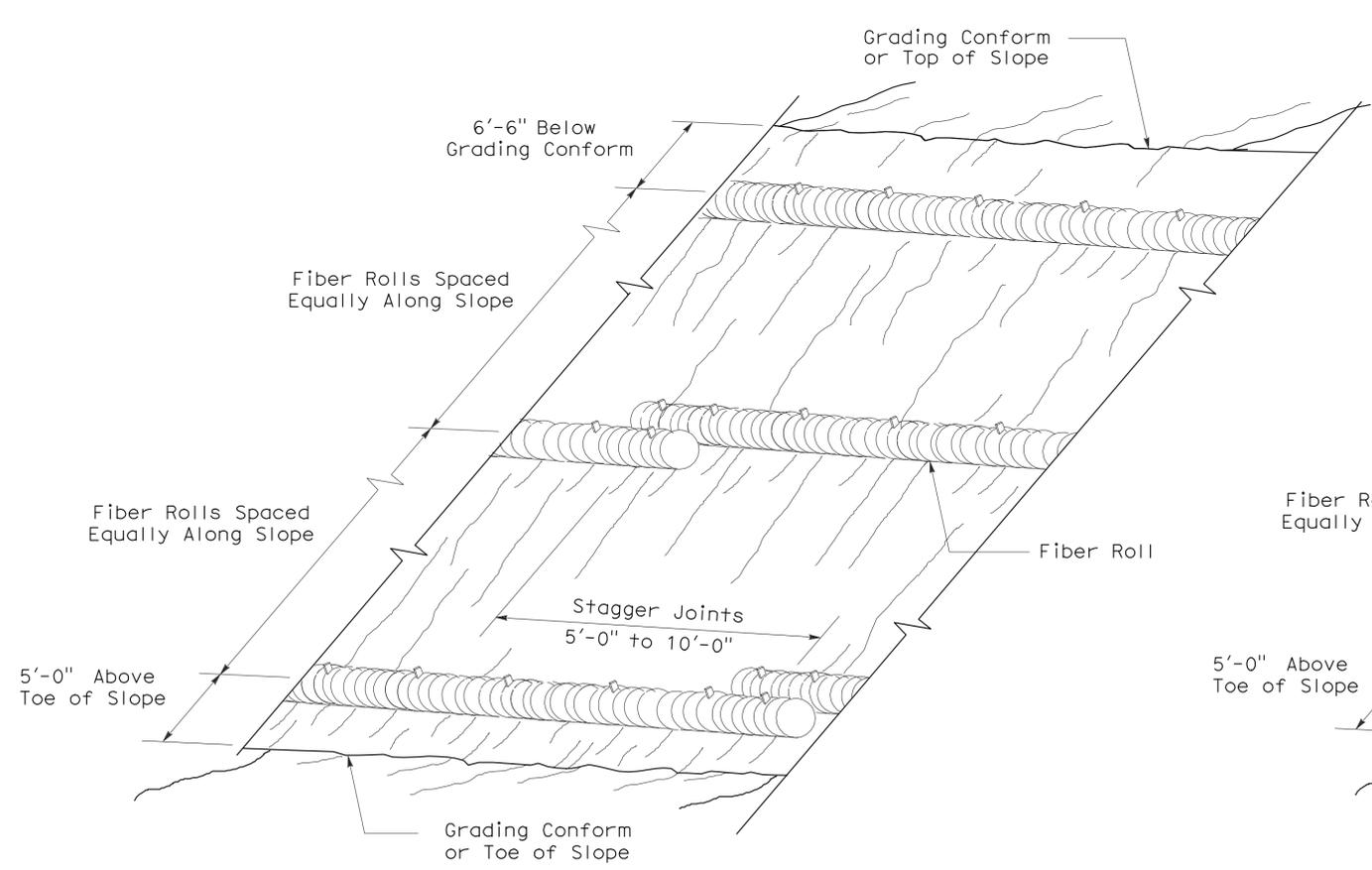
**SECTION**



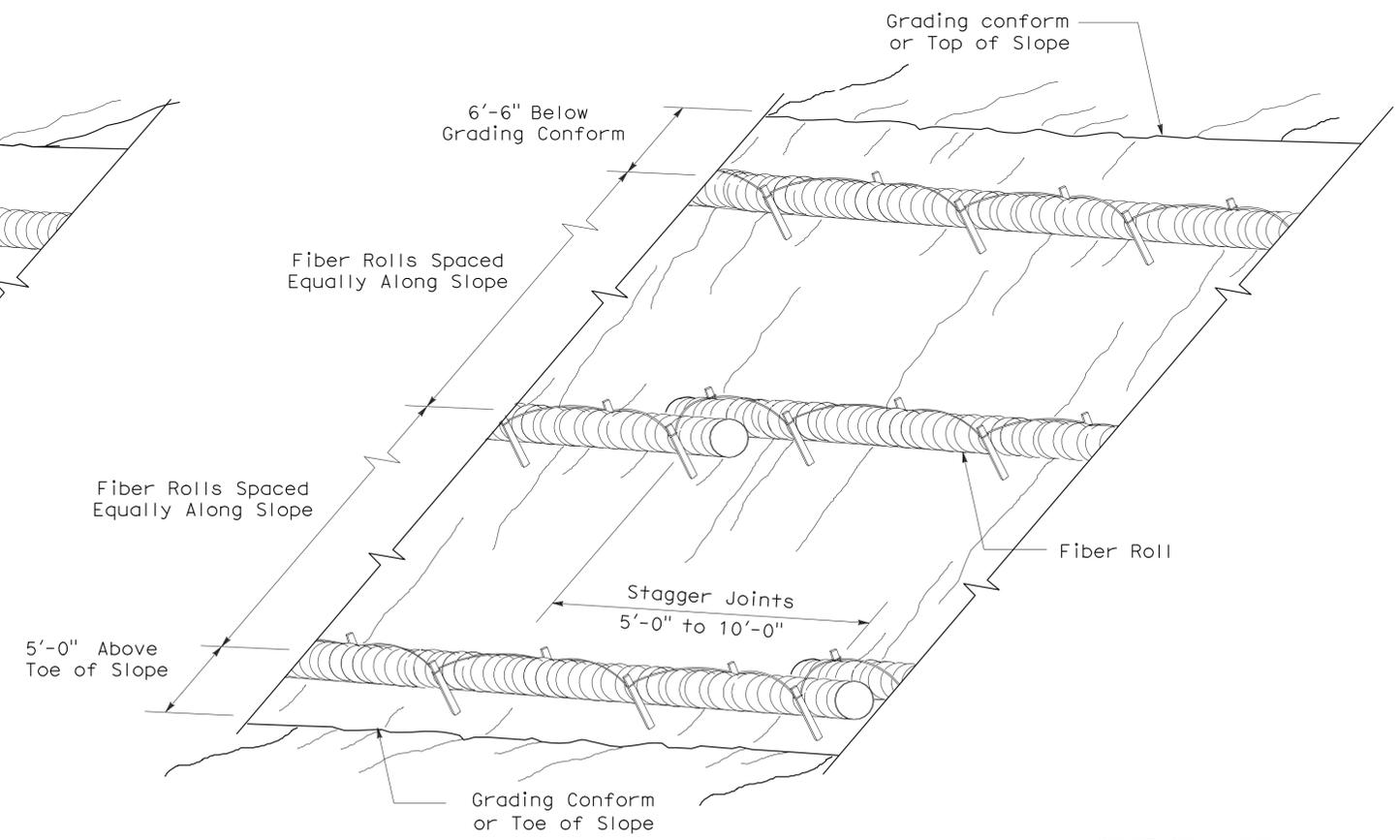
**PLAN**



**ELEVATION**  
**STAKE NOTCH DETAIL**



**PERSPECTIVE**  
**FIBER ROLL (TYPE 1)**



**PERSPECTIVE**  
**FIBER ROLL (TYPE 2)**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**EROSION CONTROL DETAILS**  
**(FIBER ROLL)**

NO SCALE

RNSP H51 DATED APRIL 3, 2009 SUPERSEDES NSP H51 DATED DECEMBER 1, 2006 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED NEW STANDARD PLAN RNSP H51

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	49	67

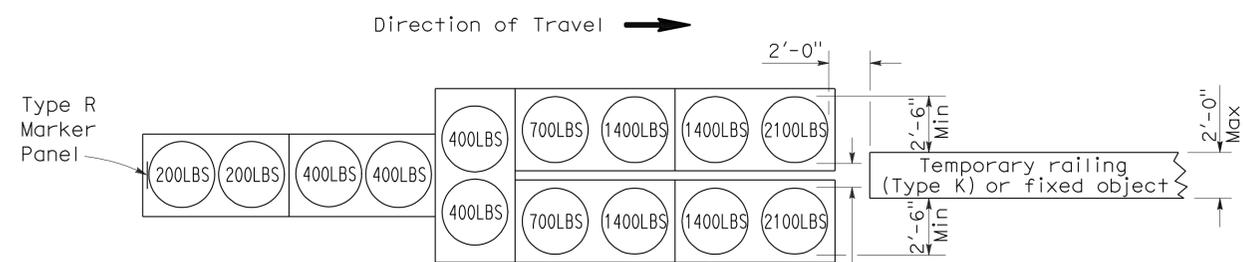
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

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

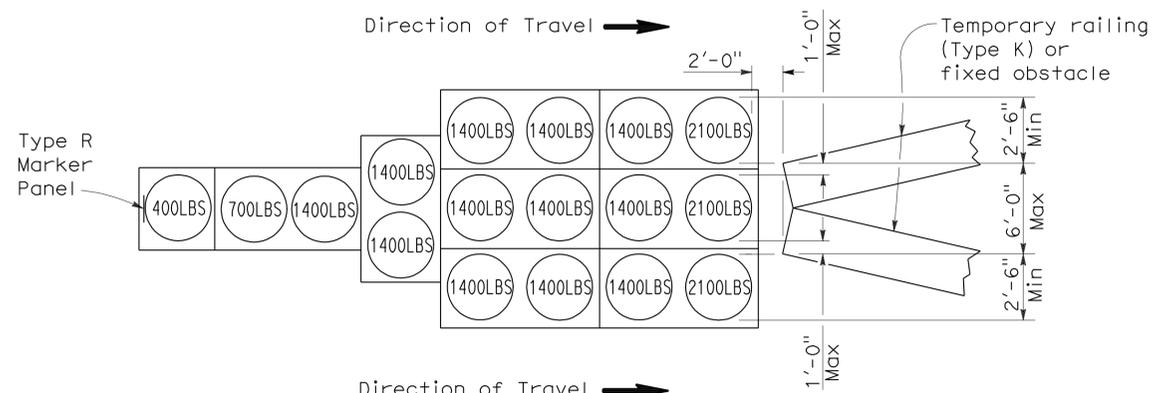
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 5-9-11



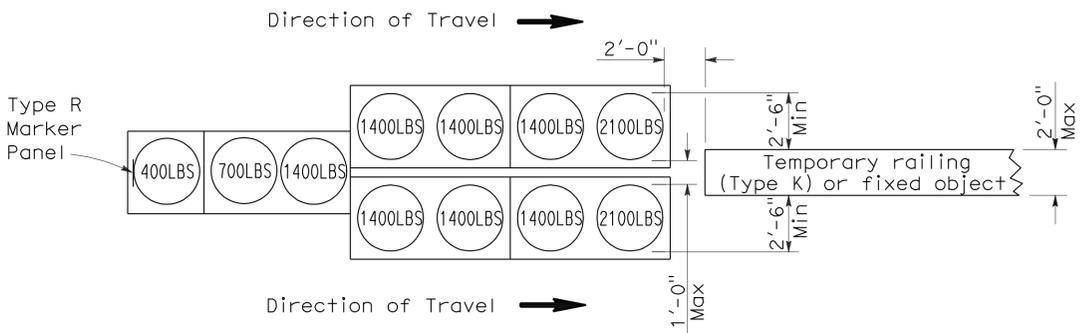
**ARRAY 'TU14'**

Approach speed 45 mph or more



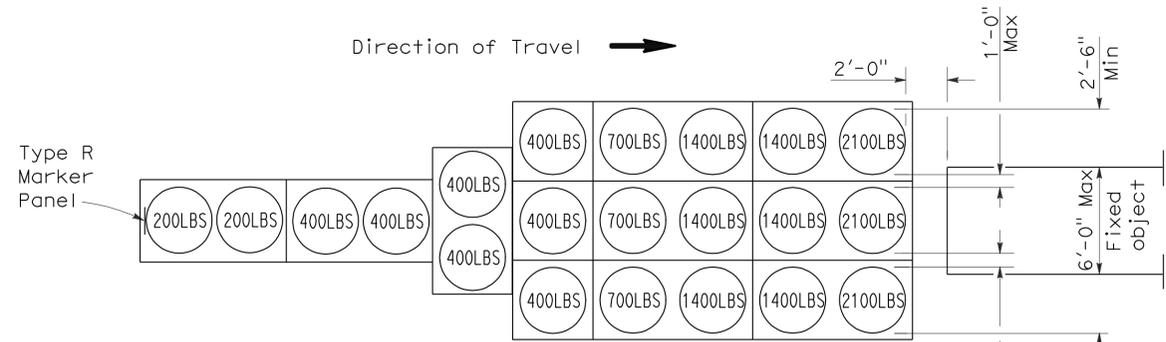
**ARRAY 'TU17'**

Approach speed less than 45 mph



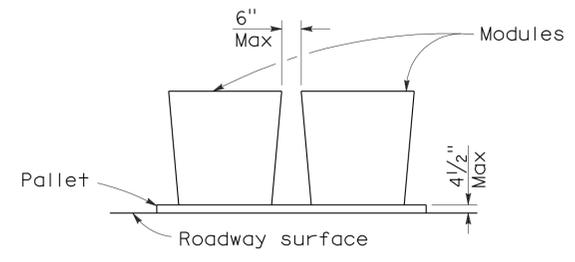
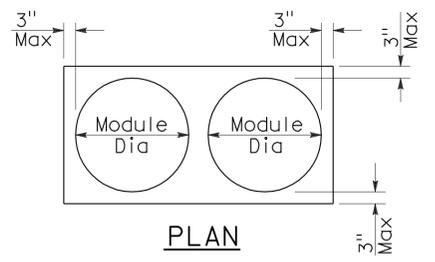
**ARRAY 'TU11'**

Approach speed less than 45 mph



**ARRAY 'TU21'**

Approach speed 45 mph or more



**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 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.

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

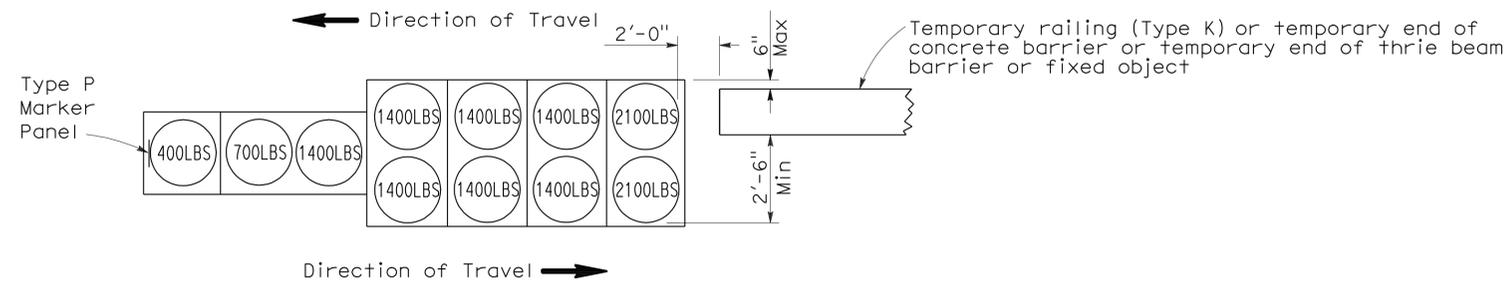
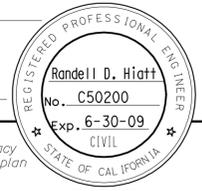
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	50	67

Randell D. Hiatt  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

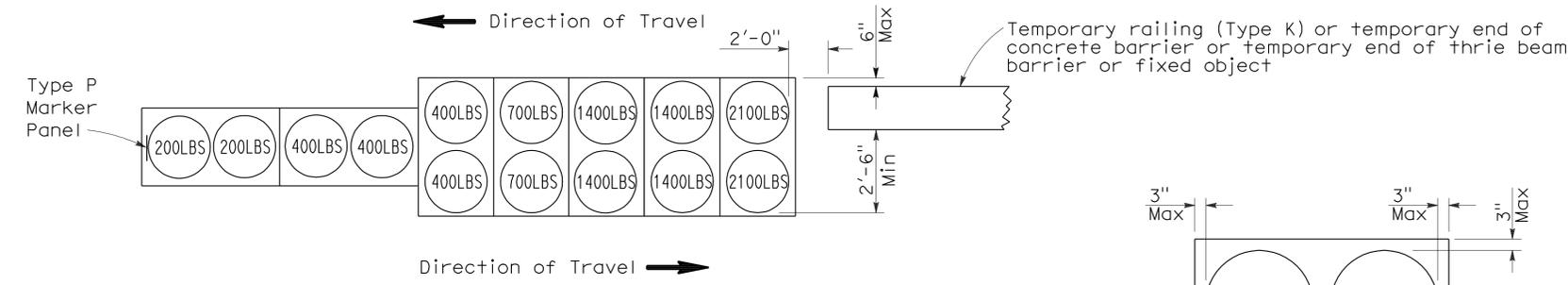
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 5-9-11



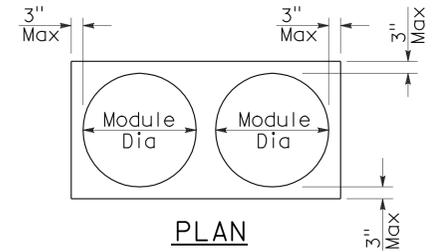
**ARRAY 'TB11'**

Approach speed less than 45 mph

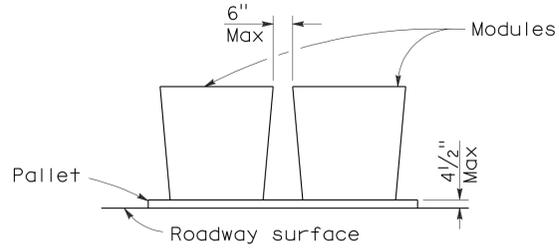


**ARRAY 'TB14'**

Approach speed 45 mph or more



PLAN



ELEVATION

**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

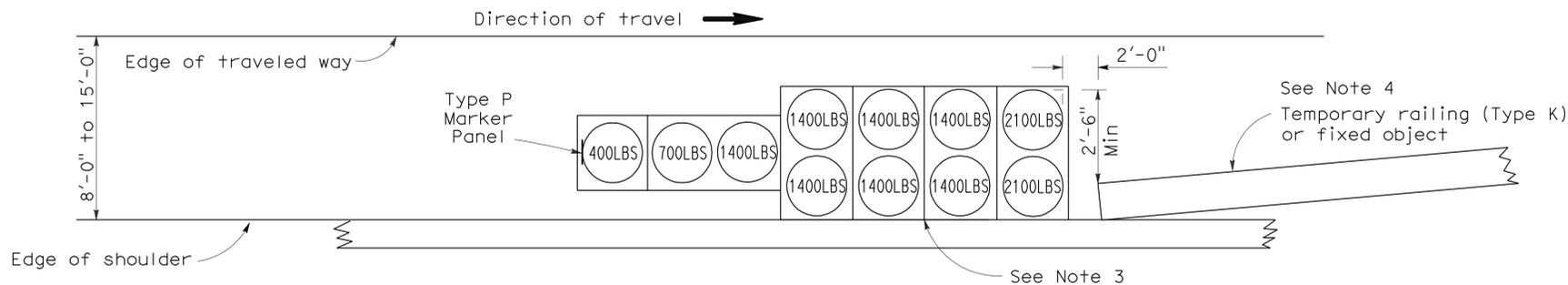
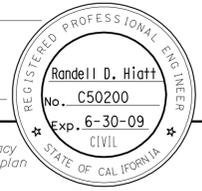
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	51	67

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

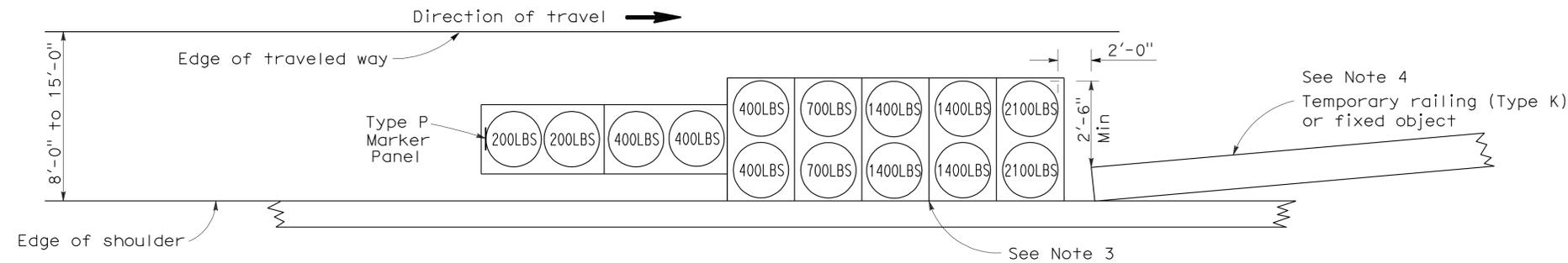
June 6, 2008  
PLANS APPROVAL DATE

*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.*

To accompany plans dated 5-9-11



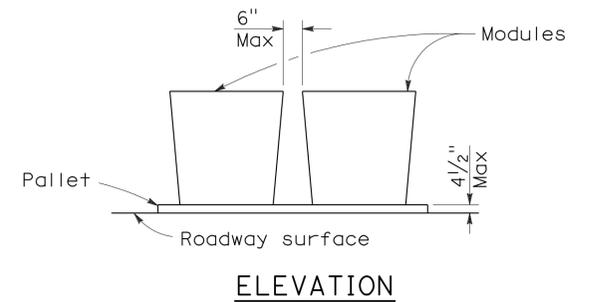
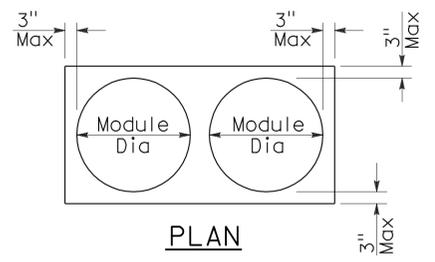
**ARRAY 'TS11'**  
Approach speed less than 45 mph  
See Note 9



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

**NOTES:**

- (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.
- All sand weights are nominal.
- 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.
- 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.
- Temporary crash cushion arrays shall not encroach on the traveled way.
- Arrays for median shoulders shall conform to details shown on this plan for outside shoulders.
- Place the Type P marker panel so that the bottom of the panel rests upon the pallet and faces traffic.
- Refer to Standard Plan A73B for marker details.
- 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.
- Approach speeds indicated conform to NCHRP 350 Report criteria.
- Use of pallets is optional.



**CRASH CUSHION PALLET DETAIL**  
See Note 11

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**

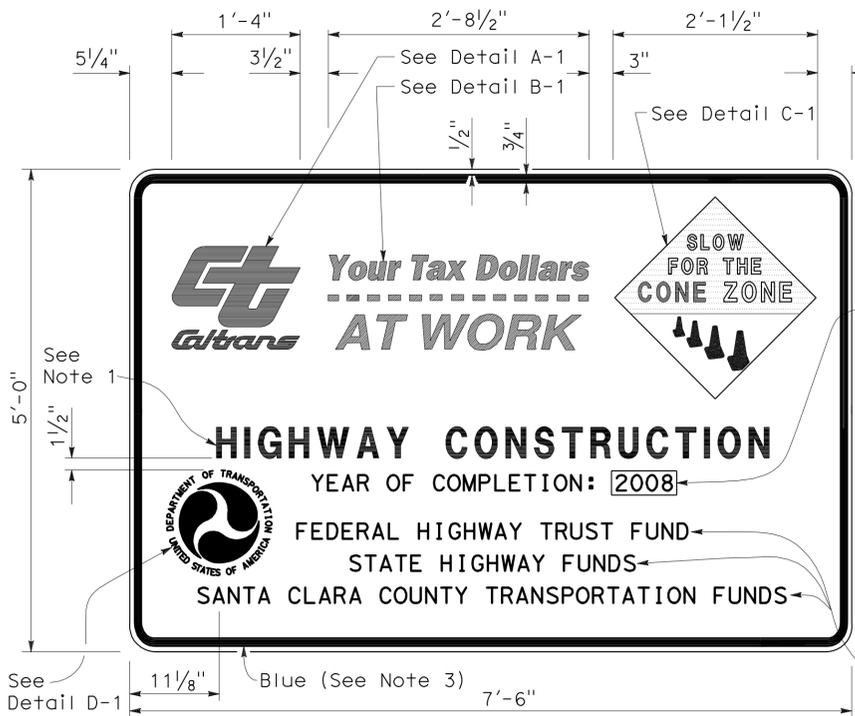
2006 REVISED STANDARD PLAN RSP T2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	52	67

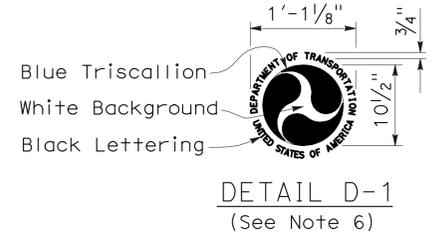
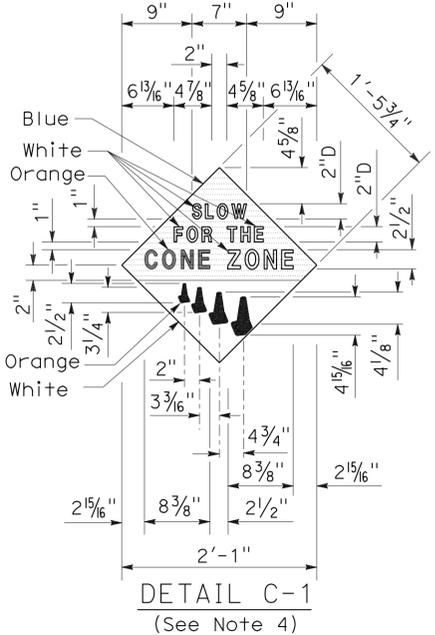
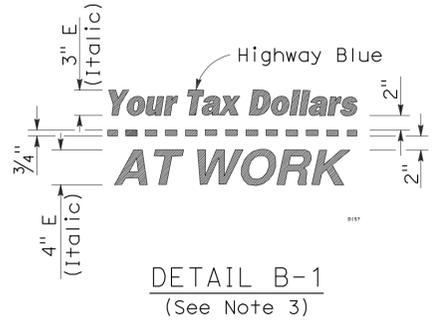
*Craig W. Edwards*  
 REGISTERED CIVIL ENGINEER  
 November 17, 2006  
 PLANS APPROVAL DATE  
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER  
 Craig W. Edwards  
 No. C36386  
 Exp. 6-30-08  
 CIVIL  
 STATE OF CALIFORNIA

To accompany plans dated 5-9-11

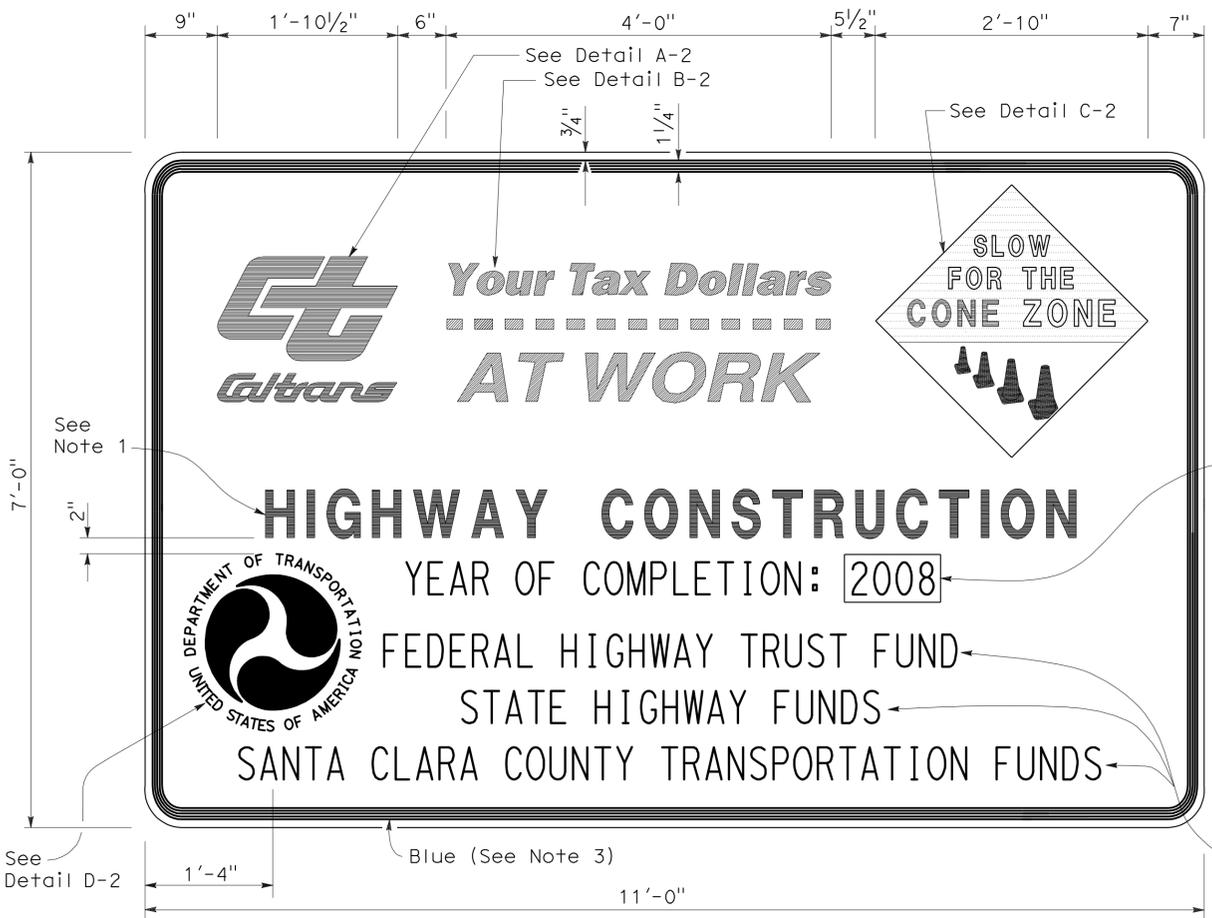


**TYPE 1**

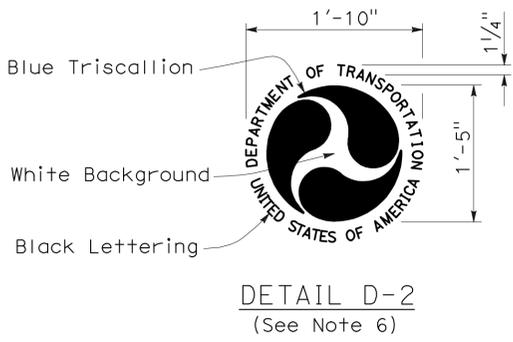
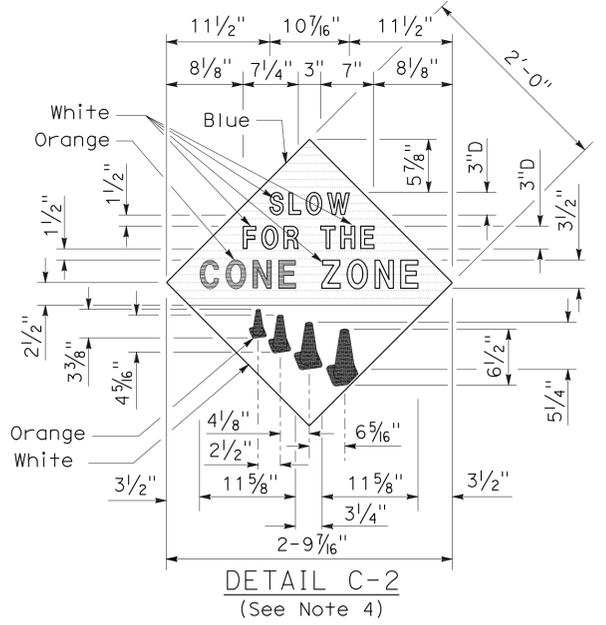
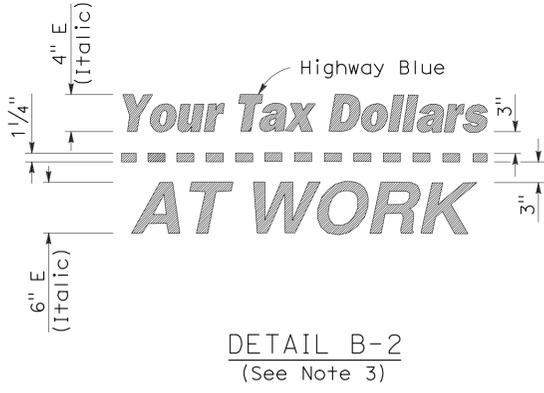
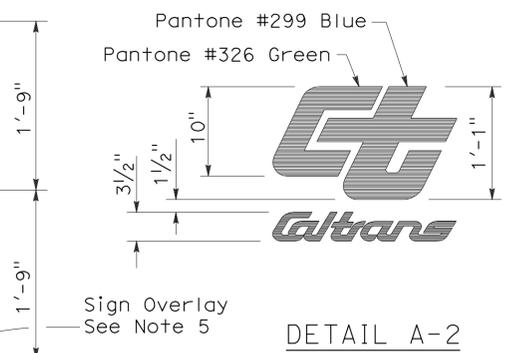


**NOTES:**

1. The sign messages shown for type of project and fund types are examples only. See the Special Provisions for the applicable type of project and fund type messages to be used.
2. Except as otherwise shown, the legend of sign shall be black on a white background (non-reflective).
3. The border of the signs and details "B-1" and "B-2" shall be blue (non-reflective).
4. The diamond in details "C-1" and "C-2" shall be blue for the background of message, "SLOW FOR THE CONE ZONE", and white background for the orange cones. The color and type of font for the "SLOW FOR THE CONE ZONE" message shall be: "SLOW" white D; "FOR THE" white D; "CONE" orange Arial font; "ZONE" white Arial font.
5. Year of completion of project construction shown on the overlay is an example only. See the Special Provisions.
6. Use when the Project involves Federal Highway Trust Fund.



**TYPE 2**



STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**CONSTRUCTION PROJECT FUNDING IDENTIFICATION SIGNS**

NO SCALE

RSP T7 DATED NOVEMBER 17, 2006 SUPERSEDES STANDARD PLAN T7  
DATED MAY 1, 2006 - PAGE 217 OF THE STANDARD PLANS BOOK DATED MAY 2006.

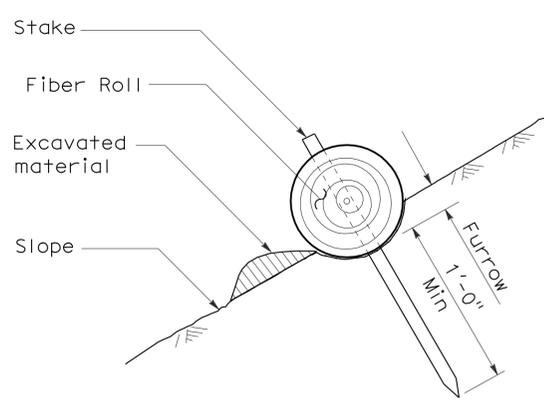
**REVISED STANDARD PLAN RSP T7**

2006 REVISED STANDARD PLAN RSP T7

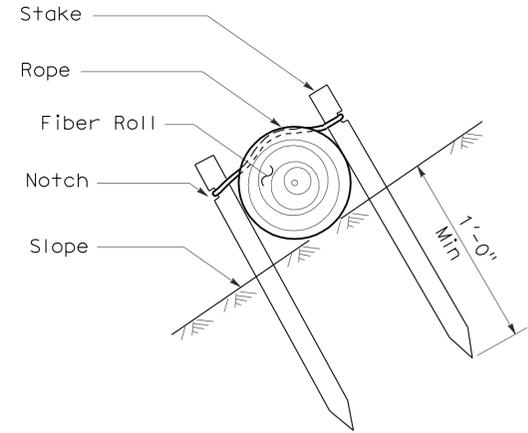
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	53	67

*Robert B. Schott*  
 LICENSED LANDSCAPE ARCHITECT  
 April 3, 2009  
 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.

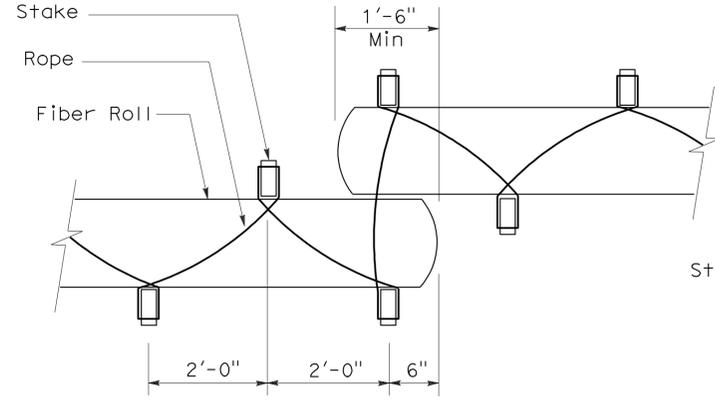
To accompany plans dated 5-9-11



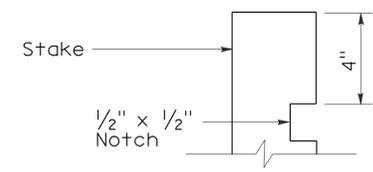
**SECTION**  
**TEMPORARY FIBER ROLL (TYPE 1)**



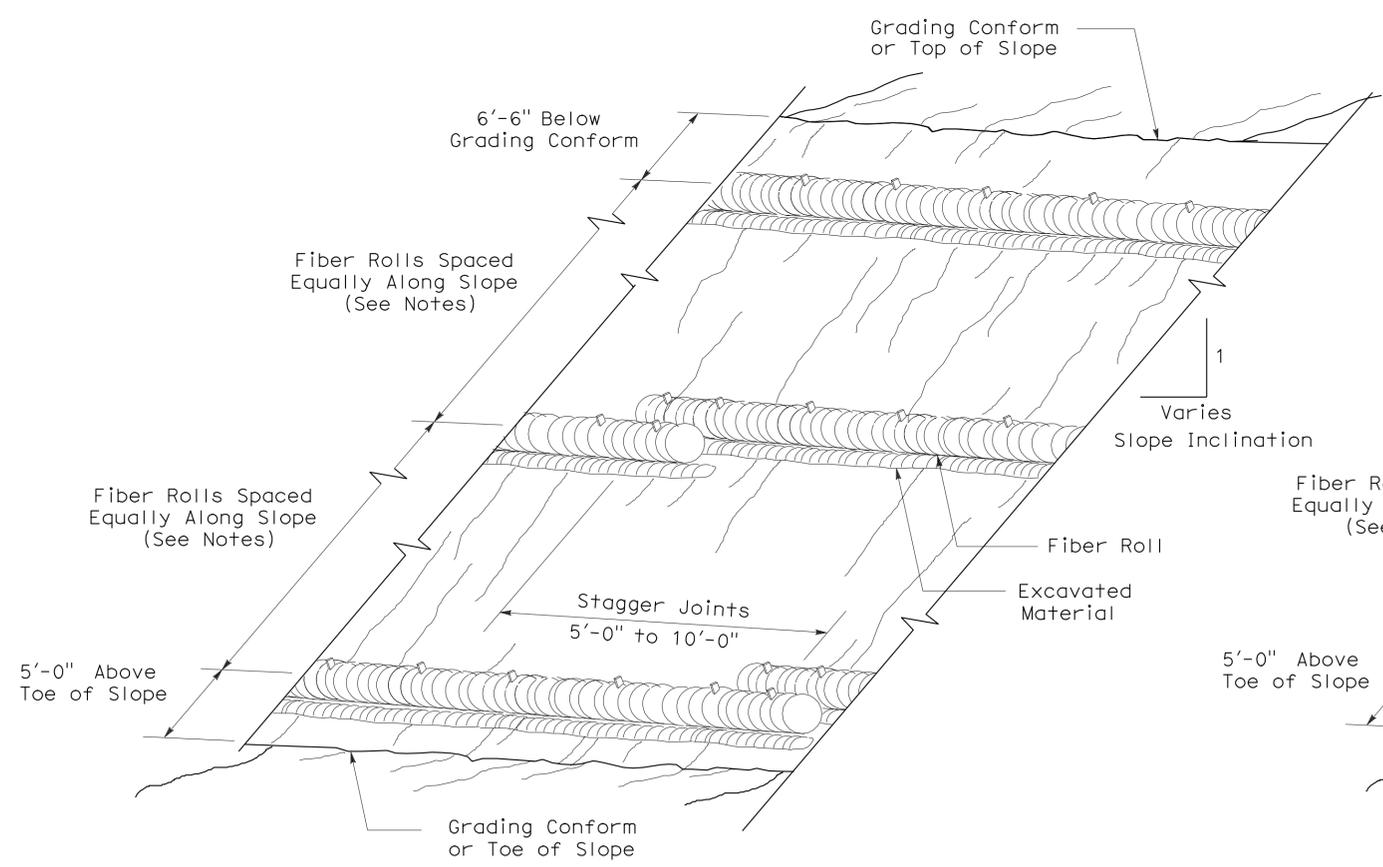
**SECTION**  
**TEMPORARY FIBER ROLL (TYPE 2)**



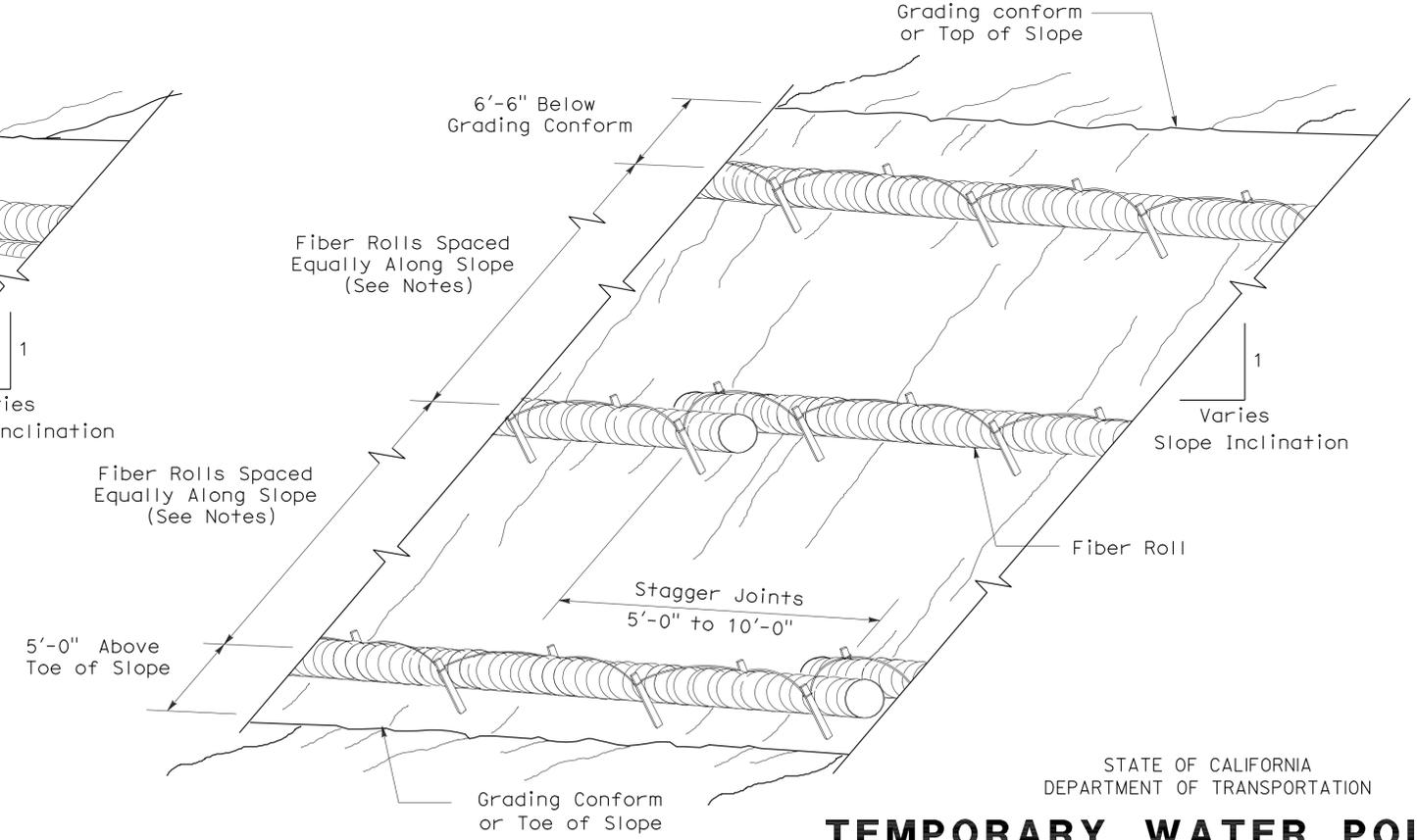
**PLAN**  
**ELEVATION**  
**STAKE NOTCH DETAIL**



- NOTES:**
1. Temporary fiber roll spacing varies depending upon slope inclination.
  2. Installations shown in the perspectives are for slope inclination of 10:1 and steeper.



**PERSPECTIVE**  
**TEMPORARY FIBER ROLL (TYPE 1)**



**PERSPECTIVE**  
**TEMPORARY FIBER ROLL (TYPE 2)**

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

**TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY FIBER ROLL)**

NO SCALE

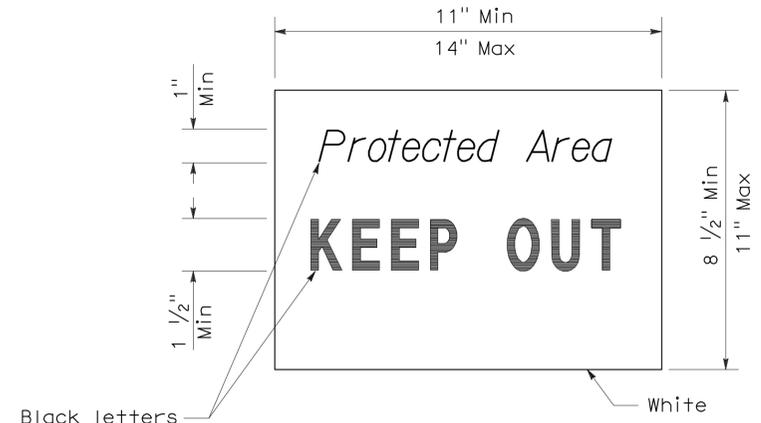
RSP T56 DATED APRIL 3, 2009 SUPERSEDES STANDARD PLAN T56 DATED MAY 1, 2006 - PAGE 232 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP T56**

2006 REVISED STANDARD PLAN RSP T56

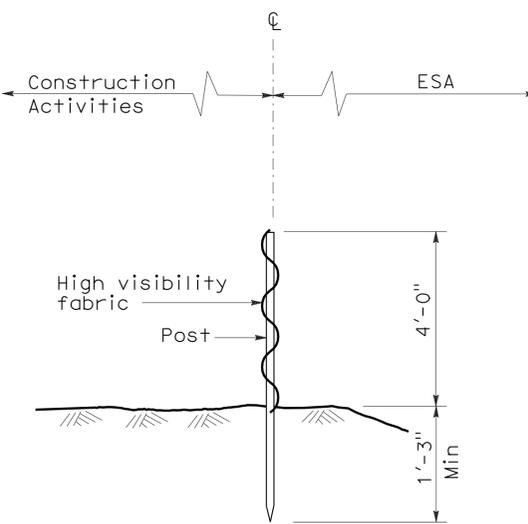
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	54	67

*Robert B. Schott*  
 LICENSED LANDSCAPE ARCHITECT  
 April 3, 2009  
 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.

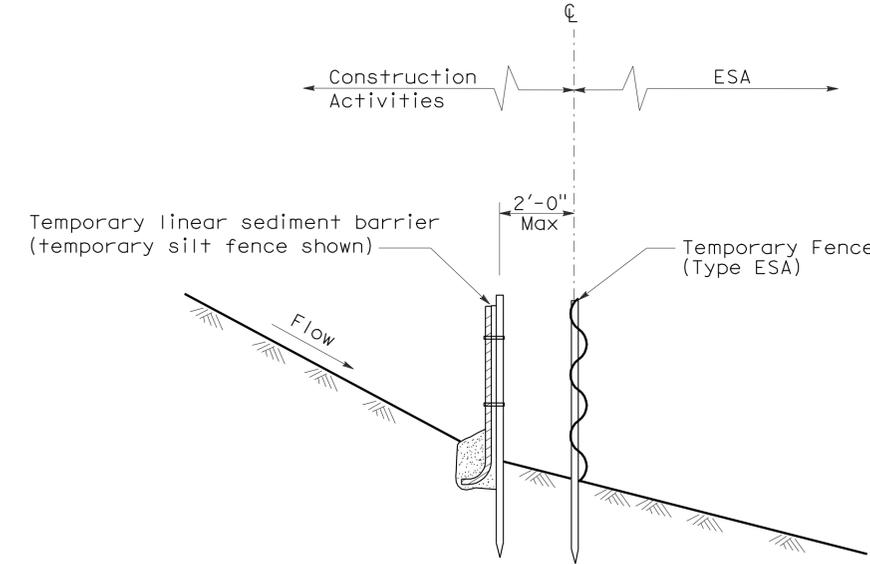


**SIGN DETAIL**

**NOTE:**  
 1. Temporary silt fence and temporary straw bale barrier shown for reference purposes only.

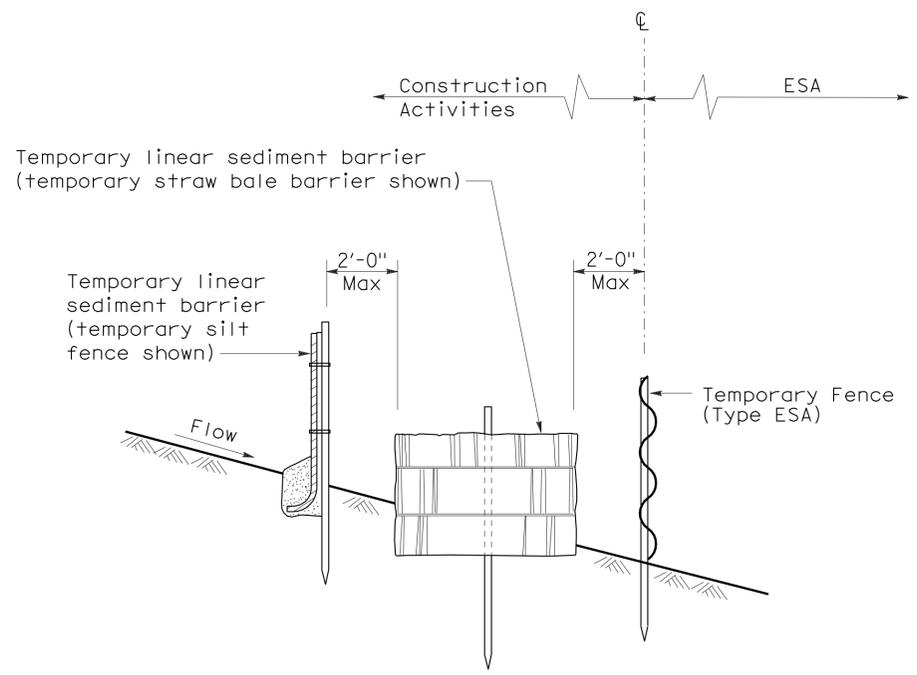


**SECTION TEMPORARY FENCE (TYPE ESA)**



**SECTION PLACEMENT DETAIL FOR TEMPORARY LINEAR SEDIMENT BARRIER USED WITH TEMPORARY FENCE (TYPE ESA)**

(See Note 1 )



**SECTION PLACEMENT DETAIL FOR TEMPORARY SILT FENCE AND TEMPORARY STRAW BALE BARRIER USED WITH TEMPORARY FENCE (TYPE ESA)**

(See Note 1 )

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**TEMPORARY WATER POLLUTION CONTROL DETAILS**  
**[TEMPORARY FENCE (TYPE ESA)]**  
 NO SCALE

NSP T65 DATED APRIL 3, 2009 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP T65

# ELECTROLIERS

STANDARD TYPES		
15, 15D		High mast light pole
15 STRUCTURE		Double Arm lighting standard
21, 21D STRUCTURE		Existing electrolier
30		Electrolier foundation (Future installation)
31	<b>NOTES:</b>	
32	1. 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.	
35	2. Luminaires shall be the cutoff type, ANSI Type III medium cutoff lighting distribution, unless otherwise specified.	
36-20A	3. 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, side attachment - 4 signal section
MAS-4B	mas-4B	
MAS-4C	mas-4C	
MAS-5A	mas-5A	Mast arm mounting vehicle signal faces, side attachment - 5 signal section
MAS-5B	mas-5B	
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	Son	12,121	41.2/41.3, 7.4/7.6	55	67

*Jeffery G. McRae*  
REGISTERED ELECTRICAL ENGINEER

October 5, 2007  
PLANS APPROVAL DATE

Jeffery G. McRae  
No. E14512  
Exp. 6-30-08  
ELECTRICAL  
STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 5-9-11

## 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	Son	12,121	41.2/41.3, 7.4/7.6	56	67

*Jeffery G. McRae*  
 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.

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

To accompany plans dated 5-9-11

### CONDUIT

PROPOSED	EXISTING	
		Lighting Conduit, unless otherwise indicated or noted
		Traffic signal conduit
		Communication conduit
		Telephone conduit
		Fire alarm conduit
		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 louvered "LG" indicates louvered green section only "PV" indicates 12" programmed visibility sections "8" indicates all 8" sections (only when specified)
		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

### SERVICE EQUIPMENT

PROPOSED	EXISTING	
		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

### SIGNAL EQUIPMENT Cont

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

### NOTES:

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

### 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

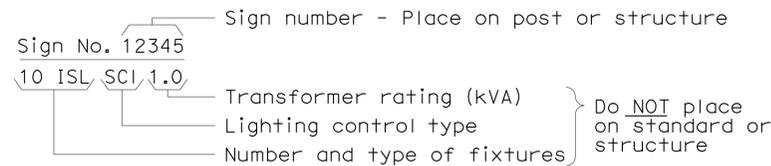
2006 REVISED STANDARD PLAN RSP ES-1B

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS  
 (SYMBOLS AND ABBREVIATIONS)**  
 NO SCALE

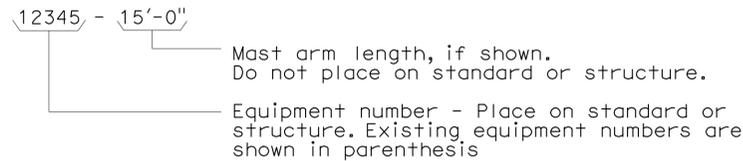
RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B  
 DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

### EQUIPMENT IDENTIFICATION

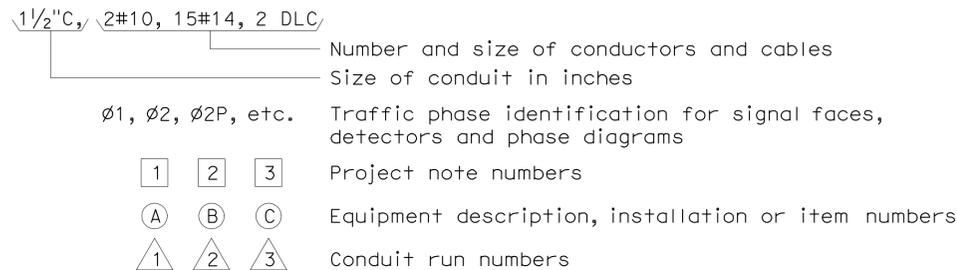
#### ILLUMINATED SIGN IDENTIFICATION NUMBER:



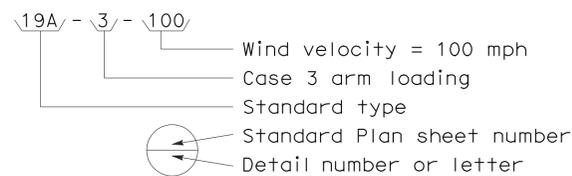
#### ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



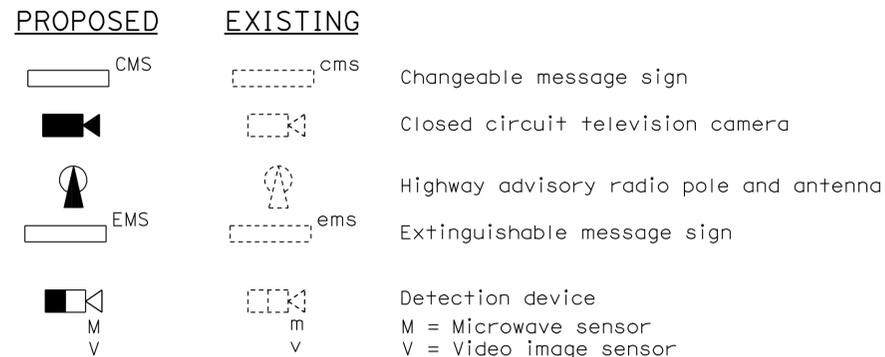
#### CONDUIT AND CONDUCTOR IDENTIFICATION:



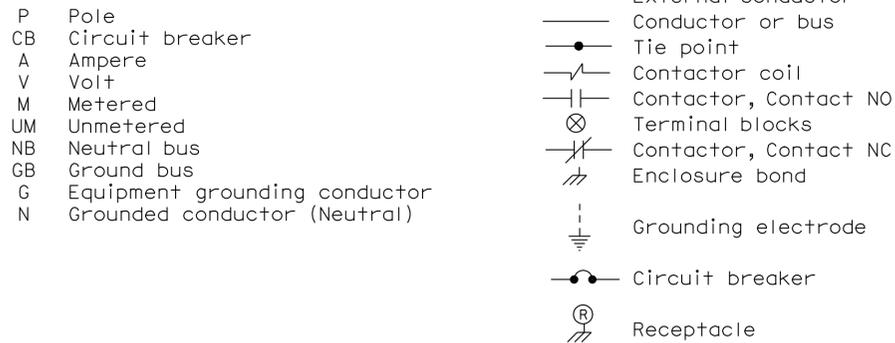
#### SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



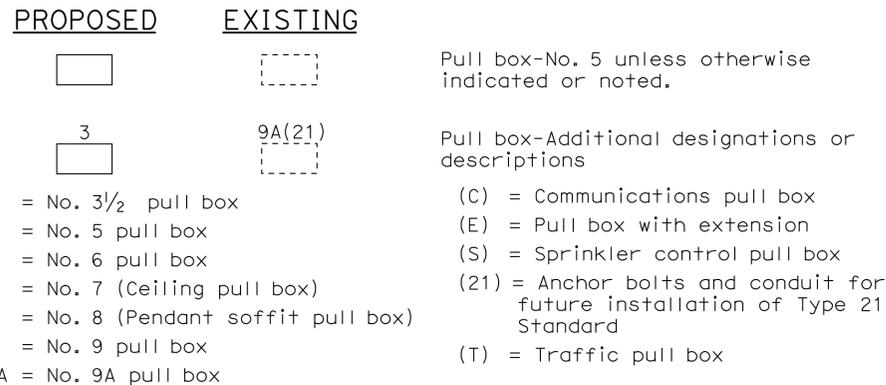
### MISCELLANEOUS EQUIPMENT



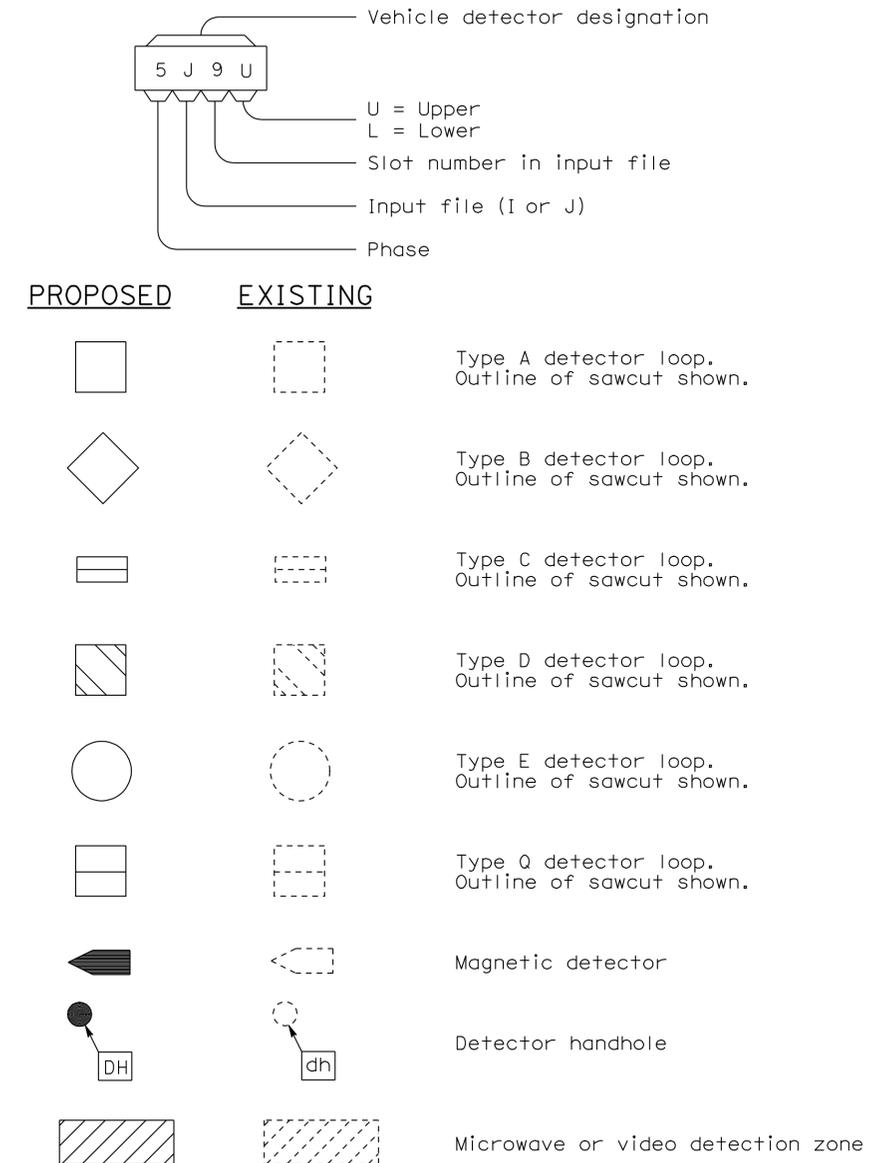
### WIRING DIAGRAM LEGEND



### 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.

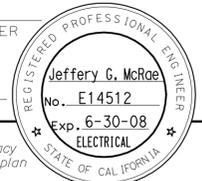
**REVISED STANDARD PLAN RSP ES-1C**

2006 REVISED STANDARD PLAN RSP ES-1C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	58	67

*Jeffery G. McRae*  
REGISTERED ELECTRICAL ENGINEER

October 5, 2007  
PLANS APPROVAL DATE



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To accompany plans dated 5-9-11

**NOTES-TYPE III SERVICE EQUIPMENT ENCLOSURES:**

1. Service equipment enclosure and metering equipment shall meet the requirements of the service utility. The meter area shall have a sealable, lockable, weathertight cover that can be removed without the use of tools.
2. Service equipment enclosures shall be factory wired and conform to NEMA standards.
3. Dimensions of service equipment enclosures shall meet the requirements of the service utility.
4. The dead front panels on Type III service equipment enclosures shall have a continuous stainless steel or aluminum piano hinge. The panel in front of the breakers shall be secured with a latch or captive screws. No live parts shall be mounted on the dead front panel.
5. The exterior door shall have provisions for padlocking. The padlock hole shall be a minimum diameter of  $\frac{7}{16}$ ".
6. Enclosures housing transformers of more than one kVA shall have effective screened ventilation louver of not less than 50 square inches. Screen shall be stainless steel No. 304, with a No. 10 size mesh. Framed screen shall be secured with at least four bolts.
7. Fasteners on the exterior of the enclosure shall be vandal-resistant and shall not be removable from the exterior. Exterior screws, nuts, bolts and washers shall be stainless steel.
8. Landing lugs for incoming service conductors shall be compatible with either copper or aluminum conductors sized to suit the conductors shown on the plan. Landing lugs shall be copper or tin-plated aluminum. Neutral bus shall be rated for 125 A and be suitable for copper or aluminum conductors unless otherwise specified. The terminal shall include but not be limited to:
  - a) Incoming terminals (landing lugs)
  - b) Neutral lugs
  - c) Solid neutral terminal strip
9. At least 6 standard single pole circuit breaker spaces,  $\frac{3}{4}$ " nominal, shall be provided for branch circuits. Circuit breaker interiors shall be copper. Interiors of enclosure shall accept plug-in or cable-in/cable-out circuit breakers.
10. Control wiring shall be 600 V, 14 stranded machine tool wire. Where subject to flexing, 19 strand wire shall be used.
11. Main bus shall be rated for 125 A and shall be tin-plated copper.
12. A plastic laminated wiring diagram shall be provided with brass mounting eyelets and attached to the inside of the enclosure and the wiring diagram shall be affixed to the interior with a UL or ETL approved method.

13. An engraved phenolic nameplate on the dead front panel indicating the function of each circuit or device shall be installed with stainless steel rivets or stainless steel screws:
  - a) Adjacent to the breaker or device with character size a minimum of  $\frac{1}{8}$ ".
  - b) At the top of the exterior door panel indicating State system number, voltage level and number of phases with character size a minimum of  $\frac{3}{16}$ ".
14. The plan shows the approximate location of devices within the enclosure. Components may be rearranged, however, the "working" clearances within the service equipment enclosure shall be maintained.
15. In unpaved areas a raised portland cement concrete pad 2'-0" x 4" x width of foundation shall be constructed in front of new service equipment enclosure installation. Pad shall be set to elevation of foundation.
16. Foundation shall extend 2" minimum beyond edge of service equipment enclosure.
17. Internal bus, where shown, is typical only. Alternative design of proposed service equipment enclosure shall be submitted to the Engineer for approval.
18. Plug-in circuit breakers may be mounted in the vertical or horizontal position. Cable-in/cable-out circuit breakers shall be mounted in the vertical position.
19. Type III-AF and Type III-BF service equipment enclosures shall have the meter viewing windows located on the front side of the service equipment enclosures.
20. Type III-AR and Type III-BR service equipment enclosures shall be similarly constructed as Type III-AF and Type III-BF respectively, except the meter viewing windows shall be located on the back side of the service equipment enclosures.
21. Minimum clearance shall be required for front and back of service equipment enclosure per National Electrical Code, Article 110.26, "Spaces About Electric Equipment (600 Volts, Nominal, or Less)."

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS  
(SERVICE EQUIPMENT NOTES  
TYPE III SERIES)**

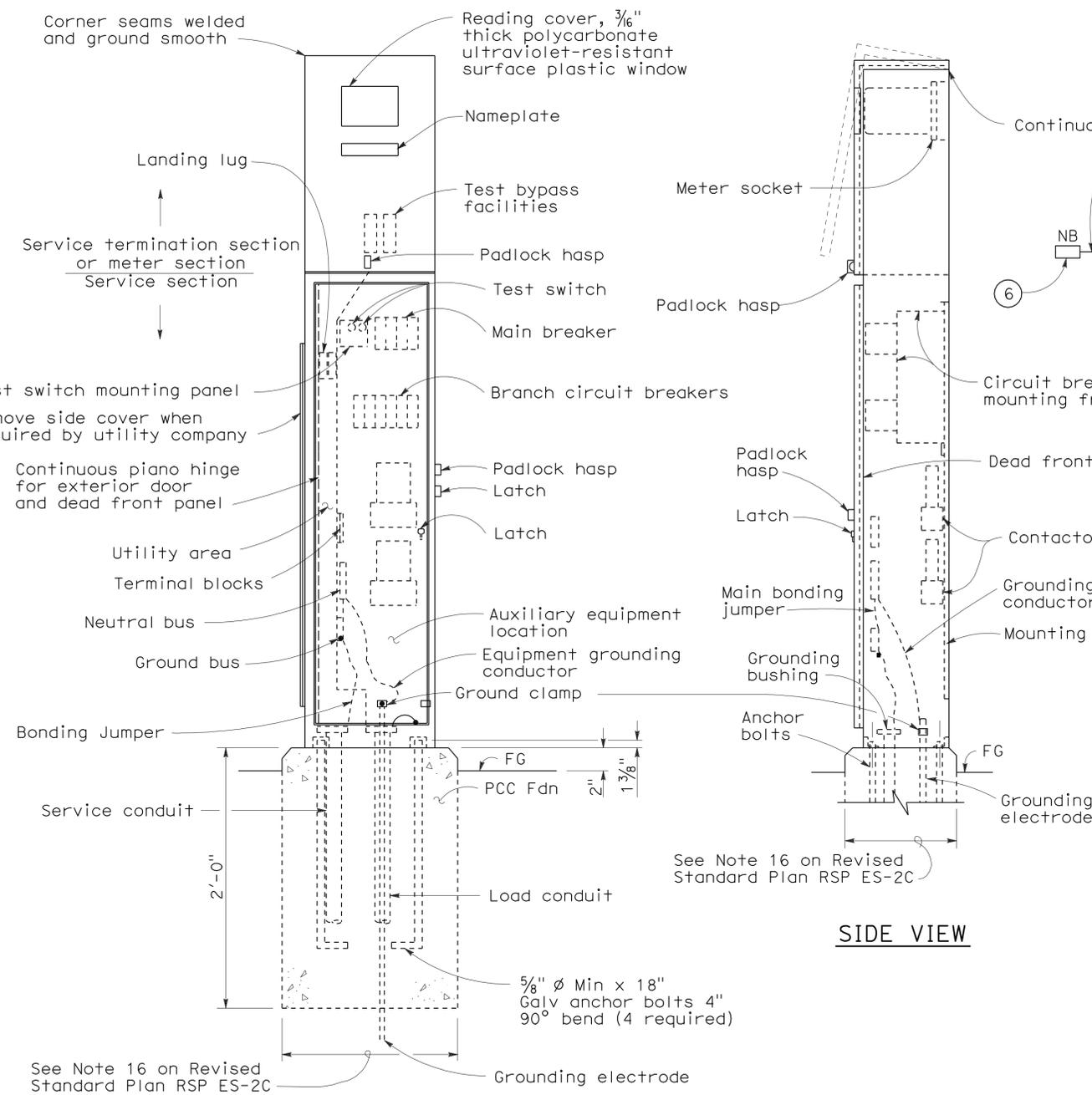
NO SCALE

RSP ES-2C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-2C  
DATED MAY 1, 2006 - PAGE 405 OF THE STANDARD PLANS BOOK DATED MAY 2006.

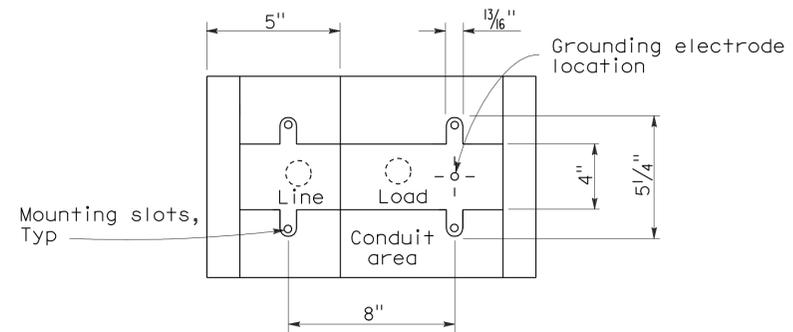
**REVISED STANDARD PLAN RSP ES-2C**

2006 REVISED STANDARD PLAN RSP ES-2C

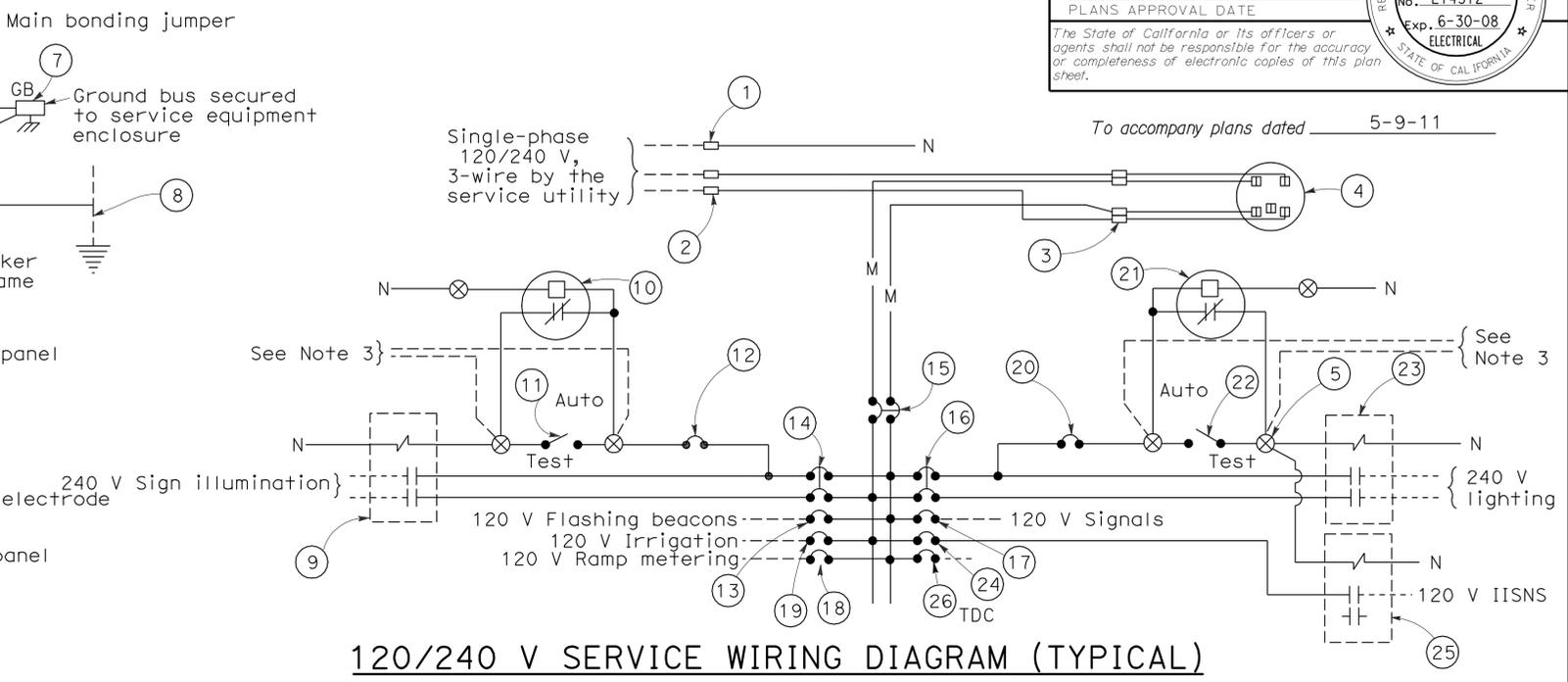
2006 REVISED STANDARD PLAN RSP ES-2D



**TYPE III-AF SERVICE EQUIPMENT ENCLOSURE (TYPICAL)**



**BASE FOR TYPE III-A SERVICE EQUIPMENT ENCLOSURE**



**120/240 V SERVICE WIRING DIAGRAM (TYPICAL)**

TYPE III-A SERVICE (120/240 V) EQUIPMENT LEGEND					
ITEM No.	COMPONENT	NAME PLATE DESCRIPTION	ITEM No.	COMPONENT	NAME PLATE DESCRIPTION
1	Neutral lug		14	30 A, 240 V, 2P, CB	Sign Illumination
2	Landing lug (Note 6)		15	100 A, 240 V, 2P, CB	Main Breaker
3	Test bypass facility		16	30 A, 240 V, 2P, CB	Lighting
4	Meter socket and support		17	50 A, 120 V, 1P, CB	Signals
5	Terminal blocks		18	30 A, 120 V, 1P, CB	Ramp Metering
6	Neutral bus		19	20 A, 120 V, 1P, CB	Irrigation
7	Ground bus		20	15 A, 120 V, 1P, CB	Lighting Control
8	Grounding electrode		21	Photoelectric unit (Note 7)	
9	30 A, 2PNO Contactor	Sign Illumination	22	15 A, 1P, Test switch	Lighting Test Switch
10	Photoelectric unit (Note 7)		23	60 A, 2PNO Contactor	Lighting
11	15 A, 1P, Test switch	Sign Illumination Test Switch	24	15 A, 120 V, 1P, CB	IISNS
12	15 A, 120 V, 1P, CB	Sign Illumination Control	25	30 A, 2PNO Contactor	IISNS
13	15 A, 120 V, 1P, CB	Flashing Beacon	26	20 A, 120 V, 1P, CB	Telephone Demarcation Cabinet

- NOTES: (FOR SERVICE EQUIPMENT ENCLOSURE)**
- Voltage ratings of service equipment shall conform to the service voltages indicated on the plans.
  - Unless otherwise indicated on the plans, service equipment items shall be provided for each service equipment enclosure as shown.
  - Connect to remote test switch mounted on lighting standards, sign post or structure when required.
  - Items No. 1 and 6 shall be isolated from the service equipment enclosure.
  - Meter sockets shall be 5 clip type.
  - The landing lug shall be suitable for multiple conductors.
  - Type I photoelectric control shall be used unless otherwise indicated on the plans.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS  
(SERVICE EQUIPMENT AND  
TYPICAL WIRING DIAGRAM,  
TYPE III - A SERIES)**

NO SCALE

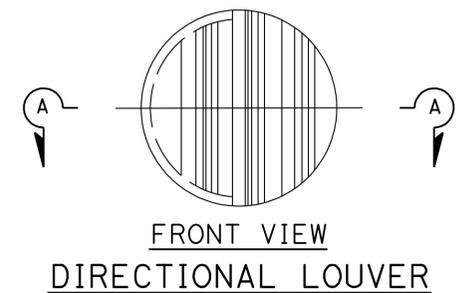
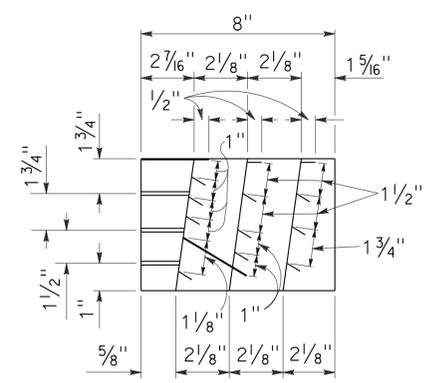
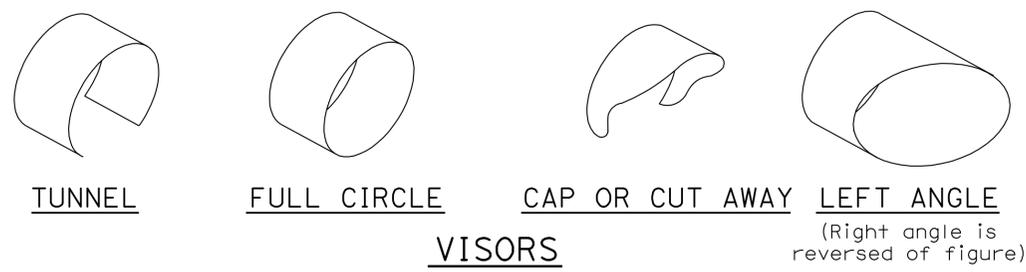
RSP ES-2D DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-2D DATED MAY 1, 2006 - PAGE 406 OF THE STANDARD PLANS BOOK DATED MAY 2006.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	60	67

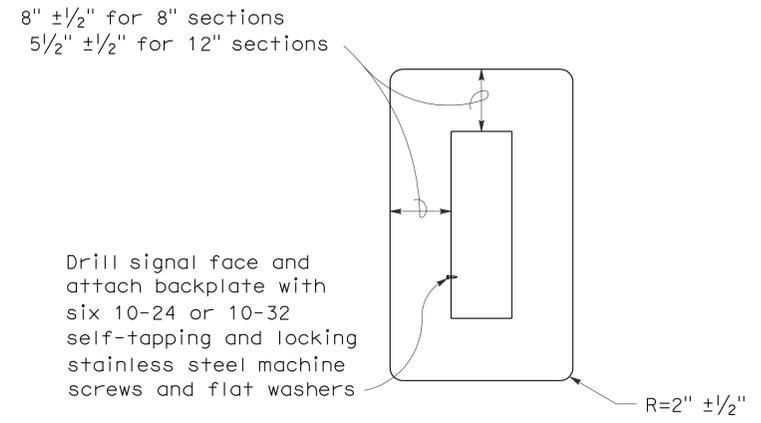
REGISTERED ELECTRICAL ENGINEER  
 Jeffery G. McRae  
 No. E14512  
 Exp. 6-30-10  
 ELECTRICAL  
 STATE OF CALIFORNIA

June 6, 2008  
 PLANS APPROVAL DATE

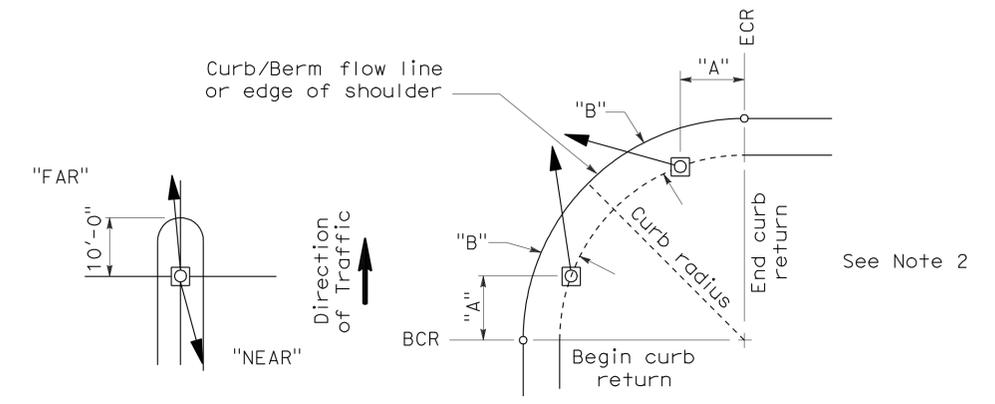
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Directional louvers shall be oriented as directed by the Engineer and secured in place with one plated brass machine screw and nut.

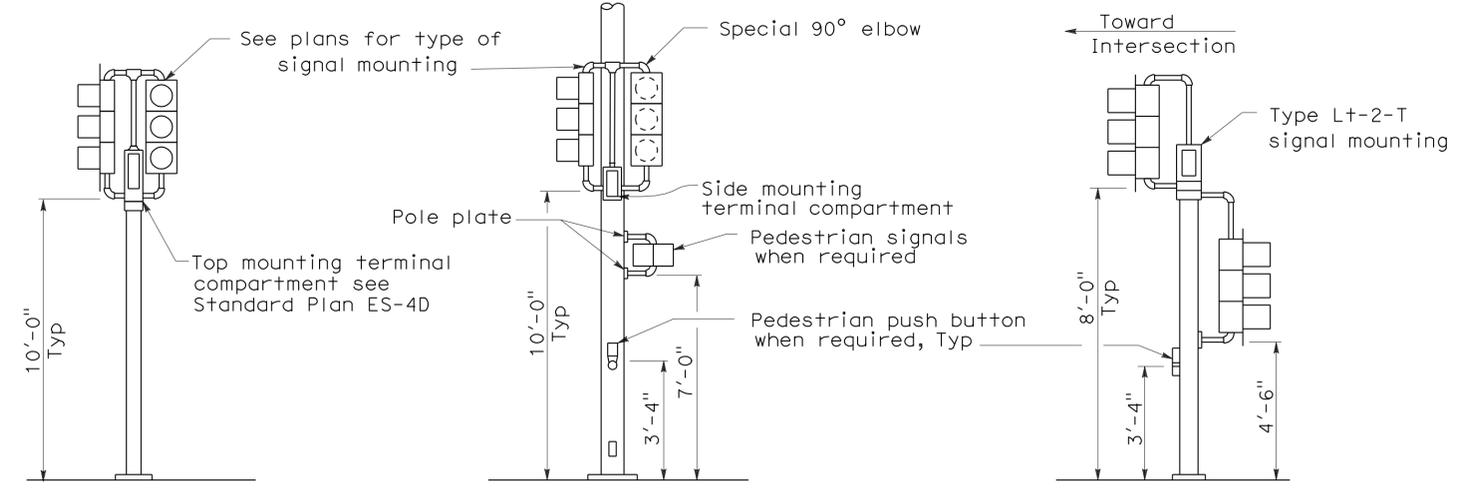


**8" AND 12" SECTIONS**  
**BACKPLATE**  
 1/16" minimum thickness  
 3001-14 aluminum, or plastic when specified



- NOTES:**
1. Typical signal pole placement unless dimensioned on plans.
  2. For "A" and "B" dimensions, see Pole Schedule, or as directed by the Engineer.

**SIGNAL STANDARD PLACEMENT DIMENSIONS AND EQUIPMENT LOCATIONS**

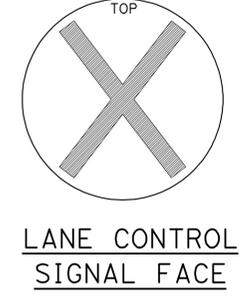
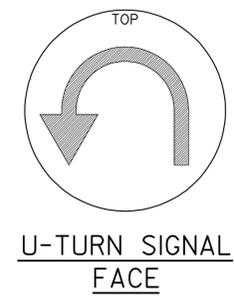


**TOP MOUNTED SIGNALS (TV)**  
 Type 1-A, 1-B, 1-C and 1-D standard as indicated on the plans

**SIDE MOUNTED SIGNALS (SV AND SP)**  
 Normally used on standards with luminaire or signal mast arm

**LEFT TURN LANE SIGNAL**  
 Type 1-A, 1-B, 1-C and 1-D standard as indicated on plans

**TYPICAL SIGNAL INSTALLATIONS**



STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS (SIGNAL HEADS AND MOUNTINGS)**

NO SCALE

RSP ES-4C DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN ES-4C DATED MAY 1, 2006 - PAGE 420 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP ES-4C**

2006 REVISED STANDARD PLAN RSP ES-4C

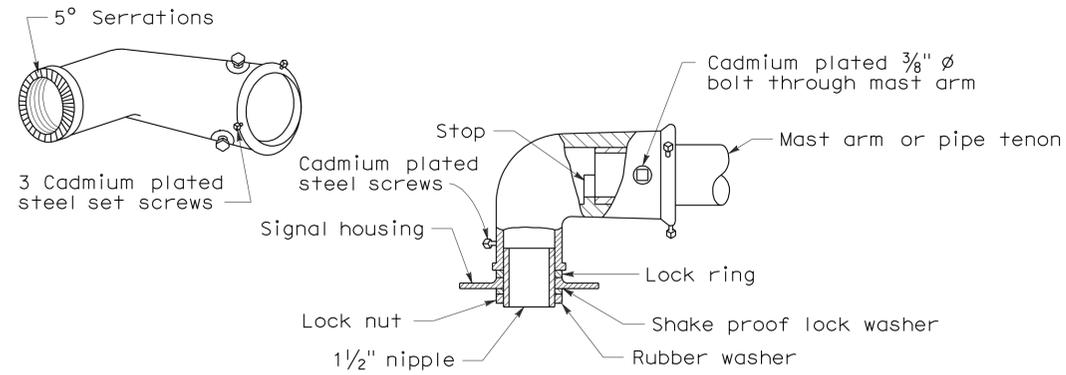
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	61	67

Jeffrey G. McRae  
 REGISTERED ELECTRICAL ENGINEER  
 No. E14512  
 Exp. 6-30-10  
 STATE OF CALIFORNIA

June 6, 2008  
 PLANS APPROVAL DATE

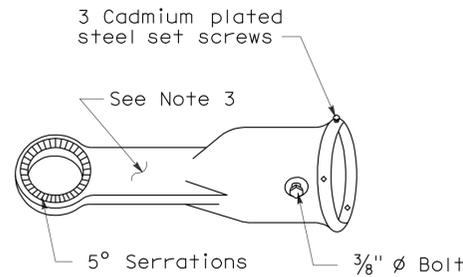
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To accompany plans dated 5-9-11



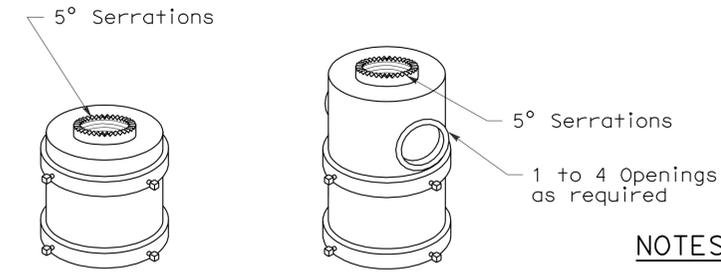
**MAST ARM MOUNTING - TYPE "MAT"**

For 2 NPS pipe, see Note 1.



**MAST ARM MOUNTING - TYPE "MAS"**

For 2 NPS pipe. See Note 1.

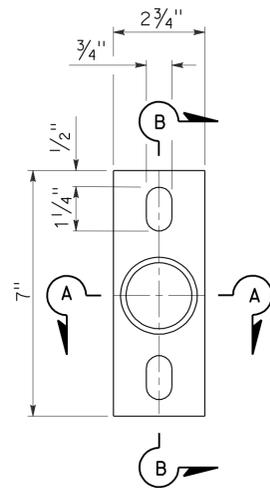


For one mounting For multiple mountings

**TOP MOUNTINGS**

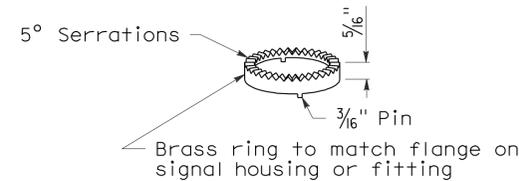
For 4 NPS pipe, see Note 2.

**SIGNAL SLIP FITTERS**



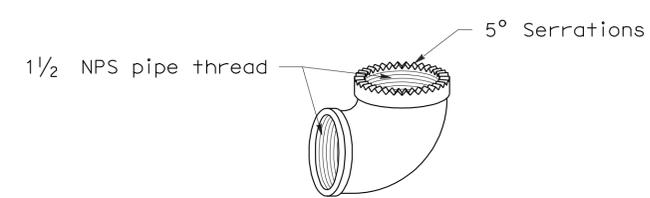
**POLE PLATE**

For side mountings



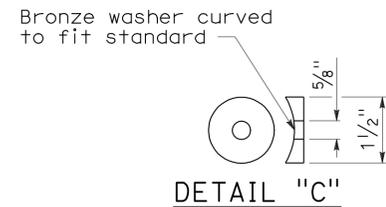
**LOCK RING**

Use where locking ring is not integral with signal housing or fitting.



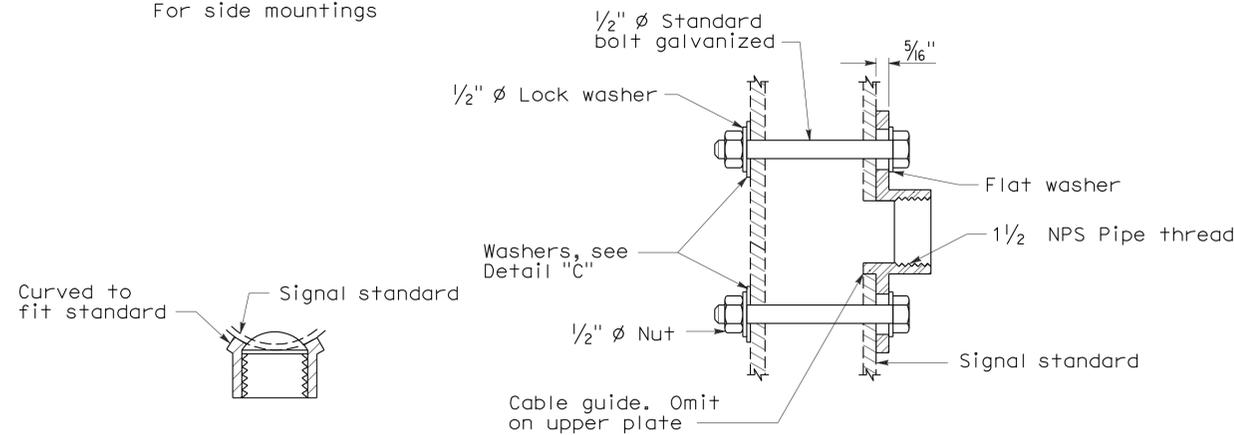
**SPECIAL 90° ELBOW**

One for each signal head, except those with special slip fitter mounting

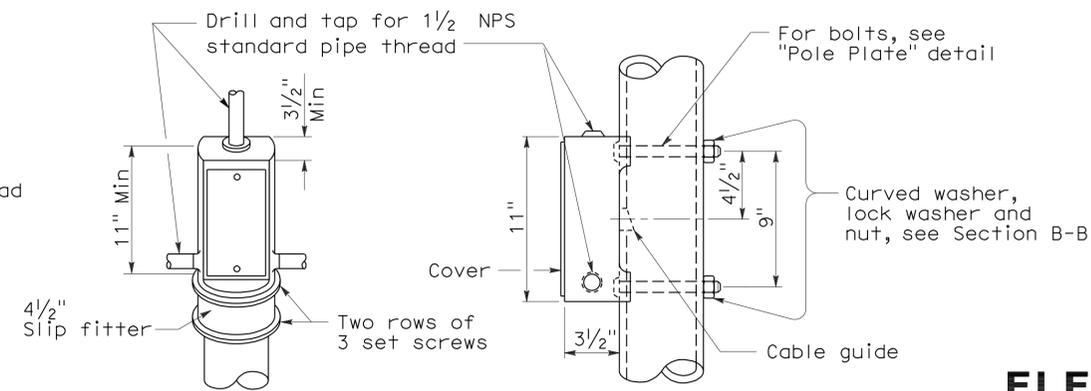


**DETAIL "C"**

**MISCELLANEOUS MOUNTING HARDWARE**



**SECTION B-B**



**TOP MOUNTING**

**SIDE MOUNTING**

**TERMINAL COMPARTMENTS**

**ELECTRICAL SYSTEMS (SIGNAL HEADS AND MOUNTINGS)**

NO SCALE

RSP ES-4D DATED June 6, 2008 SUPERSEDES STANDARD PLAN ES-4D DATED MAY 1, 2006 - PAGE 421 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP ES-4D**

2006 REVISED STANDARD PLAN RSP ES-4D

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	62	67

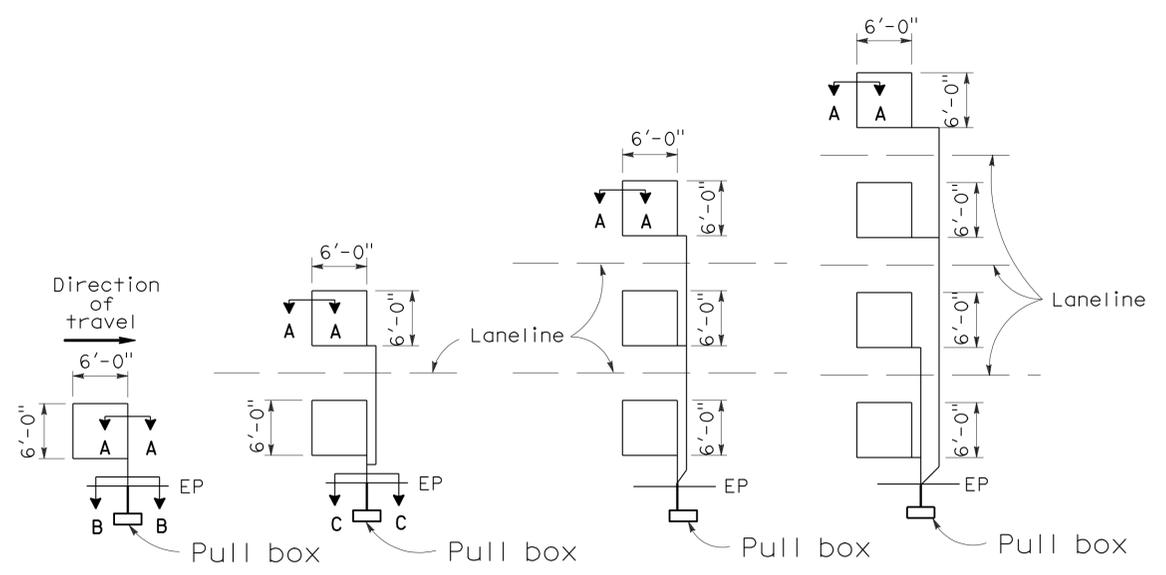
*Jeffery G. McRae*  
 REGISTERED ELECTRICAL ENGINEER  
 October 5, 2007  
 PLANS APPROVAL DATE  
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 5-9-11

2006 REVISED STANDARD PLAN RSP ES-5A

## LOOP INSTALLATION PROCEDURE

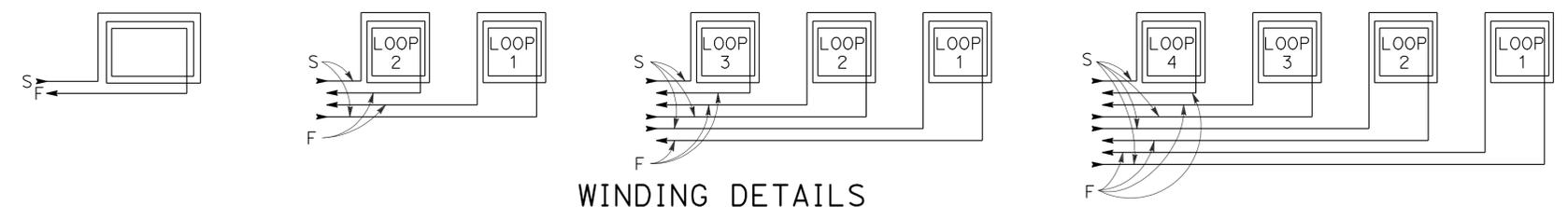
- Loops shall be centered in lanes.
- Saw slots in pavement for loop conductors as shown in details.
- Distance between side of loop and a lead-in saw cut from adjacent detectors shall be 2'-0" minimum. Distance between lead-in saw cuts shall be 6" minimum.
- Bottom of saw slot shall be smooth with no sharp edges.
- Slots shall be washed until clean, blown out and thoroughly dried before installing loop conductors.
- Adjacent loops on the same sensor unit channel shall be wound in opposite directions.
- 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.
- 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.
- No more than 2 twisted pairs shall be installed in one sawed slot.
- Allow additional 5'-0" of slack length of conductor for the lead-in run to pull box.
- 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.
- Test each loop circuit for continuity, circuit resistance and insulation resistance at the pull box before filling slots.
- Fill slots as shown in details.
- Splice loop conductors to lead-in-cable. Splices shall be soldered.
- 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.
- Lead-in-cable shall not be spliced between the pull box and the controller cabinet terminals.
- Test each loop circuit for continuity, circuit resistance and insulation resistance at the controller cabinet location.
- 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.



**TYPE 1A INSTALLATION**    **TYPE 2A INSTALLATION**    **TYPE 3A INSTALLATION**    **TYPE 4A INSTALLATION**

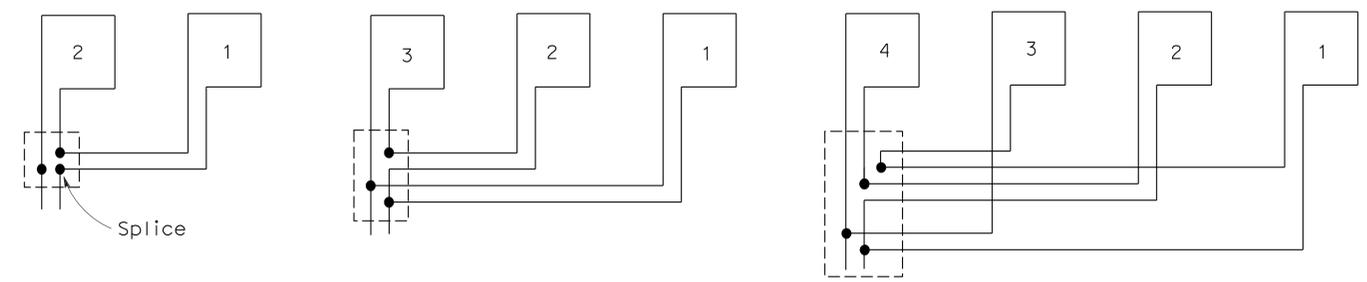
### SAWCUT DETAILS

- (Type A loop detector configurations illustrated)
- 1A thru 4A = 1 Type A loop configuration in each lane.
  - 1B thru 4B = 1 Type B loop configuration in each lane.
  - 1C = 1 Type C loop configuration entering lanes as required.
  - 1D thru 4D = 1 Type D loop configuration in each lane.
  - 1E thru 4E = 1 Type E loop configuration in each lane.
  - 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)



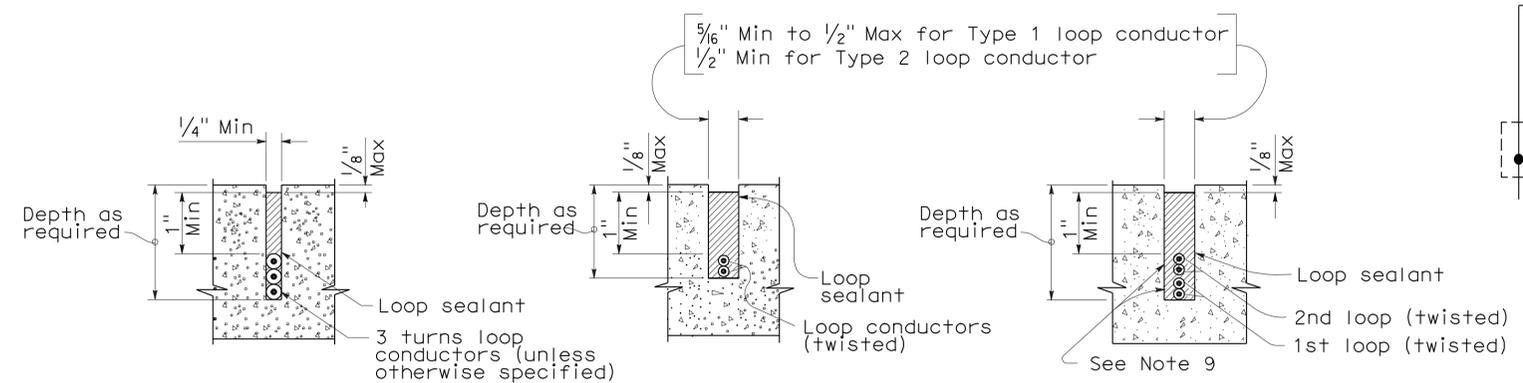
### WINDING DETAILS

See Notes 6 and 7



### TYPICAL LOOP CONNECTIONS

(Dashed lines represent the pull box)



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

## ELECTRICAL SYSTEMS (DETECTORS)

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

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.

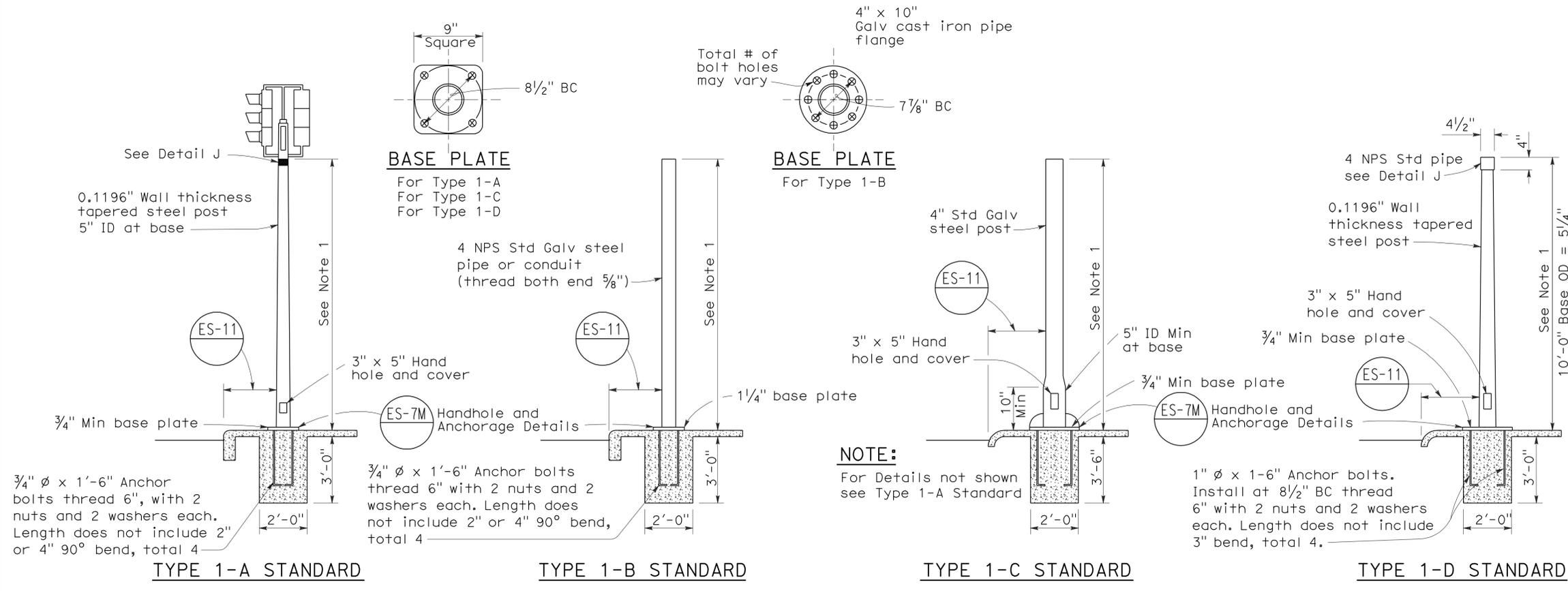
**REVISED STANDARD PLAN RSP ES-5A**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	63	67

Stanley P. Johnson  
 REGISTERED CIVIL ENGINEER  
 October 5, 2007  
 PLANS APPROVAL DATE  
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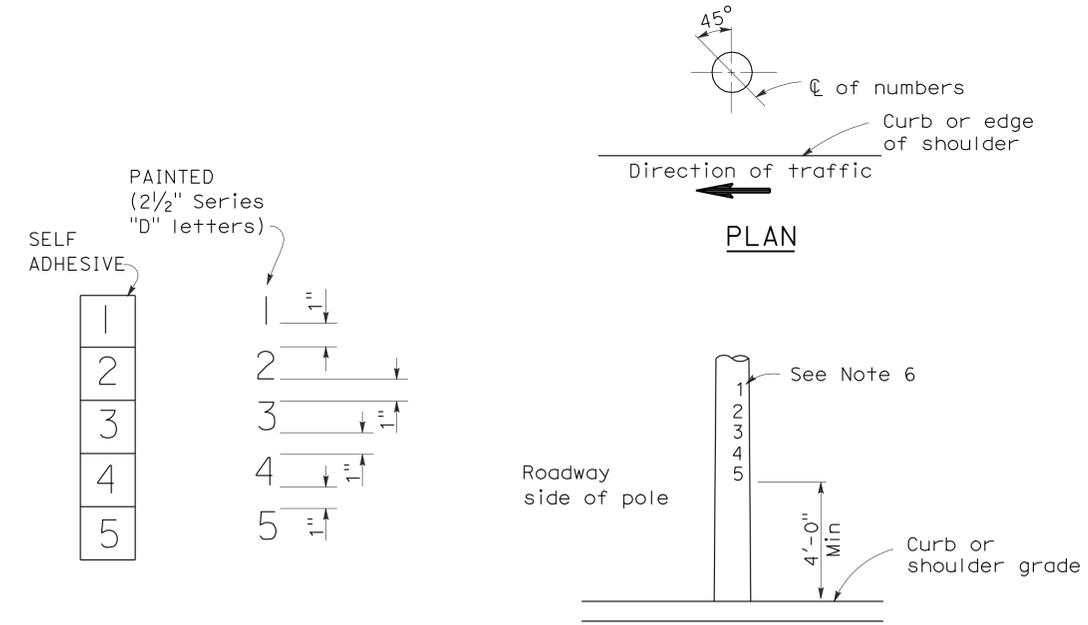
REGISTERED PROFESSIONAL ENGINEER  
 Stanley P. Johnson  
 No. C57793  
 Exp. 3-31-08  
 CIVIL  
 STATE OF CALIFORNIA

To accompany plans dated 5-9-11

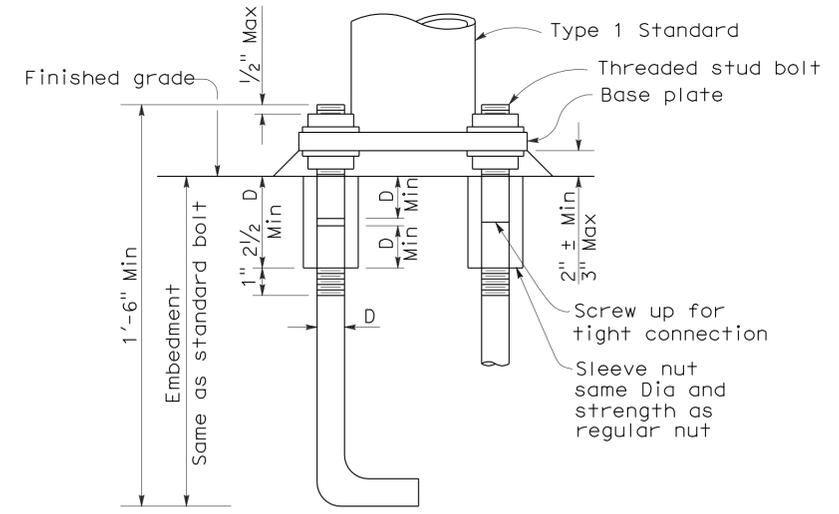


- NOTES:**
- Standards shall be 10'-0"  $\pm$  2" for vehicle signals and 7'-0"  $\pm$  2" for pedestrian signals unless otherwise noted on plans.
  - Top of standards shall be 4 1/2" OD.
  - Conduits shall extend 2" maximum above finished surface of foundation and for Types 1-A, 1-C and 1-D shall be sloped toward handhole.
  - Anchor bolts shall be bonded to conduit or grounding conductor.
  - Conduit between standard and adjacent pull box shall be 2" minimum.
  - Paint numbers on roadway side facing traffic when electrolier or post is left of direction of traffic.

**TYPE 1 SIGNAL STANDARDS**

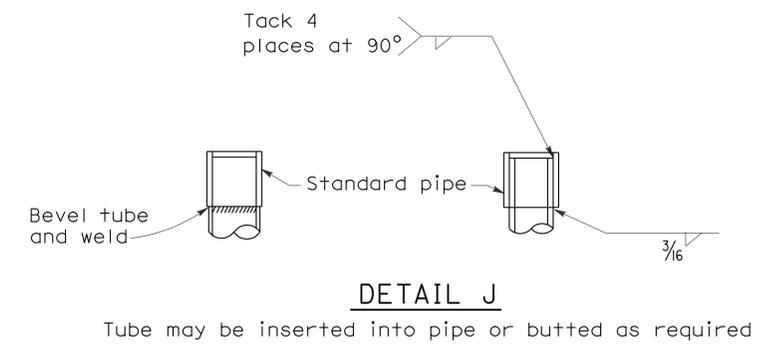


**LOCATION OF EQUIPMENT NUMBERS ON STANDARDS AND POSTS**



**ANCHOR BOLTS WITH SLEEVE NUTS**

Sleeve nuts to be used only when shown or specified on Project Plans  
D = Diameter of anchor bolt



**ELECTRICAL SYSTEMS (SIGNAL AND LIGHTING STANDARD TYPE 1 STANDARD AND EQUIPMENT NUMBERING)**

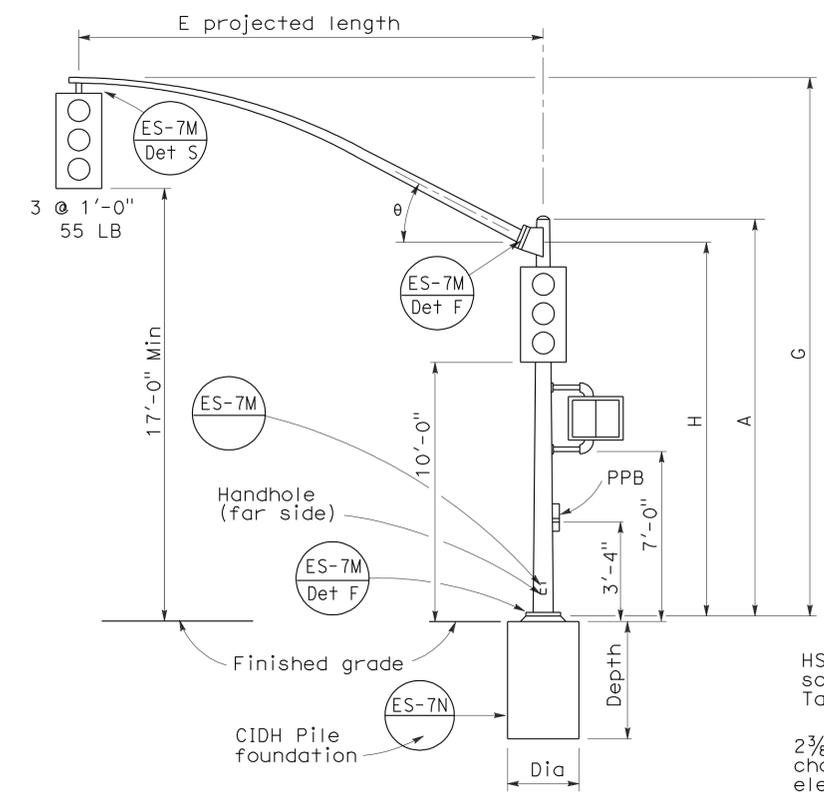
NO SCALE

RSP ES-7B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-7B DATED MAY 1, 2006 - PAGE 438 OF THE STANDARD PLANS BOOK DATED MAY 2006.

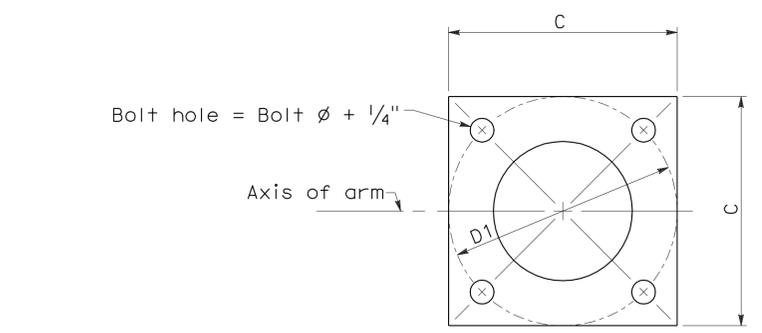
**REVISED STANDARD PLAN RSP ES-7B**

2006 REVISED STANDARD PLAN RSP ES-7B

2006 REVISED STANDARD PLAN RSP ES-7C

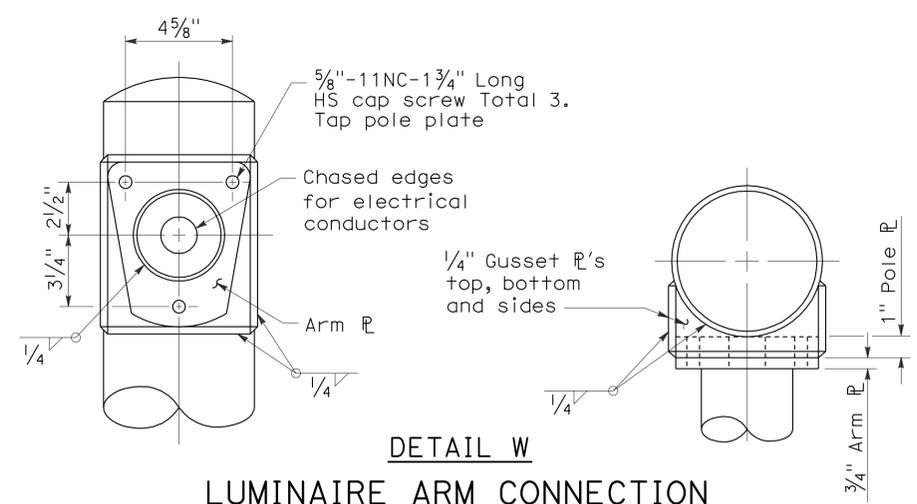


**ELEVATION**  
TYPE 16-1-100, 18-1-100

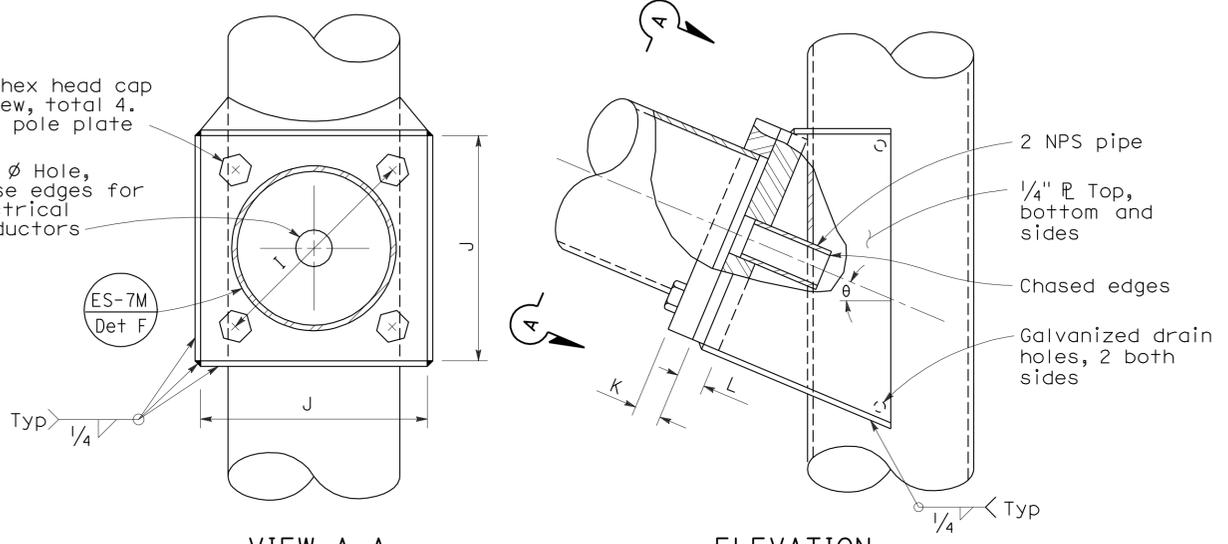


**BASE PLATE**

E Projected Length	G Mounting Height	H	Min OD At Pole	Thickness	I Bolt Circle	HS Cap Screws	J Plate size	K Arm ⌀ Thickness	L Pole ⌀ Thickness	θ
15'-0"	21'-8"±	17'-6"	7"	0.1196"	12"	1 1/4"-7NC-3"	1'-0"	1 1/4"	1 1/2"	23°
20'-0"	21'-8"±		7 1/8"							
25'-0"	22'-8"±	16'-0"	7 5/8"							
30'-0"	23'-0"±		8"							

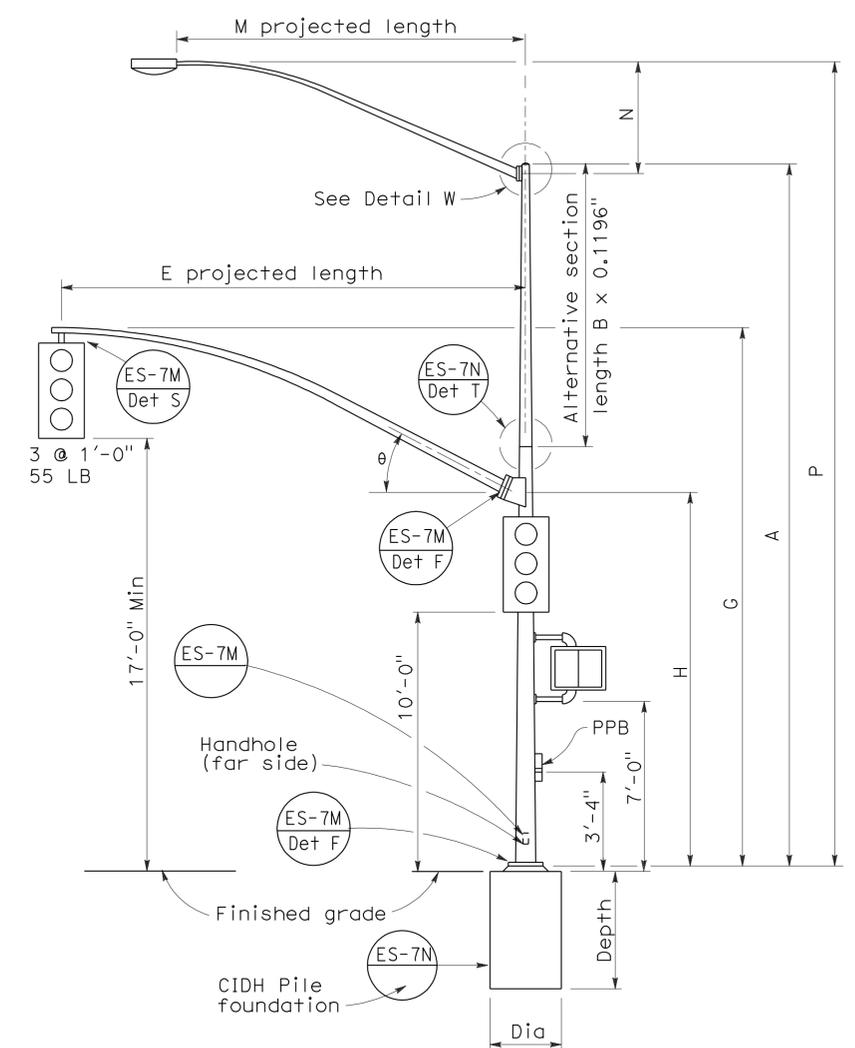


**DETAIL W**  
LUMINAIRE ARM CONNECTION



**VIEW A-A**  
SIGNAL ARM CONNECTION DETAILS

M Projected Length	N Rise	Min OD at Pole	Thickness	P Mounting Height	
				30'-0" Pole	35'-0" Pole
6'-0"	2'-0"±	3 1/4"	0.1196"	31'-6"±	36'-6"±
8'-0"	2'-6"±	3 1/2"		32'-0"±	37'-0"±
10'-0"	3'-3"±	3 3/8"		32'-9"±	37'-9"±
12'-0"	4'-3"±			33'-9"±	38'-9"±
15'-0"	4'-9"±	4 1/4"		34'-3"±	39'-3"±



**ELEVATION**  
TYPE 19-1-100, 19A-1-100

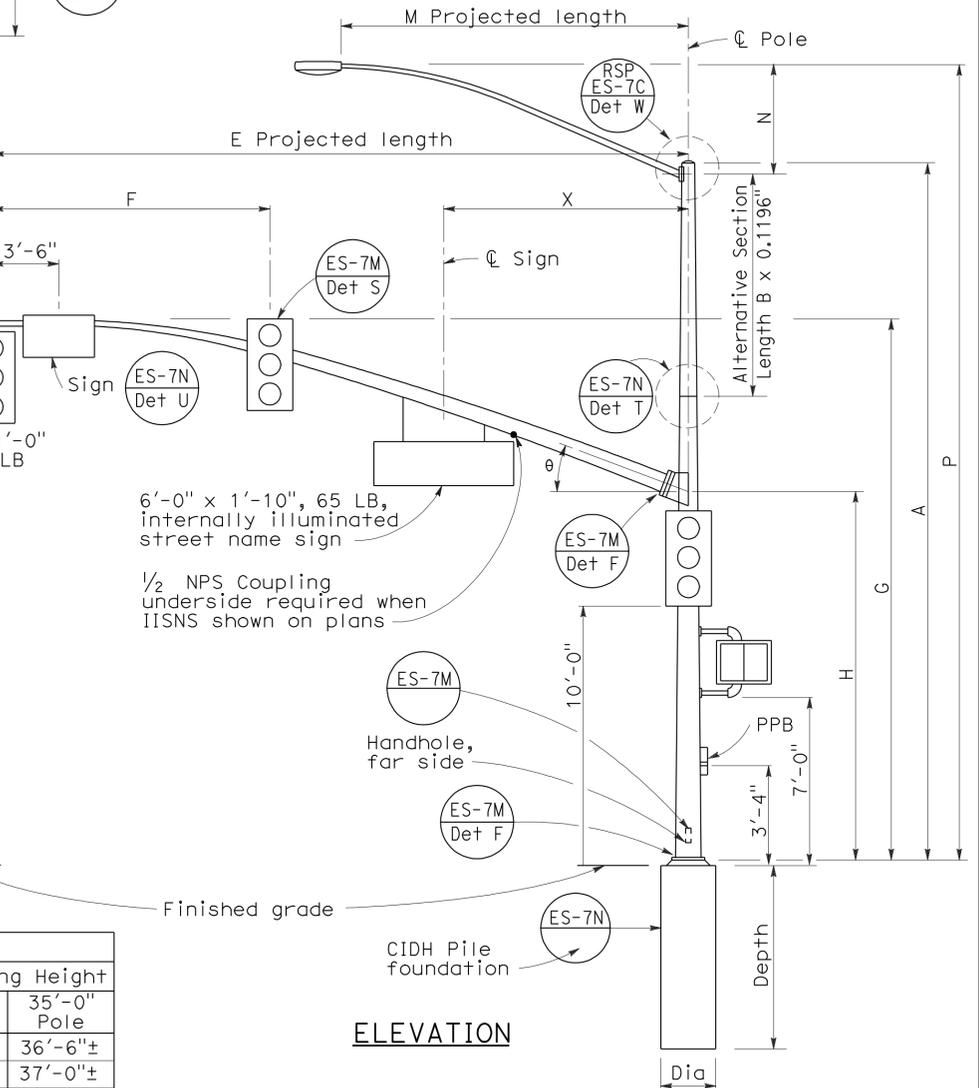
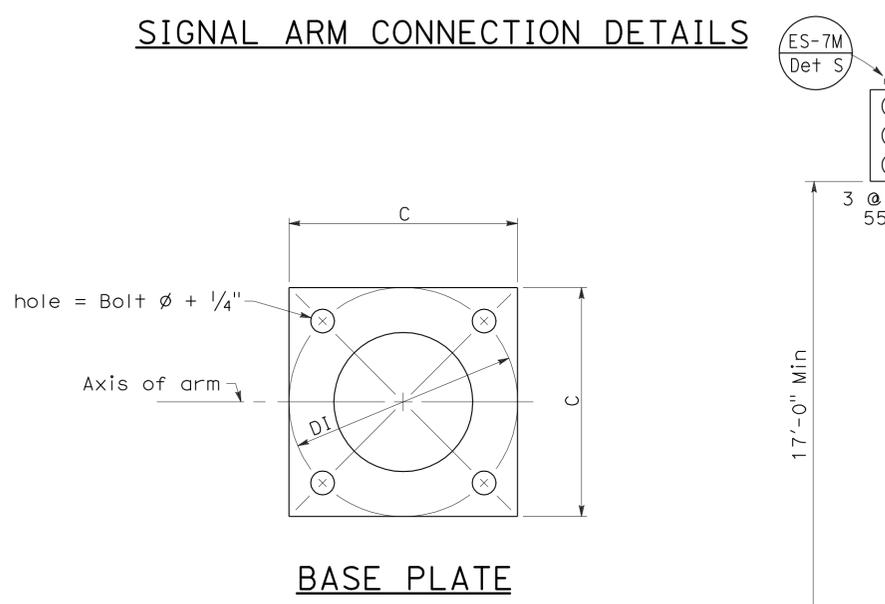
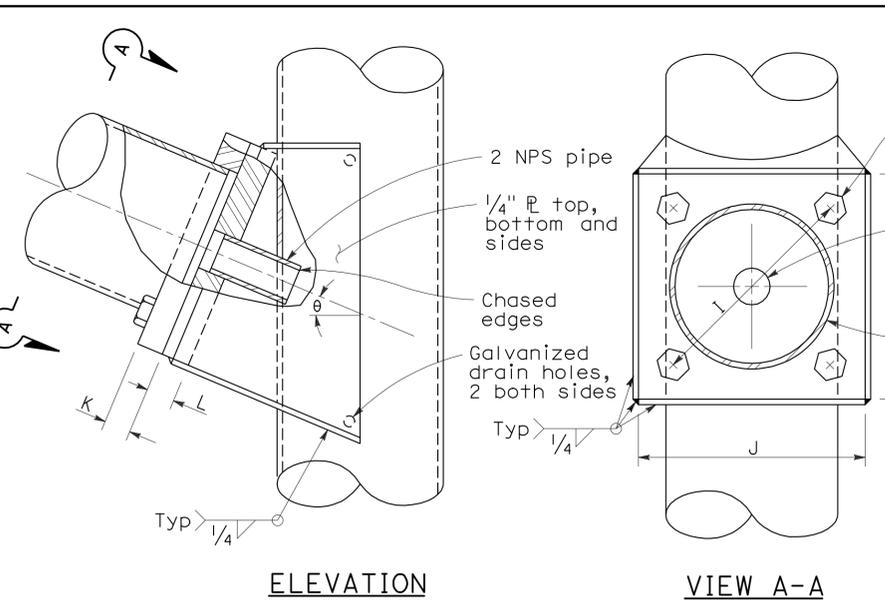
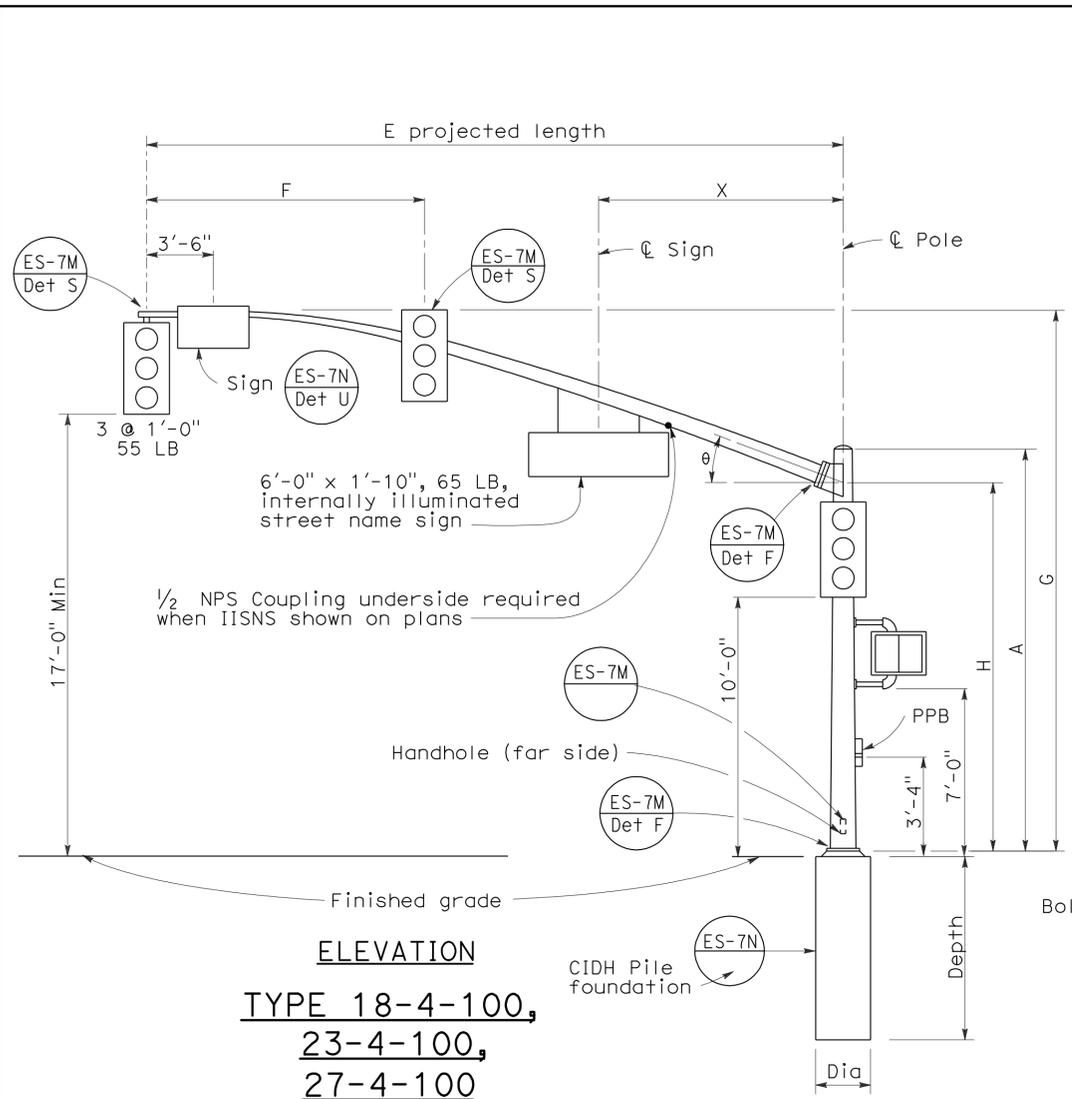
Pole Type	Load Case	Wind Velocity mph	POLE DATA					BASE PLATE DATA					CIDH PILE FOUNDATION						
			A Height	Min OD		Thickness	Alternative Section			C	D1 Bolt Circle	Thickness	Anchor Bolts		Luminaire Arm	Signal Arm	Diameter	Depth	Reinforced
				Base	Top		B Length	Bottom	Top				Size	Size					
16-1-100	1	100	18'-6"	8 1/4"	0.1793"	None			1'-6"	1'-5 1/2"	1 1/4"	1 1/2" ⌀ x 42" x 6"		None	15'-0"	2'-6"	7'-2"	Yes	
18-1-100			17'-0"	8 7/8"		None								None	20'-0"				
19-1-100			30'-0"	6 5/8"		10'-0"	8"	6 5/8"						6'-15' [12'-0"]	25'-0"				
19A-1-100			35'-0"	5 1/6"		15'-0"	5 1/6"	6'-15' [15'-0"]						30'-0"					

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS**  
**(SIGNAL AND LIGHTING STANDARD**  
**CASE 1 ARM LOADING**  
**WIND VELOCITY = 100 MPH**  
**ARM LENGTHS 15' TO 30')**  
 NO SCALE

RSP ES-7C DATED JUNE 15, 2007 SUPERSEDES STANDARD PLAN ES-7C DATED MAY 1, 2006 - PAGE 439 OF THE STANDARD PLANS BOOK DATED MAY 2006.

□ Indicates arm length to be used unless otherwise noted on plans.

**REVISED STANDARD PLAN RSP ES-7C**



E Projected Length	F Min Spacing	G Mounting Height	H	Min OD at Pole	Thickness	I Bolt Circle	HS Cap Screws	J Plate Size	K Arm Thickness	L Pole Thickness	θ	X Max
25'-0"	10'-0"	22'-8"±	16'-0"	7 <sup>5</sup> / <sub>16</sub> "	0.2391"	12"	1 <sup>1</sup> / <sub>4</sub> "-7NC-3"	1'-0"	1 <sup>1</sup> / <sub>4</sub> "	1 <sup>1</sup> / <sub>2</sub> "	23°	10'-6"
30'-0"	12'-0"	8"		8 <sup>1</sup> / <sub>16</sub> "		13 <sup>1</sup> / <sub>2</sub> "		21°				
35'-0"	14'-0"	23'-0"±		9 <sup>3</sup> / <sub>8</sub> "		1'-1 <sup>1</sup> / <sub>2</sub> "		1 <sup>1</sup> / <sub>2</sub> "	15°			
40'-0"	15'-0"	23'-8"±		10 <sup>1</sup> / <sub>4</sub> "								

M Projected Length	N Rise	Min OD at Pole	Thickness	P Mounting Height	
				30'-0" Pole	35'-0" Pole
6'-0"	2'-0"±	3 <sup>1</sup> / <sub>4</sub> "	0.1196"	31'-6"±	36'-6"±
8'-0"	2'-6"±	3 <sup>1</sup> / <sub>2</sub> "		32'-0"±	37'-0"±
10'-0"	3'-3"±	3 <sup>7</sup> / <sub>8</sub> "		32'-9"±	37'-9"±
12'-0"	4'-3"±			33'-9"±	38'-9"±
15'-0"	4'-9"±	4 <sup>1</sup> / <sub>4</sub> "		34'-3"±	39'-3"±

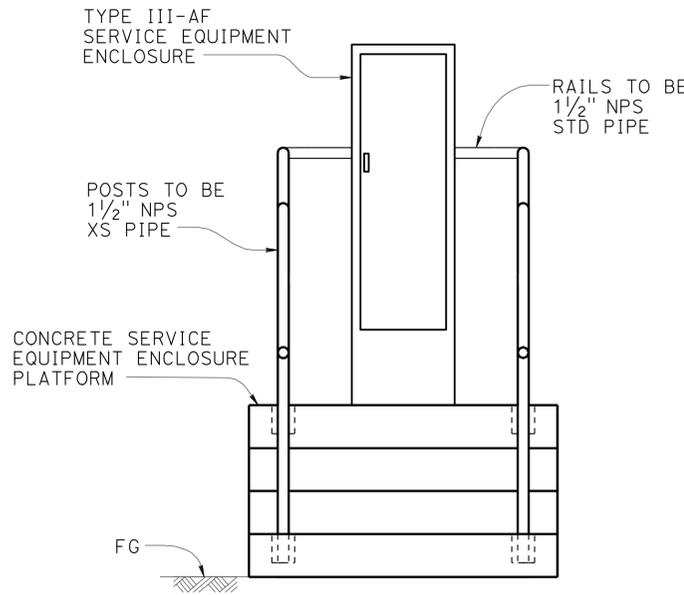
Pole Type	Load Case	Wind Velocity mph	A Height			Min OD	Thickness	Alternative Section		
			Base	Top	B Length			Bottom	Top	
18-4-100	4	100	17'-0"	9"	12"	0.2391"	None	9 <sup>3</sup> / <sub>8</sub> "	8"	
19-4-100			30'-0"	8"			10'-0"			8"
19A-4-100			35'-0"	7 <sup>5</sup> / <sub>16</sub> "			15'-0"			7 <sup>5</sup> / <sub>16</sub> "
23-4-100			17'-0"	9"			None			
24-4-100			30'-0"	8"	10'-0"	8"				
24A-4-100			35'-0"	7 <sup>5</sup> / <sub>16</sub> "	15'-0"	7 <sup>5</sup> / <sub>16</sub> "				
26-4-100			30'-0"	8"	10'-0"	8 <sup>3</sup> / <sub>8</sub> "				
26A-4-100			35'-0"	7 <sup>5</sup> / <sub>16</sub> "	15'-0"	9 <sup>3</sup> / <sub>4</sub> "				
27-4-100			17'-0"	9 <sup>3</sup> / <sub>4</sub> "	None					

C	DI Bolt Circle	Thickness	Anchor Bolts	
			Size	Reinforced
1'-6"	1'-6"	1 <sup>1</sup> / <sub>2</sub> "	2" ø x 42" x 6"	Yes

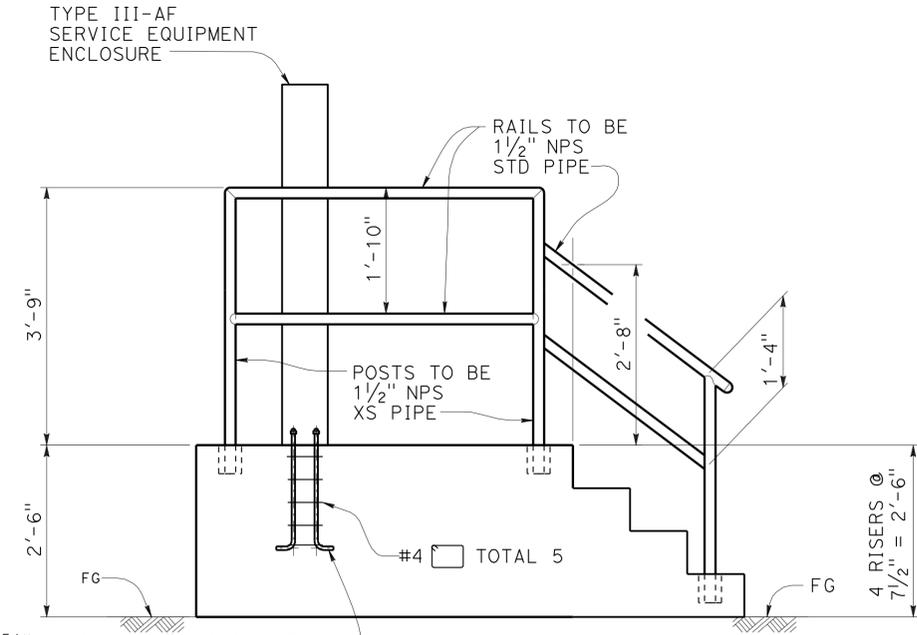
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS**  
**(SIGNAL AND LIGHTING STANDARD**  
**CASE 4 ARM LOADING**  
**WIND VELOCITY=100 MPH**  
**ARM LENGTHS 25' TO 45')**  
 NO SCALE  
 RSP ES-7F DATED OCTOBER 5, 2007 SUPERCEDES RSP ES-7F DATED NOVEMBER 17, 2006 AND STANDARD PLAN ES-7F DATED MAY 1, 2006 - PAGE 442 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP ES-7F

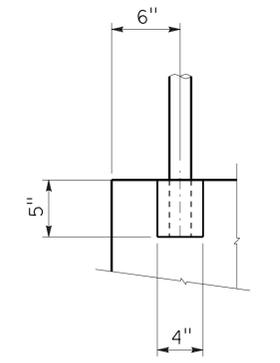
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,121	41.2/41.3, 7.4/7.6	66	67
			1-4-2010	DATE	
			5-9-11	PLANS APPROVAL DATE	
			REGISTERED CIVIL ENGINEER		
			ANDREW BUI		
			No. C63560		
			Exp. 9/30/12		
			CIVIL		
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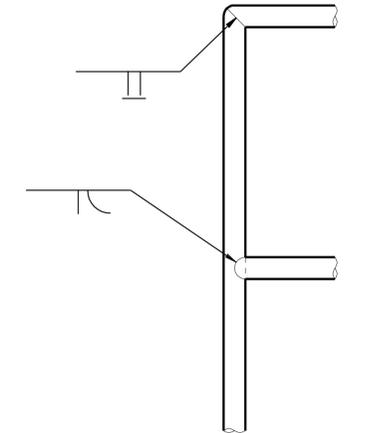
**ELEVATION**  
3/4" = 1'-0"



**SIDE VIEW**  
3/4" = 1'-0"

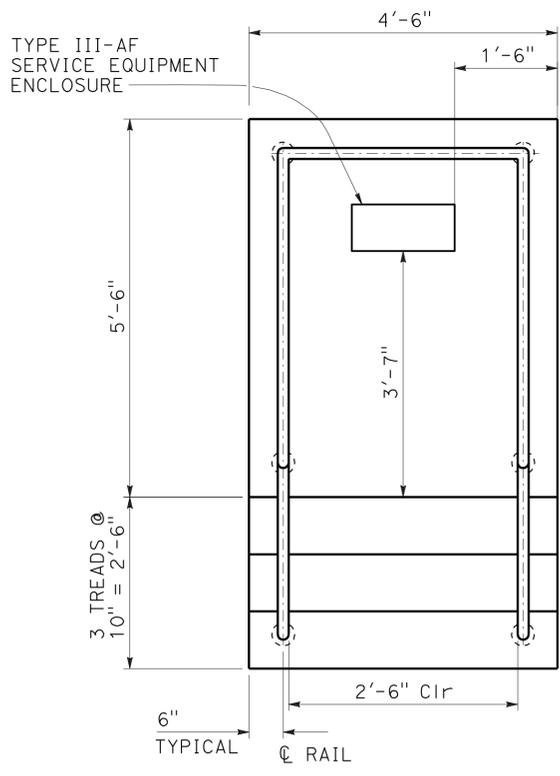


**RAIL POCKET DETAIL**  
1/2" = 1'-0"

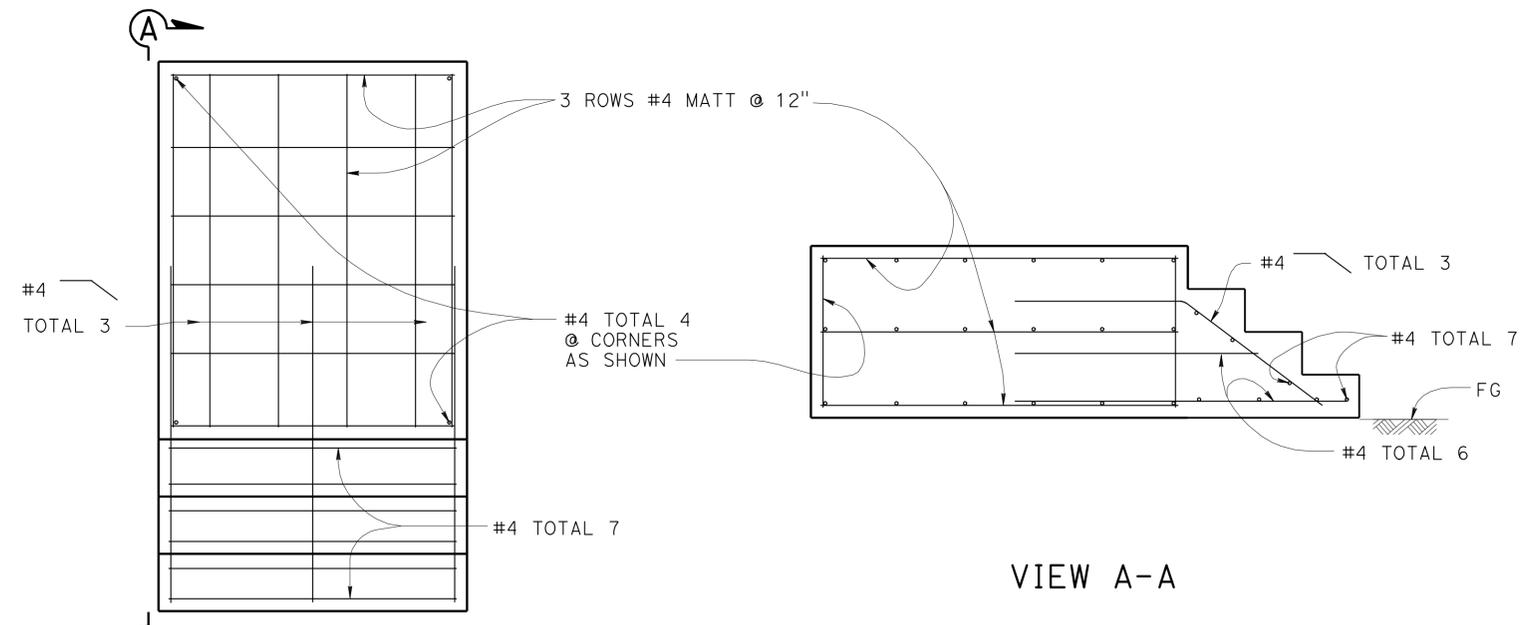


**RAIL WELD DETAILS**  
1/2" = 1'-0"

- NOTES:**
1. Refer to Standard Plans RSP ES-2D for "ELECTRICAL SYSTEMS (TYPE III - A SERIES)".
  2. Expansion joint to be placed at top & bottom rails at specified location.



**PLAN**  
3/4" = 1'-0"

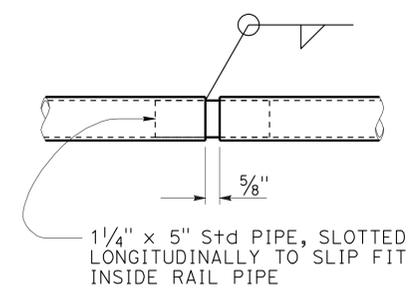


**VIEW A-A**

**REINFORCEMENT PLAN**

**REINFORCING DETAILS**  
3/4" = 1'-0"

NOTE:  
Service equipment enclosure reinforcing not shown for clarity. See SIDE VIEW on this sheet and RSP ES-2D STANDARD PLANS MAY 2006.



**EXPANSION JOINT DETAIL**  
3" = 1'-0"

DESIGN	BY J MAGANA	CHECKED A BUI
DETAILS	BY P C WELLS	CHECKED J MAGANA
QUANTITIES	BY J MAGANA	CHECKED P C WELLS

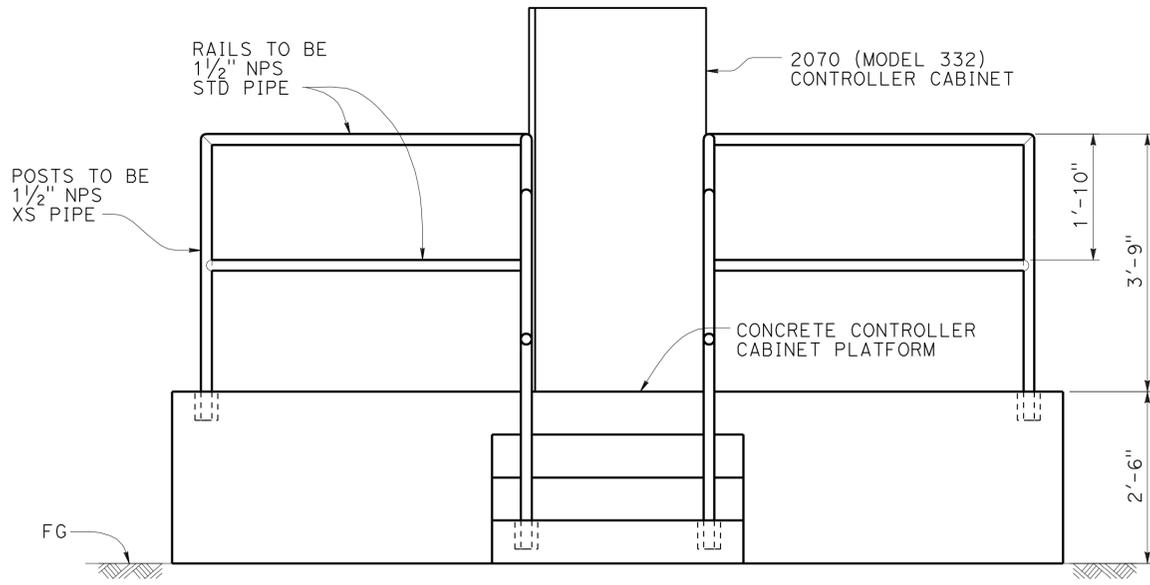
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
DESIGN AND TECHNICAL SERVICES  
SPECIAL DESIGNS BRANCH A

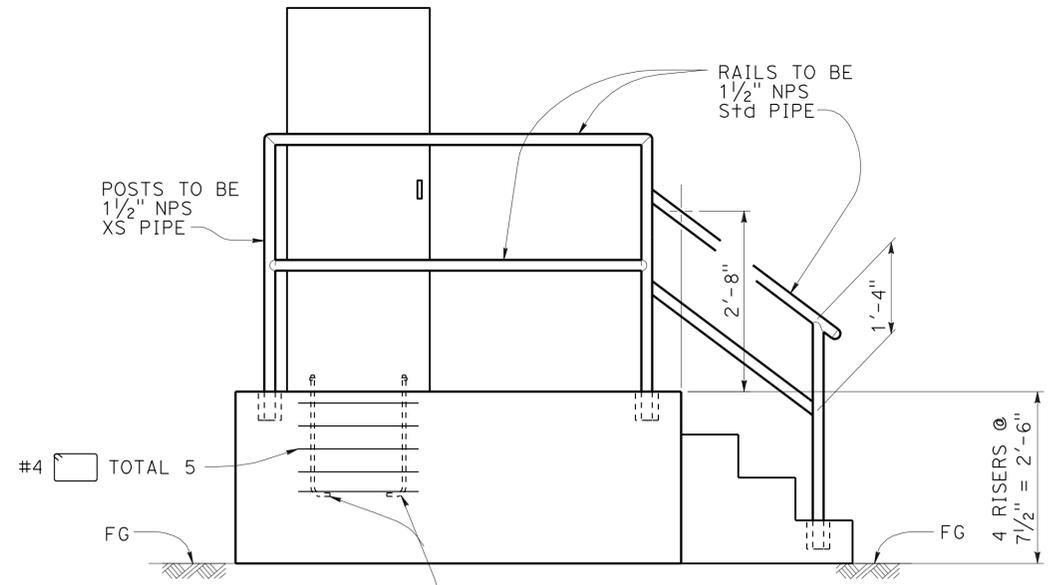
BRIDGE NO.	N/A
POST MILE	

**RAIL AND ENCLOSURE ANCHORAGE DETAILS**  
**TYPE III-AF SERVICE EQUIPMENT ENCLOSURE**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	San	12,121	41.2/41.3, 7.4/7.6	67	67
			1-4-2010	DATE	
			5-9-11	PLANS APPROVAL DATE	
			REGISTERED CIVIL ENGINEER		
			ANDREW BUI		
			No. C63560		
			Exp. 9/30/12		
			CIVIL		
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**ELEVATION**  
3/4" = 1'-0"

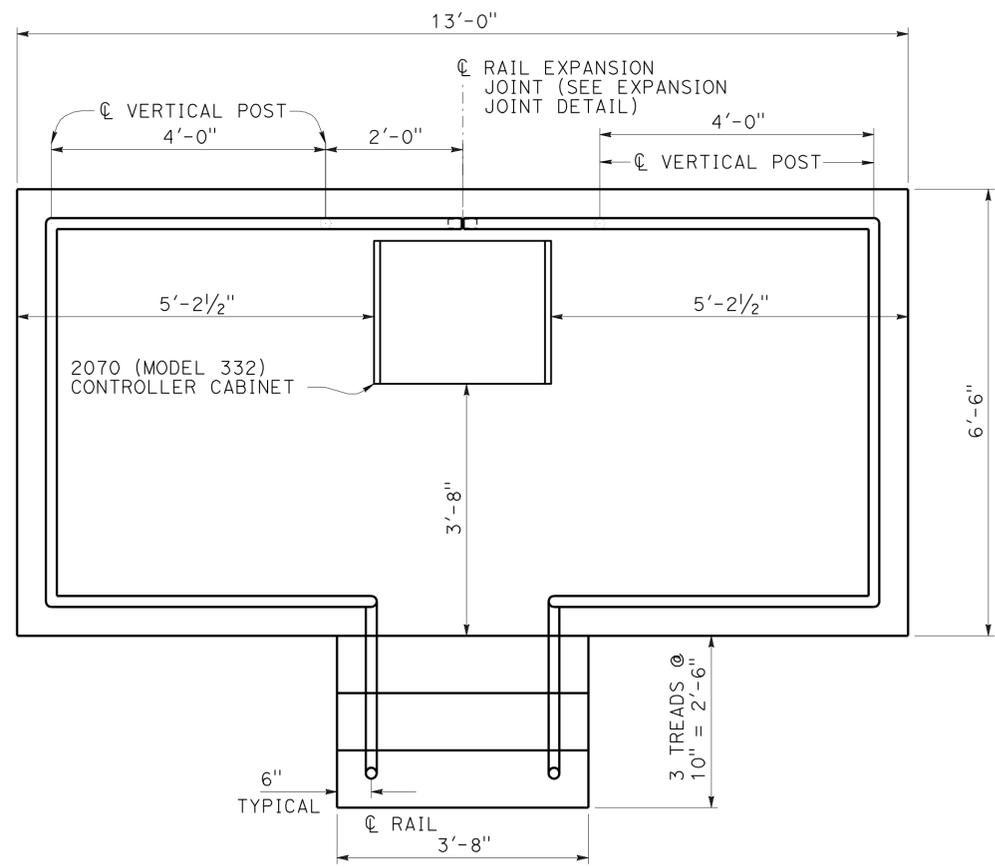


**SIDE VIEW**  
3/4" = 1'-0"

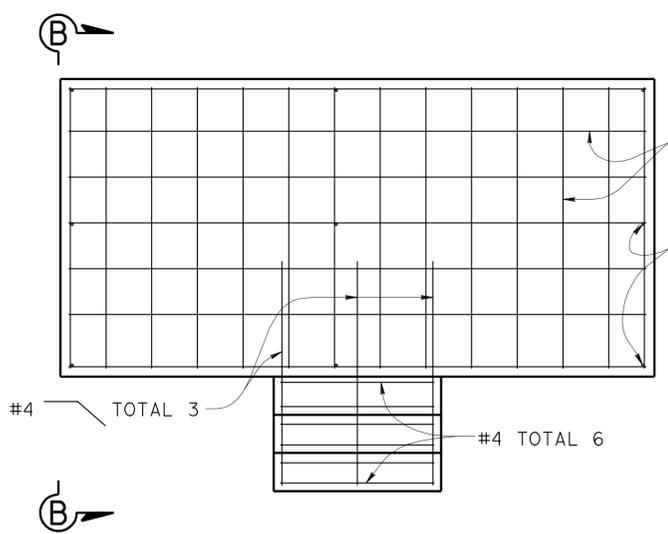
**NOTES:**

1. Refer to Standard Plans ES-3C for "ELECTRICAL SYSTEMS (CONTROLLER CABINET DETAILS)".
2. For rail details see sheet 1 of 2.

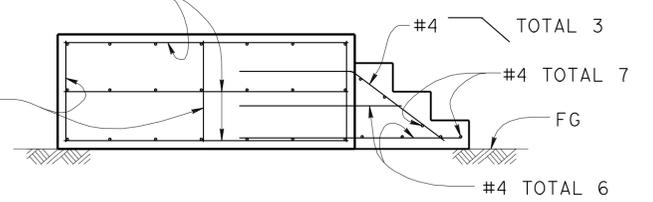
3/4"  $\phi$  Min X 18" IMBEDMENT Galv ANCHOR BOLTS W/4" 90° BEND (4 REQUIRED), SEE ALSO ES-3C STANDARD PLANS MAY 2006



**PLAN**  
3/4" = 1'-0"



**REINFORCING PLAN**



**VIEW B-B**

**NOTE:**

Controller Cabinet reinforcing not shown for clarity. See SIDE VIEW on this sheet and ES-3C STANDARD PLANS MAY 2006.

**REINFORCING DETAILS**  
1/2" = 1'-0"

DESIGN	BY J MAGANA	CHECKED A BUI
DETAILS	BY P C WELLS	CHECKED J MAGANA
QUANTITIES	BY J MAGANA	CHECKED P C WELLS

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
DESIGN AND TECHNICAL SERVICES  
SPECIAL DESIGNS BRANCH A

BRIDGE NO.	N/A
POST MILE	

**2070 CONTROLLER CABINET  
MODEL 332 PEDESTAL MODIFIED**