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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**  
**PROJECT PLANS FOR CONSTRUCTION ON**  
**STATE HIGHWAY**  
**IN SOLANO COUNTY**  
**IN BENICIA**  
**AT 0.2 MILE EAST OF EAST 5TH STREET UNDERCROSSING**

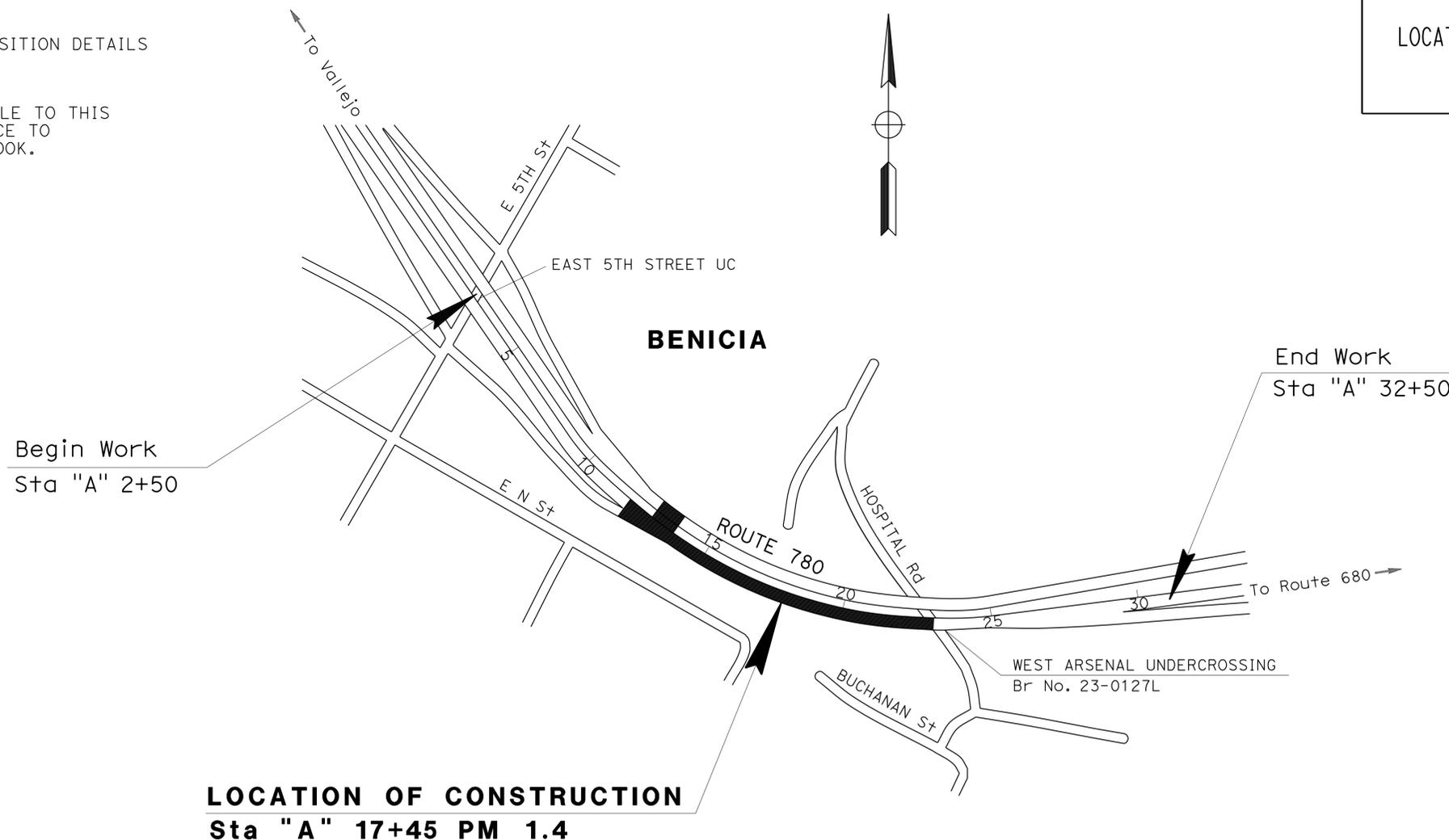
TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Sol	780	1.4	1	40





LOCATION MAP



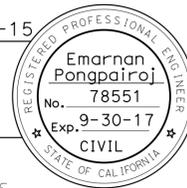
**LOCATION OF CONSTRUCTION**  
**Sta "A" 17+45 PM 1.4**

NO SCALE

PROJECT MANAGER  
OSAMA ELHAMSHARY

DESIGN MANAGER  
GHULAM POPAL

PROJECT ENGINEER:  DATE: 12-16-15  
 REGISTERED CIVIL ENGINEER



PLANS APPROVAL DATE: **January 25, 2016**

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

CONTRACT No.	<b>04-1J7104</b>
PROJECT ID	<b>0414000332</b>

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

FUNCTIONAL SUPERVISOR  
 GHULAM POPAL

CALCULATED/DESIGNED BY  
 CHECKED BY

EMARNAN PONGPAIROJ  
 GHULAM POPAL

REVISED BY  
 DATE REVISED

EP  
 1-8-16

**NOTES:**

- DIMENSIONS OF PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
- EXACT LOCATIONS AND TYPES OF HMA DIKE ARE SHOWN ON THE LAYOUTS AND SUMMARY OF QUANTITIES SHEETS.

**ROUTE 780  
 DESIGN DESIGNATION**

2011 AADT = 53,000  
 2030 AADT = 62,330  
 2011 DHV = 1,950  
 2030 DHV = 2,300  
 TI<sub>20</sub> = 11.5

**ABBREVIATION:**

RAC (G) RUBBERIZED ASPHALT  
 CONCRETE (GAP GRADED)

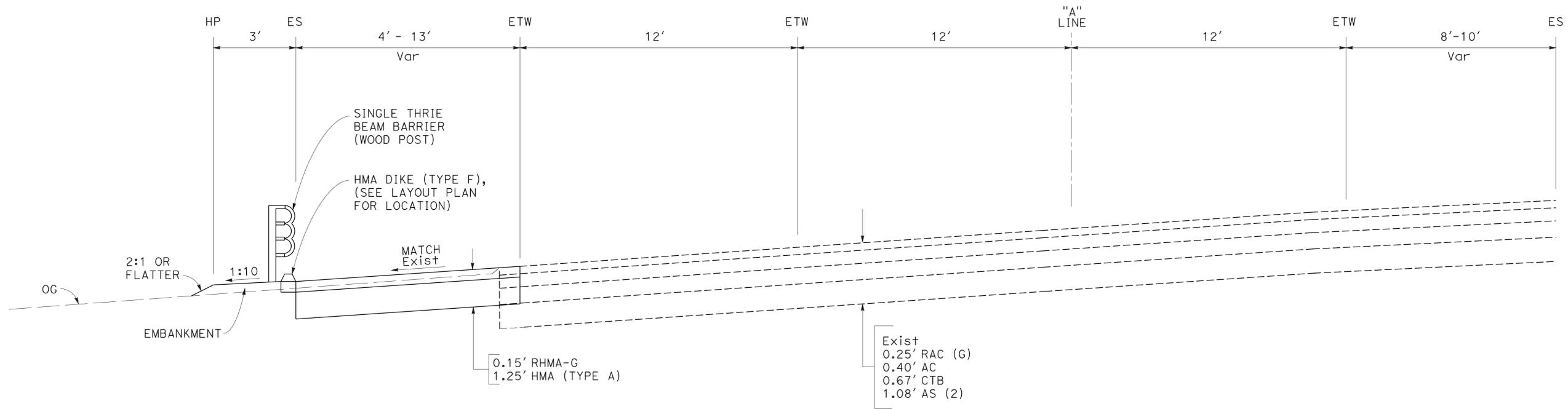
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	780	1.4	2	40

12-16-15  
 REGISTERED CIVIL ENGINEER DATE

1-25-16  
 PLANS APPROVAL DATE

Emarnan Pongpaairoj  
 No. 78551  
 Exp. 9-30-17  
 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.



EASTBOUND  
 "A" 12+40 TO 22+50  
**ROUTE 780**

**TYPICAL CROSS SECTIONS**  
 NO SCALE

**X-1**

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

FUNCTIONAL SUPERVISOR: GHULAM POPAL  
 CHECKED BY: GHULAM POPAL  
 REVISIONS: EP 1-8-16

**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	SoI	780	1.4	3	40

REGISTERED CIVIL ENGINEER DATE: 12-16-15  
 Emarnan Pongpairoj No. 78551 Exp. 9-30-17  
 PLANS APPROVAL DATE: 1-25-16  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

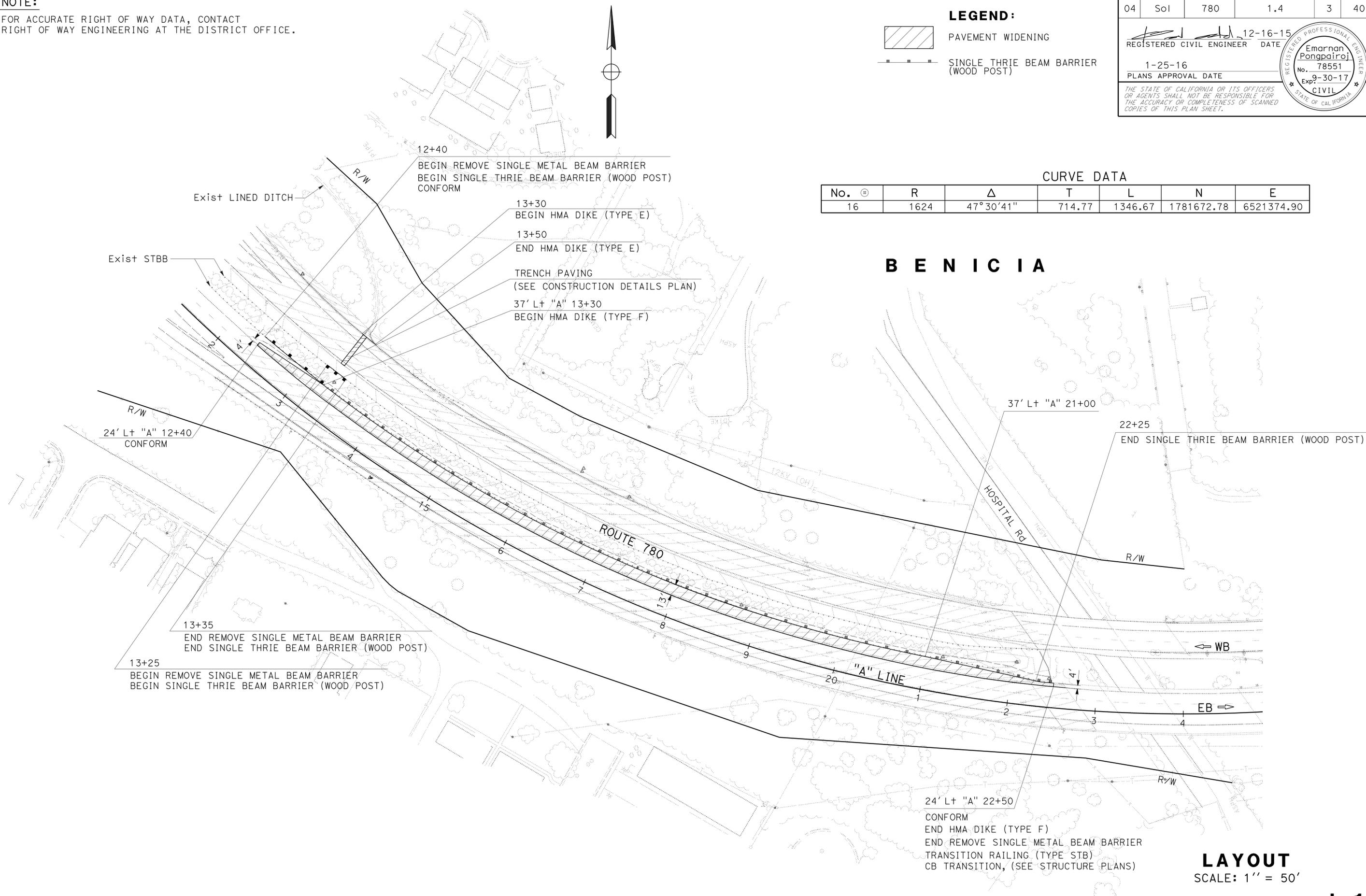
**LEGEND:**

PAVEMENT WIDENING

SINGLE THRIE BEAM BARRIER (WOOD POST)

**CURVE DATA**

No.	+	R	Δ	T	L	N	E
16		1624	47° 30' 41"	714.77	1346.67	1781672.78	6521374.90



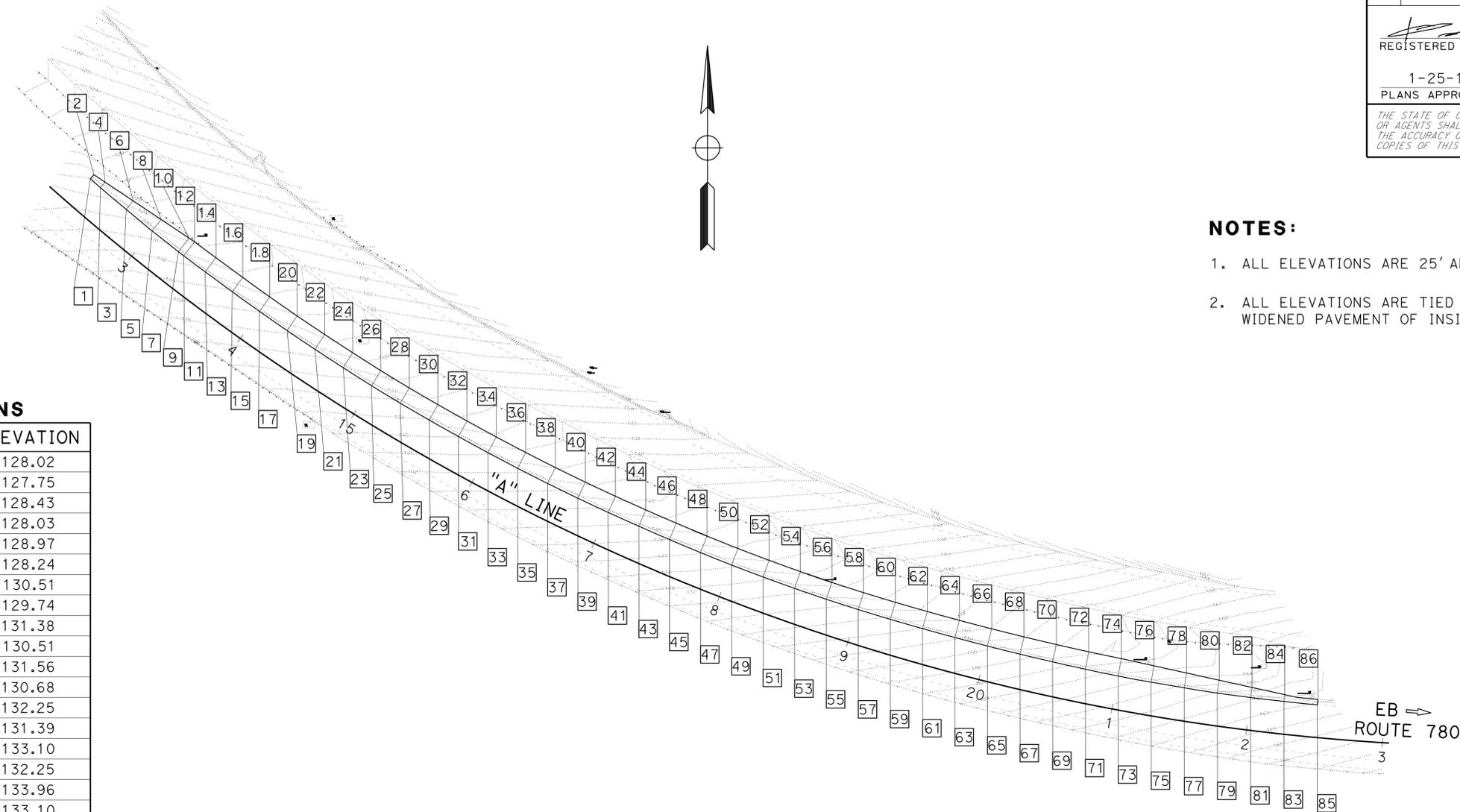
**LAYOUT**  
 SCALE: 1" = 50'

L-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Soi	780	1.4	4	40

REGISTERED CIVIL ENGINEER DATE 12-16-15  
 Emarnan Pongpaibroj No. 78551  
 1-25-16  
 PLANS APPROVAL DATE Exp. 9-30-17  
 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.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION DESIGN  
 Ghulam Popal  
 Ghulam Popal  
 Emarnan Pongpaibroj  
 Ghulam Popal  
 EP  
 1-8-16



- NOTES:**
- ALL ELEVATIONS ARE 25' APART UNLESS OTHERWISE NOTED.
  - ALL ELEVATIONS ARE TIED TO FRONT AND BACK EDGE OF WIDENED PAVEMENT OF INSIDE SHOULDER.

**PAVEMENT ELEVATIONS**

No.	LOCATION	ELEVATION
1	23.97' Lt "A" 12+40	128.02
2	27.97' Lt "A" 12+40	127.75
3	23.94' Lt "A" 12+50	128.43
4	29.76' Lt "A" 12+50	128.03
5	23.97' Lt "A" 12+75	128.97
6	32.47' Lt "A" 12+75	128.24
7	23.80' Lt "A" 13+00	130.51
8	34.80' Lt "A" 13+00	129.74
9	23.87' Lt "A" 13+25	131.38
10	36.74' Lt "A" 13+25	130.51
11	23.90' Lt "A" 13+30	131.56
12	36.87' Lt "A" 13+30	130.68
13	24.14' Lt "A" 13+50	132.25
14	37.14' Lt "A" 13+50	131.39
15	24.31' Lt "A" 13+75	133.10
16	37.31' Lt "A" 13+75	132.25
17	24.37' Lt "A" 14+00	133.96
18	37.33' Lt "A" 14+00	133.10
19	24.40' Lt "A" 14+25	134.82
20	37.37' Lt "A" 14+25	133.96
21	24.48' Lt "A" 14+50	135.62
22	37.47' Lt "A" 14+50	134.74
23	24.51' Lt "A" 14+75	136.45
24	37.47' Lt "A" 14+75	135.56
25	24.46' Lt "A" 15+00	137.09
26	37.42' Lt "A" 15+00	136.11
27	24.47' Lt "A" 15+25	138.00
28	37.44' Lt "A" 15+25	137.03
29	24.63' Lt "A" 15+50	139.06
30	37.59' Lt "A" 15+50	138.18
31	24.73' Rt "A" 15+75	139.98
32	37.70' Rt "A" 15+75	139.11
33	24.76' Rt "A" 16+00	140.91
34	37.75' Rt "A" 16+00	140.06
35	24.79' Rt "A" 16+25	141.76
36	37.79' Rt "A" 16+25	140.91
37	24.85' Rt "A" 16+50	142.60
38	37.83' Rt "A" 16+50	141.74
39	24.90' Lt "A" 16+75	143.41
40	37.88' Lt "A" 16+75	142.52
41	24.98' Lt "A" 17+00	144.25
42	37.95' Lt "A" 17+00	143.35
43	25.04' Rt "A" 17+25	145.13

**PAVEMENT ELEVATIONS**

No.	LOCATION	ELEVATION
44	38.00' Lt "A" 17+25	144.21
45	25.01' Rt "A" 17+50	146.01
46	37.97' Lt "A" 17+50	145.06
47	24.92' Rt "A" 17+75	146.93
48	37.89' Lt "A" 17+75	145.97
49	24.85' Rt "A" 18+00	147.87
50	37.82' Lt "A" 18+00	146.93
51	24.87' Rt "A" 18+25	148.82
52	37.84' Lt "A" 18+25	147.89
53	24.89' Rt "A" 18+50	149.67
54	37.85' Lt "A" 18+50	148.71
55	24.93' Rt "A" 18+75	150.49
56	37.91' Lt "A" 18+75	149.52
57	25.04' Rt "A" 19+00	151.33
58	38.03' Lt "A" 19+00	150.33
59	25.21' Rt "A" 19+25	152.17
60	38.19' Lt "A" 19+25	151.17
61	25.34' Lt "A" 19+50	153.03
62	38.31' Lt "A" 19+50	152.03
63	25.40' Lt "A" 19+75	153.89
64	38.37' Lt "A" 19+75	152.89
65	25.38' Lt "A" 20+00	154.77

**PAVEMENT ELEVATIONS**

No.	LOCATION	ELEVATION
66	38.35' Lt "A" 20+00	153.77
67	25.26' Lt "A" 20+25	155.66
68	38.23' Lt "A" 20+25	154.65
69	25.08' Lt "A" 20+50	156.55
70	38.05' Lt "A" 20+50	155.54
71	24.80' Lt "A" 20+75	157.46
72	37.75' Lt "A" 20+75	156.46
73	24.51' Lt "A" 21+00	158.38
74	37.46' Lt "A" 21+00	157.39
75	24.37' Lt "A" 21+25	159.30
76	36.51' Lt "A" 21+25	158.39
77	24.21' Lt "A" 21+50	160.23
78	35.18' Lt "A" 21+50	159.41
79	23.91' Lt "A" 21+75	161.07
80	33.47' Lt "A" 21+75	160.35
81	23.92' Lt "A" 22+00	161.86
82	31.38' Lt "A" 22+00	161.29
83	23.95' Lt "A" 22+25	162.03
84	28.90' Lt "A" 22+25	161.63
85	23.94' Lt "A" 22+50	163.16
86	27.90' Lt "A" 22+50	162.84

**CONSTRUCTION DETAILS  
PAVEMENT ELEVATION PLAN**

SCALE: 1" = 50'

APPROVED FOR PAVEMENT ELEVATION WORK ONLY

C-1

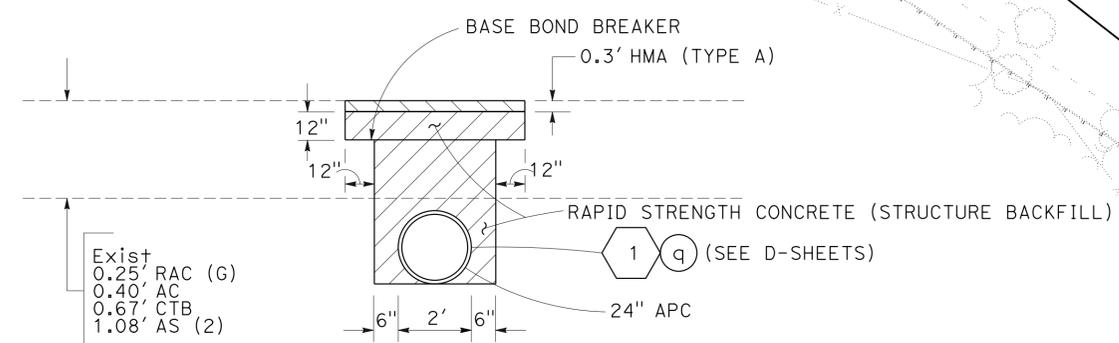
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	780	1.4	5	40

12-16-15  
 REGISTERED CIVIL ENGINEER DATE  
 1-25-16  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 Emarnan Pongpaibroj  
 No. 78551  
 Exp. 9-30-17  
 CIVIL  
 STATE OF CALIFORNIA

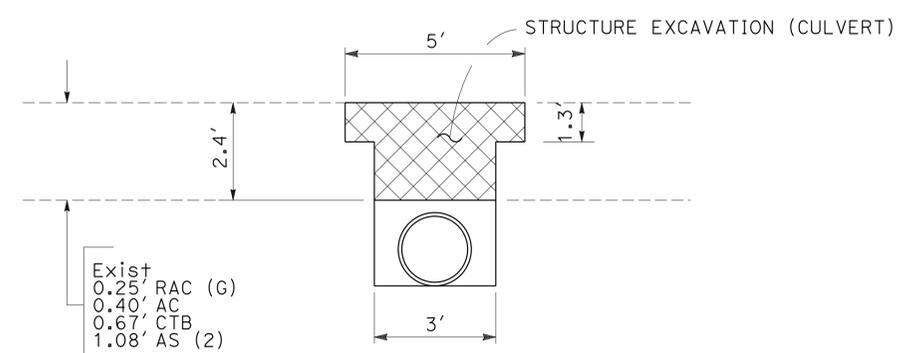
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**ABBREVIATION:**  
 RAC (G) RUBBERIZED ASPHALT  
 CONCRETE (GAP GRADED)



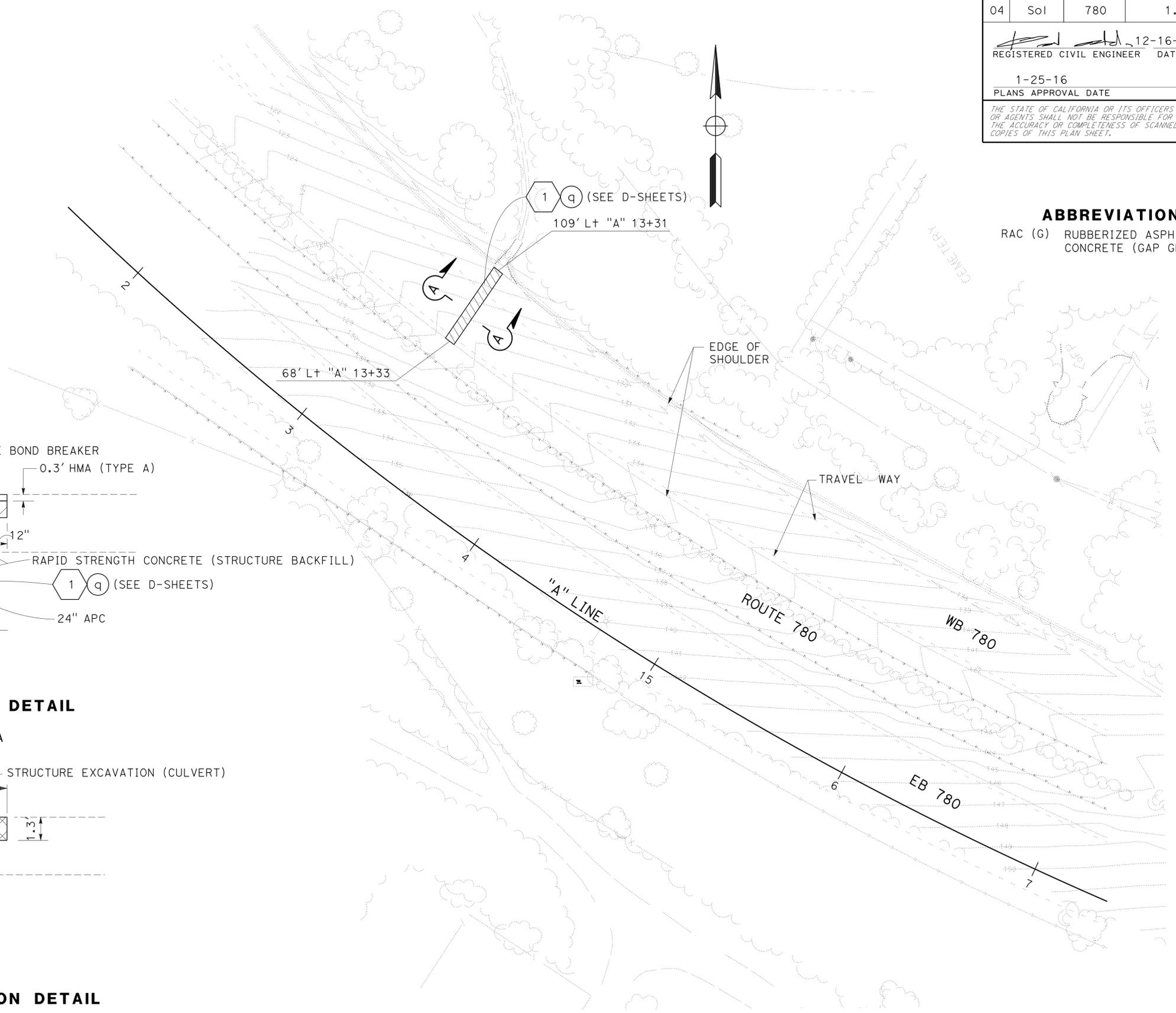
**TRENCH PAVING DETAIL**

SECTION A-A



**TRENCH EXCAVATION DETAIL**

SECTION A-A



**CONSTRUCTION DETAILS**  
 NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN
FUNCTIONAL SUPERVISOR	GHULAM POPAL
CALCULATED/DESIGNED BY	CHECKED BY
EMARNAN PONGPAIBROJ	GHULAM POPAL
REVISOR	DATE
EP	1-8-16

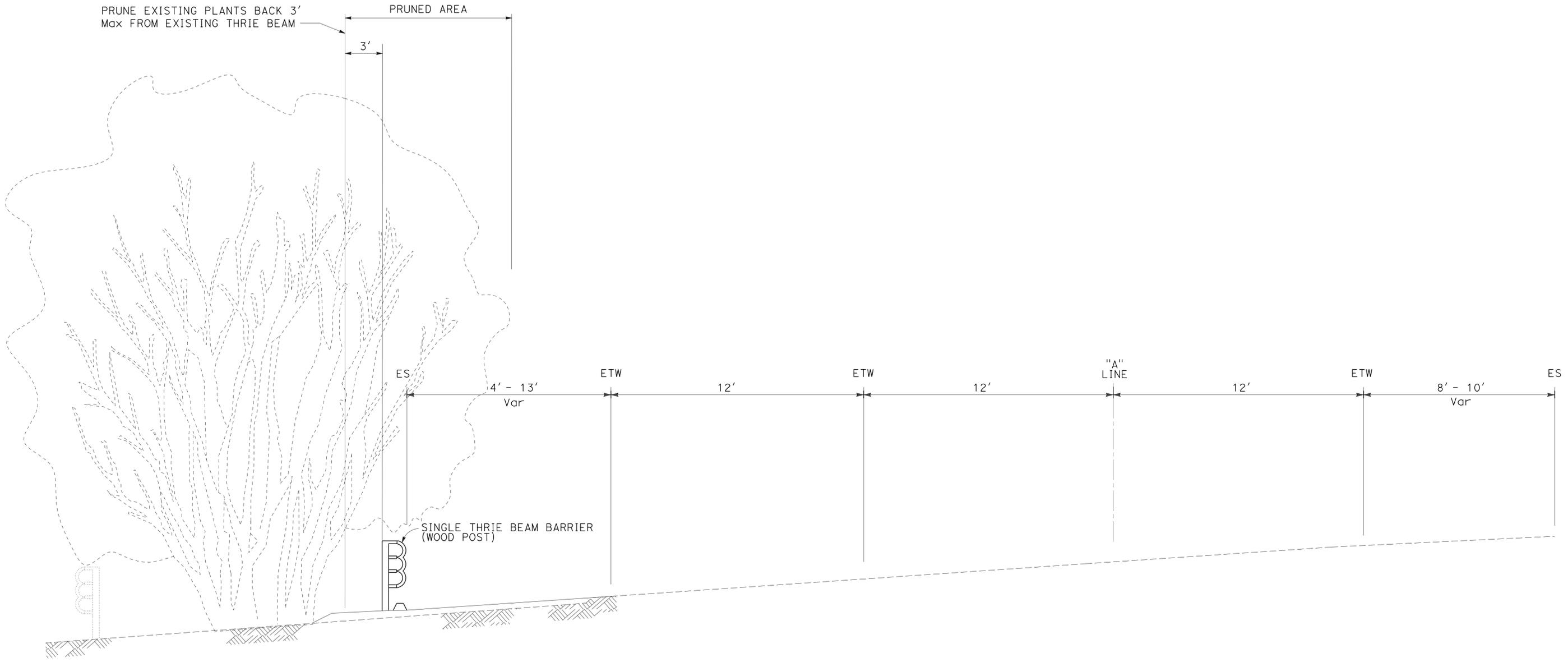
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	780	1.4	6	40

12-16-15  
 REGISTERED CIVIL ENGINEER DATE  
 1-25-16  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 Emarnan Pongpairoj  
 No. 78551  
 Exp. 9-30-17  
 CIVIL  
 STATE OF CALIFORNIA

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN
FUNCTIONAL SUPERVISOR	GHULAM POPAL
CALCULATED/DESIGNED BY	CHECKED BY
EMARNAN PONGPAIROJ	GHULAM POPAL
REVISED BY	DATE REVISED
EP	1-8-16



EASTBOUND  
"A" 12+40 TO 21+50

**CONSTRUCTION DETAIL  
PRUNE EXISTING PLANTS**

NO SCALE

**C-3**

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

FUNCTIONAL SUPERVISOR: KAMRAN NAKHJURI  
 CALCULATED/DESIGNED BY: KAMRAN NAKHJURI  
 CHECKED BY: TRANG HOANG  
 REVISOR: TRANG HOANG  
 DATE: 12-10-15

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



**LEGEND:**

▨ TEMPORARY COVER

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	780	1.4	7	40

Trang Hoang 1-7-16  
 REGISTERED CIVIL ENGINEER DATE

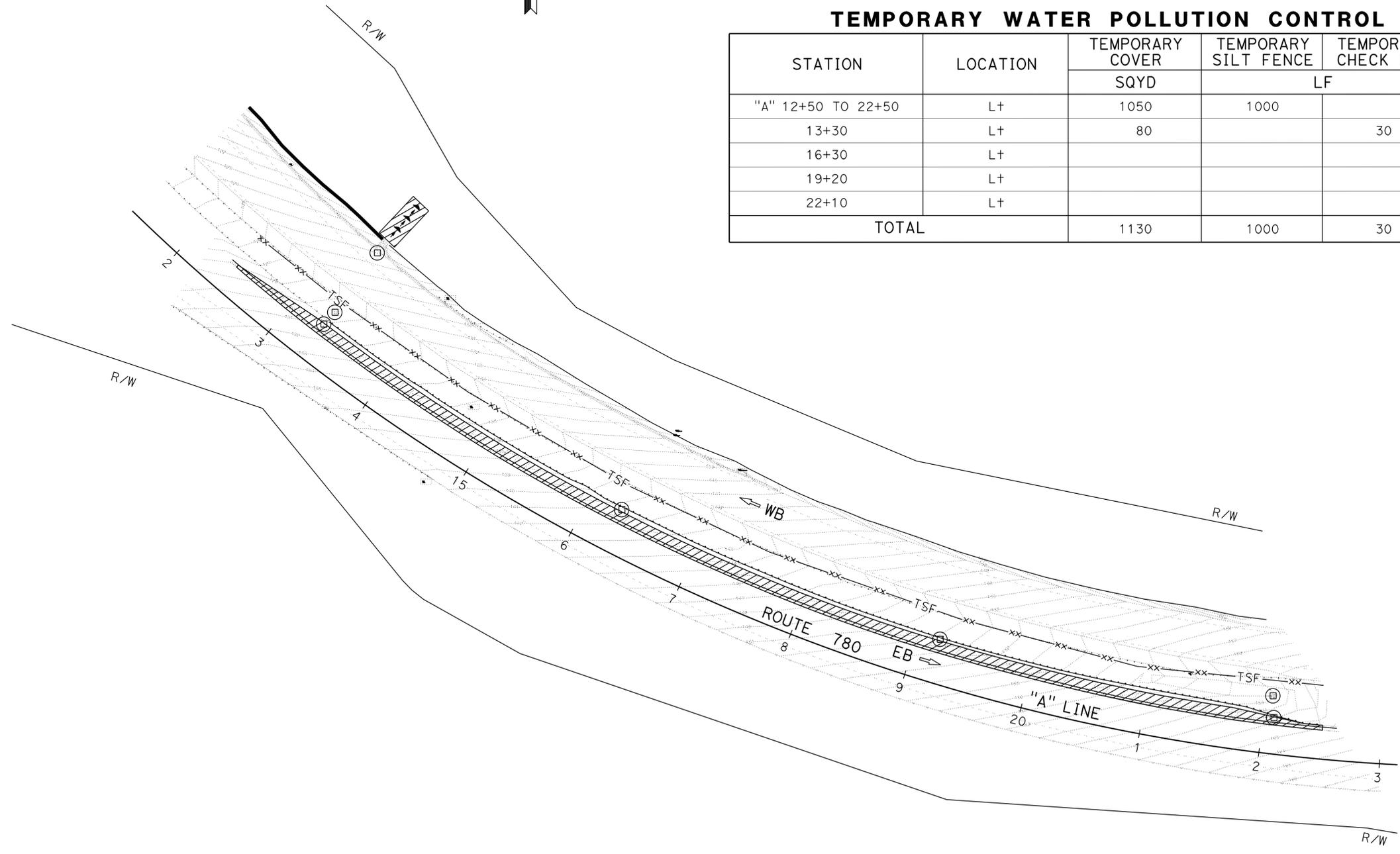
1-25-16  
 PLANS APPROVAL DATE

Trang T. Hoang  
 No. 59917  
 Exp. 2-31-17  
 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.

**TEMPORARY WATER POLLUTION CONTROL QUANTITIES**

STATION	LOCATION	TEMPORARY COVER	TEMPORARY SILT FENCE	TEMPORARY CHECK DAM	TEMPORARY DRAINAGE INLET PROTECTION
		SQYD	LF		EA
"A" 12+50 TO 22+50	L+	1050	1000		
13+30	L+	80		30	3
16+30	L+				1
19+20	L+				1
22+10	L+				2
TOTAL		1130	1000	30	7



**TEMPORARY WATER POLLUTION CONTROL PLAN AND QUANTITIES**

SCALE: 1" = 50'

APPROVED FOR TEMPORARY WATER POLLUTION CONTROL WORK ONLY

**WPC-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** HYDRAULICS  
 FUNCTIONAL SUPERVISOR: JOSEPH PETERSON  
 CALCULATED/DESIGNED BY: [blank] CHECKED BY: [blank]  
 KHAI LEONG  
 KATHLEEN REILLY  
 REVISED BY: KL DATE REVISED: 1-8-16

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

- NOTES:**
1. LOCATION OF EXISTING DRAINAGE FACILITIES ARE APPROXIMATE AND SHOULD BE VERIFIED BY THE ENGINEER.
  2. TOP OF GRATE ELEVATION (TOG) IS THE FINISHED PAVEMENT ELEVATION MINUS THE GUTTER DEPRESSION.
  3. THERE WILL BE NO STANDARD GUTTER DEPRESSION (SGD) PROVIDED, UNLESS OTHERWISE NOTED.
  4. ALL TIES TO INLET, MANHOLES AND JUNCTION BOXES ARE DEFINED ON SHEET DD-1, UNLESS OTHERWISE NOTED.

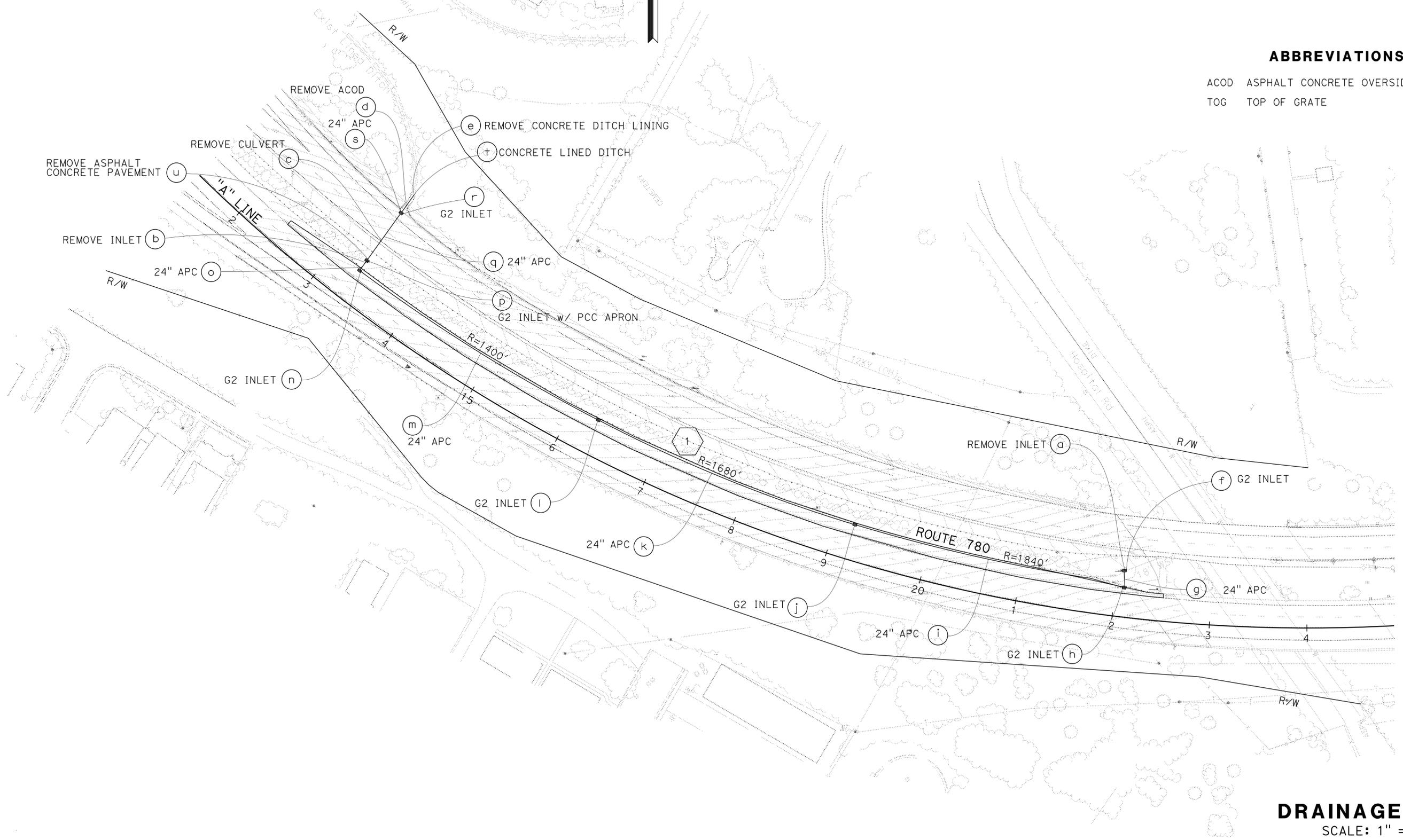
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	780	1.4	8	40

12-18-15  
 REGISTERED CIVIL ENGINEER DATE  
 1-25-16  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 Khai Shoon Leong  
 No. 76183  
 Exp. 6-30-16  
 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.

**ABBREVIATIONS:**  
 ACOD ASPHALT CONCRETE OVERSIDE DRAIN  
 TOG TOP OF GRATE



APPROVED FOR DRAINAGE WORK ONLY

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

**D-1**

LAST REVISION DATE PLOTTED => 28-JAN-2016 01-08-16 TIME PLOTTED => 09:58

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 DESIGN  
 FUNCTIONAL SUPERVISOR: GHULAM POPAL  
 CHECKED BY: GHULAM POPAL  
 EMARNAN PONGPAIROJ  
 REVISIONS: 1-8-16  
 DATE REVISED: 1-8-16  
 EP: 130

**ABBREVIATION:**

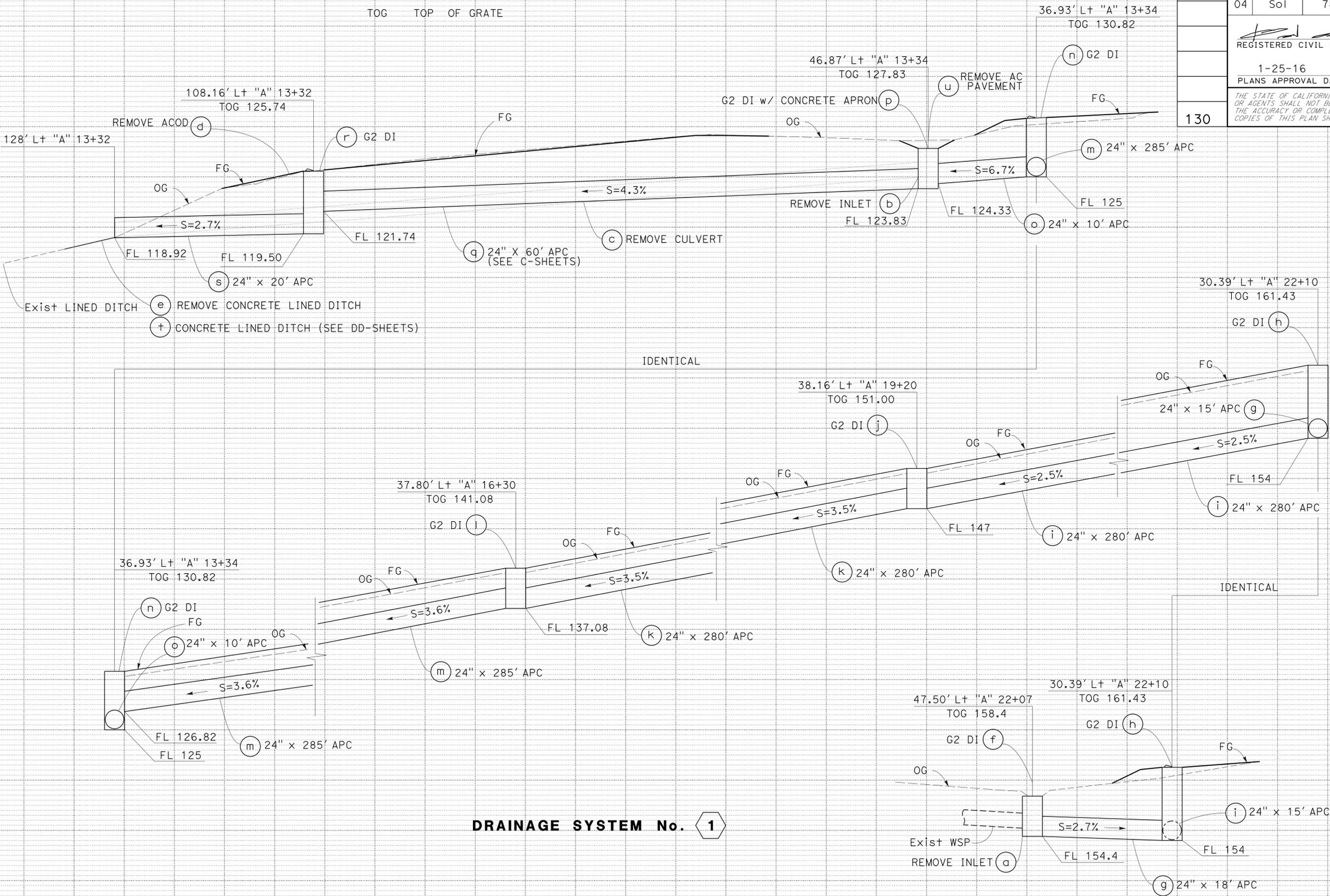
TOG TOP OF GRATE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	780	1.4	9	40

12-16-15  
 REGISTERED CIVIL ENGINEER DATE  
 1-25-16  
 PLANS APPROVAL DATE

Emarnan Pongpaïroj  
 No. 78551  
 Exp. 9-30-17  
 CIVIL  
 STATE OF CALIFORNIA

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**DRAINAGE SYSTEM No. 1**

**DRAINAGE PROFILES**

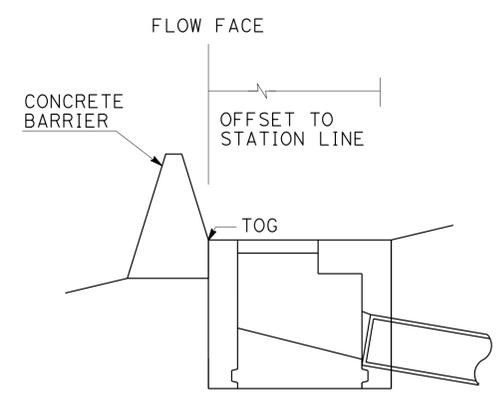
SCALE: Horiz 1" = 10'  
 Vert 1" = 5'

**DP-1**

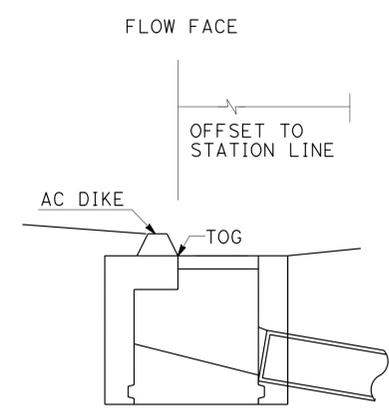
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	780	1.4	10	40
			12-18-15	DATE	
REGISTERED CIVIL ENGINEER			DATE		
1-25-16			PLANS APPROVAL DATE		
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					



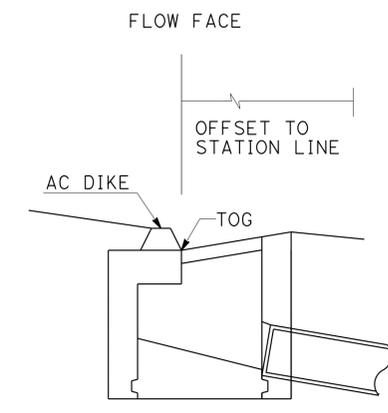
**NOTE:**  
1. FOR INFORMATION NOT SHOWN, SEE STANDARD PLAN RSP D73.



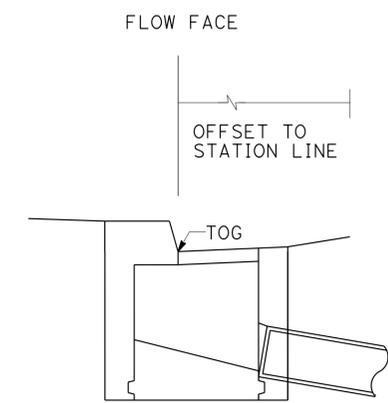
SECTION B-B



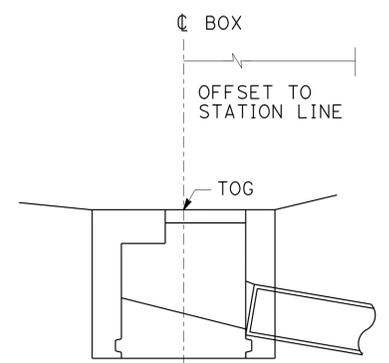
SECTION C-C



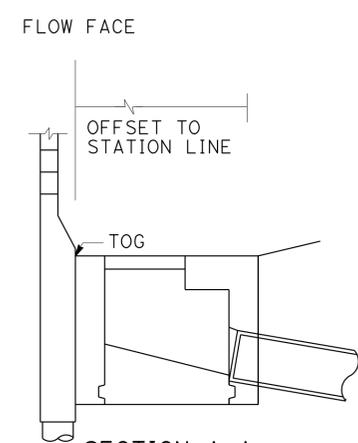
ELEVATION



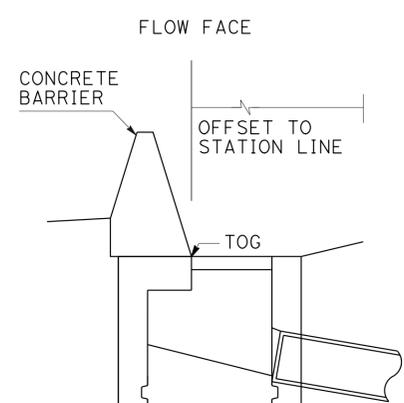
ELEVATION



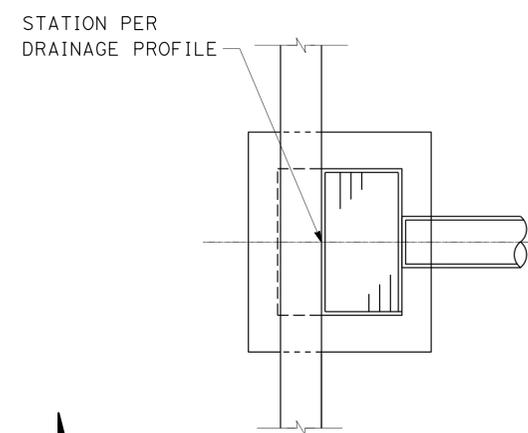
ELEVATION



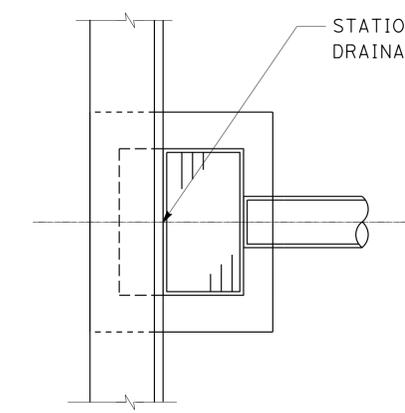
SECTION A-A



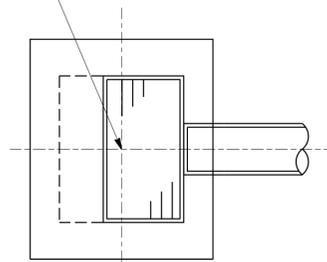
SECTION D-D



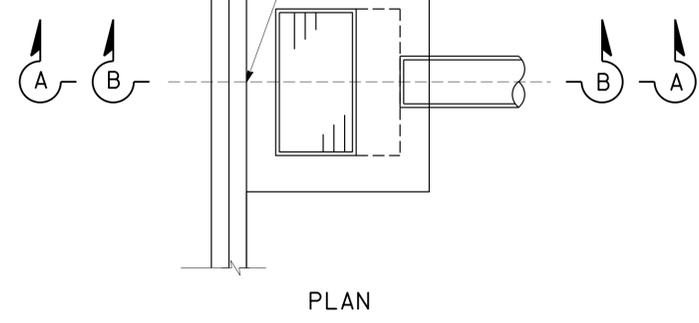
PLAN



PLAN

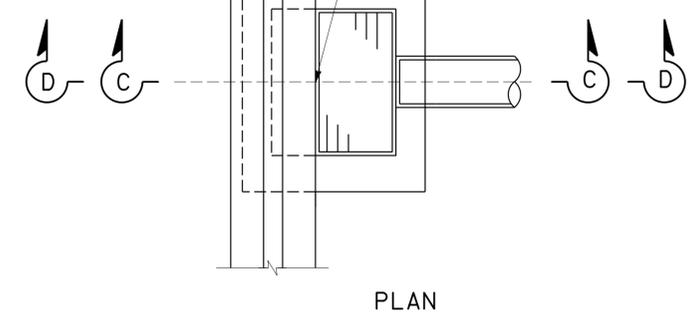


PLAN



PLAN

**INLET ADJACENT TO SOUND WALL (SECTION A-A) OR CONCRETE BARRIER (SECTION B-B)**  
(TYPES 60E, 60GE, 60SC, 60SE, OR HIGH SIDE OF TYPES 60C, 60GC)



PLAN

**INLET ADJACENT TO AC DIKE (SECTION C-C) OR CONCRETE BARRIER (SECTION D-D)**  
(TYPE 60C SHOWN, TYPES 60, 60G, 60GC SIMILAR)

**INLET WITHIN AC SIDE GUTTER**

**INLET ADJACENT TO CURB**

**FIELD INLET**

**DRAINAGE DETAILS**  
NO SCALE

**DD-1**

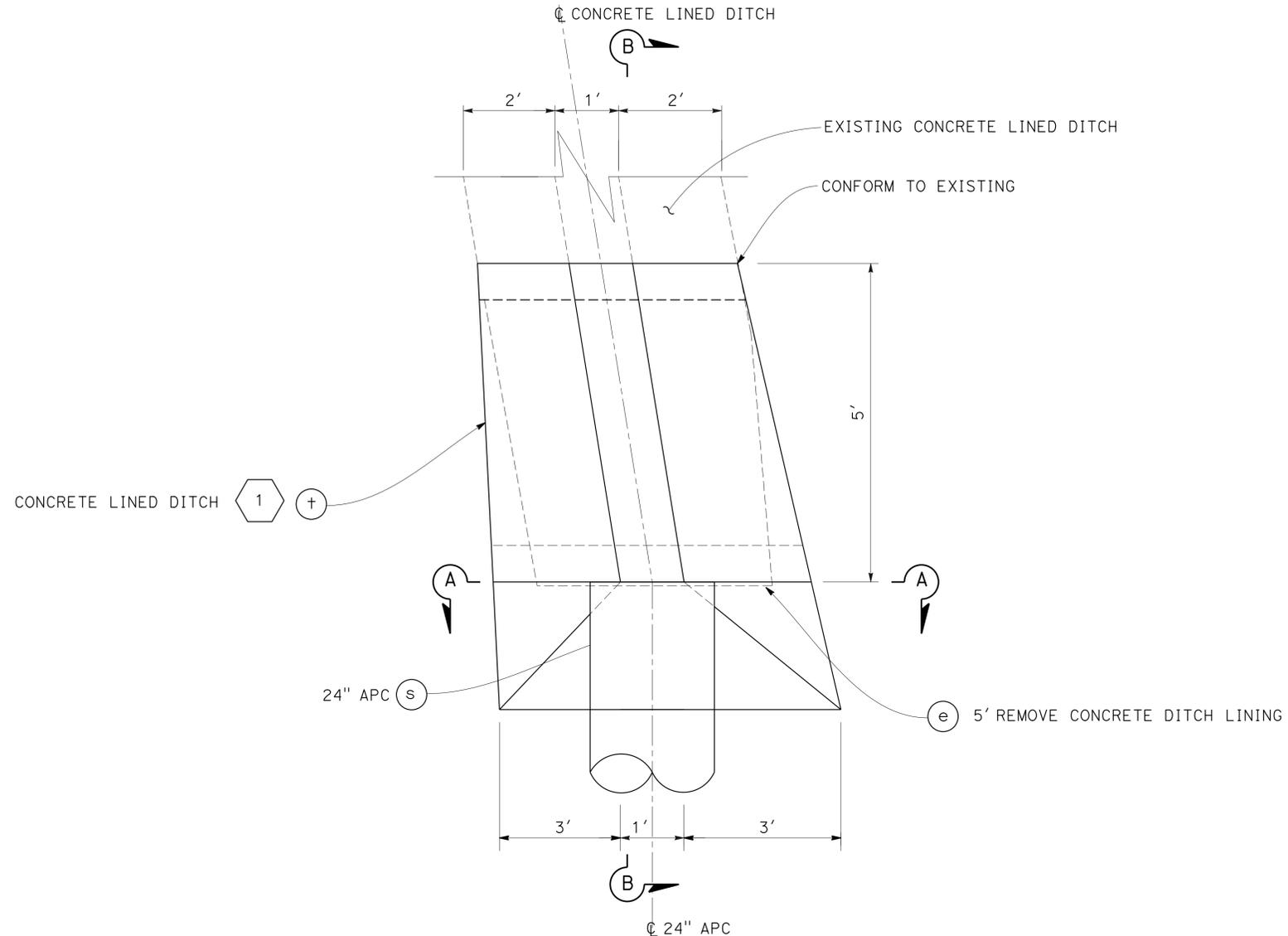
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - HYDRAULICS  
 FUNCTIONAL SUPERVISOR: JOSEPH PETERSON  
 CALCULATED/DESIGNED BY: KATHLEEN REILLY  
 CHECKED BY: KATHLEEN REILLY  
 REVISIONS: KL 1-8-16  
 REVISIONS: KL 1-8-16

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	REVISIONS	DATE
Caltrans	HYDRAULICS	KL	1-8-16
		KATHLEEN REILLY	1-8-16
	JOSEPH PETERSON		

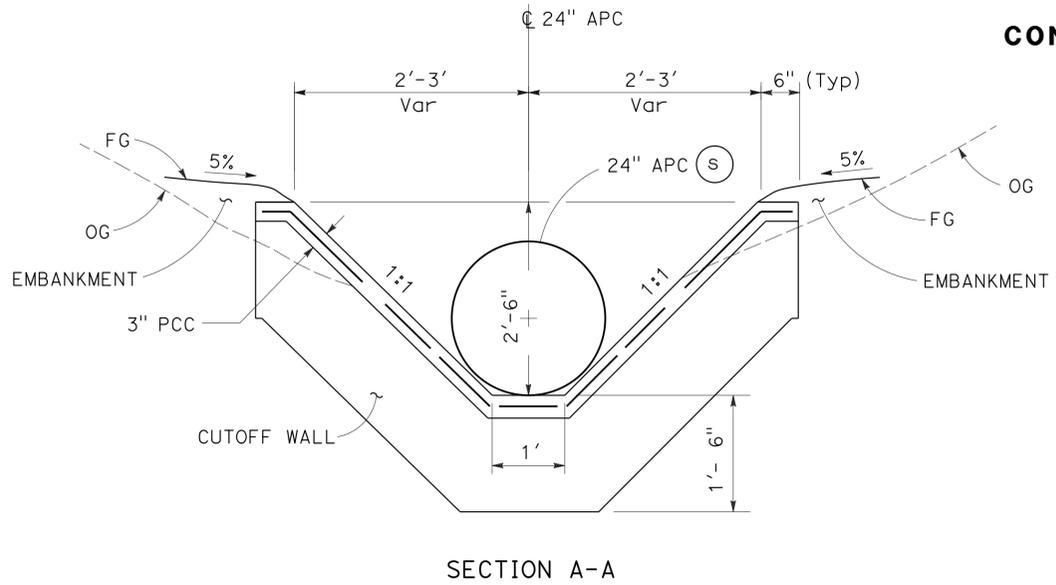
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	780	1.4	11	40
REGISTERED CIVIL ENGINEER			DATE	12-18-15	
PLANS APPROVAL DATE			1-25-16		

REGISTERED PROFESSIONAL ENGINEER  
 Khai Shoon Leong  
 No. 76183  
 Exp. 6-30-16  
 CIVIL  
 STATE OF CALIFORNIA

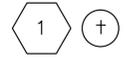
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



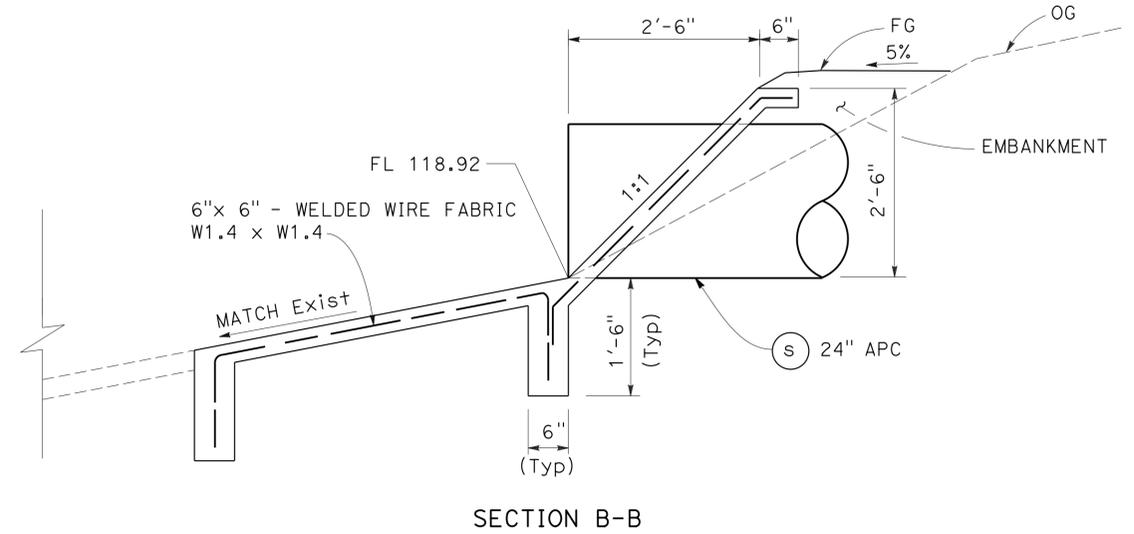
**NOTE (THIS SHEET ONLY):**  
CUTOFF WALL REQUIRED AT THE BEGINNING AND END OF LINED DITCH.



**CONCRETE LINED DITCH**



PLAN

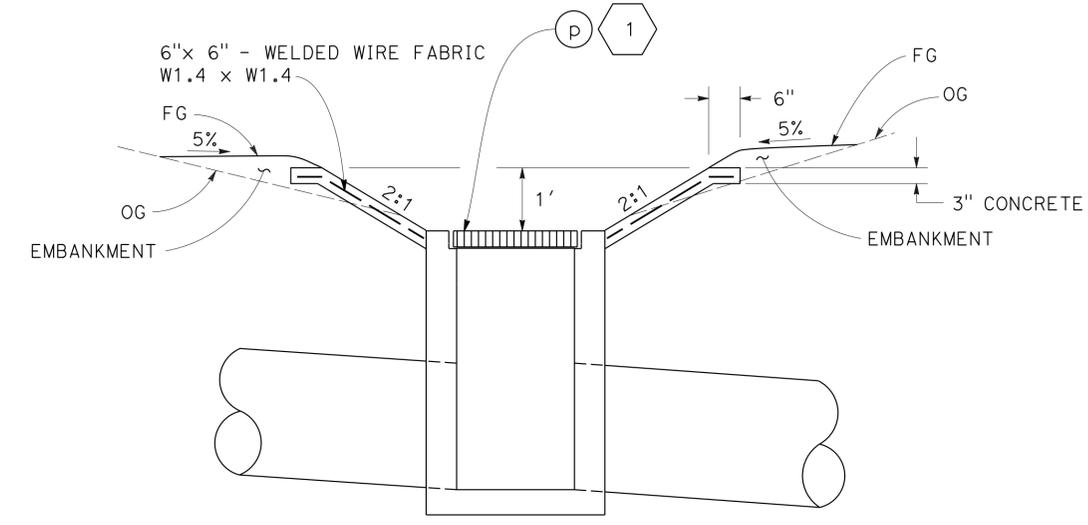
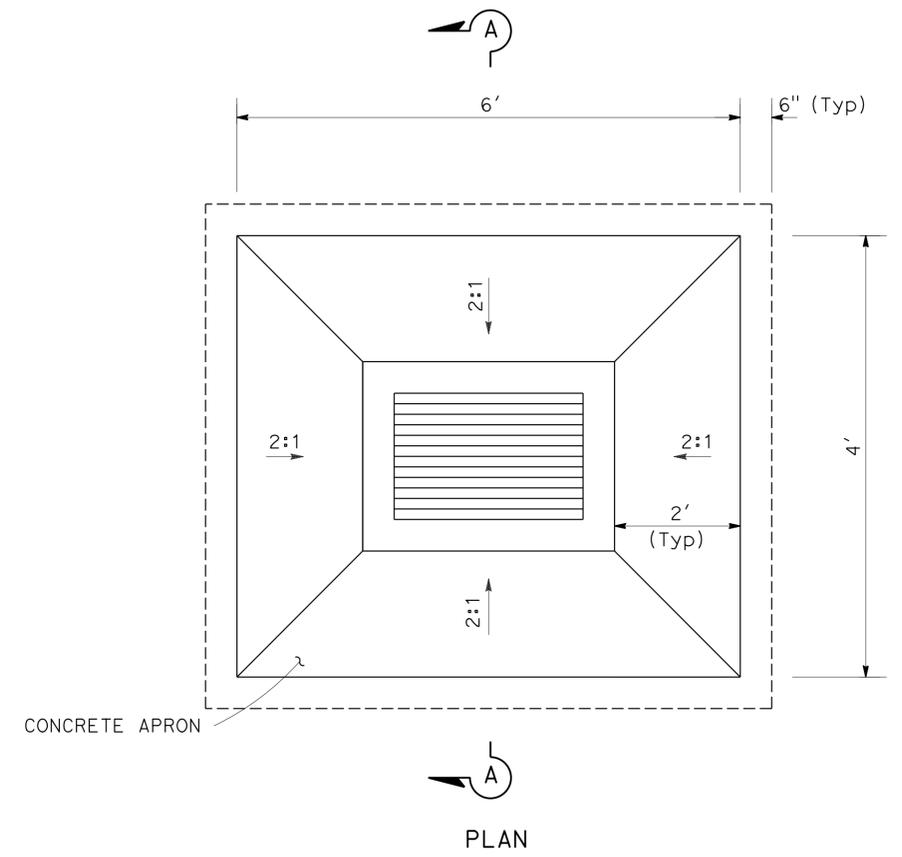


SECTION B-B

**DRAINAGE DETAILS**  
NO SCALE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	780	1.4	12	40
			12-18-15	REGISTERED CIVIL ENGINEER DATE	
			1-25-16	PLANS APPROVAL DATE	
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISOR	DATE
<b>Caltrans</b>	JOSEPH PETERSON	DESIGNED BY	KL	1-8-16
<b>HYDRAULICS</b>		CHECKED BY		



**INLET WITH CONCRETE APRON**

1 P

**DRAINAGE DETAILS**  
NO SCALE

**DD-3**





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

FUNCTIONAL SUPERVISOR  
 GHULAM POPAL

CALCULATED-DESIGNED BY  
 CHECKED BY

EMARNAN PONGPAIROJ  
 GHULAM POPAL

REVISED BY  
 DATE REVISED

EP  
 1-8-16

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

**LEGEND:**

<b>EXISTING UTILITIES</b>	<b>UTILITIES</b>	<b>OWNERSHIP</b>
-w-----w-	WATER	SOLANO COUNTY WATER AUTHORITY
--e-----e-	ELECTRIC	PACIFIC GAS AND ELECTRIC
---t-----t-	TELEPHONE	AMERICAN TELEPHONE AND TELEGRAPH

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	780	1.4	14	40

REGISTERED CIVIL ENGINEER DATE 12-16-15  
 Emarnan Pongpaïroj  
 No. 78551  
 Exp. 9-30-17  
 CIVIL

1-25-16  
 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.



THIS PLAN TO BE USED FOR UTILITY INFORMATION ONLY

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

**U-1**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	780	1.4	15	40

*Jeri-Paul Fabian* 12-18-15  
REGISTERED CIVIL ENGINEER DATE

1-25-16  
PLANS APPROVAL DATE

**REGISTERED PROFESSIONAL ENGINEER**  
**Jeri-Paul F. Fabian**  
No. 81174  
Exp. 9-30-17  
CIVIL  
STATE OF CALIFORNIA

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

### STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

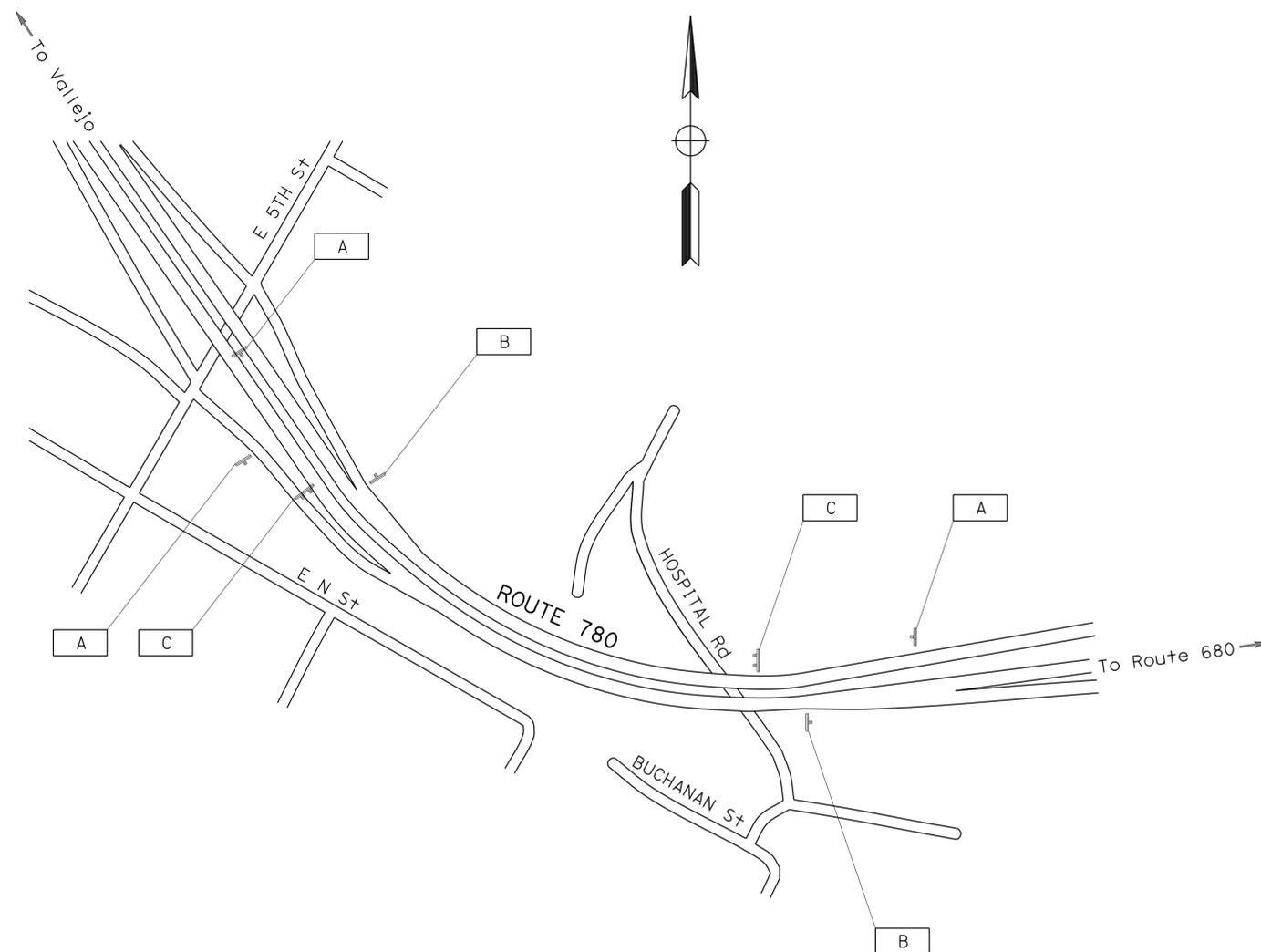
SIGN LETTER	MUTCD CODE	PANEL SIZE	SIGN MESSAGE	No. OF POSTS & SIZE	No. OF SIGNS
A	W20-1	48" x 48"	ROAD WORK AHEAD	1 - 4" x 6"	3
B	G20-2	36" x 18"	END ROAD WORK	1 - 4" x 4"	2
C	C40(CA)	144" x 60"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONE	2 - 6" x 8"	2

#### LEGEND:

□ CONSTRUCTION AREA SIGN DESIGNATION

#### NOTE:

- EXACT LOCATION AND POSITION OF CONSTRUCTION AREA SIGNS TO BE DETERMINED BY THE ENGINEER.



## CONSTRUCTION AREA SIGNS

NO SCALE

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

CS-1

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

FUNCTIONAL SUPERVISOR  
LOURDES DAVID

CALCULATED/DESIGNED BY  
CHECKED BY

JERI-PAUL FABIAN  
CLAUDIA FANG

REVISED BY  
DATE REVISED

JF  
1-8-16

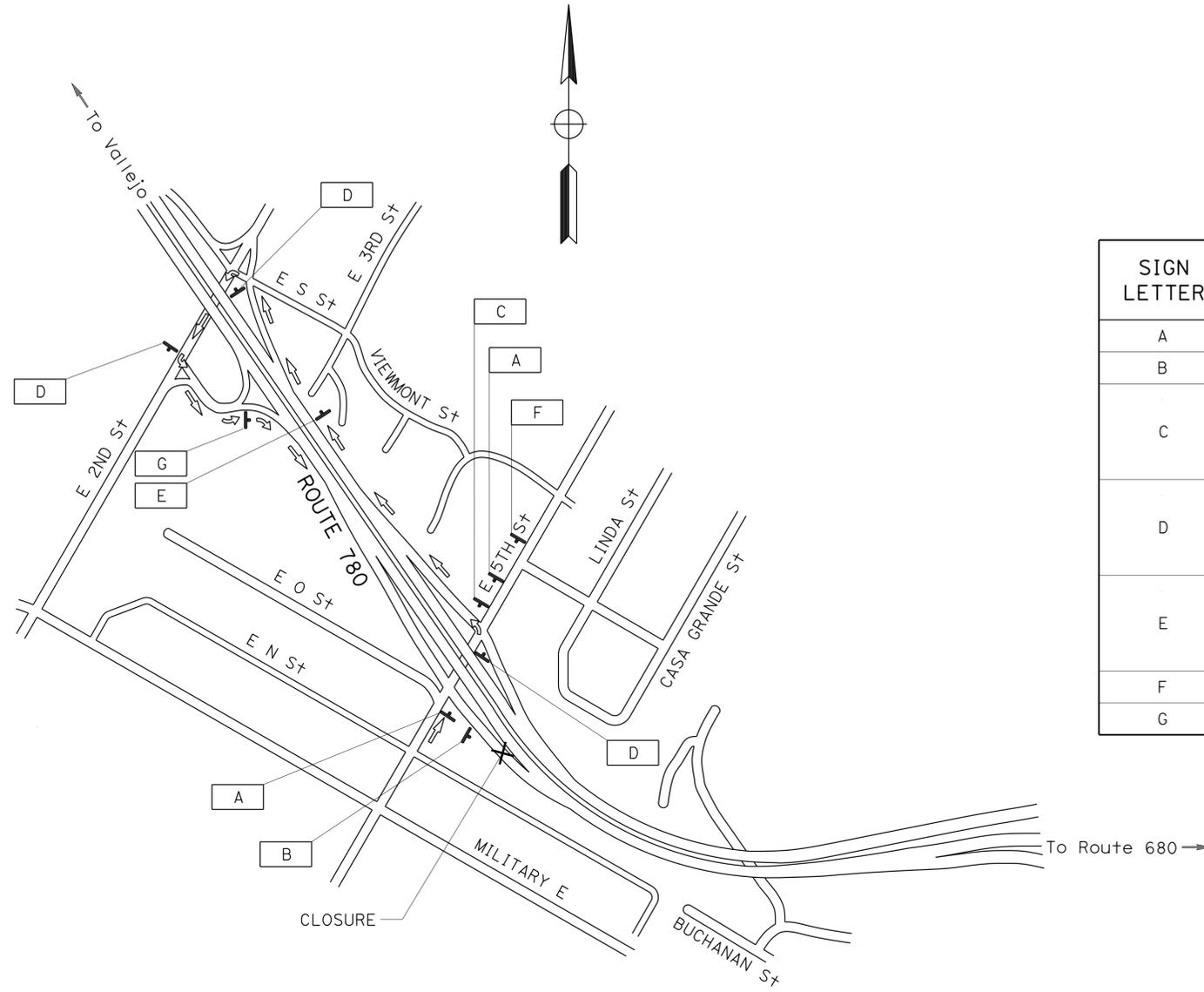
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	780	1.4	16	40

*Jerri-Paul Fabian* 2-18-15  
 REGISTERED CIVIL ENGINEER DATE  
 1-25-16  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 Jerri-Paul F. Fabian  
 No. 81174  
 Exp. 9-30-17  
 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**  
 TRAFFIC  
 FUNCTIONAL SUPERVISOR  
 LOURDES DAVID  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 JERI-PAUL FABIAN  
 CLAUDIA FANG  
 REVISED BY  
 DATE REVISED  
 JF  
 1-8-16

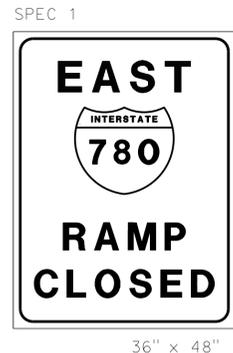


**DETOUR PLAN No. 1**  
 EB ROUTE 780 ON-RAMP  
 FROM E 5TH ST CLOSED

NB E 5TH ST  
 ON-RAMP TO WB ROUTE 780  
 WB ROUTE 780  
 OFF-RAMP TO E 2ND ST  
 SB E 2ND ST  
 ON-RAMP TO EB ROUTE 780

**STATIONARY MOUNTED CONSTRUCTION AREA SIGNS**

SIGN LETTER	MUTCD CODE	SIGN MESSAGE	PANEL SIZE	No. OF POSTS & SIZE	No. OF SIGNS
A	W20-2	DETOUR AHEAD	48" x 48"	1 - 4" x 6"	2
B	SC6-4(CA)	RAMP CLOSED (DATE AND TIME)	48" x 60"	1 - 6" x 6"	1
C	SC3(→)(CA)	DETOUR (RIGHT ARROW)	48" x 18"	1 - 4" x 6"	1
	G27-2(780)(CA)	ROUTE SHIELD 780	21" x 18"		
D	M3-2	EAST	24" x 12"	1 - 4" x 6"	3
	SC3(←)(CA)	DETOUR (LEFT ARROW)	48" x 18"		
	G27-2(780)(CA)	ROUTE SHIELD 780	21" x 18"		
E	M3-2	EAST	24" x 12"	1 - 4" x 6"	1
	SC3(↗)(CA)	DETOUR (UP RIGHT AHEAD ARROW)	48" x 18"		
	G27-2(780)(CA)	ROUTE SHIELD 780	21" x 18"		
F	SPEC 1	EAST ROUTE 780 RAMP CLOSED	36" x 48"	1 - 4" x 6"	1
G	M4-8a	END DETOUR	24" x 18"	1 - 4" x 4"	1



5" D CAPS  
 BLACK /  
 FLUORESCENT  
 ORANGE

**CONSTRUCTION AREA SIGNS**  
 NO SCALE

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

**CS-2**

LAST REVISION | DATE PLOTTED => 28-JAN-2016  
 01-08-16 | TIME PLOTTED => 09:59



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

FUNCTIONAL SUPERVISOR: GHULAM POPAL  
 CALCULATED/DESIGNED BY: GHULAM POPAL  
 CHECKED BY: GHULAM POPAL  
 REVISIONS: EP 1-8-16  
 REVISOR: EMARNAN PONGPAIROJ  
 DATE: 1-8-16

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

**CONSTRUCTION:**

1. EB 780 PRUNE PLANT AS SHOWN ON C-SHEET.
2. EB-780: INSTALL Temp PAVEMENT DELINEATION AND Temp RAILING (TYPE K) ALONG EB-780.
3. EB-780: REMOVE SINGLE THRIE BEAM BARRIER, ALONG EB-780.
4. WB-780: INSTALL THE FOLLOWING DRAINAGE SYSTEM (1) (PORTION): c(PORTION), q(PORTION), s,r,d, ACROSS WB-780, (SEE DRAINAGE PLANS), INCLUDING PLACING HMA AND RSC FOR DRAINAGE TRENCH AS SHOWN ON C-SHEET.

**LEGEND:**

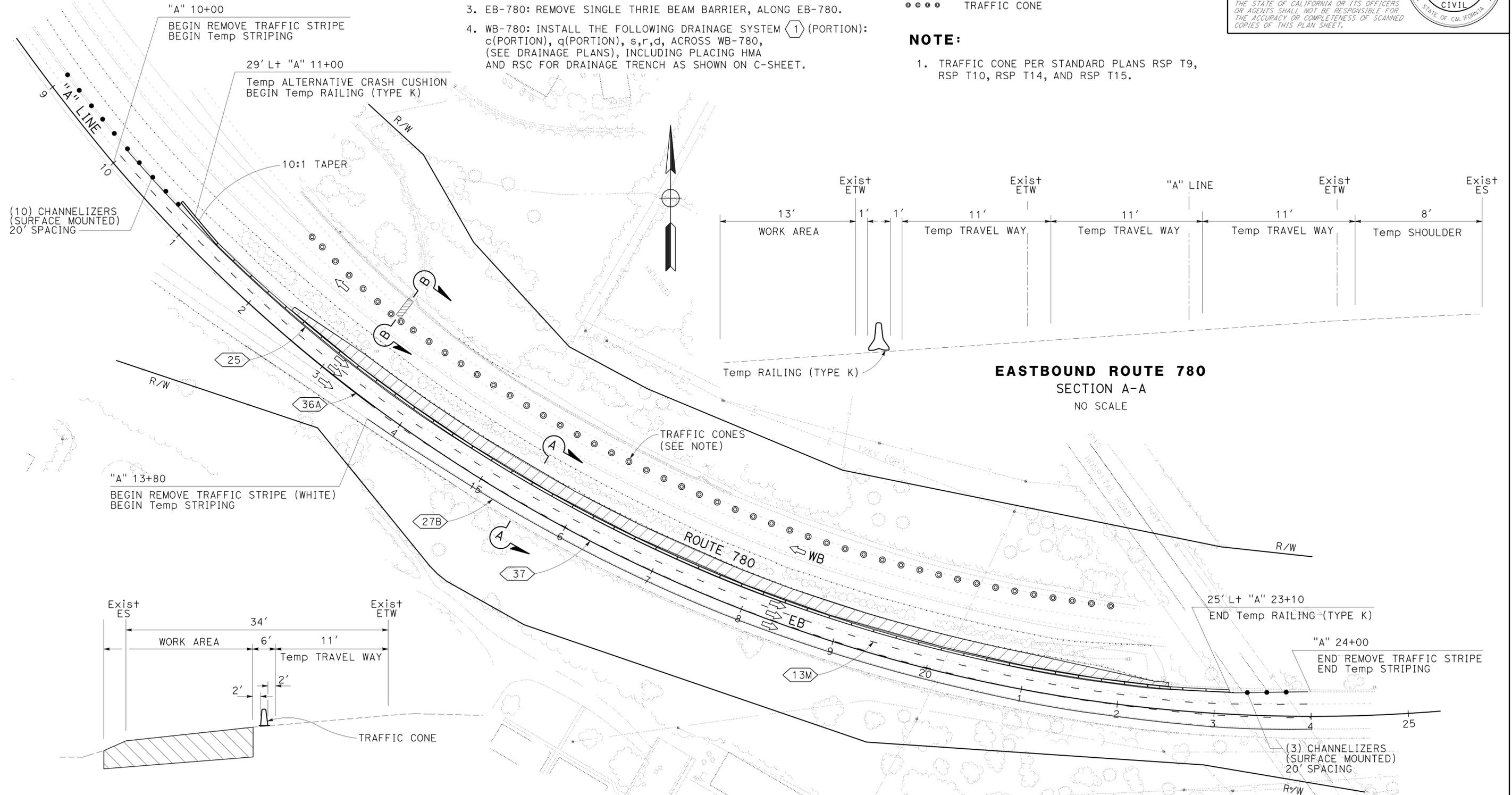
-  CONSTRUCT THIS STAGE
-  Temp ALTERNATIVE CRASH CUSHION
-  TRAFFIC CONE

**NOTE:**

1. TRAFFIC CONE PER STANDARD PLANS RSP T9, RSP T10, RSP T14, AND RSP T15.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	780	1.4	18	40

12-16-15  
 REGISTERED CIVIL ENGINEER DATE  
 Emarnan Pongpairoj  
 No. 78551  
 Exp. 9-30-17  
 CIVIL  
 1-25-16  
 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.



**WESTBOUND ROUTE 780**  
 SECTION B-B  
 NO SCALE

**EASTBOUND ROUTE 780**  
 SECTION A-A  
 NO SCALE

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

APPROVED FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY

**SC-1**

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

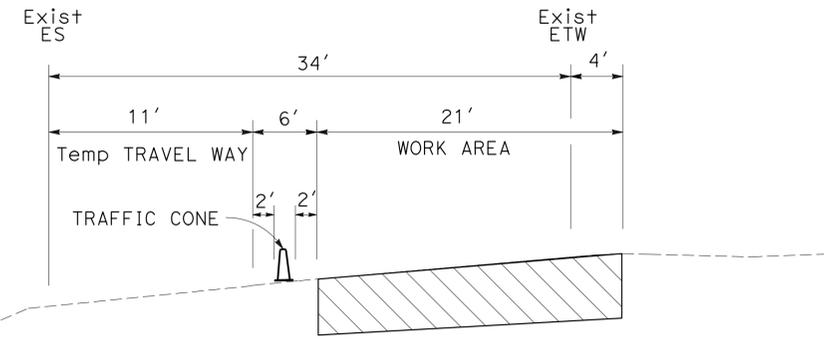
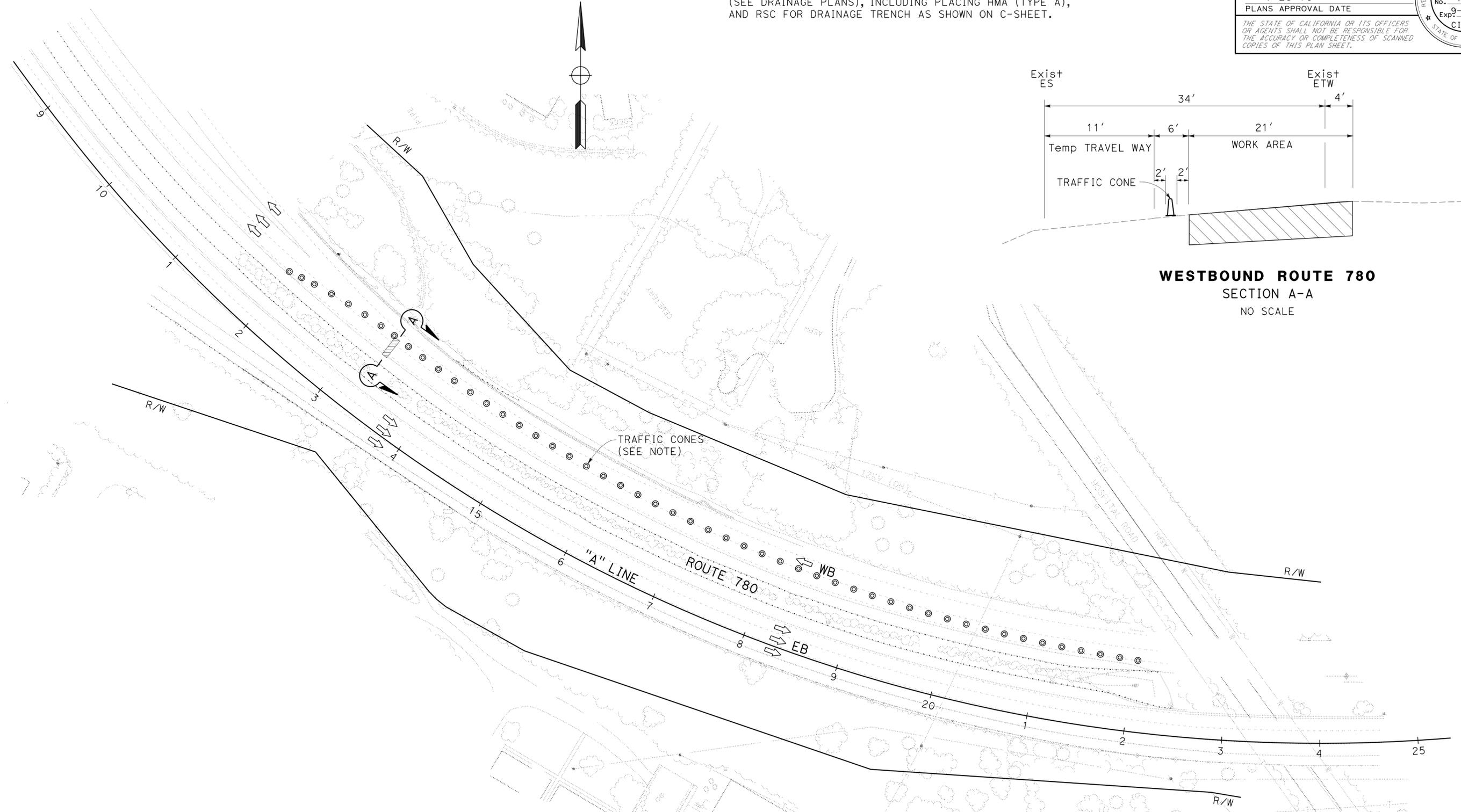
FUNCTIONAL SUPERVISOR: GHULAM POPAL  
 CALCULATED/DESIGNED BY: GHULAM POPAL  
 CHECKED BY: GHULAM POPAL  
 REVISIONS:  
 EP 1-8-16  
 REVISOR: GHULAM POPAL  
 DATE: 1-8-16

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

**CONSTRUCTION**  
 1. WB-780: INSTALL THE REMAINING DRAINAGE SYSTEM (PORTION): (PORTION), q(PORTION), u,p,b, AND o ACROSS WB-780, (SEE DRAINAGE PLANS), INCLUDING PLACING HMA (TYPE A), AND RSC FOR DRAINAGE TRENCH AS SHOWN ON C-SHEET.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	780	1.4	19	40

REGISTERED CIVIL ENGINEER DATE: 12-16-15  
 Emarnan Pongpairoj No. 78551 Exp. 9-30-17 CIVIL  
 PLANS APPROVAL DATE: 1-25-16  
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.



**WESTBOUND ROUTE 780**  
 SECTION A-A  
 NO SCALE

**STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN**  
 STAGE 1 - PHASE 2

SCALE: 1" = 50'

FOR NOTES, AND LEGEND, SEE SHEET SC-1

APPROVED FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY

**SC-2**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN
FUNCTIONAL SUPERVISOR	GHULAM POPAL
CALCULATED/DESIGNED BY	CHECKED BY
EMARNAN PONGPAIROJ	GHULAM POPAL
REVISOR	DATE
EP	1-8-16

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

**CONSTRUCTION:**

1. EB-780: CONSTRUCT SHOULDER AND CONCRETE BARRIER TRANSITION, (SEE STRUCTURE PLANS), AND INSTALL SINGLE THRIE BEAM BARRIER.
2. EB-780: INSTALL PAVEMENT DELINEATION, (SEE PD-SHEET)
3. WB-780: INSTALL Temp RAILING (TYPE K) ON WB 780 AND INSTALL THE REMAINING DRAINAGE SYSTEM (1) e and t.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	780	1.4	20	40
			DATE	12-16-15	
			PLANS APPROVAL DATE	1-25-16	

REGISTERED CIVIL ENGINEER

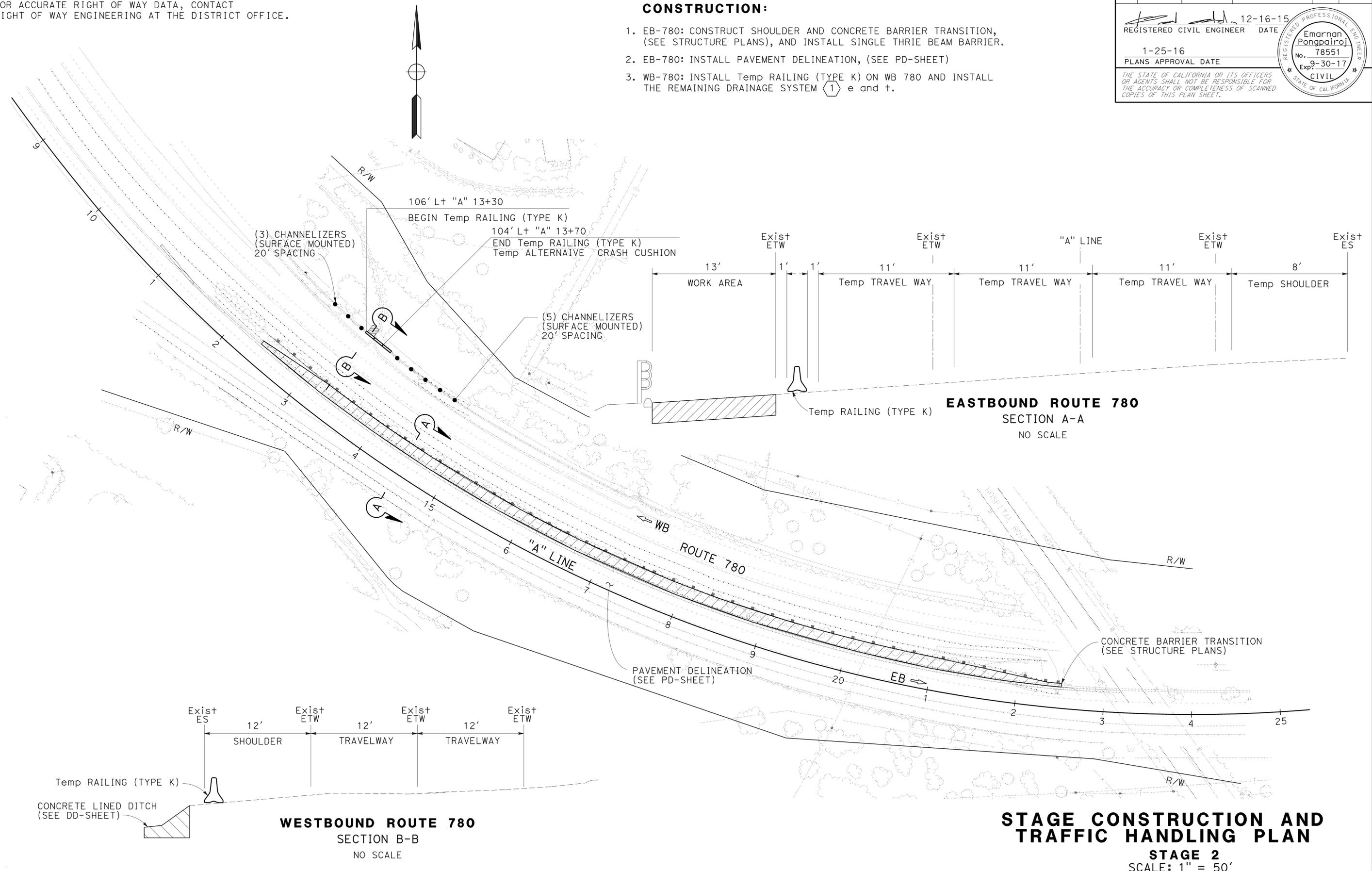
Emarnan Pongpaairoj

No. 78551

Exp. 9-30-17

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.



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

APPROVED FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY

FOR NOTES AND LEGEND, SEE SHEET SC-1

**SC-3**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	780	1.4	21	40

12-16-15  
 REGISTERED CIVIL ENGINEER DATE  
 Emarnan Pongpairoj  
 No. 78551  
 Exp. 9-30-17  
 CIVIL  
 STATE OF CALIFORNIA  
 REGISTERED PROFESSIONAL ENGINEER

1-25-16  
 PLANS APPROVAL DATE

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

**NOTES:**

1. DETAIL 13M IS A MODIFIED PAVEMENT DELINEATION DETAIL 13. FOR DIMENSION AND DETAIL NOT SHOWN, SEE DETAIL 13.
2. INSTALL 4" WHITE AFTER INSTALLING PAVEMENT MARKERS.

**REMOVE PAVEMENT MARKERS AND TRAFFIC STRIPES**

SHEET No.	STATION	DIRECTION	DETAIL No.	REMOVE PAVEMENT MARKER			REMOVE THERMOPLASTIC TRAFFIC STRIPE	
				TYPE A	TYPE G	TYPE H	4" WHITE	8" WHITE
				EA			LF	
SC-1	"A" 10+00 TO 24+00	EB	25			31		
SC-1	"A" 10+00 TO 24+00	EB	27B				1240	
SC-1	"A" 13+80 TO 24+00	EB	37		140			1020
SC-1	"A" 10+00 TO 24+00	EB	13M	124	31		1400	
SC-1	"A" 12+20 TO 13+80	EB	36A					320
SUBTOTAL				124	171	31	2640	1340
TOTAL				326			3980	

**REMOVE THERMOPLASTIC TRAFFIC STRIPE (4" YELLOW)**

SHEET No.	STATION	DIRECTION	EA
SC-1	"A" 10+00 TO 24+00	EB	1400
SC-2	"A" 13+30 TO 13+40	WB	10
TOTAL			1410

**TEMPORARY TRAFFIC STRIPES AND PAVEMENT MARKERS**

SHEET No.	STATION	DIRECTION	DETAIL No.	TEMPORARY TRAFFIC STRIPE		TEMPORARY PAVEMENT MARKER		
				WHITE	YELLOW	TYPE A	TYPE G	TYPE H
				LF		EA		
SC-1	"A" 10+00 TO 24+00	EB	25		1400			31
SC-1	"A" 10+00 TO 24+00	EB	27B, 36A	1560				
SC-1	"A" 10+00 TO 24+00	EB	13M, 37	2420		124	171	
SUBTOTAL				3980	1400	124	171	31
TOTAL				5380		326		

**CHANNELIZERS (SURFACE MOUNTED)**

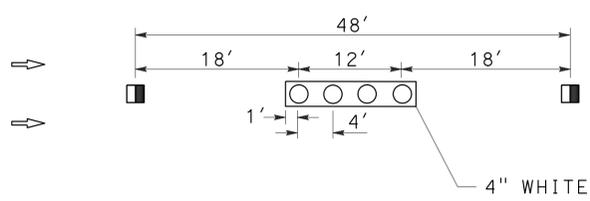
SHEET No.	STATION	DIRECTION	EA
SC-1	"A" 10+00 TO 11+00	EB	10
SC-1	"A" 23+10 TO 23+70	EB	3
SC-3	"A" 13+90 TO 14+70	WB	8
TOTAL			21

**TEMPORARY ALTERNATIVE CRASH CUSHION**

SHEET No.	STATION	DIRECTION	EA
SC-1	"A" 11+00	EB	1
SC-3	"A" 13+70	WB	1
TOTAL			2

**TEMPORARY RAILING (TYPE K)**

SHEET No.	STATION	DIRECTION	LF
SC-1	"A" 11+00 TO 23+10	EB	1210
SC-3	"A" 13+30 TO 13+70	WB	40
TOTAL			1250



**DETAIL 13M**  
NO SCALE

**STAGE CONSTRUCTION DETAILS**

**SCD-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 DESIGN  
 Ghulam Popal  
 Ghulam Popal  
 1-8-16  
 EP

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

FUNCTIONAL SUPERVISOR: GHULAM POPAL  
 CHECKED BY: HILARY CHAN  
 REVISIONS: 1-8-16  
 EP: 1-8-16

**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	SoI	780	1.4	22	40

REGISTERED CIVIL ENGINEER: *Katie K. Yim* DATE: 1-20-16  
 PLANS APPROVAL DATE: 1-25-16  
 No. 45029  
 Exp. 3-31-16  
 CIVIL

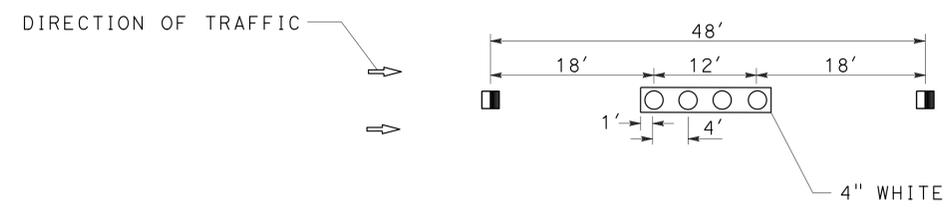
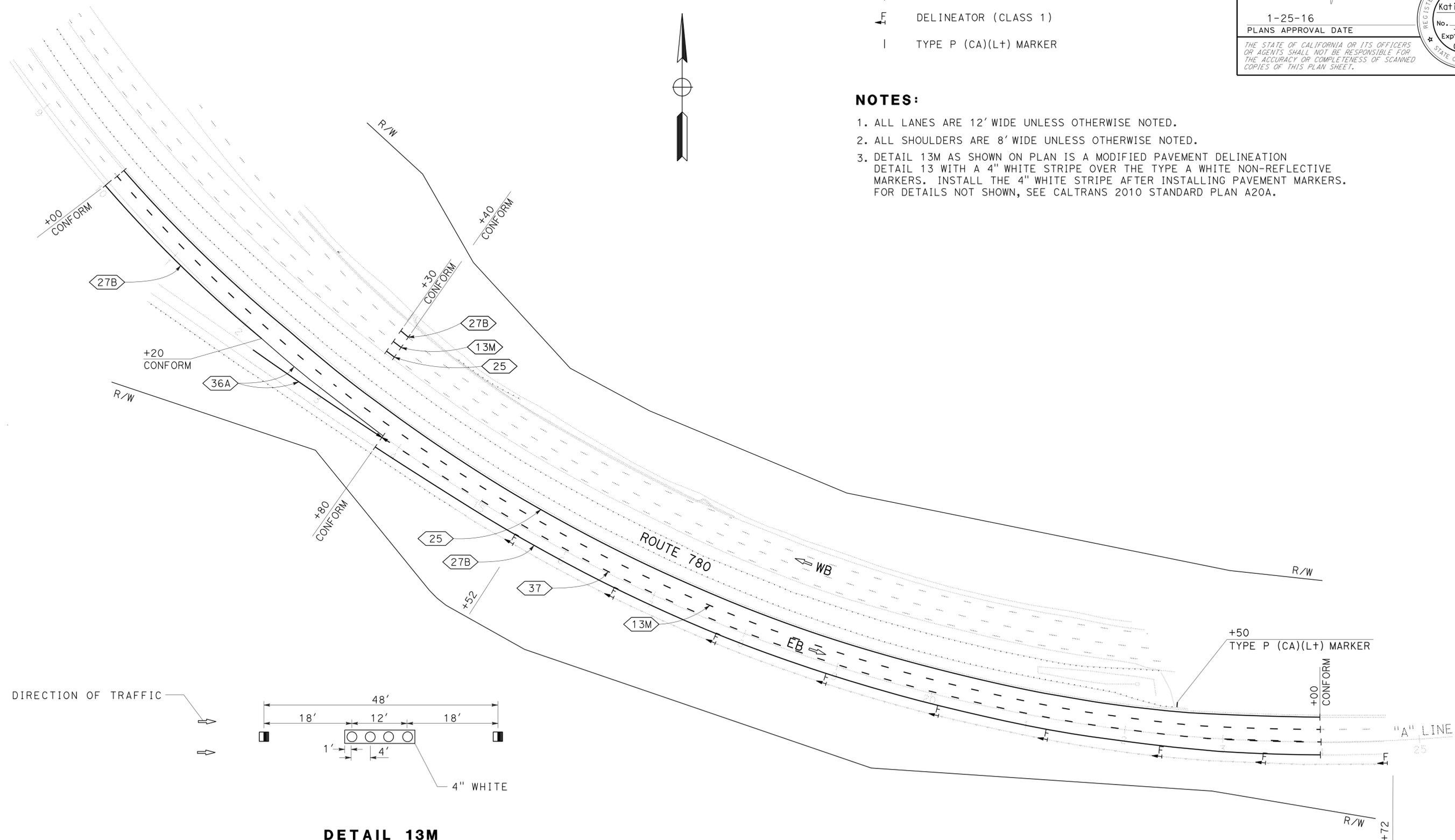
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**LEGEND:**

- ↔ CHANGE OF PAVEMENT DELINEATION DETAILS
- F DELINEATOR (CLASS 1)
- I TYPE P (CA)(L+) MARKER

**NOTES:**

1. ALL LANES ARE 12' WIDE UNLESS OTHERWISE NOTED.
2. ALL SHOULDERS ARE 8' WIDE UNLESS OTHERWISE NOTED.
3. DETAIL 13M AS SHOWN ON PLAN IS A MODIFIED PAVEMENT DELINEATION DETAIL 13 WITH A 4" WHITE STRIPE OVER THE TYPE A WHITE NON-REFLECTIVE MARKERS. INSTALL THE 4" WHITE STRIPE AFTER INSTALLING PAVEMENT MARKERS. FOR DETAILS NOT SHOWN, SEE CALTRANS 2010 STANDARD PLAN A20A.



**DETAIL 13M**  
 NO SCALE

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

APPROVED FOR PAVEMENT DELINEATION WORK ONLY

**PD-1**



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	780	1.4	24	40

12-16-15  
REGISTERED CIVIL ENGINEER DATE  
Emarnan Pongpairoj  
No. 78551  
Exp. 9-30-17  
CIVIL  
STATE OF CALIFORNIA  
1-25-16  
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.

### EARTHWORK QUANTITIES

STATION	SHEET No.	DIRECTION	ROADWAY EXCAVATION	EMBANKMENT (N)
			CY	
"A" 12+40 TO 22+50	L-1	EB	630	70
"A" 13+30	DD-2, DD-3	WB		5
TOTAL			630	75

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

### PLACE HMA DIKE

STATION	SHEET No.	DIRECTION	(TYPE E)	(TYPE F)
			LF	
"A" 13+30 TO 22+50	L-1	EB		920
"A" 13+30 TO 13+50	L-1	WB	20	
TOTAL			20	920

### PAVEMENT STRUCTURE QUANTITIES SUMMARY

STATION	SHEET No.	DIRECTION	HMA (TYPE A)	
			ROADWAY	DIKE
			TON	
"A" 12+40 TO 22+50	L-1	EB	1140	14
"A" 13+30 TO 13+50	L-1	WB	10	1
SUBTOTAL			1150	15
TOTAL			1165	

### TACK COAT

STATION	SHEET No.	DIRECTION	TON
"A" 12+40 TO 22+50	L-1	EB	5

### SINGLE THRIE BEAM BARRIER (WOOD POST)

STATION	SHEET No.	DIRECTION	LF
"A" 12+40 TO 22+25	L-1	EB	985
"A" 13+40 TO 13+35	L-1	WB	10
TOTAL			995

### PLACE HOT MIX ASPHALT (MISCELLANEOUS AREA)

STATION	SHEET No.	DIRECTION	SQYD
"A" 13+30	C-2	WB	25

### TRANSITION RAILING (TYPE STB)

STATION	SHEET No.	DIRECTION	EA
"A" 22+50	L-1	EB	1

### RUBBERIZED HOT MIX ASPHALT (GAP GRADED)

STATION	SHEET No.	DIRECTION	TON
"A" 12+40 TO 22+50	L-1	EB	140
TOTAL			140

### TREATED WOOD WASTE

STATION	SHEET No.	DIRECTION	LB
"A" 12+40 TO 22+50	L-1	EB	15,000
TOTAL			15,000

### REMOVE SINGLE METAL BEAM BARRIER

STATION	SHEET No.	DIRECTION	LF
"A" 12+40 TO 22+50	L-1	EB	1010
"A" 13+25 TO 13+35	L-1	WB	10
TOTAL			1020

## SUMMARY OF QUANTITIES

Q-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
DESIGN  
EMARNAN PONGPAIROJ  
GHULAM POPAL  
GHULAM POPAL  
1-8-16  
EP  
REVISOR  
DATE  
CALCULATED/DESIGNED BY  
CHECKED BY  
FUNCTIONAL SUPERVISOR  
REVISIONS

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	780	1.4	25	40

*Alex McDonald* 1-16-15  
 LICENSED LANDSCAPE ARCHITECT

1-25-16  
 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.

**EROSION CONTROL TYPE 1**

SEQUENCE	ITEM	MATERIAL		APPLICATION RATE	DEPTH	REMARKS
		DESCRIPTION	TYPE			
STEP 1	FIBER ROLLS	RICE STRAW FILLED, JUTE COVERED	10 TO 12 INCHES IN Dia			INSTALLATION TYPE 1
STEP 2	COMPOST	COMPOST	COARSE	269 CY/ACRE	2"	MAY BE SUBSTITUTED WITH TREE TRIMMING MULCH

**EROSION CONTROL TYPE 2**

SEQUENCE	ITEM	MATERIAL		APPLICATION RATE	DEPTH	REMARKS
		DESCRIPTION	TYPE			
STEP 1	COMPOST	COMPOST	MEDIUM	135 CY/ACRE	1"	
STEP 2	ROLLED EROSION CONTROL PRODUCT (NETTING)	NETTING	TYPE A			
STEP 3	FIBER ROLLS	RICE STRAW FILLED, JUTE COVERED	10 TO 12 INCHES IN Dia			INSTALLATION TYPE 2

**EROSION CONTROL QUANTITIES**

SHEET	EROSION CONTROL LOCATION NUMBER	ROLLED EROSION CONTROL PRODUCT (NETTING)	FIBER ROLLS	COMPOST
		SQFT	LF	SQFT
EC-1	1	378	61	378
	2		1042	7168
TOTAL		378	1103	7546

**EROSION CONTROL LEGEND AND QUANTITIES**  
 NO SCALE

**ECL-1**

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

FUNCTIONAL SUPERVISOR: DAVID W. YAM  
 CALCULATED/DESIGNED BY: ALEX MCDONALD  
 CHECKED BY: CHRIS PADICK  
 REVISED BY: AKM  
 DATE REVISED: 1-5-16

**NOTES:**

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- SEE Std PLAN T63 FOR DETAILS ON FIBEL ROLLS PLACEMENT WITH COMPOST AT DRAIN INLETS.



**LEGEND:**

-  EROSION CONTROL TYPE 1
-  EROSION CONTROL TYPE 2
-  EROSION CONTROL LOCATION NUMBER

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	780	1.4	26	40

Alex McDonald 12-16-15  
 LICENSED LANDSCAPE ARCHITECT

1-25-16  
 PLANS APPROVAL DATE

8-31-16  
 Renewal Date

1-8-16  
 Date

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

APPROVED FOR EROSION CONTROL WORK ONLY

**EC-1**

	<b>M</b>
Maint	MAINTENANCE
Max	MAXIMUM
MB	METAL BEAM
MBB	METAL BEAM BARRIER
MBGR	METAL BEAM GUARD RAILING
Med	MEDIAN
MGS	MIDWEST GUARDRAIL SYSTEM
MH	MANHOLE
Min	MINIMUM
Misc	MISCELLANEOUS
Misc I & S	MISCELLANEOUS IRON AND STEEL
Mkr	MARKER
Mod	MODIFIED, MODIFY
Mon	MONUMENT
MP	METAL PLATE
MPGR	METAL PLATE GUARD RAILING
MR	MOVEMENT RATING
MSE	MECHANICALLY STABILIZED EMBANKMENT
Mt	MOUNTAIN, MOUNT
MtI	MATERIAL
MVP	MAINTENANCE VEHICLE PULLOUT
	<b>N</b>
N	NORTH
NB	NORTHBOUND
No.	NUMBER (MUST HAVE PERIOD)
Nos.	NUMBERS (MUST HAVE PERIOD)
NPS	NOMINAL PIPE SIZE
NS	NEAR SIDE
NSP	NEW STANDARD PLAN
NTS	NOT TO SCALE
	<b>O</b>
Obir	OBLITERATE
OC	OVERCROSSING
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OG	ORIGINAL GROUND
OGAC	OPEN GRADED ASPHALT CONCRETE
OGFC	OPEN GRADED FRICTION COURSE
OH	OVERHEAD
OHWM	ORDINARY HIGH WATER MARK
O-O	OUT TO OUT
Opp	OPPOSITE
OSD	OVERSIDE DRAIN
	<b>P</b>
p	PAGE
PAP	PERFORATED ALUMINUM PIPE
PB	PULL BOX
PC	POINT OF CURVATURE, PRECAST
PCC	POINT OF COMPOUND CURVE, PORTLAND CEMENT CONCRETE
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN
PCP	PERFORATED CONCRETE PIPE, PRESTRESSED CONCRETE PIPE
PCVC	POINT OF COMPOUND VERTICAL CURVE
PEC	PERMIT TO ENTER AND CONSTRUCT
Ped	PEDESTRIAN
Ped OC	PEDESTRIAN OVERCROSSING
Ped UC	PEDESTRIAN UNDERCROSSING
Perm MtI	PERMEABLE MATERIAL

	<b>P continued</b>
PG	PROFILE GRADE
PI	POINT OF INTERSECTION
PJP	PARTIAL JOINT PENETRATION
Pkwy	PARKWAY
PL, PL	PLATE
P/L	PROPERTY LINE
PM	POST MILE, TIME FROM NOON TO MIDNIGHT
PN	PAVING NOTCH
POC	POINT OF HORIZONTAL CURVE
POT	POINT OF TANGENT
POVC	POINT OF VERTICAL CURVE
PP	PIPE PILE, PLASTIC PIPE, POWER POLE
PPL	PREFORMED PERMEABLE LINER
PPP	PERFORATED PLASTIC PIPE
PRC	POINT OF REVERSE CURVE
PRF	PAVEMENT REINFORCING FABRIC
PRVC	POINT OF REVERSE VERTICAL CURVE
PS&E	PLANS, SPECIFICATIONS AND ESTIMATES
PS, P/S	PRESTRESSED
PSP	PERFORATED STEEL PIPE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
Pvmt	PAVEMENT
	<b>Q</b>
Qty	QUANTITY
	<b>R</b>
R	RADIUS
R & D	REMOVE AND DISPOSE
R & S	REMOVE AND SALVAGE
R/C	RATE OF CHANGE
RCA	REINFORCED CONCRETE ARCH
RCB	REINFORCED CONCRETE BOX
RCP	REINFORCED CONCRETE PIPE
RCPA	REINFORCED CONCRETE PIPE ARCH
Rd	ROAD
Reinf	REINFORCED, REINFORCEMENT, REINFORCING
Rel	RELOCATE
Repl	REPLACEMENT
Ret	RETAINING
Rev	REVISED, REVISION
Rdwy	ROADWAY
RHMA	RUBBERIZED HOT MIX ASPHALT
Riv	RIVER
RM	ROAD-MIXED
RP	RADIUS POINT, REFERENCE POINT
RR	RAILROAD
RSP	ROCK SLOPE PROTECTION, REVISED STANDARD PLAN
Rt	RIGHT
Rte	ROUTE
RW	REDWOOD, RETAINING WALL
R/W	RIGHT OF WAY
Rwy	RAILWAY

	<b>S</b>
S	SOUTH, SUPPLEMENT
SAE	STRUCTURE APPROACH EMBANKMENT
Salv	SALVAGE
SAPP	STRUCTURAL ALUMINUM PLATE PIPE
SB	SOUTHBOUND
SC	SAND CUSHION
SCSP	SLOTTED CORRUGATED STEEL PIPE
SD	STORM DRAIN
Sec	SECOND, SECTION
Sep	SEPARATION
SG	SUBGRADE
Shld	SHOULDER
Sht	SHEET
Sim	SIMILAR
SL	STATION LINE
SM	SELECTED MATERIAL
Spec	SPECIAL, SPECIFICATIONS
SPP	SLOTTED PLASTIC PIPE
SS	SLOPE STAKE
SSBM	STRAP AND SADDLE BRACKET METHOD
SSD	STRUCTURAL SECTION DRAIN
SSPA	STRUCTURAL STEEL PLATE ARCH
SSPP	STRUCTURAL STEEL PLATE PIPE
SSPPA	STRUCTURAL STEEL PLATE PIPE ARCH
SSRP	STEEL SPIRAL RIB PIPE
St	STREET
Sta	STATION
STBB	SINGLE THRIE BEAM BARRIER
Std	STANDARD
Str	STRUCTURE
Surf	SURFACING
SW	SIDEWALK, SOUND WALL
Swr	SEWER
Sym	SYMMETRICAL
S4S	SURFACE 4 SIDES
	<b>T</b>
T	SEMI-TANGENT
Tan	TANGENT
TBB	THRIE BEAM BARRIER
Tbr	TIMBER
TC	TOP OF CURB
TCB	TRAFFIC CONTROL BOX
TCE	TEMPORARY CONSTRUCTION EASEMENT
TeI	TELEPHONE
Temp	TEMPORARY
TG	TOP OF GRADE
Tot	TOTAL
TP	TELEPHONE POLE
TPB	TREATED PERMEABLE BASE
TPM	TREATED PERMEABLE MATERIAL
Trans	TRANSITION

	<b>T continued</b>
TS	TRANSVERSE, TRAFFIC SIGNAL, TUBULAR STEEL
Typ	TYPICAL
	<b>U</b>
UC	UNDERCROSSING
UD	UNDERDRAIN
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
UP	UNDERPASS
	<b>V</b>
V	VALVE, DESIGN SPEED
Var	VARIABLE, VARIES
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
Vert	VERTICAL
Via	VIADUCT
Vol	VOLUME
	<b>W</b>
W	WEST, WIDTH
WB	WESTBOUND
WH	WEEP HOLE
WM	WIRE MESH
WS	WATER SURFACE
WSP	WELDED STEEL PIPE
Wt	WEIGHT
WV	WATER VALVE
WW	WINGWALL
WWLOL	WINGWALL LAYOUT LINE
	<b>X</b>
X Sec	CROSS SECTION
Xing	CROSSING
	<b>Y</b>
Yr	YEAR
Yrs	YEARS

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	780	1.4	27	40

*Grace M. Tsushima*  
REGISTERED CIVIL ENGINEER

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

July 19, 2013  
PLANS APPROVAL DATE

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

TO ACCOMPANY PLANS DATED 1-25-16

**UNIT OF MEASUREMENT SYMBOLS:**  
Some of the symbols used in the project plan quantity tables and in the Bid Item List are:

**TABLE A**

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

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

**TABLE B**

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

\* For use on a sign panel only

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

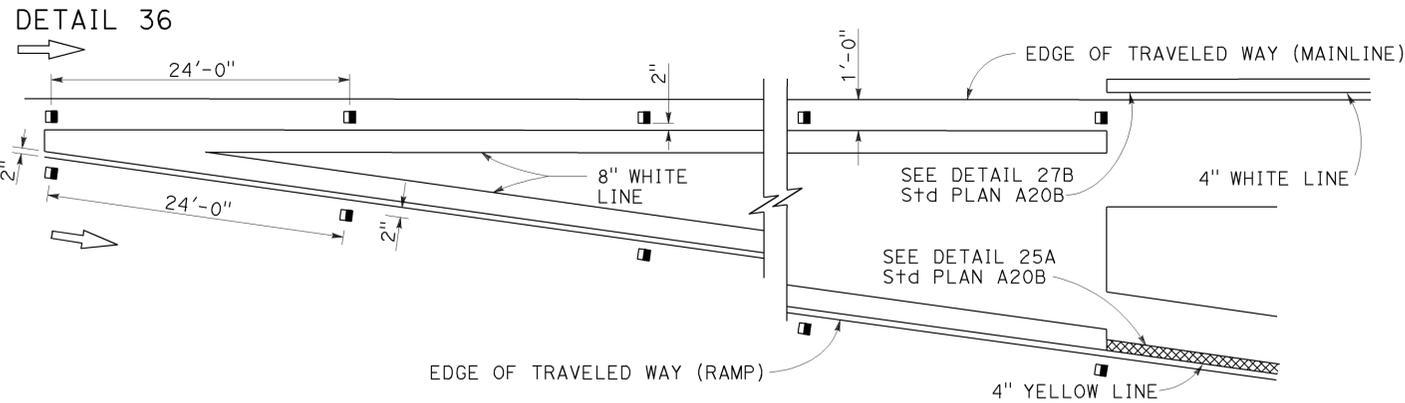
**ABBREVIATIONS  
(SHEET 2 OF 2)**

NO SCALE

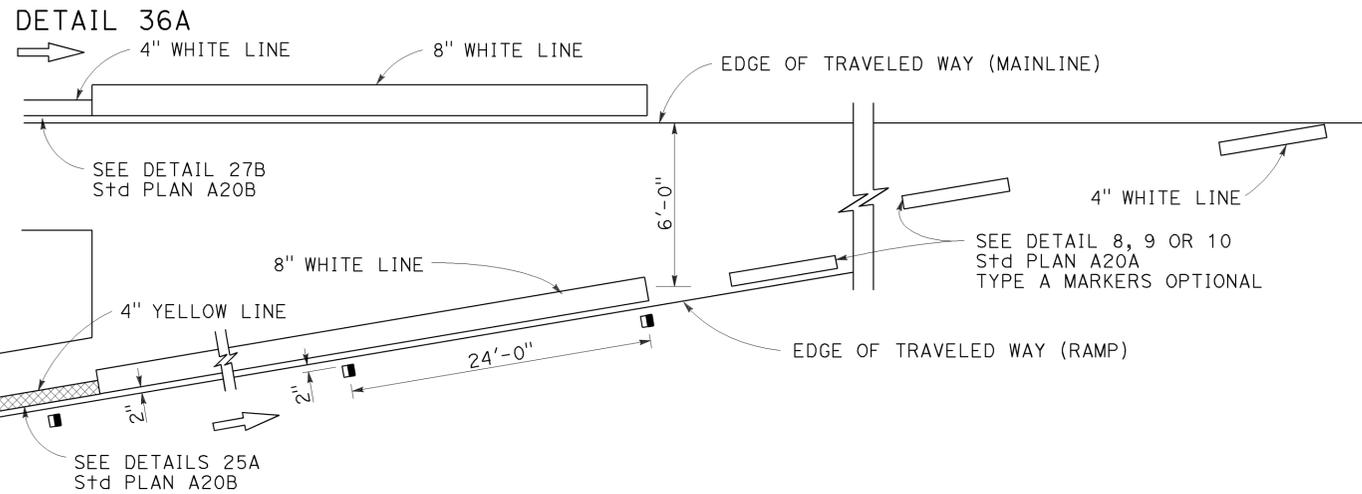
RSP A10B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A10B  
DATED MAY 20, 2011 - PAGE 2 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP A10B

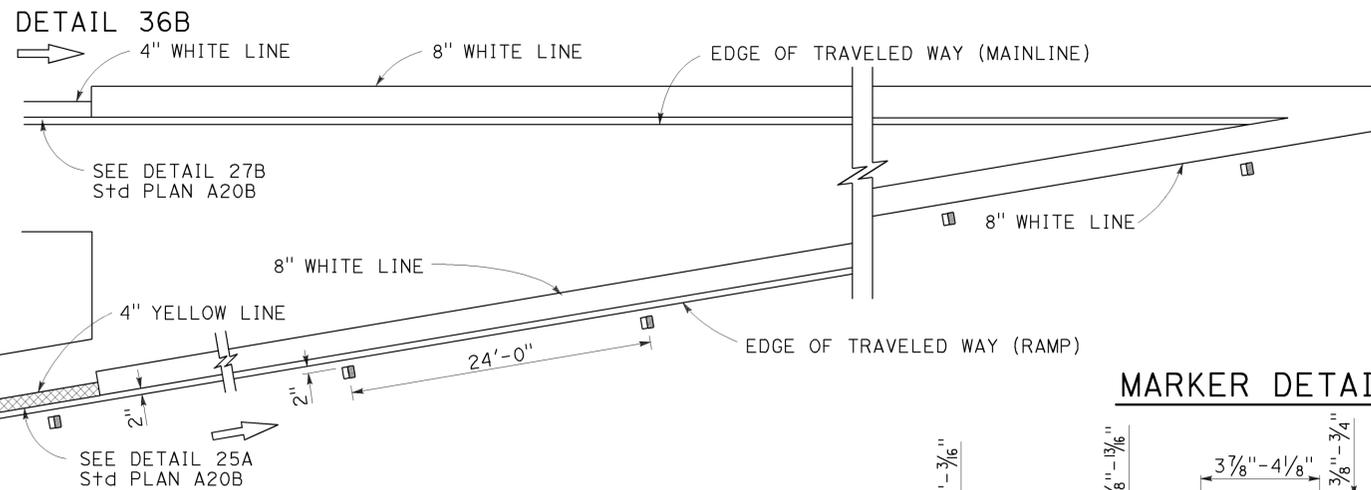
### EXIT RAMP NEUTRAL AREA (GORE) TREATMENT



### ENTRANCE RAMP NEUTRAL AREA (MERGE) TREATMENT



### ENTRANCE RAMP NEUTRAL AREA (ACCELERATION LANE) TREATMENT

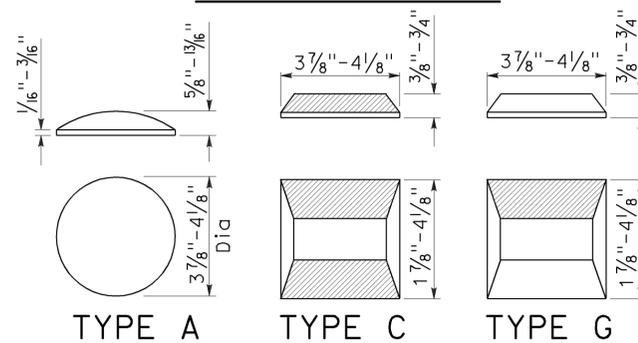


### MARKER DETAILS

#### LEGEND:

#### MARKERS

- TYPE A WHITE NON-REFLECTIVE
- ◻ TYPE C RED-CLEAR RETROREFLECTIVE
- TYPE G ONE-WAY CLEAR RETROREFLECTIVE

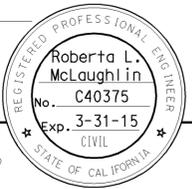


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Soi	780	1.4	28	40

Roberta L. McLaughlin  
REGISTERED CIVIL ENGINEER

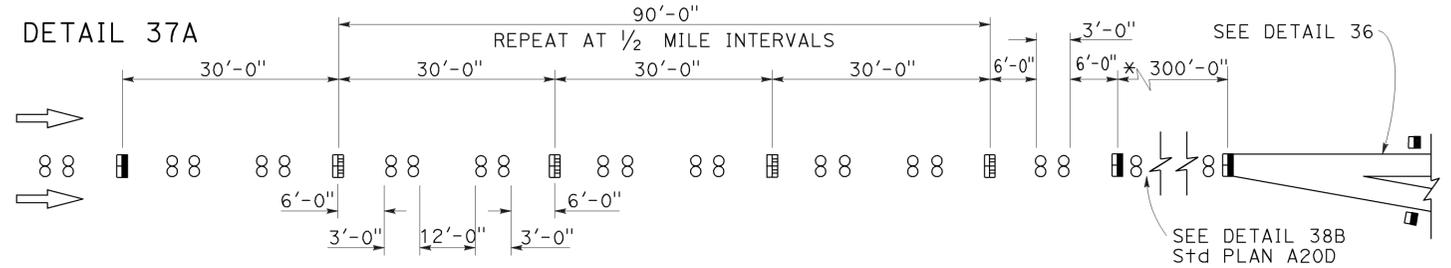
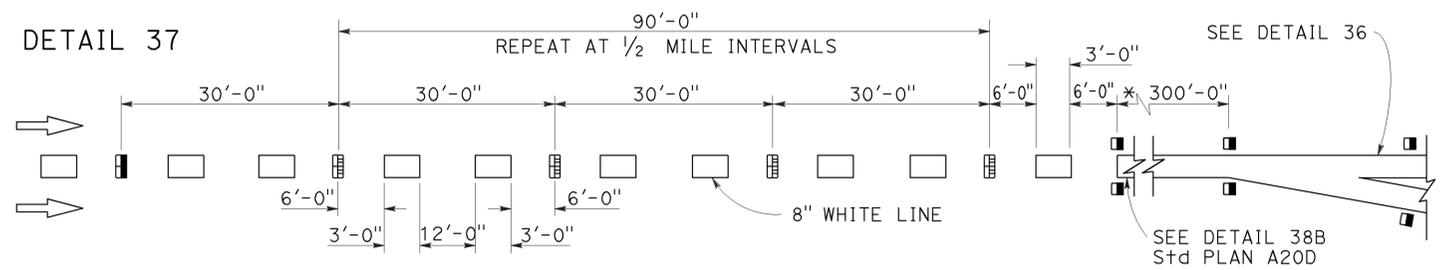
July 19, 2013  
PLANS APPROVAL DATE

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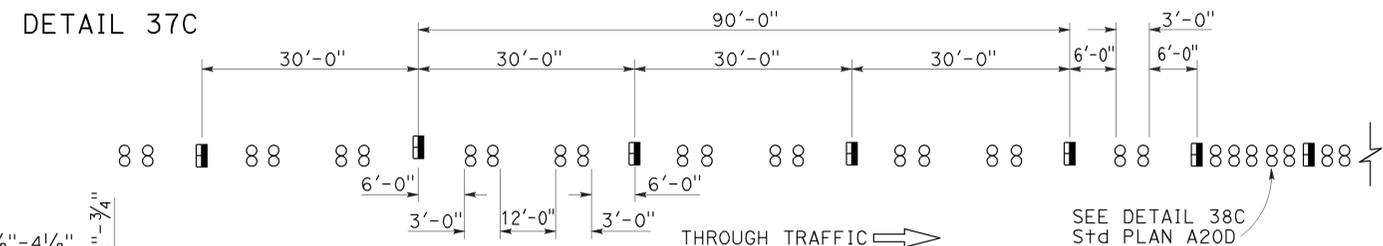
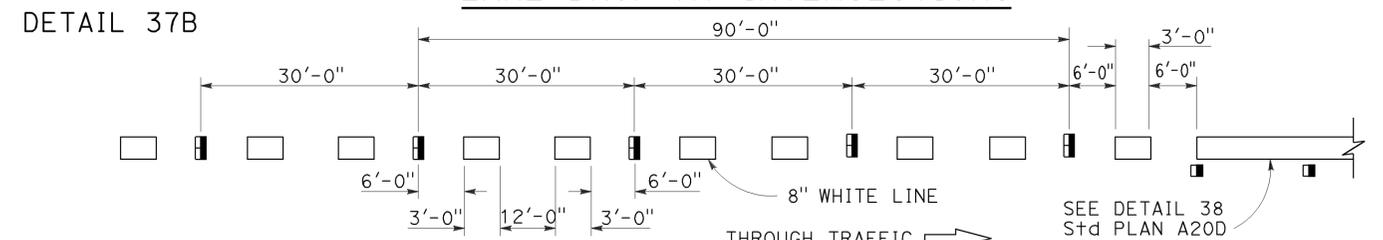
TO ACCOMPANY PLANS DATED 1-25-16

### LANE DROP AT EXIT RAMP



\* The solid channelizing line shown may be omitted on short auxiliary lanes where weaving length is critical.

### LANE DROP AT INTERSECTIONS



STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

## PAVEMENT MARKERS AND TRAFFIC LINE TYPICAL DETAILS

NO SCALE

RSP A20C DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A20C DATED MAY 20, 2011 - PAGE 11 OF THE STANDARD PLANS BOOK DATED 2010.

## REVISED STANDARD PLAN RSP A20C

2010 REVISED STANDARD PLAN RSP A20C

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Soi	780	1.4	29	40

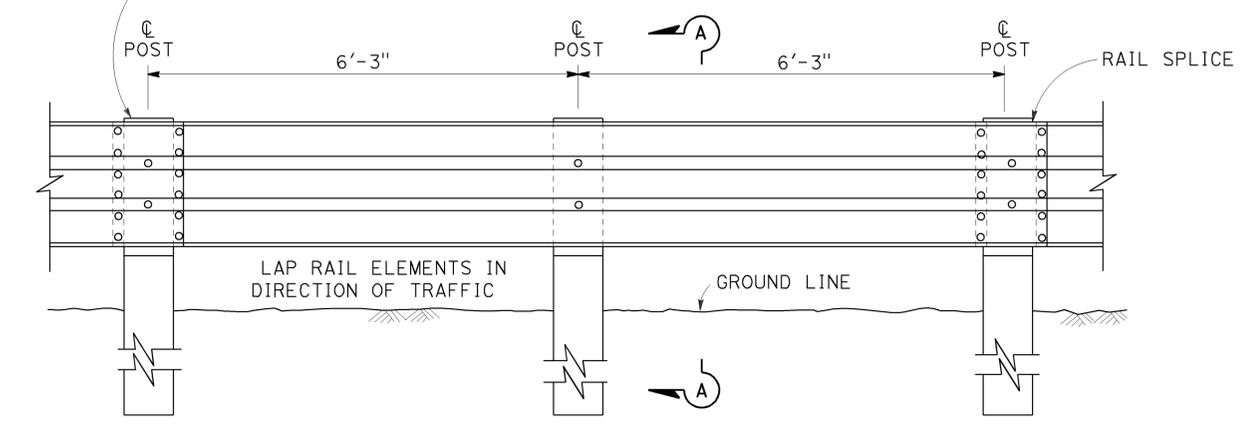
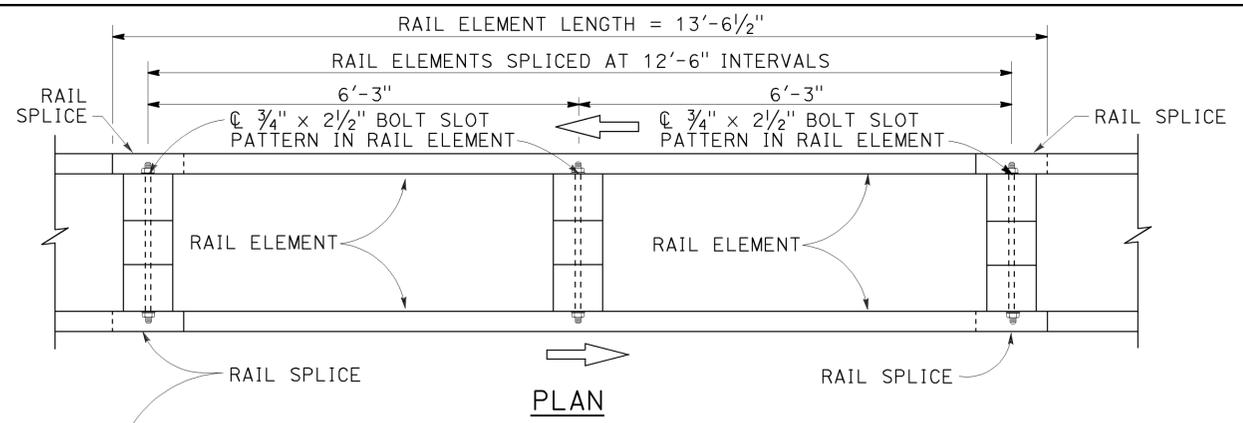
**Randell D. Hiatt**  
REGISTERED CIVIL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

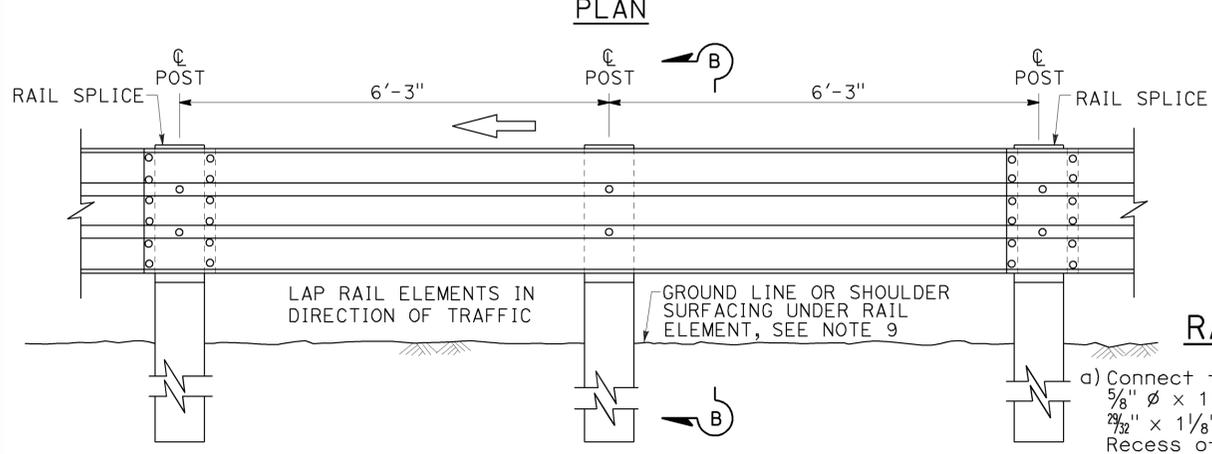
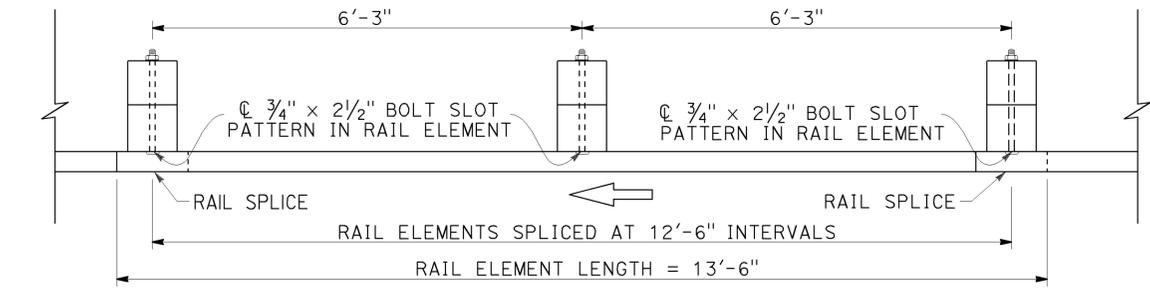
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REGISTERED PROFESSIONAL ENGINEER  
No. C50200  
Exp. 6-30-15  
CIVIL  
STATE OF CALIFORNIA

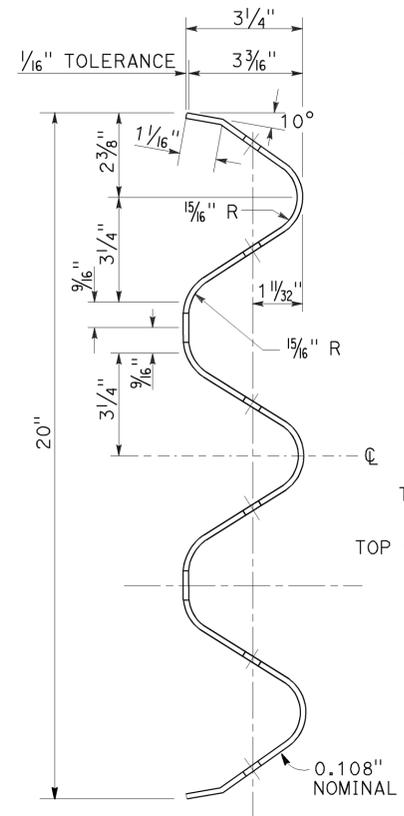
TO ACCOMPANY PLANS DATED 1-25-16



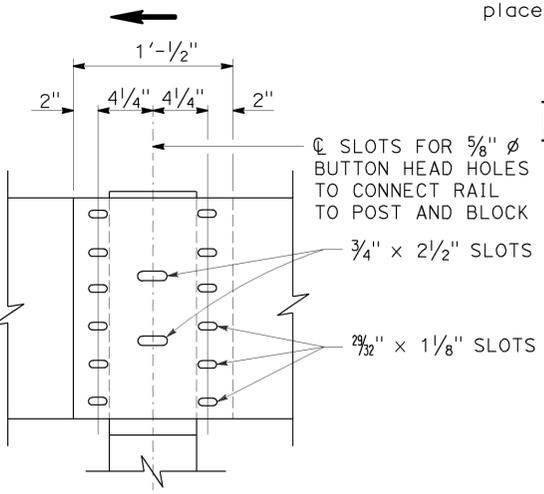
**ELEVATION**  
**DOUBLE THRIE BEAM BARRIER**  
(Wood post and blocks)  
See Note 1



**ELEVATION**  
**SINGLE THRIE BEAM BARRIER**  
(Wood post and blocks)  
See Note 1

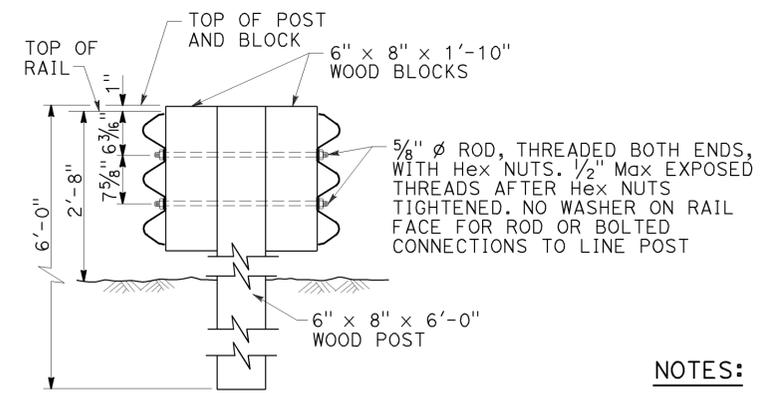


**SECTION THRU**  
**RAIL ELEMENT**

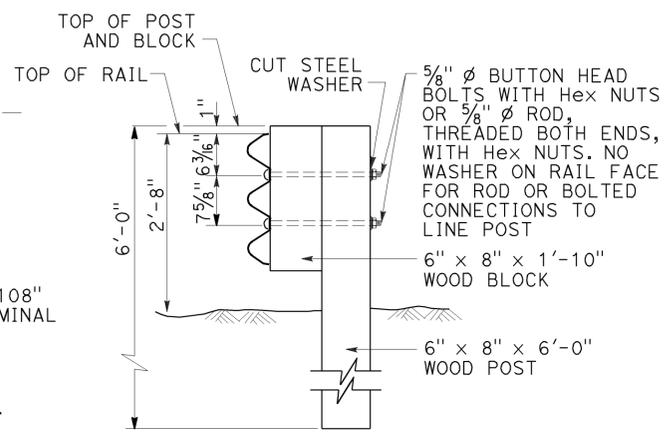


**ELEVATION**  
**RAIL ELEMENT SPLICE DETAIL**

- Connect the overlapped ends of the thrie beam rail elements with  $\frac{5}{8}$ "  $\phi$  x  $1\frac{1}{4}$ " button head oval shoulder bolts inserted into the  $\frac{29}{32}$ " x  $1\frac{1}{8}$ " slots and bolted together with  $\frac{5}{8}$ "  $\phi$  recessed hex nuts. Recess of hex nut points toward rail element. A total of 12 bolts and nuts are to be used at each rail splice connection.
- The ends of the rail elements are to be overlapped in the direction of traffic (see details).
- Where end cap is to be attached to the end of a rail element, a total of 4 of the above described splice bolts and nuts are to be used. Where a return cap is to be attached to the ends of rail elements, a total of 8 of the above described splice bolts and nuts are to be used.

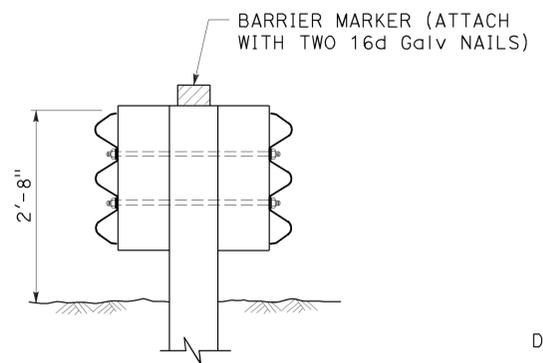


**SECTION A-A**  
**TYPICAL WOOD LINE**  
**POST INSTALLATION**



Where bolts are used, install so that the threaded end of the bolts and nuts are placed away from traffic side of rail.

**SECTION B-B**  
**TYPICAL WOOD LINE**  
**POST INSTALLATION**



**THRIE BEAM BARRIER**  
**DELINEATION**  
See Note 8

**THRIE BEAM BARRIER**  
**STANDARD BARRIER RAILING**  
**SECTION (WOOD POST**  
**WITH WOOD BLOCK)**

NO SCALE

RSP A78A DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A78A DATED MAY 20, 2011 - PAGE 89 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A78A**

2010 REVISED STANDARD PLAN RSP A78A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	780	1.4	30	40

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

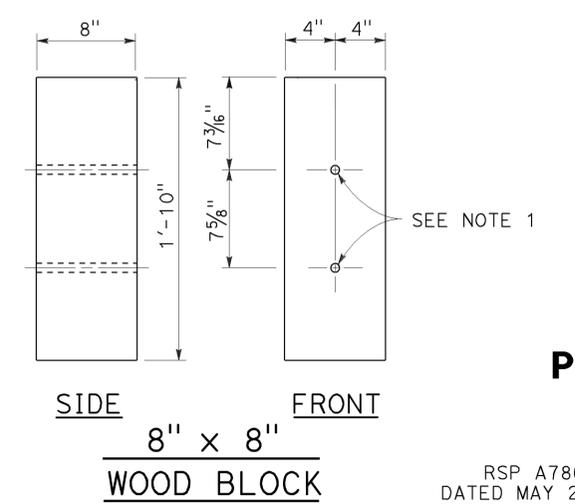
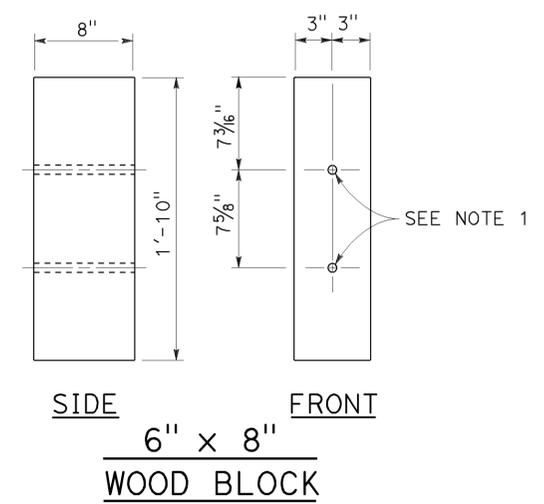
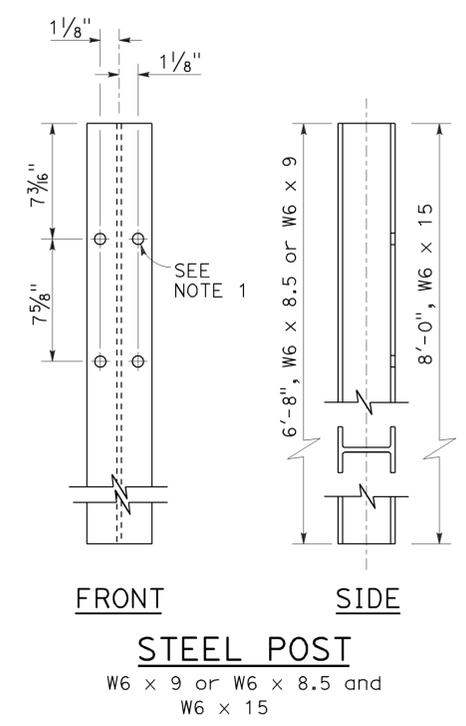
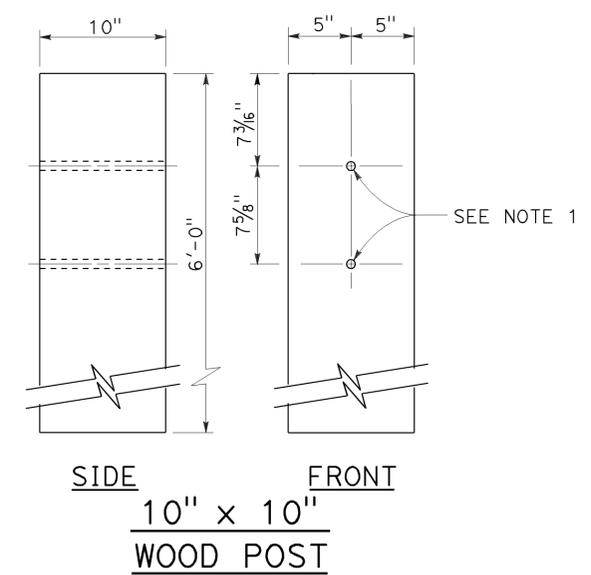
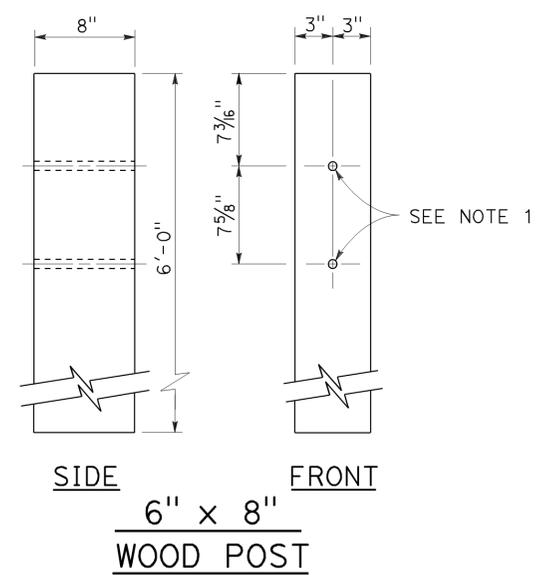
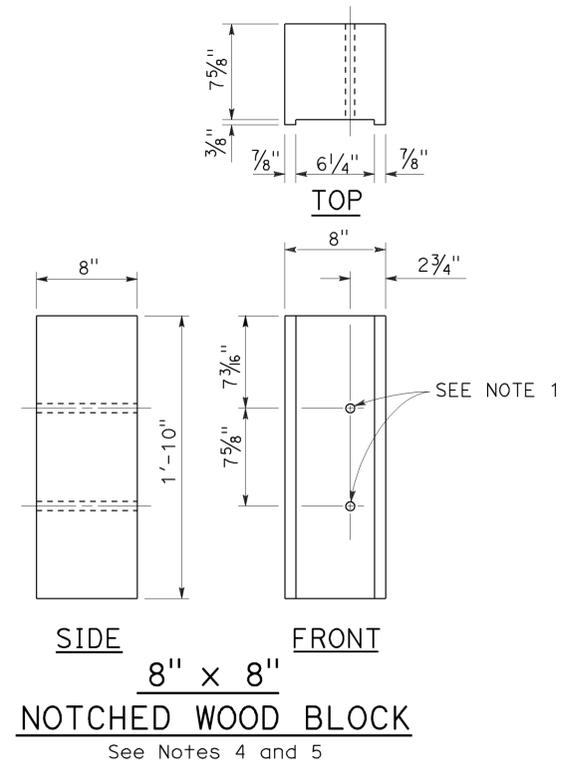
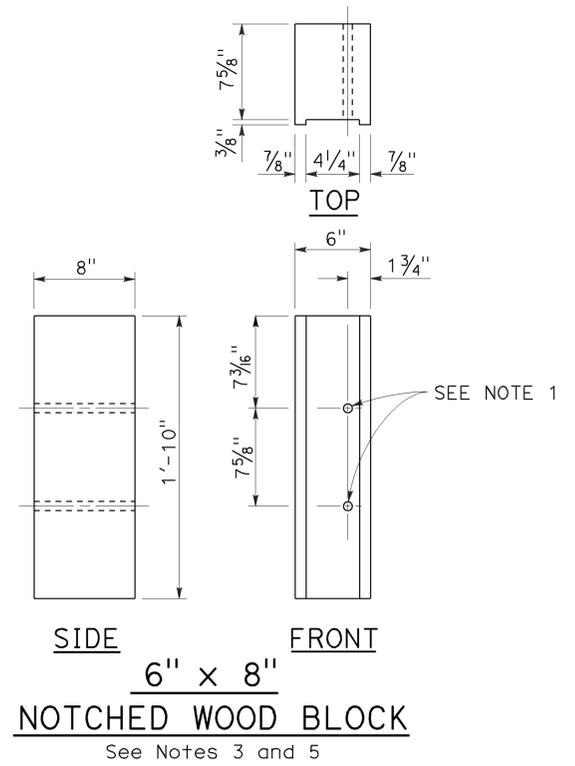
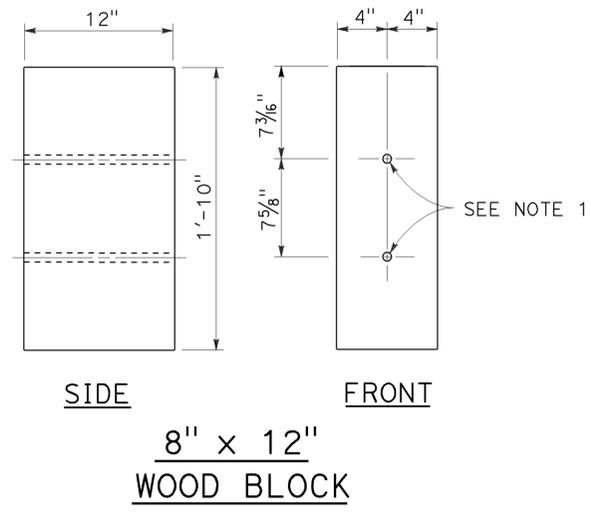
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REGISTERED PROFESSIONAL ENGINEER  
No. C50200  
Exp. 6-30-15  
CIVIL  
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 1-25-16

**NOTES:**

1. All holes in steel post to be  $\frac{13}{16}$ " Dia maximum. Holes in wood posts and wood blocks to be  $\frac{3}{4}$ " Dia  $\pm \frac{1}{16}$ ".
2. Dimensions shown for wood post are nominal.
3. For use with W6 x 8.5 or W6 x 9 steel post.
4. For use with W6 x 15 steel post.
5. Notched face of block faces steel post.



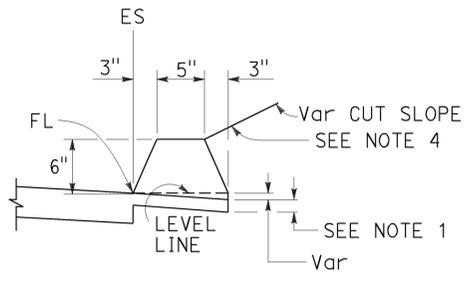
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**THRIE BEAM BARRIER  
POST AND BLOCK DETAILS**  
NO SCALE

RSP A78C2 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A78C2  
DATED MAY 20, 2011 - PAGE 92 OF THE STANDARD PLANS BOOK DATED 2010.

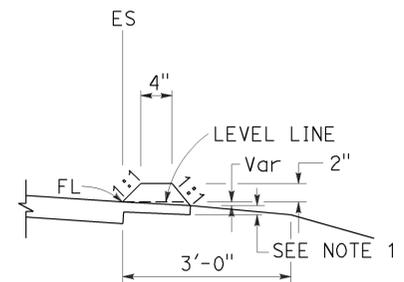
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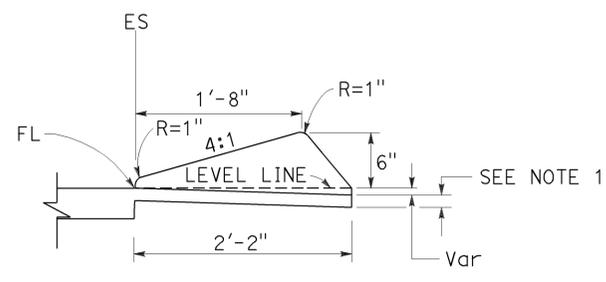
TO ACCOMPANY PLANS DATED 1-25-16



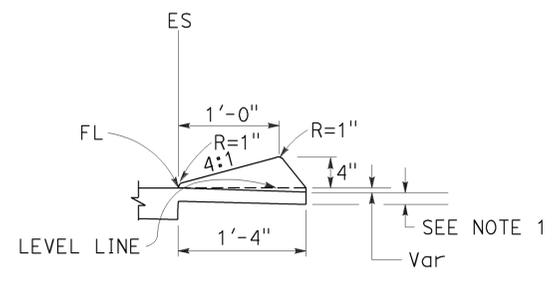
**TYPE A**  
See Note 3



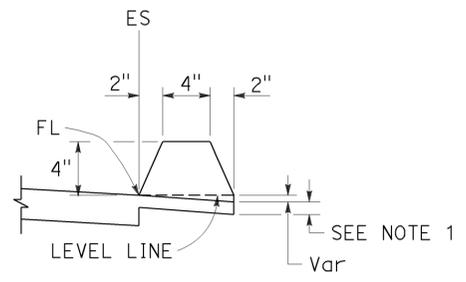
**TYPE C**



**TYPE D**

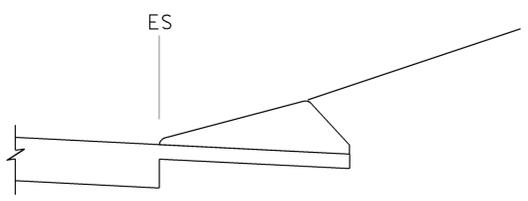


**TYPE E**

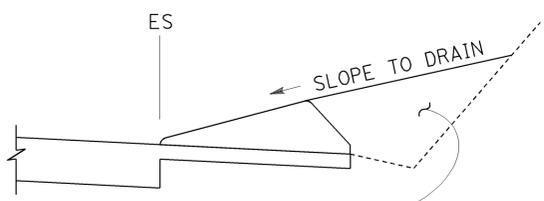


**TYPE F**  
See Note 5

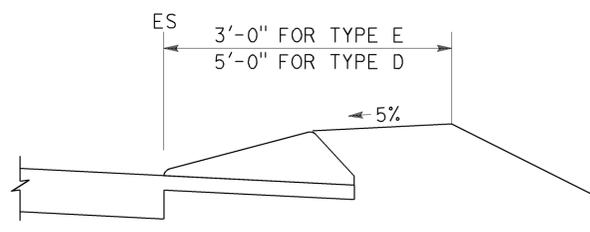
**DIKES**



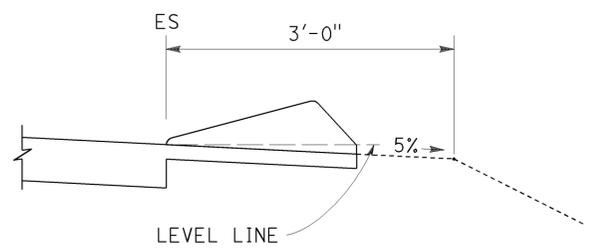
**CASE C-1**  
Cut Slope



**CASE C-2**  
Cut Slope



**CASE F**



**CASE R**  
See Note 2

**TYPE D AND E BACKFILL DETAILS**

**NOTES:**

1. For HMA shoulders only, extend top layer of HMA placed on the shoulder under dike with no joint at the ES. For projects with OGFC shoulders, do not extend OGFC under dike. See project plans for modified dike detail.
2. Case R applies to retrofit only projects where restrictive conditions do not provide enough width for Case F backfill.
3. Type A dike only to be used where restrictive slope conditions do not provide enough width to use Type D or Type E dike.
4. Fill and compact with excavated material to top of dike.
5. Use Type F dike, where dike is required with guard railing installations. See Revised Standard Plan RSP A77N4 for dike positioning details.

**DIKE QUANTITIES**

TYPE	CUBIC YARDS PER LINEAR FOOT
A	0.0135
C	0.0038
D	0.0293
E	0.0130
F	0.0066

Quantities based on 5% cross slope.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**HOT MIX ASPHALT DIKES**

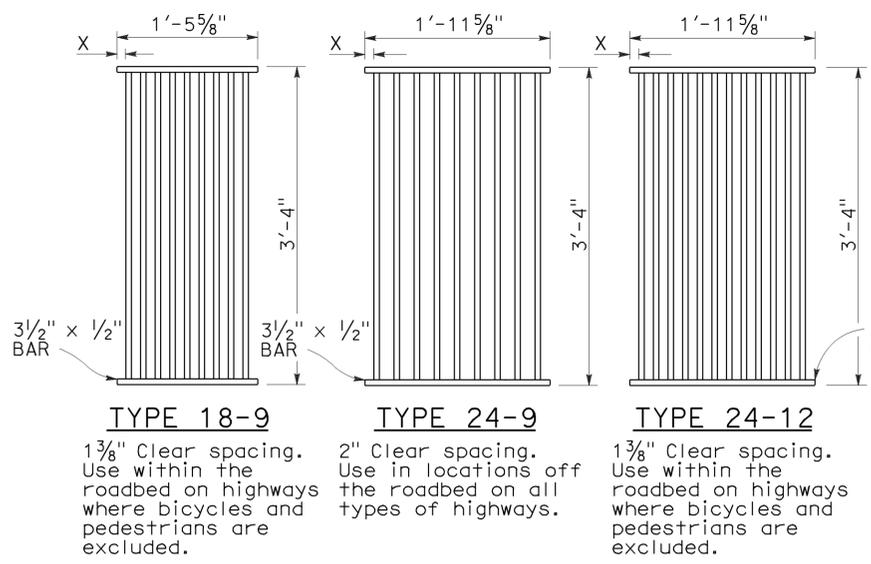
NO SCALE

RSP A87B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A87B  
DATED MAY 20, 2011 - PAGE 120 OF THE STANDARD PLANS BOOK DATED 2010.

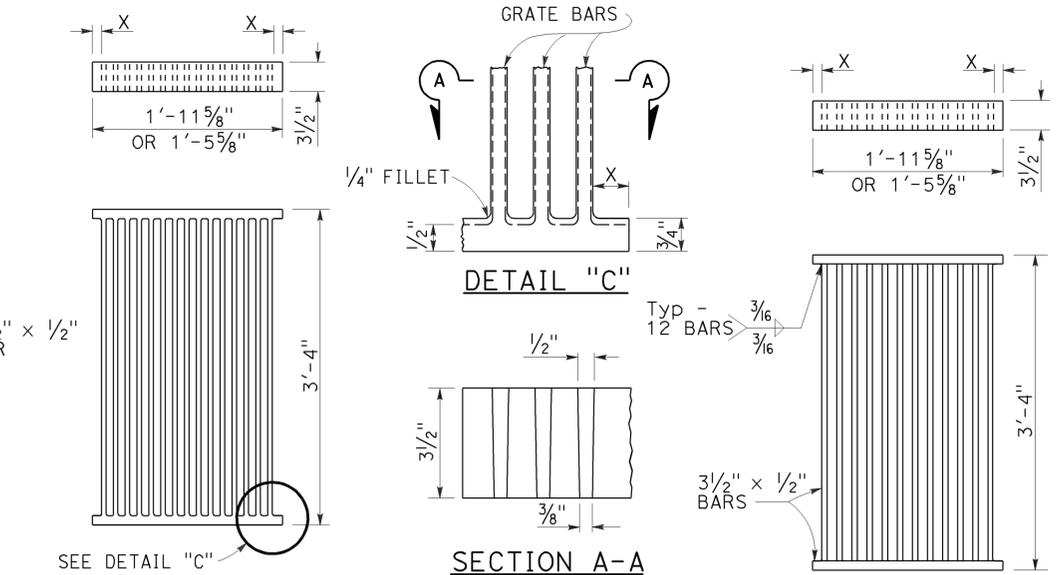
**REVISED STANDARD PLAN RSP A87B**

2010 REVISED STANDARD PLAN RSP A87B

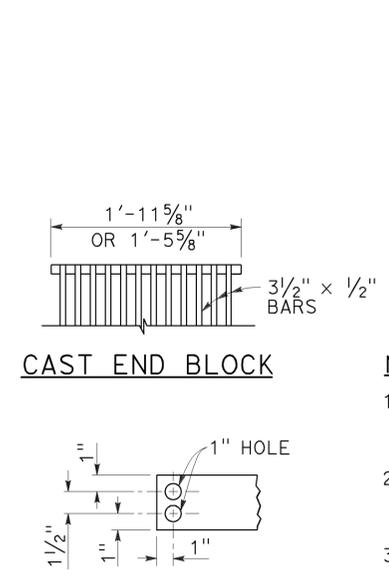




**RECTANGULAR GRATE DETAILS**  
(See table below)

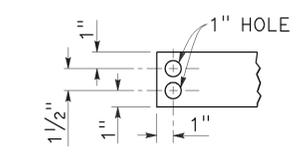


**ALTERNATIVE CAST DUCTILE IRON GRATE OR CAST CARBON STEEL GRATE**



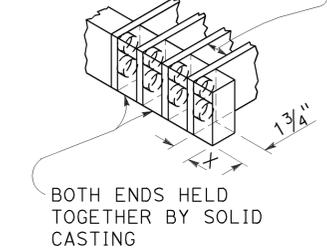
**ALTERNATIVE WELDED GRATE**

**CAST END BLOCK**



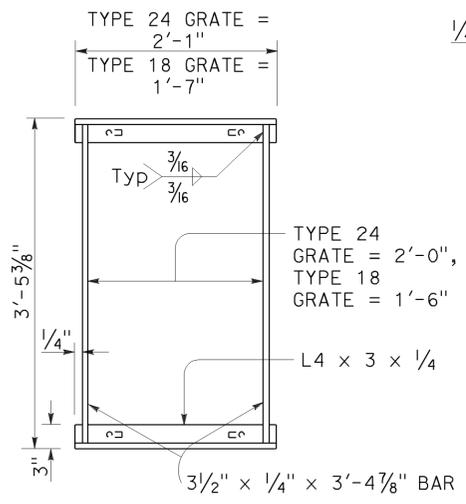
**END OF BAR**

**SPACING SAME AS FOR WELDED OR BOLTED GRATE**

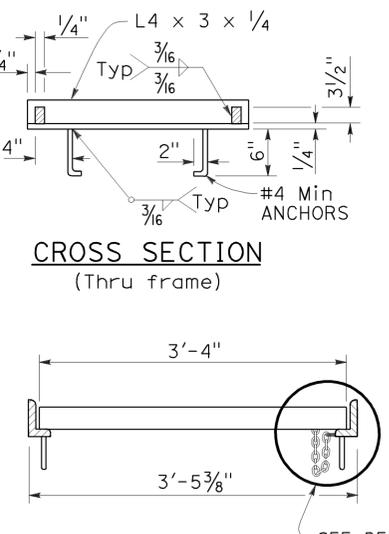


**ALTERNATIVE CAST DUCTILE IRON OR CAST CARBON STEEL END BLOCK GRATE**

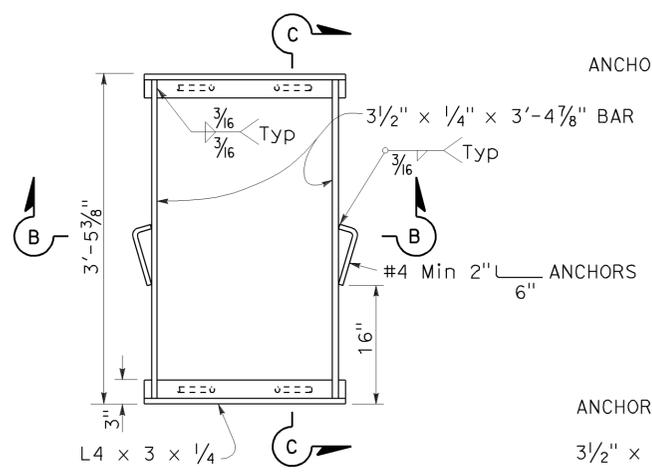
- NOTES:**
- Grate type numbers refer to approximate width of grate in inches and number of bars, respectively.
  - Contractor has the option of using cast ductile iron, cast carbon steel, welded, bolted, or cast end block grate.
  - Rounded top of bars optional on all grates.
  - Pipe inlets with a grate shall be placed so that bars parallel direction of principle surface flow.
  - Complete joint penetration butt welds may be substituted for the fillet welds on all anchors.
  - Standard square, hexagon, round or equivalent headed anchors may be substituted for the right angle hooks on the anchors shown on this plan.
  - Grate and frame weights are based on welded grates (weights of face angles, steps, protection bars, etc. are not included).
  - Connect chain to grate and frame only at locations shown on the plans. When chain is required, do not use cast ductile iron grates.



**TYPICAL FRAME**

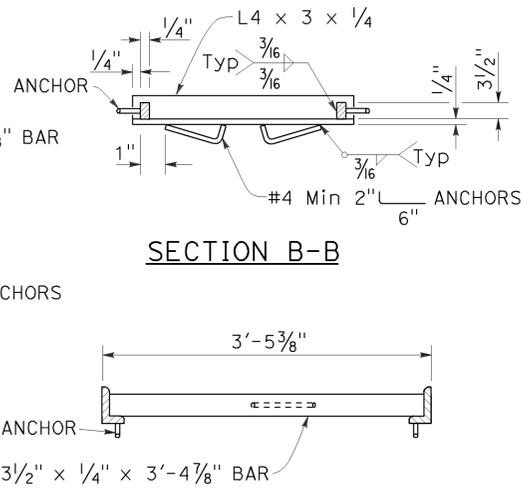


**LONGITUDINAL SECTION**  
(Thru frame and grate)



**TYPICAL FRAME**

**ALTERNATIVE ANCHOR FOR RECTANGULAR FRAME**  
(For details not shown, See Rectangular Frame Details)



**SECTION B-B**

**SECTION C-C**

**RECTANGULAR FRAME DETAILS**

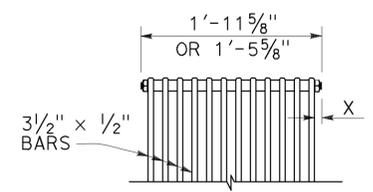
(For all rectangular grates)

**GRATE BAR SPACING TABLE**

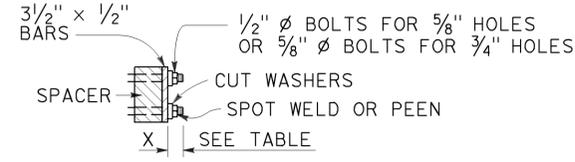
TYPE	NO. OF BARS	CLEAR BAR SPACING	X
18-9	9	1 3/8"	1 1/16"
24-9	9	2"	1 9/16"
24-12	12	1 3/8"	1 1/4"

INLET TYPE	COVER TYPE	WEIGHT LB
OS	PLATE	174
OL-7	PLATE	170
OL-10	PLATE	170
OL-14	PLATE	170
OL-21	PLATE	170
OCPI	PLATE	112
OCPI	PLATE	112
OCPI	REDWOOD	42
OMP	PLATE	177
OMPI	PLATE	177

INLET TYPE	GRATE TYPE	NO. OF GRATES	WEIGHT LB
GDO	24-12	2	634
GOL-7	24-12	1	326
GOL-10	24-12	1	326
G0,G1,G2,G3,G4 (TYPE 24)	24-9	1	263
	24-12	1	326
G4 (TYPE 18),G5,G6	18-9	1	249
GT1	18-9	2	498
GT2	18-9	2	498
GT3	24-12	2	652
GT4	24-12	2	652
TRASH RACK			22
GRATE CHAIN			3

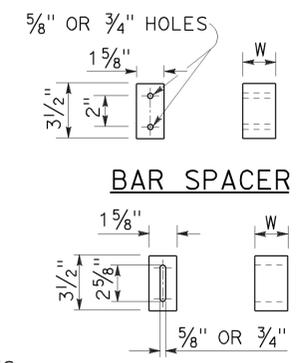


**BOLTED END BLOCK**



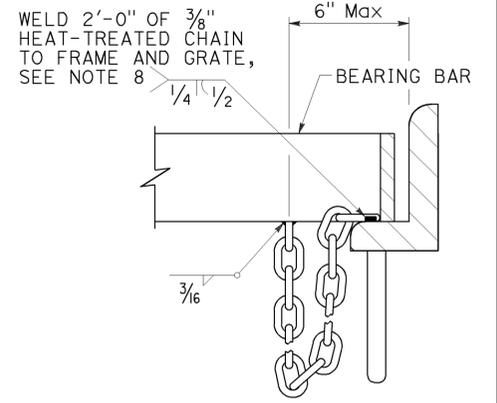
**BOLTING DETAIL**

**ALTERNATIVE BOLTED GRATE**



**BAR SPACER**

**ALTERNATIVE SPACER**  
W = 1 3/8" or 2"



**DETAIL "D"**  
(Steel grates only)

**GRATE DETAILS No. 1**

NO SCALE

**BASIS FOR MISC IRON & STEEL FINAL PAY WEIGHTS FOR DRAINAGE INLETS**

(See Note 7)

RSP D77A DATED APRIL 19, 2013 SUPERSEDES RSP D77A DATED JULY 20, 2012 AND STANDARD PLAN D77A DATED MAY 20, 2011 - PAGE 164 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP D77A**

2010 REVISED STANDARD PLAN RSP D77A

*Gregory A. Balzer*  
 LICENSED LANDSCAPE ARCHITECT

July 19, 2013  
 PLANS APPROVAL DATE

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TO ACCOMPANY PLANS DATED 1-25-16

**A**

AB AGGREGATE BASE  
 ABS ACRYLONITRILE-BUTADIENE-STYRENE  
 AC ASPHALT CONCRETE  
 ACC ARMOR-CLAD CONDUCTORS  
 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  
 BPE BACKFLOW PREVENTER ENCLOSURE  
 BV BALL VALVE

**C**

C CONDUIT  
 CAP CORRUGATED ALUMINUM PIPE  
 CARV COMBINATION AIR RELEASE VALVE  
 CB COUPLING BAND  
 CCA CAM COUPLER ASSEMBLY  
 CEC CONTROLLER ENCLOSURE CABINET  
 CHDPE CORRUGATED HIGH DENSITY POLYETHYLENE  
 CL CHAIN LINK  
 CNC CONTROL AND NEUTRAL CONDUCTORS  
 Conc CONCRETE  
 CP COPPER PIPE  
 CS COMPOST SOCK  
 CSP CORRUGATED STEEL PIPE  
 CST CENTER STRIP  
 CV CHECK VALVE

**D**

Dia DIAMETER  
 DIP DUCTILE IRON PIPE  
 DIT DRIP IRRIGATION TUBING  
 DG DECOMPOSED GRANITE  
 DN DIAMETER NOMINAL  
 DVA DRIP VALVE ASSEMBLY

**E**

EC EROSION CONTROL  
 ECTC EROSION CONTROL TECHNOLOGY COUNCIL  
 ElecT ELECTRIC/ELECTRICAL  
 Elev ELEVATION  
 ELL ELBOW  
 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  
 FCV FLOW CONTROL VALVE  
 FERT FERTILIZER  
 FG FINISHED GRADE  
 FH FLEXIBLE HOSE  
 FIPT FEMALE IRON PIPE THREAD  
 FIS FERTILIZER INJECTOR SYSTEM  
 FL FLOW LINE  
 FR FIBER ROLL  
 FS FLOW SENSOR  
 FSC FLOW SENSOR CABLE  
 FV FLUSH VALVE

**G**

Galv GALVANIZED  
 GARV GARDEN VALVE  
 GARVA GARDEN VALVE ASSEMBLY  
 GM GRAVEL MULCH  
 GPH GALLONS PER HOUR  
 GPM GALLONS PER MINUTE  
 GSP GALVANIZED STEEL PIPE  
 GV GATE VALVE

**H**

H HALF CIRCLE  
 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  
 IFS IRRIGATION FILTRATION SYSTEM  
 IPS IRON PIPE SIZE  
 IPT IRON PIPE THREAD  
 Irr IRRIGATION

**L**

L LENGTH

**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  
 MtI 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  
 OL OVERLAP

**P**

P PART CIRCLE  
 PB PULL BOX  
 PCC PORTLAND CEMENT CONCRETE  
 PE POLYETHYLENE  
 Pk+ PACKET  
 PL PLASTIC  
 PLS PURE LIVE SEED  
 PLT PLANT/PLANTING  
 PLT ESTB PLANT ESTABLISHMENT  
 PM POST MILE  
 PR PRESSURE RATED  
 PRLV PRESSURE RELIEF VALVE  
 PRV PRESSURE REGULATING VALVE  
 PVC POLYVINYL CHLORIDE  
 Pvm+ PAVEMENT

**Q**

Q QUARTER CIRCLE  
 QCV QUICK COUPLING VALVE

**NOTE:**  
 For additional abbreviations, see Standard Plans A10A and A10B.

**R**

R RADIUS  
 RCP REINFORCED CONCRETE PIPE  
 RCV REMOTE CONTROL VALVE  
 RCVM REMOTE CONTROL VALVE (MASTER)  
 RCVMF REMOTE CONTROL VALVE (MASTER) W/FLOW SENSOR  
 RCVP REMOTE CONTROL VALVE W/PRESSURE REGULATOR  
 RCW RECYCLED WATER  
 RECP ROLLED EROSION CONTROL PRODUCT  
 REQ REQUIRED  
 RICS REMOTE IRRIGATION CONTROL SYSTEM  
 R/W RIGHT OF WAY

**S**

S SLIP  
 SCH SCHEDULE  
 SF STATE-FURNISHED  
 Shld SHOULDER  
 Sq SQUARE  
 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  
 TT TWO-THIRDS CIRCLE  
 TWSA TREE WELL SPRINKLER ASSEMBLY  
 Typ TYPICAL

**U**

UG UNDERGROUND

**W**

W WIDTH  
 W/ WITH  
 WM WATER METER  
 WS WYE STRAINER  
 WSA WYE STRAINER ASSEMBLY  
 WSP WELDED STEEL PIPE  
 WWM WELDED WIRE MESH

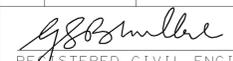
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**LANDSCAPE AND EROSION CONTROL ABBREVIATIONS**  
 NO SCALE

RSP H1 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN H1 DATED MAY 20, 2011 - PAGE 218 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP H1**

2010 REVISED STANDARD PLAN RSP H1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	780	1.4	35	40

  
 REGISTERED CIVIL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE



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TO ACCOMPANY PLANS DATED 1-25-16

TABLE 1

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

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

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

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

TABLE 2

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

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

\*\* - Longitudinal buffer space or flagger station spacing

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

TABLE 3

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

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

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

**TRAFFIC CONTROL SYSTEM TABLES  
 FOR LANE AND RAMP CLOSURES**

NO SCALE

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

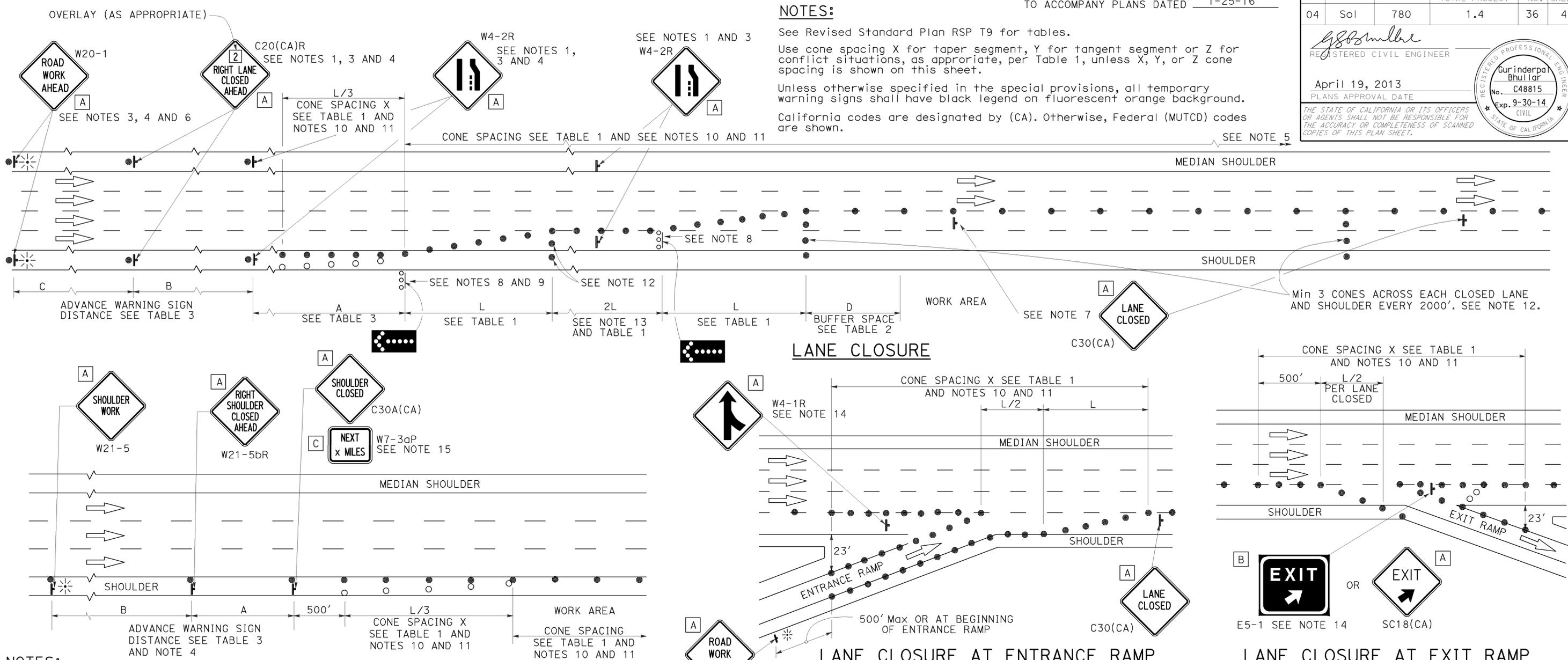
2010 REVISED STANDARD PLAN RSP T9

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	780	1.4	36	40

REGISTERED CIVIL ENGINEER  
 April 19, 2013  
 PLANS APPROVAL DATE

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



- NOTES:**
1. Median lane closures shall conform to the details as shown except that C20(CA)L and W4-2L signs shall be used.
  2. At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closures.
  3. Duplicate sign installations are not required:
    - a) On opposite shoulder if at least one-half of the available lanes remain open to traffic.
    - b) In the median if the width of the median shoulder is less than 8' and the outside lanes are to be closed.
  4. Each advance warning sign on each side of the roadway shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
  5. A G20-2 "END ROAD WORK" sign, with minimum size of 48" x 24" as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious or ends within a larger project's limits.

- SHOULDER CLOSURE**
6. If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT x MILES", use a C20(CA) sign for the first advance warning sign.
  7. Place a C30(CA) sign every 2000' throughout length of lane closure.
  8. One flashing arrow sign for each lane closed. The flashing arrow signs shall be Type I.
  9. A minimum 1500' of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at top of crest vertical curve or on a horizontal curve.
  10. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
  11. Portable delineators, placed at one-half the spacing indicated for traffic cones may be used instead of cones for daytime closures only.

- LANE CLOSURE AT ENTRANCE RAMP**
12. Unless otherwise specified in the special provisions, a minimum of 3 cones shall be placed transversely across each closed lane and shoulder at each location where a taper across a traffic lane ends and every 2000' as shown on the "Lane Closure" detail. Two Type II barricades may be used instead of the 3 cones. The transverse alignment of the cones or barricades on the closed shoulder may be shifted from the transverse alignment to provide access to the work.
  13. Unless otherwise specified in the special provisions, the 2L tangent shown along lane lines shall be used between the L tapers required for each closed traffic lane.
  14. Unless otherwise specified in the special provisions, the E5-1 or SC18(CA) and W4-1 signs shall be used as shown.
  15. A W7-3aP "NEXT x MILES" plaque must be used if the shoulder closure extends beyond the distance that can be perceived by road users.

**LEGEND**

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

**SIGN PANEL SIZE (Min)**

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

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

**TRAFFIC CONTROL SYSTEM  
 FOR LANE CLOSURE ON  
 FREEWAYS AND EXPRESSWAYS**

NO SCALE

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

**REVISED STANDARD PLAN RSP T10**

2010 REVISED STANDARD PLAN RSP T10

# TYPICAL RAMP CLOSURES

## SIGN PANEL SIZE (Min)

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

## LEGEND

- TRAFFIC CONE
- † TEMPORARY TRAFFIC CONTROL SIGN
- ‡ BARRICADES
- ⚡ PORTABLE FLASHING BEACON

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	780	1.4	37	40

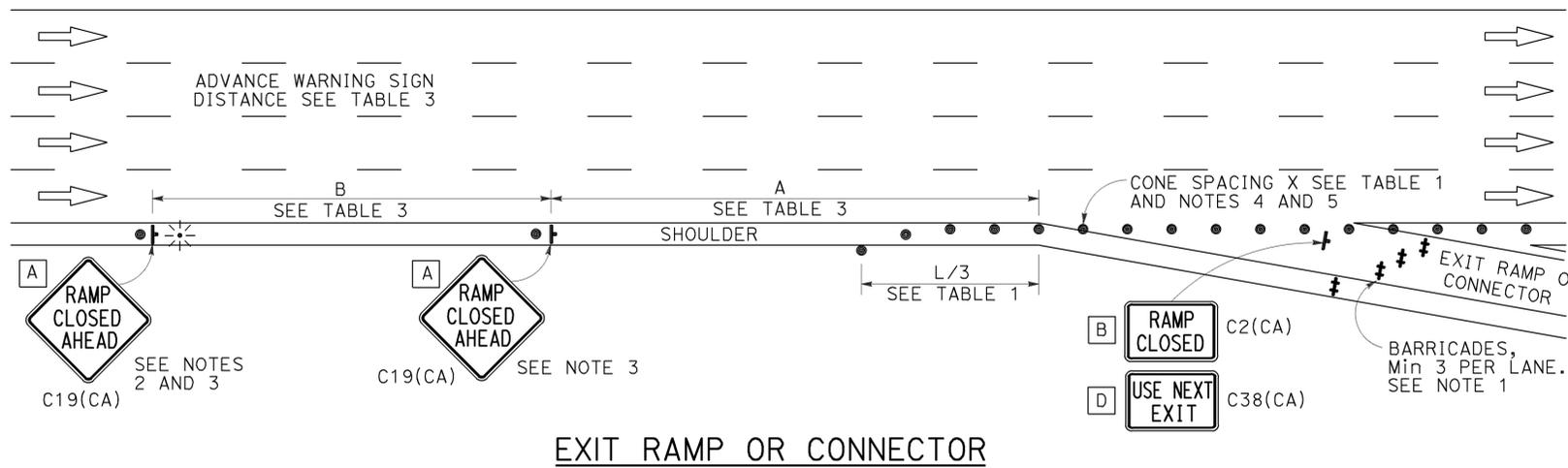
*Gurinderpal Bhullar*  
 REGISTERED CIVIL ENGINEER  
 April 19, 2013  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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

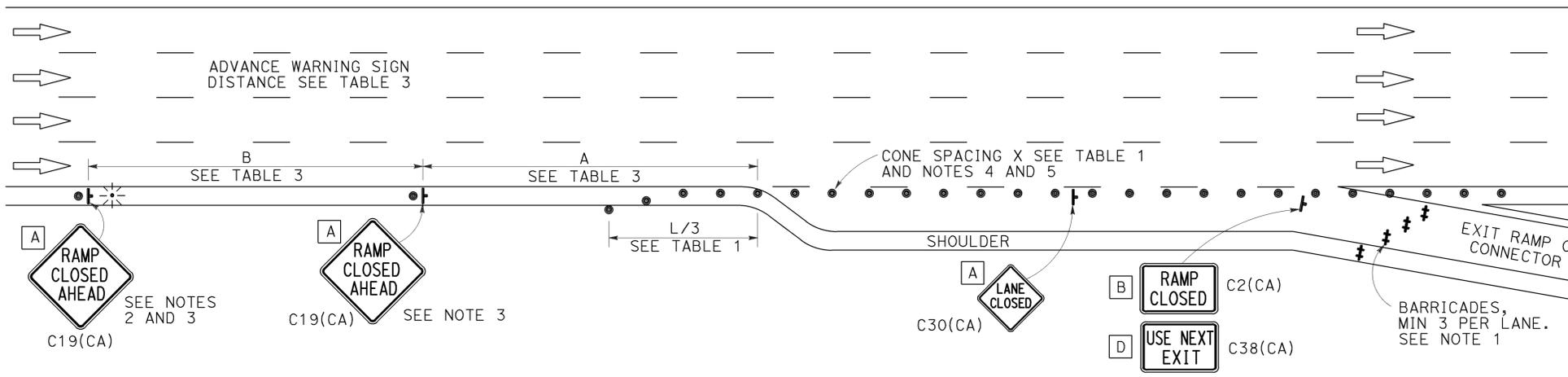
TO ACCOMPANY PLANS DATED 1-25-16

## NOTES:

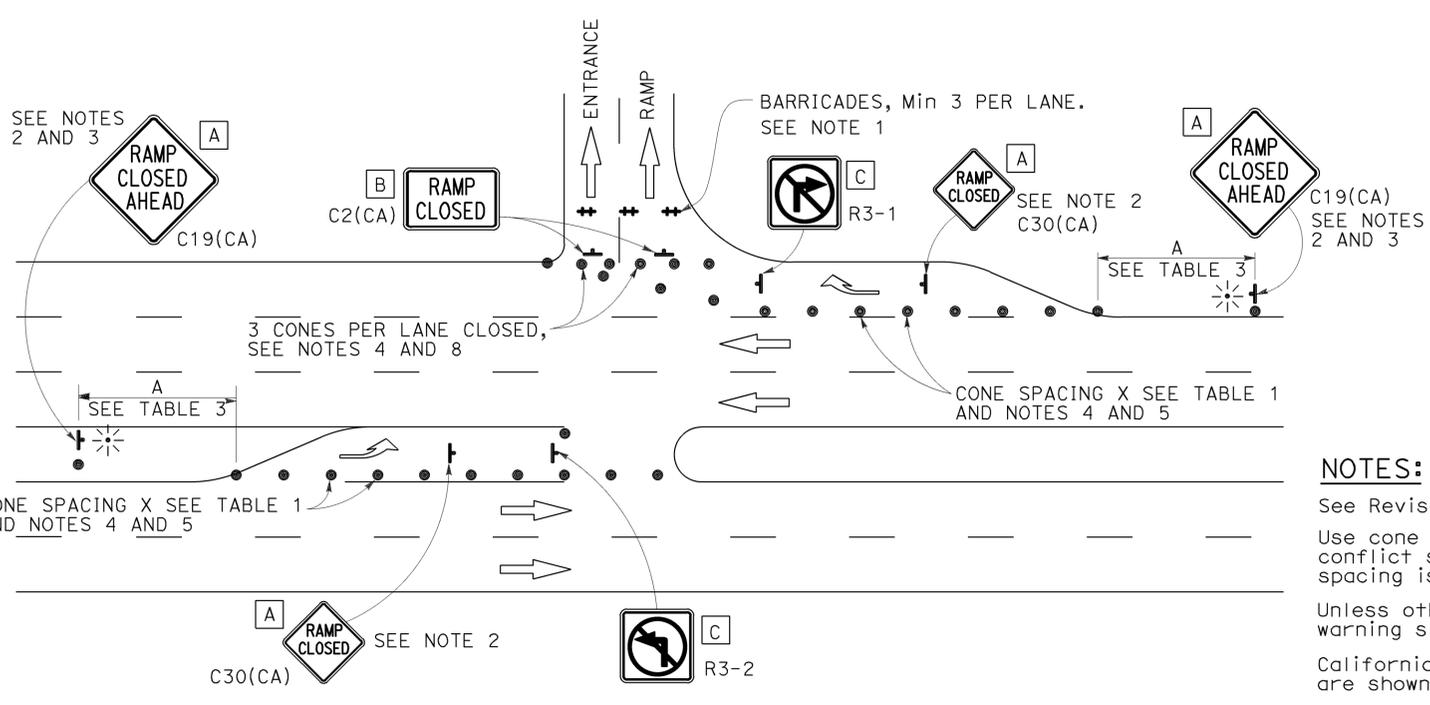
- Barricades shall be Type I, II, or III for closures lasting one week or less and Type III for closures lasting longer than one week.
- In addition to placing the C19(CA) "RAMP CLOSED AHEAD" and C30(CA) "RAMP CLOSED" signs, black on orange overlay plates with the word "CLOSED" may be mounted, as directed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



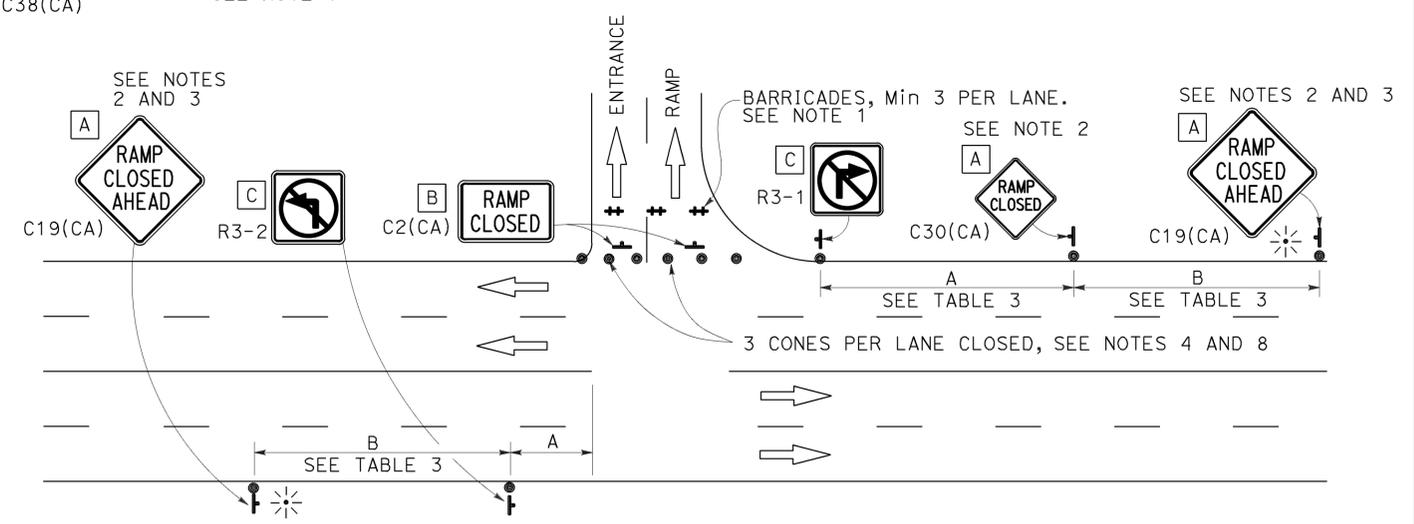
EXIT RAMP OR CONNECTOR



EXIT RAMP OR CONNECTOR WITH ADDITIONAL LANE



ENTRANCE RAMP WITH TURNING POCKETS



ENTRANCE RAMP WITHOUT TURNING POCKETS

## NOTES:

- See Revised Standard Plan RSP T9 for tables.
- Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.
- Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on fluorescent orange background.
- California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**TRAFFIC CONTROL SYSTEM  
 FOR RAMP CLOSURE**  
 NO SCALE

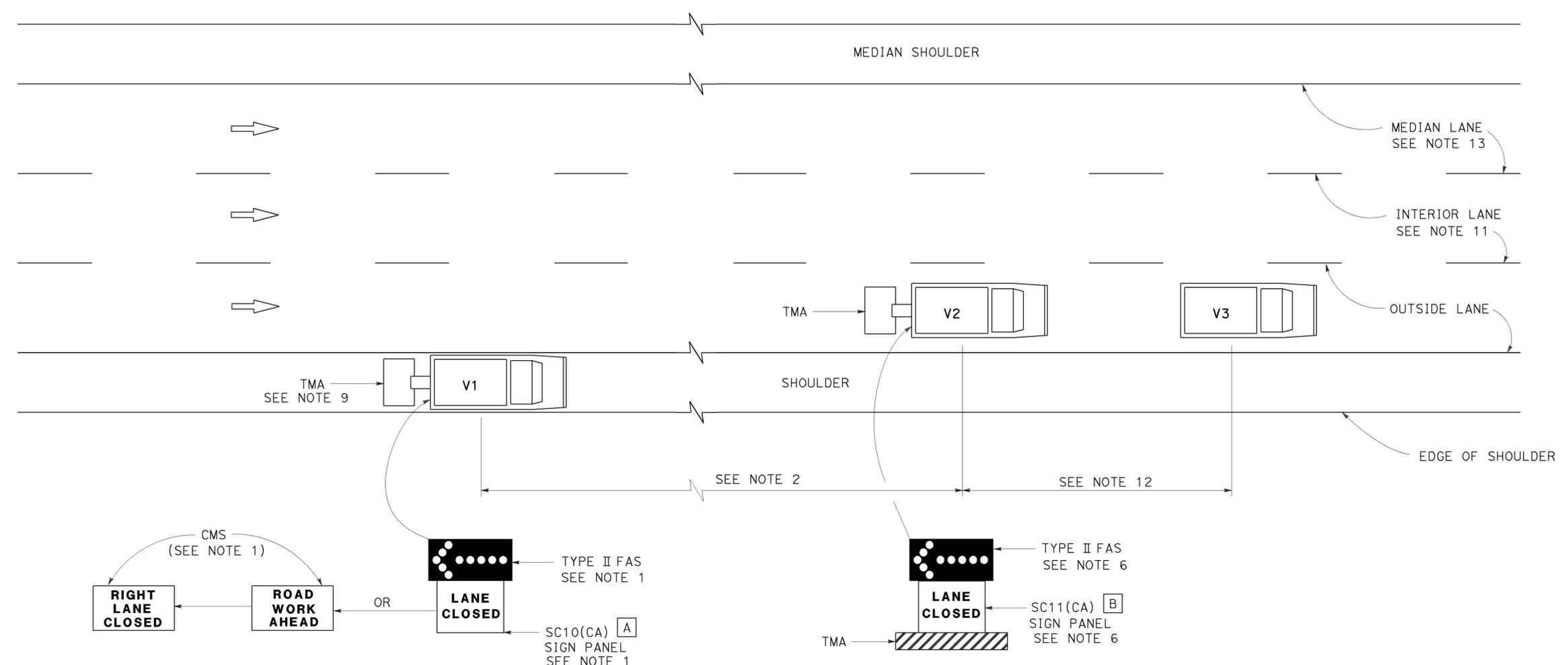
RSP T14 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T14  
 DATED MAY 20, 2011 - PAGE 242 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP T14**

2010 REVISED STANDARD PLAN RSP T14



TO ACCOMPANY PLANS DATED 1-25-16



**SIGN PANEL SIZE (Min)**

- A 66" x 36"
- B 54" x 42"

**LEGEND**

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

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

**NOTES:**

- Either a changeable message sign or a SC10(CA) sign panel and a Type II flashing arrow sign shall be mounted on the rear of sign vehicle V1. The changeable message sign shall be sequenced to show the "ROAD WORK AHEAD" message first, followed by the "RIGHT LANE CLOSED" message. For median lane closure, the flashing arrow symbol shall be reversed with the arrowhead on the right and the changeable message sign shall show "LEFT LANE CLOSED".
- If traffic queues develop, sign vehicle V1 should be positioned upstream from the end of queue. Sign vehicle V1 shall be positioned where highly visible when shoulders are not available.
- A minimum sight distance of 1500' should be provided in advance of sign vehicle V1.
- Sign vehicle V1 should remain at the beginning of horizontal or vertical curves until the other vehicles (V2 and V3) are far enough beyond the curve to resume the minimum sight distance of 1500'.
- Vehicle-mounted sign panels shall have Type III or above retroreflective sheeting, black on white, or black on fluorescent orange, with 6" minimum series D letters per Caltrans sign specifications.
- Shadow vehicle V2 shall be equipped with a truck-mounted attenuator. The sign panel shown and a Type II flashing arrow sign shall be mounted on the rear of shadow vehicle V2. For median lane closure the flashing arrow sign symbol shall be displayed with the arrowhead on the right.
- All vehicles used for lane closures shall be equipped with two-way radios, and the vehicle operators shall maintain communication during the work or application operation.
- All vehicles shall be equipped with flashing or rotating amber lights.
- If sign vehicle V1 encroaches into the traffic lane due to insufficient shoulder width, sign vehicle V1 shall be equipped with a truck-mounted attenuator. Sign vehicle V1 shall stay as close to the edge of shoulder as practicable.
- Where workers would be on foot in the work area, a stationary type lane closure (Revised Standard Plan T10, T11, etc., as applicable) shall be used instead of this plan.
- For moving lane closure on interior lane of multilane highways, use Revised Standard Plan T16.
- The spacing between work vehicle(s) and the shadow vehicles, and between each shadow vehicle should be minimized to deter road users from driving in between.
- When the work/application vehicle V3 occupies the median lane, sign vehicle V1 should drive in the median shoulder and indicate left lane closed ahead.

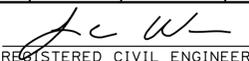
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

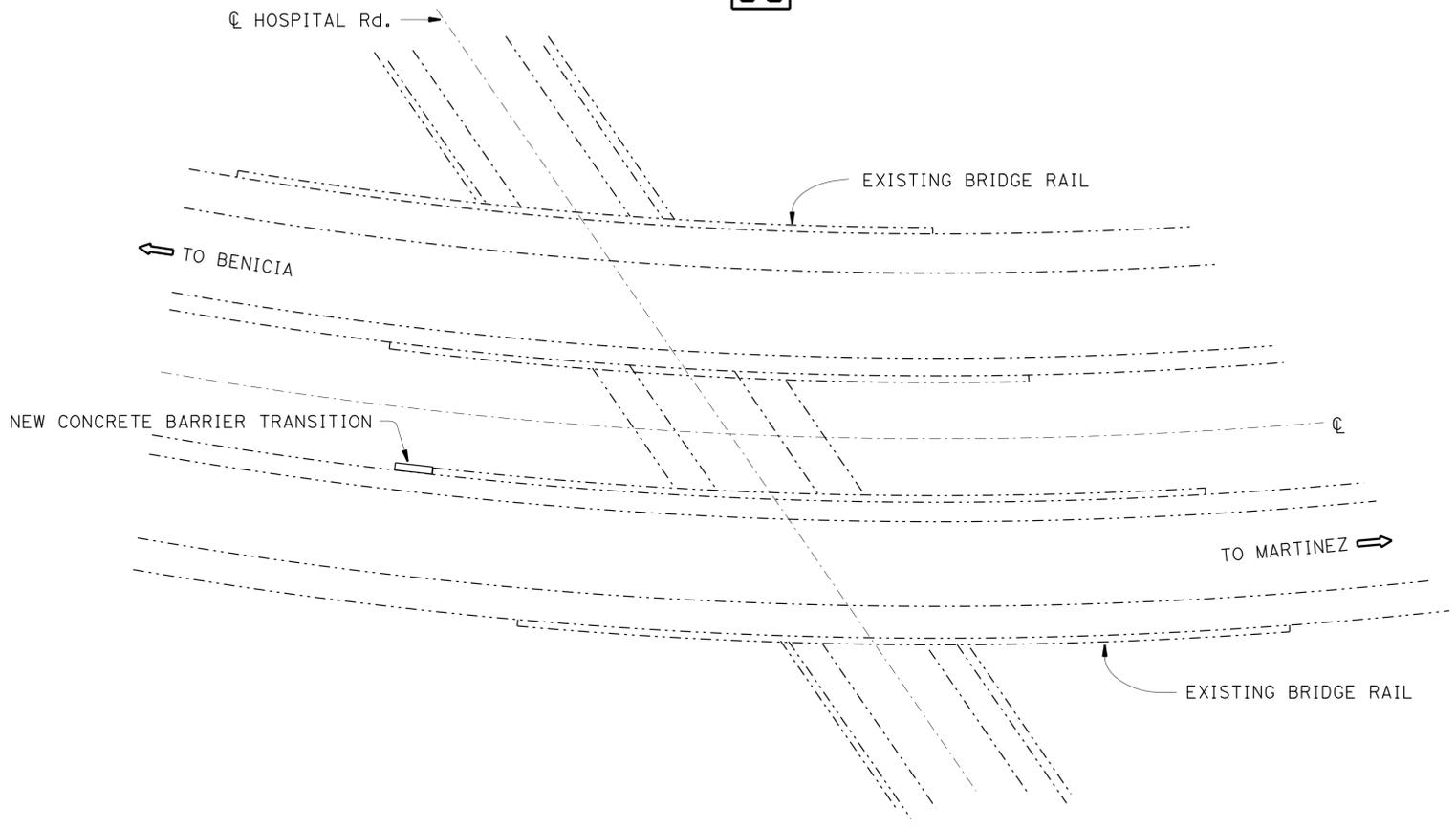
**TRAFFIC CONTROL SYSTEM FOR MOVING LANE CLOSURE ON MULTILANE HIGHWAYS**  
NO SCALE

RSP T15 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T15 DATED MAY 20, 2011 - PAGE 243 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP T15**

2010 REVISED STANDARD PLAN RSP T15

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	780	1.4	39	40
 REGISTERED CIVIL ENGINEER			12-1-15	DATE	
PLANS APPROVAL DATE			1-25-16		
No. C78431 Exp. 9/30/17 CIVIL					
<i>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.</i>					

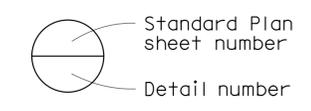


**INDEX TO PLANS**

SHEET No.	TITLE
1.	GENERAL PLAN
2.	CONCRETE BARRIER TRANSITION DETAILS

**STANDARD PLANS DATED 2010**

A10A	ACRONYMS AND ABBREVIATIONS (SHEET 1 OF 2)
RSP A10B	ACRONYMS AND ABBREVIATIONS (SHEET 2 OF 2)
A78J	SINGLE THRIE BEAM BARRIER TRANSITION RAILING (TYPE STB)



**WEST ARSENAL UNDERCROSSING**  
BRIDGE No. 23-0127L

WEST ARSENAL UNDERCROSSING	BRIDGE No. 23-0127R
QUANTITIES	
CONCRETE BARRIER (TRANSITION)	4 LF

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

NO SCALE

NOTE:  
See "Roadway Plans" for work locations.

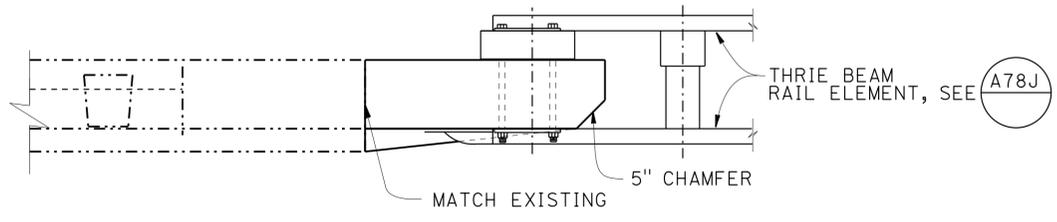
DAVID NEUMANN BRANCH CHIEF	DESIGN	BY LANCE WARREN	CHECKED JOEL MAGANA	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN SPECIAL DESIGN BRANCH B	BRIDGE NO.	<b>CONCRETE BARRIER TRANSITION</b>  <b>GENERAL PLAN</b>		
	DETAILS	BY HUNG NGUYEN	CHECKED LANCE WARREN	LAYOUT	BY			CHECKED		23-0127R	
	QUANTITIES	BY LANCE WARREN	CHECKED JOEL MAGANA	SPECIFICATIONS	BY			PLANS AND SPECS COMPARED		POST MILE	1.23
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS						0 1 2 3	UNIT: 3619 PROJECT NUMBER & PHASE: 0414000332	CONTRACT NO.: 04-1J7101	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 7/14/15	SHEET 1 OF 2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	SoI	780	1.4	40	40

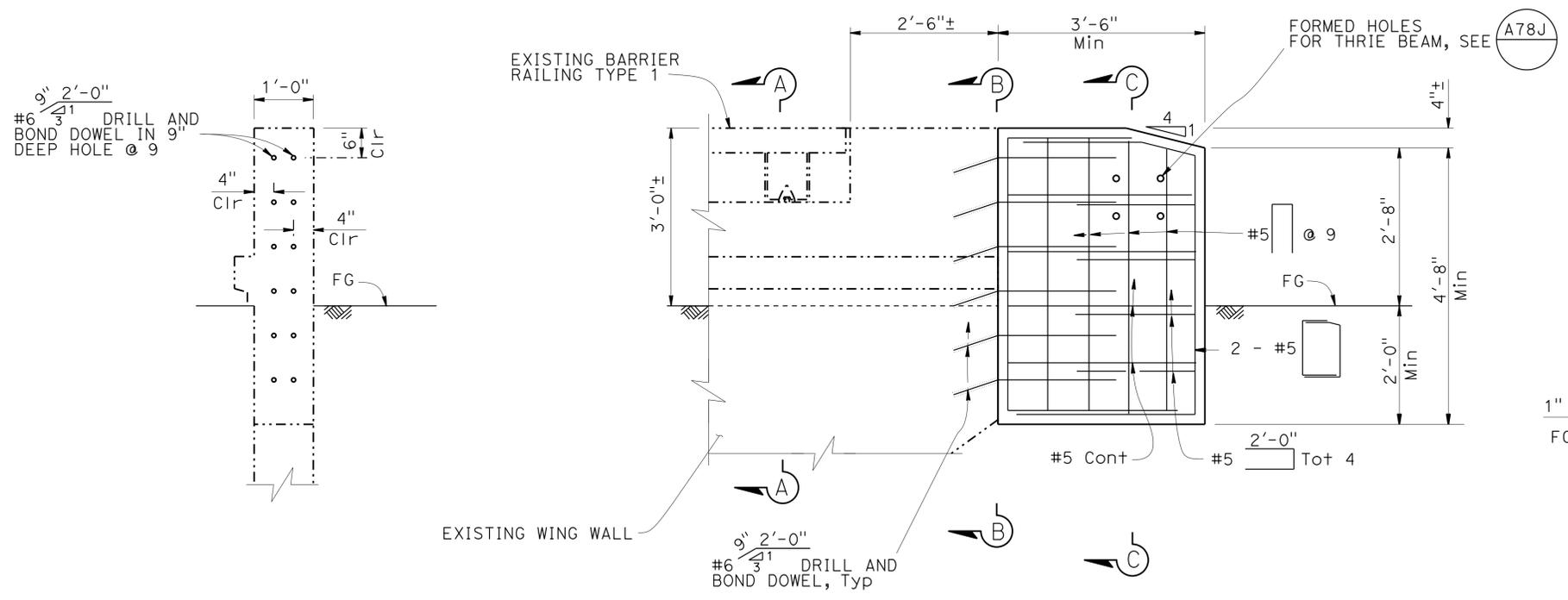
12-1-15  
 REGISTERED CIVIL ENGINEER DATE  
 1-25-16  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 RICHARD LANCE WARREN  
 No. C78431  
 Exp. 9/30/17  
 CIVIL  
 STATE OF CALIFORNIA

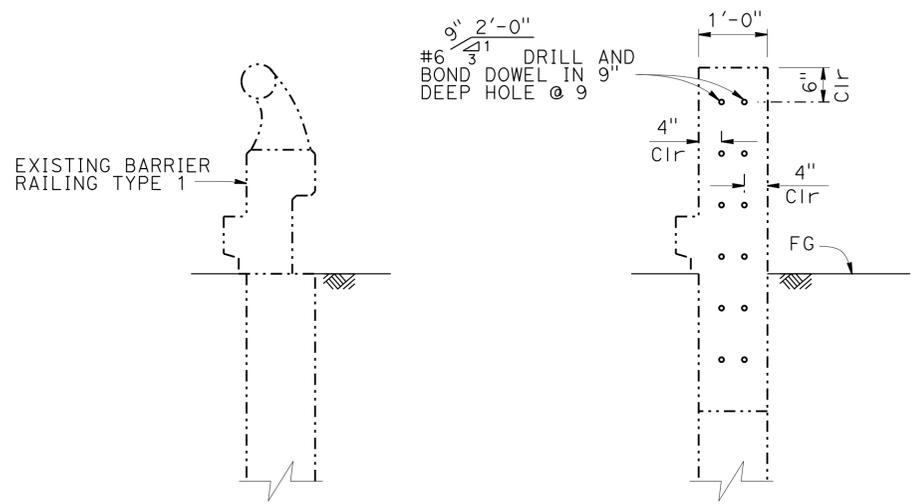
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**PLAN**

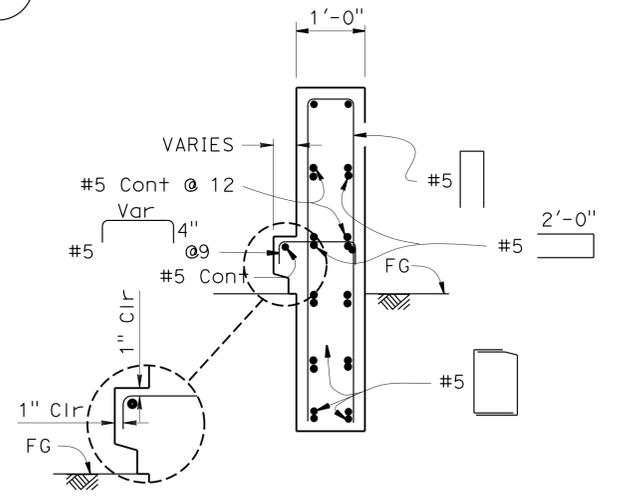


**ELEVATION**



**SECTION A-A**

**SECTION B-B**



**SECTION C-C**

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

NO SCALE

LEGEND:  
 - - - - - Indicates Existing Structure  
 \_\_\_\_\_ Indicates New Structure

DAVID NEUMANN BRANCH CHIEF	DESIGN	BY LANCE WARREN	CHECKED JOEL MAGANA	<b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN <b>DESIGN BRANCH B</b>	BRIDGE NO.	<b>THRIE BEAM CONNECTION - TYPE 1</b>			
	DETAILS	BY HUNG NGUYEN	CHECKED LANCE WARREN			23-0127R	<b>CONCRETE BARRIER TRANSITION DETAILS</b>			
	QUANTITIES	BY LANCE WARREN	CHECKED JOEL MAGANA			POST MILE	1.23			
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS: 0 1 2 3						UNIT: 3619 PROJECT NUMBER & PHASE: 0414000332	CONTRACT NO.: 04-1J7101	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES: 7/14/15	SHEET 2 OF 2