

INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2-5	TYPICAL CROSS SECTIONS
6-7	LAYOUTS
8-9	CONSTRUCTION DETAILS
10-18	DRAINAGE PLANS, PROFILES, DETAILS AND QUANTITIES
19	CONSTRUCTION AREA SIGNS
20-21	MOTORIST INFORMATION PLANS AND DETAILS
22-25	STAGE CONSTRUCTION PLANS
26-32	TRAFFIC HANDLING PLANS AND QUANTITIES
33-35	PAVEMENT DELINEATION PLANS AND QUANTITIES
36-37	SIGN DETAILS AND QUANTITIES
38-39	SUMMARY OF QUANTITIES
40	EROSION CONTROL PLAN
41	ELECTRICAL DETAILS
42-74	REVISED STANDARD PLANS

STRUCTURE PLANS

75-79	STRUCTURE PLANS
-------	-----------------

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

STATE OF CALIFORNIA **ACHSNHP-X087(030)E**
 DEPARTMENT OF TRANSPORTATION
PROJECT PLANS FOR CONSTRUCTION ON STATE HIGHWAY
IN SANTA CRUZ COUNTY IN SANTA CRUZ
AT ROUTE 1/17 SEPARATION

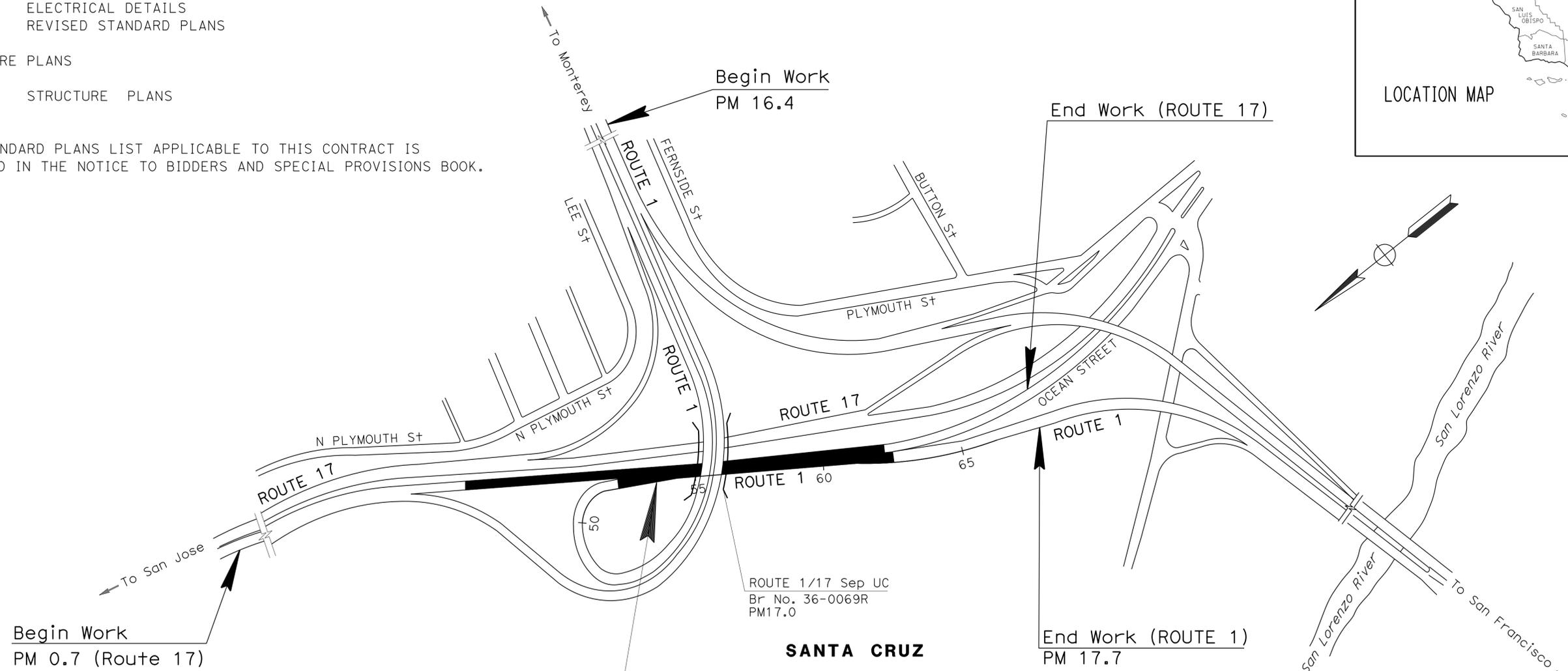
TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SCR	1, 17	17.0, 0.0	1	79





LOCATION MAP

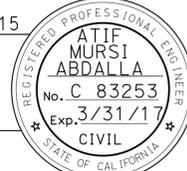


LOCATION OF CONSTRUCTION
ROUTE 1/17 SEPARATION
ROUTE 1 PM 17.0
ROUTE 17 PM 0.0

ROUTE 1/17 Sep UC
 Br No. 36-0069R
 PM17.0

SANTA CRUZ


 PROJECT ENGINEER DATE 4-27-15
 REGISTERED CIVIL ENGINEER
April 27, 2015
 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.

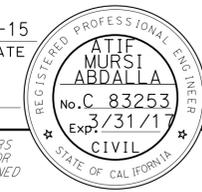


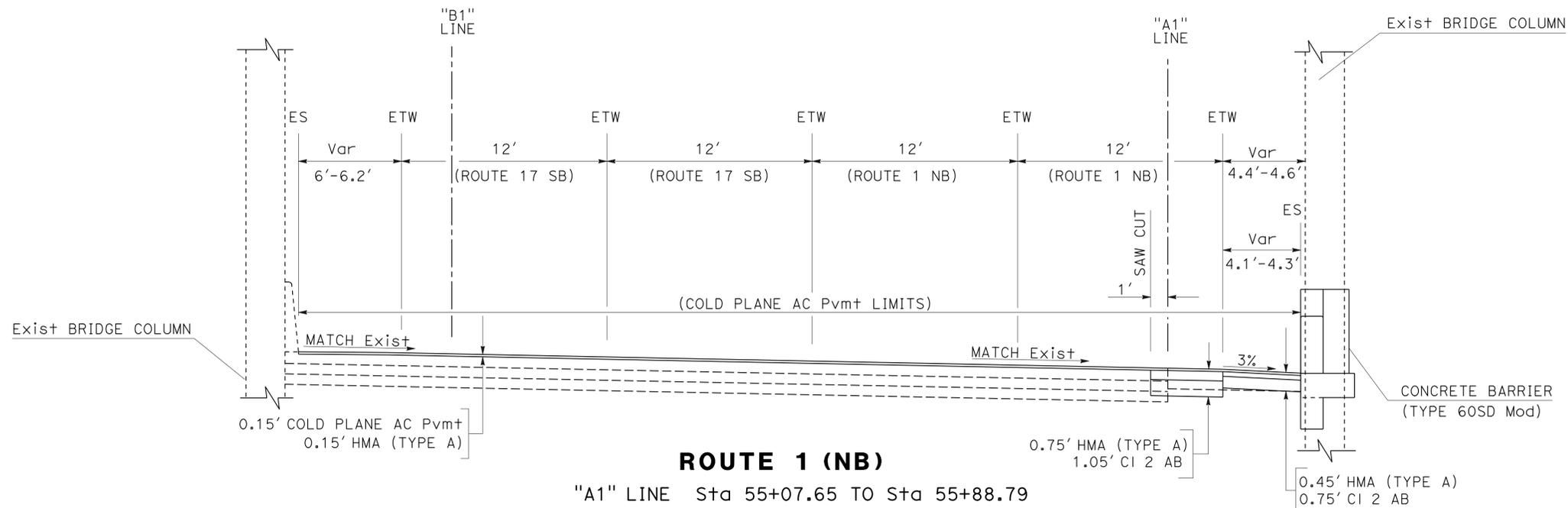
PROJECT MANAGER
LUIS DUAZO
 DESIGN ENGINEER
STEVEN McDONALD

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

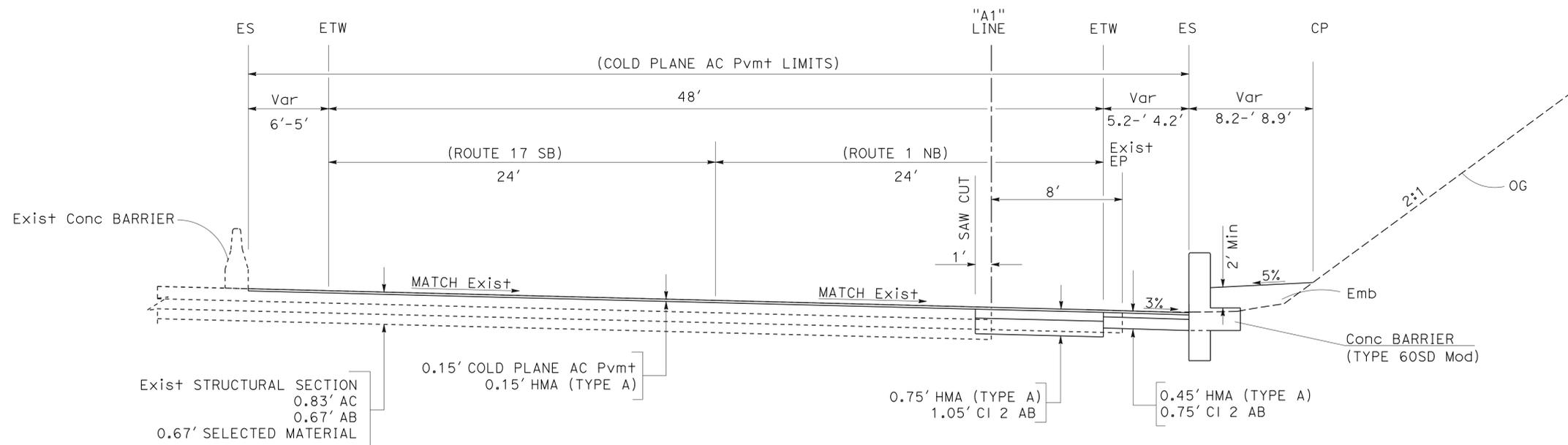
NO SCALE

DATE PLOTTED => 17-JUN-2015
 TIME PLOTTED => 13:13
 LAST REVISION 04-24-15

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	3	79
			4-27-15		
REGISTERED CIVIL ENGINEER			DATE		
4-27-15			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>					



ROUTE 1 (NB)
"A1" LINE Sta 55+07.65 TO Sta 55+88.79



ROUTE 1 (NB)
"A1" LINE Sta 54+86.25 TO Sta 55+07.65

TYPICAL CROSS SECTIONS

NO SCALE

X-2

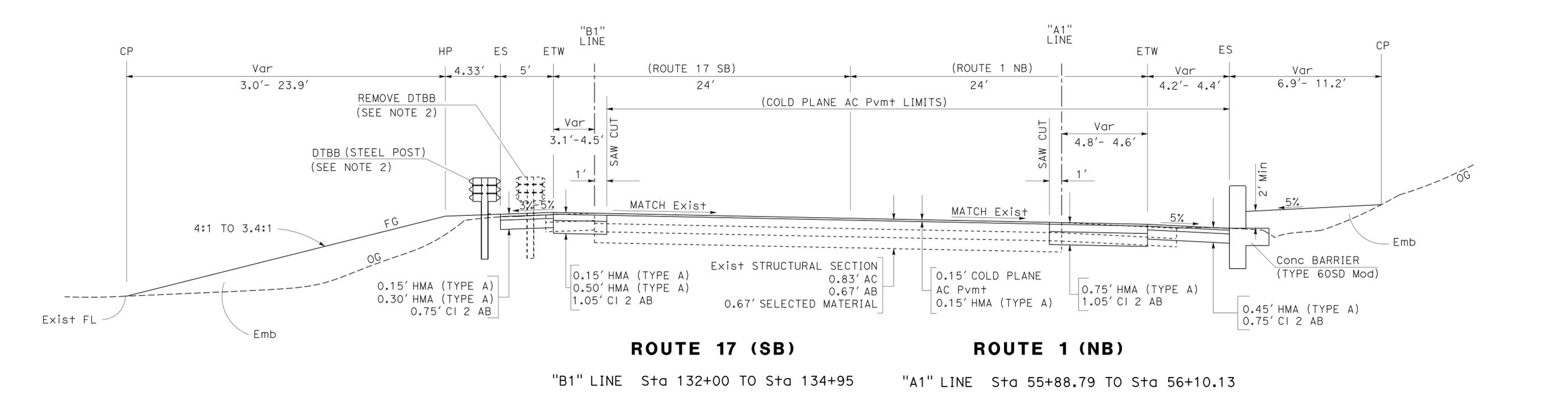
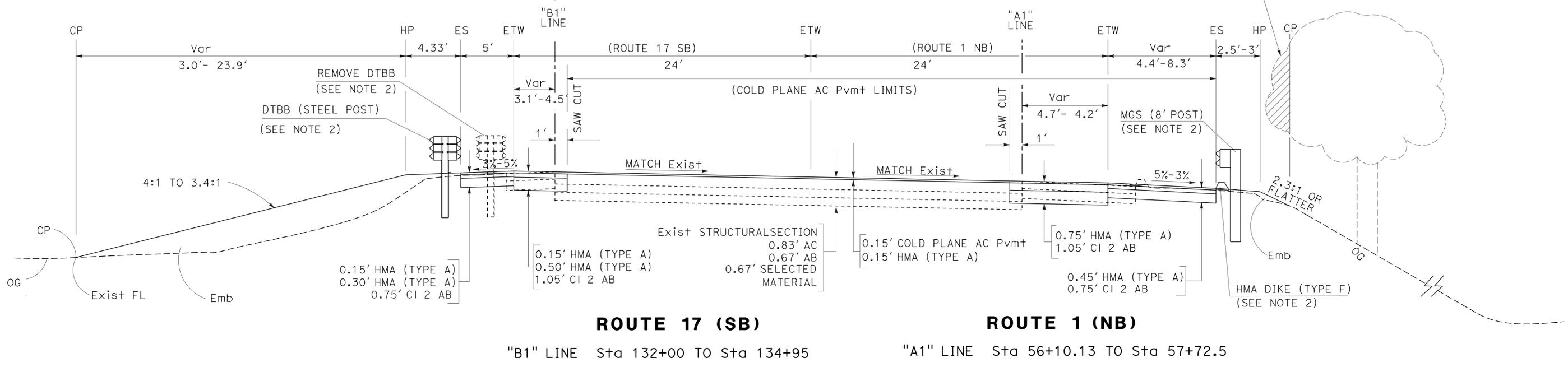
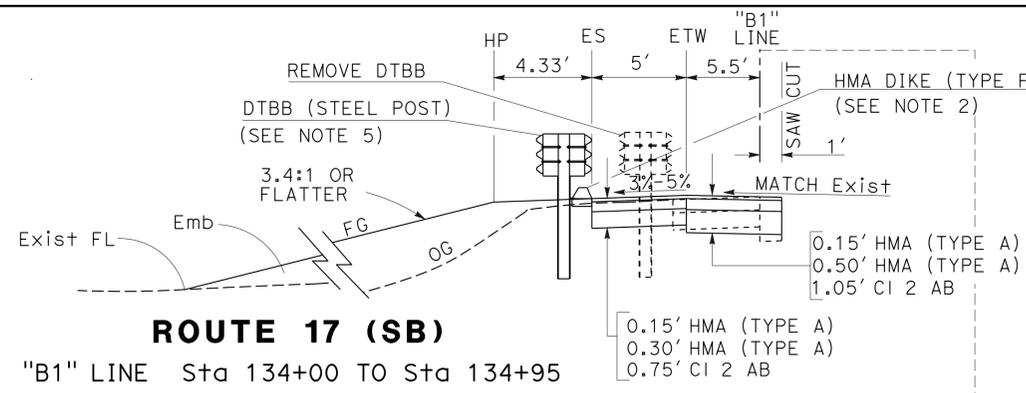
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	REVISOR	DATE
Caltrans	STEVEN McDONALD	ATIF ABDALLA	
06-DESIGN		SAL JARAMILLO	
	CHECKED BY	DESIGNED BY	DATE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	4	79

<i>Atif M</i>	4-27-15
REGISTERED CIVIL ENGINEER	DATE
4-27-15	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
ATIF MURSI ABDALLA
 No. C. 83253
 Exp. 3/31/17
 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.



TYPICAL CROSS SECTIONS
X-3
 NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
06-DESIGN
 FUNCTIONAL SUPERVISOR: STEVEN McDONALD
 CALCULATED/DESIGNED BY: SAL JARAMILLO
 CHECKED BY: ATIF ABDALLA
 REVISED BY: DATE REVISION

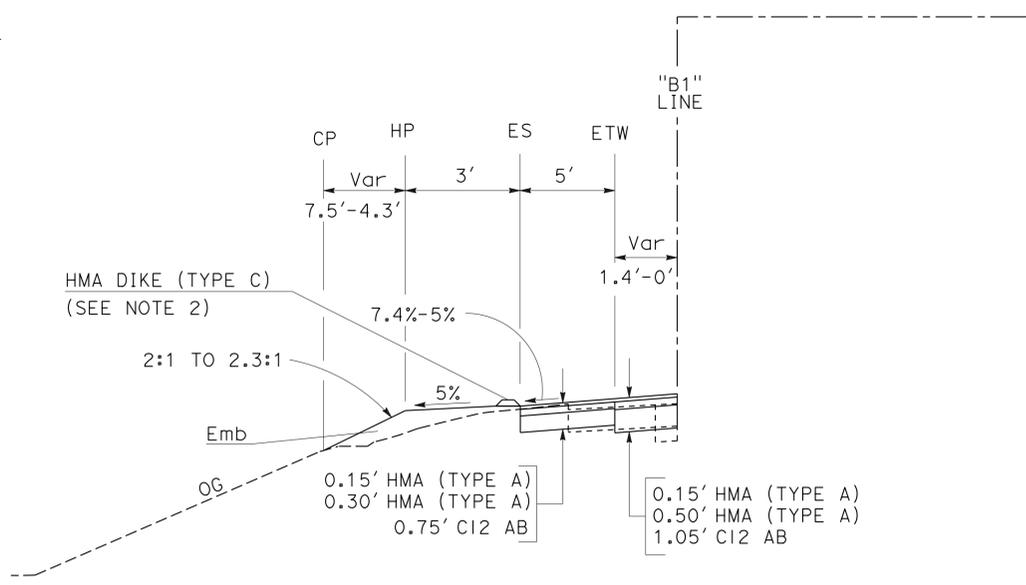
LAST REVISION DATE PLOTTED => 17-JUN-2015
 04-20-15 TIME PLOTTED => 13:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	5	79

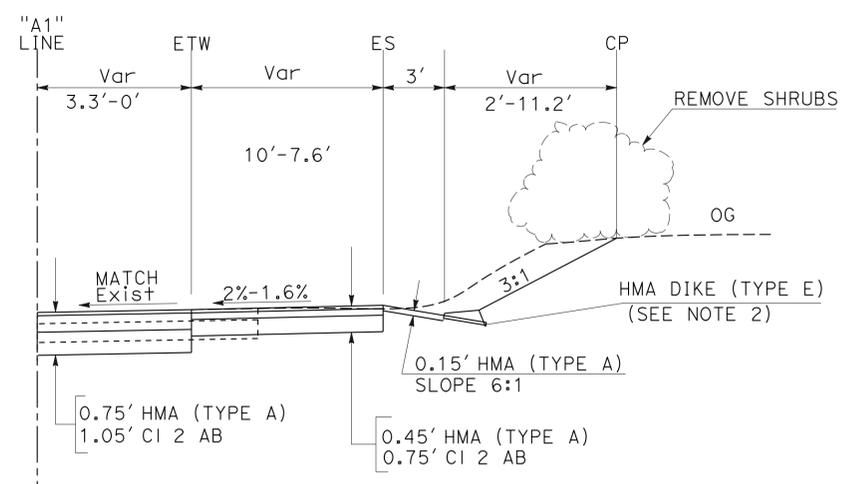
4-27-15
 REGISTERED CIVIL ENGINEER DATE
 4-27-15
 PLANS APPROVAL DATE

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.

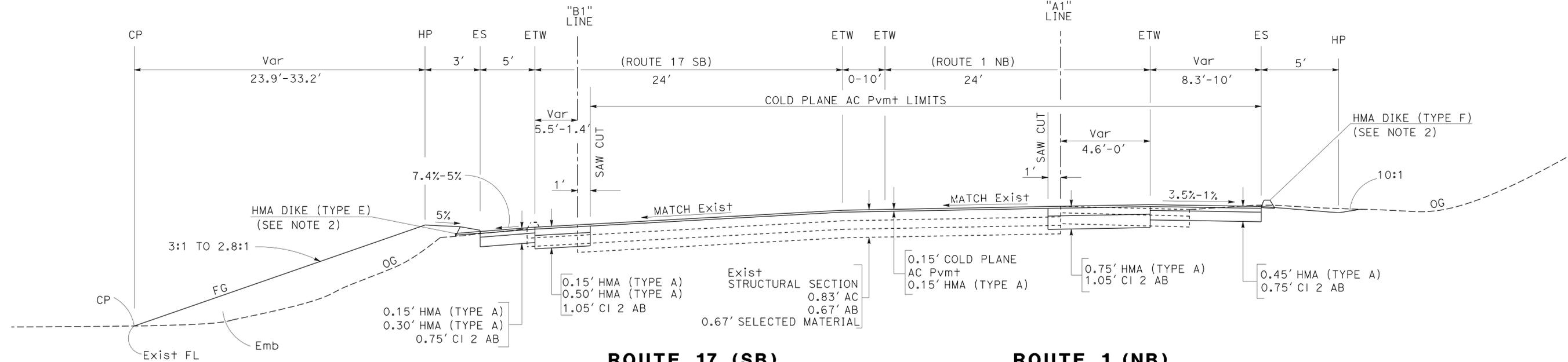
REGISTERED PROFESSIONAL ENGINEER
 ATIF MURSI ABDALLA
 No. C. 83253
 Exp. 3/31/17
 CIVIL
 STATE OF CALIFORNIA



ROUTE 17 (SB)
"B1" LINE Sta 138+15 TO Sta 138+42



ROUTE 1 (NB)
"A1" LINE Sta 58+50 TO Sta 62+75



ROUTE 17 (SB)
"B1" LINE Sta 134+95 TO Sta 138+42

ROUTE 1 (NB)
"A1" LINE Sta 57+72.5 TO Sta 63+00

TYPICAL CROSS SECTIONS
NO SCALE **X-4**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 06-DESIGN
 FUNCTIONAL SUPERVISOR: STEVEN McDONALD
 CALCULATED/DESIGNED BY: ATIF ABDALLA
 CHECKED BY: SAL JARAMILLO
 REVISED BY: DATE REVISIONS

LAST REVISION DATE PLOTTED => 17-JUN-2015
 03-11-15 TIME PLOTTED => 13:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	6	79

4-27-15
 REGISTERED CIVIL ENGINEER DATE
 4-27-15
 PLANS APPROVAL DATE

ATIF MURSI ABDALLA
 No. C. 83253
 Exp. 3/31/17
 CIVIL

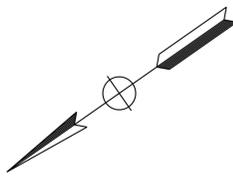
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

- 1- FOR COMPLETE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- 2- FOR RELOCATE ELECTROLIER SEE SHEET E-1.

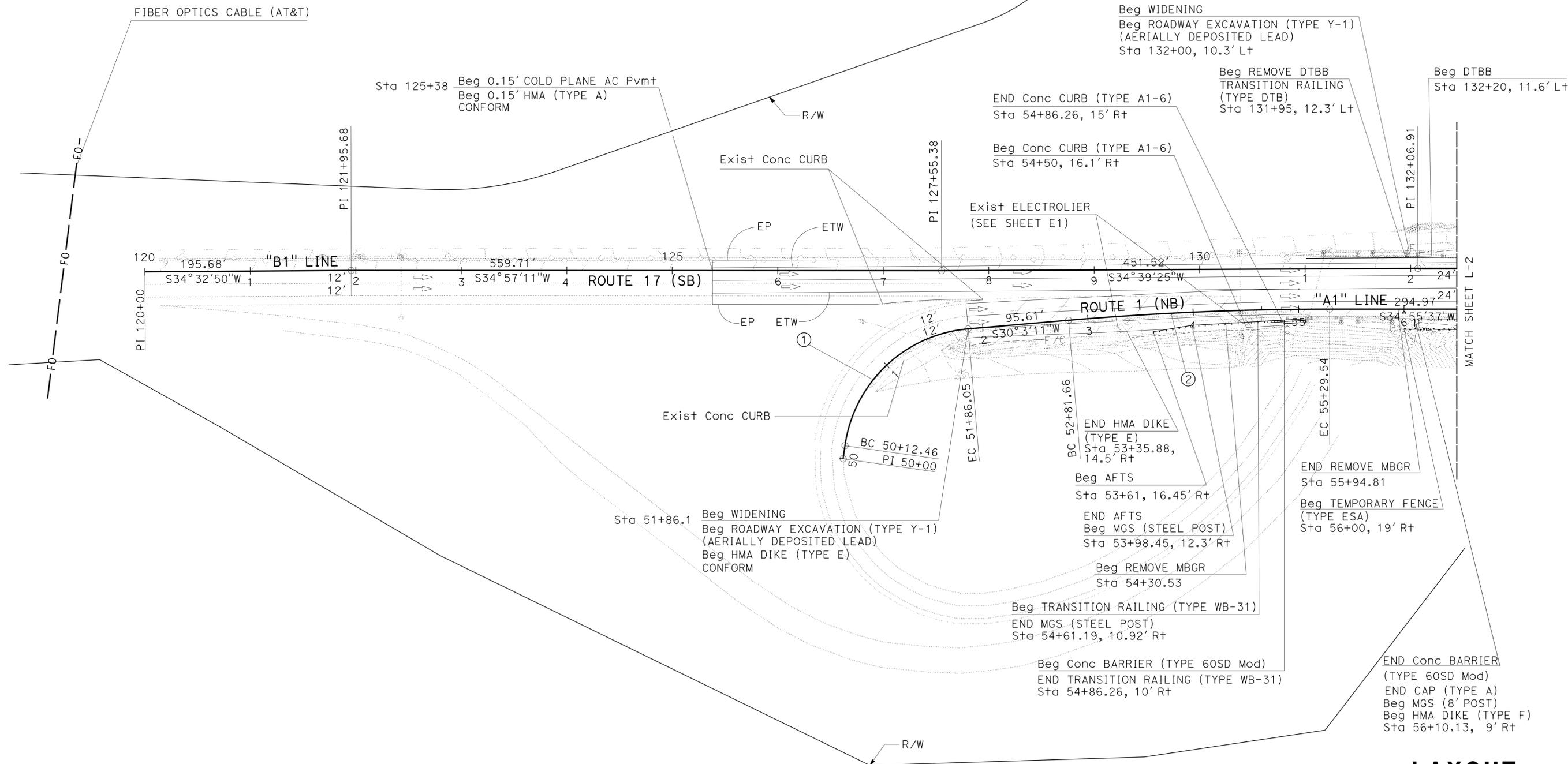
ABBREVIATION

AFTS= ALTERNATIVE FLARED TERMINAL SYSTEM



CURVE DATA

No.	⊕	R	Δ	T	L
1		129.00'	77°05'59"	102.79'	173.59'
2		2914.00'	04°52'26"	124.02'	247.88'
3		1527.00'	10°50'56"	145.00'	289.14'
4		2003.00'	19°52'53"	351.05'	695.03'



LAYOUT

L-1

SCALE: 1"=50'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 06-DESIGN

FUNCTIONAL SUPERVISOR
 STEVEN McDONALD

CALCULATED-DESIGNED BY
 CHECKED BY

ATIF ABDALLA
 SAL JARAMILLO

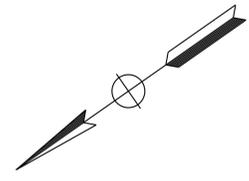
REVISED BY
 DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	7	79

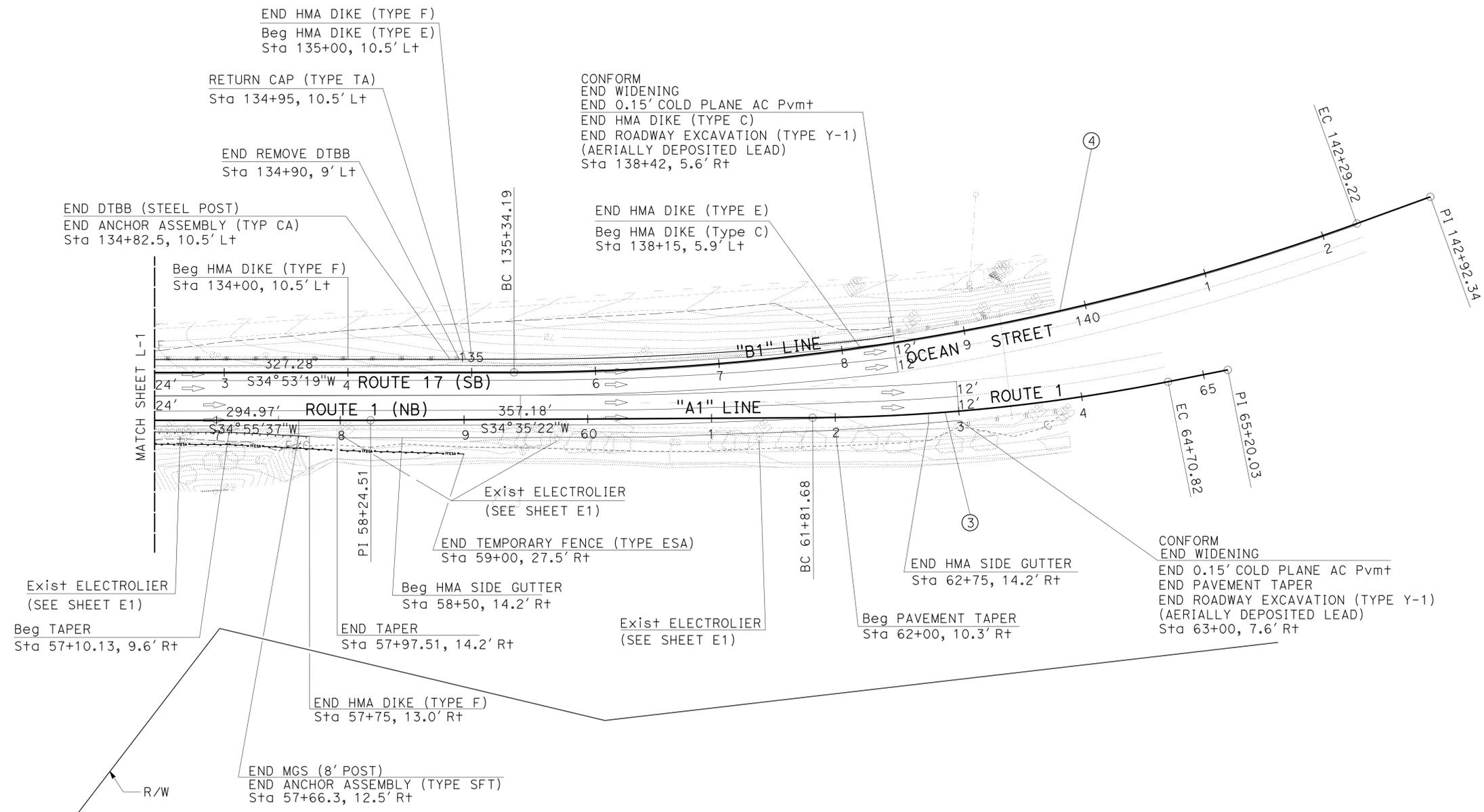
<i>Atif M</i>	4-27-15
REGISTERED CIVIL ENGINEER	DATE
4-27-15	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
ATIF MURSI ABDALLA
 No. C 83253
 Exp. 3/31/17
 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 06-DESIGN
FUNCTIONAL SUPERVISOR STEVEN McDONALD
CALCULATED/DESIGNED BY CHECKED BY
ATIF ABDALLA SAL JARAMILLO
REVISED BY DATE
REVISED BY DATE



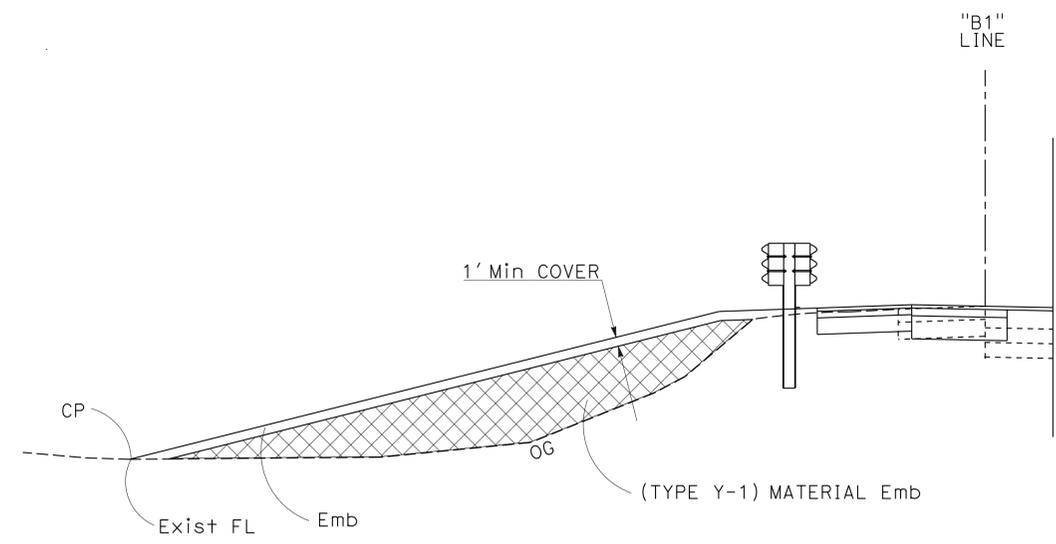
LAYOUT

L-2

SCALE: 1"=50'

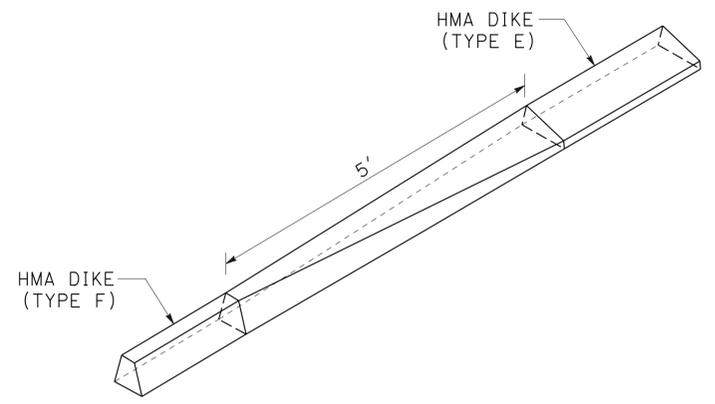
LAST REVISION: DATE PLOTTED => 17-JUN-2015 TIME PLOTTED => 13:13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	8	79
		4-27-15		REGISTERED CIVIL ENGINEER DATE	
		4-27-15		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.					



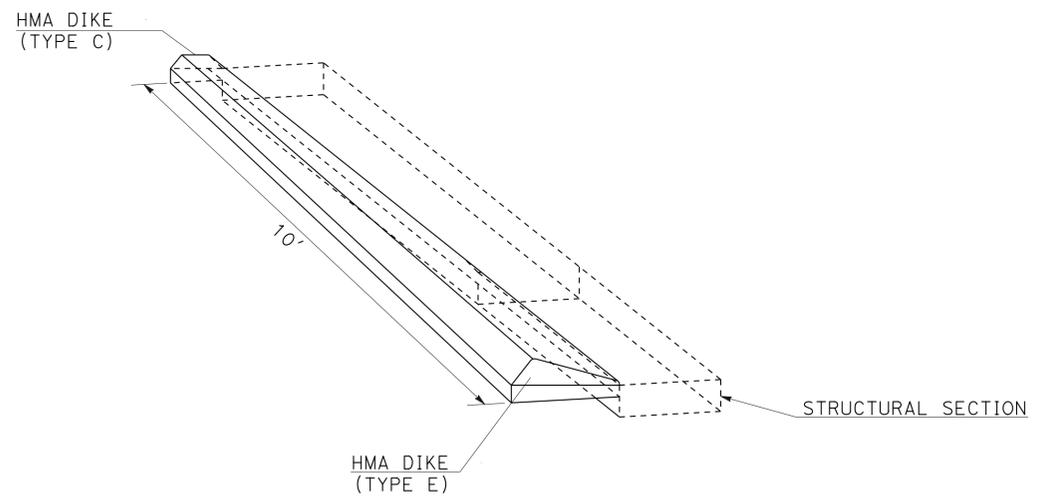
(TYPE Y-1) MATERIAL EMBANKMENT

ROUTE 17 (SB)
"B1" LINE Sta 132+00 TO Sta 138+42



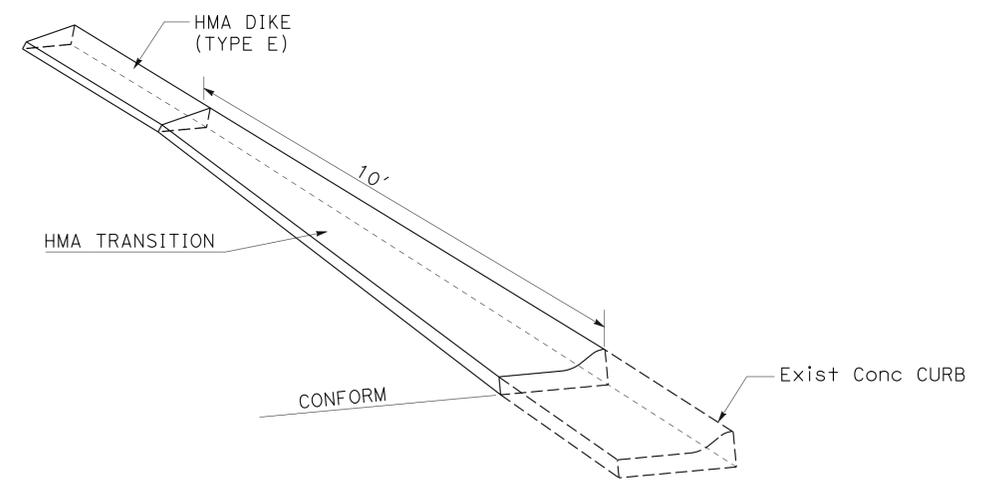
HMA DIKE TRANSITION

FROM (TYPE F) TO (TYPE E)



HMA DIKE TRANSITION

FROM (TYPE E) TO (TYPE C)



HMA DIKE TRANSITION

FROM Conc CURB TO HMA DIKE (TYPE E)

CONSTRUCTION DETAILS

NO SCALE

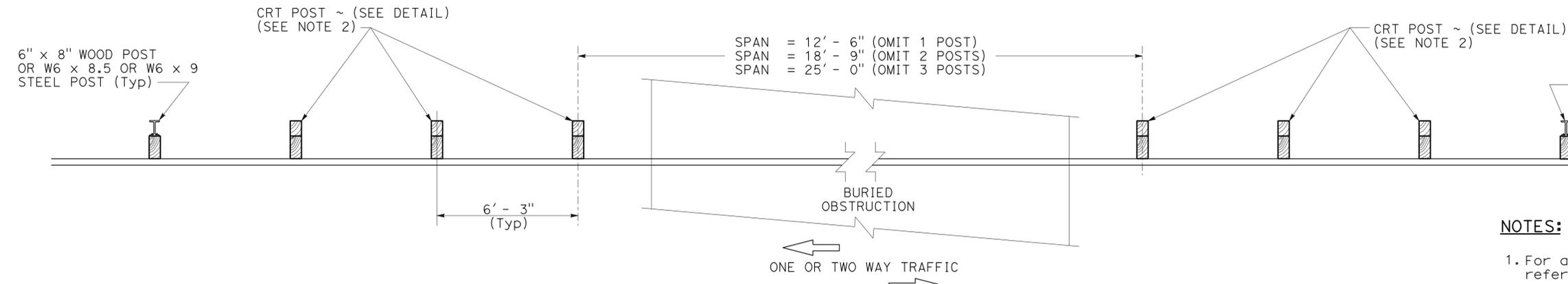
C-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
06 - DESIGN
FUNCTIONAL SUPERVISOR: STEVEN McDONALD
DESIGNED BY: SAL JARAMILLO
CHECKED BY: ATIF ABDALLA
REVISOR: ATIF ABDALLA
DATE: 4-27-15

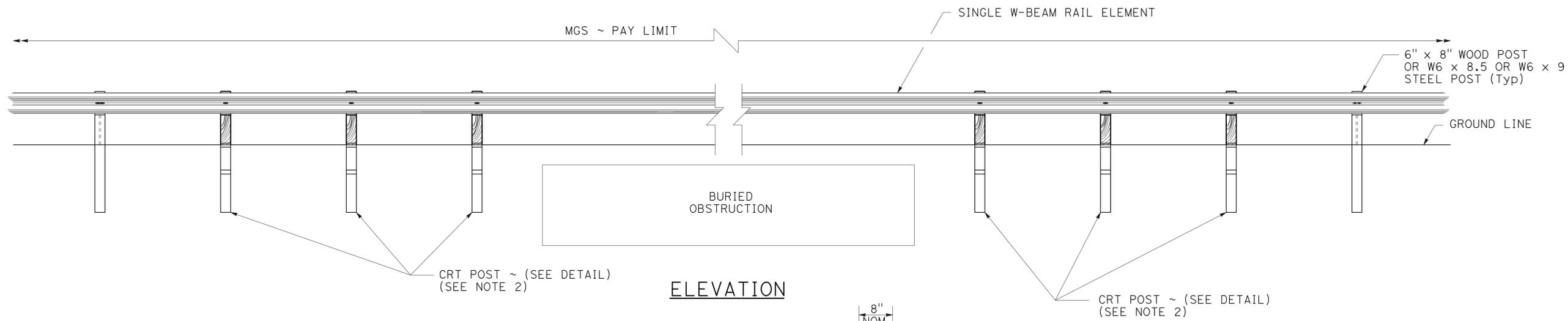
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	9	79
			4-27-15	DATE	
			4-27-15	PLANS APPROVAL DATE	
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					



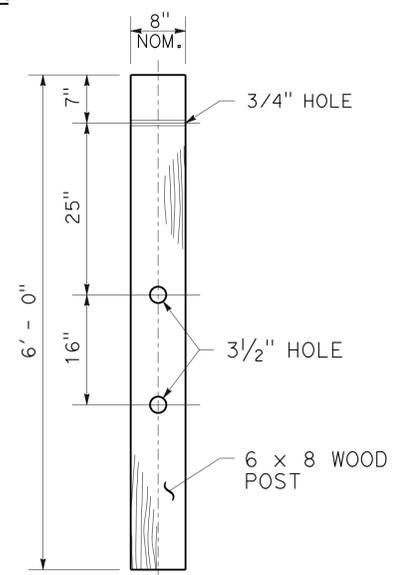
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans 06-DESIGN
 FUNCTIONAL SUPERVISOR: STEVEN McDONALD
 CALCULATED/DESIGNED BY: SAL JARAMILLO
 CHECKED BY: ATIF ABDALLA
 REVISED BY: DATE REVISIONS



- NOTES:**
- For additional details not shown on this plan, refer to RSP A77L1 and RSP A77L2.
 - CRT post to be wood only.



**MIDWEST GUARDRAIL SYSTEM DETAILS
OMIT POSTS**



**CONTROLLED RELEASING
TERMINAL (CRT) POST DETAIL**

CONSTRUCTION DETAILS
NO SCALE
C-2

LAST REVISION: DATE PLOTTED => 17-JUN-2015
 03-12-15 TIME PLOTTED => 13:13

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SCR	1, 17	17.0, 0.0	10	79

<i>Atif M</i>	4-27-15
REGISTERED CIVIL ENGINEER	DATE
4-27-15	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
ATIF MURSI ABDALLA
No. C. 83253
Exp. 3/31/17
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.

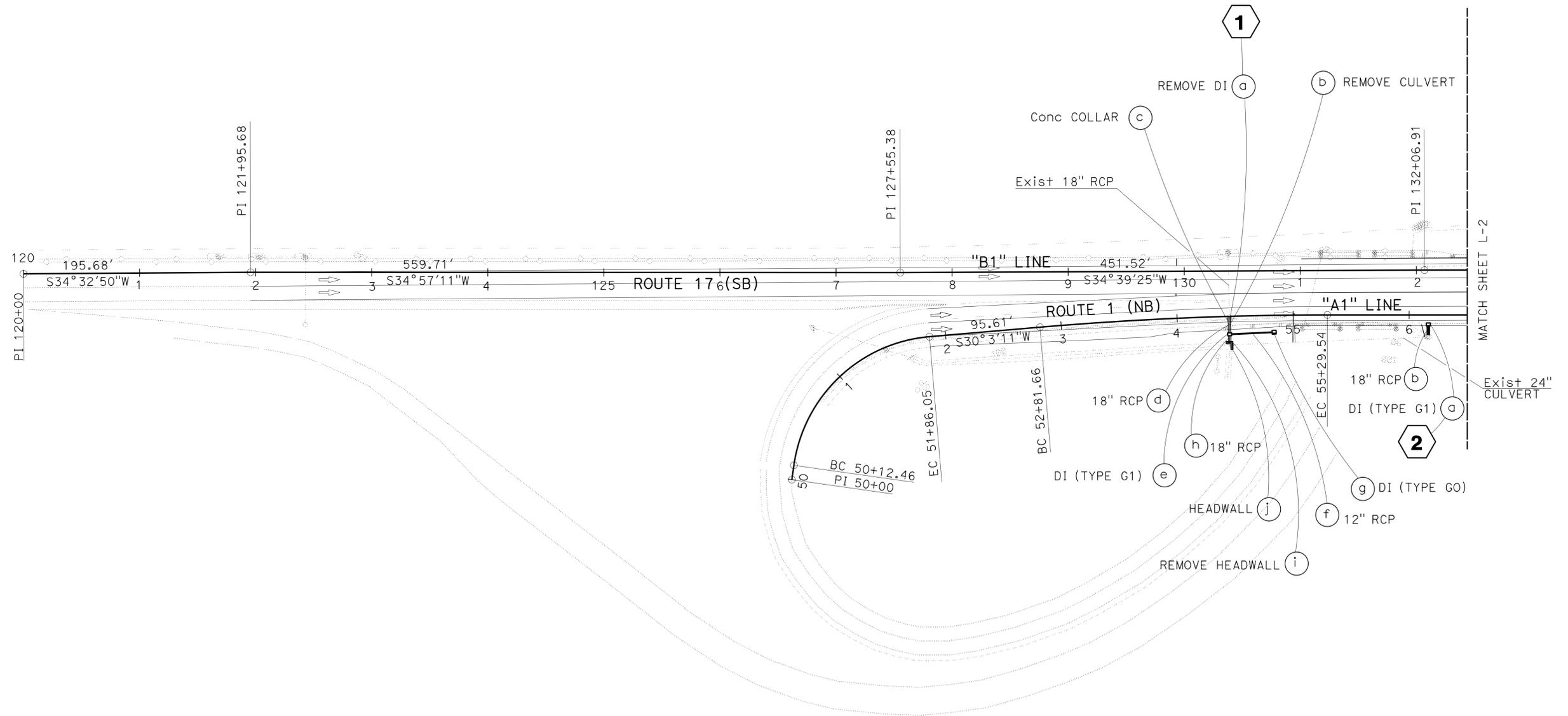
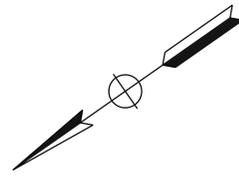
NOTE:

FOR COMPLETE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

LEGEND:

X DRAINAGE SYSTEM No.

(X) DRAINAGE UNIT No.



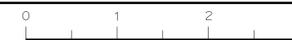
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISED BY
Caltrans	STEVEN McDONALD	ATIF ABDALLA	ATIF ABDALLA
06-DESIGN		CHECKED BY	SAL JARAMILLO

APPROVED FOR DRAINAGE WORK ONLY

SCALE: 1"=50'

DRAINAGE PLAN

D-1



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans 06 - DESIGN

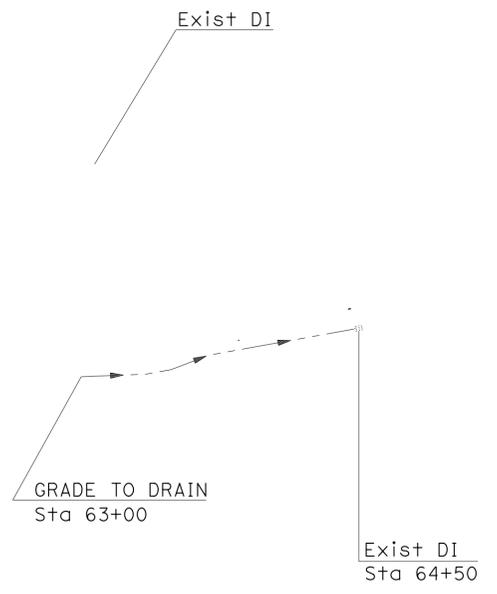
FUNCTIONAL SUPERVISOR
 STEVEN McDONALD

CALCULATED/DESIGNED BY
 CHECKED BY

ATIF ABDALLA
 SAL JARAMILLO

REVISED BY
 DATE REVISED

MATCH SHEET L-1



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	11	79

Atif M 4-27-15
 REGISTERED CIVIL ENGINEER DATE
 4-27-15
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 ATIF MURSI ABDALLA
 No. C 83253
 Exp. 3/31/17
 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.

DRAINAGE PLAN

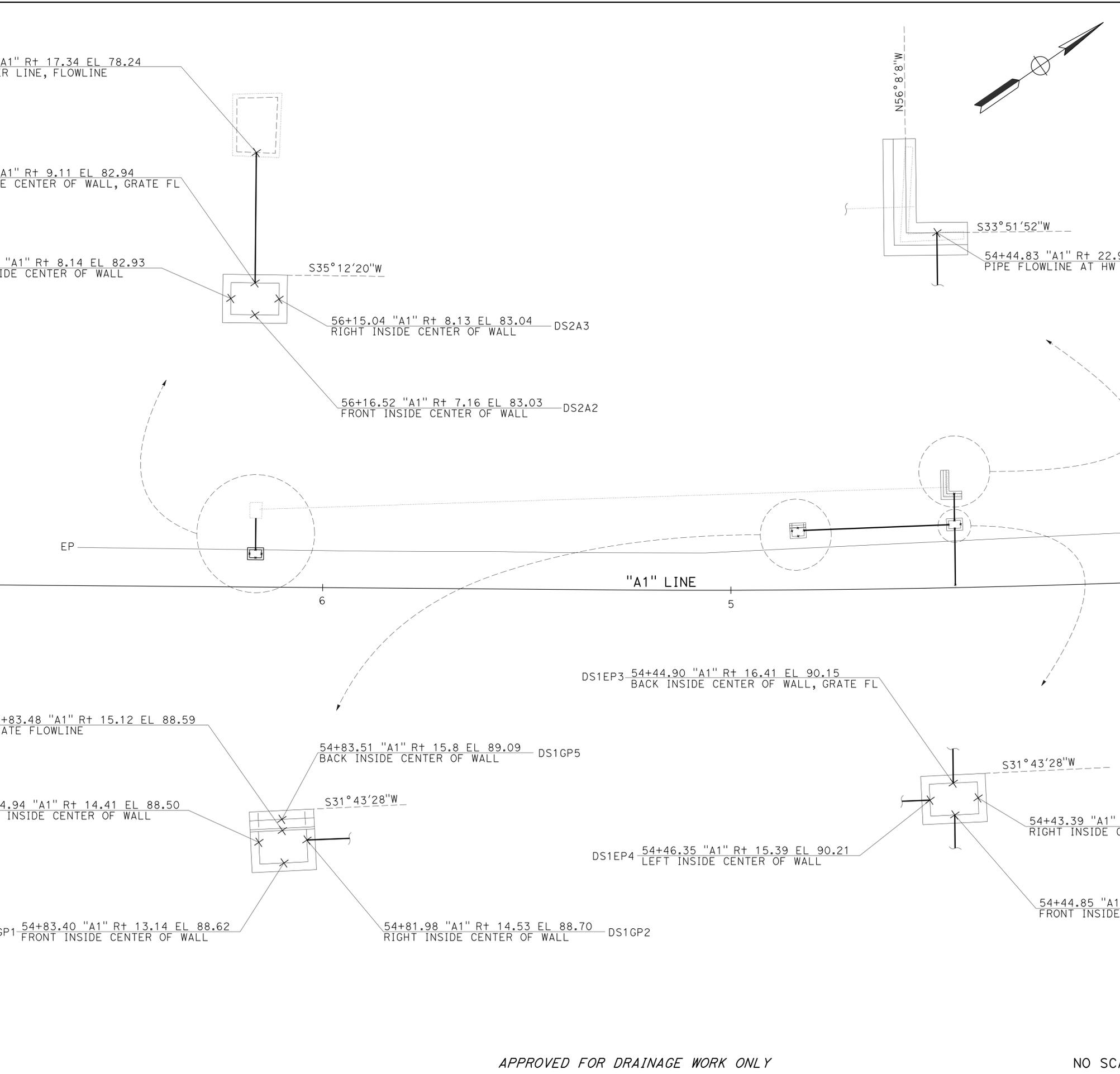
D-2

SCALE: 1"=50'

APPROVED FOR DRAINAGE WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans 06-DESIGN

FUNCTIONAL SUPERVISOR: STEVEN McDONALD
 CALCULATED/DESIGNED BY: SAL JARAMILLO
 CHECKED BY: ATIF ABDALLA
 REVISED BY: DATE REVISION



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	14	79

REGISTERED CIVIL ENGINEER: *Atif Abdalla* DATE: 4-27-15
 PLANS APPROVAL DATE: 4-27-15
 No. C. 83253
 Exp. 3/31/17
 CIVIL
 STATE OF CALIFORNIA

DRAINAGE DETAILS
DD-1

APPROVED FOR DRAINAGE WORK ONLY

NO SCALE

LAST REVISION: DATE PLOTTED => 17-JUN-2015
 TIME PLOTTED => 13:14

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	15	79

4-27-15
 REGISTERED CIVIL ENGINEER DATE
 4-27-15
 PLANS APPROVAL DATE

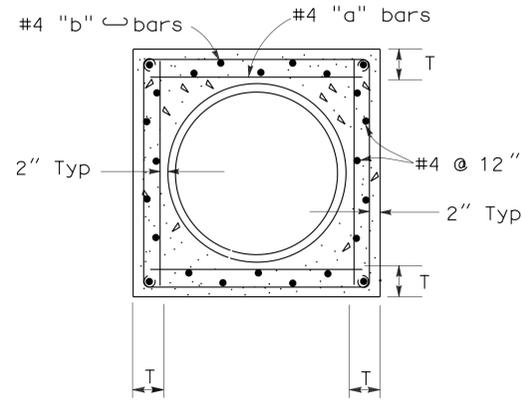
REGISTERED PROFESSIONAL ENGINEER
 ATIF MURSI ABDALLA
 No. C 83253
 Exp. 3/31/17
 CIVIL
 STATE OF CALIFORNIA

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.

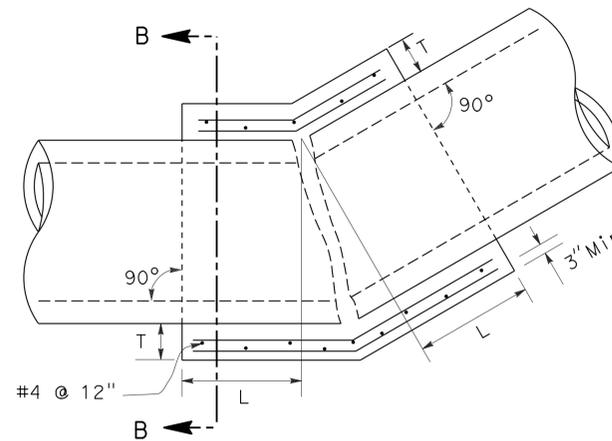
NOTES:

- WHERE PIPE OF DIFFERENT DIAMETERS ARE JOINED WITH A CONCRETE COLLAR. "L" SHALL BE THOSE OF THE LARGER PIPE. D=D1 OR D2 WHICHEVER IS GREATER.
- JOIN PIPES AT INVERTS WHERE THE SLOPE OF THE DOWNSTREAM PIPE. AND JOIN PIPES AT SOFFIT WHERE THE SLOPE OF THE UPSTREAM PIPE IS GREATER THAN THE SLOPE OF THE DOWNSTREAM PIPE.
- "B" BARS TO BE LOCKED AROUND LONGITUDINAL REINFORCEMENT. ROTATE BARS AS NECESSARY.
- CONCRETE COLLAR SHOWN IS ADEQUATE FOR UP TO 40 FEET OF FILL.
- FOR PIPE SIZE NOT LISTED USE NEXT LARGER.

D	L	T	"a"	"b"
12"	1.0'	4"	@12"	
18"	1.0'	5"	@12"	
24"	1.0'	6"	@12"	
36"	1.5'	10"	@12"	
42"	1.5'	10"	@12"	
48"	1.5'	10"	@12"	
60"	1.75'	11"	@12"	
72"	2.0'	12"	@6"	@6"



SECTION B-B



TYPICAL CONCRETE COLLAR FIELD BEND

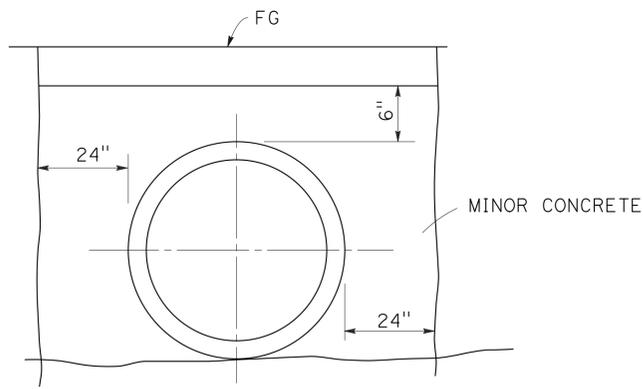
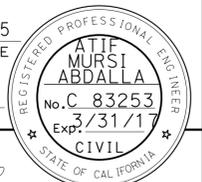
DRAINAGE DETAILS
DD-2

APPROVED FOR DRAINAGE WORK ONLY

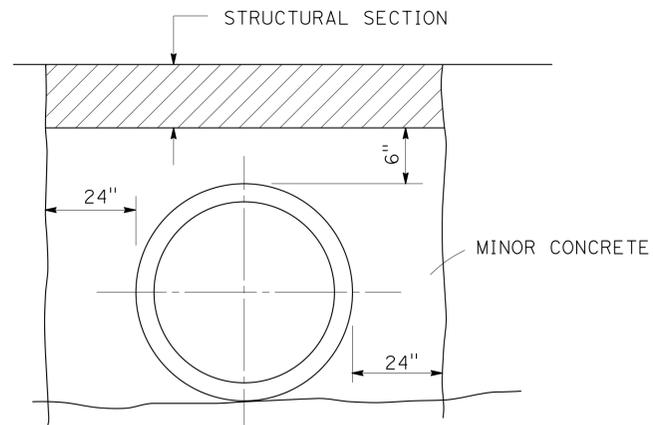
NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 06 - DESIGN
 SAL JARAMILLO
 ATIF ABDALLA
 REVISOR BY
 DATE REVISOR
 CALICULATED-DESIGNED BY
 CHECKED BY
 FUNCTIONAL SUPERVISOR
 STEVEN McDONALD

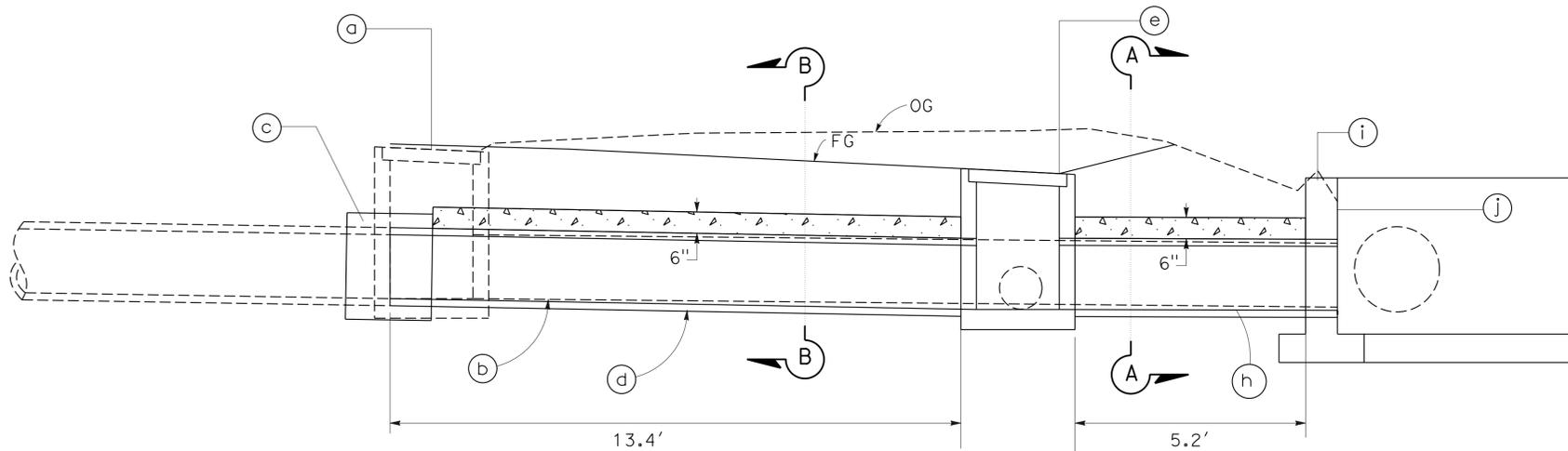
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	16	79
			4-27-15	DATE	
			4-27-15	PLANS APPROVAL DATE	
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					



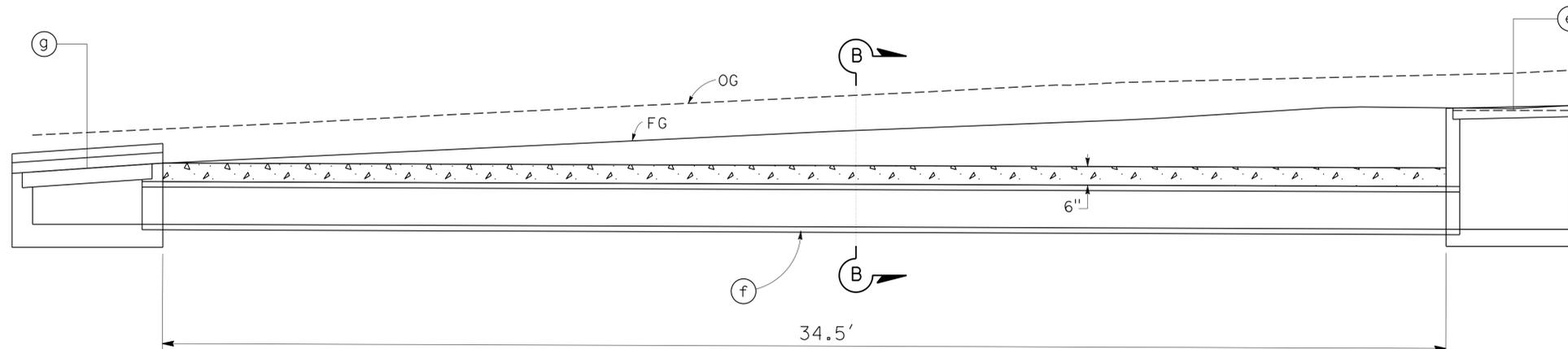
CONCRETE BACKFILL (PIPE TRENCH)
SECTION A-A



CONCRETE BACKFILL (PIPE TRENCH)
SECTION B-B



DRAINAGE SYSTEM No. 1



DRAINAGE SYSTEM No. 1

DRAINAGE DETAILS
DD-3

APPROVED FOR DRAINAGE WORK ONLY

NO SCALE

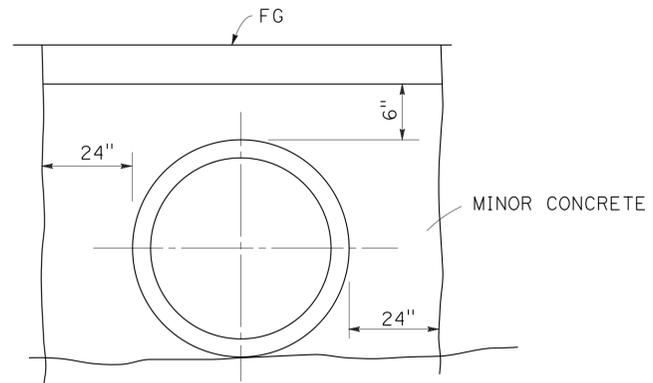
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	06 - DESIGN
Et Caltrans	
FUNCTIONAL SUPERVISOR	STEVEN McDONALD
CALCULATED-DESIGNED BY	CHECKED BY
SAL JARAMILLO	ATIF ABDALLA
REVISOR BY	DATE REVISED

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SCR	1, 17	17.0, 0.0	17	79

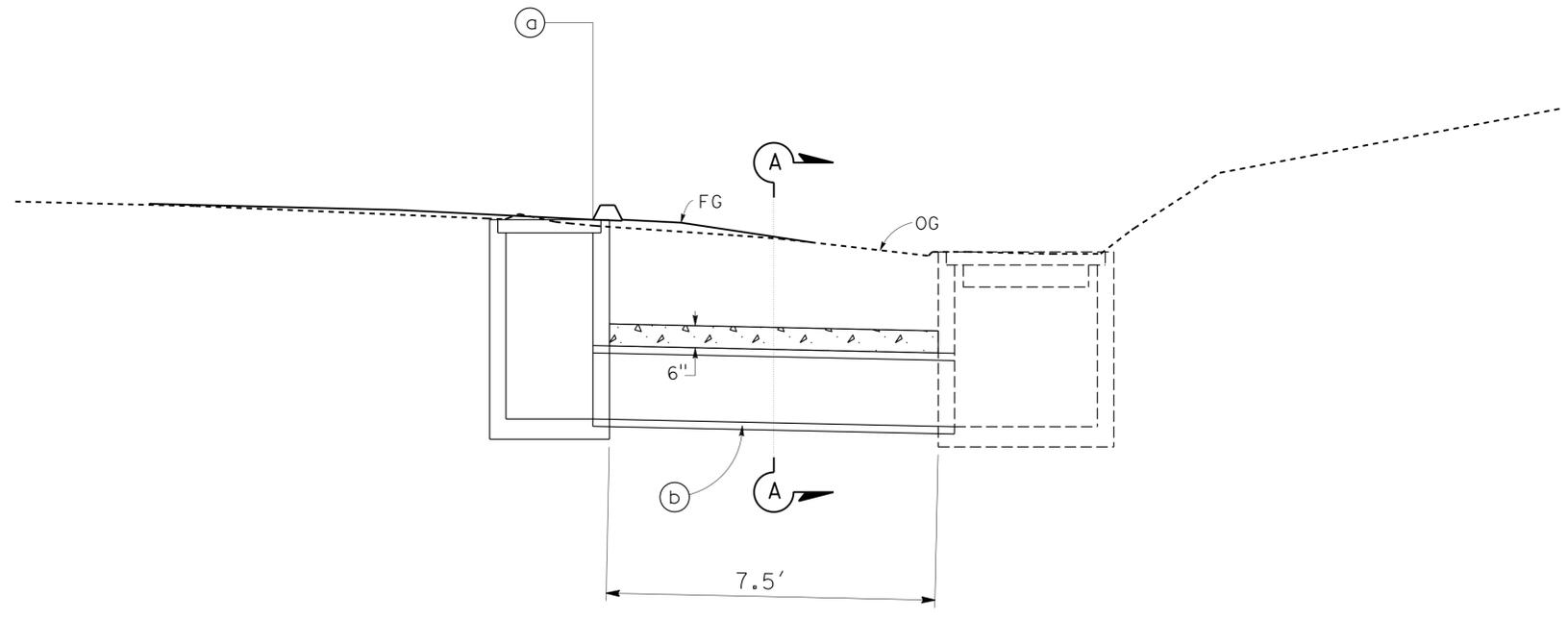
<i>Atif Mursi</i>	4-27-15
REGISTERED CIVIL ENGINEER	DATE
4-27-15	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
ATIF MURSI ABDALLA
No. C. 83253
Exp. 3/31/17
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.



CONCRETE BACKFILL (PIPE TRENCH)
SECTION A-A



DRAINAGE SYSTEM No. 2

DRAINAGE DETAILS
DD-4

APPROVED FOR DRAINAGE WORK ONLY

NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	DESIGNED BY	REVISOR
Caltrans	STEVEN McDONALD	ATIF ABDALLA	ATIF ABDALLA
06 - DESIGN	CHECKED BY	SAL JARAMILLO	DATE REVISOR

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	18	79

4-27-15
 REGISTERED CIVIL ENGINEER DATE
 4-27-15
 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.

DRAINAGE QUANTITIES

DRAINAGE PLAN SHEET No.	DRAINAGE SYSTEM No.	DRAINAGE UNIT No.	REMOVE INLET	REMOVE CULVERT	Conc COLLAR	18" REINFORCED CONCRETE PIPE	HEIGHT OF INLET (H) (N)	FRAME AND GRATE	MISCELLANEOUS IRON AND STEEL	MINOR CONCRETE (MINOR STRUCTURE)	12" REINFORCED CONCRETE PIPE	REMOVE HW	CONCRETE BACKFILL (PIPE TRENCH)	DESCRIPTION	DRAINAGE PLAN SHEET No.	DRAINAGE SYSTEM No.	DRAINAGE UNIT No.	
D-1	1	a	1											REMOVE DRAINAGE INLET	D-1	1	a	
		b		20.3										REMOVE DRAINAGE CULVERT			b	
		c			1													c
		d				13.8							13.2				18" REINFORCED CONCRETE PIPE	d
		e					3.19	1	239	1.0							DI (TYPE G1) GRATE TYPE (24-12X)	e
		f										35.5		11.4			12" TONGUE AND GROVE JOINT PIPE	f
		g						1	239	0.9							DI (TYPE G0) GRATE TYPE (24-12X)	g
		h				6.5								6.3			18" REINFORCED CONCRETE PIPE	h
		i										1					REMOVE HEADWALL	i
		j						3.67				1.5					HEADWALL	j
		a	2					4.53	1	239	1.3						DI (TYPE G1) GRATE TYPE (24-12X)	a
		b					8.2							7.9			18" REINFORCED CONCRETE PIPE	b
		TOTAL			1	20.3		28.5			717	4.7	35.5	1			38.8	

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

DRAINAGE QUANTITIES DQ-1

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No.	SIGN CODE	SIGN MESSAGE	PANEL SIZE	No. OF POST AND SIZE	No. OF SIGNS
(A)	W20-1	ROAD WORK AHEAD	60" x 60"	2 - 4" x 6"	4
(B)	C14(CA)	END ROAD WORK	48" x 24"	1 - 4" x 6"	3
(C)	C40(CA)	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	144" x 60"	2 - 6" x 8"	3
(D)	C11(CA)	ROAD CONSTRUCTION NEXT 2 MILES	90" x 48"	2 - 6" x 6"	2

NOTES:

1. EXACT SIGN LOCATIONS TO BE DETERMINED BY THE ENGINEER.
2. FOR SIGN "C40 (CA)" (TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONE), ALL LETTERS SHALL BE BLACK ON WHITE BACKGROUND.
3. EXACT PCMS LOCATIONS TO BE DETERMINED BY THE ENGINEER.

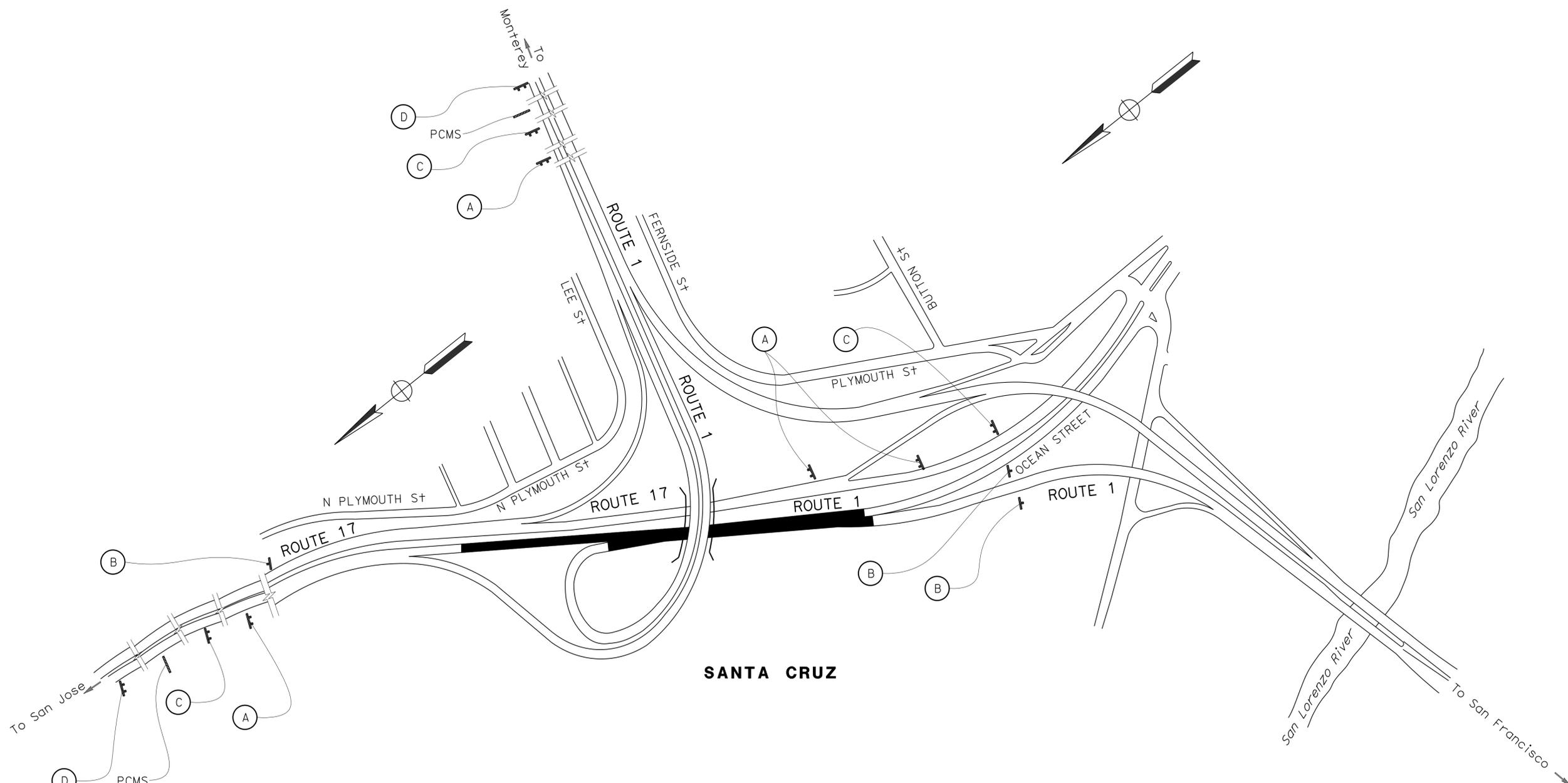
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	19	79

Hassan Cohe 03/20/15
 REGISTERED CIVIL ENGINEER DATE

4-27-15
 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
HASSAN M. TAHA
 No. 60130
 Exp. 06/30/16
 CIVIL
 STATE OF CALIFORNIA



APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

CONSTRUCTION AREA SIGNS
NO SCALE
CS-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	20	79

Hassan Cohe 03/20/15
 REGISTERED CIVIL ENGINEER DATE
 4-27-15
 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
 HASSAN M. TAHA
 No. 60130
 Exp. 06/30/16
 CIVIL
 STATE OF CALIFORNIA

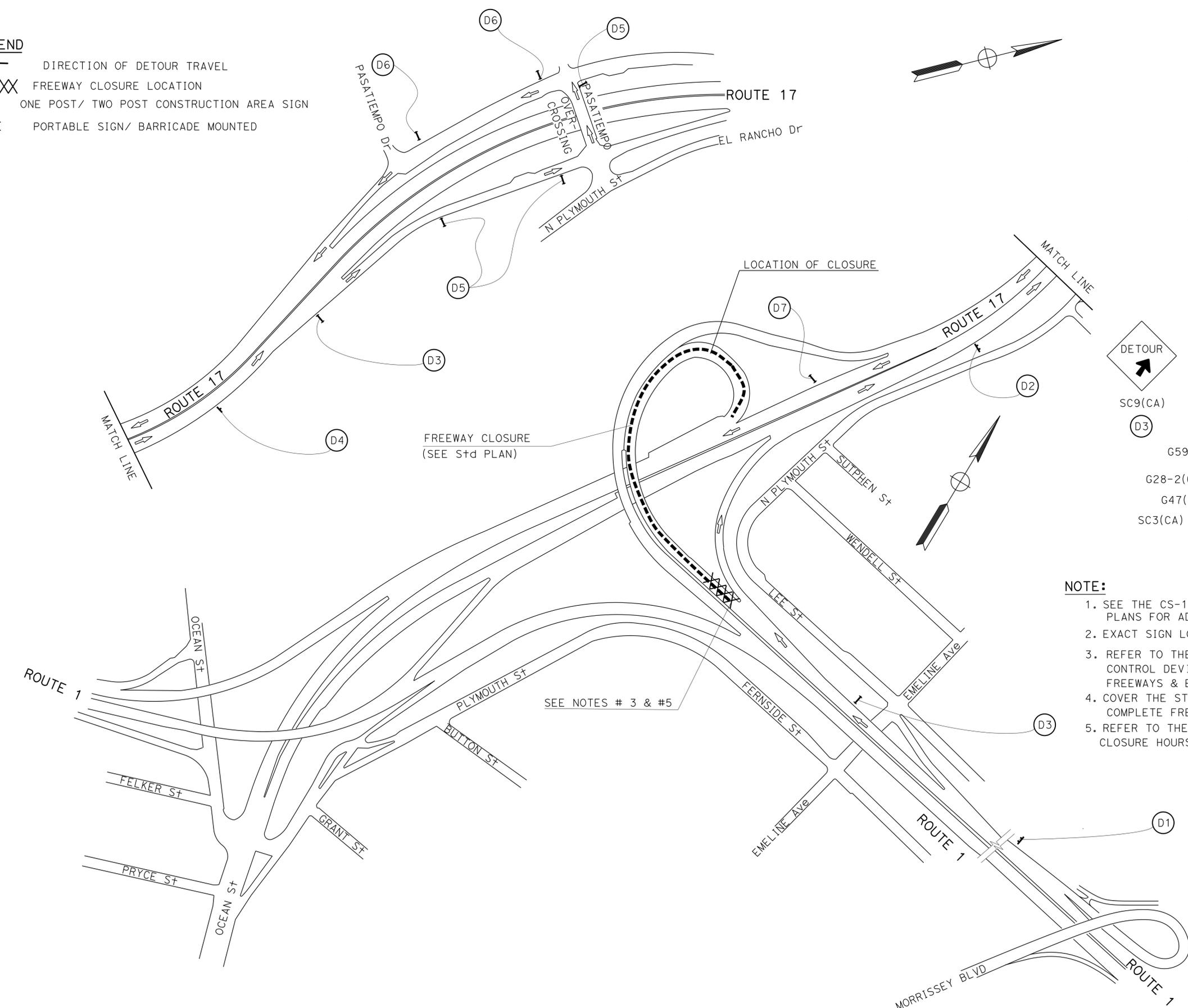
LEGEND

← DIRECTION OF DETOUR TRAVEL

--- XXX --- FREEWAY CLOSURE LOCATION

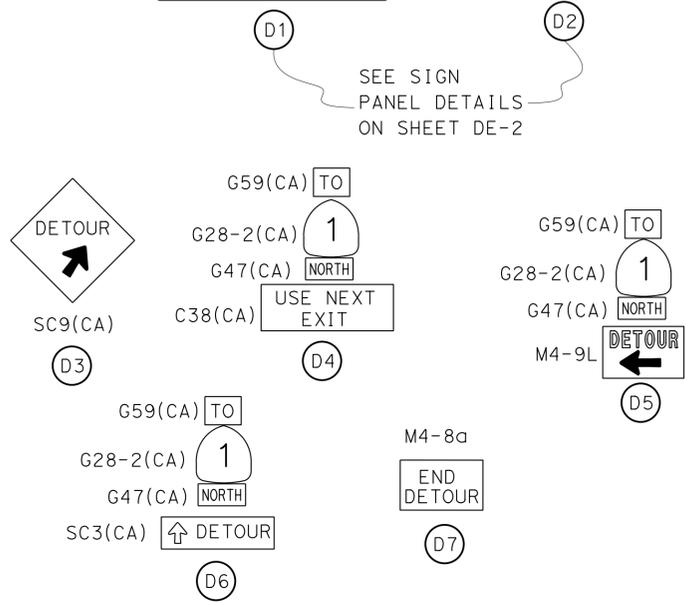
1/P ONE POST/ TWO POST CONSTRUCTION AREA SIGN

I PORTABLE SIGN/ BARRICADE MOUNTED



Sanata Cruz Half Moon Bay
USE DETOUR

Santa Cruz Half Moon Bay
NEXT EXIT



- NOTE:**
1. SEE THE CS-1 AND THE TRAFFIC HANDLING PLANS FOR ADDITIONAL CONSTRUCTION SIGNS.
 2. EXACT SIGN LOCATIONS TO BE DETERMINED BY THE ENGINEER.
 3. REFER TO THE STANDARD PLANS FOR ADDITIONAL TRAFFIC CONTROL DEVICES FOR TYPICAL TREATMENT ON COMPLETE FREEWAYS & EXPRESSWAYS CLOSURES.
 4. COVER THE STATIONERY DETOUR SIGNS DURING NON-ACTIVE COMPLETE FREEWAY CLOSURES AND DETOURS.
 5. REFER TO THE LANE CLOSURE CHARTS FOR THE PERMITTED CLOSURE HOURS ON COMPLETE FREEWAY CLOSURES.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: MOHAMMED GATAMI

DESIGNED BY: MUNIR ASSAF

CHECKED BY: HASSAN TAHA

REVISIONS:

NO.	DATE	DESCRIPTION

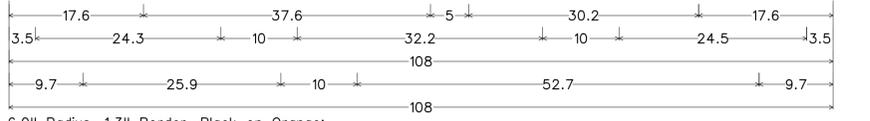
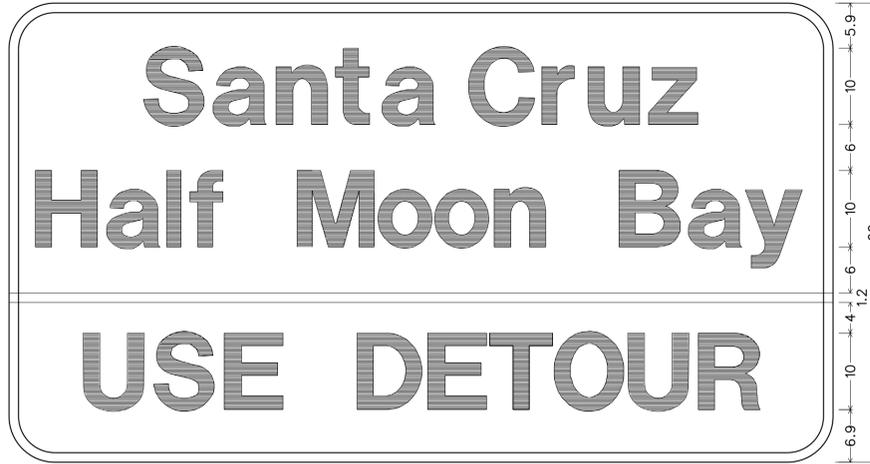
APPROVED FOR DETOUR WORK ONLY

NO SCALE

MOTORIST INFORMATION PLAN
(ROUTE 1 NB CLOSURE)

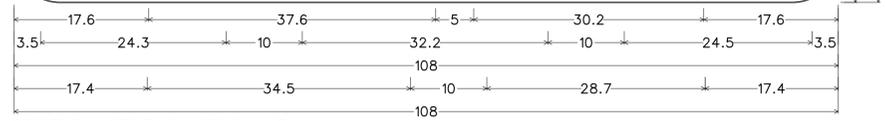
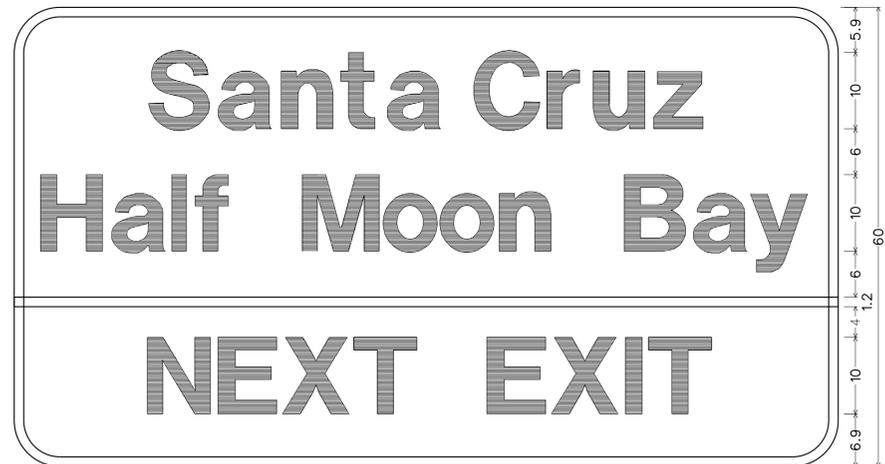
MI-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	21	79
		Hassan Cohe 03/20/15		REGISTERED CIVIL ENGINEER DATE	
		4-27-15		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>					



6.0" Radius, 1.3" Border, Black on Orange;
 [Santa Cruz] E Mod 50% spacing; [Half Moon Bay] E Mod 40% spacing; [USE DETOUR] E Mod 50% spacing;

(D1) SIGN PANEL DETAIL



6.0" Radius, 1.3" Border, Black on Orange;
 [Santa Cruz] E Mod 50% spacing; [Half Moon Bay] E Mod 40% spacing; [NEXT EXIT] E Mod 50% spacing;

(D2) SIGN PANEL DETAIL

STATIONARY MOUNTED AND PORTABLE CONSTRUCTION AREA SIGNS

SIGN No.	SIGN CODE	SIGN MESSAGE	PANEL SIZE	MOUNTING TYPE / No. OF POST AND SIZE	No. OF SIGNS	PANEL BACKGROUND	TYPE III BARRICADE
							(EA)
(D1)	SC(MOD-1)	SANTA CRUZ, HALF MOON BAY, USE DETOUR	108" x 60"	2 - 6" x 6"	1	(FRO)	
(D2)	SC(MOD-1)	SANTA CRUZ, HALF MOON BAY, NEXT EXIT	108" x 60"	2 - 6" x 6"	1	(FRO)	
(D3)	SC9(CA)	DETOURE & ARROW	48" x 48"	PORTABLE/BARRICADE MOUNTED	2	(FRO)	2
(D4)	G59(CA)	TO	18" x 12"	1 - 6" x 6"	1	(FRO)	
	G28-2(CA)	ROUTE 1, SHEILD	32" x 30"				
	G47(CA)	NORTH	30" x 15"				
	C38(CA)	USE NEXT EXIT	48" x 36"				
(D5)	G59(CA)	TO	18" x 12"	PORTABLE/BARRICADE MOUNTED	3	(FRO)	3
	G28-2(CA)	ROUTE 1, SHEILD	32" x 30"				
	G47(CA)	NORTH	30" x 15"				
	M4-9L	DETOUR & ARROW	48" x 36"				
(D6)	G59(CA)	TO	18" x 12"	PORTABLE/BARRICADE MOUNTED	2	(FRO)	3
	G28-2(CA)	ROUTE 1, SHEILD	32" x 30"				
	G47(CA)	NORTH	30" x 15"				
	SC3(CA)	DETOUR & ARROW	48" x 18"				
(D7)	M4-8a	END DETOUR	24" x 18"	PORTABLE/BARRICADE MOUNTED	1	(FRO)	1
TOTAL							9

(FRO): FLUORESCENT ORANGE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: MOHAMMED QATAMI
 CALCULATED/DESIGNED BY: MUNIR ASSAF
 CHECKED BY: HASSAN TAHA
 REVISED BY: DATE REVISIONS

APPROVED FOR DETOUR WORK ONLY

MOTORIST INFORMATION AND DETAILS
MIQ-1

LAST REVISION: DATE PLOTTED => 17-JUN-2015
 04-27-15 TIME PLOTTED => 13:14

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	22	79

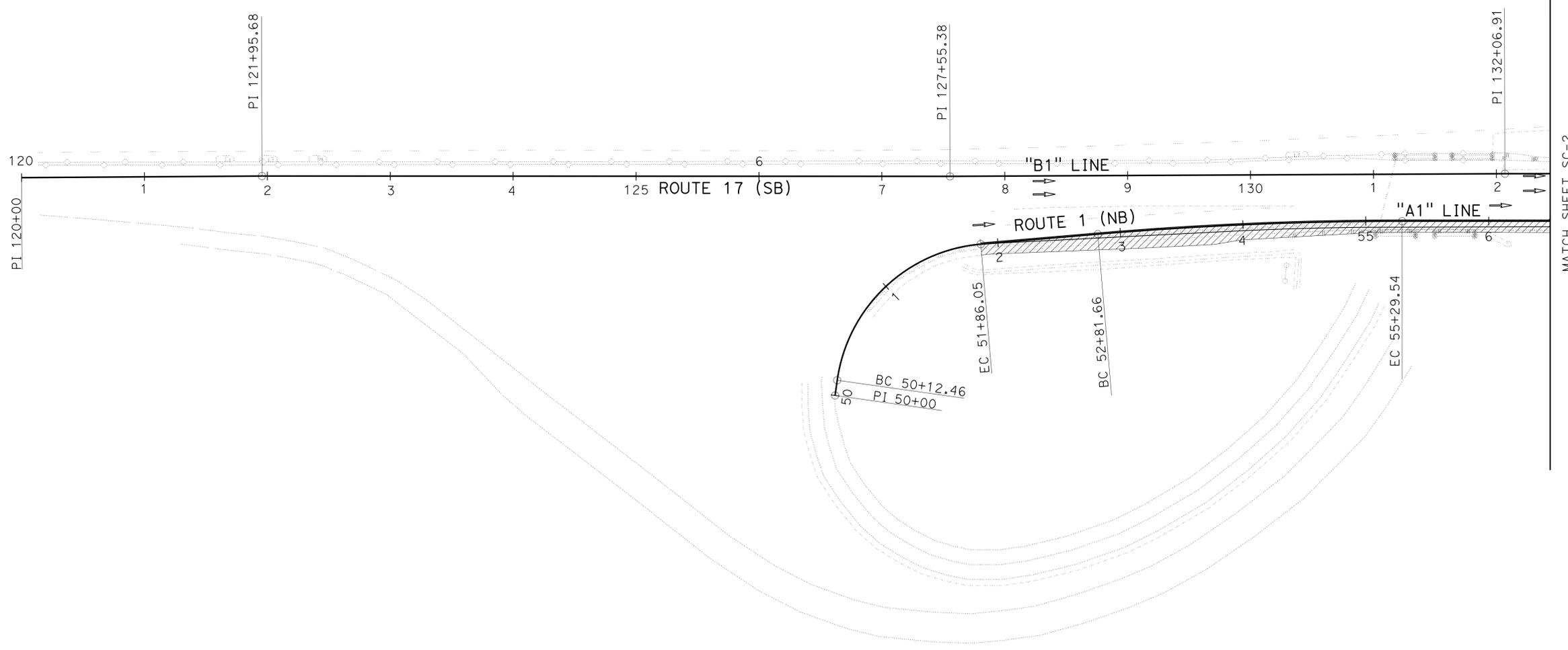
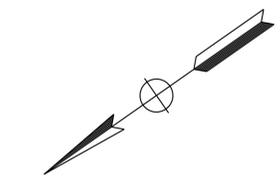
<i>Atif Mursi</i>	4-27-15
REGISTERED CIVIL ENGINEER	DATE
4-27-15	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
ATIF MURSI ABDALLA
No. C. 83253
Exp. 7/31/17
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.

- NOTES:**
- FOR COMPLETE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
 - FOR MORE INFORMATION SEE TRAFFIC HANDLING PLANS.
 - "A1" LINE IS THE OUTSIDE EXISTING ETW OF Rte 1.
 - "B1" LINE IS THE EXISTING INSIDE ETW OF Rte 1.
 - THE LAST SEQUENCE OF WORK IS COLD PLANE AND OVERLAY.

- LEGEND:**
-  CONSTRUCT THIS STAGE
 -  CONSTRUCTED IN PREVIOUS STAGES
 -  CONSTRUCTION NOTE NUMBER



**STAGE CONSTRUCTION PLAN
(STAGE 1)**

SCALE: 1"=50'

SC-1

APPROVED FOR STAGE CONSTRUCTION WORK ONLY

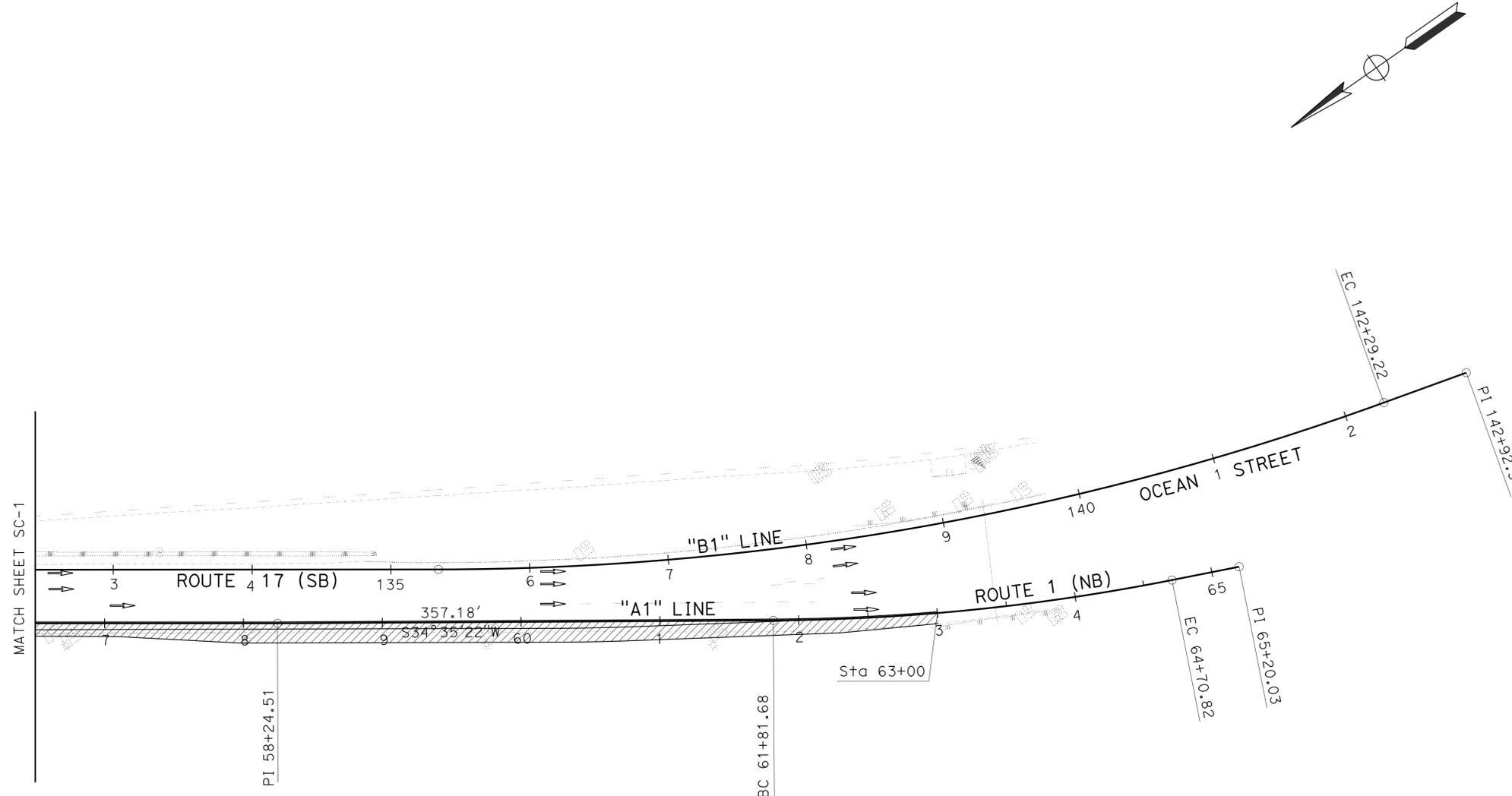
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISOR
Caltrans 06-DESIGN	STEVEN McDONALD	CHECKED BY	ATIF ABDALLA
			SAL JARAMILLO

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	23	79

<i>Atif Mursi</i>	4-27-15
REGISTERED CIVIL ENGINEER	DATE
4-27-15	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
ATIF MURSI ABDALLA
 No. C 83253
 Exp. 3/31/17
 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	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR
Caltrans 06-DESIGN	STEVEN McDONALD	CHECKED BY	ATIF ABDALLA
			SAL JARAMILLO

APPROVED FOR STAGE CONSTRUCTION WORK ONLY

STAGE CONSTRUCTION PLAN (STAGE 1)

SCALE: 1"=50'

SC-2

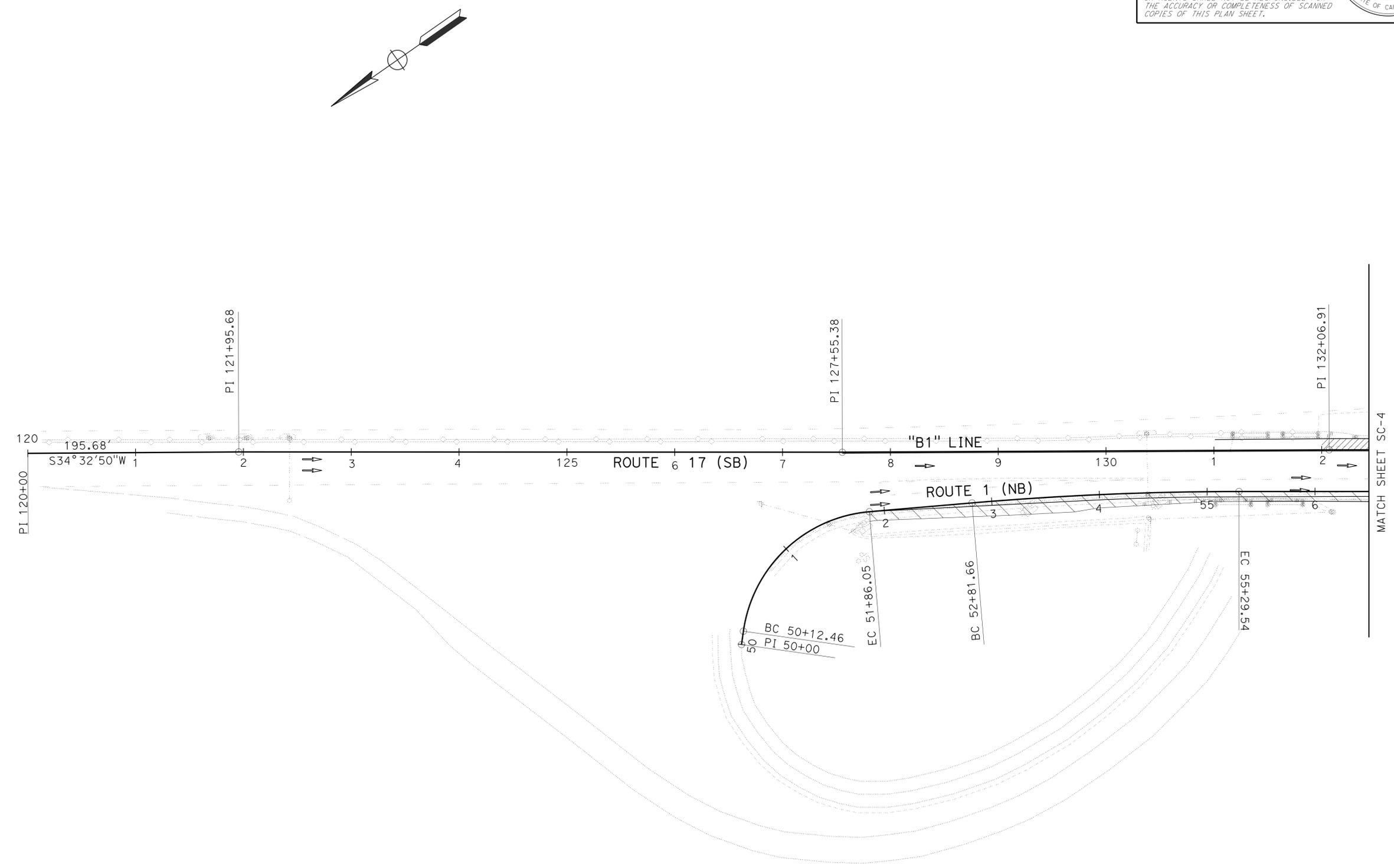
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	24	79

<i>Atif M</i>	4-27-15
REGISTERED CIVIL ENGINEER	DATE
4-27-15	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
ATIF MURSI ABDALLA
 No. C 83253
 Exp. 3/31/17
 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	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISOR BY
Caltrans	STEVEN McDONALD	CHECKED BY	DATE REVISED
06 - DESIGN		ATIF ABDALLA	
		SAL JARAMILLO	



STAGE CONSTRUCTION PLAN (STAGE 2)

APPROVED FOR STAGE CONSTRUCTION WORK ONLY

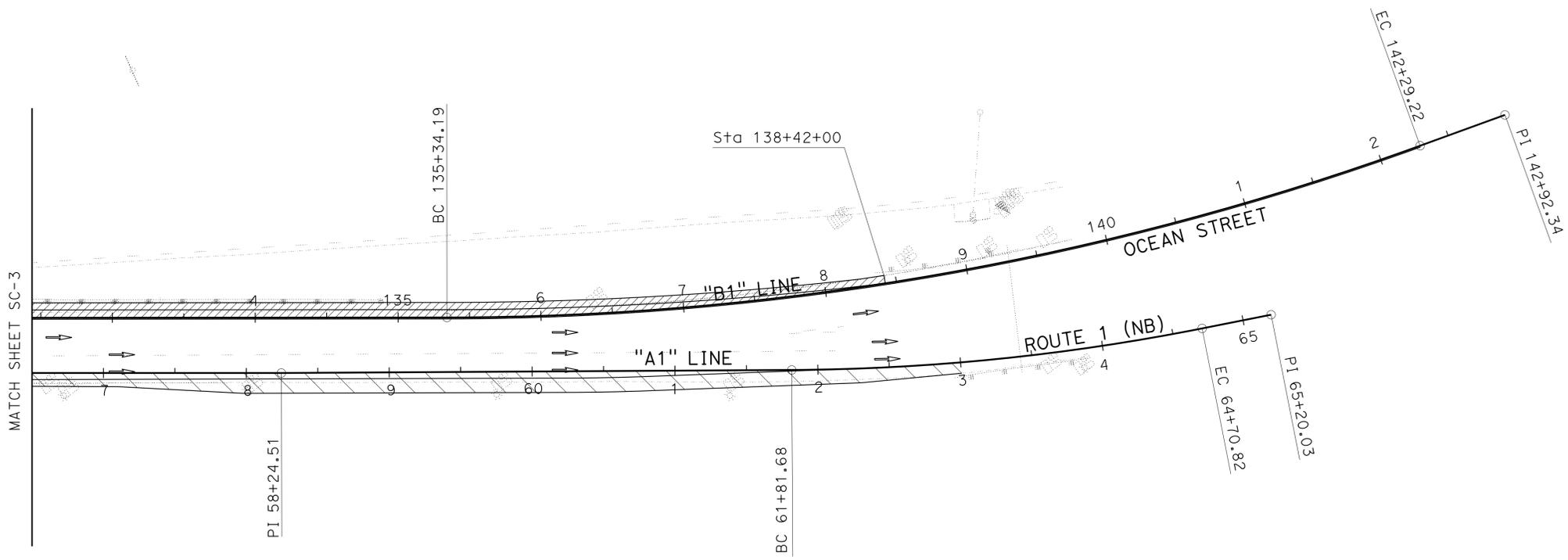
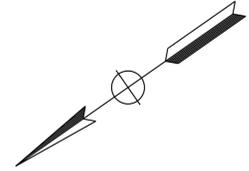
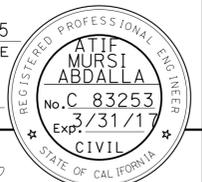
SCALE: 1"=50'

SC-3

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	25	79

<i>Atif Mursi</i>	4-27-15
REGISTERED CIVIL ENGINEER	DATE
4-27-15	
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	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR
Caltrans 06-DESIGN	STEVEN McDONALD	ATIF ABDALLA SAL JARAMILLO	ATIF ABDALLA
		CHECKED BY	DATE REVISOR

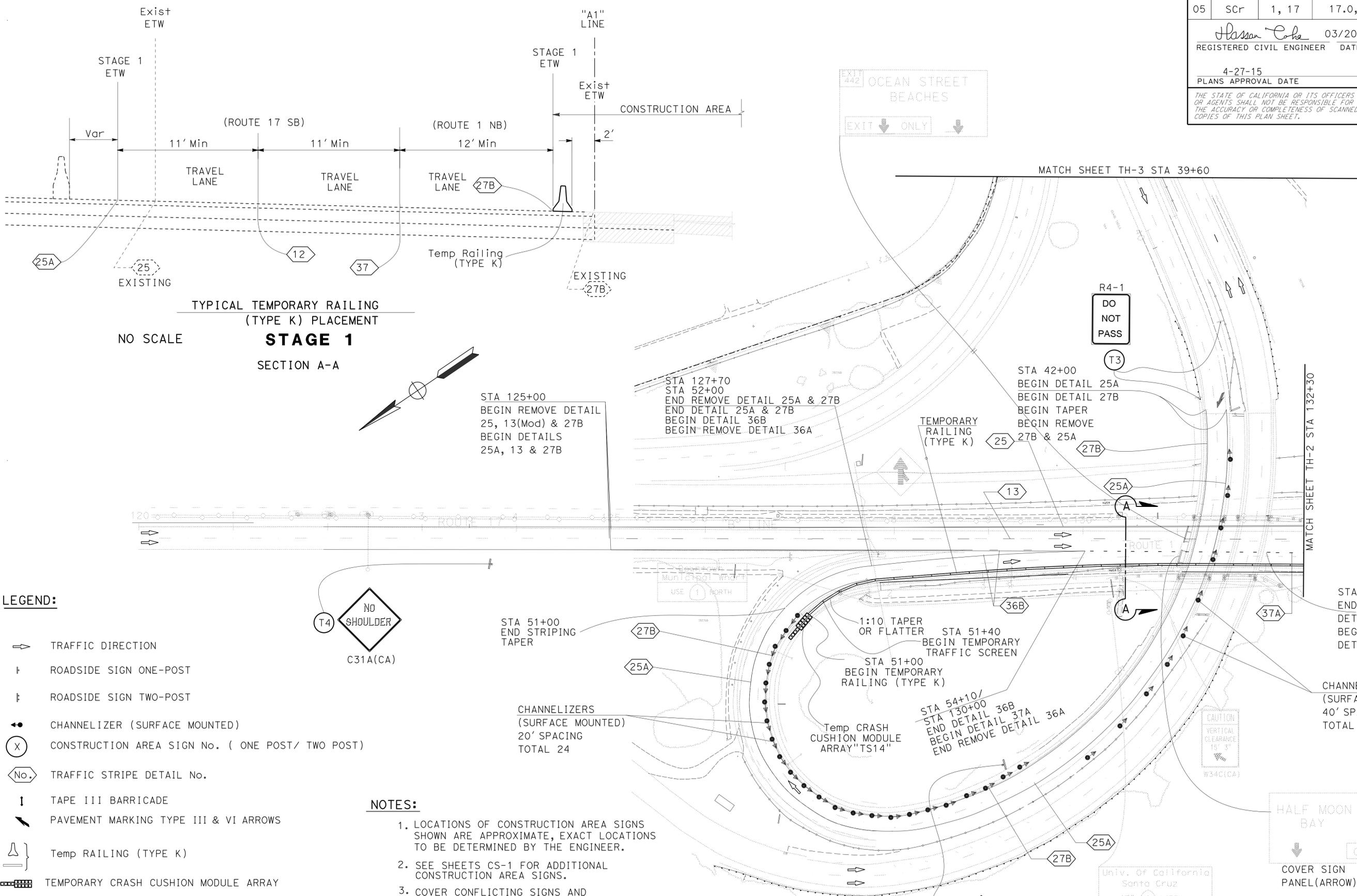
STAGE CONSTRUCTION PLAN (STAGE 2)

APPROVED FOR STAGE CONSTRUCTION WORK ONLY

SCALE: 1"=50'

SC-4

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	26	79
<i>Hassan Cohe</i> 03/20/15 REGISTERED CIVIL ENGINEER DATE			HASSAN M. TAHA No. 60130 Exp. 06/30/16 CIVIL		
4-27-15			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>					



TYPICAL TEMPORARY RAILING (TYPE K) PLACEMENT
 NO SCALE
STAGE 1
 SECTION A-A

LEGEND:

- TRAFFIC DIRECTION
- ROADSIDE SIGN ONE-POST
- ROADSIDE SIGN TWO-POST
- CHANNELIZER (SURFACE MOUNTED)
- CONSTRUCTION AREA SIGN No. (ONE POST/ TWO POST)
- TRAFFIC STRIPE DETAIL No.
- TAPE III BARRICADE
- PAVEMENT MARKING TYPE III & VI ARROWS
- Temp RAILING (TYPE K)
- TEMPORARY CRASH CUSHION MODULE ARRAY
- EXISTING TRAFFIC STRIPE DETAIL No.

NOTES:

1. LOCATIONS OF CONSTRUCTION AREA SIGNS SHOWN ARE APPROXIMATE, EXACT LOCATIONS TO BE DETERMINED BY THE ENGINEER.
2. SEE SHEETS CS-1 FOR ADDITIONAL CONSTRUCTION AREA SIGNS.
3. COVER CONFLICTING SIGNS AND REMOVE CONFLICTING STRIPING
4. SEE THE STAGE CONSTRUCTION PLANS FOR STAGING SEQUENCE.
5. SEE PD SHEETS FOR PERMANENT SIGNS & STRIPING DETAILS

APPROVED FOR TRAFFIC HANDLING WORK ONLY

TRAFFIC HANDLING PLAN (STAGE 1) TH-1

SCALE: 1"=50'

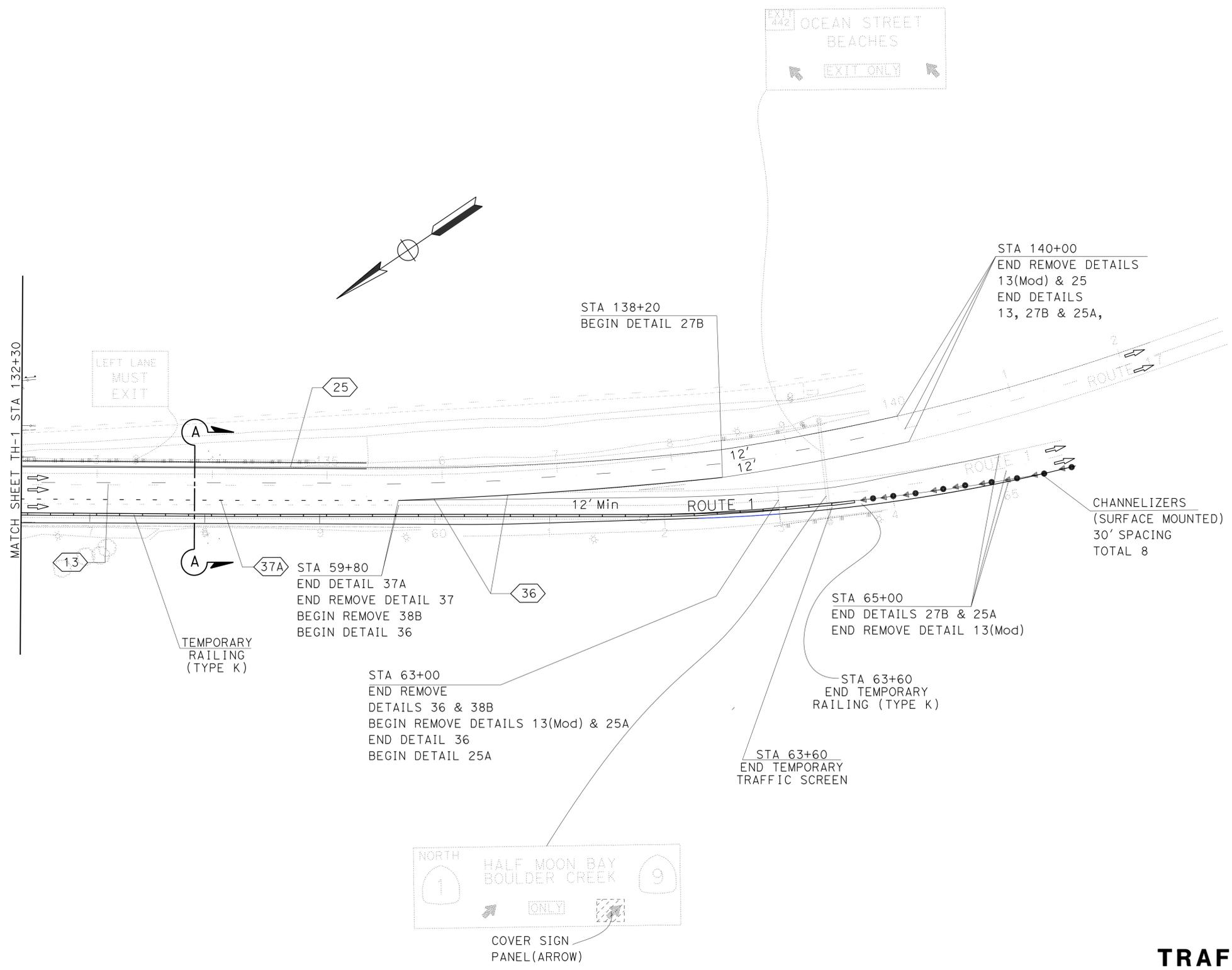
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	06 - TRAFFIC DESIGN
FUNCTIONAL SUPERVISOR	MOHAMMED QATAMI
CALCULATED/DESIGNED BY	CHECKED BY
MUNIR ASSAF	HASSAN TAHA
REVISOR	DATE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	27	79

<i>Hassan Cohe</i>	03/20/15
REGISTERED CIVIL ENGINEER	DATE
4-27-15	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
HASSAN M. TAHA
No. 60130
Exp. 06/30/16
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.



APPROVED FOR TRAFFIC HANDLING WORK ONLY

TRAFFIC HANDLING PLAN
(STAGE 1)
TH-2

SCALE: 1"=50'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	MUNIR ASSAF	REVISOR BY	
Caltrans 06 - TRAFFIC DESIGN	MOHAMMED QATAMI	CHECKED BY	HASSAN TAHA	DATE	

LAST REVISION DATE PLOTTED => 17-JUN-2015 04-27-15 TIME PLOTTED => 13:14

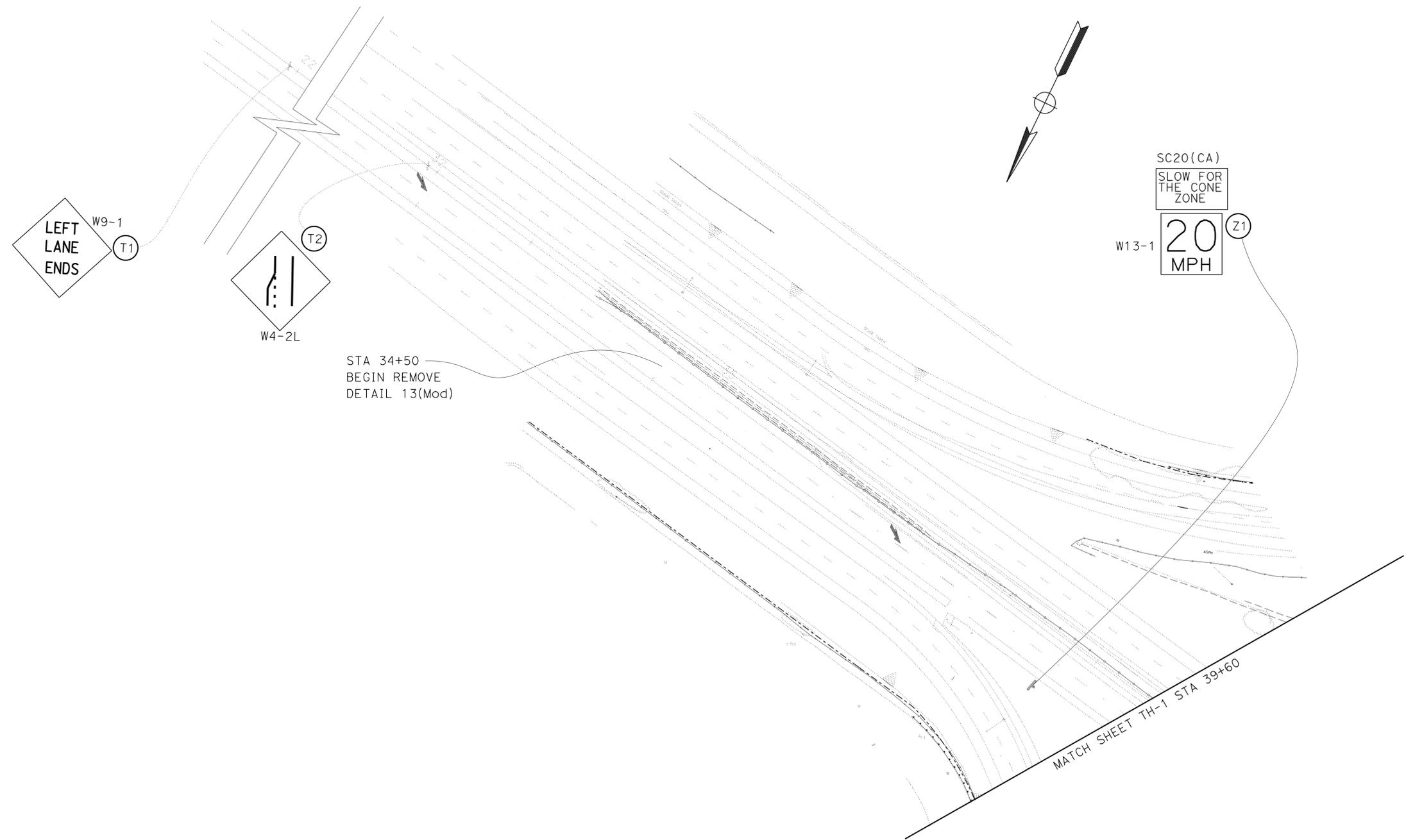
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	28	79

Hassan Cohe 03/20/15
 REGISTERED CIVIL ENGINEER DATE
 4-27-15
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 HASSAN M. TAHA
 No. 60130
 Exp. 06/30/16
 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.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	MUNIR ASSAF	REVISED BY	
Caltrans 06 - TRAFFIC DESIGN	MOHAMMED OATAMI	CHECKED BY	HASSAN TAHA	DATE REVISED	



APPROVED FOR TRAFFIC HANDLING WORK ONLY

TRAFFIC HANDLING PLAN
(STAGE 1)
TH-3

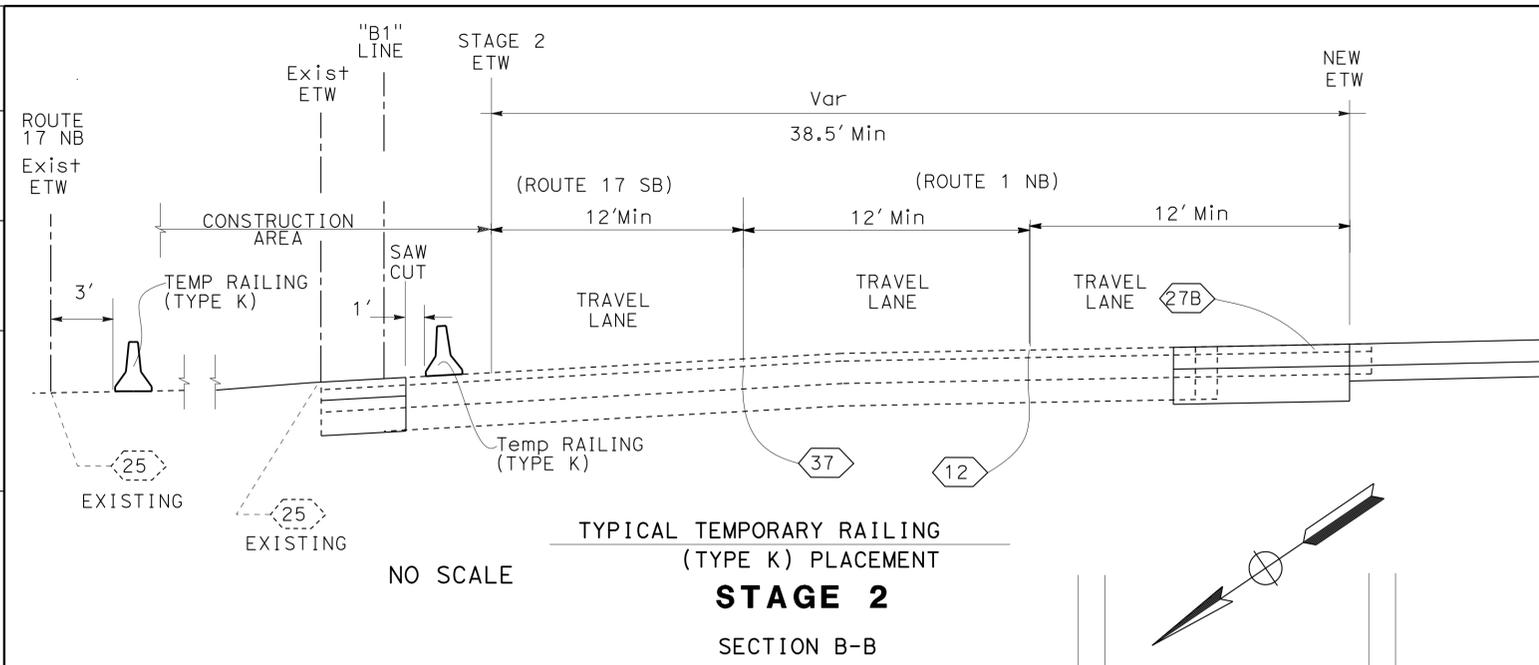
SCALE: 1"=50'

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	29	79

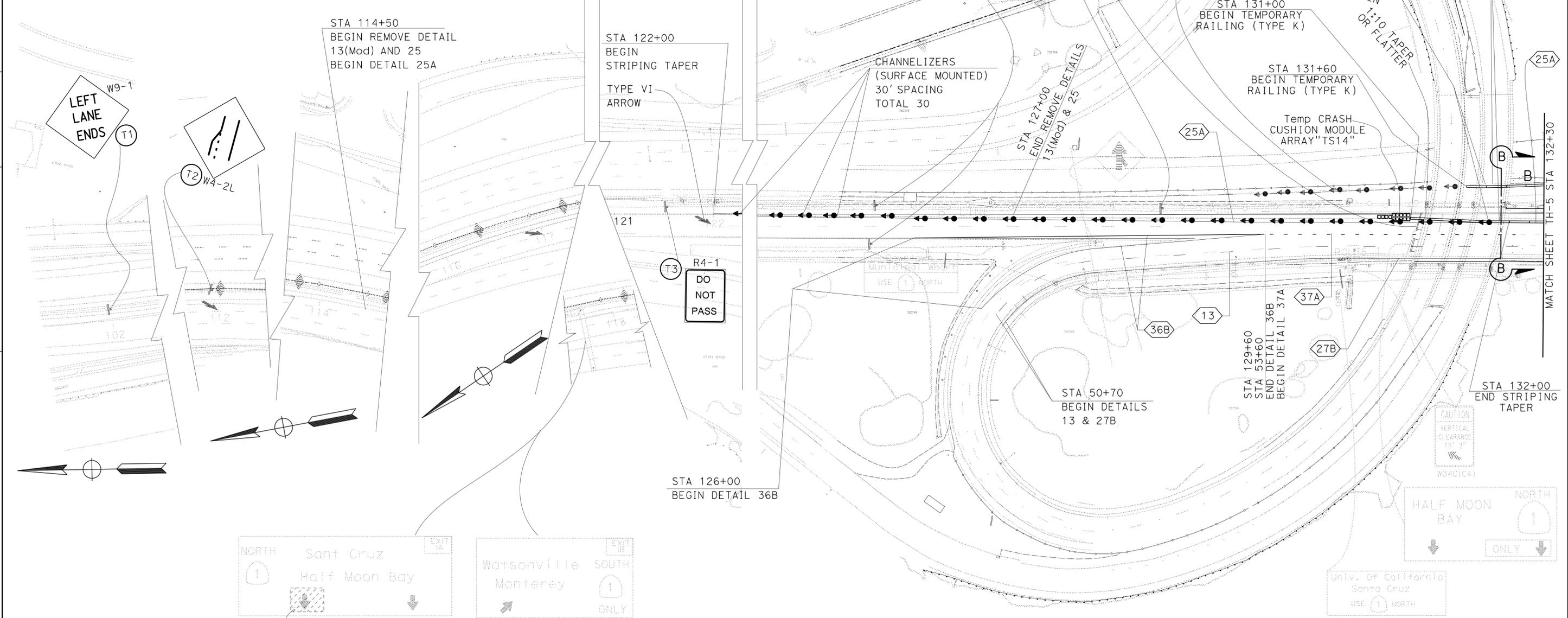
Hassan Cole 03/20/15
 REGISTERED CIVIL ENGINEER DATE
 4-27-15
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 HASSAN M. TAHA
 No. 60130
 Exp. 06/30/16
 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.



TYPICAL TEMPORARY RAILING
 (TYPE K) PLACEMENT
STAGE 2
 SECTION B-B
 NO SCALE



TRAFFIC HANDLING PLAN
(STAGE 2)
TH-4
 SCALE: 1"=50'

APPROVED FOR TRAFFIC HANDLING WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans 06 - TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: MOHAMMED QATAMI
 CALCULATED/DESIGNED BY: MUNIR ASSAF
 CHECKED BY: HASSAN TAHA
 REVISOR: MUNIR ASSAF
 DATE: 7/2/2010

USERNAME => s115755
 DGN FILE => 0512000034md004.dgn

RELATIVE BORDER SCALE
 1" = 15' IN INCHES
 0 1 2 3

UNIT 1513
 PROJECT NUMBER & PHASE 05120000341

LAST REVISION DATE PLOTTED => 17-JUN-2015
 04-27-15 TIME PLOTTED => 13:14

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	31	79

Hassan Cohe 03/20/15
REGISTERED CIVIL ENGINEER DATE

4-27-15
PLANS APPROVAL DATE

HASSAN M. TAHA
No. 60130
Exp. 06/30/16
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.

**STATIONARY MOUNTED
CONSTRUCTION AREA SIGNS (TRAFFIC HANDLING)**

SIGN No.	SIGN CODE	SIGN MESSAGE	PANEL SIZE	No. OF POST AND SIZE	No. OF SIGNS
T1	W9-1	LEFT LANE ENDS	48" x 48"	1- 6" x 6"	2
T2	W4-2L	LEFT LANE ENDS SYMBOL	48" x 48"	1- 6" x 6"	2
T3	R4-1	DO NOT PASS	48" x 60"	1- 6" x 6"	3
Z1	SC20(CA)	SLOW FOR THE CONE ZONE	48" x 54"	1- 6" x 6"	3
	R4-1	40 MPH/ 20MPH	24" x 24"		
T4	C31A(CA)	NO SHOULDER	48" x 48"	1- 6" x 6"	4

TEMPORARY RAILING (TYPE K), CRASH CUSHION, AND TRAFFIC SCREEN

STAGE	SHEET No.	STATION		TEMPORARY RAILING (TYPE K) LF	TEMPORARY CRASH CUSHION MODULE EA	TEMPORARY TRAFFIC SCREEN LF
		FROM	TO			
1	TH-1 TO TH-2	51+40	63+40	1260	14	1200
		131+20	138+60	800	14	740
2	TH-4 TO TH-5	131+60	138+80	720	14	740
		TOTAL		2780	42	2680

**CHANNELIZER
(SURFACE MOUNTED)**

LOCATION	EA
TH-1	34
TH-2	8
TH-4	37
TH-5	25
TOTAL	104

APPROVED FOR TRAFFIC HANDLING WORK ONLY

**TRAFFIC HANDLING QUANTITIES
THQ-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans 06 - TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: MOHAMMED OATAMI
DESIGNED BY: MUNIR ASSAF
CHECKED BY: HASSAN TAHA

REVISOR: REVISED BY: DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	32	79

Hassan Cohe 03/20/15
REGISTERED CIVIL ENGINEER DATE

4-27-15
PLANS APPROVAL DATE

HASSAN M. TAHA
No. 60130
Exp. 06/30/16
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.

TEMPORARY PAVEMENT DELINEATION QUANTITIES

SHEET No.	ROUTE	DIRECTION	LOCATION		DETAIL No.	TEMPORARY PAVEMENT MARKER				REMOVE PAVEMENT MARKER	TEMPORARY TRAFFIC STRIPE (PAINT)	REMOVE THERMO-PLASTIC TRAFFIC STRIPE	REMOVE YELLOW THERMO-PLASTIC TRAFFIC STRIPE (HAZARDOUS WASTE)	DESCRIPTION	TEMPORARY PAVEMENT MARKING (PAINT)	REMOVE PAINTED PAVEMENT MARKING	
			Sta TO Sta			TYPE											
			FROM	TO		A	C	G	H								EA
TH-1 TO TH-3	ROUTE 1	NB	34+50	56+00	13(Mod)					226		538		3-ARROWS TYPE VI	126	126	
	ROUTE 1	NB	56+00	59+80	37					34		76					
TH-2	ROUTE 1	NB	59+80	63+00	38B					30		640					
	ROUTE 1	NB	63+00	65+00	13(Mod)					23		50					
	ROUTE 1	NB	63+00	65+00	25A					9			200				
TH-1	ROUTE 1	NB	42+00	52+00	25A					43			1000				
TH-1 TO TH-3	ROUTE 1	NB	42+00	65+00	27B							2300					
TH-1	ROUTE 1	NB	52+00	54+10	36A					10		420					
	ROUTE 17	SB	125+00	140+00	25					32			1500				
	ROUTE 17	SB	125+00	140+00	13(Mod)					158		375					
TH-1 TO TH-3	ROUTE 17	SB	125+00	127+70	27B							270					
	ROUTE 1	NB	42+00	52+00	25A				43								
	ROUTE 1	NB	42+00	65+00	27B							1000					
	ROUTE 1	NB	52+00	54+10	36B				10			210					
	ROUTE 1	NB	54+10	59+80	37A	152	76										
	ROUTE 1	NB	59+80	63+00	36				30			640					
	ROUTE 1	NB	63+00	65+00	25A					9		200					
	ROUTE 17	SB	125+00	140+00	25					32		1500					
	ROUTE 17	SB	125+00	140+00	13	126		32									
	ROUTE 17	SB	125+00	127+70	27B							270					
TH-3	ROUTE 17	SB	138+20	140+00	27B						180						
TH-4 TO TH-5	ROUTE 17	SB	114+50	127+00	13(Mod)					133		313					
	ROUTE 17	SB	114+50	127+00	25					27			1250	3-ARROWS TYPE IV	126	126	
	ROUTE 17	SB	114+50	140+00	25A				107			2550					
	ROUTE 17	SB	126+00	129+60	36B				16			360					
	ROUTE 1	NB	50+70	65+00	27B							1430					
	ROUTE 1	NB	50+70	65+00	13	120			31								
	ROUTE 1	NB	53+60	60+50	37A	184	92										
	ROUTE 17	SB	136+40	140+00	36							720					
SUBTOTAL						582	176	151	191	775	11360	4982	3950		252	252	
TOTAL						1100				775	11360	4982	3950		252	252	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans 06-TRAFFIC DESIGN



**TRAFFIC HANDLING QUANTITIES
THQ-2**

APPROVED FOR TRAFFIC HANDLING WORK ONLY

LAST REVISION | DATE PLOTTED => 17-JUN-2015
04-27-15 TIME PLOTTED => 13:14

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SCR	1, 17	17.0, 0.0	33	79

<i>Hassan Cohe</i>	03/20/15
REGISTERED CIVIL ENGINEER	DATE
4-27-15	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER	HASSAN M. TAHA
No. 60130	Exp. 06/30/16
CIVIL	STATE OF CALIFORNIA

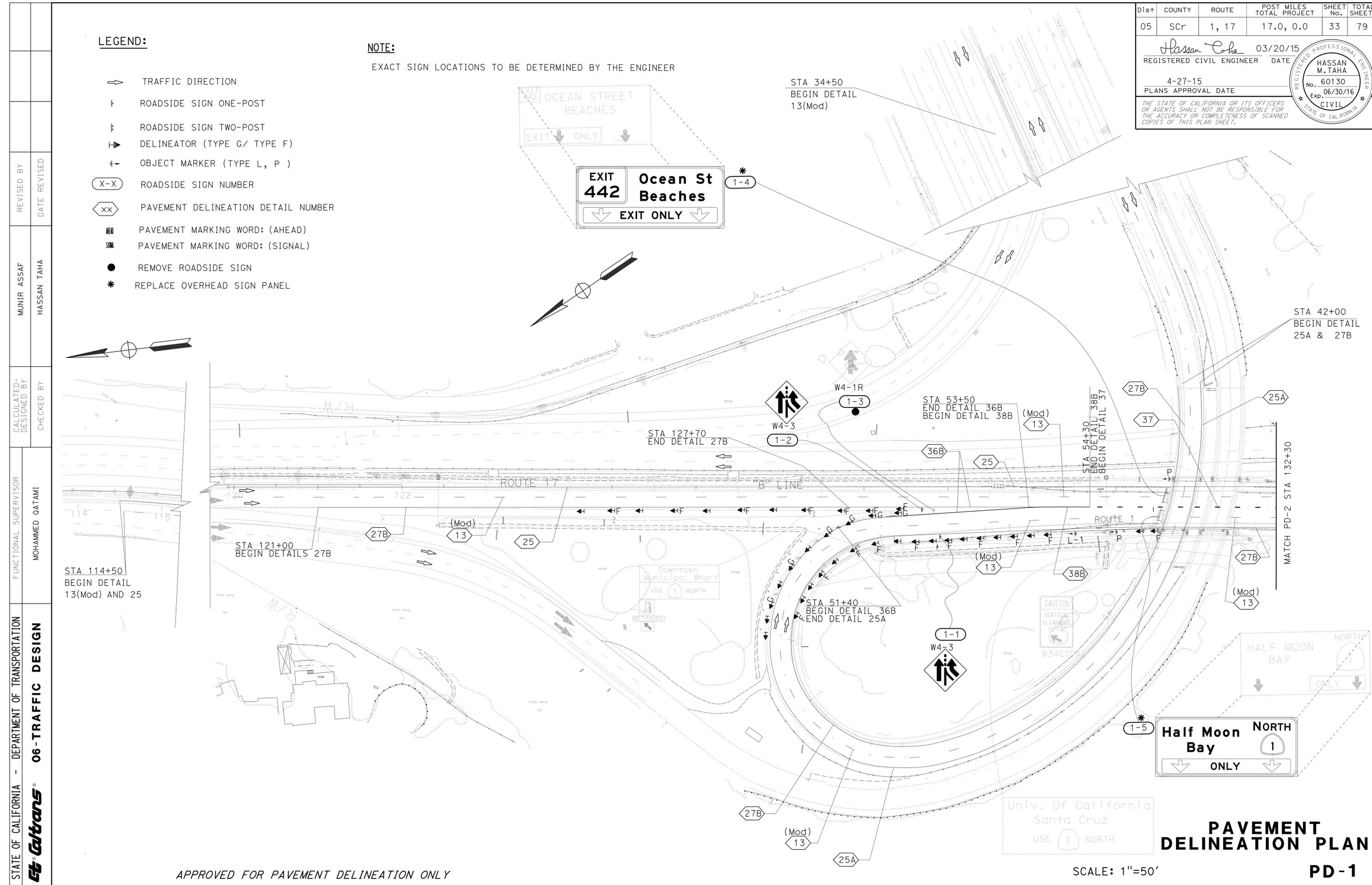
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LEGEND:

- TRAFFIC DIRECTION
- ROADSIDE SIGN ONE-POST
- ROADSIDE SIGN TWO-POST
- DELINEATOR (TYPE G / TYPE F)
- OBJECT MARKER (TYPE L, P)
- ROADSIDE SIGN NUMBER
- PAVEMENT DELINEATION DETAIL NUMBER
- PAVEMENT MARKING WORD: (AHEAD)
- PAVEMENT MARKING WORD: (SIGNAL)
- REMOVE ROADSIDE SIGN
- REPLACE OVERHEAD SIGN PANEL

NOTE:

EXACT SIGN LOCATIONS TO BE DETERMINED BY THE ENGINEER



APPROVED FOR PAVEMENT DELINEATION ONLY

SCALE: 1"=50'

PAVEMENT DELINEATION PLAN
PD-1

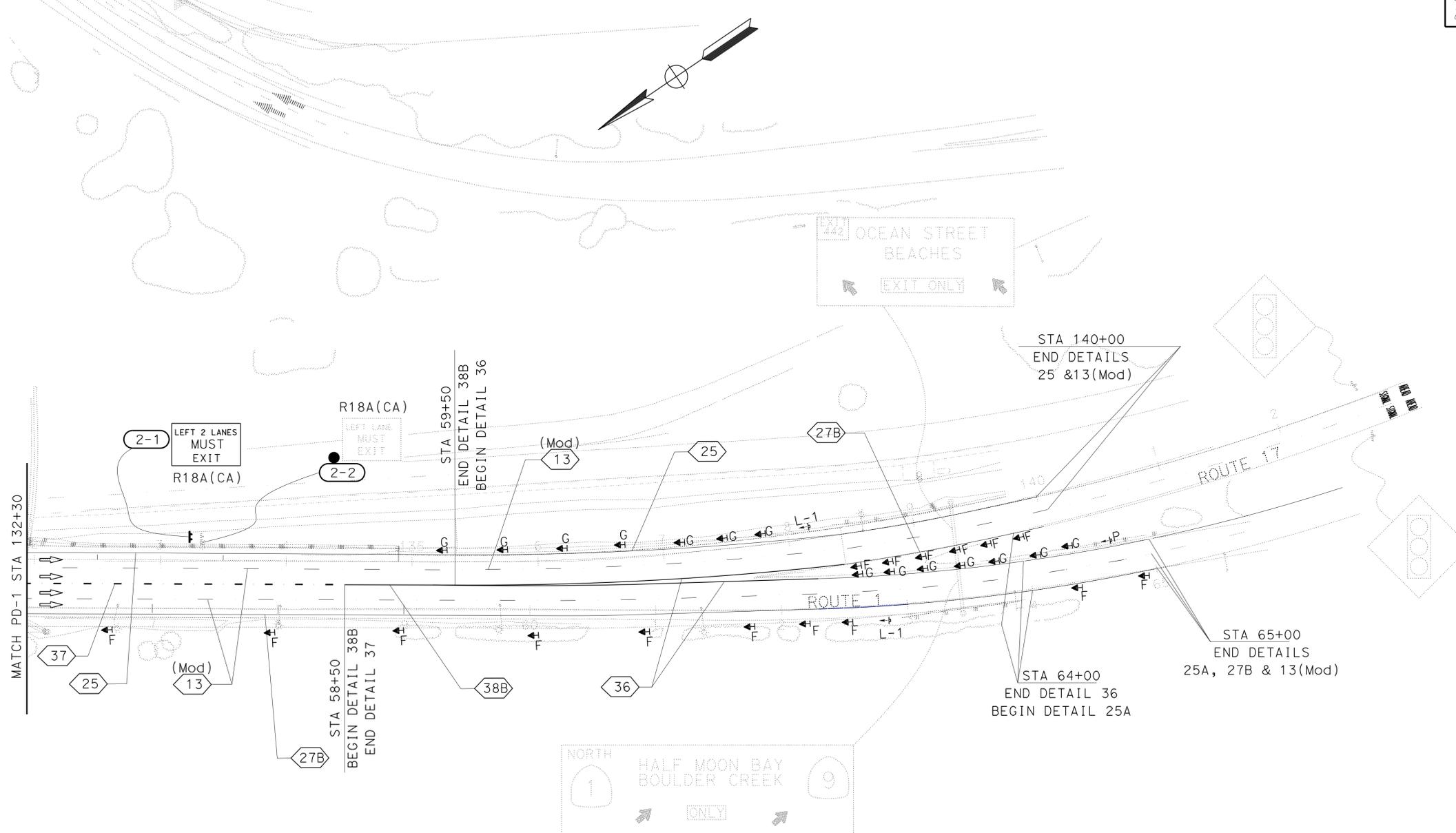
LAST REVISION: DATE PLOTTED => 30-JUN-2015
04-27-15 TIME PLOTTED => 10:01

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	34	79

<i>Hassan Cohe</i>	03/20/15
REGISTERED CIVIL ENGINEER	DATE
4-27-15	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
HASSAN M. TAHA
No. 60130
Exp. 06/30/16
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.



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	REVISOR	DATE
Caltrans 06 - TRAFFIC DESIGN	MOHAMMED QATAMI	MUNIR ASSAF	
	CHECKED BY	HASSAN TAHA	
	DESIGNED BY		

APPROVED FOR PAVEMENT DELINEATION ONLY

PAVEMENT DELINEATION PLAN
PD-2

SCALE: 1"=50'

LAST REVISION | DATE PLOTTED => 30-JUN-2015
04-27-15 | TIME PLOTTED => 10:01

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	35	79

Hassan Cohe 03/20/15
 REGISTERED CIVIL ENGINEER DATE

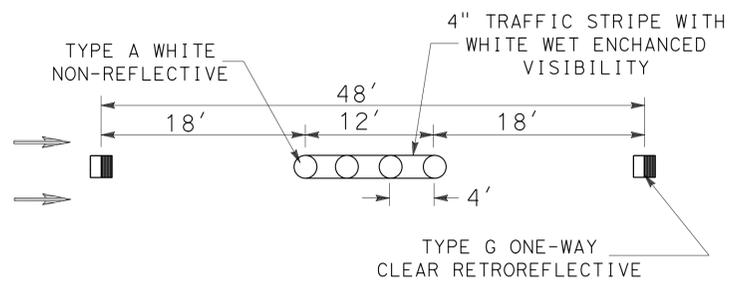
4-27-15
 PLANS APPROVAL DATE

HASSAN M. TAHA
 No. 60130
 Exp. 06/30/16
 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.

PAVEMENT DELINEATION QUANTITIES

SHEET No.	ROUTE	LOCATION		DIRECTION	DETAIL No.	PAVEMENT MARKERS RETROREFLECTIVE				THERMOPLASTIC TRAFFIC STRIPE (ENHANCED WET NIGHT VISIBILITY)					THERMOPLASTIC CROSSWALK AND PAVEMENT MARKING (ENHANCED WET NIGHT VISIBILITY)		
		FROM Sta XX+XX	TO Sta XX+XX			TYPE			PAVEMENT MARKER NON-REFLECTIVE TYPE	4"		8"		8"			4"
						C EA	G EA	H EA		A EA	YELLOW LF	WHITE LF	WHITE LF				
		DESCRIPTION	SQFT														
PD-1 TO PD-2	ROUTE 1	34+50	65+00	NB	13(Mod)		65			256							
	ROUTE 1	42+00	65+00	NB	27B							2300					
	ROUTE 1	42+00	51+40	NB	25A			40		940							
	ROUTE 1	51+40	53+50	NB	36B		10					210			2-SIGNAL	64	
	ROUTE 1	53+50	54+30	NB	38B		10					80			2-AHEAD	62	
	ROUTE 1	54+30	58+50	NB	37	8	28						420				
	ROUTE 1	58+50	59+50	NB	38B		12					100					
	ROUTE 1	59+50	64+00	NB	36		40					900					
	ROUTE 1	64+00	65+00	NB	25A			5		100							
	ROUTE 17	114+50	140+00	SB	13(Mod)		54		214								
	ROUTE 17	114+50	140+00	SB	25			54		2550							
	ROUTE 17	121+00	127+70	SB	27B						670						
SUBTOTAL						8	219	99	470	3590	2970	1290	420	5600			126
TOTAL									326	470	6550	1290	420	5600			126



DETAIL 13 (Mod)

NO SCALE

APPROVED FOR PAVEMENT DELINEATION ONLY

PAVEMENT DELINEATION QUANTITIES AND DETAILS

PDQ-1

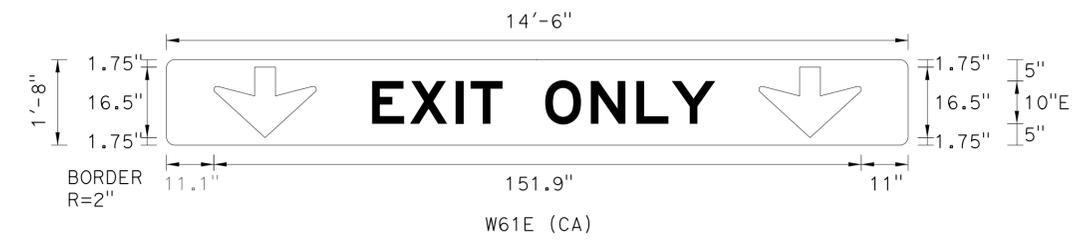
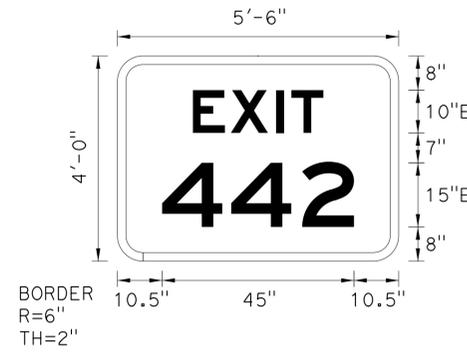
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 06 - TRAFFIC DESIGN
 Et Caltrans

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	36	79

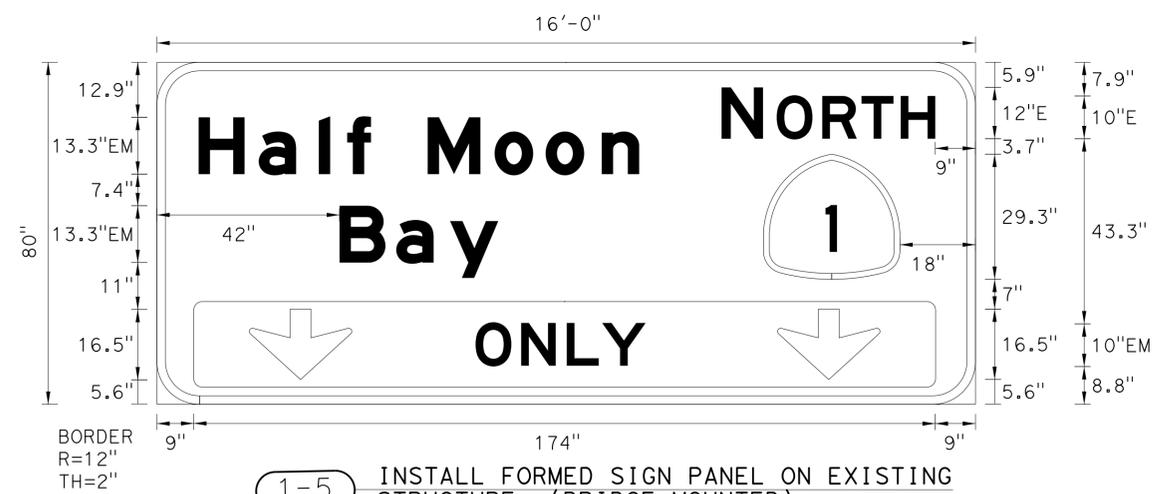
<i>Hassan Cohe</i>	03/20/15
REGISTERED CIVIL ENGINEER	DATE
4-27-15	
PLANS APPROVAL DATE	

HASSAN M. TAHA
No. 60130
Exp. 06/30/16
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.



1-4 INSTALL FORMED SIGN PANEL ON EXISTING STRUCTURE -(BRIDGE MOUNTED) ON ROUTE 17 SB



1-5 INSTALL FORMED SIGN PANEL ON EXISTING STRUCTURE -(BRIDGE MOUNTED) ON ROUTE 1 NB

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans 06-TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: MOHAMMED OATAMI
 CALCULATED/DESIGNED BY: KEVIN NGUYEN
 CHECKED BY: HASSAN TAHA
 REVISED BY: MUNIR ASSAF
 DATE REVISED:

APPROVED FOR SIGN WORK ONLY

NO SCALE

SIGN DETAILS
 SD-1

ROADSIDE SIGN QUANTITIES

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	37	79

Hassan Taaha 03/20/15
 REGISTERED CIVIL ENGINEER DATE

4-27-15
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
HASSAN M. TAHA
 No. 60130
 Exp. 06/30/16
 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.

SHEET NUMBER	SIGN (X-X)	SIGN CODE	SIGN MESSAGE	PANEL SIZE	No. OF POST AND POST SIZE	SINGLE FACED	SIGN MATERIAL					FURNISH SINGLE SHEET ALUMINUM SIGN (0.08" UNFRAMED)	ROADSIDE SIGN - ONE POST	ROADSIDE SIGN - TWO POSTS	REMOVE ROADSIDE SIGN	FURNISH SINGLE SHEET ALUMINUM SIGN (0.063" FRAMED)	TREATED WOOD WASTE
							BACKGROUND		LEGEND		PROTECTIVE OVERLAY PREMIUM FILM						
							SHEETING COLOR	RETROREFLECTIVITY ASTM TYPE	SHEETING COLOR	RETROREFLECTIVITY ASTM TYPE							
				Horiz x Vert	X - XX" x XX"						SQFT	EA	EA	EA	SQFT	LB	
PD-1	(1-1)	W4-3R	RAMP LANES MERGE-SYMBOL	48" X 48"	1 - 6" x 6"	X	YELLOW	1X	BLACK		X	16	1				
	(1-2)	W4-3R	RAMP LANES MERGE-SYMBOL	48" X 48"	1 - 6" x 6"	X	YELLOW	1X	BLACK		X	16	1				
	(1-3)	W4-3R	RAMP LANES MERGE-SYMBOL											1		80	
PD-2	(2-1)	R18A(CA)	LEFT LANE MUST EXIT	66" X 48"	2 - 4" x 6"	X	WHITE	1X	BLACK		X		1		22		
	(2-2)	R18A(CA)	LEFT LANE MUST EXIT											1		160	
TOTAL											32	2	1	2	22	240	

* QUANTITIES INCLUDED IN SHEET Q-2

DELINEATORS AND MARKERS

LOCATION	DELINEATOR (CLASS 1)		OBJECT MARKER	
	TYPE (F)	TYPE (G)	TYPE (P)	TYPE (L-1)
SHEET No.	EA	EA	EA	EA
PD-1	30	10	2	1
PD-2	14	14		2
SUBTOTAL	44	24	2	3
TOTAL	68		5	

OVERHEAD SIGN PANEL QUANTITIES

SHEET No.	SIGN No.	SIGN CODE	SIGN MESSAGE	PANEL SIZE (L x D)	OVERHEAD SIGN PANEL					FURNISH FORMED PANEL SIGN (OVERHEAD) FOR TYPE XI SHEETING	INSTALL SIGN PANEL ON EXISTING FRAME	RETROREFLECTIVE SHEETING (TYPE XI)	EXISTING FRAME TYPE
					BACKGROUND		LEGEND		GRAFFITI FLOW				
					SHEETING COLOR	RETROREFLECTIVITY ASTM TYPE	SHEETING COLOR	RETROREFLECTIVITY ASTM TYPE	PREMIUM				
				FEET x INCH						SQFT	SQFT	SQFT	
PD-1	1-4	G24-6 (CA)		16' x 80"	GREEN	XI	WHITE	XI	X	106.67	106.67	106.67	BM
	1-5	G24-6 (CA)		16' x 80"	GREEN	XI	WHITE	XI	X	106.67	106.67	106.67	BM
TOTAL										213.34	213.34	213.34	

SIGN QUANTITIES SQ-1

APPROVED FOR SIGN WORK ONLY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SCR	1, 17	17.0, 0.0	38	79

Atif Mursi Abdalla
 REGISTERED CIVIL ENGINEER DATE 4-27-15
 PLANS APPROVAL DATE 4-27-15
 No. C 83253
 Exp. 3/31/17
 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.

ROADWAY QUANTITIES

LOCATION	HOT MIX ASPHALT (TYPE A) TON	CLASS 2 AB CY	COLD PLANE AC Pvm+ SQYD	MINOR CONCRETE (CURB) LF	VEGETATION CONTROL (MINOR CONCRETE) SQYD	ROADWAY EXCAVATION (TYPE Y-1) (AERIALY DEPOSITED LEAD) CY	ROADWAY EXCAVATION CY	EMBANKMENT (N) CY	IMPORTED BORROW CY
"A1" STA 51+86.05 TO STA 63+00	611	452.4				400	694.8	54.4	
"A1" STA 51+86.05 TO STA 63+00	449.5		4440						
"A1" STA 53+61 TO STA 54+86.26					79.1		4.5		
"A1" STA 54+50 TO STA 54+86.26				40					
"B1" STA 125+38 TO STA 138+42	373.7		3690.6						
"B1" STA 132+00.00 TO STA 138+42	283.2	228.7				150	138.6	791.9	100
HMA DIKE FROM SHEET Q-2	15.98								
TOTAL	1,733.4	681.1	8130.6	40	79.1	550	837.9	846.3	100

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

FENCE

"A1" LINE STATION TO STATION	Temp FENCE (TYPE ESA) LF
56+00, 19' Rt TO 59+00, 27.5' Rt	300
TOTAL	300

TEMPORARY WATER POLLUTION CONTROL QUANTITIES

PLAN SHEET No.	LOCATION	TEMPORARY DRAINAGE INLET PROTECTION EA
D-1	"A" 54+44.9, 16.41 Rt	1
D-1	"A" 54+83.48, 15.12 Rt	1
D-1	"A" 56+16.51, 9.11 Rt	1
TOTAL		3

SUMMARY OF QUANTITIES

Q-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 06 - DESIGN
 ATIF ABDALLA
 SAL JARAMILLO
 REVISIONS BY
 DATE REVISED
 CALCULATED/DESIGNED BY
 CHECKED BY
 FUNCTIONAL SUPERVISOR
 STEVEN McDONALD

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans 06 - DESIGN
 FUNCTIONAL SUPERVISOR: STEVEN McDONALD
 CALCULATED/DESIGNED BY: []
 CHECKED BY: []
 ATIF ABDALLA
 SAL JARAMILLO
 REVISED BY: []
 DATE REVISED: []

HOT MIX ASPHALT DIKES

LOCATION	Rt+/Lt	PLACE HOT MIX ASPHALT DIKE			HOT MIX ASPHALT (TYPE A) TON
		TYPE E LF	TYPE F LF	TYPE C LF	
"A1" LINE					
Sta 51+86.10 TO Sta 53+35.88	R+	150			3.94
Sta 56+10.13 TO Sta 57+75	R+		165		2.20
"B1" LINE					
Sta 134+00 TO Sta 135+00	L+		100		1.34
Sta 135+00 TO Sta 138+15	L+	315			8.29
Sta 138+15 TO Sta 138+42	L+			27	0.21
TOTAL		465	265	27	15.98*

* QUANTITY INCLUDED IN HOT MIX ASPHALT IN ROADWAY QUANTITIES TABLE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	39	79

4-27-15
 REGISTERED CIVIL ENGINEER DATE
 4-27-15
 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.

BARRIERS AND GUARD RAILING

STATION TO STATION	ALTERNATIVE FLARED TERMINAL SYTEM	MGS (STEEL POST)	REMOVE GUARDRAIL	TREATED WOOD WASTE	TRANSITION RAILING (TYPE WB-31)	END CAP (TYPE A)	MGS (8' POST)	END ANCHOR ASSEMBLY (TYPE SFT)	REMOVE DOUBLE THRIE BEAM BARRIER	TRANSITION RAILING (TYPE DTB)	DOUBLE THRIE BEAM BARRIER (STEEL POST)	END ANCHOR ASSEMBLY (TYPE CA)	RETURN CAP (TYPE TA)
	EA	LF	LF	LB	EA	EA	LF	EA	LF	EA	LF	EA	EA
"A1" Sta 53+61, 16.45 Rt TO Sta 53+98.45, 12.3' Rt	1												
"A1" Sta 53+98.45, 12.3 Rt TO Sta 54+61.19, 10.92' Rt		62.5											
"A1" Sta 54+30.53, 11.4 Rt TO Sta 55+94.81, 7' Rt			165	3527									
"A1" Sta 54+61.19, 10.92 Rt TO Sta 54+86.26, 10' Rt					1								
"A1" Sta 56+10.13, 9' Rt TO Sta 57+66.3, 12.5' Rt						1	156.25						
"A1" Sta 57+66.3, 12.5' Rt TO Sta 57+72.5, 12.9' Rt								1					
"B1" Sta 131+95, 12.3' Lt TO Sta 132+20, 12.3' Lt										1			
"B1" Sta 131+95, 12.3' Lt TO Sta 134+90, 9' Lt				5420					295				
"B1" Sta 132+20, 11.6' Lt TO Sta 134+82.5, 10.5' Lt											262.5		
"B1" Sta 134+82.5, 10.5' Lt TO Sta 134+95, 10.5' Lt												1	
"B1" Sta 134+95, 10.5' Lt													1
TOTAL FROM SHEET SQ-1				240									
TOTAL	1	62.5	165	9187	1	1	156.25	1	295	1	262.5	1	1

SUMMARY OF QUANTITIES

Q-2

LAST REVISION DATE PLOTTED => 17-JUN-2015
 04-08-15 TIME PLOTTED => 13:14

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	40	79

Peter New
 LICENSED LANDSCAPE ARCHITECT
 4-27-15
 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. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
 2. DO NOT APPLY EROSION CONTROL TYPE 1 WITHIN 2 FEET FROM EDGE OF PAVEMENT.

LEGEND:
 EROSION CONTROL TYPE 1

EROSION CONTROL TYPE 1

SEQUENCE	ITEM	MATERIAL		APPLICATION RATE	REMARKS
		DESCRIPTION	TYPE		
STEP 1	EROSION CONTROL (DRY SEED)	SEED	MIX	30 LB/ACRE	
STEP 2	COMPOST	COMPOST	MEDIUM	135 CY/ACRE	COMPOST RATE EQUALS APPROXIMATELY 1" DEPTH
STEP 3	HYDROMULCH	FIBER	WOOD	1,500 LB/ACRE	
		TACKIFIER	PSYLLIUM	125 LB/ACRE	

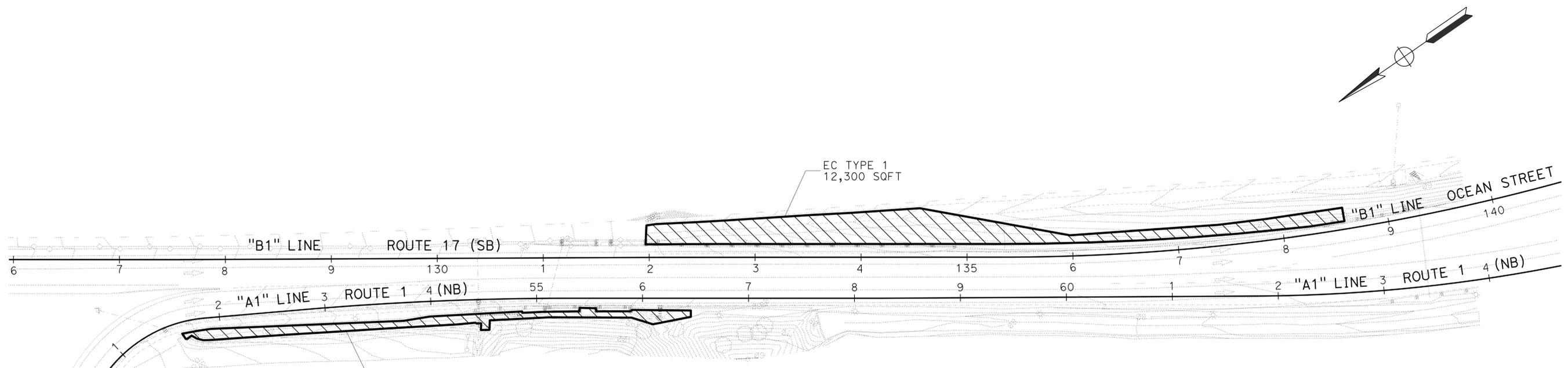
SEED MIX

BOTANICAL NAME (COMMON NAME)	PERCENT GERMINATION (MINIMUM)	POUNDS PURE LIVE SEED PER ACRE (SLOPE MEASUREMENT)
ESCHSCHOLZIA CALIFORNICA (CALIFORNIA POPPY)	72	2
ELYMUS ELYMOIDES (SQUIRRELTAIL)	66	14
LUPINUS SUCCULENTUS (ARROYO LUPINE)	77	12
VULPIA MICROSTACHYS (SMALL FESCUE)	72	2

EROSION CONTROL QUANTITIES

SHEET	DESCRIPTION	EROSION CONTROL (DRY SEED)	COMPOST	HYDROMULCH
		SQFT	SQFT	SQFT
EC-1	EROSION CONTROL TYPE 1	16,110	16,110	16,110

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 LANDSCAPE ARCHITECTURE
 SENIOR LANDSCAPE ARCHITECT
 DENNIS REEVES
 CALCULATED/DESIGNED BY
 CHECKED BY
 PETER NEW
 PAT BOLGER
 REVISED BY
 DATE REVISED



PLAN
 SCALE: 1"=50'

APPROVED FOR EROSION CONTROL WORK ONLY

EROSION CONTROL PLAN
EC-1

LAST REVISION DATE PLOTTED => 17-JUN-2015
 04-15-15 TIME PLOTTED => 13:14

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	scr	1, 17	17.0, 0.0	42	79

Grace M. Tsushima
REGISTERED CIVIL ENGINEER

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 4-27-15

UNIT OF MEASUREMENT SYMBOLS:

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

TABLE A

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

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

TABLE B

SYMBOL USED	DEFINITIONS
ksi	KIPS PER SQUARE INCH
ksf	KIPS PER SQUARE FOOT
psi	POUNDS PER SQUARE INCH
psf	POUNDS PER SQUARE FOOT
lb/ft ³ , pcf	POUNDS PER CUBIC FOOT
tsf	TONS PER SQUARE FOOT
mph, MPH *	MILES PER HOUR
∅	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.

REVISED STANDARD PLAN RSP A10B

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
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
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
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

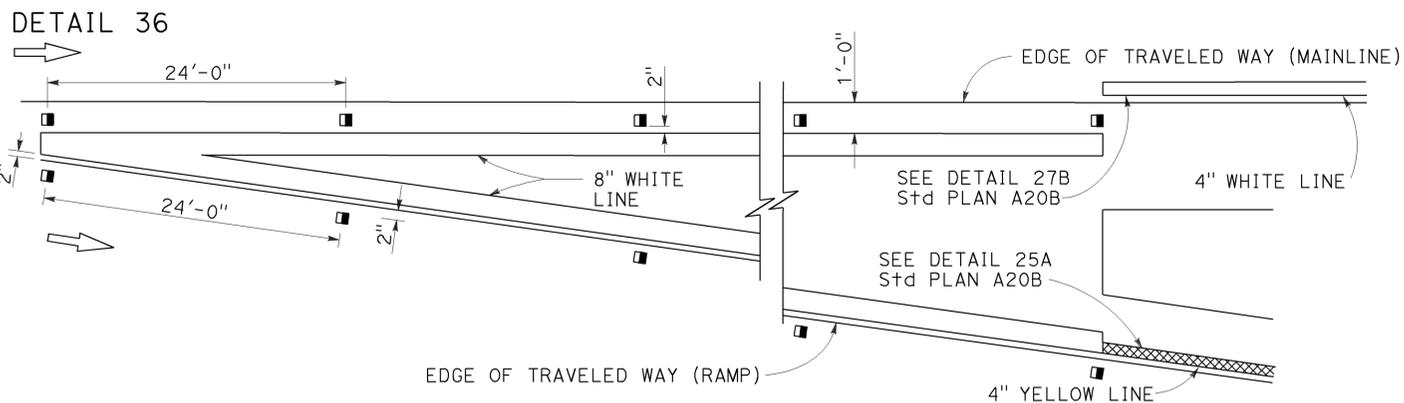
Maint	MAINTENANCE
Max	MAXIMUM
MB	METAL BEAM
MBB	METAL BEAM BARRIER
MBGR	METAL BEAM GUARD RAILING
Med	MEDIAN
MGS	MIDWEST GUARDRAIL SYSTEM
MH	MANHOLE
Min	MINIMUM
Misc	MISCELLANEOUS
Misc I & S	MISCELLANEOUS IRON AND STEEL
Mkr	MARKER
Mod	MODIFIED, MODIFY
Mon	MONUMENT
MP	METAL PLATE
MPGR	METAL PLATE GUARD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

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
Qty	QUANTITY
R	RADIUS
R & D	REMOVE AND DISPOSE
R & S	REMOVE AND SALVAGE
R/C	RATE OF CHANGE
RCA	REINFORCED CONCRETE ARCH
RCB	REINFORCED CONCRETE BOX
RCP	REINFORCED CONCRETE PIPE
RCPA	REINFORCED CONCRETE PIPE ARCH
Rd	ROAD
Reinf	REINFORCED, REINFORCEMENT, REINFORCING
Rel	RELOCATE
Repl	REPLACEMENT
Ret	RETAINING
Rev	REVISED, REVISION
Rdwy	ROADWAY
RHMA	RUBBERIZED HOT MIX ASPHALT
Riv	RIVER
RM	ROAD-MIXED
RP	RADIUS POINT, REFERENCE POINT
RR	RAILROAD
RSP	ROCK SLOPE PROTECTION, REVISED STANDARD PLAN
Rt	RIGHT
Rte	ROUTE
RW	REDWOOD, RETAINING WALL
R/W	RIGHT OF WAY
Rwy	RAILWAY

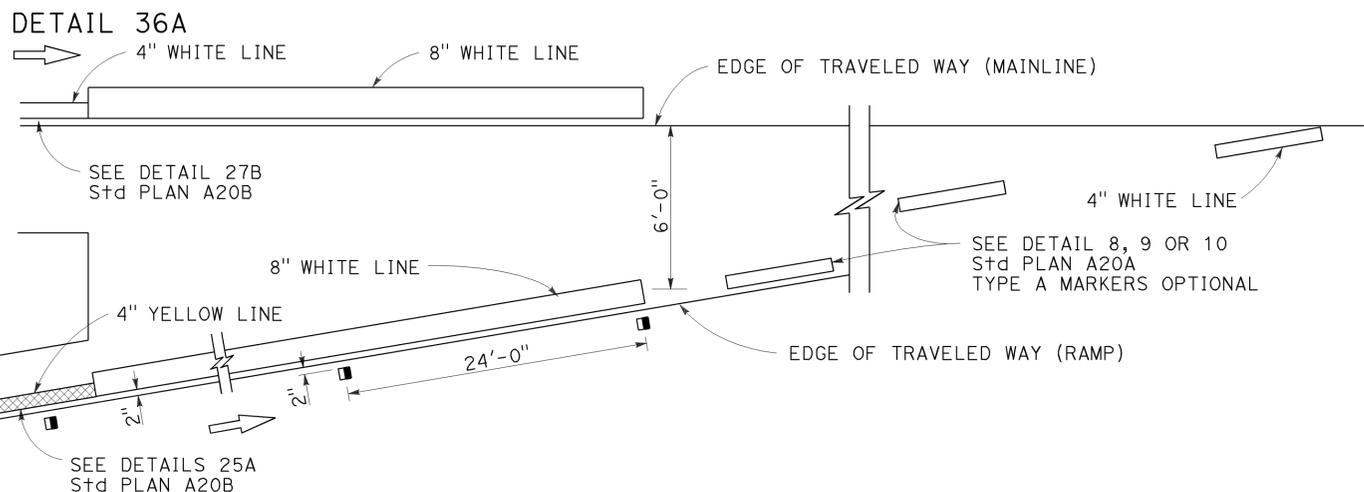
S	SOUTH, SUPPLEMENT
SAE	STRUCTURE APPROACH EMBANKMENT
Salv	SALVAGE
SAPP	STRUCTURAL ALUMINUM PLATE PIPE
SB	SOUTHBOUND
SC	SAND CUSHION
SCSP	SLOTTED CORRUGATED STEEL PIPE
SD	STORM DRAIN
Sec	SECOND, SECTION
Sep	SEPARATION
SG	SUBGRADE
Shld	SHOULDER
Sht	SHEET
Sim	SIMILAR
SL	STATION LINE
SM	SELECTED MATERIAL
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
T	SEMI-TANGENT
Tan	TANGENT
TBB	THRIE BEAM BARRIER
Tbr	TIMBER
TC	TOP OF CURB
TCB	TRAFFIC CONTROL BOX
TCE	TEMPORARY CONSTRUCTION EASEMENT
Tel	TELEPHONE
Temp	TEMPORARY
TG	TOP OF GRADE
Tot	TOTAL
TP	TELEPHONE POLE
TPB	TREATED PERMEABLE BASE
TPM	TREATED PERMEABLE MATERIAL
Trans	TRANSITION

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

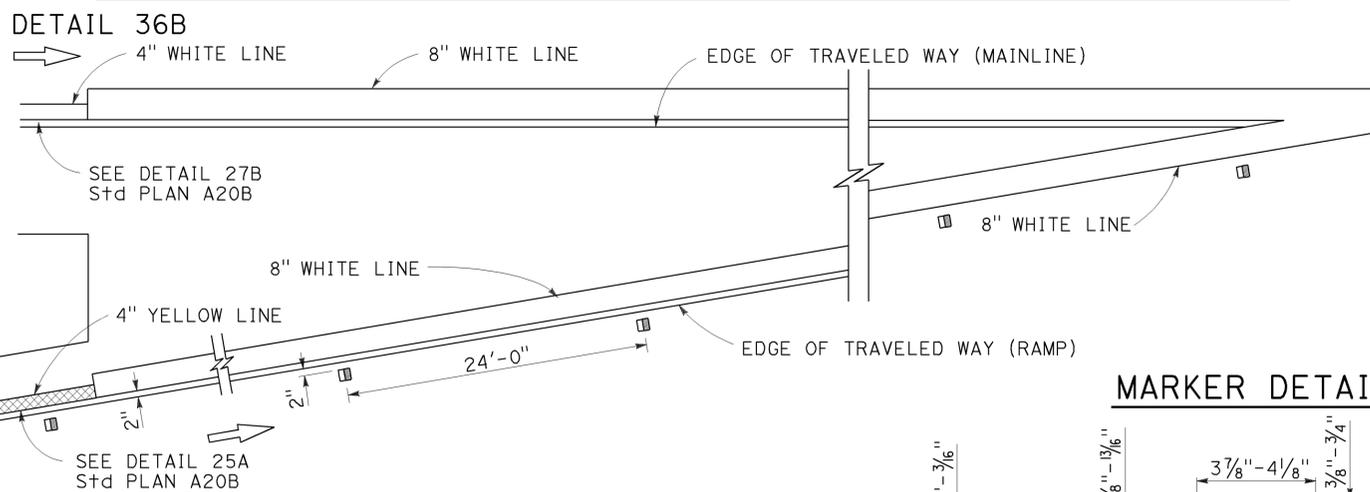
EXIT RAMP NEUTRAL AREA (GORE) TREATMENT



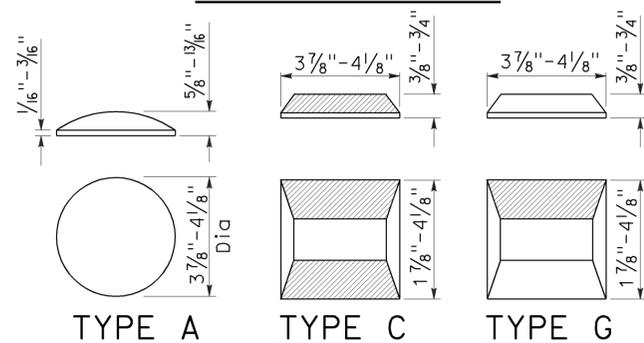
ENTRANCE RAMP NEUTRAL AREA (MERGE) TREATMENT



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

RETROREFLECTIVE FACE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	43	79

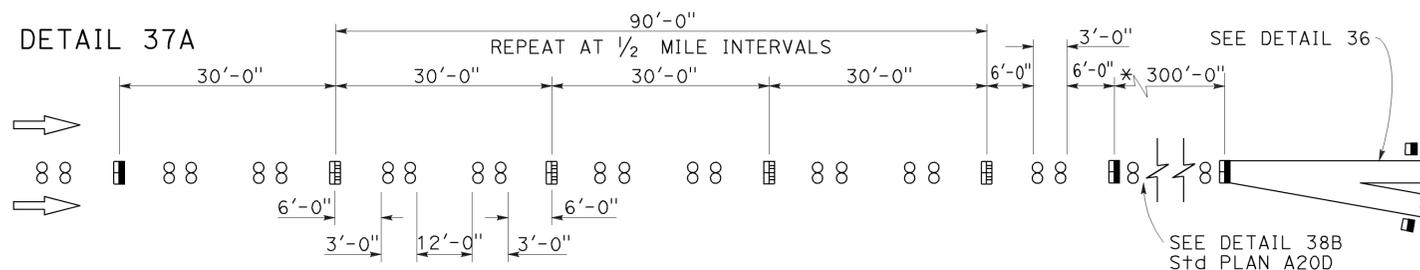
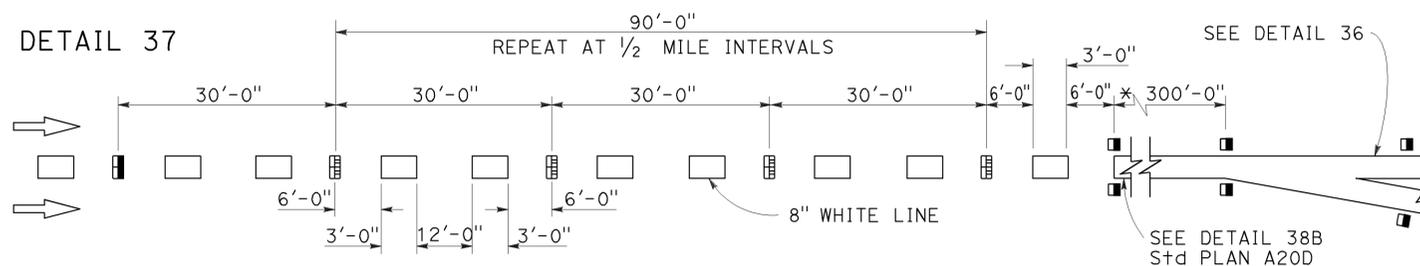
Roberta L. McLaughlin
 REGISTERED CIVIL ENGINEER
 No. C40375
 Exp. 3-31-15
 CIVIL
 STATE OF CALIFORNIA

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.

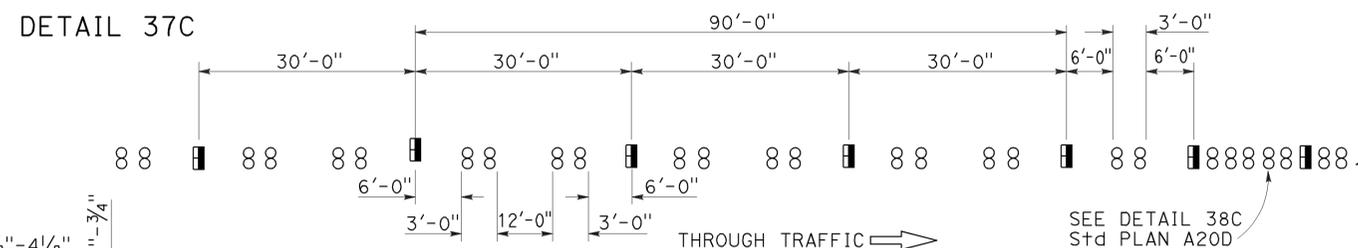
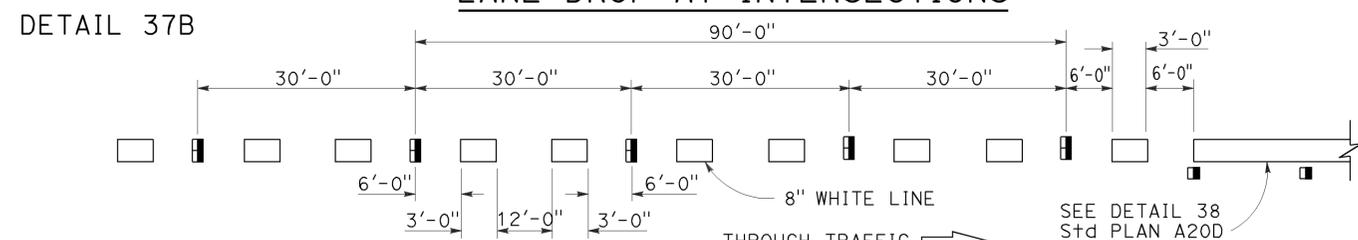
TO ACCOMPANY PLANS DATED 4-27-15

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

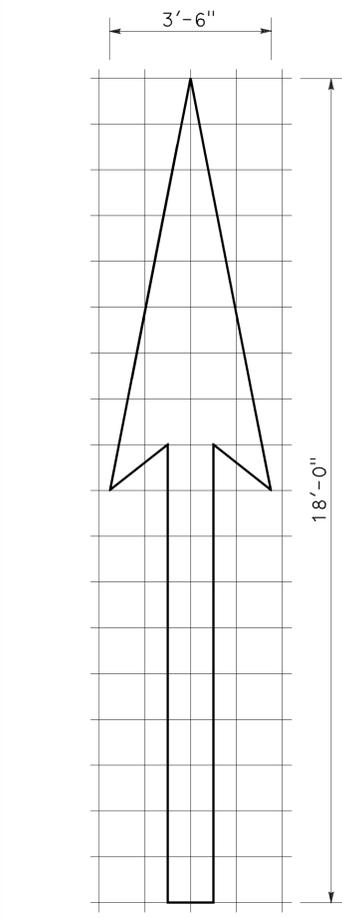
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	scr	1, 17	17.0, 0.0	44	79

Registered Professional Engineer
 Roberta L. McLaughlin
 No. C40375
 Exp. 3-31-13
 CIVIL
 STATE OF CALIFORNIA

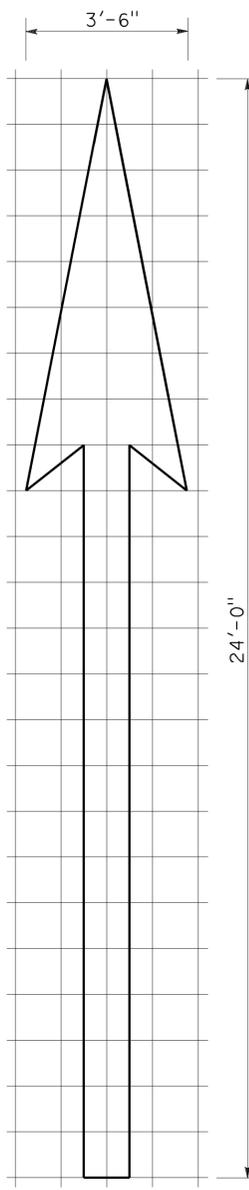
April 20, 2012
 PLANS APPROVAL DATE

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.

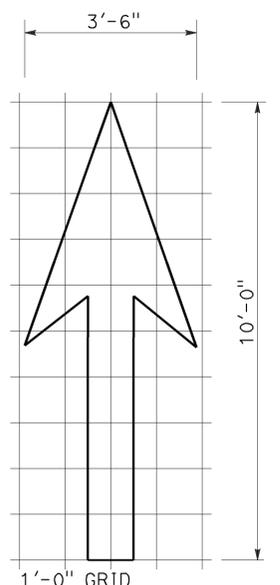
TO ACCOMPANY PLANS DATED 4-27-15



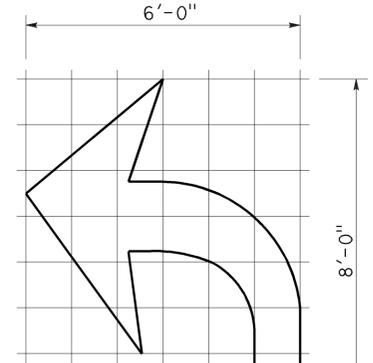
1'-0" GRID
A=25 ft²
TYPE I 18'-0" ARROW



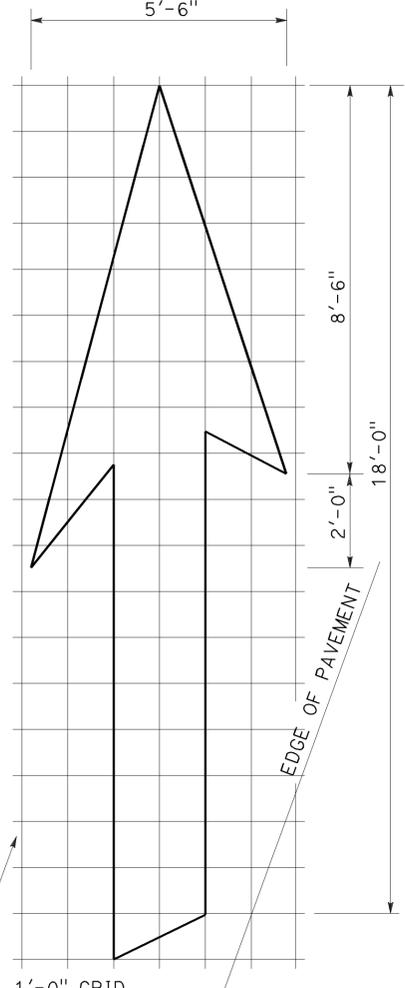
1'-0" GRID
A=31 ft²
TYPE I 24'-0" ARROW



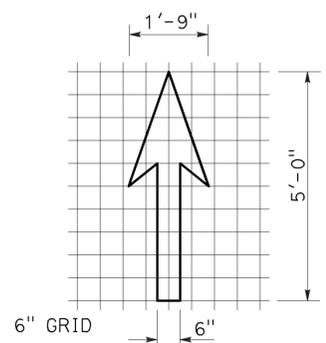
1'-0" GRID
A=14 ft²
TYPE I 10'-0" ARROW



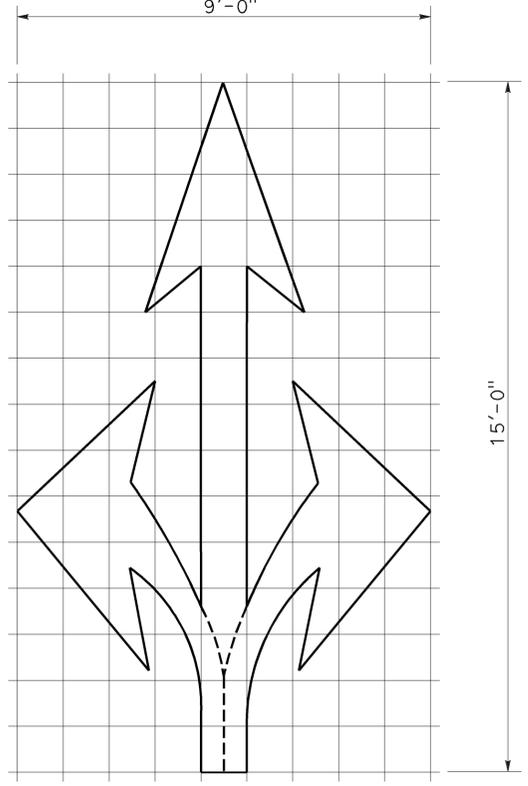
1'-0" GRID
A=15 ft²
TYPE IV (L) ARROW
(For Type IV (R) arrow, use mirror image)



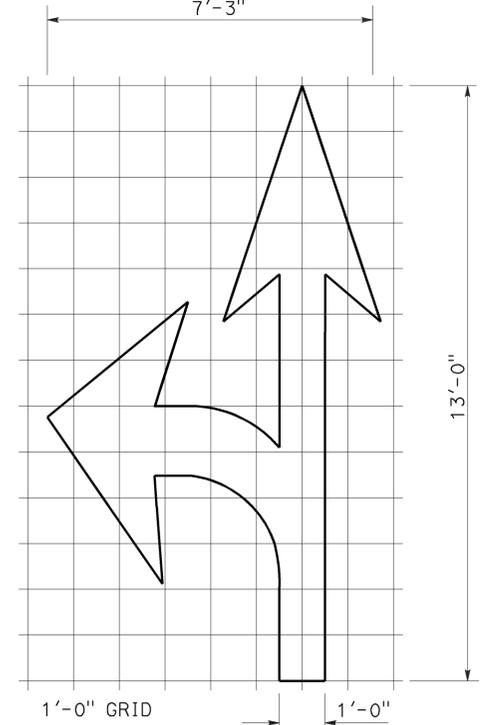
1'-0" GRID
A=42 ft²
TYPE VI ARROW
Right lane drop arrow
(For left lane, use mirror image)



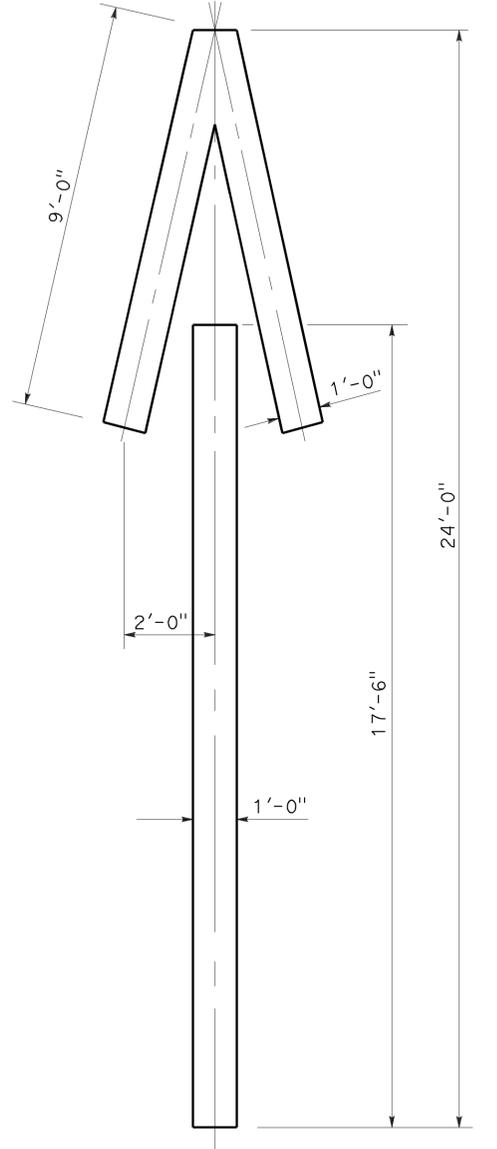
6" GRID
A=3.5 ft²
BIKE LANE ARROW



1'-0" GRID
A=36 ft²
TYPE VIII ARROW



1'-0" GRID
A=27 ft²
TYPE VII (L) ARROW
(For Type VII (R) arrow, use mirror image)



A=33 ft²
TYPE V ARROW

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**PAVEMENT MARKINGS
ARROWS**
NO SCALE

RSP A24A DATED APRIL 20, 2012 SUPERSEDES STANDARD PLAN A24A DATED MAY 20, 2011 - PAGE 13 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A24A

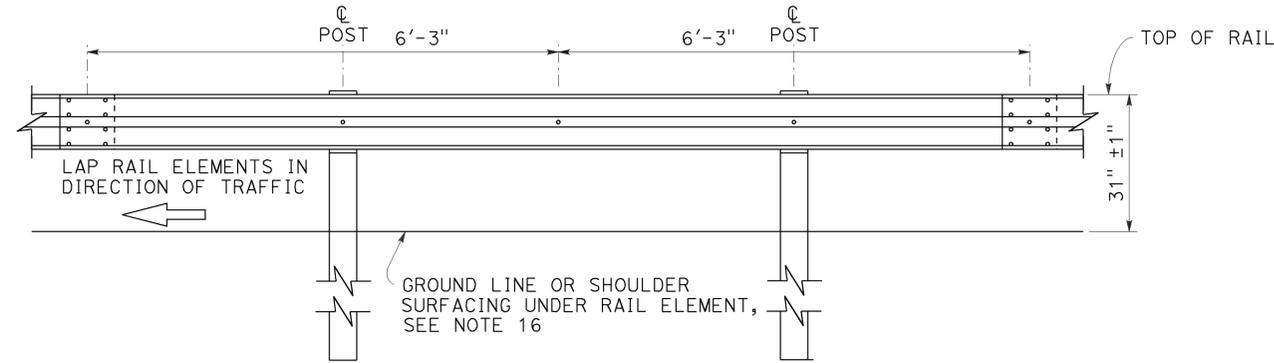
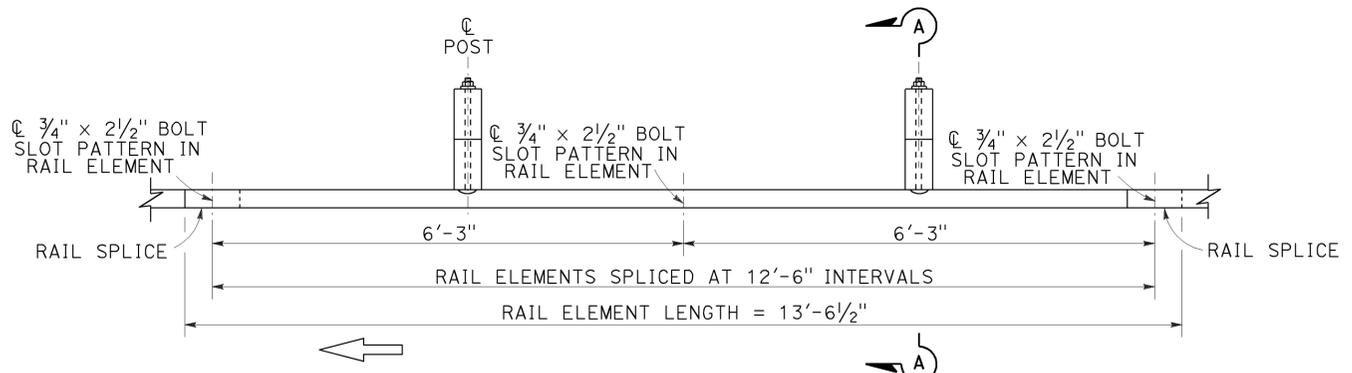
2010 REVISED STANDARD PLAN RSP A24A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	45	79

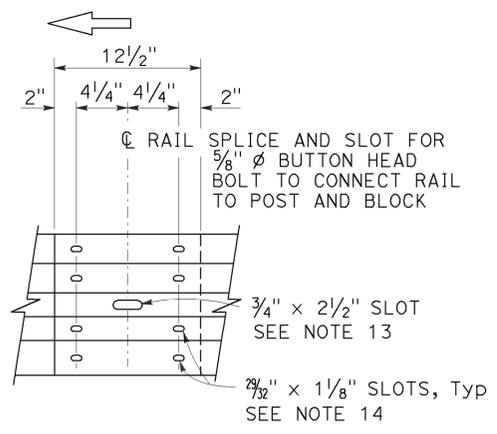
RANDALL D. HIATT
 REGISTERED CIVIL ENGINEER
 July 19, 2013
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



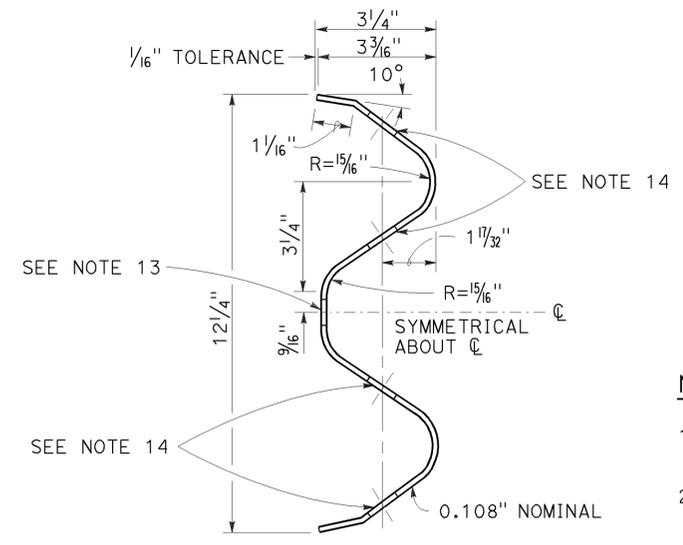
TO ACCOMPANY PLANS DATED 4-27-15



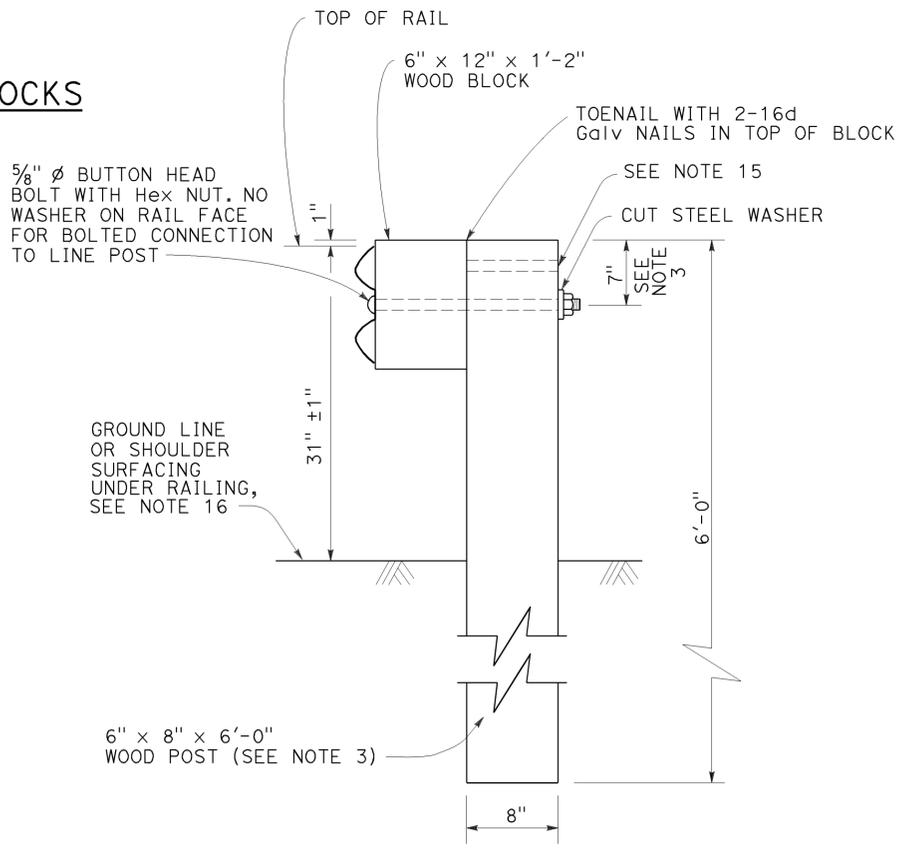
MIDWEST GUARDRAIL SYSTEM WITH WOOD POST AND BLOCKS



- Connect the over lapped end of the rail elements with 5/8" Ø x 1 3/8" button head oval shoulder splice bolts inserted into the 7/32" x 1 1/8" slots and bolted together with 5/8" Ø recessed hex nuts. Recess of hex nut points toward rail element. A total of 8 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.



SECTION THRU RAIL ELEMENT



SECTION A-A
TYPICAL WOOD LINE POST INSTALLATION
See Note 4

NOTES:

- For details of steel post installations, see Revised Standard Plan RSP A77L2.
- For details of standard hardware used to construct MGS, see Revised Standard Plan RSP A77M1.
- For details of wood posts and wood blocks used to construct MGS, see Revised Standard Plan RSP A77N1.
- For additional installation details, see Revised Standard Plan RSP A77N3.
- MGS post spacing to be 6'-3" center to center, except as otherwise noted.
- For MGS typical layouts, see the A77P, A77Q and A77R Series of Standard Plans.
- If railing is connected to terminal system end treatment, use 31" height terminal system end treatment.
- For MGS end anchor details, see Revised Standard Plans RSP A77S1 and RSP A77T2.
- For details of MGS transition to bridge railing, see Revised Standard Plan RSP A77U4.
- For additional details of MGS connection to bridge railing, see Revised Standard Plans RSP A77U1, RSP A77U2 and RSP A77V1.
- For MGS connection details to abutments and walls, see Revised Standard Plan RSP A77U3.
- For typical MGS delineation and dike positioning details, see Revised Standard Plan RSP A77N4.
- Slotted hole for bolted connection of rail element to block and post. See "Section Thru Rail Element".
- Slotted holes for splice bolts to overlap ends of rail element. See "Section Thru Rail Element".
- Additional hole in uppermost portion of line post is for potential future adjustments of railing height. See Revised Standard Plan RSP A77N1.
- Install posts in soil.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
MIDWEST GUARDRAIL SYSTEM
STANDARD RAILING SECTION
(WOOD POST WITH WOOD BLOCK)

NO SCALE

RSP A77L1 DATED JULY 19, 2013 SUPPLEMENTS STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77L1

2010 REVISED STANDARD PLAN RSP A77L1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	46	79

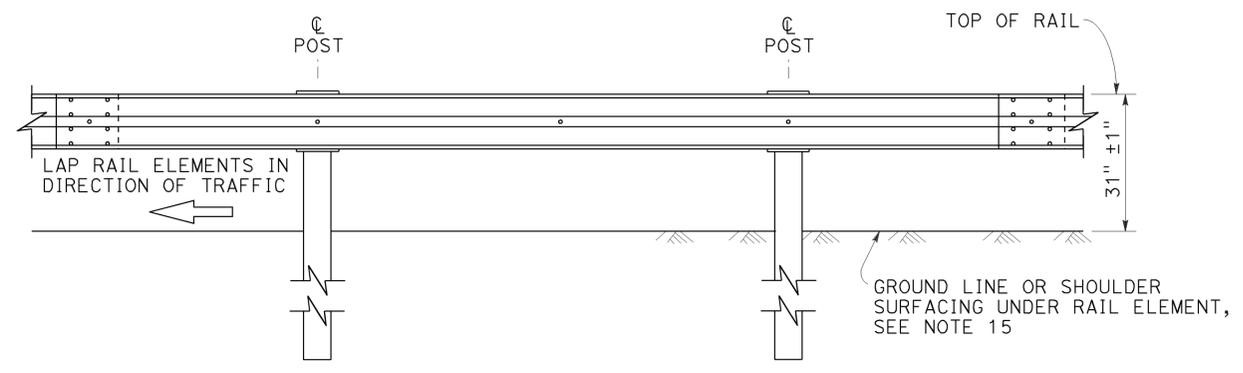
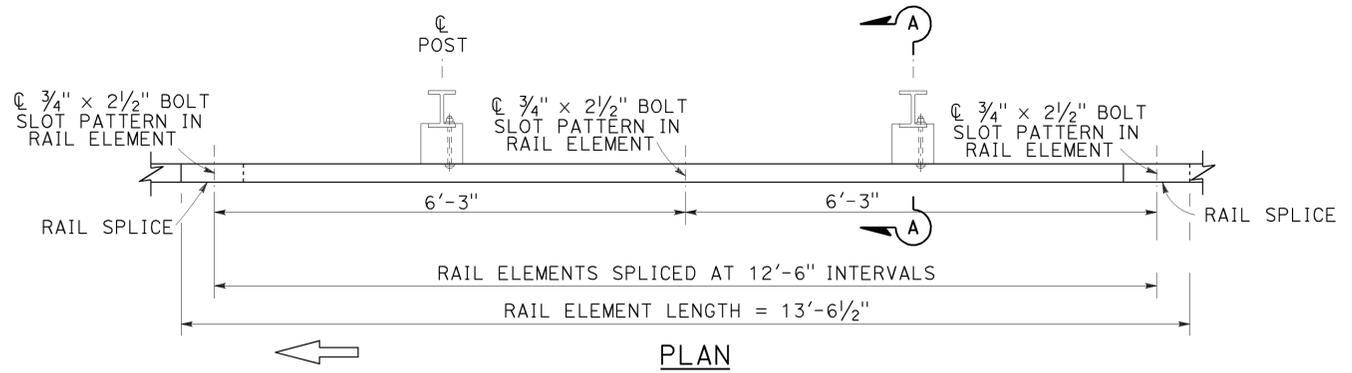
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

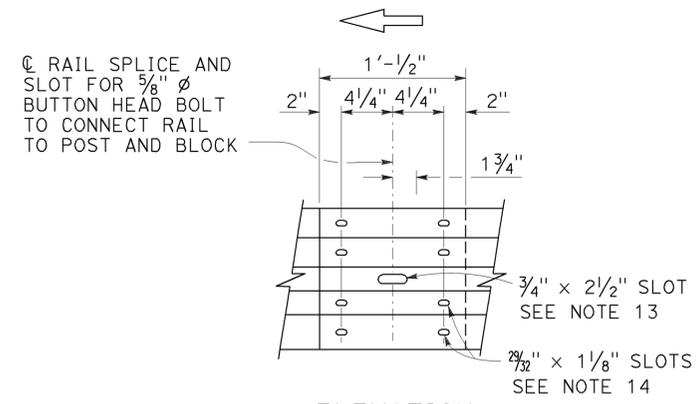
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED 4-27-15

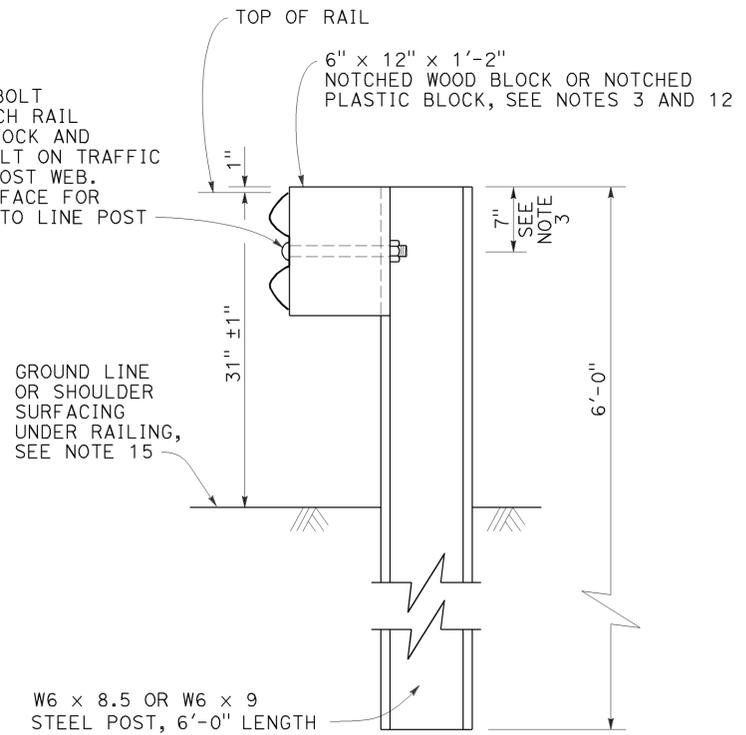
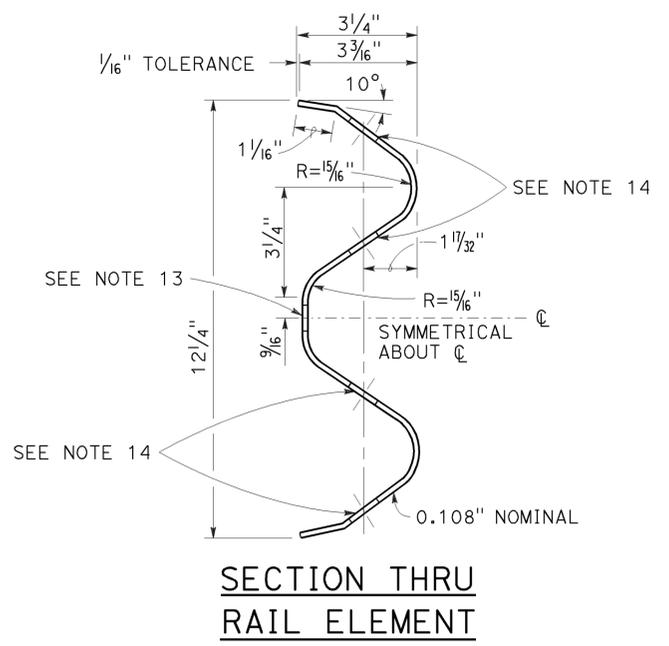
2010 REVISED STANDARD PLAN RSP A77L2



MIDWEST GUARDRAIL SYSTEM WITH STEEL POSTS AND NOTCHED WOOD OR NOTCHED RECYCLED PLASTIC BLOCKS



- Connect the overlapped end of the rail elements with 5/8" ϕ x 1 3/8" button head oval shoulder splice bolts inserted into the 7/32" x 1 1/8" slots and bolted together with 5/8" ϕ recessed hex nuts. Recess of hex nut points toward rail element. A total of 8 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.



SECTION A-A
TYPICAL STEEL LINE POST INSTALLATION
See Note 4

NOTES:

- For details of wood post installations, see Revised Standard Plan RSP A77L1.
- For details of standard hardware used to construct MGS, see Revised Standard Plan RSP A77M1.
- For details of steel posts and notched wood blocks used to construct MGS, see Revised Standard Plan RSP A77N2.
- For additional installation details, see Revised Standard Plan RSP A77N3.
- MGS post spacing to be 6'-3" center to center, except as otherwise noted.
- For MGS typical layouts, see the A77P, A77Q and A77R Series of Standard Plans.
- If railing is connected to terminal system end treatment, use 31" height terminal system end treatment.
- For MGS end anchor details, see Revised Standard Plans RSP A77S1 and RSP A77T2.
- For details of MGS transition to bridge railing, see Revised Standard Plan RSP A77U4.
- For additional details of MGS connection to bridge railings, see Revised Standard Plans RSP A77U1, RSP A77U2 and RSP A77V1.
- For dike positioning and MGS delineation details, see Revised Standard Plan RSP A77N4.
- Notched face of block faces steel post.
- Slotted hole for bolted connection of rail element to block and post. See "Section Thru Rail Element".
- Slotted holes for splice bolts to overlap ends of rail element. See "Section Thru Rail Element".
- Install posts in soil.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

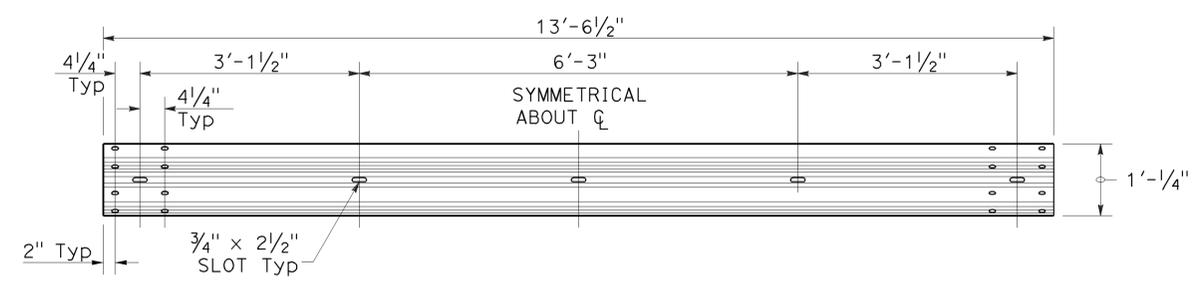
MIDWEST GUARDRAIL SYSTEM STANDARD RAILING SECTION (STEEL POST WITH NOTCHED WOOD OR NOTCHED RECYCLED PLASTIC BLOCK)

NO SCALE

RSP A77L2 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77L2

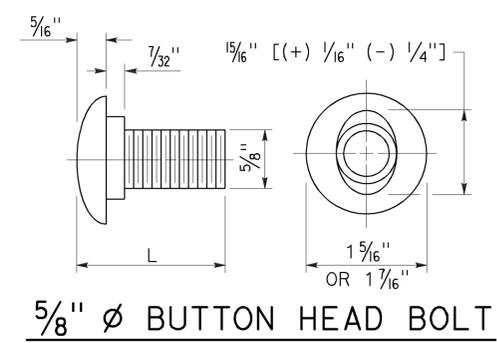
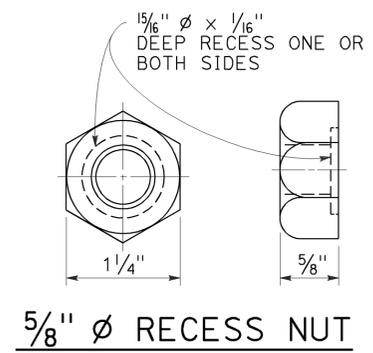
TO ACCOMPANY PLANS DATED 4-27-15



TYPICAL RAIL ELEMENT

NOTE:

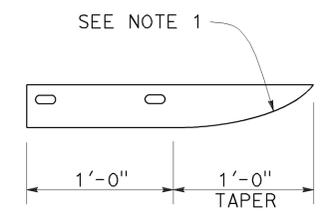
1. Slotted holes for splice bolts to overlap ends of rail element.



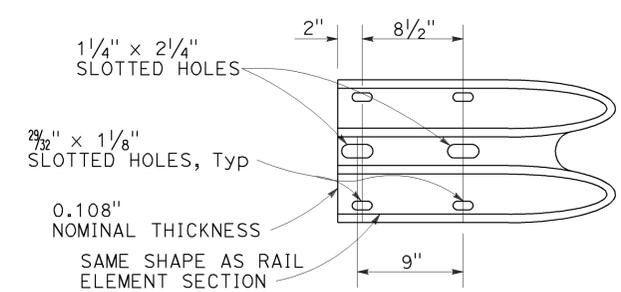
BUTTON HEAD BOLT

L	THREAD LENGTH
1 3/8"	FULL THREAD LENGTH
2"	FULL THREAD LENGTH
10"	4" Min THREAD LENGTH
18"	4" Min THREAD LENGTH
20"	4" Min THREAD LENGTH
22"	4" Min THREAD LENGTH
26"	4" Min THREAD LENGTH
36"	4" Min THREAD LENGTH
** 2 3/4"	2" Min THREAD LENGTH
** 19"	4" Min THREAD LENGTH

** For nested rail applications.



PLAN



**ELEVATION
END CAP
(TYPE A)**

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM
STANDARD HARDWARE**

NO SCALE

RSP A77M1 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77M1

2010 REVISED STANDARD PLAN RSP A77M1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	48	79

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

November 15, 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.

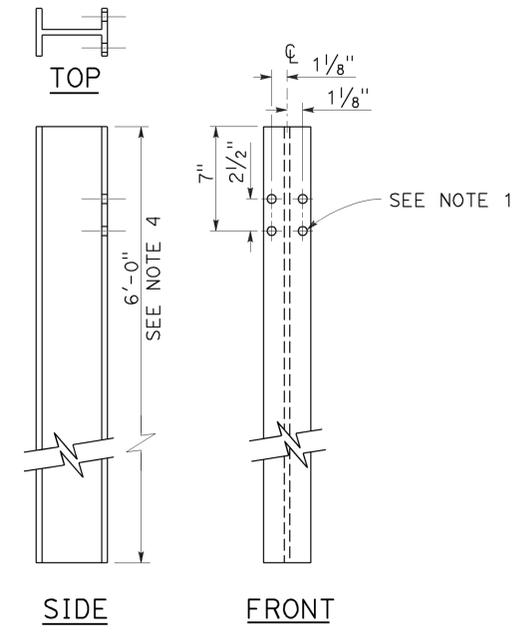
REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 4-27-15

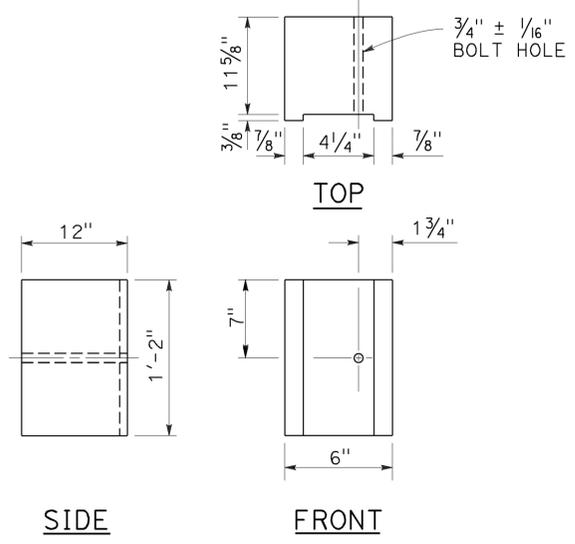
NOTES:

1. All holes in steel post shall be $\frac{13}{16}$ " Dia maximum.
2. Dimensions shown for wood block are nominal.
3. Notched face of block faces steel post.
4. 6'-0" length posts to be used for typical roadway installation. See Revised Standard Plan RSP A77N3.
5. See Revised Standard Plan RSP A77L3 for use of 6" x 8" and 8" x 8" notched wood blocks.
6. This post and 8" x 12" block combination to be used for line post sections of MGS on narrow roadways and where strengthened line post sections of MGS are warranted to shield fixed objects.

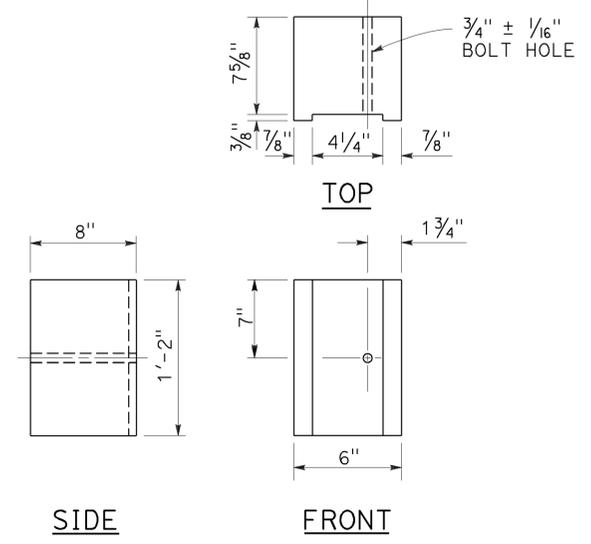
2010 REVISED STANDARD PLAN RSP A77N2



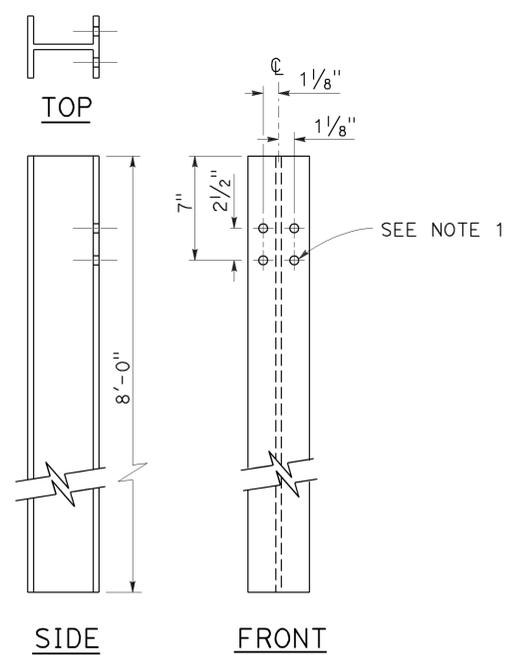
**W6 x 9 OR W6 x 8.5
STEEL POST**
See Note 4



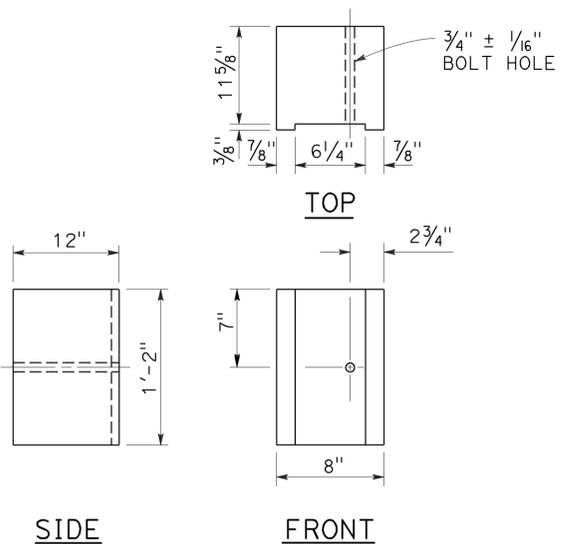
**6" x 12"
NOTCHED WOOD BLOCK**
See Notes 2 and 3



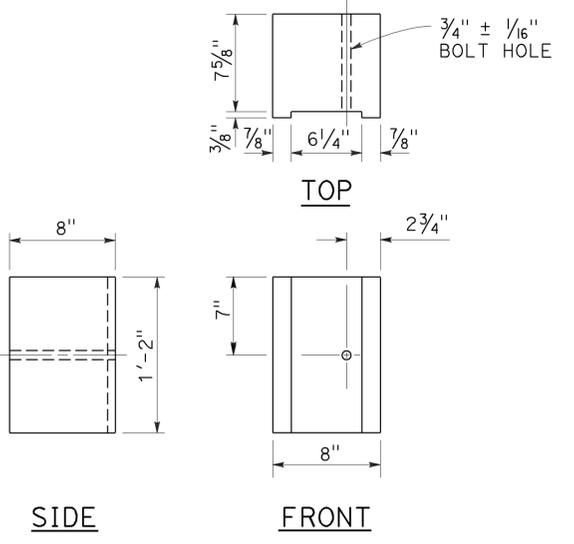
**6" x 8"
NOTCHED WOOD BLOCK**
Only for use with metal beam guard railing. See Note 5



**W6 x 15
STEEL POST**
See Note 6



**8" x 12"
NOTCHED WOOD BLOCK**
See Notes 2 and 3



**8" x 8"
NOTCHED WOOD BLOCK**
Only for use with metal beam guard railing. See Note 5

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM
STEEL POST AND
NOTCHED WOOD BLOCK DETAILS**

NO SCALE

RSP A77N2 DATED NOVEMBER 15, 2013 SUPERSEDES RSP A77N2
DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77N2

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	49	79

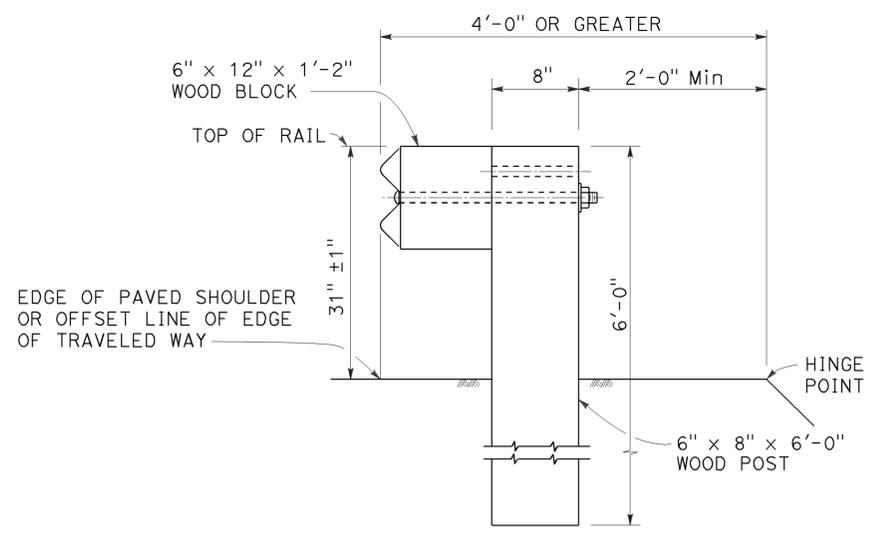
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

November 15, 2013
PLANS APPROVAL DATE

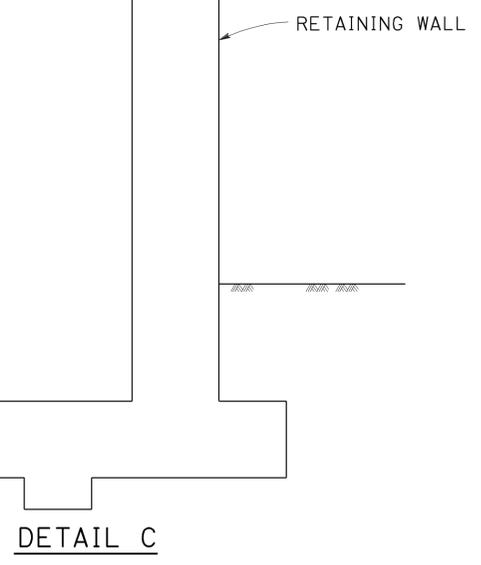
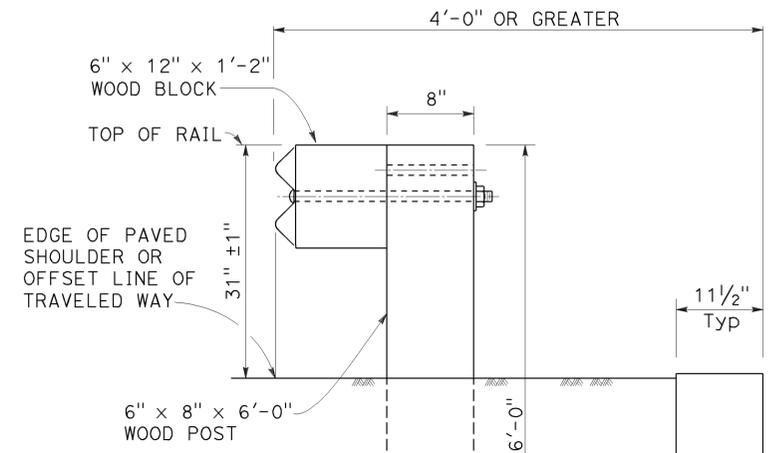
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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

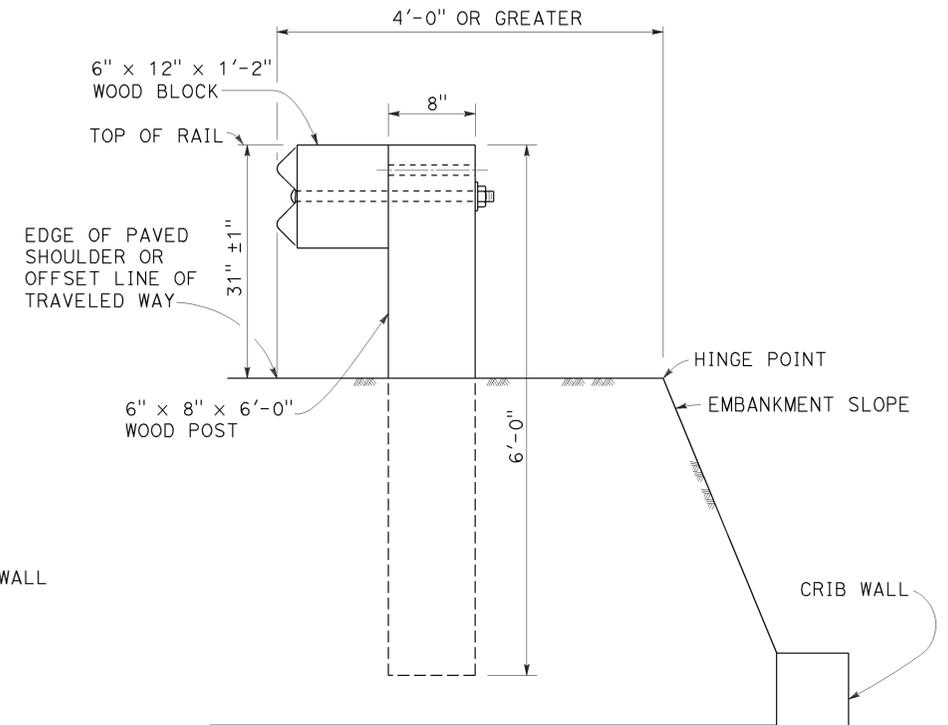
TO ACCOMPANY PLANS DATED 4-27-15



DETAIL A
TYPICAL ROADWAY
INSTALLATION
See Note 1



DETAIL B
NARROW ROADWAY
INSTALLATION
See Note 1



DETAIL D

INSTALLATION AT EARTH RETAINING WALLS

POST EMBEDMENT

NOTES:

1. These installation details also applicable to steel line post installations. For Detail A, C, and D, where steel line post installations are constructed, W6 x 8.5 or W6 x 9 steel post, 6'-0" in length, with 6" x 12" x 1'-2" notched wood blocks or notched recycled plastic blocks are to be used in place of the size of wood post and wood block shown. For Detail B, where steel line post installations are constructed, W6 x 15 steel post, 8'-0" in length, with 8" x 12" x 1'-2" notched wood blocks or notched recycled plastic blocks are to be used in place of the size of wood post and wood block shown. For additional installation details, see Revised Standard Plan RSP A77L1 and RSP A77L2.
2. Where the distance between the face of the rail and the hinge point is less than 2'-6", see the Project Plans for special details.
3. For dike positioning with MGS installations, see Revised Standard Plan RSP A77N4.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

MIDWEST GUARDRAIL SYSTEM
TYPICAL LINE POST
EMBEDMENT AND
HINGE POINT OFFSET DETAILS

NO SCALE

RSP A77N3 DATED NOVEMBER 15, 2013 SUPERSEDES RSP A77N3
DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77N3

2010 REVISED STANDARD PLAN RSP A77N3

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	50	79

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

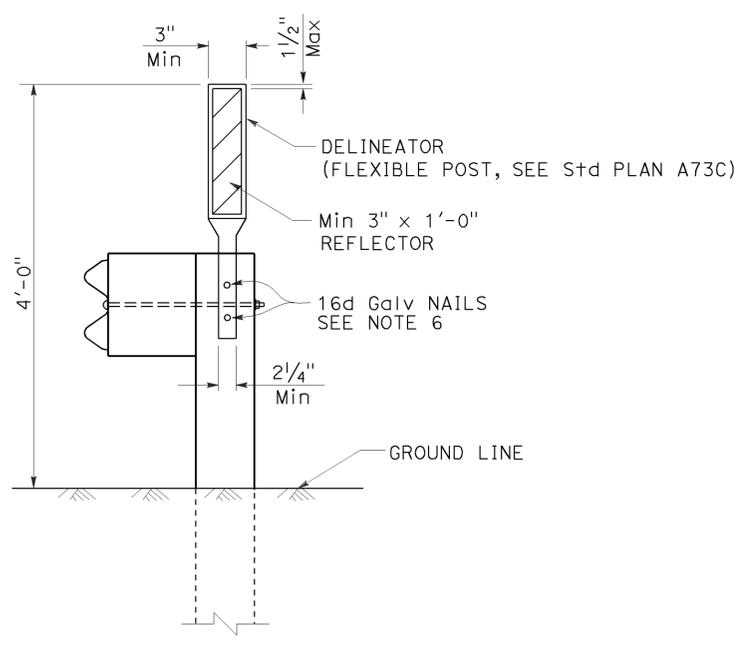
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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

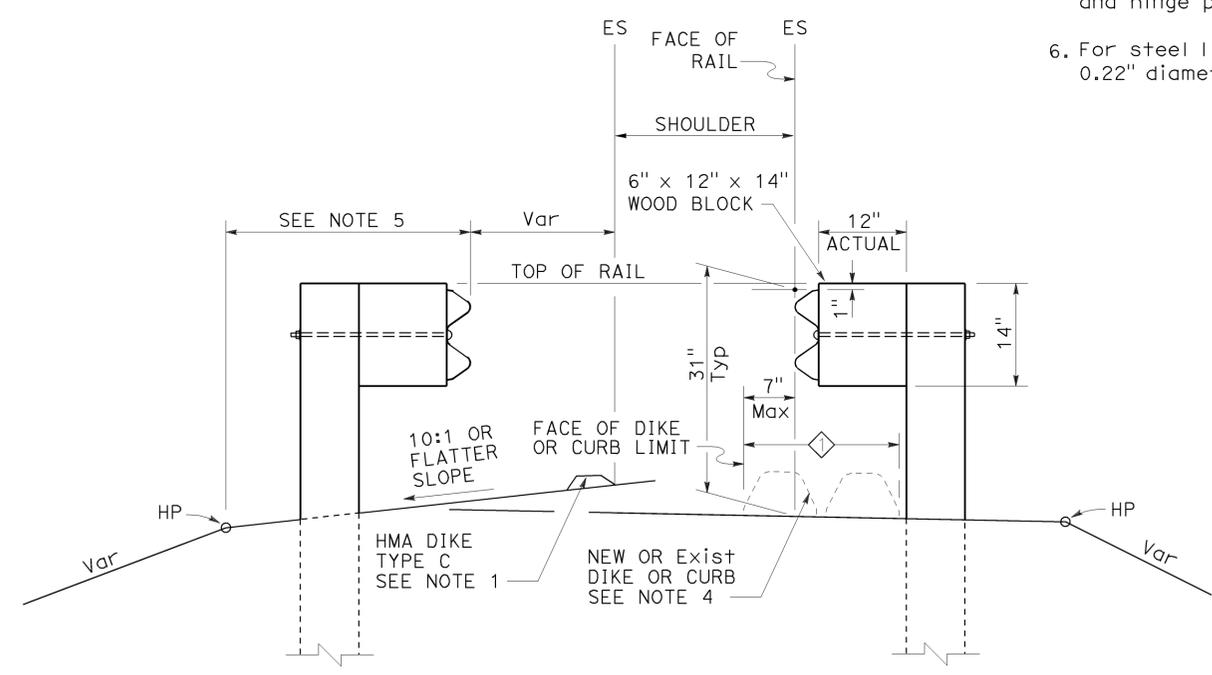
TO ACCOMPANY PLANS DATED 4-27-15

NOTES:

- When necessary to place dike more than 7" in front of face of MGS, only Type C dike may be used. For dike details, see Revised Standard Plan RSP A87B.
- For standard railing post embedment, see Revised Standard Plan RSP A77N3.
- MGS delineation to be used where shown on the Project Plans.
- When dike or curb is placed under MGS, the maximum height of the dike or curb shall be 6". Mountable dike should not be used. For dike and curb details, see Revised Standard Plans RSP A87A and RSP A87B.
- For details of typical distance between the face of rail and hinge point, see Revised Standard Plan RSP A77N3.
- For steel line posts, use 1/4" - 20 self-tapping screws in 0.22" diameter holes or 1/4" bolts in 3/32" diameter holes.



MGS DELINEATION
See Note 3



DIKE POSITIONING
See Note 1

◇ PERMISSIBLE DIKE OR CURB PLACEMENT AREA

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM
TYPICAL RAILING DELINEATION
AND DIKE POSITIONING DETAILS**
NO SCALE

RSP A77N4 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77N4

2010 REVISED STANDARD PLAN RSP A77N4

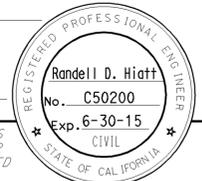
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	52	79

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

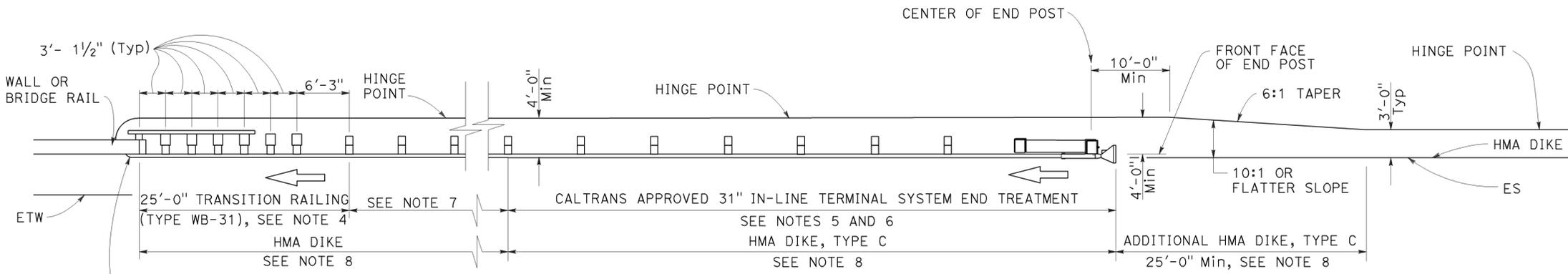
July 19, 2013
PLANS APPROVAL DATE

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 4-27-15

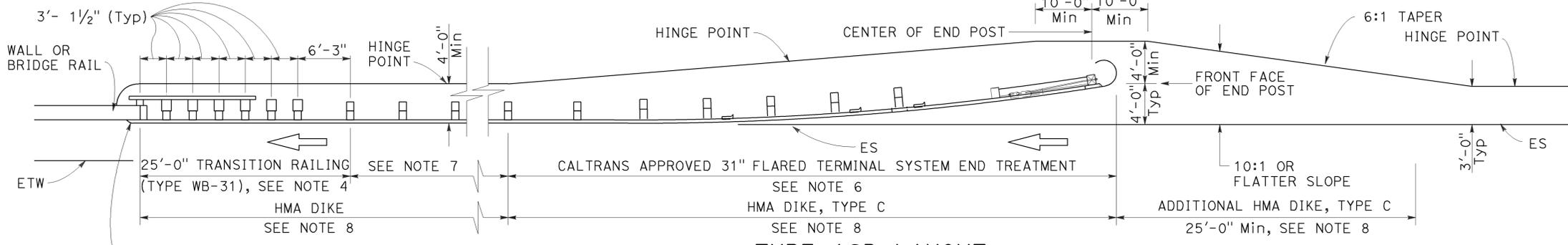


2010 REVISED STANDARD PLAN RSP A77Q1



TYPE 12A LAYOUT

(MGS installation at structure approach with 31" in-line end treatment at traffic approach end of railing)
See Notes 9



TYPE 12B LAYOUT

(MGS installation at structure approach with 31" Flared end treatment at traffic approach end of railing)
See Notes 9

NOTES:

- Line post, blocks and hardware to be used are shown on Revised Standard Plans RSP A77L1, RSP A77L2, RSP A77M1, RSP A77N1 and RSP A77N2.
- MGS 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 12" x 1'-2" wood blocks. W6 x 8.5 or W6 x 9 steel posts, 6'-0" in length, with 6" x 12" x 1'-2" notched wood blocks or plastic blocks may be used for 6" x 8" x 6'-0" wood posts with 6" x 12" x 1'-2" wood blocks where applicable and when specified.
- For Transition Railing (Type WB-31) details for Types 12A and 12B Layouts, see Revised Standard Plan RSP A77U4.
- 31" in-line terminal system end treatments are used where site conditions will not accommodate a 31" flared end treatment.
- The type 31" of terminal system end treatment to be used will be shown on the Project Plans.
- Dependent on site conditions (embankment height, side slopes, or other fixed objects), it may be advisable to construct additional guard railing (a length equal to multiples of 12'-6" with 6'-3" post spacing) between the transition railing and end treatment. A 12.5 degree angle of departure can be drawn on the Project Plans from the edge of traveled way through the outer most point of the fixed object to determine the additional length of railing needed.
- Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77N4 for dike positioning details.
- Type 12A or Type 12B Layouts are typically used:
 - To the right of approaching traffic, at the end of a structure, on two-lane conventional highway where the roadbed width across the structure is less than 40 feet.
 - To the left of approaching traffic, at the end of a structure, on two-lane conventional highway where the roadbed width across the structure is less than 40 feet.
 - To the right of approaching traffic at the end of each structure on multilane freeways or expressways with separate adjacent or parallel bridges.
 - To the right of approaching traffic at the end of the structure on multilane freeways or expressways with decked median on the bridge.
- See Revised Standard Plan RSP A77Q3 for typical layout used left of approaching traffic at the ends of each structure on multilane freeways or expressways with separate adjacent or parallel bridges.
- For additional details of typical connections to bridge rail, see Connection Detail AA on Revised Standard Plans RSP A77U1 and RSP A77U2 and Connection Detail FF on Revised Standard Plans RSP A77V1 and RSP A77V2.
- For additional details of a typical connection to walls or abutments, see Revised Standard Plan RSP A77U3.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM
TYPICAL LAYOUTS FOR
STRUCTURE APPROACH**

NO SCALE

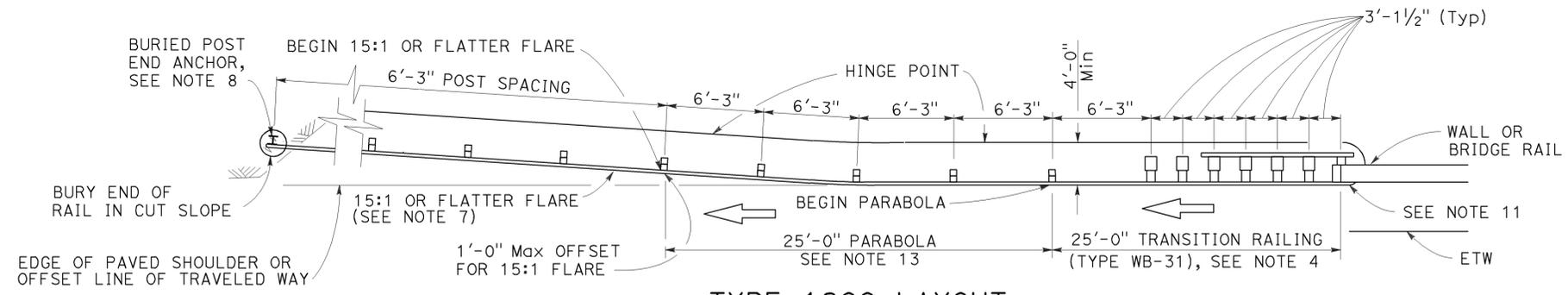
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	53	79

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

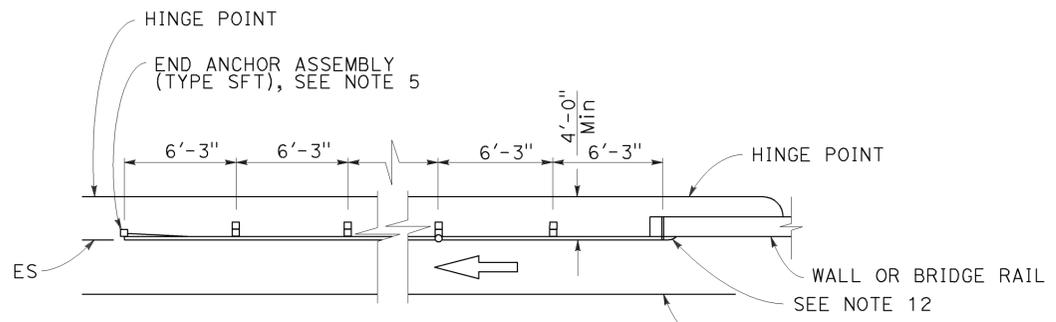
REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA

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



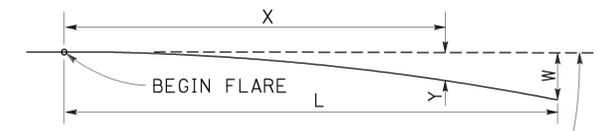
TYPE 12CC LAYOUT

(MGS installation at structure departure with a Buried end anchor treatment at trailing end of railing)
See Notes 9 and 10



TYPE 12DD LAYOUT

(MGS installation at structure departure With end anchor assembly at trailing end of railing)
See Notes 6 and 9

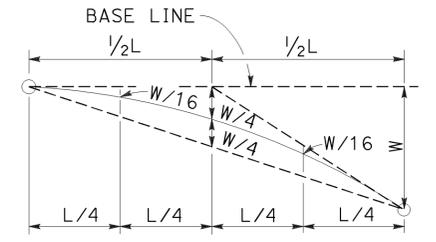


BASE LINE (EDGE OF PAVED SHOULDER OR OFFSET LINE OF EDGE OF TRAVELED WAY)

$$Y = \frac{WX^2}{L^2}$$

Y = OFFSET FROM BASE LINE
W = MAXIMUM OFFSET
X = DISTANCE ALONG BASE LINE
L = LENGTH OF FLARE

PARABOLIC FLARE OFFSETS



TYPICAL PARABOLIC LAYOUT

NOTES:

- Line post, blocks and hardware to be used are shown on Revised Standard Plans RSP A77L1, RSP A77L2, RSP A77M1, RSP A77N1 and RSP A77N2.
- MSG 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 12" x 1'-2" wood blocks. W6 x 8.5 or W6 x 9 steel posts, 6'-0" in length, with 6" x 12" x 1'-2" notched wood blocks or notched recycled plastic blocks may be used for 6" x 8" x 6'-0" wood line posts with 6" x 12" x 1'-2" wood blocks where applicable and when specified.
- For Transition Railing (Type WB-31) details for Type 12CC Layout, see Revised Standard Plan RSP A77U4.
- For details of End Anchor Assembly (Type SFT) used with Type 12DD Layout, see Revised Standard Plan RSP A77S1.
- Type 12DD layout is typically used to the right of traffic departing a structure on two-way conventional highways where the roadbed width across the structure is equal to or greater than 40 feet and MGS is recommended (embankment height, side slopes, other fixed objects). Length of railing to be equal to multiples of 12'-6". For MGS connection details to bridge rail, see Revised Standard Plans RSP A77U1 and RSP A77V1. For MGS connection details to wall, see Revised Standard Plan RSP A77U3.
- The 15:1 or flatter flare for Type 12CC Layout is based on the edge of the paved shoulder or offset line of edge of the traveled way. The length of MGS 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 the buried post end anchor used with Type 12CC Layout, see Revised Standard Plan RSP A77T2.
- Where placement of dike is required with MGS installations, see Revised Standard Plan RSP A77N4 for dike positioning details.
- Type 12CC Layout is typically used to the right of traffic departing a structure on two-way conventional highways where the roadbed width across the structure is less than 40 feet.
- For additional details of a typical connection to bridge rail for Layout Type 12CC, see Connection Detail CC on Revised Standard Plan RSP A77U2 and Connection Detail HH on Revised Standard Plan RSP A77V2.
- For additional details of a typical connection to bridge rail for Layout Type 12DD, see Connection Detail BB on Revised Standard Plan RSP A77U1 and Connection Detail GG on Revised Standard Plan RSP A77V1.
- For typical flare offsets for 25'-0" length parabola with maximum offset of 1'-0", see Revised Standard Plan RSP A77P1.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM
TYPICAL LAYOUTS FOR
STRUCTURE DEPARTURE**

NO SCALE

RSP A77Q5 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77Q5

2010 REVISED STANDARD PLAN RSP A77Q5

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	54	79

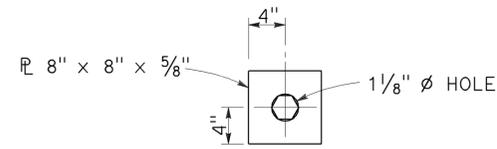
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

November 15, 2013
PLANS APPROVAL DATE

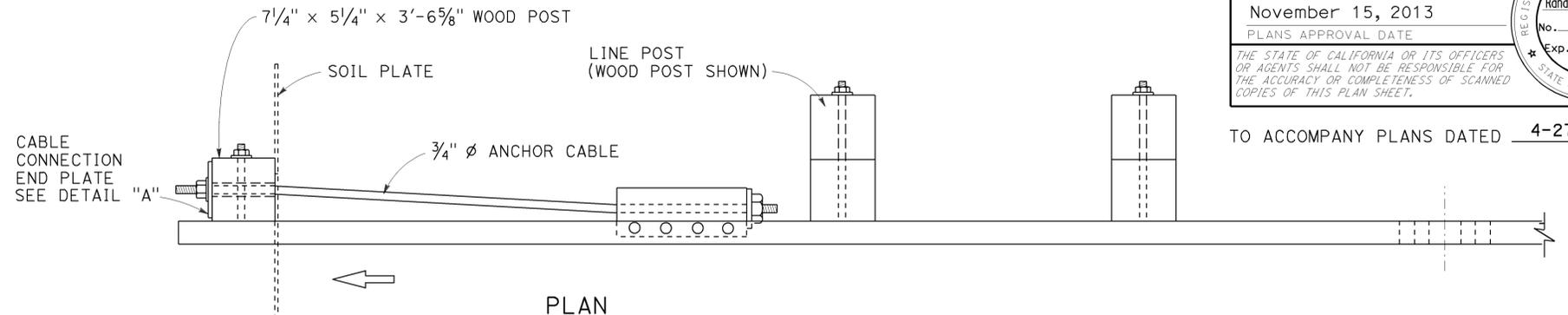
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED 4-27-15

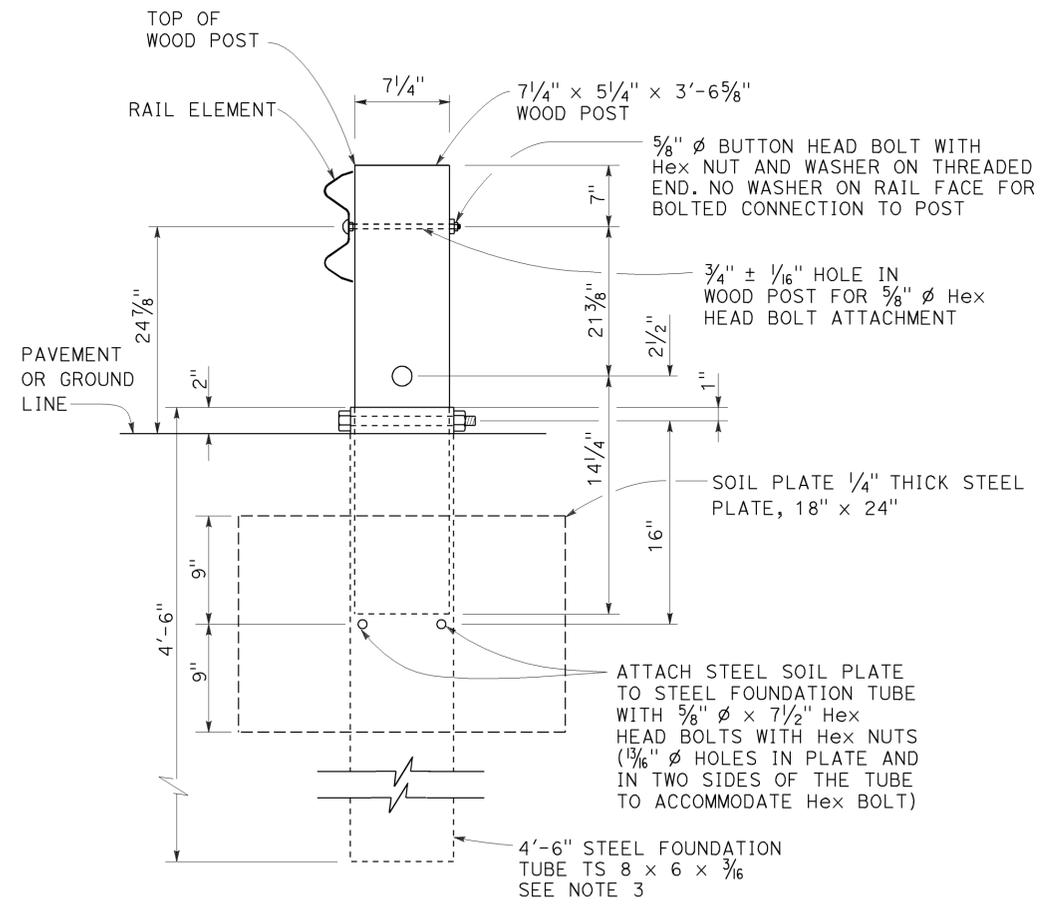
REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA



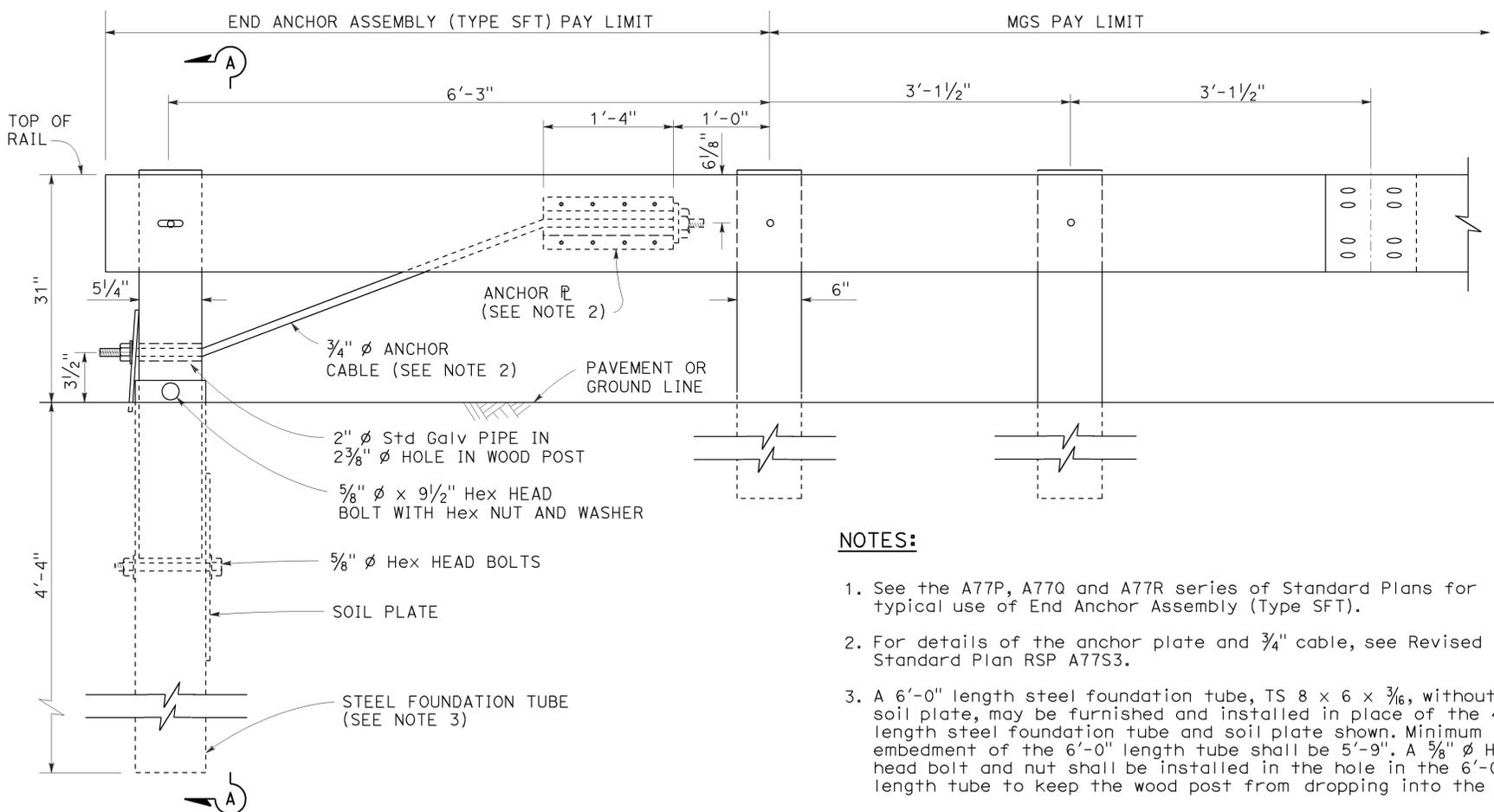
DETAIL "A"
CABLE CONNECTION
END PLATE



PLAN



SECTION A-A



ELEVATION

END ANCHOR
ASSEMBLY (TYPE SFT)
See Note 1

NOTES:

1. See the A77P, A77Q and A77R series of Standard Plans for typical use of End Anchor Assembly (Type SFT).
2. For details of the anchor plate and 3/4" cable, see Revised Standard Plan RSP A77S3.
3. A 6'-0" length steel foundation tube, TS 8 x 6 x 3/16, without a soil plate, may be furnished and installed in place of the 4'-6" length steel foundation tube and soil plate shown. Minimum embedment of the 6'-0" length tube shall be 5'-9". A 5/8" diameter hex head bolt and nut shall be installed in the hole in the 6'-0" length tube to keep the wood post from dropping into the tube.
4. Install line post, steel foundation tube and soil plate in soil.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
MIDWEST GUARDRAIL SYSTEM
END ANCHOR ASSEMBLY
(TYPE SFT)

NO SCALE

RSP A77S1 DATED NOVEMBER 15, 2013 SUPERSEDES RSP A77S1 DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77S1

2010 REVISED STANDARD PLAN RSP A77S1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	55	79

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

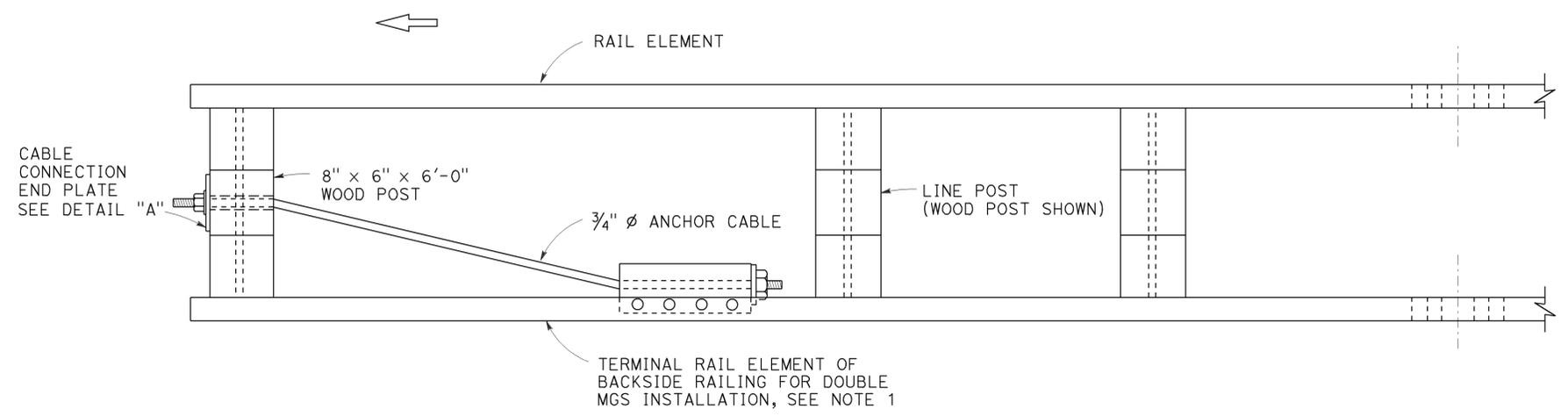
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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

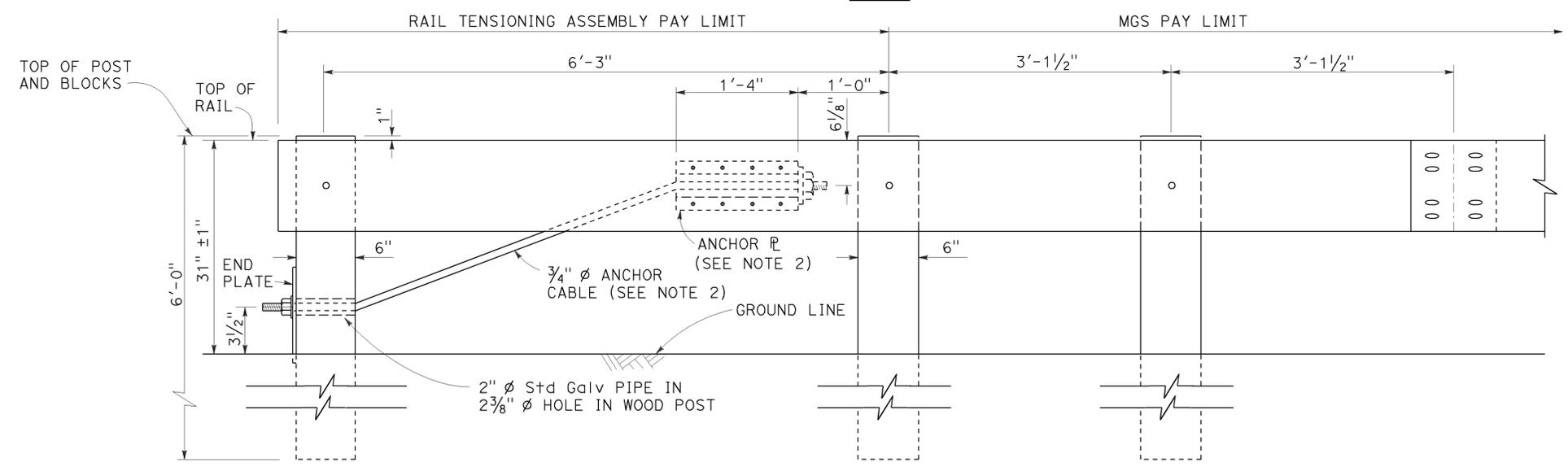
TO ACCOMPANY PLANS DATED 4-27-15

NOTES:

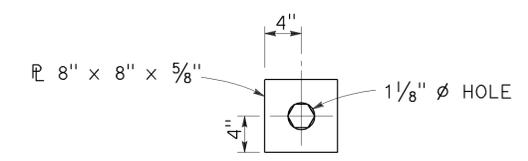
1. See Revised Standard Plans RSP A77Q3 and RSP A77R1 for typical use of rail tensioning assembly.
2. For details of the anchor plate and 3/4" cable, see Revised Standard Plan RSP A77S3.



PLAN



ELEVATION
RAIL TENSIONING
ASSEMBLY
See Note 1



DETAIL "A"
CABLE CONNECTION
END PLATE

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

MIDWEST GUARDRAIL SYSTEM
RAIL TENSIONING ASSEMBLY

NO SCALE

RSP A77S2 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77S2

2010 REVISED STANDARD PLAN RSP A77S2

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	56	79

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

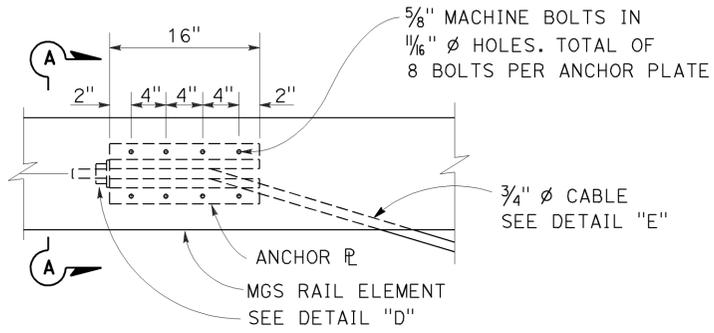
November 15, 2013
PLANS APPROVAL DATE

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.

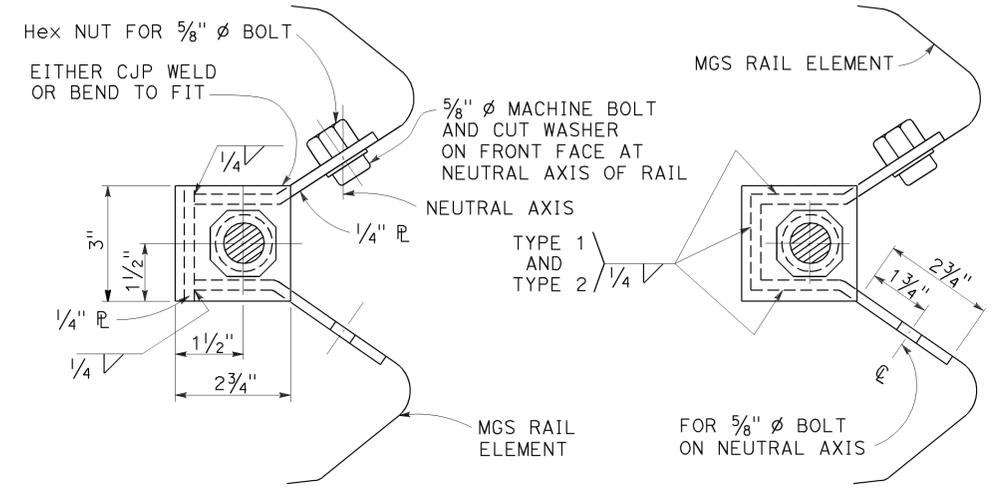
REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 4-27-15

NOTE:
See Revised Standard Plans RSP A77S1, RSP A77S2 and RSP A77T1 for typical use of anchor cable and anchor plate.

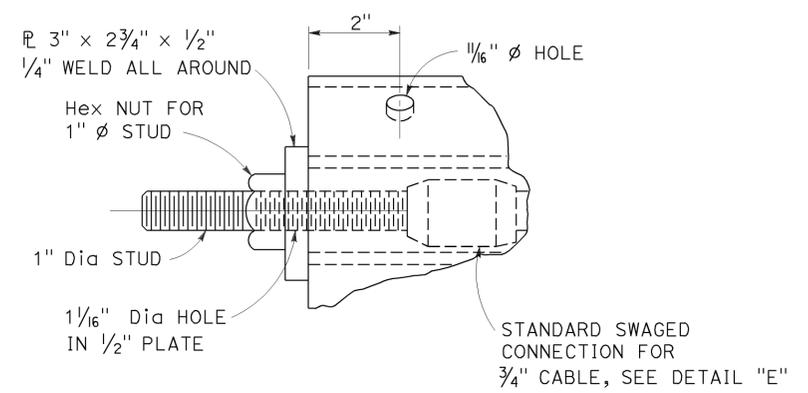


ANCHOR PLATE DETAIL
(MGS shown, TBB similar)

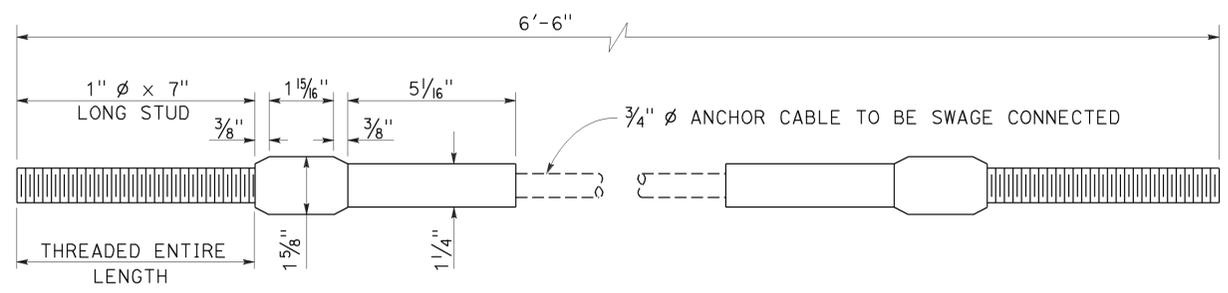


NOTE:
Dimensioning applies to both types.

SECTION A-A (ALTERNATIVE TYPE 1) **SECTION A-A (ALTERNATIVE TYPE 2)**



DETAIL "D"



ANCHOR CABLE WITH SWAGED FITTING AND STUD
DETAIL "E"

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**METAL RAILING
ANCHOR CABLE AND
ANCHOR PLATE DETAILS**

NO SCALE
RSP A77S3 DATED NOVEMBER 15, 2013 SUPERSEDES RSP A77S3
DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP A77S3

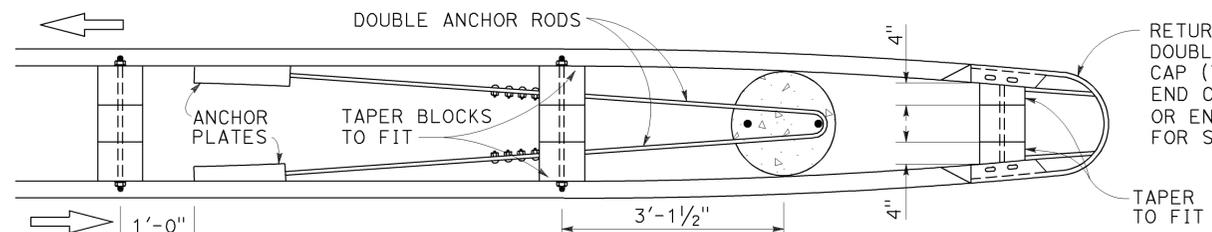
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	57	79

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

November 15, 2013
PLANS APPROVAL DATE

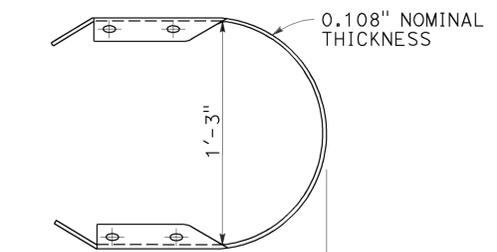
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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



PLAN
See Note 4

RETURN CAP (TYPE TA) FOR DOUBLE THRIE BEAM OR RETURN CAP (TYPE A) FOR DOUBLE MGS.
END CAP (TYPE A) FOR SINGLE MGS OR END CAP (TYPE TC) FOR SINGLE THRIE BEAM



PLAN

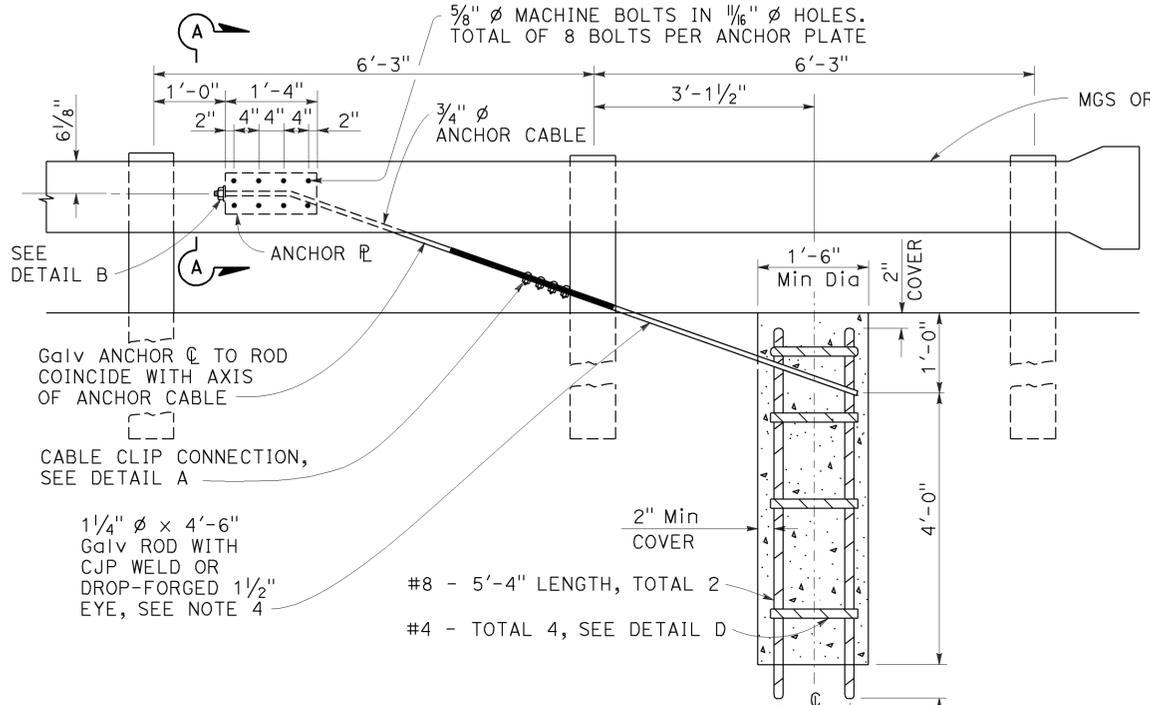
ELEVATION

RETURN CAP (TYPE A)

TO ACCOMPANY PLANS DATED 4-27-15

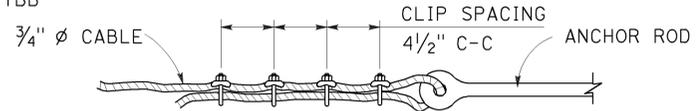
NOTES:

- For typical use of this type of end anchor, see Revised Standard Plan RSP A78E2.
- Anchor cable to be parallel to railing for straight runs of rail. Anchor cable may have angle point at anchor plate if railing is curved.
- Anchor rod hooks to be in contact with anchor reinforcement when concrete is placed. Wire ties may be used to position anchor rods.
- Single sided railing installations require only one anchor plate, anchor rod and anchor cable. Single sided railing will not have a rail element or blockouts on backside of line posts as shown in the plan view.



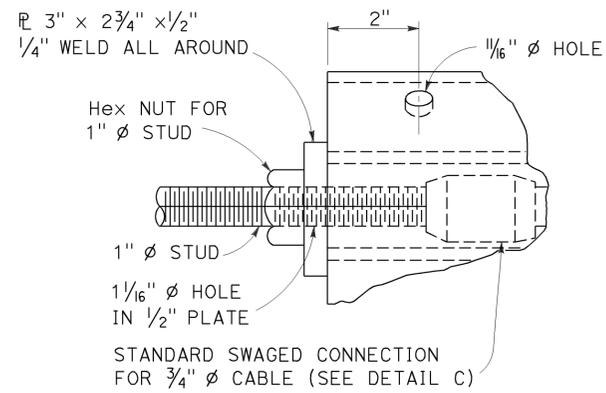
ELEVATION
END ANCHOR ASSEMBLY (TYPE CA)

(Wood post, MGS shown, details similar for Thrie Beam Barrier.)



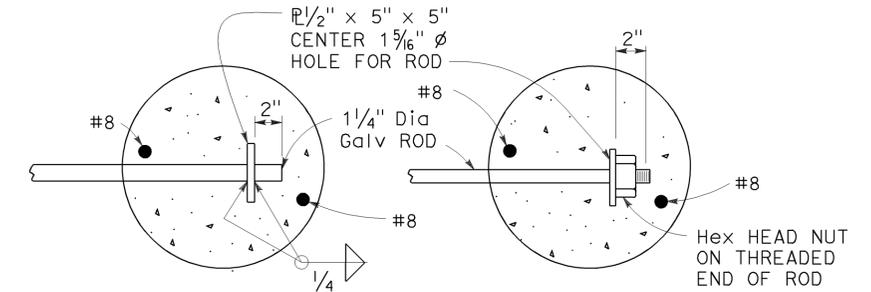
DETAIL A
CABLE CLIP CONNECTION

"U" bolts of clip on short end of cable only
"U" bolts tightened to 50 ft/lb torque



DETAIL B

STANDARD SWAGED CONNECTION FOR 3/4" ϕ CABLE (SEE DETAIL C)

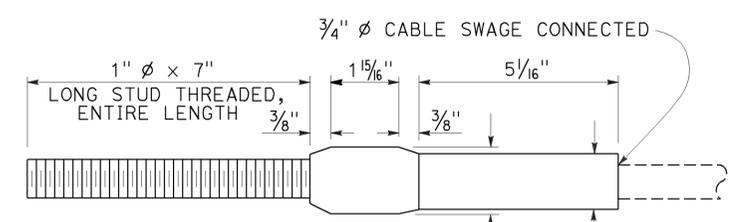


OPTIONAL ENDS ON SINGLE ANCHOR ROD

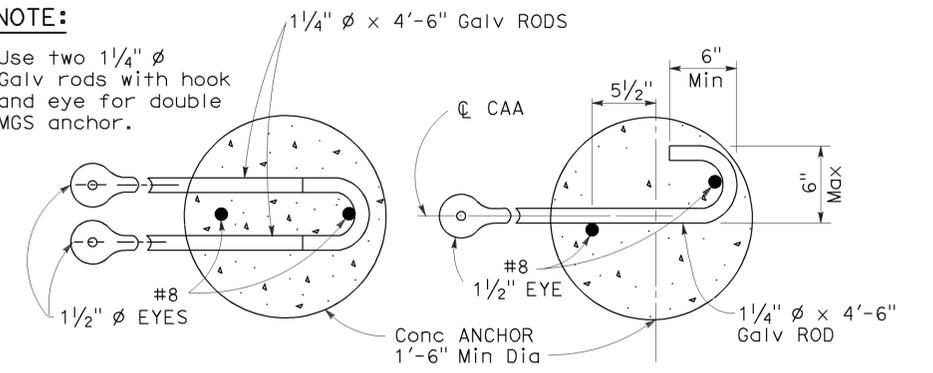
(Not to be used for double anchors)

NOTE:

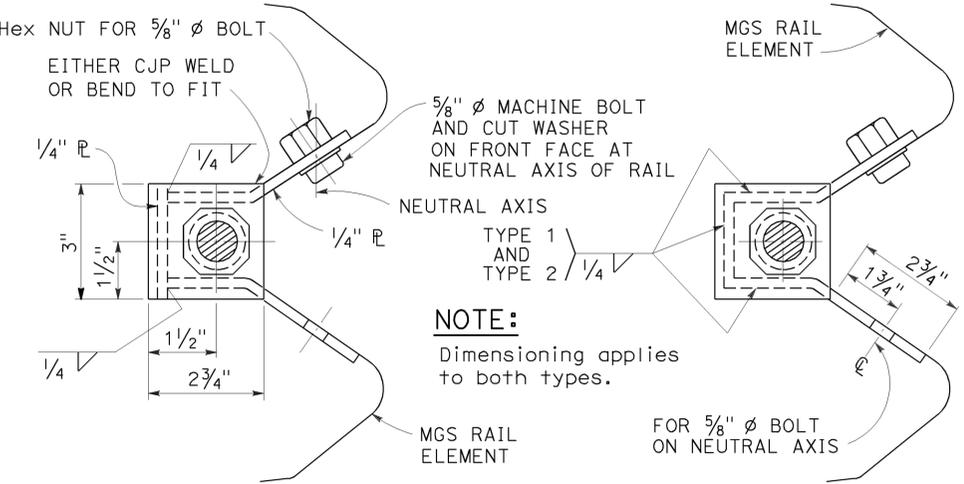
Use two 1/4" ϕ Galv rods with hook and eye for double MGS anchor.



DETAIL C
ANCHOR CABLE WITH SWAGED FITTING AND STUD

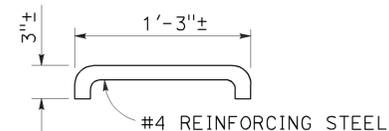


DOUBLE ANCHOR ANCHOR RODS
SINGLE ANCHOR ANCHOR RODS



SECTION A-A (Alternative Type 1)
SECTION A-A (Alternative Type 2)
ANCHOR PLATE DETAILS

NOTE:
Dimensioning applies to both types.



DETAIL D

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

METAL RAILING END ANCHOR ASSEMBLY (TYPE CA)

NO SCALE

RSP A77T1 DATED NOVEMBER 15, 2013 SUPERSEDES RSP A77T1 DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77T1

2010 REVISED STANDARD PLAN RSP A77T1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	58	79

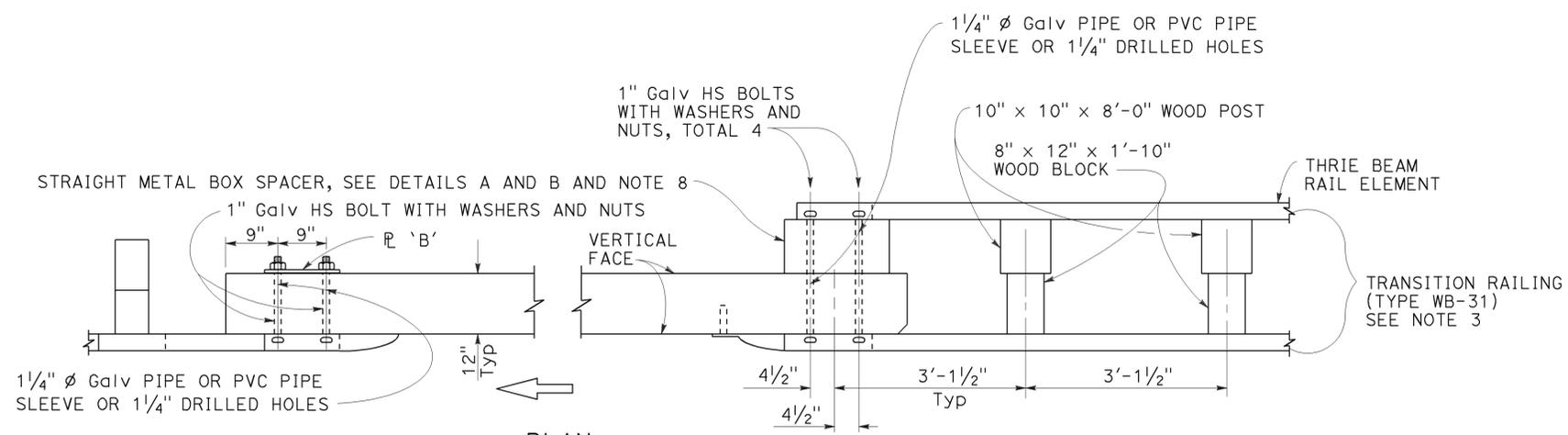
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

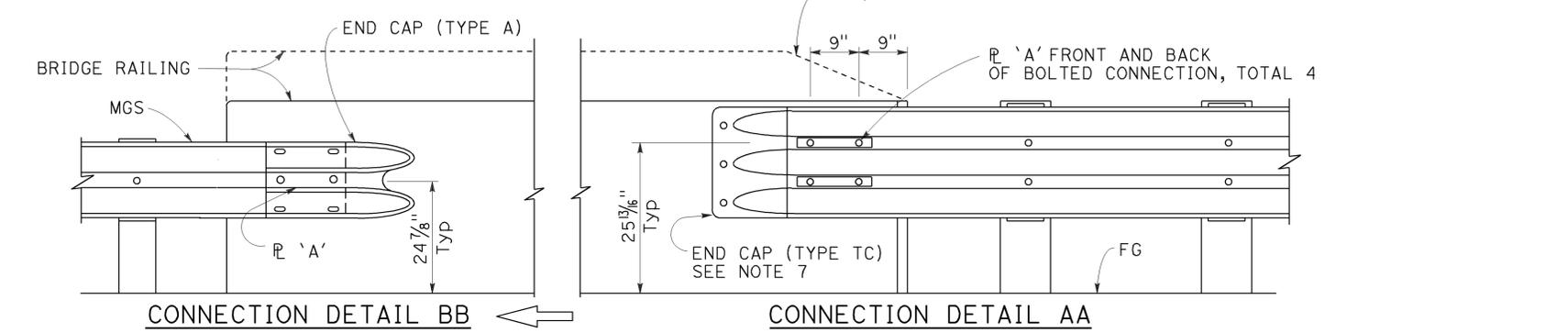
REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA

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

TO ACCOMPANY PLANS DATED 4-27-15



PLAN

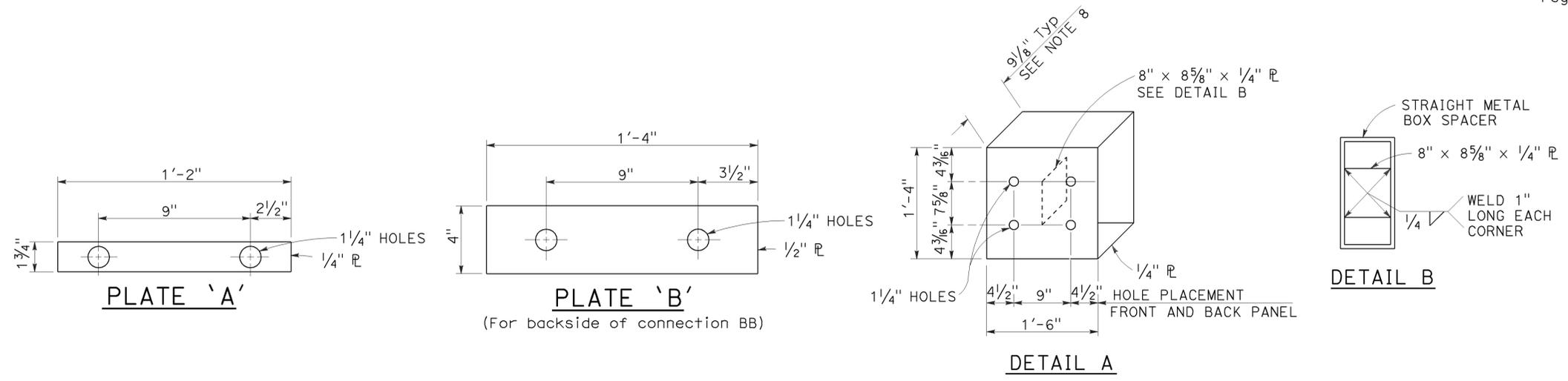


ELEVATION

MIDWEST GUARDRAIL SYSTEM CONNECTION TO BRIDGE RAILING WITHOUT SIDEWALK

NOTES:

1. See Revised Standard Plan RSP A77U2 for additional connection details to bridges without sidewalks.
2. Additional details of posts, blocks and hardware are shown on Revised Standard Plans RSP A77M1, RSP A77N1 and RSP A77N2.
3. For additional details of Transition Railing (Type WB-31), see Revised Standard Plan RSP A77U4. Transition Railing (Type WB-31) transitions the 12 gauge MGS railing section to a heavier gage nested three beam railing section which is connected to the concrete bridge railing.
4. For typical use of Connection Detail AA, see Layout Types 12A and 12B on Revised Standard Plan RSP A77Q1, Layout Types 12C and 12D on Revised Standard Plan RSP A77Q2, and Layout Type 12E on Revised Standard Plan RSP A77Q3.
5. For typical use of Connection Detail BB, see Layout Type 12D (structure departure railing connection) on Revised Standard Plan RSP A77Q2 and Layout Type 12DD on Revised Standard Plan RSP A77Q5.
6. Where the height of the bridge railing exceeds the height of the three beam railing by more than 1" at Connection Detail AA, taper the top of the end of the bridge railing at 4:1 to match the top elevation of the three beam rail.
7. For details of End Cap (Type TC), see Revised Standard Plan RSP A77U4.
8. See Revised Standard Plan RSP A77U4 for additional details regarding depth dimension for straight metal box spacer.



STRAIGHT METAL BOX SPACER

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
MIDWEST GUARDRAIL SYSTEM CONNECTIONS TO BRIDGE RAILINGS WITHOUT SIDEWALKS
DETAILS No. 1

NO SCALE

RSP A77U1 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77U1

2010 REVISED STANDARD PLAN RSP A77U1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	59	79

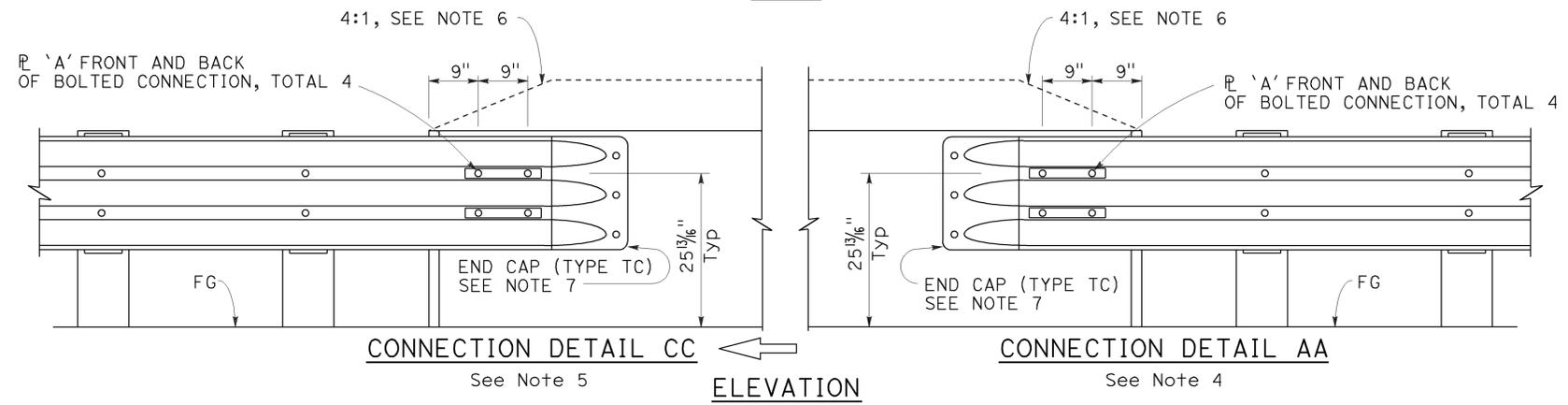
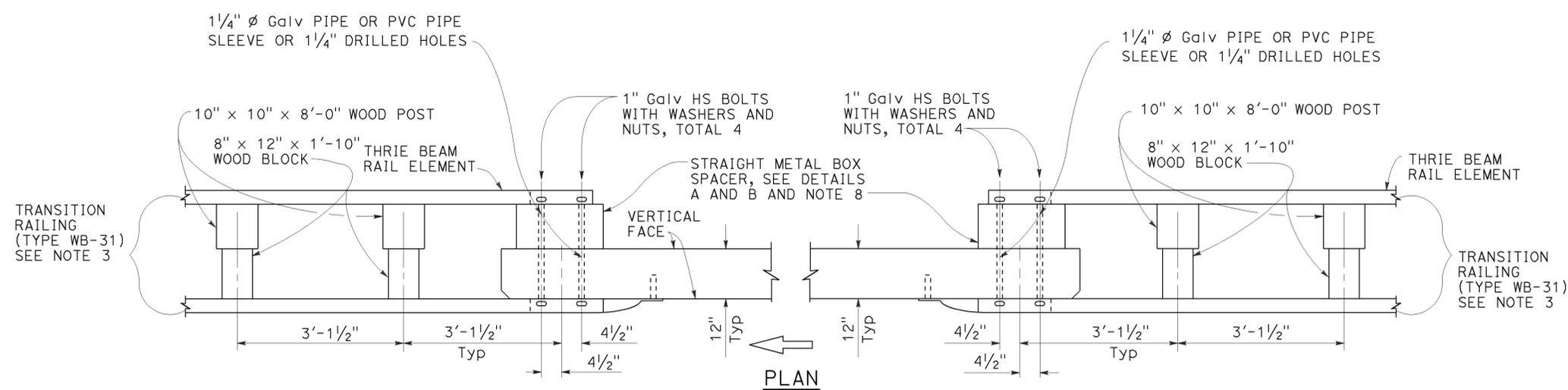
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

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.

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

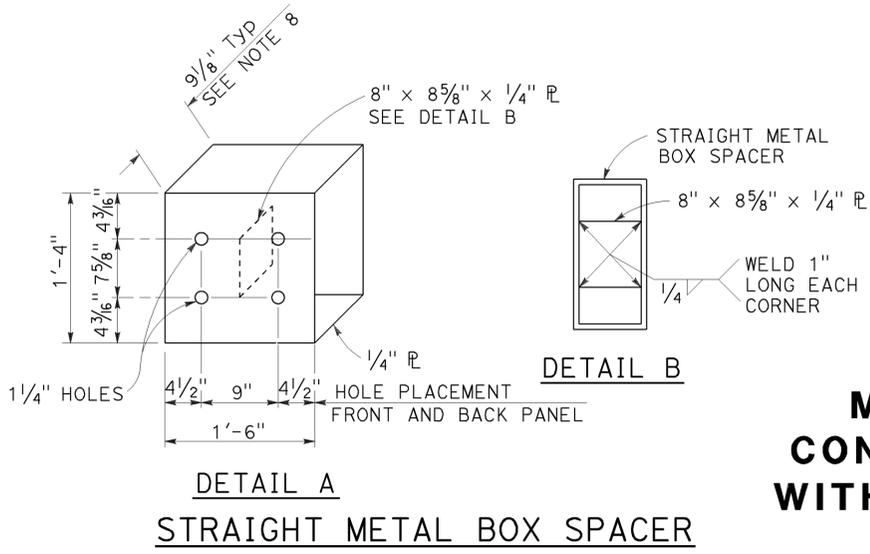
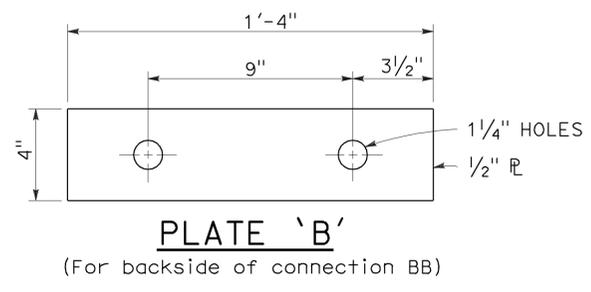
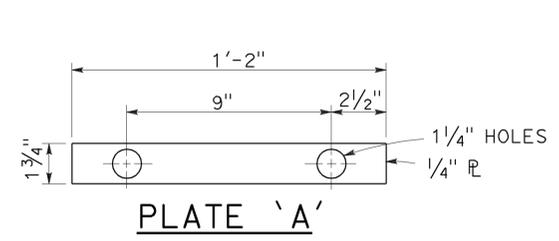
TO ACCOMPANY PLANS DATED 4-27-15



MIDWEST GUARDRAIL SYSTEM CONNECTION TO BRIDGE RAILING WITHOUT SIDEWALK

NOTES:

1. See Revised Standard Plan RSP A77U1 for additional connection details to bridges without sidewalks.
2. Additional details of posts, blocks and hardware are shown on Revised Standard Plans RSP A77M1, RSP A77N1 and RSP A77N2.
3. For additional details of Transition Railing (Type WB-31), see Revised Standard Plan RSP A77U4. Transition Railing (Type WB-31) transitions the 12 gauge MGS railing section to a heavier gage nested thrie beam railing section which is connected to the concrete bridge railing.
4. For typical use of Connection Detail AA, see Layout Types 12A and 12B on Revised Standard Plan RSP A77Q1, Layout Types 12C and 12D on Revised Standard Plan RSP A77Q2, and Layout Type 12E on Revised Standard Plan RSP A77Q3.
5. For typical use of Connection Detail CC, see Layout Types 12AA and 12BB on Revised Standard Plan RSP A77Q4 and Layout Type 12CC on Revised Standard Plan RSP A77Q5.
6. Where the height of the bridge railing exceeds the height of the thrie beam railing by more than 1 inch at Connection Detail AA and connection Detail CC, taper the top of the end of the bridge railing at 4:1 to match the top elevation of the thrie beam railing.
7. For details of End Cap (Type TC), see Revised Standard Plan RSP A77U4.
8. See Revised Standard Plan RSP A77U4 for additional details regarding depth dimension for straight metal box spacer.



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM
CONNECTIONS TO BRIDGE RAILINGS
WITHOUT SIDEWALKS DETAILS No. 2**

NO SCALE

2010 REVISED STANDARD PLAN RSP A77U2

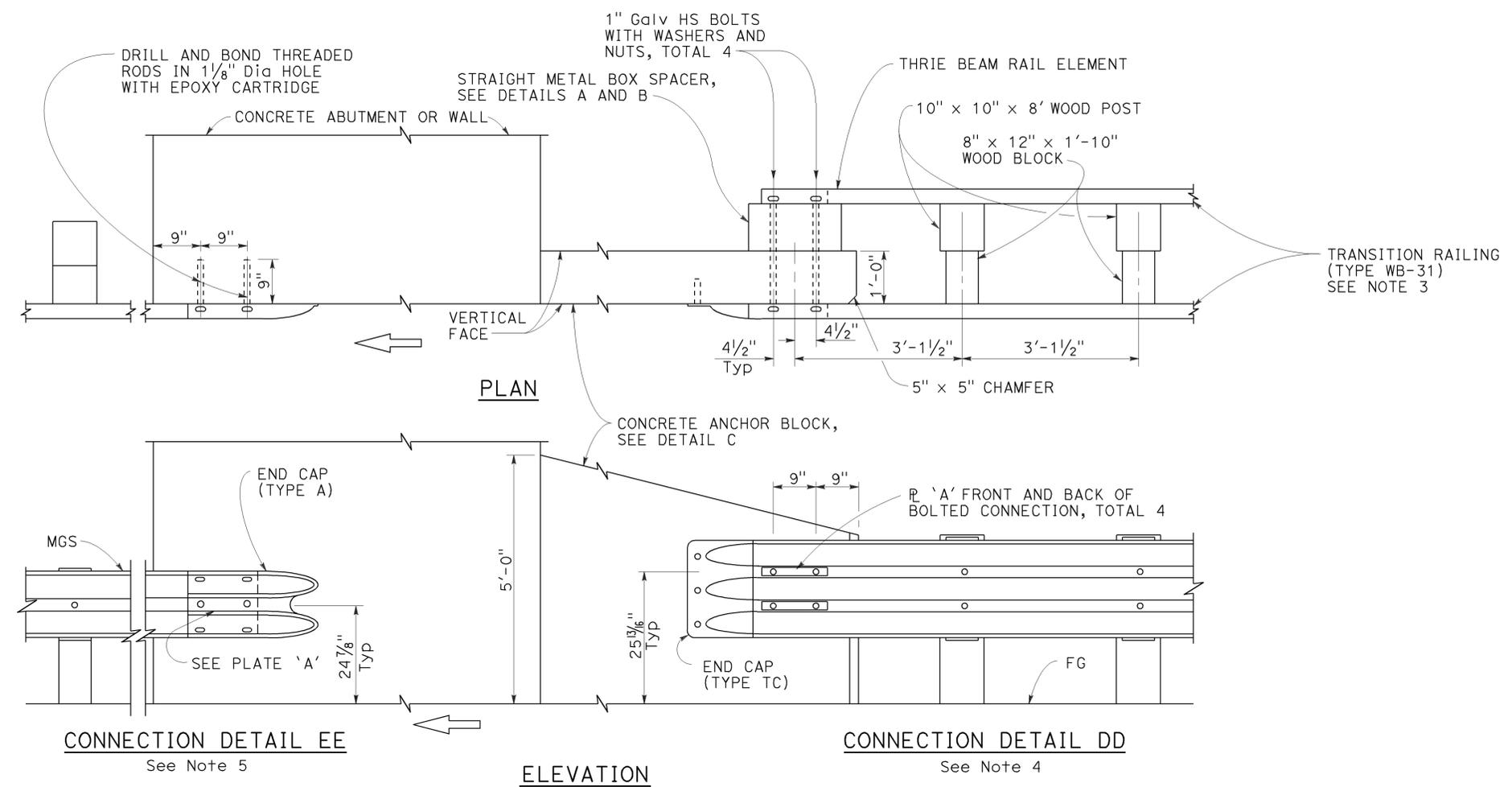
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	60	79

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

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.

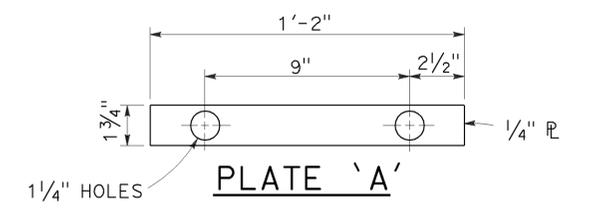
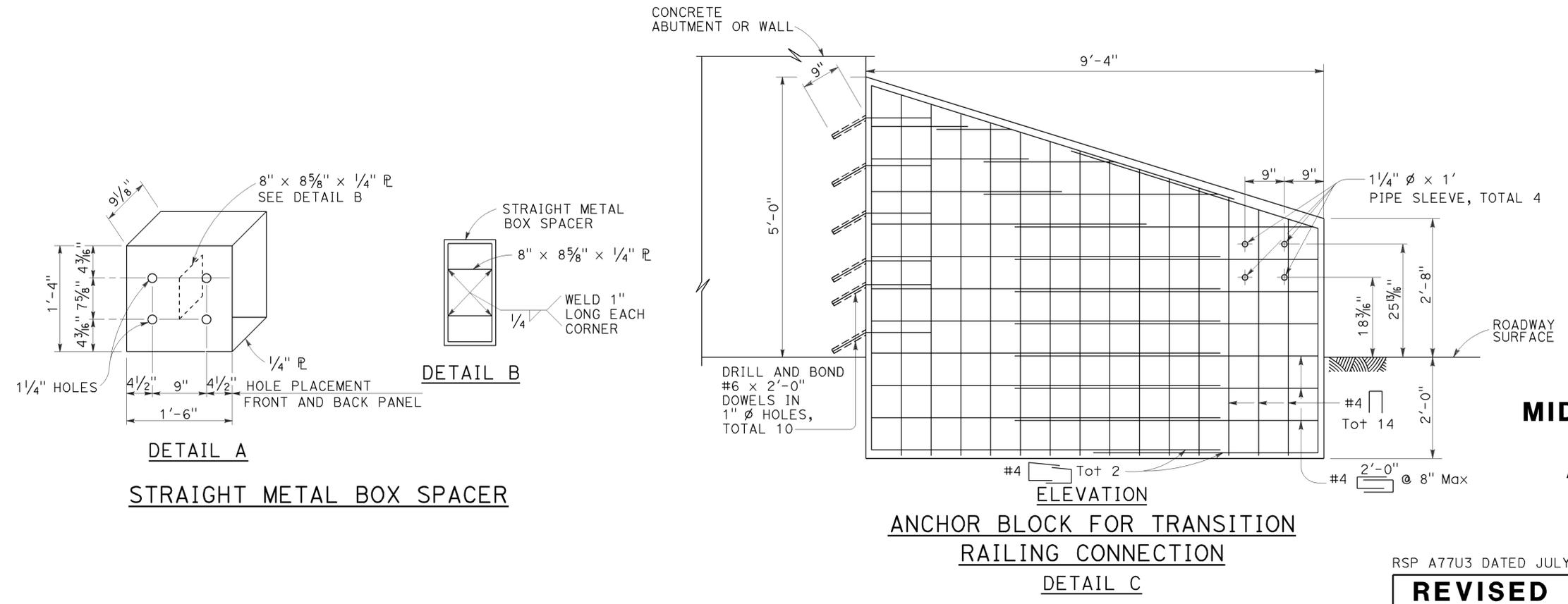
TO ACCOMPANY PLANS DATED 4-27-15



NOTES:

1. These connection details apply to abutments and walls.
2. Additional details of posts, blocks and hardware are shown on Revised Standard Plans RSP A77M1, RSP A77N1 and RSP A77N2.
3. For additional details of Transition Railing (Type WB-31), see Revised Standard Plan RSP A77U4. Transition Railing (Type WB-31) transitions the 12 gauge MGS railing section to a heavier gage nested thrie beam railing section which is connected to the concrete anchor block.
4. For typical use of Connection Details DD, see Layout Types 12A and 12B on Revised Standard Plan RSP A77Q1 and Layout Types 12C and 12D on Revised Standard Plan RSP A77Q2.
5. For typical use of Connection Detail EE, see Layout Type 12D on Revised Standard Plan RSP A77Q2 and Layout Type 12DD on Revised Standard Plan RSP A77Q5.

MIDWEST GUARDRAIL SYSTEM CONNECTION TO ABUTMENT OR WALL



MIDWEST GUARDRAIL SYSTEM CONNECTIONS TO ABUTMENTS AND WALLS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

NO SCALE

RSP A77U3 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77U3

2010 REVISED STANDARD PLAN RSP A77U3

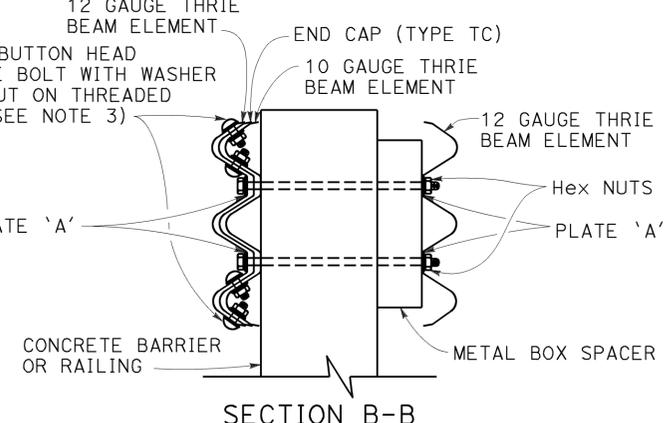
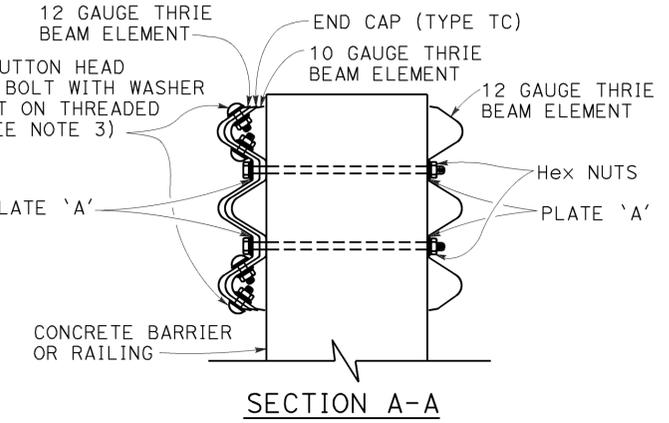
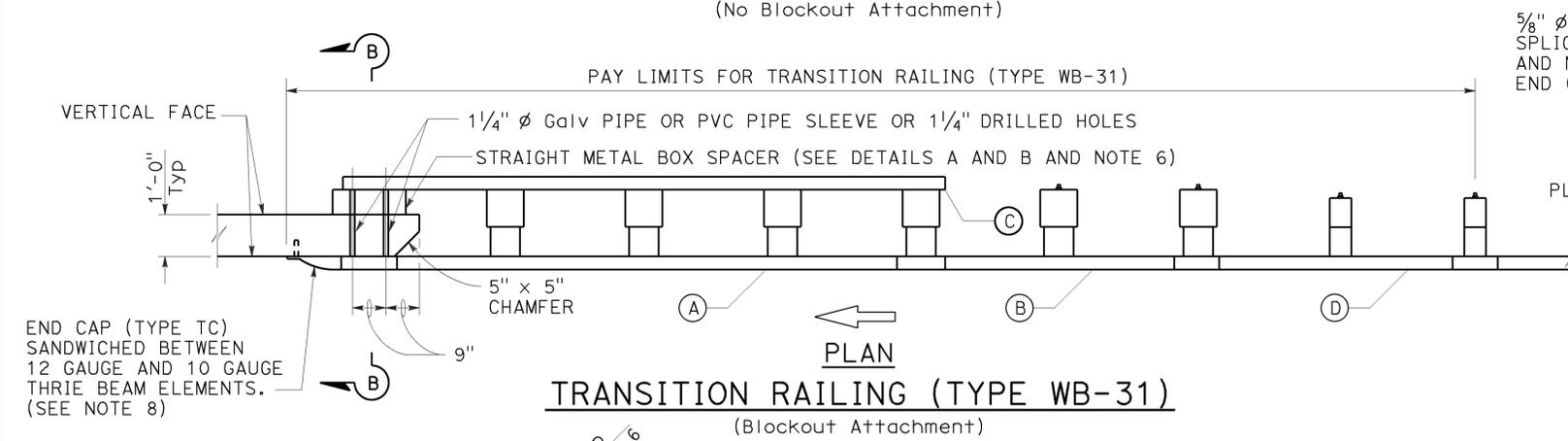
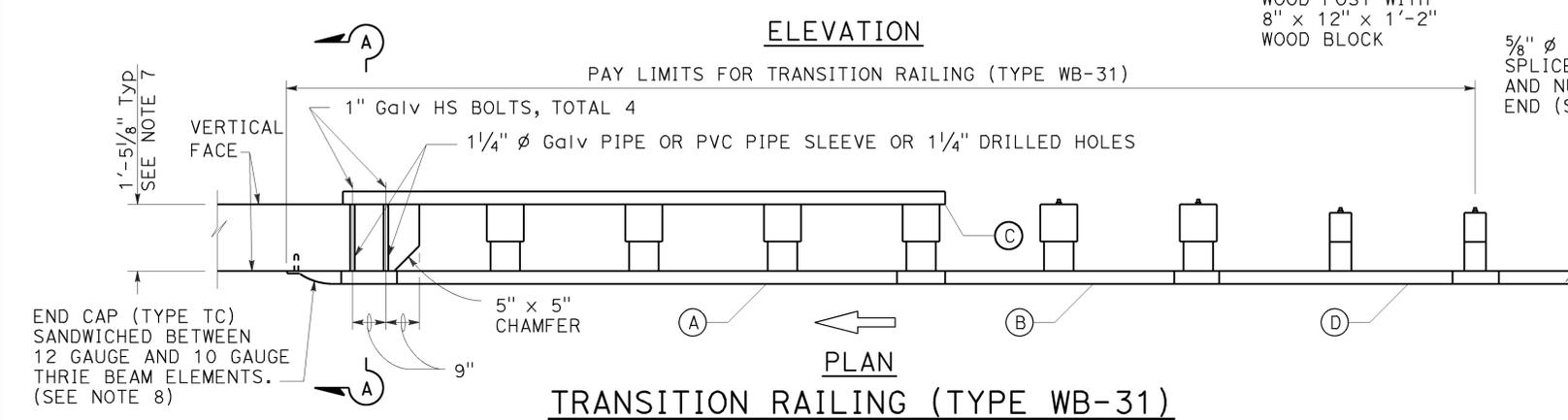
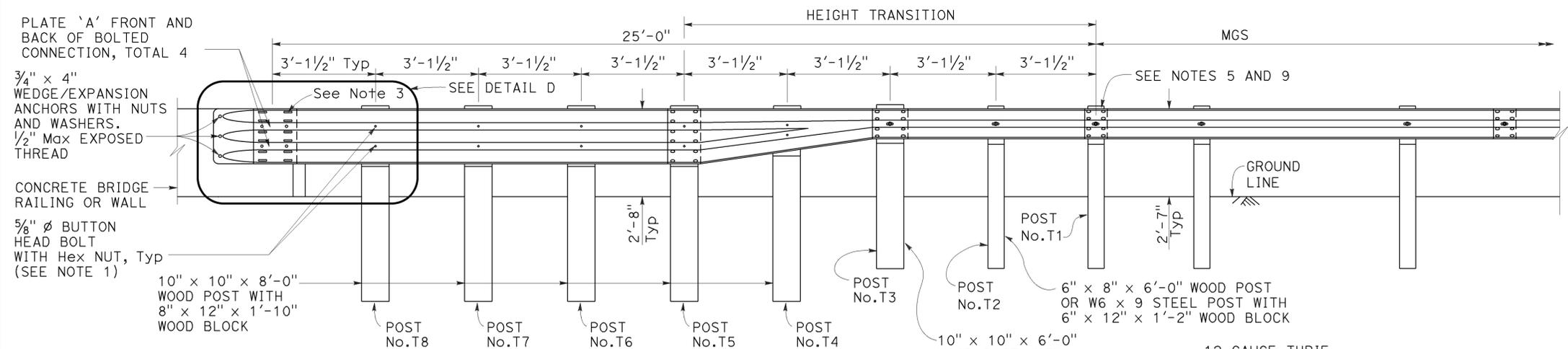
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	61	79

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

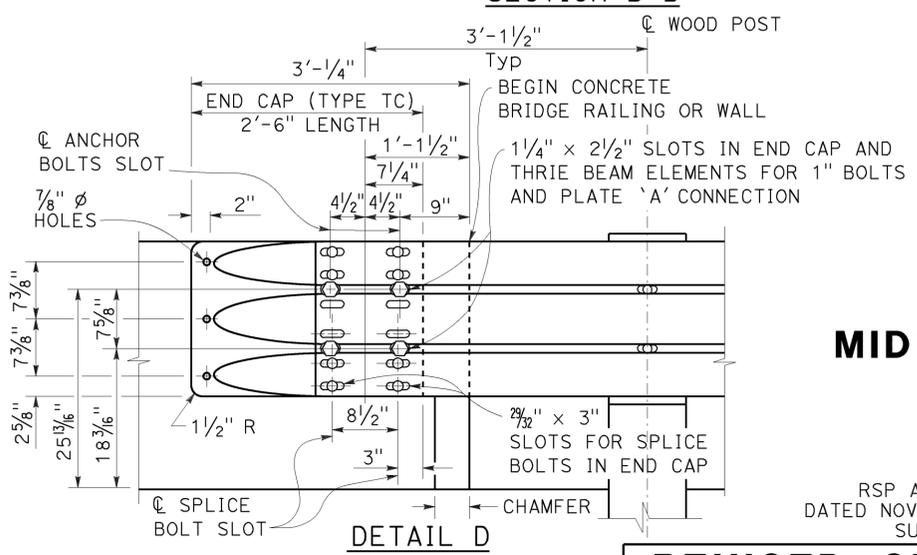
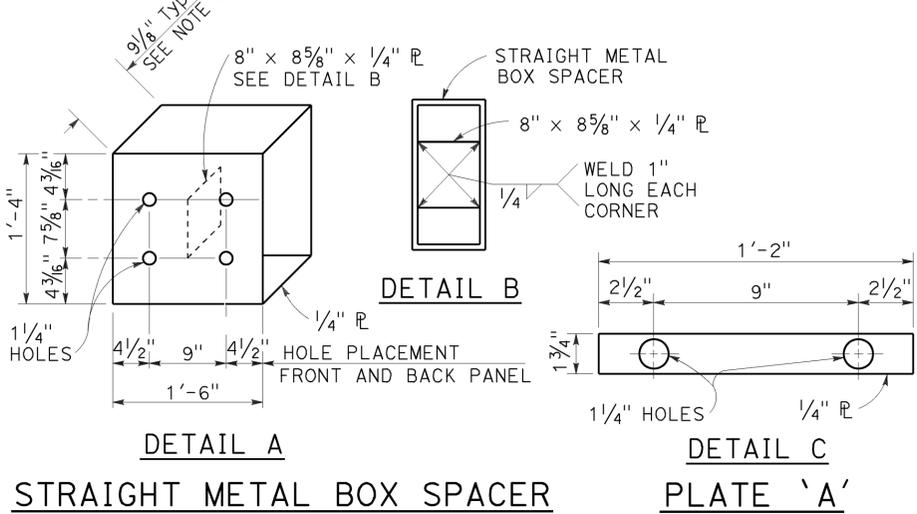
January 23, 2015
PLANS APPROVAL DATE

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. C50200
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA



- LEGEND:**
- (A) NESTED THRIE BEAM ELEMENTS (ONE 12 GAUGE ELEMENT NESTED OVER ONE 10 GAUGE ELEMENT).
 - (B) ONE ASYMMETRICAL 10 GAUGE "W" BEAM TO THRIE BEAM ELEMENT.
 - (C) ONE 12 GAUGE THRIE BEAM ELEMENT.
 - (D) ONE 10 GAUGE "W" BEAM RAIL ELEMENT (7'-3/2" LENGTH)
- 10 GAUGE = 0.138" THICK
12 GAUGE = 0.108" THICK



- NOTES:** TO ACCOMPANY PLANS DATED 4-27-15
1. Use 5/8" ϕ Button head bolts and hex nuts for connections to posts. No washer on rail face for bolted connections to post.
 2. The nested rail elements, end cap, and "W" beam to thrie beam element may be spliced together prior to bolting the elements to the wood post and concrete barrier or railing.
 3. Exterior splice bolt holes for rail element splices at Post No. T5 and the connection to the concrete barrier or railing shall be the standard 7/32" x 1/8" slot size. Interior splice bolt holes at these locations may be increased up to 1/4" ϕ . Only the top 4 and the bottom 4 splice bolts with washers and nuts are required for rail splices at Post No. T5 and the connection to the concrete barrier or railing.
 4. The top elevation of Posts No. T2 through No. T7 shall not project more than 1" above the top elevation of the rail element.
 5. Typically, the railing connected to Transition Railing (Type WB-31) will be either standard railing section of MGS with height transition ratio of 150:1 or a Caltrans approved 31" end treatment attached to Post No. T1.
 6. The depth of the metal box spacer varies from the 9/8" to 1/2" and is dependent on the width of the concrete railing or wall. The combined dimension for the depth of the metal box spacer plus the width of railing or wall is typically 21 1/8". Where the space between the backside of the concrete railing or wall and the rear thrie beam element is less than 1/2", metal plates similar to Plate 'A' are to be used as spacers.
 7. Where the width of the concrete railing or wall is greater than 17 1/8", wood blocks are to be used to fill the space created between the backside of Posts No. T5 through No. T8 and the rear thrie beam element. These wood blocks shall be 8" in width and 1'-2" in length. The dimension between the front thrie beam element and the rear thrie beam element is to match the width of the concrete railing or wall.
 8. End cap may be installed over 12 gauge and 10 gauge thrie beam elements where transition railing is installed on the departure end of bridge railing.
 9. Conform standard railing section height to 31" at Post No. T1 using height transition ratio of 150:1.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM
TRANSITION RAILING
(TYPE WB-31)**

NO SCALE

RSP A77U4 DATED JANUARY 23, 2015 SUPERSEDES RSP A77U4 DATED NOVEMBER 15, 2013 AND RSP A77U4 DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77U4

2010 REVISED STANDARD PLAN RSP A77U4

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	62	79

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

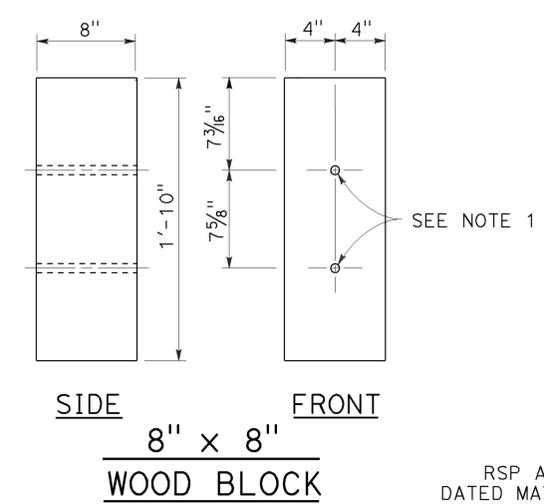
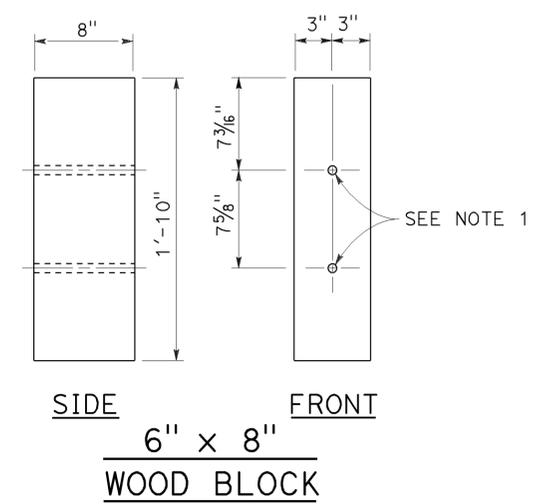
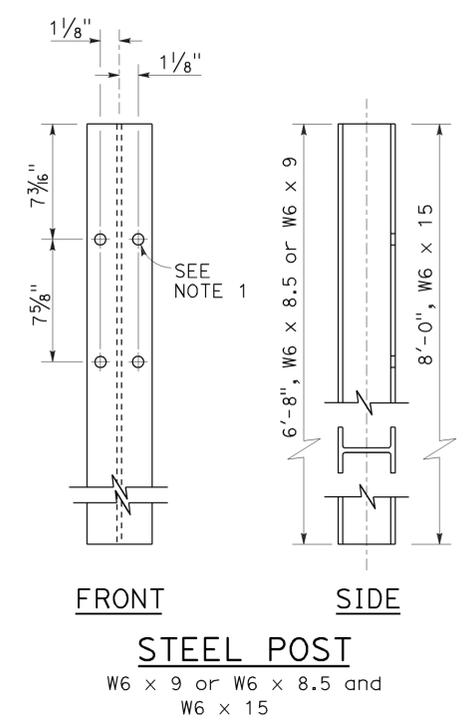
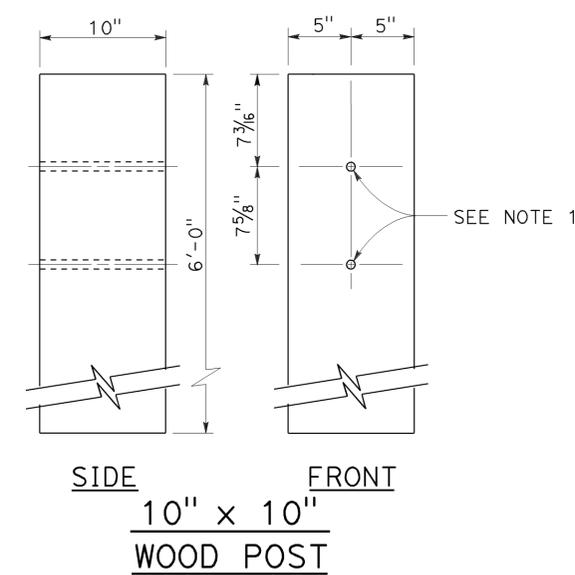
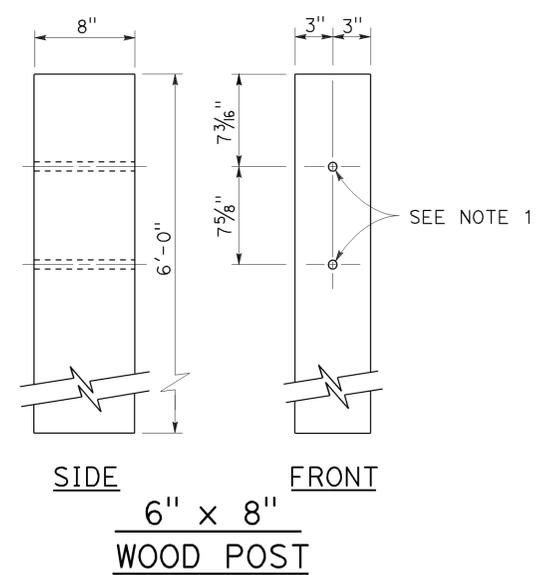
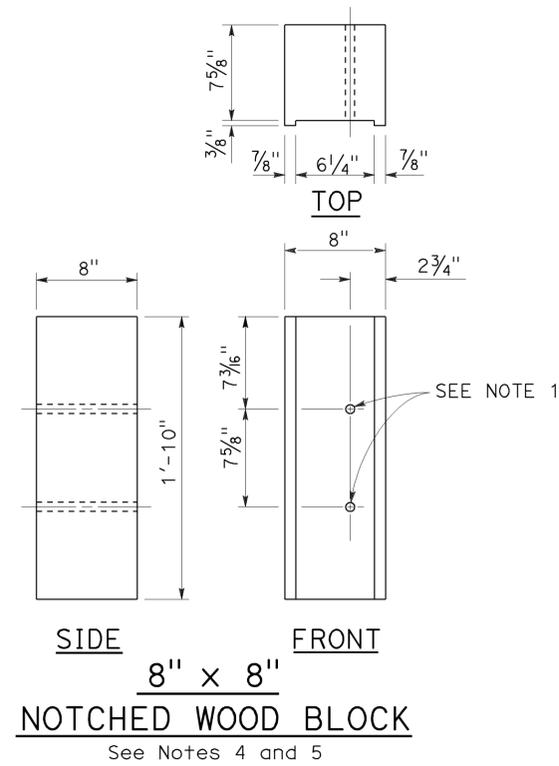
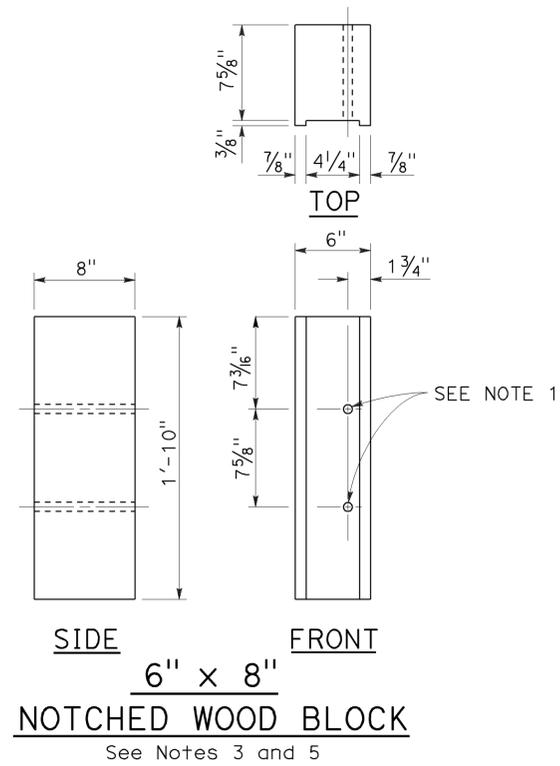
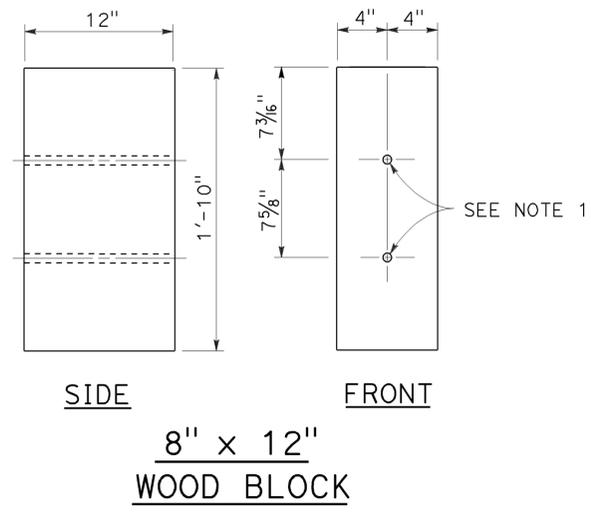
July 19, 2013
PLANS APPROVAL DATE

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.

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

TO ACCOMPANY PLANS DATED 4-27-15

- NOTES:**
- 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 $\pm \frac{1}{16}$ ".
 - Dimensions shown for wood post are nominal.
 - For use with W6 x 8.5 or W6 x 9 steel post.
 - For use with W6 x 15 steel post.
 - Notched face of block faces steel post.



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**THRIE BEAM BARRIER
POST AND BLOCK DETAILS**

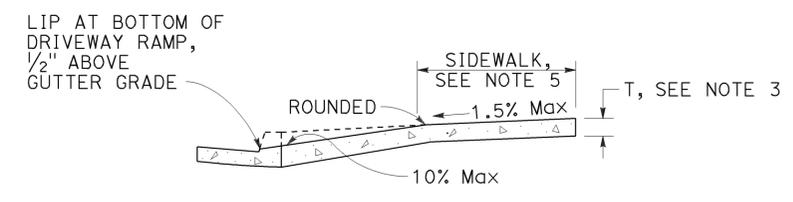
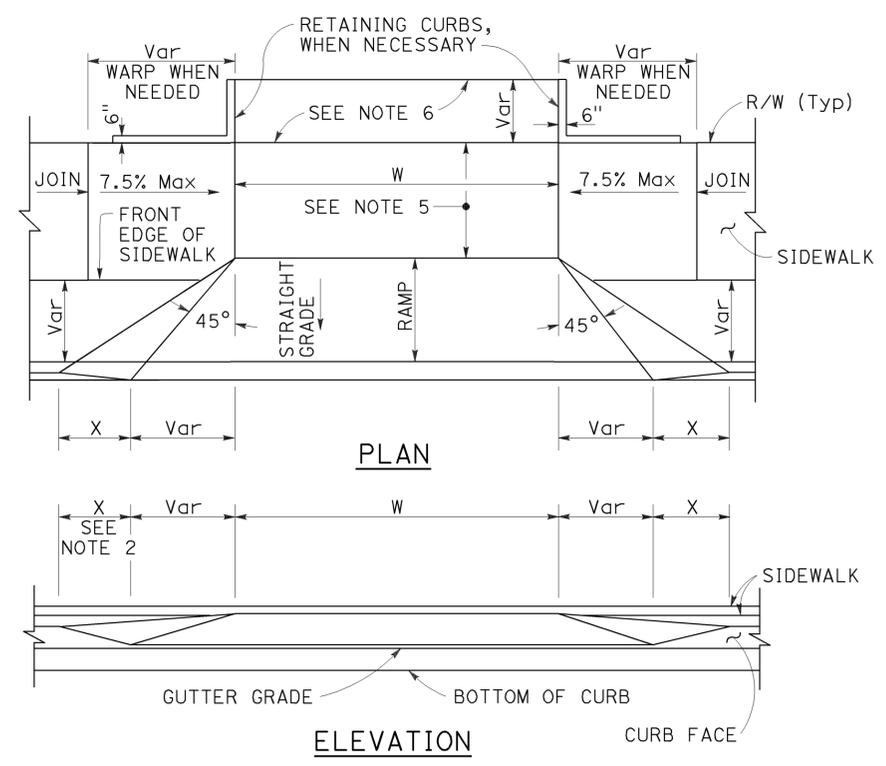
NO SCALE

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

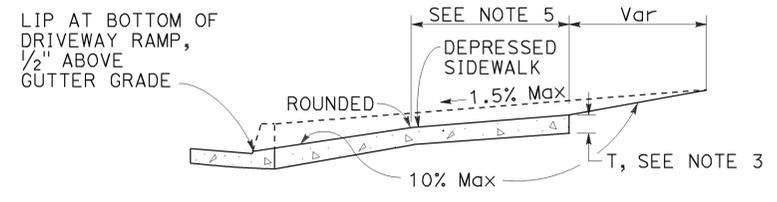
REVISED STANDARD PLAN RSP A78C2

2010 REVISED STANDARD PLAN RSP A78C2

TO ACCOMPANY PLANS DATED 4-27-15



CASE A
Typical driveway, sidewalk not depressed



CASE B
Driveway with depressed sidewalk

SECTIONS

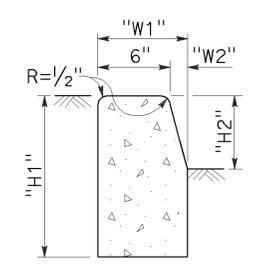
TABLE A

CURB TYPE	DIMENSIONS			
	"H1"	"H2"	"W1"	"W2"
A1-6	1'-2"	6"	7 1/2"	1 1/2"
A1-8	1'-4"	8"	8"	2"
A2-6	1'-0"	6"	2'-7 1/2"	1 1/2"
A2-8	1'-2"	8"	2'-8"	2"
A3-6	6"	5"	7 1/4"	1 1/4"
A3-8	8"	7"	7 3/4"	1 3/4"
B1-4	1'-0"	4"	7 1/2"	2 1/2"
B1-6	1'-2"	6"	9"	4"
B2-4	10"	4"	2'-7 1/2"	2 1/2"
B2-6	1'-0"	6"	2'-9"	4"
B3-4	4"	3"	7"	2"
B3-6	6"	5"	8 1/2"	3 1/2"
D-4	10"	4"	1'-6"	1'-1"
D-6	1'-0"	6"	2'-2"	1'-9"

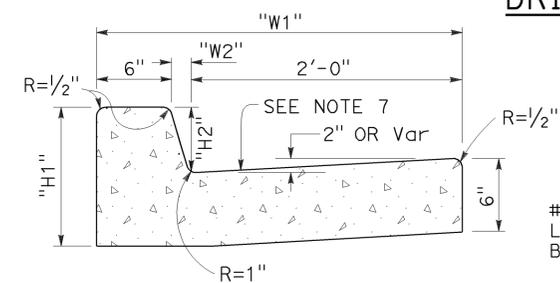
CURB QUANTITIES

TYPE	CUBIC YARDS PER LINEAR FOOT
A1-6	0.02585
A1-8	0.03084
A2-6	0.05903
A2-8	0.06379
A3-6	0.01036
A3-8	0.01435
B1-4	0.02185
B1-6	0.02930
B2-4	0.05515
B2-6	0.06171
B3-4	0.00641
B3-6	0.01074
B4	0.05709
D-4	0.04083
D-6	0.06804
E	0.06661

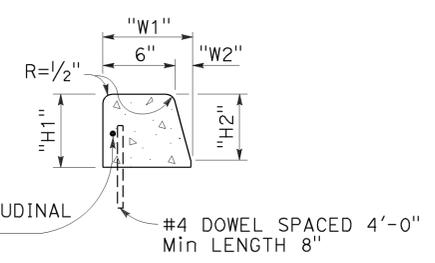
DRIVEWAYS



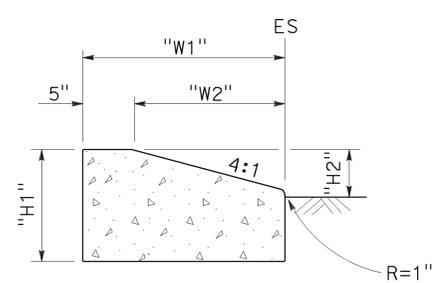
TYPE A1 CURBS
See Table A



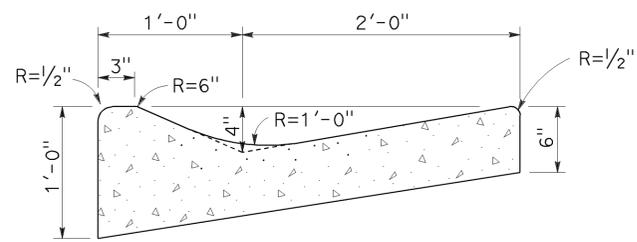
TYPE A2 CURBS
See Table A



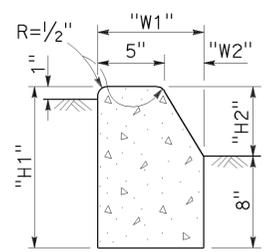
TYPE A3 CURBS
Superimposed on existing pavement
See Table A



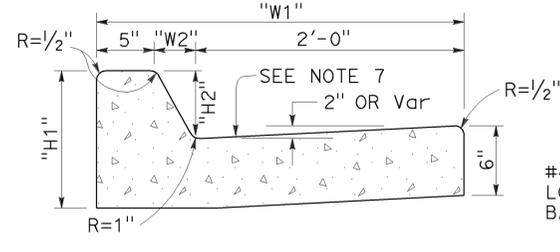
TYPE D CURBS
See Table A



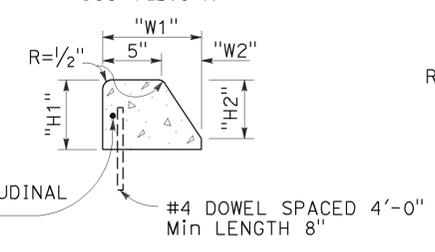
TYPE E CURB



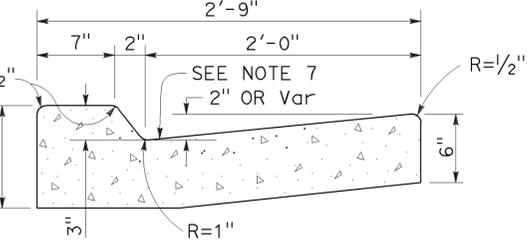
TYPE B1 CURBS
See Table A



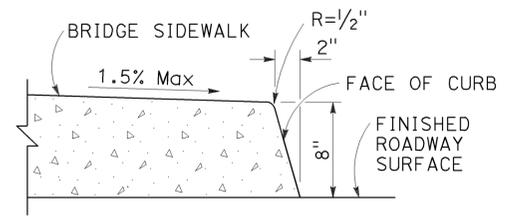
TYPE B2 CURBS
See Table A



TYPE B3 CURBS
Superimposed on existing pavement
See Table A



TYPE B4 CURBS



TYPE H CURB
On Bridges

CURBS

- NOTES:**
- Case A driveway section typically applies.
 - $\chi=3'-0"$ except for curb heights over 10" where 4:1 slopes shall be used on curb slope.
 - Sidewalk and ramp thickness "T" at driveway shall be 4" for residential and 6" for commercial.
 - Difference in slope of the driveway ramp and the slope of a line between the gutter and a point on the roadway 5'-0" from gutter line shall not exceed 15%. Reduce driveway ramp slope, not gutter slope, where required.
 - Minimum width of clear passageway for sidewalk shall be 4'-2".
 - Retaining curbs and acquisition of construction easement may be necessary for narrow sidewalks or curb heights in excess of 6".
 - Across the pedestrian route at curb ramp locations, the gutter pan slope shall not exceed 1" of depth for each 2'-0" of width.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CURBS AND DRIVEWAYS

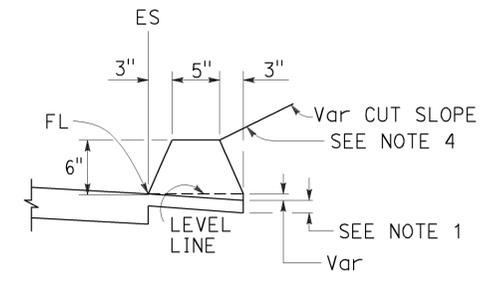
NO SCALE

RSP A87A DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A87A
DATED MAY 20, 2011 - PAGE 119 OF THE STANDARD PLANS BOOK DATED 2010.

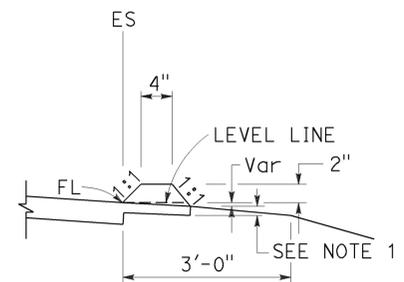
REVISED STANDARD PLAN RSP A87A

2010 REVISED STANDARD PLAN RSP A87A

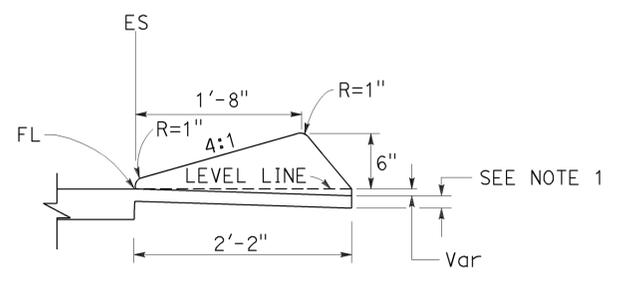
TO ACCOMPANY PLANS DATED 4-27-15



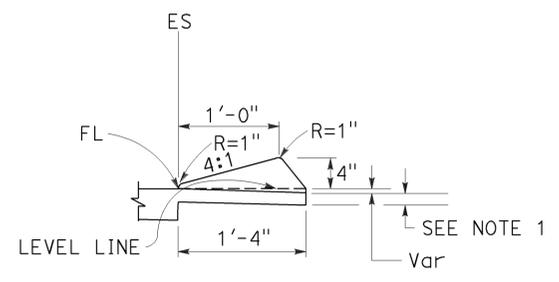
TYPE A
See Note 3



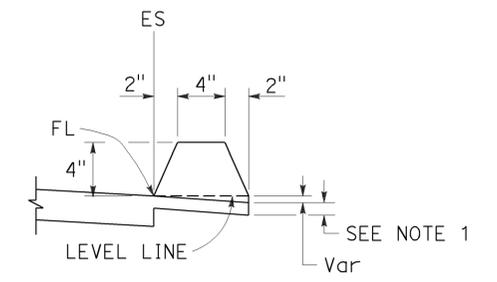
TYPE C



TYPE D

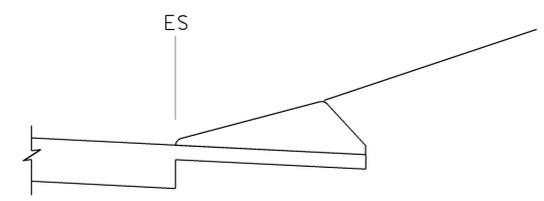


TYPE E

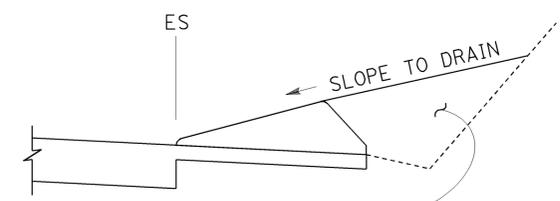


TYPE F
See Note 5

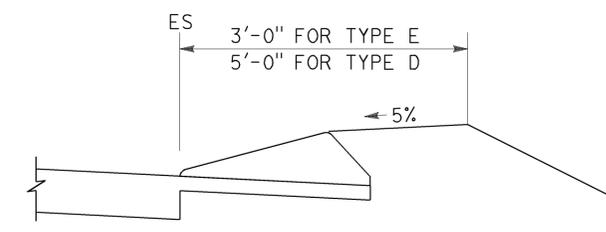
DIKES



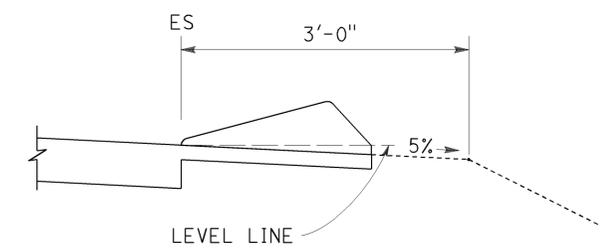
CASE C-1
Cut Slope



CASE C-2
Cut Slope



CASE F



CASE R
See Note 2

TYPE D AND E BACKFILL DETAILS

NOTES:

- 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.
- Case R applies to retrofit only projects where restrictive conditions do not provide enough width for Case F backfill.
- Type A dike only to be used where restrictive slope conditions do not provide enough width to use Type D or Type E dike.
- Fill and compact with excavated material to top of dike.
- 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

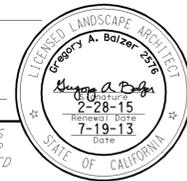
RSP A87B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A87B DATED MAY 20, 2011 - PAGE 120 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A87B

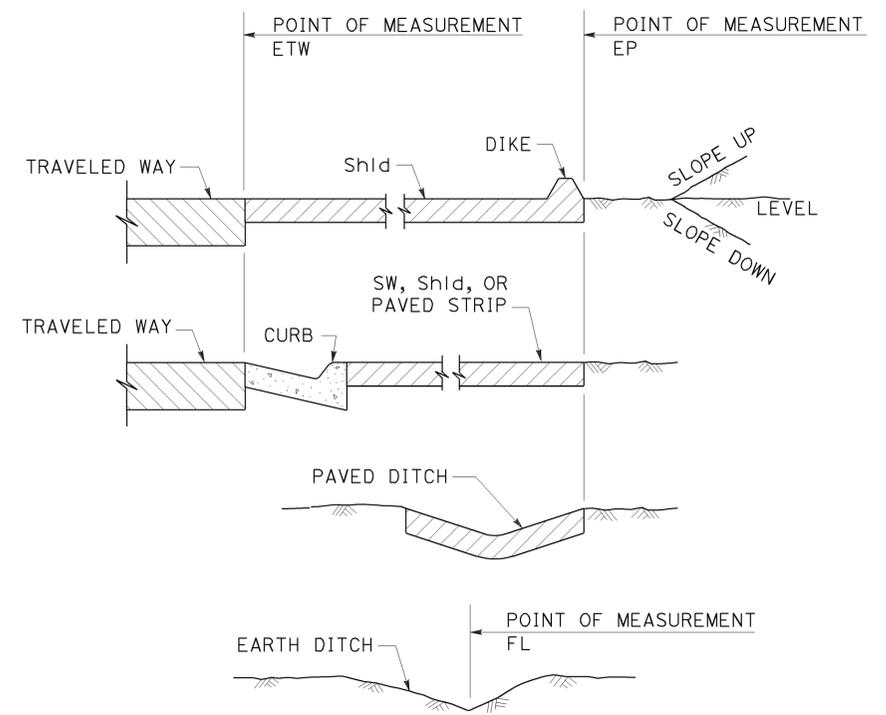
2010 REVISED STANDARD PLAN RSP A87B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	scr	1, 17	17.0, 0.0	66	79

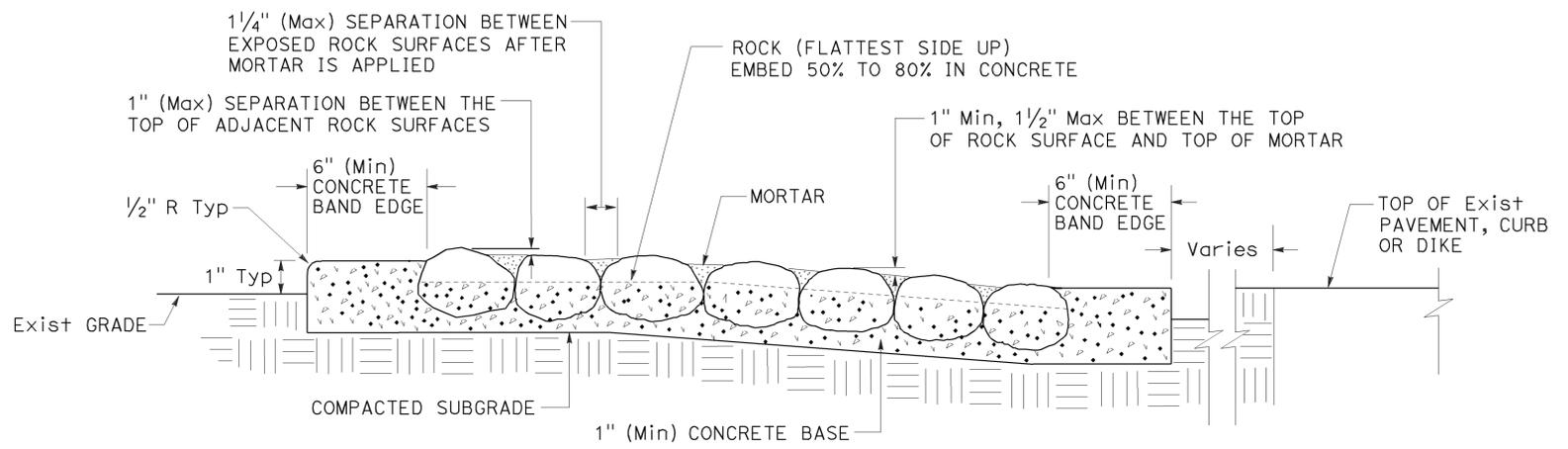
Gregory A. Balzer
 LICENSED LANDSCAPE ARCHITECT
 July 19, 2013
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



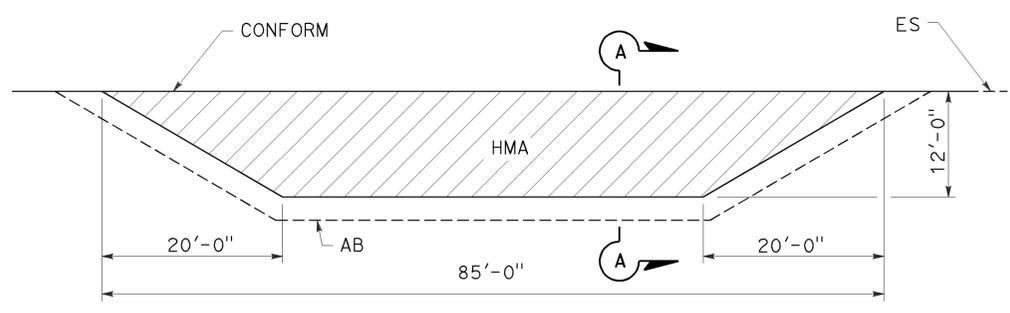
TO ACCOMPANY PLANS DATED 4-27-15



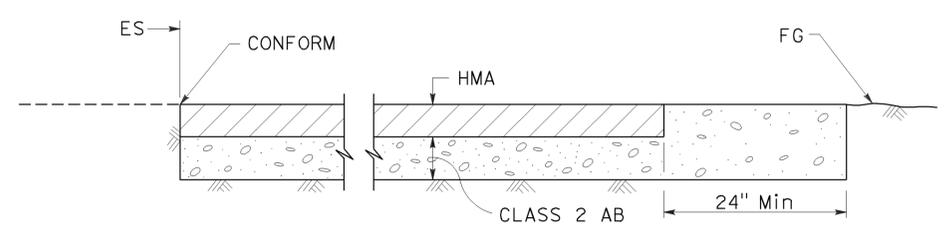
**SECTION
POINTS OF MEASUREMENT**



**SECTION
ROCK BLANKET**



PLAN



**SECTION A-A
MAINTENANCE VEHICLE PULLOUT**

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
LANDSCAPE DETAILS
 NO SCALE

RSP H9A DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP H9A

2010 REVISED STANDARD PLAN RSP H9A

TO ACCOMPANY PLANS DATED 4-27-15

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
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.

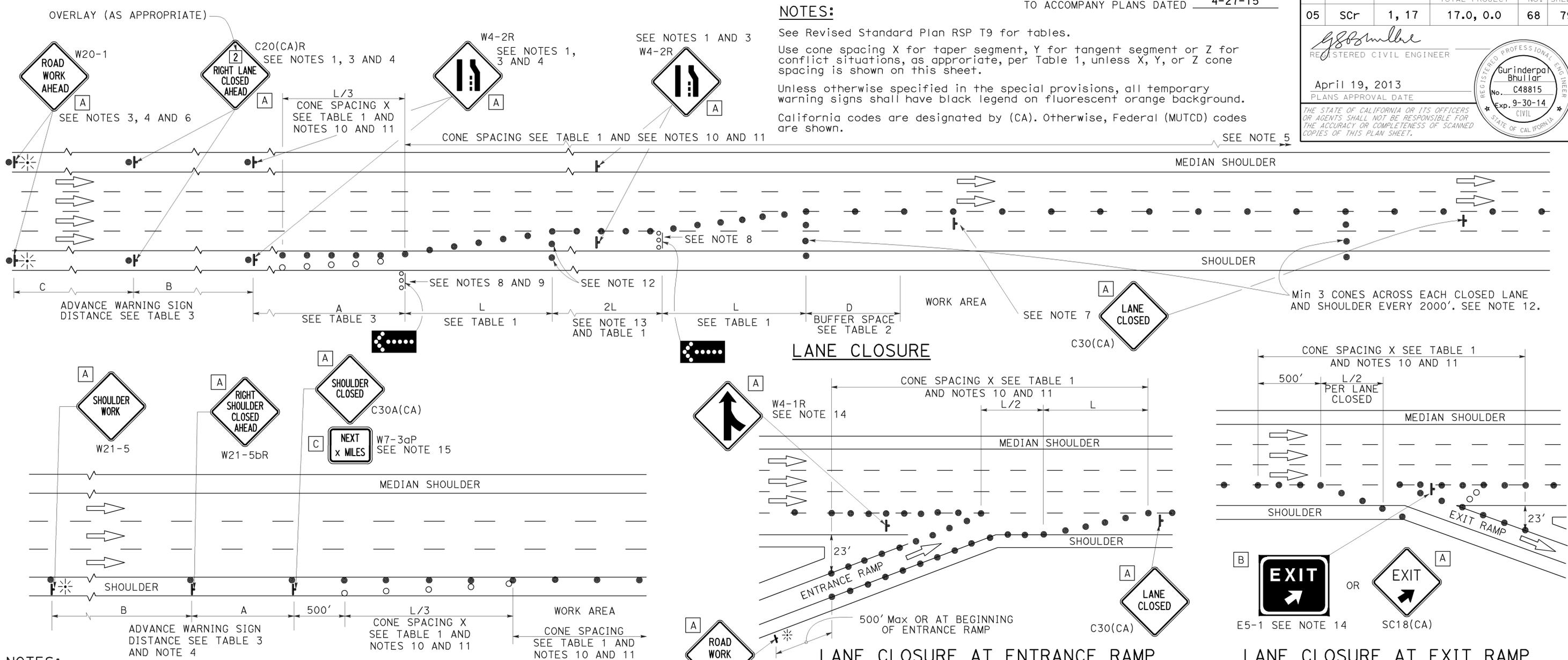
2010 REVISED STANDARD PLAN RSP T9

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	68	79

REGISTERED CIVIL ENGINEER
 April 19, 2013
 PLANS APPROVAL DATE

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

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



- NOTES:**
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 _____ MILES", use a C20(CA)L and W4-2L signs shall be used.
 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 _____ 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)
- T TEMPORARY TRAFFIC CONTROL SIGN
- FAS 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

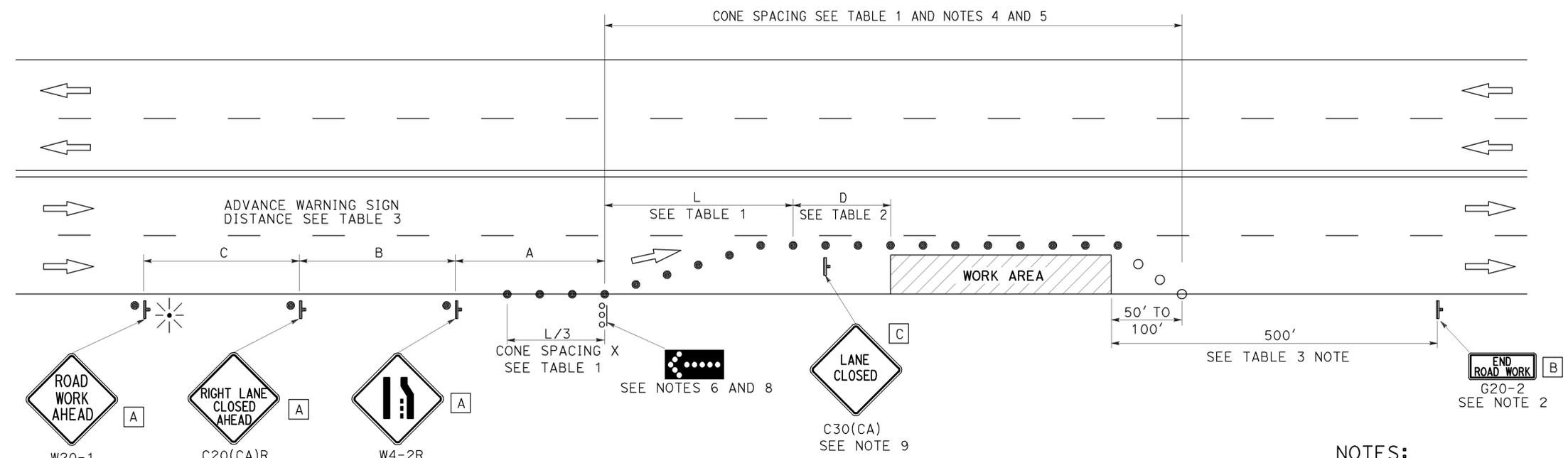
RSP T10 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T10 DATED MAY 20, 2011 - PAGE 237 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T10

2010 REVISED STANDARD PLAN RSP T10



TO ACCOMPANY PLANS DATED 4-27-15



TYPICAL LANE CLOSURE

NOTES:

See Revised Standard Plan RSP T9 for tables.
 Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as 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.

NOTES:

- Each advance warning sign shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
- A G20-2 "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious, or ends within a larger project's limits.
- If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT _____ MILES", use a C20(CA) sign for the first advance warning sign.
- All cones used for lane 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 closures only.
- Flashing arrow sign shall be either Type I or Type II.
- For approach speeds over 50 mph, use the "Traffic Control System for Lane Closure On Freeways And Expressways" plan for lane closure details and requirements.
- A minimum 1500' of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at the top of crest vertical curve or on a horizontal curve.
- Place a C30(CA) sign every 2000' throughout length of lane closure.
- Median lane closures shall conform to the details as shown except that C20(CA)L and W4-2L signs shall be used.
- At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closure unless, otherwise directed by the Engineer.

LEGEND

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

SIGN PANEL SIZE (Min)

- A 48" x 48"
- B 36" x 18"
- C 30" x 30"

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**TRAFFIC CONTROL SYSTEM
 FOR LANE CLOSURE ON
 MULTILANE CONVENTIONAL
 HIGHWAYS**

NO SCALE

RSP T11 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T11 DATED MAY 20, 2011 - PAGE 239 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T11

2010 REVISED STANDARD PLAN RSP T11

LEGEND:

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 TAPE
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
TSP	TELEPHONE SERVICE POINT

MISCELLANEOUS ELECTROLIERS

<u>NEW</u>	<u>EXISTING</u>	
		LUMINAIRE ON WOOD POLE
		NON-STANDARD ELECTROLIER (SEE PROJECT NOTES OR PROJECT PLANS)
		CITY ELECTROLIER
		ELECTROLIER FOUNDATION (FUTURE INSTALLATION)

NOTES:

- HPS luminaires shall be 310 W HPS when installed on Type 21, 21D, 30, 31 and 32 Standards, unless otherwise specified. HPS luminaires shall be 200 W when installed on other type standards or poles, unless otherwise specified.
- LED luminaires shall be 235 W when installed on Type 21, 21D, 30, 31 and 32 Standards, unless otherwise specified. LED luminaires shall be 165 W when installed on other type standards or poles, unless otherwise specified.
- Luminaires shall be the cutoff type, ANSI Type III medium cutoff lighting distribution, unless otherwise specified.

ABBREVIATIONS

APS	ACCESSIBLE PEDESTRIAN SIGNAL	M/M	MULTIPLE TO MULTIPLE TRANSFORMER
BBS	BATTERY BACKUP SYSTEM	Mtg	MOUNTING
BC	BOLT CIRCLE	MV	MERCURY VAPOR LIGHTING FIXTURE
BPB	BICYCLE PUSH BUTTON	MVDS	MICROWAVE VEHICLE DETECTION SYSTEM
C	CONDUIT	N	NEUTRAL (GROUNDED CONDUCTOR)
CB	CIRCUIT BREAKER	NB	NEUTRAL BUS
CCTV	CLOSED CIRCUIT TELEVISION	NC	NORMALLY CLOSE
Ck+	CIRCUIT	NO	NORMALLY OPEN
CMS	CHANGEABLE MESSAGE SIGN	P	CIRCUIT BREAKER'S POLE
Ctid	CALTRANS IDENTIFICATION	PB	PULL BOX
Comm	COMMUNICATION	PBA	PUSH BUTTON ASSEMBLY
DLC	LOOP DETECTOR LEAD-IN CABLE	PEC	PHOTOELECTRIC CONTROL
EMS	EXTINGUISHABLE MESSAGE SIGN	Ped	PEDESTRIAN
EVUC	EMERGENCY VEHICLE UNIT CABLE	PEU	PHOTOELECTRIC UNIT
EVUD	EMERGENCY VEHICLE UNIT DETECTOR	PT	CONDUIT WITH PULL TAPE
FB	FLASHING BEACON	RE	RELOCATED EQUIPMENT
FBCA	FLASHING BEACON CONTROL ASSEMBLY	RM	RAMP METERING
FBS	FLASHING BEACON WITH SLIP BASE	RWIS	ROADSIDE WEATHER INFORMATION SYSTEM
FO	FIBER OPTIC	SB	SLIP BASE
G	EQUIPMENT GROUNDING CONDUCTOR	SIC	SIGNAL INTERCONNECT CABLE
GB	GROUND BUS	Sig	SIGNAL
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	SMA	SIGNAL MAST ARM
HAR	HIGHWAY ADVISORY RADIO	SNS	STREET NAME SIGN
Hex	HEXAGONAL	SP	SERVICE POINT
HPS	HIGH PRESSURE SODIUM	TDC	TELEPHONE DEMARCATION CABINET
IISNS	INTERNALLY ILLUMINATED STREET NAME SIGN	TMS	TRAFFIC MONITORING STATION
ISL	INDUCTION SIGN LIGHTING	TOS	TRAFFIC OPERATIONS SYSTEM
LED	LIGHT EMITTING DIODE	Veh	VEHICLE
LMA	LUMINAIRE MAST ARM	VIVDS	VIDEO IMAGE VEHICLE DETECTION SYSTEM
LPS	LOW PRESSURE SODIUM	WIM	WEIGH-IN-MOTION
Ltg	LIGHTING	Xfmr	TRANSFORMER
Lum	LUMINAIRE		
M	METERED		
MAT	MAST ARM MOUNTING TOP ATTACHMENT		
MAS	MAST ARM MOUNTING SIDE ATTACHMENT		

STANDARD ELECTROLIER

<u>NEW</u>	<u>EXISTING</u>	<u>STANDARD TYPE</u>
		15
		15D
		15 STRUCTURE
		15D STRUCTURE
		21
		21D
		21 STRUCTURE
		21D STRUCTURE
		30
		31
		32

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	70	79

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

Theresa Aziz Gabriel
No. E15129
Exp. 6-30-14
ELECTRICAL
STATE OF CALIFORNIA

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

TO ACCOMPANY PLANS DATED 4-27-15

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.

COMMONLY USED SYMBOLS FOR UNITED STATES CUSTOMARY UNITS OF MEASUREMENT:

SYMBOL USED	DEFINITIONS
Ω	OHMS
min	MINUTE
s	SECOND
bps	BITS PER SECOND
Bps	BYTES PER SECOND
A	AMPERE
V	VOLT
V(dc)	VOLT (DIRECT CURRENT)
V(ac)	VOLT (ALTERNATING CURRENT)
FC	FOOT - CANDLE
W	WATTS
VA	VOLT-AMPERE
M	MEGA
k	KILO
m	MILLI
μ	MICRO
P	PICO
Hz	HERTZ

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(LEGEND AND ABBREVIATIONS)**

NO SCALE

RSP ES-1A DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-1A DATED MAY 20, 2011 - PAGE 425 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-1A

2010 REVISED STANDARD PLAN RSP ES-1A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	71	79

Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 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 4-27-15

CONDUIT

NEW	EXISTING	
---	---	LIGHTING CONDUIT, UNLESS OTHERWISE INDICATED OR NOTED
---	---	TRAFFIC SIGNAL CONDUIT
---C---	---c---	COMMUNICATION CONDUIT
---T---	---t---	TELEPHONE CONDUIT
---F---	---f---	FIRE ALARM CONDUIT
---FO---	---fo---	FIBER OPTIC CONDUIT
---	---	CONDUIT TERMINATION
		CONDUIT RISER ATTACHED TO THE STRUCTURE OR SERVICE POLE

SIGNAL EQUIPMENT

NEW	EXISTING	
		PEDESTRIAN SIGNAL HEAD "C" INDICATES COUNTDOWN PEDESTRIAN HEAD
		PUSH BUTTON ASSEMBLY POST
		PEDESTRIAN BARRICADE
		VEHICLE SIGNAL HEAD (WITH BACKPLATE AND 3-SECTIONS: RED, YELLOW AND GREEN)
		VEHICLE SIGNAL HEAD WITH ANGLE VISOR
		MODIFICATIONS OF BASIC SYMBOL: "L" INDICATES ALL NON-ARROW SECTIONS LOUVERED "LG" INDICATES LOUVERED GREEN SECTION ONLY "PV" INDICATES ALL 12" SECTIONS PROGRAMMED VISIBILITY "8" INDICATES ALL 8" SECTIONS (ONLY WHEN SPECIFIED)
		VEHICLE SIGNAL HEAD CONSISTING OF RED, YELLOW AND GREEN LEFT ARROW SECTIONS
		VEHICLE SIGNAL HEAD CONSISTING OF RED AND YELLOW SECTIONS WITH AN UP GREEN ARROW SECTION
		VEHICLE SIGNAL HEAD (5 SECTION) CONSISTING OF RED, YELLOW AND GREEN SECTIONS WITH YELLOW AND GREEN RIGHT ARROW SECTIONS
		TYPE 15TS STANDARD WITH VEHICLE SIGNAL HEAD AND LUMINAIRE
		TYPE 21TS STANDARD WITH VEHICLE SIGNAL HEAD AND LUMINAIRE
		STANDARD WITH LUMINAIRE AND SIGNAL MAST ARMS AND ATTACHED VEHICLE SIGNAL HEADS
		TYPE 1 STANDARD WITH ATTACHED VEHICLE SIGNAL HEADS
		STANDARD WITH A SIGNAL MAST ARM, ATTACHED VEHICLE SIGNAL HEADS AND INTERNALLY ILLUMINATED STREET NAME SIGN
		CONTROLLER ASSEMBLY. DOOR INDICATES FRONT OF CABINET

SERVICE EQUIPMENT

NEW	EXISTING	
---OH---	---oh---	OVERHEAD LINES
		WOOD POLE, "U" INDICATES UTILITY OWNED
		POLE GUY WITH ANCHOR
		UTILITY TRANSFORMER - GROUND MOUNTED
		SERVICE EQUIPMENT ENCLOSURE TYPE. DOOR INDICATES FRONT OF ENCLOSURE
		TELEPHONE DEMARCATION CABINET

POLE-MOUNTED SERVICE DESIGNATION

	TYPE H SERVICE, 28'-10"	TYPE OF INSTALLATION AND POLE HEIGHT ABOVE GRADE
--	-------------------------	--

FLASHING BEACON

NEW	EXISTING	
		FLASHING BEACON (ONE VEHICLE SIGNAL HEAD WITH BACKPLATE AND VISOR) "R" INDICATES RED INDICATION, "Y" INDICATES YELLOW INDICATION
		FLASHING BEACON WITH TYPE 15-FBS STANDARD AND A SIGN.
		FLASHING BEACON WITH TYPES 9, 9A OR 9B SIGN UNLESS OTHERWISE SPECIFIED OR INDICATED

SIGNAL EQUIPMENT Cont

NEW	EXISTING	
		GUARD POST
		TYPE 1 STANDARD WITH RAMP METERING SIGN
		OPTICAL DETECTOR FOR THE EMERGENCY VEHICLE DETECTION SYSTEM

NOTES:

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

ILLUMINATED OVERHEAD SIGN

NEW	EXISTING	
		SINGLE POST, SINGLE ILLUMINATED SIGN, BALANCED BUTTERFLY
		SINGLE POST, DOUBLE ILLUMINATED SIGN, BALANCED BUTTERFLY
		SINGLE POST, SINGLE ILLUMINATED SIGN, FULL CANTILEVER
		DOUBLE POST, SINGLE ILLUMINATED SIGN
		SINGLE ILLUMINATED SIGN MOUNTED ON STRUCTURE
		DOUBLE POST, SINGLE ILLUMINATED SIGN WITH ELECTROLIER

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(LEGEND AND ABBREVIATIONS)**

NO SCALE

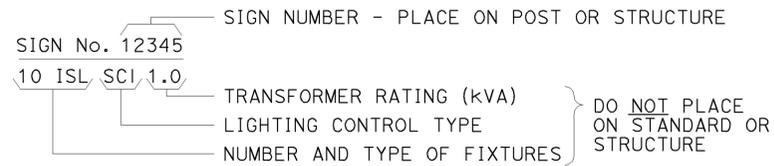
RSP ES-1B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-1B DATED MAY 20, 2011 - PAGE 426 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-1B

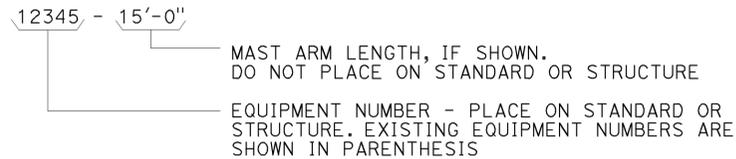
2010 REVISED STANDARD PLAN RSP ES-1B

EQUIPMENT IDENTIFICATION

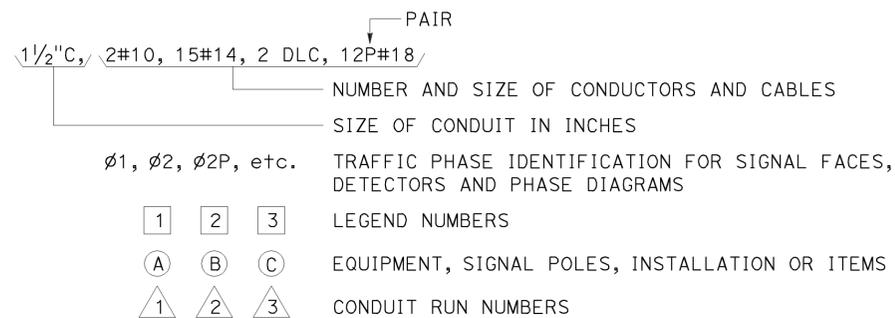
ILLUMINATED SIGN IDENTIFICATION NUMBER:



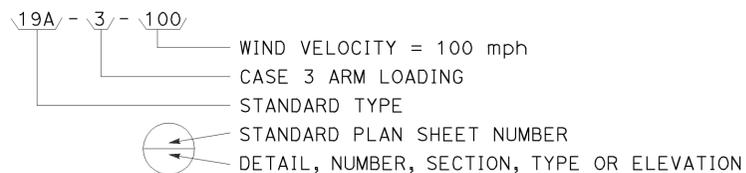
ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



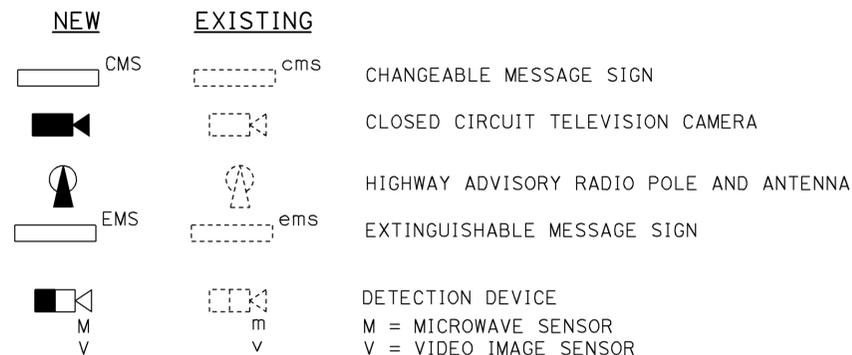
CONDUIT AND CONDUCTOR IDENTIFICATION:



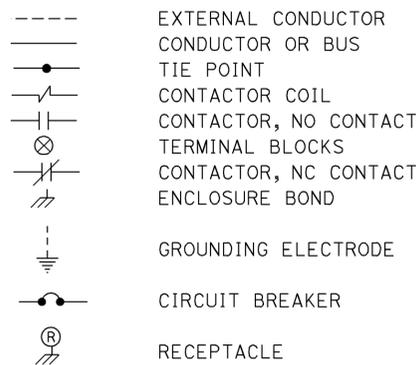
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



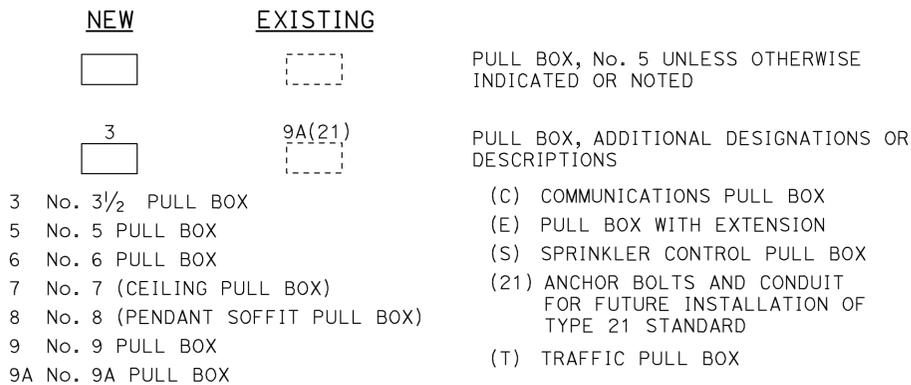
MISCELLANEOUS EQUIPMENT



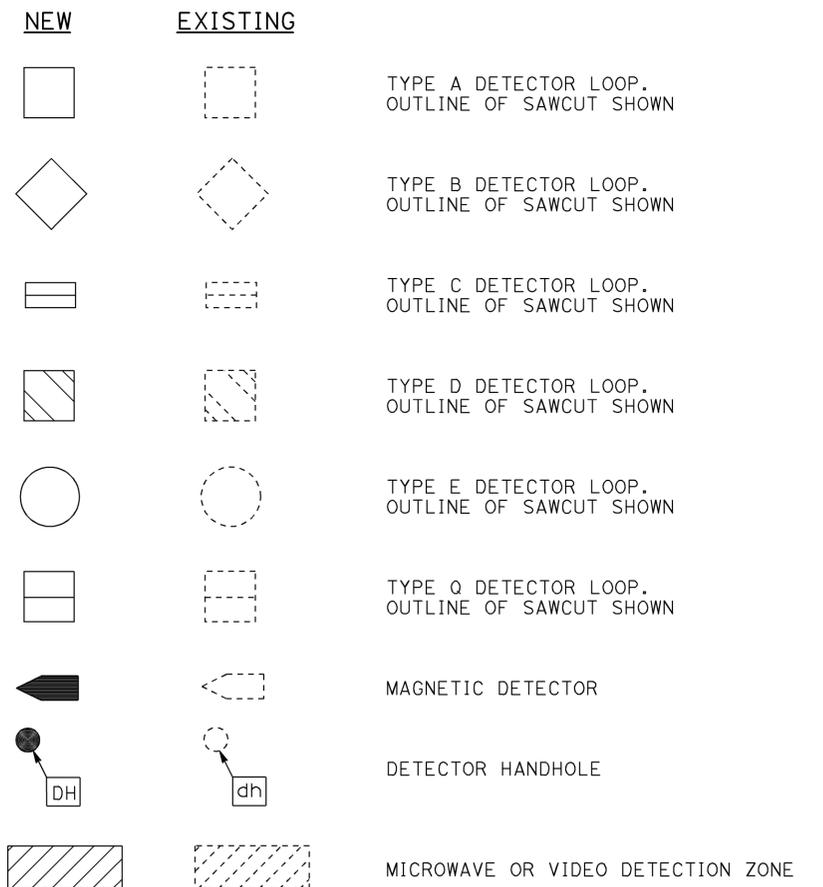
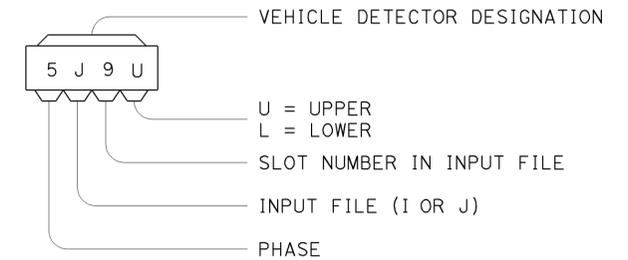
WIRING DIAGRAM LEGEND



PULL BOXES



VEHICLE DETECTORS



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (LEGEND AND ABBREVIATIONS)

NO SCALE

RSP ES-1C DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-1C DATED MAY 20, 2011 - PAGE 427 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP ES-1C

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	73	79

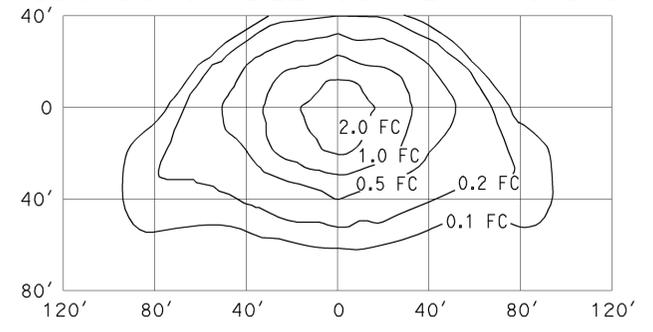
Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 No. E15129
 Exp. 6-30-14
 ELECTRICAL
 STATE OF CALIFORNIA

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.

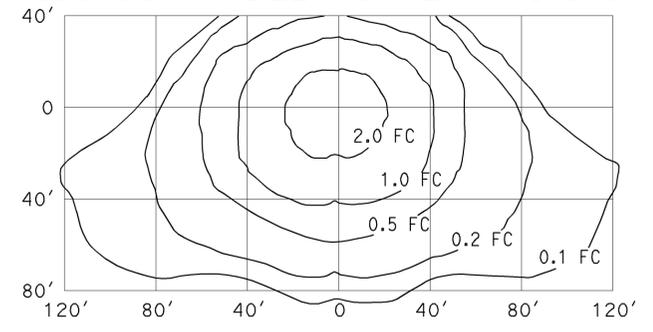
TO ACCOMPANY PLANS DATED 4-27-15

ISOFOOTCANDLE CURVE - MINIMUM



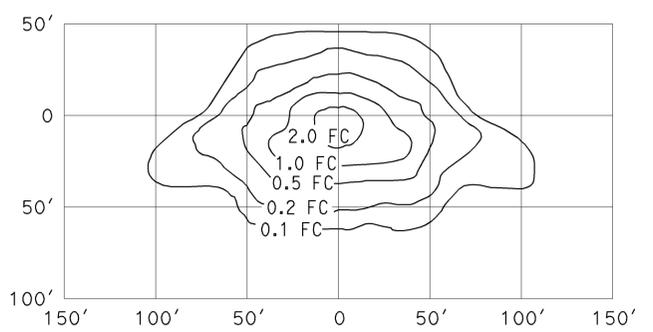
TYPE III MEDIUM CUTOFF
 Cutoff Luminaire
 34' Mounting Height
 Lamp operated at 22,000 lm
 200-W high pressure sodium lamp
 ANSI Designation S66

ISOFOOTCANDLE CURVE - MINIMUM



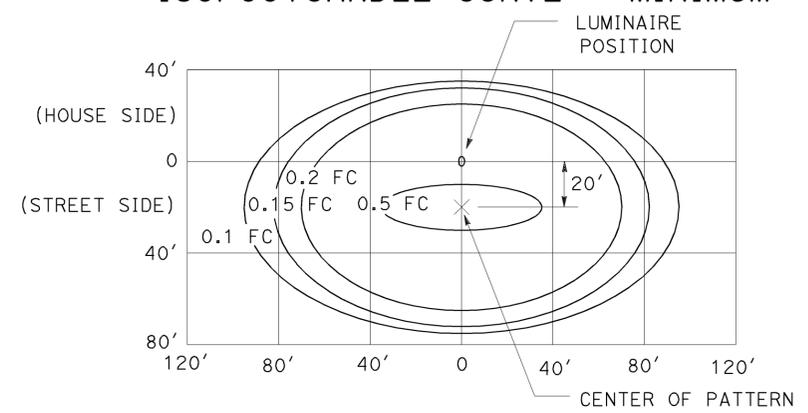
TYPE III MEDIUM CUTOFF
 Cutoff Luminaire
 40' Mounting Height
 Lamp operated at 37,000 lm
 310-W high pressure sodium lamp
 ANSI Designation S67

ISOFOOTCANDLE CURVE - MINIMUM



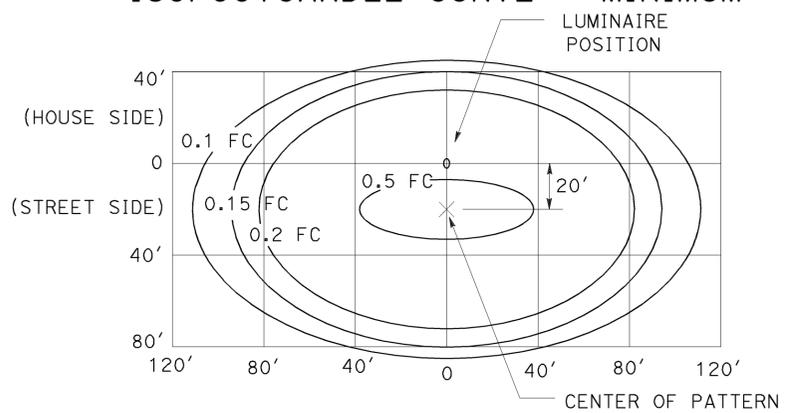
TYPE III MEDIUM CUTOFF
 Cutoff Luminaire
 30' Mounting Height
 Lamp operated at 16,000 lm
 150-W high pressure sodium lamp
 ANSI Designation S55

ISOFOOTCANDLE CURVE - MINIMUM



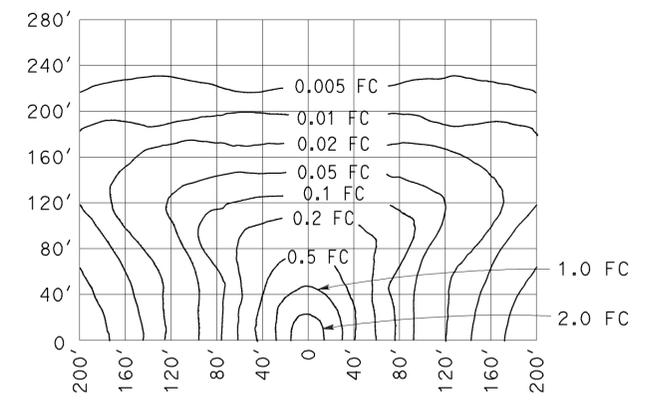
LED LUMINAIRE ROADWAY 1
 165-W at 34' Mounting Height

ISOFOOTCANDLE CURVE - MINIMUM



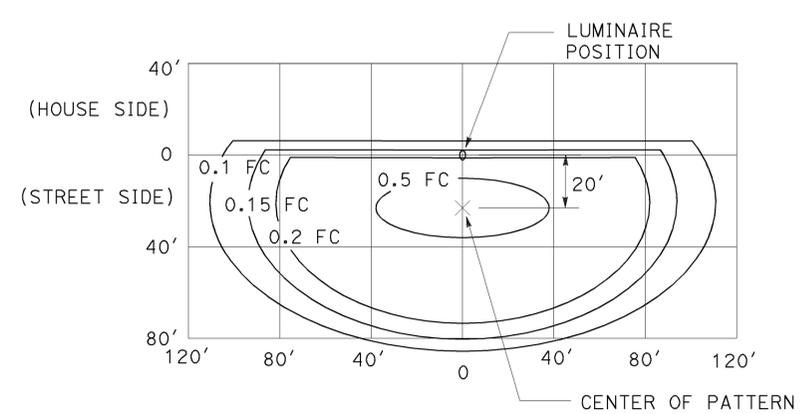
LED LUMINAIRE ROADWAY 2
 235-W at 40' Mounting Height

ISOFOOTCANDLE CURVE - MINIMUM



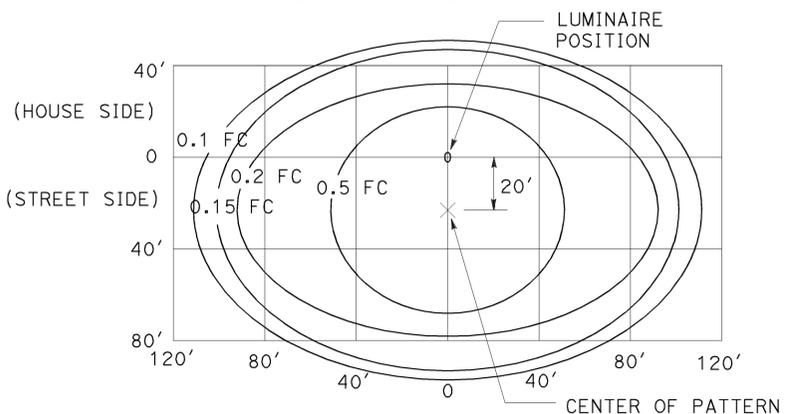
LOW PRESSURE SODIUM LUMINAIRE
 40' Mounting Height
 Lamp operated at 33,000 lm
 180-W low pressure sodium lamp

ISOFOOTCANDLE CURVE - MINIMUM



LED LUMINAIRE ROADWAY 3
 235-W at 40' Mounting Height
 with back side control

ISOFOOTCANDLE CURVE - MINIMUM

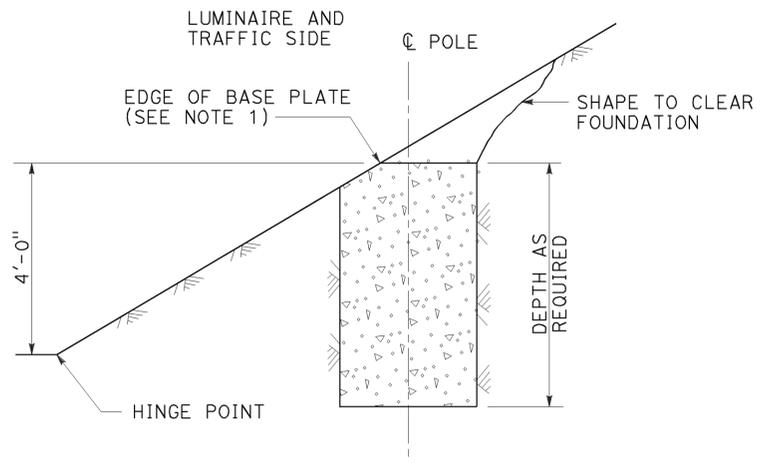
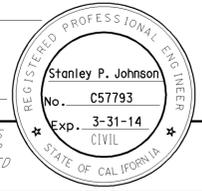


LED LUMINAIRE ROADWAY 4
 300-W at 40' Mounting Height

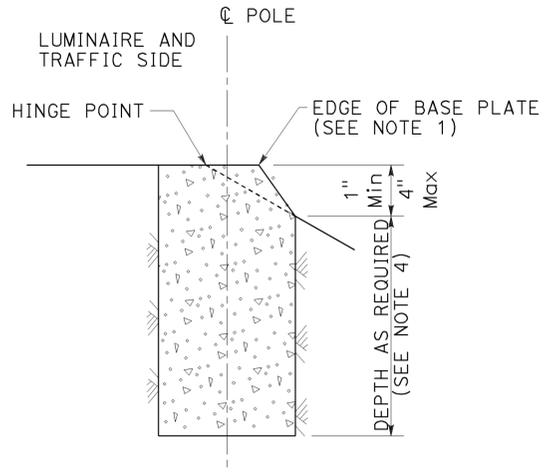
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (ISOFOOTCANDLE DIAGRAMS)**

NO SCALE
 RSP ES-10A DATED JULY 19, 2013 SUPERSEDES RSP ES-10A DATED JULY 20, 2012
 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

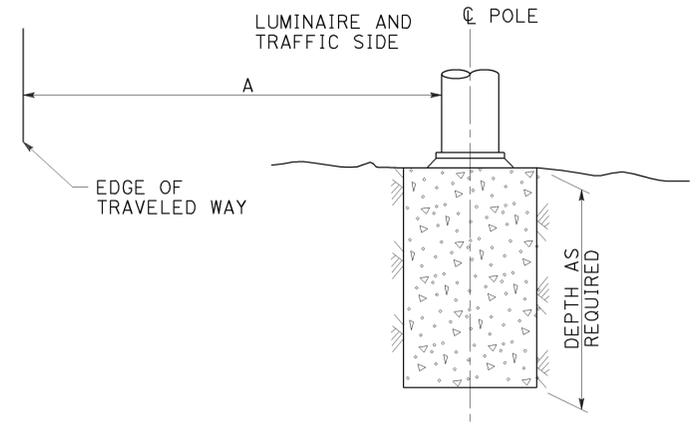
2010 REVISED STANDARD PLAN RSP ES-10A



**CUT SLOPES
 STEEPER THAN 4:1,
 LESS THAN 2:1
 DETAIL A-1**
 See Note 2 and 3



**FILL SLOPES
 STEEPER THAN 4:1,
 LESS THAN 2:1
 DETAIL A-2**
 See Note 2 and 3



**FLAT SECTIONS, CUT OR FILL SLOPES
 4:1 OR FLATTER
 DETAIL A-3**
 See Note 2

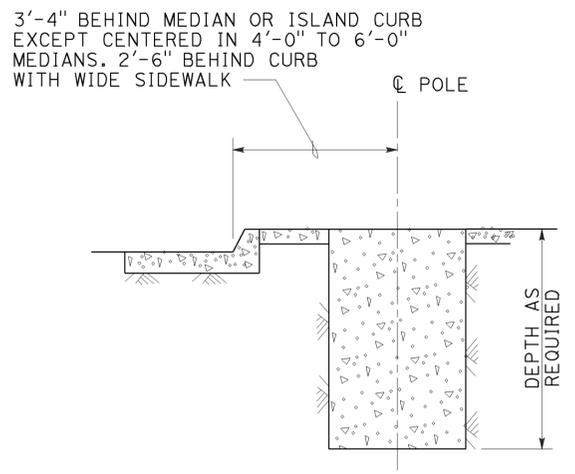
TO ACCOMPANY PLANS DATED 4-27-15

STANDARD TYPE	SETBACK (DIMENSION A)
32	30'-0" (Min)
31	20'-0" (Min)
15, 15D, 15-SB, 21, 21D, 30	ARM LENGTH (Min)

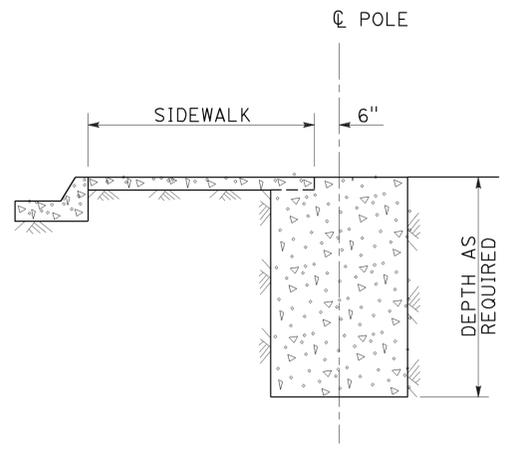
**FOUNDATIONS ADJACENT TO ALL ROADWAYS EXCEPT
 IN SIDEWALK, MEDIAN AND ISLAND AREAS
 DETAIL A**

NOTES:

- Where a portion of the foundation is above grade, the top edges shall have a 1" chamfer.
- Slopes shall be horizontal to vertical ratio (Horizontal : Vertical).
- Horizontal setbacks on cut and fill slopes steeper than 4:1 shall not exceed the distance shown for flat sections.
- CIDH embedment depth shall be increased beyond standard depths by the diameter of the CIDH.



**MEDIAN, ISLAND
 OR WIDE SIDEWALK
 DETAIL B-1**
 7' Wide and wider



**NARROW SIDEWALK
 DETAIL B-2**
 Less than 7' wide

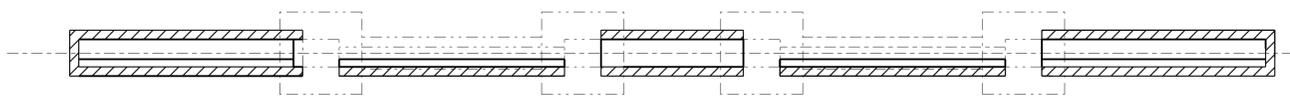
**FOUNDATIONS IN SIDEWALK, MEDIAN AND ISLAND AREAS
 DETAIL B**

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (FOUNDATION INSTALLATIONS)**
 NO SCALE

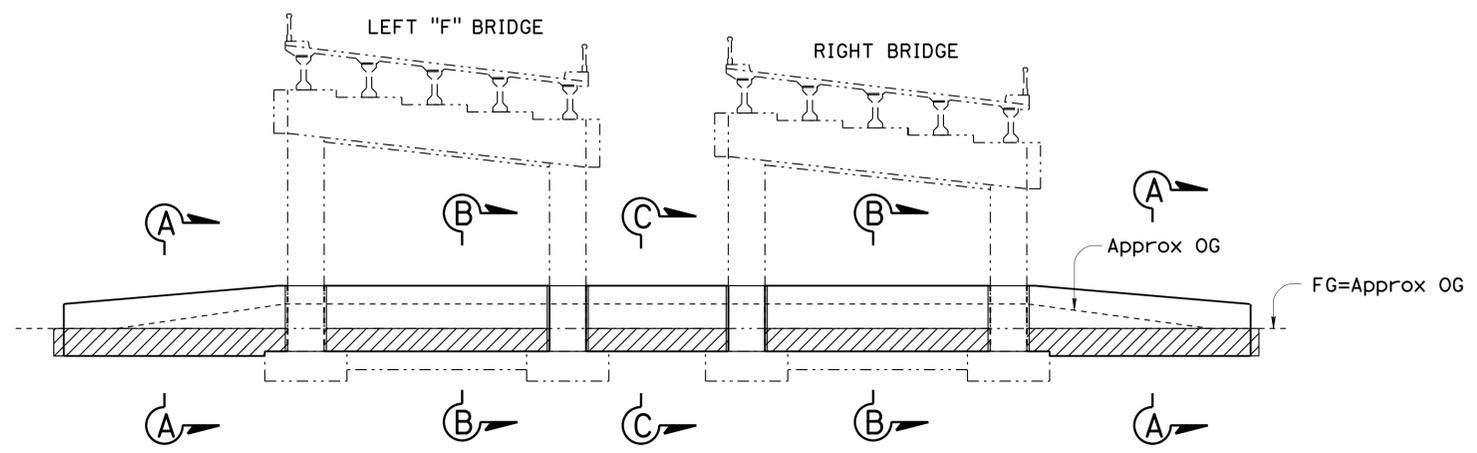
RSP ES-11 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-11
 DATED MAY 20, 2011 - PAGE 488 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP ES-11

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	76	79
			3/17/15	DATE	
REGISTERED CIVIL ENGINEER			DATE		
4-27-15			PLANS APPROVAL DATE		
No. C61500			Exp. 6/30/15		
CIVIL			STATE OF CALIFORNIA		
<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>					



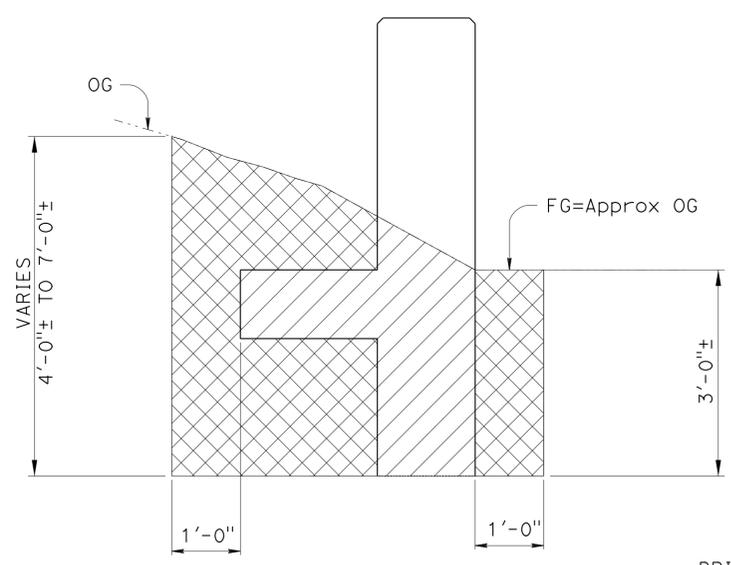
PLAN
NO SCALE



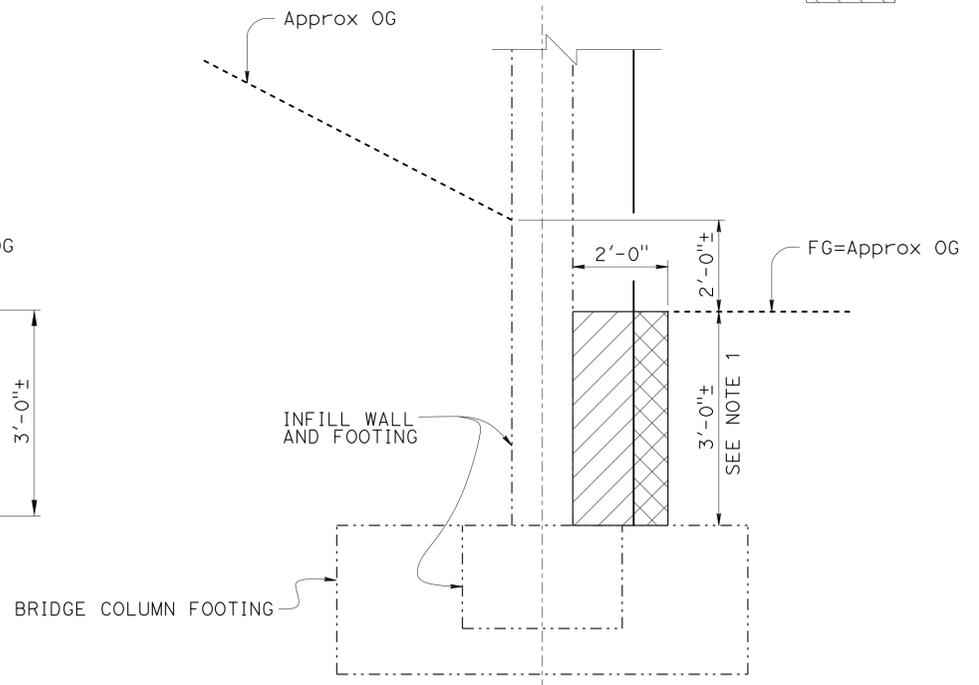
ELEVATION
NO SCALE

NOTE:
1. Existing Infill Wall was built in 1997 as Seismic Retrofit. As-Built plans from 1997 indicate Bent 4 to have been Slurry Backfilled.

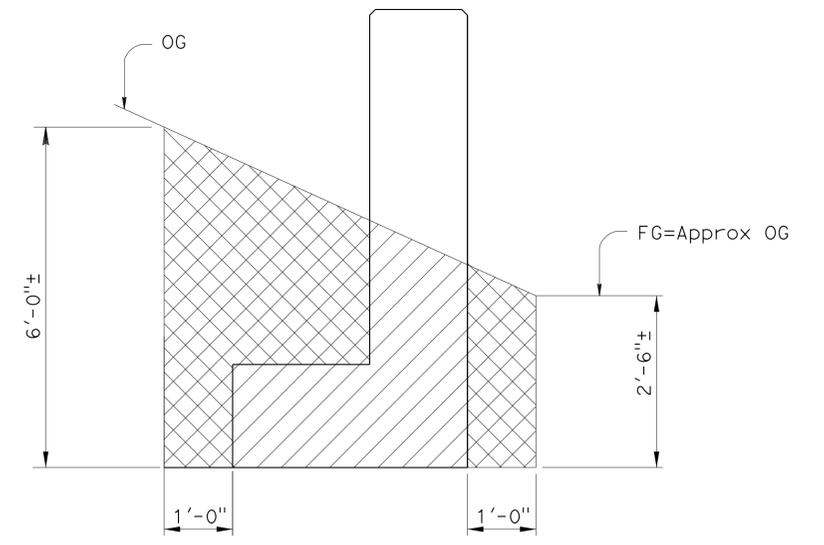
- LEGEND:**
- EXISTING STRUCTURE
 - NEW CONSTRUCTION
 - ▨ INDICATES APPROXIMATE EXCAVATION
 - ▩ INDICATES APPROXIMATE BACKFILL



SECTION A-A
NO SCALE



SECTION B-B
NO SCALE



SECTION C-C
NO SCALE

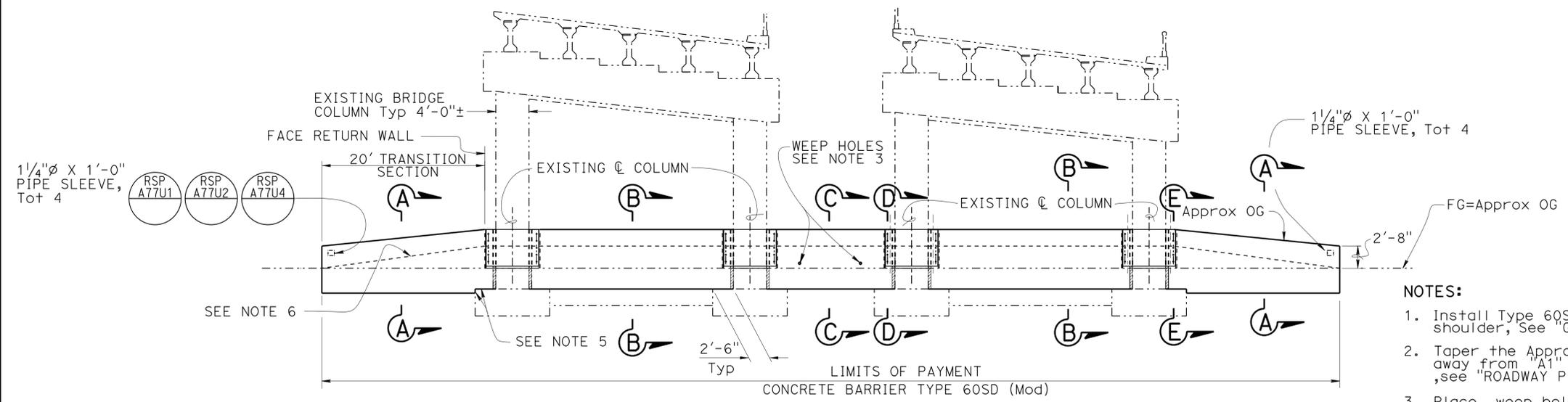
NOTE:
THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

BRANCH CHIEF DAVID NEUMANN	DESIGN	BY JOEL MAGANA	CHECKED N. KANEPATHIPILLAI	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH B	BRIDGE NO.	36-0069R/F	ROUTE 1/17 INTERCHANGE SEPARATION LIMITS OF EXCAVATION AND BACKFILL
	DETAILS	BY B. EDWARDS	CHECKED N. KANEPATHIPILLAI			POST MILE	17.02	
	QUANTITIES	BY AIMAN MALAK	CHECKED N. KANEPATHIPILLAI					

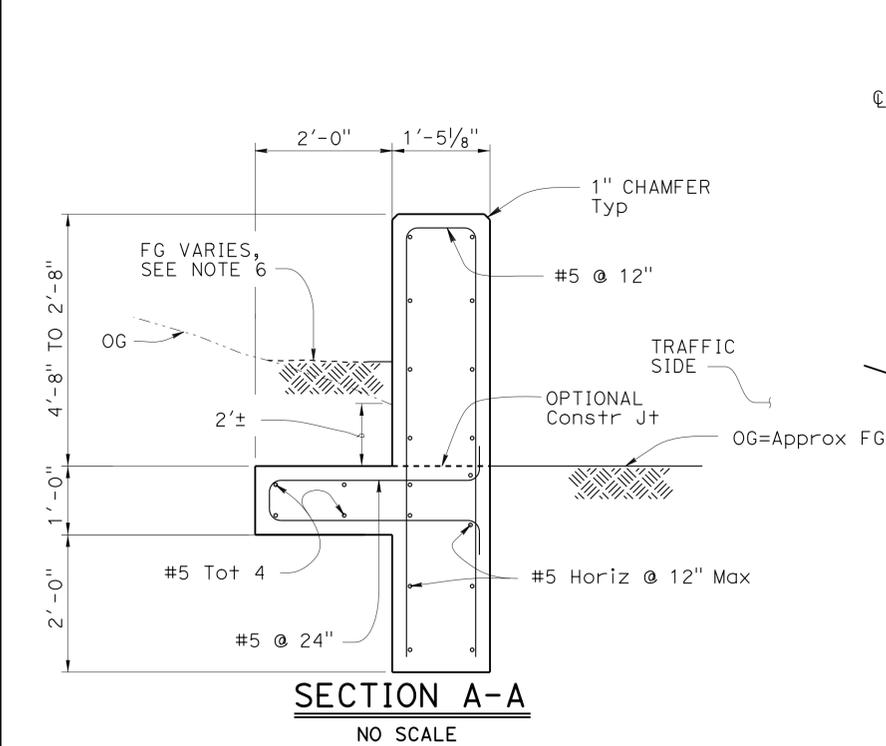
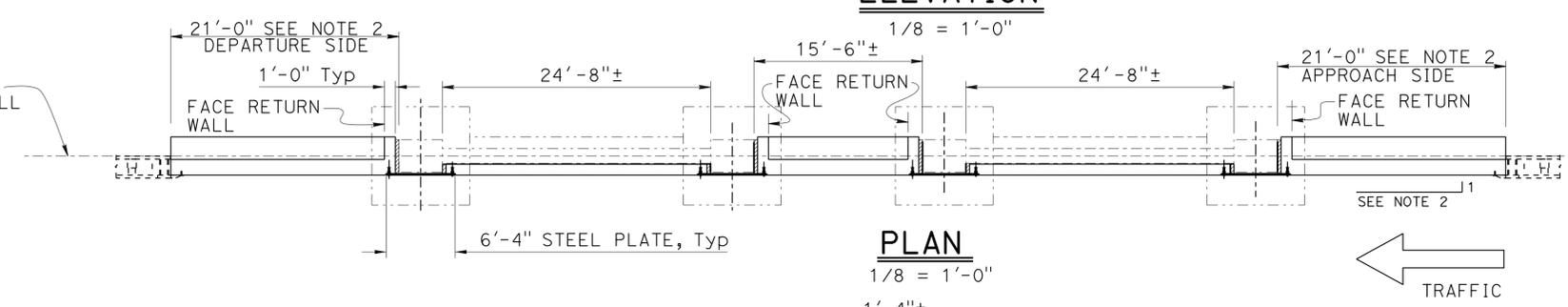
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	77	79

3/17/15
 REGISTERED CIVIL ENGINEER DATE
 4-27-15
 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.

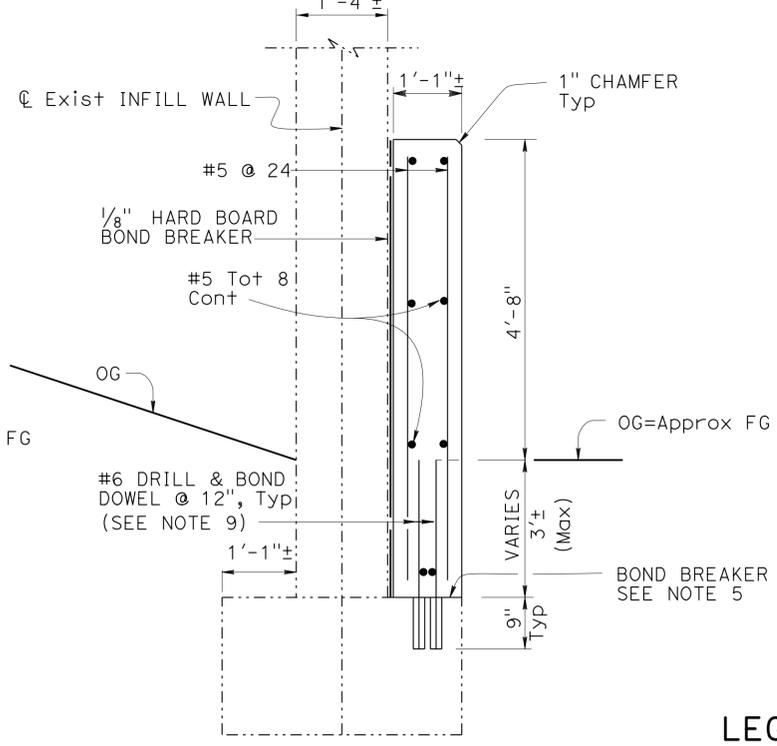
REGISTERED PROFESSIONAL ENGINEER
 JOEL MAGANA
 No. C61500
 Exp. 6/30/15
 CIVIL
 STATE OF CALIFORNIA



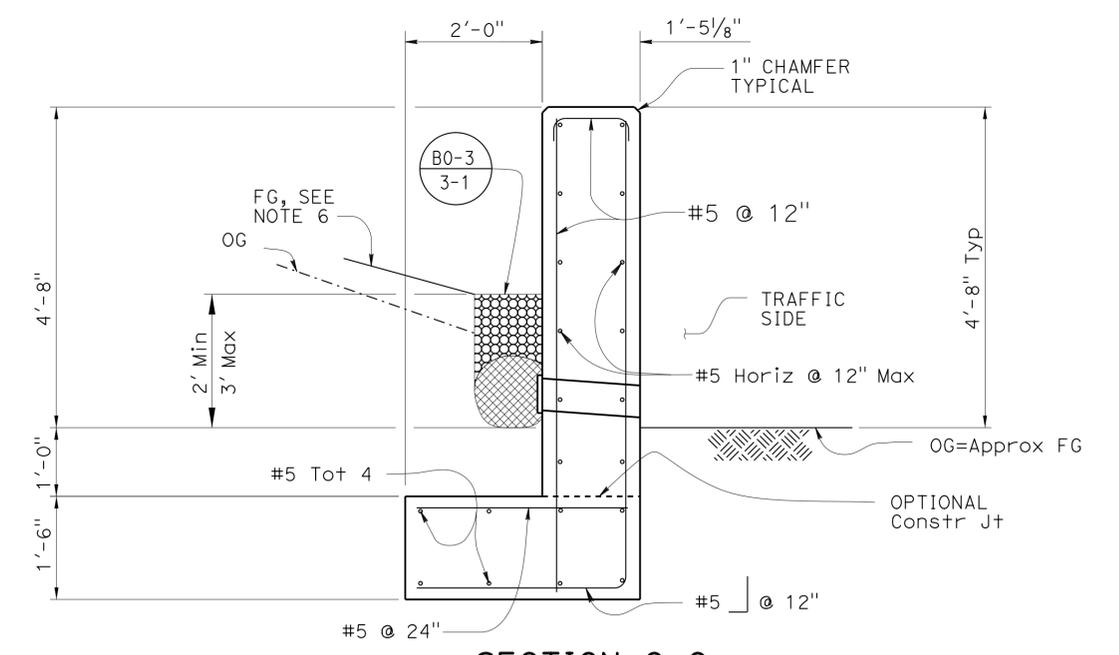
- NOTES:**
1. Install Type 60SD (Mod) at Bent 4 right shoulder, See "GENERAL PLAN" sheet.
 2. Taper the Approach and Departure 20' Transition Section away from "A1" Line, beginning at the face of Return Wall, see "ROADWAY PLANS" for exact alignment of Barrier.
 3. Place weep holes 3'-0" away from columns. See "SECTION C-C" and refer to "2010 STANDARD PLANS" sheet "B0-3".
 4. All plates & connections shall be galvanized.
 5. Where existing bridge footing is encountered, apply bond breaker between bridge footing and new structure. Use 1/8" thick hardboard for bond breaker. Do not place dowels into existing bridge column footing.
 6. Grade embankment slope behind concrete barrier transition to drain.
 7. For cover plate details, see "DETAIL F", "DETAIL G" and "ALTERNATIVE ANCHORAGE", see "CONCRETE BARRIER TYPE 60SD (Mod) - DETAILS No. 2" sheet.
 8. For "SECTION D-D" and "SECTION E-E", see "CONCRETE BARRIER TYPE 60SD (Mod) - DETAILS No. 3" sheet.
 9. For drill and bond dowel, see "DRILL AND BOND DOWEL LAYOUT AT BAY WITH INFILL WALL" on "CONCRETE BARRIER TYPE 60SD (Mod) - DETAILS No. 2" sheet.
 10. For FG elevations, see "Roadway Plans".



SECTION A-A
NO SCALE



SECTION B-B (AT BAY WITH INFILL WALL)
NO SCALE



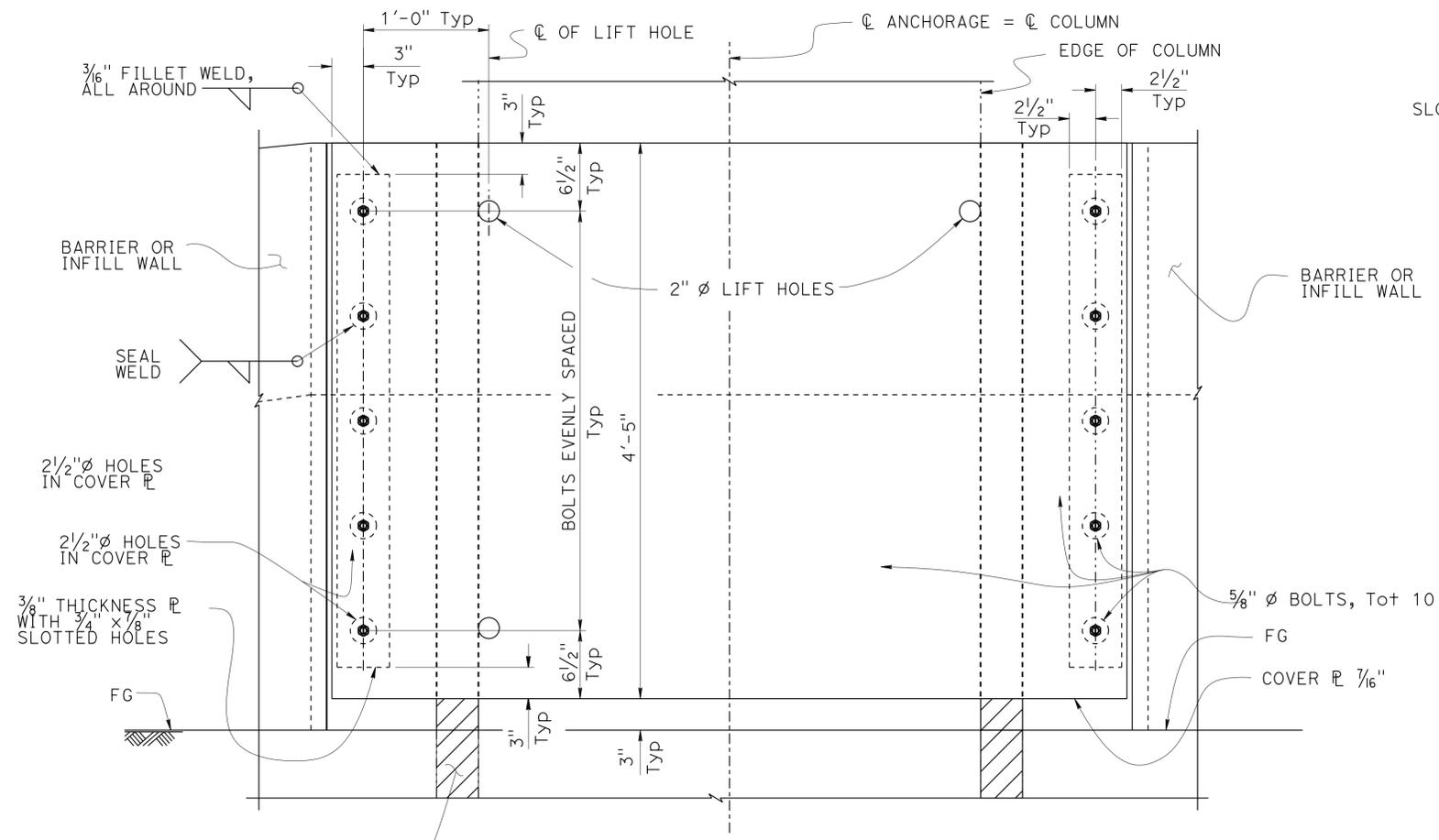
SECTION C-C (WEEP HOLE DETAIL)
NO SCALE

LEGEND:
 - - - - - INDICATES EXISTING STRUCTURE
 _____ INDICATES NEW STRUCTURE CONSTRUCTION

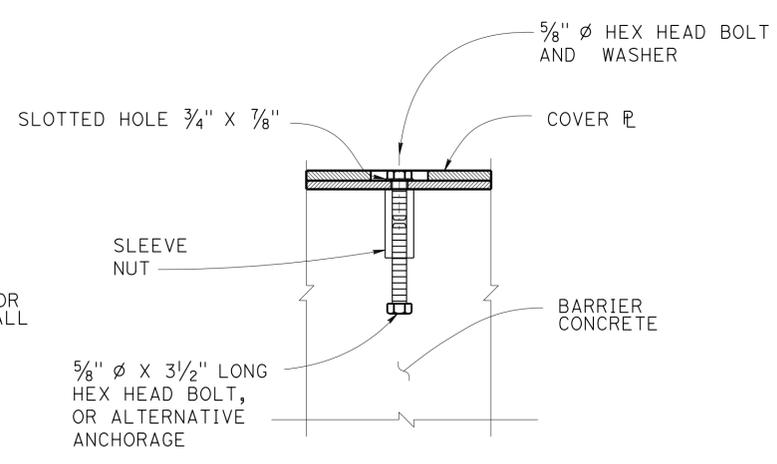
NOTE:
 THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

BRANCH CHIEF DAVID NEUMANN	DESIGN	BY JOEL MAGANA	CHECKED N. KANEPATHIPILLAI	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH B	BRIDGE NO.	36-0069R/F	ROUTE 1/17 INTERCHANGE SEPARATION	
	DETAILS	BY S. CHOLDA	CHECKED N. KANEPATHIPILLAI			POST MILE	17.02		CONCRETE BARRIER TYPE 60SD (Mod) - DETAILS No. 1
	QUANTITIES	BY AIMAN MALAK	CHECKED N. KANEPATHIPILLAI						

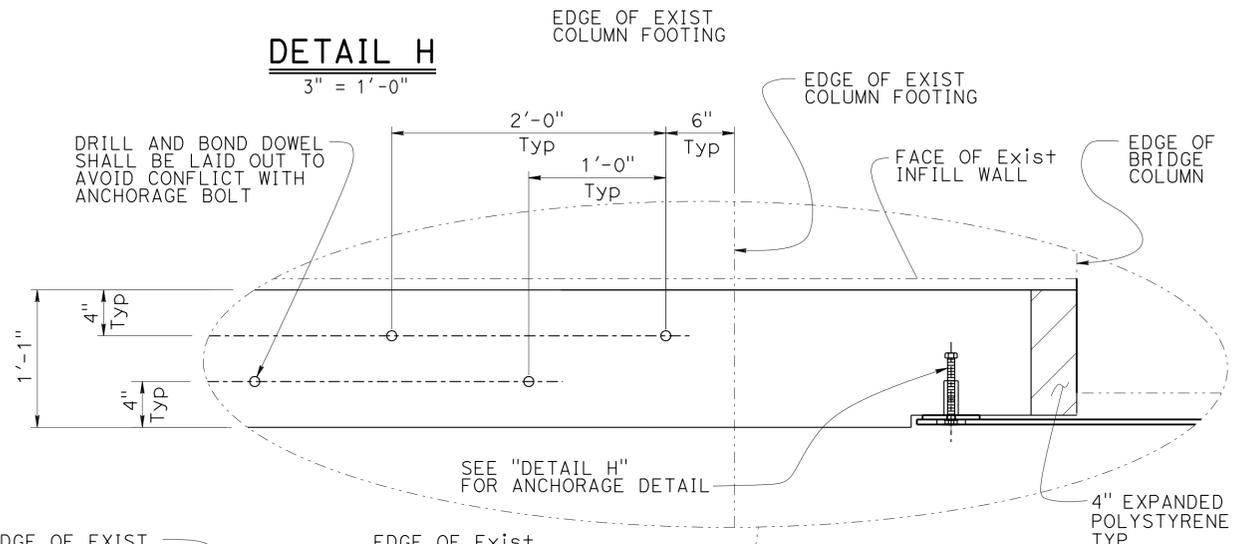
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SCR	1, 17	17.0, 0.0	78	79
3/17/15 REGISTERED CIVIL ENGINEER DATE					
4-27-15 PLANS APPROVAL DATE					
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.					



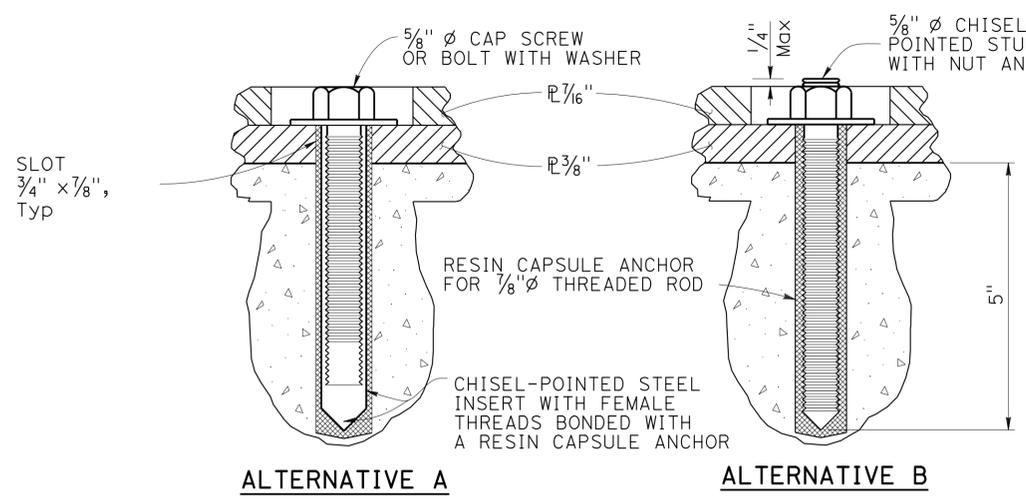
DETAIL F
1/2" = 1'-0"



DETAIL H
3" = 1'-0"



DETAIL G
DRILL AND BOND DOWEL LAYOUT AT BAY WITH INFILL WALL
3/4" = 1'-0"



ALTERNATIVE ANCHORAGE
NO SCALE

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

DESIGN	BY JOEL MAGANA	CHECKED N. KANEPATHIPILLAI
DETAILS	BY S. SHOLDA	CHECKED N. KANEPATHIPILLAI
QUANTITIES	BY A. MALAK	CHECKED N. KANEPATHIPILLAI

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
DESIGN AND TECHNICAL SERVICES
SPECIAL DESIGNS BRANCH **B**

BRIDGE NO.	36-0069R/F
POST MILE	17.02

ROUTE 1/17 INTERCHANGE SEPARATION
CONCRETE BARRIER TYPE 60SD (Mod) - DETAILS No. 2

(ENGLISH) SPECIAL DESIGNS BRANCH BORDER SHEET (REV. 7-1-09)

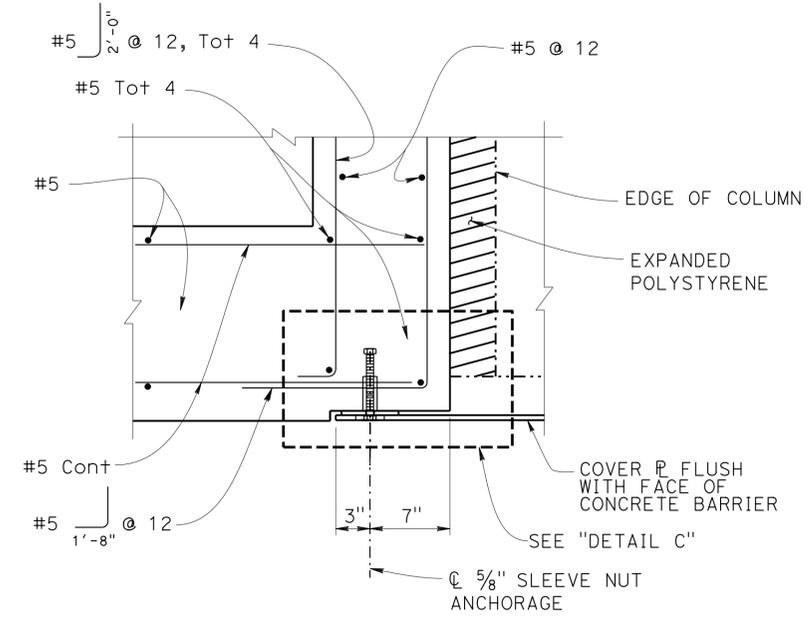


UNIT: 3619
PROJECT NUMBER & PHASE: 0512000034-1 CONTRACT NO.: 05-1A8701

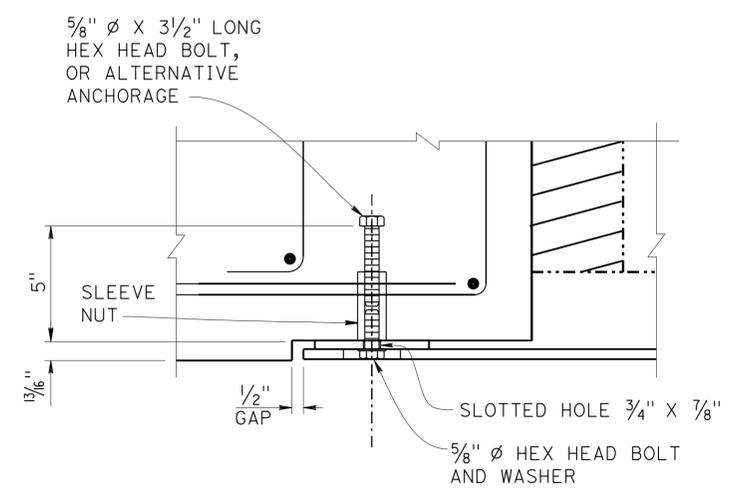
DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET	OF
	02-19-15 03-13-15	4	5

USERNAME => s115755 DATE PLOTTED => 05-JUN-2015 TIME PLOTTED => 13:56

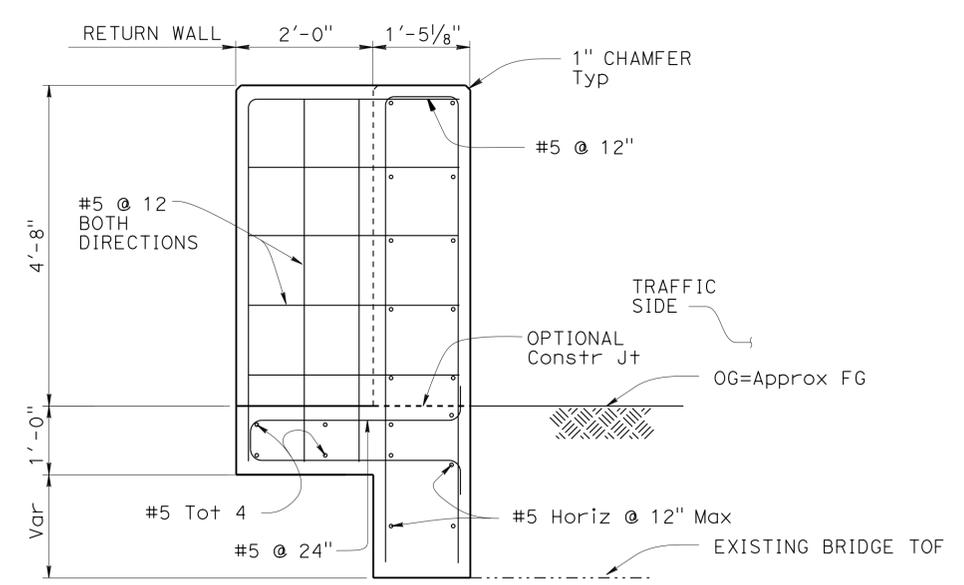
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Scr	1, 17	17.0, 0.0	79	79
			3/17/15		
REGISTERED CIVIL ENGINEER			DATE		
4-27-15			PLANS APPROVAL DATE		
			REGISTERED PROFESSIONAL ENGINEER No. C61500 Exp. 6/30/15 CIVIL STATE OF CALIFORNIA		
<i>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.</i>					



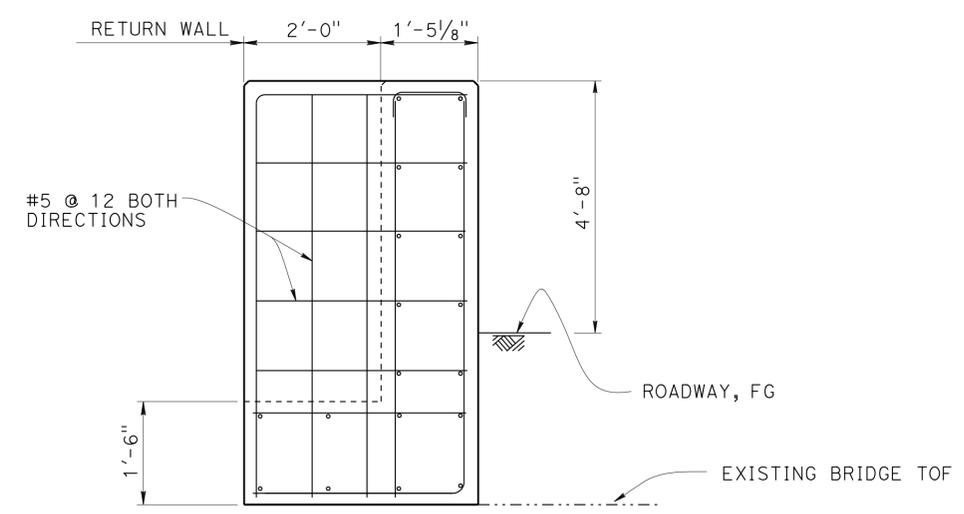
RETURN WALL DETAIL
1/2" = 1'-0"



DETAIL C
3" = 1'-0"



RETURN WALL SECTION E-E
3/4" = 1'-0"



RETURN WALL SECTION D-D
3/4" = 1'-0"

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

BRANCH CHIEF <u>DAVID NEUMANN</u>	DESIGN	BY JOEL MAGANA	CHECKED N. KANEPATHIPILLAI	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH B	BRIDGE NO.	ROUTE 1/17 INTERCHANGE SEPARATION CONCRETE BARRIER TYPE 60SD (Mod) - DETAILS No. 3
	DETAILS	BY S. CHOLDA	CHECKED N. KANEPATHIPILLAI			36-0069R/F	
	QUANTITIES	BY AIMAN MALAK	CHECKED N. KANEPATHIPILLAI			17.02	