

INDEX OF PLANS

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

STATE OF CALIFORNIA ACHSSTP-P078(109)E
DEPARTMENT OF TRANSPORTATION

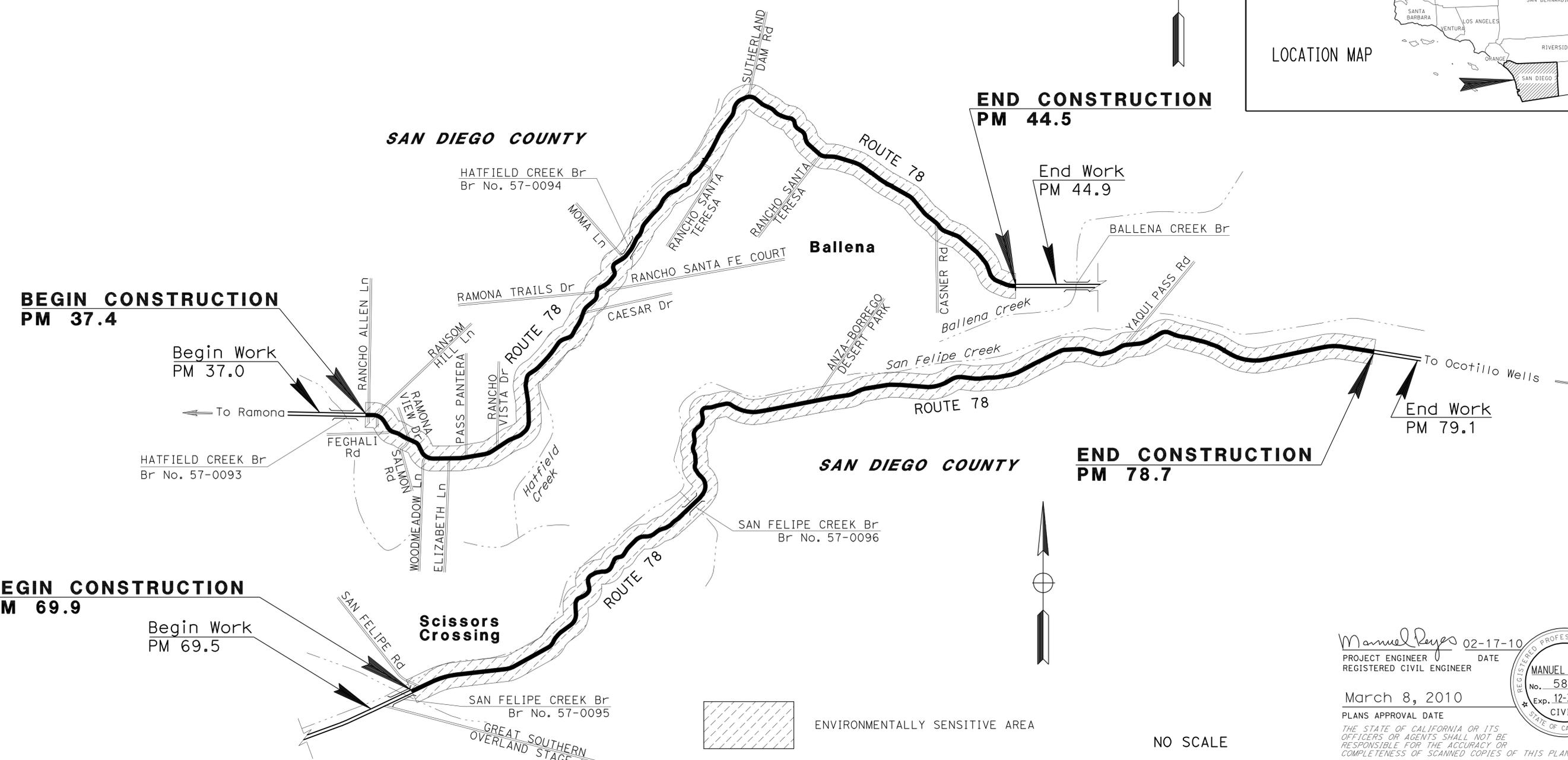
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY

IN SAN DIEGO COUNTY NEAR RAMONA FROM 0.2 MILE EAST OF HATFIELD CREEK BRIDGE 57-0093 TO 0.5 MILE WEST OF BALLENA CREEK BRIDGE AND NEAR SCISSORS CROSSING FROM SAN FELIPE CREEK BRIDGE 57-0095 TO 1.9 MILES EAST OF YAQUI PASS ROAD

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	78	37.4/44.5, 69.9/78.7	1	16

Caltrans



PROJECT MANAGER
RICHARD ESTRADA

DESIGN ENGINEER
MANUEL REYES

Manuel Reyes 02-17-10
PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

March 8, 2010
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.

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

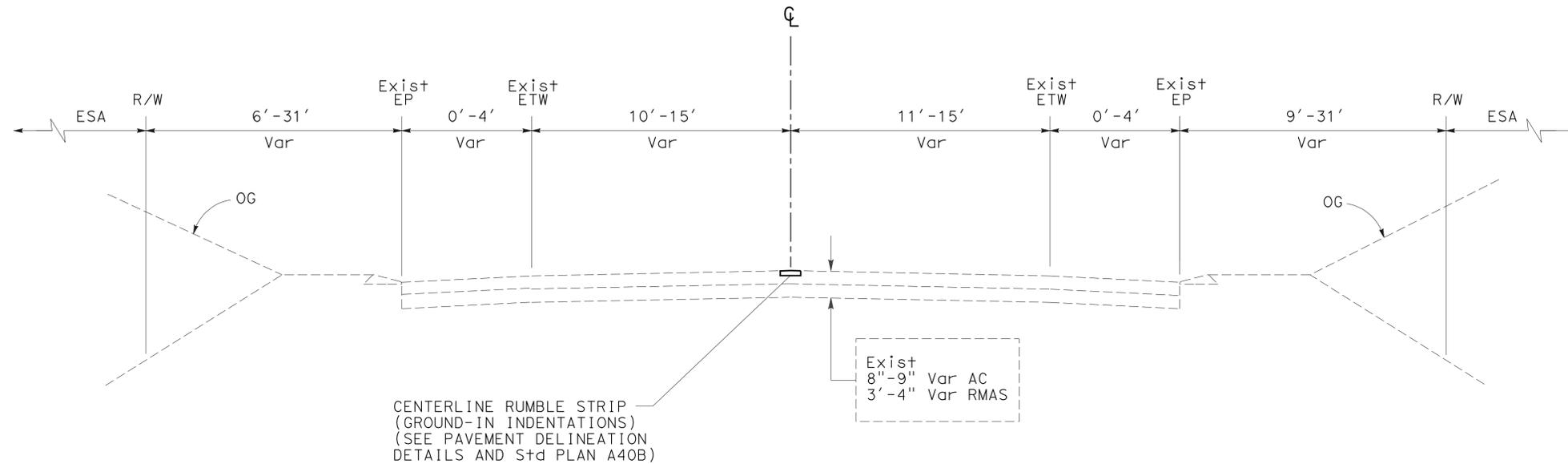
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TIME PLOTTED => 15:20

LAST REVISION
02-22-10

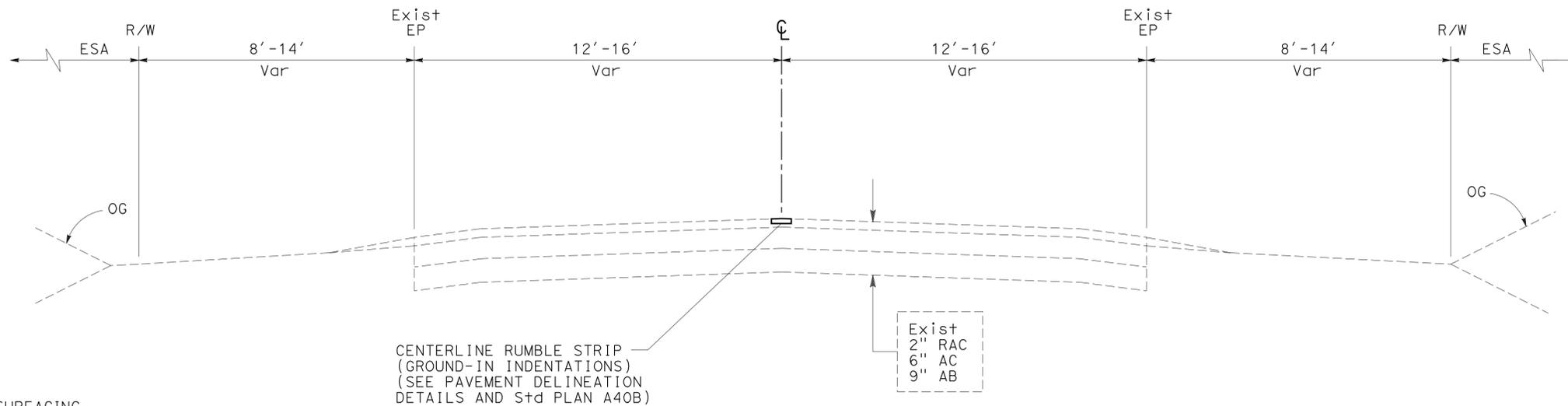
NOTES:

- DIMENSIONS OF THE PAVEMENT STRUCTURAL SECTIONS ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
- EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.
- UNDERGROUND UTILITIES TO BE FIELD LOCATED.
- FOG SEAL COAT SHALL BE APPLIED TO ALL GROUND AREAS.
- FIELD ADJUST LOCATION OF POSTS TO AVOID IMPACTING EXISTING UTILITIES.
- CENTERLINE RUMBLE STRIP SHALL NOT BE PLACED AT TURN LOCATIONS, PASSING ZONES AND BRIDGES.
- CENTERLINE RUMBLE STRIP SHALL NOT BE PLACED AT INTERSECTIONS (SEE CONSTRUCTION DETAILS).
- SEE SUMMARY OF QUANTITIES FOR LOCATIONS OF "MBGR".
- SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.

DESIGN DESIGNATION		
	PM 37.4/44.5	PM 69.9/78.7
ADT (2007)	9,500	1500
ADT (2030)	11,900	7000
DHV	2,160	1100
T	6.0%	24.0%
V	N/A	N/A



ROUTE 78
PM 69.9 TO 78.7



ROUTE 78
PM 37.4 TO 44.5

LEGEND:

- RMAS - ROAD MIXED ASPHALT SURFACING
- RAC - RUBBERIZED ASPHALT CONCRETE
- ESA - ENVIRONMENTALLY SENSITIVE AREAS

TYPICAL CROSS SECTIONS

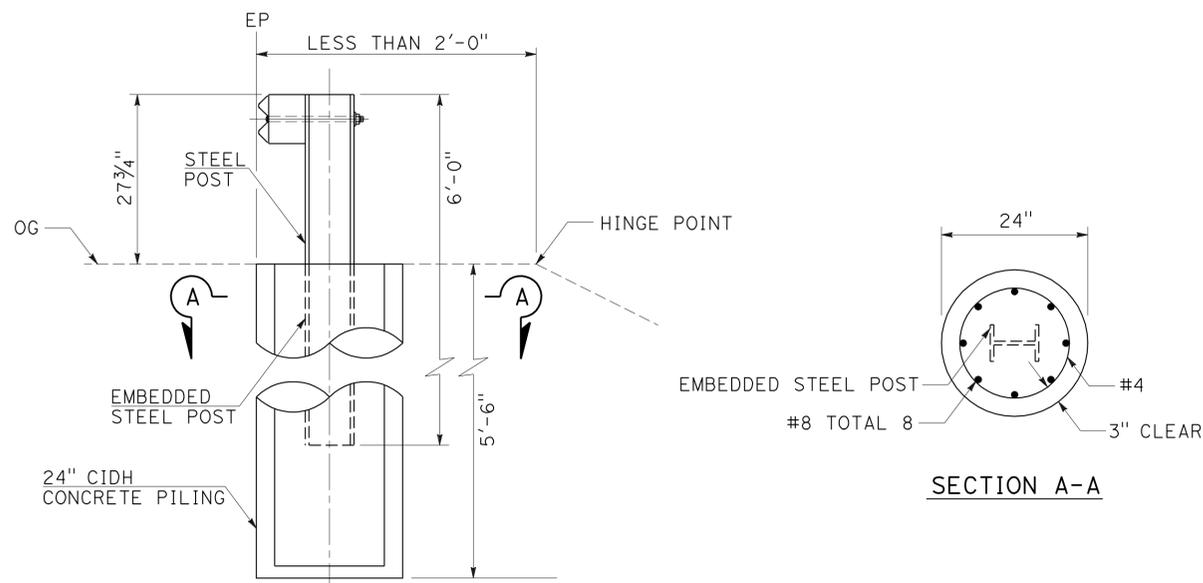
NO SCALE

X-1

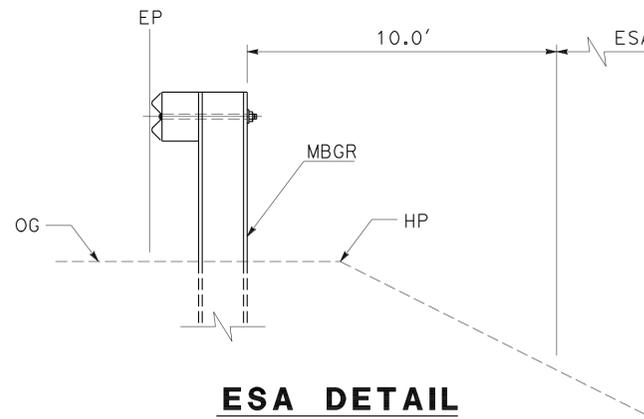
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans PROJECT DEVELOPMENT
 FUNCTIONAL SUPERVISOR: RICHARD ESTRADA
 CALCULATED/DESIGNED BY: [blank] CHECKED BY: [blank]
 DONI DECASTRO VAN CALLANTA
 REVISED BY: [blank] DATE REVISED: [blank]

NOTE:

- "AREAS FOR CONTRACTORS USE" IS RESTRICTED TO PREVIOUSLY DISTURBED ACCESS, NO CLEARING OF VEGETATION ALLOWED.
- THE EXACT LIMITS OF THE "AREAS FOR CONTRACTORS USE" WILL BE DETERMINED BY THE ENGINEER.
- FOR ADDITIONAL DIMENSIONS NOT SHOWN ON 24" CIDH CONCRETE PILING DETAIL, SEE Std PLANS A77C2, A77C3 AND B2-3.
- ESA - ENVIRONMENTALLY SENSITIVE AREA

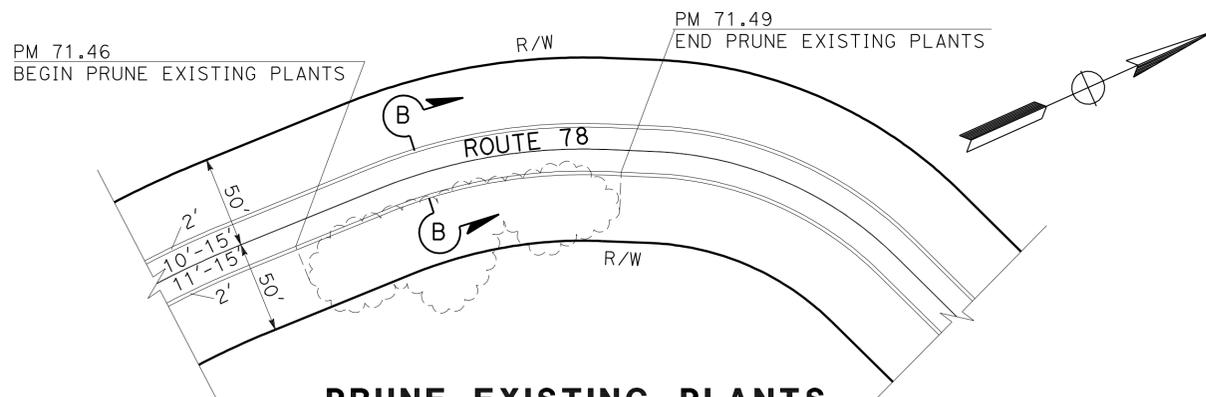


24" CIDH CONCRETE PILING DETAIL

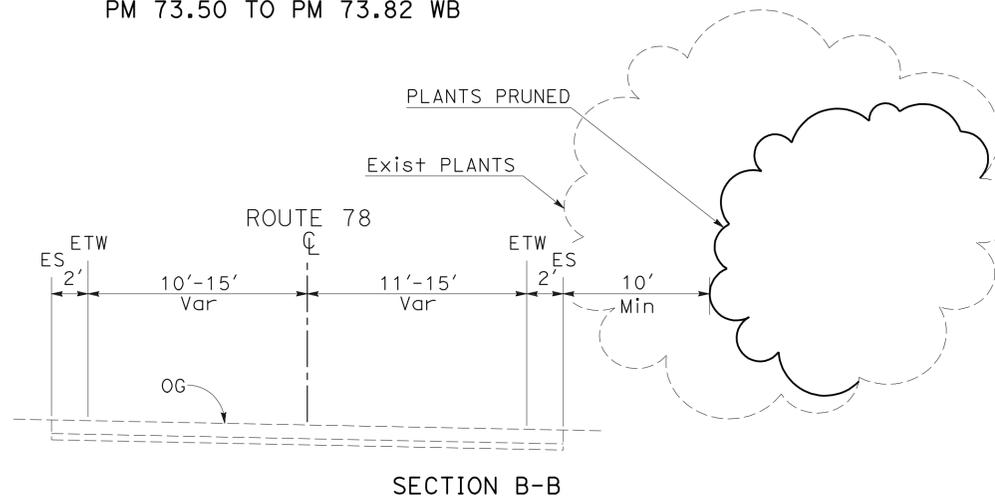


ESA DETAIL

- PM 71.00 TO PM 71.08 EB
- PM 72.93 TO PM 73.07 WB
- PM 73.11 TO PM 73.37 WB
- PM 73.50 TO PM 73.82 WB



PRUNE EXISTING PLANTS DETAIL

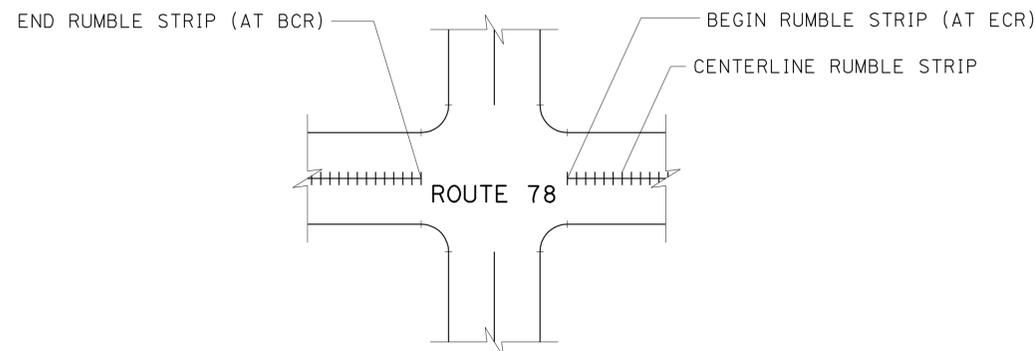


SECTION B-B

ROUTE 78 - AREAS FOR CONTRACTORS USE

(SEE NOTE 1 AND 2)

POSTMILE	DIRECTION	DESCRIPTION/COMMENTS
38.2	EB	200' EAST TO 200' WEST OF ELIZABETH LANE.
38.9	EB	200' EAST OF UNPAVED DRIVEWAY.
40.7	EB	MILEPOST 40.7 TO 200' EAST.
70.6	EB	CALL BOX 78-706 TO 100' WEST OF CALL BOX.
71.3	WB	MILEPOST 71.3 TO 200' EAST.
71.7	EB	MILEPOST 71.7 TO 100' EAST.
72.8	WB	100' WEST TO 200' WEST OF SAN FELIPE CREEK BRIDGE (57-0095).
73.9	EB	MILEPOST 73.9 TO 200' EAST.
75.2	EB	100' EAST TO 100' WEST OF CALL BOX 78-752.
78.1	EB	CALL BOX 78-781 TO 200' WEST OF CALL BOX.



TYPICAL RUMBLE STRIP PLACEMENT AT INTERSECTIONS

CONSTRUCTION DETAILS

NO SCALE

C-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	78	37.4/44.5, 69.9/78.7	4	16

Manuel Reyes 02-17-10
 REGISTERED CIVIL ENGINEER DATE

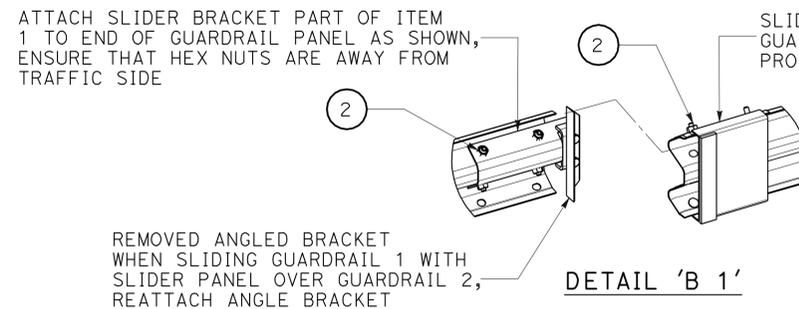
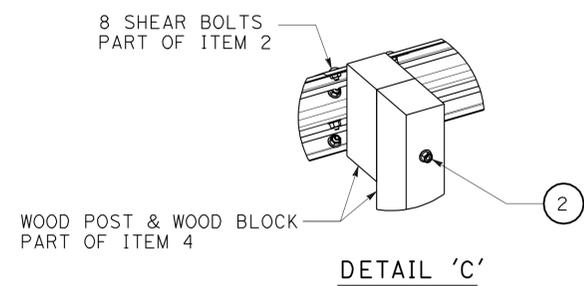
03-08-10
 PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS
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 COPIES OF THIS PLAN SHEET.

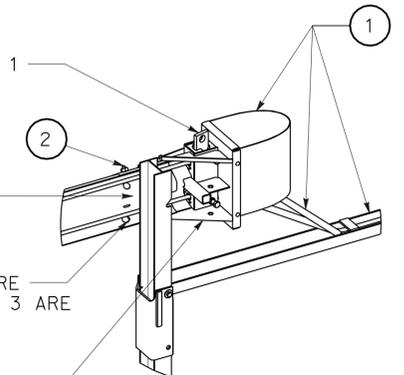
REGISTERED PROFESSIONAL ENGINEER
 MANUEL REYES
 No. 58621
 Exp. 12-31-10
 CIVIL

NOTES:

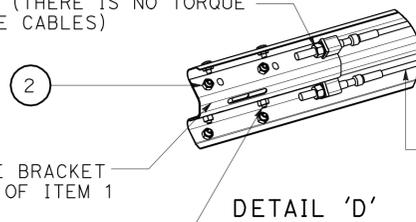
1. SEE MANUFACTURER PLANS FOR ADDITIONAL DETAILS AND DIMENSIONS NOT SHOWN ON PLANS.
2. SYSTEM TO BE INSTALLED PER MANUFACTURER SPECIFICATIONS.
3. ONLY TIGHTEN THE CABLE ASSEMBLIES USING THE NUTS AT THE CABLE BRACKET (SEE DETAIL 'D'). DO NOT TIGHTEN THE CABLES AT THE FRONT OF THE GROUND ANCHOR.
4. WHEN DRIVING STEEL POST, ENSURE THAT A DRIVING CAP WITH TIMBER OR PLASTIC INSERT IS USED TO PREVENT DAMAGE TO THE GALVANIZING TO THE TOP OF THE STEEL POST.



USE A PRY BAR TURN FRICTION PLATE PART OF ITEM 1 COUNTER CLOCKWISE UNTIL IS COMPLETELY AGAINST LOCKING MECHANISM, SECURE IN PLACE USING 4 BOLTS PART OF ITEM 2 ON SIDE OF IMPACT HEAD WELDMENT



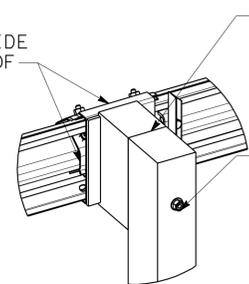
TIGHTEN CABLE ASSEMBLIES UNTIL THEY ARE NOT VISIBLY SAGGING BETWEEN WOOD POSTS (THERE IS NO TORQUE REQUIREMENT FOR THE CABLES)



PASS 2 CABLE ASSEMBLIES BETWEEN GUARDRAIL PANELS AND WOOD BLOCKS

ENSURE THAT HEX NUTS ARE ON INSIDE OF GUARDRAIL PANEL

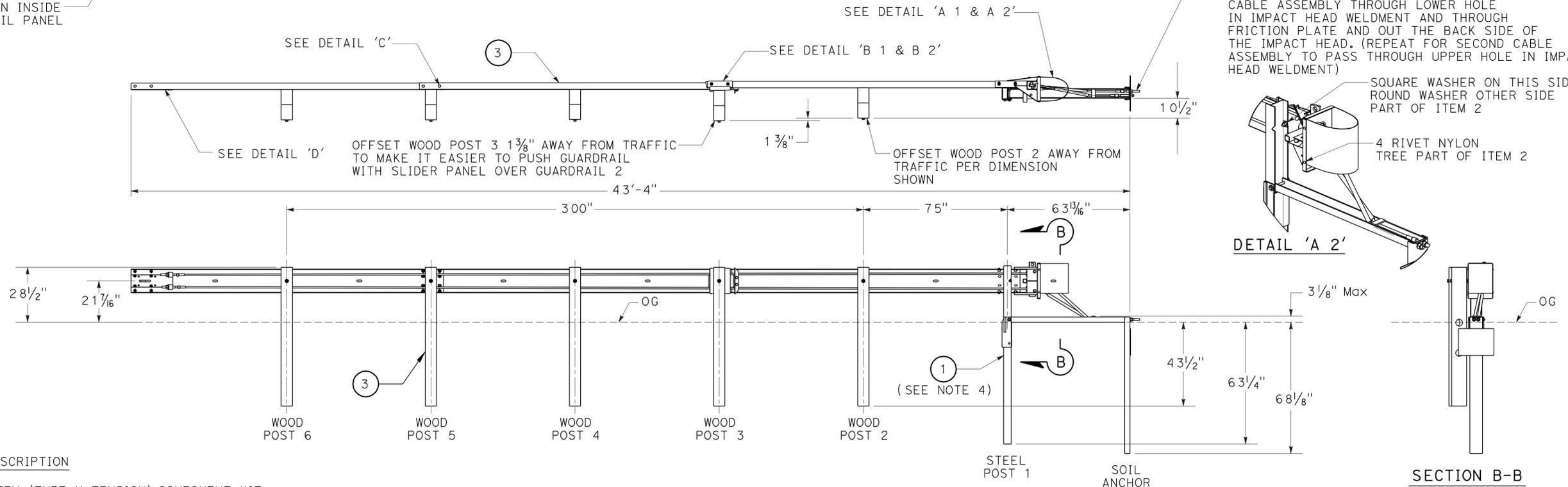
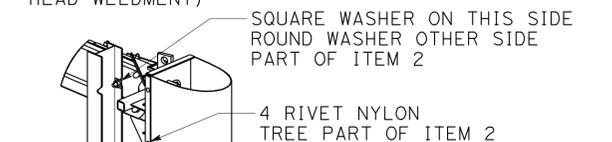
SLIDER PANEL ON TRAFFIC SIDE
SLIDER BRACKET ON INSIDE OF GUARDRAIL PANEL



BEFORE INSTALLATION OF GUARDRAIL TO WOOD BLOCKS, SECURE WOOD BLOCK FROM ROTATION WITH A 16d GALVANIZED NAIL (ALL WOOD POST)

USE GUARDRAIL HARDWARE PROVIDED PART OF ITEM 3 TO SECURE WOOD BLOCK TO WOOD POST GUARDRAIL IS NOT BOLTED TO THE WOOD BLOCK OR WOOD POST

PASS CABLE ASSEMBLY UNDER THE STEEL STRAP ON THE GROUND STRUT AND FORWARD THROUGH THE HOLES AT FRONT END OF GROUND STRUT. THEN PASS CABLE ASSEMBLY THROUGH LOWER HOLE IN IMPACT HEAD WELDMENT AND THROUGH FRICTION PLATE AND OUT THE BACK SIDE OF THE IMPACT HEAD. (REPEAT FOR SECOND CABLE ASSEMBLY TO PASS THROUGH UPPER HOLE IN IMPACT HEAD WELDMENT)



LEGEND

- | ITEM | DESCRIPTION |
|------|--|
| 1 | TERMINAL SYSTEM (TYPE X-TENSION) COMPONENT KIT |
| 2 | TERMINAL SYSTEM (TYPE X-TENSION) SYSTEM HARDWARE KIT |
| 3 | TERMINAL SYSTEM (TYPE X-TENSION) GUARDRAIL COMPONENT KIT 1 |

TERMINAL SYSTEM (TYPE X-TENSION) DETAIL

CONSTRUCTION DETAILS

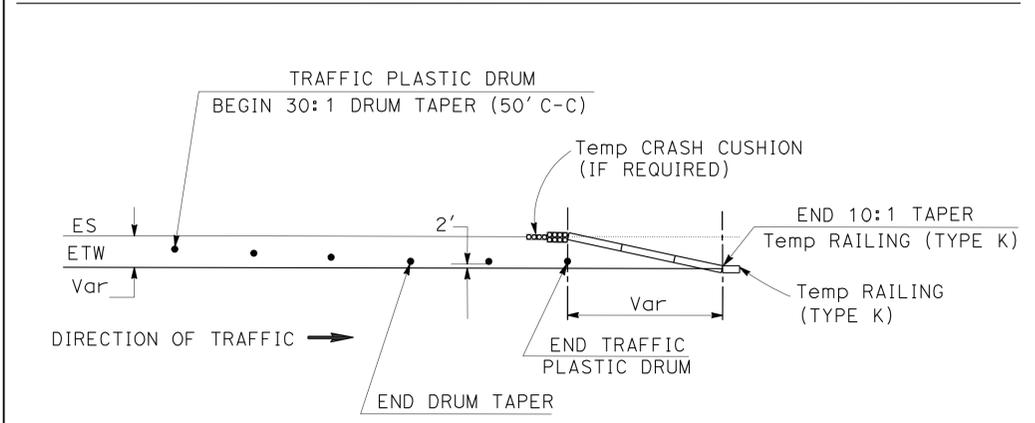
NO SCALE

C-2

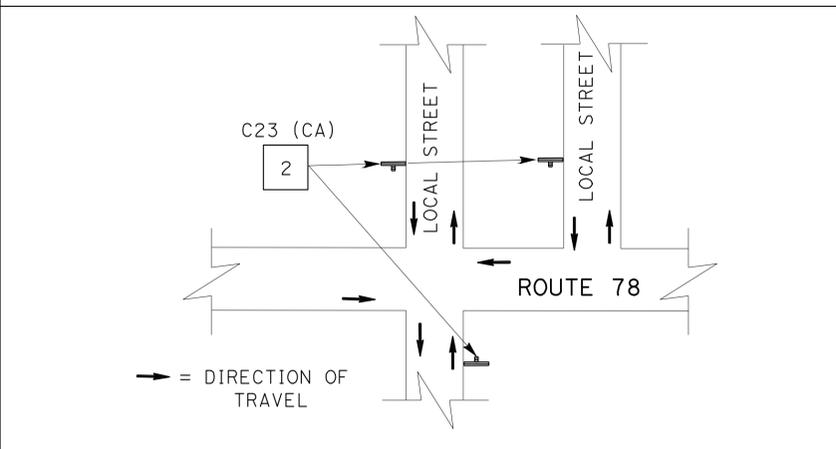
LEGEND:

X = CONSTRUCTION AREA SIGN

TYPICAL PLACEMENT OF TRAFFIC PLASTIC DRUM

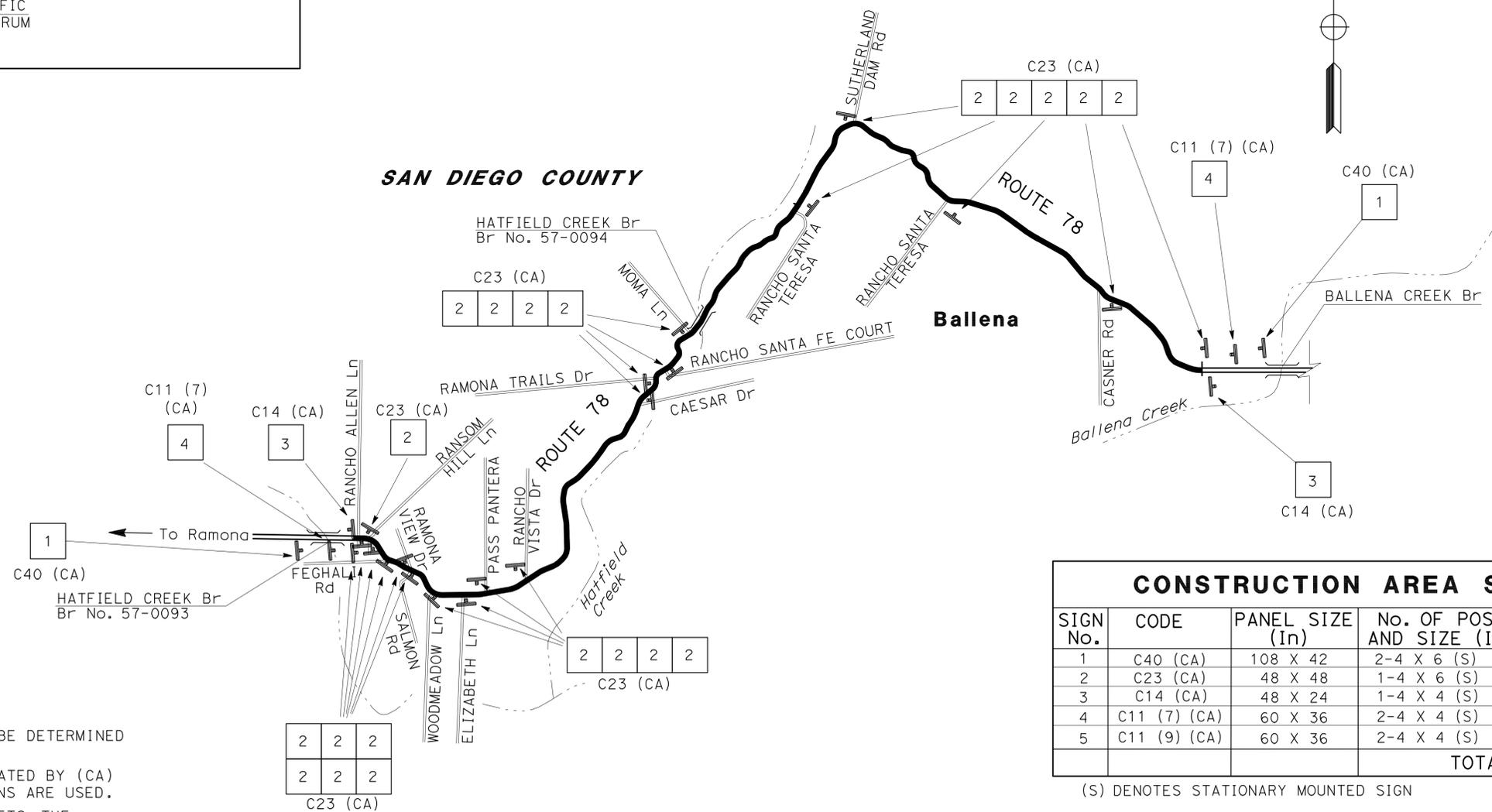


TYPICAL CONSTRUCTION AREA SIGN PLACEMENT ON INTERSECTING STREETS



NOEL TAPIA
SHAHIN T. ADIBI
CAMILLE ABOUFADEL
TRAFFIC DESIGN

SAN DIEGO COUNTY



CONSTRUCTION AREA SIGNS

SIGN No.	CODE	PANEL SIZE (In)	No. OF POST AND SIZE (In)	No. OF SIGNS
1	C40 (CA)	108 X 42	2-4 X 6 (S)	4
2	C23 (CA)	48 X 48	1-4 X 6 (S)	25
3	C14 (CA)	48 X 24	1-4 X 4 (S)	4
4	C11 (7) (CA)	60 X 36	2-4 X 4 (S)	2
5	C11 (9) (CA)	60 X 36	2-4 X 4 (S)	2
TOTAL				37

(S) DENOTES STATIONARY MOUNTED SIGN

CONSTRUCTION AREA SIGNS

NO SCALE

CS-1

NOTES:

- EXACT LOCATION OF CONSTRUCTION AREA SIGNS SHALL BE DETERMINED BY THE ENGINEER.
- FEDERAL MUTCD SIGN CODES ARE SHOWN UNLESS DESIGNATED BY (CA) INDICATING STANDARD CALIFORNIA SIGN SPECIFICATIONS ARE USED.
- EXISTING UTILITIES ARE NOT SHOWN ON THESE PLAN SHEETS. THE CONTRACTOR SHALL VERIFY LOCATIONS OF EXISTING UTILITIES AND ADJUST THE FIELD LOCATION OF SIGN POSTS IN CONSULTATION WITH THE ENGINEER.

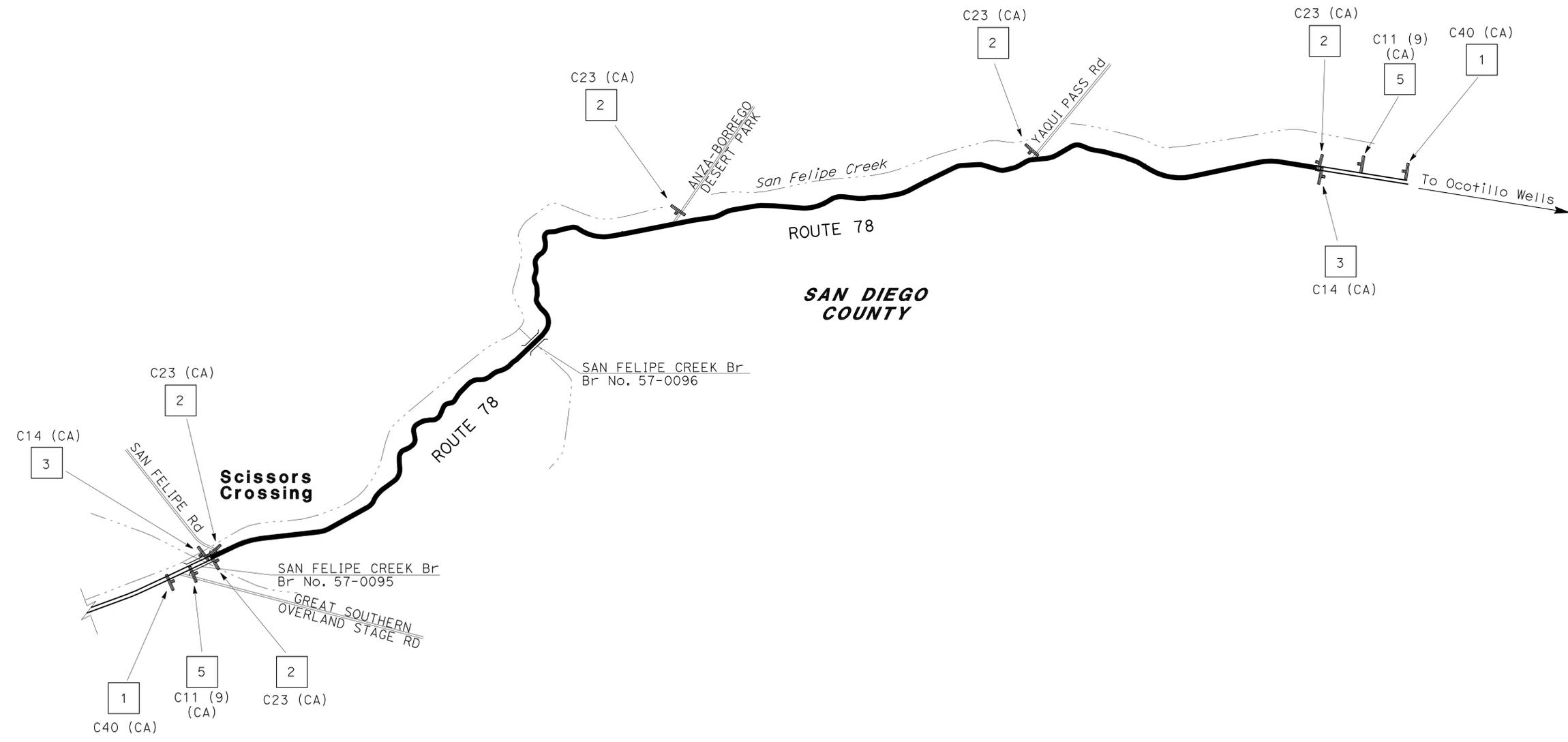
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR	CAMILLE ABOUFADEL
CALCULATED/DESIGNED BY	CHECKED BY
NOEL TAPIA	SHAHIN T. ADIBI
REVISED BY	DATE

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	78	37.4/44.5, 69.9/78.7	6	16

REGISTERED CIVIL ENGINEER DATE 02-17-10
 REGISTERED CIVIL ENGINEER No. 54839 Exp. 06-30-10 CIVIL
 PLANS APPROVAL DATE 03-08-10

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CONSTRUCTION AREA SIGNS
 NO SCALE
CS-2

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	78	37.4/44.5, 69.9/78.7	7	16

REGISTERED CIVIL ENGINEER	DATE
02-17-10	
PLANS APPROVAL DATE	
03-08-10	

REGISTERED PROFESSIONAL ENGINEER	No.	Exp.
SHAHIN T. ADIBI	54839	06-30-10
CIVIL		

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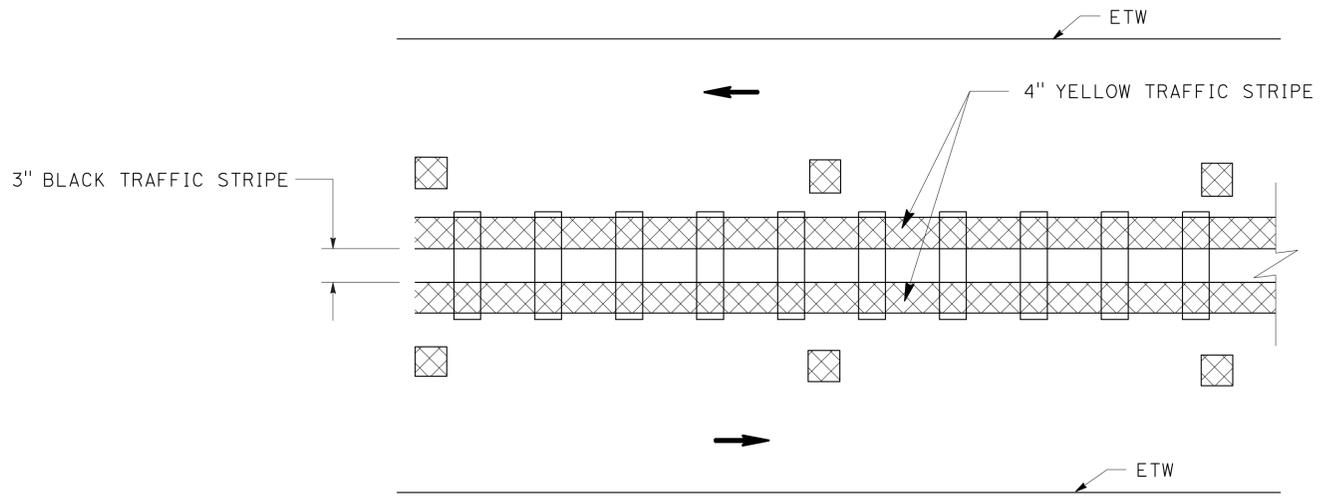
NOTES:

1. PAINT TRAFFIC STRIPE (2 COAT) SHALL BE PLACED OVER CENTERLINE RUMBLE STRIP.
2. SEE STANDARD PLAN A40B FOR CENTERLINE RUMBLE STRIP.
3. CENTERLINE RUMBLE STRIP SHALL NOT BE PLACED AT INTERSECTIONS, TURN LOCATIONS, PASSING ZONES AND BRIDGES.
4. ALL PAVEMENT DELINEATION SHALL BE REPLACED IN KIND.

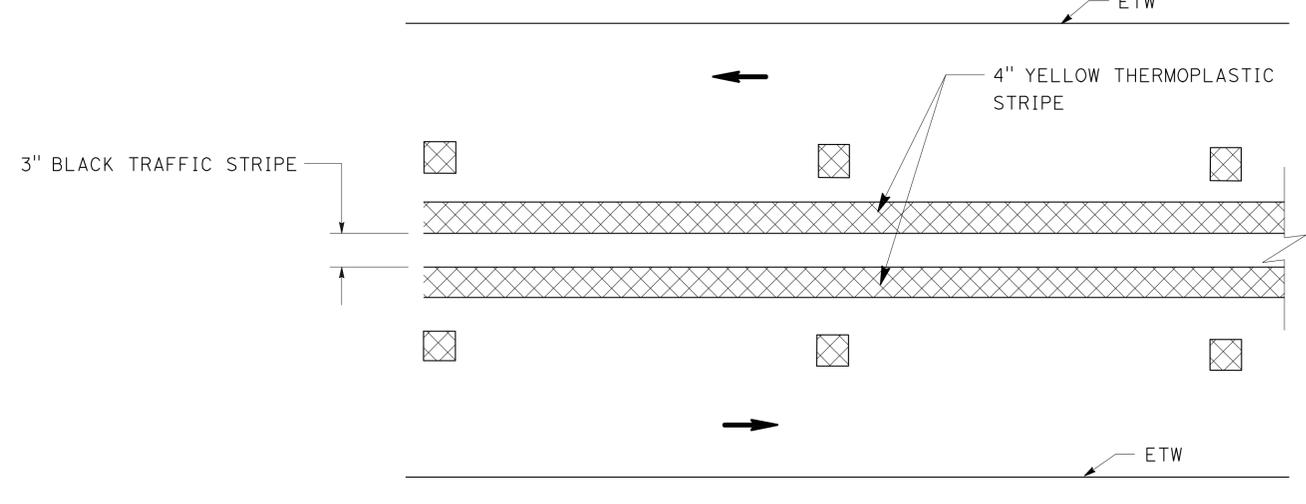
LEGEND:

-  = DIRECTION OF TRAVEL
-  = CENTERLINE RUMBLE STRIP (AC, GROUND-IN INDENTATIONS)
-  = PAVEMENT MARKER (TYPE D)

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: CAMILLE ABOUFADEL
 CALCULATED/DESIGNED BY: NOEL TAPIA
 CHECKED BY: SHAHIN T. ADIBI
 REVISED BY: NOEL TAPIA
 DATE REVISED: SHAHIN T. ADIBI



DETAIL 22Mod WITH CENTERLINE RUMBLE STRIP
ROUTE 78



DETAIL 22ModT (BRIDGE DECKS)
ROUTE 78

PAVEMENT DELINEATION DETAILS
NO SCALE
PDD-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	78	37.4/44.5, 69.9/78.7	8	16

02-17-10
REGISTERED CIVIL ENGINEER DATE

03-08-10
PLANS APPROVAL DATE

SHAHIN T. ADIBI
No. 54839
Exp. 06-30-10
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: 1. ALL PAVEMENT DELINEATION SHALL BE REPLACED IN KIND.

THERMOPLASTIC PAVEMENT MARKING													
ROUTE	LOCATION	DIRECTION	LIMIT LINE 12 IN SQFT	YIELD LINE 36 IN SQFT	CROSSWALK 12 IN SQFT	ARROW TYPE I (24') SQFT	ARROW TYPE II(L) SQFT	ARROW TYPE II(R) SQFT	ARROW TYPE III(R) SQFT	ARROW TYPE III(L) SQFT	ARROW TYPE VI SQFT	ARROW TYPE V SQFT	REMARKS
78	PM 76.83	WB										168.0	
TOTAL											168.0		

PAVEMENT MARKER AND TRAFFIC STRIPE SUMMARY											
ROUTE	DIRECTION	POSTMILE			DETAIL No.	PAVEMENT MARKER (RETROREFLECTIVE) (EA)		PAINT TRAFFIC STRIPE (2 COAT) (LF)	THERMOPLASTIC TRAFFIC STRIPE (LF)		REMARKS
		Beg	END	TYPE D YELLOW		TYPE G YELLOW	4"		8"		
										22Mod	
78	EB/WB	37.40	44.50	22Mod	3126		37,385				
		69.90	70.01	22Mod	51		583				
		69.90	70.01	27B			1,166				
		70.03	72.69	22Mod	1173		14,048				
		70.03	72.69	27B			28,096				
		72.69	72.72	22ModT	16		159	318			
		72.69	72.72	27B			318				
		72.72	76.83	22Mod	1811		21,700				
		72.72	76.83	27B			43,400				
		76.83	76.84	38		3			53		
		76.83	76.84	27B			200				
		76.84	78.70	22Mod	821		9,821				
		76.84	78.70	27B			19,642				
SUBTOTAL					6998	3	176,518	318	53		
TOTAL						7001	176,518	318	53		

MILEPOST MARKER				
ROUTE	DIRECTION	POSTMILE	Qty (EA)	REMARKS
78	WB	37.50	1	
	EB	39.00	1	
	WB	39.50	1	
	WB	40.50	1	
	WB	41.50	1	
	EB	42.00	1	
	WB	69.50	1	
	WB	70.50	1	
	WB	76.50	1	
	EB	77.00	1	
TOTAL			10	

REMOVE PAVEMENT MARKER (N)				
ROUTE	DIRECTION	POSTMILE	TYPE	QUANTITY (EA)
78	EB/WB	37.40/44.50	D	3126
78	EB/WB	69.90/78.70	D, G	3883

REMOVE TRAFFIC STRIPE						
ROUTE	DIRECTION	POSTMILE	DETAIL/TYPE	PAINTED (LF)	THERMOPLASTIC (LF)	REMARKS
78	EB/WB	37.40 / 44.50	22Mod	112,155		
78	EB/WB	69.90 / 78.70	22Mod	138,615		
78	EB/WB	72.69 / 72.72	22ModT		318	
78	EB/WB	76.82 / 76.84	38		200	
TOTAL				250,770	518	

REMOVE PAVEMENT MARKING			
ROUTE	DIRECTION	POSTMILE	QUANTITY (SQFT)
78	WB	76.83	168.0

**PAVEMENT DELINEATION
QUANTITIES
PDQ-1**

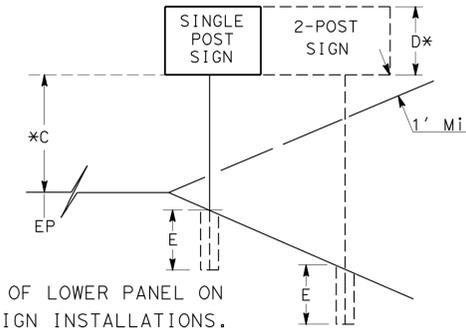
(N) = NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

NOTES:

- FEDERAL (MUTCD) SIGN CODES ARE SHOWN UNLESS DESIGNATED BY (CA) INDICATING STANDARD CALIFORNIA SIGN SPECIFICATIONS.
- MINIMUM POST LENGTHS WERE CALCULATED ASSUMING A LEVEL GROUND SURFACE FROM THE EP. ENSURE "C" DIMENSION IS MET. POST LENGTHS MAY VARY DUE TO SITE CONDITIONS.
- EXACT LOCATIONS OF SIGNS AND POSTS SHALL BE DETERMINED BY THE ENGINEER.
- REFER TO "FURNISH ROADSIDE SIGN PANEL" CHART FOR FURTHER INFORMATION.

ROADSIDE SIGN QUANTITIES



SIGN No.	ROUTE/PM	CODE	PANEL SIZE		D	C	E	Min POST LENGTH	POST SIZE				ROADSIDE SIGN		RESET	RELO-CATE	REMOVE	INSTALL ROAD-SIDE SIGN		INSTALL SIGN	MAST ARM MOUNTED SIGN (N)	REMARKS
			Horiz	Vert					4X4	4X6	6X6	6X8	ONE POST	TWO POST				LAMI-NATED WOOD BOX POST	PANEL ON EXIST POST			
			INCHES	X INCHES	LF	LF	LF	LF	INCHES	X INCHES	EA	EA	EA	EA	EA	EA	EA	EA	EA			
1	EB78 PM73.78	W1-6R	36x18											1								
	↓	TYPE N (CA)	18x18																			
2	WB78 PM73.66	W1-1	24x24													1						
	↓	W13-1	18x18																			
3	WB78 PM73.66	W1-1a (25)(L)	36x36		4.24	7.0	4.5	15.74		X		1										
4	WB78 PM73.59	W1-6L	36x18													1						
	↓	TYPE N (CA)	18x18																			
5	WB78 PM73.59	W1-6L	36x18		3.0	7.0	4.5	14.50		X		1										
	↓	TYPE N (CA)	18x18																			
6	EB78 PM73.57	W1-6R	36x18										1									
	↓	TYPE N (CA)	18x18																			
7	WB78 PM73.52	W1-5R	30x30													1						
	↓	W7-3a (2)	24x18																			
8	WB78 PM73.52	W1-5R	30x30		5.53	7.0	4.5	17.03		X		1										
	↓	W7-3a (2)	24x18																			
9	WB78 PM73.82	Type L-1 (CA) (OM2-2V)	8x24		2.00	2.0	2.0	6.00				1										
10	WB78 PM73.37	Type L-1 (CA) (OM2-2V)	8x24		2.00	2.0	2.0	6.00				1										
11	WB78 PM73.07	Type L-1 (CA) (OM2-2V)	8x24		2.00	2.0	2.0	6.00				1										
12	EB78 PM71.00	Type L-1 (CA) (OM2-2V)	8x24		2.00	2.0	2.0	6.00				1										
TOTAL											7		2		3							

SIGN QUANTITIES

SQ-1

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	78	37.4/44.5, 69.9/78.7	10	16

 02-17-10
 REGISTERED CIVIL ENGINEER DATE

03-08-10
 PLANS APPROVAL DATE

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



NOTES:

- FEDERAL (MUTCD) SIGN CODES ARE SHOWN UNLESS DESIGNATED BY (CA) INDICATING STANDARD CALIFORNIA SIGN SPECIFICATIONS.
- PROTECTIVE OVERLAY DESIGNATIONS ARE AS FOLLOWS:
SOC-SPRAY-ON COATING, SF-STANDARD FILM, AND PF-PREMIUM FILM.
- REFER TO "ROADSIDE SIGN QUANTITIES" CHART FOR FURTHER INFORMATION.
- BLACK - BIK, YELLOW - YIw,

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: CAMILLE ABOUFADEL
 CALCULATED/DESIGNED BY: NOEL TAPIA
 CHECKED BY: SHAHIN T. ADIBI
 REVISED BY: NOEL TAPIA
 DATE REVISED:

FURNISH ROADSIDE SIGN PANEL

SIGN No.	CODE	PANEL SIZE		BACKGROUND		LEGEND			SIGN PANEL				REMARKS	
		Horiz	Vert	SHEETING COLOR	RETRO-REFLECTIVE ASTM TYPE	SHEETING COLOR	REFLECTIVE ASTM TYPE	BLACK (NON-REFLECTIVE)	SINGLE SHEET ALUMINUM (SQFT)					
									UNFRAMED		FRAMED			PREMIUM PROTECTIVE OVERLAY FILM
		INCHES	X INCHES	0.063 INCHES	0.080 INCHES	0.063 INCHES	0.080 INCHES							
3	W1-1a (25)(L)	36	x 36	YIw	IV	BIK	IV	X	9.00				X	
5	W1-6L TYPE N (CA)	36	x 18	YIw	IV	BIK	IV	X	4.50				X	
		18	x 18	YIw	IV				2.25				X	
8	W1-5R W7-3a (2)	30	x 30	YIw	IV	BIK	IV	X	6.25				X	
		24	x 18	YIw	IV	BIK	IV	X	3.00				X	
9	Type L-1 (CA) (OM2-2V)	8	x 24	Wh+	IV	YIw	IV		1.33				X	
9	Type L-1 (CA) (OM2-2V)	8	x 24	Wh+	IV	YIw	IV		1.33				X	
9	Type L-1 (CA) (OM2-2V)	8	x 24	Wh+	IV	YIw	IV		1.33				X	
9	Type L-1 (CA) (OM2-2V)	8	x 24	Wh+	IV	YIw	IV		1.33				X	
TOTAL									30.32					

SIGN QUANTITIES
SQ-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans PROJECT DEVELOPMENT
 FUNCTIONAL SUPERVISOR: RICHARD ESTRADA
 CALCULATED/DESIGNED BY: DONI DECASTRO
 CHECKED BY: VAN D. CALLANTA
 REVISED BY: DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	78	37.4/44.5, 69.9/78.7	11	16

Manuel Reyes 02-17-10
 REGISTERED CIVIL ENGINEER DATE

03-08-10
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 No. 58621
 Exp. 12-31-10
 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.

RUMBLE STRIP					
ROUTE	BEGIN POST MILE	END POST MILE	LENGTH (LF) (N)	ASPHALTIC EMULSION (FOG SEAL COAT) (TON) (N)	CENTERLINE RUMBLE STRIP (AC, GROUND-IN INDENTATIONS) (S+d)
78	37.4	44.5	37,488	0.44	374.9
78	69.9	78.7	46,464	0.54	464.6
TOTAL					839.5

METAL BEAM GUARD RAILING																	
ROUTE	Beg POST MILE	END POST MILE	DIRECTION	LAYOUT TYPE (N)	REMOVE MBGR	MBGR	MBGR (STEEL POST)	24" CIDH CONCRETE PILING	CRASH CUSHION (TYPE CAT) BACKUP	TERMINAL SYSTEM (TYPE X-TENSION)	END CAP (TYPE TC) (N)	CONCRETE RAILING TRANSITION (N)	REMOVE EXISTING TERMINAL SECTION (N)	REMOVE CABLE ANCHOR ASSEMBLY (N)	BURIED POST END ANCHOR (N)	GUARD RAILING DELINEATOR	REMARKS
					LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	
78	71.00	71.08	EB	11H	387.50	243.75	62.5	55.0		2			2	2		8	
	72.93	73.07	WB	11D	737.50	656.25				2			2	2		16	
	73.11	73.37	WB	11D	1,375.00	1,293.75				2			2	2		32	
	73.50	73.82	WB	11D	1,662.50	1,581.25				2			2	2		40	
TOTAL					4,162.50	3,775.00	62.5	55.0		8						91	

SUMMARY OF QUANTITIES

Q-1

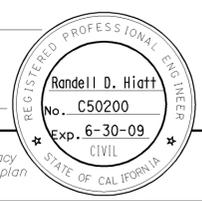
(N) - NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	78	37.4/44.5, 69.9/78.7	12	16

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

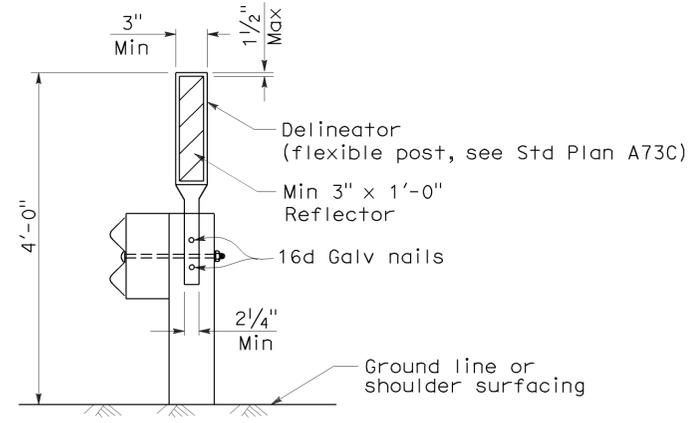
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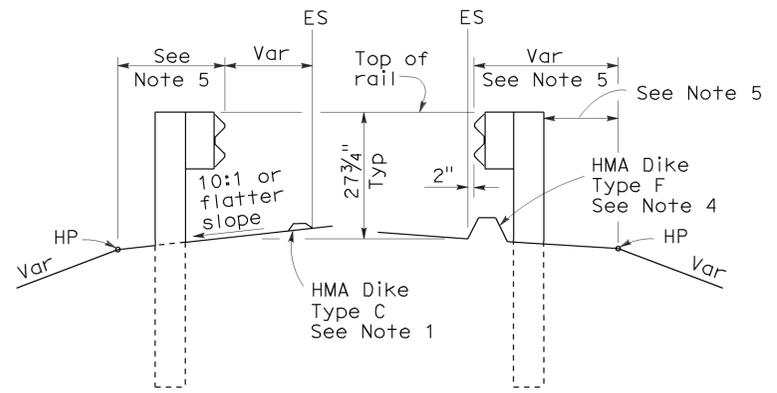
To accompany plans dated 03-08-10

NOTES:

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



GUARD RAILING DELINEATION
See Note 3



DIKE POSITIONING
See Note 1

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

REVISED STANDARD PLAN RSP A77C4

2006 REVISED STANDARD PLAN RSP A77C4

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	78	37.4/44.5, 69.9/78.7	13	16

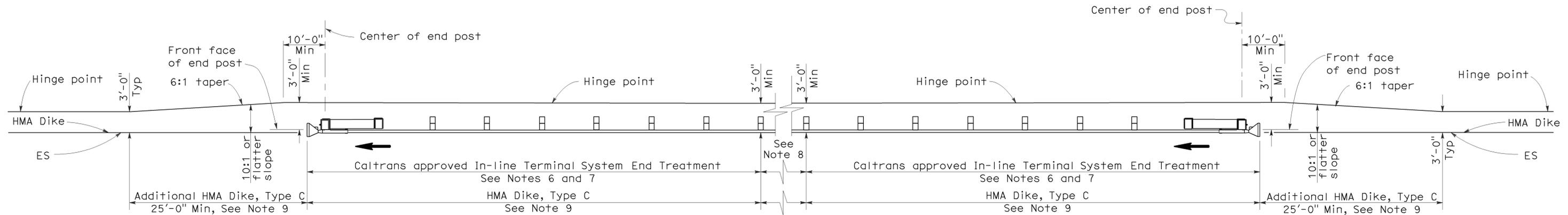
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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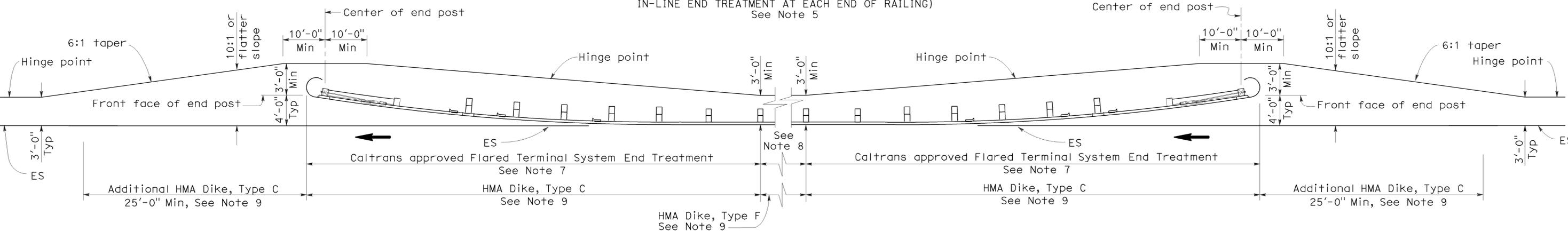
REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

To accompany plans dated 03-08-10



TYPE 11D LAYOUT

(EMBANKMENT GUARD RAILING INSTALLATION WITH IN-LINE END TREATMENT AT EACH END OF RAILING)
See Note 5



TYPE 11E LAYOUT

(EMBANKMENT GUARD RAILING INSTALLATION WITH FLARED END TREATMENT AT EACH END OF RAILING)
See Note 5

NOTES:

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard rail post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or plastic blocks may be used for 6" x 8" x 6'-0" wood post with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- Direction of adjacent traffic indicated by →.
- Layout Types 11D through 11L, shown on the A77E Series of Revised Standard Plans, are typically used where guard railing is recommended to shield embankment slopes and a crashworthy end treatment is required for both directions of traffic.
- In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
- The type of terminal system end treatment to be used will be shown on the Project Plans.
- Dependent on site conditions (embankment height and side slope), construction of additional guard railing (length equal to multiples of 12'-6" with 6'-3" post spacing) may be advisable.
- Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77C4 for dike positioning details.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**METAL BEAM GUARD RAILING
TYPICAL LAYOUTS FOR
EMBANKMENTS**

NO SCALE
RSP A77E2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77E2
DATED MAY 1, 2006 - PAGE 49 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77E2

2006 REVISED STANDARD PLAN RSP A77E2

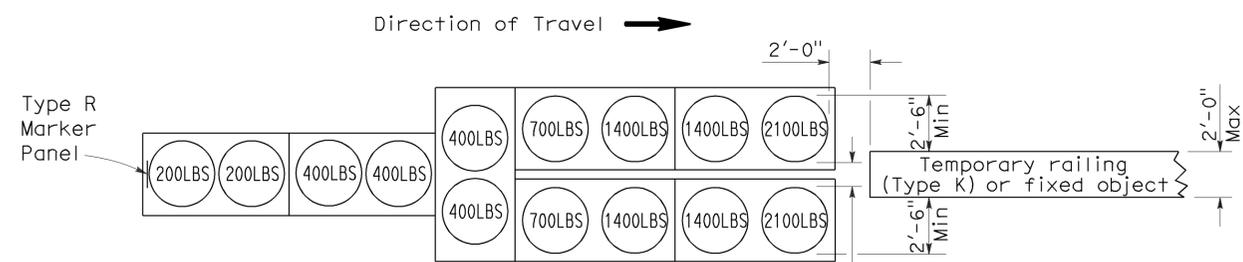
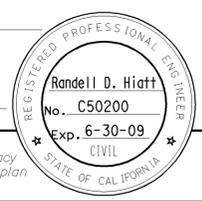
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	78	37.4/44.5, 69.9/78.7	14	16

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

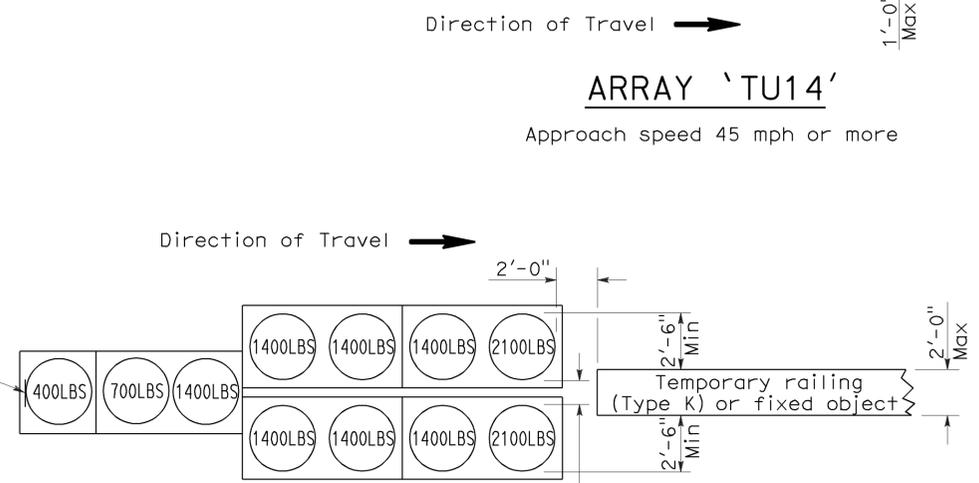
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To accompany plans dated 03-08-10



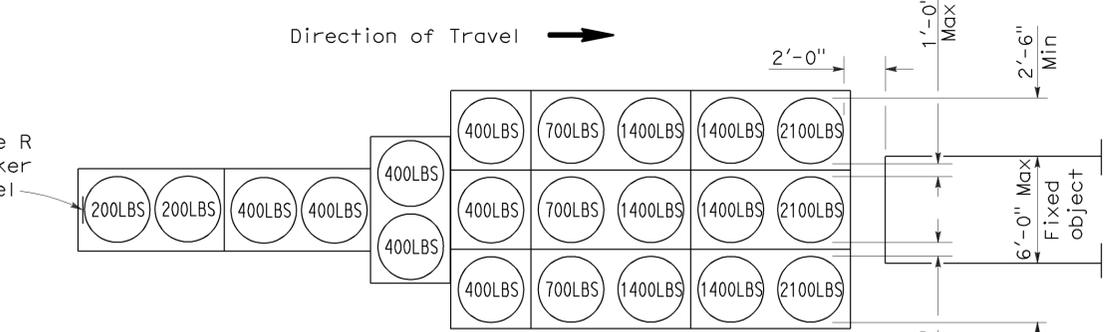
ARRAY 'TU14'

Approach speed 45 mph or more



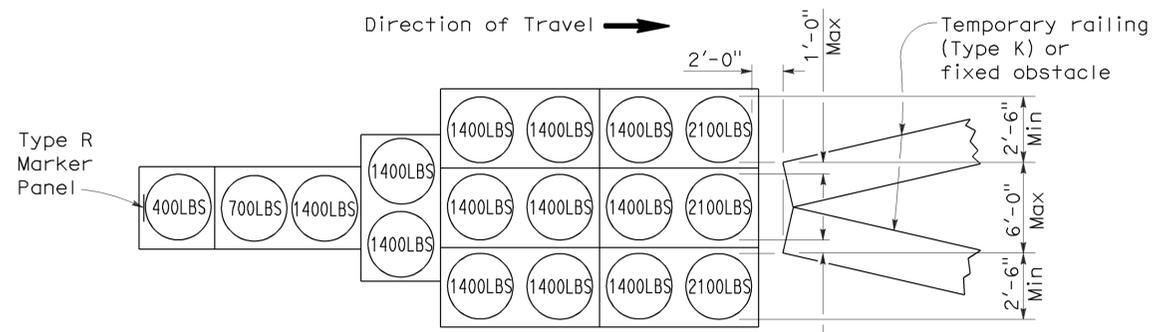
ARRAY 'TU11'

Approach speed less than 45 mph



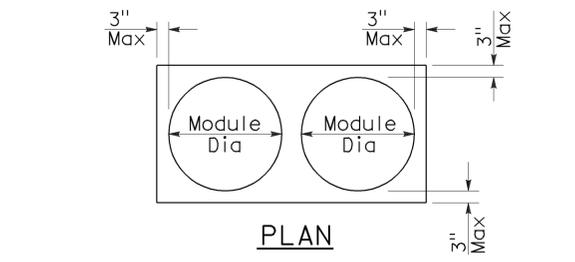
ARRAY 'TU21'

Approach speed 45 mph or more

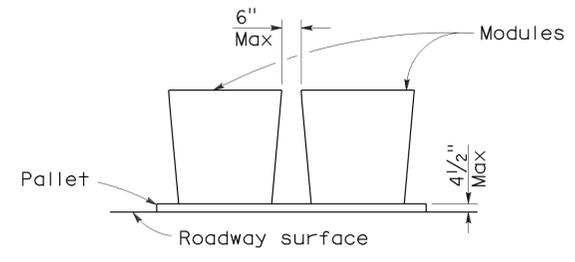


ARRAY 'TU17'

Approach speed less than 45 mph



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

REVISED STANDARD PLAN RSP T1A

2006 REVISED STANDARD PLAN RSP T1A

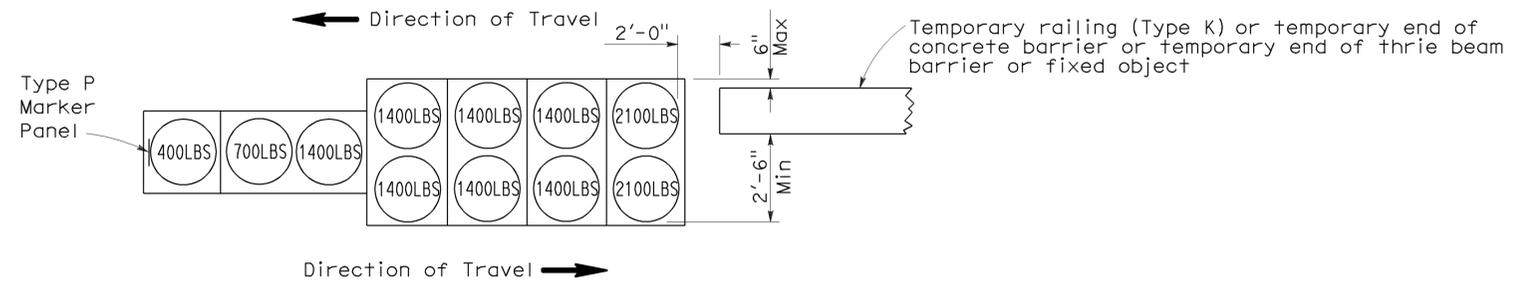
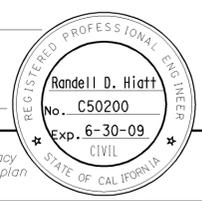
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	78	37.4/44.5, 69.9/78.7	15	16

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

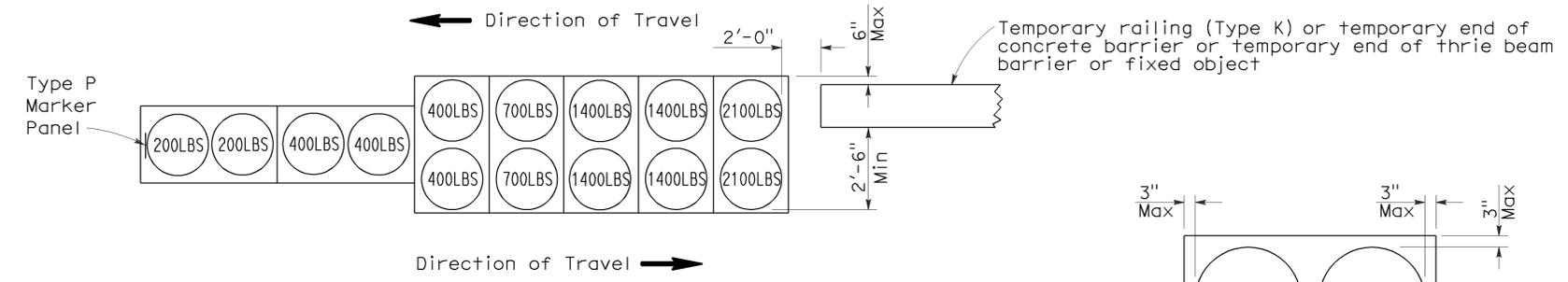
June 6, 2008
PLANS APPROVAL DATE

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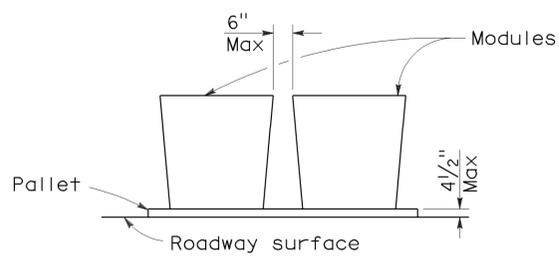
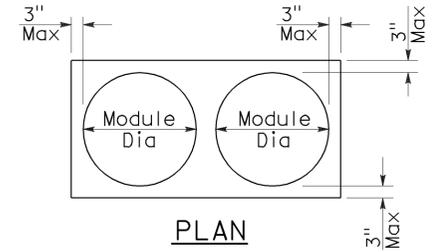
To accompany plans dated 03-08-10



ARRAY 'TB11'
Approach speed less than 45 mph



ARRAY 'TB14'
Approach speed 45 mph or more



CRASH CUSHION PALLET DETAIL
See Note 7

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

REVISED STANDARD PLAN RSP T1B

2006 REVISED STANDARD PLAN RSP T1B

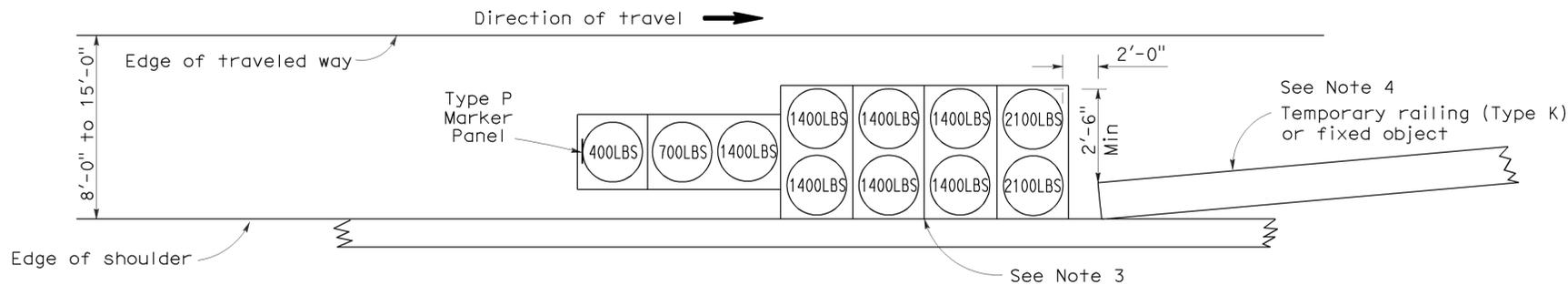
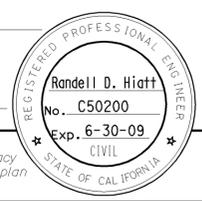
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	78	37.4/44.5, 69.9/78.7	16	16

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

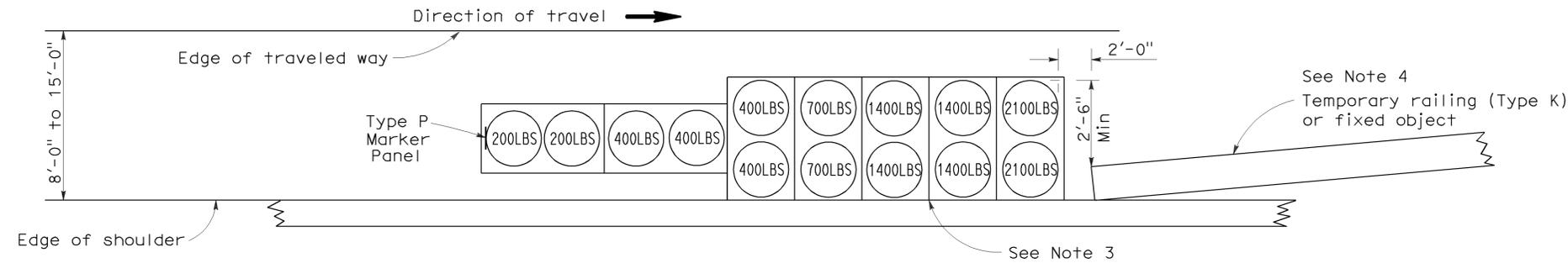
June 6, 2008
PLANS APPROVAL DATE

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To accompany plans dated 03-08-10



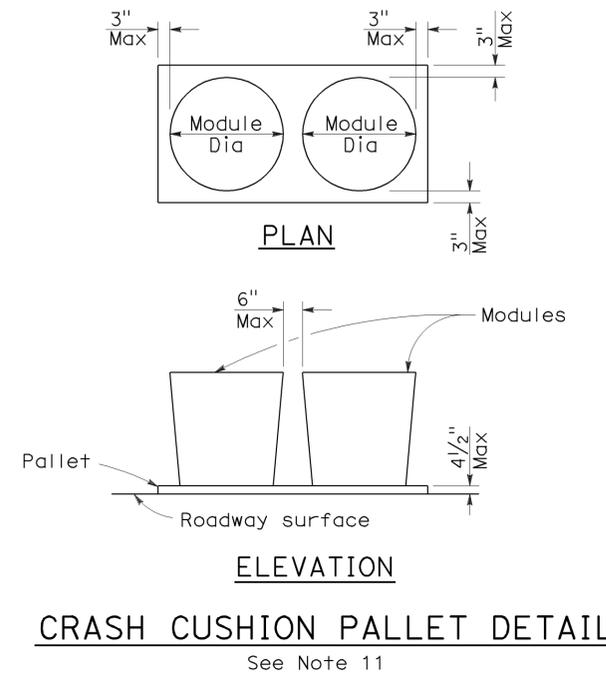
ARRAY 'TS11'
Approach speed less than 45 mph
See Note 9



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

NOTES:

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



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**TEMPORARY CRASH CUSHION,
SAND FILLED
(SHOULDER INSTALLATIONS)**
NO SCALE

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

REVISED STANDARD PLAN RSP T2

2006 REVISED STANDARD PLAN RSP T2