

INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2-19	CONSTRUCTION DETAILS
20	DRAINAGE PLAN, PROFILE AND DRAINAGE QUANTITIES
21	CONSTRUCTION AREA SIGNS
22	TRAFFIC HANDLING PLAN
23	TRAFFIC HANDLING QUANTITIES
24	SIGN PLAN
25-26	SUMMARY OF QUANTITIES
27-47	REVISED AND NEW STANDARD PLANS

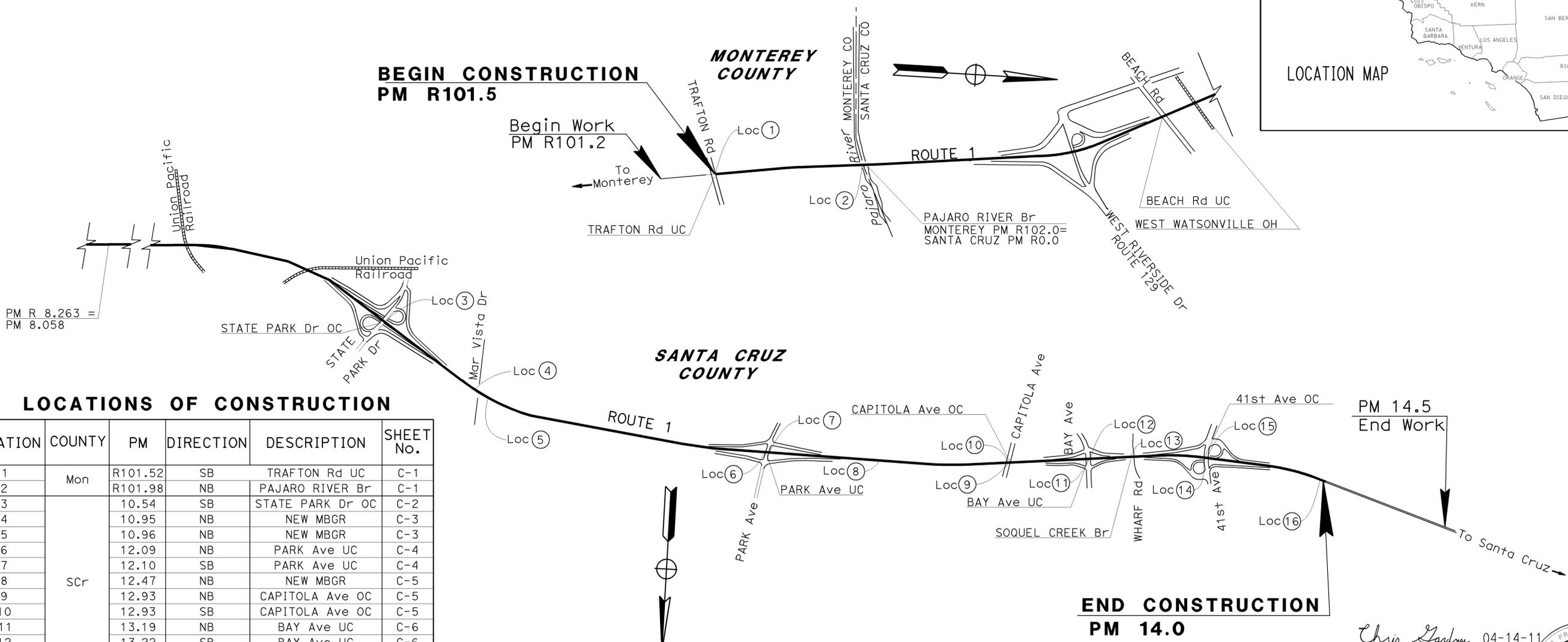
THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.

STATE OF CALIFORNIA  
**DEPARTMENT OF TRANSPORTATION**  
**PROJECT PLANS FOR CONSTRUCTION ON STATE HIGHWAY**  
**IN MONTEREY AND SANTA CRUZ COUNTIES**  
**AT VARIOUS LOCATIONS**  
**FROM TRAFTON ROAD UNDERCROSSING**  
**TO 0.4 MILE NORTH OF 41ST AVENUE OVERCROSSING**

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon,Scr	1	R101.5/R102.0, R0.0/14.0	1	47

LOCATION MAP



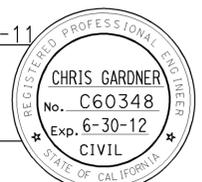
**LOCATIONS OF CONSTRUCTION**

LOCATION	COUNTY	PM	DIRECTION	DESCRIPTION	SHEET No.
1	Mon	R101.52	SB	TRAFTON Rd UC	C-1
2		R101.98	NB	PAJARO RIVER Br	C-1
3	Scr	10.54	SB	STATE PARK Dr OC	C-2
4		10.95	NB	NEW MBGR	C-3
5		10.96	NB	NEW MBGR	C-3
6		12.09	NB	PARK Ave UC	C-4
7		12.10	SB	PARK Ave UC	C-4
8		12.47	NB	NEW MBGR	C-5
9		12.93	NB	CAPITOLA Ave OC	C-5
10		12.93	SB	CAPITOLA Ave OC	C-5
11		13.19	NB	BAY Ave UC	C-6
12		13.22	SB	BAY Ave UC	C-6
13		13.38	SB	SOQUEL CREEK Br	C-6
14		13.62	NB	41st Ave OC	C-7
15		13.62	SB	41st Ave OC	C-7
16		13.97	NB	NEW MBGR	C-8

PROJECT MANAGER  
**LUIS DUAZO**  
 DESIGN ENGINEER  
**BORIS AYAVIRI**

**END CONSTRUCTION**  
**PM 14.0**

*Chris Gardner* 04-14-11  
 PROJECT ENGINEER DATE  
 REGISTERED CIVIL ENGINEER  
**April 18, 2011**  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



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

NO SCALE

CONTRACT No.	<b>05-OP2504</b>
PROJECT ID	<b>050000245</b>

DATE PLOTTED => 21-JUN-2011 13:44  
 TIME PLOTTED => 04-14-11

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

FUNCTIONAL SUPERVISOR  
 BORTIS AYAVIRI

CALCULATED/DESIGNED BY  
 CHECKED BY

GERARDO GOMEZ  
 CHRIS GARDNER

REVISED BY  
 DATE REVISED

**LEGEND**

-  CONCRETE ANCHOR BLOCK (CAB) CONNECTION FOR BARRIER RAILING
-  DIRECTION OF TRAFFIC
-  MBGR TERMINAL SYSTEM

**ABBREVIATIONS**

- AFTS - ALTERNATIVE FLARED TERMINAL SECTION
- AITS - ALTERNATIVE IN-LINE TERMINAL SECTION
- EAA - END ANCHOR ASSEMBLY
- R/RC - REMOVE AND RECONSTRUCT.
- N/RCD - NEW OR RECONSTRUCTED.
- CAB - CONCRETE ANCHOR BLOCK

**NOTES:**

1. SEE CONSTRUCTION DETAIL C-9 FOR VEGETATION CONTROL (ASPHALT COMPOSITE)
2. A SINGLE INSTALLATION OF MBGR SHALL NOT MIX NEW AND EXIST RAIL ELEMENTS.

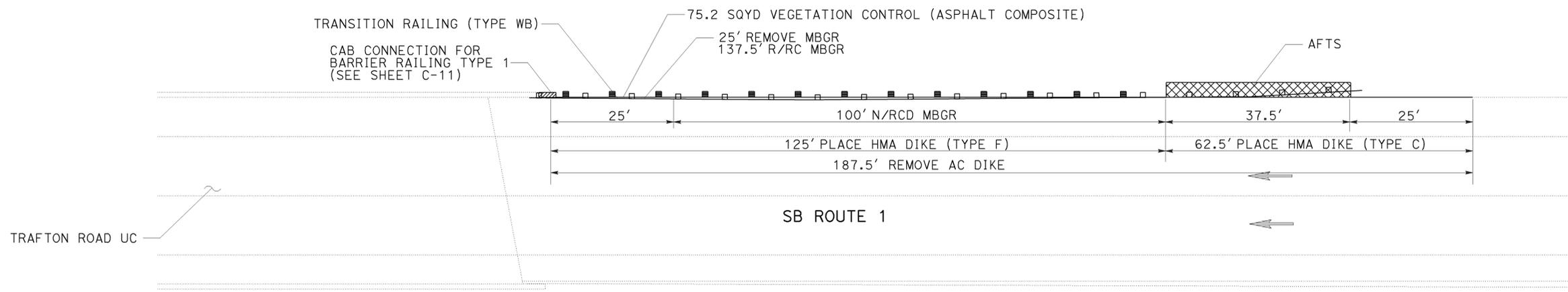
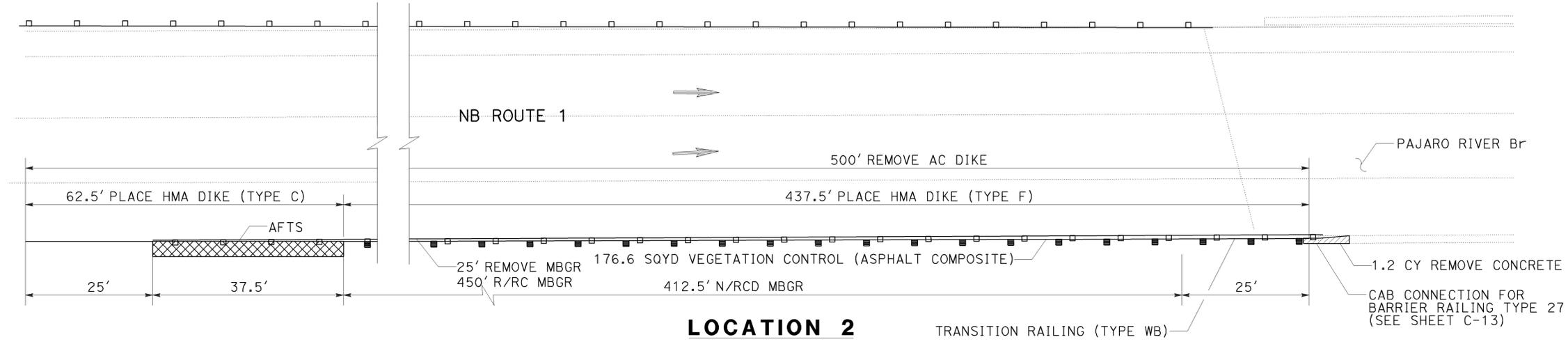
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon, SCr	1	R101.5/R102.0, RO.0/14.0	2	47

Chris Gardner 04-13-11  
 REGISTERED CIVIL ENGINEER DATE

4-18-11  
 PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER  
 CHRIS GARDNER  
 No. C60348  
 Exp. 6-30-12  
 CIVIL  
 STATE OF CALIFORNIA

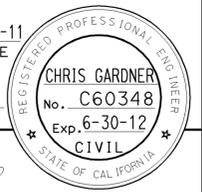


**EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THE PLANS**

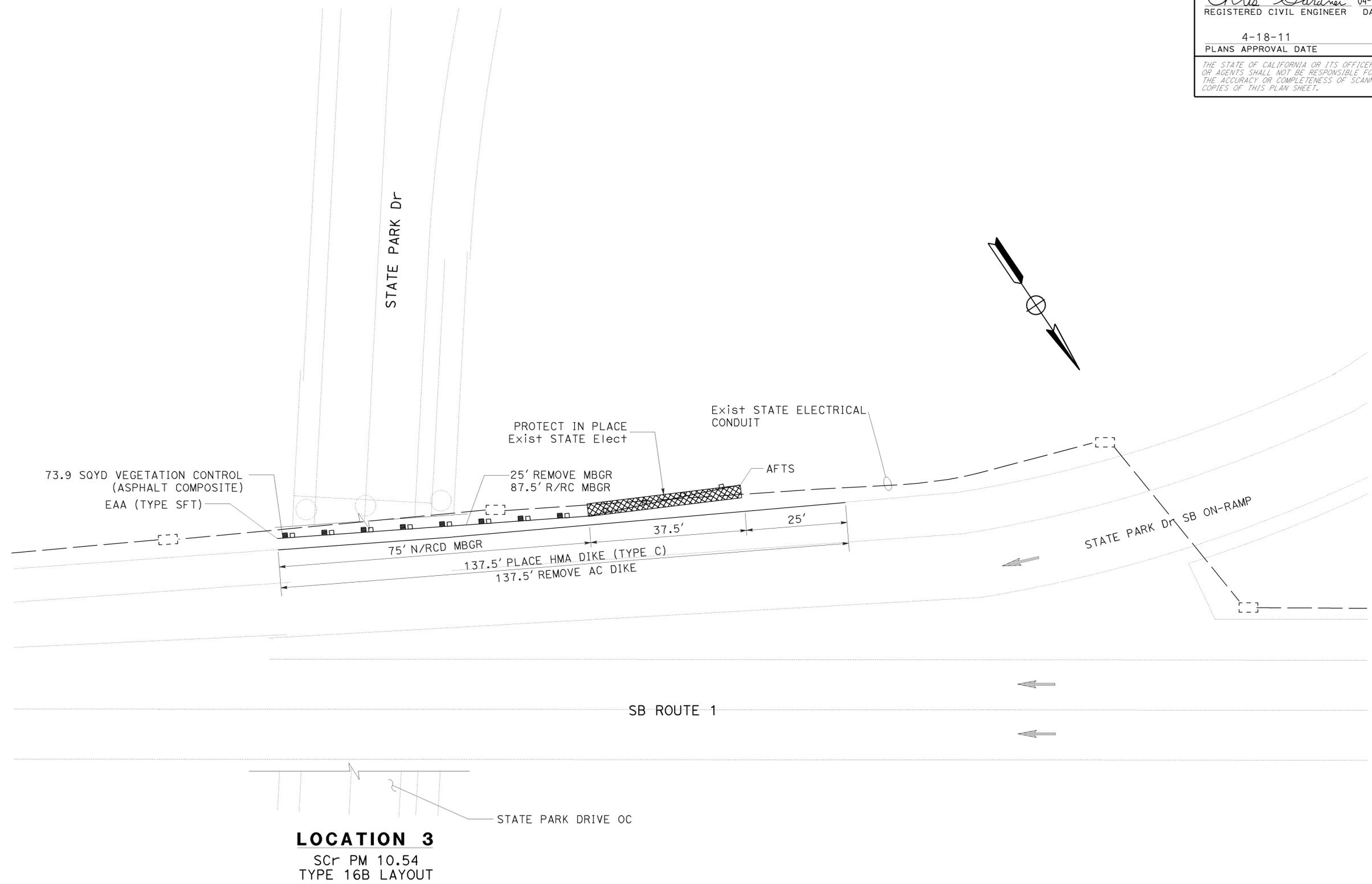
**CONSTRUCTION DETAILS C-1**  
 NO SCALE

LAST REVISION | DATE PLOTTED => 22-APR-2011 04-13-11 | TIME PLOTTED => 16:29

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon, SCr	1	R101.5/R102.0, RO.0/14.0	3	47
<i>Chris Gardner</i> REGISTERED CIVIL ENGINEER			04-13-11	DATE	
4-18-11 PLANS APPROVAL DATE					
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	GERARDO GOMEZ	REVISOR BY
<b>Caltrans</b>	CHRIS GARDNER	DATE REVISED
06-DESIGN		
FUNCTIONAL SUPERVISOR		
BORIS AYAVIRI		
CALCULATED/DESIGNED BY		
CHECKED BY		



**LOCATION 3**  
 SCr PM 10.54  
 TYPE 16B LAYOUT

**EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THE PLANS**

**CONSTRUCTION DETAILS**  
 NO SCALE  
**C-2**

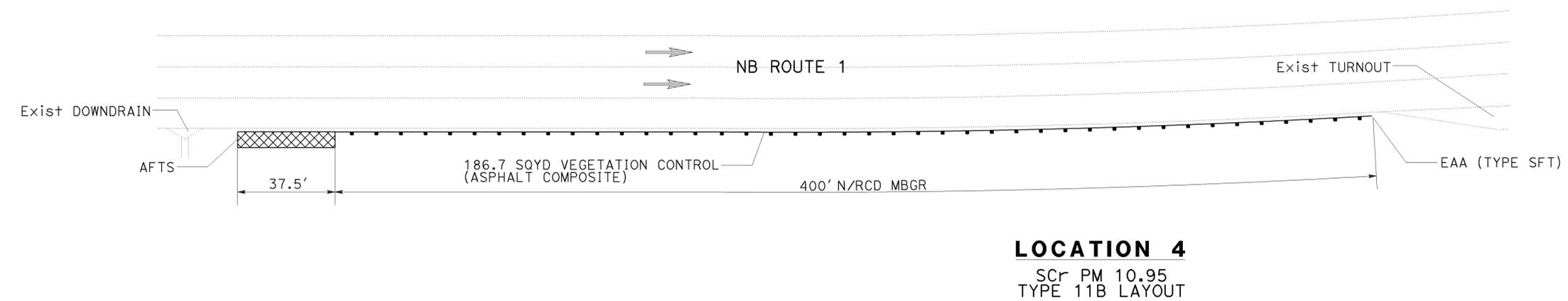
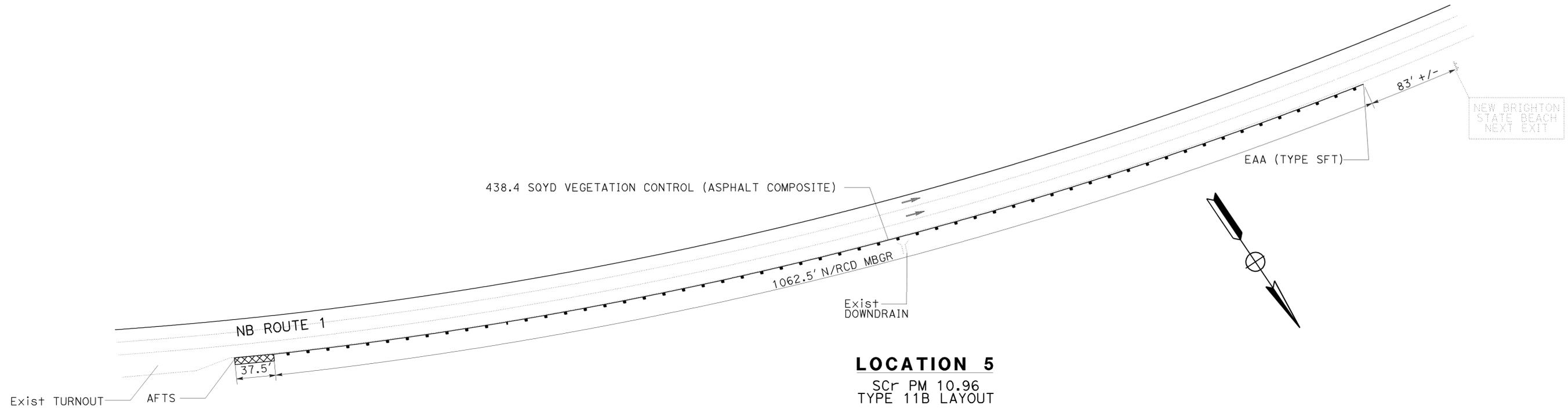
LAST REVISION | DATE PLOTTED => 22-APR-2011  
 04-13-11 | TIME PLOTTED => 16:29

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon, SCr	1	R101.5/R102.0, R0.0/14.0	4	47

Chris Gardner 04-13-11  
 REGISTERED CIVIL ENGINEER DATE  
 4-18-11  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 CHRIS GARDNER  
 No. C60348  
 Exp. 6-30-12  
 CIVIL  
 STATE OF CALIFORNIA

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



**EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THE PLANS**

**CONSTRUCTION DETAILS**  
NO SCALE  
**C-3**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	06-DESIGN
Caltrans	
FUNCTIONAL SUPERVISOR	BORIS AYAVIRI
CALCULATED/DESIGNED BY	CHECKED BY
GERARDO GOMEZ	CHRIS GARDNER
REVISOR	DATE

LAST REVISION | DATE PLOTTED => 22-APR-2011  
 04-13-11 TIME PLOTTED => 16:29

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon, SCr	1	R101.5/R102.0, RO.0/14.0	5	47

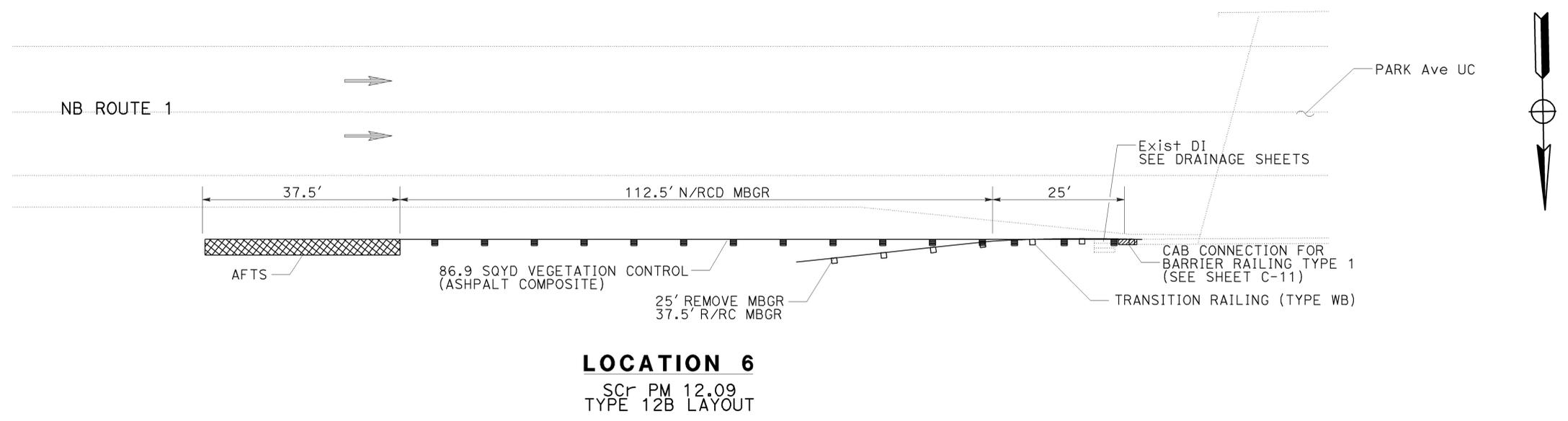
  

<i>Chris Gardner</i>	04-13-11
REGISTERED CIVIL ENGINEER	DATE
4-18-11	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
CHRIS GARDNER
No. C60348
Exp. 6-30-12
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.



EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THE PLANS

**CONSTRUCTION DETAILS**  
NO SCALE  
**C-4**

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

FUNCTIONAL SUPERVISOR  
BORTIS AYAYIRI

DESIGNED BY  
GERARDO GOMEZ

CHECKED BY  
CHRIS GARDNER

USERNAME => s115755  
DGN FILE => 0500000245ga004.dgn

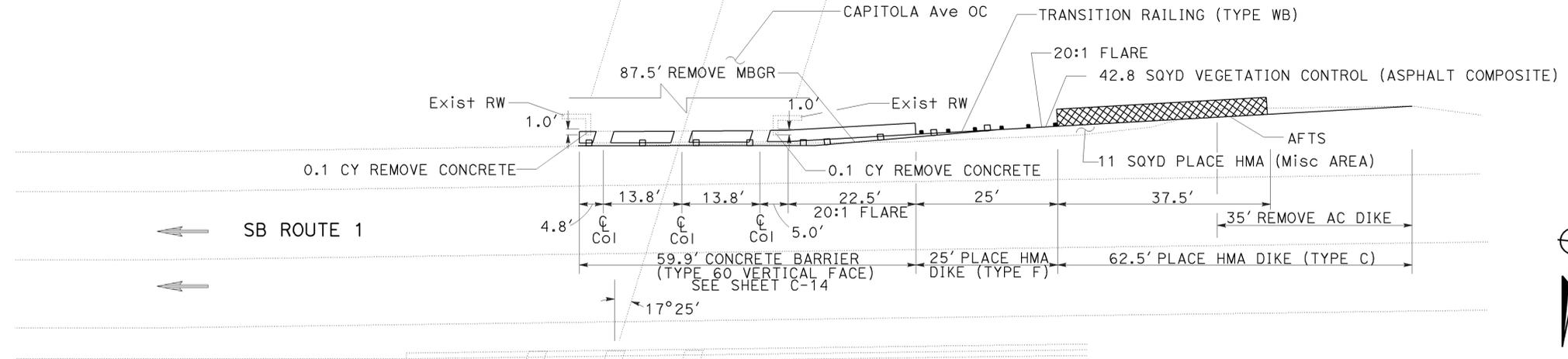
RELATIVE BORDER SCALE IS IN INCHES

UNIT 1468

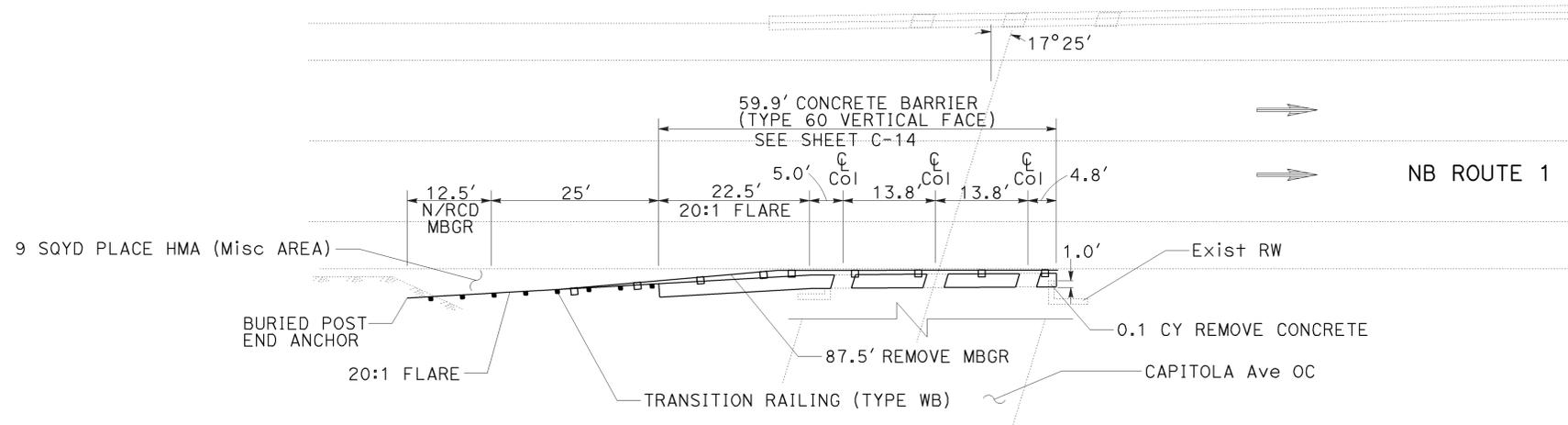
PROJECT NUMBER & PHASE 05000002451

LAST REVISION | DATE PLOTTED => 22-APR-2011  
04-13-11 TIME PLOTTED => 16:29

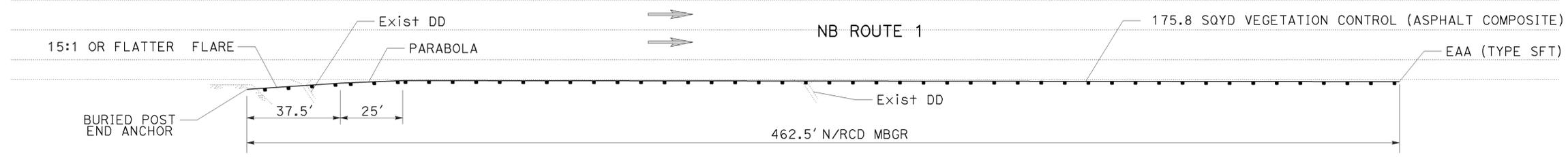
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon, SCr	1	R101.5/R102.0, RO.0/14.0	6	47
<i>Chris Gardner</i> REGISTERED CIVIL ENGINEER			04-13-11 DATE		
4-18-11			PLANS APPROVAL DATE		
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					



**LOCATION 10**  
ScR PM 12.93



**LOCATION 9**  
ScR PM 12.93



**LOCATION 8**  
ScR PM 12.47  
TYPE 11C LAYOUT

**EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THE PLANS**

**CONSTRUCTION DETAILS C-5**

NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	06-DESIGN
FUNCTIONAL SUPERVISOR	BORIS AYAVIRI
CALCULATED/DESIGNED BY	CHECKED BY
GERARDO GOMEZ	CHRIS GARDNER
REVISOR	DATE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon, SCr	1	R101.5/R102.0, RO.0/14.0	7	47

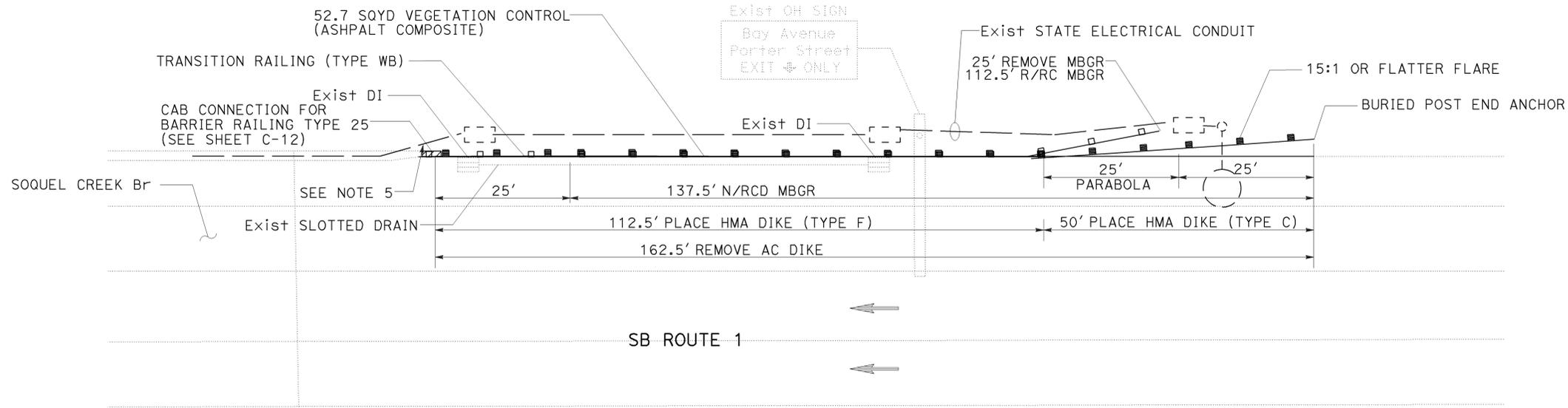
  

<i>Chris Gardner</i>	04-13-11
REGISTERED CIVIL ENGINEER	DATE
4-18-11	
PLANS APPROVAL DATE	

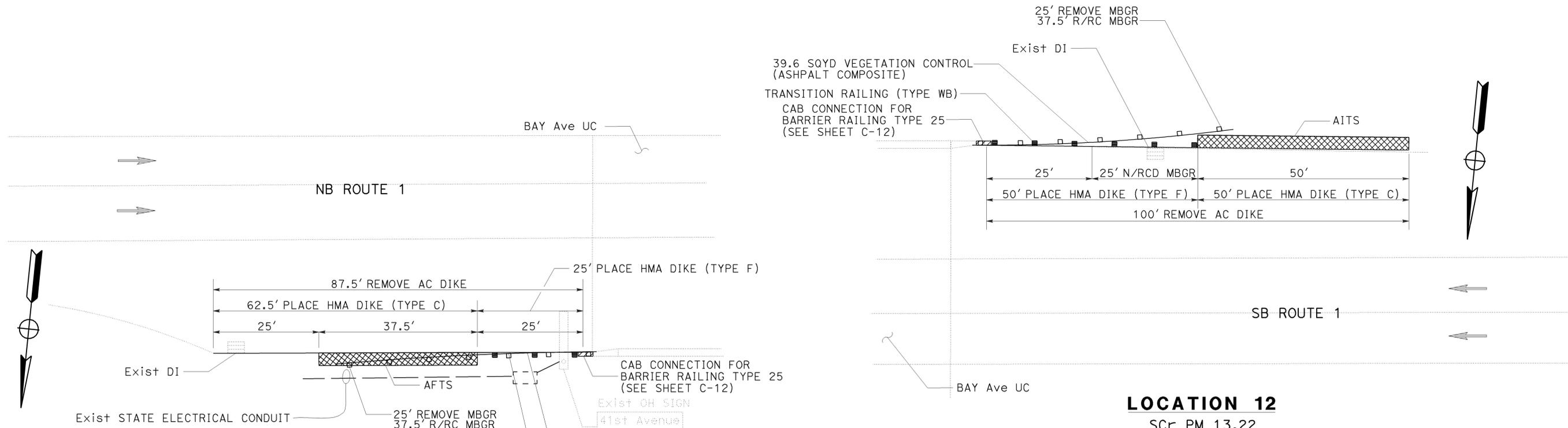
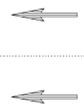
  

REGISTERED PROFESSIONAL ENGINEER
CHRIS GARDNER
No. C60348
Exp. 6-30-12
CIVIL

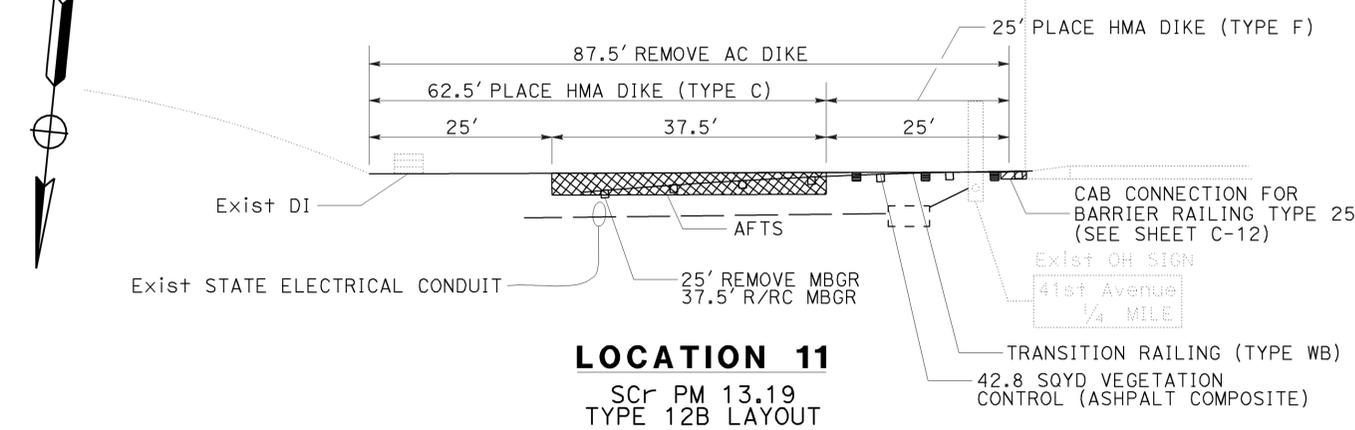
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



**LOCATION 13**  
Scr PM 13.38  
TYPE 12C LAYOUT



**LOCATION 12**  
Scr PM 13.22  
TYPE 12A LAYOUT



**LOCATION 11**  
Scr PM 13.19  
TYPE 12B LAYOUT

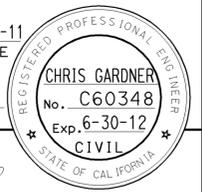
EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THE PLANS

**CONSTRUCTION DETAILS**  
C-6

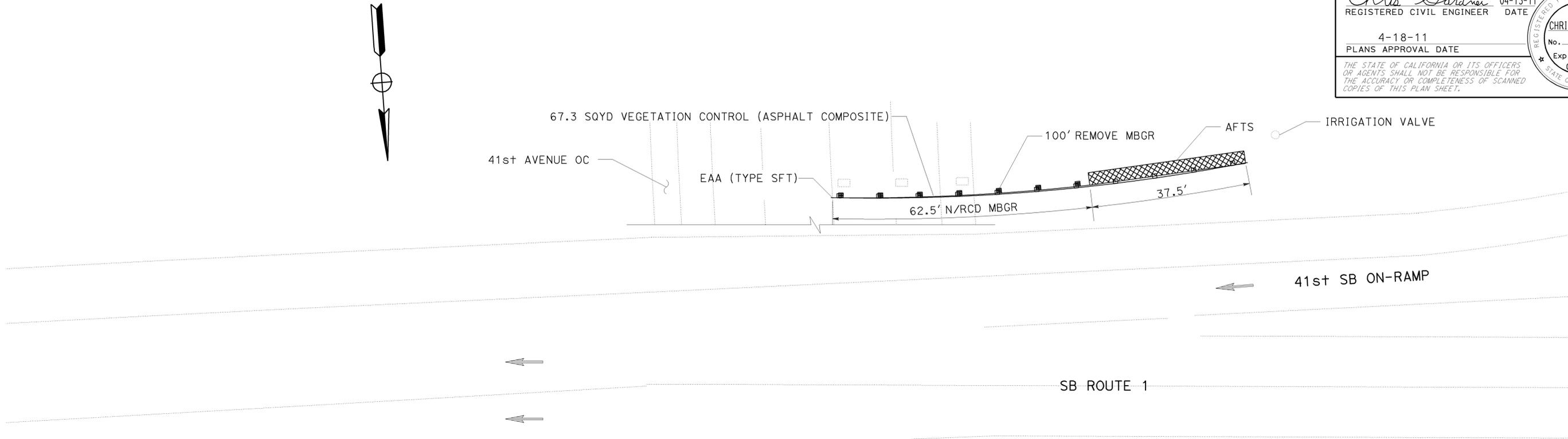
NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	06-DESIGN
FUNCTIONAL SUPERVISOR	BORIS AYAVIRI
REVISOR	GERARDO GOMEZ
DESIGNER	CHRIS GARDNER
CHECKED BY	
DESIGNED BY	
DATE	
REVISION	

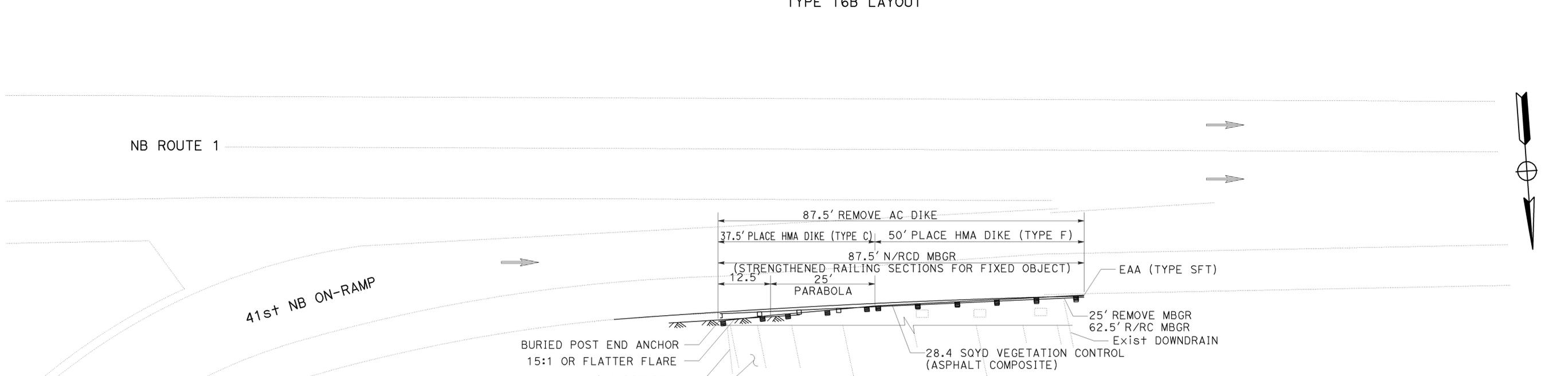
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon, SCr	1	R101.5/R102.0, R0.0/14.0	8	47
Chris Gardner			04-13-11	REGISTERED CIVIL ENGINEER DATE	
4-18-11			PLANS APPROVAL DATE		
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	REVISOR	DATE
<b>Caltrans</b>	BORIS AYAVIRI	GERARDO GOMEZ	
<b>06-DESIGN</b>		CHRIS GARDNER	
		CALCULATED/DESIGNED BY	CHECKED BY



**LOCATION 15**  
ScR PM 13.62  
TYPE 16B LAYOUT



**LOCATION 14**  
ScR PM 13.62  
TYPE 16C LAYOUT

**EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THE PLANS**

**CONSTRUCTION DETAILS**  
NO SCALE  
**C-7**

LAST REVISION | DATE PLOTTED => 22-APR-2011 04-13-11 TIME PLOTTED => 16:29

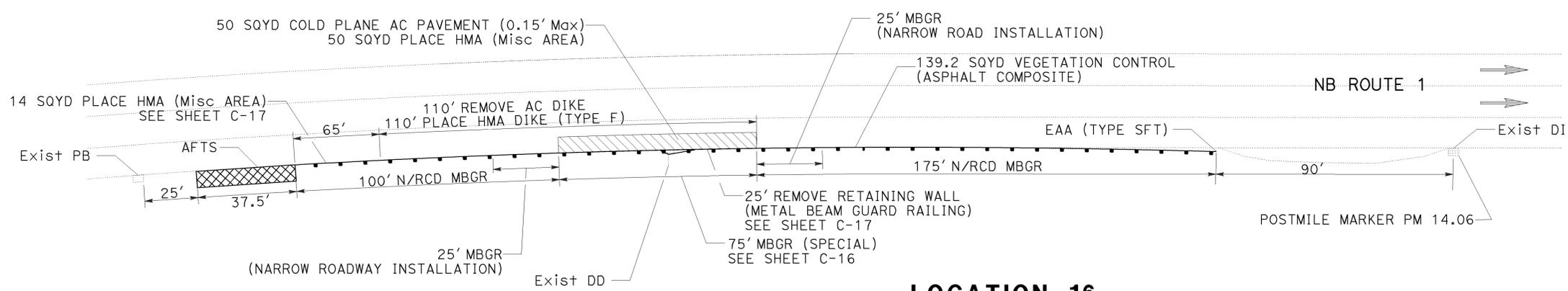
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon, SCr	1	R101.5/R102.0, R0.0/14.0	9	47

Chris Gardner 04-13-11  
 REGISTERED CIVIL ENGINEER DATE  
 4-18-11  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 CHRIS GARDNER  
 No. C60348  
 Exp. 6-30-12  
 CIVIL  
 STATE OF CALIFORNIA

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	06-DESIGN	FUNCTIONAL SUPERVISOR	DESIGNED BY	REVISOR	DATE
Caltrans		BORIS AYAVIRI	CHRIS GARDNER	GERARDO GOMEZ	
			CHECKED BY	DATE	



**LOCATION 16**  
 Scr PM 13.97  
 TYPE 11B LAYOUT



EXISTING UTILITY FACILITIES ARE NOT SHOWN ON THE PLANS

**CONSTRUCTION DETAILS**  
**C-8**  
 NO SCALE

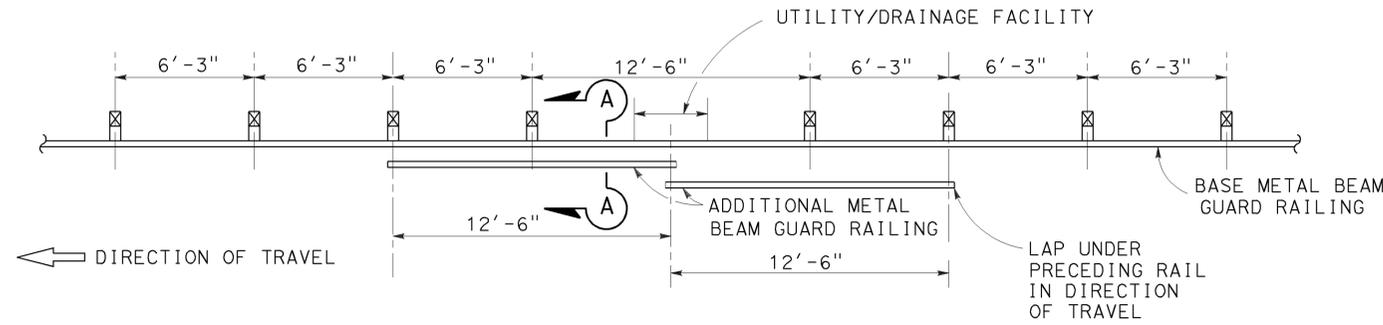
LAST REVISION | DATE PLOTTED => 22-APR-2011  
 04-13-11 | TIME PLOTTED => 16:29



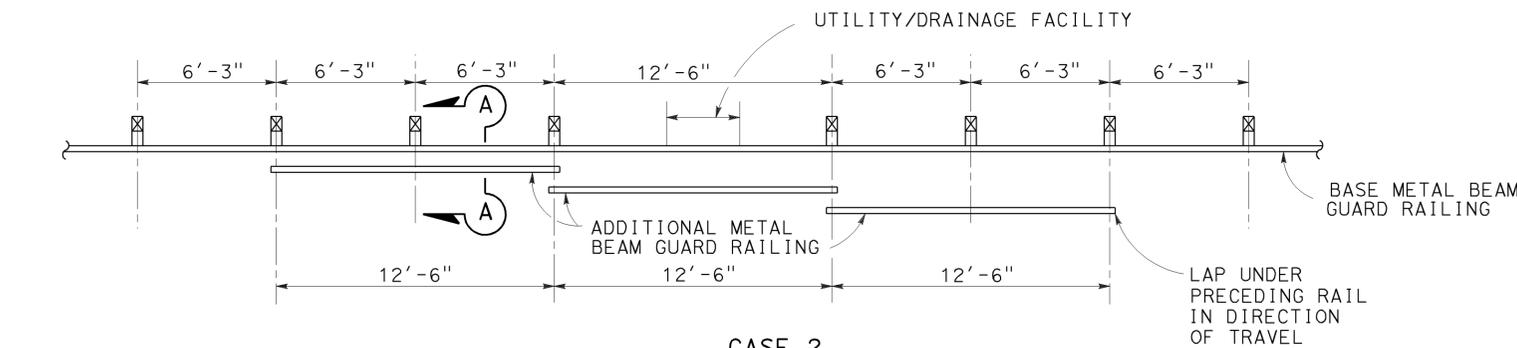
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon,SCr	1	R101.5/R102.0, R0.0/14.0	11	47
Chris Gardner REGISTERED CIVIL ENGINEER			04-13-11 DATE		
4-18-11 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

**NOTES:**

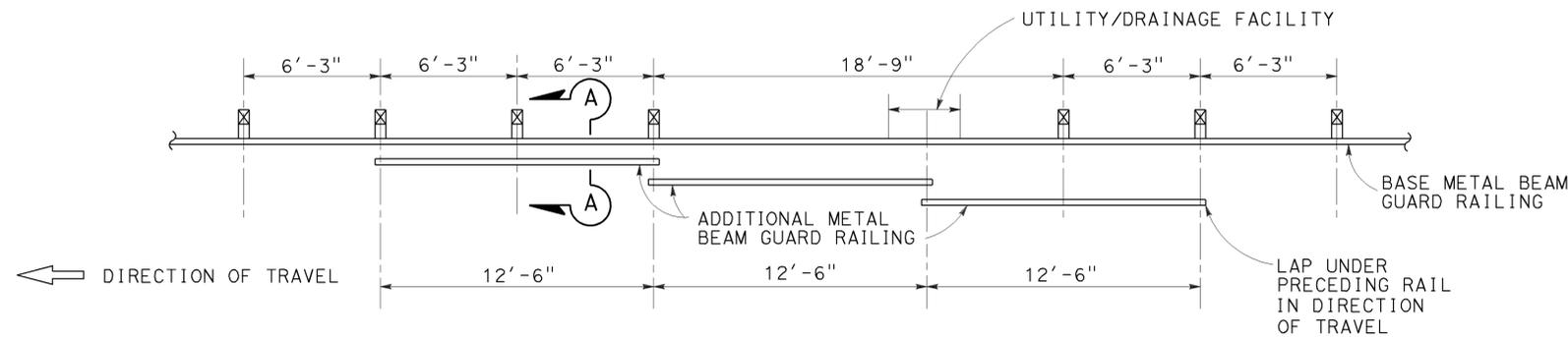
1. USE CASE 1 OR CASE 2 WHEN ONE POST OMITTED.
2. USE CASE 3 WHEN TWO POSTS ARE OMITTED.
3. FOR OTHER DETAILS, SEE STANDARD PLANS.
4. LOCATIONS OF NESTING SHALL BE TO AVOID UTILITY / DRAINAGE FACILITY OR AS DIRECTED BY THE ENGINEER.
5. OFFSET THE ADDITIONAL METAL BEAM GUARD RAILING SPLICES 6'-3" FROM THE BASE METAL BEAM GUARD RAILING SPLICES.



**CASE 1**  
ONE POST OMITTED (SPLICE IN CENTER)

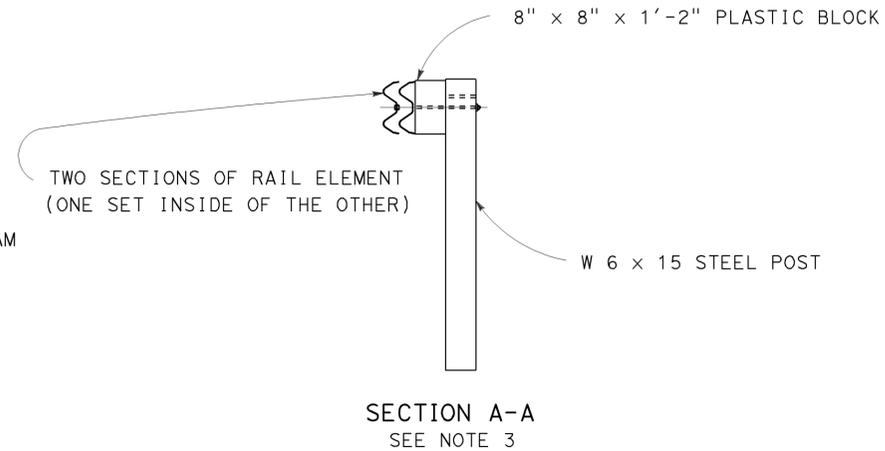


**CASE 2**  
ONE POST OMITTED (SPLICE AT POSTS)

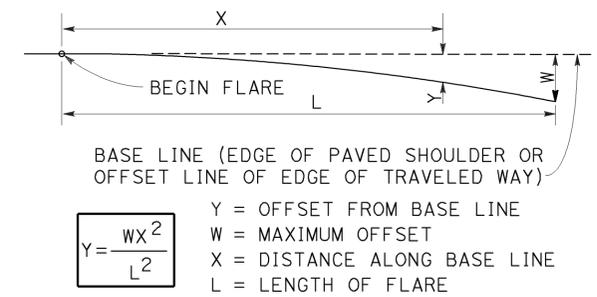


**CASE 3**  
TWO POSTS OMITTED

**LONG SPAN NESTED GUARD RAILING**



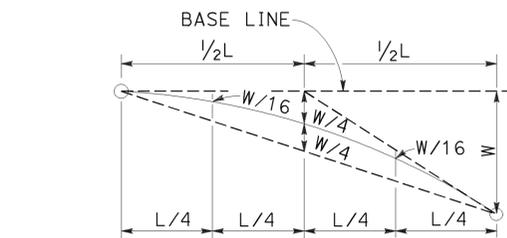
**SECTION A-A**  
SEE NOTE 3



**PARABOLIC FLARE OFFSETS**

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

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



**TYPICAL PARABOLIC LAYOUT**

**CONSTRUCTION DETAILS**  
**C-10**

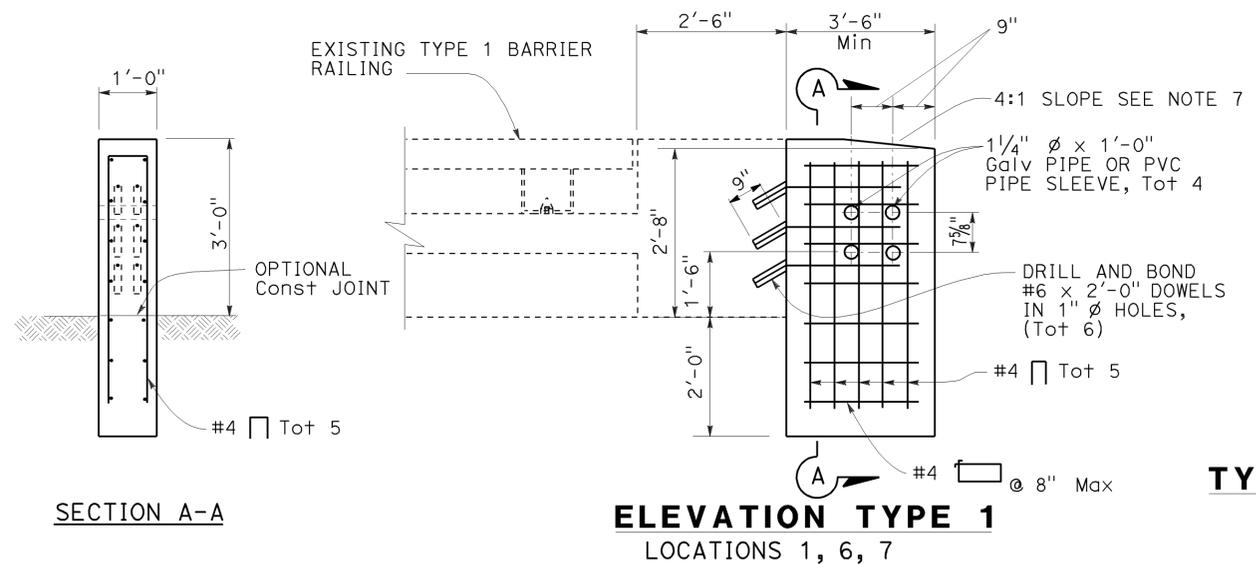
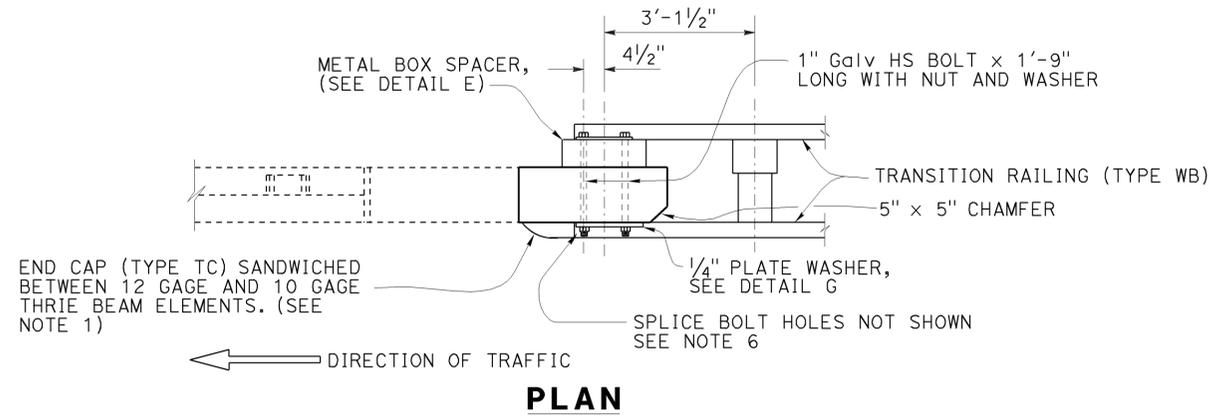
NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 06-DESIGN  
 Gerardo Gomez  
 Chris Gardner  
 Boris Ayaviri  
 Caltrans

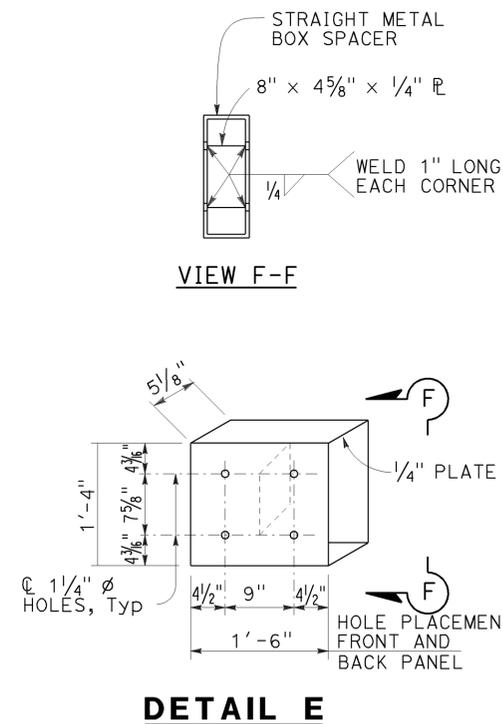
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon, SCr	1	R101.5/R102.0, R0.0/14.0	12	47
<i>Chris Gardner</i> REGISTERED CIVIL ENGINEER			04-13-11 DATE		
4-18-11 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

**NOTES:**

- FOR DETAILS NOT SHOWN, SEE STANDARD PLANS.
- DEPENDENT DIMENSIONS WILL BE VERIFIED IN THE FIELD BEFORE FABRICATING ANY END CONNECTION TO CONFORM WITH EXISTING PAVED CONDITIONS.
- WHEN END SECTION IS CALLED FOR, MODIFY TYPICAL TERMINAL SECTION TO FIT. SEE DETAIL E
- ALL PLATES AND BOLTS ARE GALVANIZED.
- CUT AND REMOVE PORTION OF TYPE 1 AS REQUIRED.
- EXTERIOR SPLICE BOLT HOLES SHALL BE THE STANDARD 7/8" x 1/8" SLOT SIZE FOR RAIL SPLICES AT POST #T4 AND THE CONNECTION TO THE CONCRETE BARRIER OR RAILING. INTERIOR SPLICE BOLT HOLES MAY BE INCREASED UP TO 1 1/4" DIA. WASHERS SHALL BE USED WITH SPLICE BOLTS ON BACK SIDE OF RAIL ELEMENT AT POST #T4 AND CONNECTION TO THE CONCRETE BARRIER OR RAILING.
- TAPER THE TOP OF THE END OF THE BRIDGE RAILING AT 4:1 TO MATCH THE TOP ELEVATION OF THE THRIE BEAM RAIL ELEMENT.
- FOR TRANSITION RALING (TYPE WB), SEE S+d PLANS.



**TYPICAL SECTION**  
(TYPE 1 BARRIER)



**DETAIL E**

**DETAIL G**

**CONSTRUCTION DETAILS**  
(CONCRETE ANCHOR BLOCK CONNECTION FOR BARRIER RAILING TYPE 1)

NO SCALE

**C-11**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	REVISOR	DATE
<b>Caltrans</b>	BORIS AYAVIRI	GERARDO GOMEZ	
06-DESIGN		CHRIS GARDNER	
	CHECKED BY	DESIGNED BY	



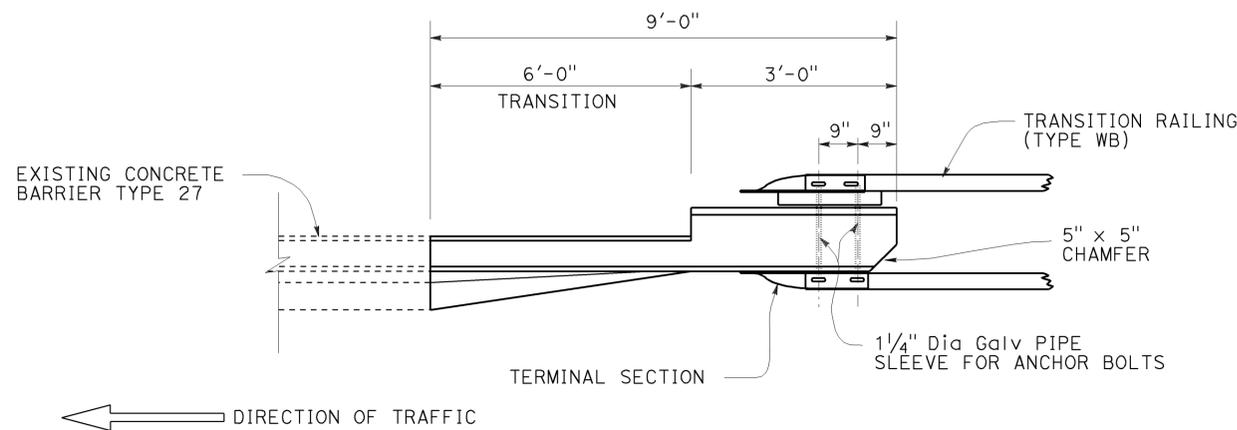
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon, SCr	1	R101.5/R102.0, RO.0/14.0	14	47
<i>Chris Gardner</i> 04-13-11 REGISTERED CIVIL ENGINEER DATE					
4-18-11 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

**NOTES:**

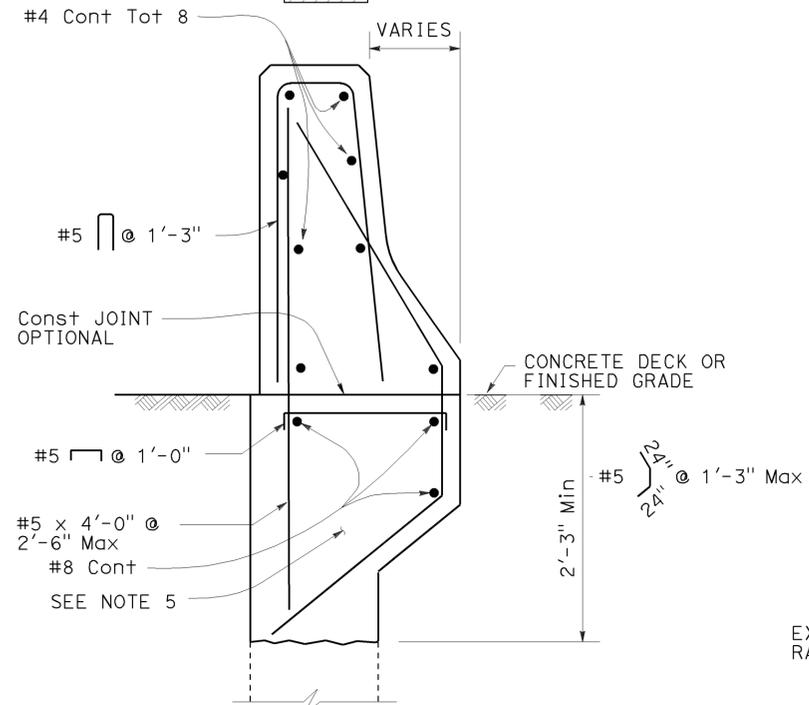
- FOR DETAILS NOT SHOWN, SEE STANDARD PLANS.
- DEPENDENT DIMENSIONS WILL BE VERIFIED IN THE FIELD BEFORE FABRICATING ANY END CONNECTION TO CONFORM WITH EXISTING PAVED CONDITIONS
- FOR TRANSITION RAILING (TYPE WB) CONNECTION, SEE STANDARD PLANS.
- ALL PLATES AND BOLTS ARE GALVANIZED.
- CUT AND REMOVE THAT PORTION OF TYPE 27 EXISTING REINFORCEMENT TO REMAIN.
- WINGALL REINFORCEMENT TO REMAIN.
- BRIDGE NAME AND NUMBER SHALL BE PAINTED ON NEW BRIDGE RAIL IF REMOVED.

**LEGEND:**

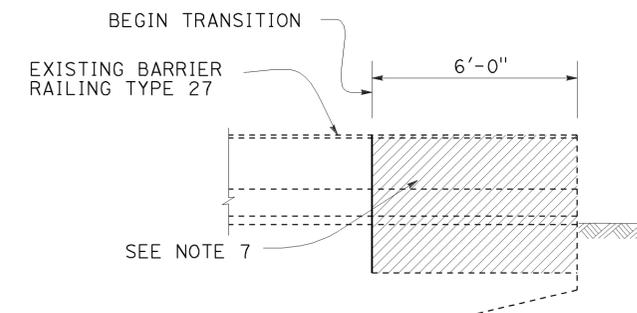
- INDICATES EXISTING STRUCTURE.
- INDICATES NEW CONSTRUCTION.
- CONCRETE REMOVAL.



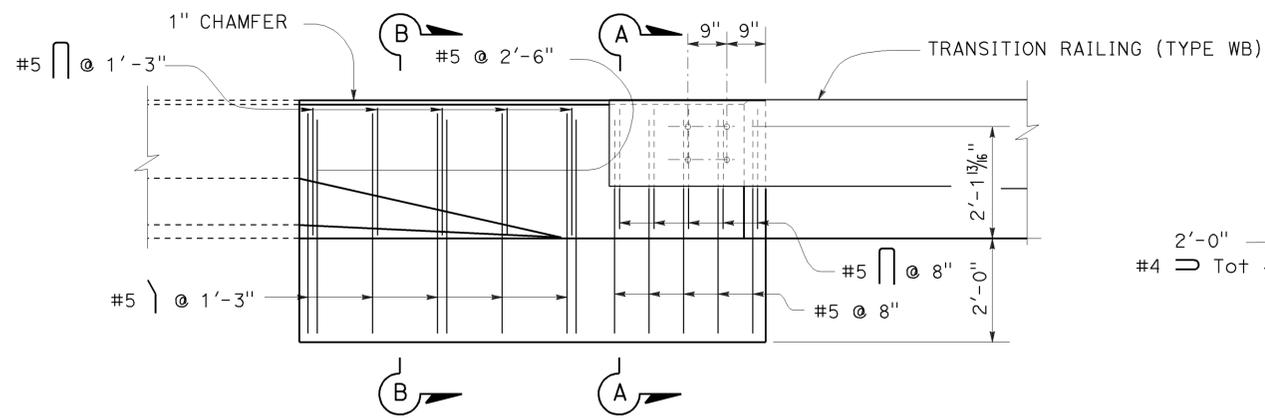
**PLAN**



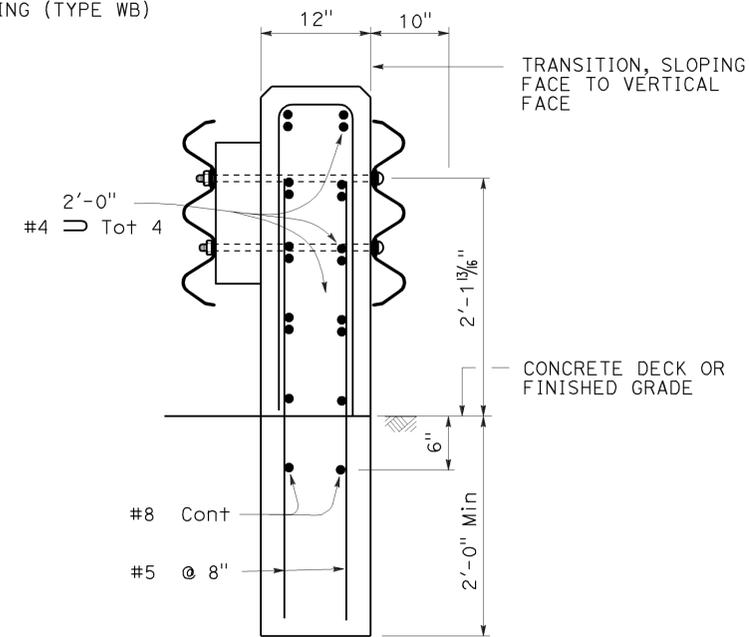
**SECTION B-B**



**CONCRETE REMOVAL  
NO SCALE**



**ELEVATION  
LOCATION 2**



**SECTION A-A**

**CONSTRUCTION DETAILS  
(CONCRETE ANCHOR BLOCK CONNECTION  
FOR BARRIER RAILING TYPE 27)**

NO SCALE

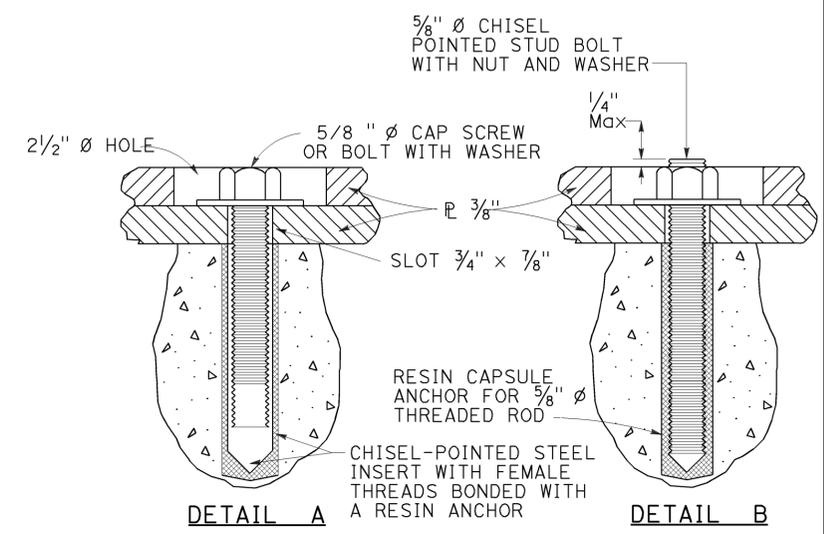
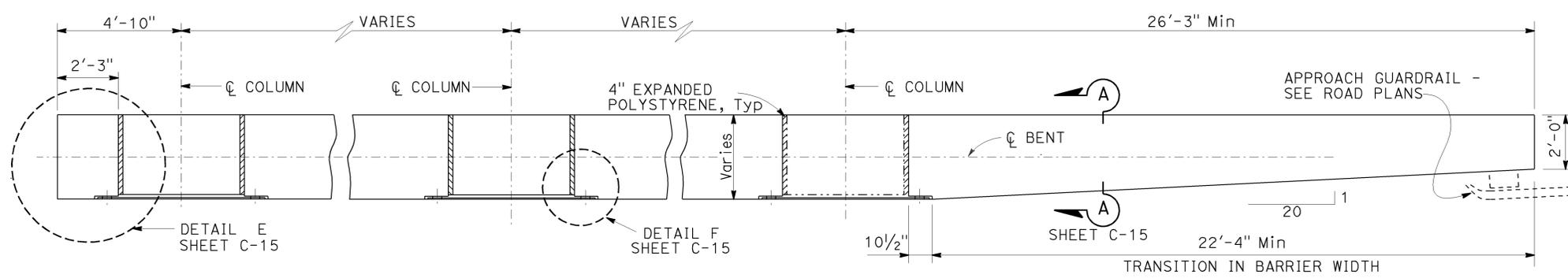
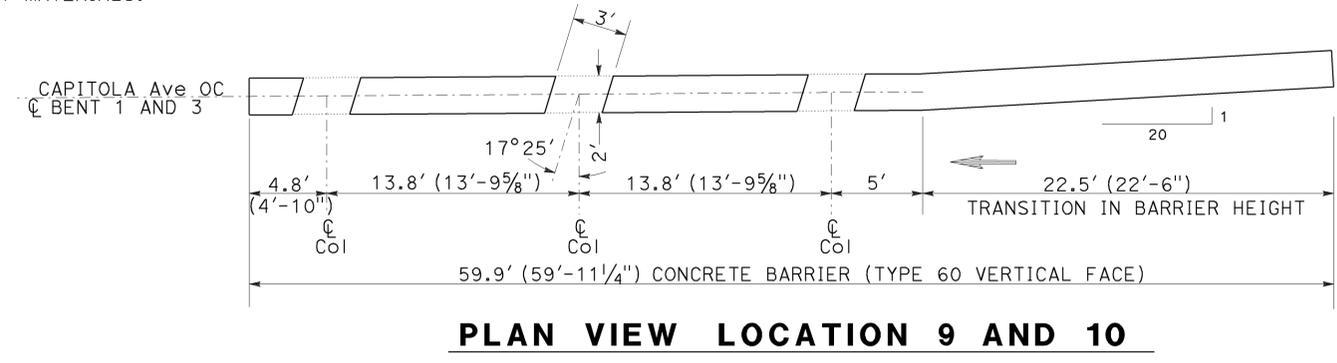
**C-13**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon,SCr	1	R101.5/R102.0, RO.0/14.0	15	47
Chris Gardner			04-13-11	REGISTERED CIVIL ENGINEER DATE	
4-18-11			PLANS APPROVAL DATE		
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					

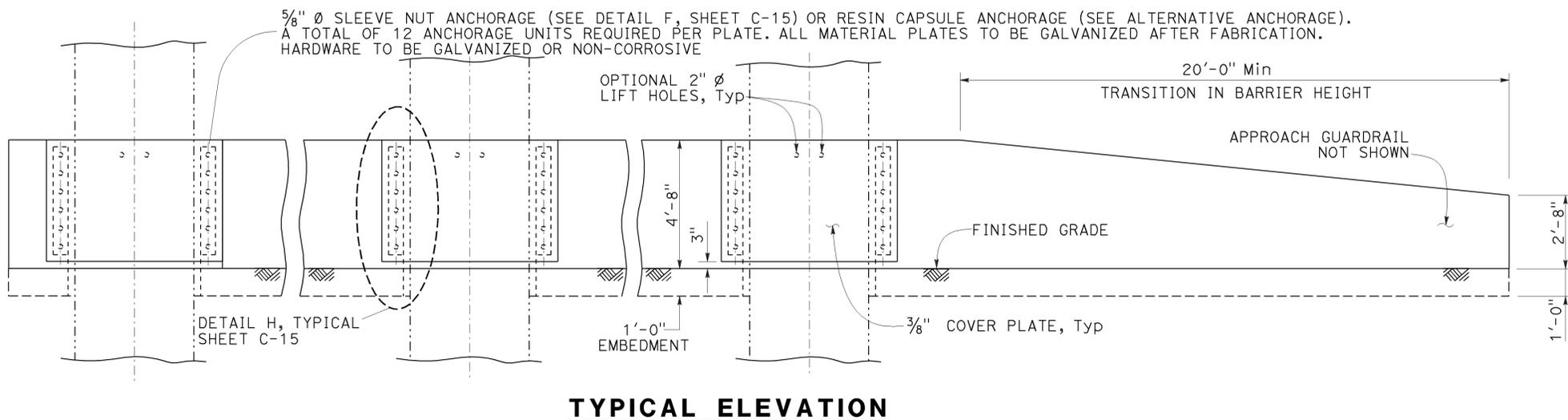


**NOTES:**

1. RESIN CAPSULE ANCHORAGE IS SUBJECT TO APPROVAL OF THE ENGINEER. INSTALLATION PROCEDURES SHALL COMPLY WITH MANUFACTURER'S INSTRUCTIONS.
2. DETAIL B SIMILAR TO DETAIL A EXCEPT FOR ANCHORAGE DEVICES.
3. SEE SHEET C-15 FOR ADDITIONAL DETAILS.
4. THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIALS.



**ALTERNATIVE ANCHORAGE**  
SEE NOTES 1 AND 2



**TYPICAL ELEVATION**

**CONSTRUCTION DETAILS**  
(CONCRETE BARRIER  
TYPE 60 VERTICAL FACE)  
NO SCALE **C-14**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
06-DESIGN  
Caltrans

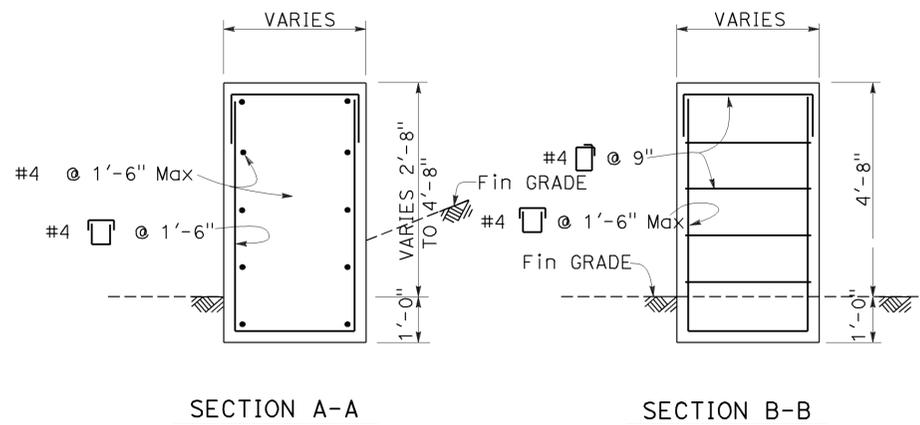
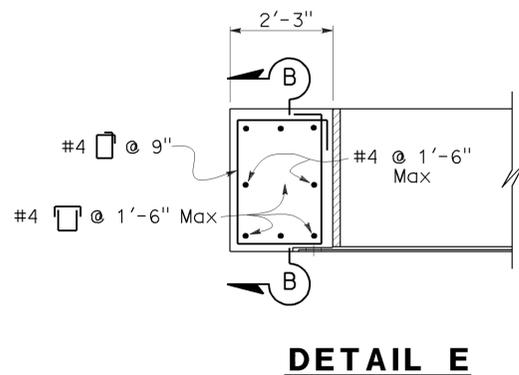
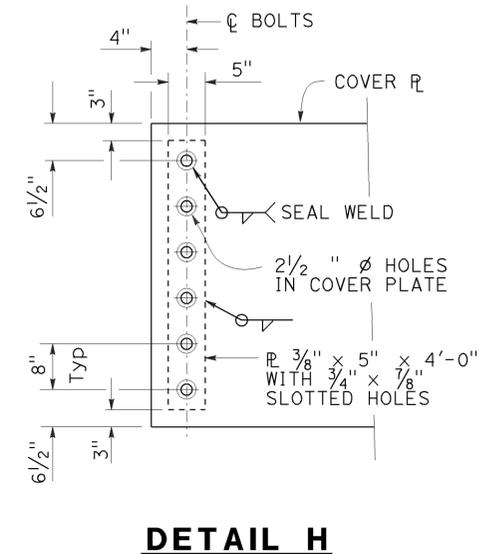
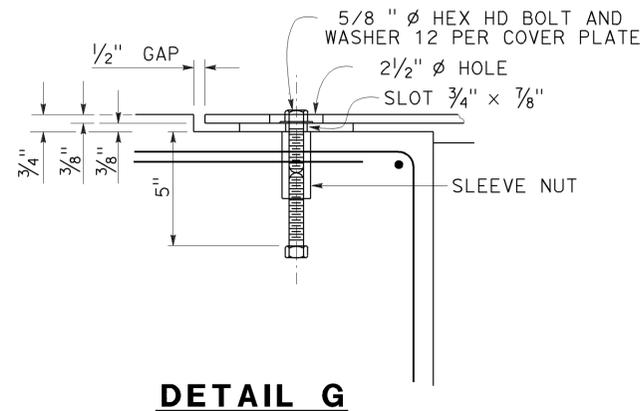
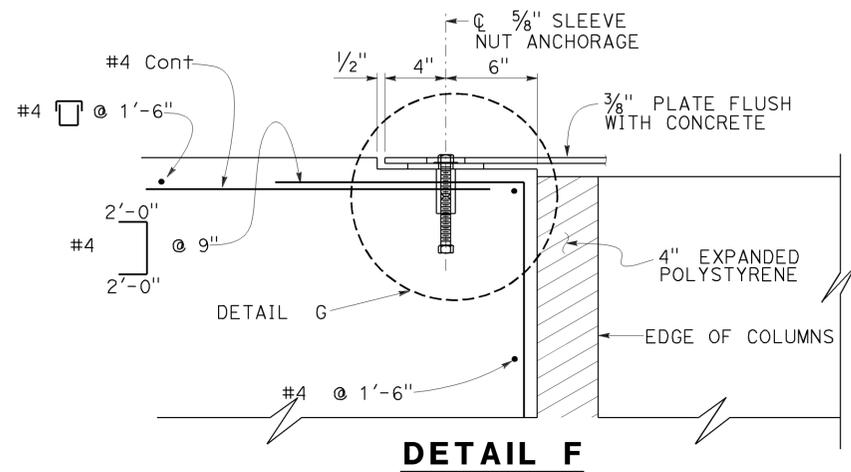
REVISOR BY DATE

GERARDO GOMEZ  
CHRIS GARDNER

CALCULATED/DESIGNED BY CHECKED BY

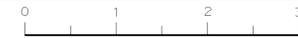
FUNCTIONAL SUPERVISOR  
BORTIS AYAVIRI

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon, SCr	1	R101.5/R102.0, R0.0/14.0	16	47
Chris Gardner			04-13-11	REGISTERED CIVIL ENGINEER DATE	
4-18-11			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>					



**CONSTRUCTION DETAILS**  
**CONCRETE BARRIER**  
**(TYPE 60 VERTICAL FACE)**  
 NO SCALE **C-15**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	REVISOR	DATE
<b>Caltrans</b>	BORIS AYAVIRI	GERARDO GOMEZ	CHRIS GARDNER
06-DESIGN			



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon, SCr	1	R101.5/R102.0, RO.0/14.0	17	47

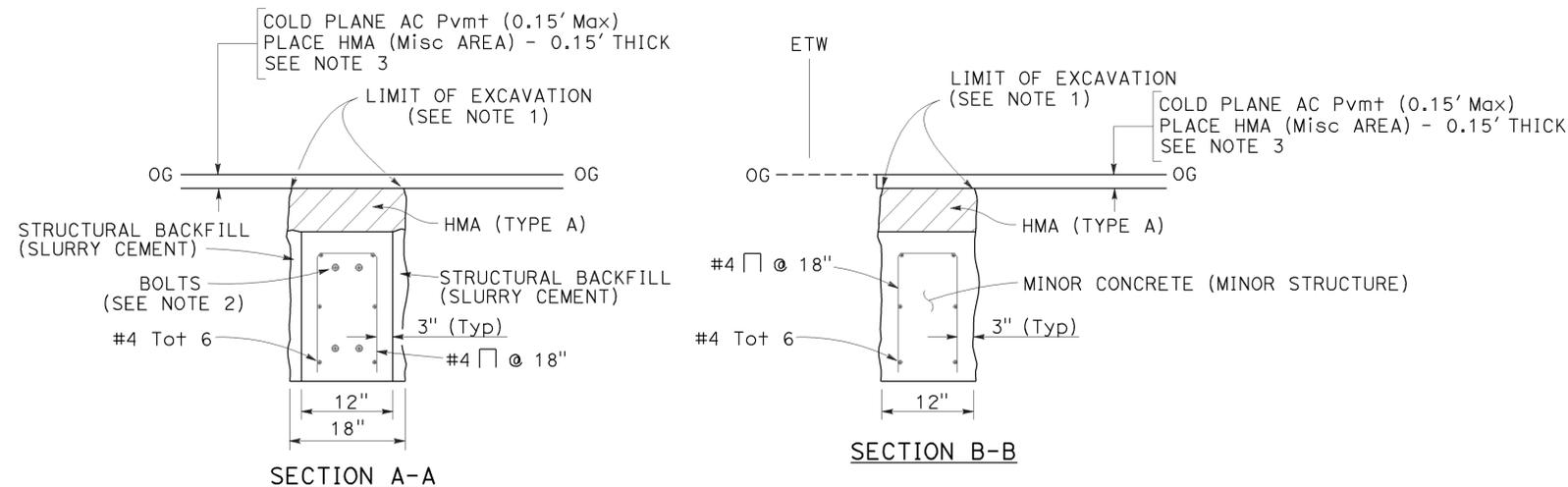
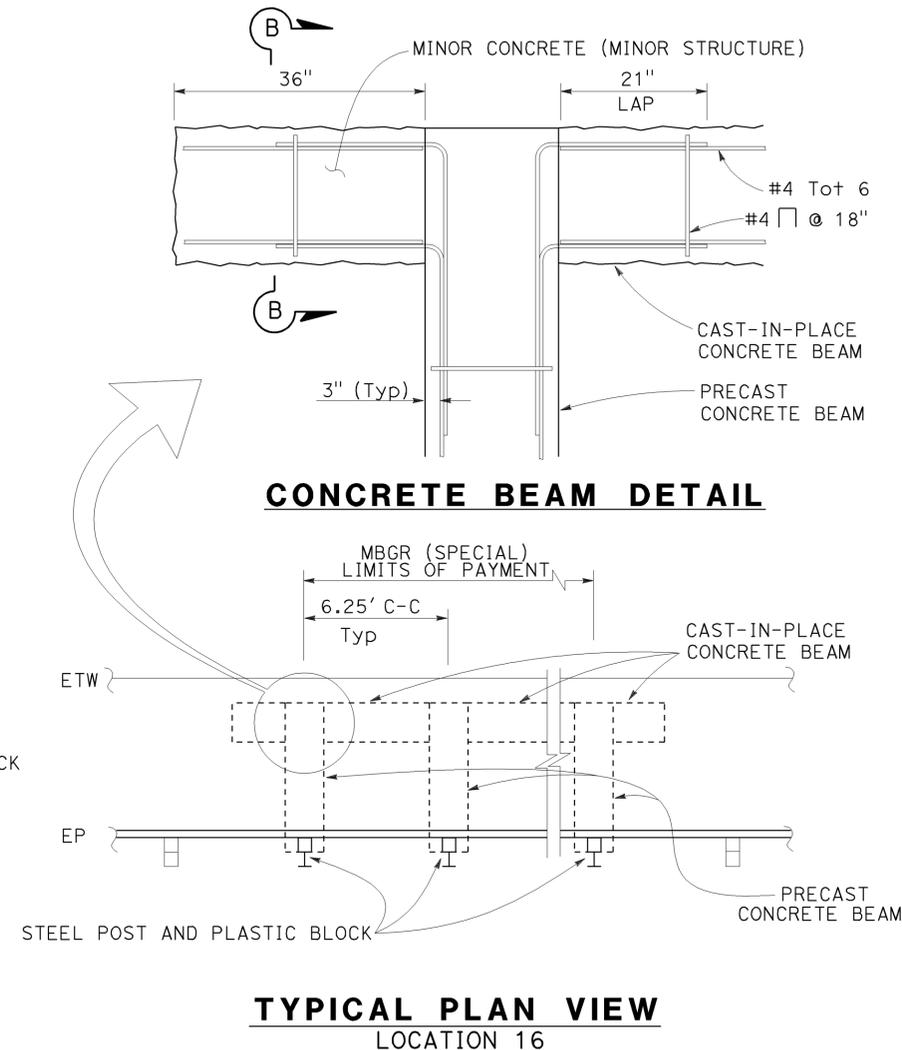
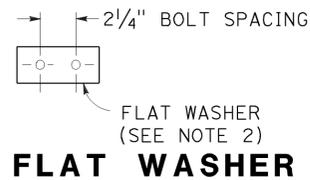
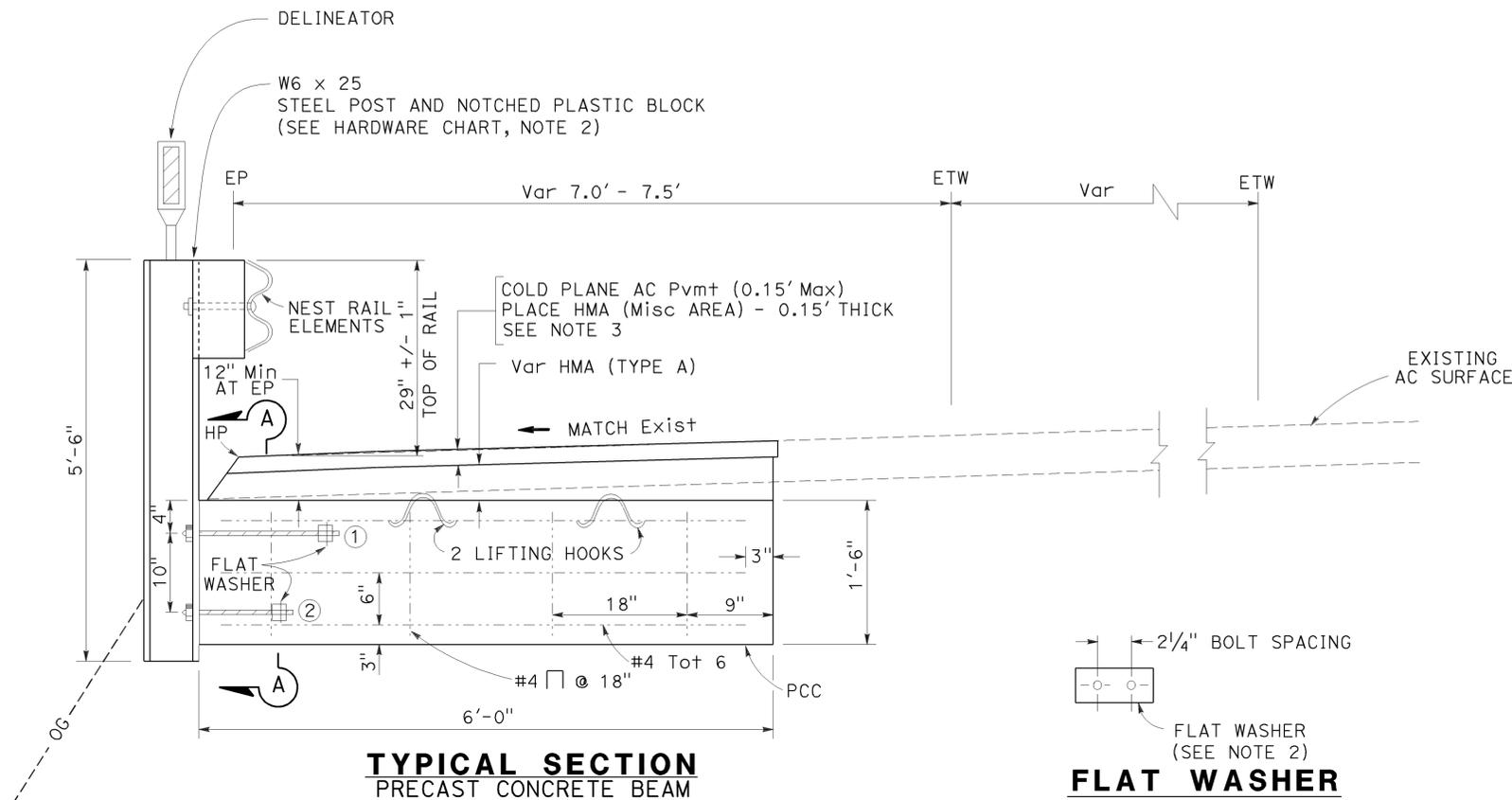
Chris Gardner 04-13-11  
 REGISTERED CIVIL ENGINEER DATE  
 4-18-11  
 PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER  
 CHRIS GARDNER  
 No. C60348  
 Exp. 6-30-12  
 CIVIL  
 STATE OF CALIFORNIA

**NOTES:**

1. APPROXIMATE EXCAVATION PER PRECAST CONCRETE BEAM IS 1 CY.
2. SEE HARDWARE CHART FOR DIMENSIONS.
3. SEE SUMMARY OF QUANTITIES SHEET FOR QUANTITIES.



**HARDWARE CHART FOR PRECAST CONCRETE BEAM**

CASE	STEEL POST	PLASTIC BLOCK	①	②	BOLT SPACING
PRECAST BEAM	W6 x 25	6" x 8" x 1'-2"	2 Ea 3/4" Dia x 1'-6" HS BOLTS (THREADED BOTH ENDS) WITH 3 Ea HEX NUTS AND 3" x 7" x 1/4" FLAT WASHER	2 Ea 5/8" Dia x 1' HS BOLTS (THREADED BOTH ENDS) WITH 3 Ea HEX NUTS AND 2" x 7" x 1/4" FLAT WASHER	2 1/4"

**CONSTRUCTION DETAILS**  
(MBGR (SPECIAL))  
NO SCALE  
**C-16**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon, SCr	1	R101.5/R102.0, RO.0/14.0	18	47

<i>Chris Gardner</i>	04-13-11
REGISTERED CIVIL ENGINEER	DATE
4-18-11	
PLANS APPROVAL DATE	

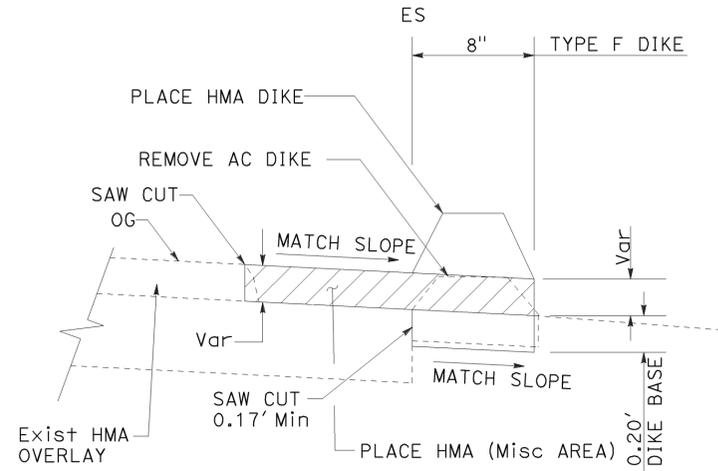
  

REGISTERED PROFESSIONAL ENGINEER
CHRIS GARDNER
No. C60348
Exp. 6-30-12
CIVIL

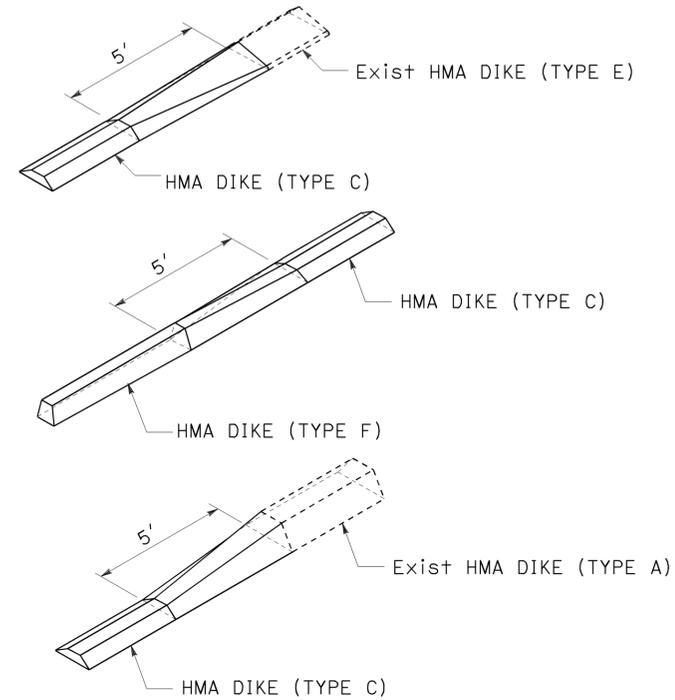
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**NOTES:**

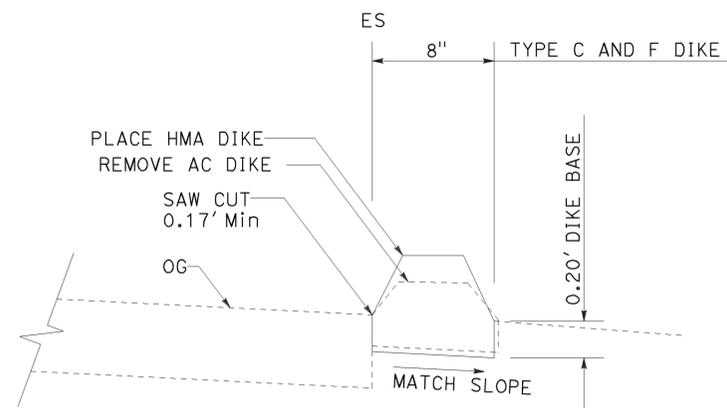
1. FOR DIKE POSITIONING WITH GUARD RAILING INSTALLATIONS, SEE STANDARD PLAN.



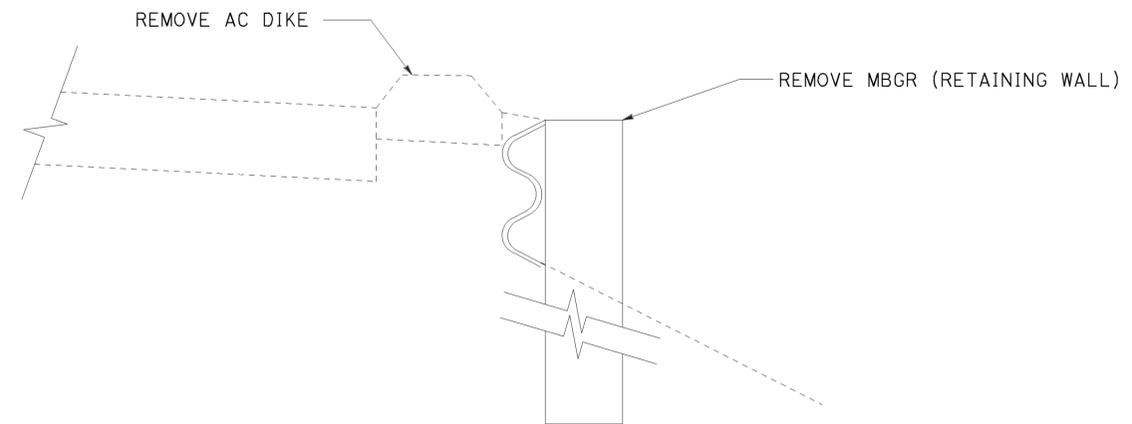
**REMOVE AC DIKE / PLACE HMA DIKE AND HMA (Misc AREA)**  
LOCATION 16



**HMA DIKE TRANSITION DETAILS**  
SEE NOTE 1



**REMOVE AC DIKE / PLACE HMA DIKE**



**REMOVE MBGR (RETAINING WALL)**  
LOCATION 16

**CONSTRUCTION DETAILS**  
NO SCALE  
**C-17**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	REVISOR	DATE
<b>Caltrans</b>	BORIS AYAYIRI	GERARDO GOMEZ	
06-DESIGN		CHRIS GARDNER	



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon, SCr	1	R101.5/R102.0, RO.0/14.0	20	47

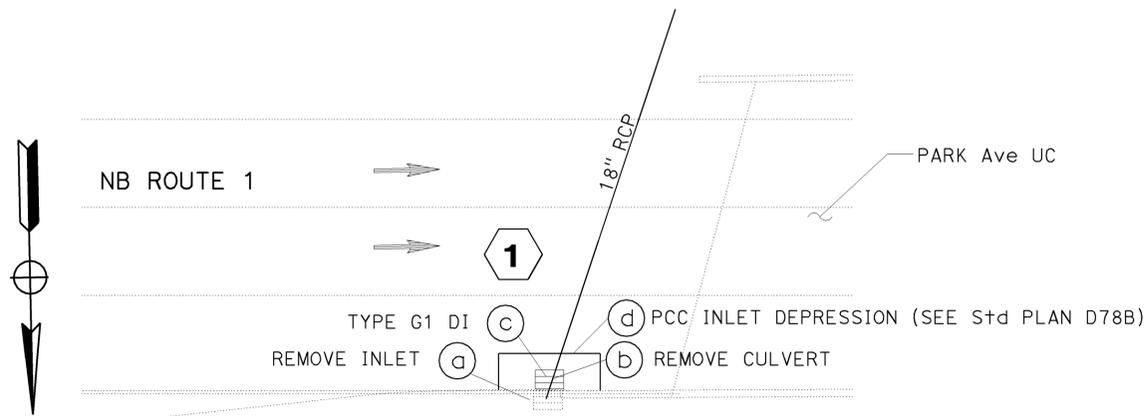
Chris Gardner 04-13-11  
 REGISTERED CIVIL ENGINEER DATE  
 4-18-11  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 No. C60348  
 Exp. 6-30-12  
 CIVIL  
 STATE OF CALIFORNIA

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

**LEGEND**

- # DRAINAGE SYSTEM No.
- (X) DRAINAGE UNIT No.



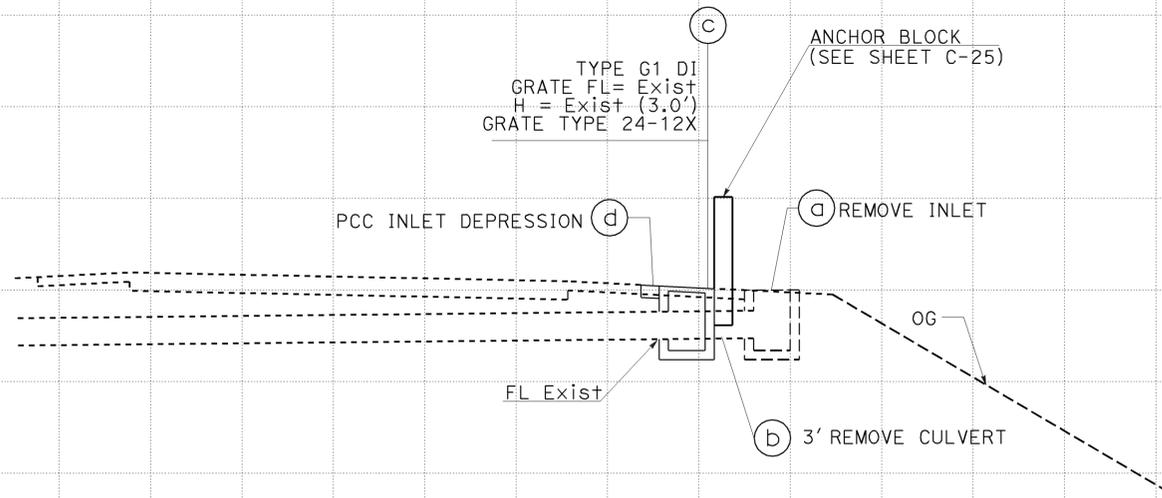
**PLAN  
LOCATION 6**  
ScR PM 12.09

THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY

**DRAINAGE QUANTITIES**

DRAINAGE SYSTEM No.	DRAINAGE UNIT No.	LOCATION	DRAINAGE INLETS					DESCRIPTION	DRAINAGE SYSTEM No.	DRAINAGE UNIT No.
			MINOR CONCRETE (MINOR STRUCTURE)	"H" (N)	MISCELLANEOUS IRON AND STEEL	REMOVE CULVERT	REMOVE INLET			
			CY	FT	LB	LF	EA			
1	a	6					1	REMOVE G1 INLET (H=3.0')	1	a
	b	6				3.0	REMOVE 3.0' 18" RCP	b		
	c	6	0.95	3.0	239		TYPE G1 DI, GRATE TYPE 24-12X	c		
	d	6	1.05				PCC INLET DEPRESSION (W=4'-0", L=13'-4", THICKNESS=8")	d		
TOTAL			2.00		239	3.0	1			

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

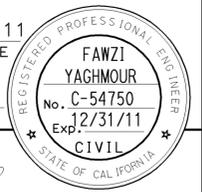


**DRAINAGE SYSTEM 1  
PROFILE**

**DRAINAGE PLAN, PROFILE  
AND DRAINAGE QUANTITIES**  
NO SCALE **D-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 Caltrans®  
 06-DESIGN  
 FUNCTIONAL SUPERVISOR: BORTIS AYAVIRI  
 DESIGNED BY: GERARDO GOMEZ  
 CHECKED BY: CHRIS GARDNER  
 REVISIONS: [Blank]

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon,ScR	1	R101.5/R102.0, R0.0/14.0	21	47
			04-15-11	REGISTERED CIVIL ENGINEER DATE	
			4-18-11	PLANS APPROVAL DATE	
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					



### STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No.	SIGN CODE	PANEL SIZE	SIGN MESSAGE	No. OF POSTS AND SIZE	No. OF SIGNS
(A)	G20-1	60" x 48"	ROAD WORK NEXT 15 MILES	2-4" x 6"	2
(B)	G20-2	48" x 48"	END ROAD WORK	1-4" x 6"	2

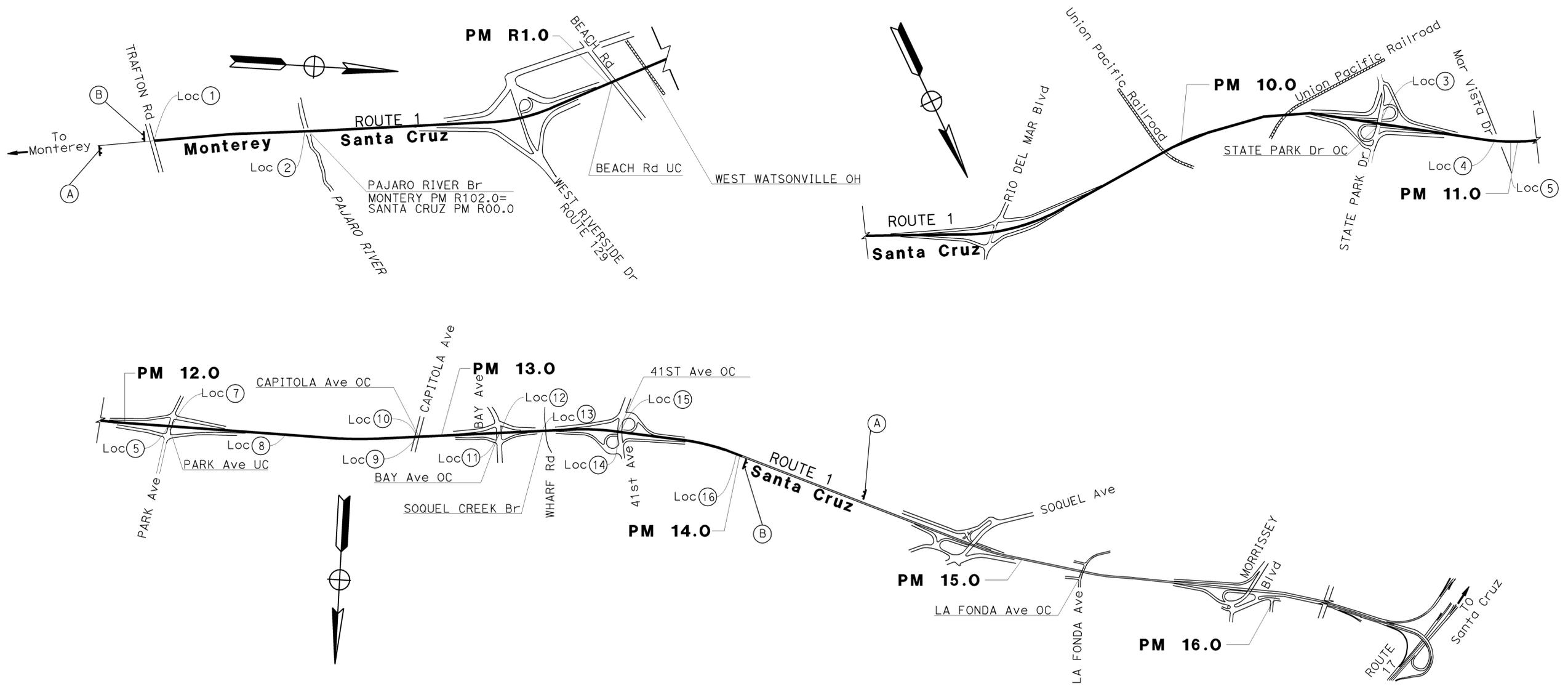
#### LEGEND

- SIGN NUMBER
- ⌋ TWO POST
- ⌋ ONE POST



#### NOTES:

- LOCATION OF CONSTRUCTION AREA SIGNS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.
- FOR ADDITIONAL CONSTRUCTION AREA SIGNS, SEE TRAFFIC HANDLING PLANS AND QUANTITIES.



NO SCALE

## CONSTRUCTION AREA SIGNS CS-1

THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGNS ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** TRAFFIC DESIGN  
 FAWZI YAGHMOUR  
 DAVID BLACK  
 MOHAMMED OATAMI  
 REVISIONS: 04-08-11

USERNAME => s115755  
 DGN FILE => 05000002451a001.dgn



UNIT 1512

PROJECT NUMBER & PHASE

05000002451

LAST REVISION | DATE PLOTTED => 22-APR-2011  
 04-08-11 | TIME PLOTTED => 16:30

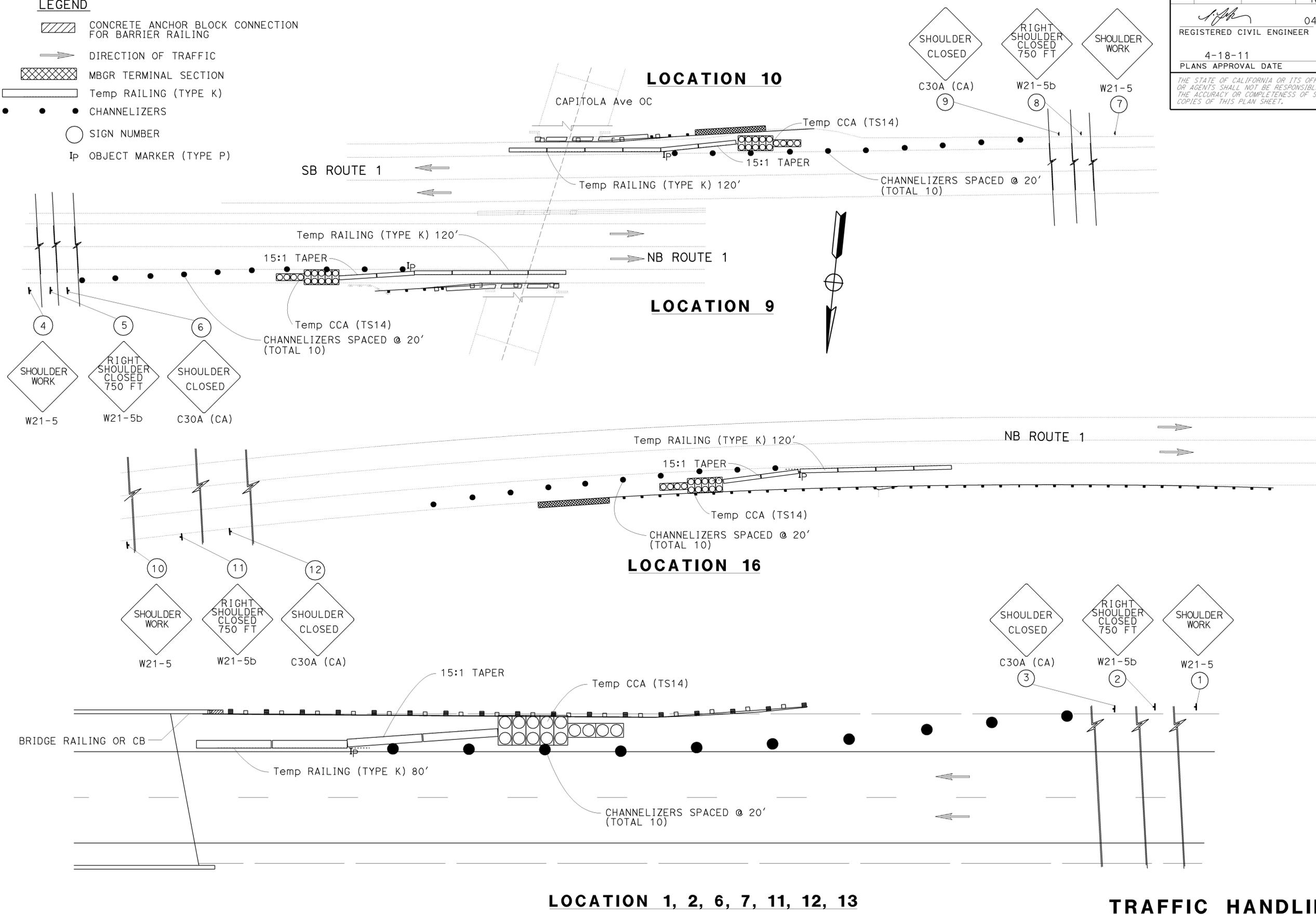
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon, SCr	1	R101.5/R102.0, RO.0/14.0	22	47
			04-15-11	REGISTERED CIVIL ENGINEER DATE	
			4-18-11	PLANS APPROVAL DATE	
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					



**LEGEND**

- CONCRETE ANCHOR BLOCK CONNECTION FOR BARRIER RAILING
- DIRECTION OF TRAFFIC
- MBGR TERMINAL SECTION
- Temp RAILING (TYPE K)
- CHANNELIZERS
- SIGN NUMBER
- OBJECT MARKER (TYPE P)

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** TRAFFIC DESIGN  
 FUNCTIONAL SUPERVISOR: MOHAMMED OATAMI  
 DESIGNED BY: DAVID BLACK  
 CHECKED BY:  
 REVISIONS:  
 REVISION BY: DATE  
 REVISION BY: DATE



THIS PLAN ACCURATE FOR TRAFFIC HANDLING ONLY

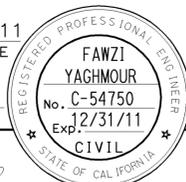
**TRAFFIC HANDLING PLAN**  
 TH-1  
 NO SCALE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon, SCr	1	R101.5/R102.0, R0.0/14.0	23	47

 04-15-11  
 REGISTERED CIVIL ENGINEER DATE

4-18-11  
 PLANS APPROVAL DATE

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



### CONSTRUCTION AREA SIGNS (STATIONARY MOUNTED)

LOCATION	SHEET	No. OF SIGN (EA)	SIGN No. 	SIGN CODE	PANEL SIZE	No. OF POST AND SIZE	REMARKS	PLACEMENT
1, 2, 6, 7, 11, 12, and 13	TH-1	7	1	W21-5	48" x 48"	1 - 4" x 6"	SHOULDER WORK	AS DIRECTED BY THE ENGINEER
		7	2	W21-5b	48" x 48"	1 - 4" x 6"	RIGHT SHOULDER CLOSED 750 FT	
		7	3	C30A (CA)	48" x 48"	1 - 4" x 6"	SHOULDER CLOSED	
9		1	4	W21-5	48" x 48"	1 - 4" x 6"	SHOULDER WORK	AS DIRECTED BY THE ENGINEER
		1	5	W21-5b	48" x 48"	1 - 4" x 6"	RIGHT SHOULDER CLOSED 750 FT	
		1	6	C30A (CA)	48" x 48"	1 - 4" x 6"	SHOULDER CLOSED	
10		1	7	W21-5	48" x 48"	1 - 4" x 6"	SHOULDER WORK	AS DIRECTED BY THE ENGINEER
		1	8	W21-5b	48" x 48"	1 - 4" x 6"	RIGHT SHOULDER CLOSED 750 FT	
		1	9	C30A (CA)	48" x 48"	1 - 4" x 6"	SHOULDER CLOSED	
16		1	10	W21-5	48" x 48"	1 - 4" x 6"	SHOULDER WORK	AS DIRECTED BY THE ENGINEER
		1	11	W21-5b	48" x 48"	1 - 4" x 6"	RIGHT SHOULDER CLOSED 750 FT	
		1	12	C30A (CA)	48" x 48"	1 - 4" x 6"	SHOULDER CLOSED	

### TRAFFIC HANDLING QUANTITIES

LOCATION	SHEET	CHANNELIZER (SURFACE MOUNTED)	TEMPORARY CRASH CUSHION MODULE	OBJECT MARKER (TYPE P) *	TEMPORARY RAILING (TYPE K)
			TYPE 'TS14'	EA	
			EA	EA	
1, 2, 6, 7, 11, 12, and 13	TH-1	70	98	7	560
9		10	14	1	120
10		10	14	1	120
16		10	14	1	120
SUB-TOTAL		100	140	10	920
TOTAL	100	140	140	920	

\*- TEMPORARY OBJECT MARKERS ARE INCLUDED IN CONSTRUCTION AREA SIGNS

## TRAFFIC HANDLING QUANTITIES THQ-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  

**TRAFFIC DESIGN**

FUNCTIONAL SUPERVISOR: MOHAMMED OATAMI  
 REVISIONS: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

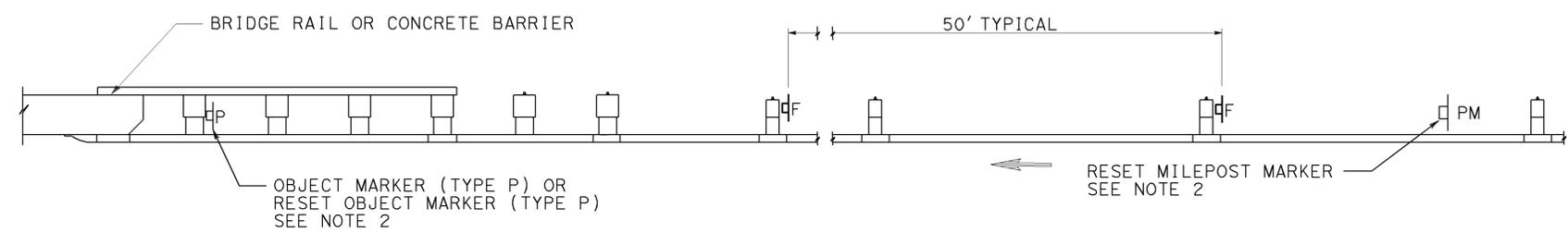
**LEGEND**

- DIRECTION OF TRAFFIC
- P OBJECT MARKER (TYPE P)
- L-1 OBJECT MARKER (TYPE L-1)
- F GUARD RAIL DELINEATOR (TYPE F)
- PM MILEPOST MARKER
- F DELINEATOR CLASS 1 (TYPE F)

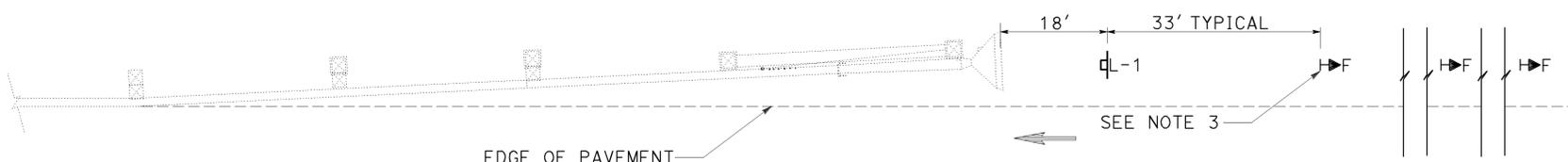
**NOTES:**

1. SEE STANDARD PLANS FOR ADDITIONAL DETAILS.
2. SEE QUANTITY TABLE FOR QUANTITY AND LOCATION.
3. IF MBGR IS LESS THEN 10 FEET FROM ETW THEN USE DELINEATOR CLASS 1 (TYPE F).

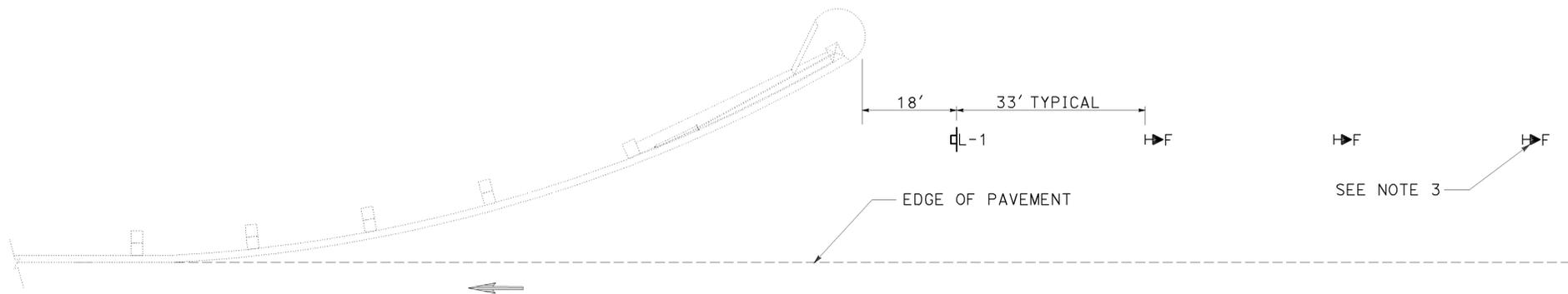
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** TRAFFIC DESIGN  
 FAWZI YAGHMOUR DAVID BLACK  
 MOHAMMED OATAMI  
 REVISIONS: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000



**TYPICAL GUARD RAILING DELINEATION**



**TYPICAL TERMINAL SYSTEM DELINEATION (IN-LINE)**



**TYPICAL TERMINAL SYSTEM DELINEATION (FLARED)**

**MARKERS AND DELINEATORS**

Loc No.	Co	PM	DESCRIPTION	GUARD RAILING DELINEATOR		OBJECT MARKER		RESET MARKER	
				TYPE F	TYPE EA	TYPE L-1	TYPE P	OBJECT TYPE P	MILE POST
1	Mon	R101.52	TRAFTON Rd UC	3	3	1	1		
2		R101.98	PAJARO RIVER Br	9	3	1	1		
3		10.54	STATE PARK Dr OC	2	3	1			
4		10.95	NEW MBGR	9	3	1			
5		10.96	NEW MBGR	22	3	1			
6		12.09	PARK Ave UC	4	3	1		1	1
7		12.10	PARK Ave UC	12	3	1	1		
8	ScR	12.47	NEW MBGR	10					
9		12.93	CAPITOLA Ave OC	1			1		
10		12.93	CAPITOLA Ave OC	2	3	1	1		
11		13.19	BAY Ave UC	2	3	1	1		
12		13.22	BAY Ave UC	2	3	1		1	
13		13.38	SOQUEL CREEK Br	4				1	
14		13.62	41st Ave OC	2			1		1
15		13.62	41st Ave OC	2	3	1			
16		13.97	NEW MBGR	7	3	1			1
SUB-TOTAL				93	36	12	7	3	3
TOTAL				93	36	19			6

**SIGN PLAN**  
**(DELINEATOR AND OBJECT MARKER)**  
**S-1**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon,ScR	1	R101.5/R102.0, R0.0/14.0	25	47

*Chris Gardner* 04-13-11  
 REGISTERED CIVIL ENGINEER DATE  
 4-18-11  
 PLANS APPROVAL DATE

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

### METAL BEAM GUARD RAILING

Loc No.	Co	PM	DESCRIPTION	DIRECTION OF TRAVEL		REMOVE MBGR	(N) REMOVE AND RECONSTRUCT MBGR	(N) NEW OR RECONSTRUCTED MBGR	TRANSITION RAILING (TYPE WB)	END ANCHOR ASSEMBLY (TYPE SFT)	ALTERNATE FLARED TERMINAL SYSTEM	ALTERNATE IN-LINE TERMINAL SYSTEM	MBGR (SPECIAL)	(N) BURIED POST END ANCHOR	VEGETATION CONTROL (ASPHALT COMPOSITE)	(N) MBGR LAYOUT TYPE	SHEET No.	COMMENT		
				NB/SB	Rt/L+															
1	Mon	R101.52	TRAFTON Rd UC	SB	R+	25	137.5	100	1		1						C-1			
2		R101.98	PAJARO RIVER Br	NB	R+	25	450	412.5	1		1						C-1			
3	ScR	10.54	STATE PARK Dr OC	SB	R+	25	87.5	75		1	1						73.9	16B	C-2	
4		10.95	NEW MBGR	NB	R+			400		1	1						186.7	11B	C-3	
5		10.96	NEW MBGR	NB	R+			1,062.5		1	1						438.4	11B	C-3	
6		12.09	PARK Ave UC	NB	R+	25	37.5	112.5	1		1						86.9	12B	C-4	
7		12.10	PARK Ave UC	SB	R+	25	575	537.5	1		1						248.4	12B	C-4	
8		12.47	NEW MBGR	NB	R+			462.5			1			1			175.8	11C	C-5	
9		12.93	CAPITOLA Ave OC	NB	R+	87.5		12.5	1					1					C-5	
10		12.93	CAPITOLA Ave OC	SB	R+	87.5			1		1						42.8		C-5	
11		13.19	BAY Ave UC	NB	R+	25	37.5		1		1						42.8	12B	C-6	
12		13.22	BAY Ave UC	SB	R+	25	37.5	25	1			1					39.6	12A	C-6	
13		13.38	SOQUEL CREEK Br	SB	R+	25	112.5	137.5	1					1			52.7	12C	C-7	
14		13.62	41st Ave OC	NB	R+	25	62.5	87.5		1				1			28.4	16C	C-7	INCLUDES 87.5 LF STRENGTHEND RAILING SECTIONS
15		13.62	41st Ave OC	SB	R+	100		62.5		1	1						67.3	16B	C-7	
16		13.97	NEW MBGR	NB	R+			275		1	1			75			139.2	11B	C-8	INCLUDES 50 LF MBGR NARROW ROADWAY INSTALLATION
SUBTOTAL						500	* 1,537.5	* 3,762.5	9	7	11	1		4	1,874.7					
TOTAL						500			9	7	11	1	75		1,874.7					

(N) - NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY  
 \* - SEE RELATED TABLE

### METAL BEAM GUARD RAILING

DESCRIPTION	RECONSTRUCT METAL BEAM GUARD RAILING	METAL BEAM GUARD RAILING (STEEL POST)
	LF	LF
NEW OR RECONSTRUCTED MBGR (TOTAL MBGR QUANTITY NEEDED FOR PROJECT)		3,782.5
REMOVE AND RECONSTRUCT MBGR (QUANTITY AVAILABLE FOR RECONSTRUCTION)	1,537.5	(-1,537.5)
TOTAL	1,537.5	2,225.0

## SUMMARY OF QUANTITIES Q-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 06-DESIGN  
 GERARDO GOMEZ  
 CHRIS GARDNER  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 FUNCTIONAL SUPERVISOR  
 BORIS AYAVIRI

LAST REVISION | DATE PLOTTED => 22-APR-2011  
 04-13-11 TIME PLOTTED => 16:30

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	Mon,ScR	1	R101.5/R102.0, RO.0/14.0	26	47

Chris Gardner 04-13-11  
 REGISTERED CIVIL ENGINEER DATE  
 4-18-11  
 PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER  
 CHRIS GARDNER  
 No. C60348  
 Exp. 6-30-12  
 CIVIL

### ROADWAY QUANTITIES

Loc No.	Co	PM	DESCRIPTION	DIRECTION OF TRAVEL	SIDE OF TRAVELED WAY	CONCRETE ANCHOR BLOCK	REMOVE AC DIKE	PLACE HMA DIKE (TYPE F)	PLACE HMA DIKE (TYPE C)	HMA (TYPE A)	(N)	SHEET No.
1	Mon	R101.52	TRAFTON Rd UC	SB	R+	0.65	187.5	125.0	62.5	3.9	1	C-1
2		R101.98	PAJARO RIVER Br	NB	R+	1.6	500	437.5	62.5	10.9	27	C-2
3	ScR	10.54	STATE PARK Dr OC	SB	R+		137.5		137.5	2.4		C-16
4		10.95	NEW MBGR	NB	R+							C-17
5		10.96	NEW MBGR	NB	R+							C-17
6		12.09	PARK Ave UC	NB	R+	0.65					1	C-18
7		12.10	PARK Ave UC	SB	R+	0.65					1	C-18
8		12.47	NEW MBGR	NB	R+							C-19
9		12.93	CAPITOLA Ave OC	NB	R+							C-19
10		12.93	CAPITOLA Ave OC	SB	R+		35	25	62.5	1.7		C-19
11		13.19	BAY Ave UC	NB	R+	0.65	87.5	25	62.5	1.7	25	C-20
12		13.22	BAY Ave UC	SB	R+	0.65	100	50	50	2.0	25	C-20
13		13.38	SOQUEL CREEK Br	SB	R+	0.65	162.5	112.5	50	3.4	25	C-20
14		13.62	41st Ave OC	NB	R+		87.5	50	37.5	1.8		C-21
15		13.62	41st Ave OC	SB	R+							C-21
16		13.97	NEW MBGR	NB	R+		110	110		2.5		C-22
FROM TABLE										9.6		
TOTAL						5.50	1,407.5	935	525.0	39.9		

(N) - NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY  
 \*\* - SEE DRAINAGE SHEET FOR QUANTITY

### CONCRETE BARRIER (TYPE 60 VERTICAL FACE)

Loc No.	Co	PM	DESCRIPTION	CB (TYPE 60 VERTICAL FACE)	
				LF	
9	ScR	12.93	CAPITOLA Ave OC NB	59.9	
10	ScR	12.93	CAPITOLA Ave OC SB	59.9	
TOTAL				119.8	

### Temp WATER POLLUTION CONTROL

Loc No.	Co	PM	DESCRIPTION	Temp DRAINAGE INLET PROTECTION	Temp FIBER ROLL
				EA	LF
1	Mon	R101.52	TRAFTON Rd UC		210
2		R101.98	PAJARO RIVER Br		520
3		10.54	STATE PARK Dr OC		160
4		10.95	NEW MBGR		460
5		10.96	NEW MBGR		1,120
6		12.09	PARK Ave UC	1	200
7		12.10	PARK Ave UC		620
8		12.47	NEW MBGR	1	480
9		12.93	CAPITOLA Ave OC		120
10		12.93	CAPITOLA Ave OC		180
11		13.19	BAY Ave UC	1	110
12		13.22	BAY Ave UC	1	120
13		13.38	SOQUEL CREEK Br	2	180
14		13.62	41st Ave OC	1	110
15		13.62	41st Ave OC		120
16		13.97	NEW MBGR	2	410
TOTAL				9	5,120

### ROADWAY QUANTITIES

Loc No.	Co	PM	DESCRIPTION	HMA (TYPE A)	PLACE HMA (Misc AREA)	COLD PLANE AC Pvm+ (0.15' Max)	REMOVE CONCRETE	REMOVE RETAINING WALL (MBGR)	DESCRIPTION
				TON	SQYD	SQYD	CY	LF	
2	Mon	R101.98	PAJARO RIVER Br				1.2		
9	ScR	12.93	CAPITOLA Ave OC	1.5	9		0.1		HMA 0.25' THICK
10	ScR	12.93	CAPITOLA Ave OC	1.8	11		0.2		HMA 0.25' THICK
16	ScR	13.97	NEW MBGR	6.3	64	50		25	HMA 0.15' THICK
SUBTOTAL				9.6	84	50	1.5	25	
TOTAL					84	50	1.5	25	

### SUMMARY OF QUANTITIES Q-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 Gerardo Gomez  
 Chris Gardner  
 Boris Ayaviri  
 06-DESIGN  
 Caltrans

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
05	Mon, Scr	1	R101.5/R102.0, R0.0/14.0	27	47

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

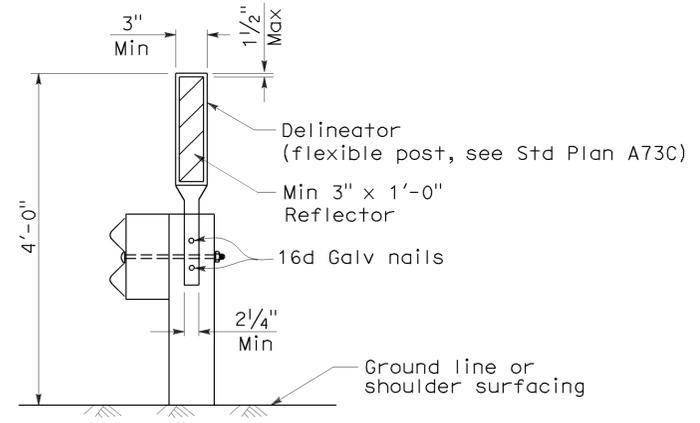
June 6, 2008  
PLANS APPROVAL DATE

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

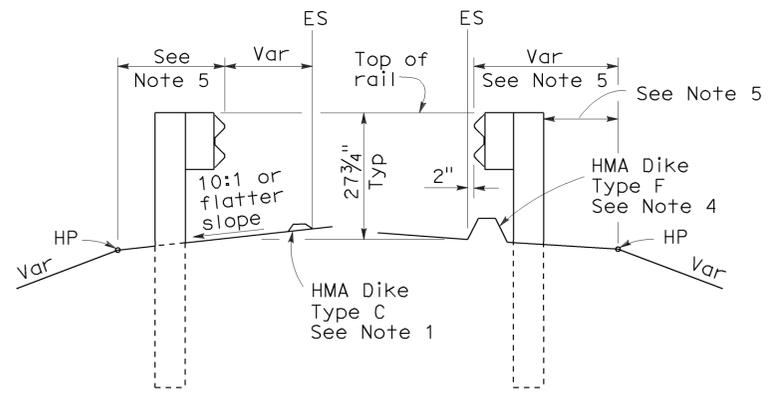
To accompany plans dated 4-18-11

**NOTES:**

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



**GUARD RAILING DELINEATION**  
See Note 3



**DIKE POSITIONING**  
See Note 1

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

**REVISED STANDARD PLAN RSP A77C4**

2006 REVISED STANDARD PLAN RSP A77C4



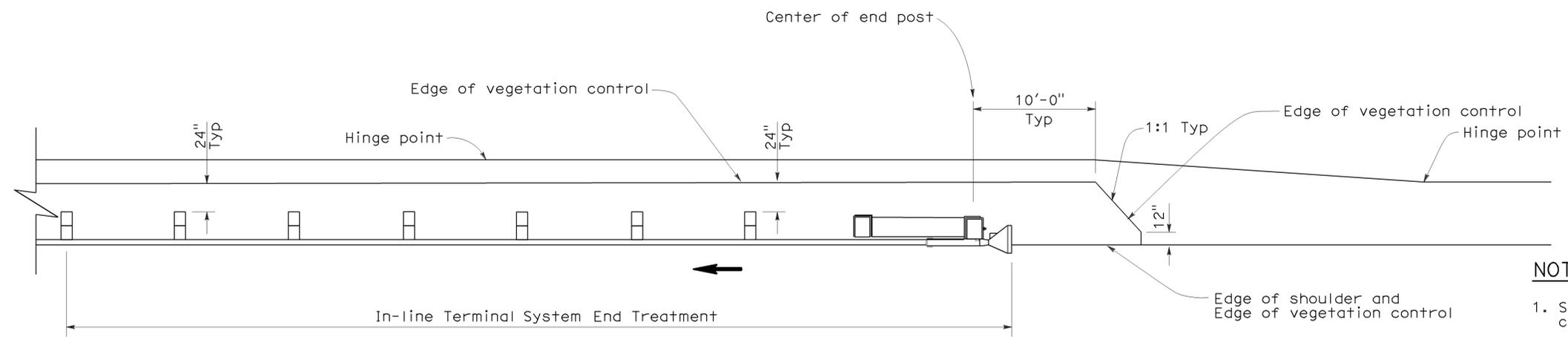
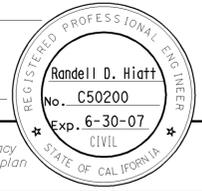
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
05	Mon,Scr	1	R101.5/R102.0, R0.0/14.0	29	47

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

October 20, 2006  
PLANS APPROVAL DATE

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

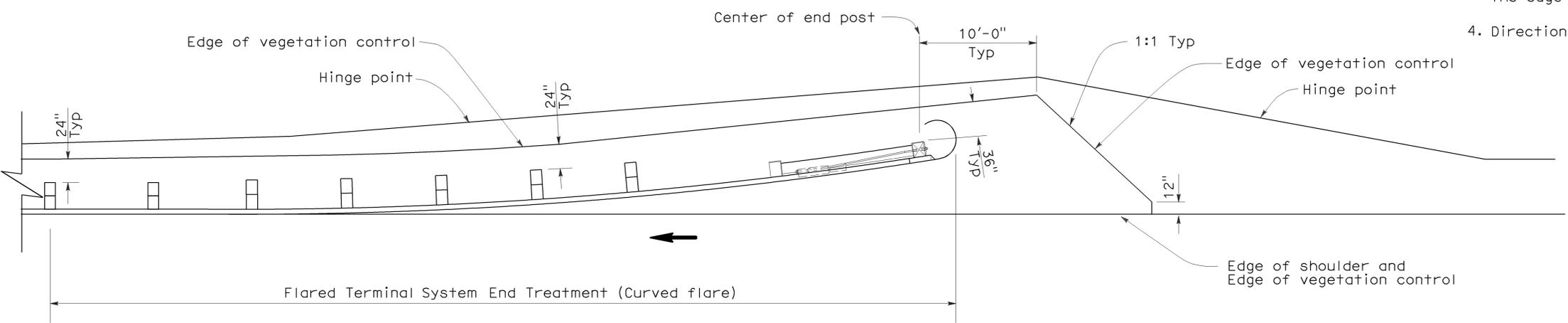
To accompany plans dated 4-18-11



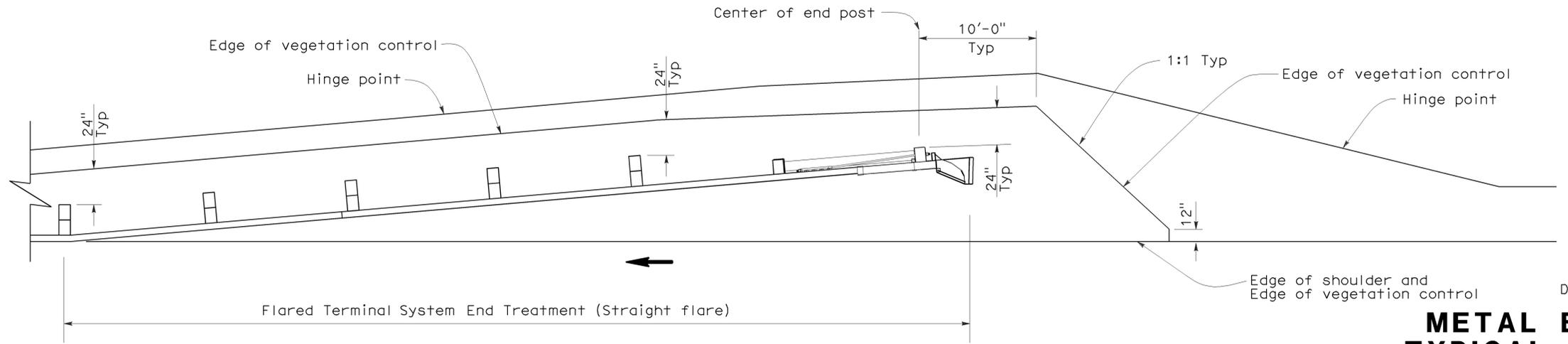
PLAN

**NOTES:**

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



PLAN



PLAN

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**METAL BEAM GUARD RAILING  
TYPICAL VEGETATION CONTROL  
FOR TERMINAL SYSTEM END TREATMENTS**

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

**NEW STANDARD PLAN NSP A77C6**

2006 NEW STANDARD PLAN NSP A77C6

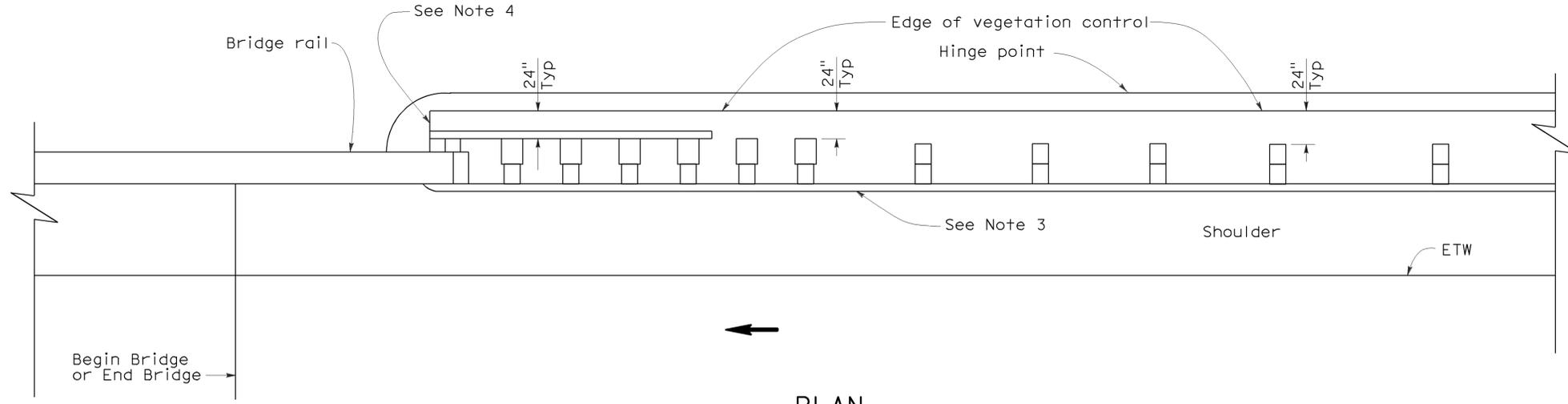
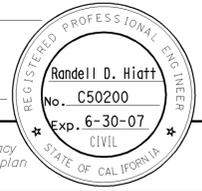
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
05	Mon, Scr	1	R101.5/R102.0, RO.0/14.0	30	47

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

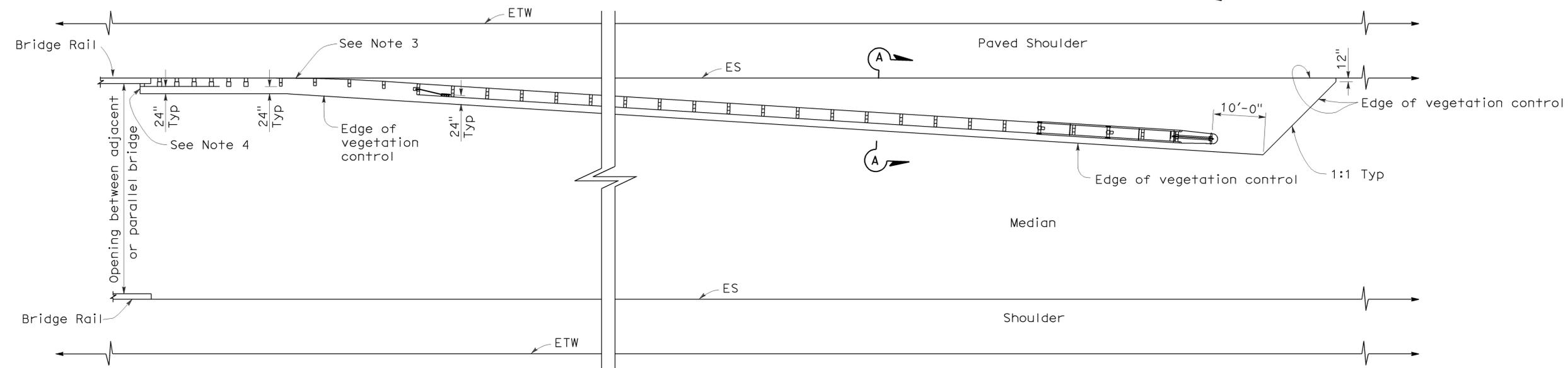
October 20, 2006  
PLANS APPROVAL DATE

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

To accompany plans dated 4-18-11



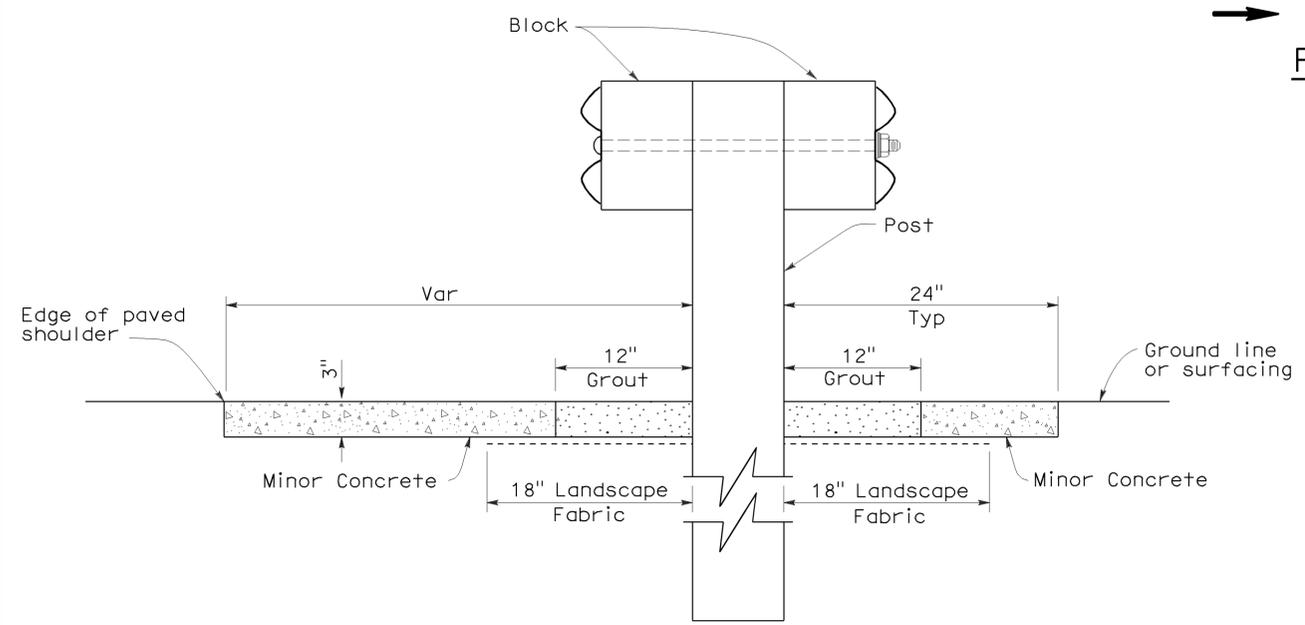
PLAN



PLAN

NOTES:

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



SECTION A-A

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING  
TYPICAL VEGETATION CONTROL  
AT STRUCTURE APPROACH  
AND DEPARTURE**

NO SCALE  
NSP A77C7 DATED OCTOBER 20, 2006 SUPPLEMENTS THE STANDARD  
PLANS BOOK DATED MAY 2006.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
05	Mon,Scr	1	R101.5/R102.0, R0.0/14.0	31	47

Randell D. Hiatt  
REGISTERED CIVIL ENGINEER

October 20, 2006  
PLANS APPROVAL DATE

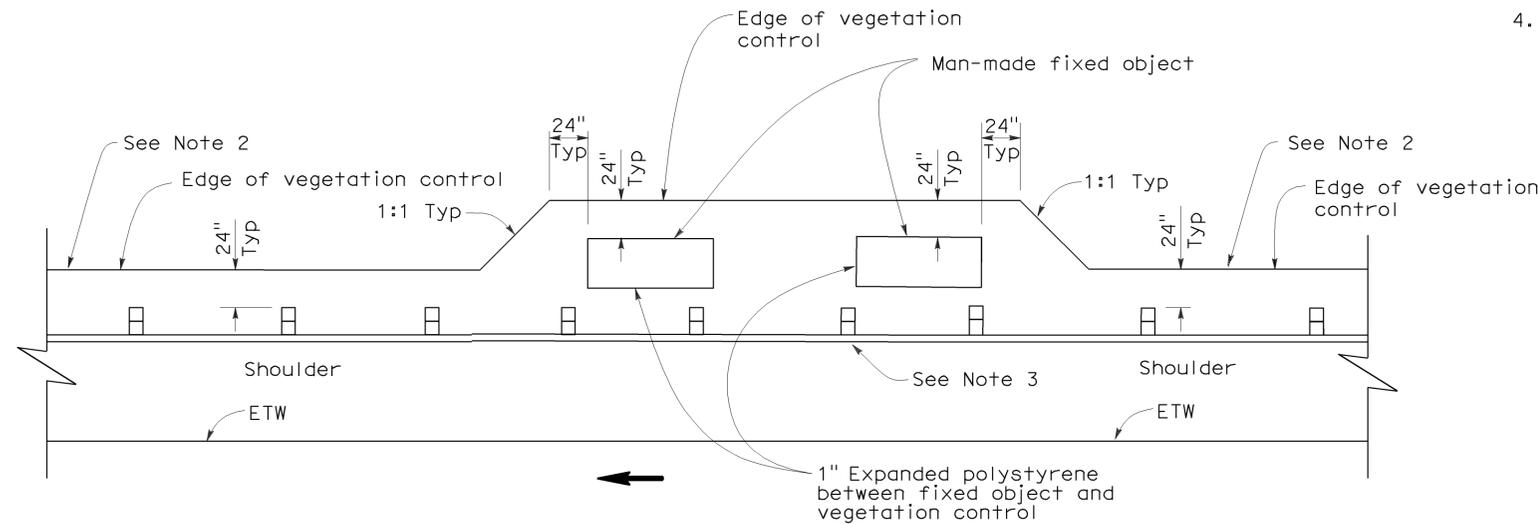
*The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.*

REGISTERED PROFESSIONAL ENGINEER  
Randell D. Hiatt  
No. C50200  
Exp. 6-30-07  
CIVIL  
STATE OF CALIFORNIA

To accompany plans dated 4-18-11

**NOTES:**

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



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

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

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

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

**NEW STANDARD PLAN NSP A77C8**

2006 NEW STANDARD PLAN NSP A77C8



**NOTES:**

1. See New Standard Plan NSP A77C5 for additional vegetation control details.
2. Where dike is constructed under railing, construct vegetation control to back edge of dike. Where paved shoulder is constructed within 24" in front of the post, construct vegetation control to the edge of paved shoulder.
3. Direction of adjacent traffic indicated by ←.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
05	Mon, SCr	1	R101.5/R102.0, R0.0/14.0	33	47

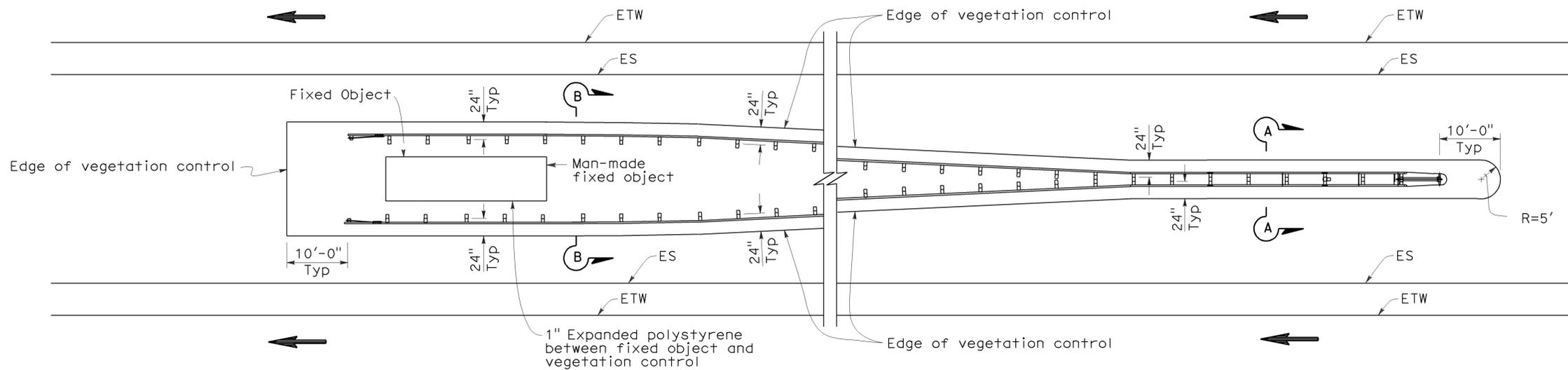
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

October 20, 2006  
PLANS APPROVAL DATE

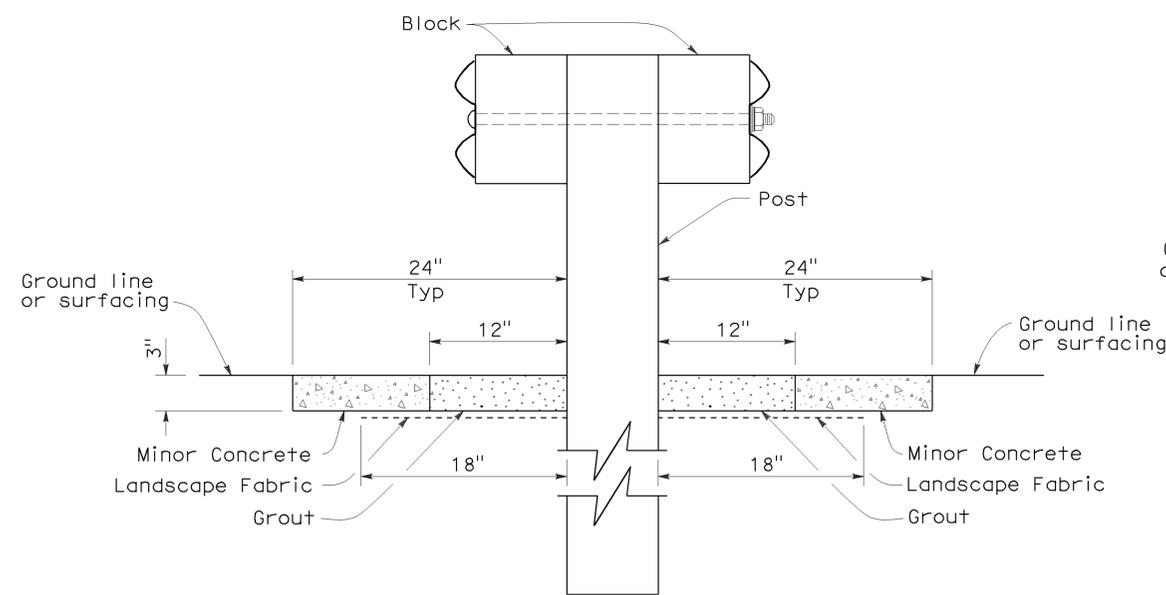
*Randell D. Hiatt*  
No. C50200  
Exp. 6-30-07  
CIVIL  
STATE OF CALIFORNIA

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

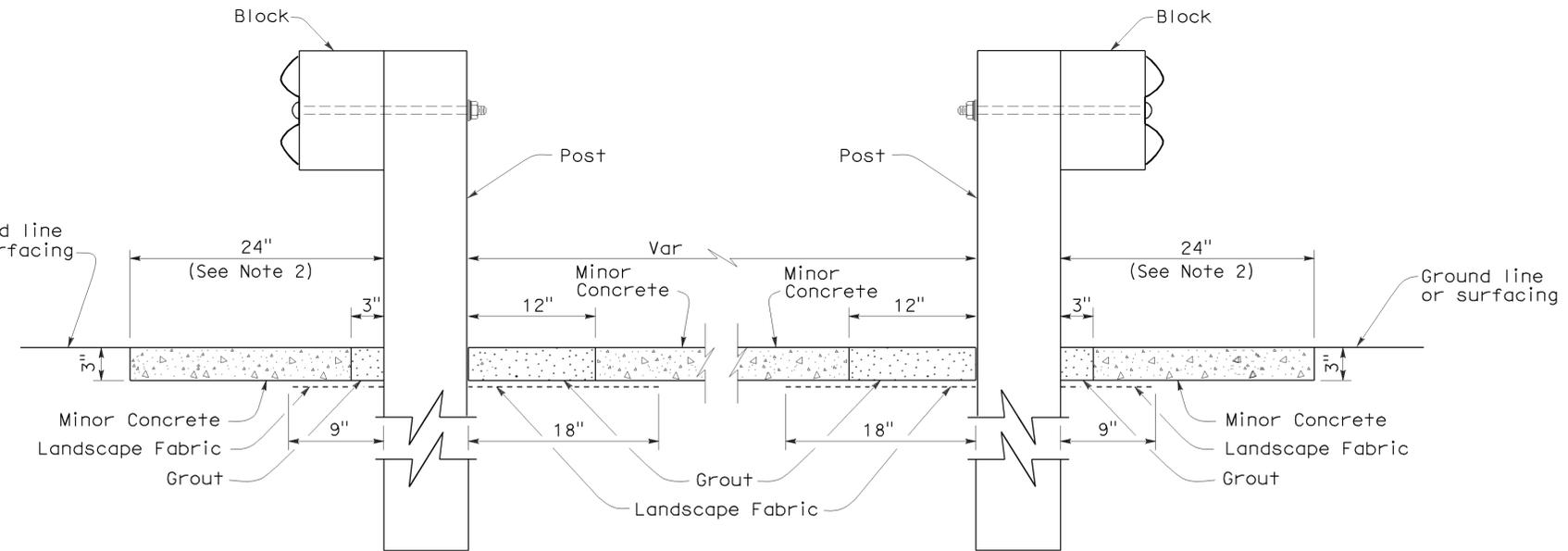
To accompany plans dated 4-18-11



**PLAN**  
FIXED OBJECT(S) BETWEEN SEPARATE ROADBEDS  
(ONE-WAY TRAFFIC)



**SECTION A-A**



**SECTION B-B**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

NSP A77C10 DATED OCTOBER 20, 2006 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP A77C10

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
05	Mon, Scr	1	R101.5/R102.0, R0.0/14.0	34	47

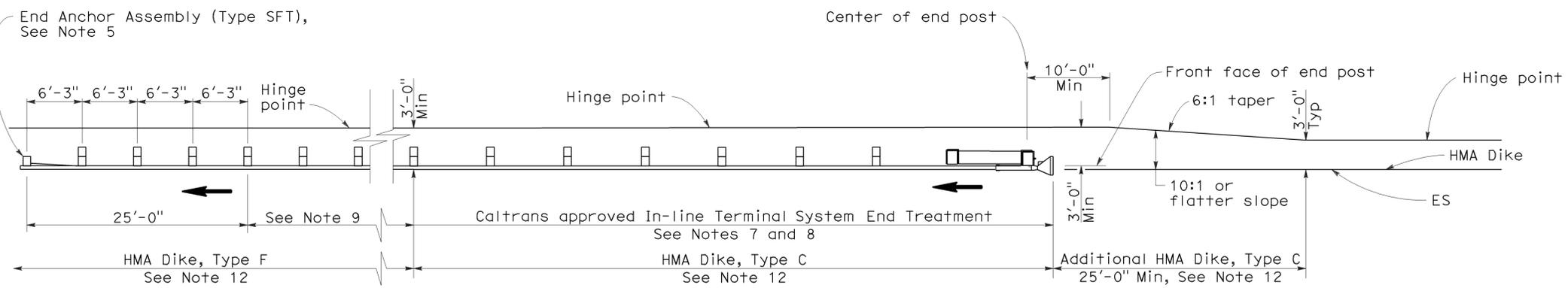
Randell D. Hiatt  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

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

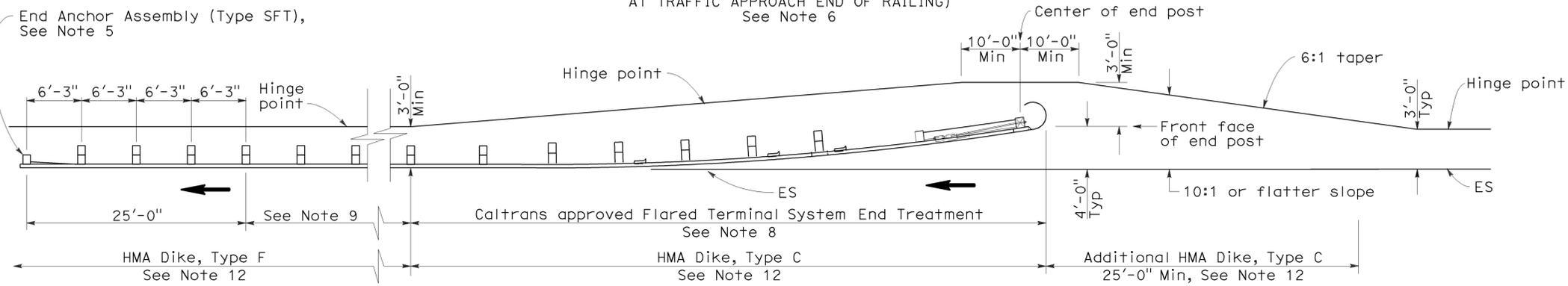
To accompany plans dated 4-18-11

2006 REVISED STANDARD PLAN RSP A77E1



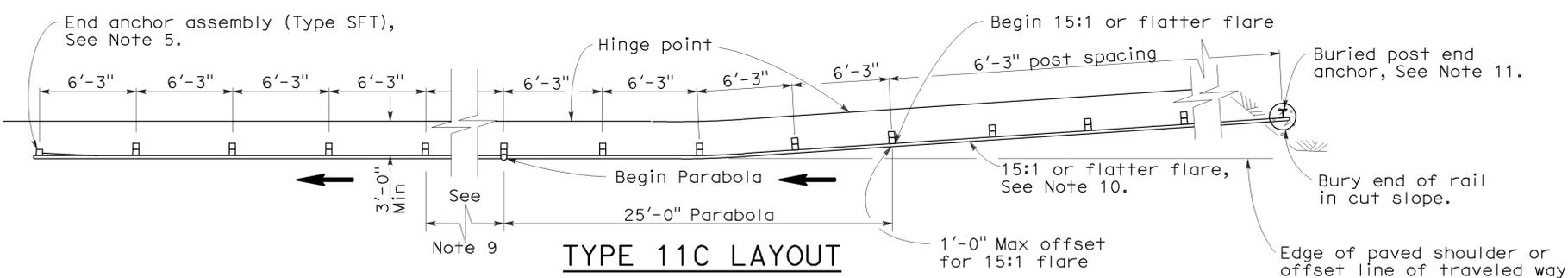
**TYPE 11A LAYOUT**

(EMBANKMENT GUARD INSTALLATION WITH IN-LINE END TREATMENT AT TRAFFIC APPROACH END OF RAILING) See Note 6



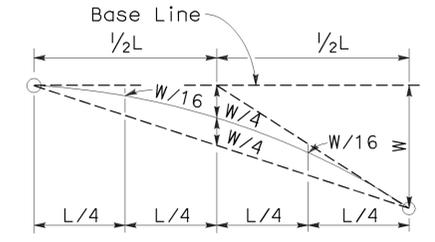
**TYPE 11B LAYOUT**

(EMBANKMENT GUARD RAILING INSTALLATION WITH FLARED END TREATMENT AT TRAFFIC APPROACH END OF RAILING) See Note 6

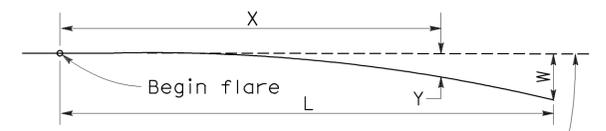


**TYPE 11C LAYOUT**

(EMBANKMENT GUARD RAILING INSTALLATION WITH BURIED END ANCHOR TREATMENT AT TRAFFIC APPROACH END OF RAILING) See Notes 6 and 12



**TYPICAL PARABOLIC LAYOUT**

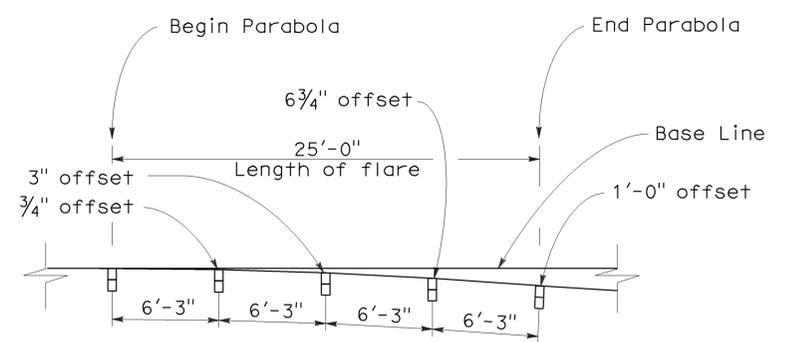


Base Line (Edge of paved shoulder or offset line of edge of traveled way)

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

Y = Offset from base line  
W = Maximum offset  
X = Distance along base line  
L = Length of flare

**PARABOLIC FLARE OFFSETS**



**TYPICAL FLARE OFFSETS FOR 1 FOOT MAX END OFFSET**

**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 recycled 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  $\rightarrow$ .
- For End Anchor Assembly (Type SFT) details, see Standard Plan A77H1.
- Layout Types 11A, 11B or 11C are typically used where guard railing is recommended to shield embankment slopes and a crashworthy end treatment is required for only one direction 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.
- The 15:1 or flatter flare used with buried end anchors is based on the edge of the paved shoulder or offset line of edge of the traveled way. The length of guard railing within the 15:1 or flatter flare is based on site conditions and should be a length equal to multiples of 12'-6".
- For details of the buried post end anchor used with Type 11C Layout, see Standard Plan A77I2.
- 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 A77E1 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77E1  
DATED MAY 1, 2006 - PAGE 48 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP A77E1**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
05	Mon, Scr	1	R101.5/R102.0, R0.0/14.0	35	47

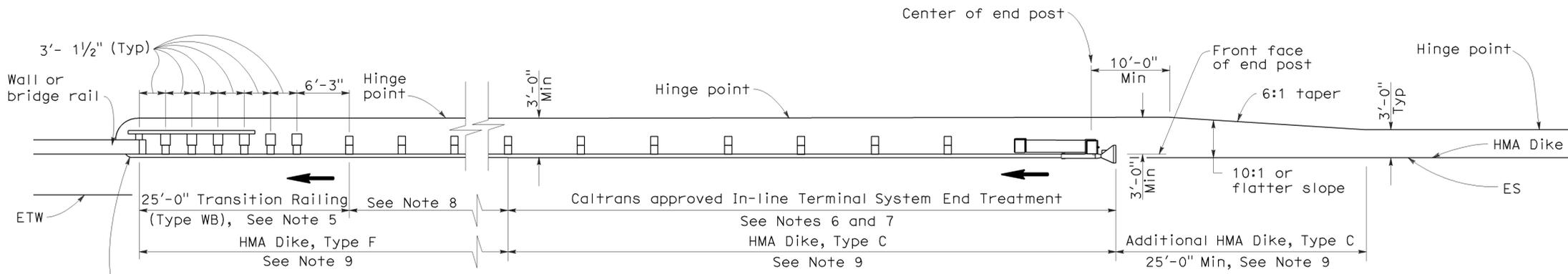
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

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

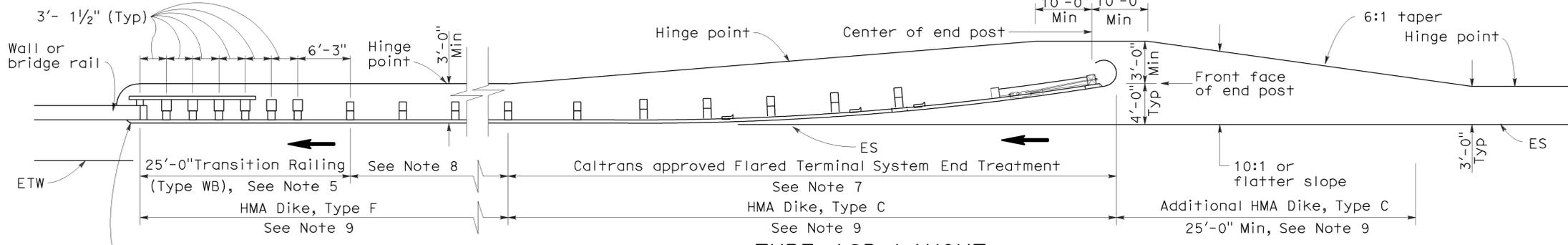
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 4-18-11



**TYPE 12A LAYOUT**

(GUARD RAILING INSTALLATION AT STRUCTURE APPROACH WITH AN IN-LINE END TREATMENT AT TRAFFIC APPROACH END OF RAILING)  
See Notes 10



**TYPE 12B LAYOUT**

(GUARD RAILING INSTALLATION AT STRUCTURE APPROACH WITH A FLARED END TREATMENT AT TRAFFIC APPROACH END OF RAILING)  
See Notes 10

**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 posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- Direction of adjacent traffic indicated by  $\rightarrow$ .
- For Transition Railing (Type WB) details for Types 12A and 12B Layouts, see Standard Plan A77J4.
- 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, 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.

- Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77C4 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 A77F3 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 A77J1 and RSP A77J2 and Connection Detail FF on Standard Plans A77K1 and A77K2.
- For additional details of a typical connection to walls or abutments, see Standard Plan A77J3.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

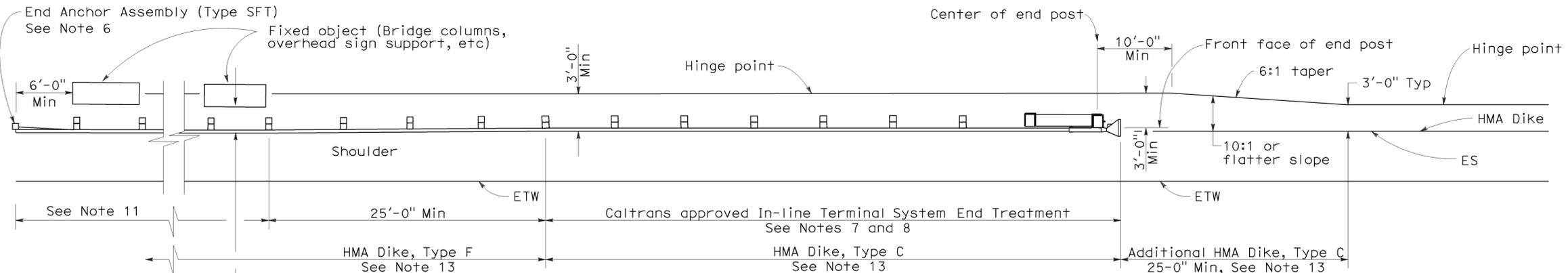
**METAL BEAM GUARD RAILING  
TYPICAL LAYOUTS FOR  
STRUCTURE APPROACH**

NO SCALE

RSP A77F1 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77F1  
DATED MAY 1, 2006 - PAGE 54 OF THE STANDARD PLANS BOOK DATED MAY 2006.

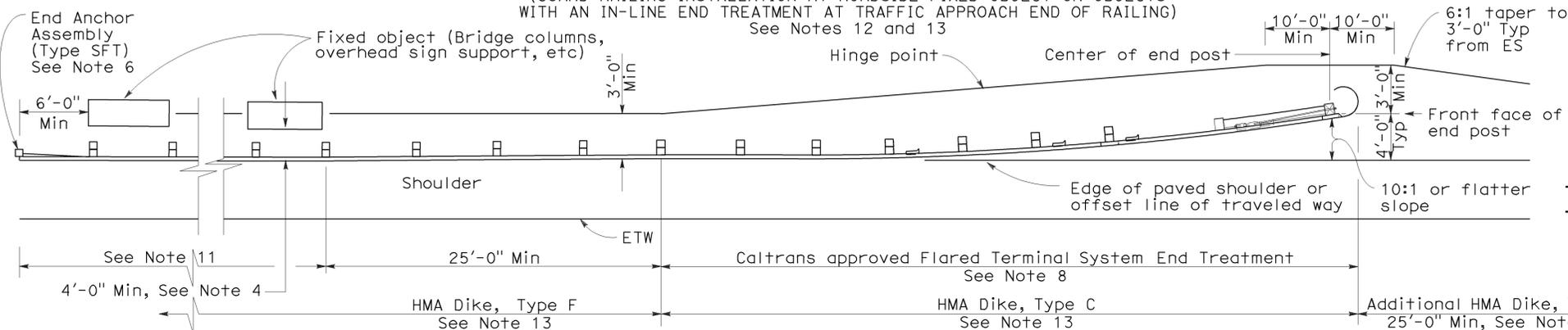
**REVISED STANDARD PLAN RSP A77F1**

2006 REVISED STANDARD PLAN RSP A77F1



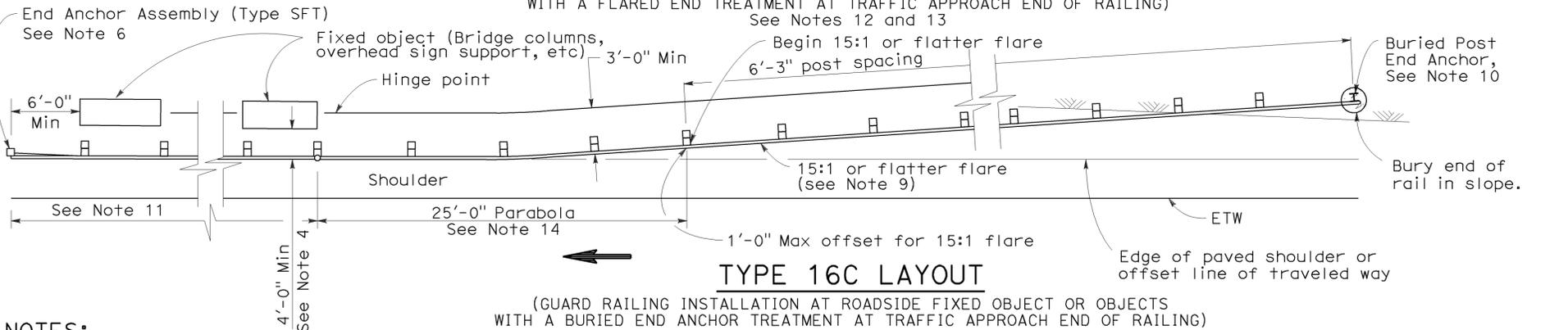
**TYPE 16A LAYOUT**

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH AN IN-LINE END TREATMENT AT TRAFFIC APPROACH END OF RAILING)  
See Notes 7 and 8



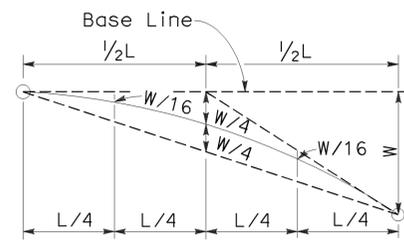
**TYPE 16B LAYOUT**

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH A FLARED END TREATMENT AT TRAFFIC APPROACH END OF RAILING)  
See Notes 12 and 13

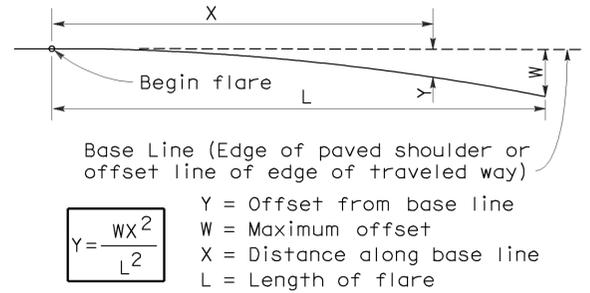


**TYPE 16C LAYOUT**

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH A BURIED END ANCHOR TREATMENT AT TRAFFIC APPROACH END OF RAILING)  
See Notes 12 and 13



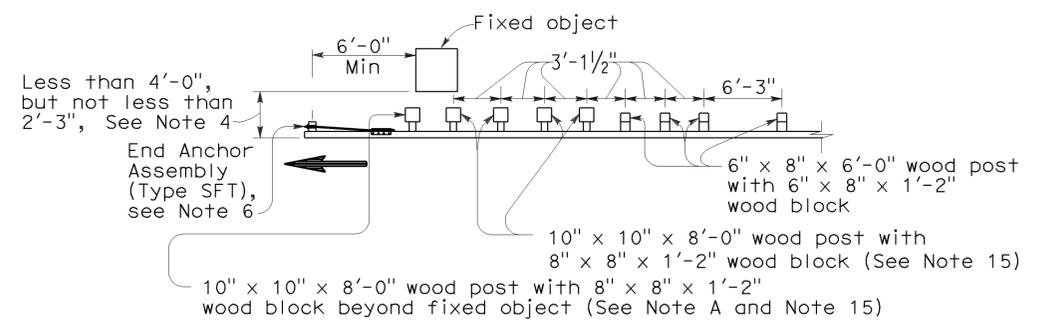
**TYPICAL PARABOLIC LAYOUT**



**PARABOLIC FLARE OFFSETS**

**NOTES:**

- Line post, blocks and hardware to be used are shown on Revised Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard railing post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks may be used for 6" x 8" x 6'-0" wood line posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- A 4'-0" minimum clearance is required between the face of the railing and the face of a fixed object located directly behind standard guard railing sections with post spacing of 6'-3". Construct guard railing as shown in the detail "Strengthened Railing Sections for Fixed Objects" on this plan, where the clearance between the face of the railing and the face of a fixed object is less than 4'-0", but not less than 2'-3". Where the clearance is less than 2'-3", a concrete wall or barrier should be constructed to shield the fixed object(s).
- Direction of adjacent traffic indicated by →.
- For End Anchor Assembly (Type SFT) details, see Standard Plan A77H1.
- In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
- The type of terminal system to be used will be shown on the Project Plans.
- The 15:1 or flatter flare used with Type 16C Layout is based on the edge of the paved shoulder or offset line of the traveled way. The length of guard railing within the 15:1 or flatter flare is based on site conditions and should be a length equal to multiples of 12'-6".
- For details of the Buried Post End Anchor used with Type 16C Layout, see Standard Plan A77I2.
- As site conditions dictate, construct additional guard railing to shield fixed object(s). Additional guard railing length equal to multiples of 12'-6". Post spacing at 6'-3" except as specified in Note 4.
- Layout Types 16A, 16B or 16C are typically used where guard railing is recommended to shield roadside fixed object(s) and a crashworthy end treatment is required for only one direction of traffic.
- Where placement of dike is required with guard railing, see Revised Standard Plan RSP A77C4 for dike positioning details.
- For typical flare offsets for 25'-0" length parabola with maximum offset of 1'-0", see Revised Standard Plan RSP A77E1.
- W6 x 15 steel post, 8'-0" in length, with 8" x 8" x 1'-2" notched wood block or notched recycled plastic blocks may be used in place of the 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood block shown in the "Strengthened Railing Sections Detail".



**NOTE A:**

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

**STRENGTHENED RAILING SECTIONS FOR FIXED OBJECT**

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

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**METAL BEAM GUARD RAILING TYPICAL LAYOUTS FOR ROADSIDE FIXED OBJECTS**

NO SCALE  
RSP A77G3 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77G3  
DATED MAY 1, 2006 - PAGE 61 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP A77G3**

2006 REVISED STANDARD PLAN RSP A77G3

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
05	Mon, SCr	1	R101.5/R102.0, R0.0/14.0	37	47

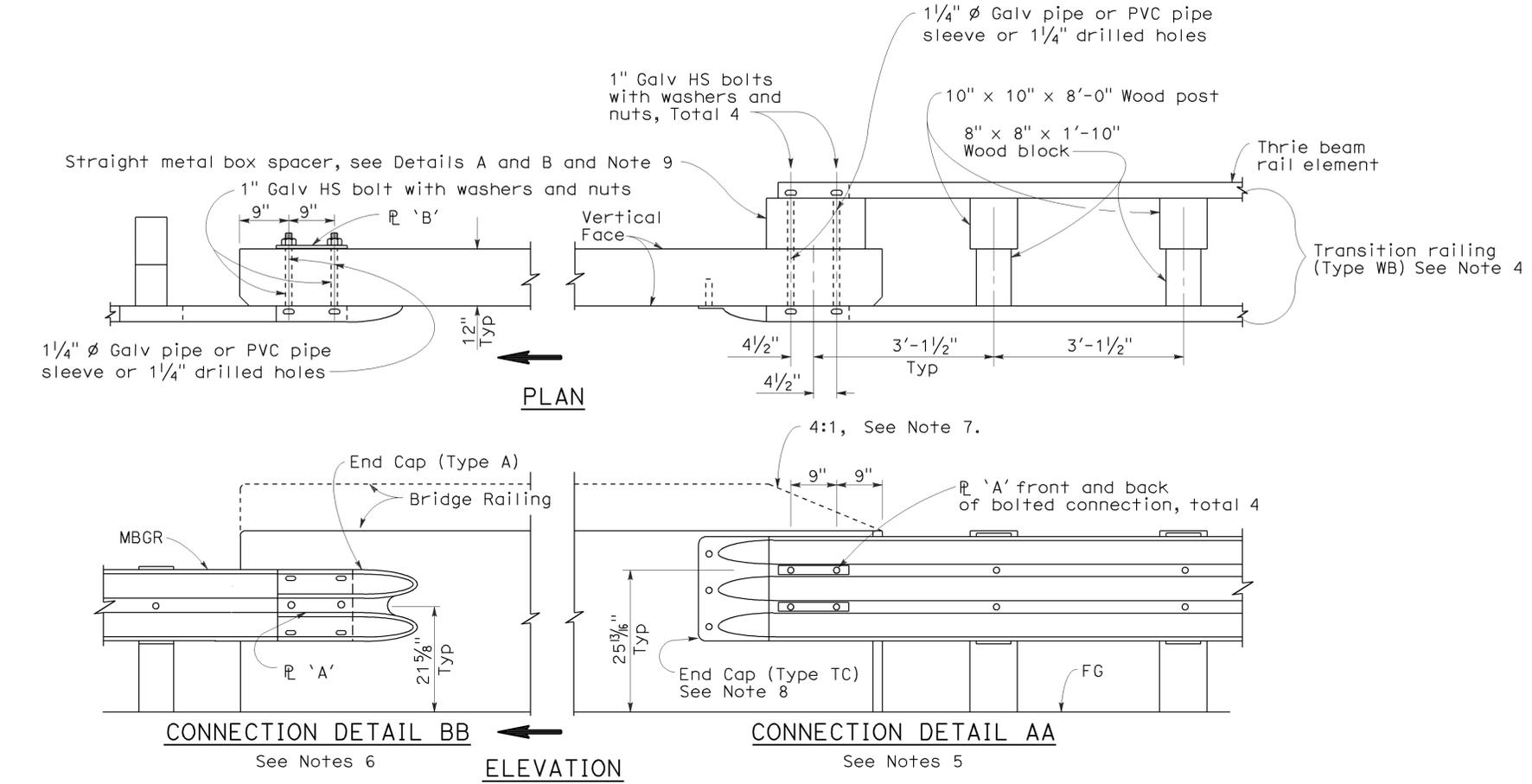
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

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

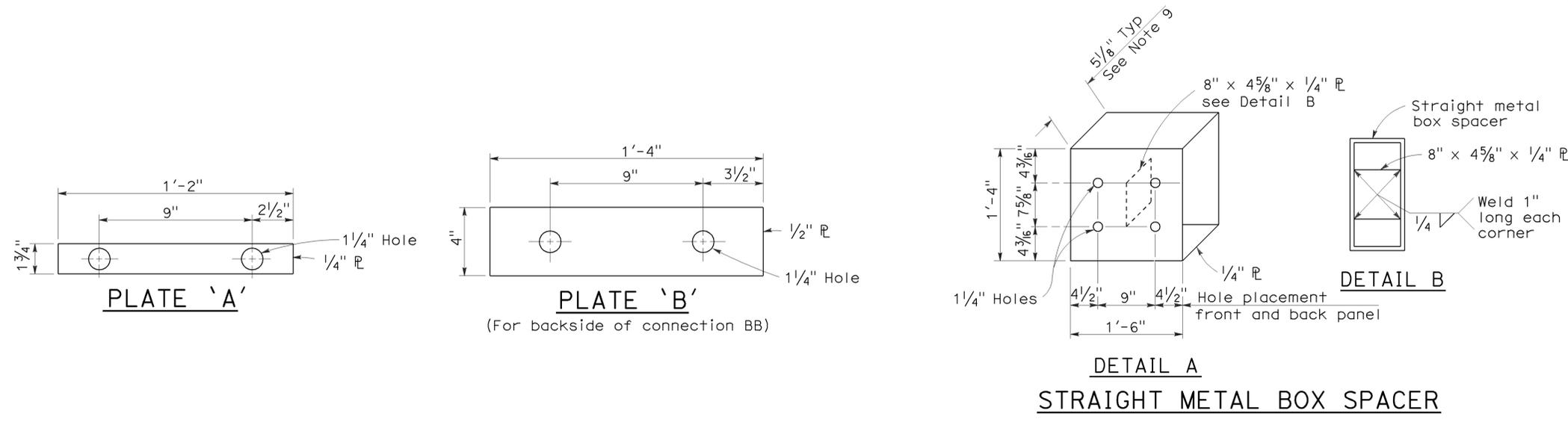
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 4-18-11



- NOTES:**
1. See Revised Standard Plan RSP A77J2 for additional connection details to bridges without sidewalks.
  2. Additional details of posts, blocks and hardware are shown on Standard Plan A77B1, A77C1 and A77C2.
  3. Direction of adjacent traffic indicated by  $\rightarrow$ .
  4. For additional details of Transition Railing (Type WB), see Standard Plan A77J4. Transition Railing (Type WB) transitions the 12 gage w-beam standard railing section of guard railing to a heavier gage nested thrie beam railing section which is connected to the concrete bridge railing.
  5. For typical use of Connection Detail AA, see Layout Types 12A and 12B on Revised Standard Plan RSP A77F1, Layout Types 12C and 12D on Standard Plan A77F2, and Layout Type 12E on Revised Standard Plan RSP A77F3.
  6. For typical use of Connection Detail BB, see Layout Type 12D (structure departure railing connection) on Standard Plan A77F2 and Layout Type 12DD on Standard Plan A77F5.
  7. Where the height of the bridge railing exceeds the height of the thrie 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 thrie beam rail.
  8. For details of End Cap (Type TC), see Standard Plan A77J4.
  9. See Standard Plan A77J4 for additional details regarding depth dimension for straight metal box spacer.

**GUARD RAILING CONNECTION TO BRIDGE RAILING WITHOUT SIDEWALK**



STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**METAL BEAM GUARD RAILING CONNECTIONS TO BRIDGE RAILINGS WITHOUT SIDEWALKS DETAILS No.1**

NO SCALE  
RSP A77J1 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77J1 DATED MAY 1, 2006 - PAGE 72 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP A77J1

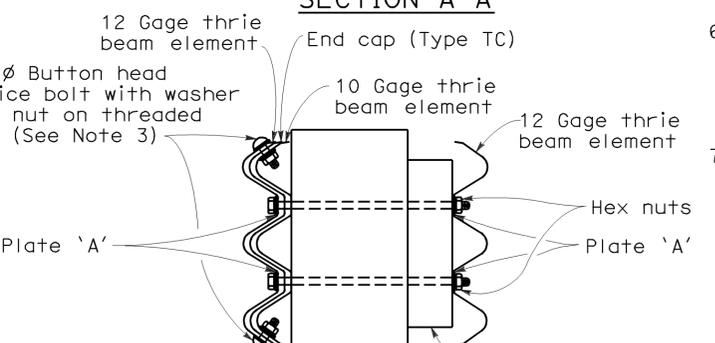
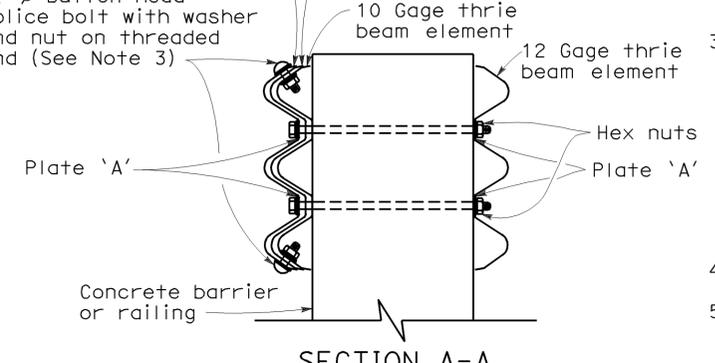
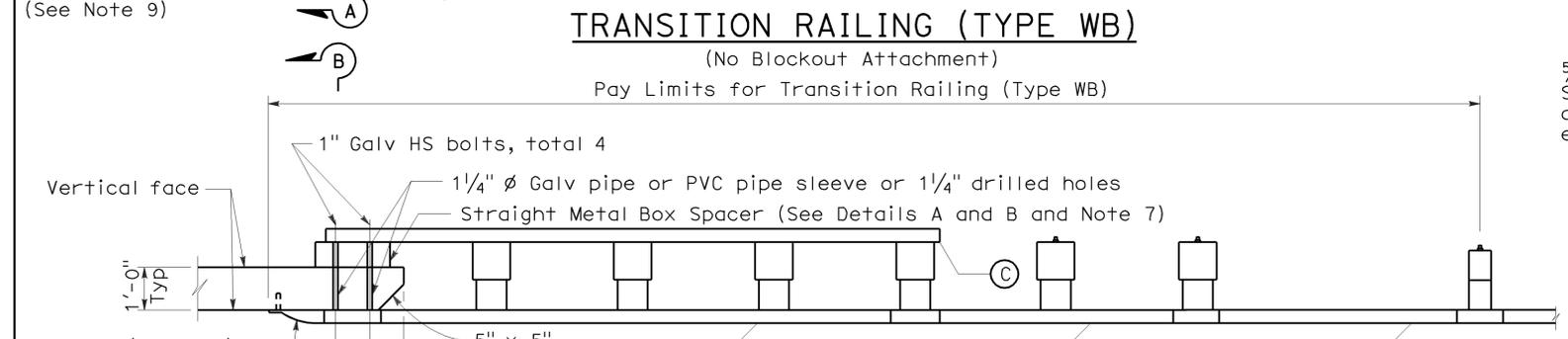
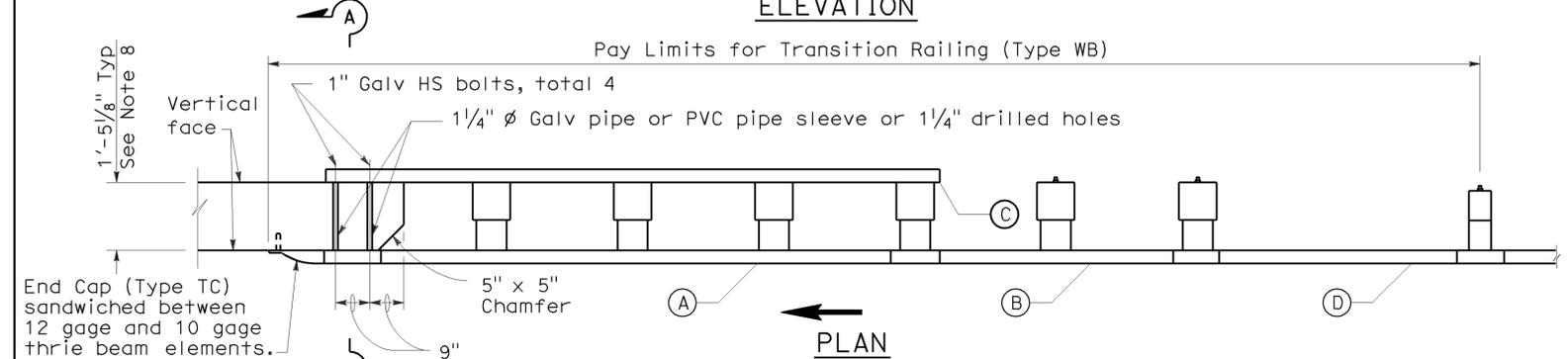
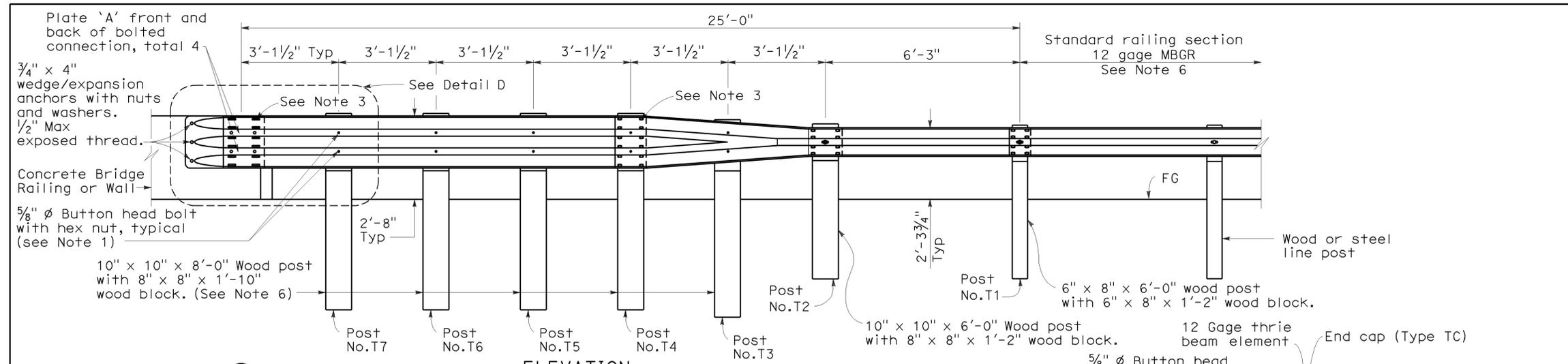
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
05	Mon, Scr	1	R101.5/R102.0, RO.0/14.0	38	47

**Randell D. Hiatt**  
REGISTERED CIVIL ENGINEER

June 5, 2009  
PLANS APPROVAL DATE

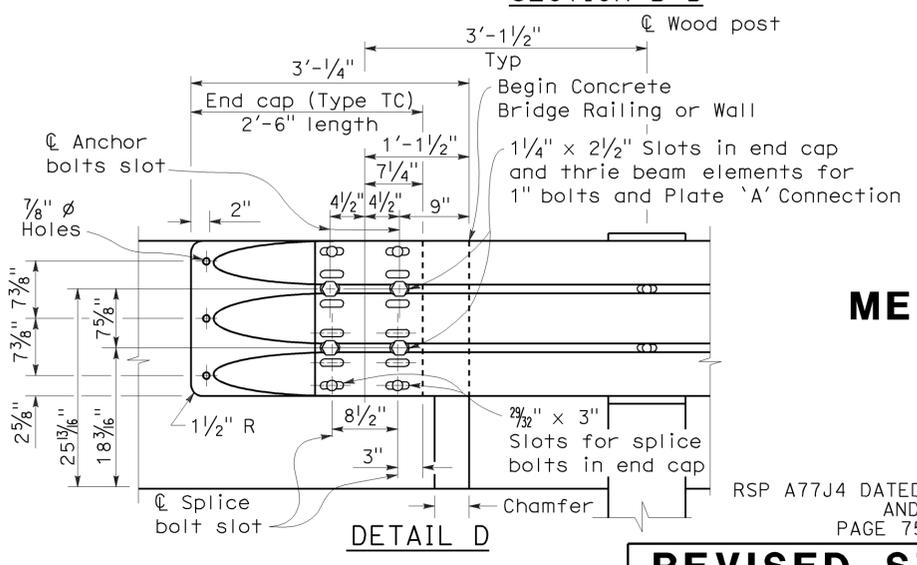
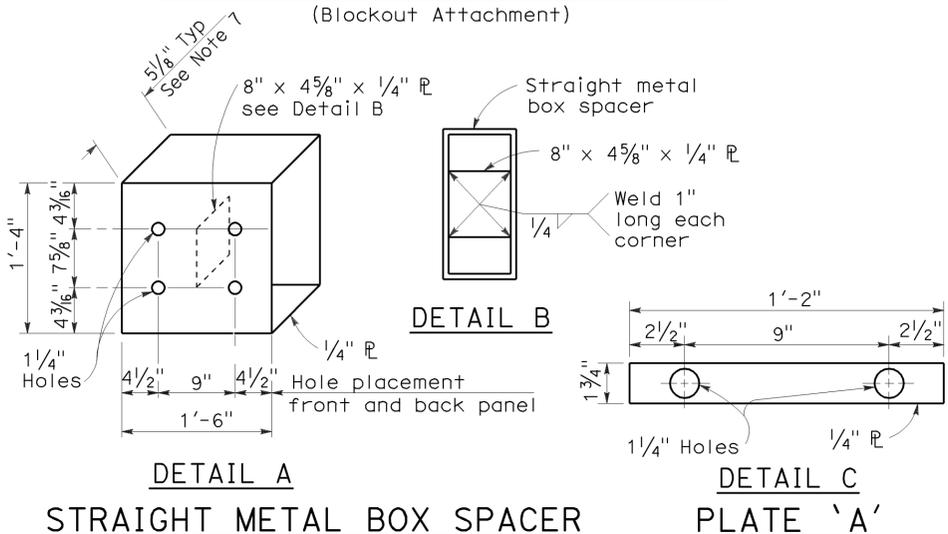
*The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.*

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



- NOTES:** To accompany plans dated 4-18-11
- Use 5/8 "  $\phi$  Button head bolts and hex nuts for connections to posts. No washer on rail face for bolted connections to post.
  - 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.
  - Exterior splice bolt holes for rail element splices at Post No.T4 and the connection to the concrete barrier or railing shall be the standard 29/32 " x 1 1/8 " slot size. Interior splice bolt holes at these locations may be increased up to 1 1/4 "  $\phi$ . Only the top 2 and the bottom 2 splice bolts with washers and nuts are required for rail splices at Post No.T4 and the connection to the concrete barrier or railing.
  - Direction of adjacent traffic indicated by  $\rightarrow$ .
  - The top elevation of Post Nos.T2 through T7 shall not project more than 1" above the top elevation of the rail element.
  - Typically, the railing connected to Transition Railing (Type WB) will be either standard railing section of metal beam guard railing or an approved Caltrans end treatment attached to Post No.T1.
  - The depth of the metal box spacer varies from the 5 1/8 " to 1 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 17 1/8 ". Where the space between the backside of the concrete railing or wall and the rear thrie beam element is less than 1 1/2 ", metal plates similar to Plate 'A' are to be used as spacers.
  - 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.4 through No.7 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.
  - End cap may be installed over 12 gage and 10 gage thrie beam elements where transition railing is installed on the departure end of bridge railing.

- LEGEND**
- (A) Nested thrie beam elements (one 12 gage element nested over one 10 gage element).
  - (B) One 10 gage "W" beam to thrie beam element.
  - (C) One 12 gage thrie beam element.
  - (D) One 10 gage "W" beam rail element (7'-3 1/2" length)
- 10 gage = 0.135" thick  
12 gage = 0.108" thick



STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

## METAL BEAM GUARD RAILING TRANSITION RAILING (TYPE WB)

NO SCALE

RSP A77J4 DATED JUNE 5, 2009 SUPERSEDES RSP A77J4 DATED JUNE 6, 2008 AND STANDARD PLAN A77J4 DATED MAY 1, 2006 - PAGE 75 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP A77J4**

2006 REVISED STANDARD PLAN RSP A77J4

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
05	Mon, SCr	1	R101.5/R102.0, R0.0/14.0	39	47

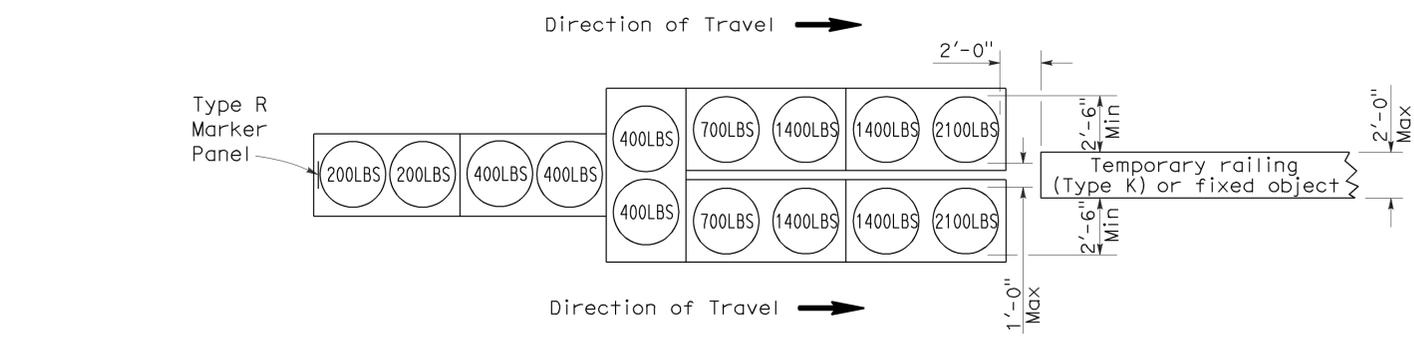
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

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

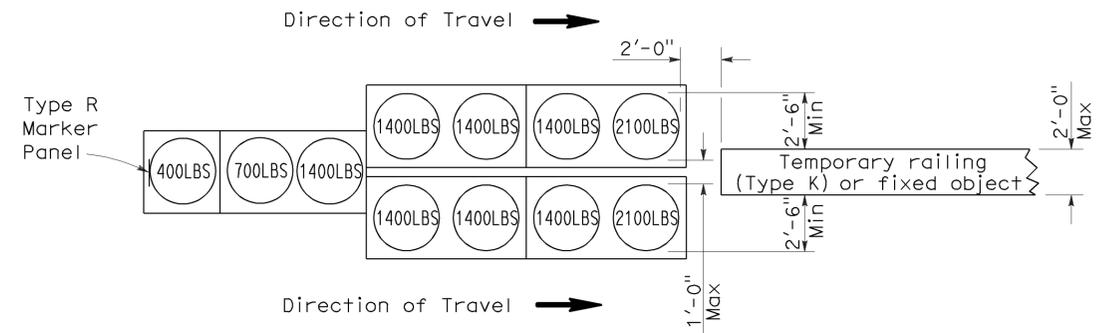
REGISTERED PROFESSIONAL ENGINEER  
Randell D. Hiatt  
No. C50200  
Exp. 6-30-09  
CIVIL  
STATE OF CALIFORNIA

To accompany plans dated 4-18-11



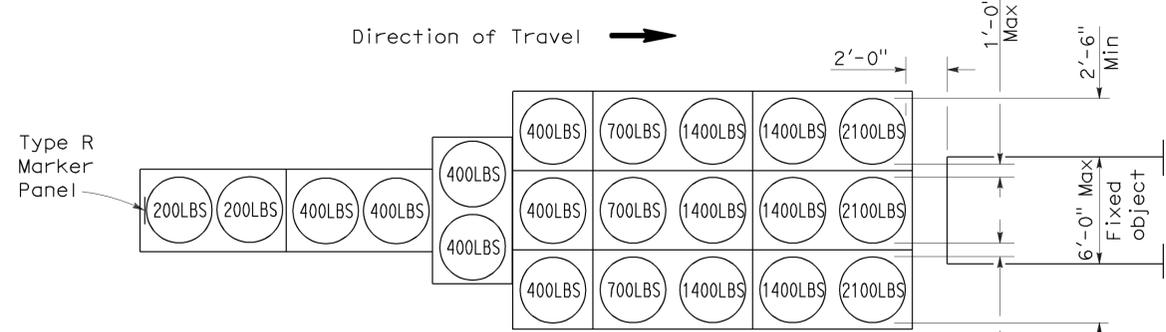
**ARRAY 'TU14'**

Approach speed 45 mph or more



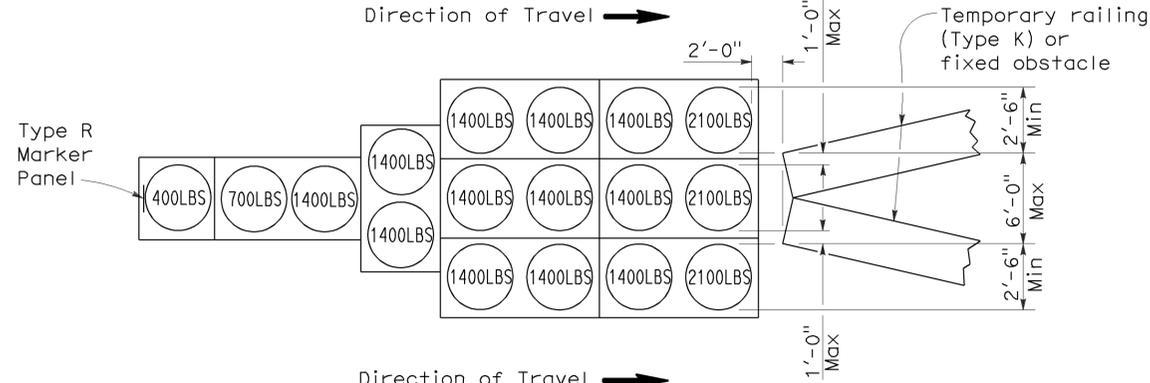
**ARRAY 'TU11'**

Approach speed less than 45 mph



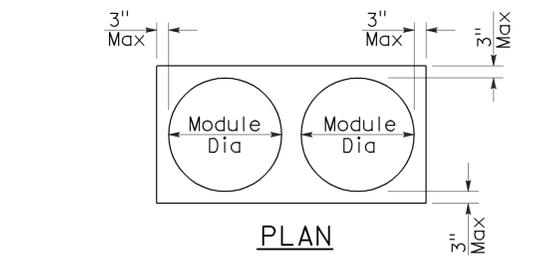
**ARRAY 'TU21'**

Approach speed 45 mph or more

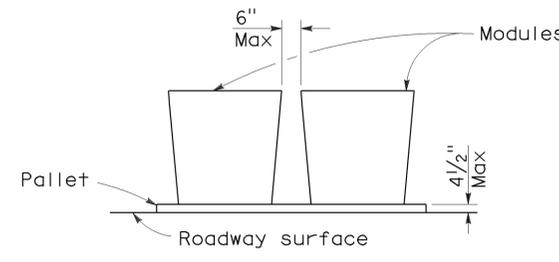


**ARRAY 'TU17'**

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

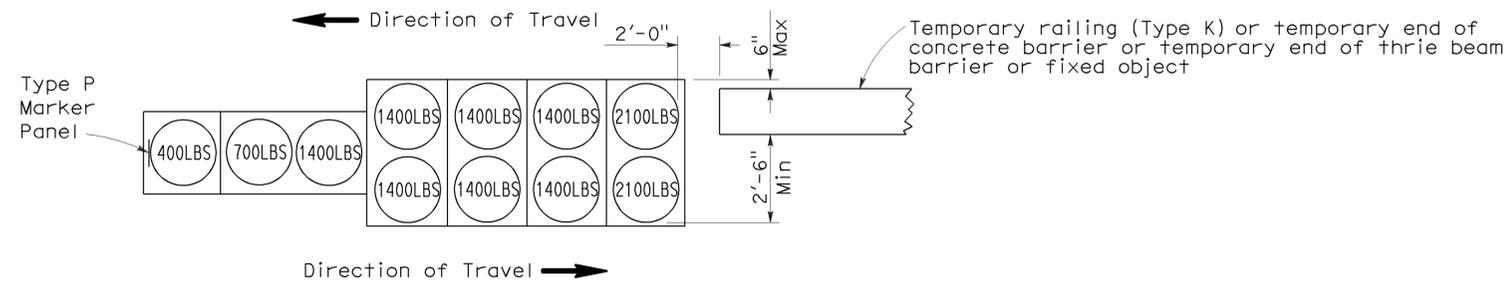
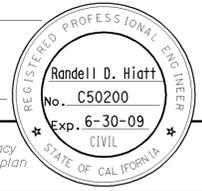
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
05	Mon, SCr	1	R101.5/R102.0, R0.0/14.0	40	47

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

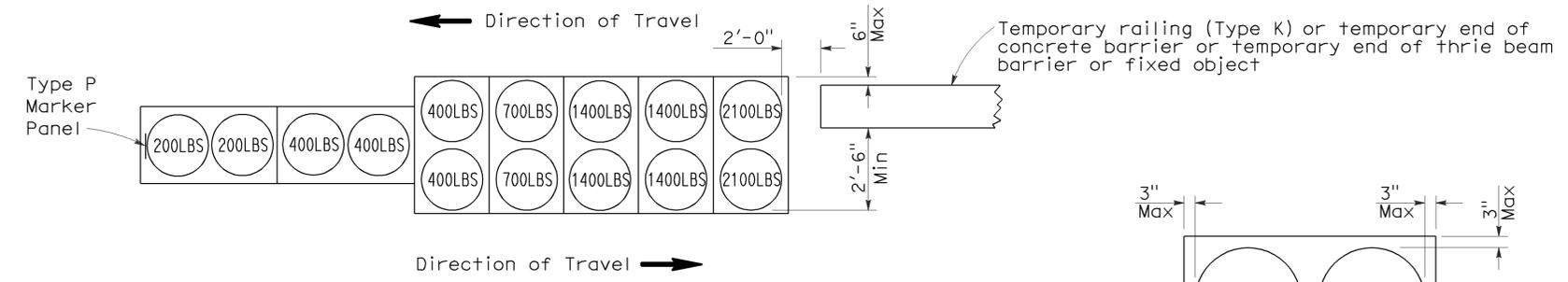
*The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.*

To accompany plans dated 4-18-11



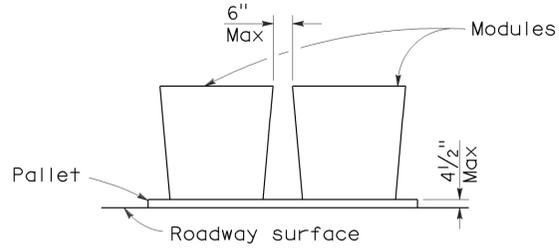
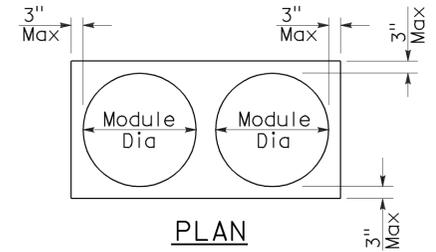
**ARRAY 'TB11'**

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
05	Mon, SCr	1	R101.5/R102.0, R0.0/14.0	41	47

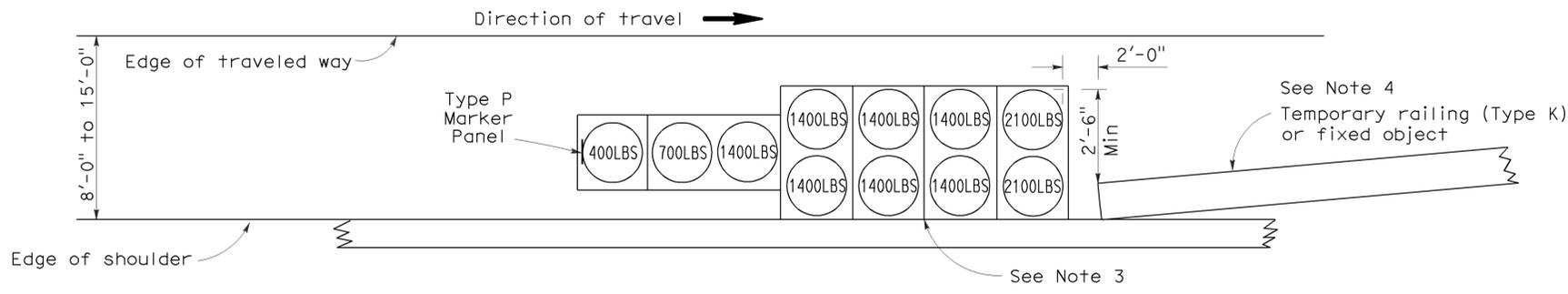
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

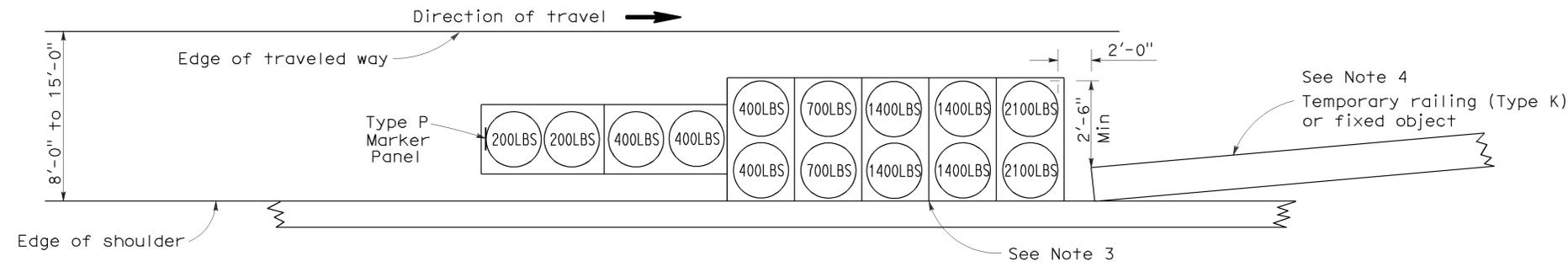
*Randell D. Hiatt*  
No. C50200  
Exp. 6-30-09  
CIVIL  
STATE OF CALIFORNIA

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

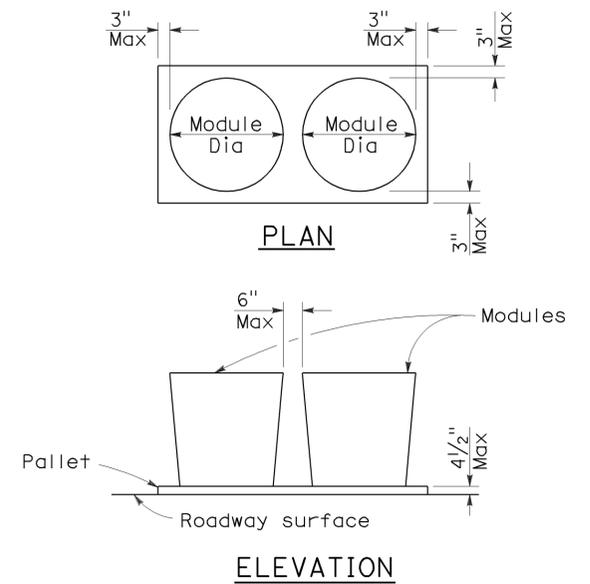
To accompany plans dated 4-18-11



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



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



**CRASH CUSHION PALLET DETAIL**  
See Note 11

**NOTES:**

- (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**

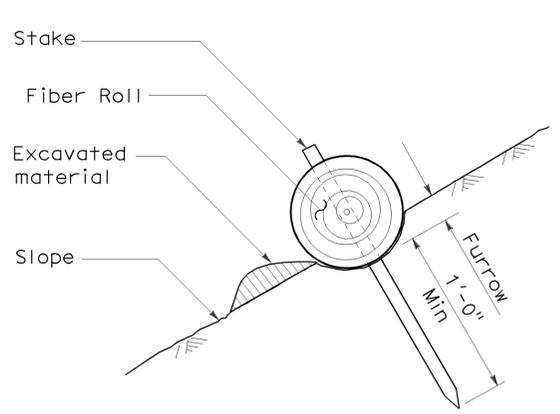
2006 REVISED STANDARD PLAN RSP T2



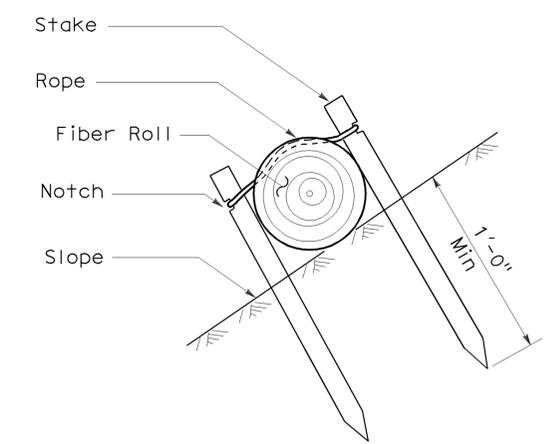
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
05	Mon, SCr	1	R101.5/R102.0, R0.0/14.0	43	47

*Robert B. Schott*  
 LICENSED LANDSCAPE ARCHITECT  
 April 3, 2009  
 PLANS APPROVAL DATE  
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

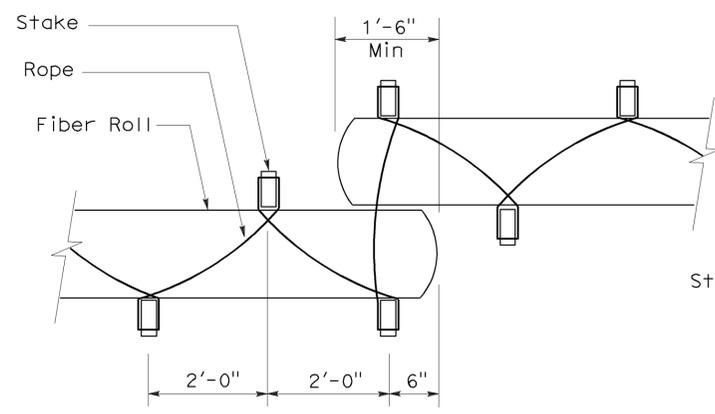
To accompany plans dated 4-18-11



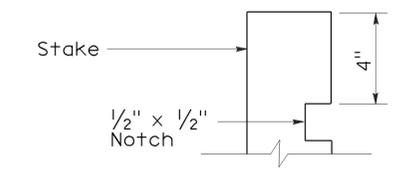
**SECTION**  
**TEMPORARY FIBER ROLL (TYPE 1)**



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

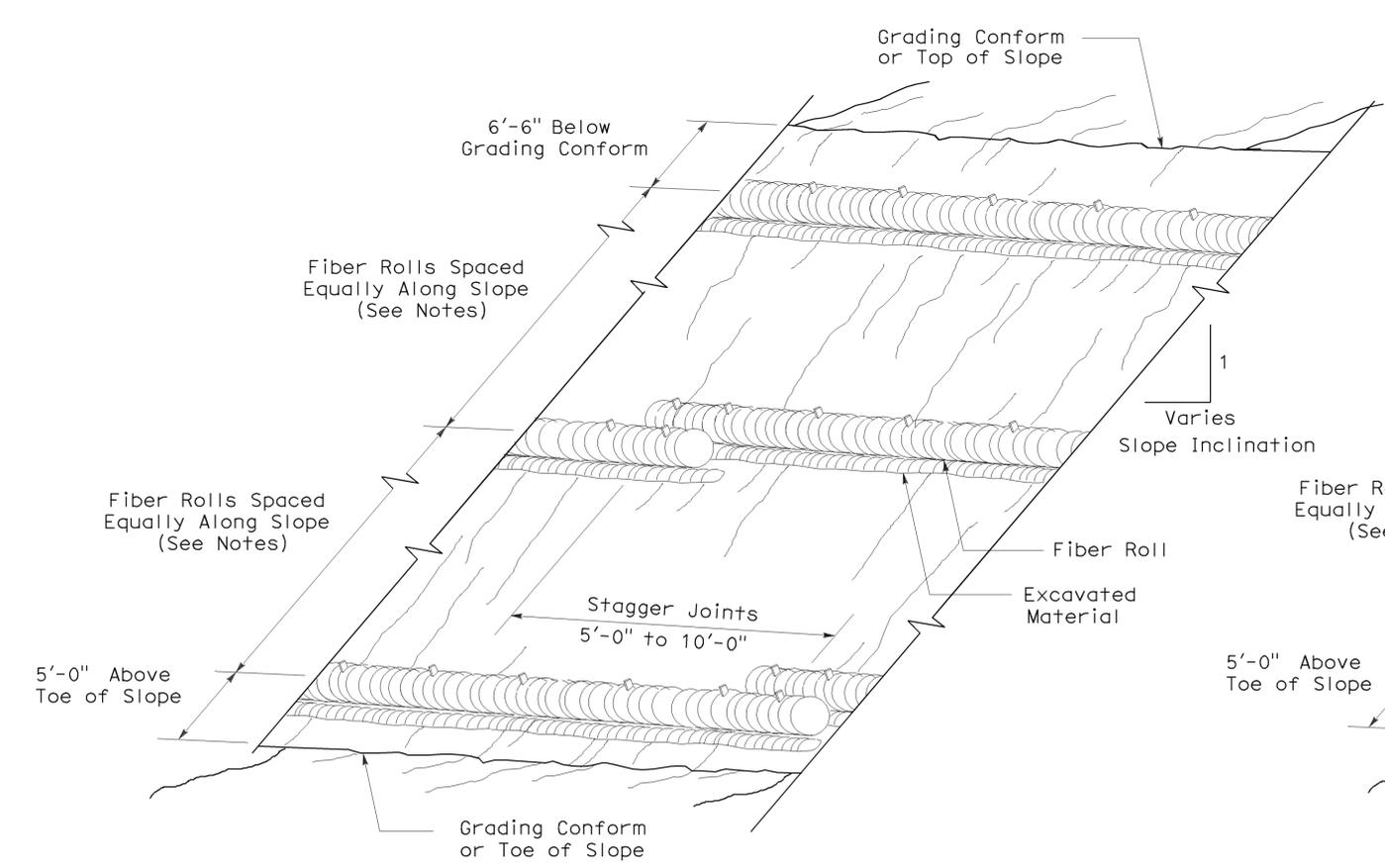


**PLAN**

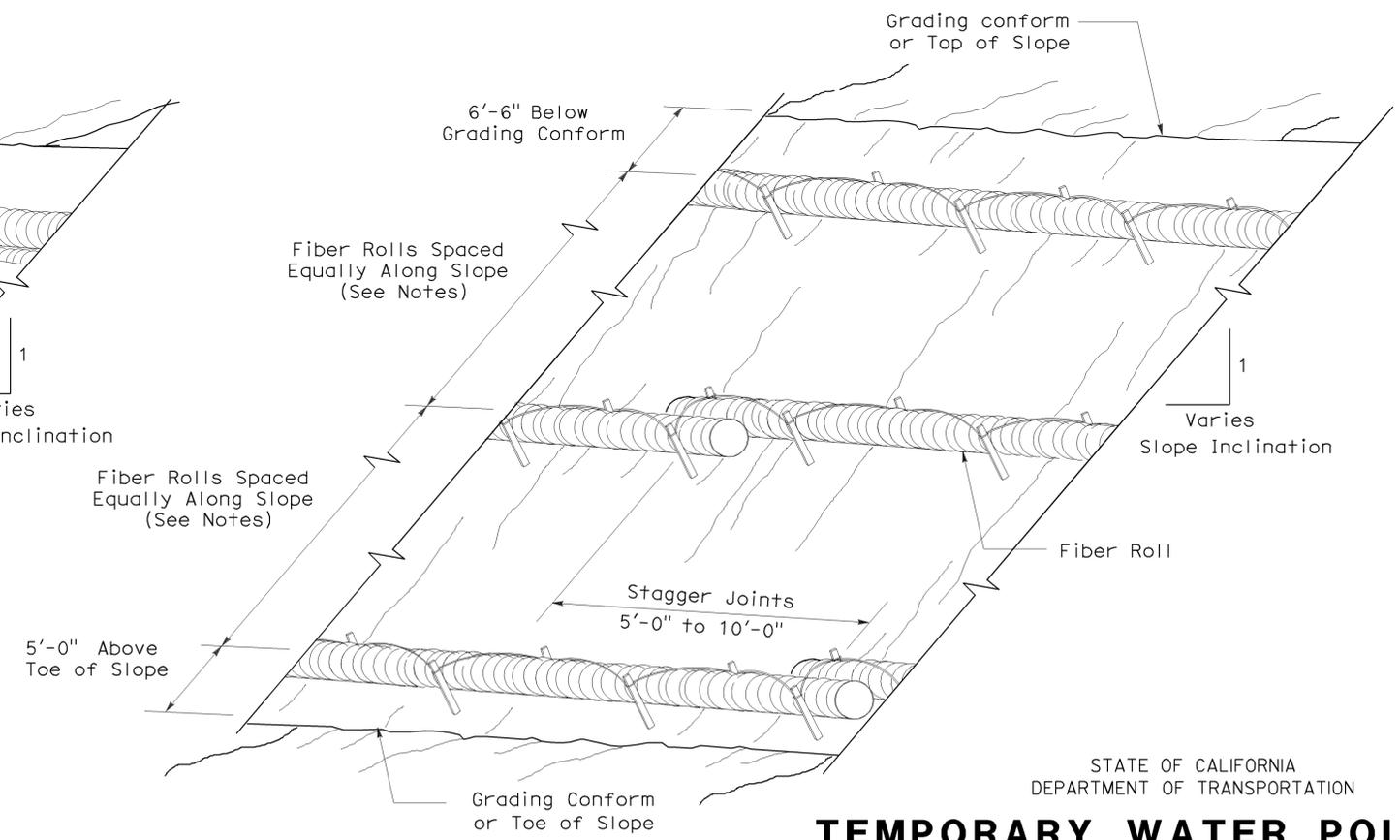


**ELEVATION**  
**STAKE NOTCH DETAIL**

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



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



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

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

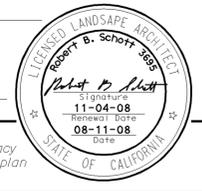
**REVISED STANDARD PLAN RSP T56**

232

2006 REVISED STANDARD PLAN RSP T56

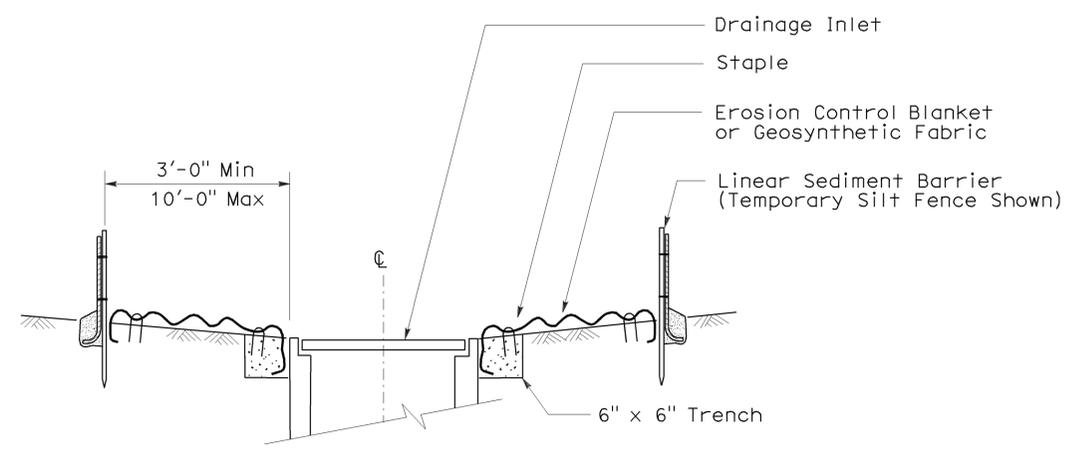
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
05	Mon, SCr	1	R101.5/R102.0, R0.0/14.0	44	47

Robert B. Schott  
 LICENSED LANDSCAPE ARCHITECT  
 August 15, 2008  
 PLANS Approval DATE  
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

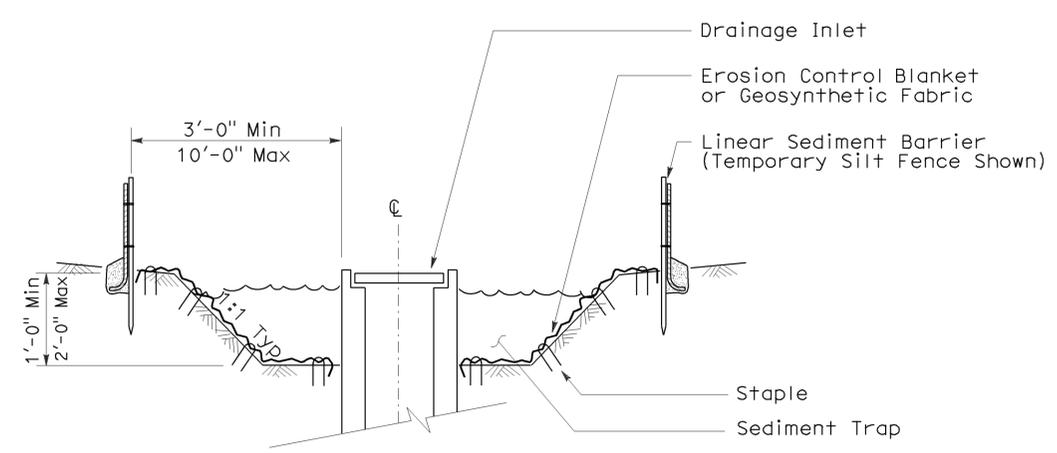


To accompany plans dated 4-18-11

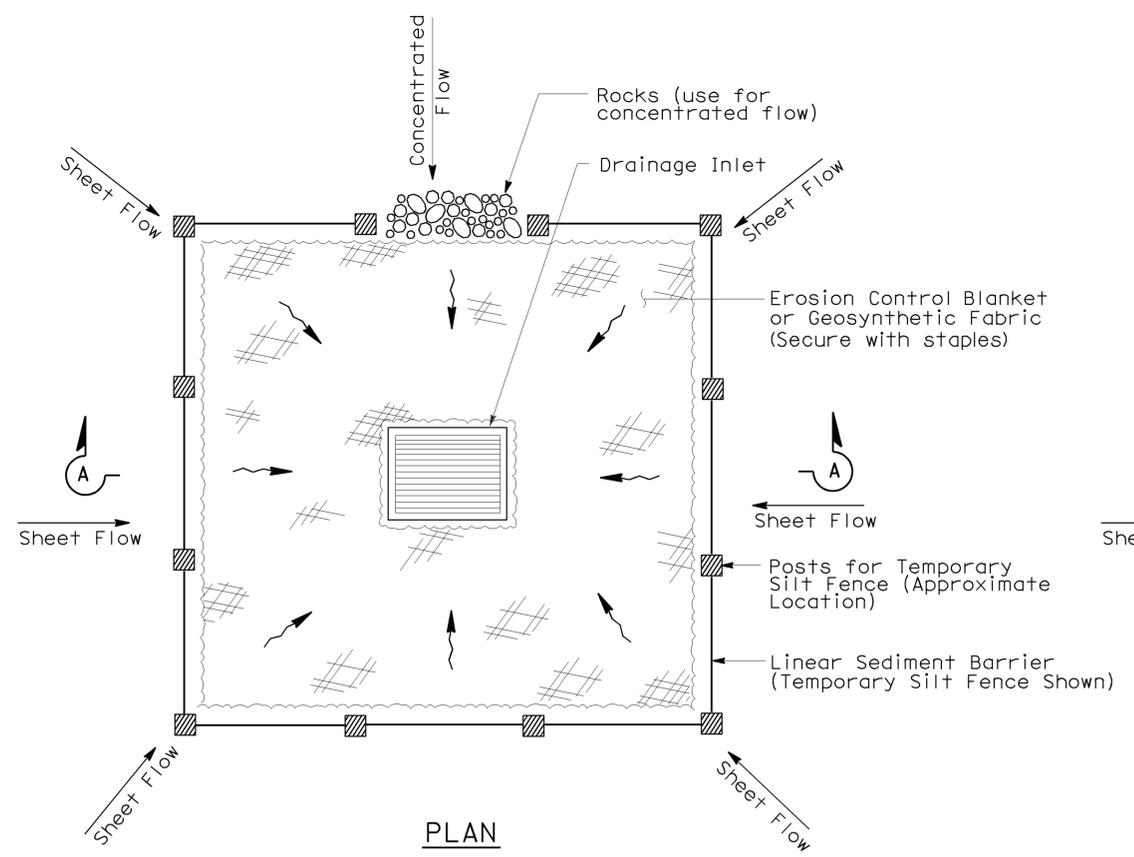
- NOTES:**
1. See Standard Plan T51 for Temporary Silt Fence.
  2. Dimensions may vary to fit field conditions.



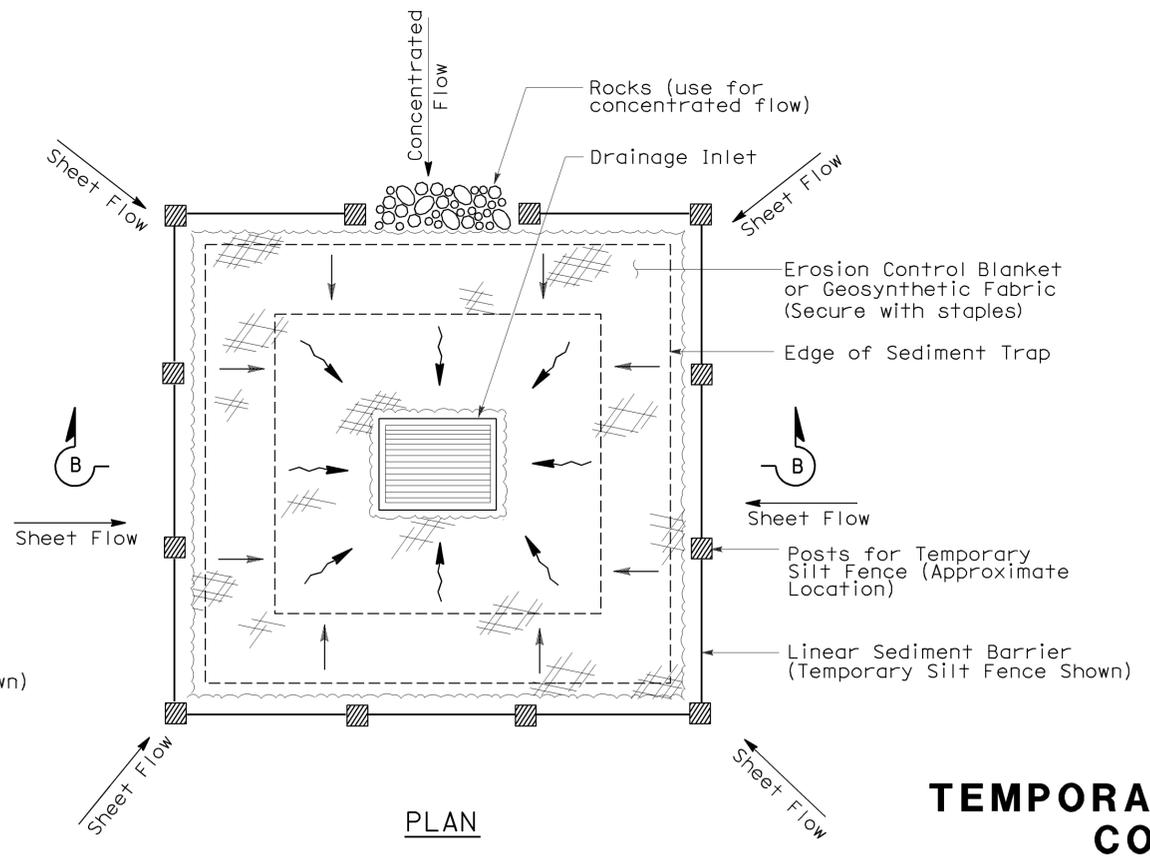
SECTION A-A



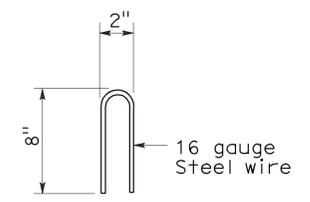
SECTION B-B



TEMPORARY DRAINAGE INLET PROTECTION (TYPE 1)



TEMPORARY DRAINAGE INLET PROTECTION (TYPE 2) (EXCAVATED SEDIMENT TRAP)



STAPLE DETAIL

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

## TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)

NO SCALE

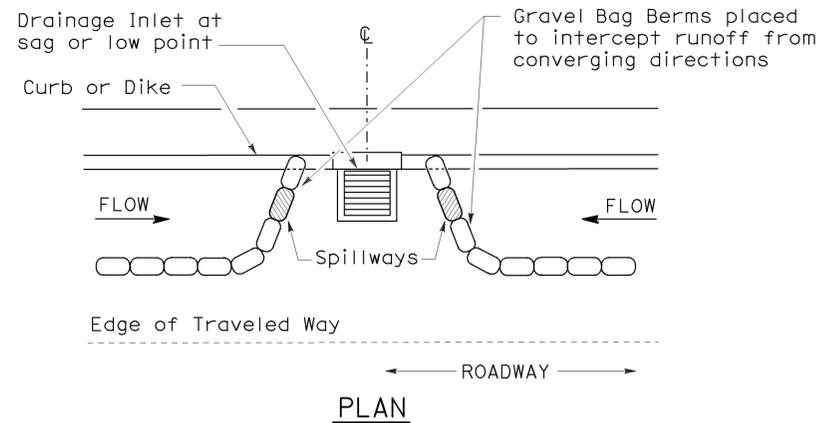
Nsp +61 dated august 15, 2008 supplements the standard plans book dated may 2006.

2006 NEW STANDARD PLAN NSP T61

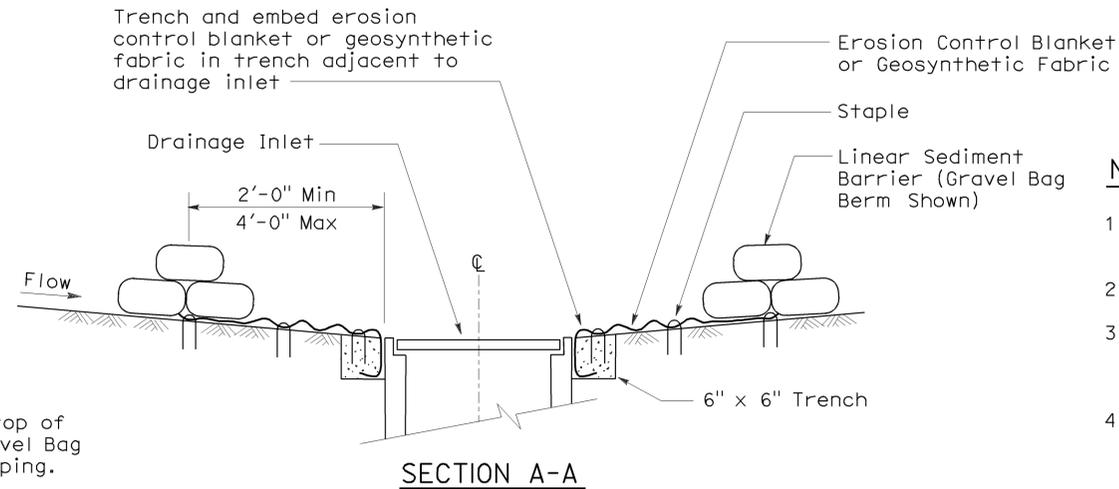
### GRAVEL BAG BERM (TYPE 3A) SPACING TABLE

SLOPE OF ROADWAY (PERCENT)	1 to 3.9	4 to 5.9	6 to 7.9	8 to 10	10+
INTERVAL BETWEEN BERM	100'	75'	50'	25'	12'

For slope of less than 1%, install barriers only if erosion/sediment is prevalent



**PLAN**  
**CONFIGURATION FOR SAG POINT INLET (GRAVEL BAG BERM)**

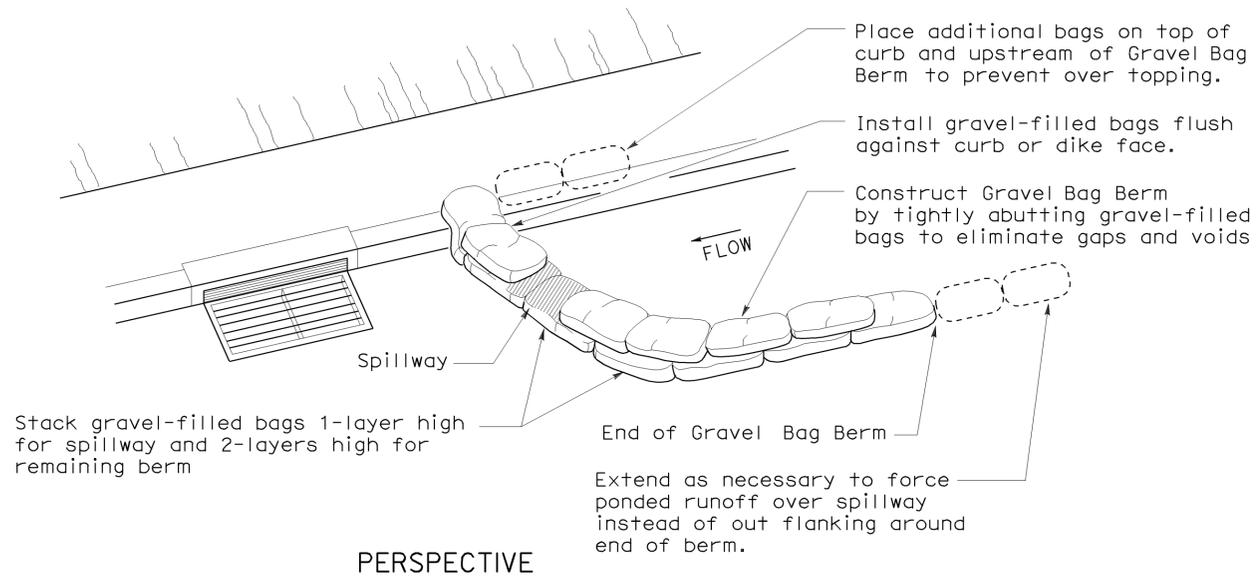


**SECTION A-A**

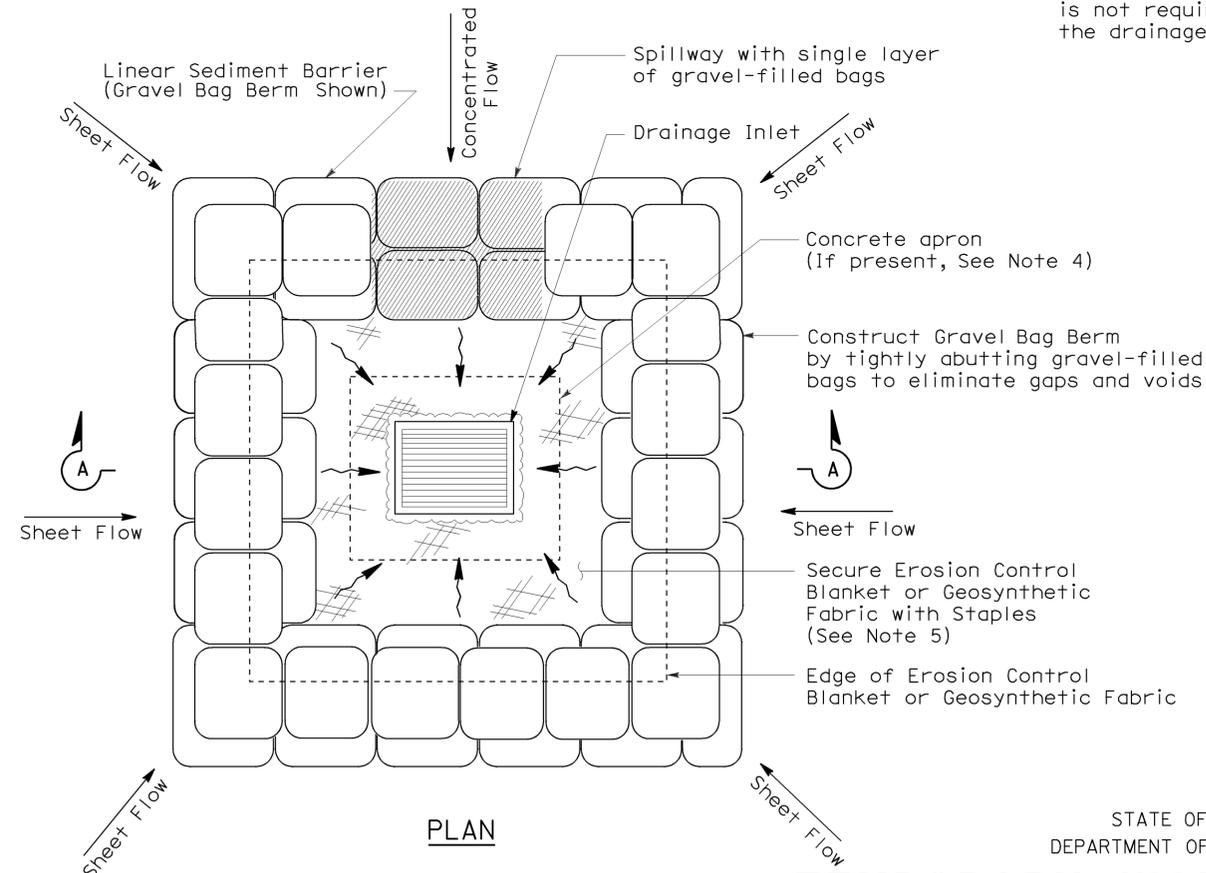
**NOTES:**

1. Place safety cones adjacent to drainage inlet protection.
2. Dimensions may vary to fit field conditions.
3. Install a minimum of 3 gravel bag berms upstream of each drainage inlet to be protected.
4. Position erosion control blanket or geosynthetic fabric at edge of concrete apron and secure in trench.
5. Erosion control blanket or geosynthetic fabric is not required if the area adjacent to the drainage inlet is vegetated or paved.

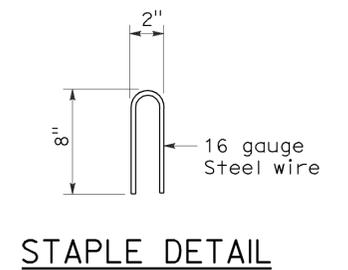
To accompany plans dated 4-18-11



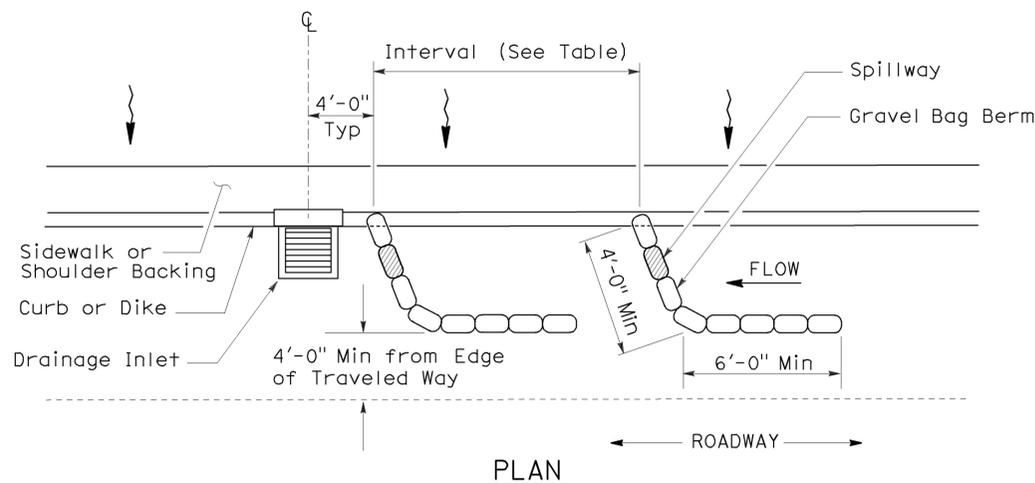
**PERSPECTIVE**



**PLAN**  
**TEMPORARY DRAINAGE INLET PROTECTION (TYPE 3B)**



**STAPLE DETAIL**



**PLAN**  
**TEMPORARY DRAINAGE INLET PROTECTION (TYPE 3A) (GRAVEL BAG BERM)**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)**

NO SCALE  
NSP T62 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

FLEXIBLE SEDIMENT BARRIER SPACING TABLE

SLOPE OF ROADWAY (PERCENT)	0 to 0.9	1 to 1.9	2 to 2.9	3 to 4	5+
INTERVAL BETWEEN BARRIERS	50'	35'	30'	25'	20'
ANGLE FROM FACE OF CURB	70°	70°	70°	45°	45°
SUGGESTED BARRIER LENGTH	6'	6'	6'	6'	6'

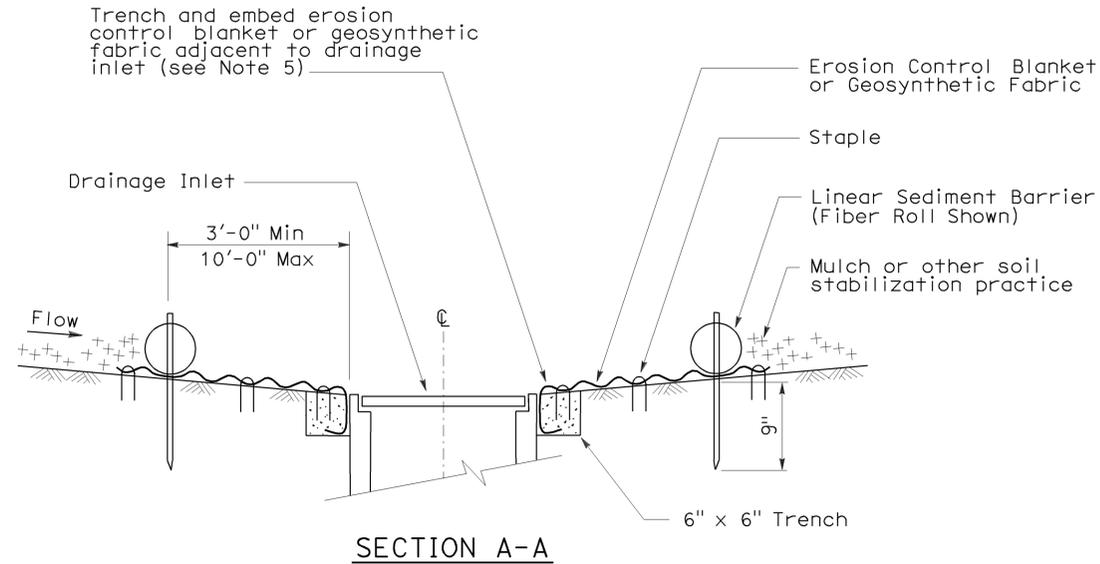
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
05	Mon, SCr	1	R101.5/R102.0, R0.0/14.0	46	47

Robert B. Schott  
LICENSED LANDSCAPE ARCHITECT

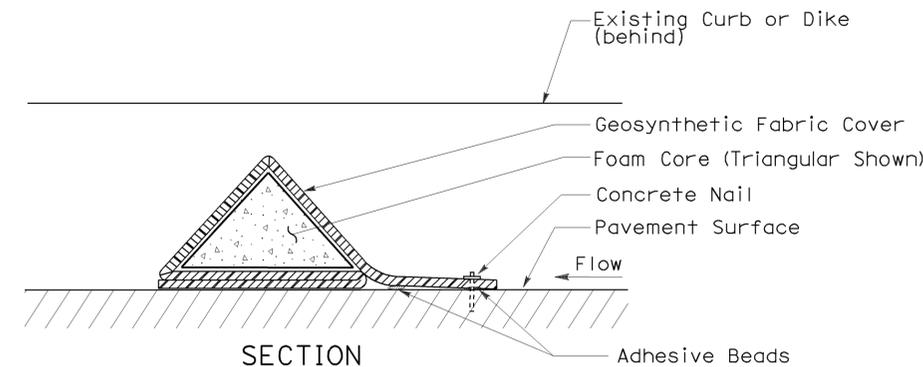
August 15, 2008  
PLANS APPROVAL DATE

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

To accompany plans dated 4-18-11



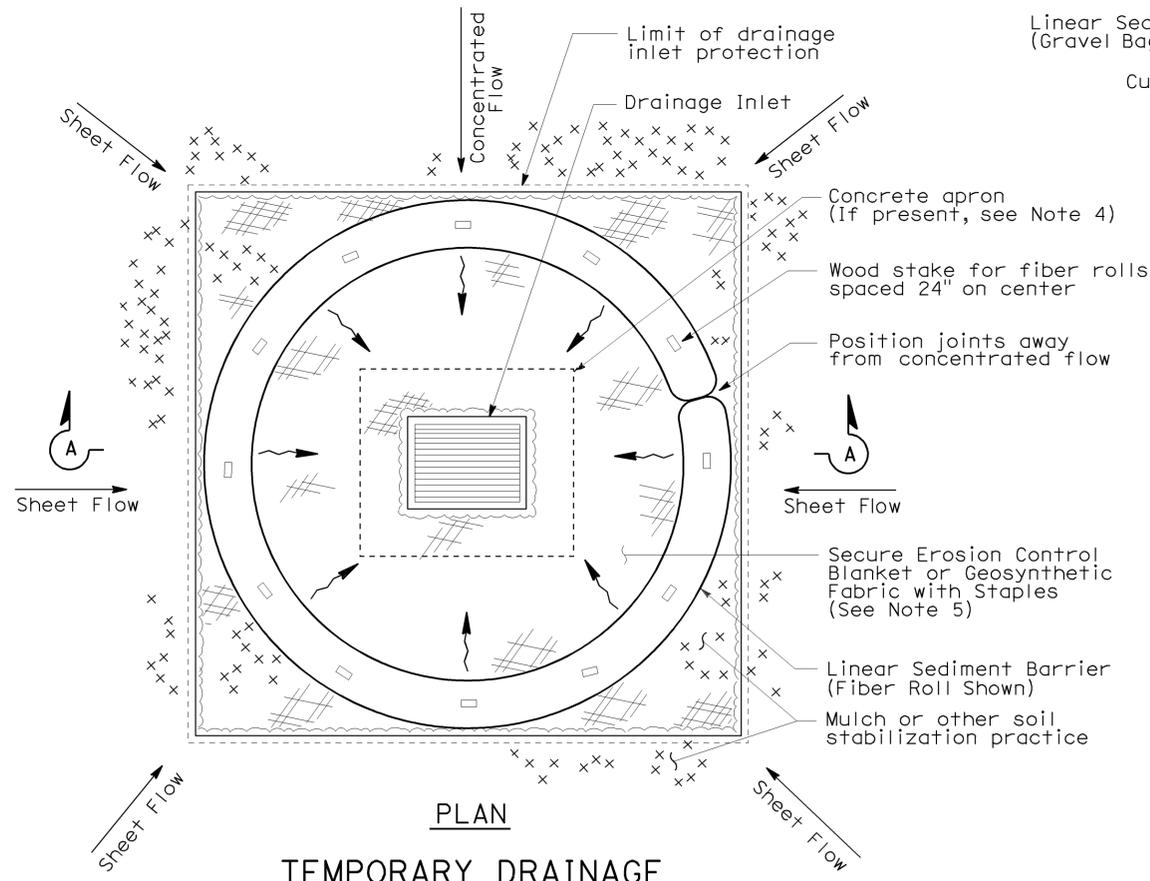
SECTION A-A



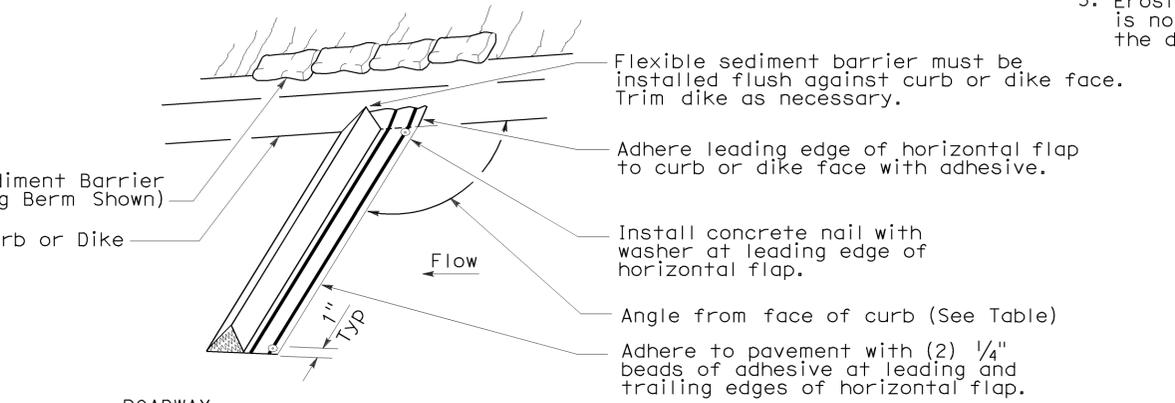
SECTION  
FLEXIBLE SEDIMENT BARRIER DETAIL  
(FOAM BARRIER SHOWN)

NOTES:

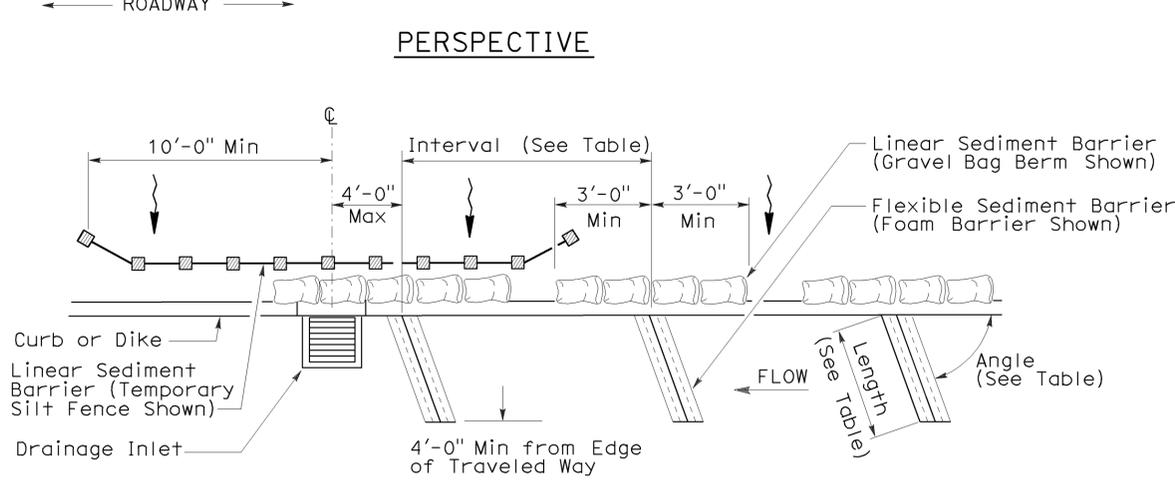
- See Standard Plan T51 for Temporary Silt Fence.
- Dimensions may vary to fit field conditions.
- Install a minimum of 3 flexible sediment barriers upstream of each drainage inlet to be protected.
- Position erosion control blanket or geosynthetic fabric at edge of concrete apron and secure in trench.
- Erosion control blanket or geosynthetic fabric is not required if the area adjacent to the drainage inlet is vegetated.



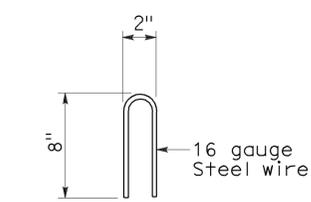
PLAN  
TEMPORARY DRAINAGE  
INLET PROTECTION (TYPE 4A)



PERSPECTIVE



PLAN  
TEMPORARY DRAINAGE  
INLET PROTECTION (TYPE 4B)  
FLEXIBLE SEDIMENT BARRIER



STAPLE DETAIL

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**TEMPORARY WATER POLLUTION  
CONTROL DETAILS  
(TEMPORARY DRAINAGE  
INLET PROTECTION)**

NO SCALE  
NSP T63 DATED AUGUST 15, 2008 SUPPLEMENTS  
THE STANDARD PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP T63

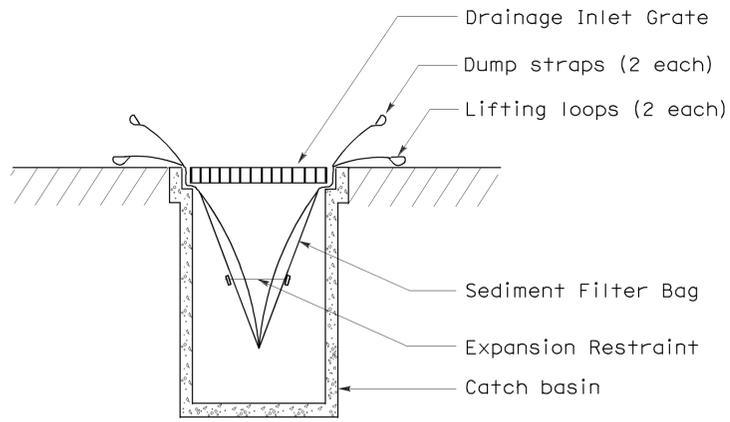
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
05	Mon, SCr	1	R101.5/R102.0, R0.0/14.0	47	47

*Robert B. Schott*  
 LICENSED LANDSCAPE ARCHITECT

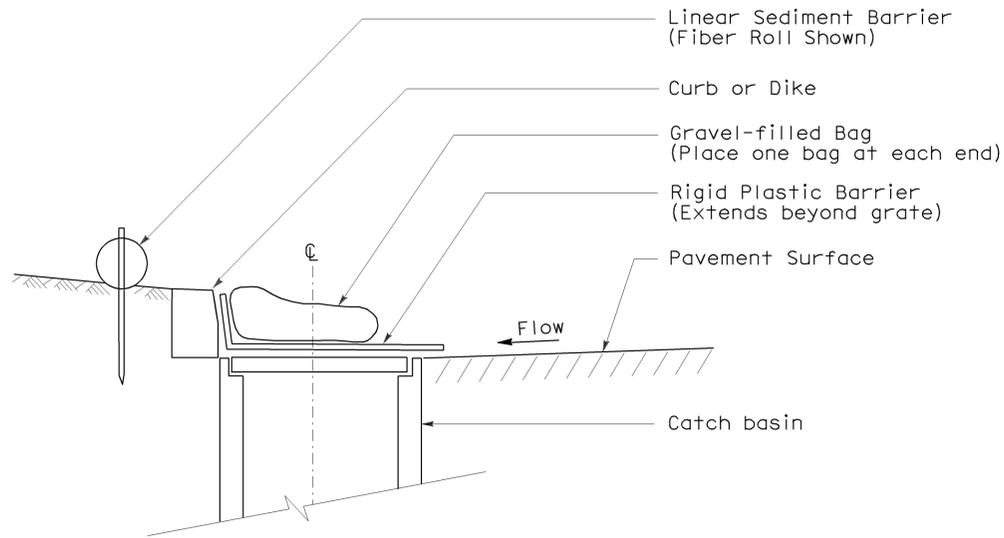
August 15, 2008  
 PLANS APPROVAL DATE

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

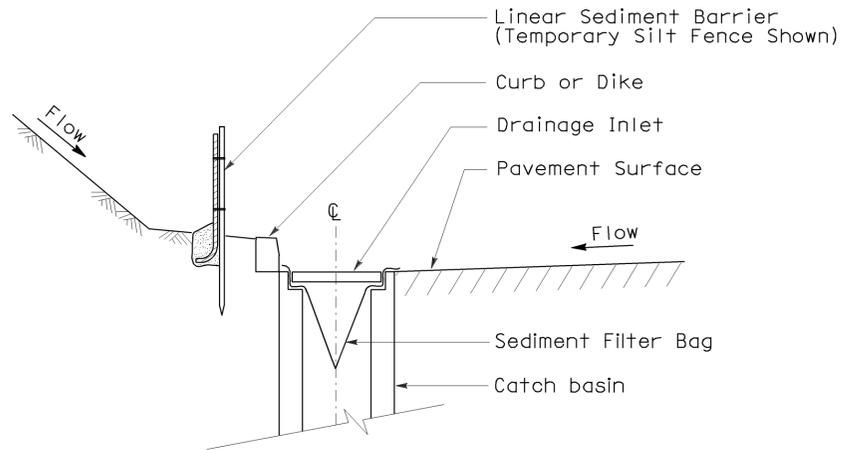
To accompany plans dated 4-18-11



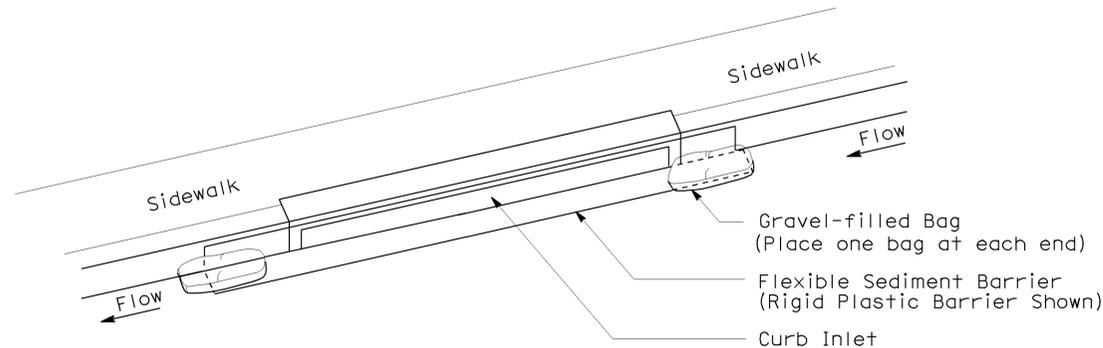
SECTION B-B  
SEDIMENT FILTER BAG DETAIL



SECTION  
TEMPORARY DRAINAGE  
INLET PROTECTION (TYPE 6A)  
(CATCH BASIN WITH GRATE)

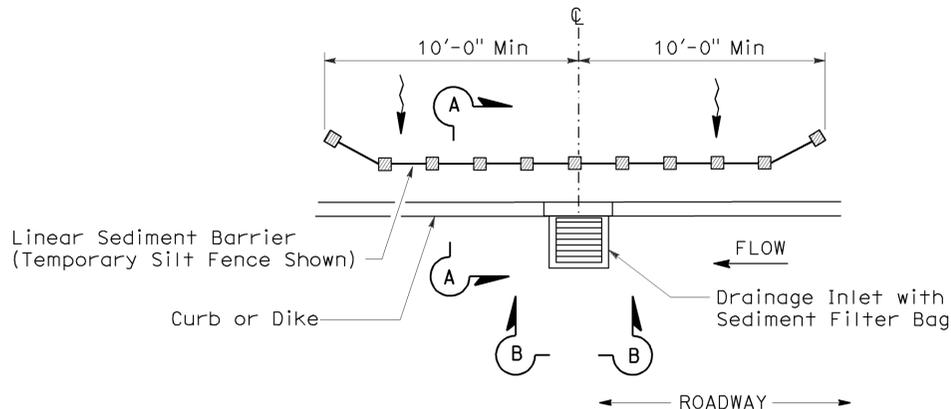


SECTION A-A



PERSPECTIVE

TEMPORARY DRAINAGE  
INLET PROTECTION (TYPE 6B)  
(CURB INLET WITHOUT GRATE)



TEMPORARY DRAINAGE  
INLET PROTECTION (TYPE 5)  
(SEDIMENT FILTER BAG)

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**TEMPORARY WATER POLLUTION  
CONTROL DETAILS  
(TEMPORARY DRAINAGE  
INLET PROTECTION)**

NO SCALE  
NSP T64 DATED AUGUST 15, 2008 SUPPLEMENTS  
THE STANDARD PLANS BOOK DATED MAY 2006.