

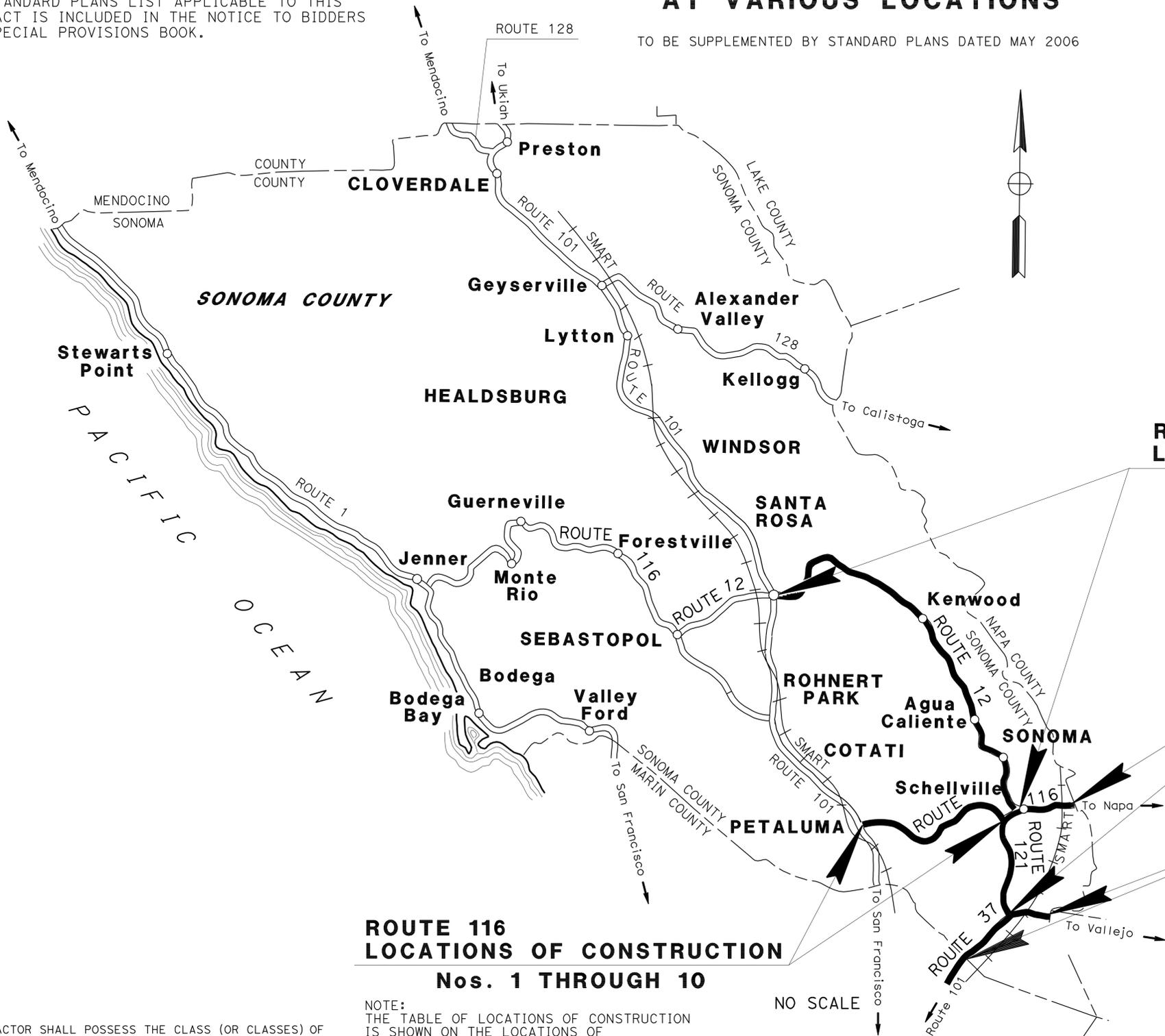
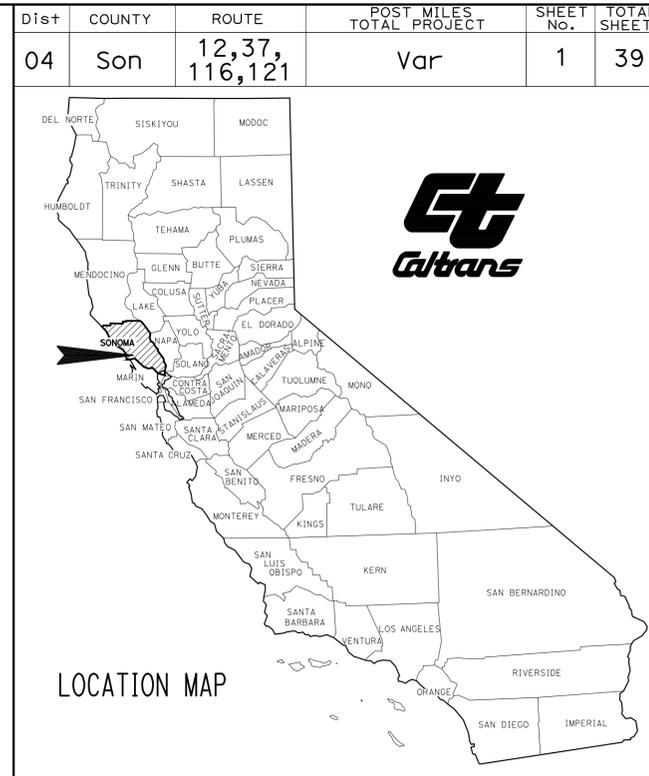
INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2-3	LOCATIONS OF CONSTRUCTION
4-17	CONSTRUCTION DETAILS
18	TEMPORARY WATER POLLUTION CONTROL DETAILS
19	EROSION CONTROL DETAILS AND QUANTITIES
20-22	CONSTRUCTION AREA SIGNS
23-28	SUMMARY OF QUANTITIES
29-39	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 **ACHSSTPG-P097(037)E**  
**DEPARTMENT OF TRANSPORTATION**  
**PROJECT PLANS FOR CONSTRUCTION ON**  
**STATE HIGHWAY**  
**IN SONOMA COUNTY**  
**AT VARIOUS LOCATIONS**

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006



**ROUTE 12**  
**LOCATIONS OF CONSTRUCTION**  
 Nos. 1 THROUGH 29

**ROUTE 121**  
**LOCATIONS OF CONSTRUCTION**  
 Nos. 1 THROUGH 34

**ROUTE 37**  
**LOCATIONS OF CONSTRUCTION**  
 Nos. 1 THROUGH 3

**ROUTE 116**  
**LOCATIONS OF CONSTRUCTION**  
 Nos. 1 THROUGH 10

**ABBREVIATION:**  
 SMART- SONOMA MARIN AREA RAIL TRANSIT

NOTE:  
 THE TABLE OF LOCATIONS OF CONSTRUCTION IS SHOWN ON THE LOCATIONS OF CONSTRUCTION SHEET.

NO SCALE

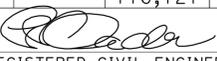
09-22-08  
 PROJECT ENGINEER DATE  
 REGISTERED CIVIL ENGINEER  
 Ghulam Popal  
 No. 61927  
 Exp. 09-30-09  
 CIVIL  
 STATE OF CALIFORNIA

December 1, 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.

PROJECT MANAGER  
 LILIAN ACORDA  
 DESIGN ENGINEER  
 GHULAM POPAL

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,37,116,121	Var	2	39

 09-22-08  
 REGISTERED CIVIL ENGINEER DATE  
 12-1-08  
 PLANS APPROVAL DATE

Ghulam Popal  
 No. 61927  
 Exp. 09-30-09  
 CIVIL

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.

**NOTE:**

EXISTING UTILITY FACILITIES HAVE NOT BEEN POSITIVELY LOCATED.

**LOCATIONS OF CONSTRUCTION**

ROUTE-LOCATION No.	DESCRIPTION	DIRECTION	PM
	ROUTE 12		
12-1	EB ON-RAMP FROM NB 101	EB	R16.2
12-2	WB OFF-RAMP TO NB 101	WB	R16.2
12-3	EB AFTER Br 20-267	EB	R17.04
12-4	WB BEFORE Br 20-267	WB	R17.04
12-5	EB RAMP BEFORE FARMERS Ln	EB	R17.53
12-6	WB (MBGR IN 3 SEGMENTS)	WB	17.82
12-7	EB	EB	17.86
12-8	MEDIAN		17.86
12-9	EB	EB	18.23
12-10	EB EAST OF St FRANCIS Rd	EB	20.54
12-11	WB EAST OF MOUNTAIN HAWK	WB	20.71
12-12	EB WEST OF FAIRWAY Dr	EB	21.02
12-13	WB WEST OF FAIRWAY Dr	WB	21.02
12-14	WB (AFTER MELITA Rd)	WB	21.66
12-15	EB	EB	22.38
12-16	EB	EB	24.7
12-17	WB	WB	24.7
12-18	WB	WB	25.8
12-19	EB	EB	25.83
12-20	EB (ADDRESS: 9125 Hwy12)	EB	26.7

ROUTE-LOCATION No.	DESCRIPTION	DIRECTION	PM
	ROUTE 12		
12-21	EB (BEFORE HELMICK Rd)	EB	26.96
12-22	WB (AFTER HELMICK Rd)	WB	27.09
12-23	EB (CORNER OF GRISWOLD Ave)	EB	27.11
12-24	EB Calabazas Cr	EB	29.41
12-25	WB Calabazas Cr Br	WB	29.41
12-26	EB (500' WEST OF Madrone Rd)	EB	32.7
12-27	WB (500' WEST OF Madrone Rd)	WB	32.7
12-28	EB at Fisher Ln	EB	38.96
12-29	WB WEST OF Fisher Ln	WB	38.96

ROUTE-LOCATION No.	DESCRIPTION	DIRECTION	PM
	ROUTE 37		
37-1	WB, TOLAY Cr Br	WB	4.04
37-2	EB, TOLAY Cr Br	EB	4.04
37-3	WB, EAST OF TOLAY Cr Br	WB	4.28

**LOCATIONS OF CONSTRUCTION**

**LC-1**

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** DESIGN  
 FUNCTIONAL SUPERVISOR: GHULAM POPAL  
 CALCULATED/DESIGNED BY: NAVSHAREEN PANDHER  
 CHECKED BY: VICTOR PEREYRA  
 REVISED BY: \_\_\_\_\_ DATE REVISED: \_\_\_\_\_

**NOTE:**  
 EXISTING UTILITY FACILITIES HAVE NOT BEEN POSITIVELY LOCATED.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,37, 116,121	Var	3	39

09-22-08  
 REGISTERED CIVIL ENGINEER DATE  
 12-1-08  
 PLANS APPROVAL DATE

**Ghulam Popal**  
 No. 61927  
 Exp. 09-30-09  
 CIVIL

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.

**LOCATIONS OF CONSTRUCTION**

ROUTE-LOCATION No.	DESCRIPTION	DIRECTION	PM
ROUTE 116			
116-1	EB, @ LAKEVILLE Hwy, W OF Rte 101 UC	EB	35.0
116-2	WB, CULVERT STRUCTURE E OF ON-RAMP	WB	35.14
116-3	EB, ADOBE Crk B W OF FRATES Rd	EB	36.17
116-4	WB, ADOBE Crk Br W OF FRATES Rd	WB	36.17
116-5	EB, A DOWNHILL LEFT-TURN CURVE WITH ADVISE 40 MPH SIGN	EB	42.50
116-6	EB, E of PRIVATE DRIVEWAY, NEXT TO PREVIOUS MBGR	EB	42.6
116-7	WB, ACROSS LONG MBGR IN EB, END OF RIGHT-TURN CURVE	WB	42.88
116-8	WB, ACROSS LONG MBGR IN EB, IN MIDST OF RIGHT-TURN CURVE	WB	42.93
116-9	WB, ACROSS LONG MBGR @ EB, BEGIN OF A LEFT-TURN CURVE	WB	43.07
116-10	WB, CHAMPLIN Cr CULVERT, E OF COUNTY DUMP Rd	WB	43.29

ROUTE-LOCATION No.	DESCRIPTION	DIRECTION	PM
ROUTE 121			
121-1	NB	NB	0.22
121-2	NB AT INTERSECTION WITH RACEWAY ENTRANCE	NB	0.6
121-3	NB	NB	0.83
121-4	SB	SB	0.83
121-5	NB	NB	0.96
121-6	SB	SB	0.96
121-7	NB AT TOLAY Cr	NB	1.53
121-8	SB AT TOLAY Cr	SB	1.53
121-9	NB	NB	1.86
121-10	SB	SB	1.86
121-11	NB	NB	2.57
121-12	SB	SB	2.57
121-13	NB	NB	2.83
121-14	SB	SB	2.92
121-15	NB	NB	3.13
121-16	SB	SB	3.13
121-17	NB	NB	5.31
121-18	NB	NB	5.45
121-19	NB OVER Cr	NB	6.5

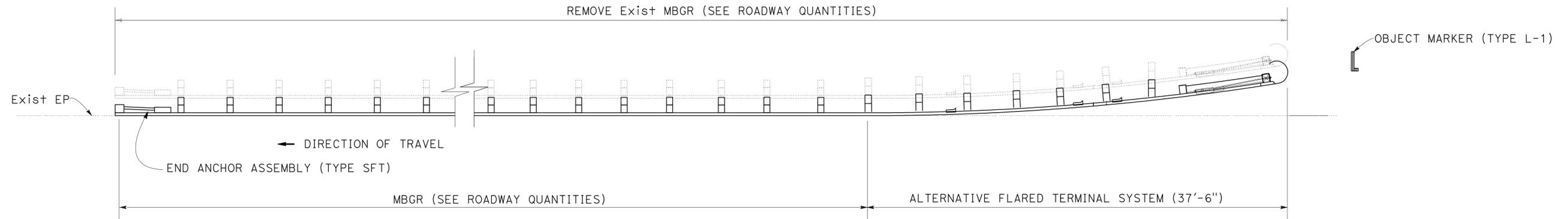
ROUTE-LOCATION No.	DESCRIPTION	DIRECTION	PM
ROUTE 121			
121-20	SB OVER CREEK	SB	6.5
121-21	NB ADJACENT TO PARKING LOT VINEYARD INN	NB	6.6
121-22	NB	NB	8.15
121-23	SB	SB	8.22
121-24	NB SOUTH OF SCHELLVILLE 8TH St, Cr	NB	8.22
121-25	NB NORTH OF SCHELLVILLE 8TH St	NB	8.25
121-26	SB NORTH OF RR XING	SB	8.27
121-27	NB SOUTH OF RR XING	NB	8.51
121-28	SB NORTH OF RR XING	SB	8.51
121-29	NB NORTH OF RR XING	NB	8.61
121-30	NB	NB	10.55
121-31	SB	SB	10.55
121-32	SB AT NAPA Rd	SB	10.79

**LOCATIONS OF CONSTRUCTION**  
**LC-2**

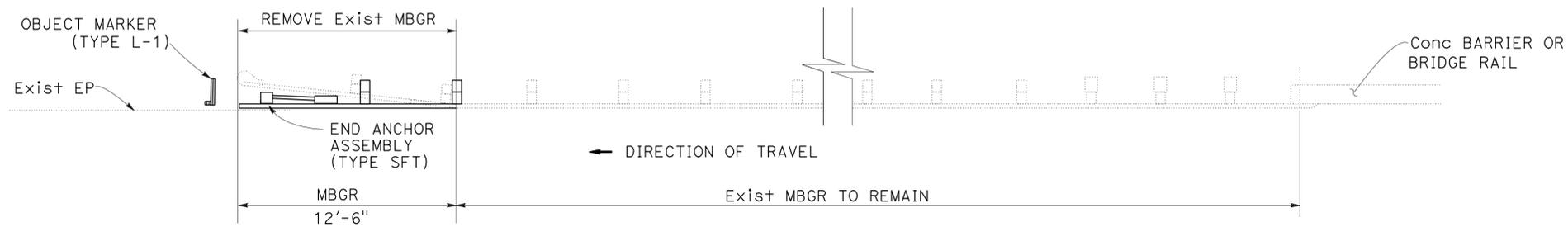
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,37,116,121	Var	4	39
			09-22-08	REGISTERED CIVIL ENGINEER DATE	
			12-1-08	PLANS APPROVAL DATE	
					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.</small>					

**NOTES:**

- EXISTING UTILITY FACILITIES HAVE NOT BEEN POSITIVELY LOCATED.
- SPACE GUARD RAILING DELINEATORS 50 FEET ON TANGENT SECTIONS AND 25 FEET ON CURVE SECTIONS.



**DETAIL A**  
Loc. 12-10, 12-12



**DETAIL B**  
Loc. 12-3, 12-24

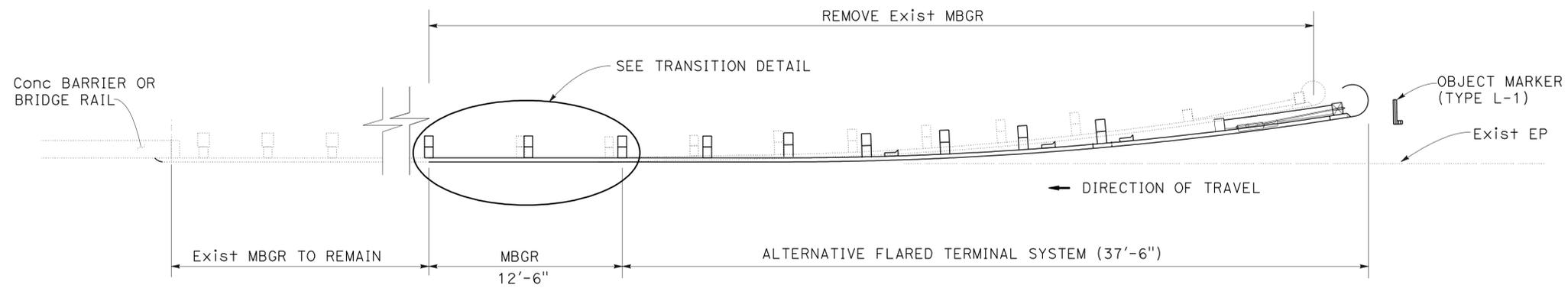
**CONSTRUCTION DETAILS**

NO SCALE

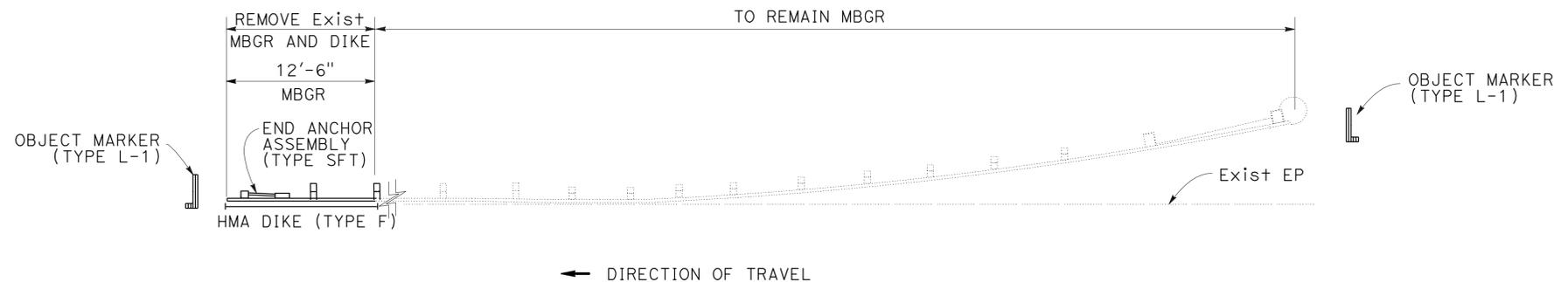
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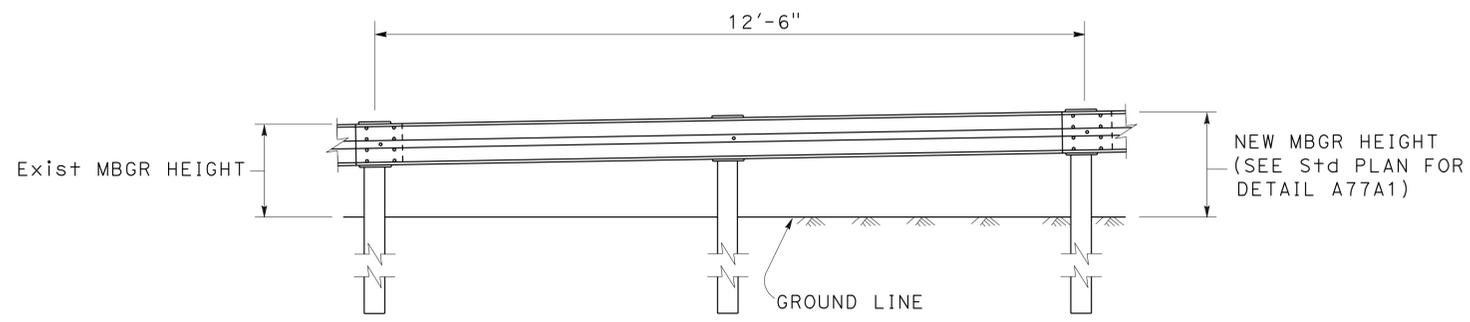
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,37,116,121	Var	5	39
			09-22-08	REGISTERED CIVIL ENGINEER DATE	
			12-1-08	PLANS APPROVAL DATE	
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.</small>					



**DETAIL C**  
Loc. 116-1



**DETAIL D**  
Loc. 12-5



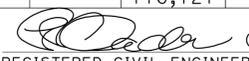
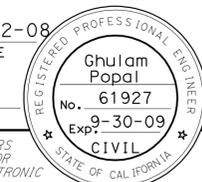
**TRANSITION DETAIL**

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

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

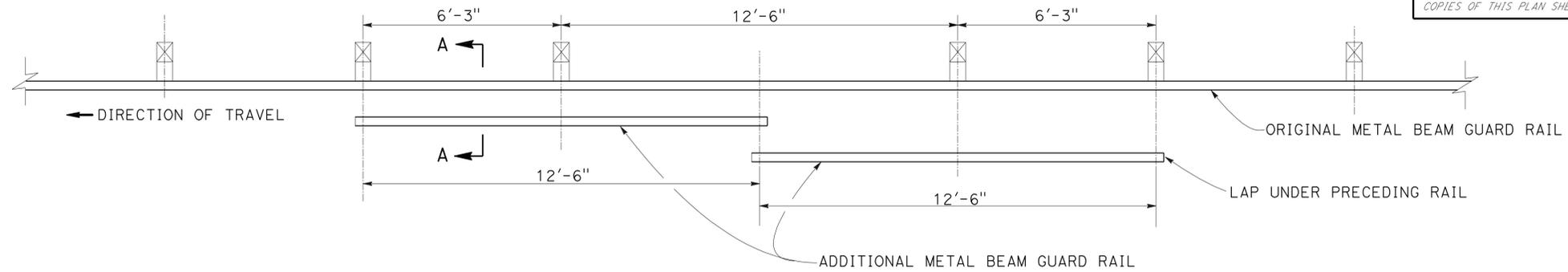
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR
<b>Caltrans</b>	GHULAM POPAL	GHULAM POPAL	NAVSHAREEN PANDHER
		CHECKED BY	DATE REVISED
		VICTOR PEREYRA	

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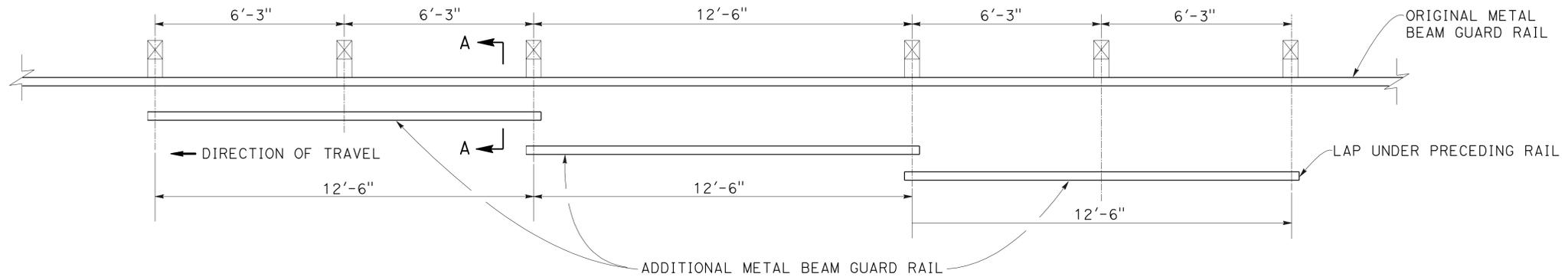
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,37,116,121	Var	6	39
 REGISTERED CIVIL ENGINEER DATE 09-22-08					
12-1-08 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.</small>					

**NOTES:**

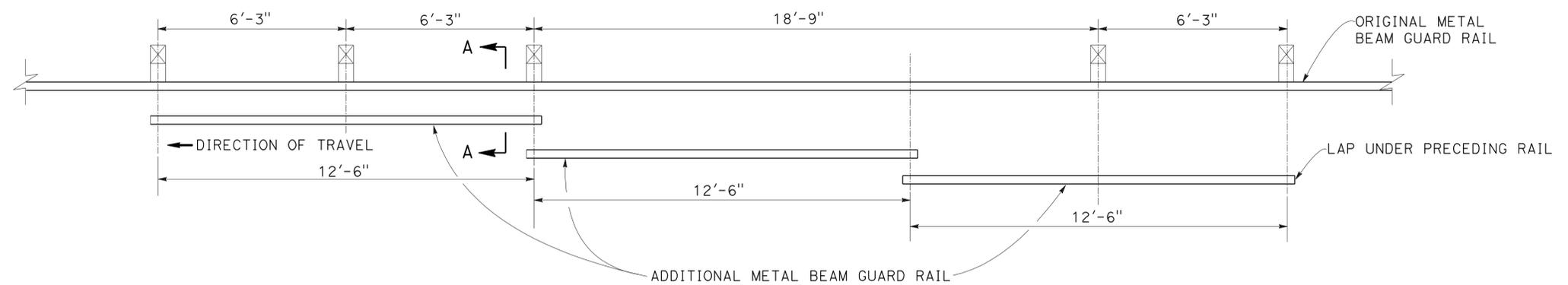
1. USE CASE 1 OR CASE 2 WHEN ONE POST IS OMITTED.
2. USE CASE 3 WHEN TWO POSTS ARE OMITTED.
3. FOR OTHER DETAILS, SEE STANDARD PLANS A77A, A77B AND A77C.
4. USE AT LOCATIONS WHERE THERE ARE UTILITY CONFLICTS.



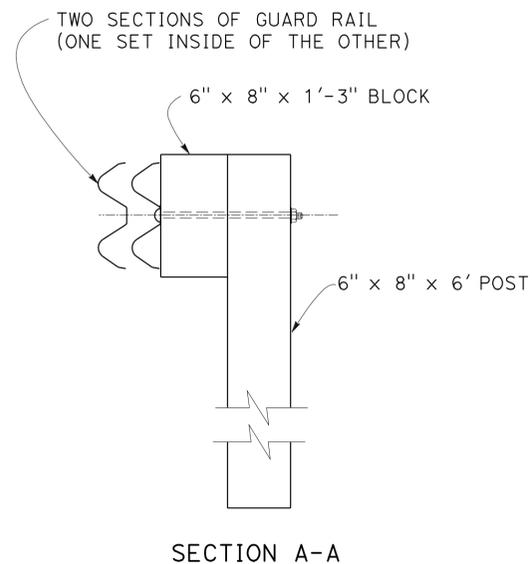
**CASE 1  
ONE POST OMITTED (SPLICE IN CENTER)**



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



**CASE 3  
TWO POST OMITTED**



**DETAIL E  
LONG SPAN NESTED GUARD RAIL**

**CONSTRUCTION DETAILS**

NO SCALE

**C-3**

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN
	
FUNCTIONAL SUPERVISOR	GHULAM POPAL
CALCULATED/DESIGNED BY	CHECKED BY
NAVSHAREEN PANDHER	VICTOR PEREYRA
REVISED BY	DATE REVISED

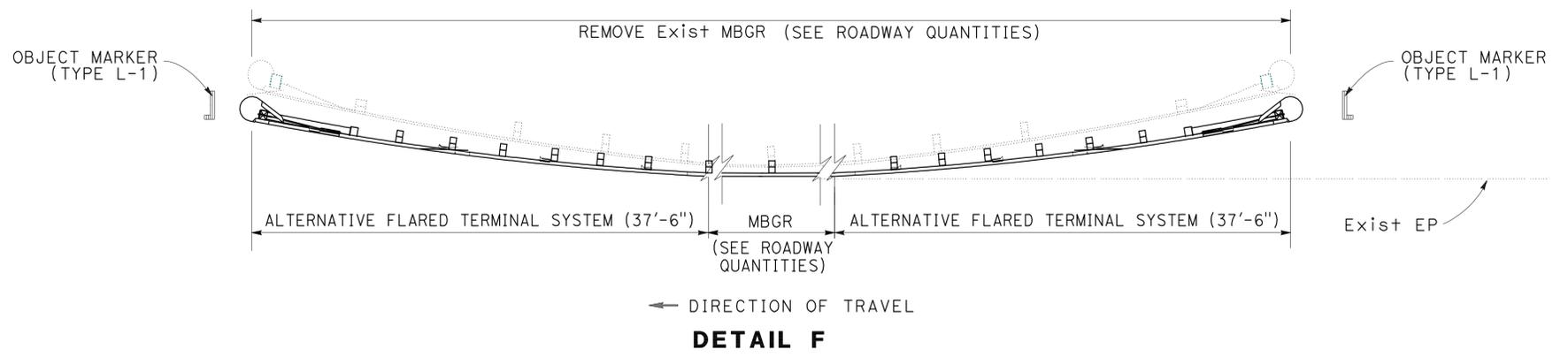
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,37,116,121	Var	7	39

09-22-08  
REGISTERED CIVIL ENGINEER DATE

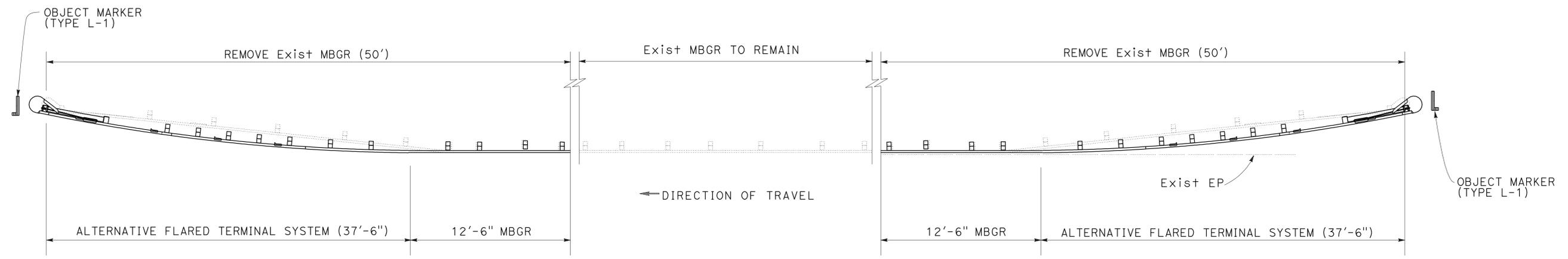
12-1-08  
PLANS APPROVAL DATE

Ghulam Popal  
No. 61927  
Exp. 9-30-09  
CIVIL

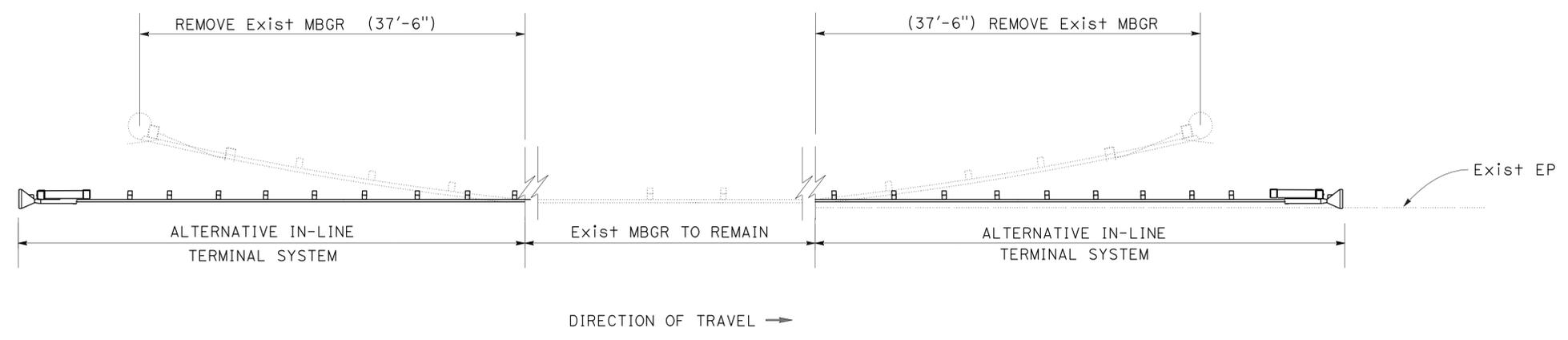
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.



**DETAIL F**  
Loc. 116-5, 116-6, 121-22, 121-23, 121-24, 121-25, 121-26, 121-27, 121-28, 121-29



**DETAIL G**  
Loc. 116-7, 116-9, 121-1, 121-2, 121-3, 121-4, 121-5, 121-6, 121-12  
121-13, 121-15, 121-18, 121-21, 121-30, 121-31, 121-32  
12-11, 12-14, 12-23, 12-29, 37-3



**DETAIL H**  
Loc. 12-8

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

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

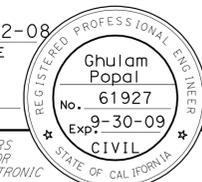
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN
FUNCTIONAL SUPERVISOR	GHULAM POPAL
CALCULATED/DESIGNED BY	CHECKED BY
NAVSHAREEN PANDHER	VICTOR PEREYRA
REVISED BY	DATE REVISED

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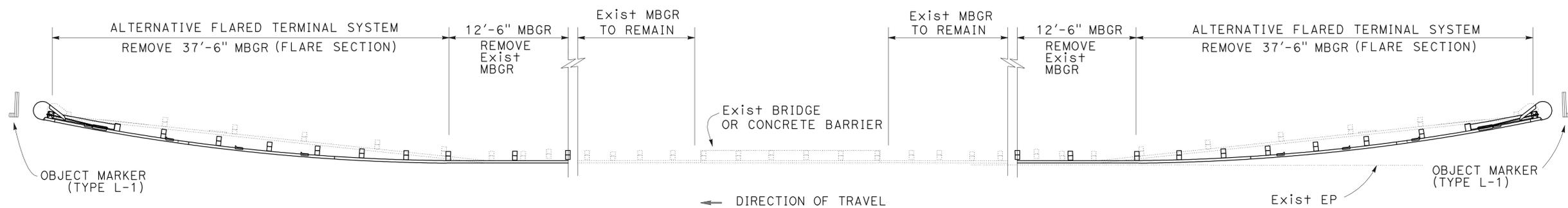




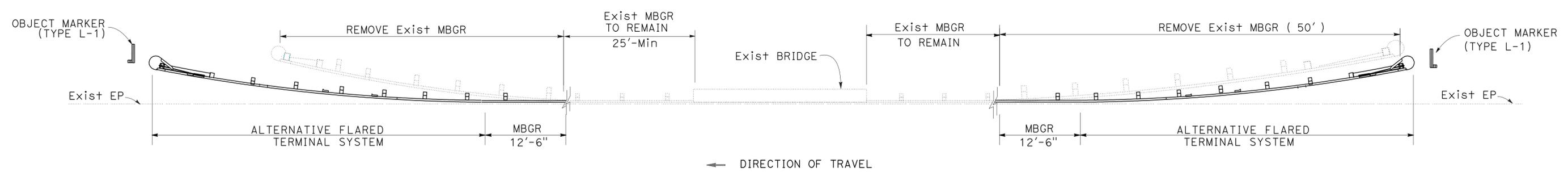


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12, 37, 116, 121	Var	11	39
 REGISTERED CIVIL ENGINEER DATE 09-22-08					
12-1-08 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.</small>					

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR
<b>Caltrans</b>	GHULAM POPAL	GHULAM POPAL	NAVSHAREEN PANDHER
<b>DESIGN</b>		CHECKED BY	DATE REVISED
		VICTOR PEREYRA	



**DETAIL P**  
Loc, 116-10, 121-17

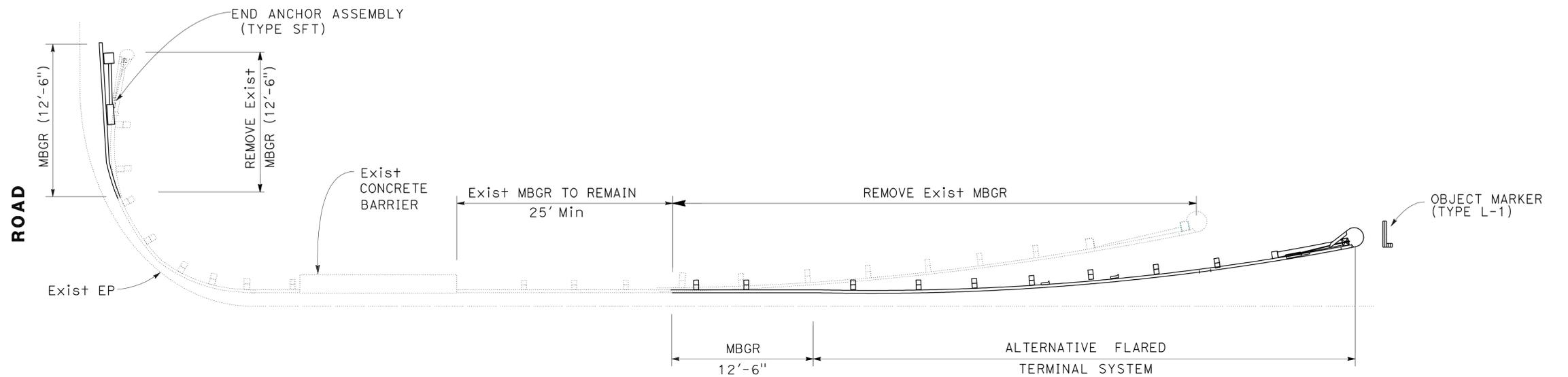


**DETAIL Q**  
Loc. 12-28

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

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12, 37, 116, 121	Var	12	39
 REGISTERED CIVIL ENGINEER DATE 09-22-08					
12-1-08			PLANS APPROVAL DATE		
<small>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.</small>					



← DIRECTION OF TRAVEL  
**DETAIL R**  
 Loc. 12-25

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	DESIGNED BY	REVISOR
<b>Caltrans</b>	GHULAM POPAL	NAVSHAREEN PANDHER	DATE
		VICTOR PEREYRA	REVISION
			DATE

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

**CONSTRUCTION DETAILS**  
 NO SCALE  
**C - 9**

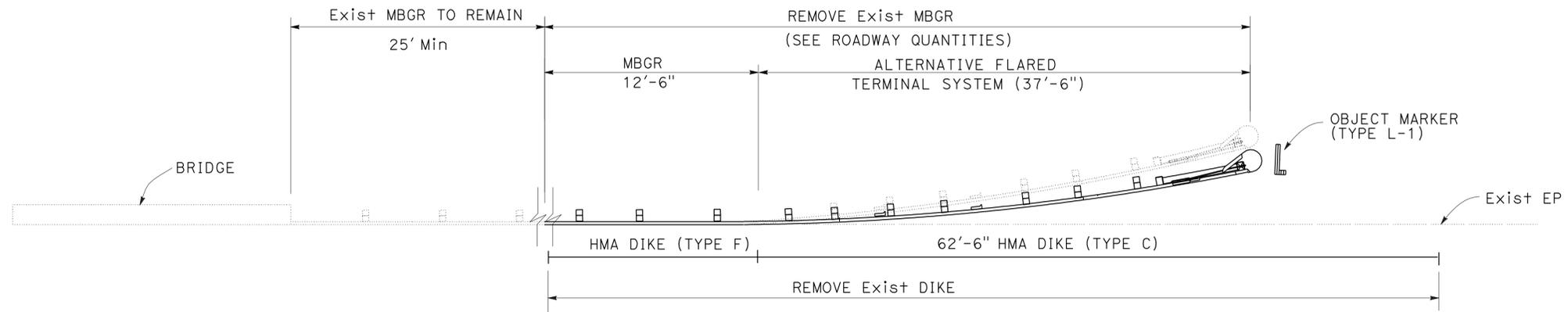


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12, 37, 116, 121	Var	14	39

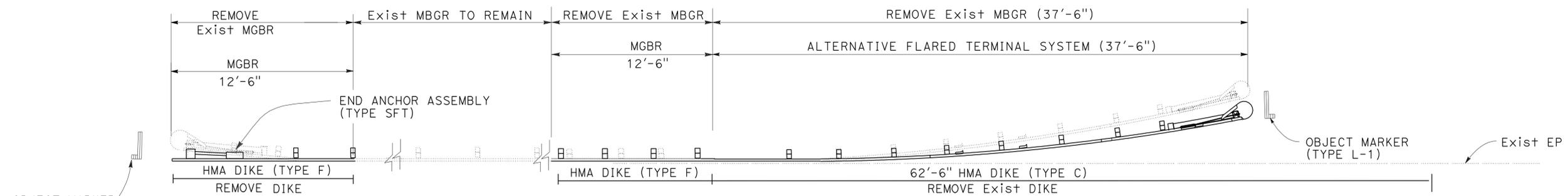
09-22-08  
 REGISTERED CIVIL ENGINEER DATE  
 12-1-08  
 PLANS APPROVAL DATE

Ghulam Popal  
 No. 61927  
 Exp. 9-30-09  
 CIVIL

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.



← DIRECTION OF TRAVEL  
**DETAIL U**  
 Loc. 12-4



← DIRECTION OF TRAVEL  
**DETAIL V**  
 Loc. 116-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** DESIGN  
 Ghulam Popal  
 Functional Supervisor  
 Victor Pereyra  
 Checked By  
 Navshareen Pandher  
 Revised By  
 Date Revised

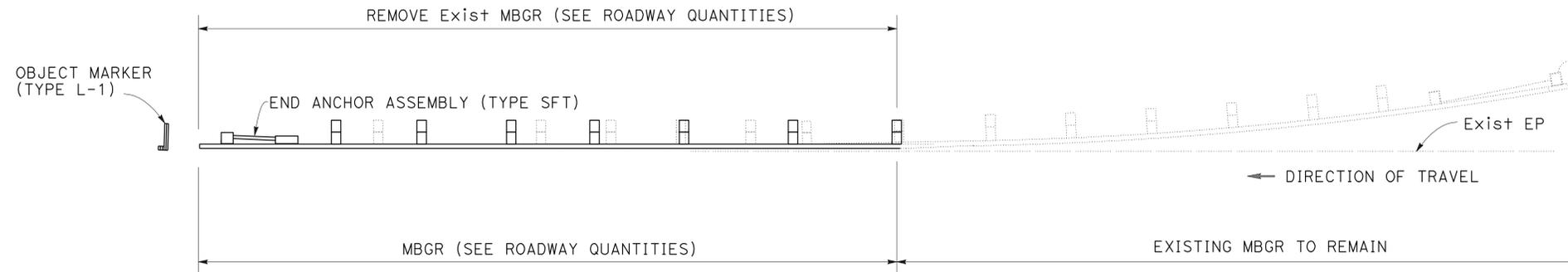
FOR NOTES, ABBREVIATIONS &/OR LEGEND, SEE SHEET C-1

**CONSTRUCTION DETAILS**  
 NO SCALE  
**C-11**

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LAST REVISION DATE PLOTTED => 09-JUN-2009  
 09-23-08 TIME PLOTTED => 13:24

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12, 37, 116, 121	Var	15	39
			09-22-08	REGISTERED CIVIL ENGINEER DATE	
12-1-08			PLANS APPROVAL DATE		
					
<small>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.</small>					



**DETAIL W**  
Loc. 12-7



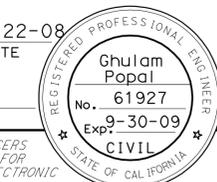
**DETAIL X**  
Loc. 121-10, 121-11

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

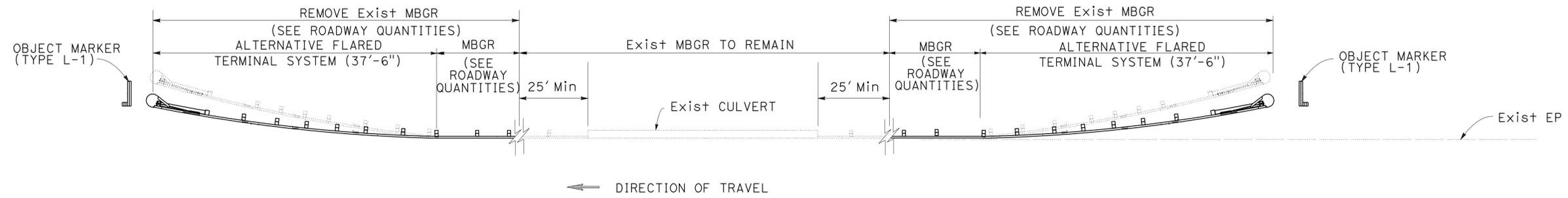
**CONSTRUCTION DETAILS**  
NO SCALE

**C-12**

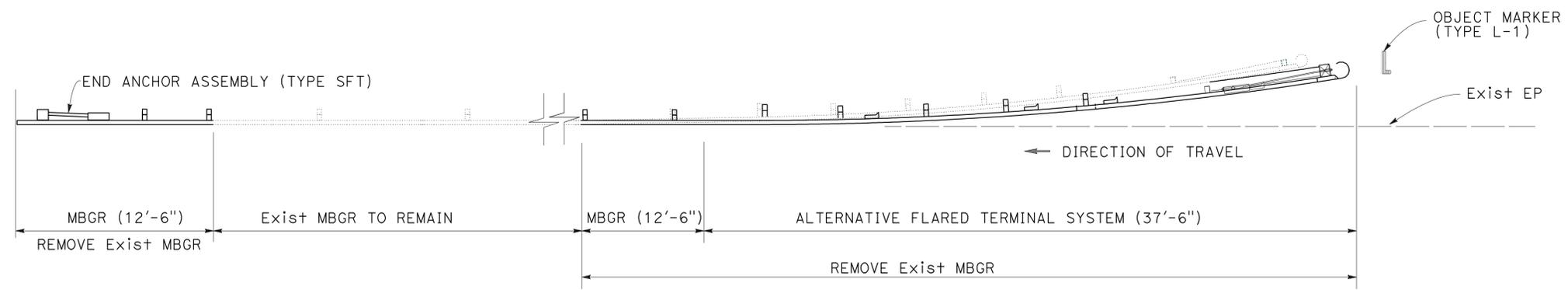
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	DESIGN
	GHULAM POPAL	
CALCULATED/DESIGNED BY	CHECKED BY	REVISOR
		NAVSHAREEN PANDHER
		DATE REVISOR
		VICTOR PEREYRA

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12, 37, 116, 121	Var	16	39
			09-22-08	REGISTERED CIVIL ENGINEER DATE	
12-1-08			PLANS APPROVAL DATE		
					
<small>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.</small>					

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	DESIGN
<b>Caltrans</b>	GHULAM POPAL	
CALCULATED/DESIGNED BY	CHECKED BY	
NAVSHAREEN PANDHER	VICTOR PEREYRA	
REVISED BY	DATE REVISED	



**DETAIL Y**  
Loc. 12-26, 12-27



**DETAIL Z**  
Loc. 12-6, 12-9, 12-13

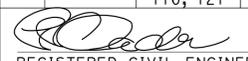
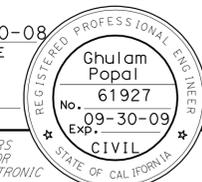
FOR NOTES, ABBREVIATIONS &/OR LEGEND, SEE SHEET C-1

**CONSTRUCTION DETAILS**

NO SCALE

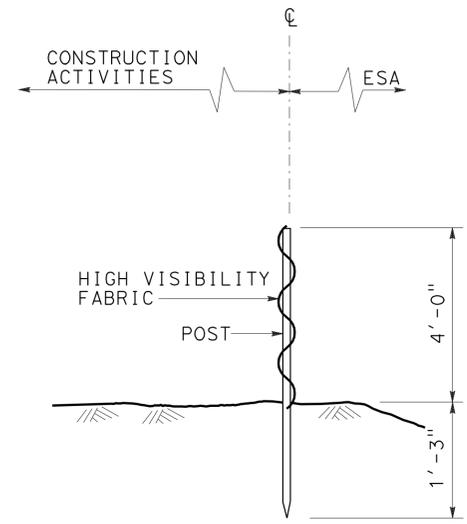
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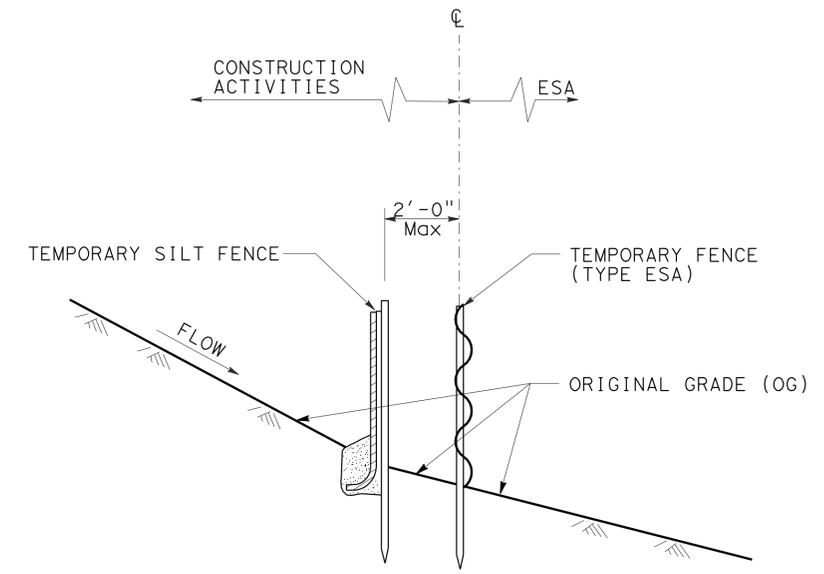
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12, 37, 116, 121	Var	18	39
 REGISTERED CIVIL ENGINEER DATE 09-10-08					
12-1-08				PLANS APPROVAL DATE	
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.</small>					

**NOTE**

- TEMPORARY SILT FENCE SHOWN FOR REFERENCE PURPOSES ONLY.



**SECTION  
TEMPORARY FENCE (TYPE ESA)**



**SECTION  
PLACEMENT DETAIL  
FOR TEMPORARY SILT FENCE  
USED WITH TEMPORARY  
FENCE (TYPE ESA)**  
(SEE NOTE 1 )

**TEMPORARY WATER POLLUTION  
CONTROL DETAILS**

NO SCALE

**WPCD-1**

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR	GHULAM POPAL	CALCULATED-DESIGNED BY	CHECKED BY	NAVSHAREEN PANDHER	REVISED BY	DATE REVISED
						VICTOR PEREYRA		

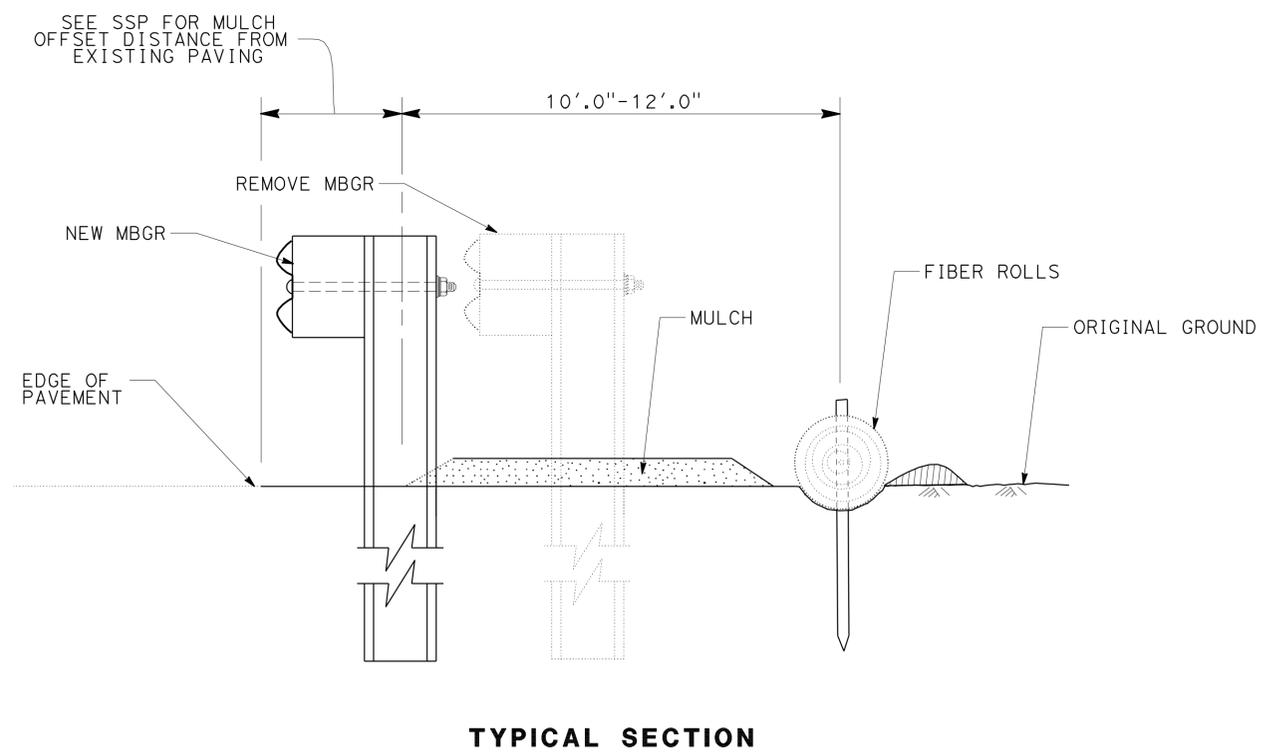
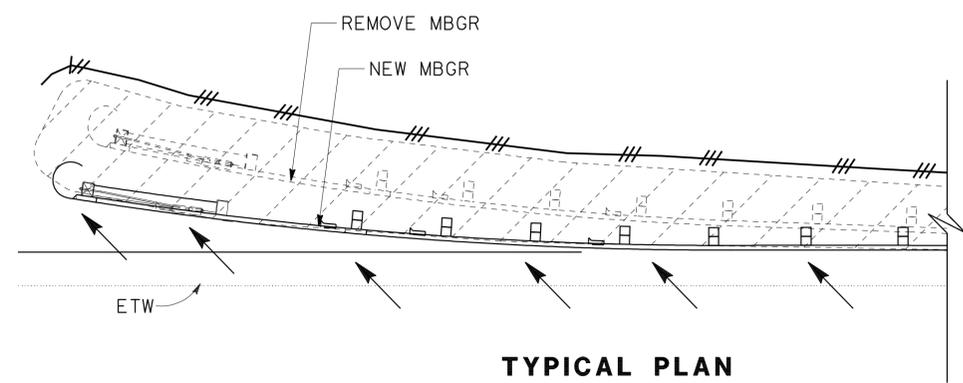
**NOTES:**

1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. EXACT LIMITS OF WORK OR DEPLOYMENT OF EROSION CONTROL MATERIALS SHALL BE DETERMINED BY THE ENGINEER.
3. SEE STD PLAN NSP H51 FOR FIBER ROLLS INSTALLATION DETAILS.

**EROSION CONTROL QUANTITIES**

ROUTE	POSTMILE	DIRECTION	MULCH	FIBER ROLLS
			CY	LF
12	29.41	EB	2	13
12	29.41	WB	5	50
37	4.04	WB	4	38
37	4.04	EB	4	38
116	36.17	EB	4	38
116	36.17	WB	2	13
116	43.29	WB	10	100
121	1.53	NB	3	25
121	1.53	SB	3	25
TOTALS			37	340

**LEGEND**



**EROSION CONTROL DETAILS AND QUANTITIES**

NO SCALE

**ECD-1**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12, 37, 116, 121	Var	19	39

LICENSED LANDSCAPE ARCHITECT  
 12-1-08  
 PLANS APPROVAL DATE

11-30-09  
 Renewal Date

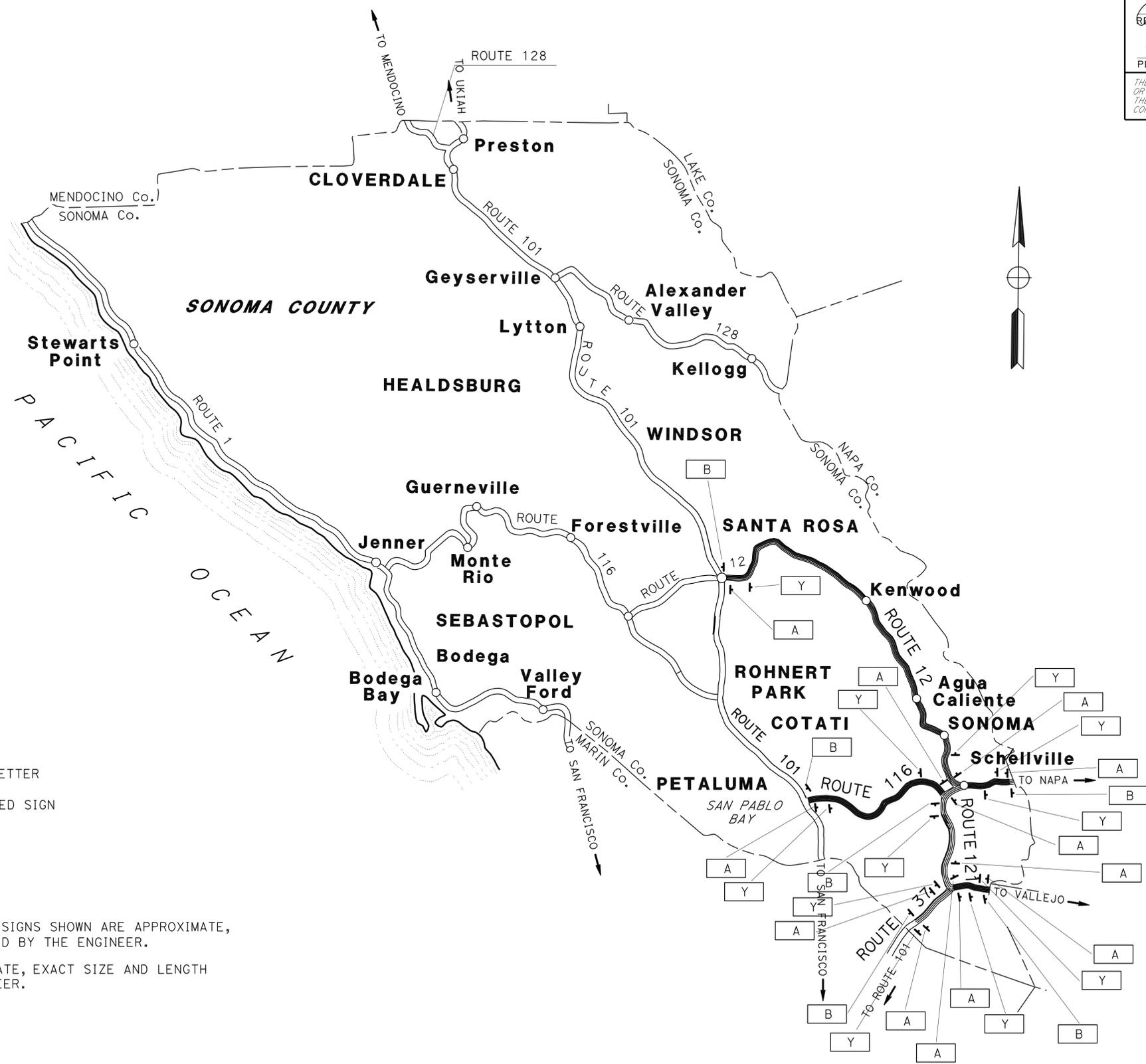
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12, 37, 116, 121	Var	20	39

*Jeryl L. Struven* 09-11-08  
 REGISTERED CIVIL ENGINEER DATE  
 12-1-08  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 No. 49964  
 Exp. 12-31-08  
 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.



**LEGEND:**

- X CONSTRUCTION AREA SIGN LETTER
- (S) DENOTES STATIONARY MOUNTED SIGN
- DIRECTION OF TRAFFIC

**NOTES:**

1. LOCATION OF CONSTRUCTION AREA SIGNS SHOWN ARE APPROXIMATE, EXACT LOCATION TO BE DETERMINED BY THE ENGINEER.
2. SIGN POST LENGTH ARE APPROXIMATE, EXACT SIZE AND LENGTH TO BE DETERMINED BY THE ENGINEER.

**CONSTRUCTION AREA SIGNS**  
NO SCALE  
**CS - 1**

THIS PLAN ACCURATE FOR  
CONSTRUCTION AREA SIGN WORK ONLY



USERNAME => trmikes1  
DGN FILE => 40a9131a001.dgn

CU 04231

EA 0A9131

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 FUNCTIONAL SUPERVISOR  
 JERILYN STRUVEN  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 HENRY TAM  
 HENRY TAM  
 REVISED BY  
 DATE REVISED

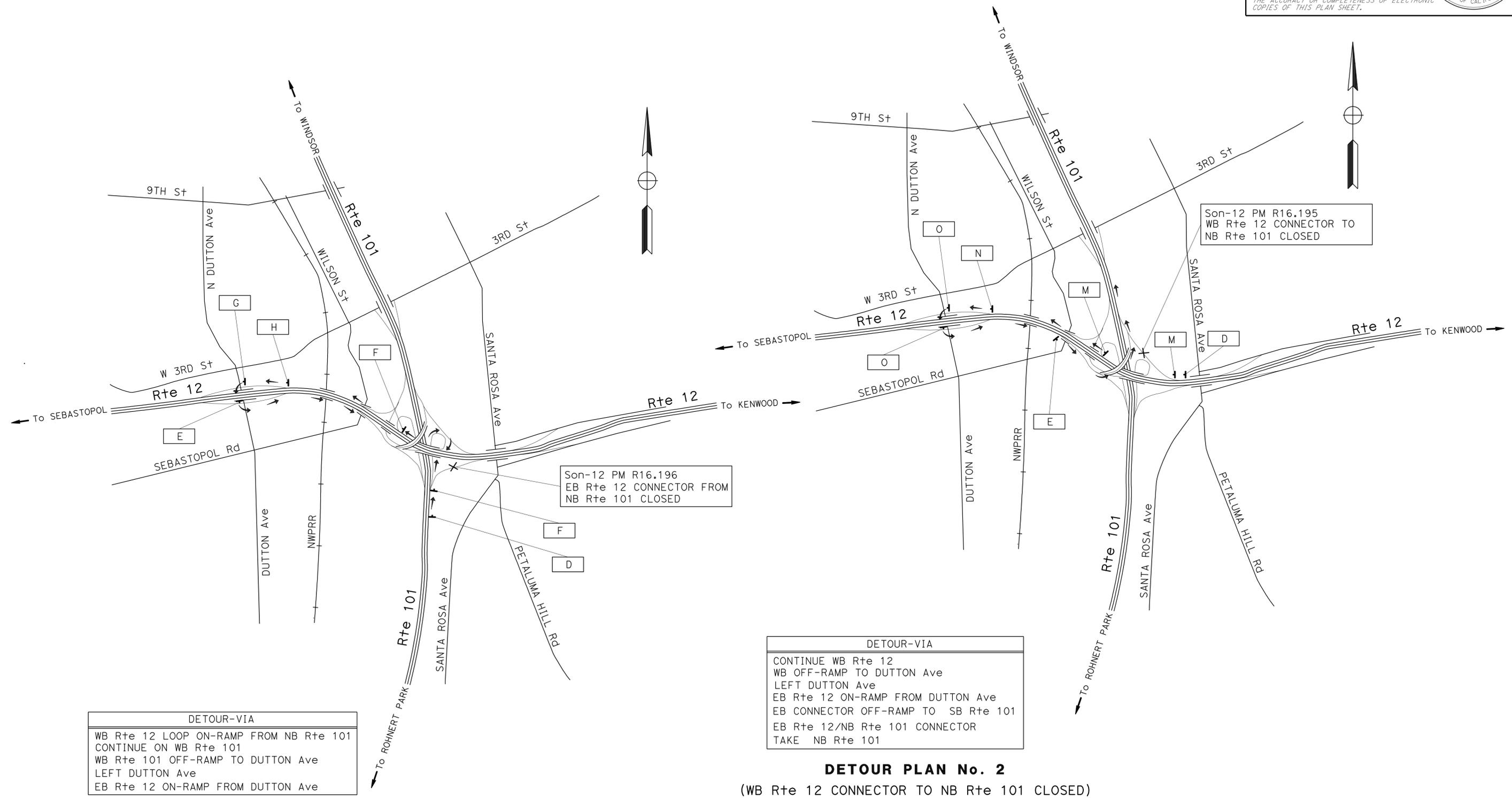
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12, 37, 116, 121	Var	21	39

*Jeryl L. Struven* 09-11-08  
 REGISTERED CIVIL ENGINEER DATE  
 12-1-08  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 Jeryl L. Struven  
 No. 49964  
 Exp. 2-31-08  
 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.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN
FUNCTIONAL SUPERVISOR	JERILYN STRUVEN
CALCULATED-DESIGNED BY	CHECKED BY
HENRY TAM	HENRY TAM
REVISED BY	DATE REVISED



**CONSTRUCTION AREA SIGNS**  
 NO SCALE  
**CS - 2**

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 FUNCTIONAL SUPERVISOR: JERILYN STRUVEN  
 CHECKED BY: HENRY TAM  
 DESIGNED BY: HENRY TAM  
 REVISIONS: REVISED BY: HENRY TAM, DATE REVISED: HENRY TAM

**STATIONARY MOUNTED  
 CONSTRUCTION AREA SIGNS**

SIGN No.	MUTCD CODE	MESSAGE	PANEL SIZE	NUMBER OF POST AND SIZE	QUANTITY (EA)
A	W20-1	ROAD WORK AHEAD	48'' x 48''	1- 4'' x 6''	10
B	G20-2	END ROAD WORK	36'' x 18''	1- 4'' x 4''	5
D	W20-2	DETOUR AHEAD	48'' x 48''	1- 4'' x 6''	2
E	M4-8a	END DETOUR	24'' x 18''	1- 4'' x 4''	2
F	M4-8	DETOUR	24'' x 12''	1- 4'' x 6''	2
	G28-2(12)(CA)	ROUTE SHIELD 12	24'' x 25''		
	M3-2	EAST	24'' x 12''		
G	M6-3 (▲)	UP ARROW	21'' x 15''	1- 4'' x 6''	1
	M4-8	DETOUR	24'' x 12''		
	G28-2(12)(CA)	ROUTE SHIELD 12	24'' x 25''		
H	M3-2	EAST	24'' x 12''	1- 4'' x 6''	1
	M6-1 (◀)	LEFT ARROW	21'' x 15''		
	M4-8	DETOUR	24'' x 12''		
M	M6-2 (▶)	UP RIGHT ARROW	21'' x 15''	1- 4'' x 6''	2
	M4-8	DETOUR	24'' x 12''		
	G26-2(101)(CA)	ROUTE SHIELD 101	28'' x 24''		
N	M3-1	NORTH	24'' x 12''	1- 4'' x 6''	1
	M6-2 (▶)	UP RIGHT ARROW	21'' x 15''		
	M4-8	DETOUR	24'' x 12''		
O	M3-1	NORTH	24'' x 12''	1- 4'' x 6''	2
	M6-1 (◀)	LEFT ARROW	21'' x 15''		
	G26-2(101)(CA)	ROUTE SHIELD 101	28'' x 24''		
Y	C40(CA)	TRAFFIC FINES	72'' x 36''	2 - 4'' x 6''	12
		DOUBLED IN			
		CONSTRUCTION ZONES			
TOTAL					40

**NOTE:**

CALIFORNIA SIGN CODES ARE DESIGNATED BY (CA).  
 OTHERWISE, FEDERAL MUTCD CODES ARE SHOWN.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12, 37, 116, 121	Var	22	39

09-11-08  
 REGISTERED CIVIL ENGINEER DATE

12-1-08  
 PLANS APPROVAL DATE

Jerilyn L. Struven  
 No. 49964  
 Exp. 2-31-08  
 CIVIL

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**CONSTRUCTION AREA SIGNS  
 SIGN QUANTITIES**

**CS-3**

THIS PLAN ACCURATE FOR  
 CONSTRUCTION AREA SIGN WORK ONLY



**NOTE:**  
EXISTING UTILITY FACILITIES HAVE NOT BEEN POSITIVELY LOCATED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12, 37, 116, 121	Var	23	39

09-22-08  
REGISTERED CIVIL ENGINEER DATE

12-1-08  
PLANS APPROVAL DATE

**Ghulam Popal**  
No. 61927  
Exp. 09-30-09  
CIVIL

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.

### ROADWAY QUANTITIES

ROUTE-LOCATION No.	DESCRIPTION	DIRECTION	PM	REMOVE AC DIKE	METAL BEAM GUARD RAILING LAYOUT TYPE	REMOVE MARKER (N)	REMOVE MBGR	MINOR HMA	PLACE HMA (Misc AREA)	PLACE HMA DIKE (TYPE C)	PLACE HMA DIKE (TYPE F)	BURIED POST END ANCHOR (N)	OBJECT MARKER (TYPE L-1)	GUARD RAILING DELINEATOR (TYPE E)	GUARD RAILING DELINEATOR (TYPE F)	MBGR (WOOD POST)	ALTERNATIVE FLARED TERMINAL SYSTEM	ALTERNATIVE IN-LINE TERMINAL SYSTEM	END ANCHOR ASSEMBLY (TYPE SFT)	RESET ROADSIDE SIGN	COMMENTS
				LF	EA	LF	TON	SQYD	LF	EA	LF	EA									
	ROUTE 12																				
	FROM LAGUNA DE SANTA ROSA Br TO 500' WEST OF MADRONE Rd																				
12-1	EB ON-RAMP FROM NB 101	EB	R16.2		12B		565						1		28	525	1				SEE DETAIL T, SHEET C-10
12-2	WB OFF-RAMP TO NB 101	WB	R16.2		11E		50						1		2	12.5	1				SEE DETAIL J, SHEET C-5
12-3	EB AFTER Br 20-267	EB	R17.04		11B		12.5						1		1	12.5			1		SEE DETAIL B, SHEET C-1
12-4	WB BEFORE Br 20-267	WB	R17.04	75	12B		50	0.6		62.5	12.5		1		2	12.5	1				SEE DETAIL U, SHEET C-11
12-5	EB RAMP BEFORE FARMERS Ln	EB	R17.53	12.5	11B		12.5	0.2			12.5		2		1	12.5			1		SEE DETAIL D, SHEET C-2
12-6	WB (MBGR IN 3 SEGMENTS)	WB	17.82		11B		150						3	8		75	3		3	1	SEE DETAIL Z, SHEET C-13
12-7	EB	EB	17.86		11B		700						1	28		700			1		SEE DETAIL W, SHEET C-12
12-8	MEDIAN		17.86		11D		75							4				2			SEE DETAIL H, SHEET C-4
12-9	EB	EB	18.23		11B		62.5						1	2		25	1		1		SEE DETAIL Z, SHEET C-13
12-10	EB EAST OF St FRANCIS Rd	EB	20.54		11B		62.5						1	2		25	1		1	1	SEE DETAIL A, SHEET C-1
12-11	WB EAST OF MOUNTAIN HAWK	WB	20.71		11E		100						2	4		25	2				SEE DETAIL G, SHEET C-4
12-12	EB WEST OF FAIRWAY Dr	EB	21.02		11B		75						1	2		37.5	1		1		SEE DETAIL A, SHEET C-1
12-13	WB WEST OF FAIRWAY Dr	WB	21.02		11B		62.5						1	2		25	1		1		SEE DETAIL Z, SHEET C-13
12-14	WB (AFTER MELITA Rd)	WB	21.66		11E		100						2	3		25	2	0		1	SEE DETAIL G, SHEET C-4
12-15	EB	EB	22.38		11E		50						1	2		12.5	1				SEE DETAIL K, SHEET C-5

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

### SUMMARY OF QUANTITIES

Q-1

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

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** DESIGN  
 FUNCTIONAL SUPERVISOR: GHULAM POPAL  
 CALCULATED/DESIGNED BY: NAVSHAREEN PANDHER  
 CHECKED BY: VICTOR PEREYRA  
 REVISED BY: \_\_\_\_\_ DATE REVISED: \_\_\_\_\_

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12, 37, 116, 121	Var	24	39

09-22-08  
 REGISTERED CIVIL ENGINEER DATE  
 12-1-08  
 PLANS APPROVAL DATE

**Ghulam Popal**  
 No. 61927  
 Exp. 09-30-09  
 CIVIL

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.

### ROADWAY QUANTITIES

ROUTE-LOCATION No.	DESCRIPTION	DIRECTION	PM	REMOVE AC DIKE	METAL BEAM GUARD RAILING LAYOUT TYPE	REMOVE MARKER (N)	REMOVE MBGR	MINOR HMA	PLACE HMA (Misc AREA)	PLACE HMA DIKE (TYPE C)	PLACE HMA DIKE (TYPE F)	BURIED POST END ANCHOR (N)	OBJECT MARKER (TYPE L-1)	GUARD RAILING DELINEATOR (TYPE E)	GUARD RAILING DELINEATOR (TYPE F)	MBGR (WOOD POST)	DOUBLE MBGR (WOOD POST)	ALTERNATIVE FLARED TERMINAL SYSTEM	ALTERNATIVE IN-LINE TERMINAL SYSTEM	END ANCHOR ASSEMBLY (TYPE SFT)	RESET ROADSIDE SIGN	COMMENTS
				LF	EA	LF	TON	SQYD	LF	EA	LF	EA	EA	EA								
	ROUTE 12																					
12-16	EB	EB	24.7		12B		37.5						1	2		12.5		1				SEE DETAIL L, SHEET C-6
12-17	WB	WB	24.7		12B		37.5						1	2		12.5		1				SEE DETAIL L, SHEET C-6
12-18	WB	WB	25.8		12B		50						1	4		12.5		1				SEE DETAIL J, SHEET C-5
12-19	EB	EB	25.83		12B		37.5						1	2		12.5		1				SEE DETAIL L, SHEET C-6
12-20	EB (ADDRESS: 9125 Hwy12)	EB	26.7		11E		50						1	2		12.5		1				SEE DETAIL J, SHEET C-5
12-21	EB (BEFORE HELMICK Rd)	EB	26.96		11E		50						1	2		12.5		1				SEE DETAIL J, SHEET C-5
12-22	WB (AFTER HELMICK Rd)	WB	27.09		11E		50						1	2		12.5		1				SEE DETAIL J, SHEET C-5
12-23	EB (CORNER OF GRISWOLD Ave)	EB	27.11		11E		100						2	4		25		2				SEE DETAIL G, SHEET C-4
12-24	EB Calabazas Cr	EB	29.41		11B	1	12.5						1	1		12.5				1		SEE DETAIL B, SHEET C-1
12-25	WB Calabazas Cr Br	WB	29.41		12B		50						1	4		25		1		1		SEE DETAIL R, SHEET C-9
12-26	EB (500' WEST OF Madrone Rd)	EB	32.7		12B	1	400						2	12		350		2				SEE DETAIL Y, SHEET C-13
12-27	WB (500' WEST OF Madrone Rd)	WB	32.7		12B	1	400						2	12		350		2				SEE DETAIL Y, SHEET C-13
12-28	EB at Fisher Ln	EB	38.96		12B		75						2	4		25		2			1	SEE DETAIL Q, SHEET C-8
12-29	WB WEST OF Fisher Ln	WB	38.96		11E								2	4		25		2			1	SEE DETAIL G, SHEET C-4
	SUBTOTAL Rte 12			87.5		3	3578 .8		62.5	25	38	114	34	2425		33	2	12	5			

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

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

### SUMMARY OF QUANTITIES

Q - 2

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** DESIGN  
 FUNCTIONAL SUPERVISOR: GHULAM POPAL  
 CALCULATED/DESIGNED BY: NAVSHAREEN PANDHER  
 CHECKED BY: VICTOR PEREYRA  
 REVISED BY: \_\_\_\_\_ DATE REVISED: \_\_\_\_\_

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,37 116,121	Var	25	39

09-22-08  
 REGISTERED CIVIL ENGINEER DATE  
 12-1-08  
 PLANS APPROVAL DATE

**Ghulam Popal**  
 No. 61927  
 Exp. 09-30-09  
 CIVIL

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.

### ROADWAY QUANTITIES

ROUTE-LOCATION No.	DESCRIPTION	DIRECTION	PM	REMOVE AC DIKE	METAL BEAM GUARD RAILING LAYOUT TYPE	REMOVE MARKER (N)	REMOVE MBGR	MINOR HMA	PLACE HMA (Misc AREA)	PLACE HMA DIKE (TYPE C)	PLACE HMA DIKE (TYPE F)	BURIED POST END ANCHOR (N)	OBJECT MARKER (TYPE L-1)	OBJECT MARKER (TYPE P)	GUARD RAILING DELINEATOR (TYPE E)	GUARD RAILING DELINEATOR (TYPE F)	MBGR (WOOD POST)	REMOVE METAL RAILING	TRANSITION RAILING (TYPE WB)	ALTERNATIVE FLARED TERMINAL SYSTEM	ALTERNATIVE IN-LINE TERMINAL SYSTEM	END ANCHOR ASSEMBLY (TYPE SFT)	RESET ROADSIDE SIGN	COMMENTS
				LF	EA	LF	TON	SQYD	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	
	ROUTE 37																							
37-1	WB, TOLAY Cr Br	WB	4.04		12B	1	37.5						1	2			12.5			1				SEE DETAIL L, SHEET C-6
37-2	EB, TOLAY Cr Br	EB	4.04		12BB	1	37.5						1	2			12.5			1				SEE DETAIL M, SHEET C-6
37-3	WB, EAST OF TOLAY Cr Br	WB	4.28		11E	1	100						2	4			25			2				SEE DETAIL G, SHEET C-4
	SUBTOTAL Rte 37					3	175						4	8			50			4				

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

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

### SUMMARY OF QUANTITIES

Q - 3

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 FUNCTIONAL SUPERVISOR: GHULAM POPAL  
 CALCULATED/DESIGNED BY: NAVSHAREEN PANDHER  
 CHECKED BY: VICTOR PEREYRA  
 REVISED BY: \_\_\_\_\_  
 DATE REVISED: \_\_\_\_\_

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,37 116,121	Var	26	39

09-22-08  
 REGISTERED CIVIL ENGINEER DATE  
 12-1-08  
 PLANS APPROVAL DATE

**Ghulam Popal**  
 No. 61927  
 Exp. 09-30-09  
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**ROADWAY QUANTITIES**

ROUTE-LOCATION No.	DESCRIPTION	DIRECTION	PM	REMOVE CRASH CUSHION		METAL BEAM GUARD RAILING LAYOUT TYPE	REMOVE MARKER (N)		REMOVE MBGR	END ANCHOR ASSEMBLY (TYPE CA)	CRASH CUSHION MODULE, SAND FILLED (TYPE ARRAY B14)	CRASH CUSHION MODULE, SAND FILLED (TYPE ARRAY B11)	MINOR HMA	PLACE HMA (Misc AREA)	PLACE HMA DIKE (TYPE C)	PLACE HMA DIKE (TYPE F)	BURIED POST END ANCHOR (N)	OBJECT MARKER (TYPE L-1)		GUARD RAILING DELINEATOR (TYPE E)	GUARD RAILING DELINEATOR (TYPE F)	MBGR (WOOD POST)	DOUBLE MBGR (WOOD POST)	ALTERNATIVE FLARED TERMINAL SYSTEM		ALTERNATIVE IN-LINE TERMINAL SYSTEM		END ANCHOR ASSEMBLY (TYPE SFT)	RAIL TENSIONING ASSEMBLY (N)	RESET ROADSIDE SIGN	COMMENTS
				EA	LF		EA	LF										EA	EA					EA	EA	EA	EA				
ROUTE 116																															
FROM Rte 1 to Rte 12																															
116-1	EB, @ LAKEVILLE Hwy, W OF Rte 101 UC	EB	35.0			12B		50											1	2			12.5		1						SEE DETAIL C, SHEET C-2
116-2	WB, CULVERT STRUCTURE E OF ON-RAMP	WB	35.14		87.5	11B		62.5					0.8		62.5	25			2	2			25		1		1				SEE DETAIL V, SHEET C-11
116-3	EB, ADOBE Cr Br W OF FRATES Rd	EB	36.17			12B		37.5											1	2			12.5		1						SEE DETAIL L, SHEET C-6
116-4	WB, ADOBE Cr Br W OF FRATES Rd	WB	36.17			12B		12.5											1	2			12.5		1						SEE DETAIL L, SHEET C-6
116-5	EB, A DOWNHILL LEFT-TURN CURVE WITH ADVISE 40 MPH SIGN	EB	42.50			11E	1	220											2	9			150		2						SEE DETAIL F, SHEET C-4
116-6	EB, E of Pvt Dwy, NEXT TO PREVIOUS MBGR	EB	42.6			11E		2600											2	104			2525		2			1			SEE DETAIL F, SHEET C-4
116-7	WB, ACROSS LONG MBGR IN EB, END OF RIGHT-TURN CURVE	WB	42.88			11E		100											2	4			25		2						SEE DETAIL G, SHEET C-4
116-8	WB, ACROSS LONG MBGR in EB, IN MIDST OF RIGHT-TURN CURVE	WB	42.93			11L		100										1	1	4			62.5		1						SEE DETAIL I, SHEET C-5
116-9	WB, ACROSS LONG MBGR @ EB, BEGIN OF A LEFT-TURN CURVE	WB	43.07			11E	1	100											2	4			25		2				1		SEE DETAIL G, SHEET C-4
116-10	WB, CHAMPLIN Cr CULVERT, E OF COUNTY DUMP Rd	WB	43.29			12B		100											2	4			25		2						SEE DETAIL P, SHEET C-8
SUBTOTAL Rte 116					87.5		2	3383					0.8	62.5	25	1	16	137					2875		15		1	2			

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

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

**SUMMARY OF QUANTITIES**

**Q-4**

J:\hermie\009131\workingfiles\40a913pa005.dgn

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** DESIGN  
 FUNCTIONAL SUPERVISOR: GHULAM POPAL  
 CALCULATED/DESIGNED BY: NAVSHAREEN PANDHER  
 CHECKED BY: VICTOR PEREYRA  
 REVISED BY: \_\_\_\_\_ DATE REVISED: \_\_\_\_\_

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,37,116,121	Var	27	39

09-22-08  
 REGISTERED CIVIL ENGINEER DATE  
 12-1-08  
 PLANS APPROVAL DATE

**Ghulam Popal**  
 No. 61927  
 Exp. 09-30-09  
 CIVIL

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### ROADWAY QUANTITIES

ROUTE-LOCATION No.	DESCRIPTION	DIRECTION	PM	REMOVE AC DIKE	METAL BEAM GUAR DRILLING LAYOUT TYPE	REMOVE MARKER (N)	REMOVE MBGR	MINOR HMA	PLACE HMA (Misc AREA)	PLACE HMA DIKE (TYPE C)	PLACE HMA DIKE (TYPE F)	BURIED POST END ANCHOR (N)	OBJECT MARKER (TYPE L-1)	GUARD RAILING DELINEATOR (TYPE E)	GUARD RAILING DELINEATOR (TYPE F)	MBGR (WOOD POST)	ALTERNATIVE FLARED TERMINAL SYSTEM	ALTERNATIVE IN-LINE TERMINAL SYSTEM	END ANCHOR ASSEMBLY (TYPE SFT)	RESET ROADSIDE SIGN	COMMENTS
				LF		EA	LF	TON	SQYD	LF	EA		EA	LF	EA						
	ROUTE 121																				
121-1	NB	NB	0.22		11E	1	100						2	4		25	2				SEE DETAIL G, SHEET C-4
121-2	NB AT INTERSECTION WITH RACEWAY ENTRANCE	NB	0.6		11E	1	100						2	4		25	2				SEE DETAIL G, SHEET C-4
121-3	NB	NB	0.83		11E	1	100						2	4		25	2				SEE DETAIL G, SHEET C-4
121-4	SB	SB	0.83		11E	1	100						2	4		25	2				SEE DETAIL G, SHEET C-4
121-5	NB	NB	0.96		11E	1	100						2	4		25	2				SEE DETAIL G, SHEET C-4
121-6	SB	SB	0.96		11E	1	100						2	4		25	2			1	SEE DETAIL G, SHEET C-4
121-7	NB AT TOLAY Cr	NB	1.53		12B	1	25						2	4		25	2				SEE DETAIL O, SHEET C-7
121-8	SB AT TOLAY Cr	SB	1.53		12B	1	25						2	4		25	2				SEE DETAIL O, SHEET C-7
121-9	NB	NB	1.86	75	11E	1	100	0.6		62.5	12.5		2	4		25	2				SEE DETAIL S, SHEET C-10
121-10	SB	SB	1.86	150	11E	1	100	0.8		125	25		2	4		25	2				SEE DETAIL X, SHEET C-12
121-11	NB	NB	2.57	150	11E	1	100	0.8		125	25		2	4		25	2			1	SEE DETAIL X, SHEET C-12
121-12	SB	SB	2.57		11E	1	100						2	4		25	2			1	SEE DETAIL G, SHEET C-4
121-13	NB	NB	2.83		11E	1	100						2	4		25	2				SEE DETAIL G, SHEET C-4
121-14	SB	SB	2.92		12B	1	62.5						2	4		25	2				SEE DETAIL N, SHEET C-7
121-15	NB	NB	3.13		11E	1	100						2	4		25	2				SEE DETAIL G, SHEET C-4
121-16	SB	SB	3.13	75	11E	1	100	0.6		62.5	12.5		2	4		25	2				SEE DETAIL S, SHEET C-10
121-17	NB	NB	5.31		12B	1	100						2	4		25	2			2	SEE DETAIL P, SHEET C-8
121-18	NB	NB	5.45		11E	1	100						2	4		25	2				SEE DETAIL G, SHEET C-4
121-19	NB OVER CREEK	NB	6.5		12B	1	37.5						1	2		12.5	1			2	SEE DETAIL L, SHEET C-6

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

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

### SUMMARY OF QUANTITIES

Q-5

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** DESIGN  
 FUNCTIONAL SUPERVISOR: GHULAM POPAL  
 CALCULATED/DESIGNED BY: NAVSHAREEN PANDHER  
 CHECKED BY: VICTOR PEREYRA  
 REVISED BY: \_\_\_\_\_ DATE REVISED: \_\_\_\_\_

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Son	12,37, 116,121	Var	28	39

09-22-08  
 REGISTERED CIVIL ENGINEER DATE  
 12-1-08  
 PLANS APPROVAL DATE

**Ghulam Popal**  
 No. 61927  
 Exp. 09-30-09  
 CIVIL

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**ROADWAY QUANTITIES**

ROUTE-LOCATION No.	DESCRIPTION	DIRECTION	PM	REMOVE AC DIKE	METAL BEAM GUARD RAILING LAYOUT TYPE	REMOVE MARKER (N)	REMOVE MBGR	MINOR HMA	PLACE HMA (Misc AREA)	PLACE HMA DIKE (TYPE C)	PLACE HMA DIKE (TYPE F)	BURIED POST END ANCHOR (N)	OBJECT MARKER (TYPE L-1)	GUARD RAILING DELINEATOR (TYPE E)	GUARD RAILING DELINEATOR (TYPE F)	MBGR (WOOD POST)	ALTERNATIVE FLARED TERMINAL SYSTEM	ALTERNATIVE IN-LINE TERMINAL SYSTEM	END ANCHOR ASSEMBLY (TYPE SFT)	RESET ROADSIDE SIGN	COMMENTS		
				LF	EA	LF	TON	SQYD	LF	EA	EA	EA	EA										
	ROUTE 121																						
121-20	SB OVER Cr	SB	6.5		12B	1	75						2	4		25	2				SEE DETAIL O, SHEET C-7		
121-21	NB ADJACENT TO PARKING LOT VINEYARD INN	NB	6.6		11E		100						2	4		25	2			1	SEE DETAIL G, SHEET C-4		
121-22	NB	NB	8.15		11E		75						2	4		12.5	2				SEE DETAIL F, SHEET C-4		
121-23	SB	SB	8.22		11E		440						2	18		362.5	2				SEE DETAIL F, SHEET C-4		
121-24	NB SOUTH OF SCHELLVILLE 8TH St, Cr	NB	8.22		11E		151						2	6		112.5	2				SEE DETAIL F, SHEET C-4		
121-25	NB NORTH OF SCHELLVILLE 8TH St	NB	8.25		11E		75						2	4		12.5	2				SEE DETAIL F, SHEET C-4		
121-26	SB NORTH OF RR XING	SB	8.27		11E		63						2	4		12.5	2		1		SEE DETAIL F, SHEET C-4		
121-27	NB SOUTH OF RR XING	NB	8.51		11E		63						2	4		12.5	2		1		SEE DETAIL F, SHEET C-4		
121-28	SB NORTH OF RR XING	SB	8.51		11E		141						2	6		62.5	2		1		SEE DETAIL F, SHEET C-4		
121-29	NB NORTH OF RR XING	NB	8.61		11E		115						2	6		37.5	2				SEE DETAIL F, SHEET C-4		
121-30	NB	NB	10.55		11E	1	100						2	4		25	2				SEE DETAIL G, SHEET C-4		
121-31	SB	SB	10.55		11E	1	100						2	4		25	2		1		SEE DETAIL G, SHEET C-4		
121-32	SB AT NAPA Rd	SB	10.79		11E	1	100						2	4		25	2		2		SEE DETAIL G, SHEET C-4		
	SUBTOTAL Rte 121						450		23	3248	2.8		375	75		63	154		1212.5	63	14		
	TOTAL						625		31	10384	4.4		500	125	1	121	447		6562.5	115	2	13	23

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

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

**SUMMARY OF QUANTITIES**

**Q - 6**

LAST REVISION | DATE PLOTTED => 09-JUN-2009  
 09-23-08 | TIME PLOTTED => 13:27

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Son	12,37, 116,121	Var	29	39

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

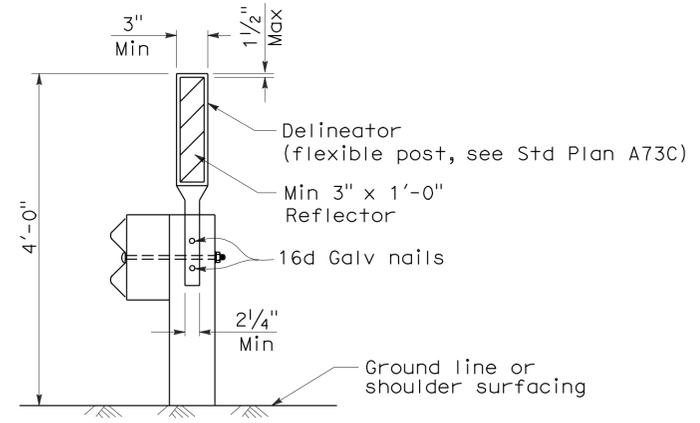
June 6, 2008  
PLANS APPROVAL DATE

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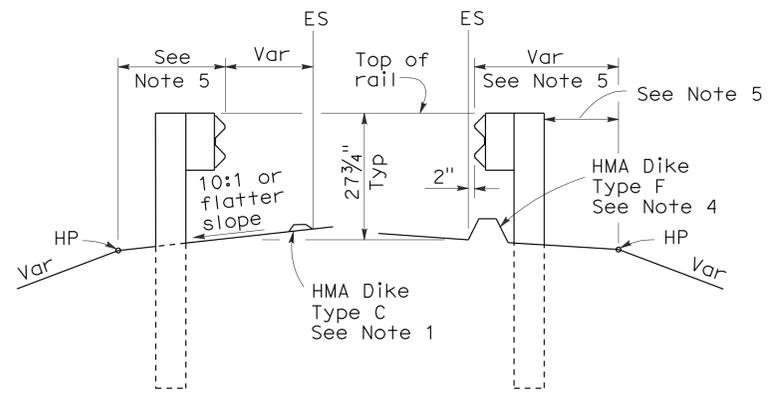
To accompany plans dated 12-1-08

**NOTES:**

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



**GUARD RAILING DELINEATION**  
See Note 3



**DIKE POSITIONING**  
See Note 1

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

**REVISED STANDARD PLAN RSP A77C4**

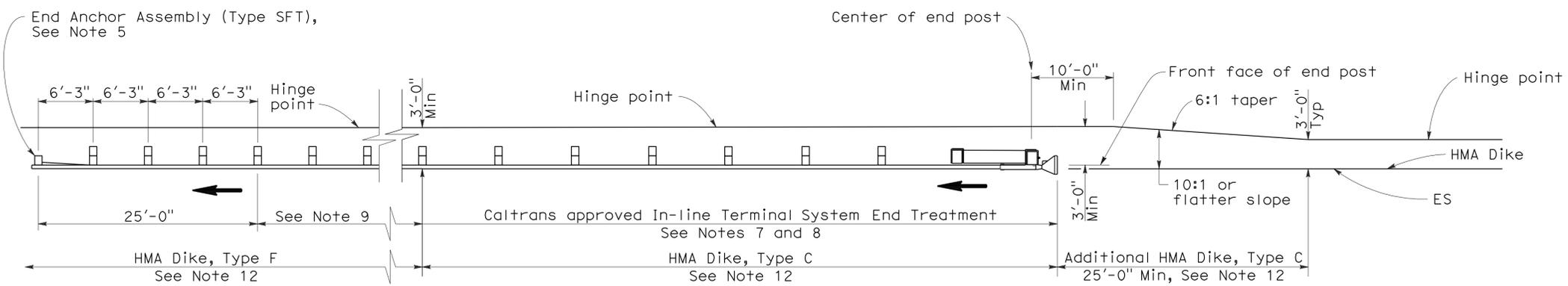
2006 REVISED STANDARD PLAN RSP A77C4

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Son	12,37, 116,121	Var	30	39

RANDALL D. HIATT  
 REGISTERED CIVIL ENGINEER  
 No. C50200  
 Exp. 6-30-09  
 CIVIL  
 STATE OF CALIFORNIA

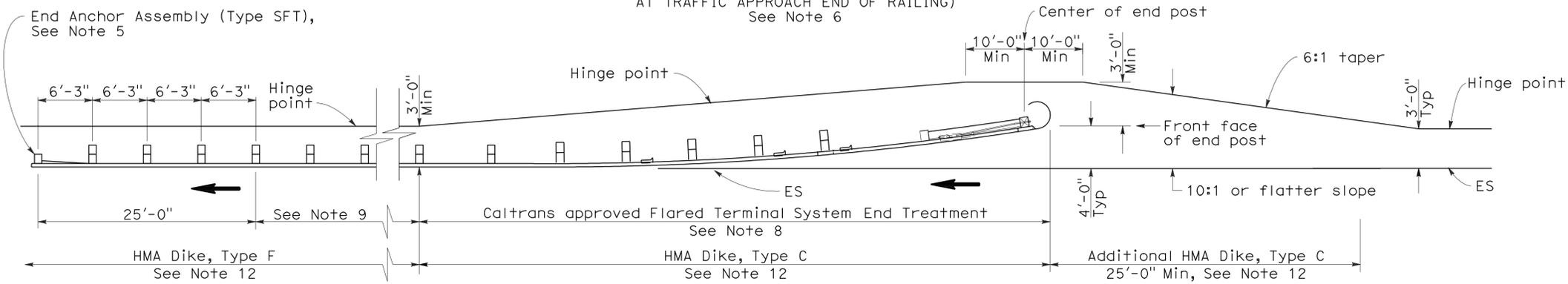
June 6, 2008  
 PLANS APPROVAL DATE  
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 12-1-08



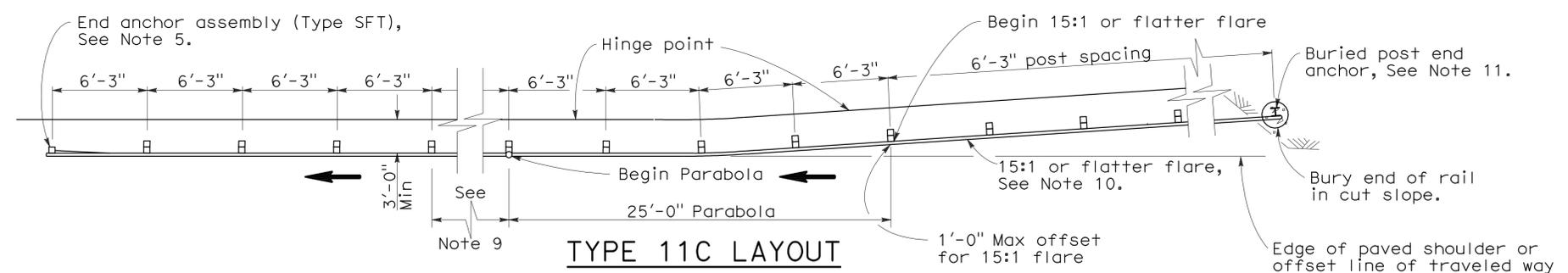
**TYPE 11A LAYOUT**

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



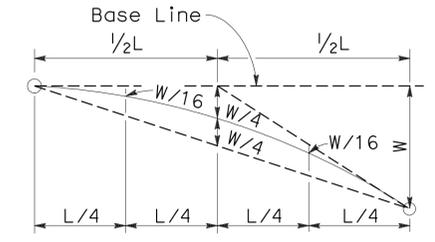
**TYPE 11B LAYOUT**

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

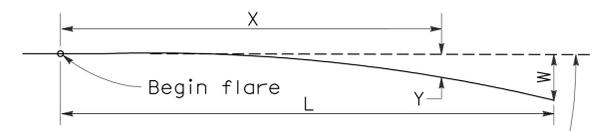


**TYPE 11C LAYOUT**

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



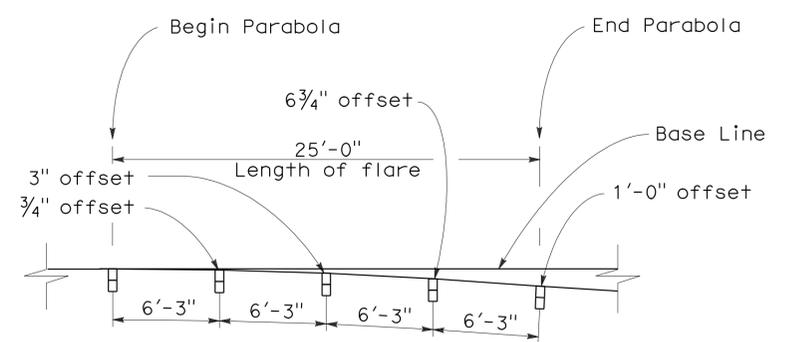
**TYPICAL PARABOLIC LAYOUT**



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 →.
- 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**

2006 REVISED STANDARD PLAN RSP A77E1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Son	12,37, 116,121	Var	31	39

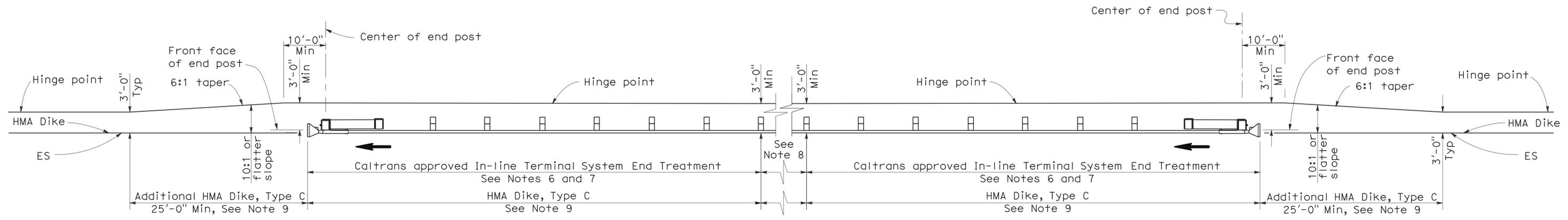
Randell D. Hiatt  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

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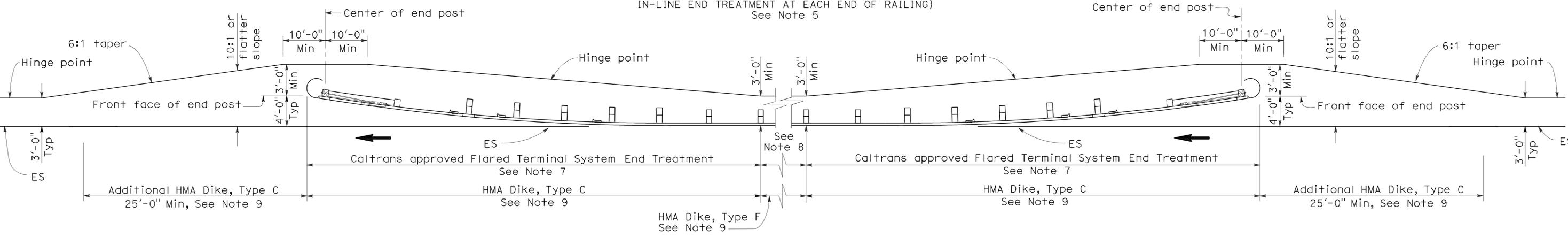
REGISTERED PROFESSIONAL ENGINEER  
Randell D. Hiatt  
No. C50200  
Exp. 6-30-09  
CIVIL  
STATE OF CALIFORNIA

To accompany plans dated 12-1-08



**TYPE 11D LAYOUT**

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



**TYPE 11E LAYOUT**

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

**NOTES:**

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

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

NO SCALE

RSP A77E2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77E2  
DATED MAY 1, 2006 - PAGE 49 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP A77E2**

2006 REVISED STANDARD PLAN RSP A77E2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Son	12,37, 116,121	Var	32	39

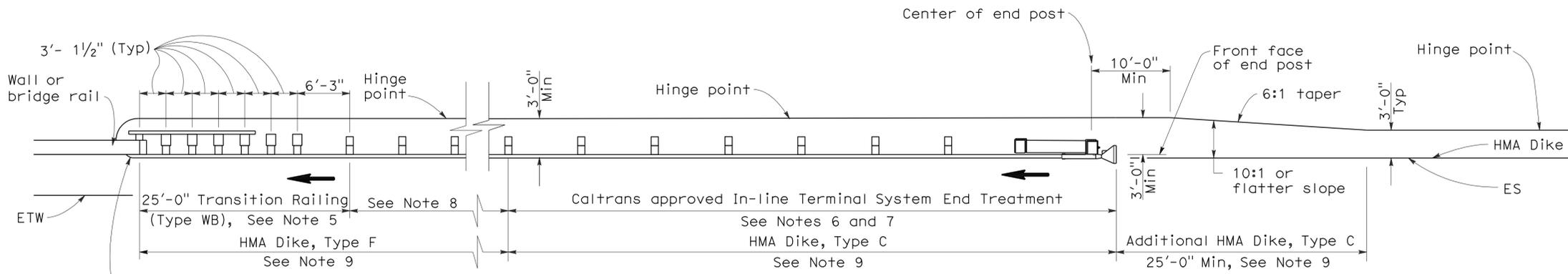
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

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

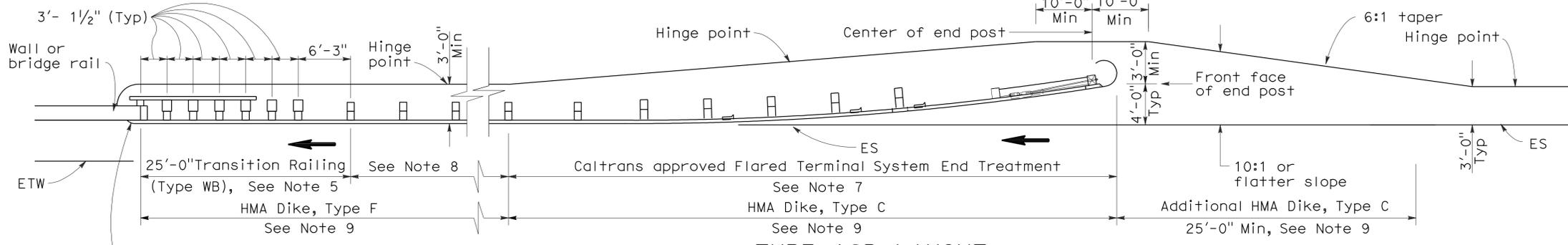
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To accompany plans dated 12-1-08



**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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Son	12,37, 116,121	Var	33	39

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

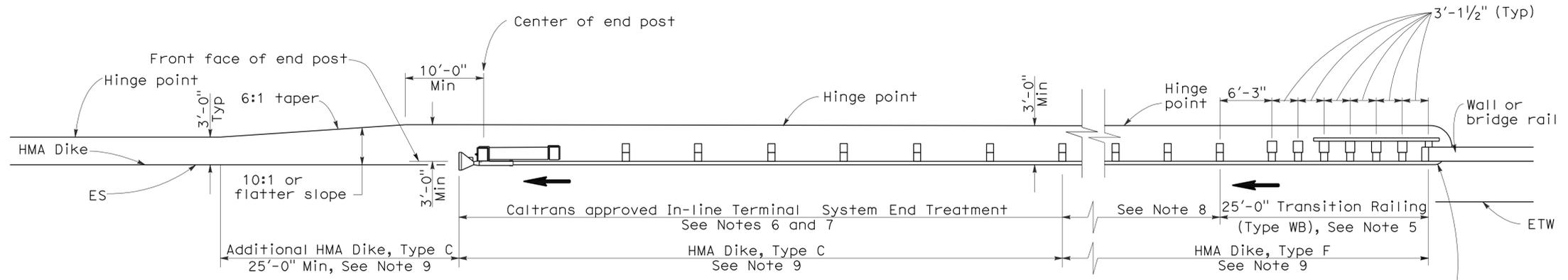
June 6, 2008  
PLANS APPROVAL DATE

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

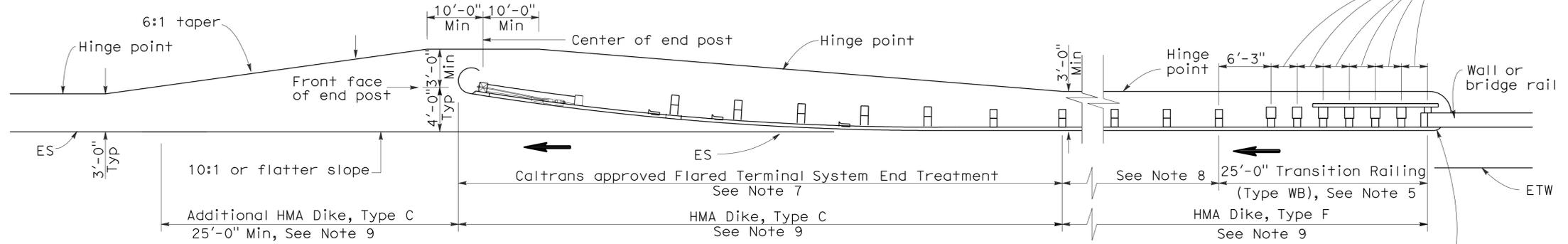
To accompany plans dated 12-1-08

2006 REVISED STANDARD PLAN RSP A77F4



**TYPE 12AA LAYOUT**

(GUARD RAILING INSTALLATION AT STRUCTURE DEPARTURE WITH AN IN-LINE END TREATMENT AT TRAILING END OF RAILING)  
See Notes 9 and 10



**TYPE 12BB LAYOUT**

(GUARD RAILING INSTALLATION AT STRUCTURE DEPARTURE WITH A FLARED END TREATMENT AT TRAILING END OF RAILING)  
See Notes 9 and 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 notched recycled plastic blocks may be used for 6" x 8" x 6'-0" wood posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- Direction of adjacent traffic indicated by →.
- For Transition Railing (Type WB) details for Types 12AA and 12BB Layouts, see Standard Plan A77J4.
- In-line Terminal System 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.
- Dependent on site conditions (embankment height, side slopes, 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 treatments.
- Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77C4 for dike positioning details.
- Type 12AA or Type 12BB Layouts are typically used to the right of traffic departing a structure on two-way conventional highways where the roadbed width across the structure is less than 40 feet.
- For additional details of typical connections to bridge rail, see Connection Detail CC on Revised Standard Plan RSP A77J2 and Connection Detail HH on Standard Plans A77k2.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**METAL BEAM GUARD RAILING  
TYPICAL LAYOUTS FOR  
STRUCTURE DEPARTURE**  
NO SCALE

RSP A77F4 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77F4  
DATED MAY 1, 2006 - PAGE 57 OF THE STANDARD PLANS BOOK DATED MAY 2006.

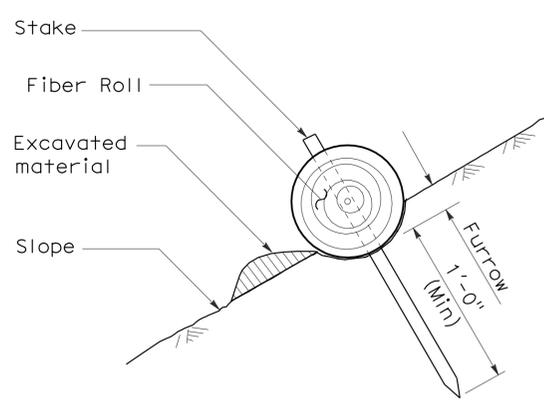
**REVISED STANDARD PLAN RSP A77F4**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Son	12,37, 116,121	Var	34	39

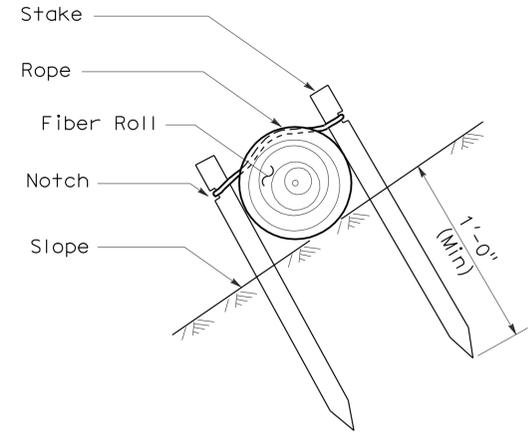
December 1, 2006  
 PLANS APPROVAL DATE  
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



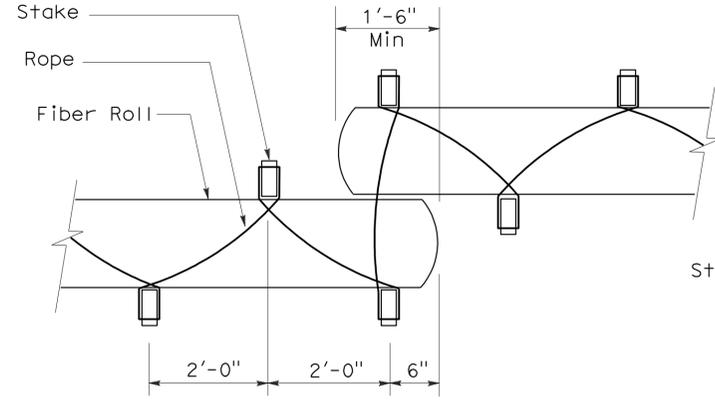
To accompany plans dated 12-1-08



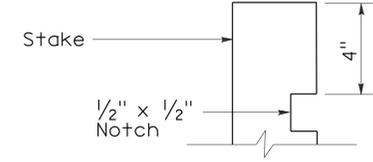
**SECTION**  
**FIBER ROLL**  
**(TYPE 1)**



**SECTION**

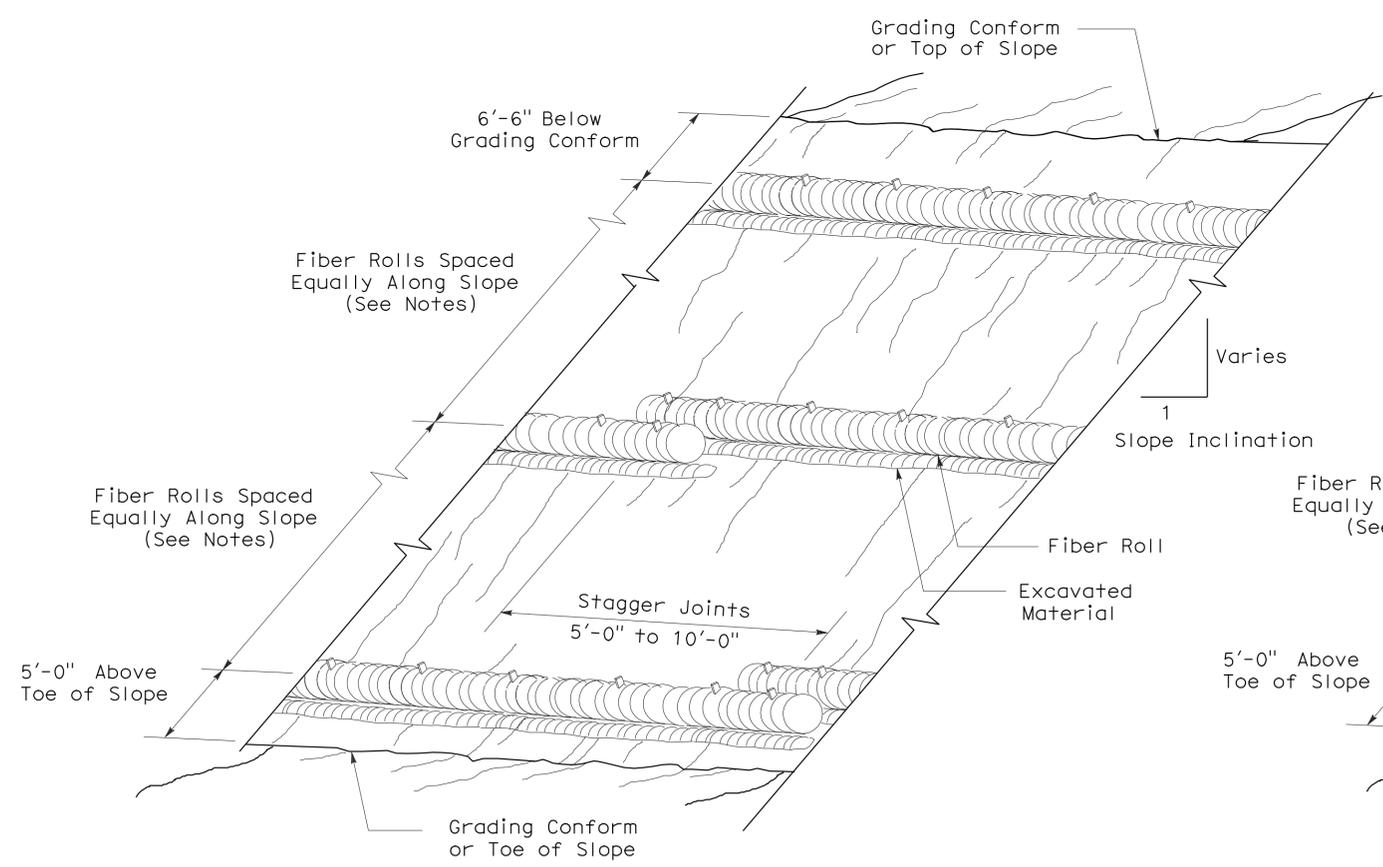


**PLAN**

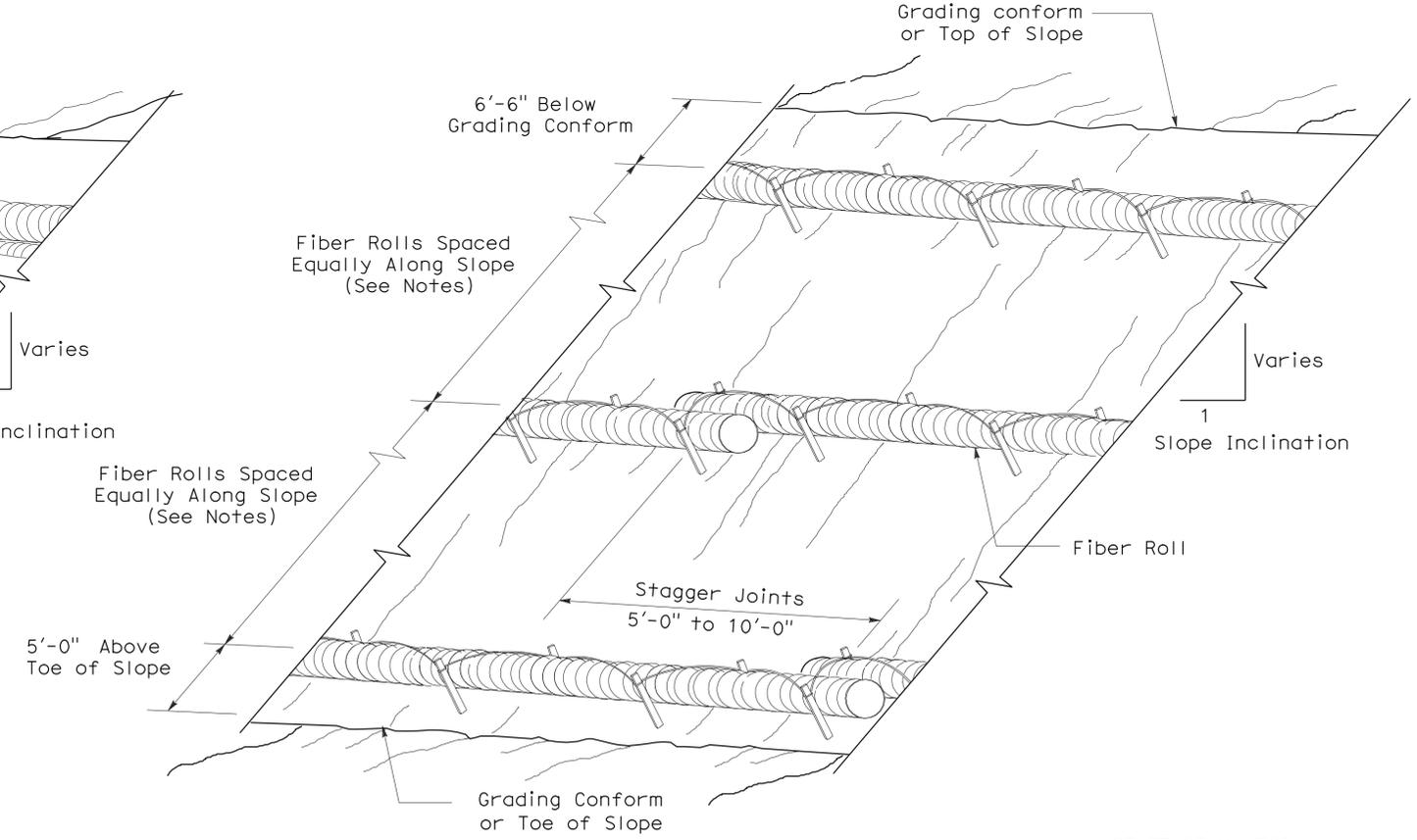


**ELEVATION**  
**STAKE NOTCH DETAIL**

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



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



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

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

NO SCALE  
NSP H51 DATED DECEMBER 1, 2006 SUPPLEMENTS  
THE STANDARD PLANS BOOK DATED MAY 2006

2006 NEW STANDARD PLAN NSP H51

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Son	12,37, 116,121	Var	35	39

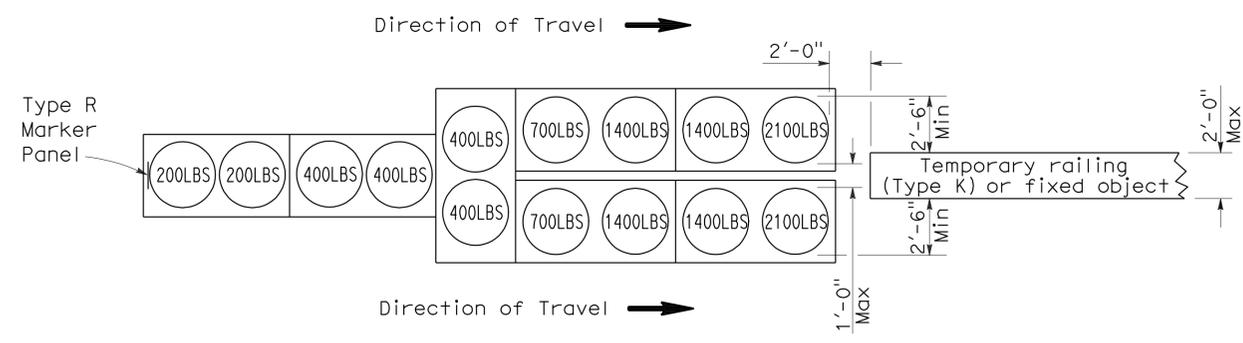
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

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

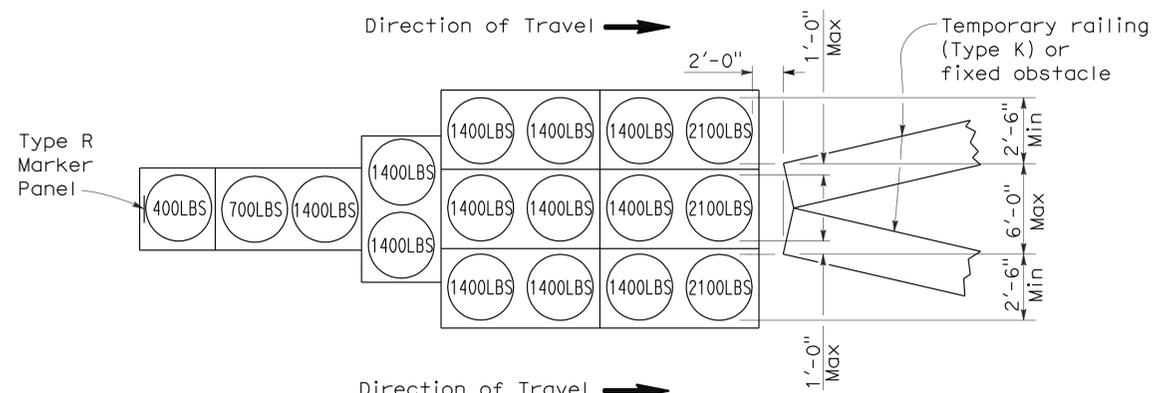
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To accompany plans dated 12-1-08



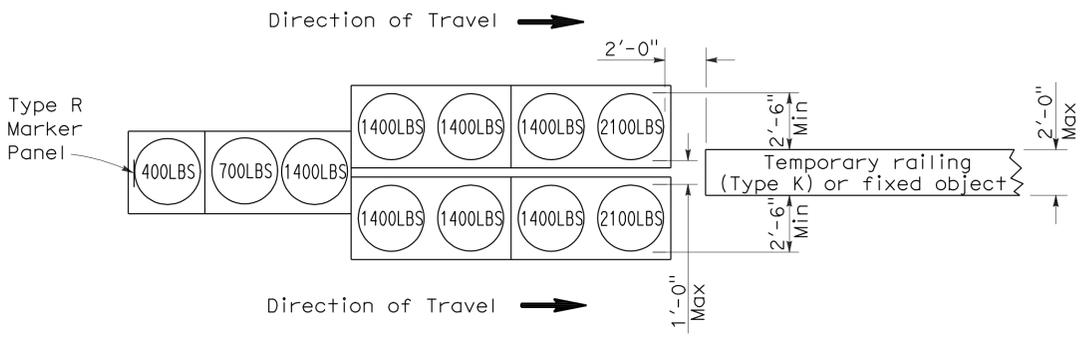
**ARRAY 'TU14'**

Approach speed 45 mph or more



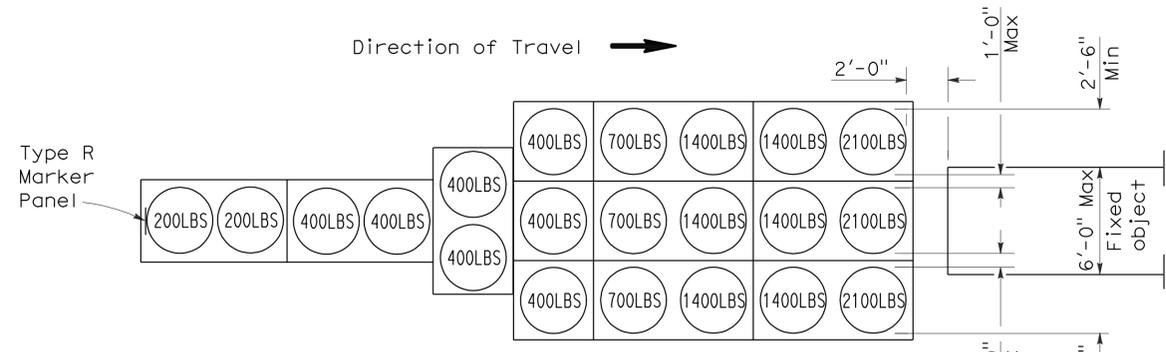
**ARRAY 'TU17'**

Approach speed less than 45 mph



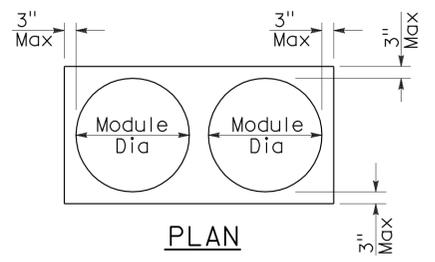
**ARRAY 'TU11'**

Approach speed less than 45 mph

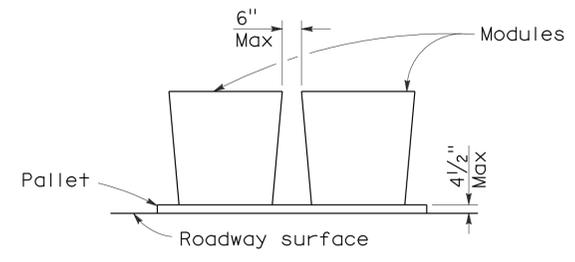


**ARRAY 'TU21'**

Approach speed 45 mph or more



**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

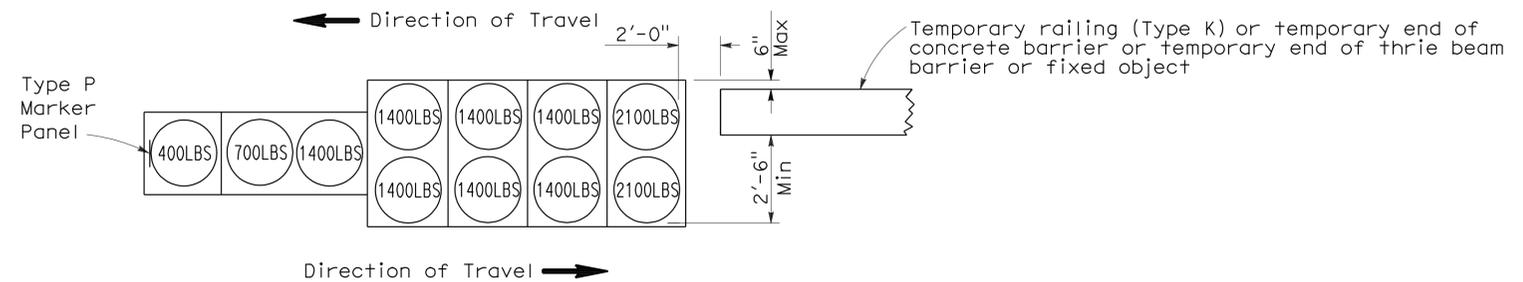
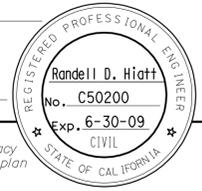
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Son	12,37, 116,121	Var	36	39

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

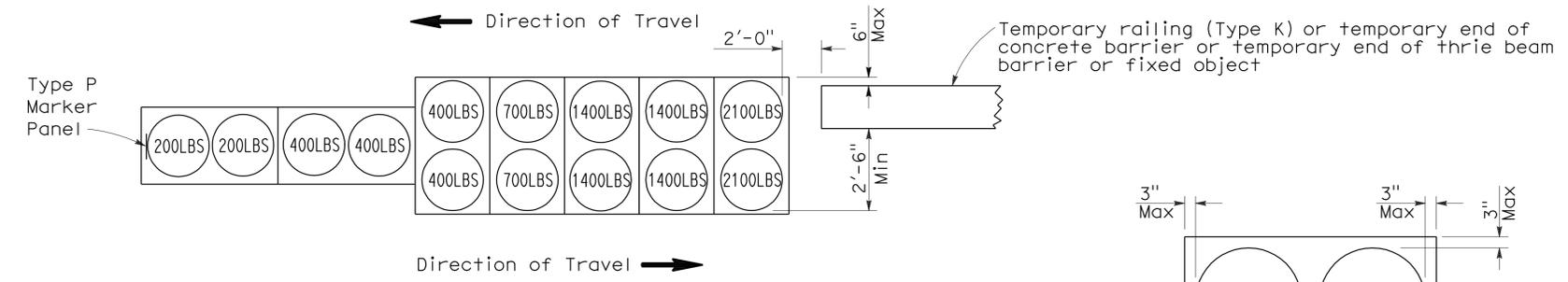
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To accompany plans dated 12-1-08



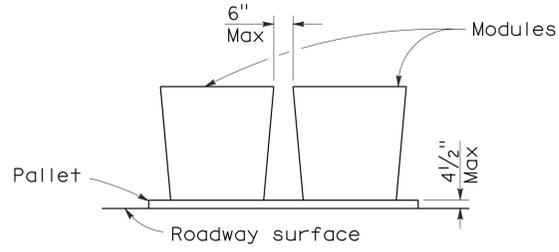
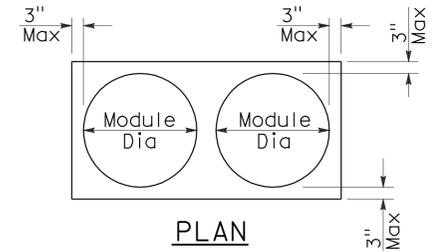
**ARRAY 'TB11'**

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
04	Son	12,37, 116,121	Var	37	39

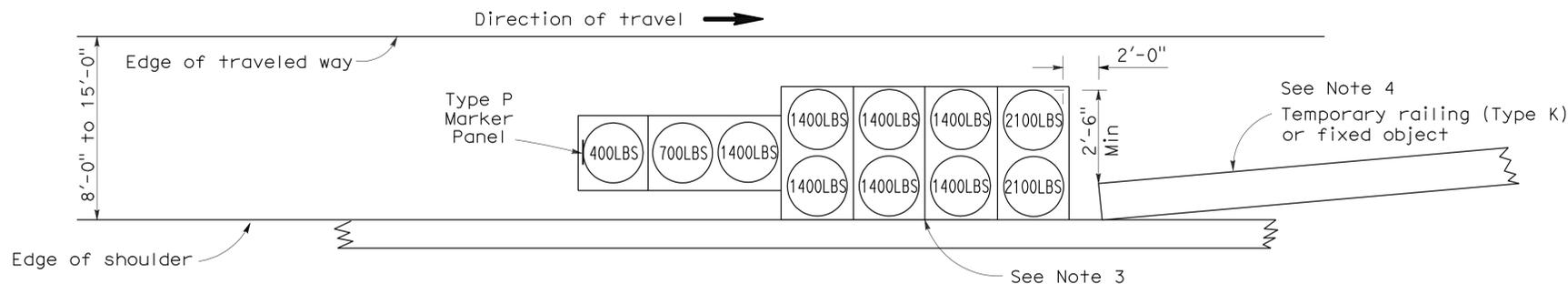
*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

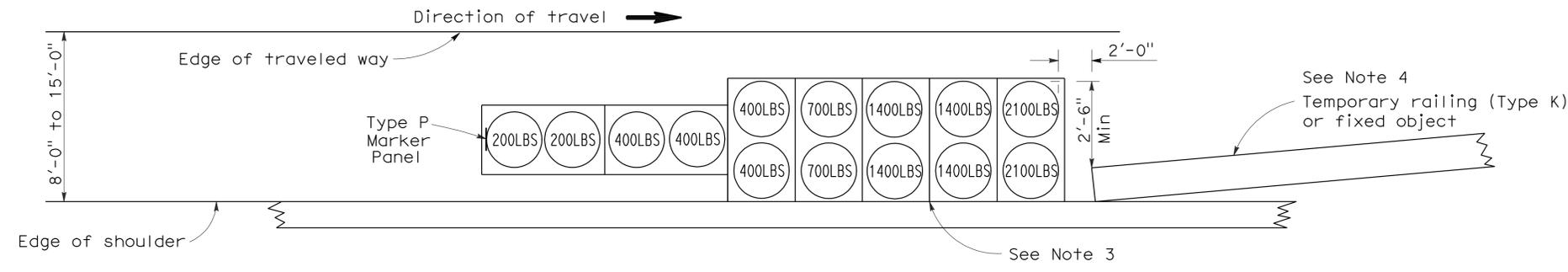
*The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.*

To accompany plans dated 12-1-08

2006 REVISED STANDARD PLAN RSP T2



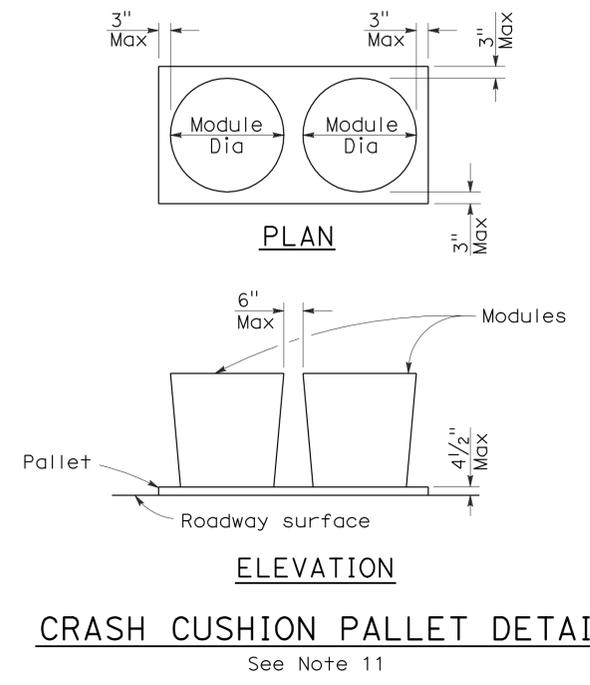
**ARRAY 'TS11'**  
Approach speed less than 45 mph  
See Note 9



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

**NOTES:**

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



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

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

**REVISED STANDARD PLAN RSP T2**

See Note 11

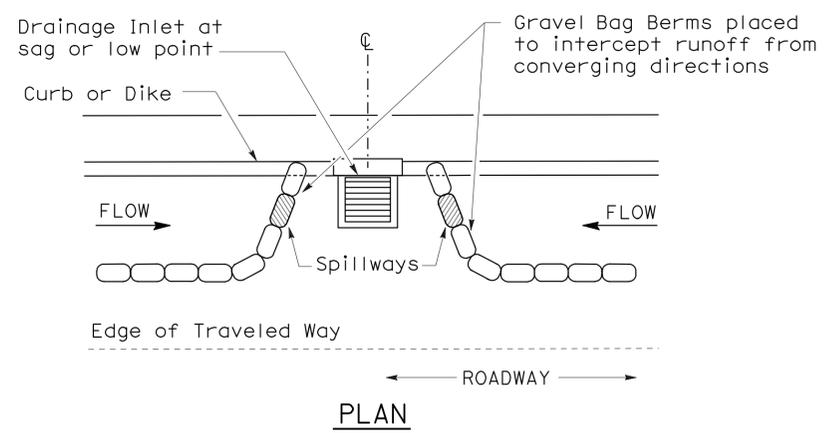


To accompany plans dated 12-1-08

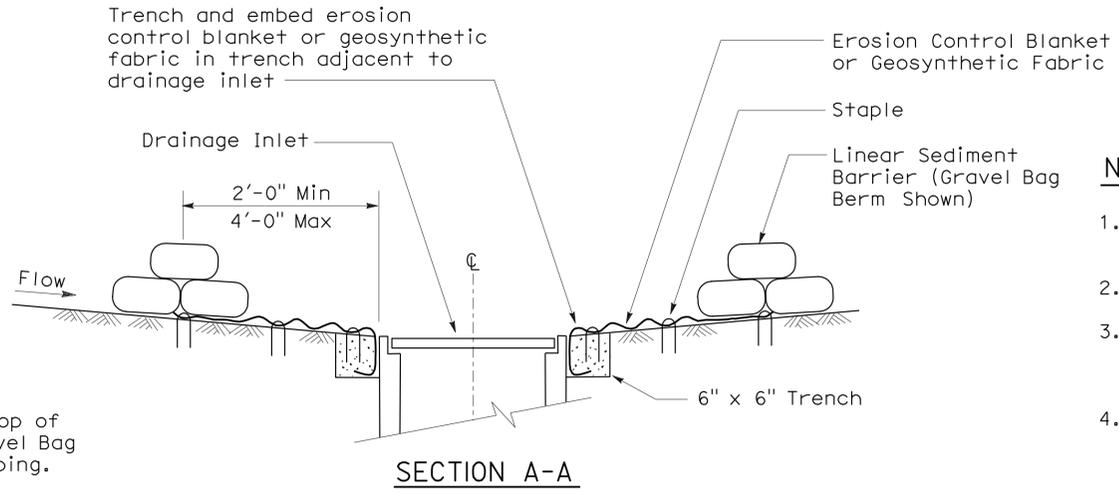
### GRAVEL BAG BERM (TYPE 3A) SPACING TABLE

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



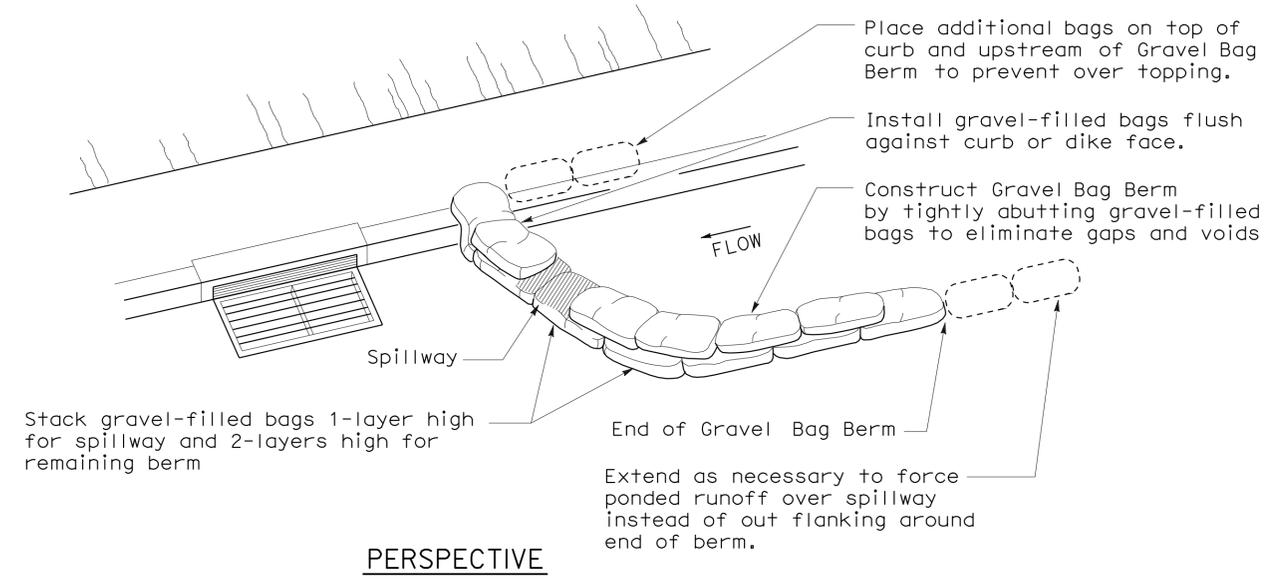
**PLAN**  
**CONFIGURATION FOR SAG POINT INLET**  
**(GRAVEL BAG BERM)**



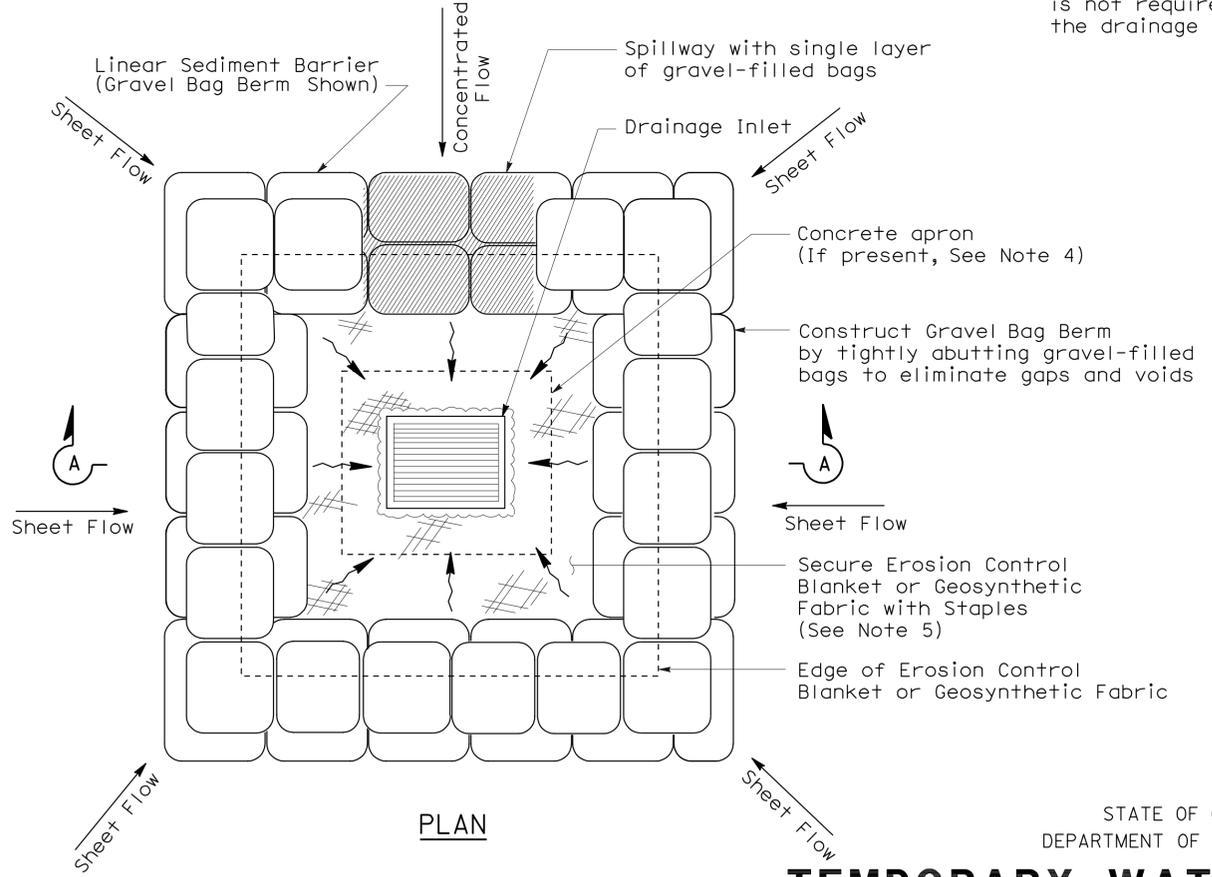
**SECTION A-A**

**NOTES:**

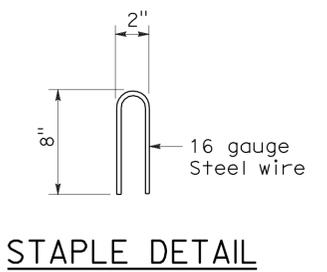
1. Place safety cones adjacent to drainage inlet protection.
2. Dimensions may vary to fit field conditions.
3. Install a minimum of 3 gravel bag berms upstream of each drainage inlet to be protected.
4. Position erosion control blanket or geosynthetic fabric at edge of concrete apron and secure in trench.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



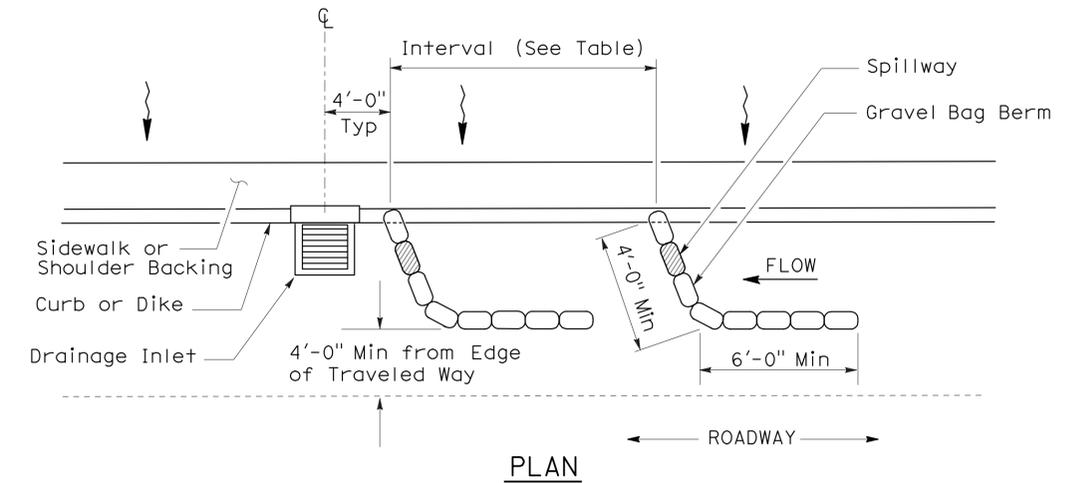
**PERSPECTIVE**



**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.

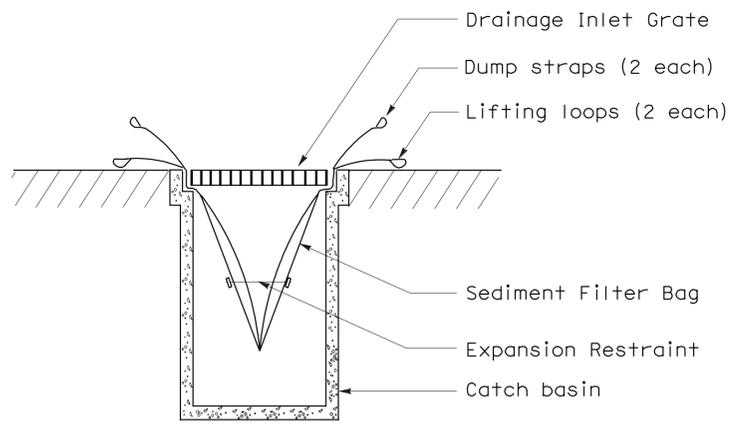
2006 NEW STANDARD PLAN NSP T62

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Son	12,37, 116,121	Var	39	39

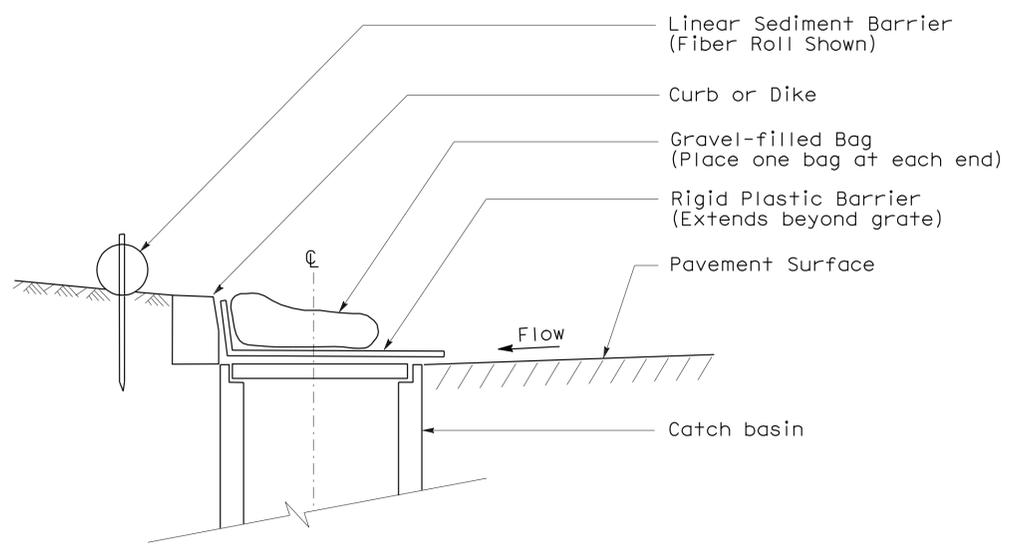
*Robert B. Schott*  
 LICENSED LANDSCAPE ARCHITECT  
 August 15, 2008  
 PLANS APPROVAL DATE  
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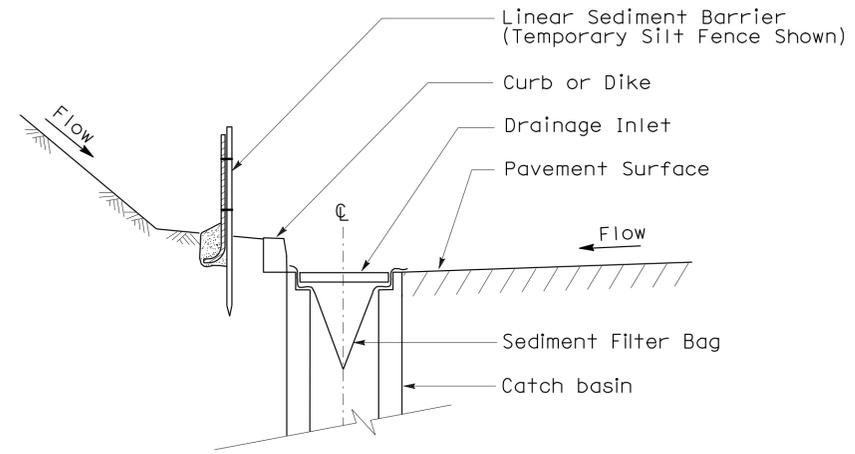
To accompany plans dated 12-1-08



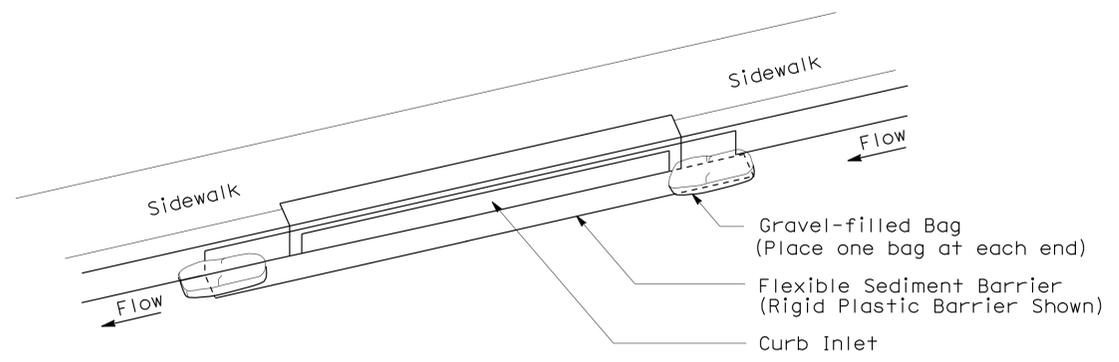
**SECTION B-B**  
**SEDIMENT FILTER BAG DETAIL**



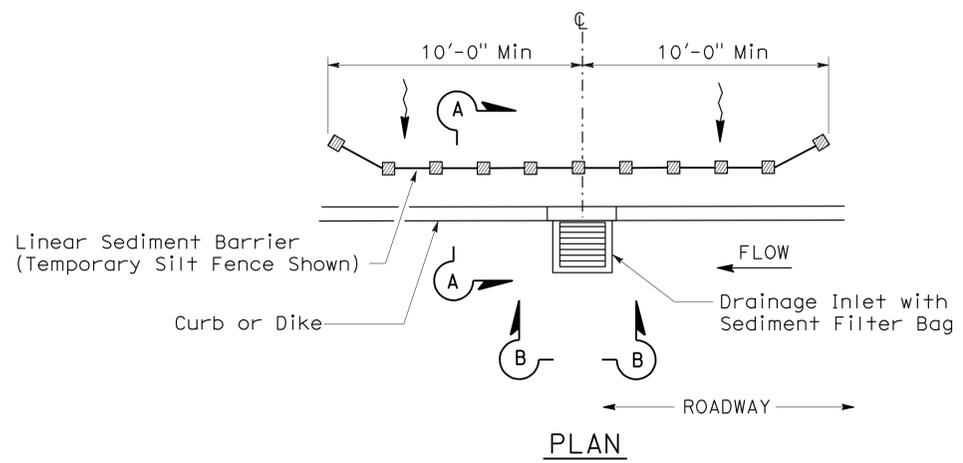
**SECTION**  
**TEMPORARY DRAINAGE INLET PROTECTION (TYPE 6A)**  
**(CATCH BASIN WITH GRATE)**



**SECTION A-A**



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



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

**NOTES:**

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

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.