

INDEX OF PLANS

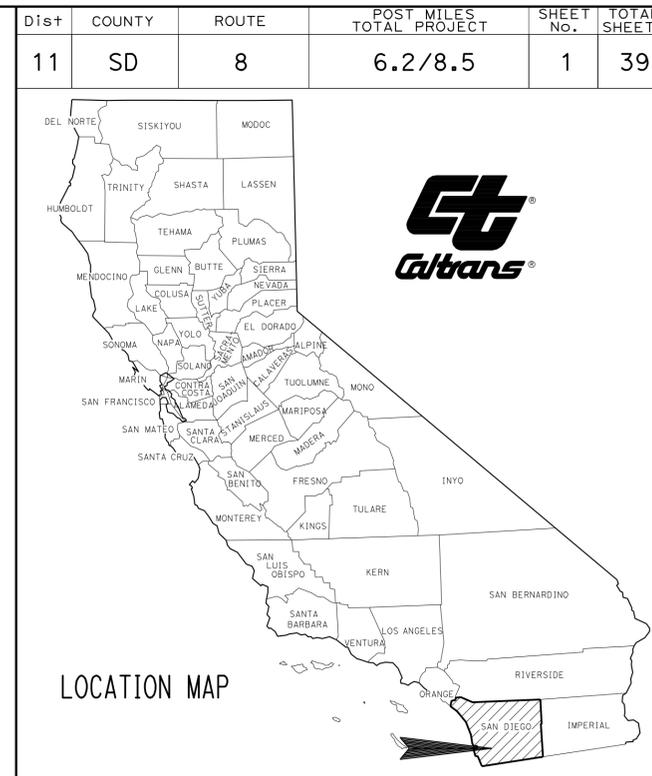
SHEET NO.	DESCRIPTION
1	TITLE AND LOCATION MAP
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THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.

STATE OF CALIFORNIA **ACIM-008-1(310)E**
 DEPARTMENT OF TRANSPORTATION

**PROJECT PLANS FOR CONSTRUCTION ON
 STATE HIGHWAY
 IN SAN DIEGO COUNTY IN SAN DIEGO
 AT VARIOUS LOCATIONS FROM FAIRMOUNT AVENUE
 UNDERCROSSING TO 0.2 MILE EAST OF COLLEGE
 AVENUE OVERCROSSING**

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006



BEGIN CONSTRUCTION

Sta "SD-8L" 464+30 PM 6.2

LOCATION 2
 Sta 497+00/511+80 "R3WR1"

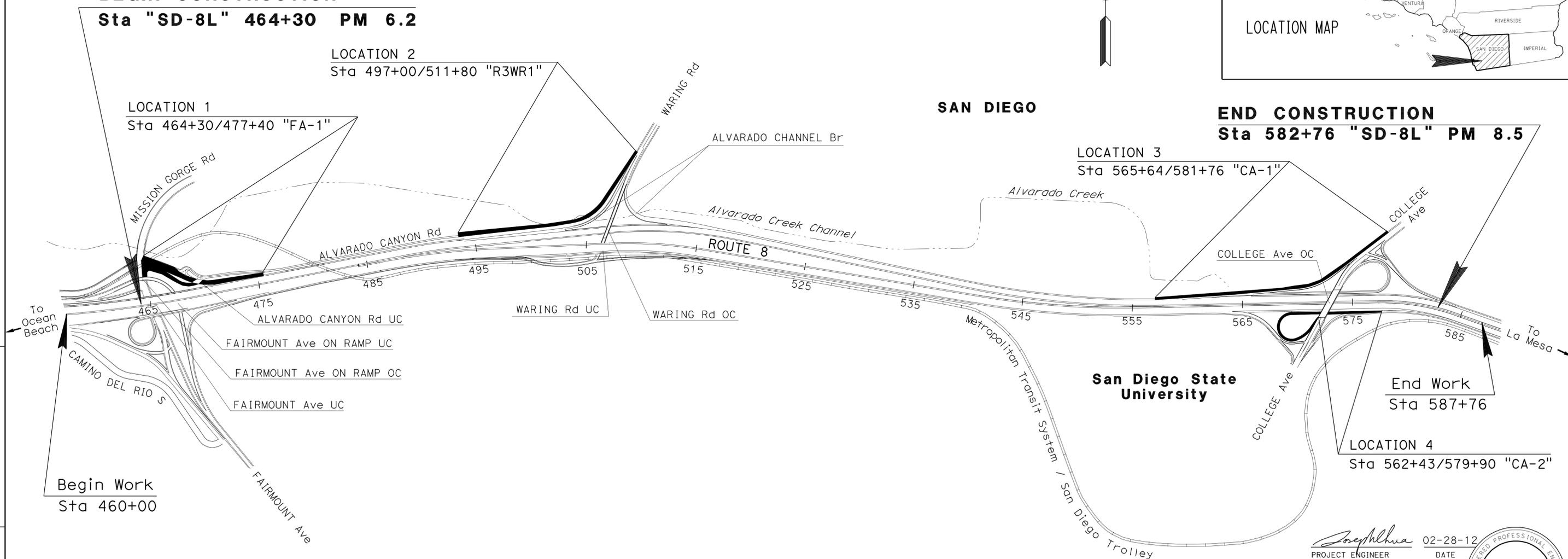
LOCATION 1
 Sta 464+30/477+40 "FA-1"

END CONSTRUCTION

Sta 582+76 "SD-8L" PM 8.5

LOCATION 3
 Sta 565+64/581+76 "CA-1"

LOCATION 4
 Sta 562+43/579+90 "CA-2"



PROJECT MANAGER
 CHRIS THOMAS

DESIGN ENGINEER
 JOSEPH CHUA

PROJECT ENGINEER
 REGISTERED CIVIL ENGINEER



March 12, 2012
 PLANS APPROVAL DATE

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

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

NO SCALE

CONTRACT No.	11-407304
PROJECT ID	1100020399

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	8	6.2/8.5	2	39

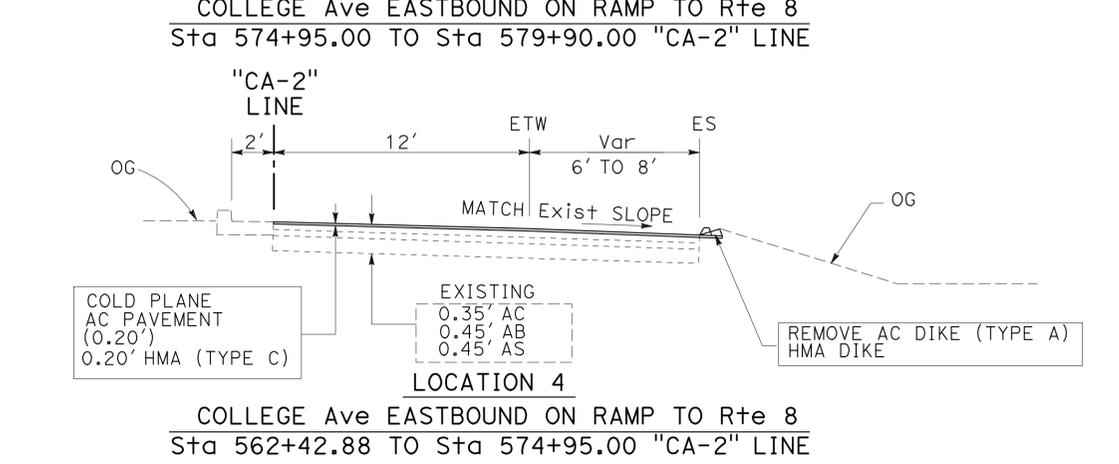
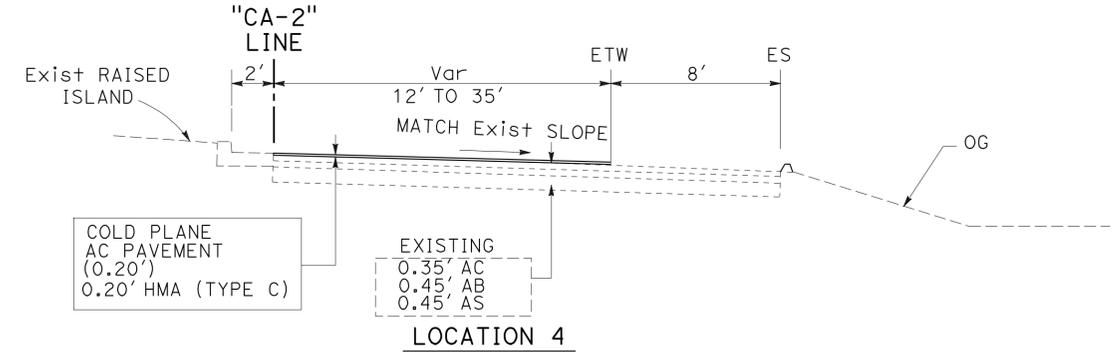
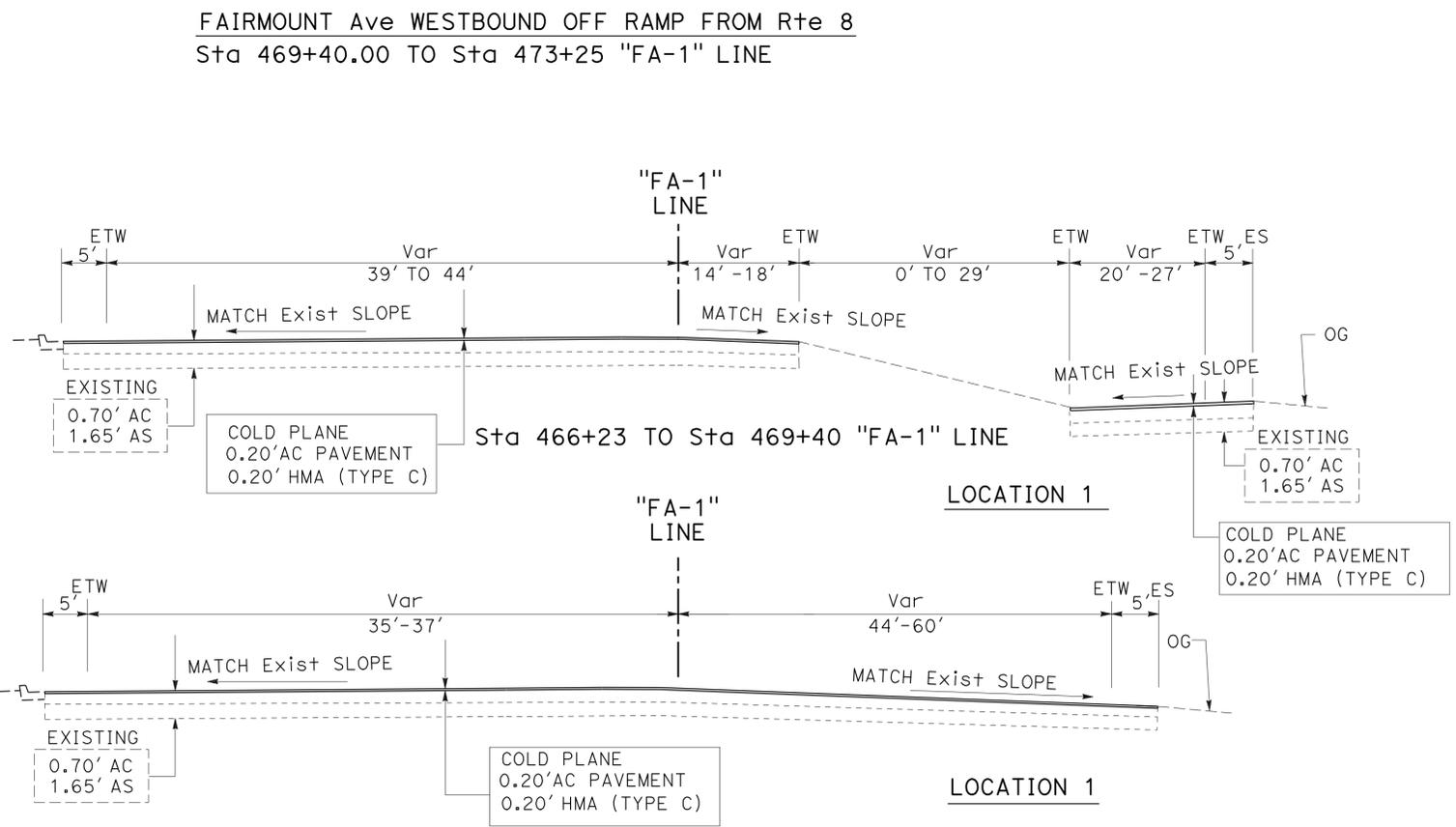
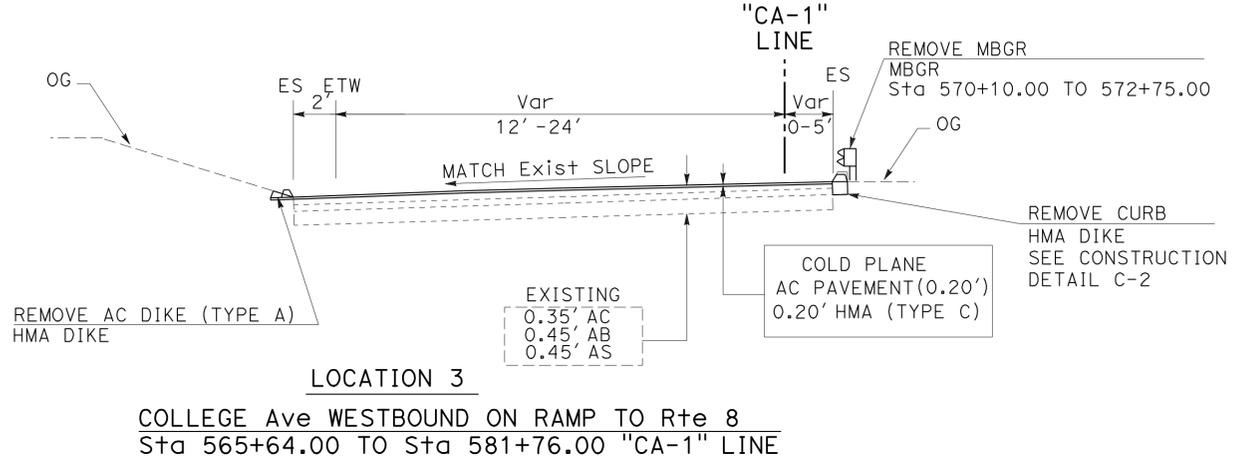
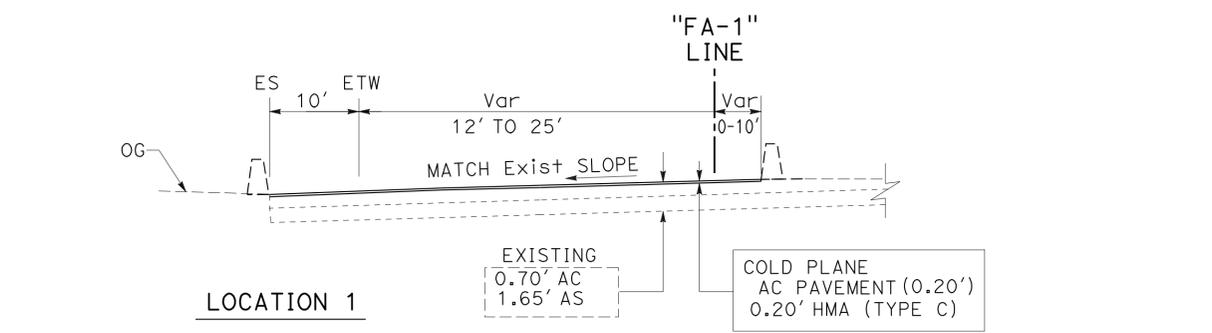
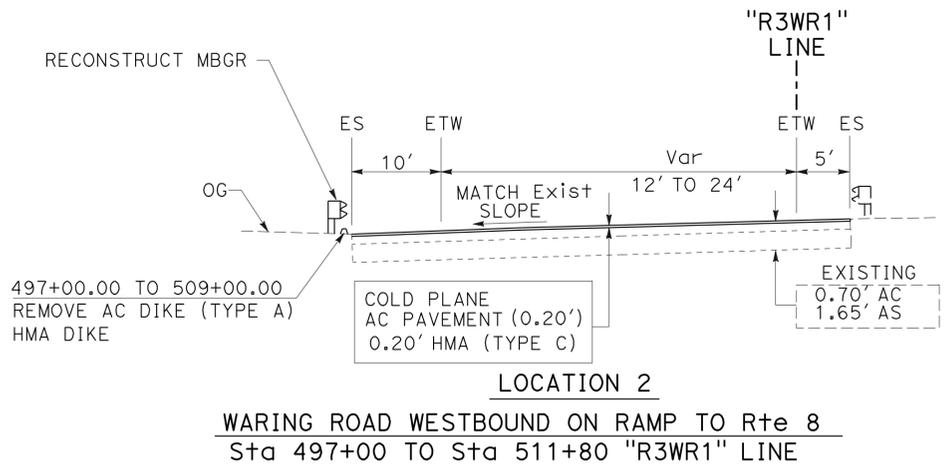
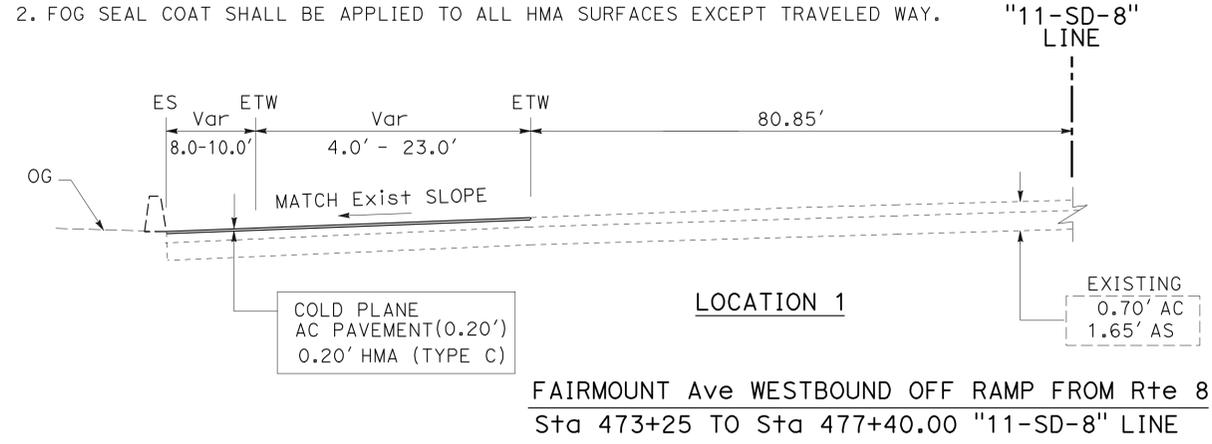
REGISTERED CIVIL ENGINEER	DATE
02-28-12	
PLANS APPROVAL DATE	
03-12-12	

REGISTERED PROFESSIONAL ENGINEER
JOSEPH CHUA
No. 53168
Exp. 06-30-13
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:

- DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
- FOG SEAL COAT SHALL BE APPLIED TO ALL HMA SURFACES EXCEPT TRAVELED WAY.



TYPICAL CROSS SECTIONS
NO SCALE
X-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 MINOR A
 FUNCTIONAL SUPERVISOR: CHRIS THOMAS
 CALCULATED/DESIGNED BY: JOSEPH CHUA
 CHECKED BY: THIN BUI
 REVISED BY: JOSEPH CHUA
 DATE REVISED: 02-28-12

LAST REVISION DATE PLOTTED => 13-MAR-2012
 03-05-12 TIME PLOTTED => 14:40

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	8	6.2/8.5	3	39

REGISTERED CIVIL ENGINEER DATE 02-28-12
 JOSEPH CHUA
 No. 53168
 Exp. 06-30-13
 CIVIL
 STATE OF CALIFORNIA

03-12-12
 PLANS APPROVAL DATE

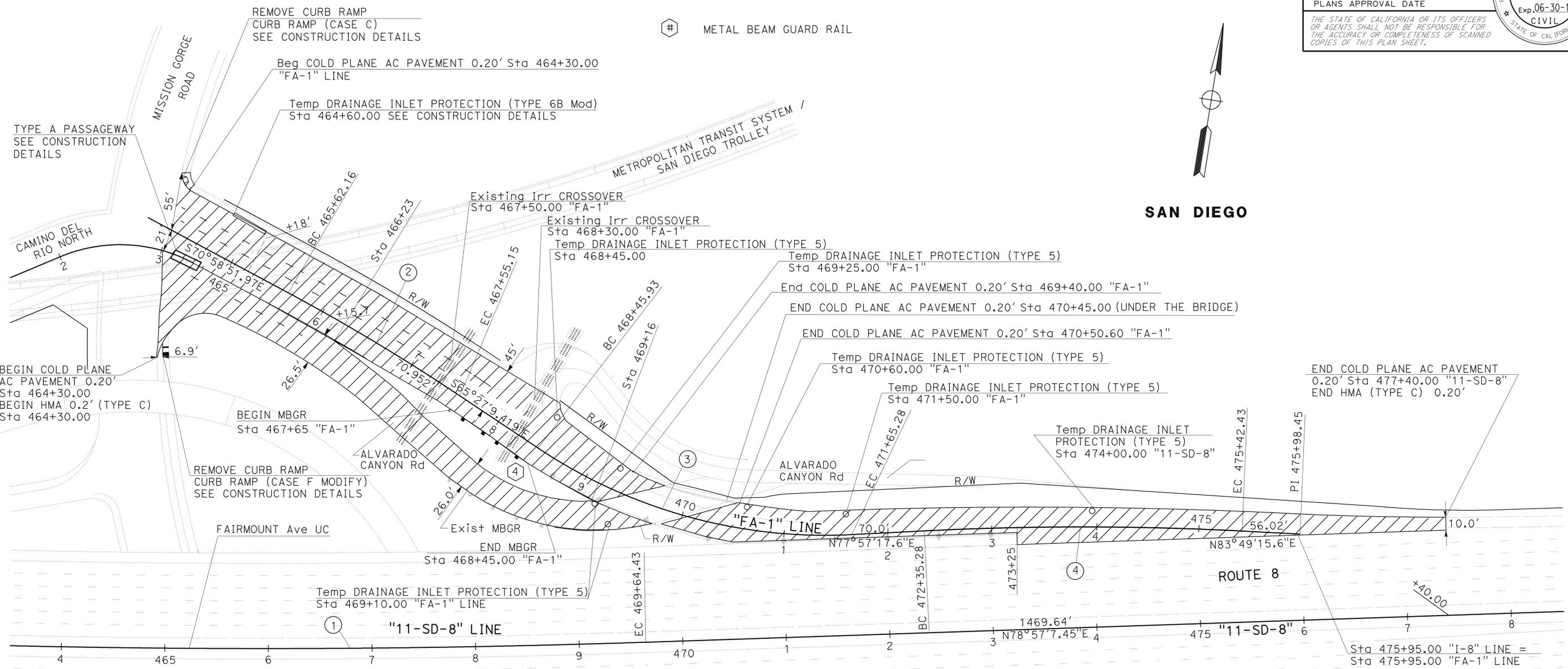
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING IN THE DISTRICT OFFICE.
- UTILITIES ARE NOT SHOWN ON THIS PLAN.

LEGEND:

- COLD PLANE AC 0.20'
- HOT MIX ASPHALT 0.20' (TYPE C)
- METAL BEAM GUARD RAIL



SAN DIEGO



CURVE DATA

No.	R	Δ	T	L
①	11,007.98'	2° 17' 37"	220.36'	440.65'
②	2,000.36'	5° 31' 46"	96.60'	193.05'
③	500.00'	36° 35' 38"	165.33'	319.34'
④	3,000.00'	05° 51' 58"	153.71'	307.15'

**LAYOUT
LOCATION 1
L-1**

SCALE: 1" = 50'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 MINOR A
 Chris Thomas
 Functional Supervisor
 Checked by
 Joseph Chua
 Thin Bui
 Revised by
 Date Revised

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	8	6.2/8.5	5	39

REGISTERED CIVIL ENGINEER **JOSEPH CHUA** No. 53168 Exp. 06-30-13
 DATE 02-28-12
 DATE 03-12-12
 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. LOCATION OF UTILITY FACILITIES SHOWN ON THESE PLANS WERE OBTAINED EITHER FROM THE OWNER'S RECORDS AND/OR FROM STATE SURVEYS.
2. LOCATION OF UTILITY LINES SHOWN ON THESE PLANS ARE APPROXIMATE. THE CONTRACTOR IS TO FIELD VERIFY OR POTHOLE IN ORDER TO DETERMINE EXACT LOCATION.
3. FOR ACCURATE RIGHT OF WAY, CONTACT RIGHT OF WAY ENGINEERING IN THE DISTRICT OFFICE.

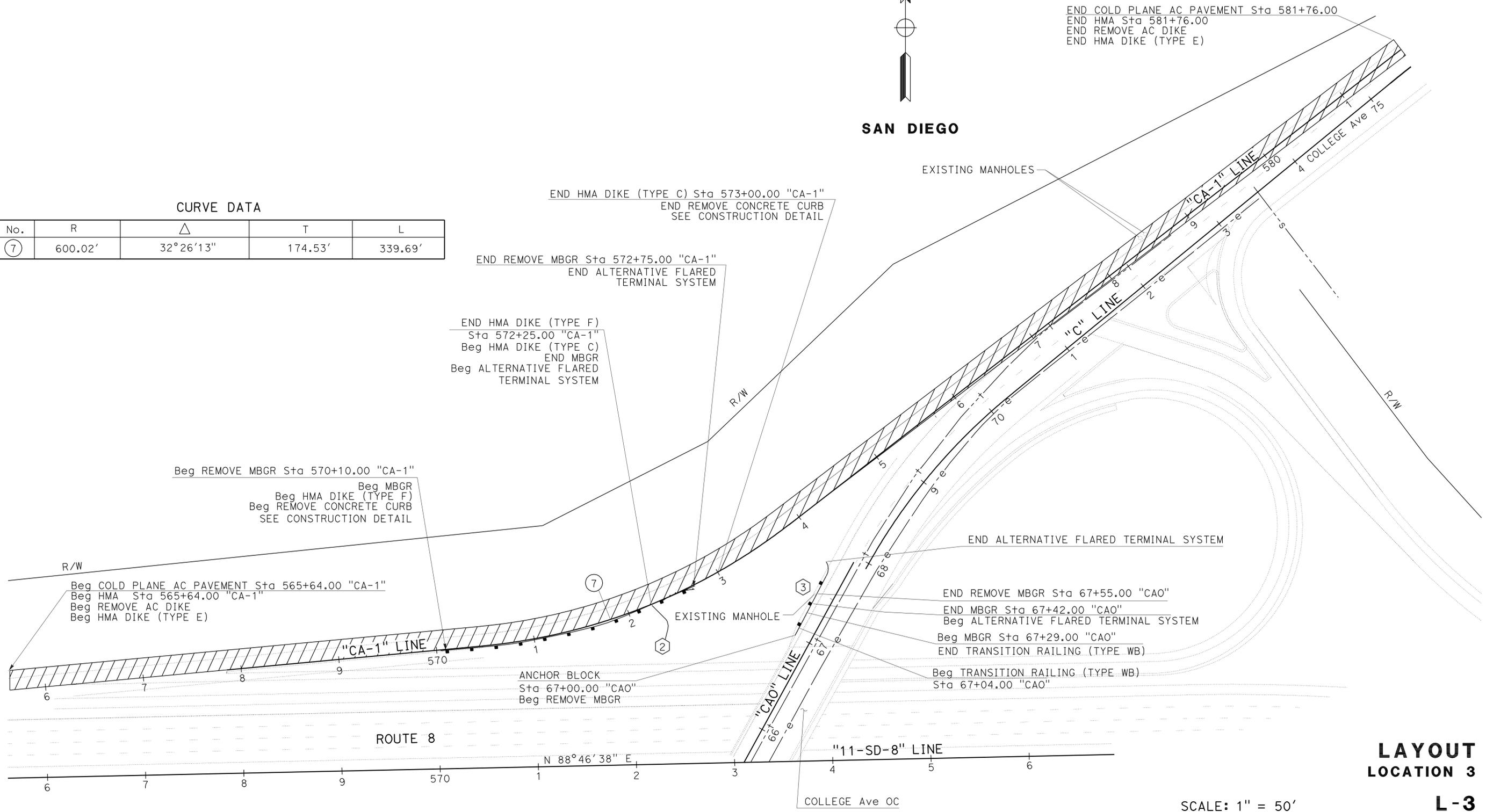
LEGEND:

SYMBOL	EXISTING UTILITY	OWNER
—e—	ELECTRIC UNDERGROUND LINE	SDG&E
---s---	SEWER LINE	CITY OF SAN DIEGO
---t---	TELEPHONE UNDER GROUND LINE	ATT



CURVE DATA

No.	R	Δ	T	L
⑦	600.02'	32°26'13"	174.53'	339.69'



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 MINOR A
 FUNCTIONAL SUPERVISOR: CHRIS THOMAS
 CALCULATED/DESIGNED BY: JOSEPH CHUA
 CHECKED BY: THIN BUI
 REVISIONS: REVISOR: JOSEPH CHUA, DATE: 02-28-12
 REVISOR: THIN BUI, DATE: 03-12-12

LAYOUT
LOCATION 3
L-3

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	8	6.2/8.5	6	39

REGISTERED CIVIL ENGINEER DATE 02-28-12
 JOSEPH CHUA
 No. 53168
 Exp. 06-30-13
 CIVIL
 REGISTERED PROFESSIONAL ENGINEER
 STATE OF CALIFORNIA

03-12-12
 PLANS APPROVAL DATE

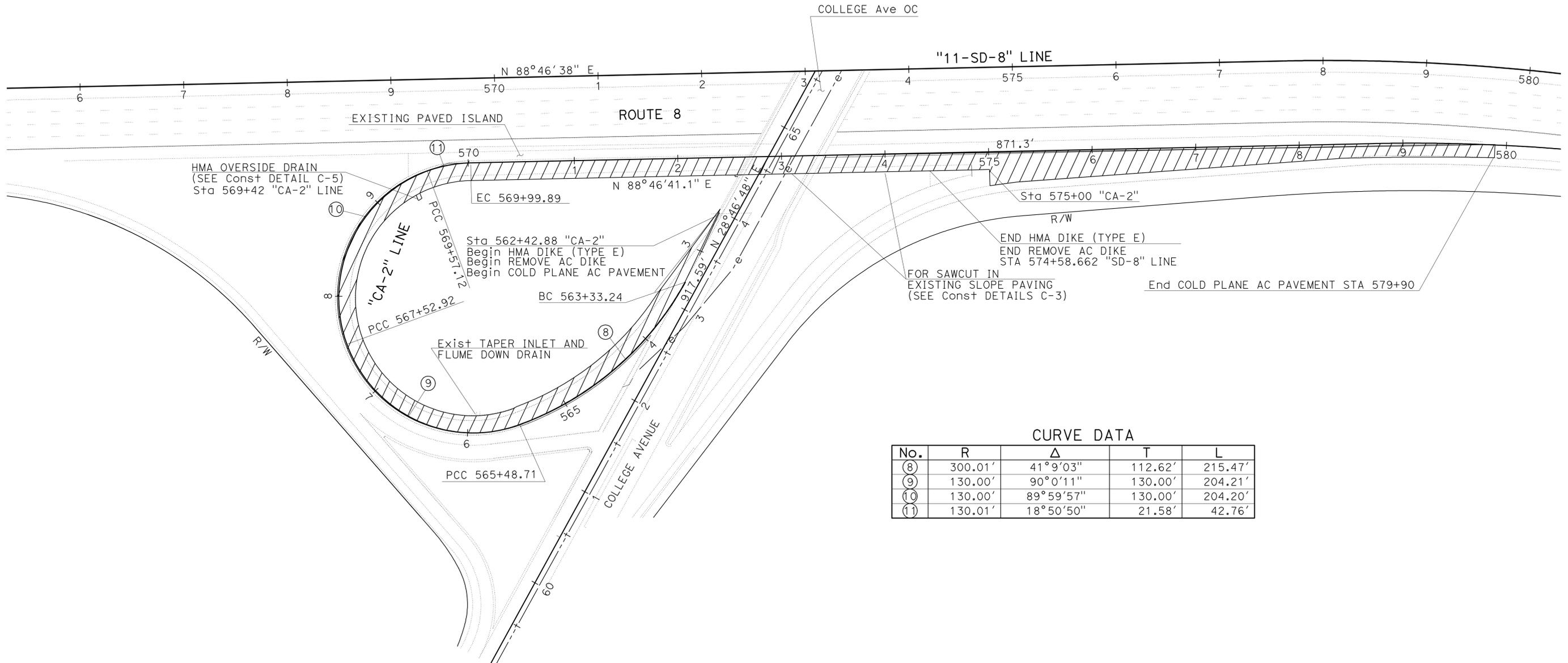
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SAN DIEGO

- NOTES:**
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 2. LOCATION OF UTILITY LINES SHOWN ON THESE PLANS ARE APPROXIMATE. THE CONTRACTOR IS TO FIELD VERIFY OR POTHOLE IN ORDER TO DETERMINE EXACT LOCATION.
 3. FOR ACCURATE RIGHT OF WAY, CONTACT RIGHT OF WAY ENGINEERING IN THE DISTRICT OFFICE.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 MINOR A
 FUNCTIONAL SUPERVISOR: CHRIS THOMAS
 CALCULATED/DESIGNED BY: JOSEPH CHUA
 CHECKED BY: THIN BUI
 REVISED BY: DATE
 REVISIONS:



CURVE DATA

No.	R	Δ	T	L
(8)	300.01'	41°9'03"	112.62'	215.47'
(9)	130.00'	90°0'11"	130.00'	204.21'
(10)	130.00'	89°59'57"	130.00'	204.20'
(11)	130.01'	18°50'50"	21.58'	42.76'

**LAYOUT
LOCATION 4**

SCALE: 1" = 50'

L-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans **INS**
 MINOR A

FUNCTIONAL SUPERVISOR
 CHRIS THOMAS

CALCULATED/DESIGNED BY
 CHECKED BY

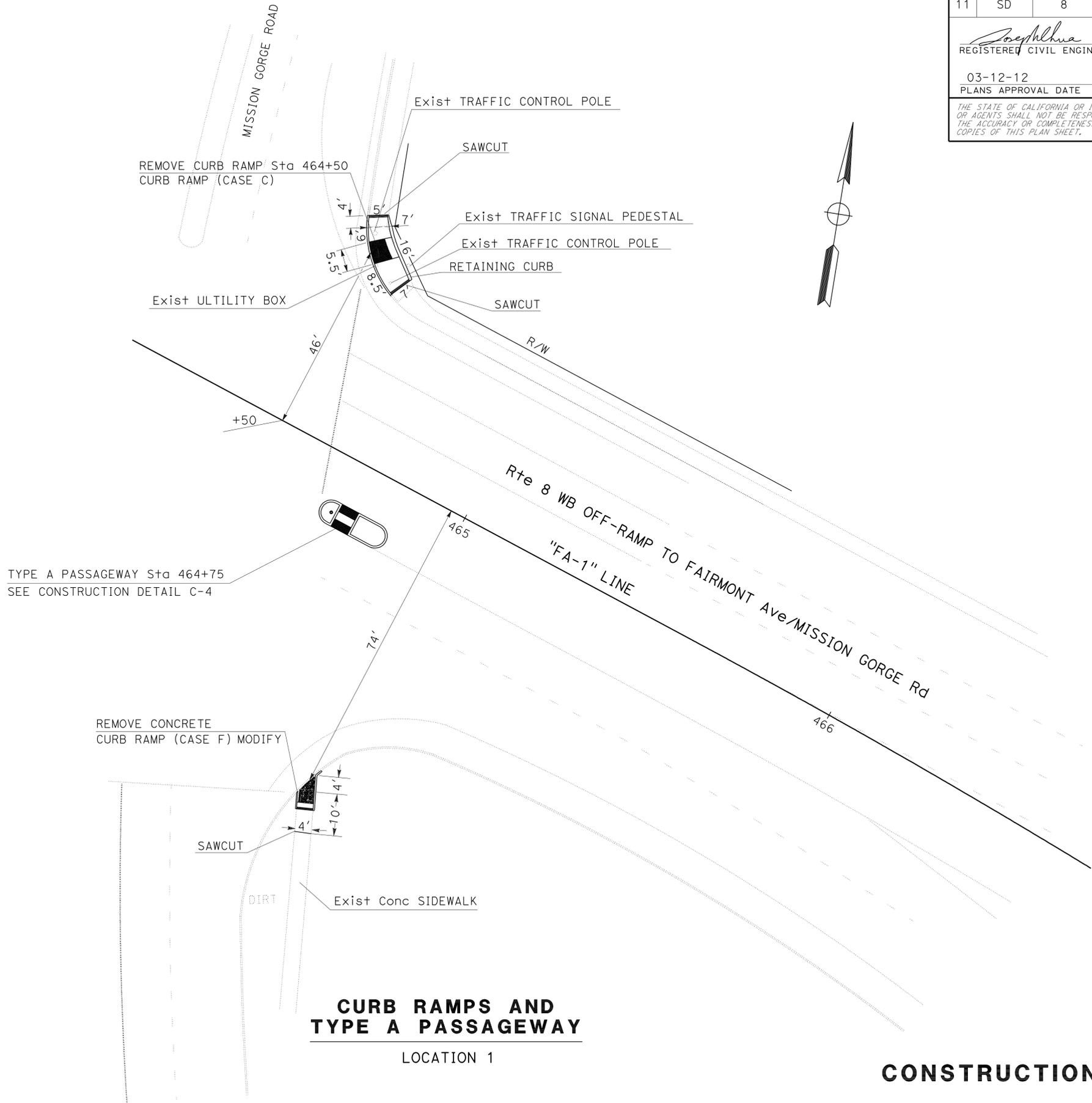
JOSEPH CHUA
 THIN BUT

REVISED BY
 DATE REVISED

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	8	6.2/8.5	7	39

REGISTERED CIVIL ENGINEER DATE 02-28-12
 REGISTERED CIVIL ENGINEER No. 53168
 PLANS APPROVAL DATE 03-12-12
 Exp. 06-30-13
 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.



**CURB RAMPS AND
 TYPE A PASSAGEWAY**
 LOCATION 1

CONSTRUCTION DETAILS
 NO SCALE
C-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	8	6.2/8.5	8	39

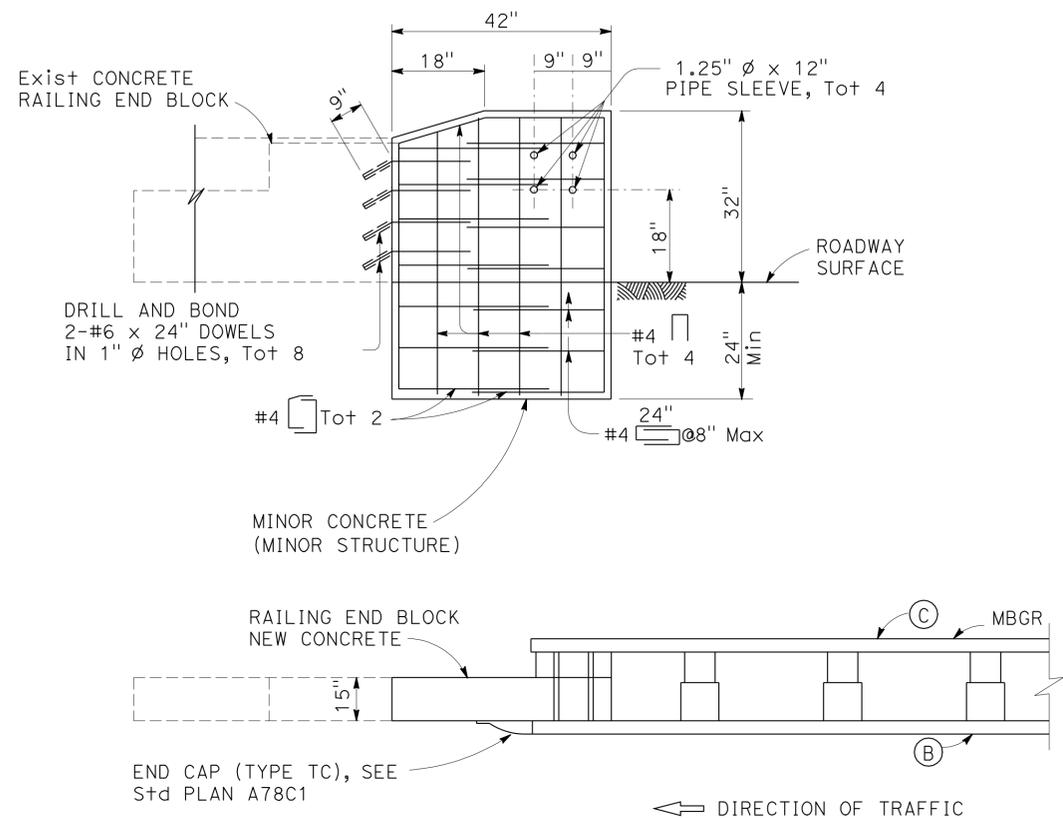
<i>Joseph Chua</i>	02-28-12
REGISTERED CIVIL ENGINEER	DATE
03-12-12	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
JOSEPH CHUA
No. 53168
Exp. 06-30-13
CIVIL
STATE OF CALIFORNIA

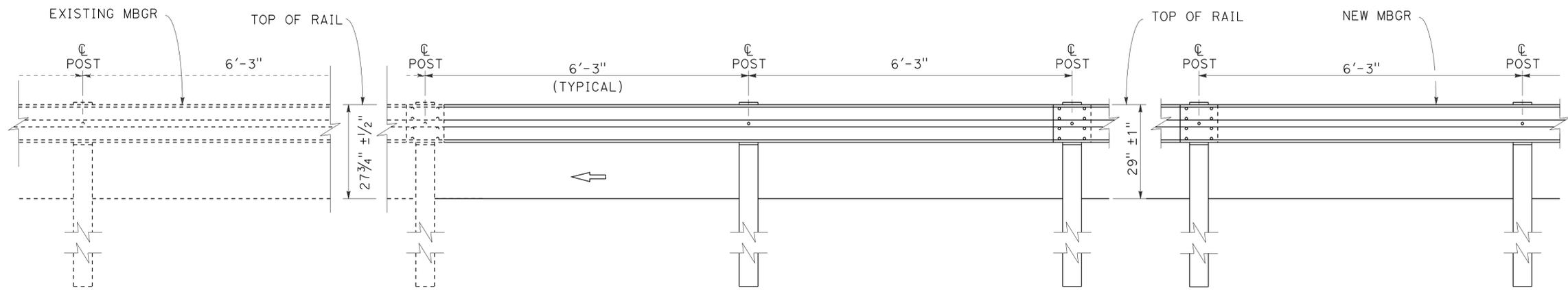
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NOTES:

- DEPENDENT DIMENSIONS SHALL BE VERIFIED IN THE FIELD BEFORE FABRICATING ANY END CONNECTION TO CONFORM WITH EXISTING CONDITIONS.
- FOR DETAILS NOT SHOWN, SEE STANDARD PLANS A77J1, A77J2 AND A78J.



BRIDGE RAIL CONNECTION DETAIL

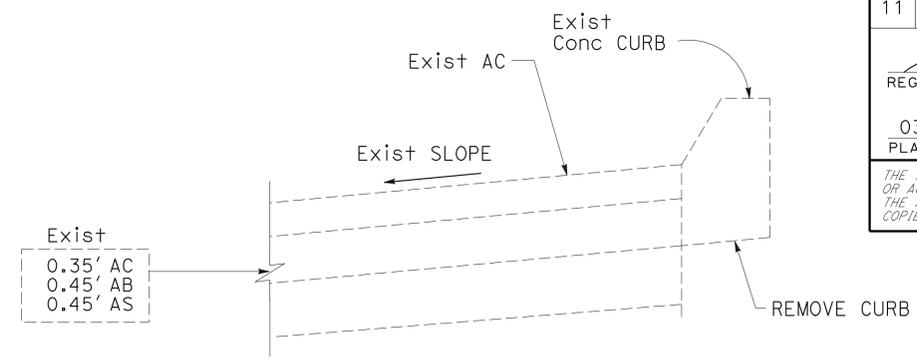


ELEVATION

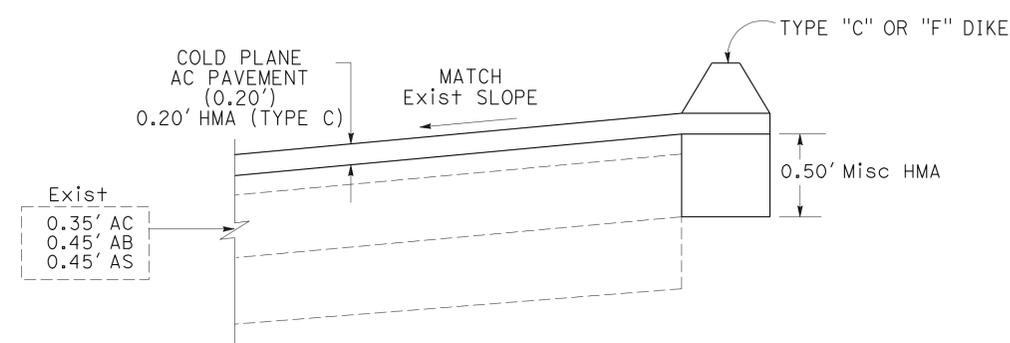
FOR DETAILS NOT SHOWN, SEE STANDARD PLANS RSP A77A1 AND RSP A77A2.

TO CONNECT EXISTING RAILING TO NEW RAILING, TRANSITION THE TOP OF NEW RAILING TO THE EXISTING RAILING HEIGHT AT A 120:1 RATIO

METAL BEAM GUARD RAILING TRANSITION



Exist TYPE B1-6 CONCRETE CURB



REMOVE CURB DETAIL

Sta 570+10.00 "CA-1" TO 573+00.00 "CA-1"

CONSTRUCTION DETAILS

NO SCALE

C-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - **Caltrans** - MINOR A - FUNCTIONAL SUPERVISOR - CHRIS THOMAS - CALCULATED/DESIGNED BY - CHECKED BY - JOSEPH CHUA - THIN BUT - REVISED BY - DATE REVISED -

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	8	6.2/8.5	9	39

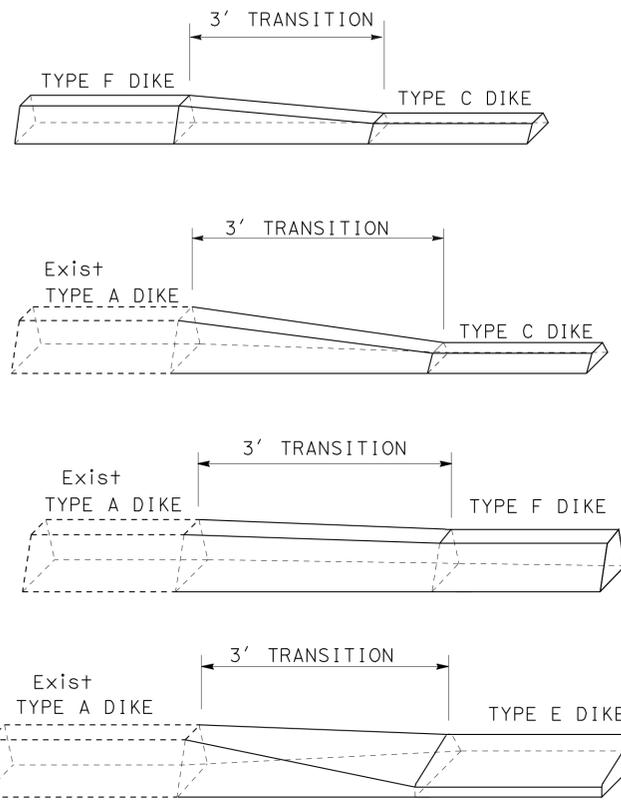
<i>Joseph Chua</i>	02-28-12
REGISTERED CIVIL ENGINEER	DATE
03-12-12	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
JOSEPH CHUA
 No. 53168
 Exp. 06-30-13
 CIVIL
 STATE OF CALIFORNIA

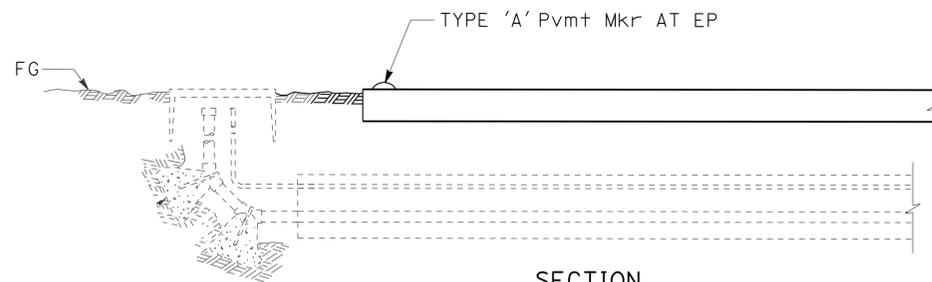
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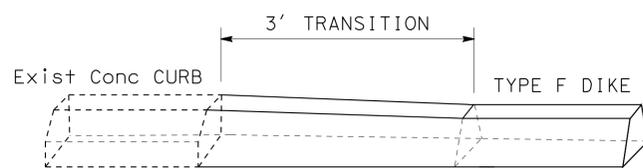


HMA DIKE TRANSITION

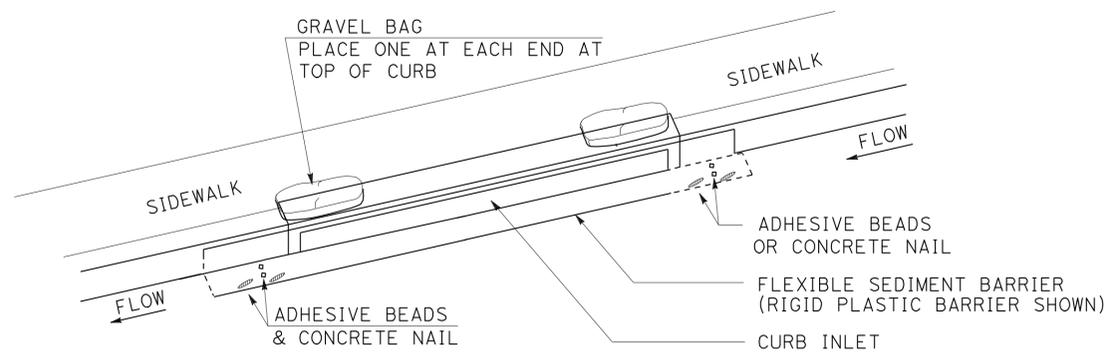


SECTION

Exist IRRIGATION CROSSOVER

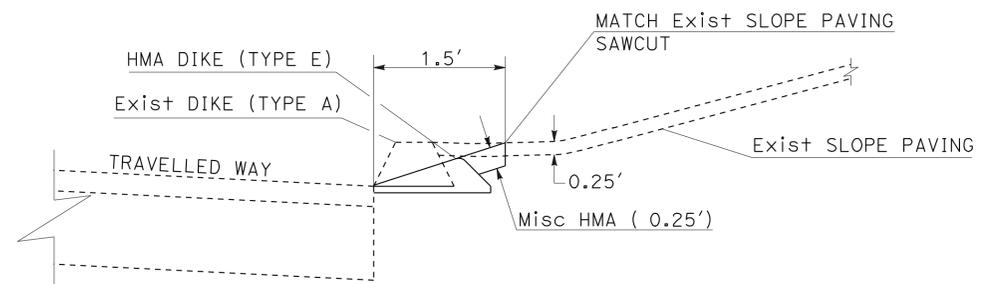


Conc CURB TRANSITION TO HMA DIKE



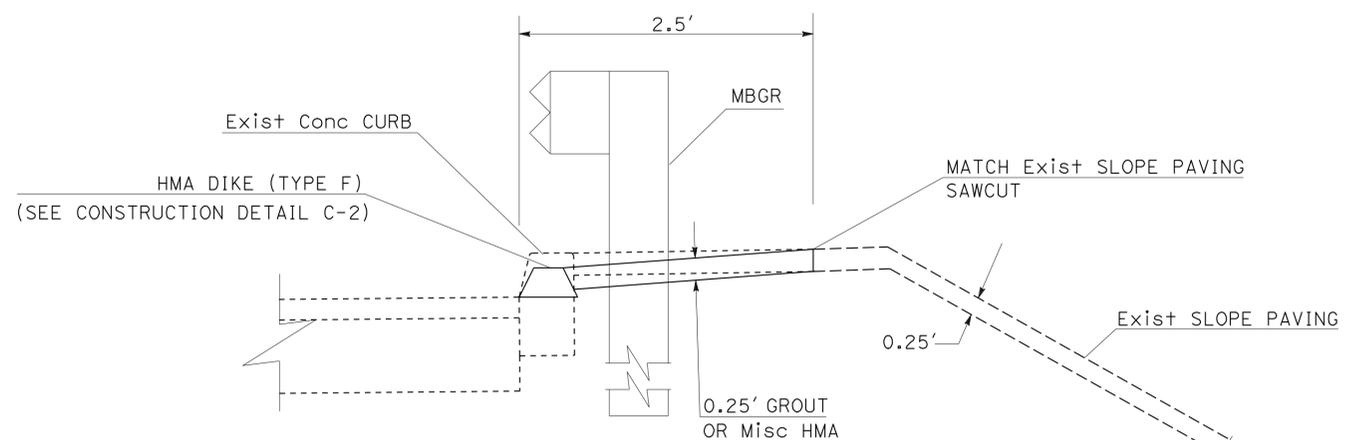
PERSPECTIVE

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



MISCELLANEOUS HMA CONSTRUCTION DETAIL

Sta 572+55 "CA-2" TO 573+30 "CA-2" LINE
 Sta 574+00 "CA-2" TO 574+43 "CA-2" LINE



MODIFIED VEGETATION CONTROL CONSTRUCTION DETAIL

Sta 570+07 TO 570+62 "CA-1" LINE
 (FOR DETAILS NOT SHOWN SEE Const DETAILS C-5)

CONSTRUCTION DETAILS

NO SCALE

C-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 MINOR A
 Chris Thomas
 Functional Supervisor
 Joseph Chua
 Thin Bui
 Revised By
 Date Revised
 Calculated/Designed By
 Checked By
 USERNAME => s127400
 DGN FILE => 1100020399ga003.dgn
 BORDER LAST REVISED 7/2/2010
 RELATIVE BORDER SCALE IS IN INCHES
 UNIT 2763
 PROJECT NUMBER & PHASE 11000203991

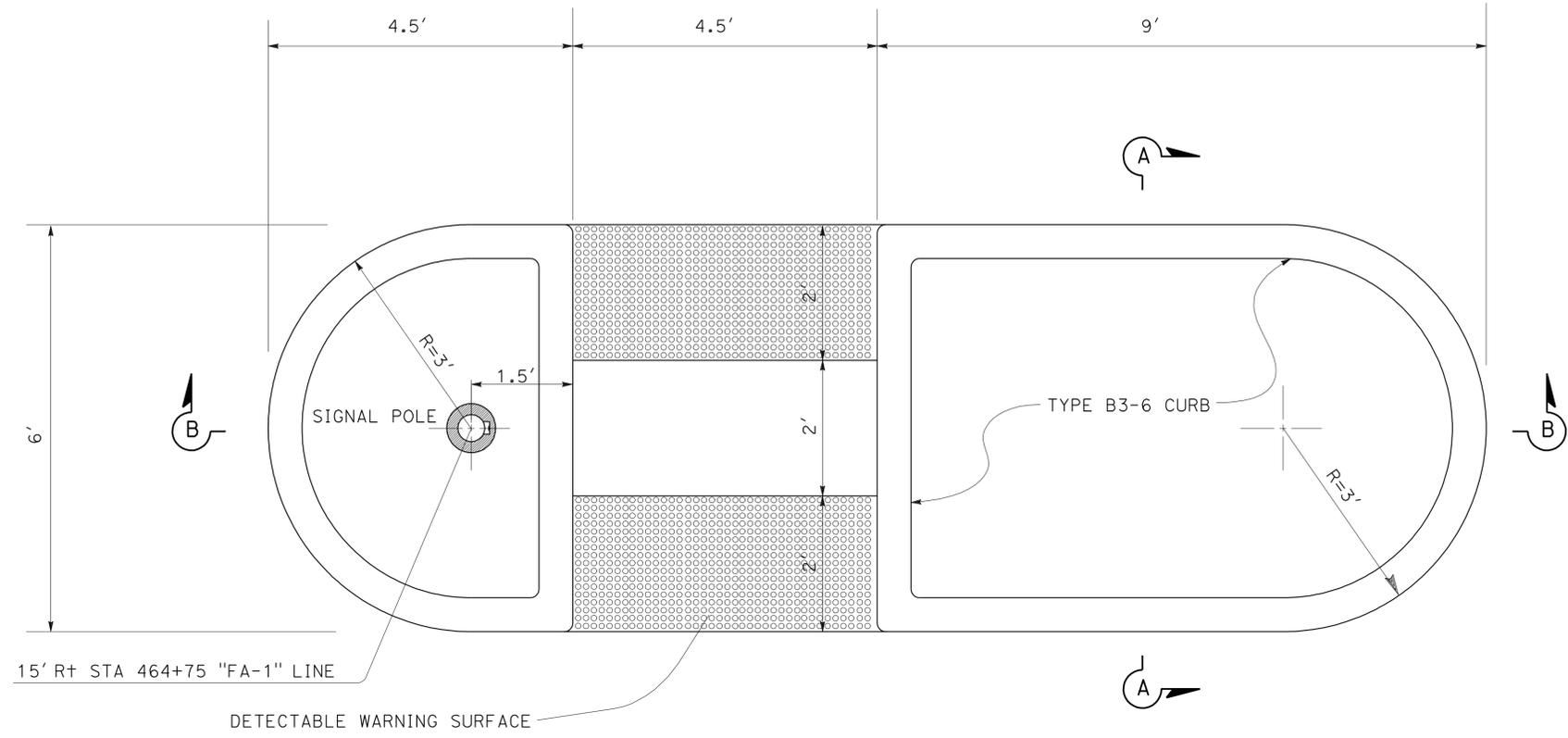
LAST REVISION DATE PLOTTED => 13-MAR-2012
 03-09-12 TIME PLOTTED => 14:40

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	8	6.2/8.5	10	39

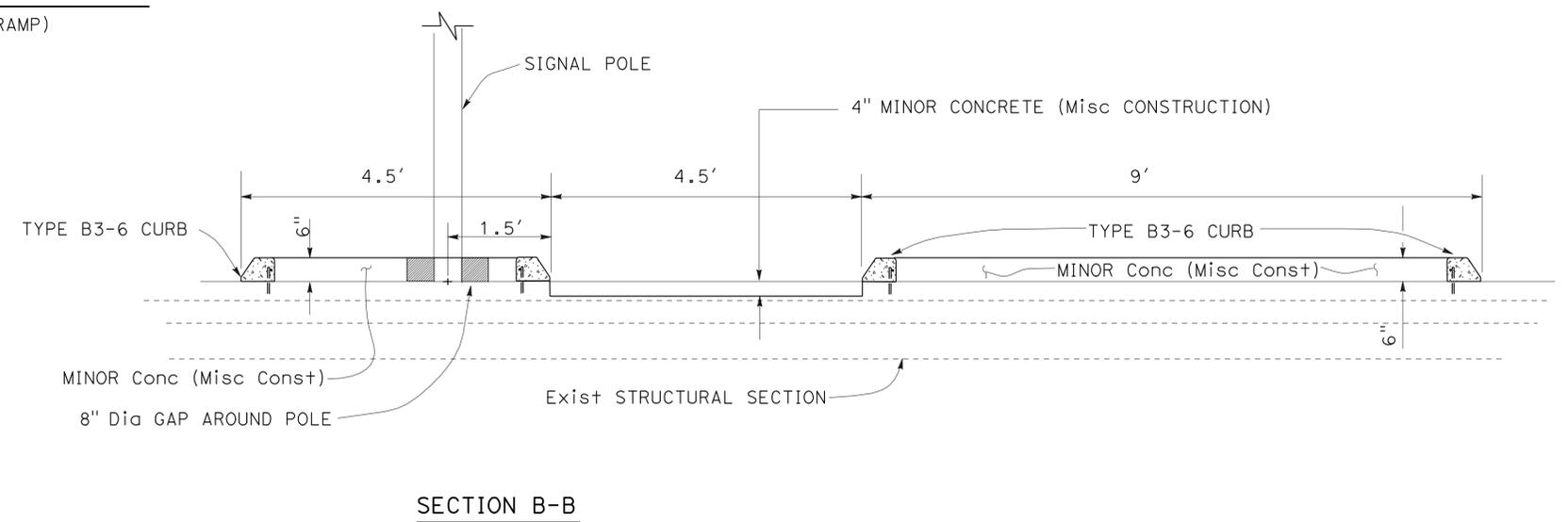
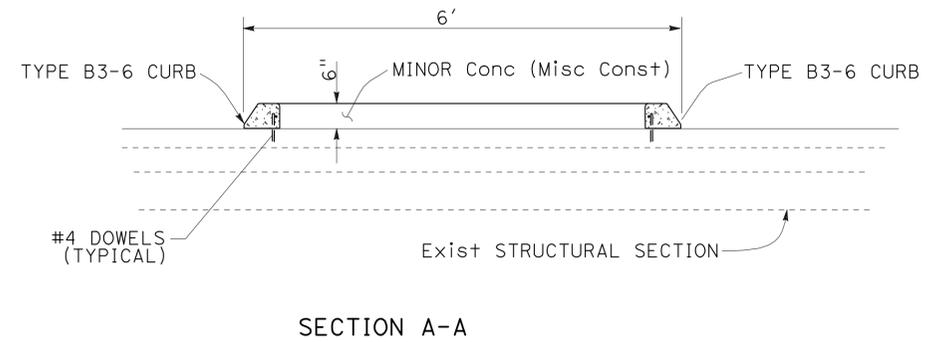
<i>Joseph Chua</i>	02-28-12
REGISTERED CIVIL ENGINEER	DATE
03-12-12	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
JOSEPH CHUA
 No. 53168
 Exp. 06-30-13
 CIVIL
 STATE OF CALIFORNIA

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TYPE A PASSAGEWAY DETAIL
(WESTBOUND FAIRMOUNT OFF RAMP)



CONSTRUCTION DETAILS

NO SCALE

C-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	MINOR A
FUNCTIONAL SUPERVISOR	CHRIS THOMAS
CALCULATED/DESIGNED BY	CHECKED BY
JOSEPH CHUA	THIN BUI
REVISOR BY	DATE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	8	6.2/8.5	11	39

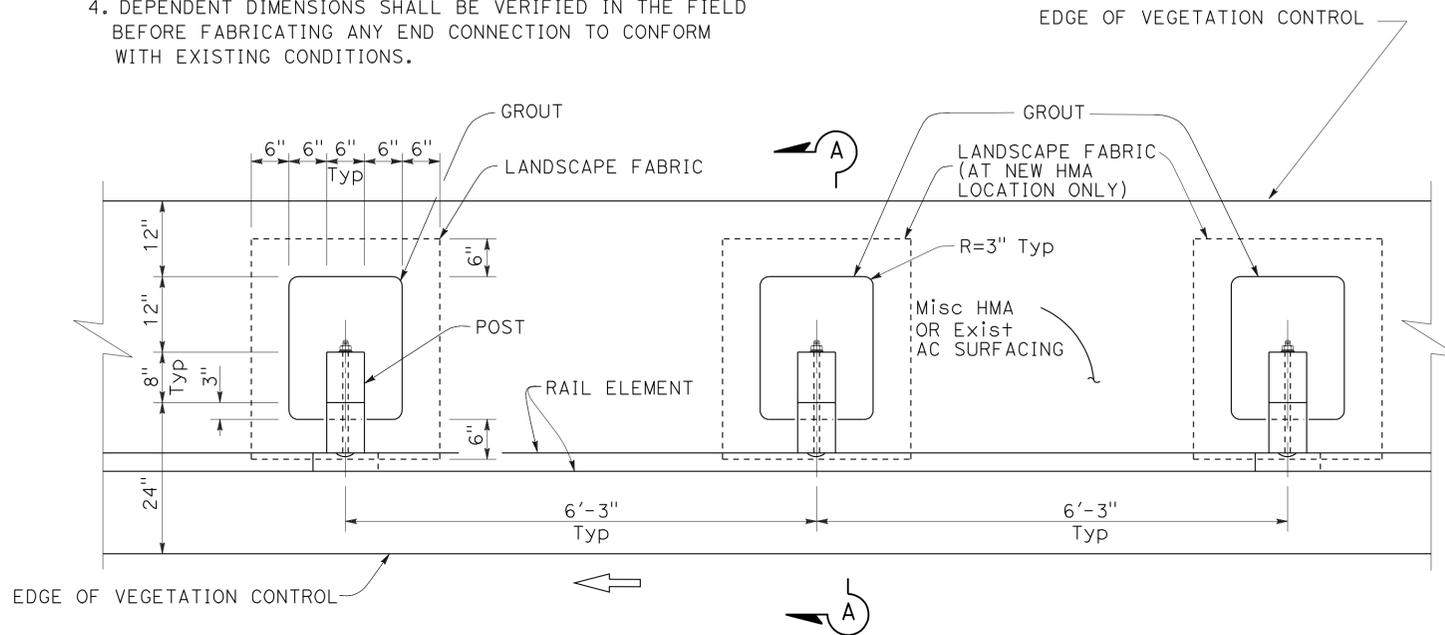
<i>Joseph Chua</i>	02-28-12
REGISTERED CIVIL ENGINEER	DATE
03-12-12	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
JOSEPH CHUA
No. 53168
Exp. 06-30-13
CIVIL

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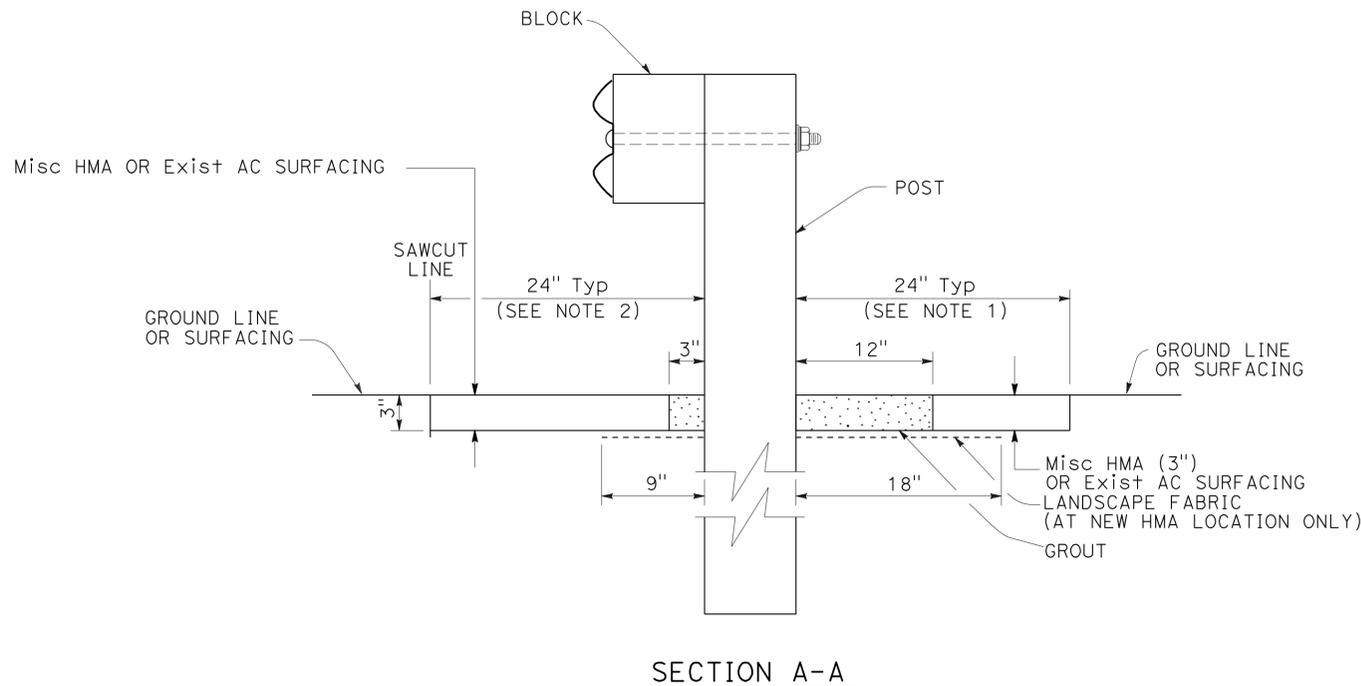
NOTES:

- 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.
- 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.
- DIRECTION OF ADJACENT TRAFFIC INDICATED BY: →
- DEPENDENT DIMENSIONS SHALL BE VERIFIED IN THE FIELD BEFORE FABRICATING ANY END CONNECTION TO CONFORM WITH EXISTING CONDITIONS.

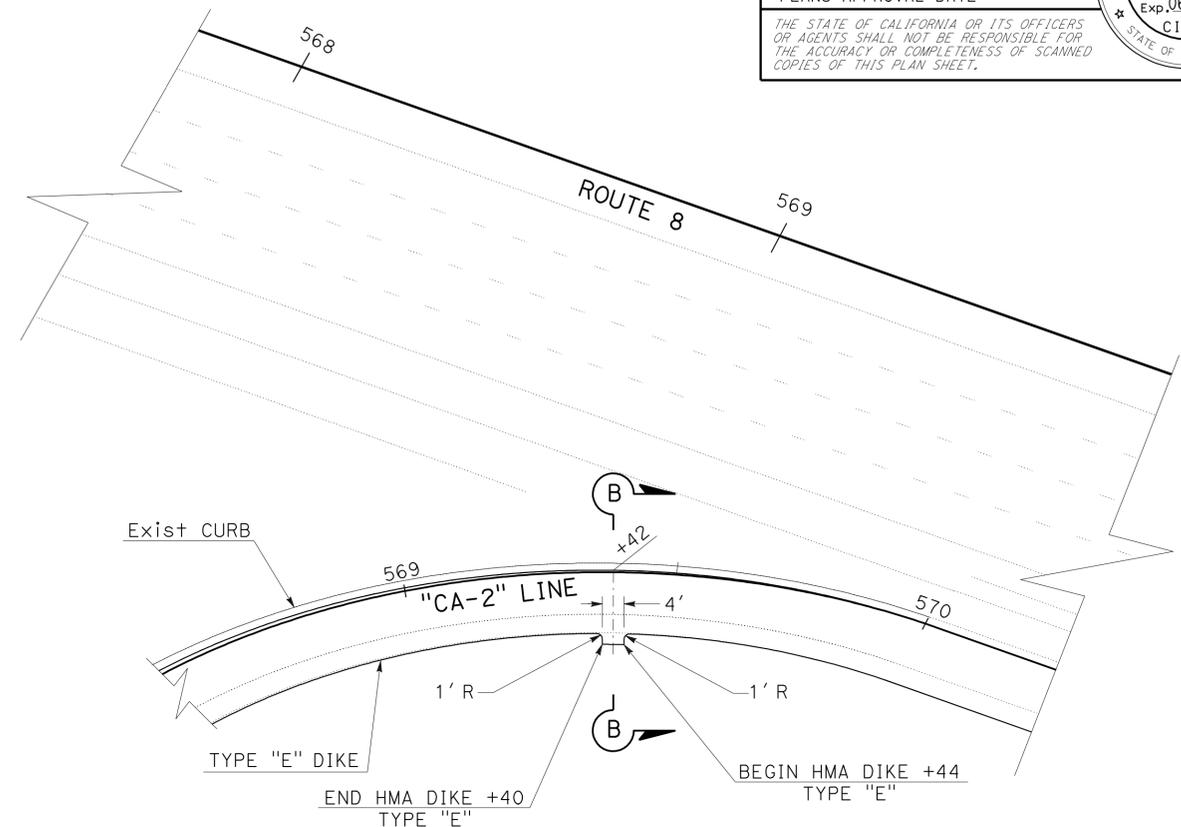


MODIFIED VEGETATION CONTROL

Sta 570+07 "CA-1" TO 570+62.00 "CA-1"
Sta 67+04.00 "CA0" TO 67+79.50 "CA0"

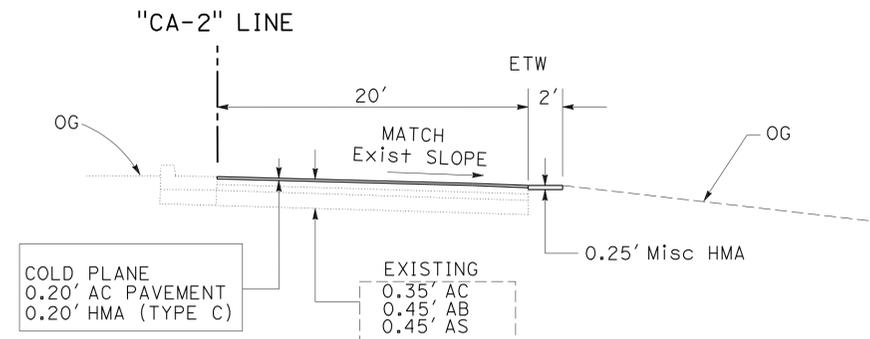


SECTION A-A



HMA OVERSIDE DRAIN

Sta 569+42.00 "CA-2" LINE



SECTION B-B

CONSTRUCTION DETAILS

NO SCALE

C-5

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	8	6.2/8.5	12	39

02-29-12
 REGISTERED CIVIL ENGINEER DATE
 03-12-12
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 SHAHIN ADIBI
 No. 54839
 Exp. 06-30-12
 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.

NOTES:

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

LEGEND:

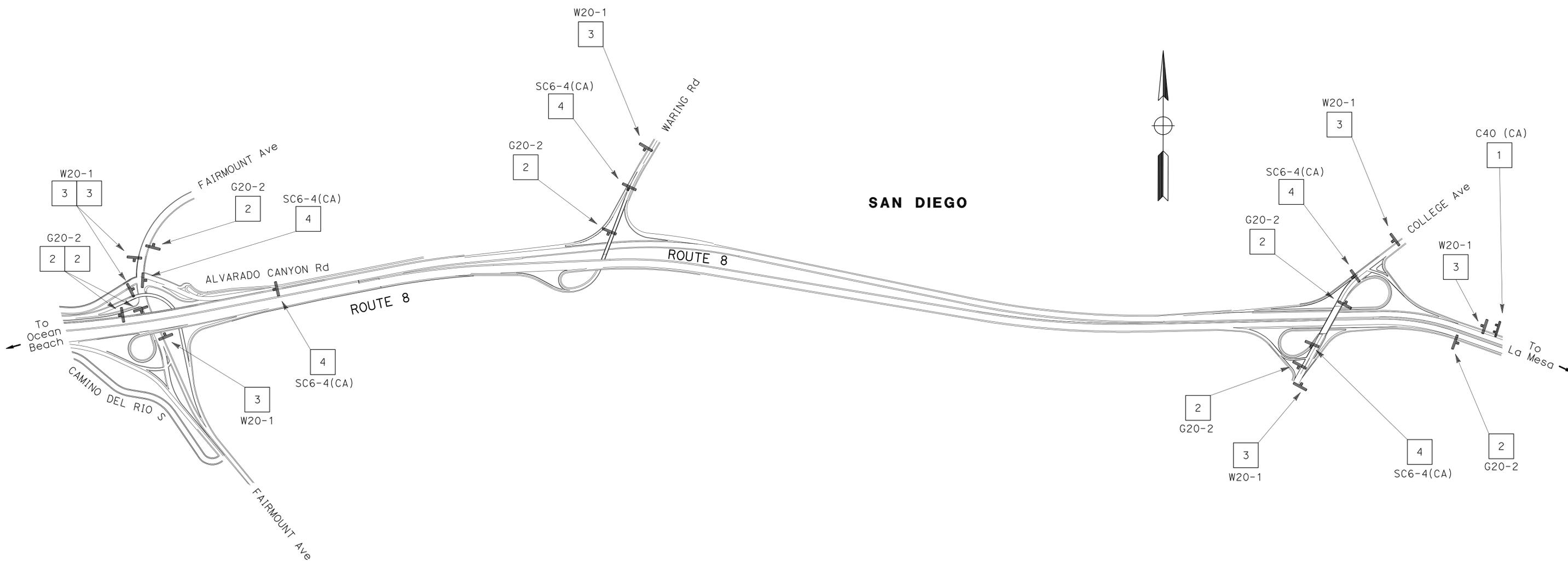
- X = CONSTRUCTION AREA SIGNS
 = DIRECTION OF TRAFFIC

CONSTRUCTION AREA SIGNS

SIGN No.	TYPE	PANEL SIZE (In)x(In)	No. OF POST AND SIZE (In)x(In)	No. OF SIGNS
1	C40 (CA)	108 X 42	2-4 X 6 (s)	1
2	C14 (CA)	48 X 24	1-4 X 4 (s)	7
3	C23 (CA)	48 X 48	1-4 X 6 (s)	7
4	SC6-4 (CA)	48 X 60	PORTABLE	5
TOTAL				20

(s) DENOTES STATIONARY MOUNTED SIGN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR CAMILLE ABOU-FADEL
 CALCULATED/DESIGNED BY CHECKED BY
 RYAN CHAO SHAHIN ADIBI
 REVISED BY DATE REVISED



CONSTRUCTION AREA SIGNS
NO SCALE
CS-1

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

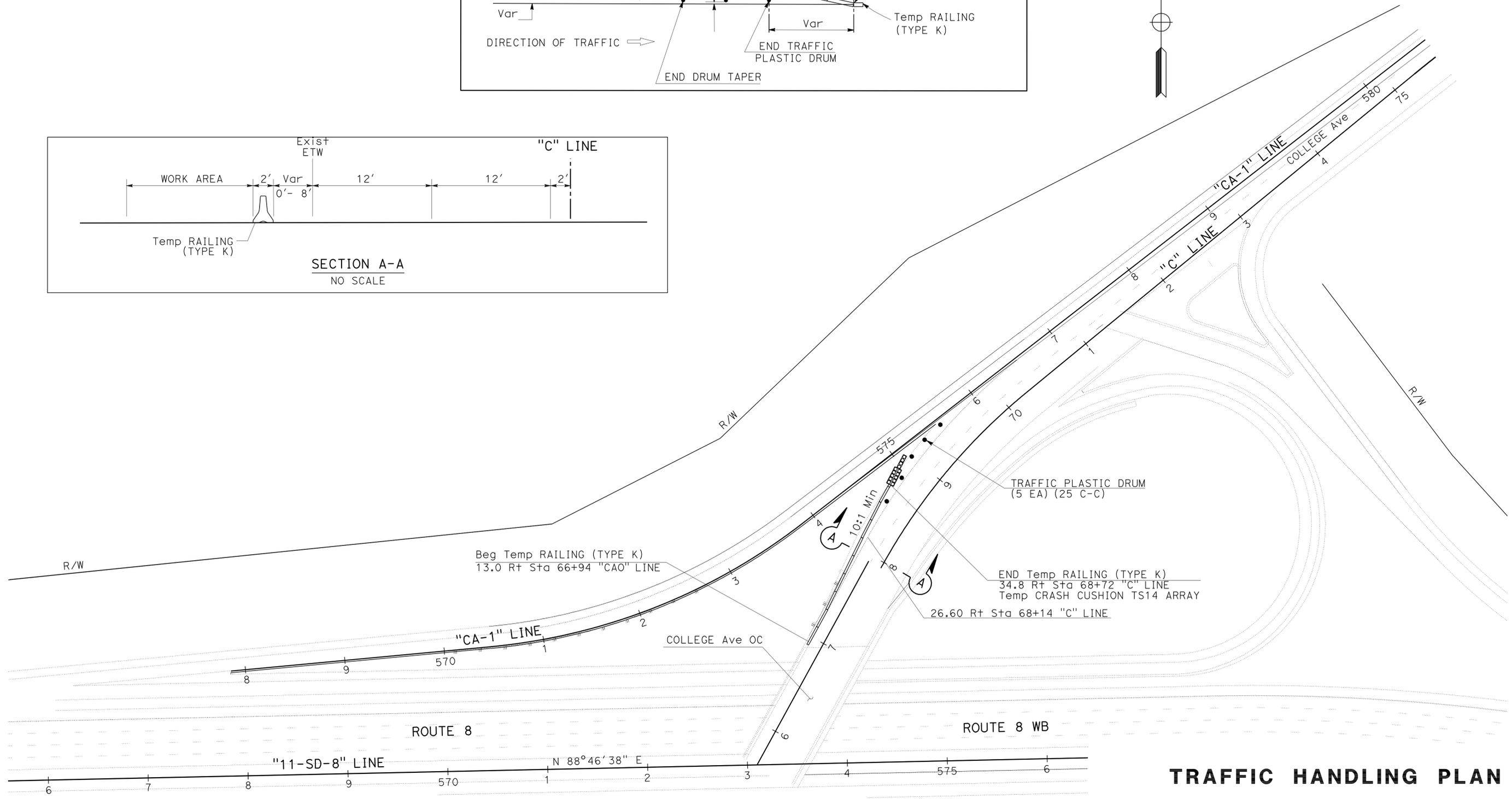
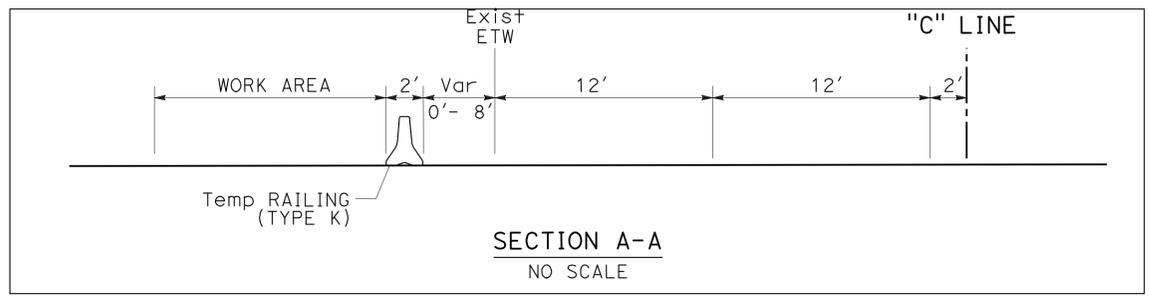
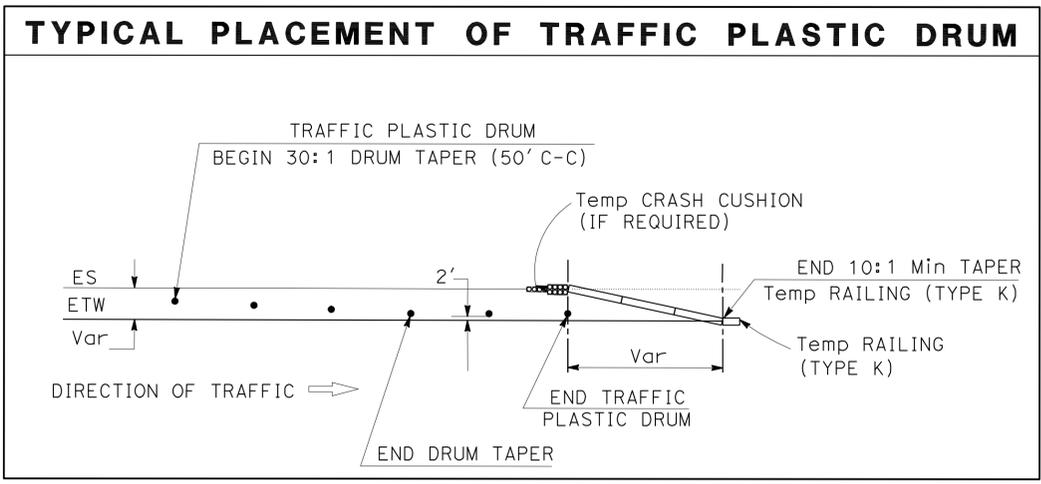
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	8	6.2/8.5	13	39

<i>Joseph Chua</i>	02-28-12
REGISTERED CIVIL ENGINEER	DATE
03-12-12	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
JOSEPH CHUA
No. 53168
Exp. 06-30-13
CIVIL

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



TRAFFIC HANDLING PLAN
TH-1
SCALE: 1" = 50'

APPROVED FOR TRAFFIC HANDLING WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
MINOR A

REVISOR BY
DATE REVISED

JOSEPH CHUA
THIN BUI

CALCULATED/DESIGNED BY
CHECKED BY

FUNCTIONAL SUPERVISOR
CHRIS THOMAS

MINOR A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	8	6.2/8.5	14	39

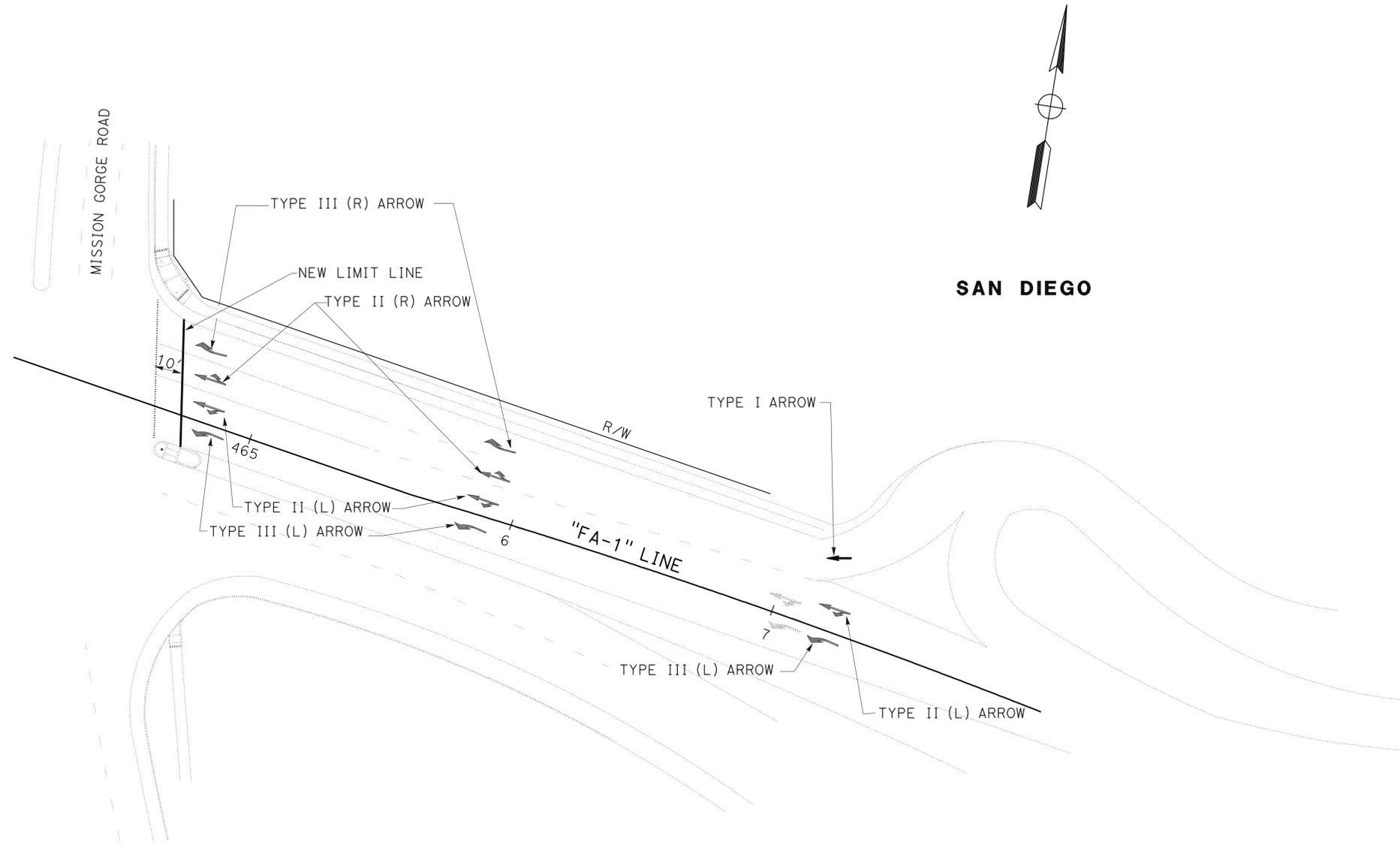
REGISTERED CIVIL ENGINEER	DATE	02-29-12
REGISTERED CIVIL ENGINEER	DATE	03-12-12
PLANS APPROVAL DATE		

REGISTERED PROFESSIONAL ENGINEER	No. 54839
Exp. 06-30-12	CIVIL

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NOTE:

1. ALL PAVEMENT DELINEATION SHALL BE REPLACED IN KIND UNLESS INDICATED OTHERWISE.
2. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING IN THE DISTRICT OFFICE.



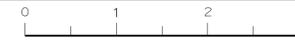
SAN DIEGO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR
Caltrans	CAMILLE ABOU-FADEL	CHECKED BY	RYAN CHAO
TRAFFIC DESIGN			SHAHIN ADIBI
			DATE REVISED

PAVEMENT DELINEATION PLAN
LOCATION 1
PD-1

APPROVED FOR PAVEMENT DELINEATION WORK ONLY

NO SCALE



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	8	6.2/8.5	15	39

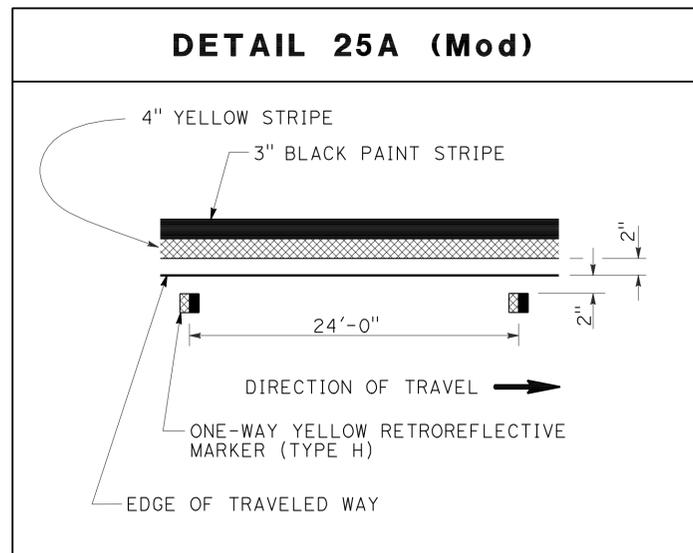
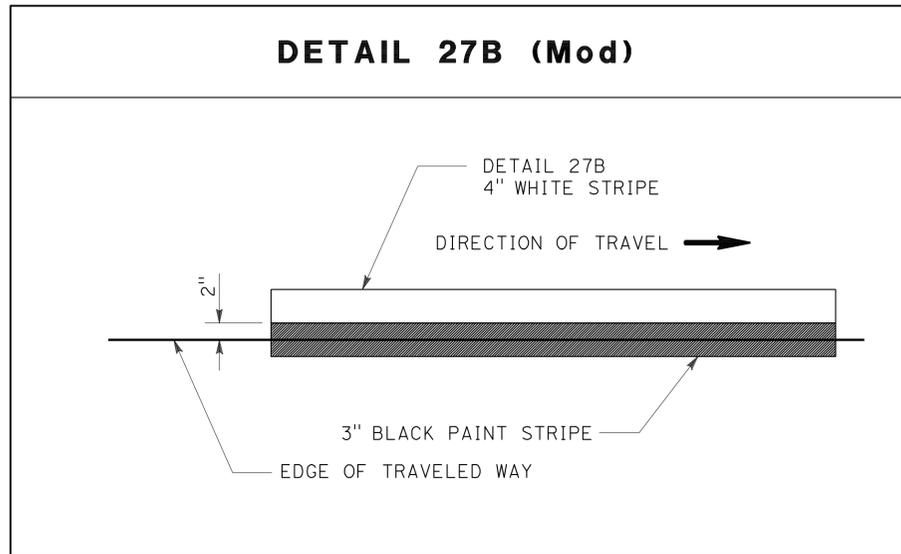
 02-29-12
 REGISTERED CIVIL ENGINEER DATE

03-12-12
 PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
 SHAHIN ADIBI
 No. 54839
 Exp. 06-30-12
 CIVIL
 STATE OF CALIFORNIA

NOTE: 1. ALL PAVEMENT DELINEATION SHALL BE REPLACED IN KIND UNLESS INDICATED OTHERWISE.



PAVEMENT DELINEATION DETAILS

NO SCALE

PDD-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	RYAN CHAO	REVISOR
Caltrans	CAMILLE ABOU-FADEL	SHAHIN ADIBI	DATE
TRAFFIC DESIGN			REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	8	6.2/8.5	17	39

02-29-12
REGISTERED CIVIL ENGINEER DATE

03-12-12
PLANS APPROVAL DATE

SHAHIN ADIBI
No. 54839
Exp. 06-30-12
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.

NOTE: 1. ALL PAVEMENT DELINEATION SHALL BE REPLACED IN KIND UNLESS INDICATED OTHERWISE.

THERMOPLASTIC PAVEMENT MARKING

Rte	LOCATION	DIRECTION	PM	TYPE IV (R) SQFT	TYPE I-24' SQFT	TYPE II (L) SQFT	TYPE II (R) SQFT	TYPE III (L) SQFT	TYPE V SQFT	SIGNAL SQFT	AHEAD SQFT	12" LIMIT LINE SQFT	8" - 45° HATCHING SQFT	
8	WB OFF - FAIRMOUNT Ave	WB	6.44	30		135	90	126	99	32	31		147	
8	WB ON - WARING Rd	WB	7.03		62							44		
8	WB ON - COLLEGE Ave	WB	8.14		62									
8	EB ON - COLLEGE Ave	EB	8.47						66					
SUB TOTAL				30	124	135	90	126	165	32	31	44	60	147
TOTAL				984										

REMOVE YELLOW PAINTED TRAFFIC STRIPE (HAZARDOUS WASTE)

ROUTE	DESCRIPTION	PM	DETAIL	LENGTH (LF)	REMARKS
8	WB OFF - FAIRMOUNT Ave	6.44	25A(Mod)	65	BRIDGE
TOTAL				65	

REMOVE PAVEMENT MARKERS (N)

ROUTE	DESCRIPTION	PM	TYPE A, G, H (EA)
8	WB OFF - FAIRMOUNT Ave	6.44	88
8	WB ON - WARING Rd	7.03	86
8	WB ON - COLLEGE Ave	8.14	143
8	EB ON - COLLEGE Ave	8.47	65
TOTAL			382

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

REMOVE PAINTED TRAFFIC STRIPE

ROUTE	DESCRIPTION	PM	DETAIL	LENGTH (LF)	REMARKS
8	WB OFF - FAIRMOUNT Ave	6.44	25A(Mod)	65	BRIDGE (BLACK STRIPE)
8	WB OFF - FAIRMOUNT Ave	6.44	27B(Mod)	65	BRIDGE
8	WB OFF - FAIRMOUNT Ave	6.44	9	20	BRIDGE
TOTAL				150	

PAVEMENT DELINEATION QUANTITIES

PDQ-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: CAMILLE ABOU-FADEL

REVISOR: RYAN CHAO, SHAHIN ADIBI

REVISIONS: (None listed)

LAST REVISION DATE PLOTTED => 13-MAR-2012 03-08-12 TIME PLOTTED => 14:41

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	8	6.2/8.5	18	39

02-28-12
 REGISTERED CIVIL ENGINEER DATE

03-12-12
 PLANS APPROVAL DATE

JOSEPH CHUA
 No. 53168
 Exp. 06-30-13
 CIVIL

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HMA DIKE

SHEET	LINE	LOCATION	BEGIN STATION	END STATION	REMOVE ASPHALT Conc DIKE (LF)	PLACE HMA DIKE			MINOR HMA (TON)
						TYPE F (LF)	TYPE C (LF)	TYPE E (LF)	
L-1	"FA-1"	1	464+70	464+90	46				
L-2	"R3WR-1"	2	497+00	509+25	1225				
L-2	"R3WR-1"	2	497+00	506+70		970			12.5
L-2	"R3WR-1"	2	506+70	507+60			90		0.7
L-2	"R3WR-1"	2	507+60	509+25				165	4.3
L-3	"CA-1"	3	570+10	572+75		215			2.8
L-3	"CA-1"	3	565+64	581+76	1612			1612	42.4
L-3	"CA-1"	3	572+25	573+00			75		0.6
L-4	"CA-2"	4	562+43	574+59	1216			1216	31.6
TOTAL					4099	1185	165	2993	94.9

REMOVE CONCRETE CURB

SHEET	LINE	LOCATION	BEGIN STATION	END STATION	(LF)
L-1	"FA-1"	1	464+50	464+70	20
L-3	"CA-1"	3	570+10	573+00	290
TOTAL					310

REMOVE CONCRETE

SHEET	Sta	ALIGNMENT	(CY)	REMARK
L-1	464+50	FA-1	1.5	CURB RAMP
L-1	464+96	FA-1	0.4	CURB RAMP
L-3	570+07 To 570+62	CA-1	0.4	SLOPE PROTECTION
L-4	572+55 To 573+30	CA-2	0.5	SLOPE PROTECTION
L-4	574+00 To 574+43	CA-2	0.3	SLOPE PROTECTION
TOTAL			3.1	

MINOR CONCRETE (MISCELLANEOUS CONSTRUCTION)

SHEET	Sta	ALIGNMENT	(CY)*	REMARK
L-1	464+50	FA-1	1.5	CURB RAMP
L-1	464+96	FA-1	0.4	CURB RAMP
L-1	464+75	FA-1	1.8	PASSAGEWAY
TOTAL			3.7	

* INCLUDES CURB

Temp DRAINAGE INLET PROTECTION

SHEET	ALIGNMENT	STATION	TYPE 5 (EA)	TYPE 6B Mod (EA)
L-1	FA-1	464+60		1
L-1	FA-1	468+45	1	
L-1	FA-1	469+25	2	
L-1	FA-1	470+60	1	
L-1	FA-1	471+50	1	
L-1	FA-1	474+00	1	
L-2	R3WR1	502+80	1	
SUB-TOTAL			7	1
TOTAL			8	

CONSTRUCTION QUANTITIES

SHEET	LOCATION	LINE	BEGIN STATION	END STATION	COLD PLANE ASPHALT CONCRETE PAVEMENT (SQYD)	HOT MIX ASPHALT (TYPE C) (TON)	ASPHALTIC EMULSION (FOG SEAL COAT) (TON)	TACK COAT (TON)
L-1	1	"FA-1"	464+30	473+25	5,177	676	0.4	1.5
L-1	1	"11-SD-8"	473+25	477+40	2,158	282	0.2	0.3
L-2	2	"WR-1"	497+00	511+80	4,715	616	0.7	1.0
L-3	3	"CA-1"	565+64	581+76	3,567	466	0.5	0.9
L-4	4	"CA-2"	562+43	579+90	3,515	459	0.5	0.8
TOTAL					19,132	2499	2.3	4.5

MINOR HMA

SHEET	LINE	LOCATION	BEGIN STATION	END STATION	PLACE HMA (Misc AREA)(SQYD)	TON	REMARKS
L-3	"CA-1"	3	570+07	570+62	11.5	1.9	SLOPE PAVING
L-3	"CA-1"	3	570+10	573+00	33	10.7	BACKFILL Conc CURB
L-4	"CA-2"	4	572+55	573+30	4.2	0.7	SLOPE PAVING
L-4	"CA-2"	4	574+00	574+43	2.4	0.4	SLOPE PAVING
L-4	"CA-2"	4	569+42	569+42	1	0.1	OVERSIDE DRAIN
TOTAL					52.1	13.8	

METAL BEAM GUARD RAILING (WOOD POST)

MBGR No.	SHEET No.	LAYOUT TYPE	REMOVE MBGR	MBGR	END ANCHOR ASSEMBLY (TYPE SFT)	ALTERNATIVE FLARED TERMINAL SYSTEM	METAL BEAM GUARD RAILING CONNECTIONS TO BRIDGE RAILINGS (STANDARD PLAN A77J1) [N]	GUARD RAILING DELINEATOR	TRANSITION RAILING (TYPE WB)	RECONSTRUCT MBGR	MINOR CONCRETE (MINOR STRUCTURE)
			(LF)	(LF)	(EA)	(EA)	(EA)	TYPE F (EA)	(EA)	(LF)	ANCHOR BLOCK (CY)
1	L-2	16B	40	70		1		10		900	
2	L-3	16B	265	265	1	1		10			
3	L-3	12B	50	13		1		2	1		1.6
4	L-1	12DD		80	1		1	2			
TOTAL			355	428	2	3	1	24	1	900	1.6

SUMMARY OF QUANTITIES Q-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 Caltrans
 MINOR A
 FUNCTIONAL SUPERVISOR: CHRIS THOMAS
 CALCULATED/DESIGNED BY: JOSEPH CHUA
 CHECKED BY: THIN BUI
 REVISIONS: REVISOR: JOSEPH CHUA, DATE: 02-28-12, REVISION: 03-12-12
 REVISOR: THIN BUI, DATE: 03-12-12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	8	6.2/8.5	19	39

 02-28-12
 REGISTERED CIVIL ENGINEER DATE
 03-12-12
 PLANS APPROVAL DATE

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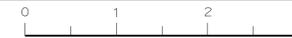


STAGE CONSTRUCTION QUANTITIES

MBGR LOCATION	SHEET No.	LINE	BEGIN STATION	END STATION	TEMPORARY RAILING (TYPE K)	TEMPORARY CRASH CUSHION MODULE	TRAFFIC PLASTIC DRUM
					(LF)	(EA)	(EA)
1	TH-1	"CAO"	66+96	68+72	180	14	5
TOTAL					180	14	5

SUMMARY OF QUANTITIES Q-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 MINOR A
 FUNCTIONAL SUPERVISOR
 CHRIS THOMAS
 CALCULATED/DESIGNED BY
 CHECKED BY
 JOSEPH CHUA
 THIN BUI
 REVISED BY
 DATE REVISED

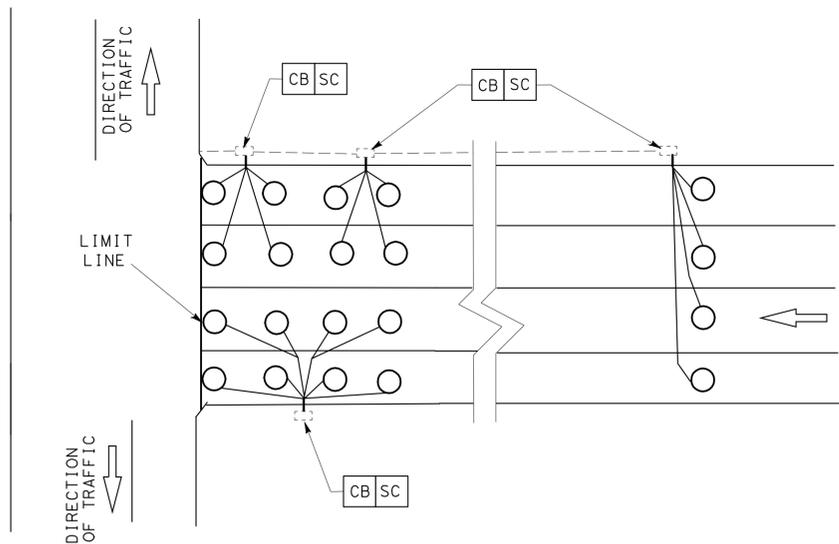


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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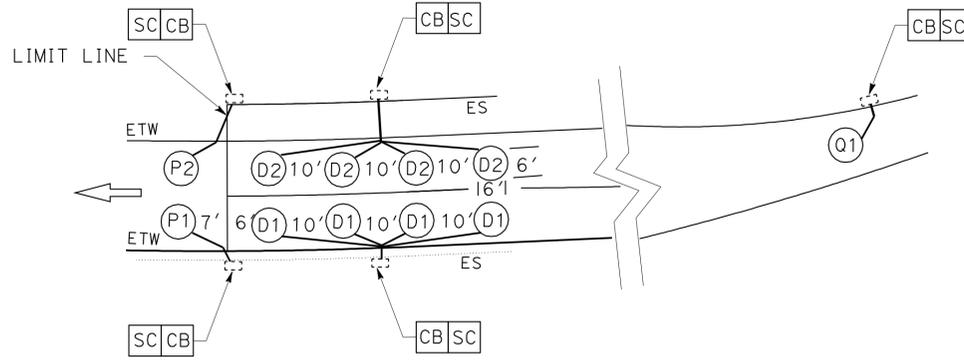
02-29-12
 REGISTERED ELECTRICAL ENGINEER DATE
 03-12-12
 PLANS APPROVAL DATE

DANNY D. MCCLURE
 No. 16074
 Exp. 12-31-13
 ELECTRICAL

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DETAIL "A"
TRAFFIC SIGNAL
(TYPICAL)



DETAIL "B"
RAMP METER
(TYPICAL)

- LEGEND**
- P = PASSAGE DETECTION
 - D = DEMAND DETECTION
 - Q = QUEUE DETECTION

INDUCTIVE LOOP DETECTOR

ROUTE	PM	INTERSECTION	FACILITY	DIRECTION	LOCATION OF INDUCTIVE LOOP DETECTOR CENTERED IN LANE (N)								INDUCTIVE LOOP DETECTOR (EA)		
					FRONT LOOPS				ADVANCE LOOPS					RAMP METER LOOPS	
					LANE #1	LANE #2	LANE #3	LANE #4	LANE #1	LANE #2	LANE #3	LANE #4		LANE #1	LANE #2
8	6.441	FAIRMOUNT AVENUE WB OFF RAMP DETAIL "A"	SIGNAL P6.231	WB	4(8-13-L+)	4(8-12-L+)	4(8-11-R+)	4(8-18-R+)	1(8-10-R+)	1(8-9-R+)	1(8-8-R+)	1(8-7-R+)			20
8	7.025	WARING ROAD WB ON RAMP SEE DETAIL "B"	RAMP METERING Z7.081	WB									1(P-L+) 4(D-L+)	1(P-L+) 4(D-L+)	10
8	8.141	COLLEGE AVENUE WB ON RAMP SEE DETAIL "B"	RAMP METERING Z8.341	WB									1(P-L+) 4(D-L+)	1(P-L+) 4(D-L+)	10
8	8.141	COLLEGE AVENUE EB ON RAMP SEE DETAIL "B"	RAMP METERING Z8.340	EB									1(Q-R+) 1(P-L+) 4(D-L+)		6
TOTAL													46		

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

NOTE:

TRAFFIC SIGNAL

- QUANTITY OF LOOPS
- TRAFFIC PHASE IDENTIFICATION
- LOOP NUMBER
- TERMINATION PULL BOX LOCATION IN DIRECTION OF TRAVEL

* - LOOP IDENTIFICATION: 1(2-4-R+)

NOTE:

RAMP METER

- QUANTITY OF LOOPS
- LOOP IDENTIFIER
- TERMINATION PULL BOX LOCATION IN DIRECTION OF TRAVEL

* - LOOP IDENTIFICATION: 1(P-R+)

INDUCTIVE LOOP DETECTOR

NO SCALE

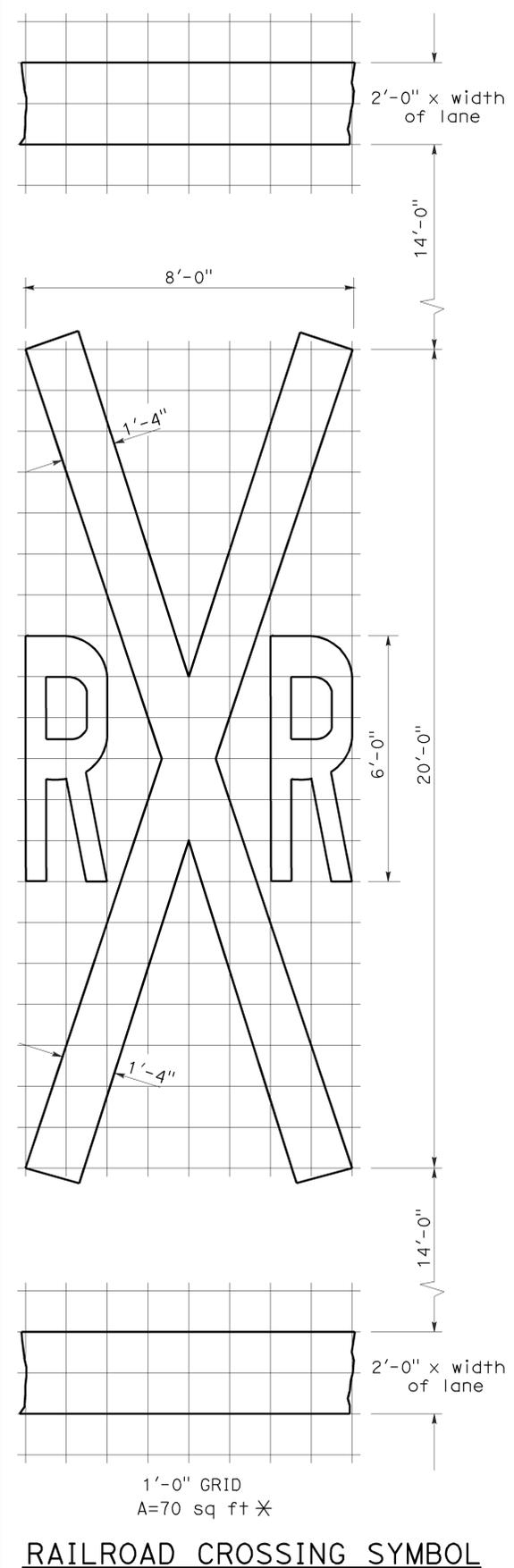
E-1

APPROVED FOR ELECTRICAL WORK ONLY

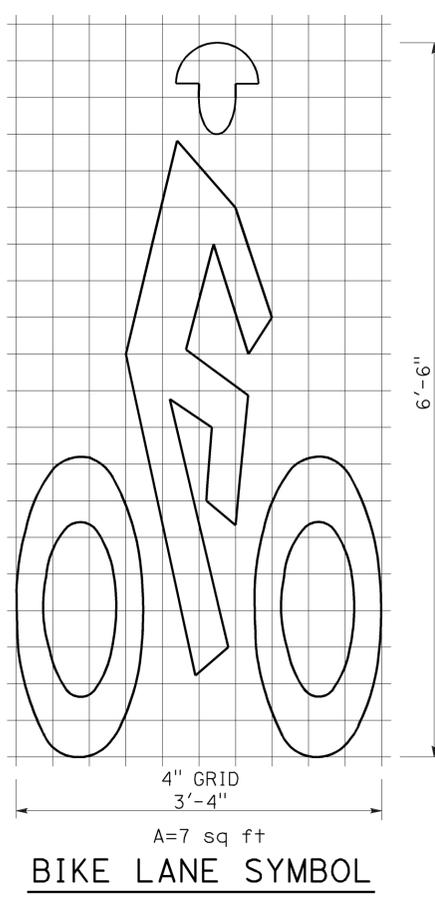
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 TRAFFIC ELECTRICAL
 DANNY MCCLURE
 ENRIQUE BERNAL
 DALE WILSON
 FUNCTIONAL SUPERVISOR
 CALCULATED/DESIGNED BY
 CHECKED BY
 REVISED BY
 DATE REVISD
 USERNAME => s127400
 DGN FILE => 1100020399uad001.dgn
 BORDER LAST REVISED 7/2/2010
 RELATIVE BORDER SCALE IS IN INCHES
 UNIT 2833
 PROJECT NUMBER & PHASE
 11000203991

LAST REVISION DATE PLOTTED => 13-MAR-2012
 03-09-12 TIME PLOTTED => 14:42

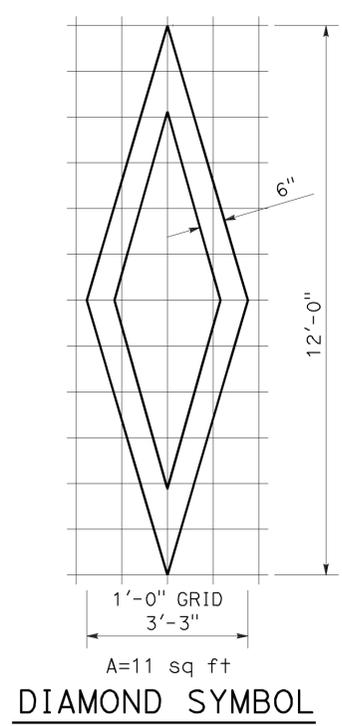
To accompany plans dated 03-12-12



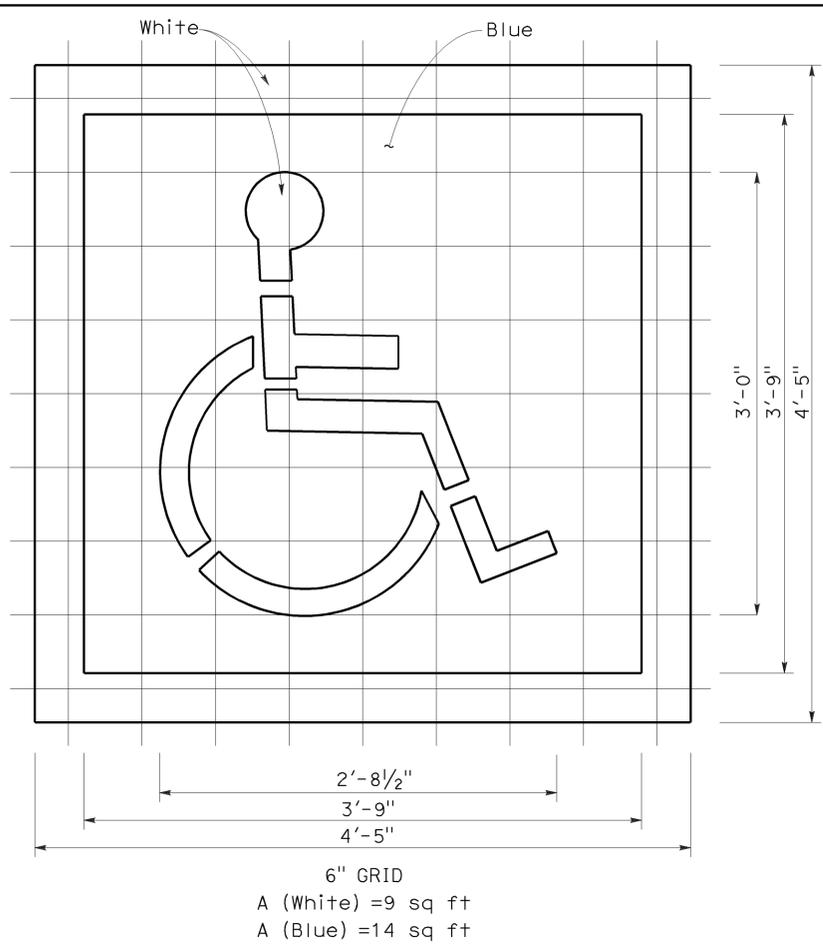
RAILROAD CROSSING SYMBOL
 *70 sq ft DOES NOT INCLUDE THE 2'-0" x VARIABLE WIDTH TRANSVERSE LINES.



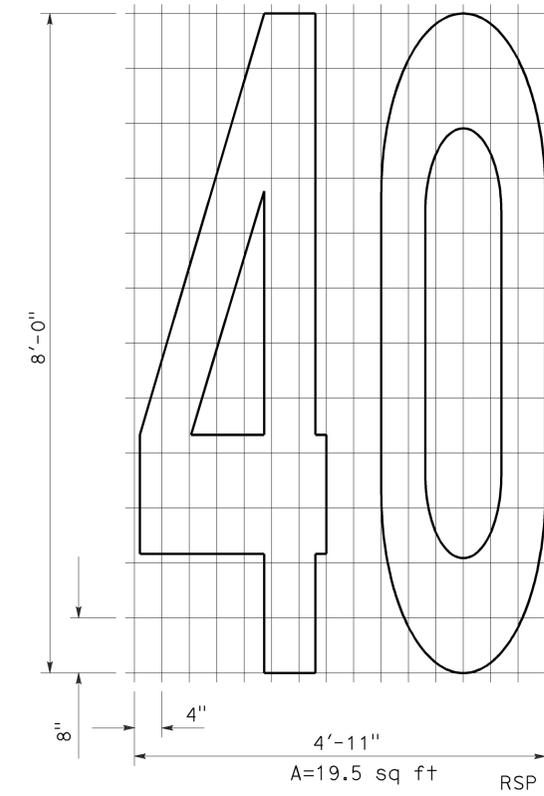
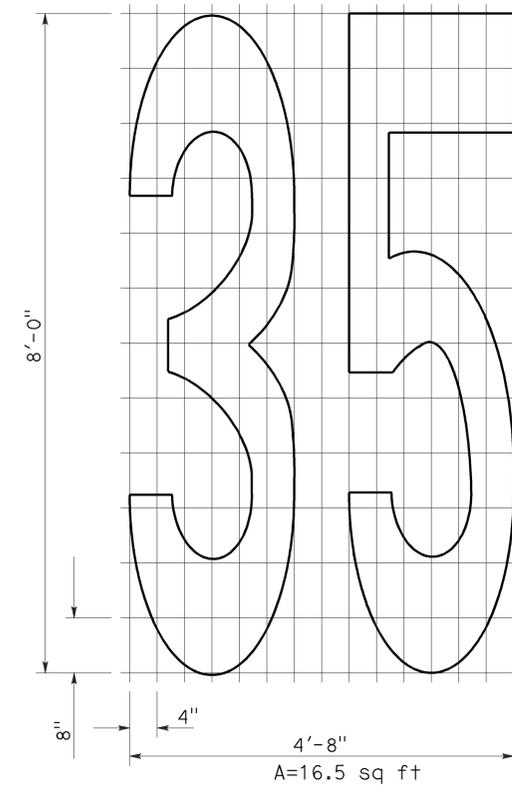
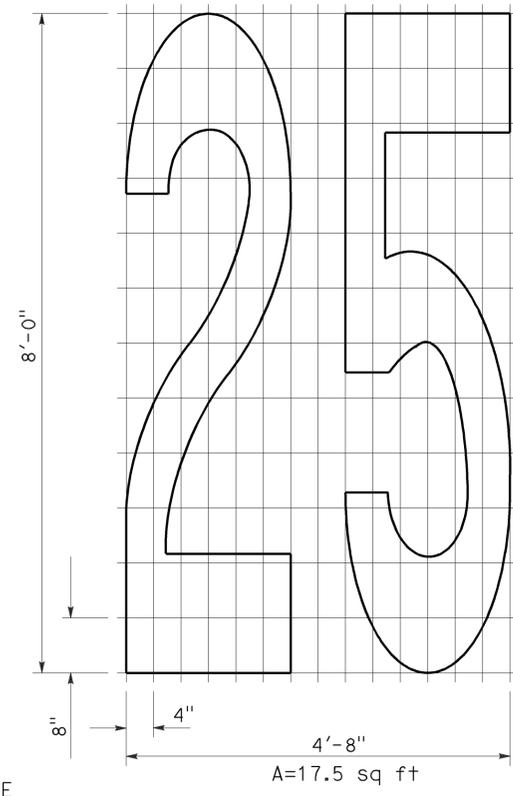
BIKE LANE SYMBOL



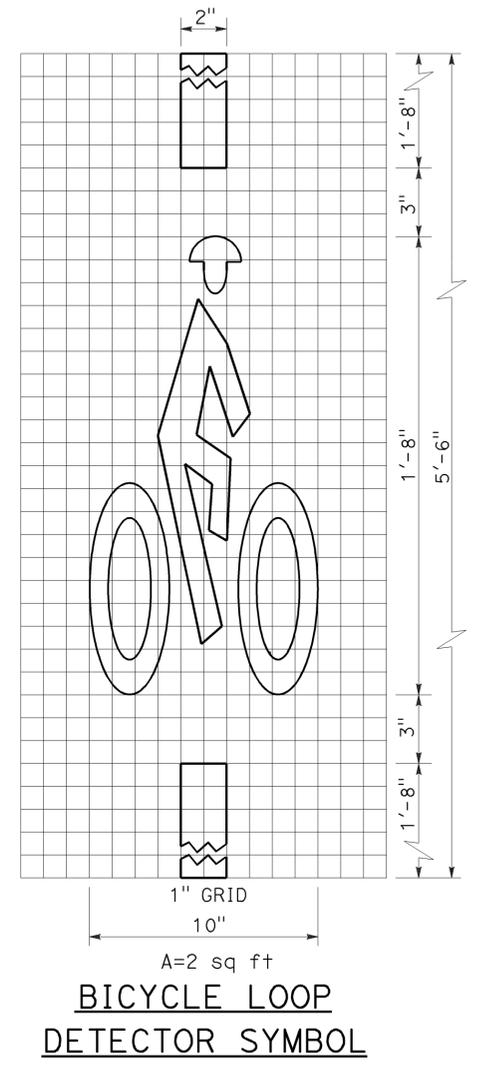
DIAMOND SYMBOL



INTERNATIONAL SYMBOL OF ACCESSIBILITY MARKING



NUMERALS



BICYCLE LOOP DETECTOR SYMBOL

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

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
PAVEMENT MARKINGS SYMBOLS AND NUMERALS
 NO SCALE

RSP A24C DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A24C DATED MAY 1, 2006 - PAGE 11 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP A24C

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	8	6.2/8.5	22	39

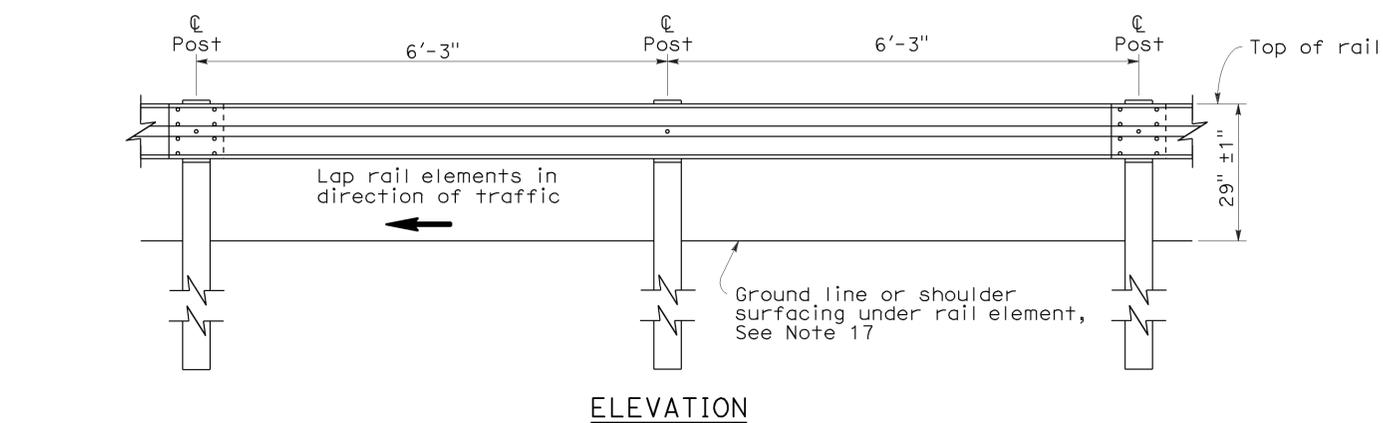
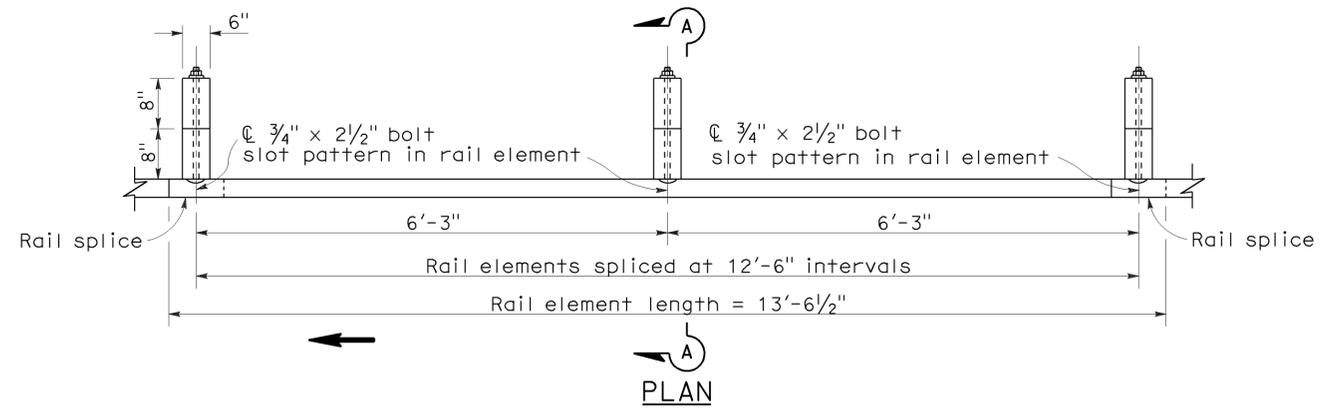
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

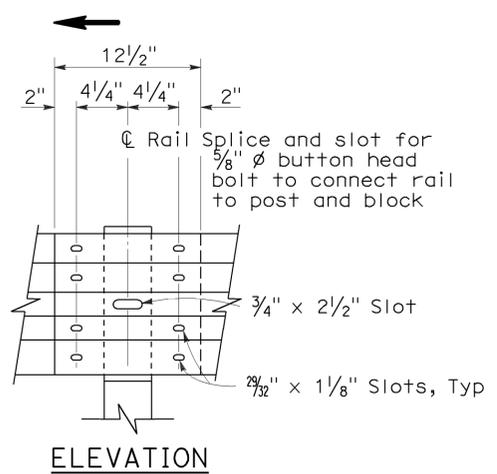
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To accompany plans dated 03-12-12

2006 REVISED STANDARD PLAN RSP A77A1

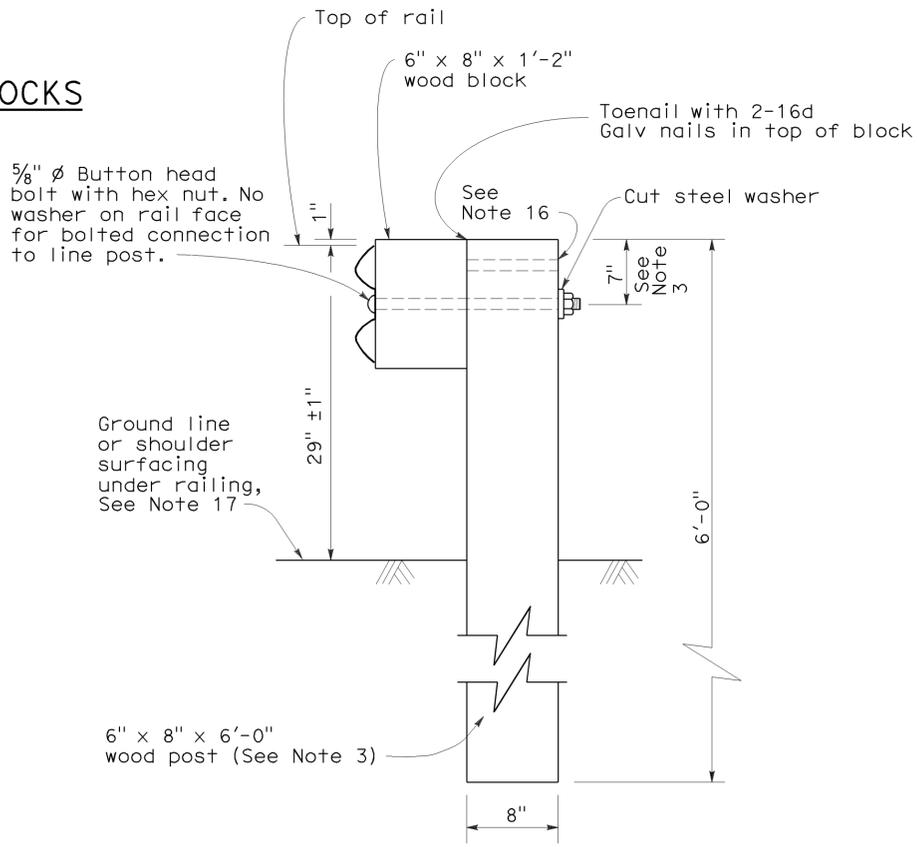
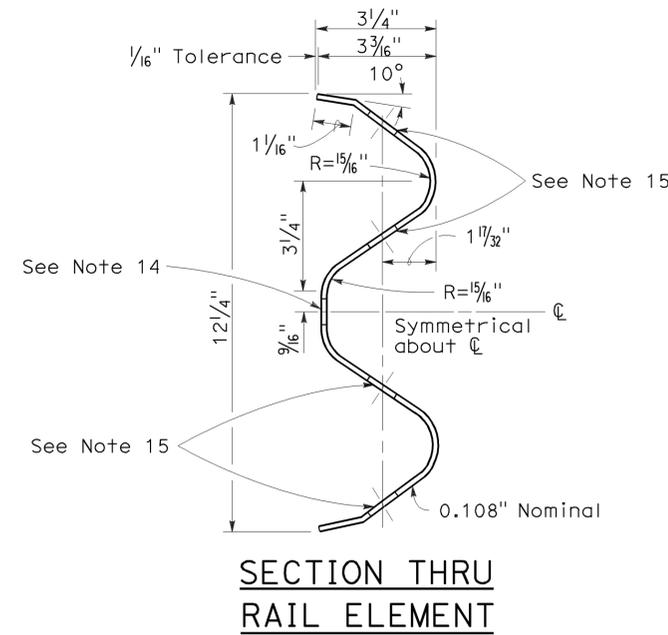


METAL BEAM GUARD RAILING WITH WOOD POST AND BLOCKS



RAIL ELEMENT SPLICE DETAIL

- Connect the overlapped end of the rail elements with $\frac{5}{8}$ " ϕ x $1\frac{3}{8}$ " button head oval shoulder splice bolts inserted into the $\frac{29}{32}$ " x $1\frac{1}{8}$ " slots and bolted together with $\frac{5}{8}$ " ϕ recessed hex nuts. Recess of hex nut points toward rail element. A total of 8 bolts and nuts are to be used at each rail splice connection.
- The ends of the rail elements are to be overlapped in the direction of traffic (see details).
- Where end cap is to be attached to the end of a rail element, a total of 4 of the above described splice bolts and nuts are to be used.



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

See Note 4

NOTES:

- For details of steel post installations, see Standard Plan A77A2.
- For details of standard hardware used to construct guard railing, see Standard Plan A77B1.
- For details of wood posts and wood blocks used to construct guard railing, see Standard Plan A77C1.
- For additional installation details, see Standard Plan A77C3.
- Guard railing post spacing to be 6'-3" center to center, except as otherwise noted.
- For guard railing typical layouts, see the A77E, A77F and A77G Series of Standard Plans.
- For terminal system end treatment details, see the A77L Series of Standard Plans. To connect railing to terminal system end treatment, transition the top of railing height at a ratio of 120:1 to terminal system end treatment height plus one 12'-6" standard railing section at the transitioned height for a horizontal connection to the end treatment.
- For guard railing end anchor details, see Standard Plans A77H1 and A77I2.
- For details of guard railing transition to bridge railing, see Standard Plan A77J4.
- For additional details of guard railing connection to bridge railings, see Standard Plans A77J1, A77J2 and A77K1.
- For guard railing connection details to abutments and walls, see Standard Plan A77J3.
- Direction of adjacent traffic indicated by \rightarrow .
- For typical guard railing delineation and dike positioning details, see Standard Plan A77C4.
- Slotted hole for bolted connection of rail element to block and post. See "Section Thru Rail Element".
- Slotted holes for splice bolts to overlap ends of rail element. See "Section Thru Rail Element".
- Additional hole in uppermost portion of line post is for potential future adjustments of railing height. See Standard Plan A77C1.
- Install posts in soil.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING
STANDARD RAILING SECTION
(WOOD POST WITH
WOOD BLOCK)**

NO SCALE

RSP A77A1 DATED MAY 20, 2011 SUPERSEDES STANDARD PLAN A77A1
DATED MAY 1, 2006 - PAGE 41 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77A1

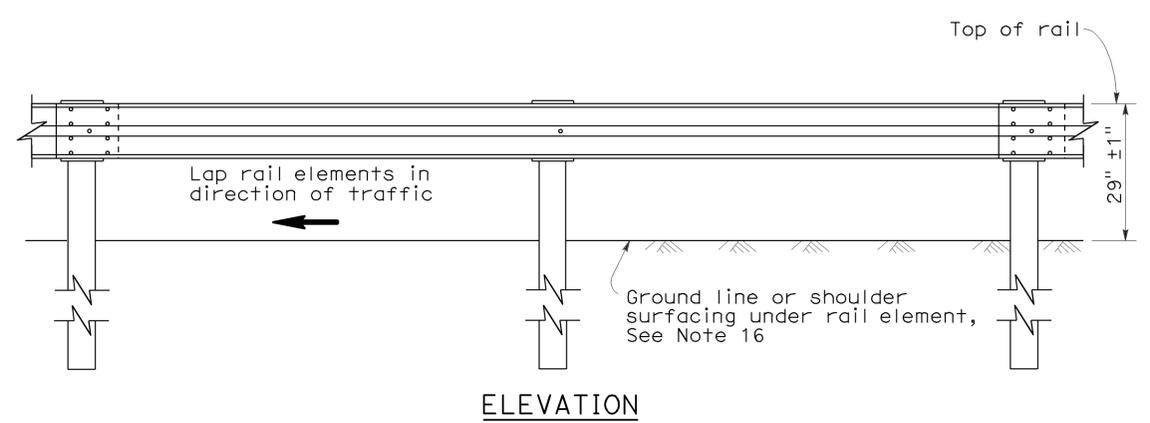
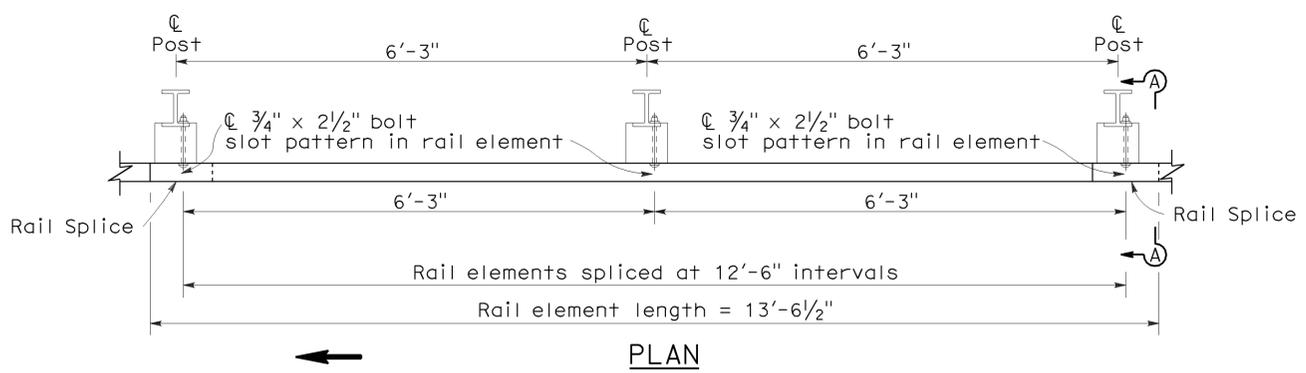
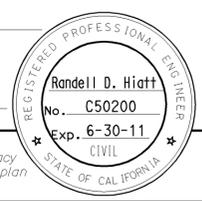
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	8	6.2/8.5	23	39

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

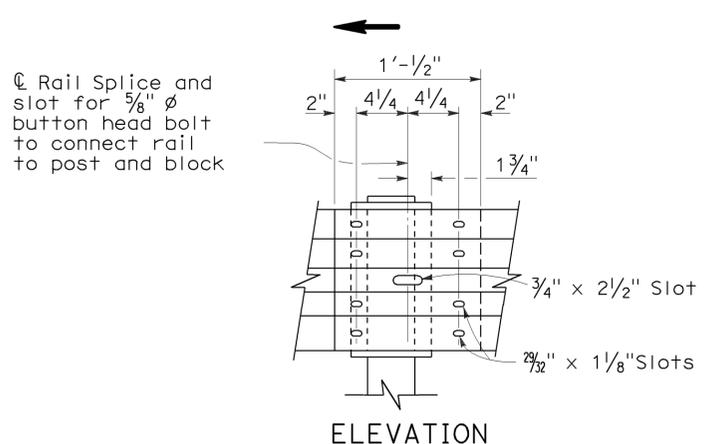
May 20, 2011
PLANS APPROVAL DATE

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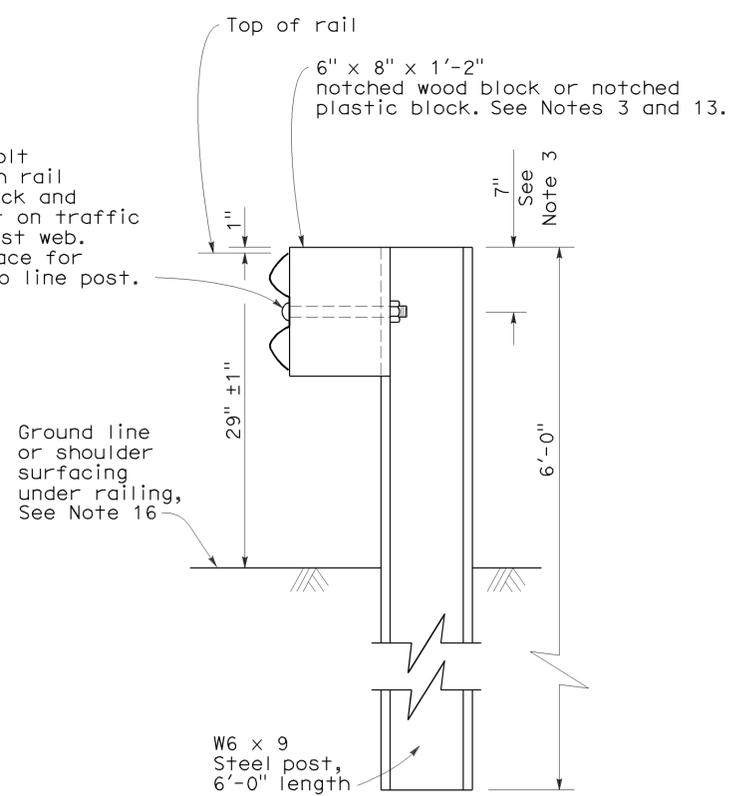
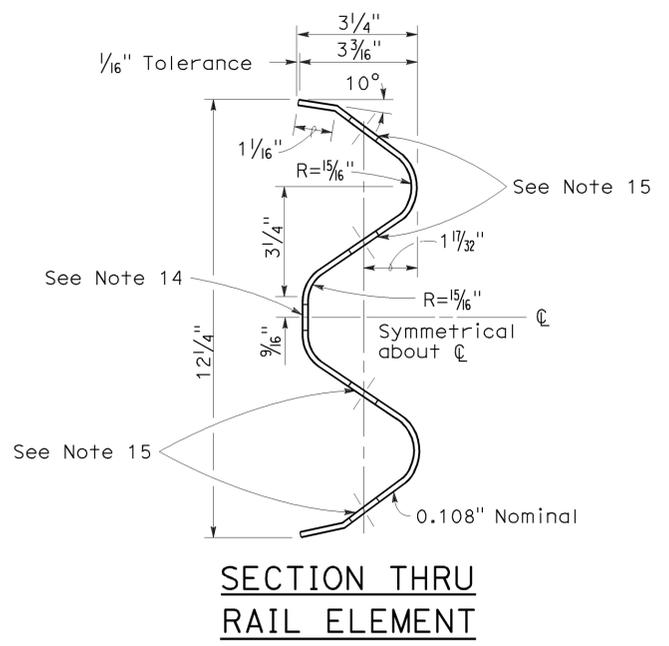
To accompany plans dated 03-12-12



METAL BEAM GUARD RAILING WITH STEEL POSTS AND NOTCHED WOOD OR NOTCHED RECYCLED PLASTIC BLOCKS



- Connect the overlapped end of the rail elements with $\frac{5}{8}$ " ϕ x $1\frac{3}{8}$ " button head oval shoulder splice bolts inserted into the $\frac{29}{32}$ " x $1\frac{1}{8}$ " slots and bolted together with $\frac{5}{8}$ " ϕ recessed hex nuts. Recess of hex nut points toward rail element. A total of 8 bolts and nuts are to be used at each rail splice connection.
- The ends of the rail elements are to be overlapped in the direction of traffic (see details).
- Where end cap is to be attached to the end of a rail element, a total of 4 of the above described splice bolts and nuts are to be used.



NOTES:

- For details of wood post installations, see Standard Plan A77A1.
- For details of standard hardware used to construct guard railing, see Standard Plan A77B1.
- For details of steel posts and notched wood blocks used to construct guard railing, see Standard Plan A77C2.
- For additional installation details, see Standard Plan A77C3.
- Guard railing post spacing to be 6'-3" center to center, except as otherwise noted.
- For guard railing typical layouts, see the A77E, A77F and A77G Series of Standard Plans.
- For terminal system end treatment details, see the A77L Series of Standard Plans. To connect railing to terminal system end treatment, transition the top of railing height at a ratio of 120:1 to terminal system end treatment height plus one 12'-6" standard railing section at the transitioned height for a horizontal connection to the end treatment.
- For guard railing end anchor details, see Standard Plans A77H1 and A77I2.
- For details of guard railing transition to bridge railing, see Standard Plan A77J4.
- For additional details of guard railing connection to bridge railings, see Standard Plans A77J1, A77J2 and A77K1.
- For dike positioning and guard railing delineation details, see Standard Plan A77C4.
- Direction of adjacent traffic indicated by \rightarrow .
- Notched face of block faces steel post.
- Slotted hole for bolted connection of rail element to block and post. See "Section Thru Rail Element".
- Slotted holes for splice bolts to overlap ends of rail element. See "Section Thru Rail Element".
- Install posts in soil.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING
STANDARD RAILING SECTION
(STEEL POST WITH NOTCHED
WOOD OR NOTCHED
RECYCLED PLASTIC BLOCK)**

NO SCALE

RSP A77A2 DATED MAY 20, 2011 SUPERSEDES STANDARD PLAN A77A2
DATED MAY 1, 2006 - PAGE 42 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77A2

2006 REVISED STANDARD PLAN RSP A77A2

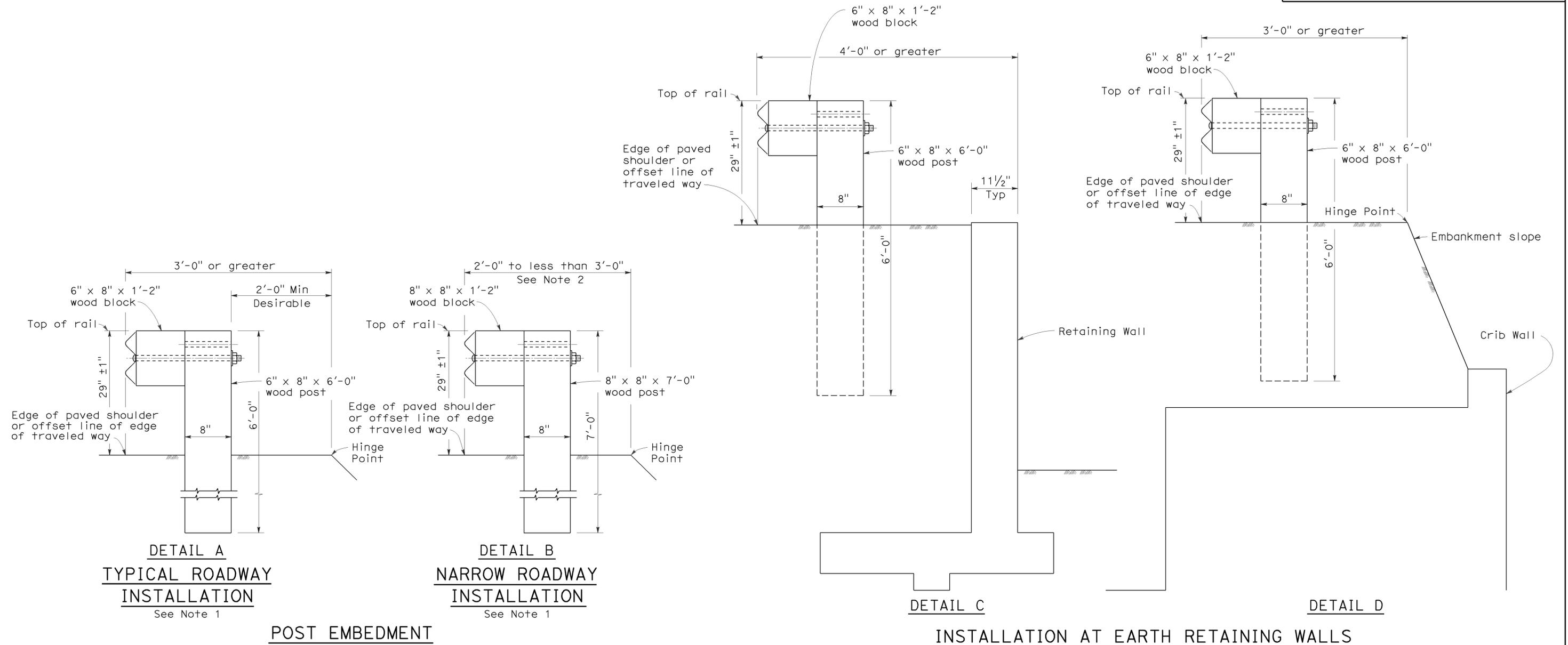
To accompany plans dated 03-12-12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	8	6.2/8.5	24	39

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May 20, 2011
PLANS APPROVAL DATE

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NOTES:

1. These installation details also applicable to steel line post installations. For Detail A, C, and D, where steel line post installations are constructed, W6 x 9 steel post, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks are to be used in place of the size of wood post and wood block shown. For Detail B, where steel line post installations are constructed, W6 x 9 steel post, 7'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks are to be used in place of the size of wood post and wood block shown. For additional installation details, see Standard Plans A77A1 and A77A2.
2. Where the distance between the face of the rail and the hinge point is less than 2'-0", see the Project Plans for special details.
3. For dike positioning with guard railing installations, see Standard Plan A77C4.

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**METAL BEAM GUARD RAILING
TYPICAL LINE POST
EMBEDMENT AND
HINGE POINT OFFSET DETAILS**

NO SCALE

RSP A77C3 DATED MAY 20, 2011 SUPERSEDES STANDARD PLAN A77C3
DATED MAY 1, 2006 - PAGE 46 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77C3

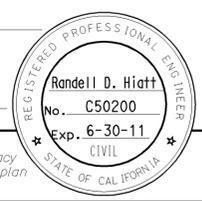
2006 REVISED STANDARD PLAN RSP A77C3

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	8	6.2/8.5	25	39

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May 20, 2011
PLANS APPROVAL DATE

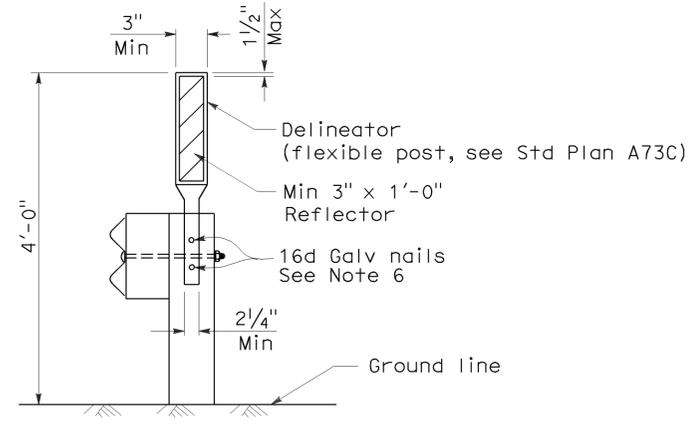
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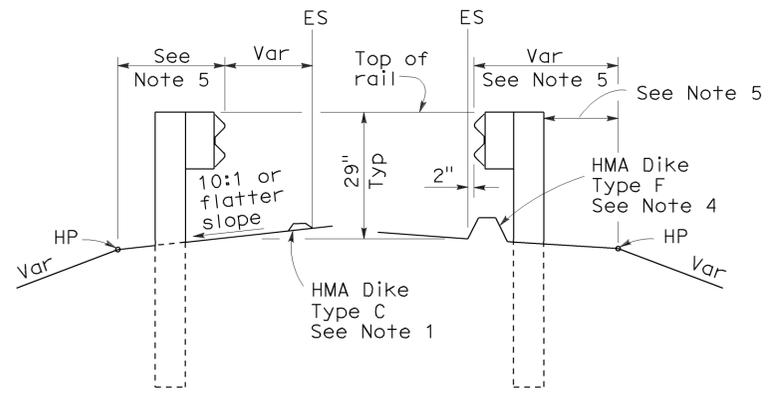
To accompany plans dated 03-12-12

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 Standard Plans A87A and A87B.
5. For details of typical distance between the face of rail and hinge point, see Standard Plan A77C3.
6. For steel line posts, use 1/4" - 20 self-tapping screws in 0.22" diameter holes or 1/4" bolts in 3/32" diameter holes.



GUARD RAILING DELINEATION
See Note 3



DIKE POSITIONING
See Note 1

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**METAL BEAM GUARD RAILING
TYPICAL RAILING DELINEATION
AND DIKE POSITIONING DETAILS**
NO SCALE

RSP A77C4 DATED MAY 20, 2011 SUPERSEDES RSP A77C4 DATED JUNE 6, 2008 AND STANDARD PLAN A77C4 DATED MAY 1, 2006 - PAGE 47 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77C4

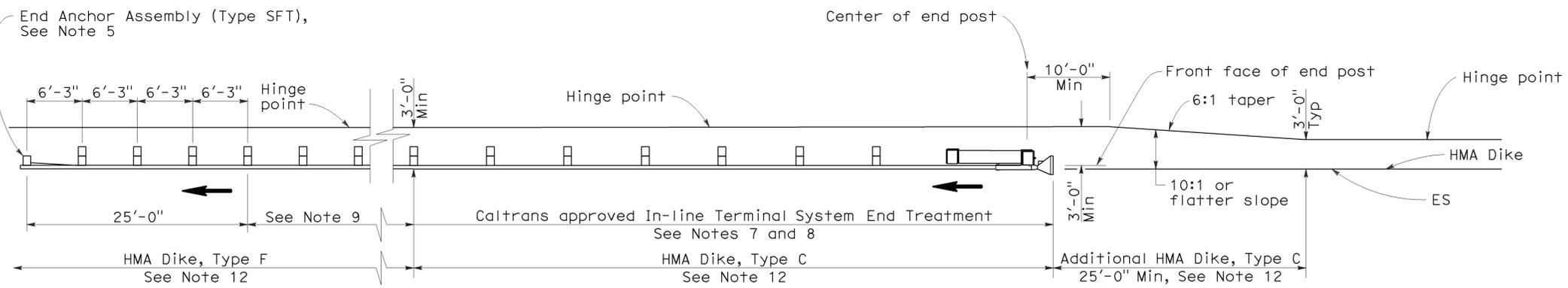
2006 REVISED STANDARD PLAN RSP A77C4

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	8	6.2/8.5	26	39

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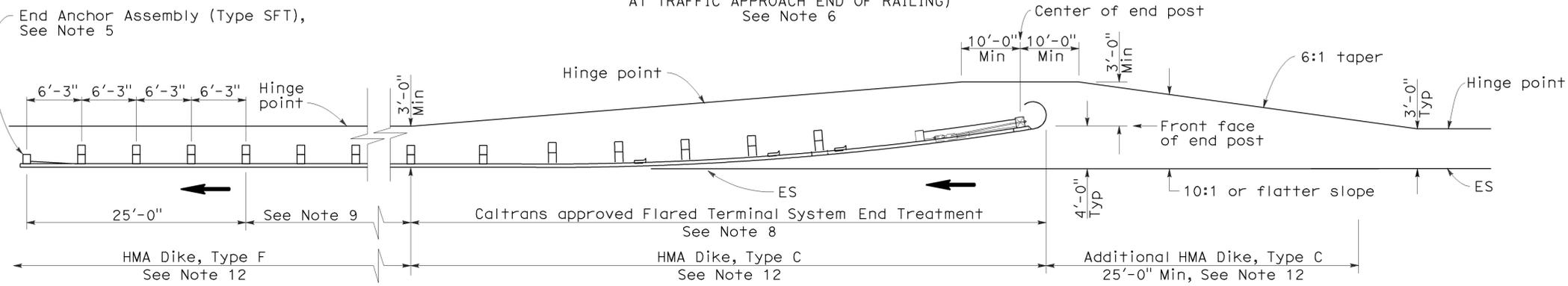
June 6, 2008
 PLANS APPROVAL DATE

To accompany plans dated 03-12-12



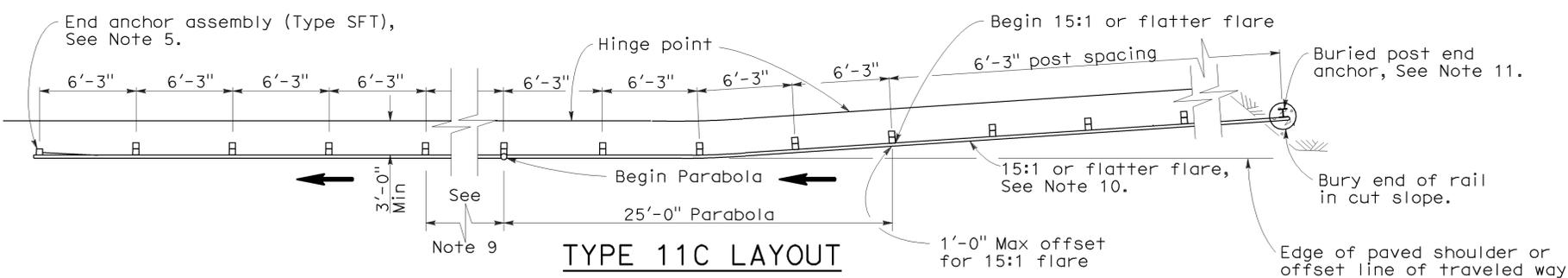
TYPE 11A LAYOUT

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



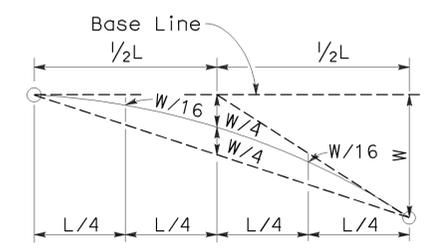
TYPE 11B LAYOUT

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

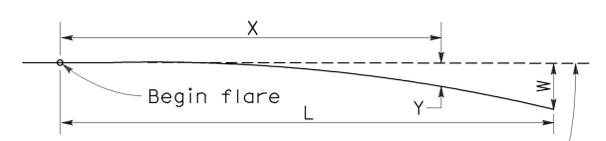


TYPE 11C LAYOUT

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

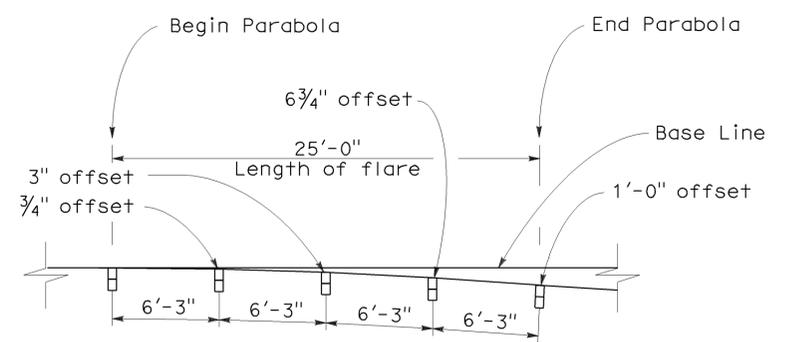


TYPICAL PARABOLIC LAYOUT



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

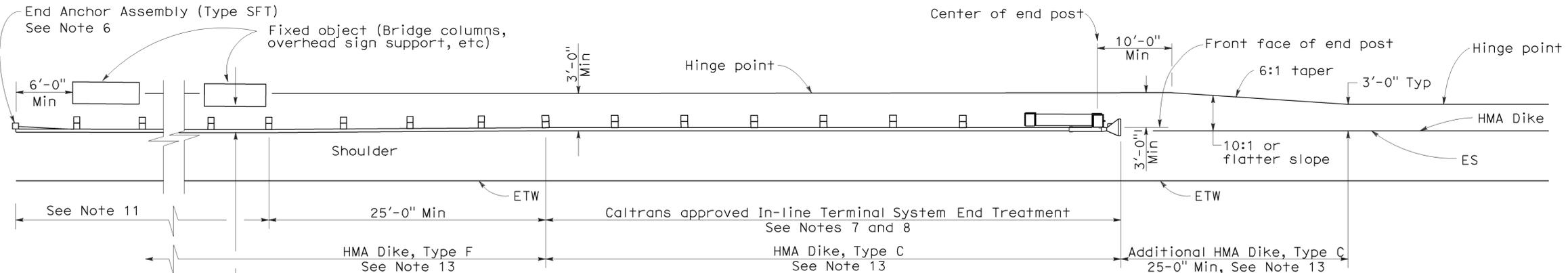
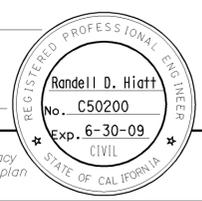
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	8	6.2/8.5	27	39

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

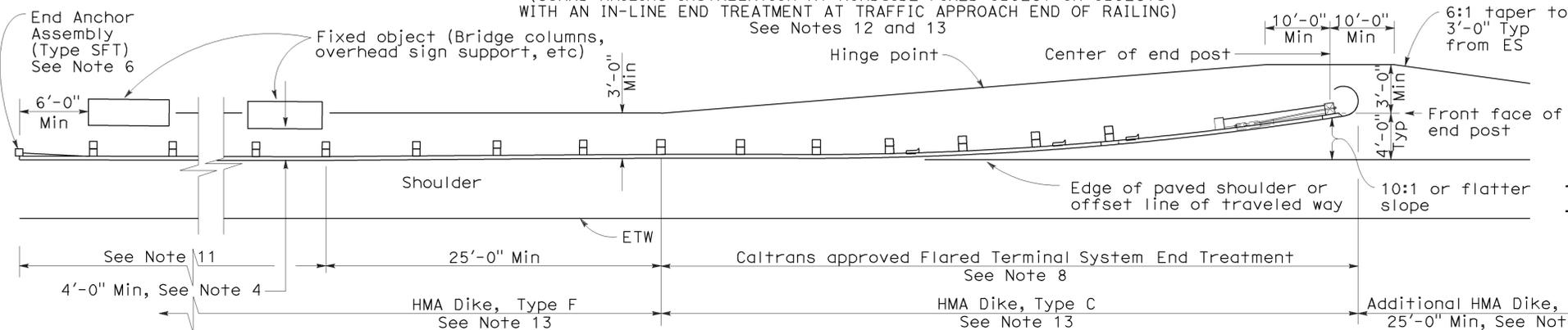
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To accompany plans dated 03-12-12



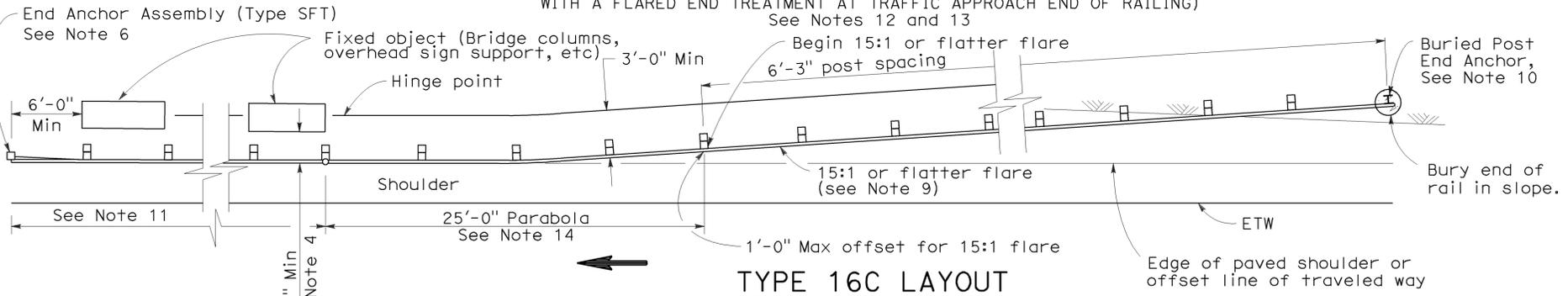
TYPE 16A LAYOUT

(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



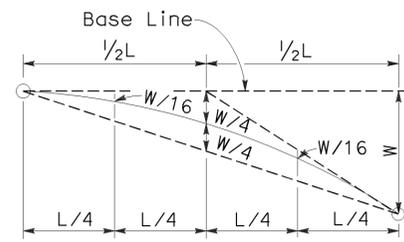
TYPE 16B LAYOUT

(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

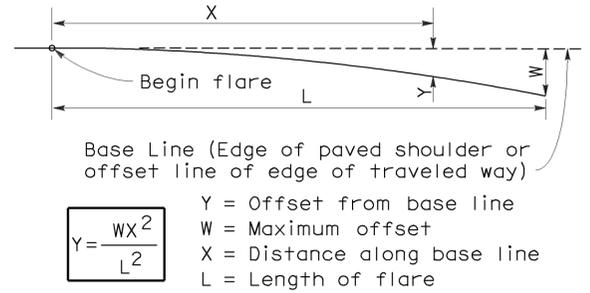


TYPE 16C LAYOUT

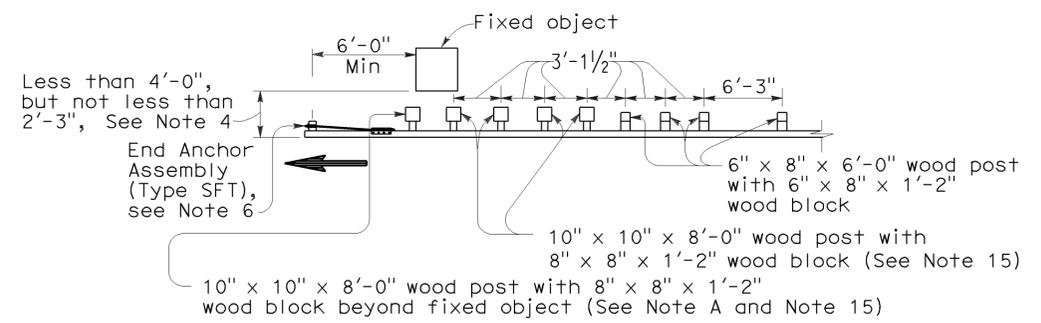
(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH A BURIED END ANCHOR TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Notes 12 and 13



TYPICAL PARABOLIC LAYOUT



PARABOLIC FLARE OFFSETS



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

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 \rightarrow .
- 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 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 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".

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

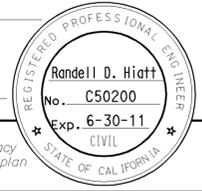
2006 REVISED STANDARD PLAN RSP A77G3

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	8	6.2/8.5	28	39

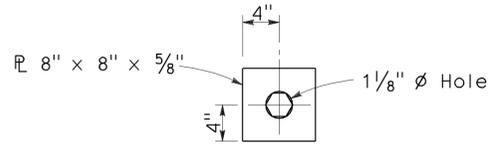
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

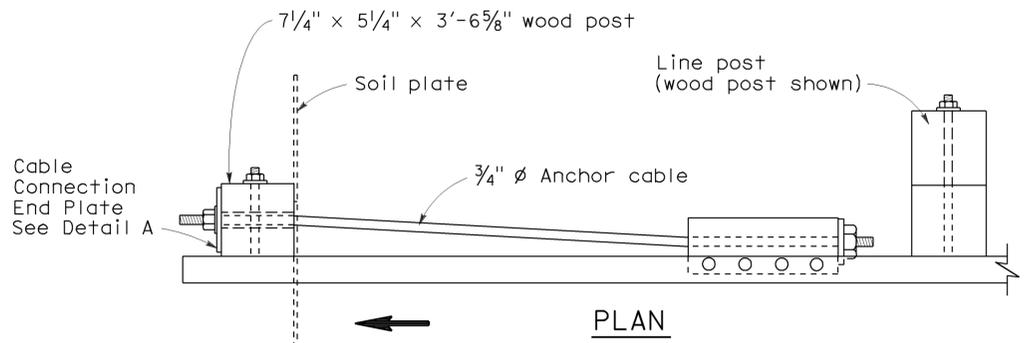
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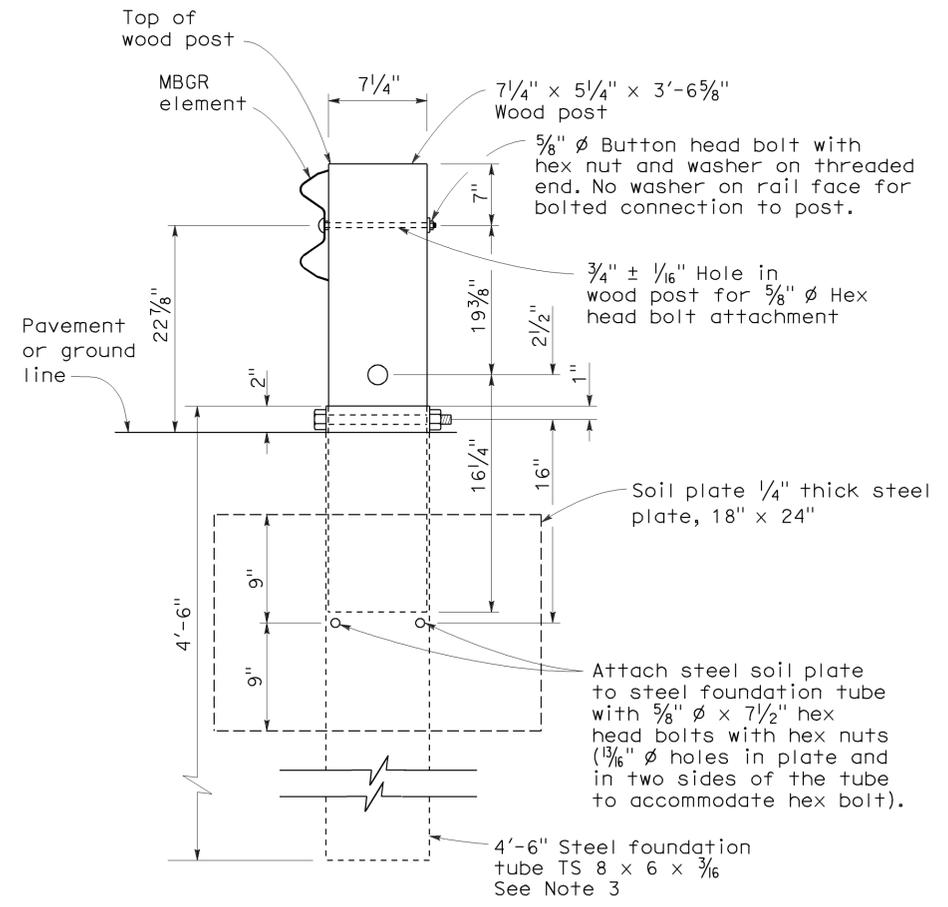
To accompany plans dated 03-12-12



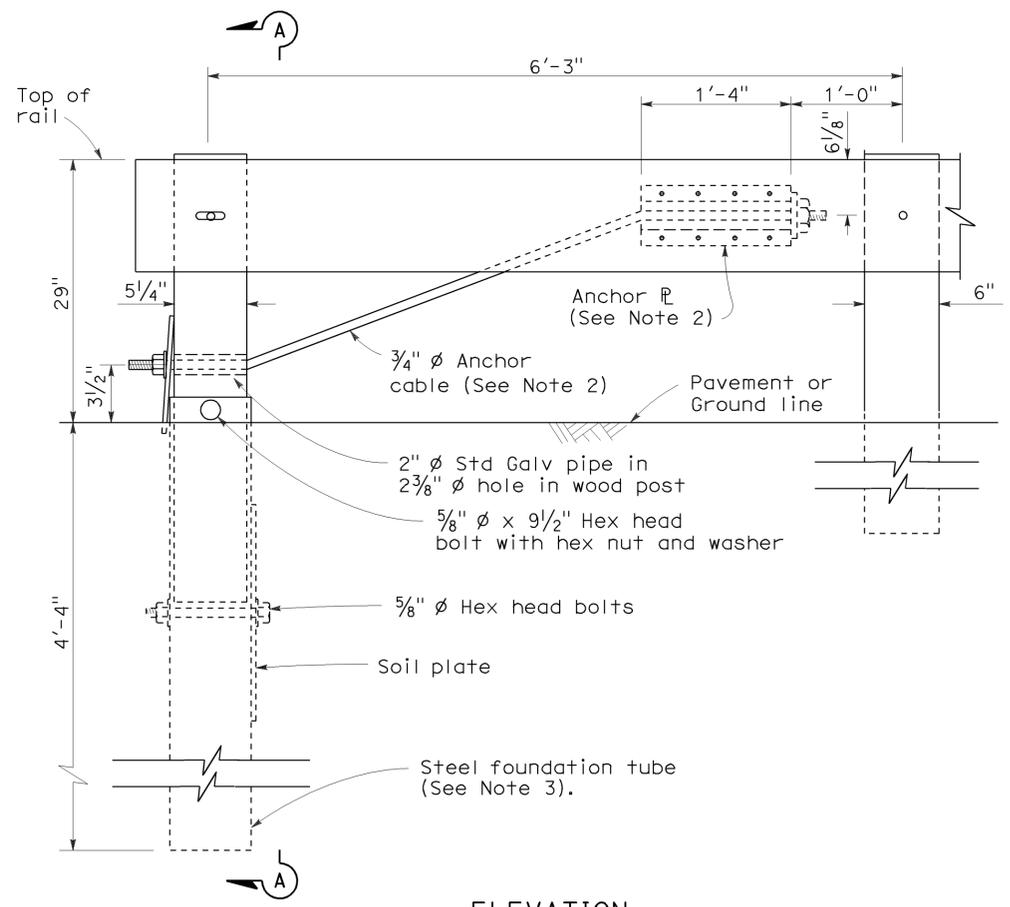
**DETAIL A
CABLE CONNECTION
END PLATE**



PLAN



SECTION A-A



**ELEVATION
END ANCHOR
ASSEMBLY (TYPE SFT)**
See Note 1

NOTES:

1. See the A77E, A77F and A77G series of Standard Plans for typical use of End Anchor Assembly (Type SFT).
2. For details of the anchor plate and 3/4" cable, see Standard Plan A77H3.
3. A 6'-0" length steel foundation tube, TS 8 x 6 x 3/16, without a soil plate, may be furnished and installed in place of the 4'-6" length steel foundation tube and soil plate shown. Minimum embedment of the 6'-0" length tube shall be 5'-9". A 5/8" diameter hex head bolt and nut shall be installed in the hole in the 6'-0" length tube to keep the wood post from dropping into the tube.
4. Direction of traffic indicated by ➡.
5. Install line post, steel foundation tube and soil plate in soil.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**METAL RAILING
END ANCHOR ASSEMBLY
(TYPE SFT)**
NO SCALE

RSP A77H1 DATED MAY 20, 2011 SUPERSEDES STANDARD PLAN A77H1
DATED MAY 1, 2006 - PAGE 67 OF THE STANDARD PLANS BOOK DATED MAY 2006.

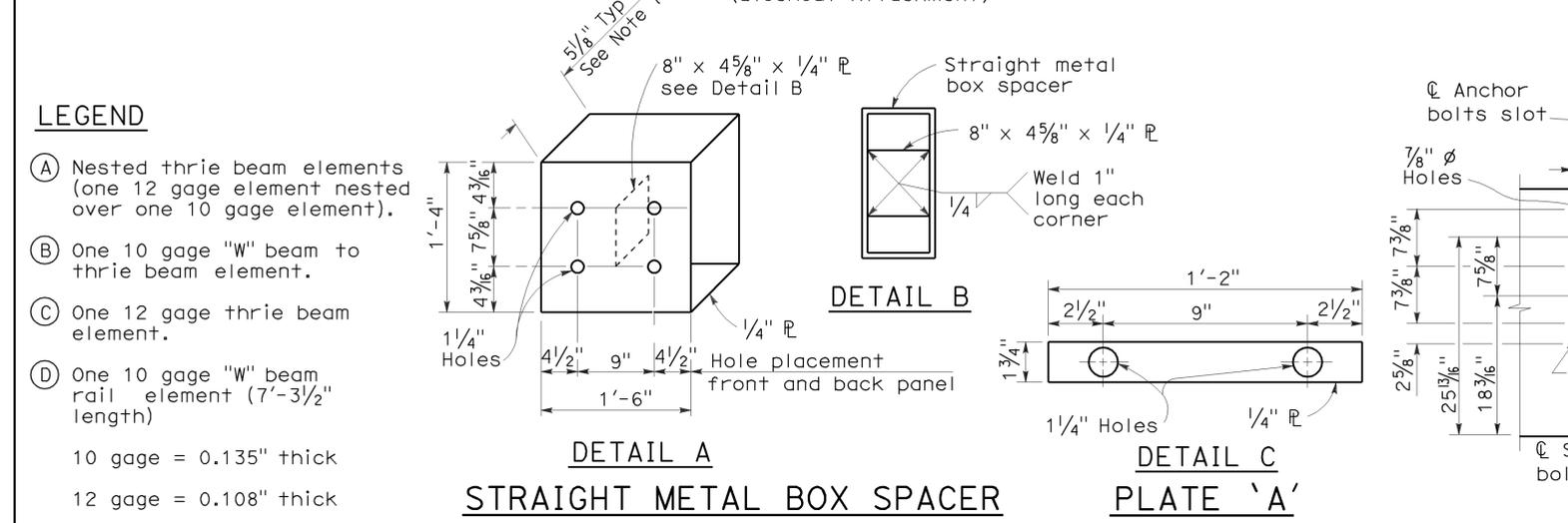
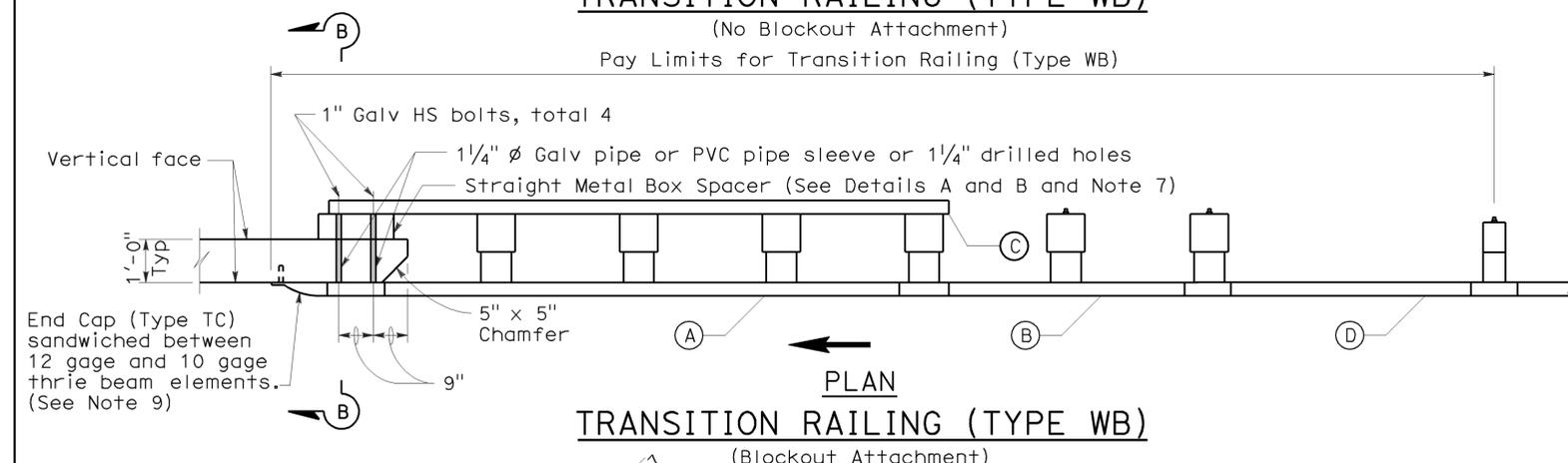
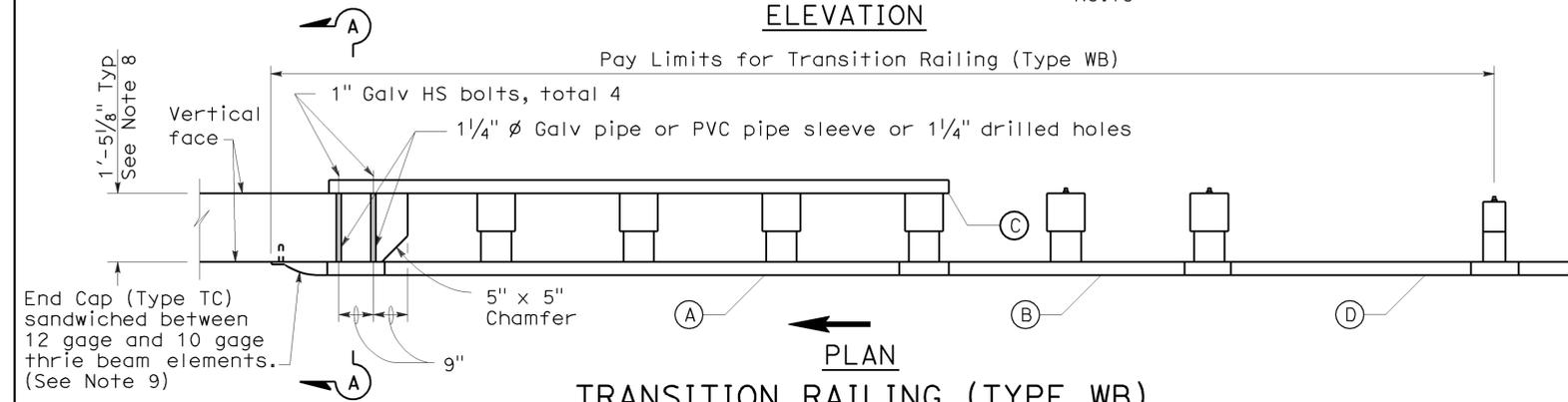
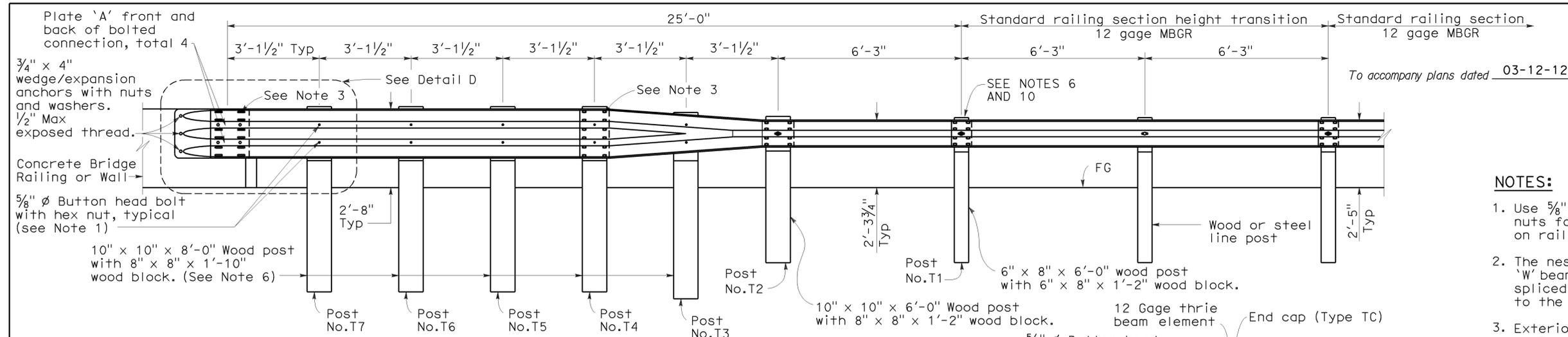
REVISED STANDARD PLAN RSP A77H1

2006 REVISED STANDARD PLAN RSP A77H1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	8	6.2/8.5	29	39

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 Exp. 6-30-11
 STATE OF CALIFORNIA

May 20, 2011
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- NOTES:**
- Use 5/8" ø 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 7/32" x 1/8" slot size. Interior splice bolt holes at these locations may be increased up to 1/4" ø. 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 →.
 - The top elevation of Posts No. T2 through No. 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 with height transition ratio of 120:1 or an approved Caltrans end treatment attached to Post No. T1.
 - The depth of the metal box spacer varies from the 5/8" 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. T4 through No. T7 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.
 - Conform standard railing section height to 2'-3 3/4" at Post No. T1 using height transition ratio of 120:1.

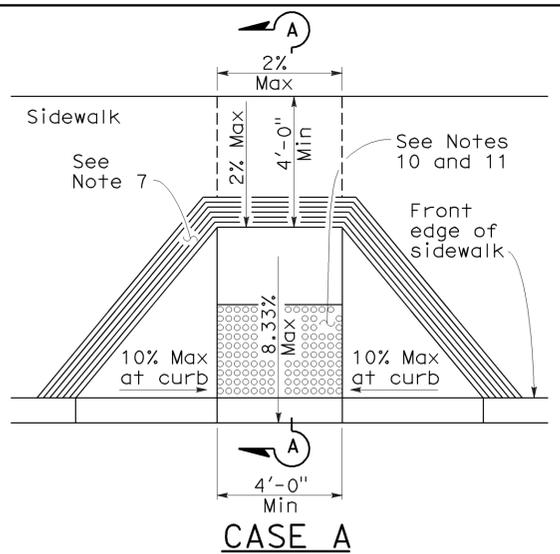
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**METAL BEAM GUARD RAILING
 TRANSITION RAILING
 (TYPE WB)**
 NO SCALE
 RSP A77J4 DATED MAY 20, 2011 SUPERSEDES
 RSP A77J4 DATED JUNE 5, 2009, RSP A77J4 DATED JUNE 6, 2008
 AND STANDARD PLAN A77J4 DATED MAY 1, 2006 -
 PAGE 75 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP A77J4

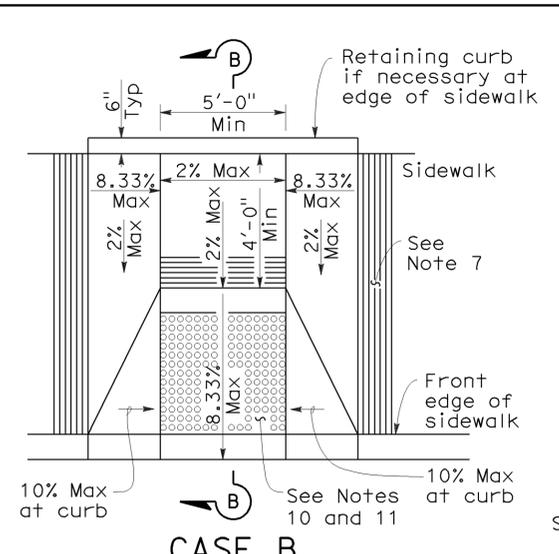
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	8	6.2/8.5	30	39

H. David Cordova
 REGISTERED CIVIL ENGINEER
 September 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.

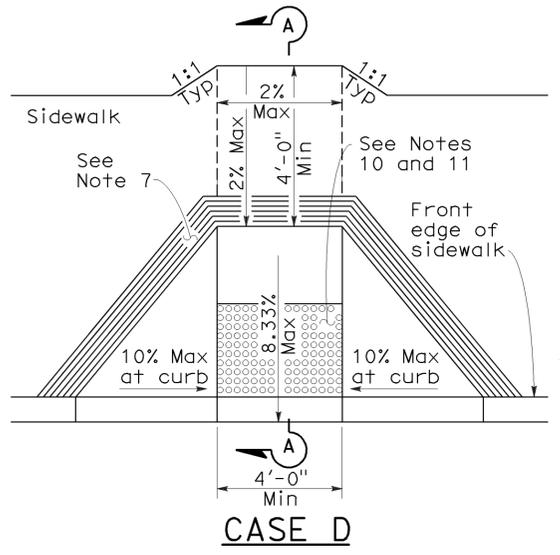
REGISTERED PROFESSIONAL ENGINEER
Hector David Cordova
No. C41957
Exp. 3-31-08
CIVIL
STATE OF CALIFORNIA



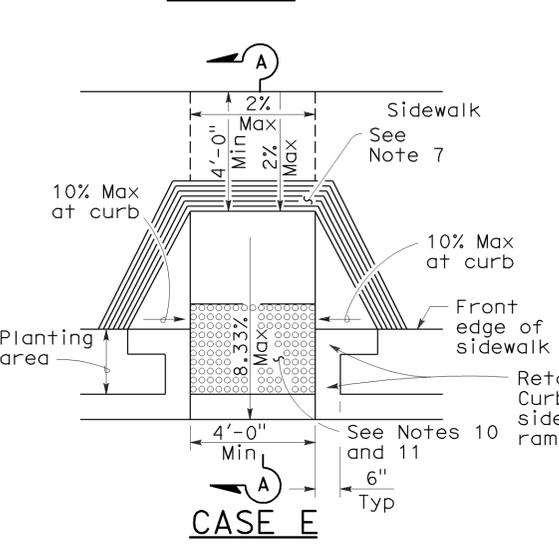
CASE A



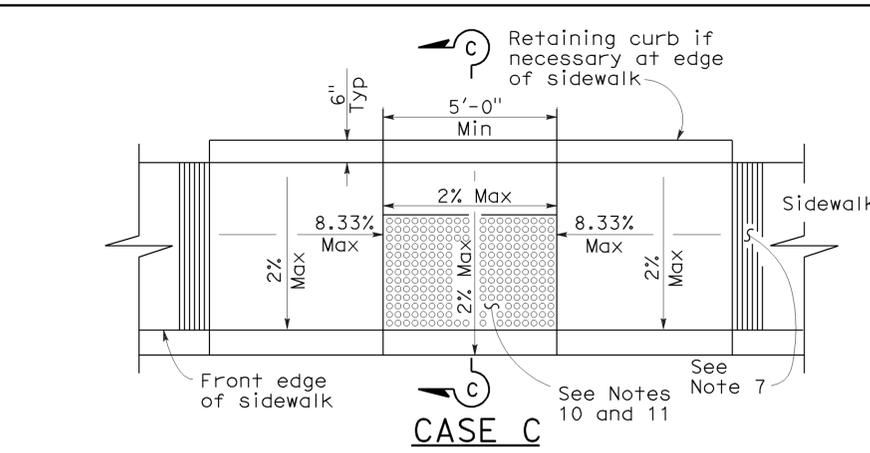
CASE B



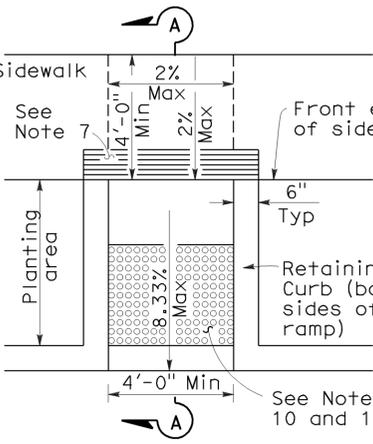
CASE D



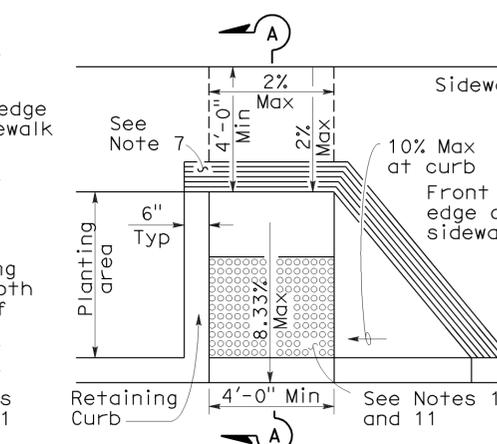
CASE E



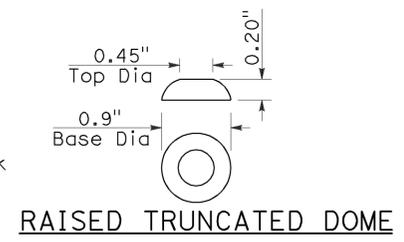
CASE C



CASE F



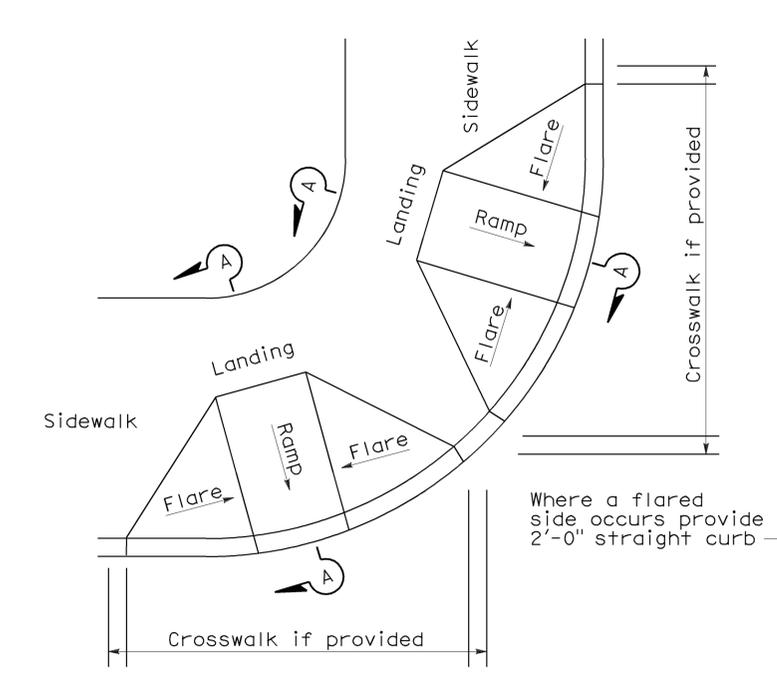
CASE G



RAISED TRUNCATED DOME

NOTES:

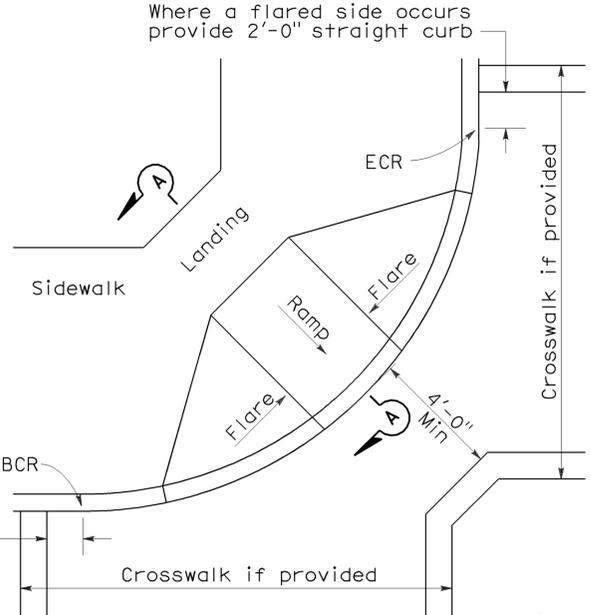
- As site conditions dictate, Case A through Case G curb ramps may be used for corner installations similar to those shown in Detail A and Detail B. The case of curb ramps used in Detail A do not have to be the same. Case A through Case G curb ramps also may be used at mid block locations, as site conditions dictate.
- If distance from curb to back of sidewalk is too short to accommodate ramp and 4'-0" platform (landing) as shown in Case A, the sidewalk may be depressed longitudinally as in Case B, or C or may be widened as in Case D.
- When ramp is located in center of curb return, crosswalk configuration must be similar to that shown for Detail B.
- As site conditions dictate, the retaining curb side and the flared side of the Case G ramp shall be constructed in reversed position.
- If located on a curve, the sides of the ramp need not be parallel, but the minimum width of the ramp shall be 4'-0".
- Side slope of ramp flares vary uniformly from a maximum of 10% at curb to conform with longitudinal sidewalk slope adjacent to top of the ramp, except in Case C and Case F.
- The curb ramp shall be outlined, as shown, with a 1'-0" wide border with 1/4" grooves approximately 3/4" on center. See grooving detail.
- Transitions from ramps and landing to walks, gutters or streets shall be flush and free of abrupt changes.
- Maximum slopes of adjoining gutters, the road surface immediately adjacent to the curb ramp or accessible route shall not exceed 5 percent within 4'-0" of the top and bottom of the curb ramp.
- Curb ramps shall have a detectable warning surface that extends the full width and 3'-0" depth of the ramp. Detectable Warning Surfaces shall conform to the details on this plan and the requirements in the Special Provisions.
- The edge of the detectable warning surface nearest the street shall be between 6" and 8" from the gutter flowline.
- Sidewalk and ramp thickness, "T", shall be 3/2" minimum.
- Utility pull boxes, manholes, vaults and all other utility facilities within the boundaries of the curb ramp will be relocated or adjusted to grade by the owner prior to, or in conjunction with, curb ramp construction.
- For retrofit conditions, removal and replacement of curb apron will be at the Contractor's option, unless otherwise shown on project plans.



DETAIL A

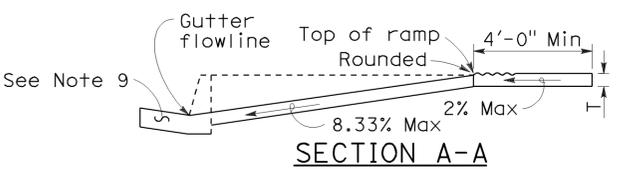
TYPICAL TWO-RAMP CORNER INSTALLATION

See Note 1

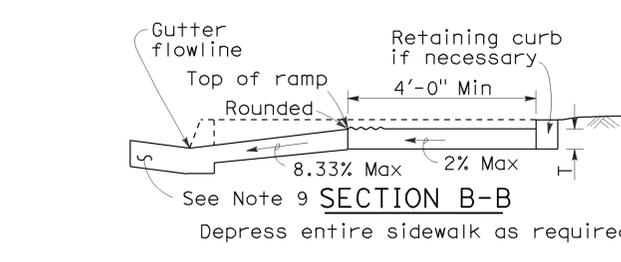


DETAIL B
TYPICAL ONE-RAMP CORNER INSTALLATION

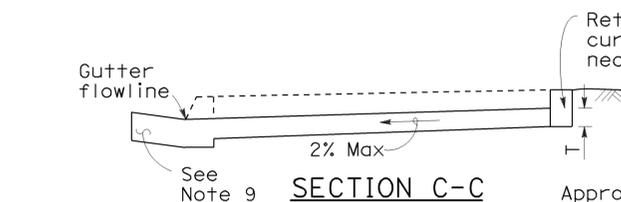
See Notes 1 and 3



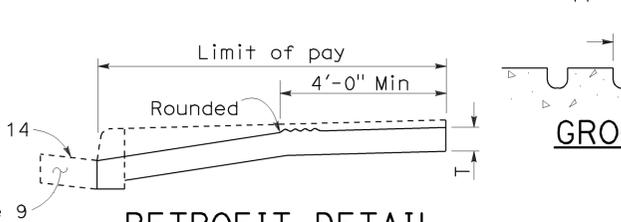
SECTION A-A



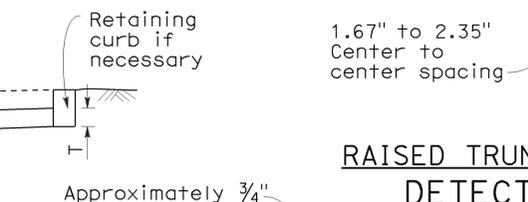
SECTION B-B



SECTION C-C



RETROFIT DETAIL
Existing curb and sidewalk



GROOVING DETAIL

1.67" to 2.35"
Center to
center spacing

**RAISED TRUNCATED DOME PATTERN (IN-LINE)
DETECTABLE WARNING SURFACE**

See Note 10
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
CURB RAMP DETAILS
NO SCALE

RSP A88A DATED SEPTEMBER 1, 2006 SUPERSEDES STANDARD PLAN A88A
DATED MAY 1, 2006 - PAGE 115 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A88A

2006 REVISED STANDARD PLAN RSP A88A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	8	6.2/8.5	31	39

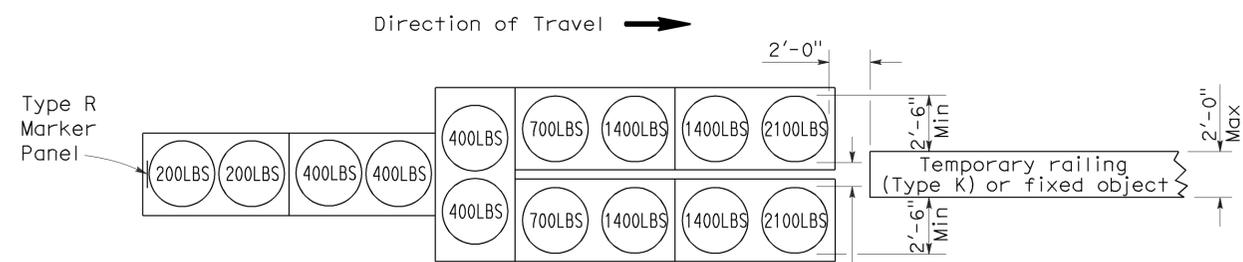
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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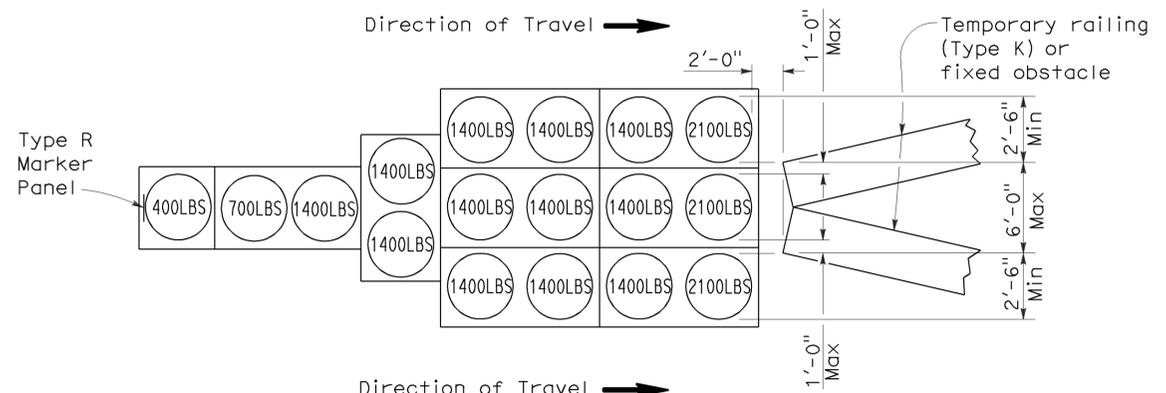
To accompany plans dated 03-12-12

2006 REVISED STANDARD PLAN RSP T1A



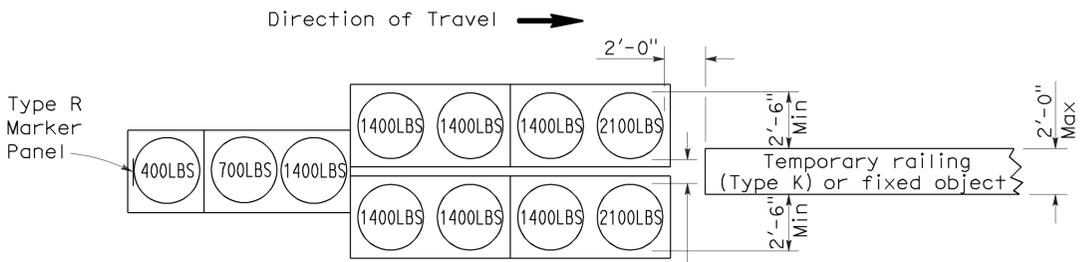
ARRAY 'TU14'

Approach speed 45 mph or more



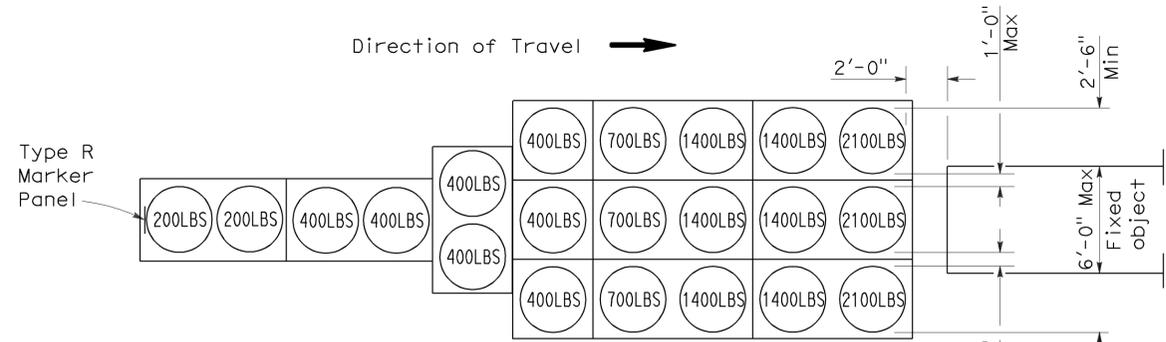
ARRAY 'TU17'

Approach speed less than 45 mph



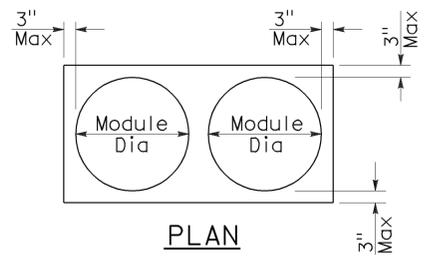
ARRAY 'TU11'

Approach speed less than 45 mph

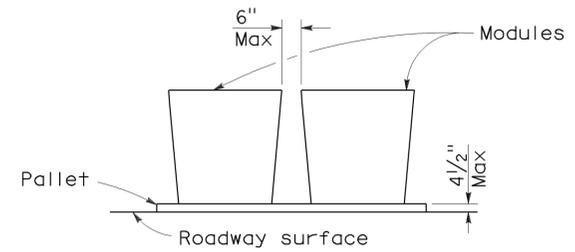


ARRAY 'TU21'

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	8	6.2/8.5	32	39

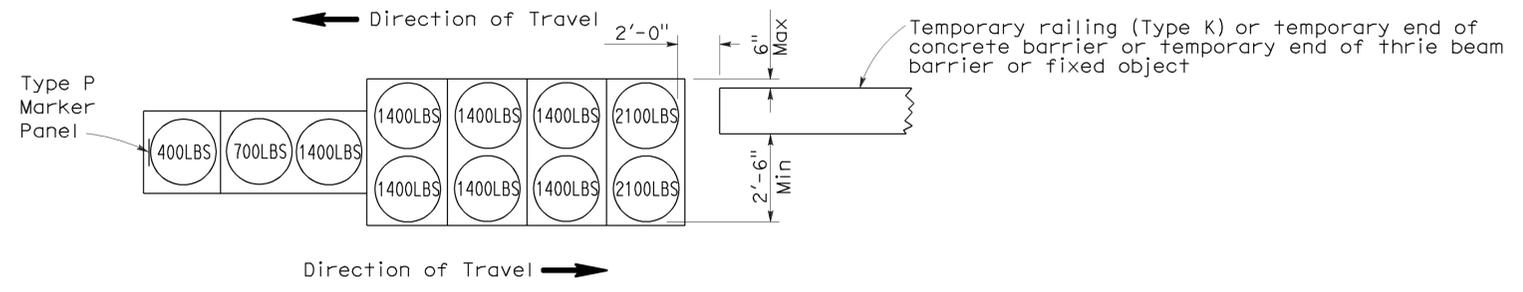
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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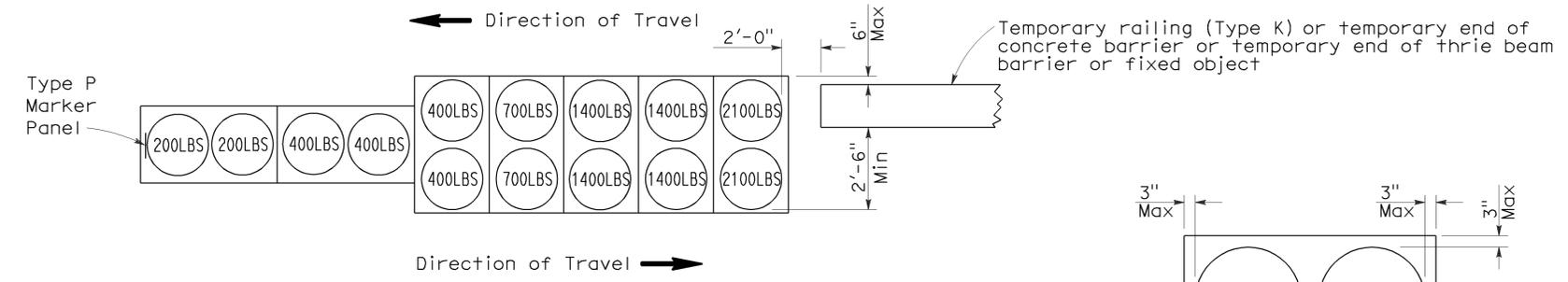
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

To accompany plans dated 03-12-12



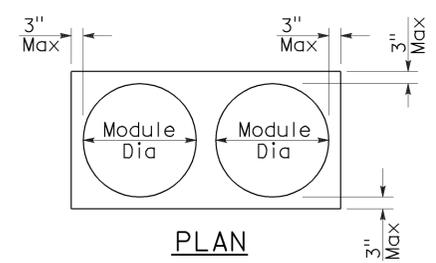
ARRAY 'TB11'

Approach speed less than 45 mph

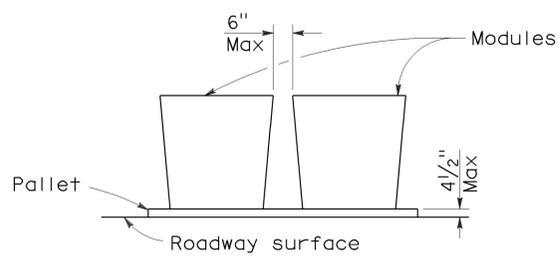


ARRAY 'TB14'

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 Type P marker panel so that the bottom of the panel rests upon the pallet.
5. Refer to Standard Plan A73B for marker details.
6. Approach speeds indicated conform to NCHRP 350 Report criteria.
7. Use of pallets is optional.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

REVISED STANDARD PLAN RSP T1B

2006 REVISED STANDARD PLAN RSP T1B

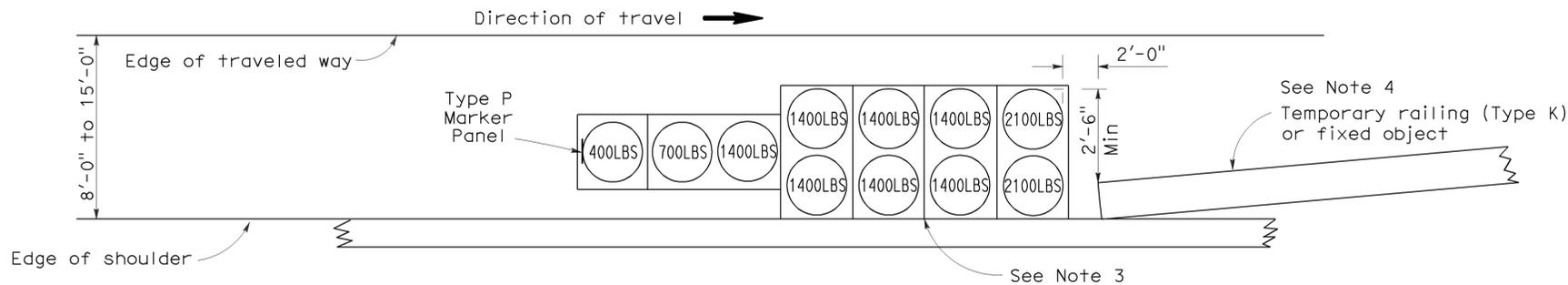
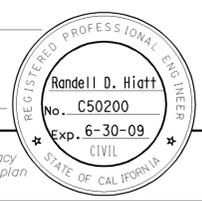
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	8	6.2/8.5	33	39

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

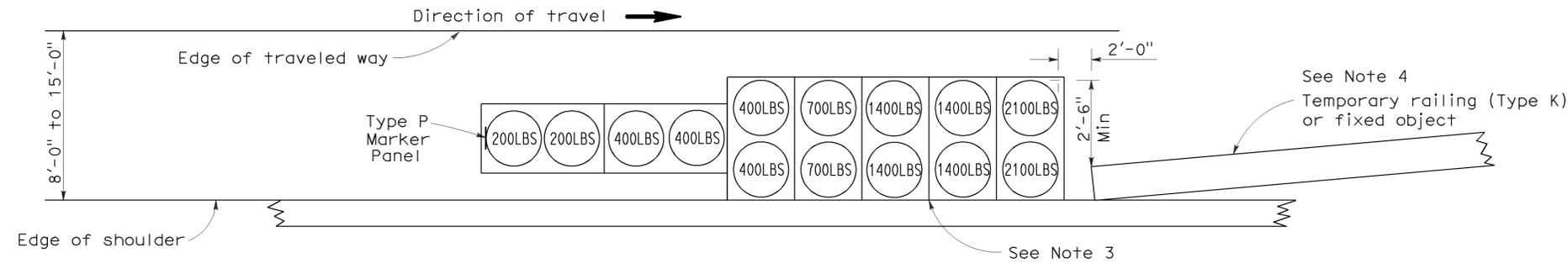
June 6, 2008
PLANS APPROVAL DATE

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To accompany plans dated 03-12-12



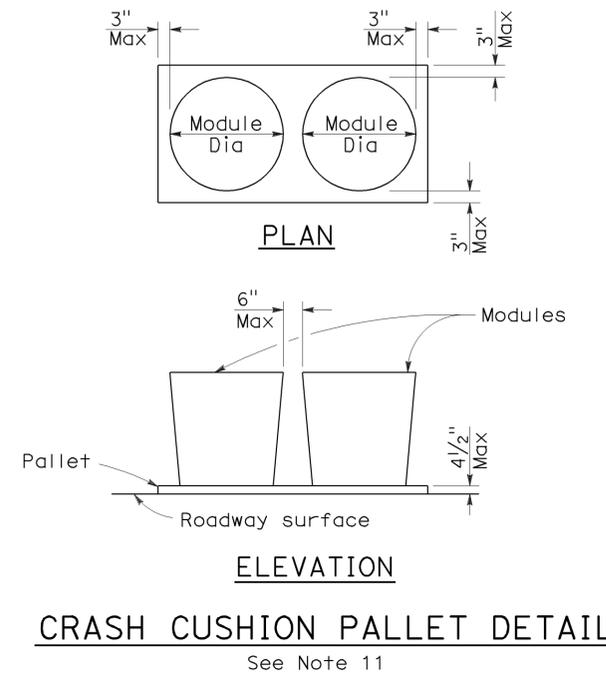
ARRAY 'TS11'
Approach speed less than 45 mph
See Note 9



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

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. 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.
4. 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.
5. Temporary crash cushion arrays shall not encroach on the traveled way.
6. Arrays for median shoulders shall conform to details shown on this plan for outside shoulders.
7. Place the Type P marker panel so that the bottom of the panel rests upon the pallet and faces traffic.
8. Refer to Standard Plan A73B for marker details.
9. 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.
10. Approach speeds indicated conform to NCHRP 350 Report criteria.
11. 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
11	SD	8	6.2/8.5	34	39

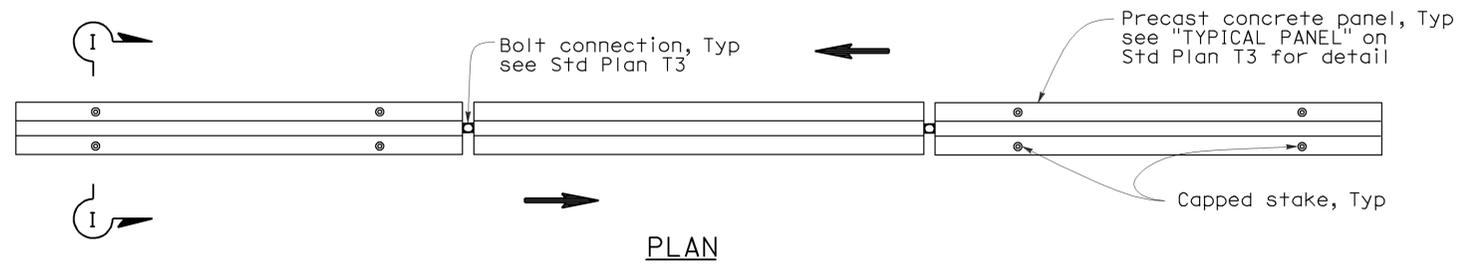
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

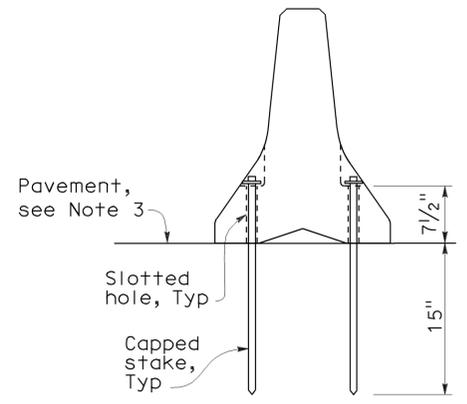
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REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-11
CIVIL
STATE OF CALIFORNIA

To accompany plans dated 03-12-12

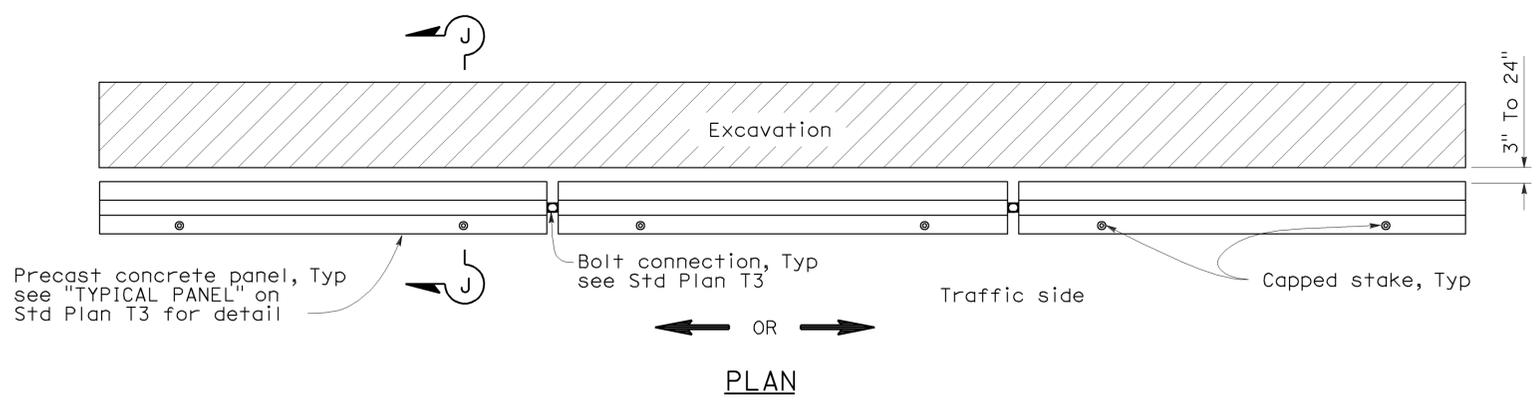


RAILING STAKING CONFIGURATION FOR TWO-WAY TRAFFIC
See Note 1

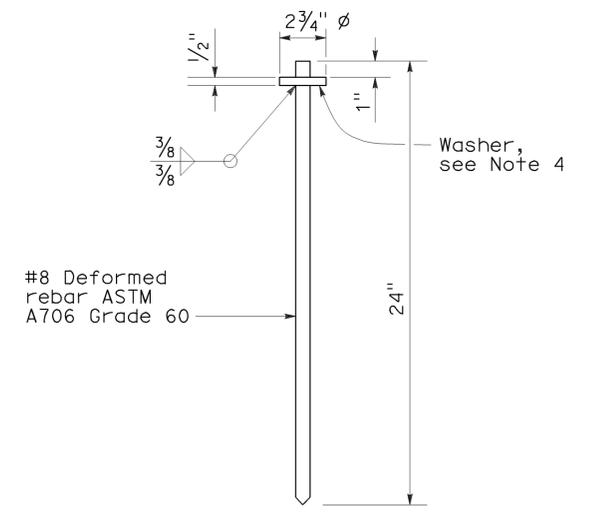
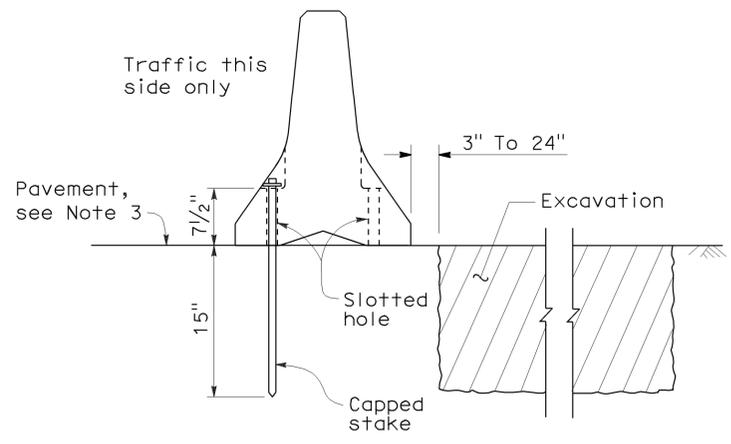


NOTES:

1. Where Type K Temporary Railing is placed as a temporary or long term barrier in two-way traffic on highways with less than 24" from the edge of traveled way, use four capped stakes per every other panel with end panels staked.
2. Where Type K Temporary Railing is placed 3" to 24" from the edge of an excavation on highways, use two capped stakes per panel along the traffic side.
3. Staked Type K Temporary Railing must be supported by at least 4" thick concrete, hot mix asphalt or existing asphalt concrete pavement.
4. The minimum yield strength for the washer must be 60,000 psi.
5. Direction of adjacent traffic indicated by \Rightarrow .



RAILING STAKING CONFIGURATION ADJACENT TO AN EXCAVATION
See Note 2



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**TEMPORARY RAILING
(TYPE K)**

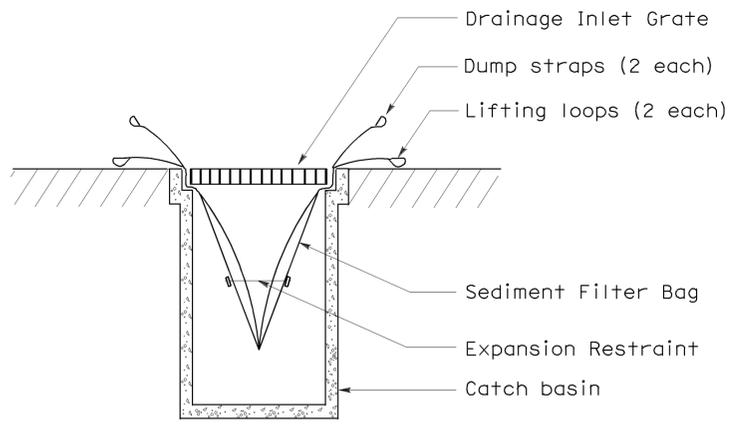
NO SCALE

NSP T3A DATED MAY 20, 2011 SUPPLEMENTS
THE STANDARD PLANS BOOK DATED MAY 2006.

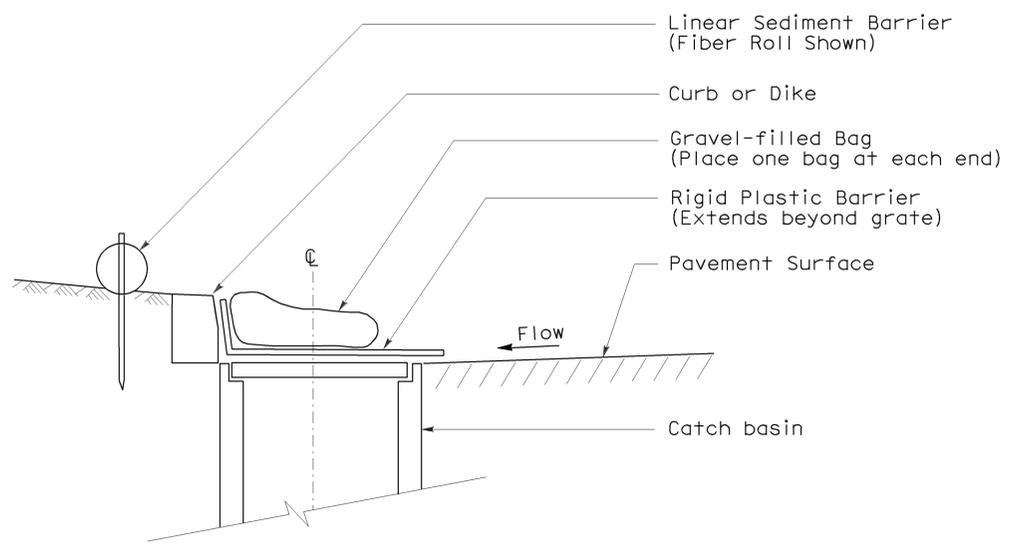
2006 NEW STANDARD PLAN NSP T3A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	8	6.2/8.5	35	39

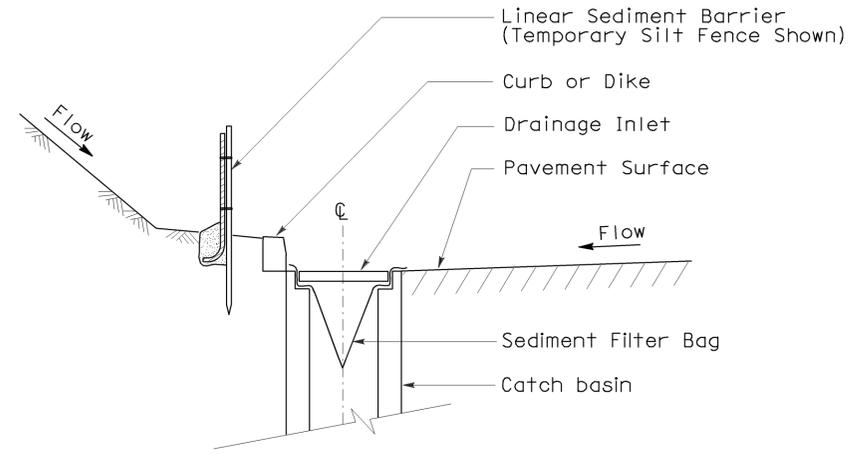
Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT
 August 15, 2008
 PLANS APPROVAL DATE
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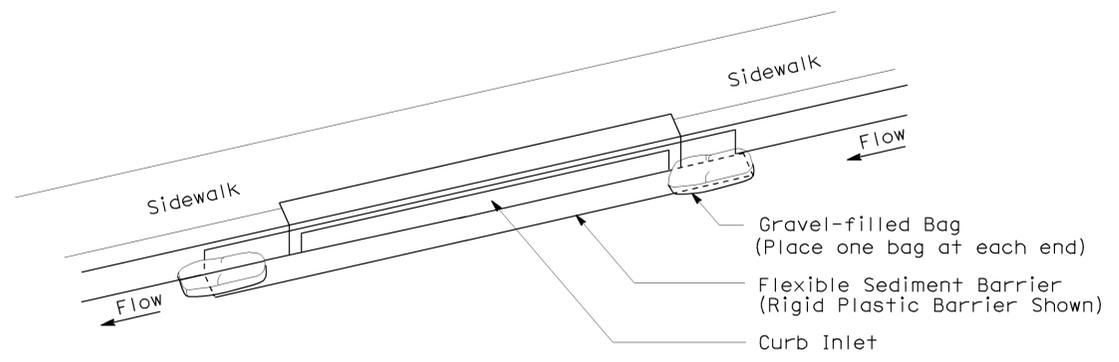
SECTION B-B
SEDIMENT FILTER BAG DETAIL



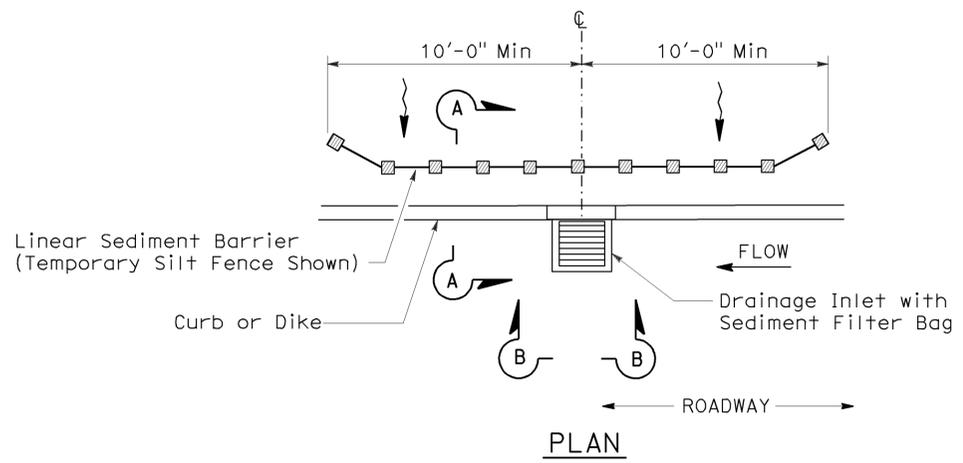
SECTION
TEMPORARY DRAINAGE INLET PROTECTION (TYPE 6A)
(CATCH BASIN WITH GRATE)



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.

To accompany plans dated 03-12-12

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.

NEW STANDARD PLAN NSP T64

2006 NEW STANDARD PLAN NSP T64

ELECTROLIERS

STANDARD TYPES	Symbol	Description
15, 15D		High mast light pole
15 STRUCTURE		Double Arm lighting standard
21, 21D STRUCTURE		Existing electrolier
30		Electrolier foundation (Future installation)
31		NOTES: 1. Luminaires shall be 310 W HPS when installed on Type 21, 21D, 30, 31, 32, 35 and 36-20A Standards, unless otherwise specified. Luminaires shall be 200 W HPS when installed on other type standards or poles, unless otherwise specified. 2. Luminaires shall be the cutoff type, ANSI Type III medium cutoff lighting distribution, unless otherwise specified. 3. Variations noted adjacent to symbol on project plans.
32		
35		
36-20A		

- Electrolier (see project notes or project plans)
- Luminaire on wood pole

STANDARD NOTES:

- AB** Abandon. If applied to conduit, remove conductors.
- BC** Install pull box in existing conduit run.
- BP** Pedestrian barricade, type as indicated on plan.
- CB** Install conduit into existing pull box.
- CC** Connect new and existing conduit. Remove existing conductors and install conductors as indicated.
- CF** Conduit to remain for future use. Remove conductors. Install pull wire or rope.
- DH** Detector handhole.
- FA** Foundation to be abandoned.
- IS** Install sign on signal mast arm.
- NS** No slip base on standard.
- PEC** Photoelectric control.
- PEU** Photoelectric unit.
- RC** Equipment or material to be removed and become the property of the Contractor.
- RE** Remove electrolier, fuses and ballast. Tape ends of conductors.
- RL** Relocate equipment.
- RR** Remove and reuse equipment.
- RS** Remove and salvage equipment.
- SC** Splice new to existing conductors.
- SD** Service disconnect.
- SF** Standard to remain for future use. Remove luminaire, pole conductors, fuses and ballast.
- TSP** Telephone service point.

ABBREVIATIONS AND EQUIPMENT DESIGNATIONS

PROPOSED EXISTING

PROPOSED	EXISTING	Description
BBS	bbs	Battery backup system
BC	bc	Bolt circle
C	C	Conduit
CCTV	cctv	Closed circuit television
CKT	ckt	Circuit
CMS	cms	Changeable message sign
DLC	dlc	Loop detector lead-in cable
EMS	ems	Extinguishable message sign
EVC	evc	Emergency vehicle cable
EVD	evd	Emergency vehicle detector
FB	fb	Flashing beacon
FBCA	fbca	Flashing beacon control assembly
FBS	fbs	Flashing beacon with slip base
FO	fo	Fiber optic
G	G	Ground (Equipment Grounding Conductor)
GFCI	GFCI	Ground fault circuit interrupt
HAR	har	Highway advisory radio
HEX	hex	Hexagonal
HPS	hps	High pressure sodium
IISNS	iisns	Internally illuminated street name sign
ISL	isl	Induction sign lighting
LED	led	Light emitting diode
LMA	lma	Luminaire mast arm
LPS	lps	Low pressure sodium
LTG	ltg	Lighting
LUM	lum	Luminaire
MAT	mat	Mast arm mounting vehicle signal faces, top attachment
MAS	mas	Mast arm mounting vehicle signal faces, side attachment
MAS-4A	mas-4A	Mast arm mounting vehicle signal faces, side attachment - 4 signal section
MAS-4B	mas-4B	Mast arm mounting vehicle signal faces, side attachment - 4 signal section
MAS-4C	mas-4C	Mast arm mounting vehicle signal faces, side attachment - 4 signal section
MAS-5A	mas-5A	Mast arm mounting vehicle signal faces, side attachment - 5 signal section
MAS-5B	mas-5B	Mast arm mounting vehicle signal faces, side attachment - 5 signal section
MC	mc	Mercury contactor
M/M	m/m	Multiple to multiple transformer
MT	mt	Conduit with pull wire or rope only
MTG	mtg	Mounting
N	N	Mercury vapor lighting fixture
NC	NC	Neutral (Grounded Conductor)
NO	NO	Normally closed
PB	pb	Normally open
PEC	pec	Pull box
PEC	pec	Photoelectric control (Type I, II, III, IV or V as shown)
PED	ped	Pedestrian
PEU	peu	Photoelectric unit
PPB	ppb	Pedestrian push button
RL	rl	Relocated equipment
RM	rm	Ramp metering
SB	sb	Slip base
SIC	sic	Signal interconnect cable
SIG	sig	Signal
SMA	sma	Signal mast arm
SNS	sns	Street name sign
SP	sp	Service point
TDC	tdc	Telephone demarcation cabinet
TMS	tms	Traffic monitoring station
TOS	tos	Traffic Operations System
VEH	veh	Vehicle
XFMR	xfmr	Transformer
COMM	comm	Communication
RWIS	rwis	Roadway weather information system

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	8	6.2/8.5	36	39

REGISTERED ELECTRICAL ENGINEER
 October 5, 2007
 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 03-12-12

SOFFIT AND WALL MOUNTED LUMINAIRES

- Pendant, 70 W HPS unless otherwise specified.
- Flush, 70 W HPS unless otherwise specified.
- Wall surface, 70 W HPS unless otherwise specified.
- Existing soffit or wall luminaire to remain unmodified.
- Existing soffit or wall luminaire to be modified as specified.

NOTE:
Arrow indicates "street side" of luminaire.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

RSP ES-1A DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-1A DATED MAY 1, 2006 - PAGE 400 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1A

2006 REVISED STANDARD PLAN RSP ES-1A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	8	6.2/8.5	37	39

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

Jeffery G. McRae
No. E14512
Exp. 6-30-08
ELECTRICAL
STATE OF CALIFORNIA

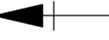
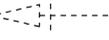
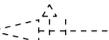
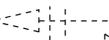
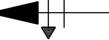
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 03-12-12

CONDUIT

PROPOSED	EXISTING	
---	---	Lighting Conduit, unless otherwise indicated or noted
---	---	Traffic signal conduit
-C-	-c-	Communication conduit
-T-	-t-	Telephone conduit
-F-	-f-	Fire alarm conduit
-FO-	-fo-	Fiber optic conduit
---	---	Conduit termination 
		Conduit riser in/on structure or service pole

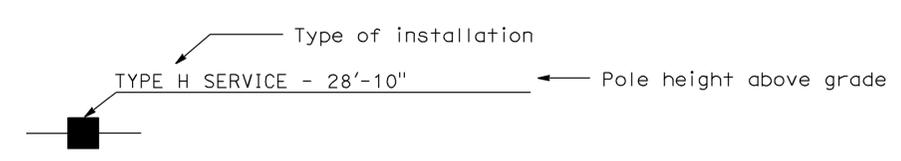
SIGNAL EQUIPMENT

PROPOSED	EXISTING	
		Pedestrian signal face
		Pedestrian push button post
		Pedestrian barricade
		Vehicle signal face (with backplate, 3-Section: red, yellow and green)
		Vehicle signal face with angle visors
		Modifications of basic symbols: "L" Indicates all non-arrow sections lowered "LG" Indicates lowered green section only "PV" Indicates 12" programmed visibility sections "8" indicates all 8" sections (only when specified)
		Type 15TS and Vehicle signal face
		Vehicle signal face with red, yellow and green left arrow sections
		Vehicle signal face with red and yellow sections and up green arrow
		Vehicle signal face (5 Section) with red, yellow and green sections and yellow and green right arrows
		Type 1 Standard and attached vehicle signal faces
		Standard with signal mast arm only and attached vehicle signal faces and internally illuminated street name sign
		Type 33 Standard, Left-turn vehicle signal face and sign
		Standard with luminaire and signal mast arms and attached vehicle signal faces
		Cantilever flashing beacon Type 9 Frame, with a sign unless otherwise specified or indicated
		Type 15-FBS Standard with two vehicle signal face sections with lens, backplate and visor with a sign
		Flashing beacon. One vehicle signal face section with lens, backplate and visor. "R" indicates red indication, "Y" indicates yellow indication
		Controller assembly. Door indicates front of cabinet

SERVICE EQUIPMENT

PROPOSED	EXISTING	
---OH---	---oh---	Overhead lines
		Wood pole "U" indicates utility owned
		Pole guy with anchor
		Utility transformer - ground mounted
		Service equipment enclosure type
		Service equipment enclosure door indicates front of enclosure
		Telephone demarcation cabinet

POLE-MOUNTED SERVICE DESIGNATION



ILLUMINATED OVERHEAD SIGN

PROPOSED	EXISTING	
		Overhead sign - Single post
		Overhead sign - Two post
		Overhead sign - Mounted on structure
		Overhead sign with electrolier

SIGNAL EQUIPMENT Cont

PROPOSED	EXISTING	
		Guard post
		Type 1 Standard with "Meter On" sign
		Emergency Vehicle detector

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(SYMBOLS AND ABBREVIATIONS)**

NO SCALE

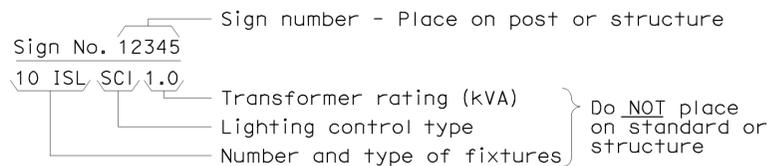
RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B
DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1B

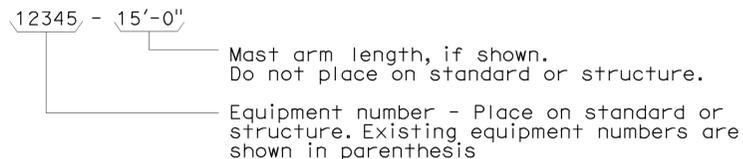
2006 REVISED STANDARD PLAN RSP ES-1B

EQUIPMENT IDENTIFICATION

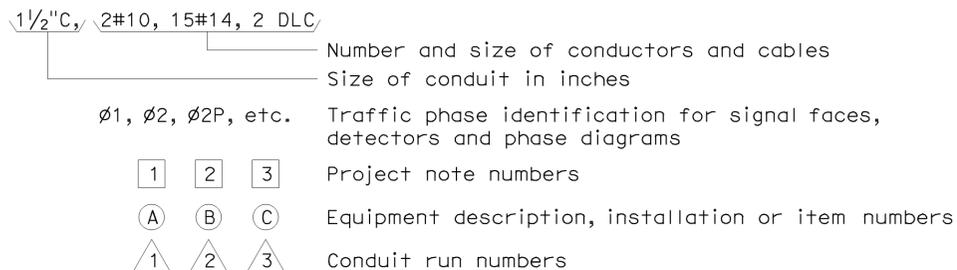
ILLUMINATED SIGN IDENTIFICATION NUMBER:



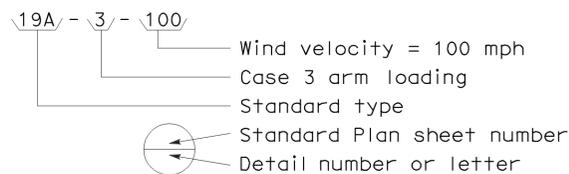
ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



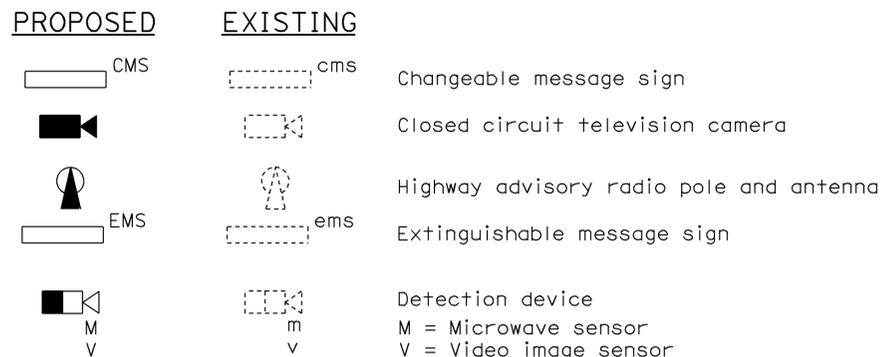
CONDUIT AND CONDUCTOR IDENTIFICATION:



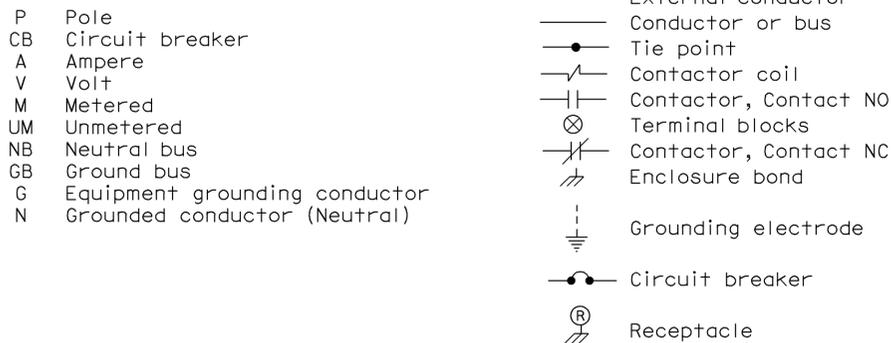
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



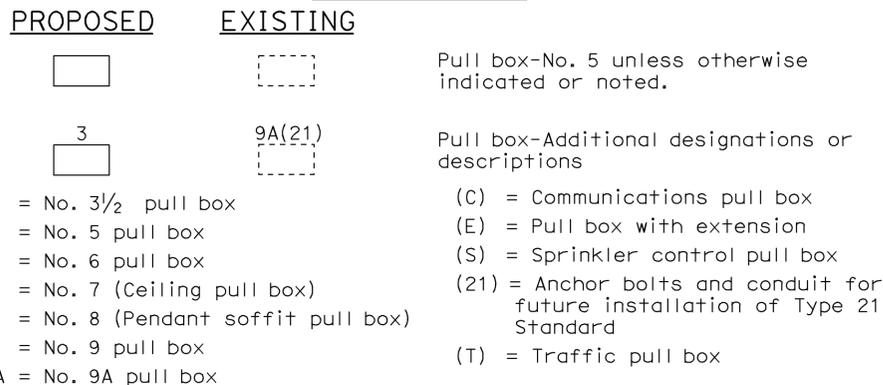
MISCELLANEOUS EQUIPMENT



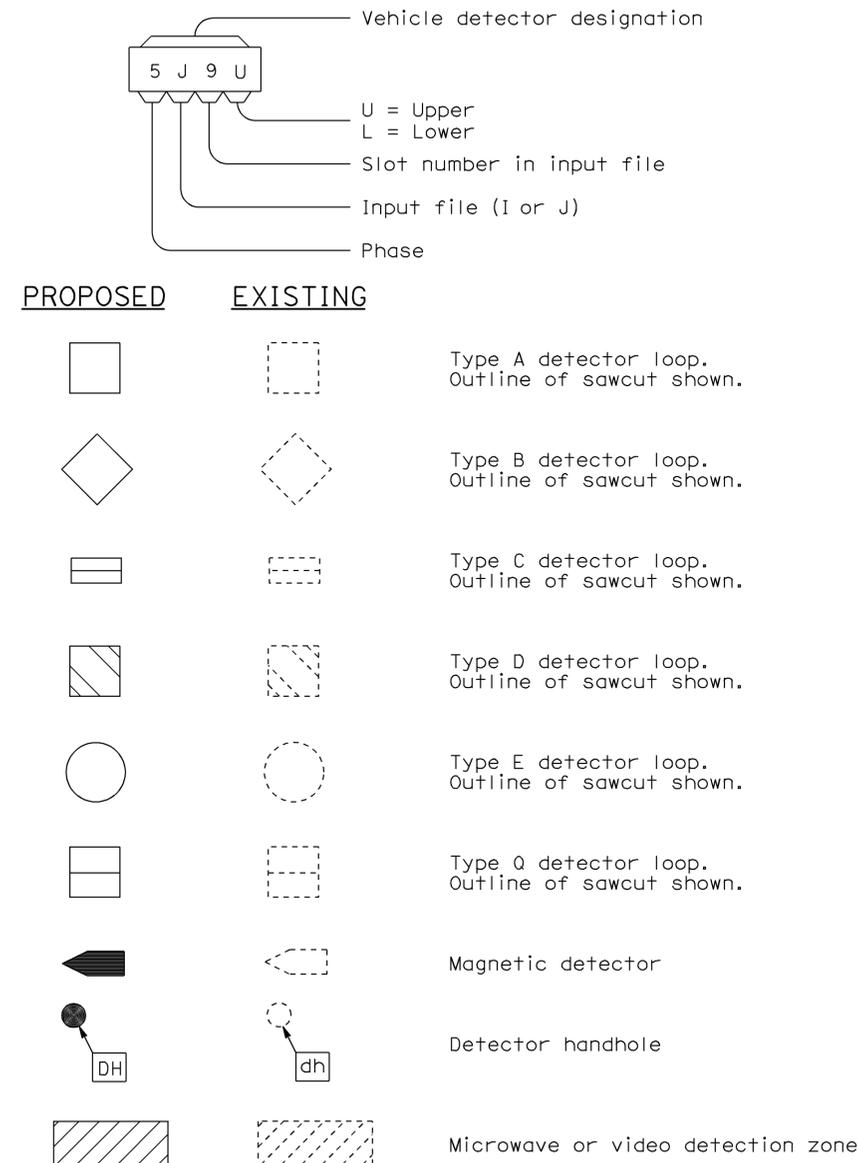
WIRING DIAGRAM LEGEND



PULL BOXES



VEHICLE DETECTORS



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(SYMBOLS AND ABBREVIATIONS)

NO SCALE

RSP ES-1C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1C
 DATED MAY 1, 2006 - PAGE 402 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1C

2006 REVISED STANDARD PLAN RSP ES-1C

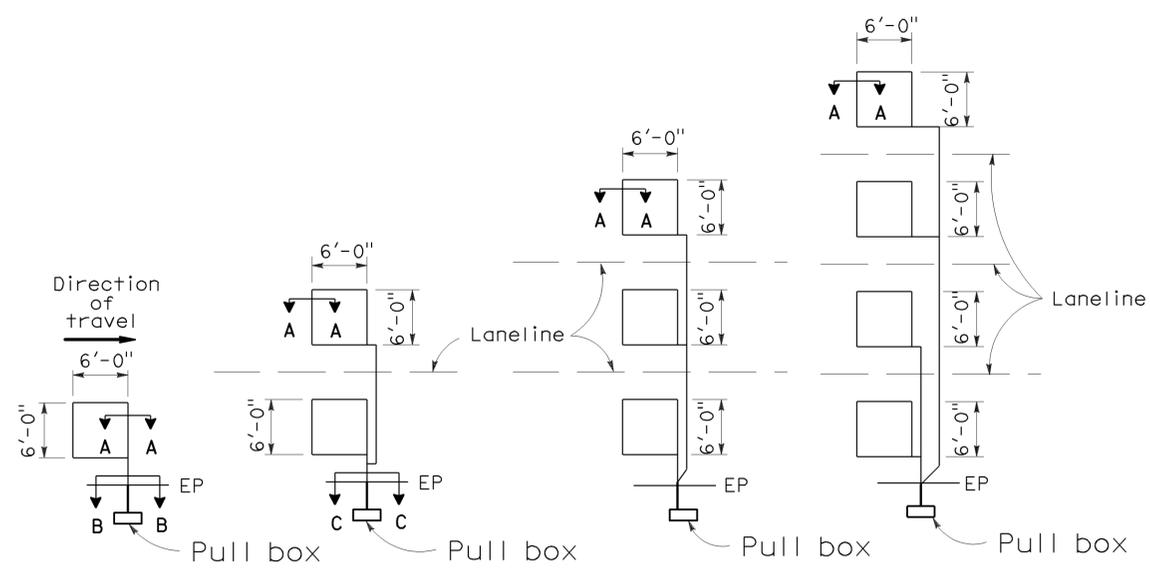
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	8	6.2/8.5	39	39

Jeffrey G. McRae
 REGISTERED ELECTRICAL ENGINEER
 October 5, 2007
 PLANS APPROVAL DATE
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2006 REVISED STANDARD PLAN RSP ES-5A

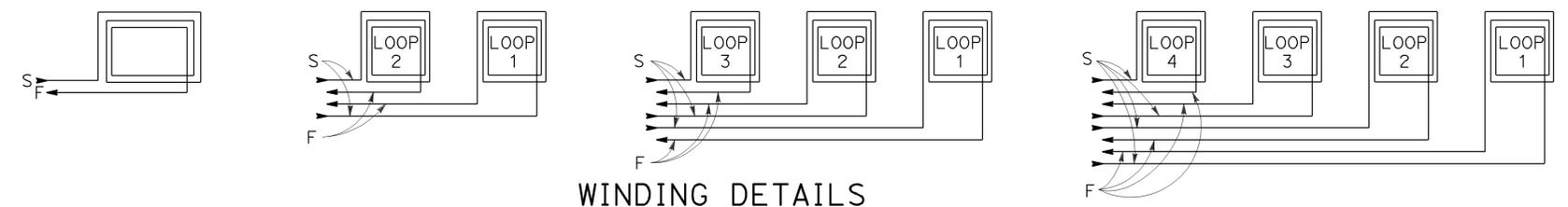
LOOP INSTALLATION PROCEDURE

- Loops shall be centered in lanes.
- Saw slots in pavement for loop conductors as shown in details.
- Distance between side of loop and a lead-in saw cut from adjacent detectors shall be 2'-0" minimum. Distance between lead-in saw cuts shall be 6" minimum.
- Bottom of saw slot shall be smooth with no sharp edges.
- Slots shall be washed until clean, blown out and thoroughly dried before installing loop conductors.
- Adjacent loops on the same sensor unit channel shall be wound in opposite directions.
- Identify and tag loop circuit pairs in the pull box with loop number, start (S) and finish (F) of conductor. Identify and tag lead-in-cable with sensor number and phase.
- Install loop conductor in slot using a 3/16" to 1/4" thick wood paddle. Hold loop conductors with wood paddles (at the bottom of the sawed slot) during sealant placement.
- No more than 2 twisted pairs shall be installed in one sawed slot.
- Allow additional 5'-0" of slack length of conductor for the lead-in run to pull box.
- The additional length of each conductor for each loop shall be twisted together into a pair (6 turns per 3'-4" minimum) before being placed in the slot and conduit leading to pull box.
- Test each loop circuit for continuity, circuit resistance and insulation resistance at the pull box before filling slots.
- Fill slots as shown in details.
- Splice loop conductors to lead-in-cable. Splices shall be soldered.
- End of lead-in-cable and Type 2 loop conductor shall be waterproofed prior to installing in conduit to prevent moisture from entering the cable.
- Lead-in-cable shall not be spliced between the pull box and the controller cabinet terminals.
- Test each loop circuit for continuity, circuit resistance and insulation resistance at the controller cabinet location.
- Where loop conductors are not to be spliced to a lead-in-cable, the ends of the conductors shall be taped and waterproofed with electrical insulating coating.



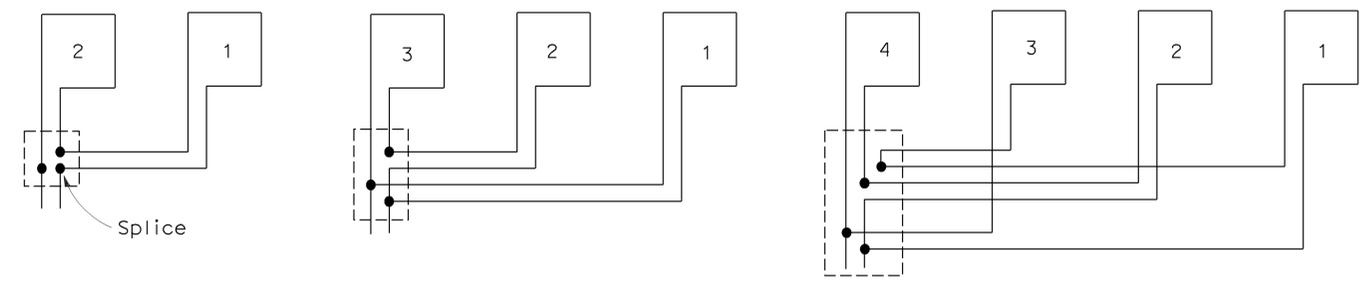
TYPE 1A INSTALLATION TYPE 2A INSTALLATION TYPE 3A INSTALLATION TYPE 4A INSTALLATION
SAWCUT DETAILS

- (Type A loop detector configurations illustrated)
- 1A thru 4A = 1 Type A loop configuration in each lane.
 - 1B thru 4B = 1 Type B loop configuration in each lane.
 - 1C = 1 Type C loop configuration entering lanes as required.
 - 1D thru 4D = 1 Type D loop configuration in each lane.
 - 1E thru 4E = 1 Type E loop configuration in each lane.
 - 1Q thru 4Q = 1 Type Q loop configuration in each lane.
- (Use Type A, B, C, D, E or Q loop detector configurations only when specified or shown on plans)



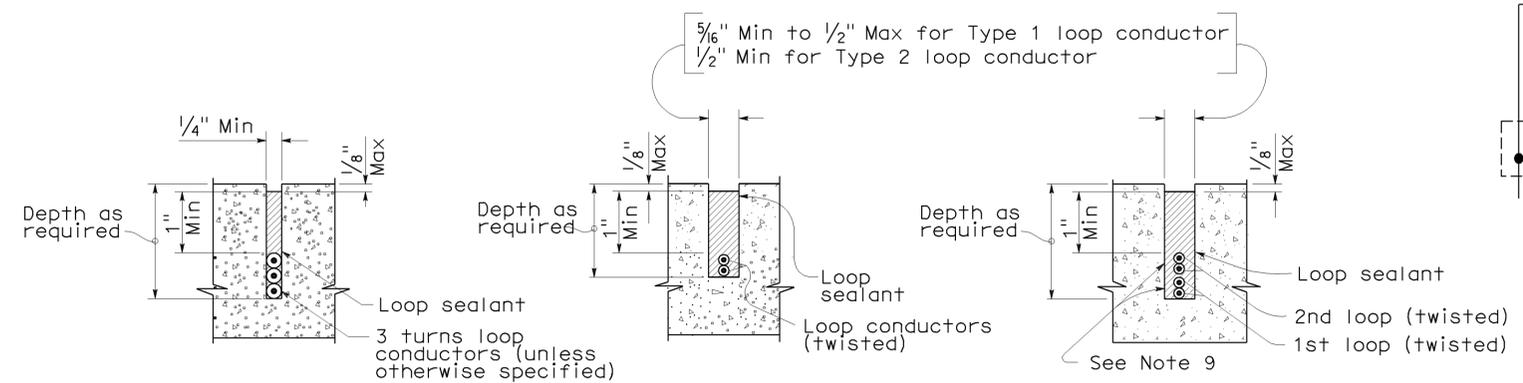
WINDING DETAILS

See Notes 6 and 7



TYPICAL LOOP CONNECTIONS

(Dashed lines represent the pull box)



SECTION A-A SECTION B-B SECTION C-C
SLOT DETAILS - TYPE 1 AND TYPE 2 LOOP CONDUCTOR

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS (DETECTORS)

NO SCALE

RSP ES-5A DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-5A DATED MAY 1, 2006 - PAGE 423 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-5A