

INDEX OF PLANS

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

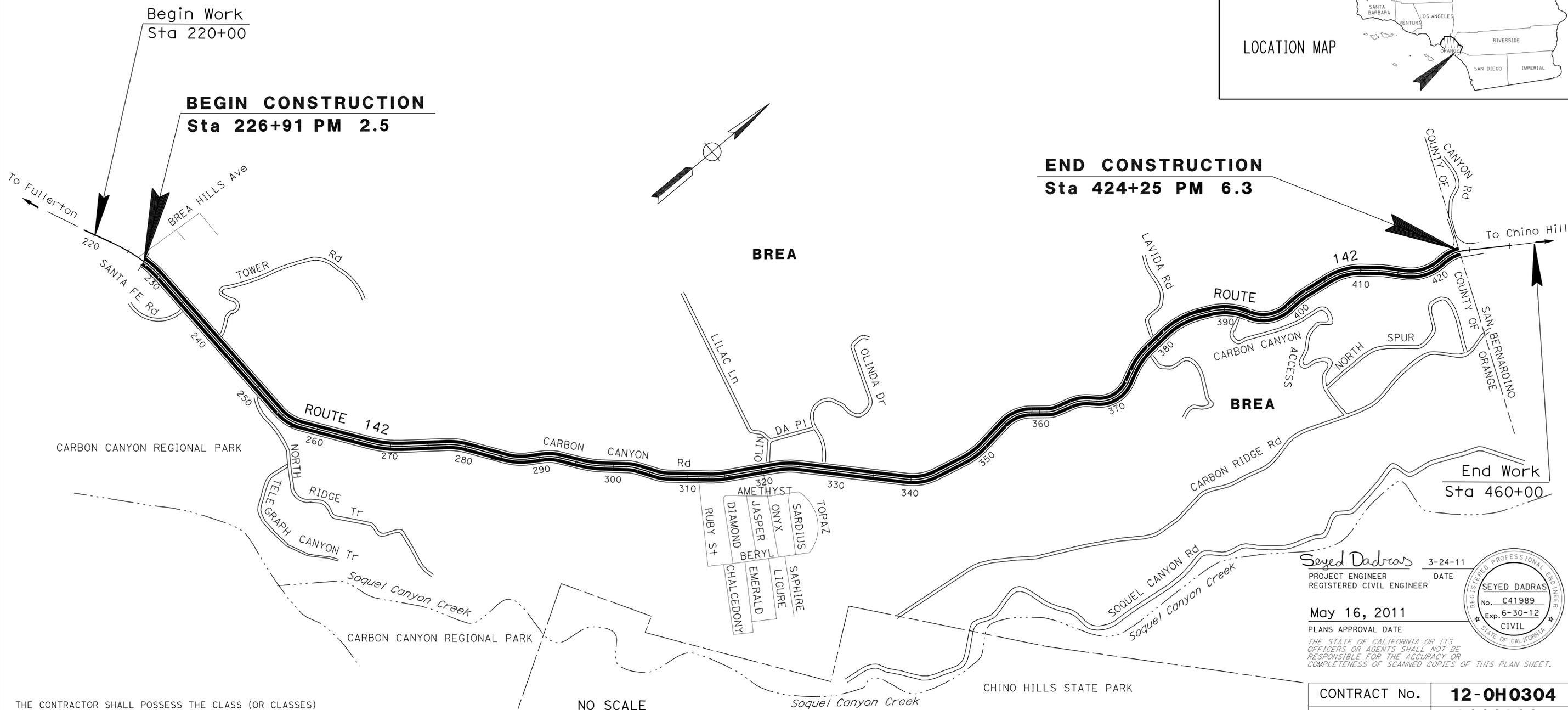
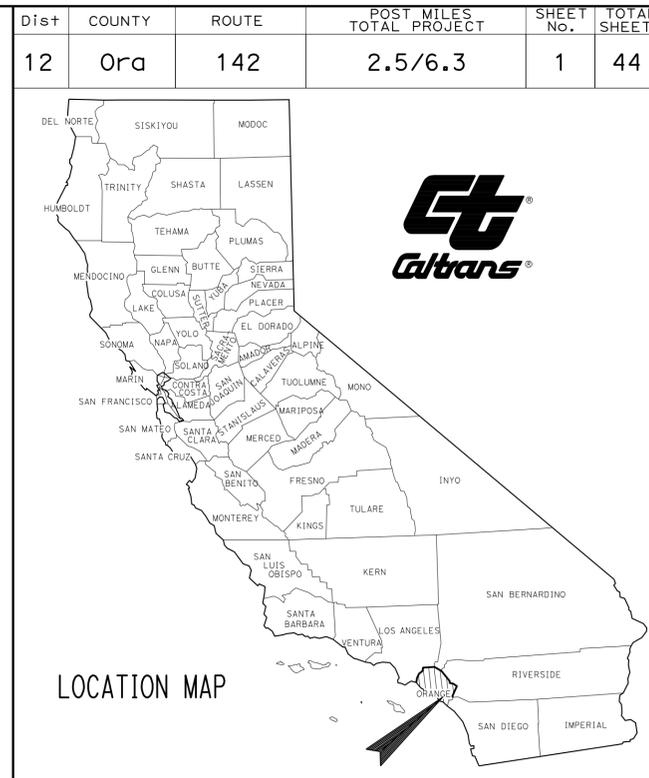
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

STP-P142(015)E

PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY

IN ORANGE COUNTY
IN BREA
FROM BREA HILLS AVENUE
TO SAN BERNARDINO COUNTY LINE

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006



PROJECT MANAGER	PIJA ANSARI
DESIGN ENGINEER	SEYED DADRAS

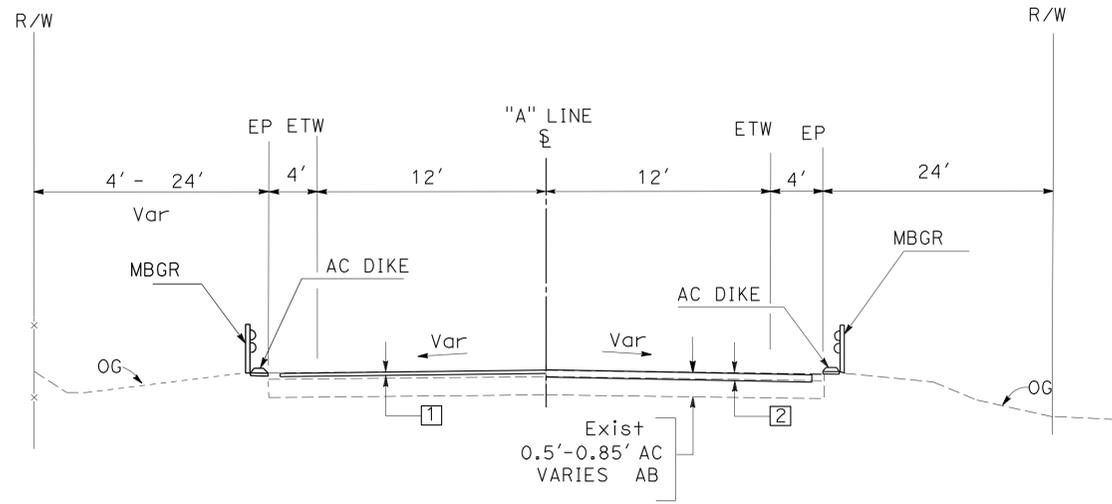
Seyed Dadras 3-24-11
PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

May 16, 2011
PLANS APPROVAL DATE

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

CONTRACT No.	12-OH0304
PROJECT ID	1200020064

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	142	2.5/6.3	2	44
Seyed Dadras			3-24-11	DATE	
REGISTERED CIVIL ENGINEER			SEYED DADRAS		
5-16-11			No. C41989		
PLANS APPROVAL DATE			Exp. 6-30-12		
			CIVIL		
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WESTBOUND

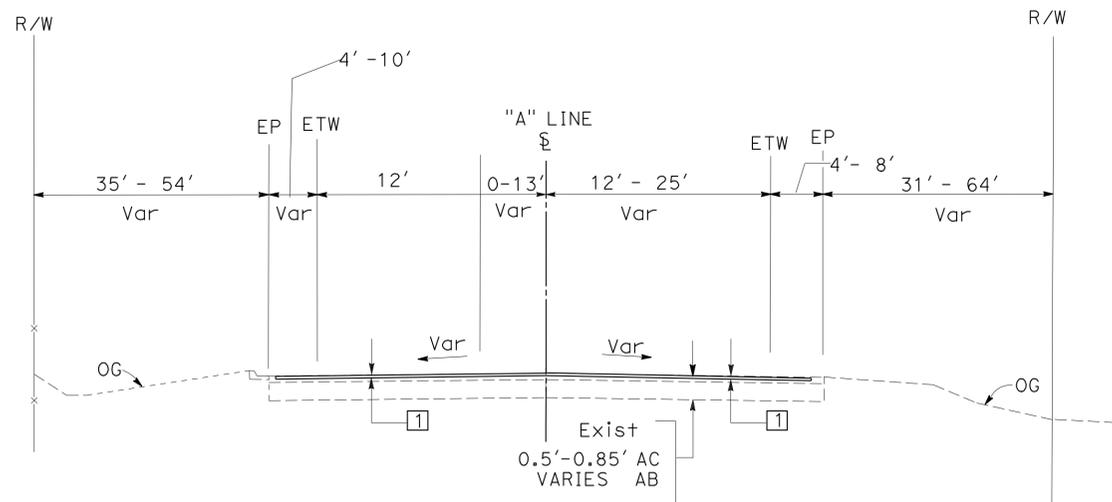
EASTBOUND

ROUTE 142

FROM Sta 230+50 TO Sta 232+76

TYPICAL STRUCTURAL SECTIONS

- 1 0.20' RUBBERIZED HMA (GAP GRADED)
0.10' COLD PLANE AC Pvm+
- 2 0.20' RUBBERIZED HMA (GAP GRADED)
0.40' HMA (TYPE A)
0.50' COLD PLANE AC Pvm+

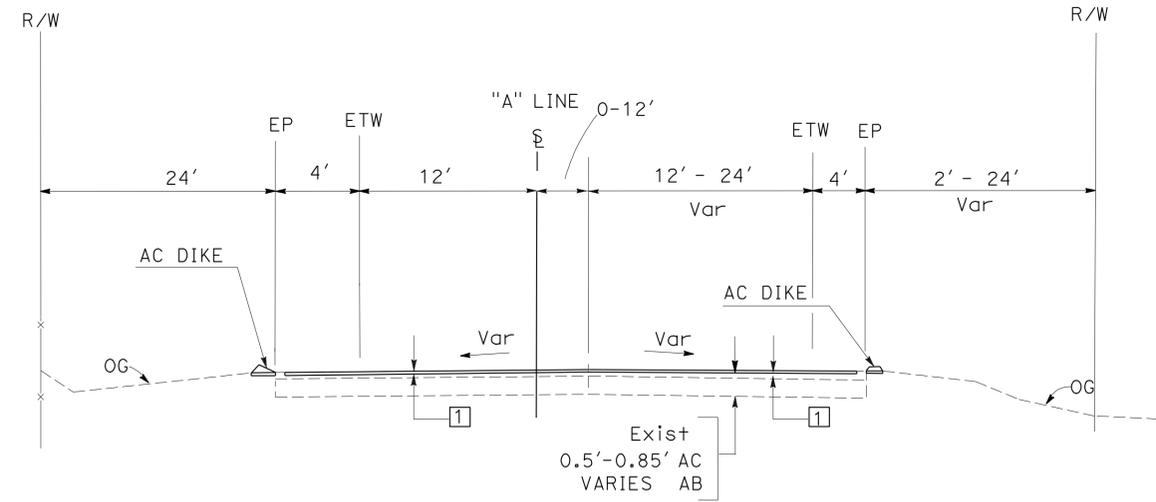


WESTBOUND

EASTBOUND

ROUTE 142

FROM Sta 226+91 TO Sta 230+50



WESTBOUND

EASTBOUND

ROUTE 142

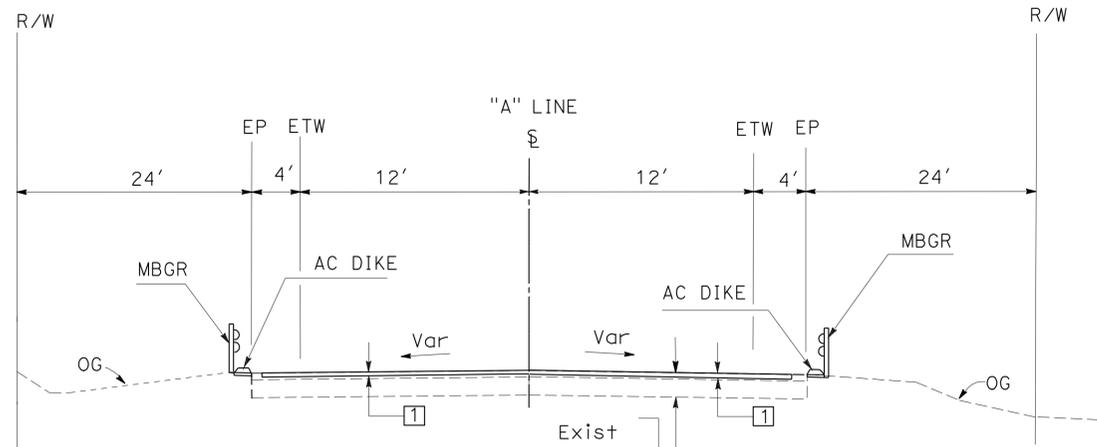
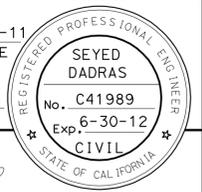
FROM Sta 232+76 TO Sta 241+20

TYPICAL CROSS SECTIONS
NO SCALE

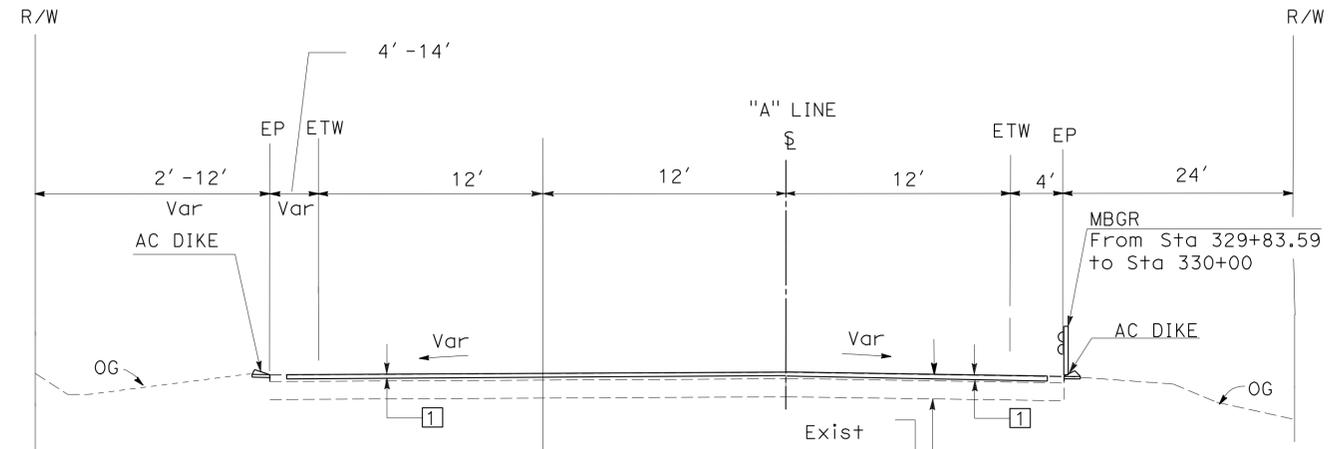
X-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION DESIGN DIVISION
 FUNCTIONAL SUPERVISOR: KAMRAN MAZHAR
 CALCULATED/DESIGNED BY: SEYED DADRAS
 CHECKED BY:
 DUNG PHAN
 REVISED BY: DATE REVISION
 REVISIONS:

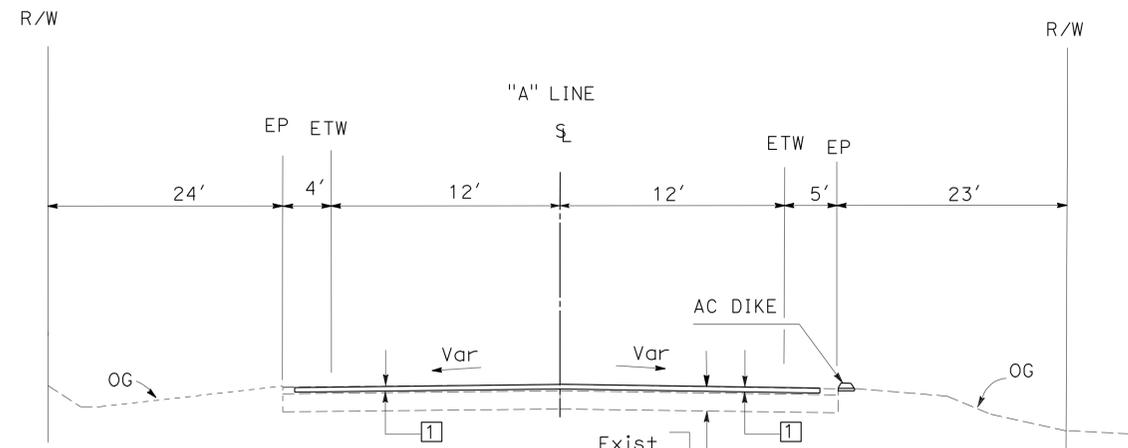
Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	142	2.5/6.3	3	44
Sayed Dadras			3-24-11	REGISTERED CIVIL ENGINEER DATE	
5-16-11			PLANS APPROVAL DATE		
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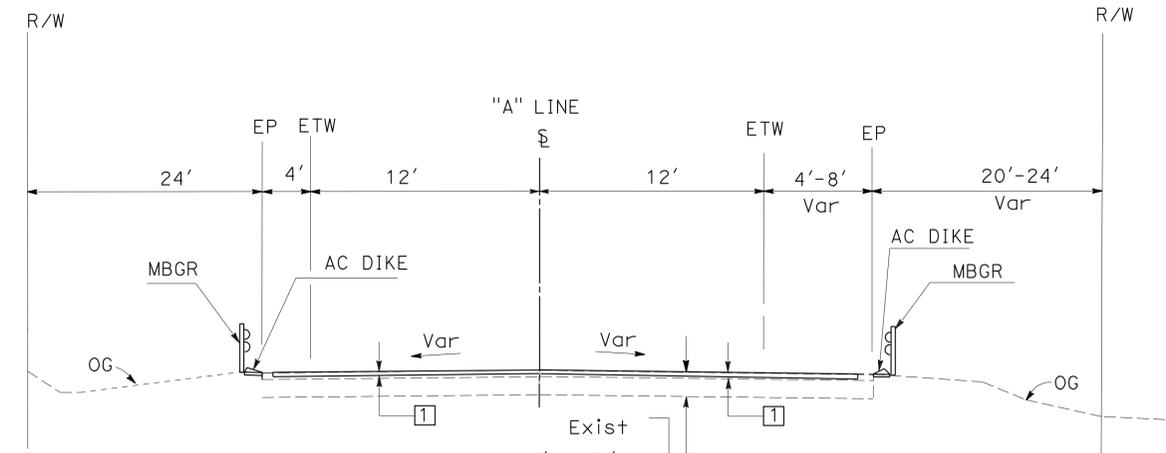
WESTBOUND **EASTBOUND**
ROUTE 142
 FROM Sta 252+78 TO Sta 267+53.94



WESTBOUND **EASTBOUND**
ROUTE 142
 FROM Sta 326+52 TO Sta 330+00
 FROM Sta 318+28 TO Sta 322+67



WESTBOUND **EASTBOUND**
ROUTE 142
 FROM Sta 241+20 TO Sta 252+78



WESTBOUND **EASTBOUND**
ROUTE 142
 FROM Sta 267+53.94 TO Sta 318+28

TYPICAL CROSS SECTIONS
 NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION DESIGN DIVISION
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 CHECKED BY: DUNG PHAN
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x
 x
 x

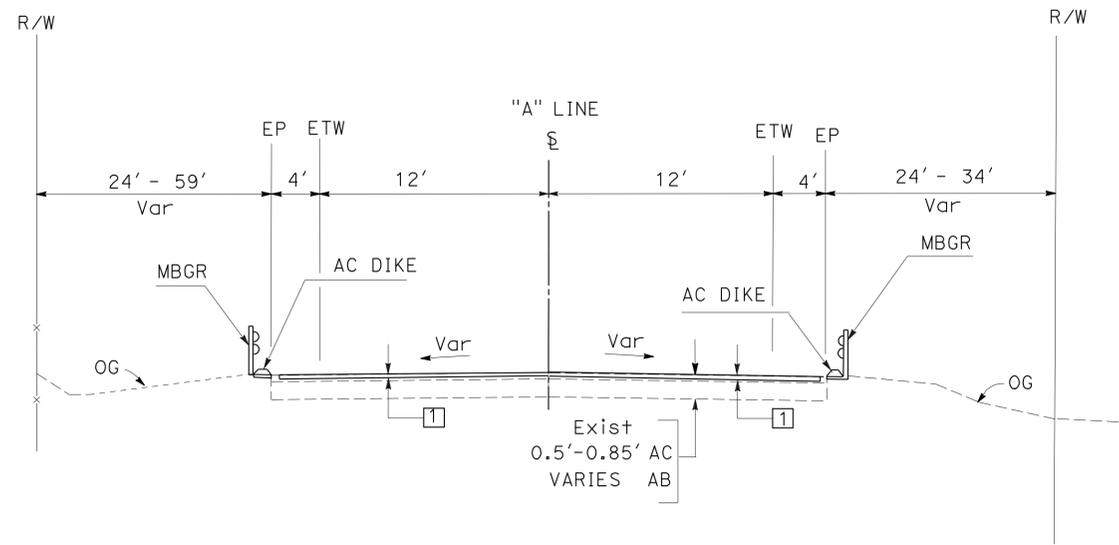
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Seyed Dadras 3-24-11
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5-16-11
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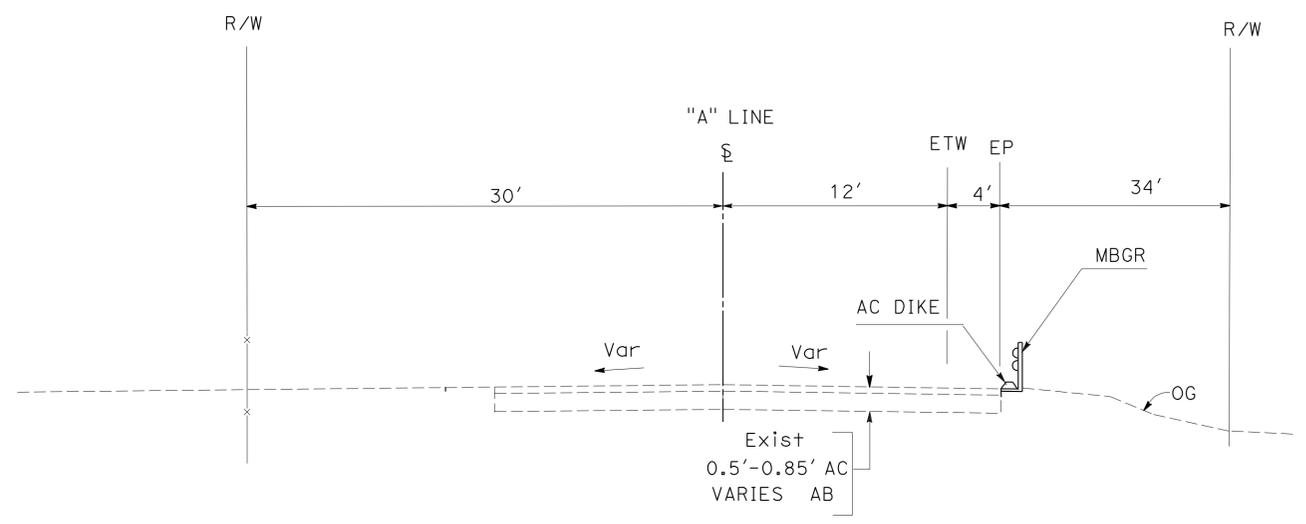
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REGISTERED PROFESSIONAL ENGINEER
SEYED DADRAS
 No. C41989
 Exp. 6-30-12
 CIVIL
 STATE OF CALIFORNIA



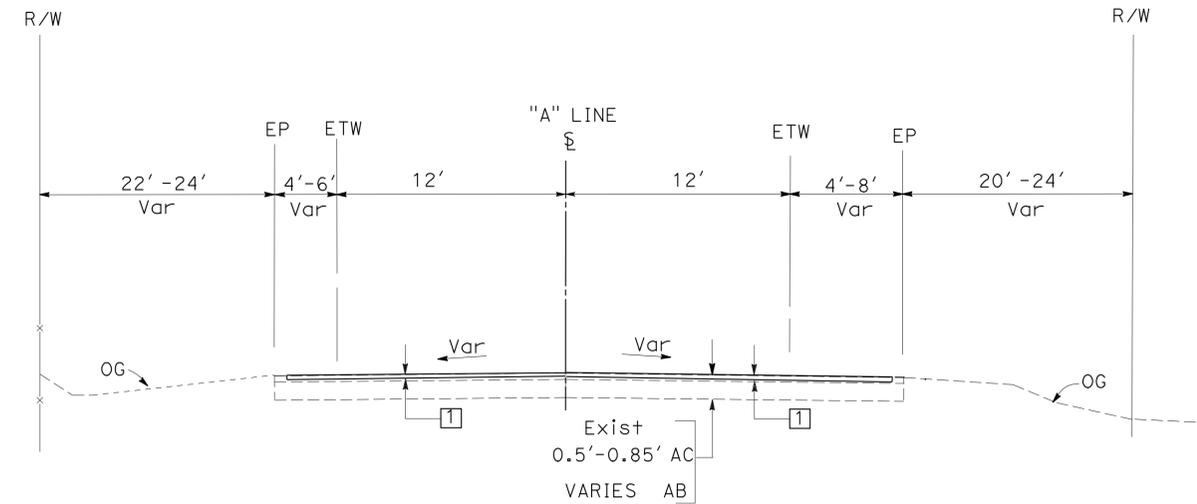
WESTBOUND **EASTBOUND**

ROUTE 142
 FROM Sta 330+00 TO Sta 423+82



WESTBOUND **EASTBOUND**

ROUTE 142
 FROM Sta 423+82 TO Sta 424+25



WESTBOUND **EASTBOUND**

ROUTE 142
 FROM Sta 322+67 TO Sta 326+52

TYPICAL CROSS SECTIONS
 NO SCALE

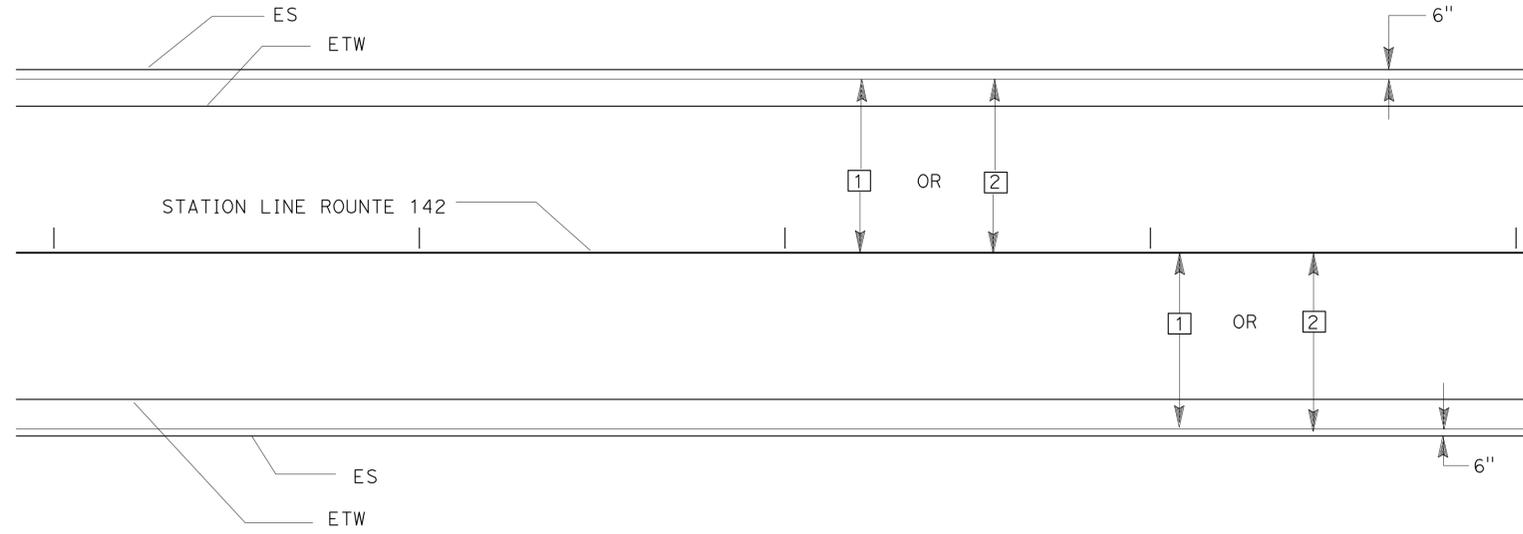
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DESIGN DIVISION
 FUNCTIONAL SUPERVISOR: KAMRAN MAZHAR
 CALCULATED/DESIGNED BY: SEYED DADRAS
 CHECKED BY: DUNG PHAN
 REVISED BY: DATE
 REVISIONS: 1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	142	2.5/6.3	5	44

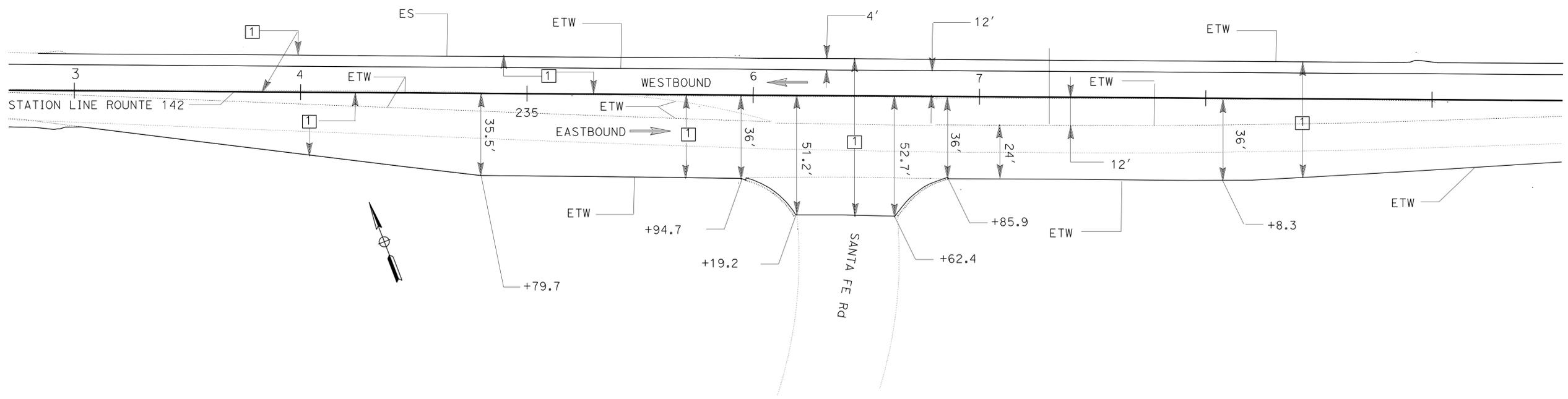
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TYPICAL LIMIT OF COLD PLANE AND HMA OVERLAY



**LIMIT OF COLD PLANE AND HMA OVERLAY
 ROUTE 142 AT SANTA FE Rd**

CONSTRUCTION DETAILS
 NO SCALE

C-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN DIVISION

REVISOR
 REVISED BY
 DATE

DUNG PHAN
 SEYED DADRAS

CALCULATED/DESIGNED BY
 CHECKED BY

FUNCTIONAL SUPERVISOR
 KAMRAN MAZHAR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN DIVISION

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RELATIVE BORDER SCALE
 IS IN INCHES

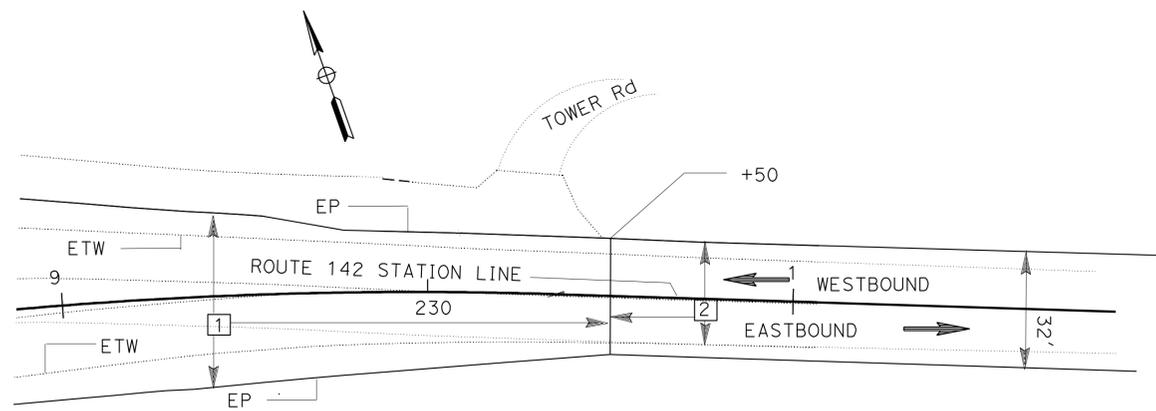
UNIT 2998

PROJECT NUMBER & PHASE

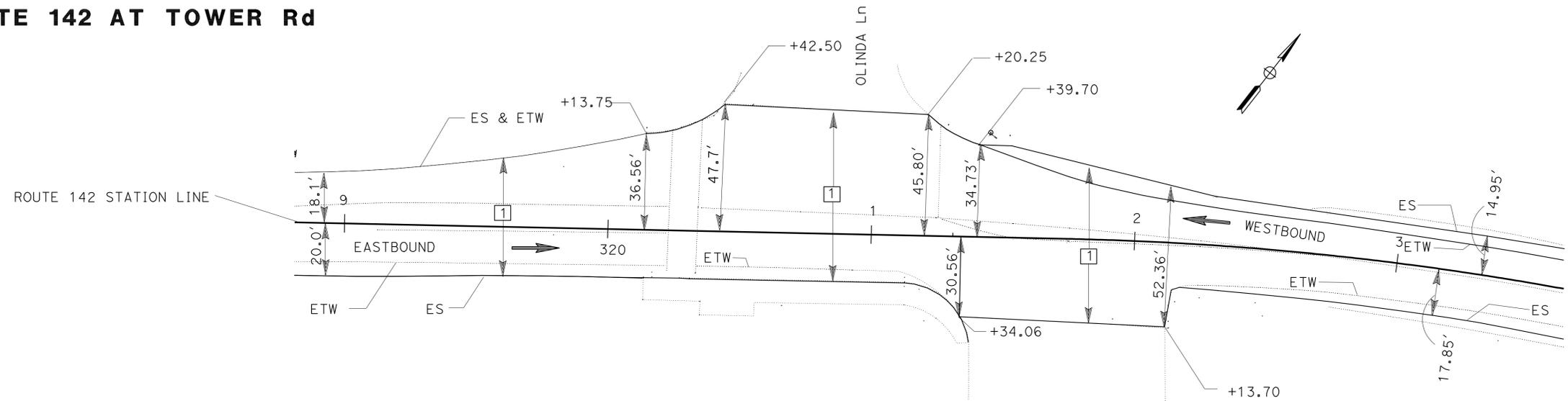
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 03-14-11 TIME PLOTTED => 14:41

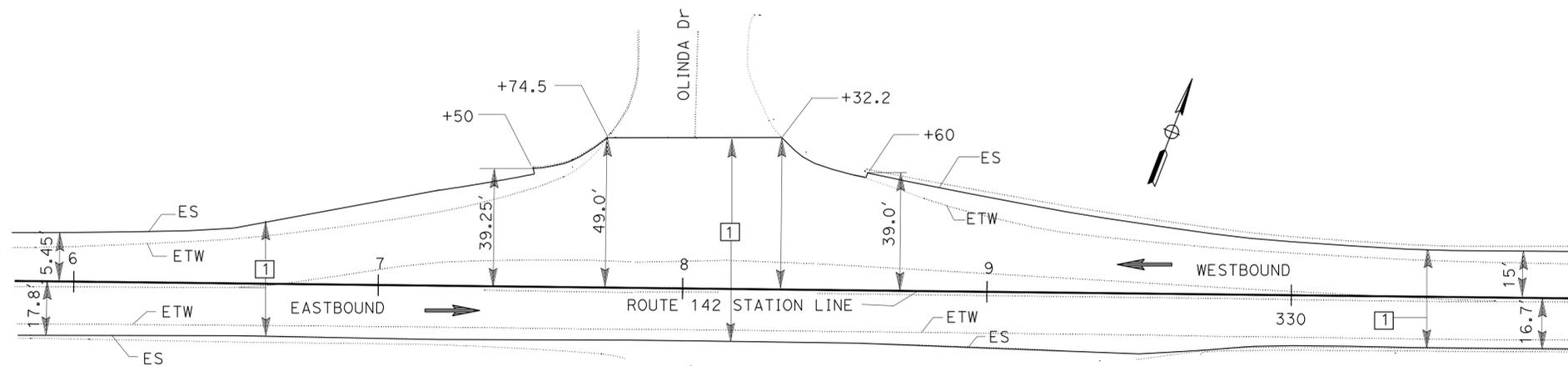
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	142	2.5/6.3	6	44
Seyed Dadras			3-24-11	DATE	
REGISTERED CIVIL ENGINEER			PLANS APPROVAL DATE		
5-16-11			DATE		
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REGISTERED PROFESSIONAL ENGINEER SEYED DADRAS No. C41989 Exp. 6-30-12 CIVIL STATE OF CALIFORNIA					



**LIMIT OF COLD PLANE AND HMA OVERLAY
ROUTE 142 AT TOWER Rd**



**LIMIT OF COLD PLANE AND HMA OVERLAY
ROUTE 142 AT OLINDA Ln**



**LIMIT OF COLD PLANE AND HMA OVERLAY
ROUTE 142 AT OLINDA Dr**

CONSTRUCTION DETAILS

NO SCALE

C-2

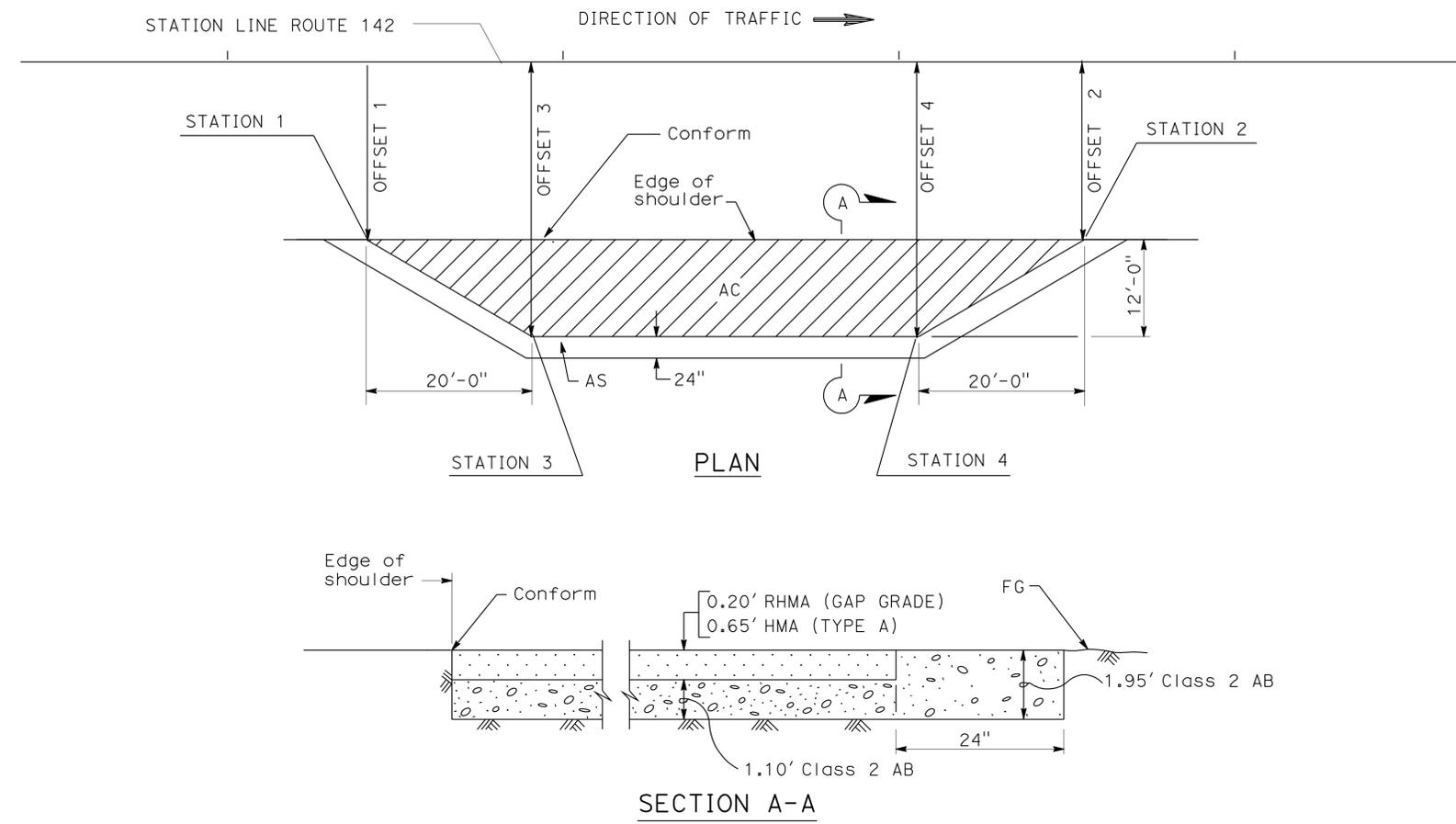
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12	Ora	142	2.5/6.3	7	44

Sayed Dadras 3-24-11
 REGISTERED CIVIL ENGINEER DATE
 5-16-11
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 SEYED DADRAS
 No. C41989
 Exp. 6-30-12
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 STATE OF CALIFORNIA

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DESIGN DIVISION
 FUNCTIONAL SUPERVISOR KAMRAN MAZHAR
 CALCULATED/DESIGNED BY CHECKED BY
 DUNG PHAN SEYED DADRAS
 REVISED BY DATE REVISED



TYPICAL MAINTENANCE VEHICLE PULLOUT (MVP)

CONSTRUCT MVP PER CALTRANS STANDARD PLAN H9

EB/WB	STATION 1	OFFSET 1	STATION 2	OFFSET 2	STATION 3	OFFSET 3	STATION 4	OFFSET 4
		(LF)		(LF)		(LF)		(LF)
Eastbound	280+45.50	14.85	281+80.50	15.07	280+65.50	26.69	281+60.50	26.98
Eastbound	312+17.00	22.92	313+02.00	19.35	312+37.00	34.29	312+82.00	32.52
Eastbound	347+76.50	17.93	349+11.50	16.38	347+96.50	29.56	348+91.50	28.56
Eastbound	378+62.00	16.73	381+02.00	17.90	378+82.00	28.72	380+82.00	29.49
Eastbound	404+24.50	15.12	405+59.50	19.15	404+44.50	29.74	405+39.50	28.85
Westbound	280+12.50	18.58	281+17.50	18.98	280+32.50	30.84	280+97.50	30.83
Westbound	343+58.00	19.28	346+58.00	14.01	343+78.00	30.61	346+38.00	26.01
Westbound	382+00.00	12.81	383+16.00	16.80	382+20.00	26.77	382+96.00	28.75

CONSTRUCTION DETAILS
 NO SCALE

LAST REVISION DATE PLOTTED => 19-MAY-2011 03-15-11 TIME PLOTTED => 14:41

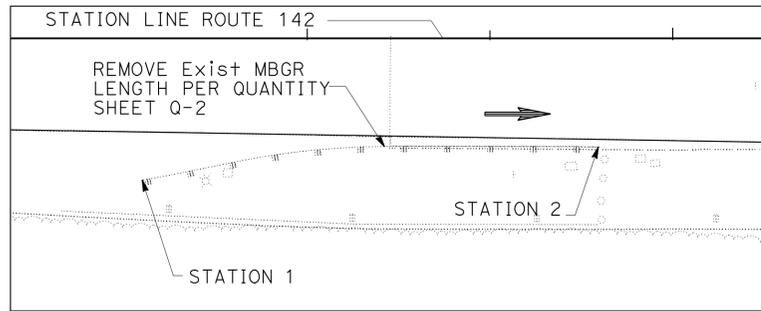
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN DIVISION
 FUNCTIONAL SUPERVISOR
 KAMRAN MAZHAR
 CALCULATED/DESIGNED BY
 CHECKED BY
 SEYED DADRAS
 DUNG PHAN
 REVISED BY
 DATE
 REVISIONS
 DATE
 REVISIONS

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	142	2.5/6.3	8	44

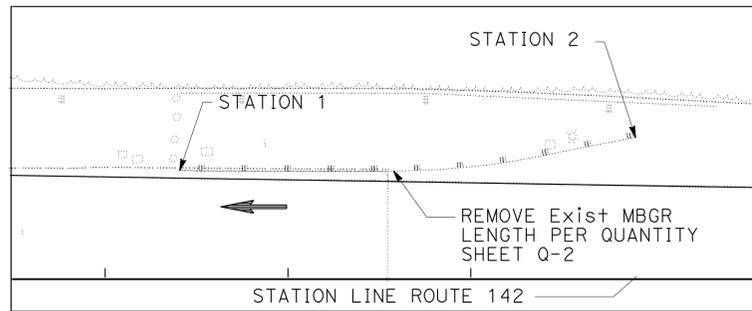
Seyed Dadras
 REGISTERED CIVIL ENGINEER
 3-24-11
 DATE
 5-16-11
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 SEYED DADRAS
 No. C41989
 Exp. 6-30-12
 CIVIL
 STATE OF CALIFORNIA

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MBGR EB



MBGR WB

REMOVE MBGR

EB/WB	STATION 1	TO	STATION 2
Eastbound	231+38.70	TO	232+62.70
Eastbound	253+89.00	TO	259+37.78
Eastbound	265+63.75	TO	266+53.00
Eastbound	275+25.37	TO	280+35.44
Eastbound	283+00.00	TO	285+03.20
Eastbound	287+46.97	TO	292+06.15
Eastbound	301+78.94	TO	307+25.11
Eastbound	313+25.04	TO	316+30.09
Eastbound	329+46.09	TO	332+16.28
Eastbound	338+65.30	TO	345+71.75
Eastbound	353+84.66	TO	355+00.00
Eastbound	370+87.73	TO	371+78.70
Eastbound	412+56.86	TO	415+51.32
Eastbound	416+54.82	TO	417+68.96
Eastbound	421+58.15	TO	424+00.00
Westbound	231+22.80	TO	232+60.50
Westbound	257+85.50	TO	258+87.00
Westbound	266+02.00	TO	266+79.40
Westbound	277+04.98	TO	278+24.15
Westbound	284+33.89	TO	285+25.17
Westbound	289+86.64	TO	292+53.78
Westbound	299+36.13	TO	301+00.00
Westbound	303+69.83	TO	304+61.50
Westbound	315+12.11	TO	317+20.75
Westbound	354+28.04	TO	355+44.09
Westbound	367+34.14	TO	368+80.97
Westbound	370+40.59	TO	373+83.59
Westbound	401+90.76	TO	406+91.87

MBGR TO PROTECT IN PLACE

EB/WB	STATION 1	TO	STATION 2
Eastbound	316+79.09	TO	317+00.00
Westbound	378+87.43	TO	381+83.08
Westbound	390+03.83	TO	390+58.06
Westbound	423+58.97	TO	423+86.77

REMOVE AC DIKE

EB/WB	STATION 1	TO	STATION 2
Eastbound	231+38.70	TO	232+62.70
Eastbound	236+85.00	TO	252+78.00
Eastbound	267+53.94	TO	284+94.11
Eastbound	282+75.00	TO	284+79.00
Eastbound	302+22.60	TO	304+19.40
Eastbound	312+54.60	TO	315+46.00
Eastbound	329+46.09	TO	336+86.23
Eastbound	338+65.30	TO	346+71.62
Eastbound	412+56.86	TO	415+04.00
Eastbound	421+58.15	TO	424+60.00
Westbound	231+68.50	TO	243+97.07
Westbound	244+44.45	TO	246+05.77
Westbound	292+41.20	TO	298+66.95
Westbound	299+44.80	TO	300+70.03
Westbound	328+58.59	TO	332+40.19
Westbound	332+89.70	TO	337+71.15
Westbound	394+71.03	TO	399+66.32
Westbound	400+91.78	TO	404+52.31
Westbound	409+27.21	TO	415+03.34

CONSTRUCTION DETAILS
NO SCALE

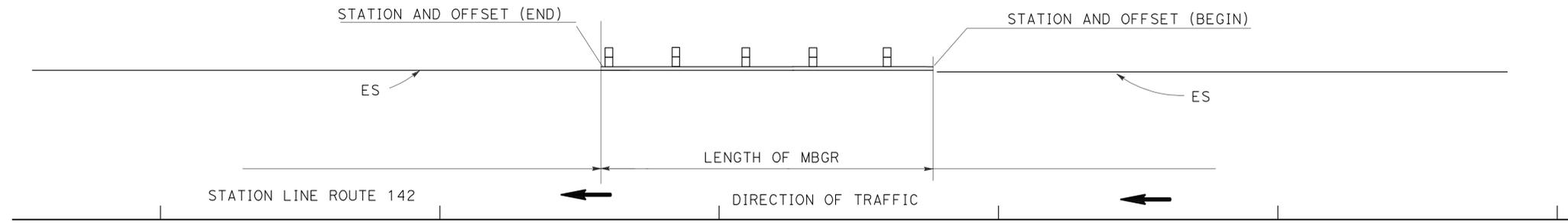


Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	142	2.5/6.3	9	44

Seyed Dadras 3-24-11
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5-16-11
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PLACE MBGR

EB/WB	LAYOUT TYPE	BEGIN			END			END ANCHOR ASSEMBLY
		STATION	OFFSET	CALTRANS APPROVED TERMINAL SYSTEM	STATION	OFFSET	CALTRANS APPROVED TERMINAL SYSTEM	
EASTBOUND	11E	231+76.20	17.72	FLARED	232+25.20	17.72	FLARED	
EASTBOUND	11E	254+26.50	16.47	FLARED	259+00.28	21.20	FLARED	
EASTBOUND	11E	266+01.25	17.07	FLARED	266+15.50	16.96	FLARED	
EASTBOUND	11E	275+65.00	14.24	FLARED	280+17.50	15.44	FLARED	
EASTBOUND	11E	283+37.50	14.90	FLARED	284+65.70	14.90	FLARED	
EASTBOUND	11E	287+84.47	16.40	FLARED	291+68.65	24.46	FLARED	
EASTBOUND	11E	302+16.44	36.64	FLARED	306+87.612	24.90	FLARED	
EASTBOUND	11B	313+62.54	20.33	FLARED	315+92.59	21.85		SFT
EASTBOUND	11E	329+83.59	17.50	FLARED	331+78.78	16.96	FLARED	
EASTBOUND	11E	339+02.80	15.77	FLARED	345+34.25	18.27	FLARED	
EASTBOUND	11E	354+22.16	18.48	FLARED	354+62.50	17.50	FLARED	
EASTBOUND	11J	371+25.23	16.09	IN LINE	371+41.20	16.96	FLARED	
EASTBOUND	11E	412+94.36	13.92	FLARED	415+13.82	15.11	FLARED	
EASTBOUND	11E	416+92.32	16.42	FLARED	417+31.46	15.33	FLARED	
EASTBOUND	11E	421+95.65	22.01	FLARED	423+62.50	24.78	FLARED	
WESTBOUND	11E	231+60.30	16.64	FLARED	232+23.00	17.07	FLARED	
WESTBOUND	11E	258+23.00	19.14	FLARED	258+49.50	17.61	FLARED	
WESTBOUND	11E	266+39.50	17.29	FLARED	266+41.90	17.50	FLARED	
WESTBOUND	11E	277+42.48	20.11	FLARED	277+86.65	20.33	FLARED	
WESTBOUND	11E	284+71.39	18.27	FLARED	284+87.67	17.83	FLARED	
WESTBOUND	11E	290+27.14	27.83	FLARED	292+16.28	10.76	FLARED	
WESTBOUND	11E	299+73.63	5.22	FLARED	300+62.50	4.13	FLARED	
WESTBOUND	11E	304+24.00	6.74	FLARED	307+07.33	6.36	FLARED	
WESTBOUND	16E	315+18.36	17.94	FLARED	316+83.25	20.68	FLARED	
WESTBOUND	11E	354+65.54	17.07	FLARED	355+06.59	19.03	FLARED	
WESTBOUND	16E	367+71.64	16.85	FLARED	368+43.47	16.15	FLARED	
WESTBOUND	11D	370+78.09	28.05	IN LINE	373+46.09	15.98	IN LINE	
WESTBOUND	11E	384+80.50	15.57	FLARED	388+90.50	14.43	FLARED	
WESTBOUND	11E	398+37.50	23.90	FLARED	399+32.50	20.65	FLARED	
WESTBOUND	11E	402+28.26	20.33	FLARED	406+54.37	17.94	FLARED	
WESTBOUND	11E	408+17.50	19.65	FLARED	409+62.50	15.40	FLARED	

NOTE:

MBGR TYPE 11 B PER CALTRANS STANDARD PLAN A77 E1
 MBGR TYPE 11 E AND 11 D PER CALTRANS STANDARD PLAN A77 E2
 MBGR TYPE 11 J PER CALTRANS STANDARD PLAN A77 E5
 MBGR TYPE 16 B PER CALTRANS STANDARD PLAN A77 G3
 MBGR TYPE 16 E PER CALTRANS STANDARD PLAN A77 G4

CONSTRUCTION DETAILS
NO SCALE

C-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION DESIGN DIVISION
 Kamran Mazhar
 DUNG PHAN
 SYDNEY DADRAS
 REVISOR BY DATE
 CALCULATED BY DESIGNED BY
 CHECKED BY

LAST REVISION DATE PLOTTED => 19-MAY-2011
 03-18-11 TIME PLOTTED => 18:07

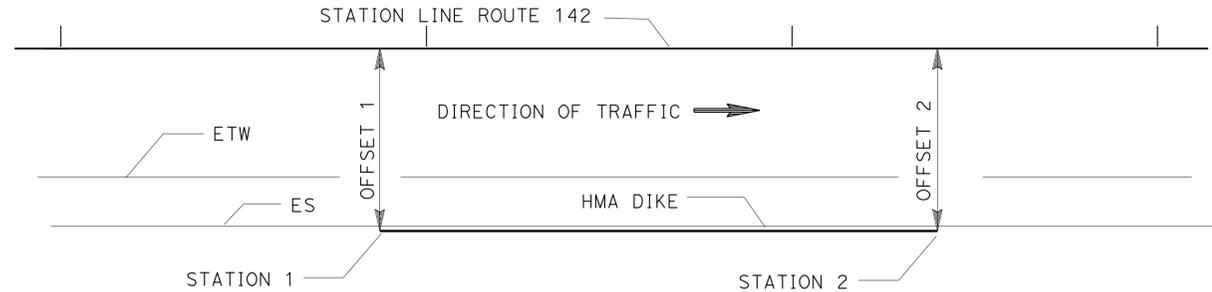
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No. C41989
Exp. 6-30-12
CIVIL

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PLACE HMA DIKE

EB/WB	STATION 1	TO	STATION 2	OFFSET 1	OFFSET 2	PLACE HMA DIKE		
				(LF)	(LF)	TYPE C (LF)	TYPE E (LF)	TYPE F (LF)
EASTBOUND	231+13.70	TO	231+76.20	16.21	16.21	62.5		
EASTBOUND	231+76.20	TO	232+25.20	16.21	15.89			49.0
EASTBOUND	232+25.20	TO	232+87.70	15.89	16.85	62.5		
EASTBOUND	236+85.00	TO	252+78.00	36.52	15.51		1593.0	
EASTBOUND	253+64.00	TO	254+26.50	18.20	16.40	62.5		
EASTBOUND	254+26.50	TO	259+00.28	16.40	18.52			473.8
EASTBOUND	259+00.28	TO	259+62.78	18.52	18.07	62.5		
EASTBOUND	265+38.75	TO	266+01.25	18.58	16.40	62.5		
EASTBOUND	266+01.25	TO	266+15.50	16.40	16.08			14.3
EASTBOUND	266+15.50	TO	266+78.00	16.08	16.70	62.5		
EASTBOUND	267+53.94	TO	275+00.37	13.90	12.43		746.43	
EASTBOUND	275+00.37	TO	275+62.87	12.43	11.92	62.5		
EASTBOUND	275+62.87	TO	279+97.94	11.92	13.54			435.07
EASTBOUND	279+97.94	TO	280+60.44	13.54	13.16	62.5		
EASTBOUND	282+75.00	TO	283+37.50	13.26	13.91	62.5		
EASTBOUND	283+37.50	TO	284+65.70	13.91	14.03			128.20
EASTBOUND	284+65.70	TO	285+28.20	14.03	14.23	62.5		
EASTBOUND	287+21.97	TO	287+84.47	14.99	15.43	62.5		
EASTBOUND	287+84.47	TO	291+68.65	15.43	23.35			384.18
EASTBOUND	291+68.65	TO	292+31.15	23.35	22.48	62.5		
EASTBOUND	292+31.15	TO	292+83.36	22.48	21.02		52.21	
EASTBOUND	301+53.94	TO	302+16.44	32.25	36.46	62.5		
EASTBOUND	302+16.44	TO	306+87.61	36.46	21.18			471.17
EASTBOUND	306+87.61	TO	307+50.11	21.18	24.22	62.5		
EASTBOUND	313+00.04	TO	313+62.54	24.28	19.29	62.5		
EASTBOUND	313+62.54	TO	315+92.59	19.29	21.82			230.05
EASTBOUND	329+21.09	TO	329+83.59	18.97	17.27	62.5		
EASTBOUND	329+83.59	TO	331+78.78	17.27	16.53			195.19
EASTBOUND	331+78.78	TO	332+41.28	16.53	16.28	62.5		
EASTBOUND	332+16.28	TO	336+86.23	16.28	16.02		469.95	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION DESIGN DIVISION
 Kamran Mazhar
 DUNG PHAN
 SEYED DADRAS
 REVISOR BY DATE
 CHECKED BY
 DESIGNED BY

CONSTRUCTION DETAILS
NO SCALE

C-6

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	142	2.5/6.3	11	44

Sayed Dadras 3-24-11
REGISTERED CIVIL ENGINEER DATE

5-16-11
PLANS APPROVAL DATE

SEYED DADRAS
No. C41989
Exp. 6-30-12
CIVIL

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

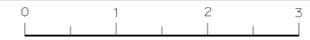
PLACE HMA DIKE

EB/WB	STATION 1	TO	STATION 2	OFFSET 1	OFFSET 2	PLACE HMA DIKE		
				(LF)	(LF)	TYPE C (LF)	TYPE E (LF)	TYPE F (LF)
EASTBOUND	338+40.30	TO	339+02.80	16.10	15.47	62.50		
EASTBOUND	339+02.80	TO	345+34.25	15.47	17.05			631.45
EASTBOUND	345+24.25	TO	345+96.75	17.05	18.31	62.50		
EASTBOUND	345+96.75	TO	346+71.62	18.31	19.89		74.87	
EASTBOUND	353+59.66	TO	354+22.16	17.04	16.42	62.50		
EASTBOUND	354+22.16	TO	354+62.50	16.42	15.79			40.34
EASTBOUND	354+62.50	TO	355+25.00	15.79	17.68	62.50		
EASTBOUND	370+62.73	TO	371+25.23	17.05	16.07	62.50		
EASTBOUND	371+25.23	TO	371+41.20	16.07	16.10			15.97
EASTBOUND	371+41.20	TO	372+03.70	16.10	17.01	62.50		
EASTBOUND	412+31.86	TO	412+94.36	17.01	16.54	62.50		
EASTBOUND	412+94.36	TO	415+13.82	16.54	16.73			219.50
EASTBOUND	415+13.82	TO	415+76.32	16.73	19.73	62.50		
EASTBOUND	416+29.82	TO	416+92.32	20.60	17.42	62.50		
EASTBOUND	416+92.32	TO	417+31.46	17.42	15.63			39.14
EASTBOUND	417+31.46	TO	417+93.96	15.63	15.47	62.50		
EASTBOUND	421+33.15	TO	421+95.65	17.52	21.50	62.50		
EASTBOUND	421+95.65	TO	423+62.50	21.50	24.60			166.85
EASTBOUND	423+62.50	TO	424+25.00	24.60	22.89	62.50		
WESTBOUND	230+97.80	TO	231+60.30	15.48	15.56	62.50		
WESTBOUND	231+60.30	TO	232+23.00	15.88	15.88			62.70
WESTBOUND	232+23.00	TO	232+85.50	15.88	16.20	62.50		
WESTBOUND	232+85.50	TO	246+05.77	16.52	17.65		1320.27	
WESTBOUND	257+60.50	TO	258+23.00	22.94	17.81	62.50		
WESTBOUND	258+23.00	TO	258+49.50	17.81	16.04			26.50
WESTBOUND	258+49.50	TO	259+12.00	16.04	15.08	62.50		
WESTBOUND	265+77.00	TO	266+39.50	14.92	15.40	62.50		
WESTBOUND	266+39.50	TO	266+41.90	15.40	15.40			2.40
WESTBOUND	266+41.90	TO	267+04.40	15.40	17.33	62.50		
WESTBOUND	276+79.98	TO	277+42.48	23.90	19.20	62.50		
WESTBOUND	277+42.48	TO	277+86.65	19.20	18.50			44.17
WESTBOUND	277+86.65	TO	278+49.15	18.50	17.77	62.50		
WESTBOUND	284+08.89	TO	284+71.39	19.41	17.65	62.50		
WESTBOUND	284+71.39	TO	284+87.67	17.65	17.65			16.28
WESTBOUND	284+87.67	TO	285+50.17	18.29	19.89	62.50		
WESTBOUND	289+64.64	TO	290+27.14	29.68	27.43	62.50		
WESTBOUND	290+27.14	TO	292+16.28	27.43	9.71			189.14
WESTBOUND	292+16.28	TO	292+78.78	9.71	12.63	62.50		
WESTBOUND	292+78.78	TO	298+66.95	12.63	9.47		588.17	
WESTBOUND	299+11.13	TO	299+73.63	24.81	4.40	62.50		
WESTBOUND	299+73.63	TO	300+62.50	4.40	3.85			88.87
WESTBOUND	300+62.50	TO	301+25.00	4.81	3.05	62.50		
WESTBOUND	303+61.50	TO	304+24.00	3.20	6.40	62.50		
WESTBOUND	304+24.00	TO	307+07.33	6.40	12.50			283.33
WESTBOUND	307+07.33	TO	307+69.83	12.50	10.70	62.50		
WESTBOUND	314+55.86	TO	315+18.36	15.98	18.50	62.50		
WESTBOUND	315+18.36	TO	316+83.25	18.50	19.36			164.89
WESTBOUND	316+83.25	TO	317+45.75	19.36	20.93	62.50		
WESTBOUND	328+58.59	TO	332+40.19	38.67	20.37		381.60	
WESTBOUND	332+40.19	TO	337+71.50	20.79	18.53		481.50	
WESTBOUND	337+71.50	TO	354+03.04	16.36	16.28	62.50		
WESTBOUND	354+03.04	TO	354+65.54	16.36	16.28			41.05

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DESIGN DIVISION
FUNCTIONAL SUPERVISOR: KAMRAN MAZHAR
CALCULATED/DESIGNED BY: DUNG PHAN
CHECKED BY: SEYED DADRAS
REVISED BY: DATE REVISION

CONSTRUCTION DETAILS

C-7



Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	142	2.5/6.3	12	44

Sayed Dadras 3-24-11
REGISTERED CIVIL ENGINEER DATE

5-16-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SEYED DADRAS
No. C41989
Exp. 6-30-12
CIVIL
STATE OF CALIFORNIA

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PLACE HMA DIKE

EB/WB	STATION 1	TO	STATION 2	OFFSET 1 (LF)	OFFSET 2 (LF)	PLACE HMA DIKE		
						TYPE C (LF)	TYPE E (LF)	TYPE F (LF)
WESTBOUND	355+06.59	TO	355+69.09	17.55	16.05	62.50		
WESTBOUND	367+09.14	TO	367+71.64	17.17	15.41	62.50		
WESTBOUND	367+71.64	TO	368+43.47	15.41	17.65			71.83
WESTBOUND	368+43.47	TO	369+05.97	17.65	17.02	62.50		
WESTBOUND	370+15.59	TO	370+78.09	24.87	23.22	62.50		
WESTBOUND	370+78.09	TO	373+46.09	23.22	14.16			268.00
WESTBOUND	373+46.09	TO	374+08.59	14.16	15.40	62.50		
WESTBOUND	384+18.00	TO	384+80.50	16.04	14.67	62.50		
WESTBOUND	384+80.50	TO	387+90.50	14.67	13.72			310.00
WESTBOUND	388+90.50	TO	389+53.00	14.57	18.62	62.50		
WESTBOUND	394+71.03	TO	397+75.00	24.91	23.14			303.97
WESTBOUND	397+75.00	TO	398+37.50	23.14	25.01	62.50		
WESTBOUND	398+37.50	TO	399+32.50	25.01	19.57			95.00
WESTBOUND	399+32.50	TO	399+95.00	19.57	15.64	62.50		
WESTBOUND	400+91.78	TO	401+65.76	14.92	18.06		73.98	
WESTBOUND	401+65.76	TO	402+28.26	16.75	17.80	62.50		
WESTBOUND	402+28.26	TO	406+54.37	18.84	17.01			426.11
WESTBOUND	406+54.37	TO	407+16.87	17.85	18.61	62.50		
WESTBOUND	407+55.00	TO	408+17.50	18.77	17.61	62.50		
WESTBOUND	408+17.50	TO	409+62.50	17.61	13.96			145.00
WESTBOUND	409+62.50	TO	410+25.00	13.96	15.07	62.50		
WESTBOUND	410+25.00	TO	415+03.34	15.07	23.50		478.34	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DESIGN DIVISION

FUNCTIONAL SUPERVISOR
KAMRAN MAZHAR

CALCULATED/DESIGNED BY
CHECKED BY

DUNG PHAN
SEYED DADRAS

REVISED BY
DATE REVISED

CONSTRUCTION DETAILS

C-8

LAST REVISION DATE PLOTTED => 19-MAY-2011 TIME PLOTTED => 18:07

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	142	2.5/6.3	13	44

Sayed Dadras 3-24-11
 REGISTERED CIVIL ENGINEER DATE

5-16-11
 PLANS APPROVAL DATE

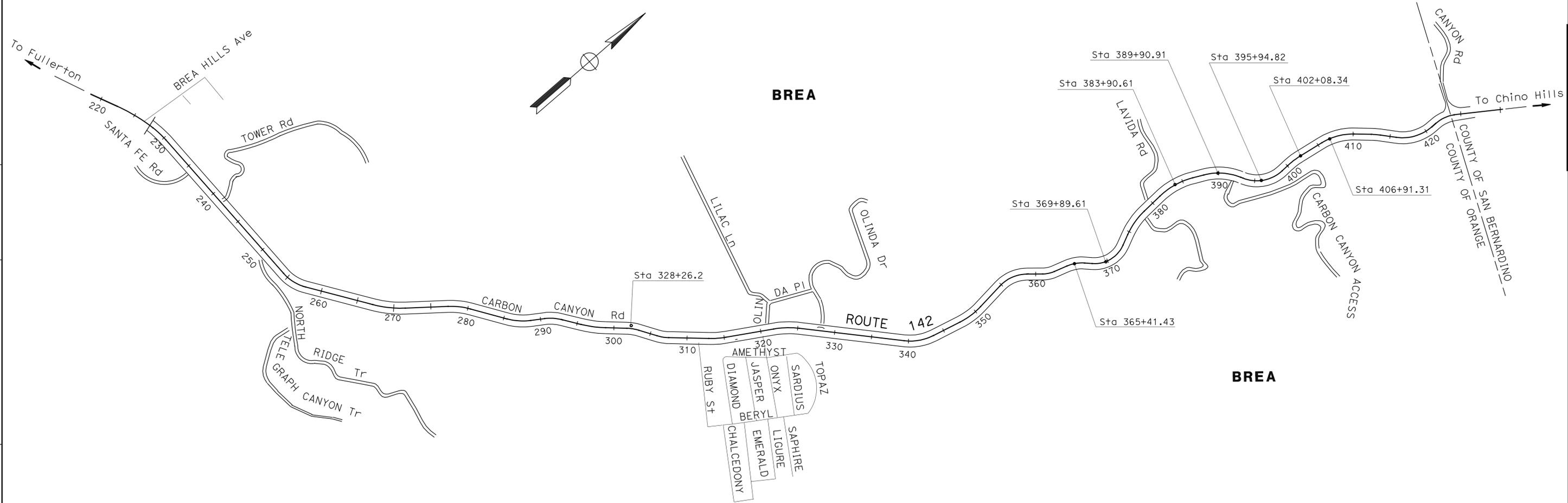
REGISTERED PROFESSIONAL ENGINEER
 SEYED DADRAS
 No. C41989
 Exp. 6-30-12
 CIVIL
 STATE OF CALIFORNIA

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NOTE:

MANHOLES, INLETS WITHIN CALTRANS R/W NEED TO BE ADJUSTED TO FINISH GRADE AND ACCORDING TO CALTRANS REQUIREMENTS.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN DIVISION
FUNCTIONAL SUPERVISOR	KAMRAN MAZHAR
CALCULATED/DESIGNED BY	CHECKED BY
DUNG PHAN	KAMRAN MAZHAR
REVISOR BY	DATE
REVISOR BY	DATE



ADJUST FRAME AND COVER TO GRADE (BY OTHERS)

CONSTRUCTION DETAILS
 NO SCALE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	142	2.5/6.3	14	44

Sayed Dadras
REGISTERED CIVIL ENGINEER
DATE 3-24-11

5-16-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
SEYED DADRAS
No. C41989
Exp. 6-30-12
CIVIL
STATE OF CALIFORNIA

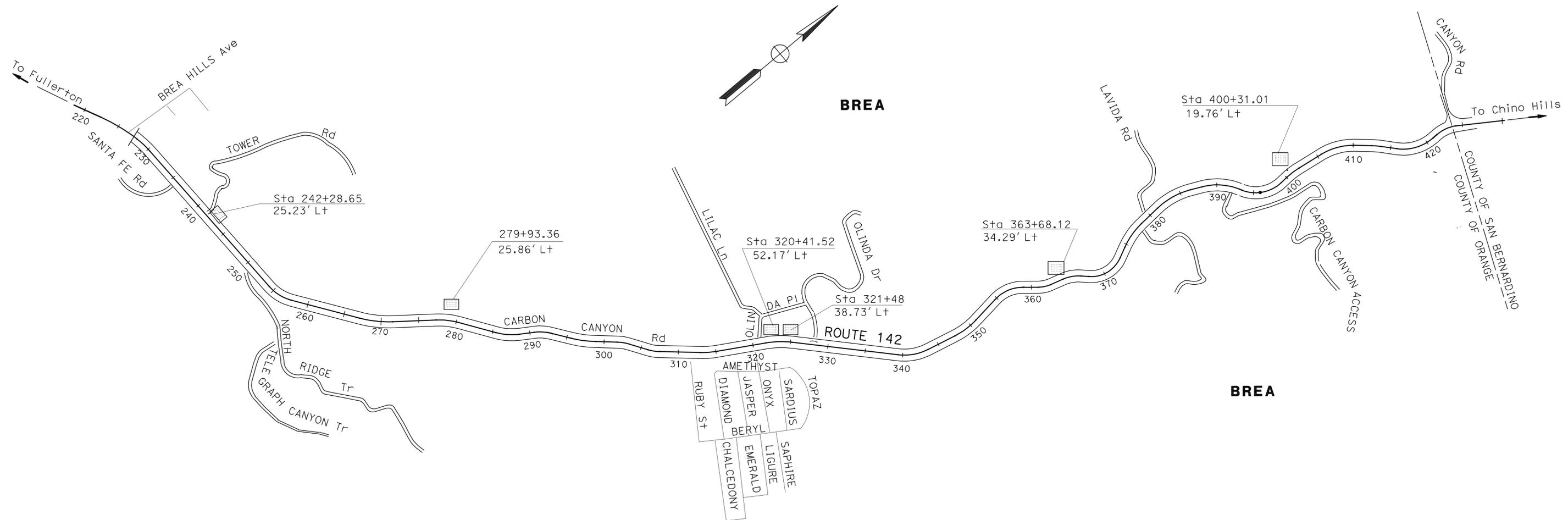
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LEGEND:

[Symbol] TEMPORARY DRAINAGE INLET PROTECTION

NOTE:

FOR MORE DETAIL, SEE NEW STANDARD PLAN NSP T62.



TEMPORARY WATER POLLUTION CONTROL QUANTITIES

EB/WB	STATION	OFFSET	TEMPORARY DRAINAGE INLET PROTECTION
			TYPE 3B (EA)
WESTBOUND	242+28.65	25.23	1
WESTBOUND	279+93.36	25.86	1
WESTBOUND	320+41.52	52.17	1
WESTBOUND	321+48.00	38.73	1
WESTBOUND	363+68.12	34.29	1
WESTBOUND	400+31.01	19.76	1
TOTAL			6

TEMPORARY WATER POLLUTION CONTROL PLAN

NO SCALE

WPC-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 DESIGN DIVISION
 FUNCTIONAL SUPERVISOR: KAMRAN MAZHAR
 CALCULATED/DESIGNED BY: SEYED DADRAS
 CHECKED BY:
 DUNG PHAN
 REVISED BY: SEYED DADRAS
 DATE REVISED:



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	142	2.5/6.3	15	44

Seyed Dadras 3-24-11
 REGISTERED CIVIL ENGINEER DATE

5-16-11
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 SEYED DADRAS
 No. C41989
 Exp. 6-30-12
 CIVIL
 STATE OF CALIFORNIA

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LEGEND:

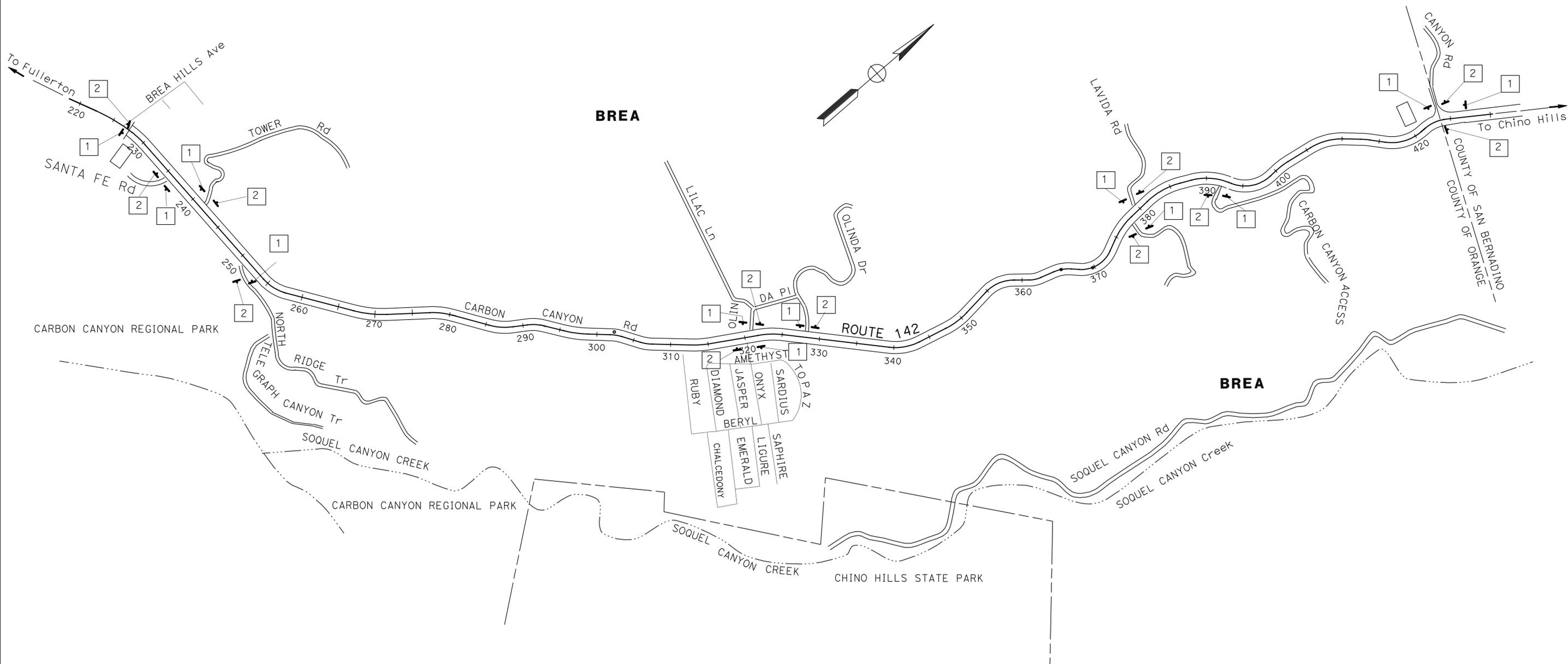
- X CONSTRUCTION AREA SIGN
- ↓ CONSTRUCTION AREA SIGN, 1-POST
- PORTABLE CHANGEABLE MESSAGE SIGN

NOTES:

1. LOCATION OF CONSTRUCTION AREA SIGNS ARE APPROXIMATE, EXACT LOCATIONS TO BE DETERMINED BY THE ENGINEER.
2. LOCATION AND MESSAGE OF PORTABLE CHANGEABLE MESSAGE SIGNS TO BE DETERMINED BY THE ENGINEER.

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No.	SIGN CODE	PANEL SIZE (FT)	SIGN MESSAGE	No. OF POSTS AND POST SIZE (IN)	No. OF SIGNS
1	W20-1	4 x 4	ROAD WORK AHEAD	(1) - 4 x 6	12
2	G20-2	5 x 2	END ROAD WORK	(1) - 4 x 6	12



CONSTRUCTION AREA SIGNS

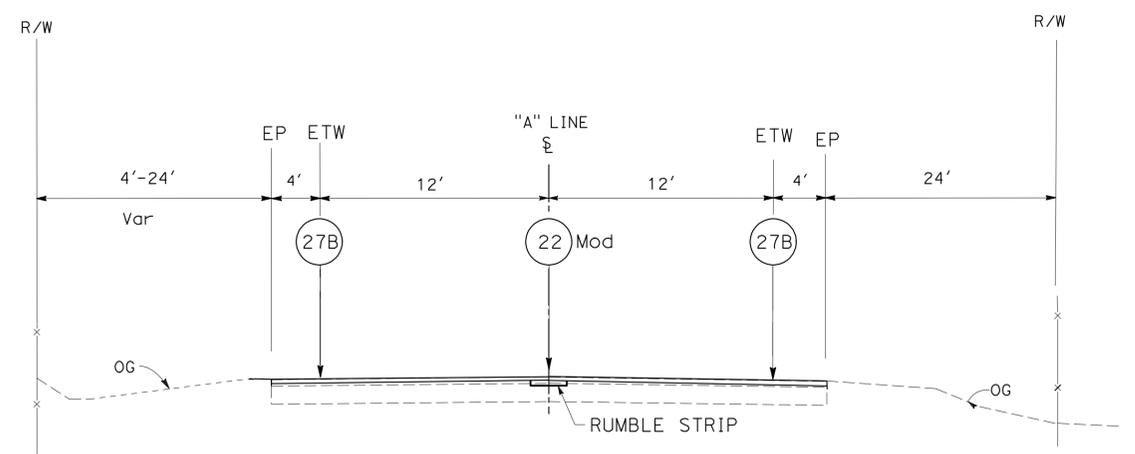
NO SCALE

CS-1

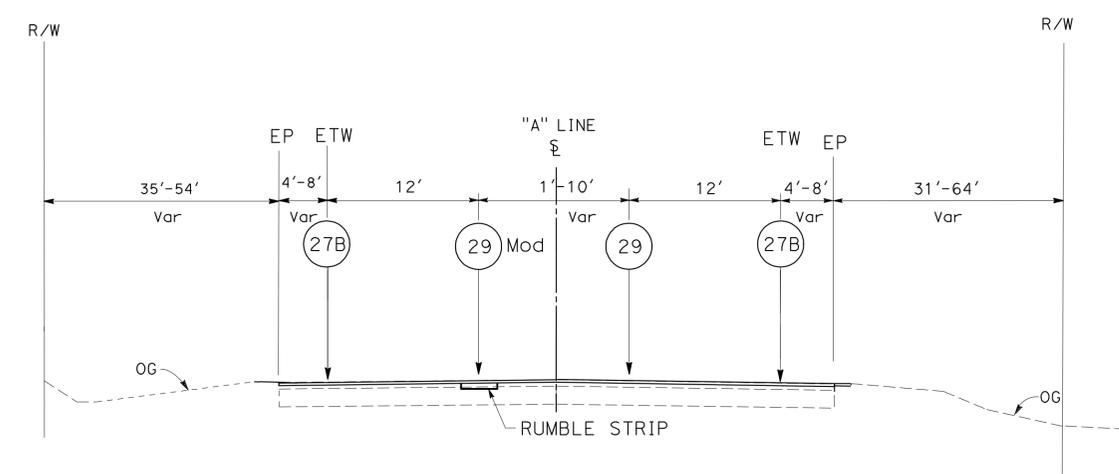
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION DESIGN DIVISION
 Kamran Mazhar
 Functional Supervisor
 Seyed Dadras
 DUNG PHAN
 Revised By
 DATE REVISOR



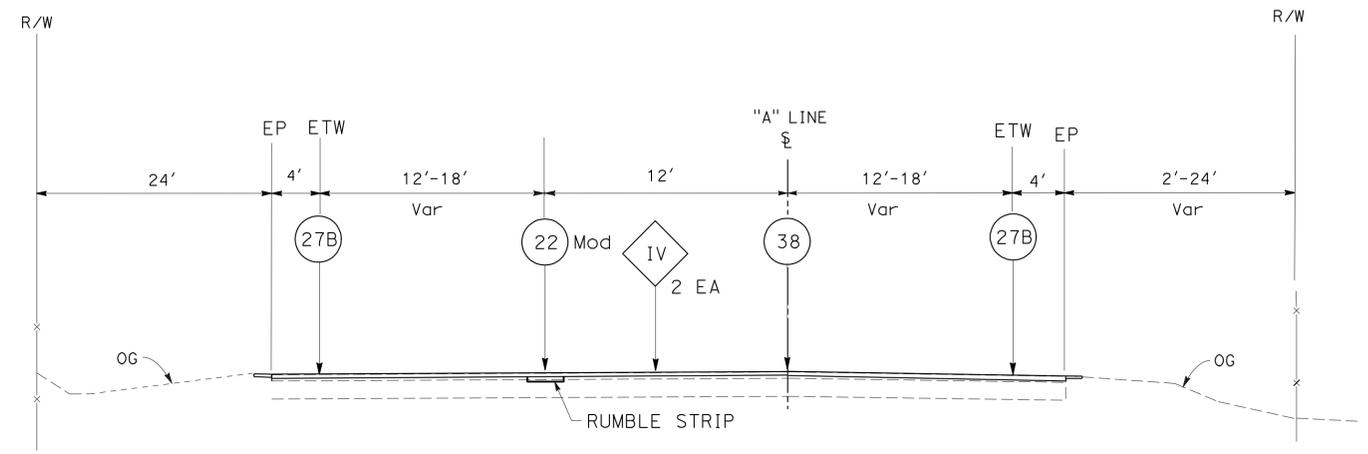
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	142	2.5/6.3	16	44
 REGISTERED CIVIL ENGINEER			3-24-11	DATE	
5-16-11			PLANS APPROVAL DATE		
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ROUTE 142
TYPICAL SECTION
NO PASSING ZONE - TWO DIRECTION



ROUTE 142
TYPICAL SECTION WITH MEDIAN ISLAND
AT VARIOUS LOCATIONS

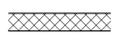


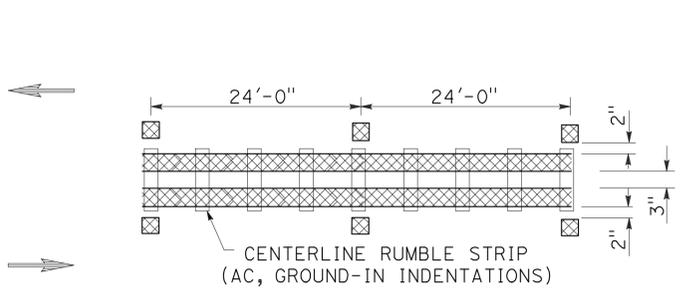
ROUTE 142
TYPICAL SECTION WITH LEFT TURN LANE
AT VARIOUS LOCATIONS

NOTES:

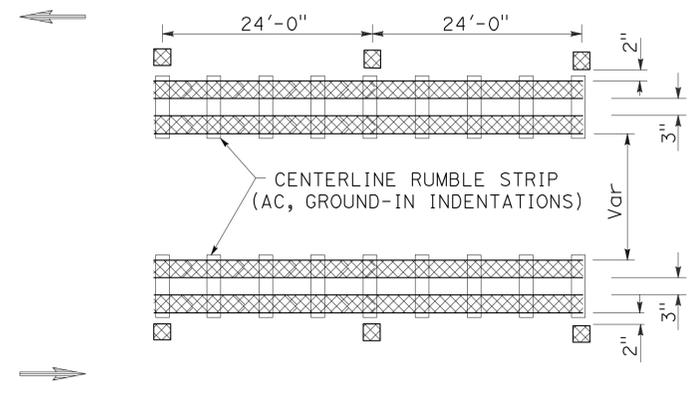
1. TYPICAL SECTIONS SHOWN ARE FOR REFERENCE ONLY. CONTRACTOR TO VERIFY EXACT LOCATIONS OF PAVEMENT MARKINGS (ARROWS, WORDS, DIAGONAL STRIPES), LEFT AND RIGHT TURN LANES.
2. RUMBLE STRIPS SHALL NOT BE PLACED AT INTERSECTIONS AND TURN LOCATIONS.
3. SEE STANDARD PLAN A40B FOR RUMBLE STRIPS DETAILS (GROUND-IN INDENTATIONS).

LEGEND:

-  PAVEMENT DELINEATION DETAIL
-  ARROW TYPE
-  DIRECTION OF TRAFFIC
-  TYPE D TWO-WAY YELLOW RETROREFLECTIVE MARKER
-  4" YELLOW THERMOPLASTIC TRAFFIC STRIPE



DETAIL 22 Mod



DETAIL 29 Mod

PAVEMENT DELINEATION DETAILS

NO SCALE

PDD-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION DESIGN DIVISION
 FUNCTIONAL SUPERVISOR SON NGUYEN
 CALCULATED/DESIGNED BY CHECKED BY
 BANG HUA
 REVISED BY DATE REVISED
 BANG HUA

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	142	2.5/6.3	17	44


 REGISTERED CIVIL ENGINEER DATE 3-24-11
 5-16-11
 PLANS APPROVAL DATE



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PAVEMENT DELINEATION QUANTITIES

LOCATION	THERMOPLASTIC TRAFFIC STRIPE				THERMOPLASTIC PAVEMENT MARKING				PAVEMENT MARKER		REMOVE	
	DETAIL 22 4" SOLID YELLOW	DETAIL 29 4" SOLID YELLOW	DETAIL 27B 4" SOLID WHITE	DETAIL 38 8" SOLID WHITE	ARROWS	WORDS	12" CROSSWALK/ LIMIT LINE	12" WHITE DIAGONAL STRIPE	RETRO-REFLECTIVE		YELLOW THERMOPLASTIC TRAFFIC STRIPE	PAVEMENT MARKER
									TYPE D	TYPE G		
	LF	LF	LF	LF	SQFT	SQFT	SQFT	SQFT	EA	EA	LF	EA
EB Rte-142 (CARBON CANYON Rd)	18000	3020	9750	395	135	63	155	44	820	20	21020	840
WB Rte-142 (CARBON CANYON Rd)	18000	3020	9750	240	60	116	185	75	820	12	21020	832
TOTAL	61540			635	833				1672		42040	1672

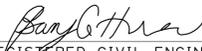
**CENTERLINE RUMBLE STRIP
 (AC, GROUND-IN INDENTATIONS)**

BEGIN Sta	END Sta	LENGTH Sta
226+91	424+25	197.34
TOTAL		197.34

PAVEMENT DELINEATION QUANTITIES

PDQ-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	142	2.5/6.3	19	44

 3-24-11
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5-16-11
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ROADSIDE SIGNS

LOCATION	SIGN No.	SIGN CODE	SIGN PANEL DIMENSION (L x H)	POST SIZE & LENGTH (N)		ROADSIDE SIGN (ONE POST)	REMOVE ROADSIDE SIGN	REMARK
				4"x6"	6"x6"			
				inch x inch	ft			
EB Rte-142 PM2.6	1	W11-7	30 x 30	18		1		AT CROSSWALK
		W16-7pL	24 x 12					
WB Rte-142 PM2.6	2	W11-7	30 x 30	18		1		AT CROSSWALK
		W16-7pL	24 x 12					
WB Rte-142 PM2.9	3	W11-7	30 x 30	18		1		400 FEET TO CROSSWALK
EB Rte-142 PM2.8	4	W50(CA)		18		1	1	
		W50(CA)	36 x 36					
EB Rte-142 PM3.0	6	W1-2 , W13-1				1	1	
		W1-2	30 x 30					
		W13-1	30 x 30					
WB Rte-142 PM4.3	8	S4-3 ; R2-1 ; S4-2		18		1	1	
		S4-3	24 x 8					
		R2-1	24 x 30					
TOTAL		S4-2	24 x 10			6	3	

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

NOTE:

ROADSIDE SIGN POST MILE LOCATIONS ARE APPROXIMATE. INSTALL NEW SIGNS AT LOCATIONS OF EXISTING SIGNS UNLESS NOTED OTHERWISE.

MATERIAL SUMMARY (CONTRACTOR FURNISHED SIGNS)

SIGN No.	SIGN CODE	SIGN PANEL DIMENSION (L x H)	SINGLE FACED	SIGN FACING MATERIAL				ROADSIDE FURNISH SINGLE SHEET ALUMINUM SIGN	(REMARK) DESCRIPTION
				BACKGROUND		LEGEND			
				SHEETING COLOR	RETROREFLECTIVE ASTM TYPE	SHEETING COLOR	RETROREFLECTIVE ASTM TYPE		
1	W11-7	30 x 30	X	Y	IV	Blk	non	6.3	
	W16-7pL	24 x 12	X	Y	IV	Blk	non	2.0	
2	W11-7	30 x 30	X	Y	IV	Blk	non	6.3	
	W16-7pL	24 x 12	X	Y	IV	Blk	non	2.0	
3	W11-7	30 x 30	X	Y	IV	Blk	non	6.3	
5	W50(CA)	36 x 36	X	Y	IV	Blk	non	9.0	
7	W1-2	30 x 30	X	Y	IV	Blk	non	6.3	(ARROW CURVES LEFT)
	W13-1	30 x 30	X	Y	IV	Blk	non	6.3	40 MPH
9	S4-3	24 x 8	X	Y	IV	Blk	non	1.3	
	R2-1	24 x 30	X	W	IV	Blk	non	5.0	SPEED LIMIT 25
	S4-2	24 x 10	X	W	IV	Blk	non	1.7	
TOTAL								52.5	

ABBREVIATIONS:

- Blk = BLACK
- W = WHITE
- Y = YELLOW
- non = NON-REFLECTIVE
- (CA) = CALIFORNIA SIGN CODE

SIGN QUANTITIES (CONTRACTOR FURNISHED SIGNS)

SQ-1

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	142	2.5/6.3	20	44

Seyed Dadras 3-24-11
REGISTERED CIVIL ENGINEER DATE

5-16-11
PLANS APPROVAL DATE

SEYED DADRAS
No. C41989
Exp. 6-30-12
CIVIL
STATE OF CALIFORNIA

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

MVP QUANTITIES

EB/WB	FROM Sta	TO Sta	ROADWAY EXCAVATION	HMA (TYPE A)	RHMA (GAP GRADED)	CLASS 2 AB
			(CY)	(TON)	(TON)	(CY)
EASTBOUND	280+45.50	281+80.50	122.34	65.48	20.15	78.90
EASTBOUND	312+17.00	313+02.00	71.79	37.01	11.39	47.23
EASTBOUND	347+76.50	349+11.50	122.34	65.48	20.15	78.90
EASTBOUND	378+62.00	381+02.00	228.51	125.27	38.54	145.40
EASTBOUND	404+24.50	405+59.50	122.34	65.48	20.15	78.90
EASTBOUND	280+12.50	281+17.50	89.99	48.40	14.89	57.88
WESTBOUND	343+58.00	346+58.00	287.16	159.43	49.06	181.38
WESTBOUND	382+00.00	383+16.00	101.11	54.66	16.82	252.91
TOTAL			1145.58	621.21	191.15	733.43

ADJUST FRAME AND COVER TO GRADE

EB/WB	STATION	(N)
		ADJUST FRAME AND COVER TO GRADE
		(EA)
WESTBOUND	328+26.20	1
EASTBOUND	365+41.43	1
EASTBOUND	369+89.61	1
WESTBOUND	383+90.61	1
WESTBOUND	389+90.91	1
WESTBOUND	395+94.82	1
WESTBOUND	402+08.34	1
WESTBOUND	406+91.31	1
TOTAL		8

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

ROADWAY QUANTITIES

EB/WB	FROM Sta	TO Sta	COLD PLANE		RHMA (GAP GRADED)	HMA TYPE A	CLASS 2 AB	ROADWAY EXCAVATION
			0.10' DEPTH	0.50' DEPTH				
			(SQYD)	(SQYD)	(TON)	(TON)	(CY)	(CY)
EASTBOUND	226+91.00	230+50.00	723.56		95.08			
WESTBOUND	226+91.00	230+50.00	1042.56		136.99			
EASTBOUND	230+50.00	232+76.00	342.56		45.01			
WESTBOUND	230+50.00	232+76.00		268.11	23.23	90.02		
EASTBOUND	232+76.00	241+20.00	1651.67		217.03			
WESTBOUND	232+76.00	241+20.00	1703.00		223.77			
EASTBOUND	241+20.00	252+78.00	2320.22		304.88			
WESTBOUND	241+20.00	252+78.00	2495.56		327.92			
EASTBOUND	252+78.00	267+53.94	2834.44		372.45			
WESTBOUND	252+78.00	267+53.94	2915.00		383.03			
EASTBOUND	267+53.94	318+28.00	9613.67		1263.24			
WESTBOUND	267+53.94	318+28.00	10598.22		1392.61			
EASTBOUND	318+28.00	322+67.00	1316.11		172.94			
WESTBOUND	318+28.00	322+67.00	1416.22		186.09			
EASTBOUND	322+67.00	326+52.00	888.22		116.71			
WESTBOUND	322+67.00	326+52.00	948.89		124.68			
EASTBOUND	326+52.00	330+00.00	708.56		93.10			
WESTBOUND	326+52.00	330+00.00	1394.78		183.27			
EASTBOUND	330+00.00	423+82.00	18863.33		2478.64			
WESTBOUND	330+00.00	423+82.00	19702.78		2588.95			
SUB TOTAL			81479.33	268.11	10741.62	90.02		
QUANTITY FROM MVPS					191.15	621.21	733.43	1145.58
QUANTITY FROM PLACE HMA DIKE						272.19		
GRAND TOTAL				81747.44	10932.77	983.42	733.43	1145.58

SUMMARY OF QUANTITIES

Q-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN DIVISION
 FUNCTIONAL SUPERVISOR: KAMRAN MAZHAR
 CALCULATED/DESIGNED BY: [Blank]
 CHECKED BY: [Blank]
 DUNG PHAN: SEYED DADRAS
 REVISED BY: [Blank]
 DATE REVISED: [Blank]

x

x

x

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	142	2.5/6.3	21	44

Seyed Dadras 3-24-11
 REGISTERED CIVIL ENGINEER DATE

5-16-11
 PLANS APPROVAL DATE

SEYED DADRAS
 No. C41989
 Exp. 6-30-12
 CIVIL
 STATE OF CALIFORNIA

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

REMOVE MBGR

EB/WB	STATION 1	TO	STATION 2	REMOVE MBGR
				(LF)
EASTBOUND	231+38.70	TO	232+62.70	124.00
EASTBOUND	253+89.00	TO	259+37.78	548.78
EASTBOUND	265+63.75	TO	266+53.00	89.25
EASTBOUND	275+25.37	TO	280+35.44	510.07
EASTBOUND	283+00.00	TO	285+03.20	203.20
EASTBOUND	287+46.97	TO	292+06.15	459.18
EASTBOUND	301+78.94	TO	307+25.11	546.17
EASTBOUND	313+25.04	TO	316+30.09	305.05
EASTBOUND	329+46.09	TO	332+16.28	270.19
EASTBOUND	338+65.30	TO	345+71.75	706.45
EASTBOUND	353+84.66	TO	355+00.00	115.34
EASTBOUND	370+87.73	TO	371+78.70	90.97
EASTBOUND	412+56.86	TO	415+51.32	294.46
EASTBOUND	416+54.82	TO	417+68.96	114.14
EASTBOUND	421+58.15	TO	424+00.00	241.85
WESTBOUND	231+22.80	TO	232+60.50	137.70
WESTBOUND	257+85.50	TO	258+87.00	101.50
WESTBOUND	266+02.00	TO	266+79.40	77.40
WESTBOUND	277+04.98	TO	278+24.15	119.17
WESTBOUND	284+33.89	TO	285+25.17	91.28
WESTBOUND	289+86.64	TO	292+53.78	264.14
WESTBOUND	299+36.13	TO	301+00.00	163.87
WESTBOUND	303+69.83	TO	304+61.50	91.67
WESTBOUND	315+12.11	TO	317+20.75	208.64
WESTBOUND	354+28.04	TO	355+44.09	116.05
WESTBOUND	367+34.14	TO	368+80.97	146.83
WESTBOUND	370+40.59	TO	373+83.59	343.00
WESTBOUND	401+90.76	TO	406+91.87	501.11
TOTAL				7586.46

REMOVE AC DIKE

EB/WB	STATION 1	TO	STATION 2	REMOVE AC DIKE
				(LF)
EASTBOUND	231+38.70	TO	232+62.70	124.00
EASTBOUND	236+85.00	TO	252+78.00	1593.00
EASTBOUND	267+53.94	TO	284+94.11	1740.17
EASTBOUND	282+75.00	TO	284+79.00	204.00
EASTBOUND	302+22.60	TO	304+19.40	196.80
EASTBOUND	312+54.60	TO	315+46.00	291.40
EASTBOUND	329+46.09	TO	336+86.23	740.14
EASTBOUND	338+65.30	TO	346+71.62	806.32
EASTBOUND	412+56.86	TO	415+04.00	247.14
EASTBOUND	421+58.15	TO	424+60.00	301.85
WESTBOUND	231+68.50	TO	243+97.07	1228.57
WESTBOUND	244+44.45	TO	246+05.77	161.32
WESTBOUND	292+41.20	TO	298+66.95	625.75
WESTBOUND	299+44.80	TO	300+70.03	125.23
WESTBOUND	328+58.59	TO	332+40.19	381.60
WESTBOUND	332+89.70	TO	337+71.50	481.80
WESTBOUND	394+71.03	TO	399+66.32	495.29
WESTBOUND	400+91.78	TO	404+52.31	360.53
WESTBOUND	409+27.21	TO	415+03.34	576.13
TOTAL				10681.04

SUMMARY OF QUANTITIES



Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	142	2.5/6.3	22	44

Seyed Dadras 3-24-11
 REGISTERED CIVIL ENGINEER DATE

5-16-11
 PLANS APPROVAL DATE

SEYED DADRAS
 No. C41989
 Exp. 6-30-12
 CIVIL

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PLACE MBGR

EB/WB	LAYOUT TYPE	BEGIN STATION	END STATION	MBGR LENGTH	ALTERNATE FLARED TERMINAL SYSTEM	ALTERNATE IN LINE TERMINAL SYSTEM	END ANCHOR ASSEMBLY (TYPE SFT)	GUARD RAILING DELINEATOR
				(LF)	(EA)	(EA)	(EA)	(EA)
EASTBOUND	11E	231+76.20	232+25.20	49.00	2			4
EASTBOUND	11E	254+26.50	259+00.28	473.78	2			38
EASTBOUND	11E	266+01.25	266+15.50	14.25	2			1
EASTBOUND	11E	275+62.87	279+97.94	435.07	2			35
EASTBOUND	11E	283+37.50	284+65.70	128.20	2			10
EASTBOUND	11E	287+84.47	291+68.65	384.18	2			55
EASTBOUND	11E	302+16.44	306+87.61	471.17	2			38
EASTBOUND	11B	313+62.54	315+92.59	230.05	1		1	18
EASTBOUND	11E	329+83.59	331+78.78	195.19	2			16
EASTBOUND	11E	339+02.80	345+34.25	631.45	2			51
EASTBOUND	11E	354+22.16	354+62.50	40.34	2			3
EASTBOUND	11J	371+25.23	371+41.20	15.97	1	1		2
EASTBOUND	11E	412+94.36	415+13.82	219.46	2			18
EASTBOUND	11E	416+92.32	417+31.46	39.14	2			3
EASTBOUND	11E	421+95.65	423+62.50	166.85	2			13
WESTBOUND	11E	231+60.30	232+23.00	62.70	2			5
WESTBOUND	11E	258+23.00	258+49.50	26.50	2			2
WESTBOUND	11E	266+39.50	266+41.90	2.40	2			1
WESTBOUND	11E	277+42.48	277+86.65	44.17	2			4
WESTBOUND	11E	284+71.39	284+87.67	16.28	2			2
WESTBOUND	11E	290+27.14	292+16.28	189.14	2			15
WESTBOUND	11E	299+73.63	300+62.50	88.87	2			7
WESTBOUND	11E	304+24.00	307+07.33	283.33	2			23
WESTBOUND	16E	315+18.36	316+83.25	164.89	2			13
WESTBOUND	11E	354+65.54	355+06.59	41.05	2			3
WESTBOUND	16E	367+71.64	368+43.47	71.83	2			6
WESTBOUND	11D	370+78.09	373+46.09	268.00		2		21
WESTBOUND	11E	384+80.50	388+90.50	410.00	2			33
WESTBOUND	11E	398+37.50	399+32.50	95.00	2			8
WESTBOUND	11E	402+28.26	406+54.37	426.11	2			34
WESTBOUND	11E	408+17.50	409+62.50	145.00	2			12
TOTAL				5829.37	58	3	1	495

SUMMARY OF QUANTITIES

Q-3



Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	142	2.5/6.3	23	44

Sayed Dadras 3-24-11
REGISTERED CIVIL ENGINEER DATE

5-16-11
PLANS APPROVAL DATE

SEYED DADRAS
No. C41989
Exp. 6-30-12
CIVIL
STATE OF CALIFORNIA

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

PLACE HMA DIKE

EB/WB	STATION 1	TO	STATION 2	PLACE HMA DIKE			HOT MIX ASPHAR+ TYPE(A) TON
				TYPE C	TYPE E	TYPE F	
				(LF)	(LF)	(LF)	
EASTBOUND	231+13.70	TO	231+76.20	62.50			0.47
EASTBOUND	231+76.20	TO	232+25.20			49.00	0.64
EASTBOUND	232+25.20	TO	232+87.70	62.50			0.47
EASTBOUND	236+85.00	TO	252+78.00		1593.00		40.82
EASTBOUND	253+64.00	TO	254+26.50	62.50			0.47
EASTBOUND	254+26.50	TO	259+00.28			473.78	6.16
EASTBOUND	259+00.28	TO	259+62.78	62.50			0.47
EASTBOUND	265+38.75	TO	266+01.25	62.50			0.47
EASTBOUND	266+01.25	TO	266+15.50			14.25	0.19
EASTBOUND	266+15.50	TO	266+78.00	62.50			0.47
EASTBOUND	267+53.94	TO	275+00.37		746.43		19.13
EASTBOUND	275+00.37	TO	275+62.87	62.50			0.47
EASTBOUND	275+62.87	TO	279+97.94			435.07	5.66
EASTBOUND	279+97.94	TO	280+60.44	62.50			0.47
EASTBOUND	282+75.00	TO	283+37.50	62.50			0.47
EASTBOUND	283+37.50	TO	284+65.70			128.20	1.67
EASTBOUND	284+65.70	TO	285+28.20	62.50			0.47
EASTBOUND	287+21.97	TO	287+84.47	62.50			0.47
EASTBOUND	287+84.47	TO	291+68.65			384.18	5.00
EASTBOUND	291+68.65	TO	292+31.15	62.50			0.47
EASTBOUND	292+31.15	TO	292+83.36		52.21		1.34
EASTBOUND	301+53.94	TO	302+16.44	62.50			0.47
EASTBOUND	302+16.44	TO	306+87.61			471.17	6.13
EASTBOUND	306+87.61	TO	307+50.11	62.50			0.47
EASTBOUND	313+00.04	TO	313+62.54	62.50			0.47
EASTBOUND	313+62.54	TO	315+92.59			230.05	2.99
EASTBOUND	329+21.09	TO	329+83.59	62.50			0.47
EASTBOUND	329+83.59	TO	331+78.78			195.19	2.54
EASTBOUND	331+78.78	TO	332+41.28	62.50			0.47
EASTBOUND	332+16.28	TO	336+86.23		469.95		12.04
EASTBOUND	338+40.30	TO	339+02.80	62.50			0.47
EASTBOUND	339+02.80	TO	345+34.25			631.45	8.21
EASTBOUND	345+24.25	TO	345+96.75	62.50			0.47
EASTBOUND	345+96.75	TO	346+71.62		74.87		1.92
EASTBOUND	353+59.66	TO	354+22.16	62.50			0.47
EASTBOUND	354+22.16	TO	354+62.50			40.34	0.52
EASTBOUND	354+62.50	TO	355+25.00	62.50			0.47
EASTBOUND	370+62.73	TO	371+25.23	62.50			0.47
EASTBOUND	371+25.23	TO	371+41.20			15.97	0.21
EASTBOUND	371+41.20	TO	372+03.70	62.50			0.47
EASTBOUND	412+31.86	TO	412+94.36	62.50			0.47
EASTBOUND	412+94.36	TO	415+13.82			219.46	2.85
EASTBOUND	415+13.82	TO	415+76.32	62.50			0.47
EASTBOUND	416+29.82	TO	416+92.32	62.50			0.47
EASTBOUND	416+92.32	TO	417+31.46			39.14	0.51
EASTBOUND	417+31.46	TO	417+93.96	62.50			0.47
EASTBOUND	421+33.15	TO	421+95.65	62.50			0.47
EASTBOUND	421+95.65	TO	423+62.50			166.85	2.17
EASTBOUND	423+62.50	TO	424+25.00	62.50			0.47
SUBTOTAL SHEET Q-4				1812.50	2936.46	3494.10	134.33

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DESIGN DIVISION
 FUNCTIONAL SUPERVISOR: KAMRAN MAZHAR
 CALCULATED/DESIGNED BY: DUNG PHAN
 CHECKED BY: SEYED DADRAS
 REVISED BY: DUNG PHAN
 DATE REVISED: SEYED DADRAS

SUMMARY OF QUANTITIES

Q-4

LAST REVISION | DATE PLOTTED => 19-MAY-2011
 03-18-11 TIME PLOTTED => 18:08

PLACE HMA DIKE

EB/WB	STATION 1	TO	STATION 2	PLACE HMA DIKE			HOT MIX ASPHALT TYPE(A) TON
				TYPE C (LF)	TYPE E (LF)	TYPE F (LF)	
WESTBOUND	230+97.80	TO	231+60.30	62.50			0.47
WESTBOUND	231+60+30	TO	232+23.00			62.70	0.82
WESTBOUND	232+23.00	TO	232+85.50	62.50			0.47
WESTBOUND	232+85.50	TO	246+05.77		1320.27		33.30
WESTBOUND	257+60.50	TO	258+23.00	62.50			0.47
WESTBOUND	258+23.00	TO	258+49.50			26.50	0.34
WESTBOUND	258+49.50	TO	259+12.00	62.50			0.47
WESTBOUND	265+77.00	TO	266+39.50	62.50			0.47
WESTBOUND	266+39.50	TO	266+41.90			2.40	0.03
WESTBOUND	266+41.90	TO	267+04.40	62.50			0.47
WESTBOUND	276+79.98	TO	277+42.48	62.50			0.47
WESTBOUND	277+42.48	TO	277+86.65			44.17	0.57
WESTBOUND	277+86.65	TO	278+49.15	62.50			0.47
WESTBOUND	284+08.89	TO	284+71.39	62.50			0.47
WESTBOUND	284+71.39	TO	284+87.67			16.28	0.21
WESTBOUND	284+87.67	TO	285+50.17	62.50			0.47
WESTBOUND	289+64.64	TO	290+27.14	62.50			0.47
WESTBOUND	290+27.14	TO	292+16.28			189.14	2.64
WESTBOUND	292+16.28	TO	292+78.78	62.50			0.47
WESTBOUND	292+78.78	TO	298+66.95		588.17		15.07
WESTBOUND	299+11.13	TO	299+73.63	62.50			0.47
WESTBOUND	299+73.63	TO	300+62.50			88.87	1.16
WESTBOUND	300+62.50	TO	301+25.00	62.50			0.47
WESTBOUND	303+61.50	TO	304+24.00	62.50			0.47
WESTBOUND	304+24.00	TO	307+07.33			283.33	3.69
WESTBOUND	307+07.33	TO	307+169.83	62.50			0.47
WESTBOUND	314+55.86	TO	315+18.36	62.50			0.47
WESTBOUND	315+18.36	TO	316+83.25			164.89	2.14
WESTBOUND	316+83.25	TO	317+45.75	62.50			0.47
WESTBOUND	328+58.59	TO	332+40.19		381.60		9.78
WESTBOUND	332+89.70	TO	337+71.50		481.80		12.35
WESTBOUND	354+03.04	TO	354+65.54	62.50			0.47
WESTBOUND	354+65.54	TO	355+06.59			41.05	0.53
WESTBOUND	355+06.59	TO	355+69.09	62.50			0.47
WESTBOUND	367+09.14	TO	367+71.64	62.50			0.47
WESTBOUND	367+71.64	TO	368+43.47			71.83	0.93
WESTBOUND	368+43.47	TO	369+05.97	62.50			0.47
WESTBOUND	370+15.59	TO	370+78.09	62.50			0.47
WESTBOUND	370+78.09	TO	373+46.09			268.00	3.49
WESTBOUND	373+46.09	TO	374+08.59	62.50			0.47
WESTBOUND	384+18.00	TO	384+80.50	62.50			0.47
WESTBOUND	384+80.50	TO	387+90.50			410.00	5.33
WESTBOUND	388+90.50	TO	389+53.00	62.50			0.47
WESTBOUND	394+71.03	TO	397+75.00		303.97		7.79
WESTBOUND	397+75.00	TO	398+37.50	62.50			0.47
WESTBOUND	398+37.50	TO	399+32.50			95.00	1.24
WESTBOUND	399+32.50	TO	399+95.00	62.50			0.47
WESTBOUND	400+91.78	TO	401+65.76		73.98		1.90
WESTBOUND	401+65.76	TO	402+28.26	62.50			0.47
WESTBOUND	402+28.26	TO	406+54.37			426.11	5.54
WESTBOUND	406+54.37	TO	407+16.87	62.50			0.47
WESTBOUND	407+55.00	TO	408+17.50	62.50			0.47
WESTBOUND	408+17.50	TO	409+62.50			145.00	1.89
WESTBOUND	409+62.50	TO	410+25.00	62.50			0.47
WESTBOUND	410+25.00	TO	415+03.34		478.34		12.26
SUBTOTAL QUANTITIES SHEET Q-5				2000.00	3628.13	2335.27	137.86
TOTAL SHEET Q-4 AND Q-5				3812.50	6564.59	5829.37	272.19

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	142	2.5/6.3	24	44

Sayed Dadras 3-24-11
 REGISTERED CIVIL ENGINEER DATE

5-16-11
 PLANS APPROVAL DATE

SEYED DADRAS
 No. C41989
 Exp. 6-30-12
 CIVIL

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DESIGN DIVISION

FUNCTIONAL SUPERVISOR
 KAMRAN MAZHAR

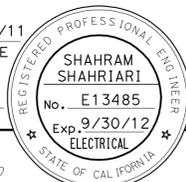
CALCULATED/DESIGNED BY
 CHECKED BY

DUNG PHAN
 SEYED DADRAS

REVISED BY
 DATE REVISED

SUMMARY OF QUANTITIES
Q-5

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Orca	142	2.5/6.3	25	44
			3/24/11		
REGISTERED ELECTRICAL ENGINEER			DATE		
5-16-11			PLANS APPROVAL DATE		
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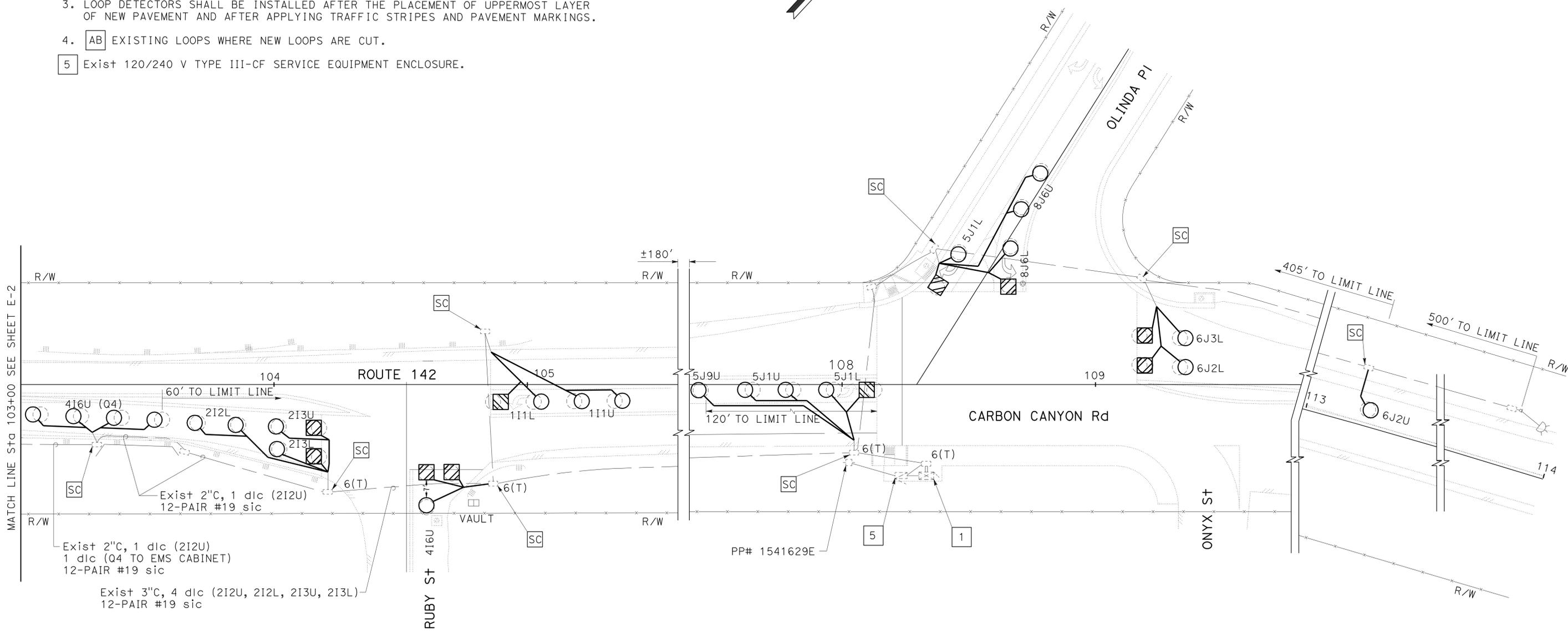
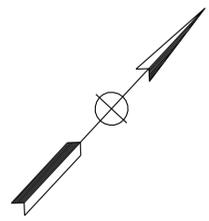


NOTE:

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

NOTES: (THIS SHEET)

- EXISTING MODEL 170 CONTROLLER ASSEMBLY.
- THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF EXISTING LOOPS PRIOR TO CUTTING NEW LOOPS AND REUSE EXISTING CONDUIT STUB OUT.
- LOOP DETECTORS SHALL BE INSTALLED AFTER THE PLACEMENT OF UPPERMOST LAYER OF NEW PAVEMENT AND AFTER APPLYING TRAFFIC STRIPES AND PAVEMENT MARKINGS.
- AB EXISTING LOOPS WHERE NEW LOOPS ARE CUT.
- Exist 120/240 V TYPE III-CF SERVICE EQUIPMENT ENCLOSURE.



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN
 FUNCTIONAL SUPERVISOR: SHAHRAM SHAHRIARI
 CALCULATED/DESIGNED BY: SHAHRAM SHAHRIARI
 CHECKED BY:
 FRANCIS M. ALVIAR
 VANESSA V. TRUONG
 REVISED BY: FRANCIS M. ALVIAR
 DATE REVISED:

INDUCTIVE LOOP DETECTOR
SCALE: 1" = 20'

E-1

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

LAST REVISION:
 DATE PLOTTED => 20-MAY-2011
 TIME PLOTTED => 13:40

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Orca	142	2.5/6.3	26	44
			3/24/11		
			REGISTERED ELECTRICAL ENGINEER	DATE	
			5-16-11	PLANS APPROVAL DATE	
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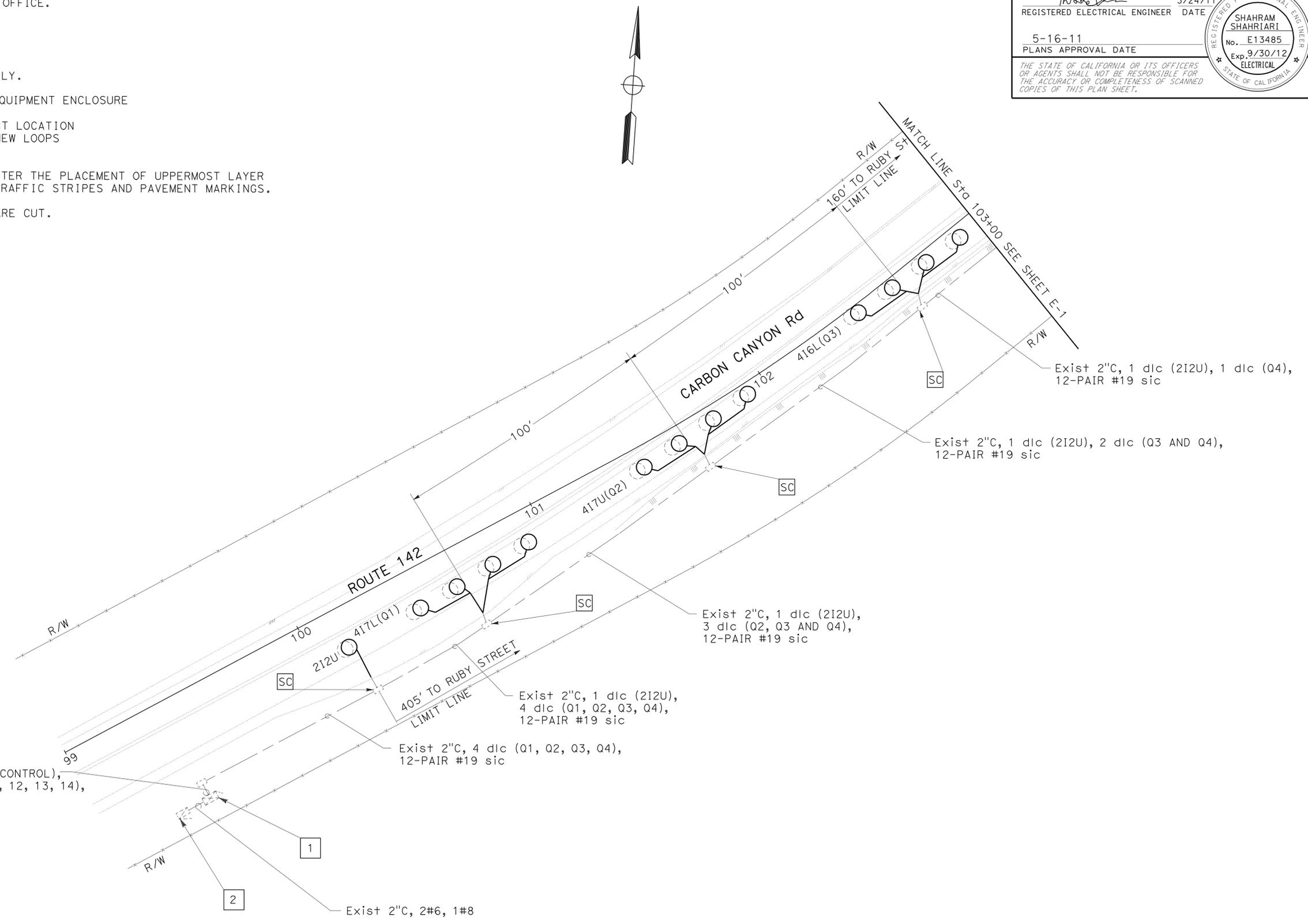
NOTE:

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

NOTES: (THIS SHEET)

- 1 EXISTING MODEL 170 CONTROLLER ASSEMBLY.
- 2 Exist 120/240 V TYPE III-CF SERVICE EQUIPMENT ENCLOSURE
3. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF EXISTING LOOPS PRIOR TO CUTTING NEW LOOPS AND REUSE EXISTING CONDUIT STUB OUT.
4. LOOP DETECTORS SHALL BE INSTALLED AFTER THE PLACEMENT OF UPPERMOST LAYER OF NEW PAVEMENT AND AFTER APPLYING TRAFFIC STRIPES AND PAVEMENT MARKINGS.
5. AB EXISTING LOOPS WHERE NEW LOOPS ARE CUT.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN
 FUNCTIONAL SUPERVISOR: SHAHRAM SHAHRIARI
 CALCULATED/DESIGNED BY: CHECKED BY:
 FRANCIS M. ALVIAR VANESSA V. TRUONG
 REVISED BY: DATE REVISED:



INDUCTIVE LOOP DETECTOR
SCALE: 1" = 20'

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

LAST REVISION:
 DATE PLOTTED => 19-MAY-2011
 TIME PLOTTED => 18:09

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	142	2.5/6.3	27	44

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

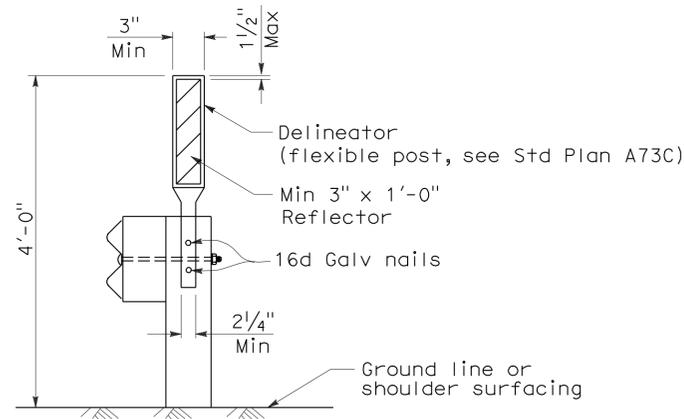
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REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

To accompany plans dated 5-16-11

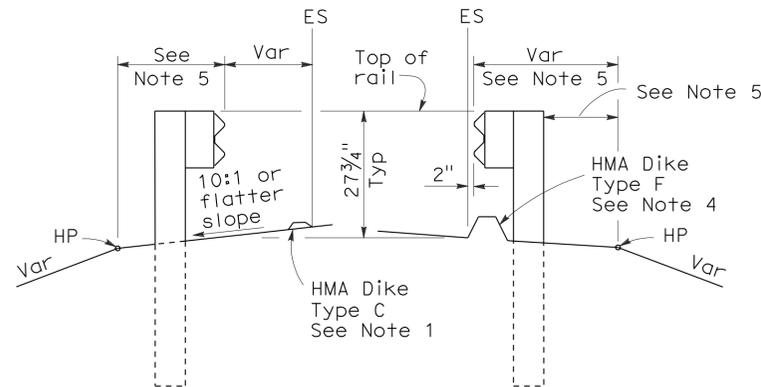
NOTES:

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



GUARD RAILING DELINEATION

See Note 3



DIKE POSITIONING

See Note 1

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

REVISED STANDARD PLAN RSP A77C4

2006 REVISED STANDARD PLAN RSP A77C4

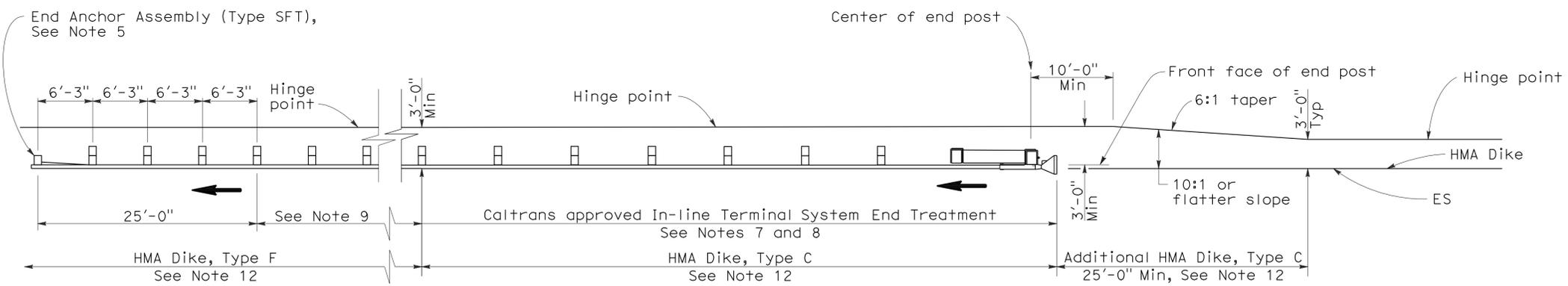
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	142	2.5/6.3	28	44

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

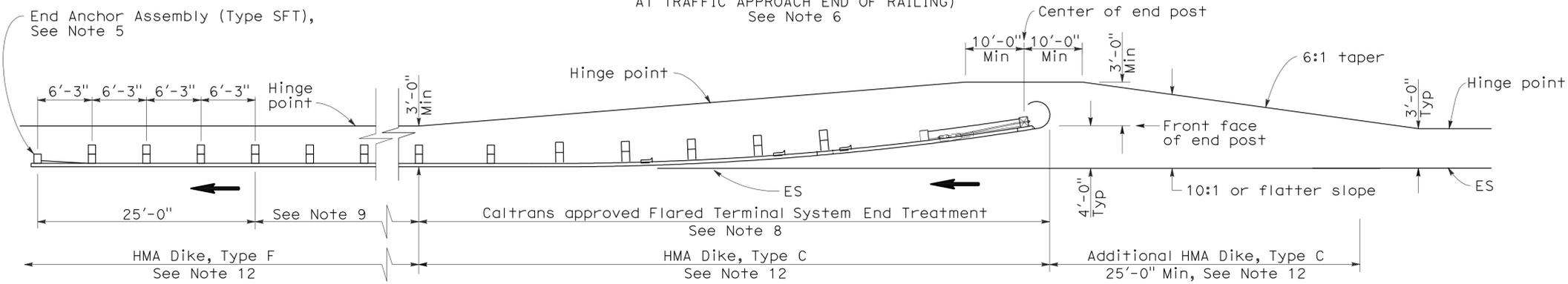
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To accompany plans dated 5-16-11



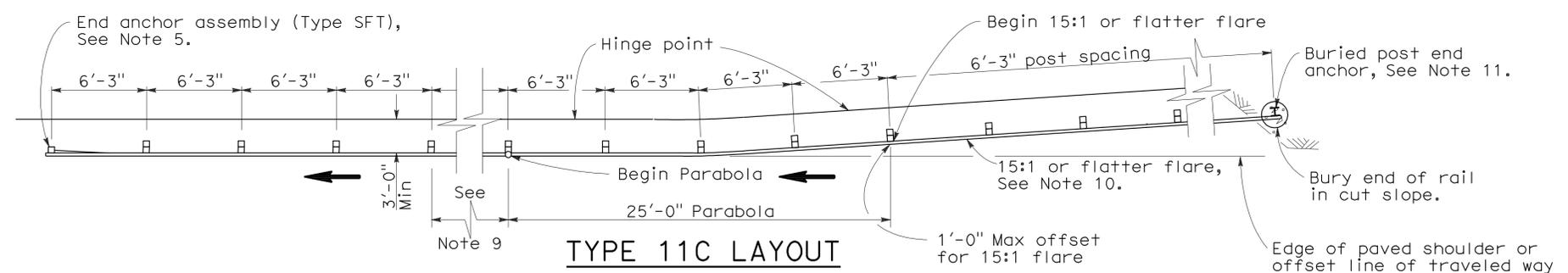
TYPE 11A LAYOUT

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



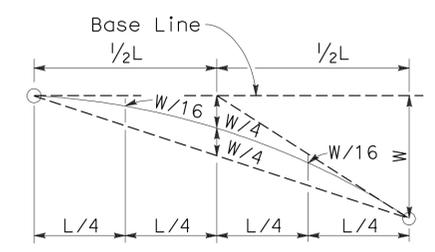
TYPE 11B LAYOUT

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

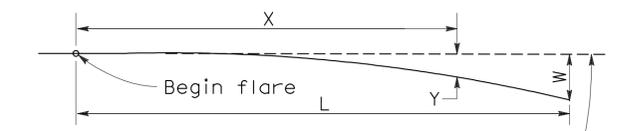


TYPE 11C LAYOUT

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



TYPICAL PARABOLIC LAYOUT

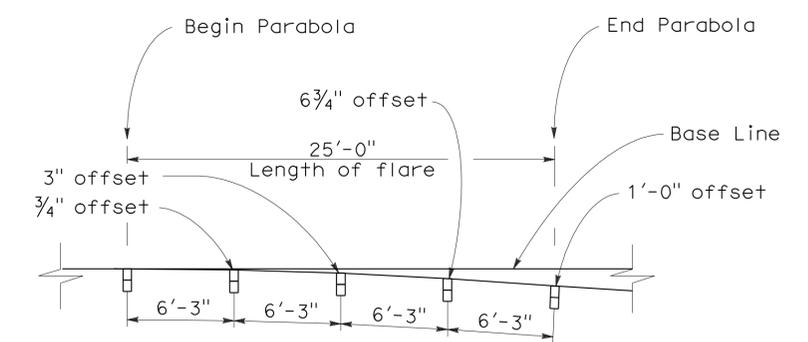


Base Line (Edge of paved shoulder or offset line of edge of traveled way)

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

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

PARABOLIC FLARE OFFSETS



TYPICAL FLARE OFFSETS FOR 1 FOOT MAX END OFFSET

NOTES:

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1, and A77C2.
- Guard rail post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or recycled plastic blocks may be used for 6" x 8" x 6'-0" wood post with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- Direction of adjacent traffic indicated by \rightarrow .
- For End Anchor Assembly (Type SFT) details, see Standard Plan A77H1.
- Layout Types 11A, 11B or 11C are typically used where guard railing is recommended to shield embankment slopes and a crashworthy end treatment is required for only one direction of traffic.
- In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
- The type of terminal system end treatment to be used will be shown on the Project Plans.
- Dependent on site conditions (embankment height and side slope), construction of additional guard railing (length equal to multiples of 12'-6" with 6'-3" post spacing) may be advisable.
- The 15:1 or flatter flare used with buried end anchors is based on the edge of the paved shoulder or offset line of edge of the traveled way. The length of guard railing within the 15:1 or flatter flare is based on site conditions and should be a length equal to multiples of 12'-6".
- For details of the buried post end anchor used with Type 11C Layout, see Standard Plan A77I2.
- Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77C4 for dike positioning details.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
METAL BEAM GUARD RAILING
TYPICAL LAYOUTS FOR EMBANKMENTS
NO SCALE

RSP A77E1 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77E1
DATED MAY 1, 2006 - PAGE 48 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77E1

2006 REVISED STANDARD PLAN RSP A77E1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	142	2.5/6.3	29	44

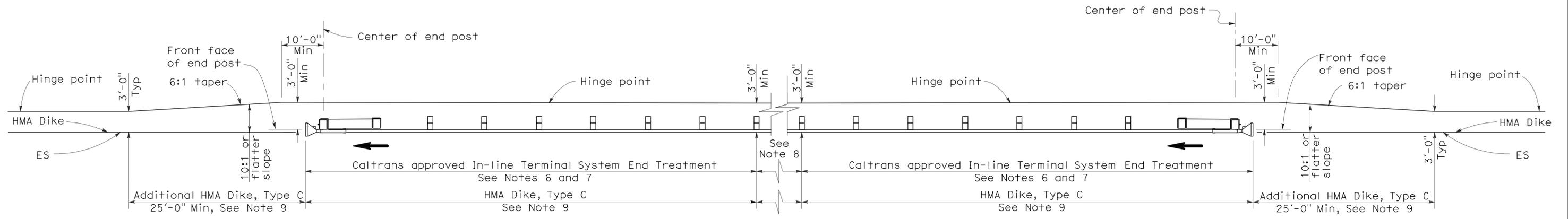
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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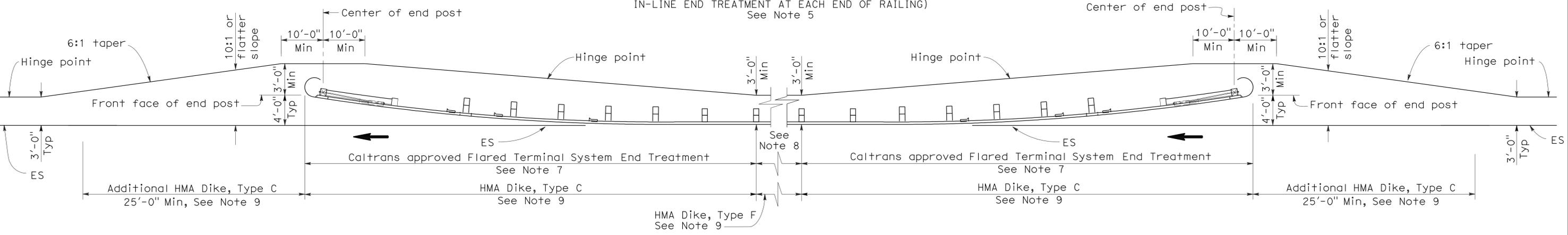
REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

To accompany plans dated 5-16-11



TYPE 11D LAYOUT

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



TYPE 11E LAYOUT

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

NOTES:

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

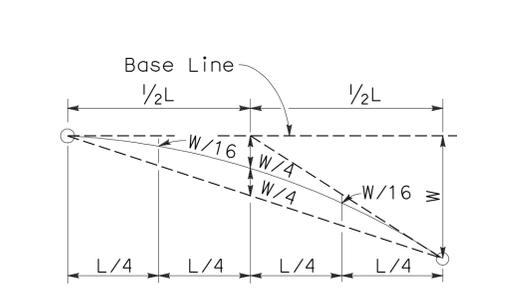
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**METAL BEAM GUARD RAILING
TYPICAL LAYOUTS FOR
EMBANKMENTS**

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

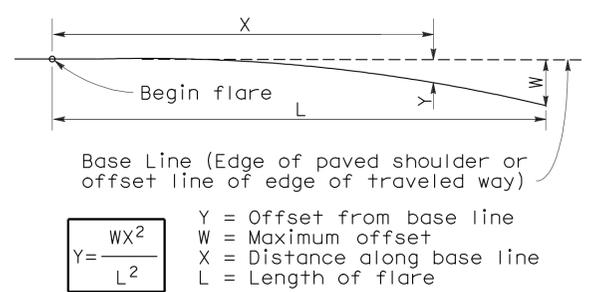
2006 REVISED STANDARD PLAN RSP A77E2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	142	2.5/6.3	30	44

RANDALL D. HIATT
 REGISTERED CIVIL ENGINEER
 June 6, 2008
 PLANS APPROVAL DATE
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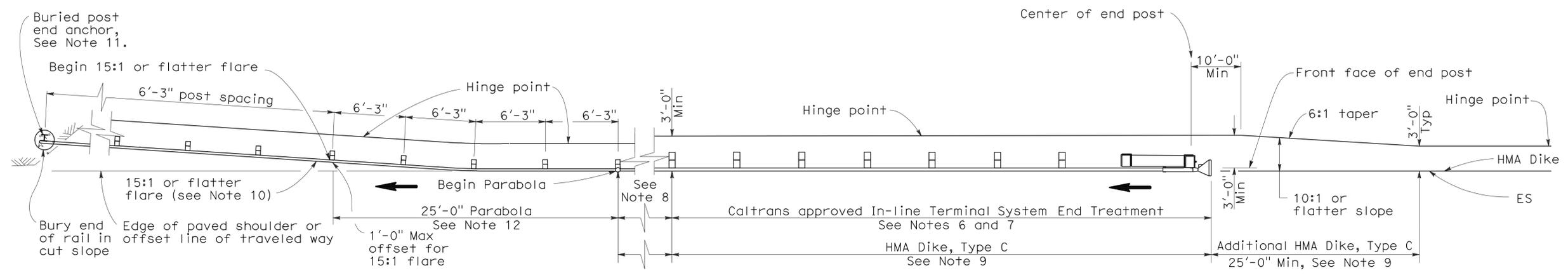


TYPICAL PARABOLIC LAYOUT



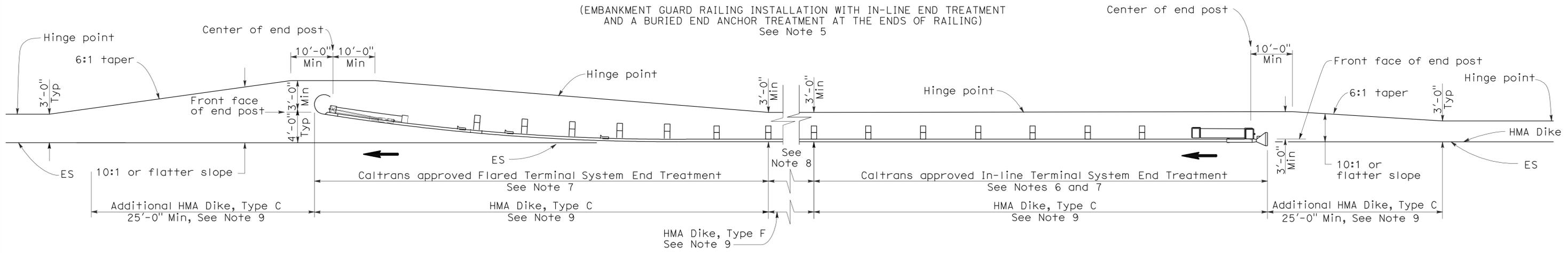
PARABOLIC FLARE OFFSETS

To accompany plans dated 5-16-11



TYPE 11I LAYOUT

(EMBANKMENT GUARD RAILING INSTALLATION WITH IN-LINE END TREATMENT AND A BURIED END ANCHOR TREATMENT AT THE ENDS OF RAILING)
See Note 5



TYPE 11J LAYOUT

(EMBANKMENT GUARD RAILING INSTALLATION WITH IN-LINE END TREATMENT AND FLARED END TREATMENT AT THE ENDS OF RAILING)
See Note 5

NOTES:

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard rail post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or plastic blocks may be used for 6" x 8" x 6'-0" wood post with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- Direction of adjacent traffic indicated by →.
- Layout Types 11D through 11L, shown on the A77E Series of Revised Standard Plans, are typically used where guard railing is recommended to shield embankment slopes and a crashworthy end treatment is required for both directions of traffic.
- In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
- The type of terminal system end treatment to be used will be shown on the Project Plans.
- Dependent on site conditions (embankment height and side slope), construction of additional guard railing (length equal to multiples of 12'-6" with 6'-3" post spacing) may be advisable.
- Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77C4 for dike positioning details.
- 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 11I Layout, see Standard Plan A77I2.
- For typical flare offsets for 25'-0" length parabola with maximum offset of 1'-0", see Revised Standard Plan RSP A77E1.

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

NO SCALE
RSP A77E5 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77E5
DATED MAY 1, 2006 - PAGE 52 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP A77E5

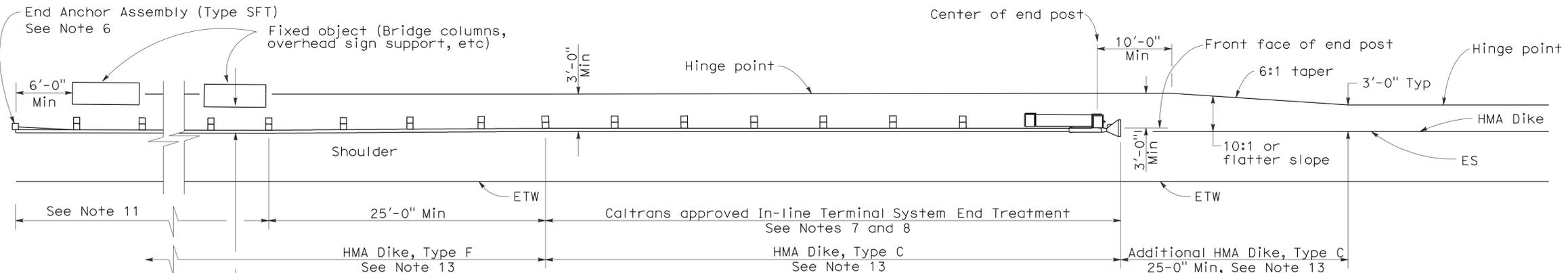
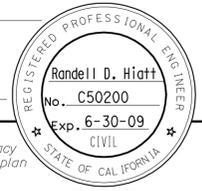
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	142	2.5/6.3	31	44

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

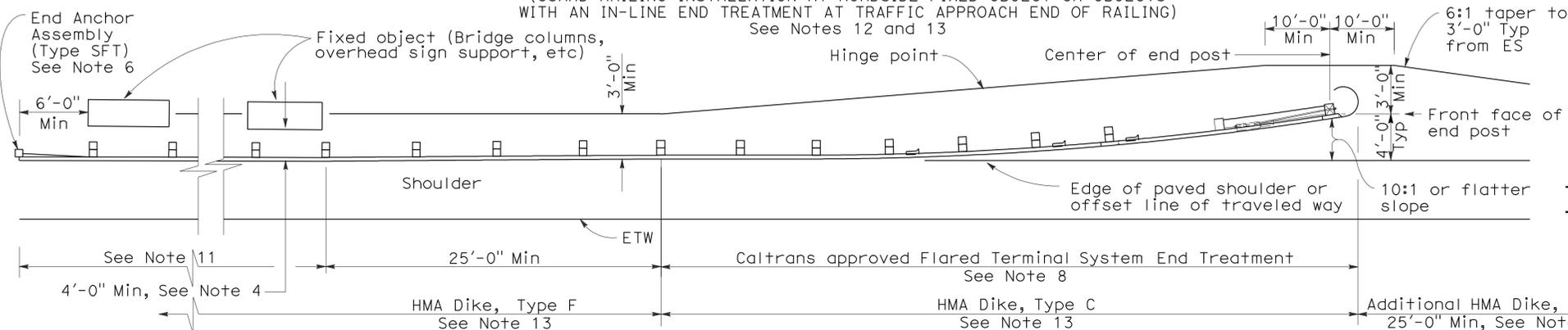
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To accompany plans dated 5-16-11



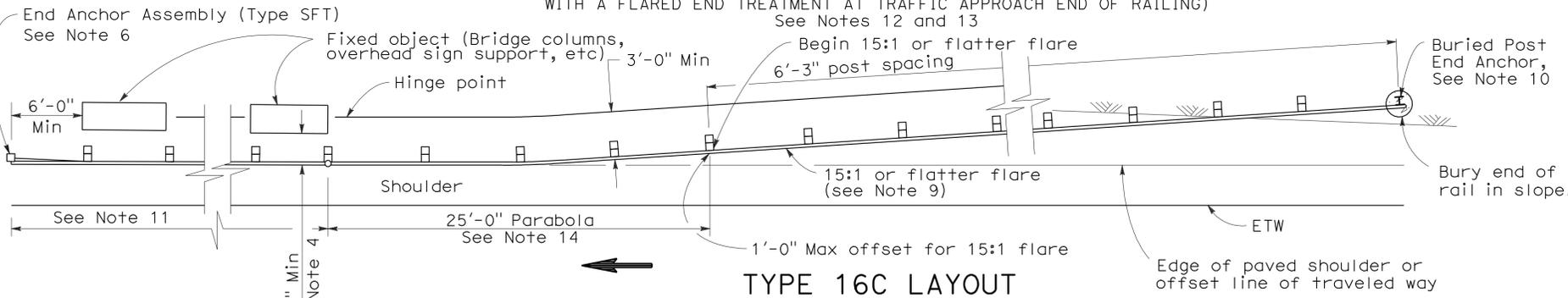
TYPE 16A LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH AN IN-LINE END TREATMENT AT TRAFFIC APPROACH END OF RAILING)
See Notes 12 and 13



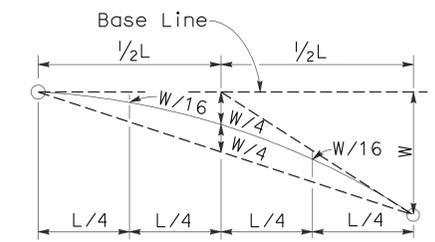
TYPE 16B LAYOUT

(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

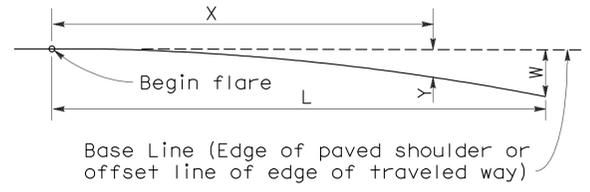


TYPE 16C LAYOUT

(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



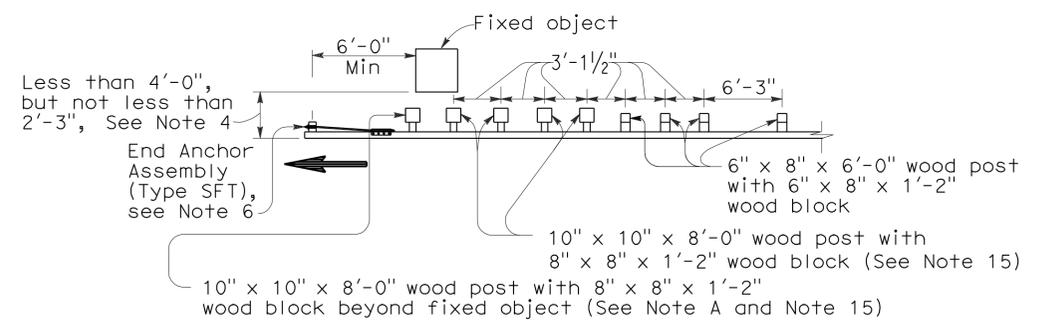
Base Line (Edge of paved shoulder or offset line of edge of traveled way)
Y = Offset from base line
W = Maximum offset
X = Distance along base line
L = Length of flare

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

PARABOLIC FLARE OFFSETS

NOTES:

- Line post, blocks and hardware to be used are shown on Revised Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard railing post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks may be used for 6" x 8" x 6'-0" wood line posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- A 4'-0" minimum clearance is required between the face of the railing and the face of a fixed object located directly behind standard guard railing sections with post spacing of 6'-3". Construct guard railing as shown in the detail "Strengthened Railing Sections for Fixed Objects" on this plan, where the clearance between the face of the railing and the face of a fixed object is less than 4'-0", but not less than 2'-3". Where the clearance is less than 2'-3", a concrete wall or barrier should be constructed to shield the fixed object(s).
- Direction of adjacent traffic indicated by \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".



NOTE A:

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

STRENGTHENED RAILING SECTIONS FOR FIXED OBJECT

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

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

NO SCALE

RSP A77G3 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77G3
DATED MAY 1, 2006 - PAGE 61 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77G3

2006 REVISED STANDARD PLAN RSP A77G3

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	142	2.5/6.3	32	44

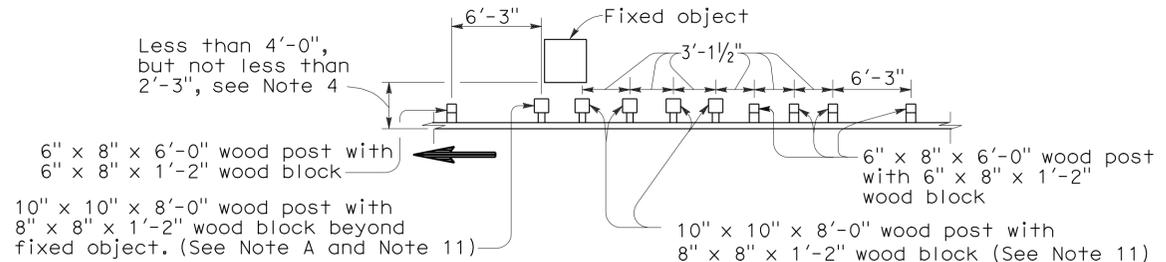
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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To accompany plans dated 5-16-11

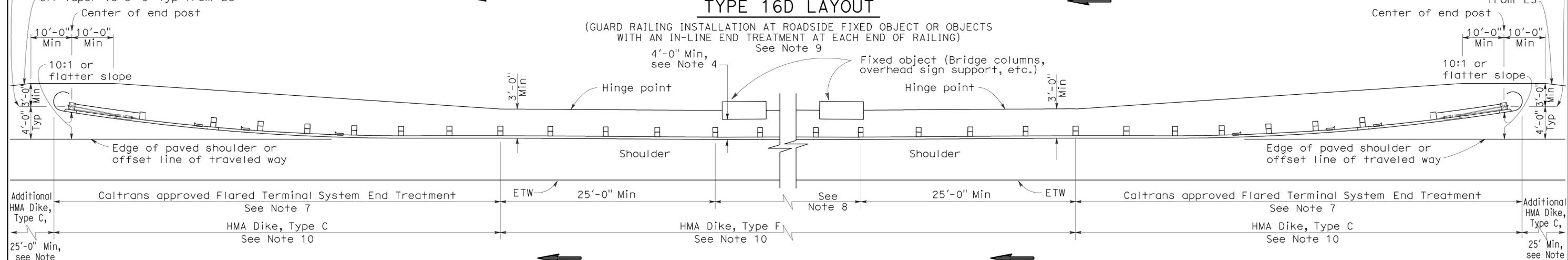
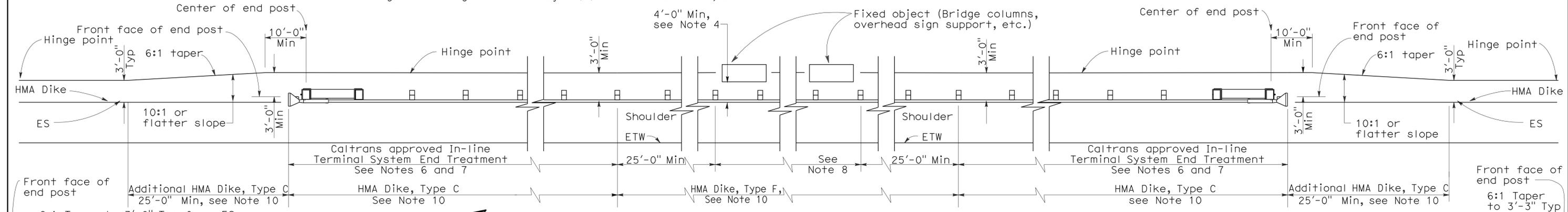
2006 REVISED STANDARD PLAN RSP A77G4



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 object(s).

STRENGTHENED RAILING SECTIONS FOR FIXED OBJECT

Use strengthened railing sections with Layout Types 16D or 16E where minimum clearance between 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 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 at 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 →.

- 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.
- 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 16D through 16L, shown on the A77G Series of Revised Standard Plans, are typically used where guard railing is recommended to shield roadside fixed object(s) and a crashworthy end treatment is required for both directions of traffic.
- Where placement of dike is required with guard railing, see Revised Standard Plan RSP A77C4 for dike positioning details.

11. W6 x 15 steel post, 8'-0" in length, with 8" x 8" x 1'-2" notched wood block or notched recycled plastic block 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 A77G4 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77G4
DATED MAY 1, 2006 - PAGE 62 OF THE STANDARD PLANS BOOK DATED MAY 2006.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	142	2.5/6.3	33	44

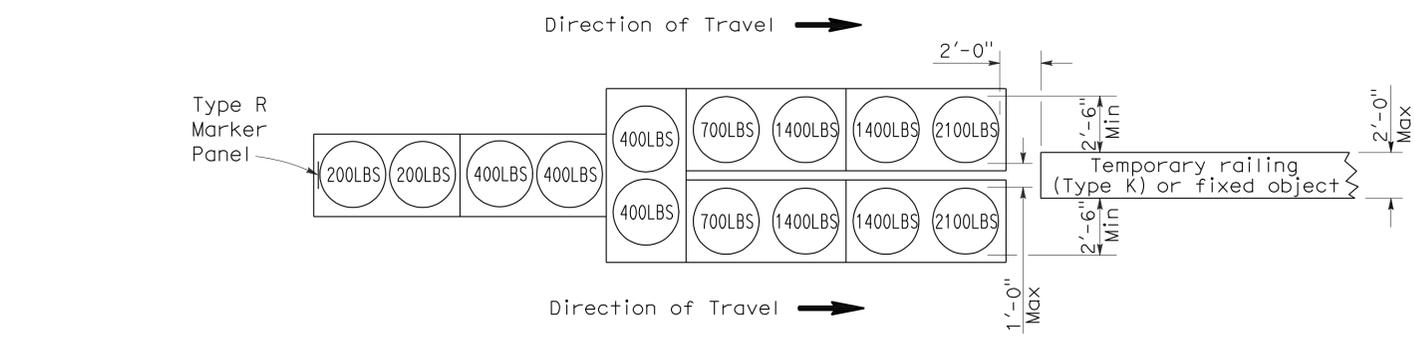
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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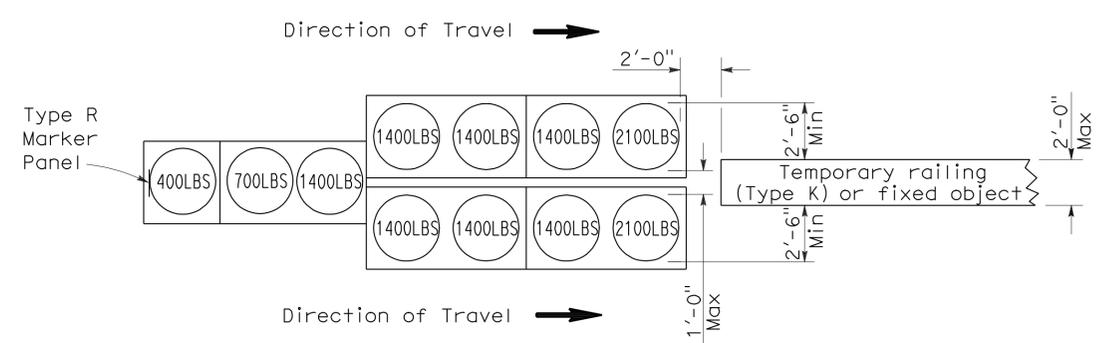
REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

To accompany plans dated 5-16-11



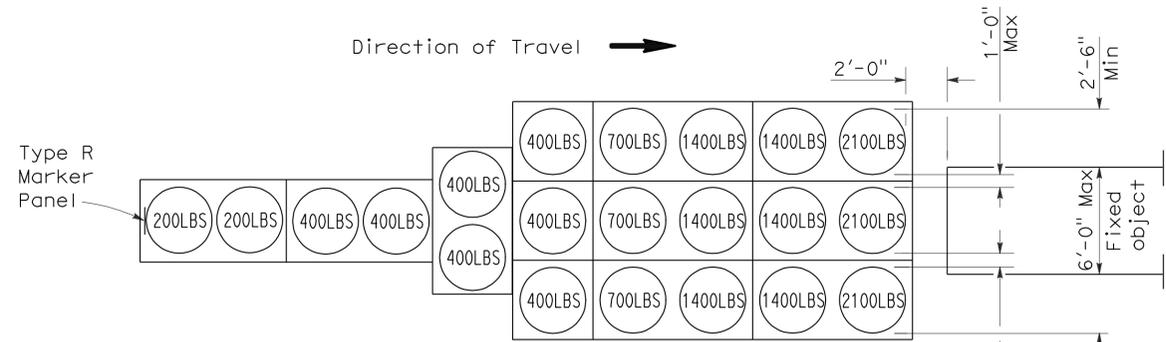
ARRAY 'TU14'

Approach speed 45 mph or more



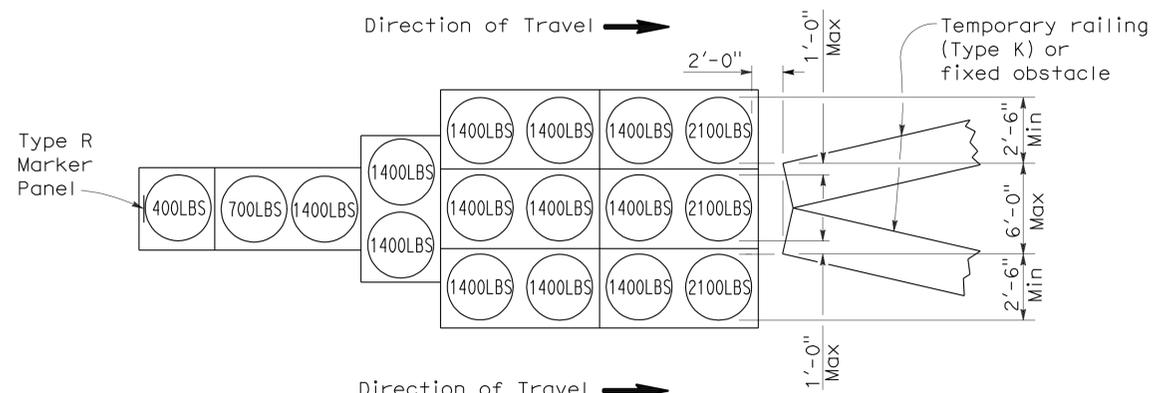
ARRAY 'TU11'

Approach speed less than 45 mph



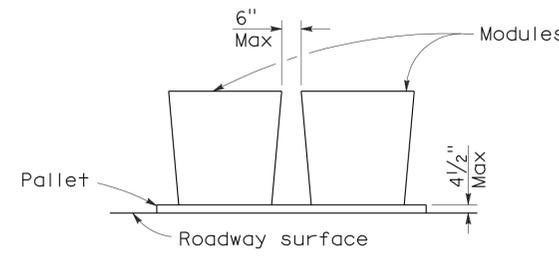
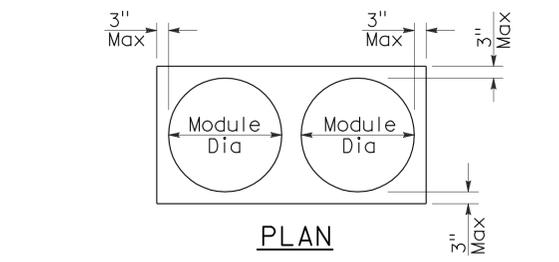
ARRAY 'TU21'

Approach speed 45 mph or more



ARRAY 'TU17'

Approach speed less than 45 mph



CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

REVISED STANDARD PLAN RSP T1A

2006 REVISED STANDARD PLAN RSP T1A

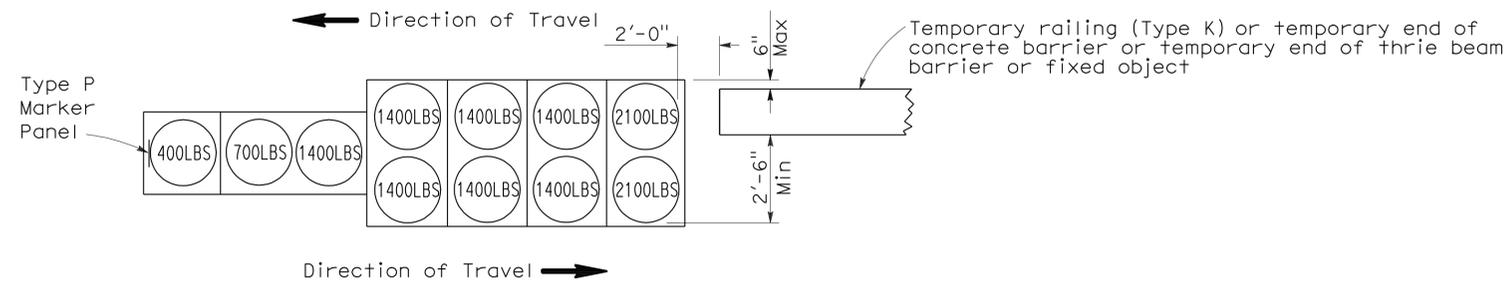
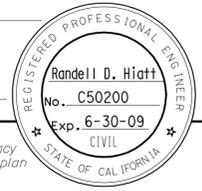
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	142	2.5/6.3	34	44

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

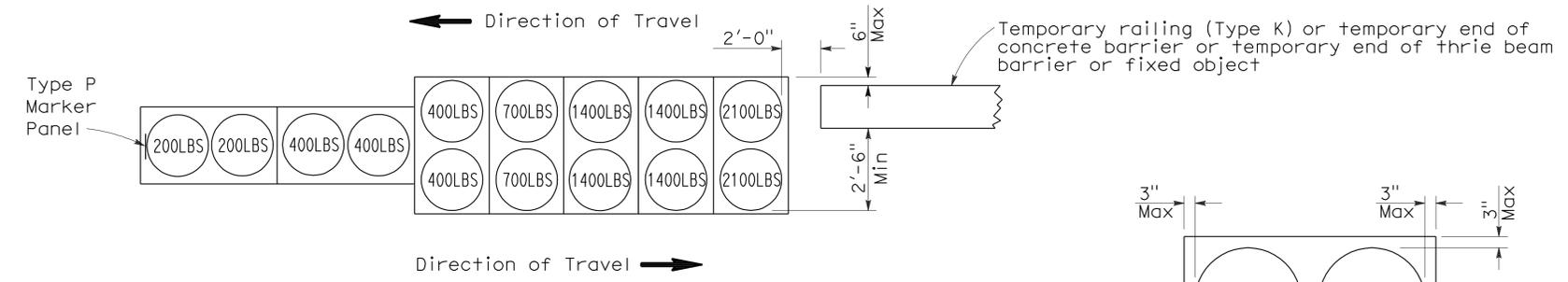
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To accompany plans dated 5-16-11



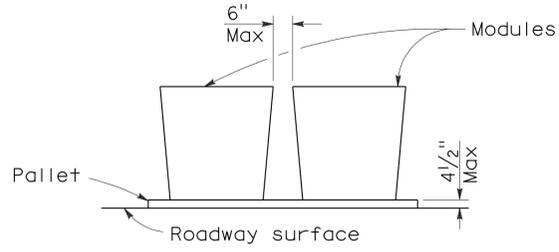
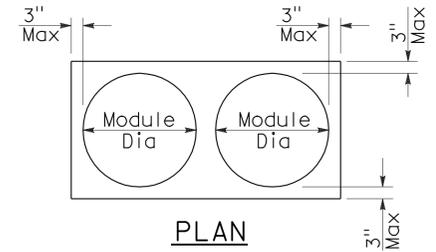
ARRAY 'TB11'

Approach speed less than 45 mph



ARRAY 'TB14'

Approach speed 45 mph or more



CRASH CUSHION PALLET DETAIL
See Note 7

NOTES:

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

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

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

REVISED STANDARD PLAN RSP T1B

2006 REVISED STANDARD PLAN RSP T1B

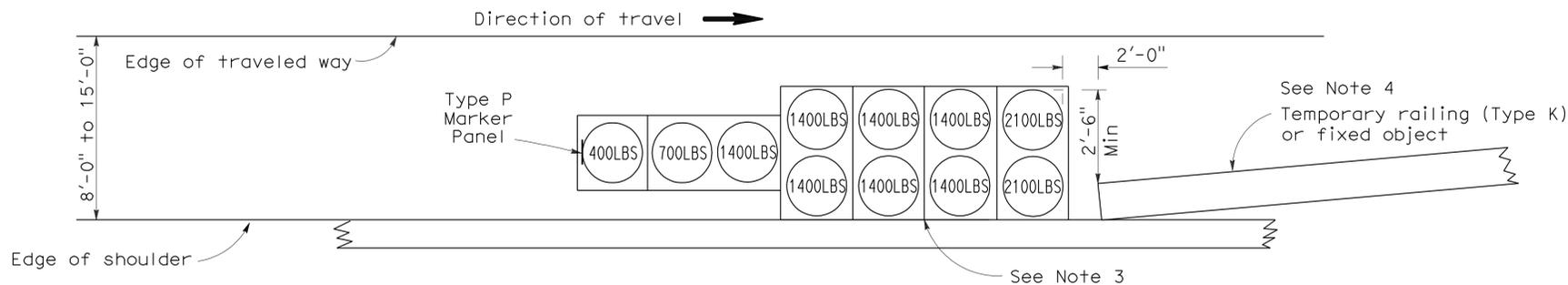
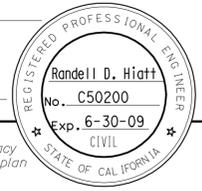
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	142	2.5/6.3	35	44

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

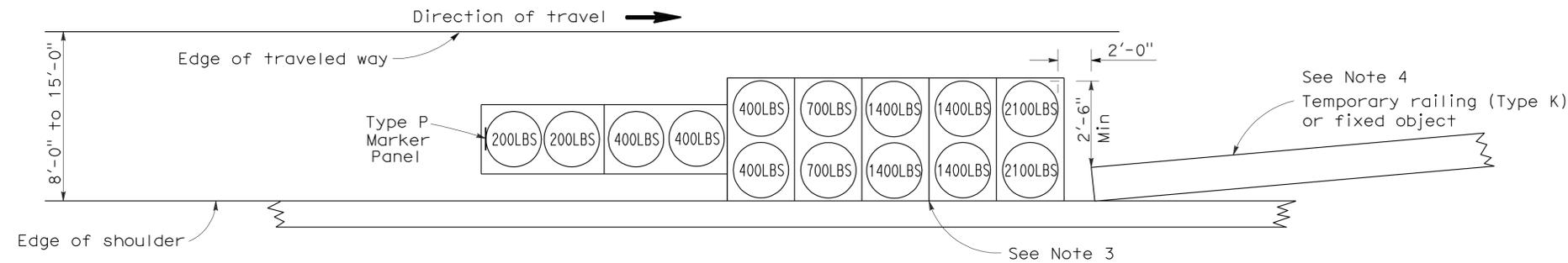
June 6, 2008
PLANS APPROVAL DATE

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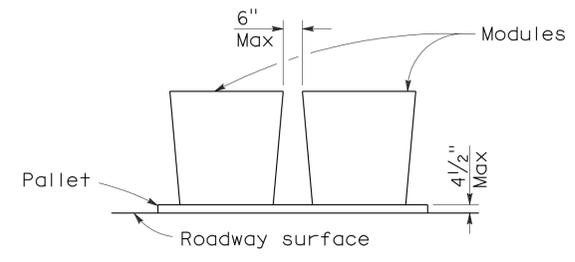
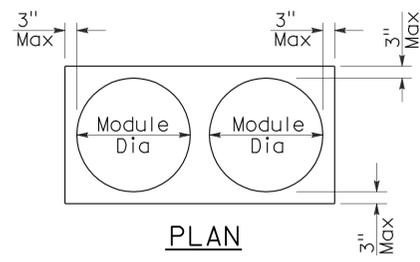
To accompany plans dated 5-16-11



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



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



CRASH CUSHION PALLET DETAIL
See Note 11

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**TEMPORARY CRASH CUSHION,
SAND FILLED
(SHOULDER INSTALLATIONS)**

NO SCALE
RSP T2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T2
DATED MAY 1, 2006 - PAGE 213 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T2

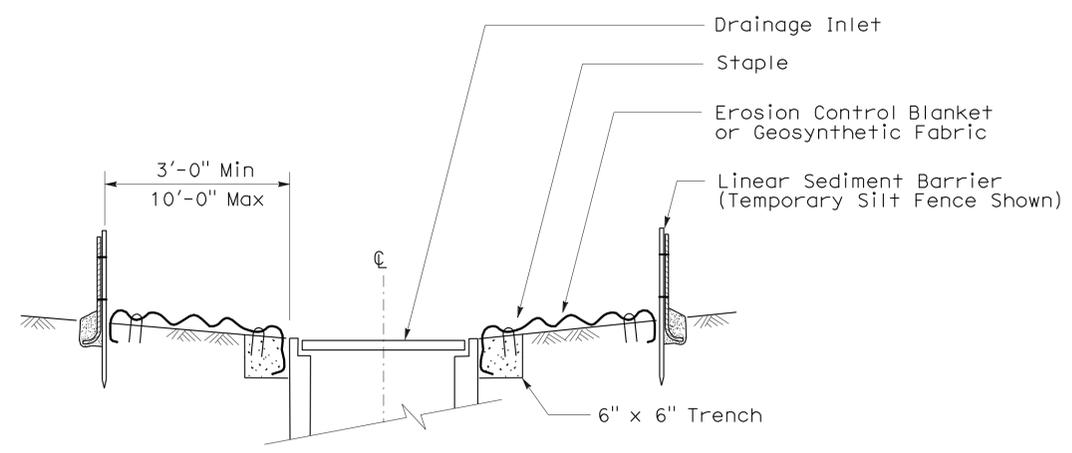
2006 REVISED STANDARD PLAN RSP T2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	142	2.5/6.3	37	44

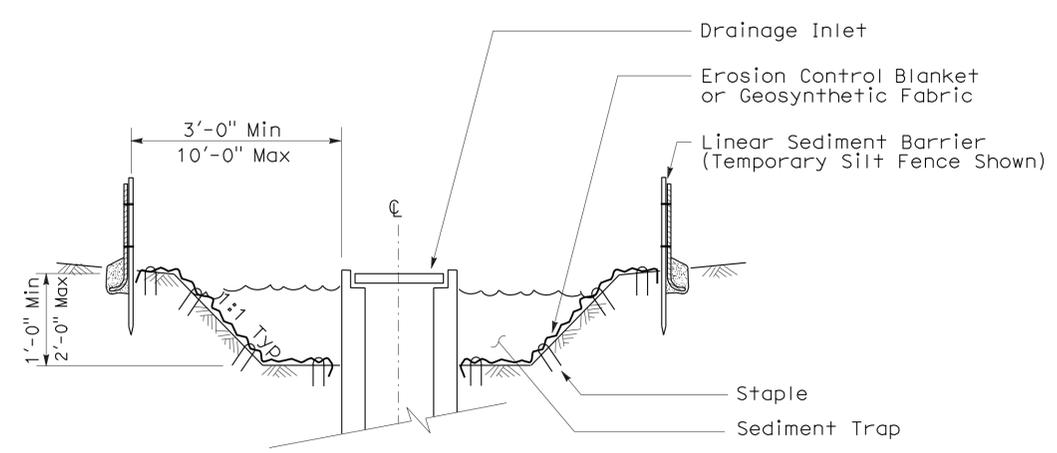
Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT
 August 15, 2008
 PLANS Approval DATE
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To accompany plans dated 5-16-11

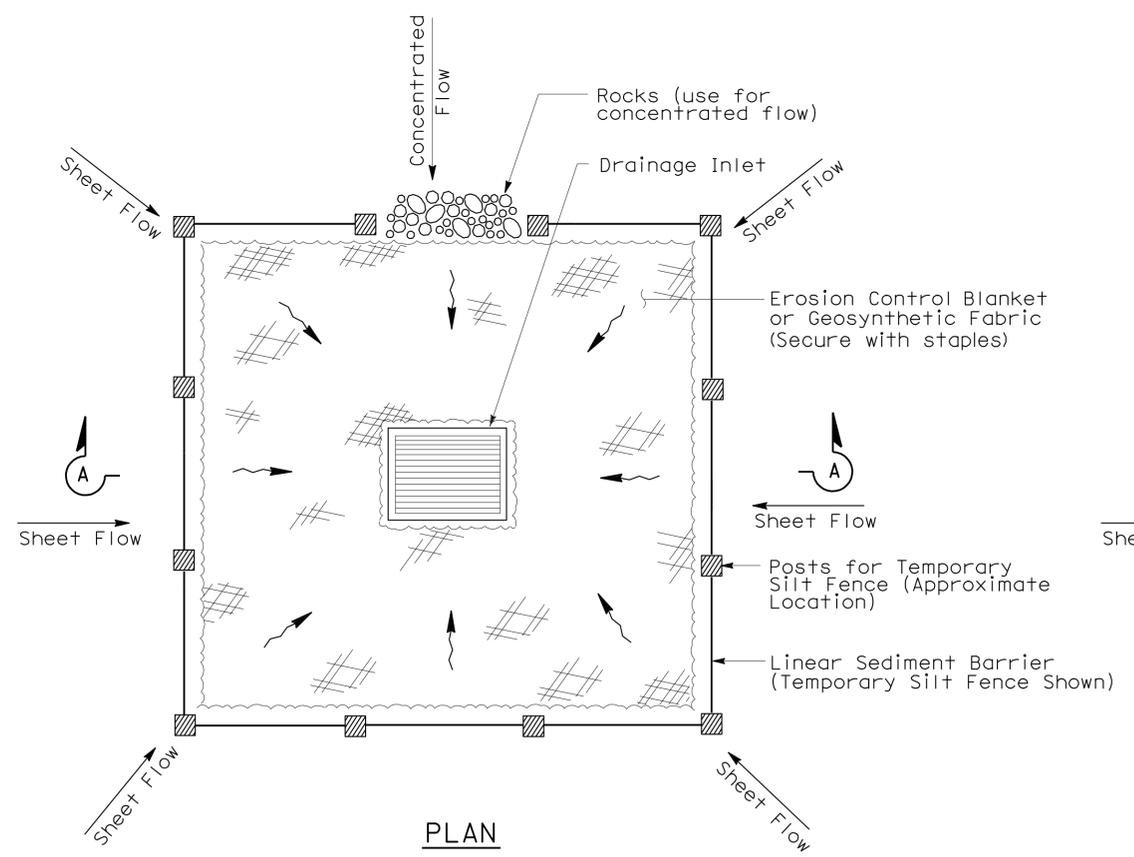
- NOTES:**
- See Standard Plan T51 for Temporary Silt Fence.
 - Dimensions may vary to fit field conditions.



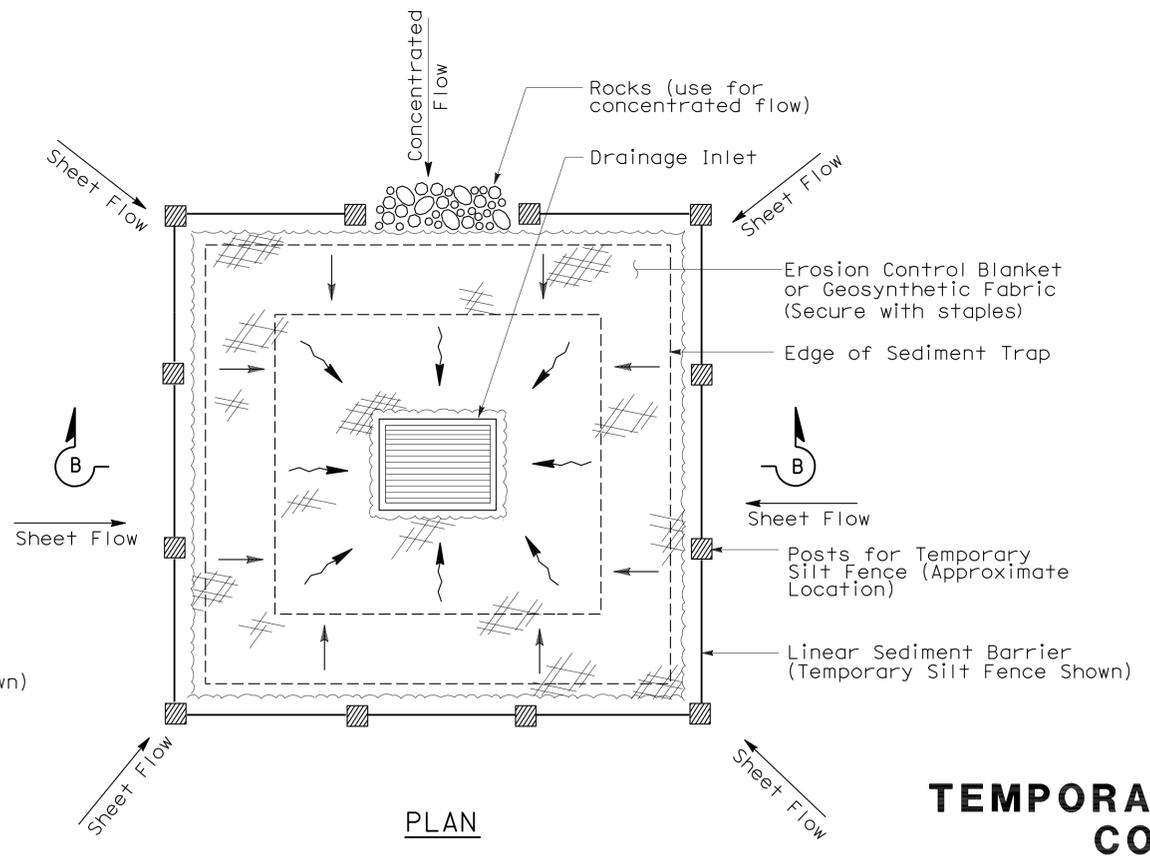
SECTION A-A



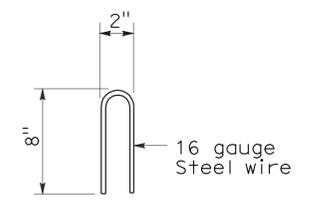
SECTION B-B



TEMPORARY DRAINAGE INLET PROTECTION (TYPE 1)



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



STAPLE DETAIL

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)
 NO SCALE

NSP T61 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP T61

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	142	2.5/6.3	38	44

Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT
 August 15, 2008
 PLANS APPROVAL DATE
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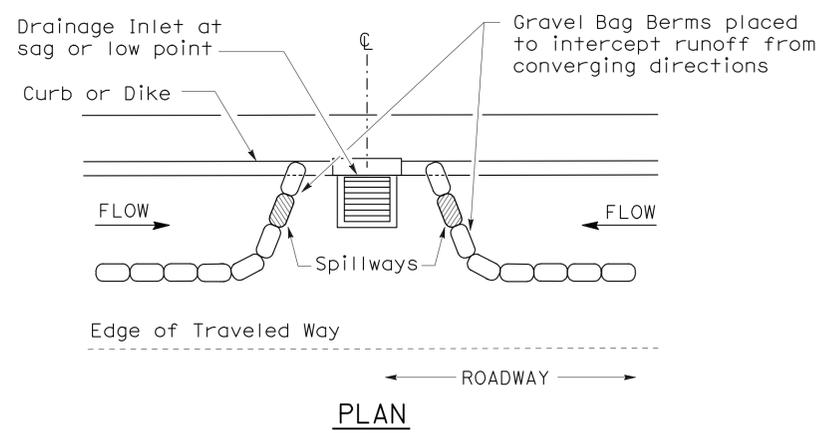


To accompany plans dated 5-16-11

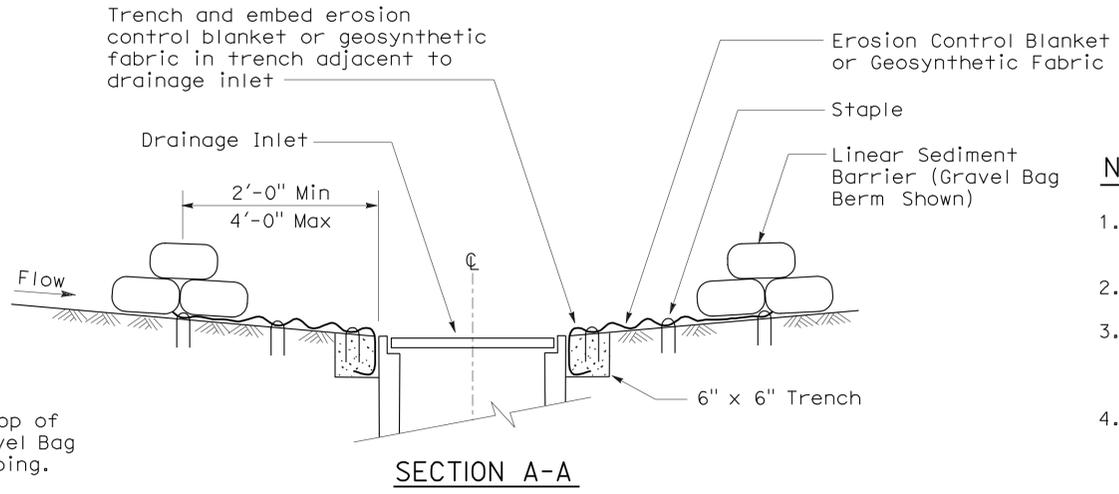
GRAVEL BAG BERM (TYPE 3A) SPACING TABLE

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

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



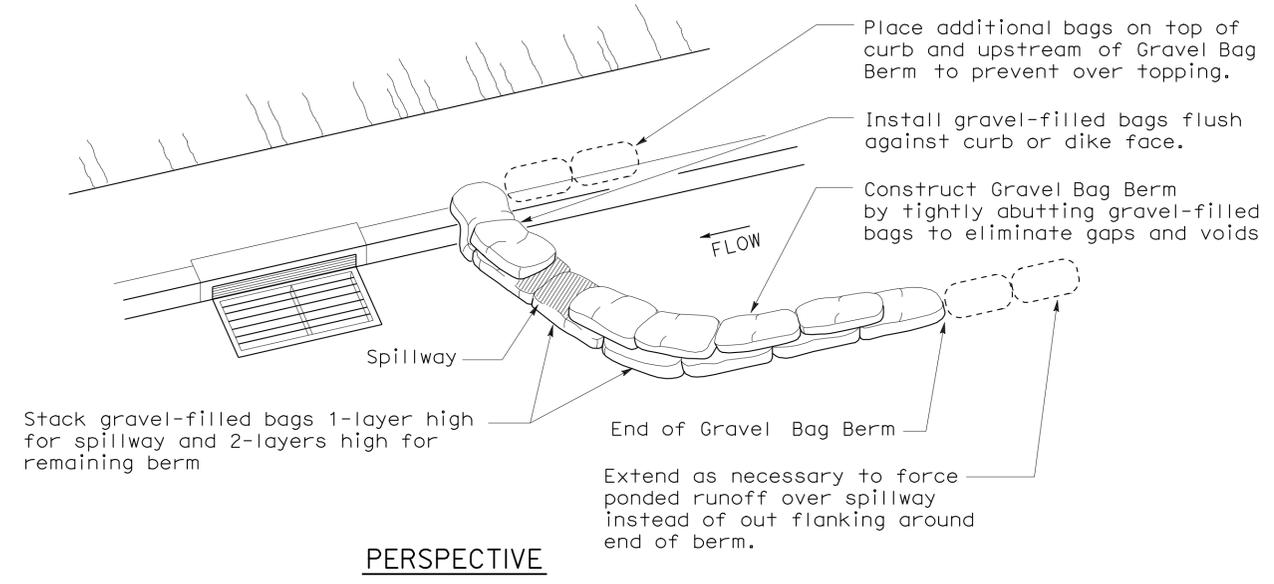
PLAN
CONFIGURATION FOR SAG POINT INLET (GRAVEL BAG BERM)



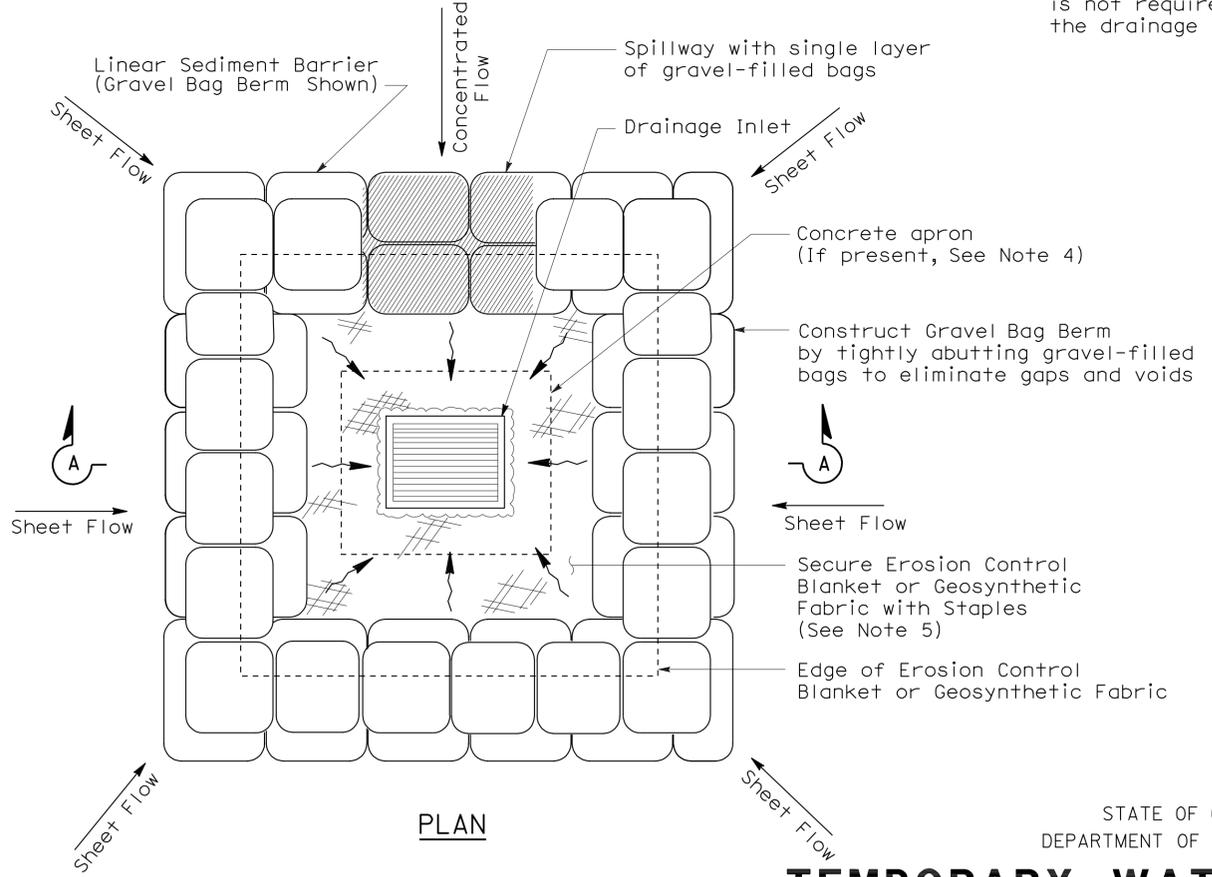
SECTION A-A

NOTES:

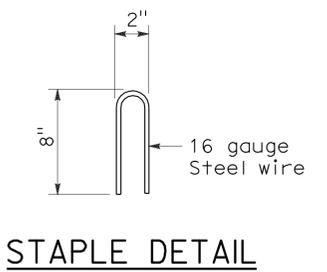
1. Place safety cones adjacent to drainage inlet protection.
2. Dimensions may vary to fit field conditions.
3. Install a minimum of 3 gravel bag berms upstream of each drainage inlet to be protected.
4. Position erosion control blanket or geosynthetic fabric at edge of concrete apron and secure in trench.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



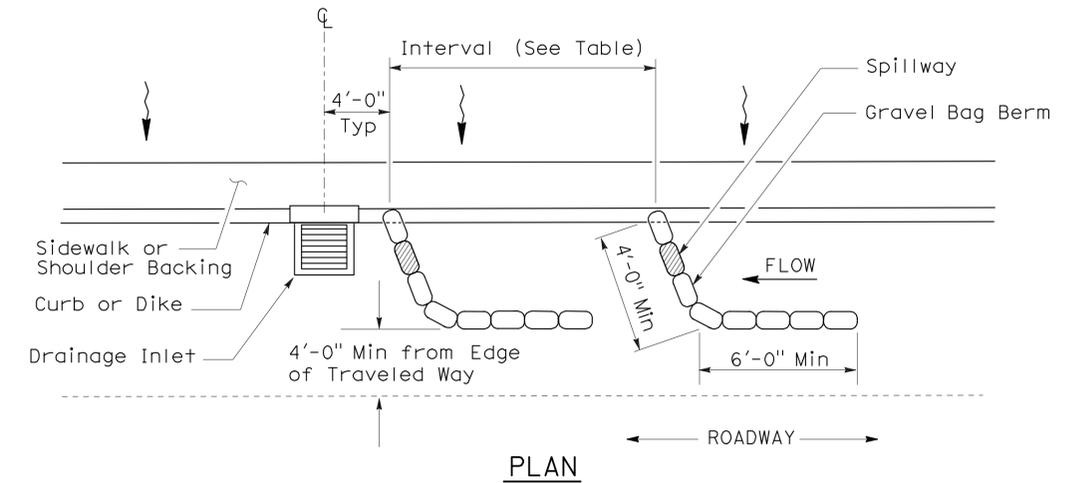
PERSPECTIVE



PLAN
TEMPORARY DRAINAGE INLET PROTECTION (TYPE 3B)



STAPLE DETAIL



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

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

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

2006 NEW STANDARD PLAN NSP T62

FLEXIBLE SEDIMENT BARRIER SPACING TABLE

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

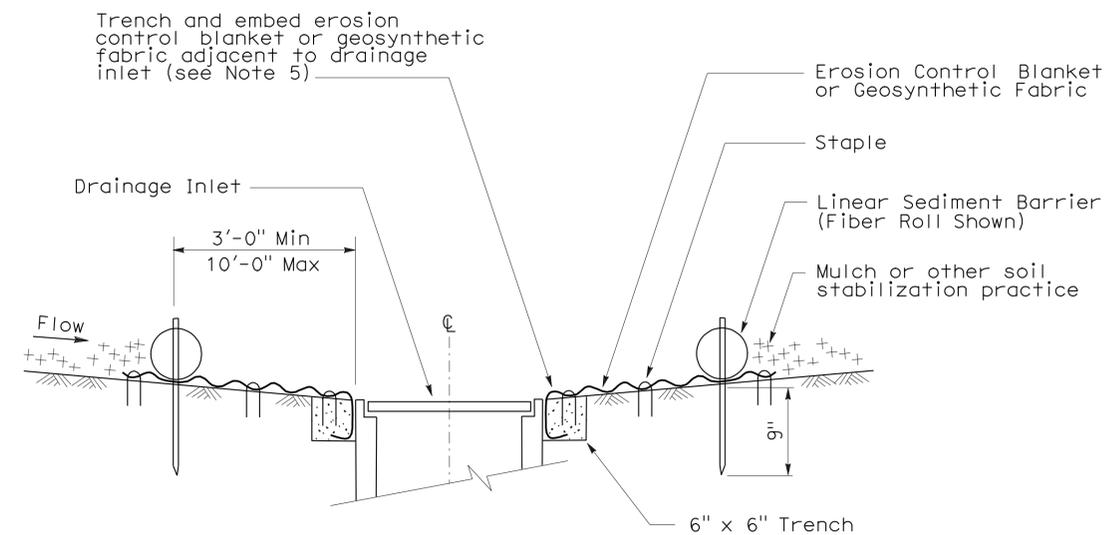
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	142	2.5/6.3	39	44

Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT
 August 15, 2008
 PLANS APPROVAL DATE
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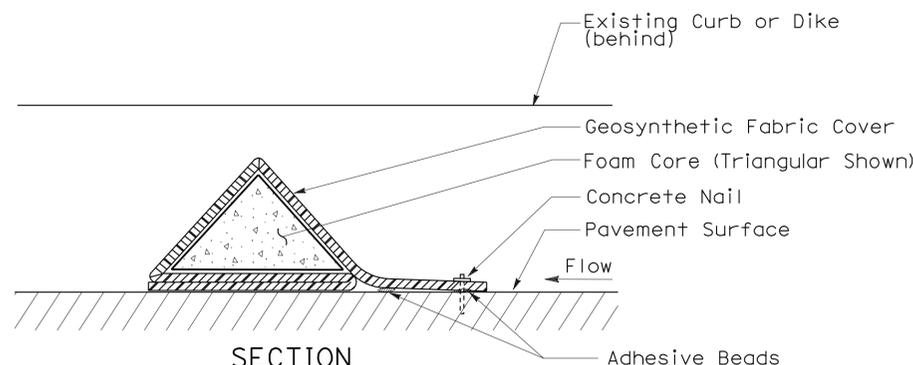
To accompany plans dated 5-16-11

NOTES:

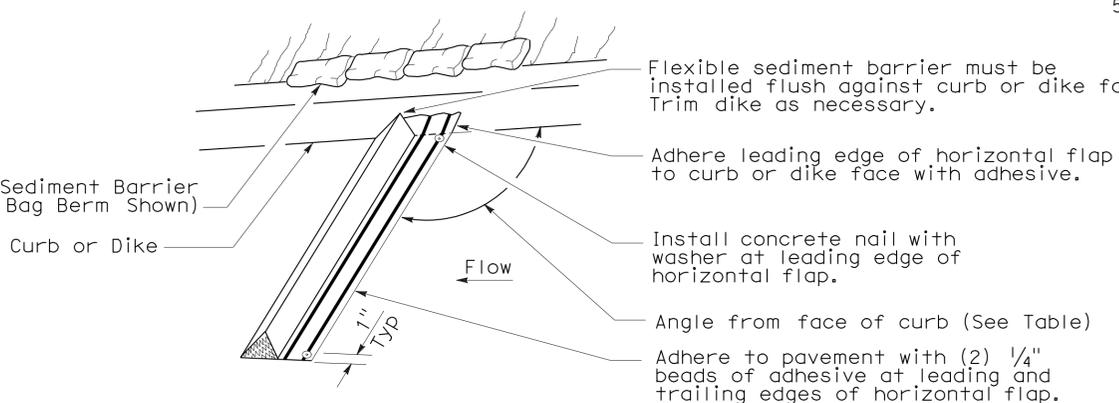
- See Standard Plan T51 for Temporary Silt Fence.
- Dimensions may vary to fit field conditions.
- Install a minimum of 3 flexible sediment barriers upstream of each drainage inlet to be protected.
- Position erosion control blanket or geosynthetic fabric at edge of concrete apron and secure in trench.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



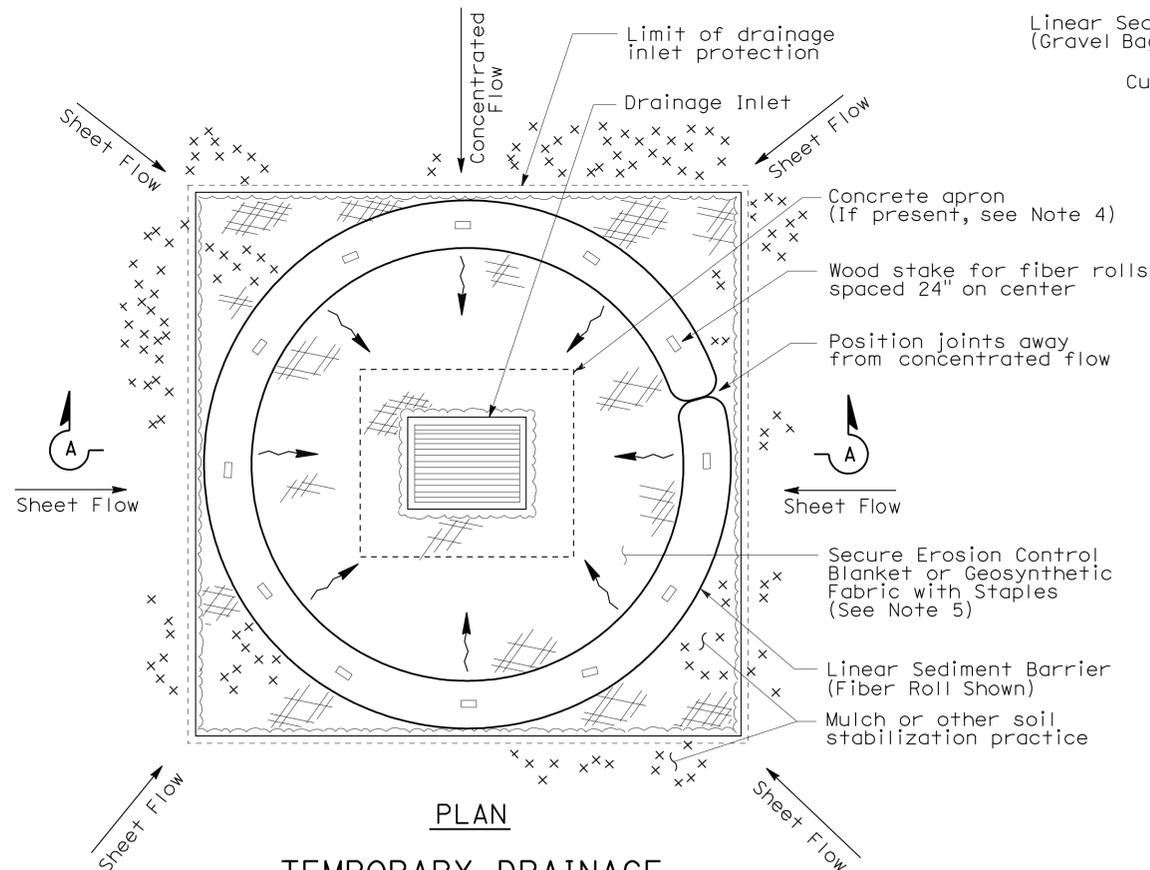
SECTION A-A



FLEXIBLE SEDIMENT BARRIER DETAIL (FOAM BARRIER SHOWN)

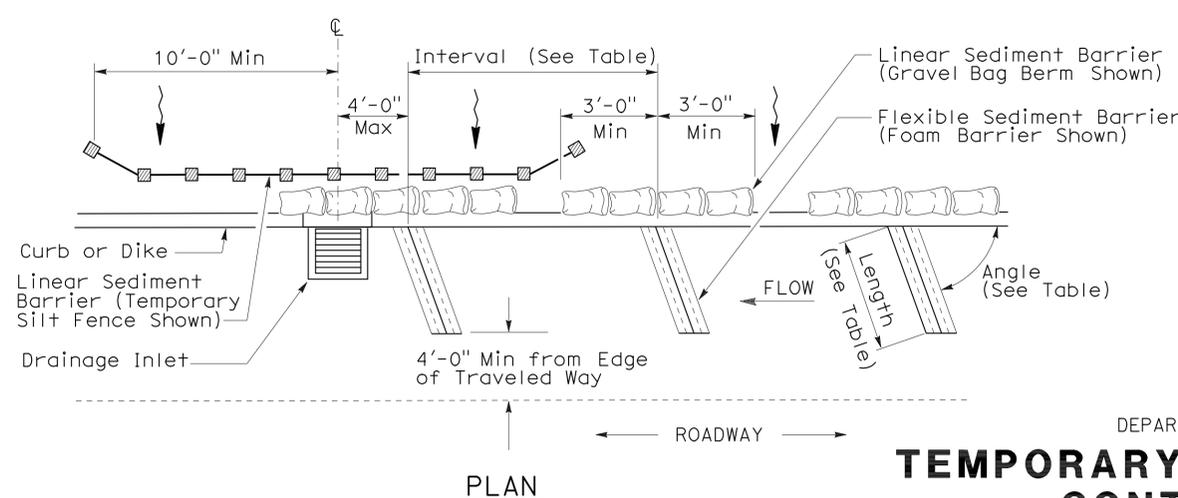


PERSPECTIVE



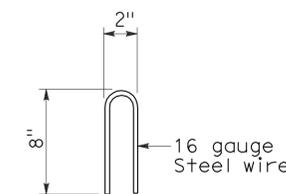
PLAN

TEMPORARY DRAINAGE INLET PROTECTION (TYPE 4A)



PLAN

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



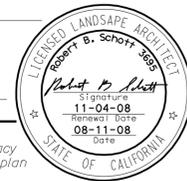
STAPLE DETAIL

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

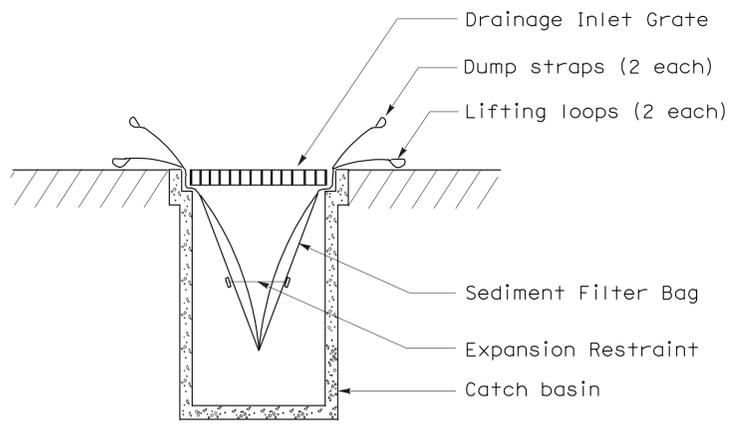
NO SCALE
NSP T63 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	142	2.5/6.3	40	44

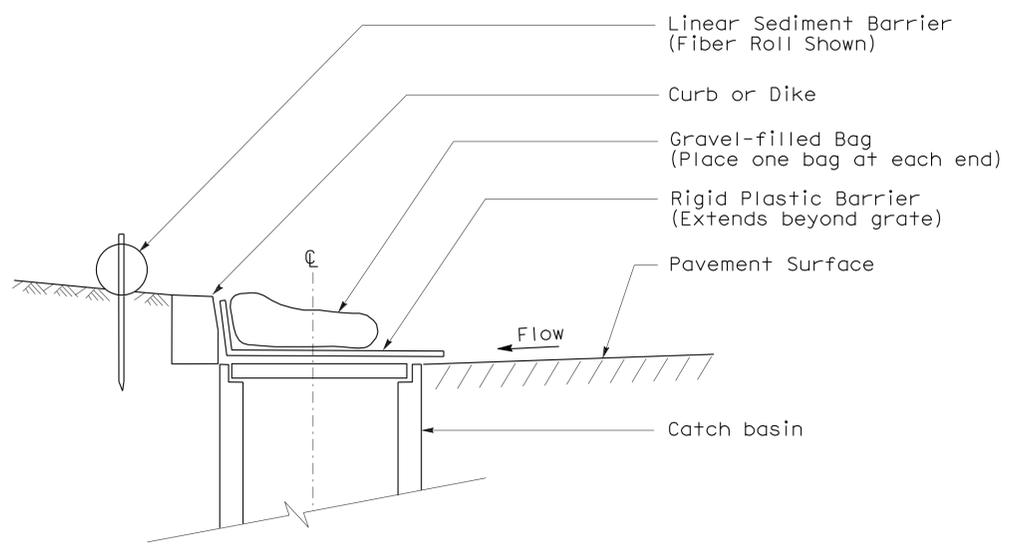
Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT
 August 15, 2008
 PLANS APPROVAL DATE
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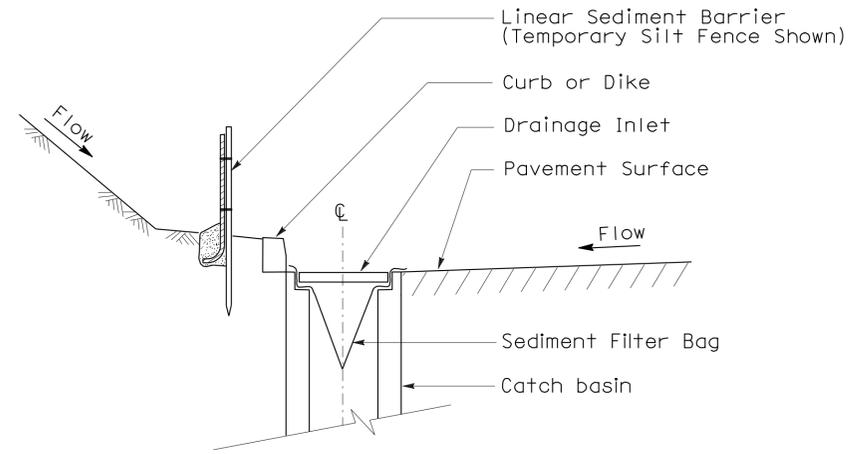
To accompany plans dated 5-16-11



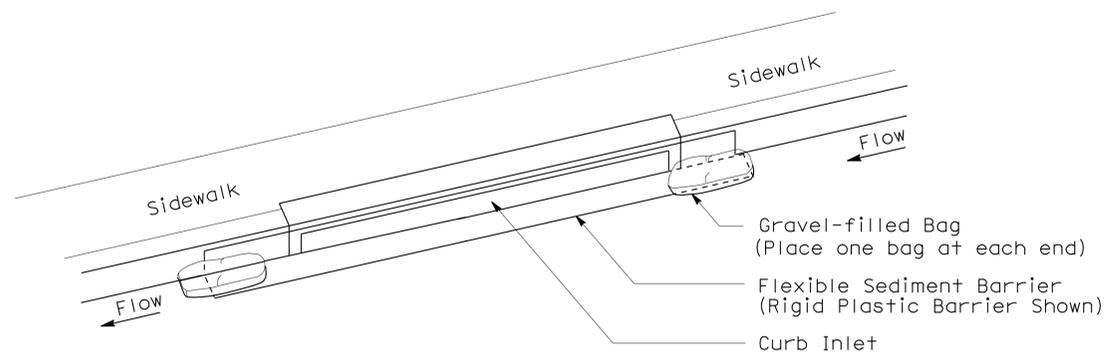
SECTION B-B
SEDIMENT FILTER BAG DETAIL



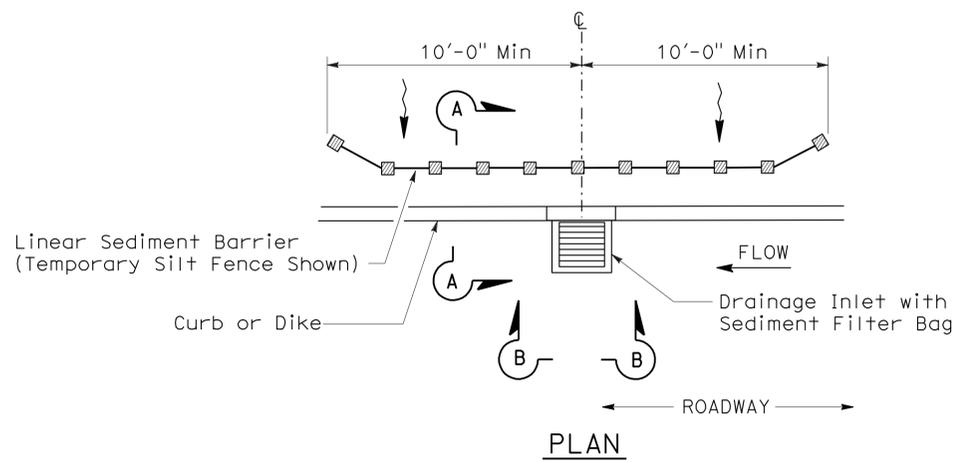
SECTION
TEMPORARY DRAINAGE
INLET PROTECTION (TYPE 6A)
(CATCH BASIN WITH GRATE)



SECTION A-A



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



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

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)

NO SCALE

NSP T64 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

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		
32		
35		
36-20A		

NOTES:

- 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.
- Luminaires shall be the cutoff type, ANSI Type III medium cutoff lighting distribution, unless otherwise specified.
- Variations noted adjacent to symbol on project plans.

- 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
	mv	Mercury vapor lighting fixture
N	N	Neutral (Grounded Conductor)
NC	NC	Normally closed
NO	NO	Normally open
PB	pb	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		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
12	Ora	142	2.5/6.3	41	44

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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

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To accompany plans dated 5-16-11

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

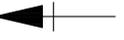
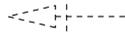
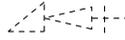
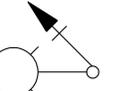
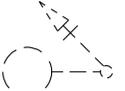
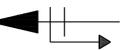
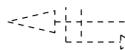
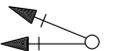
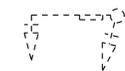
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
12	Ora	142	2.5/6.3	42	44

Jeffrey G. McRae
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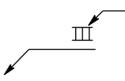
CONDUIT

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

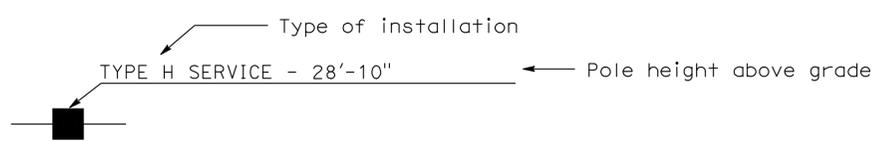
SIGNAL EQUIPMENT

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 louvered "LG" indicates louvered 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

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

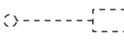
POLE-MOUNTED SERVICE DESIGNATION



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
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**ELECTRICAL SYSTEMS
 (SYMBOLS AND ABBREVIATIONS)**
 NO SCALE

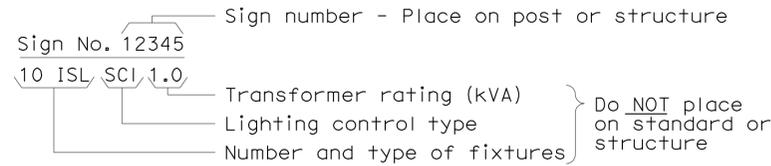
RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B
 DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1B

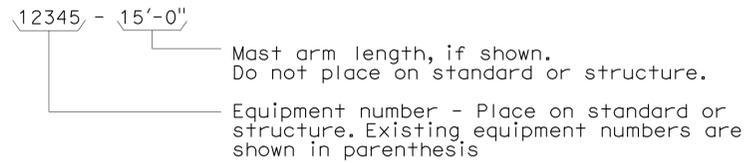
2006 REVISED STANDARD PLAN RSP ES-1B

EQUIPMENT IDENTIFICATION

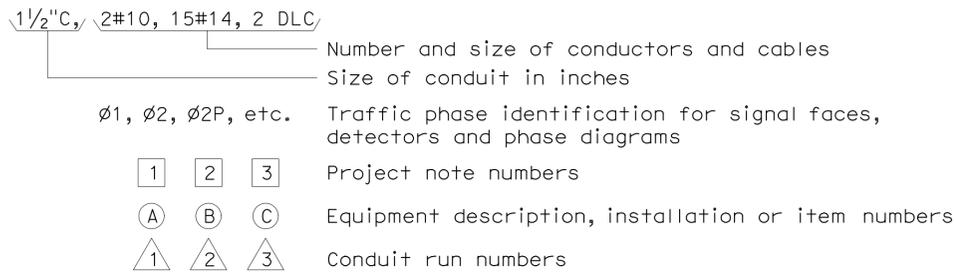
ILLUMINATED SIGN IDENTIFICATION NUMBER:



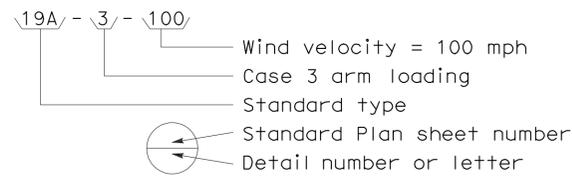
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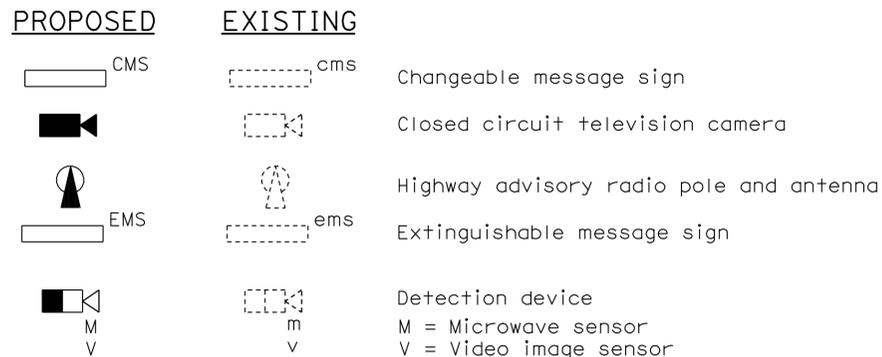
CONDUIT AND CONDUCTOR IDENTIFICATION:



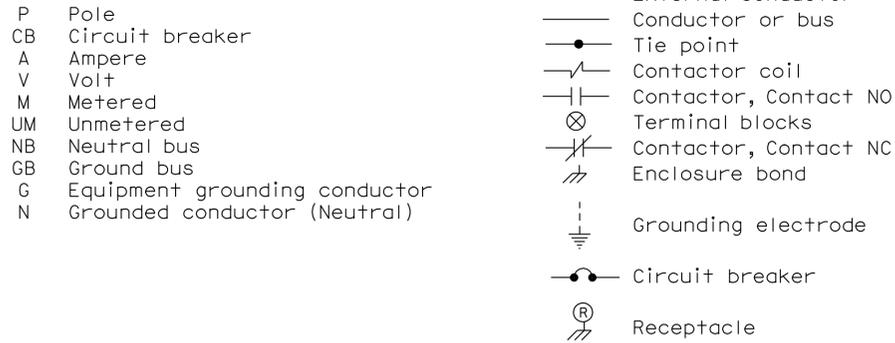
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



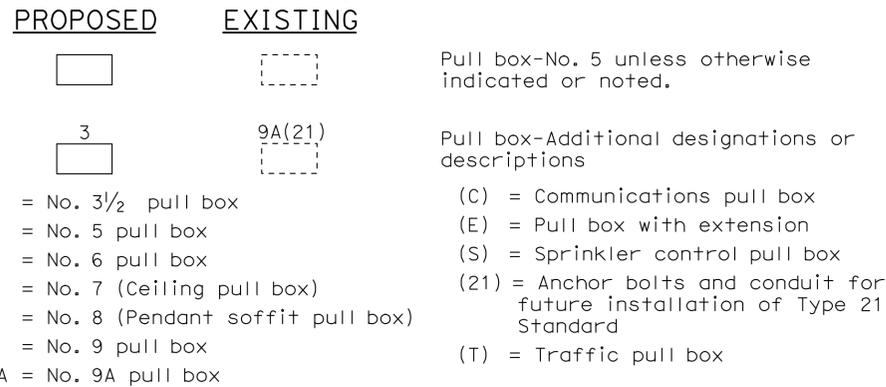
MISCELLANEOUS EQUIPMENT



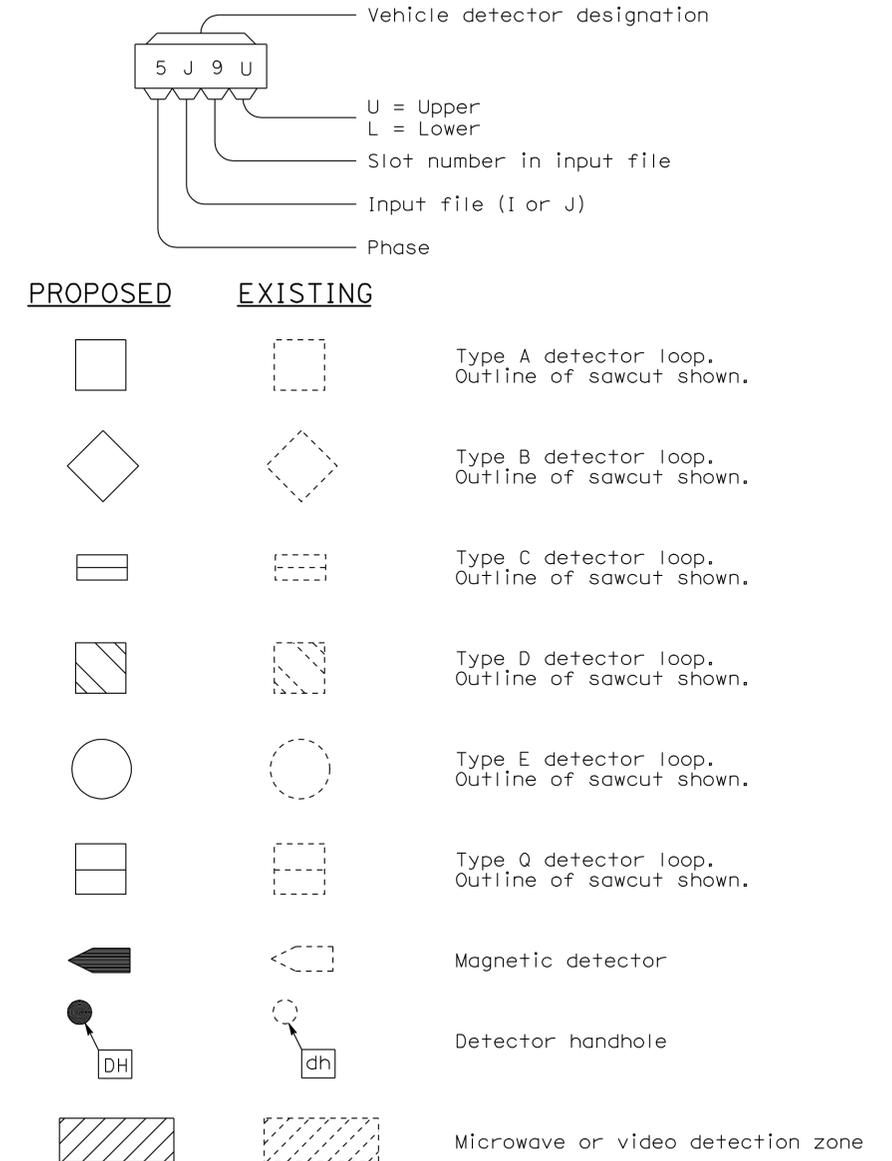
WIRING DIAGRAM LEGEND



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
12	Ora	142	2.5/6.3	44	44

REGISTERED ELECTRICAL ENGINEER
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 Jeffrey G. McRae
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 STATE OF CALIFORNIA

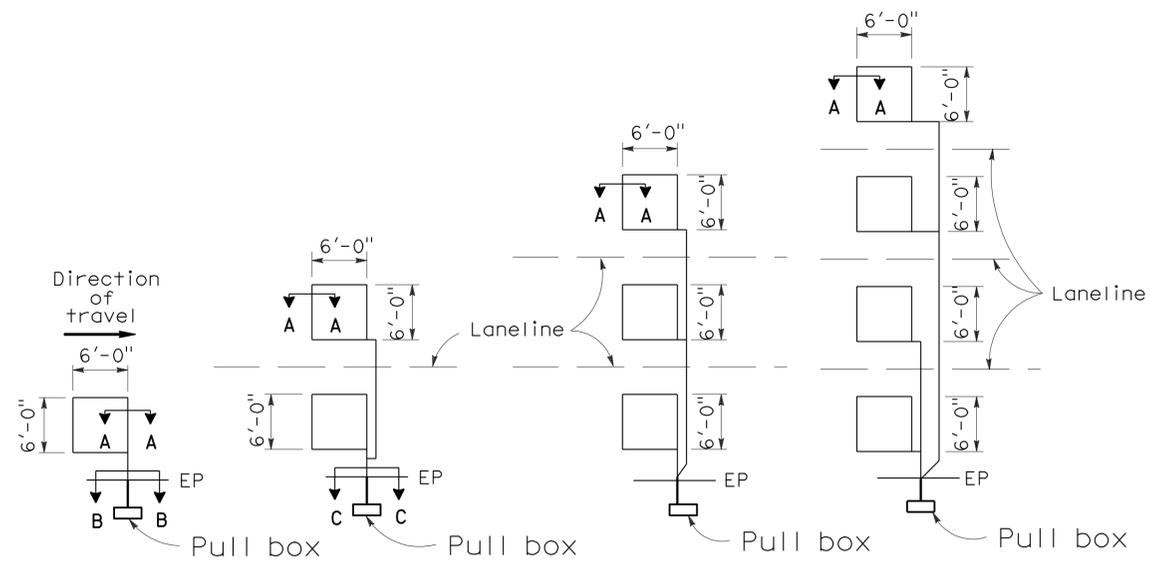
October 5, 2007
 PLANS APPROVAL DATE

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To accompany plans dated 5-16-11

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.

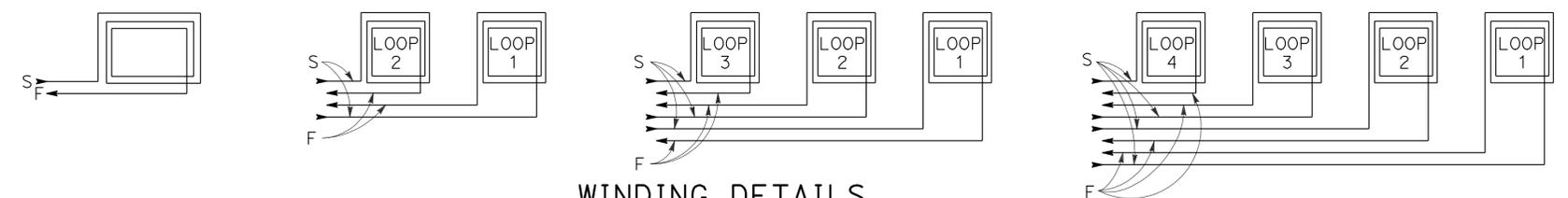


TYPE 1A INSTALLATION TYPE 2A INSTALLATION TYPE 3A INSTALLATION TYPE 4A INSTALLATION
 Laneline Pull box Pull box Pull box Pull box

SAWCUT DETAILS

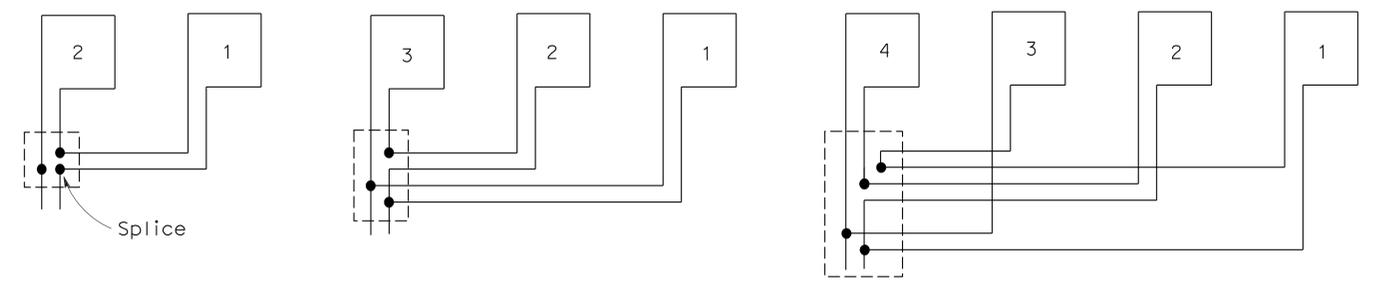
(Type A loop detector configurations illustrated)

- 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)



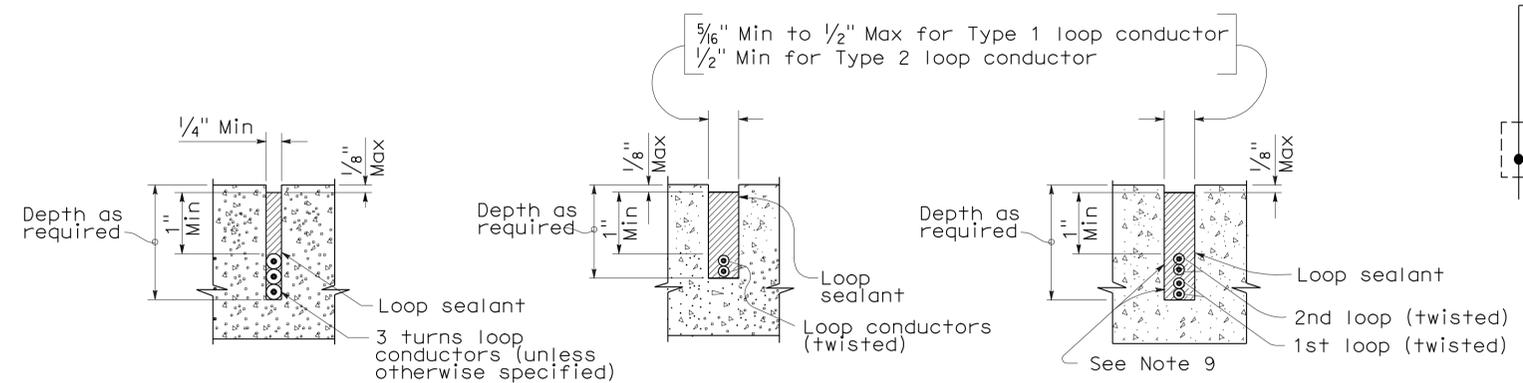
WINDING DETAILS

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

ELECTRICAL SYSTEMS (DETECTORS)

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

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.