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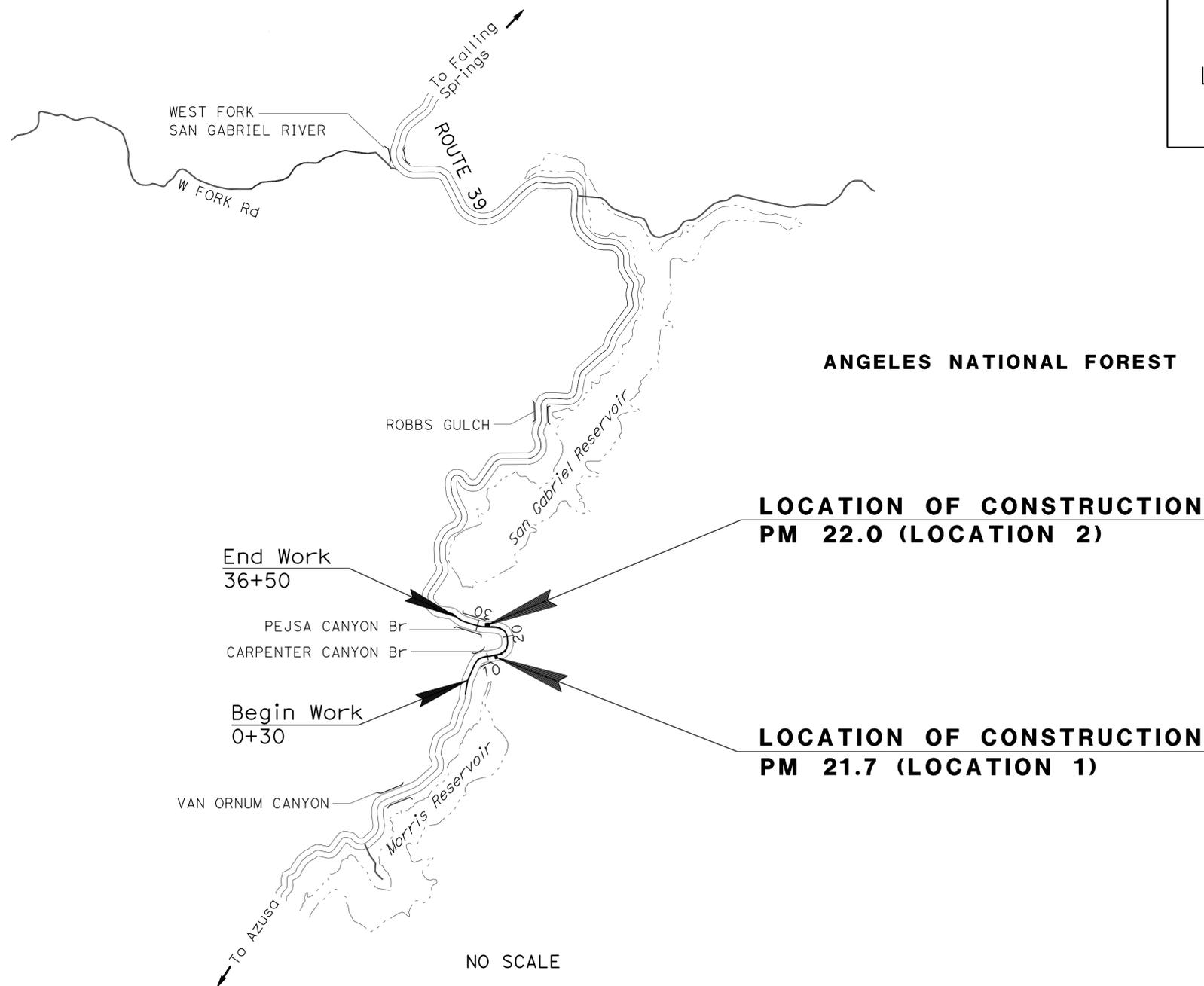
THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

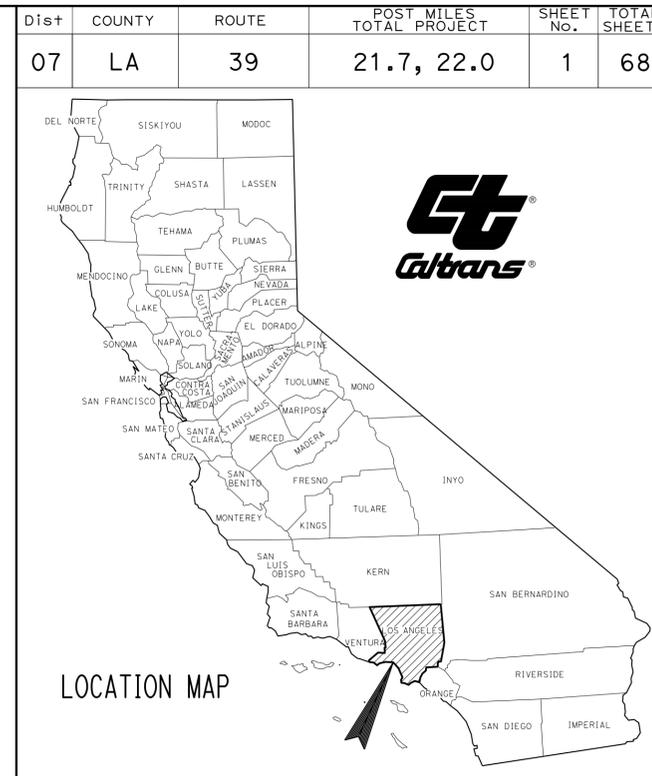
ER-45Y5(004)E

PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN LOS ANGELES COUNTY
AT 0.2 MILE NORTH OF CARPENTER CANYON BRIDGE AND
AT 0.2 MILE SOUTH OF PEJSA CANYON BRIDGE

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010



NO SCALE



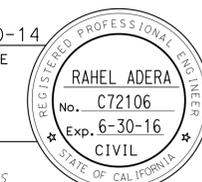
PROJECT MANAGER	JOHN K LEE
DESIGN ENGINEER	RAHEL ADERA

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

Rahel Adera 5-20-14
PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

June 23, 2014
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.	07-3X8204
PROJECT ID	0713000218

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN

FUNCTIONAL SUPERVISOR
 OJT KALU

CALCULATED/DESIGNED BY
 CHECKED BY

RAHEL ADERA
 CASIMIRO BAUTISTA

REVISED BY
 DATE

NOTES:

1. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.

PAVEMENT CLIMATE REGION
 SOUTH MOUNTAIN

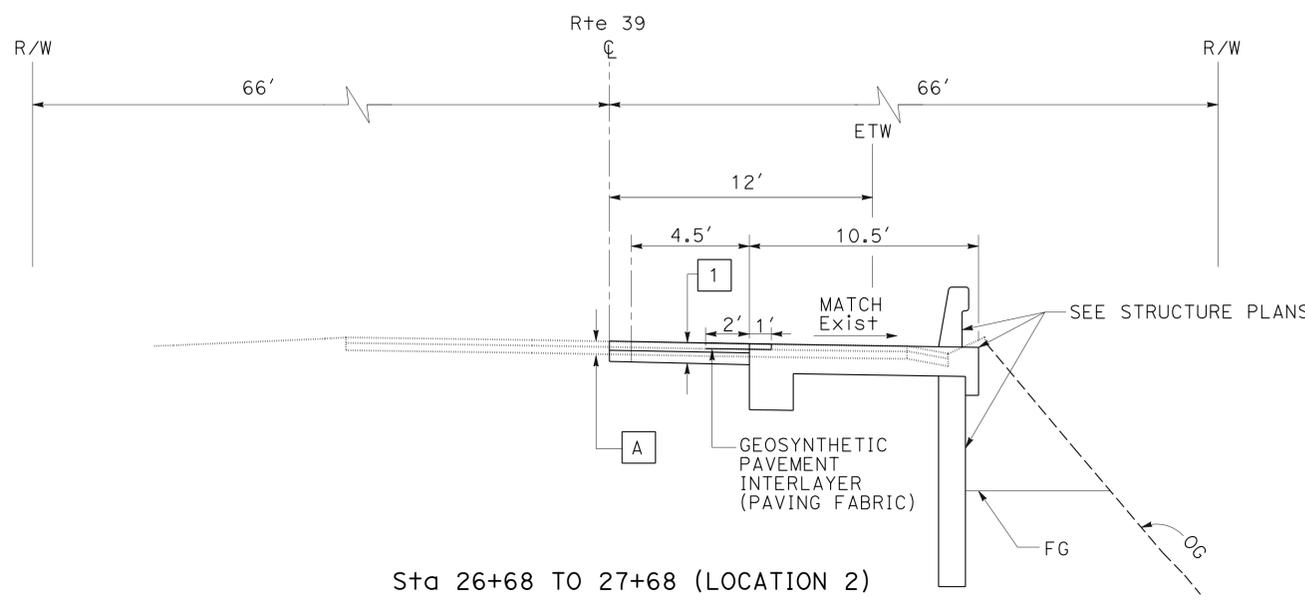
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	2	68

Rahel Adera 5-20-14
 REGISTERED CIVIL ENGINEER DATE

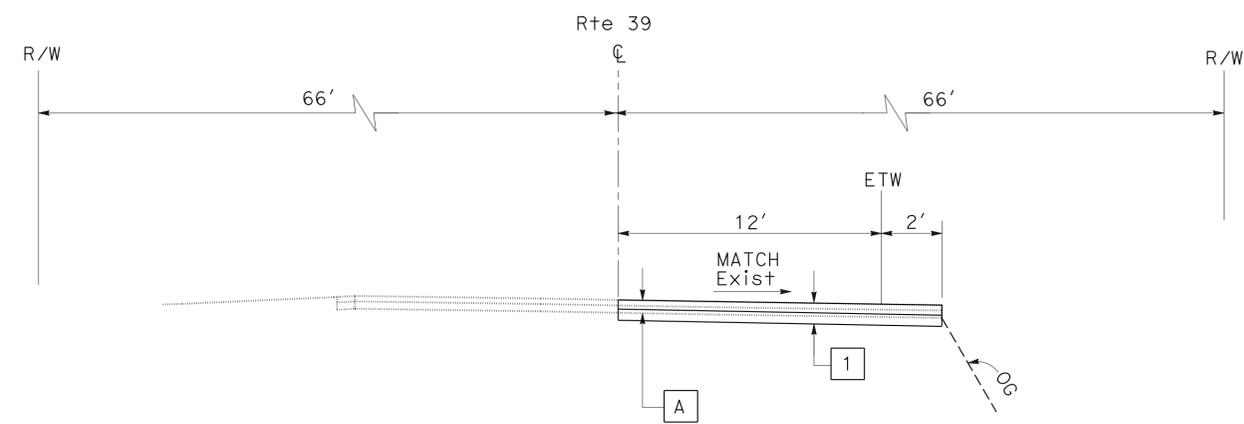
6-23-14
 PLANS APPROVAL DATE

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

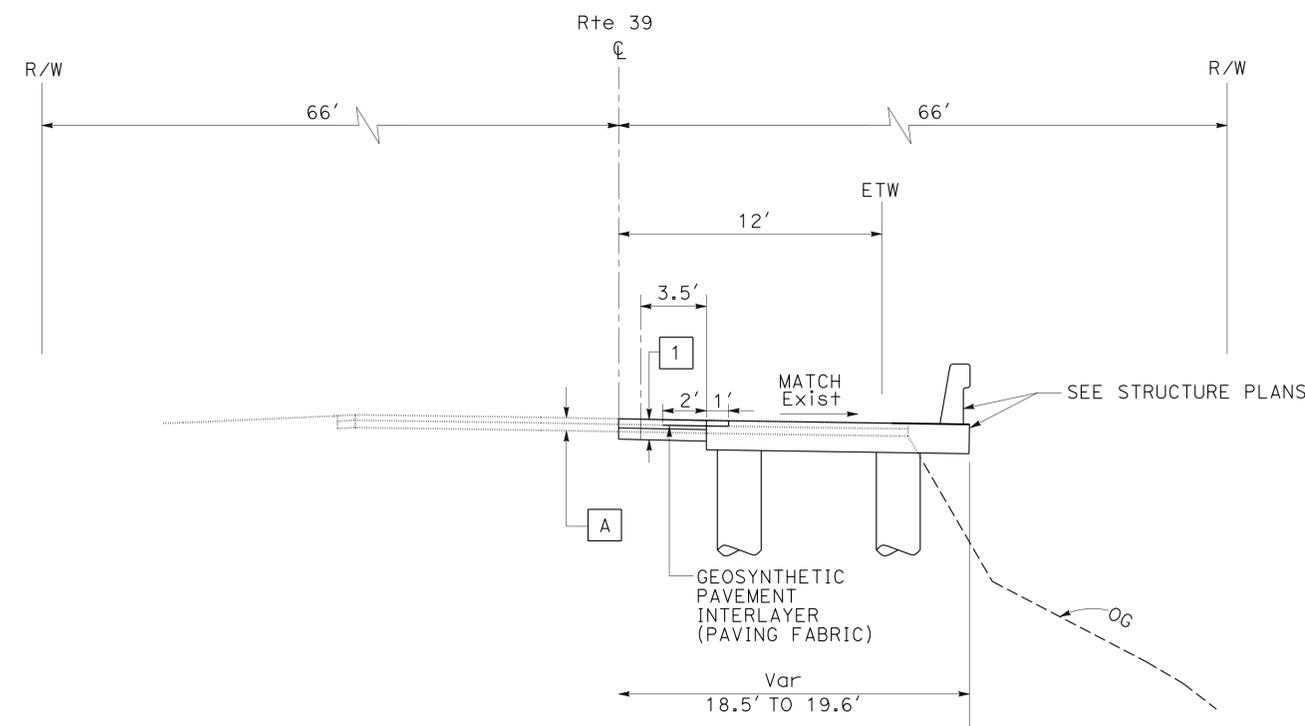
REGISTERED PROFESSIONAL ENGINEER
 RAHEL ADERA
 No. C72106
 Exp. 6-30-16
 CIVIL
 STATE OF CALIFORNIA



Sta 26+68 TO 27+68 (LOCATION 2)



Sta 11+95 TO Sta 12+00
 Sta 12+60.71 TO Sta 12+66
 Sta 26+63 TO Sta 26+68
 Sta 27+68 TO Sta 27+73



Sta 12+00 TO 12+60.71 (LOCATION 1)

ROUTE 39

TYPICAL CROSS SECTIONS
 NO SCALE

X-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN
 FUNCTIONAL SUPERVISOR: OJI KALU
 RAHEL ADERA
 CASIMIRO BAUTISTA
 REVISIONS: (Grid with 'x' marks)
 CALCULATED/DESIGNED BY: (Grid with 'x' marks)
 CHECKED BY: (Grid with 'x' marks)
 REVISED BY: (Grid with 'x' marks)
 DATE REVISED: (Grid with 'x' marks)

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	3	68

Rahel Adera 5-20-14
 REGISTERED CIVIL ENGINEER DATE

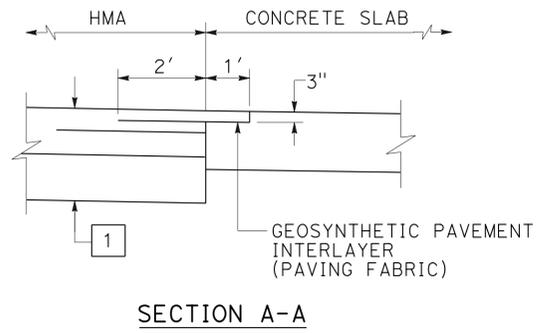
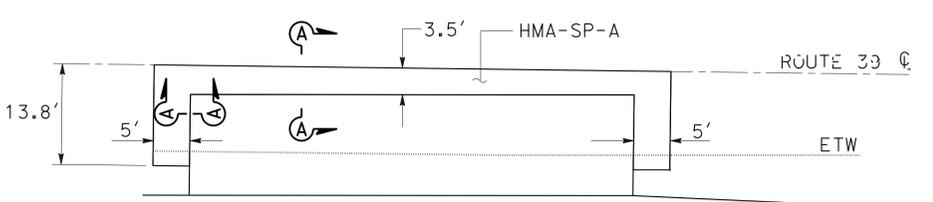
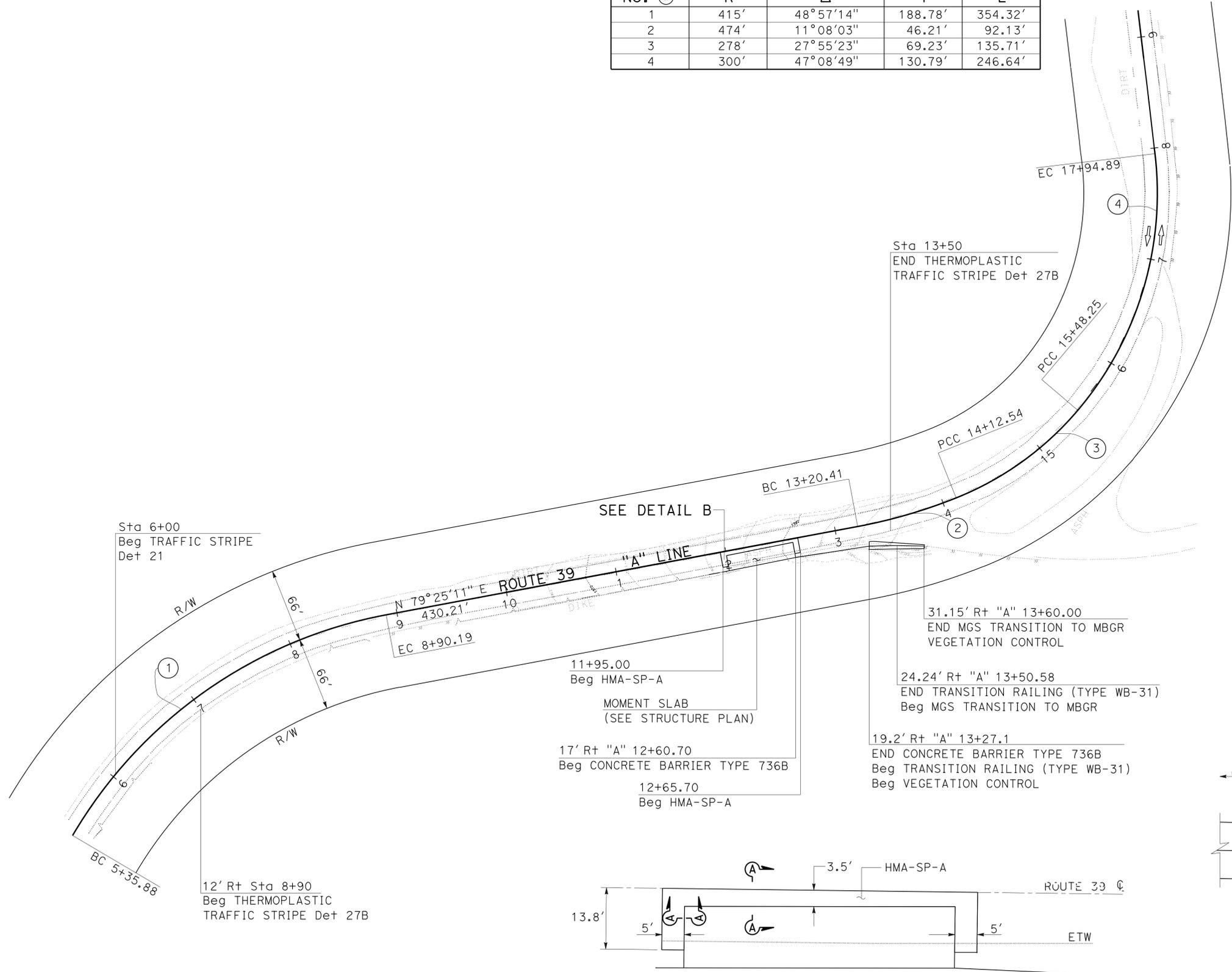
6-23-14
 PLANS APPROVAL DATE

RAHEL ADERA
 No. C72106
 Exp. 6-30-16
 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.

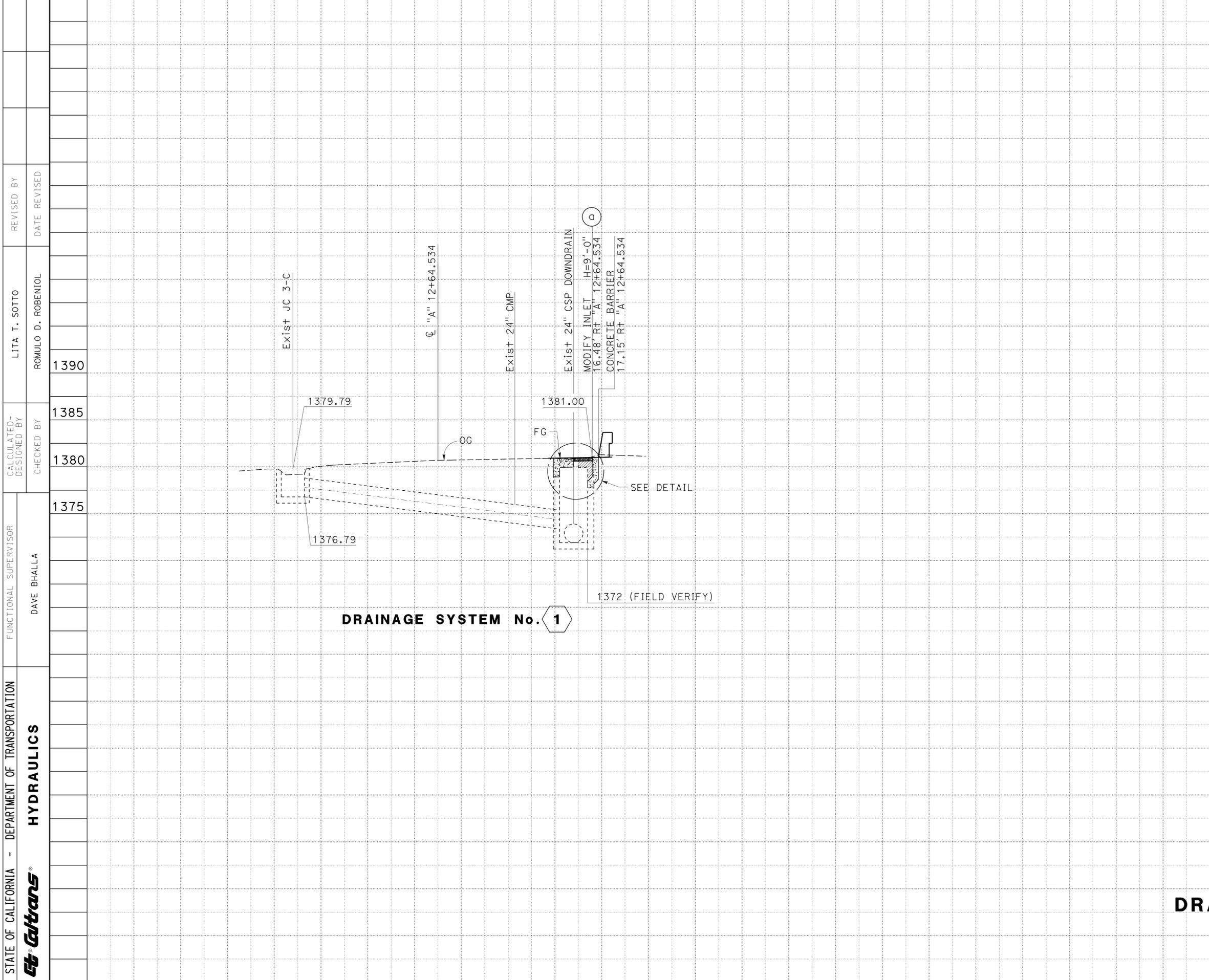
CURVE DATA

No. (⊕)	R	Δ	T	L
1	415'	48°57'14"	188.78'	354.32'
2	474'	11°08'03"	46.21'	92.13'
3	278'	27°55'23"	69.23'	135.71'
4	300'	47°08'49"	130.79'	246.64'



DETAIL B
LOCATION-1 PM 21.7

LAYOUT
 SCALE: 1" = 50'



DRAINAGE SYSTEM No. 1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	6	68

5-20-14
 REGISTERED CIVIL ENGINEER DATE
 6-23-14
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 DAVE BHALLA
 No. 34350
 Exp. 9-30-15
 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.

DRAINAGE PROFILES

SCALE: Horiz 1" = 5'
Vert 1" = 5'

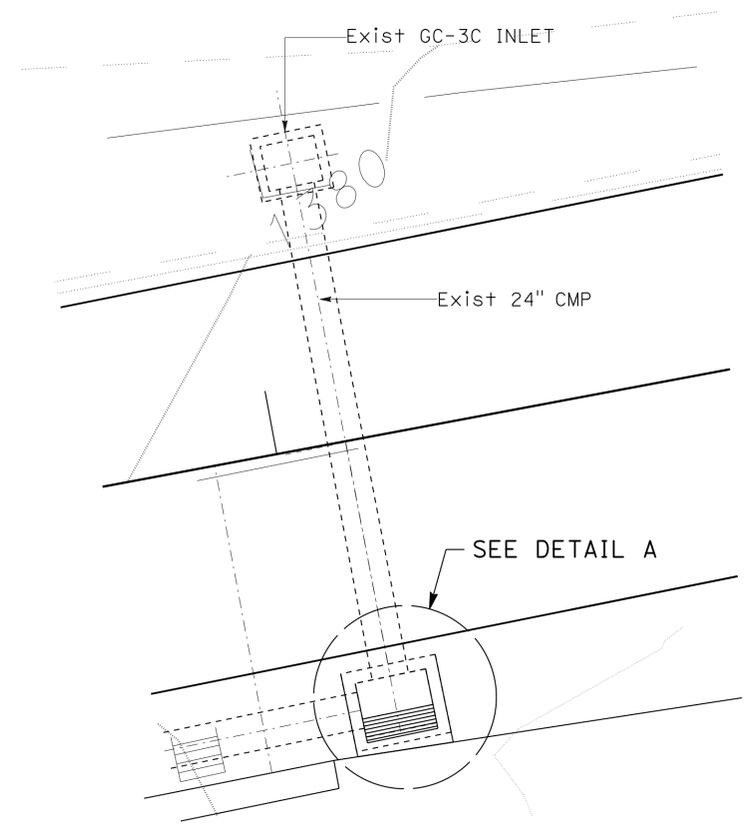
DP-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	7	68

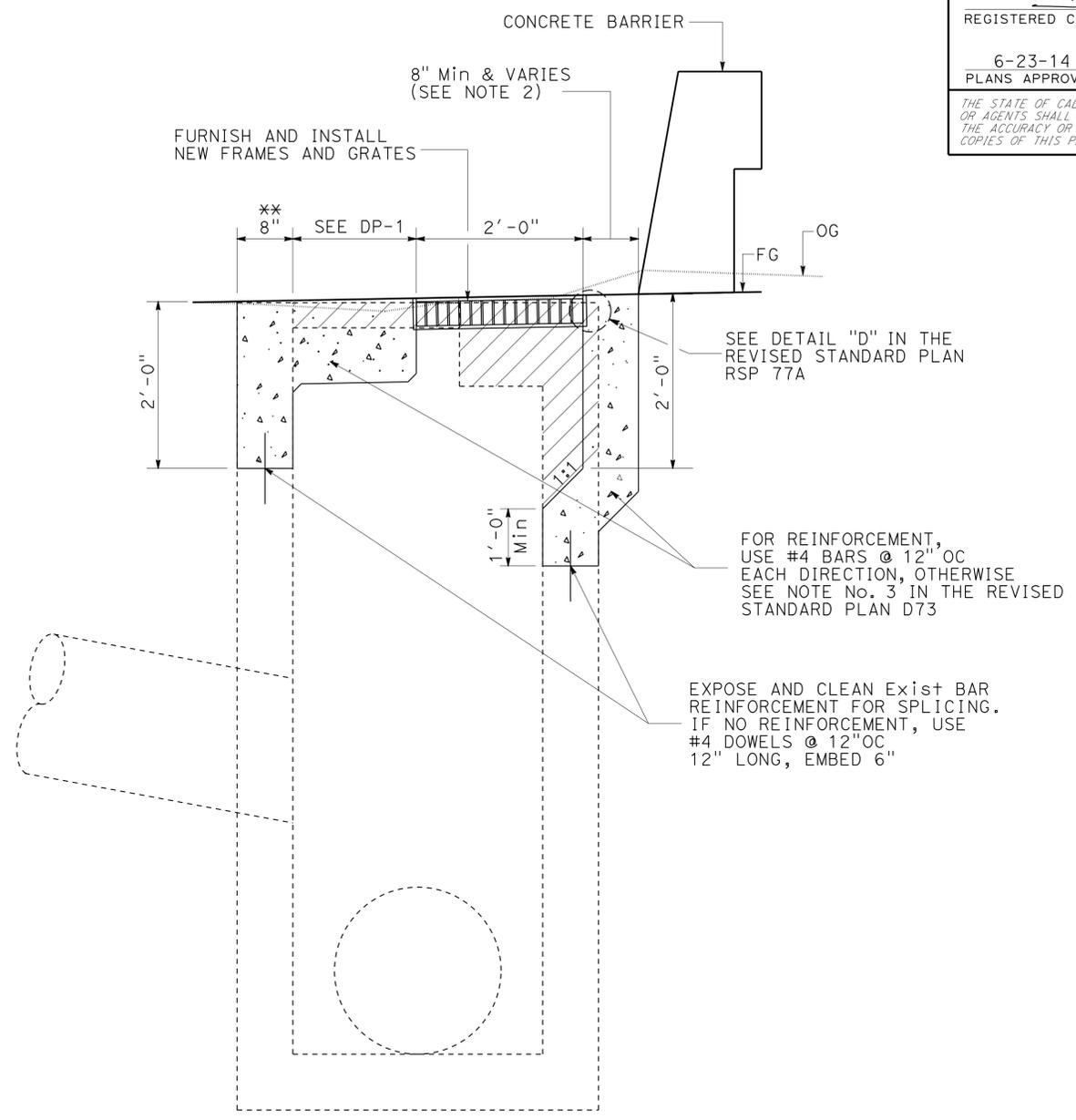
REGISTERED CIVIL ENGINEER	DATE
<i>[Signature]</i>	5-20-14
PLANS APPROVAL DATE	
6-23-14	

REGISTERED PROFESSIONAL ENGINEER
DAVE BHALLA
No. 34350
Exp. 9-30-15
CIVIL
STATE OF CALIFORNIA

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INLET LOCATION @ PM 21.67

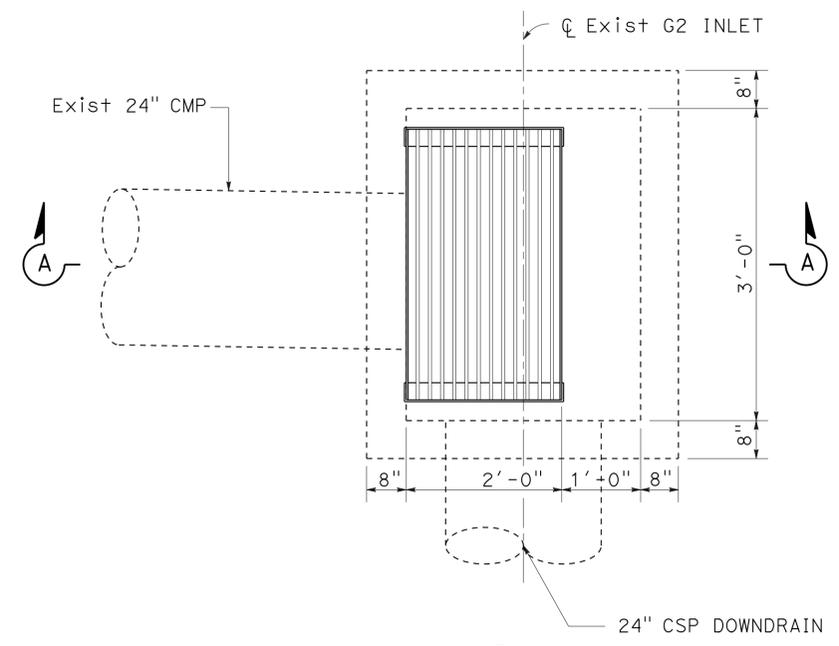


MODIFY INLET

** 8" OR TO MATCH EXISTING THICKNESS

NOTES:

1. SEE REVISED STANDARD PLAN RSP D77A AND D77B DATED APRIL 19, 2013 FOR FRAME AND GRATE DETAILS AND WEIGHTS OF MISCELLANEOUS IRON AND STEEL. PLEASE REFER TO DETAIL "D" AS SHOWN IN RECTANGULAR FRAME DETAILS.
2. THE WALL THICKNESSES OF THE MODIFY INLET SHOWN ABOVE VARY FROM 8" TO MATCH WITH THE ALIGNMENT OF THE CONCRETE BARRIER.
3. PLEASE PROVIDE ISOLATION JOINT AROUND DRAINAGE INLET AS SHOWN IN DETAIL "A" ON P45 OF THE STANDARD PLAN.



DETAIL A

DRAINAGE DETAILS

NO SCALE

DD-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	REVISOR	DATE
Caltrans	DAVE BHALLA	LITA T. SOTTO	
HYDRAULICS		ROMULO D. ROBERTIOL	
		CALCULATED/DESIGNED BY	CHECKED BY



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	9	68

Rahel Adera 5-20-14
REGISTERED CIVIL ENGINEER DATE

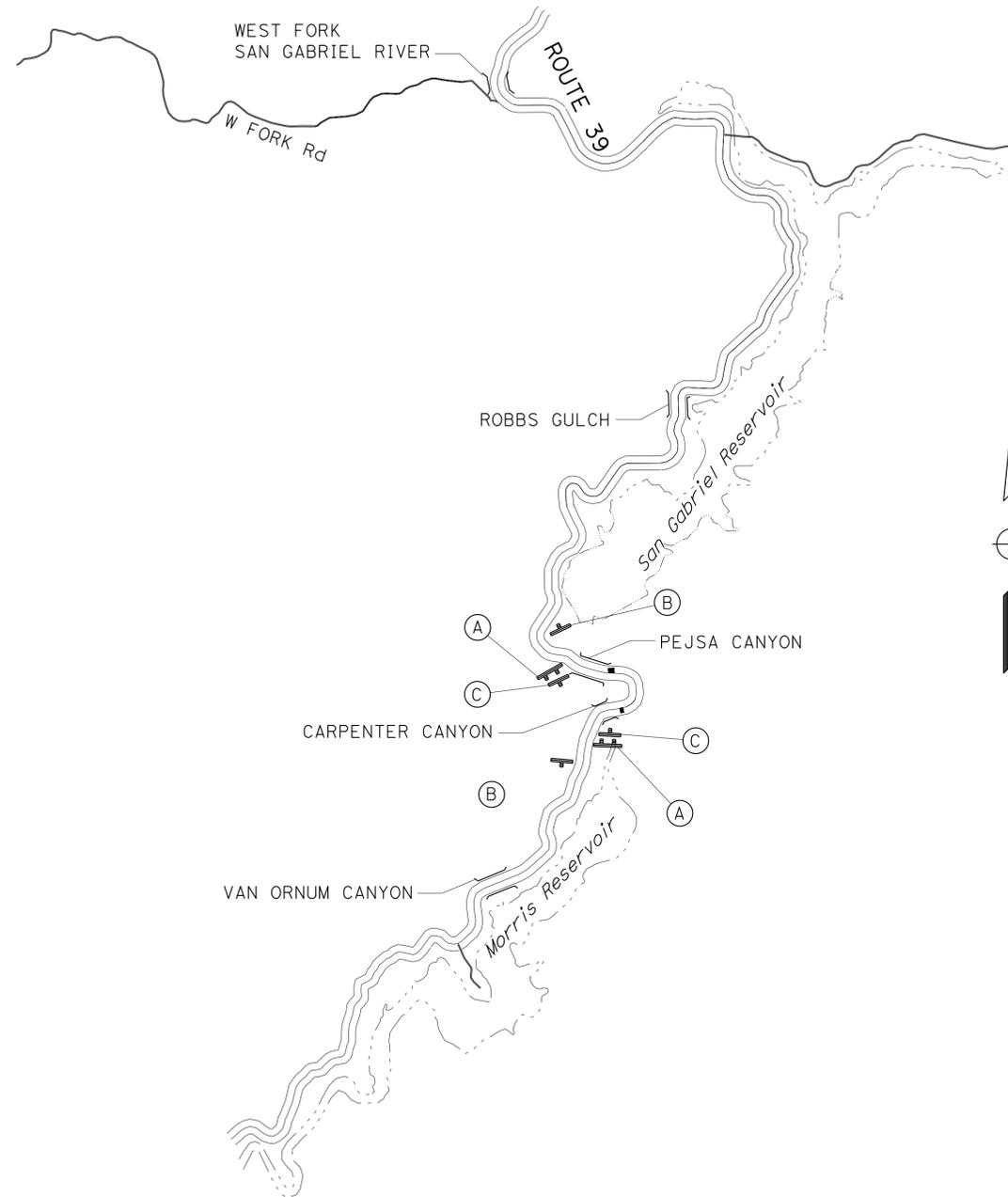
6-23-14
PLANS APPROVAL DATE

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NOTES:

1. LOCATIONS OF CONSTRUCTION AREA SIGNS ARE APPROXIMATE. EXACT SIGN LOCATIONS WILL BE DETERMINED BY THE ENGINEER.
2. FOR ADDITIONAL CONSTRUCTION AREA SIGNS, SEE TRAFFIC HANDLING PLANS.
3. "TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES" SIGNS MUST BE PLACED 500 FEET IN ADVANCE OF "ROAD WORK AHEAD" OR AS DETERMINED BY THE ENGINEER.



STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No. (X)	SIGN CODE		PANEL SIZE	SIGN MESSAGE	NUMBER OF POSTS AND SIZE	NUMBER OF SIGNS
	FEDERAL	CALIFORNIA				
A		C40 (CA)	108" x 42"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	2 - 6" x 6"	2
B	G20-2		36" x 18"	END ROAD WORK	1 - 4" x 6"	2
C	W20-1		36" x 36"	ROAD WORK AHEAD	1 - 4" x 6"	2

CONSTRUCTION AREA SIGNS

NO SCALE

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

CS-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION DESIGN

Caltrans

FUNCTIONAL SUPERVISOR	OJT KALU
CALCULATED/DESIGNED BY	CHECKED BY
RAHEL ADERA	CASIMIRO BAUTISTA
REVISED BY	DATE REVISED

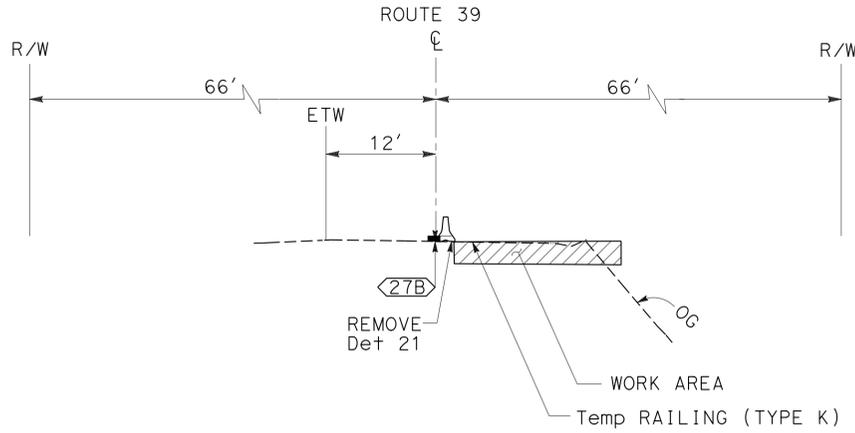
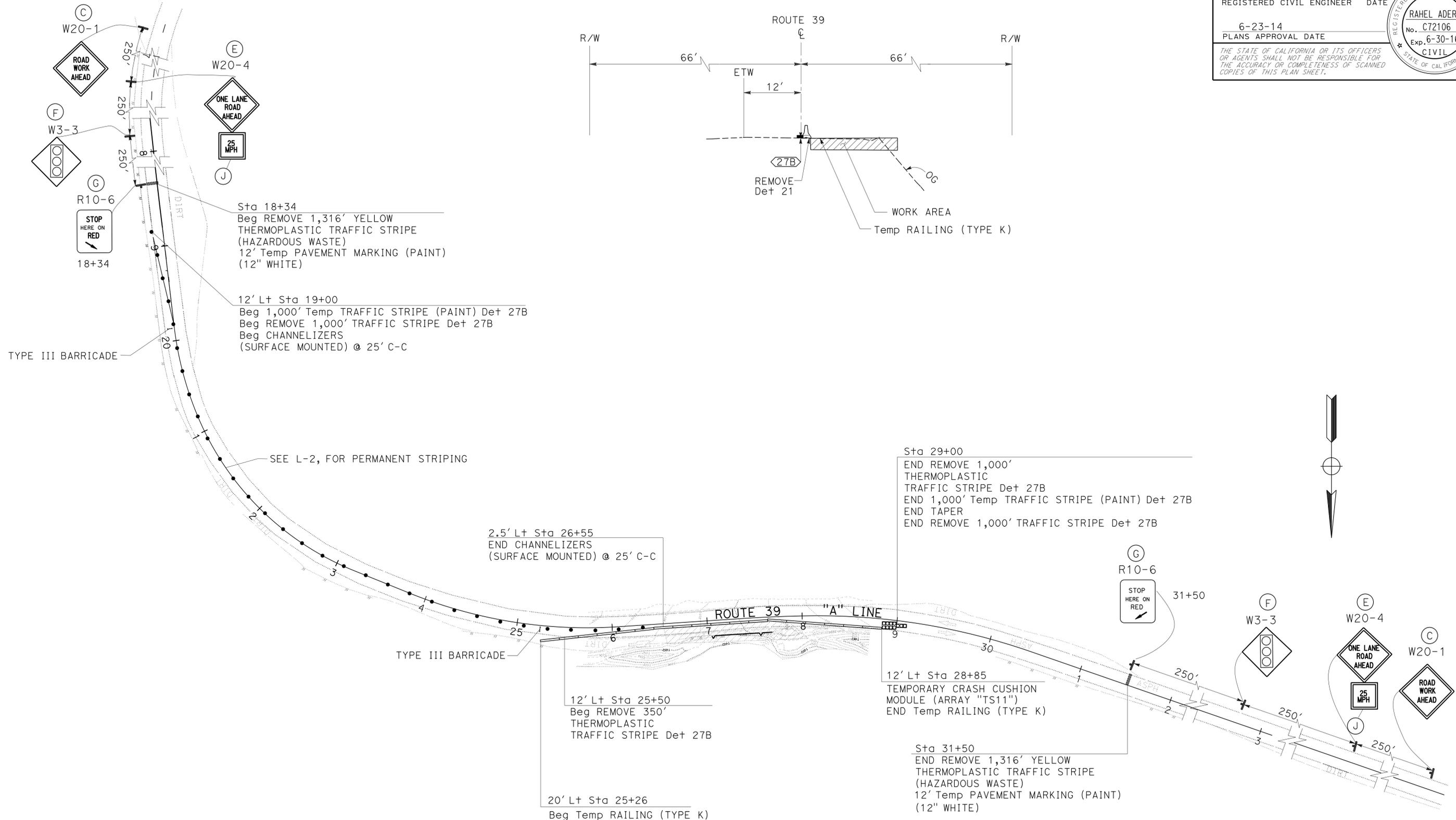


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	11	68

<i>Rahel Adera</i> 5-20-14 REGISTERED CIVIL ENGINEER DATE		
6-23-14 PLANS APPROVAL DATE		
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>		

NOTES:

- SEE CONSTRUCTION AREA SIGN PLAN FOR ADDITIONAL CONSTRUCTION AREA SIGN
- SEE SHEET E-2 FOR TEMPORARY TRAFFIC SIGNAL AND LIGHTING



PM 21.97

STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN

STAGE 2
SCALE: 1" = 50'

SC-2

APPROVED FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DESIGN

Caltrans

REVISOR	DATE	REVISION

FUNCTIONAL SUPERVISOR: OJI KALU

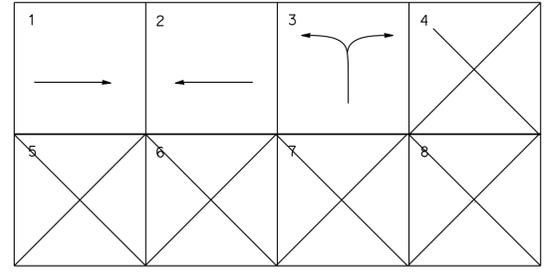
DESIGNED BY: RAHEL ADERA

CHECKED BY: CASIMIRO BAUTISTA

DESIGNED BY: RAHEL ADERA

CHECKED BY: CASIMIRO BAUTISTA

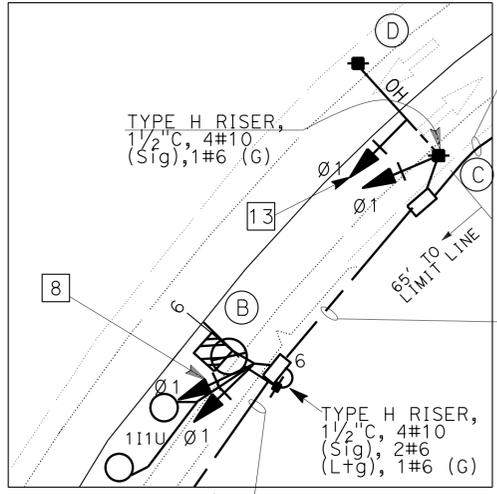
FOR ACCURATE RIGHT OF WAY DATA, CONTACT
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



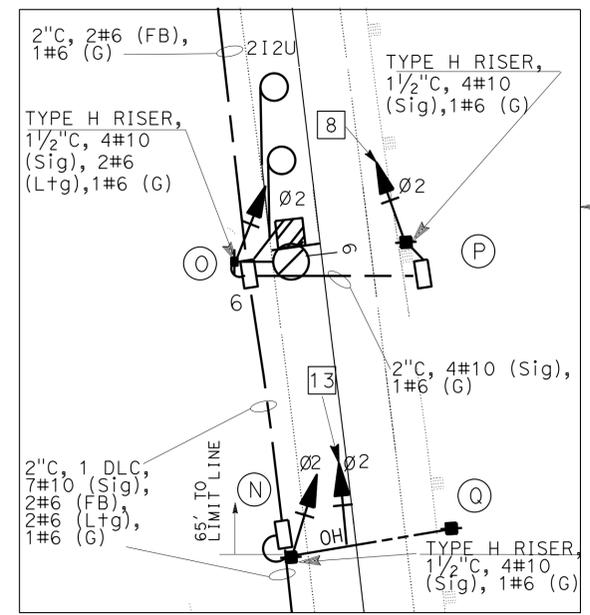
PHASE DIAGRAM

LEGEND: (SHEETS SC-3 TO SC-6)

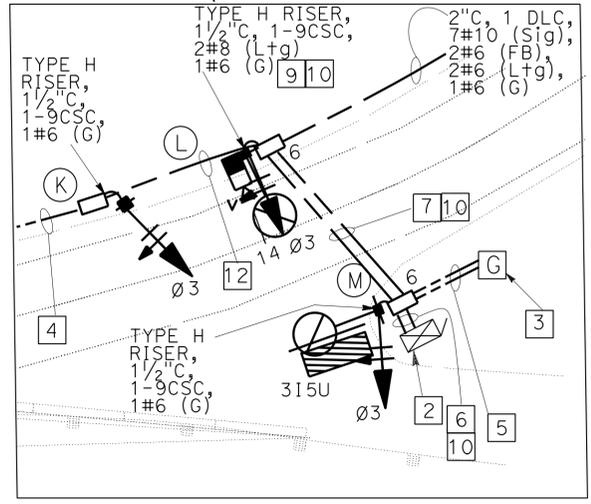
- [G] GENERATOR.
- [FB] FLASHING BEACON SEE SHEET SES-2 (CASE 5N).



DETAIL A
NO SCALE



DETAIL C
NO SCALE



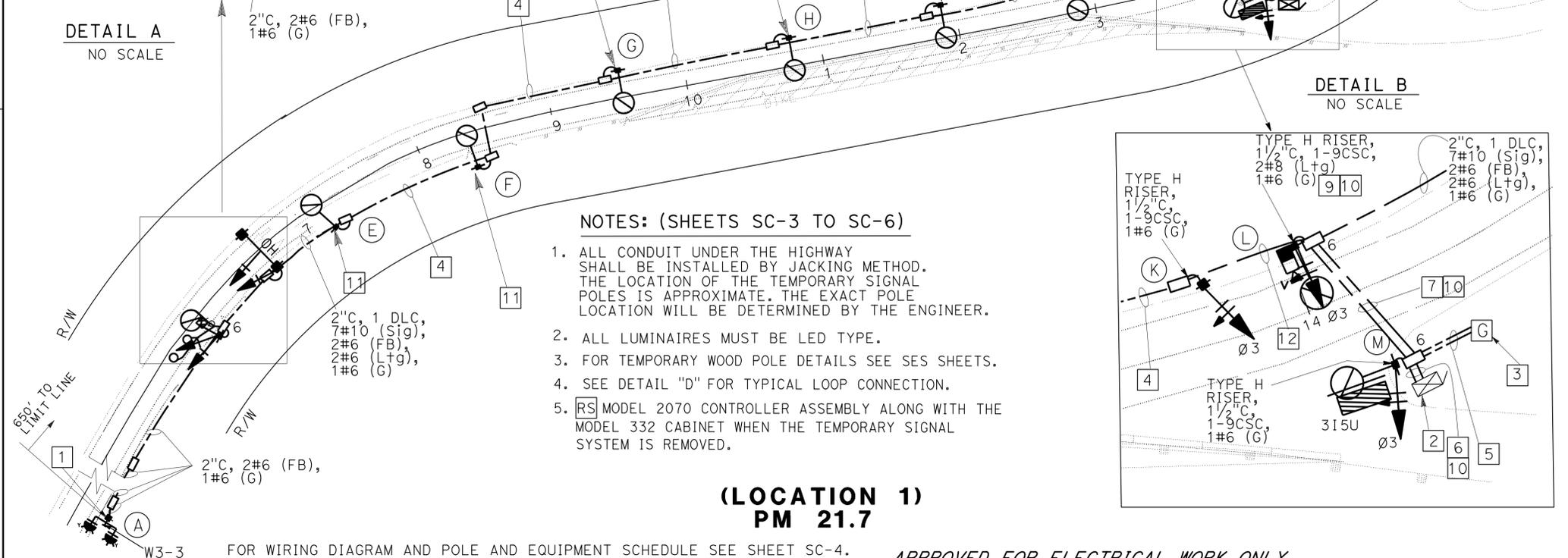
DETAIL B
NO SCALE

NOTES: (SHEETS SC-3 TO SC-6)

1. ALL CONDUIT UNDER THE HIGHWAY SHALL BE INSTALLED BY JACKING METHOD. THE LOCATION OF THE TEMPORARY SIGNAL POLES IS APPROXIMATE. THE EXACT POLE LOCATION WILL BE DETERMINED BY THE ENGINEER.
2. ALL LUMINAIRES MUST BE LED TYPE.
3. FOR TEMPORARY WOOD POLE DETAILS SEE SES SHEETS.
4. SEE DETAIL "D" FOR TYPICAL LOOP CONNECTION.
5. [RS] MODEL 2070 CONTROLLER ASSEMBLY ALONG WITH THE MODEL 332 CABINET WHEN THE TEMPORARY SIGNAL SYSTEM IS REMOVED.

**(LOCATION 1)
 PM 21.7**

APPROVED FOR ELECTRICAL WORK ONLY



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	12	68

12/4/13
 REGISTERED ELECTRICAL ENGINEER DATE

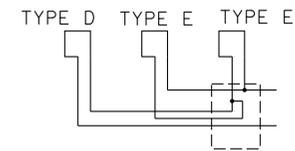
6-23-14
 PLANS APPROVAL DATE

MOHAMMAD ALI ELAZEM
 No. E17089
 Exp. 9/30/15
 ELECTRICAL

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: (THIS SHEET ONLY)

- 1 TYPE H RISER, 1 1/2" C, 2#6 (FB), 1#6 (G).
- 2 INSTALL DEPARTMENT-FURNISHED MODEL 2070 CONTROLLER ASSEMBLY WITH MODEL 332 CABINET. INSTALL BBS. COMPONENTS OF BATTERY BACKUP SYSTEM ARE DEPARTMENT-FURNISHED.
- 3 INSTALL PORTABLE GENERATOR.
- 4 INSTALL 2" C, 1 DLC, 7#10 (Sig), 2#6 (FB), 4#6 (Ltg), 1#6 (G).
- 5 INSTALL 2-2" C, 2#6 (Sig), 4#6 (FB), 6#6 (Ltg), 2#8 (Ltg), 1#6 (G).
- 6 INSTALL 2-3" C, 2#6 (Sig), 2 DLC, 1-9CSC, 14#10 (Sig), 1#6 (G).
- 7 INSTALL 2-3" C, 2 DLC, 1-9CSC, 14#10 (Sig), 4#6 (FB), 6#6 (Ltg), 2#8 (Ltg), 1#6 (G).
- 8 MOUNT TRAFFIC SIGNAL FACE AT 17' HIGH.
- 9 INSTALL VIDEO IMAGE VEHICLE DETECTION SYSTEM (VIVDS) CAMERA. INSTALL (VIVDS) CABLE FROM THE CAMERA HOUSING TO THE VIDEO INTERFACE UNIT IN THE CONTROLLER ASSEMBLY.
- 10 INSTALL VIDEO IMAGE VEHICLE DETECTION SYSTEM (VIVDS) CABLE.
- 11 TYPE H RISER, 1 1/2" C, 2#6 (Ltg), 1#6 (G).
- 12 INSTALL 2" C, 1 DLC, 1-9CSC, 7#10 (Sig), 2#6 (FB), 4#6 (Ltg), 1#6 (G).
- 13 FOR INSTALLATION DETAIL SEE SHEET SES-3 CASE 1GT.



DETAIL D
NO SCALE

TEMPORARY SIGNAL SYSTEM

SCALE: 1" = 50'

SC-3

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	13	68

Mohammad Elazem 12/4/13
 REGISTERED ELECTRICAL ENGINEER DATE

6-23-14
 PLANS APPROVAL DATE

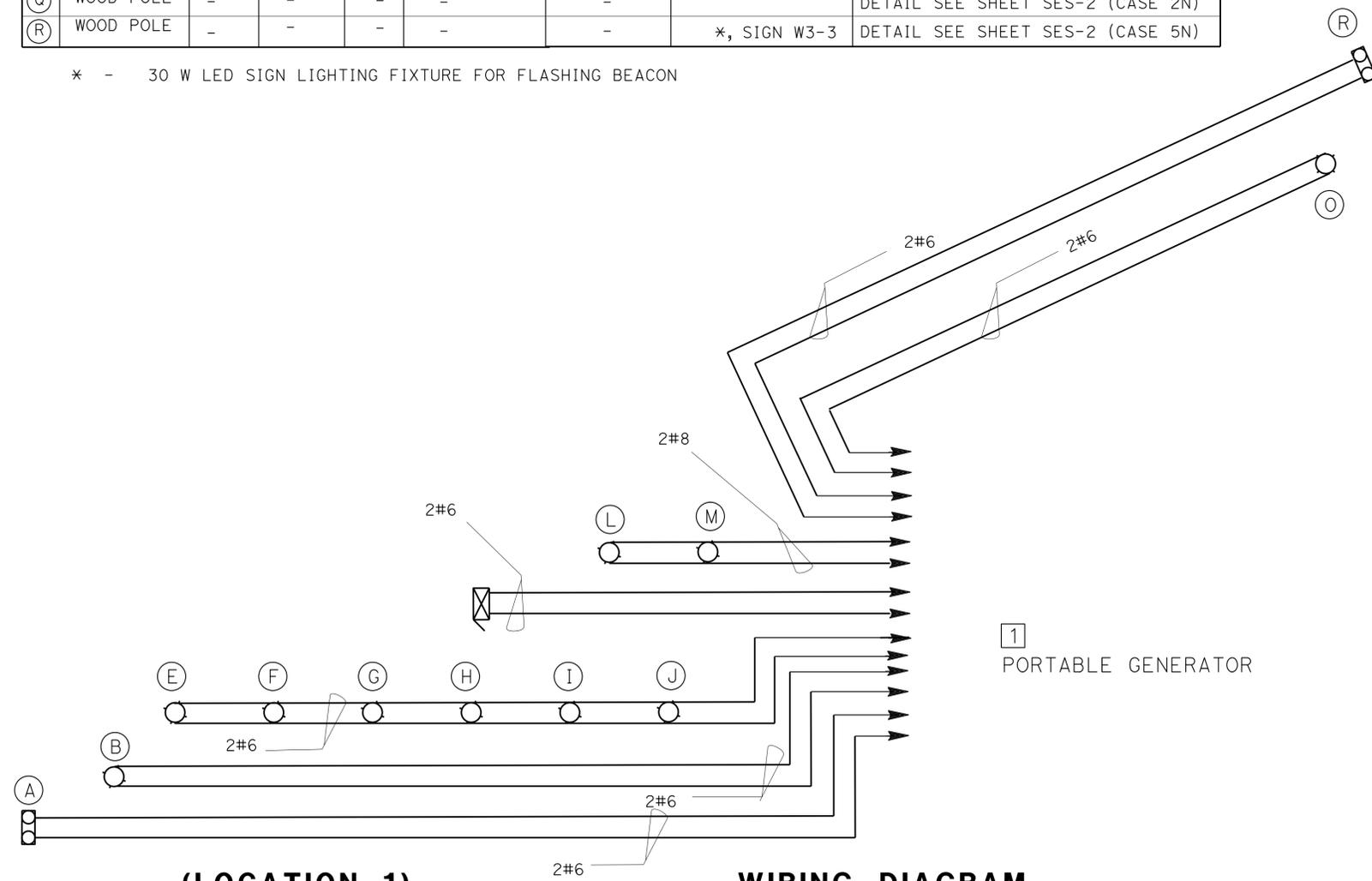
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REGISTERED PROFESSIONAL ENGINEER
MOHAMMAD ALI ELAZEM
 No. E17089
 Exp. 9/30/15
 ELECTRICAL
 STATE OF CALIFORNIA

POLE AND EQUIPMENT SCHEDULE

STANDARD	TYPE	LMA	Veh Sig Mtg			LUMINAIRE (LED)	SPECIAL REQUIREMENTS	NOTES
			SPAN WIRE Ø	Ø	POLE Mtg			
(A)	WOOD POLE	-	-	-	-	-	*, SIGN W3-3	DETAIL SEE SHEET SES-2 (CASE 5N)
(B)	WOOD POLE	12'	-	1	2	165 W	-	DETAIL SEE SHEET SES-2 (CASE 1N)
(C)	WOOD POLE	-	1	1	SV-1-T	-	-	DETAIL SEE SHEET SES-3 (CASE 1GT)
(D)	WOOD POLE	-	-	-	-	-	-	DETAIL SEE SHEET SES-2 (CASE 2N)
(E)	WOOD POLE	12'	-	-	-	165 W	-	DETAIL SEE SHEET SES-2 (CASE 1N)
(F)	WOOD POLE	12'	-	-	-	165 W	-	DETAIL SEE SHEET SES-2 (CASE 1N)
(G)	WOOD POLE	12'	-	-	-	165 W	-	DETAIL SEE SHEET SES-2 (CASE 1N)
(H)	WOOD POLE	12'	-	-	-	165 W	-	DETAIL SEE SHEET SES-2 (CASE 1N)
(I)	WOOD POLE	12'	-	-	-	165 W	-	DETAIL SEE SHEET SES-2 (CASE 1N)
(J)	WOOD POLE	12'	-	-	-	165 W	-	DETAIL SEE SHEET SES-2 (CASE 1N)
(K)	WOOD POLE	-	-	3	SV-1-T	-	-	DETAIL SEE SHEET SES-2 (CASE 1N)
(L)	WOOD POLE	12'	-	3	SV-1-T	165 W	VIVDS	DETAIL SEE SHEET SES-2 (CASE 1N)
(M)	WOOD POLE	12'	-	3	SV-1-T	165 W	-	DETAIL SEE SHEET SES-2 (CASE 1N)
(N)	WOOD POLE	-	2	2	SV-1-T	-	-	DETAIL SEE SHEET SES-3 (CASE 1GT)
(O)	WOOD POLE	12'	-	2	SV-1-T	165 W	-	DETAIL SEE SHEET SES-2 (CASE 1N)
(P)	WOOD POLE	-	-	2	SV-1-T	-	-	DETAIL SEE SHEET SES-2 (CASE 1N)
(Q)	WOOD POLE	-	-	-	-	-	-	DETAIL SEE SHEET SES-2 (CASE 2N)
(R)	WOOD POLE	-	-	-	-	-	*, SIGN W3-3	DETAIL SEE SHEET SES-2 (CASE 5N)

* - 30 W LED SIGN LIGHTING FIXTURE FOR FLASHING BEACON



WIRING DIAGRAM LEGEND: (THIS SHEET ONLY)

- INSTALL 165 W LED LUMINAIRE
- INSTALL FLASHING BEACON WITH 30 W SIGN LIGHTING FIXTURE.
- INSTALL CONDUCTORS
- THE PORTABLE GENERATOR INCLUDES THE FOLLOWING CIRCUIT BREAKERS:
1-50 A, 120 V, 1P, CB FOR SIGNAL.
4-15 A, 240 V, 2P, CB FOR LIGHTING.
2-15 A, 120 V, 1P, CB FOR FLASHING BEACON.
- SV-1-T, SV-1-T MOUNTED AT 17' HIGH.

(LOCATION 1)
PM 21.7

WIRING DIAGRAM
NO SCALE

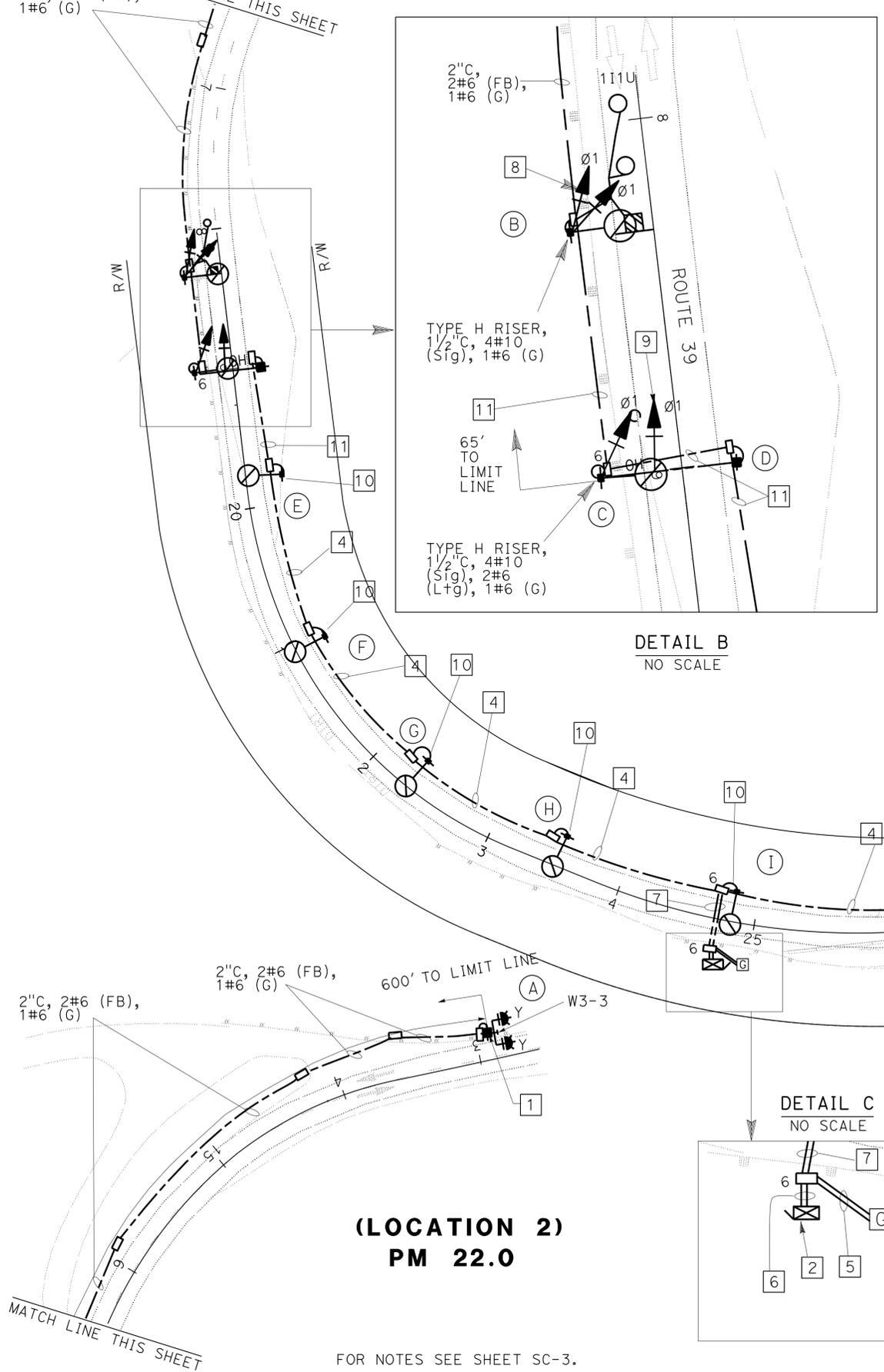
TEMPORARY SIGNAL SYSTEM
NO SCALE

SC-4

FUNCTIONAL SUPERVISOR	YI TSAU
CALCULATED/DESIGNED BY	CHECKED BY
MOHAMMAD A. ELAZEM	YI TSAU
REVISOR	DATE
CH	4/2/2014

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

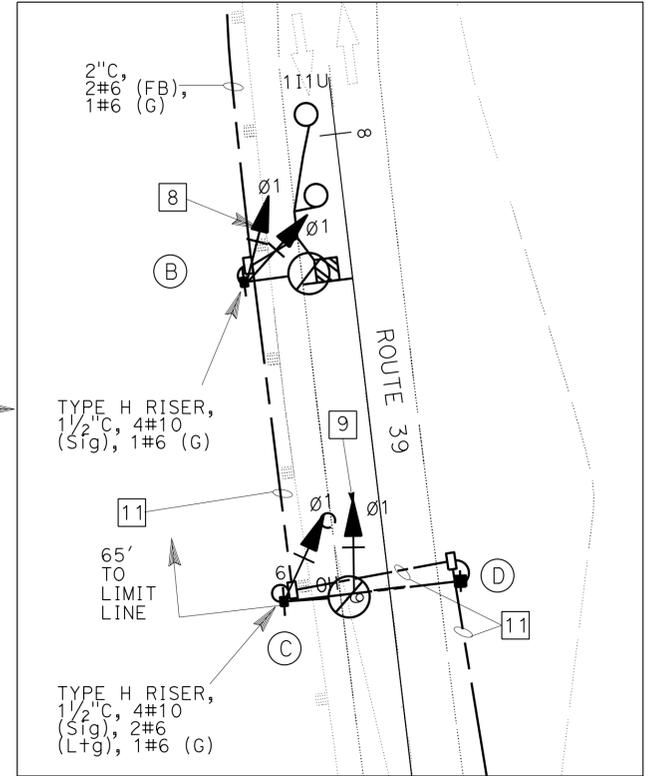
2" C, 2#6 (FB),
 1#6 (G)
 MATCH LINE THIS SHEET



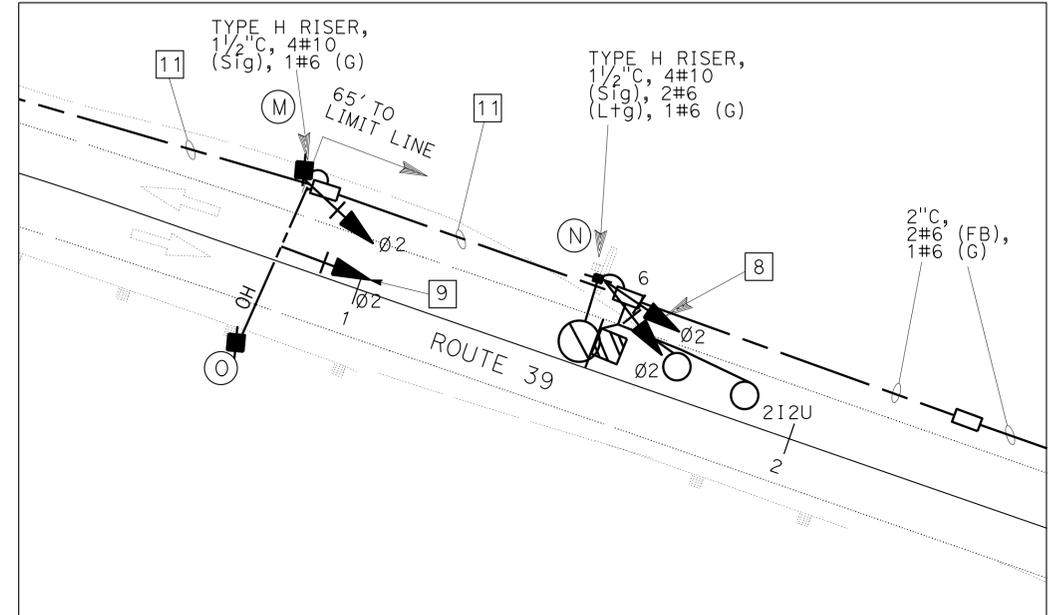
**(LOCATION 2)
 PM 22.0**

FOR NOTES SEE SHEET SC-3.
 FOR WIRING DIAGRAM AND POLE AND EQUIPMENT SCHEDULE SEE SHEET SC-6.

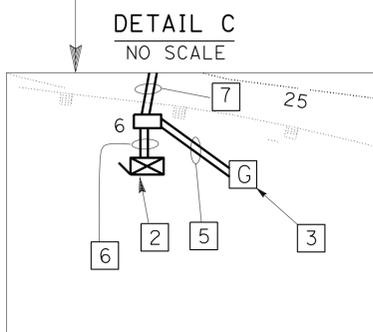
APPROVED FOR ELECTRICAL WORK ONLY



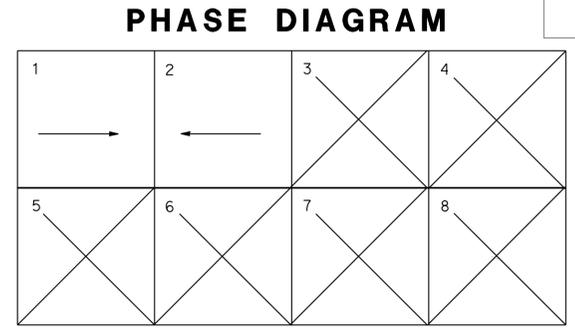
DETAIL B
 NO SCALE



DETAIL A
 NO SCALE



DETAIL C
 NO SCALE



PHASE DIAGRAM

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	14	68

REGISTERED ELECTRICAL ENGINEER DATE 12/4/13
 mohamed Elazem
 MOHAMMAD ALI ELAZEM
 No. E17089
 Exp. 9/30/15
 ELECTRICAL
 STATE OF CALIFORNIA

6-23-14
 PLANS APPROVAL DATE

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LEGEND: (THIS SHEET ONLY)

- 1 TYPE H RISER, 1 1/2" C, 2#6 (FB), 1#6 (G).
- 2 INSTALL DEPARTMENT-FURNISHED MODEL 2070 CONTROLLER ASSEMBLY WITH MODEL 332 CABINET. INSTALL BBS. COMPONENTS OF BATTERY BACKUP SYSTEM ARE DEPARTMENT-FURNISHED.
- 3 INSTALL PORTABLE GENERATOR.
- 4 INSTALL 2" C, 1 DLC, 7#10 (Sig), 2#6 (FB), 4#6 (Ltg), 1#6 (G).
- 5 INSTALL 2-2" C, 2#6 (Sig), 4#6 (FB), 6#6 (Ltg), 1#6 (G).
- 6 INSTALL 2-3" C, 2#6 (Sig), 2 DLC, 14#10 (Sig), 1#6 (G).
- 7 INSTALL 2-2" C, 2 DLC, 14#10 (Sig), 4#6 (FB), 6#6 (Ltg), 1#6 (G).
- 8 MOUNT TRAFFIC SIGNAL FACE AT 17' HIGH.
- 9 FOR INSTALLATION DETAIL SEE SHEET SES-3 (CASE 1GT).
- 10 TYPE H RISER, 1 1/2" C, 2#6 (Ltg), 1#6 (G).
- 11 INSTALL 2" C, 1 DLC, 7#10 (Sig), 2#6 (FB), 2#6 (Ltg), 1#6 (G).

TEMPORARY SIGNAL SYSTEM

SCALE: 1" = 50'

SC-5

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	15	68

MOHAMMAD ALI ELAZEM 12/4/13
 REGISTERED ELECTRICAL ENGINEER DATE

6-23-14
 PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER
MOHAMMAD ALI ELAZEM
 No. E17089
 Exp. 9/30/15
 ELECTRICAL
 STATE OF CALIFORNIA

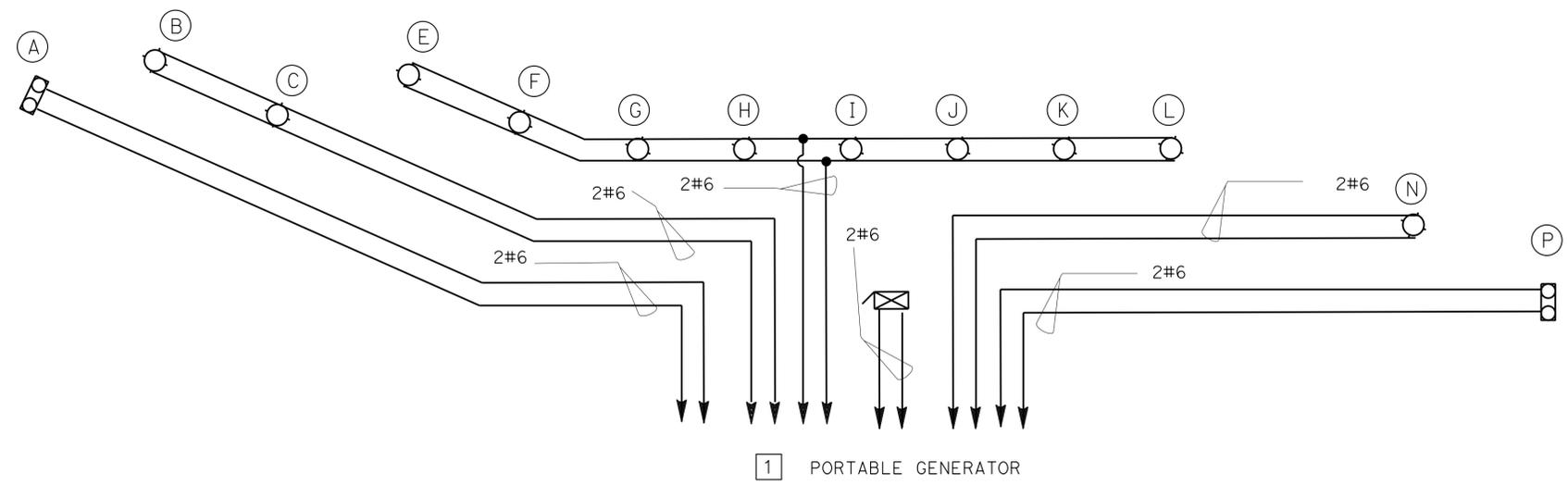
POLE AND EQUIPMENT SCHEDULE

STANDARD	TYPE	LMA	Veh Sig Mtg			LUMINAIRE (LED)	SPECIAL REQUIREMENTS	NOTES
			SPAN WIRE Ø	Ø	POLE Mtg			
(A)	WOOD POLE	-	-	-	-	-	*, SIGN W3-3	DETAIL SEE SHEET SES-2 (CASE 5N)
(B)	WOOD POLE	12'	-	1	2	165 W	-	DETAIL SEE SHEET SES-2 (CASE 1N)
(C)	WOOD POLE	-	1	1	SV-1-T	165 W	-	DETAIL SEE SHEET SES-3 (CASE 1GT)
(D)	WOOD POLE	-	-	-	-	-	-	DETAIL SEE SHEET SES-2 (CASE 2N)
(E)	WOOD POLE	12'	-	-	-	165 W	-	DETAIL SEE SHEET SES-2 (CASE 1N)
(F)	WOOD POLE	12'	-	-	-	165 W	-	DETAIL SEE SHEET SES-2 (CASE 1N)
(G)	WOOD POLE	12'	-	-	-	165 W	-	DETAIL SEE SHEET SES-2 (CASE 1N)
(H)	WOOD POLE	12'	-	-	-	165 W	-	DETAIL SEE SHEET SES-2 (CASE 1N)
(I)	WOOD POLE	12'	-	-	-	165 W	-	DETAIL SEE SHEET SES-2 (CASE 1N)
(J)	WOOD POLE	12'	-	-	-	165 W	-	DETAIL SEE SHEET SES-2 (CASE 1N)
(K)	WOOD POLE	12'	-	-	-	165 W	-	DETAIL SEE SHEET SES-2 (CASE 1N)
(L)	WOOD POLE	12'	-	-	-	165 W	-	DETAIL SEE SHEET SES-2 (CASE 1N)
(M)	WOOD POLE	-	2	2	SV-1-T	-	-	DETAIL SEE SHEET SES-3 (CASE 1GT)
(N)	WOOD POLE	-	-	2	2	165 W	-	DETAIL SEE SHEET SES-2 (CASE 1N)
(O)	WOOD POLE	-	-	-	-	-	-	DETAIL SEE SHEET SES-2 (CASE 2N)
(P)	WOOD POLE	-	-	-	-	-	*, SIGN W3-3	DETAIL SEE SHEET SES-2 (CASE 5N)

* - 30 W LED SIGN LIGHTING FIXTURE FOR FLASHING BEACON

WIRING DIAGRAM LEGEND: (THIS SHEET ONLY)

- INSTALL 165 W LED LUMINAIRE
- INSTALL FLASHING BEACON WITH 30 W SIGN LIGHTING FIXTURE.
- INSTALL CONDUCTORS
- SPLICE CONDUCTORS
- THE PORTABLE GENERATOR AND UPS SYSTEM INCLUDES THE FOLLOWING CIRCUIT BREAKERS:
 1-50 A, 120 V, 1P, CB FOR SIGNAL.
 3-15 A, 240 V, 2P, CB FOR LIGHTING.
 2-15 A, 120 V, 1P, CB FOR FLASHING BEACON.
- SV-1-T, SV-1-T MOUNTED AT 17' HIGH.



(LOCATION 2)
PM 22.0

WIRING DIAGRAM
NO SCALE

TEMPORARY SIGNAL SYSTEM

NO SCALE

SC-6

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: YI TSAU
 MOHAMMAD A. ELAZEM
 YI TSAU
 CH: 4/2/2014
 REVISIONS: 00-00-00
 USERNAME => s119140
 DGN FILE => 73x820ma006.dgn
 BORDER LAST REVISED 7/2/2010
 RELATIVE BORDER SCALE IS IN INCHES
 UNIT 1880
 PROJECT NUMBER & PHASE 07130002181



LAST REVISION: DATE PLOTTED => 31-JUL-2014
 TIME PLOTTED => 13:03

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	16	68

Mohammad Elazem 12/4/13
 REGISTERED ELECTRICAL ENGINEER DATE

6-23-14
 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.

TEMPORARY SIGNAL SYSTEM

SHEET No.	WOODEN POLE (N)	TYPE E LOOP (N)	TYPE D LOOP (N)	MODEL 2070 CONTROLLER ASSEMBLY (N)	GENERATOR (N)	No. 6 PB (N)	No. 5 PB (N)	DLC (N)	9 CSC (N)	#6 CONDUCTOR (N)	#8 CONDUCTOR (N)	#10 CONDUCTOR (N)	#6 GROUND CONDUCTOR (N)	VIDEO COMPOSITE CABLES (N)	SIZE 1 1/2" C CONDUIT (N)	SIZE 2" C CONDUIT (N)	SIZE 3" C CONDUIT (N)	VIVDS (N)
	EA	EA	EA	EA	EA	EA	EA	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	EA
SC-3	18	4	2	1	2	4	19	1804	257	13156	398	12012	4598	155	693	3619	220	1
SC-5	16	4	2	1	2	4	18	1760	-	13046	-	14091	3762	-	539	3190	55	-
TOTAL	34	8	4	2	4	8	37	3564	257	26202	398	26103	8360	155	1232	6809	275	1

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: YI TSAU
 CALCULATED/DESIGNED BY: MOHAMMAD A. ELAZEM
 CHECKED BY: YI TSAU
 REVISOR: CH
 DATE REVISED: 4/2/2014

ELECTRICAL QUANTITIES

SC-7



TRAFFIC HANDLING QUANTITIES

SHEET NUMBER	LINE DESIGNATION	STATION	DIRECTION	TEMPORARY RAILING (TYPE K)	TEMPORARY CRASH CUSHION MODULE	CHANNELIZER (SURFACE MOUNTED)	REMOVE			
							TEMPORARY TRAFFIC STRIPE (PAINT)	TEMPORARY PAVEMENT MARKING (PAINT)	THERMOPLASTIC TRAFFIC STRIPE	YELLOW THERMOPLASTIC TRAFFIC STRIPE (HAZARDOUS WASTE)
SC-1	"A"	6+00 TO 19+00	NB	LF 460	EA	EA 14	LF 700	SQFT 48	LF 650	LF 2,600
SC-2	"A"	25+00 TO 29+00	NB	LF 320	EA 11	EA 31	LF 1,000	SQFT 24	LF 1,000	LF 2,632
TOTAL				LF 780	EA 11	EA 45	LF 1,700	SQFT 72	LF 1,650	LF 5,232

PAVEMENT DELINEATION QUANTITIES

SHEET NUMBER	LINE DESIGNATION	STATION	DIRECTION	THERMOPLASTIC TRAFFIC STRIPE	
				DETAIL 21 (4" YELLOW)	DETAIL 27B
L-1	"A"	6+00 TO 19+00	NB	LF 2,600	LF 650
L-2	"A"	19+00 TO 31+50	NB	LF 2,500	LF 1,000
TOTAL				LF 5,100	LF 1,650

WATER POLLUTION CONTROL QUANTITIES

SHEET NUMBER	TEMPORARY COVER	TEMPORARY MULCH	TEMPORARY DRAINAGE INLET PROTECTION	TEMPORARY GRAVEL BAG BERM	TEMPORARY FIBER ROLL
	SQYD	SQYD	EA	LF	LF
L-1	458	244	1	908	
L-2	492	216	1		
TOTAL	950	460	2	908	

MIDWEST GUARDRAIL SYSTEM QUANTITIES

SHEET NUMBER	LINE DESIGNATION	STATION	DIRECTION	MIDWEST GUARDRAIL SYSTEM (STEEL POST)	TRANSITION RAILING (TYPE WB-31)	REMOVE MBGR	VEGETATION CONTROL (MINOR CONCRETE)	TREATED WOOD WASTE	CONCRETE BARRIER TYPE 736B
				LF	EA	LF	SQYD	LB	LF
L-1	"A"	12+85 TO 13+94.3	NB	28.1	1		27		66.7
L-2	"A"	25+82.9 TO 26+68	NB						88.4
L-2	"A"	27+68 TO 29+16	NB	75	1	105	24	1,210	
TOTAL				103.1	2	105	51	1,210	155.1

ROADWAY QUANTITIES

SHEET NUMBER	LINE DESIGNATION	STATION	DIRECTION	HOT MIX ASPHALT-SUPERPAVE, TYPE A (HMA-SP-A)	LEAN CONCRETE BASE (LCB)	CLASS 3 AGGREGATE BASE	GEOSYNTHETIC PAVEMENT INTERLAYER (PAVING FABRIC)
				TON	CY	CY	SQYD
L-1	"A"	11+95 TO 12+66	NB	11.7	7.2	13.8	28.4
L-2	"A"	26+63 TO 27+73	NB	21.5	13.3	25.4	41.6
TOTAL				33.2	20.5	39.2	70

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	17	68

Rahel Adera 5-20-14
REGISTERED CIVIL ENGINEER DATE

6-23-14
PLANS APPROVAL DATE

RAHEL ADERA
No. CT2106
Exp. 6-30-16
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.

SUMMARY OF QUANTITIES

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	18	68

LICENSED LANDSCAPE ARCHITECT
 Signature: *Duc T. Trinh*
 No. 5457
 6-23-14
 PLANS APPROVAL DATE
 Signature: *Duc T. Trinh*
 11-30-15
 Renewal Date
 5-20-14
 Date
 STATE OF CALIFORNIA

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

NOTES:

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.

EROSION CONTROL QUANTITIES

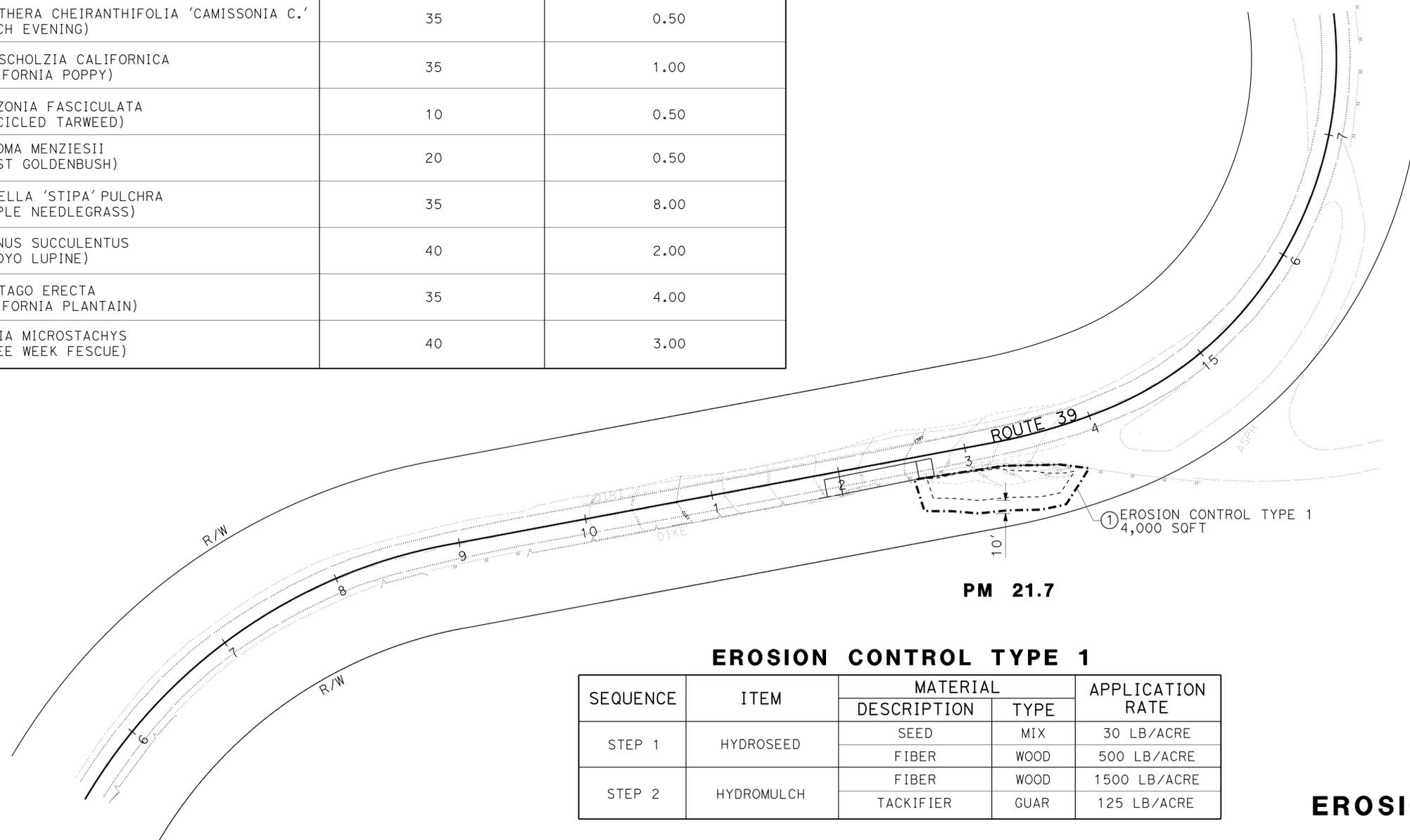
SHEET	LOCATION	DESCRIPTION	HYDROSEED	HYDROMULCH
			SQFT	SQFT
EC-1	①	EROSION CONTROL - TYPE 1	4,000	4,000
EC-2	②	EROSION CONTROL - TYPE 1	9,000	9,000
TOTAL			13,000	13,000

LEGEND:

-  EROSION CONTROL TYPE 1
-  GRADING LIMITS

SEED MIX

SEED	BOTANICAL NAME (COMMON NAME)	PERCENT GERMINATION (MINIMUM)	POUNDS PURE LIVE SEED PER ACRE (SLOPE MEASUREMENT)
MIX	AGROSTIS PALLENS 'DIEGOSENSIS' (SISKIYOU THINGRASS)	35	0.50
	BROMUS CARINATUS (CALIFORNIA BROME)	40	10.00
	OENOTHERA CHEIRANTHIFOLIA 'CAMISSONIA C.' (BEACH EVENING)	35	0.50
	ESCHSCHOLZIA CALIFORNICA (CALIFORNIA POPPY)	35	1.00
	HEMIZONIA FASCICULATA (FASCICLED TARWEED)	10	0.50
	ISOCOMA MENZIESII (COAST GOLDENBUSH)	20	0.50
	NASSELLA 'STIPA' PULCHRA (PURPLE NEEDLEGRASS)	35	8.00
	LUPINUS SUCCULENTUS (ARROYO LUPINE)	40	2.00
	PLANTAGO ERECTA (CALIFORNIA PLANTAIN)	35	4.00
	VULPIA MICROSTACHYS (THREE WEEK FESCUE)	40	3.00



EROSION CONTROL TYPE 1

SEQUENCE	ITEM	MATERIAL		APPLICATION RATE
		DESCRIPTION	TYPE	
STEP 1	HYDROSEED	SEED	MIX	30 LB/ACRE
		FIBER	WOOD	500 LB/ACRE
STEP 2	HYDROMULCH	FIBER	WOOD	1500 LB/ACRE
		TACKIFIER	GUAR	125 LB/ACRE

EROSION CONTROL PLAN

SCALE: 1" = 50'

EC-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 LANDSCAPE ARCHITECTURE
 SENIOR LANDSCAPE ARCHITECT
 PATTY WATANABE
 CALCULATED/DESIGNED BY
 CHECKED BY
 LEE DO
 DUC T. TRINH
 REVISED BY
 DATE REVISED

APPROVED FOR EROSION CONTROL WORK ONLY

LAST REVISION DATE PLOTTED => 31-JUL-2014
 00-00-00 TIME PLOTTED => 1:3:03

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	19	68

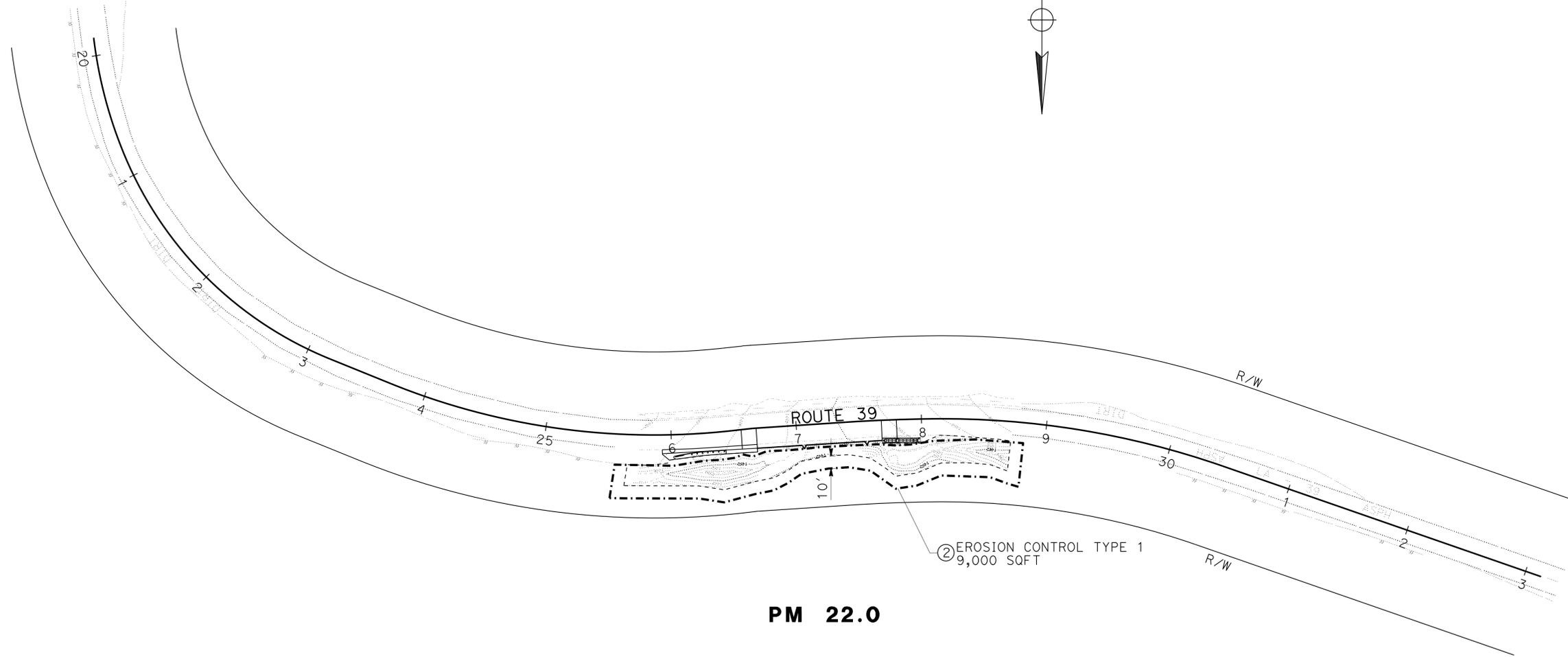
Signature: *Duc T. Trinh*
 LICENSED LANDSCAPE ARCHITECT
 6-23-14
 PLANS APPROVAL DATE

Signature: *Duc T. Trinh*
 No. 5457
 11-30-15
 5-20-14
 STATE OF CALIFORNIA

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

NOTES:

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.



PM 22.0

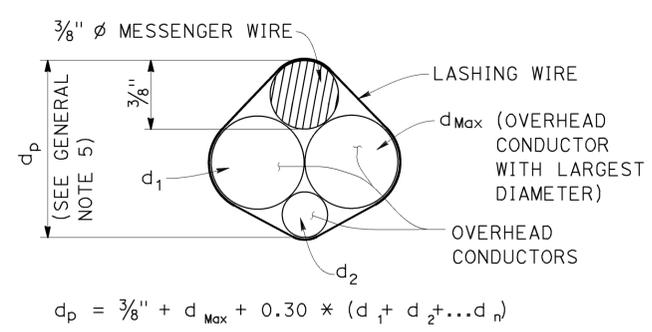
EROSION CONTROL PLAN

SCALE: 1" = 50'

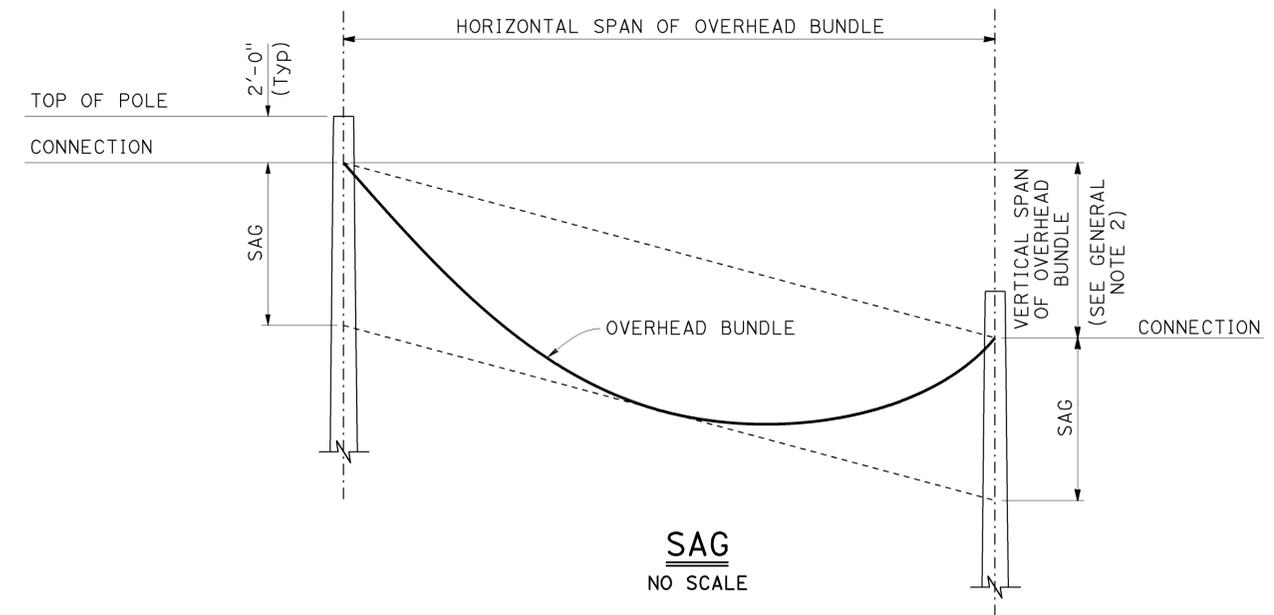
EC-2

APPROVED FOR EROSION CONTROL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	SENIOR LANDSCAPE ARCHITECT	CALCULATED/DESIGNED BY	LEE DO	REVISOR BY	
Caltrans LANDSCAPE ARCHITECTURE	PATTY WATANABE	CHECKED BY	DUC T. TRINH	DATE REVISED	



PROJECTED DEPTH OF OVERHEAD BUNDLE, (d_p)



Design: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, Fifth Edition (LTS-5).

GROUP LOAD COMBINATIONS:

- I Dead Load
- II Dead Load + Wind Load
- III Dead Load + 0.5 (Wind Load) + Ice Load
- IV Fatigue: Not used

LOADING:

Wind Loading: 100 mph (3-second gust)
 Wind Recurrence Interval: 10 years
 Combined height, exposure, and elevated terrain factor = 1.05
 (Exposure C, structure is not located on or over the top half of a ridge, hill, or escarpment)

Ice Loading: 3.0 psf on surfaces, 0.60 in radial thickness of ice at a unit weight of 60 pcf on overhead bundles

BASIC DESIGN VALUES:

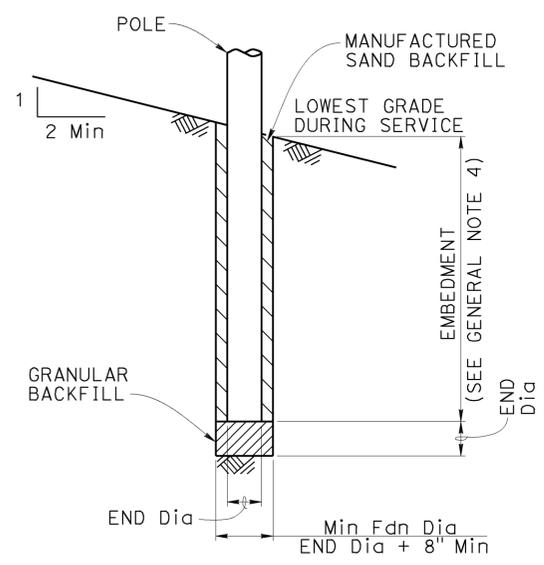
Timber Poles: F_b = 1850 psi
 F_v = 110 psi
 F_{cp} = 230 psi
 F_c = 950 psi
 E = 1500 x 10³ psi

DESIGN WIRE BREAKING STRENGTHS:

ASTM A475, Utilities Grade, 7 strand modified by termination efficiency factor of 0.8.

FOUNDATION DESIGN NOTES:

- Pole embedment depth design is based on Broms' approximate procedure as described in Article 13.6 of AASHTO LTS-5.
- Embedment depth is calculated based on following soil parameters, Cohesive Soil: Shear strength of soil c = 1500 psf. Cohesionless Soil: φ = 30 deg, γ = 120 pcf. Soil assumed to be unsaturated.
- An overload factor of 2.0 and an under capacity factor of 0.7 were used for safety factor of 2.86.
- Allowable vertical bearing pressure at the end bearing of poles is 3000 psf at 6 feet or more embedment.



GENERAL NOTES:

- The messenger wire and any combination of overhead conductors must not exceed either a self weight of 3.0 lb/ft or the maximum d_p.
- The maximum vertical span is 10% of the horizontal span.
- For poles with adjacent unbalanced horizontal spans, the shortest horizontal span must be at least 50% of the largest horizontal span.
- Add 2'-0" for slopes above 1V:4H.
- For a pole supporting multiple spans, calculate d_p for each span and use the largest value.
- Do not exceed the attachments shown.

DIAMETERS AND SELF WEIGHT OF OVERHEAD CONDUCTORS

CONDUCTOR OR CABLE TYPE	DIAMETER d (in)	WEIGHT w (plf)
3 CONDUCTOR SIGNAL CABLE (3CSC)	0.400	0.0980
5 CONDUCTOR SIGNAL CABLE (5CSC)	0.500	0.1560
9 CONDUCTOR SIGNAL CABLE (9CSC)	0.650	0.2760
12 CONDUCTOR SIGNAL CABLE (12CSC)	0.800	0.3970
28 CONDUCTOR SIGNAL CABLE (28CSC)	0.900	0.6490
1-#14	0.166	0.0235
1-#12	0.185	0.0330
1-#10	0.210	0.0476
1-#8	0.271	0.0774
1-#6	0.310	0.1130
1-#4	0.359	0.1690
1-#3	0.388	0.2080
1-#2	0.420	0.2560
1-#1	0.498	0.3340
6-CONDUCTOR SIGNAL INTERCONNECT CABLE (SIC)	0.350	0.0860
12-CONDUCTOR SIGNAL INTERCONNECT CABLE (SIC)	0.500	0.1440
DETECTOR LEAD-IN CABLE (DLC)	0.310	0.0440
12 to 48-STRAND FIBER OPTIC CABLE (48FOC)	0.424	0.0600
72-STRAND FIBER OPTIC CABLE (72FOC)	0.484	0.0770
96-STRAND FIBER OPTIC CABLE (96FOC)	0.535	0.1050
144-STRAND FIBER OPTIC CABLE (144FOC)	0.670	0.1890
3/8" φ MESSENGER WIRE	0.375	0.2730
VIVDS CABLE	0.590	0.1520

NO SCALE

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

BRANCH CHIEF DAVID NEUMANN	DESIGN BY A MALAK	CHECKED T MARCHENKO	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH	BRIDGE NO. N/A	TEMPORARY WOOD POLES GENERAL NOTES	SES-1
	DETAILS BY H NGUYEN	CHECKED A MALAK			POST MILE 21.7, 22.0		
	QUANTITIES BY	CHECKED					

POLE SELECTION TABLE

LEGEND

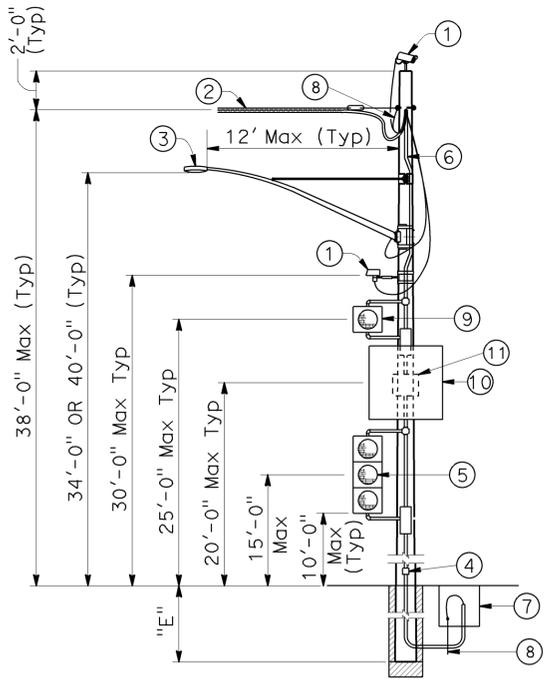
- Wood Pole No Attachments
- ^A Wood Pole with Attachments
- OH- Overhead Bundle

OVERHEAD BUNDLE HORIZONTAL SPAN (Max)	MAXIMUM d _p	CASE 1N (Mod)				CASE 2N				CASE 3N (Mod)				CASE 4N				CASE 5N
		1"	1.5"	2.0"	2.5"	1"	1.5"	2.0"	2.5"	1.0"	1.5"	2.0"	2.5"	1"	1.5"	2.0"	2.5"	N/A
50'	MINIMUM POLE CLASS	H-1	H-2	H-2	H-2	4	3	2	1	H-2	H-2	H-3	H-3	H-4	H-4	H-4	H-5	CLASS 1 E = 10'
	POLE EMBEDMENT (E)	11'				10'				11'				12'				
	MINIMUM POLE CLASS	H-2	H-3	H-4	H-5	1	H-1	H-2	H-3	H-4	H-5	H-5	H-6	H-5	H-5	H-6		
	POLE EMBEDMENT (E)	12'				11'				12'				12'				
100'	MINIMUM POLE CLASS	H-2	H-3	H-4	H-5	1	H-1	H-2	H-3	H-4	H-5	H-5	H-6	H-5	H-5	H-6		
	POLE EMBEDMENT (E)	12'				11'				12'				12'				
150'	MINIMUM POLE CLASS	H-4	H-5	H-6		H-1	H-2	H-3	H-5	H-6			H-6					
	POLE EMBEDMENT (E)	12'				12'				12'				12'				
200'	MINIMUM POLE CLASS	H-5	H-6			H-2	H-3	H-5										
	POLE EMBEDMENT (E)	12'				12'												

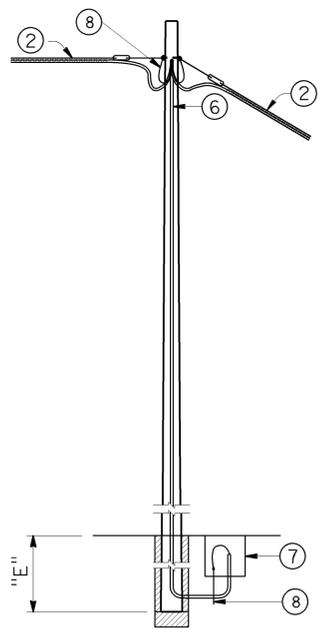
- ① CCTV camera assembly or vehicle detection system
- ② Overhead bundle consisting of a 3/8" x messenger wire and overhead conductors and lashing wire.
- ③ Luminaire with mast arm
- ④ Pedestrian pushbutton
- ⑤ Signal face with 3 indications or single sheet sign panel (10 SQFT Max)
- ⑥ Riser with weather head as required
- ⑦ Pull box as required
- ⑧ Grounding as required
- ⑨ Single section flashing beacon or single sheet sign panel (4 SQFT Max)
- ⑩ Single sheet sign panel (4' x 4' Max) or signal face with 3 indications
- ⑪ Flashing beacon control assembly
- ⑫ NEMA 3R enclosure, 26"(W) x 56"(H) x 12"(D) Max dimensions. Max weight including batteries, 450 lbs
- ⑬ Sign lighting fixture
- ⑭ 2-section 12" flashing beacon

NOTES:

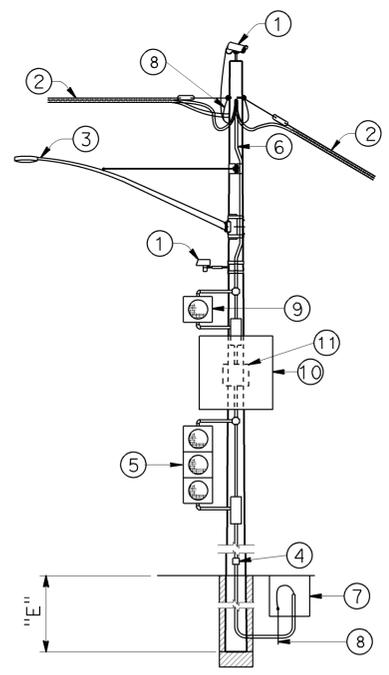
1. In addition to other restrictions on maximum horizontal span, this horizontal span must not exceed 100'.
2. Cases, 1N, 3N and 4N may substitute the attachments shown in Case 5N if the photovoltaic panel is not included.



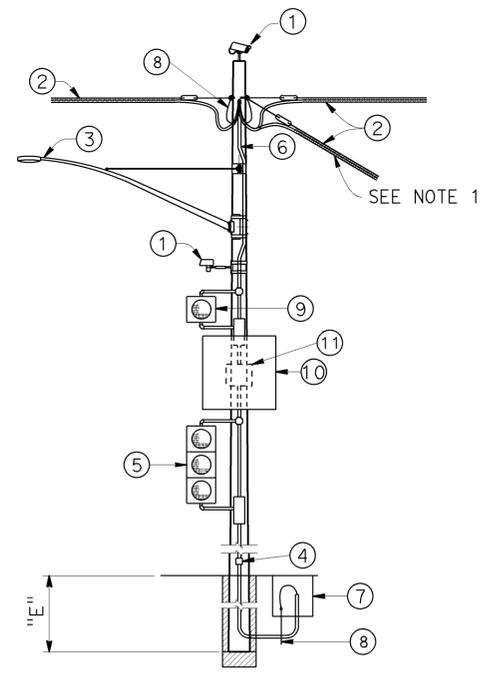
**CASE 1N
POLE AT DEAD END
WITH ATTACHMENTS**
SEE NOTE 2



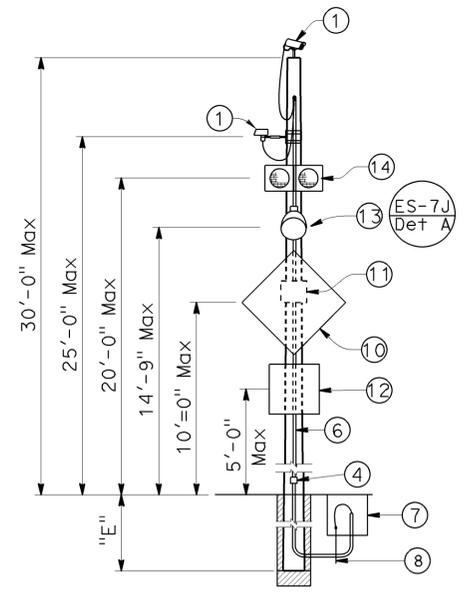
**CASE 2N
POLE AT TANGENT
WITHOUT ATTACHMENTS**



**CASE 3N
POLE AT TANGENT OR CORNER
WITH ATTACHMENTS**
SEE NOTE 2



**CASE 4N
POLE AT JUNCTION
WITH ATTACHMENTS**
SEE NOTE 2



**CASE 5N
POLE WITHOUT OVERHEAD BUNDLE
WITH ATTACHMENTS**

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

BRANCH CHIEF DAVID NEUMANN

DESIGN	BY A MALAK	CHECKED T MARCHENKO
DETAILS	BY H NGUYEN	CHECKED A MALAK
QUANTITIES	BY	CHECKED

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
DESIGN AND TECHNICAL SERVICES
SPECIAL DESIGNS BRANCH **B**

BRIDGE NO.	N/A
POST MILE	21.7, 22.0

**TEMPORARY WOOD POLES
NON-GUYED - NO SIGNALS ON SPANS**

SES-2

LEGEND

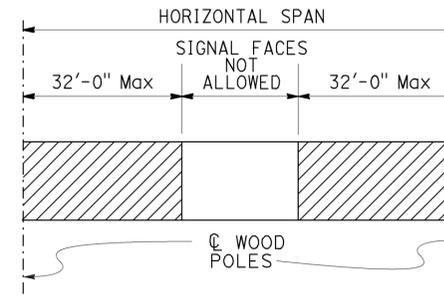
- A** Wood Pole with Attachments
- TS- Overhead Bundle with Signal Faces (See Note 2)
- OH- Overhead Bundle
- Guy Anchor

POLE SELECTION TABLE

OVERHEAD BUNDLE HORIZONTAL SPAN Max	MAXIMUM d _p	CASE 1GT			CASE 2GT			CASE 3GT		
		1"	1.5"	2.0"	1"	1.5"	2.0"	1"	1.5"	2.0"
50'	MINIMUM POLE CLASS	H-2	H-3	H-3	H-2	H-2	H-2	H-3	H-4	H-4
	POLE EMBEDMENT (E)	10'			10'			11'		
100'	MINIMUM POLE CLASS	H-3	H-3	H-4	H-2	H-3	H-3	H-4	H-4	H-5
	POLE EMBEDMENT (E)	11'			10'			11'		
150'	MINIMUM POLE CLASS	H-3	H-4	H-4	H-2	H-3	H-4	H-4	H-5	H-5
	POLE EMBEDMENT (E)	11'			10'			11'		

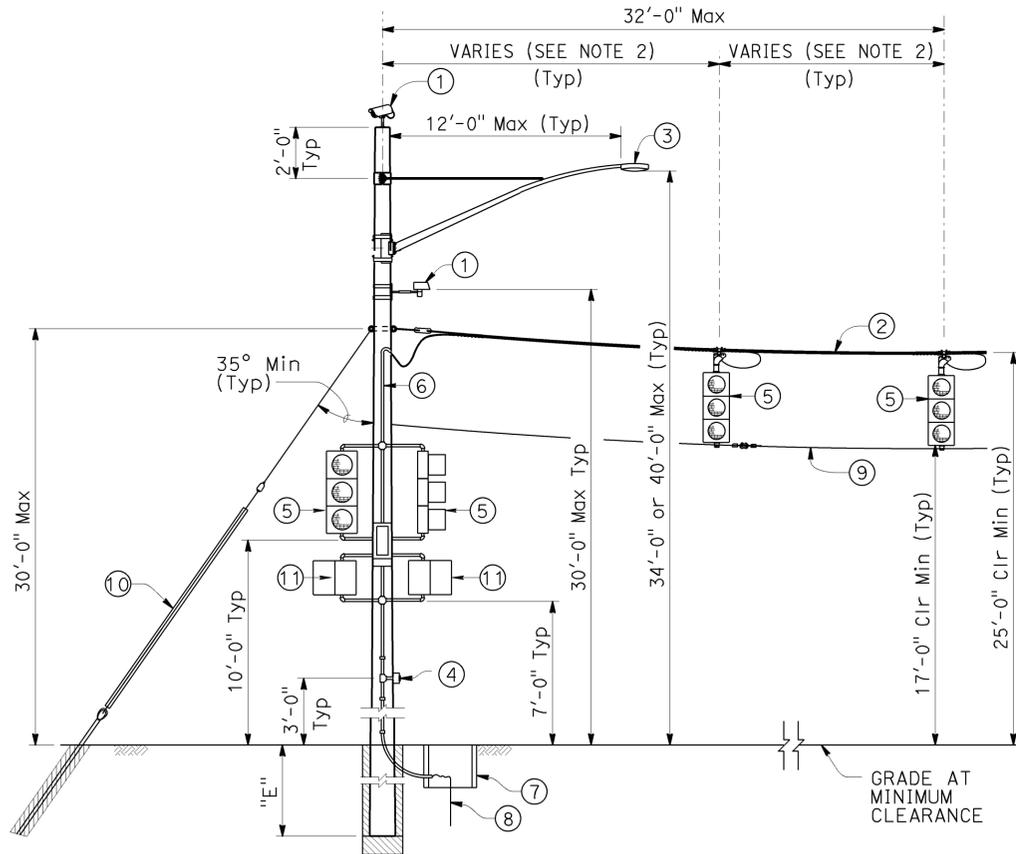
NOTES:

- In addition to other restrictions on maximum horizontal span, this horizontal span must not exceed 100'.
- Maximum of 2 SIGNAL FACES per span within the hatched regions indicated by "LOCATION OF SIGNAL FACES".
- Guy wire in line with opposing span ± 5°.

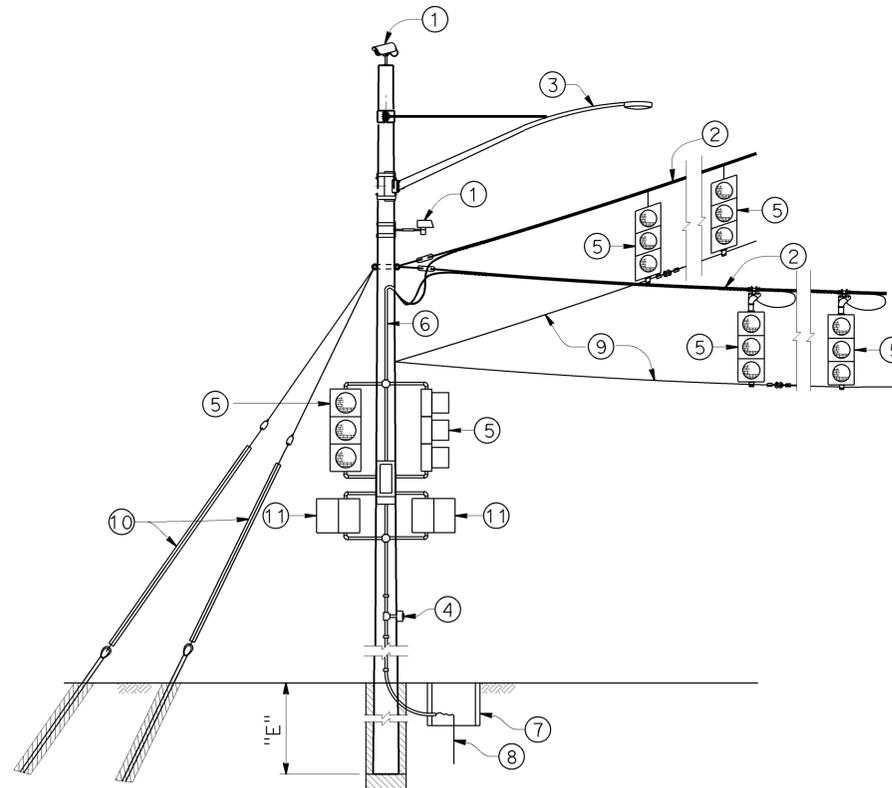


LOCATION OF SIGNAL FACES

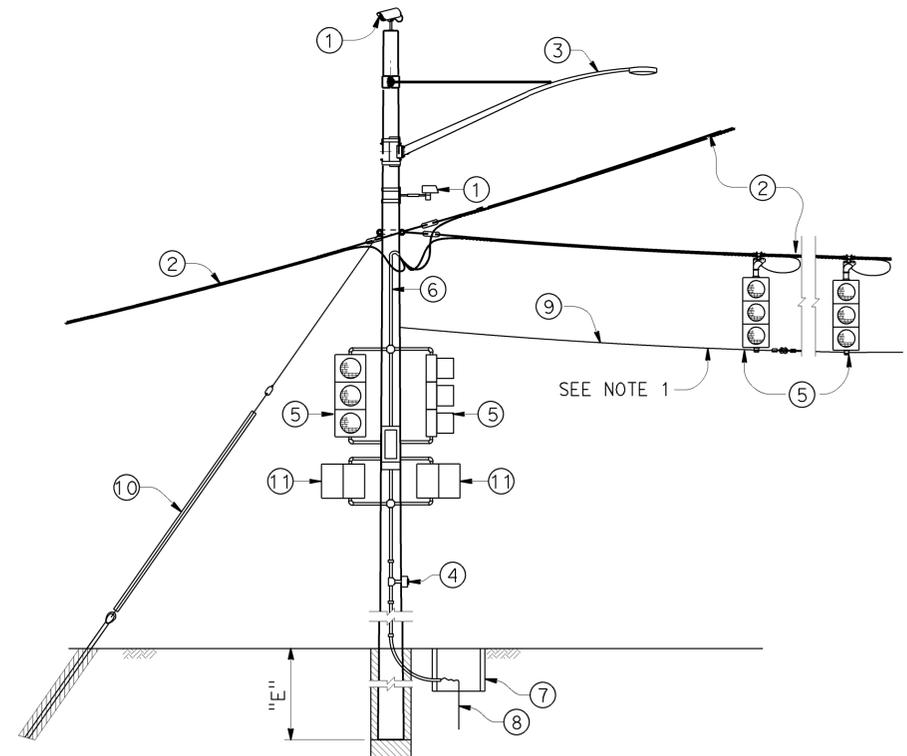
- CCTV camera assembly or vehicle detection system
- Overhead bundle consisting of 3/8" ø messenger wire and overhead conductors and lashing wire
- Luminaire with mast arm
- Pedestrian pushbutton
- Signal face with 3 indications or single sheet sign panel (10 SQFT Max) or only one signal face with 4 indications on single span wire
- Riser with weather head as required
- Pull box as required
- Grounding as required
- 3/8" ø tether wire
- 1/2" ø guy wire with white guy marker and strain insulator. For anchorage see "TEMPORARY WOOD POLES-DETAILS No. 2" sheet
- Pedestrian signal head



**CASE 1GT
POLE AT DEAD END
WITH ATTACHMENTS**



**CASE 2GT
POLE AT CORNER
WITH ATTACHMENTS**



**CASE 3GT
POLE AT JUNCTION
WITH ATTACHMENTS**

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

BRANCH CHIEF DAVID NEUMANN

DESIGN	BY A MALAK	CHECKED T MARCHENKO
DETAILS	BY H NGUYEN	CHECKED A MALAK
QUANTITIES	BY	CHECKED

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
DESIGN AND TECHNICAL SERVICES
SPECIAL DESIGNS BRANCH

BRIDGE NO.	N/A
POST MILE	21.7, 22.0

**TEMPORARY WOOD POLES
GUYED - WITH SIGNAL FACES ON SPANS**

SES-3

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	23	68

REGISTERED CIVIL ENGINEER *Aiman malak* DATE 3-12-14
 PLANS APPROVAL DATE 6-23-14
 No. C73369 Exp. 12-31-2014
 CIVIL
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

LEGEND

-  Wood Pole with Attachments
-  Overhead Bundle with Signal Faces (See Note 1)

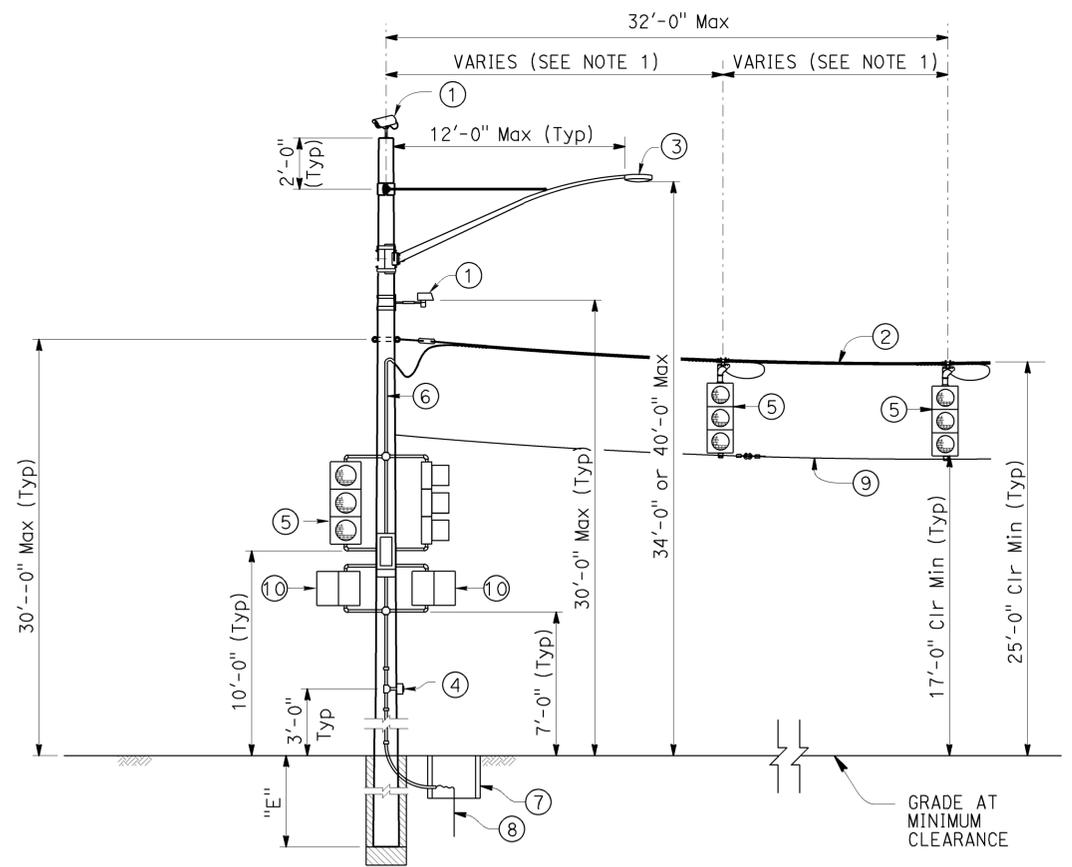
POLE SELECTION TABLE

		CASE 1NT			
OVERHEAD BUNDLE HORIZONTAL SPAN (Max)	75'	MAXIMUM d _p	1"	1.5"	2.0"
		MINIMUM POLE CLASS	H-5	H-6	H-6
		POLE EMBEDMENT (E)	13'		

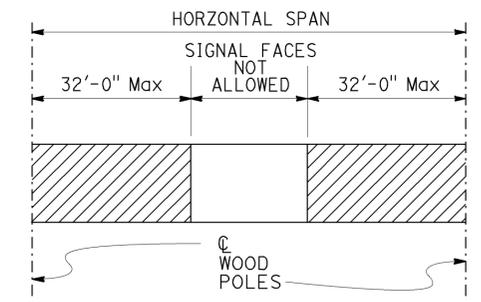
- ① CCTV camera assembly or vehicle detection system
- ② Overhead bundle consisting of a 3/8" ø messenger wire and overhead conductors and lashing wire
- ③ Luminaire with mast arm
- ④ Pedestrian pushbutton
- ⑤ Signal face with 3 indications or single sheet sign panel (10 SQFT Max) or only one signal face with 4 indications on single span wire
- ⑥ Riser with weather head as required
- ⑦ Pull box as required
- ⑧ Grounding as required
- ⑨ 3/8" ø tether wire
- ⑩ Pedestrian signal head

NOTES:

1. Maximum of 2 SIGNAL FACES per span within the hatched regions indicated by "LOCATION OF SIGNAL FACES".



**CASE 1NT
POLE AT DEAD END
WITH ATTACHMENTS**



LOCATION OF SIGNAL FACES

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

BRANCH CHIEF DAVID NEUMANN

DESIGN	BY A MALAK	CHECKED T MARCHENKO
DETAILS	BY H NGUYEN	CHECKED A MALAK
QUANTITIES	BY	CHECKED

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
DESIGN AND TECHNICAL SERVICES
SPECIAL DESIGNS BRANCH **B**

BRIDGE NO.	N/A
POST MILE	21.7, 22.0

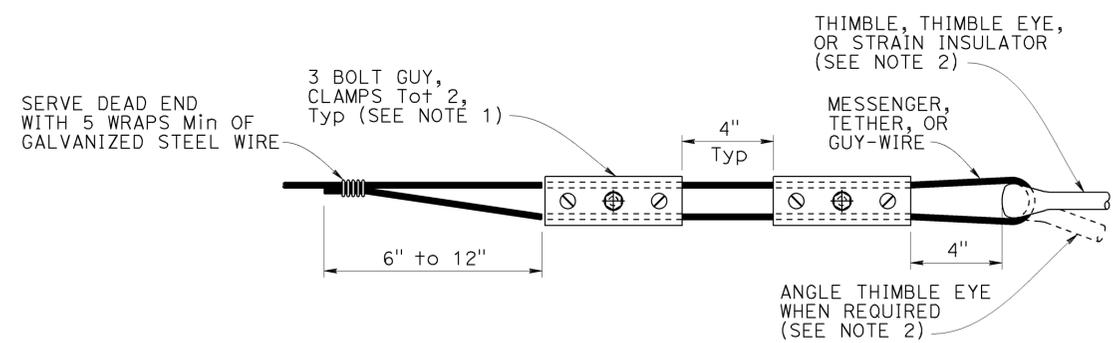
**TEMPORARY WOOD POLES
NON-GUYED - WITH SIGNALS FACES ON SPANS**

SES-4

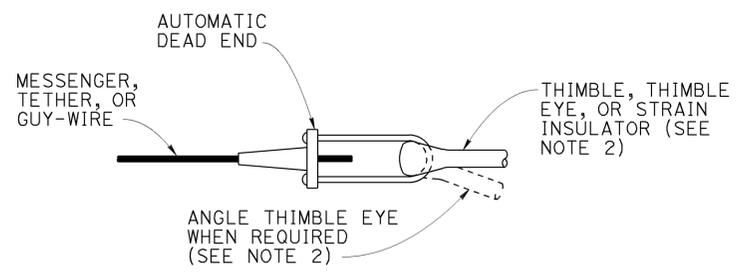
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	24	68

REGISTERED CIVIL ENGINEER	DATE
3-12-14	
PLANS APPROVAL DATE	
6-23-14	

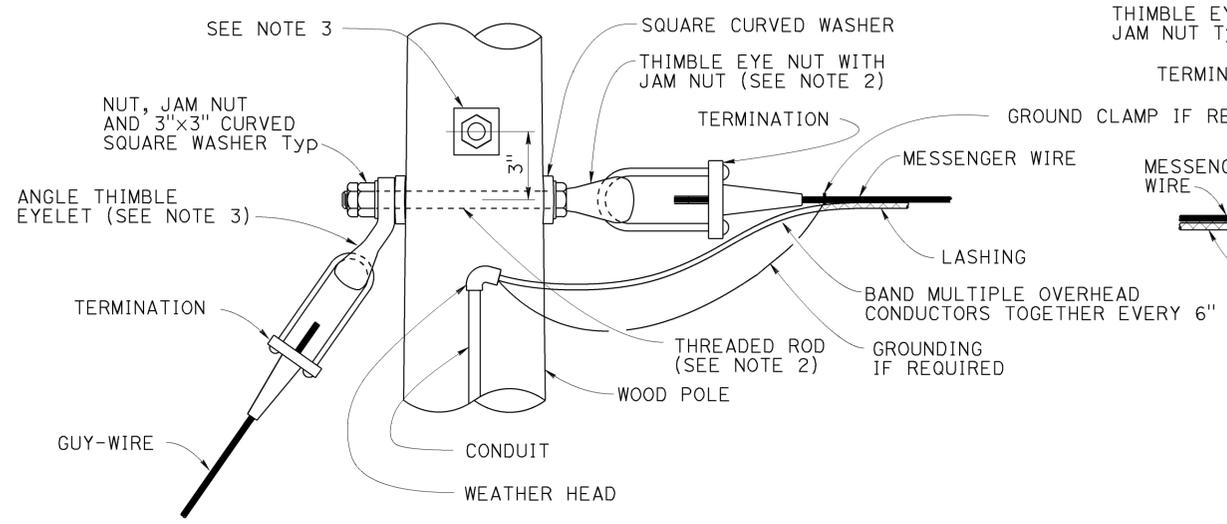
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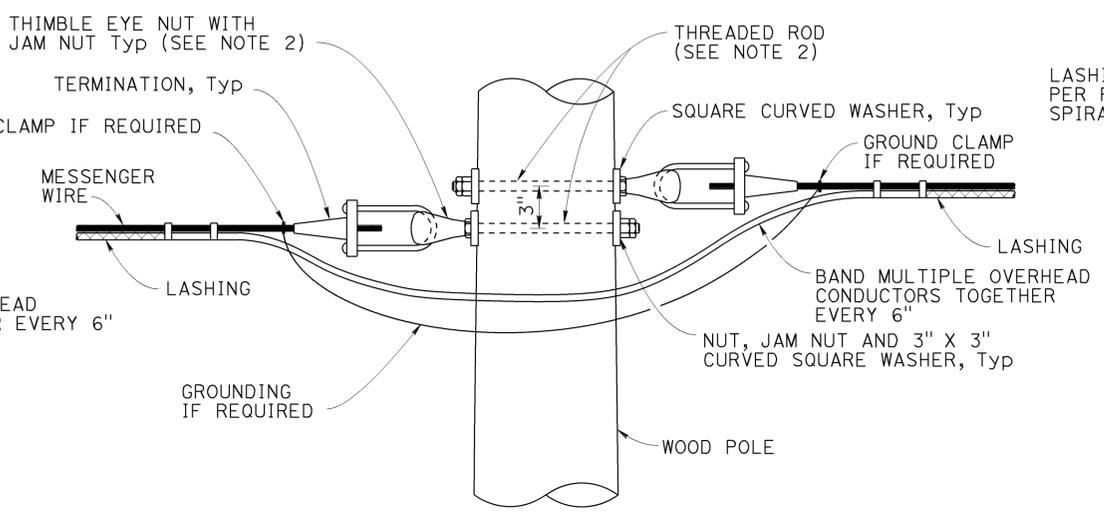
ALTERNATIVE TERMINATION OF MESSENGER WIRES USING GUY CLAMPS



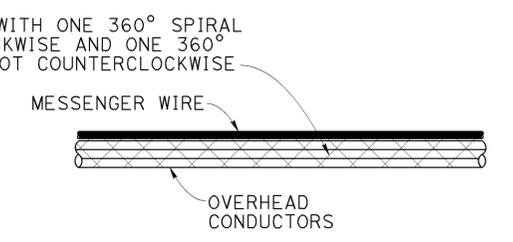
TERMINATION OF WIRES USING AUTOMATIC DEAD END



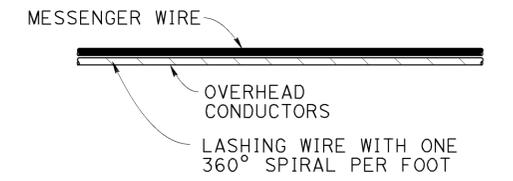
POLE AT DEAD END WITH GUY-WIRE CONNECTION



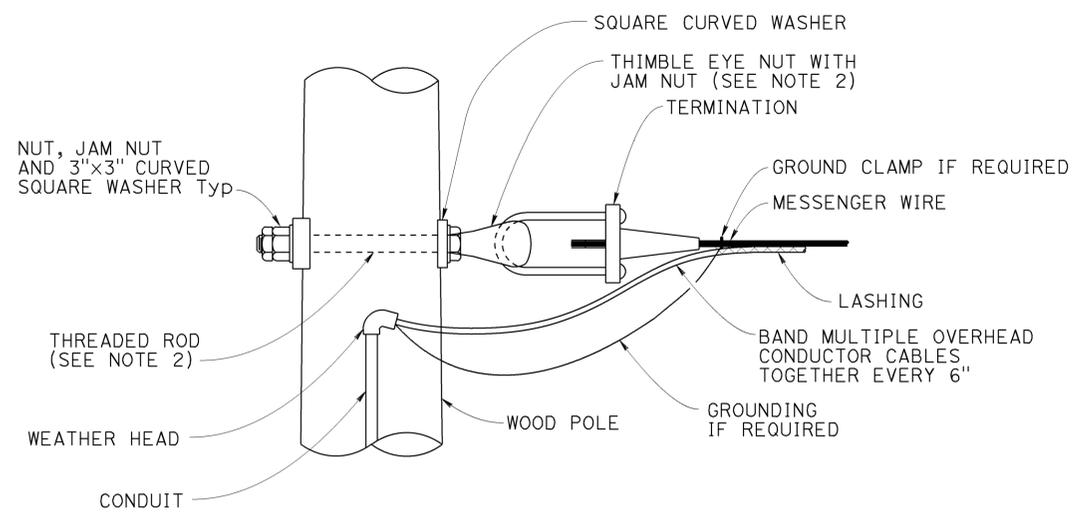
POLE AT TANGENT OR CORNER CONNECTION



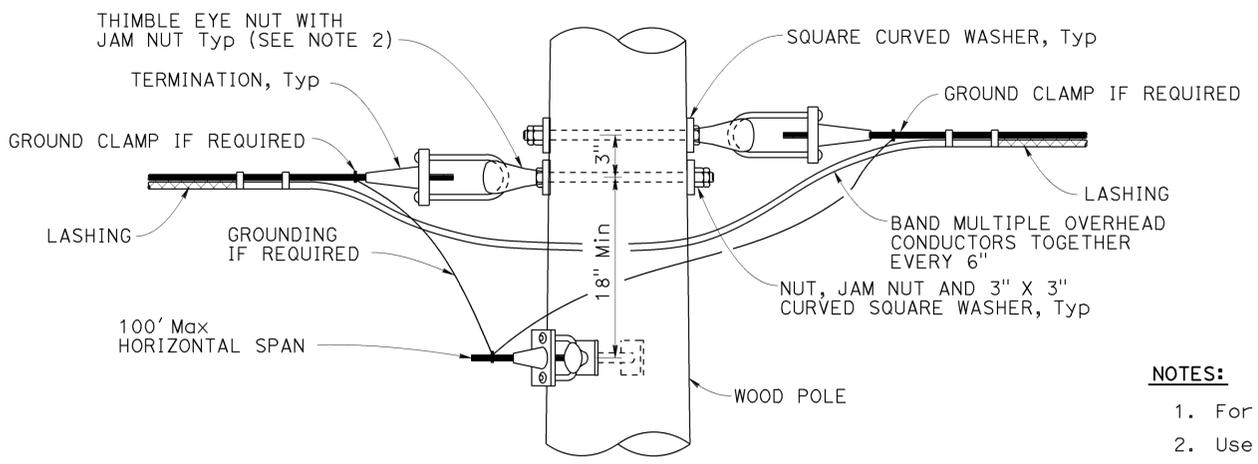
DOUBLE LASHING DETAIL
USE IF d_p IS GREATER THAN 1/2"



TYPICAL LASHING DETAIL
USE IF d_p IS 1/2" OR LESS



POLE AT DEAD END CONNECTION



POLE AT JUNCTION CONNECTION

- NOTES:**
1. For guy wires use 3 clamps.
 2. Use 5/8" dia except 3/4" dia at guyed wires.
 3. Install additional angle thimble eyelet at poles with two guy wires.

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

BRANCH CHIEF	DAVID NEUMANN
DESIGN	BY A MALAK
DETAILS	BY H NGUYEN
QUANTITIES	BY

CHECKED	T MARCHENKO
CHECKED	A MALAK
CHECKED	

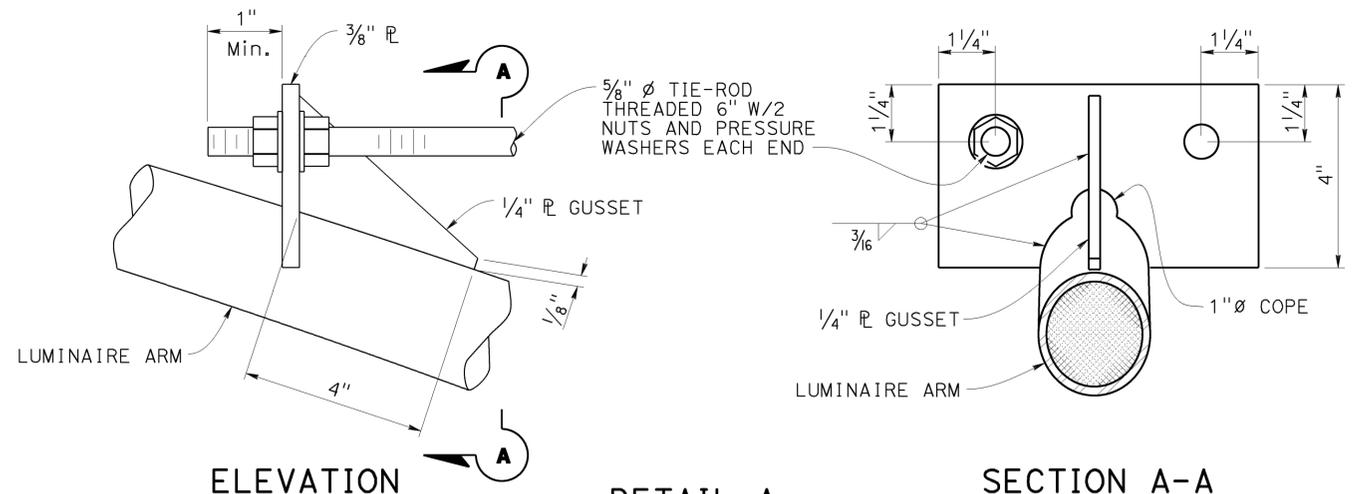
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
DESIGN AND TECHNICAL SERVICES
SPECIAL DESIGNS BRANCH

BRIDGE NO.	N/A
POST MILE	21.7, 22.0

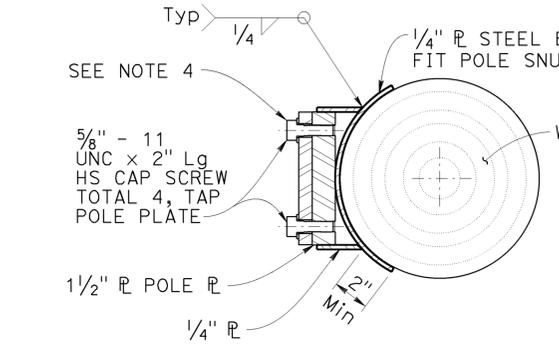
TEMPORARY WOOD POLES
DETAILS No. 1

SES-5
SHEET 5 OF 8



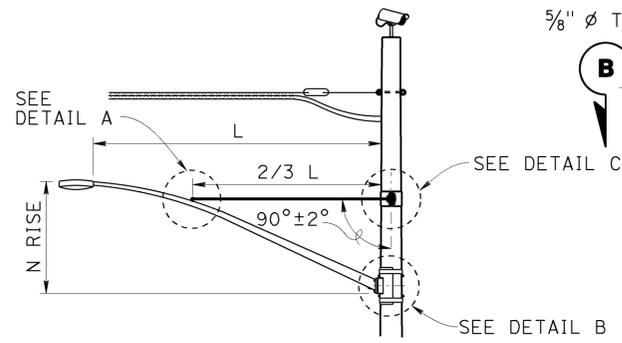
ELEVATION
DETAIL A
TIE-ROD AT LUMINAIRE ARM
 NO SCALE

- NOTES:**
- Luminaire mast arms must be in compliance with Standard Plan ES-6D with noted modifications.
 - Verify pole dimensions at tie-rod attachment height. Fabricate 8" flat bar with "L" dimension to maintain an open gap between flanges in finished installation.
 - Not all screw heads and bolt heads are shown for clarity.
 - Mast arm not shown for clarity.

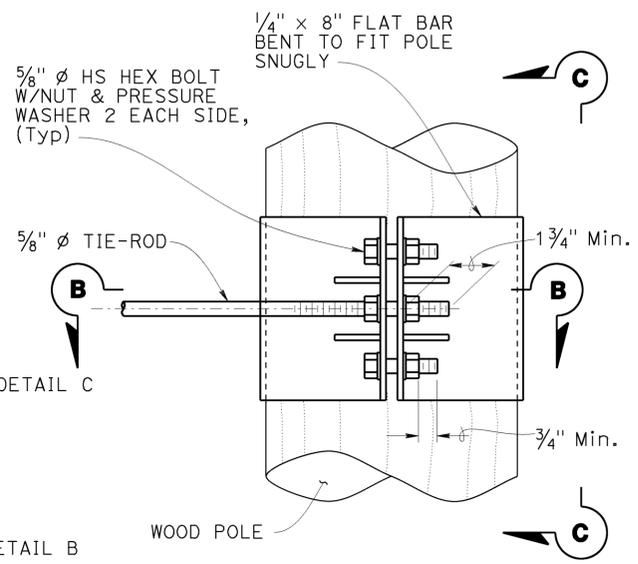


LUMINAIRE MAST ARM DATA			
PROJECTED LENGTH	N RISE	Min OD AT POLE	NOMINAL THICKNESS
6'-0"	2'-0"±	3 1/4"	0.1196"
8'-0"	2'-6"±	3 1/2"	
10'-0"	3'-3"±	3 7/8"	
12'-0"	4'-3"±	3 7/8"	

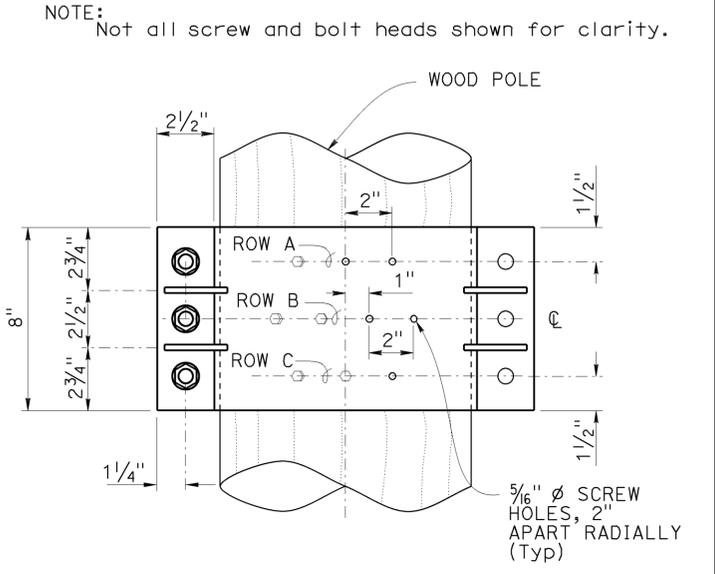
SECTION E-E



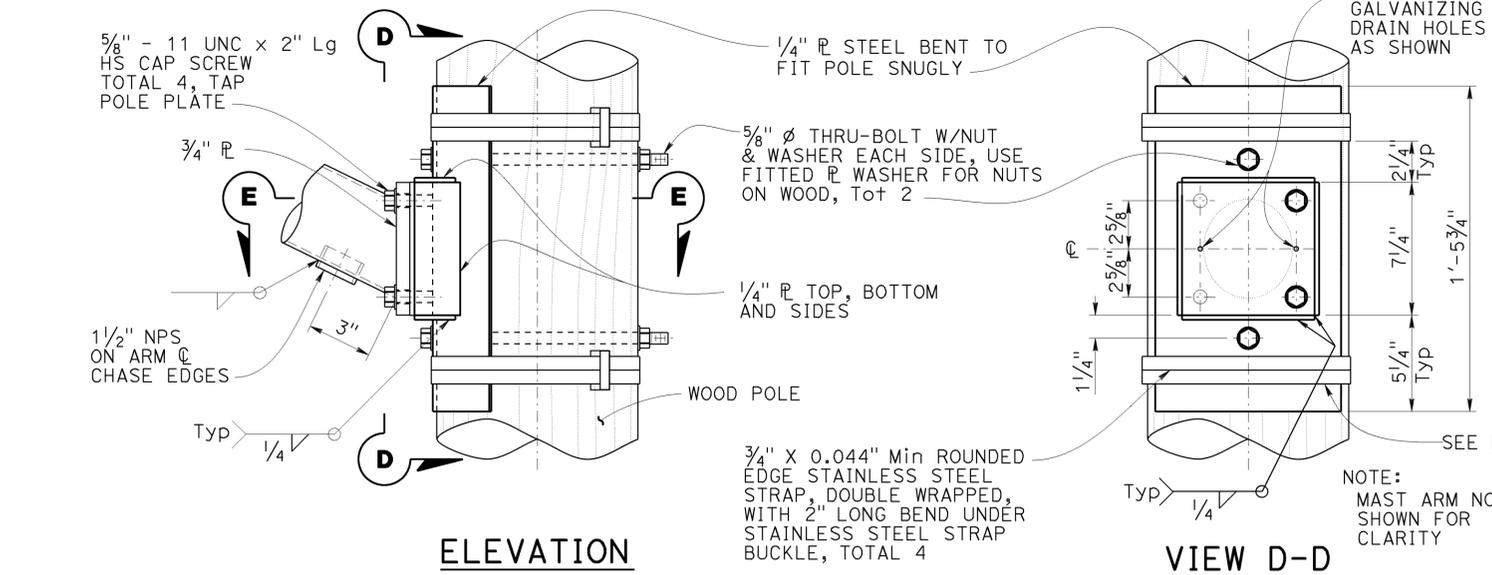
LUMINAIRE MAST ARM



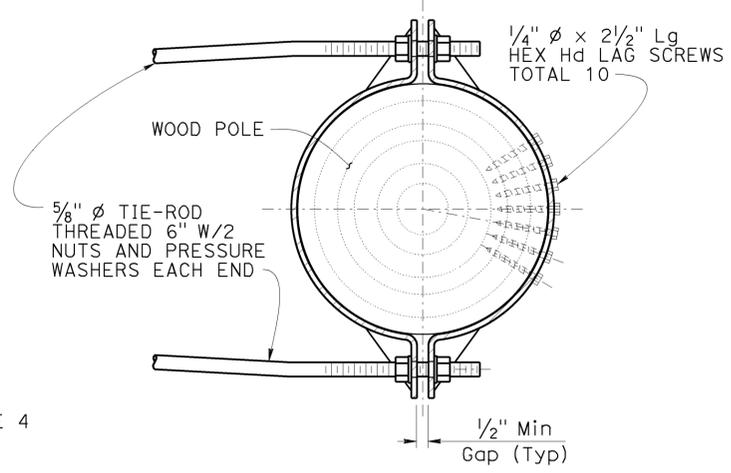
ELEVATION



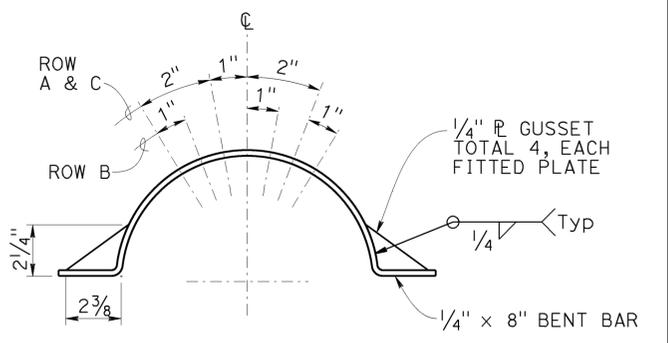
VIEW C-C



DETAIL B
ARM CONNECTION DETAILS
 NO SCALE



SECTION B-B



DETAIL C
TIE-ROD AT POLE
 NO SCALE

NOTE:
 THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

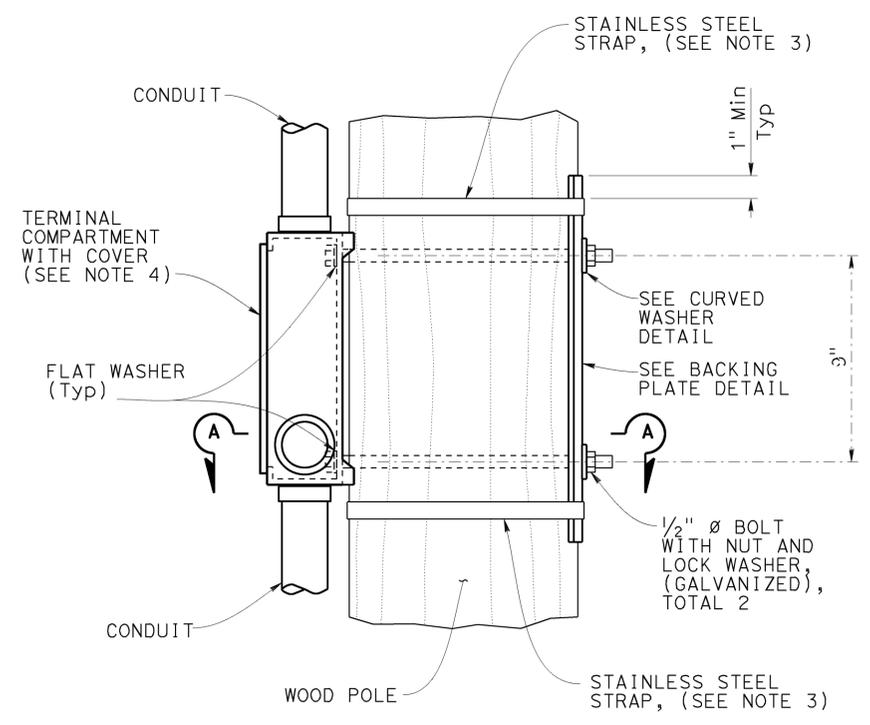
BRANCH CHIEF DAVID NEUMANN	DESIGN BY J MAGANA	CHECKED T MARCHENKO	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH	BRIDGE NO. N/A	TEMPORARY WOOD POLES DETAILS No. 2	SES-6
	DETAILS BY H NGUYEN	CHECKED J MAGANA			POST MILE 21.7, 22.0		
QUANTITIES BY	CHECKED						

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	26	68

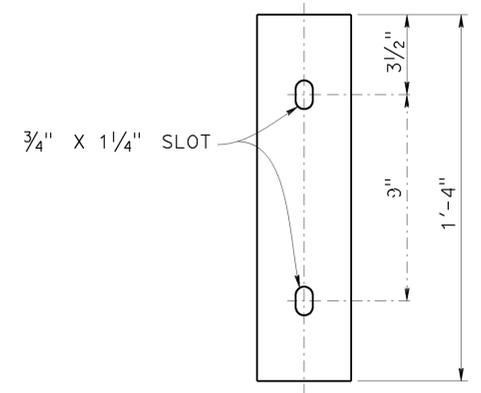
Aliman malak
 REGISTERED CIVIL ENGINEER DATE 3-12-14
 6-23-14
 PLANS APPROVAL DATE

No. C73369
 Exp. 12-31-2014
 CIVIL
 STATE OF CALIFORNIA

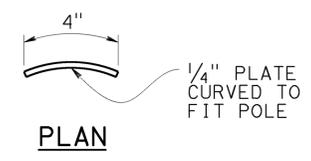
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ELEVATION

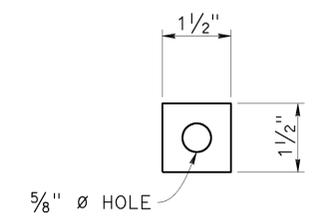


ELEVATION

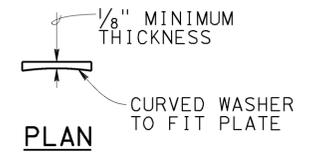


PLAN

BACKING PLATE DETAIL



ELEVATION

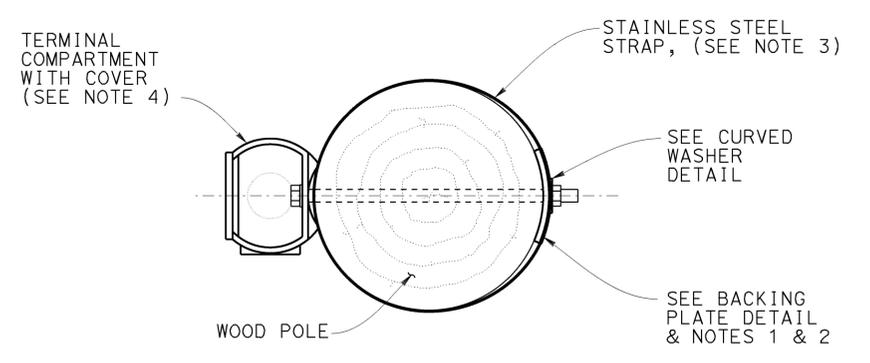


PLAN

CURVED WASHER DETAIL

NOTES:

1. Verify pole dimensions at terminal compartment for fabrication of backing plate and curved washer.
2. Backing plate to be galvanized after fabrication.
3. 3/4" x 0.044" minimum, rounded edge stainless steel straps, double wrapped with 2" long bend under stainless steel strap buckle.
4. For details not shown see Standard Plan ES-4D.



SECTION A-A

**SIDE MOUNTING
TERMINAL COMPARTMENT**

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

NO SCALE

BRANCH CHIEF	DESIGN	BY A MALAK	CHECKED T MARCHENKO
	DETAILS	BY H NGUYEN	CHECKED A MALAK
	QUANTITIES	BY	CHECKED

STATE OF CALIFORNIA	
DEPARTMENT OF TRANSPORTATION	

DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH	B
BRIDGE NO. N/A	

UNIT: 3619 PROJECT NUMBER & PHASE: 0713000218 1	POST MILE 21.7, 22.0
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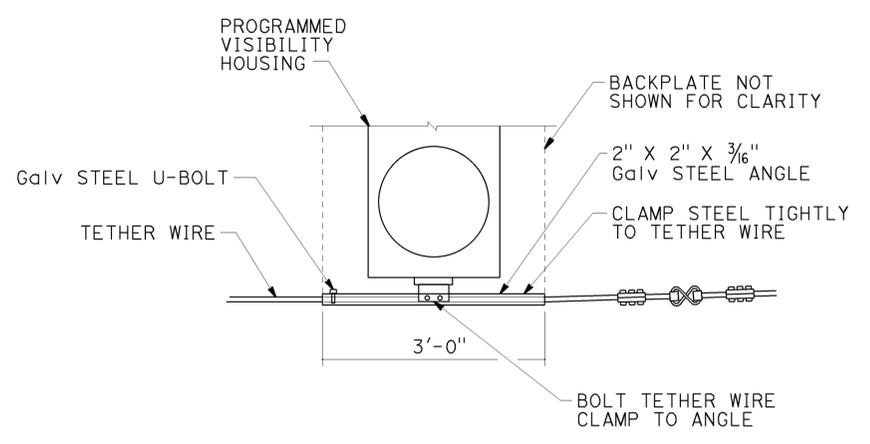
TEMPORARY WOOD POLES DETAILS No. 3	
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SES-7	
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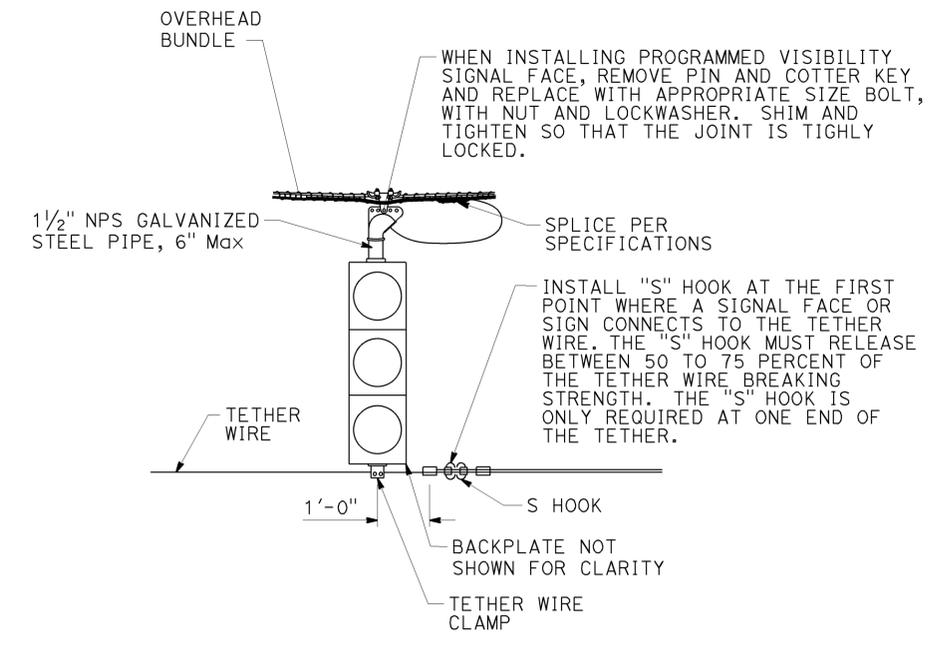
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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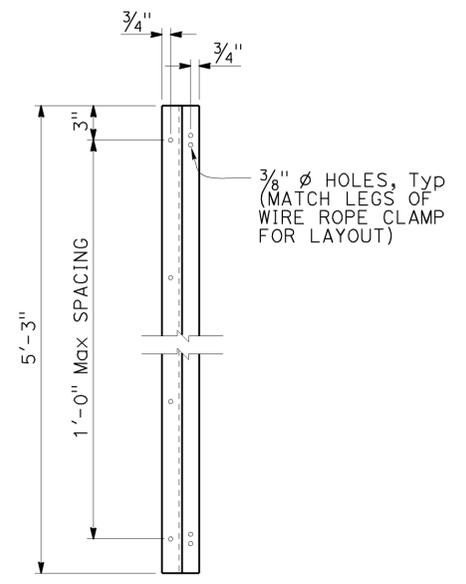
Alman malak
REGISTERED CIVIL ENGINEER DATE 3-12-14
6-23-14
PLANS APPROVAL DATE
No. C73369
Exp 12-31-2014
CIVIL
STATE OF CALIFORNIA
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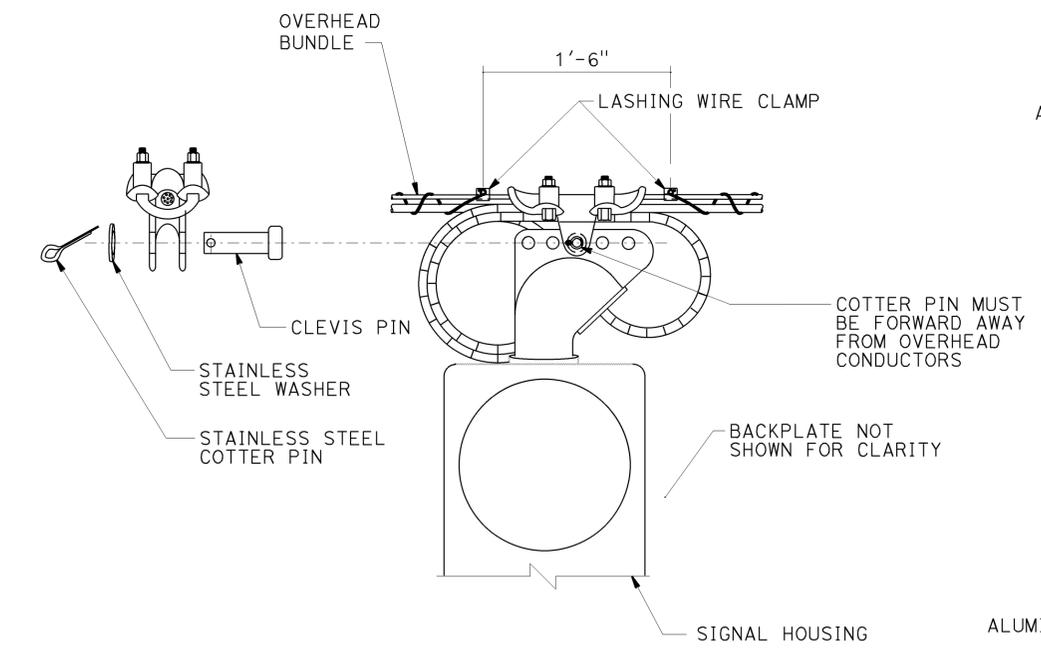
TETHER WIRE ATTACHMENT FOR PROGRAMMED VISIBILITY SIGNAL FACE



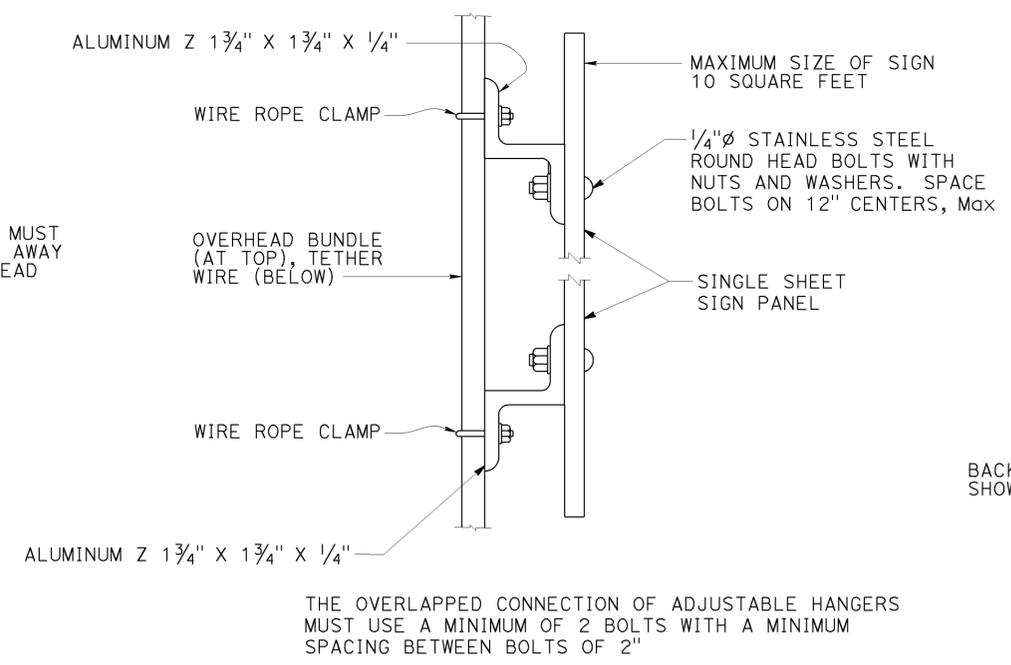
SIGNAL FACE SUPPORT



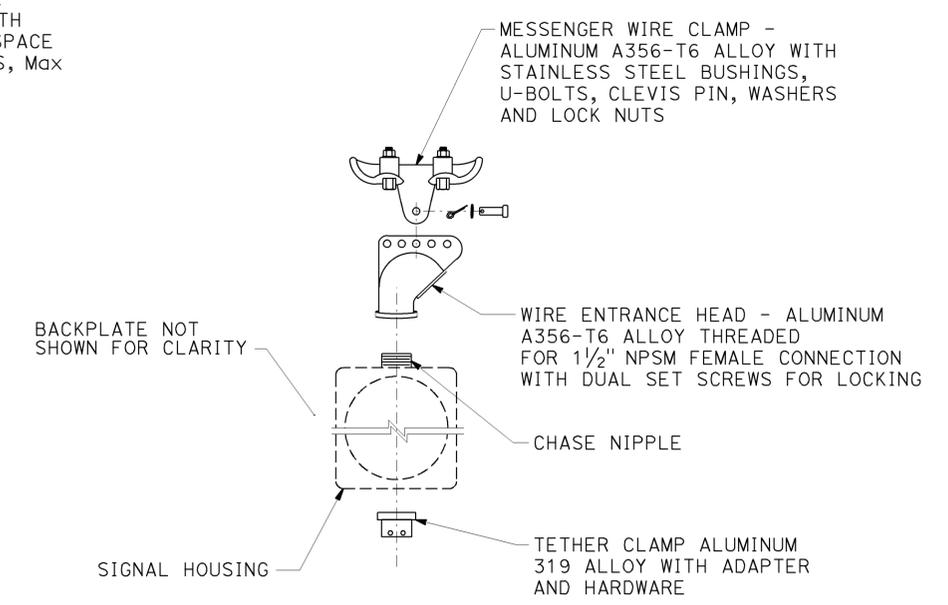
Z-BAR ELEVATION



MESSENGER WIRE CLAMP COTTER PIN DETAIL



SIGN MOUNTING DETAIL



SIGNAL FACE SUPPORT EXPLODED VIEW

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

BRANCH CHIEF	DAVID NEUMANN
--------------	---------------

DESIGN	BY A MALAK	CHECKED T MARCHENKO
DETAILS	BY H NGUYEN	CHECKED A MALAK
QUANTITIES	BY	CHECKED

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
DESIGN AND TECHNICAL SERVICES
SPECIAL DESIGNS BRANCH

BRIDGE NO.	N/A
POST MILE	21.7, 22.0

TEMPORARY WOOD POLES
DETAILS No. 3

SES-8

	M	
Maint	MAINTENANCE	
Max	MAXIMUM	
MB	METAL BEAM	
MBB	METAL BEAM BARRIER	
MBGR	METAL BEAM GUARD RAILING	
Med	MEDIAN	
MGS	MIDWEST GUARDRAIL SYSTEM	
MH	MANHOLE	
Min	MINIMUM	
Misc	MISCELLANEOUS	
Misc I & S	MISCELLANEOUS IRON AND STEEL	
Mkr	MARKER	
Mod	MODIFIED, MODIFY	
Mon	MONUMENT	
MP	METAL PLATE	
MPGR	METAL PLATE GUARD RAILING	
MR	MOVEMENT RATING	
MSE	MECHANICALLY STABILIZED EMBANKMENT	
Mt	MOUNTAIN, MOUNT	
MtI	MATERIAL	
MVP	MAINTENANCE VEHICLE PULLOUT	
	N	
N	NORTH	
NB	NORTHBOUND	
No.	NUMBER (MUST HAVE PERIOD)	
Nos.	NUMBERS (MUST HAVE PERIOD)	
NPS	NOMINAL PIPE SIZE	
NS	NEAR SIDE	
NSP	NEW STANDARD PLAN	
NTS	NOT TO SCALE	
	O	
Obir	OBLITERATE	
OC	OVERCROSSING	
OD	OUTSIDE DIAMETER	
OF	OUTSIDE FACE	
OG	ORIGINAL GROUND	
OGAC	OPEN GRADED ASPHALT CONCRETE	
OGFC	OPEN GRADED FRICTION COURSE	
OH	OVERHEAD	
OHWM	ORDINARY HIGH WATER MARK	
O-O	OUT TO OUT	
Opp	OPPOSITE	
OSD	OVERSIDE DRAIN	
	P	
p	PAGE	
PAP	PERFORATED ALUMINUM PIPE	
PB	PULL BOX	
PC	POINT OF CURVATURE, PRECAST	
PCC	POINT OF COMPOUND CURVE, PORTLAND CEMENT CONCRETE	
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN	
PCP	PERFORATED CONCRETE PIPE, PRESTRESSED CONCRETE PIPE	
PCVC	POINT OF COMPOUND VERTICAL CURVE	
PEC	PERMIT TO ENTER AND CONSTRUCT	
Ped	PEDESTRIAN	
Ped OC	PEDESTRIAN OVERCROSSING	
Ped UC	PEDESTRIAN UNDERCROSSING	
Perm MtI	PERMEABLE MATERIAL	

	P continued	
PG	PROFILE GRADE	
PI	POINT OF INTERSECTION	
PJP	PARTIAL JOINT PENETRATION	
Pkwy	PARKWAY	
PL, PL	PLATE	
P/L	PROPERTY LINE	
PM	POST MILE, TIME FROM NOON TO MIDNIGHT	
PN	PAVING NOTCH	
POC	POINT OF HORIZONTAL CURVE	
POT	POINT OF TANGENT	
POVC	POINT OF VERTICAL CURVE	
PP	PIPE PILE, PLASTIC PIPE, POWER POLE	
PPL	PREFORMED PERMEABLE LINER	
PPP	PERFORATED PLASTIC PIPE	
PRC	POINT OF REVERSE CURVE	
PRF	PAVEMENT REINFORCING FABRIC	
PRVC	POINT OF REVERSE VERTICAL CURVE	
PS&E	PLANS, SPECIFICATIONS AND ESTIMATES	
PS, P/S	PRESTRESSED	
PSP	PERFORATED STEEL PIPE	
PT	POINT OF TANGENCY	
PVC	POLYVINYL CHLORIDE	
Pvmt	PAVEMENT	
	Q	
Qty	QUANTITY	
	R	
R	RADIUS	
R & D	REMOVE AND DISPOSE	
R & S	REMOVE AND SALVAGE	
R/C	RATE OF CHANGE	
RCA	REINFORCED CONCRETE ARCH	
RCB	REINFORCED CONCRETE BOX	
RCP	REINFORCED CONCRETE PIPE	
RCPA	REINFORCED CONCRETE PIPE ARCH	
Rd	ROAD	
Reinf	REINFORCED, REINFORCEMENT, REINFORCING	
Rel	RELOCATE	
Repl	REPLACEMENT	
Ret	RETAINING	
Rev	REVISED, REVISION	
Rdwy	ROADWAY	
RHMA	RUBBERIZED HOT MIX ASPHALT	
Riv	RIVER	
RM	ROAD-MIXED	
RP	RADIUS POINT, REFERENCE POINT	
RR	RAILROAD	
RSP	ROCK SLOPE PROTECTION, REVISED STANDARD PLAN	
Rt	RIGHT	
Rte	ROUTE	
RW	REDWOOD, RETAINING WALL	
R/W	RIGHT OF WAY	
Rwy	RAILWAY	

	S	
S	SOUTH, SUPPLEMENT	
SAE	STRUCTURE APPROACH EMBANKMENT	
Salv	SALVAGE	
SAPP	STRUCTURAL ALUMINUM PLATE PIPE	
SB	SOUTHBOUND	
SC	SAND CUSHION	
SCSP	SLOTTED CORRUGATED STEEL PIPE	
SD	STORM DRAIN	
Sec	SECOND, SECTION	
Sep	SEPARATION	
SG	SUBGRADE	
Shld	SHOULDER	
Sht	SHEET	
Sim	SIMILAR	
SL	STATION LINE	
SM	SELECTED MATERIAL	
Spec	SPECIAL, SPECIFICATIONS	
SPP	SLOTTED PLASTIC PIPE	
SS	SLOPE STAKE	
SSBM	STRAP AND SADDLE BRACKET METHOD	
SSD	STRUCTURAL SECTION DRAIN	
SSPA	STRUCTURAL STEEL PLATE ARCH	
SSPP	STRUCTURAL STEEL PLATE PIPE	
SSPPA	STRUCTURAL STEEL PLATE PIPE ARCH	
SSRP	STEEL SPIRAL RIB PIPE	
St	STREET	
Sta	STATION	
STBB	SINGLE THRIE BEAM BARRIER	
Std	STANDARD	
Str	STRUCTURE	
Surf	SURFACING	
SW	SIDEWALK, SOUND WALL	
Swr	SEWER	
Sym	SYMMETRICAL	
S4S	SURFACE 4 SIDES	
	T	
T	SEMI-TANGENT	
Tan	TANGENT	
TBB	THRIE BEAM BARRIER	
Tbr	TIMBER	
TC	TOP OF CURB	
TCB	TRAFFIC CONTROL BOX	
TCE	TEMPORARY CONSTRUCTION EASEMENT	
TeI	TELEPHONE	
Temp	TEMPORARY	
TG	TOP OF GRADE	
Tot	TOTAL	
TP	TELEPHONE POLE	
TPB	TREATED PERMEABLE BASE	
TPM	TREATED PERMEABLE MATERIAL	
Trans	TRANSITION	

	T continued	
TS	TRANSVERSE, TRAFFIC SIGNAL, TUBULAR STEEL	
Typ	TYPICAL	U
UC	UNDERCROSSING	
UD	UNDERDRAIN	
UG	UNDERGROUND	
UON	UNLESS OTHERWISE NOTED	
UP	UNDERPASS	V
V	VALVE, DESIGN SPEED	
Var	VARIABLE, VARIES	
VC	VERTICAL CURVE	
VCP	VITRIFIED CLAY PIPE	
Vert	VERTICAL	
Via	VIADUCT	
Vol	VOLUME	W
W	WEST, WIDTH	
WB	WESTBOUND	
WH	WEEP HOLE	
WM	WIRE MESH	
WS	WATER SURFACE	
WSP	WELDED STEEL PIPE	
Wt	WEIGHT	
WV	WATER VALVE	
WW	WINGWALL	
WWLOL	WINGWALL LAYOUT LINE	X
X Sec	CROSS SECTION	
Xing	CROSSING	Y
Yr	YEAR	
Yrs	YEARS	

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	28	68

Grace M. Tsushima
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 Grace M. Tsushima
 No. C49814
 Exp. 9-30-14
 CIVIL
 STATE OF CALIFORNIA

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TO ACCOMPANY PLANS DATED 6-23-14

UNIT OF MEASUREMENT SYMBOLS:
Some of the symbols used in the project plan quantity tables and in the Bid Item List are:

TABLE A

SYMBOL USED	DEFINITIONS
ACRE	ACRE
CF	CUBIC FOOT
CY	CUBIC YARD
EA	EACH
GAL	GALLON
LB	POUND
LF	LINEAR FOOT
SQFT	SQUARE FOOT
SQYD	SQUARE YARD
STA	100 FEET
TAB	TABLET
TON	2,000 POUNDS

Some of the symbols used in the plans other than in the project plan quantity tables are:

TABLE B

SYMBOL USED	DEFINITIONS
ksi	KIPS PER SQUARE INCH
ksf	KIPS PER SQUARE FOOT
psi	POUNDS PER SQUARE INCH
psf	POUNDS PER SQUARE FOOT
lb/ft ³ , pcf	POUNDS PER CUBIC FOOT
tsf	TONS PER SQUARE FOOT
mph, MPH *	MILES PER HOUR
ø	NOMINAL DIAMETER
oz	OUNCE
lb	POUND
kíp	1,000 POUNDS
cal	CALORIE
ft	FOOT OR FEET
gal	GALLON

* For use on a sign panel only

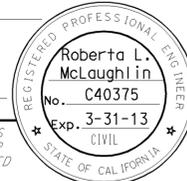
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ABBREVIATIONS
(SHEET 2 OF 2)**

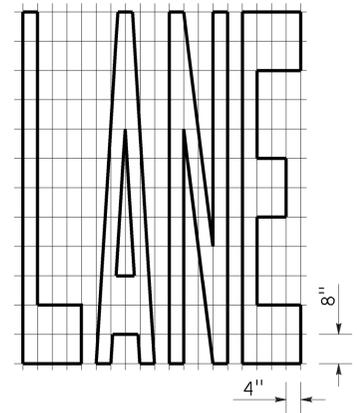
NO SCALE

RSP A10B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A10B
DATED MAY 20, 2011 - PAGE 2 OF THE STANDARD PLANS BOOK DATED 2010.

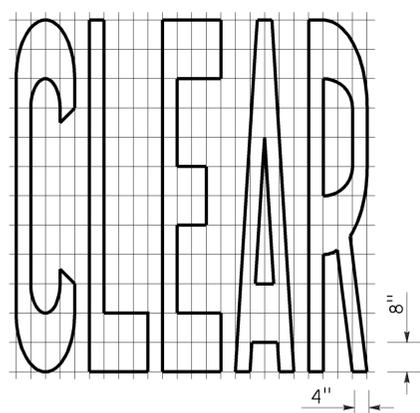
2010 REVISED STANDARD PLAN RSP A10B



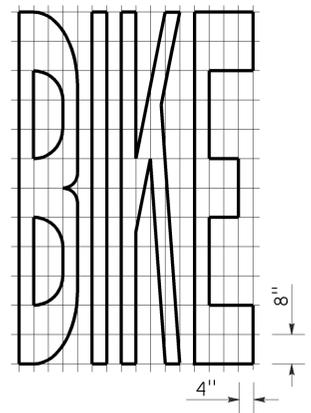
TO ACCOMPANY PLANS DATED 6-23-14



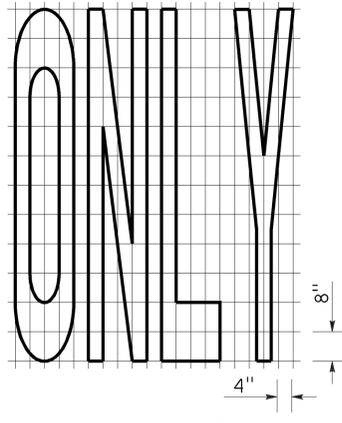
A=24 ft²



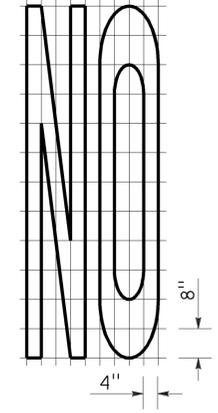
A=27 ft²



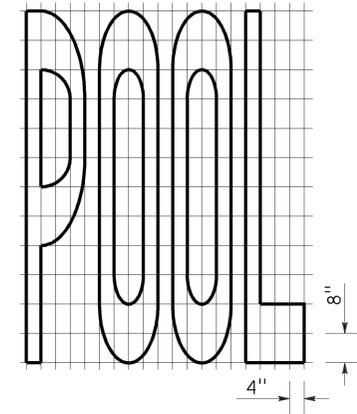
A=21 ft²



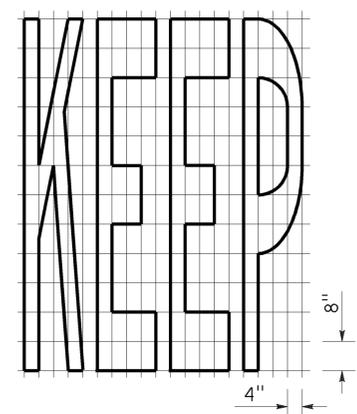
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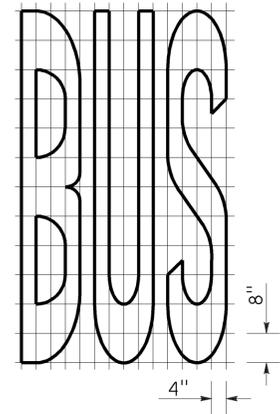
A=14 ft²



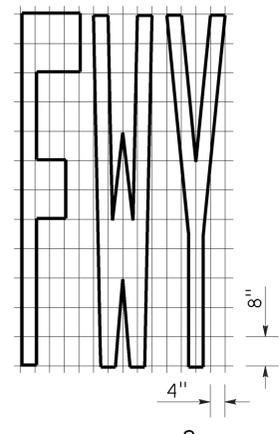
A=23 ft²



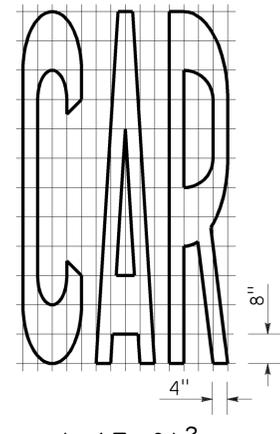
A=24 ft²



A=20 ft²

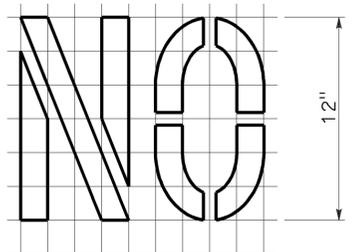


A=16 ft²



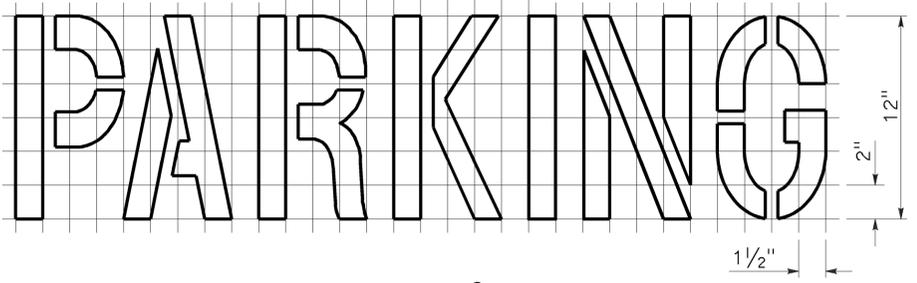
A=17 ft²

WORD MARKINGS			
ITEM	ft ²	ITEM	ft ²
LANE	24	NO	14
POOL	23	BIKE	21
CAR	17	BUS	20
CLEAR	27	ONLY	22
KEEP	24	FWY	16



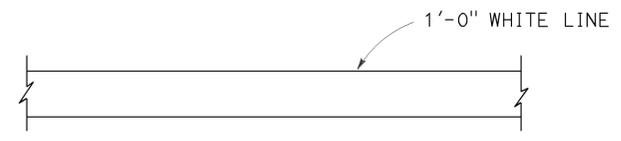
A=2 ft²

See Notes 6 and 7

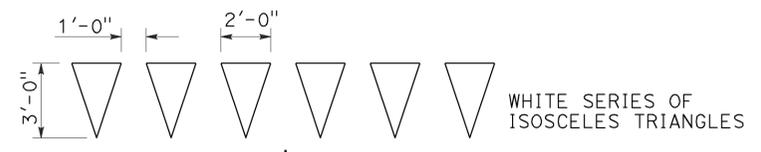


A=2 ft²

See Notes 6 and 7



LIMIT LINE (STOP LINE)



YIELD LINE

NOTES:

1. If a message consists of more than one word, it should read "UP", i.e., the first word should be nearest the driver.
2. The space between words should be at least four times the height of the characters for low speed roads, but not more than ten times the height of the characters. The space may be reduced appropriately where there is limited space because of local conditions.
3. Minor variations in dimensions may be accepted by the Engineer.
4. Portions of a letter, number or symbol may be separated by connecting segments not to exceed 2" in width.
5. The words "NO PARKING" pavement marking is to be used for parking facilities. For typical locations of markings, see Standard Plans A90A and A90B.
6. The words "NO PARKING", shall be painted in white letters no less than 1'-0" high on a contrasting background and located so that it is visible to traffic enforcement officials.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**PAVEMENT MARKINGS
 WORDS, LIMIT AND YIELD LINES**
 NO SCALE

RSP A24E DATED JULY 20, 2012 SUPERSEDES STANDARD PLAN A24E
 DATED MAY 20, 2011 - PAGE 17 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP A24E

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	30	68

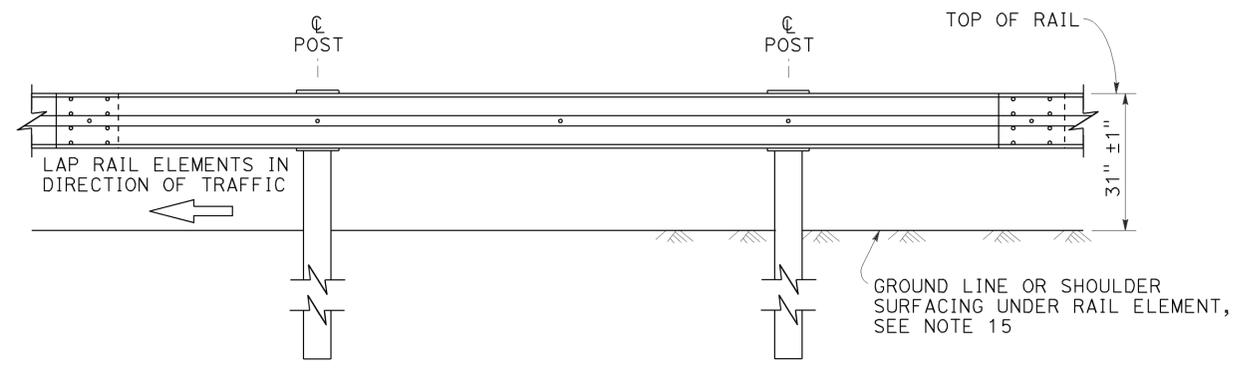
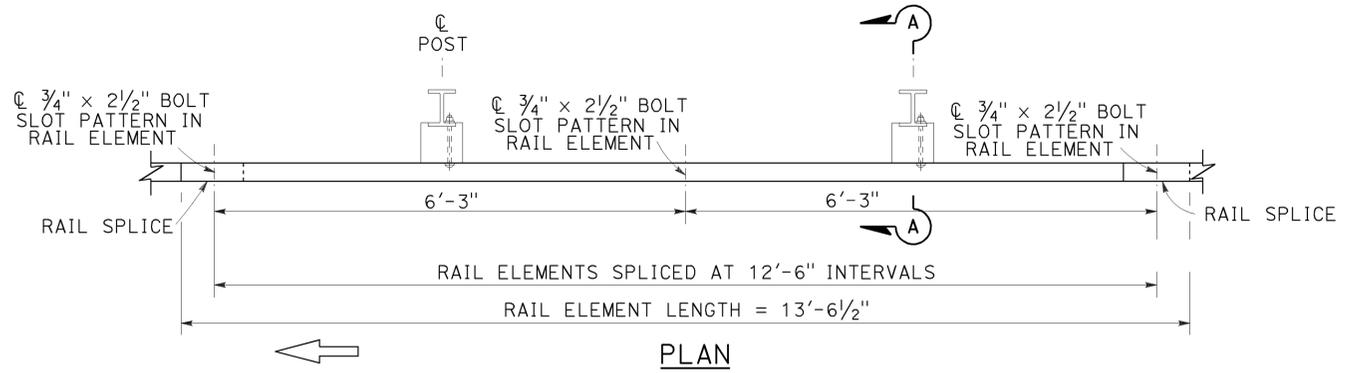
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

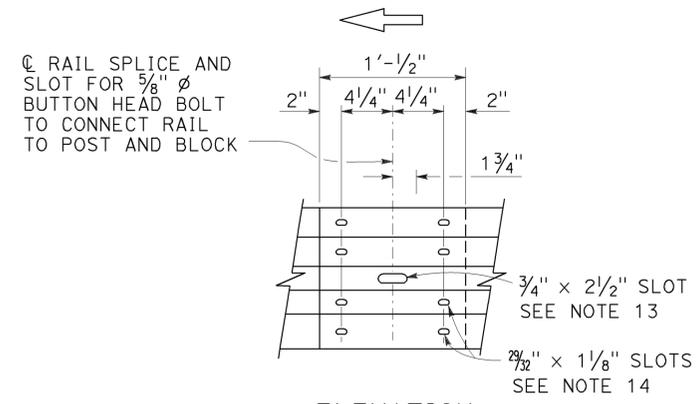
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TO ACCOMPANY PLANS DATED 6-23-14

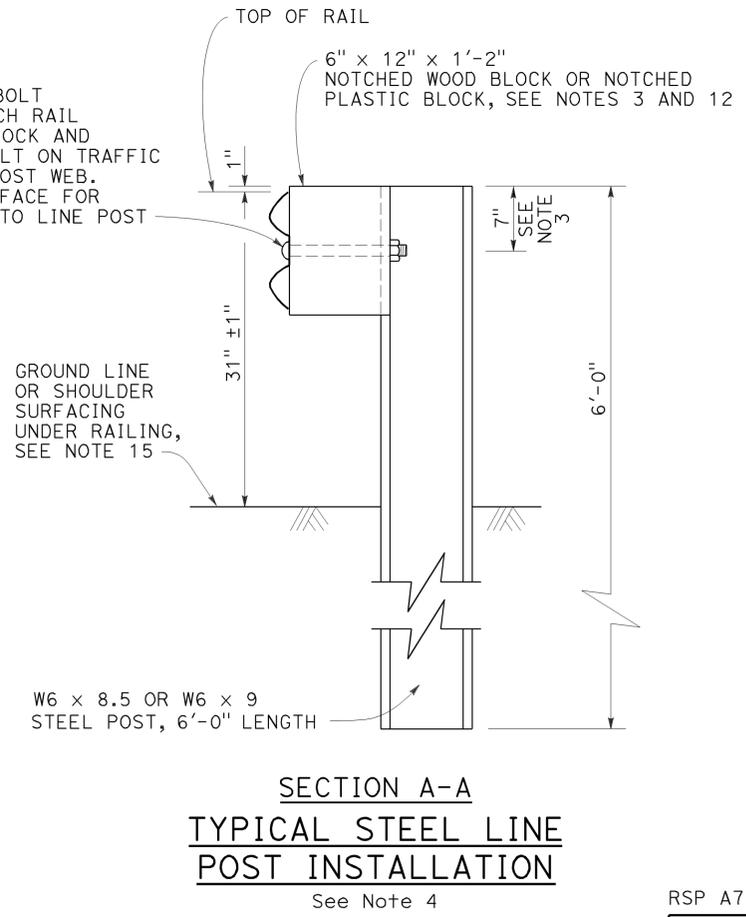
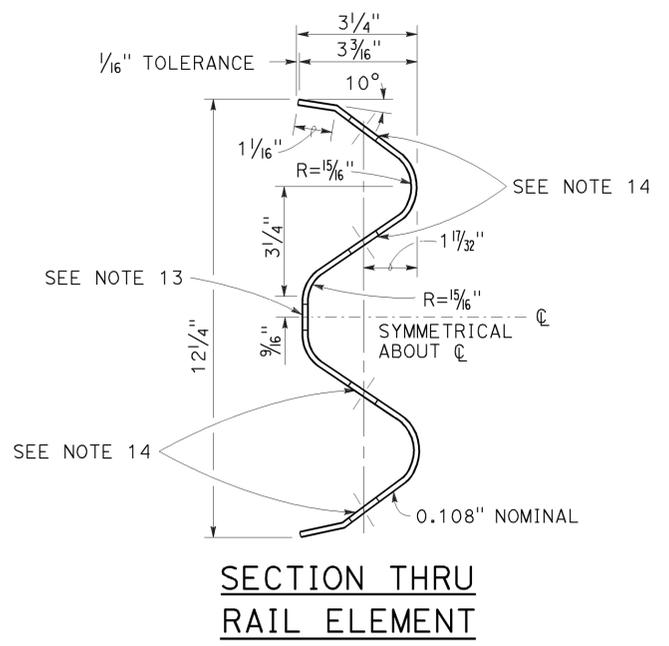
REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA



MIDWEST GUARDRAIL SYSTEM WITH STEEL POSTS AND NOTCHED WOOD OR NOTCHED RECYCLED PLASTIC BLOCKS



- Connect the overlapped end of the rail elements with 5/8" Ø x 1 3/8" button head oval shoulder splice bolts inserted into the 7/32" x 1 1/8" slots and bolted together with 5/8" Ø recessed hex nuts. Recess of hex nut points toward rail element. A total of 8 bolts and nuts are to be used at each rail splice connection.
- The ends of the rail elements are to be overlapped in the direction of traffic (see details).
- Where end cap is to be attached to the end of a rail element, a total of 4 of the above described splice bolts and nuts are to be used.



NOTES:

- For details of wood post installations, see Revised Standard Plan RSP A77L1.
- For details of standard hardware used to construct MGS, see Revised Standard Plan RSP A77M1.
- For details of steel posts and notched wood blocks used to construct MGS, see Revised Standard Plan RSP A77N2.
- For additional installation details, see Revised Standard Plan RSP A77N3.
- MGS post spacing to be 6'-3" center to center, except as otherwise noted.
- For MGS typical layouts, see the A77P, A77Q and A77R Series of Standard Plans.
- If railing is connected to terminal system end treatment, use 31" height terminal system end treatment.
- For MGS end anchor details, see Revised Standard Plans RSP A77S1 and RSP A77T2.
- For details of MGS transition to bridge railing, see Revised Standard Plan RSP A77U4.
- For additional details of MGS connection to bridge railings, see Revised Standard Plans RSP A77U1, RSP A77U2 and RSP A77V1.
- For dike positioning and MGS delineation details, see Revised Standard Plan RSP A77N4.
- Notched face of block faces steel post.
- Slotted hole for bolted connection of rail element to block and post. See "Section Thru Rail Element".
- Slotted holes for splice bolts to overlap ends of rail element. See "Section Thru Rail Element".
- Install posts in soil.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

MIDWEST GUARDRAIL SYSTEM STANDARD RAILING SECTION (STEEL POST WITH NOTCHED WOOD OR NOTCHED RECYCLED PLASTIC BLOCK)

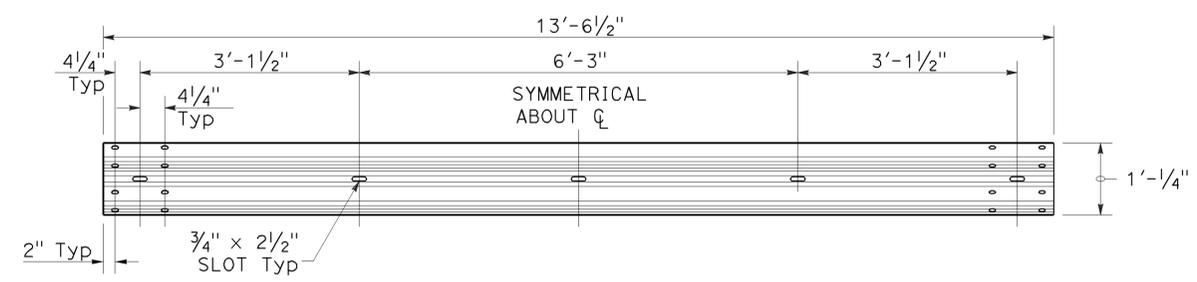
NO SCALE

RSP A77L2 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77L2

2010 REVISED STANDARD PLAN RSP A77L2

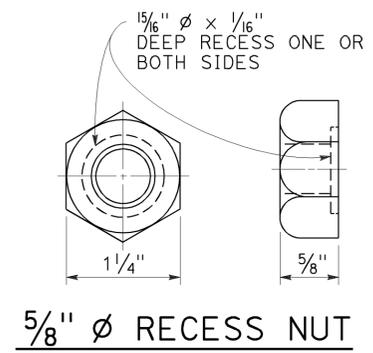
TO ACCOMPANY PLANS DATED 6-23-14



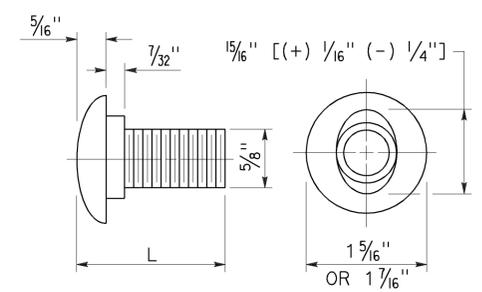
TYPICAL RAIL ELEMENT

NOTE:

- Slotted holes for splice bolts to overlap ends of rail element.



5/8" Ø RECESS NUT

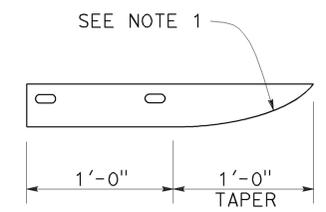


5/8" Ø BUTTON HEAD BOLT

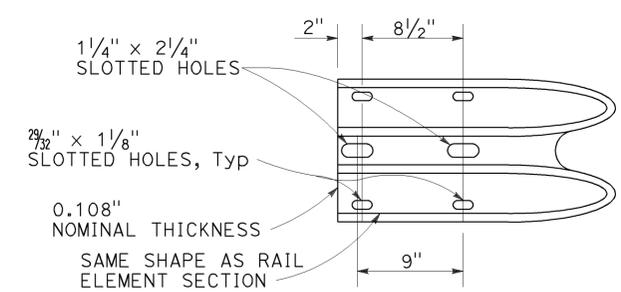
BUTTON HEAD BOLT

L	THREAD LENGTH
1 3/8"	FULL THREAD LENGTH
2"	FULL THREAD LENGTH
10"	4" Min THREAD LENGTH
18"	4" Min THREAD LENGTH
20"	4" Min THREAD LENGTH
22"	4" Min THREAD LENGTH
26"	4" Min THREAD LENGTH
36"	4" Min THREAD LENGTH
** 2 3/4"	2" Min THREAD LENGTH
** 19"	4" Min THREAD LENGTH

** For nested rail applications.



PLAN



**ELEVATION
END CAP
(TYPE A)**

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM
STANDARD HARDWARE**

NO SCALE

RSP A77M1 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77M1

2010 REVISED STANDARD PLAN RSP A77M1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	39	21.7, 22.0	32	68

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

November 15, 2013
PLANS APPROVAL DATE

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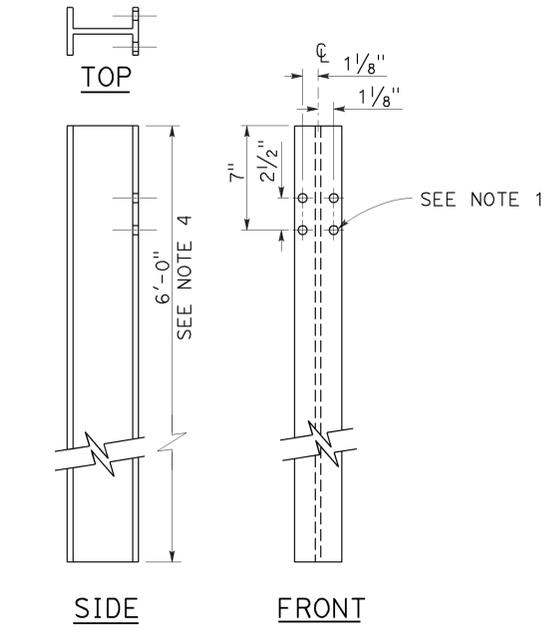
REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 6-23-14

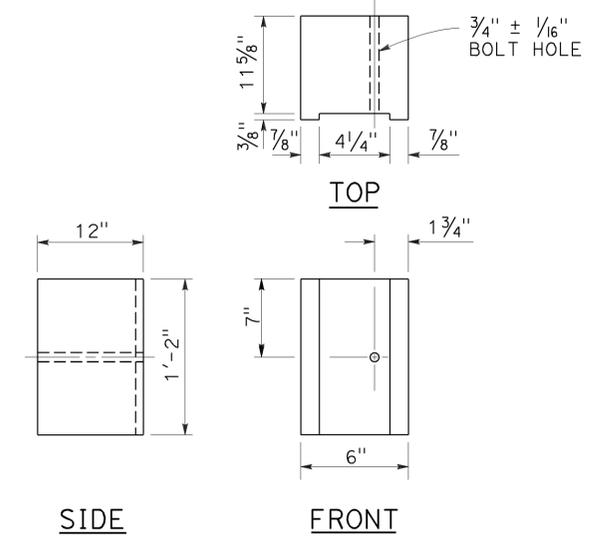
NOTES:

1. All holes in steel post shall be $\frac{13}{16}$ " Dia maximum.
2. Dimensions shown for wood block are nominal.
3. Notched face of block faces steel post.
4. 6'-0" length posts to be used for typical roadway installation. See Revised Standard Plan RSP A77N3.
5. See Revised Standard Plan RSP A77L3 for use of 6" x 8" and 8" x 8" notched wood blocks.
6. This post and 8" x 12" block combination to be used for line post sections of MGS on narrow roadways and where strengthened line post sections of MGS are warranted to shield fixed objects.

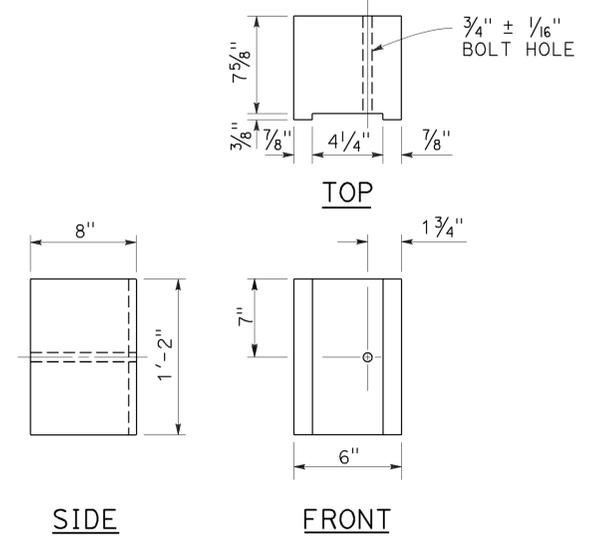
2010 REVISED STANDARD PLAN RSP A77N2



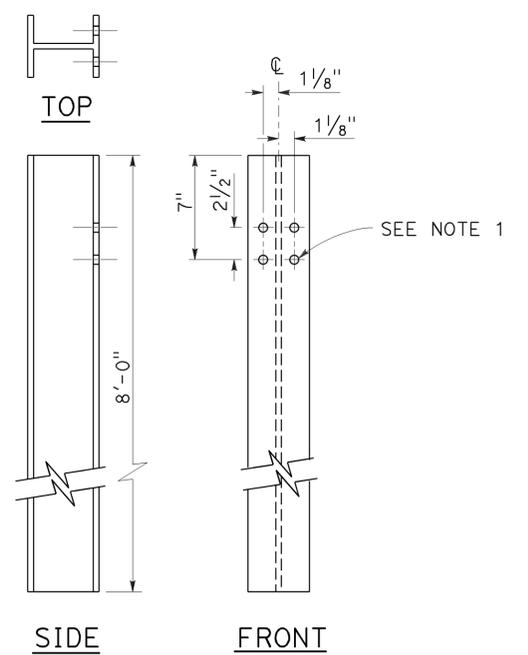
**W6 x 9 OR W6 x 8.5
STEEL POST**
See Note 4



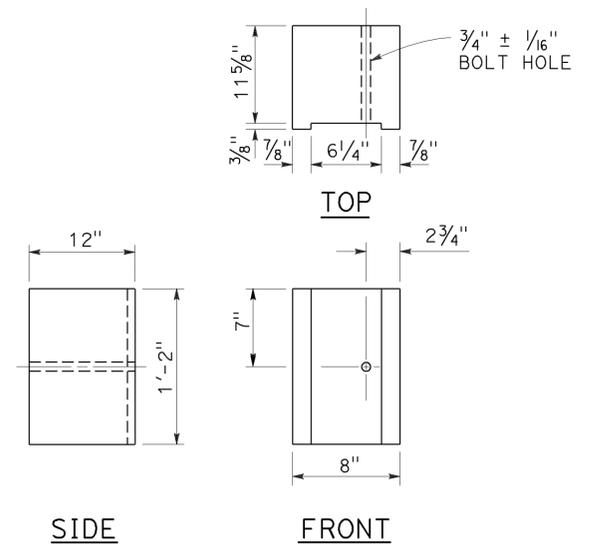
**6" x 12"
NOTCHED WOOD BLOCK**
See Notes 2 and 3



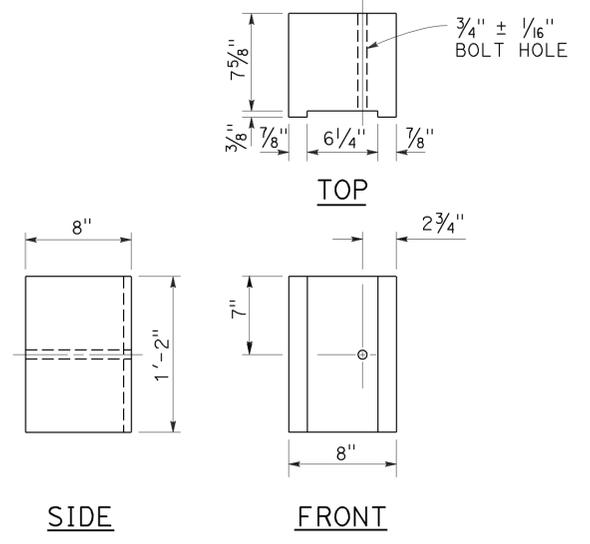
**6" x 8"
NOTCHED WOOD BLOCK**
Only for use with metal beam guard railing. See Note 5



**W6 x 15
STEEL POST**
See Note 6



**8" x 12"
NOTCHED WOOD BLOCK**
See Notes 2 and 3



**8" x 8"
NOTCHED WOOD BLOCK**
Only for use with metal beam guard railing. See Note 5

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM
STEEL POST AND
NOTCHED WOOD BLOCK DETAILS**

NO SCALE

RSP A77N2 DATED NOVEMBER 15, 2013 SUPERSEDES RSP A77N2
DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	33	68

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

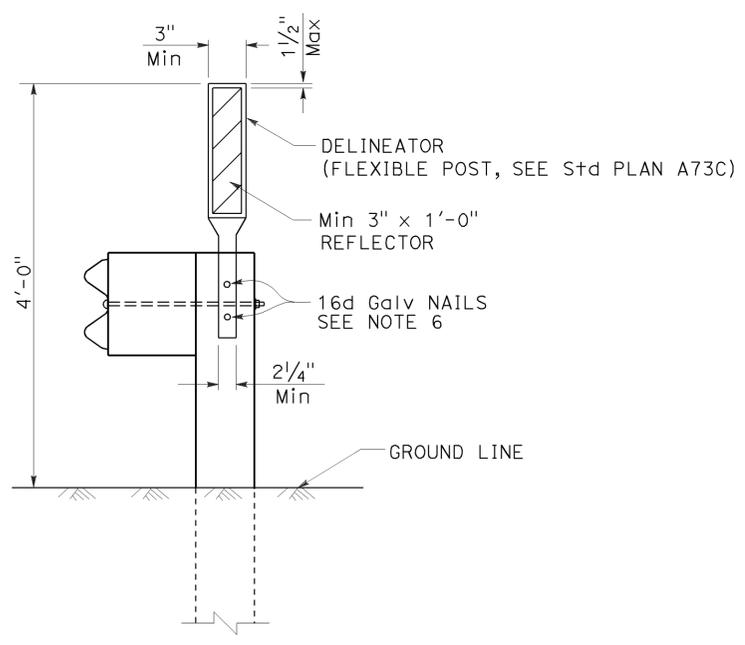
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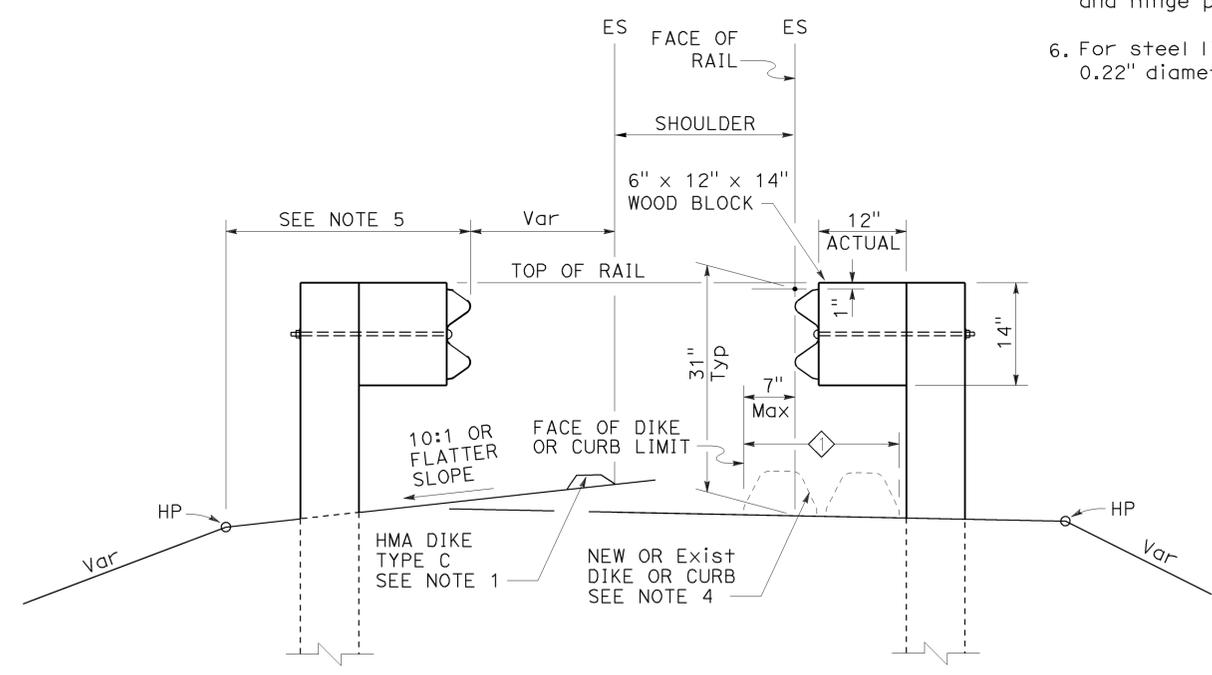
TO ACCOMPANY PLANS DATED 6-23-14

NOTES:

1. When necessary to place dike more than 7" in front of face of MGS, only Type C dike may be used. For dike details, see Revised Standard Plan RSP A87B.
2. For standard railing post embedment, see Revised Standard Plan RSP A77N3.
3. MGS delineation to be used where shown on the Project Plans.
4. When dike or curb is placed under MGS, the maximum height of the dike or curb shall be 6". Mountable dike should not be used. For dike and curb details, see Revised Standard Plans RSP A87A and RSP A87B.
5. For details of typical distance between the face of rail and hinge point, see Revised Standard Plan RSP A77N3.
6. For steel line posts, use 1/4" - 20 self-tapping screws in 0.22" diameter holes or 1/4" bolts in 3/32" diameter holes.



MGS DELINEATION
See Note 3



DIKE POSITIONING
See Note 1

◇ PERMISSIBLE DIKE OR CURB PLACEMENT AREA

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM
TYPICAL RAILING DELINEATION
AND DIKE POSITIONING DETAILS**
NO SCALE

RSP A77N4 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77N4

2010 REVISED STANDARD PLAN RSP A77N4

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	34	68

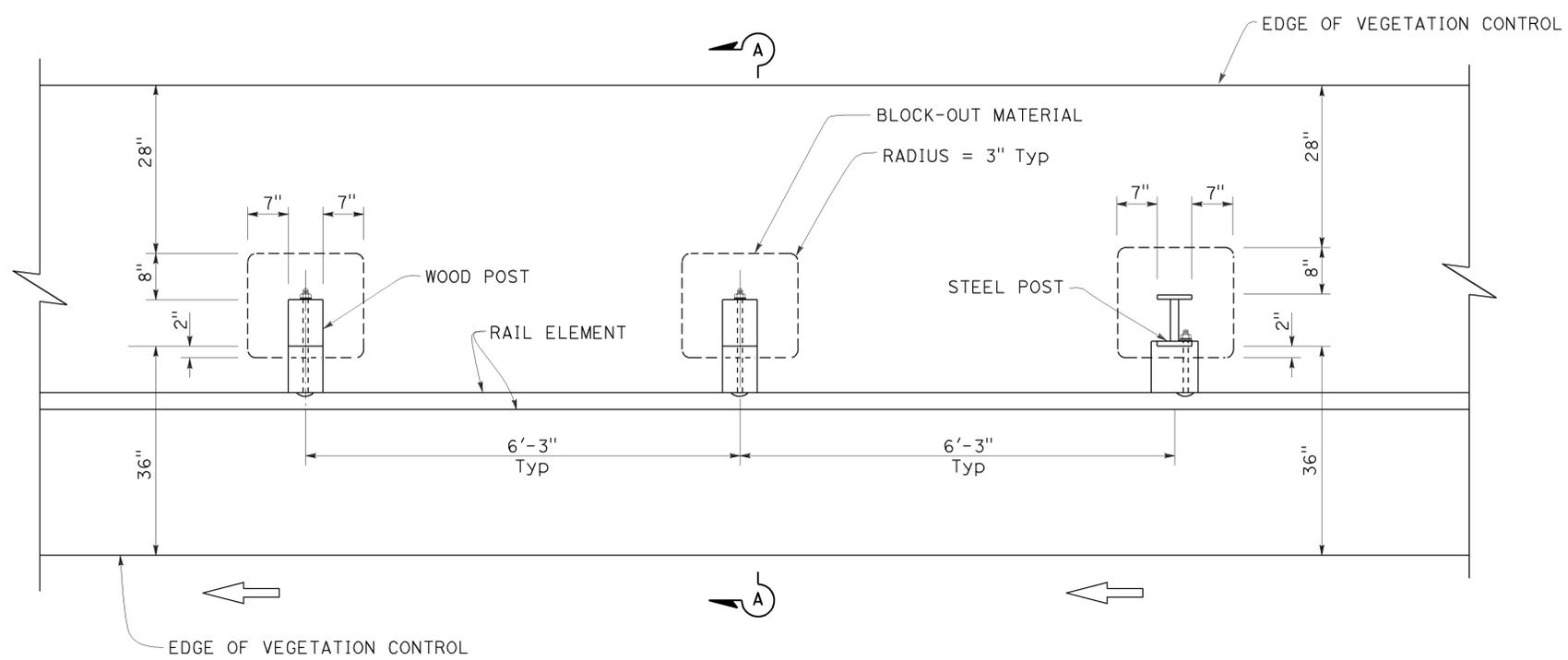
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
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REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
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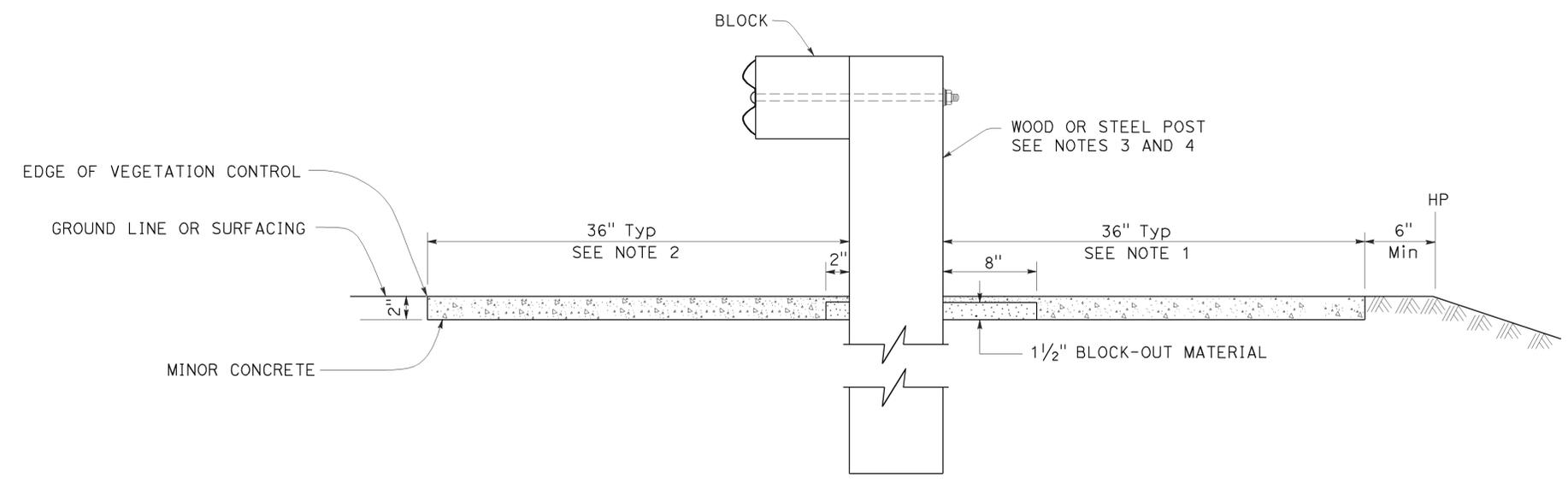
TO ACCOMPANY PLANS DATED 6-23-14



PLAN

NOTES:

1. Where the distance between back of post and hinge point is less than 42", construct vegetation control to 6" from hinge point while maintaining the 8" block-out at back of post. If the 8" block-out at back of post can not be maintained, construct vegetation control flush with the back edge of post.
2. Where dike is constructed under railing, construct vegetation control to back edge of dike. Where paved shoulder is constructed within 36" in front of the post, construct vegetation control to the edge of paved shoulder.
3. For wood post sizes, see Revised Standard Plan RSP A77N1.
4. For steel post sizes, see Revised Standard Plan RSP A77N2.
5. For details not shown, see Revised Standard Plans RSP A77L1 and RSP A77L2.



SECTION A-A

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM
TYPICAL VEGETATION CONTROL
STANDARD RAILING SECTION**

NO SCALE

RSP A77N5 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77N5

2010 REVISED STANDARD PLAN RSP A77N5

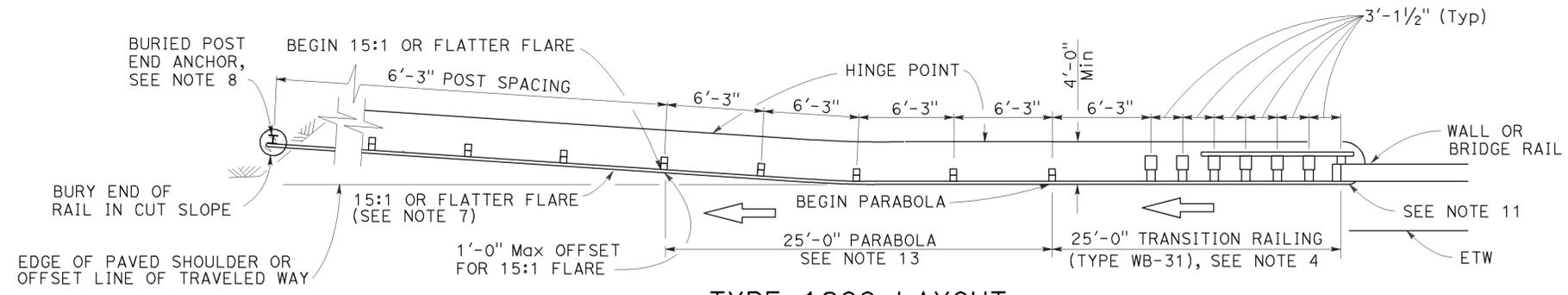
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	35	68

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

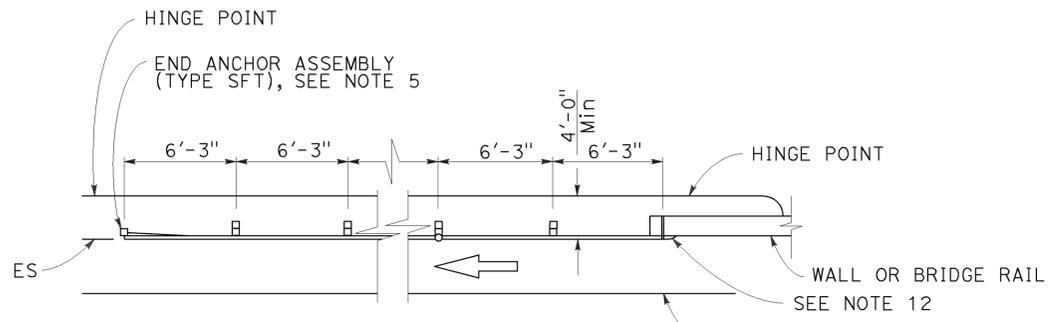
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Exp. 6-30-15
CIVIL
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TYPE 12CC LAYOUT

(MGS installation at structure departure with a Buried end anchor treatment at trailing end of railing)
See Notes 9 and 10



TYPE 12DD LAYOUT

(MGS installation at structure departure With end anchor assembly at trailing end of railing)
See Notes 6 and 9

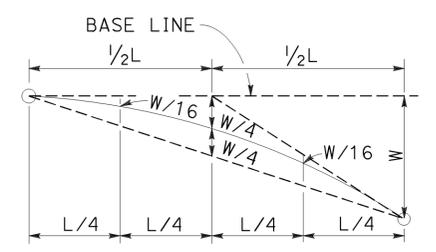


BASE LINE (EDGE OF PAVED SHOULDER OR OFFSET LINE OF EDGE OF TRAVELED WAY)

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

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

PARABOLIC FLARE OFFSETS



TYPICAL PARABOLIC LAYOUT

NOTES:

- Line post, blocks and hardware to be used are shown on Revised Standard Plans RSP A77L1, RSP A77L2, RSP A77M1, RSP A77N1 and RSP A77N2.
- MSG 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 12" x 1'-2" wood blocks. W6 x 8.5 or W6 x 9 steel posts, 6'-0" in length, with 6" x 12" 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 12" x 1'-2" wood blocks where applicable and when specified.
- For Transition Railing (Type WB-31) details for Type 12CC Layout, see Revised Standard Plan RSP A77U4.
- For details of End Anchor Assembly (Type SFT) used with Type 12DD Layout, see Revised Standard Plan RSP A77S1.
- Type 12DD layout is typically used to the right of traffic departing a structure on two-way conventional highways where the roadbed width across the structure is equal to or greater than 40 feet and MGS is recommended (embankment height, side slopes, other fixed objects). Length of railing to be equal to multiples of 12'-6". For MGS connection details to bridge rail, see Revised Standard Plans RSP A77U1 and RSP A77V1. For MGS connection details to wall, see Revised Standard Plan RSP A77U3.
- The 15:1 or flatter flare for Type 12CC Layout is based on the edge of the paved shoulder or offset line of edge of the traveled way. The length of MGS 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 12CC Layout, see Revised Standard Plan RSP A77T2.
- Where placement of dike is required with MGS installations, see Revised Standard Plan RSP A77N4 for dike positioning details.
- Type 12CC Layout is typically used to the right of traffic departing a structure on two-way conventional highways where the roadbed width across the structure is less than 40 feet.
- For additional details of a typical connection to bridge rail for Layout Type 12CC, see Connection Detail CC on Revised Standard Plan RSP A77U2 and Connection Detail HH on Revised Standard Plan RSP A77V2.
- For additional details of a typical connection to bridge rail for Layout Type 12DD, see Connection Detail BB on Revised Standard Plan RSP A77U1 and Connection Detail GG on Revised Standard Plan RSP A77V1.
- For typical flare offsets for 25'-0" length parabola with maximum offset of 1'-0", see Revised Standard Plan RSP A77P1.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM
TYPICAL LAYOUTS FOR
STRUCTURE DEPARTURE**

NO SCALE

RSP A77Q5 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77Q5

2010 REVISED STANDARD PLAN RSP A77Q5

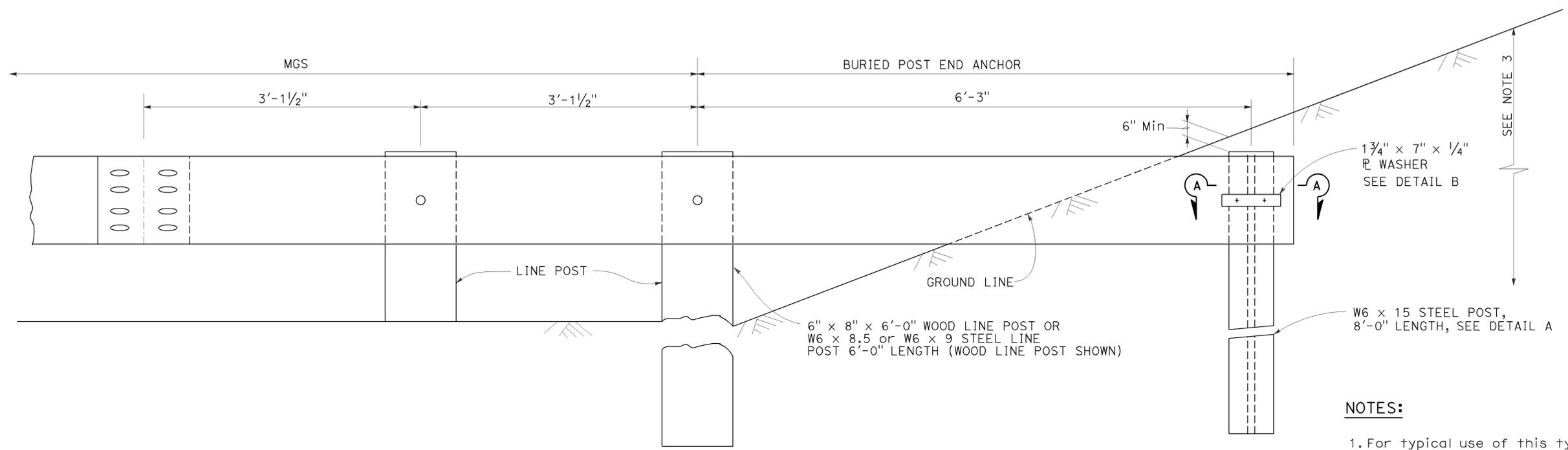
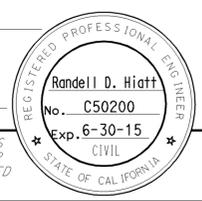
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	36	68

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

November 15, 2013
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.

TO ACCOMPANY PLANS DATED 6-23-14

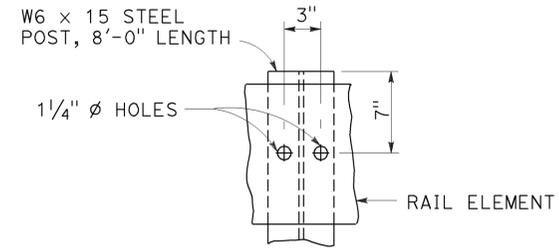


BURIED POST END ANCHOR

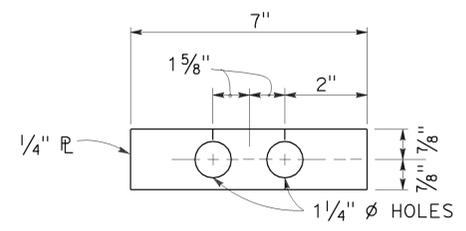
See Note 3

NOTES:

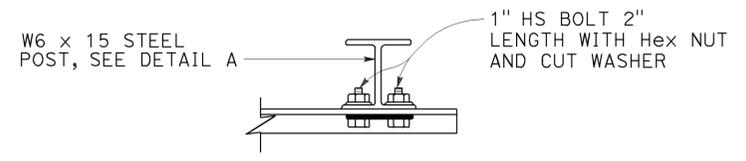
1. For typical use of this type of end anchor with MGS see the A77P, A77Q and A77R Series of the Standard Plans.
2. Holes excavation in the slope to construct the buried post end anchor shall be backfilled with selected earth, placed in layers approximately 1'-0" thick. Each layer shall be moistened and thoroughly compacted.
3. The buried post end anchor shall only be constructed at those locations where the slope perpendicular to the roadway is non-traversable.



DETAIL A



DETAIL B



SECTION A-A

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**MIDWEST GUARDRAIL SYSTEM
BURIED POST END ANCHOR**

NO SCALE

RSP A77T2 DATED NOVEMBER 15, 2013 SUPERSEDES RSP A77T2 DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77T2

2010 REVISED STANDARD PLAN RSP A77T2

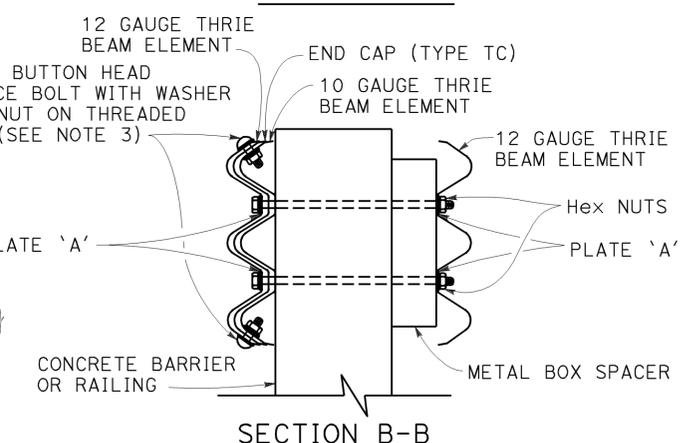
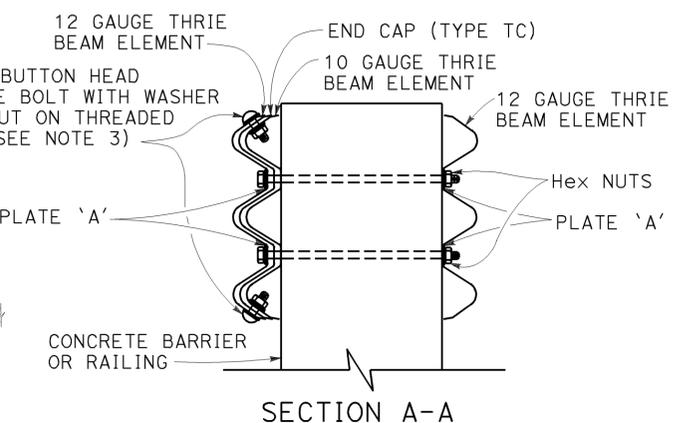
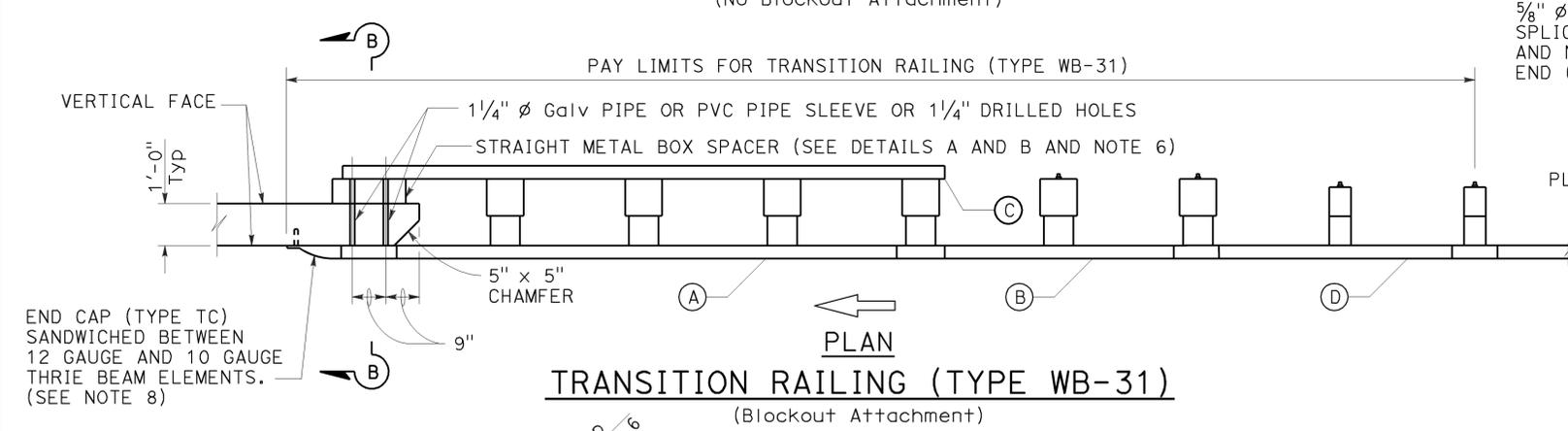
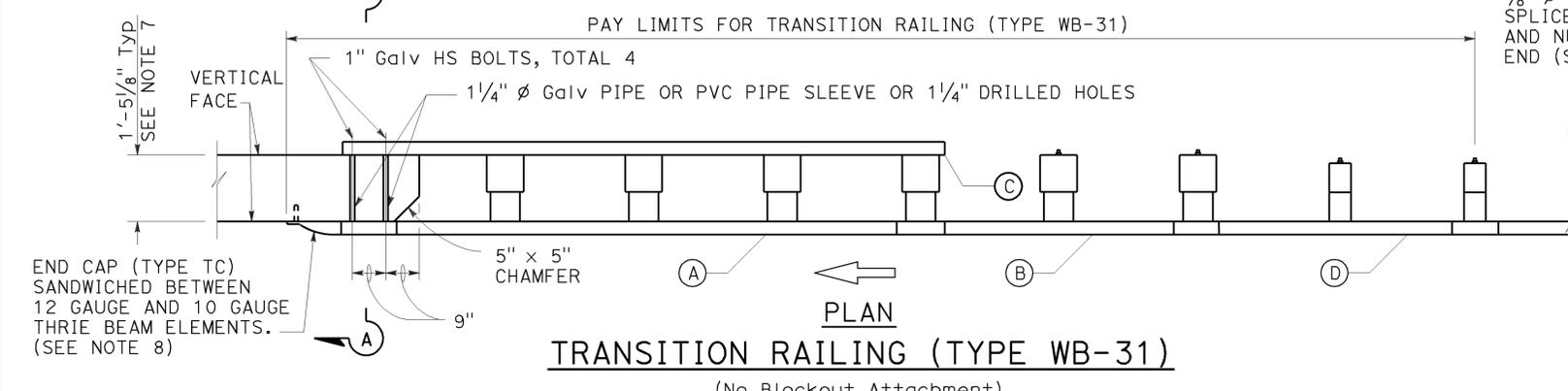
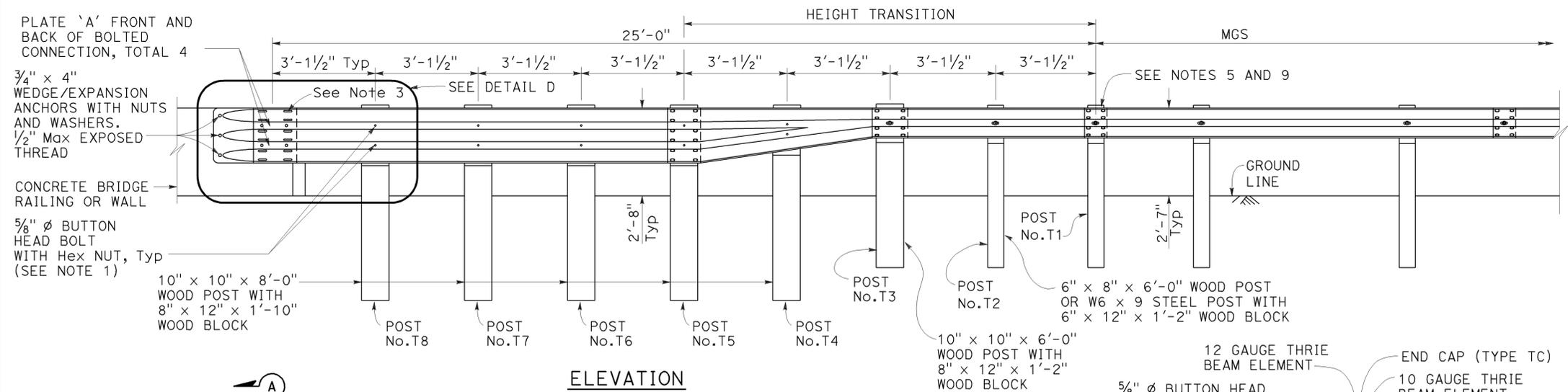
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	37	68

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

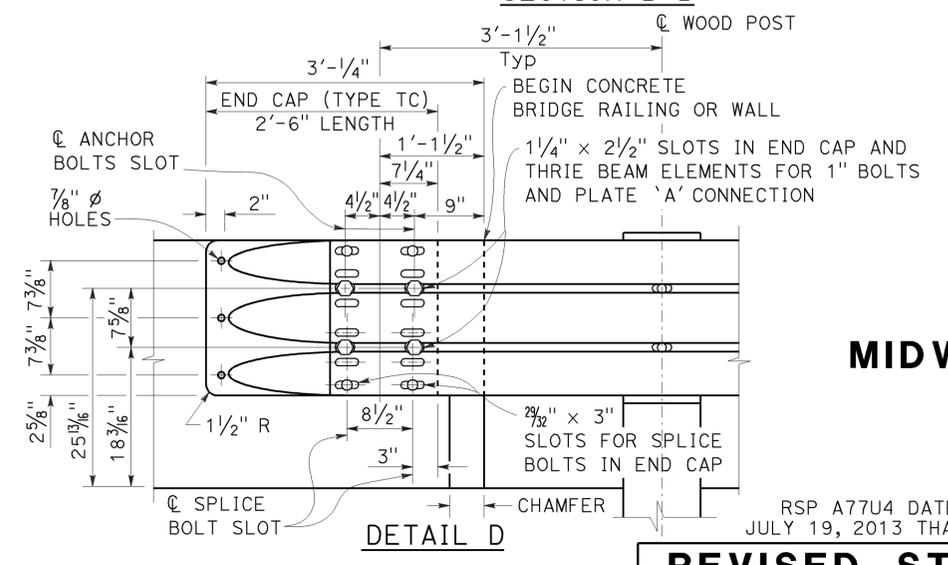
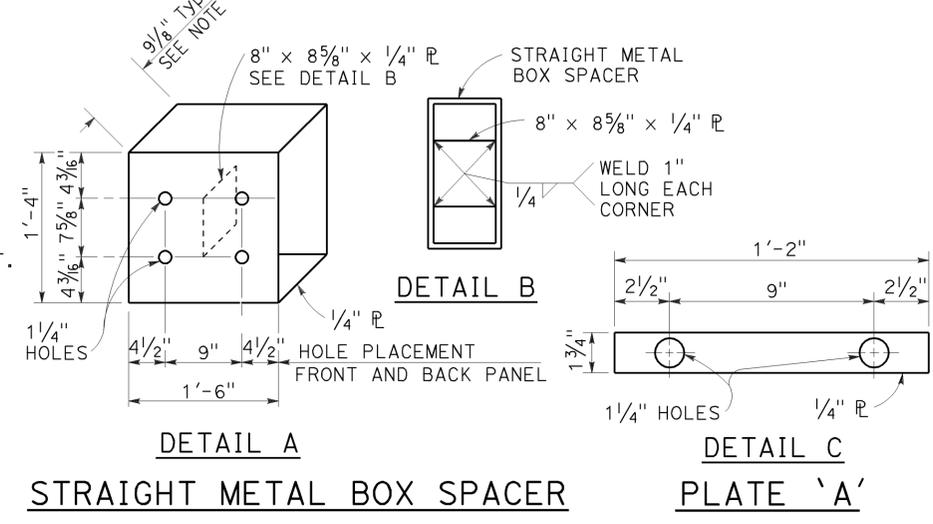
November 15, 2013
PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA



- LEGEND:**
- (A) NESTED THRIE BEAM ELEMENTS (ONE 12 GAUGE ELEMENT NESTED OVER ONE 10 GAUGE ELEMENT).
 - (B) ONE ASYMMETRICAL 10 GAUGE "W" BEAM TO THRIE BEAM ELEMENT.
 - (C) ONE 12 GAUGE THRIE BEAM ELEMENT.
 - (D) ONE 10 GAUGE "W" BEAM RAIL ELEMENT (7'-3/2" LENGTH)
- 10 GAUGE = 0.138" THICK
12 GAUGE = 0.108" THICK



- NOTES:** TO ACCOMPANY PLANS DATED 6-23-14
1. Use 5/8" Ø Button head bolts and hex nuts for connections to posts. No washer on rail face for bolted connections to post.
 2. The nested rail elements, end cap, and W beam to thrie beam element may be spliced together prior to bolting the elements to the wood post and concrete barrier or railing.
 3. Exterior splice bolt holes for rail element splices at Post No. T5 and the connection to the concrete barrier or railing shall be the standard 2 3/32" x 1 1/8" slot size. Interior splice bolt holes at these locations may be increased up to 1 1/4" Ø. Only the top 4 and the bottom 4 splice bolts with washers and nuts are required for rail splices at Post No. T5 and the connection to the concrete barrier or railing.
 4. The top elevation of Posts No. T2 through No. T7 shall not project more than 1" above the top elevation of the rail element.
 5. Typically, the railing connected to Transition Railing (Type WB-31) will be either standard railing section of MGS with height transition ratio of 150:1 or a Caltrans approved 31" end treatment attached to Post No. T1.
 6. The depth of the metal box spacer varies from the 9/8" to 1 1/2" and is dependent on the width of the concrete railing or wall. The combined dimension for the depth of the metal box spacer plus the width of railing or wall is typically 21 1/8". Where the space between the backside of the concrete railing or wall and the rear thrie beam element is less than 1 1/2", metal plates similar to Plate 'A' are to be used as spacers.
 7. Where the width of the concrete railing or wall is greater than 17 1/8", wood blocks are to be used to fill the space created between the backside of Posts No. T5 through No. T8 and the rear thrie beam element. These wood blocks shall be 8" in width and 1'-2" in length. The dimension between the front thrie beam element and the rear thrie beam element is to match the width of the concrete railing or wall.
 8. End cap may be installed over 12 gauge and 10 gauge thrie beam elements where transition railing is installed on the departure end of bridge railing.
 9. Conform standard railing section height to 31" at Post No. T1 using height transition ratio of 150:1.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM
TRANSITION RAILING
(TYPE WB-31)**

NO SCALE

RSP A77U4 DATED NOVEMBER 15, 2013 SUPERSEDES RSP A77U4 DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77U4

2010 REVISED STANDARD PLAN RSP A77U4

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	38	68

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

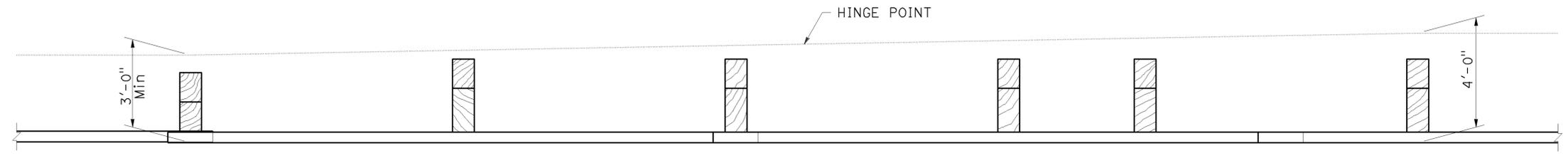
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA

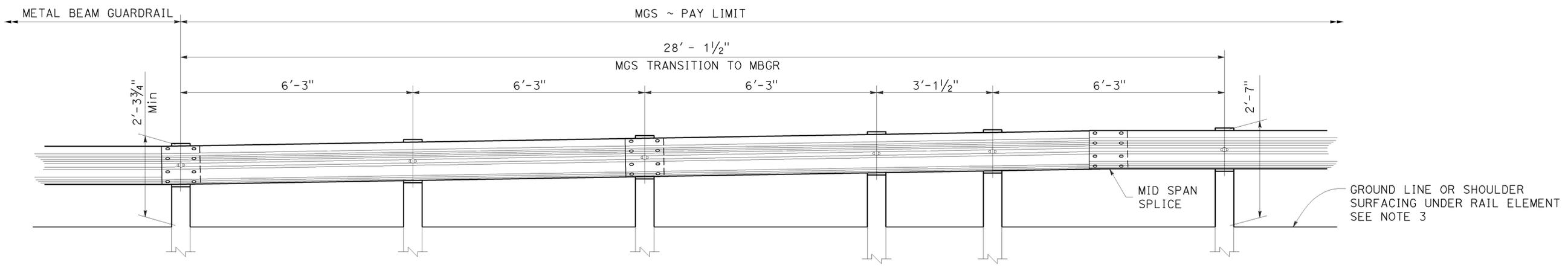
TO ACCOMPANY PLANS DATED 6-23-14

NOTES:

1. Refer to Revised Standard Plans RSP A77L1 and RSP A77L2 for component details for MGS not shown on this plan.
2. All posts for any standard barrier run shall be of the same type: Wood or Steel.
3. Install posts in soil.



PLAN



ELEVATION

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM
TRANSITION TO METAL BEAM GUARDRAIL**

NO SCALE

RSP A77U5 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77U5

2010 REVISED STANDARD PLAN RSP A77U5

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	39	68

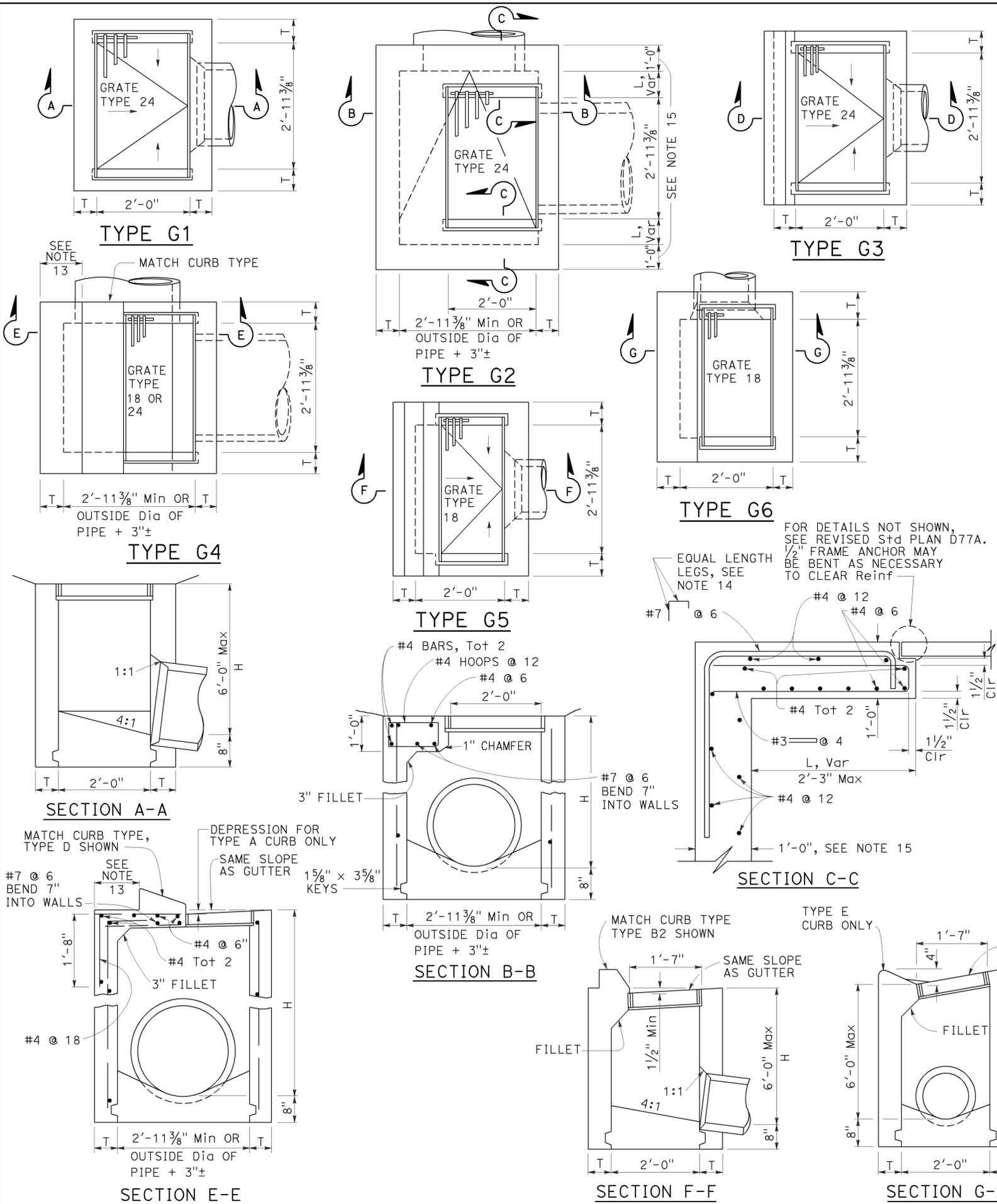
Glenn DeCou
REGISTERED CIVIL ENGINEER

October 19, 2012
PLANS APPROVAL DATE

Glenn DeCou
No. C34547
Exp. 9-30-13
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.

2010 REVISED STANDARD PLAN RSP D73



- NOTES:**
- "H" is the difference in elevation between the outlet pipe flow line and the normal gutter grade line undepressed.
 - For "T" wall thickness, see Table A below.
 - Wall reinforcing not required when "H" is 8'-0" or less and the unsupported width or length is 7'-0" or less. Walls exceeding these limits shall be reinforced with #4 bars @ 1'-6" ± centers placed 1 1/2" clear to inside of box unless otherwise shown.
 - Inlet bottom reinforcing not required. See Standard Plan D74C for alternative reinforced bottom and alternative half round bottom.
 - Steps-None required where "H" is less than 2'-6". Where "H" is 2'-6" or more, install steps with lowest rung 1'-0" above the floor and highest rung not more than 6" below top of inlet. The distance between steps shall not exceed 1'-0" and shall be uniform throughout the length of the wall. Place steps in the wall without an opening. Steps inserts may be substituted for the bar steps. Step inserts shall comply with State Industrial Safety requirements. See Standard Plan D74C for step details.
 - Details shown apply to both metal and concrete pipe.
 - Pipe(s) can be placed in any wall.
 - Curb section shall match adjacent curb.
 - Basin floors shall have wood trowel finish and a minimum slope of 12:3 from all directions toward outlet pipe.
 - Set inlet so that grate bars are parallel to direction of principal surface flow.
 - See Revised Standard Plans D77A and D77B for grate and frame details and weights of miscellaneous iron and steel.
 - See Standard Plan D78A for gutter depression details.
 - This dimension will vary with different grates, curbs types, box width and wall thickness.
 - Bar may be rotated as necessary to clear opening. Where "L" is 6" or less, bar may be omitted.
 - Where "L" is 6" or less, wall thickness shall be as shown in Table A.
 - Cast-in-place inlets to be formed around all pipes/stubs intersecting the inlet, and concrete poured in one continuous operation. Precast inlets shall have mortared connections conforming to details for Type GCP Inlet shown on Standard Plan D75B. See Standard Specifications for mortar composition.

TABLE A

CONCRETE QUANTITIES

TYPE	H=3'-0" TO 8'-0" (T=6")		H=8'-1" TO 20'-0" (T=8")	
	H=3'-0" (CY)	ADDITIONAL PCC PER FOOT (CY)	H=8'-1" (CY)	ADDITIONAL PCC PER FOOT (CY)
G-1	0.95	0.220	See Note A	SEE NOTE A
G-2*	1.31	0.255	3.50	0.357
G-3	1.03	0.220	See Note A	SEE NOTE A
G-4* (TYPE 24)	1.27	0.255	3.48	0.357
G-4* (TYPE 18)	1.30	0.255	3.50	0.357
G-5	1.02	0.220	SEE NOTE A	SEE NOTE A
G-6	1.04	0.220	SEE NOTE A	SEE NOTE A

TABLE BASED ON 8" FLOOR SLAB. NO DEDUCTIONS ARE TO BE MADE TO THESE QUANTITIES BECAUSE OF PIPE OPENINGS, DIFFERENT FLOOR ALTERNATIVES OR DIFFERENT CURB TYPES. * QUANTITIES FOR TYPE G-2 AND G-4 INLETS BASED ON THE MINIMUM INTERIOR DIMENSIONS.

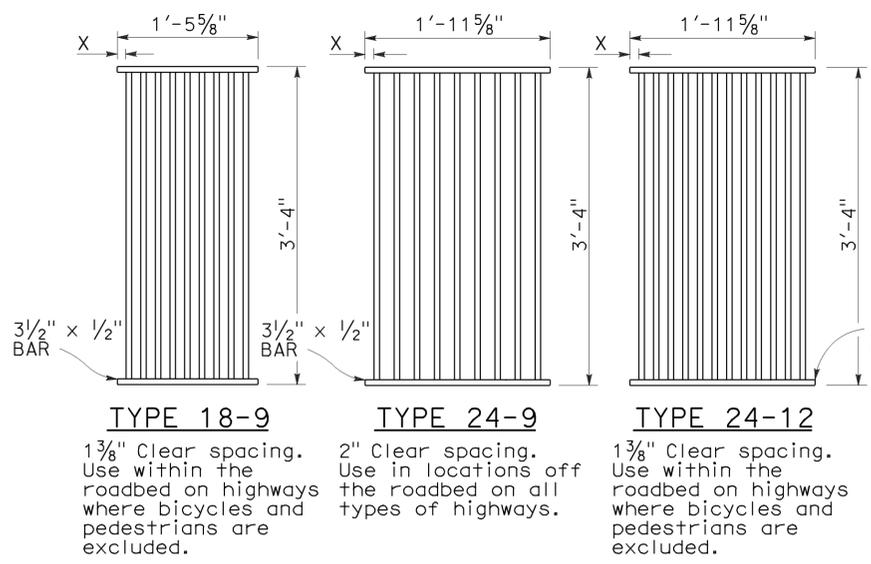
NOTE A:
Maximum allowable height 6'-0".

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

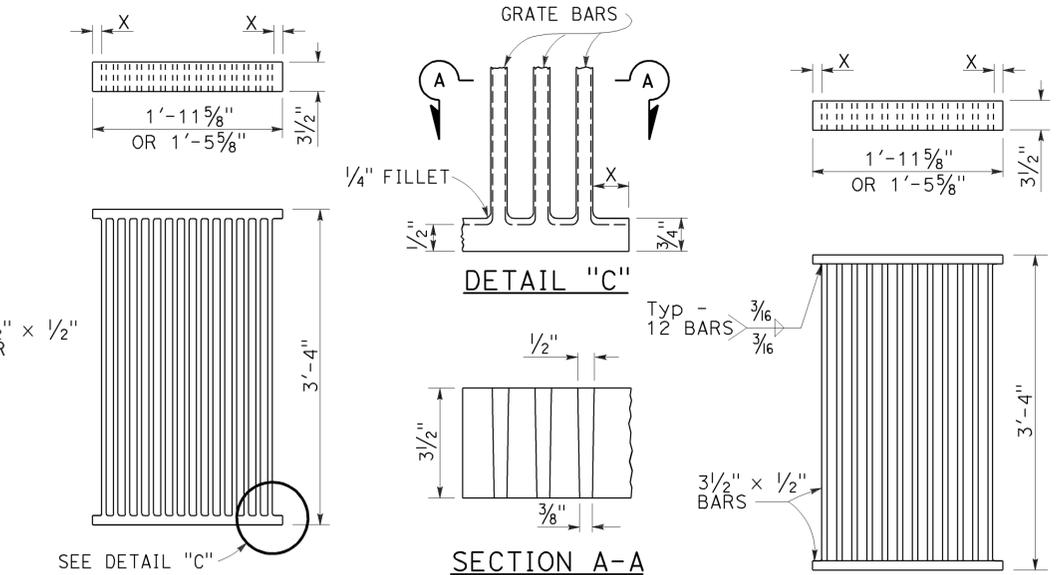
DRAINAGE INLETS
NO SCALE

RSP D73 DATED OCTOBER 19, 2012 SUPERSEDES STANDARD PLAN D73 DATED MAY 20, 2011 - PAGE 156 OF THE STANDARD PLANS BOOK DATED 2010.

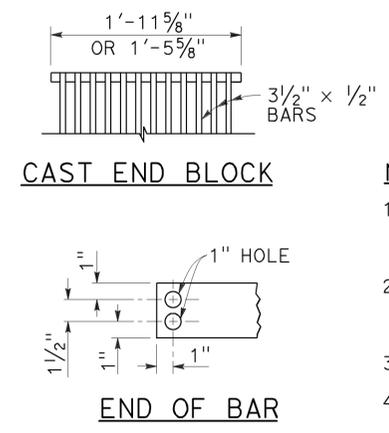
REVISED STANDARD PLAN RSP D73



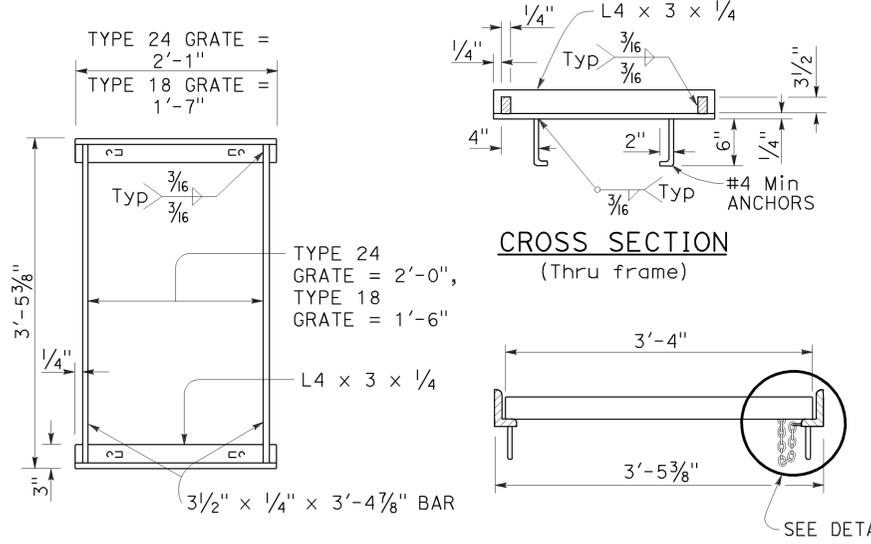
RECTANGULAR GRATE DETAILS
(See table below)



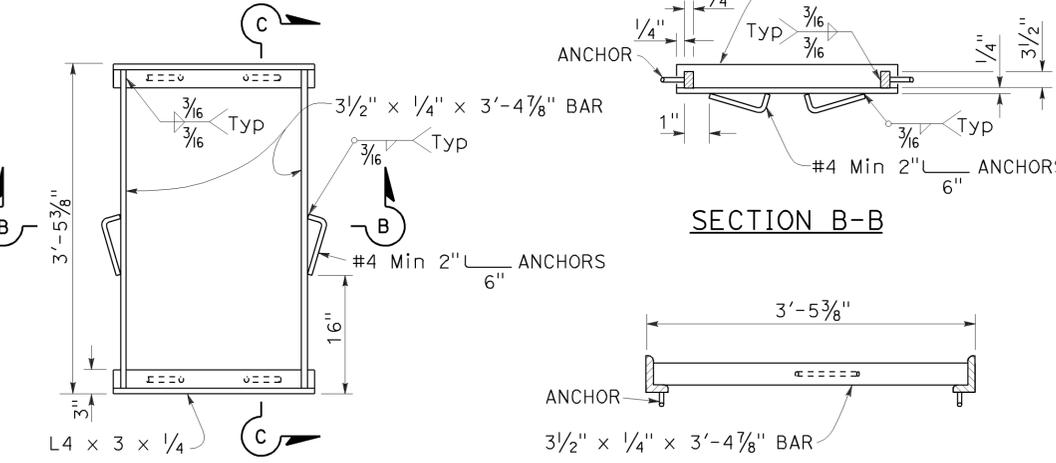
ALTERNATIVE CAST DUCTILE IRON GRATE OR CAST CARBON STEEL GRATE
ALTERNATIVE WELDED GRATE



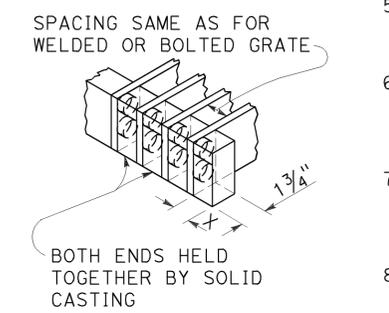
CAST END BLOCK
END OF BAR



TYPICAL FRAME
LONGITUDINAL SECTION
(Thru frame and grate)



TYPICAL FRAME
SECTION B-B



ALTERNATIVE CAST DUCTILE IRON OR CAST CARBON STEEL END BLOCK GRATE

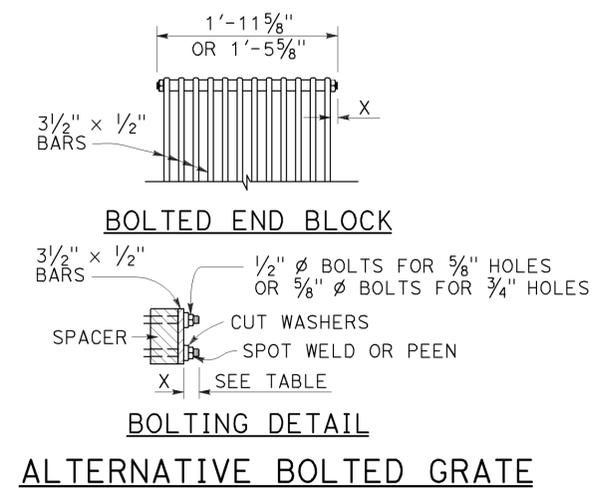
RECTANGULAR FRAME DETAILS
(For all rectangular grates)

GRATE BAR SPACING TABLE

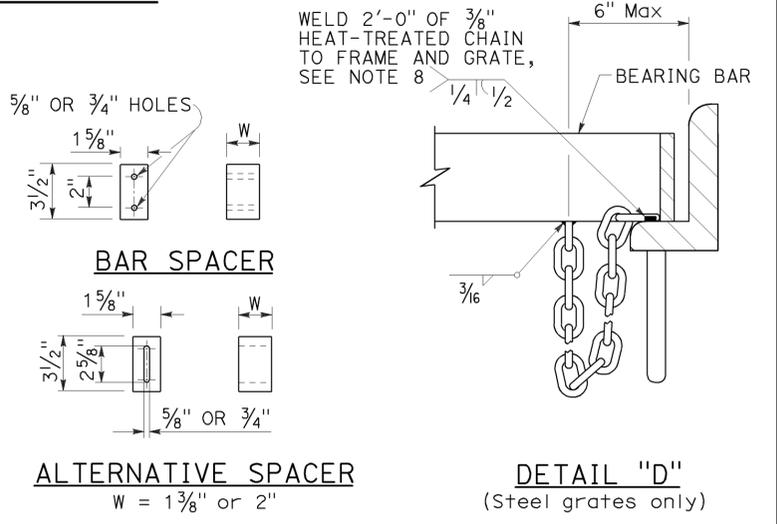
TYPE	NO. OF BARS	CLEAR BAR SPACING	X
18-9	9	1 3/8"	1 1/16"
24-9	9	2"	1 9/16"
24-12	12	1 3/8"	1 1/4"

INLET TYPE	COVER TYPE	WEIGHT LB
OS	PLATE	174
OL-7	PLATE	170
OL-10	PLATE	170
OL-14	PLATE	170
OL-21	PLATE	170
OCPI	PLATE	112
OCPI	REDWOOD	42
OMP	PLATE	177
OMPI	PLATE	177

INLET TYPE	GRATE TYPE	NO. OF GRATES	WEIGHT LB
GDO	24-12	2	634
GOL-7	24-12	1	326
GOL-10	24-12	1	326
G0,G1,G2,G3,G4 (TYPE 24)	24-9	1	263
	24-12	1	326
G4 (TYPE 18),G5,G6	18-9	1	249
GT1	18-9	2	498
GT2	18-9	2	498
GT3	24-12	2	652
GT4	24-12	2	652
TRASH RACK			22
GRATE CHAIN			3



BOLTED END BLOCK
BOLTING DETAIL
ALTERNATIVE BOLTED GRATE



BAR SPACER
ALTERNATIVE SPACER
DETAIL "D"
(Steel grates only)

GRATE DETAILS No. 1
NO SCALE

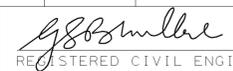
BASIS FOR MISC IRON & STEEL FINAL PAY WEIGHTS FOR DRAINAGE INLETS
(See Note 7)

RSP D77A DATED APRIL 19, 2013 SUPERSEDES RSP D77A DATED JULY 20, 2012 AND STANDARD PLAN D77A DATED MAY 20, 2011 - PAGE 164 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D77A

2010 REVISED STANDARD PLAN RSP D77A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	42	68


 REGISTERED CIVIL ENGINEER
 July 19, 2013
 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.

TO ACCOMPANY PLANS DATED 6-23-14

TABLE 1

TAPER LENGTH CRITERIA AND CHANNELIZING DEVICE SPACING							
SPEED (S)	MINIMUM TAPER LENGTH * FOR WIDTH OF OFFSET 12 FEET (W)				MAXIMUM CHANNELIZING DEVICE SPACING		
	TANGENT 2L	MERGING L	SHIFTING L/2	SHOULDER L/3	X	Y	Z **
					TAPER	TANGENT	CONFLICT
mph	ft	ft	ft	ft	ft	ft	ft
20	160	80	40	27	20	40	10
25	250	125	63	42	25	50	12
30	360	180	90	60	30	60	15
35	490	245	123	82	35	70	17
40	640	320	160	107	40	80	20
45	1080	540	270	180	45	90	22
50	1200	600	300	200	50	100	25
55	1320	660	330	220	55	110	27
60	1440	720	360	240	60	120	30
65	1560	780	390	260	65	130	32
70	1680	840	420	280	70	140	35

* - For other offsets, use the following merging taper length formula for L:
 For speed of 40 mph or less, $L = WS^2/60$
 For speed of 45 mph or more, $L = WS$

Where: L = Taper length in feet
 W = Width of offset in feet
 S = Posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph

** - Use for taper and tangent sections where there are no pavement markings or where there is a conflict between existing pavement markings and channelizers (CA).

TABLE 2

LONGITUDINAL BUFFER SPACE AND FLAGGER STATION SPACING				
SPEED *	Min D **	DOWNGRADE Min D ***		
		-3%	-6%	-9%
		ft	ft	ft
mph	ft	ft	ft	ft
20	115	116	120	126
25	155	158	165	173
30	200	205	215	227
35	250	257	271	287
40	305	315	333	354
45	360	378	400	427
50	425	446	474	507
55	495	520	553	593
60	570	598	638	686
65	645	682	728	785
70	730	771	825	891

* - Speed is posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph
 ** - Longitudinal buffer space or flagger station spacing
 *** - Use on sustained downgrade steeper than -3 percent and longer than 1 mile.

TABLE 3

ADVANCE WARNING SIGN SPACING			
ROAD TYPE	DISTANCE BETWEEN SIGNS *		
	A	B	C
	ft	ft	ft
URBAN - 25 mph OR LESS	100	100	100
URBAN - MORE THAN 25 mph TO 40 mph	250	250	250
URBAN - MORE THAN 40 mph	350	350	350
RURAL	500	500	500
EXPRESSWAY / FREEWAY	1000	1500	2640

* - The distances are approximate, are intended for guidance purposes only, and should be applied with engineering judgment. These distances should be adjusted by the Engineer for field conditions, if necessary, by increasing or decreasing the recommended distances.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM TABLES FOR LANE AND RAMP CLOSURES

NO SCALE

RSP T9 DATED JULY 19, 2013 SUPERSEDES RSP T9 DATED APRIL 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T9

2010 REVISED STANDARD PLAN RSP T9

NOTES:

See Revised Standard Plan RSP T9 for tables.

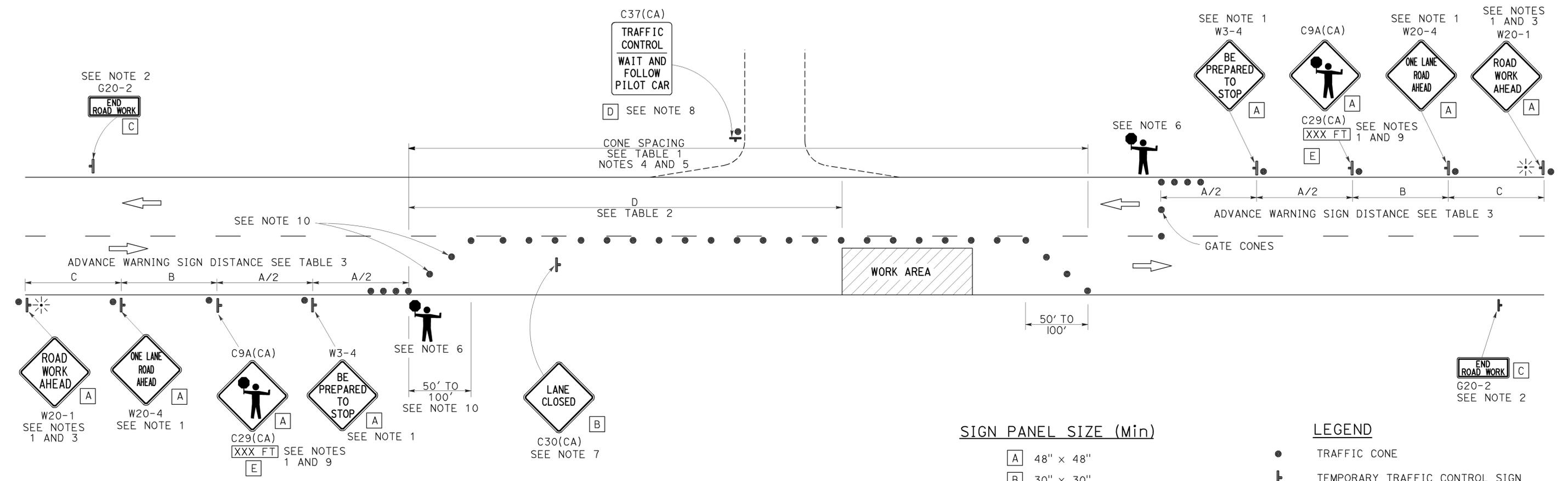
Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.

Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on fluorescent orange background.

California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.

TYPICAL LANE CLOSURE WITH REVERSIBLE CONTROL

TO ACCOMPANY PLANS DATED 6-23-14



NOTES:

- Each advance warning sign in each direction of travel shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
- A G20-2 "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane control unless the end of work area is obvious, or ends within a larger project's limits.
- If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT _____ MILES", use a W20-4 sign for the first advance warning sign.
- All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
- Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
- Additional advance flaggers may be required. Flagger should stand in a conspicuous place, be visible to approaching traffic as well as approaching vehicles after the first vehicle has stopped. During the hours of darkness, the flagging station and flagger shall be illuminated and clearly visible to approaching traffic. The illumination footprint of the lighting on the ground shall be at least 20' in diameter. Place a minimum of four cones at 50' intervals in advance of flagger station as shown.
- Place C30(CA) "LANE CLOSED" sign at 500' to 1000' intervals throughout extended work areas. They are optional if the work area is visible from the flagger station.
- When a pilot car is used, place a C37(CA) "TRAFFIC CONTROL-WAIT AND FOLLOW PILOT CAR" sign with black legend on white background at all intersections, driveways and alleys without a flagger within traffic control area. Signs shall be clean and visible at all times. Where traffic can not be effectively self-regulated, at least one flagger shall be used at each intersection within traffic control area.
- An optional C29(CA) sign may be placed below the C9A(CA) sign.
- Either traffic cones or barricades shall be placed on the taper. Barricades shall be Type I, II, or III.

SIGN PANEL SIZE (Min)

- A 48" x 48"
- B 30" x 30"
- C 36" x 18"
- D 36" x 42"
- E 20" x 7"

LEGEND

- TRAFFIC CONE
- † TEMPORARY TRAFFIC CONTROL SIGN
- ☼ PORTABLE FLASHING BEACON
- 👤 FLAGGER

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**TRAFFIC CONTROL SYSTEM
FOR LANE CLOSURE ON
TWO LANE CONVENTIONAL
HIGHWAYS**

NO SCALE

RSP T13 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T13
DATED MAY 20, 2011 - PAGE 241 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T13

2010 REVISED STANDARD PLAN RSP T13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	44	68

REGISTERED CIVIL ENGINEER

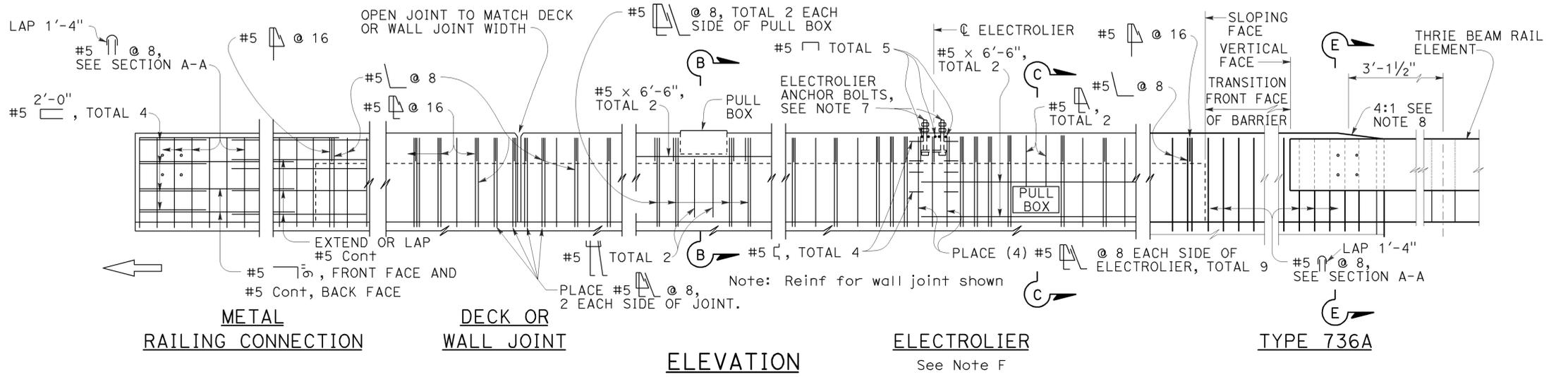
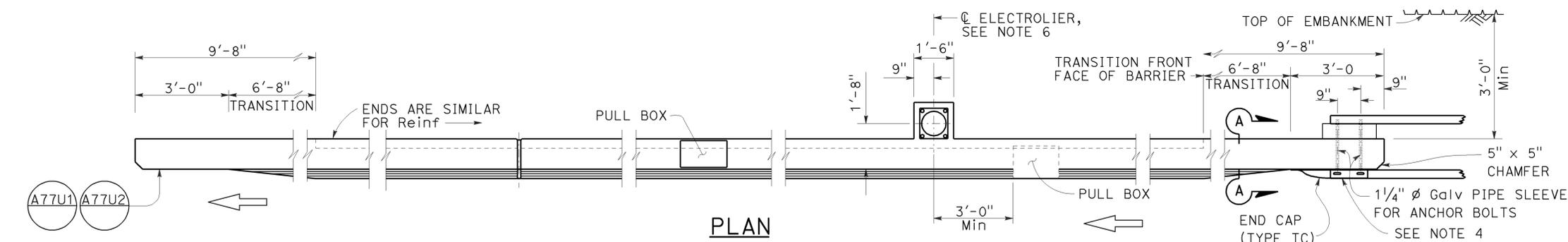
November 15, 2013
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Tillat Satter
No. C42892
Exp. 3-31-14
CIVIL
STATE OF CALIFORNIA

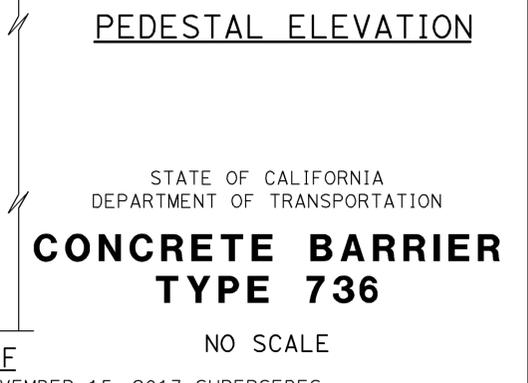
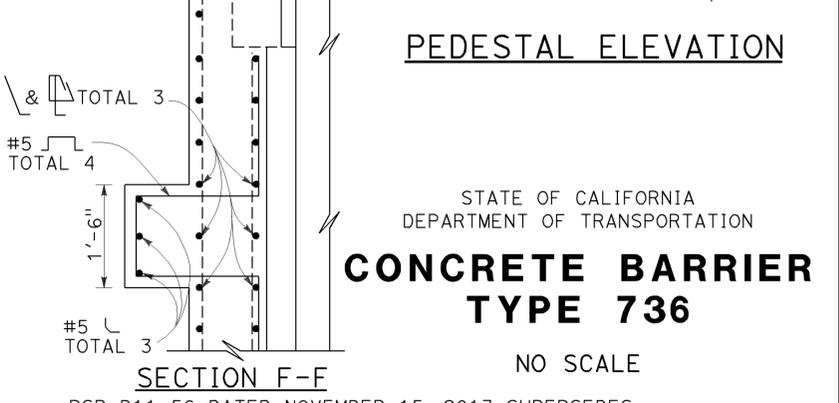
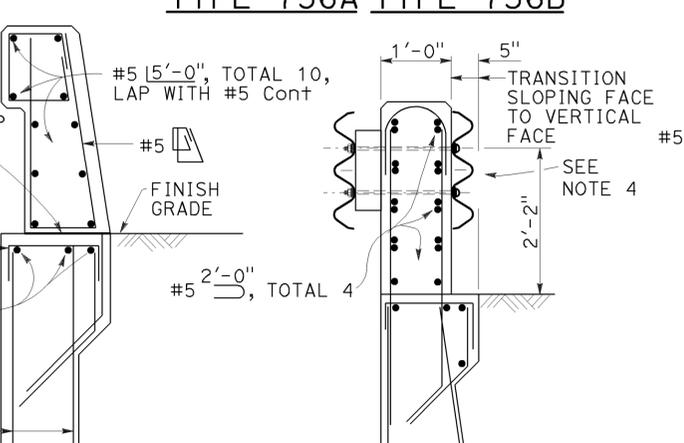
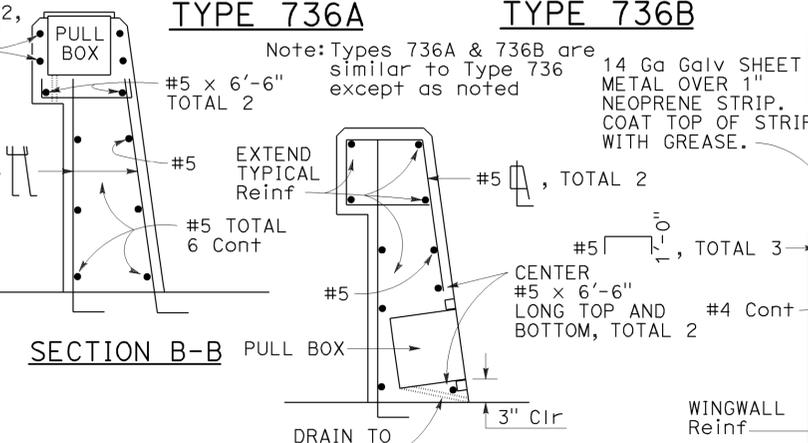
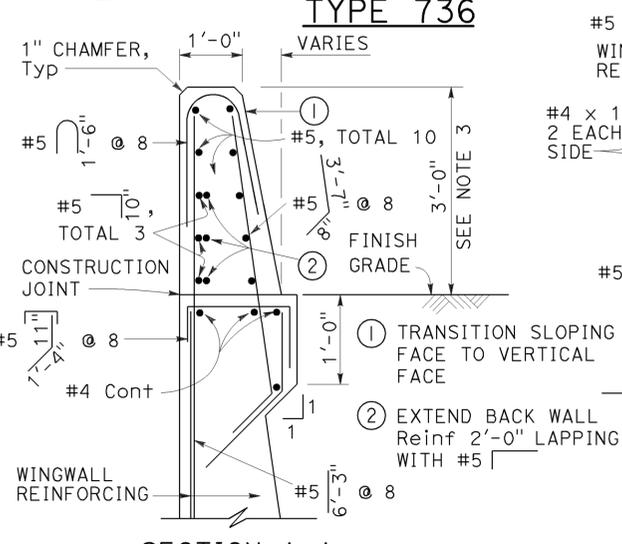
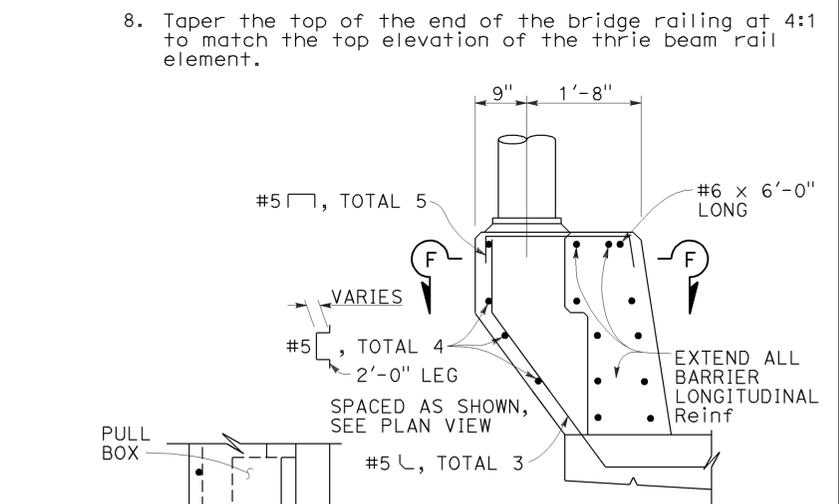
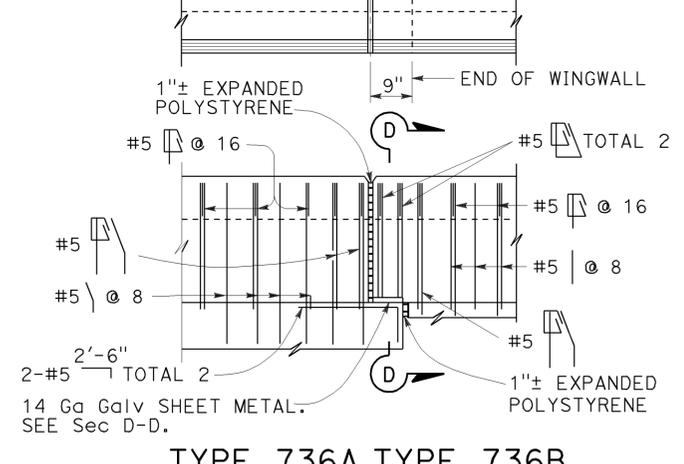
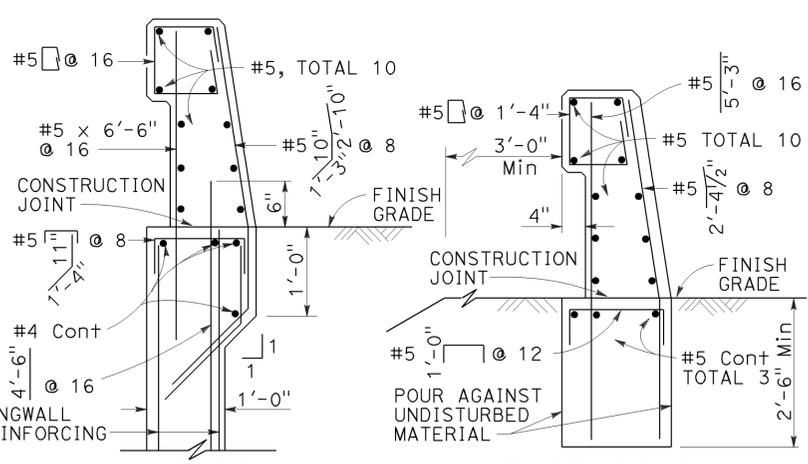
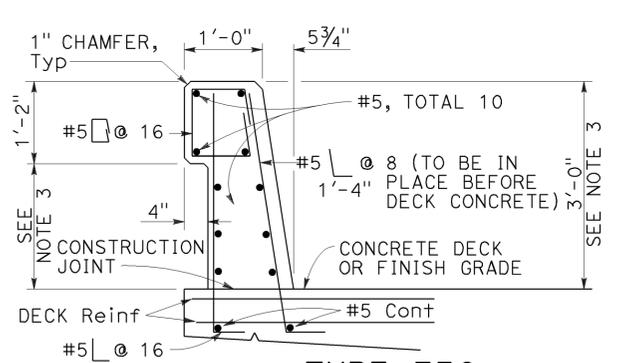
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED 6-23-14

2010 REVISED STANDARD PLAN RSP B11-56



- NOTES:**
1. Walls are to be backfilled before barrier is placed.
 2. Clearance to reinforcing steel in barrier to be 1", except as noted. Longitudinal reinforcement to stop at all expansion joints.
 3. Dimensions may vary with roadway cross slope and with certain thickness of surfacing. See Project Plans.
 4. For typical metal railing connection details not shown, see Revised Standard Plans RSP A77U1 and RSP A77U2.
 5. See Standard Plans ES-9A, ES-9B, ES-9C, ES-9D and ES-9E for electrical details. The maximum number of conduits in the barrier is limited to two 2" conduits along with one 3" conduit. When a 3" conduit is used, it is restricted to the base of the barrier.
 6. For electrolier mounting details, See Standard Plans ES-6A and ES-6B.
 7. Minimum concrete edge distance, to the reinforcing shown, shall be maintained. Edge distance may be adjusted to accommodate increase in concrete cover for architectural treatment.
 8. Taper the top of the end of the bridge railing at 4:1 to match the top elevation of the thrie beam rail element.



Details shown for barrier anchorage to Type 736A. Anchorage for barrier Types 736 and 736B are similar to their respective details.

RSP B11-56 DATED NOVEMBER 15, 2013 SUPERSEDES RSP B11-56 DATED JULY 19, 2013 AND STANDARD PLAN B11-56 DATED MAY 20, 2011 - PAGE 298 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP B11-56

LEGEND:

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 TAPE
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
TSP	TELEPHONE SERVICE POINT

ABBREVIATIONS

APS	ACCESSIBLE PEDESTRIAN SIGNAL	M/M	MULTIPLE TO MULTIPLE TRANSFORMER
BBS	BATTERY BACKUP SYSTEM	Mtg	MOUNTING
BC	BOLT CIRCLE	MV	MERCURY VAPOR LIGHTING FIXTURE
BPB	BICYCLE PUSH BUTTON	MVDS	MICROWAVE VEHICLE DETECTION SYSTEM
C	CONDUIT	N	NEUTRAL (GROUNDED CONDUCTOR)
CB	CIRCUIT BREAKER	NB	NEUTRAL BUS
CCTV	CLOSED CIRCUIT TELEVISION	NC	NORMALLY CLOSE
Ck+	CIRCUIT	NO	NORMALLY OPEN
CMS	CHANGEABLE MESSAGE SIGN	P	CIRCUIT BREAKER'S POLE
Ctid	CALTRANS IDENTIFICATION	PB	PULL BOX
Comm	COMMUNICATION	PBA	PUSH BUTTON ASSEMBLY
DLC	LOOP DETECTOR LEAD-IN CABLE	PEC	PHOTOELECTRIC CONTROL
EMS	EXTINGUISHABLE MESSAGE SIGN	Ped	PEDESTRIAN
EVUC	EMERGENCY VEHICLE UNIT CABLE	PEU	PHOTOELECTRIC UNIT
EVUD	EMERGENCY VEHICLE UNIT DETECTOR	PT	CONDUIT WITH PULL TAPE
FB	FLASHING BEACON	RE	RELOCATED EQUIPMENT
FBCA	FLASHING BEACON CONTROL ASSEMBLY	RM	RAMP METERING
FBS	FLASHING BEACON WITH SLIP BASE	RWIS	ROADSIDE WEATHER INFORMATION SYSTEM
FO	FIBER OPTIC	SB	SLIP BASE
G	EQUIPMENT GROUNDING CONDUCTOR	SIC	SIGNAL INTERCONNECT CABLE
GB	GROUND BUS	Sig	SIGNAL
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	SMA	SIGNAL MAST ARM
HAR	HIGHWAY ADVISORY RADIO	SNS	STREET NAME SIGN
Hex	HEXAGONAL	SP	SERVICE POINT
HPS	HIGH PRESSURE SODIUM	TDC	TELEPHONE DEMARCATION CABINET
IISNS	INTERNALLY ILLUMINATED STREET NAME SIGN	TMS	TRAFFIC MONITORING STATION
ISL	INDUCTION SIGN LIGHTING	TOS	TRAFFIC OPERATIONS SYSTEM
LED	LIGHT EMITTING DIODE	Veh	VEHICLE
LMA	LUMINAIRE MAST ARM	VIVDS	VIDEO IMAGE VEHICLE DETECTION SYSTEM
LPS	LOW PRESSURE SODIUM	WIM	WEIGH-IN-MOTION
Ltg	LIGHTING	Xfmr	TRANSFORMER
Lum	LUMINAIRE		
M	METERED		
MAT	MAST ARM MOUNTING TOP ATTACHMENT		
MAS	MAST ARM MOUNTING SIDE ATTACHMENT		

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	45	68

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

Theresa
Aziz Gabriel
No. E15129
Exp. 6-30-14
ELECTRICAL
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.

TO ACCOMPANY PLANS DATED 6-23-14

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.

COMMONLY USED SYMBOLS FOR UNITED STATES CUSTOMARY UNITS OF MEASUREMENT:

SYMBOL USED	DEFINITIONS
Ω	OHMS
min	MINUTE
s	SECOND
bps	BITS PER SECOND
Bps	BYTES PER SECOND
A	AMPERE
V	VOLT
V(dc)	VOLT (DIRECT CURRENT)
V(ac)	VOLT (ALTERNATING CURRENT)
FC	FOOT - CANDLE
W	WATTS
VA	VOLT-AMPERE
M	MEGA
k	KILO
m	MILLI
μ	MICRO
P	PICO
HZ	HERTZ

MISCELLANEOUS ELECTROLIERS

NEW	EXISTING	
		LUMINAIRE ON WOOD POLE
		NON-STANDARD ELECTROLIER (SEE PROJECT NOTES OR PROJECT PLANS)
		CITY ELECTROLIER
		ELECTROLIER FOUNDATION (FUTURE INSTALLATION)

NOTES:

- HPS luminaires shall be 310 W HPS when installed on Type 21, 21D, 30, 31 and 32 Standards, unless otherwise specified. HPS luminaires shall be 200 W when installed on other type standards or poles, unless otherwise specified.
- LED luminaires shall be 235 W when installed on Type 21, 21D, 30, 31 and 32 Standards, unless otherwise specified. LED luminaires shall be 165 W 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.

STANDARD ELECTROLIER

NEW	EXISTING	STANDARD TYPE
		15
		15D
		15 STRUCTURE
		15D STRUCTURE
		21
		21D
		21 STRUCTURE
		21D STRUCTURE
		30
		31
		32

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (LEGEND AND ABBREVIATIONS)

NO SCALE

RSP ES-1A DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-1A DATED MAY 20, 2011 - PAGE 425 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-1A

2010 REVISED STANDARD PLAN RSP ES-1A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	46	68

Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 July 19, 2013
 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.

TO ACCOMPANY PLANS DATED 6-23-14

CONDUIT

SIGNAL EQUIPMENT

NEW	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 ATTACHED TO THE STRUCTURE OR SERVICE POLE

NEW	EXISTING	
		PEDESTRIAN SIGNAL HEAD "C" INDICATES COUNTDOWN PEDESTRIAN HEAD
		PUSH BUTTON ASSEMBLY POST
		PEDESTRIAN BARRICADE
		VEHICLE SIGNAL HEAD (WITH BACKPLATE AND 3-SECTIONS: RED, YELLOW AND GREEN)
		VEHICLE SIGNAL HEAD WITH ANGLE VISOR
		MODIFICATIONS OF BASIC SYMBOL: "L" INDICATES ALL NON-ARROW SECTIONS LOUVERED "LG" INDICATES LOUVERED GREEN SECTION ONLY "PV" INDICATES ALL 12" SECTIONS PROGRAMMED VISIBILITY "8" INDICATES ALL 8" SECTIONS (ONLY WHEN SPECIFIED)

SIGNAL EQUIPMENT Cont

NEW	EXISTING	
		GUARD POST
		TYPE 1 STANDARD WITH RAMP METERING SIGN
		OPTICAL DETECTOR FOR THE EMERGENCY VEHICLE DETECTION SYSTEM

SERVICE EQUIPMENT

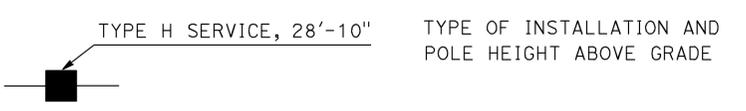
NEW	EXISTING	
---OH---	---oh---	OVERHEAD LINES
		WOOD POLE, "U" INDICATES UTILITY OWNED
		POLE GUY WITH ANCHOR
		UTILITY TRANSFORMER - GROUND MOUNTED
		SERVICE EQUIPMENT ENCLOSURE TYPE. DOOR INDICATES FRONT OF ENCLOSURE
		TELEPHONE DEMARCATION CABINET

		VEHICLE SIGNAL HEAD CONSISTING OF RED, YELLOW AND GREEN LEFT ARROW SECTIONS
		VEHICLE SIGNAL HEAD CONSISTING OF RED AND YELLOW SECTIONS WITH AN UP GREEN ARROW SECTION
		VEHICLE SIGNAL HEAD (5 SECTION) CONSISTING OF RED, YELLOW AND GREEN SECTIONS WITH YELLOW AND GREEN RIGHT ARROW SECTIONS
		TYPE 15TS STANDARD WITH VEHICLE SIGNAL HEAD AND LUMINAIRE
		TYPE 21TS STANDARD WITH VEHICLE SIGNAL HEAD AND LUMINAIRE
		STANDARD WITH LUMINAIRE AND SIGNAL MAST ARMS AND ATTACHED VEHICLE SIGNAL HEADS
		TYPE 1 STANDARD WITH ATTACHED VEHICLE SIGNAL HEADS
		STANDARD WITH A SIGNAL MAST ARM, ATTACHED VEHICLE SIGNAL HEADS AND INTERNALLY ILLUMINATED STREET NAME SIGN
		CONTROLLER ASSEMBLY. DOOR INDICATES FRONT OF CABINET

NOTES:

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

POLE-MOUNTED SERVICE DESIGNATION



FLASHING BEACON

NEW	EXISTING	
		FLASHING BEACON (ONE VEHICLE SIGNAL HEAD WITH BACKPLATE AND VISOR) "R" INDICATES RED INDICATION, "Y" INDICATES YELLOW INDICATION
		FLASHING BEACON WITH TYPE 15-FBS STANDARD AND A SIGN.
		FLASHING BEACON WITH TYPES 9, 9A OR 9B SIGN UNLESS OTHERWISE SPECIFIED OR INDICATED

ILLUMINATED OVERHEAD SIGN

NEW	EXISTING	
		SINGLE POST, SINGLE ILLUMINATED SIGN, BALANCED BUTTERFLY
		SINGLE POST, DOUBLE ILLUMINATED SIGN, BALANCED BUTTERFLY
		SINGLE POST, SINGLE ILLUMINATED SIGN, FULL CANTILEVER
		DOUBLE POST, SINGLE ILLUMINATED SIGN
		SINGLE ILLUMINATED SIGN MOUNTED ON STRUCTURE
		DOUBLE POST, SINGLE ILLUMINATED SIGN WITH ELECTROLIER

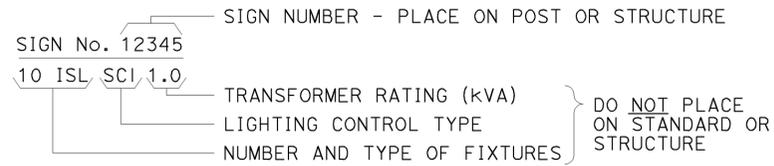
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(LEGEND AND ABBREVIATIONS)**

NO SCALE
RSP ES-1B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-1B DATED MAY 20, 2011 - PAGE 426 OF THE STANDARD PLANS BOOK DATED 2010.

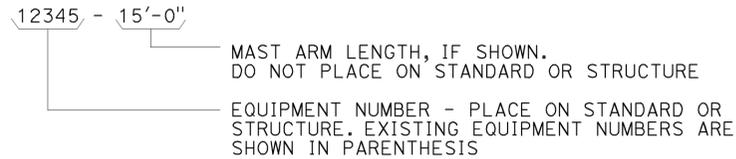
2010 REVISED STANDARD PLAN RSP ES-1B

EQUIPMENT IDENTIFICATION

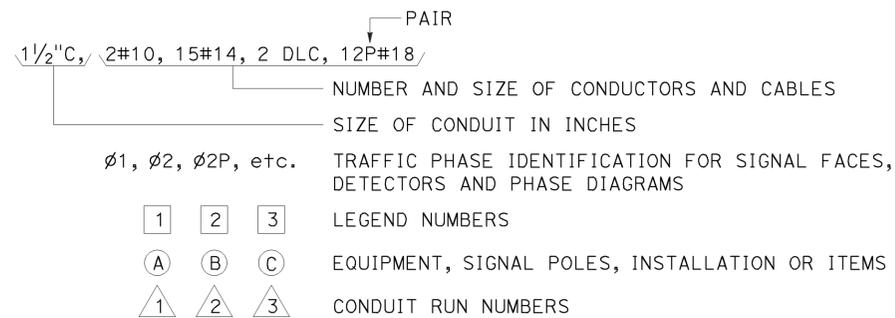
ILLUMINATED SIGN IDENTIFICATION NUMBER:



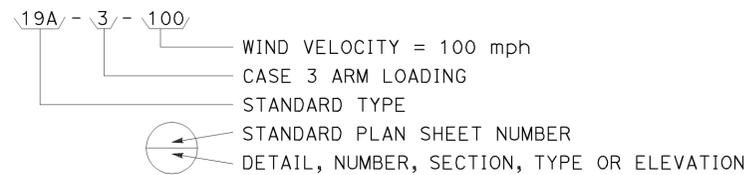
ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



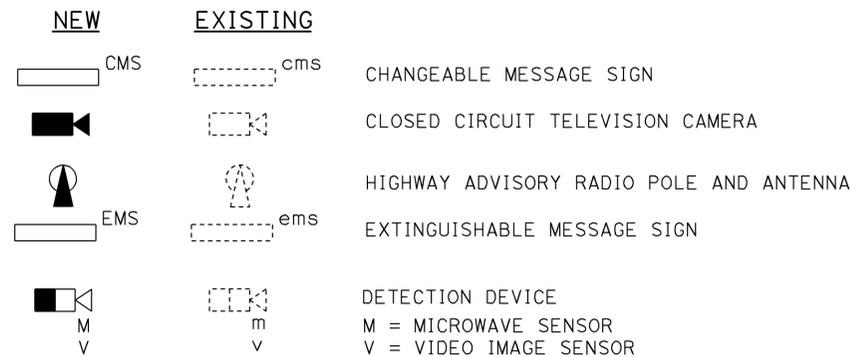
CONDUIT AND CONDUCTOR IDENTIFICATION:



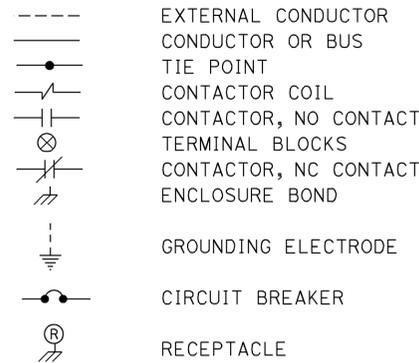
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



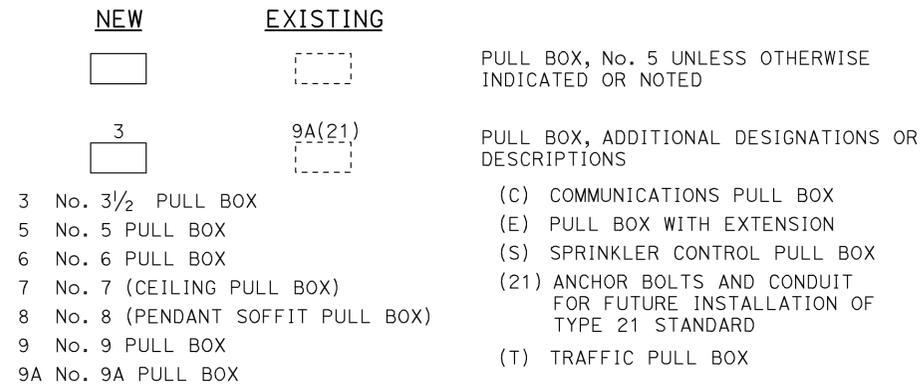
MISCELLANEOUS EQUIPMENT



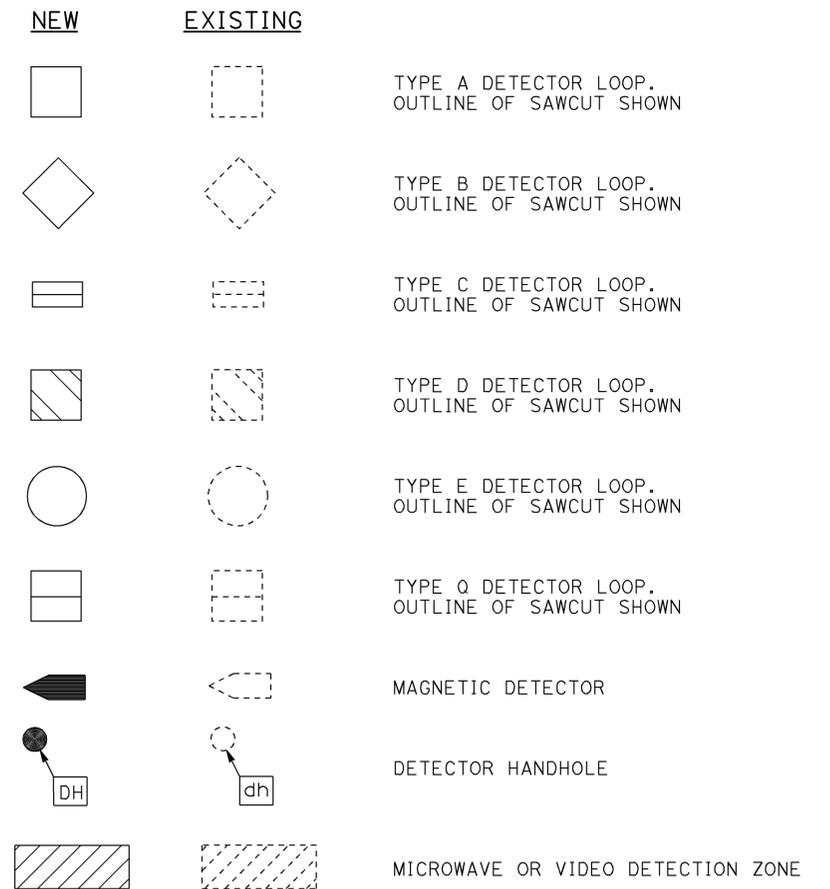
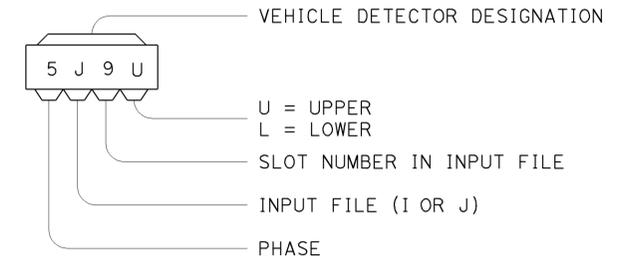
WIRING DIAGRAM LEGEND



PULL BOXES



VEHICLE DETECTORS



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (LEGEND AND ABBREVIATIONS)

NO SCALE

RSP ES-1C DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-1C
DATED MAY 20, 2011 - PAGE 427 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-1C

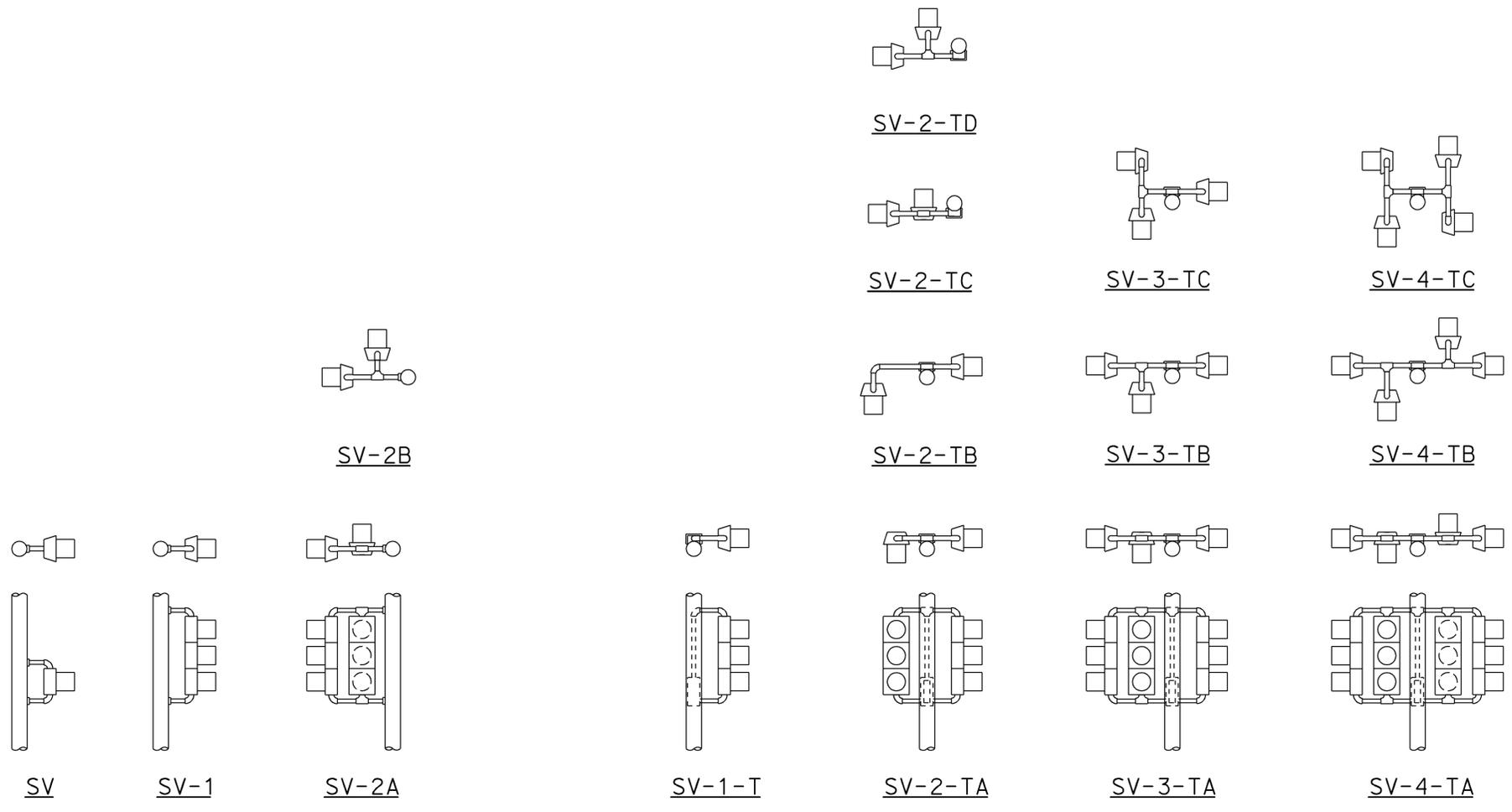
2010 REVISED STANDARD PLAN RSP ES-1C

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	48	68

Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 July 19, 2013
 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.

TO ACCOMPANY PLANS DATED 6-23-14

PLAN VIEW OF OTHER
SIDE MOUNTINGS



ABBREVIATIONS:

- SV SIDE MOUNTED VEHICLE SIGNALS
- T TERMINAL COMPARTMENT
- TV TOP MOUNTED VEHICLE SIGNALS
- 1, 2, 3, 4 NUMBER OF SIGNAL FACES
(3 - SECTION, UNLESS OTHERWISE INDICATED)
- A, B, C, D CONFIGURATION OF SIGNALS

NOTES:

1. Mountings shall be oriented to provide maximum horizontal clearance to adjacent roadway.
2. Bracket arms shall be long enough to permit proper alignment of signals and backplate installation.
3. See Standard Plans ES-4D and ES-4E for attachment fitting details.

PLAN VIEW OF
TOP MOUNTINGS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(VEHICULAR SIGNAL HEADS
AND MOUNTINGS)**

NO SCALE

RSP ES-4A DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-4A
DATED MAY 20, 2011 - PAGE 443 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-4A

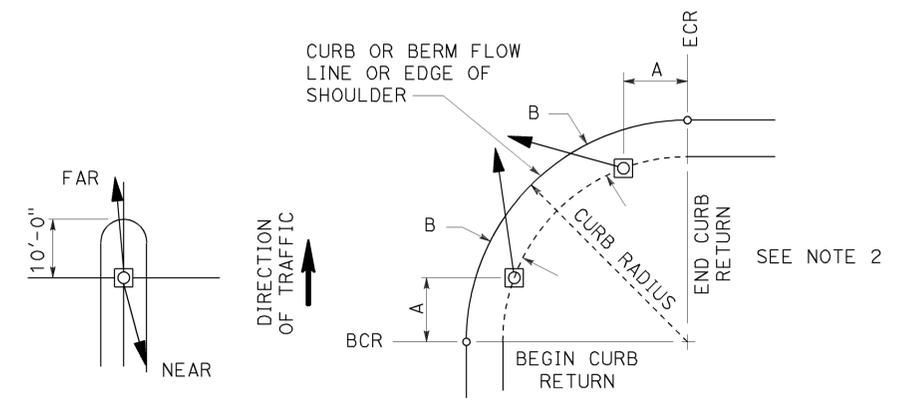
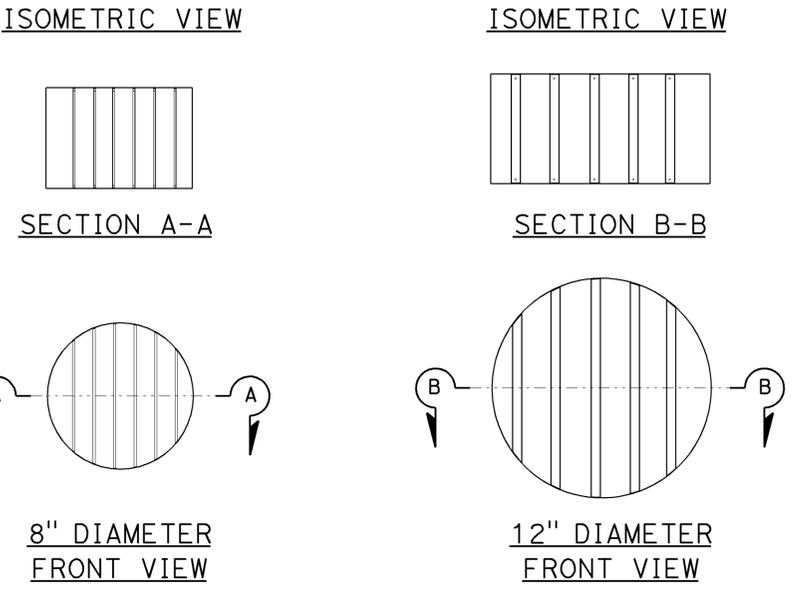
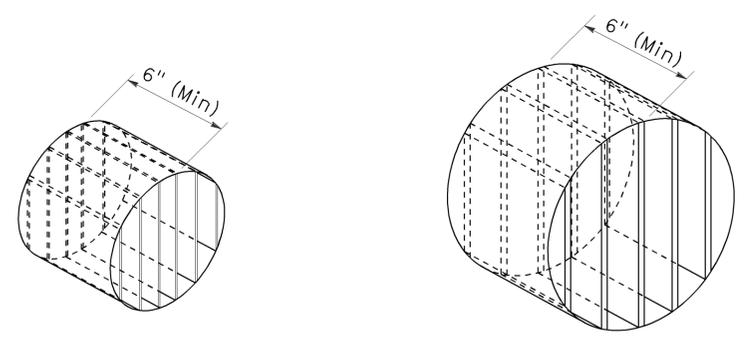
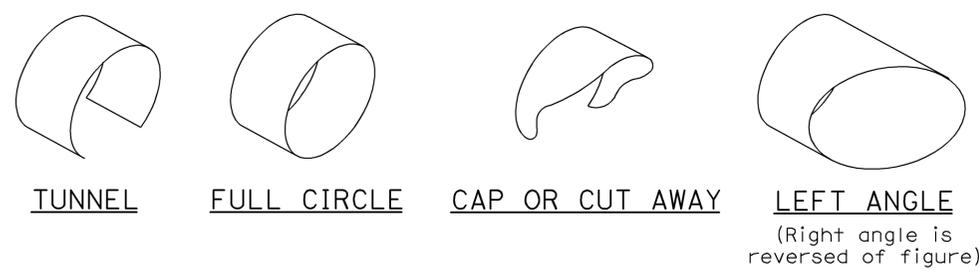
2010 REVISED STANDARD PLAN RSP ES-4A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	49	68

Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 July 19, 2013
 PLANS APPROVAL DATE
 Theresa Aziz Gabriel
 No. E15129
 Exp. 6-30-14
 ELECTRICAL
 STATE OF CALIFORNIA

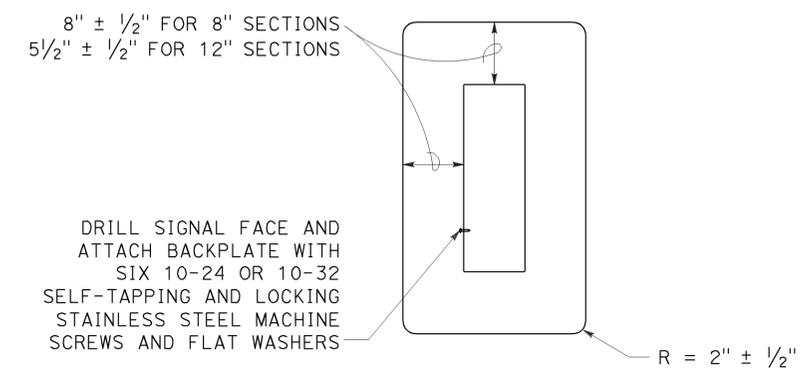
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TO ACCOMPANY PLANS DATED 6-23-14



- NOTES:**
1. Typical signal pole placement unless dimensioned on plans.
 2. For A and B dimensions, see Pole Schedule, or as directed by the Engineer.

VISORS



8" AND 12" SECTIONS

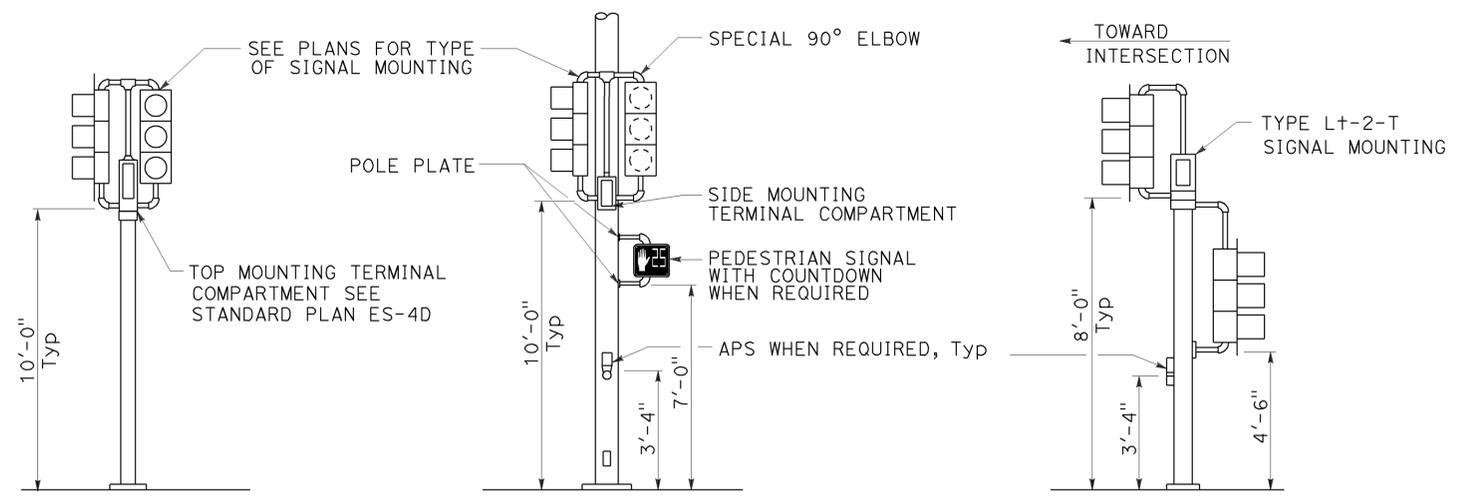
BACKPLATE

1/16" minimum thickness
 3001-14 aluminum or plastic when specified

DIRECTIONAL LOUVER

Directional louvers shall be oriented as directed by the Engineer and secured in place with one plated brass machine screw and nut.

SIGNAL STANDARD PLACEMENT DIMENSIONS AND EQUIPMENT LOCATIONS



TOP MOUNTED SIGNALS (TV)

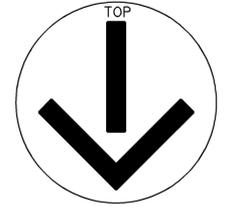
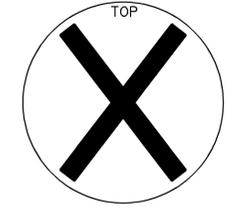
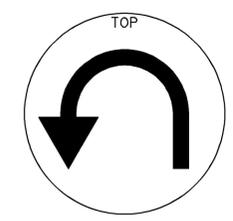
Type 1-A, 1-B, 1-C and 1-D standard as indicated on the plans

SIDE MOUNTED SIGNALS (SV AND SP)

Normally used on standards with luminaire or signal mast arm

LEFT TURN LANE SIGNAL

Type 1-A, 1-B, 1-C and 1-D standard as indicated on plans



SIGNAL FACES

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (VEHICULAR SIGNAL HEADS AND MOUNTINGS)

NO SCALE

RSP ES-4C DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-04C DATED MAY 20, 2011 - PAGE 445 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-4C

2010 REVISED STANDARD PLAN RSP ES-4C

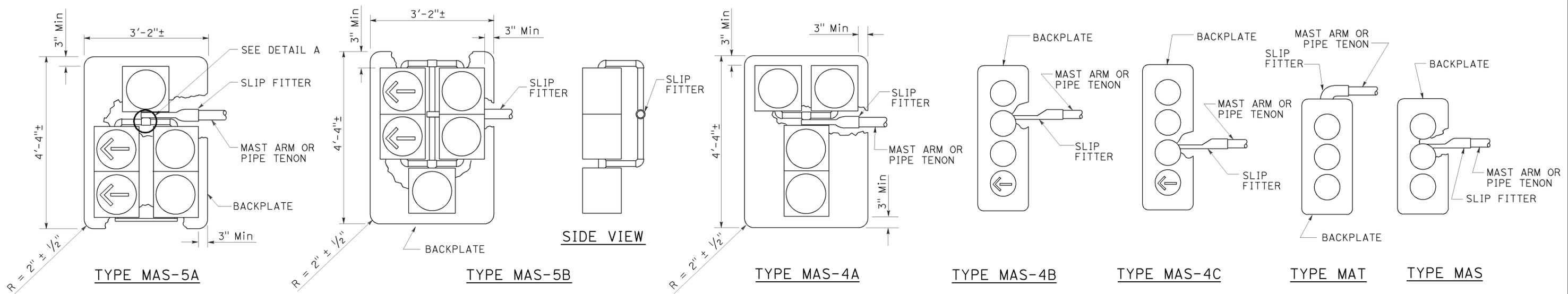
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	50	68

Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 July 19, 2013
 PLANS APPROVAL DATE

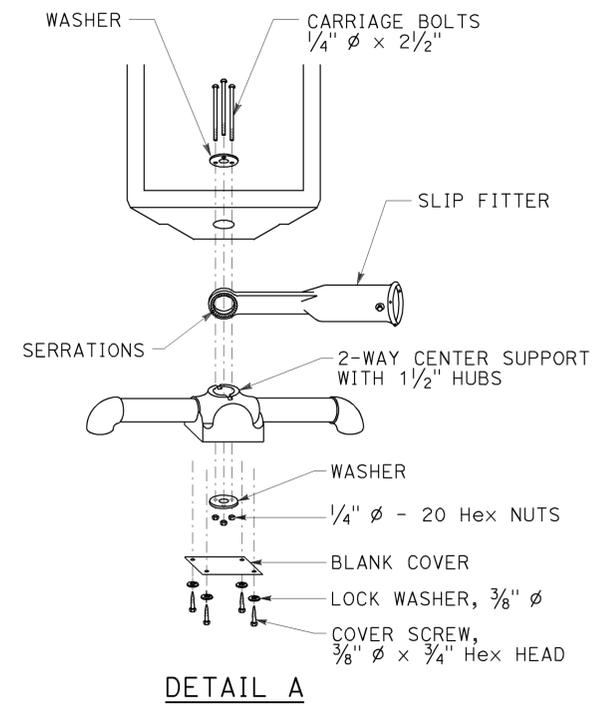
THE STATE OF CALIFORNIA OR ITS OFFICERS
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REGISTERED PROFESSIONAL ENGINEER
 Theresa
 Aziz Gabriel
 No. E15129
 Exp. 6-30-14
 ELECTRICAL
 STATE OF CALIFORNIA

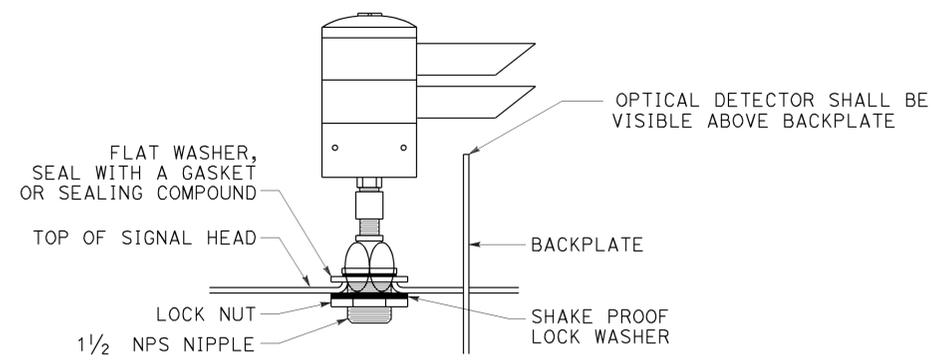
TO ACCOMPANY PLANS DATED 6-23-14



MAST ARM MOUNTINGS



DETAIL A



DETAIL B

**OPTICAL DETECTOR MOUNTING FOR
EMERGENCY VEHICLE DETECTION SYSTEM**

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (VEHICULAR SIGNAL HEADS AND
 OPTICAL DETECTOR MOUNTING)**

NO SCALE

RSP ES-4E DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-4E
 DATED MAY 20, 2011 - 447 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-4E

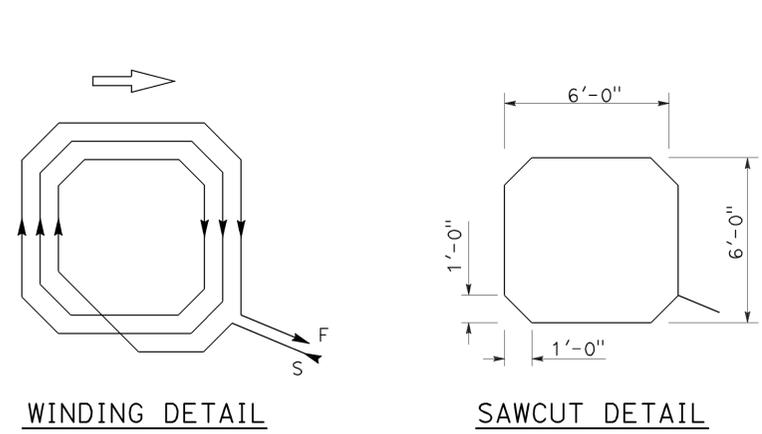
2010 REVISED STANDARD PLAN RSP ES-4E

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	51	68

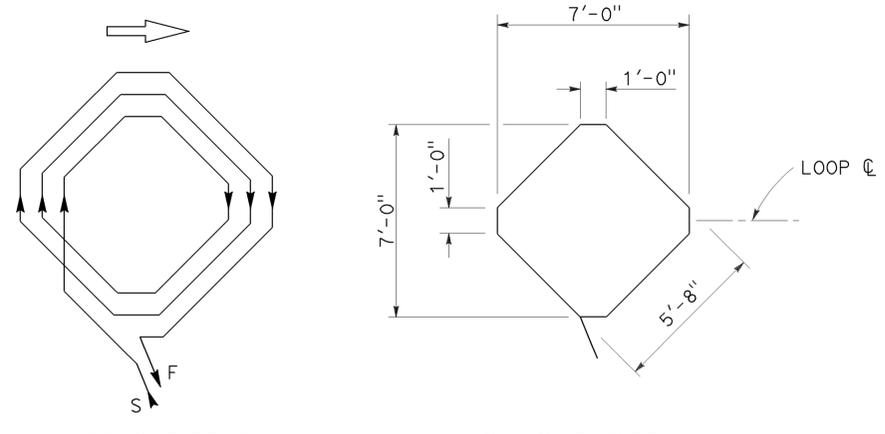
Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 July 19, 2013
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
 Theresa Aziz Gabriel
 No. E15129
 Exp. 6-30-14
 ELECTRICAL
 STATE OF CALIFORNIA

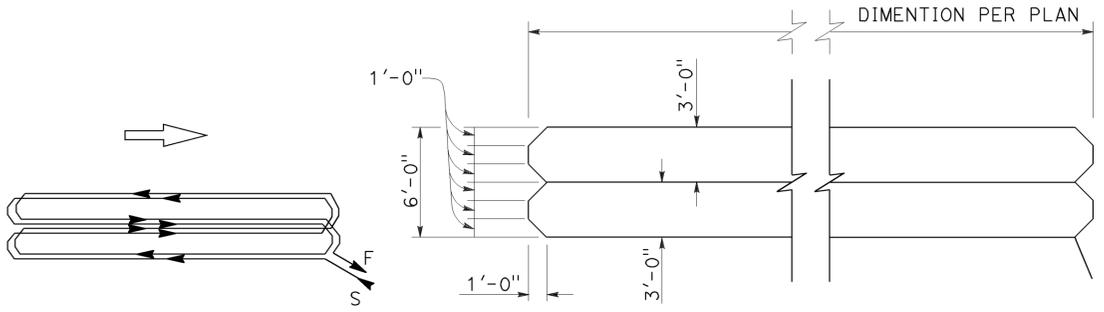
TO ACCOMPANY PLANS DATED 6-23-14



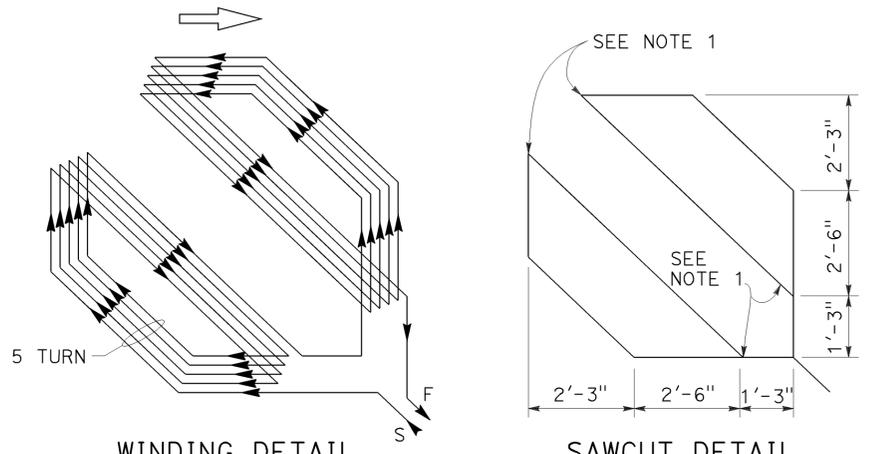
WINDING DETAIL
SAWCUT DETAIL
TYPE A LOOP DETECTOR CONFIGURATION



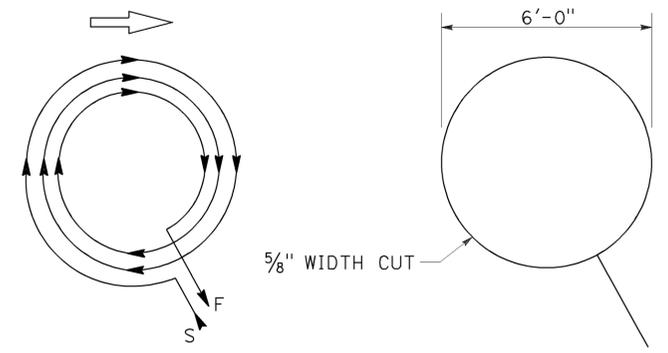
WINDING DETAIL
SAWCUT DETAIL
TYPE B LOOP DETECTOR CONFIGURATION



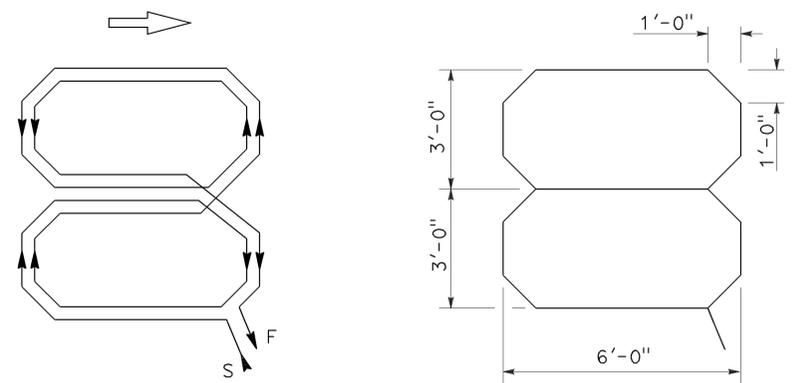
WINDING DETAIL
SAWCUT DETAIL
TYPE C LOOP DETECTOR CONFIGURATION



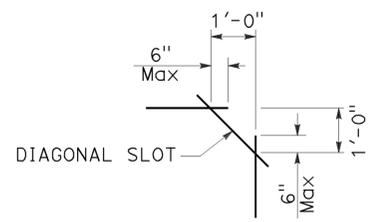
WINDING DETAIL
SAWCUT DETAIL
TYPE D LOOP DETECTOR CONFIGURATION



WINDING DETAIL
SAWCUT DETAIL
TYPE E LOOP DETECTOR CONFIGURATION



WINDING DETAIL
SAWCUT DETAIL
TYPE Q LOOP DETECTOR CONFIGURATION



**PLAN VIEW OF
DIAGONAL SLOT
AT CORNERS**

- NOTES:**
1. Round corners of acute angle sawcuts to prevent damage to conductors.
 2. Typical distance separating loops from edge to edge is 10' for Type A, B, D and E installation in single lane.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(DETECTORS)**

NO SCALE

RSP ES-5B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-5B
DATED MAY 20, 2011 - PAGE 449 OF THE STANDARD PLANS BOOK DATED 2010.

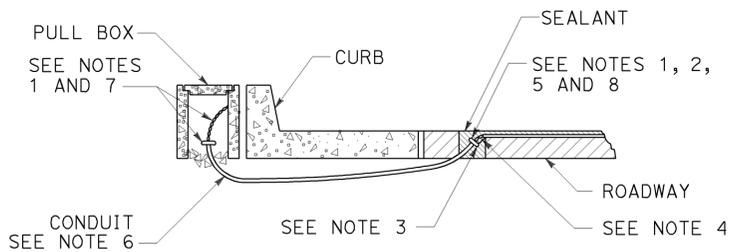
2010 REVISED STANDARD PLAN RSP ES-5B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	52	68

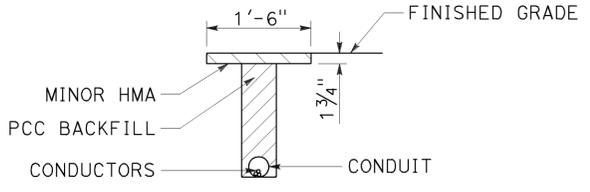
Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 July 19, 2013
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED 6-23-14

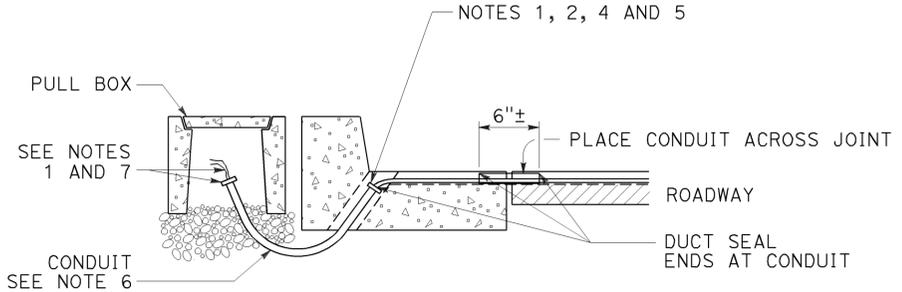
2010 REVISED STANDARD PLAN RSP ES-5D



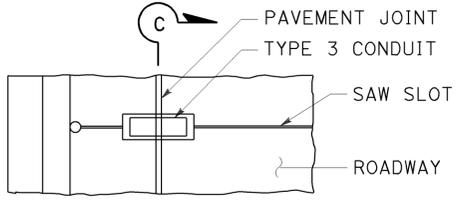
TYPE A
CURB TERMINATION DETAIL



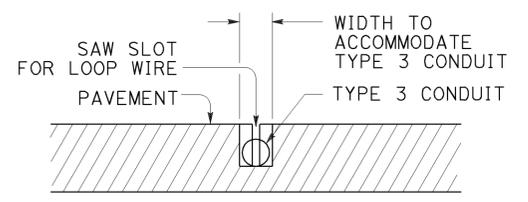
"T" TRENCH
DETAIL T



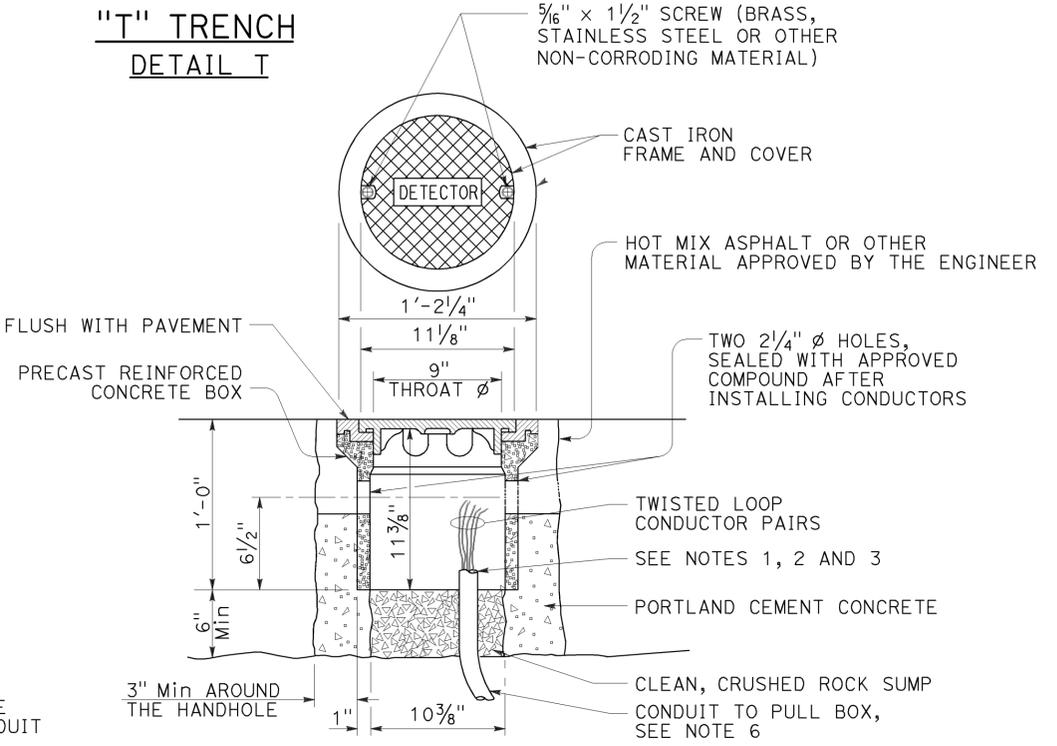
CROSS SECTION



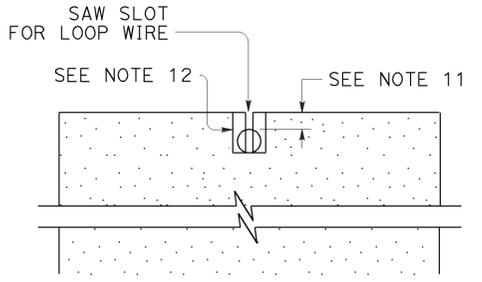
PLAN VIEW



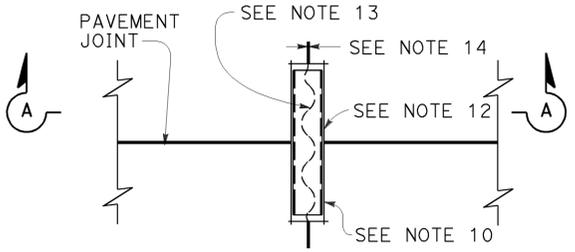
SECTION C-C



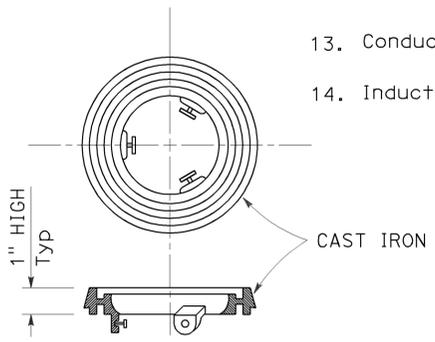
DETECTOR HANDHOLE DETAIL



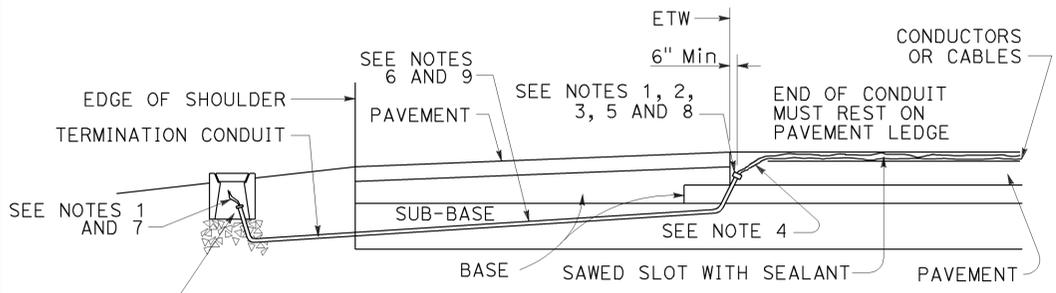
SECTION A-A



PLAN VIEW
TYPICAL LOOP LEAD-IN DETAIL
AT PAVEMENT JOINT



LOCKING GRADE RING



CROSS SECTION



PLAN VIEW
SHOULDER TERMINATION DETAILS

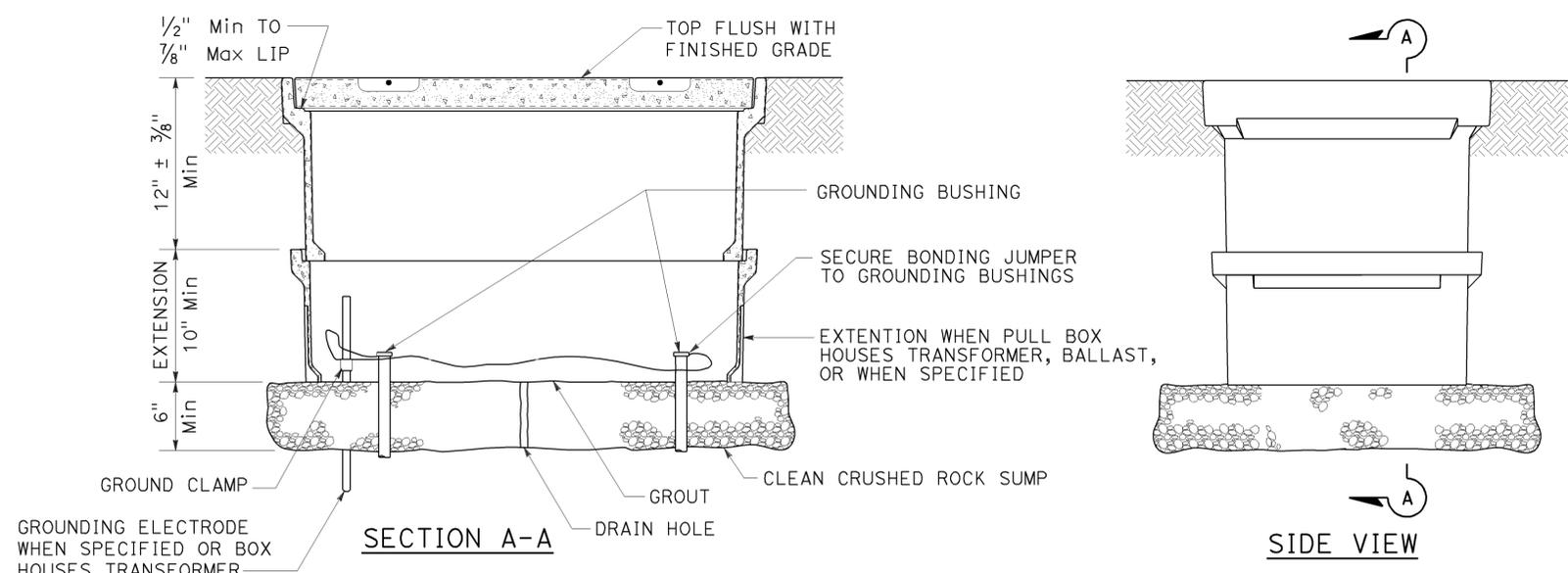
NOTES:

- Bushing shall be used at end of conduit.
- Tape detector conductors or cables 3" each side of bushings.
- Install duct seal compound to each end of termination conduit before installing sealant.
- Round all sharp edges where detector conductors or cables have to pass.
- End of conduit shall be 3/8" below roadway surface.
- Conduit size Loop conductors
 1"C minimum 1 to 2 pairs
 1 1/2"C minimum 3 to 4 pairs
 2"C minimum 5 or more pairs
- Splice detector conductors or cables to detector lead-in-cable.
- Location of detector handhole when shown on plans.
- When the shoulder and traveled way are paved with the same material and there is no joint between them, the conduit shall extend only 2'-0" into the shoulder pavement.
- 3/4"C, Type 3 conduit 6" long minimum, plug both ends with duct compound to keep out sealant.
- 1/2" Minimum between top of conduit and pavement surface.
- Sawcut shall not exceed 1" in width and 1/8" longer than conduit to be installed.
- Conductors with 1/2" minimum slack inside conduit.
- Inductive loop detector saw slot.

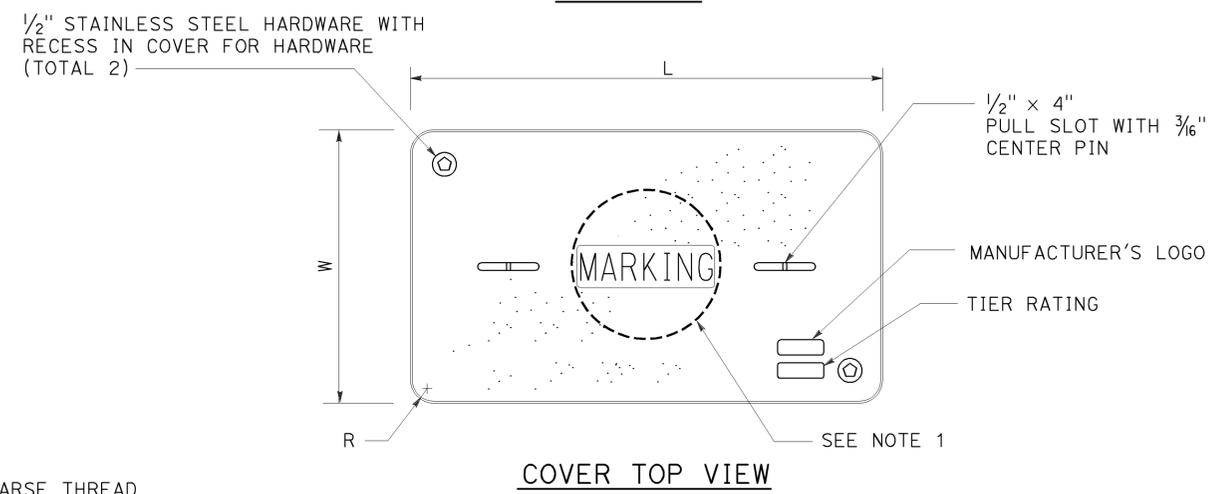
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(CURB TERMINATION
AND HANDHOLE)
NO SCALE

RSP ES-5D DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-5D
DATED MAY 20, 2011 - PAGE 451 OF THE STANDARD PLANS BOOK DATED 2010.
REVISED STANDARD PLAN RSP ES-5D

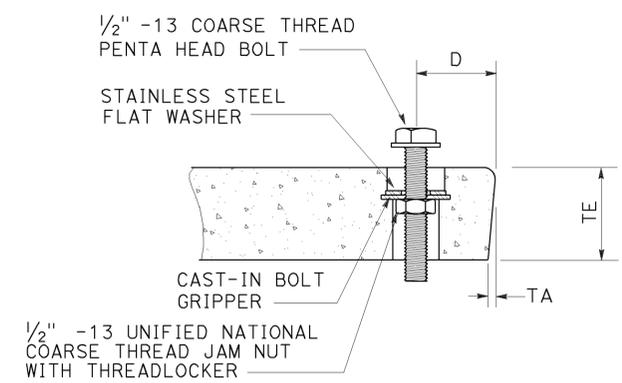
TO ACCOMPANY PLANS DATED 6-23-14



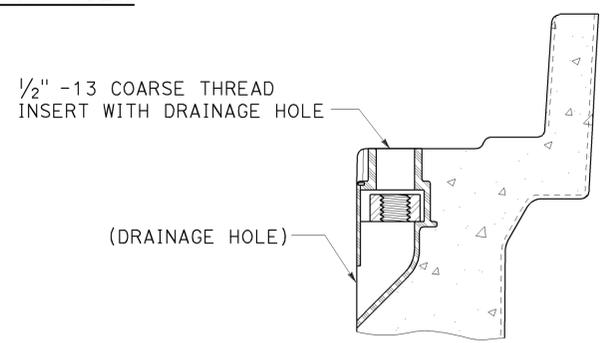
INSTALLATION DETAILS
DETAIL A



COVER TOP VIEW



TYPICAL COVER CAPTIVE BOLT
OR SIMILAR



TYPICAL THREADED INSERT
OR SIMILAR

NOTES:

- Pull box covers shall be marked as follows: "SERVICE" Service circuits between service point and service disconnect; "SPRINKLER-CONTROL" sprinkler control circuits, 50 V or less; "CALTRANS" on all pull boxes, except pull boxes marked "SPRINKLER-CONTROL"; and "TELEPHONE" Telephone service;
 - No. 3 1/2 pull box.
 - "SIGNAL" - Traffic signal circuits with or without lighting or sign lighting circuits.
 - "LIGHTING" - Lighting or sign lighting circuits where voltage is under 600 V.
 - No. 5, 6, 9 or 9A pull box.
 - "TRAFFIC SIGNAL" - Traffic signal circuits with or without lighting or sign lighting circuits.
 - "LIGHTING" - Lighting or sign lighting circuits where voltage is under 600 V.
 - "LIGHTING-HIGH VOLTAGE" - Lighting or sign lighting circuits where voltage is above 600 V.
 - "IRRIGATION" - Circuits to irrigation controller 120 V or more.
 - "RAMP METER" - Ramp meter circuits.
 - "COUNT STATION" - Count or speed monitor circuits.
 - "COMMUNICATIONS" - Communication circuits.
 - "TOS COMMUNICATIONS" - TOS communication line.
 - "TOS POWER" - TOS power.
 - "TDC POWER" - Telephone demarcation cabinet power.
 - "CCTV" - Closed circuit television circuits.
 - "TMS" - Traffic monitoring station circuits.
 - "CMS" - Changeable message sign circuits.
 - "HAR" - Highway advisory radio circuits.
 - "BOOSTER PUMP" - Booster pump circuit.
- The nominal dimensions of the opening in which the cover sets shall be the same as the cover dimensions except the length and width dimensions shall be 1/8" greater.
- Covers and boxes shall be interchangeable with California standard male and female gages. When interchanged with a standard male or female gage, the top surfaces shall be flush within 1/8". Top outside radius of covers and pull boxes shall have a 1/8" radius.
- Pull box extension may be another pull box as long as the bottom edge of the pull box can fit into the cover opening.
- All dimensions for the cover for non-traffic pull box are nominal values.

DIMENSION TABLE										
PULL BOX	PULL BOX			COVER						
	MINIMUM DEPTH BOX	MINIMUM DEPTH EXTENSION	MAXIMUM WEIGHT	L	W	R	TE	TA	D	MAXIMUM WEIGHT
No. 3 1/2	12"	N/A	40 lb	1' - 3 3/8"	10 1/8"	1 3/8"	2"	1/8"	1 3/4"	30 lb
No. 5	12"	10"	55 lb	1' - 11 1/4"	1' - 1 3/4"	1 3/8"	2"	1/8"	1 3/4"	60 lb
No. 6	12"	10"	70 lb	2' - 6 1/2"	1' - 5 1/2"	1 3/8"	2"	1/8"	2"	85 lb

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(NON-TRAFFIC PULL BOX)
NO SCALE

RSP ES-8A DATED JULY 19, 2013 SUPERSEDES RSP ES-8A DATED JANUARY 20, 2012 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-8A

2010 REVISED STANDARD PLAN RSP ES-8A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	54	68

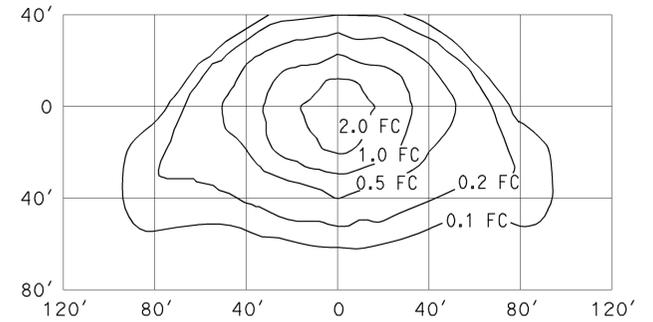
Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 No. E15129
 Exp. 6-30-14
 ELECTRICAL
 STATE OF CALIFORNIA

July 19, 2013
 PLANS APPROVAL DATE

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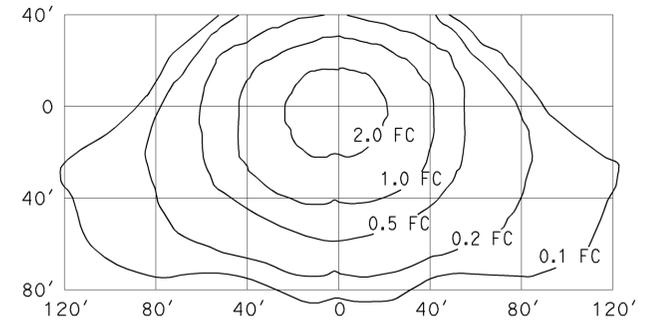
TO ACCOMPANY PLANS DATED 6-23-14

ISOFOOTCANDLE CURVE - MINIMUM



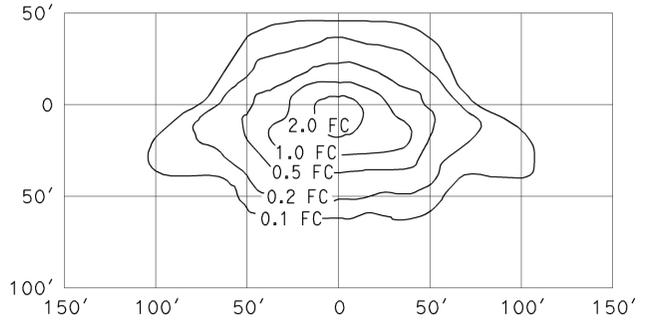
TYPE III MEDIUM CUTOFF
 Cutoff Luminaire
 34' Mounting Height
 Lamp operated at 22,000 lm
 200-W high pressure sodium lamp
 ANSI Designation S66

ISOFOOTCANDLE CURVE - MINIMUM



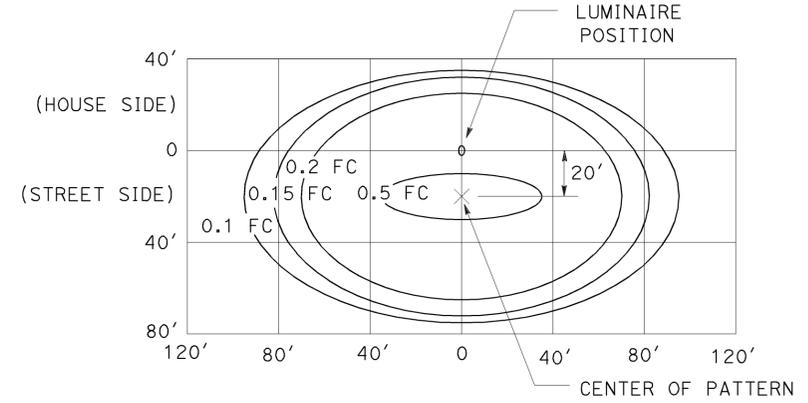
TYPE III MEDIUM CUTOFF
 Cutoff Luminaire
 40' Mounting Height
 Lamp operated at 37,000 lm
 310-W high pressure sodium lamp
 ANSI Designation S67

ISOFOOTCANDLE CURVE - MINIMUM



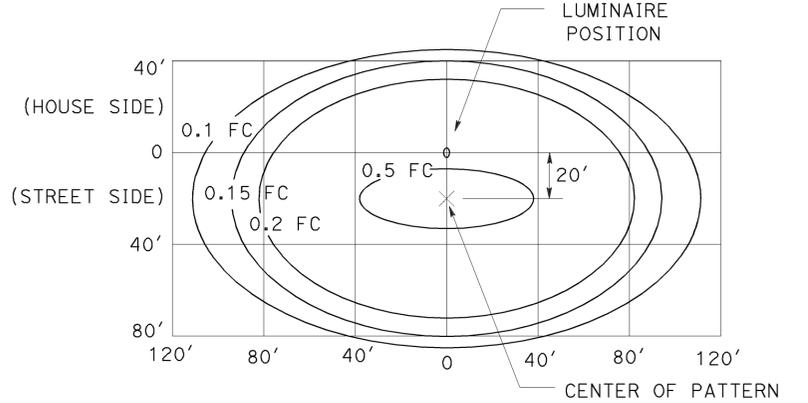
TYPE III MEDIUM CUTOFF
 Cutoff Luminaire
 30' Mounting Height
 Lamp operated at 16,000 lm
 150-W high pressure sodium lamp
 ANSI Designation S55

ISOFOOTCANDLE CURVE - MINIMUM



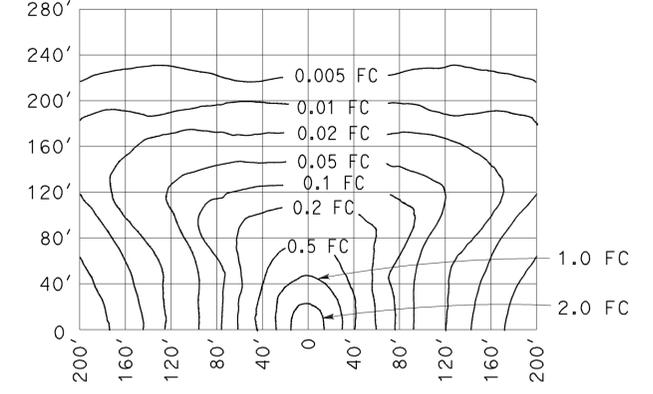
LED LUMINAIRE ROADWAY 1
 165-W at 34' Mounting Height

ISOFOOTCANDLE CURVE - MINIMUM



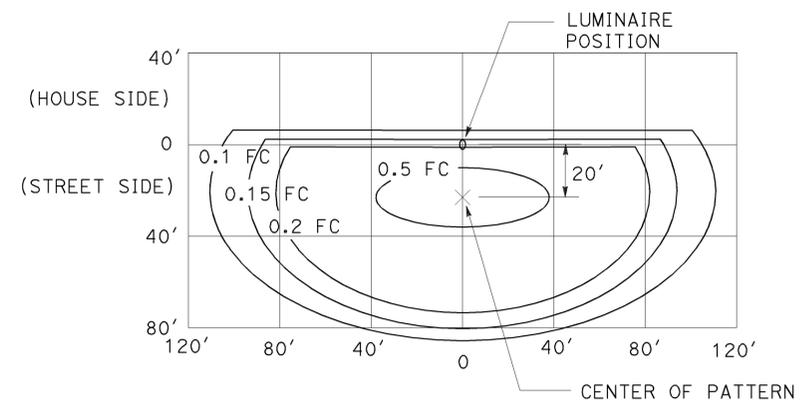
LED LUMINAIRE ROADWAY 2
 235-W at 40' Mounting Height

ISOFOOTCANDLE CURVE - MINIMUM



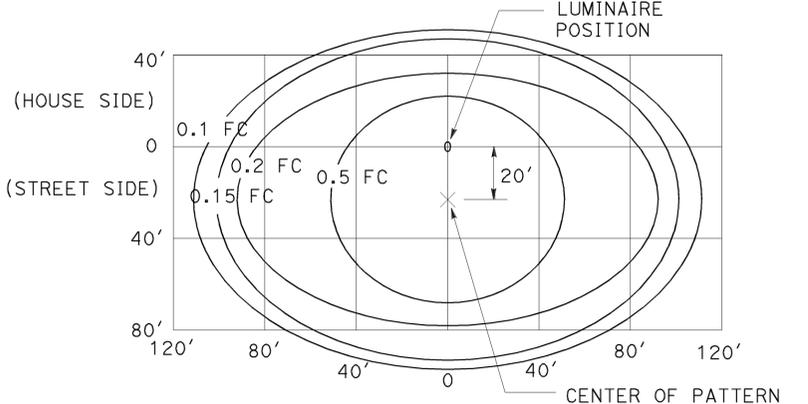
LOW PRESSURE SODIUM LUMINAIRE
 40' Mounting Height
 Lamp operated at 33,000 lm
 180-W low pressure sodium lamp

ISOFOOTCANDLE CURVE - MINIMUM



LED LUMINAIRE ROADWAY 3
 235-W at 40' Mounting Height
 with back side control

ISOFOOTCANDLE CURVE - MINIMUM



LED LUMINAIRE ROADWAY 4
 300-W at 40' Mounting Height

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (ISOFOOTCANDLE DIAGRAMS)**

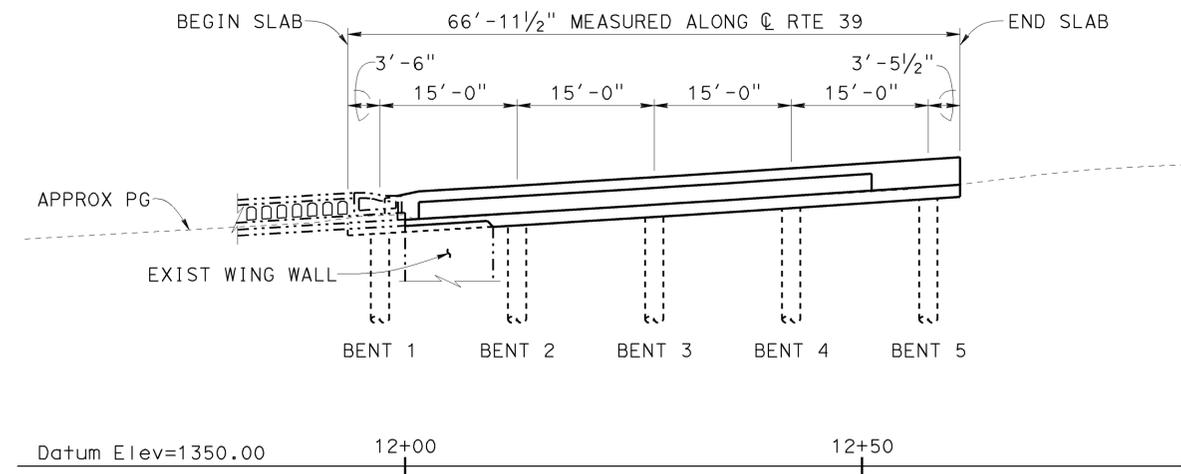
NO SCALE
 RSP ES-10A DATED JULY 19, 2013 SUPERSEDES RSP ES-10A DATED JULY 20, 2012 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP ES-10A

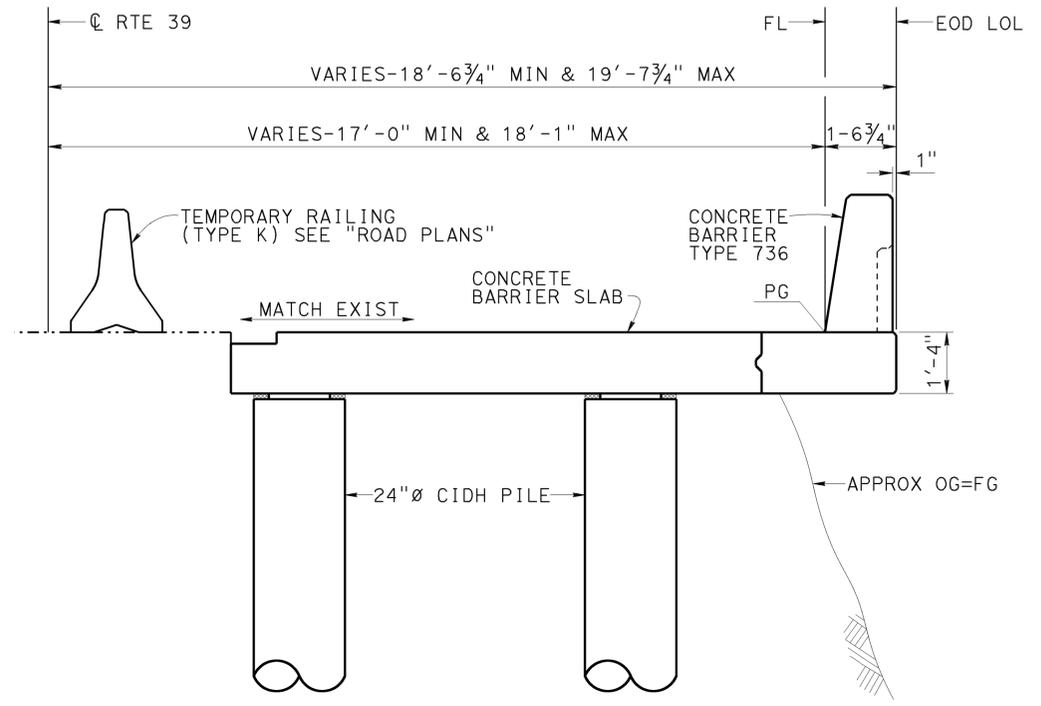
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	55	68

12-06-13
 REGISTERED CIVIL ENGINEER DATE
 6-23-14
 PLANS APPROVAL DATE
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PROFILE GRADES TABLE							
STA	12+00	+10	+20	+30	+40	+50	+60
ELEV	1376.91	1377.50	1378.10	1378.72	1379.37	1380.03	1380.68



ELEVATION
1"=10'-0"



TYPICAL SECTION
1/2"=1'-0"

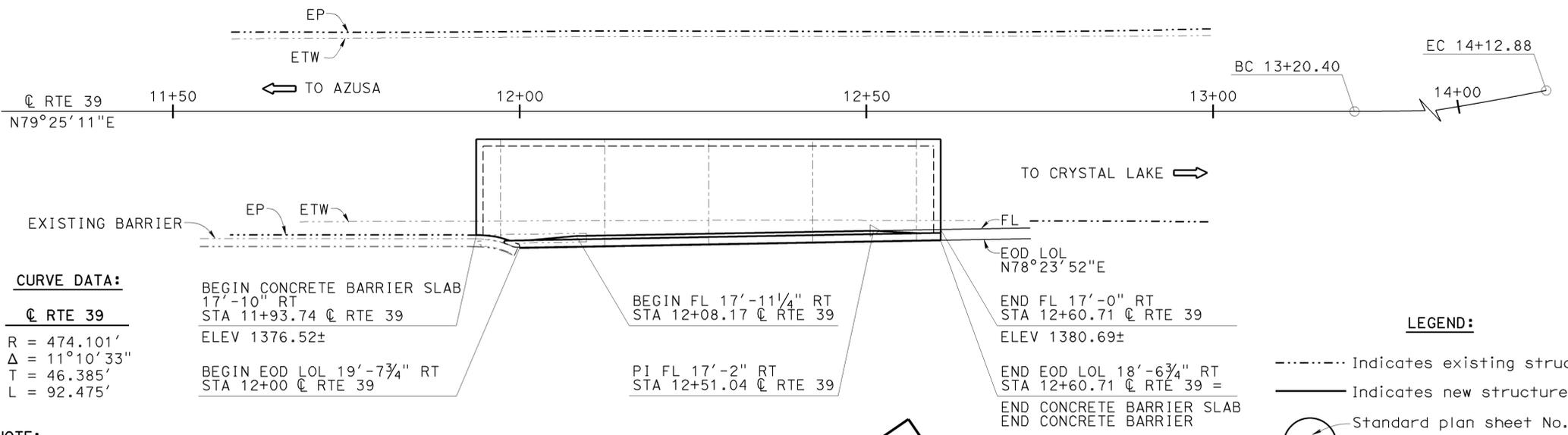
QUANTITIES

24" CAST-IN-DRILLED-HOLE CONCRETE PILING	100	LF
STRUCTURAL CONCRETE, BARRIER SLAB	50	CY
BAR REINFORCING STEEL	2,628	LB
CONCRETE BARRIER (TYPE 736)	65	LF

DESIGN: AASHTO LRFD Bridge Design Specifications, 4th Edition with California Amendments.
 F_t : 54 kips on barrier over 10 feet
 EQE: $k_h = 0.2$
 $k_v = 0.0$

STRUCTURAL CONCRETE: $f'_c = 3600$ psi
 $f_y = 60$ ksi
 $n = 8$

STRUCTURAL STEEL: ASTM A709/A709M Grade 50 or 50W
 $f_y = 50$ ksi



PLAN
1"=10'-0"

CURVE DATA:
 C RTE 39
 $R = 474.101'$
 $\Delta = 11^\circ 10' 33''$
 $T = 46.385'$
 $L = 92.475'$

BEGIN CONCRETE BARRIER SLAB
 17'-10" RT
 STA 11+93.74 C RTE 39
 ELEV 1376.52±

BEGIN FL 17'-11 1/4" RT
 STA 12+08.17 C RTE 39

BEGIN EOD LOL 19'-7 3/4" RT
 STA 12+00 C RTE 39

PI FL 17'-2" RT
 STA 12+51.04 C RTE 39

END FL 17'-0" RT
 STA 12+60.71 C RTE 39
 ELEV 1380.69±

END EOD LOL 18'-6 3/4" RT
 STA 12+60.71 C RTE 39 =

END CONCRETE BARRIER SLAB
 END CONCRETE BARRIER

LEGEND:

- Indicates existing structure
- Indicates new structure
- Standard plan sheet No.
- Detail No.

INDEX TO PLANS

SHEET NO.:	TITLE:
1.	GENERAL PLAN
2.	FOUNDATION PLAN
3.	SLAB DETAILS NO. 1
4.	SLAB DETAILS NO. 2
5.	SLAB DETAILS NO. 3
6.	LOG OF TEST BORINGS

STANDARD PLANS DATED MAY 2010

RSP A10A	ACRONYMS AND ABBREVIATIONS (SHEET 1 OF 2)
RSP A10B	ACRONYMS AND ABBREVIATIONS (SHEET 2 OF 2)
A10C	SYMBOLS (SHEET 1 OF 2)
A10D	SYMBOLS (SHEET 2 OF 2)
B0-5	BRIDGE DETAILS
B0-13	BRIDGE DETAILS
B2-3	16" AND 24" CAST-IN-DRILL-HOLE CONCRETE PILE
RSP B11-56	CONCRETE BARRIER TYPE 736

NOTE:
 THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

MATT HOLM DESIGN ENGINEER	DESIGN	BY WILLIAM ADDLESPURGER	CHECKED DOUG MENZMER	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 12	BRIDGE NO.	53-BS01	BARRIER SLAB AT PM 21.67
	DETAILS	BY TON DOAN	CHECKED DOUG MENZMER	LAYOUT	BY TON DOAN			CHECKED WILLIAM ADDLESPURGER		
	QUANTITIES	BY WILLIAM ADDLESPURGER	CHECKED DOUG MENZMER	SPECIFICATIONS	BY XIAHONG LI					

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS
 UNIT: 3606
 PROJECT NUMBER & PHASE: 0713000218 1
 CONTRACT NO.: 07-3X8204
 DISREGARD PRINTS BEARING EARLIER REVISION DATES
 REVISION DATES: 08-06-13, 12-13-13, 12-24-13, 12-31-13
 SHEET 1 OF 6

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	56	68

Wil W. Adlespurger 12-06-13
 REGISTERED CIVIL ENGINEER DATE

6-23-14
 PLANS APPROVAL DATE

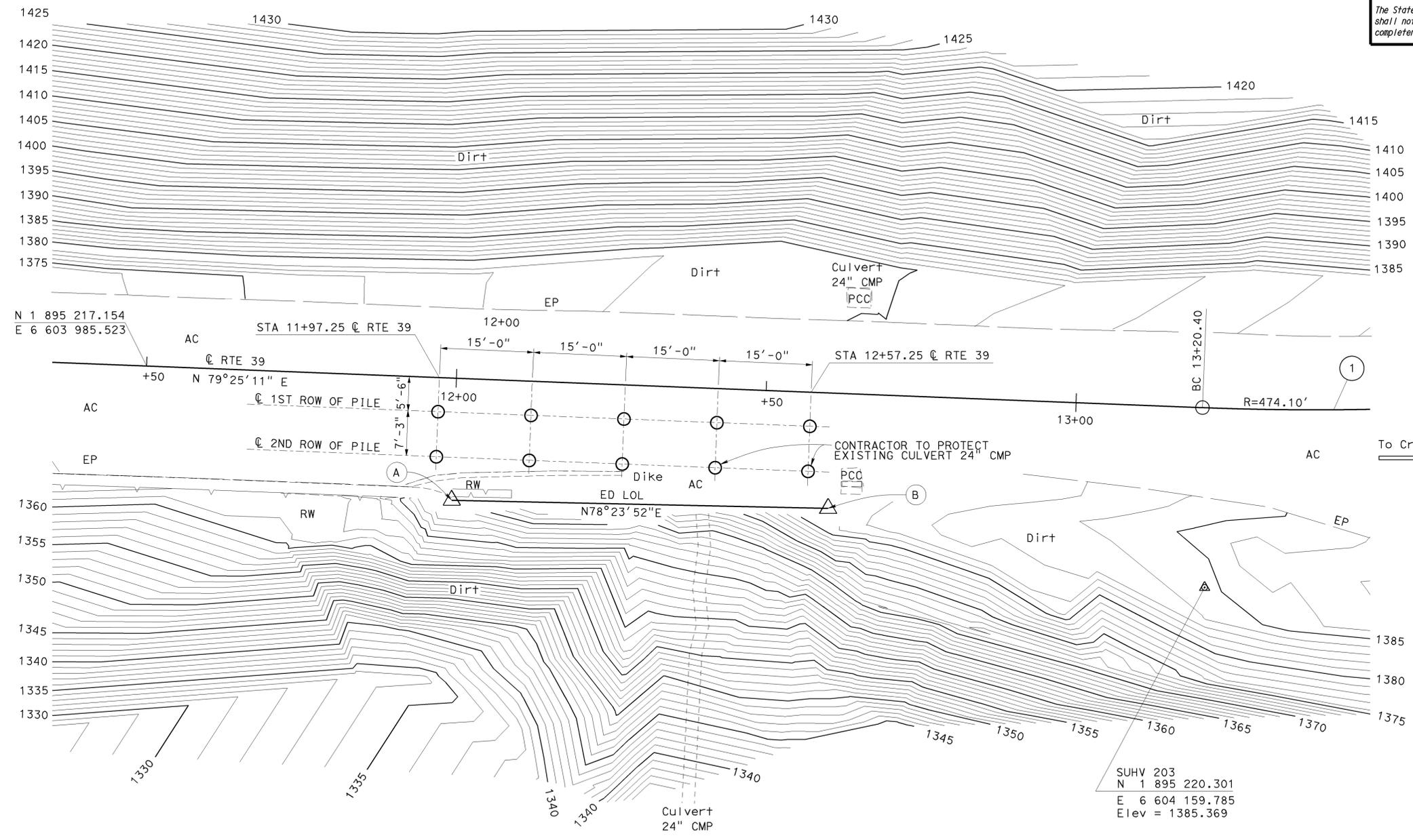
WILLIAM W. ADLESPURGER
 No. C50697
 Exp. 09-30-15
 CIVIL

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

No.	R	Δ	T	L
①	474.10'	11°10'33"	46.39'	92.48'

A Beginning ED LOL =
 19.646' RT @ Route 39 Sta 12+00.00

B Ending ED LOL =
 18.563' RT @ Route 39 Sta 12+60.71



To Azusa
 ←

To Crystal Lake
 →

SURVEY CONTROL
 SUHV 201 Not Shown
 Fnd 25.764 Rt @ Rte 39
 Sta 15+81.54
 N 1 895 364.490
 E 6 604 392.003
 Elev = 1401.300

SUHV 203
 Fnd 1" IP with yellow cap
 28.905 Rt @ Rte 39
 Sta 13+21.79
 N 1 895 220.301
 E 6 604 159.785
 Elev = 1385.369

SUHV 203
 N 1 895 220.301
 E 6 604 159.785
 Elev = 1385.369

LEGEND:

○ Indicates 2'-0" Ø CIDH Pile

NOTE:
 THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

PRELIMINARY INVESTIGATION SECTION				DESIGN BY WILLIAM ADLESPURGER	CHECKED DOUG MENZMER	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN	BRIDGE NO. 53-BS01	BARRIER SLAB AT PM 21.67 FOUNDATION PLAN
SCALE VERT. DATUM NAVD88	PHOTOGRAMMETRY AS OF: X	DETAILS BY TON DOAN	CHECKED DOUG MENZMER	DESIGN BRANCH 12	POST MILE 21.67				
1"=10'	HORIZ. DATUM NAD83	QUANTITIES BY WILLIAM ADLESPURGER	CHECKED DOUG MENZMER	PROJECT NUMBER & PHASE: 0713000218 1	CONTRACT NO.: 07-3X8204				
ALIGNMENT TIES Dist. Traverse Sheet		DRAFTED BY S. ABASSY 06/2013	CHECKED BY S. ALIVIO 06/2013	UNIT: 3646		DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES	SHEET 2 OF 6

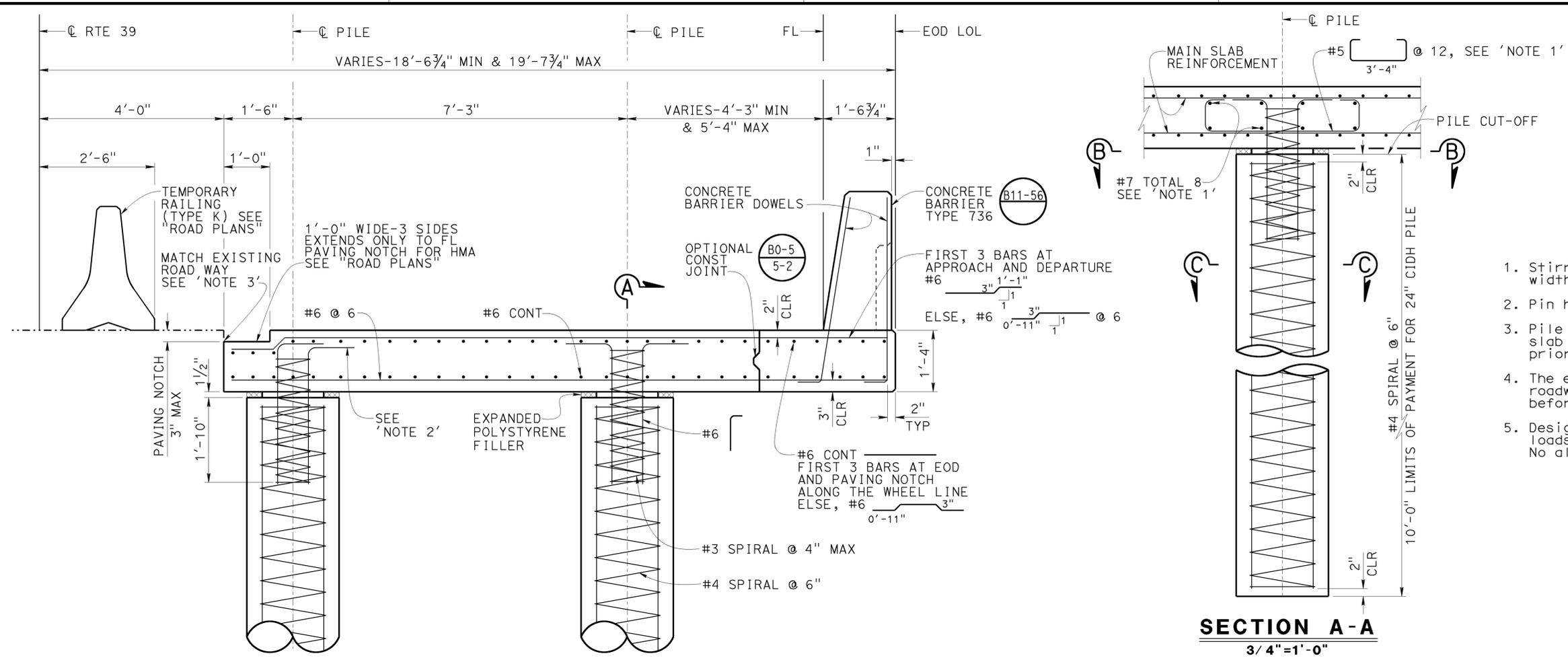
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

FILE => 53-bs01-e-fp.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	57	68

REGISTERED CIVIL ENGINEER
 DATE 12-06-13
 WILLIAM W. ADDLESPURGER
 No. C50697
 Exp. 09-30-15
 CIVIL
 STATE OF CALIFORNIA

PLANS APPROVAL DATE 6-23-14
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.



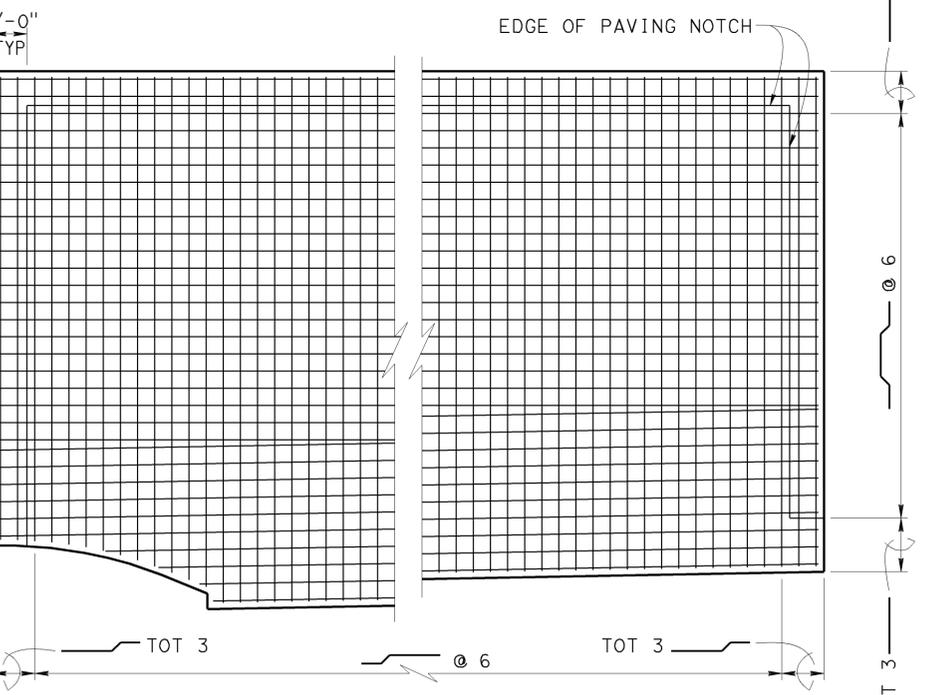
- NOTES:**
1. Stirrups and #7 reinforcement shall extend full width of slab
 2. Pin hooks shall be oriented to miss the paving notch
 3. Pile cut-off elevations shall be 1'-5 1/2" below slab grades and shall be verified by the Engineer prior to pile installation
 4. The exist field grades and cross falls of the roadway shall be field measured by the contractor before structure excavation
 5. Design tip elevations are controlled by lateral loads; the specified tips shall not be raised. No alternative pile types or sizes are allowed

TYPICAL SECTION
3/4" = 1'-0"

SECTION A-A
3/4" = 1'-0"

SECTION B-B
1" = 1'-0"

SECTION C-C
1" = 1'-0"



TOP MAT BAR REINFORCEMENT LAYOUT
3/8" = 1'-0"

- Structure Excavation
- Roadway Materials
- Structure Backfill
- Exposed portion of pile to be formed

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

PAY LIMITS FOR EARTHWORK
NO SCALE

DESIGN	BY WILLIAM ADDLESPURGER	CHECKED DOUG MENZMER
DETAILS	BY TON DOAN	CHECKED DOUG MENZMER
QUANTITIES	BY WILLIAM ADDLESPURGER	CHECKED DOUG MENZMER

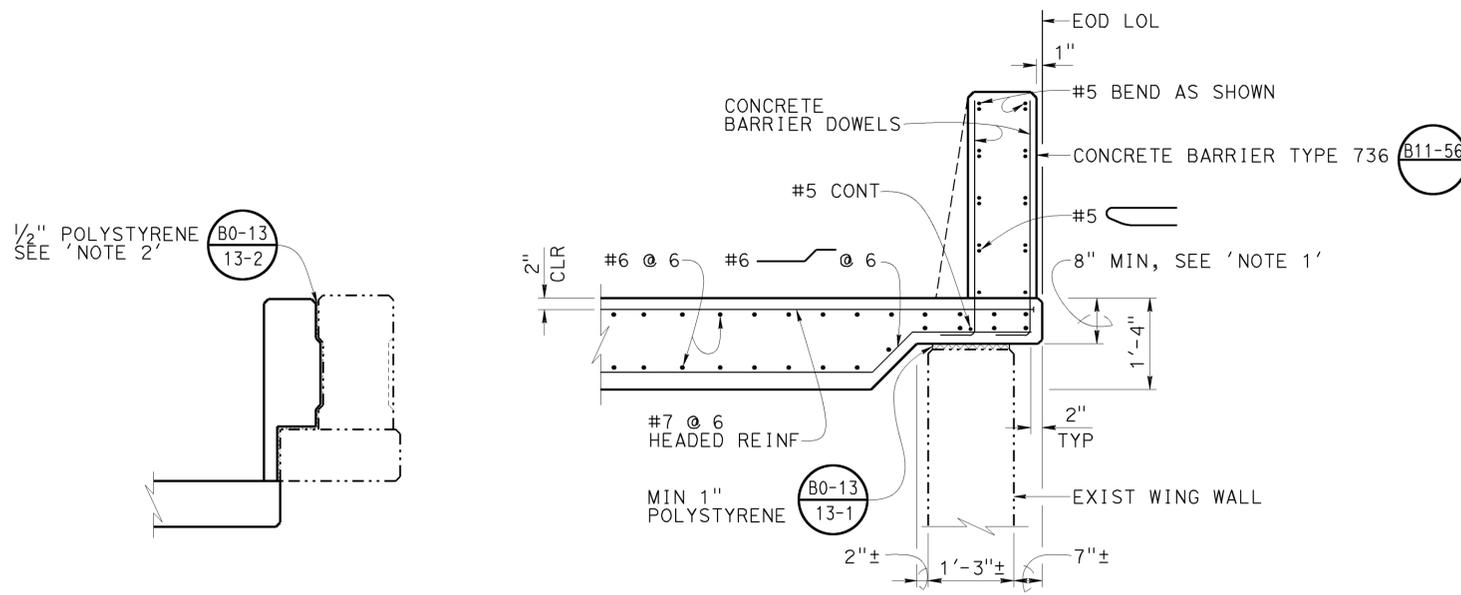
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 12

BRIDGE NO.	53-BS01
POST MILE	21.67

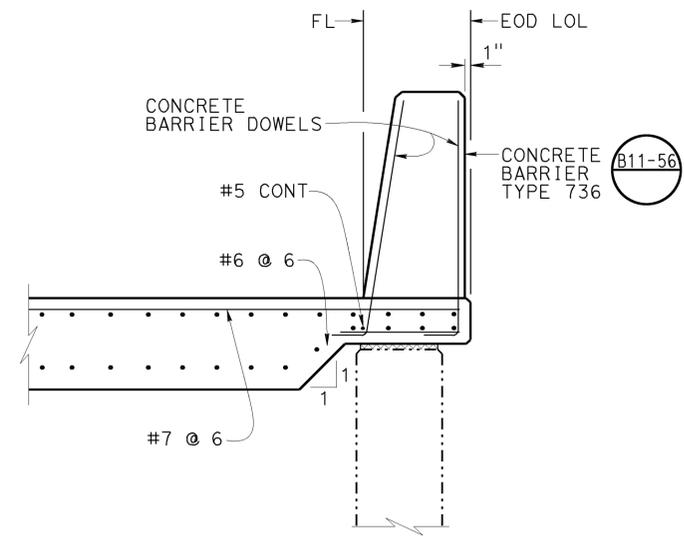
BARRIER SLAB AT PM 21.67
SLAB DETAILS NO. 1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	58	68
<i>William W. Addlespurger</i> REGISTERED CIVIL ENGINEER			12-06-13 DATE	WILLIAM W. ADDLESPURGER No. C50697 Exp. 09-30-15 CIVIL STATE OF CALIFORNIA	
6-23-14 PLANS APPROVAL DATE					
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SECTION D-D
3/4" = 1'-0"

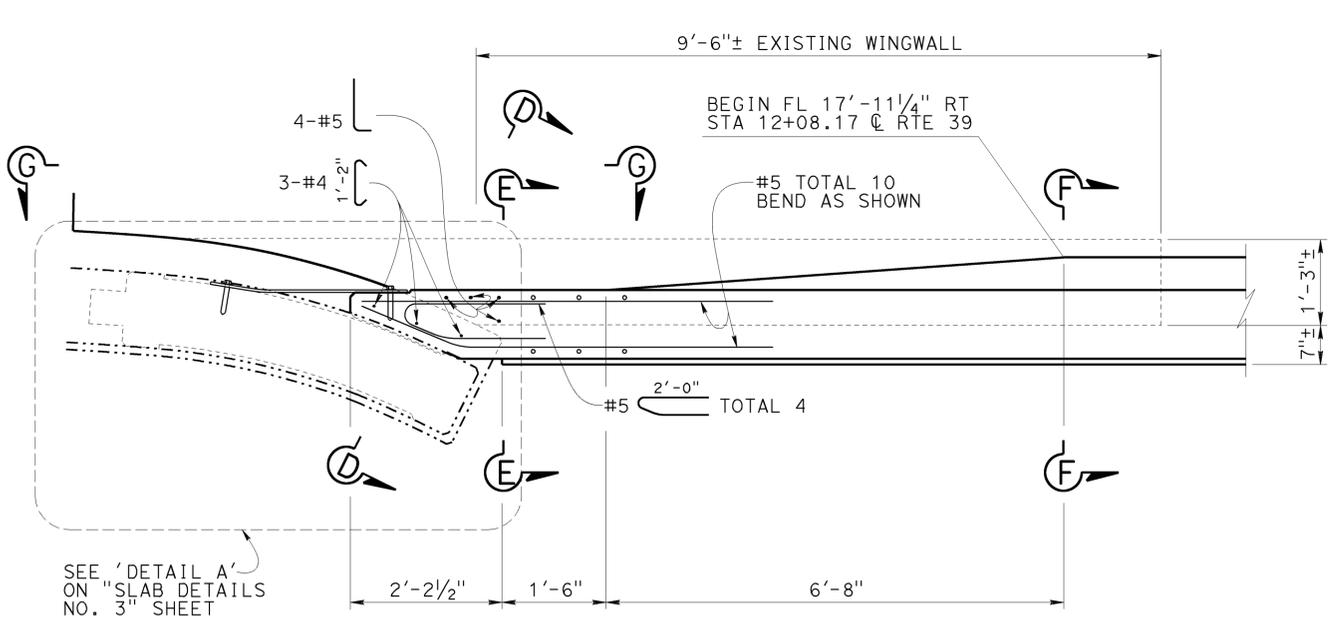
SECTION E-E
3/4" = 1'-0"



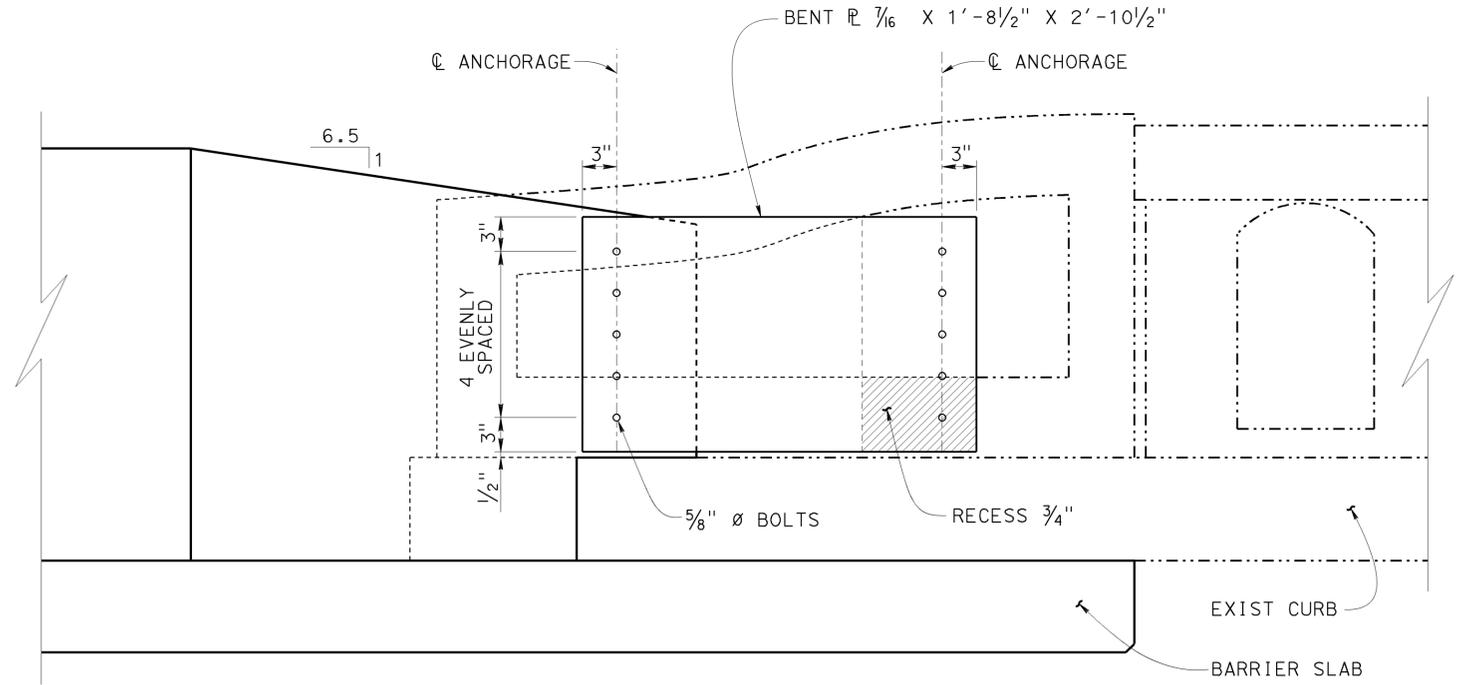
SECTION F-F
3/4" = 1'-0"

FOR NOTES AND DETAILS NOT SHOWN SEE SECTION E-E'

- NOTES:**
- 8" Minimum slab thickness estimated for first 16'-0" feet only. Place slab to maximum thickness allowed, but existing structures shall not be loaded
 - Proposed barrier shall not be connected to existing barrier, except by: $f_y = 50$ ksi steel plate



PARTIAL PLAN
3/4" = 1'-0"



VIEW G-G
1 1/2" = 1'-0"

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.



DESIGN BY WILLIAM ADDLESPURGER CHECKED DOUG MENZMER DETAILS BY TON DOAN CHECKED DOUG MENZMER QUANTITIES BY WILLIAM ADDLESPURGER CHECKED DOUG MENZMER	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 12	BRIDGE NO. 53-BS01	BARRIER SLAB AT PM 21.67 SLAB DETAILS NO. 2
			POST MILE 21.67	
			UNIT: 3606 PROJECT NUMBER & PHASE: 0713000218 1 CONTRACT NO.: 07-3X8204	

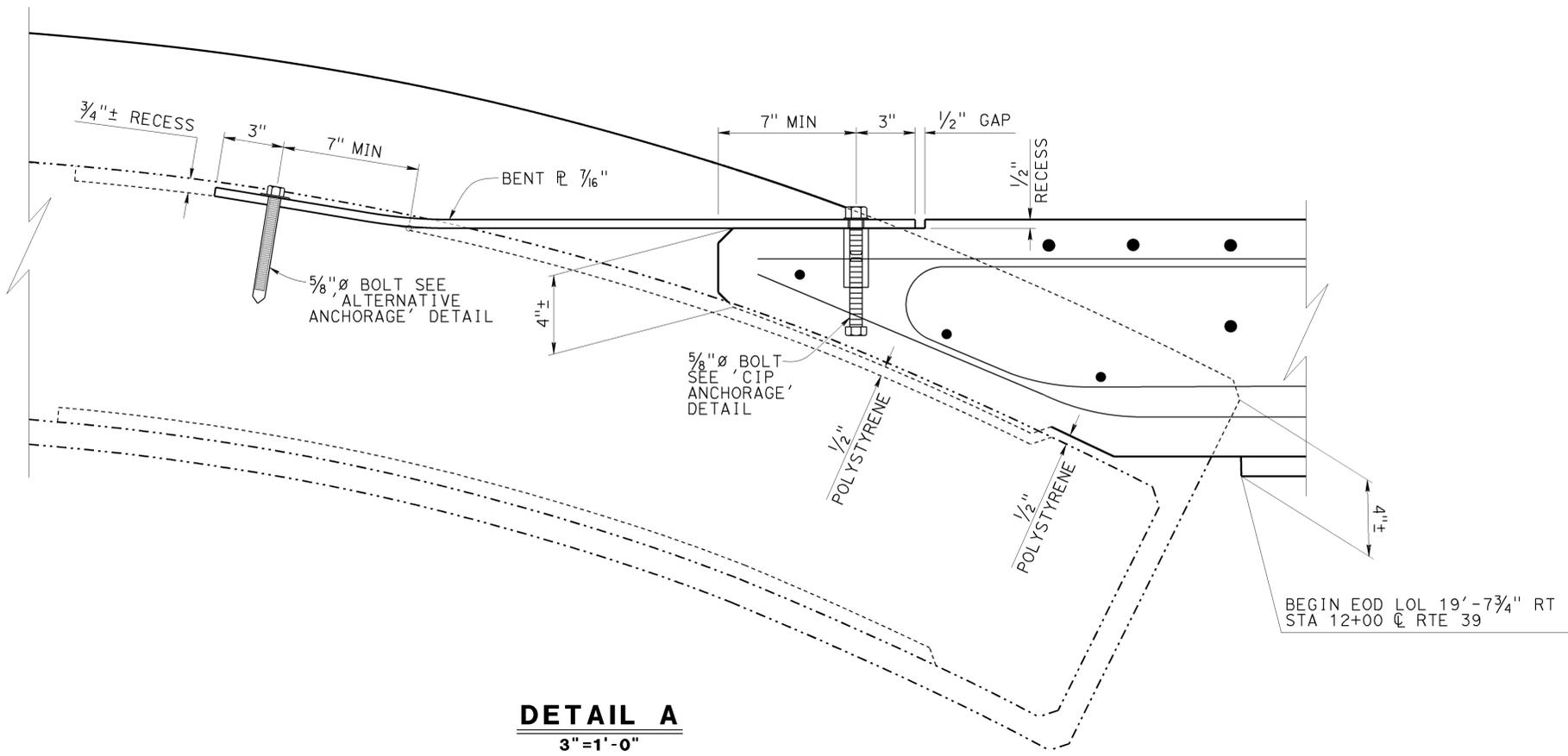
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	59	68

Wil W. Adlespurger 12-06-13
 REGISTERED CIVIL ENGINEER DATE

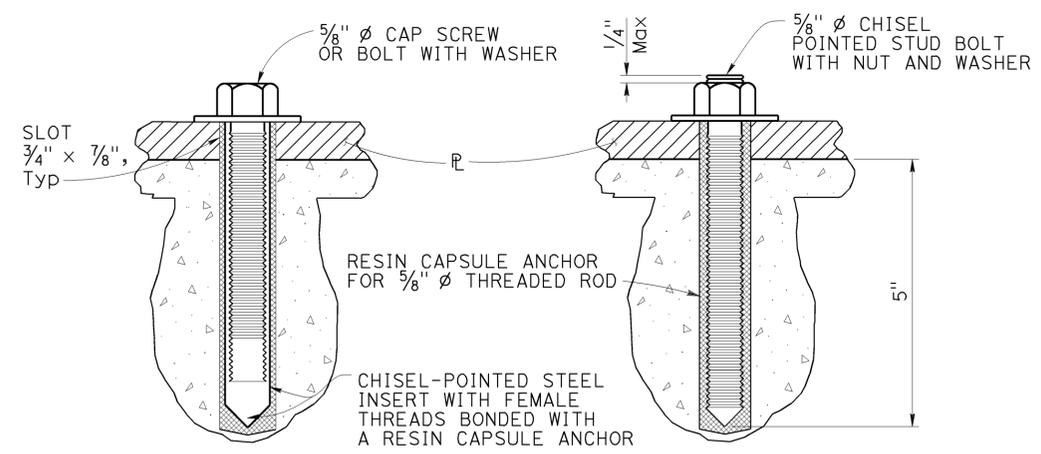
6-23-14
 PLANS APPROVAL DATE

WILLIAM W. ADLESPURGER
 No. C50697
 Exp. 09-30-15
 CIVIL
 STATE OF CALIFORNIA

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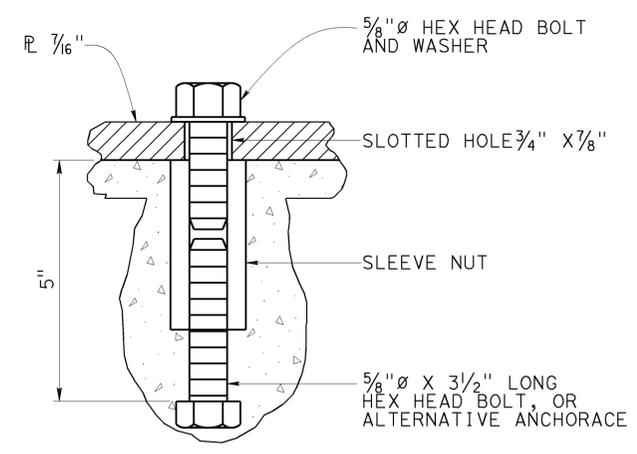
DETAIL A
 3" = 1'-0"



ALTERNATIVE A

ALTERNATIVE B

ALTERNATIVE ANCHORAGE
 NO SCALE



CIP ANCHORAGE
 NO SCALE

NOTE:
 THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DESIGN	BY WILLIAM ADLESPURGER	CHECKED DOUG MENZMER	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 12	BRIDGE NO.	BARRIER SLAB AT PM 21.67
	DETAILS	BY TON DOAN			CHECKED DOUG MENZMER	
QUANTITIES	BY WILLIAM ADLESPURGER	CHECKED DOUG MENZMER	PROJECT NUMBER & PHASE: 0713000218 1	CONTRACT NO.: 07-3X8204	POST MILE	SLAB DETAILS NO. 3
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)					21.67	REVISION DATES
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS					0 1 2 3	06-13-13
FILE => 53-bs01-u-miscd+03.dgn					UNIT: 3606	SHEET OF
					DISREGARD PRINTS BEARING EARLIER REVISION DATES	5 6

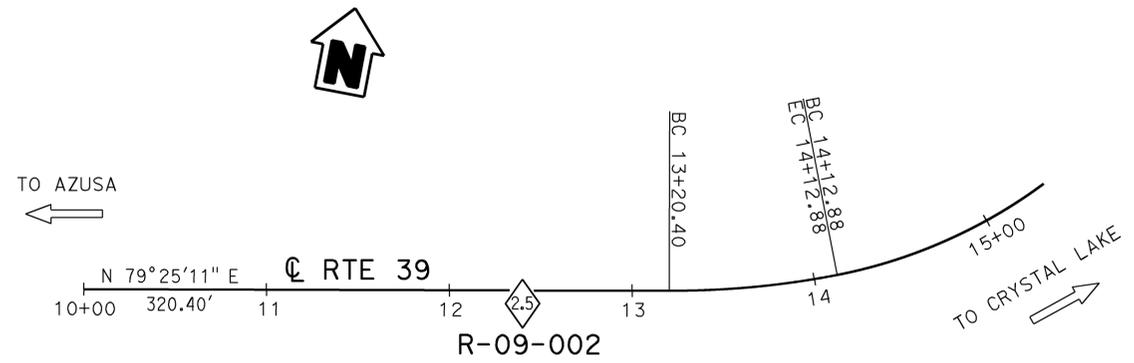
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	60	68

Sam Sukiasian 9-11-13
 REGISTERED CIVIL ENGINEER DATE
 6-23-14
 PLANS APPROVAL DATE
 REGISTERED PROFESSIONAL ENGINEER
 Sam Sukiasian
 No. C58262
 Exp. 6-30-14
 CIVIL
 STATE OF CALIFORNIA
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).
 See 2010 Standard Plans A10F and A10G for Soil Legend, and A10H for Rock Legend.

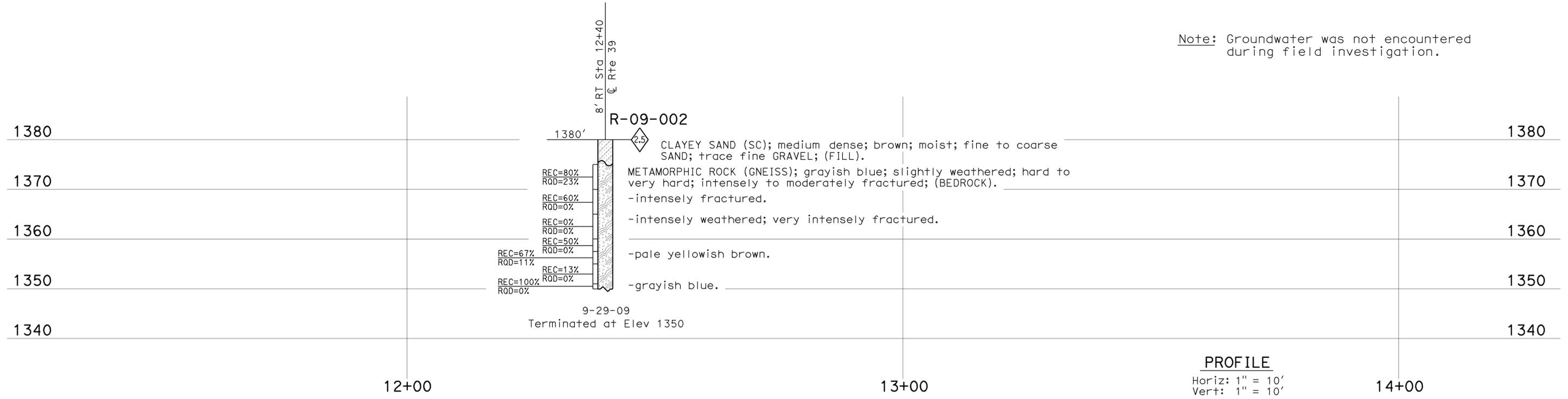
BENCH MARK

SUHV201 Elev 1401.30
 Found 1" IP with yellow CT Plug
 N 1895364.49
 E 6604392.00
 NAVD83 (1991.35)



PLAN
1" = 50'

Note: Groundwater was not encountered during field investigation.

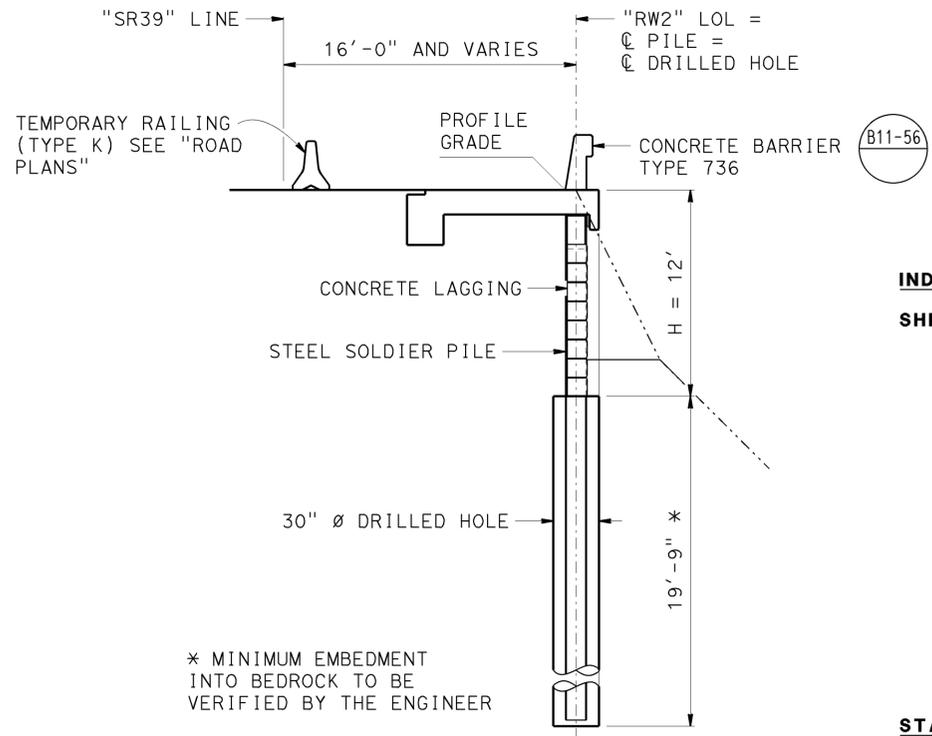
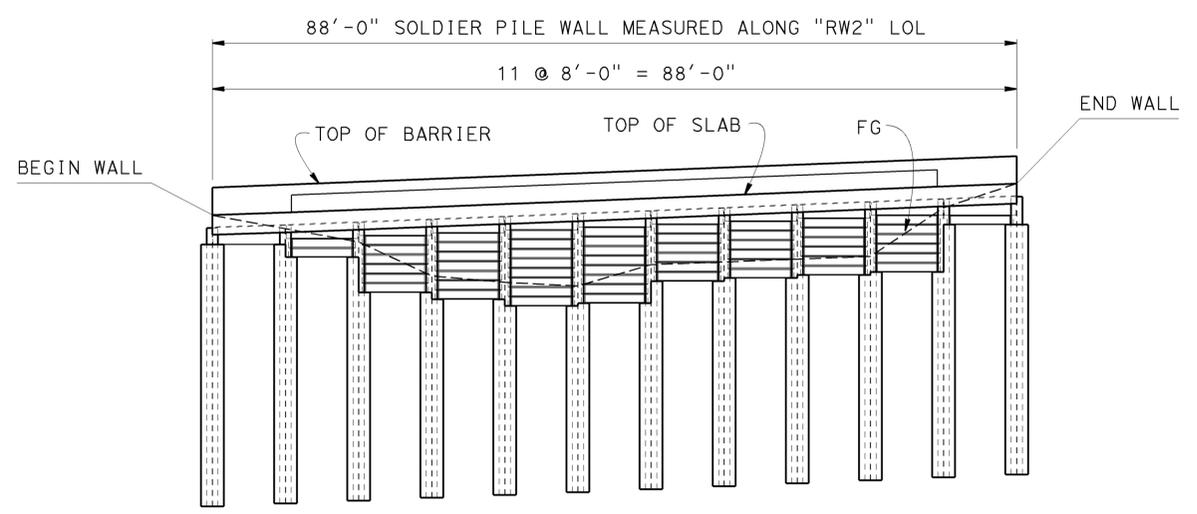


PROFILE
Horiz: 1" = 10'
Vert: 1" = 10'

ENGINEERING SERVICES		MATERIALS AND GEOTECHNICAL SERVICES		STATE OF CALIFORNIA		DIVISION OF ENGINEERING SERVICES		BRIDGE NO.		BARRIER SLAB AT PM 21.67	
FUNCTIONAL SUPERVISOR		DRAWN BY: I.G-Remmen		FIELD INVESTIGATION BY:		DEPARTMENT OF TRANSPORTATION		53-BS01		LOG OF TEST BORINGS	
NAME: T. Liu		CHECKED BY: C. Harris		Q. Liao		DESIGN BRANCH 12		POST MILE			
								21.67			
065 CIVIL LOG OF TEST BORINGS SHEET		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		0 1 2 3		UNIT: 3643		PROJECT NUMBER & PHASE: 0713000218 1		CONTRACT NO.: 07-3X8204	
						DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES		SHEET OF	
										6 6	

USERNAME => s126699 DATE PLOTTED => 21-MAY-2014 TIME PLOTTED => 08:00

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	61	68
<i>Wil W. Addlespurger</i> REGISTERED CIVIL ENGINEER			12-6-13 DATE	WILLIAM W. ADDLESPURGER No. 50697 Exp. 09-30-15 CIVIL STATE OF CALIFORNIA	
6-23-14			PLANS APPROVAL DATE		
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ELEVATION
1" = 10'

TYPICAL SECTION
NO SCALE

INDEX TO PLANS

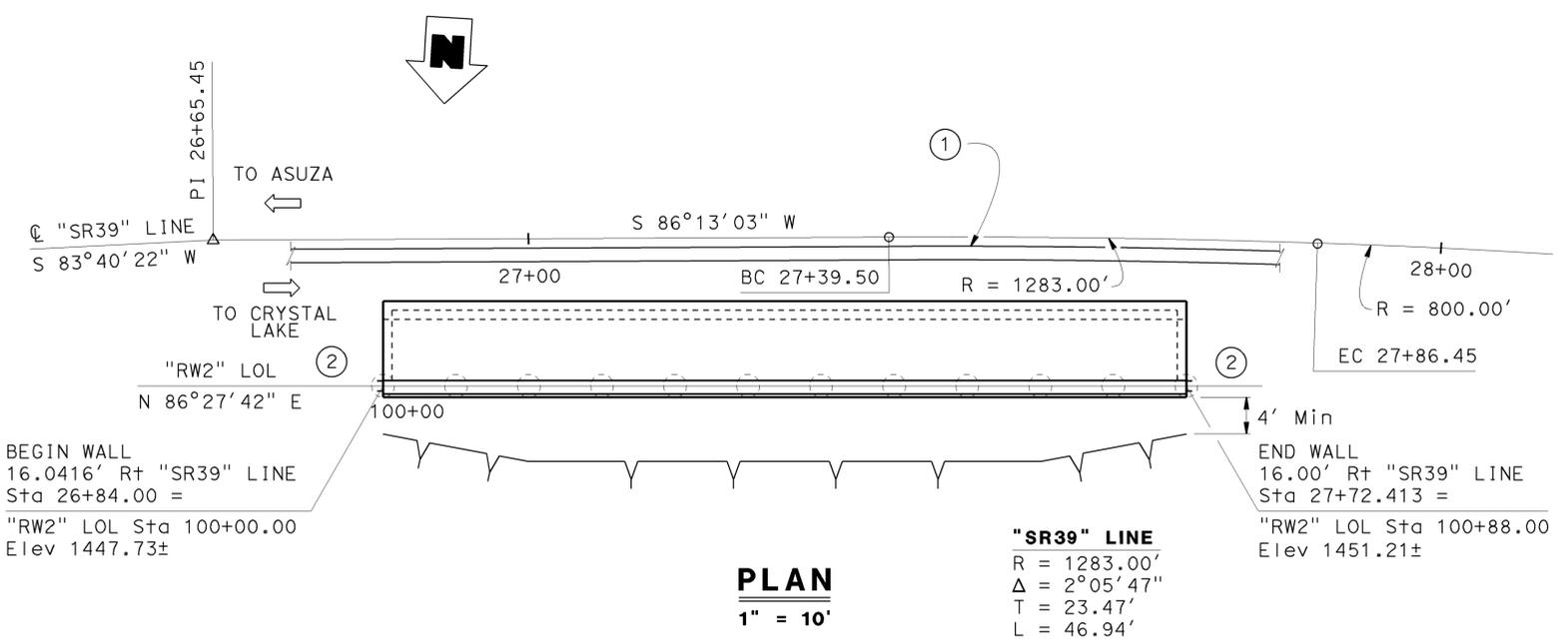
SHEET NO.	TITLE
1	GENERAL PLAN
2	FOUNDATION PLAN
3	STRUCTURE ELEVATION
4	WALL DETAILS NO. 1
5	WALL DETAILS NO. 2
6	WALL DETAILS NO. 3
7	LOG OF TEST BORINGS 1 OF 2
8	LOG OF TEST BORINGS 2 OF 2

STANDARD PLANS DATED 2010

A10A	ABBREVIATIONS (SHEET 1 OF 2)
RSP A10B	ABBREVIATIONS (SHEET 2 OF 2)
A10C	LINES AND SYMBOLS (SHEET 1 OF 3)
A10D	LINES AND SYMBOLS (SHEET 2 OF 3)
A10E	LINES AND SYMBOLS (SHEET 3 OF 3)
B0-13	BRIDGE DETAILS
RSP B11-56	CONCRETE BARRIER TYPE 736

LEGEND

- INDICATES EXISTING STRUCTURE
- INDICATES NEW STRUCTURE
- ⇨ INDICATES DIRECTION OF TRAFFIC
- ① TEMPORARY RAILING (TYPE K), SEE "ROAD PLANS"
- ② FOR MGS AND DIKE, SEE "ROAD PLANS"
- ⊖ STANDARD PLAN SHEET NO.
- ⊖ DETAIL NO.



PLAN
1" = 10'

QUANTITIES

STRUCTURE EXCAVATION (SOLDIER PILE WALL)	299 CY
STRUCTURE BACKFILL (SOLDIER PILE WALL)	164 CY
CONCRETE BACKFILL (SOLDIER PILE WALL)	52 CY
STEEL SOLDIER PILE (HP 14 x 89)	240 LF
INSTALL STEEL SOLDIER PILE (HP 14 x 117)	4 EA
30" DRILLED HOLE	381 LF
STRUCTURAL CONCRETE, CIP LAGGING	6 CY
STRUCTURAL CONCRETE, BARRIER SLAB	58 CY
PRECAST CONCRETE LAGGING	56 EA
BAR REINFORCING STEEL (CIP LAGGING)	1,075 LB
CLEAN AND PAINT STEEL SOLDIER PILING	LUMP SUM
CONCRETE BARRIER (TYPE 736)	88 LF

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

MATT HOLM DESIGN ENGINEER	DESIGN BY B. Addlespurger	CHECKED D. Menzner	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN	BRIDGE NO. 53E0289	SOLDIER PILE RETAINING WALL AT PM 21.97 GENERAL PLAN
	DETAILS BY various	CHECKED D. Menzner	LAYOUT BY B. Addlespurger	CHECKED D. Menzner		DESIGN BRANCH 12	POST MILE 21.97	
	QUANTITIES BY B. Addlespurger	CHECKED D. Menzner	SPECIFICATIONS BY Xiahong Li	PLANS AND SPECS COMPARED Xiahong Li				

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

UNIT: 3606 PROJECT NUMBER & PHASE: 0713000218 1 CONTRACT NO.: 07-3X8204

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
6-13 12-13 12-21-13	1	8

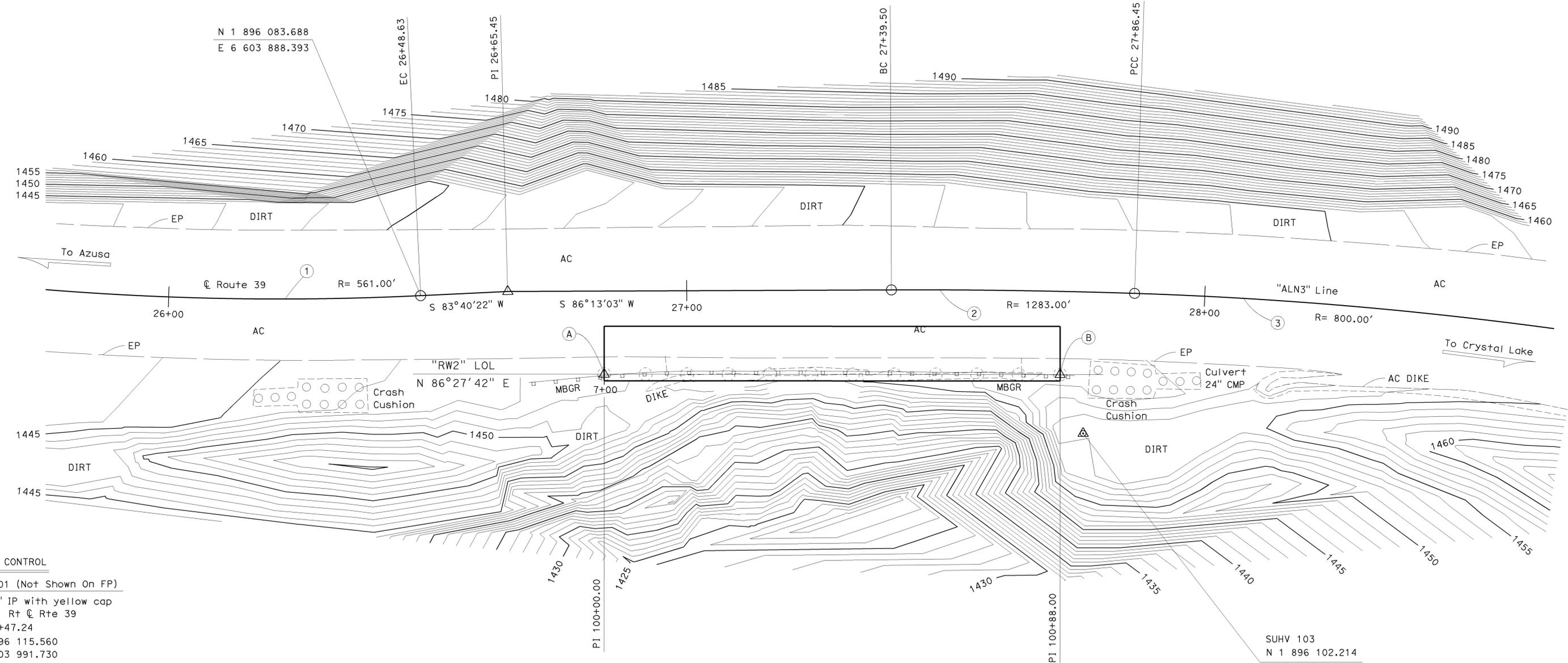
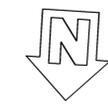
STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.09-01-10) FILE => 53e0289-a-gp.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	62	68

Wil W. Addlespurger 12-6-13
 REGISTERED CIVIL ENGINEER DATE
 6-23-14
 PLANS APPROVAL DATE
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

- (A) Sta 100+00.00 Beginning "RW2" LOL = 16.0416' RT @ "SR39" Sta 26+84.00
- (B) Sta 100+88.00 Ending "RW2" LOL = 16.00' RT @ "SR39" Sta 27+72.413

CURVE DATA				
No.	R	Δ	T	L
①	561.000'	28°20'14"	141.628'	277.458'
②	1283.000'	02°05'47"	23.474'	46.944'
③	800.000'	06°34'18"	45.929'	91.758'



SURVEY CONTROL
 SUHV 101 (Not Shown On FP)
 Fnd 1" IP with yellow cap
 29.914 Rt @ Rte 39
 Sta 25+47.24
 N 1 896 115.560
 E 6 603 991.730
 Elev = 1443.020
 SUHV 103
 Fnd 1" IP with yellow cap
 27.216 Rt @ Rte 39
 Sta 27+77.20
 N 1 896 102.214
 E 6 603 759.150
 Elev = 1454.444

SUHV 103
 N 1 896 102.214
 E 6 603 759.150
 Elev = 1454.444

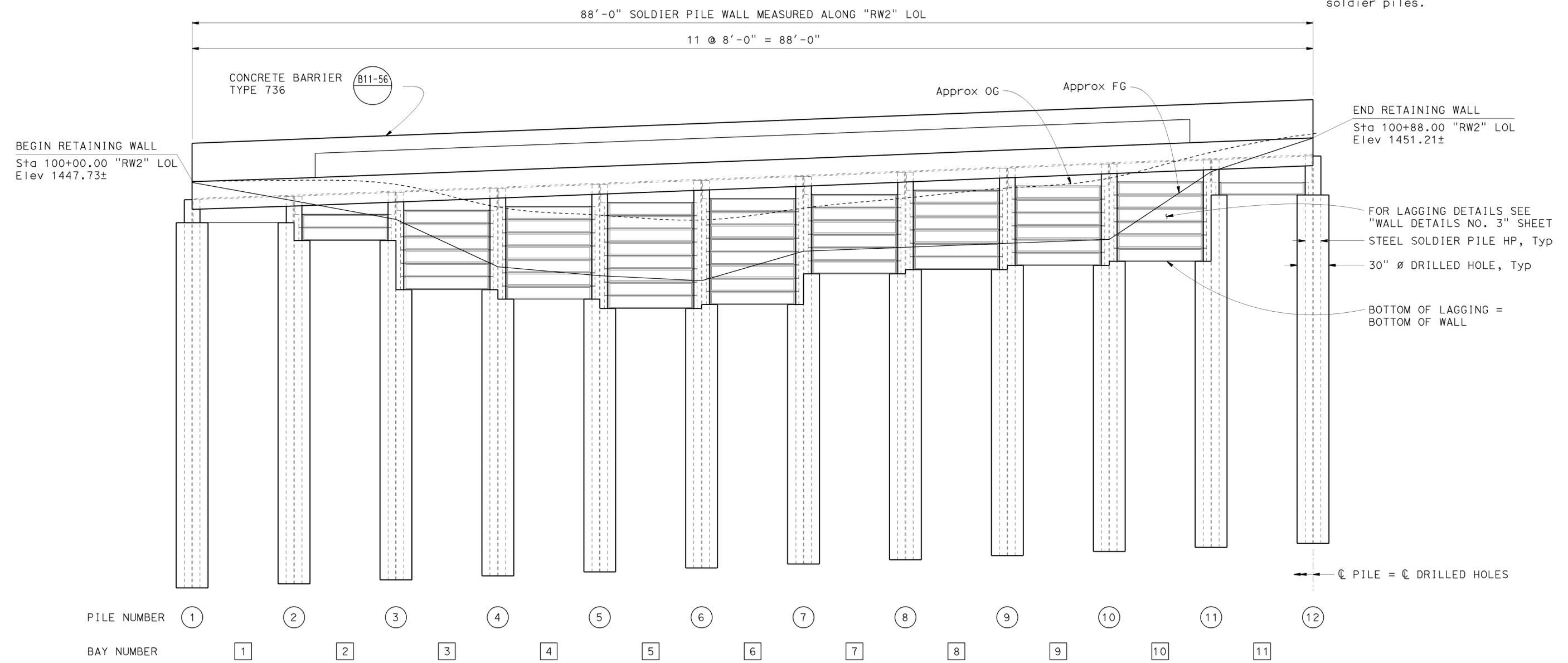
PRELIMINARY INVESTIGATION SECTION				DESIGN BY <i>B. Addlespurger</i>	CHECKED <i>D. Menzmer</i>	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 12	BRIDGE NO. 53E0289	SOLDIER PILE RETAINING WALL AT PM 21.97 FOUNDATION PLAN		
SCALE 1"=10'	VERT. DATUM NAVD88	PHOTOGRAMMETRY AS OF: X	DETAILS BY various	CHECKED <i>D. Menzmer</i>	POST MILE 21.97						
ALIGNMENT TIES Dist. Traverse Sheet	DRAFTED BY V.PHAM 6/2013	CHECKED BY S.ALIVIO 6/2013	QUANTITIES BY <i>B. Addlespurger</i>	CHECKED <i>D. Menzmer</i>							
STRUCTURES FOUNDATION PLAN SHEET (ENGLISH) (REV. 09-01-10)						ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: 3606 PROJECT NUMBER & PHASE: 0713000218 1	CONTRACT NO.: 07-3X8204	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 5/28/13 6/11/13 6-21-13	SHEET 2 OF 8

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	63	68

Wil W. Addlespurger 12-6-13
 REGISTERED CIVIL ENGINEER DATE
 6-23-14
 PLANS APPROVAL DATE
 WILLIAM W. ADDESPPURGER
 No. 50697
 Exp. 09-30-15
 CIVIL
 STATE OF CALIFORNIA
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CONTROL GRADES TABLE												
PILE NUMBER	1	2	3	4	5	6	7	8	9	10	11	12
TOP OF DECK ELEVATION	47.73	48.05	48.36	48.67	48.98	49.29	49.60	49.93	50.26	50.58	50.90	51.21
FINISHED GRADE ELEVATION	47.73	46.29	44.84	41.13	40.43	40.04	42.35	42.66	42.97	43.27	48.57	51.21
STEEL PILE TOP ELEVATION	46.31	46.63	46.94	47.25	47.56	47.87	48.18	48.51	48.84	49.16	49.48	49.79
CONCRETE PILE TOP ELEVATION = BOTTOM OF LAGGING ELEVATION	44.51	43.12	39.27	38.53	37.80	38.11	40.51	40.84	41.17	41.49	46.68	46.68
STEEL PILE TIP ELEVATION	16.31	16.63	16.94	17.25	17.56	17.87	18.18	18.51	18.84	19.16	19.48	19.79
CONCRETE PILE TIP ELEVATION	15.98	16.30	16.61	16.92	17.23	17.54	17.85	18.18	18.51	18.83	19.15	19.46

Note: Piles 1, 2, 11, and 12 are Department furnished HP 14 x 117 steel soldier piles, approximately 40 feet in length, with undercoat painted on the top 6 feet. Additional undercoating is not required. Furnish all other HP 14 x 89 steel soldier piles.



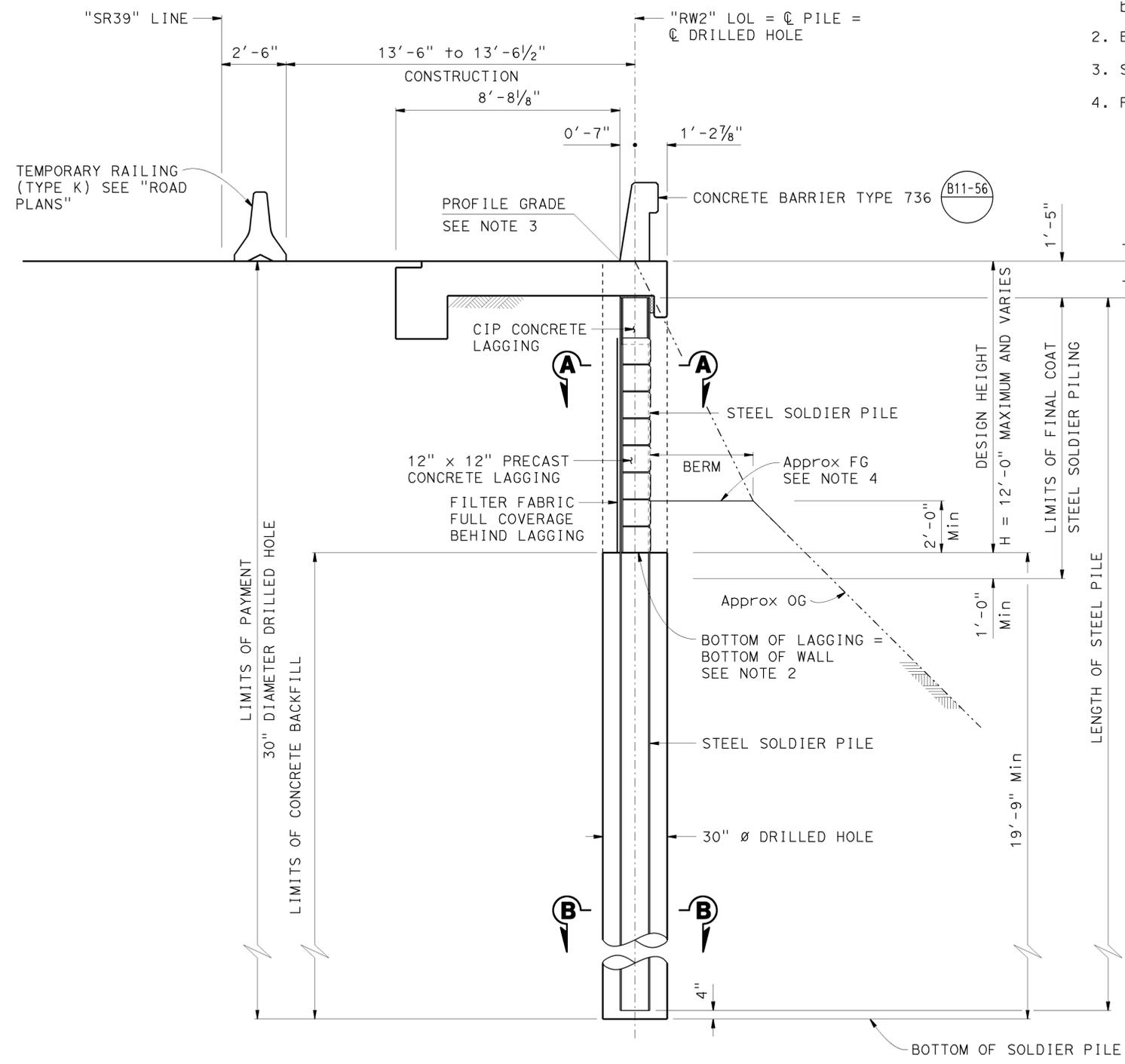
ELEVATION
1/4" = 1'-0"

DESIGN BY B. Addlespurger CHECKED D. Menzmer DETAILS BY various CHECKED D. Menzmer QUANTITIES BY B. Addlespurger CHECKED D. Menzmer	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 12	BRIDGE NO. 53E0289	SOLDIER PILE RETAINING WALL AT PM 21.97 STRUCTURE ELEVATION	
			POST MILE 21.97		
			UNIT: 3606 PROJECT NUMBER & PHASE: 0713000218 1 CONTRACT NO.: 07-3X8204		
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 5-18-13 12-8-13 1-13-14	SHEET 3 OF 8

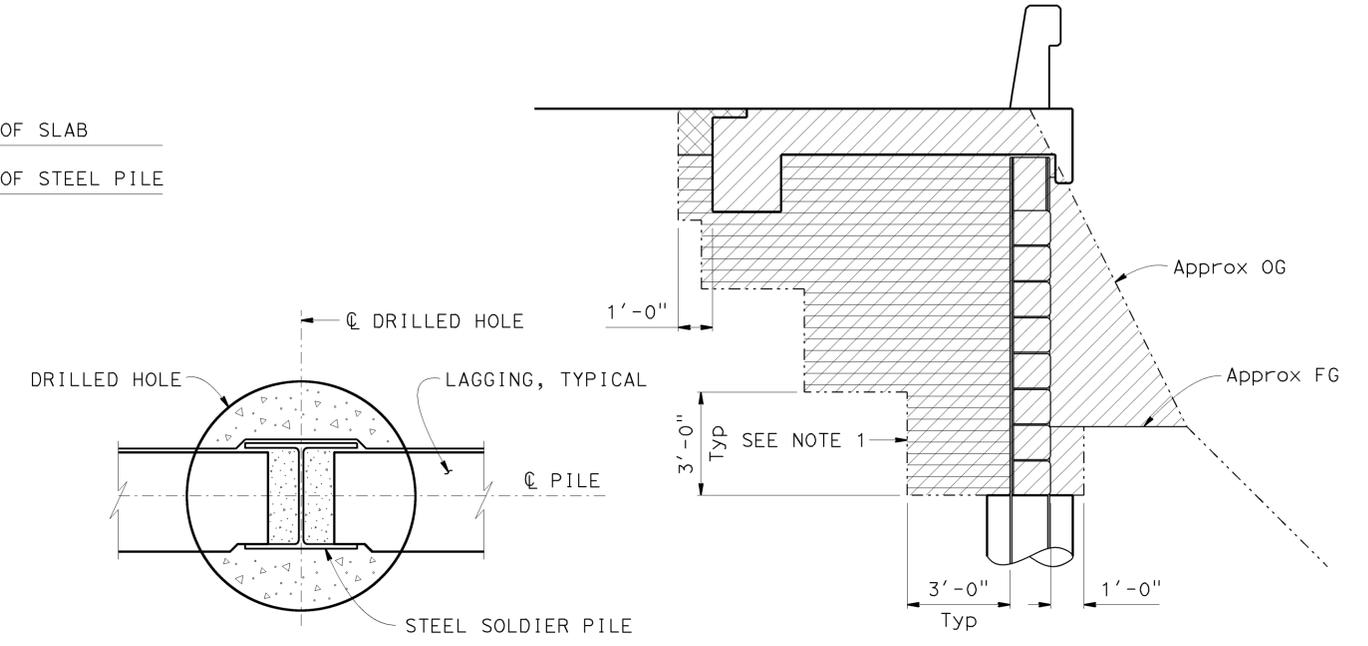
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	64	68

12-6-13
 REGISTERED CIVIL ENGINEER DATE
 6-23-14
 PLANS APPROVAL DATE
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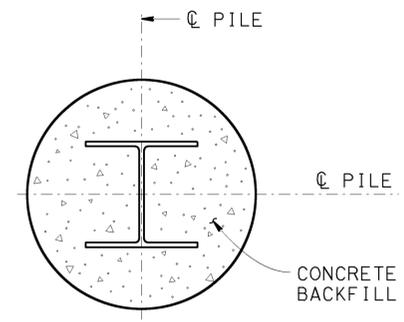
- Notes:
1. Back cut at 1:1 slope in soil conditions, with 3' minimum bench width, and as approved by the Engineer.
 2. Bottom of lagging to be determined by the Engineer.
 3. See "CONTROL GRADES TABLE" for control grades.
 4. Finish grade and berm width to be determined by the Engineer.



TYPICAL SECTION
3/8" = 1'-0"



SECTION A-A
NO SCALE



SECTION B-B
NO SCALE

PAYLIMITS FOR EARTHWORK
NO SCALE

- STRUCTURE EXCAVATION
- STRUCTURE BACKFILL
- ROADWAY MATERIALS

DESIGN	BY B. Addlespurger	CHECKED D. Menzmer
DETAILS	BY various	CHECKED D. Menzmer
QUANTITIES	BY B. Addlespurger	CHECKED D. Menzmer

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 12

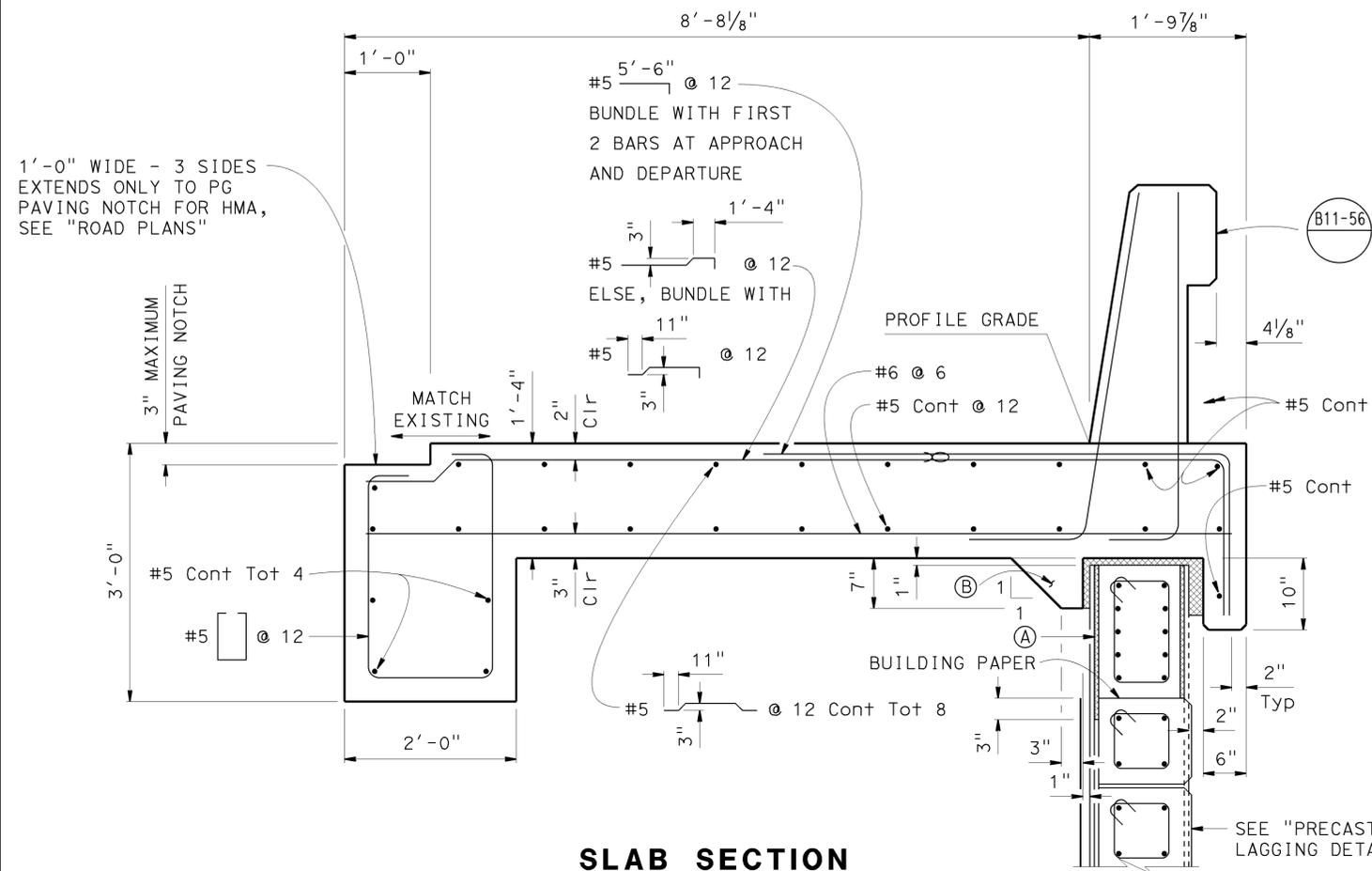
BRIDGE NO.	53E0289
POST MILE	21.97

SOLDIER PILE RETAINING WALL AT PM 21.97
WALL DETAILS NO. 1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	65	68

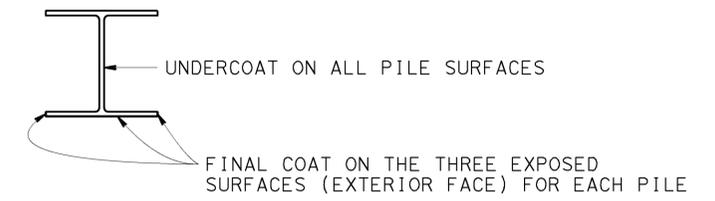
REGISTERED CIVIL ENGINEER
 DATE 12-6-13
 6-23-14
 PLANS APPROVAL DATE
 No. 50697
 Exp. 09-30-15
 CIVIL
 STATE OF CALIFORNIA

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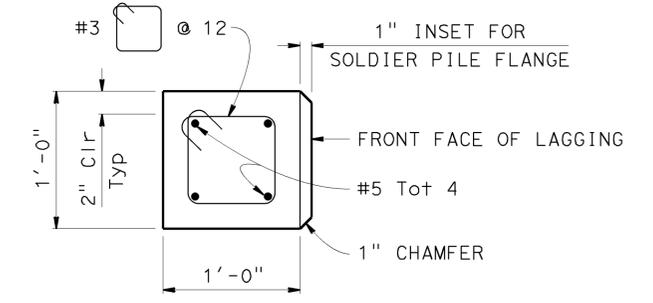
SLAB SECTION
1" = 1'-0"

- (A) 5/8" POLYSTYRENE 3 VERTICAL FACES
 - (B) ONLY IF DIRECTED BY THE ENGINEER
- POLYSTYRENE (B0-13 13-1, B0-13 13-2)

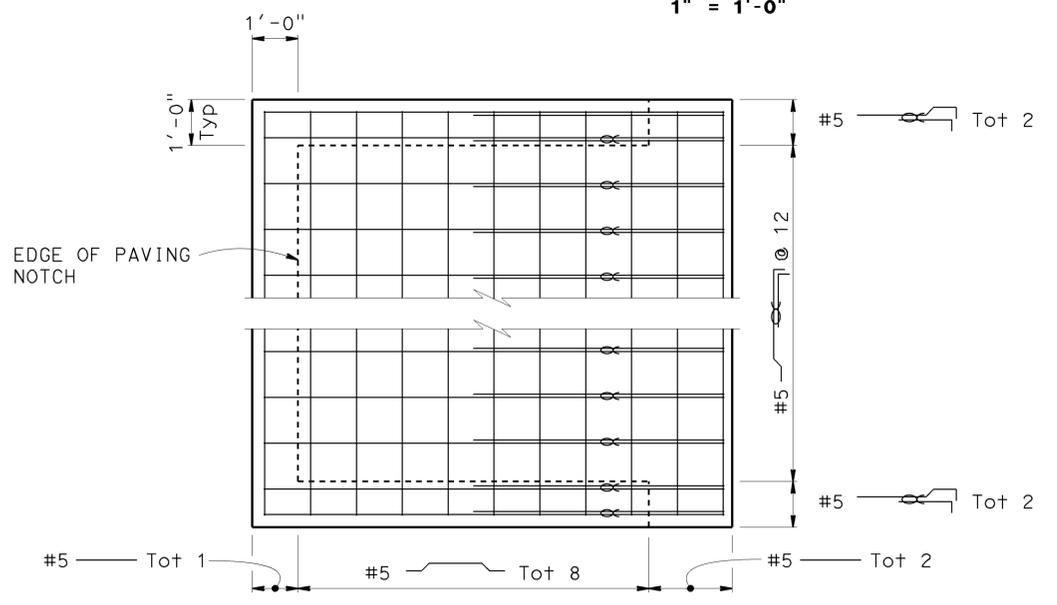


LIMITS OF CLEAN AND PAINT STEEL SOLDIER PILE
NO SCALE

- NOTES:
- No expansion joints in concrete barrier or barrier slab within wall limits.
 - ∞ Indicates bundled bars.
 - The existing field grades and cross falls of the roadway shall be field measured by the Contractor before structure excavation.

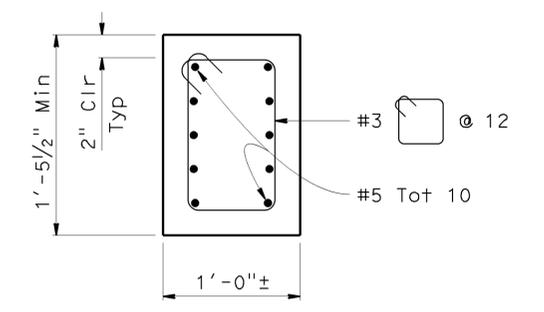


PRECAST CONCRETE LAGGING DETAIL
1 1/2" = 1'-0"



TOP MAT BAR REINFORCEMENT LAYOUT
1" = 1'-0"

- GENERAL NOTES**
- DESIGN: AASHTO LRFD Bridge Design Specifications, 4th Edition with California Amendments.
 F_t : 54 kips on barrier over 10 feet
 $EQE: k_h = 0.2$
 $k_v = 0.0$
- SOIL PARAMETERS: (For determination of Design Lateral Earth Pressures)
 Backfill weight = 130 lb/ft
 Friction Angle = 36
 Active Pressure co-efficient, $K_a = 0.26$
 Slope Angle = 40
- STRUCTURAL CONCRETE: $f'_c = 3600$ psi
 $f_y = 60$ ksi
 $n = 8$
- STRUCTURAL STEEL: ASTM A709/A709M Grade 50 or 50W
 $f_y = 50$ ksi



CIP CONCRETE LAGGING DETAIL
1 1/2" = 1'-0"

DESIGN	BY B. Addlespurger	CHECKED D. Menzmer	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 12	BRIDGE NO.	SOLDIER PILE RETAINING WALL AT PM 21.97 WALL DETAILS NO. 2
DETAILS	BY various	CHECKED D. Menzmer			53E0289	
QUANTITIES	BY B. Addlespurger	CHECKED D. Menzmer			POST MILE 21.97	

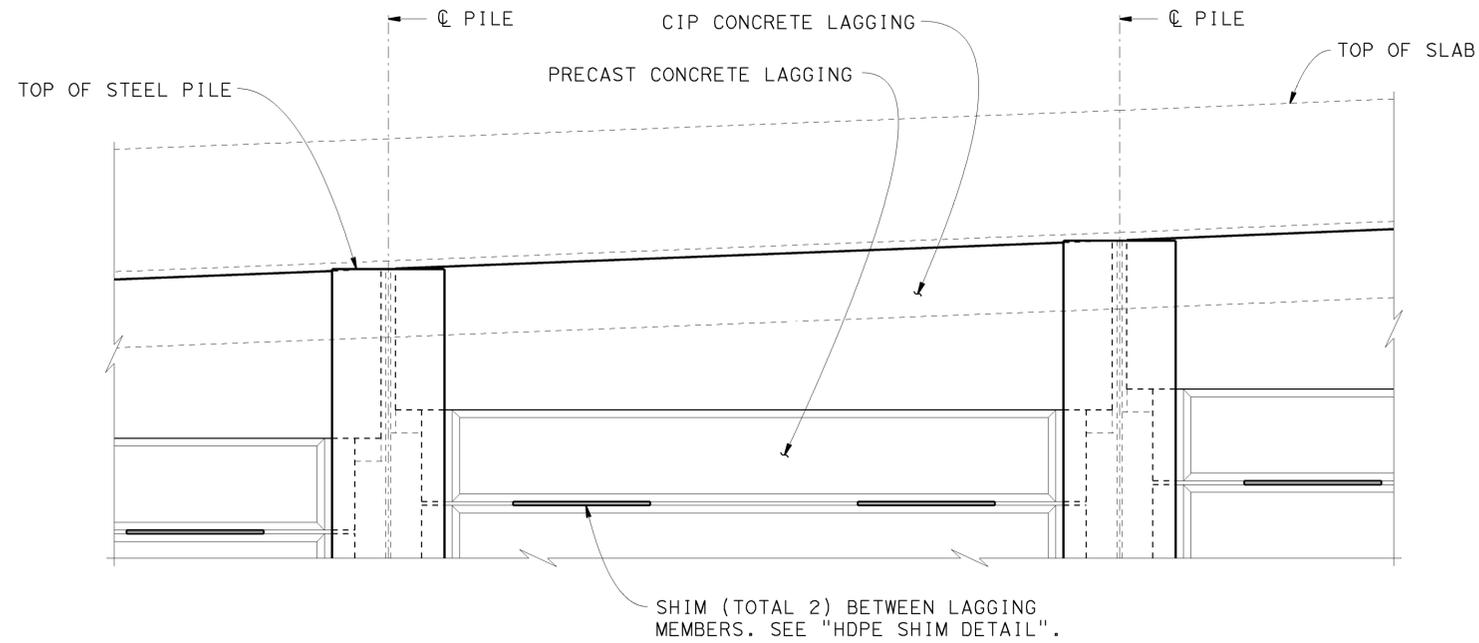
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606 PROJECT NUMBER & PHASE: 0713000218 1 CONTRACT NO.: 07-3X8204 DISREGARD PRINTS BEARING EARLIER REVISION DATES

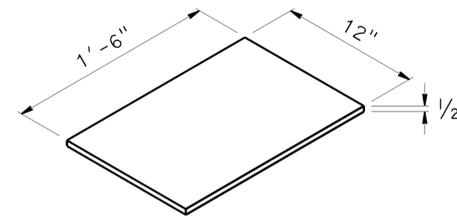
REVISION DATES	SHEET	OF
5-18-13 12-26-13 1-7-14	5	8

USERNAME => s126699 DATE PLOTTED => 21-MAY-2014 TIME PLOTTED => 08:00

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	66	68
<i>Wil W. Adlespurger</i> 12-6-13 REGISTERED CIVIL ENGINEER DATE					
6-23-14				PLANS APPROVAL DATE	
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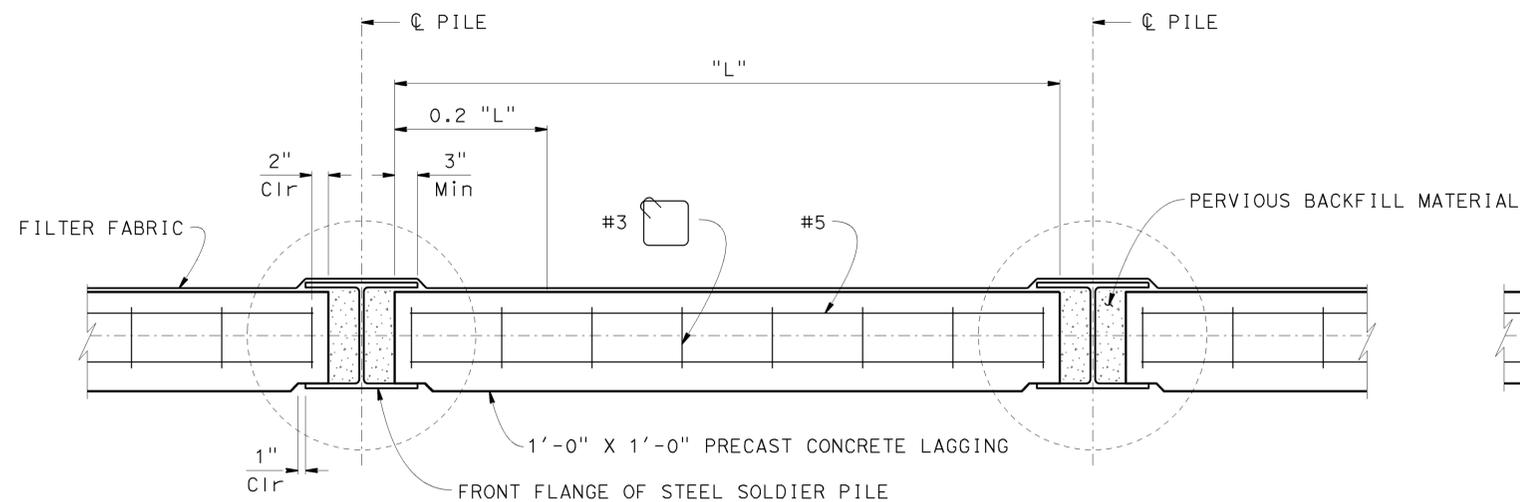
PART ELEVATION (CONCRETE LAGGING)
1" = 1'-0"



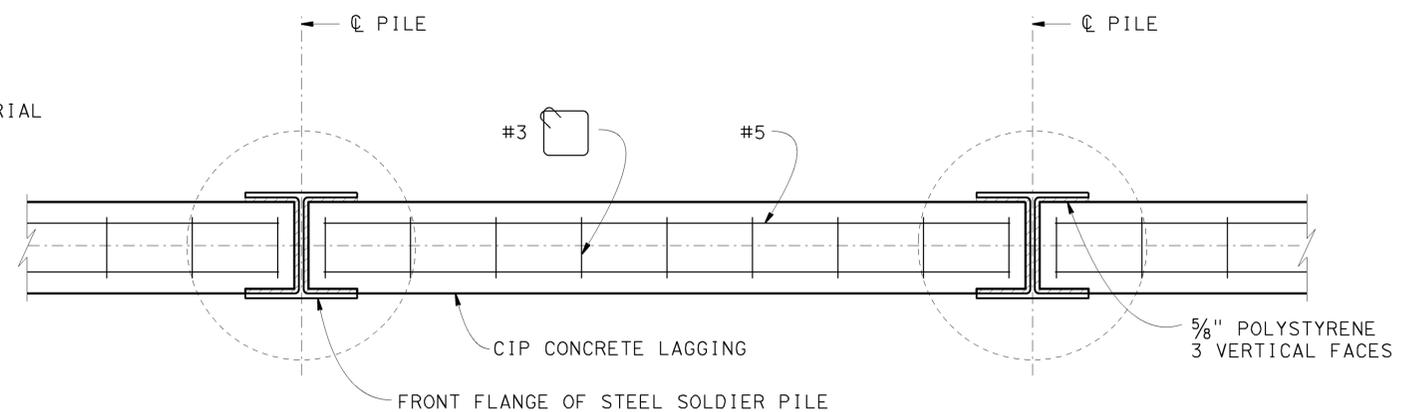
HDPE SHIM DETAIL
NO SCALE

Notes:

1. Do not place shims between the top two lagging members.
2. The shims must be glued to one of the lagging members.
3. Backfill behind lagging after every three lagging members have been placed.



PART PLAN (PRECAST CONCRETE LAGGING)
1" = 1'-0"



PART PLAN (CIP CONCRETE LAGGING)
1" = 1'-0"

DESIGN BY B. Adlespurger CHECKED D. Menzmer DETAILS BY Various CHECKED D. Menzmer QUANTITIES BY B. Adlespurger CHECKED D. Menzmer	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 12	BRIDGE NO. 53E0289	SOLDIER PILE RETAINING WALL AT PM 21.97 WALL DETAILS NO. 3	
			POST MILE 21.97		
			UNIT: 3606 PROJECT NUMBER & PHASE: 0713000218 1 CONTRACT NO.: 07-3X8204		
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REV. 09-01-10)	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 5-18-13 6-20-13 6-23-14	SHEET 6 OF 8

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	21.7, 22.0	68	68

Sam Sukiasian 9-11-13
REGISTERED CIVIL ENGINEER DATE

6-23-14
PLANS APPROVAL DATE

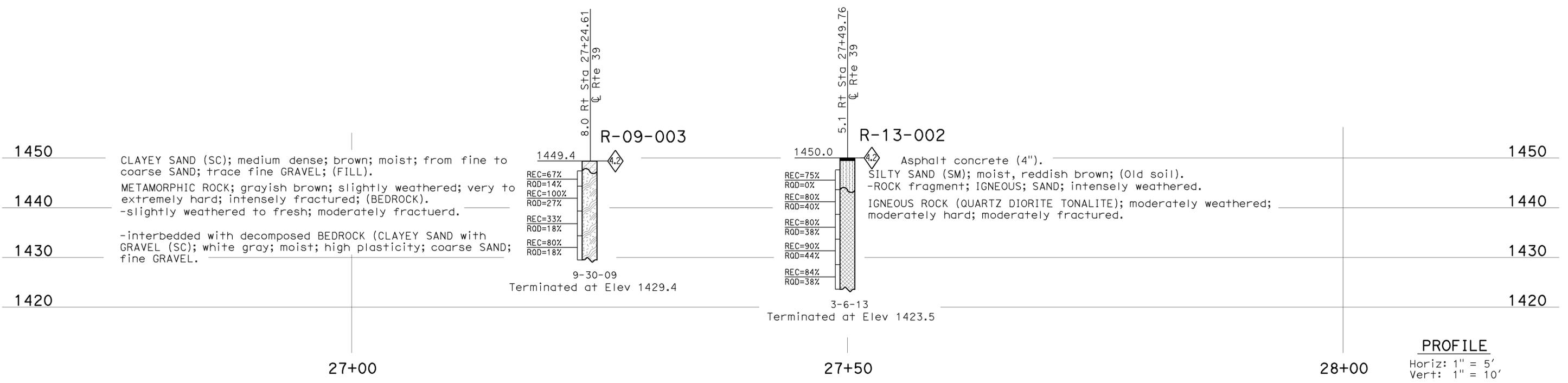
Sam Sukiasian
No. C5282
Exp. 6-30-14
CIVIL
STATE OF CALIFORNIA

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This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).
See 2010 Standard Plans A10F and A10G for Soil Legend, and A10H for Rock Legend.

FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS 1 OF 2"

Note: No ground water encountered during field investigation.



ENGINEERING SERVICES		MATERIALS AND GEOTECHNICAL SERVICES		STATE OF CALIFORNIA		DIVISION OF ENGINEERING SERVICES		BRIDGE NO.		SOLDIER PILE RETAINING WALL AT PM 21.97	
FUNCTIONAL SUPERVISOR		DRAWN BY: W. Tang 07/13		FIELD INVESTIGATION BY:		STRUCTURE DESIGN		53E0289		LOG OF TEST BORINGS 2 OF 2	
NAME: C. Liu		CHECKED BY: C. Harris		C. Harris		DESIGN BRANCH 12		POST MILE			
065 CIVIL LOG OF TEST BORINGS SHEET		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		0 1 2 3		UNIT: 2643		21.97		CONTRACT NO.: 07-3X8204	
						PROJECT NUMBER & PHASE: 0713000218 1		DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES	
								08-26-13 09-10-13		SHEET 8 OF 8	

FILE => 53e0289-z-1ofb02.dgn