

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2-4	CONSTRUCTION DETAILS
5	UTILITY PLANS AND DETAILS
6	CONSTRUCTION AREA SIGNS
7	PAVEMENT DELINEATION PLANS, DETAILS AND QUANTITIES
8-12	SIGN PLANS, DETAILS AND QUANTITIES
13	SUMMARY OF QUANTITIES
14-19	ELECTRICAL PLANS
20	STRUCTURES ELECTRICAL
21-42	REVISED AND NEW STANDARD PLANS

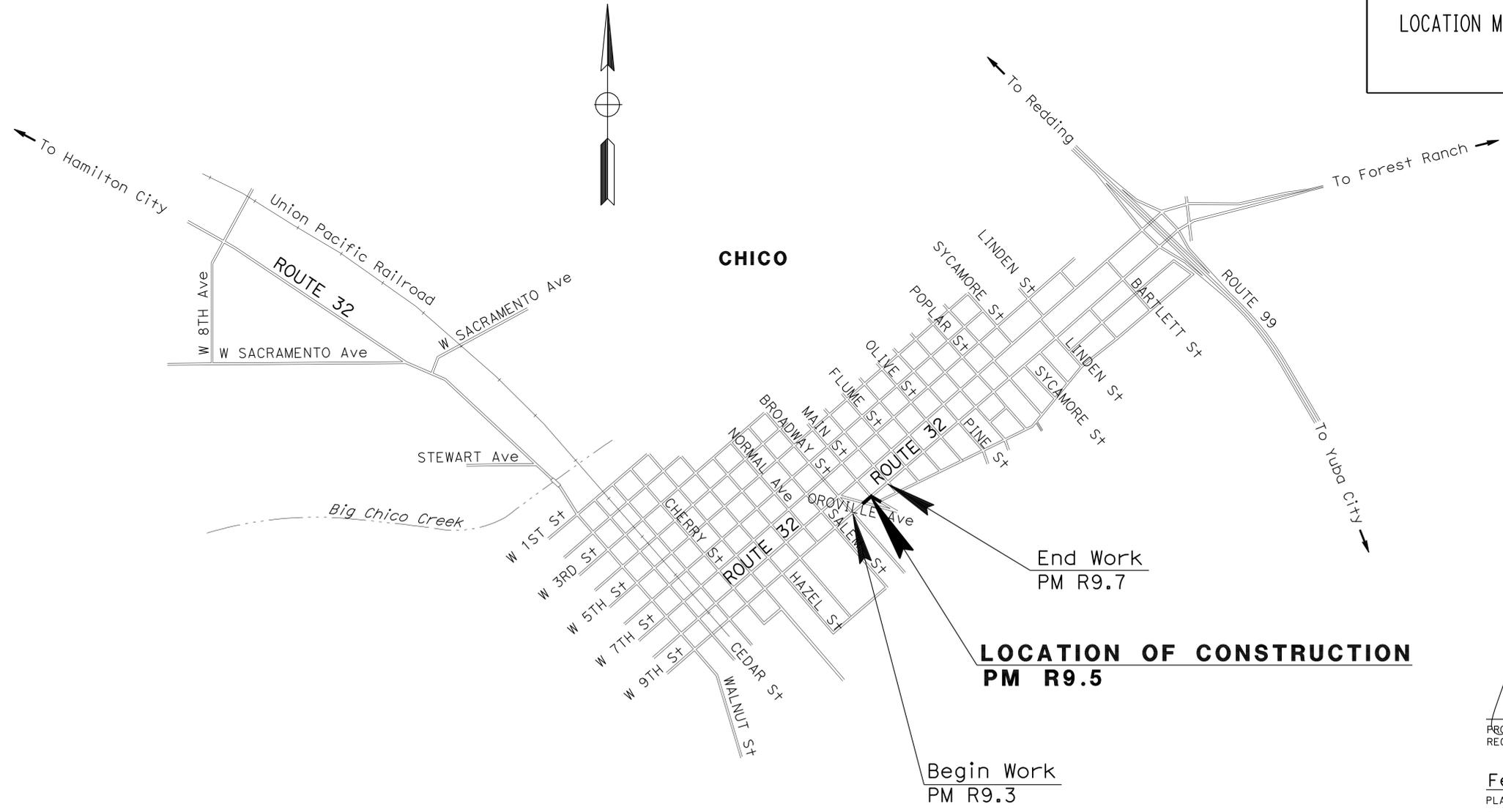
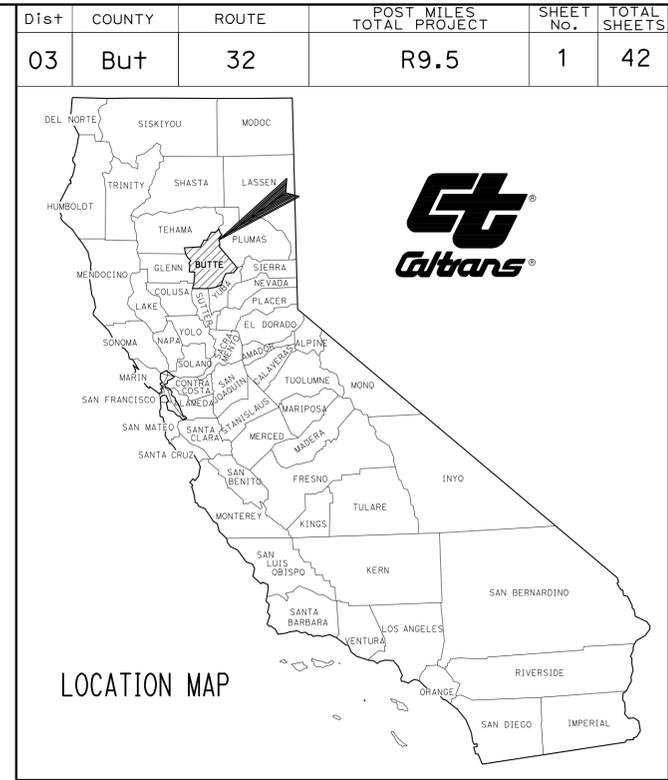
THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.

**STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION**

**PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY**

**IN BUTTE COUNTY
IN CHICO AT MAIN STREET AND
AT OROVILLE AVENUE**

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006



NO SCALE

PROJECT MANAGER
SUTHAHAR NADARAJAH

DESIGN ENGINEER
LAURIE LAMMERT

Frankal 12-6-11
PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

February 27, 2012
PLANS APPROVAL DATE

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

CONTRACT No.	03-3E9104
PROJECT ID	0300020571

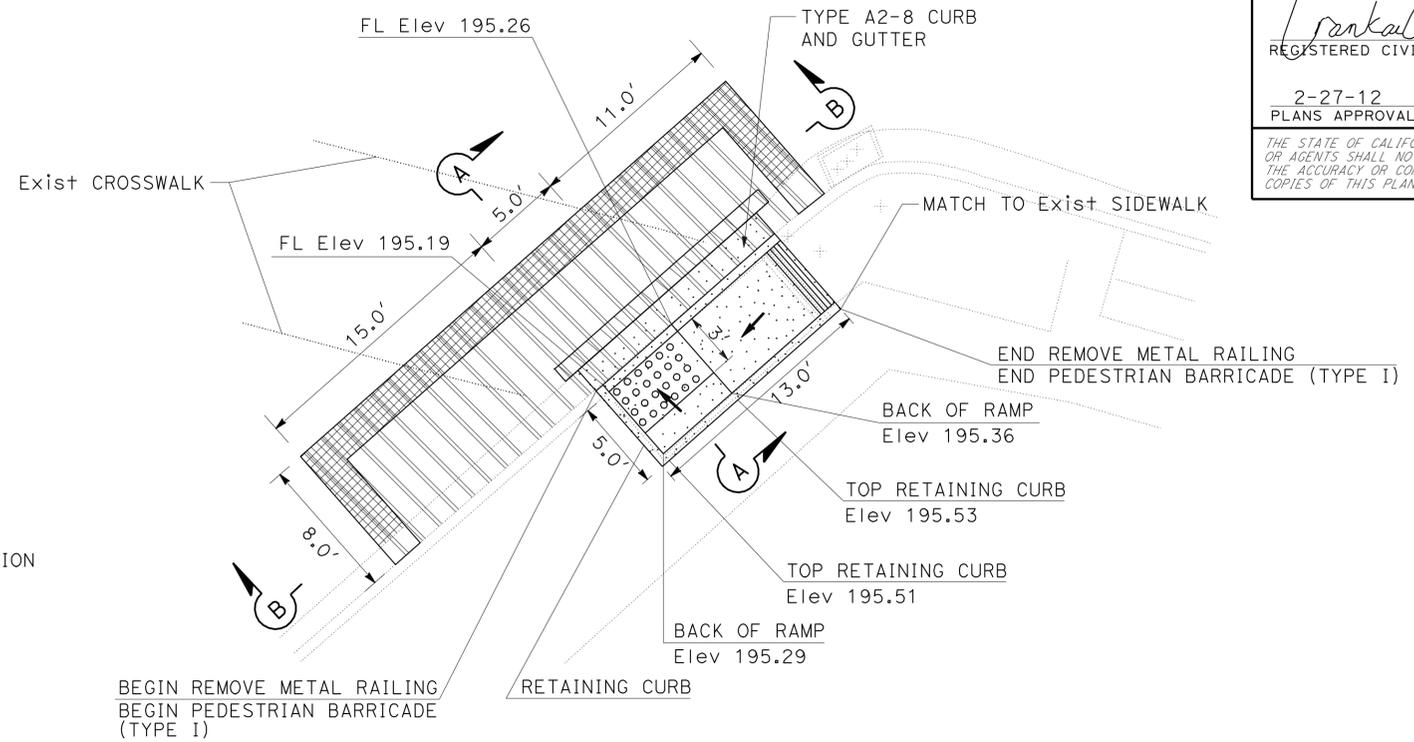
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	But	32	R9.5	2	42
<i>Frankal</i> REGISTERED CIVIL ENGINEER			12-6-11 DATE		
2-27-12 PLANS APPROVAL DATE			REGISTERED PROFESSIONAL ENGINEER No. 64269 Exp. 6-30-13 CIVIL STATE OF CALIFORNIA		
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

NOTES:

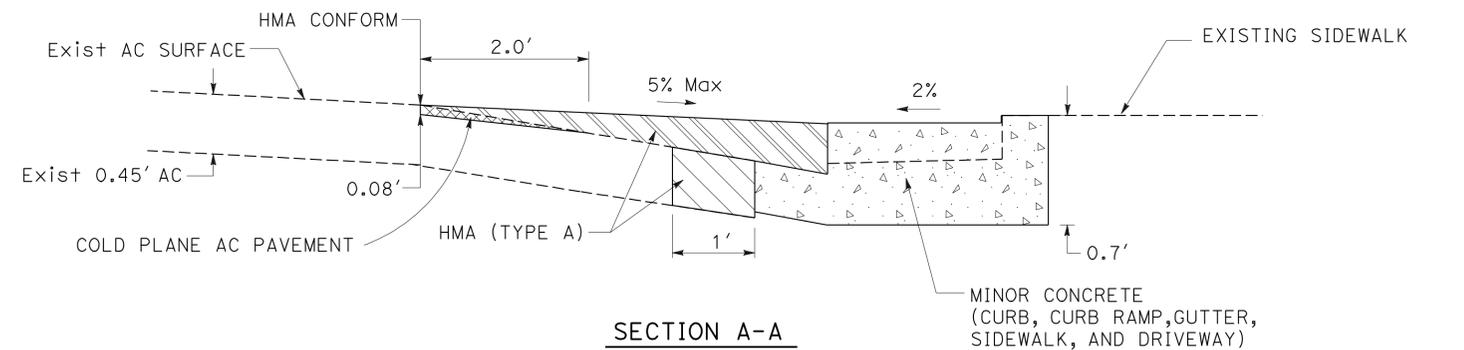
- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- EXACT LOCATIONS OF CURB RAMP DETECTABLE WARNING SURFACE WILL BE DETERMINED BY THE ENGINEER.
- FOR DETAIL OF PEDESTRIAN BARRICADES (TYPE I), SEE STANDARD PLAN ES-7P.

LEGEND

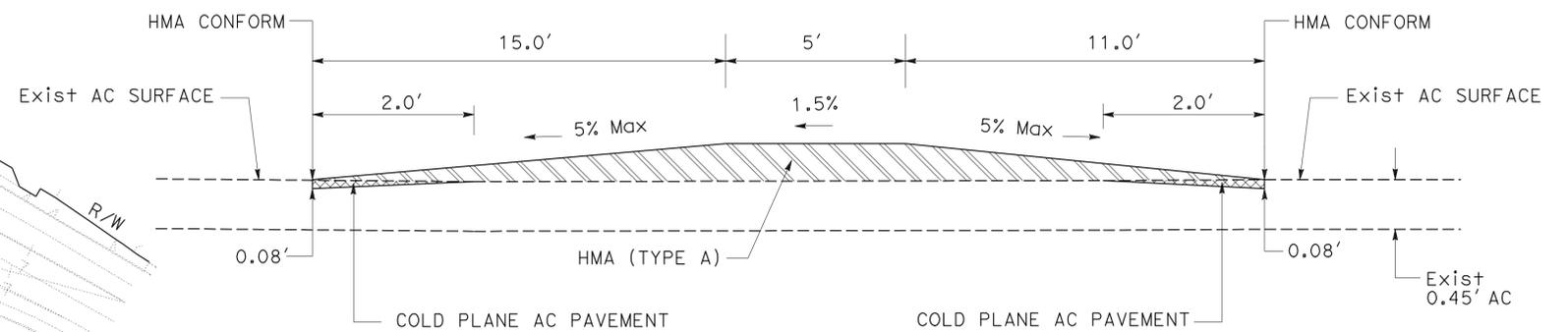
	HMA (TYPE A) (VARY FROM 0.08' TO 0.5')		GROOVED RAMP BOUNDARY SEE Std PLAN RSP A88A
	ROADWAY EXCAVATION (0.45') 0.45' HMA (TYPE A)		CURB RAMP DETECTABLE WARNING SURFACE SEE Std PLAN RSP A88A
	0.08' COLD PLANE AC PAVEMENT		DIRECTION OF SIDEWALK OR CURB RAMP SLOPE
	REMOVE CONCRETE (CURB, CURB RAMP, GUTTER, SIDEWALK, AND DRIVEWAY)		DETAIL LETTER DESIGNATION
	MINOR CONCRETE (CURB, CURB RAMP, GUTTER, SIDEWALK, AND DRIVEWAY)		CURVE DATA



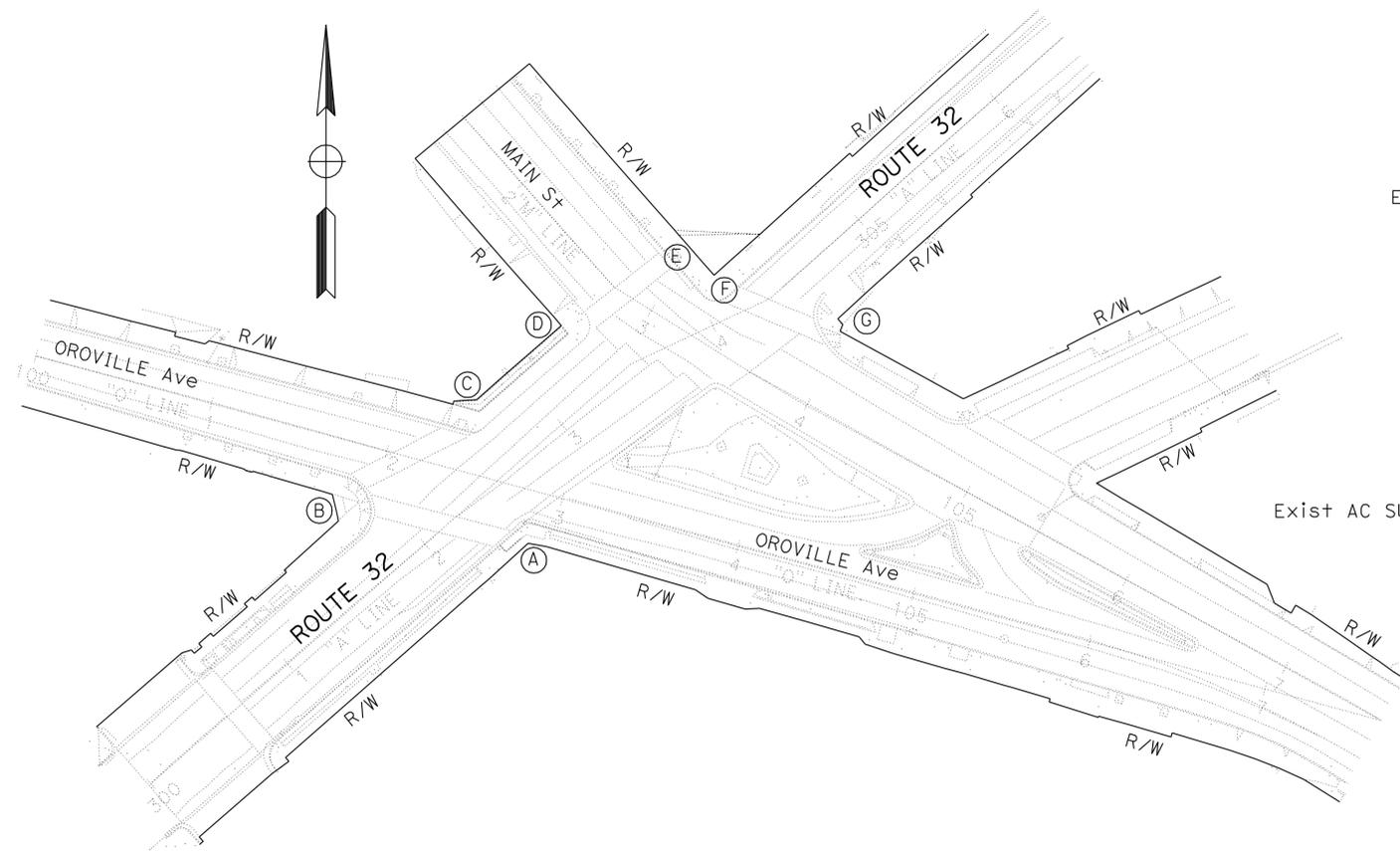
DETAIL A



SECTION A-A



SECTION B-B

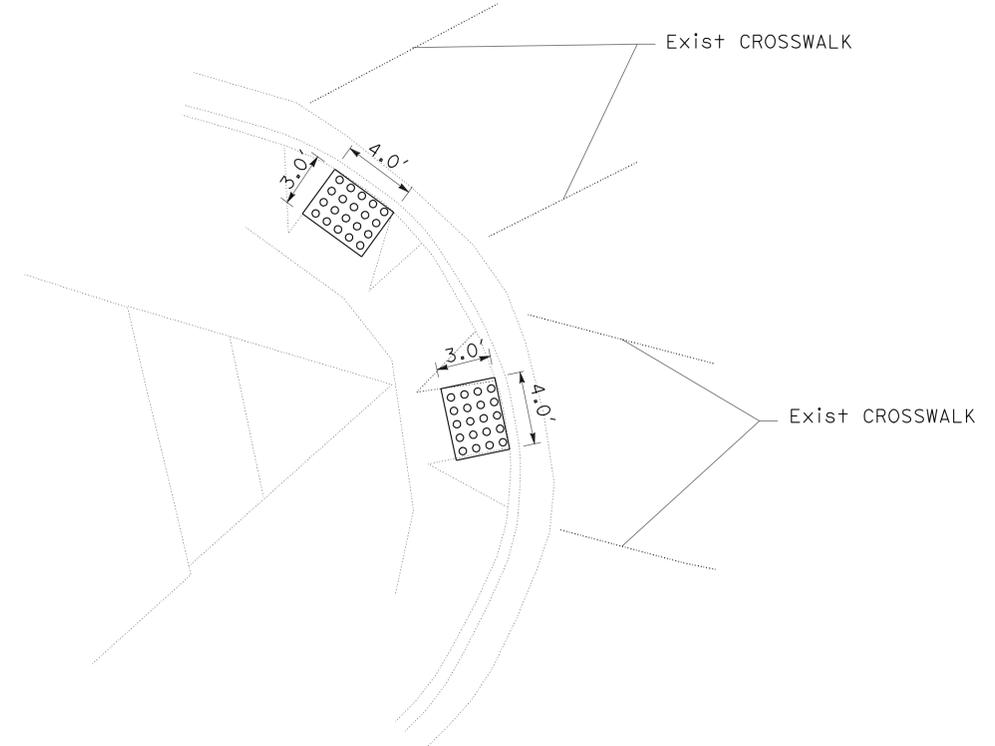


CONSTRUCTION DETAILS
NO SCALE
C-1

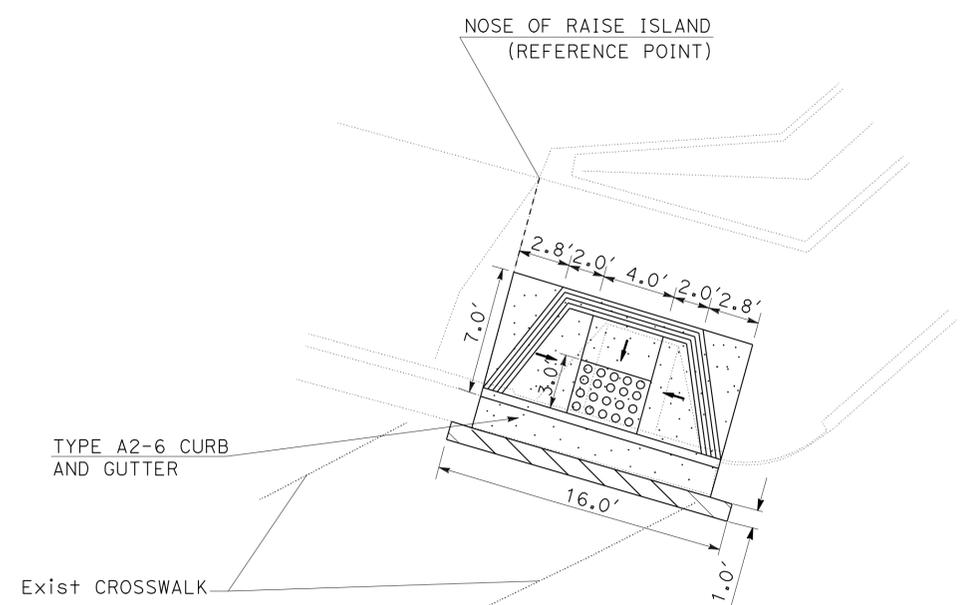
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: LAURIE LAMMERT
 REVISIONS: AI K. TRAN, DZUNG BUI, CALCULATED/DESIGNED BY, CHECKED BY

DATE PLOTTED => 01-MAR-2012
 TIME PLOTTED => 12:56

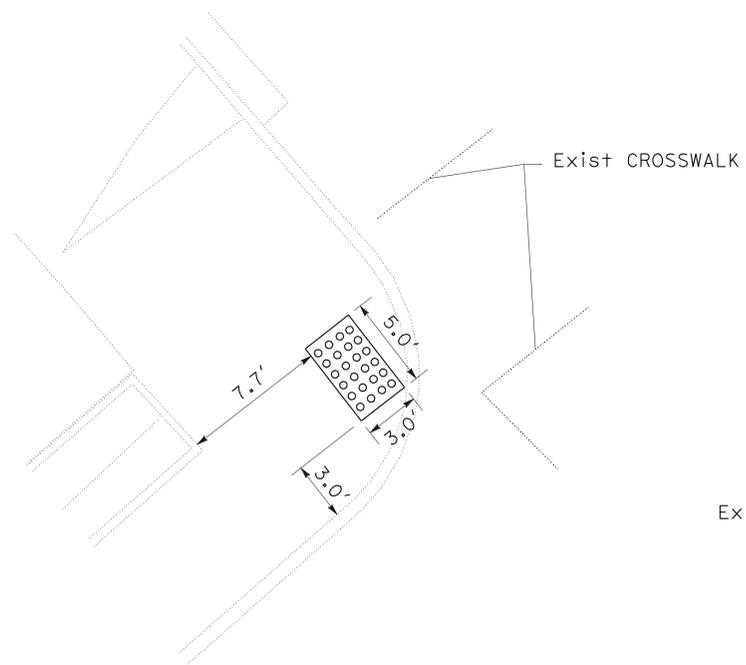
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Butt	32	R9.5	3	42
<i>Frankal</i> REGISTERED CIVIL ENGINEER			12-6-11 DATE	AI K. TRAN No. 64269 Exp. 6-30-13 CIVIL	
2-27-12 PLANS APPROVAL DATE			THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.		



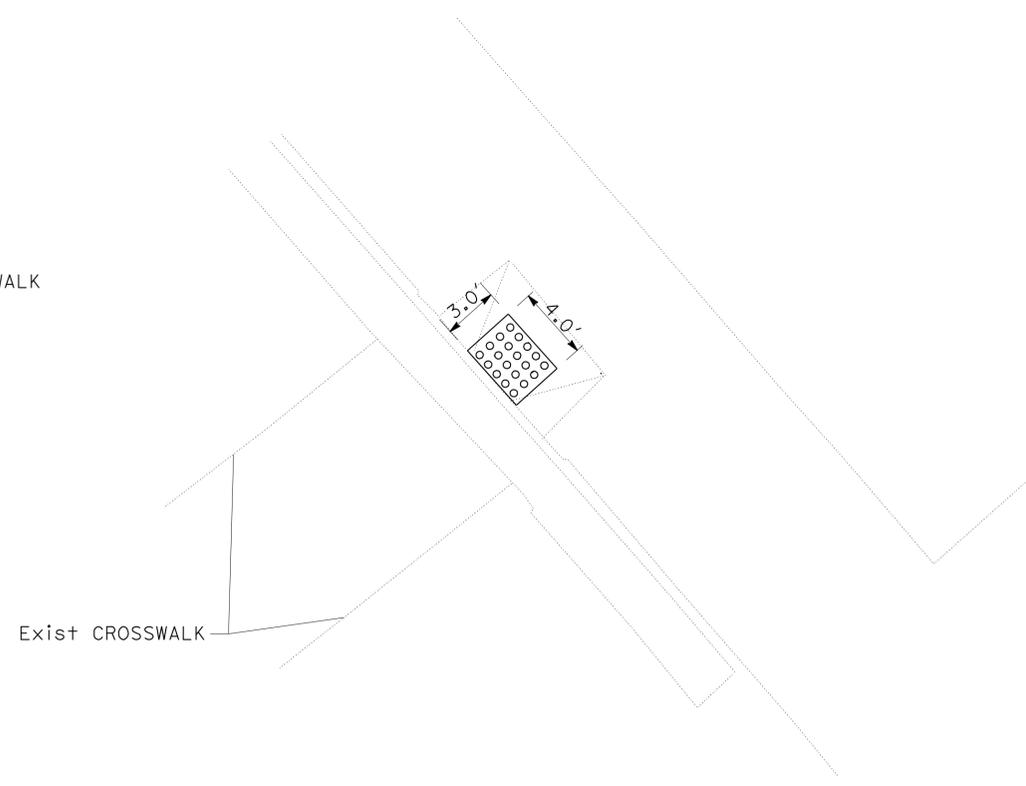
DETAIL B



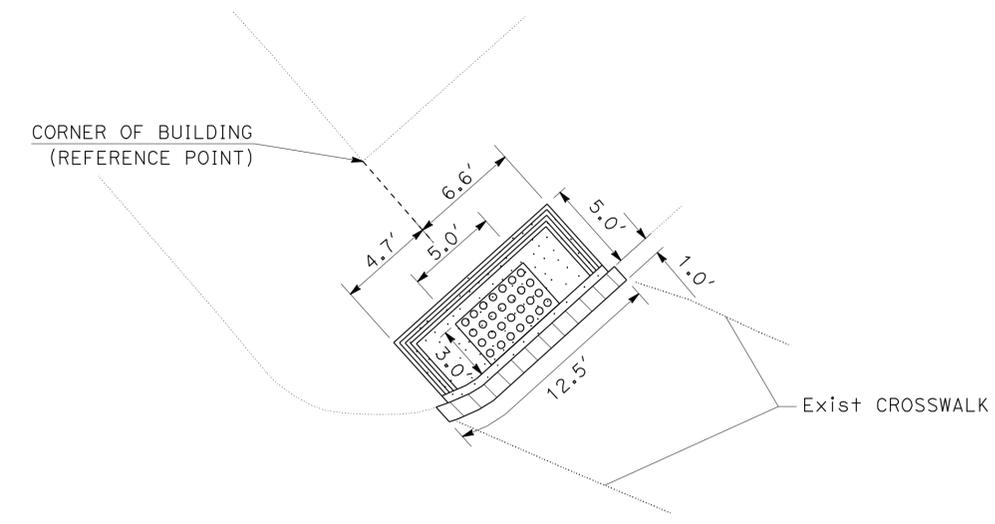
DETAIL C



DETAIL D



DETAIL E



DETAIL F

CONSTRUCTION DETAILS

NO SCALE

C-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	DESIGNED BY	REVISOR
Caltrans	LAURIE LAMMERT	AI K. TRAN	AI K. TRAN
TRAFFIC DESIGN		DZUNG BUI	
	CHECKED BY	DATE	REVISION

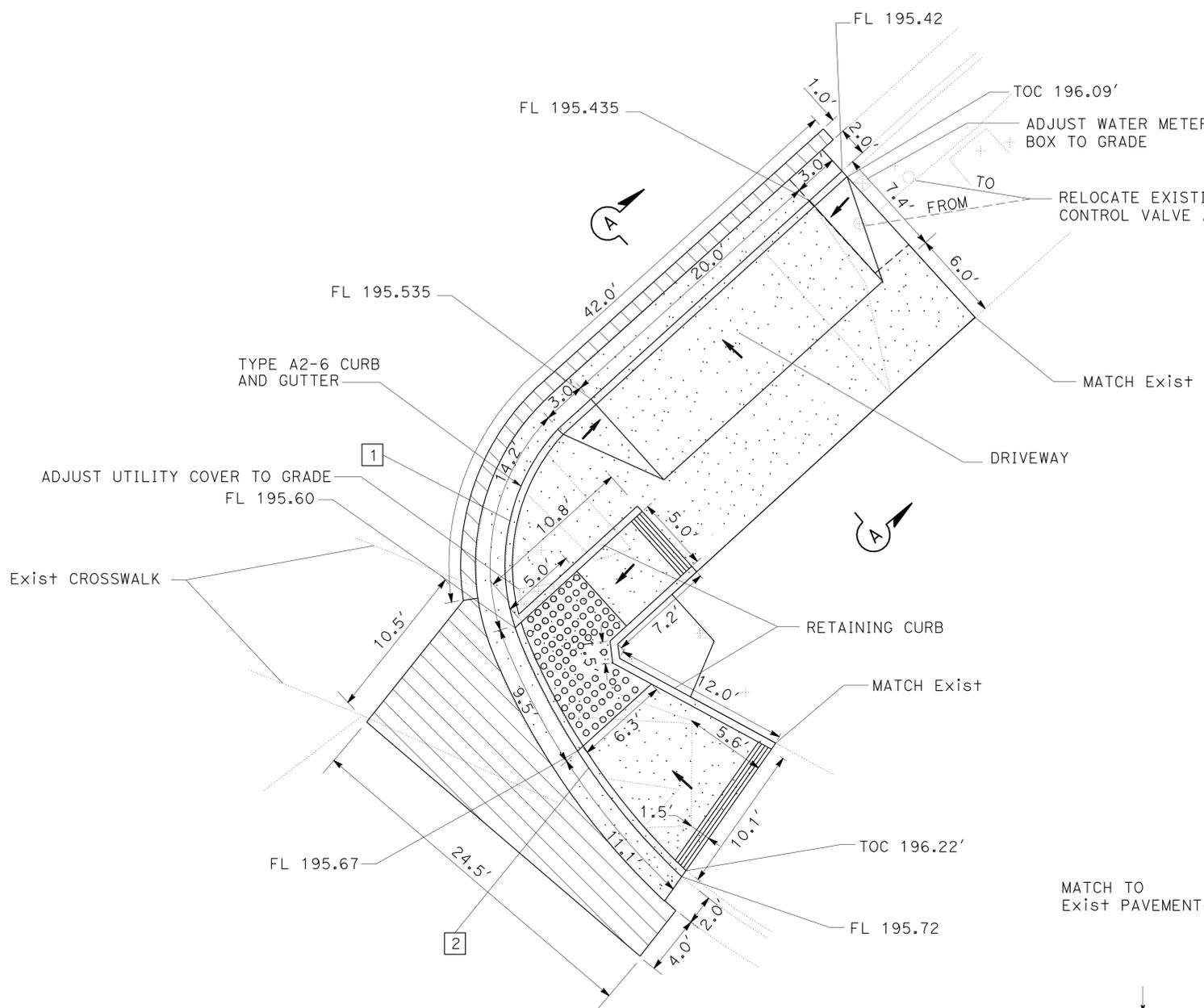
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	But	32	R9.5	4	42

Frankal
 REGISTERED CIVIL ENGINEER DATE 12-6-11
 2-27-12
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 AI K. TRAN
 No. 64269
 Exp. 6-30-13
 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.

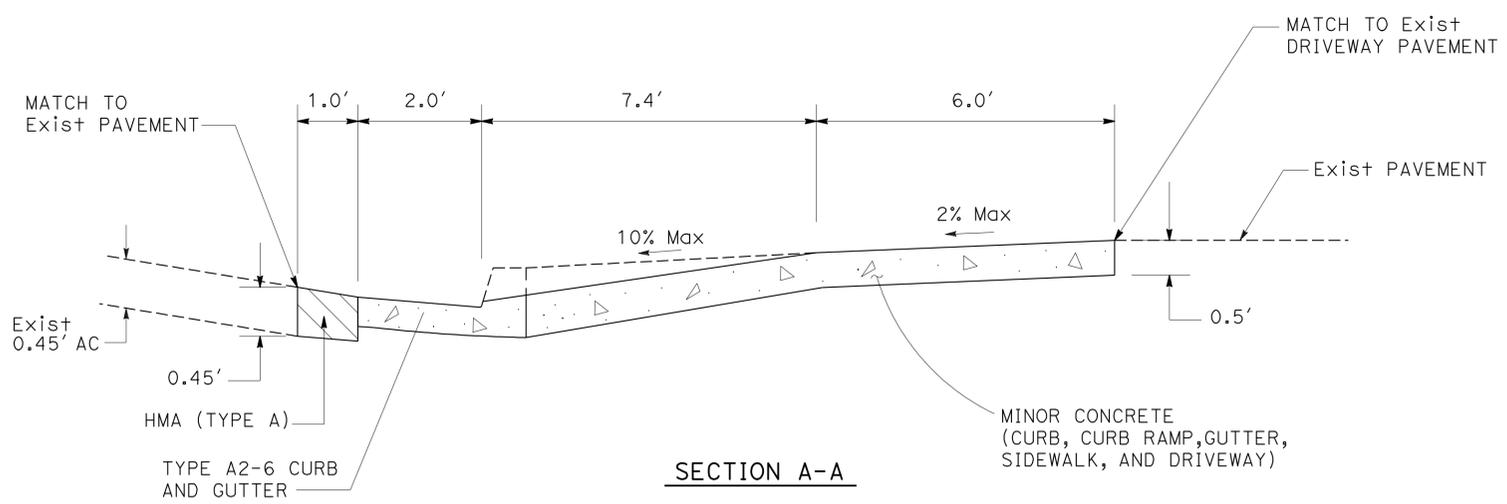
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR LAURIE LAMMERT
 AI K. TRAN
 REVISED BY AI K. TRAN
 DATE REVISIONS
 CALCULATED/DESIGNED BY DZUNG BUI
 CHECKED BY



DETAIL G

CURVE DATA

No.	R	Δ	T	L
1	13.5'	65°12'41"	8.66'	15.41'
2	46.5'	23°56'31"	9.87'	19.44'



SECTION A-A

CONSTRUCTION DETAILS
NO SCALE
C-3

DATE PLOTTED => 01-MAR-2012
 TIME PLOTTED => 14:36

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: CHARLES LAUGHLIN
 CALCULATED/DESIGNED BY: OLAWALE AJAYI
 CHECKED BY: AI K. TRAN
 REVISED BY: OLAWALE AJAYI
 DATE REVISED: AI K. TRAN

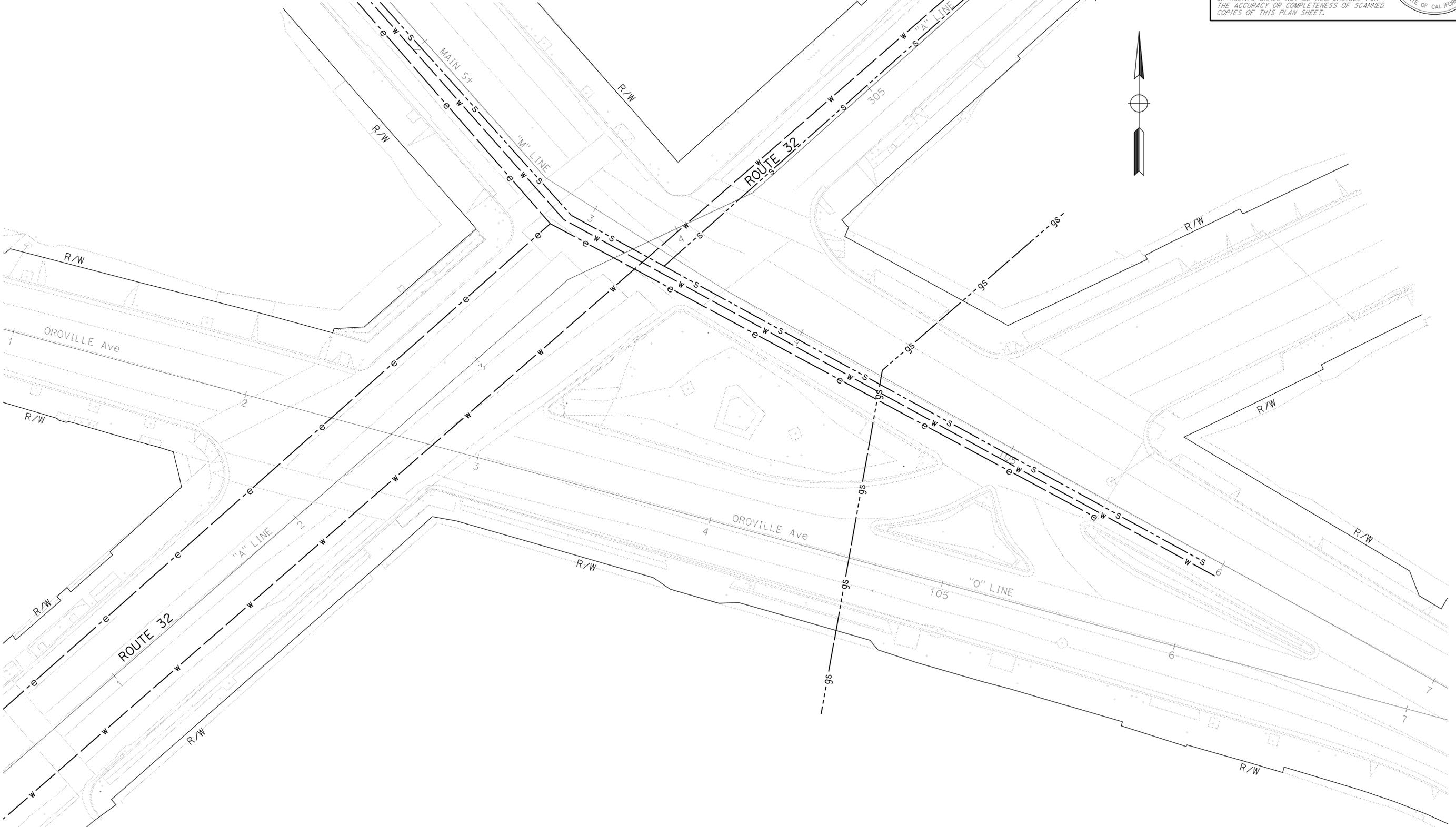
NOTES:
 1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
 2. LOCATIONS OF UTILITY FACILITIES SHOWN ON THIS PLAN ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

LEGEND

UTILITY	SYMBOL	OWNERSHIP
ELECTRIC	---e---	PG&E
GAS (LOW RISK)	---gs---	PG&E
WATER	---w---	CALIFORNIA WATER SERVICE
SANITARY SEWER	---s---	CITY OF CHICO

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	But	32	R9.5	5	42

Frankal
 REGISTERED CIVIL ENGINEER DATE 12-6-11
 2-27-12
 PLANS APPROVAL DATE
 AI K. TRAN
 No. 64269
 Exp. 6-30-13
 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.



APPROVED FOR UTILITY INFORMATION ONLY

UTILITY PLAN
 SCALE: 1" = 20'
U-1

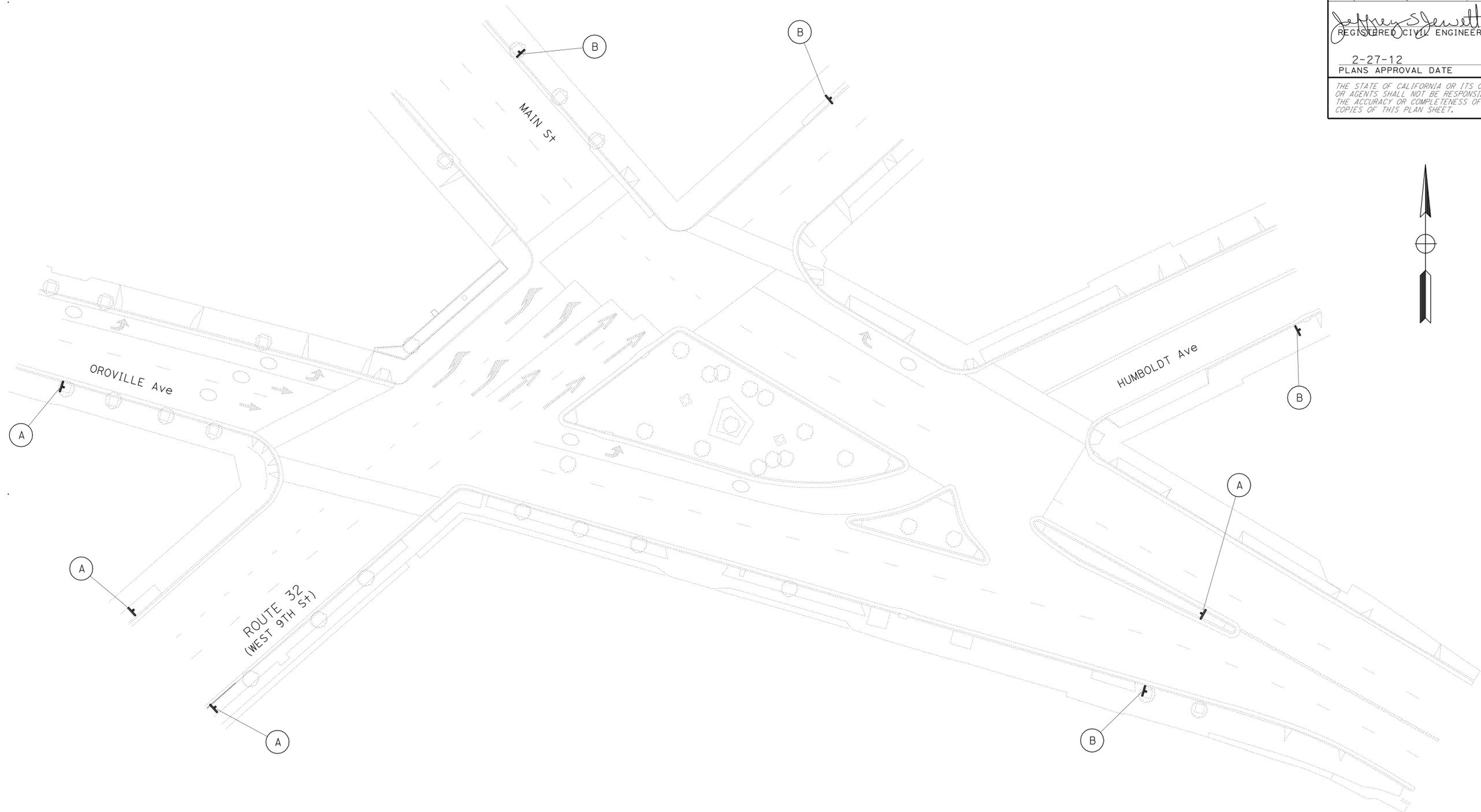
DATE PLOTTED => 02-MAR-2012 TIME PLOTTED => 06:46

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	But	32	R9.5	6	42

Jeffrey S Jewett 12-6-11
 REGISTERED CIVIL ENGINEER DATE
 2-27-12
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 Jeffrey S Jewett
 No. 49233
 Exp. 9-30-12
 CIVIL
 STATE OF CALIFORNIA

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



STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN LETTER	SIGN CODE		PANEL SIZE	SIGN MESSAGE	NUMBER OF POST AND SIZE	NUMBER OF SIGNS
	FEDERAL	CALIFORNIA				
A	W20-1	C23	48" x 48"	ROAD WORK AHEAD	1 - 6" x 6"	4
B	G20-2	C14	36" x 18"	END ROAD WORK	1 - 4" x 4"	4

NOTE: EXACT SIGN LOCATION WILL BE DETERMINED BY THE ENGINEER.

LEGEND

(No.) CONSTRUCTION AREA SIGN LETTER

↓ SIGN - SINGLE POST

CONSTRUCTION AREA SIGNS
NO SCALE

CS-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 Caltrans®
 FUNCTIONAL SUPERVISOR: SERGIO ACEVES
 JACK KEMMERLY
 REVISOR: JEFF JEWETT
 REVISIONS: (None listed)

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	But	32	R9.5	7	42

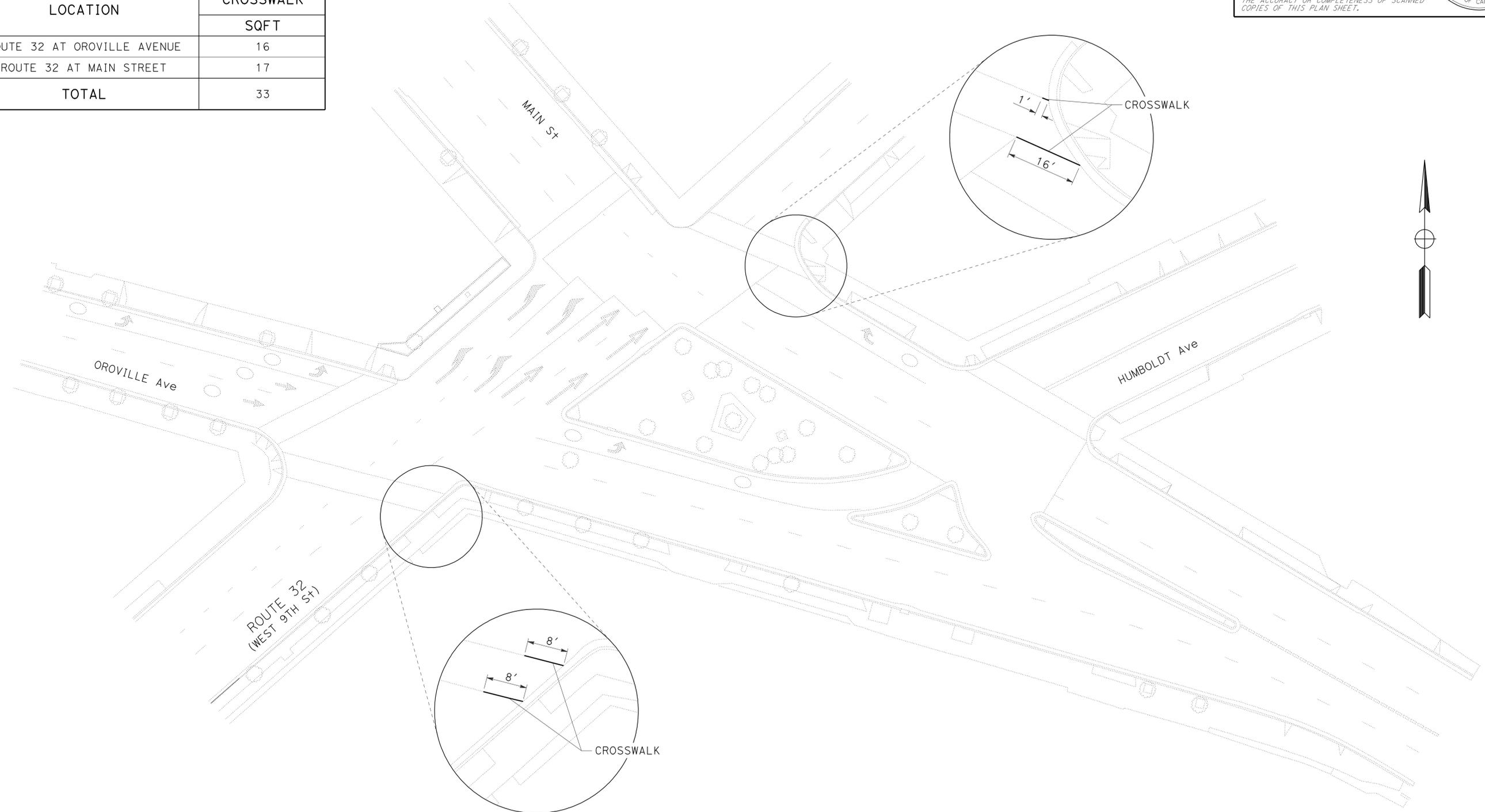
Jeffrey S. Jewett 12-6-11
 REGISTERED CIVIL ENGINEER DATE
 2-27-12
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 Jeffrey S. Jewett
 No. 49233
 Exp. 9-30-12
 CIVIL
 STATE OF CALIFORNIA

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

THERMOPLASTIC PAVEMENT MARKING

LOCATION	CROSSWALK
	SQFT
ROUTE 32 AT OROVILLE AVENUE	16
ROUTE 32 AT MAIN STREET	17
TOTAL	33



PAVEMENT DELINEATION DETAILS AND QUANTITIES

NO SCALE

PDD-1

APPROVED FOR PAVEMENT DELINEATION WORK ONLY

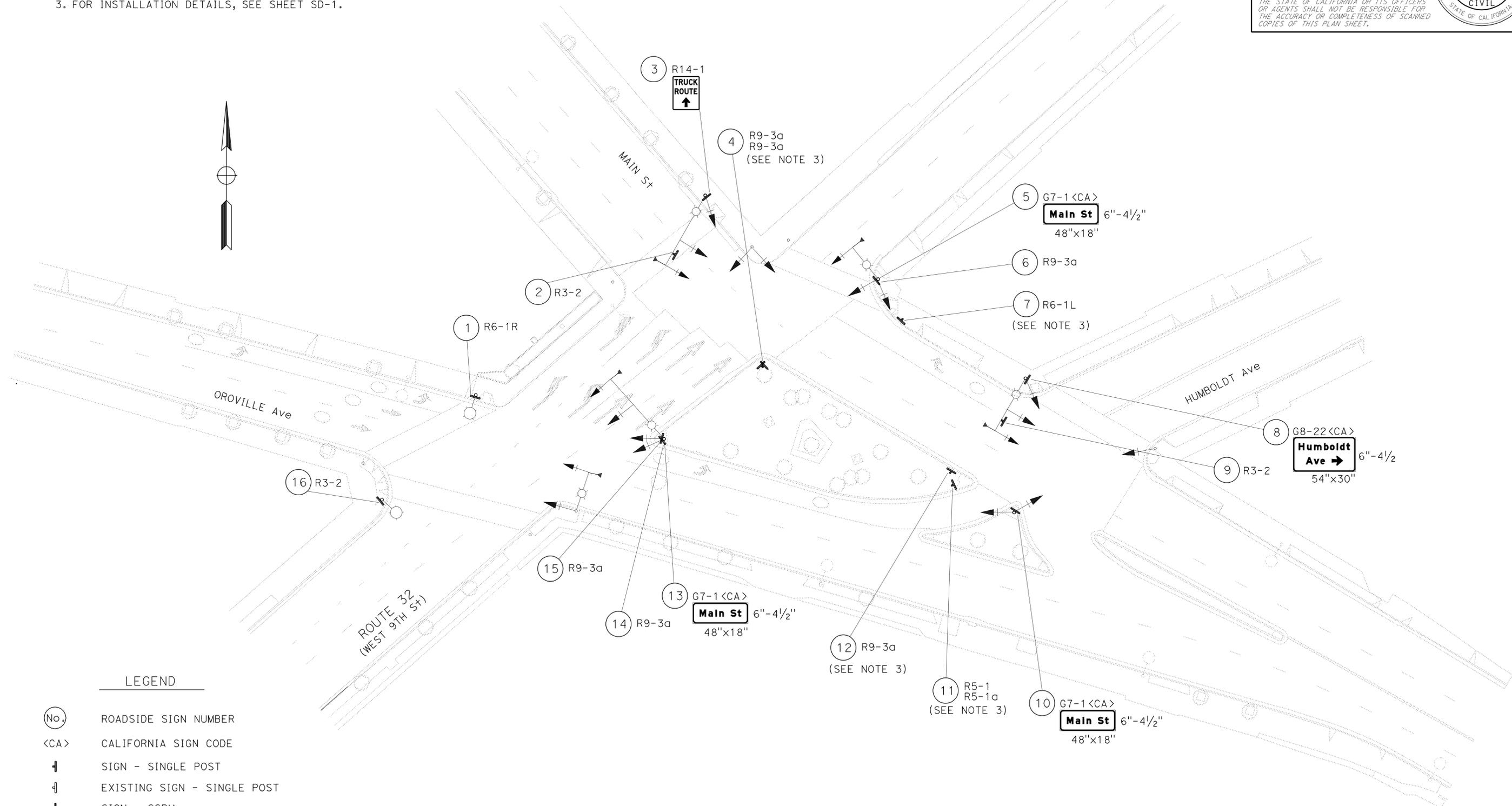
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 FUNCTIONAL SUPERVISOR: SERGIO ACEVES
 CHECKED BY: JEFF JEWETT
 DESIGNED BY: JACK KEMMERLY
 REVISIONS:

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	But	32	R9.5	8	42

 REGISTERED CIVIL ENGINEER DATE 12-6-11	
PLANS APPROVAL DATE 2-27-12	

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. ALL EXISTING SIGNS NOT SHOWN FOR REMOVAL SHALL REMAIN IN PLACE.
 2. ALL SIGN CODES SHOWN ARE FEDERAL SIGN CODES UNLESS OTHERWISE DESIGNATED AS CALIFORNIA SIGN CODES.
 3. FOR INSTALLATION DETAILS, SEE SHEET SD-1.



LEGEND

- (No.) ROADSIDE SIGN NUMBER
- <CA> CALIFORNIA SIGN CODE
- ↑ SIGN - SINGLE POST
- ↓ EXISTING SIGN - SINGLE POST
- ⇕ SIGN - SSBM
- ⇕ EXISTING SIGN - SSBM
- REMOVE ROADSIDE SIGN
- * RELOCATE ROADSIDE SIGN
- SNS STREET NAME SIGN

SIGN PLAN
NO SCALE

S-1

APPROVED FOR SIGN WORK ONLY

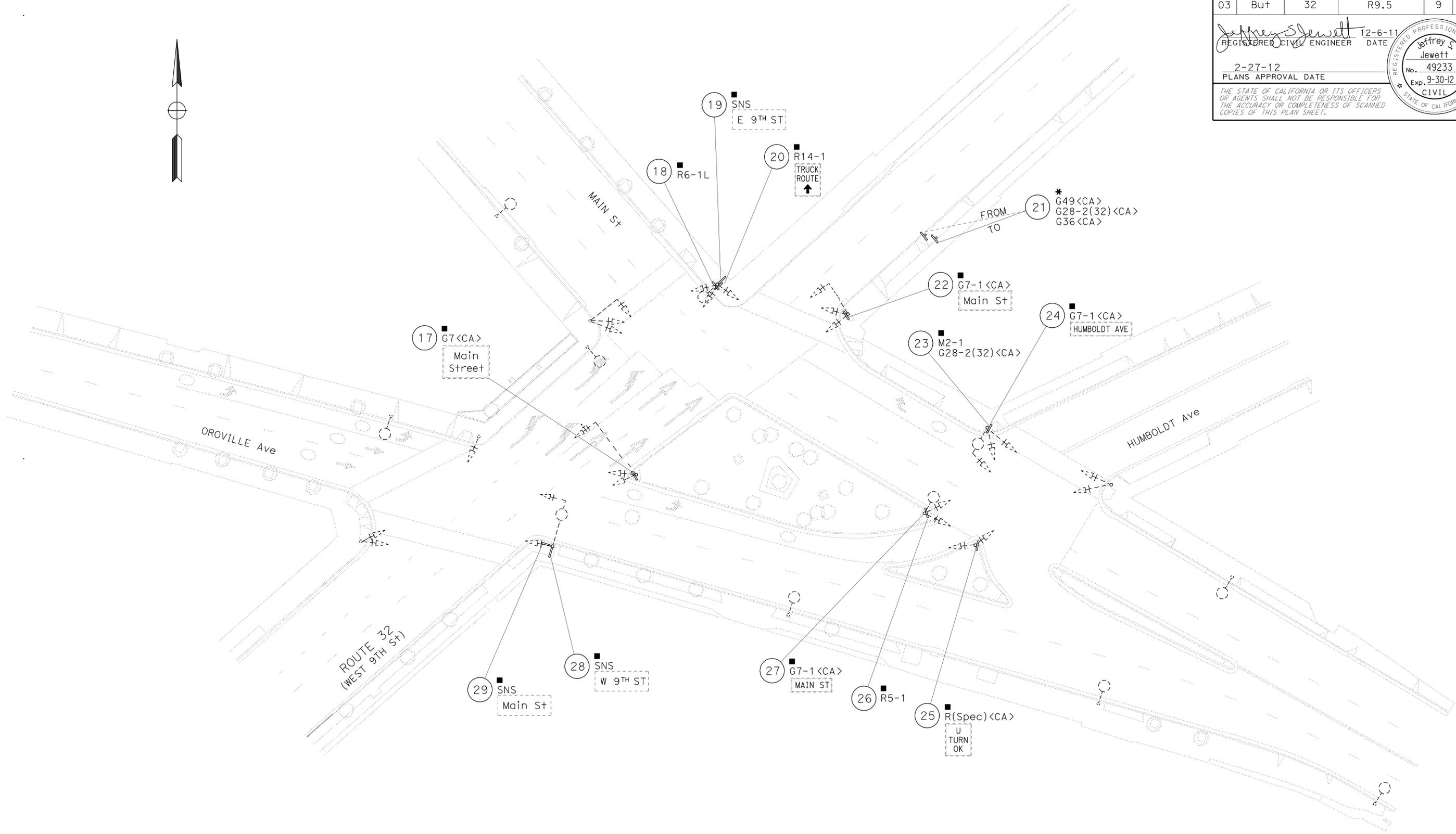
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	REVISOR	DATE
Caltrans	SERGIO ACEVES	JACK KEMMERLY	JAN 2012
		JEFF JEWETT	FEB 2012

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 FUNCTIONAL SUPERVISOR: SERGIO ACEVES
 JACK KEMMERLY
 REVISOR: JEFF JEWETT
 CALCULATED/DESIGNED BY: JEFF JEWETT
 CHECKED BY: JEFF JEWETT

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	But	32	R9.5	9	42

REGISTERED CIVIL ENGINEER: Jeffrey S. Jewett
 DATE: 12-6-11
 PLANS APPROVAL DATE: 2-27-12
 No. 49233
 Exp. 9-30-12
 CIVIL
 STATE OF CALIFORNIA

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



SIGN PLAN
EXISTING SIGNS
 NO SCALE

S-2

APPROVED FOR SIGN WORK ONLY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	But	32	R9.5	10	42

Jeffrey S Jewett 12-6-11
 REGISTERED CIVIL ENGINEER DATE
 2-27-12
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 Jeffrey S Jewett
 No. 49233
 Exp. 9-30-12
 CIVIL
 STATE OF CALIFORNIA

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ROADSIDE SIGN QUANTITIES

SIGN NUMBER (No.)	SIGN CODE		PANEL SIZE INCHES	"C" DIM IN FEET	POST SIZE AND LENGTH METAL POST 2 1/2" x 2 1/2"		ROADSIDE SIGN ONE POST EA	INSTALL SIGN (SSBM) EA	RELOCATE ROADSIDE SIGN EA	REMOVE ROADSIDE SIGN EA	REMARKS	
	FEDERAL	CALIFORNIA										
1	R6-1R		36 x 12	7				1			SEE NOTE 5	
2	R3-2		36 x 36								SEE NOTES 6 AND 7	
3	R14-1		24 x 30					1			SEE NOTE 8	
4	R9-3a R9-3a		24 x 24 24 x 24	7 5	10'		1				FACING SB PEDESTRIANS FACING WB PEDESTRIANS SEE NOTE 10	
5		G7-1	48 x 18					1			SEE NOTE 8	
6	R9-3a		24 x 24	7				1			SEE NOTE 9	
7	R6-1L		36 x 12	7	8'		1				SEE NOTE 10	
8		G8-22	54 x 30					1			SEE NOTE 8	
9	R3-2		36 x 36								SEE NOTES 6 AND 7	
10		G7-1	48 x 18					1			SEE NOTE 11	
11	R5-1 R5-1a		36 x 36 36 x 24	5	12'		1				SEE NOTE 10	
12	R9-3a		24 x 24	7	10'		1				SEE NOTE 10	
13		G7-1	48 x 18					1			SEE NOTE 8	
14	R9-3a		24 x 24	5				1			FACING EB PEDESTRIANS SEE NOTE 9	
15	R9-3a		24 x 24	7				1			FACING SB PEDESTRIANS SEE NOTE 9	
16	R3-2		36 x 36	7				1			SEE NOTE 9	
17		G7							1			
18	R6-1L								1			
19		SNS							1			
20	R14-1								1			
21		G49 G28-2(32) G36						1			SEE NOTE 10	
22		G7-1							1			
23	M2-1	G28-2(32)							1 1			
24		G7-1							1			
25		R(Spec)							1			
26	R5-1								1			
27		G7-1							1			
28		SNS							1			
29		SNS							1			
TOTAL								4	10	1	13	

NOTES:

- EXACT LOCATION AND POSITION OF ROADSIDE SIGNS WILL BE DETERMINED BY THE ENGINEER.
- POST LENGTHS GIVEN ARE APPROXIMATE.
- "C" DIM = VERTICAL CLEARANCE EP TO BOTTOM OF SIGN PANEL.
- SNS = COUNTY ROAD NAME SIGN.
- SIGN PANEL TO BE MOUNTED ON ELECTROLIER.
- (N) - NOT A SEPARATE PAY ITEM. FOR INFORMATION ONLY.
- SIGN PANEL TO BE MOUNTED ON SIGNAL MAST ARM.
- SIGN PANEL TO BE MOUNTED ON SIGNAL STANDARD DIRECTLY ABOVE THE SIGNAL MAST ARM CONNECTION.
- SIGN PANEL TO BE MOUNTED ON SIGNAL STANDARD.
- FOR ADDITIONAL METAL POST INSTALLATION INFORMATION, SEE SHEET SD-1.
- SIGN PANEL TO BE MOUNTED ON SIGNAL STANDARD DIRECTLY BELOW THE SIGNAL HEADS.

SIGN QUANTITIES

SQ-1

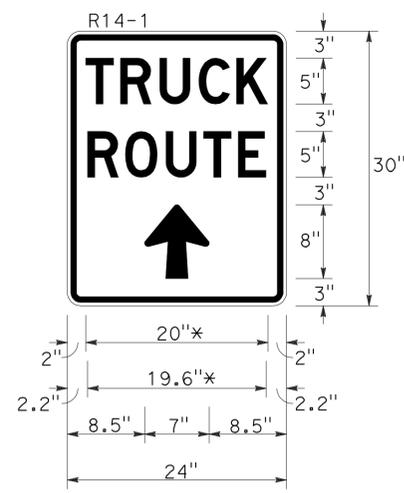
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 FUNCTIONAL SUPERVISOR: SERGIO ACEVES
 JACK KEMMERLY
 JEFF JEWETT
 REVISOR: JACK KEMMERLY
 DATE REVISOR: JEFF JEWETT
 CALCULATED/DESIGNED BY: JACK KEMMERLY
 CHECKED BY: JEFF JEWETT



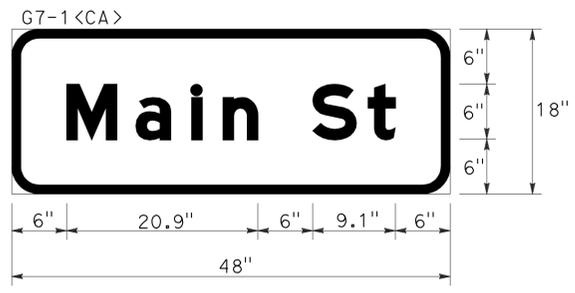
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	But	32	R9.5	11	42

REGISTERED CIVIL ENGINEER DATE 12-6-11
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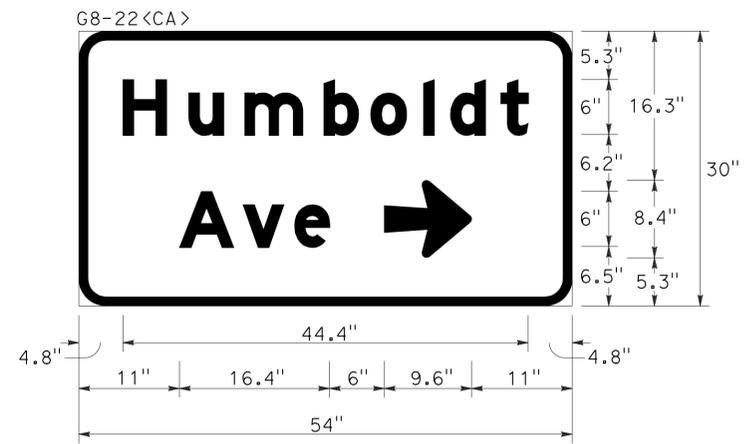
REGISTERED PROFESSIONAL ENGINEER
 Jeffrey S. Jewett
 No. 49233
 Exp. 9-30-12
 CIVIL
 STATE OF CALIFORNIA



0.625" BORDER WITH 1.5" RADIUS
 0.375" BORDER INDENT
 "TRUCK" D, "ROUTE" D
 * - SPACING REDUCED 20%
ROADSIDE SIGN NUMBER 3



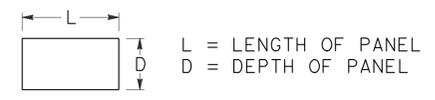
1" BORDER WITH 3" RADIUS
 "Main" E(Mod), "St" E(Mod)
ROADSIDE SIGN NUMBERS 5, 10 AND 13



1" BORDER WITH 3" RADIUS
 "Humboldt" E(Mod), "Ave" E(Mod)
ROADSIDE SIGN NUMBER 8

ROADSIDE SIGN PANEL QUANTITIES

SIGN CODE	SIGN MESSAGE/DESCRIPTION	PANEL SIZE L x D	PANEL AREA	NUMBER OF PANELS	BACKGROUND		LEGEND		PROTECTIVE OVERLAY	FURNISH SINGLE SHEET ALUMINUM SIGN	
					SHEETING COLOR	RETROREFLECTIVE ASTM TYPE	SHEETING COLOR	RETROREFLECTIVE ASTM TYPE		UNFRAMED	UNFRAMED
FEDERAL	CALIFORNIA	INCHES	SQFT						0.063"	0.080"	
									SQFT	SQFT	
R3-2	NO LEFT TURN (SYMBOL SIGN)	36 x 36	9.00	3	WHITE	IX	RED BLACK	IX	X	27.00	
R5-1	DO NOT ENTER	36 x 36	9.00	1	RED	IX	WHITE	IX	X	9.00	
R5-1a	WRONG WAY	36 x 24	6.00	1	RED	IX	WHITE	IX	X	6.00	
R6-1L	ONE WAY ARROW	36 x 12	3.00	1	WHITE	III	BLACK		X	3.00	
R6-1R	ONE WAY ARROW	36 x 12	3.00	1	WHITE	III	BLACK		X	3.00	
R9-3a	NO PEDESTRIAN CROSSING (SYMBOL SIGN)	24 x 24	4.00	6	WHITE	III	RED BLACK	III	X	24.00	
R14-1	TRUCK ROUTE ↑	24 x 30	5.00	1	WHITE	III	BLACK		X	5.00	
	G7-1	"Main St"	48 x 18	6.00	3	GREEN	III	WHITE	IX	X	18.00
	G8-22	"HUMBOLDT AVE" →	54 x 30	11.25	1	GREEN	III	WHITE	IX	X	11.25
TOTAL										77.00	29.25



SIGN QUANTITIES

SQ-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 TRAFFIC
 FUNCTIONAL SUPERVISOR: SERGIO ACEVES
 JACK KEMMERLY
 REVISOR: JEFF JEWETT
 REVISIONS: [blank]

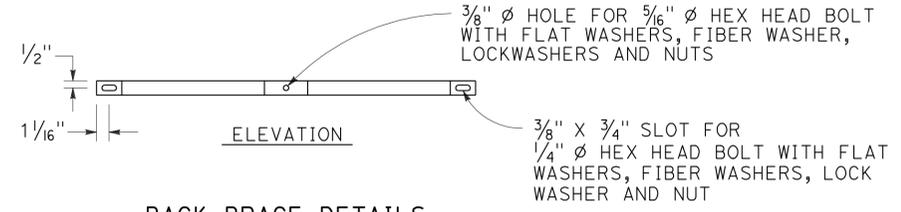
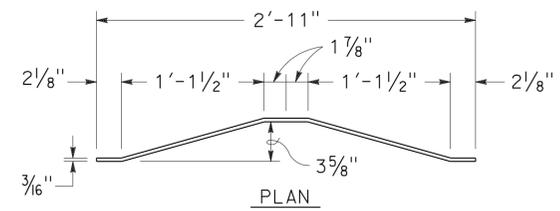
LAST REVISION: 11-9-11 DATE PLOTTED => 01-MAR-2012 TIME PLOTTED => 12:56

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	But	32	R9.5	12	42

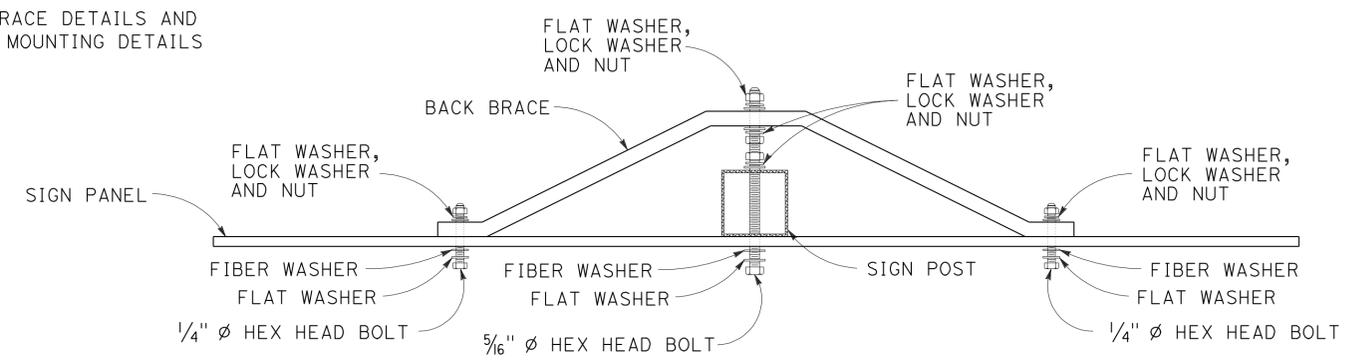
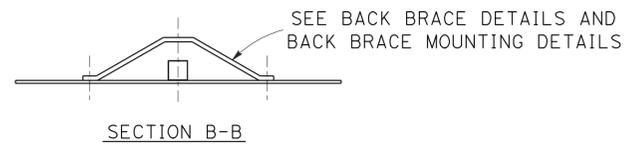
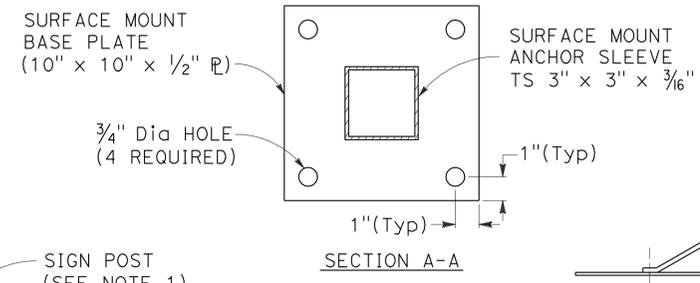
Jeffrey S. Jewett REGISTERED CIVIL ENGINEER No. 49233 Exp. 9-30-12 CIVIL	12-6-11 DATE
2-27-12 PLANS APPROVAL DATE	
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>	

NOTES:

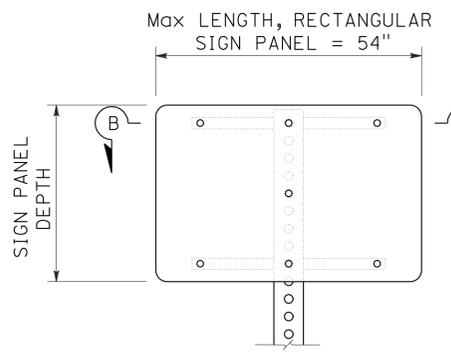
1. THE SIGN POST SHALL HAVE $\frac{7}{16}$ " DIAMETER PERFORATIONS 1" ON CENTER ON ALL FOUR SIDES FOR THE FULL LENGTH.
2. USE TWO DRIVE RIVETS TO FASTEN ASSEMBLED SIGN AND SIGN POST INTO ANCHOR SLEEVE OR SURFACE MOUNT BASE. INSTALL DRIVE RIVETS INTO THE SIDES FACING TRAFFIC.
3. ALL METAL SIGN POSTS, ANCHOR SLEEVE AND SURFACE MOUNT BASES SHALL BE GALVANIZED.
4. BALANCED SINGLE POST INSTALLATIONS OF SINGLE SHEET ALUMINUM PANEL SIGNS REQUIRE BACK BRACES WHEN 2'-10" OR MORE IN LENGTH.
5. WOOD BLOCK SPACERS ARE NOT REQUIRED FOR SIGNS MOUNTED ON METAL POSTS.
6. ATTACH RECTANGULAR SIGN PANEL TO METAL POST WITH BOLTS AT TOP AND BOTTOM. CENTER MAY BE ATTACHED WITH EITHER BOLT OR $\frac{3}{8}$ " DRIVE RIVET.
7. FOR DETAILS NOT SHOWN, SEE STANDARD PLANS RS1 AND RS2.



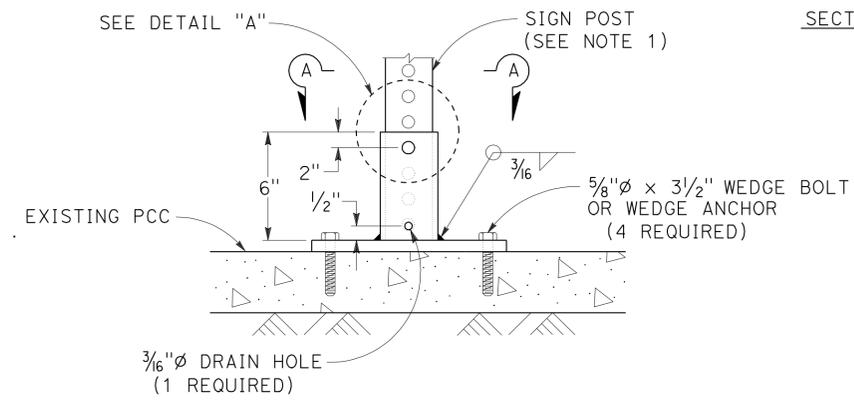
BACK BRACE DETAILS
SEE NOTE 4



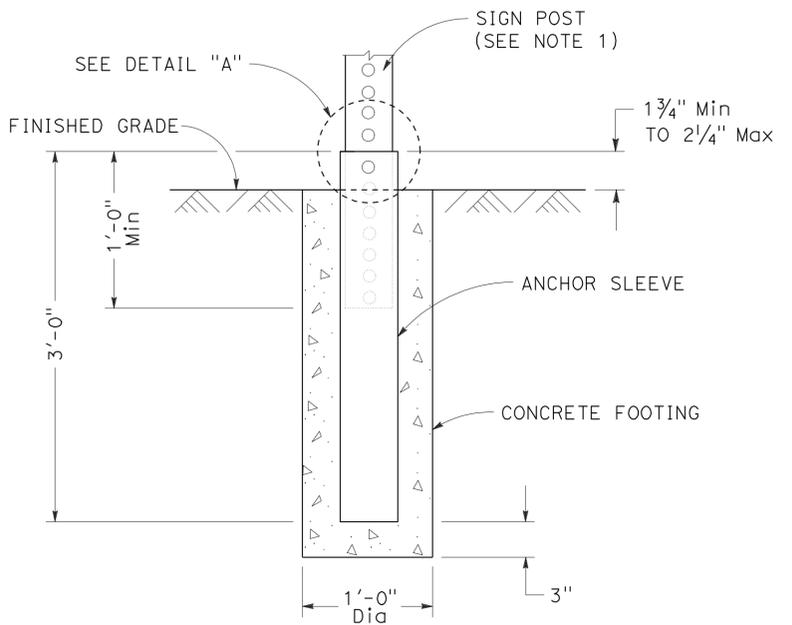
BACK BRACE MOUNTING DETAIL
SEE NOTES 5 AND 6



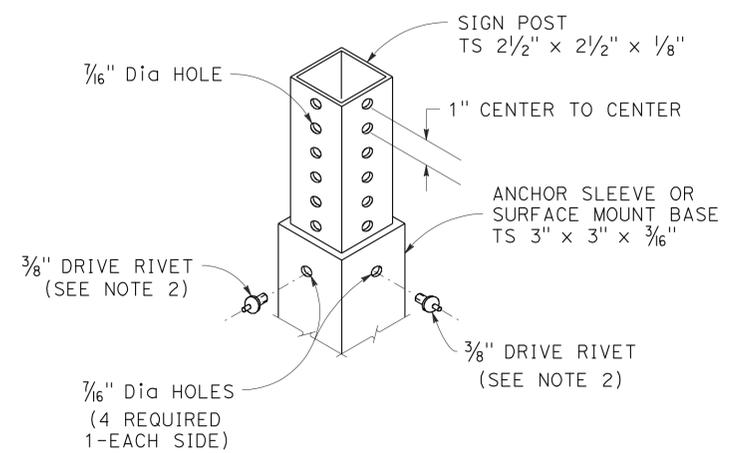
BALANCED SIGN PANEL
SEE NOTE 6



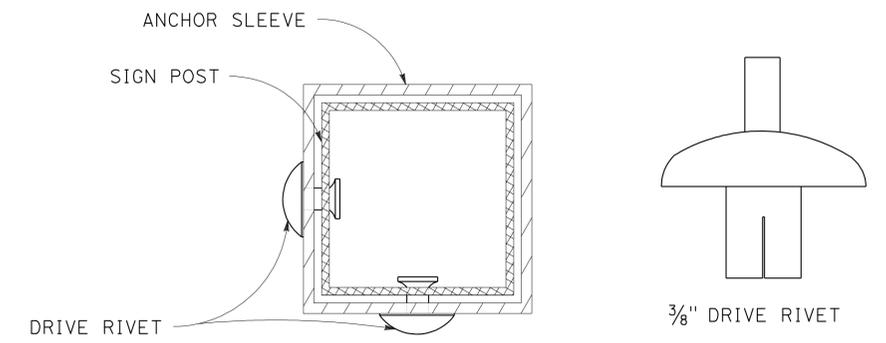
SURFACE MOUNT BASE DETAIL
ROADSIDE SIGN NUMBER 7



ANCHOR SLEEVE DETAIL
ROADSIDE SIGN NUMBERS 4, 11 AND 12



DETAIL "A"



FASTENER DETAILS

SIGN DETAIL
NO SCALE

SD-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 TRAFFIC
 FUNCTIONAL SUPERVISOR: SERGIO ACEVES
 CALCULATED/DESIGNED BY: JACK KEMMERLY
 CHECKED BY: JEFF JEWETT
 REVISED BY: DATE REVISION

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	But	32	R9.5	13	42

Frankal
 REGISTERED CIVIL ENGINEER DATE 12-6-11
 2-27-12
 PLANS APPROVAL DATE
 No. 64269
 Exp. 6-30-13
 CIVIL
 STATE OF CALIFORNIA
 REGISTERED PROFESSIONAL ENGINEER
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:

- MINOR CONCRETE (CURB, CURB RAMP, GUTTER, SIDEWALK, AND DRIVEWAY) INCLUDES A2-8 CURB AND GUTTER, A2-6 CURB AND GUTTER, RETAINING CURB, CURB RAMP, SIDEWALK AND DRIVEWAY AREAS.
- CURB RAMP DETECTABLE WARNING STRIPS FOR NEW CURB RAMP WILL BE PAID FOR AS PART OF MINOR CONCRETE (CURB, CURB RAMP, GUTTER, SIDEWALK, AND DRIVEWAY). CURB RAMP DETECTABLE WARNING STRIPS FOR LOCATIONS WITHOUT MINOR CONCRETE WORK WILL BE PAID FOR AS SHOWN ON QUANTITY SHEETS.

LEGEND:

(X) LOCATION OF WORK RAMP

ADA RAMP QUANTITIES

LOCATION	SHEET No.	ID	MINOR CONCRETE (CURB, CURB RAMP, GUTTER, SIDEWALK AND DRIVEWAY)	REMOVE CONCRETE (CURB, CURB RAMP, GUTTER, SIDEWALK, AND DRIVEWAY)	COLD PLANE ASPHALT CONCRETE PAVEMENT	HOT MIX ASPHALT (TYPE A)	ROADWAY EXCAVATION	REMOVE METAL RAILING	CURB RAMP DETECTABLE WARNING SURFACE	PEDESTRIAN BARRICADE (TYPE 1)	NOTES
			CY	CY	SQYD	TON	CY	EA	SQFT	EA	
	C-1	(A)	3.8	2.8	9	5.4	0.3	1		3	FOR PEDESTRIAN BARRICADE (TYPE 1): USE ONE 5-FOOT SECTION AND TWO 6-FOOT SECTIONS.
	C-2	(B)							24		
	C-2	(C)	2.0	2.0		0.6	0.3				
	C-2	(D)							15		
	C-2	(E)							12		
	C-2	(F)	0.7	0.7		0.5	0.2				
	C-3	(G)	12.0	12.0		7.5	3.7				
TOTAL			18.5	17.5	9	14.0	4.5	1	51	3	

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

UTILITY QUANTITIES

ADJUST UTILITY COVER TO GRADE	ADJUST WATER METER BOX TO GRADE	RELOCATE EXISTING ELECTRIC REMOTE CONTROL VALVE AND CONTROL WIRES
EA	EA	EA
1	1	1

SUMMARY OF QUANTITIES

Q-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: LAURIE LAMMERT
 CALCULATED/DESIGNED BY: AI K. TRAN
 CHECKED BY: DZUNG BUI
 REVISED BY: AI K. TRAN
 DATE REVISED:

NOTE:

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

ABBREVIATIONS:

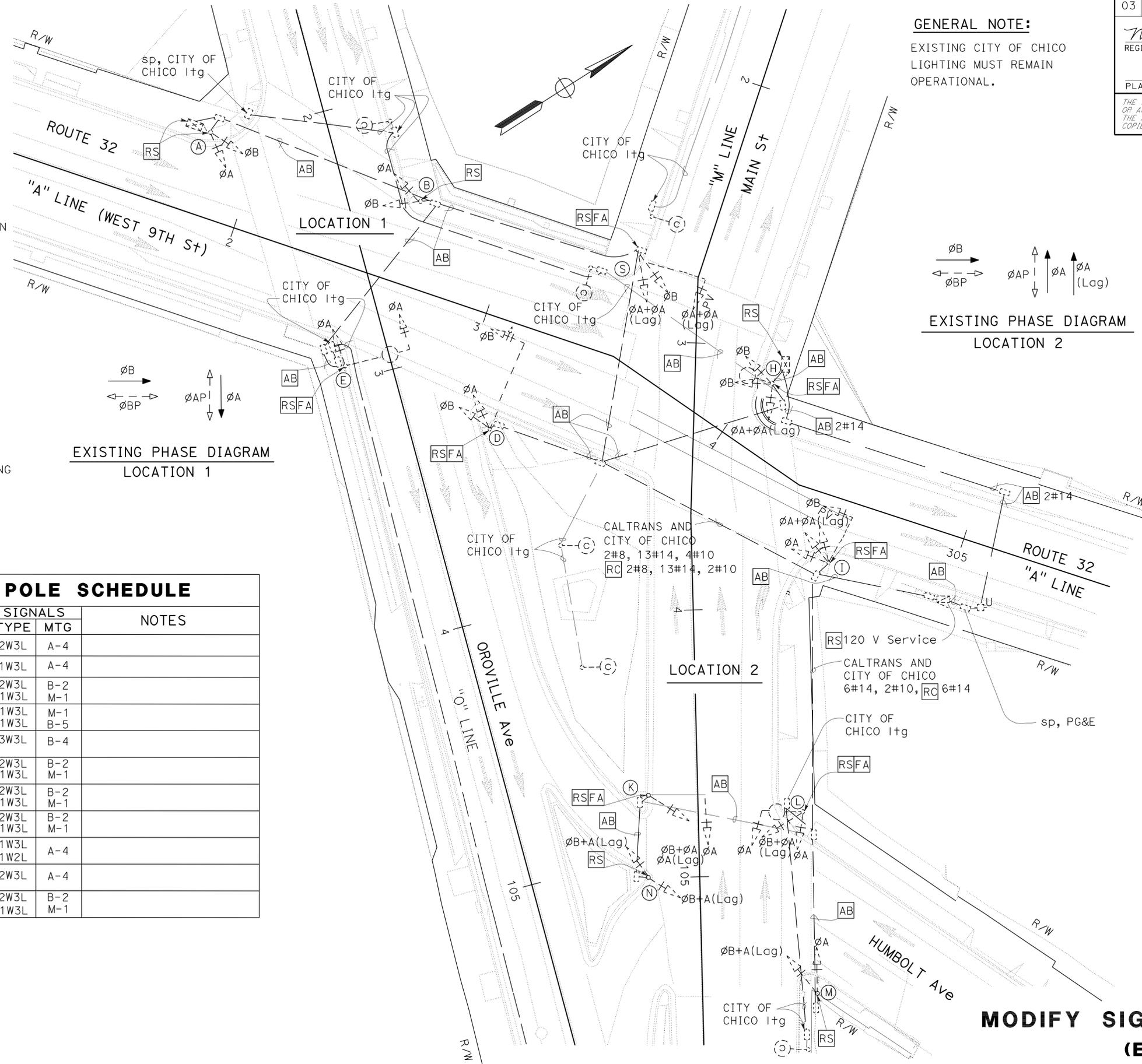
- CCU CAMERA CONTROL UNIT
- CIC CAMERA INTERCONNECT CABLE
- CTID CALTRANS IDENTIFICATION
- GPRS GENERAL PACKET RADIO SERVICE
- PG&E PACIFIC GAS AND ELECTRIC COMPANY
- VEU VIDEO ENCODER UNIT

LEGEND:

- TYPE 15TS
- EXISTING CITY LIGHTING

GENERAL NOTE:

EXISTING CITY OF CHICO LIGHTING MUST REMAIN OPERATIONAL.



EXISTING POLE SCHEDULE				
No.	STANDARD	SIGNALS		NOTES
		TYPE	MTG	
(A)	TYPE I-B	2W3L	A-4	
(B)	TYPE I-B	1W3L	A-4	
(D)	TYPE XXIII	2W3L 1W3L	B-2 M-1	
(E)	TYPE XIX	1W3L 1W3L	M-1 B-5	
(H)	TYPE III	3W3L	B-4	
(I)	TYPE XVI	2W3L 1W3L	B-2 M-1	
(K)	TYPE XVI	2W3L 1W3L	B-2 M-1	
(L)	TYPE III	2W3L 1W3L	B-2 M-1	
(M)	TYPE I-B	1W3L 1W2L	A-4	
(N)	TYPE I-B	2W3L	A-4	
(S)	TYPE XVI	2W3L 1W3L	B-2 M-1	

MODIFY SIGNAL AND LIGHTING (EXISTING)

SCALE: 1" = 20'

E-1

APPROVED FOR ELECTRICAL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 Zahra Niknafs
 Mary Ann Hudspeth
 Steven Block
 Electrical Design

CONDUCTOR AND CONDUIT SCHEDULE

CABLE SCHEDULE			CONDUIT RUN NUMBER AND SIZE							
CABLE TYPE	S + d	PHASE	1	2	3	4	5	6		
		VEH-PED							PPB	
12CSC	(A)	2, 2P	2	1	1	1	1	1	1	
	(B)	2, 4		1	1	1	1	1	1	
	(C)	4, 4P	4			1	1	1	1	
	(D)	4P	4				1	1	1	
	(E)	2P	2					1	1	
	(F)	2P	2						1	1
TOTAL CABLES			1	1	3	4	5	3	6	4
VIVDS CABLE				1	2	2	2			
AWG #8	SIGNAL CONTROLLER								2	
AWG #8	LUMINAIRES			2	2	2	2			
CONDUIT SIZE			2"	3"	1-3" 1-1"	2-3"	2-3"	2-4"		

POLE AND EQUIPMENT SCHEDULE

No.	TYPE	STANDARD		VEH SIG MTG			Ped SIGNAL		PPB		LED LUMINAIRE	SPECIAL REQUIREMENTS
		SMA	LMA	∅	Mast Arm	∅	Pole	∅	MTG	∅		
(A)	PPB POST								2			
(B)	26-4-100	45	12	2	MAS MAT	2	SV-1-T	2	SP-1-T	→	165 W	F=18'
(C)	29-5-100	50	12	4	MAS MAT	2, 4	SV-2-T				165 W	F=27'
(D)	15TS		12			4	SV-1-T	4	SP-1-T	←	165 W	
(E)	1-B							4	TP-1-T	→		
(F)	15TS		12					2	SP-1-T	←	165 W	

LOCATION 1

CONDUCTOR AND CONDUIT SCHEDULE

CABLE SCHEDULE			CONDUIT RUN NUMBER AND SIZE												
CABLE TYPE	S + d	PHASE	1	2	3	4	5	6	7	8	9				
		VEH-PED										PPB			
12CSC	(A)	4	1	1	1	1	1	1			1				
	(B)	4		1	1	1	1	1			1				
	(C)	4, 2P	2		1	1	1	1	1		1				
	(D)	2, 4, 2P	2			2	1	2	1	2	1				
	(E)	OLA, 4, 2P	2				1	1			1				
	(F)	2					1	1			1				
3CSC	(G)	2									1				
	(H)	OLA, 2P									1				
	(I)	4, 4P	4						1	1	1				
	(J)	4P, OLA	4						1	1	1				
	TOTAL CABLES			1	2	3	5	6	3	6	4	1	2	9	6
	CIC												1		
VIVDS CABLE				1	1	3	4	4				5			
AWG #8	SIGNAL CONTROLLER						2	2				2			
AWG #8	LUMINAIRES			2	2	2	2	2							
CONDUIT SIZE			2"	3"	3"	2-3"	2-3" 1-2"	2-3" 1-2"	2"	3"	2-4"				

POLE AND EQUIPMENT SCHEDULE

No.	TYPE	STANDARD		VEH SIG MTG			Ped SIGNAL		PPB		LED LUMINAIRE	SPECIAL REQUIREMENTS
		SMA	LMA	∅	Mast Arm	∅	Pole	∅	MTG	∅		
(A)	1-B						4	TV-1-T				
(B)	15TS		12				4	SV-2-T			165 W	
(C)	1-B						4	TV-1-T	2	SP-1-T	2	→
(D)	19-4-100	30	12	2	MAT MAS	2, 4	SV-2-T	2	SP-1-T	2	←	165 W F=12'
(E)	19-4-100	30	12	4	MAT	4 OLA	SV-2-T	2	SP-1-T		165 W	
(F)	PPB POST									2	→	
(G)	PPB POST									2	←	
(H)	19-4-100	30	12	OLA	MAT	OLA	SV-1-T	2	SP-1-T		165 W	
(I)	1-B						4	TV-1-T	4	SP-1-T	4	←
(J)	1-B						OLA	TV-1-T	4	SP-1-T	4	→

LOCATION 2

SIGNAL AND LIGHTING

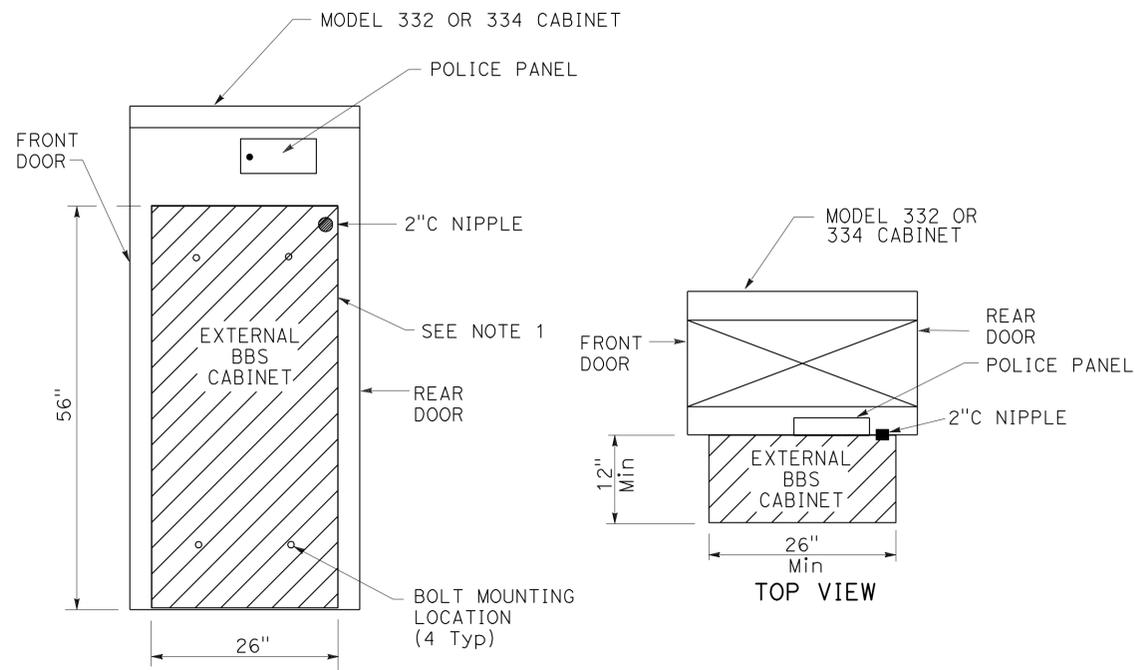
NO SCALE

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 Zahra Niknafs
 Mary Ann Hudspeth
 Steven Block
 Electrical Design

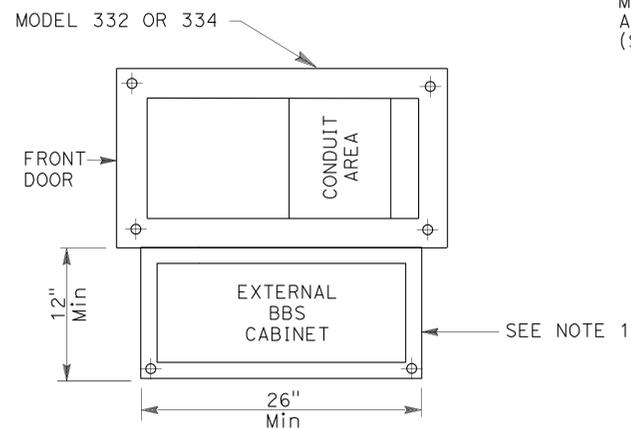
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	But	32	R9.5	17	42

REGISTERED ELECTRICAL ENGINEER DATE 12-14-11
 MARY ANN HUDSPETH
 2-27-12
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



SIDE VIEW

EXTERNAL BBS CABINET MOUNTED TO THE MODEL 332 OR 334 CABINET

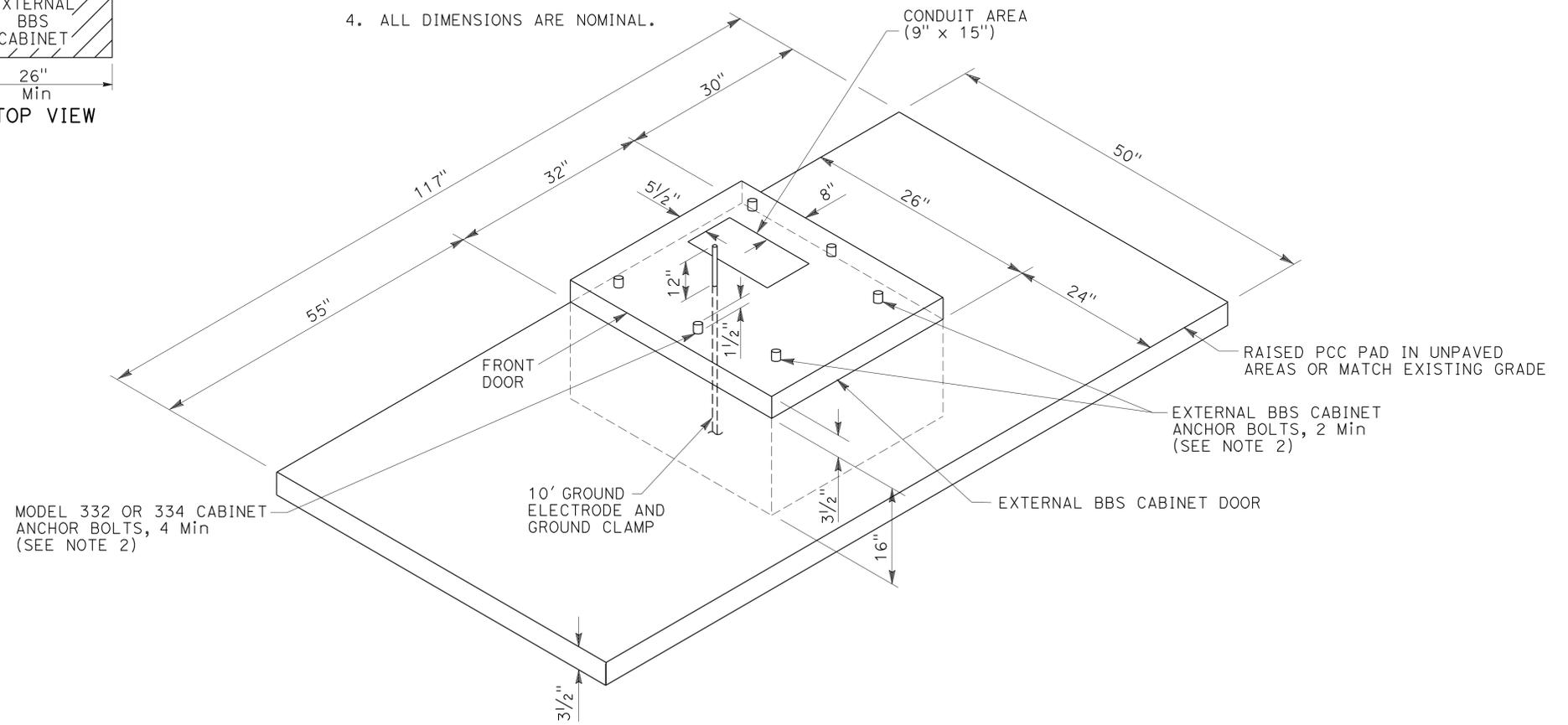


BASE PLAN FOR BBS MOUNTED TO THE MODEL 332 OR 334 CABINET

(FOR DIMENSIONS AND DETAILS NOT SHOWN, SEE SHEET A6-1 TO A6-4, AND CABINET HOUSING DETAILS OF THE TRANSPORTATION ELECTRICAL EQUIPMENT SPECIFICATION (TEES))

NOTES: (FOR THIS SHEET ONLY)

1. THE EXTERNAL BBS CABINET SHALL BE MOUNTED TO THE MODEL 332 OR 334 CABINET WITH FOUR 18-8 STAINLESS STEEL HEX HEAD, FULLY-THREADED, 3/8"-16 X 1" BOLTS; TWO WASHERS PER BOLT, DESIGNED FOR 3/8" BOLTS AND ARE 18-8 STAINLESS STEEL, 1" OUTSIDE DIAMETER, ROUND, AND FLAT; AND ONE K-LOCK NUT PER BOLT THAT IS 18-8 STAINLESS STEEL AND A HEX-NUT. THE ENGINEER WILL HAVE TO APPROVE THE BOLT MOUNTING LOCATION PRIOR TO INSTALLATION.
2. THE ANCHOR BOLTS SHALL BE 3/4" Dia X 15" WITH A 2"-90° BEND. THE CABINET MANUFACTURER'S SPECIFICATION SHALL DETERMINE THE LOCATION OF THE ANCHOR BOLTS IN THE FOUNDATION. THE ENGINEER WILL HAVE TO APPROVE THE ANCHOR BOLTS AND ITS LOCATION IN THE FOUNDATION PRIOR TO CONSTRUCTION.
3. THE CONTRACTOR SHALL VERIFY THE DIMENSIONS OF THE BBS CABINET PRIOR TO CONSTRUCTING THE FOUNDATION OF THE MODIFIED PORTION OF THE S+D MODEL 332 AND 334 CABINET FOUNDATION. THE ENGINEER WILL HAVE TO APPROVE ANY NECESSARY DEVIATIONS PRIOR TO CONSTRUCTION.
4. ALL DIMENSIONS ARE NOMINAL.



MODIFIED MODEL 332 AND 334 CABINET FOUNDATION DETAIL FOR BATTERY BACKUP SYSTEM (BBS)
(FOR DIMENSIONS AND DETAILS NOT SHOWN AND ADDITIONAL NOTES, SEE STANDARD PLAN ES-3C)

SIGNAL AND LIGHTING (BATTERY BACKUP SYSTEM FOUNDATION DETAILS)

NO SCALE

APPROVED FOR ELECTRICAL WORK ONLY

REVISOR	DATE	REVISION
ZAHRA NIKNAFS		
MARY ANN HUDSPETH		
CALCULATED/DESIGNED BY	CHECKED BY	
FUNCTIONAL SUPERVISOR	STEVEN BLOCK	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN
 FUNCTIONAL SUPERVISOR: STEVEN BLOCK
 CALCULATED/DESIGNED BY: ZAHRA NIKNAFS
 CHECKED BY: MARY ANN HUDSPETH
 REVISIONS: (Table with columns for REVISED BY and DATE REVISED)

NOTES: (FOR THIS SHEET ONLY)

1. TYPE A REFERS TO THE BBS EQUIPMENT FROM MANUFACTURER A.
2. CASE-1 REFERS TO THE SITUATION WHEN THE ENTIRE BBS EQUIPMENT INCLUDING THE BATTERIES ARE INSTALLED IN THE BBS CABINET.
3. THE LOCATION OF THE 2" C NIPPLE WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.
4. THE CONTRACTOR SHALL FURNISH AND INSTALL A NEMA-1 ENCLOSURE WITH 30 A, 1P, 120/240 VOLTS RATED CIRCUIT BREAKER MANUFACTURED PER UL STANDARD 489.
5. A TEMPERATURE PROBE SHALL BE ATTACHED TO THE BATTERY BY TAPE OR ATTACHED TO THE NEGATIVE TERMINAL OF THE BATTERY.
6. THE ELECTRICAL POWER FOR THE COOLING FAN FOR THE BBS CABINET SHALL BE TAPPED FROM THE BOTTOM OF THE TB IN THE 332 CABINET.
7. THE CONTRACTOR SHALL PROVIDE A 9-WIRE WIRING HARNESS OR BUNDLED 9 MULTICOLOR CONDUCTORS, AWG 18 WIRES FROM THE RELAY ON THE INVERTER/CHARGER UNIT TO THE CONTROLLER. THE ENDS OF THE CONDUCTORS SHALL BE INSULATED WITH TAPE AND A SIX-FOOT COIL ON EACH END.

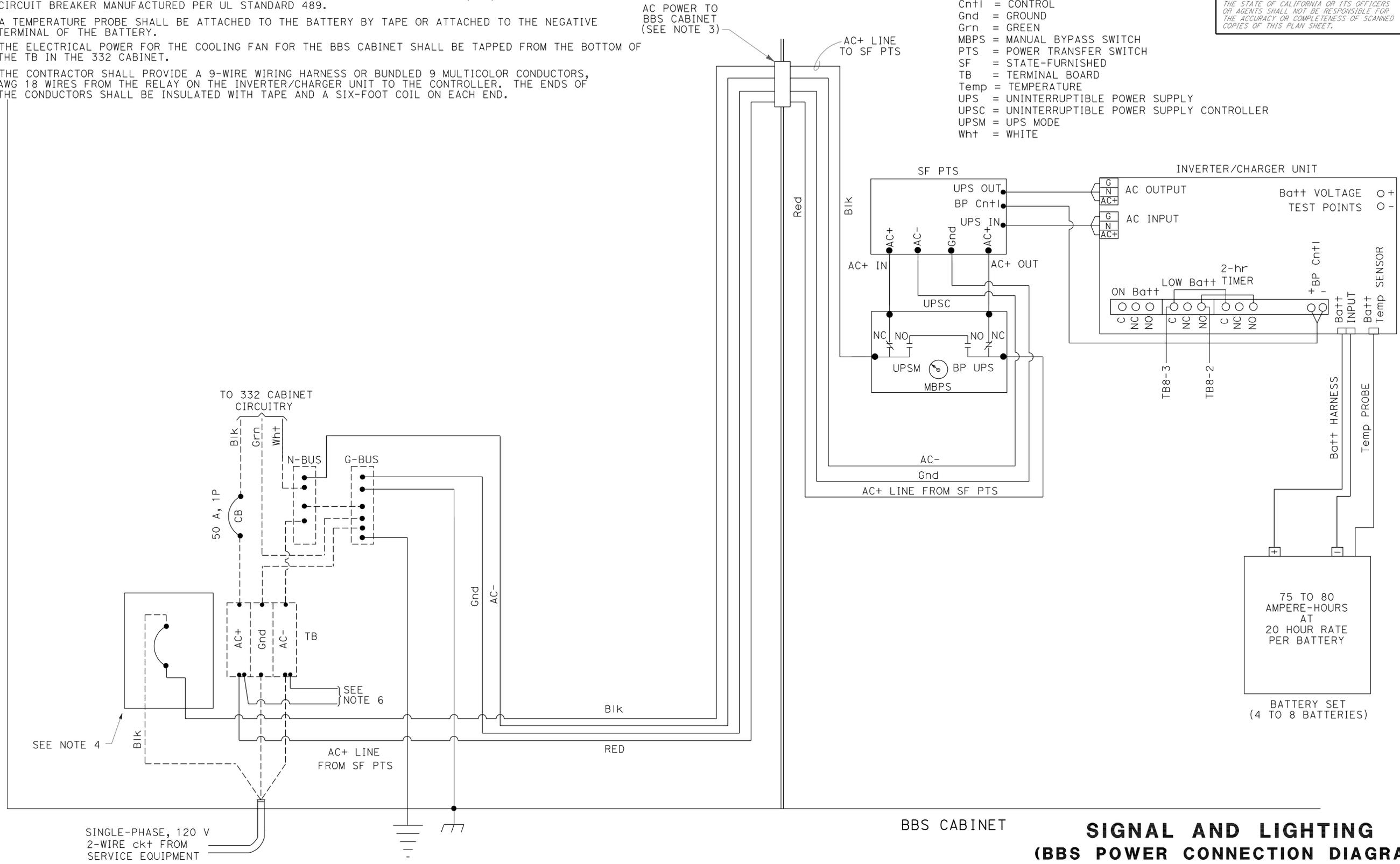
LEGEND: (FOR THIS SHEET ONLY)

- AC+ = UNGROUNDED CONDUCTOR
- AC- = GROUNDED CONDUCTOR
- Batt = BATTERY
- Blk = BLACK
- BP = BYPASS
- C = COMMON
- Cntl = CONTROL
- Gnd = GROUND
- Grn = GREEN
- MBPS = MANUAL BYPASS SWITCH
- PTS = POWER TRANSFER SWITCH
- SF = STATE-FURNISHED
- TB = TERMINAL BOARD
- Temp = TEMPERATURE
- UPS = UNINTERRUPTIBLE POWER SUPPLY
- UPSC = UNINTERRUPTIBLE POWER SUPPLY CONTROLLER
- UPSM = UPS MODE
- Wht = WHITE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	But	32	R9.5	18	42

Mary Ann Hudspeth
 REGISTERED ELECTRICAL ENGINEER DATE 12-14-11
 2-27-12
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
 MARY ANN HUDSPETH
 No. 17245
 Exp. 6-30-12
 ELECTRICAL
 STATE OF CALIFORNIA



332 CONTROLLER CABINET

BBS CABINET

**SIGNAL AND LIGHTING
 (BBS POWER CONNECTION DIAGRAM,
 TYPE A, CASE-1 ELECTRICAL DETAIL)**

NO SCALE

APPROVED FOR ELECTRICAL WORK ONLY

E-5

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Bu+	32	R9.5	19	42

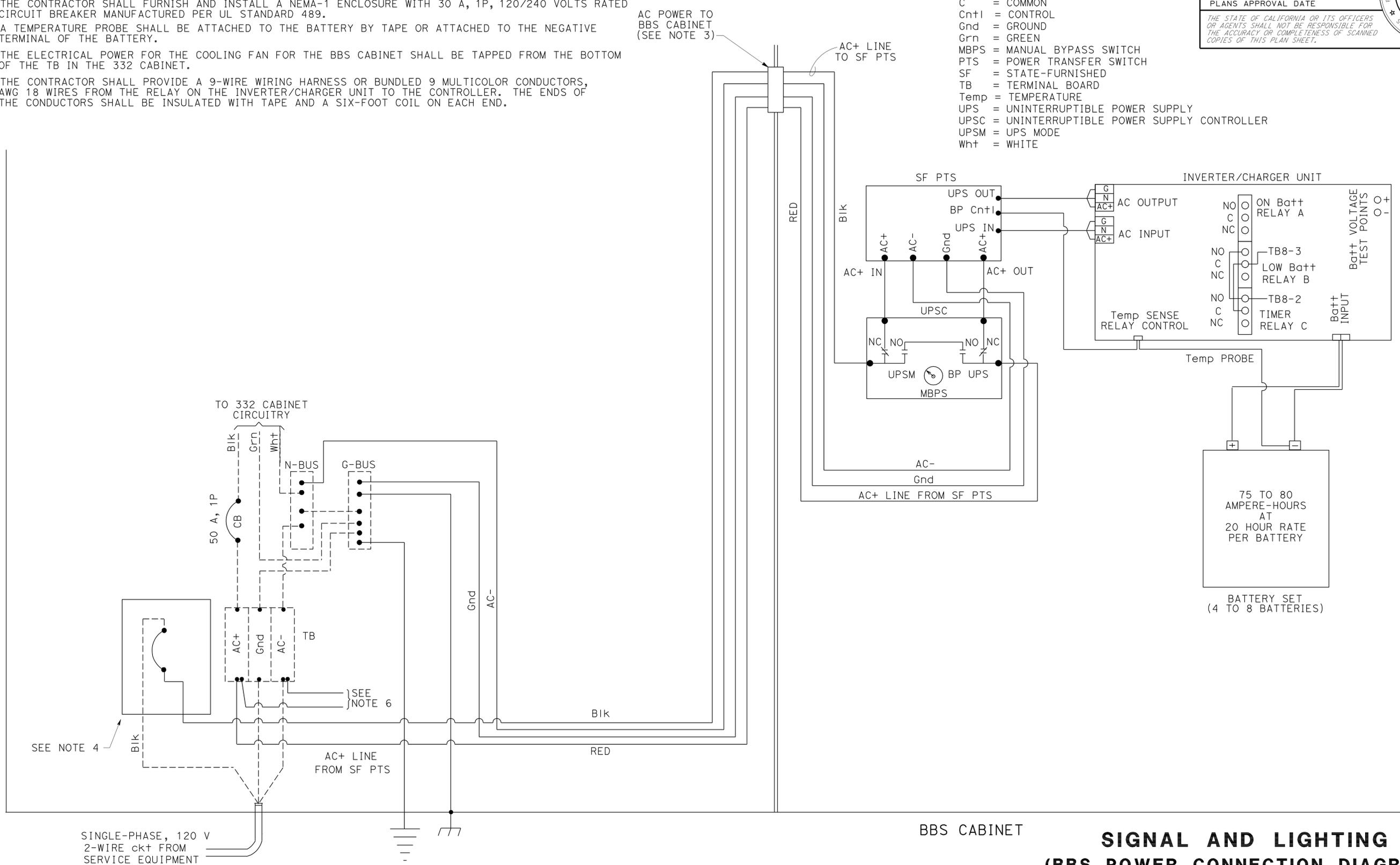
12-14-11 DATE
 REGISTERED ELECTRICAL ENGINEER
 MARY ANN HUDSPETH
 2-27-12 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES: (FOR THIS SHEET ONLY)

- TYPE B REFERS TO THE BBS EQUIPMENT FROM MANUFACTURER B.
- CASE-1 REFERS TO THE SITUATION WHEN THE ENTIRE BBS EQUIPMENT INCLUDING THE BATTERIES ARE INSTALLED IN THE BBS CABINET.
- THE LOCATION OF THE 2" C NIPPLE WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.
- THE CONTRACTOR SHALL FURNISH AND INSTALL A NEMA-1 ENCLOSURE WITH 30 A, 1P, 120/240 VOLTS RATED CIRCUIT BREAKER MANUFACTURED PER UL STANDARD 489.
- A TEMPERATURE PROBE SHALL BE ATTACHED TO THE BATTERY BY TAPE OR ATTACHED TO THE NEGATIVE TERMINAL OF THE BATTERY.
- THE ELECTRICAL POWER FOR THE COOLING FAN FOR THE BBS CABINET SHALL BE TAPPED FROM THE BOTTOM OF THE TB IN THE 332 CABINET.
- THE CONTRACTOR SHALL PROVIDE A 9-WIRE WIRING HARNESS OR BUNDLED 9 MULTICOLOR CONDUCTORS, AWG 18 WIRES FROM THE RELAY ON THE INVERTER/CHARGER UNIT TO THE CONTROLLER. THE ENDS OF THE CONDUCTORS SHALL BE INSULATED WITH TAPE AND A SIX-FOOT COIL ON EACH END.

LEGEND: (FOR THIS SHEET ONLY)

- AC+ = UNGROUNDED CONDUCTOR
- AC- = GROUNDED CONDUCTOR
- Bat+ = BATTERY
- Blk = BLACK
- BP = BYPASS
- C = COMMON
- Cntl = CONTROL
- Gnd = GROUND
- Grn = GREEN
- MBPS = MANUAL BYPASS SWITCH
- PTS = POWER TRANSFER SWITCH
- SF = STATE-FURNISHED
- TB = TERMINAL BOARD
- Temp = TEMPERATURE
- UPS = UNINTERRUPTIBLE POWER SUPPLY
- UPSC = UNINTERRUPTIBLE POWER SUPPLY CONTROLLER
- UPSM = UPS MODE
- Wht = WHITE



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR
Caltrans ELECTRICAL DESIGN	STEVEN BLOCK	ZAHRA NIKNAFS	ZAHRA NIKNAFS
		CHECKED BY	DATE REVISED
		MARY ANN HUDSPETH	

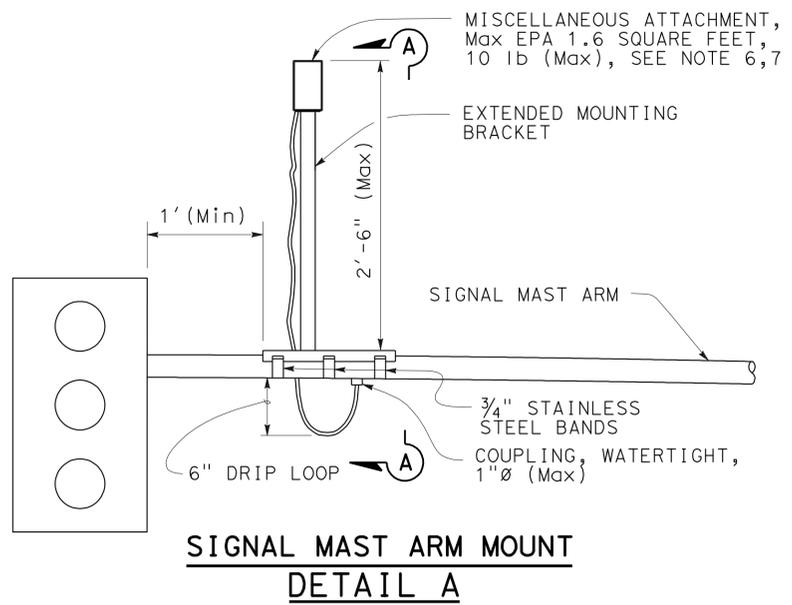
SIGNAL AND LIGHTING
(BBS POWER CONNECTION DIAGRAM, TYPE B, CASE-1 ELECTRICAL DETAIL)

NO SCALE

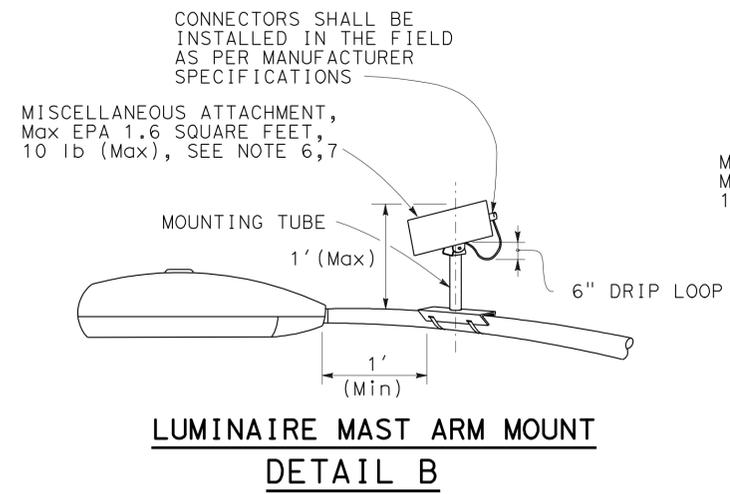
E-6

APPROVED FOR ELECTRICAL WORK ONLY

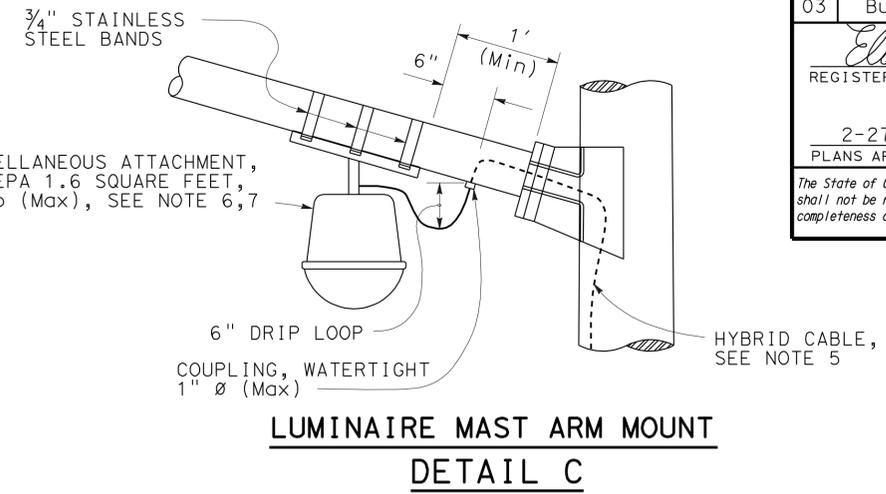
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	Bu+	32	R9.5	20	42
<i>Eliseo Lopez</i> REGISTERED CIVIL ENGINEER DATE 1/19/11			PLANS APPROVAL DATE 2-27-12		
REGISTERED PROFESSIONAL ENGINEER No. C72910 Exp. 12/31/12 CIVIL STATE OF CALIFORNIA			The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.		



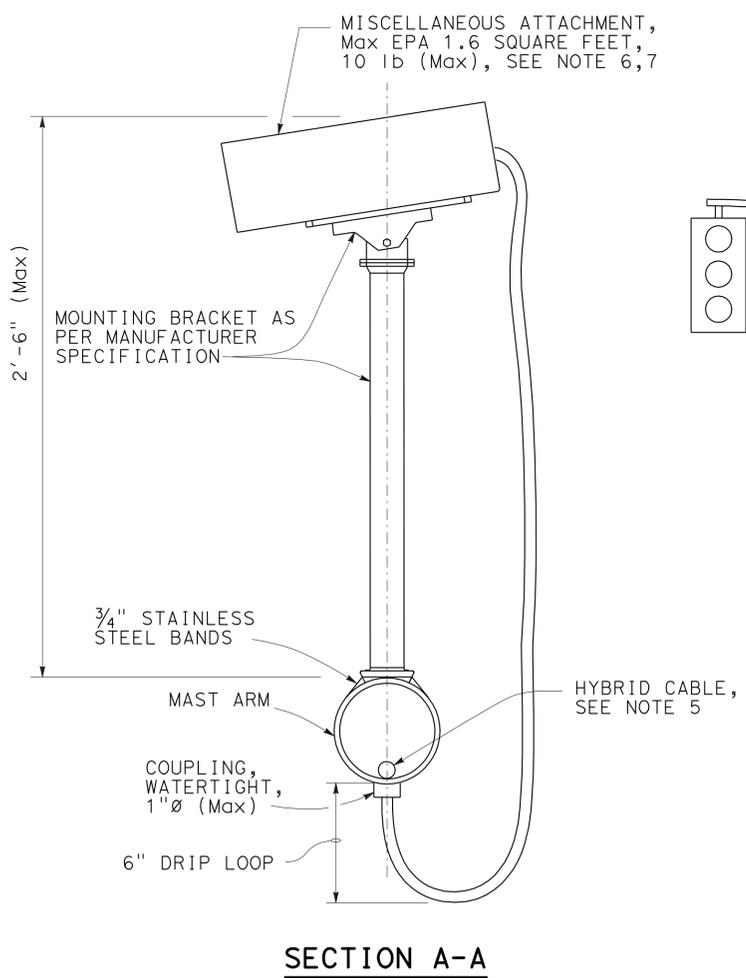
**SIGNAL MAST ARM MOUNT
DETAIL A**



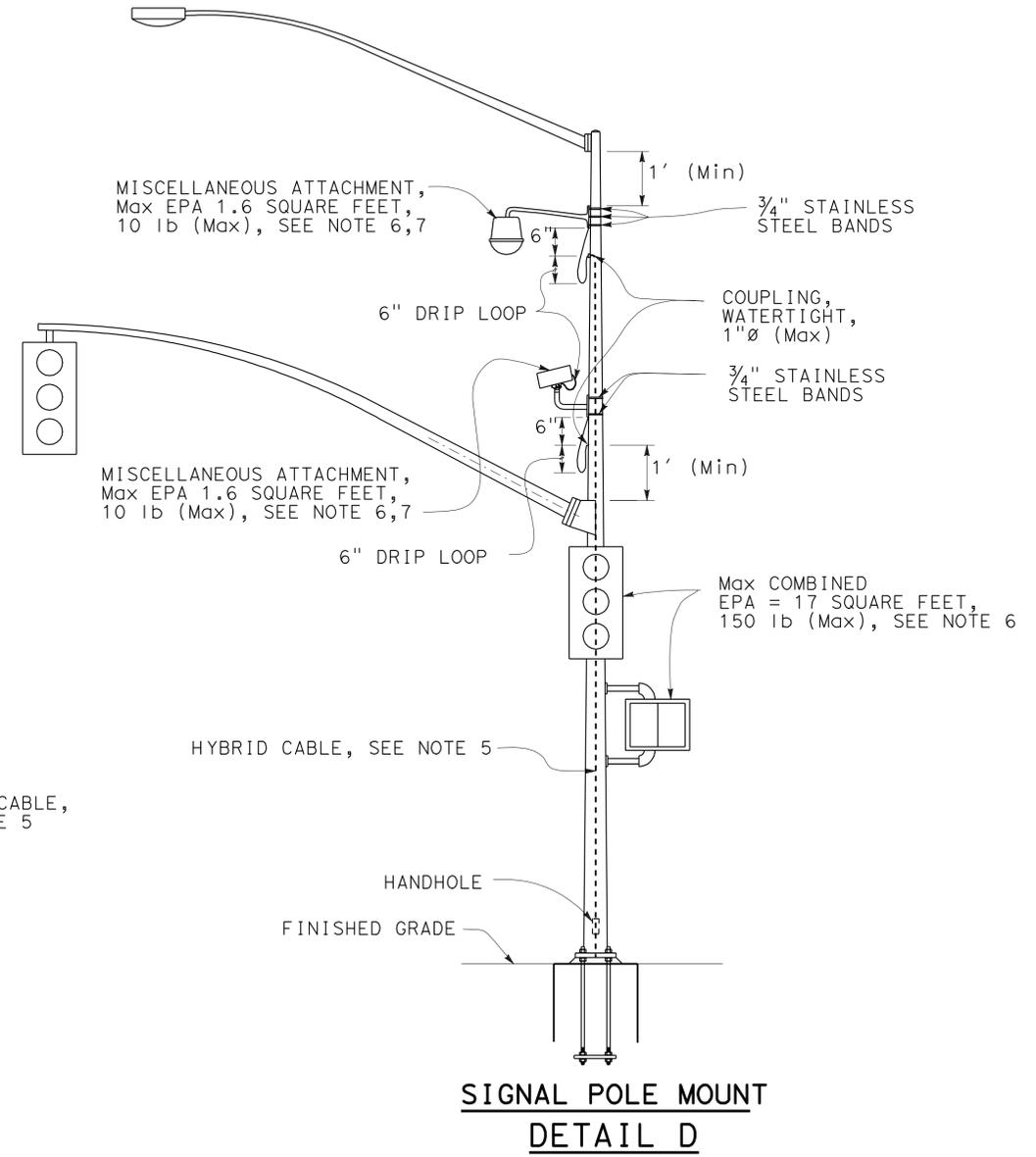
**LUMINAIRE MAST ARM MOUNT
DETAIL B**



**LUMINAIRE MAST ARM MOUNT
DETAIL C**



SECTION A-A



**SIGNAL POLE MOUNT
DETAIL D**

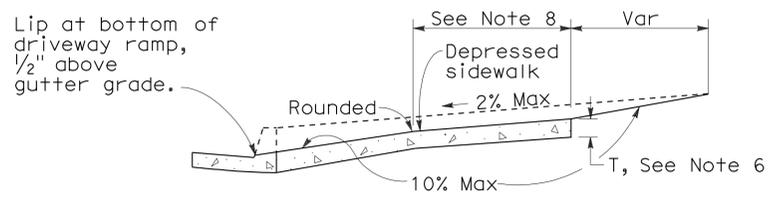
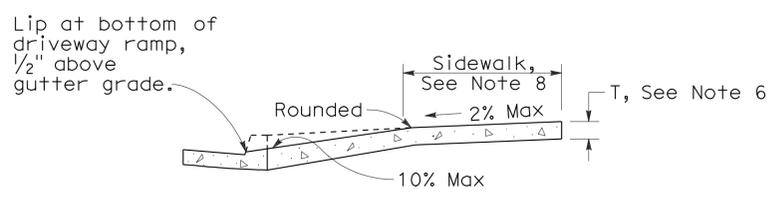
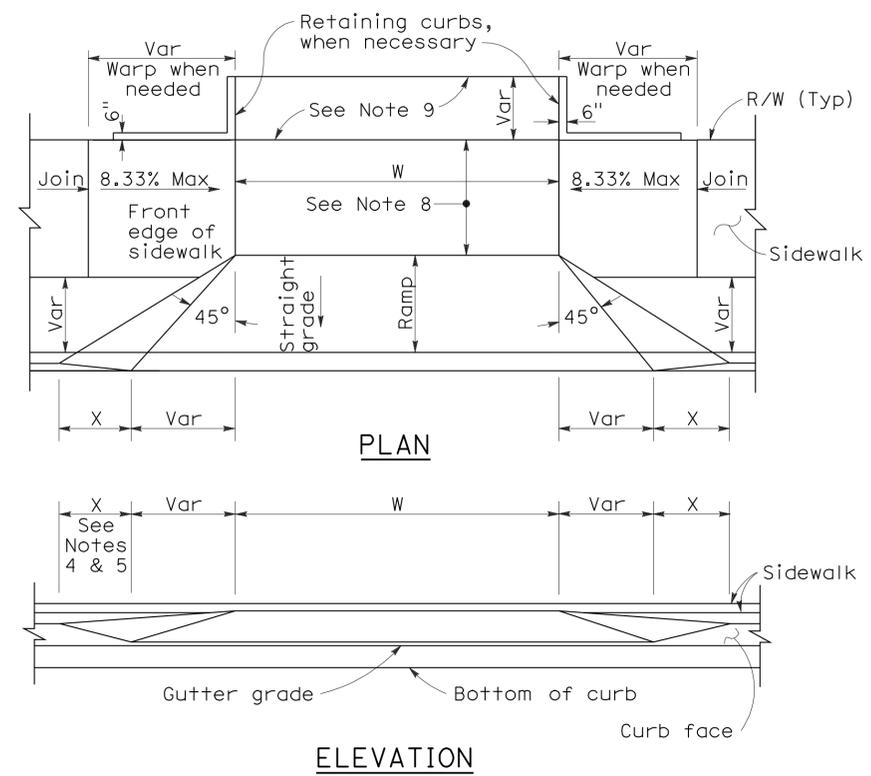
NOTES:

- Exact mounting location of miscellaneous attachment and bracket shall be approved by the Engineer per manufacturer's recommendation.
- Location of cable entrances on signal pole shall be a minimum of 1' from any flange or base plate.
- Hybrid cable entrances on signal pole shall be drilled for watertight coupling as required.
- Hybrid cable shall have a drip loop at the entrance into signal pole, luminaire mast arm and signal mast arm.
- A single hybrid cable shall run continuous and shall not be twisted from the miscellaneous attachment to the controller cabinet. No splices shall be allowed.
- Use the manufacturer's Effective Projected Area (EPA) for miscellaneous attachment. The maximum EPA for each miscellaneous attachment shall be 1.6 square feet.
- Maximum of two miscellaneous attachments per traffic signal structure.
- Maximum of one miscellaneous attachment per mast arm.
- Miscellaneous attachment shall be mounted using clamping devices.
- For details not shown, see 2006 "STANDARD PLANS" and 2006 "REVISED STANDARD PLANS".

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

NO SCALE

BRANCH CHIEF JEFFREY B WOODY	DESIGN	BY <i>E LOPEZ</i>	CHECKED <i>K C LIU</i>	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES DESIGN AND TECHNICAL SERVICES SPECIAL DESIGNS BRANCH	BRIDGE NO.	N/A	ELECTRICAL SYSTEMS SIGNAL AND LIGHTING, MISCELLANEOUS ATTACHMENT	SES-1
	DETAILS	BY <i>A R DUDSAK</i>	CHECKED <i>K C LIU</i>			POST MILE	R9.505/R9.571		
	QUANTITIES	BY	CHECKED						



CASE A

Typical driveway, sidewalk not depressed

CASE B

Driveway with depressed sidewalk

SECTIONS

CURB QUANTITIES

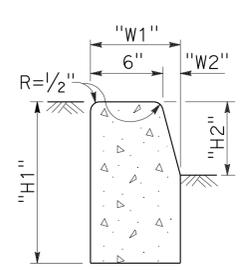
TYPE	CUBIC YARDS PER LINEAR FOOT
A1-6	0.02585
A1-8	0.03084
A2-6	0.05903
A2-8	0.06379
A3-6	0.01036
A3-8	0.01435
B1-4	0.02185
B1-6	0.02930
B2-4	0.05515
B2-6	0.06171
B3-4	0.00641
B3-6	0.01074
B4	0.05709
D-4	0.04083
D-6	0.06804
E	0.06661

TABLE A

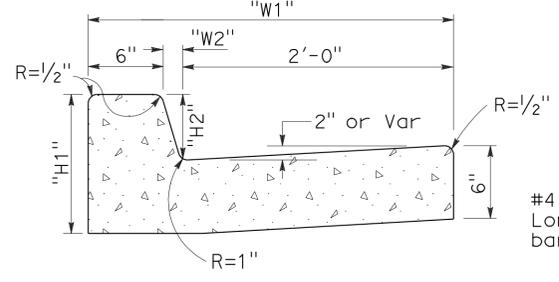
CURB TYPE	DIMENSIONS			
	"H1"	"H2"	"W1"	"W2"
A1-6	1'-2"	6"	7 1/2"	1 1/2"
A1-8	1'-4"	8"	8"	2"
A2-6	1'-0"	6"	2'-7 1/2"	1 1/2"
A2-8	1'-2"	8"	2'-8"	2"
A3-6	6"	5"	7 1/4"	1 1/4"
A3-8	8"	7"	7 3/4"	1 3/4"
B1-4	1'-0"	4"	7 1/2"	2 1/2"
B1-6	1'-2"	6"	9"	4"
B2-4	10"	4"	2'-7 1/2"	2 1/2"
B2-6	1'-0"	6"	2'-9"	4"
B3-4	4"	3"	7"	2"
B3-6	6"	5"	8 1/2"	3 1/2"
D-4	10"	4"	1'-6"	1'-1"
D-6	1'-0"	6"	2'-2"	1'-8"

To accompany plans dated 2-27-12

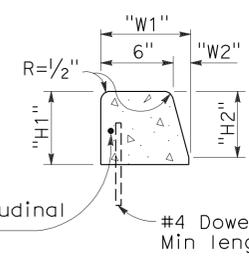
DRIVEWAYS



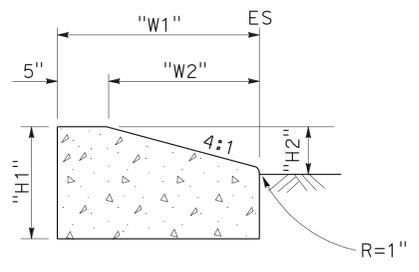
TYPE A1 CURBS
See Table A



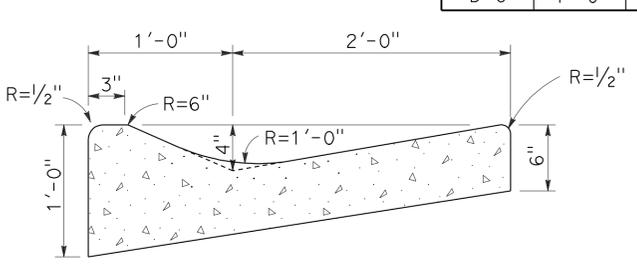
TYPE A2 CURBS
See Table A



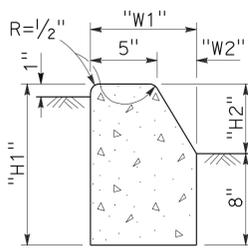
TYPE A3 CURBS
Superimposed on existing pavement
See Table A



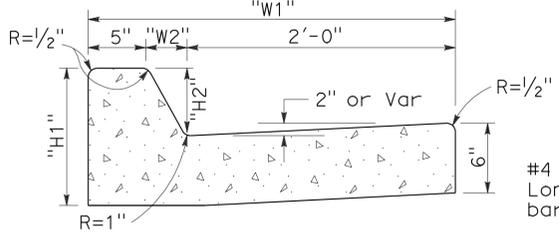
TYPE D CURBS
See Table A



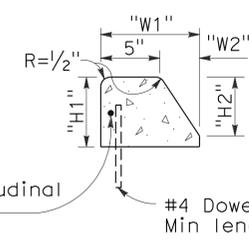
TYPE E CURB



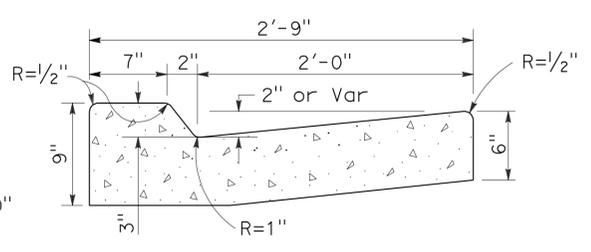
TYPE B1 CURBS
See Table A



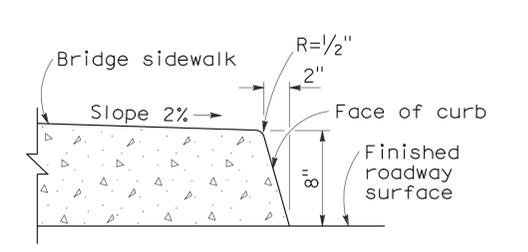
TYPE B2 CURBS
See Table A



TYPE B3 CURBS
Superimposed on existing pavement
See Table A



TYPE B4 CURBS



TYPE H CURB
On Bridges

NOTES:

- Case A driveway section typically applies.
- Use Case B driveway section when ramp slopes would exceed 10% in Case A.
- Use Case B driveway section when sidewalk cross slope would exceed 2% in Case A.
- X=3'-0" except for curb heights over 10" where 4:1 slopes shall be used on curb slope.
- X is a variable when sidewalk is located where wheelchairs may traverse the surface. Slopes shall not exceed 8.33%.
- Sidewalk and ramp thickness "T" at driveway shall be 4" for residential and 6" for commercial.
- Difference in slope of the driveway ramp and the slope of a line between the gutter and a point on the roadway 5'-0" from gutter line shall not exceed 15%. Reduce driveway ramp slope, not gutter slope, where required.
- Minimum width of clear passageway for sidewalk shall be 4'-0".
- Retaining curbs and acquisition of construction easement may be necessary for narrow sidewalks or curb heights in excess of 6".
- Across the pedestrian route at curb ramp locations, the gutter pan slope shall not exceed 1" of depth for each 2'-0" of width.

CURBS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

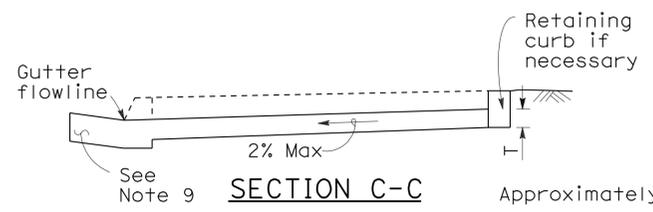
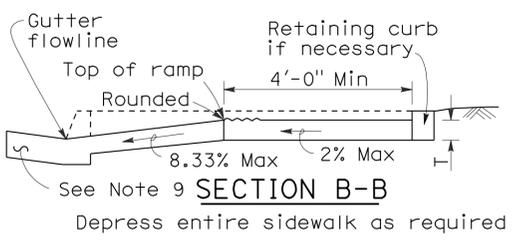
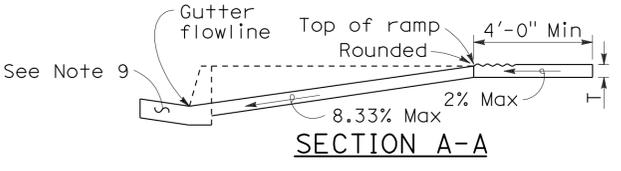
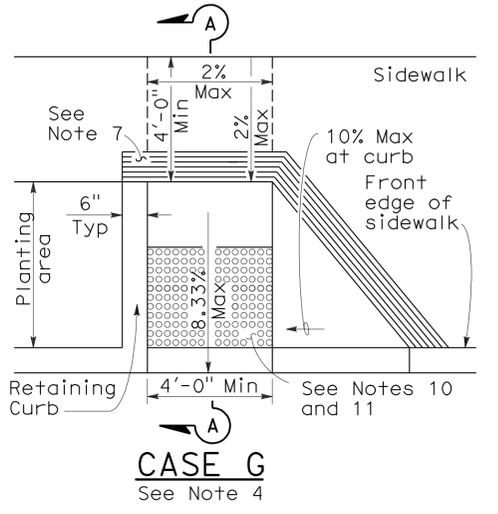
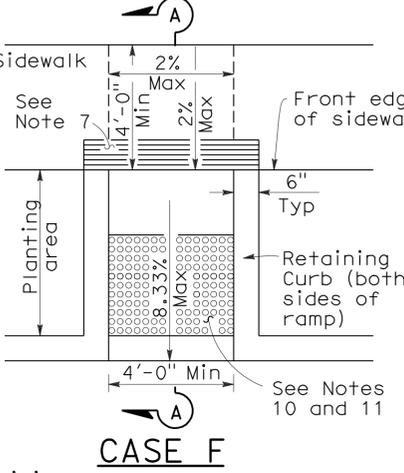
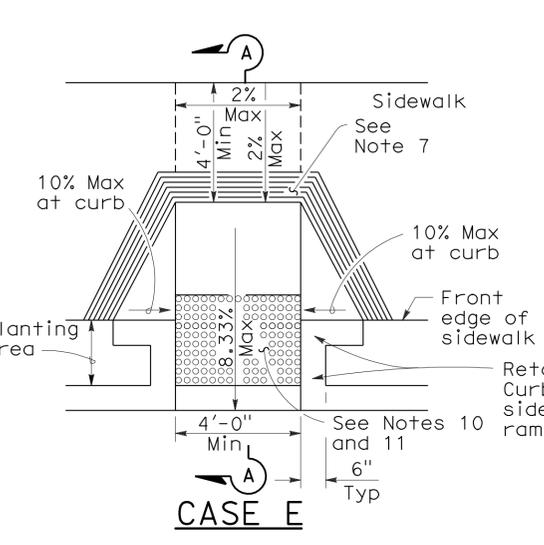
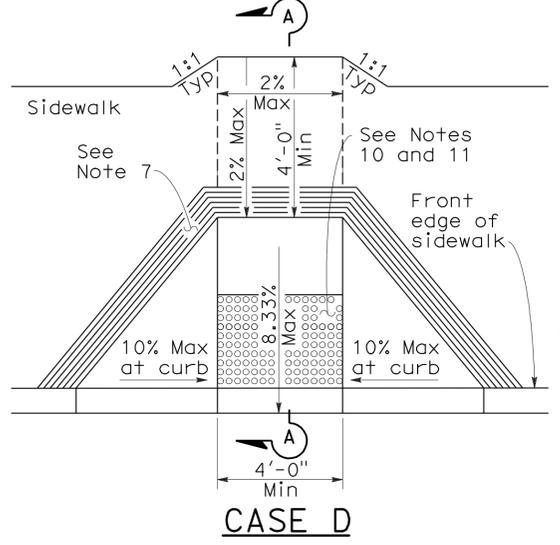
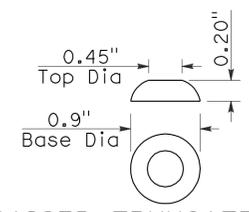
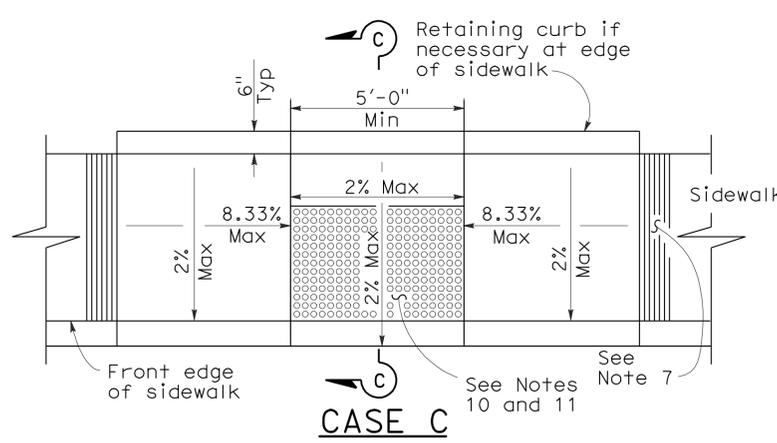
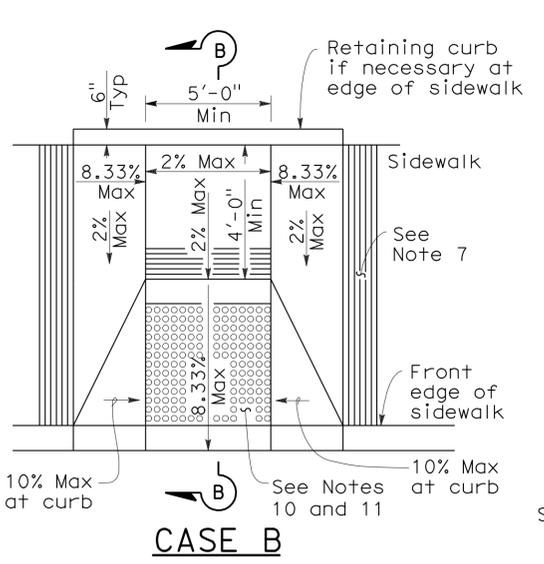
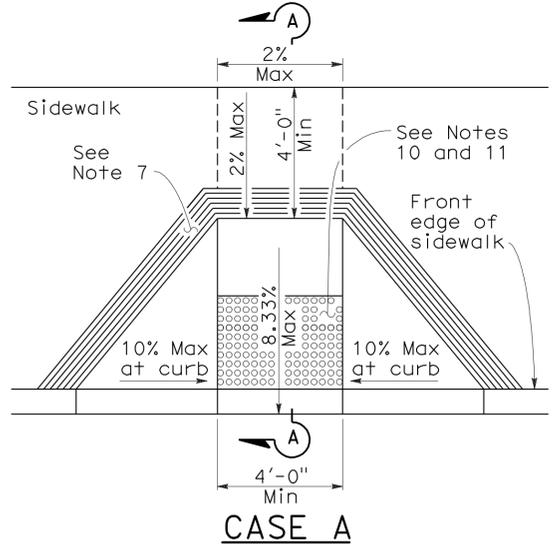
CURBS AND DRIVEWAYS

NO SCALE

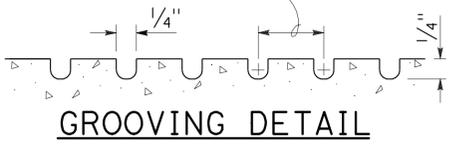
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	But	32	R9.5	22	42

H. David Cordova
 REGISTERED CIVIL ENGINEER
 September 1, 2006
 PLANS APPROVAL DATE
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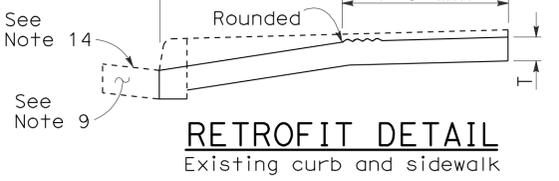
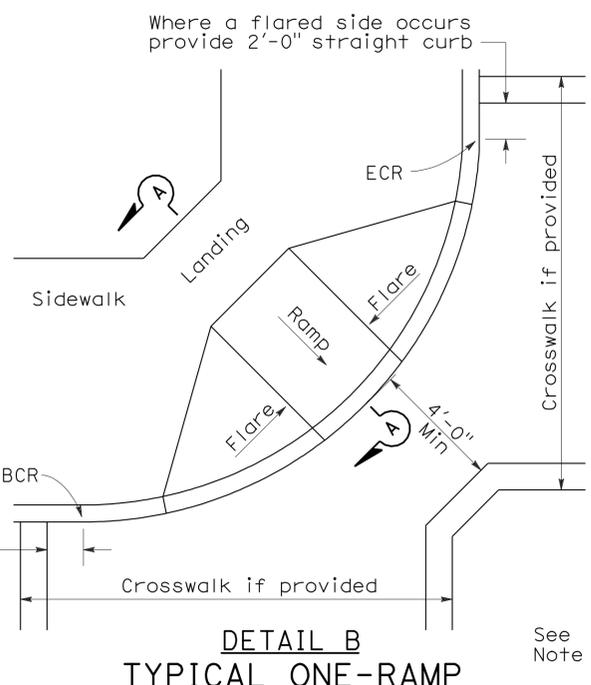
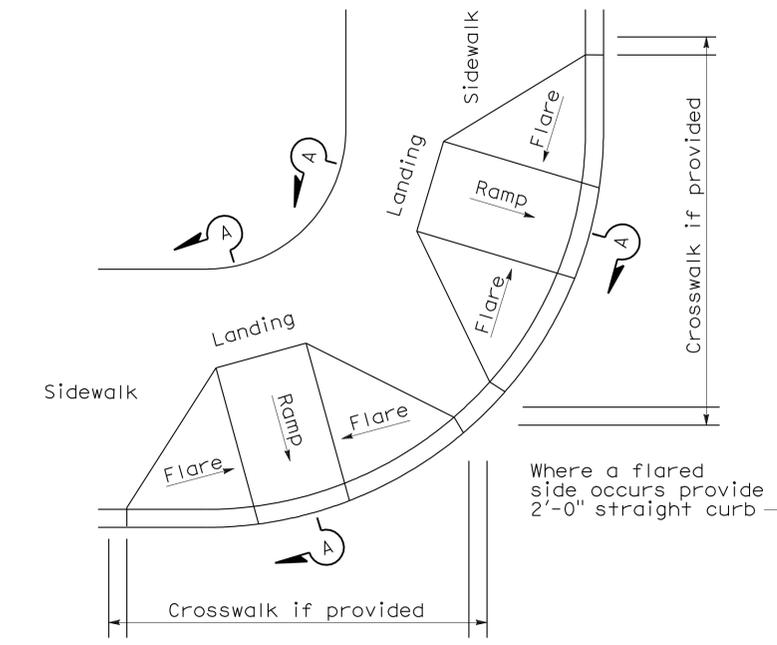
REGISTERED PROFESSIONAL ENGINEER
Hector David Cordova
No. C41957
Exp. 3-31-08
CIVIL
STATE OF CALIFORNIA



DETECTABLE WARNING SURFACE



CURB RAMP DETAILS
NO SCALE



NOTES:

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

TYPICAL TWO-RAMP CORNER INSTALLATION
See Note 1

TYPICAL ONE-RAMP CORNER INSTALLATION
See Notes 1 and 3

RETROFIT DETAIL
Existing curb and sidewalk

REVISED STANDARD PLAN RSP A88A

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

2006 REVISED STANDARD PLAN RSP A88A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	But	32	R9.5	23	42

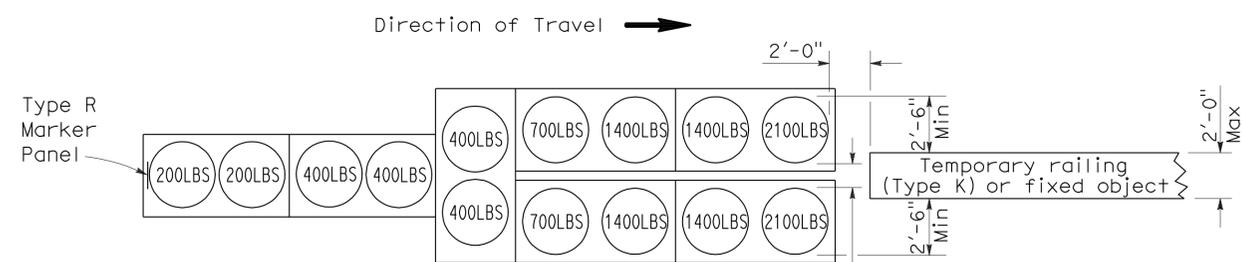
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

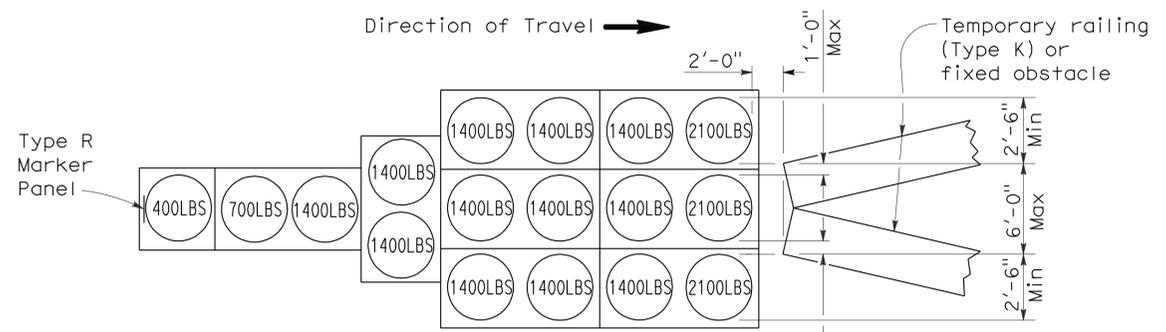
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To accompany plans dated 2-27-12



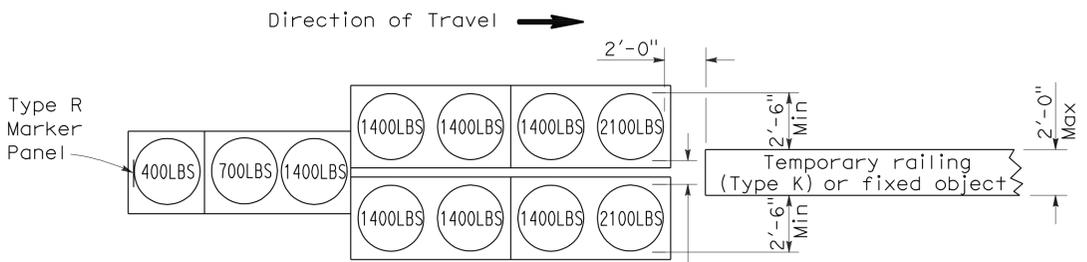
ARRAY 'TU14'

Approach speed 45 mph or more



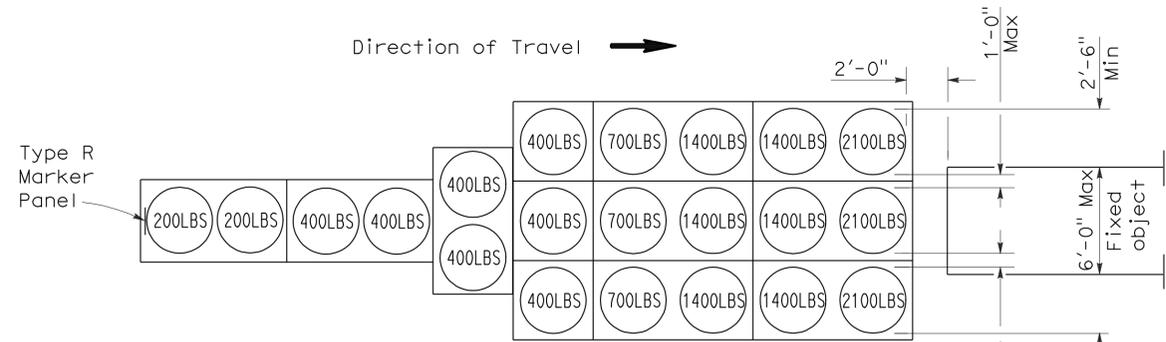
ARRAY 'TU17'

Approach speed less than 45 mph



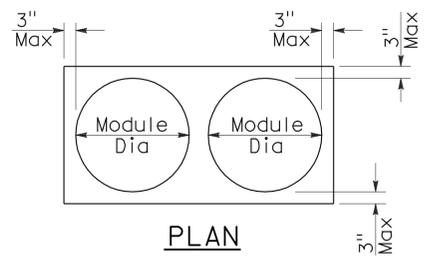
ARRAY 'TU11'

Approach speed less than 45 mph

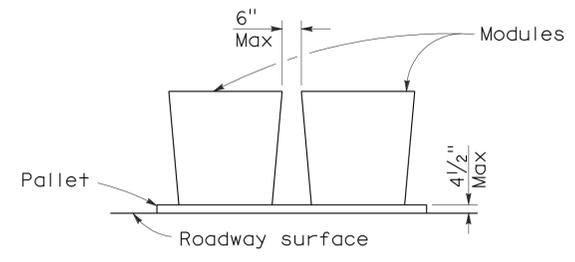


ARRAY 'TU21'

Approach speed 45 mph or more



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

REVISED STANDARD PLAN RSP T1A

2006 REVISED STANDARD PLAN RSP T1A

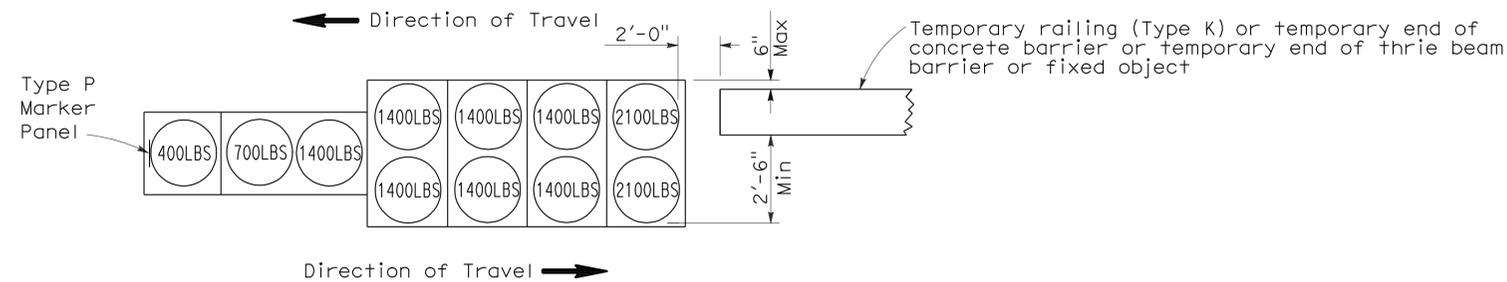
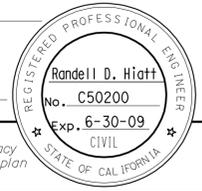
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	But	32	R9.5	24	42

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

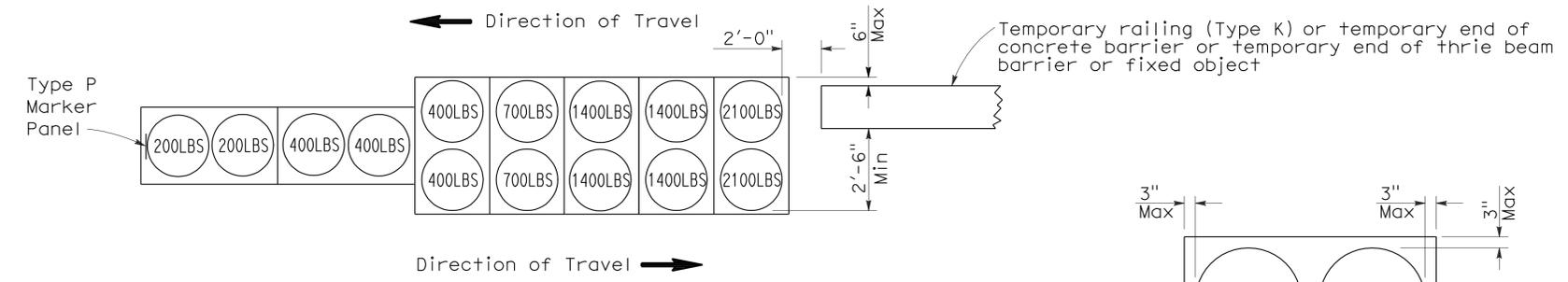
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To accompany plans dated 2-27-12



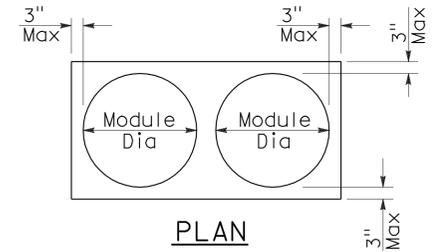
ARRAY 'TB11'

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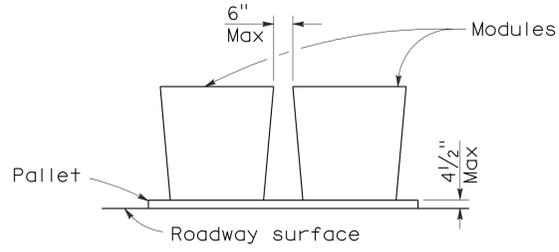


ARRAY 'TB14'

Approach speed 45 mph or more



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

REVISED STANDARD PLAN RSP T1B

2006 REVISED STANDARD PLAN RSP T1B

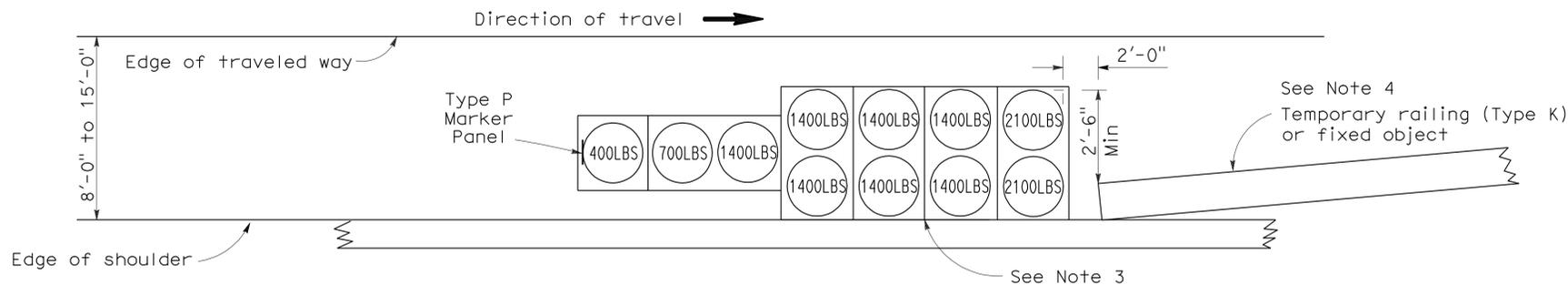
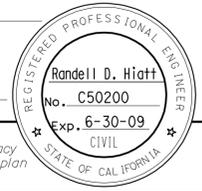
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	But	32	R9.5	25	42

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

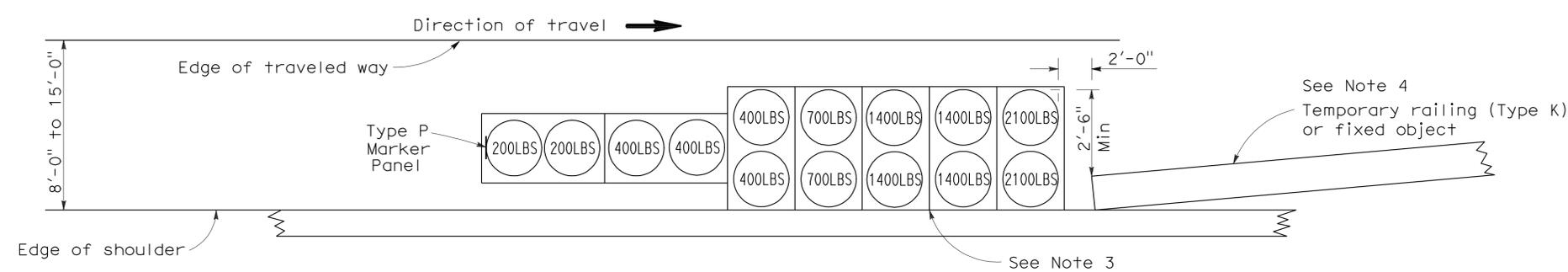
June 6, 2008
PLANS APPROVAL DATE

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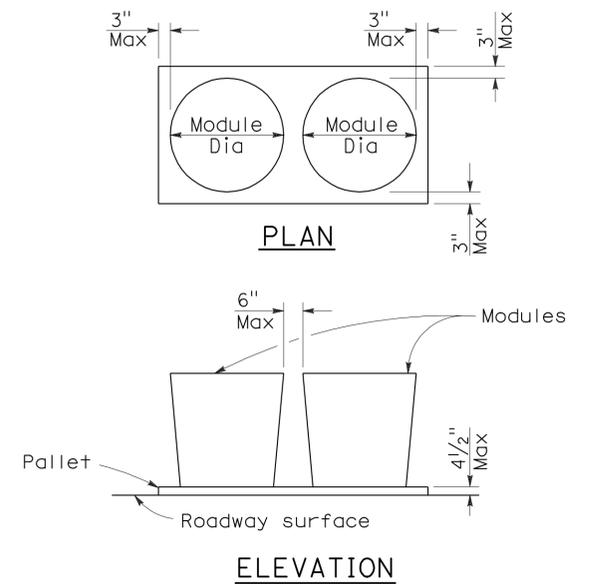
To accompany plans dated 2-27-12



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



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



CRASH CUSHION PALLET DETAIL
See Note 11

NOTES:

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

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

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

REVISED STANDARD PLAN RSP T2

2006 REVISED STANDARD PLAN RSP T2

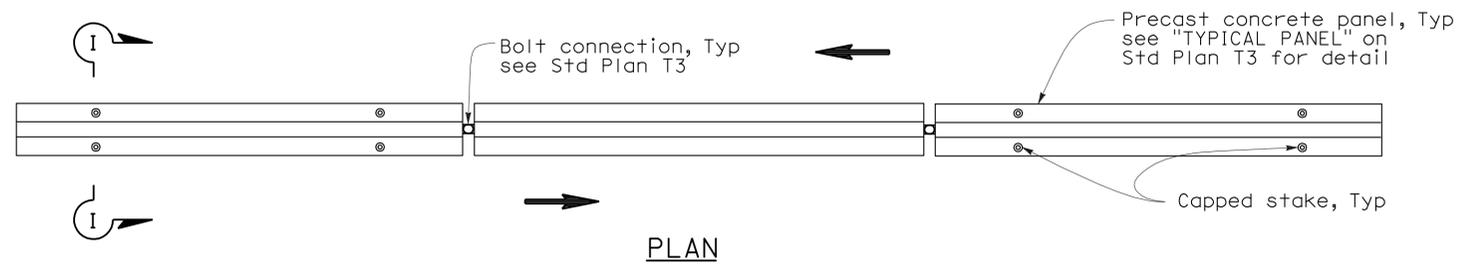
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	But	32	R9.5	26	42

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

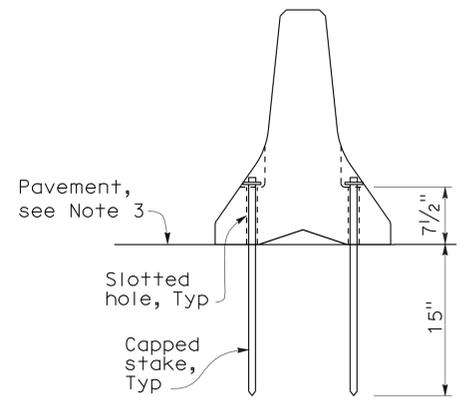
May 20, 2011
PLANS APPROVAL DATE

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To accompany plans dated 2-27-12

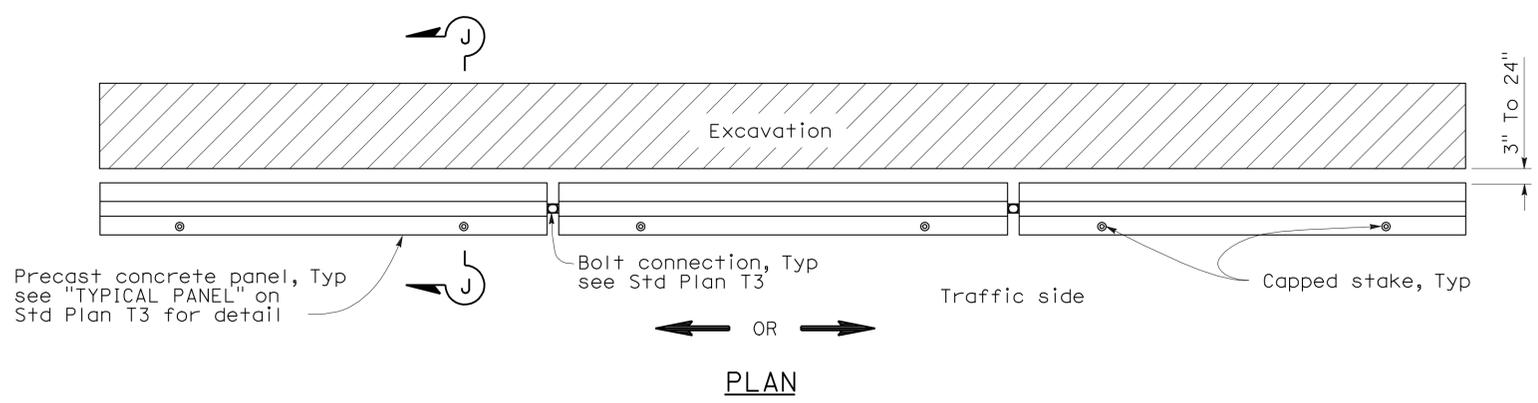


RAILING STAKING CONFIGURATION FOR TWO-WAY TRAFFIC
See Note 1

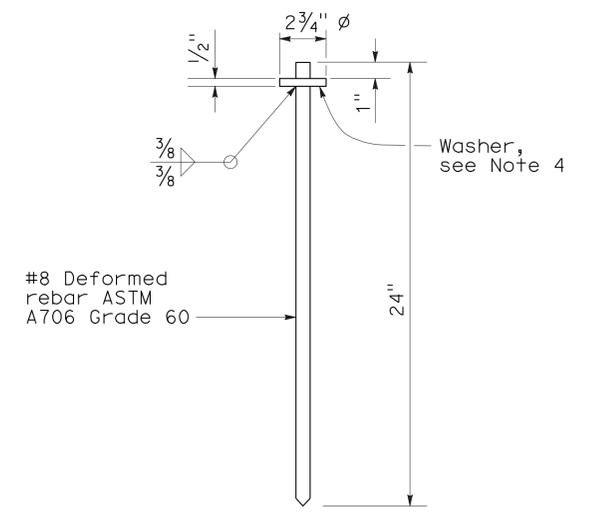
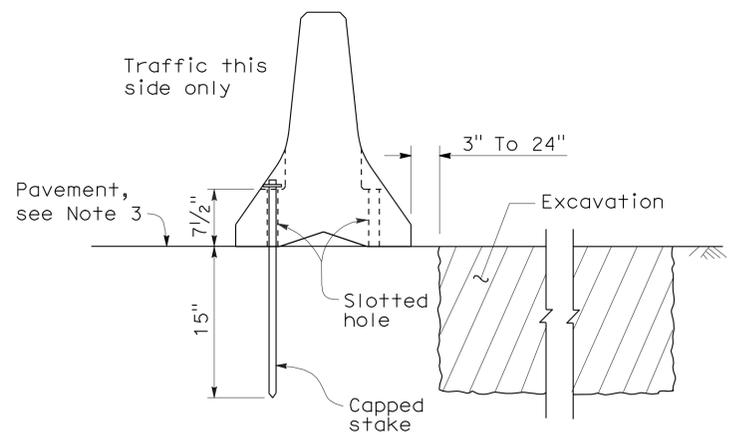


NOTES:

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



RAILING STAKING CONFIGURATION ADJACENT TO AN EXCAVATION
See Note 2



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**TEMPORARY RAILING
(TYPE K)**

NO SCALE

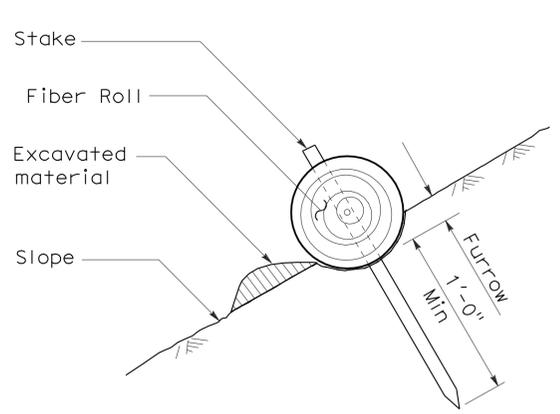
NSP T3A DATED MAY 20, 2011 SUPPLEMENTS
THE STANDARD PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP T3A

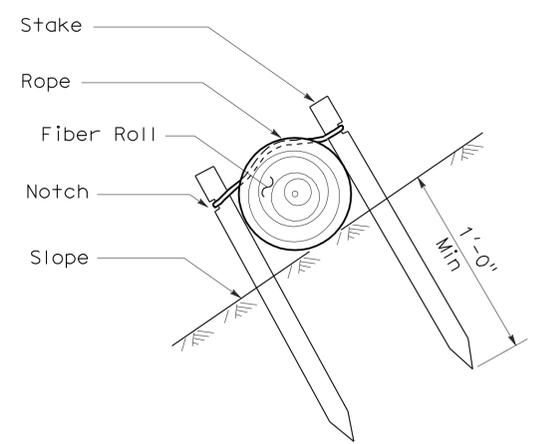
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	But	32	R9.5	27	42

Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT
 April 3, 2009
 PLANS APPROVAL DATE
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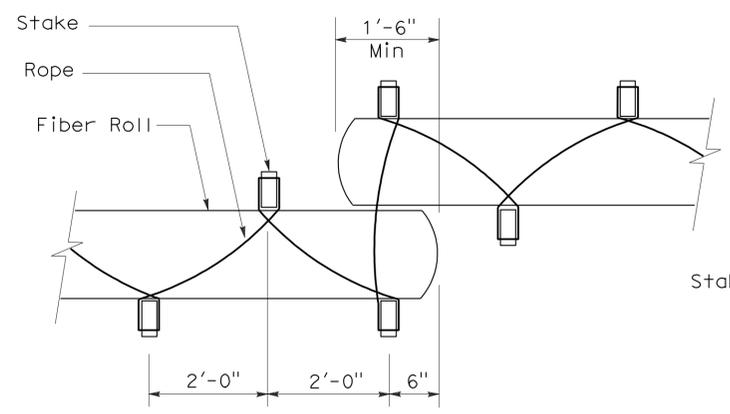
To accompany plans dated 2-27-12



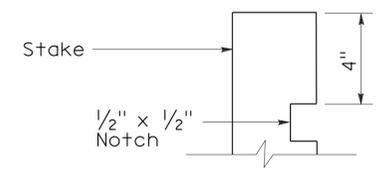
SECTION
TEMPORARY FIBER ROLL (TYPE 1)



SECTION
TEMPORARY FIBER ROLL (TYPE 2)

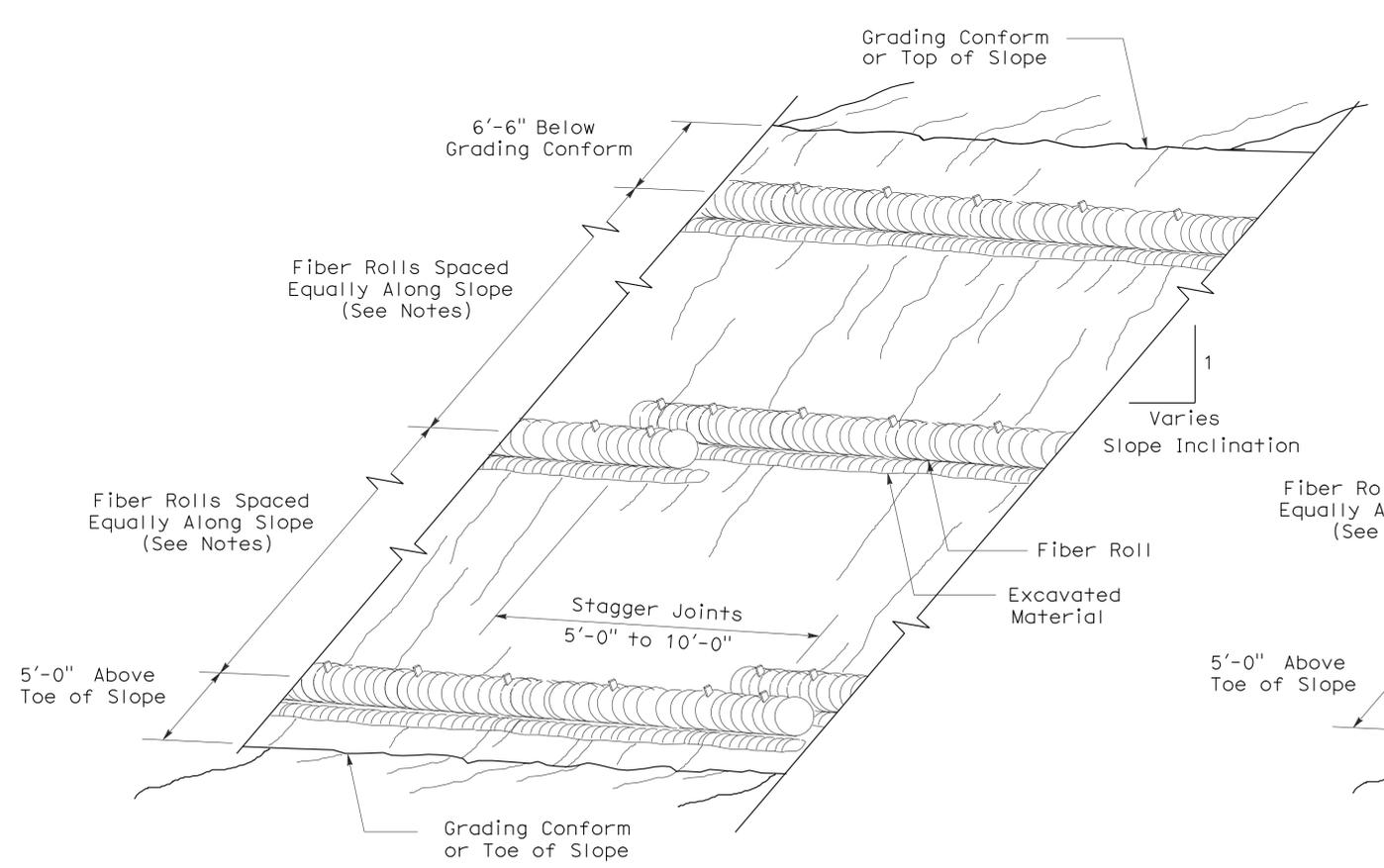


PLAN

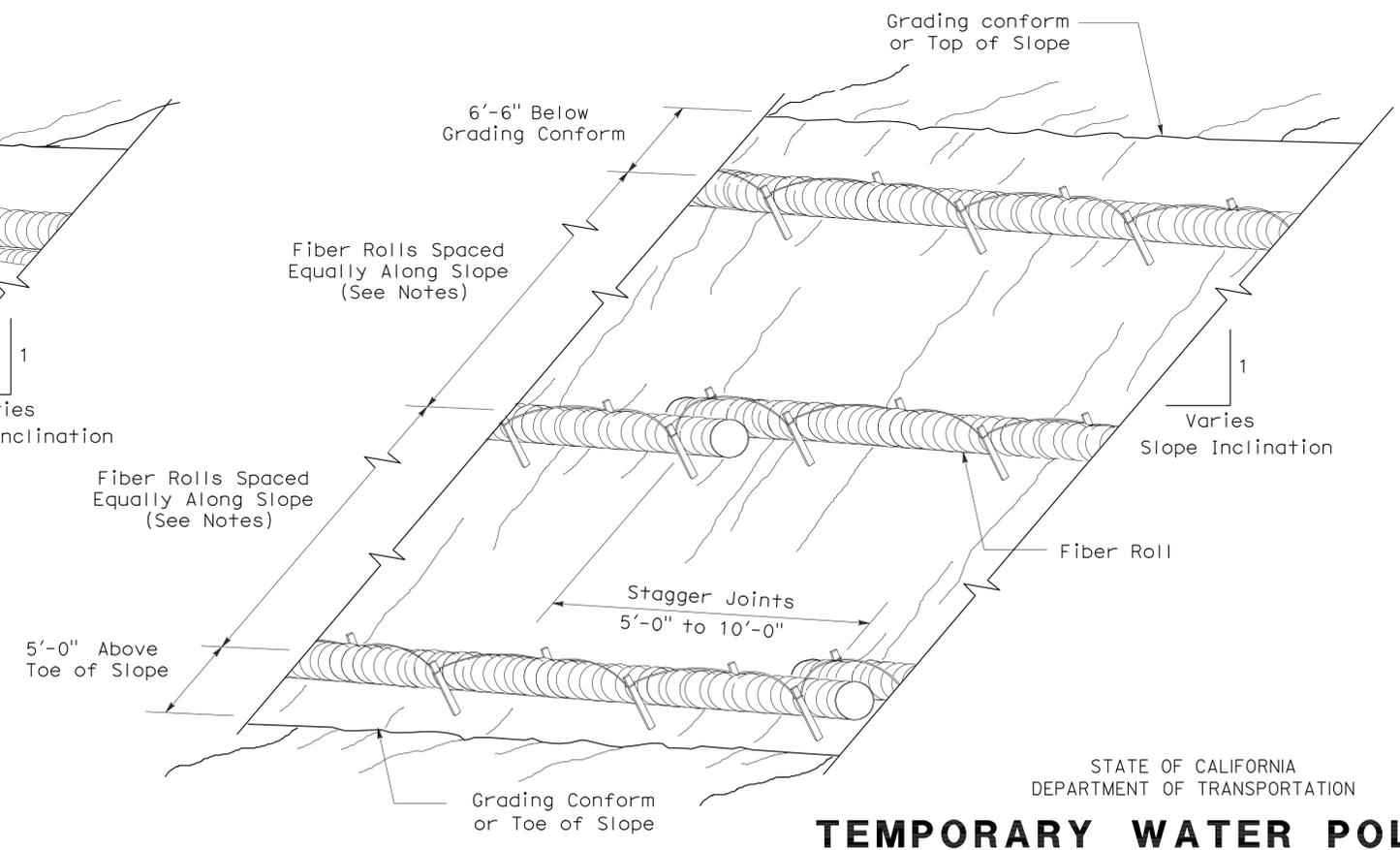


ELEVATION
STAKE NOTCH DETAIL

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



PERSPECTIVE
TEMPORARY FIBER ROLL (TYPE 1)



PERSPECTIVE
TEMPORARY FIBER ROLL (TYPE 2)

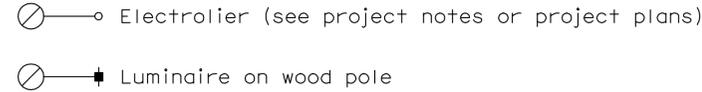
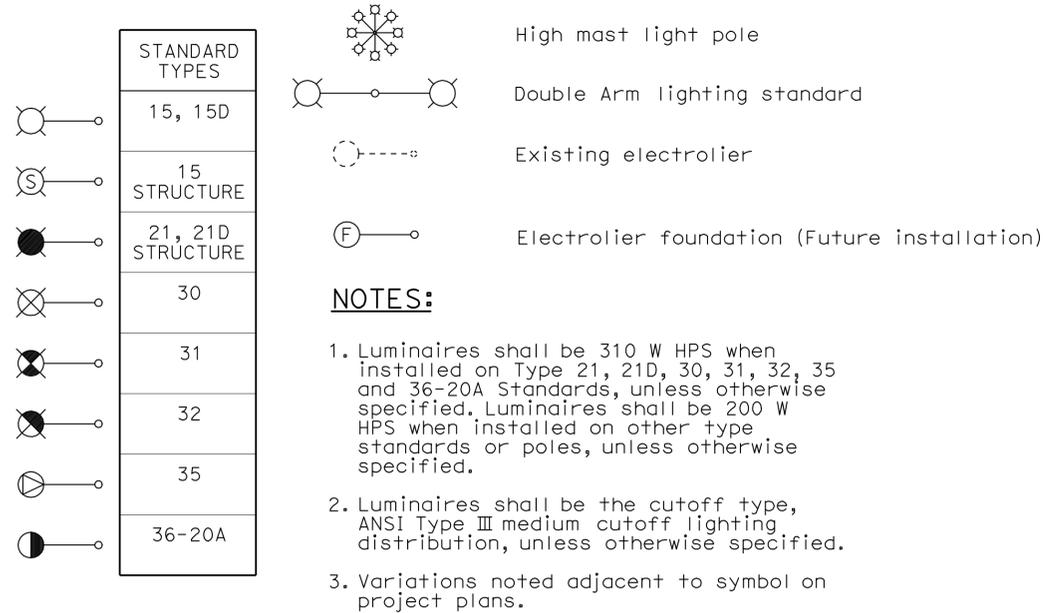
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY FIBER ROLL)
 NO SCALE

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

REVISED STANDARD PLAN RSP T56

2006 REVISED STANDARD PLAN RSP T56

ELECTROLIERS



STANDARD NOTES:

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

ABBREVIATIONS AND EQUIPMENT DESIGNATIONS

PROPOSED EXISTING

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	But	32	R9.5	28	42

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

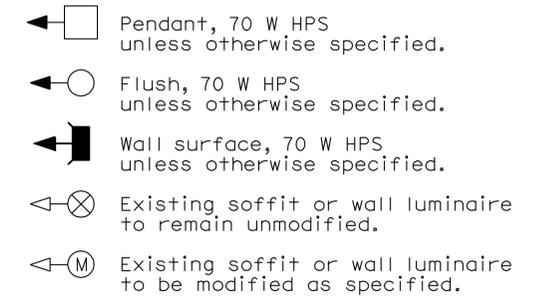
October 5, 2007
PLANS APPROVAL DATE

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

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

To accompany plans dated 2-27-12

SOFFIT AND WALL MOUNTED LUMINAIRES



NOTE:

Arrow indicates "street side" of luminaire.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

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

REVISED STANDARD PLAN RSP ES-1A

2006 REVISED STANDARD PLAN RSP ES-1A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	But	32	R9.5	29	42

Jeffery G. McRae
 REGISTERED ELECTRICAL ENGINEER
 October 5, 2007
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
 Jeffrey G. McRae
 No. E14512
 Exp. 6-30-08
 ELECTRICAL
 STATE OF CALIFORNIA

To accompany plans dated 2-27-12

CONDUIT

PROPOSED	EXISTING	
		Lighting Conduit, unless otherwise indicated or noted
		Traffic signal conduit
		Communication conduit
		Telephone conduit
		Fire alarm conduit
		Fiber optic conduit
		Conduit termination
		Conduit riser in/on structure or service pole

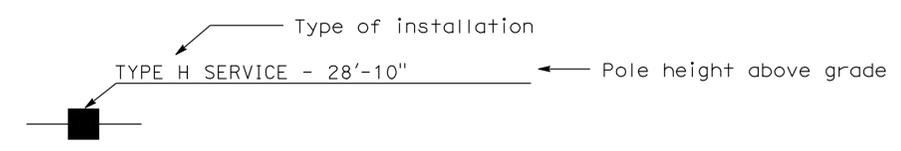
SIGNAL EQUIPMENT

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

SERVICE EQUIPMENT

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

POLE-MOUNTED SERVICE DESIGNATION



ILLUMINATED OVERHEAD SIGN

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

SIGNAL EQUIPMENT Cont

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

NOTES:

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

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(SYMBOLS AND ABBREVIATIONS)
 NO SCALE

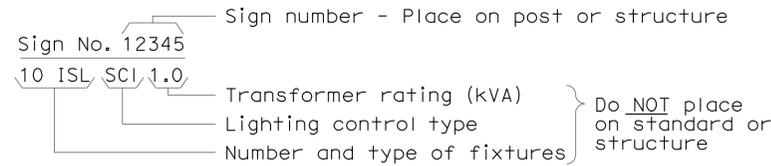
RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B
 DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1B

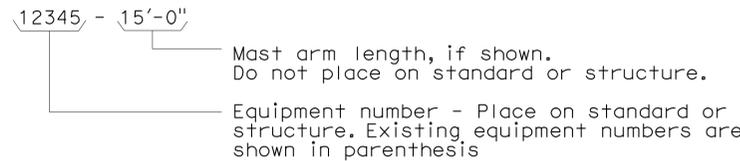
2006 REVISED STANDARD PLAN RSP ES-1B

EQUIPMENT IDENTIFICATION

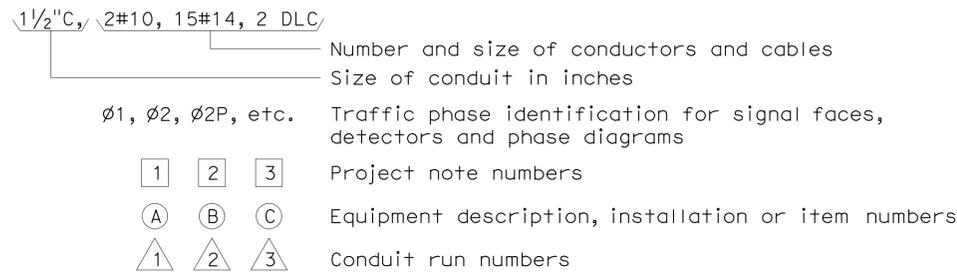
ILLUMINATED SIGN IDENTIFICATION NUMBER:



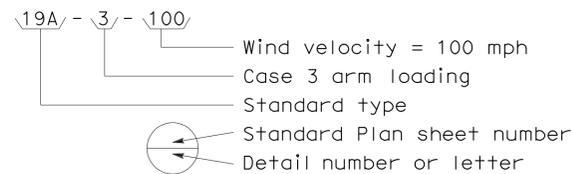
ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



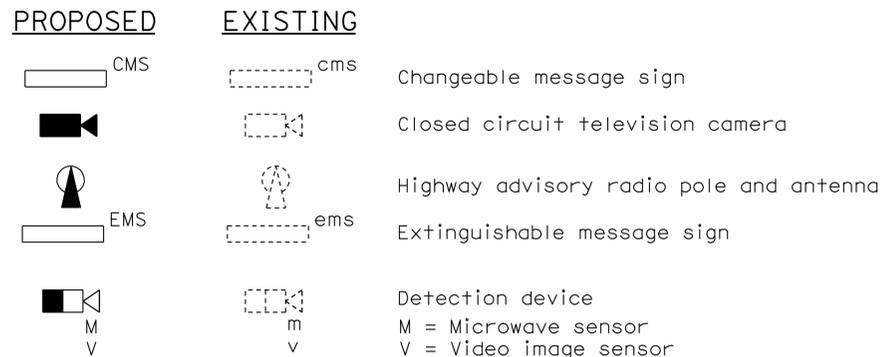
CONDUIT AND CONDUCTOR IDENTIFICATION:



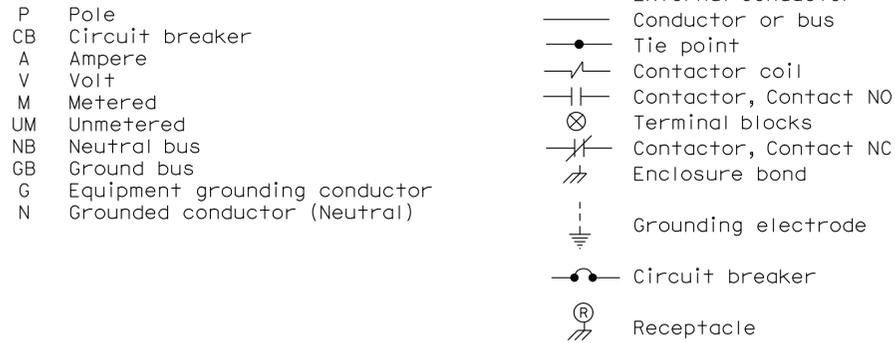
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



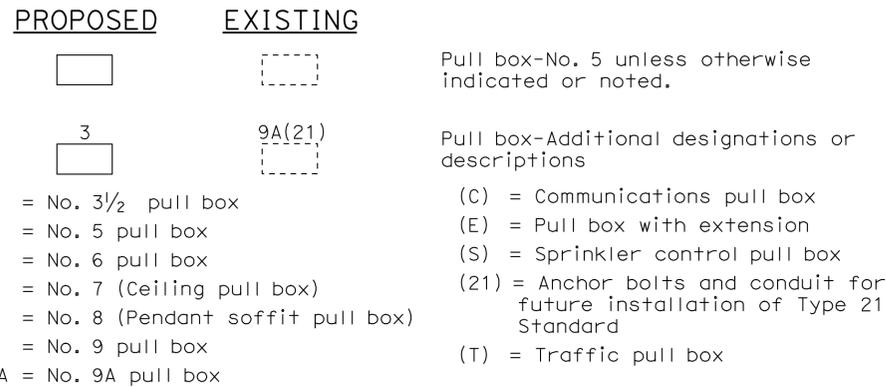
MISCELLANEOUS EQUIPMENT



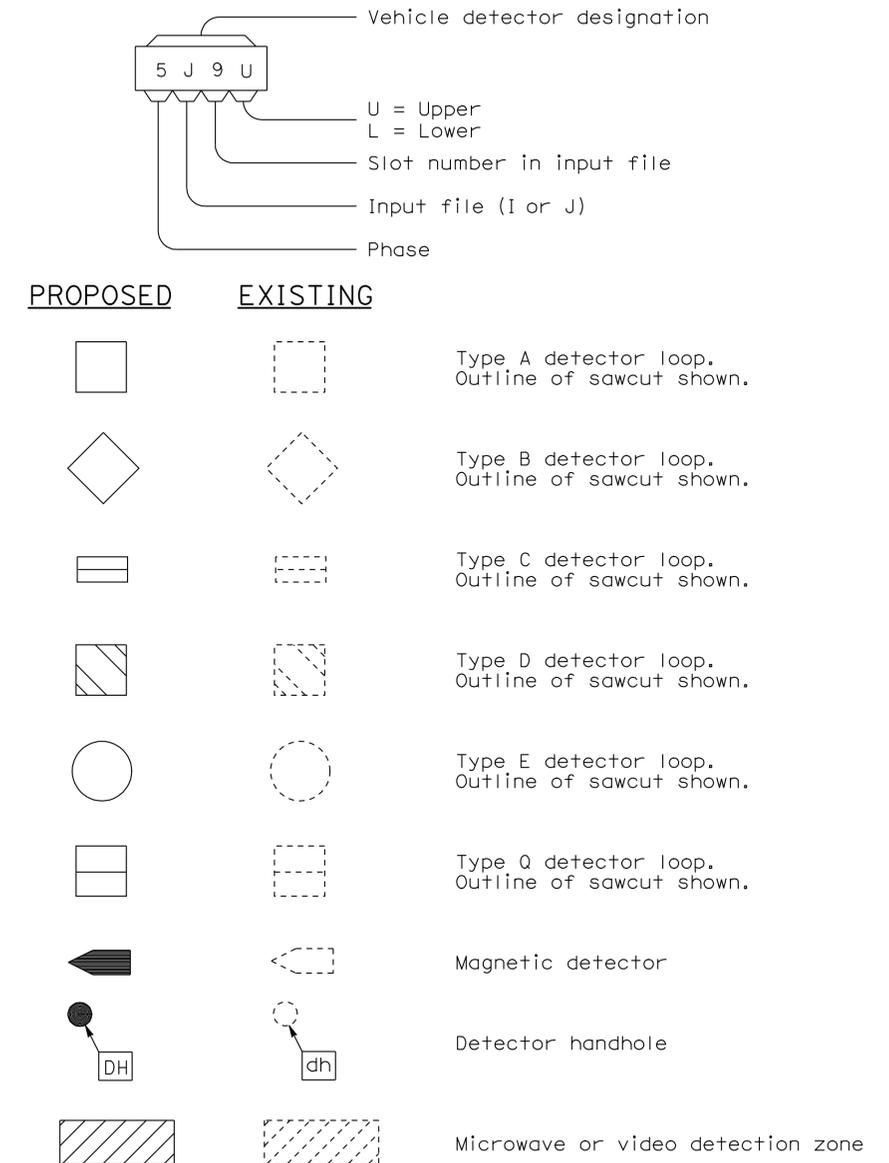
WIRING DIAGRAM LEGEND



PULL BOXES



VEHICLE DETECTORS



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(SYMBOLS AND ABBREVIATIONS)
 NO SCALE

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

REVISED STANDARD PLAN RSP ES-1C

2006 REVISED STANDARD PLAN RSP ES-1C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	But	32	R9.5	31	42

Jeffery G. McRae
 REGISTERED ELECTRICAL ENGINEER

October 5, 2007
 PLANS APPROVAL DATE

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

To accompany plans dated 2-27-12

NOTES-TYPE III SERVICE EQUIPMENT ENCLOSURES:

1. Service equipment enclosure and metering equipment shall meet the requirements of the service utility. The meter area shall have a sealable, lockable, weathertight cover that can be removed without the use of tools.
2. Service equipment enclosures shall be factory wired and conform to NEMA standards.
3. Dimensions of service equipment enclosures shall meet the requirements of the service utility.
4. The dead front panels on Type III service equipment enclosures shall have a continuous stainless steel or aluminum piano hinge. The panel in front of the breakers shall be secured with a latch or captive screws. No live parts shall be mounted on the dead front panel.
5. The exterior door shall have provisions for padlocking. The padlock hole shall be a minimum diameter of $\frac{1}{16}$ ".
6. Enclosures housing transformers of more than one kVA shall have effective screened ventilation louver of not less than 50 square inches. Screen shall be stainless steel No. 304, with a No. 10 size mesh. Framed screen shall be secured with at least four bolts.
7. Fasteners on the exterior of the enclosure shall be vandal-resistant and shall not be removable from the exterior. Exterior screws, nuts, bolts and washers shall be stainless steel.
8. Landing lugs for incoming service conductors shall be compatible with either copper or aluminum conductors sized to suit the conductors shown on the plan. Landing lugs shall be copper or tin-plated aluminum. Neutral bus shall be rated for 125 A and be suitable for copper or aluminum conductors unless otherwise specified. The terminal shall include but not be limited to:
 - a) Incoming terminals (landing lugs)
 - b) Neutral lugs
 - c) Solid neutral terminal strip
9. At least 6 standard single pole circuit breaker spaces, $\frac{3}{4}$ " nominal, shall be provided for branch circuits. Circuit breaker interiors shall be copper. Interiors of enclosure shall accept plug-in or cable-in/cable-out circuit breakers.
10. Control wiring shall be 600 V, 14 stranded machine tool wire. Where subject to flexing, 19 strand wire shall be used.
11. Main bus shall be rated for 125 A and shall be tin-plated copper.
12. A plastic laminated wiring diagram shall be provided with brass mounting eyelets and attached to the inside of the enclosure and the wiring diagram shall be affixed to the interior with a UL or ETL approved method.

13. An engraved phenolic nameplate on the dead front panel indicating the function of each circuit or device shall be installed with stainless steel rivets or stainless steel screws:
 - a) Adjacent to the breaker or device with character size a minimum of $\frac{1}{8}$ ".
 - b) At the top of the exterior door panel indicating State system number, voltage level and number of phases with character size a minimum of $\frac{3}{16}$ ".
14. The plan shows the approximate location of devices within the enclosure. Components may be rearranged, however, the "working" clearances within the service equipment enclosure shall be maintained.
15. In unpaved areas a raised portland cement concrete pad 2'-0" x 4" x width of foundation shall be constructed in front of new service equipment enclosure installation. Pad shall be set to elevation of foundation.
16. Foundation shall extend 2" minimum beyond edge of service equipment enclosure.
17. Internal bus, where shown, is typical only. Alternative design of proposed service equipment enclosure shall be submitted to the Engineer for approval.
18. Plug-in circuit breakers may be mounted in the vertical or horizontal position. Cable-in/cable-out circuit breakers shall be mounted in the vertical position.
19. Type III-AF and Type III-BF service equipment enclosures shall have the meter viewing windows located on the front side of the service equipment enclosures.
20. Type III-AR and Type III-BR service equipment enclosures shall be similarly constructed as Type III-AF and Type III-BF respectively, except the meter viewing windows shall be located on the back side of the service equipment enclosures.
21. Minimum clearance shall be required for front and back of service equipment enclosure per National Electrical Code, Article 110.26, "Spaces About Electric Equipment (600 Volts, Nominal, or Less)."

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

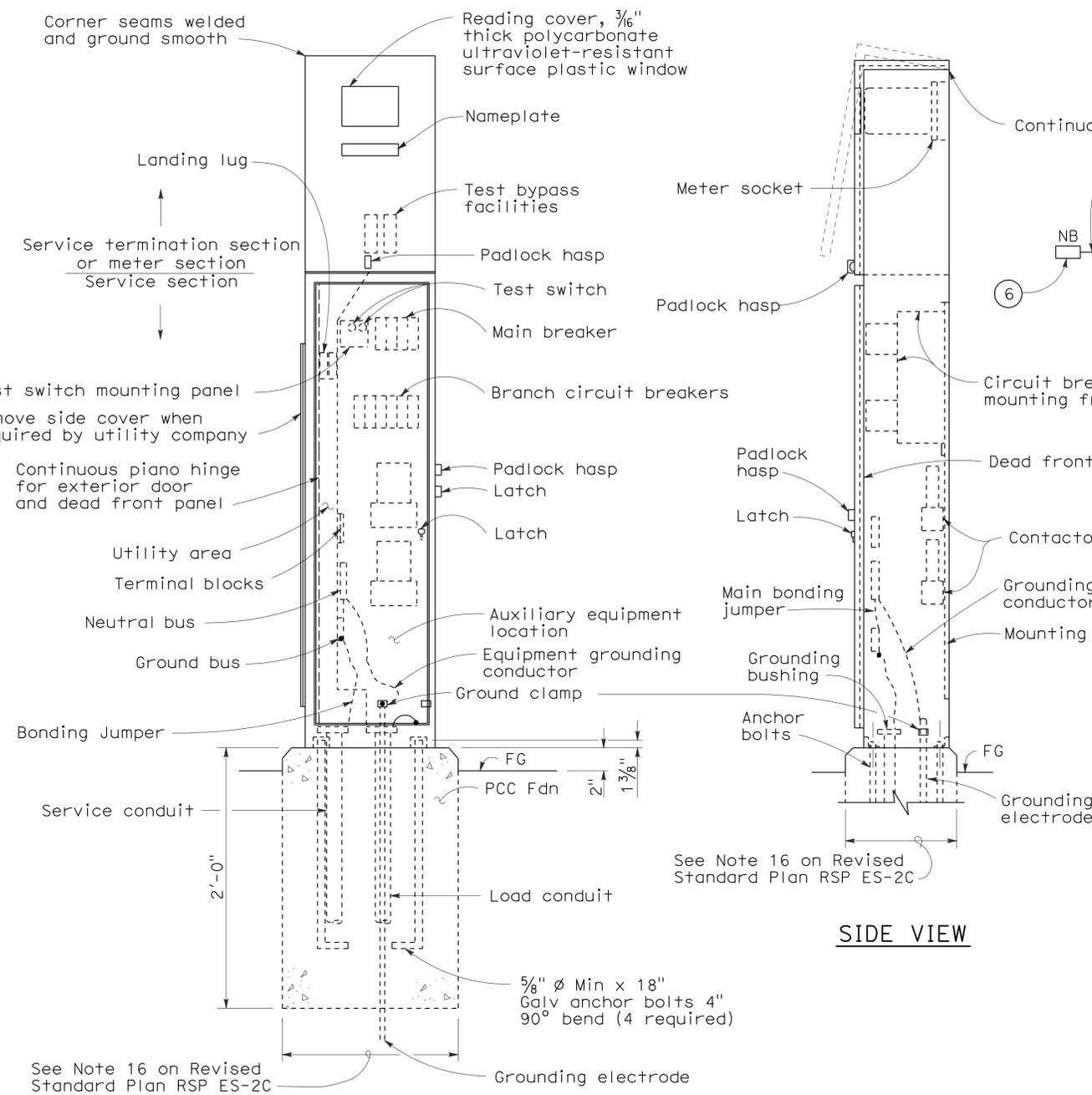
**ELECTRICAL SYSTEMS
 (SERVICE EQUIPMENT NOTES
 TYPE III SERIES)**

NO SCALE

RSP ES-2C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-2C
 DATED MAY 1, 2006 - PAGE 405 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-2C

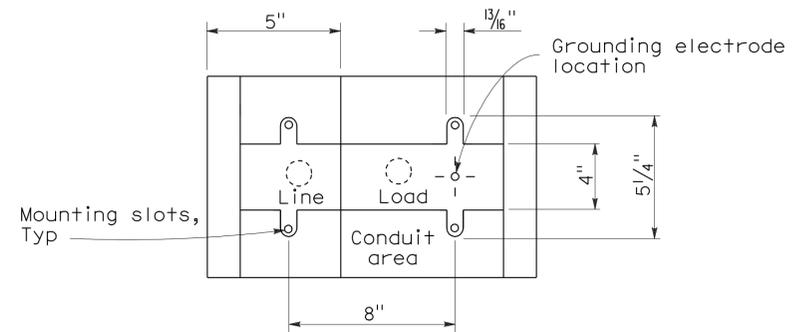
2006 REVISED STANDARD PLAN RSP ES-2C



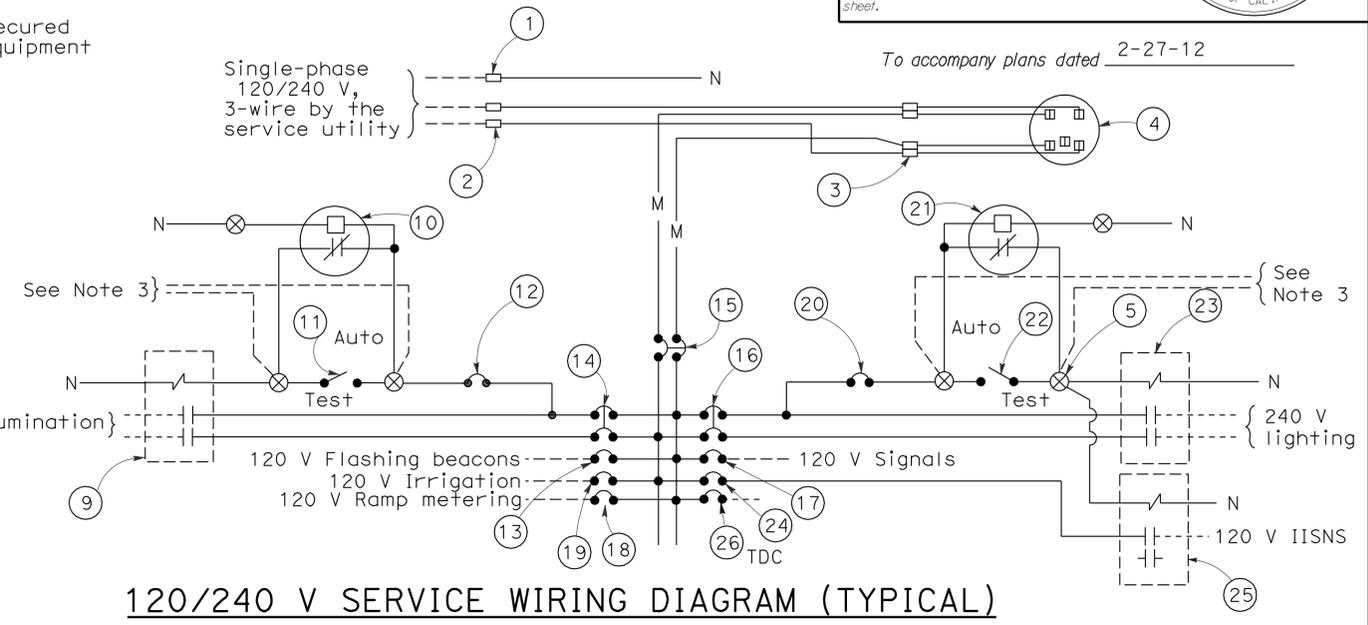
TYPE III-AF SERVICE EQUIPMENT ENCLOSURE (TYPICAL)

FRONT VIEW

SIDE VIEW



BASE FOR TYPE III-A SERVICE EQUIPMENT ENCLOSURE



120/240 V SERVICE WIRING DIAGRAM (TYPICAL)

TYPE III-A SERVICE (120/240 V) EQUIPMENT LEGEND					
ITEM No.	COMPONENT	NAME PLATE DESCRIPTION	ITEM No.	COMPONENT	NAME PLATE DESCRIPTION
1	Neutral lug		14	30 A, 240 V, 2P, CB	Sign Illumination
2	Landing lug (Note 6)		15	100 A, 240 V, 2P, CB	Main Breaker
3	Test bypass facility		16	30 A, 240 V, 2P, CB	Lighting
4	Meter socket and support		17	50 A, 120 V, 1P, CB	Signals
5	Terminal blocks		18	30 A, 120 V, 1P, CB	Ramp Metering
6	Neutral bus		19	20 A, 120 V, 1P, CB	Irrigation
7	Ground bus		20	15 A, 120 V, 1P, CB	Lighting Control
8	Grounding electrode		21	Photoelectric unit (Note 7)	
9	30 A, 2PNO Contactor	Sign Illumination	22	15 A, 1P, Test switch	Lighting Test Switch
10	Photoelectric unit (Note 7)		23	60 A, 2PNO Contactor	Lighting
11	15 A, 1P, Test switch	Sign Illumination Test Switch	24	15 A, 120 V, 1P, CB	IISNS
12	15 A, 120 V, 1P, CB	Sign Illumination Control	25	30 A, 2PNO Contactor	IISNS
13	15 A, 120 V, 1P, CB	Flashing Beacon	26	20 A, 120 V, 1P, CB	Telephone Demarcation Cabinet

NOTES: (FOR SERVICE EQUIPMENT ENCLOSURE)

- Voltage ratings of service equipment shall conform to the service voltages indicated on the plans.
- Unless otherwise indicated on the plans, service equipment items shall be provided for each service equipment enclosure as shown.
- Connect to remote test switch mounted on lighting standards, sign post or structure when required.
- Items No. 1 and 6 shall be isolated from the service equipment enclosure.
- Meter sockets shall be 5 clip type.
- The landing lug shall be suitable for multiple conductors.
- Type I photoelectric control shall be used unless otherwise indicated on the plans.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (SERVICE EQUIPMENT AND
 TYPICAL WIRING DIAGRAM,
 TYPE III - A SERIES)**

NO SCALE

RSP ES-2D DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-2D DATED MAY 1, 2006 - PAGE 406 OF THE STANDARD PLANS BOOK DATED MAY 2006.

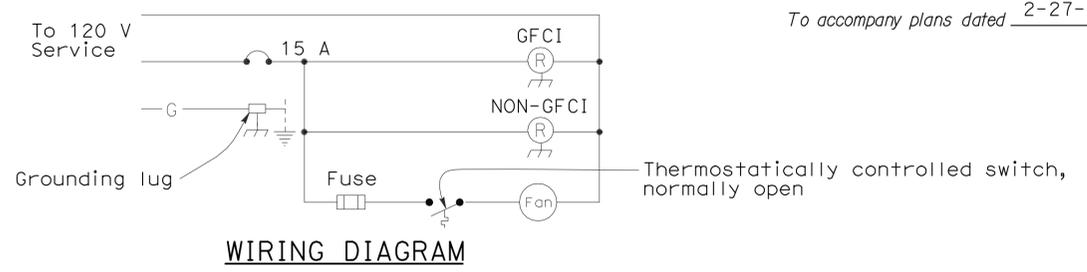
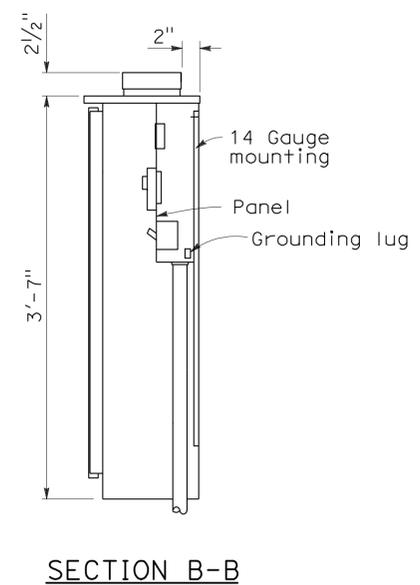
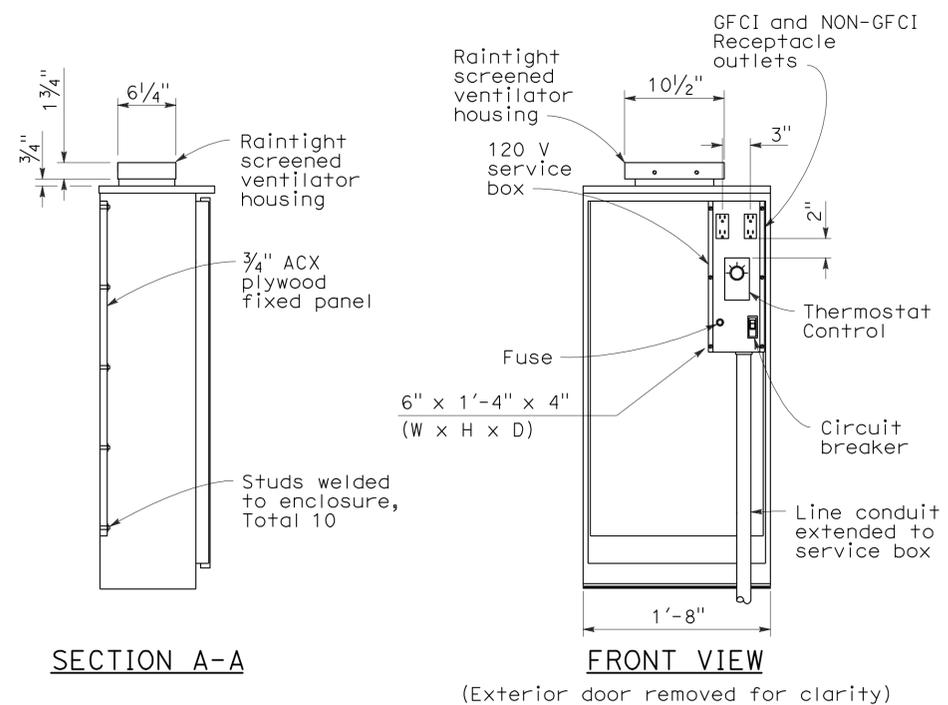
2006 REVISED STANDARD PLAN RSP ES-2D

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	But	32	R9.5	33	42

Jeffery G. McRae
 REGISTERED ELECTRICAL ENGINEER
 October 5, 2007
 PLANS APPROVAL DATE
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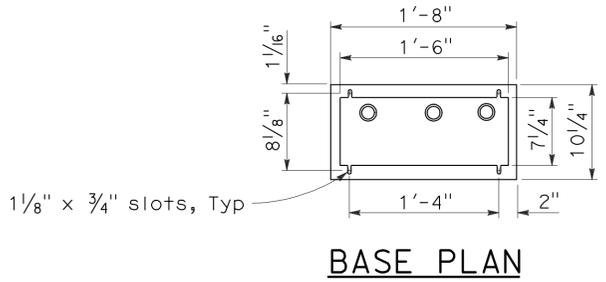
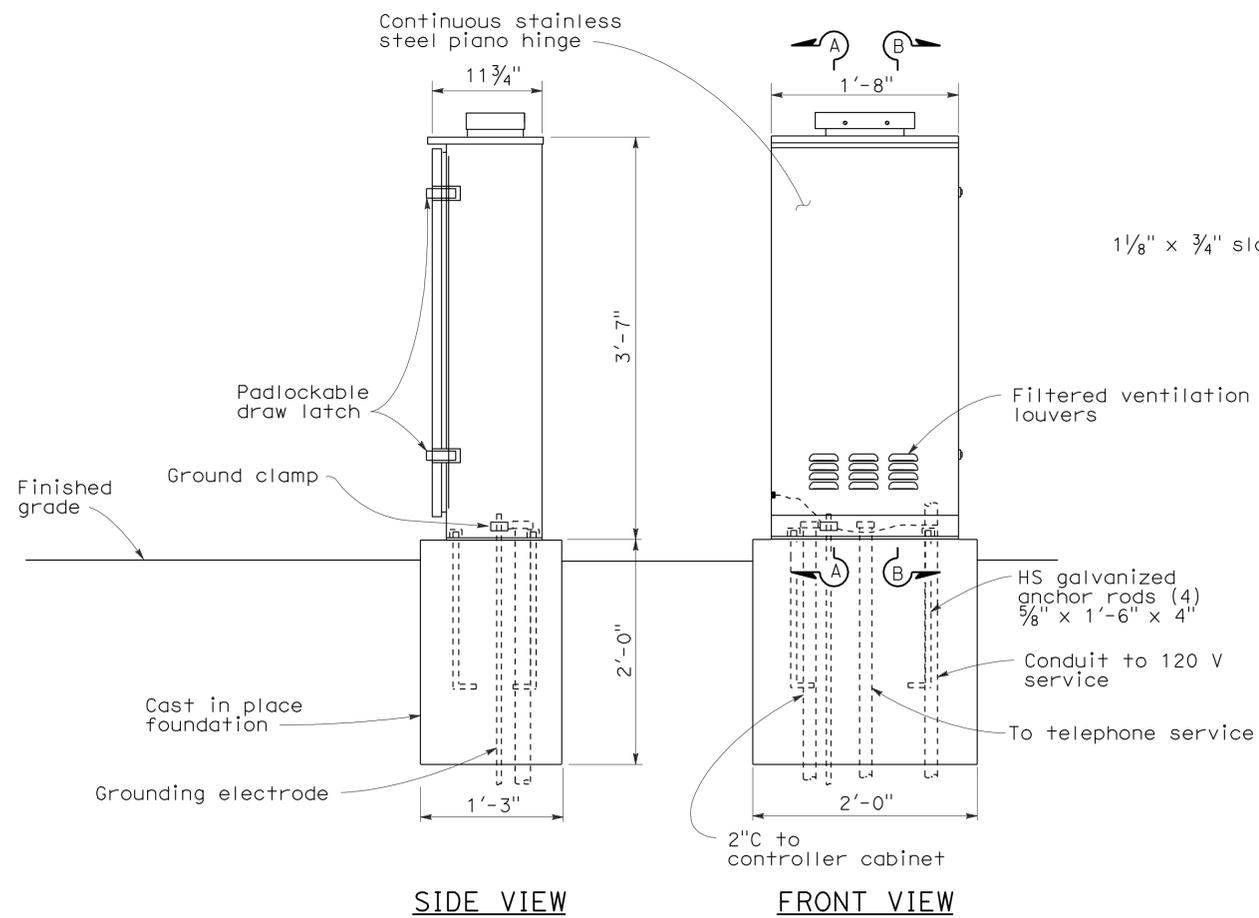
REGISTERED PROFESSIONAL ENGINEER
 Jeffery G. McRae
 No. E14512
 Exp. 6-30-08
 ELECTRICAL
 STATE OF CALIFORNIA

To accompany plans dated 2-27-12



NOTES:

1. Telephone demarcation cabinet shall be furnished with a mounting panel, outlets, circuit breaker and deadfront plates in place. Dimensions are nominal.
2. An approved mastic or caulking compound shall be placed on the foundation prior to placing the cabinet to seal openings between the bottom of the cabinet and the foundation.
3. In unpaved areas, a raised PCC pad shall be placed in front of the telephone demarcation cabinet. Pad shall be 2'-0" x 1'-10" x 4" thick, with 2" above the finished grade.
4. All conduits shall be bonded to the enclosure.
5. Telephone demarcation cabinet:
 - a) Material shall be anodized aluminum (1/8" thick).
 - b) Fabrication shall conform to the requirements of the Standard Specifications.
 - c) The exterior door shall be side hung and secured with a padlockable draw latch, the padlock hole shall be a minimum diameter of 1/16" to receive a padlock.
 - d) Ventilation louvers shall be located on the door.
 - e) Fan shall be mounted in a ventilator housing.
 - f) Fan shall be thermostatically controlled and adjustable to turn on between 80°F and 130°F.
 - g) Fan circuit shall be fused at 175 percent of the fan motor capacity.
 - h) Fan capacity shall be at least 25 cubic feet per minute.
 - i) Fasten fixed mounting panels with nuts, lock and flat washers to 3/16" ø x 1" studs welded to enclosure.



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (TELEPHONE DEMARCATI
 CABINET, TYPE B)**
 NO SCALE

RSP ES-3E DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-3E
 DATED MAY 1, 2006 - PAGE 414 OF THE STANDARD PLANS BOOK DATED MAY 2006.

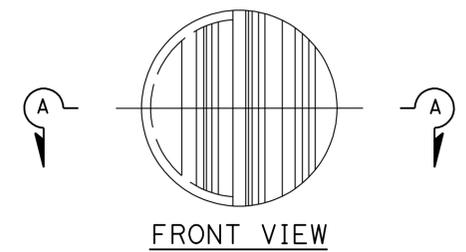
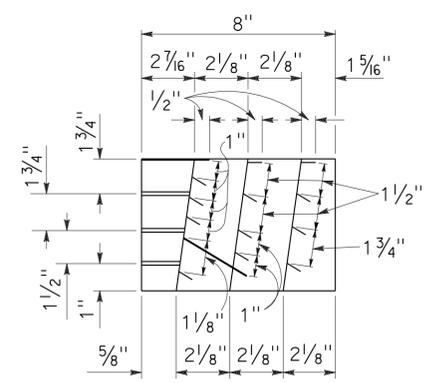
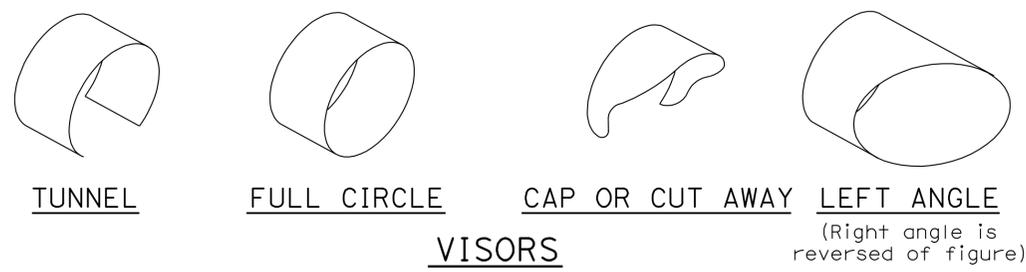
REVISED STANDARD PLAN RSP ES-3E

2006 REVISED STANDARD PLAN RSP ES-3E

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	But	32	R9.5	34	42

Jeffrey G. McRae
 REGISTERED ELECTRICAL ENGINEER
 June 6, 2008
 PLANS APPROVAL DATE
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.
 REGISTERED PROFESSIONAL ENGINEER
 Jeffrey G. McRae
 No. E14512
 Exp. 6-30-10
 ELECTRICAL
 STATE OF CALIFORNIA

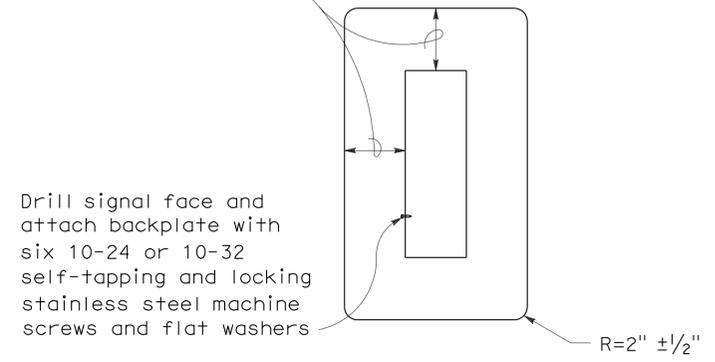
To accompany plans dated 2-27-12



DIRECTIONAL LOUVER

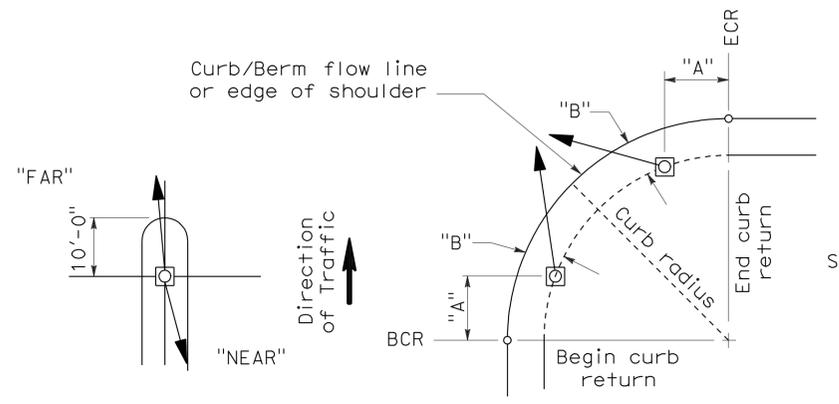
Directional louvers shall be oriented as directed by the Engineer and secured in place with one plated brass machine screw and nut.

8" ± 1/2" for 8" sections
 5 1/2" ± 1/2" for 12" sections



BACKPLATE

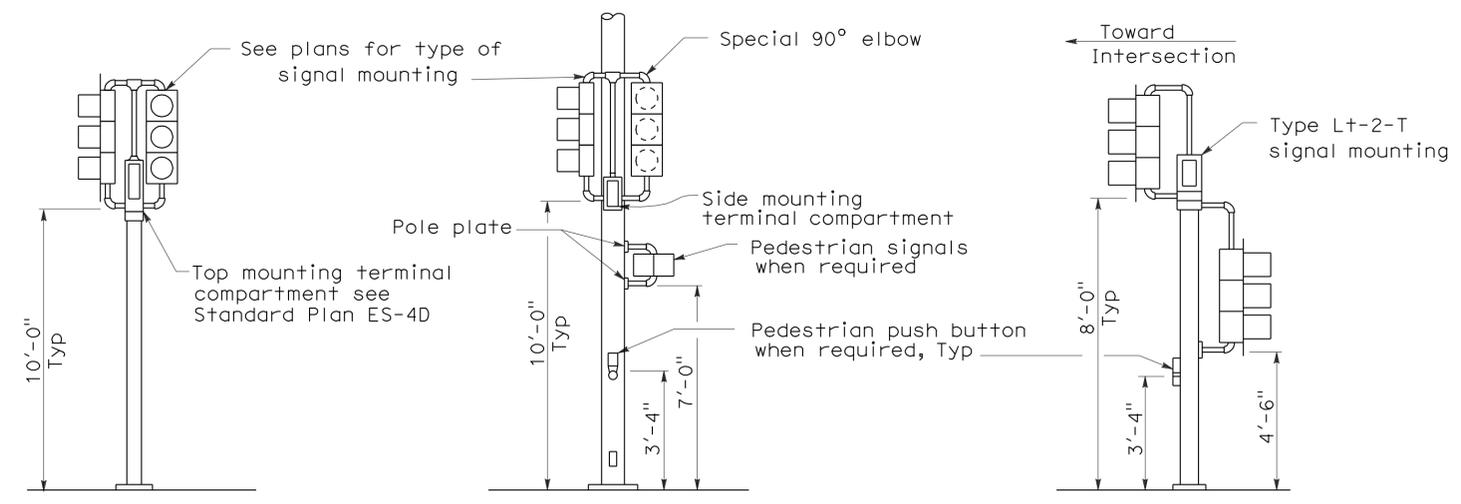
1/16" minimum thickness
 3001-14 aluminum, or plastic when specified



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.

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

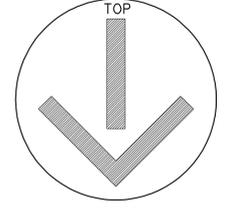
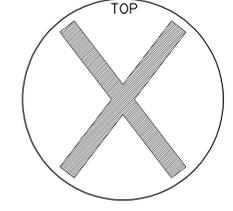
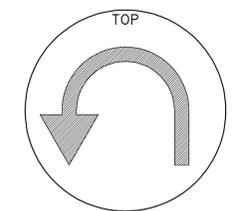
SIDE MOUNTED SIGNALS (SV AND SP)

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

TYPICAL SIGNAL INSTALLATIONS



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

NO SCALE

RSP ES-4C DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN ES-4C DATED MAY 1, 2006 - PAGE 420 OF THE STANDARD PLANS BOOK DATED MAY 2006.

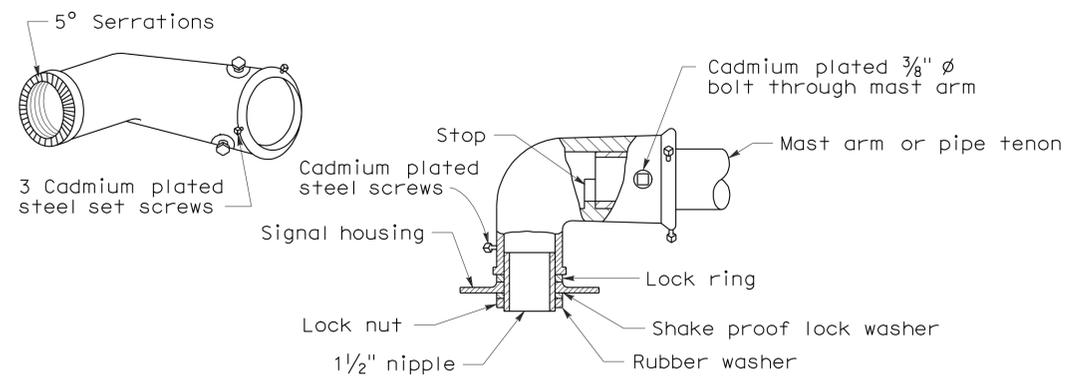
REVISED STANDARD PLAN RSP ES-4C

2006 REVISED STANDARD PLAN RSP ES-4C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	But	32	R9.5	35	42

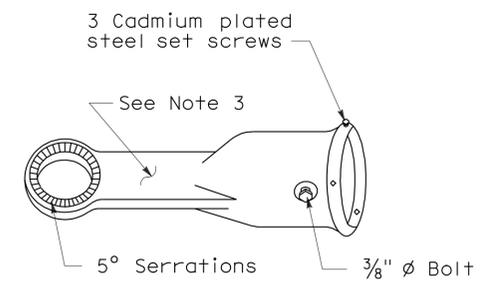
Jeffrey G. McRae
 REGISTERED ELECTRICAL ENGINEER
 June 6, 2008
 PLANS APPROVAL DATE
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 REGISTERED PROFESSIONAL ENGINEER
 Jeffrey G. McRae
 No. E14512
 Exp. 6-30-10
 ELECTRICAL
 STATE OF CALIFORNIA

To accompany plans dated 2-27-12



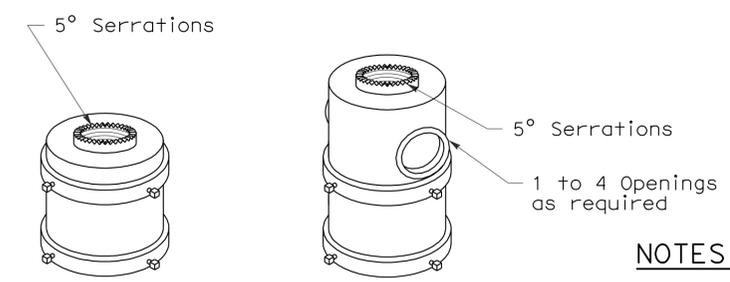
MAST ARM MOUNTING - TYPE "MAT"

For 2 NPS pipe, see Note 1.



MAST ARM MOUNTING - TYPE "MAS"

For 2 NPS pipe. See Note 1.



For one mounting For multiple mountings

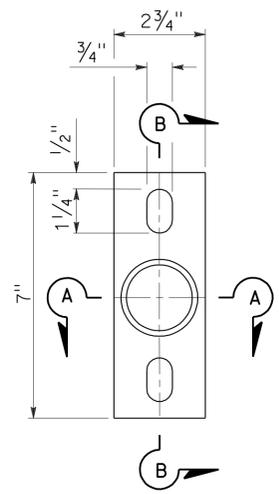
TOP MOUNTINGS

For 4 NPS pipe, see Note 2.

NOTES:

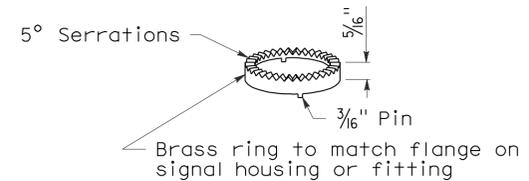
- After mast arm signal has been plumbed and secured, drill 7/16" hole through mast arm tenon in line with slip fitter hole. Place a cadmium plated 3/8" diameter galvanized bolt with washer under bolt head through hole and secure with washer, nut, and locknut. Seal openings between mast arm mountings and mast arm with mastic.
- (a) Threaded top mounted slip fitter openings shall be 1/2" NPS.
(b) Serrations in fittings shall match those on bottom of signal heads or in lock ring.
(c) Top opening shall be offset when backplate is used.
- Wireway shall have a cross section area of 0.95 square inch minimum. Minimum width of 1/2".

SIGNAL SLIP FITTERS



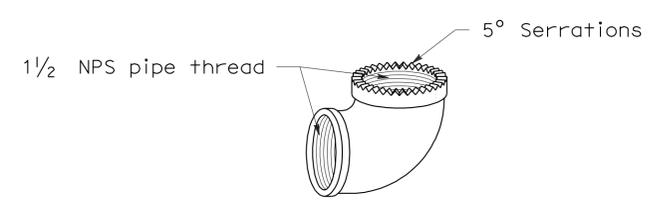
POLE PLATE

For side mountings



LOCK RING

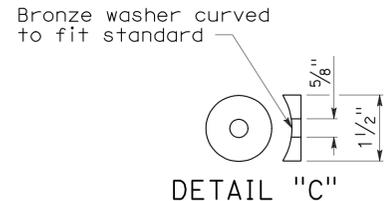
Use where locking ring is not integral with signal housing or fitting.



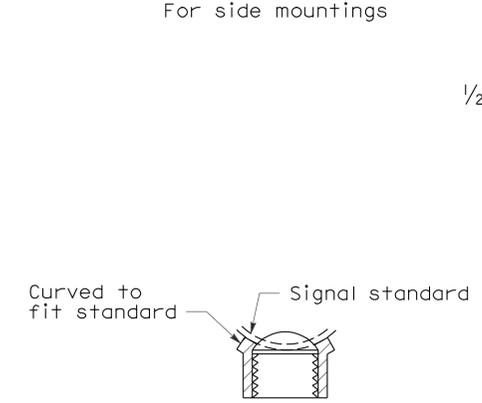
SPECIAL 90° ELBOW

One for each signal head, except those with special slip fitter mounting

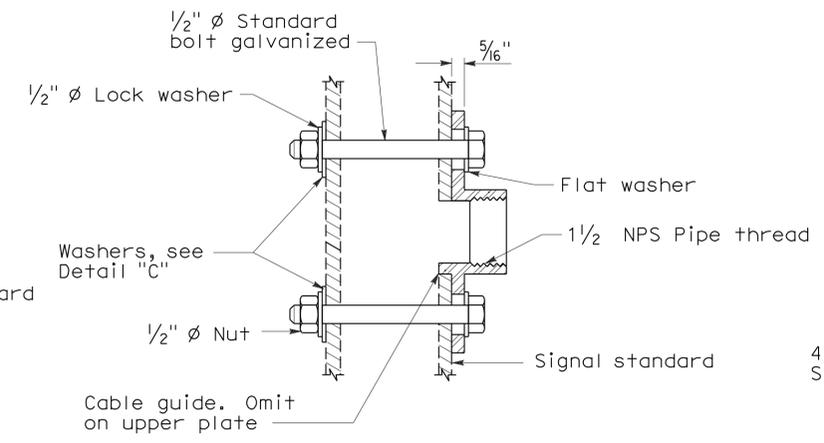
MISCELLANEOUS MOUNTING HARDWARE



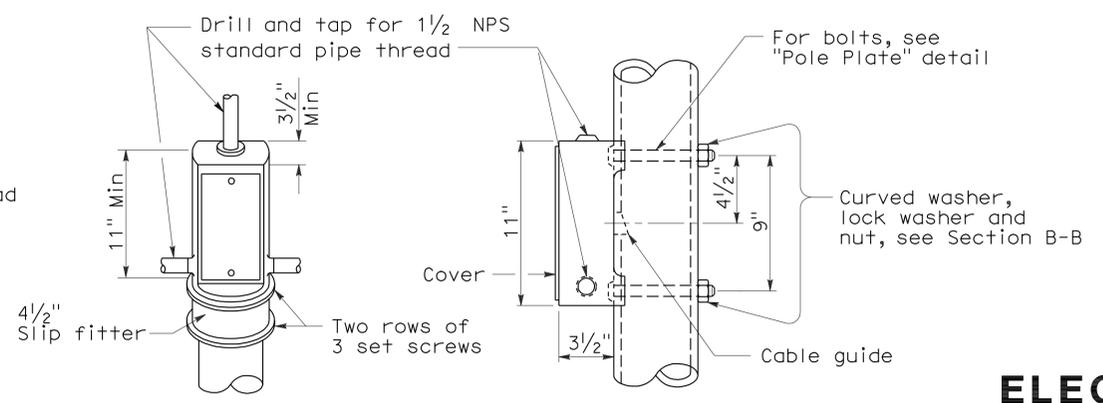
DETAIL "C"



SECTION A-A



SECTION B-B



TOP MOUNTING

SIDE MOUNTING

TERMINAL COMPARTMENTS

ELECTRICAL SYSTEMS (SIGNAL HEADS AND MOUNTINGS)

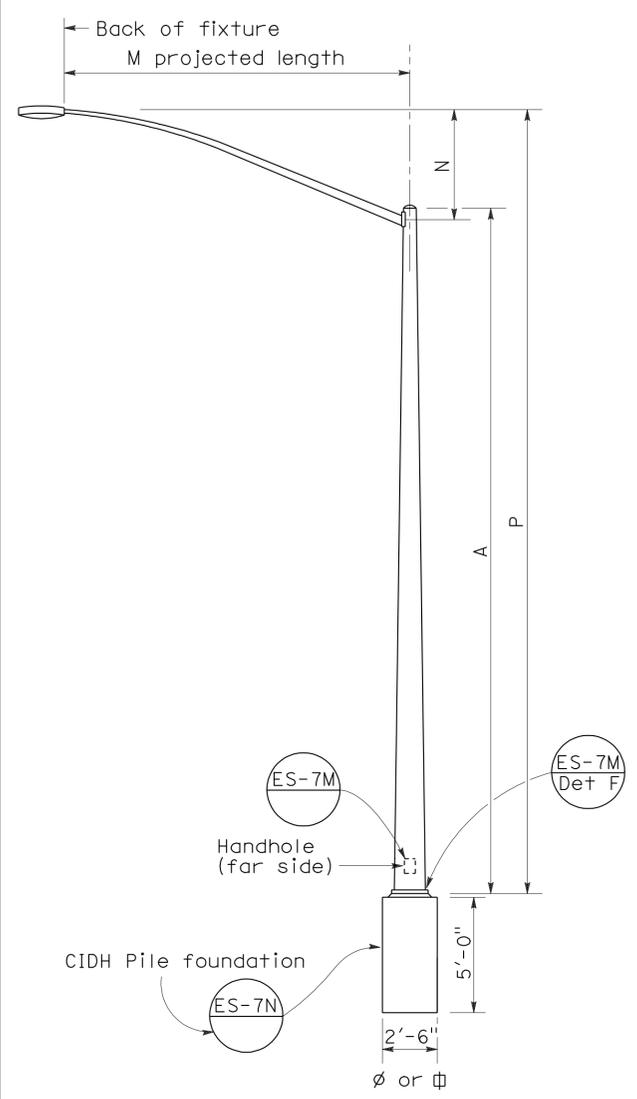
NO SCALE

RSP ES-4D DATED June 6, 2008 SUPERSEDES STANDARD PLAN ES-4D DATED MAY 1, 2006 - PAGE 421 OF THE STANDARD PLANS BOOK DATED MAY 2006.

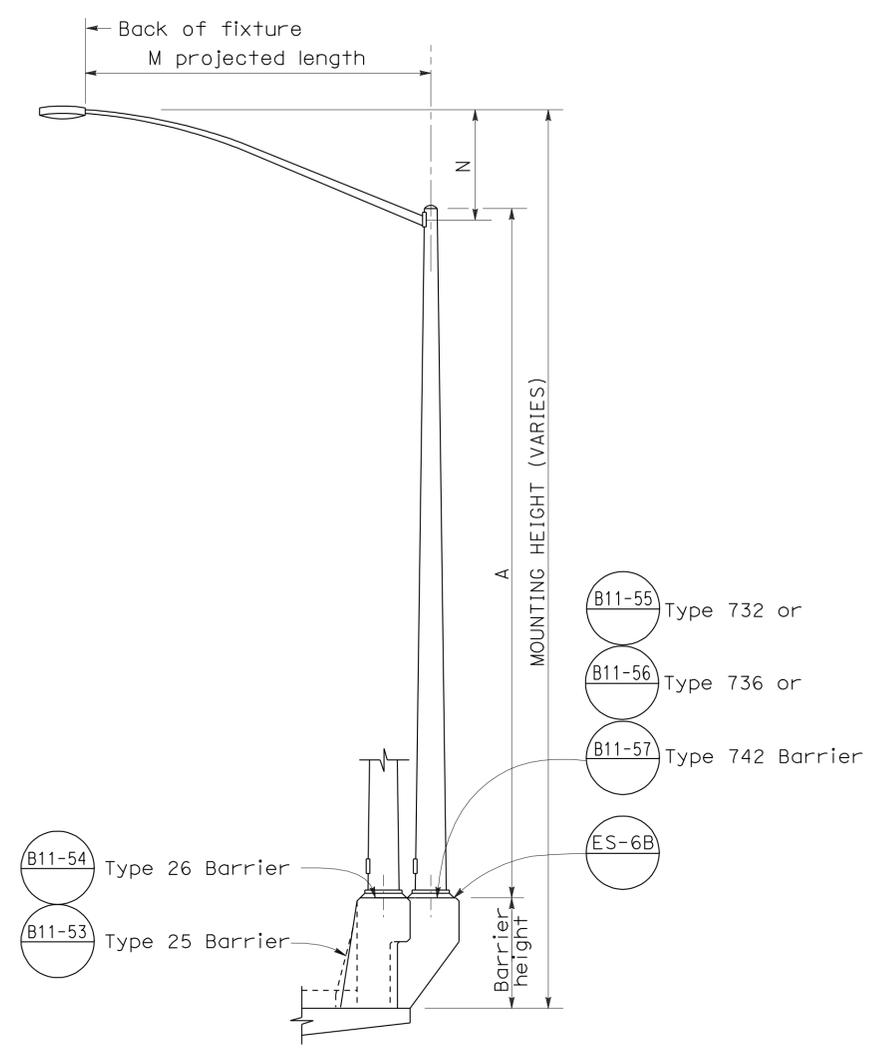
REVISED STANDARD PLAN RSP ES-4D

2006 REVISED STANDARD PLAN RSP ES-4D

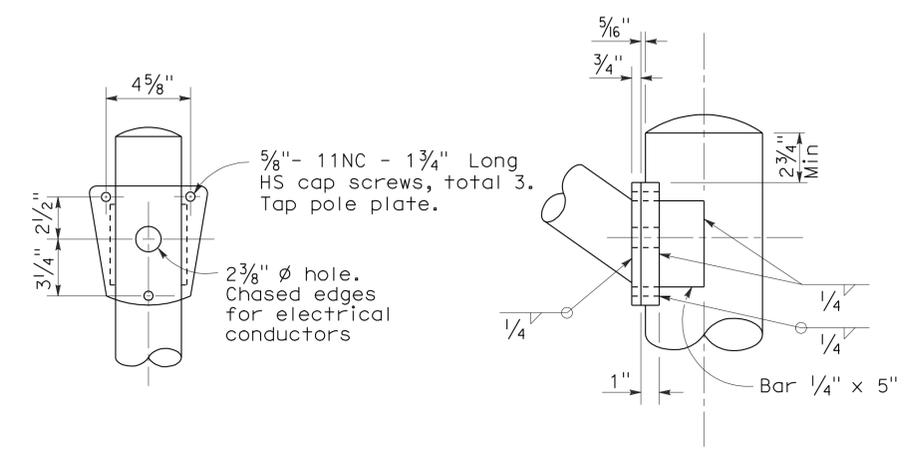
To accompany plans dated 2-27-12



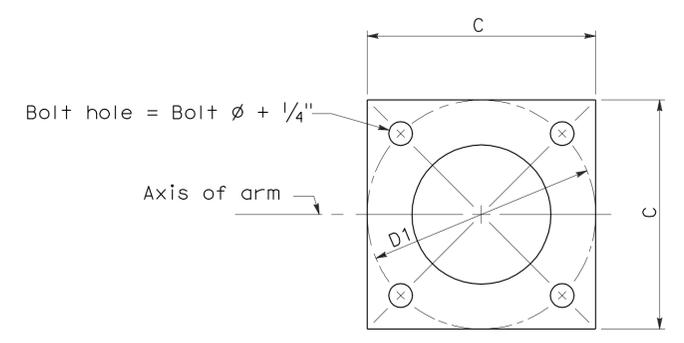
ELEVATION
TYPE 15 AND TYPE 21



ELEVATION
TYPE 15 AND TYPE 21 BARRIER RAIL MOUNTED



DETAIL R
LUMINAIRE ARM CONNECTION



BASE PLATE

POLE TYPE	POLE DATA				BASE PLATE DATA				LUMINAIRE ARM
	A Height	Min OD		Wall Thickness	C	D1 Bolt Circle	Thick-ness	Anchor Bolts Size	
15	30'	8"	3 7/8"	0.1196"	1'-0"	1'-0"	1"	1" ϕ x 3'-0" x 4"*	6' - 15' 12'
21	35'	8 5/8"	3 7/8"	0.1196"	1'-0"	1'-0"	1"	1 1/4" ϕ x 3'-0" x 4"*	6' - 15' 12'

* For barrier rail bolts, see Standard Plan ES-6B.

M Projected Length	N Rise	Min OD At Pole	Nominal Thickness	LUMINAIRE ARM DATA	
				Type 15	Type 21
6'-0"	2'-0"±	3/4"	0.1196"	31'-6"±	36'-6"±
8'-0"	2'-6"±	3/2"	0.1196"	32'-0"±	37'-0"±
10'-0"	3'-3"±	3 3/8"	0.1196"	32'-9"±	37'-9"±
12'-0"	4'-3"±	3 3/8"	0.1196"	33'-9"±	38'-9"±
15'-0"	4'-9"±	4 1/4"	0.1196"	34'-3"±	39'-3"±

NOTES:

- Indicates arm length to be used unless otherwise noted on the plans.
- For Type 15-SB, use Type 15 standard with Type 30 slip base plate details, see Standard Plan ES-6F.
- For additional notes, see Standard Plan ES-7M and ES-7N.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(LIGHTING STANDARD
TYPES 15 AND 21)

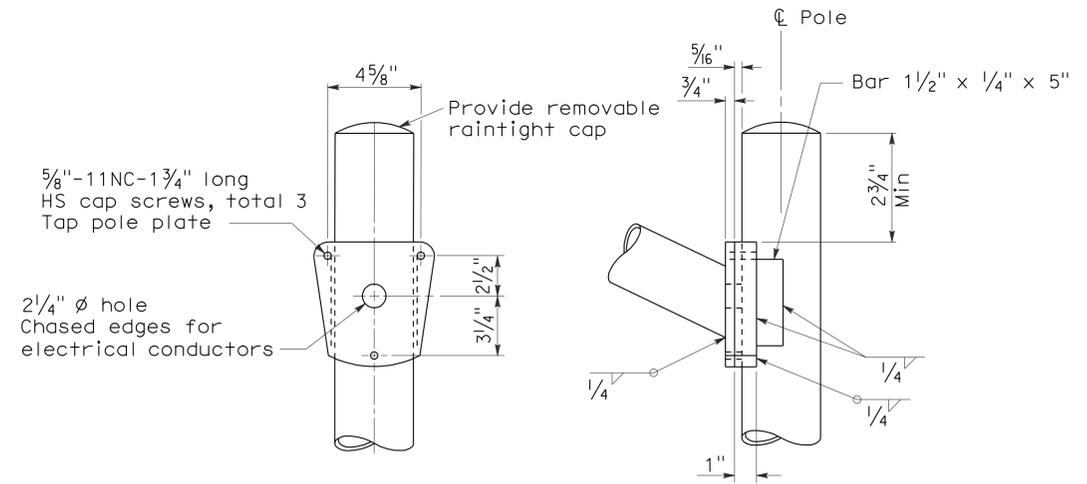
NO SCALE

RSP ES-6A DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-6A DATED MAY 1, 2006 - PAGE 427 OF THE STANDARD PLANS BOOK DATED MAY 2006.

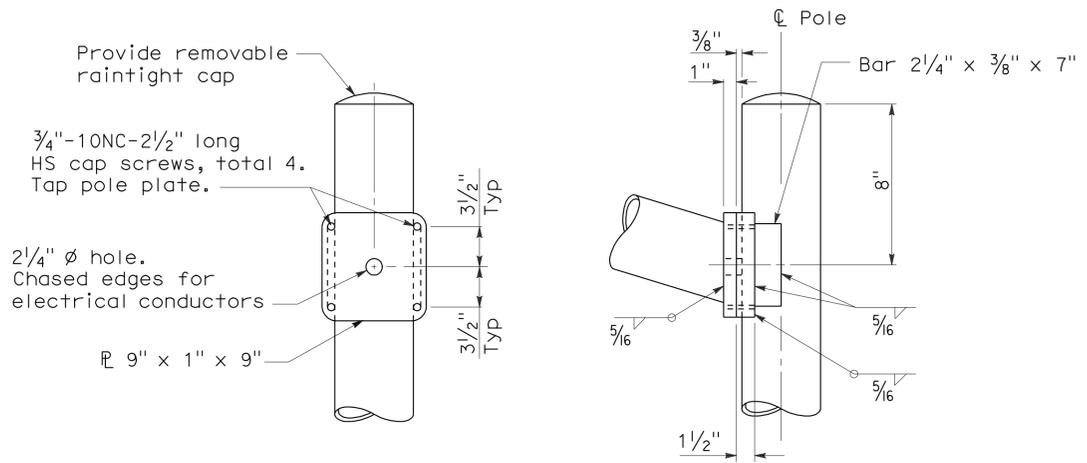
LUMINAIRE ARM DATA

PROJECTED LENGTH	THICKNESS	MINIMUM OD @ POLE	MOUNTING HEIGHT
* 6'-0"	0.1196"	3/4"	36'-9"±
8'-0"		3/2"	37'-3"±
10'-0"		3 3/4"	38'-0"±
12'-0"		3 3/4"	39'-0"±
15'-0"		4 1/4"	39'-6"±
** 20'-0"	0.1793"	5"	37'-0"±

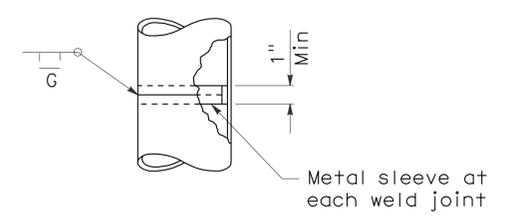
* Type 30 - arm length 6'-0" - 15'-0" maximum
 ** Type 31 - arm lengths 20'-0"



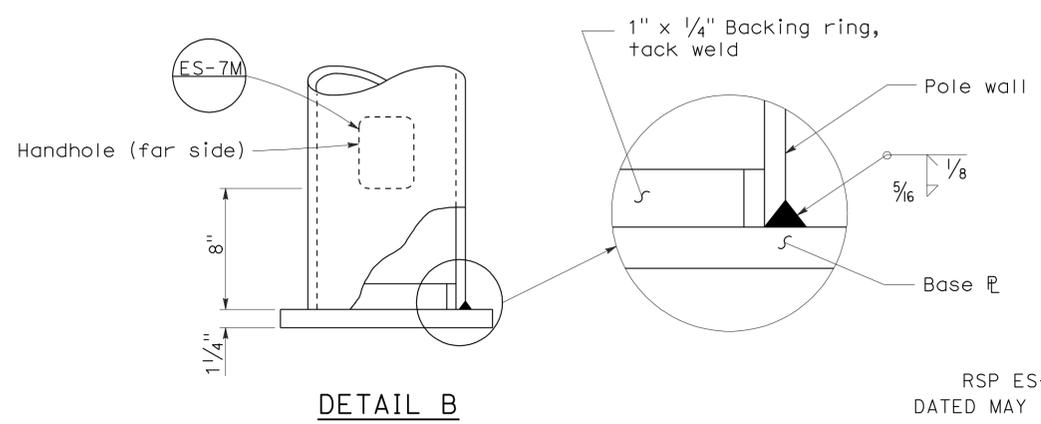
DETAIL A - TYPE 30



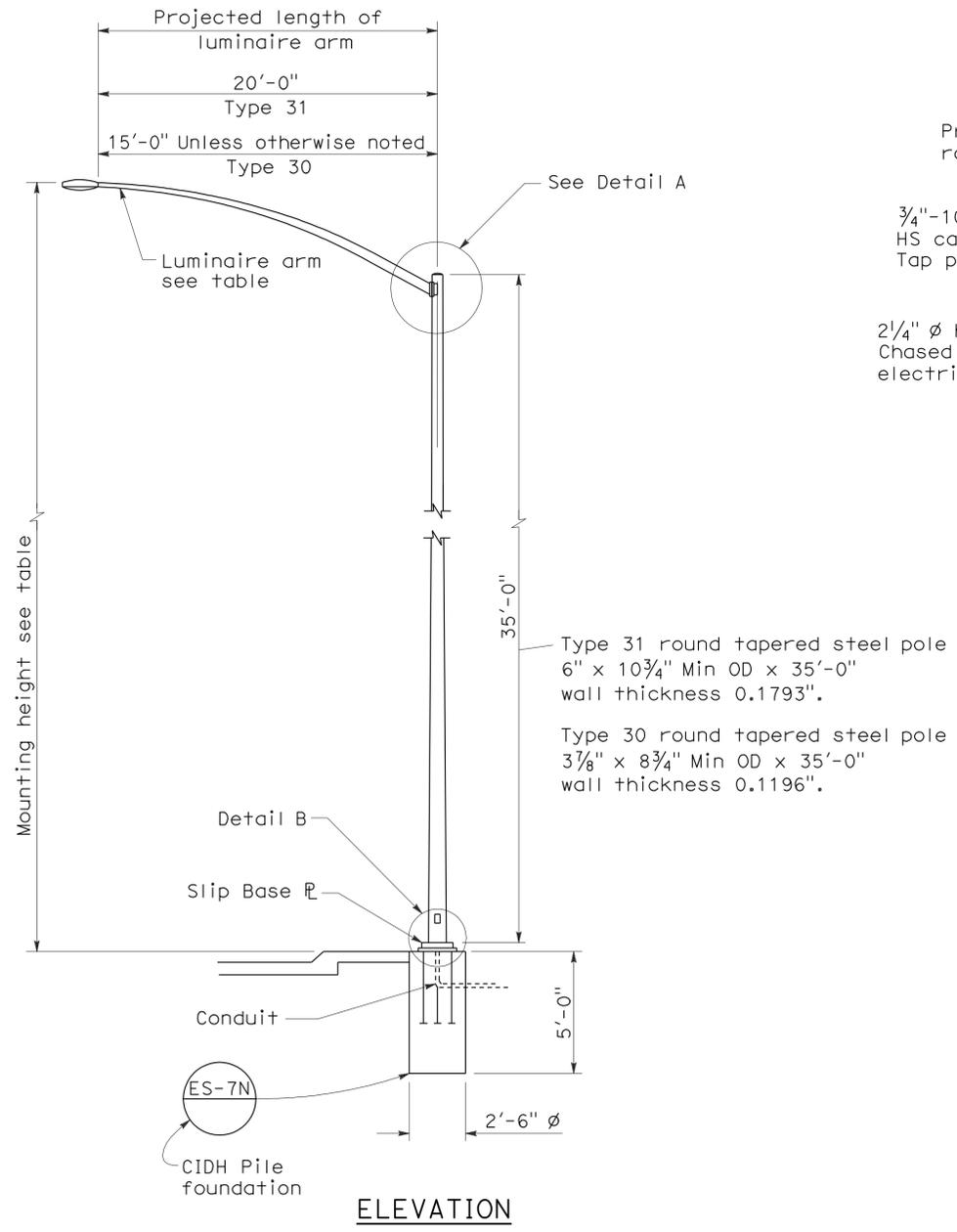
DETAIL A - TYPE 31



POLE SPLICE



DETAIL B



ELEVATION

NOTES:

- Sheet steel shall have a minimum yield of 48,000 psi.
- For slip base details see Standard Plan ES-6F.
- For Type 30 fixed base use Type 15 base plate, and foundation shown on Revised Standard Plan RSP ES-6A. Use 1 1/4 inch Dia x 3'-6 inch x 4 inch anchor bolts.
- For Type 31 fixed base use Type 32 base plate, anchor bolts and foundation on Standard Plan ES-6G.
- Handhole shall be located on downstream side of traffic unless noted otherwise on plans.
- For additional general notes refer to Standard Plan ES-7M.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (LIGHTING STANDARD
 TYPES 30 AND 31)**
 NO SCALE

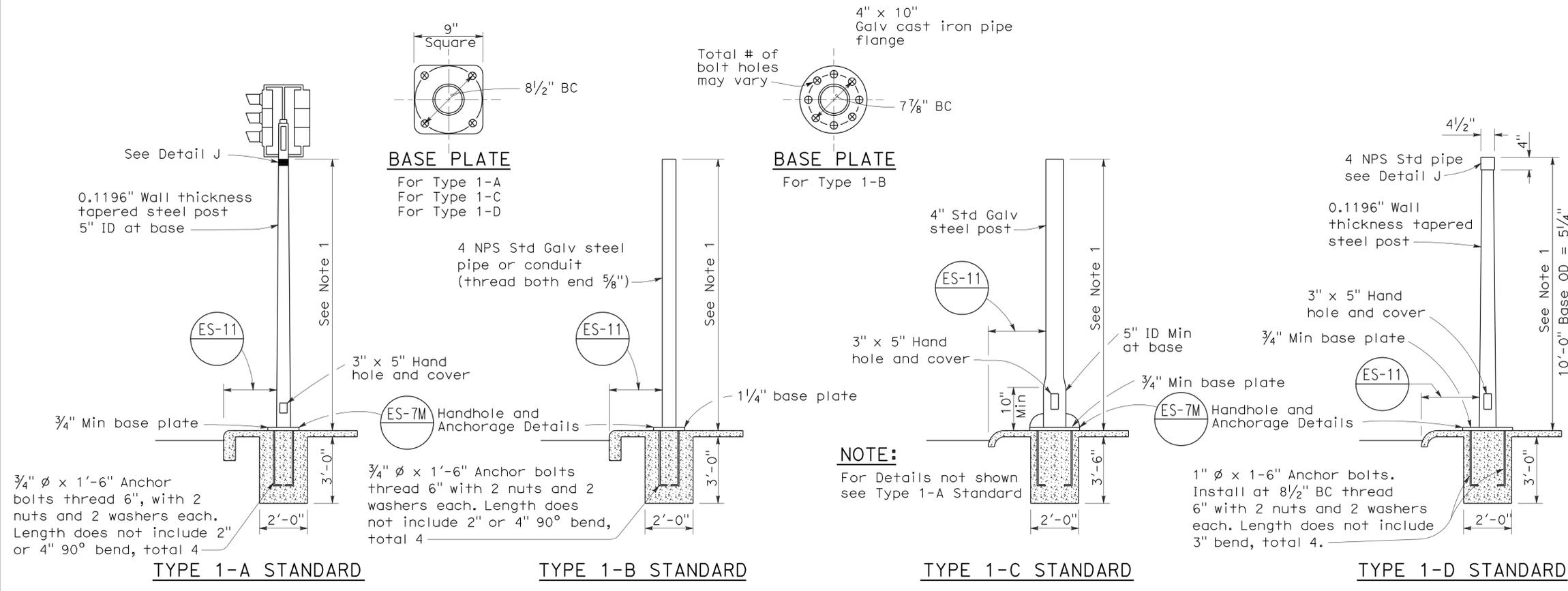
RSP ES-6E DATED JANUARY 18, 2008 SUPERCEDES STANDARD PLAN ES-6E
 DATED MAY 1, 2006 - PAGE 430 OF THE STANDARD PLANS BOOK DATED MAY 2006.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	But	32	R9.5	38	42

Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 October 5, 2007
 PLANS APPROVAL DATE
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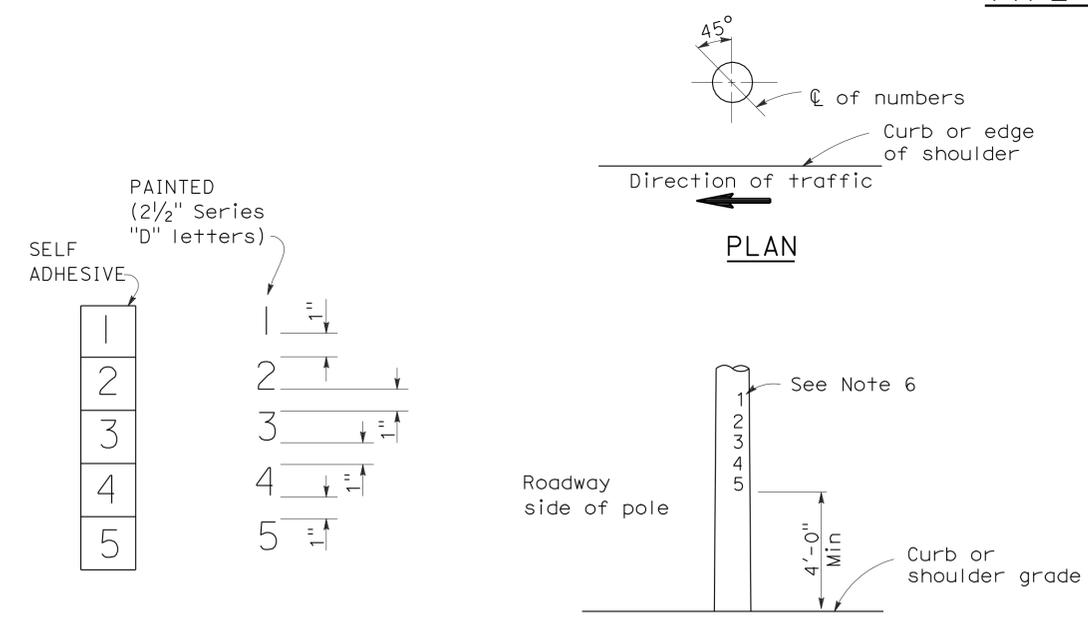
REGISTERED PROFESSIONAL ENGINEER
 Stanley P. Johnson
 No. C57793
 Exp. 3-31-08
 CIVIL
 STATE OF CALIFORNIA

To accompany plans dated 2-27-12

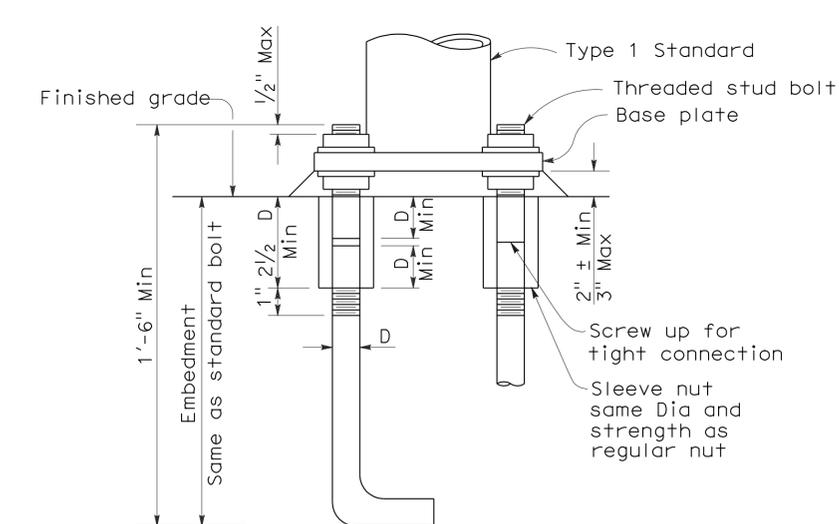


- NOTES:**
- Standards shall be 10'-0" ± 2" for vehicle signals and 7'-0" ± 2" for pedestrian signals unless otherwise noted on plans.
 - Top of standards shall be 4 1/2" OD.
 - Conduits shall extend 2" maximum above finished surface of foundation and for Types 1-A, 1-C and 1-D shall be sloped toward handhole.
 - Anchor bolts shall be bonded to conduit or grounding conductor.
 - Conduit between standard and adjacent pull box shall be 2" minimum.
 - Paint numbers on roadway side facing traffic when electrolier or post is left of direction of traffic.

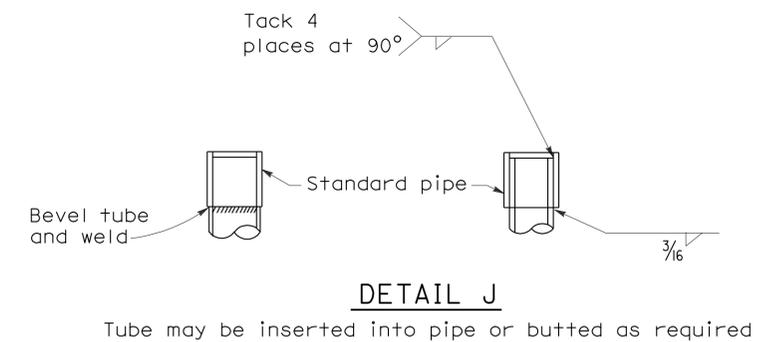
TYPE 1 SIGNAL STANDARDS



LOCATION OF EQUIPMENT NUMBERS ON STANDARDS AND POSTS



ANCHOR BOLTS WITH SLEEVE NUTS
 Sleeve nuts to be used only when shown or specified on Project Plans
 D = Diameter of anchor bolt



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

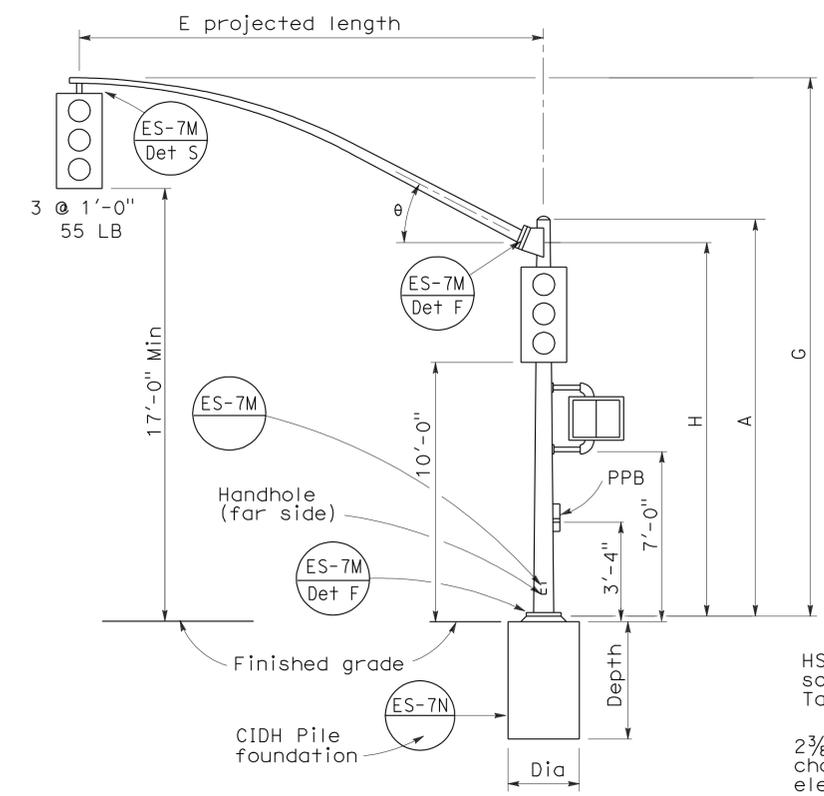
ELECTRICAL SYSTEMS (SIGNAL AND LIGHTING STANDARD TYPE 1 STANDARD AND EQUIPMENT NUMBERING)

NO SCALE

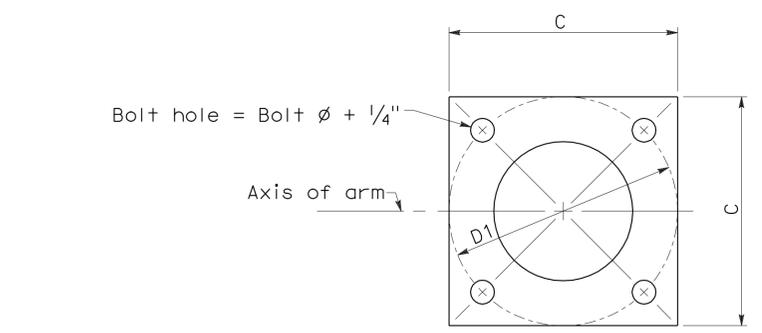
RSP ES-7B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-7B DATED MAY 1, 2006 - PAGE 438 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP ES-7B

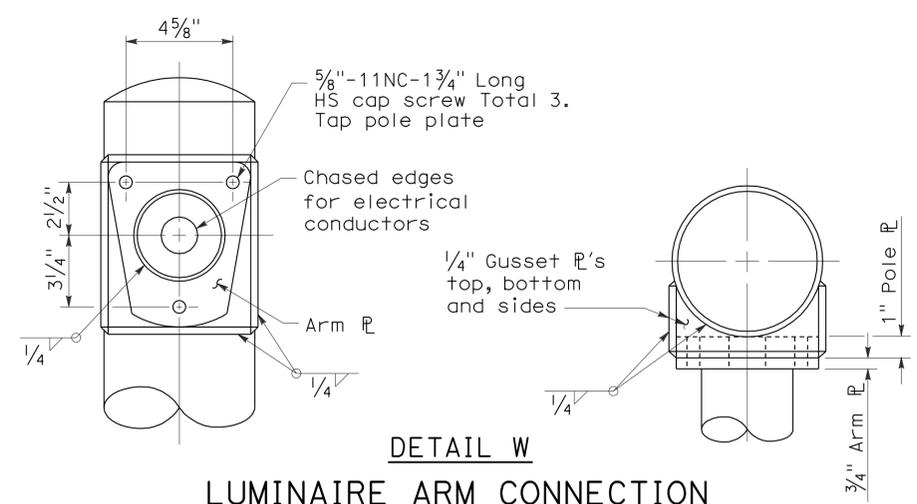
To accompany plans dated 2-27-12



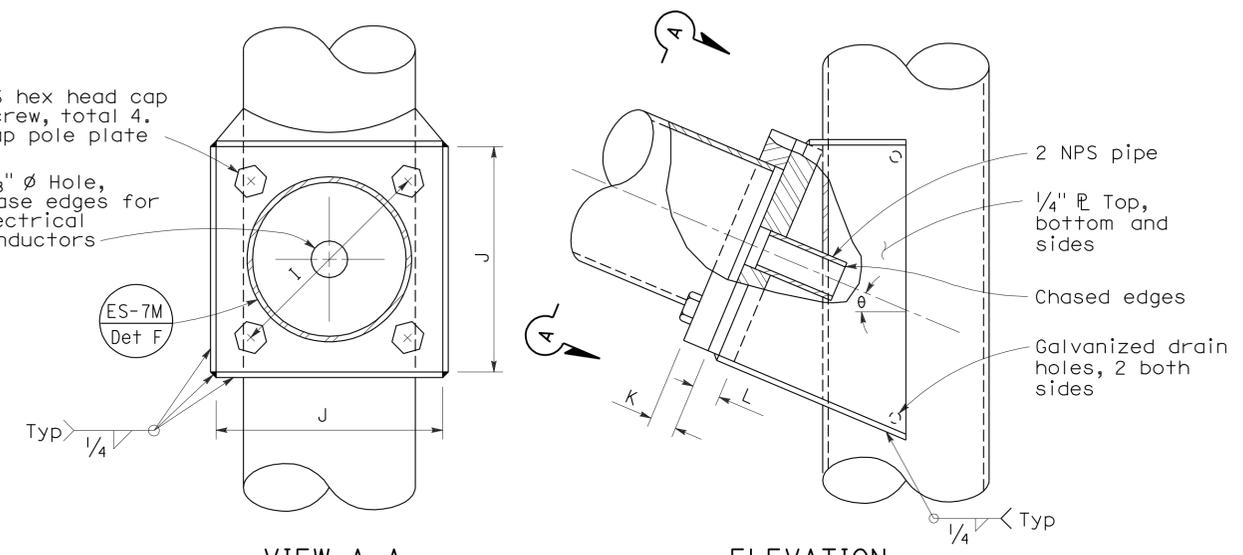
ELEVATION
TYPE 16-1-100, 18-1-100



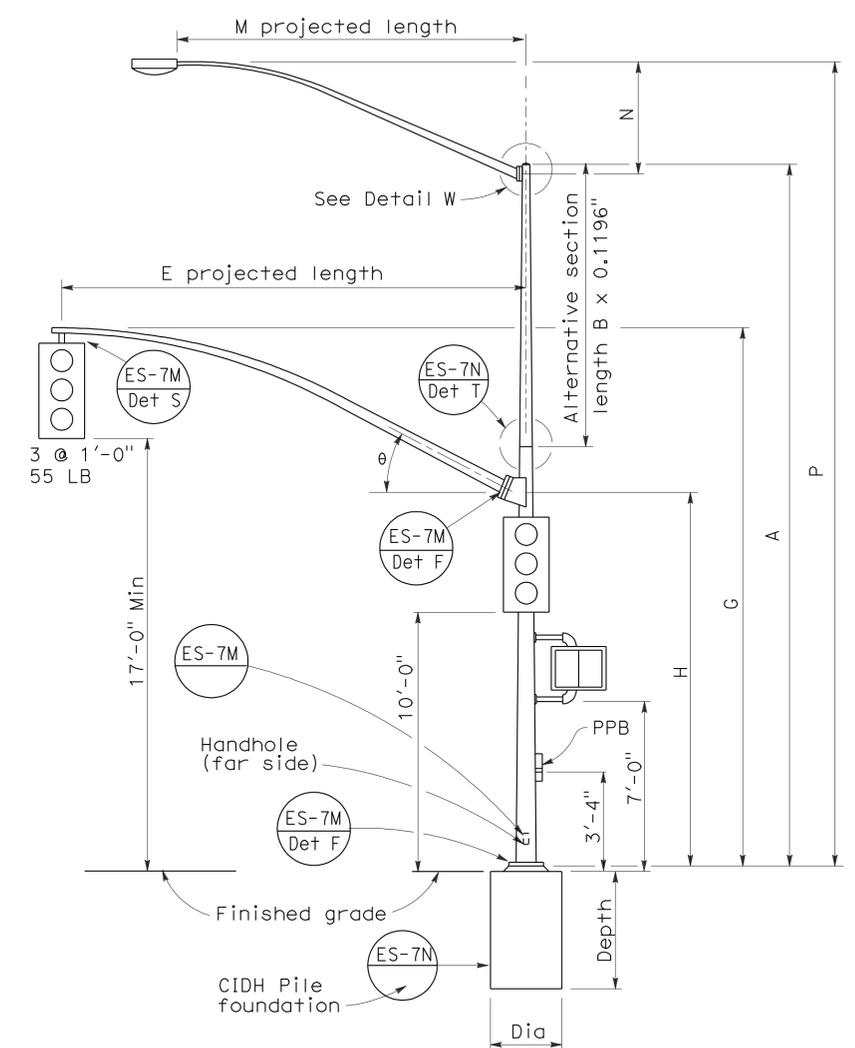
BASE PLATE



DETAIL W
LUMINAIRE ARM CONNECTION



VIEW A-A
SIGNAL ARM CONNECTION DETAILS



ELEVATION
TYPE 19-1-100, 19A-1-100

E Projected Length	G Mounting Height	H	Min OD At Pole	Thickness	I Bolt Circle	HS Cap Screws	J Plate size	K Arm R Thickness	L Pole R Thickness	θ
15'-0"	21'-8"±	17'-6"	7"	0.1196"	12"	1 1/4"-7NC-3"	1'-0"	1 1/4"	1 1/2"	23°
20'-0"	21'-8"±	7 7/8"								
25'-0"	22'-8"±	7 5/8"								
30'-0"	23'-0"±	8"								

M Projected Length	N Rise	Min OD at Pole	Thickness	P Mounting Height	
				30'-0" Pole	35'-0" Pole
6'-0"	2'-0"±	3 1/4"	0.1196"	31'-6"±	36'-6"±
8'-0"	2'-6"±	3 1/2"		32'-0"±	37'-0"±
10'-0"	3'-3"±	3 3/8"		32'-9"±	37'-9"±
12'-0"	4'-3"±	3 7/8"		33'-9"±	38'-9"±
15'-0"	4'-9"±	4 1/4"		34'-3"±	39'-3"±

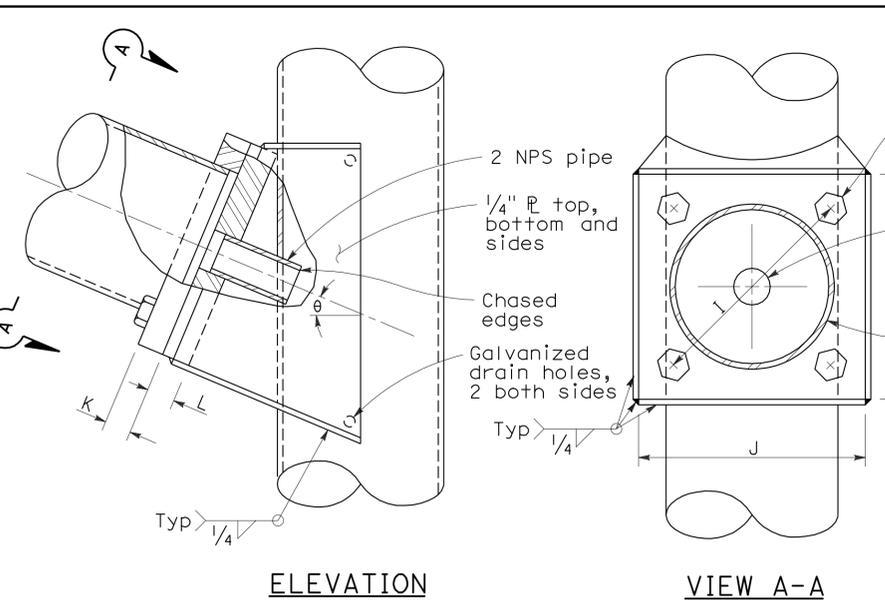
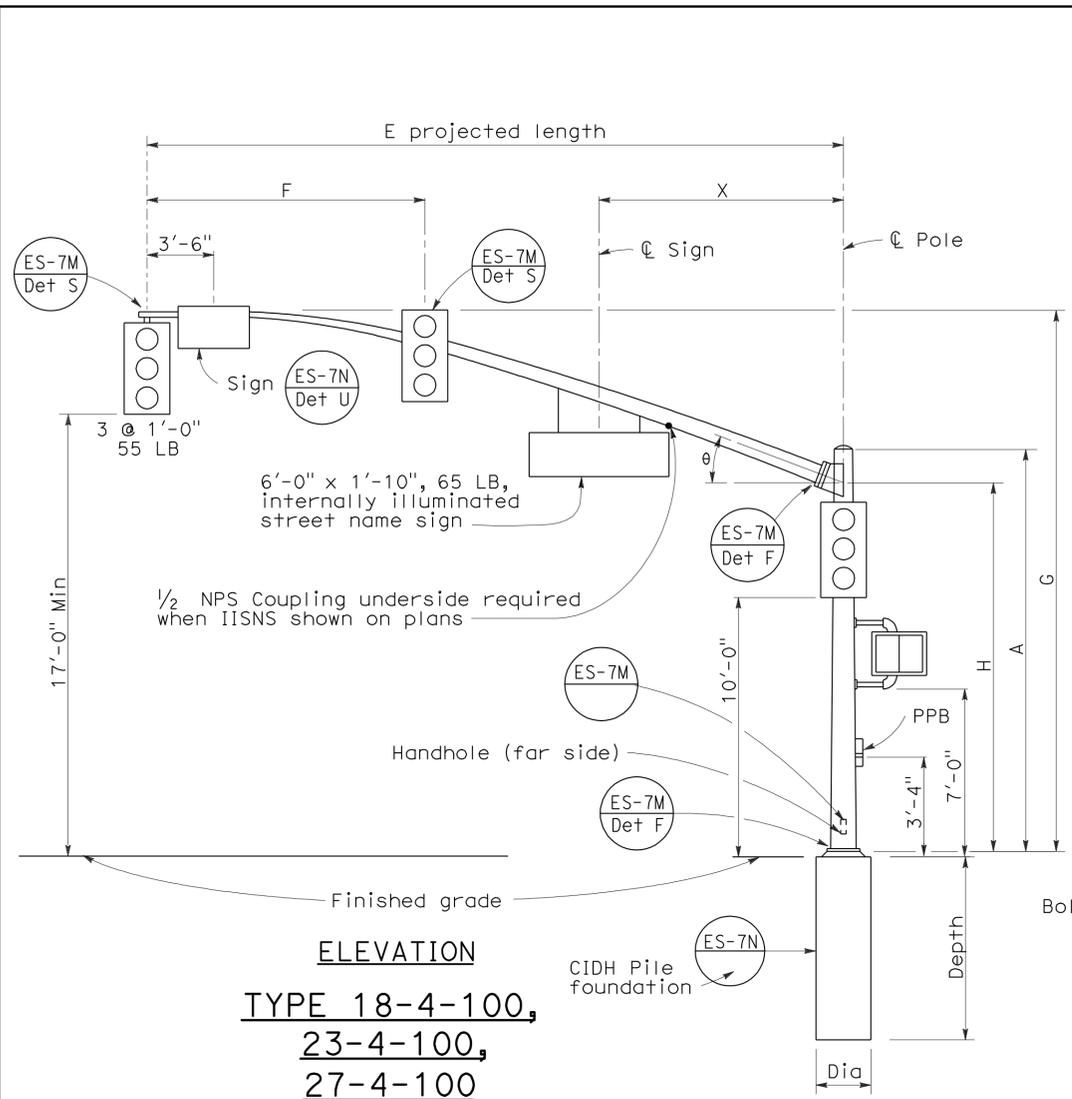
Pole Type	Load Case	Wind Velocity mph	POLE DATA					BASE PLATE DATA					CIDH PILE FOUNDATION					
			A Height	Min OD		Thickness	Alternative Section			C	D1 Bolt Circle	Thickness	Anchor Bolts Size	Luminaire Arm	Signal Arm	Diameter	Depth	Reinforced
				Base	Top		B Length	Bottom	Top									
16-1-100	1	100	18'-6"	8 1/4"	0.1793"	None			1'-6"	1'-5 1/2"	1 1/4"	1 1/2" ø x 42" x 6"	None	15'-0"	2'-6"	7'-2"	Yes	
18-1-100			17'-0"	8 7/16"		None							None	20'-0"				
19-1-100			30'-0"	6 5/8"		10'-0"	8"	6 5/8"					6'-15' [12'-0"]	25'-0"				
19A-1-100			35'-0"	5 1/16"		15'-0"	5 1/16"	6'-15' [15'-0"]					30'-0"					

□ Indicates arm length to be used unless otherwise noted on plans.

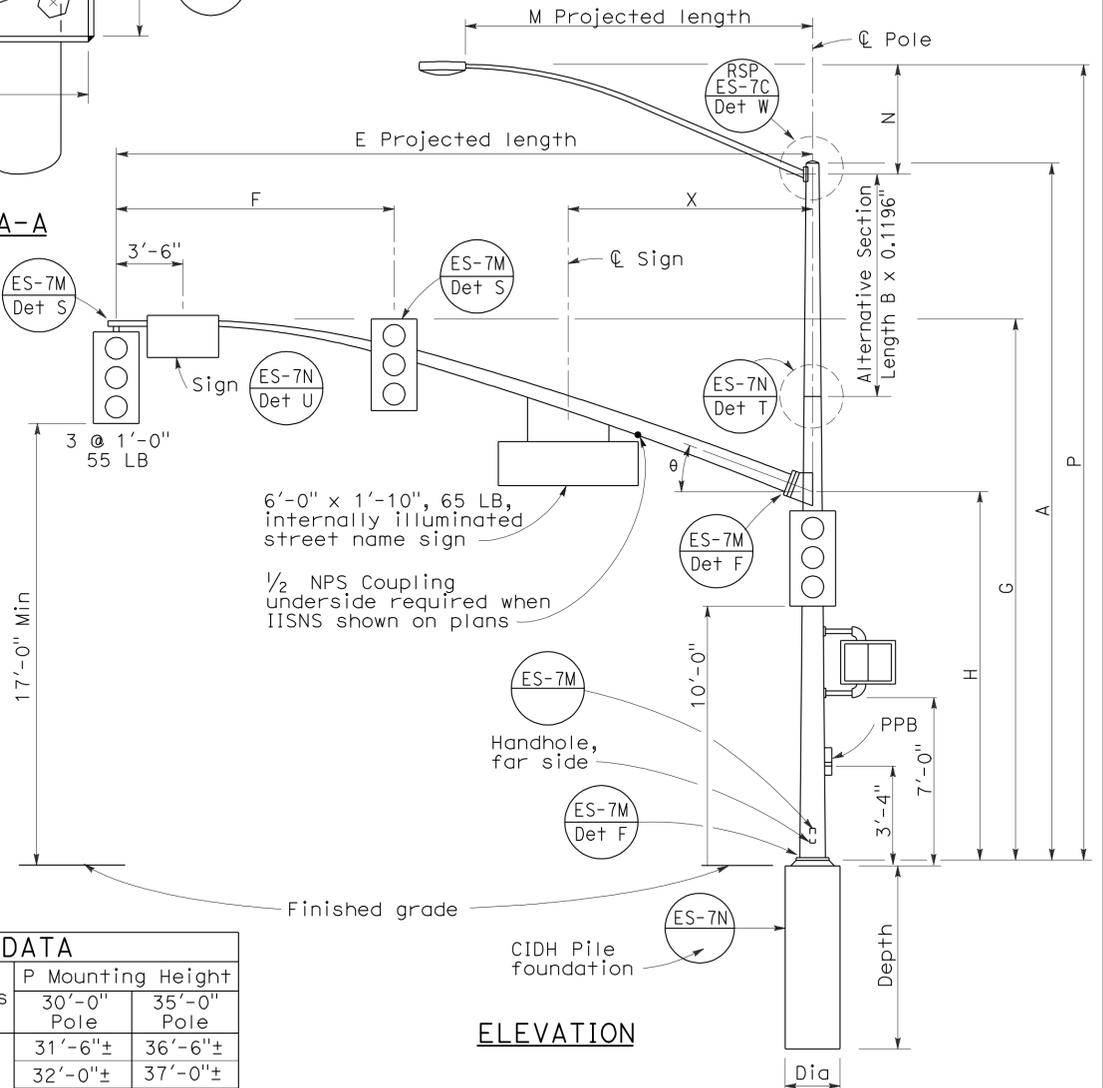
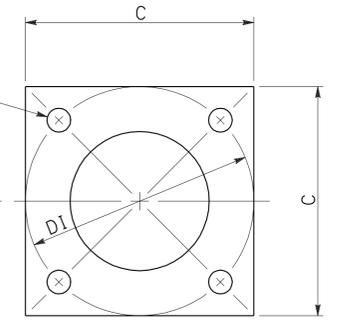
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD
CASE 1 ARM LOADING
WIND VELOCITY = 100 MPH
ARM LENGTHS 15' TO 30')

NO SCALE
RSP ES-7C DATED JUNE 15, 2007 SUPERSEDES STANDARD PLAN ES-7C
DATED MAY 1, 2006 - PAGE 439 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP ES-7C



SIGNAL ARM CONNECTION DETAILS



ELEVATION

SIGNAL ARM DATA												
E Projected Length	F Min Spacing	G Mounting Height	H	Min OD at Pole	Thickness	I Bolt Circle	HS Cap Screws	J Plate Size	K Arm P Thickness	L Pole P Thickness	θ	X Max
25'-0"	10'-0"	22'-8"±	16'-0"	7 5/16"	0.2391"	12"	1 1/4"-7NC-3"	1'-0"	1 1/4"	1 1/2"	23°	10'-6"
30'-0"	12'-0"	23'-0"±		8"								
35'-0"	14'-0"	23'-0"±		8 1/16"								
40'-0"	15'-0"	23'-0"±		9 3/8"								
45'-0"	15'-0"	23'-8"±		10 1/4"								
						13 1/2"		1'-1 1/2"	1 1/2"	1 3/4"	21°	
											15°	13'-0"

LUMINAIRE ARM DATA					
M Projected Length	N Rise	Min OD at Pole	Thickness	P Mounting Height	
				30'-0" Pole	35'-0" Pole
6'-0"	2'-0"±	3 1/4"	0.1196"	31'-6"±	36'-6"±
8'-0"	2'-6"±	3 1/2"		32'-0"±	37'-0"±
10'-0"	3'-3"±	3 7/8"		32'-9"±	37'-9"±
12'-0"	4'-3"±			33'-9"±	38'-9"±
15'-0"	4'-9"±	4 1/4"		34'-3"±	39'-3"±

Pole Type	Load Case	Wind Velocity mph	POLE DATA						BASE PLATE DATA				Luminaire Arm	Signal Arm	CIDH PILE FOUNDATION				
			A Height	Min OD		Thickness	Alternative Section			C	DI Bolt Circle	Thickness			Anchor Bolts Size	Dia	Depth	Reinforced	
				Base	Top		B Length	Bottom	Top										
18-4-100	4	100	17'-0"	12"	0.2391"	None	9 3/8"	8"	1'-6"	1'-6"	1 1/2"	2" Ø x 42" x 6"	None	25'-0", 30'-0"	3'-0"	9'-0"	Yes		
19-4-100			30'-0"			8"												None	8"
19A-4-100			35'-0"			7 5/16"												15'-0"	7 5/16"
23-4-100			17'-0"			9"												None	
24-4-100			30'-0"			8"												10'-0"	8"
24A-4-100			35'-0"	7 5/16"	15'-0"	7 5/16"													
26-4-100			30'-0"	8"	10'-0"	8 3/8"													
26A-4-100			35'-0"	7 5/16"	15'-0"	9 3/4"	7 1/16"												
27-4-100			17'-0"	9 3/4"	None														

TYPE 19-4-100, 19A-4-100,
24-4-100, 24A-4-100,
26-4-100, 26A-4-100

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD
CASE 4 ARM LOADING
WIND VELOCITY=100 MPH
ARM LENGTHS 25' TO 45')
 NO SCALE

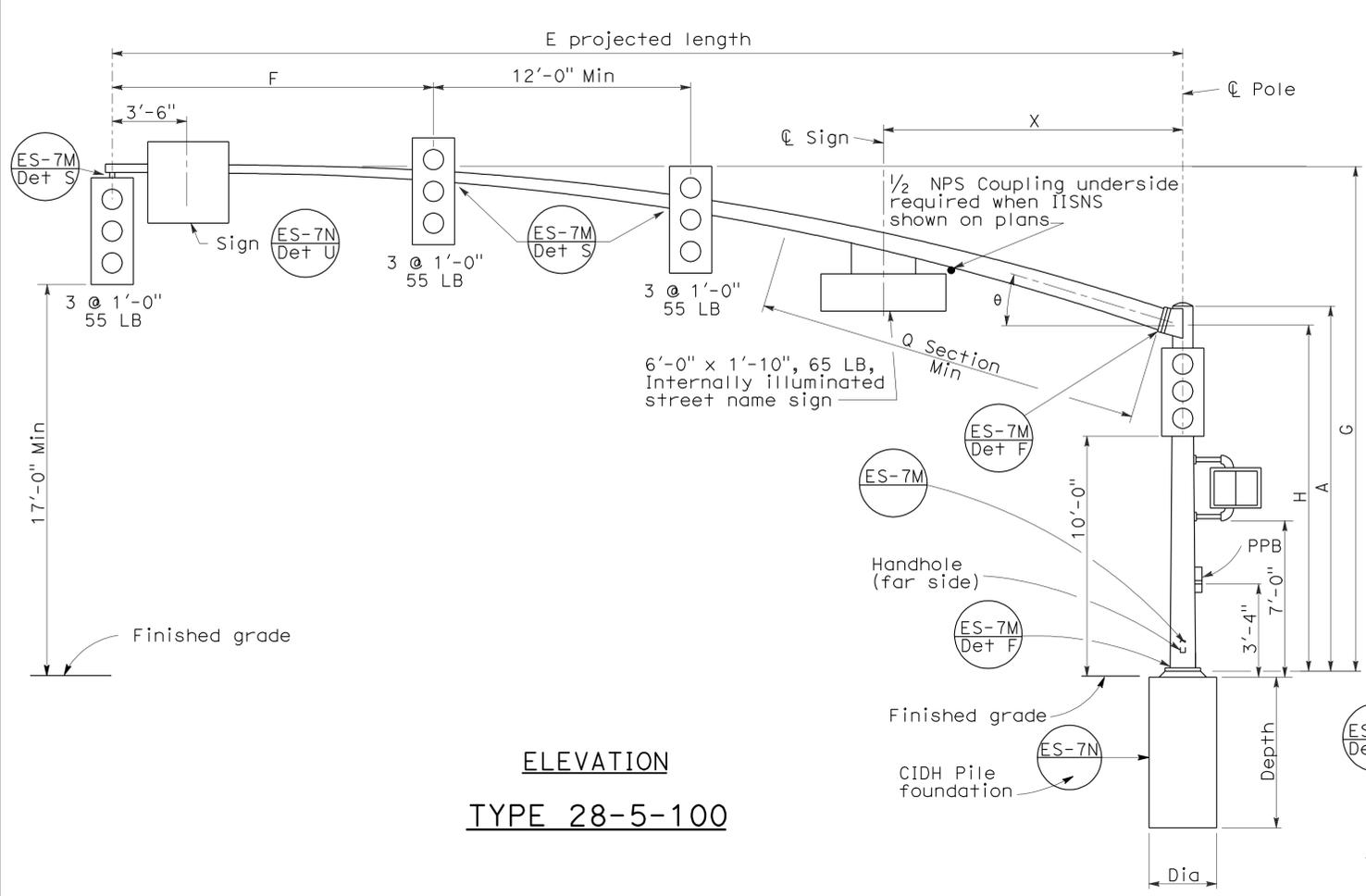
RSP ES-7F DATED OCTOBER 5, 2007 SUPERCEDES RSP ES-7F DATED NOVEMBER 17, 2006 AND STANDARD PLAN ES-7F DATED MAY 1, 2006 - PAGE 442 OF THE STANDARD PLANS BOOK DATED MAY 2006.

□ Indicates arm length to be used unless otherwise noted on plans.

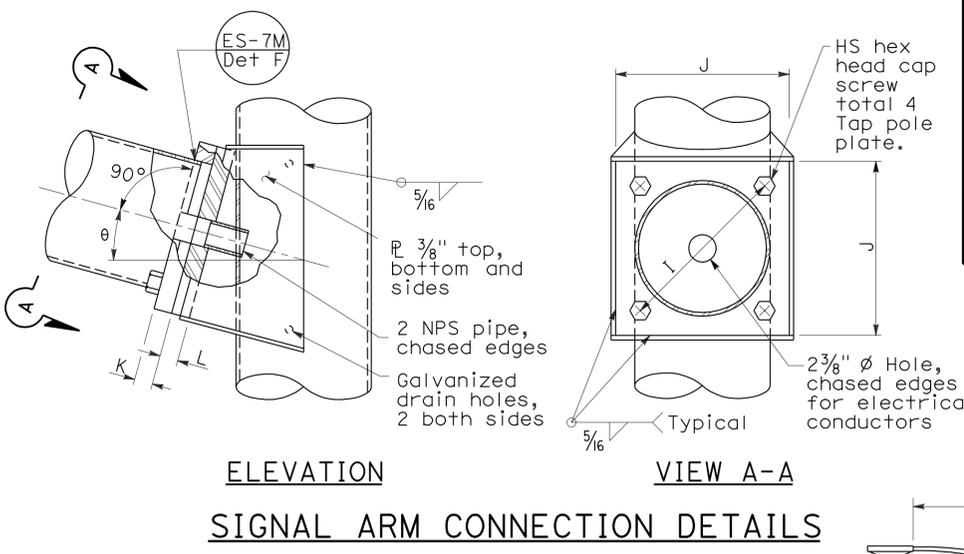
REVISED STANDARD PLAN RSP ES-7F

2006 REVISED STANDARD PLAN RSP ES-7F

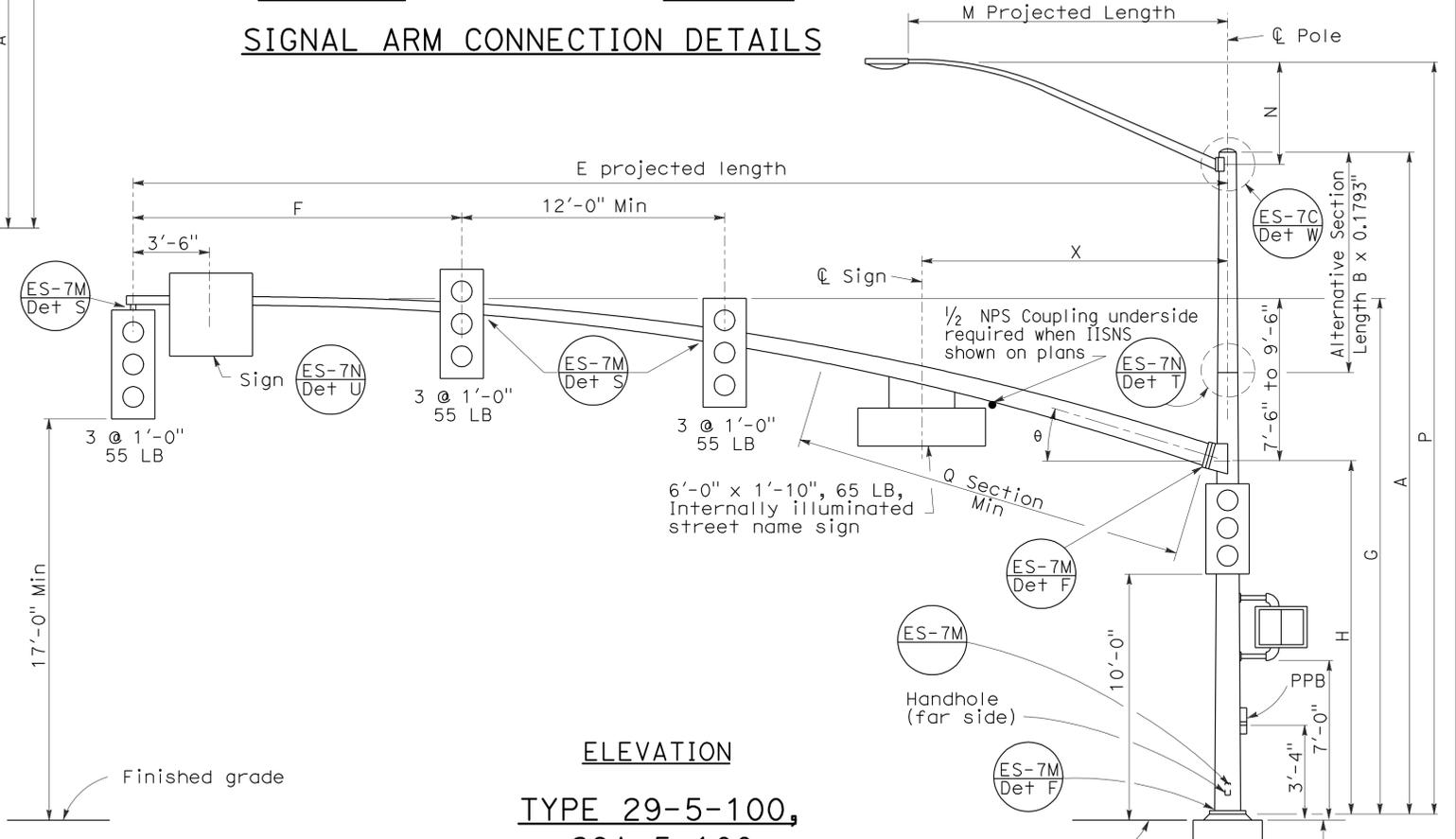
Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 No. C57793
 Exp. 03-31-08
 STATE OF CALIFORNIA
 CIVIL



ELEVATION
TYPE 28-5-100

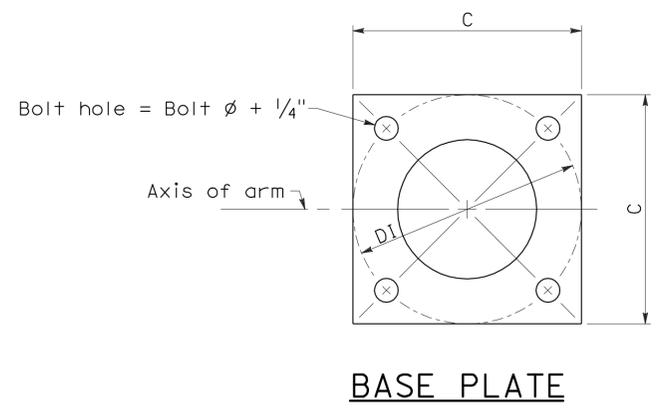


ELEVATION
SIGNAL ARM CONNECTION DETAILS



ELEVATION
TYPE 29-5-100,
29A-5-100

M Projected Length	N Rise	Min OD at Pole	Thickness	P Mounting Height
6'-0"	2'-0"±	3 1/4"	0.1196"	30'-0" Pole
8'-0"	2'-6"±	3 1/2"		31'-6"±
10'-0"	3'-3"±	3 7/8"		32'-0"±
12'-0"	4'-3"±			32'-9"±
15'-0"	4'-9"±	4 1/4"		37'-0"±



BASE PLATE

E Projected Length	F Min Spacing	G Mounting Height	H	Min OD at Pole	Thickness	I Bolt Circle	HS Cap Screws	J Plate Size	K Arm R Thickness	L Pole R Thickness	θ	Q Section		X Max
												Length	Thickness	
50'-0"	15'-0"	23'-7"± to 25'-7"±	16'-0"	11 7/16"	0.1793"	16"	1 1/2"-6NC-3 1/4"	1'-4"	1 3/4"	1 3/4"	15°	18'-0"	0.2391"	14'-0"
55'-0"		1'-1/4"		23'-0"										

Pole Type	Load Case	Wind Velocity mph	POLE DATA					BASE PLATE DATA				Luminaire Arm	Signal Arm	CIDH PILE FOUNDATION								
			A Height	Min OD		Thickness	Alternative Section			C	DI Bolt Circle			Thickness	Anchor Bolts Size	Dia	Depth	Reinforced				
				Base	Top		B Length	Bottom	Top													
28-5-100	5	100	17'-0"	14"	11 11/16"	None	11 1/4"	9 7/8"	21"	21"	1 3/4"	2" ø x 42" x 6"	6'-15'	15'-0"	50'-0", 55'-0"	3'-0"	9'-2"	Yes				
29-5-100			30'-0"		9 7/8"														10'-0"	9 7/8"	23"	23"
29A-5-100			35'-0"		9 3/16"														15'-0"	9 3/16"	23"	23"

□ Indicates arm length to be used unless otherwise noted on plans.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD
CASE 5 ARM LOADING
WIND VELOCITY=100 MPH,
ARM LENGTHS 50' TO 55')
 NO SCALE

RSP ES-7G DATED NOVEMBER 17, 2006 SUPERSEDES STANDARD PLAN ES-7G
 DATED MAY 1, 2006 - PAGE 443 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-7G

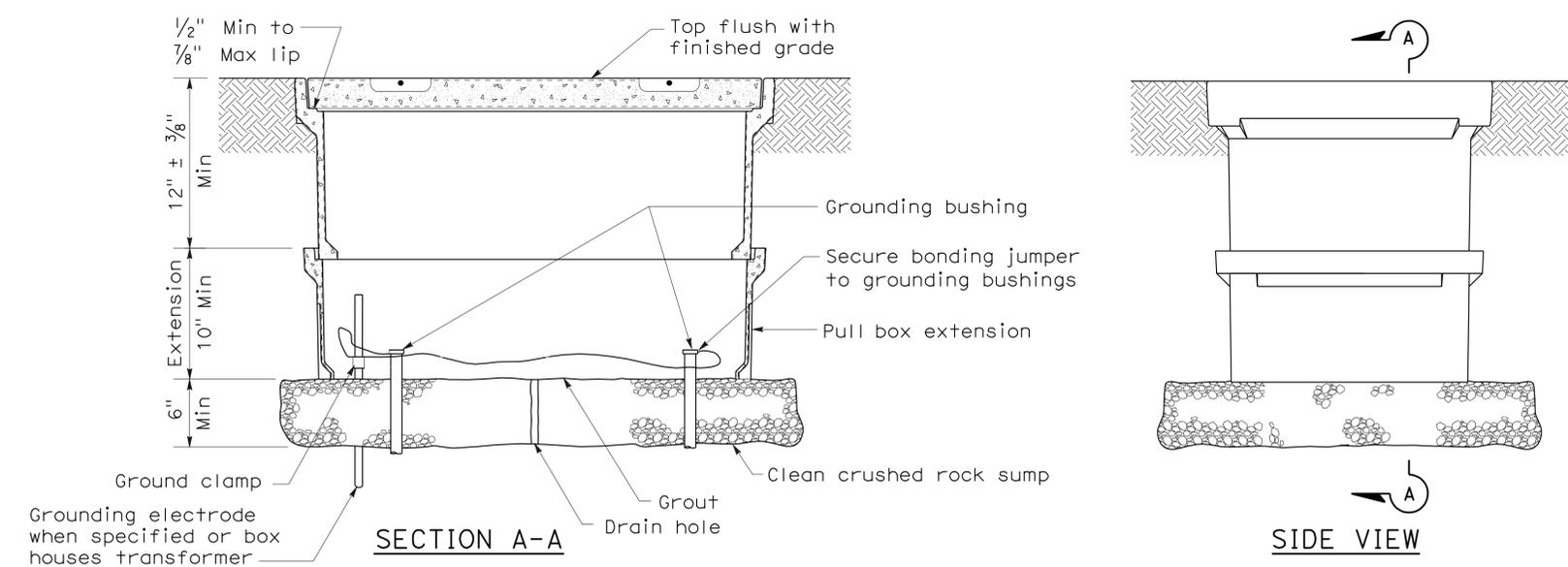
2006 REVISED STANDARD PLAN RSP ES-7G

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	But	32	R9.5	42	42

Jeffrey G. McRae
 REGISTERED ELECTRICAL ENGINEER
 January 20, 2012
 PLANS APPROVAL DATE
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

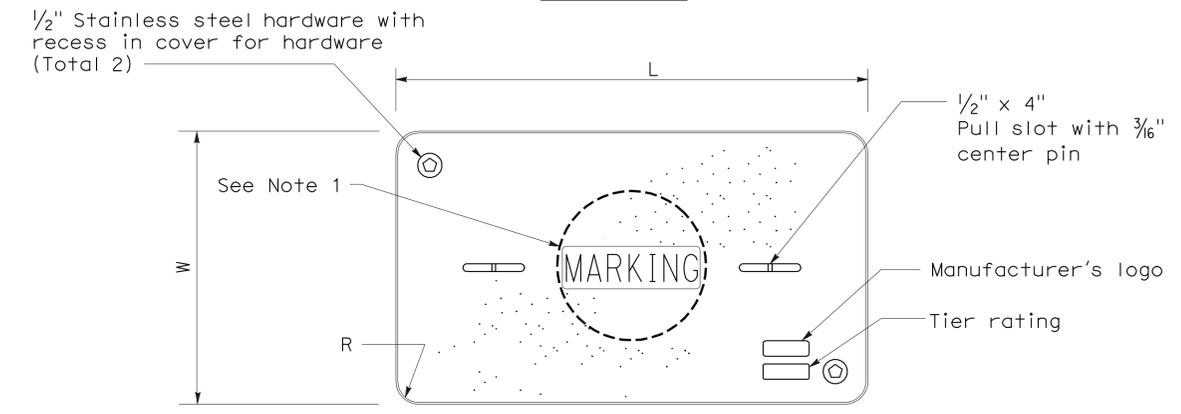
REGISTERED PROFESSIONAL ENGINEER
 Jeffrey G. McRae
 No. E14512
 Exp. 6-30-12
 ELECTRICAL
 STATE OF CALIFORNIA

To accompany plans dated 2-27-12

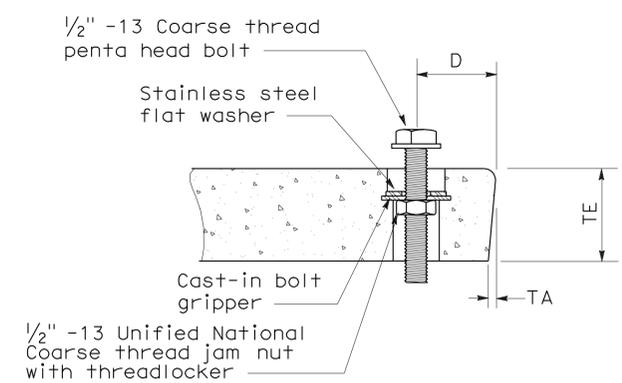


INSTALLATION DETAILS

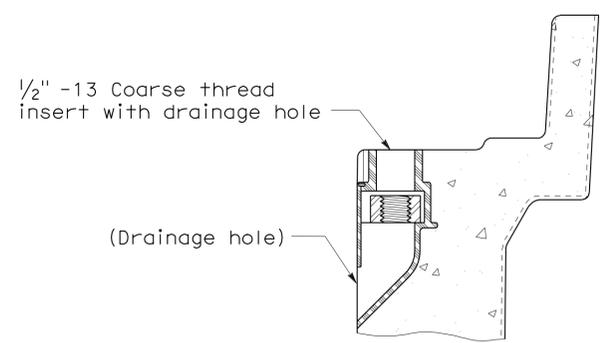
DETAIL A



COVER TOP VIEW



TYPICAL COVER CAPTIVE BOLT
(Or similar)



TYPICAL THREADED INSERT
(Or similar)

NOTES ON PULL BOXES:

- Pull box covers must 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. 3/2 pull box.
 - "SIGNAL" - Traffic signal circuits with or without street or sign lighting circuits.
 - "ST LIGHTING" - Street 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 street or sign lighting circuits.
 - "STREET LIGHTING" - Street or sign lighting circuits where voltage is under 600 V.
 - "STREET LIGHTING-HIGH VOLTAGE" - Street 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.
- The nominal dimensions of the opening in which the cover sets must be the same as the cover dimensions (L and W) plus 1/8" or greater.
- Covers and boxes must be interchangeable with California Standard. When interchanged with a standard, the top surfaces must be flush within 1/8". Top outside radius of covers and pull boxes must 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.

DIMENSION TABLE

PULL BOX	PULL BOX			COVER						
	Minimum Depth Box	Minimum Depth Extension	Maximum Weight	L	W	R	TE	TA	D	Maximum Weight
No. 3/2	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
(PULL BOX)
NO SCALE

NSP ES-8A DATED JANUARY 20, 2012 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP ES-8A