

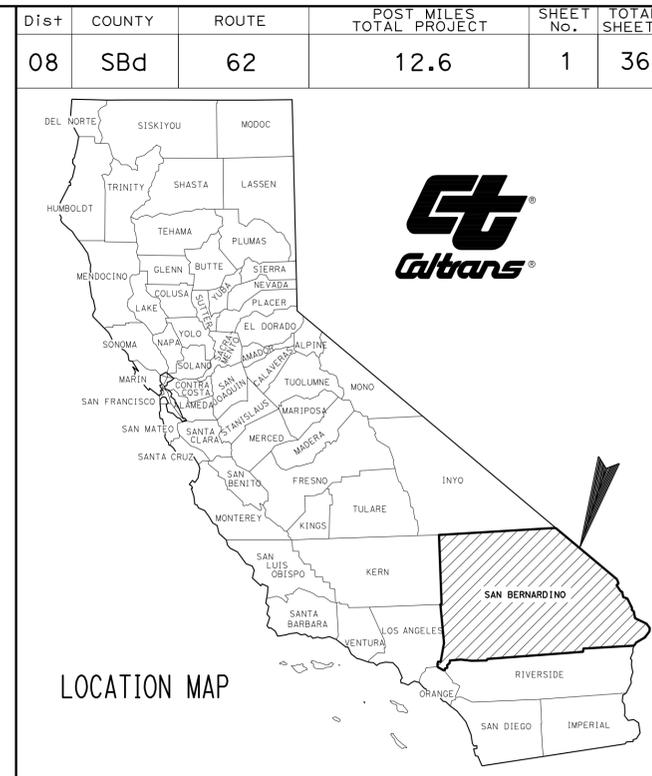
INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2	TYPICAL CROSS SECTIONS
3	LAYOUTS
4-5	CONSTRUCTION DETAILS
6	UTILITY PLAN
7	CONSTRUCTION AREA SIGNS
8-13	PAVEMENT DELINEATION PLANS AND QUANTITIES
14	SUMMARY OF QUANTITIES
15-20	ELECTRICAL PLANS
21-36	REVISED STANDARD PLANS

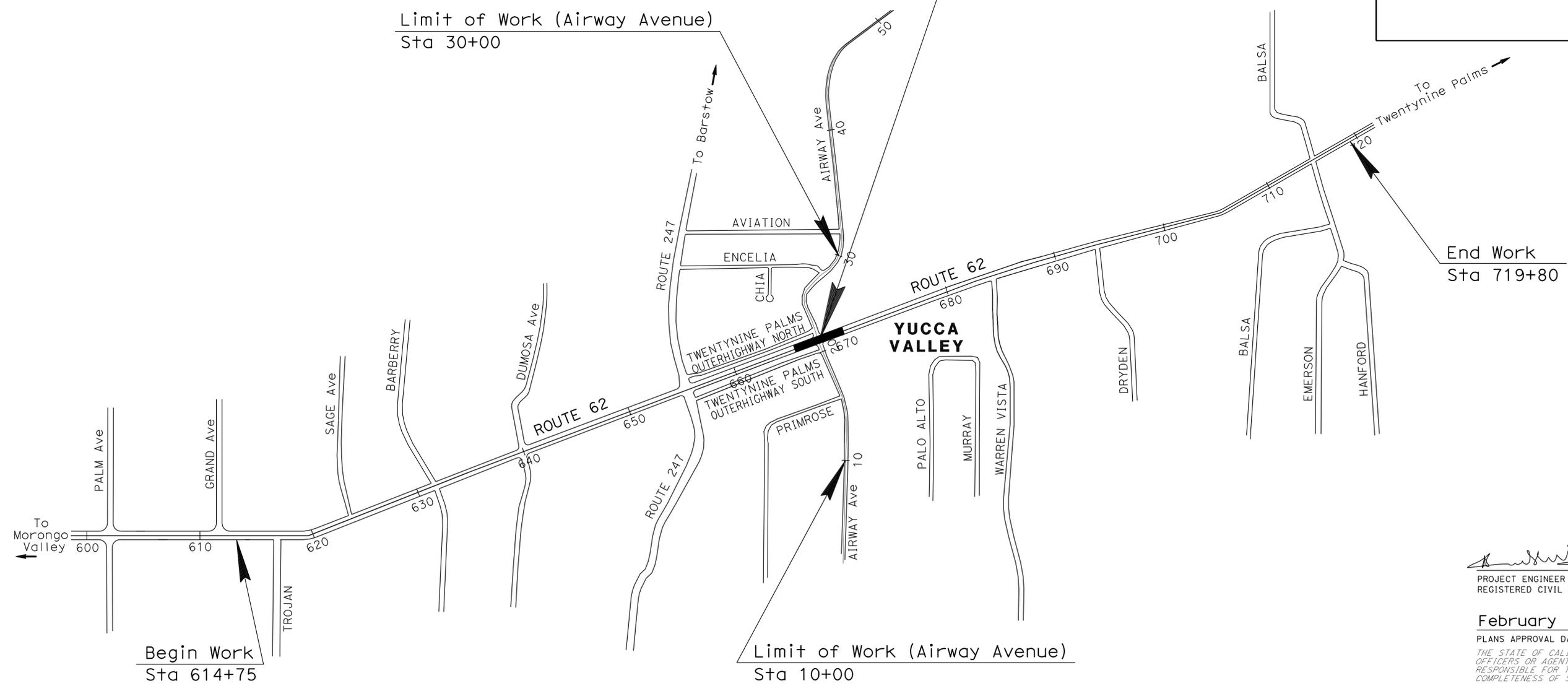
THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.

STATE OF CALIFORNIA **ACHSNHG-P062(032)E**
DEPARTMENT OF TRANSPORTATION
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN SAN BERNARDINO COUNTY
IN YUCCA VALLEY
AT AIRWAY AVENUE

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

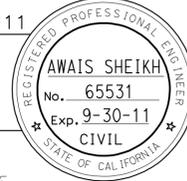


LOCATION OF CONSTRUCTION
PM 12.6



PROJECT MANAGER	ALI HADAVI
DESIGN ENGINEER	MYLINH NGUYEN

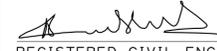
1-21-11
 PROJECT ENGINEER DATE
 REGISTERED CIVIL ENGINEER
February 14, 2011
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



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

NO SCALE

CONTRACT No.	08-OM4404
PROJECT ID	0800000480

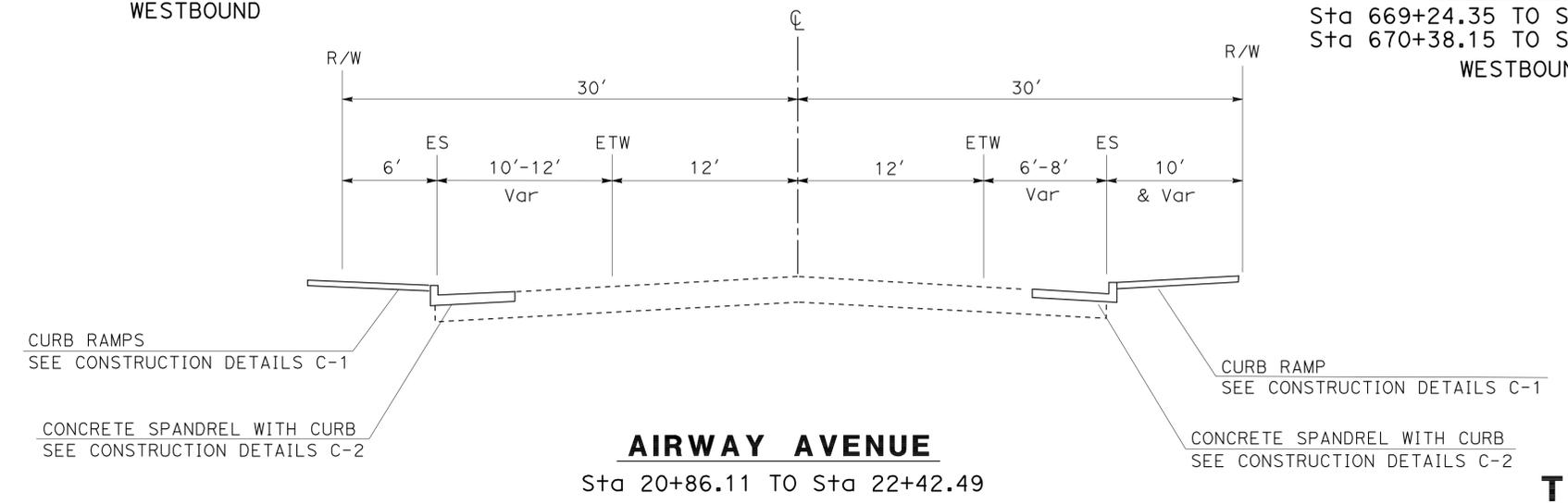
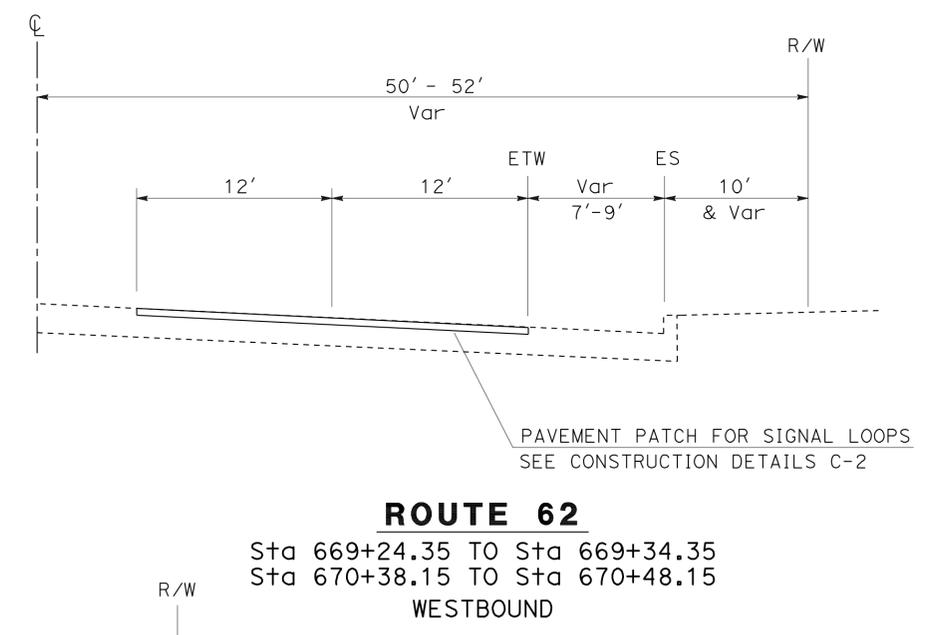
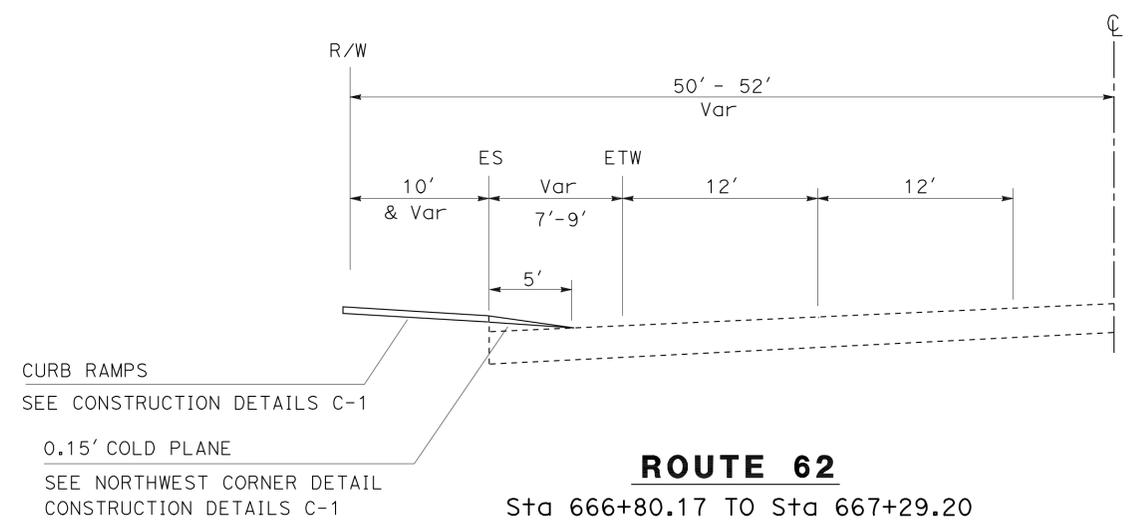
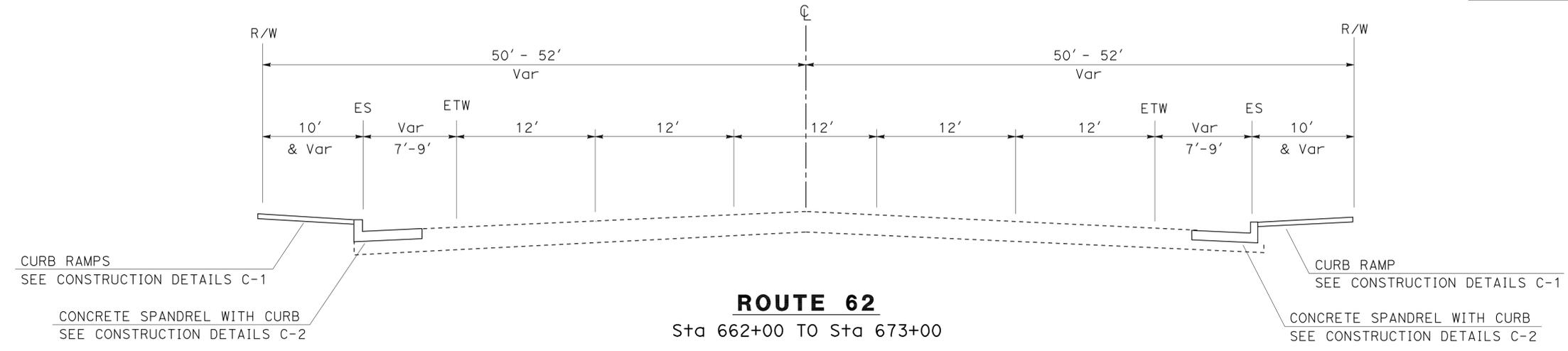
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	62	12.6	2	36
 REGISTERED CIVIL ENGINEER DATE 1-21-11					
2-14-11 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

NOTES:

- DIMENSIONS OF THE STRUCTURAL SECTION ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
- FOR LOCATION OF CURB RAMPS, SEE LAYOUT AND CONSTRUCTION DETAIL SHEETS.

DESIGN DESIGNATION (SR-62)

AADT (2011)	29,400
AADT (2031)	36,400
DHV (2031)	3,450
T (2011)	6%
T (2031)	9%
ESAL MAINLINE	4,022,474



TYPICAL CROSS SECTION
NO SCALE
X-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OPERATION SAFETY DESIGN
 FUNCTIONAL SUPERVISOR: BEHZAD SEDIGHI
 CALCULATED/DESIGNED BY: MYLINH NGUYEN
 CHECKED BY: AWAIS SHEIKH
 REVISED BY: DATE
 REVISIONS:

LAST REVISION: 01-21-11
 DATE PLOTTED => 14-FEB-2011
 TIME PLOTTED => 06:54

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	62	12.6	3	36

	1-21-11
REGISTERED CIVIL ENGINEER	DATE
2-14-11	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER	AWAIS SHEIKH
No. 65531	
Exp. 9-30-11	
CIVIL	

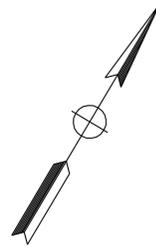
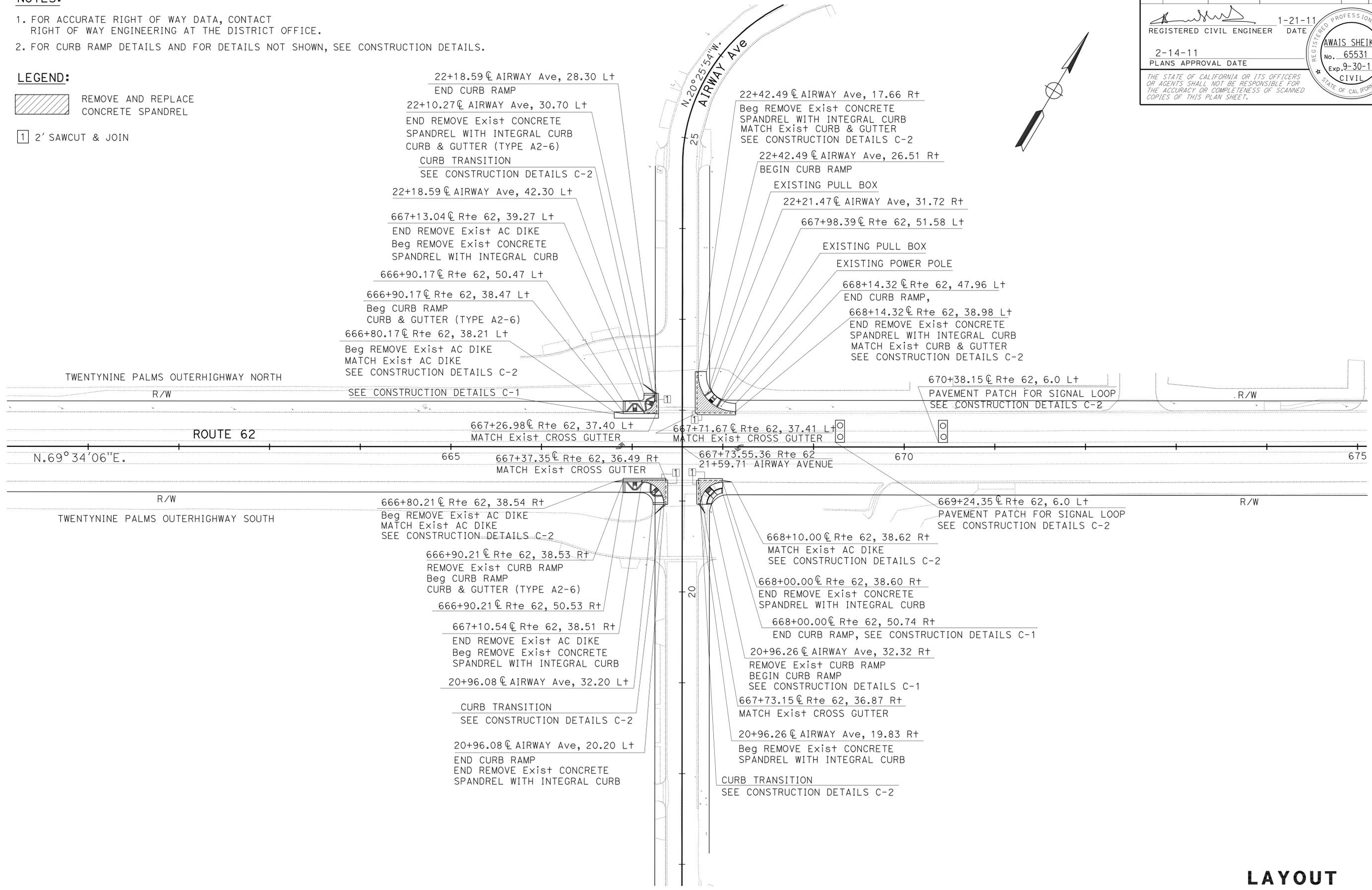
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- FOR CURB RAMP DETAILS AND FOR DETAILS NOT SHOWN, SEE CONSTRUCTION DETAILS.

LEGEND:

- REMOVE AND REPLACE CONCRETE SPANDREL
- 2' SAWCUT & JOIN



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OPERATION SAFETY DESIGN
 FUNCTIONAL SUPERVISOR BEHZAD SEDIGHT
 CALCULATED/DESIGNED BY CHECKED BY
 MYLINH NGUYEN AWAIS SHEIKH
 REVISED BY DATE REVISED
 x x x x x

LAYOUT
SCALE: 1" = 50'
L-1

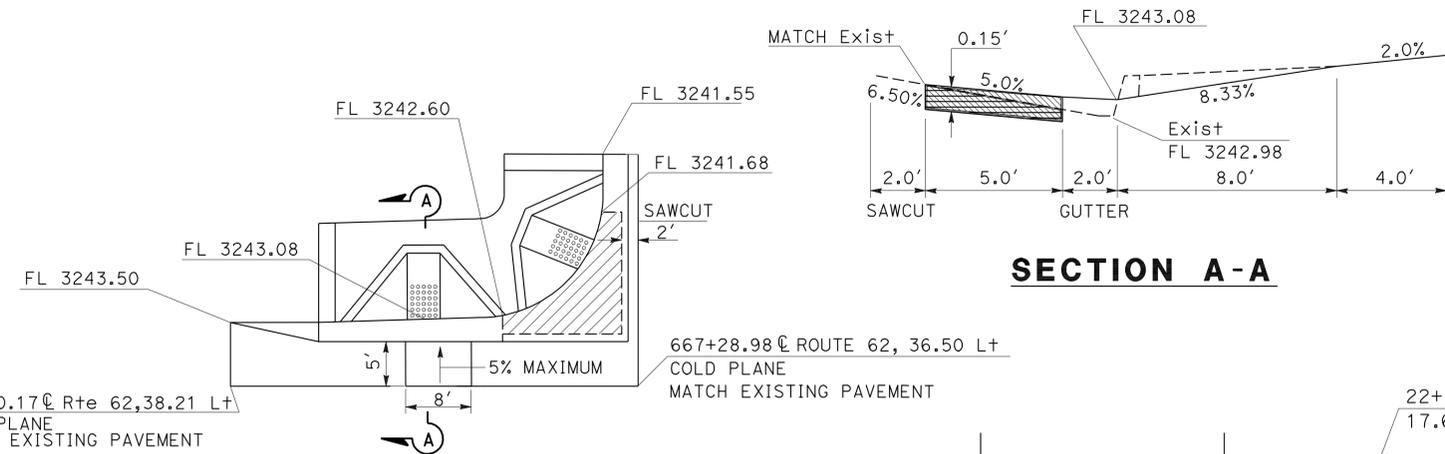
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	62	12.6	4	36

1-21-11
 REGISTERED CIVIL ENGINEER DATE
 2-14-11
 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.

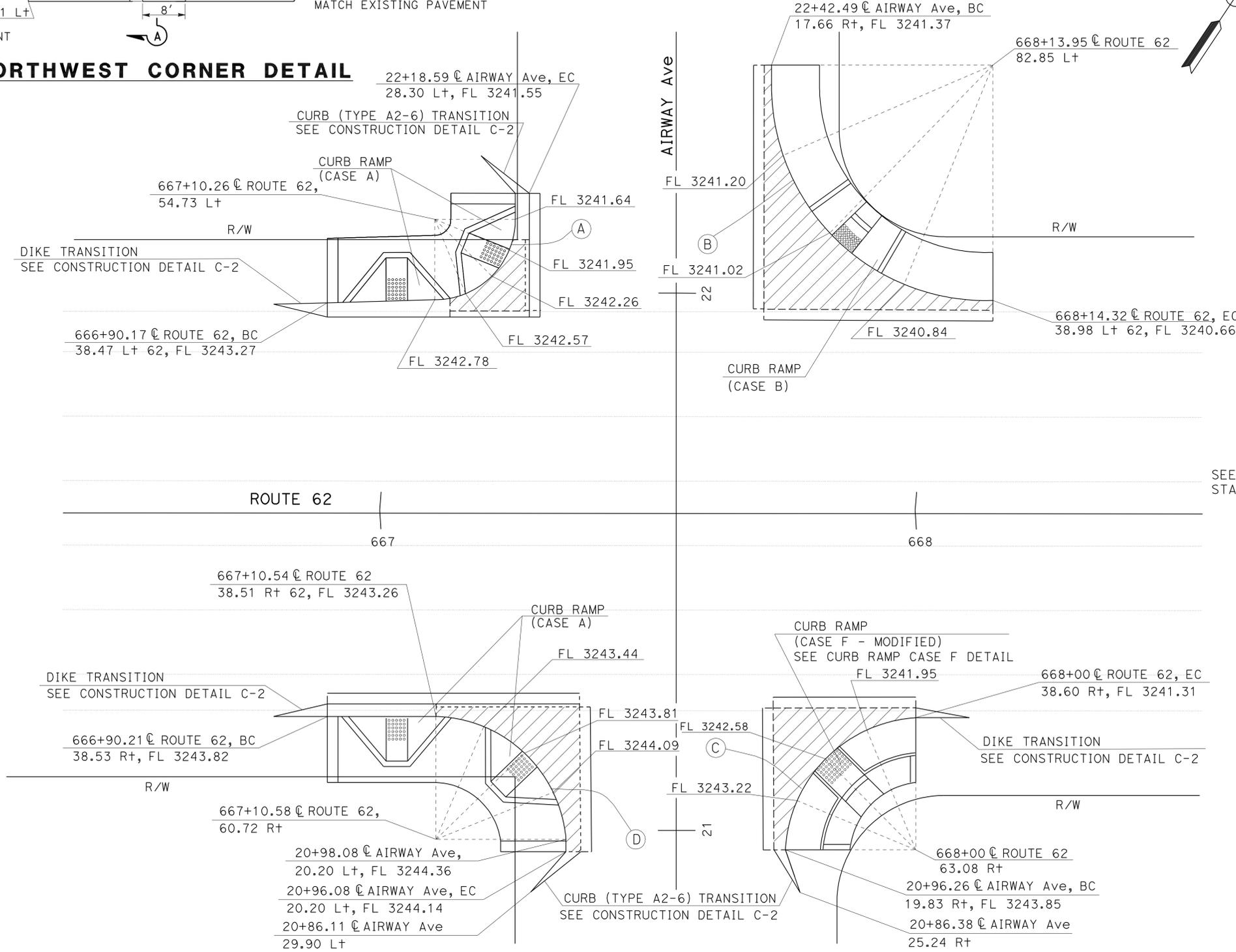
REGISTERED PROFESSIONAL ENGINEER
AWAIS SHEIKH
 No. 65531
 Exp. 9-30-11
 CIVIL
 STATE OF CALIFORNIA

- NOTES:**
1. MATCH CURBS AND GUTTER TO EXISTING FLOW LINE ELEVATION.
 2. CONSTRUCTION CURB RAMPS WITH DETECTABLE WARNING SURFACE PER REVISED STANDARD PLAN - A88A.
 3. FOR DETAILS NOT SHOWN, SEE S+D PLAN.
 4. ALL ELEVATION ARE EXISTING UNLESS MENTIONED.

- LEGEND:**
- NEW HMA TYPE A
 - 0.15' COLD PLANE

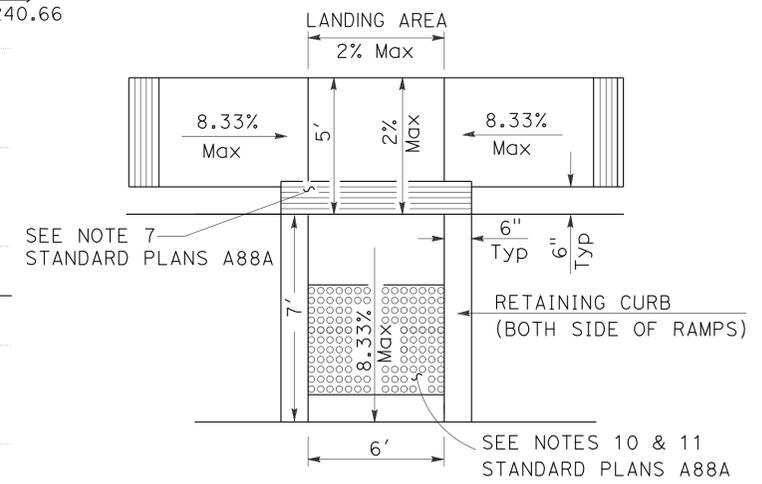


NORTHWEST CORNER DETAIL



CURVE DATA

No.	R	Δ	T	L
(A)	15.0'	90°00'00"	15.0'	23.56'
(B)	40.0'	91°52'12"	41.33'	64.14'
(C)	26.0'	83°17'42"	23.12'	37.80'
(D)	25.0'	83°37'49"	22.36'	36.49'



CURB RAMP CASE F - MODIFIED

CONSTRUCTION DETAILS NO SCALE C-1

REVISIONS:
 REVISION NO. | DATE | BY | DESCRIPTION
 1 | 1-21-11 | AWAIS SHEIKH | DESIGN
 2 | 2-14-11 | BEHZAD SEDIGHI | CHECKED
 3 | 7-2-2010 | FRANK MILES | REVISION

REVISIONS:
 REVISION NO. | DATE | BY | DESCRIPTION
 1 | 1-21-11 | AWAIS SHEIKH | DESIGN
 2 | 2-14-11 | BEHZAD SEDIGHI | CHECKED
 3 | 7-2-2010 | FRANK MILES | REVISION

REVISIONS:
 REVISION NO. | DATE | BY | DESCRIPTION
 1 | 1-21-11 | AWAIS SHEIKH | DESIGN
 2 | 2-14-11 | BEHZAD SEDIGHI | CHECKED
 3 | 7-2-2010 | FRANK MILES | REVISION

REVISIONS:
 REVISION NO. | DATE | BY | DESCRIPTION
 1 | 1-21-11 | AWAIS SHEIKH | DESIGN
 2 | 2-14-11 | BEHZAD SEDIGHI | CHECKED
 3 | 7-2-2010 | FRANK MILES | REVISION

REVISIONS:
 REVISION NO. | DATE | BY | DESCRIPTION
 1 | 1-21-11 | AWAIS SHEIKH | DESIGN
 2 | 2-14-11 | BEHZAD SEDIGHI | CHECKED
 3 | 7-2-2010 | FRANK MILES | REVISION

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	62	12.6	5	36

REGISTERED CIVIL ENGINEER	DATE
<i>Awais Sheikh</i>	1-21-11
PLANS APPROVAL DATE	
2-14-11	

REGISTERED PROFESSIONAL ENGINEER	No. 65531
Exp. 9-30-11	CIVIL

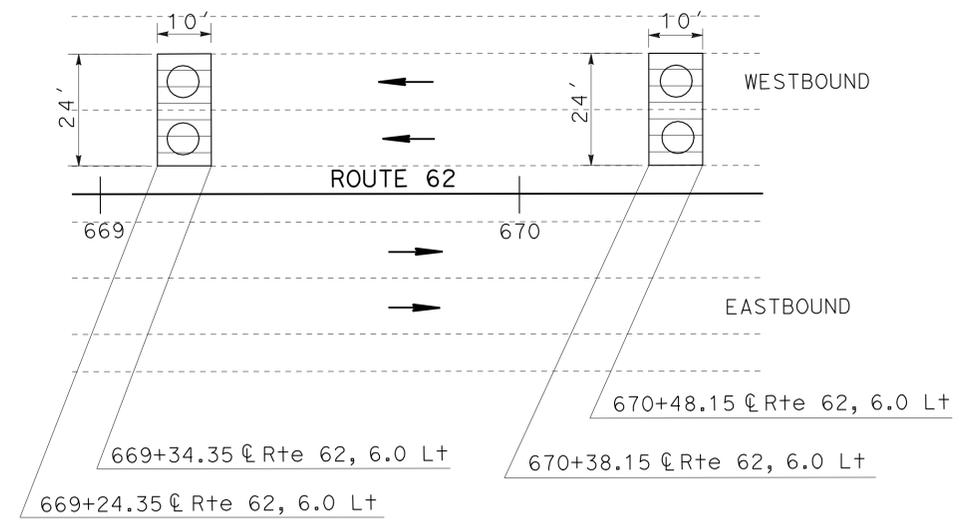
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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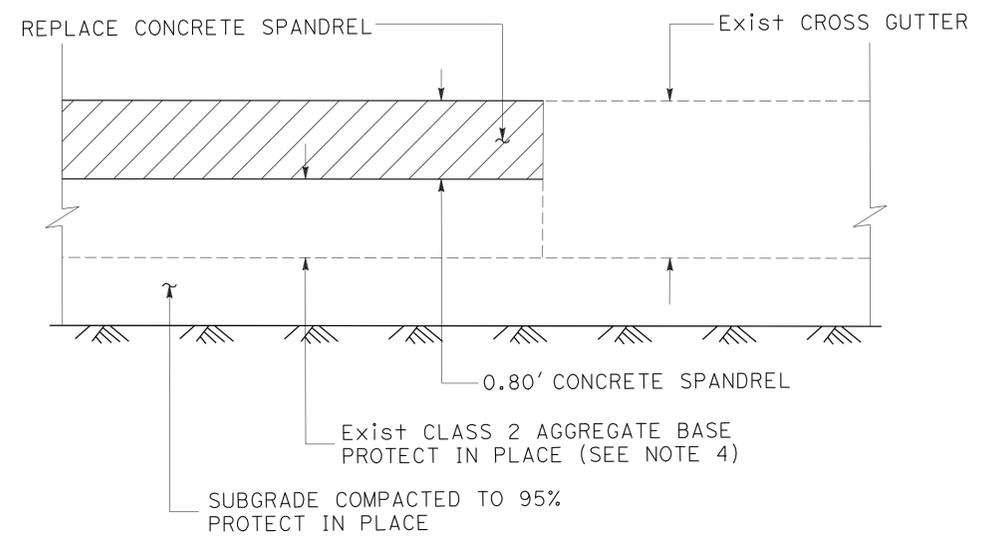
- FOR DETAIL NOT SHOWN, SEE S+D PLAN.
- MAINTAIN MINIMUM 6" BASE UNDER SPANDREL.
- CONSTRUCT 1/4" EXPANSION JOINT.
- PROTECT IN PLACE AGGREGATE BASE AND SUBGRADE UNDER EXISTING CONCRETE SPANDREL, CURB, AND CROSS GUTTER.

LEGEND:

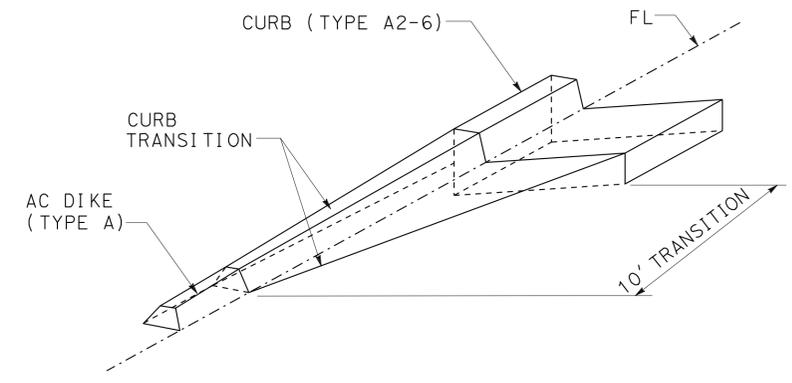
-  LIMITS OF REMOVE AND REPLACE CONCRETE SPANDREL AND CROSS GUTTER
- * NW & SW CORNERS: PROPOSE CURB & GUTTER (A2-6)
- * NE CORNER: Exist CURB & GUTTER
- * SE CORNER: Exist DIKE
- ** NW CORNER: PROPOSE CURB & GUTTER (A2-6)
- ** SW & SE CORNERS: Exist PAVEMENT TO CURB TRANSITION
- ** NE CORNER: Exist CURB & GUTTER



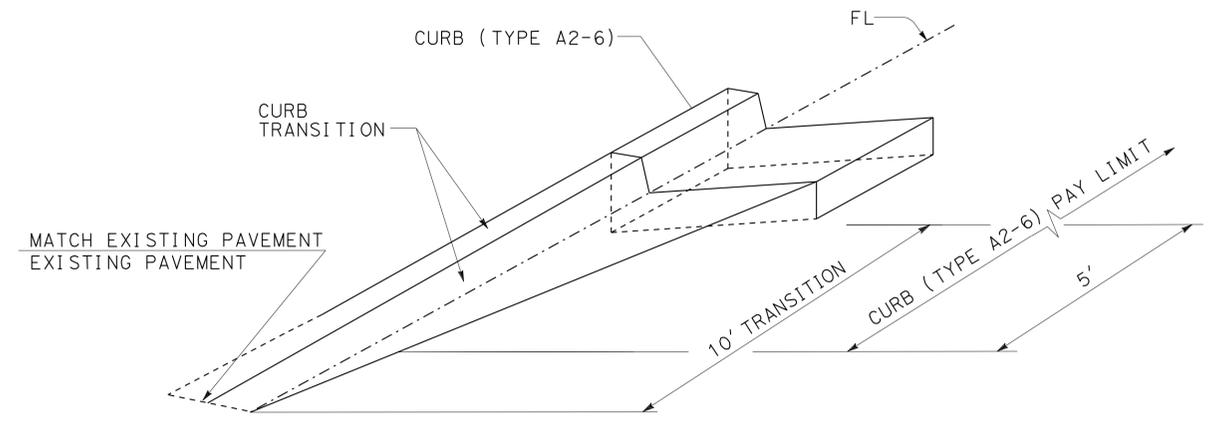
**PAVEMENT PATCH
FOR SIGNAL LOOPS (24'x10'x0.15')**



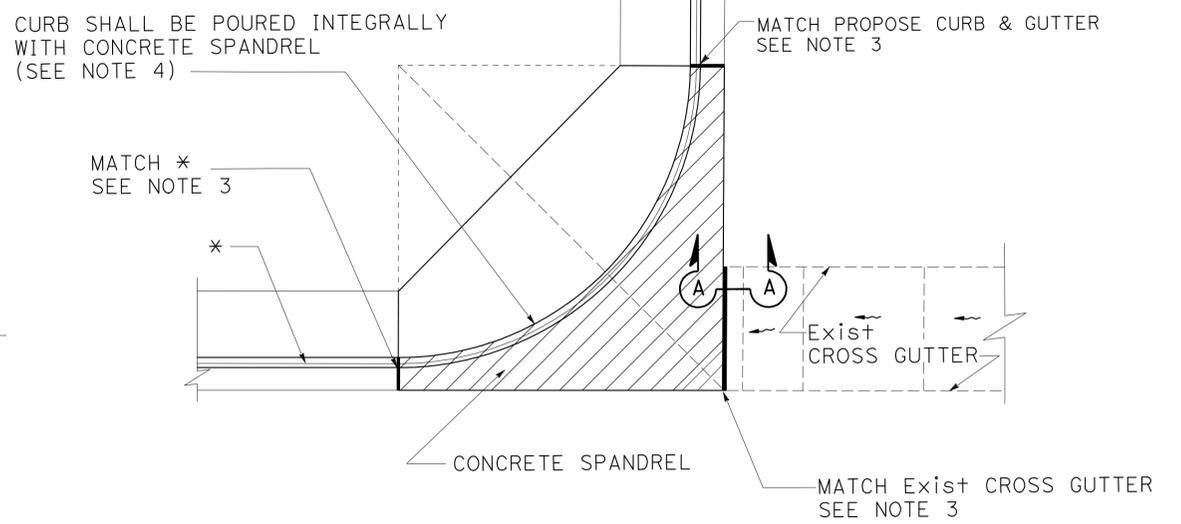
SECTION A-A



**AC DIKE (TYPE A)
TO CURB (TYPE A2-6) TRANSITION**



**EXISTING PAVEMENT TO
CURB (TYPE A2-6) TRANSITION**



CONCRETE SPANDREL DETAILS

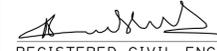
CONSTRUCTION DETAILS

NO SCALE

C-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OPERATION SAFETY DESIGN
 FUNCTIONAL SUPERVISOR: BEHZAD SEDIGHI
 CALCULATED/DESIGNED BY: MYLINH NGUYEN
 CHECKED BY: AWAIS SHEIKH
 REVISED BY: DATE REVISOR

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	62	12.6	6	36

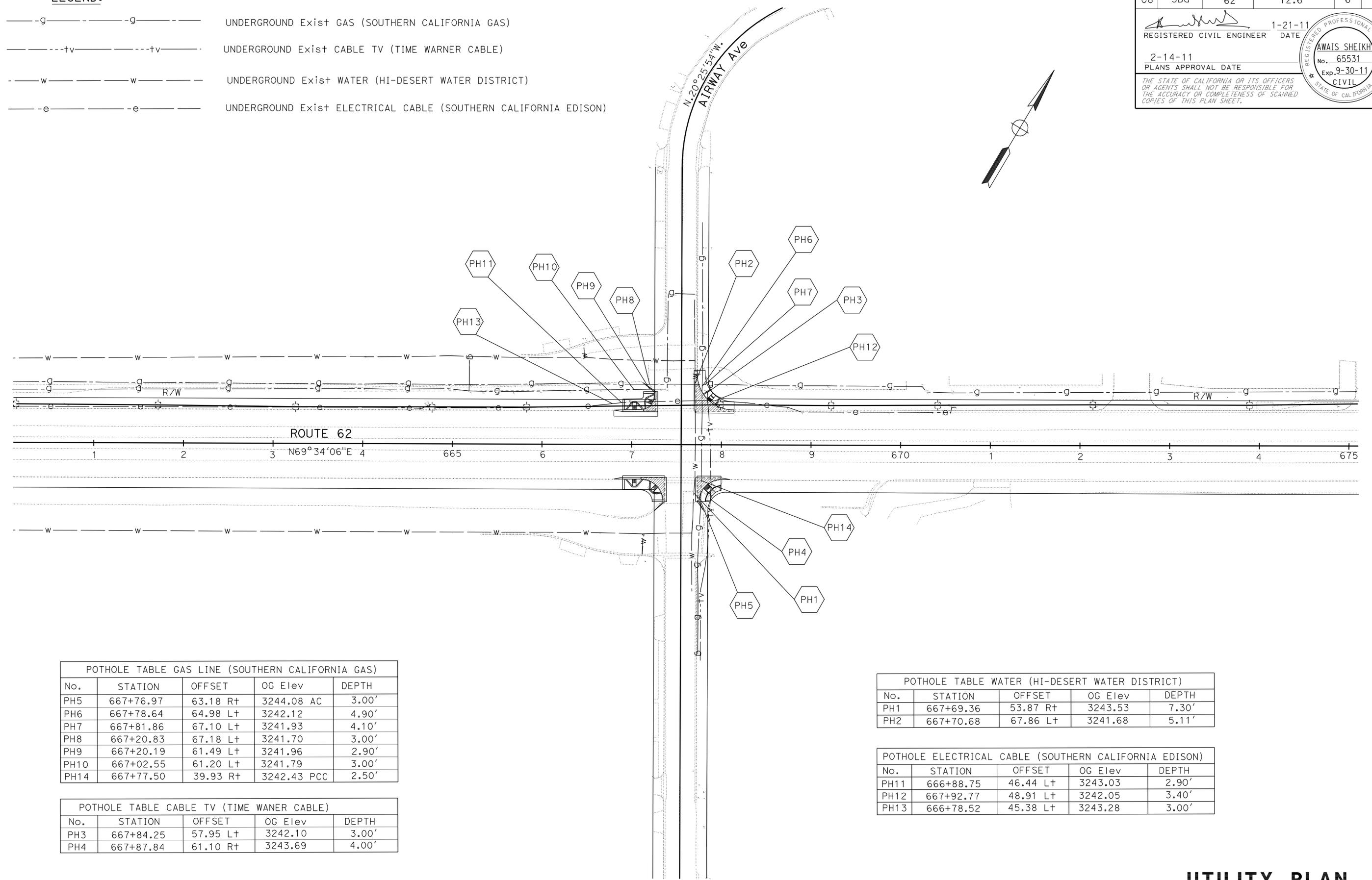
 1-21-11
 REGISTERED CIVIL ENGINEER DATE
 2-14-11
 PLANS APPROVAL DATE

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
AWAIS SHEIKH
 No. 65531
 Exp. 9-30-11
 CIVIL
 STATE OF CALIFORNIA

LEGEND:

- g-----g----- UNDERGROUND Exist GAS (SOUTHERN CALIFORNIA GAS)
- tv-----tv--- UNDERGROUND Exist CABLE TV (TIME WARNER CABLE)
- w-----w----- UNDERGROUND Exist WATER (HI-DESERT WATER DISTRICT)
- e-----e----- UNDERGROUND Exist ELECTRICAL CABLE (SOUTHERN CALIFORNIA EDISON)



POTHOLE TABLE GAS LINE (SOUTHERN CALIFORNIA GAS)				
No.	STATION	OFFSET	OG Elev	DEPTH
PH5	667+76.97	63.18 Rt	3244.08 AC	3.00'
PH6	667+78.64	64.98 Lt	3242.12	4.90'
PH7	667+81.86	67.10 Lt	3241.93	4.10'
PH8	667+20.83	67.18 Lt	3241.70	3.00'
PH9	667+20.19	61.49 Lt	3241.96	2.90'
PH10	667+02.55	61.20 Lt	3241.79	3.00'
PH14	667+77.50	39.93 Rt	3242.43 PCC	2.50'

POTHOLE TABLE WATER (HI-DESERT WATER DISTRICT)				
No.	STATION	OFFSET	OG Elev	DEPTH
PH1	667+69.36	53.87 Rt	3243.53	7.30'
PH2	667+70.68	67.86 Lt	3241.68	5.11'

POTHOLE ELECTRICAL CABLE (SOUTHERN CALIFORNIA EDISON)				
No.	STATION	OFFSET	OG Elev	DEPTH
PH11	666+88.75	46.44 Lt	3243.03	2.90'
PH12	667+92.77	48.91 Lt	3242.05	3.40'
PH13	666+78.52	45.38 Lt	3243.28	3.00'

POTHOLE TABLE CABLE TV (TIME WANER CABLE)				
No.	STATION	OFFSET	OG Elev	DEPTH
PH3	667+84.25	57.95 Lt	3242.10	3.00'
PH4	667+87.84	61.10 Rt	3243.69	4.00'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OPERATION SAFETY DESIGN
 FUNCTIONAL SUPERVISOR: BEHZAD SEDIGHI
 CALCULATED/DESIGNED BY: MYLINH NGUYEN
 CHECKED BY: AWAIS SHEIKH
 REVISOR: MYLINH NGUYEN
 DATE: 1-21-11

THIS PLAN IS ACCURATE FOR UTILITY INFORMATION ONLY.

UTILITY PLAN
 SCALE: 1" = 50' **U-1**

LAST REVISION: DATE PLOTTED => 14-FEB-2011
 TIME PLOTTED => 08:45

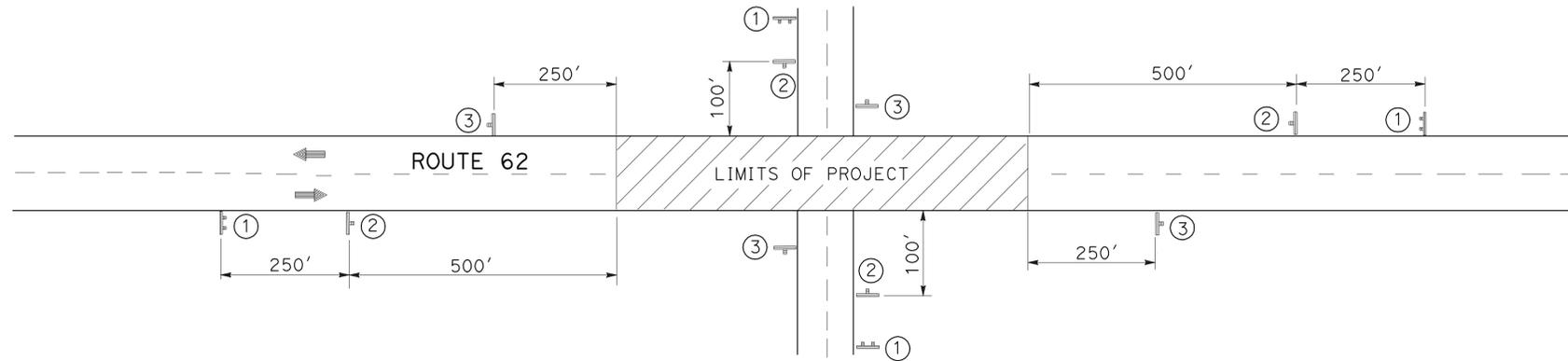
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	62	12.6	7	36

M.M. Kamgar Highway 1-21-11
REGISTERED CIVIL ENGINEER DATE

2-14-11
PLANS APPROVAL DATE

MEHDI KAMGAR
No. 58039
Exp. 6-30-12
CIVIL
STATE OF CALIFORNIA

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



TYPICAL INSTALLATION OF CONSTRUCTION AREA SIGNS

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No. (X)	SIGN CODE	PANEL SIZE	SIGN MESSAGE	No. OF POSTS AND SIZE	No. OF SIGNS
1	C40	72" X 36"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	2 - 4" X 6"	4
2	W20-1	48" X 48"	ROAD WORK AHEAD	1 - 4" X 6"	4
3	G20-2	48" X 18"	END ROAD WORK	1 - 4" X 6"	4

NOTE:

1. EXACT SIGN LOCATION WILL BE DETERMINED BY THE ENGINEER.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN B
 FUNCTIONAL SUPERVISOR LARRY SARTORI
 CALCULATED/DESIGNED BY CHECKED BY
 MEHDI KAMGAR LARRY SARTORI
 REVISED BY DATE REVISED
 REVISIONS

THIS PLAN IS ACCURATE FOR CONSTRUCTION AREA SIGNS WORK ONLY.

CONSTRUCTION AREA SIGNS
NO SCALE

CS-1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	62	12.6	8	36

M.M. Kamgar Highway 1-21-11
REGISTERED CIVIL ENGINEER DATE

2-14-11
PLANS APPROVAL DATE

MEHDI KAMGAR
No. 58039
Exp. 6-30-12
CIVIL

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NOTES:

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- EXACT POSITION AND LOCATION OF SIGN WILL BE DETERMINED BY THE ENGINEER.

LEGEND:

 PAVEMENT STRIPING DETAIL



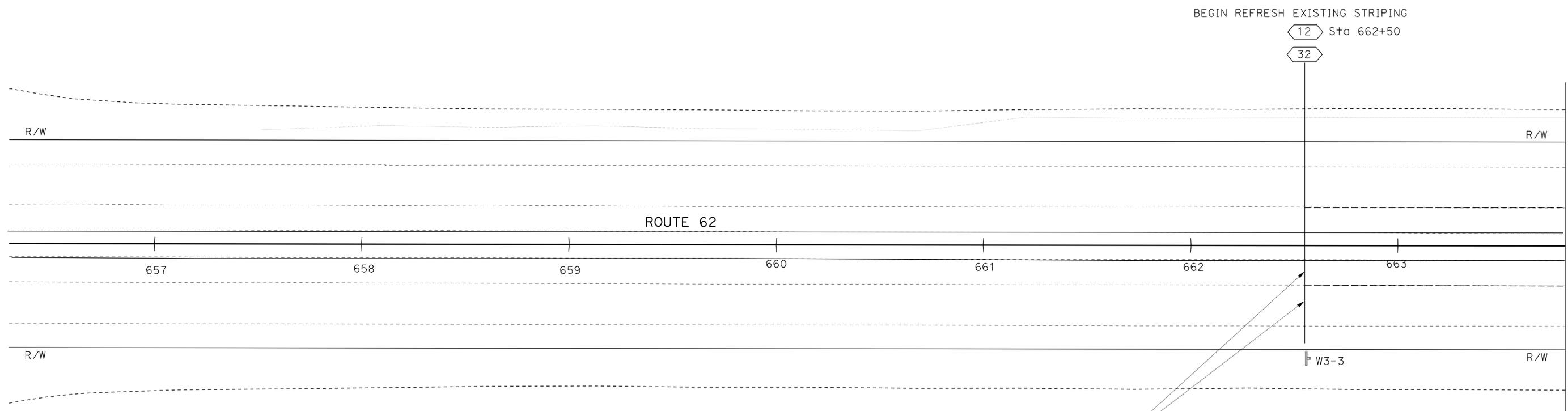
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN B

FUNCTIONAL SUPERVISOR
LARRY SARTORI

CALCULATED/DESIGNED BY
CHECKED BY

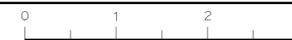
MEHDI KAMGAR
LARRY SARTORI

REVISOR BY
DATE



THIS PLAN IS ACCURATE FOR PAVEMENT DELINEATION AND SIGN WORK ONLY.

PAVEMENT DELINEATION AND SIGN PLAN
NO SCALE **PD-1**



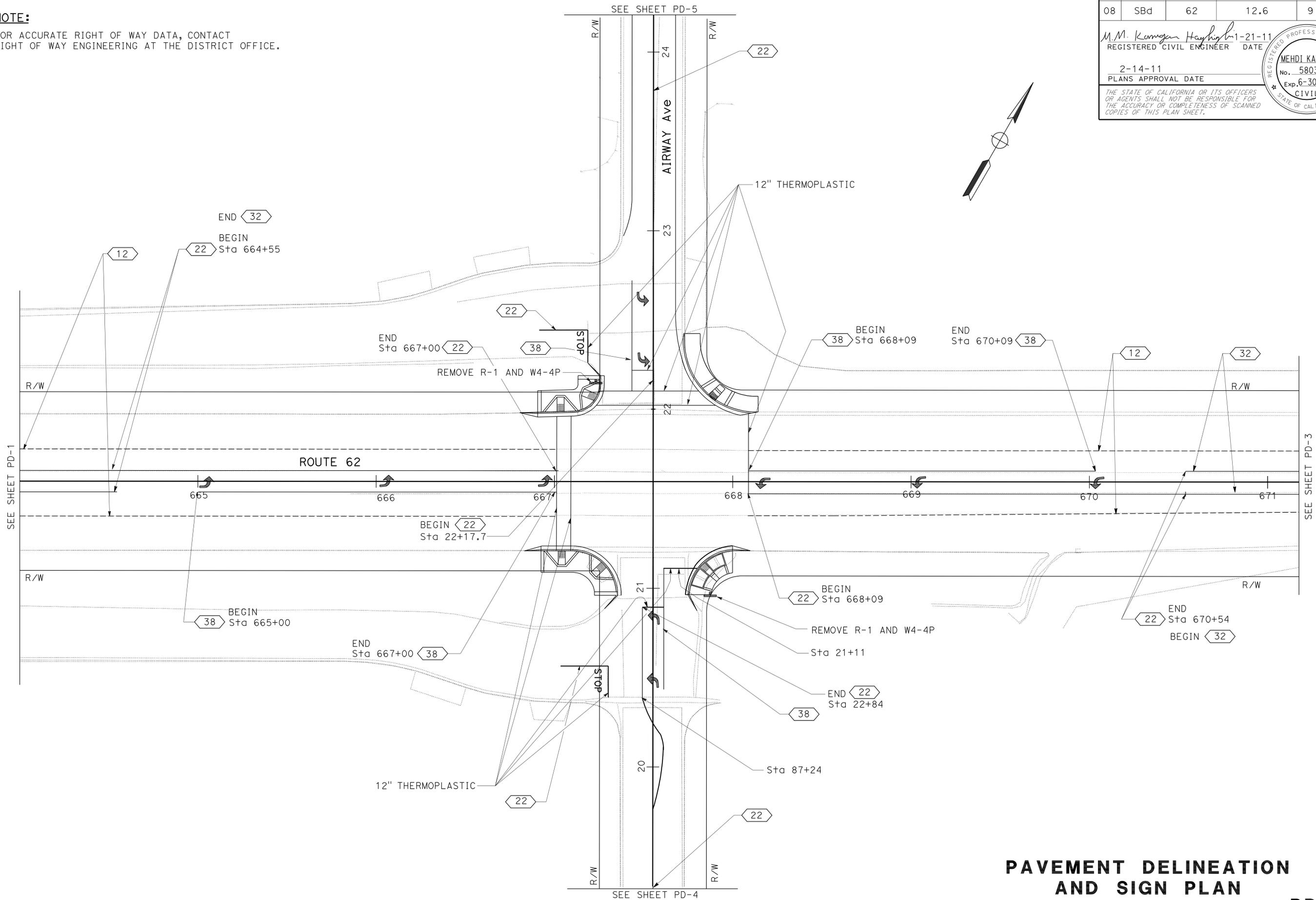
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	62	12.6	9	36

M.M. Kamgar	1-21-11
REGISTERED CIVIL ENGINEER	DATE
2-14-11	
PLANS APPROVAL DATE	

MEHDI KAMGAR
No. 58039
Exp. 6-30-12
CIVIL

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

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



**PAVEMENT DELINEATION
AND SIGN PLAN**
NO SCALE **PD-2**

THIS PLAN IS ACCURATE FOR PAVEMENT DELINEATION AND SIGN WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN B

FUNCTIONAL SUPERVISOR: LARRY SARTORI
CALCULATED/DESIGNED BY: LARRY SARTORI
REVISOR: MEHDI KAMGAR
CHECKED BY: LARRY SARTORI
REVISED BY: LARRY SARTORI
DATE REVISED: []

USERNAME => trmartin
DGN FILE => 80m440na002.dgn

RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3

UNIT 2285

PROJECT NUMBER & PHASE 0800004801

LAST REVISION: 01-21-11
DATE PLOTTED => 18-FEB-2011
TIME PLOTTED => 08:25

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	62	12.6	11	36

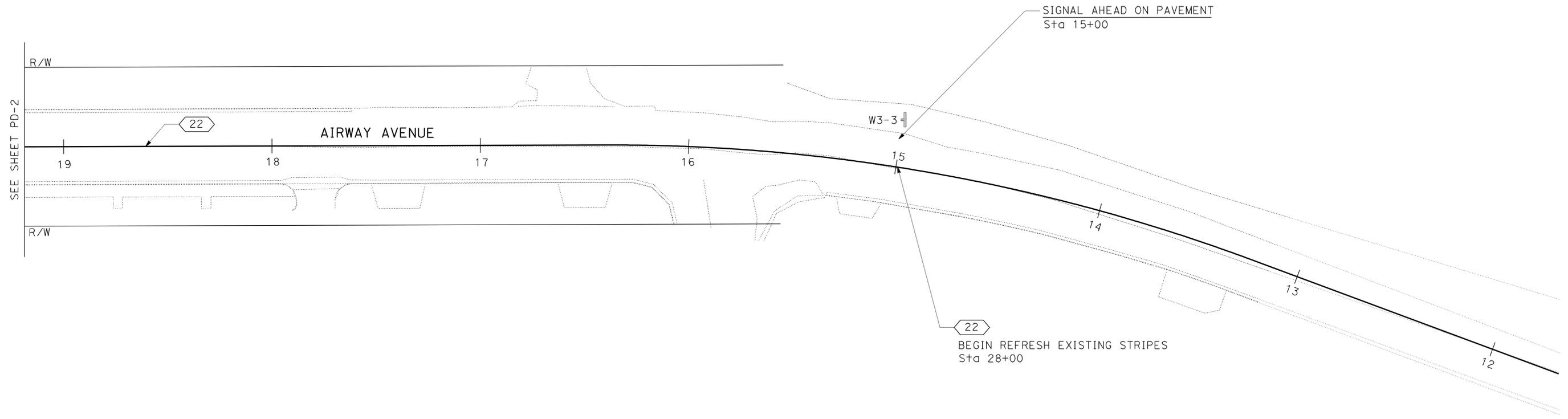
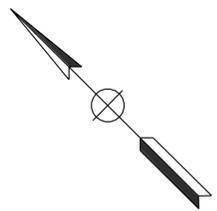
M.M. Kamgar Highway 1-21-11
 REGISTERED CIVIL ENGINEER DATE
 2-14-11
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 MEHDI KAMGAR
 No. 58039
 Exp. 6-30-12
 CIVIL
 STATE OF CALIFORNIA

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

NOTES:

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- EXACT POSITION AND LOCATION OF SIGN WILL BE DETERMINED BY THE ENGINEER.



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN B
 FUNCTIONAL SUPERVISOR: LARRY SARTORI
 CALCULATED/DESIGNED BY: MEHDI KAMGAR
 CHECKED BY: LARRY SARTORI
 REVISED BY: MEHDI KAMGAR
 DATE REVISED: LARRY SARTORI

**PAVEMENT DELINEATION
 AND SIGN PLAN**
 NO SCALE **PD-4**

THIS PLAN IS ACCURATE FOR PAVEMENT DELINEATION AND SIGN WORK ONLY.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	62	12.6	13	36

M.M. Kamgar *Mehdi Kamgar* 1-21-11
REGISTERED CIVIL ENGINEER DATE

2-14-11
PLANS APPROVAL DATE

MEHDI KAMGAR
No. 58039
Exp. 6-30-12
CIVIL
STATE OF CALIFORNIA

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

REMOVE YELLOW THERMOPLASTIC STRIPE (HAZARDOUS WASTE)	
LF	
	400
TOTAL	400

PAVEMENT DELINEATION QUANTITIES

DETAIL No.	PAVEMENT MARKERS		THERMOPLASTIC TRAFFIC STRIPE (SPRAYABLE)		THERMOPLASTIC TRAFFIC STRIPE
	REMOVE PAVEMENT MARKER	RETROREFLECTIVE		4" WHITE	4" YELLOW
		TYPE G	TYPE D		
	EA	EA		FT	FT
12	42	42		2000	
22			142		1694
32	54		54		756
38	12	24			538
SUB-TOTAL	108	66	196	2000	538
TOTAL	108	262		4450	538

THERMOPLASTIC PAVEMENT MARKING

ITEMS	QUANTITY	THERMOPLASTIC PAVEMENT MARKING
	EA	SQFT
TYPE IV ARROW	10	150
SIGNAL	6	192
AHEAD	6	186
STOP	2	44
12" STOP BAR	9 (FT)	399
TOTAL		971

REMOVE ROADSIDE SIGN	
EA	
R-1 W4-4P	2
TOTAL	2

REMOVE PAVEMENT THERMOPLASTIC MARKING	
SQFT	
STOP	44
TOTAL	44

MATERIAL SUMMARY CONTRACTOR FURNISHED SIGNS

SIGN CODE	SIGN SIZE L X D	SINGLE FACE	DOUBLE FACED	BACKGROUND SHEETING COLOR	RETROREFLECTIVE ASTM TYPE	LEGEND SHEETING COLOR	RETROREFLECTIVE ASTM TYPE	GRAFFITI FILM		ROADSIDE SINGLE-SHEET SIGN AREA		INSTALL SIGN MAST ARM HANGER ASSEMBLY (N)	INSTALL SIGN STRAP AND SADDLE BRACKET METHOD (N)	No. OF POSTS AND SIZE	DESCRIPTION
								STANDARD	PREMIUM	FRAMED ALUMINIUM	UNFRAMED ALUMINIUM				
								0.08"	0.063"						
W3-3	36" X 36"	4		YELLOW	III	BLACK	VII		X					1 - 4" X 6"	SIGNAL AHEAD SYMBOL
R3-4	36" X 36"	4		WHITE	III	BLACK	VII				X				NO U TURN
R9-3A	24" X 24"	4		WHITE	III	BLACK	VII		X			X			NO PED CROSSING SYMBOL
D3-1	72" X 18"		2	GREEN	III	WHITE	VII		X	18		X			AIRWAY AVE
D3-1	72" X 18"		2	GREEN	III	WHITE	VII		X	18		X			RTE 62
TOTAL										36	88				

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

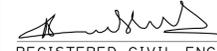
PAVEMENT DELINEATION AND SIGN QUANTITIES

PDQ-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN B
 MEHDI KAMGAR
 LARRY SARTORI
 LARRY SARTORI
 REVISIONS: 01-21-11

LAST REVISION: 01-21-11
 DATE PLOTTED => 18-FEB-2011
 TIME PLOTTED => 08:32

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	62	12.6	14	36

 1-21-11
 REGISTERED CIVIL ENGINEER DATE

2-14-11
 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
AWAIS SHEIKH
 No. 65531
 Exp. 9-30-11
 CIVIL
 STATE OF CALIFORNIA

MINOR CONCRETE (MISCELLANEOUS CONSTRUCTION)

STATION	LOCATION	CURB & GUTTER (TYPE A2-6) CURB TRANSITION	CURB RAMPS	CONCRETE SPANDREL
666+90.10 TO 667+26.75	L+	2.92	5.06	2.2
666+90.10 TO 667+37.06	R+	3.53	6.07	6.4
667+71.17 TO 668+14.65	L+	4.06	5.9	11.08
667+73.18 TO 668+00	R+	2.3	3.67	5.52
SUB-TOTAL		12.81	20.70	25.2
TOTAL		58.71		

CURB RAMPS DETECTABLE WARNING SURFACE

LOCATION	EA
NW	2.0
SW	2.0
NE	1.0
SE	1.0
TOTAL	6.0

ROADWAY QUANTITIES

LOCATION	HOT MIX ASPHALT (TYPE A)	COLD PLANE ASPHALT CONCRETE PAVEMENT 0.15' COLD PLANE
	TON	SQYD
NORTHWEST CORNER OF SR-62 & AIRWAY Ave Sta 666+80.17 TO Sta 667+28.98	3.6	32.0
NORTHEAST CORNER OF SR-62 & AIRWAY Ave Sta 667+69.67 TO Sta 668+14.32	2.4	19.0
SOUTHWEST CORNER OF SR-62 & AIRWAY Ave Sta 666+90.21 TO Sta 667+39.35	2.1	17.0
SOUTHEAST CORNER OF SR-62 & AIRWAY Ave Sta 667+71.15 TO Sta 668+00	1.4	12.0
PAVEMENT PATCH FOR SIGNAL LOOPS Sta 669+24.35 TO Sta 669+34.35 Sta 670+38.15 TO Sta 670+48.15	5.5	53.0
TOTAL	15.0	133.0

REMOVALS

STATION	LOCATION	ASPHALT CONCRETE DIKE	CONCRETE		
			CURB	CURB RAMPS	CONCRETE SPANDREL
		LF	SQFT		
666+90.10 TO 667+26.75	L+	33	20	-	100
666+80.25 TO 667+37.06	R+	30	27	280	257
667+71.17 TO 668+14.65	L+	-	45	-	460
667+73.18 TO 668+00	R+	-	30	340	274
SUB-TOTAL		63	122	620	1091
TOTAL		63	1833		

SUMMARY OF QUANTITIES

Q-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OPERATION SAFETY DESIGN
 FUNCTIONAL SUPERVISOR: BEHZAD SEDIGHI
 MYLINH NGUYEN
 AWAIS SHEIKH
 REVISOR: MYLINH NGUYEN
 DATE: 7/2/2010
 REVISIONS: 01-21-11

USERNAME => frmikesl
 DGN FILE => 80m440pa001.dgn



UNIT 2294

PROJECT NUMBER & PHASE

08000004801

LAST REVISION: 01-21-11
 DATE PLOTTED => 14-FEB-2011
 TIME PLOTTED => 09:06

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	62	12.6	15	36

<i>Ferdinand De La Cruz</i>	1-21-11
REGISTERED ELECTRICAL ENGINEER	DATE
2-14-11	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
FERDINAND DE LA CRUZ
No. E17215
Exp. 6-30-12
ELECTRICAL
STATE OF CALIFORNIA

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

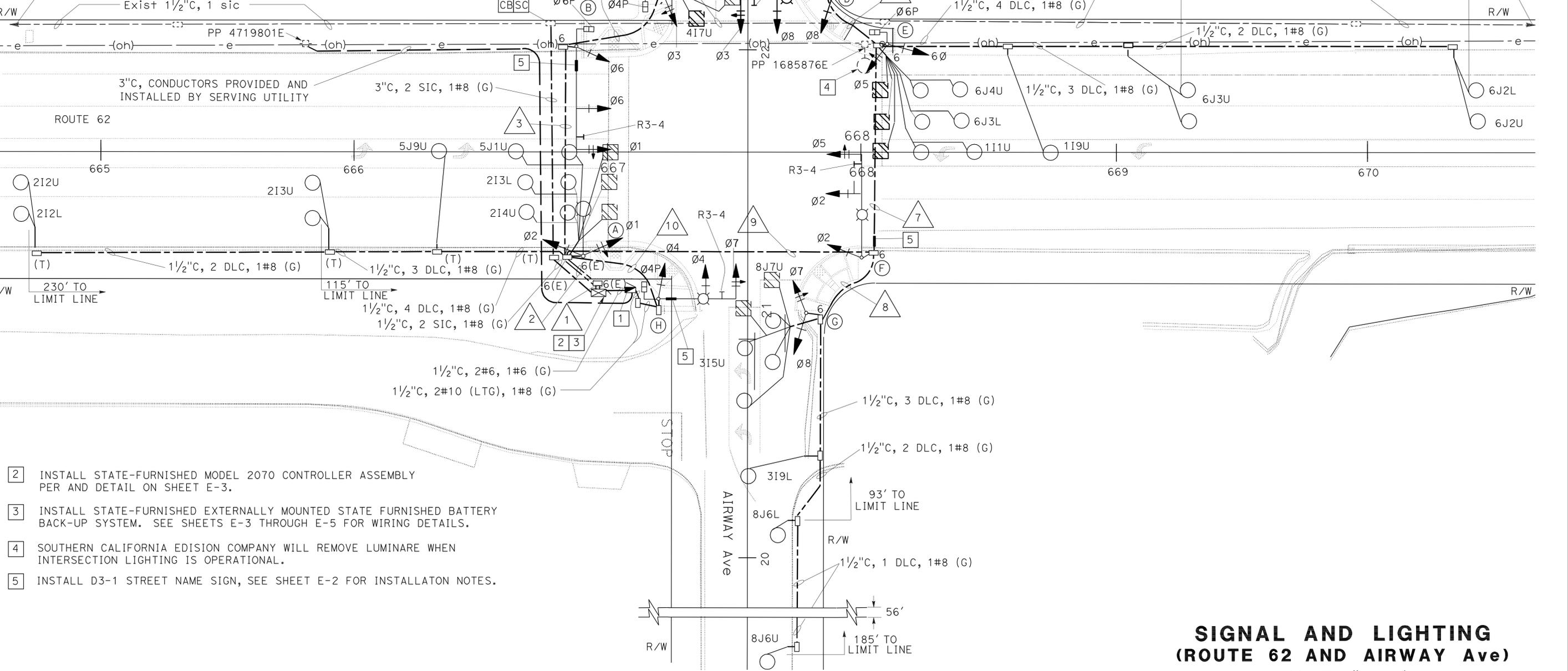
NOTE:

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

PROJECT NOTES: THIS SHEET ONLY

- INSTALL TYPE III-CF SERVICE EQUIPMENT ENCLOSURE
 METER 1: 120/240 V, 1Ø, (TC-1)
 100 A, 240 V, 2P, CB, MAIN
 50 A, 120 V, 1P, SIGNAL
 CALTRANS ID NUMBER-08540620012.645M
 ADDRESS: 57475 TWENTY NINE PALMS OUTER HIGHWAY (TC-1)
 METER 2: 120/240 V, 1Ø, (LS-3)
 100 A, 240 V, 2P, CB, MAIN
 15 A, 120 V, 1P, CB, LIGHTING CONTROL
 30 A, 120 V, 1P, LIGHTING
 15 A, 120 V, 1P, CB, SIGN ILLUMINATION CONTROL
 30 A, 120 V, 1P, IISNS (FOR FUTURE USE)
 30 A, 120 V, 2PNO CONTACTOR, IISNS
 60 A, 120 V, 2PNO CONTACTOR, LIGHTING
 CALTRANS ID NUMBER-08540620012.644M
 ADDRESS: 57475 TWENTY NINE PALMS OUTER HIGHWAY (LS-3)

EXISTING sic TO SIGNAL CABINET AT ROUTE 62 AND ROUTE 247 (OLD WOMAN SPRINGS Rd)
 Exist 1/2"C, 1 sic



- INSTALL STATE-FURNISHED MODEL 2070 CONTROLLER ASSEMBLY PER AND DETAIL ON SHEET E-3.
- INSTALL STATE-FURNISHED EXTERNALLY MOUNTED STATE FURNISHED BATTERY BACK-UP SYSTEM. SEE SHEETS E-3 THROUGH E-5 FOR WIRING DETAILS.
- SOUTHERN CALIFORNIA EDISON COMPANY WILL REMOVE LUMINARE WHEN INTERSECTION LIGHTING IS OPERATIONAL.
- INSTALL D3-1 STREET NAME SIGN, SEE SHEET E-2 FOR INSTALLATON NOTES.

SIGNAL AND LIGHTING (ROUTE 62 AND AIRWAY Ave)

SCALE: 1" = 20'

E-1

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN B
 FUNCTIONAL SUPERVISOR: FERDINAND DE LA CRUZ
 CHECKED BY: FERDINAND DE LA CRUZ
 DESIGNED BY: FERDINAND DE LA CRUZ
 REVISIONS: (None listed)

USERNAME => trmartin
 DGN FILE => 80m440u001.dgn

RELATIVE BORDER SCALE IS IN INCHES



UNIT 2292

PROJECT NUMBER & PHASE

0800004801

BORDER LAST REVISED 7/2/2010

LAST REVISION: DATE PLOTTED => 18-FEB-2011
 01-21-11 TIME PLOTTED => 08:32

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	62	12.6	16	36

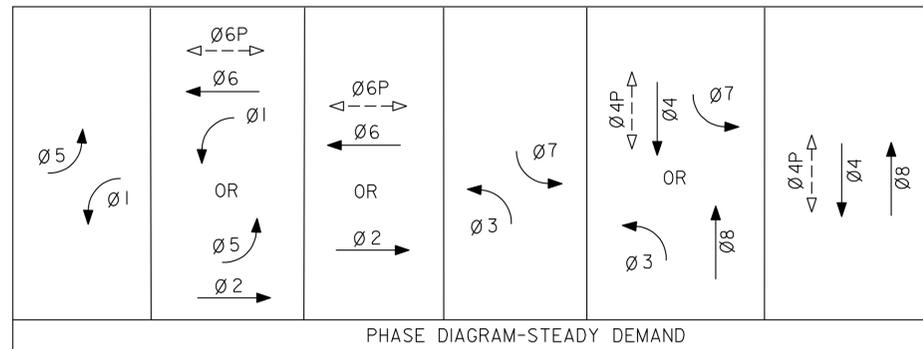
1-21-11
 REGISTERED ELECTRICAL ENGINEER DATE
 2-14-11
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 FERDINAND DE LA CRUZ
 No. E17215
 Exp. 6-30-12
 ELECTRICAL
 STATE OF CALIFORNIA

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

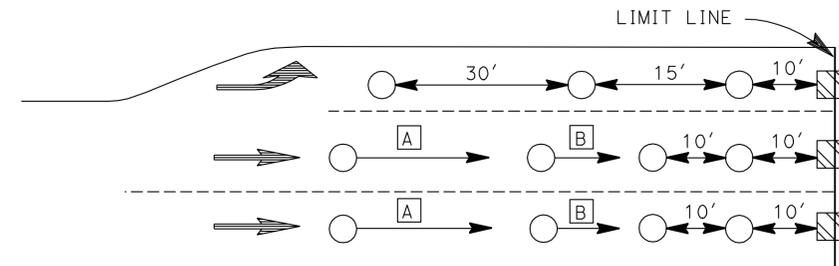
CONDUCTOR SCHEDULE														
CONDUCTOR DESIGNATION			NUMBER OF CONDUCTORS											
CABLE TYPE	Std	PHASE	RUN NUMBER											
			1	2	3	4	5	6	7	8	9	10		
VEH-PED 12CSC	(A)	Ø2,Ø1 4PPB												
	(B)	Ø6,Ø1,6P 4PPB												
	(C)	Ø4,Ø3,4P 6PPB												
	(D)	Ø3,Ø8 6PPB												
PPB 3CSC	(E)	Ø6,Ø5,6P *												
	(F)	Ø2,Ø5 *												
	(G)	Ø8,Ø7 *												
	(H)	Ø4,Ø7,4P *												
TOTAL CABLES 12/3 CONDUCTORS			8	8	4	4	3	2	2	1	1	1	2	1
#10	STREET LIGHTING				2	2	2					2	2	
#8	GROUND		2	2	1	1	1	1	1	1	1	1	1	
TYPE B DLC	Ø1		2	2							2	2		
	Ø2		5	5										
	Ø3		2	2						2	2			
	Ø4		3	3	3	3								
	Ø5		2	2										
	Ø6		5	5					5		5			
	Ø7		2	2	2	2						3	3	
TOTAL DLC's PER RUN			24	24	5	5			7	5	12			
#10 IISNS *					2	2	2				2	2		
CONDUIT SIZE (in)			2-4	2-4	4	4	4	2	4	2	4	4	2 1/2	

* FUTURE USE



POLE AND EQUIPMENT SCHEDULE

No.	STANDARD		VEH SIG MTG		PED SIGNAL	PPB		HPS LUMINAIRE	SPECIAL REQUIREMENTS
	Type	SIG MA	LUM MA	Mast Arm		Pole	MTG		
(A)	19A-4-100	-	15'-0"		SV-2-T		4	310 W	No SIG MA
(B)	27-4-100	40'-0"		I-MAS I-MAT	SV-1-T	SP-I-T	4		AIRWAY AVE, R3-4
(C)	I-A				TV-2-T	SP-I-T	6		
(D)	24-4-100	35'-0"	15'-0"	I-MAS I-MAT	SV-1-T		6	200 W	RTE 62, R3-4
(E)	I-A				TV-2-T	SP-I-T			R9-3A
(F)	26A-4-100	40'-0"	15'-0"	I-MAS I-MAT	SV-1-T			310 W	AIRWAY AVE, R3-4, R9-3A
(G)	I-A				TV-2-T				R9-3A
(H)	19A-4-100	30'-0"	15'-0"	I-MAS I-MAT	SV-1-T	SP-I-T		310 W	RTE 62, R3-4, R9-3A



[A] = DISTANCE TO LIMIT LINE, SEE PLANS
 [B] = DISTANCE TO LIMIT LINE, SEE PLANS
 TYPICAL LOOP DETECTOR SETBACKS

**SIGNAL AND LIGHTING
 (CONDUCTOR, POLE
 AND EQUIPMENT SCHEDULE)
 ROUTE 62 AND AIRWAY Ave**

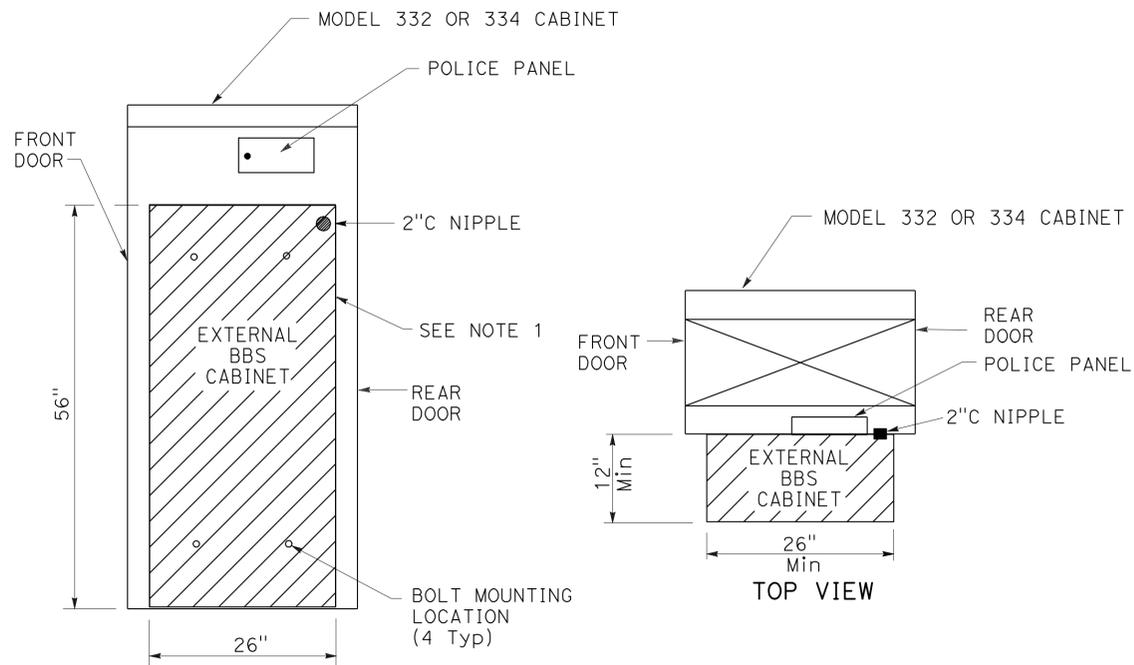
NO SCALE

E-2

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.



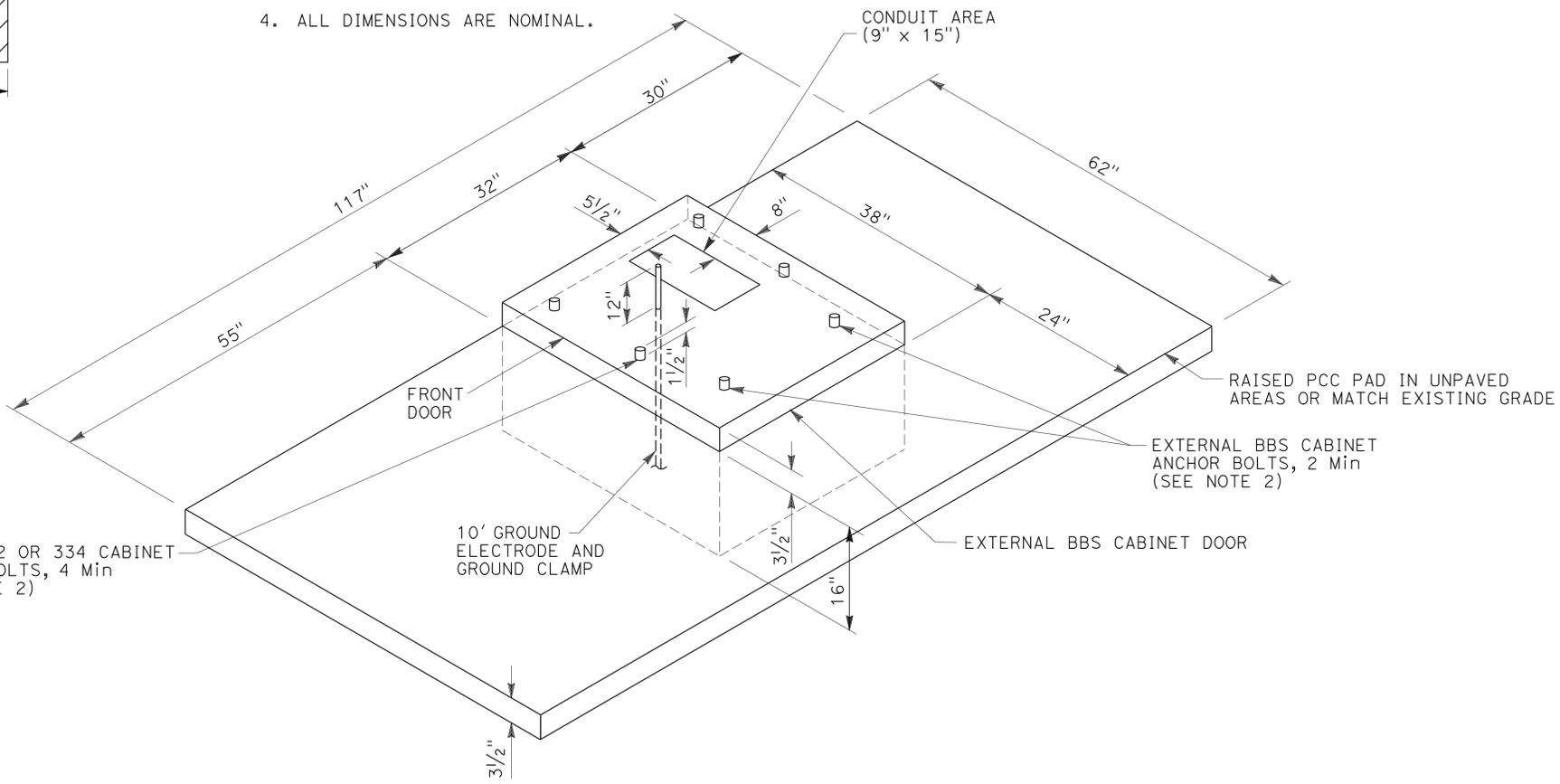
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	62	12.6	17	36
<i>Theresa Gabriel</i> REGISTERED ELECTRICAL ENGINEER DATE 1-21-11			PROFESSIONAL ENGINEER No. E15129 Exp. 6-30-12 ELECTRICAL STATE OF CALIFORNIA		
2-14-11			PLANS APPROVAL DATE		
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					



EXTERNAL BBS CABINET MOUNTED TO THE MODEL 332 OR 334 CABINET

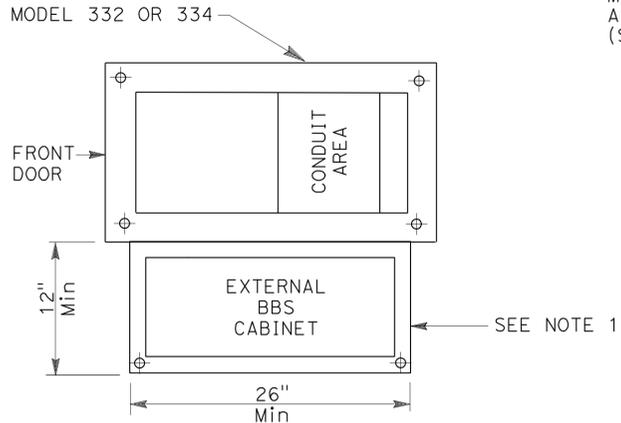
NOTES: (THIS SHEET ONLY)

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

(FOR DIMENSIONS AND DETAILS NOT SHOWN AND ADDITIONAL NOTES, SEE SHEET ES-3C OF THE STANDARD PLANS FOR MODEL 332 AND 334 CABINETS)



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, CABINET HOUSING DETAILS OF THE TRANSPORTATION ELECTRICAL EQUIPMENT SPECIFICATION (TEES))

SIGNAL AND LIGHTING (BBS FOUNDATION DETAILS) ROUTE 62 AND AIRWAY Ave

NO SCALE

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - **Caltrans** - ELECTRICAL DESIGN B

FUNCTIONAL SUPERVISOR
FERDINAND DE LA CRUZ

CALCULATED/DESIGNED BY
CHECKED BY

REVISOR
THERESA A. GABRIEL
DATE
FERDINAND DE LA CRUZ

REVISOR
DATE

REVISOR
DATE

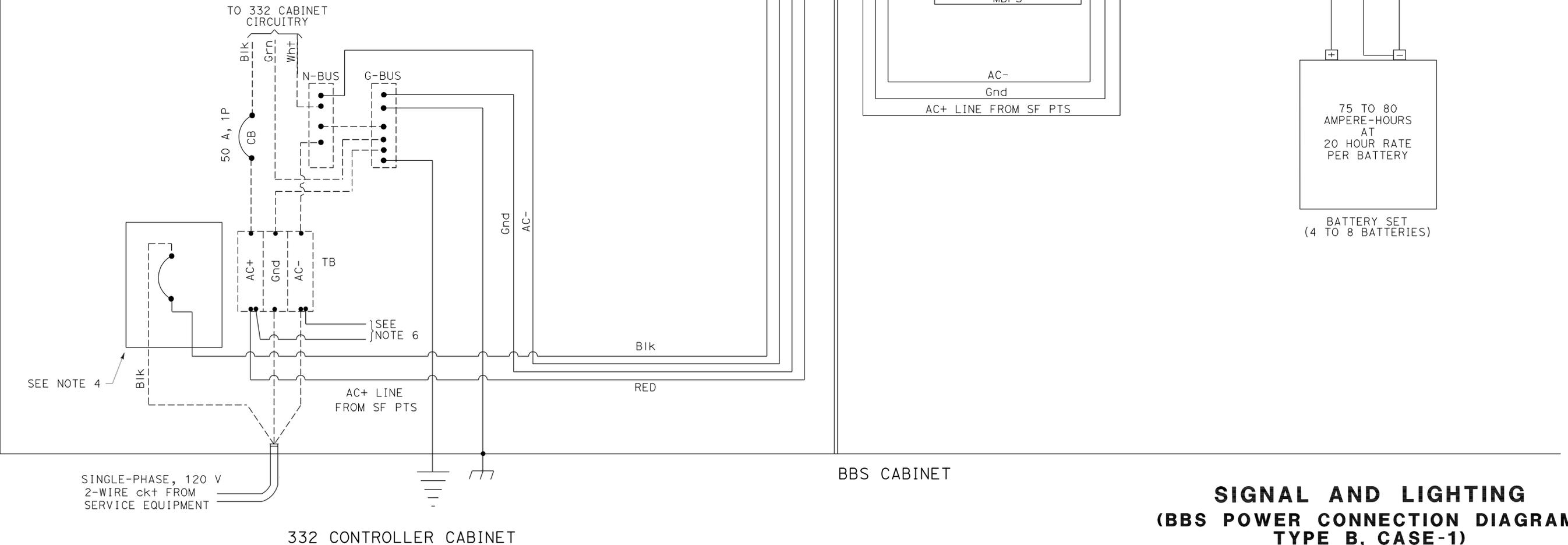
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	62	12.6	18	36
<i>Theresa Gabriel</i> REGISTERED ELECTRICAL ENGINEER DATE 1-21-11			No. E15129 Exp. 6-30-12 ELECTRICAL		
2-14-11			PLANS APPROVAL DATE		
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

LEGEND: (THIS SHEET ONLY)

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

NOTES: (THIS SHEET ONLY)

1. TYPE B REFERS TO THE BBS EQUIPMENT FROM MANUFACTURER B.
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" 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, #18 AWG 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.



**SIGNAL AND LIGHTING
(BBS POWER CONNECTION DIAGRAM,
TYPE B, CASE-1)
ROUTE 62 AND AIRWAY Ave**

NO SCALE

E-4

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN B
 FUNCTIONAL SUPERVISOR: FERDINAND DE LA CRUZ
 REVISIONS: THERESA A. GABRIEL, FERDINAND DE LA CRUZ
 CALCULATED/DESIGNED BY: FERDINAND DE LA CRUZ
 CHECKED BY: FERDINAND DE LA CRUZ
 REVISOR: THERESA A. GABRIEL
 DATE: 1-21-11

LAST REVISION: 01-21-11
 DATE PLOTTED => 14-FEB-2011
 TIME PLOTTED => 08:21

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	62	12.6	19	36

Theresa Gabriel 1-21-11
 REGISTERED ELECTRICAL ENGINEER DATE
 2-14-11
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 THERESA A. GABRIEL
 No. E15129
 Exp. 6-30-12
 ELECTRICAL
 STATE OF CALIFORNIA

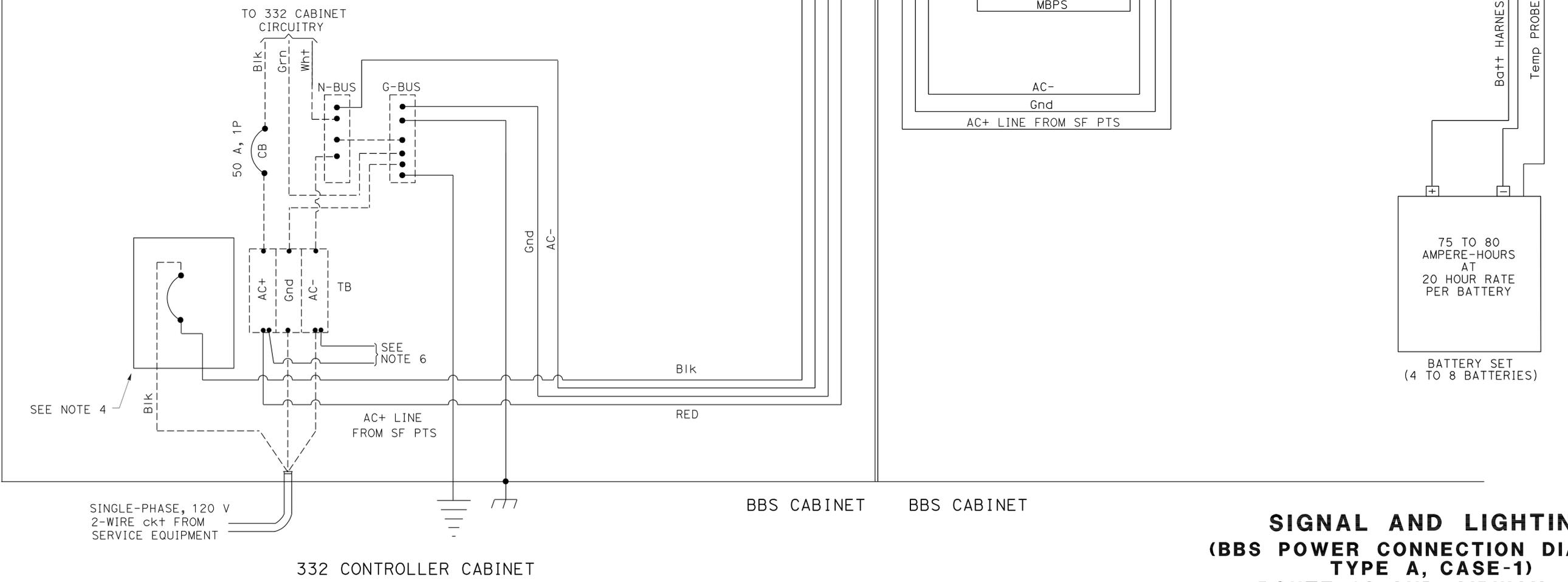
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LEGEND: (THIS SHEET ONLY)

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

NOTES: (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" 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, #18 AWG 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.



SIGNAL AND LIGHTING
(BBS POWER CONNECTION DIAGRAM,
TYPE A, CASE-1)
ROUTE 62 AND AIRWAY Ave
 NO SCALE

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN B
 FUNCTIONAL SUPERVISOR
 FERDINAND DE LA CRUZ
 CALCULATED/DESIGNED BY
 FERDINAND DE LA CRUZ
 CHECKED BY
 FERDINAND DE LA CRUZ
 REVISIONS: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	62	12.6	20	36

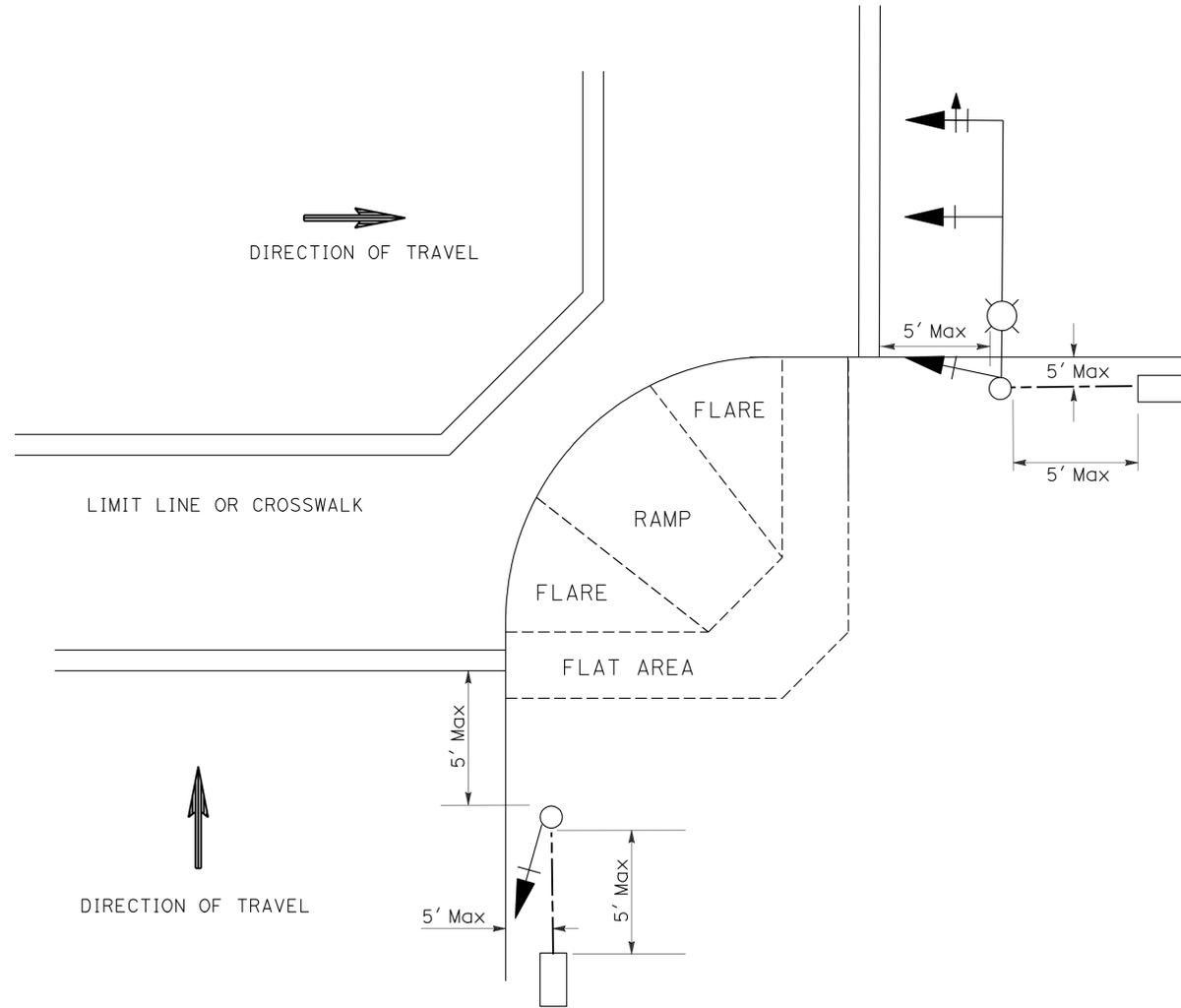
<i>Ferdinand De La Cruz</i>	1-21-11
REGISTERED ELECTRICAL ENGINEER	DATE
2-14-11	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
FERDINAND DE LA CRUZ
No. E17215
Exp. 6-30-12
ELECTRICAL
STATE OF CALIFORNIA

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

NOTES: THIS SHEET ONLY

1. NO PULL BOXES, CABINETS, SIGNAL STANDARDS OR ANY ELECTRICAL OR NON-ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN THE CURB RAMP AREA OR FUTURE CURB RAMP AREA.
2. NO PULL BOXES SHALL BE INSTALLED BETWEEN THE SIGNAL STANDARD AND THE CROSSWALKS.
3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, LOCATIONS OF CURB RAMPS, CROSS WALK AREA AND TYPE OF CURB RAMPS BEFORE INSTALLING SIGNAL FOUNDATIONS.



SIGNAL STANDARD AND PULL BOX LOCATION

**SIGNAL AND LIGHTING
(SIGNAL STANDARD AND PULL BOX LOCATION DETAIL)
ROUTE 62 AND AIRWAY Ave
NO SCALE**

E-6

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN B
FUNCTIONAL SUPERVISOR FERDINAND DE LA CRUZ
CALCULATED/DESIGNED BY CHECKED BY
RICK ANTONISHEK FERDINAND DE LA CRUZ
REVISED BY DATE REVISED

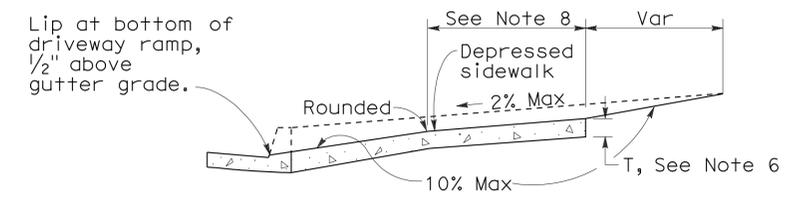
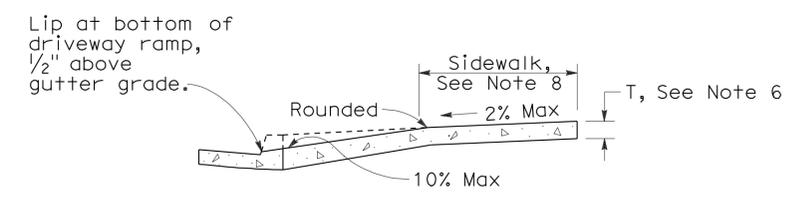
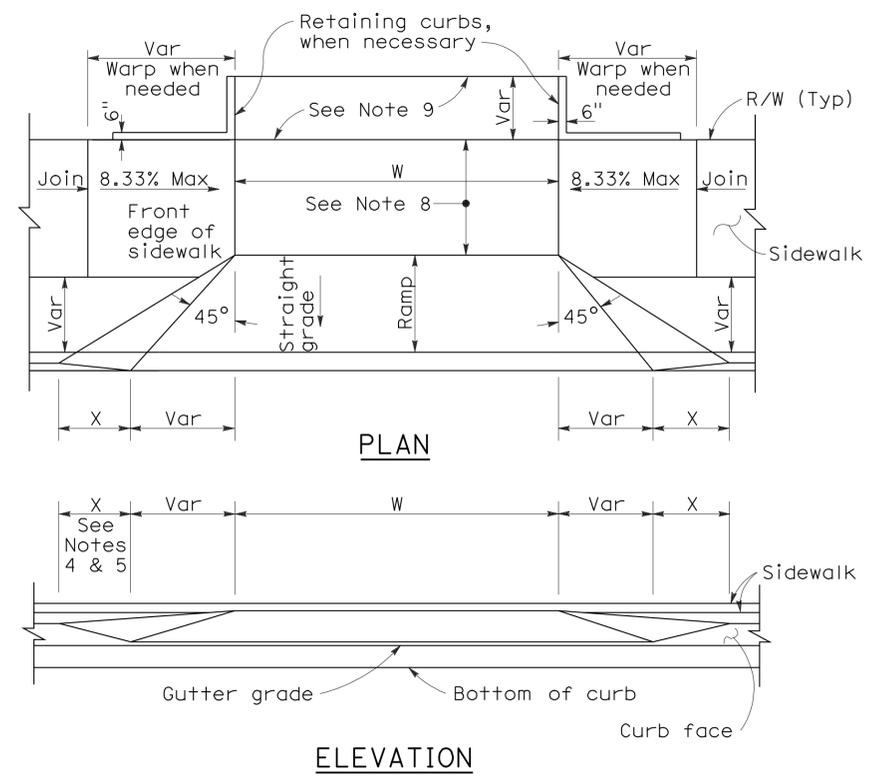
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Sbd	62	12.6	21	36

REGISTERED CIVIL ENGINEER
 November 17, 2006
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
 Michael Janzen
 No. 44788
 Exp. 03-31-08
 STATE OF CALIFORNIA
 CIVIL



CASE A

Typical driveway, sidewalk not depressed

CASE B

Driveway with depressed sidewalk

SECTIONS

CURB QUANTITIES

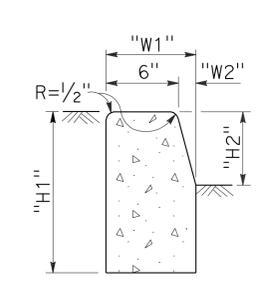
TYPE	CUBIC YARDS PER LINEAR FOOT
A1-6	0.02585
A1-8	0.03084
A2-6	0.05903
A2-8	0.06379
A3-6	0.01036
A3-8	0.01435
B1-4	0.02185
B1-6	0.02930
B2-4	0.05515
B2-6	0.06171
B3-4	0.00641
B3-6	0.01074
B4	0.05709
D-4	0.04083
D-6	0.06804
E	0.06661

TABLE A

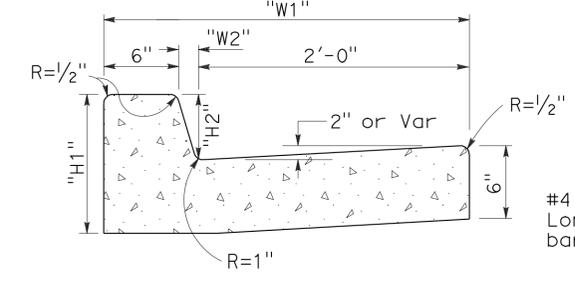
CURB TYPE	DIMENSIONS			
	"H1"	"H2"	"W1"	"W2"
A1-6	1'-2"	6"	7 1/2"	1 1/2"
A1-8	1'-4"	8"	8"	2"
A2-6	1'-0"	6"	2'-7 1/2"	1 1/2"
A2-8	1'-2"	8"	2'-8"	2"
A3-6	6"	5"	7 1/4"	1 1/4"
A3-8	8"	7"	7 3/4"	1 3/4"
B1-4	1'-0"	4"	7 1/2"	2 1/2"
B1-6	1'-2"	6"	9"	4"
B2-4	10"	4"	2'-7 1/2"	2 1/2"
B2-6	1'-0"	6"	2'-9"	4"
B3-4	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 2-14-11

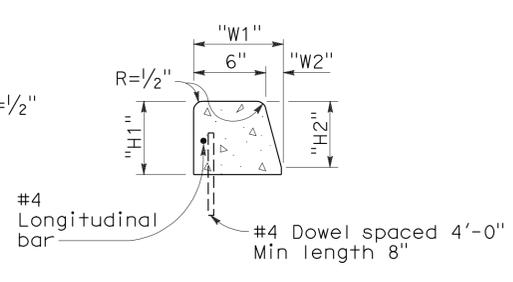
DRIVEWAYS



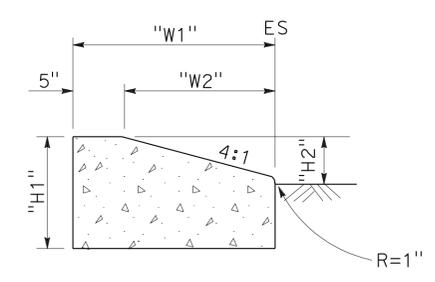
TYPE A1 CURBS
See Table A



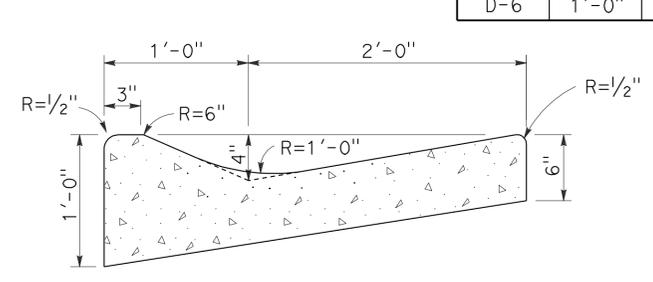
TYPE A2 CURBS
See Table A



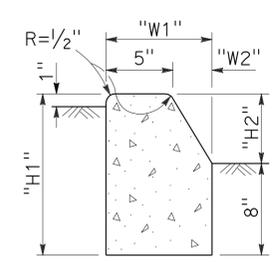
TYPE A3 CURBS
Superimposed on existing pavement
See Table A



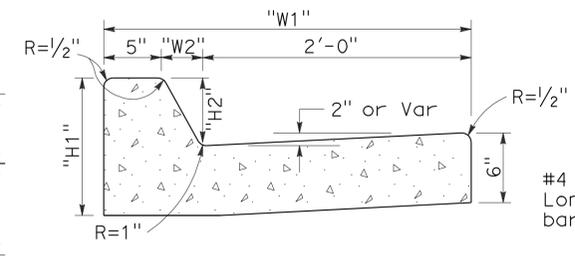
TYPE D CURBS
See Table A



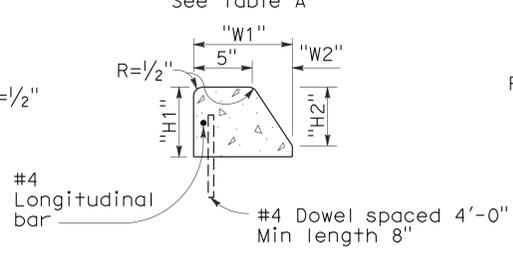
TYPE E CURB



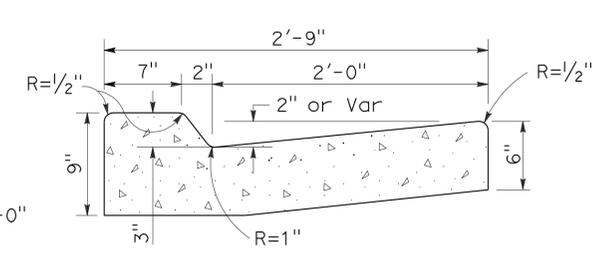
TYPE B1 CURBS
See Table A



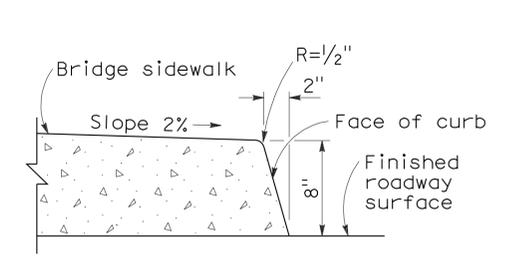
TYPE B2 CURBS
See Table A



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

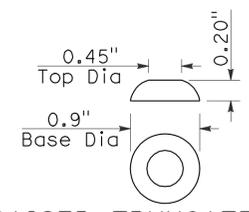
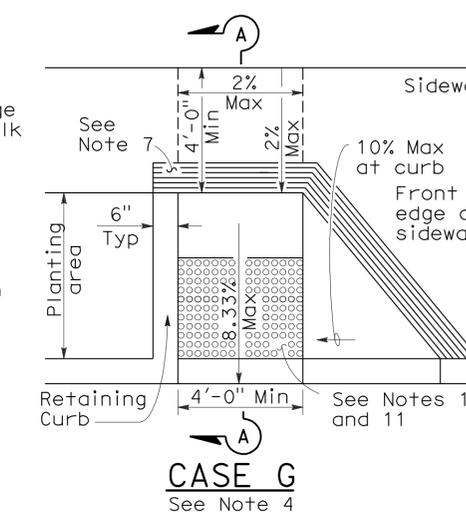
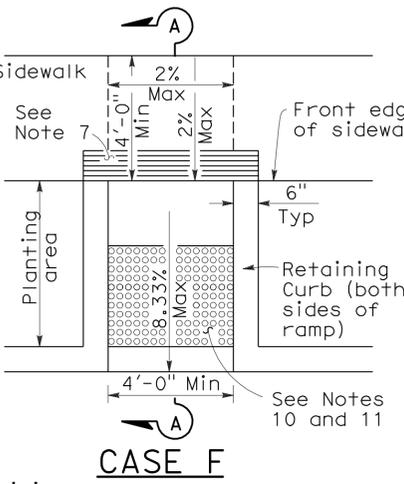
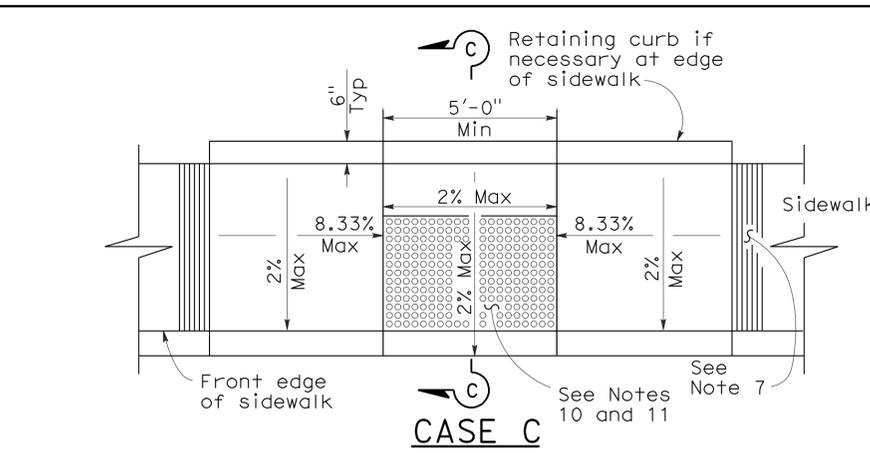
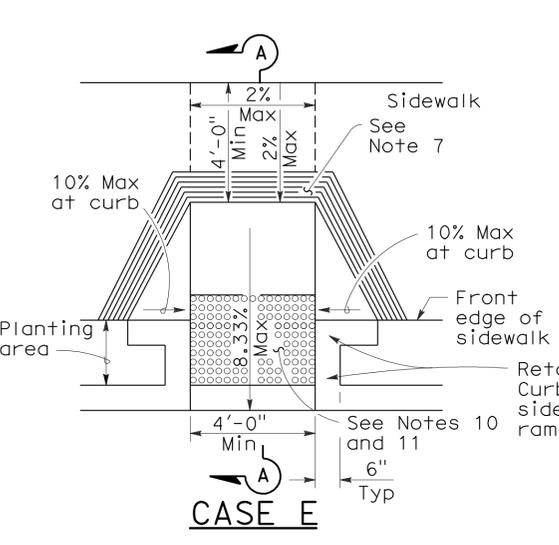
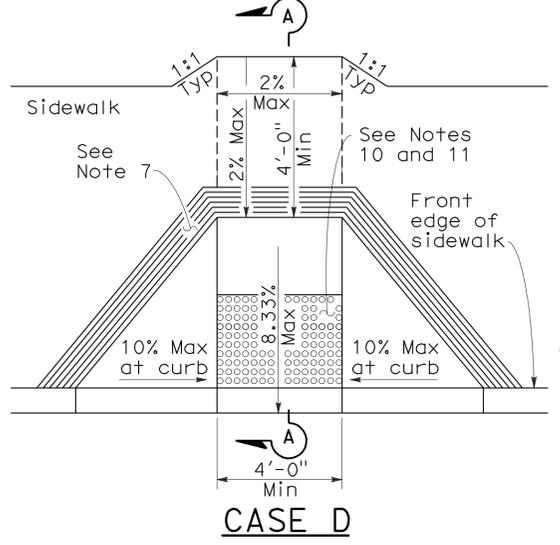
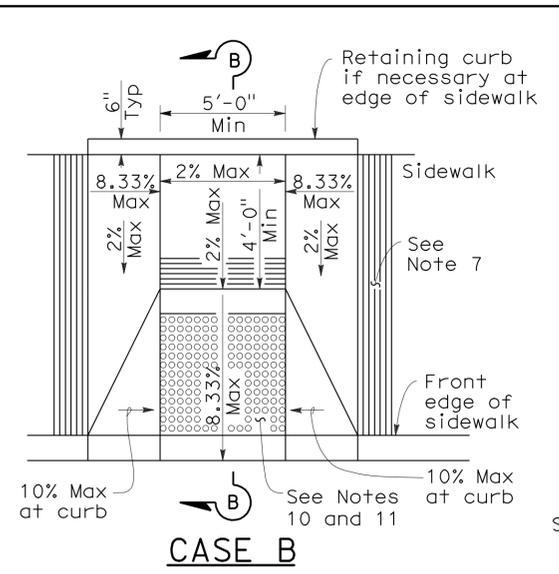
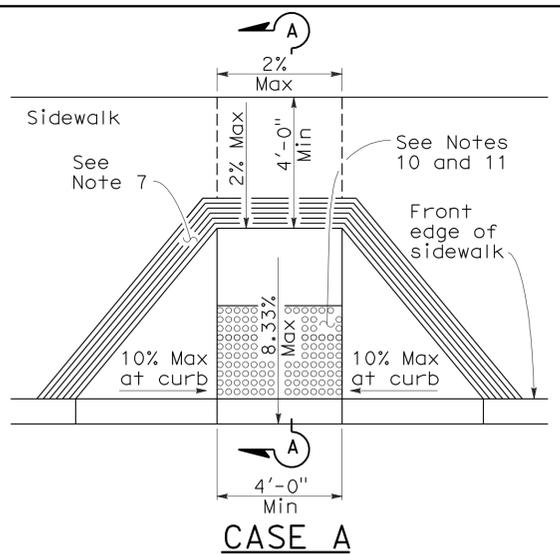
NO SCALE

2006 REVISED STANDARD PLAN RSP A87A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	62	12.6	22	36

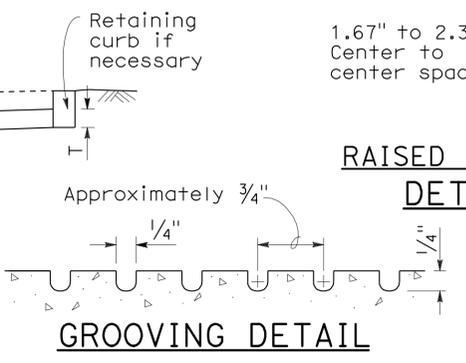
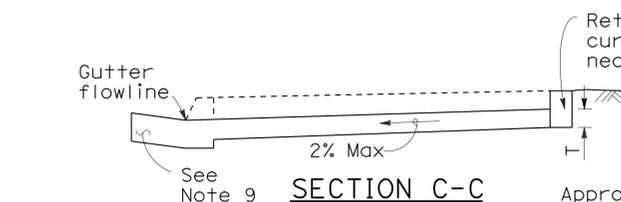
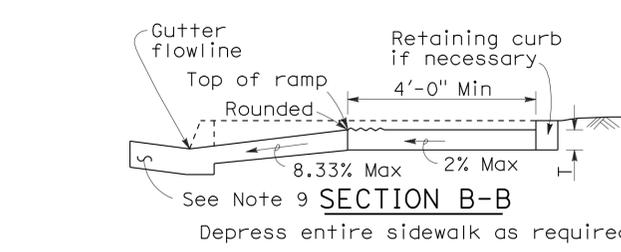
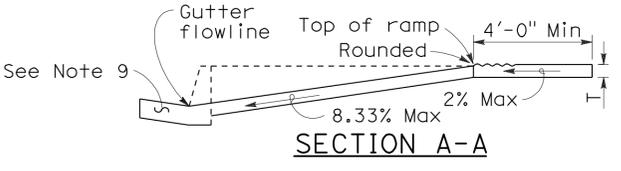
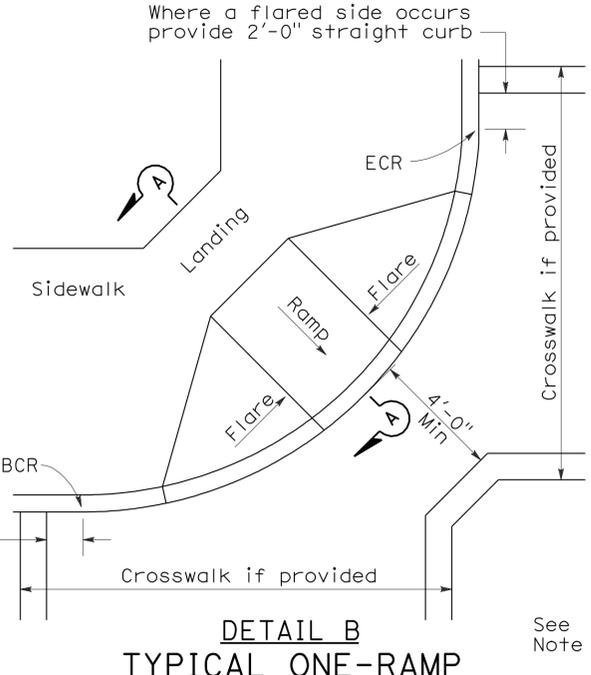
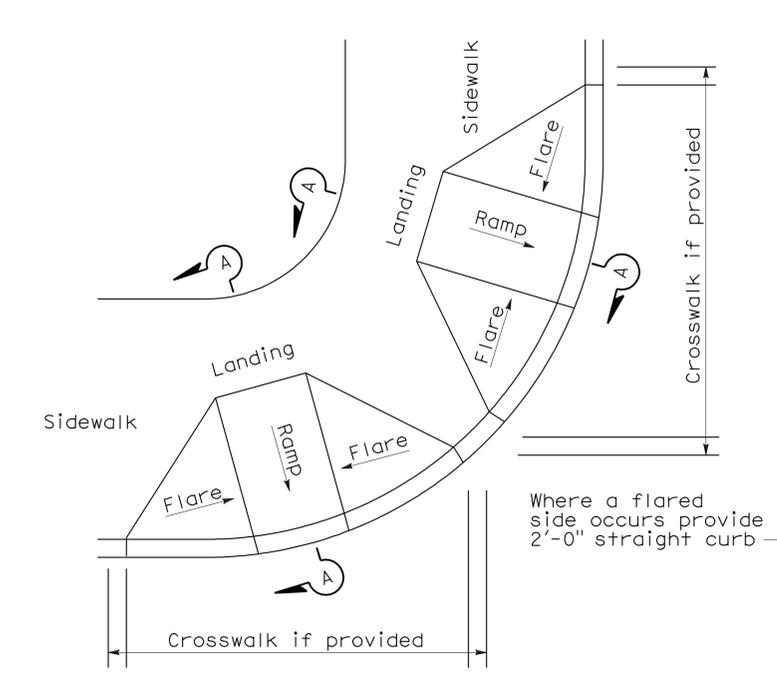
H. David Cordova
 REGISTERED CIVIL ENGINEER
 September 1, 2006
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
Hector David Cordova
 No. C41957
 Exp. 3-31-08
 CIVIL
 STATE OF CALIFORNIA



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.



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

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

TYPICAL TWO-RAMP CORNER INSTALLATION
 See Note 1

TYPICAL ONE-RAMP CORNER INSTALLATION
 See Notes 1 and 3

RETROFIT DETAIL
 Existing curb and sidewalk

2006 REVISED STANDARD PLAN RSP A88A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	62	12.6	23	36

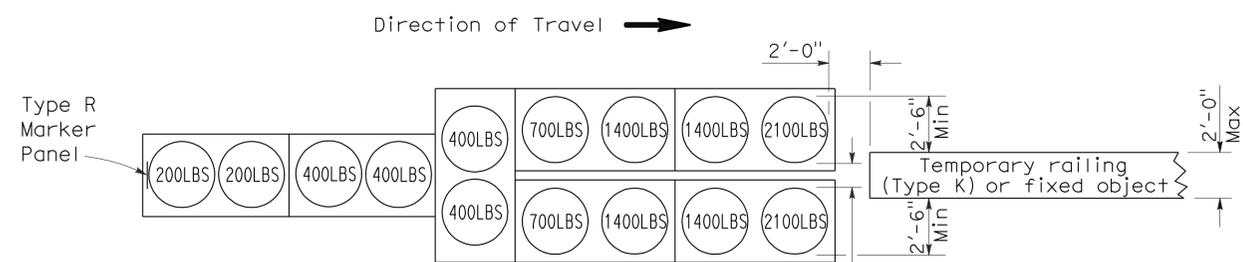
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

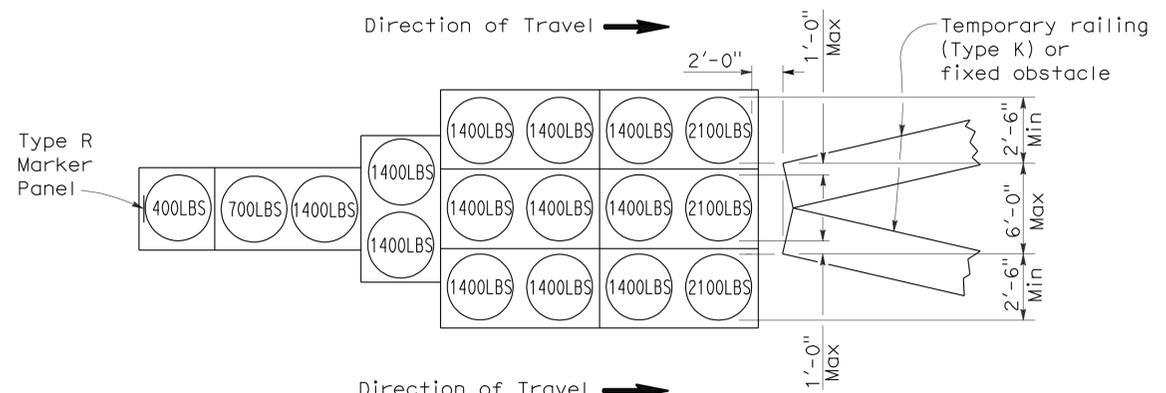
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To accompany plans dated 2-14-11



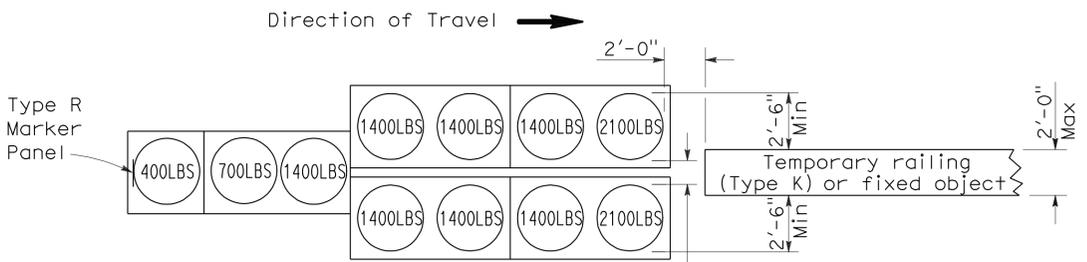
ARRAY 'TU14'

Approach speed 45 mph or more



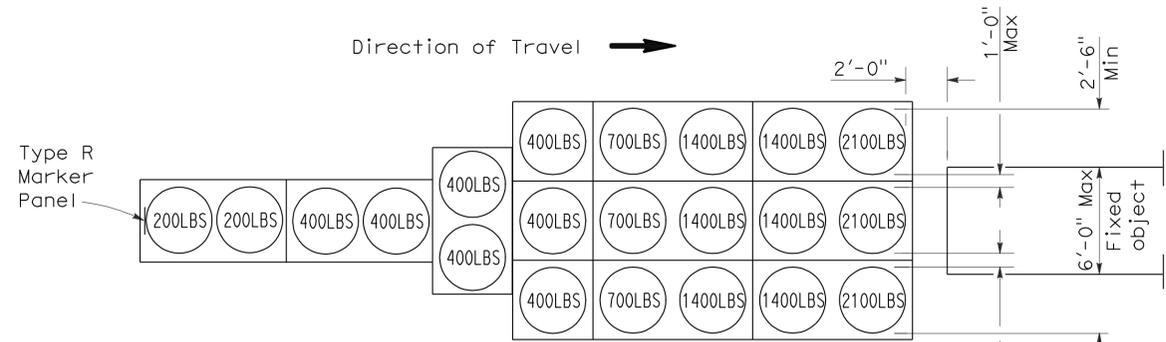
ARRAY 'TU17'

Approach speed less than 45 mph



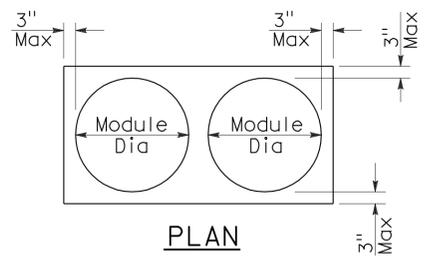
ARRAY 'TU11'

Approach speed less than 45 mph

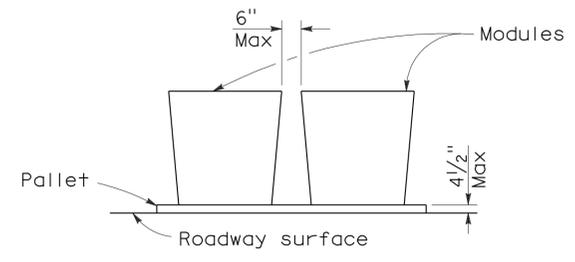


ARRAY 'TU21'

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

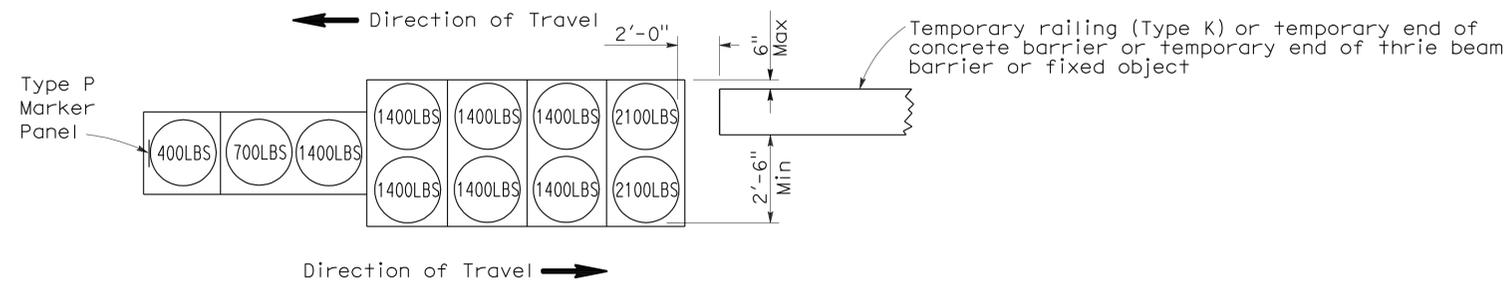
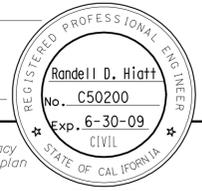
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	62	12.6	24	36

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

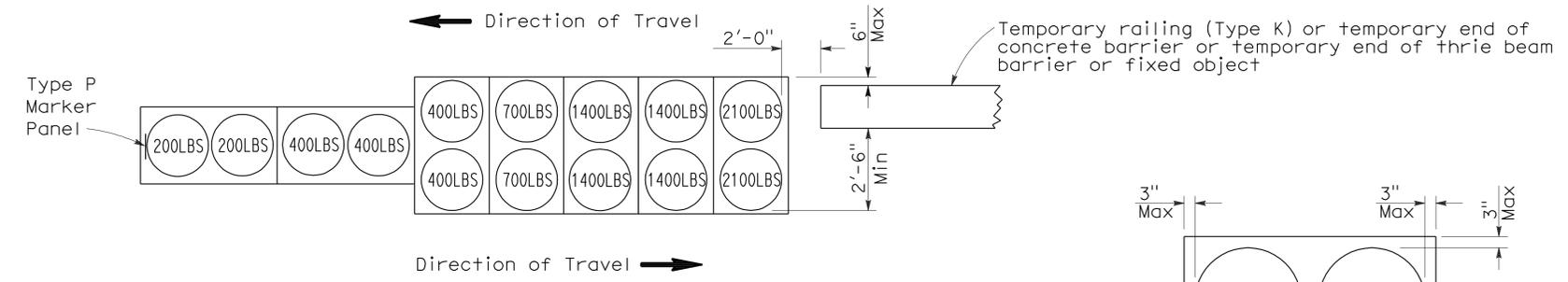
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To accompany plans dated 2-14-11



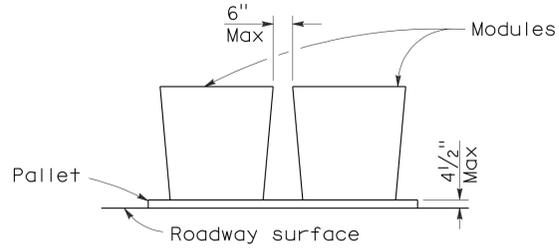
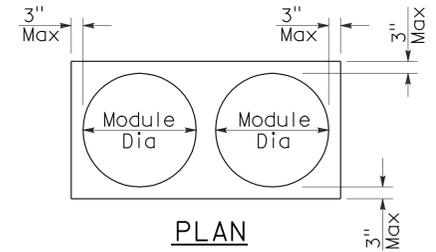
ARRAY 'TB11'

Approach speed less than 45 mph



ARRAY 'TB14'

Approach speed 45 mph or more



CRASH CUSHION PALLET DETAIL
See Note 7

NOTES:

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

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

NO SCALE

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

REVISED STANDARD PLAN RSP T1B

2006 REVISED STANDARD PLAN RSP T1B

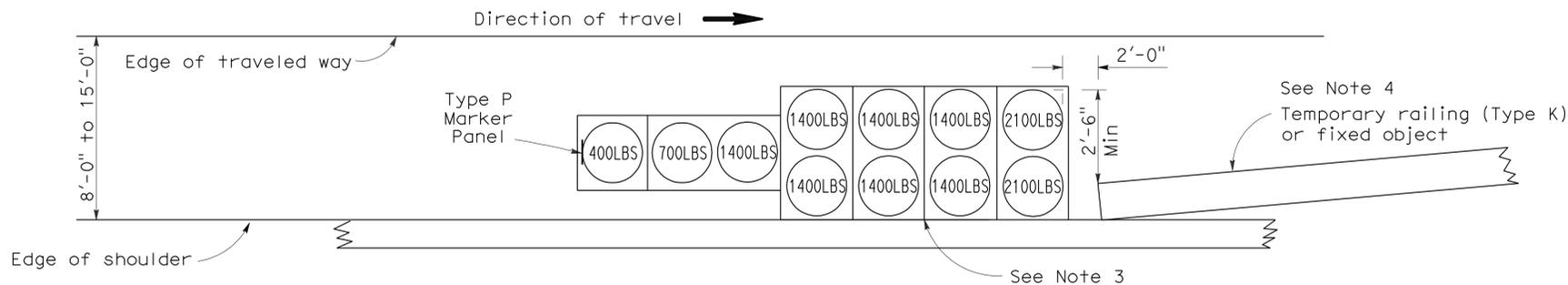
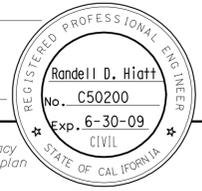
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	62	12.6	25	36

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

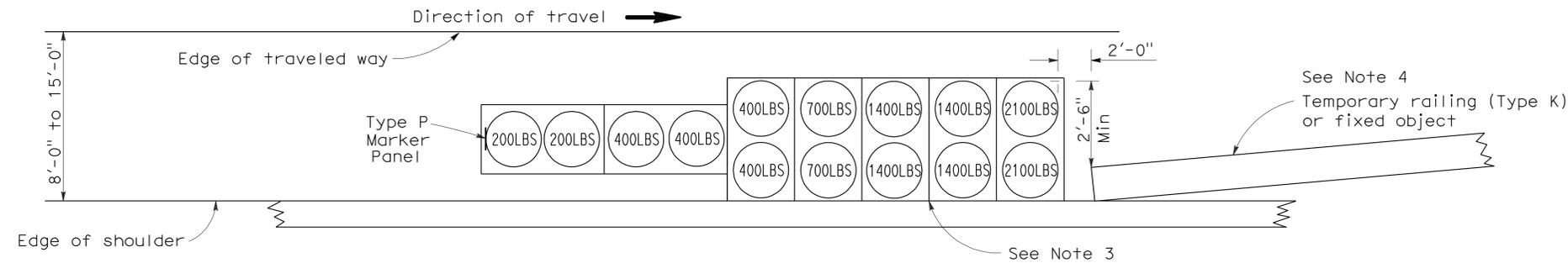
June 6, 2008
PLANS APPROVAL DATE

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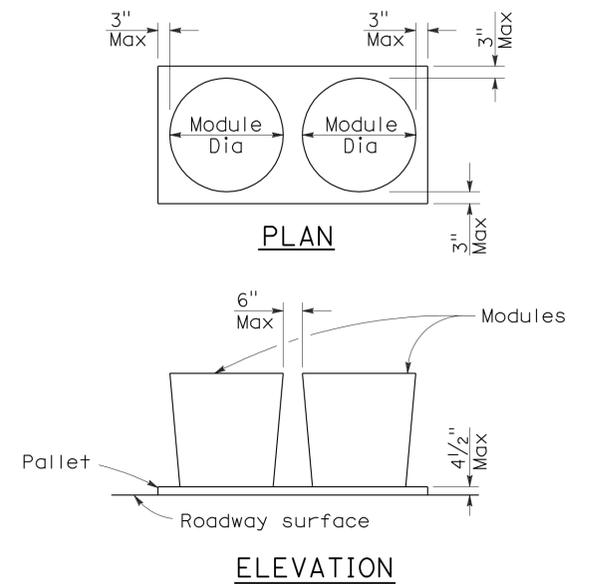
To accompany plans dated 2-14-11



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



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



CRASH CUSHION PALLET DETAIL
See Note 11

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**TEMPORARY CRASH CUSHION,
SAND FILLED
(SHOULDER INSTALLATIONS)**

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

REVISED STANDARD PLAN RSP T2

2006 REVISED STANDARD PLAN RSP T2

ELECTROLIERS

STANDARD TYPES		
15, 15D		High mast light pole
15 STRUCTURE		Double Arm lighting standard
21, 21D STRUCTURE		Existing electrolier
30		Electrolier foundation (Future installation)
31		
32		
35		
36-20A		

NOTES:

- Luminaires shall be 310 W HPS when installed on Type 21, 21D, 30, 31, 32, 35 and 36-20A Standards, unless otherwise specified. Luminaires shall be 200 W HPS when installed on other type standards or poles, unless otherwise specified.
- Luminaires shall be the cutoff type, ANSI Type III medium cutoff lighting distribution, unless otherwise specified.
- Variations noted adjacent to symbol on project plans.

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

STANDARD NOTES:

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

ABBREVIATIONS AND EQUIPMENT DESIGNATIONS

PROPOSED EXISTING

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	62	12.6	26	36

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

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To accompany plans dated 2-14-11

SOFFIT AND WALL MOUNTED LUMINAIRES

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

NOTE:

Arrow indicates "street side" of luminaire.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

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

REVISED STANDARD PLAN RSP ES-1A

2006 REVISED STANDARD PLAN RSP ES-1A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	62	12.6	27	36

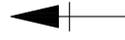
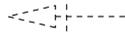
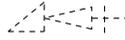
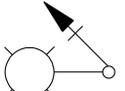
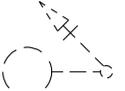
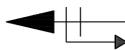
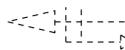
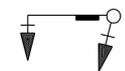
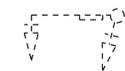
Jeffrey G. McRae
 REGISTERED ELECTRICAL ENGINEER
 October 5, 2007
 PLANS APPROVAL DATE
 Jeffrey G. McRae
 No. E14512
 Exp. 6-30-08
 ELECTRICAL
 STATE OF CALIFORNIA

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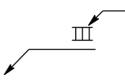
CONDUIT

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

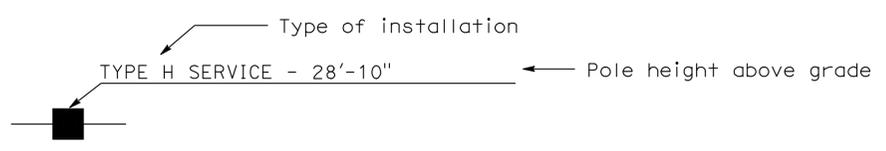
SIGNAL EQUIPMENT

PROPOSED	EXISTING	
		Pedestrian signal face
		Pedestrian push button post
		Pedestrian barricade
		Vehicle signal face (with backplate, 3-Section: red, yellow and green)
		Vehicle signal face with angle visors
		Modifications of basic symbols: "L" indicates all non-arrow sections louvered "LG" indicates louvered green section only "PV" indicates 12" programmed visibility sections "8" indicates all 8" sections (only when specified)
		Type 15TS and Vehicle signal face
		Vehicle signal face with red, yellow and green left arrow sections
		Vehicle signal face with red and yellow sections and up green arrow
		Vehicle signal face (5 Section) with red, yellow and green sections and yellow and green right arrows
		Type 1 Standard and attached vehicle signal faces
		Standard with signal mast arm only and attached vehicle signal faces and internally illuminated street name sign

SERVICE EQUIPMENT

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

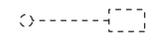
POLE-MOUNTED SERVICE DESIGNATION



ILLUMINATED OVERHEAD SIGN

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

SIGNAL EQUIPMENT Cont

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

NOTES:

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

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

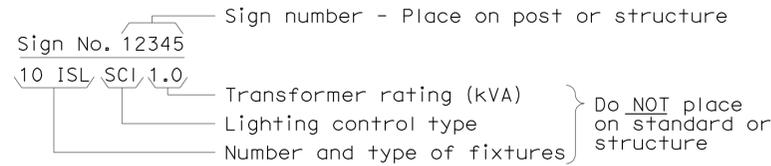
RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B
 DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1B

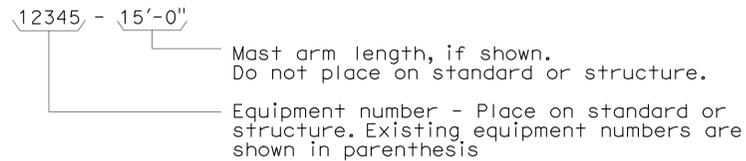
2006 REVISED STANDARD PLAN RSP ES-1B

EQUIPMENT IDENTIFICATION

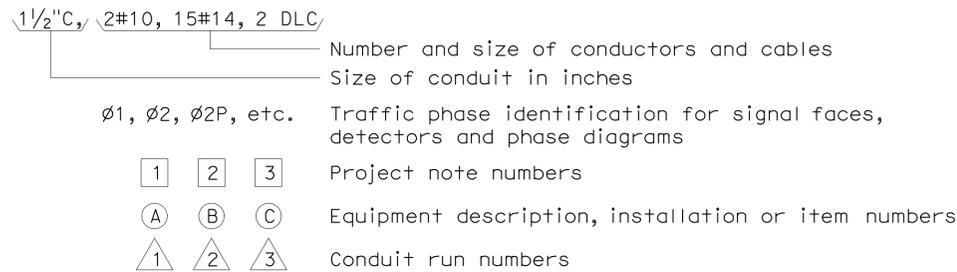
ILLUMINATED SIGN IDENTIFICATION NUMBER:



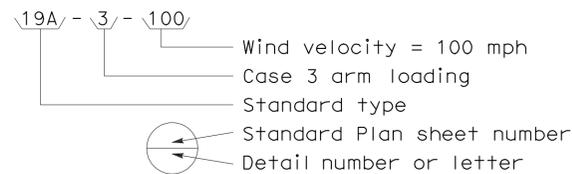
ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



CONDUIT AND CONDUCTOR IDENTIFICATION:



SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



MISCELLANEOUS EQUIPMENT

PROPOSED	EXISTING	
 CMS	 cms	Changeable message sign
		Closed circuit television camera
		Highway advisory radio pole and antenna
 EMS	 ems	Extinguishable message sign
 M V	 m v	Detection device M = Microwave sensor V = Video image sensor

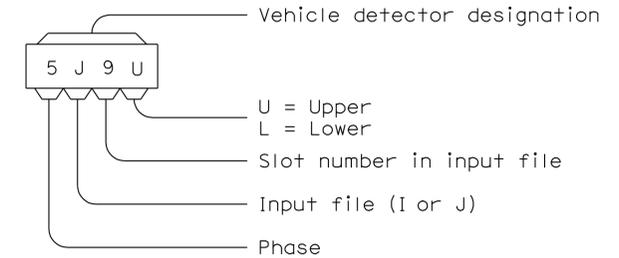
WIRING DIAGRAM LEGEND

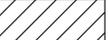
P	Pole	----	External conductor
CB	Circuit breaker	—	Conductor or bus
A	Ampere	•	Tie point
V	Volt	—/—	Contactor coil
M	Metered	— —	Contactor, Contact NO
UM	Unmetered	⊗	Terminal blocks
NB	Neutral bus	—/—	Contactor, Contact NC
GB	Ground bus	≡	Enclosure bond
G	Equipment grounding conductor	⋮	Grounding electrode
N	Grounded conductor (Neutral)	⊕	Circuit breaker
		Ⓜ	Receptacle

PULL BOXES

PROPOSED	EXISTING	
		Pull box-No. 5 unless otherwise indicated or noted.
		Pull box-Additional designations or descriptions
3		(C) = Communications pull box
5		(E) = Pull box with extension
6		(S) = Sprinkler control pull box
7		(21) = Anchor bolts and conduit for future installation of Type 21 Standard
8		(T) = Traffic pull box
9		
9A		

VEHICLE DETECTORS



PROPOSED	EXISTING	
		Type A detector loop. Outline of sawcut shown.
		Type B detector loop. Outline of sawcut shown.
		Type C detector loop. Outline of sawcut shown.
		Type D detector loop. Outline of sawcut shown.
		Type E detector loop. Outline of sawcut shown.
		Type Q detector loop. Outline of sawcut shown.
		Magnetic detector
		Detector handhole
		Microwave or video detection zone

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.

2006 REVISED STANDARD PLAN RSP ES-1C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	62	12.6	29	36

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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

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To accompany plans dated 2-14-11

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

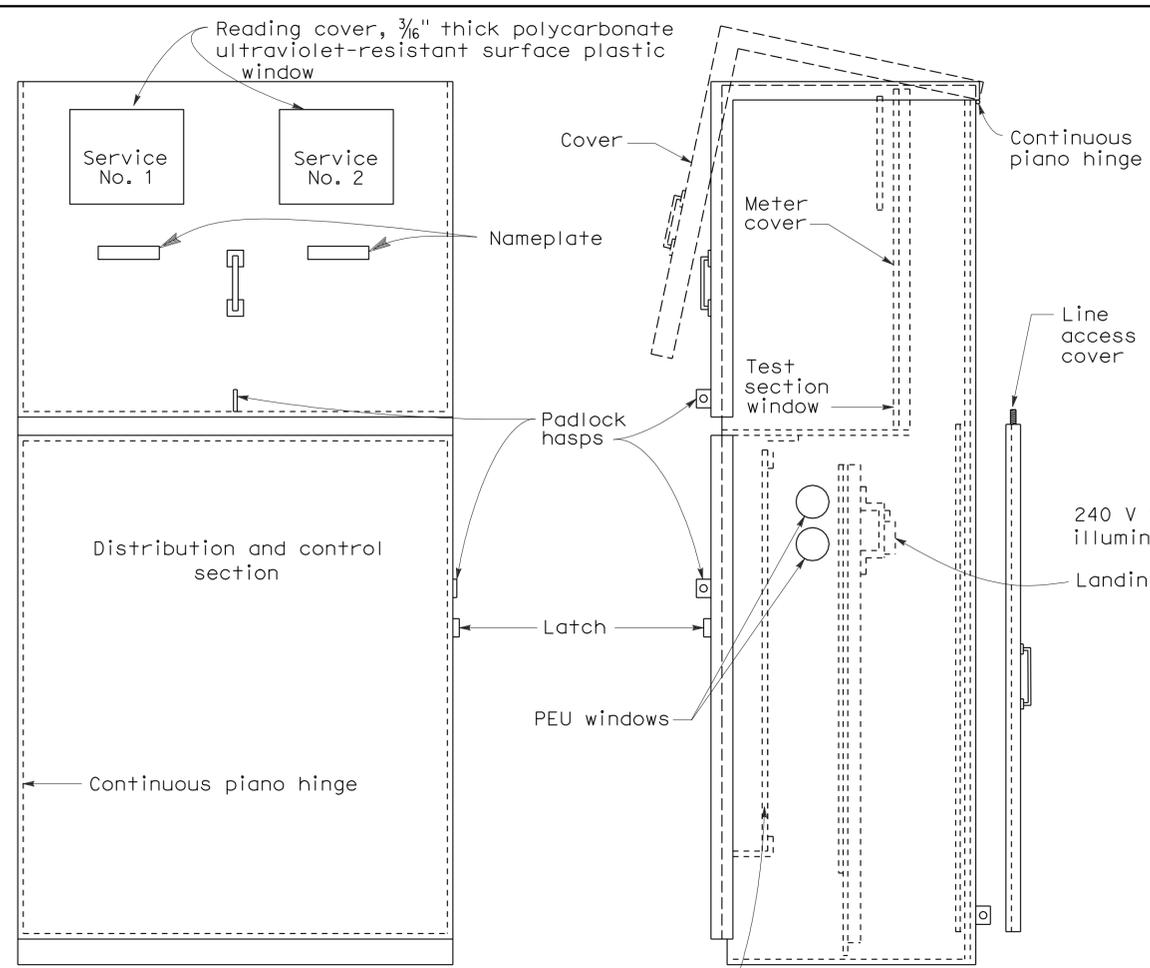
**ELECTRICAL SYSTEMS
(SERVICE EQUIPMENT NOTES
TYPE III SERIES)**

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

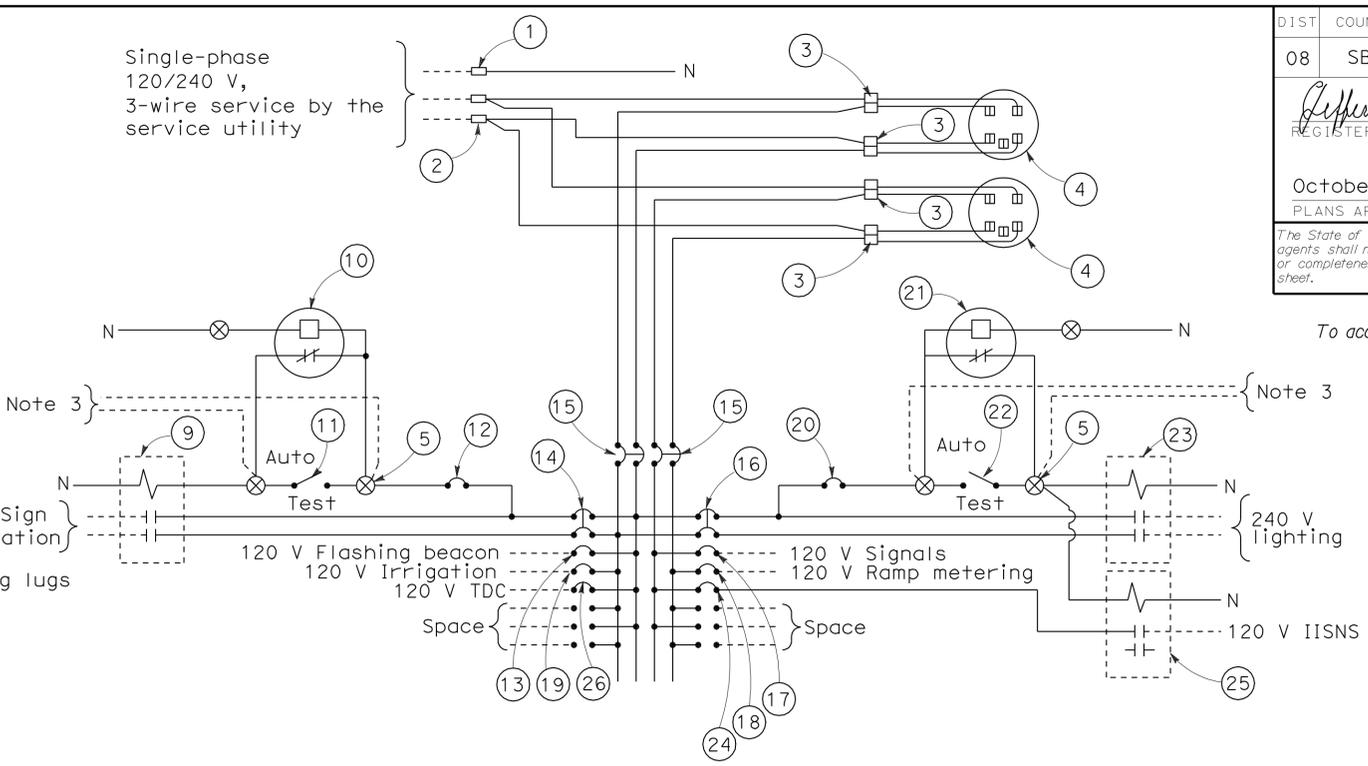
2006 REVISED STANDARD PLAN RSP ES-2C



FRONT VIEW **SIDE VIEW**

Continuous piano hinge dead front panel latch

TYPE III-CF SERVICE EQUIPMENT ENCLOSURE WITH PROVISIONS FOR TWO 100 A METERS (TYPICAL)



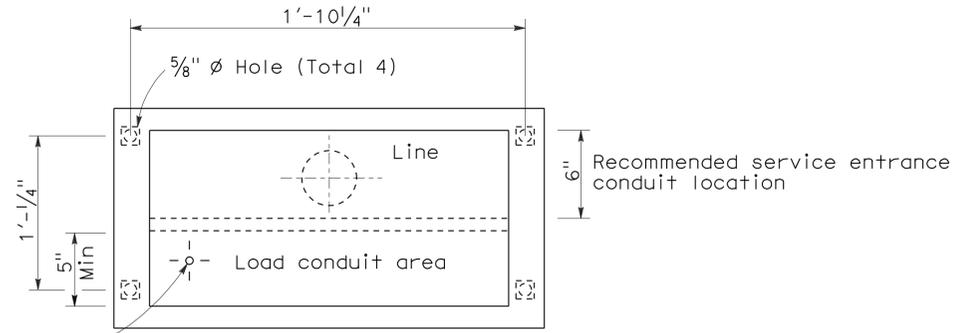
120/240 V SERVICE WIRING DIAGRAM (TYPICAL)

TYPE III-C SERVICE (120/240 V) EQUIPMENT LEGEND

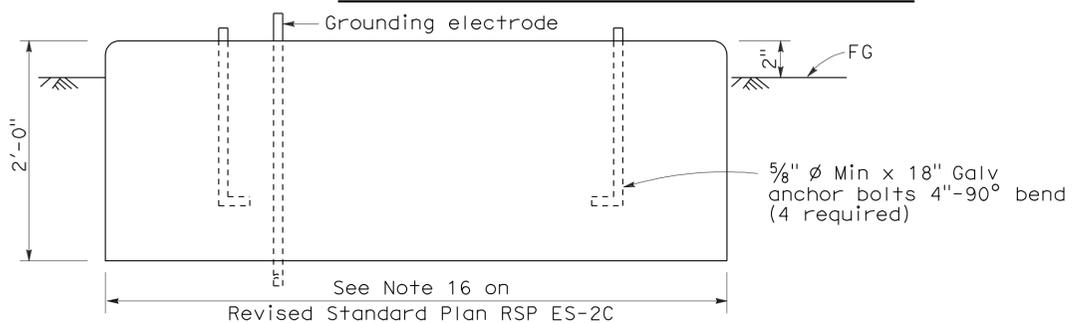
ITEM No.	COMPONENT	NAME PLATE DESCRIPTION	ITEM No.	COMPONENT	NAME PLATE DESCRIPTION
1	Neutral lug		14	30 A, 240 V, 2P, CB	Sign Illumination
2	Landing lug (Note 6)		15	100 A, 240 V, 2P, CB	Main Breaker
3	Test bypass facility		16	30 A, 240 V, 2P, CB	Lighting
4	Meter socket and support		17	50 A, 120 V, 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 Control
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.



BASE FOR TYPE III-C SERVICE EQUIPMENT ENCLOSURE



FOUNDATION DETAIL

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SERVICE EQUIPMENT AND TYPICAL WIRING DIAGRAM TYPE III - C SERIES)

NO SCALE

RSP ES-2F DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-2F DATED MAY 1, 2006 - PAGE 408 OF THE STANDARD PLANS BOOK DATED MAY 2006.

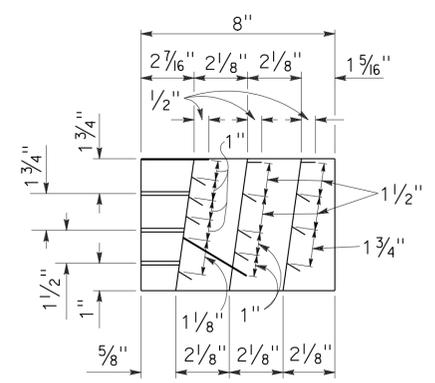
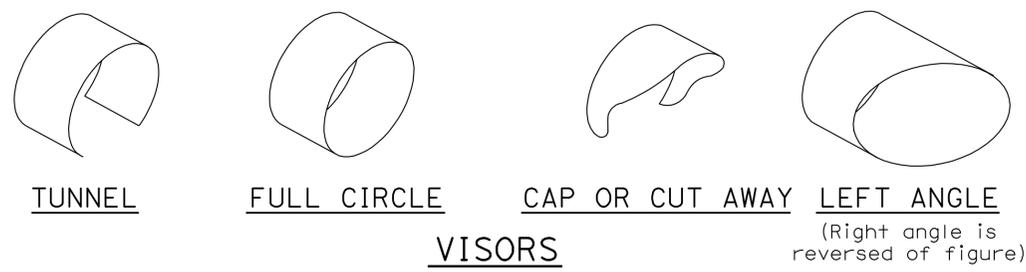
2006 REVISED STANDARD PLAN RSP ES-2F

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	62	12.6	31	36

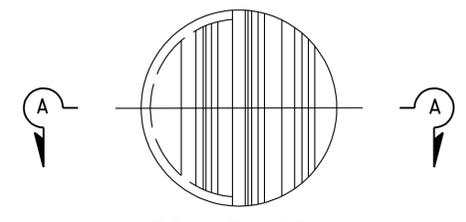
Jeffrey B. McRae
 REGISTERED ELECTRICAL ENGINEER
 June 6, 2008
 PLANS APPROVAL DATE
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER
 Jeffrey G. McRae
 No. E14512
 Exp. 6-30-10
 ELECTRICAL
 STATE OF CALIFORNIA

To accompany plans dated 2-14-11



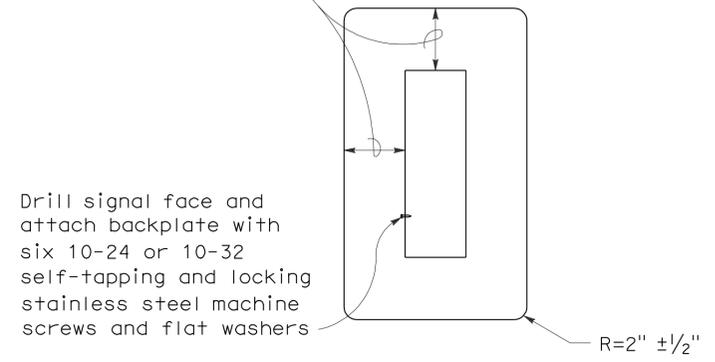
SECTION A-A



FRONT VIEW
DIRECTIONAL LOUVER

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

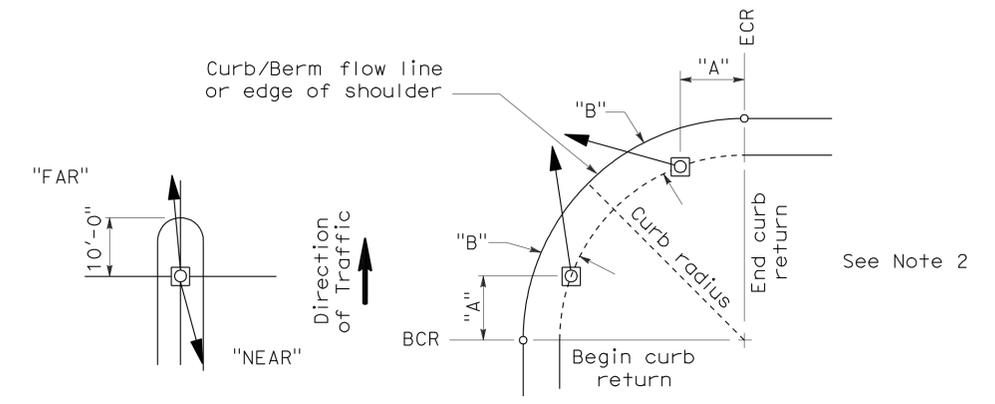
8" ± 1/2" for 8" sections
 5 1/2" ± 1/2" for 12" sections



8" AND 12" SECTIONS

BACKPLATE

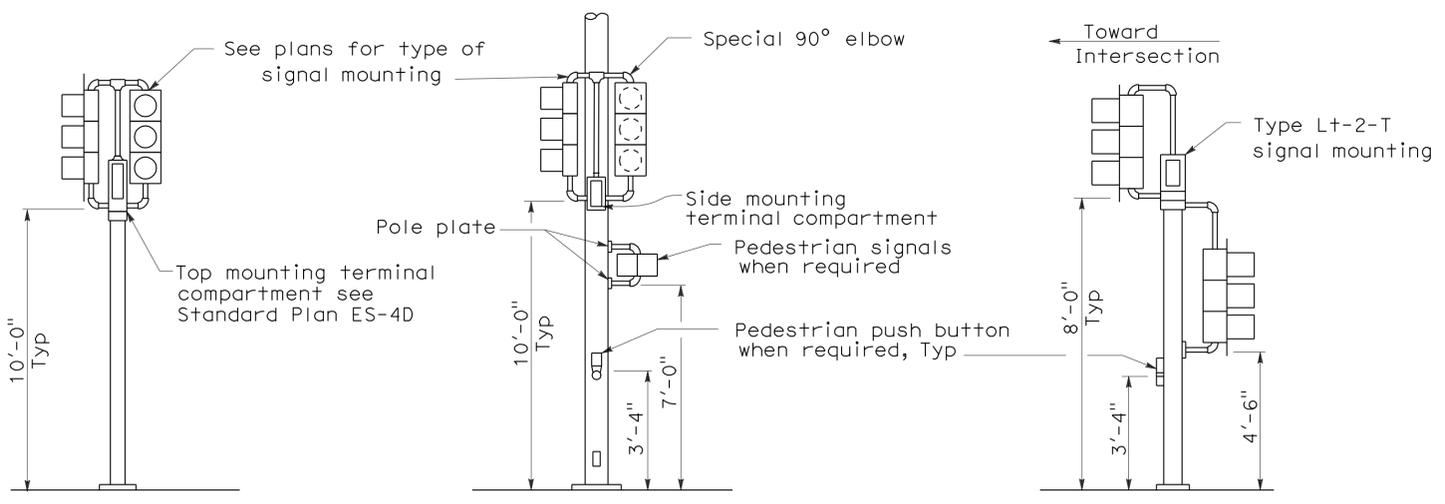
1/16" minimum thickness
 3001-14 aluminum, or plastic when specified



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

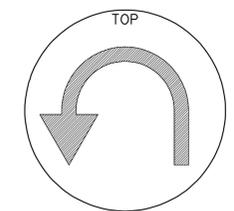
SIDE MOUNTED SIGNALS (SV AND SP)

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

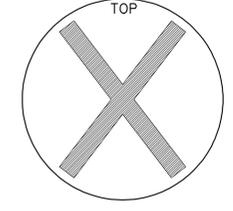
TYPICAL SIGNAL INSTALLATIONS



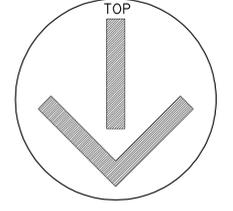
U-TURN SIGNAL FACE



BICYCLE SIGNAL FACE



LANE CONTROL SIGNAL FACE



LANE CONTROL SIGNAL FACE

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

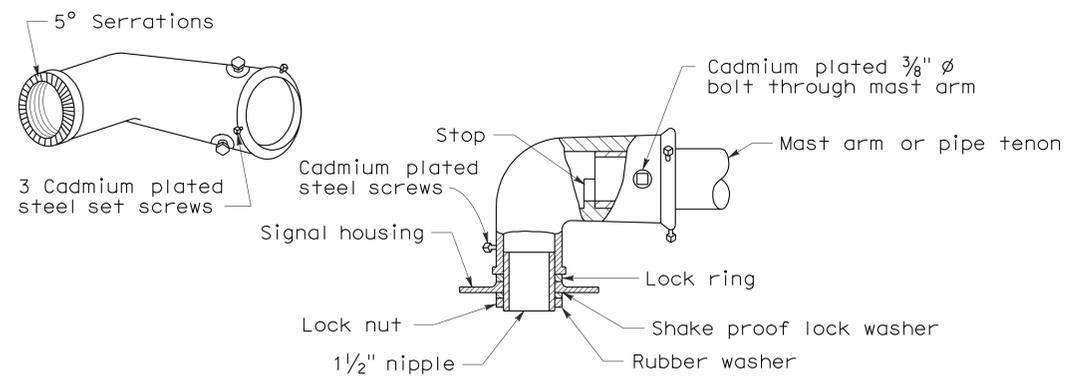
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Sbd	62	12.6	32	36

Jeffrey G. McRae
 REGISTERED ELECTRICAL ENGINEER
 No. E14512
 Exp. 6-30-10
 STATE OF CALIFORNIA

June 6, 2008
 PLANS APPROVAL DATE

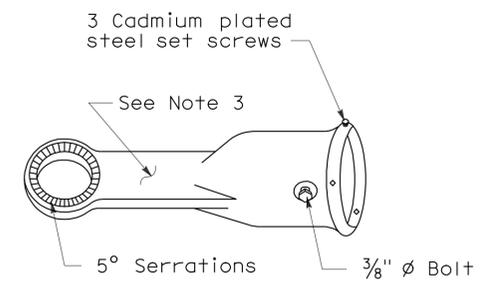
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 2-14-11



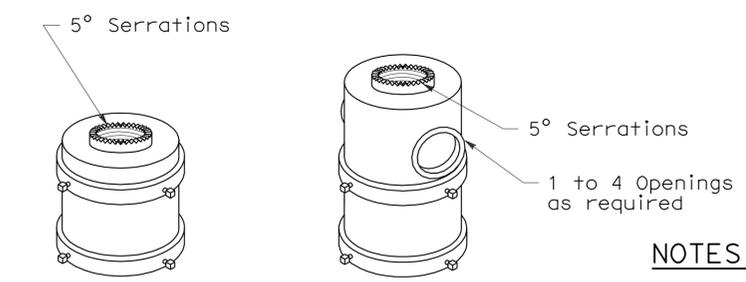
MAST ARM MOUNTING - TYPE "MAT"

For 2 NPS pipe, see Note 1.



MAST ARM MOUNTING - TYPE "MAS"

For 2 NPS pipe. See Note 1.

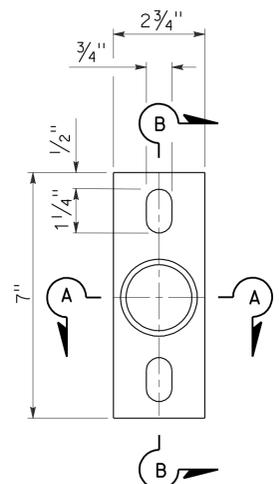


For one mounting For multiple mountings

TOP MOUNTINGS

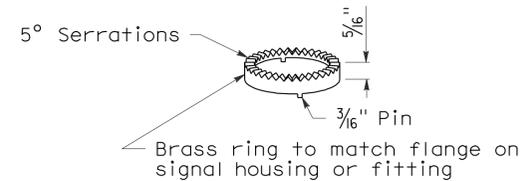
For 4 NPS pipe, see Note 2.

SIGNAL SLIP FITTERS



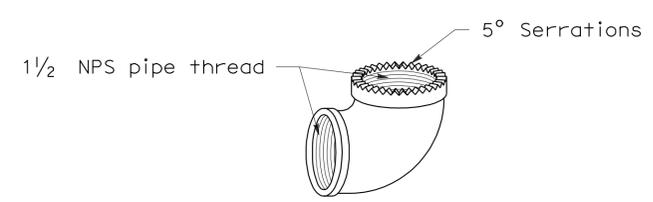
POLE PLATE

For side mountings



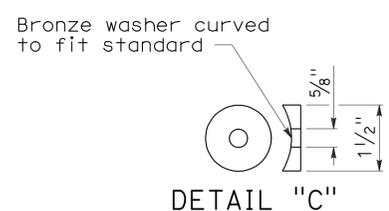
LOCK RING

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



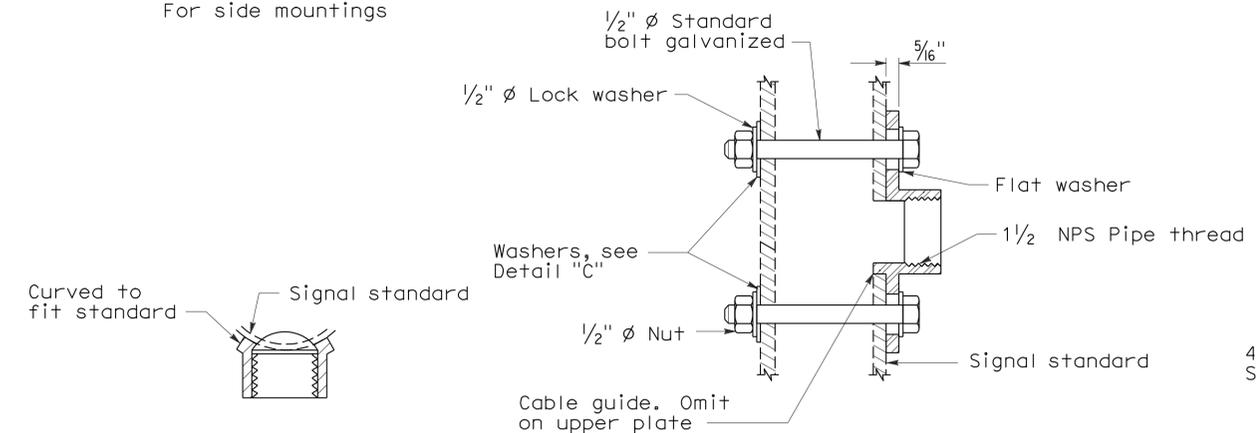
SPECIAL 90° ELBOW

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



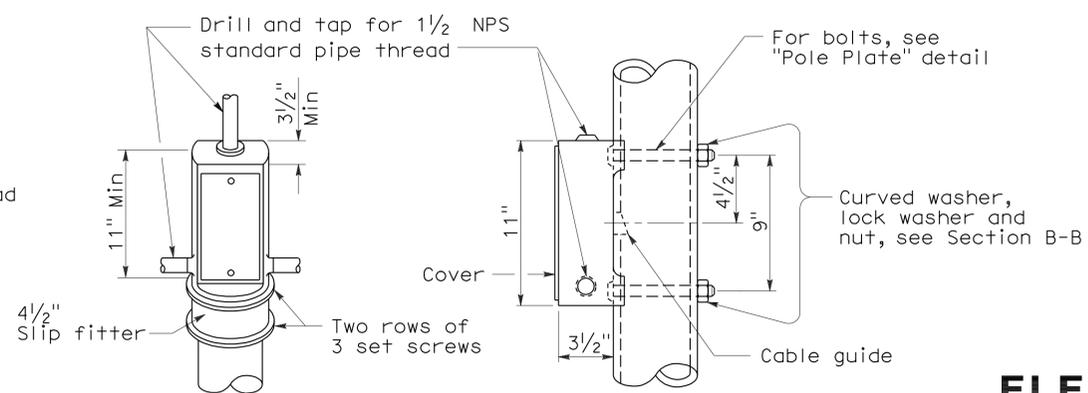
DETAIL "C"

MISCELLANEOUS MOUNTING HARDWARE



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

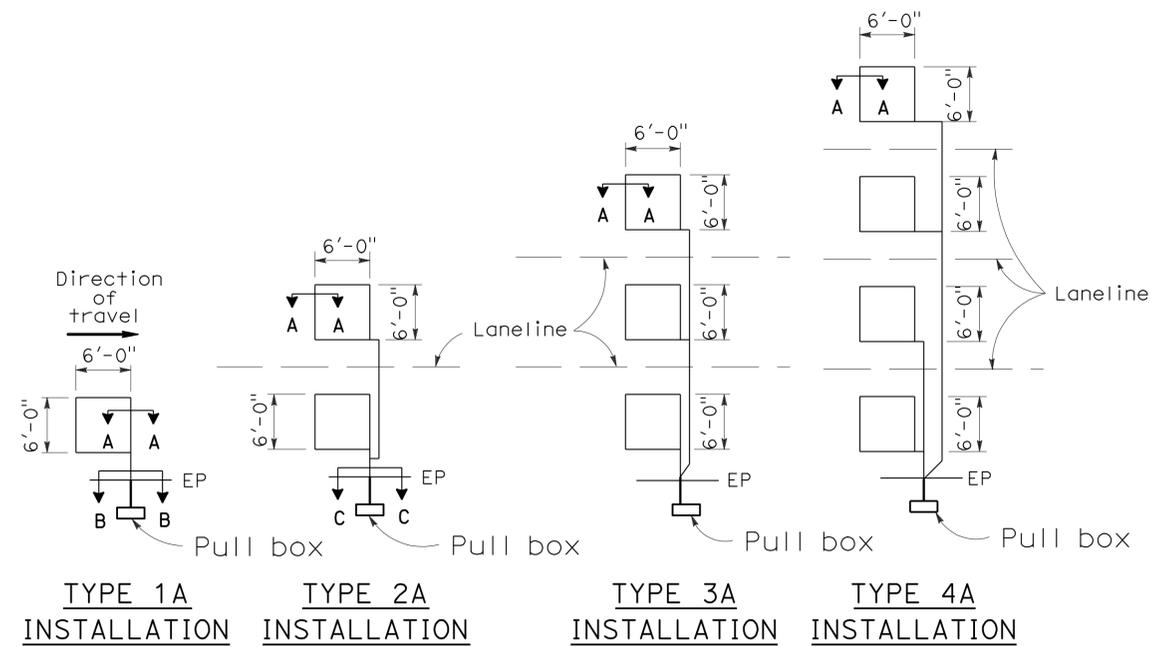
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	62	12.6	33	36

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

LOOP INSTALLATION PROCEDURE

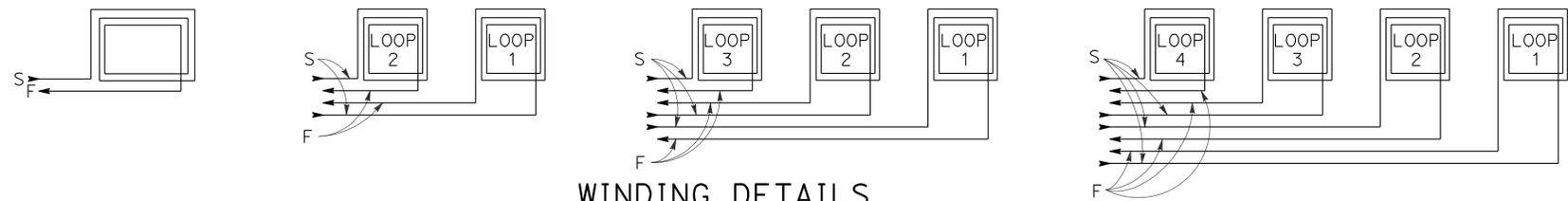
- Loops shall be centered in lanes.
- Saw slots in pavement for loop conductors as shown in details.
- Distance between side of loop and a lead-in saw cut from adjacent detectors shall be 2'-0" minimum. Distance between lead-in saw cuts shall be 6" minimum.
- Bottom of saw slot shall be smooth with no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



SAWCUT DETAILS

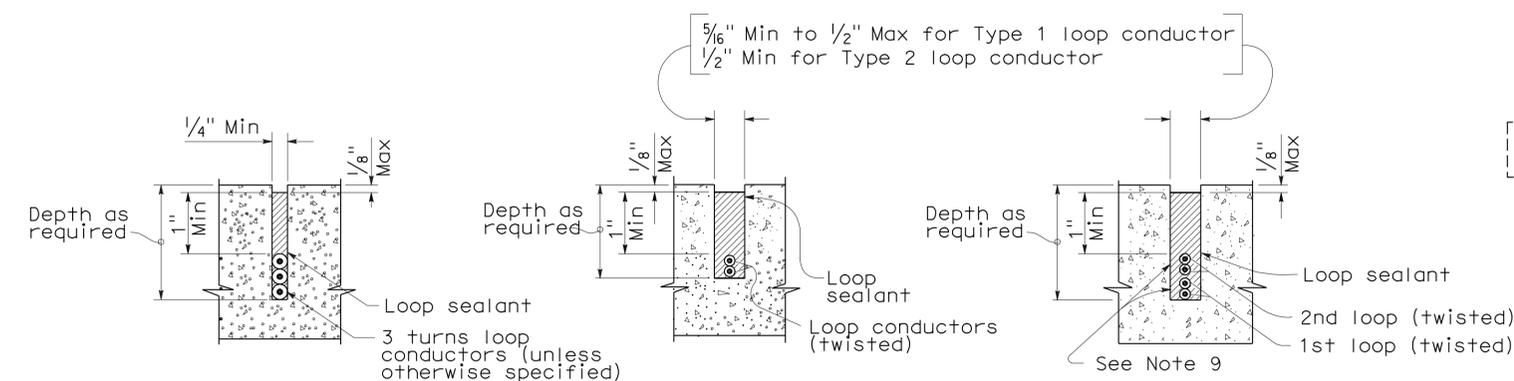
(Type A loop detector configurations illustrated)

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

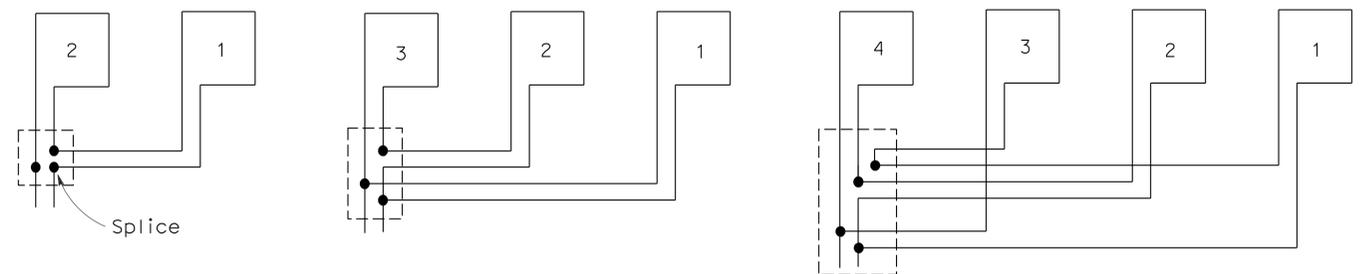


WINDING DETAILS

See Notes 6 and 7



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



TYPICAL LOOP CONNECTIONS

(Dashed lines represent the pull box)

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (DETECTORS)

NO SCALE

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

REVISED STANDARD PLAN RSP ES-5A

2006 REVISED STANDARD PLAN RSP ES-5A

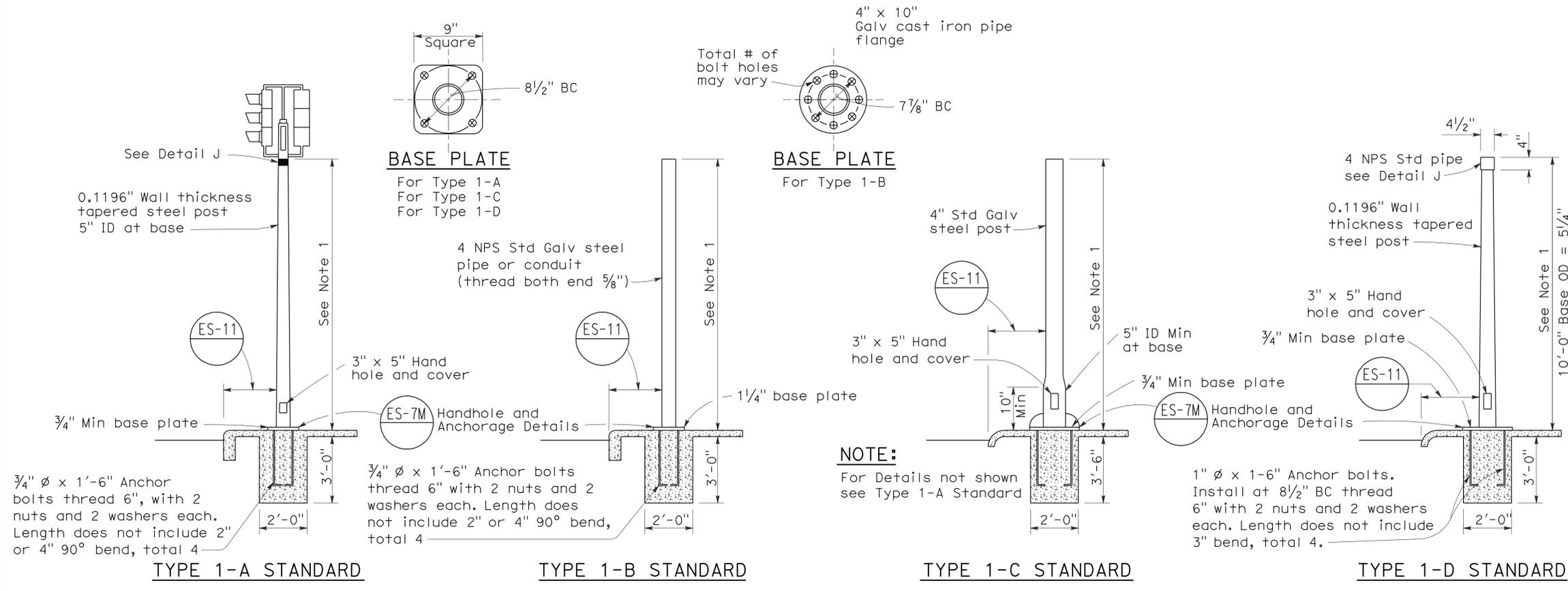
To accompany plans dated 2-14-11

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	62	12.6	34	36

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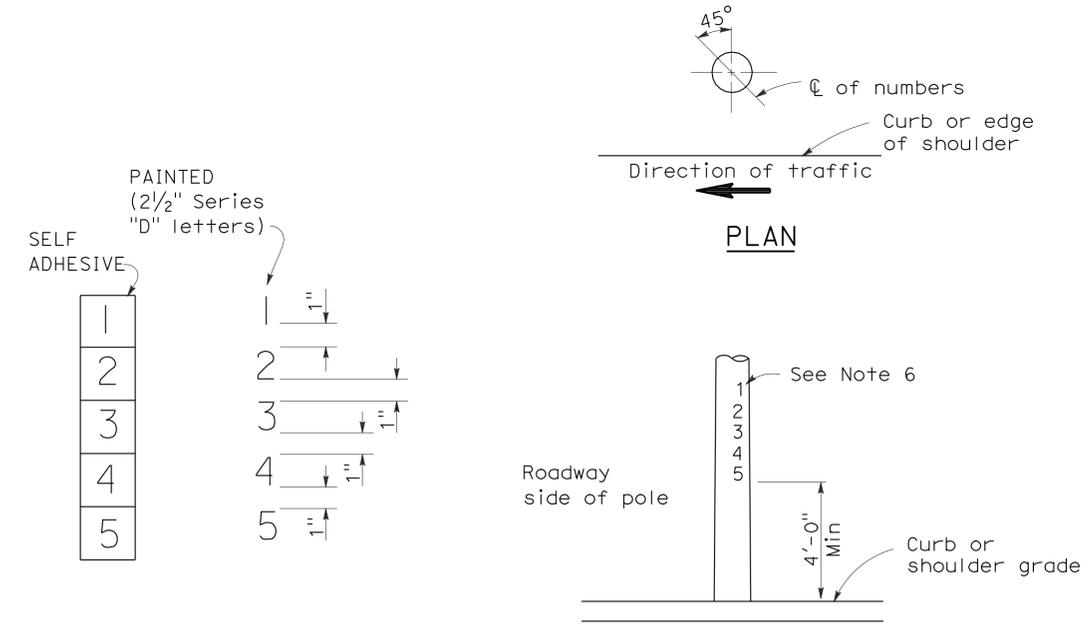
REGISTERED PROFESSIONAL ENGINEER
 Stanley P. Johnson
 No. C57793
 Exp. 3-31-08
 CIVIL
 STATE OF CALIFORNIA

To accompany plans dated 2-14-11

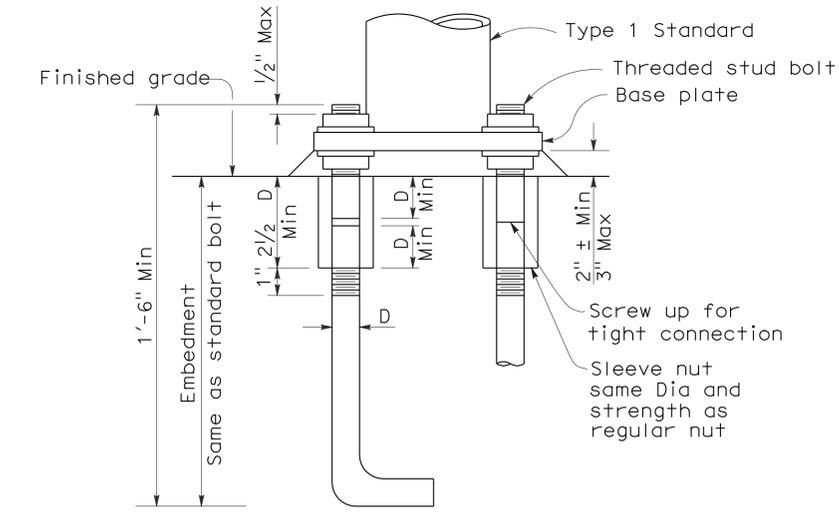


- NOTES:**
- Standards shall be 10'-0" \pm 2" for vehicle signals and 7'-0" \pm 2" for pedestrian signals unless otherwise noted on plans.
 - Top of standards shall be 4 1/2" OD.
 - Conduits shall extend 2" maximum above finished surface of foundation and for Types 1-A, 1-C and 1-D shall be sloped toward 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.

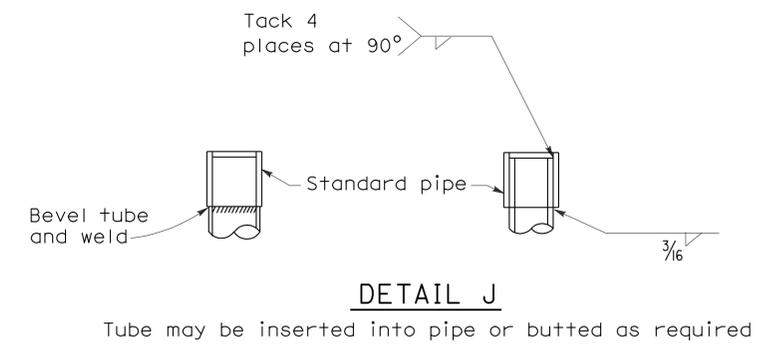
TYPE 1 SIGNAL STANDARDS



NUMBER DETAIL
TYPICAL NUMBER FORMAT
LOCATION OF EQUIPMENT NUMBERS ON STANDARDS AND POSTS



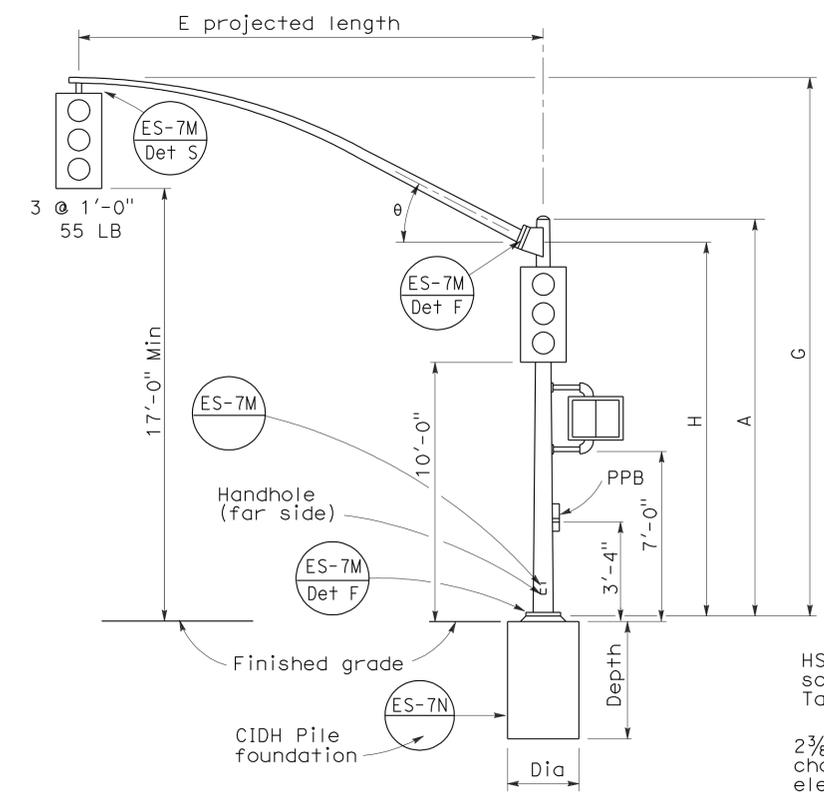
ANCHOR BOLTS WITH SLEEVE NUTS
Sleeve nuts to be used only when shown or specified on Project Plans
D = Diameter of anchor bolt



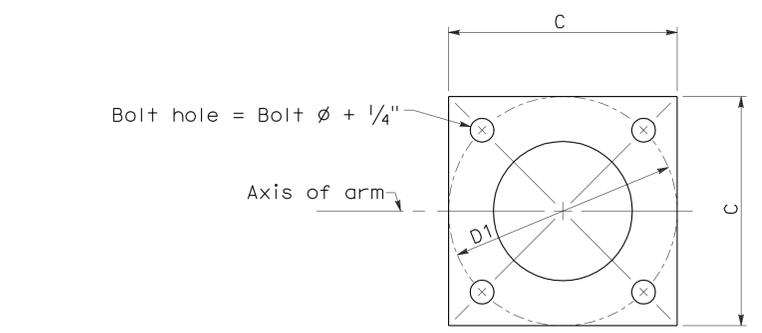
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS (SIGNAL AND LIGHTING STANDARD TYPE 1 STANDARD AND EQUIPMENT NUMBERING)
NO SCALE

2006 REVISED STANDARD PLAN RSP ES-7B

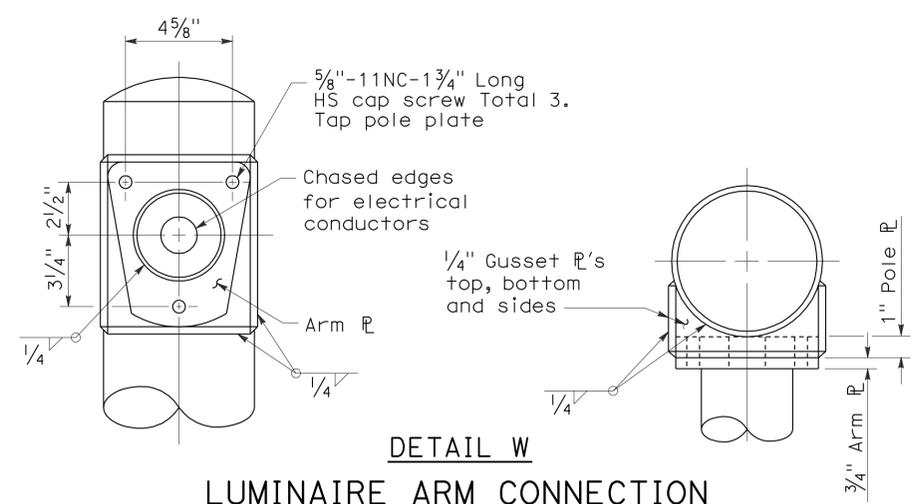
To accompany plans dated 2-14-11



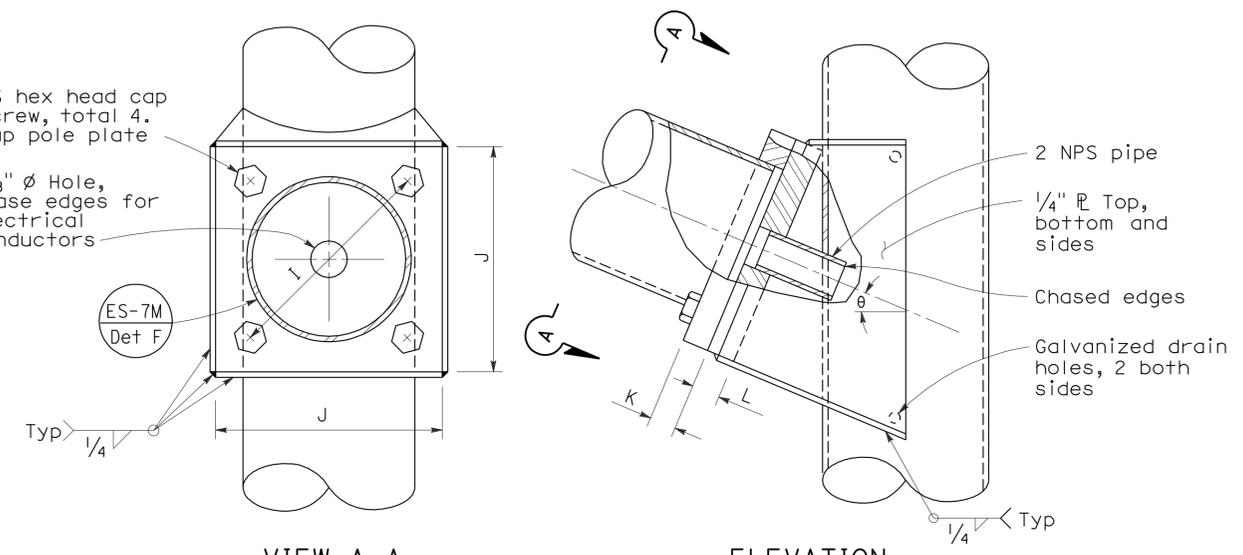
ELEVATION
TYPE 16-1-100, 18-1-100



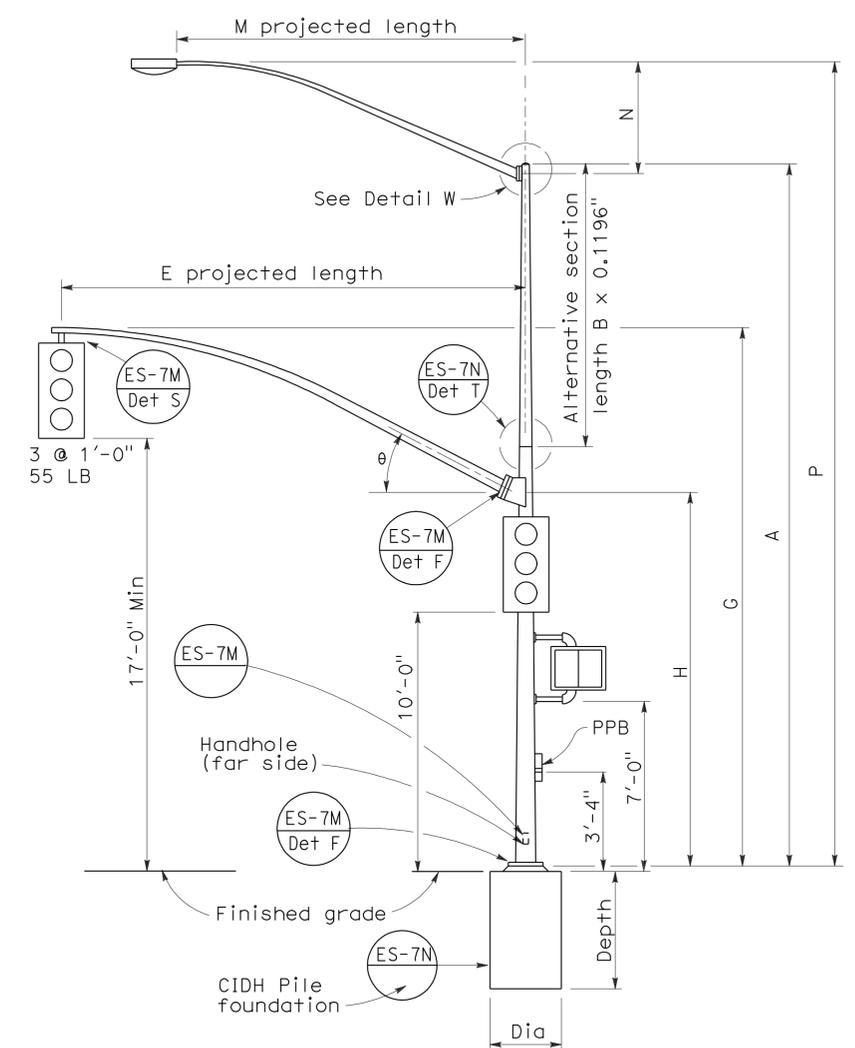
BASE PLATE



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 ϕ Thickness	L Pole ϕ 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 1/8"								
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"±

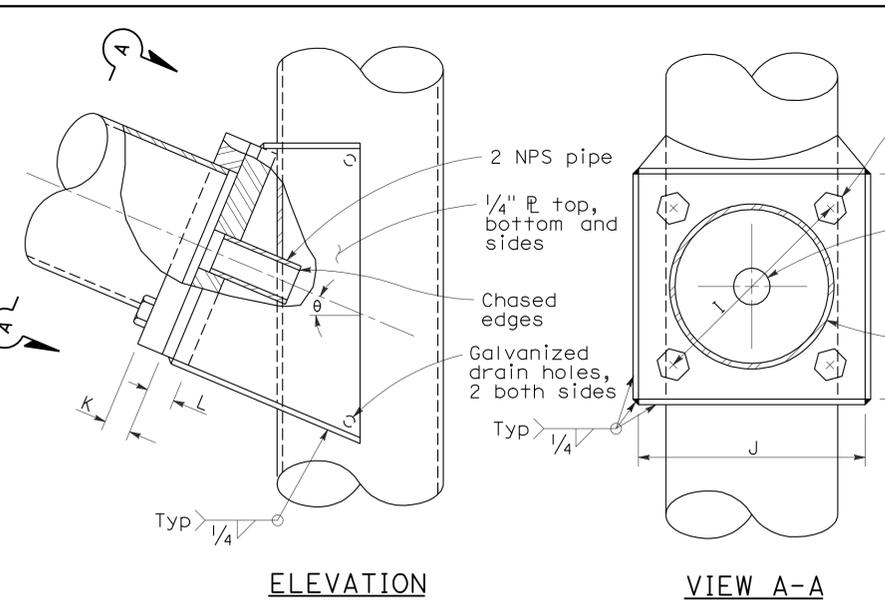
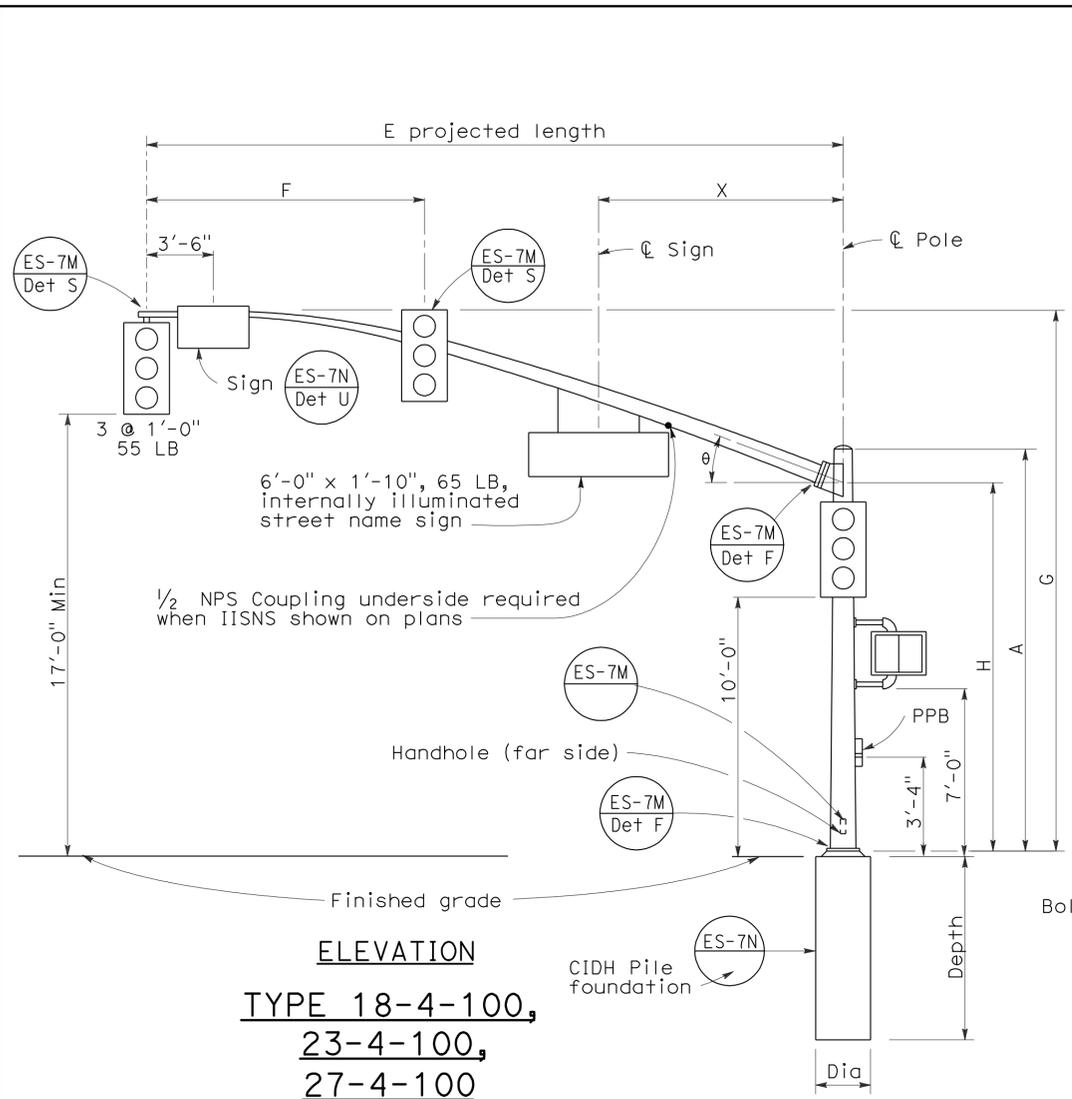
Pole Type	Load Case	Wind Velocity mph	POLE DATA					BASE PLATE DATA					CIDH PILE FOUNDATION						
			A Height	Min OD		Thickness	Alternative Section			C	D1 Bolt Circle	Thickness	Anchor Bolts		Luminaire Arm	Signal Arm	Diameter	Depth	Reinforced
				Base	Top		B Length	Bottom	Top				Size						
16-1-100	1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

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

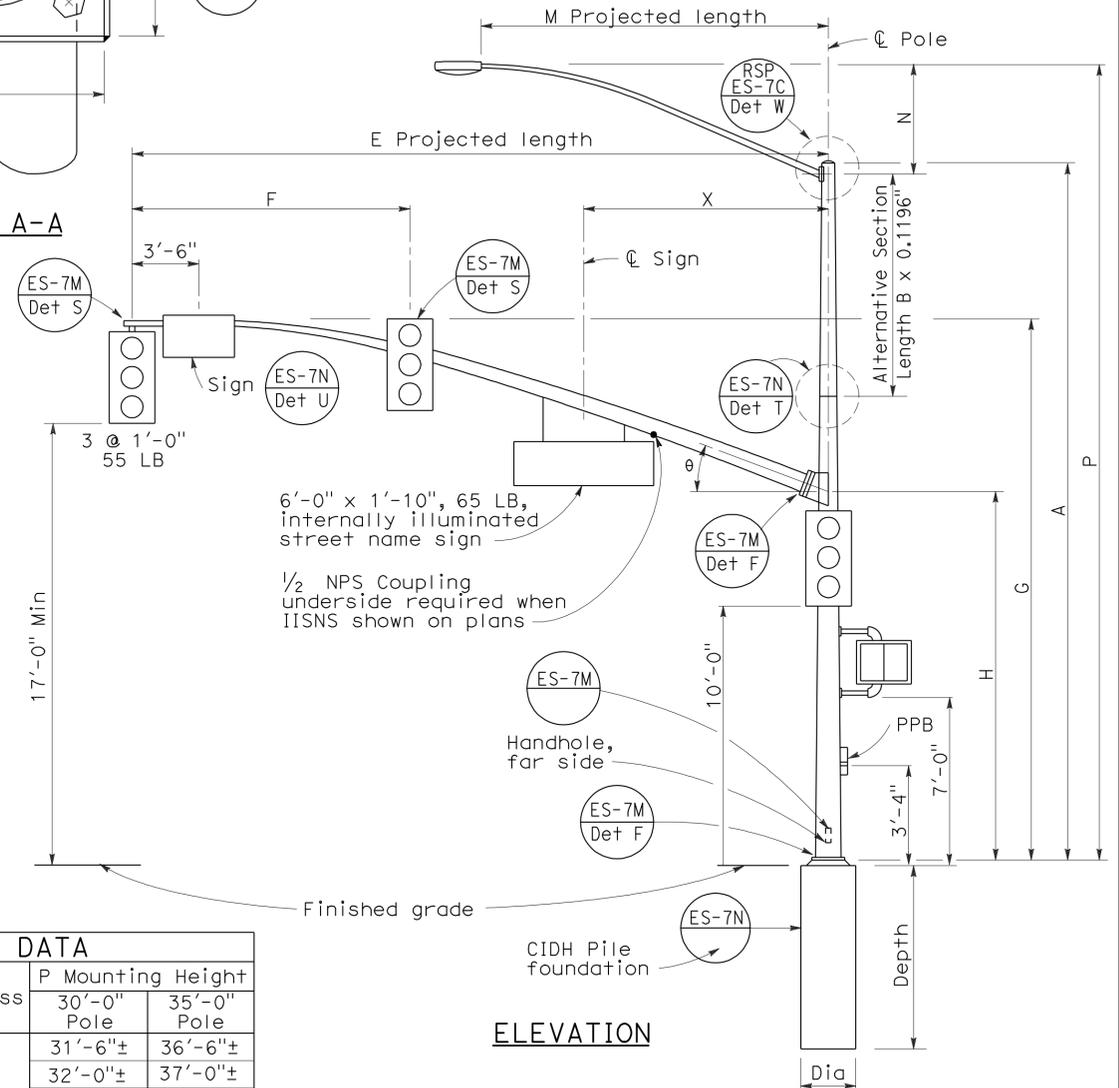
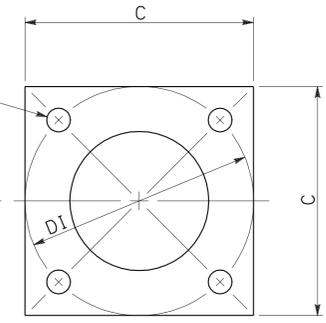
RSP ES-7C DATED JUNE 15, 2007 SUPERSEDES STANDARD PLAN ES-7C
 DATED MAY 1, 2006 - PAGE 439 OF THE STANDARD PLANS BOOK DATED MAY 2006.

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

2006 REVISED STANDARD PLAN RSP ES-7C



SIGNAL ARM CONNECTION DETAILS



ELEVATION

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

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 ϕ Thickness	L Pole ϕ 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"	8"										
35'-0"	14'-0"	8 1/16"										
40'-0"	15'-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"	15°	13'-0"

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"±	4"		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" ϕ 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														

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

REVISED STANDARD PLAN RSP ES-7F

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.

2006 REVISED STANDARD PLAN RSP ES-7F