

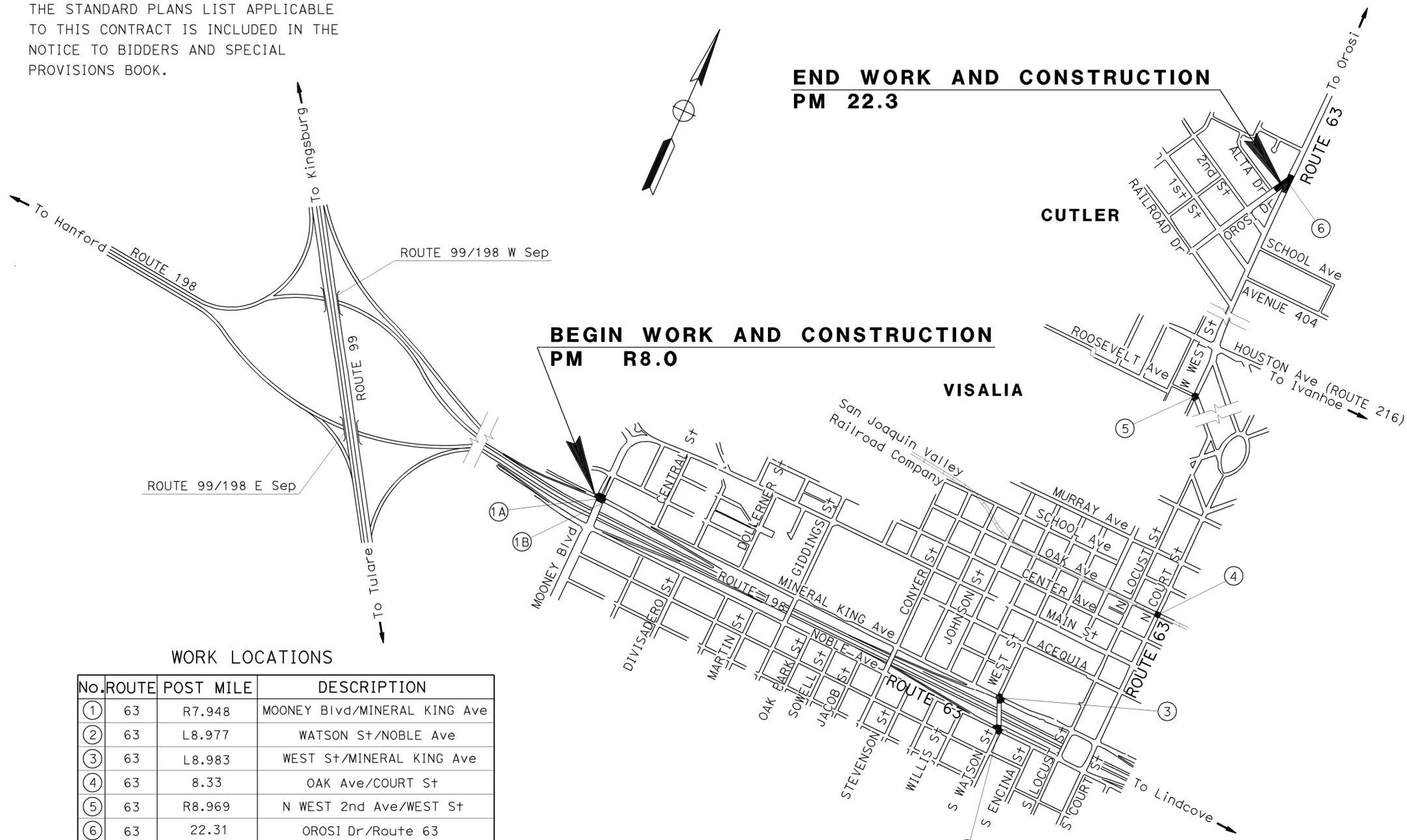
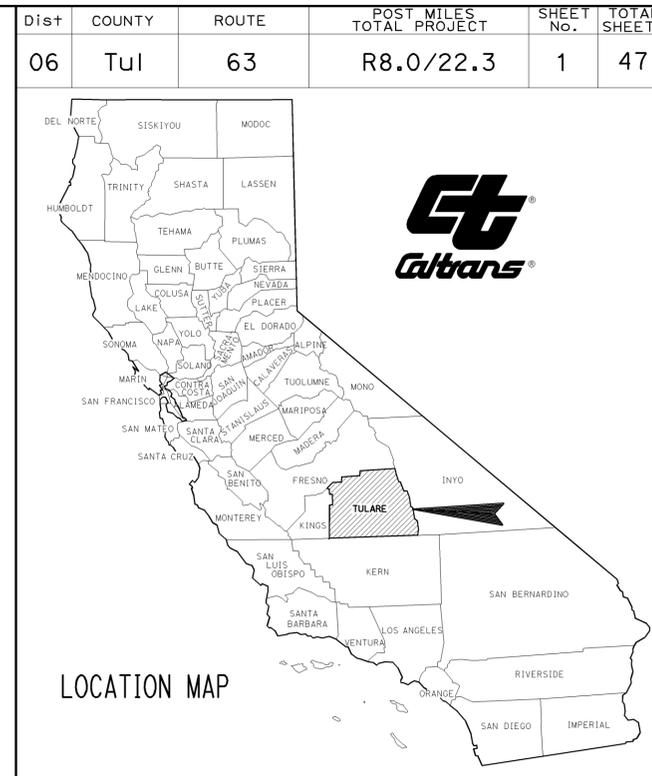
INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2	TYPICAL CROSS SECTIONS
3-11	CONSTRUCTION DETAILS
12	UTILITY PLAN
13	CONSTRUCTION AREA SIGNS
14	PAVEMENT DELINEATION AND SIGN PLAN
15	PAVEMENT DELINEATION QUANTITIES
16	SUMMARY OF QUANTITIES
17-21	MODIFY SIGNAL AND LIGHTING
22-47	REVISED AND NEW STANDARD PLANS

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
PROJECT PLANS FOR CONSTRUCTION ON STATE HIGHWAY
IN TULARE COUNTY IN VISALIA AND CUTLER
AT VARIOUS LOCATIONS
FROM MOONEY BOULEVARD TO OROSI DRIVE

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006



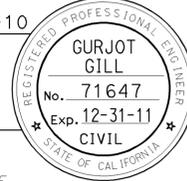
WORK LOCATIONS

No.	ROUTE	POST MILE	DESCRIPTION
①	63	R7.948	MOONEY Blvd/MINERAL KING Ave
②	63	L8.977	WATSON St/NOBLE Ave
③	63	L8.983	WEST St/MINERAL KING Ave
④	63	8.33	OAK Ave/COURT St
⑤	63	R8.969	N WEST 2nd Ave/WEST St
⑥	63	22.31	OROSI Dr/Route 63

NO SCALE

PROJECT MANAGER
DALLIA FOSTER
 DESIGN ENGINEER
ABDUL BAKER

Gurjot Gill 4-10-10
 PROJECT ENGINEER DATE
 REGISTERED CIVIL ENGINEER
April 19, 2010
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



CONTRACT No.	06-OG9504
PROJECT ID	060000116

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Tul	63	R8.0/22.3	2	47

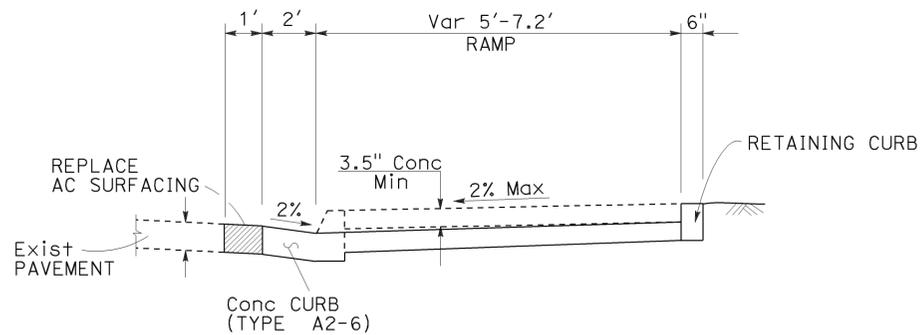
4-10-10
 REGISTERED CIVIL ENGINEER DATE
 4-19-10
 PLANS APPROVAL DATE

GURJOT GILL
 No. 71647
 Exp. 12-31-11
 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.

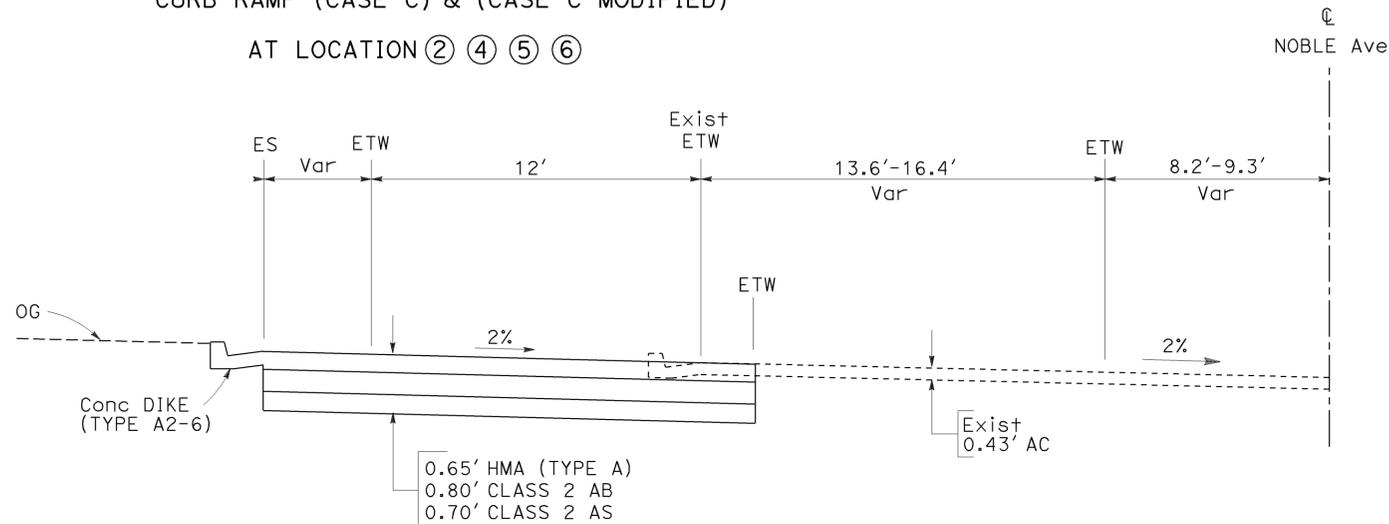
NOTES:

1. DIMENSION OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.
3. FOR LOCATION OF SAWCUT AC PAVEMENT TRANSITION SEE CONSTRUCTION DETAILS SHEETS.

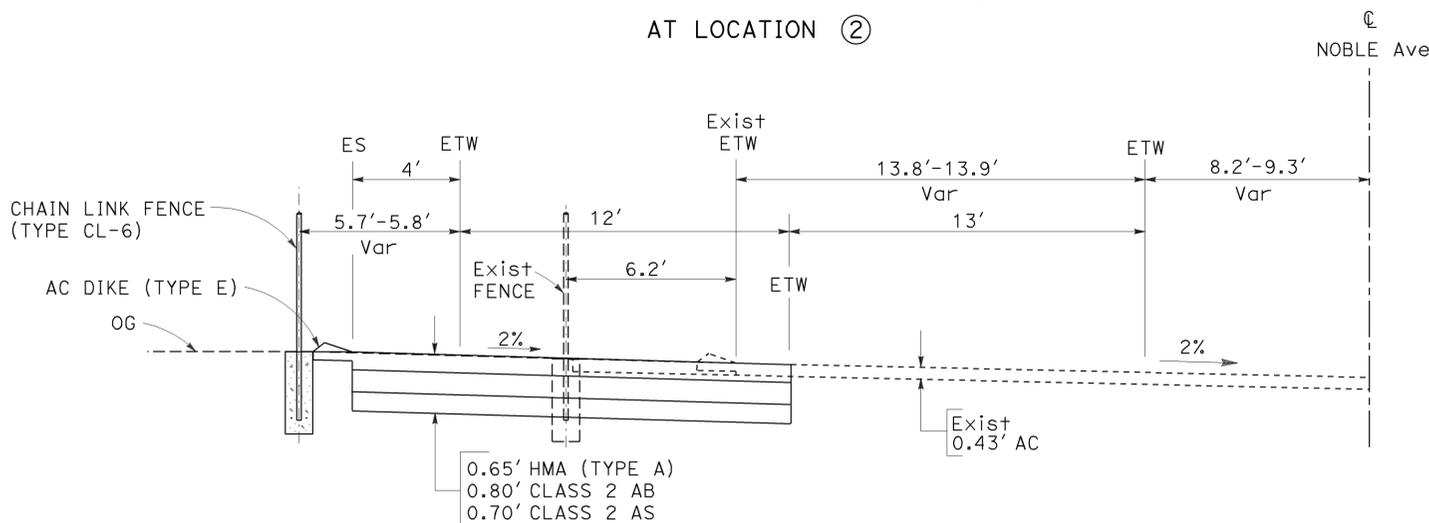


ROUTE 63

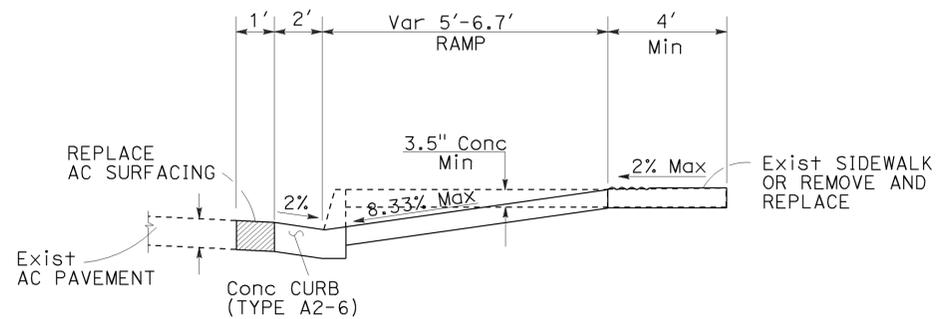
CURB RAMP (CASE C) & (CASE C MODIFIED)
 AT LOCATION ② ④ ⑤ ⑥



STA 120+16.29 TO STA 120+60.34
 AT LOCATION ②

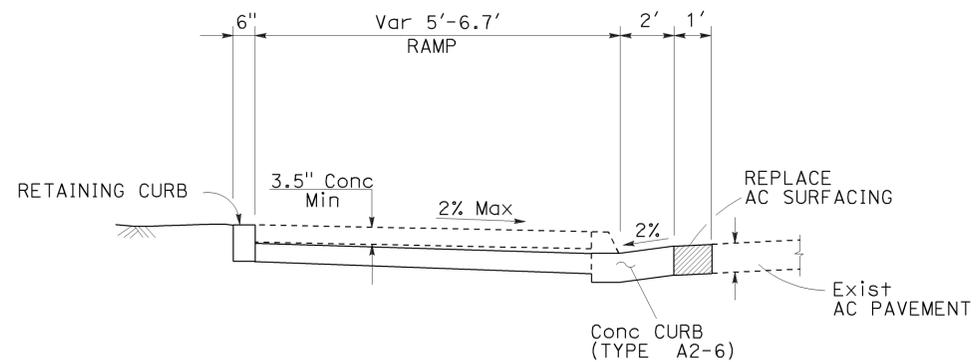


STA 119+79.10 TO STA 120+16.29
 AT LOCATION ②



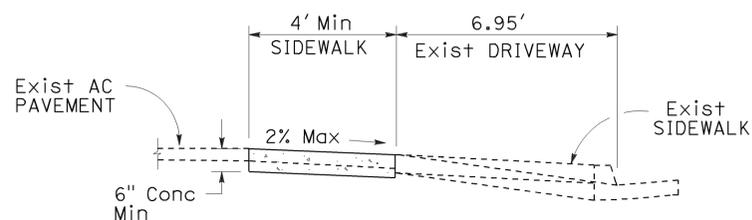
ROUTE 63

CURB RAMP (CASE A) & (CASE G)
 AT LOCATION ① ② ③ ④



ROUTE 63

CURB RAMP (CASE CM) & (CM MODIFIED)
 AT LOCATION ⑤



SECTION A-A
 AT LOCATION ③
 SOUTHWEST CORNER

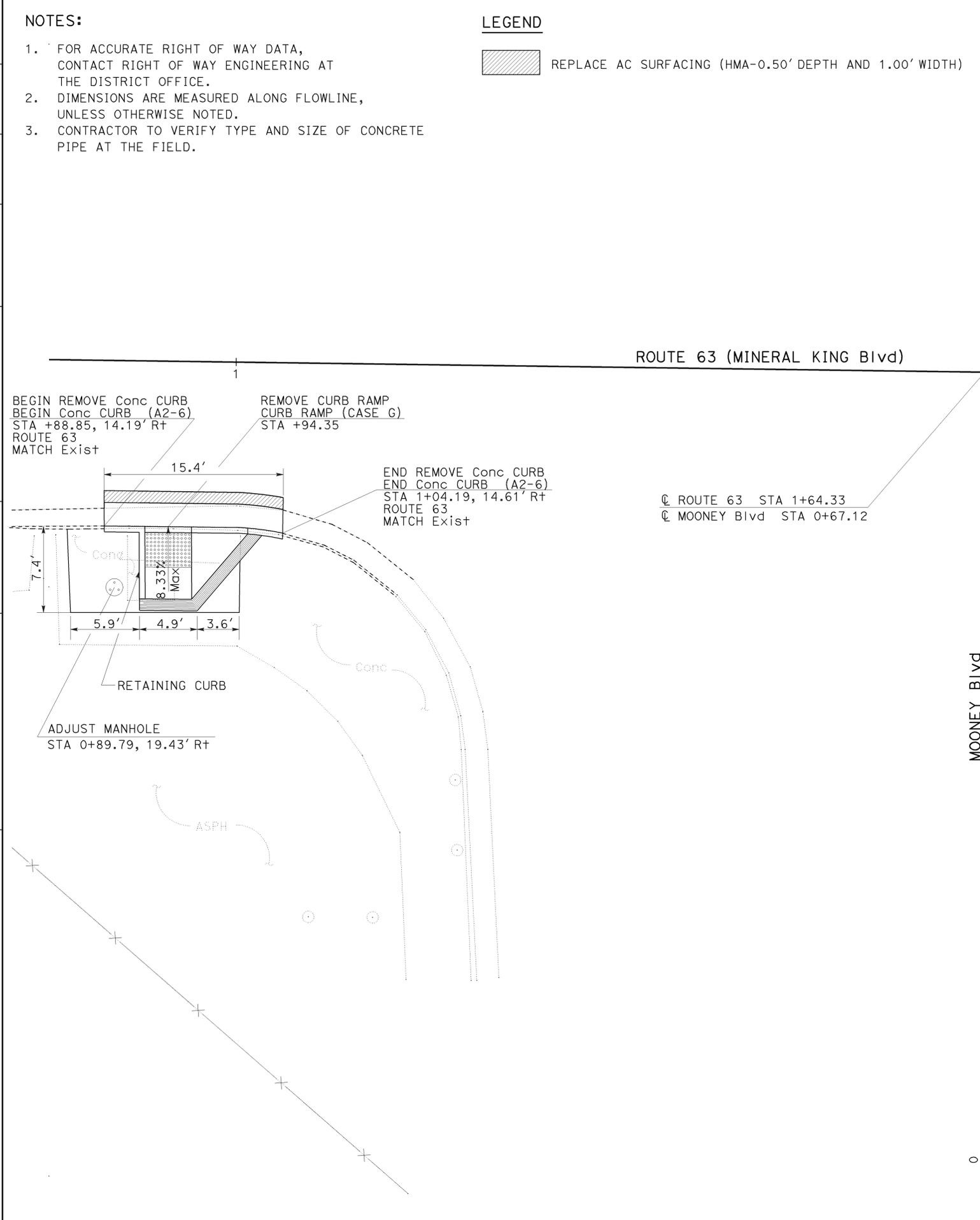
TYPICAL CROSS SECTIONS

NO SCALE

X-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 DESIGN
 FUNCTIONAL SUPERVISOR: ABDUL BAKER
 CHECKED BY: MARCO NABAVI
 GURJOT GILL
 REVISED BY: DATE REVISED:

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN



- NOTES:**
- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
 - DIMENSIONS ARE MEASURED ALONG FLOWLINE, UNLESS OTHERWISE NOTED.
 - CONTRACTOR TO VERIFY TYPE AND SIZE OF CONCRETE PIPE AT THE FIELD.

LEGEND

REPLACE AC SURFACING (HMA-0.50' DEPTH AND 1.00' WIDTH)

ABBREVIATION

ASPH - ASPHALT

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Tul	63	R8.0/22.3	3	47

GURJOT GILL
 REGISTERED CIVIL ENGINEER
 DATE 4-10-10
 PLANS APPROVAL DATE 4-19-10

REGISTERED PROFESSIONAL ENGINEER
 GURJOT GILL
 No. 71647
 Exp. 12-31-11
 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.



**CONSTRUCTION DETAILS
 (LOCATIONS 1)**

SCALE: 1"=5'

C-1

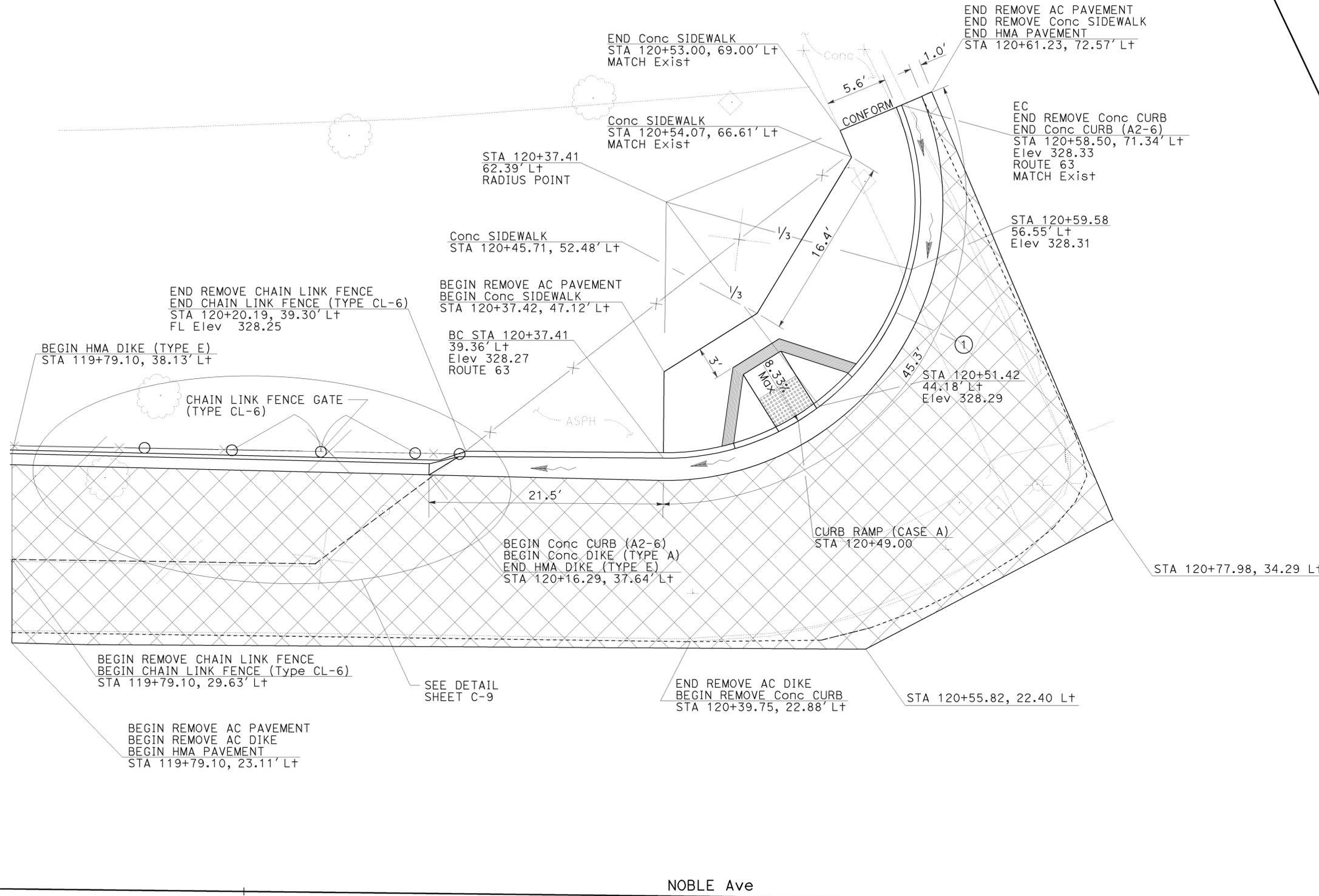
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Tul	63	R8.0/22.3	5	47

<i>Gurjot S. Gill</i>	4-10-10
REGISTERED CIVIL ENGINEER	DATE
4-19-10	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
GURJOT GILL
No. 71647
Exp. 12-31-11
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.

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

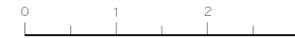


CURVE DATA

No.	R	Δ	T	L
①	23.00'	112°46'53"	234.61'	45.27'

CONSTRUCTION DETAILS
(LOCATION 2)
SCALE: 1"=5'
C-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN
 FUNCTIONAL SUPERVISOR: ABDUL BAKER
 CHECKED BY: GURJOT GILL
 DESIGNED BY: MARCO NABAVI
 DATE REVISED: 4-19-10
 REVISIONS: (None listed)



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Tul	63	R8.0/22.3	6	47

<i>Gurjot S. Gill</i>		4-10-10
REGISTERED CIVIL ENGINEER		DATE
4-19-10		
PLANS APPROVAL DATE		

REGISTERED PROFESSIONAL ENGINEER
GURJOT GILL
No. 71647
Exp. 12-31-11
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.

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

No.	R	Δ	T	L
②	15.00'	115° 15' 52"	23.67'	31.18'



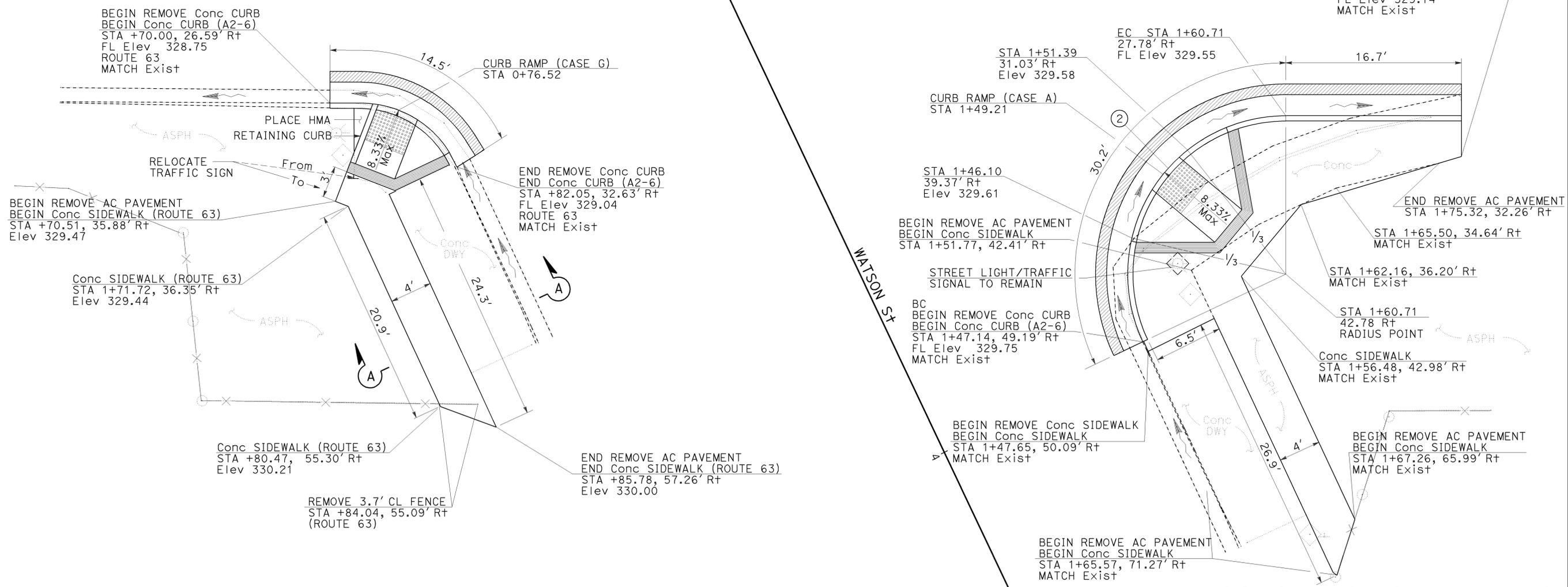
ROUTE 63 (MINERAL KING Blvd)

ROUTE 63 (MINERAL KING Blvd)

WEST ST

PI 1+00.00

WATSON ST



**CONSTRUCTION DETAILS
(LOCATION 3)**

SCALE: 1"=5'

C-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN

FUNCTIONAL SUPERVISOR
 ABDUL BAKER

CALCULATED/DESIGNED BY
 CHECKED BY

MARCO NABAVI
 GURJOT GILL

REVISED BY
 DATE REVISED

REVISIONS

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Tul	63	R8.0/22.3	7	47

<i>Gurjot S. Gill</i>	4-10-10
REGISTERED CIVIL ENGINEER	DATE
4-19-10	
PLANS APPROVAL DATE	

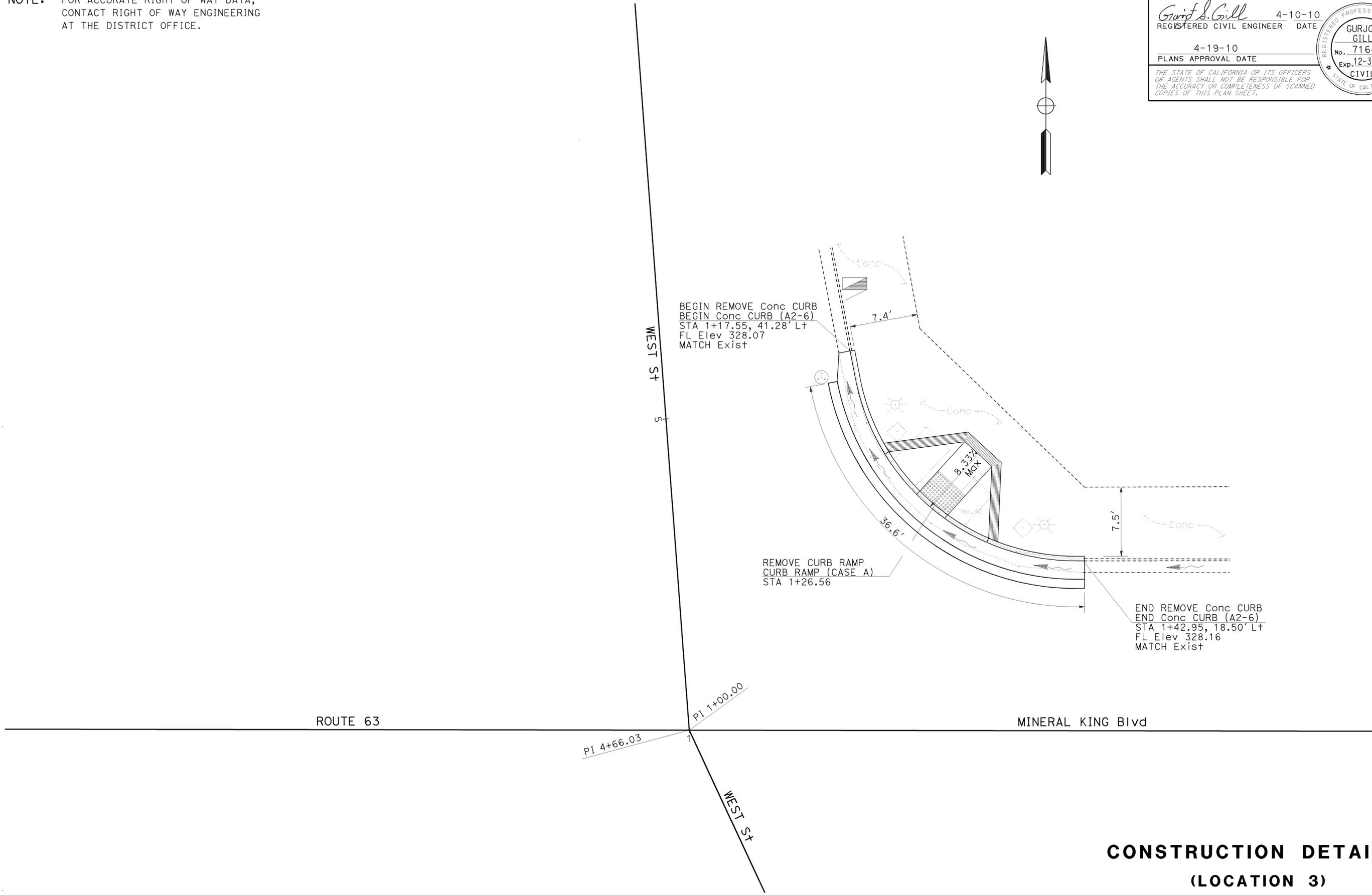
REGISTERED PROFESSIONAL ENGINEER
GURJOT GILL
No. 71647
Exp. 12-31-11
CIVIL

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.

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



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN
Caltrans	
FUNCTIONAL SUPERVISOR	ABDUL BAKER
CALCULATED/DESIGNED BY	CHECKED BY
MARCO NABAVI	GURJOT GILL
REVISOR BY	DATE REVISED

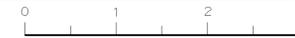


CONSTRUCTION DETAILS

(LOCATION 3)

SCALE: 1"=5'

C-5



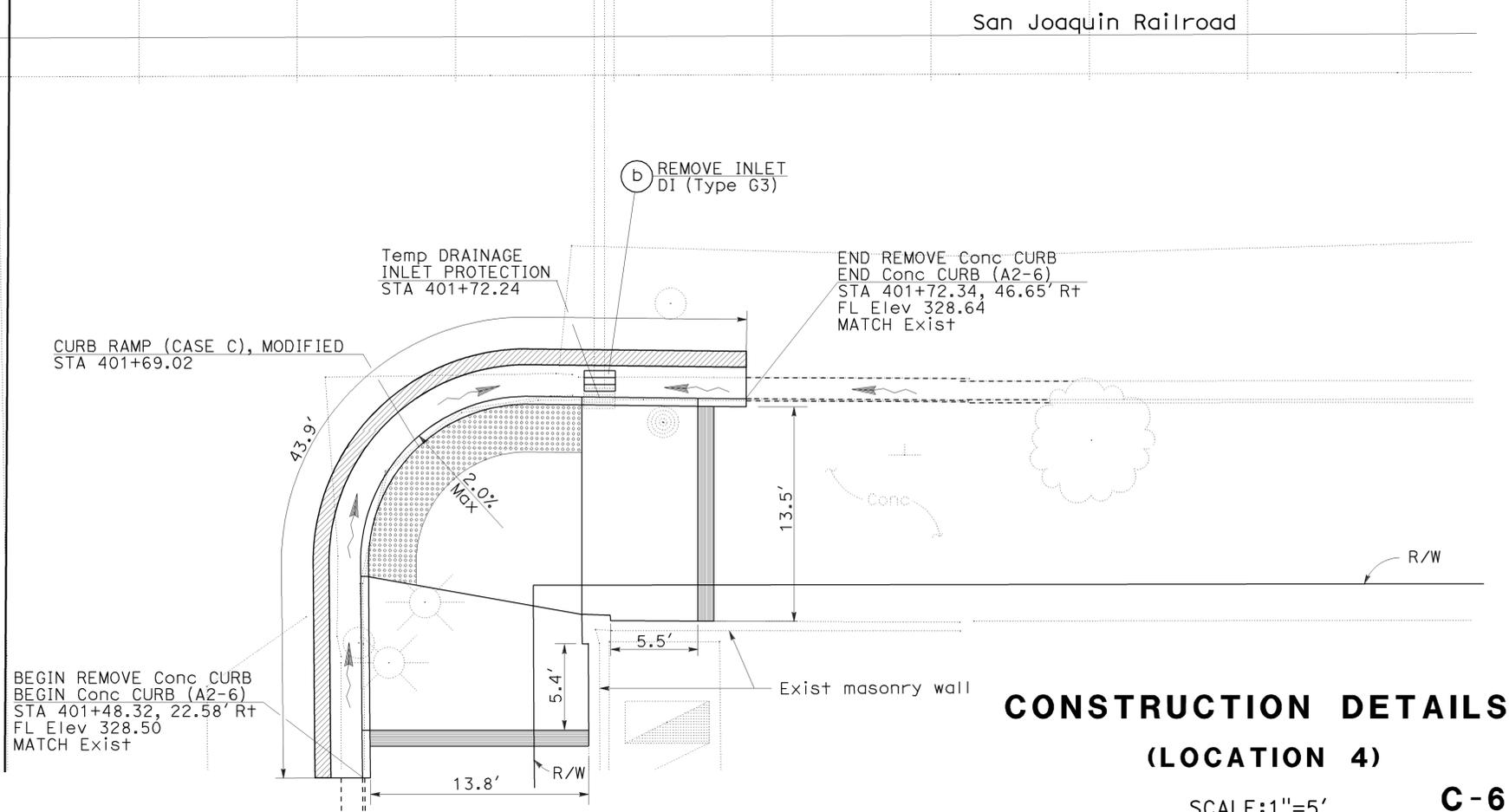
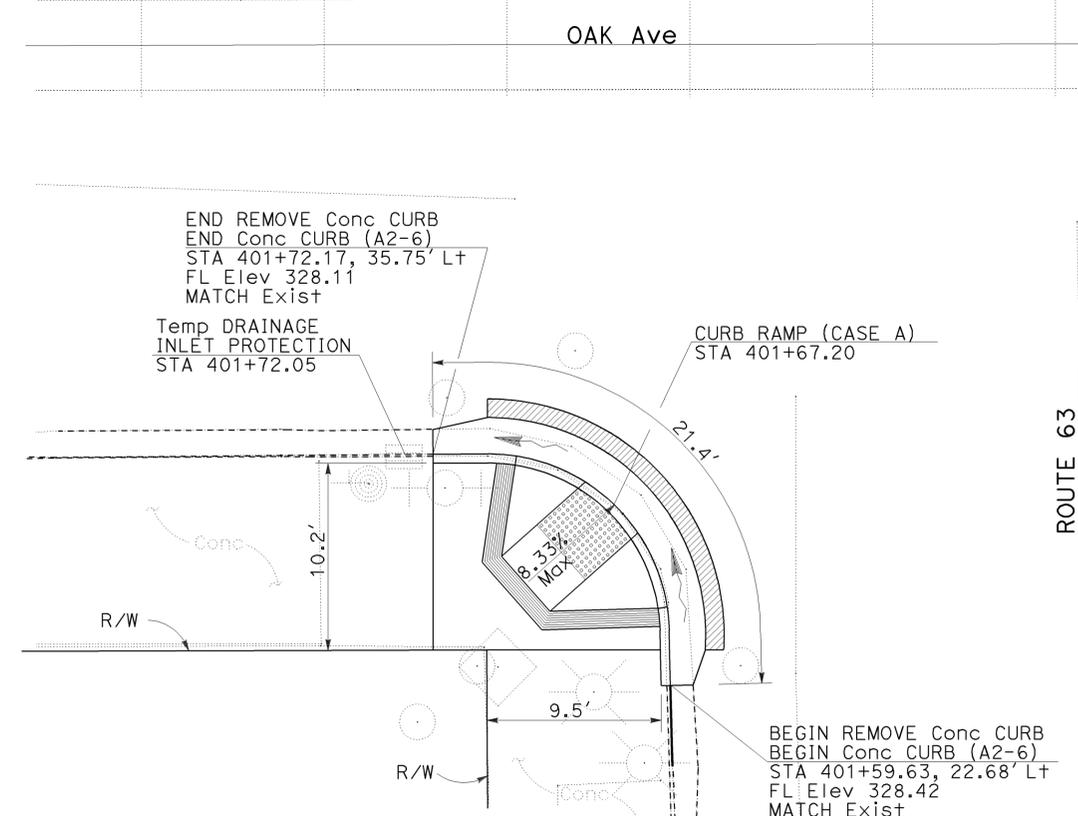
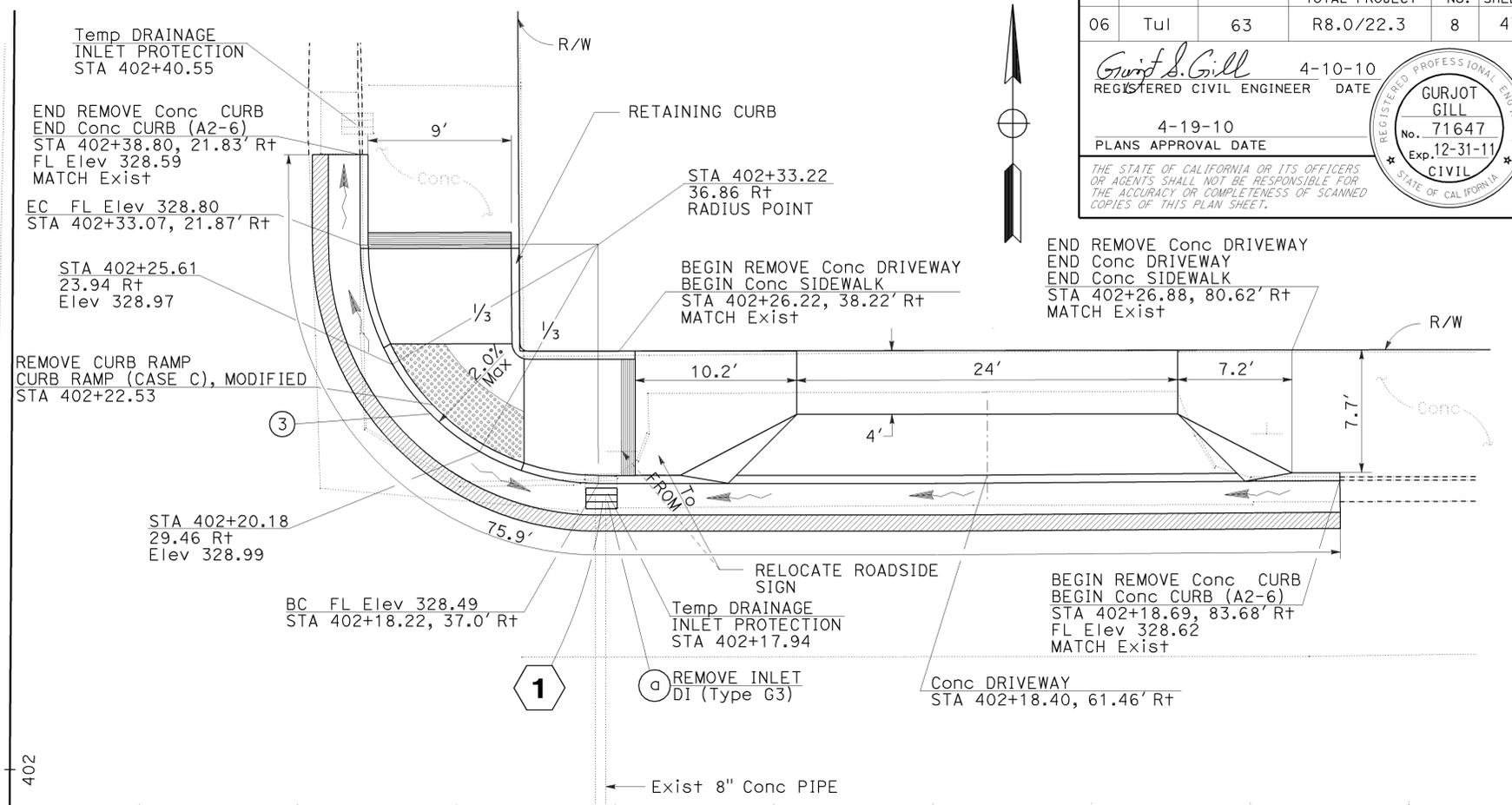
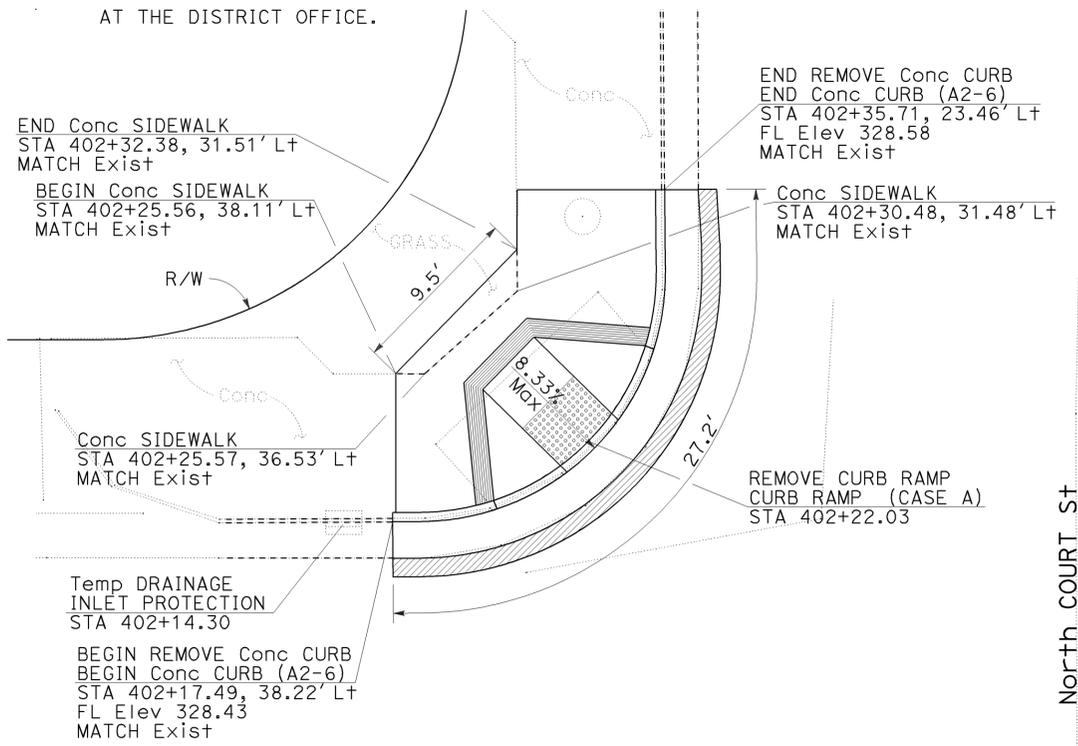
NOTE: FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Tul	63	R8.0/22.3	8	47

Gurjot S. Gill 4-10-10
 REGISTERED CIVIL ENGINEER DATE
 4-19-10
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 GURJOT GILL
 No. 71647
 Exp. 12-31-11
 CIVIL
 STATE OF CALIFORNIA

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



CURVE DATA

No.	R	Δ	T	L
③	15.00'	89°47'11"	14.94'	23.54'

CONSTRUCTION DETAILS
(LOCATION 4)
SCALE: 1"=5' **C-6**

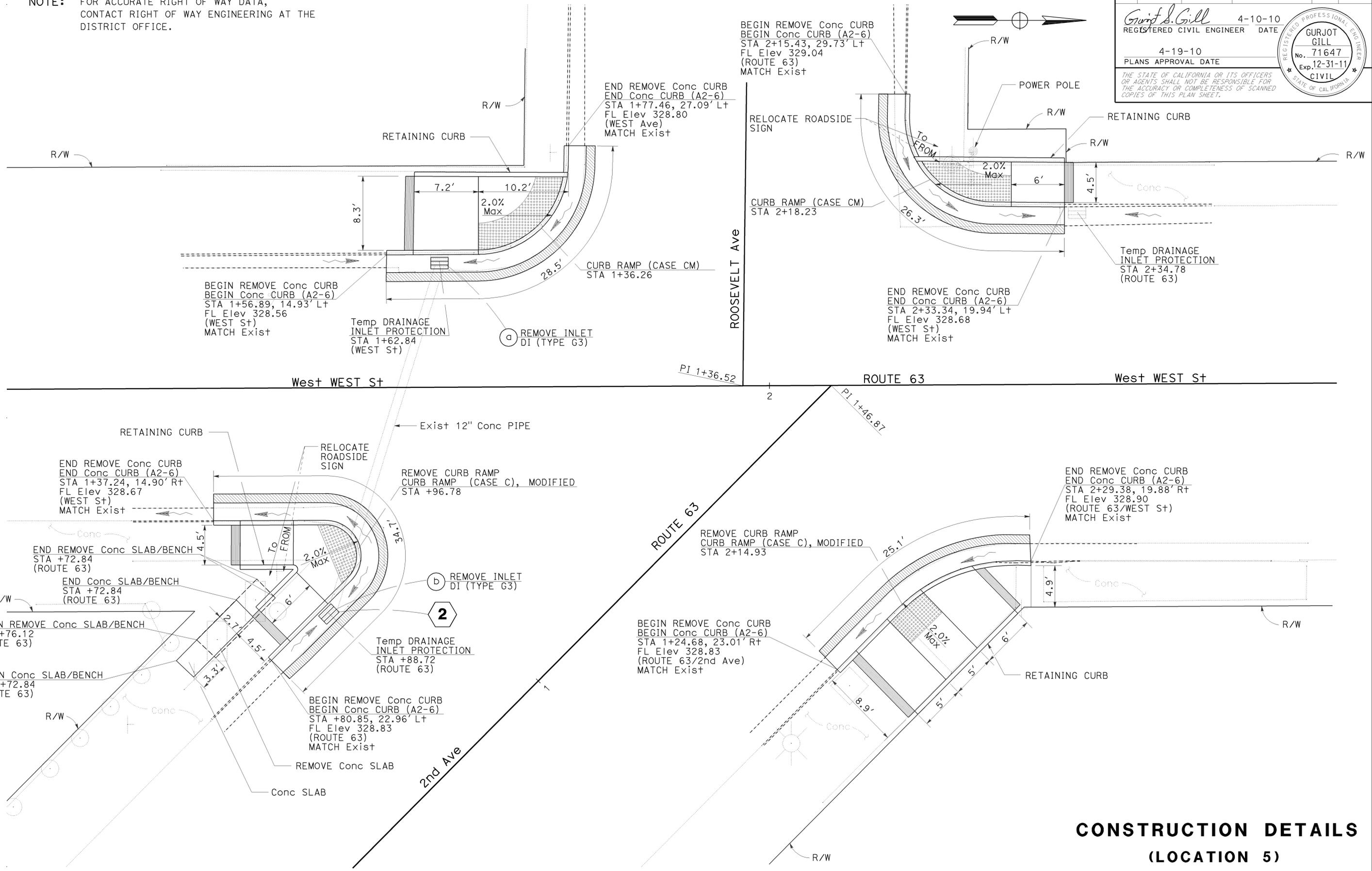
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Tul	63	R8.0/22.3	9	47

<i>Gurjot S. Gill</i>	4-10-10
REGISTERED CIVIL ENGINEER	DATE
4-19-10	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
GURJOT GILL
No. 71647
Exp. 12-31-11
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.

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



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN
 FUNCTIONAL SUPERVISOR: ABDUL BAKER
 CHECKED BY: GURJOT GILL
 REVISIONS: MARCO NABAVI, GURJOT GILL
 REVISED BY: DATE REVISED

CONSTRUCTION DETAILS
(LOCATION 5)
 SCALE: 1"=5' **C-7**

LAST REVISION: DATE PLOTTED => 24-APR-2010
 04-14-10 TIME PLOTTED => 01:04

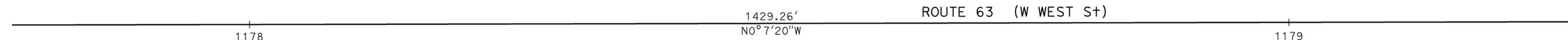
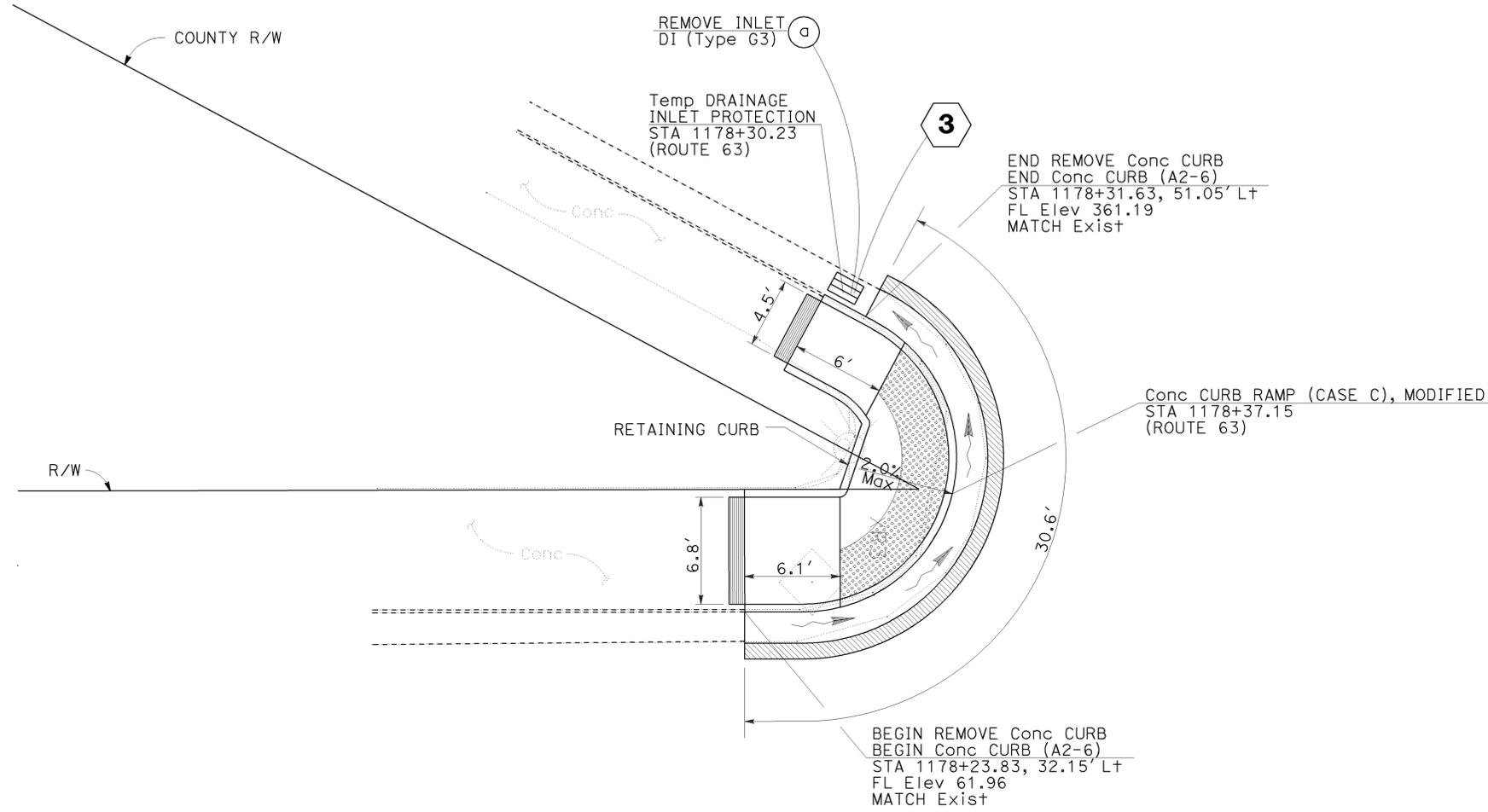
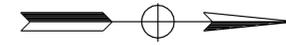
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Tul	63	R8.0/22.3	10	47

<i>Gurjot S. Gill</i>	4-10-10
REGISTERED CIVIL ENGINEER	DATE
4-19-10	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
GURJOT GILL
No. 71647
Exp. 12-31-11
CIVIL

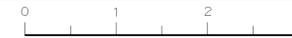
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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



CONSTRUCTION DETAILS
(LOCATION 6)
C-8
 SCALE: 1"=5'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN
<i>Caltrans</i>	
FUNCTIONAL SUPERVISOR	ABDUL BAKER
CALCULATED/DESIGNED BY	CHECKED BY
MARCO NABAVI	GURJOT GILL
REVISOR BY	DATE REVISED



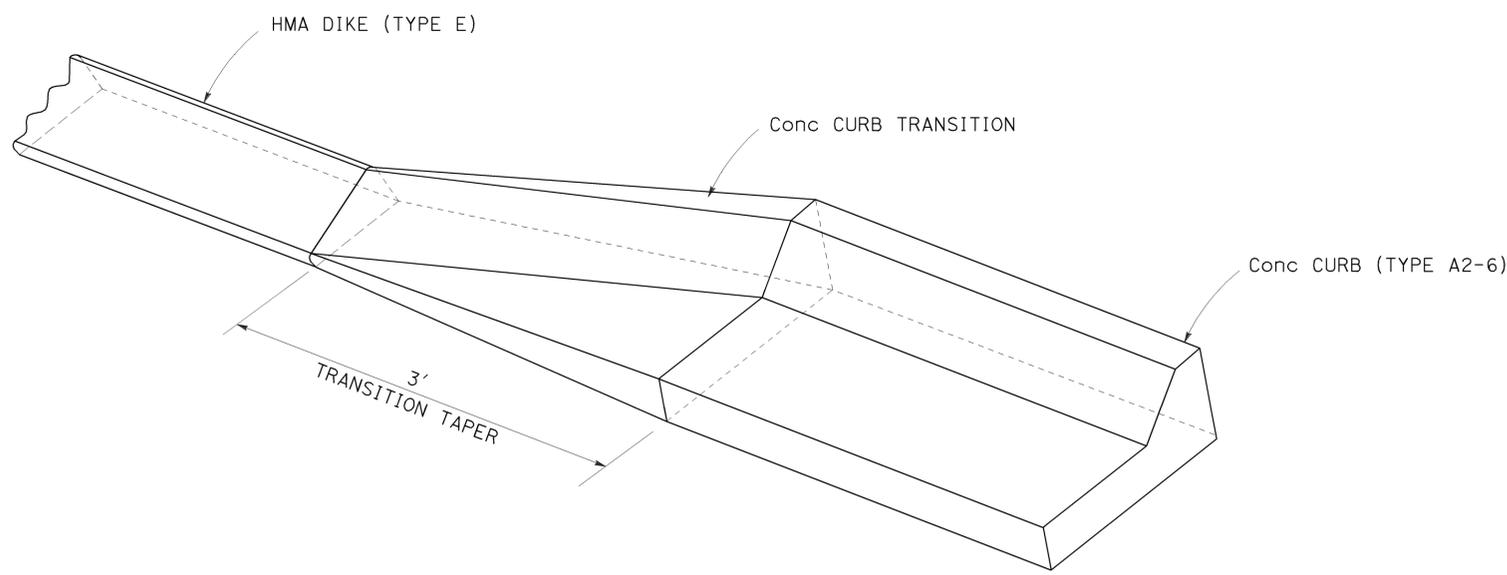
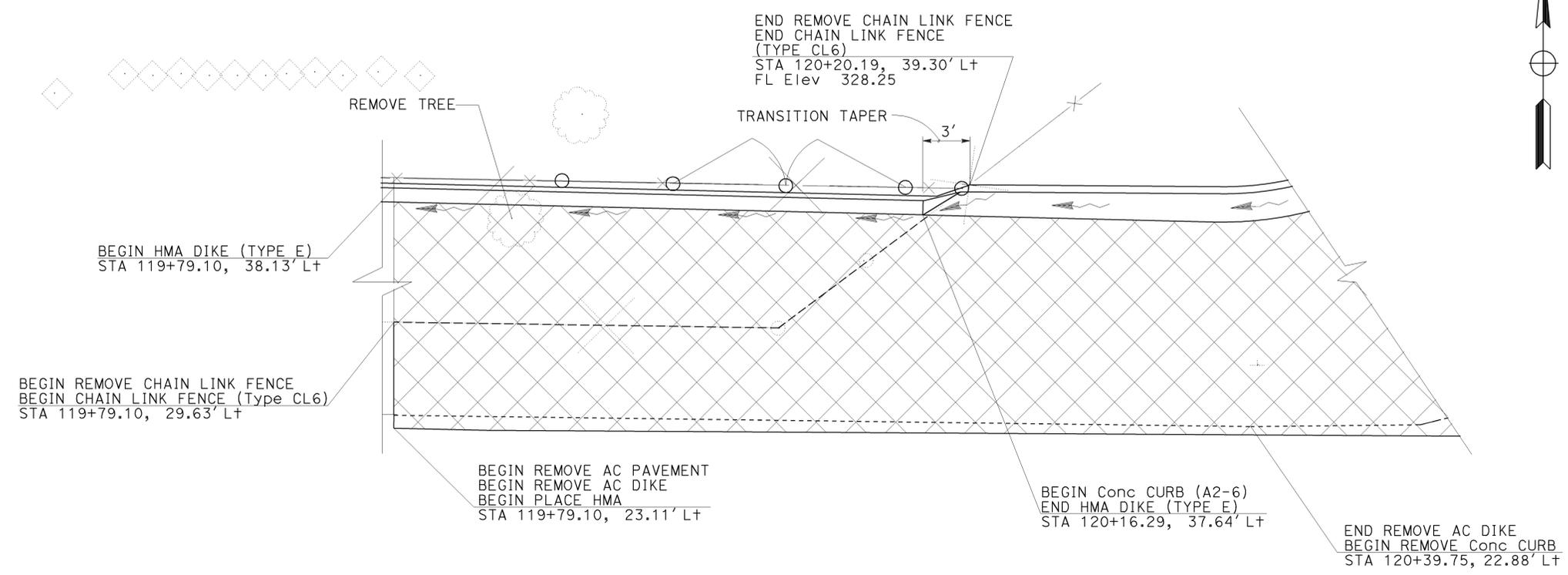
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Tul	63	R8.0/22.3	11	47

<i>Gurjot S. Gill</i>	4-10-10
REGISTERED CIVIL ENGINEER	DATE
4-19-10	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
GURJOT GILL
No. 71647
Exp. 12-31-11
CIVIL

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



HMA DIKE TO CONCRETE CURB TRANSITION

**CONSTRUCTION DETAILS
(LOCATION 2)**

NO SCALE

C-9

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN
FUNCTIONAL SUPERVISOR
ABDUL BAKER
CALCULATED/DESIGNED BY
CHECKED BY
MARCO NABAVI
GURJOT GILL
REVISOR BY
DATE REVISED

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 DESIGN
 FUNCTIONAL SUPERVISOR: ABDUL BAKER
 CHECKED BY: MARCO NABAVI
 DESIGNED BY: GURJOT GILL
 REVISIONS: REVISED BY: DATE REVISED:

NOTES:

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
- LOCATION OF UTILITY FACILITIES SHOWN ON THESE PLANS ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

LEGEND

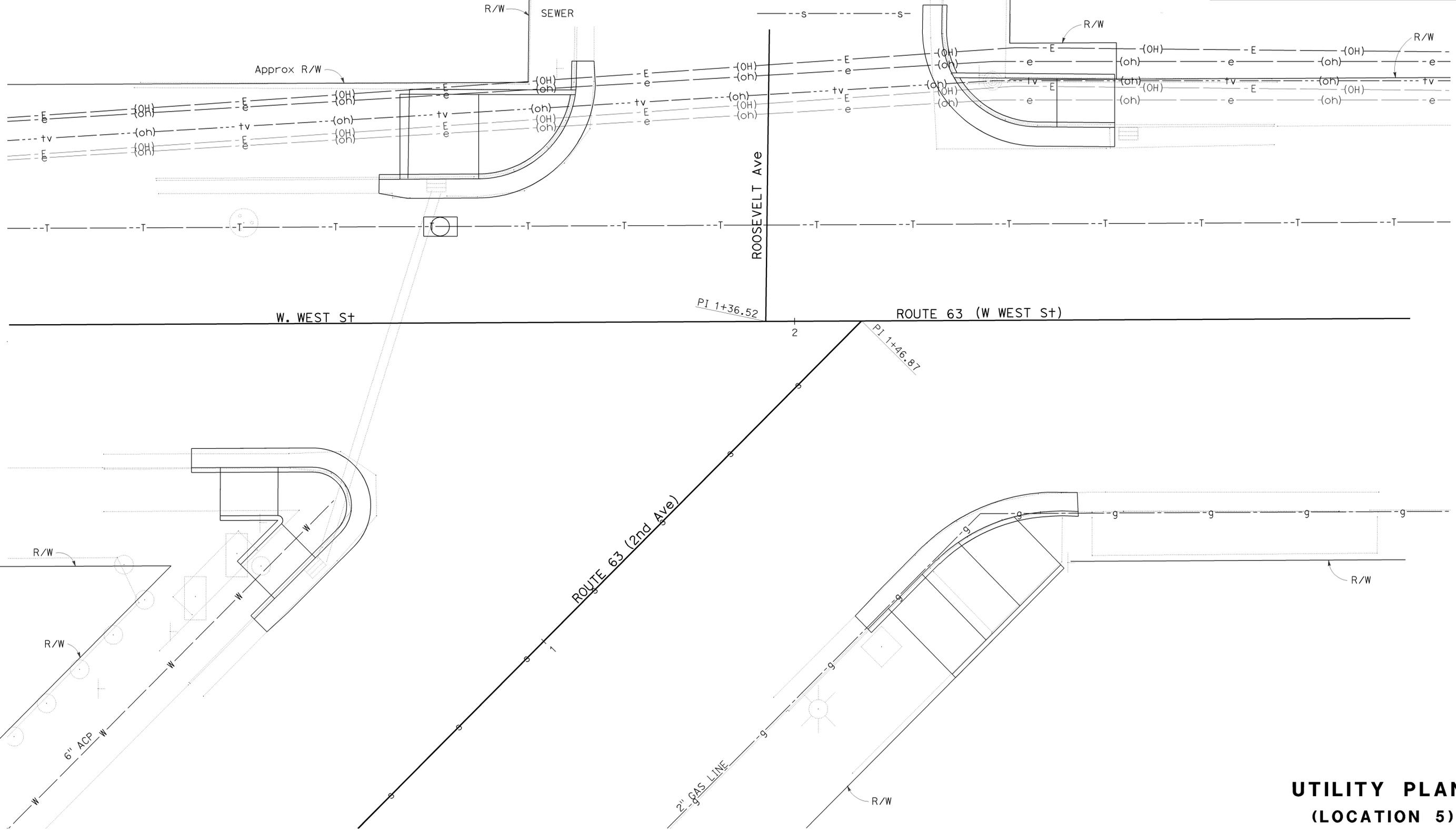
- GAS (PG&E) -----g-----g-----
- WATER (CITY OF VISALIA) -----w-----w-----
- ELECTRICITY - OH (Exist) (PG&E) -----e------(oh)-----
- ELECTRICITY - OH (NEW) (PG&E) -----E------(OH)-----
- TELEVISION (COMCAST) -----tv-----tv-----
- TELEPHONE (at&t) -----T-----T-----
- SEWER -----s-----s-----

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Tul	63	R8.0/22.3	12	47

Gurjot S. Gill 4-10-10
 REGISTERED CIVIL ENGINEER DATE
 4-19-10
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 GURJOT GILL
 No. 71647
 Exp. 12-31-11
 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.



THIS PLAN ACCURATE FOR UTILITY INFORMATION ONLY.

**UTILITY PLAN
 (LOCATION 5)
 SCALE: 1"=5' U-1**

LAST REVISION | DATE PLOTTED => 24-APR-2010
 04-14-10 TIME PLOTTED => 01:05

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No.	SIGN CODE	SIGN MESSAGE	PANEL SIZE	No. OF POST AND SIZE	No. OF SIGNS
(A)	W20-1	ROAD WORK AHEAD	36" x 36"	1 - 4" x 6"	18
(B)	G20-2	END ROAD WORK	36" x 18"	1 - 4" x 4"	19

NOTE: SIGN LOCATIONS SHOWN ARE APPROXIMATE ONLY. EXACT LOCATIONS TO BE DETERMINED BY THE ENGINEER.

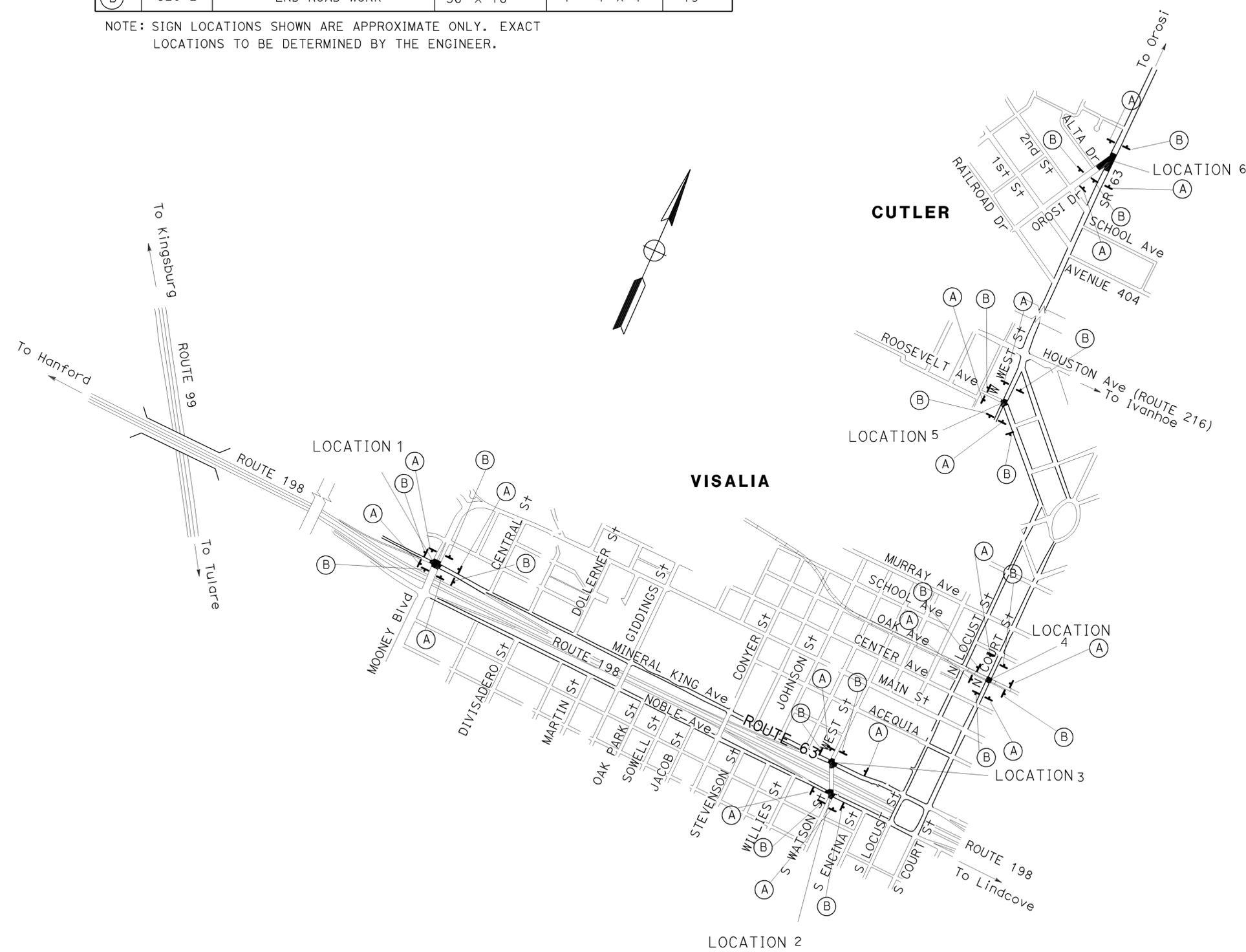
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Tul	63	R8.0/22.3	13	47

Hassan Cohe 04-15-10
REGISTERED CIVIL ENGINEER DATE

4-19-10
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.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: MOHAMMED OATAMI
 CALCULATED/DESIGNED BY: MOHAMMED OATAMI
 CHECKED BY: MOHAMMED OATAMI
 REVISIONS: KAMRUL KHAN, HASSAN TAHA
 REVISED BY: HASSAN TAHA
 DATE REVISED:



CONSTRUCTION AREA SIGNS

NO SCALE

CS-1

THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGN ONLY.

LAST REVISION | DATE PLOTTED => 24-APR-2010 | TIME PLOTTED => 04:02

ROADSIDE SIGN QUANTITIES

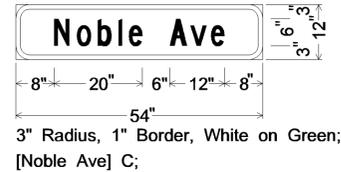
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Tul	63	R8.0/22.3	15	47

Hassan Cohe 04-15-10
 REGISTERED CIVIL ENGINEER DATE

4-19-10
 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.

SHEET No.	SIGN No.	SIGN CODE	SIGN MESSAGE	No. OF POST AND POST SIZE	PANEL SIZE	BACKGROUND		LEGEND		GRAFFITI FLOW		FURNISHED SINGLE SHEET ALUMINUM SIGN UNFRAMED		ROADSIDE SIGN (SSBM) *	RESET ROADSIDE SIGN	REMOVE ROADSIDE SIGN
						SHEETING COLOR	RETRO-REFLECTIVITY ASTM TYPE	SHEETING COLOR	RETRO-REFLECTIVITY ASTM TYPE	STANDARD	PREMIUM	0.063"	0.080"			
												SQFT	SQFT	EA	EA	EA
PD-1	①	R1-1 (LOCATION 2)														1
	②	R10(CA) (LOCATION 2)													1	
	③	R1-1 (LOCATION 2)														1
	④	R73-3(CA) (LOCATION 2)	LEFT TURN NO U TURN	ON MAST ARM	36"x36"	WHITE	III	BLACK		X		9.00		1		
	⑤	R3-1 (LOCATION 2)	NO RIGHT TURN	ON MAST ARM	36"x36"	WHITE	III	BLACK/RED		X		9.00			1	
	⑥	R73-4(CA) (LOCATION 2)	THRU/RIGHT NO U TURN	ON MAST ARM	36"x45"	WHITE	III	BLACK		X		11.25		1		
	⑦	R3-2 (LOCATION 2)	NO LEFT TURN	ON MAST ARM	36"x36"	WHITE	III	BLACK/RED		X		9.00			1	
	⑧	D3 (LOCATION 2)	NOBLE Ave	ON SIGNAL POLE	54"x12"	GREEN	III	WHITE	IV	X		9.00		2		
	⑨	D3 (LOCATION 2)	WATSON St	ON SIGNAL POLE	54"x12"	GREEN	III	WHITE	IV	X		4.50		1		
	⑩	R9-3B (LOCATION 2)	USE CROSSWALK	ON SIGNAL POLE	12"x18"	WHITE	III	BLACK		X		3.00		2		
	⑪	R9-3A (LOCATION 2)	No Pedestrian CROSSING	ON SIGNAL POLE	24"x24"	WHITE	III	BLACK/RED		X		8.00		2		
	⑫	R3-6 (LOCATION 2)	THRU/LEFT ARROW	ON MAST ARM	36"x30"	WHITE	III	BLACK		X		7.50		1		
	⑬	G50,G48 G28(63)CA,G281(98)(CA) (LOCATION 2)													1	
	⑭	R1-1 (LOCATION 4)													1	
	⑮	R11(CA) (LOCATION 4)													1	
	⑯	R14-1,S11(CA) (LOCATION 4)													1	
	⑰	R1-1 (LOCATION 5)													1	
TOTAL												56.25	13.50	8	2	



*ELECTRICAL ITEM, FOR INFORMATION ONLY. SEE ELECTRICAL PLANS FOR LOCATION AND INSTALLATION METHOD.

PAVEMENT DELINEATION QUANTITIES

SHEET No.	ROUTE	LOCATION	DETAIL No.	PAVEMENT MARKERS (RETROREFLECTIVE)		REMOVE PAVEMENT MARKER (N)	THERMOPLASTIC TRAFFIC STRIPE		REMOVE THERMOPLASTIC TRAFFIC STRIPE	THERMOPLASTIC PAVEMENT MARKING	SQFT	REMOVE THERMOPLASTIC PAVEMENT MARKING	SQFT
				TYPE G			4" SOLID	8" SOLID					
				EA	EA		LF	LF					
PD-1	WATSON St (LOCATION 2)	STA 3+90 TO STA 5+00	9			9			32	2-TYPE III (L) ARROW (LOCATION 2)	84		
		STA 3+63 TO STA 5+00	38	20				137			1-TYPE II (L) ARROW (LOCATION 2)		45
										2-LIMIT LINE(24')(LOCATION 2)	24	24	
										4" WHITE STRIPE(LOCATION 2)	19		
	NOBLE St (LOCATION 2)	STA 120+06 TO STA 120+72	27B				66			3- CROSSWALK (LOCATION 2)(360') (LOCATION 2)	360	360	
										3- CROSSWALK (LOCATION 3)(350') (LOCATION 3)	350	350	
TOTAL					20	9	66	137	32		837	779	

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

PAVEMENT DELINEATION AND SIGN QUANTITIES PDQ-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Tul	63	R8.0/22.3	16	19

Gurjot S. Gill 4-19-10
 REGISTERED CIVIL ENGINEER DATE
 4-19-10
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 GURJOT GILL
 No. 71647
 Exp. 12-31-11
 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.

ROADWAY QUANTITIES

SHEET No.	LOCATION No.	MINOR Conc (Misc CONSTRUCTION)					REPLACE AC SURFACING	PLACE HMA DIKE (TYPE E)	STRUCTURAL SECTION				ROADWAY EXCAVATION					REMOVE CHAIN LINK FENCE	CHAIN LINK FENCE TYPE (CL-6)	8' CHAIN LINK GATE		
		CURB RAMP/RETAINING CURB	CURB (A2-6)	SIDEWALK	DRIVEWAY	Conc SLAB BENCH			HMA	AB (CL 2)	AS (CL 2)	TACK COAT (N)	REMOVE AC PAVEMENT	REMOVE CONCRETE								
														CY	CY	CY	CY				CY	CY
C-1	1-SOUTHWEST CORNER	0.7	0.9	0.6																		
C-1	1-SOUTHEAST CORNER	0.8	1.2	0.6									0.6			1.2	0.8					
C-2	2-SOUTHWEST CORNER	0.7	2.1	2.8												2.1						
C-2	2-SOUTHEAST CORNER	0.8	1.2													1.2						
C-2	2-NORTHEAST CORNER	1.8	1.8													1.8	1.8					
C-3	2-NORTHWEST CORNER	0.8	3.9	2.4				37.2	64.5	40.5	35.5	0.1	195.8			3.9	2.4			43.7	50.7	2
C-4	3-SOUTHWEST CORNER	0.6	0.9													0.9	1.2			3.7		
C-4	3-SOUTHEAST CORNER	1.1	2.8	4.2												2.5	2.2					
C-5	3-NORTHEAST CORNER	1.2	2.3													2.3						
C-6	4-NORTHWEST CORNER	0.9	1.6	0.1												1.6	0.1					
C-6	4-NORTHEAST CORNER	2.1	4.4	2.5	1.7								1.5			4.4	3.3	2.5				
C-6	4-SOUTHWEST CORNER	0.8	1.3													1.3	0.8					
C-6	4-SOUTHEAST CORNER	4.9	2.6										3.2			2.6	4.9					
C-7	5-NORTHEAST CORNER	2.0	1.5													1.5						
C-7	5-NORTHWEST CORNER	1.0	2.0													2.0	1.0					
C-7	5-SOUTHWEST CORNER	1.8	1.7										2.1			1.7						
C-7	5-SOUTHEAST CORNER	1.6	2.0			0.3										2.0	1.0			0.4		
C-8	5-SOUTHWEST CORNER	2.2	2.0													2.0	2.2					
SUB TOTAL		25.8	36.2	13.2	1.7	0.3	11.1	37.2	64.5	40.5	35.5	0.1	206.1	11.0	35.9	20.0	2.5	0.4	47.4	50.7	2	
TOTAL		77.2					11.1	37.2	64.5	40.5	35.5	0.1	275.9					47.4	50.7	2		

DRAINAGE QUANTITIES

PLAN SHEET No.	DRAINAGE SYSTEM No. 	DRAINAGE UNIT 	DRAINAGE INLET (N)			REMOVE INLET	DESCRIPTION	LOCATION No.
			MINOR CONCRETE (MINOR STRUCTURE)	HEIGHT OF INLET "H"	Misc IRON AND STEEL			
			CY	LF	LB			
C-6	1	a	1.47	5'	239	1	DI TYPE G3 W/ TYPE 24-12X GRATE	4-NORTHEAST CORNER
C-6		b	1.47	5'	239	1	DI TYPE G3 W/ TYPE 24-12X GRATE	4-SOUTHEAST CORNER
C-7	2	a	1.47	5'	239	1	DI TYPE G3 W/ TYPE 24-12X GRATE	5-SOUTHWEST CORNER
C-7		b	1.47	5'	239	1	DI TYPE G3 W/ TYPE 24-12X GRATE	5-SOUTHEAST CORNER
C-8	3	a	1.47	5'	239	1	DI TYPE G3 W/ TYPE 24-12X GRATE	6-SOUTHWEST CORNER
TOTAL			7.35		1195	5		

Temp DRAINAGE INLET PROTECTION

SHEET No.	LOCATION/DESCRIPTION	EACH
C-2	NOBLE Ave AND S WATSON St	1
C-6	N COURT St AND OAK Ave	4
C-7	W WEST St (SR-63) AND ROOSEVELT Ave	3
C-8	W WEST St (SR-63) AND OROSI Dr	1
TOTAL		9

SUMMARY OF QUANTITIES

Q-1

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Tul	63	R8.0/22.3	17	47

4-10-10
 REGISTERED ELECTRICAL ENGINEER DATE
 4-19-10
 PLANS APPROVAL DATE

DANIEL THAH VO
 No. 17408
 Exp. 9/30/10
 ELECTRICAL

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.

NOTES: (FOR SHEET E-2)

- 1 120/240 V, 1Ø, 3-WIRE, TYPE III-CF SERVICE EQUIPMENT ENCLOSURE WITH THE FOLLOWING CIRCUIT BREAKERS:
CTID No. 06460630009710T

AMPERES	VOLTS	POLES	NAME PLATE	METER	PHOTOELECTRIC CONTROL TYPE
100	240	2	MAIN BREAKER	YES	—
60	120	1	SIGNAL	YES	—
60	120	1	SPARE	YES	—
20	120	1	SPARE	YES	—
—	—	6	SPACE	—	—

CTID No. 06460630009710L

AMPERES	VOLTS	POLES	NAME PLATE	METER	PHOTOELECTRIC CONTROL TYPE
100	240	2	MAIN BREAKER	YES	—
30	240	2	LIGHTING	YES	IV
30	240	2	HIGHWAY LIGHTING	YES	V
15	120	1	LIGHTING CONTROLS	YES	—
40	240	2	SPARE	YES	—
—	—	6	SPACE	—	—

- 2 STATE-FURNISHED MODEL 2070 CONTROLLER ASSEMBLY AND BATTERY BACKUP SYSTEM.
- 3 240 FEET TO LIMIT LINE.
- 4 185 FEET TO LIMIT LINE.
- 5 254 FEET TO LIMIT LINE.
- 6 TO EXISTING HIGHWAY LIGHTING AT PM 9.64.
- 7 INSTALL APPROXIMATELY 850 FEET OF SIC FROM THE CONTROLLER CABINET ON THE SOUTHWEST CORNER OF ROUTE 63 AND WATSON ST TO THE CONTROLLER CABINET ON THE SOUTHWEST CORNER OF ROUTE 63 AND LOCUST ST.
- 8 INSTALL APPROXIMATELY 500 FEET OF SIC FROM THE CONTROLLER CABINET ON THE SOUTHWEST CORNER OF ROUTE 63 AND WATSON ST TO THE CONTROLLER CABINET ON THE NORTHWEST CORNER OF MINERAL KING Ave AND WEST ST.
- 9 PIPE TENON ON SMA FOR FUTURE VEHICLE SIGNAL HEADS.
- 10 SEE SHEET E-5 FOR VIVDS DETAIL.
- 11 INSTALL APPROXIMATELY 500 FEET OF FO CABLE FROM THE CONTROLLER CABINET ON THE SOUTHWEST CORNER OF ROUTE 63 AND WATSON ST TO THE PULL BOX ADJACENT TO THE CONTROLLER CABINET ON THE NORTHWEST CORNER OF MINERAL KING Ave AND WEST ST.
12. ALL PULL BOXES SHALL BE No. 5 WITH EXTENSION UNLESS OTHERWISE NOTED.

ABBREVIATIONS:
 SCE = SOUTHERN CALIFORNIA EDISON
 CTID = CALTRANS IDENTIFICATION
 VIVDS = VIDEO IMAGE VEHICLE DETECTION SYSTEM

CONDUIT AND CONDUCTOR SCHEDULE

CONDUCTOR DESIGNATION			CONDUIT RUN NUMBER AND SIZE																		
CABLE TYPE	POLE	PHASE	1	2	3	4	5	6	7	8	9	10									
			2-4"	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"								
VEH-PED 12CSC	(A)	2,2P	4	1	1																
	(B)		4	1	1	1															
	(C)	4,4P	1	1	1	1															
	(D)	8,8P	1	1	1	1	1														
	(E)		8	1	1	1	1	1	1												
	(F)	2,2P	8	1														1	1	1	1
	(G)	7,8,8P	2	1														1	1	1	1
	(H)	4,7,4P	2	1																1	1
PPB 3CSC		TOTAL	6	3	3	2	2	1	1	0	0	0	1	1	2	3	3				
AWG		CIRCUIT																			
#8		LIGHTING				2	2	2	2	2	2										
#6		SIGNAL	2														2	2			
#8		HIGHWAY LIGHTING				2	2	2	2	2	2										
		SIC	2	1	1	1											1	1	1		
		FO*	1	1	1	1															
		VIVDS HARNESS	1																	1	
DLC		PHASE																			
		Ø2	4																		
		Ø2 ADV	1																		
		Ø4	1	1	1	1	1														
		Ø4 ADV	1	1	1	1															
		Ø8	1																1	1	
	Ø8 ADV	1																	1	1	
		TOTAL	9	2	2	2	0	0	0	0	0	0	0	0	2	2					

* TERMINATE FO CABLE IN CABINET FOR FUTURE USE.

POLE AND EQUIPMENT SCHEDULE

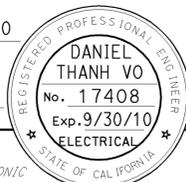
No.	STANDARD			VEH SIG MTG		PED SIG MTG	PPB		LED LUM (W)	SPECIAL REQUIREMENTS
	TYPE	SMA	LMA	MAST ARM	POLE		Ø	ARROW		
(A)	1-A				TV-1-T	SP-1-T	4	→		
(B)	15TS		15'				4	←	165	INSTALL R9-3A AND R9-3B SIGNS ON LIGHTING POLE. REFER TO SIGN PLANS FOR DETAILS.
(C)	1-A				TV-1-T	SP-1-T				
(D)	17-3-100	20'	15'	MAS	SV-1-T	SP-1-T			165	INSTALL D3, R9-3A, AND R9-3B SIGNS ON SIGNAL POLE. INSTALL R73-4 (CA) AND R3-2 SIGN ON SMA. REFER TO SIGN PLANS FOR DETAILS.
(E)	PPB POST						8	→		
(F)	61-5-100	60'	15'	MAS MAS	SV-1-T	SP-1-T	8	←	165	F=20', F'=12', INSTALL D3 SIGN ON SIGNAL POLE. INSTALL R3-6 (CA) SIGN ON SMA. REFER TO SIGN PLANS FOR DETAILS.
(G)	1-A				TV-2-T	SP-1-T	2	→		
(H)	19-4-100	30'	15'	MAS MAS	SV-1-T	SP-1-T	2	←	165	F=15', INSTALL D3 SIGN ON SIGNAL POLE. INSTALL R73-3 (CA) AND R3-1 SIGNS ON SMA. REFER TO SIGN PLANS FOR DETAILS.

MODIFY SIGNAL AND LIGHTING
 NO SCALE
E-1

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 ELECTRICAL DESIGN
 KARIM ABDOLLAHIAN
 DANIEL VO
 ALI BAKHOUD

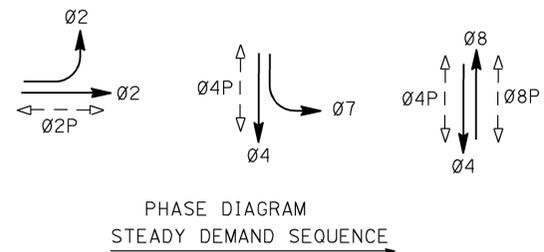
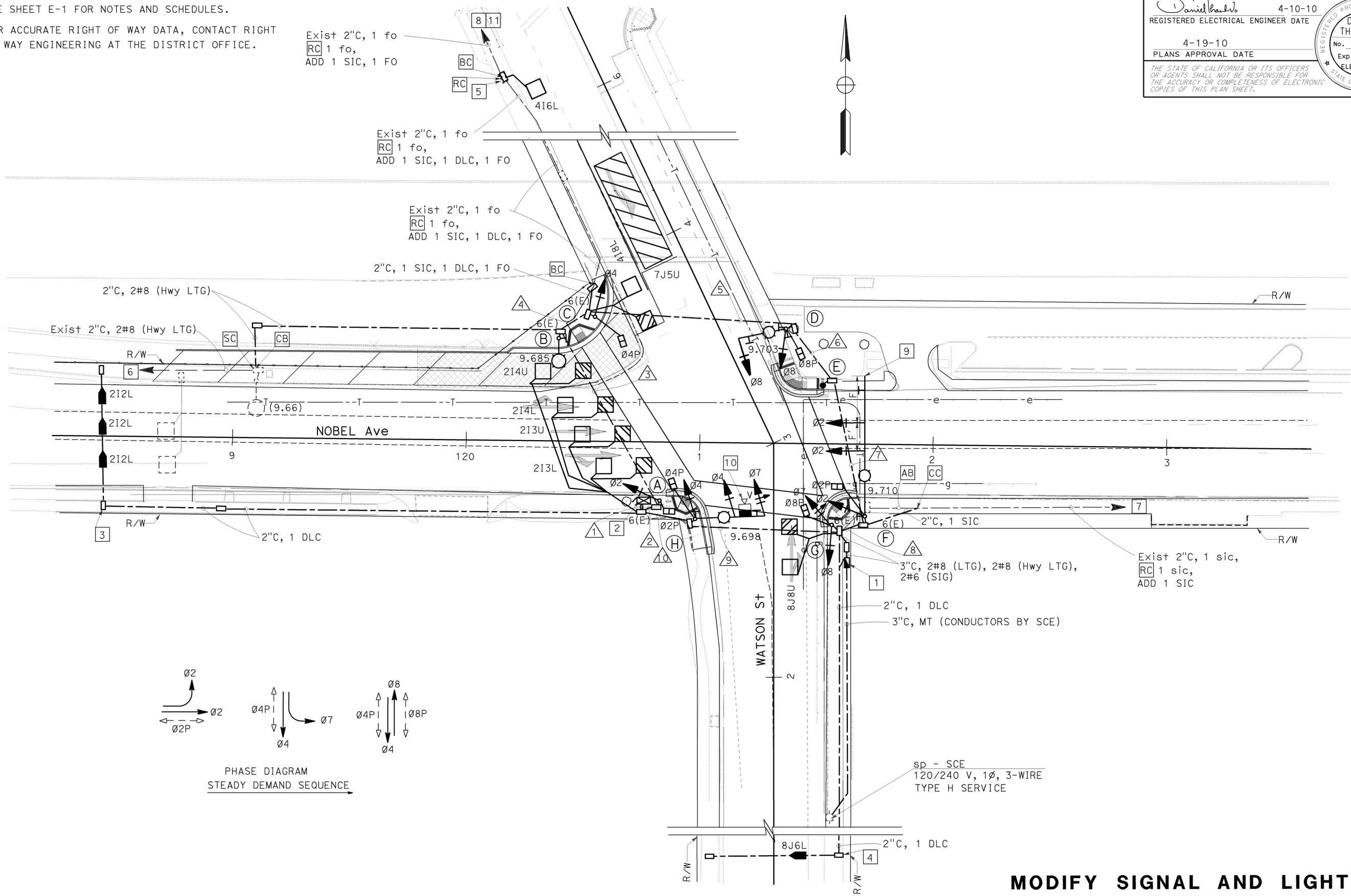
LAST REVISION | DATE PLOTTED => 24-APR-2010
 04-23-10 TIME PLOTTED => 01:05

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Tul	63	R8.0/22.3	18	47
			4-10-10		
REGISTERED ELECTRICAL ENGINEER DATE			4-19-10	PLANS APPROVAL DATE	
<small>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.</small>					

NOTES:

- SEE SHEET E-1 FOR NOTES AND SCHEDULES.
- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

REVISOR: KARIM ABDOLLAHIAN
 CHECKED BY: DANIEL VO
 CALCULATED/DESIGNED BY: ALI BAKHOUD
 FUNCTIONAL SUPERVISOR: ALI BAKHOUD
 DEPARTMENT OF TRANSPORTATION - ELECTRICAL DESIGN



MODIFY SIGNAL AND LIGHTING

SCALE: 1"=20' **E-2**

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Tul	63	R8.0/22.3	19	47

<i>Daniel Vo</i>	4-10-10
REGISTERED ELECTRICAL ENGINEER DATE	
4-19-10	
PLANS APPROVAL DATE	

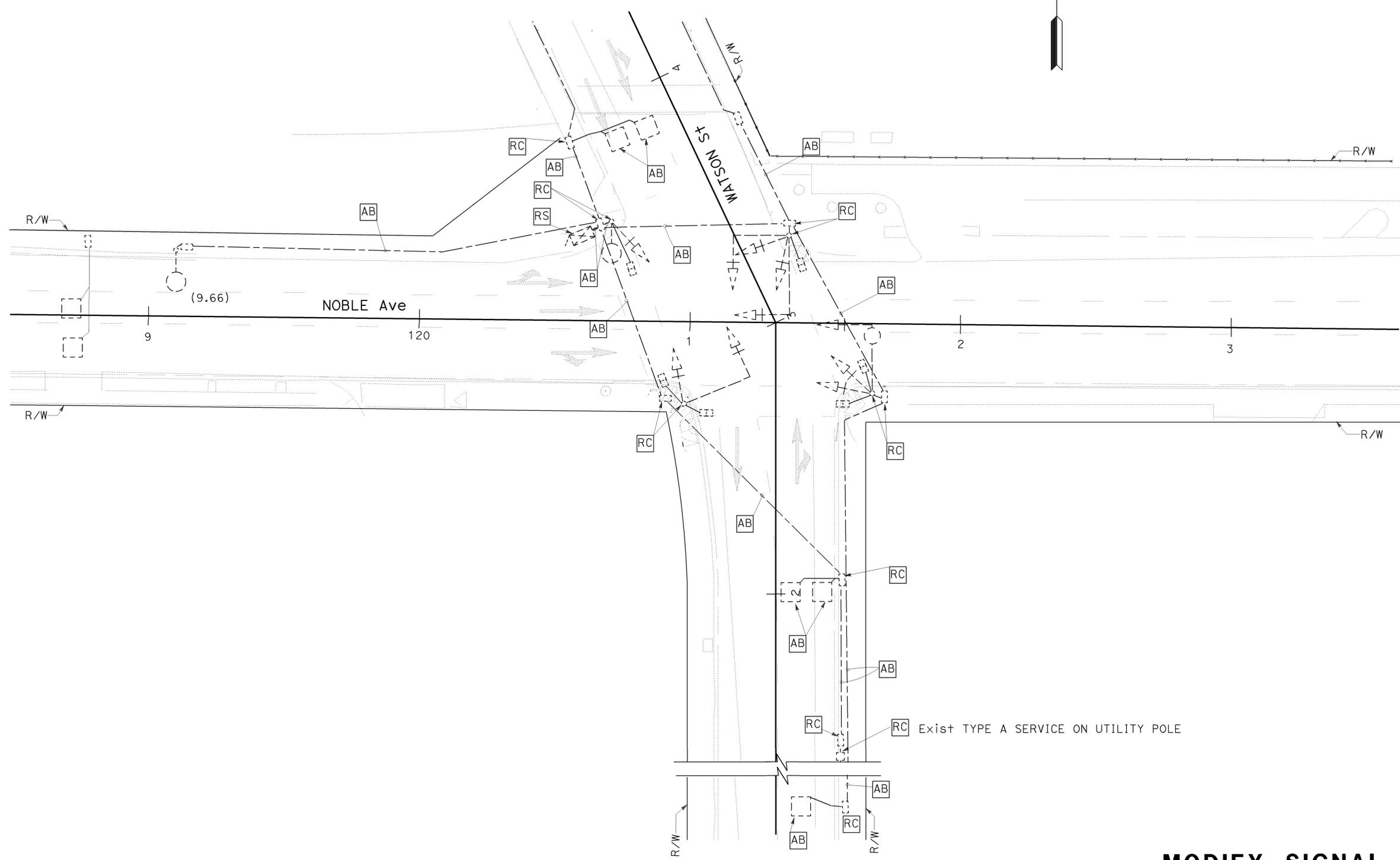


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NOTES: (FOR THIS SHEET ONLY)

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

REVISOR	DATE	REVISION
KARIM ABDOLLAHIAN		
DANIEL VO		
ALI BAKHOUD		



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans ELECTRICAL DESIGN

MODIFY SIGNAL AND LIGHTING
E-3

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

SCALE: 1"=20'

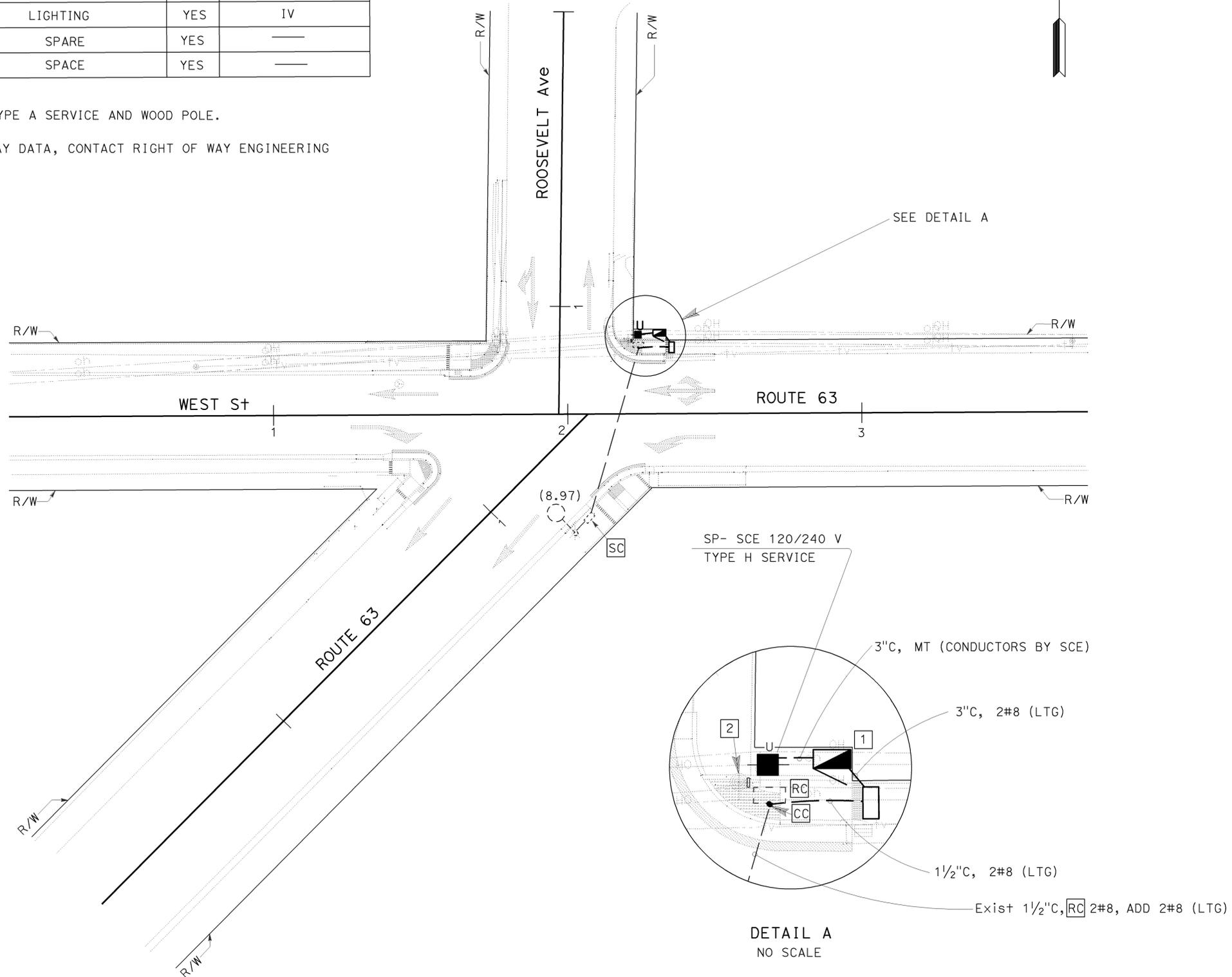
NOTES: (FOR THIS SHEET ONLY)

1 120/240 V, 1 ϕ , 3 WIRE, TYPE III-AF SERVICE EQUIPMENT ENCLOSURE WITH THE FOLLOWING CIRCUIT BREAKERS:

CTID No. 06460630009951L

AMPERES	VOLTS	POLES	NAME PLATE	METER	PHOTOELECTRIC CONTROL TYPE
100	240	2	MAIN BREAKER	YES	—
30	240	2	LIGHTING	YES	IV
30	240	2	SPARE	YES	—
—	—	6	SPACE	YES	—

2 RC EXISTING 120/240 V, TYPE A SERVICE AND WOOD POLE.
 3. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Electrans ELECTRICAL DESIGN
 FUNCTIONAL SUPERVISOR: ALI BAKHDOUD
 CALCULATED/DESIGNED BY: CHECKED BY:
 KARIM ABDOLLAHIAN DANIEL VO
 REVISED BY: DATE REVISED:

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

RELATIVE BORDER SCALE IS IN INCHES



USERNAME => s115755
 DGN FILE => 60g950ua004.dgn

CU 06391

EA 069501

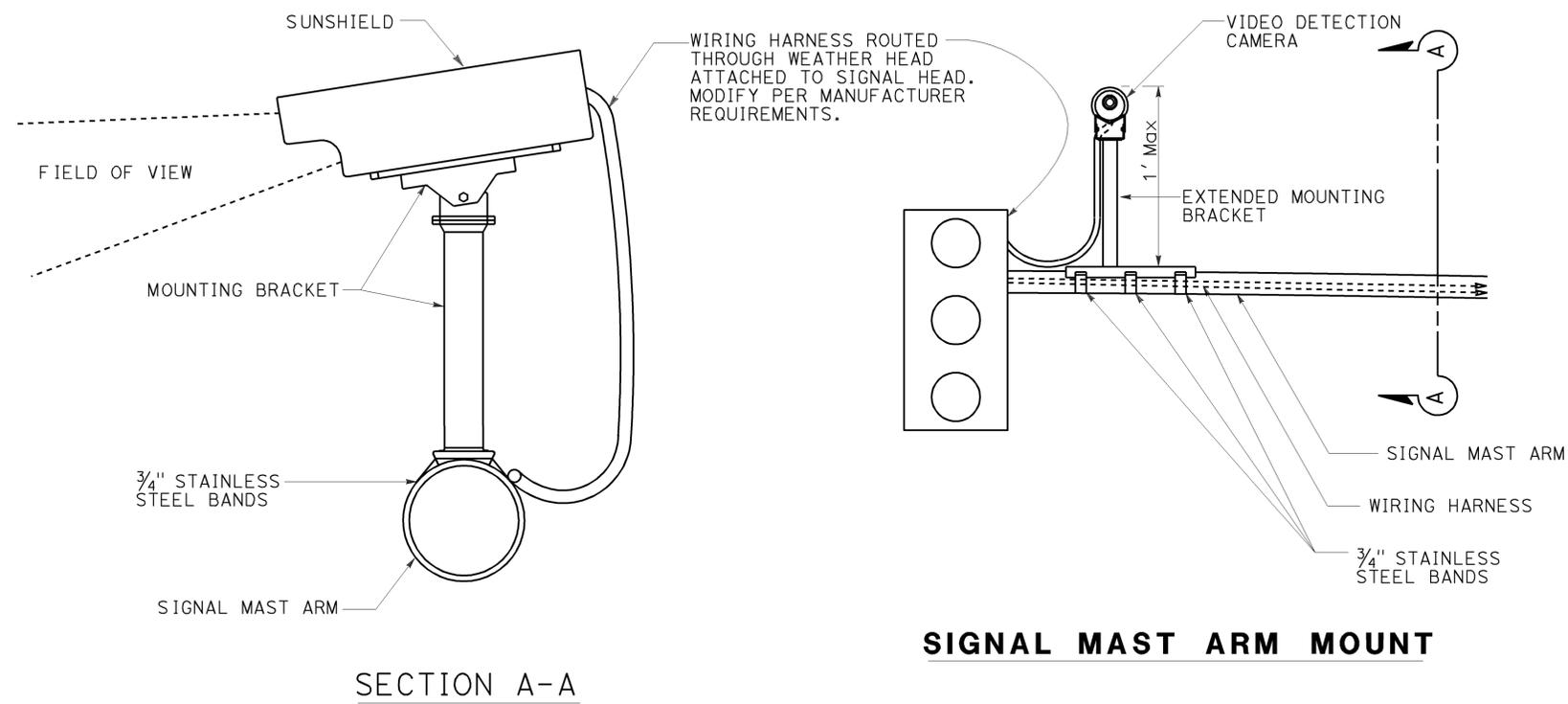
MODIFY LIGHTING
E-4

SCALE: 1"=20'

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Tul	63	R8.0/22.3	21	47
<i>Daniel Bakhdo</i> REGISTERED ELECTRICAL ENGINEER DATE 4-10-10			REGISTERED PROFESSIONAL ENGINEER DANIEL THANH VO No. 17408 Exp. 9/30/10 ELECTRICAL		
PLANS APPROVAL DATE 4-19-10			<small>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.</small>		

NOTES:

1. EXACT MOUNTING LOCATION OF VIDEO DETECTION CAMERA AND BRACKET SHALL BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
2. CABLES SHALL HAVE DRIP LOOPS AT ENTRANCE INTO SIGNAL POLE.
3. CABLES SHALL NOT BE TWISTED BETWEEN VIDEO DETECTION CAMERA AND CONTROLLER CABINET.



SECTION A-A

SIGNAL MAST ARM MOUNT

**VIDEO DETECTION CAMERA MOUNTING DETAILS
DETAIL A**

MODIFY SIGNAL AND LIGHTING

NO SCALE

E-5

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.



USERNAME => s115755
DGN FILE => 60g950ua005.dgn

CU 06391

EA 069501

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	63	R8.0/22.3	22	47

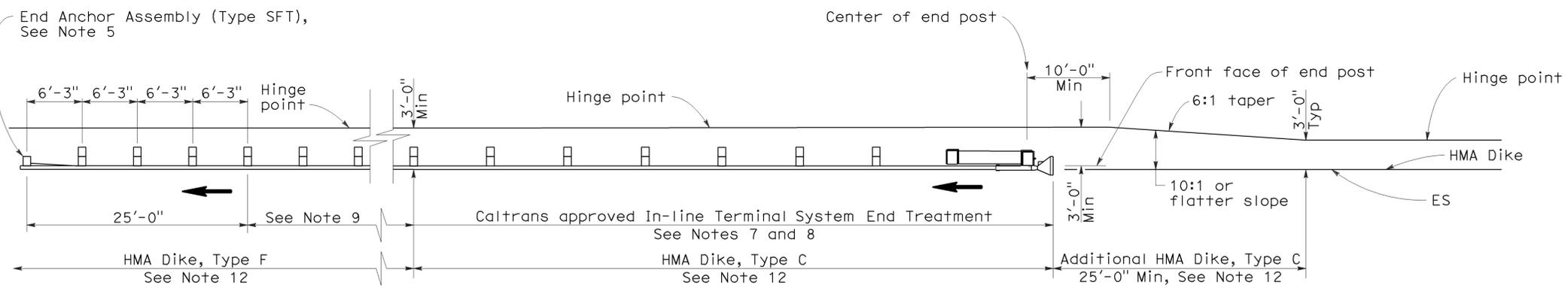
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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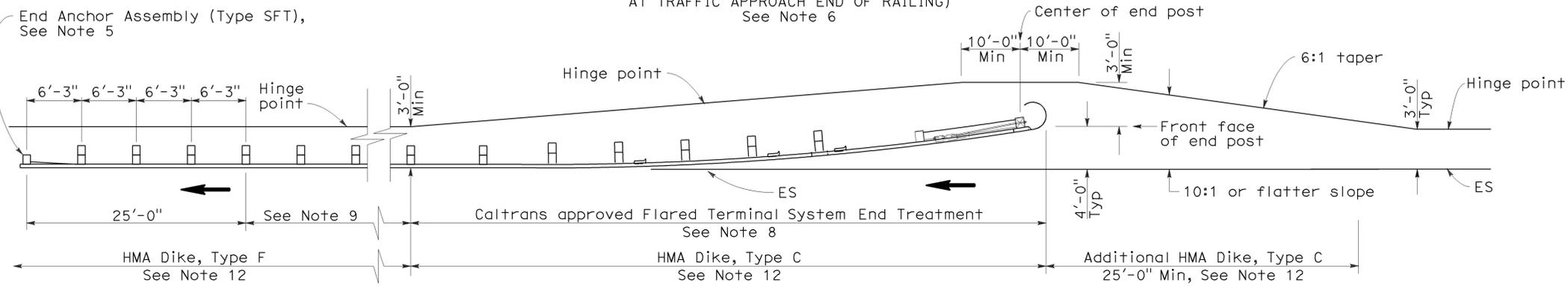
To accompany plans dated 4-19-10

2006 REVISED STANDARD PLAN RSP A77E1



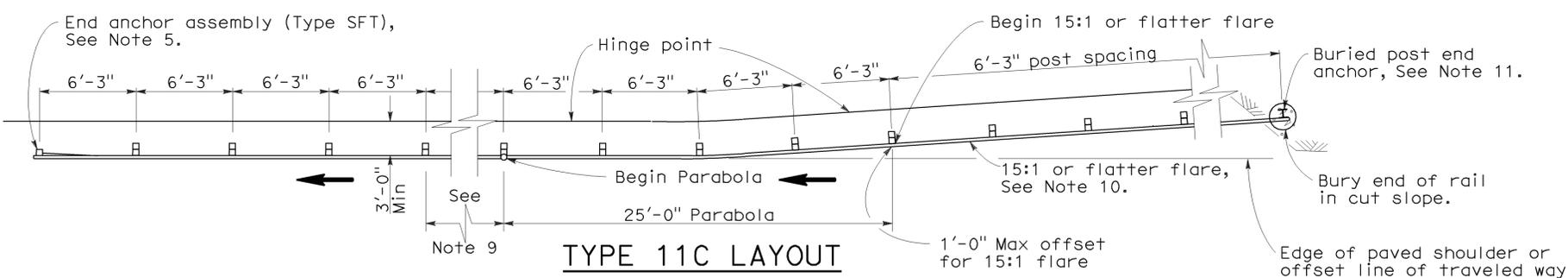
TYPE 11A LAYOUT

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



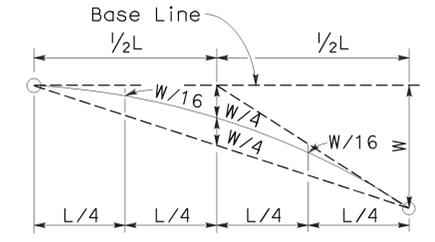
TYPE 11B LAYOUT

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

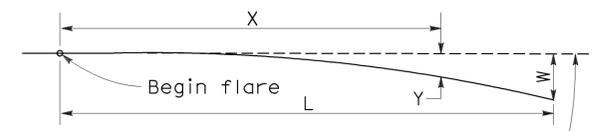


TYPE 11C LAYOUT

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



TYPICAL PARABOLIC LAYOUT

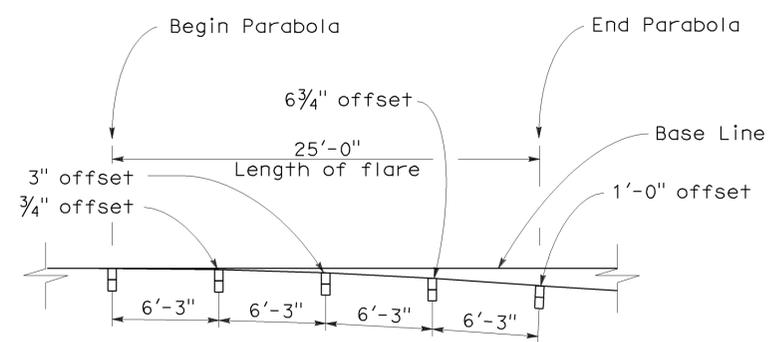


Base Line (Edge of paved shoulder or offset line of edge of traveled way)

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

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

PARABOLIC FLARE OFFSETS



TYPICAL FLARE OFFSETS FOR 1 FOOT MAX END OFFSET

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING
TYPICAL LAYOUTS FOR
EMBANKMENTS**

NO SCALE

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

REVISED STANDARD PLAN RSP A77E1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	63	R8.0/22.3	23	47

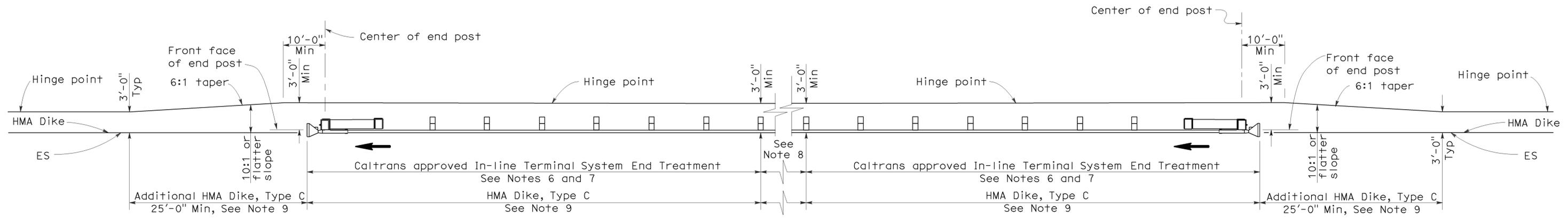
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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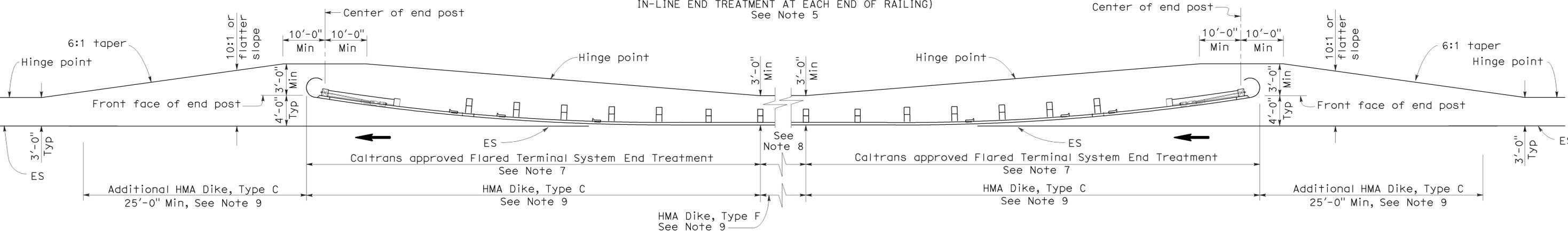
REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

To accompany plans dated 4-19-10



TYPE 11D LAYOUT

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



TYPE 11E LAYOUT

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

NOTES:

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

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

NO SCALE

RSP A77E2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77E2
DATED MAY 1, 2006 - PAGE 49 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77E2

2006 REVISED STANDARD PLAN RSP A77E2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	63	R8.0/22.3	24	47

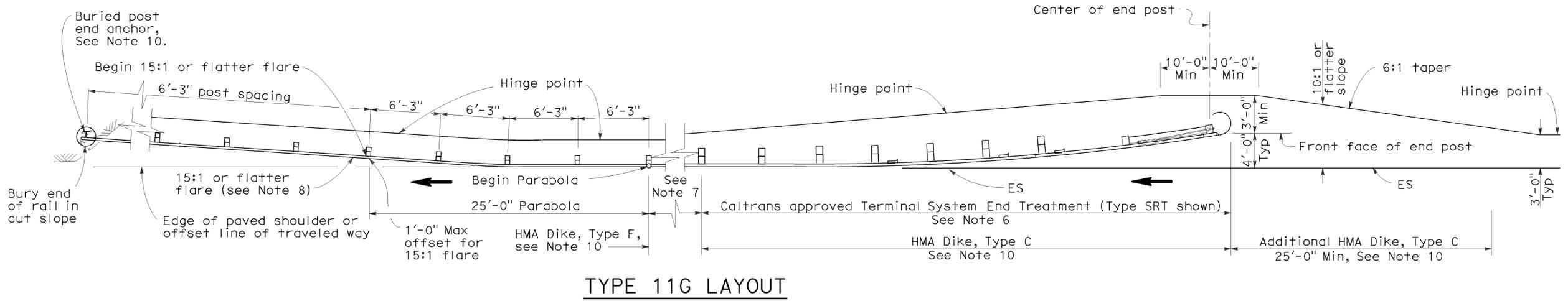
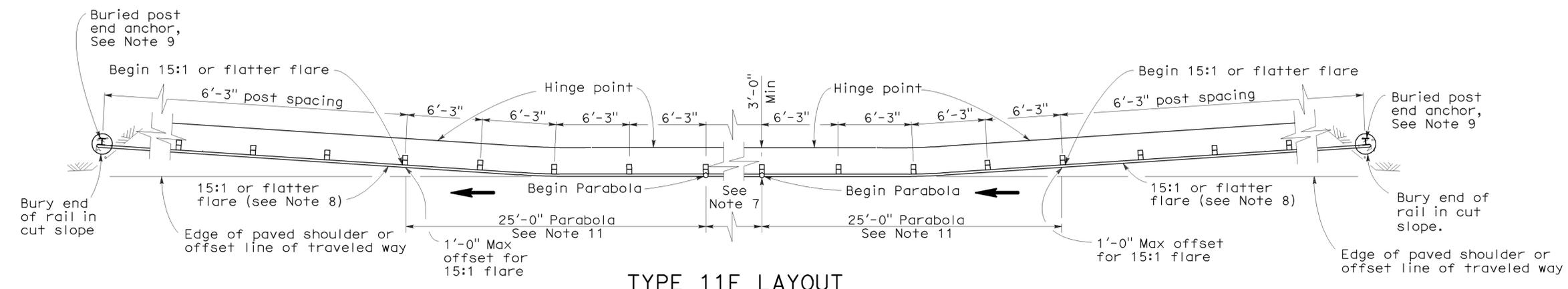
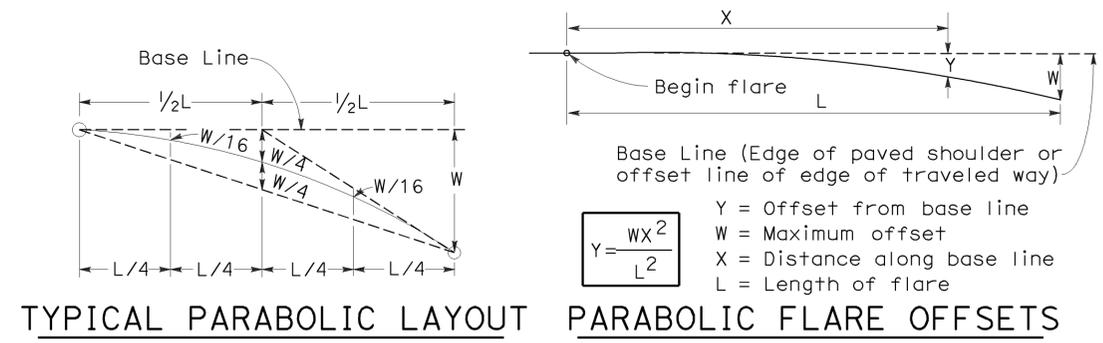
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

To accompany plans dated 4-19-10



NOTES:

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard rail post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or plastic blocks may be used for 6" x 8" x 6'-0" wood post with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- Direction of adjacent traffic indicated by \rightarrow .
- Layout Types 11D through 11L, shown on the A77E Series of Revised Standard Plans, are typically used where guard railing is recommended to shield embankment slopes and a crashworthy end treatment is required for both directions of traffic.
- The type of terminal system end treatment to be used will be shown on the Project Plans.
- Dependent on site conditions (embankment height and side slope), construction of additional guard railing (length equal to multiples of 12'-6" with 6'-3" post spacing) may be advisable.
- The 15:1 or flatter flare used with buried end anchors is based on the edge of the paved shoulder or offset line of edge of the traveled way. The length of guard railing within the 15:1 or flatter flare is based on site conditions and should be a length equal to multiples of 12'-6".
- For details of the buried post end anchor used with Type 11F and 11G Layouts, see Standard Plan A77I2.
- Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77C4 for dike positioning details.
- For typical flare offsets for 25'-0" length parabola with maximum offset of 1'-0", see Revised Standard Plan RSP A77E1.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING
TYPICAL LAYOUTS FOR
EMBANKMENTS**

NO SCALE

RSP A77E3 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77E3
DATED MAY 1, 2006 - PAGE 50 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77E3

2006 REVISED STANDARD PLAN RSP A77E3

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	63	R8.0/22.3	25	47

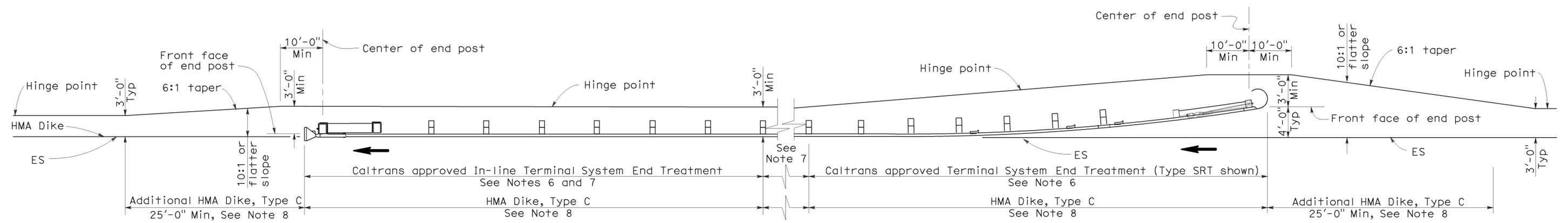
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

To accompany plans dated 4-19-10



TYPE 11H LAYOUT

(EMBANKMENT GUARD RAILING INSTALLATION WITH FLARED END TREATMENT AND AN IN-LINE TREATMENT AT THE ENDS OF RAILING)
See Notes 5 and 8

NOTES:

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard rail post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or plastic blocks may be used for 6" x 8" x 6'-0" wood post with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- Direction of adjacent traffic indicated by →.
- Layout Types 11D through 11L, shown on the A77E Series of Revised Standard Plans, are typically used where guard railing is recommended to shield embankment slopes and a crashworthy end treatment is required for both directions of traffic.
- The type of terminal system end treatment to be used will be shown on the Project Plans.
- Dependent on site conditions (embankment height and side slope), construction of additional guard railing (length equal to multiples of 12'-6" with 6'-3" post spacing) may be advisable.
- Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77C4 for dike positioning details.

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

RSP A77E4 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77E4
DATED MAY 1, 2006 - PAGE 51 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77E4

2006 REVISED STANDARD PLAN RSP A77E4

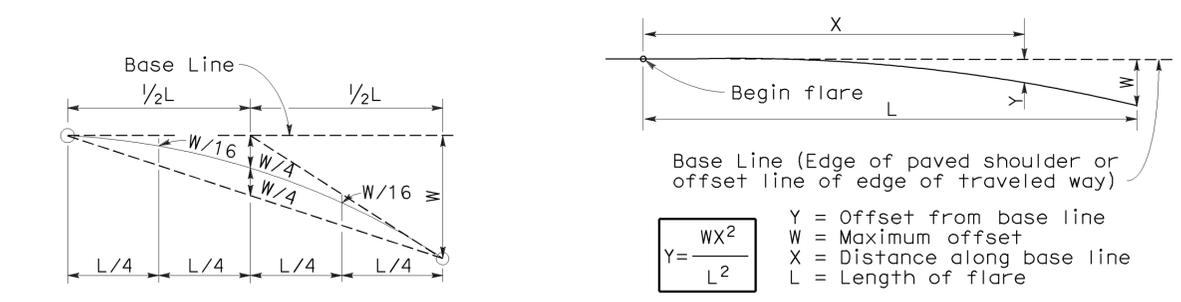
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	63	R8.0/22.3	26	47

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

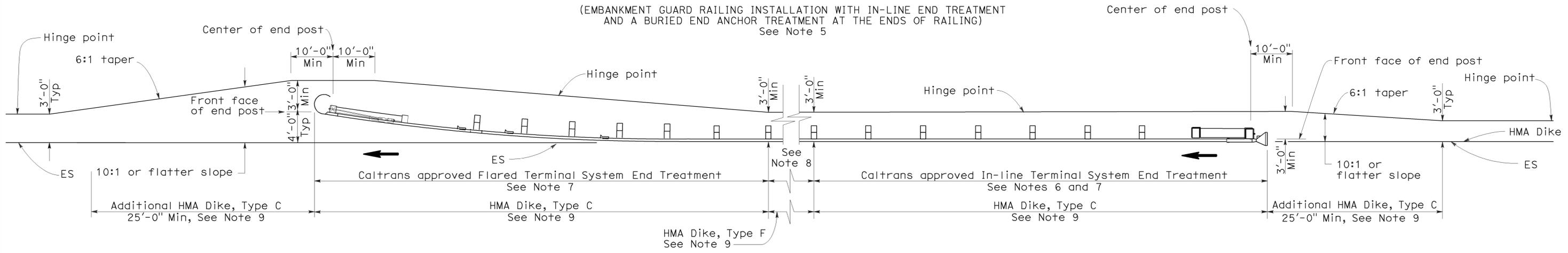
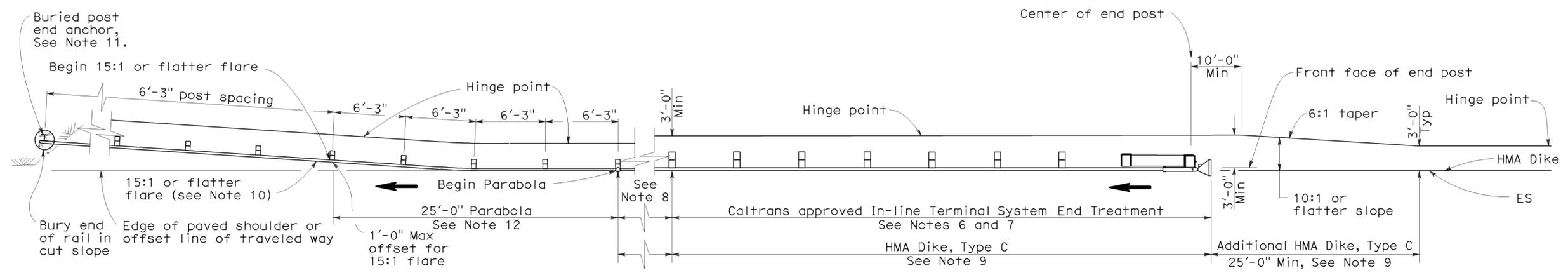
June 6, 2008
PLANS APPROVAL DATE

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



To accompany plans dated 4-19-10



NOTES:

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard rail post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or plastic blocks may be used for 6" x 8" x 6'-0" wood post with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- Direction of adjacent traffic indicated by \rightarrow .
- Layout Types 11D through 11L, shown on the A77E Series of Revised Standard Plans, are typically used where guard railing is recommended to shield embankment slopes and a crashworthy end treatment is required for both directions of traffic.
- In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
- The type of terminal system end treatment to be used will be shown on the Project Plans.
- Dependent on site conditions (embankment height and side slope), construction of additional guard railing (length equal to multiples of 12'-6" with 6'-3" post spacing) may be advisable.
- Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77C4 for dike positioning details.
- The 15:1 or flatter flare used with buried end anchors is based on the edge of the paved shoulder or offset line of edge of the traveled way. The length of guard railing within the 15:1 or flatter flare is based on site conditions and should be a length equal to multiples of 12'-6".
- For details of the buried post end anchor used with Type 11I Layout, see Standard Plan A77I2.
- For typical flare offsets for 25'-0" length parabola with maximum offset of 1'-0", see Revised Standard Plan RSP A77E1.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING
TYPICAL LAYOUTS FOR
EMBANKMENTS**

NO SCALE

RSP A77E5 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77E5
DATED MAY 1, 2006 - PAGE 52 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP A77E5

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	63	R8.0/22.3	27	47

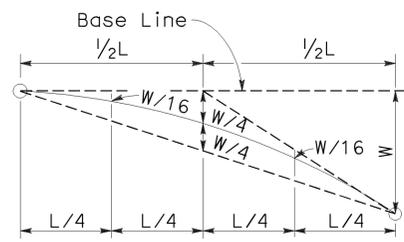
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

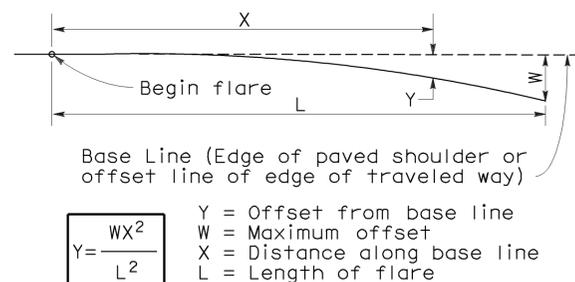
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REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

To accompany plans dated 4-19-10



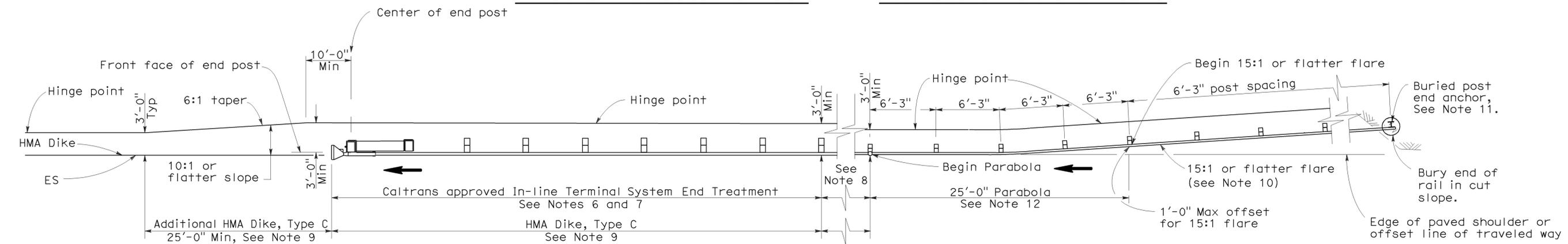
TYPICAL PARABOLIC LAYOUT



PARABOLIC FLARE OFFSETS

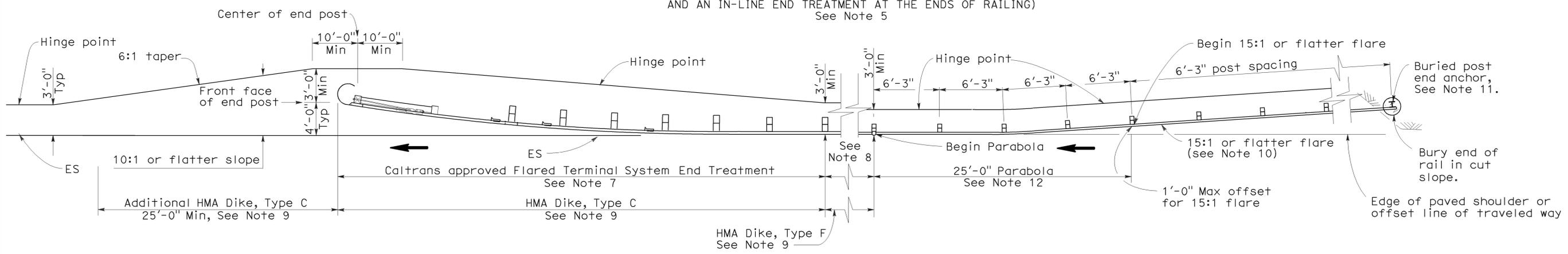
$$Y = \frac{WX^2}{L^2}$$

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



TYPE 11K LAYOUT

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



TYPE 11L LAYOUT

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

NOTES:

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
- Guard rail post spacing to be 6'-3" center to center, except as otherwise noted.
- Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or plastic blocks may be used for 6" x 8" x 6'-0" wood post with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- Direction of adjacent traffic indicated by →.
- Layout Types 11D through 11L, shown on the A77E Series of Revised Standard Plans, are typically used where guard railing is recommended to shield embankment slopes and a crashworthy end treatment is required for both directions of traffic.
- In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
- The type of terminal system end treatment to be used will be shown on the Project Plans.
- Dependent on site conditions (embankment height and side slope), construction of additional guard railing (length equal to multiples of 12'-6" with 6'-3" post spacing) may be advisable.
- Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77C4 for dike positioning details.
- The 15:1 or flatter flare used with buried end anchors is based on the edge of the paved shoulder or offset line of edge of the traveled way. The length of guard railing within the 15:1 or flatter flare is based on site conditions and should be a length equal to multiples of 12'-6".
- For details of the buried post end anchor used with Type 11K and 11L Layouts, see Standard Plan A77I2.
- For typical flare offsets for 25'-0" length parabola with maximum offset of 1'-0", see Revised Standard Plan RSP A77E1.

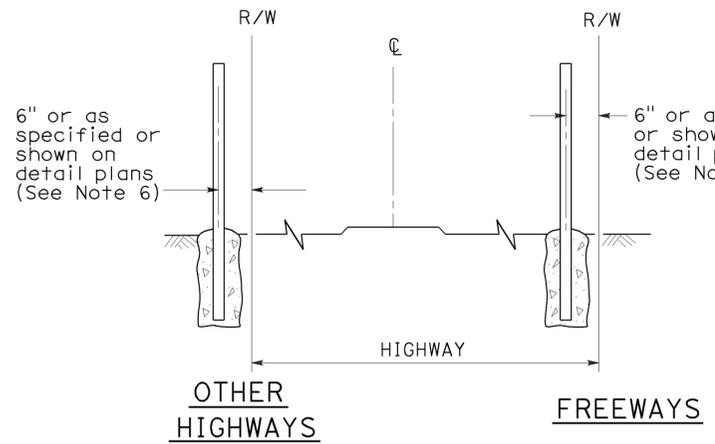
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**METAL BEAM GUARD RAILING
TYPICAL LAYOUTS FOR
EMBANKMENTS**

NO SCALE

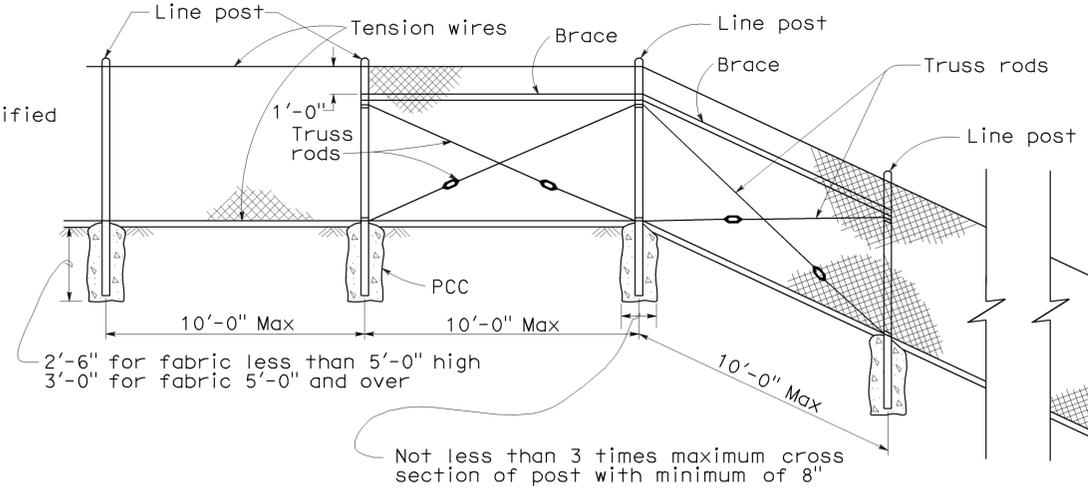
RSP A77E6 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77E6
DATED MAY 1, 2006 - PAGE 53 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77E6

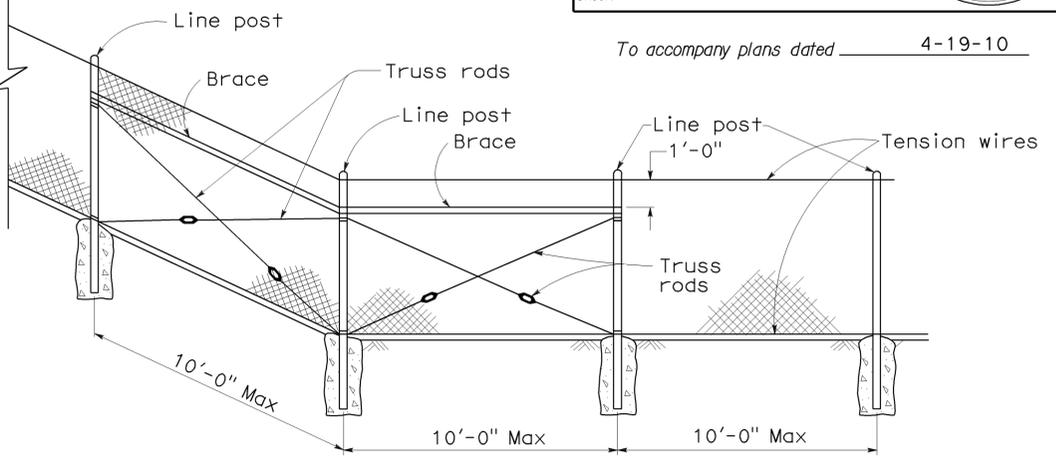
2006 REVISED STANDARD PLAN RSP A77E6



FENCE LOCATION

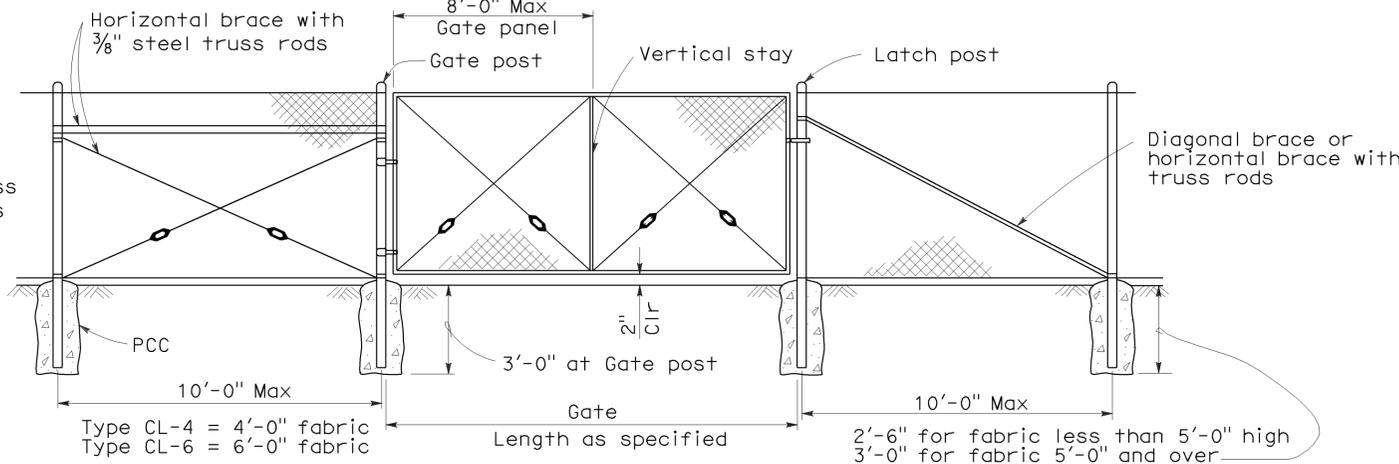
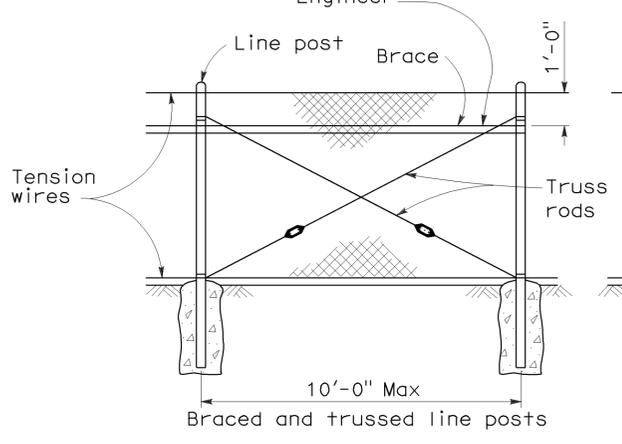


CHAIN LINK FENCE ON SHARP BREAK IN GRADE



To accompany plans dated 4-19-10

Brace to be removed after all other fence construction is completed unless otherwise directed by the Engineer



CHAIN LINK GATE INSTALLATION

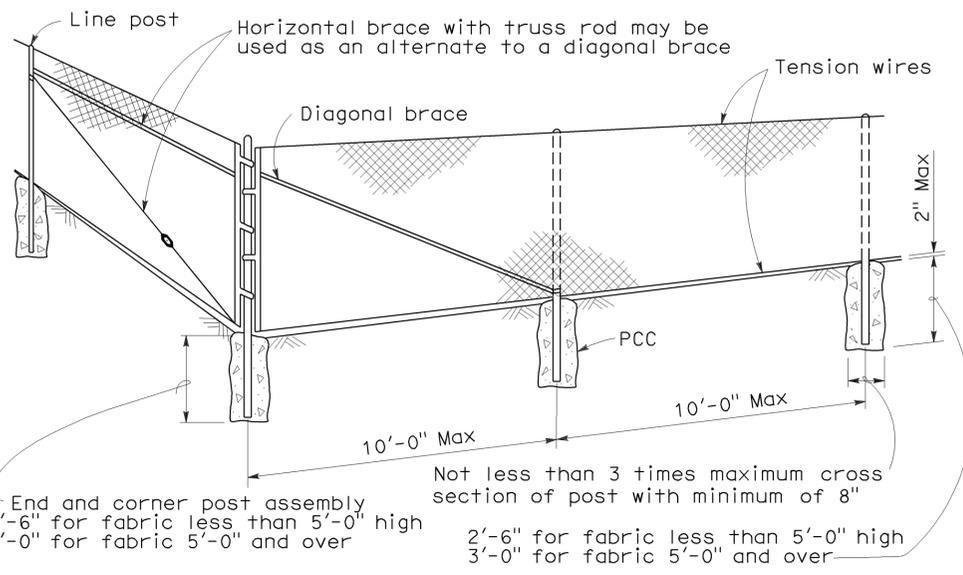
GATE POST			
FENCE HEIGHT	GATE WIDTHS	NOMINAL ID	WEIGHT PER FOOT
6'-0" and Less	Up thru 6'-0"	2 1/2"	4.95 LB
	Over 6'-0" thru 12'-0"	4"	10.79 LB
	Over 12'-0" thru 18'-0"	5"	14.62 LB
	Over 18'-0" to 24'-0" Max	6"	18.97 LB
Over 6'-0"	Up thru 6'-0"	3"	7.58 LB
	Over 6'-0" thru 12'-0"	5"	14.62 LB
	Over 12'-0" thru 18'-0"	6"	18.97 LB
	Over 18'-0" to 24'-0" Max	8"	28.55 LB

Above post dimensions and weights are minimums. Larger sizes may be used on approval of the Engineer.

NOTES:

- The below table shows examples of post and brace sections which may comply with the Specifications.
- Sections shown in the tables must also comply with the strength requirements and other provisions of the Specifications.
- Other sections which comply with the strength requirements and other provisions of the Specifications may be used on approval of the Engineer.
- Options exercised shall be uniform on any one project.
- Dimensions shown are nominal.
- Offset to be 2'-0" at monument locations, measured at right angles to R/W lines. Taper to achieve offset to be at least 20'-0" long.

FENCE HEIGHT	TYPICAL MEMBER DIMENSIONS (See Notes)									
	LINE POSTS			END, LATCH & CORNER POSTS			BRACES			
	ROUND ID	H	ROLL FORMED	ROUND ID	ROLL FORMED		ROUND ID	H	ROLL FORMED	
6' & less	1 1/2"	1 7/8" x 1 5/8"	1 7/8" x 1 5/8"	2"	3 1/2" x 3 1/2"	2" x 1 3/4"	1 1/4"	1 1/2" x 1 5/16"	1 5/8" x 1 1/4"	1 3/4" x 1 1/4"
Over 6'	2"	2 1/4" x 2"	2" x 1 3/4"	2 1/2"	3 1/2" x 3 1/2"	2 1/2" x 2 1/2"	1 1/4"	1 1/2" x 1 5/16"	1 5/8" x 1 1/4"	1 3/4" x 1 1/4"



CORNER POST

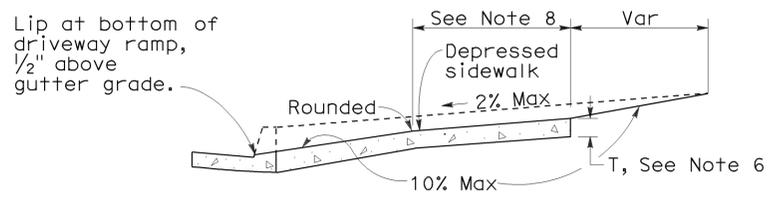
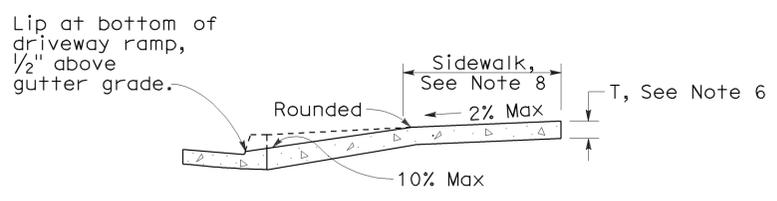
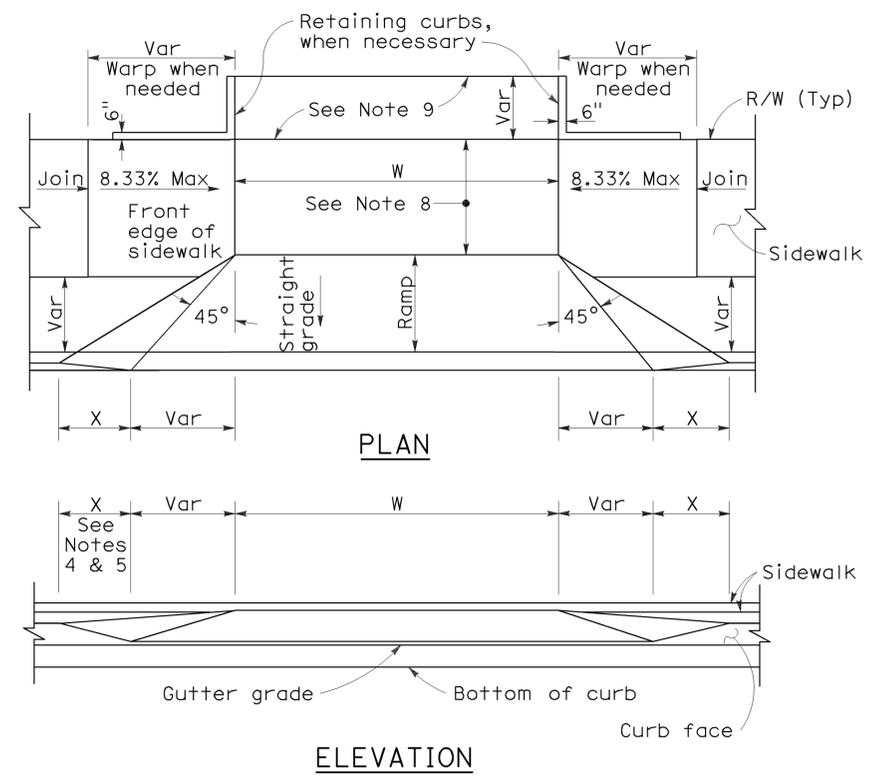
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
CHAIN LINK FENCE
NO SCALE

RSP A85 DATED JUNE 5, 2009 SUPERSEDES STANDARD PLAN A85
DATED MAY 1, 2006 - PAGE 111 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A85

2006 REVISED STANDARD PLAN RSP A85

2006 REVISED STANDARD PLAN RSP A87A



CASE A

Typical driveway, sidewalk not depressed

CASE B

Driveway with depressed sidewalk

SECTIONS

CURB QUANTITIES

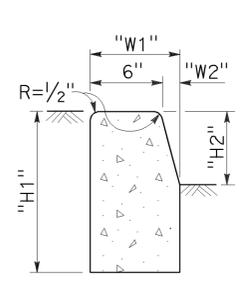
TYPE	CUBIC YARDS PER LINEAR FOOT
A1-6	0.02585
A1-8	0.03084
A2-6	0.05903
A2-8	0.06379
A3-6	0.01036
A3-8	0.01435
B1-4	0.02185
B1-6	0.02930
B2-4	0.05515
B2-6	0.06171
B3-4	0.00641
B3-6	0.01074
B4	0.05709
D-4	0.04083
D-6	0.06804
E	0.06661

TABLE A

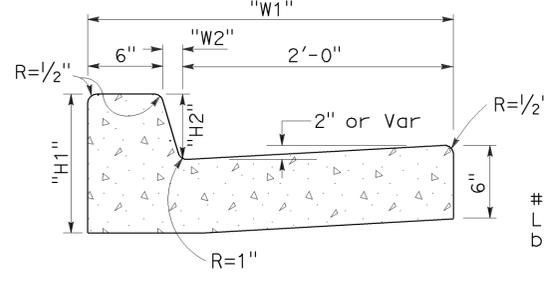
CURB TYPE	DIMENSIONS			
	"H1"	"H2"	"W1"	"W2"
A1-6	1'-2"	6"	7 1/2"	1 1/2"
A1-8	1'-4"	8"	8"	2"
A2-6	1'-0"	6"	2'-7 1/2"	1 1/2"
A2-8	1'-2"	8"	2'-8"	2"
A3-6	6"	5"	7 1/4"	1 1/4"
A3-8	8"	7"	7 3/4"	1 3/4"
B1-4	1'-0"	4"	7 1/2"	2 1/2"
B1-6	1'-2"	6"	9"	4"
B2-4	10"	4"	2'-7 1/2"	2 1/2"
B2-6	1'-0"	6"	2'-9"	4"
B3-4	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 4-19-10

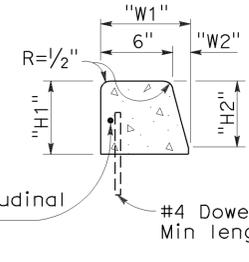
DRIVEWAYS



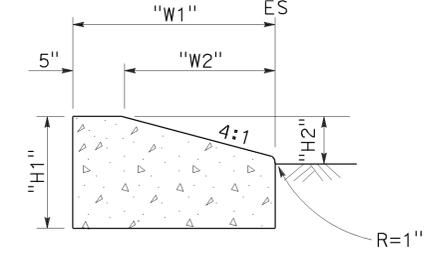
TYPE A1 CURBS
See Table A



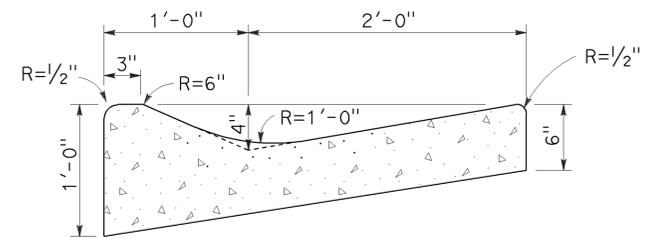
TYPE A2 CURBS
See Table A



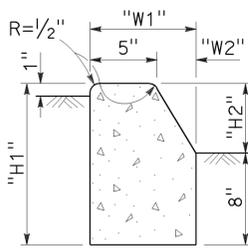
TYPE A3 CURBS
Superimposed on existing pavement
See Table A



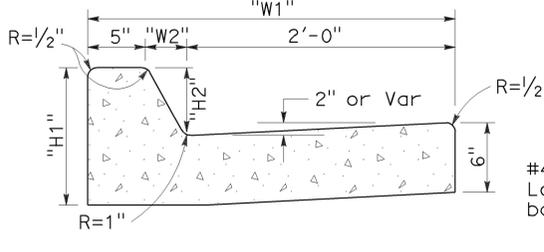
TYPE D CURBS
See Table A



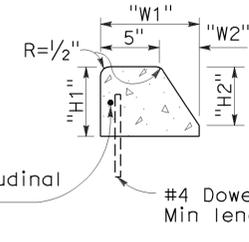
TYPE E CURB



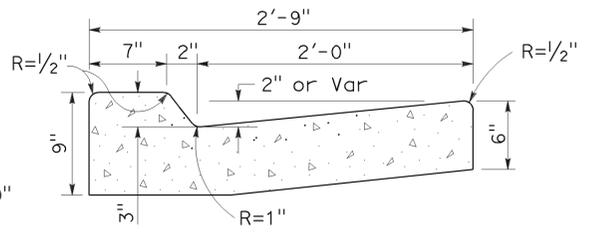
TYPE B1 CURBS
See Table A



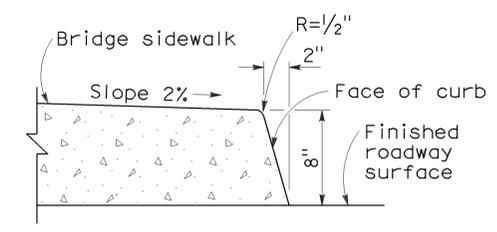
TYPE B2 CURBS
See Table A



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

RSP A87A DATED NOVEMBER 17, 2006 SUPERSEDES STANDARD PLAN A87A
DATED MAY 1, 2006 - PAGE 113 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A87A

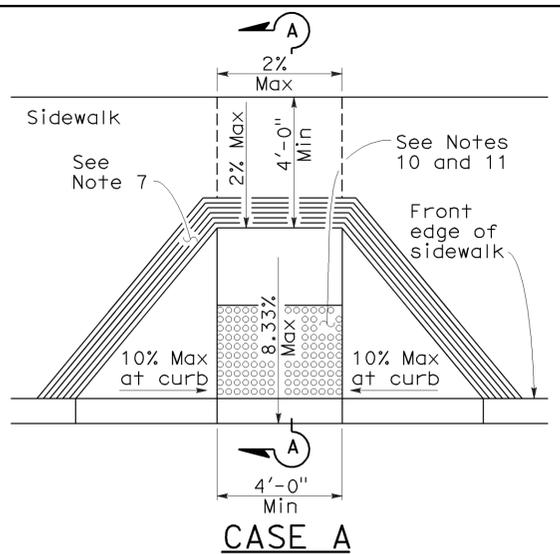
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	63	R8.0/22.3	30	47

H. David Cordova
REGISTERED CIVIL ENGINEER

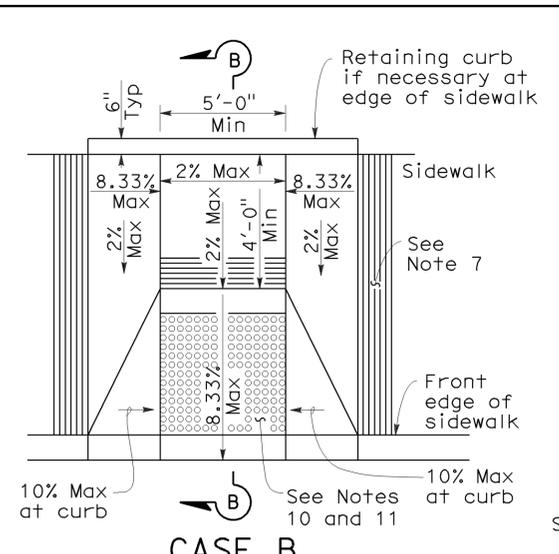
September 1, 2006
PLANS APPROVAL DATE

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

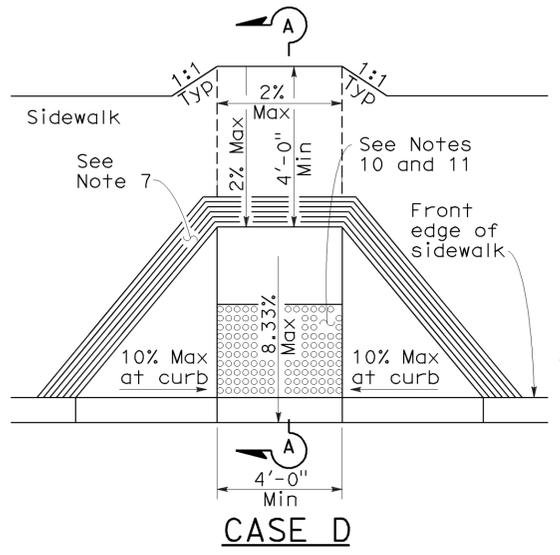
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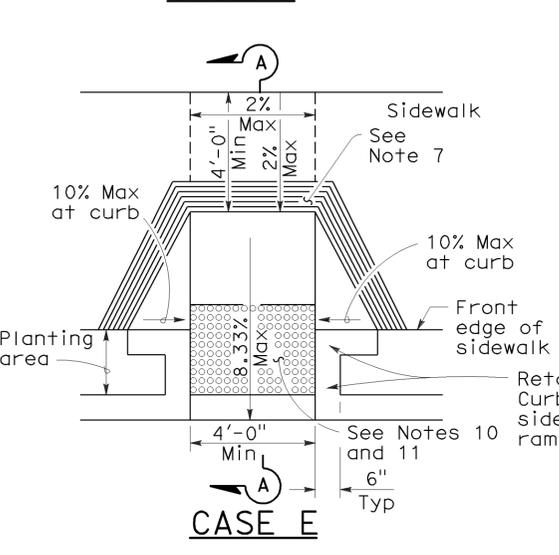
CASE A



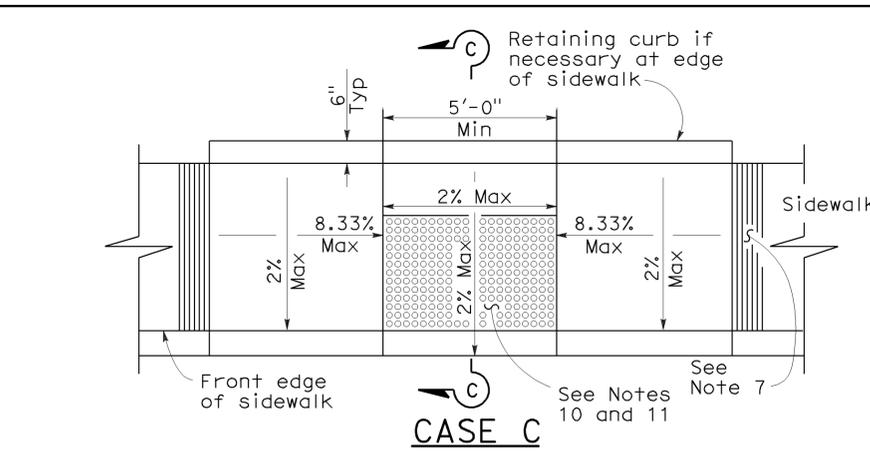
CASE B



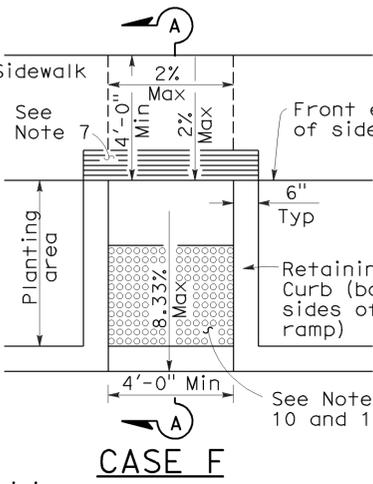
CASE D



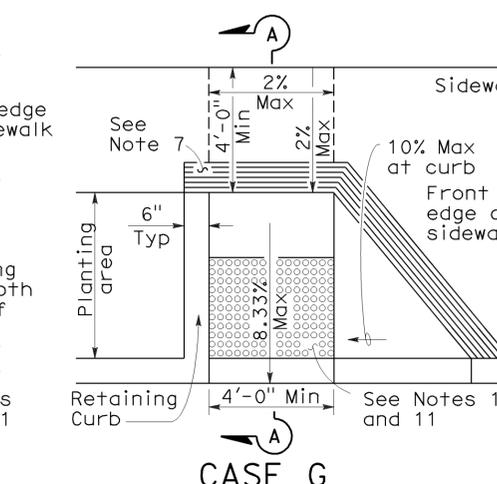
CASE E



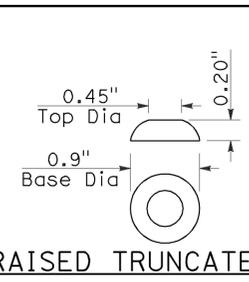
CASE C



CASE F



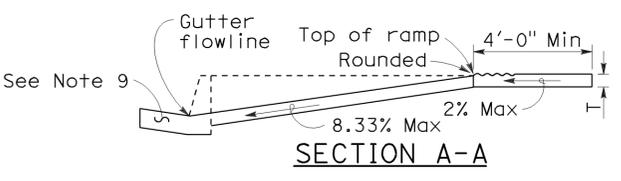
CASE G



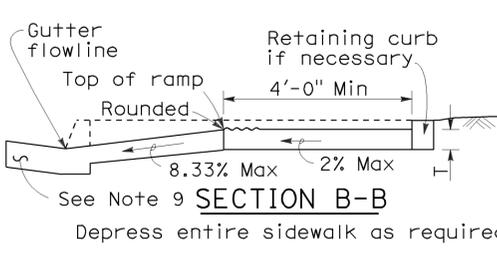
RAISED TRUNCATED DOME

NOTES:

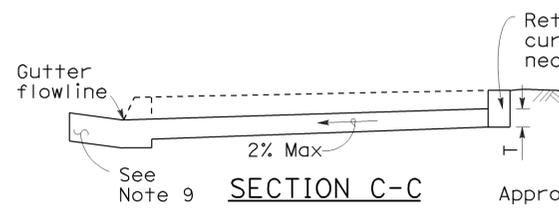
- As site conditions dictate, Case A through Case G curb ramps may be used for corner installations similar to those shown in Detail A and Detail B. The case of curb ramps used in Detail A do not have to be the same. Case A through Case G curb ramps also may be used at mid block locations, as site conditions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



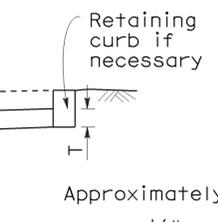
SECTION A-A



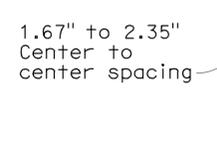
SECTION B-B



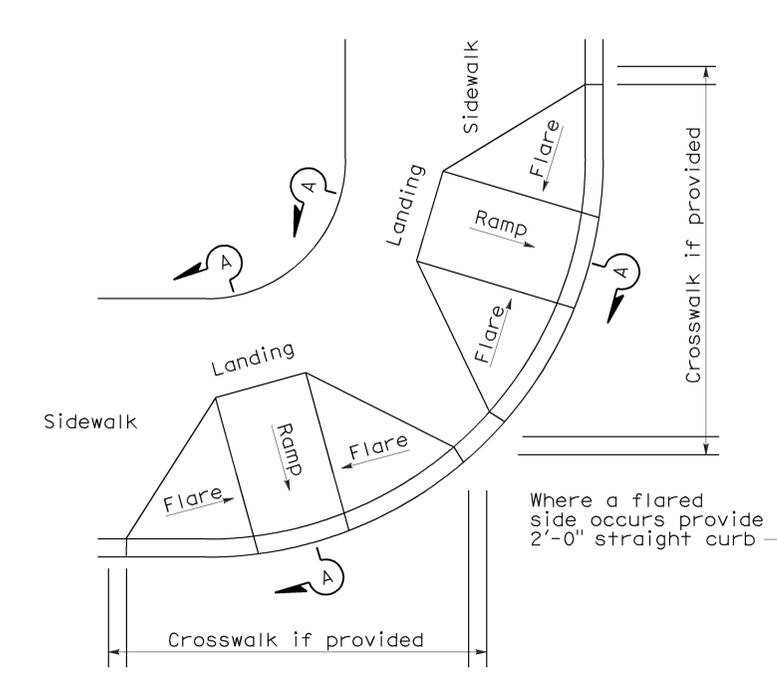
SECTION C-C



GROOVING DETAIL



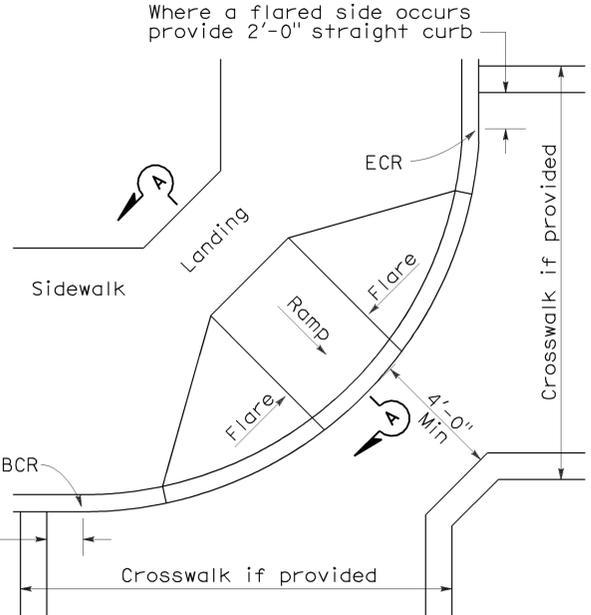
RAISED TRUNCATED DOME PATTERN (IN-LINE) DETECTABLE WARNING SURFACE



DETAIL A

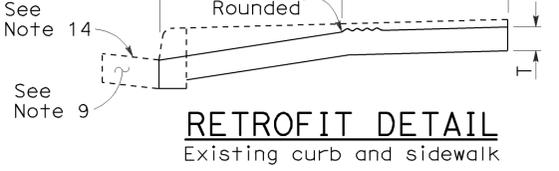
TYPICAL TWO-RAMP CORNER INSTALLATION

See Note 1



DETAIL B 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
06	Tul	63	R8.0/22.3	31	47

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

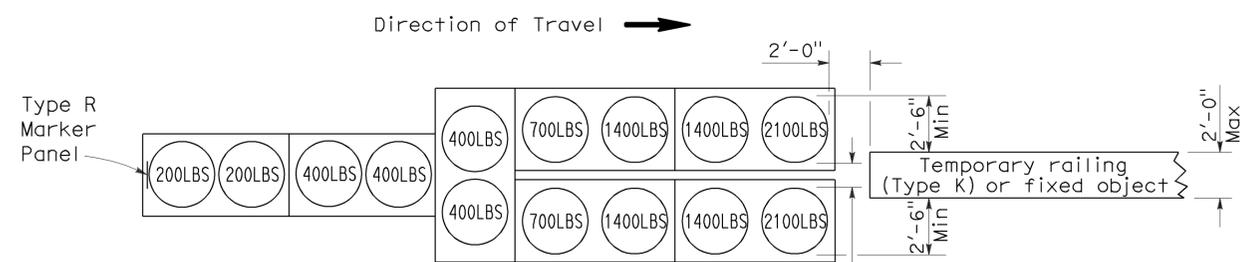
June 6, 2008
PLANS APPROVAL DATE

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

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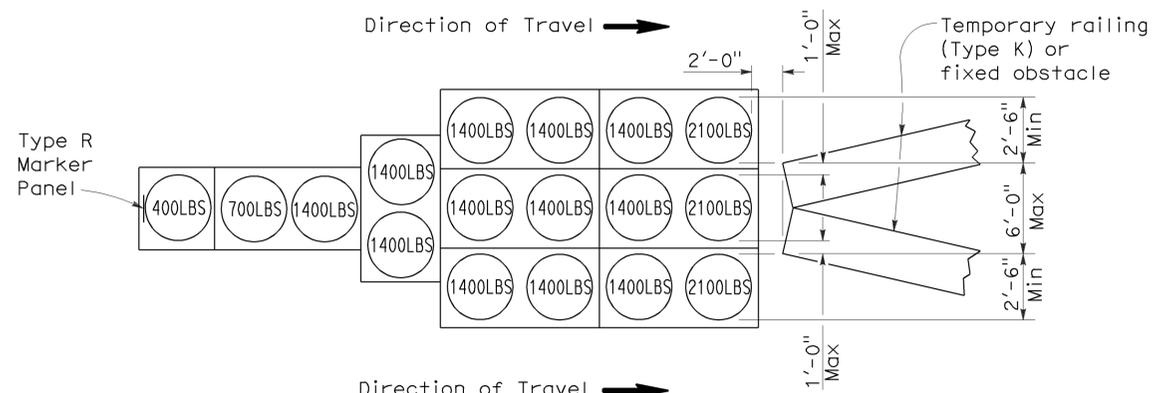
To accompany plans dated 4-19-10

2006 REVISED STANDARD PLAN RSP T1A



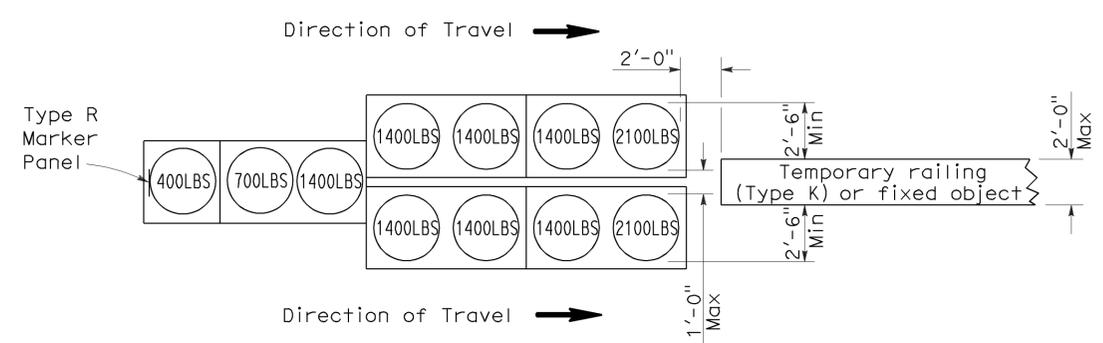
ARRAY 'TU14'

Approach speed 45 mph or more



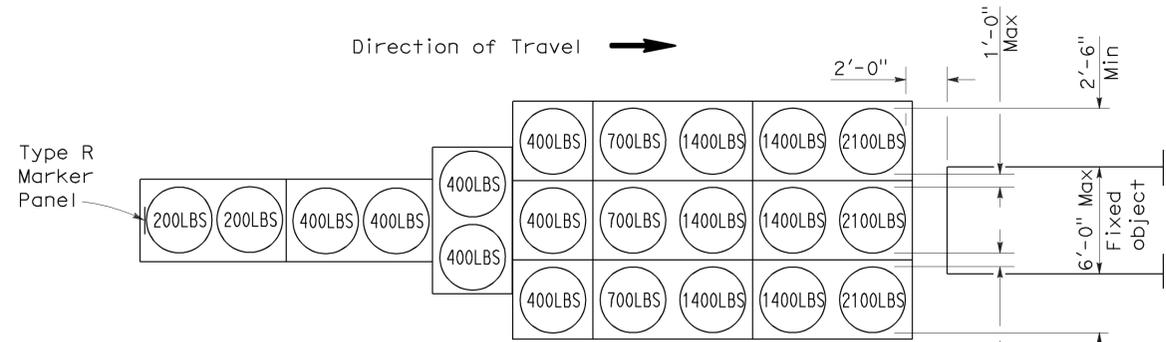
ARRAY 'TU17'

Approach speed less than 45 mph



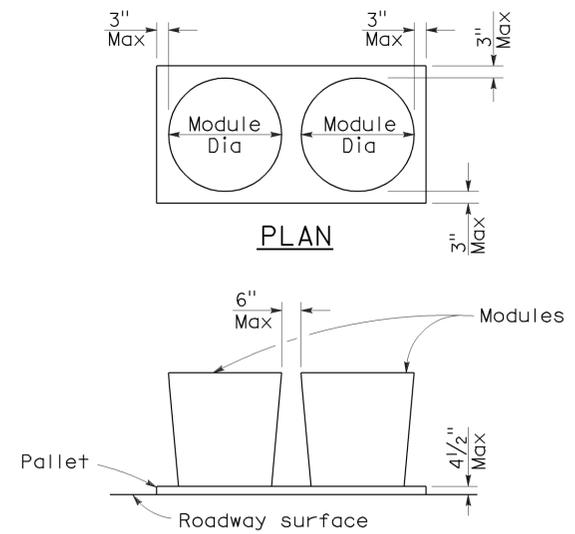
ARRAY 'TU11'

Approach speed less than 45 mph



ARRAY 'TU21'

Approach speed 45 mph or more



PLAN

ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

REVISED STANDARD PLAN RSP T1A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	63	R8.0/22.3	32	47

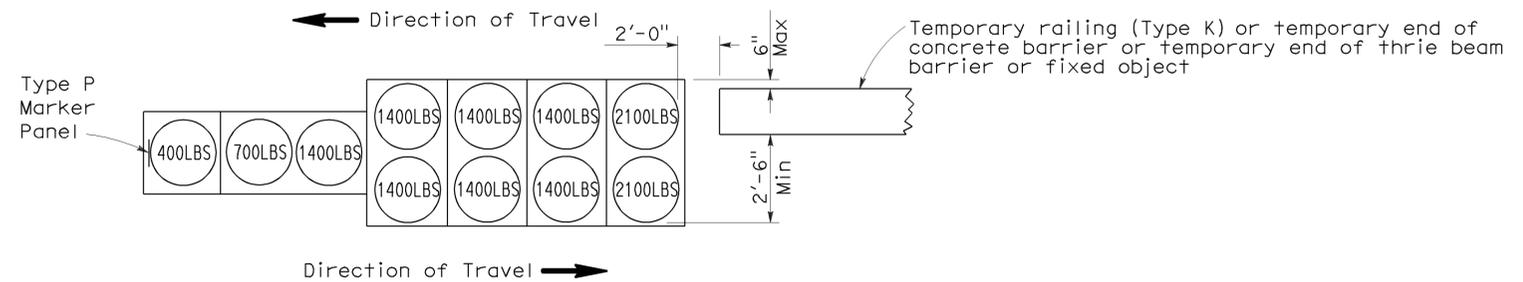
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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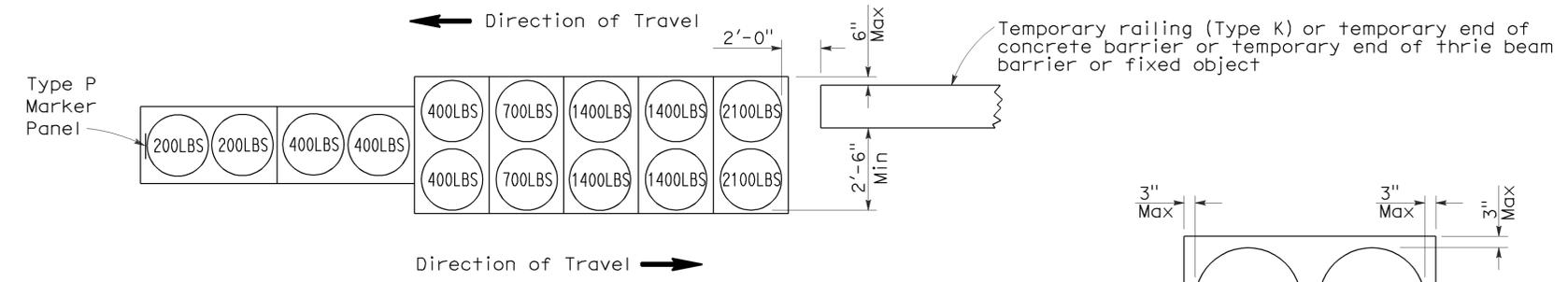
REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

To accompany plans dated 4-19-10



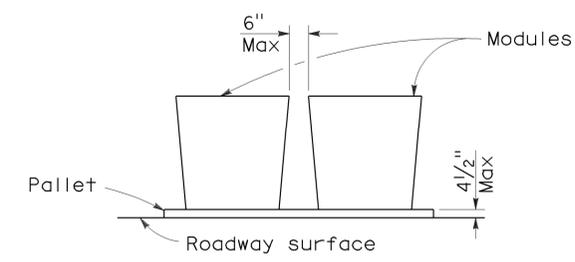
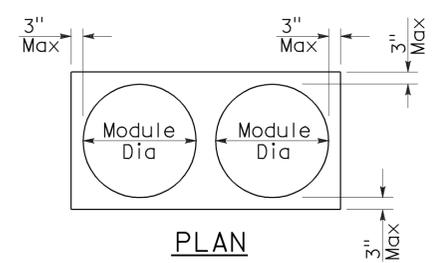
ARRAY 'TB11'

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
06	Tul	63	R8.0/22.3	33	47

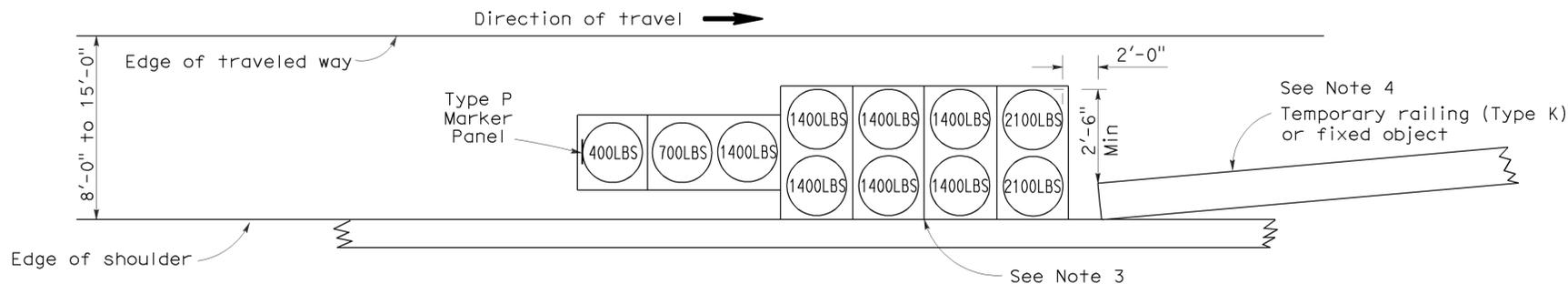
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

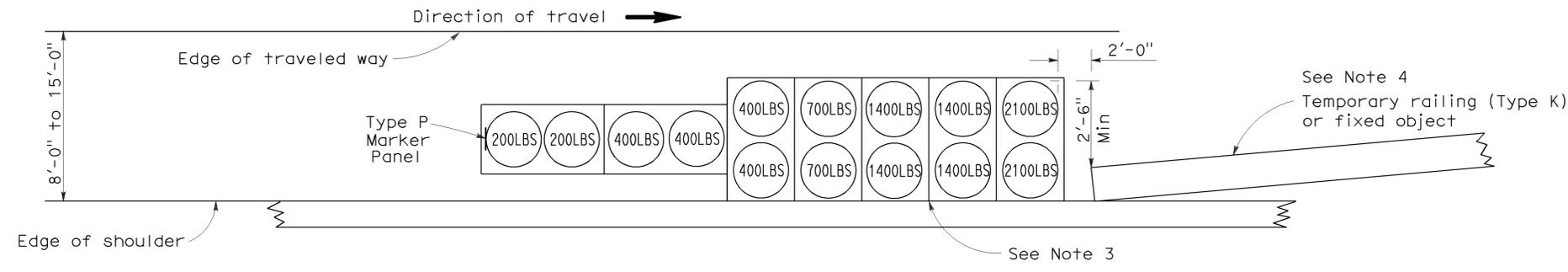
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REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

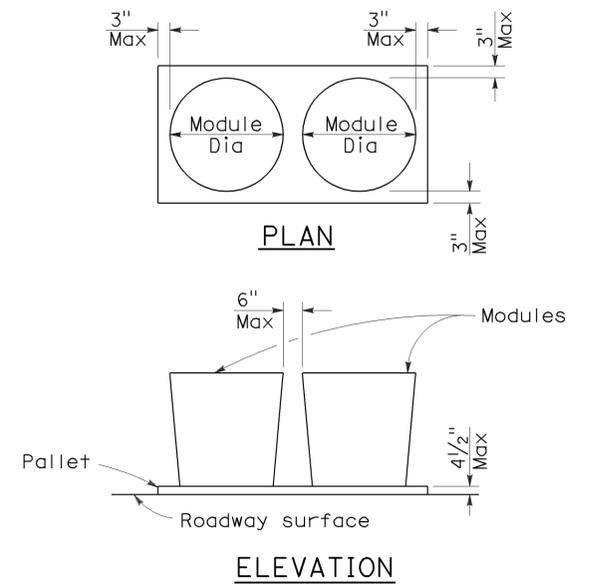
To accompany plans dated 4-19-10



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



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



CRASH CUSHION PALLET DETAIL
See Note 11

NOTES:

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

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

RSP T2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T2
DATED MAY 1, 2006 - PAGE 213 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T2

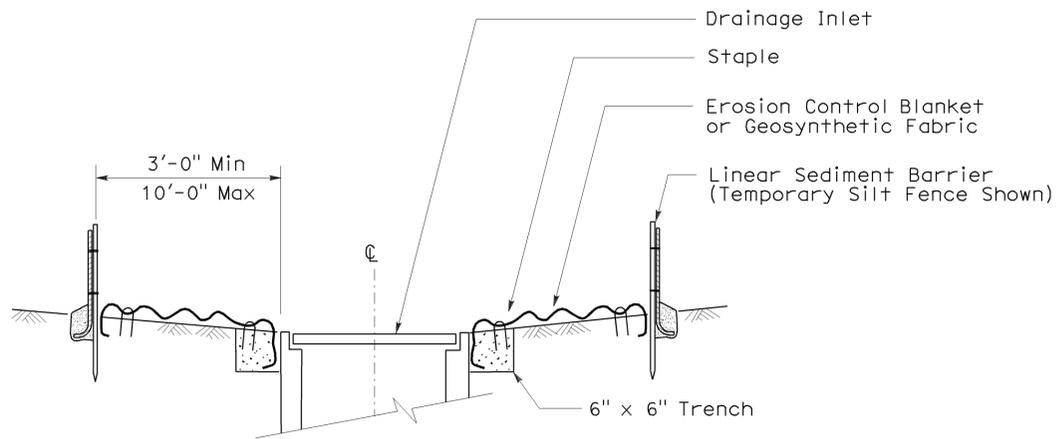
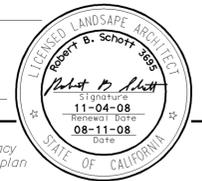
2006 REVISED STANDARD PLAN RSP T2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
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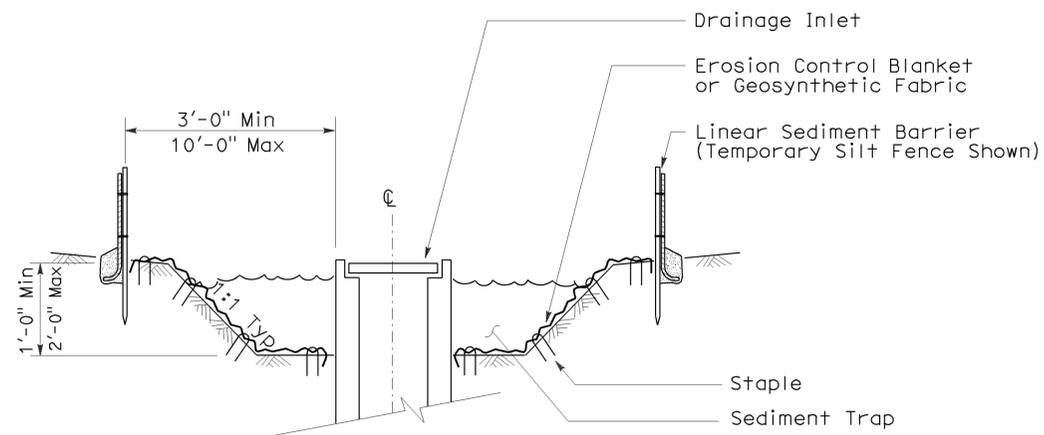
Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT
 August 15, 2008
 PLANS Approval DATE

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To accompany plans dated 4-19-10



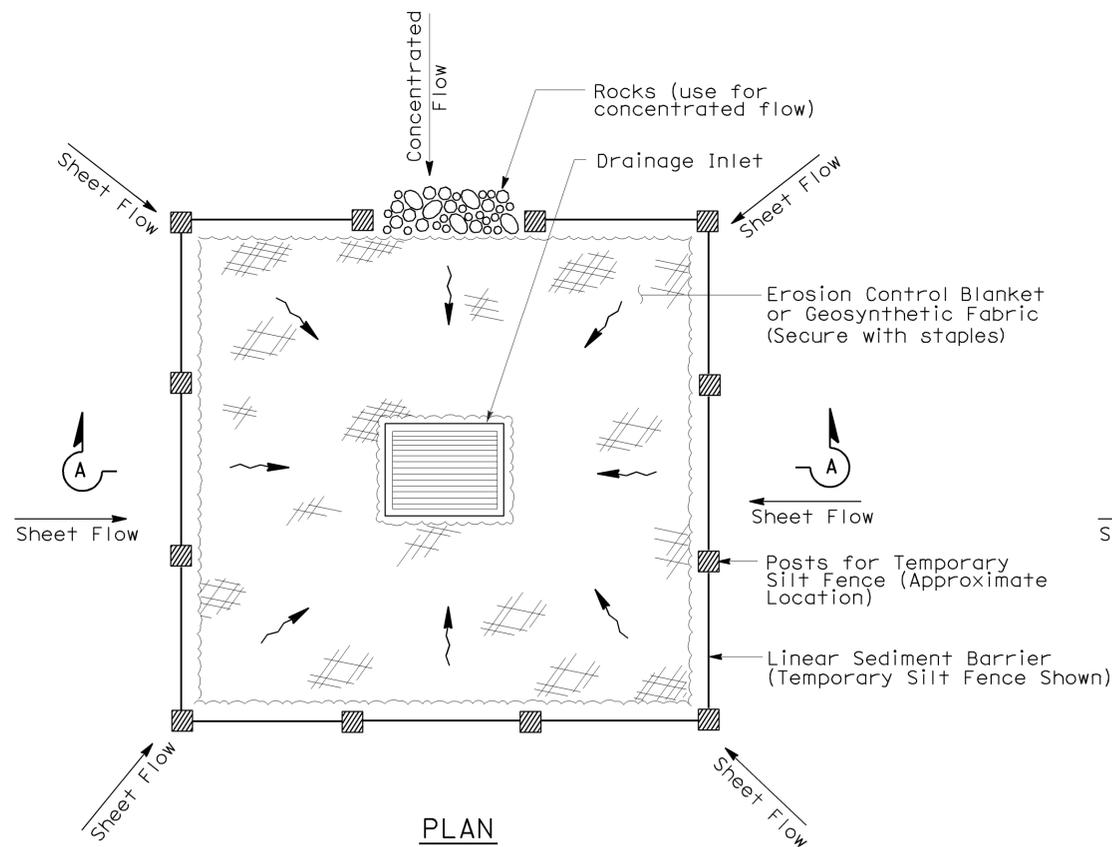
SECTION A-A



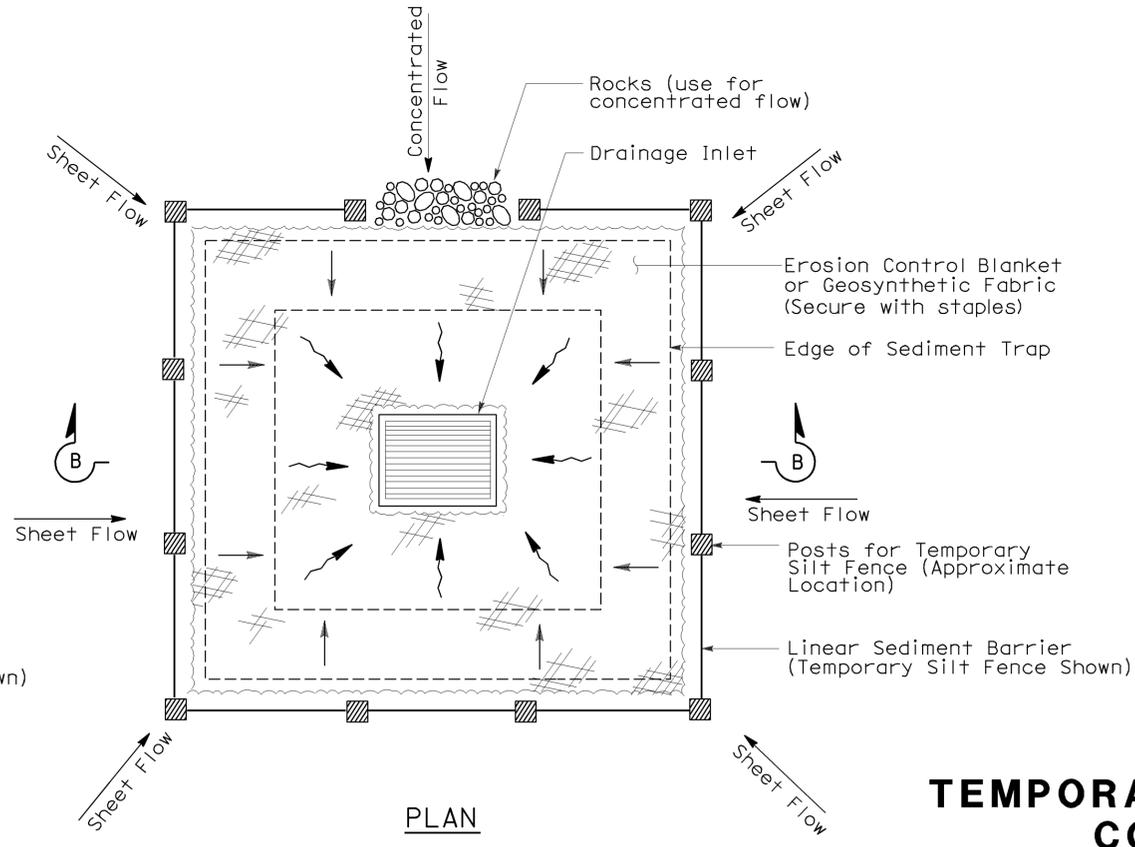
SECTION B-B

NOTES:

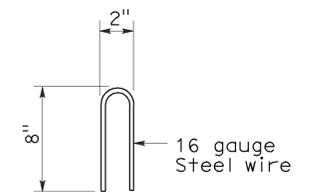
1. See Standard Plan T51 for Temporary Silt Fence.
2. Dimensions may vary to fit field conditions.



TEMPORARY DRAINAGE INLET PROTECTION (TYPE 1)



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



STAPLE DETAIL

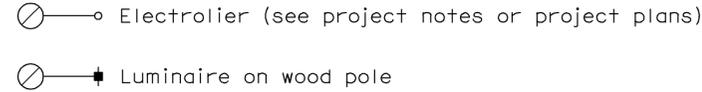
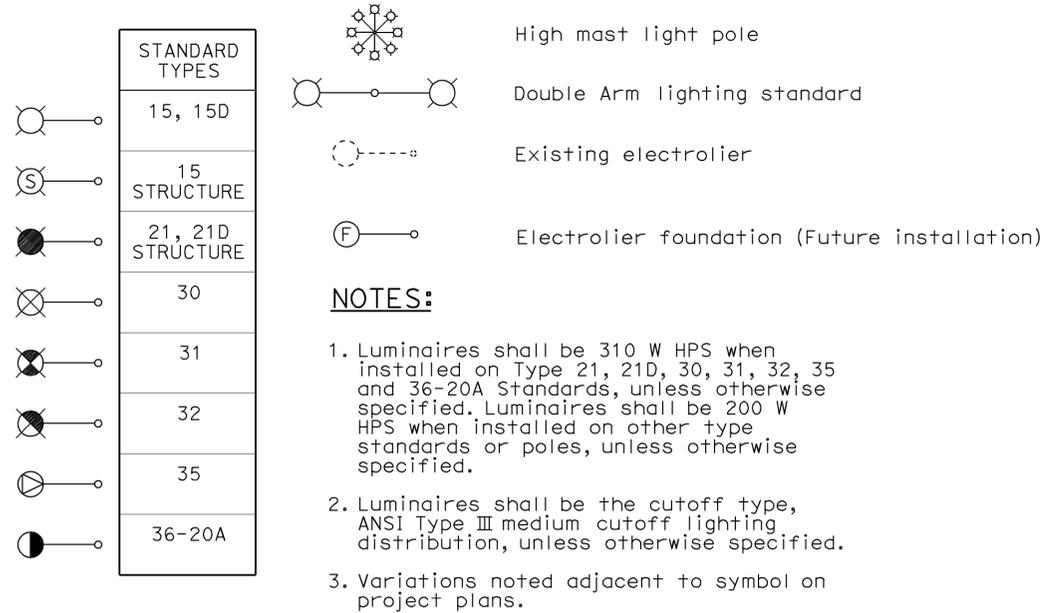
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)

NO SCALE

Nsp +61 dated august 15, 2008 supplements the standard plans book dated may 2006.

2006 NEW STANDARD PLAN NSP T61

ELECTROLIERS



STANDARD NOTES:

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

ABBREVIATIONS AND EQUIPMENT DESIGNATIONS

PROPOSED EXISTING

BBS	bbs	Battery backup system
BC	bc	Bolt circle
C	C	Conduit
CCTV	cctv	Closed circuit television
CKT	ckt	Circuit
CMS	cms	Changeable message sign
DLC	dlc	Loop detector lead-in cable
EMS	ems	Extinguishable message sign
EVC	evc	Emergency vehicle cable
EVD	evd	Emergency vehicle detector
FB	fb	Flashing beacon
FBCA	fbca	Flashing beacon control assembly
FBS	fbs	Flashing beacon with slip base
FO	fo	Fiber optic
G	G	Ground (Equipment Grounding Conductor)
GFCI	GFCI	Ground fault circuit interrupt
HAR	har	Highway advisory radio
HEX	hex	Hexagonal
HPS	hps	High pressure sodium
IISNS	iisns	Internally illuminated street name sign
ISL	isl	Induction sign lighting
LED	led	Light emitting diode
LMA	lma	Luminaire mast arm
LPS	lps	Low pressure sodium
LTG	ltg	Lighting
LUM	lum	Luminaire
MAT	mat	Mast arm mounting vehicle signal faces, top attachment
MAS	mas	Mast arm mounting vehicle signal faces, side attachment
MAS-4A	mas-4A	Mast arm mounting vehicle signal faces, 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
06	Tul	63	R8.0/22.3	35	47

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

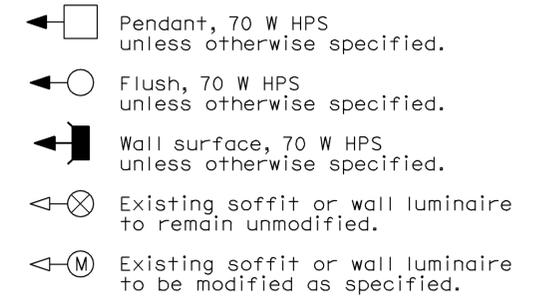
October 5, 2007
PLANS APPROVAL DATE

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

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To accompany plans dated 4-19-10

SOFFIT AND WALL MOUNTED LUMINAIRES



NOTE:

Arrow indicates "street side" of luminaire.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

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

REVISED STANDARD PLAN RSP ES-1A

2006 REVISED STANDARD PLAN RSP ES-1A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	63	R8.0/22.3	36	47

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

CONDUIT

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

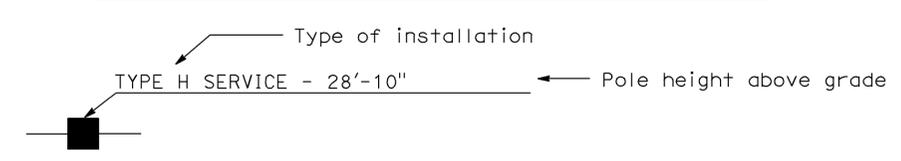
SIGNAL EQUIPMENT

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

SERVICE EQUIPMENT

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

POLE-MOUNTED SERVICE DESIGNATION



ILLUMINATED OVERHEAD SIGN

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

SIGNAL EQUIPMENT Cont

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

NOTES:

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

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

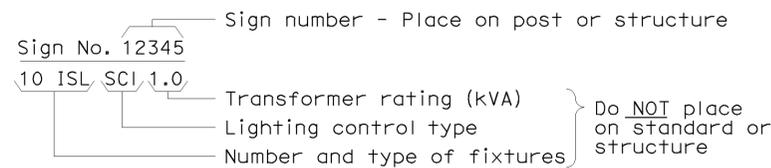
RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B
 DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1B

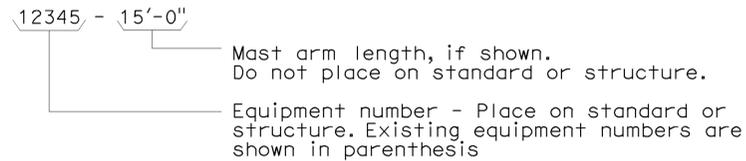
2006 REVISED STANDARD PLAN RSP ES-1B

EQUIPMENT IDENTIFICATION

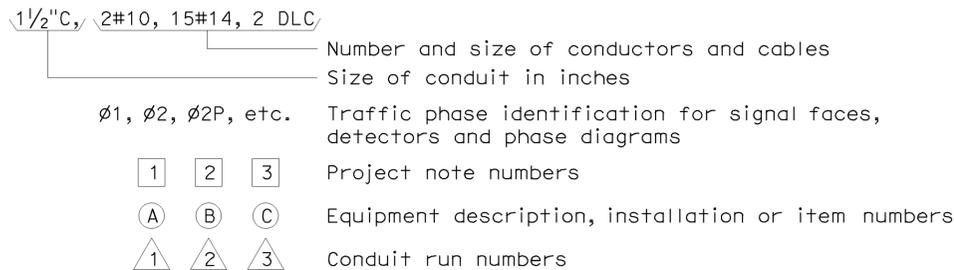
ILLUMINATED SIGN IDENTIFICATION NUMBER:



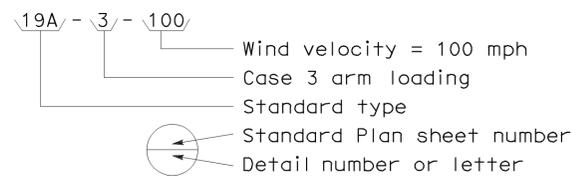
ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



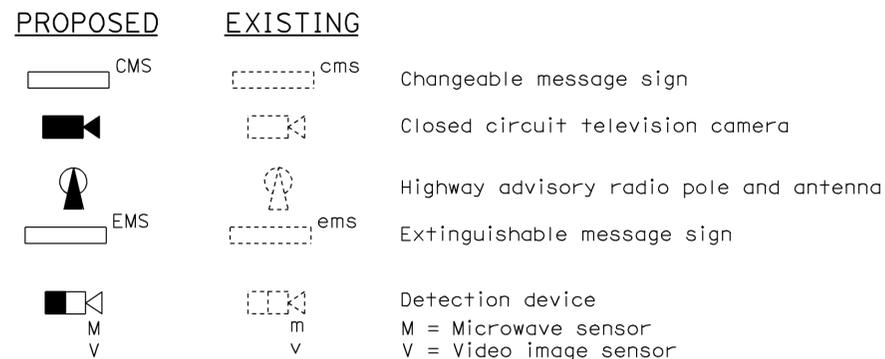
CONDUIT AND CONDUCTOR IDENTIFICATION:



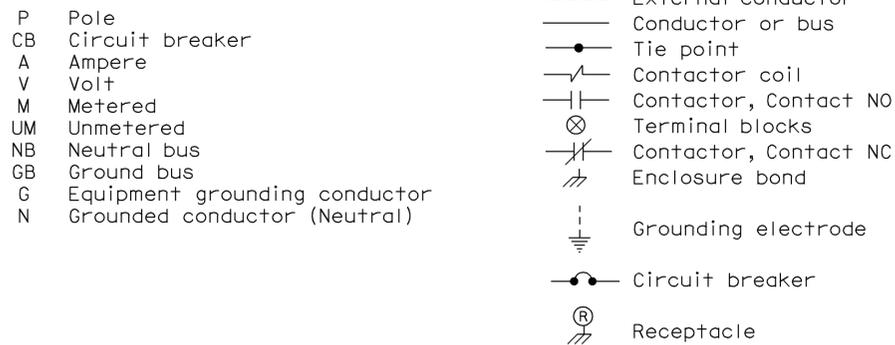
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



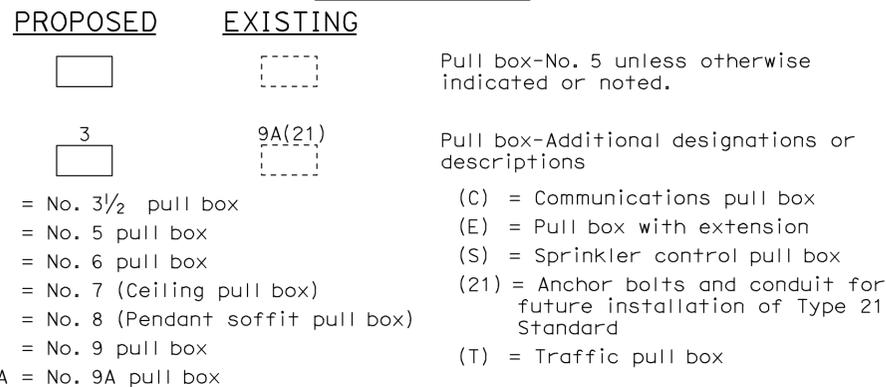
MISCELLANEOUS EQUIPMENT



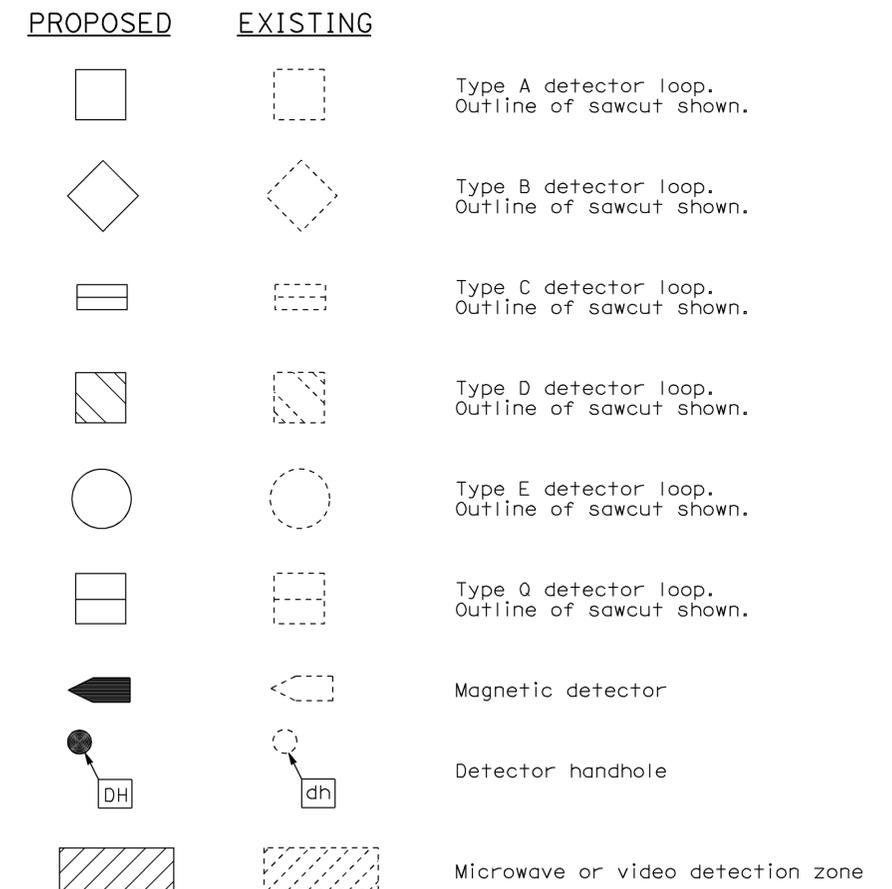
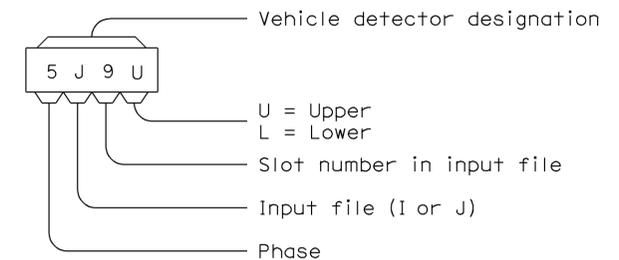
WIRING DIAGRAM LEGEND



PULL BOXES



VEHICLE DETECTORS



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	63	R8.0/22.3	38	47

Jeffery G. McRae
 REGISTERED ELECTRICAL ENGINEER

October 5, 2007
 PLANS APPROVAL DATE

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

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

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 $\frac{7}{16}$ ".
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)."

To accompany plans dated 4-19-10

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

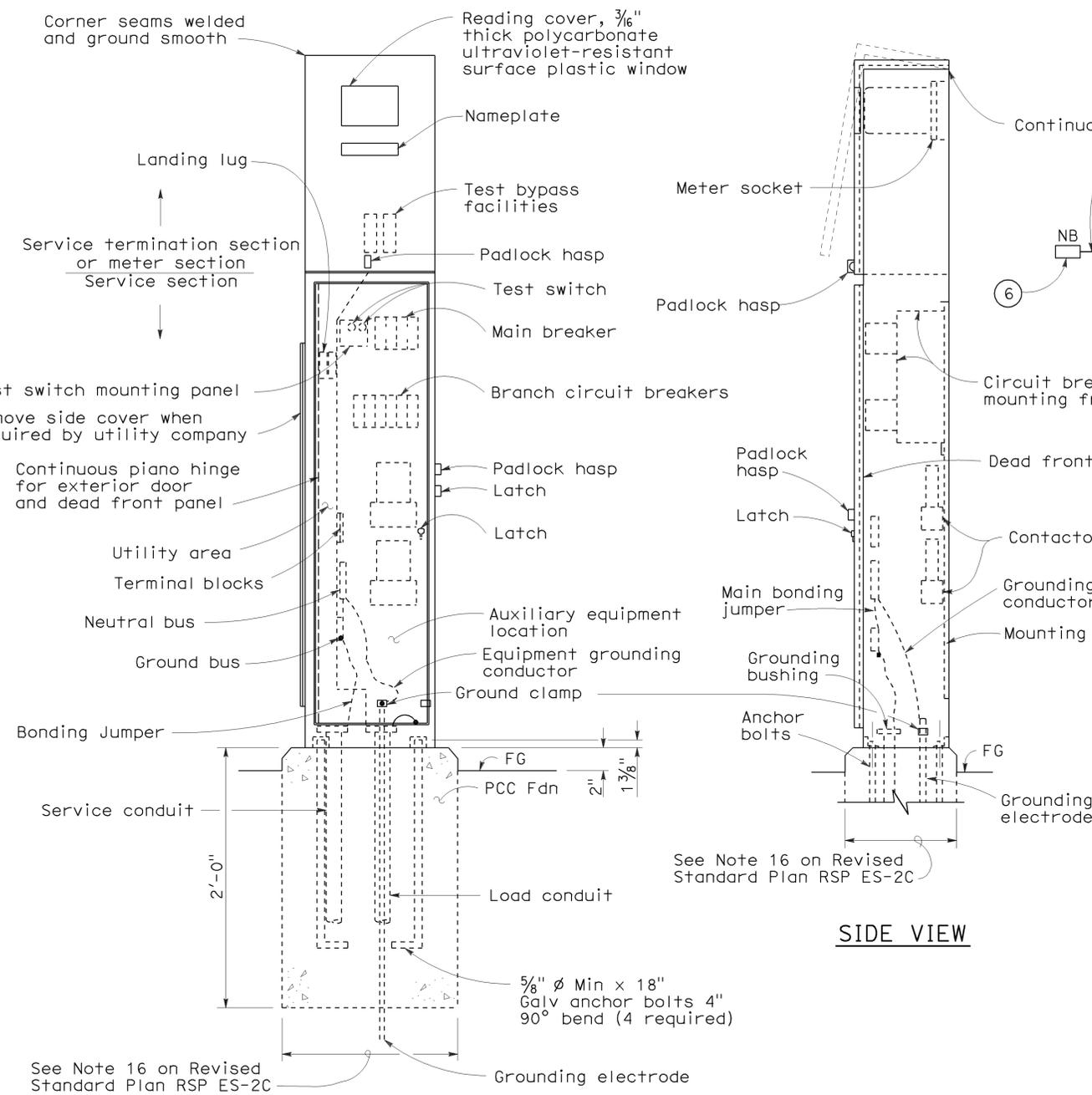
**ELECTRICAL SYSTEMS
 (SERVICE EQUIPMENT NOTES
 TYPE III SERIES)**

NO SCALE

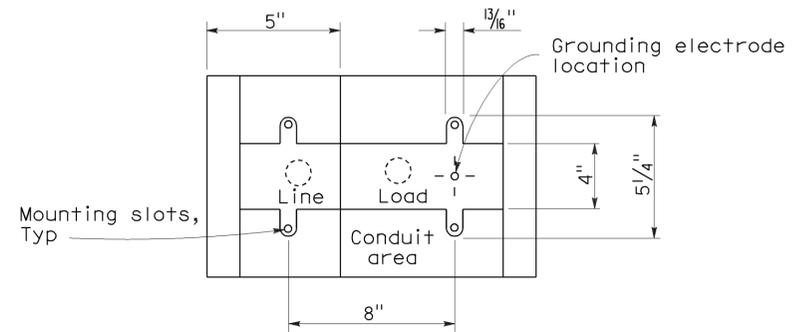
RSP ES-2C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-2C
 DATED MAY 1, 2006 - PAGE 405 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-2C

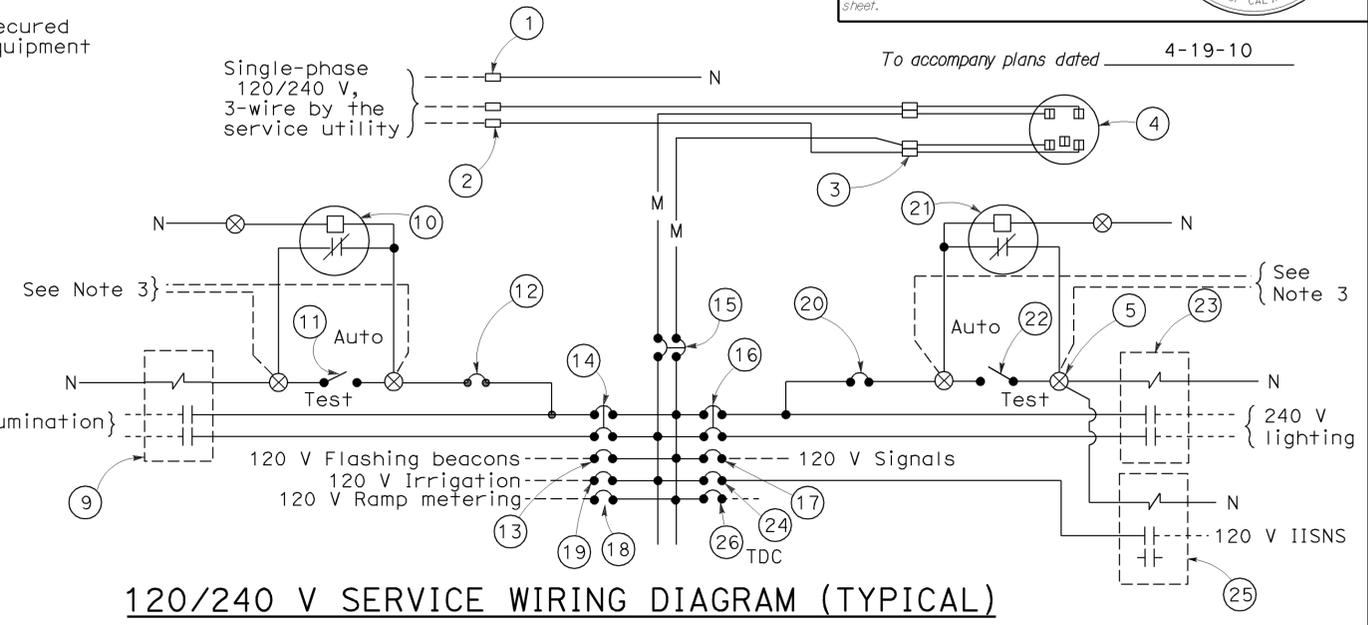
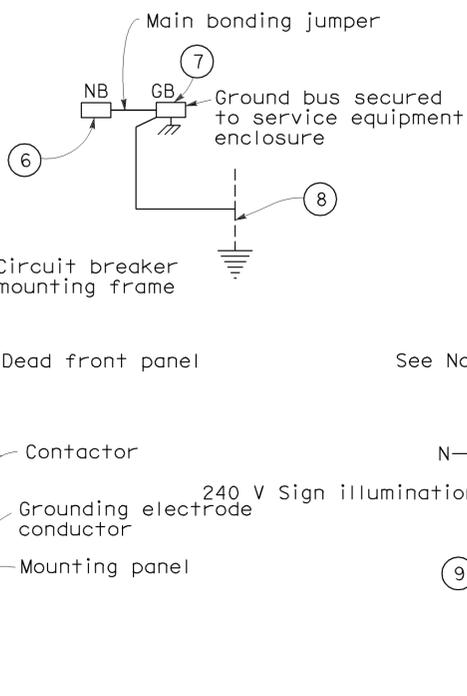
2006 REVISED STANDARD PLAN RSP ES-2C



TYPE III-AF SERVICE EQUIPMENT ENCLOSURE (TYPICAL)



BASE FOR TYPE III-A SERVICE EQUIPMENT ENCLOSURE



120/240 V SERVICE WIRING DIAGRAM (TYPICAL)

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

NOTES: (FOR SERVICE EQUIPMENT ENCLOSURE)

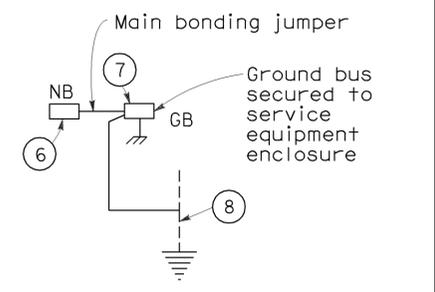
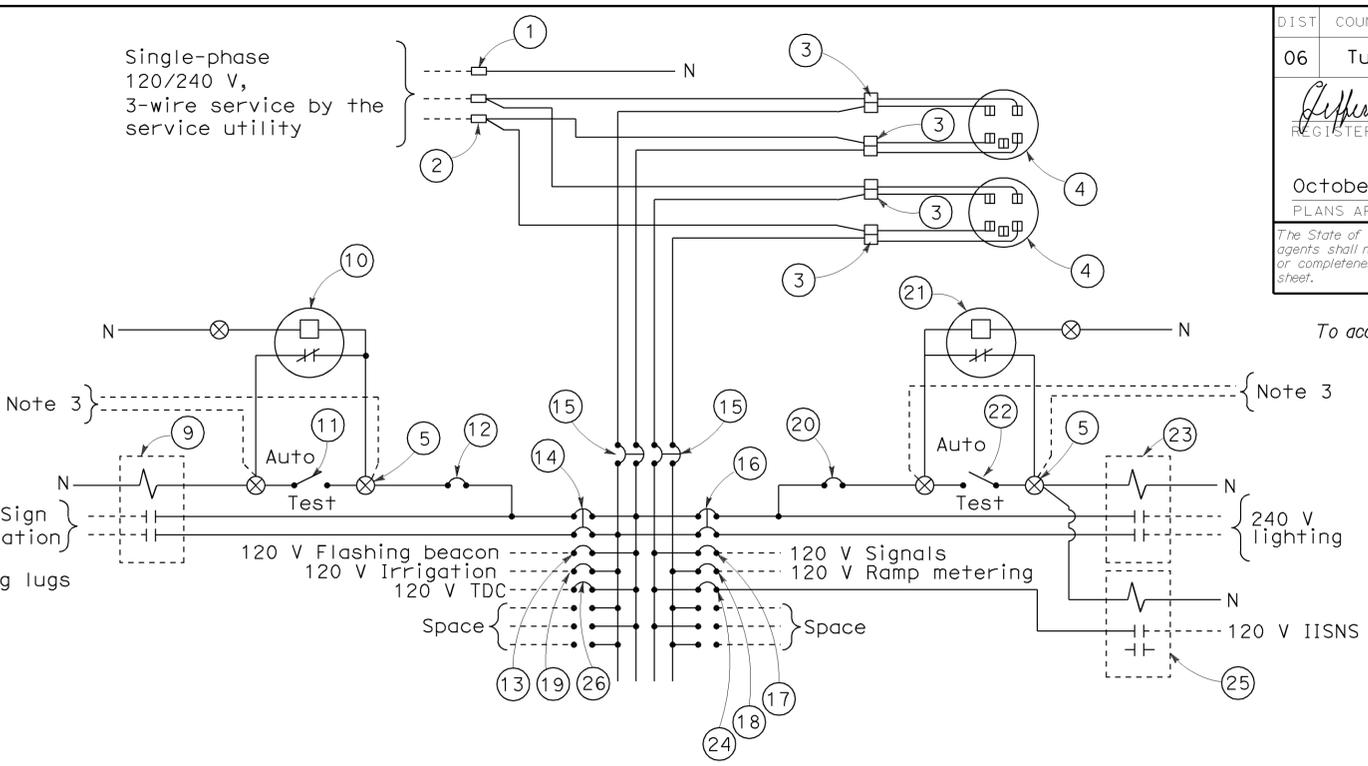
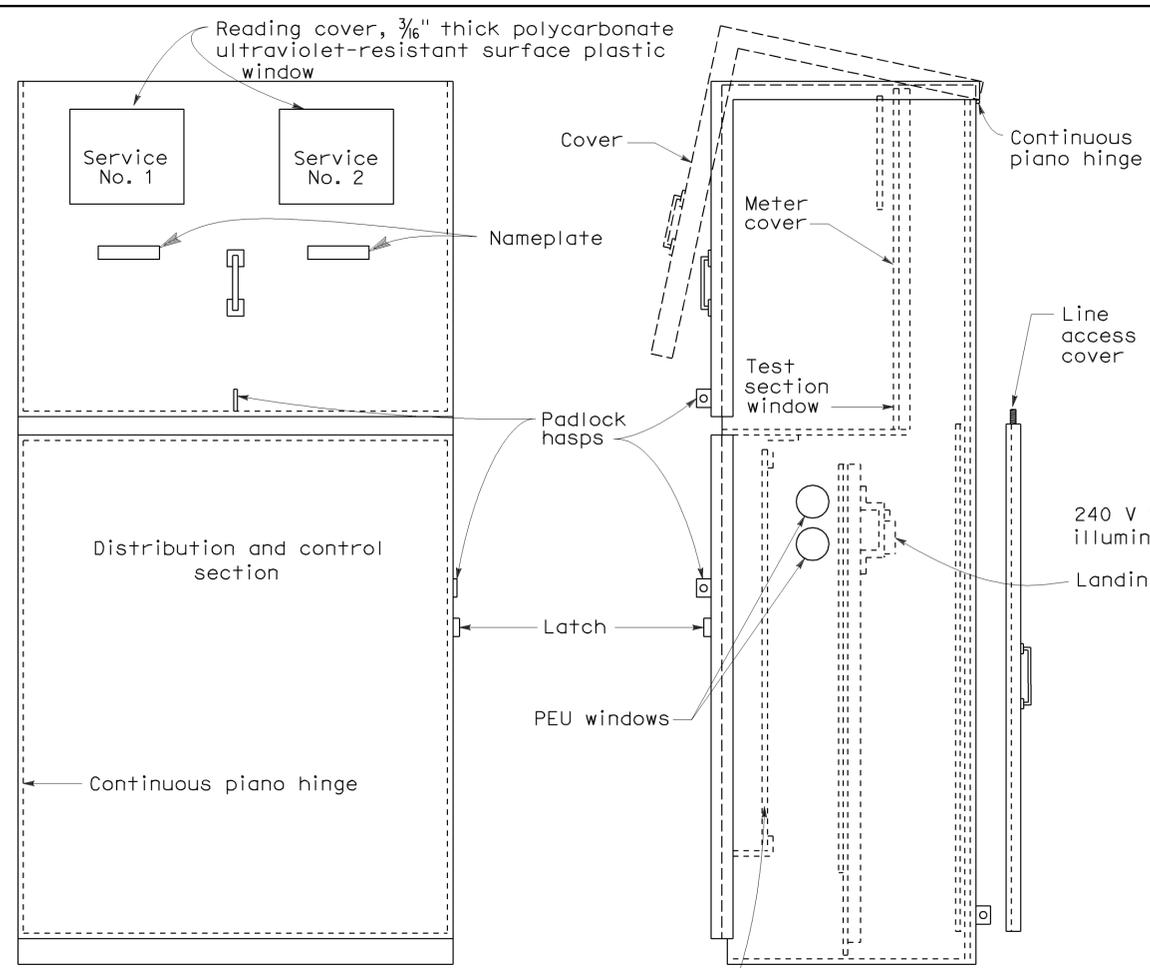
- Voltage ratings of service equipment shall conform to the service voltages indicated on the plans.
- Unless otherwise indicated on the plans, service equipment items shall be provided for each service equipment enclosure as shown.
- Connect to remote test switch mounted on lighting standards, sign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

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

NO SCALE

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

2006 REVISED STANDARD PLAN RSP ES-2D



120/240 V SERVICE WIRING DIAGRAM (TYPICAL)

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

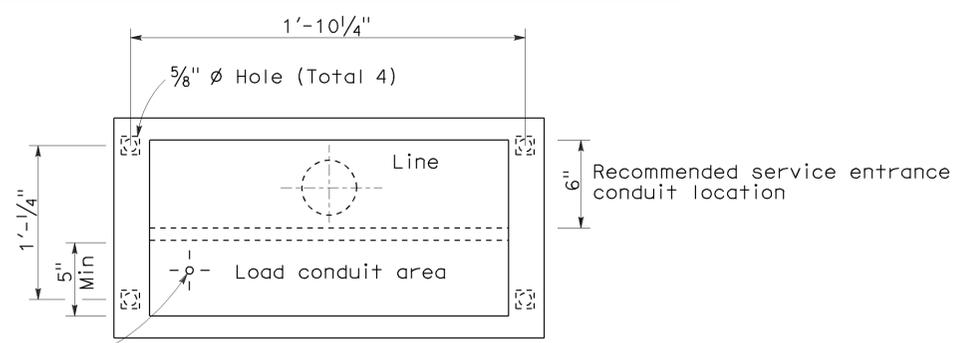
TYPE III-C SERVICE (120/240 V) EQUIPMENT LEGEND					
ITEM No.	COMPONENT	NAME PLATE DESCRIPTION	ITEM No.	COMPONENT	NAME PLATE DESCRIPTION
1	Neutral lug		14	30 A, 240 V, 2P, CB	Sign Illumination
2	Landing lug (Note 6)		15	100 A, 240 V, 2P, CB	Main Breaker
3	Test bypass facility		16	30 A, 240 V, 2P, CB	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)

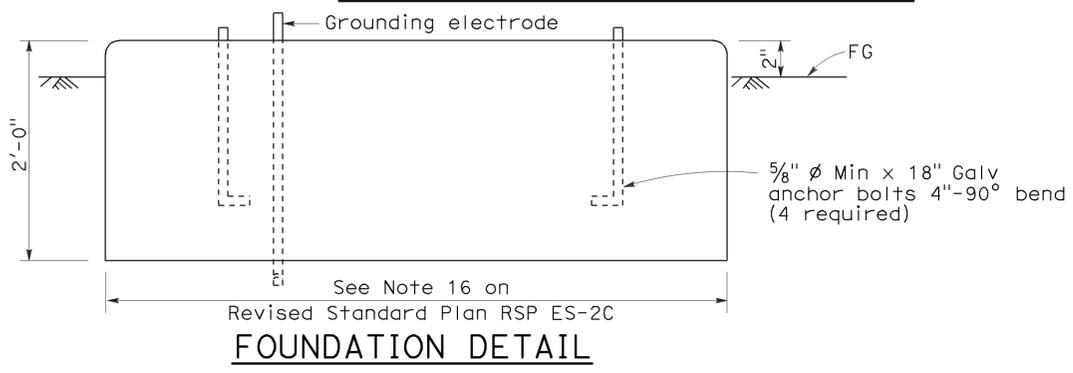
- Voltage ratings of service equipment shall conform to the service voltages indicated on the plans.
- Unless otherwise indicated on the plans, service equipment items shall be provided for each service equipment enclosure as shown.
- Connect to remote test switch mounted on lighting standards, sign 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.

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.



BASE FOR TYPE III-C SERVICE EQUIPMENT ENCLOSURE



FOUNDATION DETAIL

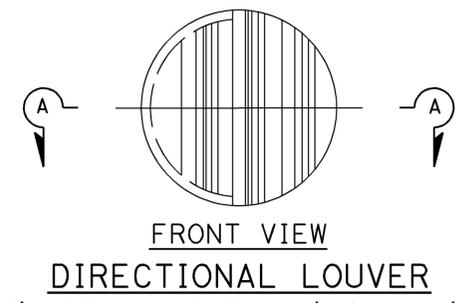
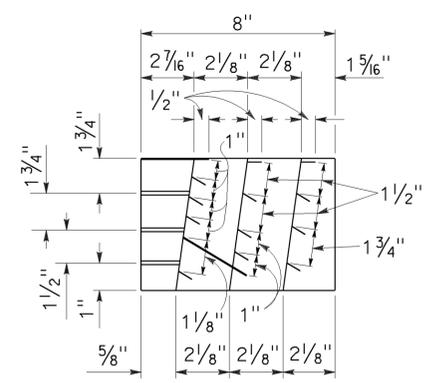
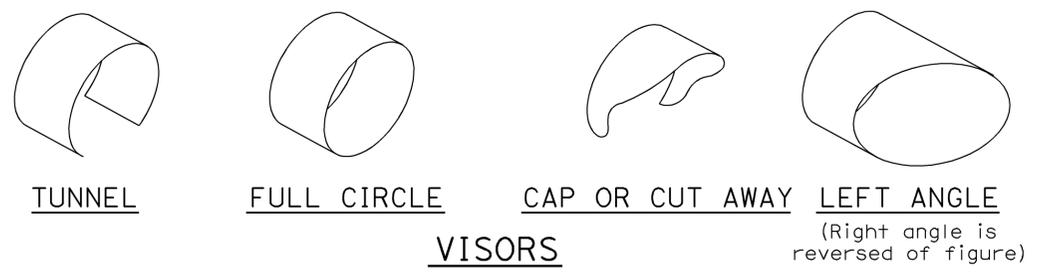
2006 REVISED STANDARD PLAN RSP ES-2F

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
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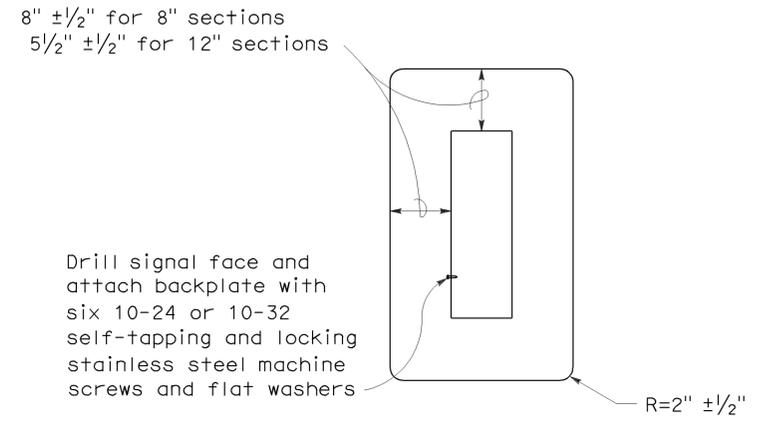
Jeffery G. McRae
 REGISTERED ELECTRICAL ENGINEER
 No. E14512
 Exp. 6-30-10
 ELECTRICAL
 STATE OF CALIFORNIA

June 6, 2008
 PLANS APPROVAL DATE

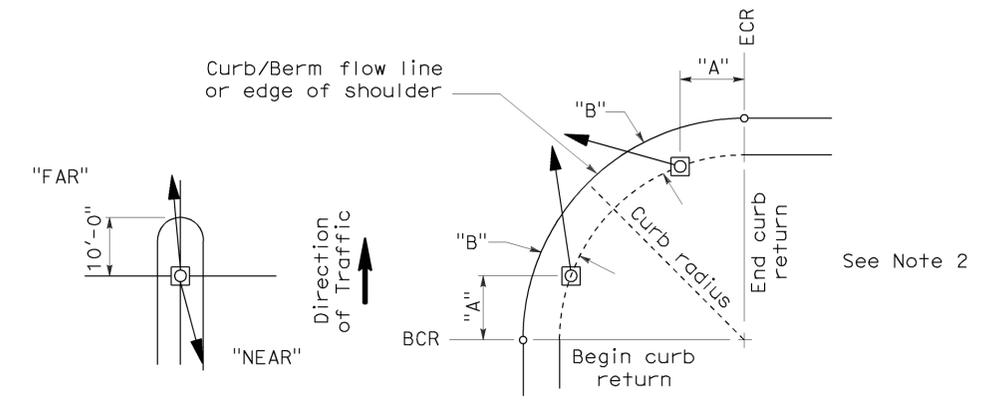
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Directional louvers shall be oriented as directed by the Engineer and secured in place with one plated brass machine screw and nut.



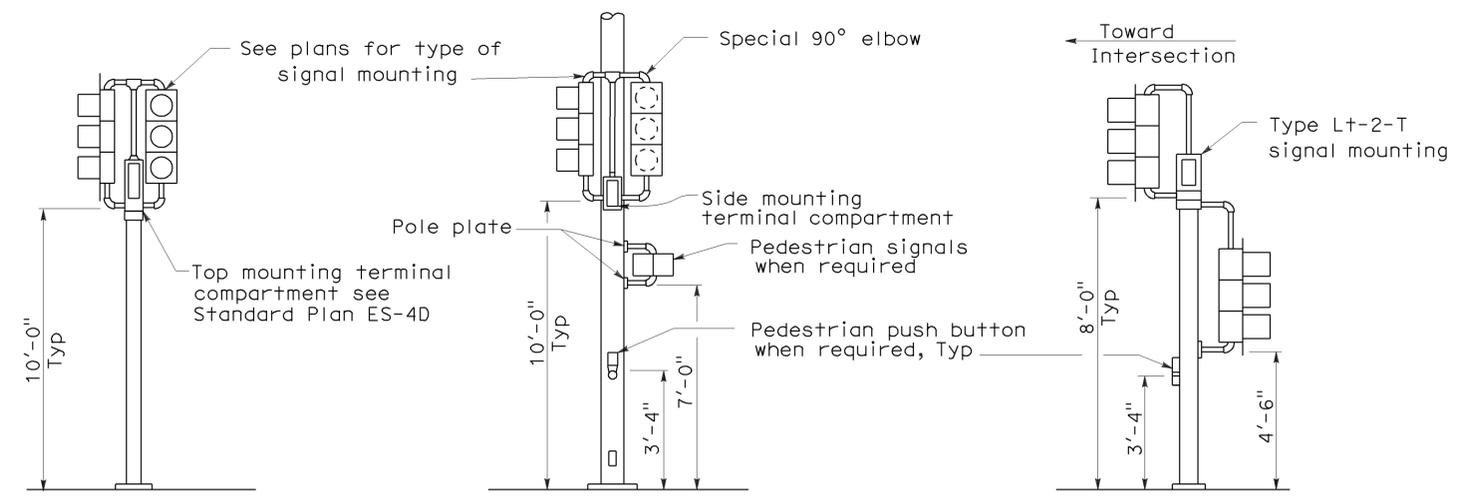
8" AND 12" SECTIONS
BACKPLATE
 1/16" minimum thickness
 3001-14 aluminum, or plastic when specified



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

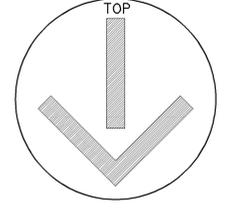
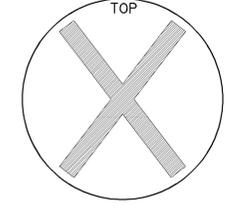
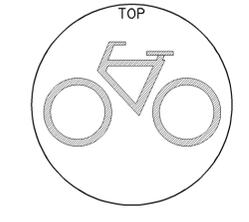
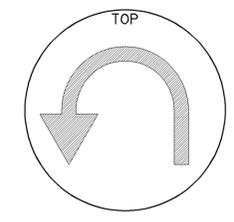


TOP MOUNTED SIGNALS (TV)
 Type 1-A, 1-B, 1-C and 1-D standard as indicated on the plans

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



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

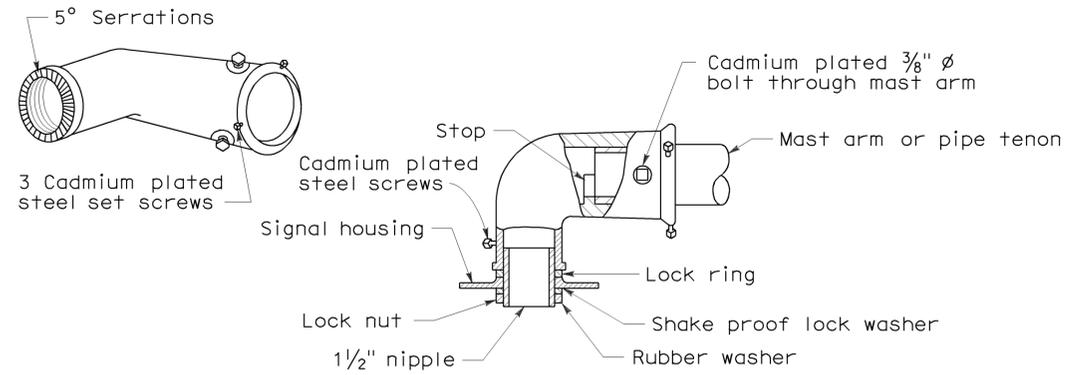
2006 REVISED STANDARD PLAN RSP ES-4C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	63	R8.0/22.3	42	47

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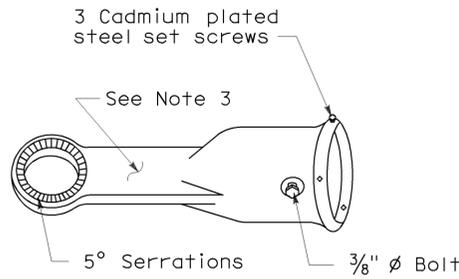
REGISTERED PROFESSIONAL ENGINEER
 Jeffrey G. McRae
 No. E14512
 Exp. 6-30-10
 ELECTRICAL
 STATE OF CALIFORNIA

To accompany plans dated 4-19-10



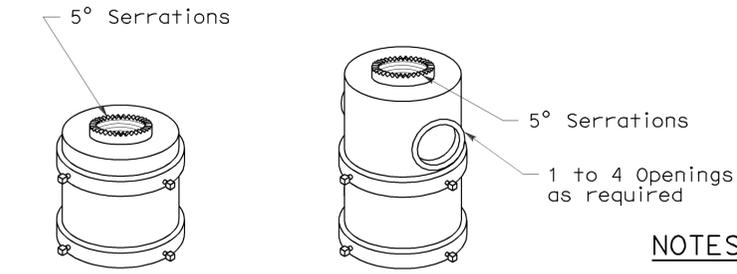
MAST ARM MOUNTING - TYPE "MAT"

For 2 NPS pipe, see Note 1.



MAST ARM MOUNTING - TYPE "MAS"

For 2 NPS pipe. See Note 1.



For one mounting For multiple mountings

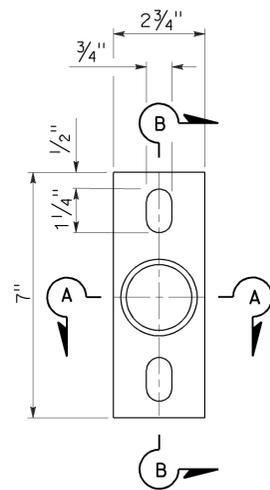
TOP MOUNTINGS

For 4 NPS pipe, see Note 2.

NOTES:

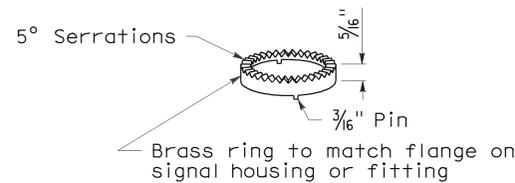
- After mast arm signal has been plumbed and secured, drill 7/16" hole through mast arm tenon in line with slip fitter hole. Place a cadmium plated 3/8" ø galvanized bolt with washer under bolt head through hole and secure with washer, nut, and locknut. Seal openings between mast arm mountings and mast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

SIGNAL SLIP FITTERS



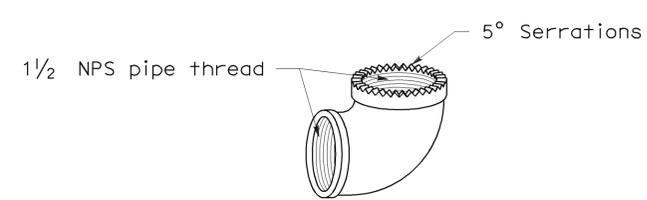
POLE PLATE

For side mountings



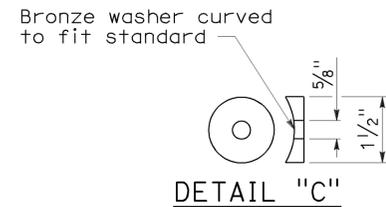
LOCK RING

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

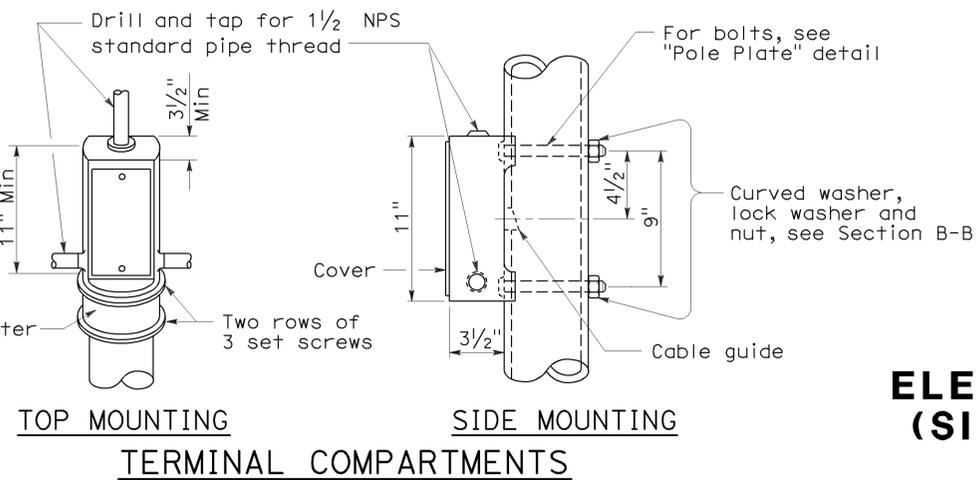
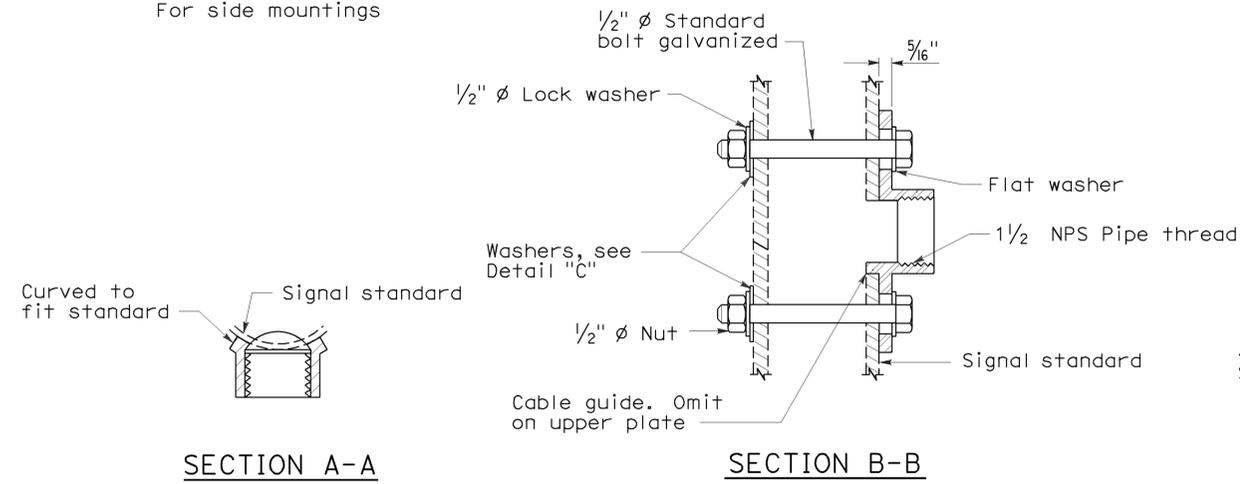


SPECIAL 90° ELBOW

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



MISCELLANEOUS MOUNTING HARDWARE



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
06	Tul	63	R8.0/22.3	43	47

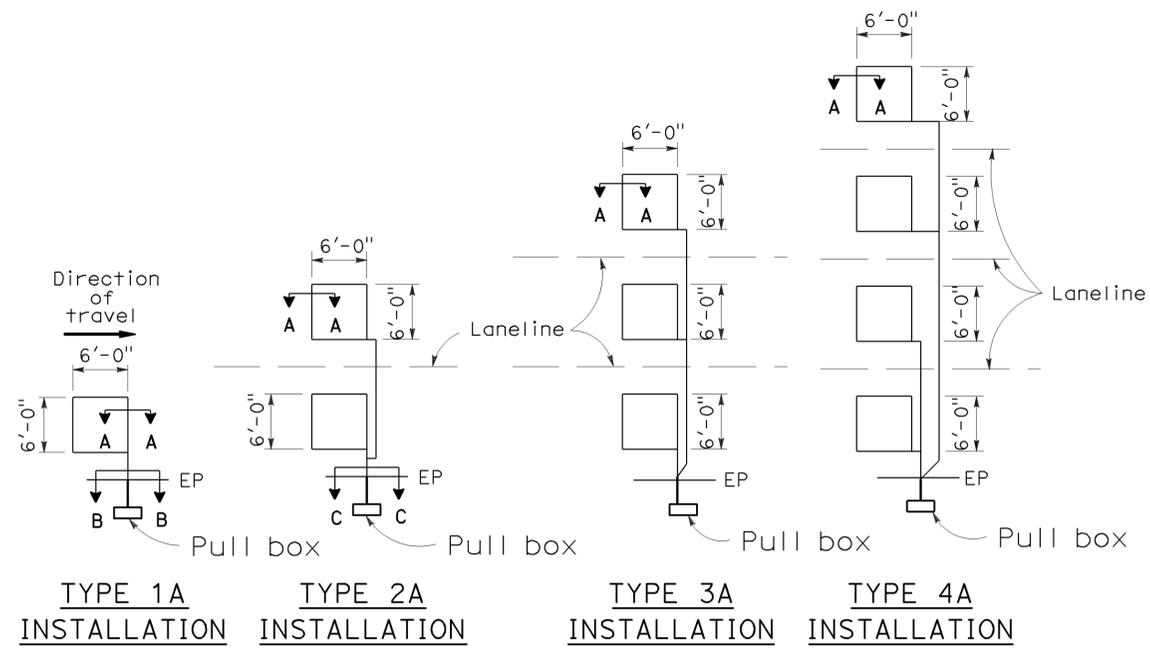
Jeffery G. McRae
 REGISTERED ELECTRICAL ENGINEER
 No. E14512
 Exp. 6-30-08
 ELECTRICAL
 STATE OF CALIFORNIA

October 5, 2007
 PLANS APPROVAL DATE

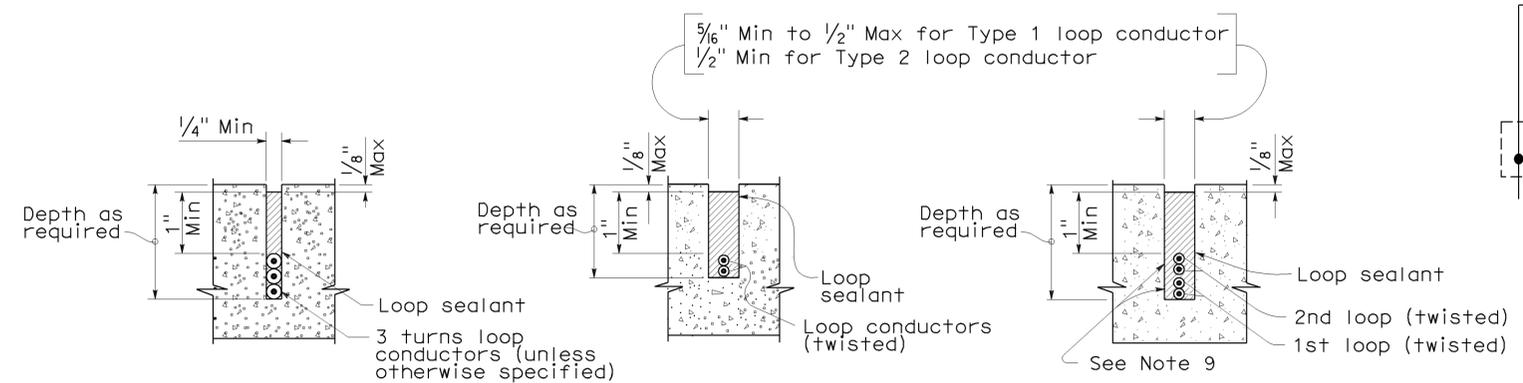
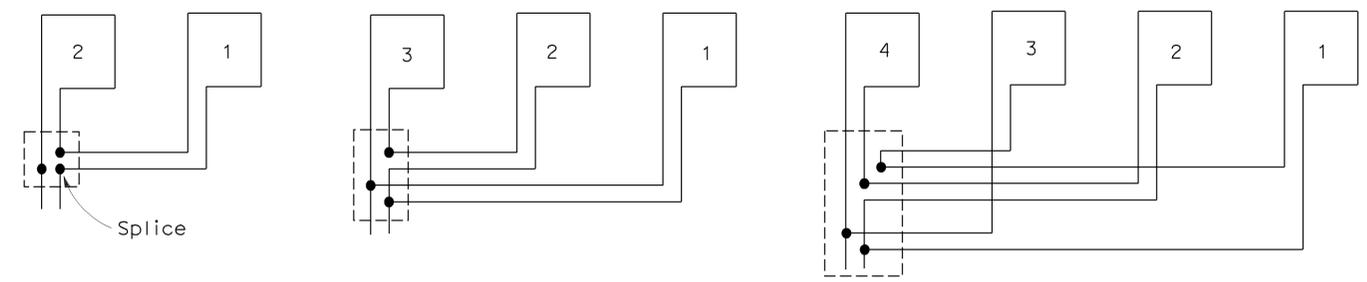
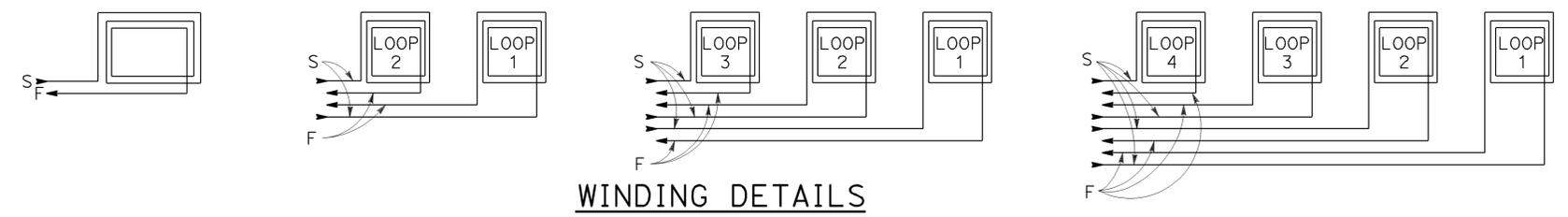
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

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.



- 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)



ELECTRICAL SYSTEMS (DETECTORS)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

NO SCALE

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

REVISED STANDARD PLAN RSP ES-5A

2006 REVISED STANDARD PLAN RSP ES-5A

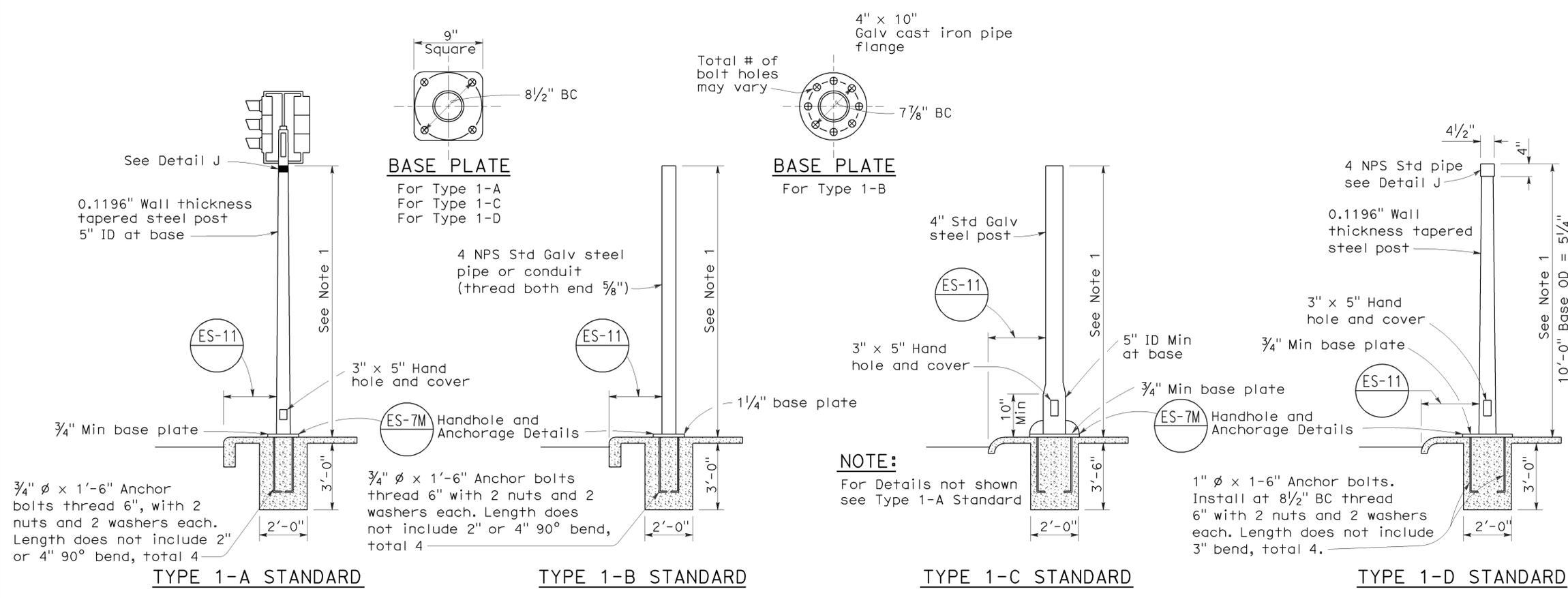
To accompany plans dated 4-19-10

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	63	R8.0/22.3	44	47

Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 October 5, 2007
 PLANS APPROVAL DATE
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

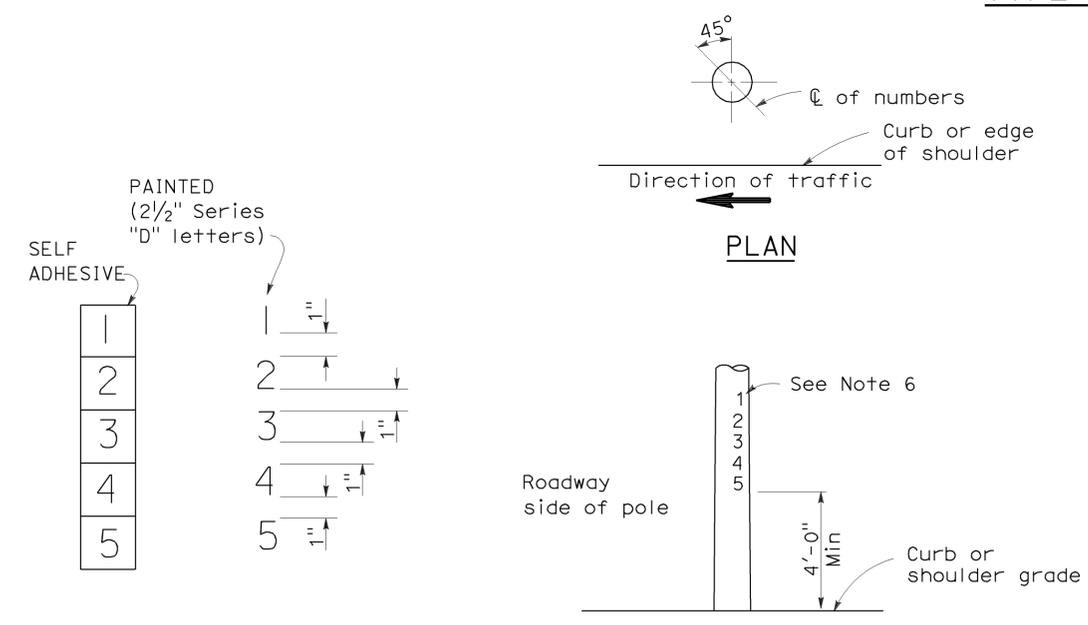
REGISTERED PROFESSIONAL ENGINEER
 Stanley P. Johnson
 No. C57793
 Exp. 3-31-08
 CIVIL
 STATE OF CALIFORNIA

To accompany plans dated 4-19-10

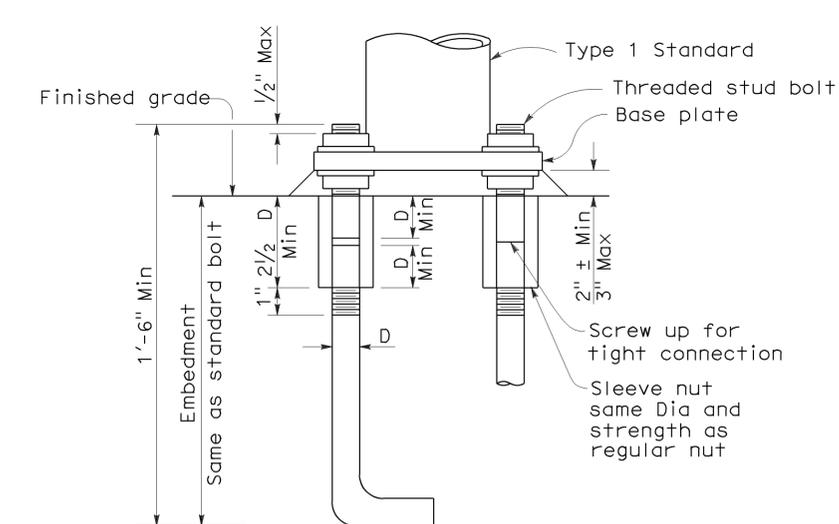


- NOTES:**
- Standards shall be 10'-0" ± 2" for vehicle signals and 7'-0" ± 2" for pedestrian signals unless otherwise noted on plans.
 - Top of standards shall be 4 1/2" OD.
 - Conduits shall extend 2" maximum above finished surface of foundation and for Types 1-A, 1-C and 1-D shall be sloped toward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

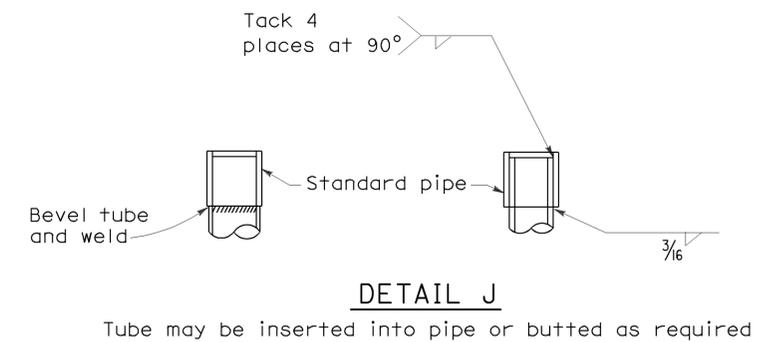
TYPE 1 SIGNAL STANDARDS



LOCATION OF EQUIPMENT NUMBERS ON STANDARDS AND POSTS



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



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

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

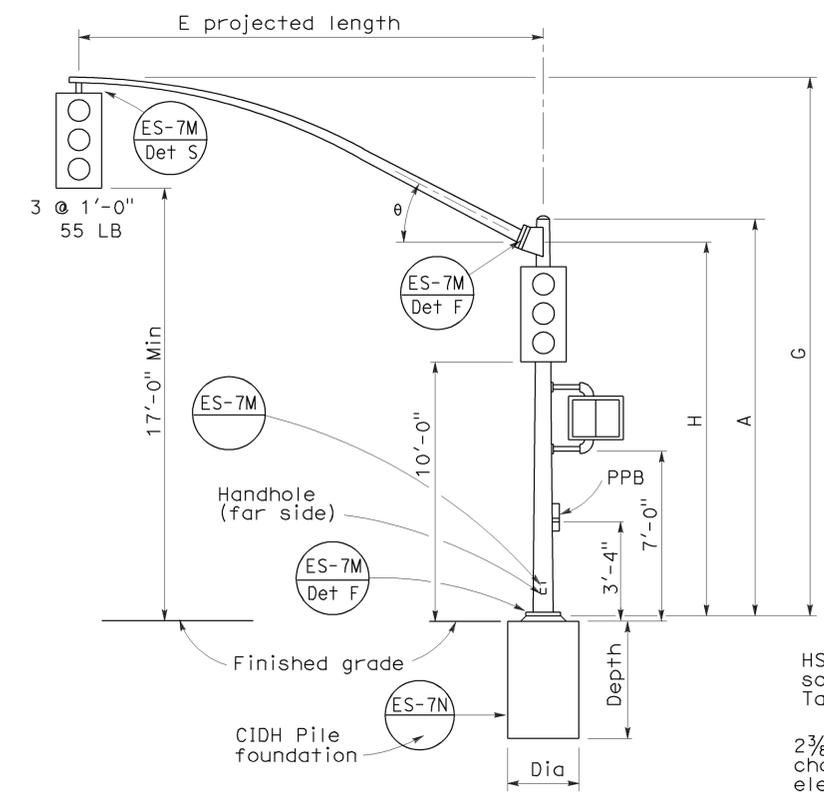
NO SCALE

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

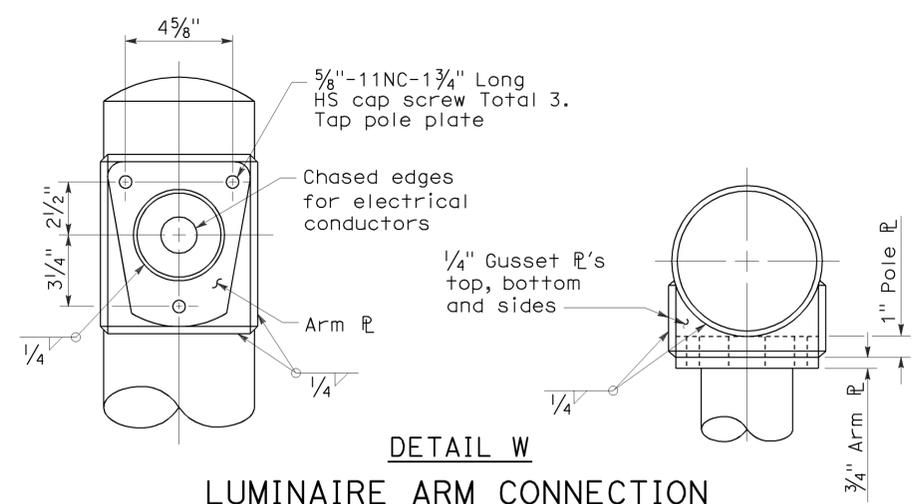
REVISED STANDARD PLAN RSP ES-7B

2006 REVISED STANDARD PLAN RSP ES-7B

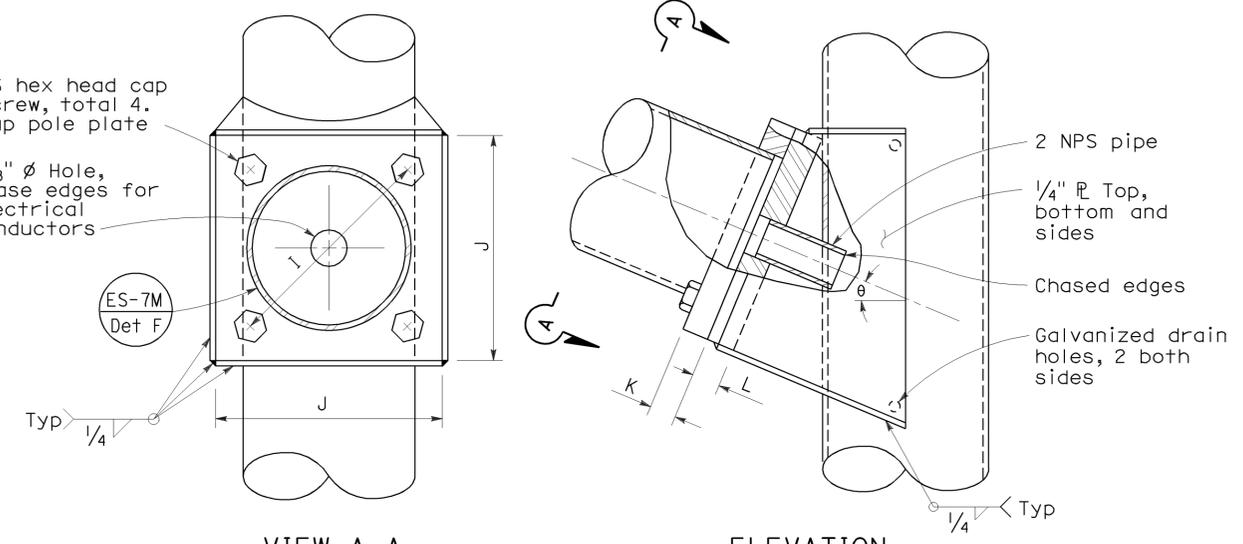
2006 REVISED STANDARD PLAN RSP ES-7C



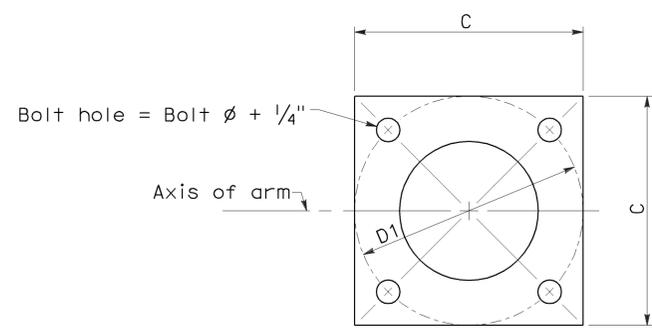
ELEVATION
TYPE 16-1-100, 18-1-100



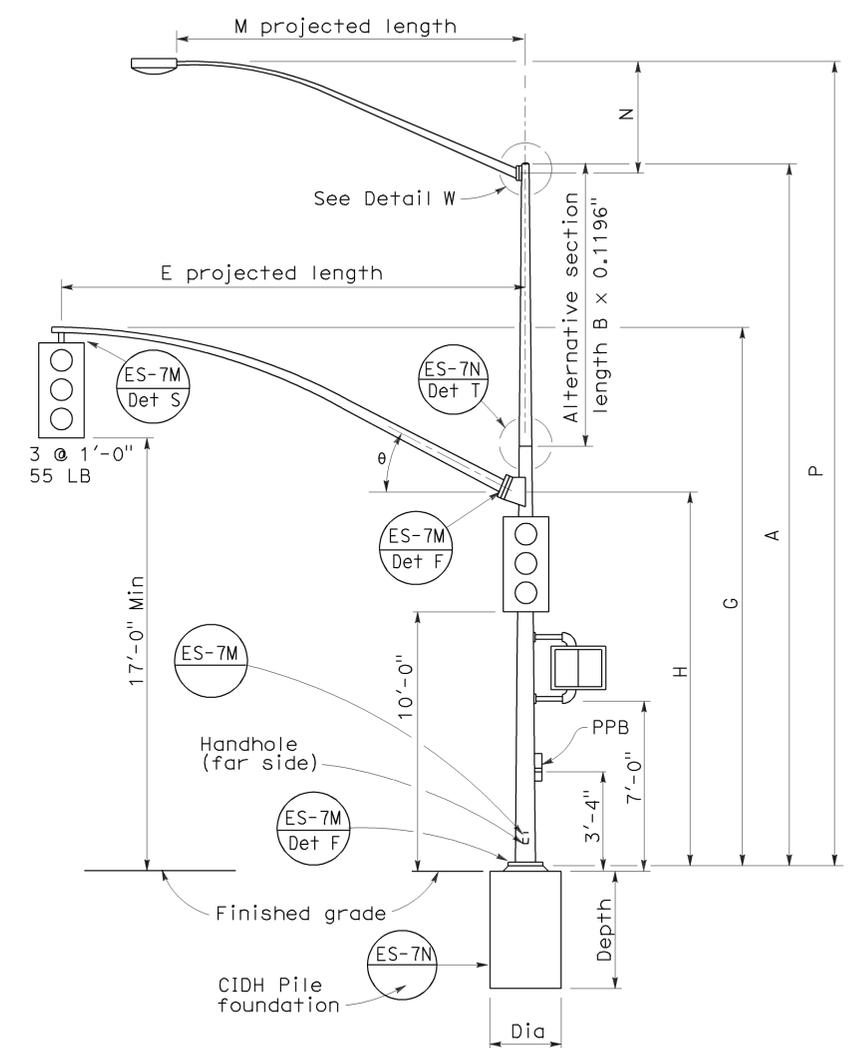
DETAIL W
LUMINAIRE ARM CONNECTION



VIEW A-A
SIGNAL ARM CONNECTION DETAILS



BASE PLATE



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

E Projected Length	G Mounting Height	H	Min OD At Pole	Thickness	I Bolt Circle	HS Cap Screws	J Plate size	K Arm R Thickness	L Pole R Thickness	θ
15'-0"	21'-8"±	17'-6"	7"	0.1196"	12"	1 1/4"-7NC-3"	1'-0"	1 1/4"	1 1/2"	23°
20'-0"	21'-8"±		7 1/8"							
25'-0"	22'-8"±	16'-0"	7 5/8"							
30'-0"	23'-0"±		8"							

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

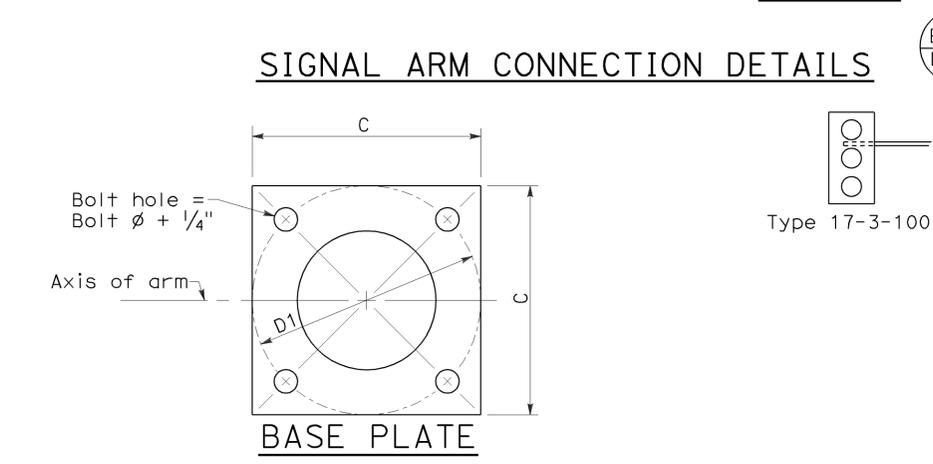
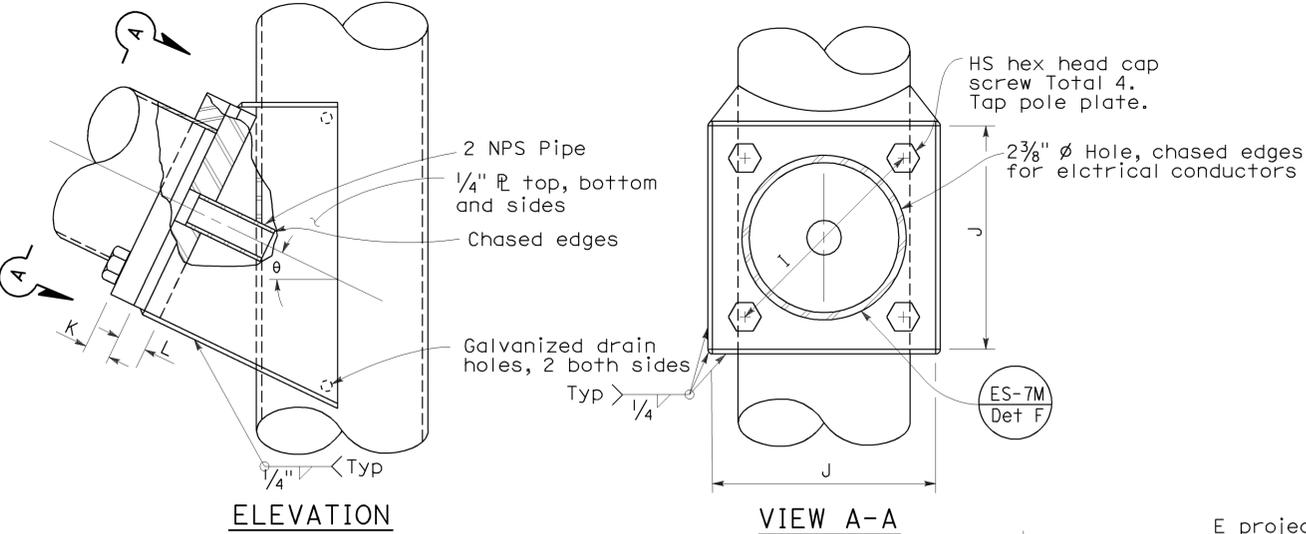
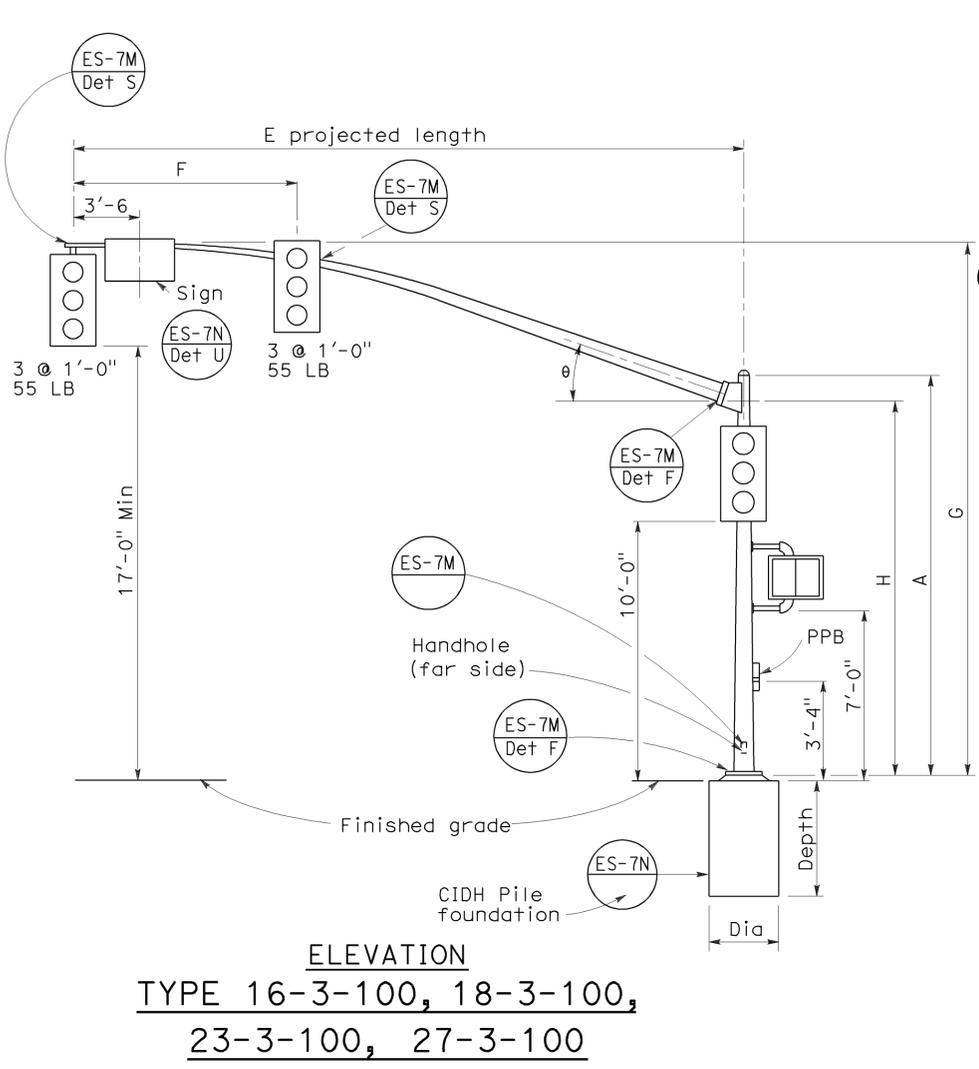
□ Indicates arm length to be used unless otherwise noted on plans.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD
CASE 1 ARM LOADING
WIND VELOCITY = 100 MPH
ARM LENGTHS 15' TO 30')
 NO SCALE
 RSP ES-7C DATED JUNE 15, 2007 SUPERSEDES STANDARD PLAN ES-7C
 DATED MAY 1, 2006 - PAGE 439 OF THE STANDARD PLANS BOOK DATED MAY 2006.
REVISED STANDARD PLAN RSP ES-7C

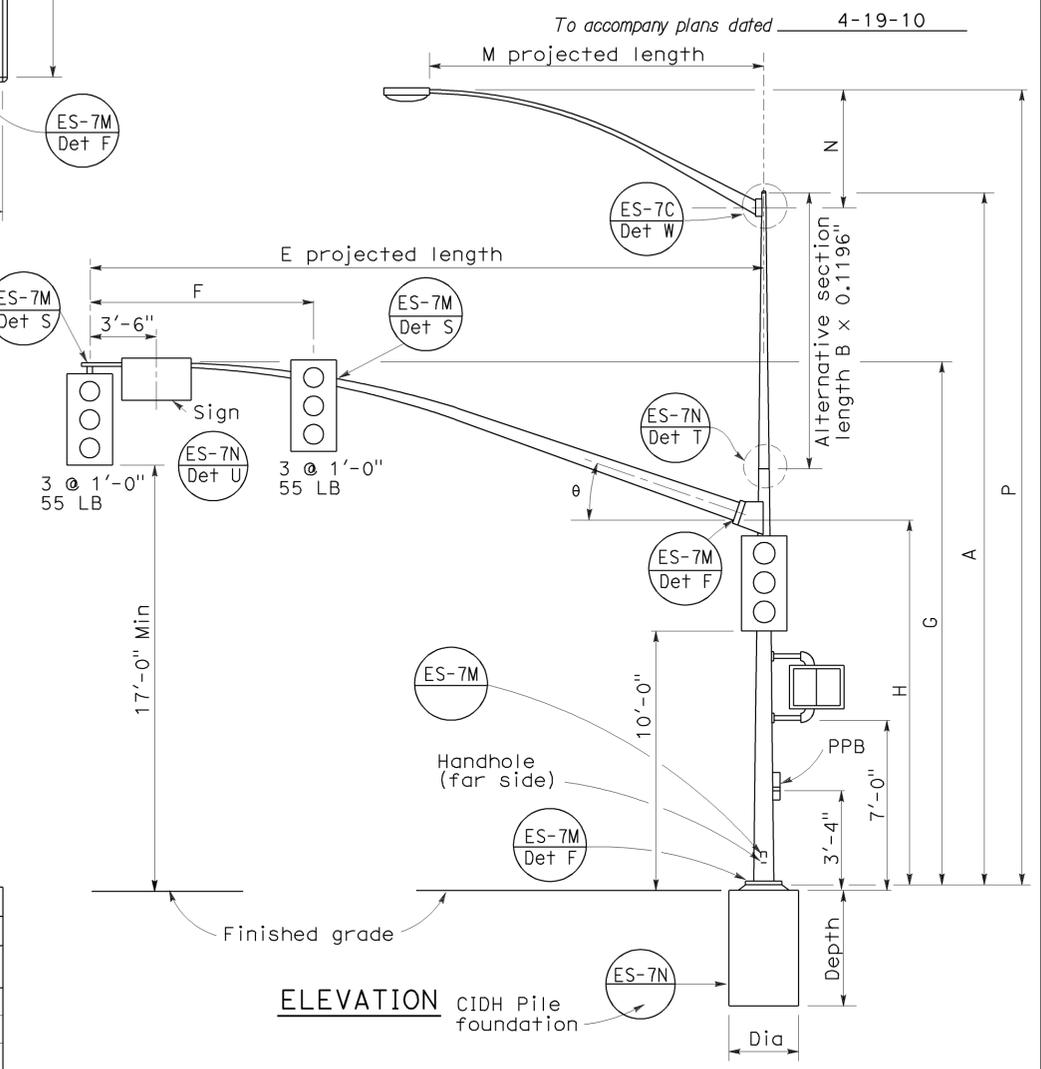
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	63	R8.0/22.3	46	47

REGISTERED CIVIL ENGINEER
 June 30, 2006
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
 Jeffrey B. Woody
 No. C41260
 Exp. 3-31-07
 CIVIL
 STATE OF CALIFORNIA



ELEVATION
TYPE 16-3-100, 18-3-100,
23-3-100, 27-3-100



ELEVATION
TYPE 17-3-100, 24A-3-100,
19-3-100, 26-3-100,
19A-3-100, 26A-3-100, 24-3-100

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 R Thickness	L Pole R Thickness	theta
15'-0"	8'-0"	21'-8"±	17'-6"	6 5/8"	0.1793"	12"	1 1/4"-7NC-3"	1'-0"	1 1/4"	1 1/2"	23°
20'-0"		21'-8"±		7"							
25'-0"	12'-0"	22'-8"±		7 5/8"							
30'-0"				8"							
35'-0"	14'-0"	23'-0"±	16'-0"	8 3/4"	0.2391"	13"	1'-1"	1 1/2"	1 3/4"	21°	
40'-0"	15'-0"			9 3/8"							
45'-0"		23'-8"±		10 1/16"							

M Projected Length	N Rise	Min OD at Pole	Thickness	P Mounting Height Pole	P Mounting Height 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"±

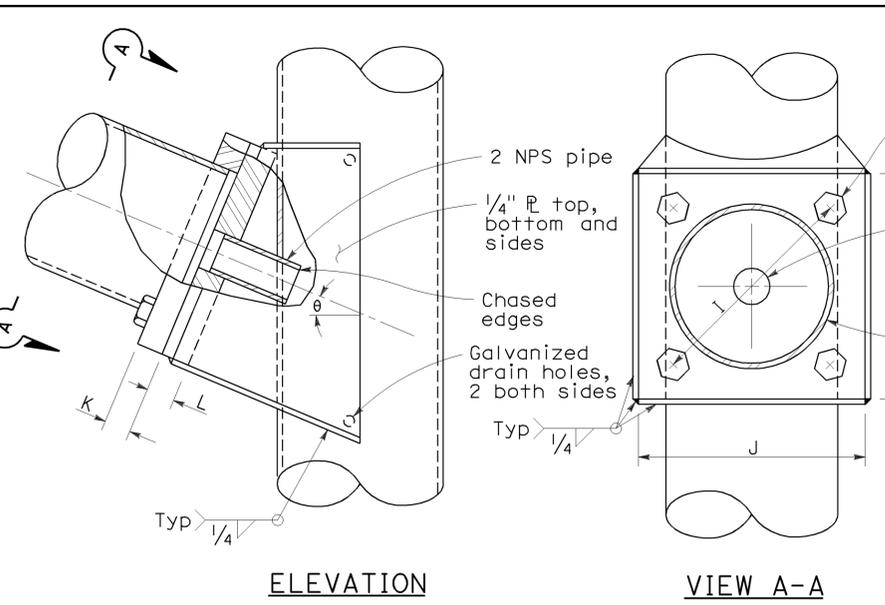
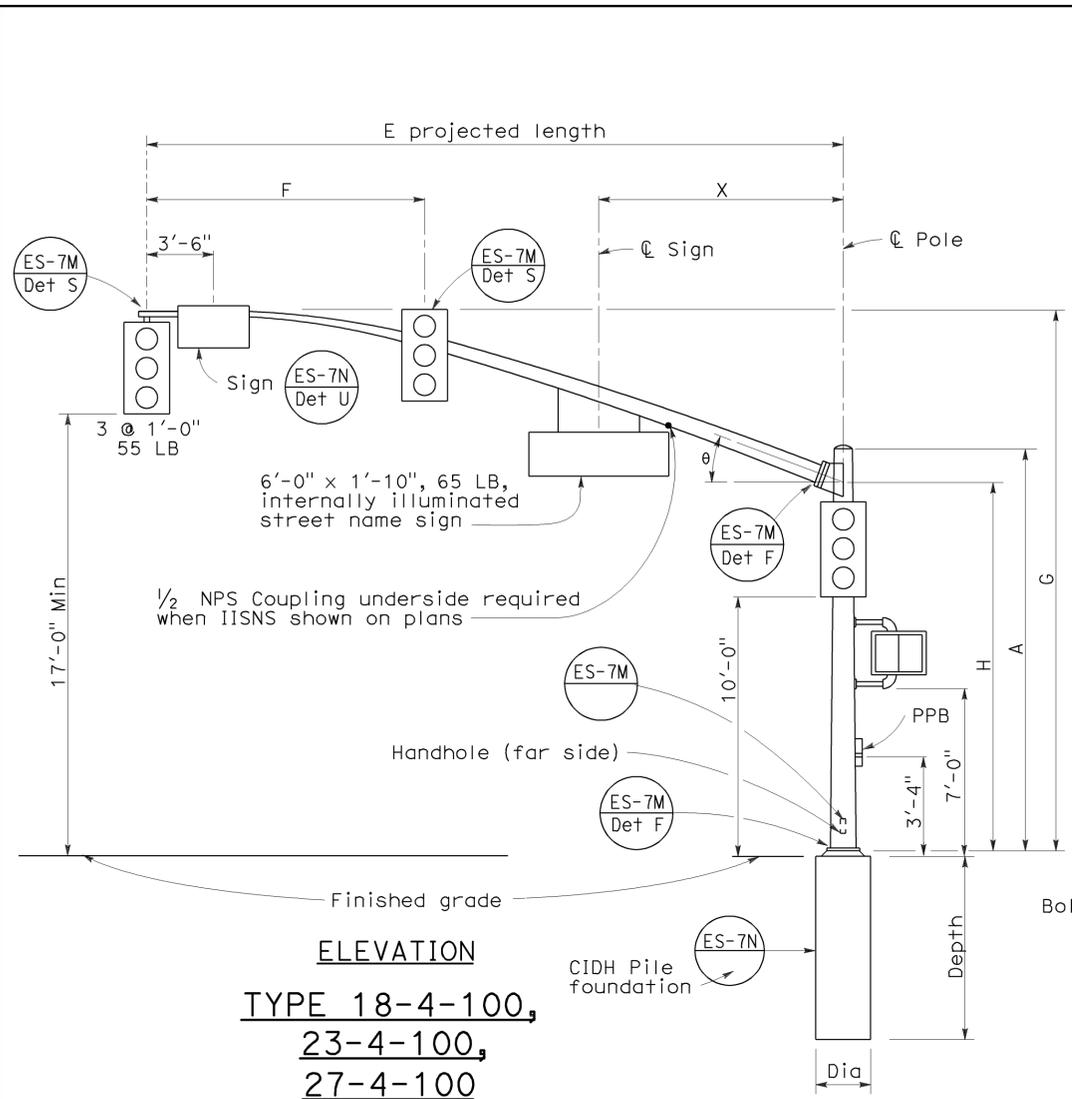
Pole Type	Load Case	Wind Velocity mph	POLE DATA				BASE PLATE DATA				Luminaire Arm	Signal Arm	CIDH PILE FOUNDATION					
			A Height	Min OD		Thickness	Alternative Section			C			D1 Bolt Circle	Thickness	Anchor Bolts Size	Diameter	Depth	Reinforced
				Base	Top		B Length	Bottom	Top									
16-3-100	3	100	18'-6"	10 3/4"	8 1/4"	0.1793"	None	8"	7 5/16"	1'-6"	1'-5 1/2"	1 1/2"	2"ø x 42" x 6"	3'-0"	9'-0"	Yes		
17-3-100			30'-0"		6 5/8"		10'-0"		7 5/16"									
18-3-100			17'-0"	8 7/16"	None													
19-3-100			30'-0"	7 7/8"	10'-0"	9 1/4"	7 7/8"											
19A-3-100			35'-0"	7 3/16"	15'-0"	7 3/16"												
23-3-100			17'-0"	9 5/8"	None													
24-3-100			30'-0"	7 7/8"	10'-0"	9 1/4"	7 7/8"											
24A-3-100			35'-0"	7 3/16"	15'-0"	7 3/16"												
26-3-100			30'-0"	8"	10'-0"	9 3/8"	8"											
26A-3-100			35'-0"	7 5/16"	15'-0"	7 5/16"												
27-3-100			17'-0"	9 3/4"	None													

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

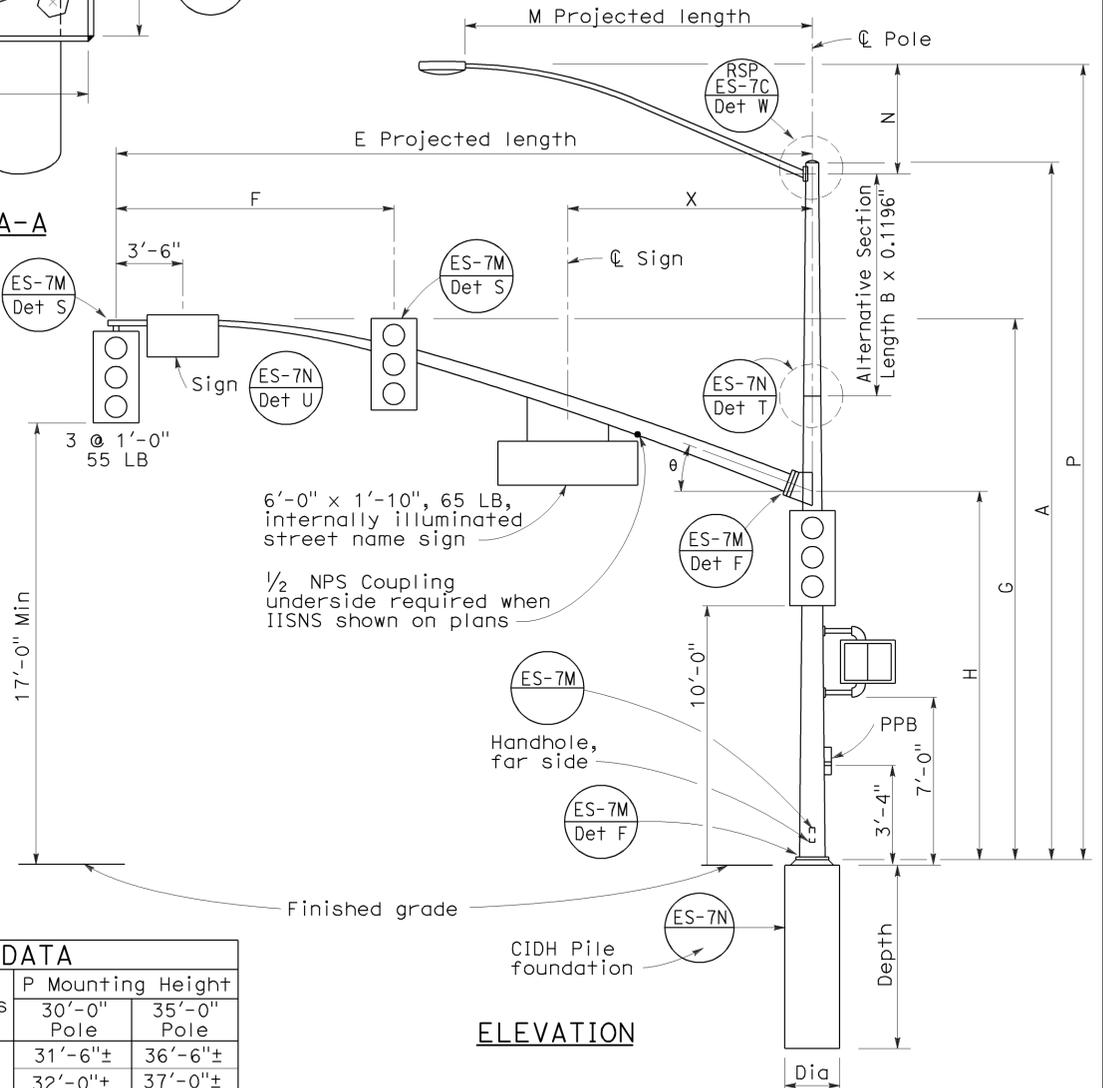
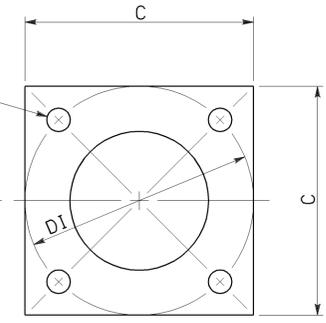
REVISED STANDARD PLAN RSP ES-7E

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD
CASE 3 ARM LOADING
WIND VELOCITY=100 MPH
ARM LENGTHS 15' TO 45')
 NO SCALE
 RSP ES-7E DATED JUNE 30, 2006 SUPERSEDES STANDARD PLAN DATED MAY 1, 2006 -
 PAGE 441 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP ES-7E



SIGNAL ARM CONNECTION DETAILS



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 Flange Thickness	L Pole Flange Thickness	θ	X Max
25'-0"	10'-0"	22'-8"±	16'-0"	7 5/16"	0.2391"	12"	1 1/4"-7NC-3"	1'-0"	1 1/4"	1 1/2"	23°	10'-6"
30'-0"	12'-0"	23'-0"±		8"								
35'-0"	14'-0"	23'-0"±		8 1/16"								
40'-0"	15'-0"	23'-8"±		9 3/8"								
45'-0"		23'-8"±		10 1/4"		13 1/2"						

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

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

ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD
CASE 4 ARM LOADING
WIND VELOCITY=100 MPH
ARM LENGTHS 25' TO 45')
 NO SCALE
 RSP ES-7F DATED OCTOBER 5, 2007 SUPERCEDES RSP ES-7F DATED NOVEMBER 17, 2006 AND STANDARD PLAN ES-7F DATED MAY 1, 2006 - PAGE 442 OF THE STANDARD PLANS BOOK DATED MAY 2006.

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

2006 REVISED STANDARD PLAN RSP ES-7F