Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	138	87.2/88.9	101	156

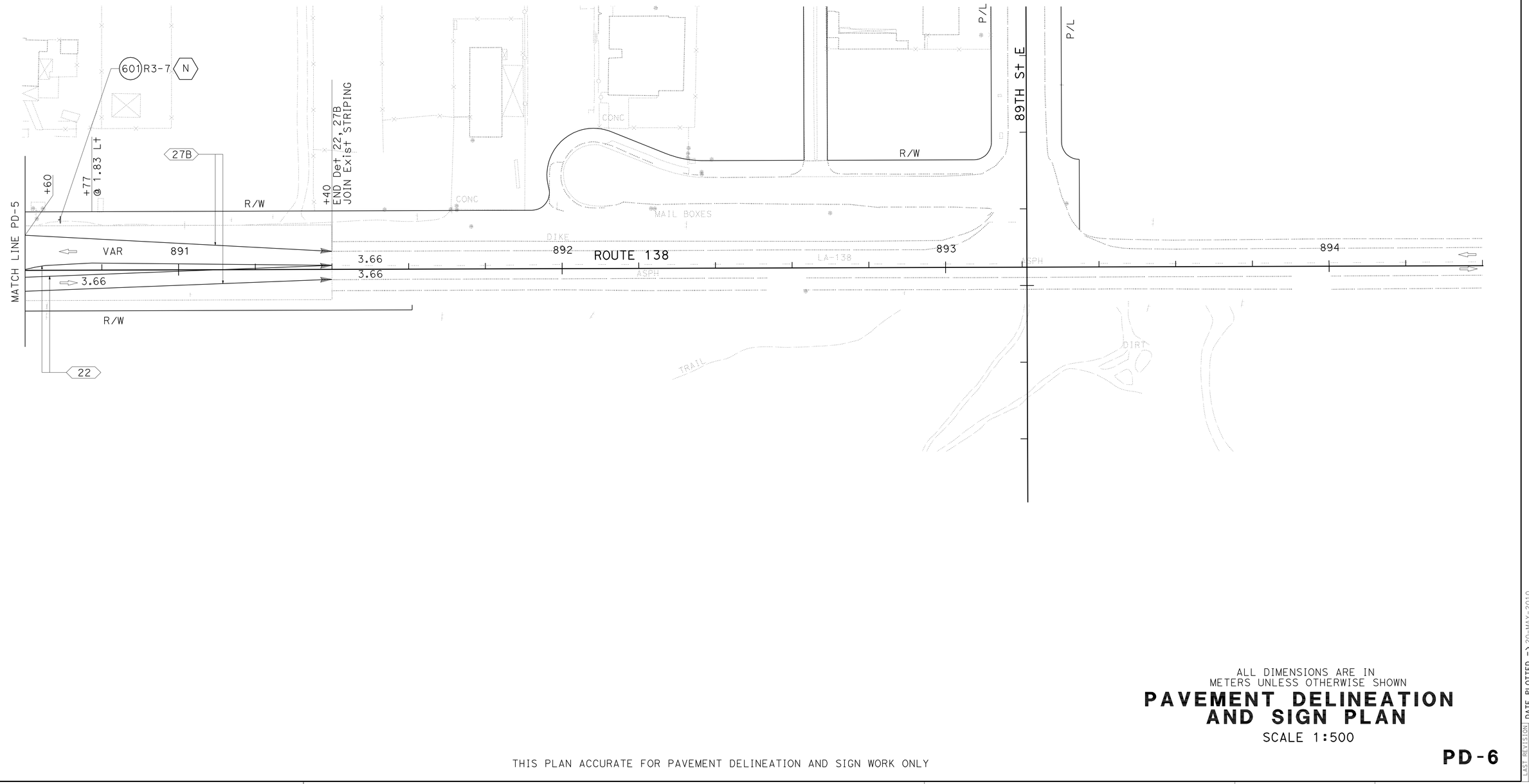
10/26/09
REGISTERED CIVIL ENGINEER DATE

EDGAR HERRERA
No. C 67603
Exp. 6/30/11
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

5-17-10
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.

Caltrans Metric



ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PAVEMENT DELINEATION AND SIGN PLAN

SCALE 1:500

PD-6

THIS PLAN ACCURATE FOR PAVEMENT DELINEATION AND SIGN WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans **TRAFFIC DESIGN**

FUNCTIONAL SUPERVISOR: GRISH BIGLARIAN
CALCULATED-DESIGNED BY: MARISA MANDOCDOC
CHECKED BY: EDGAR HERRERA
REVISED BY
DATE REVISED

LAST REVISION DATE PLOTTED => 20-MAY-2010
01-04-10 TIME PLOTTED => 13:07

BORDER LAST REVISED 3/1/2007

RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80

USERNAME => trstrk
DGN FILE => 712722na06.dgn

CU 07380

EA 127221

NOTES:

1. STREET NAME SHALL BE 100 mm UPPER CASE SERIES "B" LETTERS AND NUMBERS AND 75 mm LOWER CASE SERIES "B" LETTERS.
2. TWO FASTENERS (RIVETS) SHALL BE USED TO ATTACH STREET NAME SIGN BLADES OF 760 mm SIGNS TO BRACKET. THREE FASTENERS SHALL BE USED TO ATTACH STREET NAME SIGN BLADES OF 915 AND 1070 mm SIGNS TO BRACKET.
3. EXACT LOCATION AND POSITION OF ROADSIDE SIGNS WILL BE DETERMINED BY THE ENGINEER.

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	138	87.2/88.9	102	156

Caltrans Metric

10/26/09
REGISTERED CIVIL ENGINEER DATE

EDGAR HERRERA No. C 67603 Exp. 6/30/11 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

5-17-10
PLANS APPROVAL DATE

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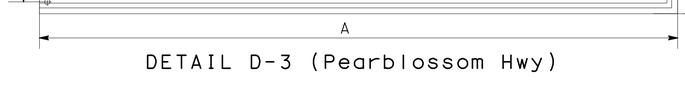
DETAIL DIMENSIONS (mm)

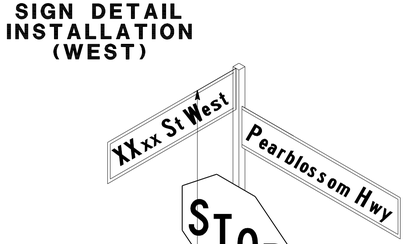
SIGN CODE	A	B	C	D	E	F	G	H	I	DESCRIPTION
D-3	1070	50	100	75	205	160	13	8	9	PEARBLOSSOM HWY
D-3	760	50	100	75	205	160	13	8	9	77th, 80th, 82nd, 85th & 87th

DETAIL D-3 (Pearblossom Hwy)

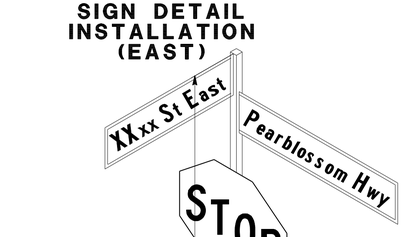


DETAIL D-3 (XXxx St East)

SIGN DETAIL INSTALLATION (WEST)



SIGN DETAIL INSTALLATION (EAST)



ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PAVEMENT DELINEATION AND SIGN DETAILS

NO SCALE

PDD-1

THIS PLAN ACCURATE FOR PAVEMENT DELINEATION AND SIGN WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: GRISH BIGLARIAN
CALCULATED-DESIGNED BY:
CHECKED BY: EDGAR HERRERA
MARISA MANDOCDOC

REVISED BY | DATE REVISED

LAST REVISION: 01-04-10
DATE PLOTTED => 20-MAY-2010
TIME PLOTTED => 13:07

BORDER LAST REVISED 3/1/2007
RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80
USERNAME => trstrk
DGN FILE => 712722nb01.dgn
CU 07380
EA 127221

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	138	87.2/88.9	103	156

REGISTERED CIVIL ENGINEER — 10/26/09 DATE

EDGAR HERRERA No. C 67603 Exp. 6/30/09 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

5-17-10
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.

SHEET No.	THERMOPLASTIC TRAFFIC STRIPE							THERMOPLASTIC PAVEMENT MARKING				PAVEMENT MARKER		REMOVE			
	BROKEN		SOLID									RETROREFLECTIVE					
	DETAIL 32 100 mm BROKEN YELLOW STRIPE (5.18 m-2.14 m)	DETAIL 35A 100 mm BROKEN YELLOW STRIPE (10.98 m-3.66 m)	DETAIL 22 100 mm YELLOW STRIPE	DETAIL 27B 100 mm WHITE STRIPE	DETAIL 32 100 mm YELLOW STRIPE	DETAIL 35A 100 mm YELLOW STRIPE	DETAIL 38 200 mm WHITE STRIPE	ARROW	CROSSWALK & LIMIT LINE	TEXT	DIAGONAL (YELLOW)	TYPE D	TYPE G	YELLOW THERMOPLASTIC TRAFFIC STRIPE (HAZARDOUS WASTE)	THERMOPLASTIC PAVEMENT MARKINGS *	THERMOPLASTIC TRAFFIC STRIPE	PAVEMENT MARKERS *
	m	m	m	m	m	m	m	m^2	m^2	m^2	m^2	EA	EA	m	m^2	m	EA
PD - 1	202	128	436	189	202	128	78	5.56	43.6	4.08	4.2	103	11	560	7.0	416	58
PD - 2	434	126	460	0	434	126	61	5.56	40.2	4.08	3.1	146	8	760	8.0	722	137
PD - 3	400	0	864	146	400	0	104	15.3	46.50	0	4.8	186	14	934	4.0	1070	210
PD - 4	537	60	264	0	537	60	31	2.78	30.9	8.16	4.6	132	4	800	4.0	729	131
PD - 5	410	0	1042	476	410	0	95	16.68	55.7	0	1.5	212	13	1020	5.0	1174	214
PD - 6	0	0	320	160	0	0	0	0	0	0	0	44	0	160	0	160	78
SUB - TOTAL	1983	314	3386	971	1983	314	369	45.88	216.9	16.32	18.2	823	50	4234	28	4271	828
TOTAL	1983	314	6654				369	297.3				873		4234	28	4271	828

* FOR ADDITIONAL QUANTITIES SEE SC SHEETS

PAVEMENT DELINEATION QUANTITIES
PDQ-1

CALCULATED-DESIGNED BY: MARISA MANDOCDOC
CHECKED BY: EDGAR HERRERA
REVISED BY
DATE REVISED
FUNCTIONAL SUPERVISOR: GRISH BIGLARIAN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

LAST REVISION DATE PLOTTED => 20-MAY-2010
TIME PLOTTED => 13:07

BORDER LAST REVISED 3/1/2007
RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80
USERNAME => trstrk
DGN FILE => 712722nc01.dgn
CU 07380
EA 127221

LEGEND

L : LENGTH OF SIGN
D : DEPTH OF SIGN

NOTES:

1. EXACT LOCATION AND POSITION OF ROADSIDE SIGNS WILL BE DETERMINED BY THE ENGINEER.
2. SIGNS ARE MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, SEP 2006 EDITION) CODED EXCEPT AS NOTED.
3. (CA) DENOTES CALIFORNIA CODED SIGNS.
4. FOR SIGN SPECIFICATIONS SEE CALTRANS WEBSITE: http://www.dot.ca.gov/hq/traffops/signtech/signdel/specs.htm

Caltrans Metric

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	138	87.2/88.9	104	156

10/26/09
REGISTERED CIVIL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER
EDGAR HERRERA
No. C 67603
Exp. 6/30/09
CIVIL
STATE OF CALIFORNIA

5-17-10
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.

ROADSIDE SIGNS - (ONE POST)

SHEET No.	SIGN No.	SIGN CODE	PANEL SIZE (mm x mm)	POST DATA				ROADSIDE SIGNS		MATERIAL SUMMARY								REMARKS
				SIZE (mm x mm)	H (m)	E (m)	LENGTH	INSTALL	REMOVE		BACKGROUND		LEGEND			GRAFFITI FILM	SINGLE SHEET UNFRAMED ALUMINUM	
										SINGLE FACED	SHEETING COLOR	RETRO-REFLECTIVE ASTM TYPE	SHEETING COLOR	RETRO-REFLECTIVE ASTM TYPE	NON REFLECTIVE	PREMIUM	1.6 mm	
							H	EA	EA								m^2	
PD-1	101	R1-1	600 X 600	89 X 89	2.48	1.1	3.58	1	1	X	RED	III	WHITE	III		X	0.36	STOP
	102	R1-1	600 X 600	89 X 89	2.48	1.1	3.58	1	1	X	RED	III	WHITE	III		X	0.36	STOP
	103	D3-1	1070 X 205 760 X 205	89 X 89	2.48	1.1	3.58	1	1	X	BLUE	III	WHITE	III		X	0.38	PEARBLOSSOM Hwy, 77th St East
	104	D3-1	1070 X 205 760 X 205	89 X 89	2.48	1.1	3.58	1	1	X	BLUE	III	WHITE	III		X	0.38	PEARBLOSSOM Hwy, 77th St East
PD-2	201	R1-1	600 X 600	89 X 89	2.48	1.1	3.58	1	1	X	RED	III	WHITE	III		X	0.36	STOP
	202	D3-1	1070 X 205 760 X 205	89 X 89	2.48	1.1	3.58	1	1	X	BLUE	III	WHITE	III		X	0.38	PEARBLOSSOM Hwy, 80th St East
	203	W11-2	750 X 750	89 X 140	2.48	1.1	3.58	1	1	X	WHITE	III	BLACK		X	X	0.56	PEDESTRIAN TRAFFIC
	204	R26A(S)(CA)	610 X 760	89 X 89	2.48	1.1	3.58	1	1	X	WHITE	III	RED	III		X	0.46	NO STOPPING ANY TIME
	205	R26A(S)(CA)	610 X 760	89 X 89	2.48	1.1	3.58	1	1	X	WHITE	III	RED	III		X	0.46	NO STOPPING ANY TIME
	206	R26A(S)(CA)	610 X 760	89 X 89	2.48	1.1	3.58	1	1	X	WHITE	III	RED	III		X	0.46	NO STOPPING ANY TIME
	207	D3-1	1070 X 205 760 X 205	89 X 89	2.48	1.1	3.58	1	1	X	BLUE	III	WHITE	III		X	0.38	PEARBLOSSOM Hwy, 80th ST. East
	208	R1-1	600 X 600	89 X 89	2.48	1.1	3.58	1	1	X	RED	III	WHITE	III		X	0.38	STOP
	209	R26A(S)(CA)	610 X 760	89 X 89	2.48	1.1	3.58	1	1	X	WHITE	III	RED	III		X	0.46	NO STOPPING ANY TIME
	210	R26A(S)(CA)	610 X 760	89 X 89	2.48	1.1	3.58	1	1	X	WHITE	III	RED	III		X	0.46	NO STOPPING ANY TIME
	211	R26A(S)(CA)	610 X 760	89 X 89	2.48	1.1	3.58	1	1	X	WHITE	III	RED	III		X	0.46	NO STOPPING ANY TIME
PD-3	301	S5-2	600 X 750	89 X 89	2.48	1.1	3.58	1		X	WHITE	III	BLACK		X	X	0.45	END SCHOOL ZONE
	302	S5-2							1									
	303	G28-2(138)	635 X 710	89 X 89	2.48	1.1	3.58	1	1	X	GREEN	III	WHITE	III		X	0.45	STATE ROUTE 138 MARKER
		M3-4	600 X 300							X	GREEN	III	WHITE	III		X	0.18	CARDINAL DIRECTION AUXILIARY (WEST)
	304	S1-1	900 X 900	89 X 140	2.48	1.1	3.58	1		X	YELLOW	III	BLACK		X	X	0.81	SCHOOL (ICON)
		W16-7pL	600 X 300							X	YELLOW	III	BLACK		X	X	0.18	LEFT DIAGONAL ARROW PLAQUE
	305	R3-7R	750 X 750	89 X 140	2.48	1.1	3.58	1		X	WHITE	III	BLACK		X	X	0.56	RIGHT LANE MUST TURN RIGHT
							SHEET TOTAL	19	17								8.93	

SIGN QUANTITIES

SQ-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
FUNCTIONAL SUPERVISOR: GRISH BIGLARIAN
CALCULATED-DESIGNED BY: MARISA MANDOCDOC
CHECKED BY: EDGAR HERRERA
REVISED BY
DATE REVISED

LAST REVISION DATE PLOTTED => 20-MAY-2010
01-04-10 TIME PLOTTED => 13:07

BORDER LAST REVISED 3/1/2007
RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80
USERNAME => trstrk
DGN FILE => 712722oc01.dgn
CU 07380
EA 127221

LEGEND

L : LENGTH OF SIGN
D : DEPTH OF SIGN

NOTES:

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2. SIGNS ARE MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, SEP 2006 EDITION) CODED EXCEPT AS NOTED.
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4. FOR SIGN SPECIFICATIONS SEE CALTRANS WEBSITE: http://www.dot.ca.gov/hq/traffops/signtech/signdel/specs.htm

Caltrans Metric

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	138	87.2/88.9	105	156

10/26/09
REGISTERED CIVIL ENGINEER DATE

EDGAR HERRERA No. C 67603 Exp.6/30/09 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

5-17-10
PLANS APPROVAL DATE

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ROADSIDE SIGNS - (ONE POST)

SHEET No.	SIGN No.	SIGN CODE	PANEL SIZE (mm x mm)	POST DATA				ROADSIDE SIGNS		MATERIAL SUMMARY								REMARKS
										BACKGROUND			LEGEND			GRAFFITI FILM	SINGLE SHEET UNFRAMED ALUMINUM	
				SIZE (mm x mm)	H (m)	E (m)	LENGTH	INSTALL	REMOVE	SINGLE FACED	SHEETING COLOR	RETRO-REFLECTIVE ASTM TYPE	SHEETING COLOR	RETRO-REFLECTIVE ASTM TYPE	NON REFLECTIVE	PREMIUM	1.6 mm	
							H	EA	EA								m^2	
PD-3	306	W74(L+)(CA)	916 X 916	89 X 140	2.48	1.1	3.58	1		X	YELLOW	III	BLACK		X	X	0.84	THRU TRAFFIC MERGE LEFT
	307	R3-7R	750 X 750	89 X 140	2.48	1.1	3.58	1		X	WHITE	III	BLACK		X	X	0.56	RIGHT LANE MUST TURN RIGHT
	308	S1-1	900 X 900	89 X 140	2.48	1.1	3.58	1	1	X	YELLOW	III	BLACK		X	X	0.81	SCHOOL (ICON)
		W16-9p	600 X 300							X	YELLOW	III	BLACK		X	X	0.18	AHEAD
	309	R4(Mod)	600 X 750	89 X 89	2.48	1.1	3.58	1	1	X	WHITE	III	BLACK		X	X	0.45	TRUCKS NO RIGHT TURN (BUSES OK)
	310	S4-3	600 X 250	89 X 140	2.48	1.1	3.58	1		X	YELLOW	III	BLACK		X	X	0.15	SCHOOL
		R2-1(25)	450 X 600							X	WHITE	III	BLACK		X	X	0.27	SPEED LIMIT (25)
		S4-2	600 X 250							X	WHITE	III	BLACK		X	X	0.15	WHEN CHILDREN ARE PRESENT
	311	S4-5a(25)	750 X 750	89 X 140	2.48	1.1	3.58	1		X	YELLOW	III	BLACK		X	X	0.56	25 MPH SCHOOL ZONE AHEAD
	312	R4(Mod)	600 X 750	89 X 89	2.48	1.1	3.58	1	1	X	WHITE	III	BLACK		X	X	0.45	TRUCKS NO RIGHT TURN (BUSES OK)
	313	S1-1	900 X 900	89 X 140	2.48	1.1	3.58	1		X	YELLOW	III	BLACK		X	X	0.81	SCHOOL (ICON)
		W16-7pR	600 X 300							X	YELLOW	III	BLACK		X	X	0.18	RIGHT DIAGONAL ARROW PLAQUE
	314	R26A(S)(CA)	610 X 760	89 X 89	2.48	1.1	3.58	1		X	WHITE	III	RED	III		X	0.46	NO STOPPING ANY TIME
	315	R26A(S)(CA)	610 X 760	89 X 89	2.48	1.1	3.58	1		X	WHITE	III	RED	III		X	0.46	NO STOPPING ANY TIME
PD-4	401	S4-3	600 X 250	89 X 140	2.48		3.58	1		X	YELLOW	III	BLACK		X	X	0.15	SCHOOL
		R2-1(25)	450 X 600							X	WHITE	III	BLACK		X	X	0.27	SPEED LIMIT (25)
		S4-2	600 X 250							X	WHITE	III	BLACK		X	X	0.15	WHEN CHILDREN ARE PRESENT
	402	S1-1	900 X 900	89 X 140	2.48	1.1	3.58	1	1	X	YELLOW	III	BLACK		X	X	0.81	SCHOOL (ICON)
		W16-9P	600 X 300							X	YELLOW	III	BLACK		X	X	0.18	AHEAD
							SHEET TOTAL	12	4								7.89	

SIGN QUANTITIES

SQ-2

CALCULATED-DESIGNED BY MARISA MANDOCDOC
CHECKED BY EDGAR HERRERA
REVISED BY
DATE REVISED
FUNCTIONAL SUPERVISOR GRISH BIGLARIAN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

LAST REVISION DATE PLOTTED => 20-MAY-2010
01-04-10 TIME PLOTTED => 13:07

BORDER LAST REVISED 3/1/2007
RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80
USERNAME => trstrk
DGN FILE => 712722oc02.dgn
CU 07380
EA 127221

LEGEND

L : LENGTH OF SIGN
D : DEPTH OF SIGN

NOTES:

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Caltrans Metric

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	138	87.2/88.9	106	156

REGISTERED CIVIL ENGINEER — DATE 10/26/09

REGISTERED PROFESSIONAL ENGINEER — EDGAR HERRERA — No. C 67603 — Exp. 6/30/09 — CIVIL — STATE OF CALIFORNIA

PLANS APPROVAL DATE 5-17-10

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ROADSIDE SIGNS - (ONE POST)

SHEET No.	SIGN No.	SIGN CODE	PANEL SIZE (mm X mm)	POST DATA				ROADSIDE SIGNS		MATERIAL SUMMARY								REMARKS
				SIZE (mm X mm)	H (m)	E (m)	LENGTH	INSTALL	REMOVE		BACKGROUND		LEGEND			GRAFFITI FILM	SINGLE SHEET UNFRAMED ALUMINUM	
							H	EA	EA	SINGLE FACED	SHEETING COLOR	RETRO-REFLECTIVE ASTM TYPE	SHEETING COLOR	RETRO-REFLECTIVE ASTM TYPE	NON REFLECTIVE	PREMIUM	1.6 mm m^2	
PD-4	403	R26A(S)(CA)	610 X 760	89 X 89	2.48	1.1	3.58	1	1	X	WHITE	III	RED	III		X	0.46	NO STOPPING ANYTIME
	404	R1-1	600 X 600	89 X 89	2.48	1.1	3.58	1	1	X	RED	III	WHITE	III		X	0.36	STOP
	405	R26A(S)(CA)	610 X 760	89 X 89	2.48	1.1	3.58	1	1	X	WHITE	III	RED	III		X	0.46	NO STOPPING ANYTIME
	406	D3-1	1070 X 205 760 X 205	89 X 89	2.48	1.1	3.58	1	1	X	BLUE	III	WHITE	III		X	0.38	PEARLBLOSSOM Hwy, 85th St East
	407	R26A(S)(CA)							1									
	408	R26A(S)(CA)	610 X 760	89 X 89	2.48	1.1	3.58	1		X	WHITE	III	RED	III		X	0.46	NO STOPPING ANYTIME
	409	R2-1(25)	450 X 600	89 X 140	2.48	1.1	3.58	1		X	WHITE	III	BLACK		X	X	0.27	SPEED LIMIT (25)
	410	R26A(S)(CA)	610 X 760	89 X 89	2.48	1.1	3.58	1	1	X	WHITE	III	RED	III		X	0.46	NO STOPPING ANYTIME
	411	R26A(S)(CA)	610 X 760	89 X 89	2.48	1.1	3.58	1	1	X	WHITE	III	RED	III		X	0.46	NO STOPPING ANYTIME
	412	S5-2	600 X 750	89 X 140	2.48	1.1	3.58	1	1	X	WHITE	III	RED	III		X	0.45	END SCHOOL ZONE
		R26A(S)(CA)	610 X 760							X	WHITE	III	RED	III		X	0.46	NO STOPPING ANYTIME
	414	OM1-3	450 X 450	89 X 140	2.48	1.1	3.58	1		X	YELLOW	III				X	0.20	YELLOW OBJECT MARKER
		W1-7	900 X 450							X	YELLOW	III	BLACK		X	X	0.40	TWO DIRECTION LARGE ARROW
	415	R3-2	600 X 600	89 X 89	2.48	1.1	3.58		1	X	WHITE/RED	III	BLACK		X	X	0.36	LEFT TURN PROHIBITION
	416	R2-1(40)	450 X 600	89 X 140	2.48	1.1	3.58	1	1	X	WHITE	III	BLACK		X	X	0.27	SPEED LIMIT (40)
PD-5	501	R2-1(25)	450 X 600	89 X 140	2.48	1.1	3.58	1	1	X	WHITE	III	BLACK		X	X	0.27	SPEED LIMIT (25)
	502	R1-1							1									
							SHEET TOTAL	12	12								5.72	

SIGN QUANTITIES

SQ-3

REVISED BY | DATE REVISED
MARISA MANDOCDOC | EDGAR HERRERA
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: GRISH BIGLARIAN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

LAST REVISION DATE PLOTTED => 20-MAY-2010
01-04-10 TIME PLOTTED => 14:05

BORDER LAST REVISED 3/1/2007 | RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80 | USERNAME => trcarol DGN FILE => 712722oc03.dgn | CU 07380 | EA 127221

LEGEND

L : LENGTH OF SIGN
D : DEPTH OF SIGN

NOTES:

1. EXACT LOCATION AND POSITION OF ROADSIDE SIGNS WILL BE DETERMINED BY THE ENGINEER.
2. SIGNS ARE MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, SEP 2006 EDITION) CODED EXCEPT AS NOTED.
3. (CA) DENOTES CALIFORNIA CODED SIGNS.
4. FOR SIGN SPECIFICATIONS SEE CALTRANS WEBSITE: http://www.dot.ca.gov/hq/traffops/signtech/signdel/specs.htm

Caltrans Metric

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	138	87.2/88.9	107	156

REGISTERED CIVIL ENGINEER — DATE 10/26/09

REGISTERED PROFESSIONAL ENGINEER — EDGAR HERRERA — No. C 67603 — Exp. 6/30/09 — CIVIL — STATE OF CALIFORNIA

PLANS APPROVAL DATE 5-17-10

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.

ROADSIDE SIGNS - (ONE POST)

SHEET No.	SIGN No.	SIGN CODE	PANEL SIZE (mm X mm)	POST DATA				ROADSIDE SIGNS		MATERIAL SUMMARY								REMARKS
										BACKGROUND			LEGEND			GRAFFITI FILM	SINGLE SHEET UNFRAMED ALUMINUM	
				SIZE (mm X mm)	H (m)	E (m)	LENGTH	INSTALL	REMOVE	SINGLE FACED	SHEETING COLOR	RETRO-REFLECTIVE ASTM TYPE	SHEETING COLOR	RETRO-REFLECTIVE ASTM TYPE	NON REFLECTIVE	PREMIUM	1.6 mm	
							H	EA	EA								m^2	
PD-5	503	R3-7R	750 X 750	89 X 140	2.48	1.1	3.58	1		X	WHITE	III	BLACK		X	X	0.56	RIGHT LANE MUST TURN RIGHT
	504	R3-7R	750 X 750	89 X 140	2.48	1.1	3.58	1		X	WHITE	III	BLACK		X	X	0.56	RIGHT LANE MUST TURN RIGHT
	505	D3-1	1070 X 205 760 X 205	89 X 89	2.48	1.1	3.58	1	1	X	BLUE	III	WHITE	III		X	0.38	PEARBLOSSOM Hwy, 87th St East
	506	R2-1(40)	450 X 600	89 X 89	2.48	1.1	3.58	1		X	WHITE	III	BLACK		X	X	0.27	SPEED LIMIT (40)
	507	R2-1(45)							1									
	508	D3-1	1070 X 205 760 X 205	89 X 89	2.48	1.1	3.58	1	1	X	BLUE	III	WHITE	III		X	0.38	PEARBLOSSOM Hwy, 87th St East
	509	R1-1							1									
	510	R2-1(45)	450 X 600	89 X 89	2.48	1.1	3.58	1		X	WHITE	III	BLACK		X	X	0.27	SPEED LIMIT (45)
PD-6	601	R3-7R	750 X 750	89 X 140	2.48	1.1	3.58	1		X	WHITE	III	BLACK		X	X	0.56	RIGHT LANE MUST TURN RIGHT
E-2	*	R3-4	600 X 600							X	WHITE/RED	III	BLACK		X	X	1.44	U-TURN PROHIBITED
E-3	*	R3-4	600 X 600							X	WHITE/RED	III	BLACK		X	X	1.44	U-TURN PROHIBITED
E-6	*	W3-3	900 X 900							X	G/R/Y	III	BLACK		X	X	0.81	SIGNAL AHEAD
																		* SEE INDICATED ELECTRICAL SHEET FOR SIGN PLACEMENT AND LOCATION
							SHEET TOTAL	7	4								6.67	
							GRAND TOTAL	50	37								29.21	

SIGN QUANTITIES

SQ-4

CALCULATED-DESIGNED BY | CHECKED BY

REVISED BY | DATE REVISED

MARISA MANDOCDOC | EDGAR HERRERA

FUNCTIONAL SUPERVISOR: GRISH BIGLARIAN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans TRAFFIC DESIGN

LAST REVISION DATE PLOTTED => 20-MAY-2010
01-04-10 TIME PLOTTED => 14:05

BORDER LAST REVISED 3/1/2007 | RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80 | USERNAME => trcarol DGN FILE => 712722oc04.dgn | CU 07380 | EA 127221

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	138	87.2/88.9	108	156

Caltrans Metric

Quang Thai 1-11-10
REGISTERED CIVIL ENGINEER DATE

5-17-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
QUANG THAI
No. C66223
Exp. 6-30-10
CIVIL
STATE OF CALIFORNIA

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

ROADWAY QUANTITIES

STATION	HOT MIX ASPHALT (TYPE A) (QC/QA)	CLASS 3 AGGREGATE BASE	LEAN CONCRETE BASE (RAPID SETTING)	IMPORTED MATERIAL (SHOULDER BACKING)	TACK COAT	ROADWAY EXCAVATION	EMBANKMENT (N)	CONCRETE PAVEMENT (RAPID STRENGTH CONCRETE)	CHAIN LINK FENCE (TYPE CL-1.2)	ROLLING CL GATE	REMOVE CONCRETE	REMOVE MASONRY WALL	REMOVE CL FENCE	REMOVE SLIDING GATE
	tonne	m^3	m^3	tonne	tonne	m^3	m^3	m^3	m	EA	m^3	m	m	EA
L-1 873+50.95 TO 875+40	3 260	336	14	175	1.2	358	588	37			28			
L-2 875+40 TO 879+20	4 510	559		387	1.8	318	723	35			14.2	11		
L-3 879+20 TO "A" 12+73	5 654	950	23	307	2.5	1 647	567	111	46.29	1	27		46.29	1
L-4 "A" 12+73 TO 886+80	4 327	565		376	1.8	681	812	34	36.24				36.24	
L-5 886+80 TO 890+60	6 629	731		354	3.0	311	751	19						
L-6 890+60 TO 891+40	950	87			0.7	185	63							
DQ-7											2.86			
TOTAL	25 330	3 228	37	1 599	11	3 500	3 504	236	82.53	1	72.06	11	82.53	1

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

COLD PLANE AC PAVEMENT

STATION	LOCATION	COLD PLANE ASPHALT CONCRETE PAVEMENT
		m^2
L-2 878+80 TO 879+20	EB	208
L-3 879+20 TO 879+40	EB	104
L-3 880+10 TO 880+37.03	EB	141
L-3 880+10 TO 880+37.03	WB	141
L-4 "A" 14+00 TO 886+80	EB	1 394
L-5 890+10 TO 890+60	EB	305
L-5 890+10 TO 890+60	WB	305
L-6 890+80 TO 891+20	EB	366
L-6 890+60 TO 891+20	WB	366
TOTAL		3 330

MINOR CONCRETE (CURB, CURB AND GUTTER, CURB RAMP AND SIDEWALK)

STATION	CURB	CURB AND GUTTER	CURB RAMP	SIDEWALK	RAISED TRUNCATED DOME (N)
	m^3	m^3	m^3	m^3	m^2
L-1 873+50.949 TO 875+40	2	43	36	39	16
L-2 875+40 TO 879+20		107	40	74	14
L-3 879+20 TO "A" 12+73	4	100	35	178	12
L-4 "A" 12+73 TO 886+80		112	25	75	9
L-5 886+80 TO 890+60		86	55	61	9
SUBTOTAL	6	448	191	427	60
TOTAL	1 072				60

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

TEMPORARY WATER POLLUTION CONTROL QUANTITIES

TEMPORARY COVER	TEMPORARY GRAVEL BAG BERM	TEMPORARY FIBER ROLL	TEMPORARY CONCRETE WASHOUT FACILITY	TEMPORARY CONSTRUCTION ENTRANCE	TEMPORARY DRAINAGE INLET PROTECTION
m^2	m	m	EA	EA	EA
200	150	400	2	6	8

SUMMARY OF QUANTITIES

Q-1

CALCULATED-DESIGNED BY	QUANG THAI	REVISED BY			
CHECKED BY	M. OJI KALU	DATE REVISED			
FUNCTIONAL SUPERVISOR	M. OJI KALU				

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OFFICE OF DESIGN B

LAST REVISION 12-29-09
DATE PLOTTED => 20-MAY-2010
TIME PLOTTED => 13:26

BORDER LAST REVISED 3/1/2007 | RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80 | USERNAME => trlim DGN FILE => 712722pa01.dgn | CU 07244 | EA 127221

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

PROJECT NOTES (THIS SHEET ONLY):

1. EXISTING 120/240 V TYPE III-BF SERVICE EQUIPMENT ENCLOSURE TO REMAIN AND WITH THE FOLLOWING:
   100 A, 240 V, 2P, MAIN
   50 A, 120 V, 1P CB -SIGNAL
   30 A, 120 V, 1P CB - LIGHTING
   15 A,120 V, 1P CB- TYPE V PEC.
   ID # 07-53-138-0-054.710
   ADDRESS: 8150 ½ PEARBLOSSOM HIGHWAY
2. SEE SHEET E-8 FOR DETAILS.

GENERAL (THIS SHEET ONLY):

1. RS ALL EXISTING POLES, AND EQUIPMENTS.
2. RC EXISTING PULL BOXES.
3. AB EXISTING DETECTOR LOOPS, AND CONDUITS.

1 NOT USED	2 Ø2 → / Ø2P ←	3 NOT USED	4 Ø4 ↓
5 NOT USED	6 Ø2P ← / Ø6 →	7 NOT USED	8 Ø8 ↑ / Ø8P ↓

EXISTING PHASE DIAGRAM

EXISTING CONDUCTOR AND CONDUIT SCHEDULE

AWG OR CABLE	CONDUCTOR RUN	1	2	3	4	5	6	7	8	9	10	11
#6	SERVICE			2		2	2	2	2	2		
#8	LUMINAIRE		2	2	2	2	2			2		
#10	SIGNAL COMMON	1	1	1	1	1	1	2	2			
#12	SIGN LIGHTING		2	2	2	2	2			2		
28CSC		2	2	2	2	2	2	2	2			
dlc	Ø 2 DETECTOR			3	3	3	3	3	3		1	
	Ø 4 DETECTOR			3			3	3	3			
	Ø 6 DETECTOR			2				3	3			1
	Ø 8 DETECTOR	1	1					1	1			
CONDUIT SIZE		78	78	78	78	78	78	2-78	2-78	53	41	41

EXISTING POLE AND EQUIPMENT SCHEDULE

	STANDARD			VEH SIG MTG		PED SIGNAL	PPB		HPS LUMINAIRE
No.	TYPE	SMA	LMA	MAST ARM	POLE	MTG	Ø	ARROW	
Ⓐ	19-2-129	7.6	3.7	MAS	SV-1-T	——	——	——	200 W
Ⓑ	1A	——	——	——	TV-1	SP-1-T	6	→	——
Ⓒ	26-4-129	12.2	3.7	MAS	SV-1-T	SP-1-T	6	←	200 W
Ⓓ	1A	——	——	——	TV-1	SP-1-T	8	→	——
Ⓔ	19-2-129	7.6	3.7	MAS	SV-1-T	SP-1-T	8	←	200 W
Ⓕ	15	——	3.7	——	TV-1	SP-1-T	2	→	200 W
Ⓖ	19-2-129	6.1	——	——	SV-1-T	SP-1-T	2	←	——
Ⓗ	1A	——	——	——	TV-1	——	——	——	——

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY

SIGNAL AND LIGHTING (REMOVAL)

(ROUTE 138 AT 82ND St EAST)

SCALE 1 : 200

E-1

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	138	87.2/88.9	109	156

Jesse Ruelas 12/31/09
REGISTERED ELECTRICAL ENGINEER DATE

5-17-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — J. RUELAS No. E015604 Exp. 12-31-11 ELECT — STATE OF CALIFORNIA

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

Caltrans Metric

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: LV
CHECKED BY: JR
FUNCTIONAL SUPERVISOR: YI TSAU

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

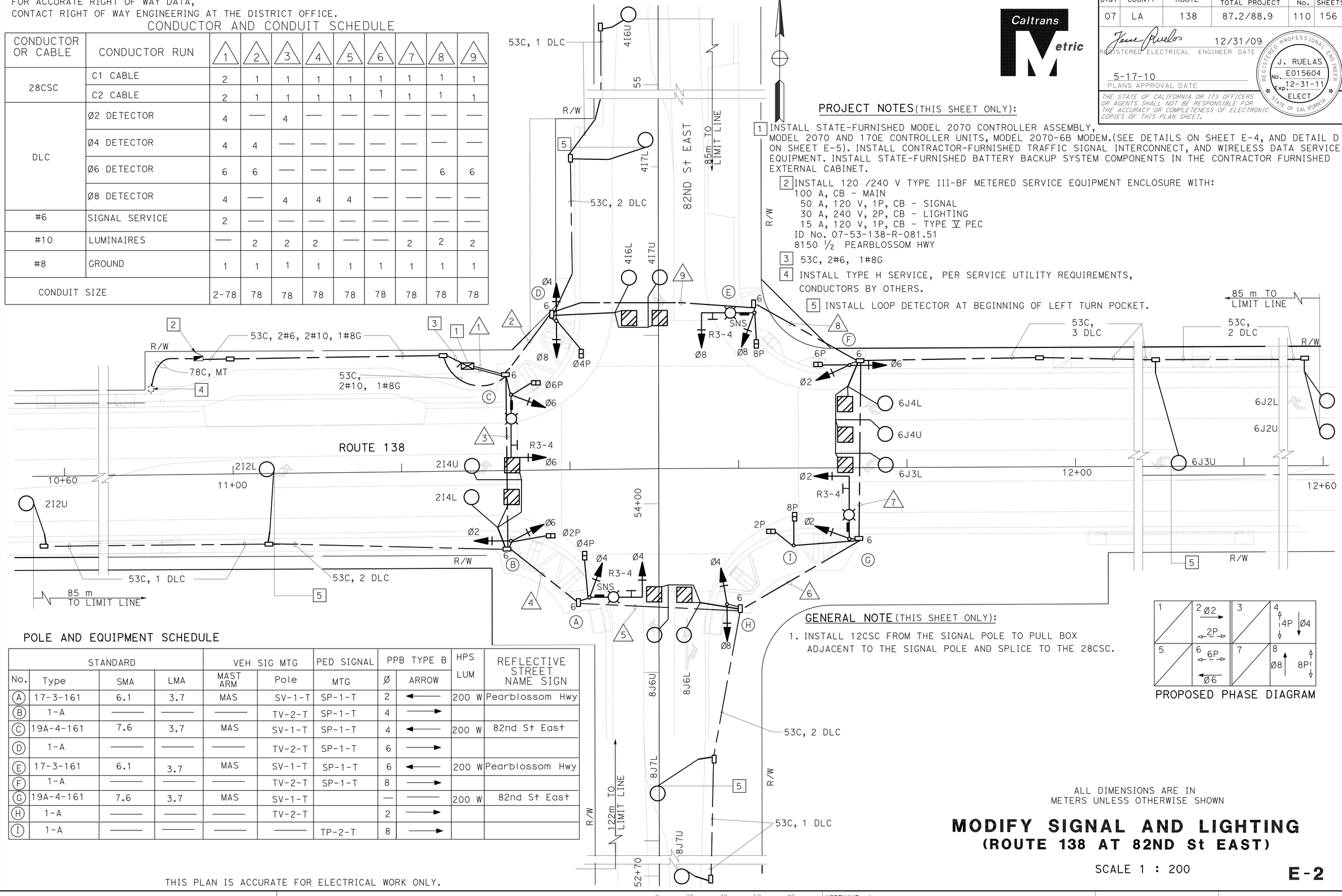
LAST REVISION DATE PLOTTED => 24-MAY-2010
04-29-10 TIME PLOTTED => 09:59

BORDER LAST REVISED 3/1/2007 | RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80 | USERNAME => trmikesl | DGN FILE => 712722ua01.dgn | CU 07383 | EA 127221

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

CONDUCTOR AND CONDUIT SCHEDULE

CONDUCTOR OR CABLE	CONDUCTOR RUN	1	2	3	4	5	6	7	8	9
28CSC	C1 CABLE	2	1	1	1	1	1	1	1	1
	C2 CABLE	2	1	1	1	1	1	1	1	1
DLC	Ø2 DETECTOR	4	—	4	—	—	—	—	—	—
	Ø4 DETECTOR	4	4	—	—	—	—	—	—	—
	Ø6 DETECTOR	6	6	—	—	—	—	—	6	6
	Ø8 DETECTOR	4	—	4	4	4	—	—	—	—
#6	SIGNAL SERVICE	2	—	—	—	—	—	—	—	—
#10	LUMINAIRES	—	2	2	2	—	—	2	2	2
#8	GROUND	1	1	1	1	1	1	1	1	1
CONDUIT SIZE		2-78	78	78	78	78	78	78	78	78



POLE AND EQUIPMENT SCHEDULE

	STANDARD			VEH SIG MTG		PED SIGNAL	PPB TYPE B		HPS LUM	REFLECTIVE STREET NAME SIGN
No.	Type	SMA	LMA	MAST ARM	Pole	MTG	Ø	ARROW		
(A)	17-3-161	6.1	3.7	MAS	SV-1-T	SP-1-T	2	←	200 W	Pearblossom Hwy
(B)	1-A	—	—	—	TV-2-T	SP-1-T	4	→		
(C)	19A-4-161	7.6	3.7	MAS	SV-1-T	SP-1-T	4	←	200 W	82nd St East
(D)	1-A	—	—	—	TV-2-T	SP-1-T	6	→		
(E)	17-3-161	6.1	3.7	MAS	SV-1-T	SP-1-T	6	←	200 W	Pearblossom Hwy
(F)	1-A	—	—	—	TV-2-T	SP-1-T	8	→		
(G)	19A-4-161	7.6	3.7	MAS	SV-1-T		—	—	200 W	82nd St East
(H)	1-A	—	—	—	TV-2-T		2	→		
(I)	1-A	—	—	—	—	TP-2-T	8	→		

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

Caltrans Metric

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	138	87.2/88.9	110	156

Jesse Ruelas 12/31/09
REGISTERED ELECTRICAL ENGINEER DATE

5-17-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — J. RUELAS No. E015604 Exp. 12-31-11 ELECT — STATE OF CALIFORNIA

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

PROJECT NOTES (THIS SHEET ONLY):

1. INSTALL STATE-FURNISHED MODEL 2070 CONTROLLER ASSEMBLY, MODEL 2070 AND 170E CONTROLLER UNITS, MODEL 2070-6B MODEM.(SEE DETAILS ON SHEET E-4, AND DETAIL D ON SHEET E-5). INSTALL CONTRACTOR-FURNISHED TRAFFIC SIGNAL INTERCONNECT, AND WIRELESS DATA SERVICE EQUIPMENT. INSTALL STATE-FURNISHED BATTERY BACKUP SYSTEM COMPONENTS IN THE CONTRACTOR FURNISHED EXTERNAL CABINET.
2. INSTALL 120 /240 V TYPE III-BF METERED SERVICE EQUIPMENT ENCLOSURE WITH:
   100 A, CB - MAIN
   50 A, 120 V, 1P, CB - SIGNAL
   30 A, 240 V, 2P, CB - LIGHTING
   15 A, 120 V, 1P, CB - TYPE V PEC
   ID No. 07-53-138-R-081.51
   8150 1/2 PEARBLOSSOM HWY
3. 53C, 2#6, 1#8G
4. INSTALL TYPE H SERVICE, PER SERVICE UTILITY REQUIREMENTS, CONDUCTORS BY OTHERS.
5. INSTALL LOOP DETECTOR AT BEGINNING OF LEFT TURN POCKET.

GENERAL NOTE (THIS SHEET ONLY):

1. INSTALL 12CSC FROM THE SIGNAL POLE TO PULL BOX ADJACENT TO THE SIGNAL POLE AND SPLICE TO THE 28CSC.

PROPOSED PHASE DIAGRAM

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

MODIFY SIGNAL AND LIGHTING
(ROUTE 138 AT 82ND St EAST)

SCALE 1 : 200

E-2

REVISED BY: LV | DATE REVISED: JR
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: YI TSAU
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

LAST REVISION DATE PLOTTED => 20-MAY-2010
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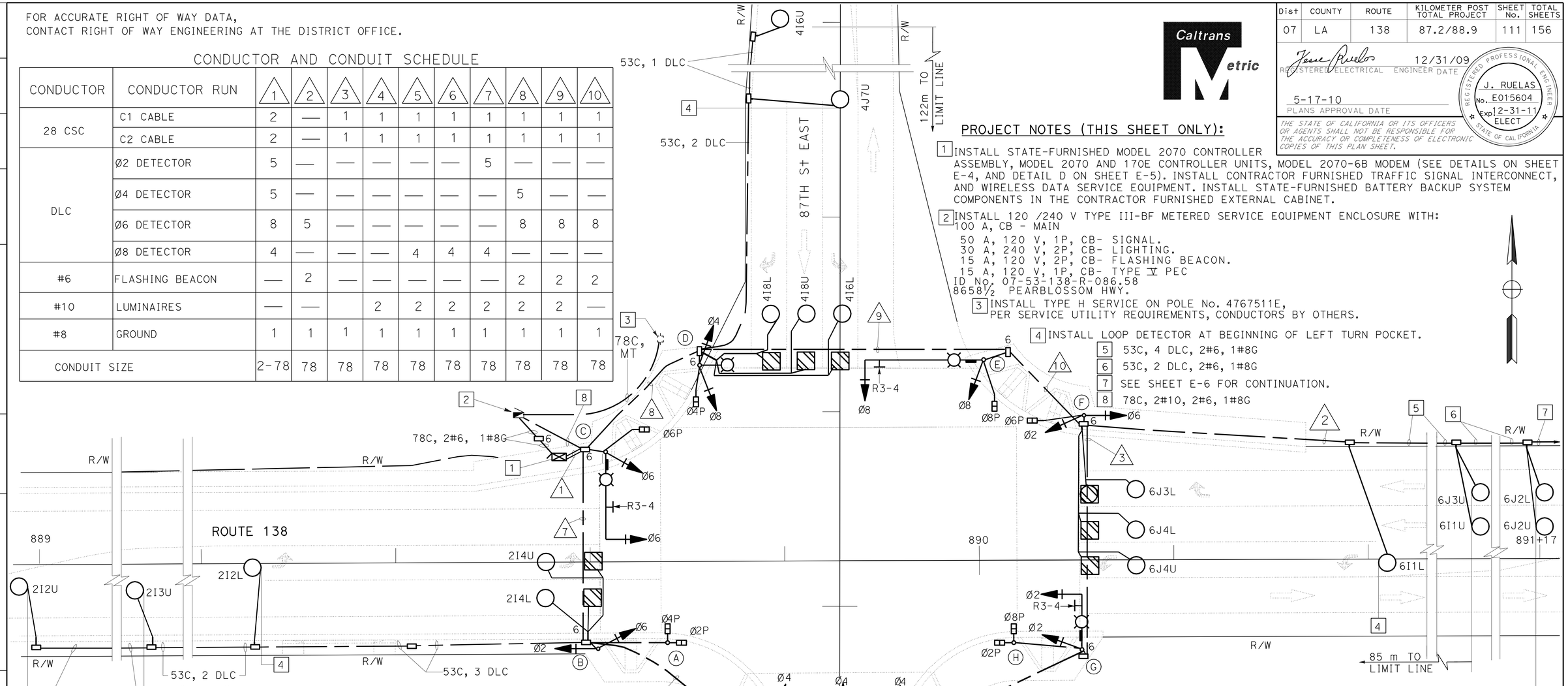
04-26-10

BORDER LAST REVISED 3/1/2007 | RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80 | USERNAME => trcarol DGN FILE => 712722ua02.dgn | CU 07383 | EA 127221

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

CONDUCTOR AND CONDUIT SCHEDULE

CONDUCTOR	CONDUCTOR RUN	1	2	3	4	5	6	7	8	9	10
28 CSC	C1 CABLE	2	—	1	1	1	1	1	1	1	1
	C2 CABLE	2	—	1	1	1	1	1	1	1	1
DLC	Ø2 DETECTOR	5	—	—	—	—	—	5	—	—	—
	Ø4 DETECTOR	5	—	—	—	—	—	—	5	—	—
	Ø6 DETECTOR	8	5	—	—	—	—	—	8	8	8
	Ø8 DETECTOR	4	—	—	—	4	4	4	—	—	—
#6	FLASHING BEACON	—	2	—	—	—	—	—	2	2	2
#10	LUMINAIRES	—	—		2	2	2	2	2	2	—
#8	GROUND	1	1	1	1	1	1	1	1	1	1
CONDUIT SIZE		2-78	78	78	78	78	78	78	78	78	78



POLE AND EQUIPMENT SCHEDULE

	STANDARD			VEH SIG MTG		PED SIGNAL	PPB TYPE B		HPS LUMINAIRE	REFLECTIVE STREET NAME SIGN
No.	Type	SMA	LMA	MAST ARM	Pole	MTG	Ø	ARROW		
(A)	1-A	———	———	———	———	TP-2-T	4	←	———	———
(B)	1-A	———	———	———	TV-2-T		—	———	———	———
(C)	19A-4-161	9.1	3.7	MAS	SV-1-T	SP-1-T	4	←	200 W	87th St East
(D)	15TS	———	———	———	SV-2-TA	SP-1-T	6	→	200 W	———
(E)	26A-4-161	12.2	3.7	MAS	SV-1-T	SP-1-T	6	←	200 W	Pearblossom Hwy
(F)	1-A	———	———	———	TV-2-T	SP-1-T	8	→	———	———
(G)	17-3-161	6.1	3.7	MAS	SV-1-T		—	———	200 W	87th St East
(H)	1-A	———	———	———	———	TP-2-T	8	→	———	———
(I)	1-A	———	———	———	TV-2-T				———	———
(J)	19A-4-161	7.6	3.7	MAS	SV-1-T	———	2	←	200 W	Pearblossom Hwy

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

PROJECT NOTES (THIS SHEET ONLY):

1 INSTALL STATE-FURNISHED MODEL 2070 CONTROLLER ASSEMBLY, MODEL 2070 AND 170E CONTROLLER UNITS, MODEL 2070-6B MODEM (SEE DETAILS ON SHEET E-4, AND DETAIL D ON SHEET E-5). INSTALL CONTRACTOR FURNISHED TRAFFIC SIGNAL INTERCONNECT, AND WIRELESS DATA SERVICE EQUIPMENT. INSTALL STATE-FURNISHED BATTERY BACKUP SYSTEM COMPONENTS IN THE CONTRACTOR FURNISHED EXTERNAL CABINET.

2 INSTALL 120 /240 V TYPE III-BF METERED SERVICE EQUIPMENT ENCLOSURE WITH:
100 A, CB - MAIN
50 A, 120 V, 1P, CB- SIGNAL.
30 A, 240 V, 2P, CB- LIGHTING.
15 A, 120 V, 2P, CB- FLASHING BEACON.
15 A, 120 V, 1P, CB- TYPE V PEC
ID No. 07-53-138-R-086.58
8658½ PEARBLOSSOM HWY.

3 INSTALL TYPE H SERVICE ON POLE No. 4767511E, PER SERVICE UTILITY REQUIREMENTS, CONDUCTORS BY OTHERS.

4 INSTALL LOOP DETECTOR AT BEGINNING OF LEFT TURN POCKET.

5 53C, 4 DLC, 2#6, 1#8G

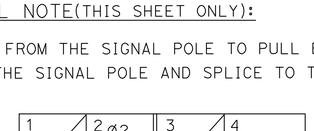
6 53C, 2 DLC, 2#6, 1#8G

7 SEE SHEET E-6 FOR CONTINUATION.

8 78C, 2#10, 2#6, 1#8G

GENERAL NOTE(THIS SHEET ONLY):

1. INSTALL 12CSC FROM THE SIGNAL POLE TO PULL BOX ADJACENT TO THE SIGNAL POLE AND SPLICE TO THE 28CSC.



PROPOSED PHASE DIAGRAM

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

SIGNAL AND LIGHTING
(ROUTE 138 AT 87TH ST EAST)

SCALE 1 : 200

E-3

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	138	87.2/88.9	111	156

REGISTERED ELECTRICAL ENGINEER — 12/31/09 DATE

J. RUELAS No. E015604 Exp 12-31-11 ELECT — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

5-17-10
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.

Caltrans Metric

REVISED BY: LV — DATE REVISED: JR
CALCULATED-DESIGNED BY
CHECKED BY
FUNCTIONAL SUPERVISOR: YI TSAU

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

LAST REVISION DATE PLOTTED => 20-MAY-2010
TIME PLOTTED => 13:23
04-29-10

BORDER LAST REVISED 3/1/2007 | RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80 | USERNAME => trcarol DGN FILE => 712722ua03.dgn | CU 07383 | EA 127221

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	138	87.2/88.9	112	156

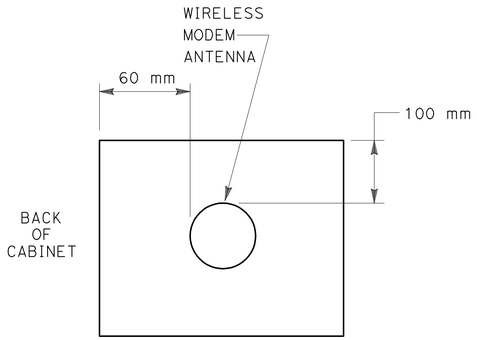
Caltrans Metric

06/03/09
REGISTERED ELECT ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER
JORGE FUENTES
No. E13875
Exp. 6/30/10
ELECTRICAL
STATE OF CALIFORNIA

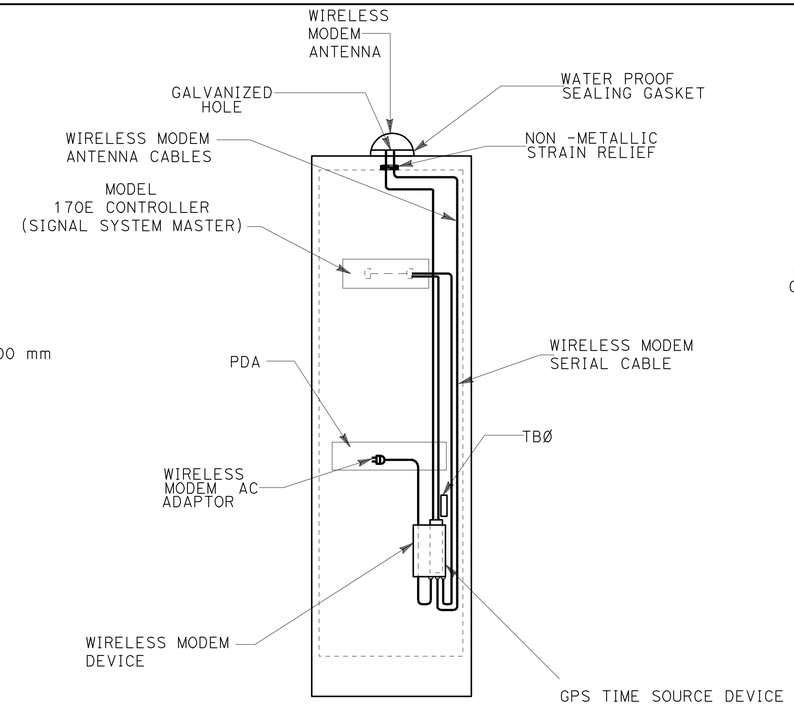
5-17-10
PLANS APPROVAL DATE

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.



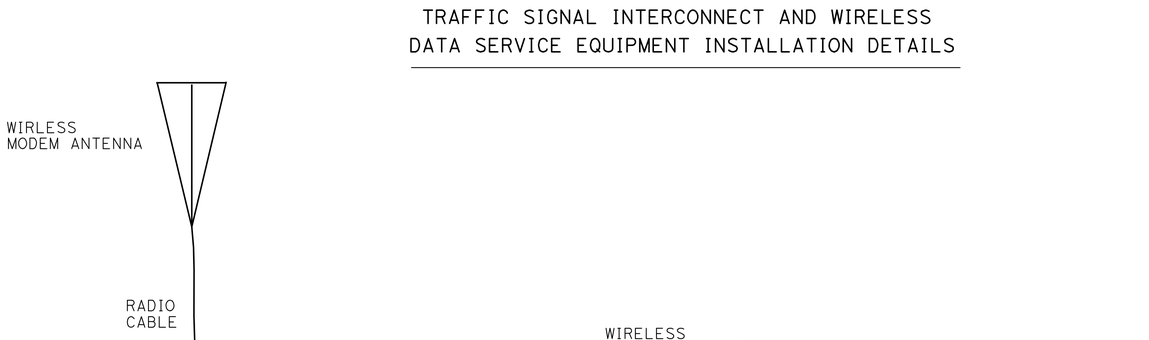
Top View

MODEL 332
CABINET

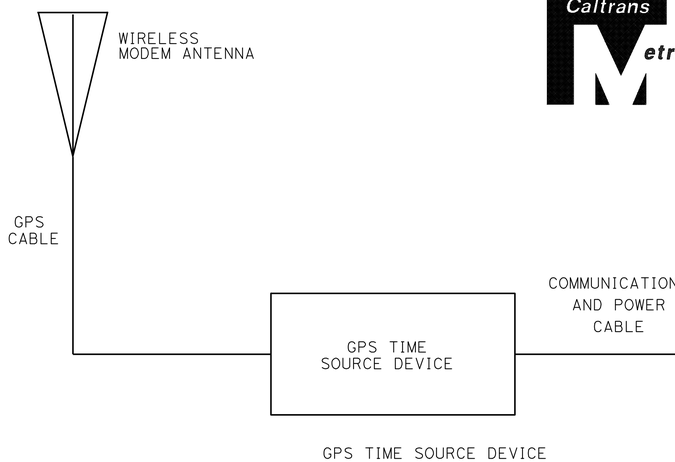


Back View

TRAFFIC SIGNAL INTERCONNECT AND WIRELESS DATA SERVICE EQUIPMENT INSTALLATION DETAILS

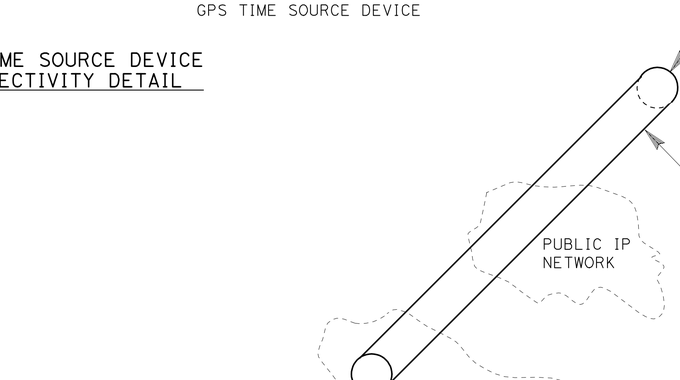


WIRELESS MODEM CONNECTION DETAIL



GPS TIME SOURCE DEVICE

GPS TIME SOURCE DEVICE CONNECTIVITY DETAIL



WIRELESS CONNECTIVITY DETAIL

ABBREVIATIONS (THIS SHEET ONLY):

PDA	POWER DISTRIBUTION ASSEMBLY
CTNET	CALTRANS TRAFFIC SIGNAL NETWORK.
LARTMC	LOS ANGELES REGIONAL TMC
VPN	VIRTUAL PRIVATE NETWORK
GRPS	GENERAL PACKET RADIO SERVICE
IP	INTERNET PROTOCOL
TOS	TRAFFIC OPERATION SYSTEM
GPS	GLOBAL POSITIONING SYSTEM

SIGNAL AND LIGHTING

(TRAFFIC SIGNAL INTERCONNECT AND WIRELESS DATA SERVICE EQUIPMENT DETAILS)

NO SCALE

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

E-4

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: LIEN VO
CHECKED BY: JORGE S. FUENTES
FUNCTIONAL SUPERVISOR: YI TSAU

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

LAST REVISION DATE PLOTTED => 20-MAY-2010
04-29-10 TIME PLOTTED => 13:04

BORDER LAST REVISED 3/1/2007

RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80

USERNAME => trcarol
DGN FILE => 712722ua04.dgn

CU 07383

EA 127221

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	138	87.2/88.9	113	156

06/03/09
REGISTERED ELECT ENGINEER DATE

JORGE FUENTES
No. E13875
Exp. 6/30/10
ELECTRICAL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

5-17-10
PLANS APPROVAL DATE

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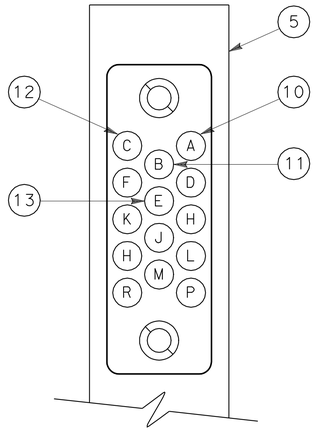
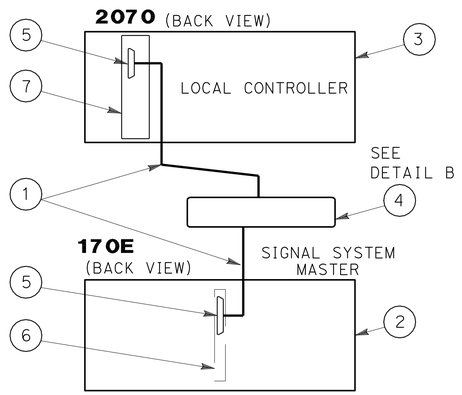
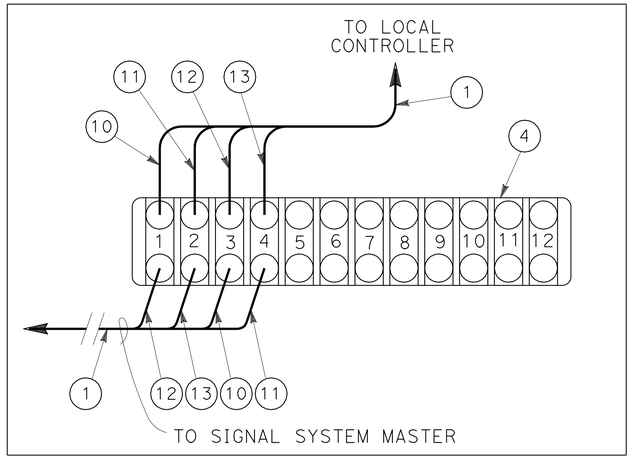


C2 PLUG CONNECTOR DETAIL



DETAIL D



DETAIL B

NOTES (THIS SHEET ONLY):

1. C2P MODEM INTERCONNECT HARNESS
2. MODEL 170E CONTROLLER
3. MODEL 2070 CONTROLLER
4. TERMINAL BLOCK Ø
5. C2S PORT
6. MODEL 400B MODEM IN MODEM SLOT 1
7. MODEL 2070-6B MODEM IN SLOT A2
8. NOT USED
9. NOT USED
10. C2 A SIGNAL
11. C2 B SIGNAL
12. C2 C SIGNAL
13. C2 E SIGNAL

SIGNAL AND LIGHTING

(TRAFFIC SIGNAL INTERCONNECT AND WIRELESS DATA SERVICE EQUIPMENT DETAILS)

NO SCALE

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

E-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
FUNCTIONAL SUPERVISOR: YI TSAU
CALCULATED-DESIGNED BY: LIEN VO
CHECKED BY: JORGE S. FUENTES
REVISED BY
DATE REVISED

LAST REVISION DATE PLOTTED => 20-MAY-2010
TIME PLOTTED => 13:04

BORDER LAST REVISED 3/1/2007
RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80
USERNAME => trcarol
DGN FILE => 712722ua05.dgn
CU 07383
EA 127221

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

PROJECT NOTES (THIS SHEET ONLY):

1. EXISTING POWER POLE No. 1450948E . RC TYPE H SERVICE .
2. RS EXISTING 120/240 V TYPE III-A SERVICE EQUIPMENT ENCLOSURE
   100 A, 240 V, 2P, CB - MAIN.
   ID No. 07-53-138-0-053.559
   ADDRESS: 8621 ½ PEARBLOSSOM HIGHWAY
3. RS EXISTING TYPE 1-A POLE, SPEED LIMIT SIGN R2 (40),
   AND FLASHING BEACON CONTROL ASSEMBLY.
4. INSTALL TYPE 15-FBS
5. 53C, 2#6, 1#8G.
6. SEE SHEET E-3 FOR CONTINUATION.

Caltrans Metric

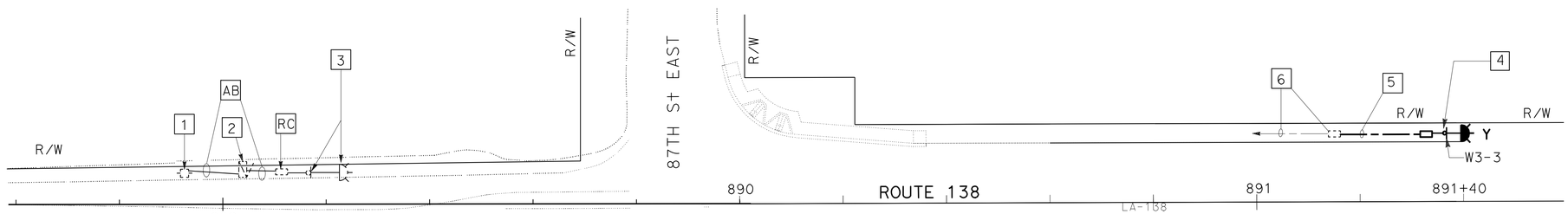
Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	138	87.2/88.9	114	156

Jesse Ruelas 12/31/09
REGISTERED ELECTRICAL ENGINEER DATE

5-17-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
J. RUELAS
No. E015604
Exp. 12-31-11
ELECT
STATE OF CALIFORNIA

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



ALL DIMENSIONS ARE IN
METERS UNLESS OTHERWISE SHOWN

MODIFY FLASHING BEACON

SCALE 1 : 500

E-6

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

CALCULATED-DESIGNED BY LV
CHECKED BY JR
REVISED BY
DATE REVISED

FUNCTIONAL SUPERVISOR
YI TSAU

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

LAST REVISION DATE PLOTTED => 20-MAY-2010
TIME PLOTTED => 13:04
04-29-10

BORDER LAST REVISED 3/1/2007

RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80

USERNAME => trcarol
DGN FILE => 712722ua06.dgn

CU 07383

EA 127221

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	138	87.2/88.9	115	156

Jesse Ruelas 12/31/09
REGISTERED ELECT ENGINEER DATE

J. RUELAS No. E015604 Exp 12-31-11 ELECT
REGISTERED PROFESSIONAL ENGINEER STATE OF CALIFORNIA

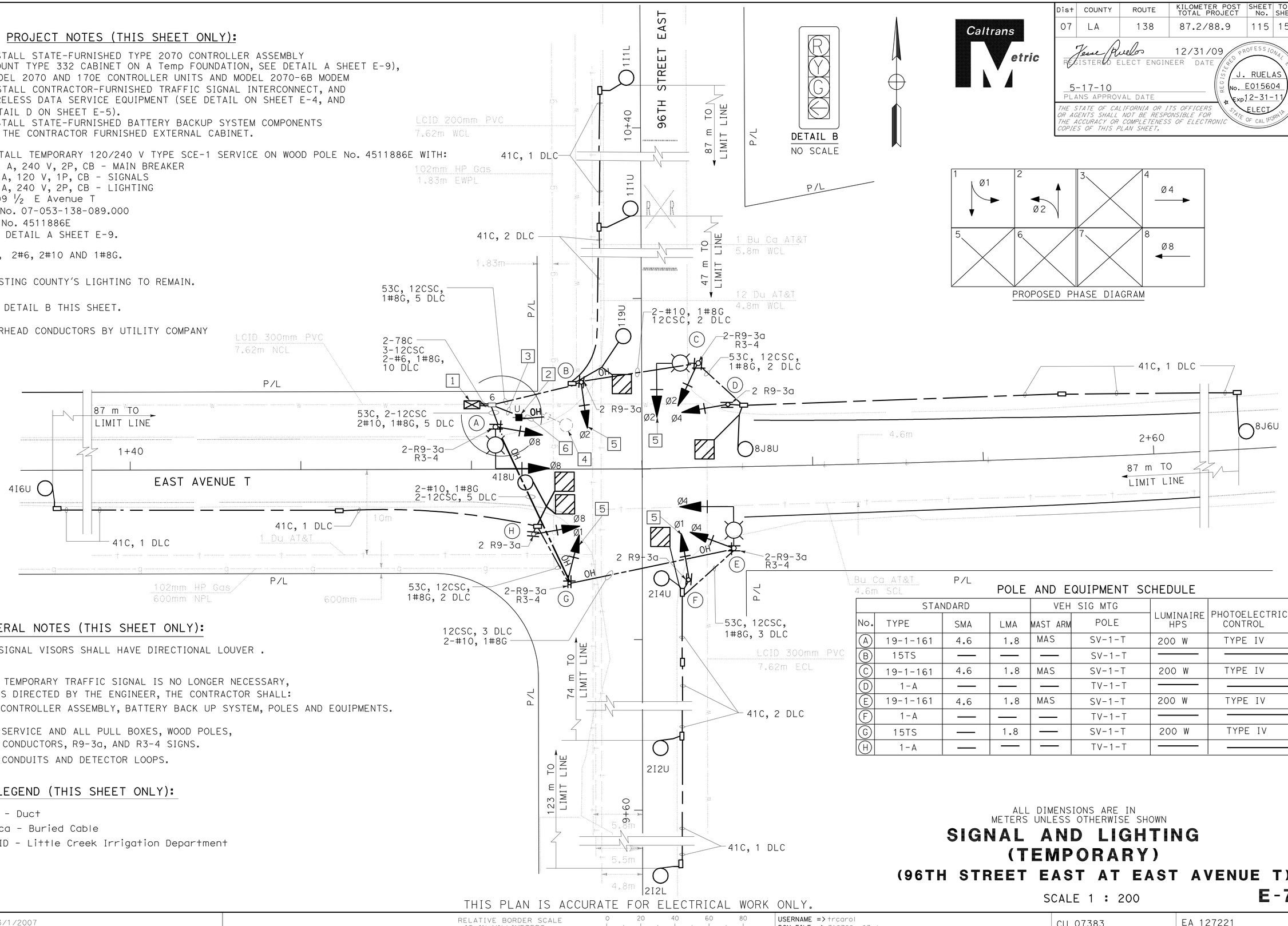
5-17-10
PLANS APPROVAL DATE

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.

Caltrans Metric

PROJECT NOTES (THIS SHEET ONLY):

1. INSTALL STATE-FURNISHED TYPE 2070 CONTROLLER ASSEMBLY (MOUNT TYPE 332 CABINET ON A Temp FOUNDATION, SEE DETAIL A SHEET E-9), MODEL 2070 AND 170E CONTROLLER UNITS AND MODEL 2070-6B MODEM INSTALL CONTRACTOR-FURNISHED TRAFFIC SIGNAL INTERCONNECT, AND WIRELESS DATA SERVICE EQUIPMENT (SEE DETAIL ON SHEET E-4, AND DETAIL D ON SHEET E-5). INSTALL STATE-FURNISHED BATTERY BACKUP SYSTEM COMPONENTS IN THE CONTRACTOR FURNISHED EXTERNAL CABINET.
2. INSTALL TEMPORARY 120/240 V TYPE SCE-1 SERVICE ON WOOD POLE No. 4511886E WITH:
   100 A, 240 V, 2P, CB - MAIN BREAKER
   50 A, 120 V, 1P, CB - SIGNALS
   30 A, 240 V, 2P, CB - LIGHTING
   9599 ½ E Avenue T
   ID No. 07-053-138-089.000
   PP No. 4511886E
   SEE DETAIL A SHEET E-9.
3. 53C, 2#6, 2#10 AND 1#8G.
4. EXISTING COUNTY'S LIGHTING TO REMAIN.
5. SEE DETAIL B THIS SHEET.
6. OVERHEAD CONDUCTORS BY UTILITY COMPANY



GENERAL NOTES (THIS SHEET ONLY):

1. ALL SIGNAL VISORS SHALL HAVE DIRECTIONAL LOUVER .
2. WHEN TEMPORARY TRAFFIC SIGNAL IS NO LONGER NECESSARY, AND AS DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL:
   - RS CONTROLLER ASSEMBLY, BATTERY BACK UP SYSTEM, POLES AND EQUIPMENTS.
   - RC SERVICE AND ALL PULL BOXES, WOOD POLES, CONDUCTORS, R9-3a, AND R3-4 SIGNS.
   - AB CONDUITS AND DETECTOR LOOPS.

LEGEND (THIS SHEET ONLY):

DU - Duct
Buca - Buried Cable
LCID - Little Creek Irrigation Department

POLE AND EQUIPMENT SCHEDULE

	STANDARD			VEH SIG MTG		LUMINAIRE HPS	PHOTOELECTRIC CONTROL
No.	TYPE	SMA	LMA	MAST ARM	POLE		
(A)	19-1-161	4.6	1.8	MAS	SV-1-T	200 W	TYPE IV
(B)	15TS	—	—	—	SV-1-T	—	—
(C)	19-1-161	4.6	1.8	MAS	SV-1-T	200 W	TYPE IV
(D)	1-A	—	—	—	TV-1-T	—	—
(E)	19-1-161	4.6	1.8	MAS	SV-1-T	200 W	TYPE IV
(F)	1-A	—	—	—	TV-1-T	—	—
(G)	15TS	—	1.8	—	SV-1-T	200 W	TYPE IV
(H)	1-A	—	—	—	TV-1-T	—	—

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

SIGNAL AND LIGHTING (TEMPORARY)

(96TH STREET EAST AT EAST AVENUE T)

SCALE 1 : 200

E-7

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

REVISED BY | DATE REVISED
LV | JR
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: YI TSAU

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

LAST REVISION DATE PLOTTED => 20-MAY-2010
TIME PLOTTED => 1405
05-05-10

BORDER LAST REVISED 3/1/2007
RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80
USERNAME => trcarol
DGN FILE => 712722ua07.dgn
CU 07383
EA 127221

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

PROJECT NOTES (THIS SHEET ONLY):

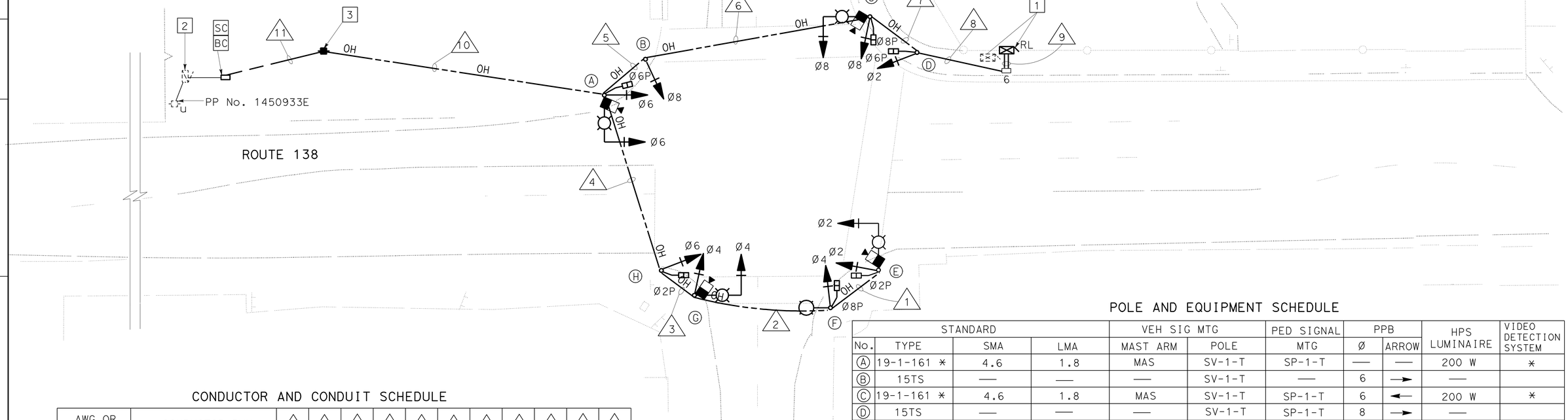
1. RL TYPE 332 CABINET, BATTERY BACKUP SYSTEM AND EQUIPMENT (MOUNT ON A Temp FOUNDATION, SEE DETAIL A SHEET E-10).
2. EXISTING 120 /240 V TYPE III-BF METERED SERVICE EQUIPMENT ENCLOSURE WITH:
   100 A, 240 V, 2P, CB - MAIN
   50 A, 120 V, 1P, CB - SIGNAL
   30 A, 120 V, 1P, CB - SAFETY LIGHTING
   ID No. 07-53-138-0-054.710
   ADDRESS: 8150 ½ PEARBLOSSOM HIGHWAY
3. INSTALL 12.2 m WOOD POLE (SEE DETAIL B SHEET E-9)

GENERAL NOTE (THIS SHEET ONLY):

1. WHEN TEMPORARY SIGNAL IS NO LONGER NEEDED AND AS DIRECTED BY THE ENGINEER:
   - RS CONTROLLER ASSEMBLY, BATTERY BACKUP SYSTEM, VIDEO IMAGE VEHICLE DETECTION, POLES AND EQUIPMENTS.
   - RC WOOD POLE, PULL BOXES AND CONDUCTORS.
   - AB CONDUITS
   - RS EXISTING 120/240 V SERVICE EQUIPMENT ENCLOSURE.

1 NOT USED	2 Ø2 → ← Ø2P	3 NOT USED	4 Ø4 ↓
5 NOT USED	6 Ø6P ← Ø6	7 NOT USED	8 Ø8 ↑ ↓ Ø8P

PHASE DIAGRAM



LEGEND:

VIDEO IMAGE VEHICLE DETECTION SYSTEM (VIVDS)

CONDUCTOR AND CONDUIT SCHEDULE

AWG OR CABLE	CONDUCTOR RUN	1	2	3	4	5	6	7	8	9	10	11
#6	SIGNAL SERVICE					2	2	2	2	2	2	2
#8	GROUND	1	1	1	1	1	1	1	1	1	1	1
#10	LUMINAIRE	2	2	2	2	2	2				2	2
VIVDS CABLE		1	1	2	2	3	3	4	4	4		
12CSC		1	2	2	2	2	2	2	2	2		
CONDUIT SIZE									53	2-53		41

POLE AND EQUIPMENT SCHEDULE

STANDARD				VEH SIG MTG		PED SIGNAL	PPB		HPS LUMINAIRE	VIDEO DETECTION SYSTEM
No.	TYPE	SMA	LMA	MAST ARM	POLE	MTG	Ø	ARROW		
Ⓐ	19-1-161 *	4.6	1.8	MAS	SV-1-T	SP-1-T	—	—	200 W	*
Ⓑ	15TS	—	—	—	SV-1-T	—	6	→	—	
Ⓒ	19-1-161 *	4.6	1.8	MAS	SV-1-T	SP-1-T	6	←	200 W	*
Ⓓ	15TS	—	—	—	SV-1-T	SP-1-T	8	→	—	
Ⓔ	19-1-161 *	4.6	1.8	MAS	SV-1-T	SP-1-T	8	←	200 W	*
Ⓕ	15TS	—	—	—	SV-1-T	SP-1-T	2	→	200 W	
Ⓖ	19-1-161 *	4.6	1.8	MAS	SV-1-T	—	2	←	200 W	*
Ⓗ	15TS	—	—	—	SV-1-T	SP-1-T	—	—	—	

* INSTALL VIDEO DETECTION SYSTEM. SEE DETAIL C SHEET E-11.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

SIGNAL AND LIGHTING (TEMPORARY) (ROUTE 138 AT 82ND St EAST)

SCALE 1 : 200

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	138	87.2/88.9	116	156

Jesse Ruelas 12/31/09
REGISTERED ELECT ENGINEER DATE

5-17-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — J. RUELAS No. E015604 Exp. 12-31-11 ELECT — STATE OF CALIFORNIA

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Caltrans Metric

REVISED BY	DATE REVISED
LV	JR

CALCULATED-DESIGNED BY
CHECKED BY

FUNCTIONAL SUPERVISOR: YI TSAU

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

LAST REVISION DATE PLOTTED => 24-MAY-2010
TIME PLOTTED => 09:59
04-29-10

BORDER LAST REVISED 3/1/2007
RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80
USERNAME => trmikesl
DGN FILE => 712722ua08.dgn
CU 07383
EA 127221

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	138	87.2/88.9	117	156

Jesse Ruelas 12/31/09
REGISTERED ELECT ENGINEER DATE

J. RUELAS
No. E015604
Exp. 12-31-11
ELECT
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

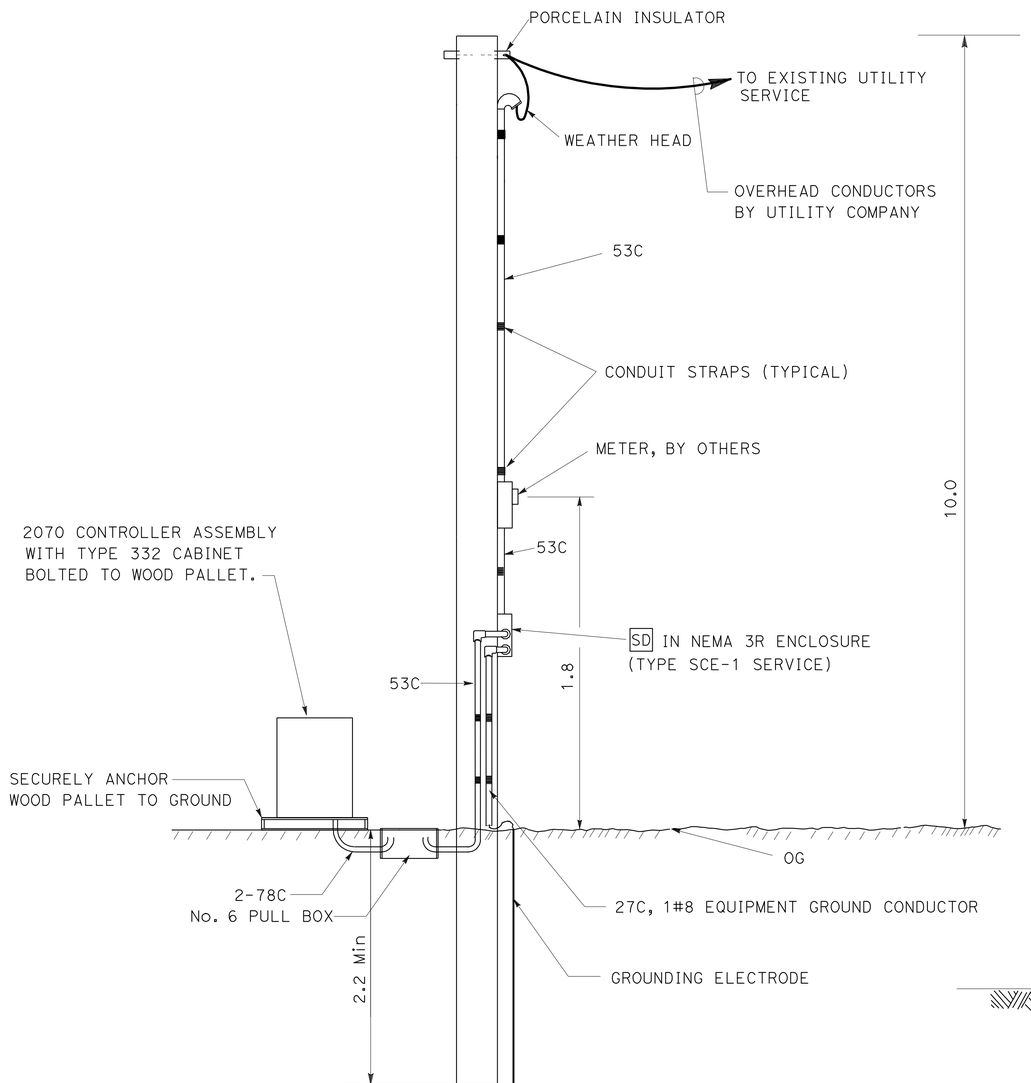
5-17-10
PLANS APPROVAL DATE

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.

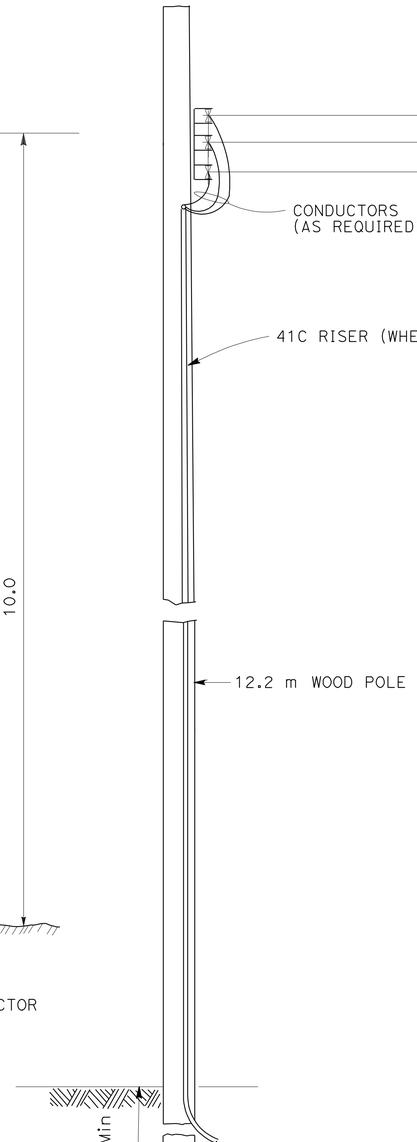
Caltrans Metric

NOTES (THIS SHEET ONLY):

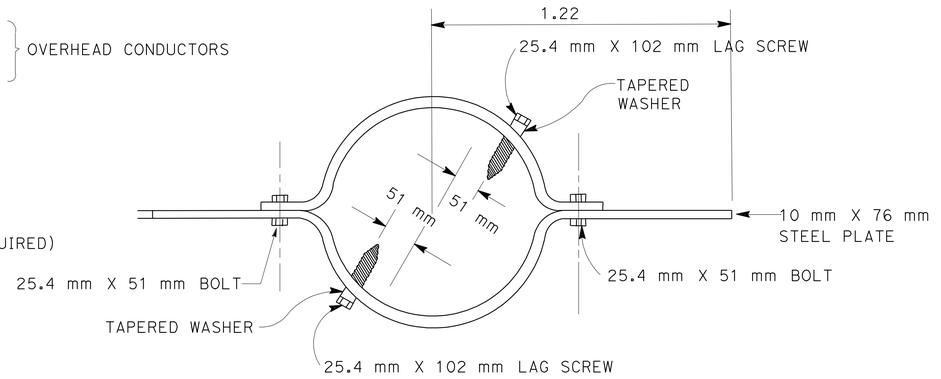
1. INSTALL CONTROLLER ASSEMBLY ADJACENT TO 12.2 m WOOD POLE. SEE DETAIL A .
2. INSTALL YELLOW TAPE ON WOOD POLE AS SHOWN IN DETAIL C.
3. ALL OVERHEAD CABLE SHALL BE SLACK SPANNED WITH 6.1 m MINIMUM OVERHEAD CLEARANCE.
4. OVERHEAD CONSTRUCTION NOT SIGNIFICANTLY COVERED HERE ON SHALL CONFORM WITH THE PROVISIONS OF GENERAL ORDER No. 95 "OVERHEAD ELECTRICAL LINE CONSTRUCTION" OF PUBLIC UTILITIES COMMISSION.



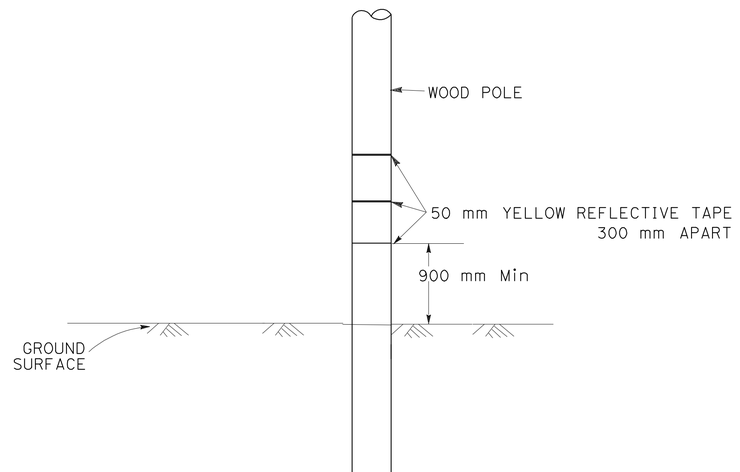
TEMPORARY CONTROLLER ASSEMBLY
TEMPORARY SERVICE ON WOOD POLE
DETAIL A



TEMPORARY WOOD POLE
DETAIL B



WIND ANCHOR
TO BE INSTALLED 0.61 m BELOW GRADE



YELLOW TAPE
DETAIL C

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

SIGNAL AND LIGHTING (TEMPORARY) (DETAILS)

NO SCALE

E-9

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

REVISED BY	DATE REVISED
LV	JR

CALCULATED-DESIGNED BY
CHECKED BY

FUNCTIONAL SUPERVISOR: YI TSAU

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN

LAST REVISION DATE PLOTTED => 20-MAY-2010
04-29-10 TIME PLOTTED => 12:45

BORDER LAST REVISED 3/1/2007
RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80
USERNAME => trlenard
DGN FILE => 712722ua09.dgn
CU 07383
EA 127221

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	138	87.2/88.9	118	156

Caltrans Metric

Jesse Ruelas 12/31/09
REGISTERED ELECT ENGINEER DATE

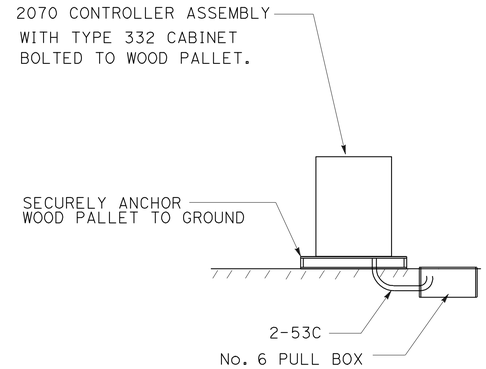
J. RUELAS
No. E015604
Exp. 12-31-11
ELECT
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

5-17-10
PLANS APPROVAL DATE

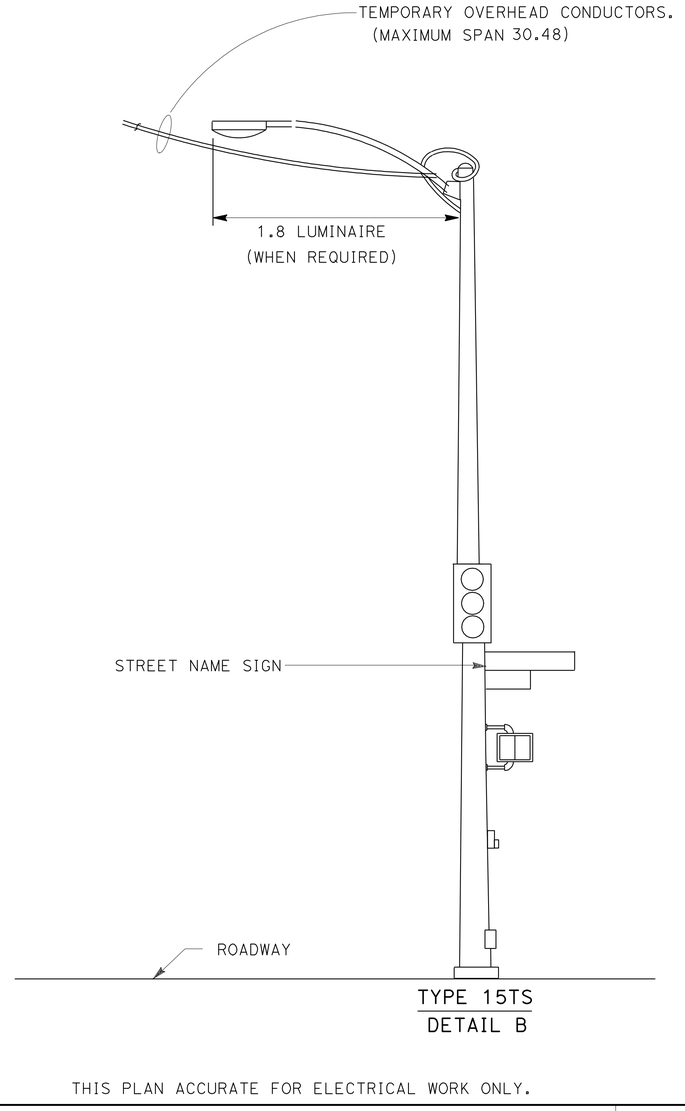
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

NOTES (THIS SHEET ONLY):

1. ALL OVERHEAD CABLE SHALL BE SLACK SPANNED WITH 6.1 m MINIMUM OVERHEAD CLEARANCE.
2. COLOR CODING ON MULTI-CONDUCTORS CABLE NEED NOT CONFORM TO THE STANDARD SPECIFICATIONS REQUIREMENT.
3. OVERHEAD CONSTRUCTION NOT SIGNIFICANTLY COVERED HERE ON SHALL CONFORM WITH THE PROVISIONS OF GENERAL ORDER No. 95 "OVERHEAD ELECTRICAL LINE CONSTRUCTION" OF PUBLIC UTILITIES COMMISSION.



TEMPORARY CONTROLLER ASSEMBLY
DETAIL A



TYPE 15TS
DETAIL B

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

ALL DIMENSIONS ARE IN
METERS UNLESS OTHERWISE SHOWN

SIGNAL AND LIGHTING (TEMPORARY) (DETAILS)

NO SCALE

E-10

REVISED BY	DATE REVISED
LV	JR

CALCULATED-DESIGNED BY
CHECKED BY

FUNCTIONAL SUPERVISOR
YI TSAU

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN

LAST REVISION 04-29-10
DATE PLOTTED => 20-MAY-2010
TIME PLOTTED => 12:45

BORDER LAST REVISED 3/1/2007

RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80

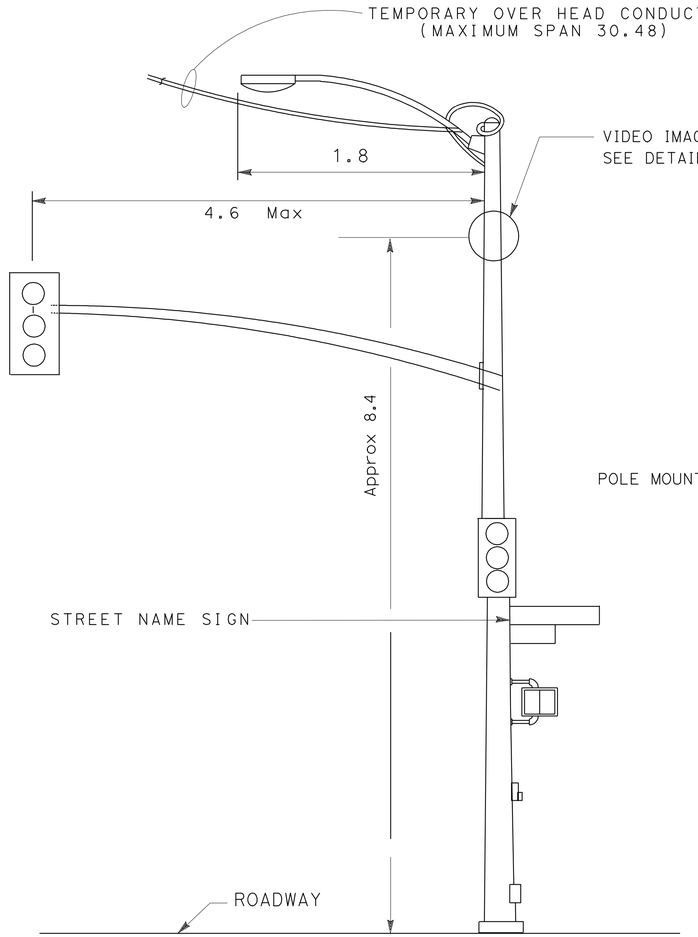
USERNAME => trienard
DGN FILE => 712722ua10.dgn

CU 07383

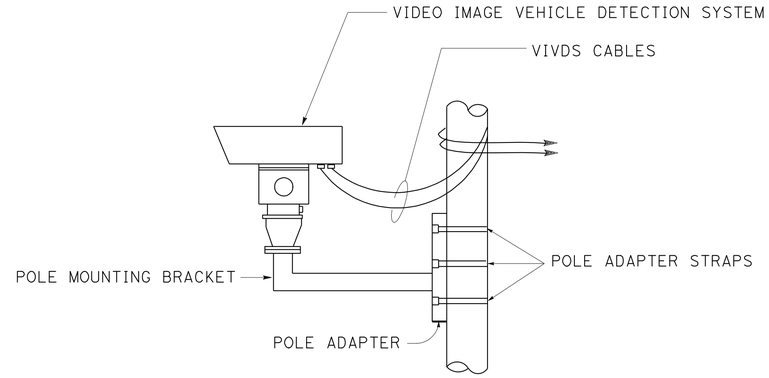
EA 127221

NOTES (THIS SHEET ONLY):

1. ALL OVERHEAD CABLE SHALL BE SLACK SPANNED WITH 6.1 m MINIMUM OVERHEAD CLEARANCE.
2. COLOR CODING ON MULTI-CONDUCTORS CABLE NEED NOT CONFORM TO THE STANDARD SPECIFICATIONS REQUIREMENT.
3. OVERHEAD CONSTRUCTION NOT SIGNIFICANTLY COVERED HERE ON SHALL CONFORM WITH THE PROVISIONS OF GENERAL ORDER No. 95 "OVERHEAD ELECTRICAL LINE CONSTRUCTION" OF PUBLIC UTILITIES COMMISSION.



TYPE 19-1-161



VIDEO IMAGE VEHICLE DETECTION SYSTEM

DETAIL C

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	138	87.2/88.9	119	156

Jesse Ruelas 12/31/09
REGISTERED ELECTRICAL ENGINEER

5-17-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — J. RUELAS No. E015604 Exp. 12-31-11 ELECT — STATE OF CALIFORNIA

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ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

SIGNALS AND LIGHTING (TEMPORARY) (DETAILS)

NO SCALE

E-11

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

REVISED BY	DATE REVISED
LV	JR

CALCULATED-DESIGNED BY
CHECKED BY

FUNCTIONAL SUPERVISOR: YI TSAU

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

LAST REVISION DATE PLOTTED => 20-MAY-2010
TIME PLOTTED => 12:45
04-29-10

BORDER LAST REVISED 3/1/2007

RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80

USERNAME => trlenard
DGN FILE => 712722ua11.dgn

CU 07383

EA 127221

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	138	87.2/88.9	120	156

REGISTERED CIVIL ENGINEER

November 17, 2006
PLANS APPROVAL DATE

Michael Janzen
No. 44788
Exp. 03-31-08
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

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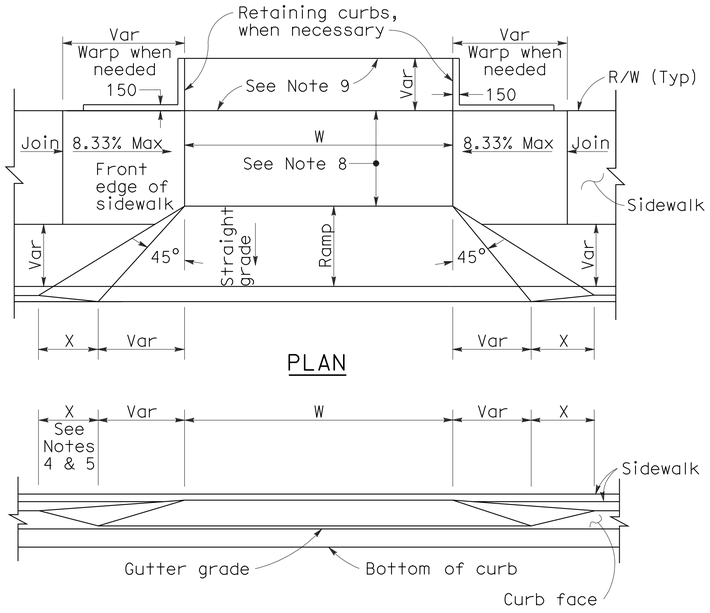
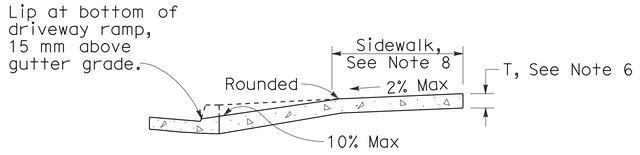
To accompany plans dated 5-17-10

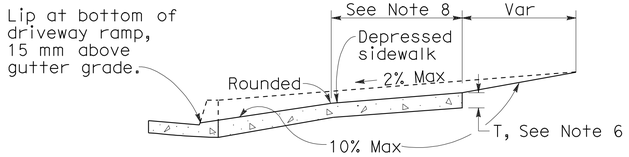
2004 REVISED Std PLAN RSP A87A





CASE A

Typical driveway, sidewalk not depressed



CASE B

Driveway with depressed sidewalk

SECTIONS

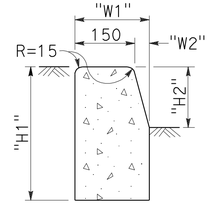
CURB QUANTITIES

TYPE	CUBIC METERS PER METER
A1-150	0.064
A1-200	0.075
A2-150	0.144
A2-200	0.155
A3-150	0.025
A3-200	0.035
B1-100	0.056
B1-150	0.073
B2-100	0.137
B2-150	0.152
B3-100	0.017
B3-150	0.027
B4	0.142
D-100	0.100
D-150	0.162
E	0.161

TABLE A

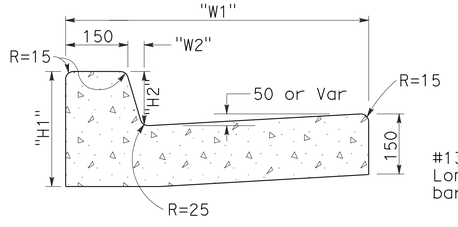
CURB TYPE	DIMENSIONS "H1"	"H2"	"W1"	"W2"
A1-150	350	150	190	40
A1-200	400	200	200	50
A2-150	300	150	790	40
A2-200	350	200	800	50
A3-150	150	130	185	35
A3-200	200	180	198	48
B1-100	300	100	200	70
B1-150	350	150	230	100
B2-100	250	100	800	70
B2-150	300	150	830	100
B3-100	100	80	185	55
B3-150	150	130	217	87
D-100	250	100	452	322
D-150	300	150	652	522

DRIVEWAYS



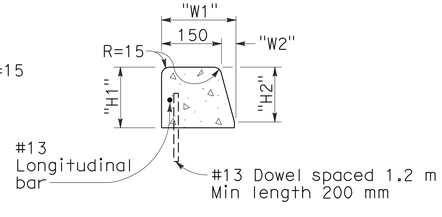
TYPE A1 CURBS

See Table A



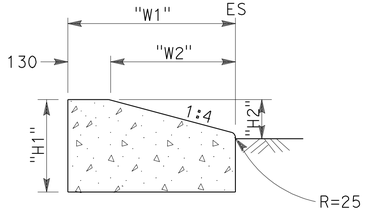
TYPE A2 CURBS

See Table A



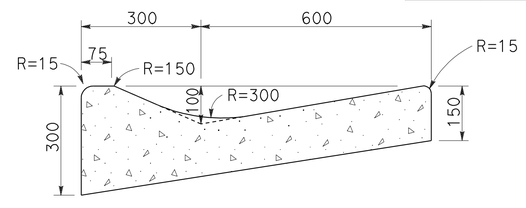
TYPE A3 CURBS

Superimposed on existing pavement
See Table A

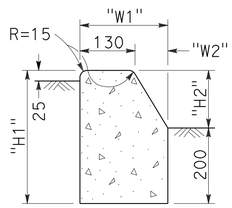


TYPE D CURBS

See Table A

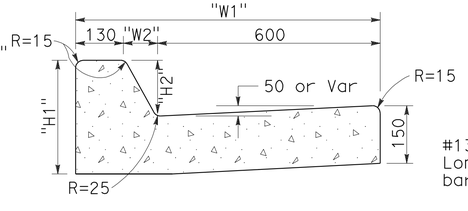


TYPE E CURB



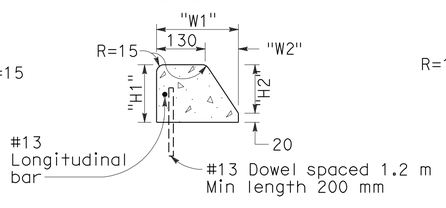
TYPE B1 CURBS

See Table A



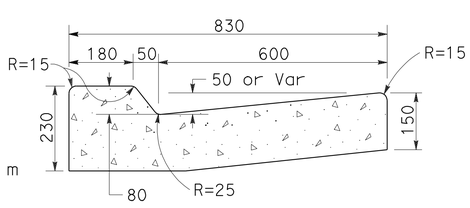
TYPE B2 CURBS

See Table A

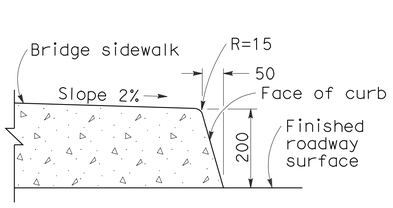


TYPE B3 CURBS

Superimposed on existing pavement
See Table A



TYPE B4 CURBS



TYPE H CURB

On Bridges

CURBS

NOTES

1. Case A driveway section typically applies.
2. Use Case B driveway section when ramp slopes would exceed 10% in Case A.
3. Use Case B driveway section when sidewalk cross slope would exceed 2% in Case A.
4. X=900 mm except for curb heights over 250 mm where 1:4 slopes shall be used on curb slope.
5. X is a variable when sidewalk is located where wheelchairs may traverse the surface. Slopes shall not exceed 8.33%.
6. Sidewalk and ramp thickness ``T'' at driveway shall be 100 mm for residental and 150 mm for commercial.
7. Difference in slope of the driveway ramp and the slope of a line between the gutter and a point on the roadway 1.5 meters from gutter line shall not exceed 15%. Reduce driveway ramp slope, not gutter slope, where required.
8. Minimum width of clear passageway for sidewalk shall be 1.22 meters.
9. Retaining curbs and acquisition of construction easement may be necessary for narrow sidewalks or curb heights in excess of 150 mm.
10. Across the pedestrian route at curb ramp locations, the gutter pan slope shall not exceed 25 mm of depth for each 600 mm of width.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CURBS AND DRIVEWAYS

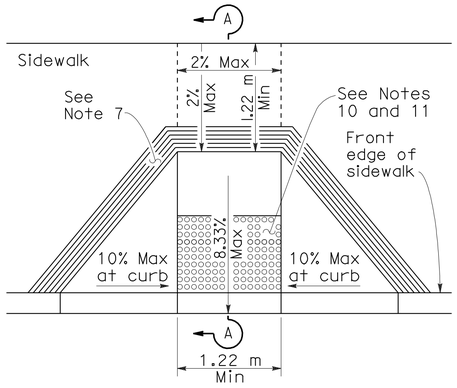
NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

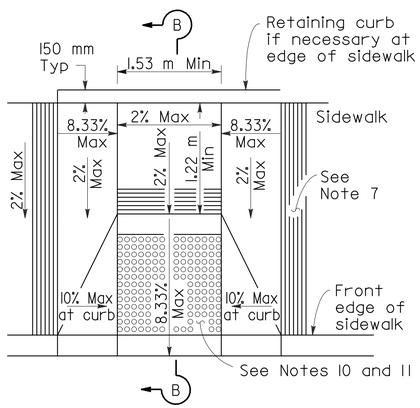
RSP A87A DATED NOVEMBER 17, 2006 SUPERSEDES STANDARD PLAN A87A DATED JULY 1, 2004-PAGE 115 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP A87A

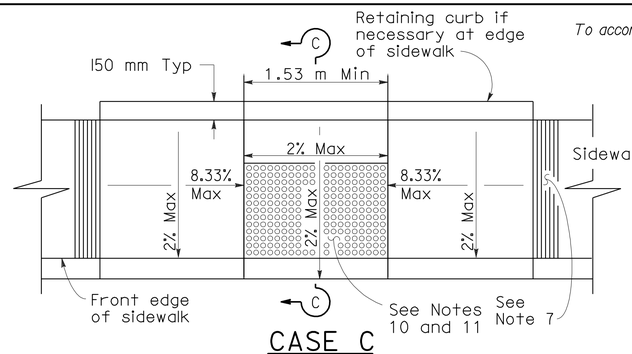
10-25-06



CASE A

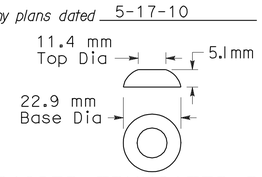


CASE B

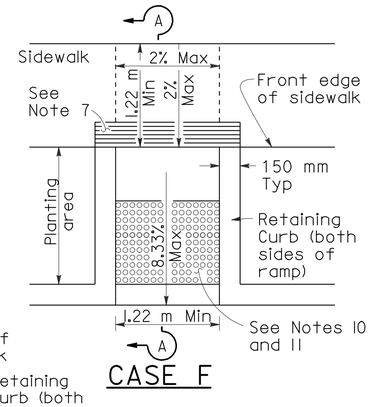


CASE C

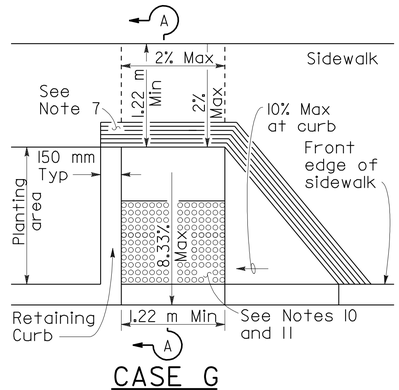
To accompany plans dated 5-17-10



RAISED TRUNCATED DOME

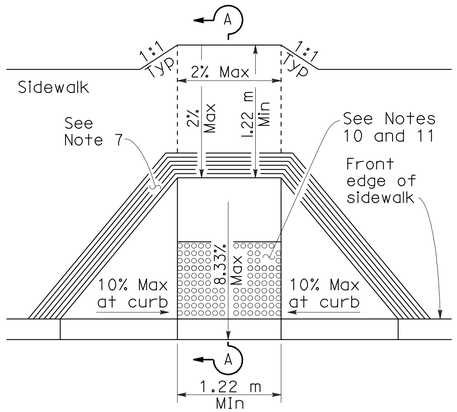


CASE F

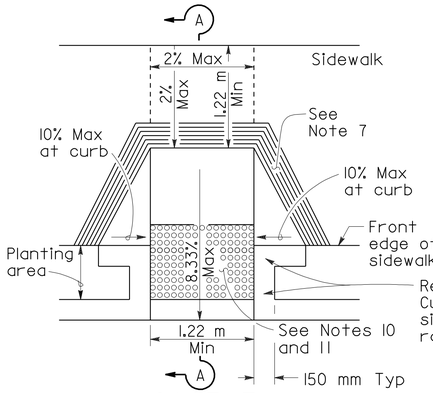


CASE G

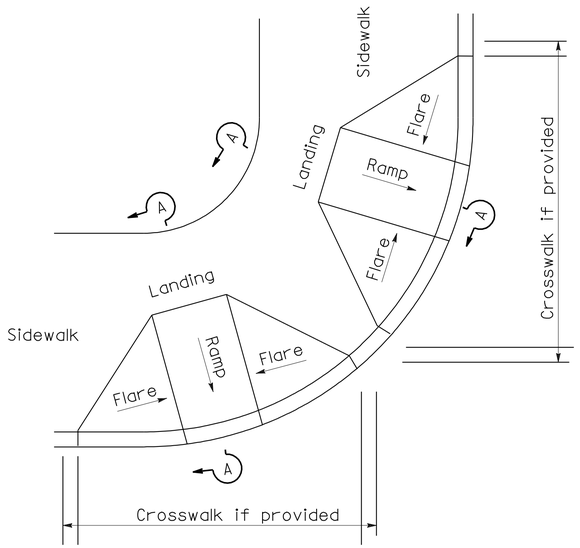
See Note 4



CASE D



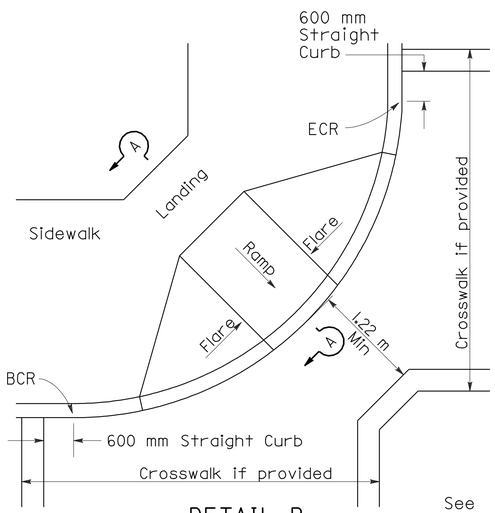
CASE E



DETAIL A

TYPICAL TWO-RAMP CORNER INSTALLATION

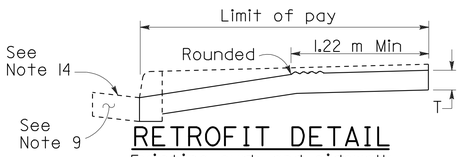
See Note 1



DETAIL B

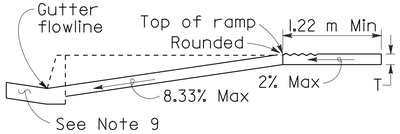
TYPICAL ONE-RAMP CORNER INSTALLATION

See Notes 1 and 3

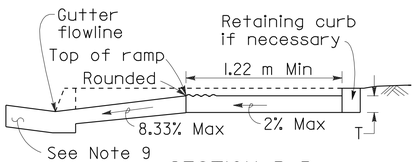


RETROFIT DETAIL

Existing curb and sidewalk

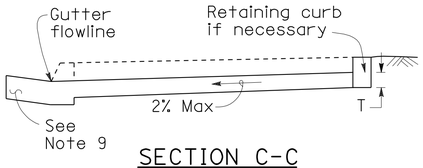


SECTION A-A

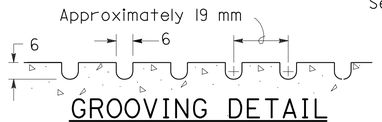


SECTION B-B

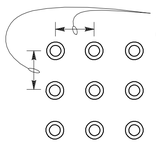
Depress entire sidewalk as required



SECTION C-C



GROOVING DETAIL



RAISED TRUNCATED DOME PATTERN (IN-LINE)

DETECTABLE WARNING SURFACE

See Note 10

NOTES

1. 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. For Cases B and C, the side of the curb ramp should always be perpendicular to curb face.
2. If distance from curb to back of sidewalk is too short to accommodate ramp and 1.22 m 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.
3. When ramp is located in center of curb return, crosswalk configuration must be similar to that shown for Detail B.
4. As site conditions dictate, the retaining curb side and the flared side of the Case G ramp shall be constructed in reversed position.
5. If located on a curve, the sides of the ramp need not be parallel, but the minimum width of the ramp shall be 1.22 m.
6. 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.
7. The curb ramp shall be outlined, as shown, with a 305 mm wide border with 6 mm grooves approximately 19 mm on center. See grooving detail.
8. Transitions from ramps and landings to walks, gutters or streets shall be flush and free of abrupt changes.
9. Maximum slopes of adjoining gutters, the road surface immediately adjacent to the curb ramp, or accessible route shall not exceed 5 percent within 1.22 m of the top and bottom of the curb ramp.
10. Curb ramps shall have a detectable warning surface that extends the full width and 914 mm depth of the ramp. Detectable Warning Surfaces shall conform to the details on this plan and the requirements in the Special Provisions.
11. The edge of the detectable warning surface nearest the street shall be between 150 mm and 205 mm from the gutter flowline.
12. Sidewalk and ramp thickness, "T", shall be 90 mm minimum.
13. 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.
14. For retrofit conditions, removal and replacement of curb apron will be at the Contractor's option, unless otherwise shown on project plans.

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	138	87.2/88.9	121	156

H. David Cordova
REGISTERED CIVIL ENGINEER

December 16, 2005
PLANS APPROVAL DATE

Hector David Cordova No. C41957 Exp. 3-31-06 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

To get to the Caltrans web site, go to: http://www.dot.ca.gov

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CURB RAMP DETAILS

NO SCALE

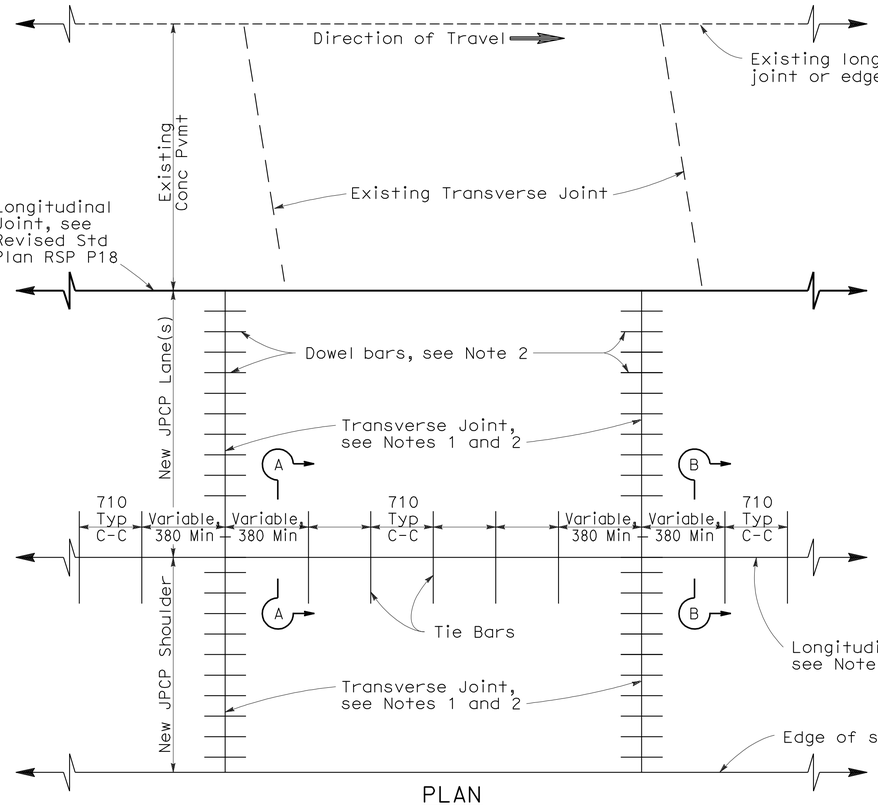
ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP A88A DATED DECEMBER 16, 2005 SUPERSEDES STANDARD PLAN A88A DATED JULY 1, 2004-PAGE 117 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP A88A

2004 REVISED Std PLAN RSP A88A

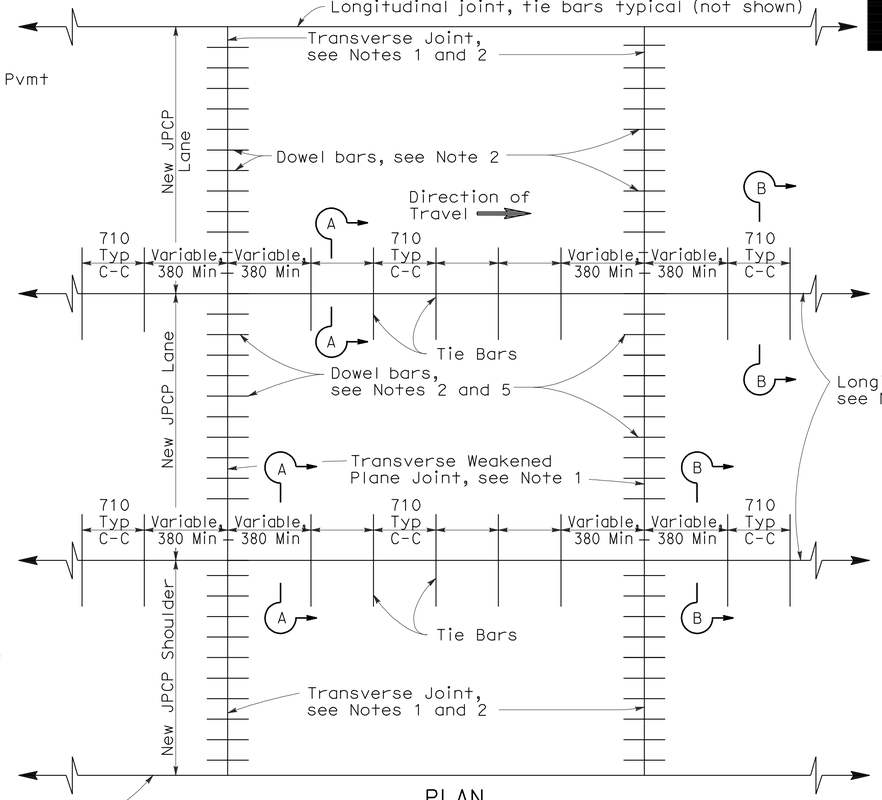
12-16-05



PLAN

LANE/SHOULDER ADDITION OR RECONSTRUCTION

See Notes 6 and 7



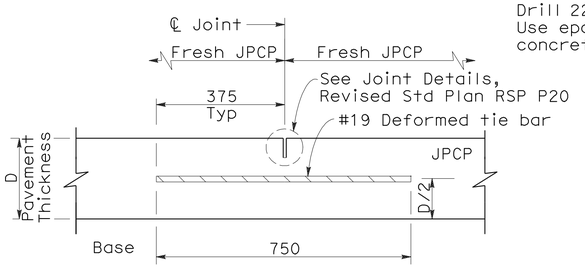
PLAN

NEW CONSTRUCTION

See Notes 6 and 7

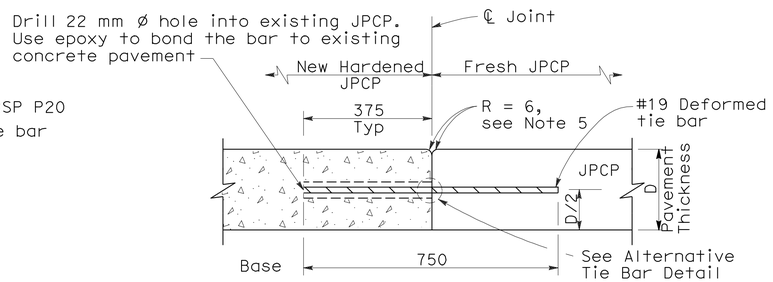
NOTES

1. Transverse joints shall be constructed at right angles to the longitudinal pavement joints in new portland cement concrete pavement and spaced at successive repeated intervals of 3.66 m, 4.57 m, 3.96 m and 4.27 m.
2. For transverse joint and dowel bar details not shown, see Revised Standard Plan RSP P10.
3. Construct longitudinal weakened plane joints as shown in Section A-A when more than one lane or shoulder widths are placed at one time. If constructing one lane at a time, use longitudinal contact joint, as shown in Section B-B.
4. For additional longitudinal joint details, see Revised Standard Plan RSP P18.
5. If fresh concrete is placed adjacent to existing concrete, the top corner of the new hardened concrete does not need to be rounded to the 6 mm radius, as shown.
6. Joint spacing patterns do not apply to intersections.
7. Details can also apply to inside widening.



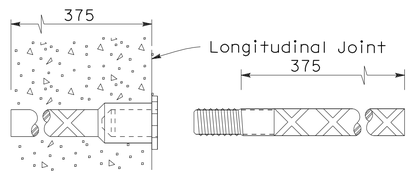
SECTION A-A

LONGITUDINAL WEAKENED PLANE JOINT



SECTION B-B

LONGITUDINAL CONTACT JOINT



ALTERNATIVE TIE BAR DETAIL

(Dowel Splice Coupler)

TIE BAR DETAILS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

JOINTED PLAIN CONCRETE PAVEMENT

NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP P1 DATED NOVEMBER 17, 2006 SUPERSEDES STANDARD PLAN P1 DATED JULY 1, 2004-PAGE 121 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP P1

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	138	87.2/88.9	122	156

William K. Farnbach
REGISTERED CIVIL ENGINEER

November 17, 2006
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — William K. Farnbach — No. 49042 — Exp. 09-30-08 — CIVIL — STATE OF CALIFORNIA

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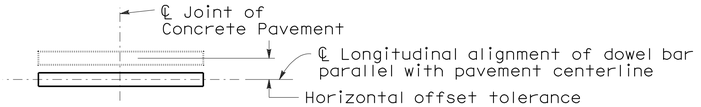
To accompany plans dated 5-17-10

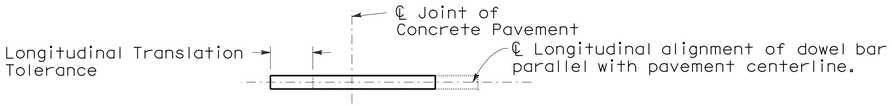
2004 REVISED Std PLAN RSP P1

10-24-06



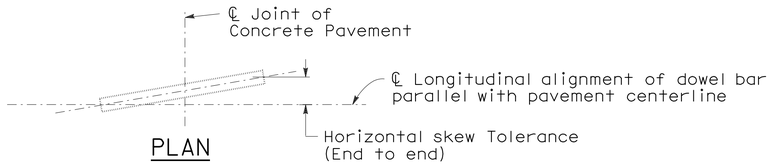
PLAN

HORIZONTAL OFFSET TOLERANCE



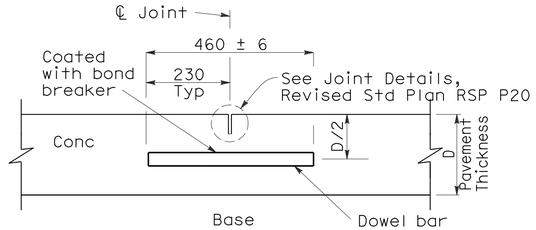
PLAN

LONGITUDINAL TRANSLATION TOLERANCE

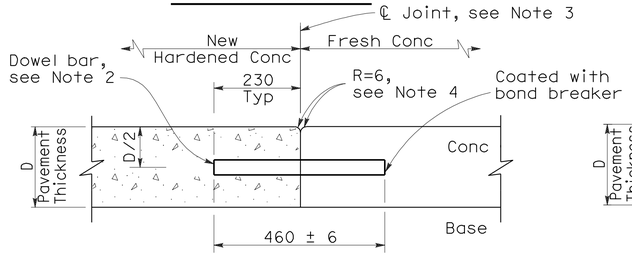


PLAN

HORIZONTAL SKEW TOLERANCE

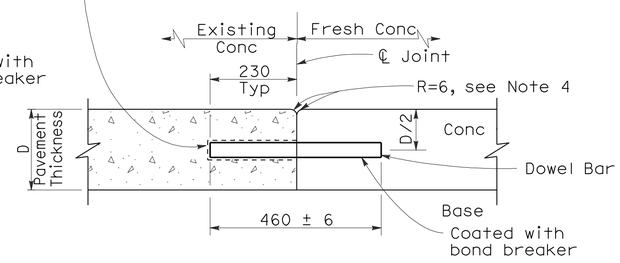


TRANSVERSE WEAKENED PLANE JOINT



TRANSVERSE CONTACT JOINT DETAIL

SECTION A-A



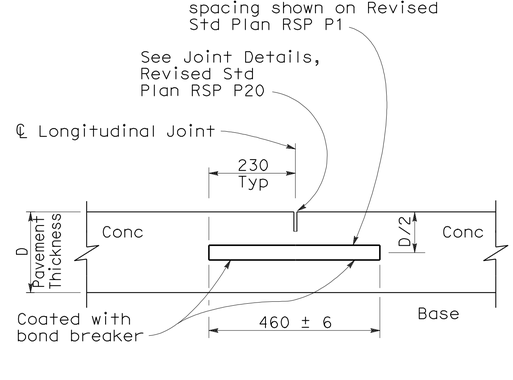
TRANSVERSE CONTACT JOINT FOR EXISTING CONCRETE PAVEMENT

(Drill and bond locations)

TABLE A

Dowel Bar Transverse Spacing Table		
Width between Longitudinal Joints (m)	Offset Dimension "X" (mm)	Number of Dowels between Longitudinal Joints
4.27	152	14
3.66	152	12
3.60	125	12
3.05	152	10
3.00	125	10
2.44	152	8
2.4	130	8
1.52	150	5
1.50	140	5

See Note 3



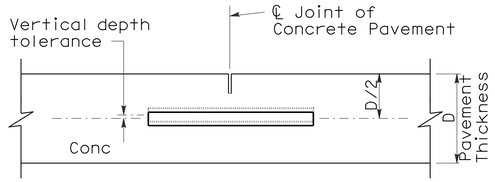
LONGITUDINAL WEAKENED PLANE JOINT WITH DOWEL BARS

(See Revised Std Plan RSP P18)

NOTES

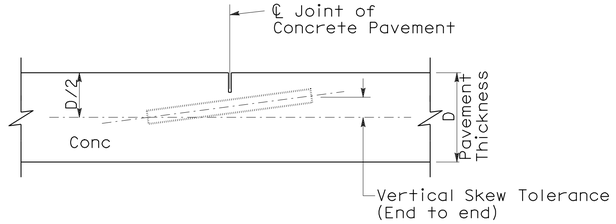
1. See Revised Standard Plan RSP P1 for typical dowel placement and locations.
2. 38 mm Dia smooth dowels are to be used with a pavement thickness, D, equal to or greater than 215 mm. For pavement thickness, D, less than 215 mm, use 32 mm Dia smooth dowels.
3. For widths not shown, see Project Plans.
4. If fresh concrete pavement is placed adjacent to existing concrete pavement, the top corner of the existing concrete pavement does not need to be rounded to the 6 mm radius, as shown.

To accompany plans dated 5-17-10



ELEVATION

VERTICAL DEPTH TOLERANCE



ELEVATION

VERTICAL SKEW TOLERANCE

Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	138	87.2/88.9	123	156

William K. Farnbach
REGISTERED CIVIL ENGINEER

November 17, 2006
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — William K. Farnbach — No. 49042 — Exp. 09-30-08 CIVIL — STATE OF CALIFORNIA

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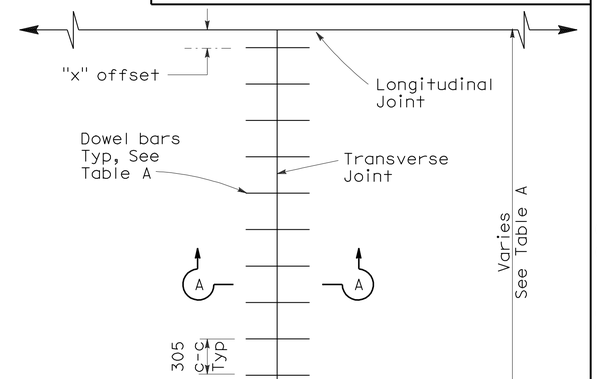
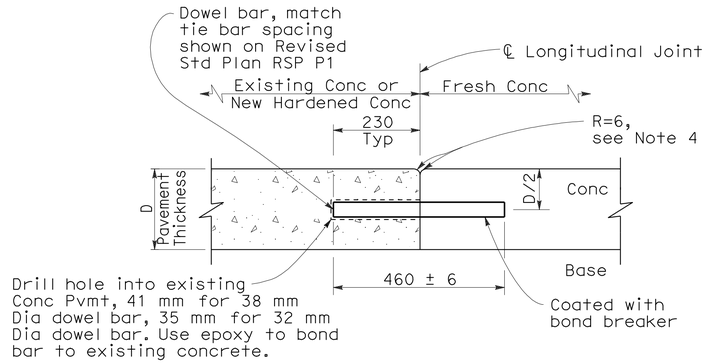


TRANSVERSE JOINT DOWEL BAR LAYOUT



LONGITUDINAL CONTACT JOINT WITH DOWEL BARS

(See Revised Std Plan RSP P18)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CONCRETE PAVEMENT-DOWEL BAR DETAILS

NO SCALE

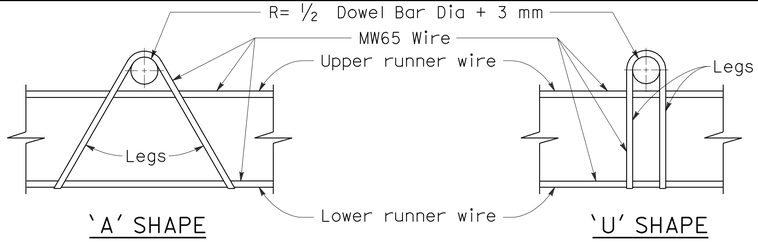
ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP P10 DATED NOVEMBER 17, 2006 SUPERSEDES STANDARD PLAN P10 DATED JULY 1, 2004-PAGE 125 OF THE STANDARD PLANS BOOK DATED JULY 2004.

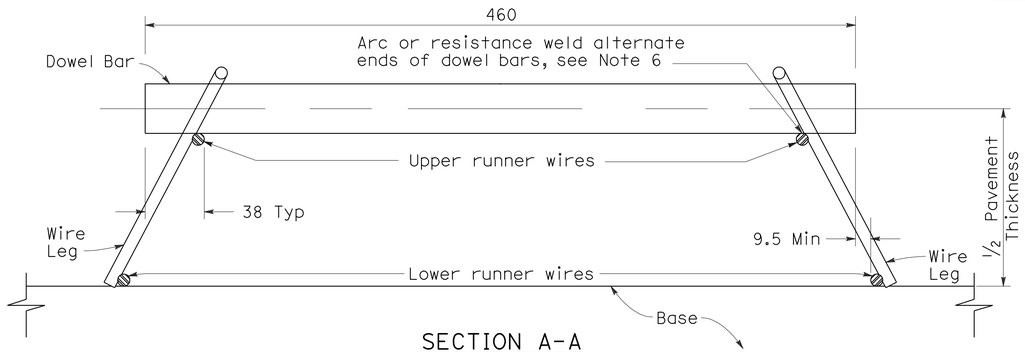
REVISED STANDARD PLAN RSP P10

2004 REVISED Std PLAN RSP P10

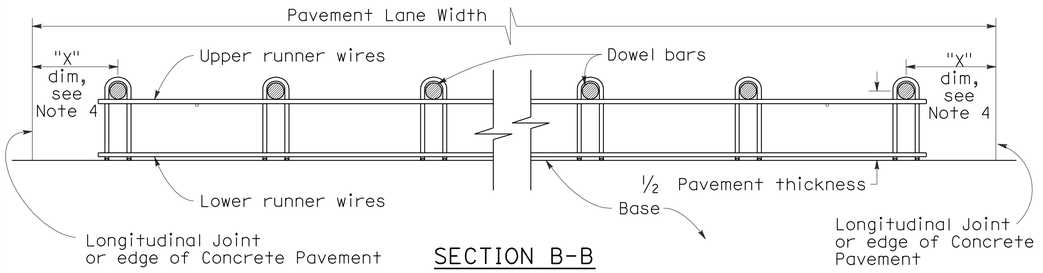
10-25-06



ASSEMBLY FRAME DETAILS

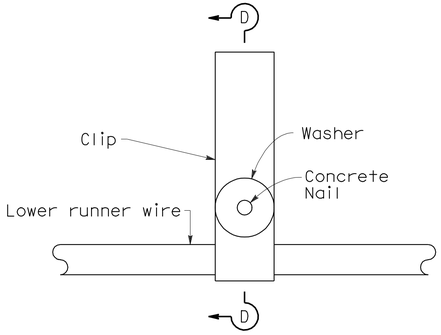


SECTION A-A

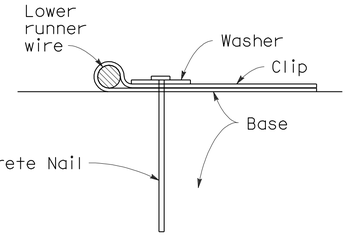


SECTION B-B

See Note 1



PLAN

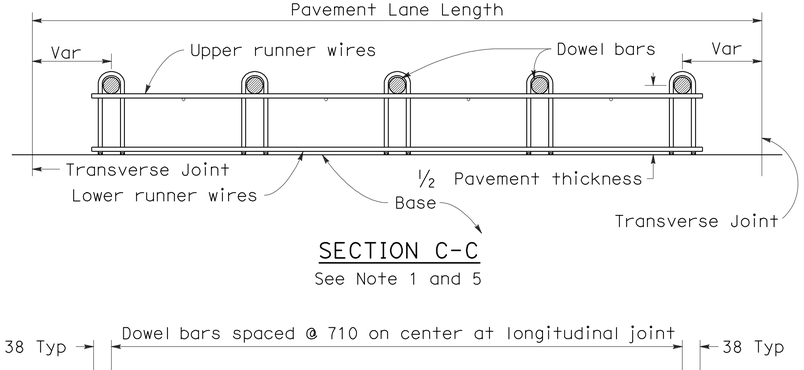


SECTION D-D

FASTENER DETAIL

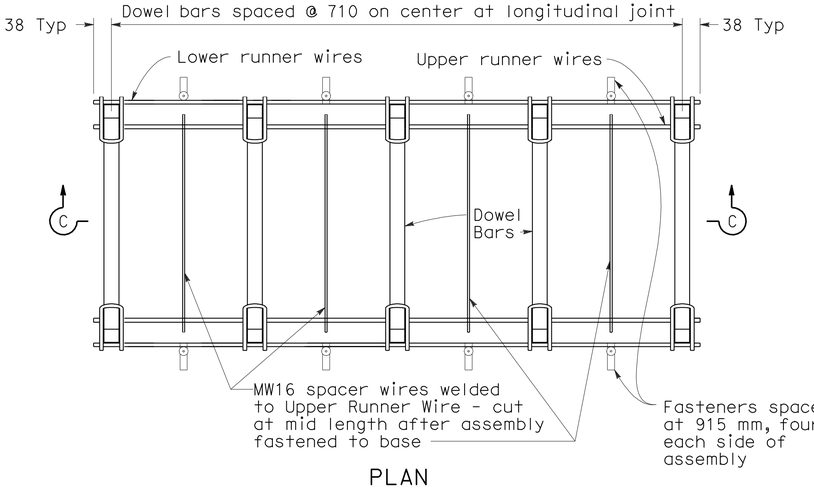
NOTES

1. 'U' frame shape assembly shown. 'U' frame shape or 'A' frame shape are acceptable.
2. Wire sizes shown are minimum required.
3. All wire intersections are to be resistance welded.
4. For "X" dimension, number of dowel bars between longitudinal joints and other details for dowel bars not shown, See Revised Standard Plan RSP P10.
5. Use tie bar spacing for longitudinal dowel bar locations. See Revised Standard Plans RSP P1 and RSP P2, and New Standard Plan NSP P3 for tie bar requirements.
6. Weld may be at top or bottom of dowel bar.



SECTION C-C

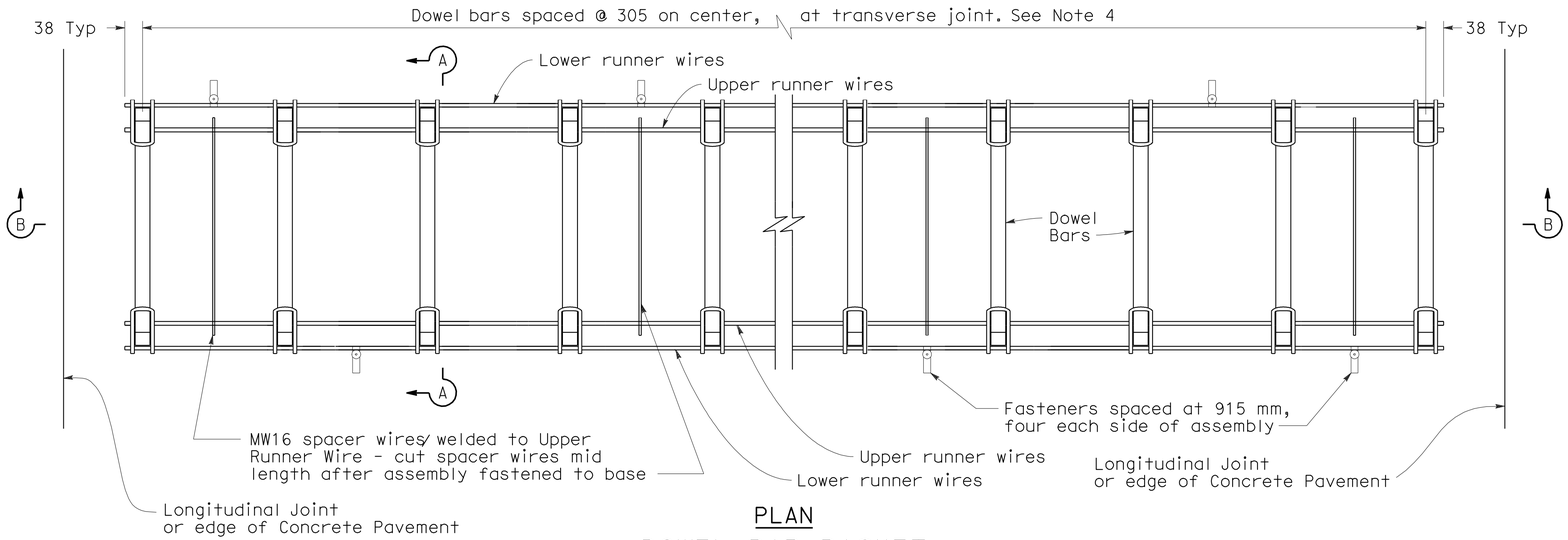
See Note 1 and 5



PLAN

DOWEL BAR BASKET (LONGITUDINAL JOINT)

See Note 1



PLAN

DOWEL BAR BASKET (TRANSVERSE JOINT)

See Note 1

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	138	87.2/88.9	124	156

William K. Farnbach
REGISTERED CIVIL ENGINEER

November 17, 2006
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — William K. Farnbach — No. 49042 — Exp. 09-30-08 CIVIL — STATE OF CALIFORNIA

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To accompany plans dated 5-17-10

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CONCRETE PAVEMENT- DOWEL BAR BASKET DETAILS

NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP P12 DATED NOVEMBER 17, 2006 SUPERSEDES STANDARD PLAN P12 DATED JULY 1, 2004-PAGE 126 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP P12

2004 REVISED Std PLAN RSP P12

10-25-06

NOTE

1. Tie bars, dowel bars, and reinforcement are not shown in joint seal details, see Revised Std Plan RSP P1, New Std Plan NSP P3, Revised Std Plan RSP P10, Std Plan P35, Std Plan P45, or Std Plan P46 as applicable.

To accompany plans dated 5-17-10

Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	138	87.2/88.9	125	156

William K. Farnbach
REGISTERED CIVIL ENGINEER

November 17, 2006
PLANS APPROVAL DATE

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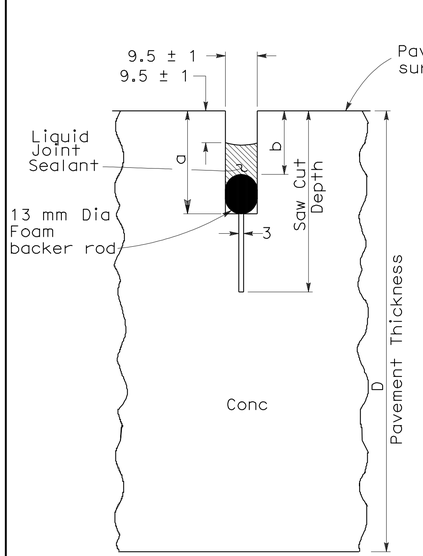
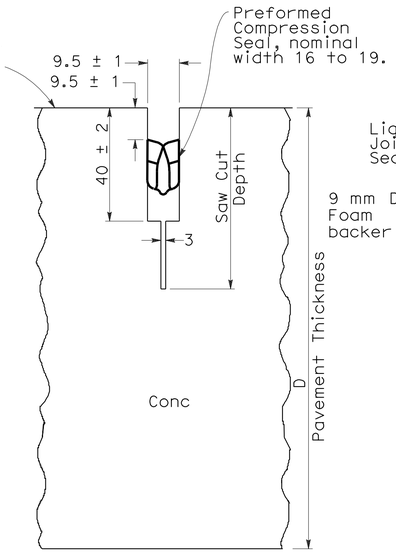


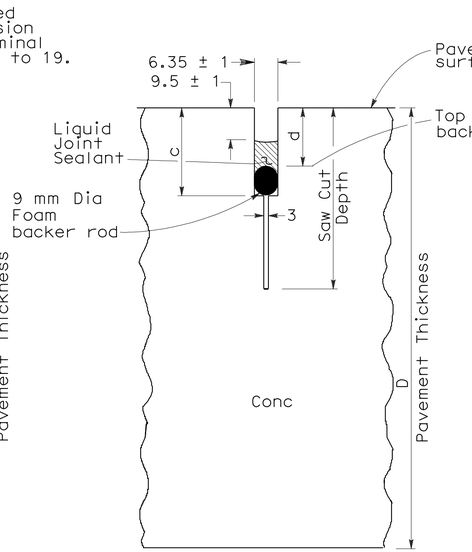
LIQUID SEALANT



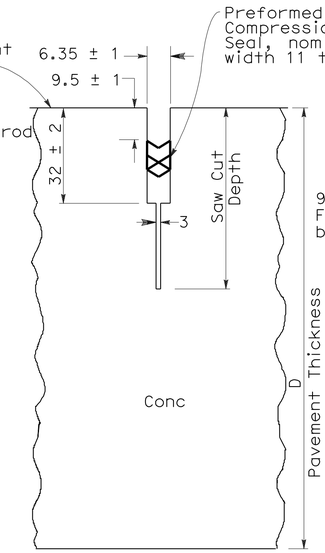
COMPRESSION SEAL

TYPE A1

Transverse Weakened Plane Joints



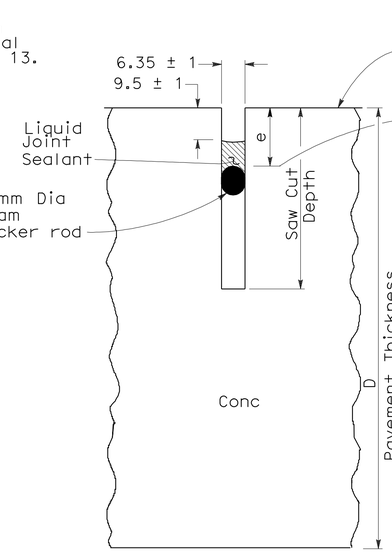
LIQUID SEALANT



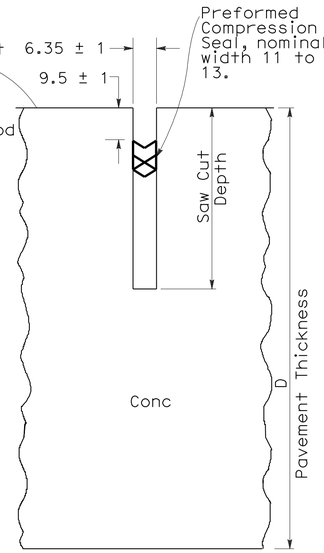
COMPRESSION SEAL

TYPE A2

Longitudinal Weakened Plane Joints



LIQUID SEALANT



COMPRESSION SEAL

TYPE B

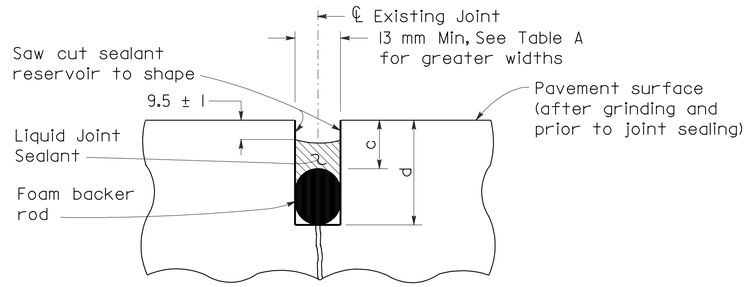
Longitudinal or Transverse Weakened Plane Joints

LIQUID SEALANT RESERVOIR DEPTH

LIQUID SEALANT MATERIAL	9.5 mm Joint Width Type A1		6.35 mm Joint Width Type A2		6.35 mm Joint Width Type B
	DIMENSION		DIMENSION		DIMENSION
	a	b	c	d	e
SILICONE	26 ± 1	15 ± 1	23 ± 1	14 ± 1	14 ± 1
ASPHALT RUBBER	30 ± 1	19 ± 1	26 ± 1	17 ± 1	17 ± 1

TABLE A

Sawn Joint Width	Backer Rod Diameter	Dimension "c"	Dimension "d"
mm	mm ± 1	mm	mm
25	33	22	55
22	30	20	50
19	25	19	44
16	22	18	40
13	17	16	33



LIQUID SEALANT TYPE R

Retrofit Transverse and Longitudinal Joints

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CONCRETE PAVEMENT-JOINT DETAILS

NO SCALE

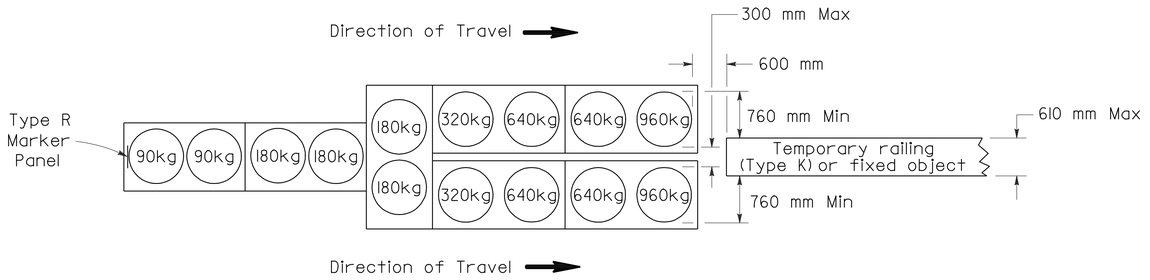
ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP P20 DATED NOVEMBER 17, 2006 SUPERSEDES STANDARD PLAN P20 DATED JULY 1, 2004-PAGE 129 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP P20

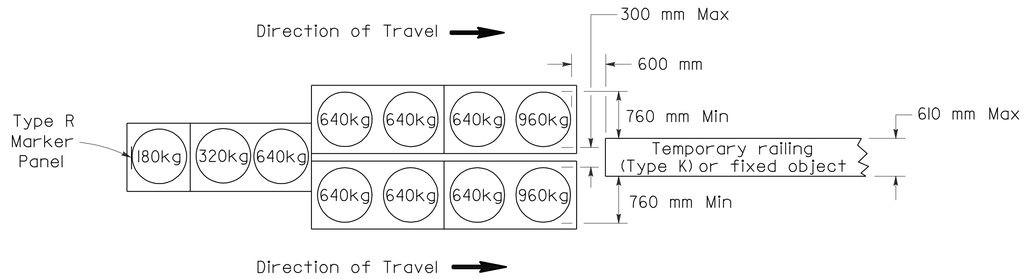
2004 REVISED Std PLAN RSP P20

10-24-06



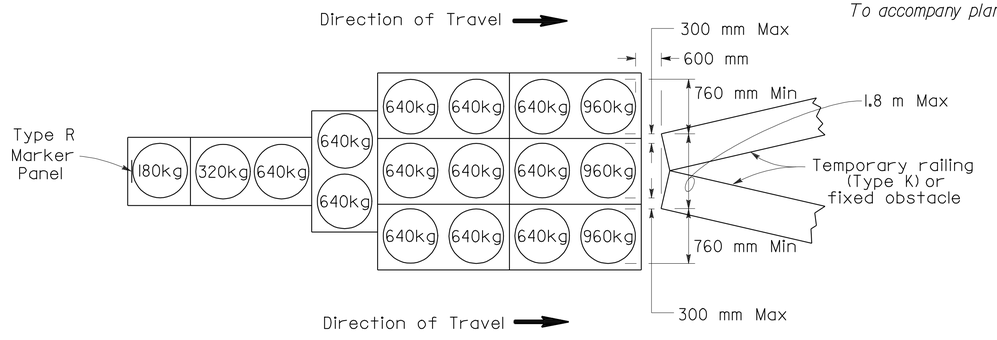
ARRAY 'TUI4'

Approach speed 70 km/h or more



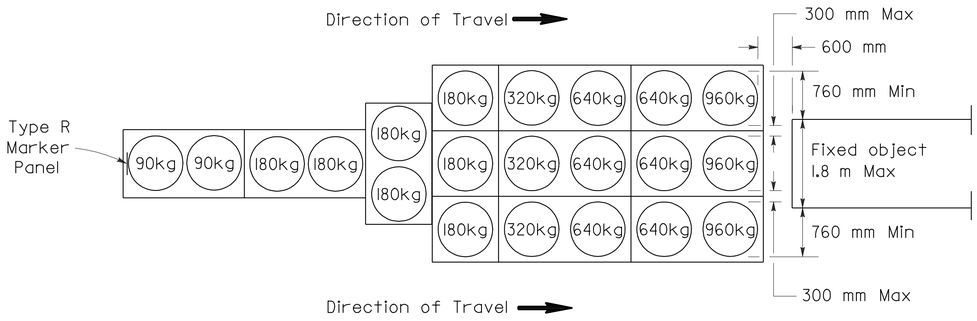
ARRAY 'TUI1'

Approach speed less than 70 km/h



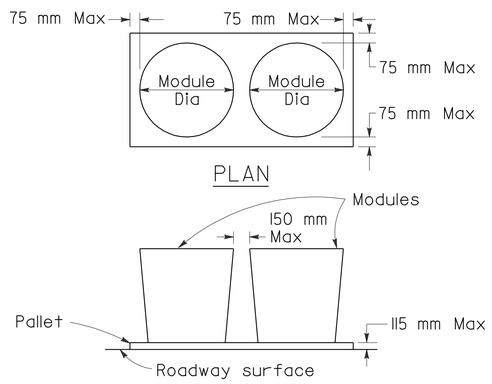
ARRAY 'TUI7'

Approach speed less than 70 km/h



ARRAY 'TU2I'

Approach speed 70 km/h or more



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES

1. (XXX) Indicates sand filled module location and mass of sand in kilograms for each module. Module spacing is based on the greater diameter of the module.
2. All sand masses are nominal.
3. Temporary crash cushion arrays shall not encroach on the traveled way.
4. Place the top of Type R marker panel 25 mm 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.

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	138	87.2/88.9	126	156

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

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To accompany plans dated 5-17-10

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY CRASH CUSHION, SAND FILLED (UNIDIRECTIONAL)

NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP T1A DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T1A
DATED July 1, 2004 - PAGE 211 OF THE STANDARD PLANS BOOK DATED July 2004.

REVISED STANDARD PLAN RSP T1A

2004 REVISED Std PLAN RSP T1A

5-16-08

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	138	87.2/88.9	127	156

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

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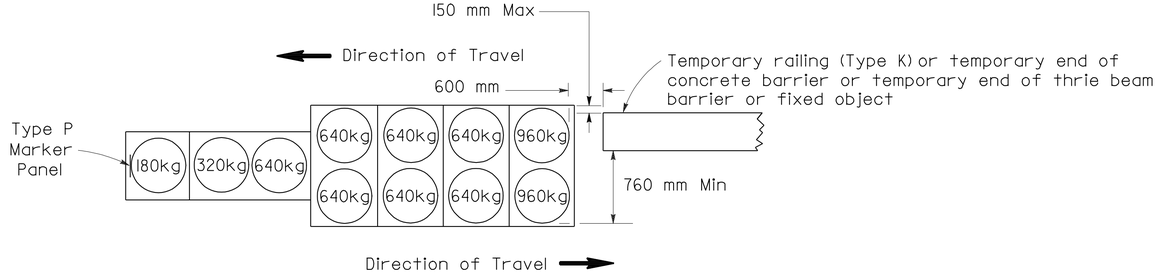
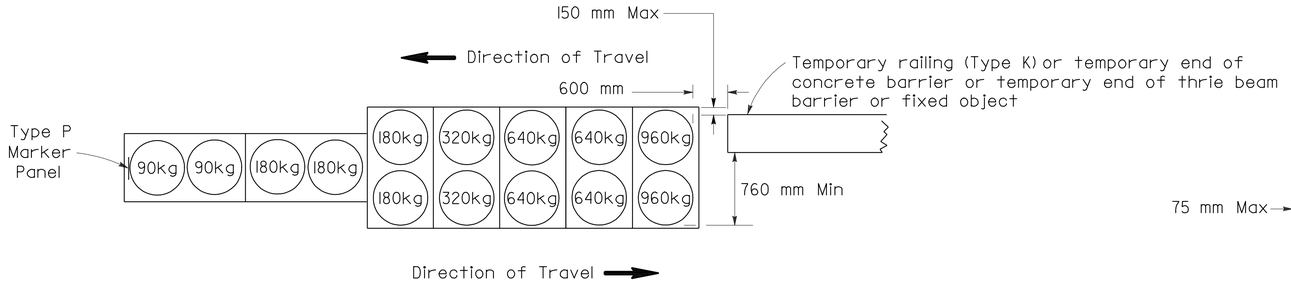
To accompany plans dated 5-17-10



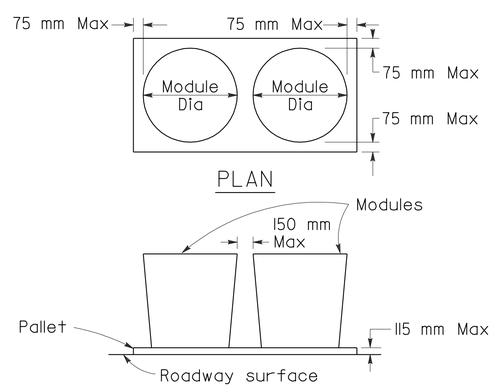
ARRAY 'TBI1'

Approach speed less than 70 km/h



ARRAY 'TBI4'

Approach speed 70 km/h or more



CRASH CUSHION PALLET DETAIL

See Note 7

NOTES

1. (XXX) Indicates sand filled module location and mass of sand in kilograms for each module. Module spacing is based on the greater diameter of the module.
2. All sand masses 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

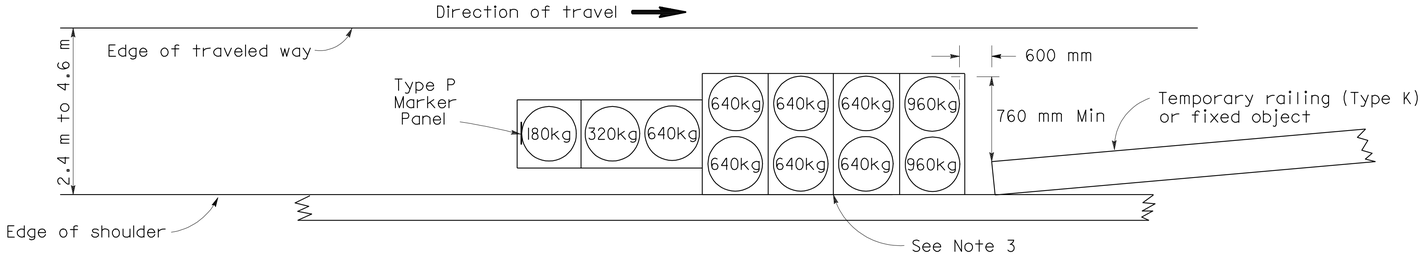
ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP T1B DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T1B DATED July 1, 2004 - PAGE 212 OF THE STANDARD PLANS BOOK DATED July 2004.

REVISED STANDARD PLAN RSP T1B

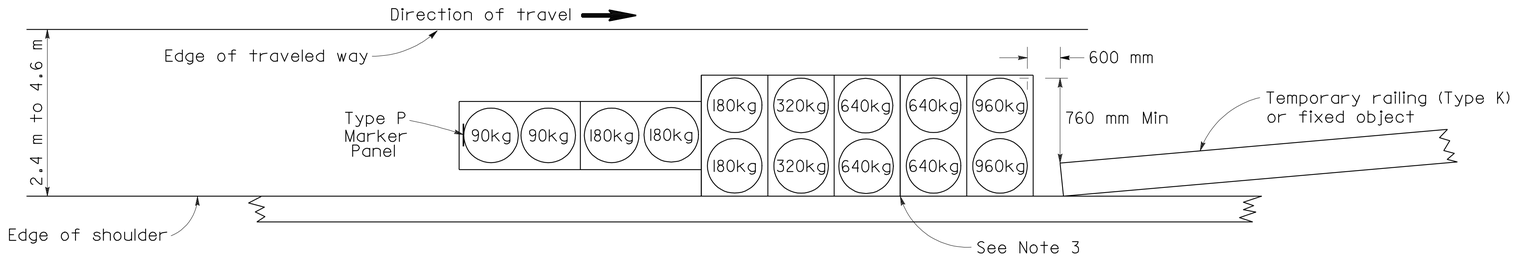
2004 REVISED Std PLAN RSP T1B

5-16-08



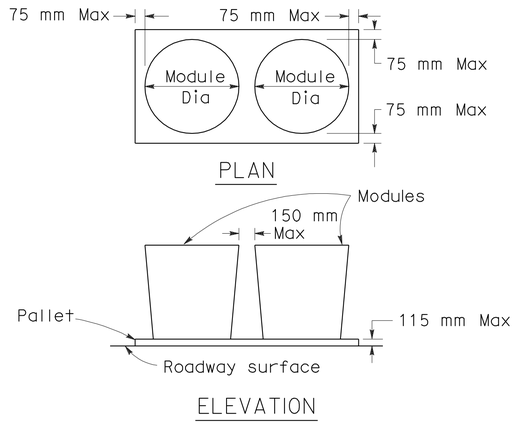
ARRAY 'TSI1'

Approach speed less than 70 km/h
See Note 9



ARRAY 'TSI4'

Approach speed 70 km/h or more
See Note 9



CRASH CUSHION PALLET DETAIL

See Note 11

Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	138	87.2/88.9	128	156

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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To accompany plans dated 5-17-10

NOTES

1. (XXX) Indicates sand filled module location and mass of sand in kilograms for each module. Module spacing is based on the greater diameter of the module.
2. All sand masses are nominal.
3. 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.
4. If the fixed object or approach end of the temporary railing is less than 4.60 meters from the edge of traveled way, a temporary crash cushion is required.
5. Temporary crash cushion arrays shall not encroach on the traveled way.
6. Arrays for median shoulders shall conform to details shown on this plan for outside shoulders.
7. Place the Type P marker panel so that the bottom of the panel rest upon the pallet and faces traffic.
8. Refer to Standard Plan A73B for marker details.
9. For shoulder widths less than 2.4 m, 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.
10. Approach speeds indicated conform to NCHRP 350 Report criteria.
11. Use of Pallets is optional.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY CRASH CUSHION, SAND FILLED (SHOULDER INSTALLATIONS)

NO SCALE

ALL DIMENSIONS ARE IN
MILLIMETERS UNLESS OTHERWISE SHOWN

RSP T2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T2
DATED July 1, 2004 - PAGE 213 OF THE STANDARD PLANS BOOK DATED July 2004.

REVISED STANDARD PLAN RSP T2

2004 REVISED Std PLAN RSP T2

5-16-08

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	138	87.2/88.9	129	156

REGISTERED CIVIL ENGINEER

April 28, 2005
PLANS APPROVAL DATE

Greg W. Edwards No. C36386 Exp. 6-30-06 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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To accompany plans dated 5-17-10

TYPICAL LANE CLOSURE

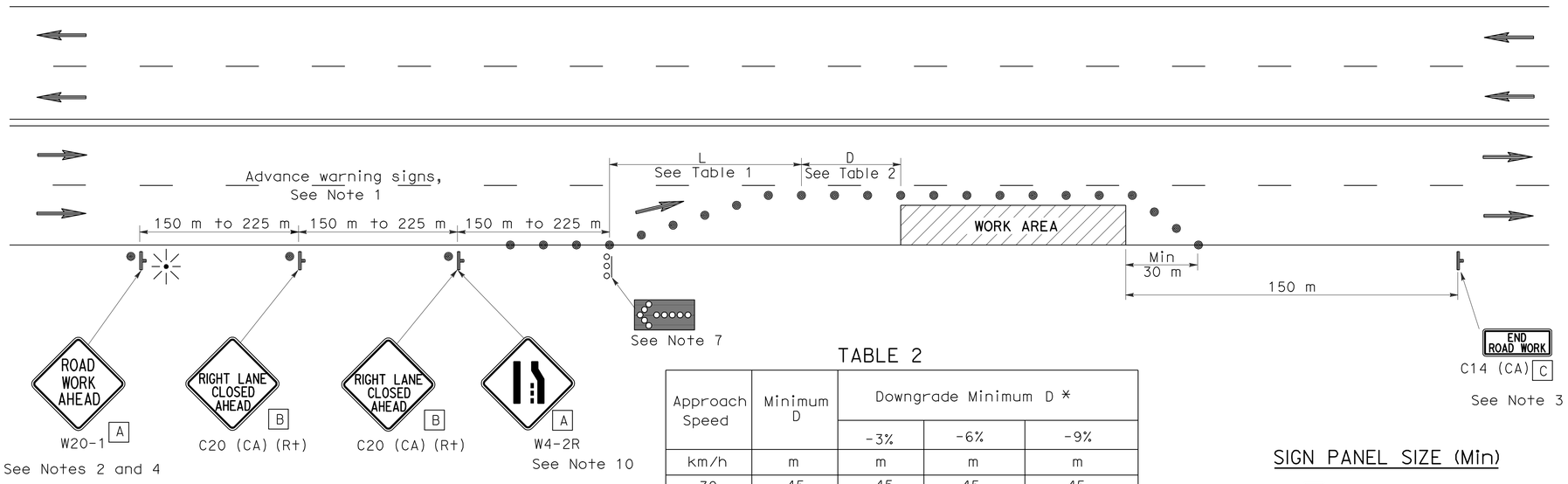


TABLE 2

Approach Speed	Minimum D	Downgrade Minimum D *		
		-3%	-6%	-9%
km/h	m	m	m	m
30	45	45	45	45
40	45	50	50	53
50	45	66	70	74
60	45	87	92	97
70	65	1 10	1 16	124
80	85	136	144	154

* Use on sustained downgrade steeper than or equal to grades shown and longer than 1.6 km.

SIGN PANEL SIZE (Min)

- A 900 mm x 900 mm
- B 914 mm x 914 mm
- C 914 mm x 457 mm

LEGEND

- Traffic Cone
- Temporary Sign
- Direction of Travel
- Flashing Arrow Sign (FAS)
- FAS Support or Trailer
- Portable Flashing Beacon

NOTES

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

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

NOTES

1. Where approach speeds are low, advance warning signs may be placed at 90 m spacing and placed closer in urban areas.
2. Each advance warning sign shall be equipped with at least two flags for daytime closure. Each flag shall be at least 400 mm x 400 mm in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
3. A C14 (CA) "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious, or ends within a larger project's limits.
4. If the W20-1 sign would follow within 600 m of a stationary W20-1 or C11 (CA) "ROAD WORK NEXT _____ MILES", use a C20 (CA) sign for the first advance warning sign.
5. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
6. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
7. Flashing arrow sign shall be either Type I or Type II.
8. The maximum spacing between cones along a tangent shall be 15 m and along a taper shall be approximately as shown in Table 1.
9. For approach speeds over 80 km/h, use the "Traffic Control System for Lane Closure On Freeways And Expressways" plan for lane closure details and requirements.
10. When specified in the special provisions, a W4-2 "LANE ENDS" symbol sign is to be used in place of the C20 (CA) "RIGHT LANE CLOSED AHEAD" sign.

TABLE I

Approach Speed	* Minimum L	** Max spacing of cones along taper
km/h	m	m
30	38	6
40	38	8
50	98	10
60	98	12
70	183	14
80	183	15
Over 80	See Note 9	

* Use L for lane widths less than or equal to 3.6 m.

** See Note 8

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON MULTILANE CONVENTIONAL HIGHWAYS

NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP T11 DATED APRIL 28, 2005 SUPERSEDES STANDARD PLAN T11 DATED JULY 1, 2004-PAGE 220 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP T11

2004 REVISED Std PLAN RSP T11

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	138	87.2/88.9	130	156

Caltrans Metric

REGISTERED CIVIL ENGINEER

April 28, 2005
PLANS APPROVAL DATE

Greg W. Edwards No. C36386 Exp. 6-30-06 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

To get to the Caltrans web site, go to: http://www.dot.ca.gov

To accompany plans dated 5-17-10

LEGEND

- Traffic Cone
- Temporary Sign
- Direction of Travel
- Flashing Arrow Sign (FAS)
- FAS Support or Trailer
- Portable Flashing Beacon

TABLE I

Approach Speed	*Minimum L	** Max spacing of cones along taper
km/h	m	m
30	38	6
40	38	8
50	98	10
60	98	12
70	183	14
80	183	15
Over 80	See Note 11	

* Use L for lane widths less than or equal to 3.6 m.

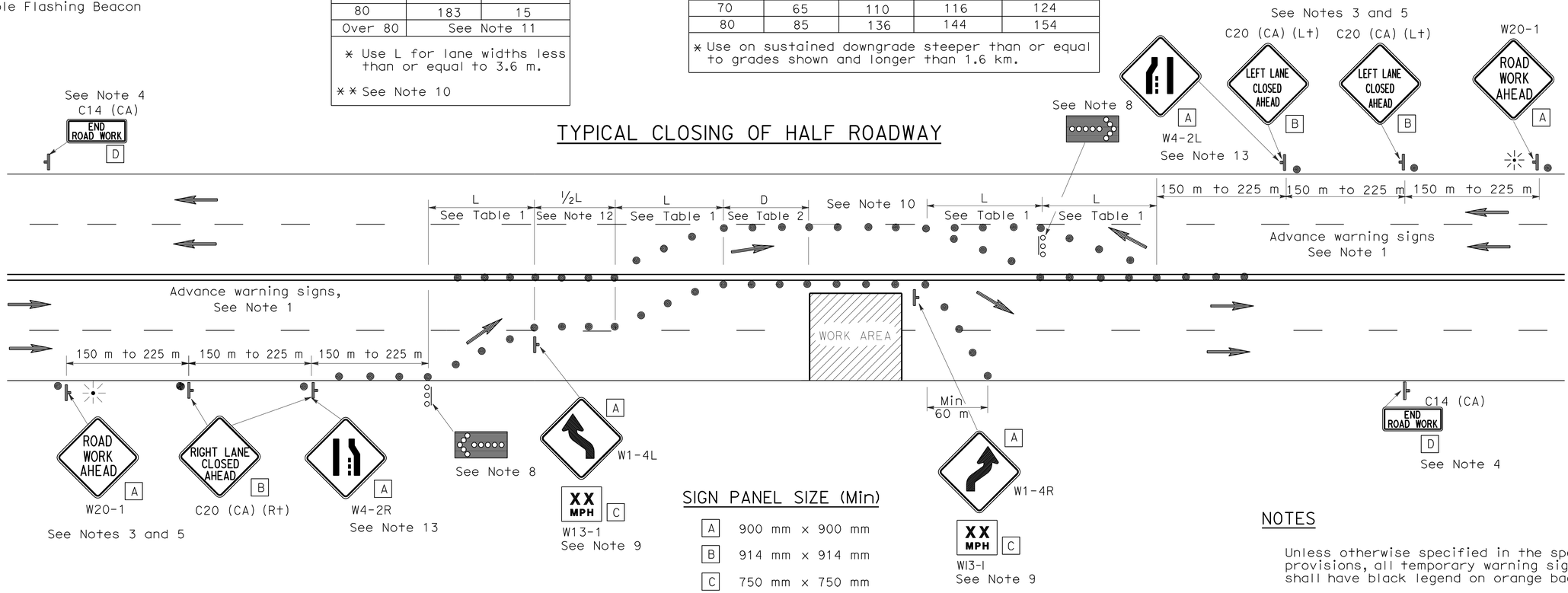
** See Note 10

TABLE 2

Approach Speed	Minimum D	Downgrade Minimum D *		
		-3%	-6%	-9%
km/h	m	m	m	m
30	45	45	45	45
40	45	50	50	53
50	45	66	70	74
60	45	87	92	97
70	65	110	116	124
80	85	136	144	154

* Use on sustained downgrade steeper than or equal to grades shown and longer than 1.6 km.

TYPICAL CLOSING OF HALF ROADWAY



SIGN PANEL SIZE (Min)

A	900 mm x 900 mm
B	914 mm x 914 mm
C	750 mm x 750 mm
D	914 mm x 457 mm

NOTES

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

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

NOTES

1. Where Approach speeds are low, advance warning signs may be placed at 90 m spacing and placed closer in urban areas.
2. At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closure unless, otherwise directed by the Engineer.
3. Each advance warning sign in each direction of travel shall be equipped with at least two flags for daytime closure. Each flag shall be at least 400 mm x 400 mm in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
4. A C14 (CA) "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious, or ends within a larger project's limits.
5. If the W20-1 sign would follow within 600 m of a stationary W20-1 or C11 (CA) "ROAD WORK NEXT _____ MILES", use a C20 (CA) sign for the first advance warning sign.
6. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
7. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
8. Flashing arrow signs shall be either Type I or Type II.
9. Advisory speed will be determined by the Engineer. The W13-1 Sign will not be required when advisory speed is more than the posted or maximum speed limit.
10. The maximum spacing between cones along a tangent shall be 15 m and along a taper shall be approximately as shown in Table 1.
11. For approach speeds over 80 km/h, use the "Traffic Control System For Lane Closure On Freeways And Expressways" plan for lane closure details and requirements.
12. Unless otherwise specified in the special provisions, the (½ L) shown between the two (L) lane closure tapers shall be used.
13. When specified in the special provisions, a W4-2 "Lane Ends" symbol sign is to be used in place of the C20 (CA) "RIGHT (LEFT) LANE CLOSED AHEAD" sign.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON MULTILANE CONVENTIONAL HIGHWAYS

NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP T12 DATED APRIL 28, 2005 SUPERSEDES STANDARD PLAN T12 DATED JULY 1, 2004-PAGE 221 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP T12

2004 REVISED Std PLAN RSP T12

NOTES

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

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

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	138	87.2/88.9	131	156

REGISTERED CIVIL ENGINEER

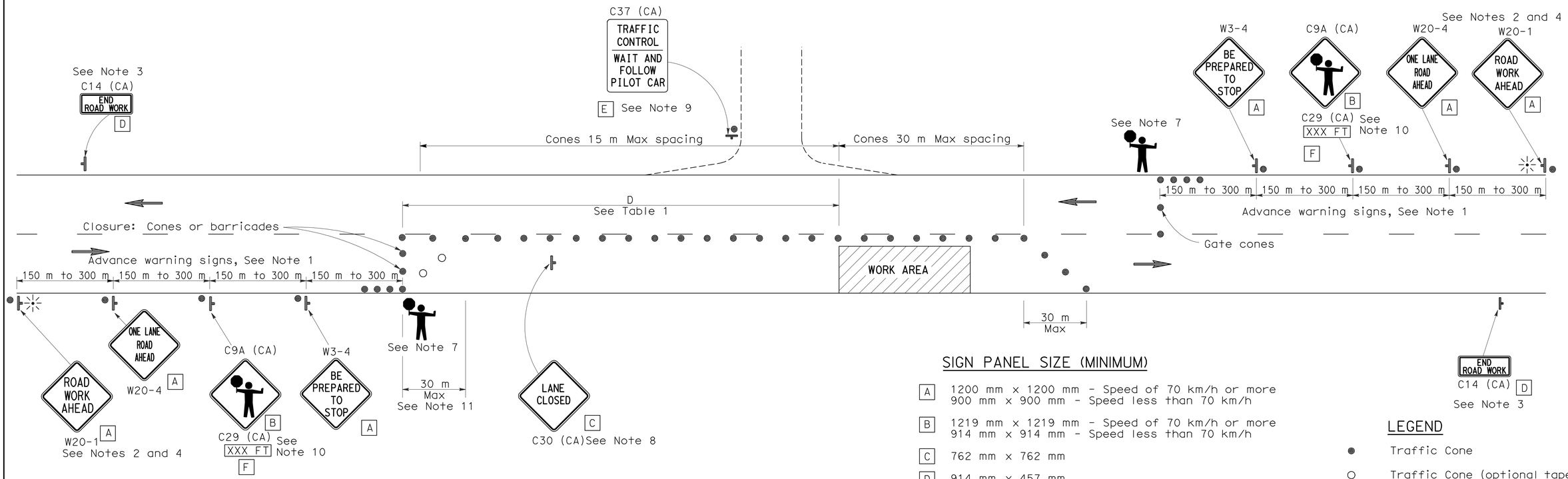
April 28, 2005
PLANS APPROVAL DATE

G.W. Edwards No. C36386 Exp. 6-30-06 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

To get to the Caltrans web site, go to: http://www.dot.ca.gov

To accompany plans dated 5-17-10

TYPICAL LANE CLOSURE WITH REVERSIBLE CONTROL



NOTES

1. Where approach speeds are low, advance warning signs may be placed at 90 m spacing, and closer in urban areas.
2. Each advance warning sign in each direction of travel shall be equipped with at least two flags for daytime closure. Each flag shall be at least 400 mm x 400 mm in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
3. A C14 (CA) "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane control unless the end of work area is obvious, or ends within a larger project's limits.
4. If the W20-1 sign would follow within 600 m of a stationary W20-1 or C11 (CA) "ROAD WORK NEXT _____ MILES", use a C16 (CA) sign for the first advance warning sign.
5. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
6. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
7. Additional advance flaggers may be required. Flagger should stand in a conspicuous place, be visible to approaching traffic as well as approaching vehicles after the first vehicle has stopped. During the hours of darkness, the flagging-station and flagger shall be illuminated and clearly visible to approaching traffic. The illumination footprint of the lighting on the ground shall be at least 6 m in diameter. Place a minimum of four cones at 15 m intervals in advance of flagger station as shown.
8. Place C30 (CA) "LANE CLOSED" sign at 150 to 300 m intervals throughout extended work areas. They are optional if the work area is visible from the flagger station.
9. When a pilot car is used, place a C37 (CA) "TRAFFIC CONTROL-WAIT AND FOLLOW PILOT CAR" sign at all intersections within traffic control area. Signs shall be clean and visible at all times.
10. An optional C29 (CA) sign may be placed below the C9A (CA) sign.
11. Traffic cones or barricades may be placed on the optional taper as shown, barricades shall be Type I, II, or III.

SIGN PANEL SIZE (MINIMUM)

- A — 1200 mm x 1200 mm - Speed of 70 km/h or more; 900 mm x 900 mm - Speed less than 70 km/h
- B — 1219 mm x 1219 mm - Speed of 70 km/h or more; 914 mm x 914 mm - Speed less than 70 km/h
- C — 762 mm x 762 mm
- D — 914 mm x 457 mm
- E — 914 mm x 1067 mm
- F — 914 mm x 229 mm

TABLE I

Approach Speed	Minimum D	Downgrade Minimum D *
km/h	m	m
30	60	72
40	60	72
50	60	72
60	90	108
70	90	108
80	150	180
90	150	180
100	150	180
110	170	204

* Use on substained downgrade steeper than -3 percent and longer than 1.6 km.

LEGEND

- Traffic Cone
- Traffic Cone (optional taper)
- Temporary Sign
- Direction of Travel
- Portable Flashing Beacon
- Flagger

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON TWO LANE CONVENTIONAL HIGHWAYS

NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP T13 DATED APRIL 28, 2005 SUPERSEDES STANDARD PLAN T13 DATED JULY 1, 2004-PAGE 222 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP T13

2004 REVISED Std PLAN RSP T13

ELECTROLIERS

STANDARD TYPES
15, 15D
15 STRUCTURE
21, 21D STRUCTURE
30
31
32
35
36-20A

High mast lighting standard

Double arm lighting standard

Existing electrolier

Electrolier foundation (Future installation)

NOTES

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

Electrolier (see project notes or project plans)

Luminaire on wood pole

STANDARD NOTES

- AB Abandon. If applied to conduit, remove conductors.
- BC Install pull box in existing conduit run.
- BP Pedestrian barricade, type as indicated on plan.
- CB Install conduit into existing pull box.
- CC Connect new and existing conduit. Remove existing conductors and install conductors as indicated.
- CF Conduit to remain for future use. Remove conductors. Install pull wire or rope.
- DH Detector handhole.
- FA Foundation to be abandoned.
- IS Install sign on signal mast arm.
- NS No slip base on standard.
- PEC Photoelectric control.
- PEU Photoelectric unit.
- RC Equipment or material to be removed and become the property of the Contractor.
- RE Remove electrolier, fuses and ballast. Tape ends of conductors.
- RL Relocate equipment.
- RR Remove and reuse equipment.
- RS Remove and salvage equipment.
- SC Splice new to existing conductors.
- SD Service disconnect.
- SF Standard to remain for future use. Remove luminaire, pole conductors, fuses and ballast. Tape disconnects.
- 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 mounted vehicle signal faces, top attachment
MAS	mas	Mast arm mounted vehicle signal faces, side attachment
MAS-4A	mas-4A	Mast arm mounted vehicle signal faces,
MAS-4B	mas-4B	side attachment - 4 signal section
MAS-4C	mas-4C	
MAS-5A	mas-5A	Mast arm mounted vehicle signal faces,
MAS-5B	mas-5B	side attachment - 5 signal section
MC	mc	Mercury contactor
M/M	m/m	Multiple to multiple transformer
MT	mt	Conduit with pull wire or rope only
MTG	mtg	Mounting
	mv	Mercury vapor lighting fixture
N	N	Neutral (Grounded Conductor)
NC	NC	Normally closed
NO	NO	Normally open
PB	pb	Pull box
PEC	pec	Photoelectric control (Type I, II, III, IV or V as shown)
PED	ped	Pedestrian
PEU	peu	Photoelectric unit
PPB	ppb	Pedestrian push button
RL	RL	Relocated equipment
RM	rm	Ramp metering
SB	sb	Slip base
SIC	sic	Signal interconnect cable
SIG	sig	Signal
SMA	sma	Signal mast arm
SNS	sns	Street name sign
SP	sp	Service point
TDC	tdc	Telephone demarcation cabinet
TMS	tms	Traffic monitoring station
TOS	tos	Traffic Operations System
VEH	veh	Vehicle
XFMR	xfmr	Transformer
COMM	comm	Communication
RWIS	rwis	Roadway weather information system

Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	138	87.2/88.9	132	156

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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

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To accompany plans dated 5-17-10

SOFFIT AND WALL MOUNTED LUMINAIRES

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

NOTE

Arrow indicates "street side" of luminaire.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-1A DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-1A DATED JULY 1, 2004-PAGE 413 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-1A

2004 REVISED Std PLAN RSP ES-1A

6-27-07

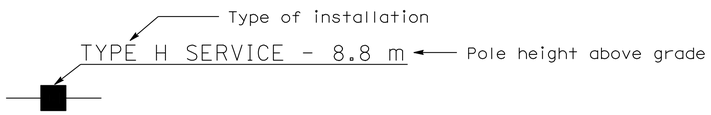
CONDUIT

PROPOSED	EXISTING	
— — —	— — —	Lighting conduit, unless otherwise indicated or noted
— - — - —	— - — - —	Traffic signal conduit
—C— —	—c— —	Communication conduit
—T— —	—t— —	Telephone conduit
—F— —	—f— —	Fire alarm conduit
—FO— —	—fo— —	Fiber optic conduit
— — —]	— — —]	Conduit termination (RSP ES-9A C)
R	r	Conduit riser in/on structure or Service pole

SERVICE EQUIPMENT

PROPOSED	EXISTING	
—OH—	—oh—	Overhead lines
U	u	Wood pole "U" indicates utility owned
		Pole guy-with anchor
		Utility transformer-ground mounted
III		Service equipment enclosure type
		Service equipment enclosure door indicates front of enclosure
T	t	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

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
PV	PV	Modifications of basic symbols: "L" Indicates all non-arrow sections louvered "LG" Indicates louvered green section only "PV" indicates 300 mm programmed visibility sections "200" indicates all 200 mm 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
Y Y	Y Y	Type 15-FBS Standard with two vehicle signal face sections with lens, backplate and visor with a sign
R	Y	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
	O	Guard post
		Type 1 Standard with "Meter On" sign
		Emergency vehicle detector

Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	138	87.2/88.9	133	156

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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

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To accompany plans dated 5-17-10

NOTES

1. All signal sections shall be 300 mm unless shown otherwise.
2. Signal heads shall be provided with backplates unless shown otherwise.
3. Signal indication shall be LED.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-1B DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-1B DATED JULY 1, 2004-PAGE 414 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-1B

2004 REVISED Std PLAN RSP ES-1B

8-9-07

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	138	87.2/88.9	134	156

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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

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To accompany plans dated 5-17-10

EQUIPMENT IDENTIFICATION

ILLUMINATED SIGN IDENTIFICATION NUMBER:

Sign No. 12345
10 ISL SCI 1.0

- Sign number - Place on post or structure
- Transformer rating (kVA)
- Lighting control type
- Number and type of fixtures

Do NOT place on standard or structure

ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:

12345 - 4.6

- Mast arm length in meters, if shown. Do not place on standard or structure.
- Equipment number - Place on standard or structure. Existing equipment numbers are shown in parenthesis

CONDUIT AND CONDUCTOR IDENTIFICATION:

41C, 2#10, 15#14, 2 DLC

- Number and size of conductors and cables
- Size of conduit in millimeters

ø1, ø2, ø2P, etc. — Traffic phase identification for signal faces, detectors and phase diagrams

1 2 3 — Project note numbers

(A) (B) (C) — Equipment description, installation or item numbers

△1 △2 △3 — Conduit run numbers

SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):

19A - 3 - 161

- Wind velocity=161 km/h
- Case 3 arm loading
- Standard type
- Standard Plan sheet number
- Detail number or letter

WIRING DIAGRAM LEGEND

P	Pole
CB	Circuit breaker
A	Ampere
V	Volt
M	Metered
UM	Unmetered
NB	Neutral bus
GB	Ground bus
G	Equipment grounding conductor
N	Grounded conductor (Neutral)

- External conductor
- Conductor or bus
- Tie point
- Contactor coil
- Contactor, Contact NO
- Terminal blocks
- Contactor, Contact NC
- Enclosure bond
- Grounding electrode
- Circuit breaker
- Receptacle

PULL BOXES

PROPOSED EXISTING

Pull box-No. 5 unless otherwise indicated or noted.

3 / 9A(21)

Pull box-Additional designations or descriptions

3 = No. 3½ pull box
5 = No. 5 pull box
6 = No. 6 pull box
7 = No. 7 (Ceiling pull box)
8 = No. 8 (Pendant soffit pull box)
9 = No. 9 pull box
9A = No. 9A pull box

(C) = Communications pull box
(E) = Pull box with extension
(S) = Sprinkler control pull box
(21) = Anchor bolts and conduit for future installation of Type 21 Standard
(T) = Traffic pull box

MISCELLANEOUS EQUIPMENT

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

VEHICLE DETECTORS

5 J 9 U

- Vehicle detector designation
- U = Upper, L = Lower
- Slot number in input file
- Input file (I or J)
- Phase

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-1C DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-1C DATED JULY 1, 2004-PAGE 415 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-1C

2004 REVISED Std PLAN RSP ES-1C

10-1-07

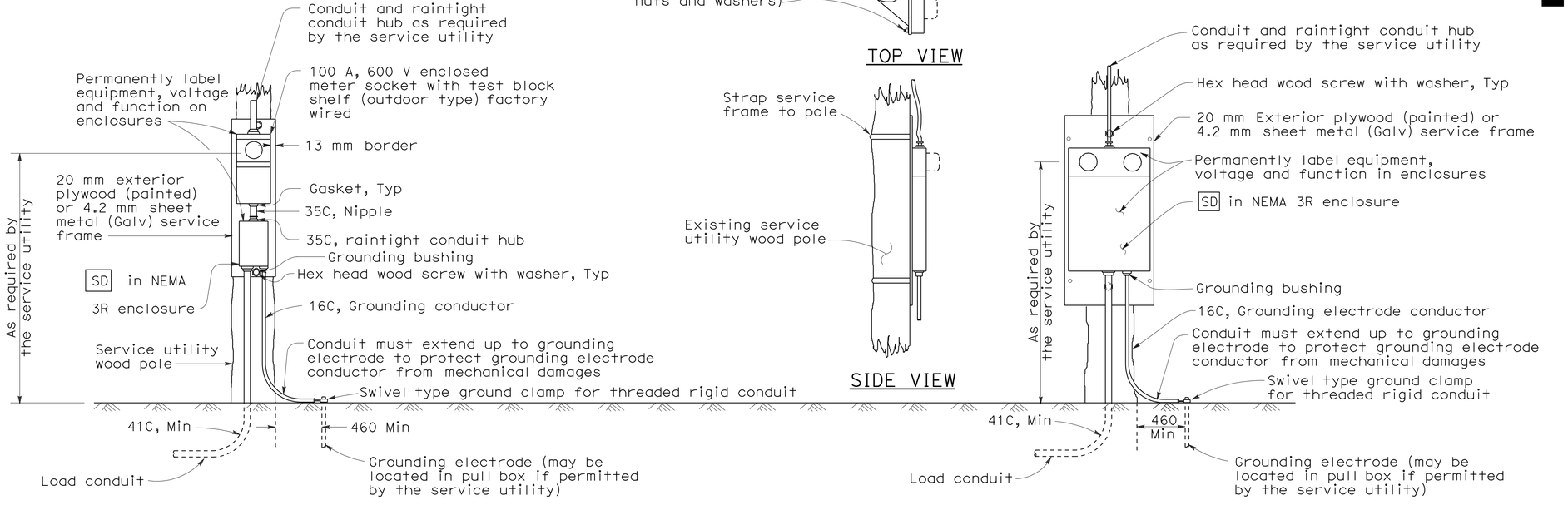
DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	138	87.2/88.9	135	156

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

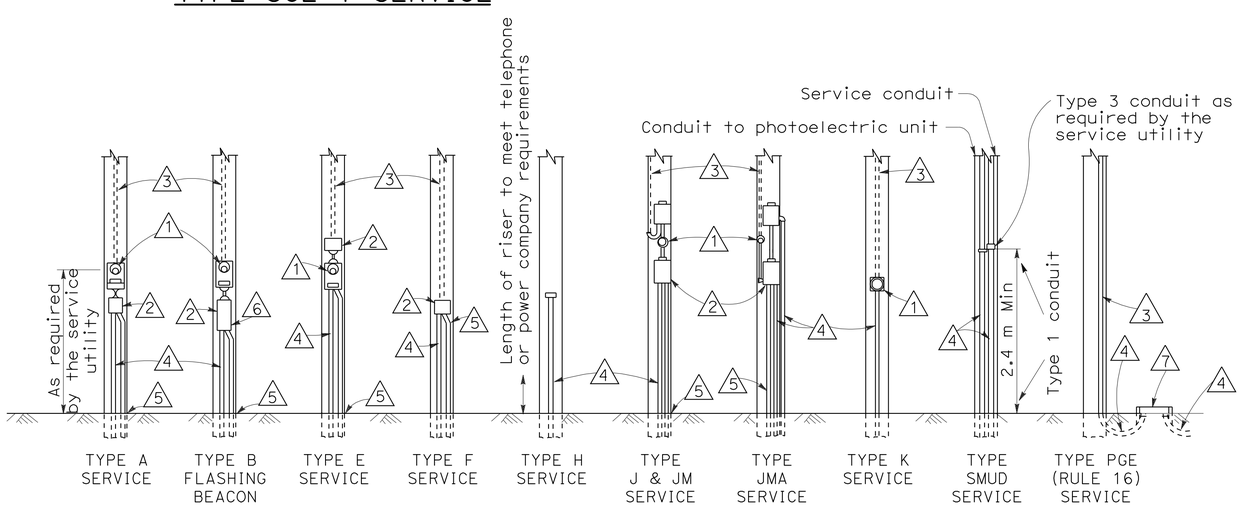
REGISTERED PROFESSIONAL ENGINEER — Jeffery G. McRae — No. E14512 — Exp. 6-30-08 — ELECTRICAL — STATE OF CALIFORNIA

To accompany plans dated 5-17-10



TYPE SCE-1 SERVICE

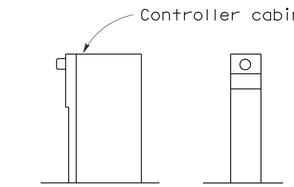
TYPE SCE-2 SERVICE



NOTES

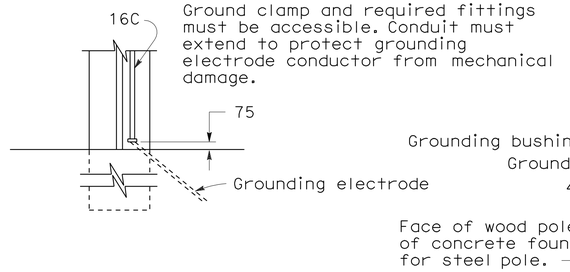
1. Meter socket.
2. Service enclosure with a minimum 60 A rated main circuit breaker, unless otherwise shown.
3. (a) Utility owned pole. The service utility will furnish and install required service riser, PEU with conductors and other equipment as needed.
   (b) State owned pole. The Contractor shall furnish and install required service riser and equipment.
4. Conduit, length and size as required.
5. 16C, 1#6. See "Service Grounding" detail.
6. Flashing beacon control assembly.
7. Service pull box, No. 5 unless otherwise noted, furnished and installed by the Contractor. Service utility shall determine the exact location.

POLE MOUNTED SERVICE INSTALLATIONS

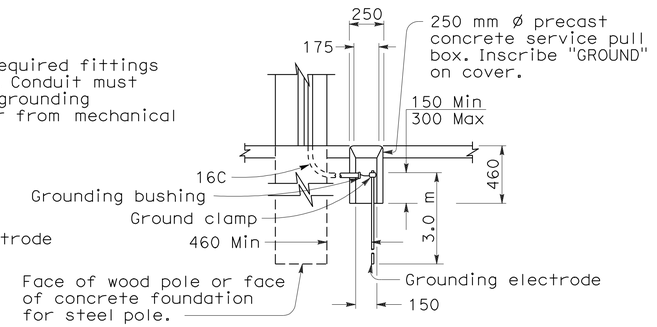


TYPE OF SERVICE (TYPICAL)

Type II service equipment enclosure mounted on a side of a controller cabinet.
Type III complete free-standing service equipment enclosure.



TYPE A



TYPE B

Use where service utility requires 460 mm clearance between grounding electrode and the pole or service equipment enclosure. Installation shown is for sidewalk or paved areas. In unpaved areas, omit special service pull box and locate ground clamp above ground or locate ground clamp in nearest pull box.

SERVICE GROUNDING

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SERVICE EQUIPMENT)

NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-2A DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-2A DATED JULY 1, 2004-PAGE 416 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-2A

2004 REVISED Std PLAN RSP ES-2A

7-2-07

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	138	87.2/88.9	136	156

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

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

To accompany plans dated 5-17-10

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-A 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 11 mm.

6. Enclosures housing transformers of more than one kVA shall have effective screened ventilation louvers of not less than 32 000 mm^2. 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. 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, 20 mm 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 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 3 mm.

    b) At the top of the exterior door panel indicating system number, voltage level and number of phases with character size a minimum of 5 mm.

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 600 mm x 100 mm 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 50 mm minimum beyond edge of service equipment enclosure.

17. Internal bus, where shown, is typical only. Alternative design of proposed service equipment enclosure shall be submitted to the Engineer for approval.

18. Plug-in circuit breakers may be mounted in the vertical or horizontal position. Cable-in/cable-out circuit breakers shall be mounted in the vertical position.

19. Type III-AF and Type III-BF service equipment enclosures shall have the meter viewing windows located on the front side of the service equipment enclosures.

20. Type III-AR and Type III-BR service equipment enclosures shall be similarly constructed as Type III-AF and Type III-BF respectively, except the meter viewing windows shall be located on the back side of the service equipment enclosures.

21. Minimum clearance shall be required for front and back of service equipment enclosure per National Electrical Code, Article 110.26, "Spaces About Electric Equipment (600 Volts, Nominal, or Less)".

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SERVICE EQUIPMENT NOTES TYPE III SERIES)

NO SCALE

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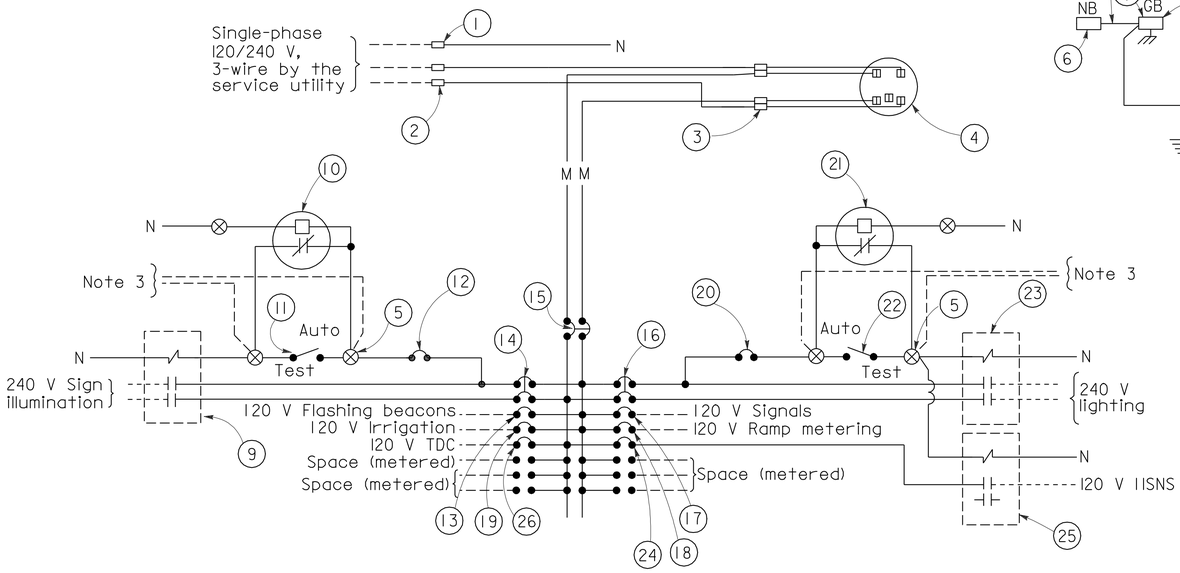
RSP ES-2C DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-2C DATED JULY 1, 2004-PAGE 418 OF THE STANDARD PLANS BOOK DATED JULY 2004.

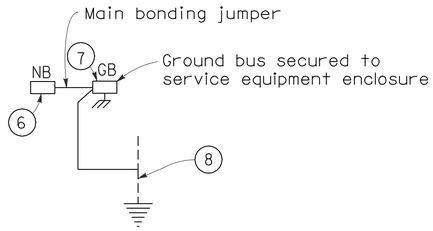
REVISED STANDARD PLAN RSP ES-2C

2004 REVISED Std PLAN RSP ES-2C

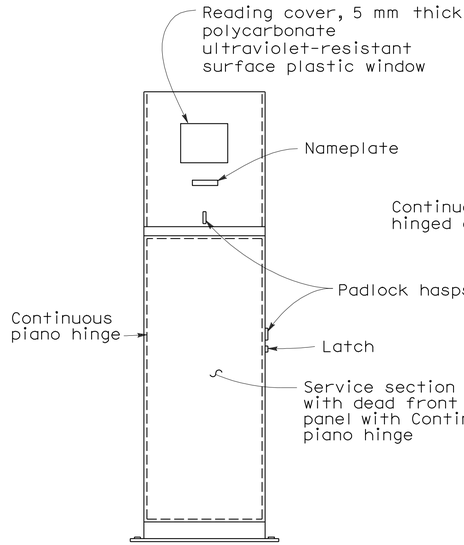
7-2-07



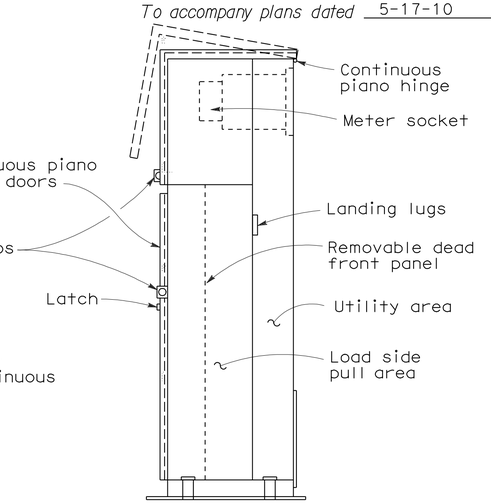
120/240 V SERVICE WIRING DIAGRAM (TYPICAL)



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

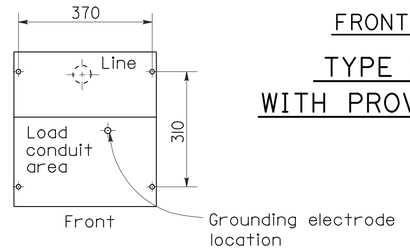


FRONT VIEW

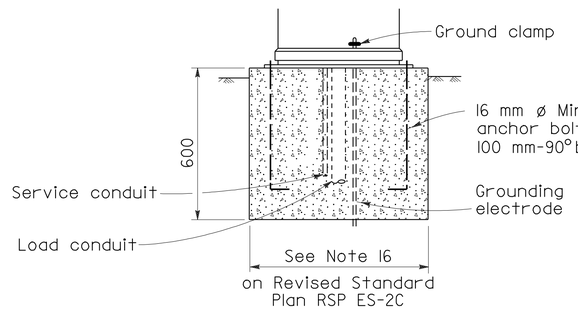


SIDE VIEW

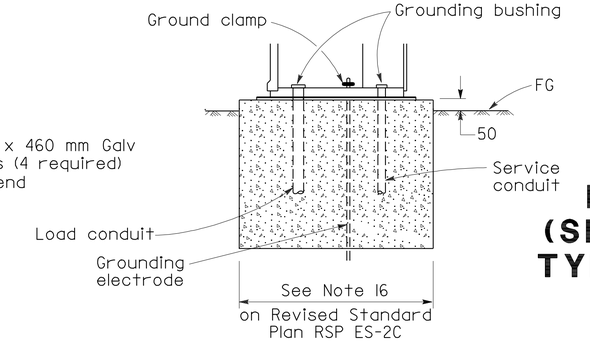
TYPE III-BF SERVICE EQUIPMENT ENCLOSURE WITH PROVISIONS FOR ONE 100 A METER (TYPICAL)



BASE FOR TYPE III-B SERVICE EQUIPMENT ENCLOSURE



FRONT VIEW



SIDE VIEW

TYPE III-B SERVICE EQUIPMENT ENCLOSURE FOUNDATION DETAILS

NOTES (FOR SERVICE EQUIPMENT ENCLOSURE)

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

NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-2E DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-2E DATED JULY 1, 2004-PAGE 420 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-2E

Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	138	87.2/88.9	137	156

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

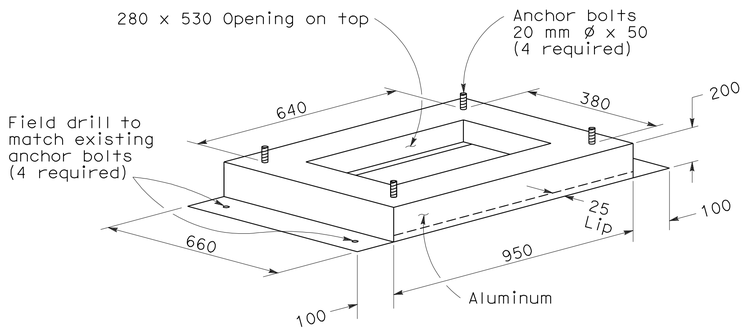
REGISTERED PROFESSIONAL ENGINEER — Jeffery G. McRae — No. E14512 — Exp. 6-30-08 — ELECTRICAL — STATE OF CALIFORNIA

To get to the Caltrans web site, go to: http://www.dot.ca.gov

To accompany plans dated 5-17-10

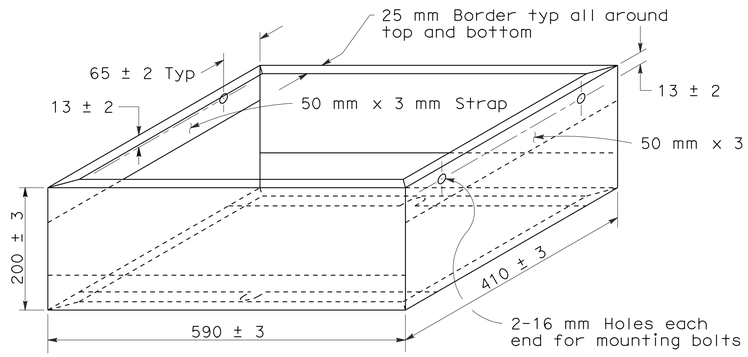
2004 REVISED Std PLAN RSP ES-2E

8-9-07



TYPE PR CABINET ADAPTER

1. Material: 4.78 thickness aluminum plate.
2. Mount adapter on Type P or Type R cabinet foundation.

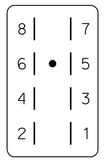


TYPE M CABINET ADAPTER

1. Mount adapter on Type M cabinet foundation.
2. Mounting bolts shall be 10 mm ø minimum size.
3. Aluminum (4.78 mm thickness).

The flasher transfer relay shall intermate with a CINCH-JONES Socket S-408-SB or equal connected as follows:

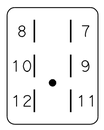
Pin No.	Circuit	Pin No.	Circuit
1	Coil	5	Common, Circuit #1
2	Coil	6	Common, Circuit #2
3	NC Circuit #1	7	NO Circuit #1
4	NC Circuit #2	8	NO Circuit #2



CONNECTOR SOCKET
FLASH TRANSFER RELAY

The flasher shall intermate with a CINCH-JONES Socket S-406-SB or equal connected as follows:

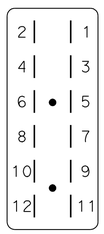
Pin No.	Circuit	Pin No.	Circuit
7	Load, Circuit #1	10	ac+
8	Load, Circuit #2	11	ac-
9	Chassis Ground	12	Not used



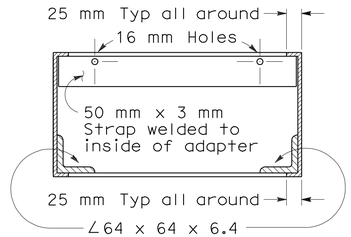
CONNECTOR SOCKET
SOLID STATE FLASHER UNIT

The Solid-state switching device shall intermate with a CINCH-JONES Socket S-2412-SB or equal connected as follows:

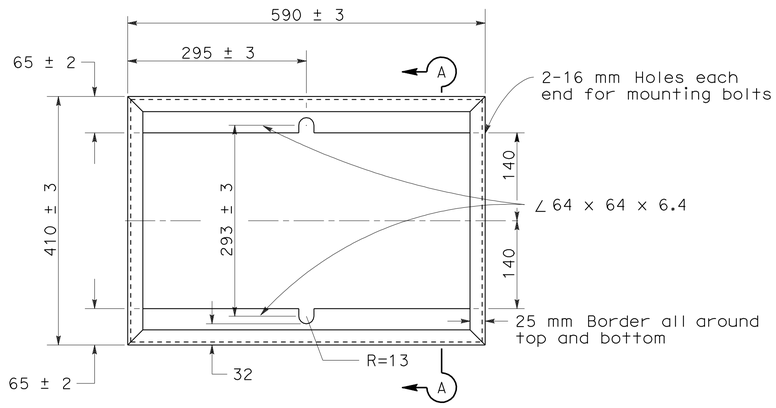
Pin No.	Circuit	Pin No.	Circuit
1	ac + Lights	7	Green or Walk Output
2	Chassis Ground	8	Yellow Input
3	Red or Don't Walk Output	9	dc+ (15 to 24 V)
4	Not used	10	Green or Walk Input
5	Yellow Output	11	ac-
6	Red or Don't Walk Input	12	Not used



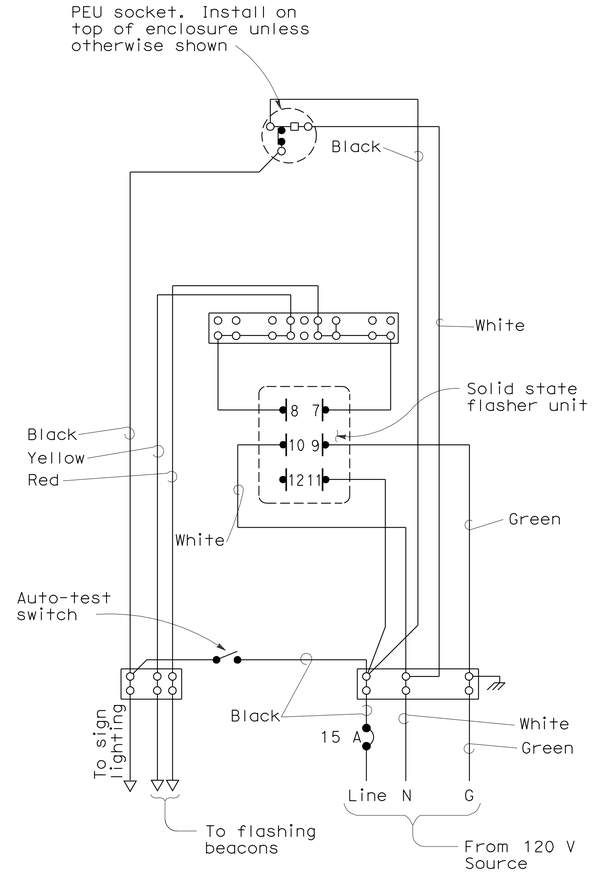
CONNECTOR SOCKET
SOLID STATE SWITCHING DEVICE



SECTION A-A



TOP VIEW



WIRING DIAGRAM
LED FLASHING BEACON CONTROL ASSEMBLY

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	138	87.2/88.9	138	156

Caltrans Metric

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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

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To accompany plans dated 5-17-10

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (CONTROLLER CABINET DETAILS)

NO SCALE

ALL DIMENSIONS ARE IN
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RSP ES-3B DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-3B
DATED JULY 1, 2004-PAGE 424 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-3B

2004 REVISED Std PLAN RSP ES-3B

6-27-07

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	138	87.2/88.9	139	156

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REGISTERED ELECTRICAL ENGINEER

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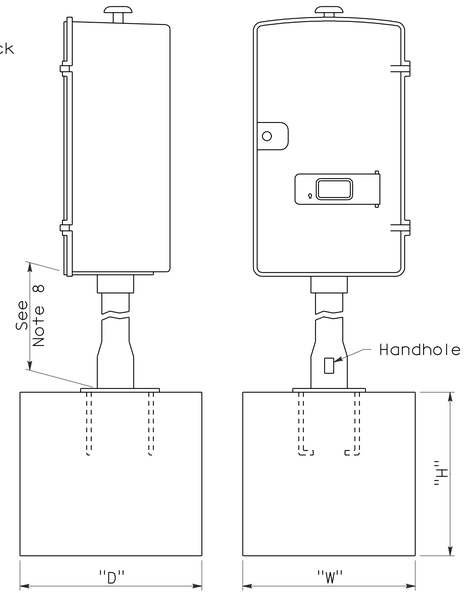
REGISTERED PROFESSIONAL ENGINEER — Jeffery G. McRae — No. E14512 — Exp. 6-30-08 — ELECTRICAL — STATE OF CALIFORNIA

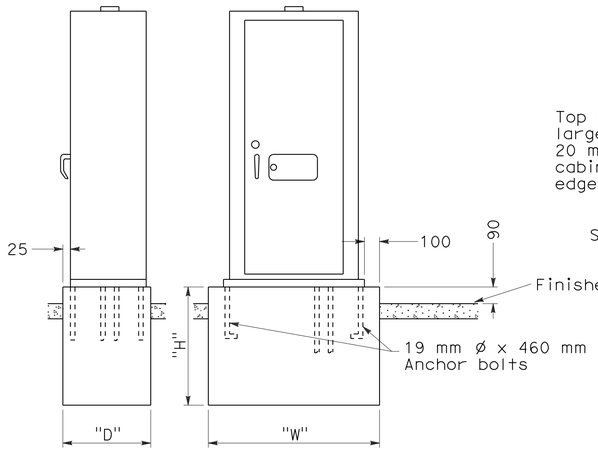
To accompany plans dated 5-17-10

NOTES - CONTROLLER CABINETS

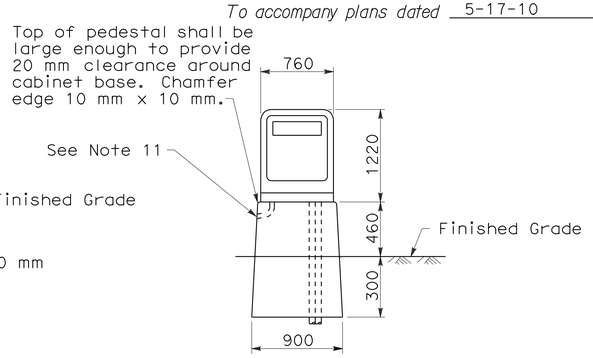
1. Cabinet dimensions are nominal.
2. Foundations shall be located to provide 600 mm minimum clearance between face of curb and any portion of cabinet.
3. Type G, M, P, R, S and Model 336 cabinets shall be installed with the back toward the nearest lane of traffic.
4. The controller cabinet ground bus shall be bonded to the controller equipment enclosure.
5. In unpaved areas, a raised portland cement concrete pad shall be constructed in front of each controller cabinet. Pad shall be 900 mm x 900 mm x 100 mm for Type G cabinets and shall be 900 mm x 100 mm thick x width of foundation for Types M, P, R, S and Model 336 cabinets.
6. In unpaved areas, the top of foundation for Type G, P, R and S cabinets shall be 150 mm above surrounding grade. Top of foundation for Type M or Model 336 cabinet shall be 460 mm above surrounding grade.
7. In sidewalks and other paved areas, top of foundation for Type G cabinet shall be level with surrounding grade. Top of foundation for Type P, R and S cabinets shall be 90 mm above surrounding grade.
8. The steel pedestal, base plate, bolt circle and foundation for Type G cabinet shall be the same as that shown for a Type 1-C Standard. Pedestal shall be 640 mm - 760 mm in length. Anchor bolts shall be 19 mm ø x 460 mm with a 50 mm - 90° bend. Four bolts required per cabinet.
9. Type G cabinet shall be provided with a slipfitter to permit mounting an 114 mm outside diameter pedestal. Slipfitter shall be bolted to bottom of the cabinet.
10. Type G cabinet shall be provided with 8 screened, raintight holes, 13 mm diameter or larger, in the bottom of the cabinet.
11. A 25 mm drain shall be provided through the foundation of a Type M or Model 336 cabinet. Drain pipe shall be screened.
12. See Table for cabinet and foundation dimensions; "D" = Depth, "H" = Height and "W" = Width.
13. Cabinet shelves shall be adjustable for vertical spacing and shall be removable. Type M, P, R and S cabinets shall be provided with a minimum of two shelves.
14. Anchor bolts for Type M, P, R, S and Model 336 cabinets shall be 19 mm ø x 460 mm with a 50 mm - 90° bend.
15. An approved mastic or caulking compound shall be placed on the foundation prior to placing the cabinet to seal openings between bottom of cabinet and foundation.
16. Controller units, plug-mounted equipment, shelf-mounted equipment and wall-mounted equipment shall be located to permit safe and easy removal or replacement without removing any other piece of equipment.
17. Cabinet fan may be installed at an alternate location near the top of the cabinet when approved by the Engineer.
18. Where telephone interconnect is required, a minimum of 130 mm clear vertical space shall be provided inside the cabinet for the equipment.
19. Telephone interconnect conductors shall be enclosed in a 21C or larger conduit through the foundation. Type 4 metal conduit shall be used to separate telephone and power conductors in cabinets and pedestals.
20. For Model 332, 334 and 336 cabinet details, see "Traffic signal controller equipment specifications".



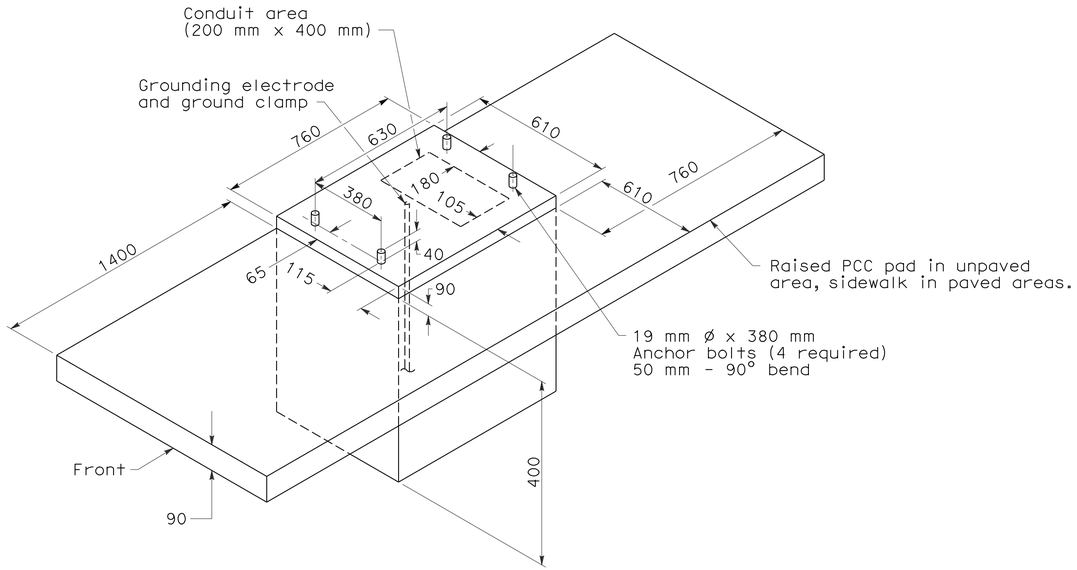
FOUNDATION FOR TYPE G CABINET



FOUNDATION FOR TYPE P, R AND S CABINETS



PEDESTAL FOUNDATION FOR TYPE M OR MODEL 336 CABINET



FOUNDATION DETAILS
For Model 332 and 334 cabinets

CABINET TYPE / MODEL	FOUNDATION H (mm)	W (mm)	D (mm)
G	900	600	600
M 336	760	900	560
P	460	1330	710
R	460	1330	710
S	460	1820	710

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (CONTROLLER CABINET DETAILS)

NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

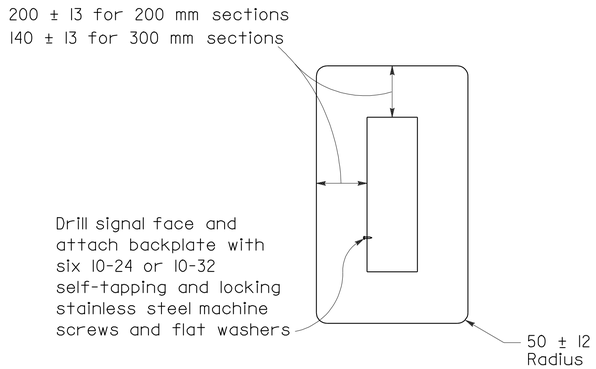
RSP ES-3C DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-3C DATED JULY 1, 2004-PAGE 425 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-3C

2004 REVISED Std PLAN RSP ES-3C

6-27-07

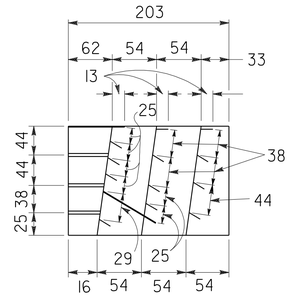
VISORS



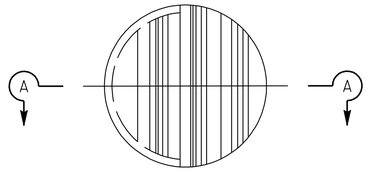
200 mm AND 300 mm SECTIONS

BACKPLATE

1.5 mm minimum thickness 3001-14 aluminum, or plastic when specified



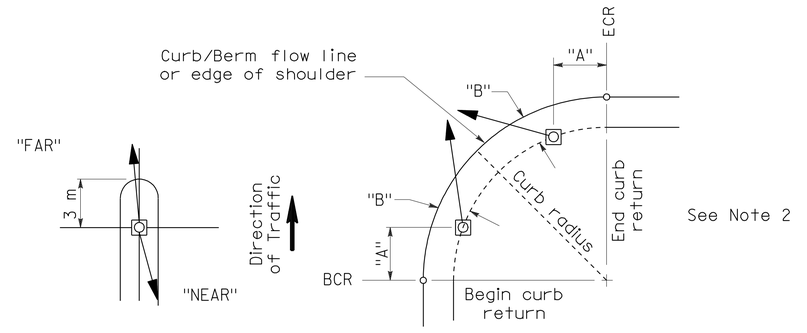
SECTION A-A



FRONT VIEW

DIRECTIONAL LOUVER

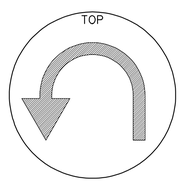
Directional louvers shall be oriented as directed by the Engineer and secured in place with one plated brass machine screw and nut.



NOTES:

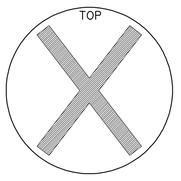
1. Typical signal pole placement unless dimensioned on plans.
2. For "A" and "B" dimensions, see Pole Schedule, or as directed by the Engineer.

SIGNAL STANDARD PLACEMENT DIMENSIONS AND EQUIPMENT LOCATIONS

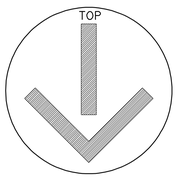


U-TURN SIGNAL FACE

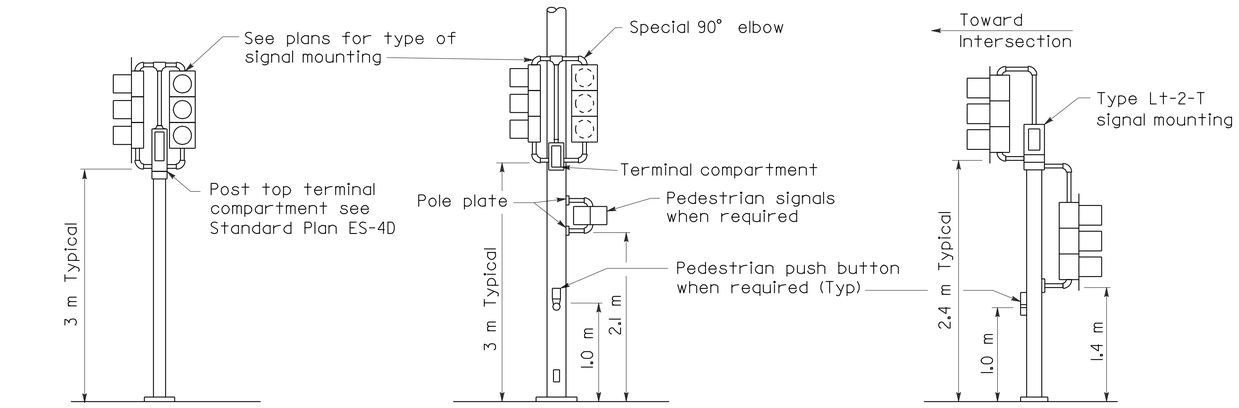
BICYCLE SIGNAL FACE



LANE CONTROL SIGNAL FACE



LANE CONTROL SIGNAL FACE



TOP MOUNTED SIGNALS (TV)

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

TYPICAL SIGNAL INSTALLATIONS

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	138	87.2/88.9	140	156

Jeffery G. McRae
REGISTERED ELECTICAL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

To get to the Caltrans web site, go to: http://www.dot.ca.gov

To accompany plans dated 5-17-10

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SIGNAL HEADS AND MOUNTINGS)

NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-4C DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN ES-4C
DATED July 1, 2004 - PAGE 433 OF THE STANDARD PLANS BOOK DATED July 2004.

REVISED STANDARD PLAN RSP ES-4C

2004 REVISED Std PLAN RSP ES-4C

5-19-08

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	138	87.2/88.9	141	156

Caltrans Metric

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

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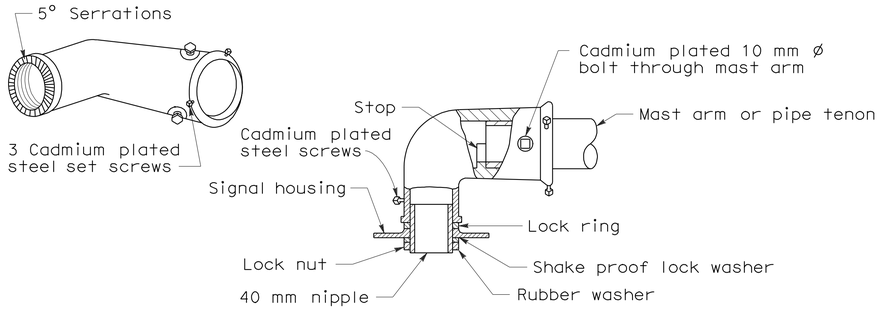
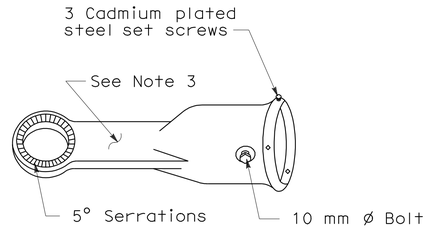
To accompany plans dated 5-17-10



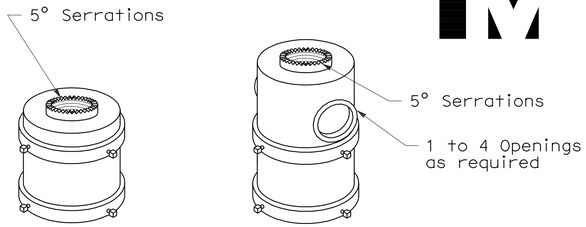
MAST ARM MOUNTING - TYPE "MAT"

For 2 NPS pipe, see Note 1.



MAST ARM MOUNTING - TYPE "MAS"

For 2 NPS pipe. See Note 1.

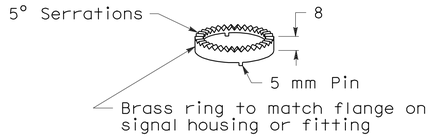


For one mounting For mulitiple mountings

TOP MOUNTINGS

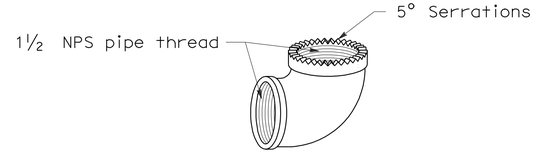
For 4 NPS pipe, see Note 2.

SIGNAL SLIP FITTERS



LOCK RING

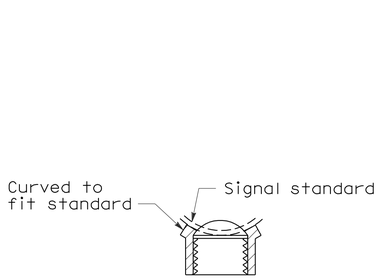
Use where locking ring is not integral with signal housing or fitting.



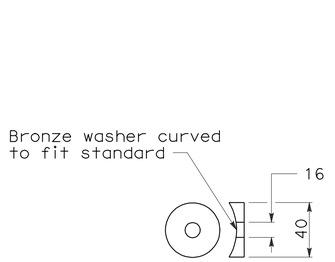
SPECIAL 90° ELBOW

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

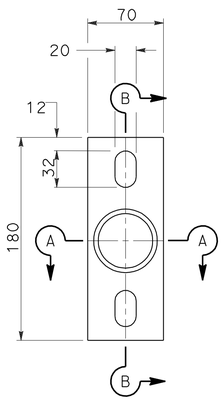
MISCELLANEOUS MOUNTING HARDWARE

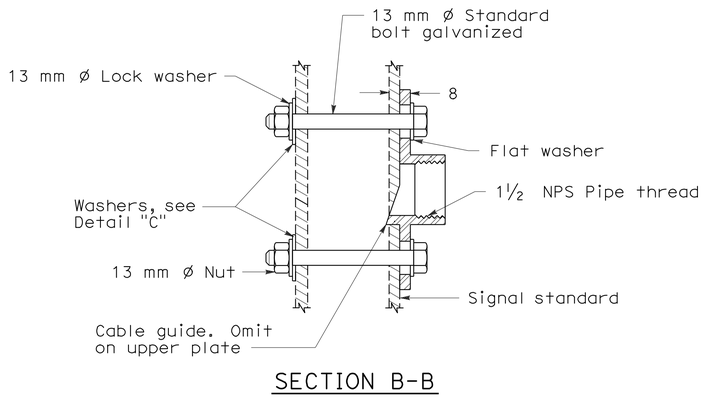


SECTION A-A



WASHER DETAIL "C"

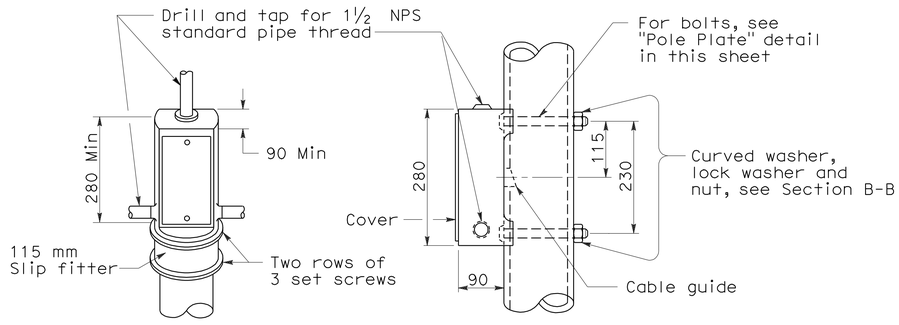




SECTION B-B

POLE PLATE

For side mountings



TOP MOUNTING SIDE MOUNTING

TERMINAL COMPARTMENTS

NOTES

1. After mast arm signal has been plumbed and secured, drill 11 mm hole through mast arm tenon in line with slip fitter hole. Place a cadmium plated 10 mm 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.
2. (a) Threaded top mounted slip fitter openings shall be 1½ 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.
3. Wireway shall have a cross section area of 600 mm² minimum. Minimum width of 13 mm.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SIGNAL HEADS AND MOUNTINGS)

NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-4D DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN ES-4D
DATED July 1, 2004 - PAGE 434 OF THE STANDARD PLANS BOOK DATED July 2004.

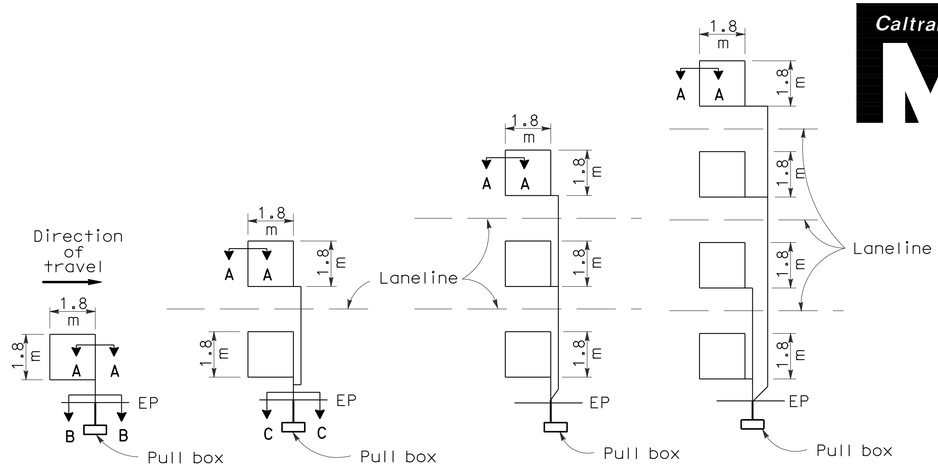
REVISED STANDARD PLAN RSP ES-4D

2004 REVISED Std PLAN RSP ES-4D

5-20-08

LOOP INSTALLATION PROCEDURE

1. Loops shall be centered in lanes.
2. Saw slots in pavement for loop conductors as shown in details.
3. Distance between side of loop and a lead-in saw cut from adjacent detectors shall be 600 mm minimum. Distance between lead-in saw cuts shall be 150 mm minimum.
4. Bottom of saw slot shall be smooth with no sharp edges.
5. Slots shall be washed until clean, blown out and thoroughly dried before installing loop conductors.
6. Adjacent loops on the same sensor unit channel shall be wound in opposite directions.
7. 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.
8. Install loop conductor in slot using a 5 mm to 6 mm thick wood paddle. Hold loop conductors with wood paddles (at the bottom of the sawed slot) during sealant placement.
9. No more than 2 twisted pairs shall be installed in one sawed slot.
10. Allow additional 1.5 m of slack length of conductor for the lead-in run to pull box.
11. The additional length of each conductor for each loop shall be twisted together into a pair (6 turns per meter minimum) before being placed in the slot and conduit leading to pull box.
12. Test each loop circuit for continuity, circuit resistance and insulation resistance at the pull box before filling slots.
13. Fill slots as shown in details.
14. Splice loop conductors to lead-in cable. Splices shall be soldered.
15. 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.
16. Lead-in-cable shall not be spliced between the pull box and the controller cabinet terminals.
17. Test each loop circuit for continuity, circuit resistance and insulation resistance at the controller cabinet location.
18. Where loop conductors are not to be spliced to a lead-in-cable, the ends of the conductors shall be taped and waterproofed with electrical insulating coating.

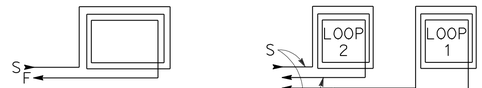


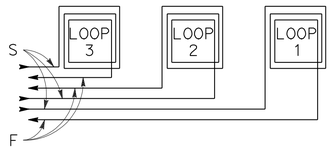
TYPE 1A INSTALLATION | TYPE 2A INSTALLATION | TYPE 3A INSTALLATION | TYPE 4A INSTALLATION

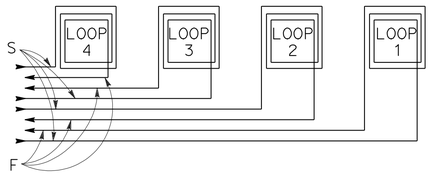
SAWCUT DETAILS

(Type A loop detector configurations illustrated)

1. 1A thru 4A = 1 Type A loop configuration in each lane.
2. 1B thru 4B = 1 Type B loop configuration in each lane.
3. 1C = 1 Type C loop configuration entering lanes as required.
4. 1D thru 4D = 1 Type D loop configuration in each lane.
5. 1E thru 4E = 1 Type E loop configuration in each lane.
6. 1Q thru 4Q = 1 Type Q loop configuration in each lane.
   (Use Type A, B, C, D, E or Q loop detector configurations only when specified or shown on plans)

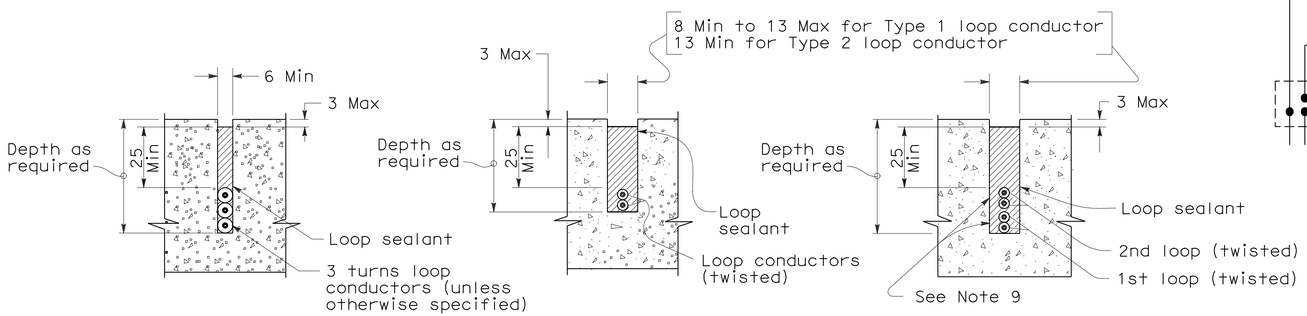






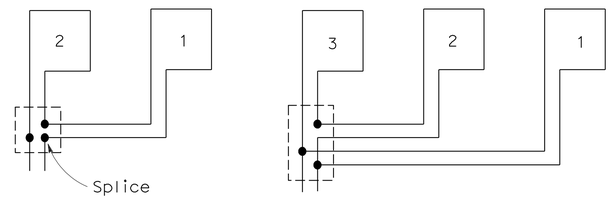
WINDING DETAILS

See Notes 6 and 7



SECTION A-A | SECTION B-B | SECTION C-C

SLOT DETAILS - TYPE 1 AND TYPE 2 LOOP CONDUCTOR



TYPICAL LOOP CONNECTIONS

(Dashed lines represent the pull box)

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	138	87.2/88.9	142	156

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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

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To accompany plans dated 5-17-10

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (DETECTORS)

NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-5A DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-5A DATED JULY 1, 2004-PAGE 436 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-5A

2004 REVISED Std PLAN RSP ES-5A

8-9-07

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	138	87.2/88.9	143	156

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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

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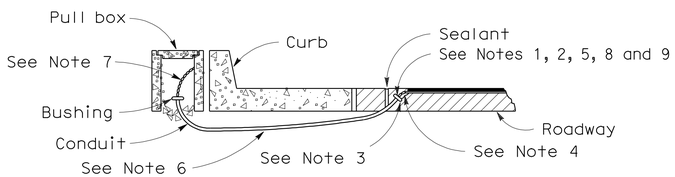
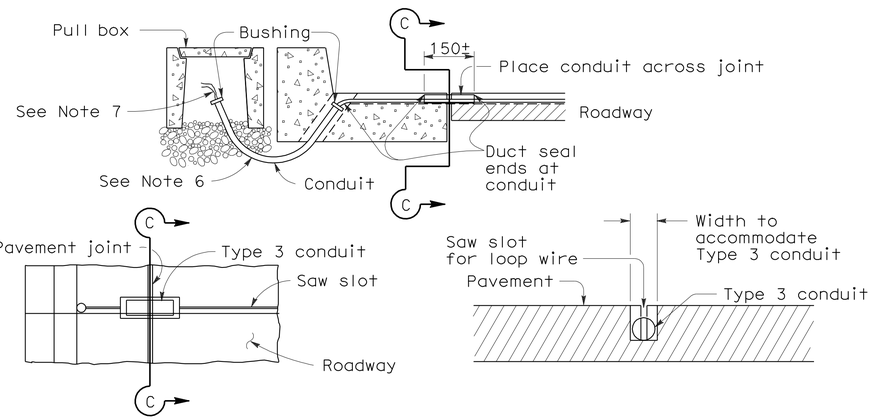


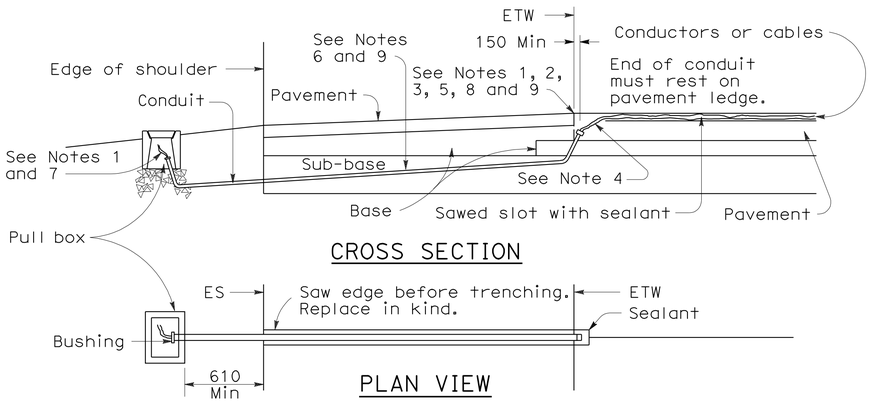
TYPE A
CURB TERMINATION DETAIL



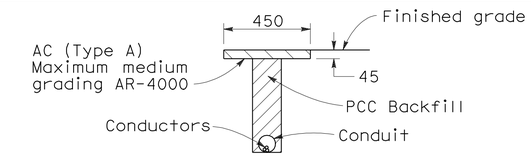
PLAN VIEW

SECTION C-C

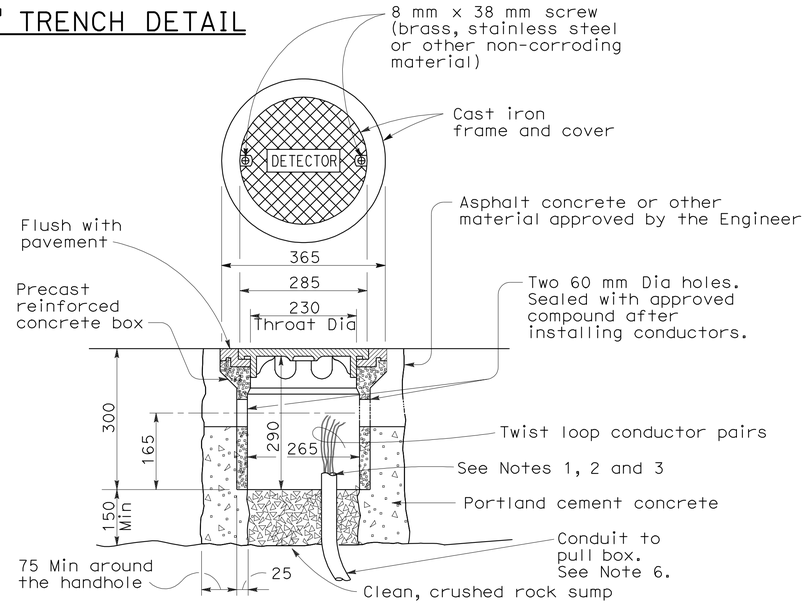
TYPE B
CURB TERMINATION DETAILS



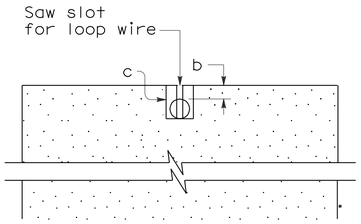
SHOULDER TERMINATION DETAILS



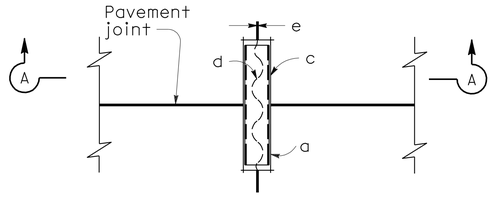
"T" TRENCH DETAIL



DETECTOR HANDHOLE DETAILS



SECTION A-A



PLAN VIEW

TYPICAL LOOP LEAD-IN DETAILS AT PAVEMENT JOINT

NOTES (This sheet only):

1. Bushing shall be used at end of conduit.
2. Tape detector conductors or cables 75 mm each side of bushings.
3. Install duct seal compound to each end of termination conduit before installing sealant.
4. Round all sharp edges where detector conductors or cables have to pass.
5. End of conduit shall be 80 mm below roadway surface.
6. Conduit size — Loop Conductors
   27C Minimum — 1 to 2 pairs
   41C Minimum — 3 to 4 pairs
   53C Minimum — 5 or more pairs
7. Splice detector conductors or cables to lead-in-cable run to controller cabinet.
8. Location of detector handhole when shown on plans.
9. When the shoulder and traveled way are paved with the same material and there is no joint between them, the conduit shall extend only 600 mm into the shoulder pavement.

NOTES:

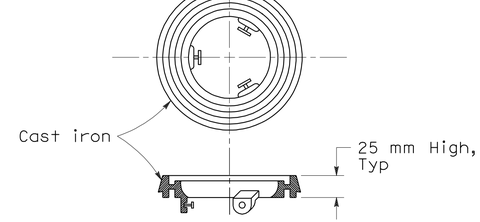
a. 21C, Type 3 conduit 150 mm long minimum, plug both ends with caulking compound to keep out sealant.

b. 13 mm minimum between top of conduit and pavement surface.

c. Saw cut shall not exceed 25 mm in width and 3 mm longer than conduit to be installed.

d. Conductors with 13 mm minimum slack inside conduit.

e. Inductive loop detector saw slot.



NOTE:
Use for Type A detector handhole on pavement resurfacing only.

LOCKING GRADE RING

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (DETECTORS)

NO SCALE

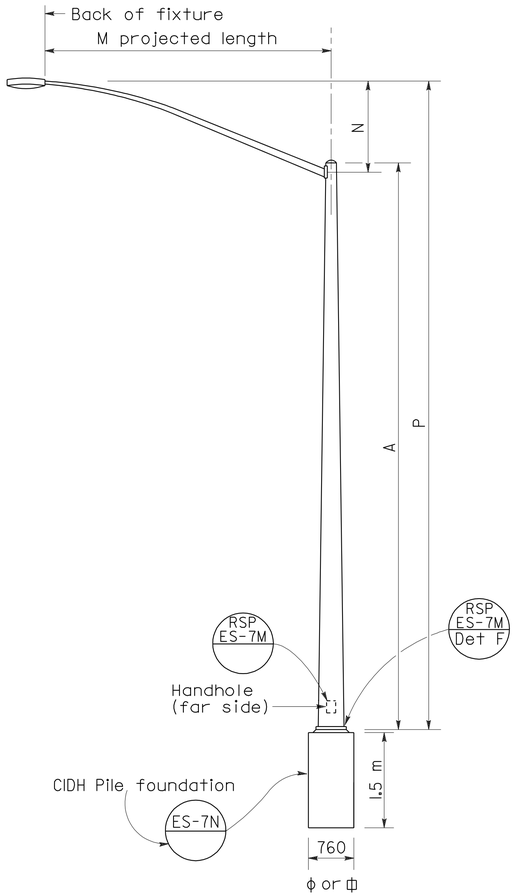
ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-5D DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-5D DATED JULY 1, 2004-PAGE 439 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-5D

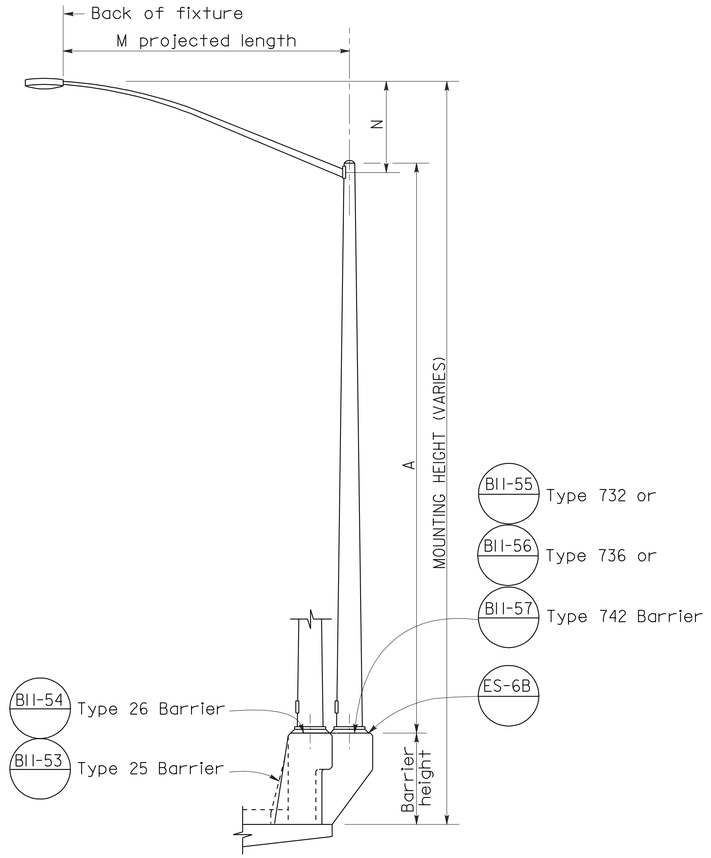
2004 REVISED Std PLAN RSP ES-5D

10-1-07



ELEVATION

TYPE 15 AND TYPE 21



ELEVATION

TYPE 15 AND TYPE 21 BARRIER RAIL MOUNTED

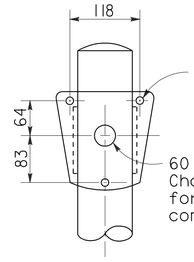
POLE TYPE	POLE DATA				BASE PLATE DATA				LUMINAIRE ARM
	A Height	Min OD		Wall Thickness	C	DI Bolt Circle	Thick-ness	Anchor Bolts Size	
		Base	Top						
	m	mm	mm	mm	mm				m
15	9.1	203	98	3.04	305	305	25	25 ø x 915 x 102*	1.8-4.6 [3.7]
21	10.7	219	98	3.04	305	305	25	See ES-6B	1.8-4.6 [3.7]

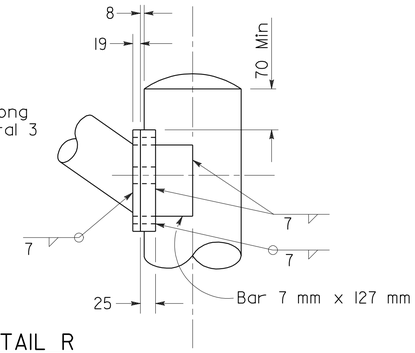
*For barrier rail bolts, see Standard Plan ES-6B.

LUMINAIRE ARM DATA					
M Projected Length	N Rise	Min OD At Pole	Nominal Thickness	P	
				Type 15	Type 21
m	mm	mm	mm	m	m
1.8	610±	83	3.04	9.5±	11.2±
2.4	760±	89	3.04	9.7±	11.3±
3.1	990±	98	3.04	9.9±	11.5±
3.7	1290±	98	3.04	10.2±	11.8±
4.6	1450±	108	3.04	10.3±	11.9±

NOTES:

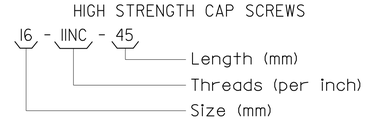
1. [ ] Indicates arm length to be used unless otherwise noted on the plans.
2. For Type 15-SB, use Type 15 standard with Type 30 base plate details, see Standard Plan ES-6F.
3. For additional notes, see Revised Standard Plan RSP ES-7M and ES-7N.

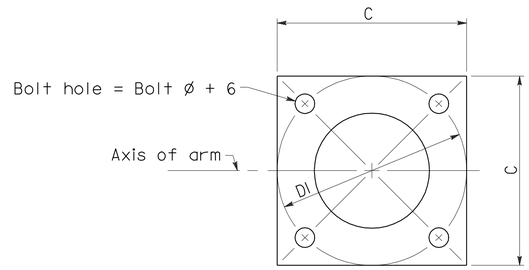




DETAIL R

LUMINAIRE ARM CONNECTION





BASE PLATE

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (LIGHTING STANDARD TYPES 15 AND 21)

NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-6A DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-6A DATED JULY 1, 2004-PAGE 440 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-6A

Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	138	87.2/88.9	144	156

REGISTERED CIVIL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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

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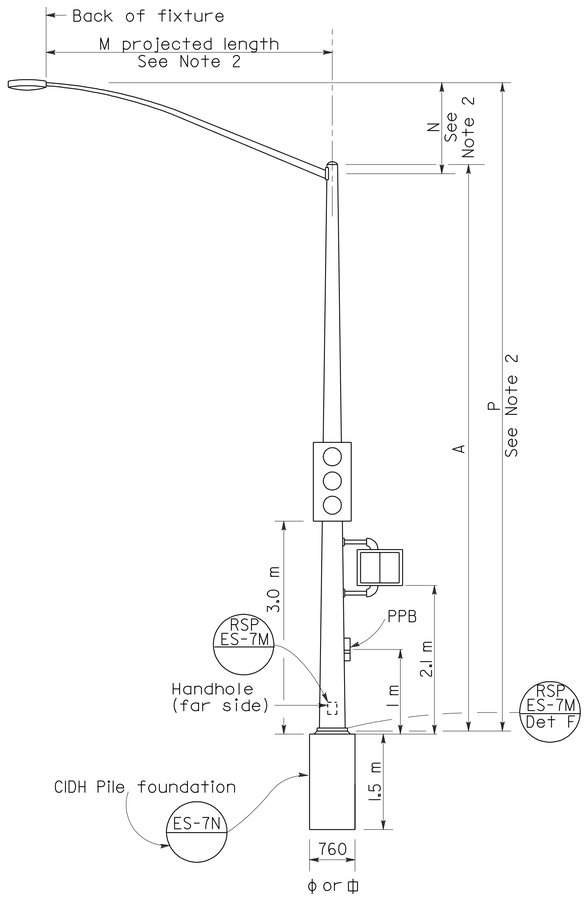
To accompany plans dated 5-17-10

2004 REVISED Std PLAN RSP ES-6A

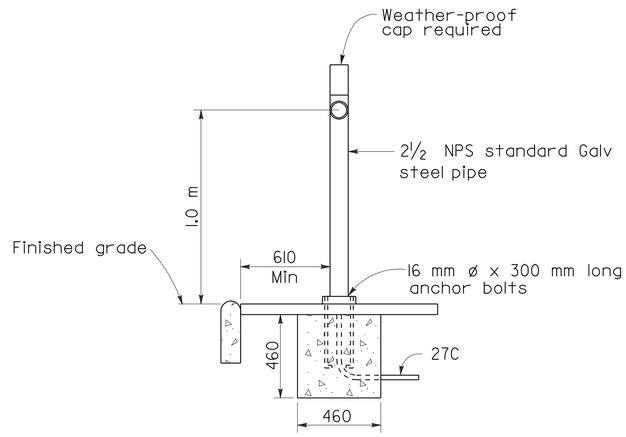
6-20-07

NOTES

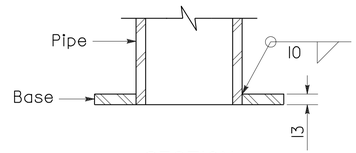
1. Pipe dimensions for pedestrian push button post are nominal. See ASTM A6M.
2. For additional details and data for Type 15TS Standard, see Standard Plan ES-6A.



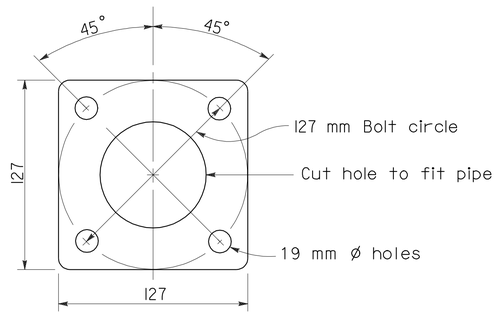
ELEVATION
TYPE 15TS STANDARD
See Note 2



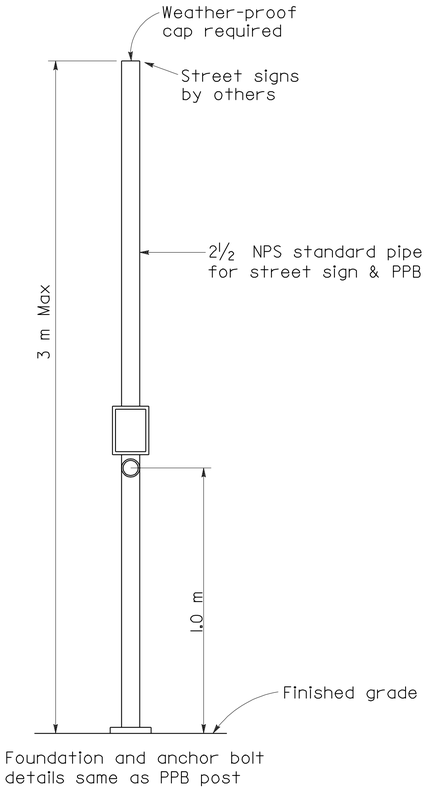
ELEVATION



SECTION



BASE PLATE
PPB POST



Foundation and anchor bolt details same as PPB post

COMBINED STREET SIGN
PEDESTRIAN PUSH BUTTON POST

PEDESTRIAN PUSH BUTTON POST

TYPE 15TS STANDARD (See Note 2)

POLE DATA				BASE PLATE DATA			
A Height	Min OD		Wall Thickness	C	DI Bolt Circle	Thick-ness	Anchor Bolts Size
	Base	Top					
m	mm	mm	mm	mm			
9.1	203	98	4.55	305	305	25	32 ø x 915 x 152

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	138	87.2/88.9	145	156

REGISTERED CIVIL ENGINEER

January 24, 2005
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Tillat Sattar — No. C42892 — Exp. 03-31-06 — CIVIL — STATE OF CALIFORNIA

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To accompany plans dated 5-17-10

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SIGNAL STANDARDS PUSH BUTTON POSTS AND TYPE 15TS STANDARD)

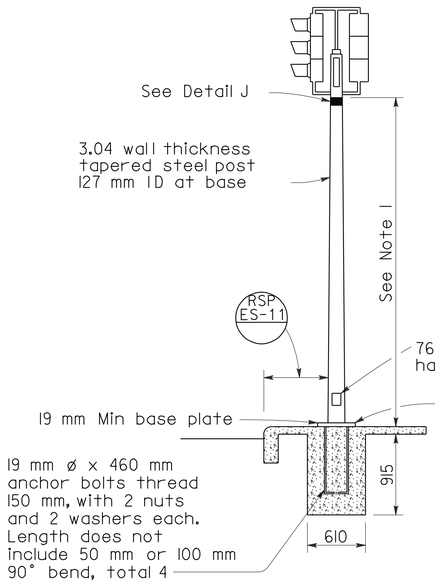
NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

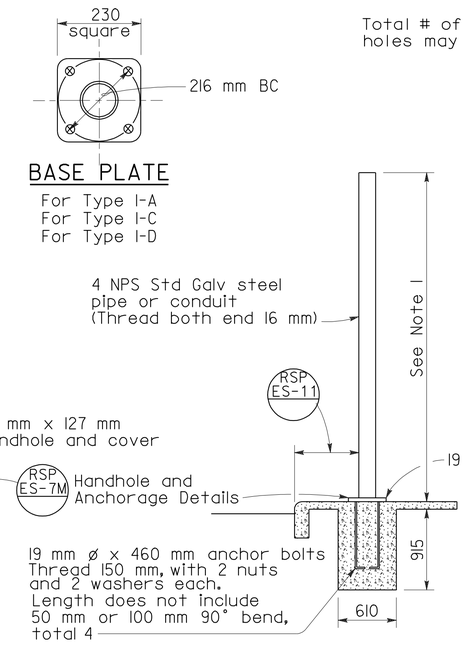
RSP ES-7A DATED JANUARY 24, 2005 SUPERSEDES STANDARD PLAN ES-7A DATED JULY 1, 2004-PAGE 451 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-7A

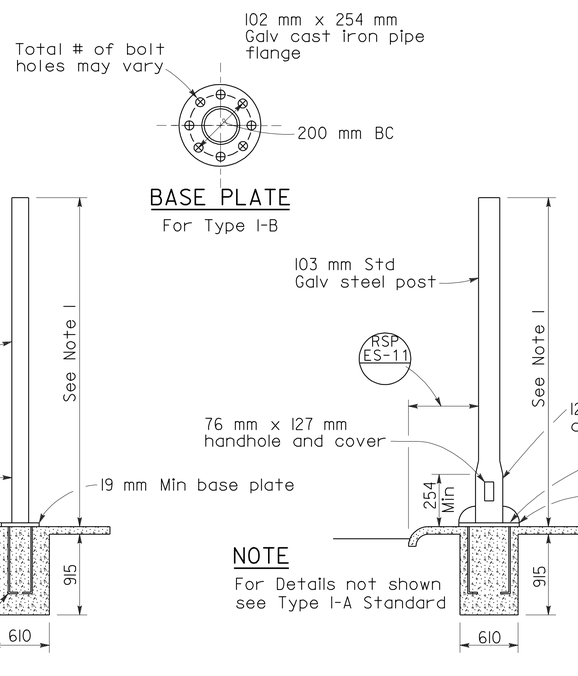
2004 REVISED Std PLAN RSP ES-7A



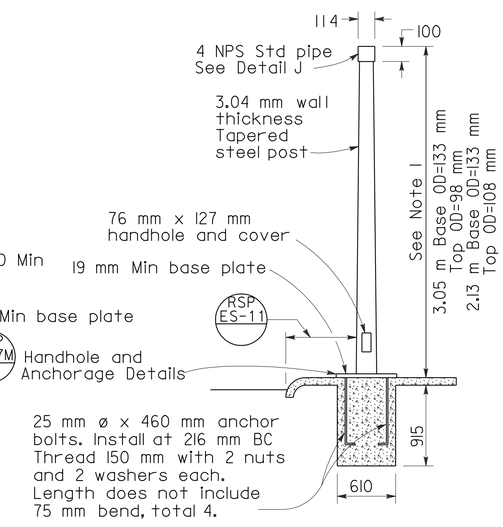
TYPE I-A STANDARD



TYPE I-B STANDARD

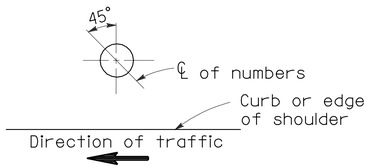


TYPE I-C STANDARD

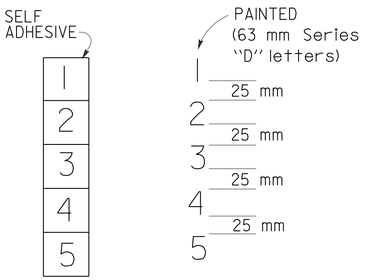


TYPE I-D STANDARD

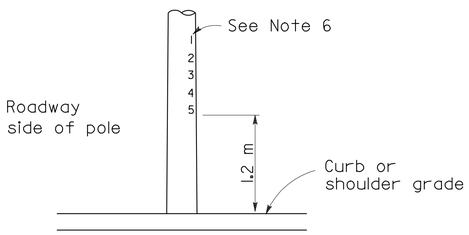
TYPE I SIGNAL STANDARDS



PLAN

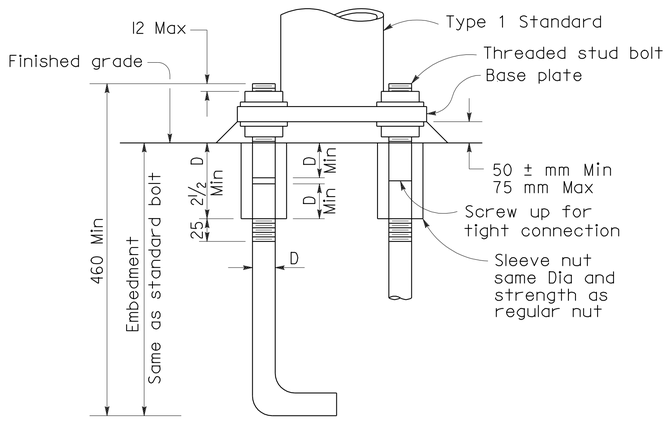


NUMBER DETAIL



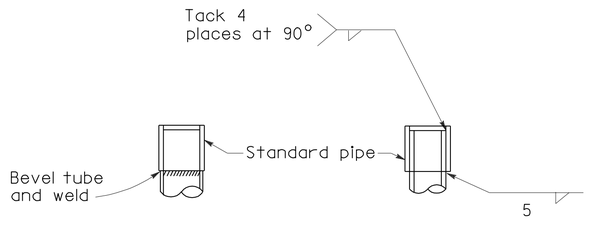
TYPICAL NUMBER FORMAT

LOCATION OF EQUIPMENT NUMBERS ON STANDARDS AND POSTS



ANCHOR BOLTS WITH SLEEVE NUTS

Sleeve nuts to be used only when shown
or specified on Project Plans
D = Diameter of anchor bolt



DETAIL J

Tube may be inserted into pipe or butted as required

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	138	87.2/88.9	146	156

REGISTERED CIVIL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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

To get to the Caltrans web site, go to: http://www.dot.ca.gov

To accompany plans dated 5-17-10

NOTES:

1. Standards shall be 3.05 m± 50 mm for vehicle signals and 2.13 m± 50 mm for pedestrian signals unless otherwise noted on plans.
2. Top of standards shall be 114 mm OD.
3. Conduits shall extend 50 mm maximum above finished surface of foundation and for Types I-A, I-C and I-D shall be sloped toward handhole.
4. Anchor bolts shall be bonded to conduit or grounding conductor.
5. Conduit between standard and adjacent pull box shall be Size 53 minimum.
6. Paint numbers on roadway side facing traffic when electrolier or post is left of direction of traffic.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEM (SIGNAL AND LIGHTING STANDARD TYPE 1 STANDARDS AND EQUIPMENT NUMBERING)

NO SCALE

ALL DIMENSIONS ARE IN
MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-7B DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-7B
DATED JULY 1, 2004-PAGE 452 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-7B

2004 REVISED Std PLAN RSP ES-7B

10-1-07

To accompany plans dated 5-17-10

Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	138	87.2/88.9	147	156

REGISTERED CIVIL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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

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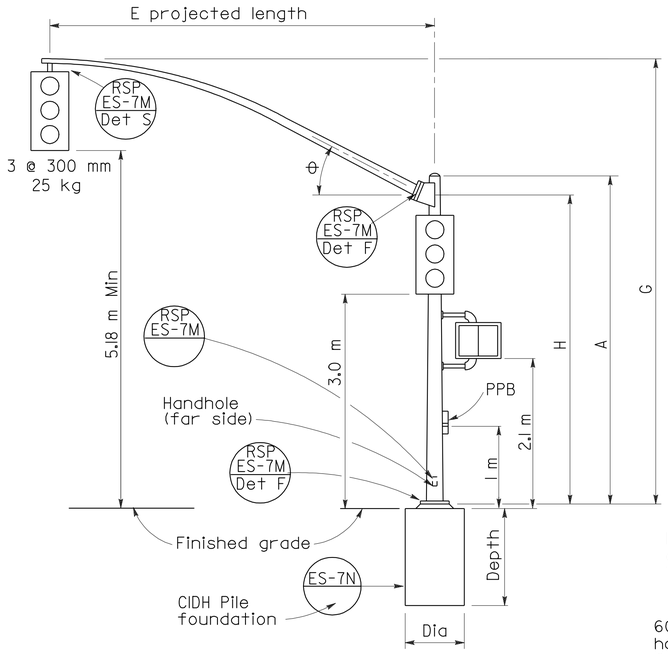
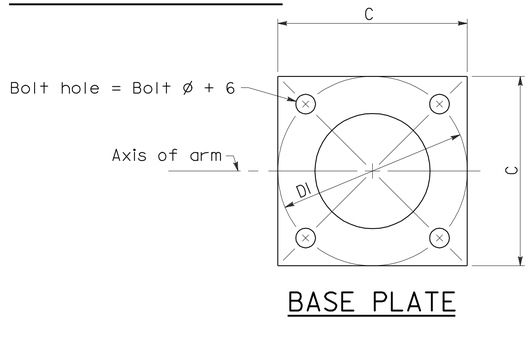
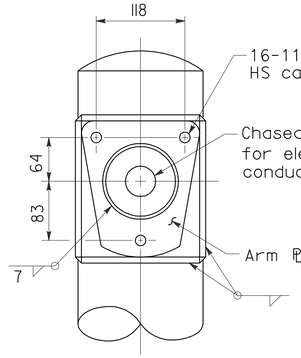


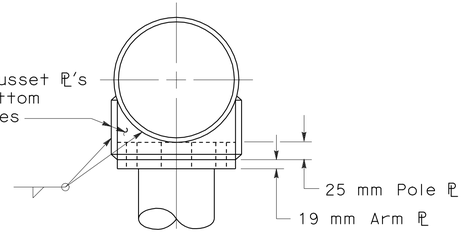
ELEVATION

TYPE 16-1-161, 18-1-161



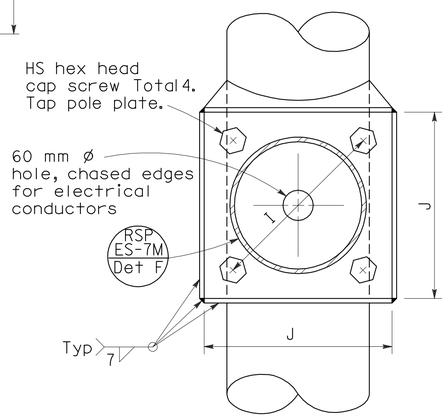
BASE PLATE



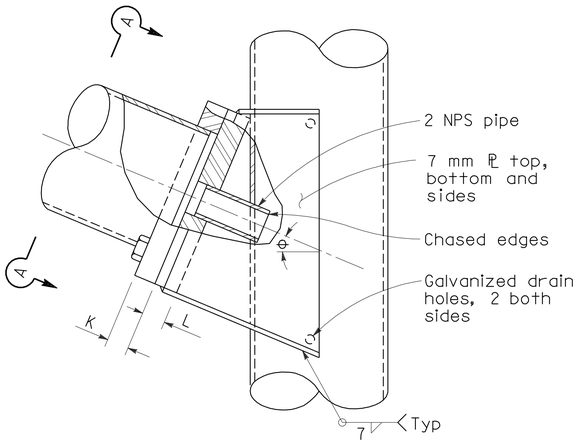


DETAIL W

LUMINAIRE ARM CONNECTION

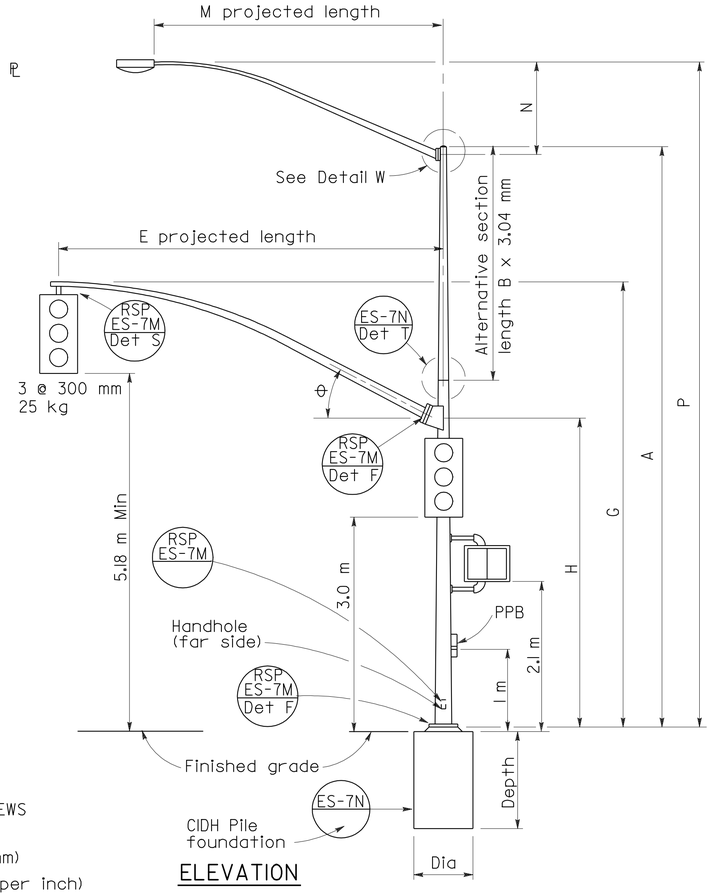


SECTION A-A



ELEVATION

SIGNAL ARM CONNECTION DETAILS



ELEVATION

TYPE 19-1-161, 19A-1-161

HIGH STRENGTH CAP SCREWS

16 - IINC - 45

- Length (mm)
- Threads (per inch)
- Size (mm)

SIGNAL ARM DATA										
E Projected Length	G Mounting Height	H	Min OD At Pole	Thickness	I Bolt Circle	HS Cap Screws	J Plate Size	K Arm ℄ Thickness	L Pole ℄ Thickness	θ
m			mm							
4.6	6.6 ±	5.3	178	3.04	305	32-7NC-76	305	32	38	23°
6.1	6.6 ±		181							
7.6	6.9 ±	4.9	186							
9.1	7.0 ±		203							

LUMINAIRE ARM DATA					
M Projected Length	N Rise	Min OD at Pole	Thickness	P Mounting Height 9.1 Pole	P Mounting Height 10.7 Pole
m	mm			m	
1.8	610 ±	83	3.04	9.5 ±	11.1 ±
2.4	760 ±	89		9.7 ±	11.3 ±
3.1	990 ±	98		9.9 ±	11.5 ±
3.7	1290 ±			10.2 ±	11.8 ±
4.6	1450 ±	108		10.4 ±	12.0 ±

Pole Type	Load Case	Wind Velocity km/h	POLE DATA A Height	Min OD Base	Min OD Top	Thickness	Alternative Section B Length	Alternative Section Bottom	Alternative Section Top	BASE PLATE DATA C	DI Bolt Circle	Thickness	Anchor Bolts Size	Luminaire Arm	Signal Arm	CIDH PILE FOUNDATION Diameter	Depth	Reinforced
			m	mm			m	mm		mm				m		mm	m	
16-1-161	1	161	5.6	273	210	4.55	None	203	168	457	445	32	38 ø x 925 x 152	None	4.6, 6.1	760	2.2	Yes
18-1-161			5.2		214		None							None				
19-1-161			9.1		168		3.0							1.8-4.6 [3.7]	7.6, 9.1			
19A-1-161			10.7		151		4.6							1.8-4.6 [4.6]				

☐ 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=161 km/h ARM LENGTHS 4.6 m TO 9.1 m)

NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-7C DATED OCTOBER 5, 2007 SUPERSEDES
RSP ES-7C DATED JANUARY 24, 2005 AND STANDARD PLAN ES-7C
DATED JULY 1, 2004-PAGE 453 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-7C

2004 REVISED Std PLAN RSP ES-7C

6-19-07

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	138	87.2/88.9	148	156

REGISTERED CIVIL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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

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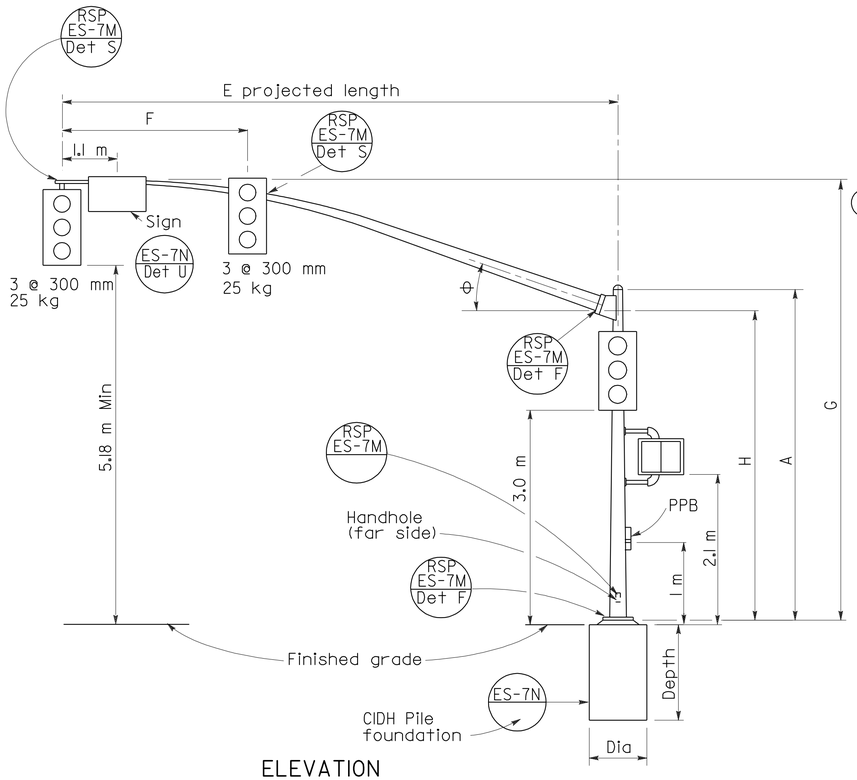
To accompany plans dated 5-17-10

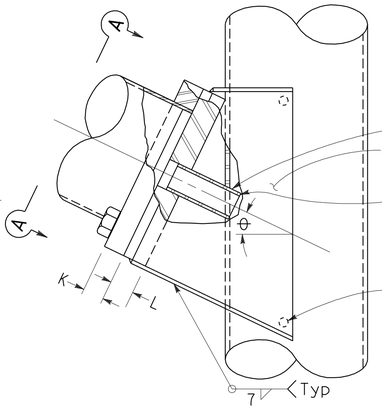
Caltrans Metric

2004 REVISED Std PLAN RSP ES-7E

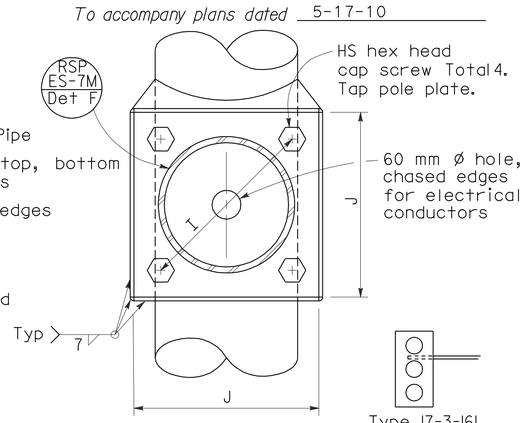


ELEVATION

TYPE 16-3-161, 18-3-161,
23-3-161, 27-3-161

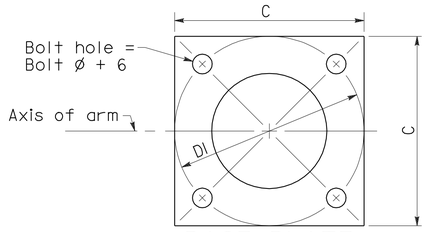


ELEVATION



SECTION A-A

SIGNAL ARM CONNECTION DETAILS



BASE PLATE

HIGH STRENGTH CAP SCREWS

16 - 11NC - 45

- Length (mm)
- Threads (per inch)
- Size (mm)

ELEVATION

TYPE 17-3-161, 19-3-161,
19A-3-161, 24-3-161,
24A-3-161, 26-3-161, 26A-3-161

SIGNAL ARM DATA											
E Projected Length	F Min Spacing	G Mounting Height	H	Min OD At Pole	Thickness	I Bolt Circle	HS Cap Screws	J Plate Size	K Arm PL Thickness	L Pole PL Thickness	θ
m				mm							
4.6	2.4	6.6 ±	5.3	168	4.55	305	32-7NC-76	305	32	38	23°
6.1		6.6 ±		178							
7.6	3.7	6.9 ±	4.9	186	6.07						21°
9.1				203							
10.7	4.3	7.0 ±		222		330		330	38	45	15°
12.2	4.6			238							
13.7		7.2 ±		256							

LUMINAIRE ARM DATA					
M Projected Length	N Rise	Min OD at Pole	Thickness	P Mounting Height	
				9.1 Pole	10.7 Pole
m	mm			m	
1.8	610 ±	83	3.04	9.5 ±	11.1 ±
2.4	760 ±	89		9.7 ±	11.3 ±
3.1	990 ±	98		9.9 ±	11.5 ±
3.7	1290 ±			10.2 ±	11.8 ±
4.6	1450 ±	108		10.4 ±	12.0 ±

Pole Type	Load Case	Wind Velocity km/h	POLE DATA							BASE PLATE DATA				Luminaire Arm	Signal Arm	CIDH PILE FOUNDATION		
			A Height	Min OD		Thickness	Alternative Section			C	DI Bolt Circle	Thickness	Anchor Bolts			Diameter	Depth	Reinforced
				Base	Top		B Length	Bottom	Top				Size					
			m	mm			m	mm		mm				m		mm	m	
16-3-161	3	161	5.6	273	210	4.55	None			457	445	38	51 ø x 1067 x 152	None	4.6, 6.1	914	2.7	Yes
17-3-161			9.1		168		3.1	203	186					1.8-4.6 [3.7]				
18-3-161			5.2	305	214	6.07	None							None	7.6, [9.1]			
19-3-161			9.1		200		3.1	235	200					1.8-4.6 [3.7]				
19A-3-161			10.7		183		4.6		183					1.8-4.6 [4.6]				
23-3-161			5.2		245		None							None	10.7			
24-3-161			9.1		200		3.1	235	200					1.8-4.6 [3.7]				
24A-3-161			10.7		183		4.6		183					1.8-4.6 [4.6]				
26-3-161			9.1	308	203	7.94	3.1	238	203					1.8-4.6 [3.7]	12.2, [13.7]			
26A-3-161			10.7		186		4.6		186					1.8-4.6 [4.6]				
27-3-161			5.2		248		None							None				

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SIGNAL AND LIGHTING STANDARD CASE 3 ARM LOADING WIND VELOCITY=161 km/h ARM LENGTHS 4.6 m TO 13.7 m)

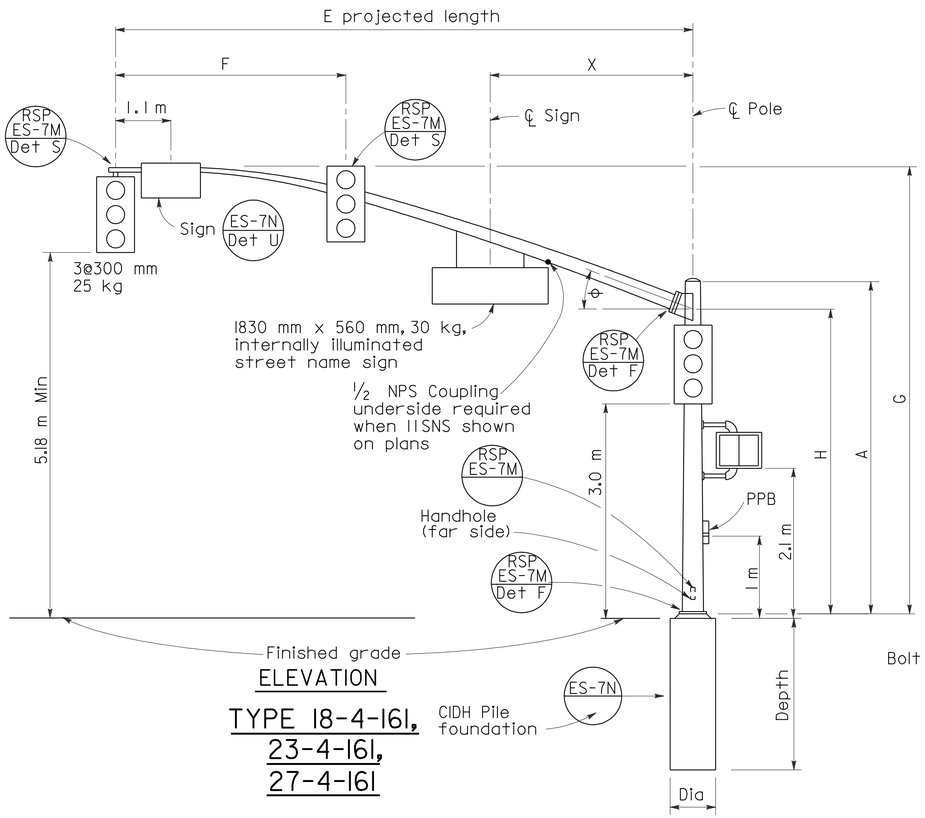
NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-7E DATED OCTOBER 5, 2007 SUPERSEDES RSP ES-7E DATED JANUARY 24, 2005 AND STANDARD PLAN ES-7E DATED JULY 1, 2004-PAGE 455 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-7E

6-19-07



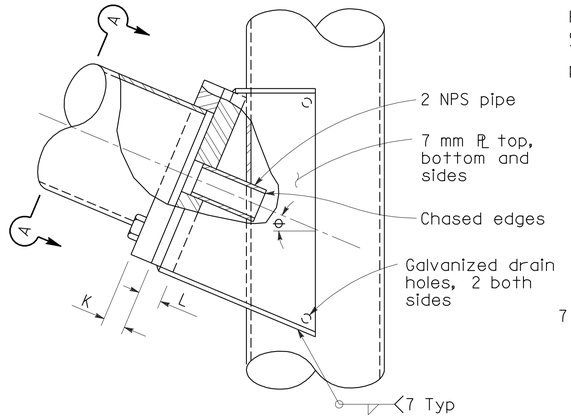
ELEVATION

TYPE 18-4-161, 23-4-161, 27-4-161

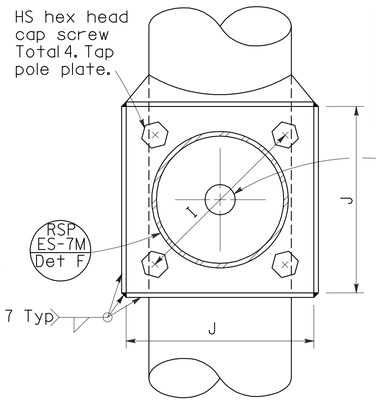
HIGH STRENGTH CAP SCREWS

16 - IINC - 45

- Length (mm)
- Threads (per inch)
- Size (mm)

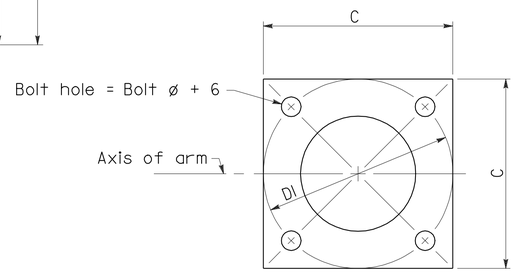


ELEVATION



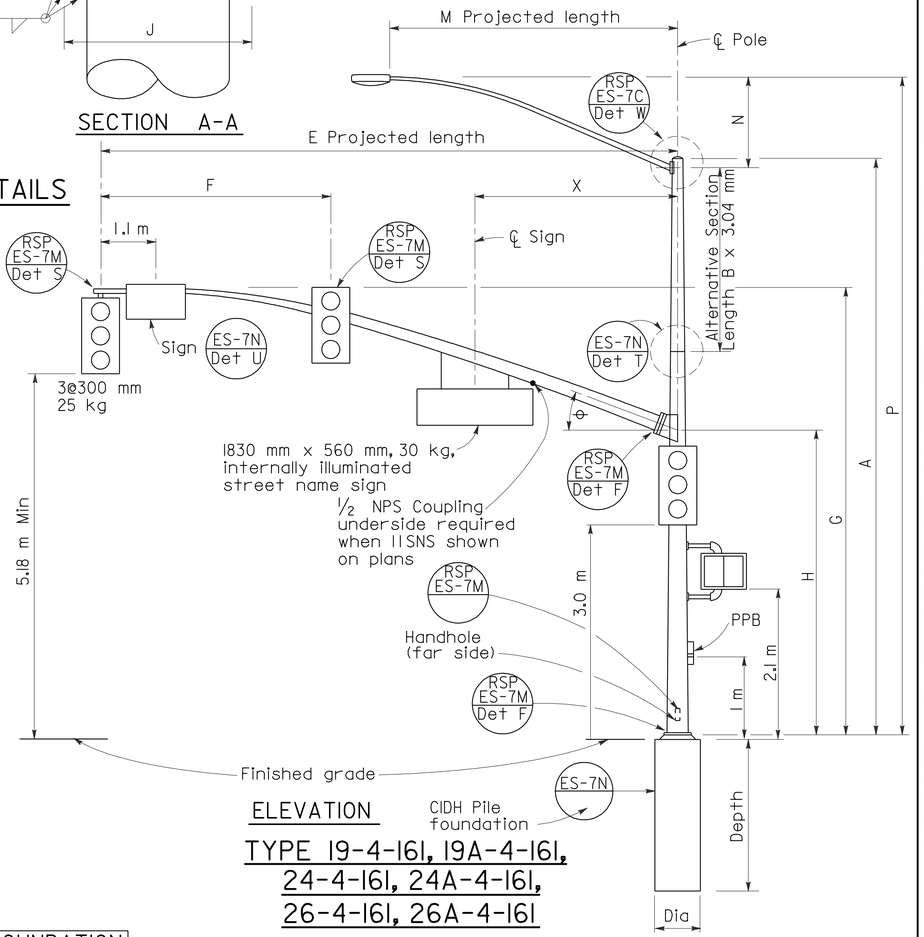
SECTION A-A

SIGNAL ARM CONNECTION DETAILS



BASE PLATE

To accompany plans dated 5-17-10



ELEVATION

TYPE 19-4-161, 19A-4-161, 24-4-161, 24A-4-161, 26-4-161, 26A-4-161

SIGNAL ARM DATA

E Projected Length	F Min Spacing	G Mounting Height	H	Min OD At Pole	Thickness	I Bolt Circle	HS Cap Screws	J Plate Size	K Arm PL Thickness	L Pole PL Thickness	⊖	X Max
m				mm								m
7.6	3.1	6.9 ±	4.9	186	6.07	305	32-7NC-76	305	32	38	23°	3.2
9.1	3.7	7.0 ±		203								
10.7	4.3			221		343		343	38	45	21°	
12.2	4.6			238							15°	4.0
13.7		7.2 ±		260								

LUMINAIRE ARM DATA

M Projected Length	N Rise	Min OD at Pole	Thickness	P Mounting Height 9.1 Pole	P Mounting Height 10.7 Pole
m	mm			m	
1.8	610 ±	83	3.04	9.5 ±	11.1 ±
2.4	760 ±	89		9.7 ±	11.3 ±
3.1	990 ±	98		9.9 ±	11.5 ±
3.7	1290 ±			10.2 ±	11.8 ±
4.6	1450 ±	108		10.4 ±	12.0 ±

Pole Type	Load Case	Wind Velocity km/h	POLE DATA A Height	Min OD Base	Min OD Top	Thickness	Alternative Section B Length	Alternative Section Bottom	Alternative Section Top	BASE PLATE DATA C	Dl Bolt Circle	Thickness	Anchor Bolts Size	Luminaire Arm	Signal Arm	CIDH PILE FOUNDATION Diameter	Depth	Reinforced
			m	mm			m	mm		mm				m		mm	m	
18-4-161	4	161	5.2	305	229	6.07	None	238	203	457	457	38	51ø x 1067 x 152	None	7.6, 9.1	914	2.7	Yes
19-4-161			9.1		203		3.1							1.8-4.6 3.7				
19A-4-161			10.7		186		4.6		186					1.8-4.6 4.6				
23-4-161			5.2		229		None							None	10.7			
24-4-161			9.1		203		3.1	238	203					1.8-4.6 3.7				
24A-4-161			10.7		186		4.6		186					1.8-4.6 4.6				
26-4-161			9.1	318	203	7.94	3.1	248	213					1.8-4.6 3.7	12.2, 13.7			
26A-4-161			10.7		186		4.6		196					1.8-4.6 4.6				
27-4-161			5.2		248		None							None				

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

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	138	87.2/88.9	149	156

Caltrans Metric

REGISTERED CIVIL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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

To get to the Caltrans web site, go to: http://www.dot.ca.gov

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SIGNAL AND LIGHTING STANDARD CASE 4 ARM LOADING WIND VELOCITY=161 km/h ARM LENGTHS 7.6 m TO 13.7 m)

NO SCALE

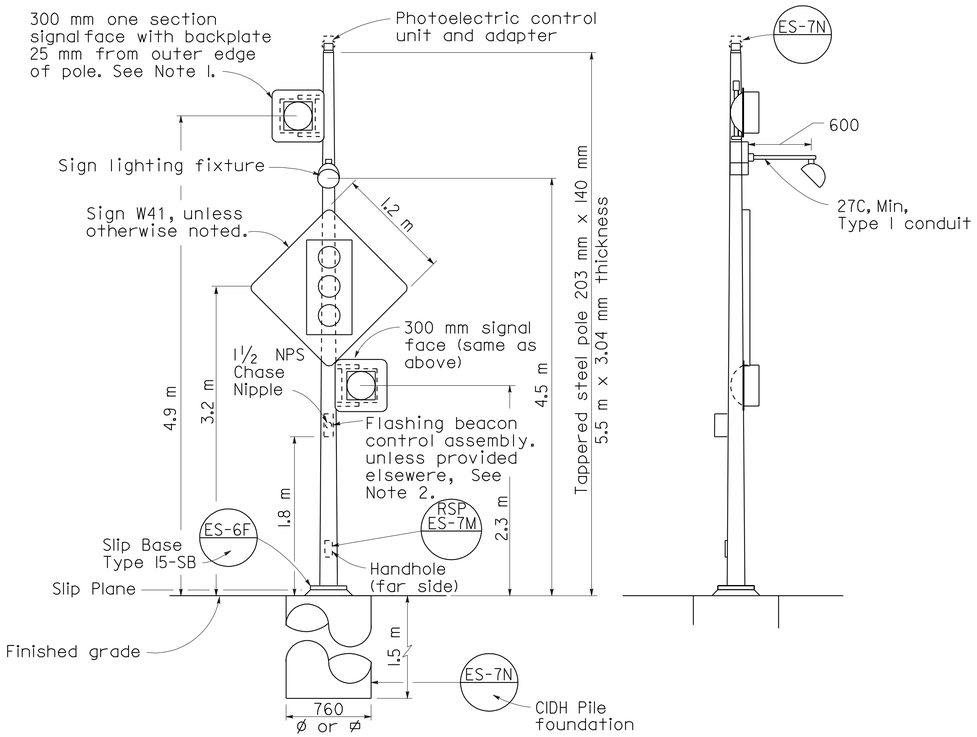
ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-7F DATED OCTOBER 5, 2007 SUPERSEDES RSP ES-7F DATED JANUARY 24, 2005 AND STANDARD PLAN ES-7F DATED JULY 1, 2004-PAGE 456 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-7F

2004 REVISED Std PLAN RSP ES-7F

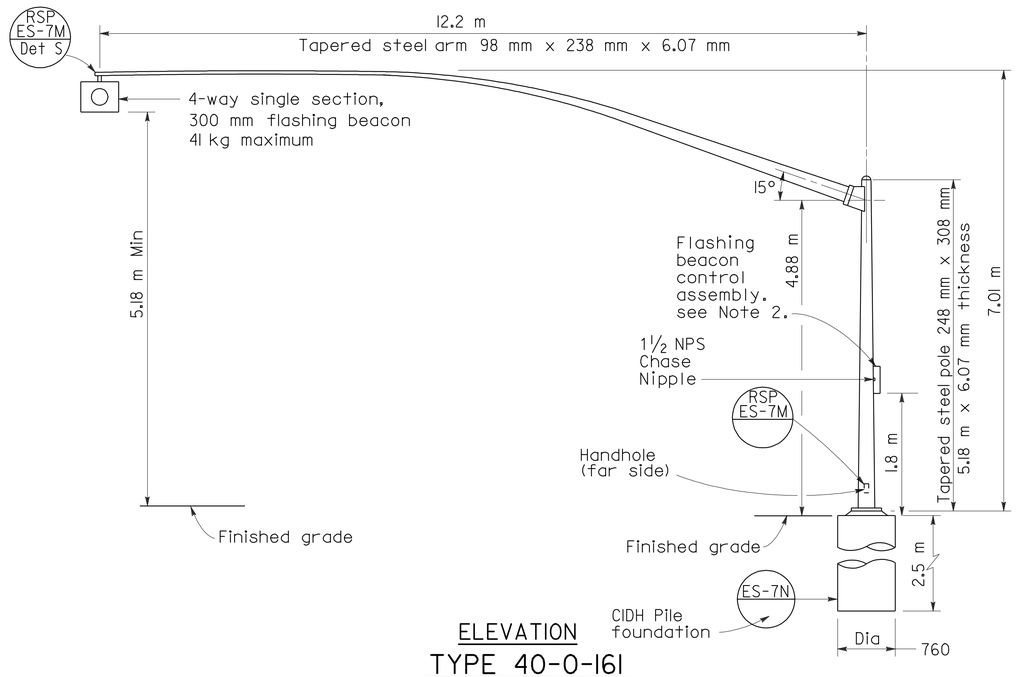
6-19-07



FRONT VIEW SIDE VIEW

TYPE 15-FBS

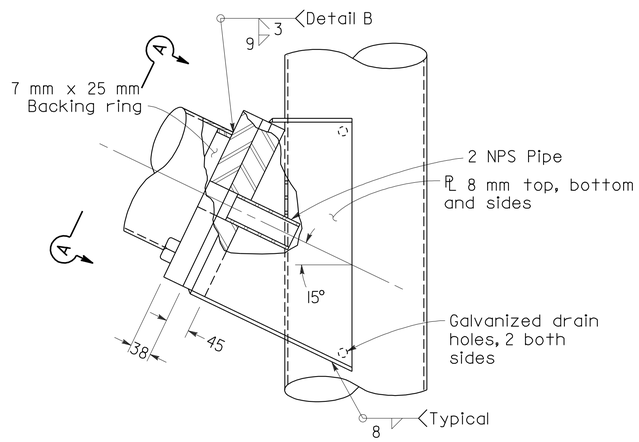
ADVANCE FLASHING BEACON WITH SLIP BASE INSTALLATION



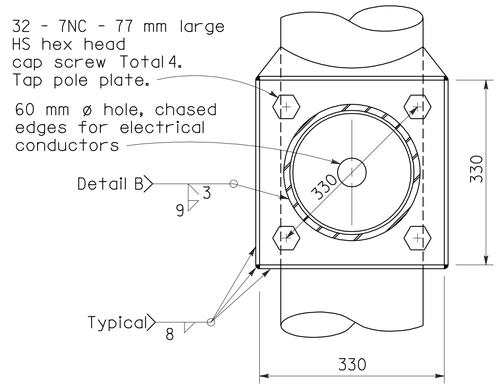
ELEVATION

TYPE 40-0-16I

To accompany plans dated 5-17-10

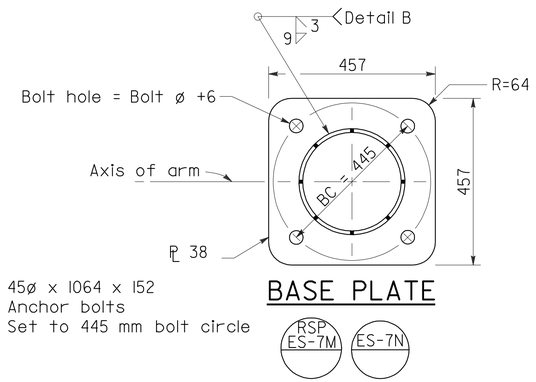


ELEVATION



SECTION A-A

SIGNAL ARM CONNECTION DETAILS



BASE PLATE

HIGH STRENGTH CAP SCREWS

16 - IINC - 45

Length (mm)
Threads (per inch)
Size (mm)

Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	138	87.2/88.9	150	156

REGISTERED CIVIL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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

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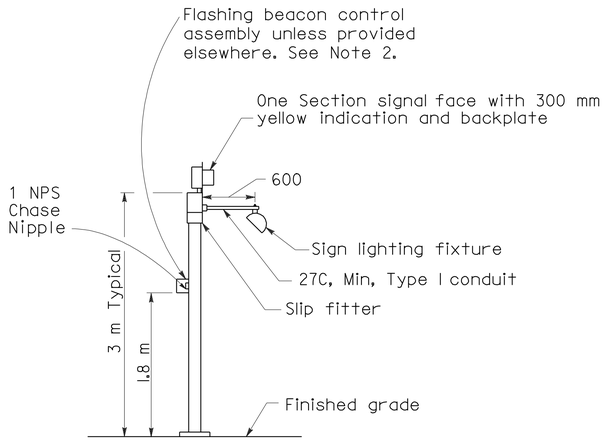
NOTES:

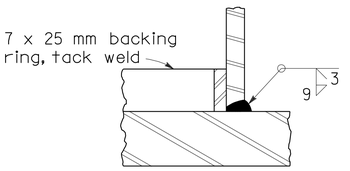
1. See Standard Plans ES-4D and ES-4E for attachment fitting details.
2. For wiring diagram, see Standard Plan ES-3B.



TYPE I-A, I-B, I-C AND I-D

ADVANCE FLASHING BEACON INSTALLATION

(See Project Plans for type of standard to be installed)



DETAIL B

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SIGNAL AND LIGHTING STANDARD ADVANCE FLASHING BEACONS)

NO SCALE

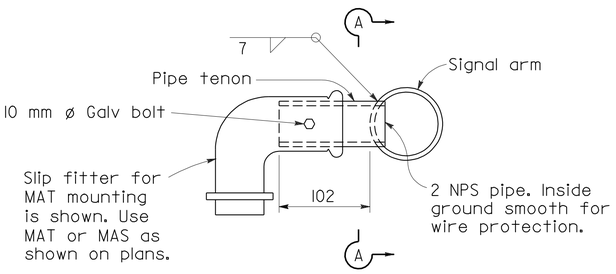
ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-7J DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-7J DATED JULY 1, 2004-PAGE 460 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-7J

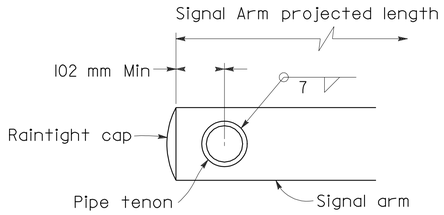
2004 REVISED Std PLAN RSP ES-7J

10-1-07



ES-4D

DETAIL S-SIDE TENON



SECTION A-A

IDENTIFICATION NUMBER

Attach a stamped metal tag with each pole's indentification number to shaft above handhole. 7 mm high number minimum.

A similar tag shall be attached to the top of the signal mast arm near the pole plate.

Sample Identification Number

Type
Load case
Design wind velocity (km/h)
Signal arm length maximum (m)
Standard plan year
Only for poles with fatigue resistant welds

19A - 3 - 161 - 9.1 - 04 - F

Use SL for special load case

Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	138	87.2/88.9	151	156

REGISTERED CIVIL ENGINEER

April 28, 2005
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Tillat Sattar
No. C42892
Exp. 03-31-2006
CIVIL
STATE OF CALIFORNIA

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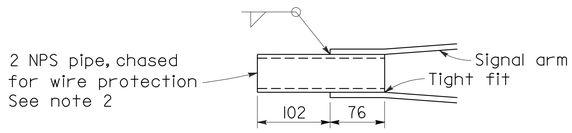
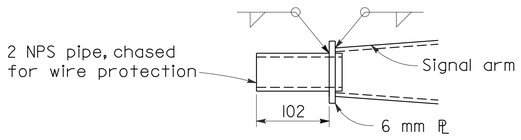
To accompany plans dated 5-17-10

PIPE TENONS

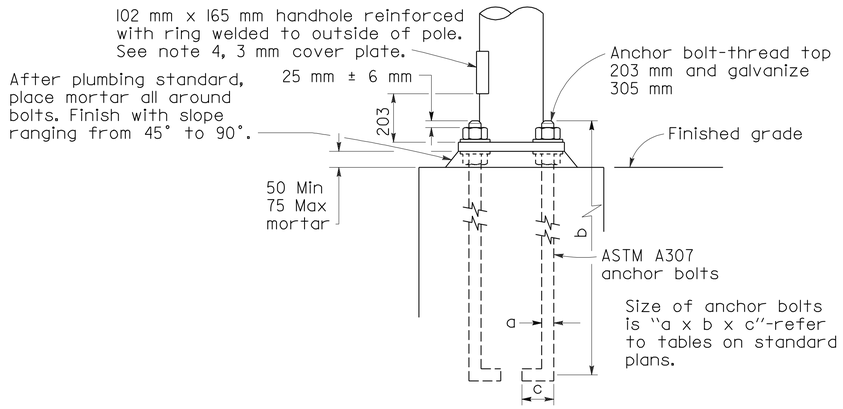


DETAIL TS-TIP TENON

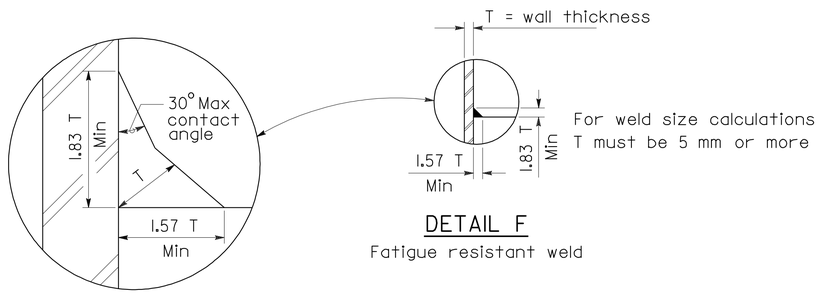


DETAIL TL-TIP TENON

This detail supersedes Detail S when so designated



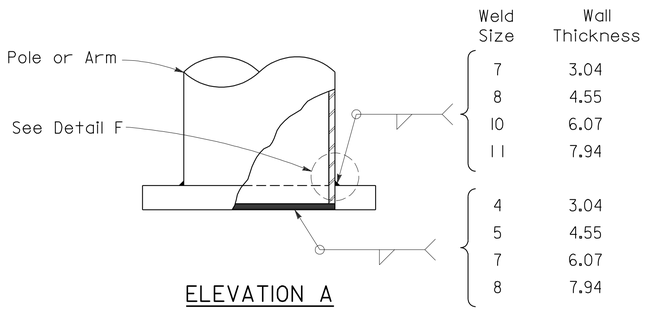
HANDHOLE AND ANCHORAGE DETAILS



For weld size calculations T must be 5 mm or more

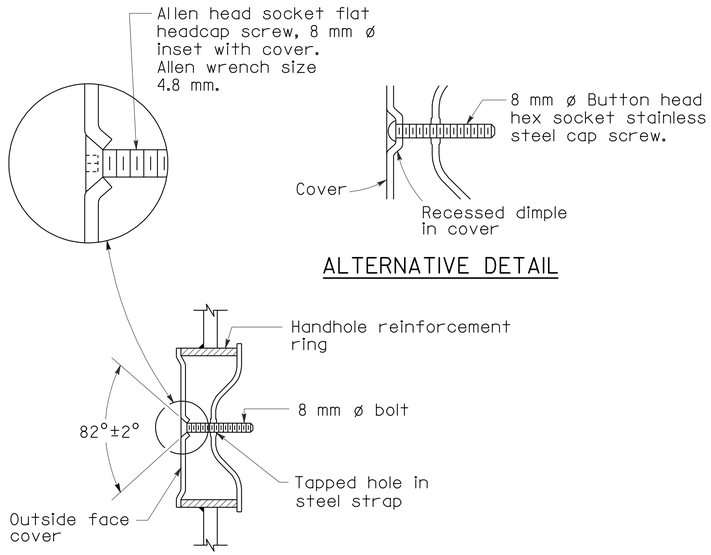
DETAIL F

Fatigue resistant weld



Weld Size	Wall Thickness
7	3.04
8	4.55
10	6.07
11	7.94
4	3.04
5	4.55
7	6.07
8	7.94

ELEVATION A



ALTERNATIVE DETAIL

TAMPER RESISTANT HANDHOLE COVER

GENERAL NOTES

SPECIFICATIONS

DESIGN : AASHTO Standard specifications for structural supports for highway signs, luminaires and traffic signals dated 2001.

Loading

WIND LOADINGS : 161 km/h

Unit Stresses

STRUCTURAL STEEL : fy = 330 MPa tapered steel tube
fy = 250 MPa unless otherwise noted

CONSTRUCTION : Standard Specifications and the Special Provisions

NOTES

1. ASTM A307 anchor bolts are required for each pole. Provide a hex nut, leveling nut and 2 washers for each bolt.
2. Luminaire arms shall be round, tapered steel tubes, taper of 11.45 mm/m to 11.66 mm/m with an end section 60 mm OD for mounting hardware. Extensions of 2 NPS Standard pipe and 178 mm long may be used at the option of the manufacturer. When low pressure sodium luminaires are required, the extension shall be 381 mm.
3. Signal arms shall be round, tapered steel tubes, maximum taper 11.66 mm/m.
4. Handhole reinforcement ring shall be 6 mm x 51 mm for 3.04 mm to 6.07 mm poles, 10 mm x 51 mm for 7.94 mm.
5. Handholes for lighting standards shall be located on the downstream side of the pole unless otherwise noted on the plans.
6. Detail F, fatigue resistant weld, is required at signal arm plate and pole base plate.
7. Cap screws shall be tightened by the turn-of-nut method 1/3 turn to form a snug tight condition. No washer will be required.
8. During pole erection, the post shall be raked as necessary with the use of leveling nuts to provide a plumb pole axis.
9. When Project Plans show a lesser number of signs and signals, the Project Plans shall prevail.
10. Outside diameter, wall thickness, and corresponding section properties at the base of traffic signal poles and arms as shown in the Standard Plans are minimums. Unless otherwise specified, alternative sections require approval by the Engineer.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SIGNAL AND LIGHTING STANDARDS DETAILS No. 1)

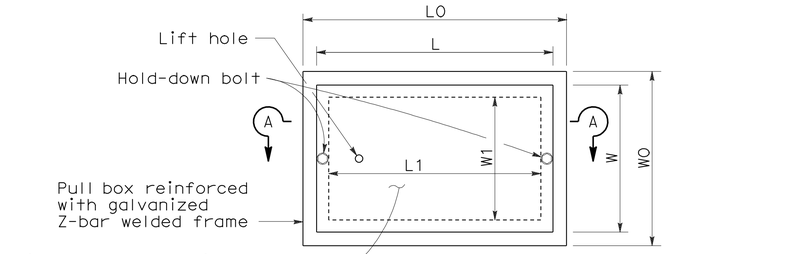
NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

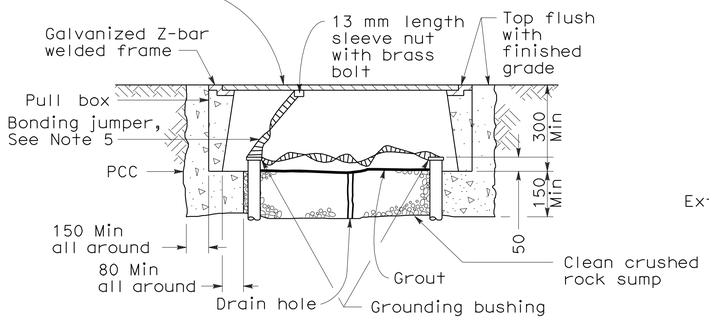
RSP ES-7M DATED APRIL 28, 2005 SUPERSEDES RSP ES-7M DATED JANUARY 24,2005 AND STANDARD PLAN ES-7M DATED JULY 1, 2004-PAGE 463 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-7M

2004 REVISED Std PLAN RSP ES-7M

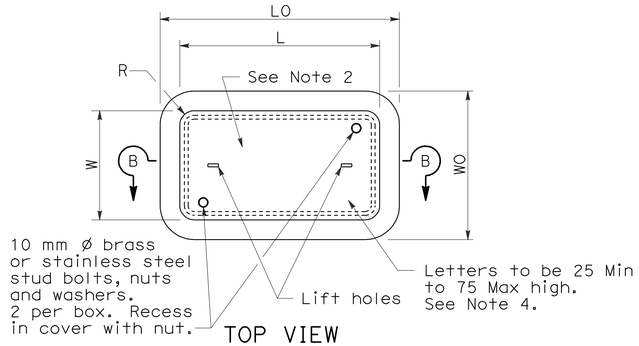


TOP VIEW

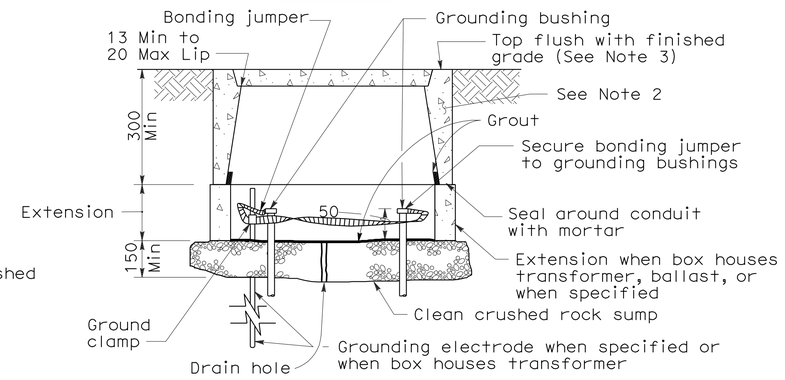


SECTION A-A

No. 3½(T), No. 5(T) AND No. 6(T) TRAFFIC PULL BOX



TOP VIEW



SECTION B-B

INSTALLATION DETAILS

DIMENSION TABLE

PULL BOX	CONCRETE BOX				NON-PCC BOX		CONCRETE OR NON-PCC COVERS				
	Minimum * Thickness	Minimum Depth Box and Extension	LO (mm)	WO (mm)	Minimum ** Thickness	Minimum Depth Box and Extension	L ** (mm)	W ** (mm)	R (mm)	Edge Thickness	Edge Taper
No. 3½	25 mm	No Extension	457	330	8 mm	No Extension	390	260	27	45 mm	3 mm
No. 5	25 mm	560 mm	666	425	8 mm	510 mm	590	350	32	50 mm	3 mm
No. 6	40 mm	610 mm	854	524	10 mm	510 mm	775	444	32	50 mm	3 mm

* Excluding conduit web ** Top dimension

DIMENSION TABLE

PULL BOX	CONCRETE BOX						NON-PCC BOX		CONCRETE OR NON-PCC COVERS				
	Minimum * Thickness	Minimum Depth Box and Extension	LO (mm)	WO (mm)	L1 (mm)	W1 (mm)	Minimum ** Thickness	Minimum Depth Box and Extension	L ** (mm)	W ** (mm)	R (mm)	Edge Thickness	Edge Taper
No. 3½(T)	40 mm	305 mm	530 ±	430 ± 25	370 ±	270 ± 25	Does Not Apply		510 ±	350 ±	0	13 mm	None
No. 5(T)	45 mm	305 mm	750 ±	600 ± 25	480 ±	330 ± 25	Does Not Apply		690 ±	410 ±	0	13 mm	None
No. 6(T)	50 mm	305 mm	900 ±	760 ± 25	600 ±	430 ± 25	Does Not Apply		840 ±	510 ±	0	13 mm	None

* Excluding conduit web ** Top dimension

NOTES ON PULL BOXES:

1. Traffic pull box shall be provided with steel cover and special concrete footing. Steel cover shall have embossed non-skid pattern.
2. Steel reinforcing shall be as regularly used in the standard products of the respective manufacturer.
3. Top of pull boxes shall be flush with surrounding grade or top of adjacent curb, except that in unpaved areas where pull box is not immediately adjacent to and protected by a concrete foundation, pole or other protective construction, the box shall be placed with its top 30 mm above surrounding grade. Where practicable, pull boxes shown in the vicinity of curbs shall be placed adjacent to the back of curb, and pull boxes shown adjacent to standards shall be placed on side of foundation facing away from traffic, unless otherwise noted. When pull box is installed in sidewalk area, the depth of the pull box shall be adjusted so that the top of the pull box is flush with the sidewalk.
4. Pull box covers shall be marked as follows: "SERVICE" Service circuits between service point and service disconnect; "SPRINKLER-CONTROL" Sprinkler control circuits, 50 V or less; "CALTRANS" On all pull boxes, except pull boxes marked "SPRINKLER-CONTROL"; and "TELEPHONE" Telephone service.

   a) No. 3½ pull box.

      1) "SIGNAL" Traffic signal circuits with or without street or sign lighting circuits.

      2) "ST LIGHTING" Street or sign lighting circuits where voltage is under 600 V.

   b) No. 5, 6, 9 or 9A pull box.

      1) "TRAFFIC SIGNAL" Traffic signal circuits with or without street or sign lighting circuits.

      2) "STREET LIGHTING" Street or sign lighting circuits where voltage is under 600 V.

      3) "STREET LIGHTING-HIGH VOLTAGE" Street or sign lighting circuits where voltage is above 600 V.

      4) "IRRIGATION" Circuits to irrigation controller 120 V or more.

      5) "RAMP METER" Ramp meter circuits.

      6) "COUNT STATION" Count or speed monitor circuits.

      7) "COMMUNICATION" Communication circuits.

      8) "TOS COMMUNICATIONS" TOS communications line.

      9) "TOS POWER" TOS power.

      10) "TDC POWER" Telephone demarcation cabinet power.

      11) "CCTV" Closed circuit television circuits.

      12) "TMS" Traffic monitoring station circuits.

      13) "CMS" Changeable message sign circuits.

      14) "HAR" Highway advisory radio circuits.

5. Bonding jumper for metal covers shall be 1 m long, minimum.
6. The nominal dimensions of the opening in which the cover sets shall be the same as the cover dimensions except the length and width dimensions shall be 3 mm greater.
7. Covers and boxes shall be interchangeable with California standard male and female gages. When interchanged with a standard male or female gage, the top surfaces shall be flush within 3 mm. Top outside edge of concrete covers and pull boxes shall have a 6 mm minimum radius.
8. Pull box shall not be installed within the boundaries of new or existing curb ramps.
9. Pull boxes for electroliers, post and signal standards shall be located ± 1.5 m from the station of the adjacent electrolier, post or signal standard. Pull boxes shall be placed adjacent to back of curb or edge of shoulder except where this is impractical, a box may be placed in another suitable protected and accessible location.

Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	138	87.2/88.9	152	156

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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

To get to the Caltrans web site, go to: http://www.dot.ca.gov

To accompany plans dated 5-17-10

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (PULL BOX DETAILS)

NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-8 DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-8 DATED JULY 1, 2004-PAGE 467 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-8

2004 REVISED Std PLAN RSP ES-8

7-3-07

Caltrans Metric

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

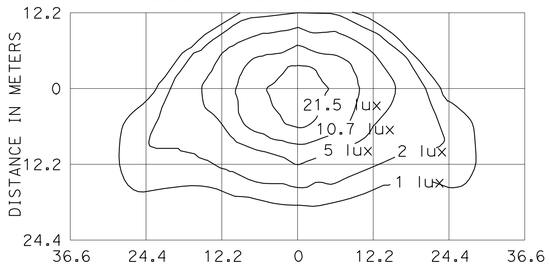
October 5, 2007
PLANS APPROVAL DATE

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

To get to the Caltrans web site, go to: http://www.dot.ca.gov

To accompany plans dated 5-17-10

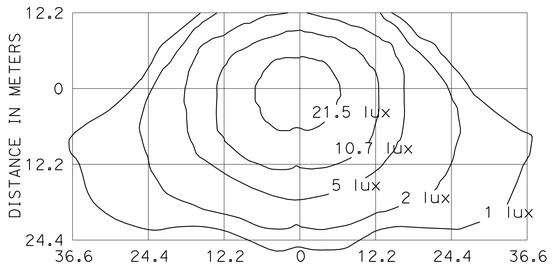
ISOLUX CURVE - MINIMUM



TYPE III MEDIUM CUTOFF

Cutoff Luminaire
10.4 m Mounting Height
LAMP OPERATED AT 22 000 lm
200 W HIGH PRESSURE SODIUM LAMP
ANSI DESIGNATION S66

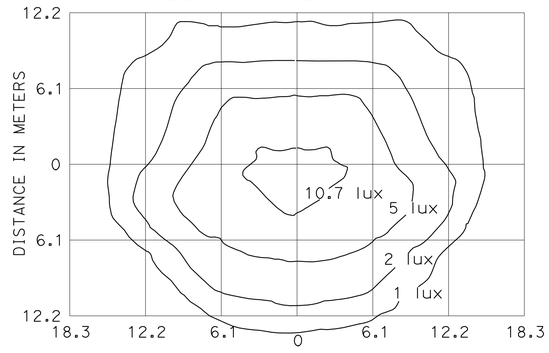
ISOLUX CURVE - MINIMUM



TYPE III MEDIUM CUTOFF

Cutoff Luminaire
12.2 m Mounting Height
LAMP OPERATED AT 37 000 lm
310 W HIGH PRESSURE SODIUM LAMP
ANSI DESIGNATION S67

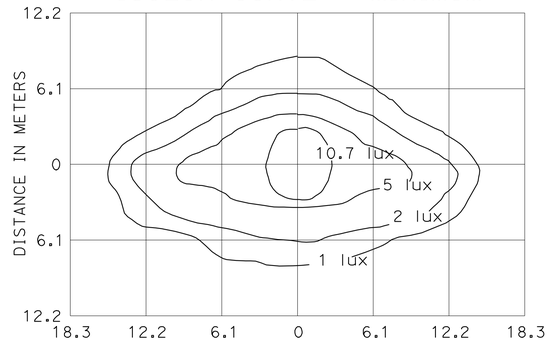
ISOLUX CURVE - MINIMUM



FLUSH SOFFIT LUMINAIRE

5.2 m Mounting Height
LAMP OPERATED AT 5800 lm
70 W HIGH PRESSURE SODIUM LAMP
ANSI DESIGNATION S62

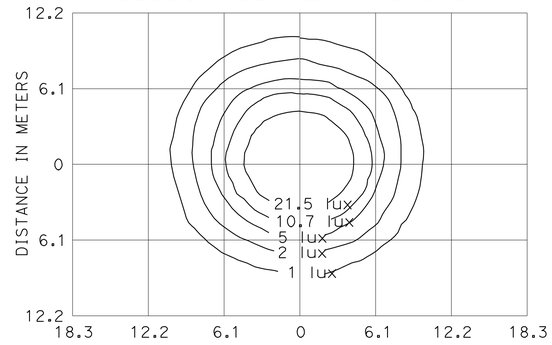
ISOLUX CURVE - MINIMUM



PENDANT SOFFIT LUMINAIRE
TYPE III SHORT

5.2 m Mounting Height
LAMP OPERATED AT 5800 lm
70 W HIGH PRESSURE SODIUM LAMP
ANSI DESIGNATION S62

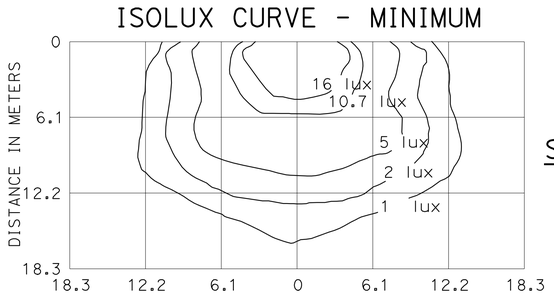
ISOLUX CURVE - MINIMUM



PENDANT SOFFIT LUMINAIRE

5.2 m Mounting Height
LAMP OPERATED AT 5800 lm
70 W HIGH PRESSURE SODIUM LAMP
ANSI DESIGNATION S62

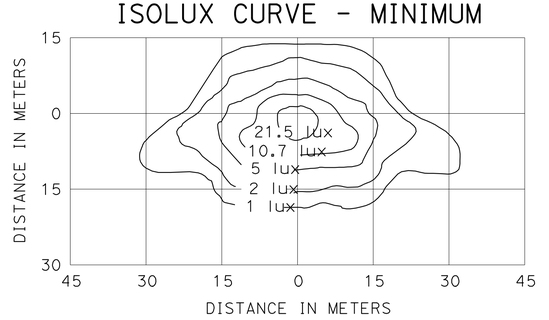
ISOLUX CURVE - MINIMUM



DETAIL ``W'' WALL LUMINAIRE

4.6 m Mounting Height
LAMP OPERATED AT 9500 lm
100 W HIGH PRESSURE SODIUM LAMP
ANSI DESIGNATION S54

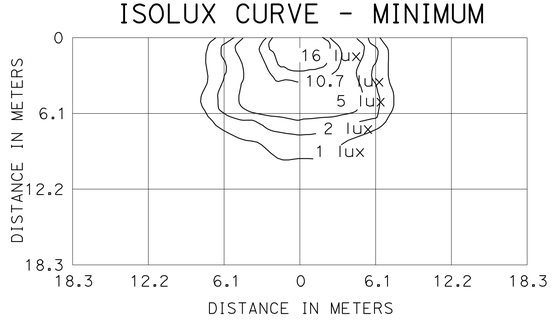
ISOLUX CURVE - MINIMUM



TYPE III MEDIUM CUTOFF

Cutoff Luminaire
9.1 m Mounting Height
LAMP OPERATED AT 16 000 lm
150 W HIGH PRESSURE SODIUM LAMP
ANSI DESIGNATION S55

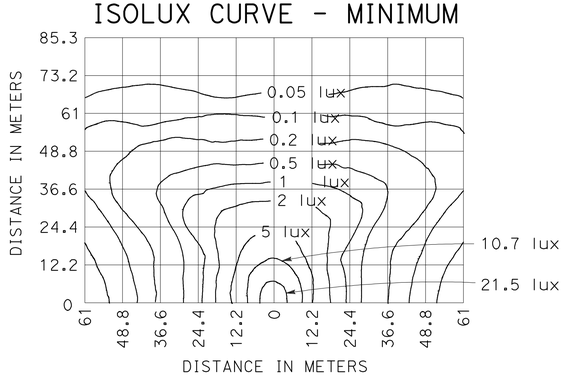
ISOLUX CURVE - MINIMUM



WALL LUMINAIRE

4.6 m Mounting Height
LAMP OPERATED AT 5800 lm
70 W HIGH PRESSURE SODIUM LAMP
ANSI DESIGNATION S62

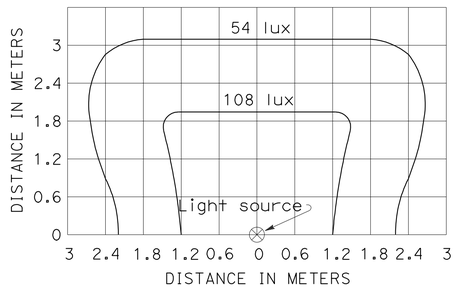
ISOLUX CURVE - MINIMUM



LOW PRESSURE SODIUM LUMINAIRE

12.2 m Mounting Height
LAMP OPERATED AT 33 000 lm
180 W LOW PRESSURE SODIUM LAMP

ISOLUX CURVE - MINIMUM



SIGN LIGHTING FIXTURE ISOLUX DIAGRAM

1. Curves represent the minimum lux of initial illumination on a 3 m x 6 m panel.
2. The lux shown are with the fixture attached to the light fixture mounting channel which places the center of the source 1420 mm in front of panel and 300 mm below the bottom edge.
3. Applicable lamp: 85-W fluorescent phosphor coated induction lamp.

NOTE

Isolux diagrams show the minimum horizontal lux required.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (ISOLUX DIAGRAMS)

NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-10 DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-10 DATED JULY 1, 2004-PAGE 474 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-10

2004 REVISED Std PLAN RSP ES-10

6-27-07

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	138	87.2/88.9	154	156

REGISTERED CIVIL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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

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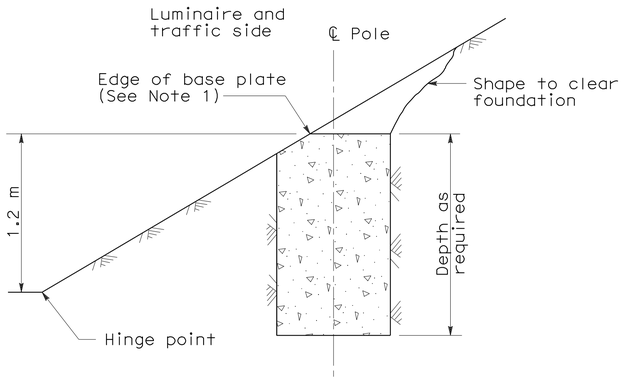
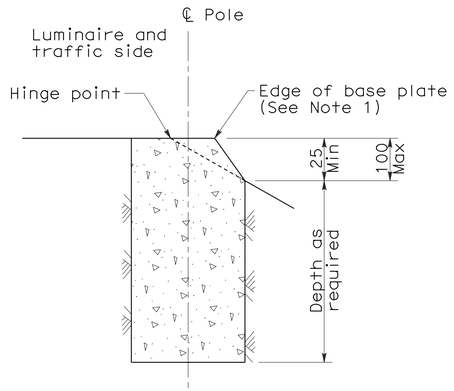
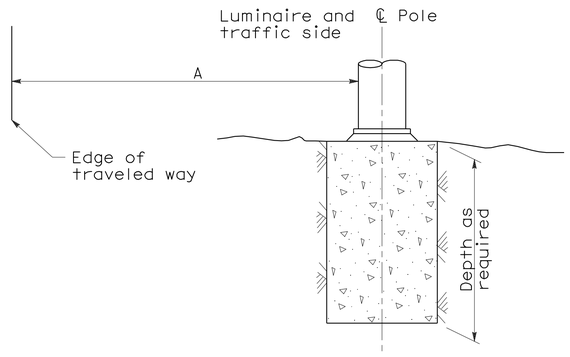
To accompany plans dated 5-17-10



CUT SLOPES
STEEPER THAN 1:4
See Note 2



FILL SLOPES
STEEPER THAN 1:4
See Note 2



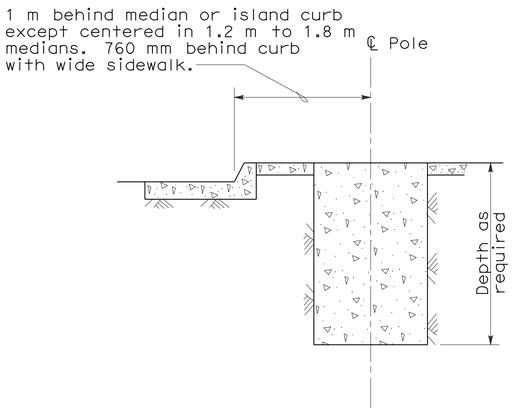
FLAT SECTIONS, CUT OR FILL SLOPES
1:4 OR FLATTER

STANDARD TYPE	SETBACK (DIMENSION A)
32	9 m Min
31, 36-20A	6 m Min
15, 15D, 15-SB, 21, 21D, 30	Mast Arm Length (Min)

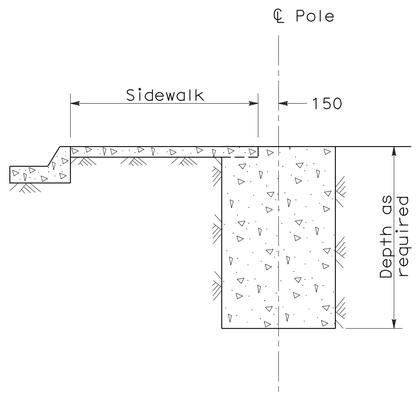
FOUNDATIONS ADJACENT TO ALL ROADWAYS EXCEPT IN SIDEWALK, MEDIAN AND ISLAND AREAS

NOTES:

1. Where a portion of the foundation is above grade, the top edges shall have a 25 mm chamfer.
2. Horizontal setbacks on cut and fill slopes steeper than 1:4 shall not exceed the distance shown for flat sections.



MEDIAN, ISLAND
OR WIDE SIDEWALK
(2 m wide and wider)



NARROW SIDEWALK
(Less than 2 m wide)

FOUNDATIONS IN SIDEWALK, MEDIAN AND ISLAND AREAS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (FOUNDATION INSTALLATIONS)

NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-11 DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-11 DATED JULY 1, 2004-PAGE 475 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-11

2004 REVISED Std PLAN RSP ES-11

10-1-07

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	138	87.2/88.9	155	156

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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

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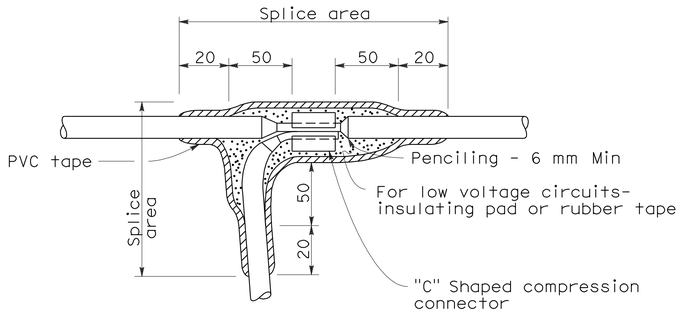
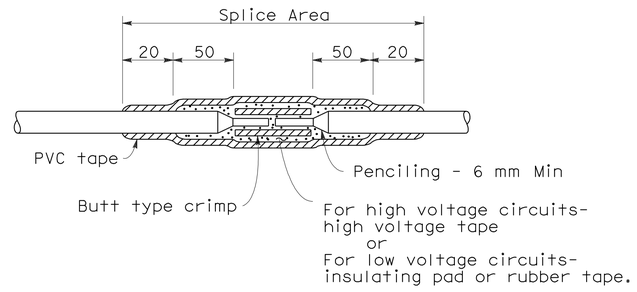


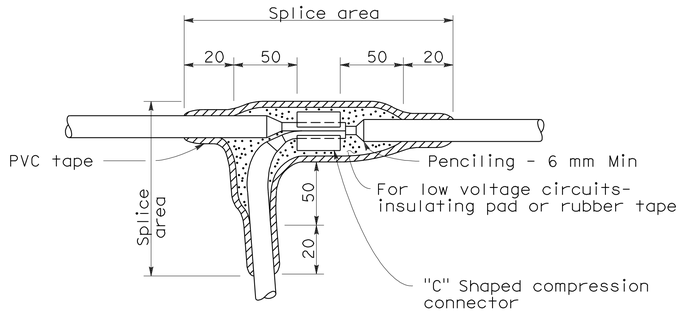
TYPE "C" SPLICE

Between 1 free-end and 1 through conductor



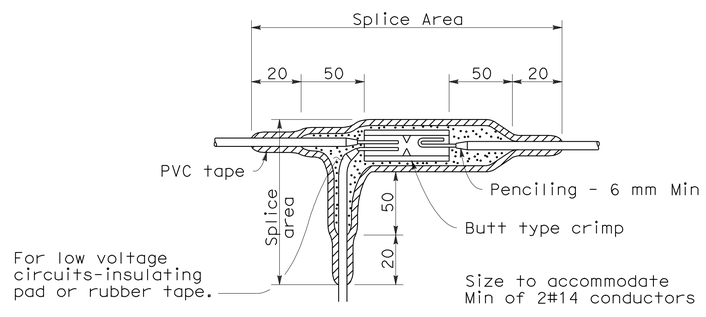
TYPE "S" SPLICE

Between 2 free-ends



TYPE "T" SPLICE

For 3 free-ends



TYPE "ST" SPLICE

NOTES:

1. Dimensions are minimum.
2. Rubber tapes shall be rolled after application.

INSULATION METHODS

Low Voltage Circuits (0-600 V)

METHOD "B"

1. Completely cover the splice area with electrical insulating coating and allow to dry.
2. Apply 2 layers of electrical insulating pad with minimum thickness of 4 mm each layer or 2 layers, half lapped, synthetic oil resistant, self fusing rubber tape.
3. Apply 3 layers half lapped polyvinyl chloride tape.
4. Cover entire splice with electrical insulating coating and allow to dry.

High Voltage Circuits (Over 600 V)

1. Completely cover the splice area with electrical insulating coating and allow to dry.
2. Apply high voltage tape to a minimum thickness equal to original insulation.
3. Apply 3 layers half lapped polyvinyl chloride tape.
4. Cover entire splice with electrical insulating coating and allow to dry.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SPLICING DETAILS)

NO SCALE

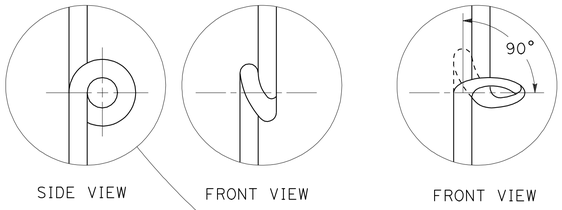
ALL DIMENSIONS ARE IN
MILLIMETERS UNLESS OTHERWISE SHOWN

RSP ES-13A DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-13A
DATED JULY 1, 2004-PAGE 478 OF THE STANDARD PLANS BOOK DATED JULY 2004.

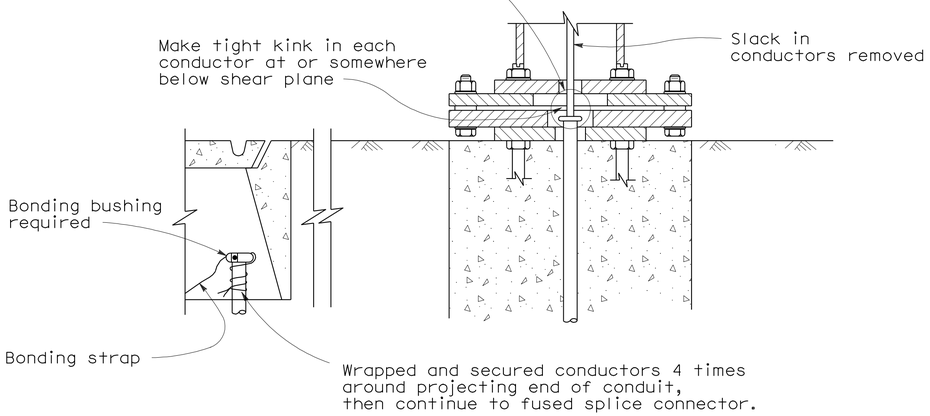
REVISED STANDARD PLAN RSP ES-13A

2004 REVISED Std PLAN RSP ES-13A

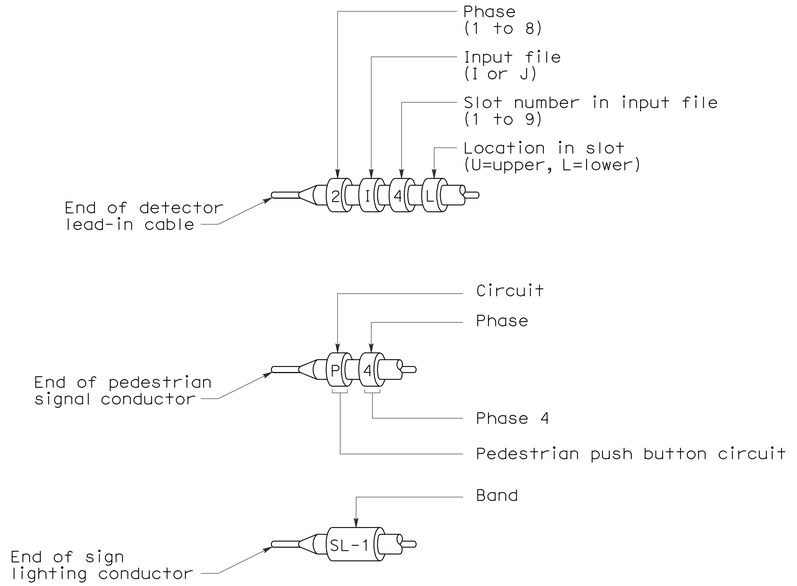
6-27-07



Continue kink to at least 90° position as indicated in step 2.



KINKING DETAIL FOR SLIP BASE STANDARDS



TYPICAL BANDING OF CONDUCTOR ENDS

Primary lines of multiple ballasts shall be provided with fused connectors.
Fuse ratings shall be as noted below.

CIRCUIT VOLTAGE	FUSE VOLTAGE RATING	FUSE CURRENT RATING																
		HPS LAMP BALLAST								LOW PRESSURE SODIUM BALLAST					INDUCTION SIGN LIGHTING	SINGLE PHASE (TWO WIRE) TRANSFORMERS (PRIMARY SIDE)		
		70 W	100 W	150 W	200 W	250 W	310 W	400 W	1000 W	35 W	55 W	90 W	135 W	180 W	85 W	1 kVA	2 kVA	3 kVA
120 V	250 V	5	5	5	5	5	5	5	-	5	5	5	5	5	5	10	20	30
240 V	250 V	5	5	5	5	5	5	5	5	3	3	3	5	5	5	6	10	20
480 V	500-600 V	5	5	5	5	5	5	5	5	2	2	2	3	3	1*	3	6	10

* See Revised Standard Plan RSP ES-15D, Type SC3 Control.

FUSE RATINGS FOR FUSED CONNECTORS

LUMINAIRE BALLAST FUSING

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	138	87.2/88.9	156	156

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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

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STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (WIRING DETAILS AND FUSE RATINGS)

NO SCALE

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RSP ES-13B DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-13B DATED JULY 1, 2004-PAGE 479 OF THE STANDARD PLANS BOOK DATED JULY 2004.

REVISED STANDARD PLAN RSP ES-13B

2004 REVISED Std PLAN RSP ES-13B

10-1-07