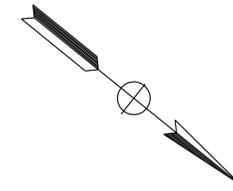


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	805	9.4/13.8	301	346

08-10-11
 REGISTERED ELECTRICAL ENGINEER DATE
 11-7-11
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

DANNY D. MCCLURE
 No. 16074
 Exp. 12-31-11
 ELECTRICAL



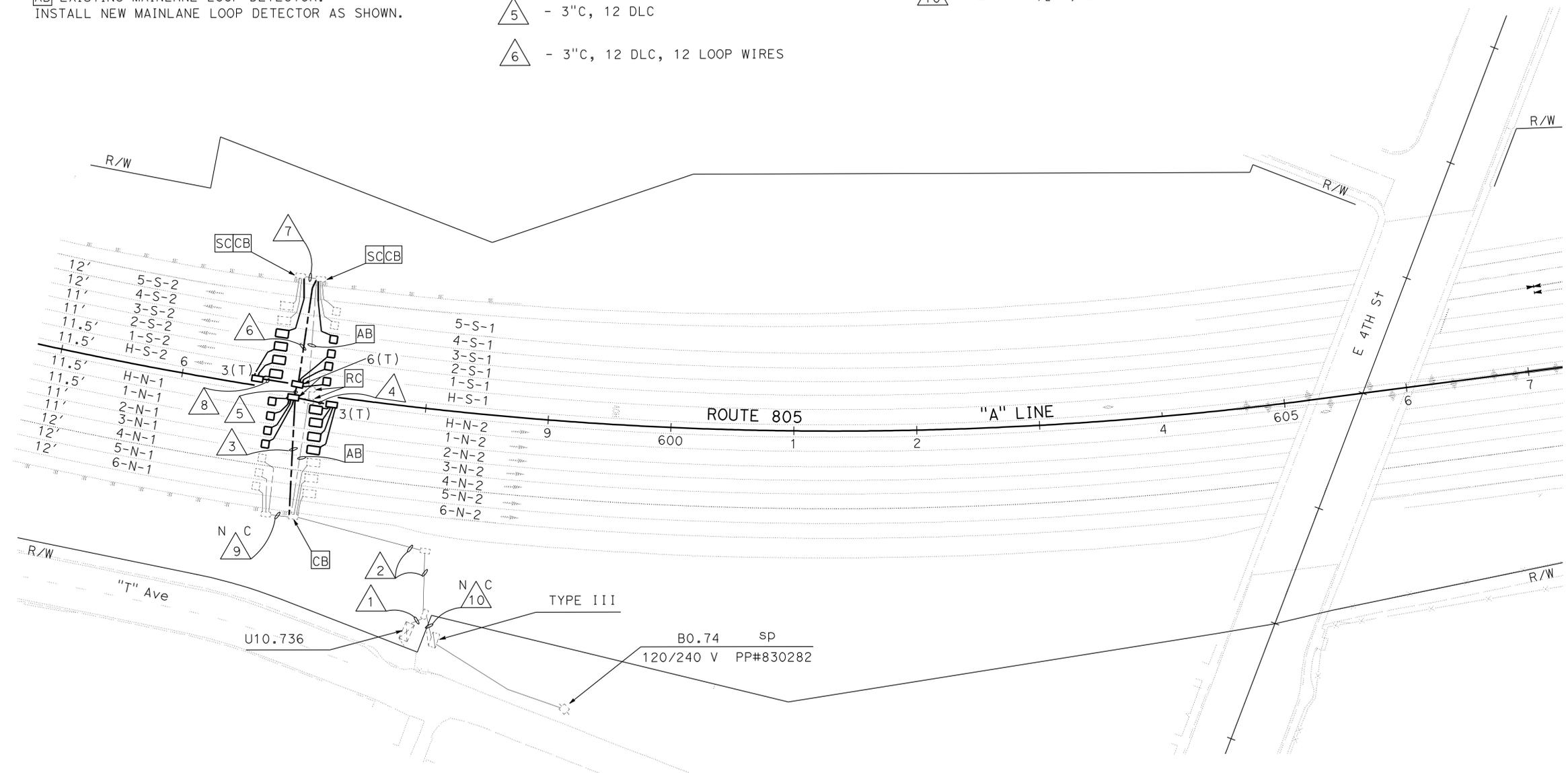
FOR ACCURATE RIGHT OF WAY AND ACCESS DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

CONDUIT NOTES(TSO):

- 1 - Exist 3"C, 22 dlc, 2#8(tms).
RC 16 dlc. ADD 20 DLC
- 2 - Exist 3"C, 22 dlc.
RC 16 dlc. ADD 20 DLC
- 3 - 3"C, 12 DLC, 16 LOOP WIRES
- 4 - 2"C, 8 LOOP WIRES
- 5 - 3"C, 12 DLC
- 6 - 3"C, 12 DLC, 12 LOOP WIRES
- 7 - Exist 1 1/2"C, 2 dlc.
RC 2 dlc. ADD 3 DLC
- 8 - 2"C, 6 LOOP WIRES
- N/C 9 - Exist 1 1/2"C, 3 dlc
- N/C 10 - Exist 1 1/2"C, 2#10(tms)

NOTES(TSO):

- 1 - FOR LOOP PLACEMENT DETAIL "ML" AND MAINLANE LOOP DETECTOR IDENTIFICATION DETAIL, SEE SHEET E-17.
- 2 - AB EXISTING MAINLANE LOOP DETECTOR. INSTALL NEW MAINLANE LOOP DETECTOR AS SHOWN.



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC ELECTRICAL
 FUNCTIONAL SUPERVISOR DALE WILSON
 CALCULATED/DESIGNED BY CHECKED BY
 DANNY MCCLURE ENRIQUE BERNAL
 REVISED BY DATE REVISED
 x x x x x

MODIFY TRAFFIC MONITORING STATION (LOCATION 2)

SCALE: 1" = 50'

E-19

APPROVED FOR ELECTRICAL WORK ONLY

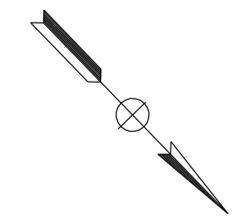
LAST REVISION DATE PLOTTED => 08-NOV-2011
 08-20-11 TIME PLOTTED => 09:15

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	805	9.4/13.8	302	346

08-10-11
 REGISTERED ELECTRICAL ENGINEER DATE
 11-7-11
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
DANNY D. MCCLURE
 No. 16074
 Exp 2-31-11
 ELECTRICAL
 STATE OF CALIFORNIA

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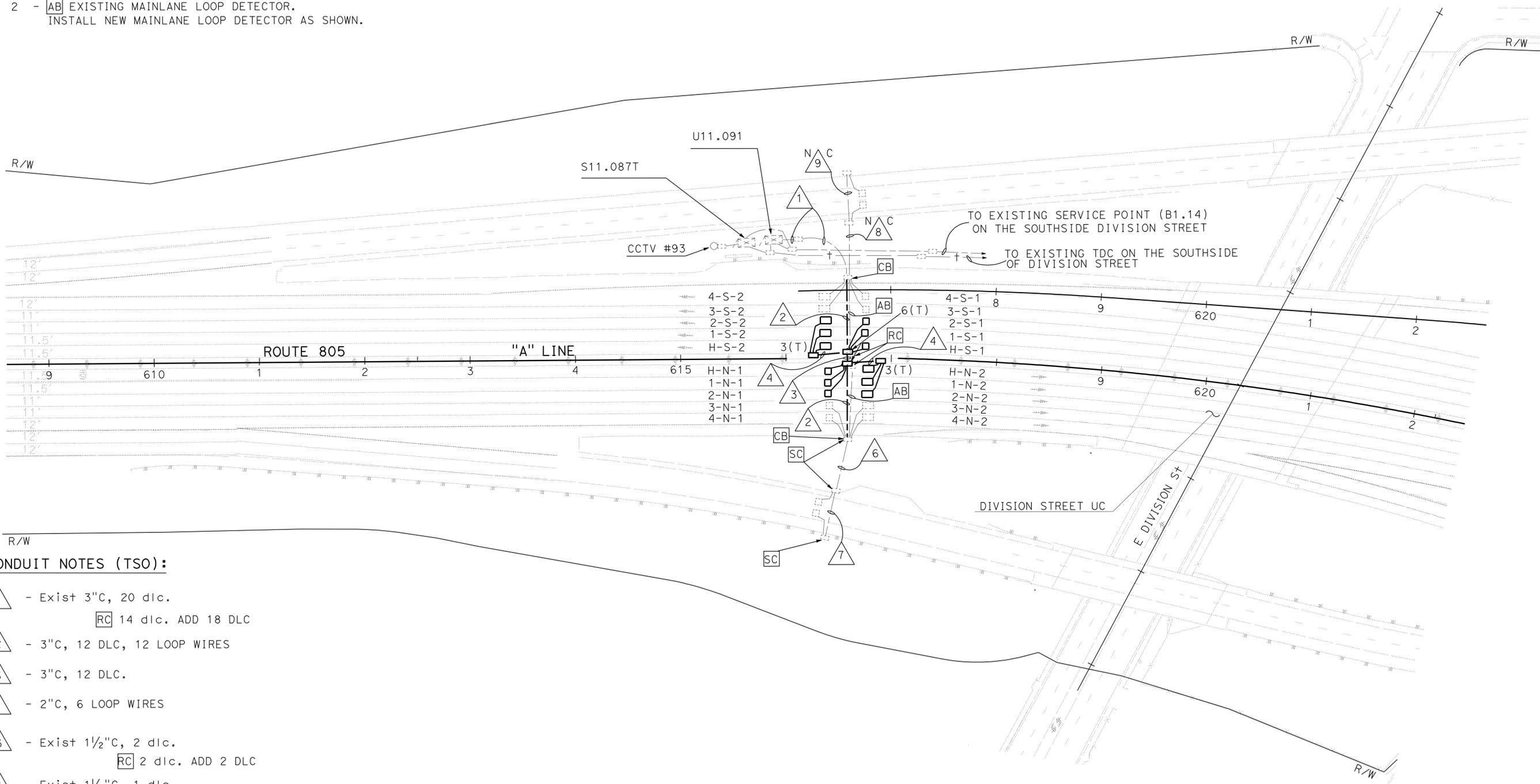


FOR ACCURATE RIGHT OF WAY AND ACCESS DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

NOTES (TSO):

- FOR LOOP PLACEMENT DETAIL "ML" AND MAINLINE LOOP DETECTOR IDENTIFICATION DETAILS, SEE SHEET E-17.
- AB EXISTING MAINLANE LOOP DETECTOR. INSTALL NEW MAINLANE LOOP DETECTOR AS SHOWN.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC ELECTRICAL
 FUNCTIONAL SUPERVISOR DALE WILSON
 CALCULATED/DESIGNED BY CHECKED BY
 DANNY MCCLURE ENRIQUE BERNAL
 REVISED BY DATE
 REVISIONS: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100



CONDUIT NOTES (TSO):

- 1 - Exist 3"C, 20 dlc.
RC 14 dlc. ADD 18 DLC
- 2 - 3"C, 12 DLC, 12 LOOP WIRES
- 3 - 3"C, 12 DLC.
- 4 - 2"C, 6 LOOP WIRES
- 6 - Exist 1 1/2"C, 2 dlc.
RC 2 dlc. ADD 2 DLC
- 7 - Exist 1 1/2"C, 1 dlc.
RC 1 dlc. ADD 1 DLC
- N8C - Exist 1 1/2"C, 2 dlc
- N9C - Exist 1 1/2"C, 1 dlc

**MODIFY TRAFFIC MONITORING STATION
(LOCATION 3)**

SCALE: 1" = 50'

E-20

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LAST REVISION DATE PLOTTED => 08-NOV-2011
 08-20-11 TIME PLOTTED => 09:15

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	805	9.4/13.8	303	346

<i>Danny D. McClure</i>	08-10-11
REGISTERED ELECTRICAL ENGINEER	DATE
11-7-11	
PLANS APPROVAL DATE	

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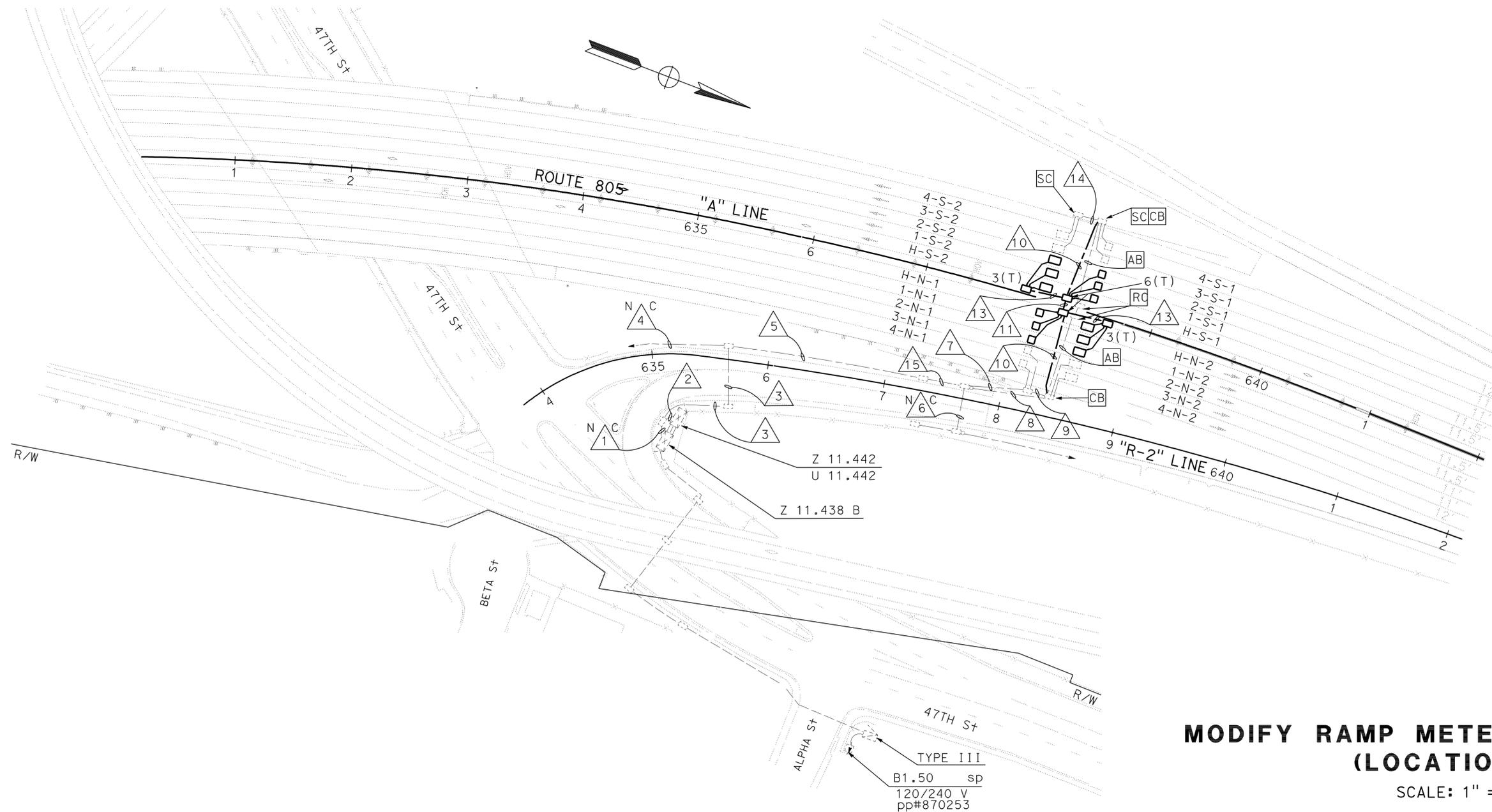
FOR ACCURATE RIGHT OF WAY AND ACCESS DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

NOTES (TSO):

- FOR LOOP PLACEMENT DETAIL "ML" AND MAINLINE LOOP DETECTOR IDENTIFICATION DETAILS, SEE SHEETS E-17.
- [AB] EXISTING MAINLANE LOOP DETECTOR. INSTALL NEW MAINLANE LOOP DETECTOR AS SHOWN.
- Exist RAMP METERING SYSTEM PARTIALLY SHOWN ONLY.

CONDUIT NOTES (TSO):

- | | |
|--|---|
| N 1 C
- Exist 3"C, 2(9csc), 2#8(1tg), 2#6(fb) | 8
- Exist 1 1/2"C, 4 dlc. |
| 2
- Exist 3"C, 2(9csc), 22 dlc.
RC 12 dlc. ADD 16 DLC | 9
- Exist 2"C, 10 dlc.
RC 10 dlc. ADD 14 DLC |
| 3
- Exist 2-3"C, 2(9csc), 2#8(1tg), 2#6(fb), 22 dlc.
RC 12 dlc. ADD 16 DLC | 10
- 3"C, 10 DLC, 12 loop wires |
| N 4 C
- Exist 1 1/2"C, 2#6(fb), 2 dlc | 11
- 3"C, 10 DLC |
| 5
- Exist 2-3"C, 2(9csc), 2#8(1tg), 2#6(fb), 20 dlc.
RC 12 dlc. ADD 16 DLC | 13
- 2"C, 6 LOOP WIRES |
| N 6 C
- Exist 2" AND 3"C, 2(9csc), 2#8(1tg), 2#6(fb), 2 dlc. | 14
- Exist 1 1/2"C, 2 dlc.
RC 2 dlc. ADD 2 DLC |
| 7
- Exist 2"C, 12 dlc.
RC 10 dlc. ADD 14 DLC | 15
- Exist 2-3"C, 2(9csc), 2#8(1tg), 2#6(fb), 18 dlc.
RC 12 dlc. ADD 16 DLC |



MODIFY RAMP METERING SYSTEM (LOCATION 2)

SCALE: 1" = 50'

E-21

APPROVED FOR ELECTRICAL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	DESIGNED BY	REVISOR
Caltrans TRAFFIC ELECTRICAL	DALE WILSON	CHECKED BY	DANNY MCCLURE
			ENRIQUE BERNAL
			DATE REVISOR

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	805	9.4/13.8	304	346

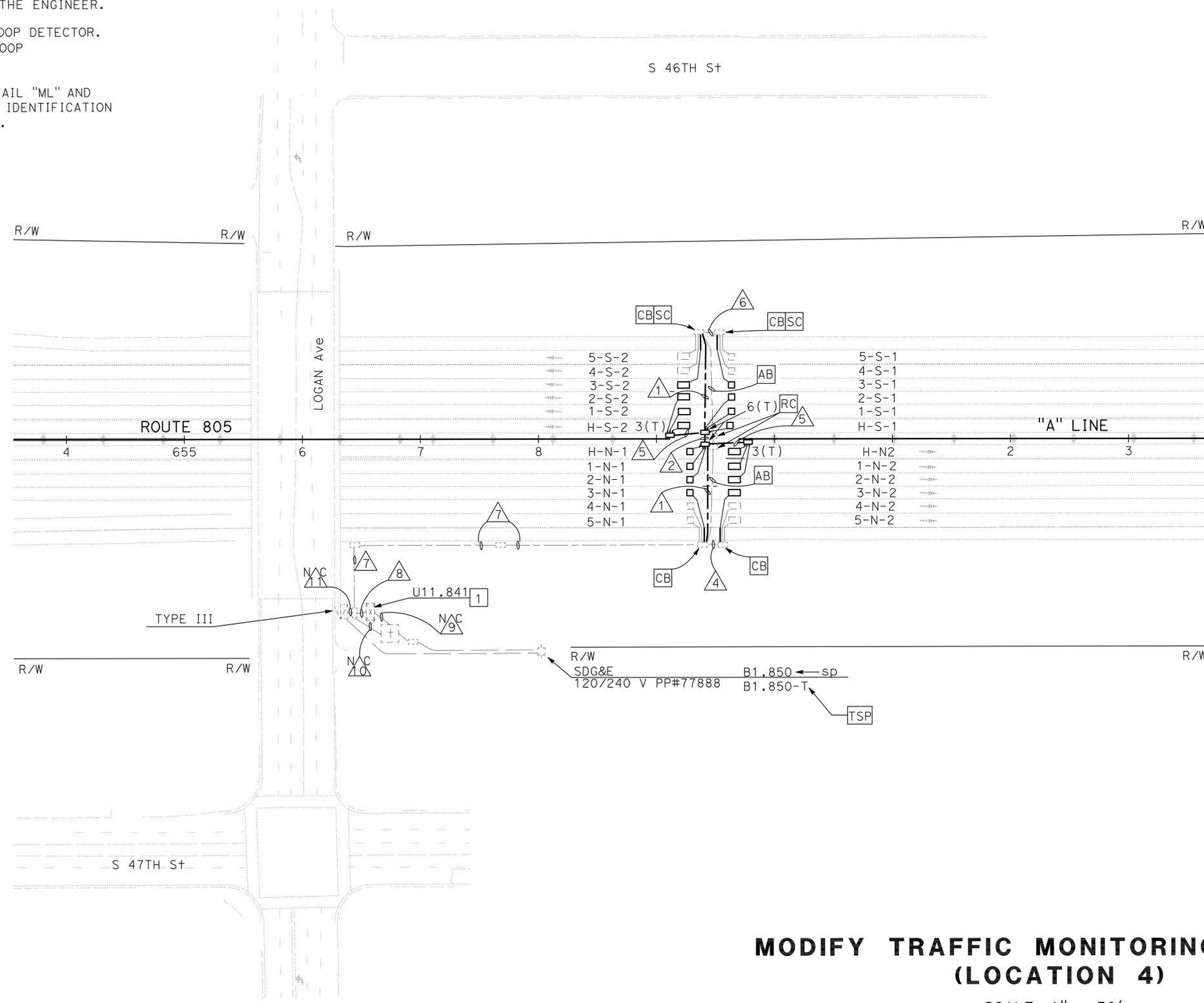
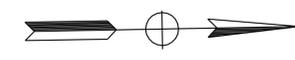
Danny D. McClure 08-10-11
 REGISTERED ELECTRICAL ENGINEER DATE
 11-7-11
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 DANNY D. MCCLURE
 No. 16074
 Exp. 12-31-11
 ELECTRICAL
 STATE OF CALIFORNIA

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

NOTES (TSO):

- 1 - Exist TRAFFIC MONITORING STATION CABINET (TYPE 334). INSTALL STATE-FURNISHED MODEL 170 CONTROLLER UNIT, AND LOOP DETECTOR SENSOR UNITS AT DIRECTON OF THE ENGINEER.
- 2 - [AB] EXISTING MAINLANE LOOP DETECTOR. INSTALL NEW MAINLANE LOOP DETECTOR AS SHOWN.
- 3 - FOR LOOP PLACEMENT DETAIL "ML" AND MAINLINE LOOP DETECTOR IDENTIFICATION DETAILS SEE SHEET E-17.



CONDUIT NOTES (TSO):

- 1 - 3"C, 12 DLC, 12 LOOP WIRES
- 2 - 3"C, 12 DLC
- 3 - 3"C, 12 DLC, 12 LOOP WIRES
- 4 - Exist 1 1/2"C, 2 dlc
ADD 1 DLC
- 5 - 2"C, 6 LOOP WIRES
- 6 - Exist 1 1/2"C, 2 dlc
[RC] 2 dlc. ADD 3 DLC
- 7 - Exist 3"C, 20 dlc
[RC] 16 dlc. ADD 20 DLC
- 8 - Exist 3"C, 20 dlc, 2#8(tms)
[RC] 16 dlc. ADD 20 DLC
- [NAC] 9 - Exist 1"C, 1 sic
- [NAC] 10 - Exist 1"C, 2#10(+dc)
- [NAC] 11 - Exist 1 1/2"C, 2#10(+dc), 2#8(tms)

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC ELECTRICAL
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MODIFY TRAFFIC MONITORING STATION (LOCATION 4)

SCALE: 1" = 50'

E-22

APPROVED FOR ELECTRICAL WORK ONLY

LAST REVISION DATE PLOTTED => 08-NOV-2011 08-20-11 TIME PLOTTED => 1:3:22

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

NOTES (TSO):

- 1 - EXISTING RAMP METERING SYSTEM CABINET (TYPE 334). INSTALL STATE-FURNISHED MODEL 170 CONTROLLER UNIT AND LOOP DETECTOR SENSOR UNITS AT DIRECTON OF THE ENGINEER.
- 2 - [AB] EXISTING MAINLANE LOOP DETECTOR. INSTALL NEW MAINLANE LOOP DETECTOR AS SHOWN.
- 3 - Exist RAMP METERING SYSTEM PARTIALLY SHOWN ONLY.
- 4 - FOR LOOP PLACEMENT DETAIL "ML" AND MAINLANE LOOP DETECTOR IDENTIFICATION DETAILS SEE SHEET E-17.

CONDUIT NOTES (TSO):

- 1 - 3"C, 12 DLC, 12 LOOP WIRES
- 2 - 3"C, 12 DLC
- 4 - 2"C, 6 LOOP WIRES
- 5 - Exist 1 1/2"C, 2 dlc, [RC] 2 dlc. ADD 3 DLC
- 7 - Exist 2"C, 13 dlc, [RC] 13 dlc. ADD 15 DLC
- 8 - Exist 1 1/2"C, 5 dlc, [RC] 3 dlc. ADD 5 DLC
- N/C 9 - Exist 1 1/2"C, 1 dlc
- 10 - Exist 2"C, 1 9csc, 7 dlc, [RC] 3 dlc. ADD 5 DLC
- N/C 11 - Exist 2 1/2"C, 15 dlc, [RC] 13 dlc. ADD 15 DLC
- N/C 12 - Exist 1 1/2"C, 6#8(sign)
- 13 - Exist 3"C, 2(9csc), 2#8(ltg), 3#14(peu), 23 dlc, [RC] 16 dlc. ADD 20 DLC
- 14 - Exist 3"C, 2(9csc), 2#8(ltg), 3#14(peu), 24 dlc, [RC] 16 dlc. ADD 20 DLC
- N/C 15 - Exist 1 1/2"C, 2#8(ltg), 2#8(rm), 2#10(+dc), 3#14(peu)
- N/C 16 - Exist 2"C, 2#8(ltg), 2#8(s), 2#8(rm), 2#10(+dc), 3#14(peu)
- 17 - Exist 3"C, 2(9csc), 2#8(rm), 2#10(+dc), 24 dlc [RC] 16 dlc. ADD 20 DLC
- N/C 18 - Exist 1 1/2"C, 3 dlc, 2#10(fb)
- N/C 19 - Exist 1 1/2"C, 1 dlc, 2#10(fb)
- 20 - Exist 3"C, 2(9csc), 2#8(rm), 2#10(+dc), 4#10(fb), 26 dlc, [RC] 16 dlc. ADD 20 DLC

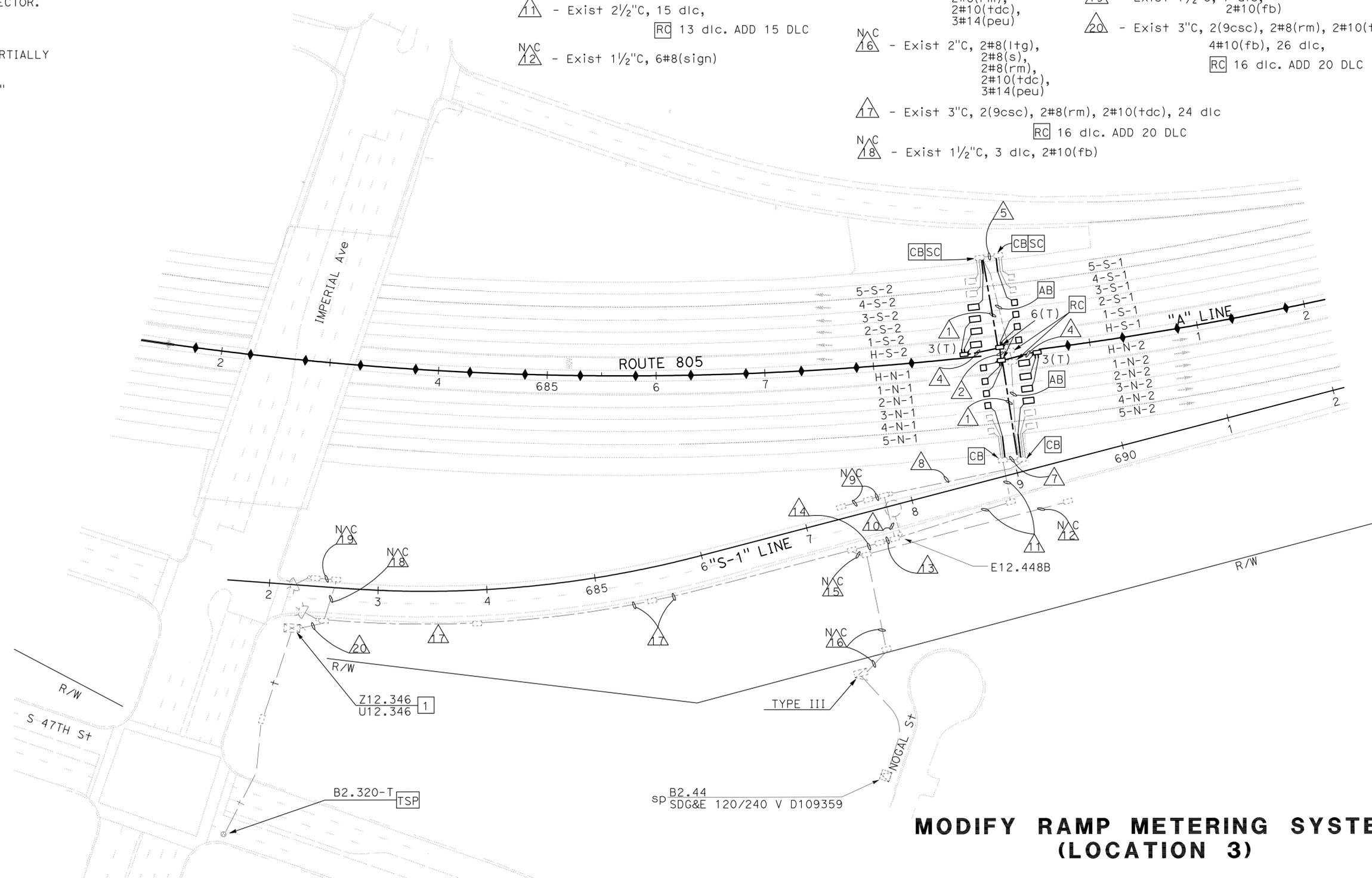


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	805	9.4/13.8	305	346

REGISTERED ELECTRICAL ENGINEER DATE 08-10-11
 DANNY D. MCCLURE
 No. 16074
 Exp. 12-31-11
 ELECTRICAL
 STATE OF CALIFORNIA

11-7-11
 PLANS APPROVAL DATE

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



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC ELECTRICAL
 FUNCTIONAL SUPERVISOR DALE WILSON
 CALCULATED-DRAWN BY CHECKED BY
 DANNY MCCLURE ENRIQUE BERNAL
 REVISED BY DATE REVISED
 x
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MODIFY RAMP METERING SYSTEM (LOCATION 3)

SCALE: 1" = 50' **E-23**

APPROVED FOR ELECTRICAL WORK ONLY

LAST REVISION DATE PLOTTED => 08-NOV-2011
 08-20-11 TIME PLOTTED => 13:23

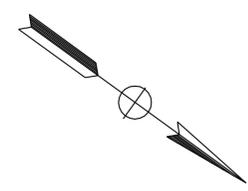
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC ELECTRICAL

FUNCTIONAL SUPERVISOR: DALE WILSON
 CALCULATED/DESIGNED BY: [blank]
 CHECKED BY: [blank]
 REVISOR: DANNY MCCLURE
 DATE: [blank]
 REVISIONS: [blank]

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

CONDUIT NOTES (TSO):

- 1 - Exist 2"C, 11 dlc. [RC] 7 dlc. ADD 18 DLC
- 2 - Exist 2"C, 11 dlc. [RC] 7 dlc
- N 3 C - Exist 1 1/2"C, 4 dlc
- 4 - 3"C, 12 DLC, 12 LOOP WIRES
- 5 - 3"C, 12 DLC
- 7 - 2"C, 6 LOOP WIRES
- 8 - Exist 2"C, 2 dlc. [RC] 2 dlc. ADD 3 DLC
- N 10 C - Exist 1"C, 2#10 (tms)



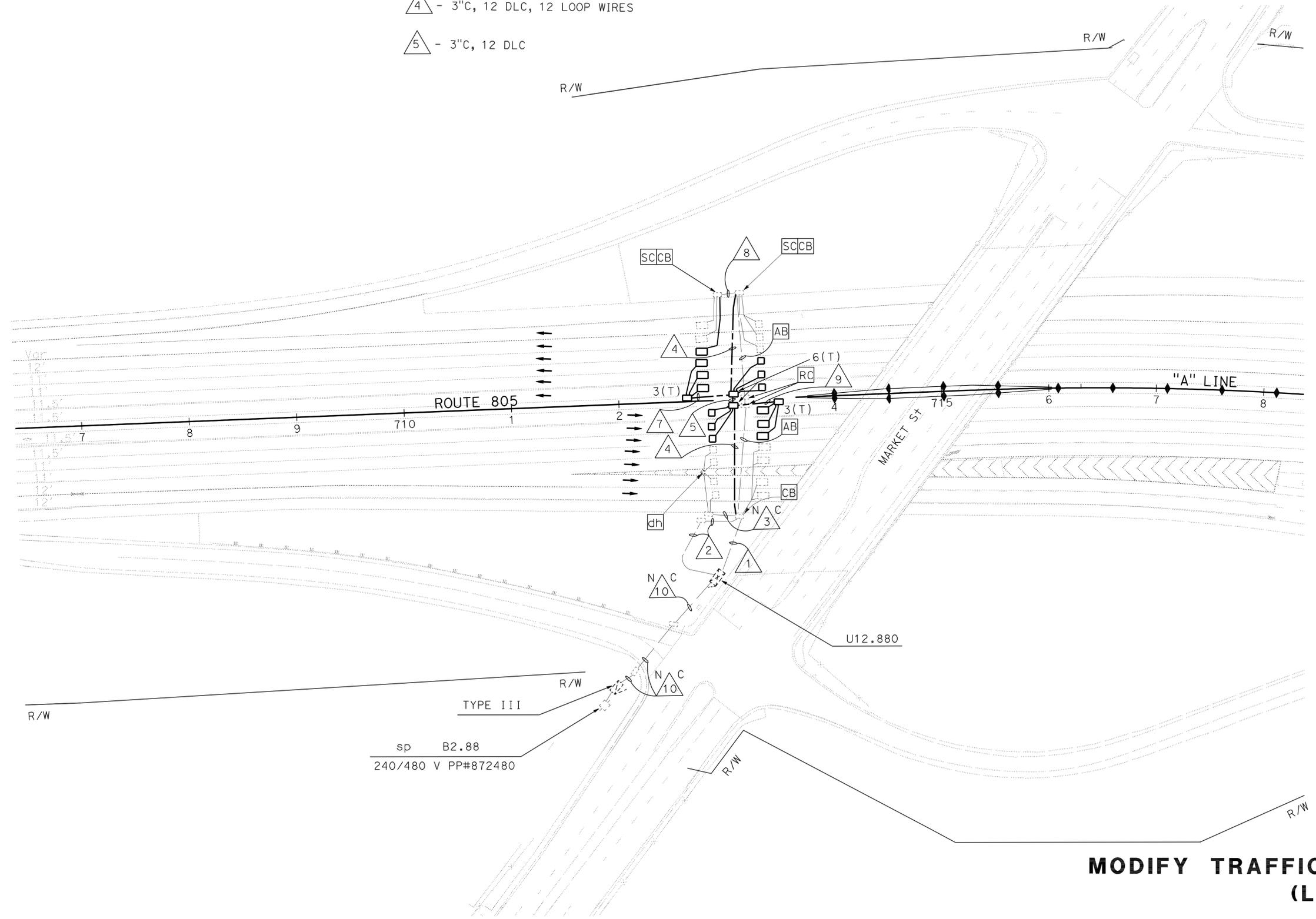
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	805	9.4/13.8	306	346

08-10-11
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 11-7-11
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DANNY D. MCCLURE
 No. 16074
 Exp 12-31-11
 ELECTRICAL

NOTES (TSO):

- 1 - FOR LOOP PLACEMENT DETAIL "ML" AND MAINLANE LOOP DETECTOR IDENTIFICATION DETAILS SEE SHEET E-17.
- 2 - [AB] EXISTING MAINLANE LOOP DETECTOR. INSTALL NEW MAINLANE LOOP DETECTOR AS SHOWN.



MODIFY TRAFFIC MONITORING STATION (LOCATION 5)

SCALE: 1" = 50'

E-24

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	805	9.4/13.8	307	346

<i>Danny D. McClure</i>	08-10-11
REGISTERED ELECTRICAL ENGINEER	DATE
11-7-11	
PLANS APPROVAL DATE	

DANNY D. MCCLURE
No. 16074
Exp. 12-31-11
ELECTRICAL

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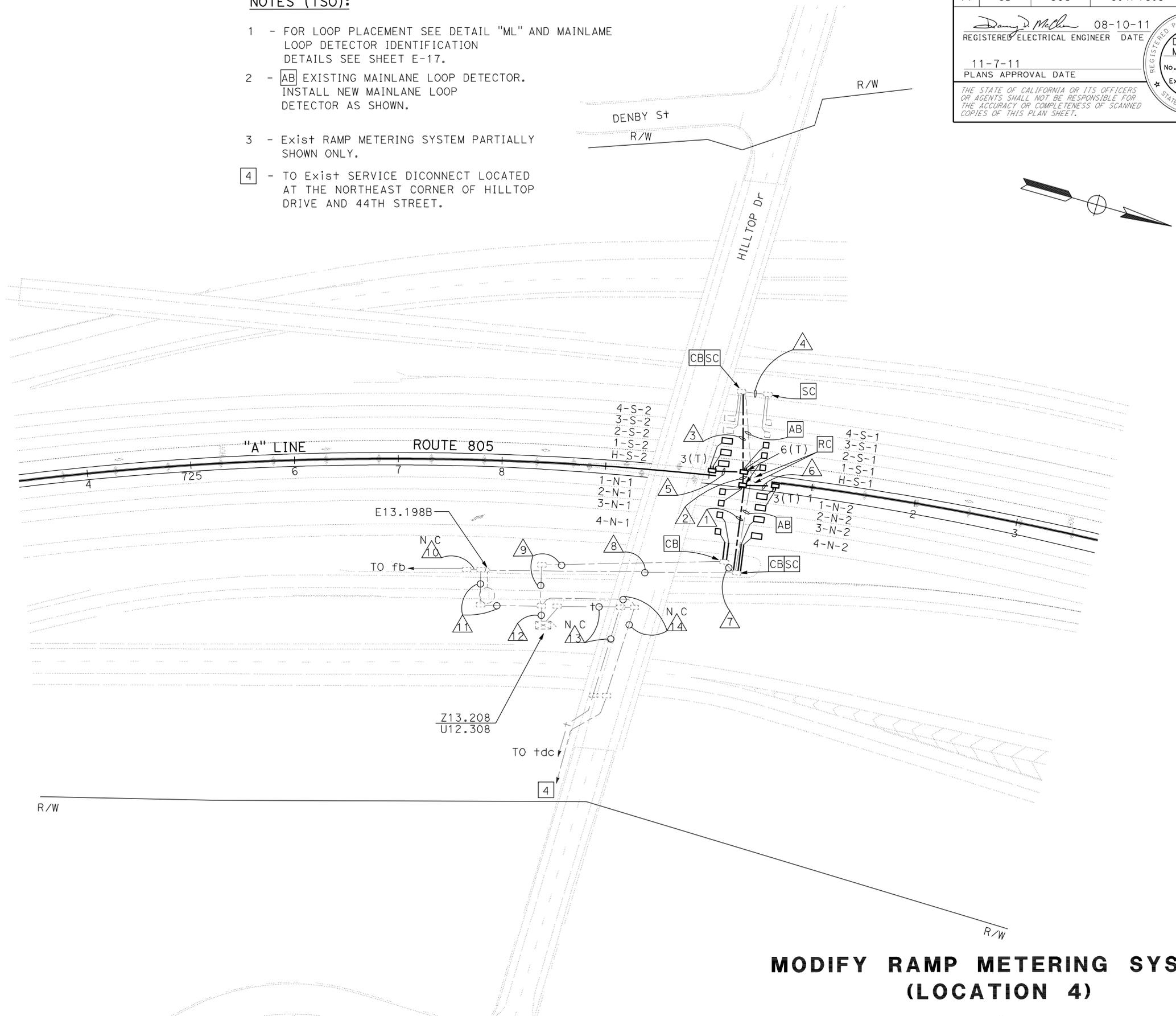
FOR ACCURATE RIGHT OF WAY AND ACCESS DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

NOTES (TSO):

- FOR LOOP PLACEMENT SEE DETAIL "ML" AND MAINLAME LOOP DETECTOR IDENTIFICATION DETAILS SEE SHEET E-17.
- AB** EXISTING MAINLAME LOOP DETECTOR. INSTALL NEW MAINLAME LOOP DETECTOR AS SHOWN.
- Exist RAMP METERING SYSTEM PARTIALLY SHOWN ONLY.
- 4** - TO Exist SERVICE DICONNECT LOCATED AT THE NORTHEAST CORNER OF HILLTOP DRIVE AND 44TH STREET.

CONDUIT NOTES (TSO):

- 1 - 3"C, 10 DLC, 8 LOOP WIRES
- 2 - 3"C, 10 DLC
- 3 - 3"C, 10 DLC, 12 LOOP WIRES
- 4 - Exist 1 1/2"C, 2 DLC, **RC** 2 dlc. ADD 2 DLC
- 5 - 2"C, 6 LOOP WIRES
- 6 - 2"C, 4 LOOP WIRES
- 7 - Exist 2"C, 10 dlc, **RC** 10 dlc. ADD 12 DLC
- 8 - Exist 1 1/2"C, 2 dlc, **RC** 2 dlc. ADD 4 DLC
- 9 - Exist 2"C, 12 dlc, **RC** 12 dlc. ADD 14 DLC
- N/C 10 - Exist 1 1/2"C, 4 dlc, 2#8(fb)
- 11 - Exist 3"C, 1(9csc), 2#8(ltg), 3#14(peu), 9 dlc, **RC** 2 dlc. ADD 4 DLC
- 12 - Exist 3"C, 1(9csc), 2#8(fb), 2#8(rm), 18 dlc, **RC** 4 dlc. ADD 18 DLC
- N/C 13 - Exist 1 1/2"C, 1 sic
- N/C 14 - Exist 1 1/2"C, 2#8(rm), 2#8(ltg), 3#14(peu)



MODIFY RAMP METERING SYSTEM (LOCATION 4)

SCALE: 1" = 50'

E-25

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC ELECTRICAL

FUNCTIONAL SUPERVISOR
DALE WILSON

CHECKED BY

DESIGNED BY

DANNY MCCLURE

ENRIQUE BERNAL

REVISOR BY

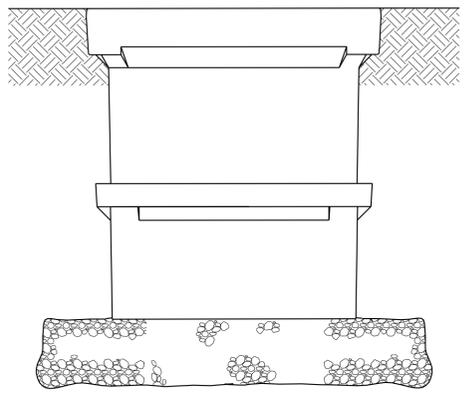
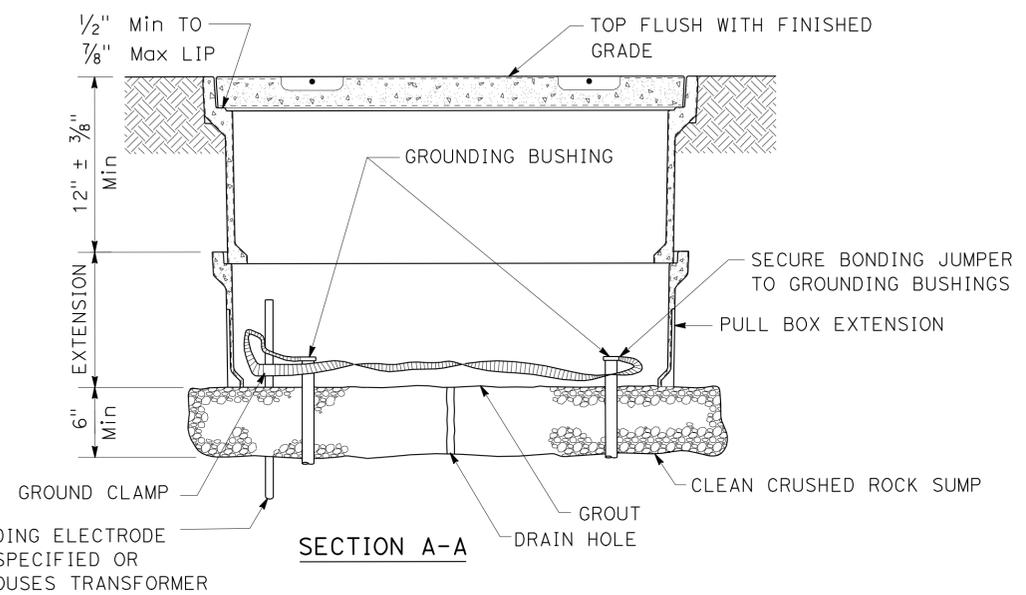
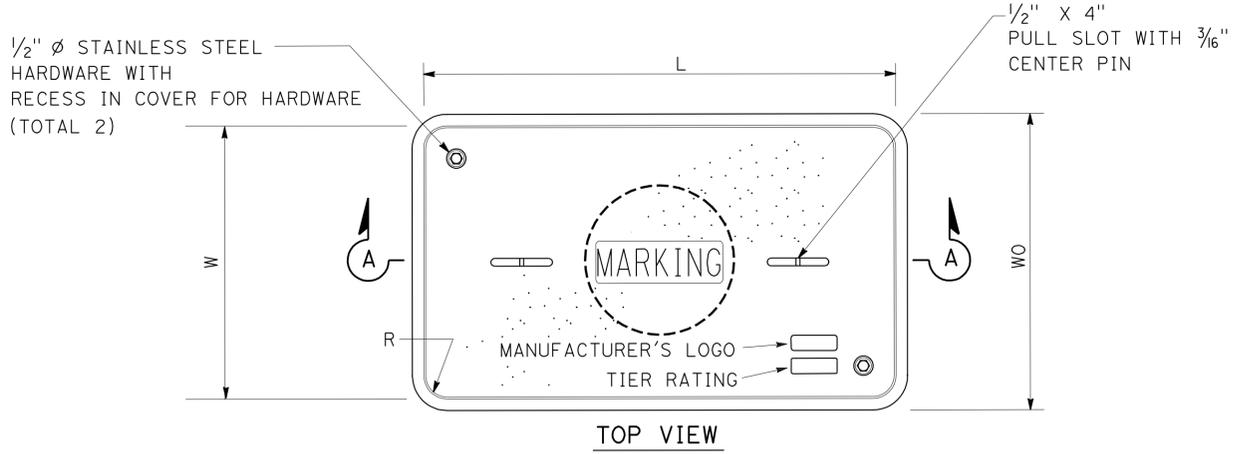
DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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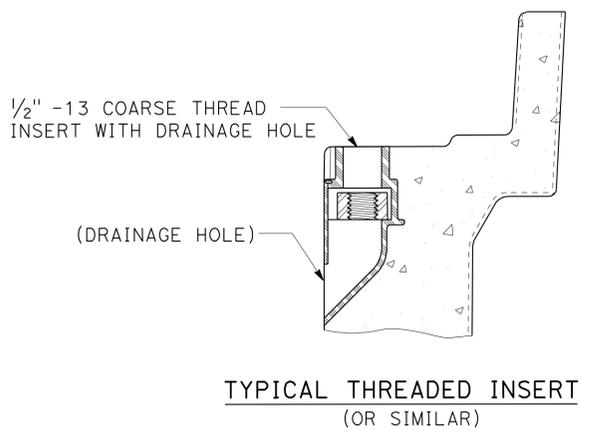
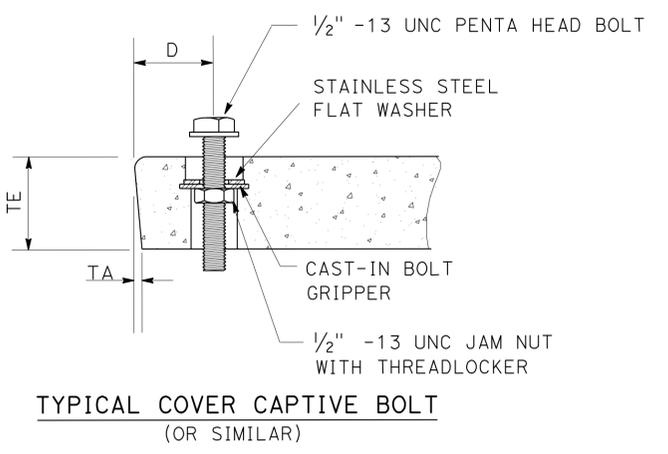
08-10-11
 REGISTERED ELECTRICAL ENGINEER DATE
 11-7-11
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 DANNY D. MCCLURE
 No. 16074
 Exp. 12-31-11
 ELECTRICAL
 STATE OF CALIFORNIA

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INSTALLATION DETAILS



NOTES:

- ALL NON-TRAFFIC RATED PULL BOXES AND COVERS, FOR IN GROUND AND IN SIDEWALK APPLICATIONS, MUST BE INDEPENDENTLY TESTED AND CERTIFIED AS COMPLYING WITH THE PROVISIONS OF ANSI/SCTE 77 2010 "SPECIFICATION FOR UNDERGROUND ENCLOSURE INTEGRITY." PULL BOXES MUST MEET THE TIER 22 APPLICATION. COVERS NOT INSTALLED IN SIDEWALKS MUST MEET THE TIER 22 APPLICATION. COVERS INSTALLED IN SIDEWALKS MUST MEET THE TIER 8 APPLICATION.
- COVERS MUST BE SECURED WITH A CAPTIVE BOLT DESIGN USING 1/2"-13 COARSE THREAD LARGE PENTA-HEAD BOLTS. THE BOLTS AND WASHERS MUST BE STAINLESS STEEL.
- THE CAPTIVE BOLT DESIGN MUST BE INDEPENDENTLY TESTED AND CERTIFIED AS CAPABLE OF WITHSTANDING A TORQUE OF 56 ft. lb AND A MINIMUM PULL OUT STRENGTH OF 750 LBS. THE PULL OUT TEST MUST BE PERFORMED WITH THE COVER IN PLACE AND THE BOLTS TORQUED TO 56 ft. lb. THE BOLTS, INSERTS, AND COVER MUST NOT BE DAMAGED WHEN TESTED UP TO THE MINIMUM PULL OUT STRENGTH.
- MARKINGS, SHOWING THE TIER RATING, MUST BE LABELED OR STENCILED ON THE INSIDE AND OUTSIDE OF THE PULL BOX AND ON THE UNDERSIDE OF THE COVER.
- THE TIER RATING MUST BE EMBOSSED ON THE TOP SURFACE OF THE COVER.
- COVERS AND PULL BOXES MUST BE INTERCHANGEABLE WITH CALIFORNIA STANDARD MALE AND FEMALE GAGES. SEE STANDARD PLAN ES-8, NOTE 7. MINIMUM RADIUS OF TOP OUTSIDE EDGE IS 1/8".
- PULL BOXES MUST NOT BE INSTALLED WITHIN THE BOUNDARIES OF NEW OR EXISTING CURB RAMPS OR DRIVEWAYS.
- AN EXTENSION MAY BE SUBSTITUTED WITH A PULL BOX IF THE BOTTOM EDGE OF THE UPPER PULL BOX FITS EVENLY INTO THE LIP OF THE LOWER PULL BOX.
- SEE STANDARD PLAN ES-8, NOTES 3,4,6 AND 9 FOR OTHER REQUIREMENTS. THESE ADDRESS, BUT ARE NOT LIMITED TO: PLACEMENT, SURROUNDING GRADE, REQUIREMENTS IN UNPAVED AREAS, PULL BOX COVER MARKING, NOMINAL DIMENSIONS OF THE OPENING, AND THE LOCATION OF BOXES FOR ELECTROLIERS AND STANDARDS.

**ELECTRICAL SYSTEMS
(NON-TRAFFIC RATED PULL BOX)**

NO SCALE

E-26

PULL BOX	PULL BOX			COVER						
	MINIMUM DEPTH BOX (In)	MINIMUM DEPTH EXTENSION (In)	MAXIMUM WEIGHT (lb)	L (In)	W (In)	R (In)	TE (In)	TA (In)	D (In)	MAXIMUM WEIGHT (lb)
No. 5	12	10	55	23 3/4	13 3/4	1 3/8	2	1/8	1 3/4	60
No. 6	12	10	70	30 1/2	17 1/2	1 3/8	2	1/8	2	85

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC ELECTRICAL
 FUNCTIONAL SUPERVISOR DALE WILSON
 CALCULATED/DESIGNED BY
 CHECKED BY
 DANNY MCCLURE ENRIQUE BERNAL
 REVISED BY DATE
 REVISIONS: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	805	9.4/13.8	309	346

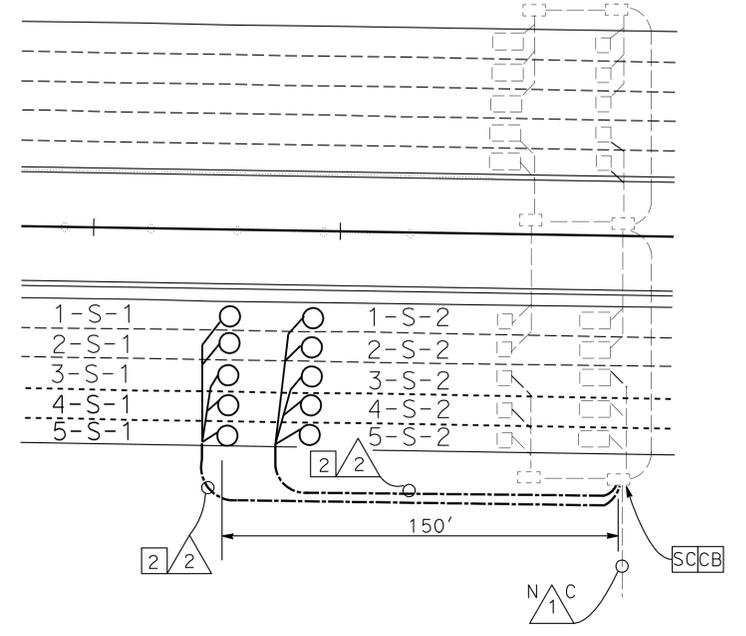
08-10-11
 REGISTERED ELECTRICAL ENGINEER DATE
 DANNY D. MCCLURE
 No. 16074
 Exp. 12-31-11
 ELECTRICAL
 STATE OF CALIFORNIA

11-7-11
 PLANS APPROVAL DATE

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

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC ELECTRICAL
 FUNCTIONAL SUPERVISOR DALE WILSON
 CALCULATED/DESIGNED BY CHECKED BY
 DANNY MCCLURE ENRIQUE BERNAL
 REVISED BY DATE REVISED
 x
 x
 x
 x
 x
 x

INDUCTIVE LOOP DETECTOR													
PM	Sta	FACILITIES	LOCATION OF INDUCTIVE LOOP DETECTORS CENTERED IN LANE										INDUCTIVE LOOP DETECTOR (EA)
			MANELANE NB LOOPS					MANELANE SB LOOPS					
			#1	#2	#3	#4	#5	#1	#2	#3	#4	#5	
9.975	556+40 NB/SB MANELANE	INCIDENT DETECTION U9.975						2	2	2	2	2	10
10.350	578+15 NB/SB MANELANE	RAMP METERING Z10.350	2	2	2	2	2						10
10.736	595+50 NB/SB MANELANE	INCIDENT DETECTION U10.736	2	2	2	2	2						10
11.091	615+10 NB/SB MANELANE	COUNT STATION U11.091						2	2	2	2		8
11.442	636+80 NB/SB MANELANE	RAMP METERING Z11.442	2	2	2	2							8
11.841	657+90 NB/SB MANELANE	INCIDENT DETECTION U11.841	2	2	2	2	2						10
12.346	687+70 NB/SB MANELANE	RAMP METERING Z12.346	2	2	2	2	2						10
12.880	711+60 NB/SB MANELANE	INCIDENT DETECTION U12.880	2	2	2	2	2						10
13.208	728+80 NB/SB MANELANE	RAMP METERING Z13.208	2	2	2	2							8
TOTAL												84	



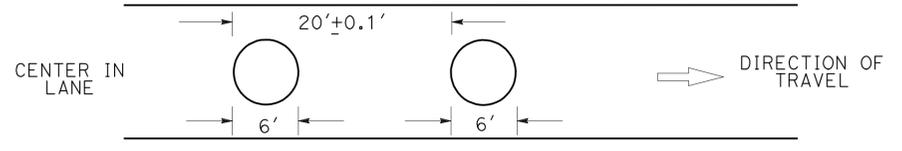
DETAIL "A"
 MANELANE LOOP PLACEMENT
 (TYPICAL)

CONDUIT NOTES (TSO):

- Exist 2" C, 20 dlc. (TYPICAL).
- 2" C, 10 LOOP WIRES.

NOTES (TSO):

- 1 - FOR LOOP PLACEMENT SEE DETAIL "R" AND DETAIL "A" ON THIS SHEET
- INSTALL TEMPORARY CONDUIT ONE FOOT IN DEPTH. NO CONCRETE BACKFILL REQUIRED.



DETAIL "R"
 TYPICAL

**INDUCTIVE LOOP DETECTOR
 (TEMPORARY)**

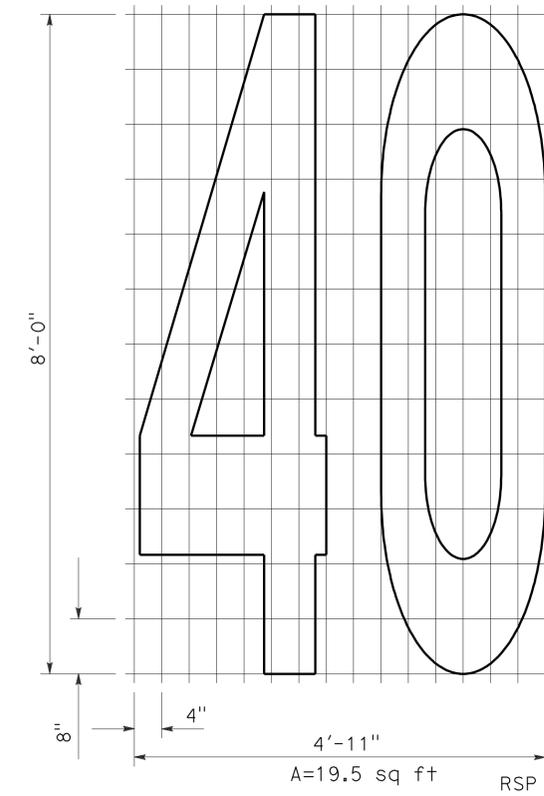
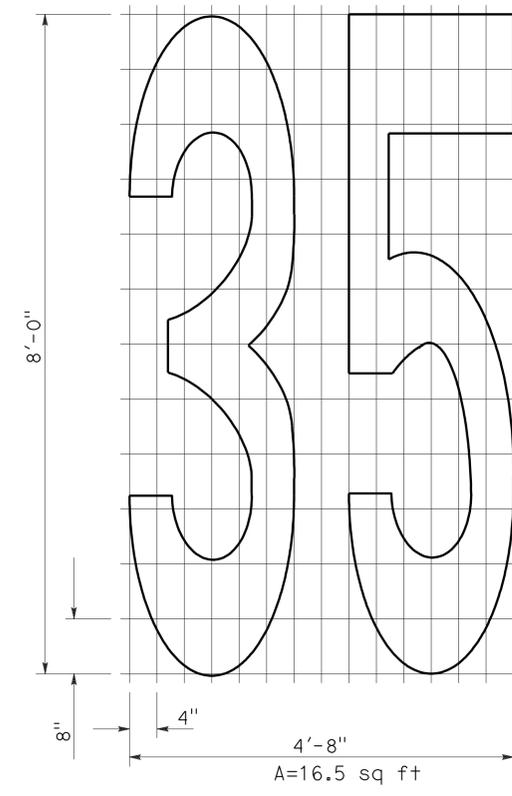
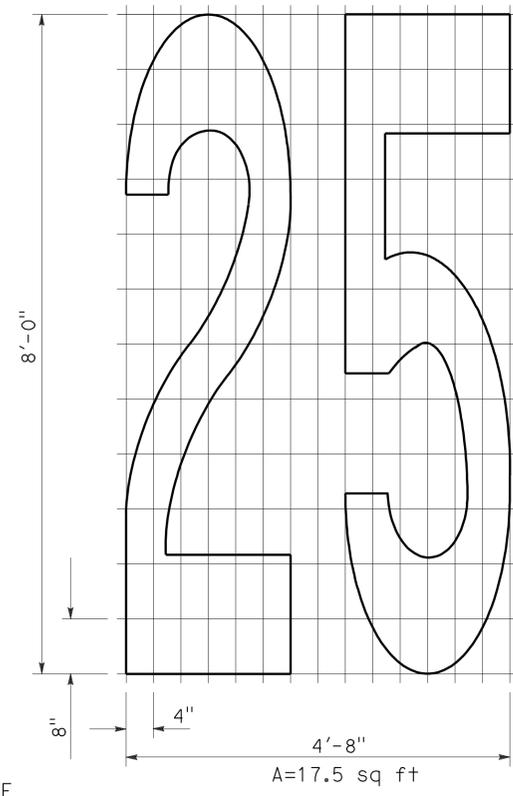
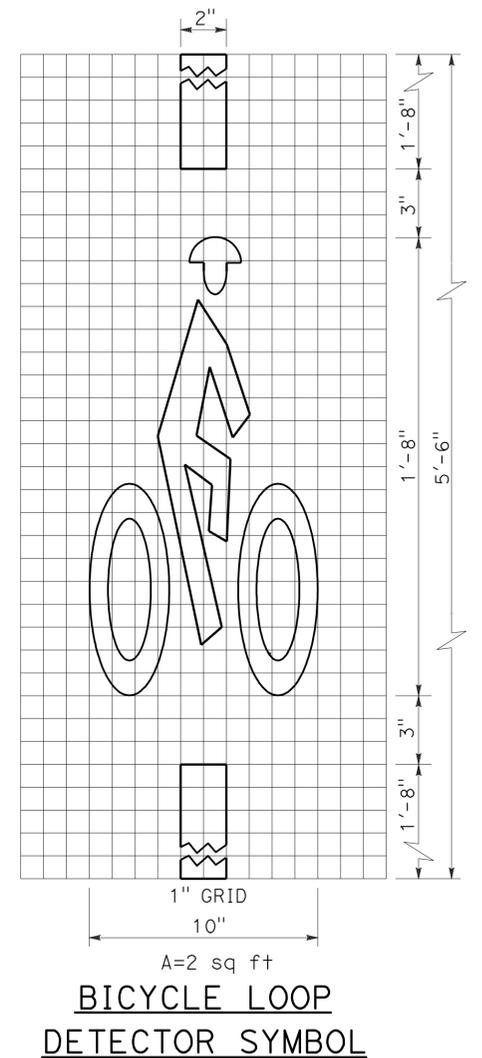
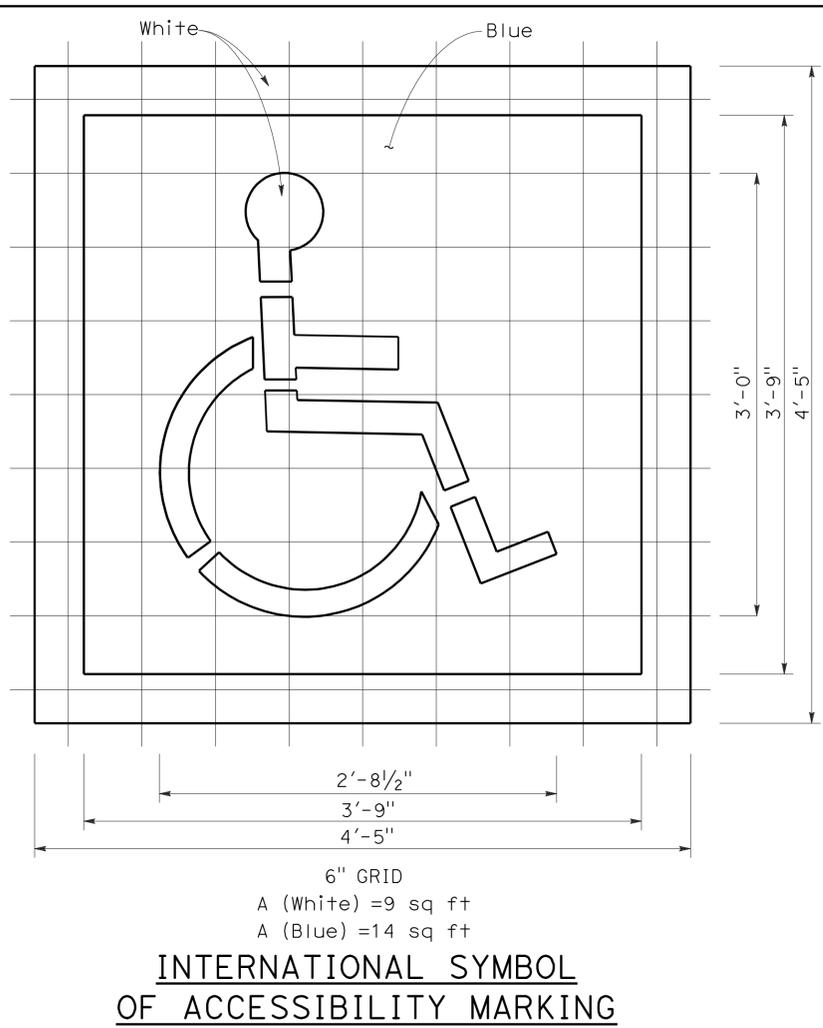
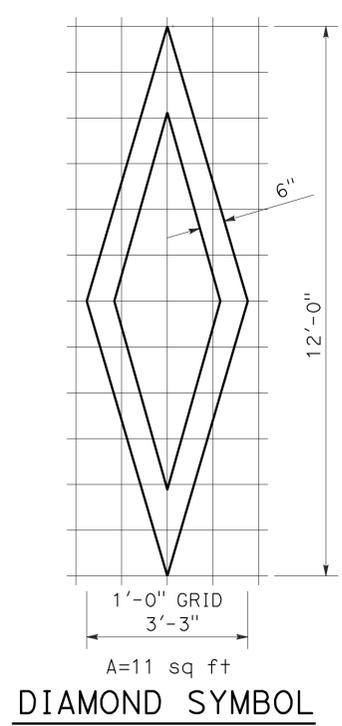
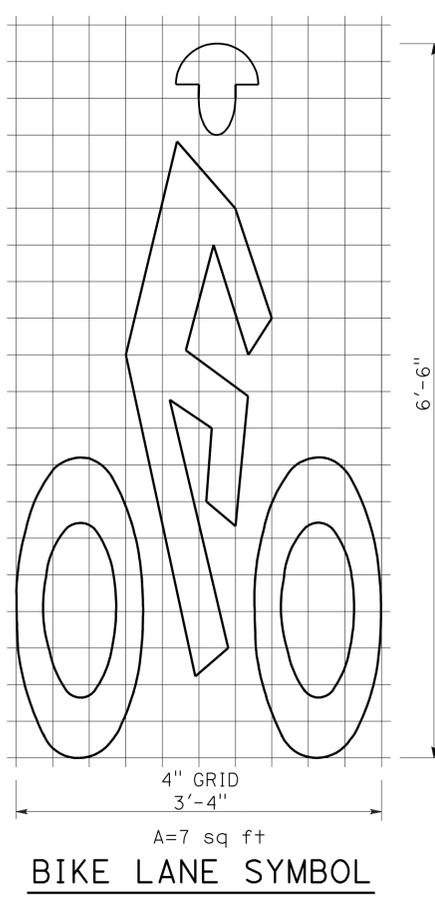
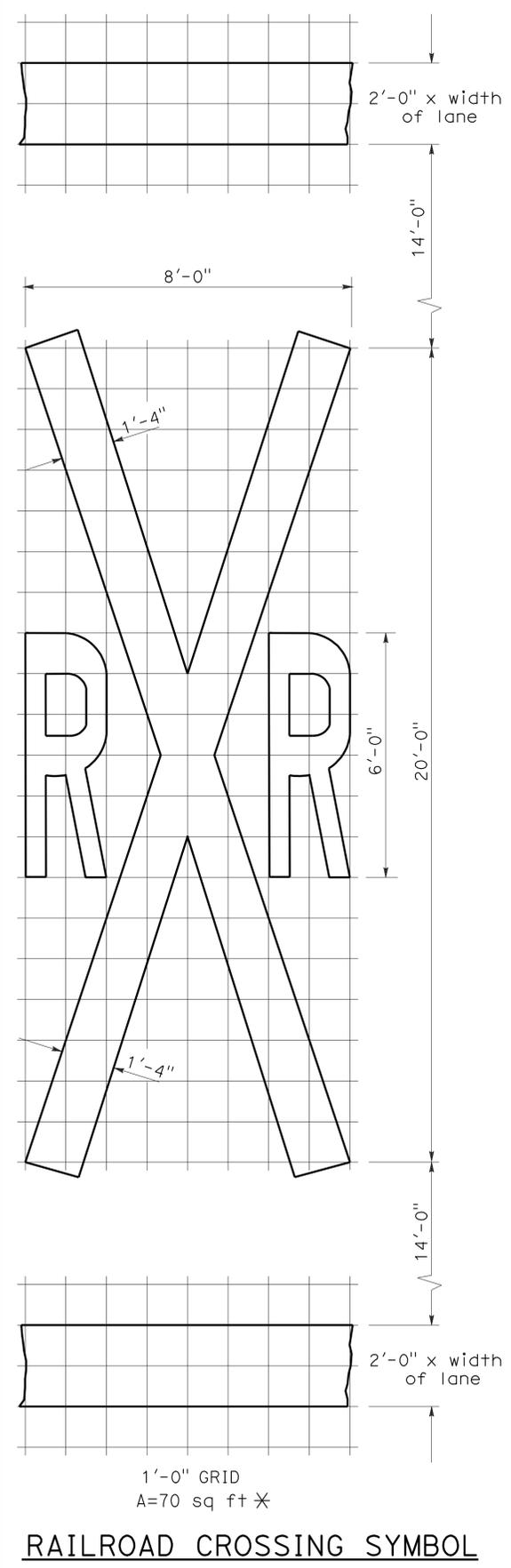
NO SCALE

E-27

APPROVED FOR ELECTRICAL WORK ONLY

LAST REVISION DATE PLOTTED => 08-NOV-2011 08-20-11 TIME PLOTTED => 09:16

To accompany plans dated 11-7-11



NUMERALS

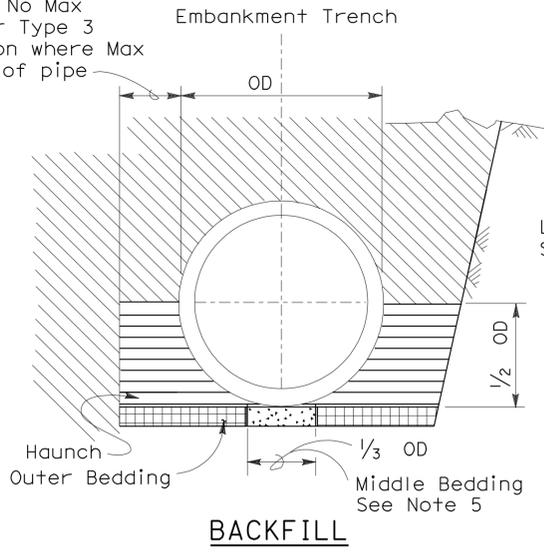
NOTE:
1. Minor variations in dimensions may be accepted by the Engineer.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**PAVEMENT MARKINGS
SYMBOLS AND NUMERALS**
NO SCALE

*70 sq ft DOES NOT INCLUDE THE 2'-0" x VARIABLE WIDTH TRANSVERSE LINES.

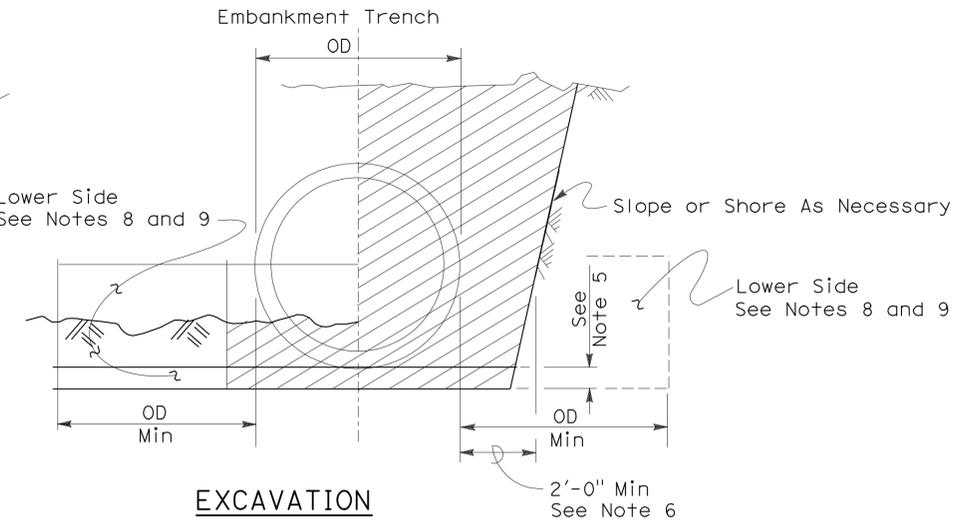
2006 REVISED STANDARD PLAN RSP A62DA

2'-0" Min; No Max except for Type 3 Installation where Max Equals OD of pipe



BACKFILL

- Roadway Embankment
- Structure Backfill (Culvert) See Note 6
- Structure Backfill (Culvert) See Note 6
- Loose Backfill



EXCAVATION

- Excavation Structure (Culvert)

TYPE 1 INSTALLATION:

The haunch and outer bedding shall be compacted to a minimum 90 percent relative compaction. In addition, the minimum sand equivalent in these areas shall be 30 and the maximum percentage passing the 75 μm sieve size shall be 12.

TYPE 2 INSTALLATION:

The haunch and outer bedding shall be compacted to a minimum 90 percent relative compaction. In addition, the minimum sand equivalent in these areas shall be 25.

TYPE 3 INSTALLATION:

The haunch and outer bedding shall be compacted to a minimum 85 percent relative compaction. 90 percent relative compaction will be required where the fill over the pipe is less than 4'-0" or 1/2 OD.

NOTES:

- Unless otherwise shown on the plans or specified in the special provision, the Contractor shall have the option of selecting the class of RCP and the type of installation to be used, provided the height of cover does not exceed the value shown for the RCP selected.
 Example: 24" RCP culvert with maximum cover of 19'-0" the options are:
 - Class III or stronger with Installation Type 1.
 - Class III Special or stronger with Installation Type 2.
 - Class IV Special or stronger with Installation Type 3.
 Cover is defined as the maximum vertical distance from top of the pipe to finished grade within the length of any given culvert.
- The class of RCP and Installation Type selected shall be the same throughout the length of any given culvert.
- The "length of any culvert" is defined as the culvert between:
 - Successive drainage structure (inlets, junction boxes, headwalls, etc.).
 - A drainage structure and the inlet or outlet end of the culvert.
 - The inlet and outlet end of the culvert when there are no intervening drainage structures.
- Oval and arch shaped RCP shall not be used.
- 1/25 OD Min, not less than 3".
- Slurry cement backfill may be substituted for backfill in the outer bedding and haunch areas. If slurry is used the outer and middle beddings shall be omitted. Prior to installation the soil under the middle 1/3 of the outside diameter of the pipe shall be softened by scarifying or other means to a minimum depth of 1/25 OD, but not less than 3". Where slurry cement backfill is used clear distance to trench wall may be reduced as set forth in Section 19-3.062 of the Standard Specifications.
- Backfill shall be placed full width of excavation except where dimensions are shown for backfill width or thickness. Dimensions shown are minimums.
- Lower side shall be suitable material as determined by the Engineer. Otherwise it shall be considered unsuitable as set forth in Section 19-2.02 of the Standard Specifications. See Note 9.
- Where the pipe is placed in a trench, if the trench walls are sloped at 5 vertical to 1 horizontal or steeper for at least 90 percent of the trench height or up to not less than 12" from the grading plane, the firmness of the soil in the lower side need not be considered.
- Non-reinforced precast concrete pipe sizes 3'-0" or smaller may be placed under installation Types 1, 2 or 3.

INSTALLATION TYPE 1

MINIMUM CLASS AND D-LOAD	COVER	
	108" Dia AND SMALLER	OVER 108" Dia
Class II 1000D	14.9'	12.9'
Class III 1350D	15.0' - 20.9'	13.0' - 18.9'
Class III Special 1700D	21.0' - 26.9'	19.0' - 24.9'
Class IV 2000D	27.0' - 31.9'	25.0' - 29.9'
Class IV Special 2500D	32.0' - 40.9'	30.0' - 38.9'
Class V 3000D	41.0' - 49.9'	39.0' - 46.9'
Class V Special 3600D	50.0' - 59.0'	47.0' - 58.0'

INSTALLATION TYPE 2

MINIMUM CLASS AND D-LOAD	COVER
Class II 1000D	9.9'
Class III 1350D	10.0' - 14.9'
Class III Special 1700D	15.0' - 19.9'
Class IV 2000D	20.0' - 24.9'
Class IV Special 2500D	25.0' - 31.9'
Class V 3000D	32.0' - 38.9'
Class V Special 3600D	39.0' - 47.0'

INSTALLATION TYPE 3

MINIMUM CLASS AND D-LOAD	COVER	
	48" Dia AND SMALLER	OVER 48" Dia
Class II 1000D	7.9'	5.9'
Class III 1350D	8.0' - 10.9'	6.0' - 8.9'
Class III Special 1700D	11.0' - 14.9'	9.0' - 12.9'
Class IV 2000D	15.0' - 17.9'	13.0' - 15.9'
Class IV Special 2500D	18.0' - 21.9'	16.0' - 19.9'
Class V 3000D	22.0' - 26.9'	20.0' - 24.9'
Class V Special 3600D	30.0' - 33.0'	25.0' - 31.0'

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**EXCAVATION AND BACKFILL
CONCRETE PIPE CULVERTS**

NO SCALE

RSP A62DA DATED NOVEMBER 17, 2006 SUPERSEDES STANDARD PLAN A62DA DATED MAY 1, 2006 - PAGE 20 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A62DA

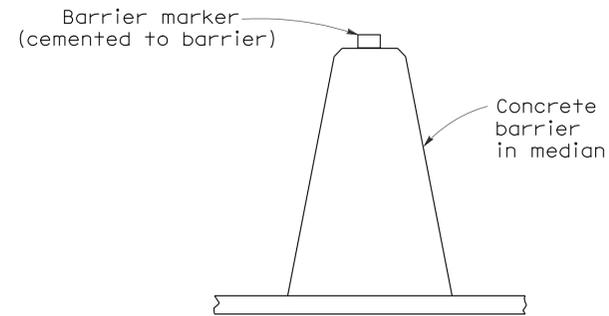
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	805	9.4/13.8	312	346

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

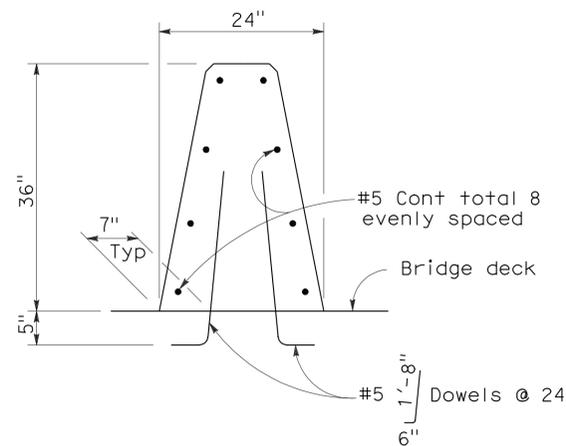
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To accompany plans dated 11-7-11



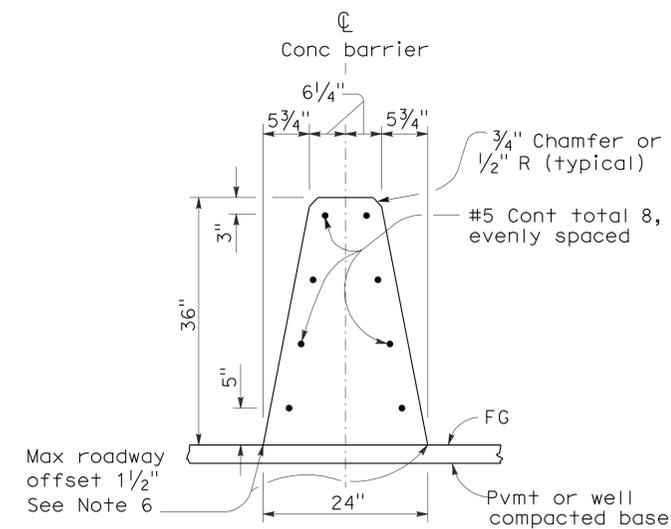
CONCRETE BARRIER TYPE 60 DELINEATION

See Notes 7 and 8



CONCRETE BARRIER TYPE 60A

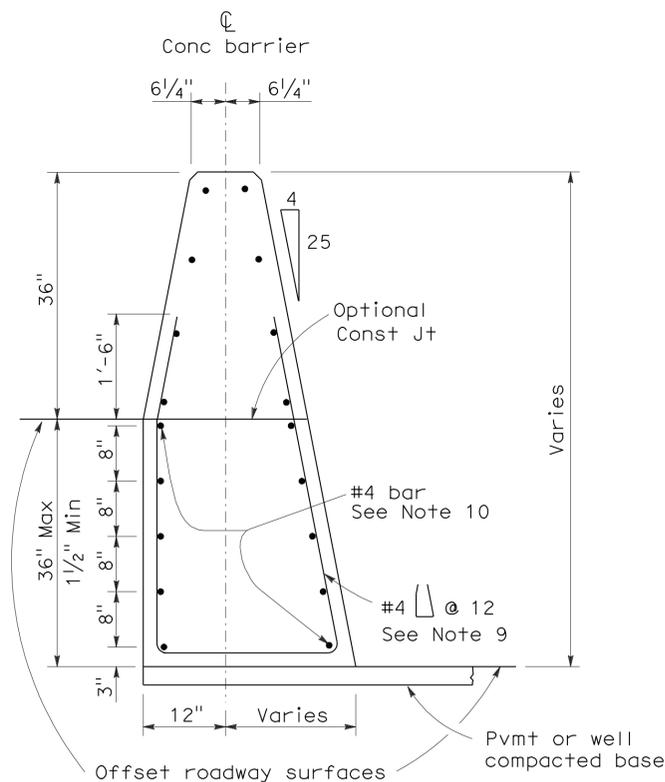
Details similar to Type 60 except as noted.



CONCRETE BARRIER TYPE 60

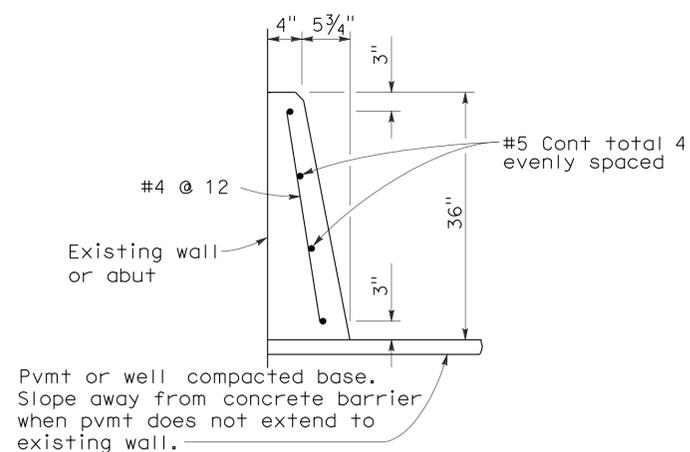
NOTES:

- See Standard Plan A76B for details of Concrete Barrier Type 60 end anchors, connection to structures and transitions to Concrete Barrier Type 50 and Concrete Barrier Type 60S.
- See Standard Plan A76C for Concrete Barrier Type 60 transitions at bridge column and sign pedestals.
- Where glare screen is required on Concrete Barrier Type 60, use Concrete Barrier Type 60G.
- Where the concrete barrier is added to the face of existing concrete structure, match existing weep holes.
- Expansion joints in concrete barrier shall be located at all deck, pavement and principal wall joints. Expansion joint filler material shall be the same size as joint or 1/2" minimum.
- Where roadway offset is greater than 1 1/2", see Concrete Barrier Type 60C.
- Barrier delineation to be used when required by the Special Provisions.
- Spacing of barrier markers to match spacing of raised pavement markers on the adjacent median edgeline pavement delineation.
- Reinforcing stirrup not required for roadway offsets less than 1'-0".
- For roadway surfaces offset greater than 1 1/2" to 3", no rebars required. For roadway surfaces offset greater than 3" to 8" use two #4 rebars at 3" above the lower roadway surface. For roadway surfaces offset greater than 8" to 12", use two #4 rebars at 3" above the lower roadway surface and two #4 rebars at 8" above the lower roadway surface. For roadway surfaces offset greater than 12" to 36", use two #4 rebars at 3" above the lower roadway surface and two #4 rebars at every 8" increment vertical spacing above the first two #4 rebars.



CONCRETE BARRIER TYPE 60C

Details similar to Type 60 except as noted. Concrete barrier end anchor when necessary. 36" roadway surfaces offset shown.



CONCRETE BARRIER TYPE 60D

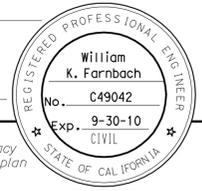
CONCRETE BARRIER TYPE 60

NO SCALE

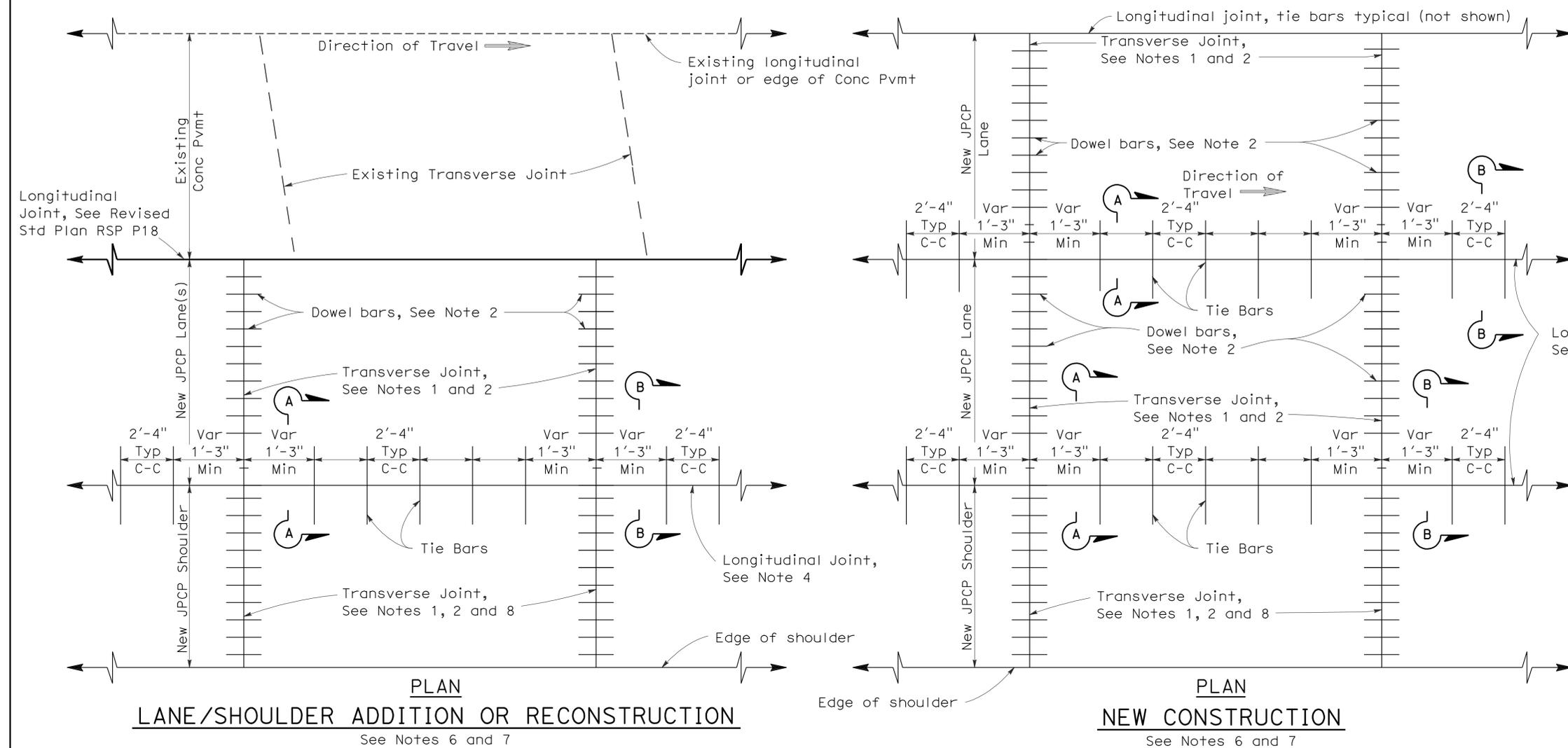
RSP A76A DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A76A DATED MAY 1, 2006 - PAGE 29 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A76A

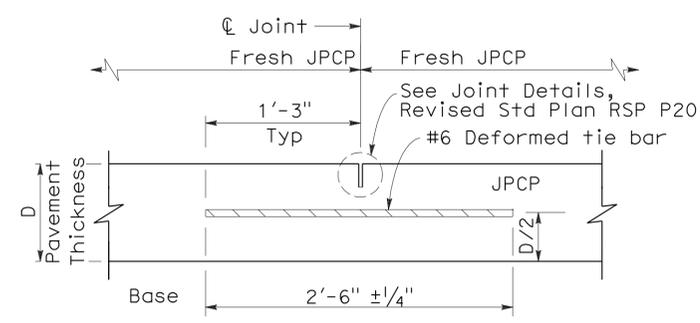
2006 REVISED STANDARD PLAN RSP A76A



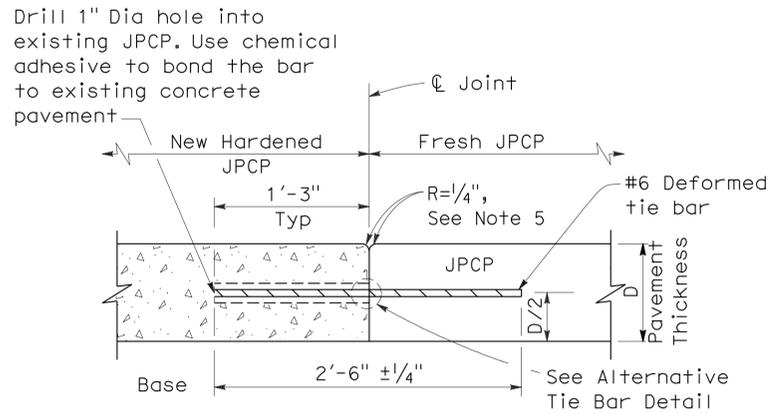
To accompany plans dated 11-7-11



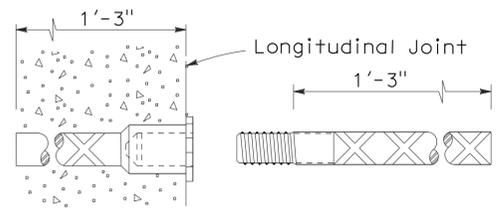
- NOTES:**
1. Transverse joints shall be constructed at right angles to the longitudinal pavement joints in new jointed plain concrete pavement and spaced at successive repeated intervals of 12', 15', 13' and 14'.
 2. For transverse joint and dowel bar details not shown, See Revised Standard Plan RSP P10.
 3. Construct longitudinal contraction 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 construction 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 1/4" radius as shown.
 6. Joint spacing patterns do not apply to intersections.
 7. Details can also apply to inside widening.
 8. Dowel bars may be omitted from shoulders when the shoulder cross slope is not the same as the adjacent traffic lane.



SECTION A-A
LONGITUDINAL CONTRACTION JOINT



SECTION B-B
LONGITUDINAL CONSTRUCTION JOINT



ALTERNATIVE TIE BAR SPLICE DETAIL
(Splice Coupler)

TIE BAR DETAILS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
JOINED PLAIN CONCRETE PAVEMENT

NO SCALE

RSP P1 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P1
DATED MAY 1, 2006 - PAGE 119 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P1

2006 REVISED STANDARD PLAN RSP P1

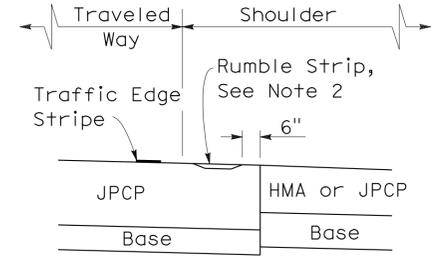
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	805	9.4/13.8	314	346

William K. Farnbach
 REGISTERED CIVIL ENGINEER
 June 5, 2009
 PLANS APPROVAL DATE
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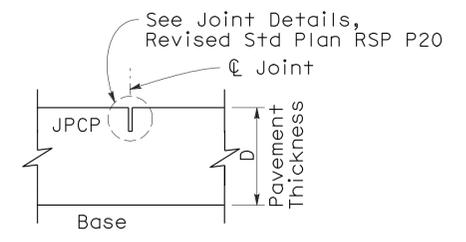
REGISTERED PROFESSIONAL ENGINEER
 William K. Farnbach
 No. C49042
 Exp. 9-30-10
 CIVIL
 STATE OF CALIFORNIA

To accompany plans dated 11-7-11

- NOTES:**
- Transverse joints shall be constructed at right angles to the longitudinal pavement joints in new Jointed Plain Concrete Pavement and spaced at successive repeated intervals of 12', 15', 13' and 14'.
 - For locations of rumble strips, see project plans. For rumble strip details not shown, see Standard Plans A40A and A40B.
 - Joint spacing patterns do not apply to intersections.



DETAIL "A"



**SECTION C-C
TRANSVERSE/LONGITUDINAL JOINT**
(no dowel bars/tie bars)

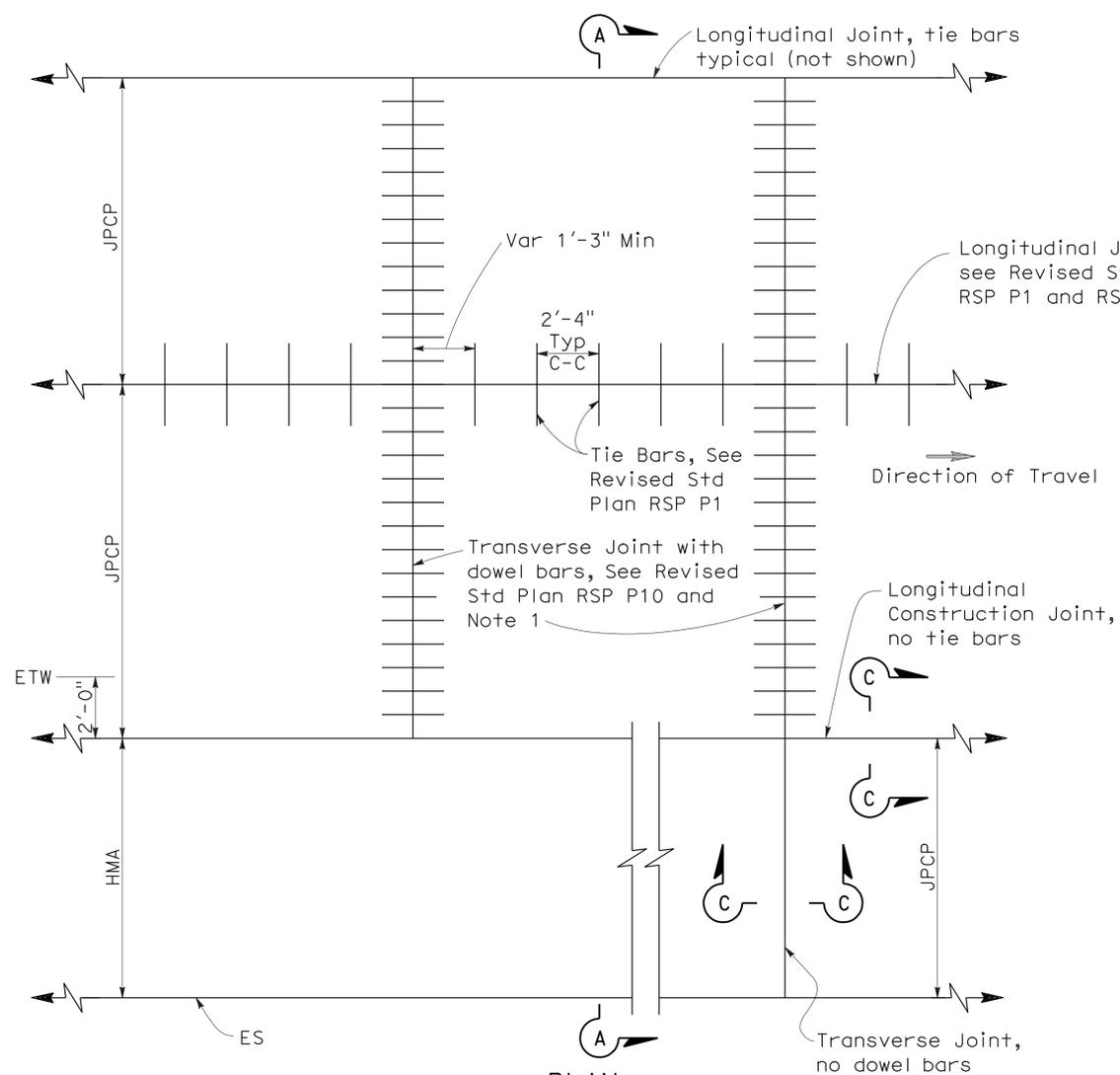
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**JOINTED PLAIN CONCRETE
PAVEMENT-WIDENED SLAB DETAILS**

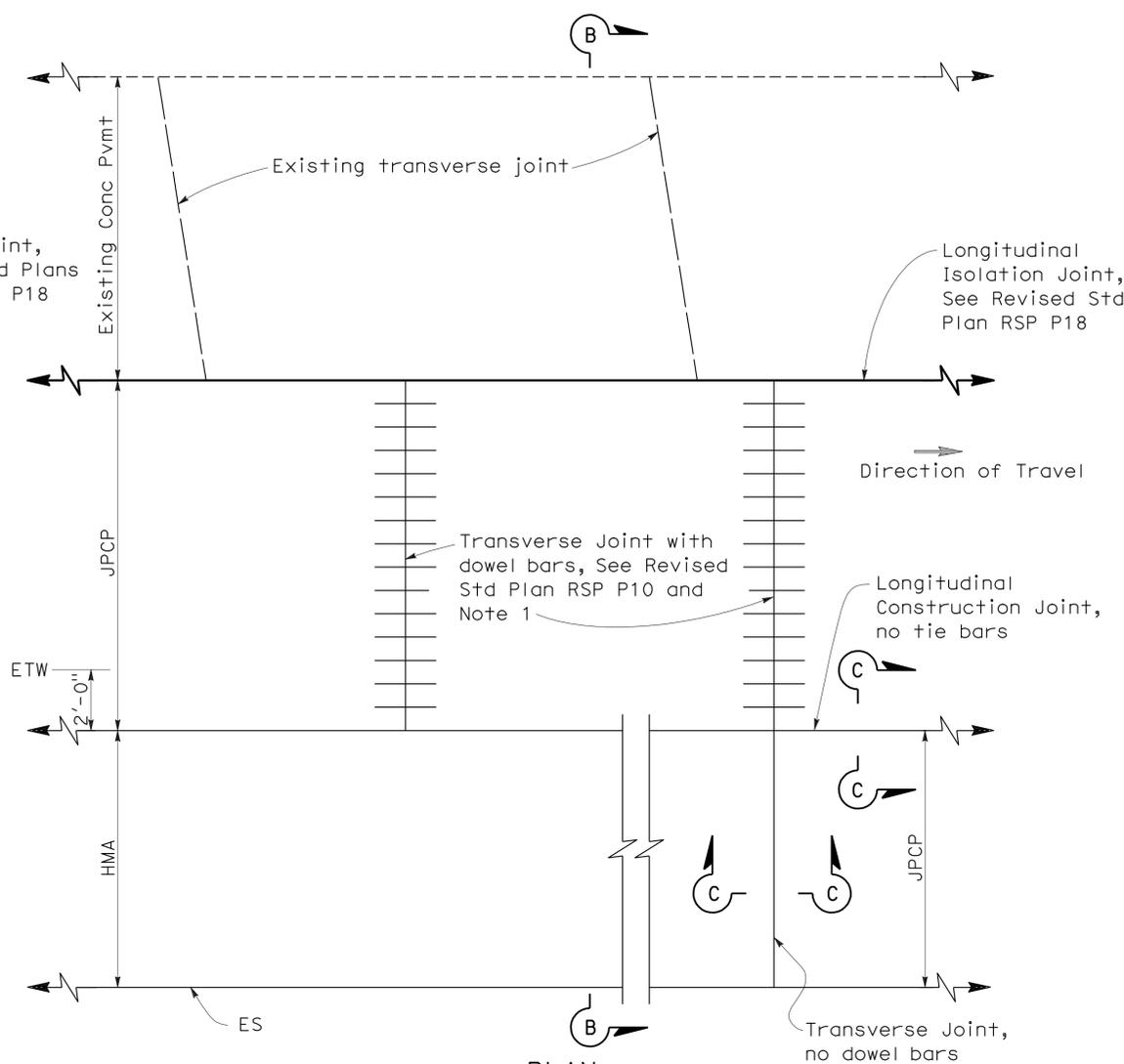
NO SCALE

RSP P2 DATED JUNE 5, 2009 SUPERCEDES STANDARD PLAN P2
DATED MAY 1, 2006 - PAGE 120 OF THE STANDARD PLANS BOOK DATED MAY 2006.

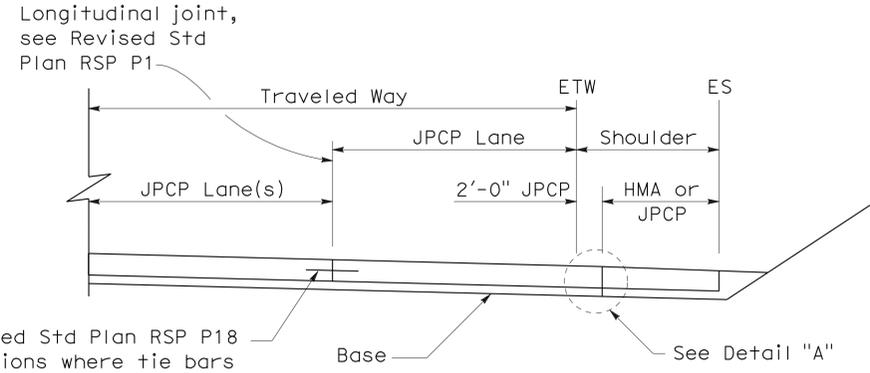
REVISED STANDARD PLAN RSP P2



**PLAN
NEW CONSTRUCTION**



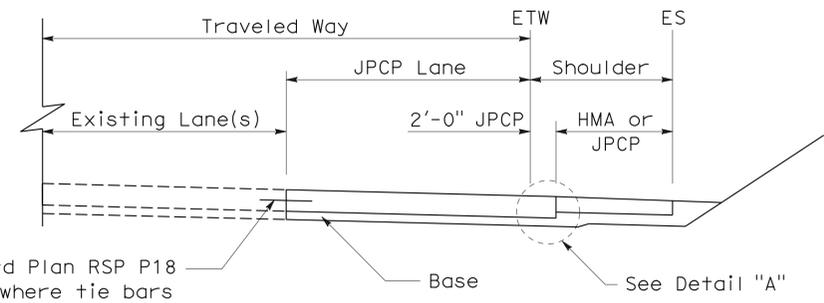
**PLAN
LANE/SHOULDER ADDITION OR RECONSTRUCTION**



SECTION A-A

See Revised Std Plan RSP P18 for locations where tie bars are used at longitudinal joint

See Detail "A"

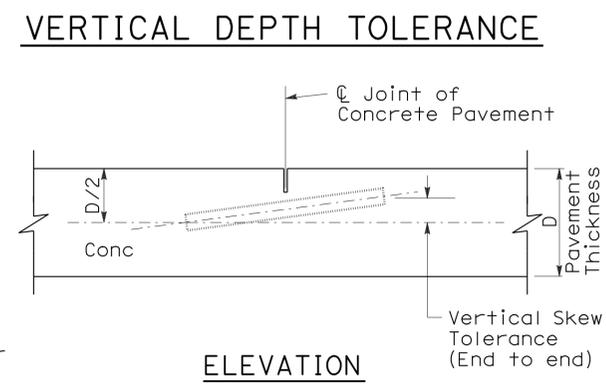
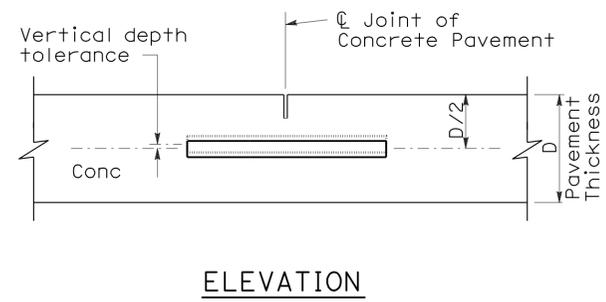
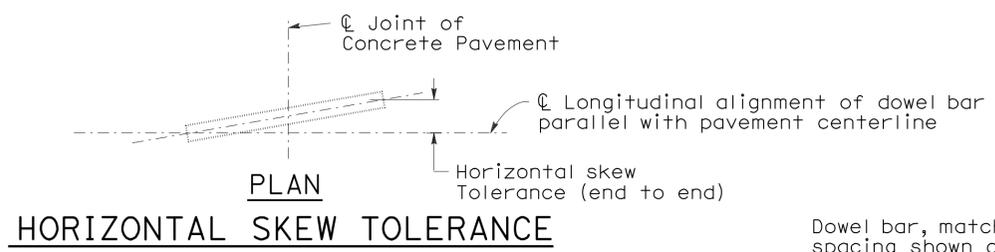
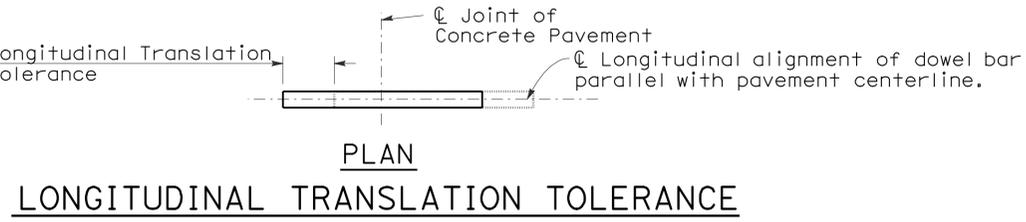
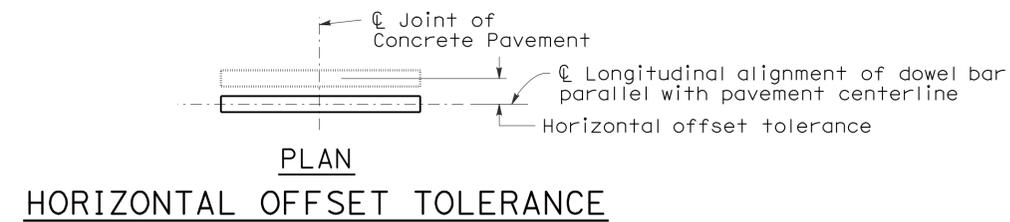
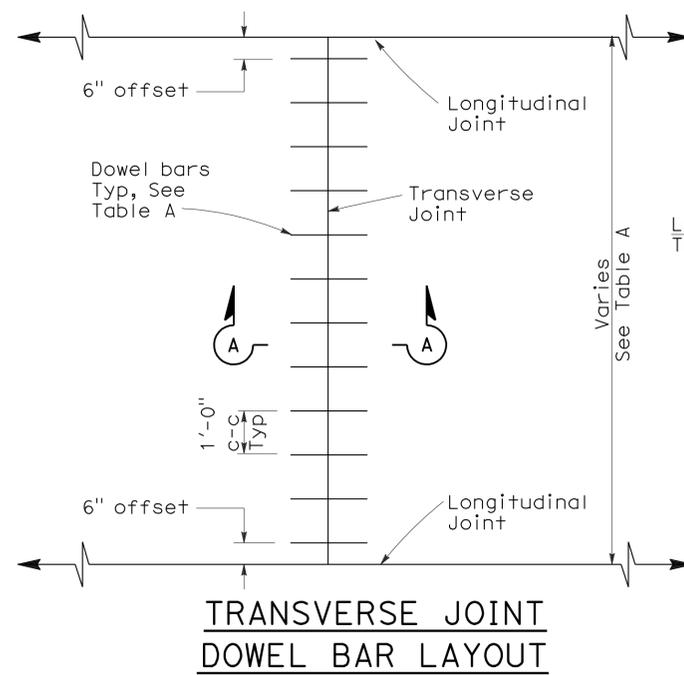


SECTION B-B

See Revised Std Plan RSP P18 for locations where tie bars are used at longitudinal joint

See Detail "A"

2006 REVISED STANDARD PLAN RSP P2



To accompany plans dated 11-7-11

- NOTES:**
- See Revised Standard Plan RSP P1 for typical dowel bar placement and locations.
 - 1 1/2" Dia smooth dowel bars are to be used with a pavement thickness, D, equal to or greater than 0.70 feet. For pavement thickness, D, less than 0.70 feet, use 1 1/4" Dia smooth dowel bars.
 - For widths not shown, see Project Plans.
 - 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 1/4" radius, as shown.

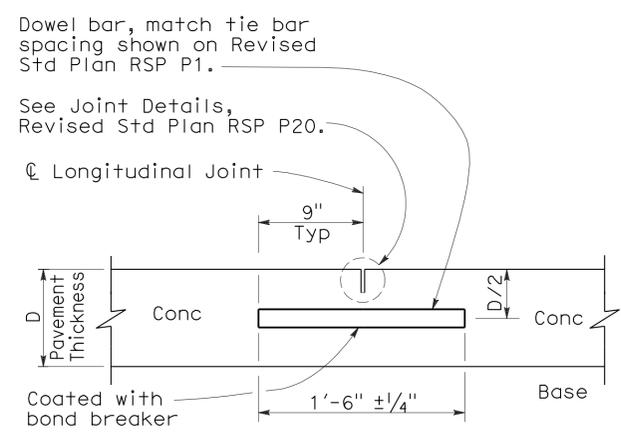
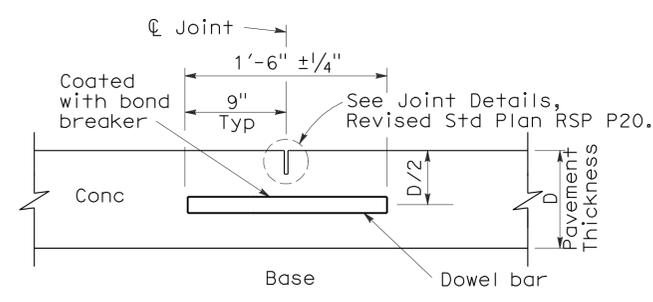
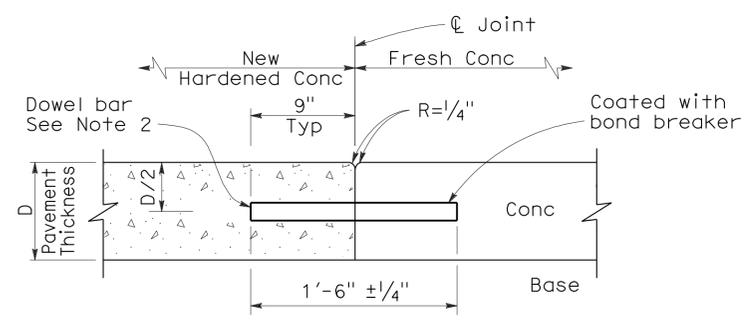


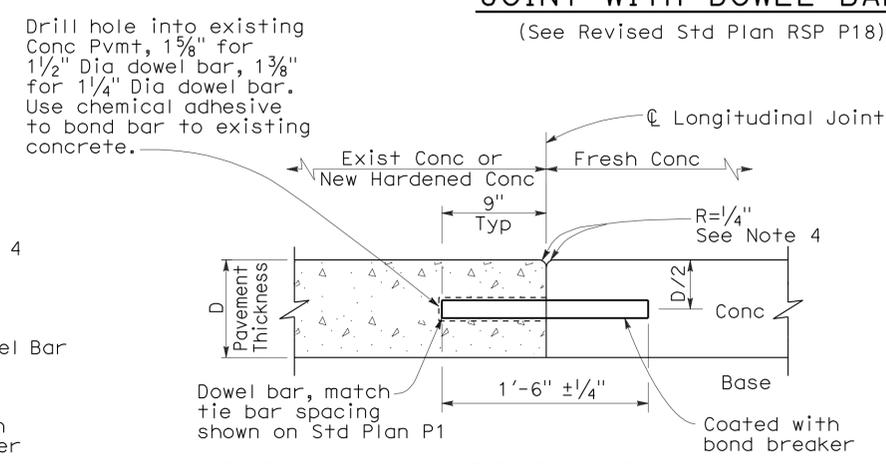
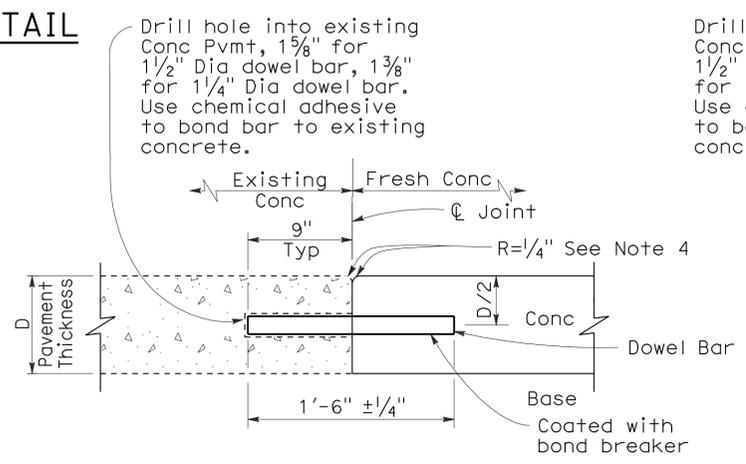
TABLE A (See Note 3)
Dowel Bar Transverse Spacing Table

Width between Longitudinal Joints	Number of Dowels between Longitudinal Joints
14'-0"	14
13'-0"	13
12'-0"	12
11'-0"	11
10'-0"	10
8'-0"	8
5'-0"	5
4'-0"	4

**SECTION A-A
TRANSVERSE
CONSTRUCTION JOINT DETAIL**

TRANSVERSE CONTRACTION JOINT

**LONGITUDINAL CONTRACTION
JOINT WITH DOWEL BARS**
(See Revised Std Plan RSP P18)



**TRANSVERSE CONSTRUCTION JOINT
FOR EXISTING CONCRETE PAVEMENT**
(Drill and bond locations)

**LONGITUDINAL CONSTRUCTION JOINT
WITH DOWEL BARS**
(See Revised Std Plan RSP P18)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**CONCRETE PAVEMENT-
DOWEL BAR
DETAILS**
NO SCALE

RSP P10 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P10
DATED MAY 1, 2006 - PAGE 124 OF THE STANDARD PLANS BOOK DATED MAY 2006.

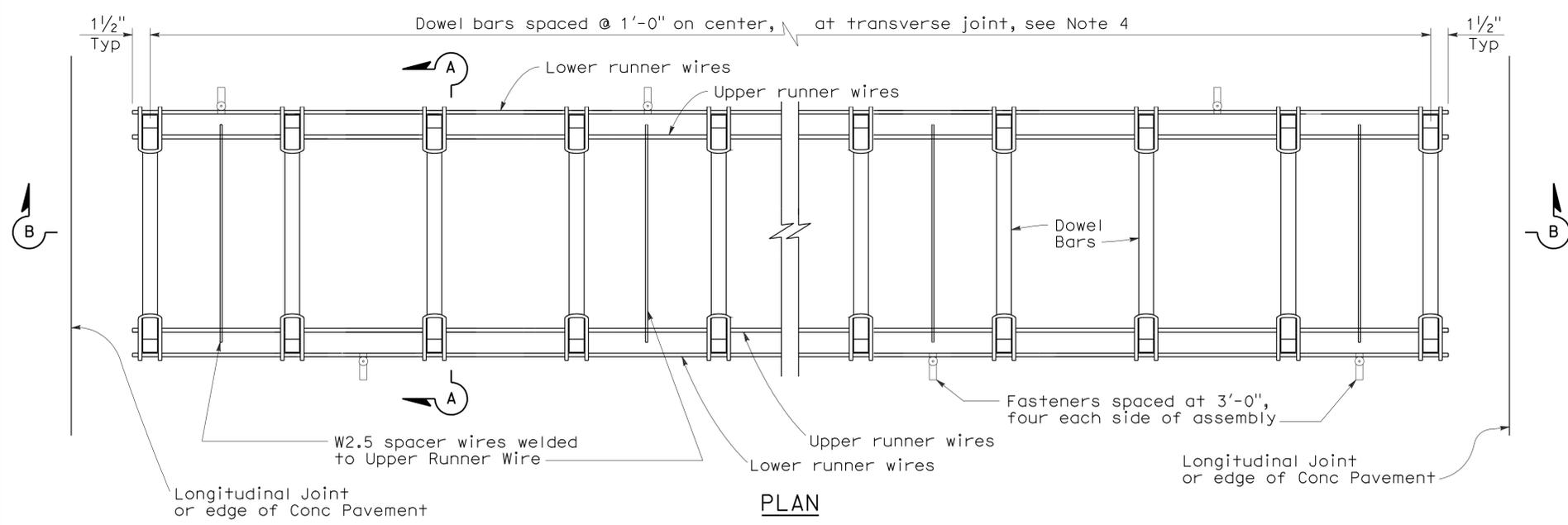
2006 REVISED STANDARD PLAN RSP P10

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	805	9.4/13.8	316	346

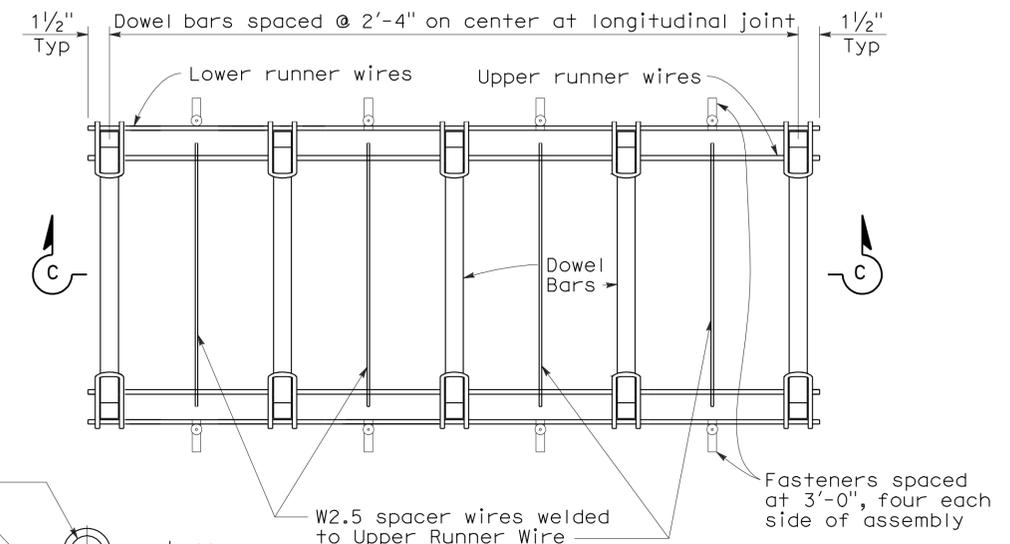
William K. Farnbach
 REGISTERED CIVIL ENGINEER
 May 15, 2009
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
 William K. Farnbach
 No. C49042
 Exp. 9-30-10
 CIVIL
 STATE OF CALIFORNIA

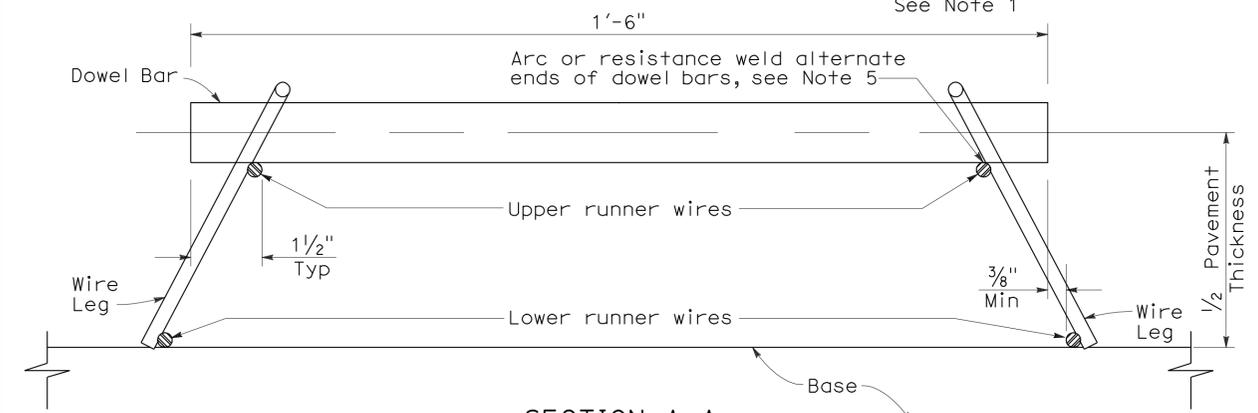
To accompany plans dated 11-7-11



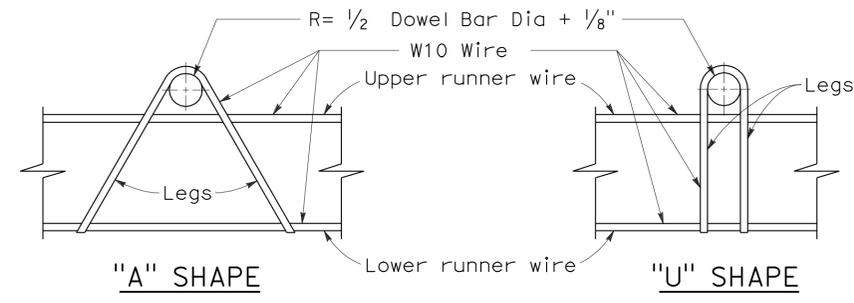
**PLAN
DOWEL BAR BASKET
(TRANSVERSE JOINT)**



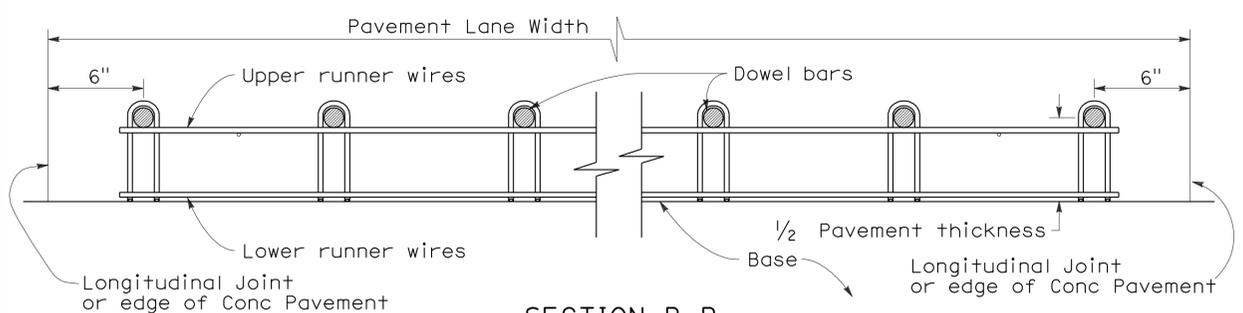
**PLAN
DOWEL BAR BASKET
(LONGITUDINAL JOINT)**



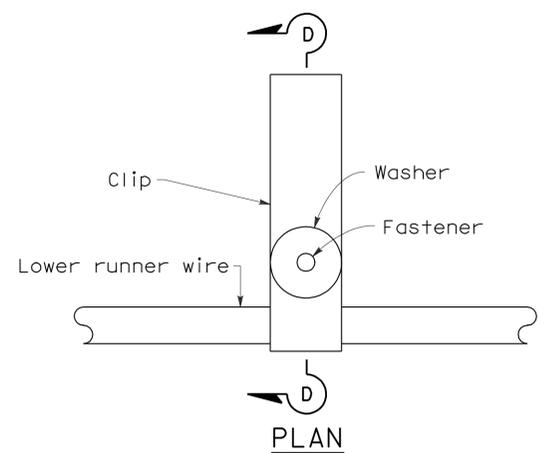
SECTION A-A



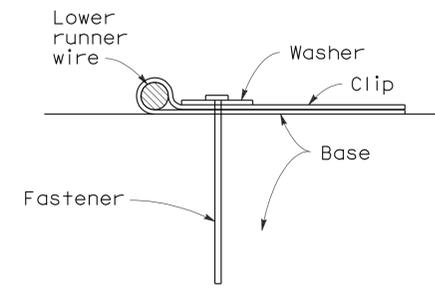
ASSEMBLY FRAME DETAILS



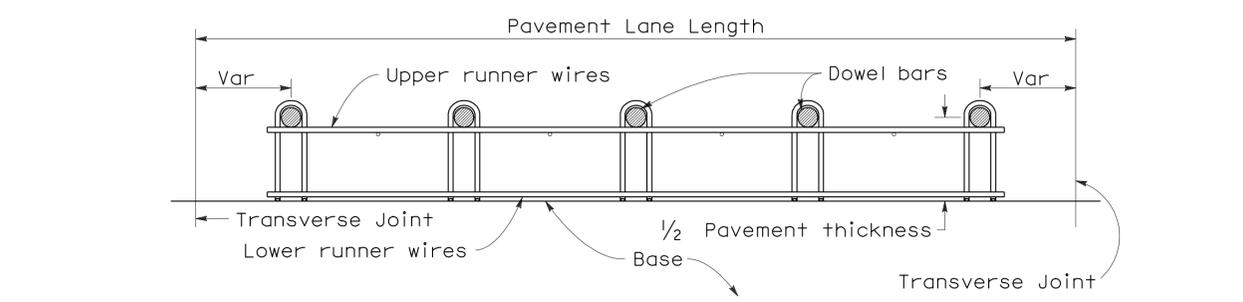
SECTION B-B



FASTENER DETAIL



SECTION D-D



SECTION C-C
See Notes 1 and 4

NOTES:

- "U" frame shape assembly shown. "U" frame shape or "A" frame shape are acceptable.
- Wire sizes shown are minimum required.
- All wire intersections are to be resistance welded.
- Use tie bar spacing for longitudinal dowel bar locations. See Revised Std Plans RSPs P1, P2, and P3 for tie bar requirements.
- Weld may be at top or bottom of dowel bar.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**CONCRETE PAVEMENT-
DOWEL BAR BASKET
DETAILS**

NO SCALE

RSP P12 DATED MAY 15, 2009 SUPERSEDES RSP P12 DATED NOVEMBER 17, 2006 AND STANDARD PLAN P12 DATED MAY 1, 2006 - PAGE 125 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P12

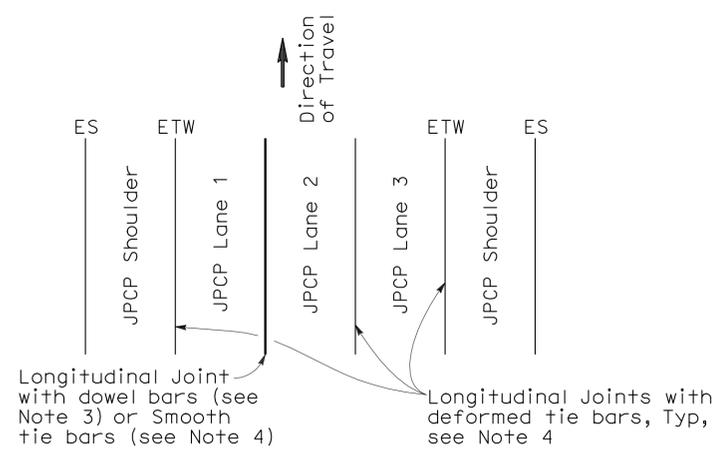
2006 REVISED STANDARD PLAN RSP P12

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	805	9.4/13.8	317	346

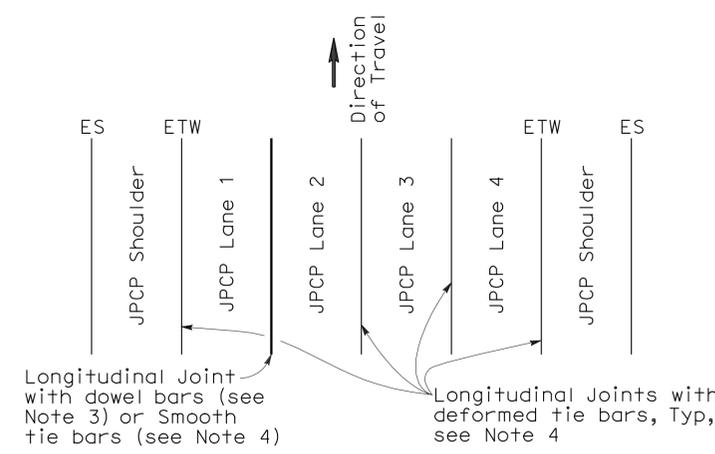
William K. Farnbach
 REGISTERED CIVIL ENGINEER
 June 5, 2009
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
 William K. Farnbach
 No. C49042
 Exp. 9-30-10
 CIVIL
 STATE OF CALIFORNIA

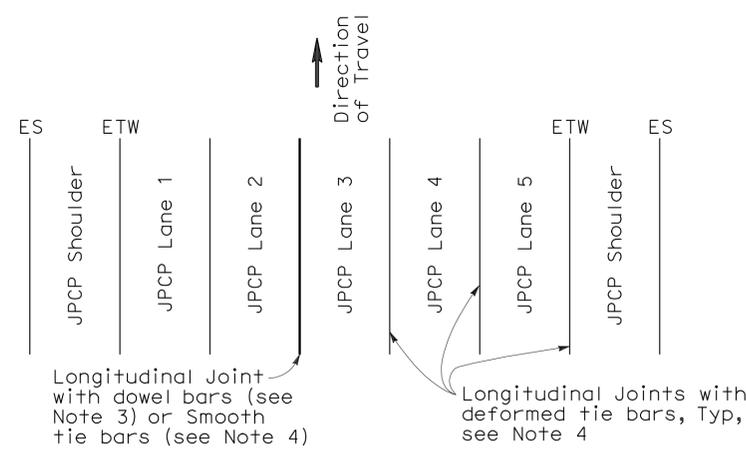
To accompany plans dated 11-7-11



3 LANES WITH TIED CONCRETE SHOULDERS
PLAN



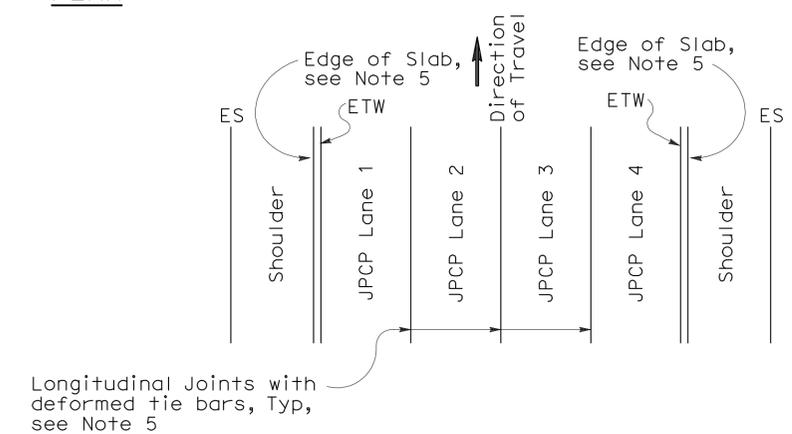
4 LANES WITH TIED CONCRETE SHOULDERS
PLAN



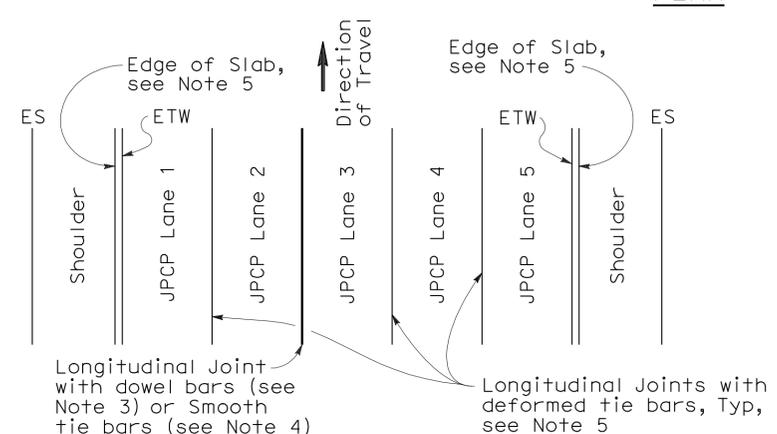
5 LANES WITH TIED CONCRETE SHOULDERS
PLAN

NOTES:

- Where Lean Concrete Base is not used as base material, the joint filler material used for the longitudinal isolation joint shall only extend to the bottom of the new concrete slab. See Detail A.
- Use 5/8" ± 1/16" dimension for silicone sealant.
- See Revised Standard Plan RSP P10 for longitudinal joint with dowel bars.
- See Revised Standard Plan RSP P1.
- See Revised Standard Plan RSP P2.

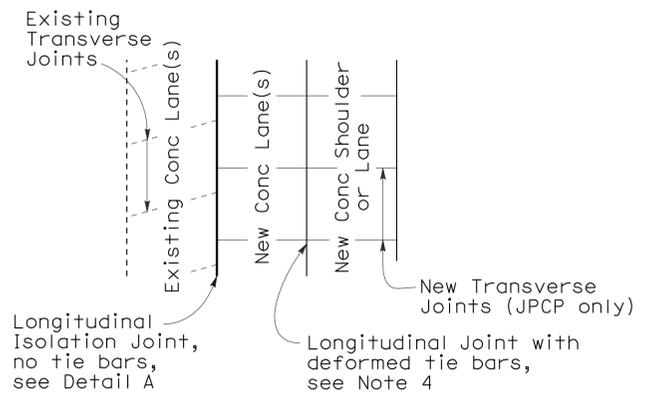


4 LANES OR LESS WITH WIDENED SLAB
PLAN



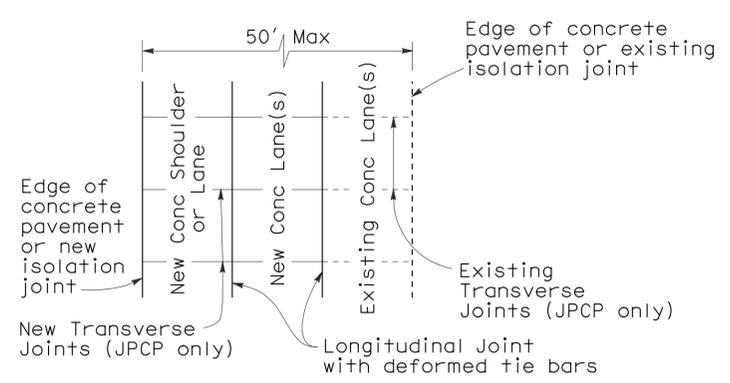
5 LANES WITH WIDENED SLAB
PLAN

NEW CONSTRUCTION
Location of Longitudinal Joints (For JPCP)



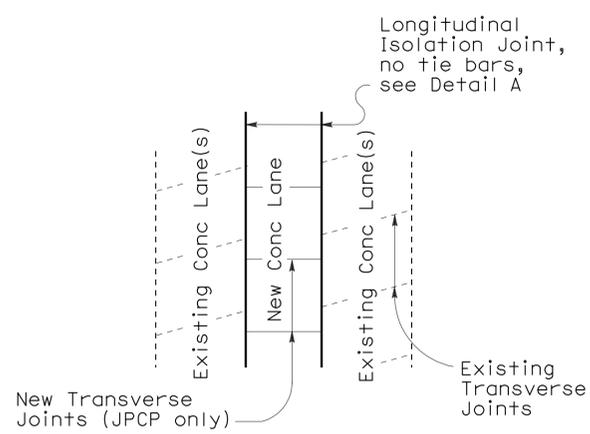
CASE 1
PLAN

Transverse Joints do not align between new and existing



CASE 2
PLAN

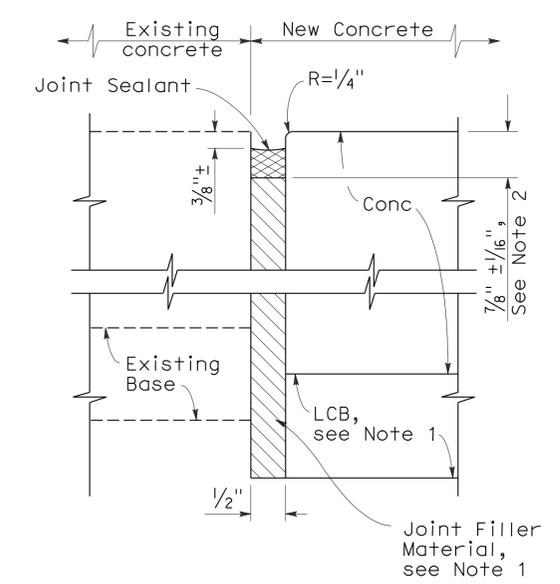
Transverse Joints align between new and existing



CASE 3 (INTERIOR LANE REPLACEMENT)
PLAN

Transverse Joints do not align between new and existing

LANE/SHOULDER ADDITION OR RECONSTRUCTION
(For JPCP and CRCP)



DETAIL A
ISOLATION JOINT

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**CONCRETE PAVEMENT-
LANE SCHEMATICS
AND ISOLATION JOINT DETAIL**
NO SCALE

RSP P18 DATED JUNE 5, 2009 SUPERSEDES RSP P18 DATED MAY 15, 2009, RSP P18 DATED NOVEMBER 17, 2006 AND STANDARD PLAN P18 DATED MAY 1, 2006 - PAGE 127 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP P18

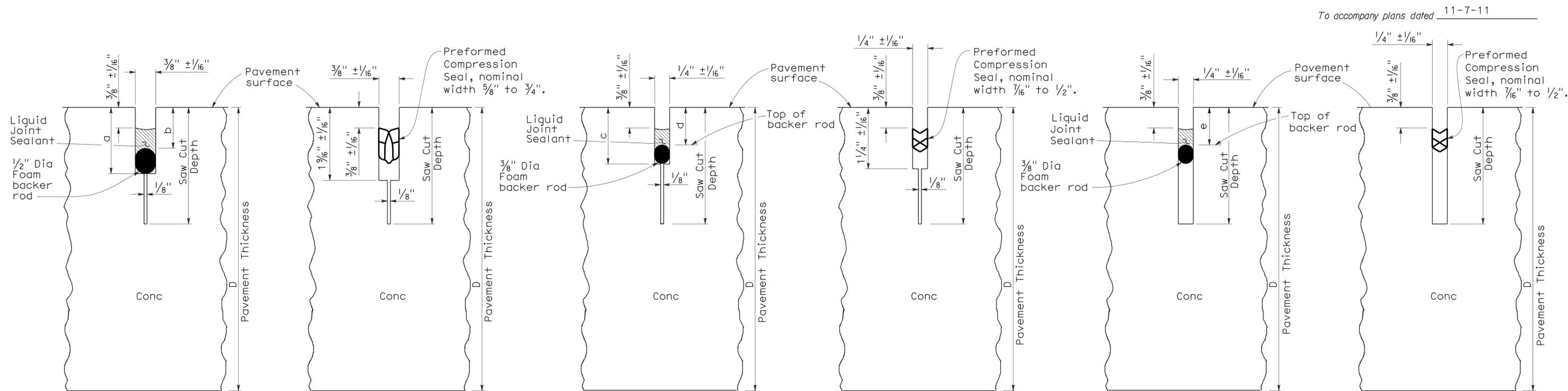
NOTE:

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	805	9.4/13.8	318	346

William K. Farnbach
 REGISTERED CIVIL ENGINEER
 May 15, 2009
 PLANS APPROVAL DATE

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LIQUID SEALANT COMPRESSION SEAL LIQUID SEALANT COMPRESSION SEAL LIQUID SEALANT COMPRESSION SEAL

TYPE A1 **TYPE A2** **TYPE B**

Transverse Contraction Joints Longitudinal Contraction Joints Longitudinal or Transverse Contraction Joint

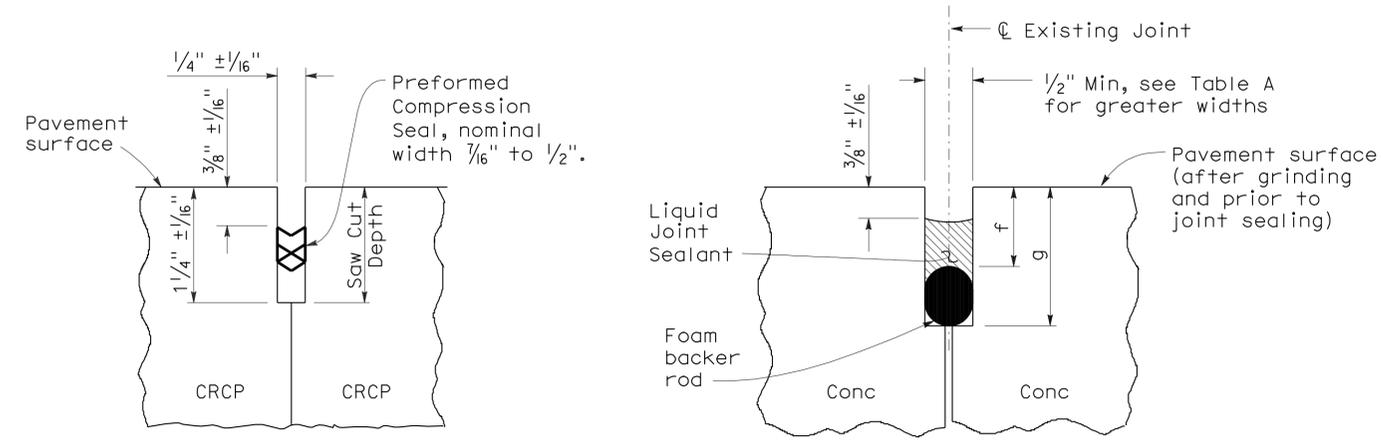
To accompany plans dated 11-7-11

LIQUID SEALANT RESERVOIR DEPTH

LIQUID SEALANT MATERIAL	3/8" Joint Width Type A1		1/4" Joint Width Type A2		1/4" Joint Width Type B
	DIMENSION		DIMENSION		DIMENSION
	a	b	c	d	e
SILICONE	1" ± 1/16"	5/8" ± 1/16"	15/16" ± 1/16"	9/16" ± 1/16"	9/16" ± 1/16"
ASPHALT RUBBER	1 3/16" ± 1/16"	3/4" ± 1/16"	1 1/16" ± 1/16"	11/16" ± 1/16"	11/16" ± 1/16"

TABLE A (TYPE R JOINT)

Sawn Joint Width	Backer Rod Diameter ± 1/16"	DIMENSION "f"	DIMENSION "g"
1"	1 5/16"	7/8"	2 1/4"
7/8"	1 3/16"	13/16"	2"
3/4"	1"	3/4"	1 3/4"
5/8"	7/8"	11/16"	1 1/2"
1/2"	11/16"	5/8"	1 1/4"



COMPRESSION SEAL LIQUID SEALANT

TYPE C **TYPE R**

Transverse and Longitudinal Construction Joints (For CRCP) Retrofit Transverse and Longitudinal Joints

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
CONCRETE PAVEMENT-JOINT DETAILS
NO SCALE

RSP P20 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P20
DATED MAY 1, 2006 - PAGE 128 OF THE STANDARD PLANS BOOK DATED MAY 2006.

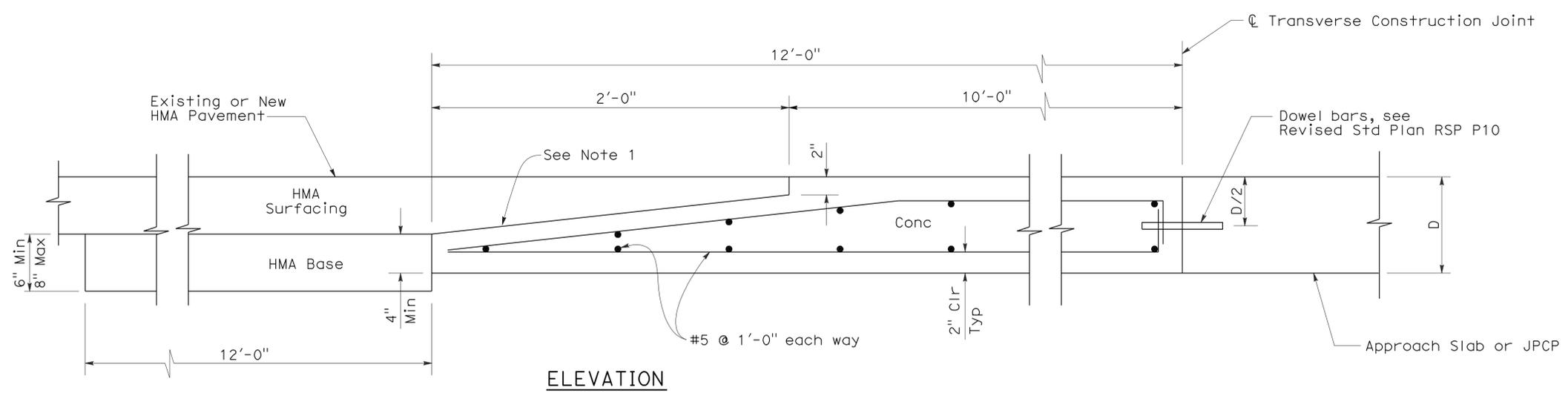
REVISED STANDARD PLAN RSP P20

2006 REVISED STANDARD PLAN RSP P20

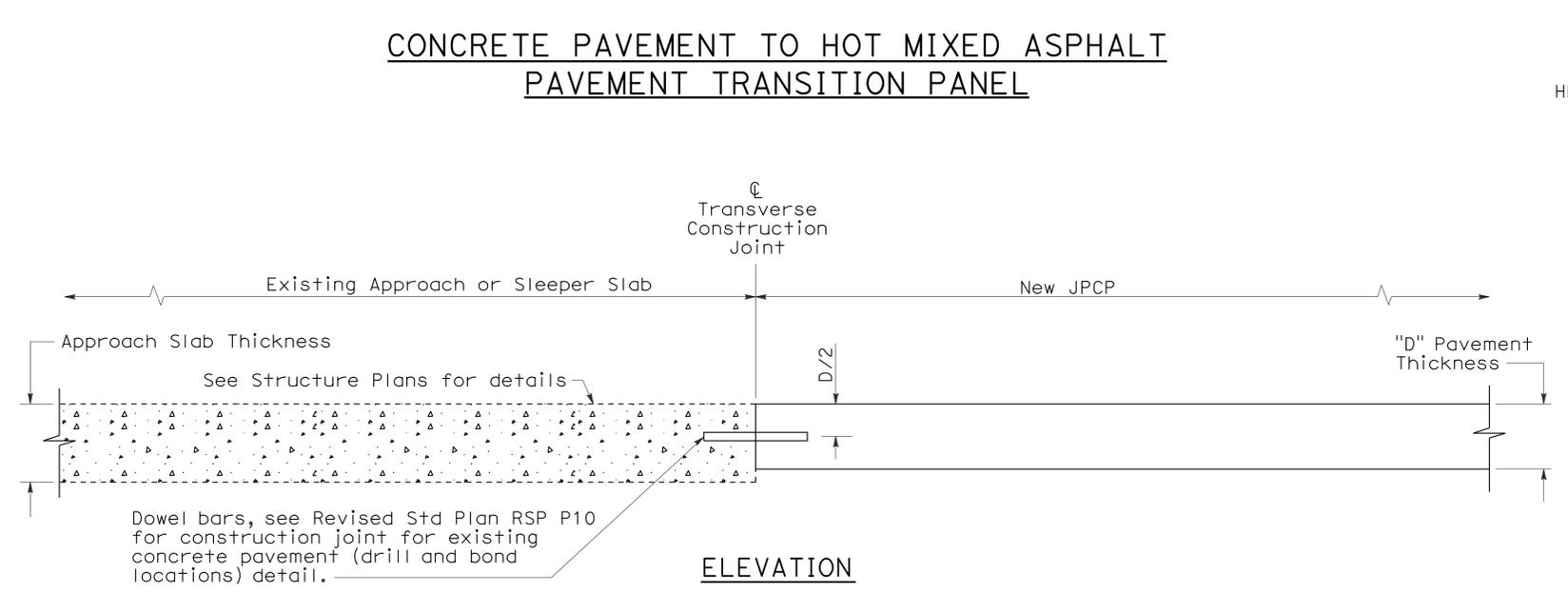
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	805	9.4/13.8	319	346

William K. Farnbach
 REGISTERED CIVIL ENGINEER
 May 15, 2009
 PLANS APPROVAL DATE
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To accompany plans dated 11-7-11

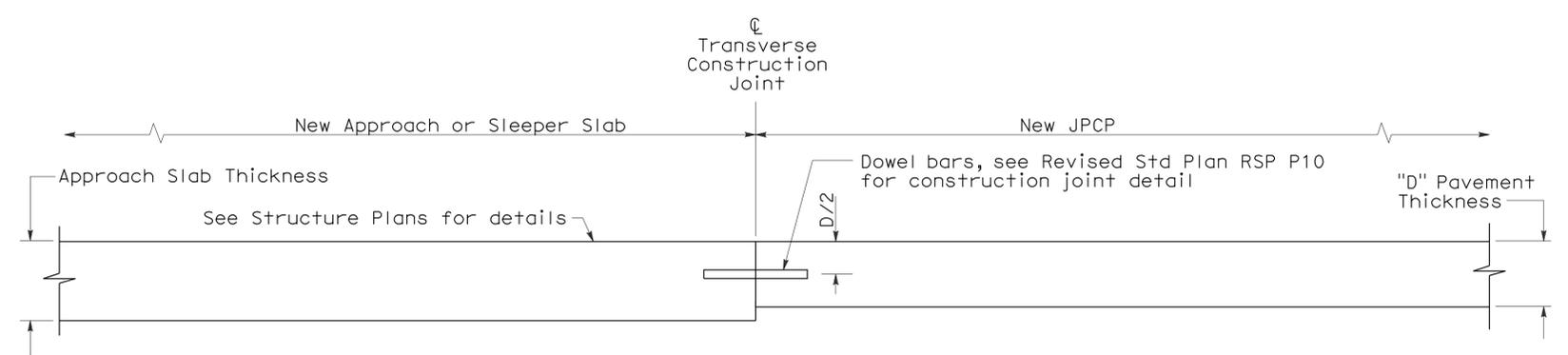


CONCRETE PAVEMENT TO HOT MIXED ASPHALT PAVEMENT TRANSITION PANEL



PAVEMENT END ANCHOR

NOTE:
1. Heavy broom finish.



CONCRETE PAVEMENT TRANSITION TO APPROACH OR SLEEPER SLAB

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**JOINTED PLAIN CONCRETE PAVEMENT-
END PANEL
PAVEMENT TRANSITIONS**
NO SCALE

RSP P30 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P30
DATED MAY 1, 2006 - PAGE 129 OF THE STANDARD PLANS BOOK DATED MAY 2006.

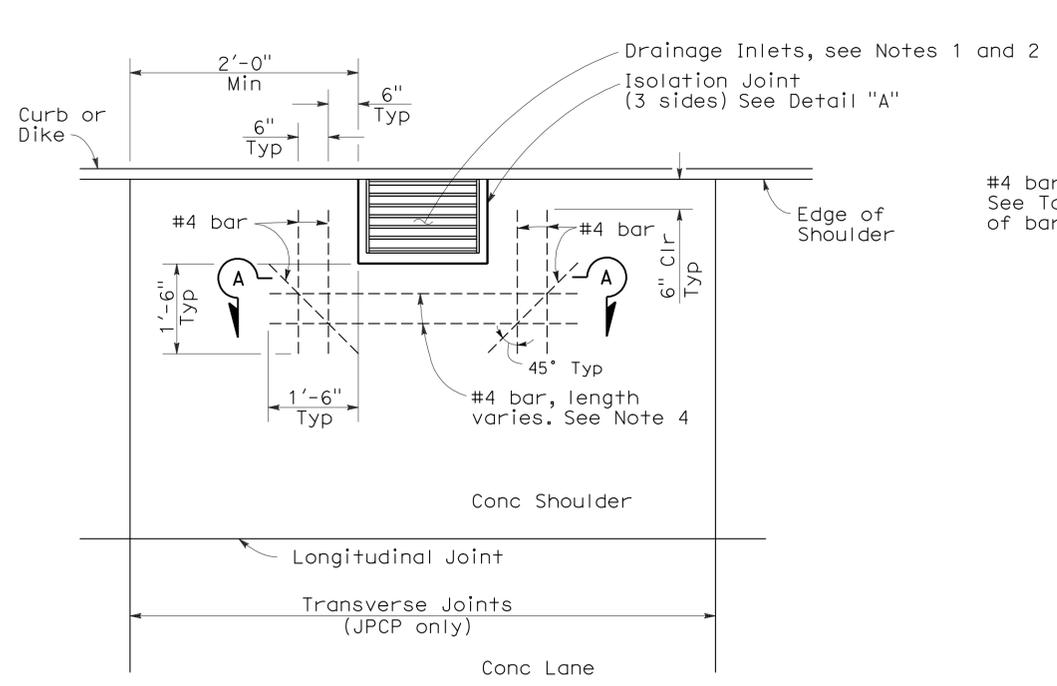
REVISED STANDARD PLAN RSP P30

2006 REVISED STANDARD PLAN RSP P30

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	805	9.4/13.8	320	346

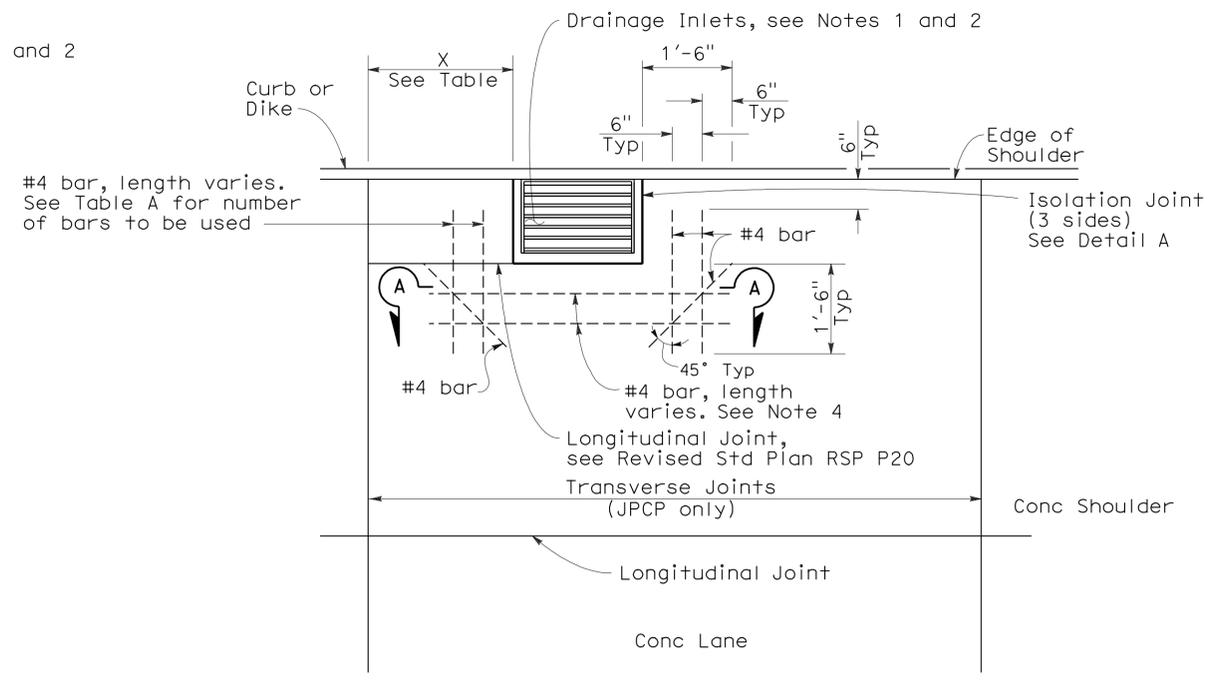
William K. Farnbach
 REGISTERED CIVIL ENGINEER
 May 15, 2009
 PLANS APPROVAL DATE
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2006 REVISED STANDARD PLAN RSP P45



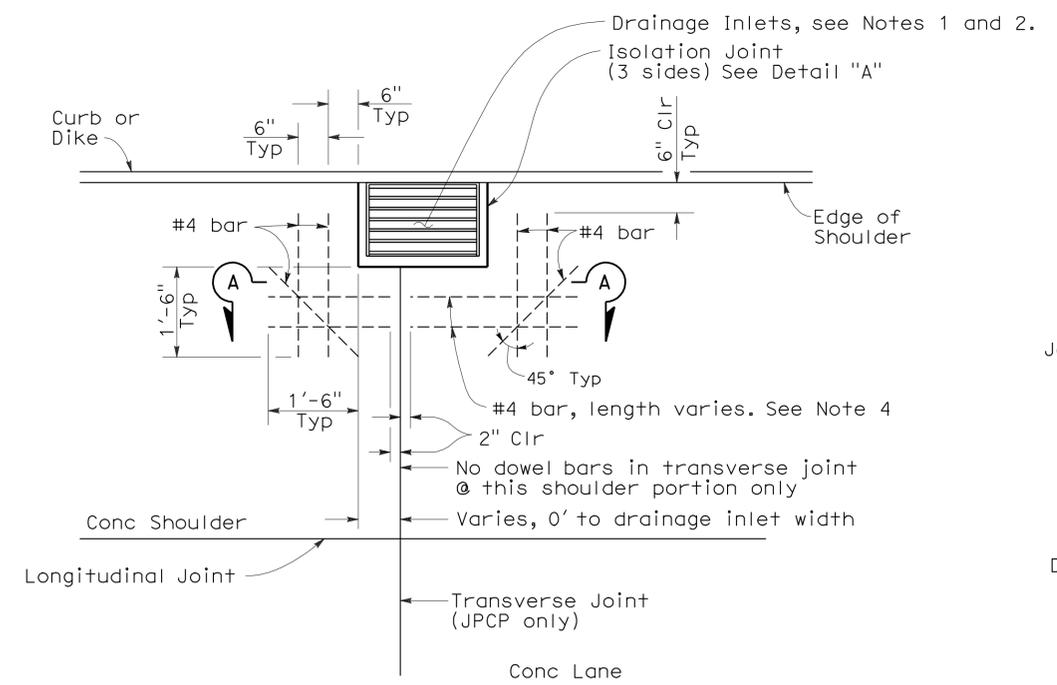
CASE 1

Transverse joint more than 2'-0" clear of drainage inlet wall or no transverse joint



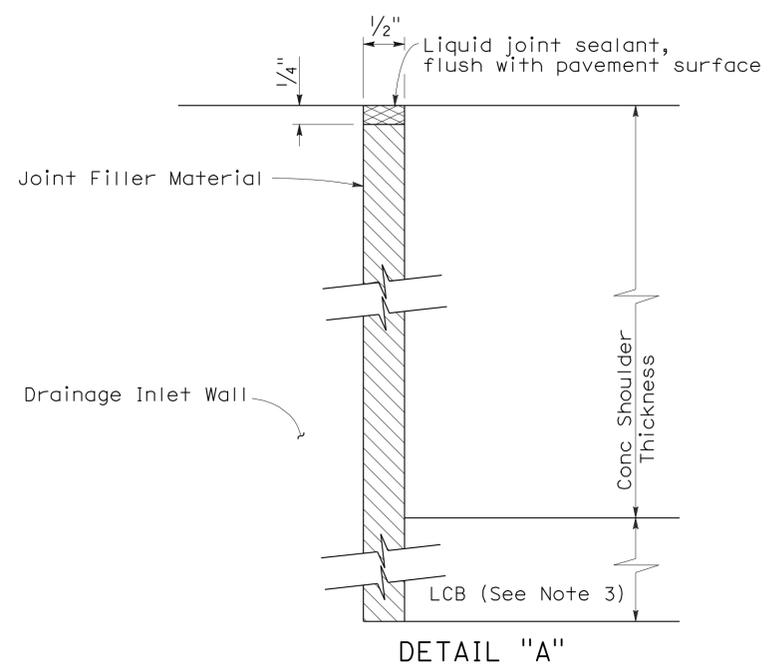
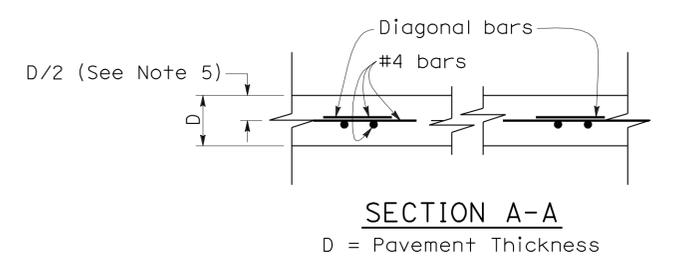
CASE 3

Transverse joint within 2'-0" of drainage inlet wall, or matches drainage inlet wall.



CASE 2

Transverse joint intersects drainage inlet, or matches drainage inlet wall.



NOTES:

1. Refer to Project Plans for location and Type of drainage inlets.
2. Top of inlet shall be flush with shoulder surface.
3. Extend joint filler material to bottom of Lean Concrete Base. Where Lean Concrete Base is not used as base material, the joint filler material shall only extend to the bottom of the new concrete pavement.
4. For Jointed Plain Concrete Pavement only. For Continuously Reinforced Concrete Pavement, terminate pavement steel reinforcement 2" clear from all outside edges of isolation joint.
5. For Jointed Plain Concrete Pavement only. For Continuously Reinforced Concrete Pavement, see New Standard Plan NSP P4.
6. Dowel and tie bars not shown, see Revised Standard Plan RSP P1.

TABLE A

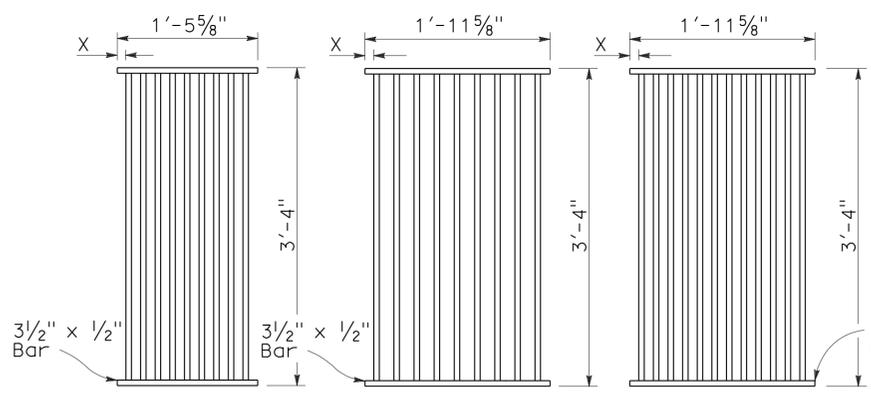
DISTANCE X	BARS REQUIRED
2'-0" to 1'-6"	2
1'-6" to 9"	1 @ X/2
9" or less	None

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**CONCRETE PAVEMENT-
DRAINAGE INLET
DETAILS No. 1**
NO SCALE

ISOLATION JOINT AROUND DRAINAGE INLET

RSP P45 DATED MAY 15, 2009 SUPERSEDES STANDARD PLAN P45
DATED MAY 1, 2006 - PAGE 132 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP P45

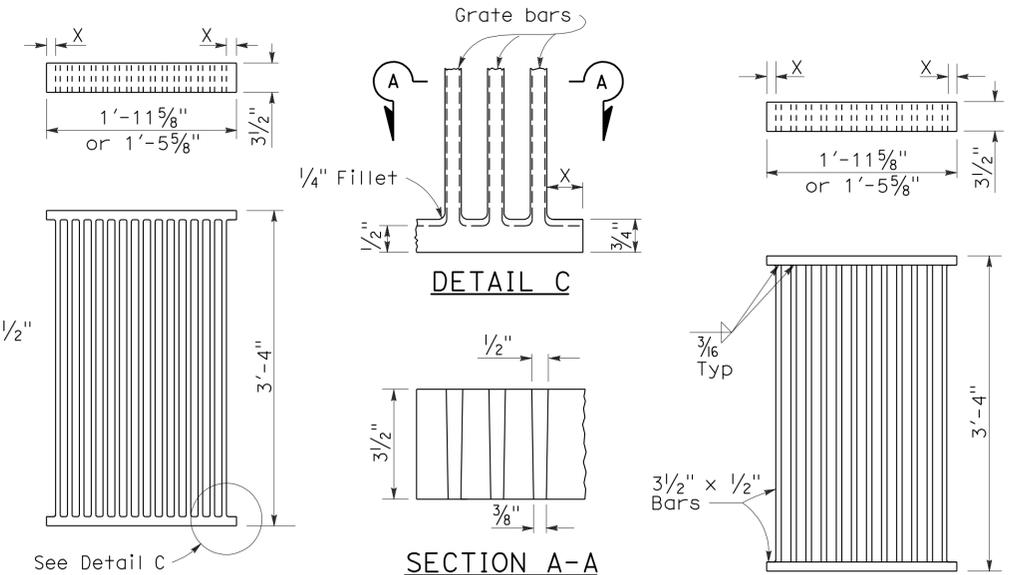


RECTANGULAR GRATE DETAILS
(See table below)

TYPE 18-9
 1 3/8" Clear spacing. Use within the roadbed on highways where bicycles and pedestrians are excluded.

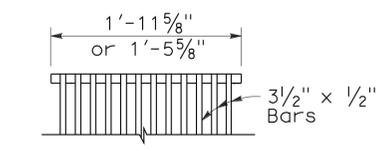
TYPE 24-9
 2" Clear spacing. Use in locations on all types of highways.

TYPE 24-12
 1 3/8" Clear spacing. Use within the roadbed on highways where bicycles and pedestrians are excluded.

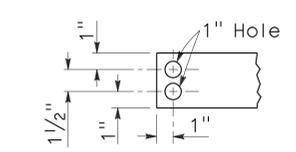


ALTERNATIVE CAST NODULAR IRON GRATE OR CAST STEEL GRATE

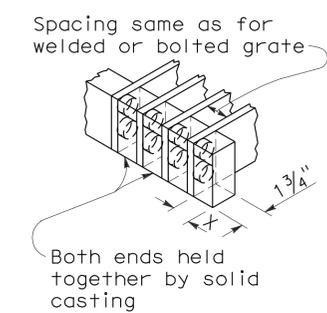
ALTERNATIVE WELDED GRATE



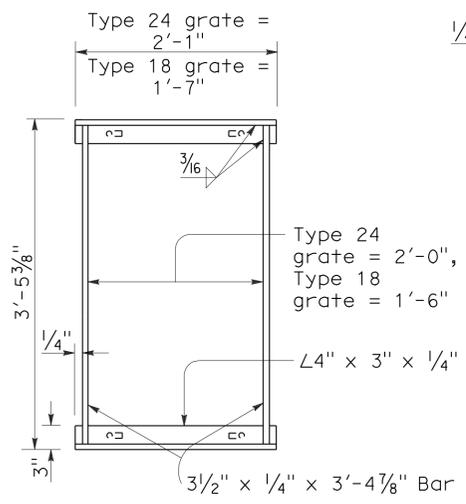
CAST END BLOCK



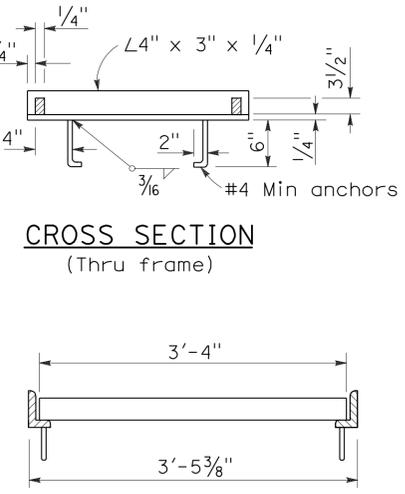
END OF BAR



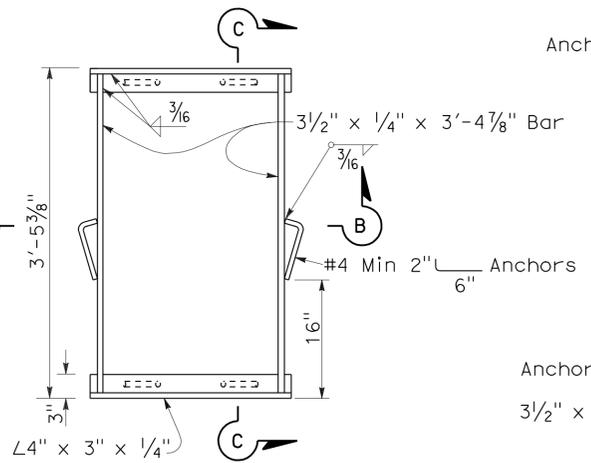
ALTERNATIVE CAST NODULAR IRON OR CAST STEEL END BLOCK GRATE



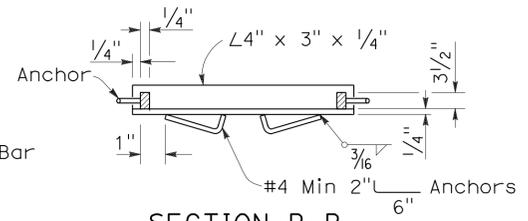
TYPICAL FRAME



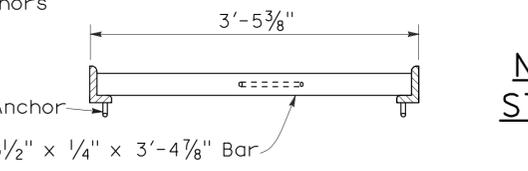
LONGITUDINAL SECTION
(Thru frame and grate)



TYPICAL FRAME



SECTION B-B



SECTION C-C

ALTERNATIVE ANCHOR FOR RECTANGULAR FRAME
(For details not shown, See Rectangular Frame Details)

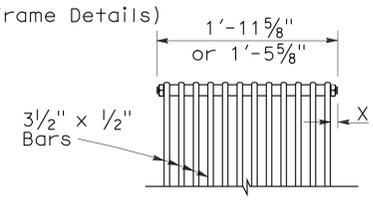
RECTANGULAR FRAME DETAILS
(For all rectangular grates)

GRATE BAR SPACING TABLE

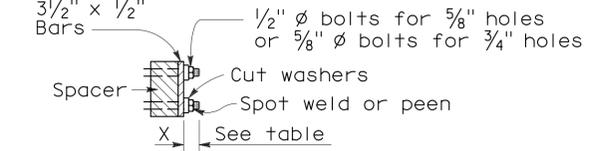
TYPE	NO. OF BARS	CLEAR BAR SPACING	X
18-9	9	1 3/8"	1 1/16"
24-9	9	2"	1 9/16"
24-12	12	1 3/8"	1 1/4"

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

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

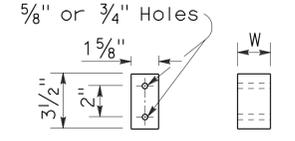


BOLTED END BLOCK

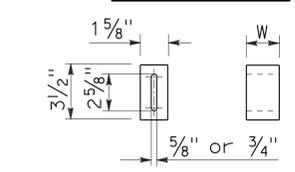


BOLTING DETAIL

ALTERNATIVE BOLTED GRATE



BAR SPACER



ALTERNATIVE SPACER
W = 1 3/8" or 2"

BASIS FOR MISC IRON & STEEL FINAL PAY WEIGHTS FOR DRAINAGE INLETS
(See General Notes, No 8)

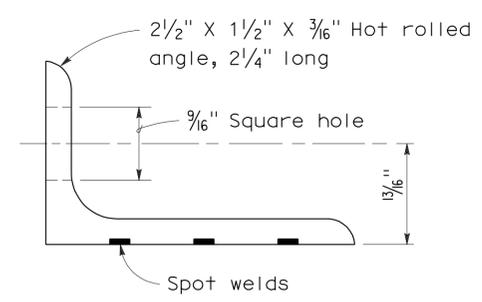
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	805	9.4/13.8	322	346

Raymond Don Tsztoo
 REGISTERED CIVIL ENGINEER
 June 6, 2008
 PLANS APPROVAL DATE

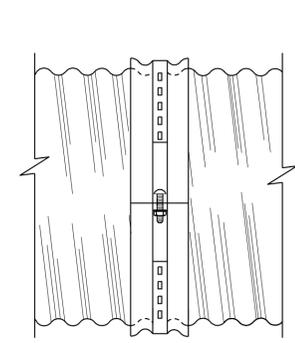
REGISTERED PROFESSIONAL ENGINEER
 Raymond Don Tsztoo
 No. C37332
 Exp. 6-30-08
 CIVIL
 STATE OF CALIFORNIA

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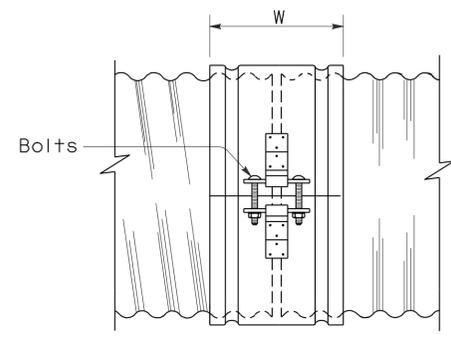
To accompany plans dated 11-7-11



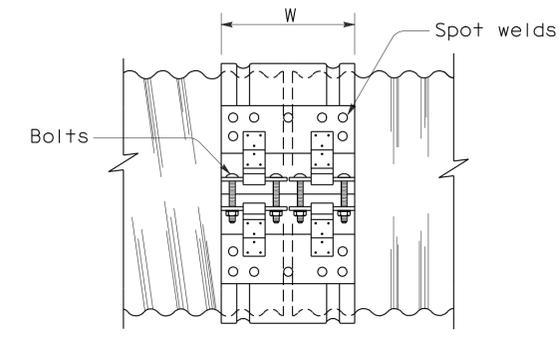
ANGLE



SIDE VIEW ANGLE



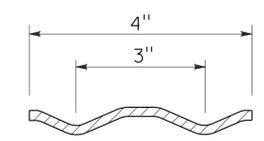
SIDE VIEW SINGLE BAR AND STRAP



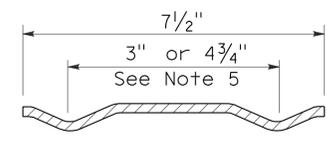
SIDE VIEW DOUBLE BAR AND STRAP

NOTES:

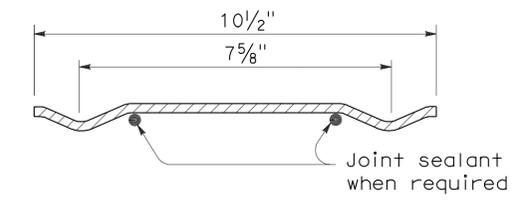
1. All ferrous metal coupling band connection hardware shall be galvanized or electroplated in accordance with the Standard Specifications.
2. Dimensions and thicknesses shown are minimum.
3. Spot welds shall develop minimum required strength of strap.
4. Fillet welds of equivalent strength may be substituted for spot welds or rivets.
5. Dimension depends upon whether end condition is lips up or lips down.



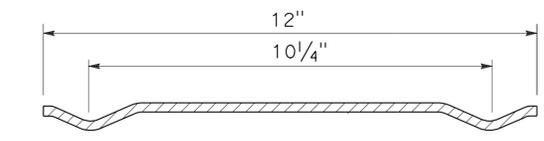
SECTION H-4 HUGGER BAND



SECTION H-7 HUGGER BAND



SECTION H-10 HUGGER BAND



SECTION H-12 HUGGER BAND

HUGGER COUPLING BANDS

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**CORRUGATED METAL PIPE
 COUPLING DETAILS No. 4
 HUGGER COUPLING BANDS**

NO SCALE

RSP D97D DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN D97D
 DATED MAY 1, 2006 - PAGE 186 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP D97D

2006 REVISED STANDARD PLAN RSP D97D

ANNULAR AND HELICAL PROFILE

COUPLING TYPE	PIPE CORRUGATION	PIPE SIZE	W OR A	PIPE WALL THICKNESS				BAR AND STRAP (CSP ONLY)				ANGLE							
				PIPE WALL THICKNESS		BAND THICKNESS		STRAP THICKNESS	BOLTS Dia	BAR Dia	BAR YIELD STRENGTH	DIMENSIONS		BOLTS (No.- Dia)		RIVETS ANGLE TO BAND		SPOT WELDS ANGLE TO BAND	
				CSP	CAP	CSP	CAP					CSP	CAP	CSP	CAP	CSP	CAP	CSP	CAP
TWO PIECE INTEGRAL FLANGE	1 1/2' x 1/4"	6"-10"	7"	0.052"-0.079"	0.048"-0.060"	0.052"	0.060"							2-3/8"	2-3/8"				
				12"-18"	7"	0.052"-0.079"		0.064"								2-1/2"			
	2 2/3' x 1/2"	12"-24"	7"	0.052"-0.079"	0.060"-0.105"	0.064"	0.060"							2-1/2"	2-1/2"				
UNIVERSAL	2 2/3' x 1/2"	THROUGH 36"	12"	0.052"-0.138"	0.060"-0.135"	0.052"	0.060"						2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	3-1/2"
		42"-60"	12"	0.052"-0.168"	0.075"-0.164"	0.052"	0.060"						2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	5-1/2"
		THROUGH 72"	12"	0.052"-0.168"	0.164"	0.052"	0.105"	0.079"	1/2"	7/8"	32 ksi	2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	5-1/2"	
		78"-84"	16 1/4"	0.168"		0.079"		DOUBLE 0.079"	1/2"	7/8"	32 ksi								
ANNULAR	2 2/3' x 1/2"	THROUGH 36"	7"	0.064"-0.138"	0.060"-0.135"	0.052"	0.060"	0.079"	1/2"	7/8"	32 ksi	2" x 2" x 3/16"	2" x 2" x 3/16"	2-1/2"	2-1/2"	3-3/8"	3-3/8"	3-1/2"	
		42"-72"	12"	0.064"-0.168"	0.075"-0.164"	0.052"	0.105"	0.079"	1/2"	7/8"	32 ksi	2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	5-1/2"	
		78"-84"	12"	0.168"		0.079"		0.109"	1/2"	7/8"	45 ksi	2" x 2" x 3/16"		3-1/2"		3-3/8"		5-1/2"	
	3" x 1"	48"-90"	14"	0.064"-0.109"		0.052"		0.079"	1/2"	7/8"	32 ksi	2" x 2" x 3/16"		3-1/2"		3-3/8"		5-1/2"	
		96"-120"	14"	0.079"-0.109"		0.052"		0.109"	1/2"	7/8"	45 ksi	2" x 2" x 3/16"		3-1/2"		4-3/8"			
		42"-108"	14"		0.060"-0.135"		0.060"					2" x 2" x 3/16"		3-1/2"		3-3/8"			
HELICAL	2 2/3' x 1/2"	THROUGH 36"	12"	0.052"-0.138"	0.060"-0.135"	0.052"	0.060"	0.079"	1/2"	7/8"	32 ksi	2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	3-1/2"	
		42"-72"	12"	0.052"-0.168"	0.075"-0.164"	0.052"	0.060"	0.079"	1/2"	7/8"	32 ksi	2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	5-1/2"	
		78"-84"	12"	0.168"		0.079"		0.109"	1/2"	7/8"	45 ksi	2" x 2" x 3/16"		3-1/2"		3-3/8"		5-1/2"	
	3" x 1"	48"-90"	14"	0.064"-0.109"		0.052"		0.079"	1/2"	7/8"	32 ksi	2" x 2" x 3/16"		3-1/2"		3-3/8"		5-1/2"	
		96"-120"	14"	0.079"-0.109"		0.052"		0.109"	1/2"	7/8"	45 ksi	2" x 2" x 3/16"		3-1/2"		4-3/8"			
		42"-108"	14"		0.060"-0.135"		0.060"					2" x 2" x 3/16"		3-1/2"		3-3/8"			
HUGGER	2 2/3' x 1/2"	REROLLED END	12"-54"	4"	0.052"-0.109"		0.052"						2 1/2" x 1 1/2" x 3/16"	2 1/2" x 1 1/2" x 3/16"	1-1/2"			3-1/2"	
			60"-66"	4"	0.109"		0.064"							2 1/2" x 1 1/2" x 3/16"	2 1/2" x 1 1/2" x 3/16"	1-1/2"		3-1/2"	
			36"-48"	4"	0.138"		0.064"							2 1/2" x 1 1/2" x 3/16"	2 1/2" x 1 1/2" x 3/16"	1-1/2"		3-1/2"	
			THROUGH 72"	10 1/2"	0.052"-0.168"		0.052"		0.079"	1/2"	7/8"	32 ksi							
			78"-84"	10 1/2"	0.168"		0.079"		0.109"	1/2"	7/8"	45 ksi							
	3" x 1"	REROLLED END	48"-90"	10 1/2"	0.064"-0.109"		0.052"		0.079"	1/2"	7/8"	32 ksi							
			96"-120"	10 1/2"	0.079"-0.109"		0.052"		0.109"	1/2"	7/8"	45 ksi							
	5" x 1"	REROLLED END	48"-66"	7 1/2"	0.064"-0.109"		0.064"		0.079"	1/2"	7/8"	32 ksi	2 1/2" x 1 1/2" x 3/16"	2 1/2" x 1 1/2" x 3/16"	1-1/2"				3-1/2"
			72"-90"	7 1/2"	0.064"-0.079"		0.064"		0.079"	1/2"	7/8"	32 ksi	2 1/2" x 1 1/2" x 3/16"	2 1/2" x 1 1/2" x 3/16"	1-1/2"				3-1/2"
			48"-90"	7 1/2"	0.064"-0.138"		0.064"		0.079"	1/2"	7/8"	32 ksi							
48"-120"			12" SEE	0.064"-0.109"		0.064"		0.079"	1/2"	7/8"	32 ksi								
48"-84"			12" NOTE	0.138"		0.064"		0.079"	1/2"	7/8"	32 ksi								
		90"-120"	12" 11	0.138"		0.064"		DOUBLE 0.079"	1/2"	7/8"	32 ksi								

SPIRAL RIB PROFILE

COUPLING TYPE	PIPE CORRUGATION	PIPE SIZE	W	PIPE WALL THICKNESS				BAR AND STRAP (SSRP ONLY)				ANGLE						
				PIPE WALL THICKNESS		BAND THICKNESS		STRAP THICKNESS	BOLTS Dia	BAR Dia	BAR YIELD STRENGTH	DIMENSIONS		BOLTS (No.- Dia)		RIVETS ANGLE TO BAND		SPOT WELDS ANGLE TO BAND
				SSRP	ASRP	SSRP	ASRP					SSRP	ASRP	SSRP	ASRP	SSRP	ASRP	SSRP
ANNULAR	2 2/3' x 1/2" * REROLLED END	24"-36"	12"	0.064"-0.109"	0.060"-0.105"	0.052"	0.060"	0.079"	1/2"	7/8"	32 ksi	2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	5-1/2"
		42"-60"	12"	0.064"-0.109"	0.075"-0.105"	0.052"	0.105"	0.079"	1/2"	7/8"	32 ksi	2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	5-1/2"
		66"-72"	12"	0.064"-0.109"		0.052"		0.079"	1/2"	7/8"	32 ksi	2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	5-1/2"
		78"-114"	12"	0.079"-0.109"		0.079"		0.109"	1/2"	7/8"	45 ksi	2" x 2" x 3/16"	2" x 2" x 3/16"	3-1/2"	3-1/2"	3-3/8"	3-3/8"	5-1/2"
HUGGER	2 2/3' x 1/2" * REROLLED END	24"-72"	10 1/2"	0.064"-0.109"		0.052"		0.079"	1/2"	7/8"	32 ksi							
		78"-84"	10 1/2"	0.109"		0.079"		0.109"	1/2"	7/8"	45 ksi							

* See Note 14.

14. All profiles of Spiral Rib Pipe (3/4" x 3/4" ribs at 7 1/2" pitch and 3/4" x 1" ribs at 11 1/2" pitch in both steel and aluminum and 3/4" x 1" ribs at 8 1/2" pitch in steel only) shall be manufactured with rerolled ends. Corrugation profile of the rerolled ends shall be 2 2/3' x 1/2" annual corrugations with a minimum of two full corrugations at each end.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	805	9.4/13.8	323	346

Raymond Don Tsztou
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

- NOTES: To accompany plans dated 11-7-11
- All ferrous metal coupling band connection hardware shall be galvanized or electro-plated in accordance with the Standard Specifications.
 - For helically corrugated coupling bands, the connection angles may be oriented parallel to the pipe axis, provided connecting holes are slotted lengthwise sufficiently to allow adjustment for the helix angle.
 - Tension strap may be connected to band with either spot welds or fillet welds that develop minimum required strength of strap.
 - Use 1 1/4" gage line dimension on attached angle leg for rivets and spot welds.
 - Band thickness shall not be less than:
 - 3 standard thicknesses lighter than the thickness of the pipe for Corrugated Steel Pipe.
 - 2 standard thicknesses lighter than the thickness of the pipe and in no case lighter than 0.060" for Corrugated Aluminum Pipe.
 - Dimensions, thicknesses and strengths shown are minimum.
 - For pipe arches use same width band as for round pipe of equal periphery.
 - Fillet welds of equivalent strength may be substituted for spot welds or rivets.
 - Spot welds shall develop minimum required strength of strap.
 - Pipe with rerolled ends having at least two 2 2/3' x 1/2" annular corrugations at each end with or without an upturned flange may be connected with any of the annular coupling bands shown for pipe of the same diameter and wall thickness and having 2 2/3' x 1/2" corrugations.
 - In the case of H-12 huggerbands, two piece bands are required for diameters through 96" and three piece bands are required for diameters 102" through 120".
 - Two piece bands are required for pipes greater than 42" diameter.
 - The 2 1/4" x 2" x 0.109" thick galvanized die-formed angle connector may be used in lieu of the 2" x 2" x 3/16" angle connector for standard joints only on pipes through 72" diameter.

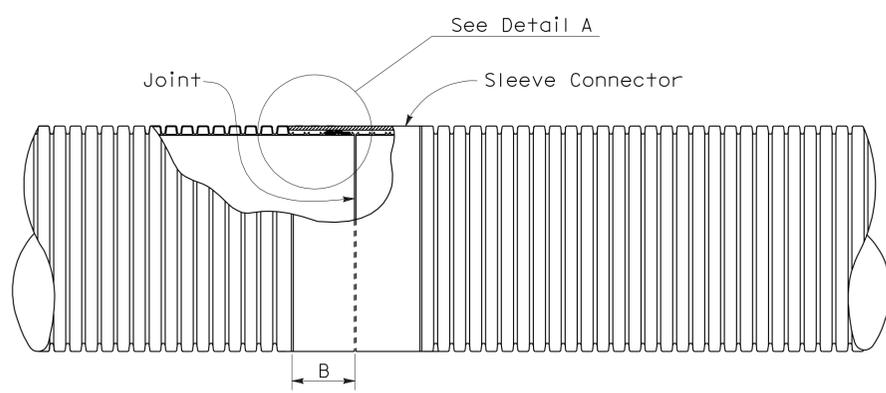
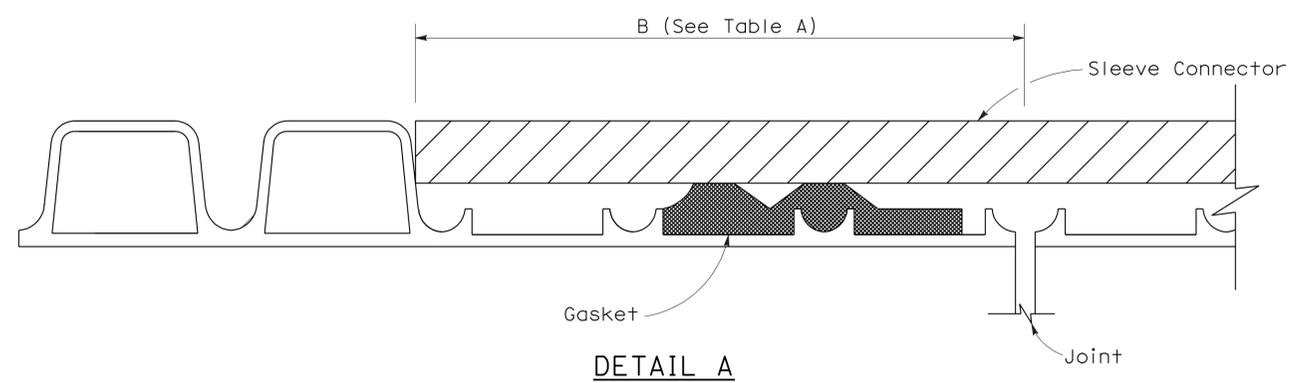
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**CORRUGATED METAL PIPE
COUPLING DETAILS No. 5
STANDARD JOINT**
NO SCALE

RSP D97E DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN D97E
DATED MAY 1, 2006 - PAGE 187 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP D97E

2006 REVISED STANDARD PLAN RSP D97E

To accompany plans dated 11-7-11



- NOTES:**
- For pipe sections installed on straight alignment, the pipe sections shall be joined to achieve maximum joint overlap at all points on the periphery as indicated in Table A where the plans call for positive or watertight joints. Maximum joint overlap is recommended where the plans call for standard joints, but in no case shall the joint overlap be less than 3/2".
 - For pipe sections installed on curved alignment, the maximum angle of deflection from straight alignment at any joint shall not exceed two degrees. Where the plans call for watertightness, field testing for compliance is required. Where plans call for positive joints, the pipe sections shall be joined to achieve Table A Dimensions on one side of the joint. Joints classified as standard shall have no less than 3/2" joint overlap at any point on the periphery.
 - Factory applied insertion line limit shall be placed on spigot.
 - Liner insert to be used inside of existing pipe.

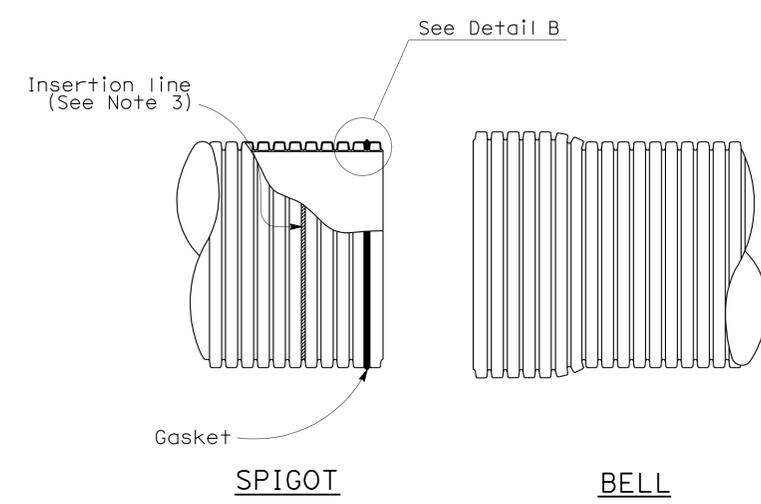
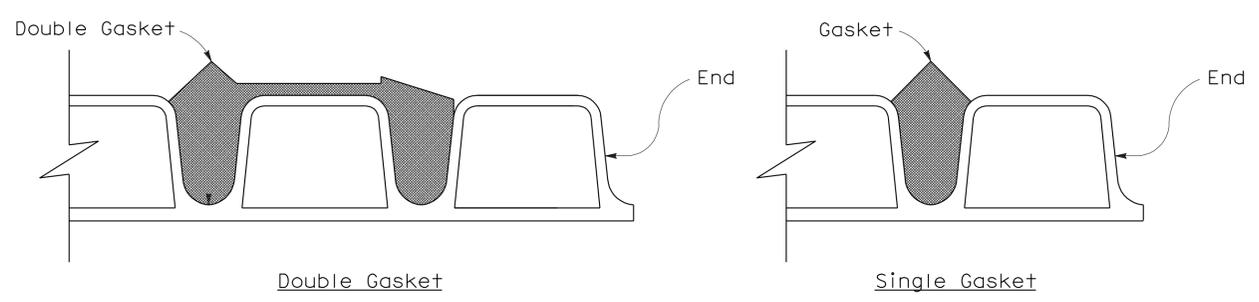
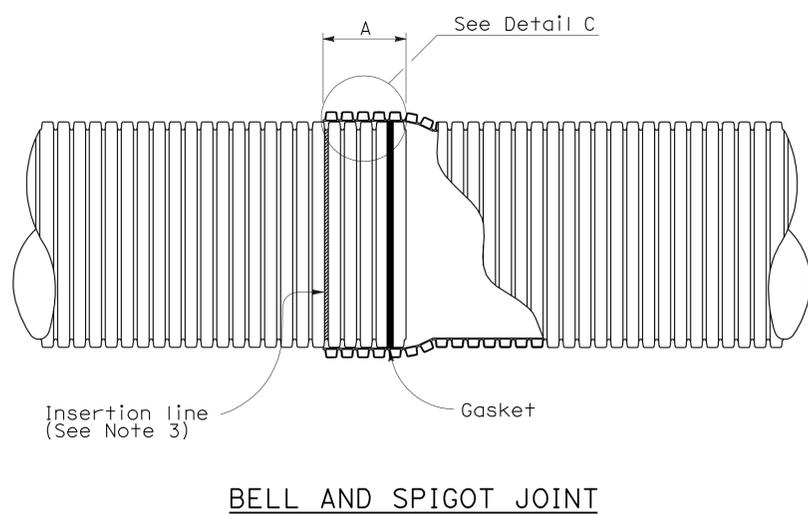
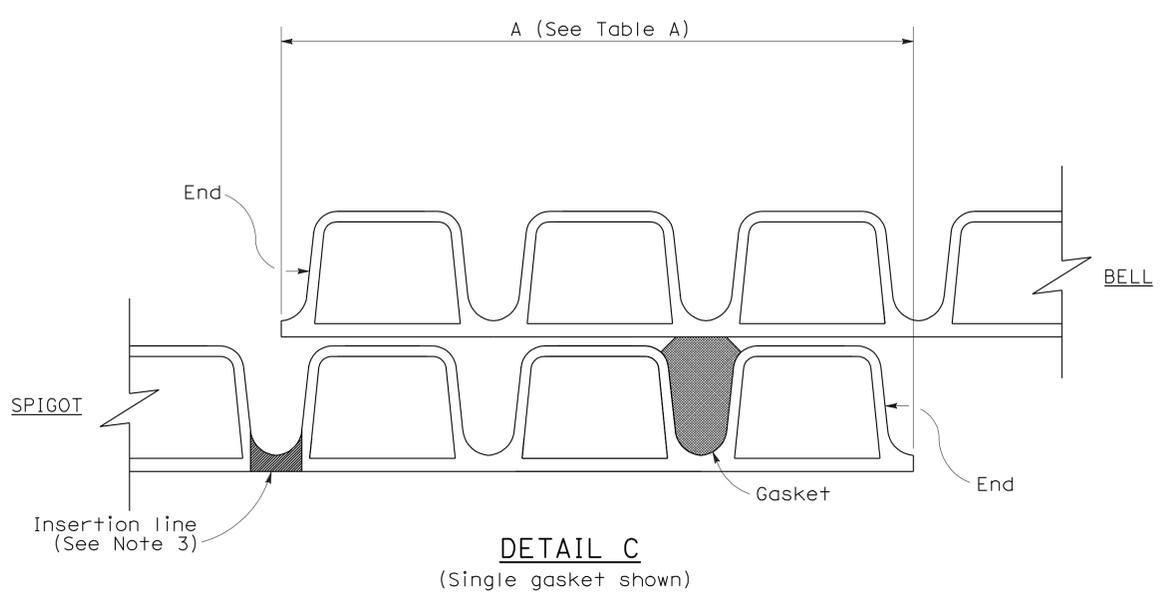


TABLE A

JOINT OVERLAP DIMENSIONS		
PIPE Dia (NOMINAL)	A	B
12"	5 3/4"	4 1/4"
15"	6 3/4"	5 5/8"
18"	6 3/4"	5 5/8"
21"	8 1/2"	5 5/8"
24"	8 1/2"	6 1/8"
30"	8 1/2"	7 1/8"
36"	8 1/2"	8 1/8"



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**CORRUGATED POLYVINYL CHLORIDE PIPE
WITH SMOOTH INTERIOR
STANDARD AND POSITIVE JOINTS**

NO SCALE
NSP D97I DATED MARCH 7, 2008 SUPPLEMENTS THE STANDARD
PLANS BOOK DATED MAY 2006.

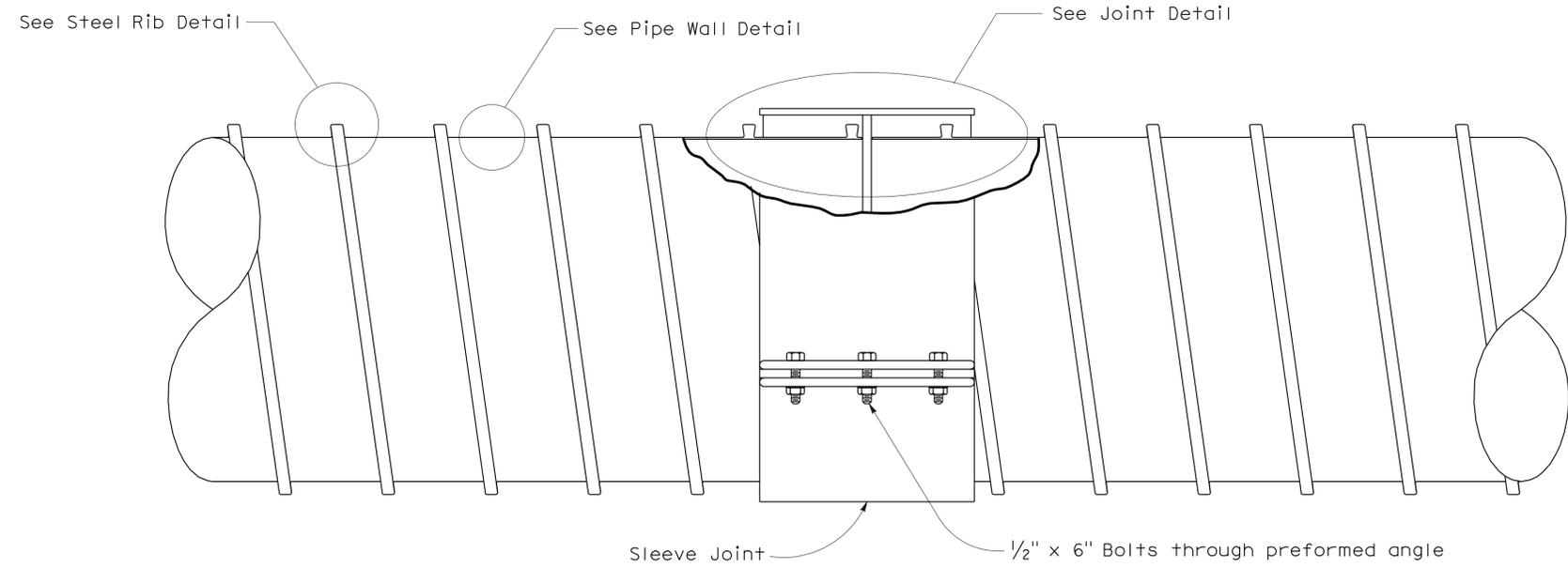
2006 NEW STANDARD PLAN NSP D97I

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	805	9.4/13.8	325	346

Raymond Don Tsztoo
 REGISTERED CIVIL ENGINEER
 June 6, 2008
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
 Raymond Don Tsztoo
 No. C37332
 Exp. 6-30-08
 CIVIL
 STATE OF CALIFORNIA

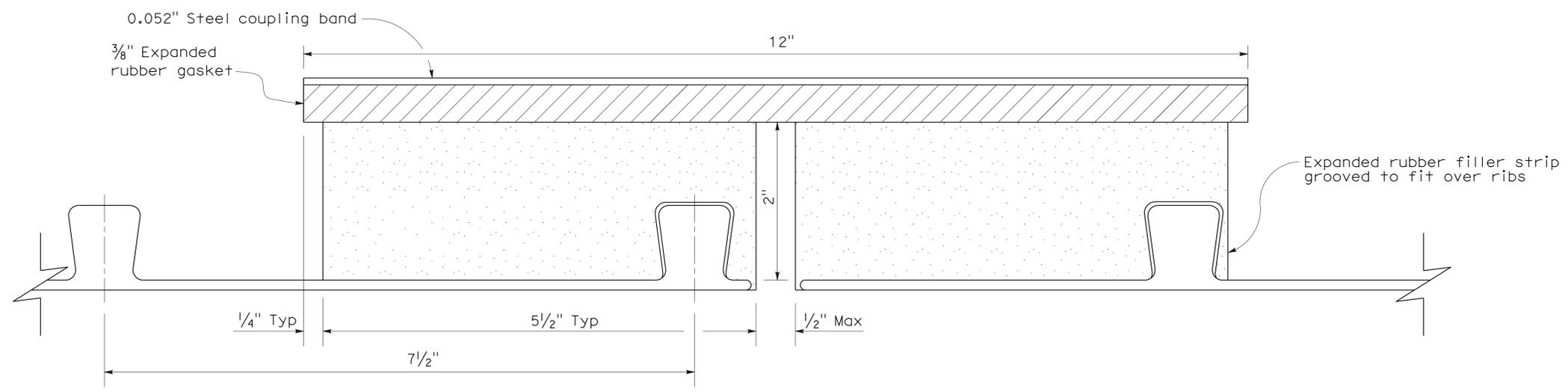
To accompany plans dated 11-7-11



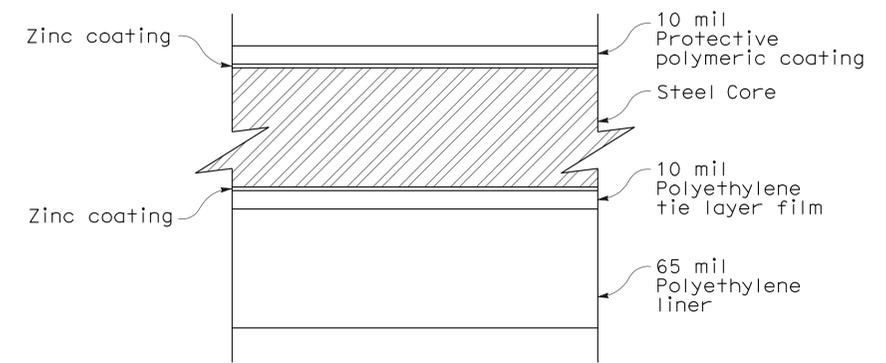
COMPOSITE STEEL SPIRAL RIB PIPE

NOTES:

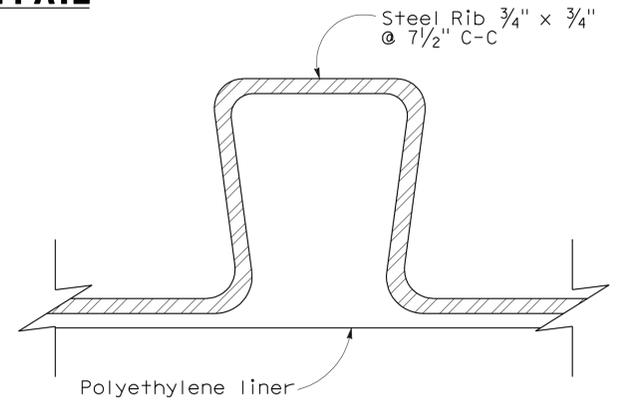
1. Pipe to conform to ASTM A 978.
2. See Standard Plan A62F for backfill details.
3. Protective polymer film to conform to ASTM A 742 and AASHTO M 246.
4. See Standard Plan D97C for Universal Coupling details.
5. Strap joint connection shall consist of 2 separate bolted preformed connectors joined to form one strap when pipe inside diameter is greater than or equal to 60".



JOINT DETAIL



PIPE WALL DETAIL



STEEL RIB DETAIL

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**COMPOSITE STEEL SPIRAL RIB PIPE
 WITH SMOOTH INTERIOR
 STANDARD JOINT**

NO SCALE
 NSP D97J DATED JUNE 6, 2008 SUPPLEMENTS THE
 STANDARD PLANS BOOK DATED MAY 2006.

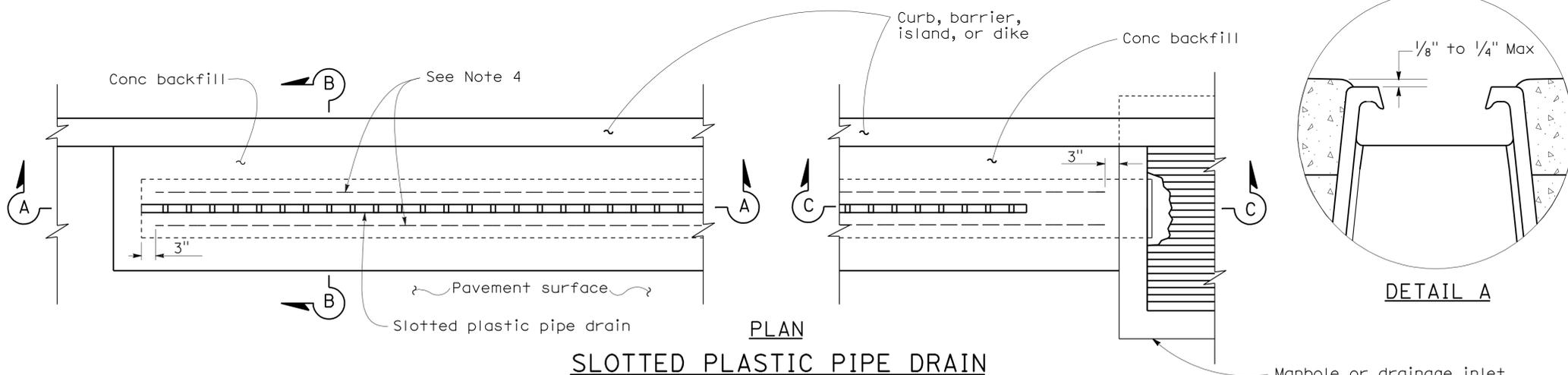
2006 NEW STANDARD PLAN NSP D97J

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	805	9.4/13.8	326	346

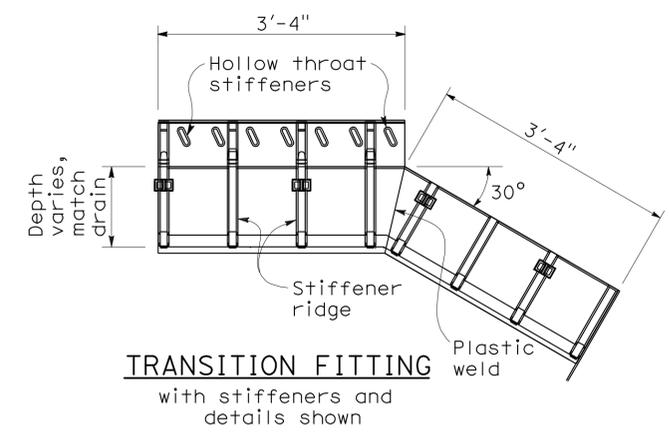
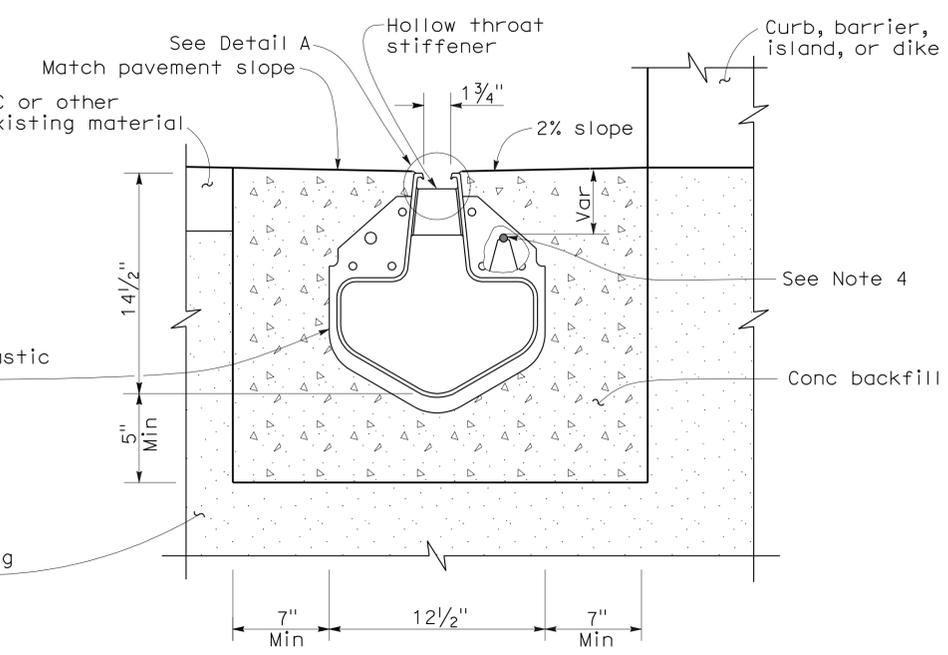
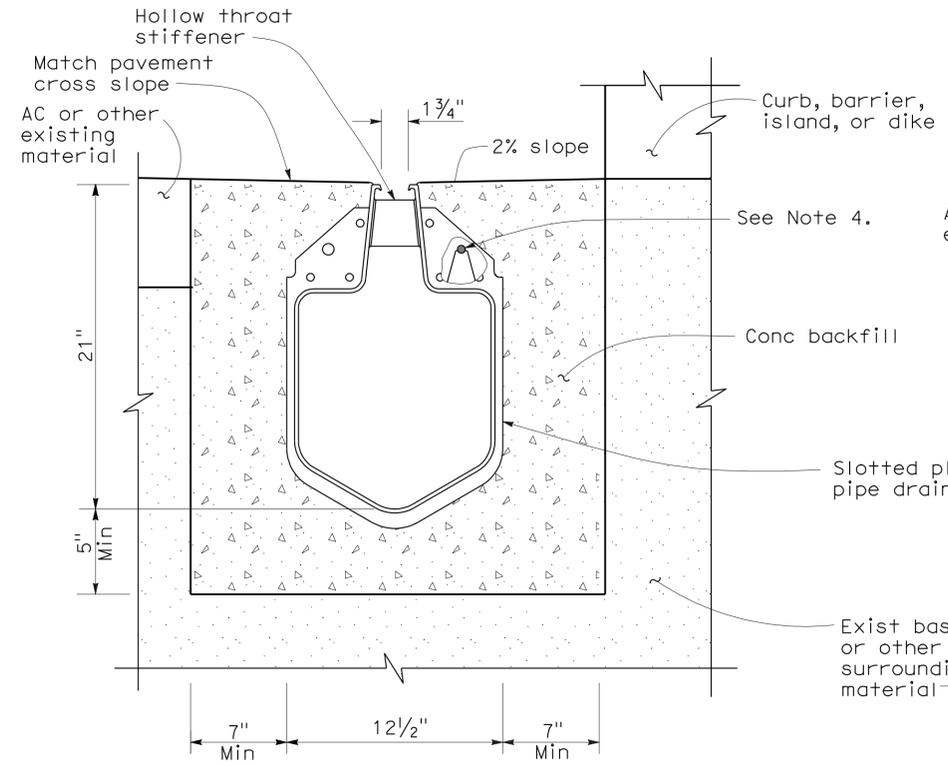
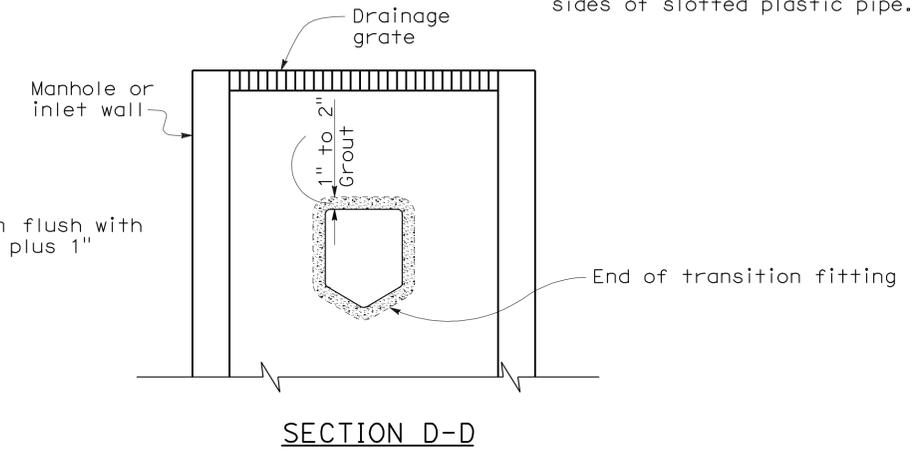
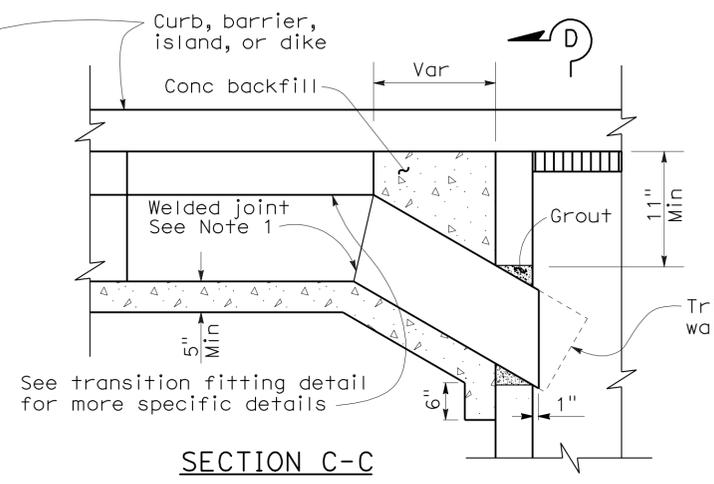
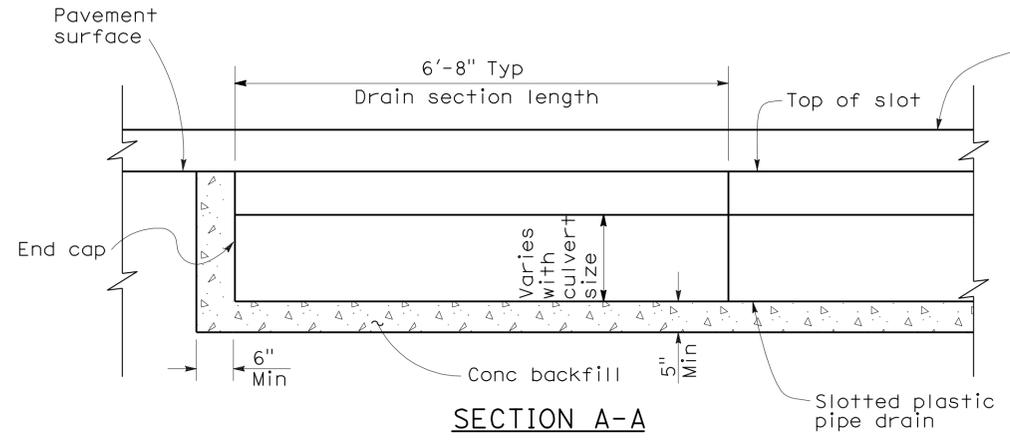
Raymond Don Tsztsoo
 REGISTERED CIVIL ENGINEER
 January 18, 2008
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
 Raymond Don Tsztsoo
 No. C37332
 Exp. 6-30-08
 CIVIL
 STATE OF CALIFORNIA

To accompany plans dated 11-7-11



- NOTES:**
1. Plastic weld shall be factory fabricated.
 2. When Heel Resistant Grate is to be used, see New Standard Plan NSP D98E for details.
 3. Exterior wall stiffener ridges and details not shown on section views. See transition fitting detail for typical exterior ridges and throat stiffeners.
 4. Lateral support, #4 bar, to be placed on both sides of slotted plastic pipe.



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
SLOTTED PLASTIC PIPE DRAIN DETAILS
 NO SCALE
 NSP D98D DATED JANUARY 18, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP D98D

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	805	9.4/13.8	327	346

Gregory A. Balzer
 LICENSED LANDSCAPE ARCHITECT
 June 5, 2009
 PLANS APPROVAL DATE
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To accompany plans dated 11-7-11

2006 REVISED STANDARD PLAN RSP H1

A

AB aggregate base
 ABS acrylonitrile-butadiene-styrene
 AC asphalt concrete
 Adj adjacent/adjustable
 AIC auxiliary irrigation controller
 Alt alternative
 AMEND amendment
 ARV air release valve
 AUTO automatic
 AUX auxiliary
 AVB atmospheric vacuum breaker

B

B&B balled and burlapped
 B/B brass/bronze
 B/B/PL brass/bronze/plastic
 B/PL brass/plastic
 BFM bonded fiber matrix
 Bit Ctd bituminous coated
 BP booster pump
 BPA backflow preventer assembly
 BPAE backflow preventer assembly in enclosure
 BPE backflow preventer enclosure
 BV ball valve

C

CAP corrugated aluminum pipe
 CARV combination air release valve
 CCA cam coupler assembly
 CEC controller enclosure cabinet
 CHDPE corrugated high density polyethylene
 CL chain link
 CNC control and neutral conductors
 Conc concrete
 Cond conduit
 CSP corrugated steel pipe
 CST center strip
 CV check valve

D

Dia diameter
 DIP ductile iron pipe
 DN diameter nominal

E

EA each
 Elect electric/electrical
 Elev elevation
 ENCL enclosure
 EP edge of pavement
 ES edge of shoulder
 EST end strip
 ESTB establishment
 ETW edge of traveled way

F

F full circle
 F/P full/part circle
 FAU filter assembly unit
 FCV flow control valve
 FERT fertilizer
 FG finished grade
 FIPT female iron pipe thread
 FIS fertilizer injector system
 FL flow line
 FM flow monitor
 FS flow sensor
 Ft foot/feet
 FV flush valve

G

GAL Gallon(s)
 Galv galvanized
 GARV garden valve
 GPH gallons per hour
 GPM gallons per minute
 GSP galvanized steel pipe
 GV gate valve

H

H half circle
 HB hose bib
 HDPE high density polyethylene
 HP horsepower/hinge point
 HPL high pressure line
 Hwy highway

I

IC irrigation controller
 ICC irrigation controller(s) in controller enclosure cabinet
 ID inside diameter
 In inches
 IFS irrigation filtration system
 IPS iron pipe size
 IPT iron pipe thread
 Irr irrigation

L

L length
 LF linear foot

M

Max maximum
 MBGR metal beam guard railing
 MCV manual control valve
 MIC master irrigation controller
 Min minimum
 MIPT male iron pipe thread
 Misc miscellaneous
 Mtl material
 MVP maintenance vehicle pullout

N

NCN no common name
 NL nozzle line
 No. number
 NPT national pipe thread

O

O/C on center
 OD outside diameter
 Oz ounce

P

P part circle
 PB pull box
 PCC portland cement concrete
 PE polyethylene
 Pkt packet
 PL plastic
 PLT plant/planting
 PLT ESTB plant establishment
 PM post mile
 PR pressure rated
 PRLV pressure relief valve
 PSFM polymer stabilized fiber matrix
 PSI pounds per square inch
 PRV pressure reducing valve
 PVC polyvinyl chloride
 Pvmt pavement

Q

Q quarter circle
 QCV quick coupling valve

R

R radius
 RCP reinforced concrete pipe
 RCV remote control valve
 RCVM remote control valve (master)
 RCVMF remote control valve (master) w/ flow meter
 RCW recycled/reclaimed water
 RECP rolled erosion control product
 REQ required
 R/W right of way

S

S slip
 SCC sprinkler control conduit
 SCH schedule
 SF state-furnished
 Shld shoulder
 SQFT square foot/feet
 SQYD square yard(s)
 SST side strip
 Sta station
 Std standard
 SW sidewalk/sound wall

T

T third circle/thread
 TLS truck loading standpipe
 TQ three quarter circle
 TRM turf reinforcement mat
 TRVD traveled
 TT two third circle
 Typ typical

U

UG underground

V

VAU valve assembly unit

W

W width
 W/ with
 WM water meter
 WS wye strainer
 WSP welded steel pipe
 WWM welded wire mesh

NOTE:
 FOR ADDITIONAL ABBREVIATIONS,
 SEE STANDARD PLANS A10A AND A10B.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**PLANTING AND IRRIGATION
 ABBREVIATIONS**

NO SCALE
 RSP H1 DATED JUNE 5, 2009 SUPERSEDES STANDARD PLAN H1
 DATED MAY 1, 2006 - PAGE 201 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP H1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	805	9.4/13.8	328	346

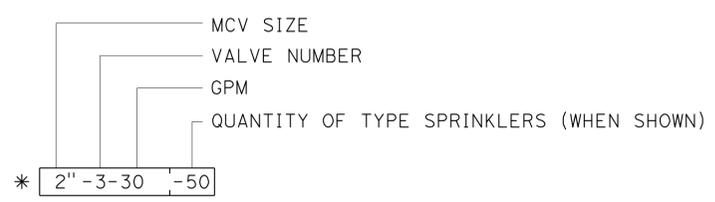
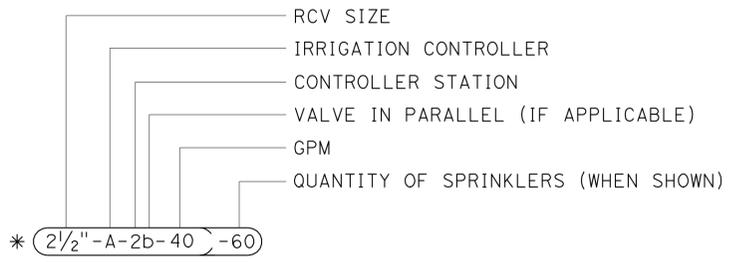
Gregory A. Balzer
 LICENSED LANDSCAPE ARCHITECT
 June 5, 2009
 PLANS APPROVAL DATE
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 11-7-11

EXISTING	PROPOSED	ITEM DESCRIPTION
		WATER METER (WM)
		BACKFLOW PREVENTER ASSEMBLY (BPA)
		BACKFLOW PREVENTER ASSEMBLY IN ENCLOSURE (BPAE)
		BACKFLOW PREVENTER ENCLOSURE (BPE)
		BOOSTER PUMP (BP)
		TRUCK LOADING STANDPIPE (TLS)
		FLOW SENSOR (FS)
		MASTER IRRIGATION CONTROLLER (MIC)
		AUXILIARY IRRIGATION CONTROLLER (AIC)
		IRRIGATION CONTROLLER (IC)/ IRRIGATION CONTROLLER (IC) (BATTERY) IRRIGATION CONTROLLER (IC) (SOLAR)
		IRRIGATION CONTROLLER(S) IN CONTROLLER ENCLOSURE CABINET (ICC)
		CONTROL AND NEUTRAL CONDUCTORS (CNC)
		SPRINKLER CONTROL CONDUIT (SCC)
		IRRIGATION CROSSOVER
		EXTEND IRRIGATION CROSSOVER
		IRRIGATION SLEEVE
		DUCTILE IRON PIPE (SUPPLY LINE) (MAIN) (DIP)
		GALVANIZED STEEL PIPE (SUPPLY LINE) (MAIN) (GSP)
		GALVANIZED STEEL PIPE (SUPPLY LINE) (LATERAL) (GSP)
		PLASTIC PIPE (PR 200) (SUPPLY LINE) (MAIN)
		PLASTIC PIPE (PR 200) (SUPPLY LINE) (LATERAL)
		PLASTIC PIPE (IRRIGATION LINE)
		REMOTE CONTROL VALVE (RCV) REMOTE CONTROL VALVE (MASTER) (RCVM) REMOTE CONTROL VALVE (MASTER) W/FLOW METER (RCVMF)
		MANUAL CONTROL VALVE (MCV)
		VALVE ASSEMBLY UNIT (VAU)
		WYE STRAINER (WS)
		FILTER ASSEMBLY UNIT (FAU)
		GATE VALVE (GV)
		BALL VALVE (BV)

EXISTING	PROPOSED	ITEM DESCRIPTION
		QUICK COUPLING VALVE (QCV)
		CAM COUPLER ASSEMBLY (CCA)
		PRESSURE REDUCING VALVE (PRV)
		PRESSURE RELIEF VALVE (PRLV)
		FLOW CONTROL VALVE (FCV)
		COMBINATION AIR RELEASE VALVE (CARV)
		CHECK VALVE (CV)
		FLUSH VALVE (FV)
		NOZZLE LINE W/TURNING UNION
		IRRIGATION SYSTEM
		IRRIGATION SYSTEM TO BE REMOVED
		CHAIN LINK GATE
		QUICK COUPLING VALVE W/SPRINKLER PROTECTOR
		SPRINKLER W/SPRINKLER PROTECTOR
		CONNECT TO EXISTING SYSTEM
		CAP
		CAP EXISTING

VALVE CODE



* VALVE CODES FOR EXISTING VALVES ARE SHOWN IN A DASHED ENCLOSURE.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
PLANTING AND IRRIGATION SYMBOLS

NO SCALE

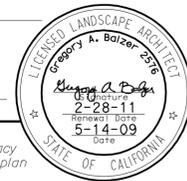
RSP H2 DATED JUNE 5, 2009 SUPERSEDES RSP H2 DATED MARCH 7, 2008 AND STANDARD PLAN H2 DATED MAY 1, 2006 - PAGE 202 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP H2

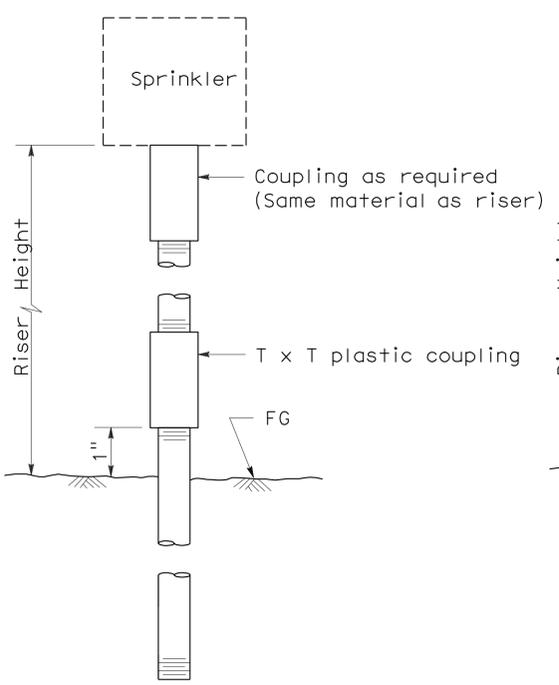
2006 REVISED STANDARD PLAN RSP H2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	805	9.4/13.8	329	346

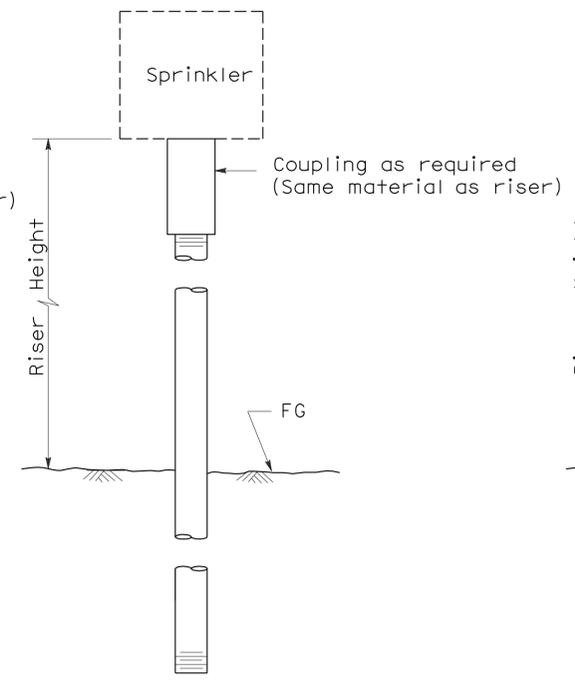
Gregory A. Balzer
 LICENSED LANDSCAPE ARCHITECT
 June 5, 2009
 PLANS APPROVAL DATE
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



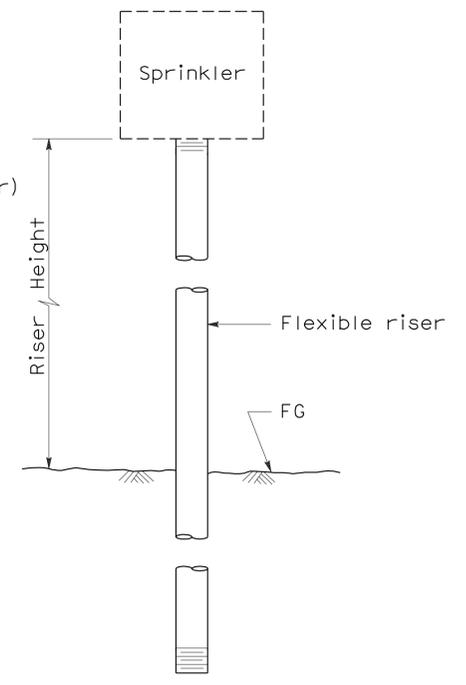
To accompany plans dated 11-7-11



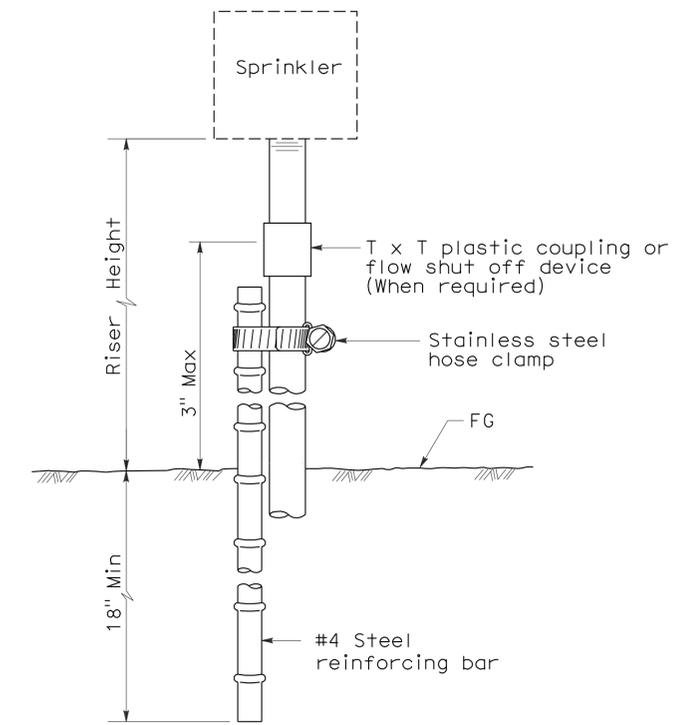
ELEVATION
RISER TYPE I



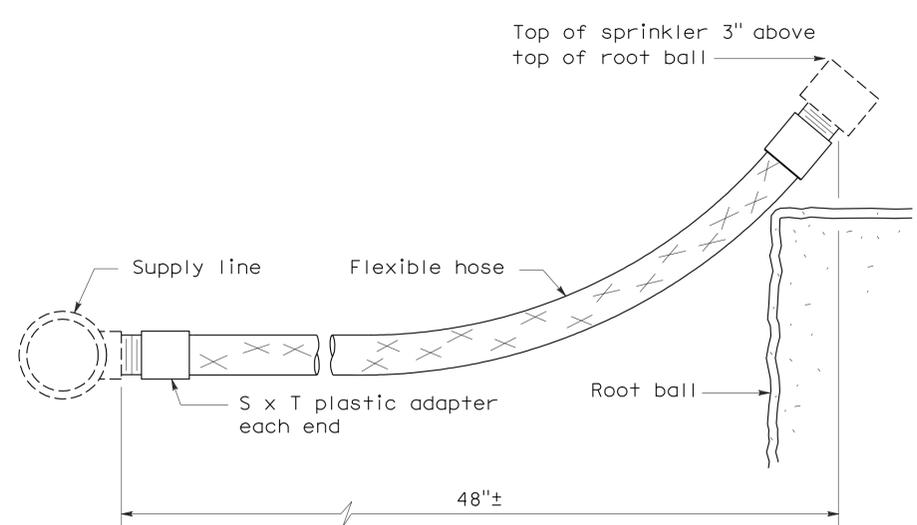
ELEVATION
RISER TYPE II



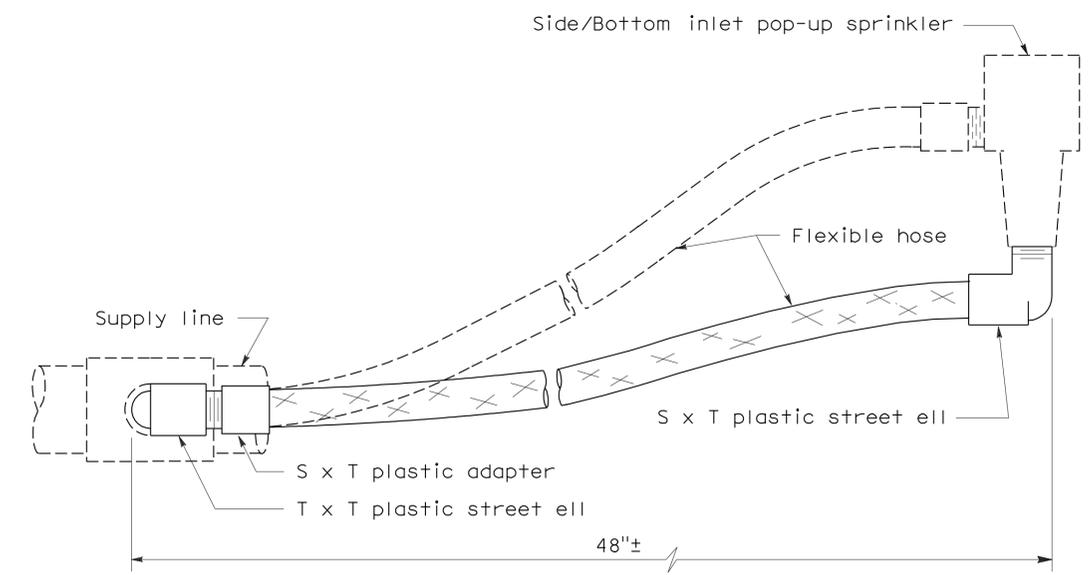
ELEVATION
RISER TYPE III



ELEVATION
RISER TYPE IV



ELEVATION
RISER TYPE V



ELEVATION
RISER TYPE VI

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**PLANTING AND IRRIGATION
DETAILS**
NO SCALE

RSP H5 DATED JUNE 5, 2009 SUPERSEDES STANDARD PLAN H5
DATED MAY 1, 2006 - PAGE 205 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP H5

2006 REVISED STANDARD PLAN RSP H5

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	805	9.4/13.8	330	346

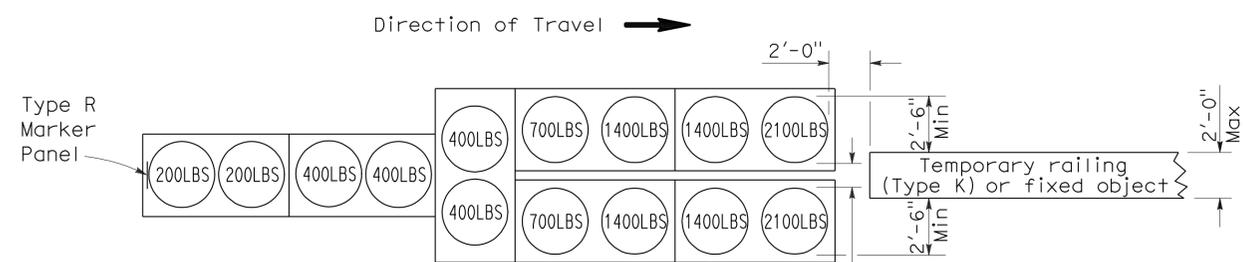
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

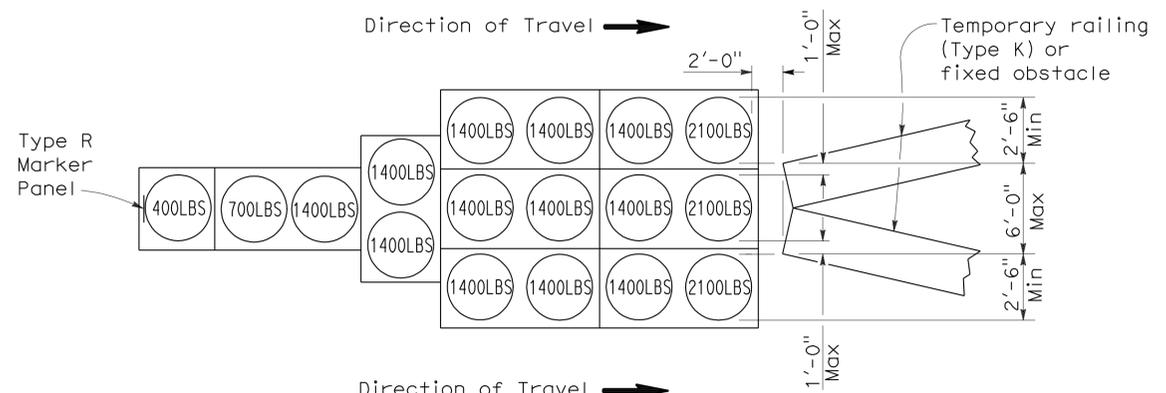
REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

To accompany plans dated 11-7-11



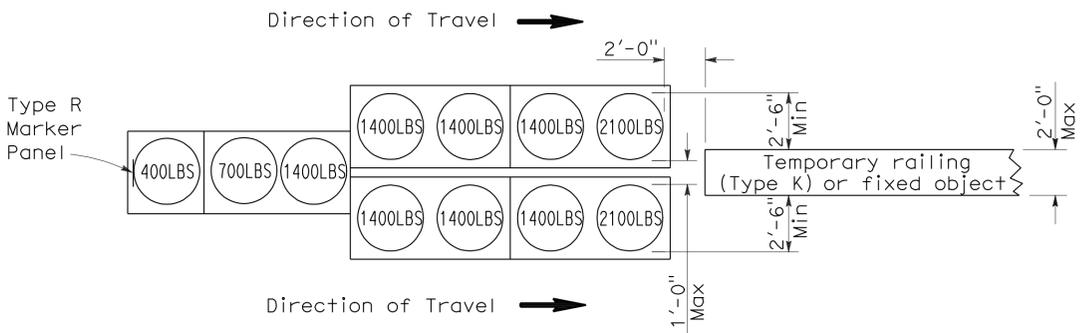
ARRAY 'TU14'

Approach speed 45 mph or more



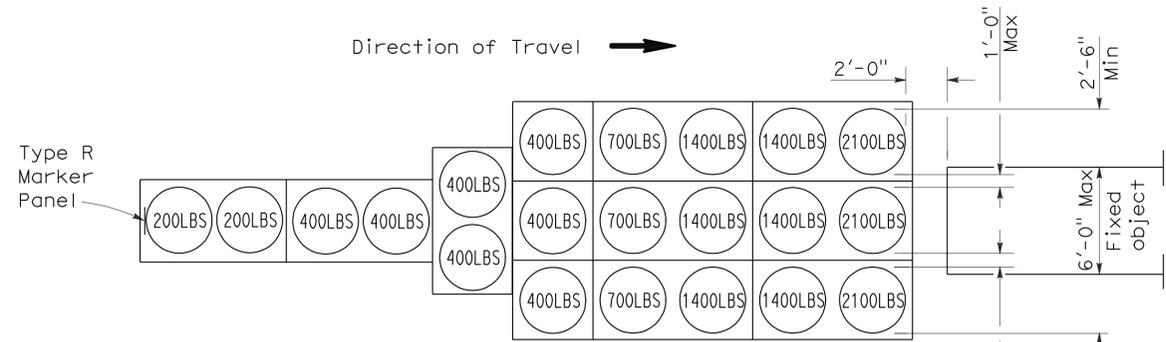
ARRAY 'TU17'

Approach speed less than 45 mph



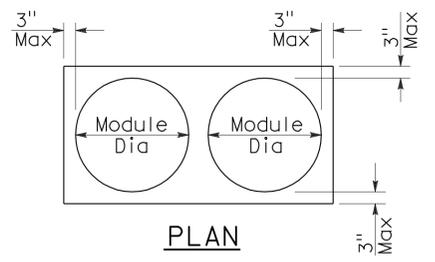
ARRAY 'TU11'

Approach speed less than 45 mph

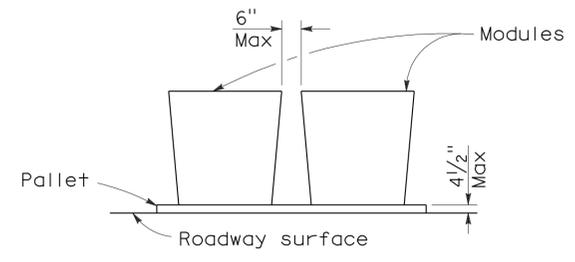


ARRAY 'TU21'

Approach speed 45 mph or more



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

REVISED STANDARD PLAN RSP T1A

2006 REVISED STANDARD PLAN RSP T1A

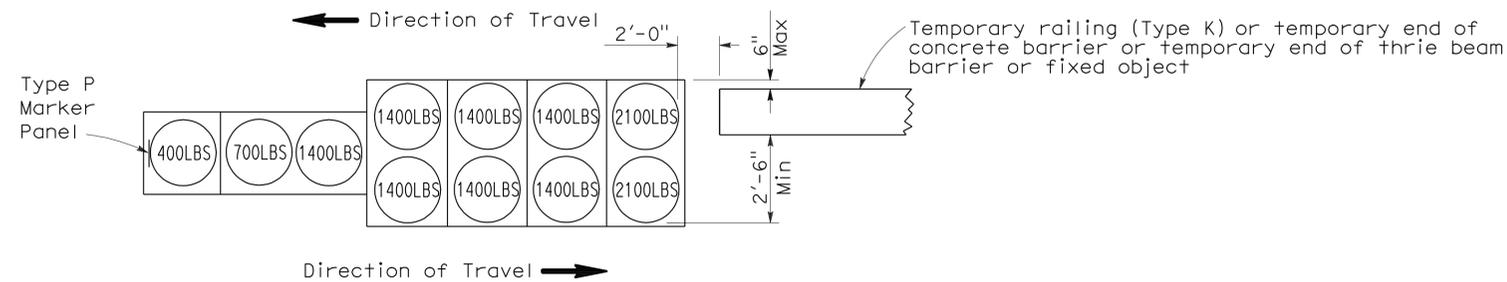
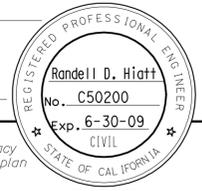
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	805	9.4/13.8	331	346

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

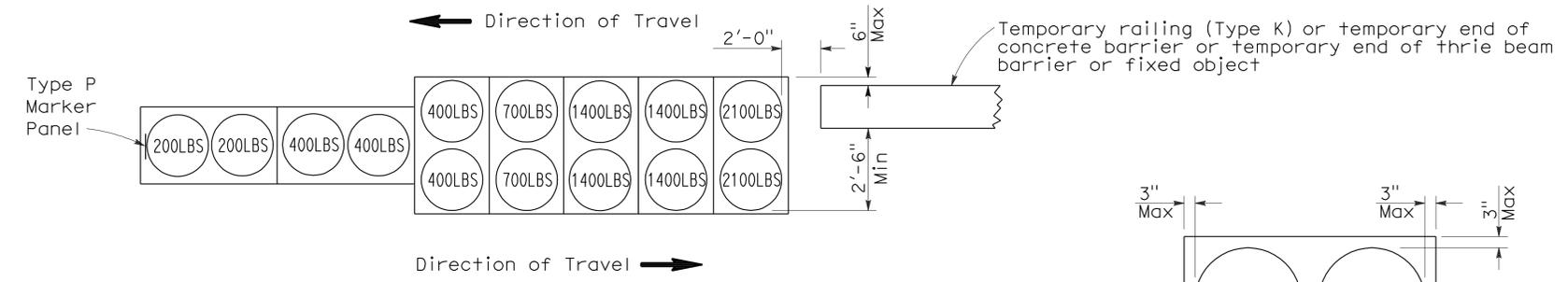
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 11-7-11



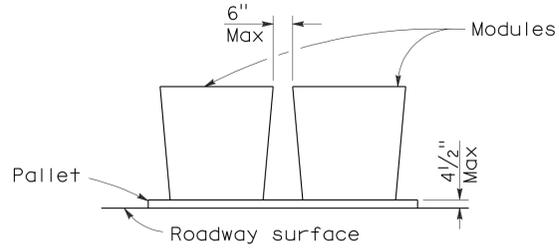
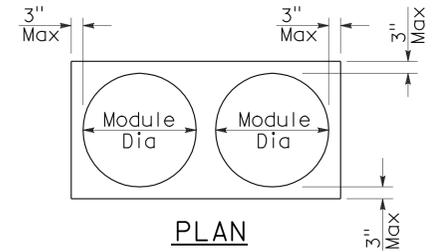
ARRAY 'TB11'

Approach speed less than 45 mph



ARRAY 'TB14'

Approach speed 45 mph or more



CRASH CUSHION PALLET DETAIL
See Note 7

NOTES:

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

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

NO SCALE

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

REVISED STANDARD PLAN RSP T1B

2006 REVISED STANDARD PLAN RSP T1B

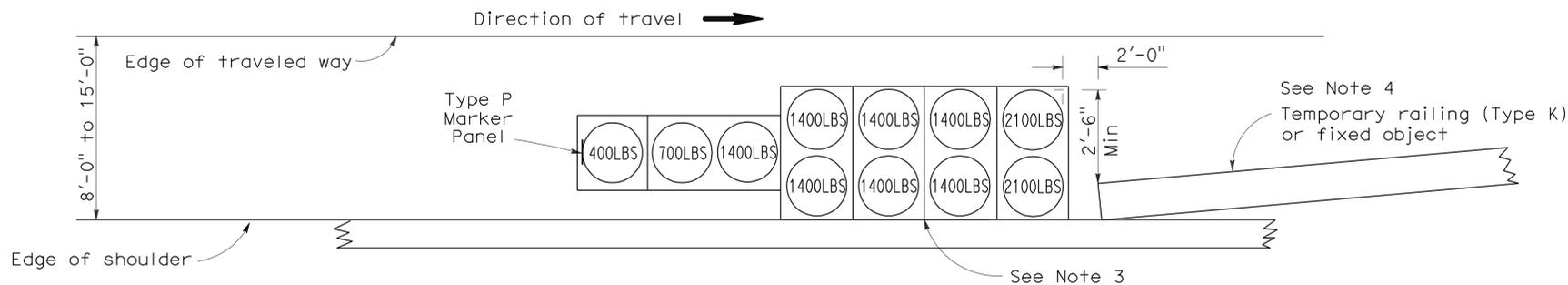
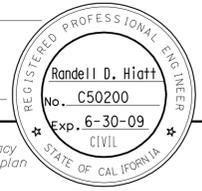
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	805	9.4/13.8	332	346

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

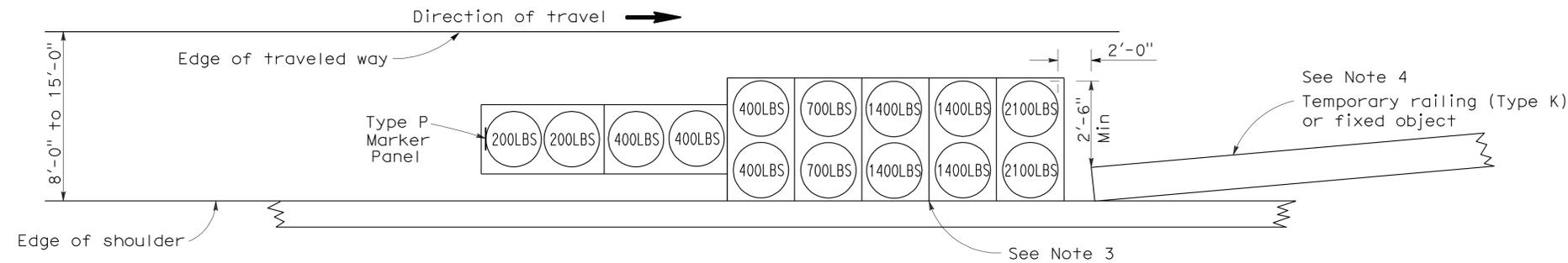
June 6, 2008
PLANS APPROVAL DATE

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

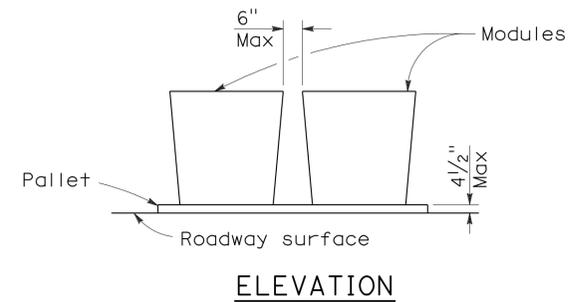
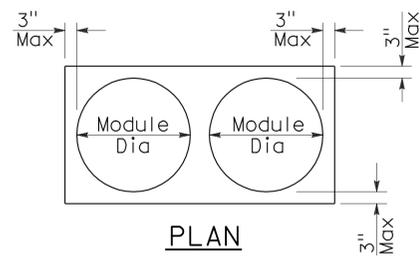
To accompany plans dated 11-7-11



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



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



CRASH CUSHION PALLET DETAIL
See Note 11

NOTES:

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

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

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

REVISED STANDARD PLAN RSP T2

2006 REVISED STANDARD PLAN RSP T2

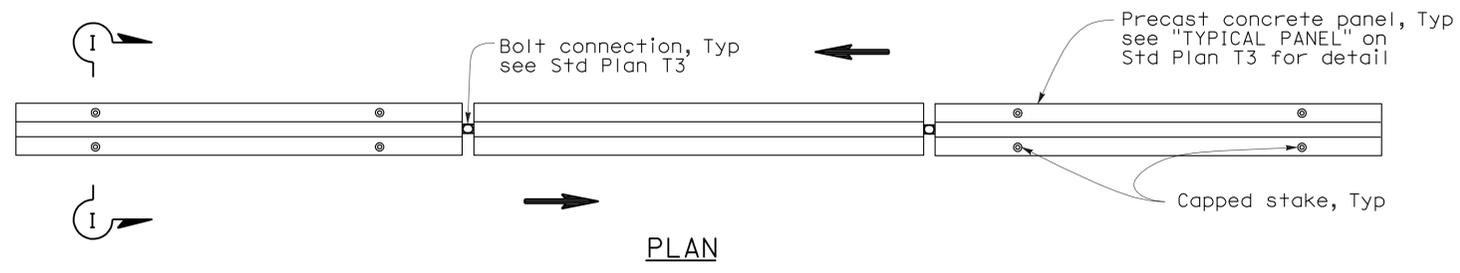
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	805	9.4/13.8	333	346

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

May 20, 2011
PLANS APPROVAL DATE

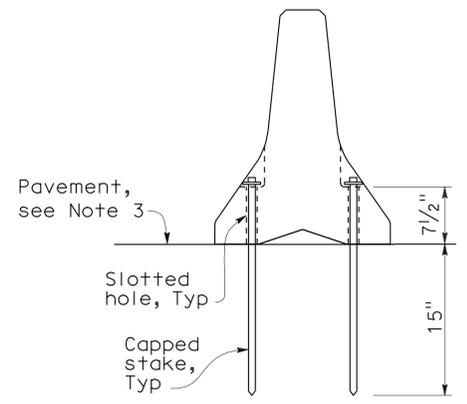
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 11-7-11



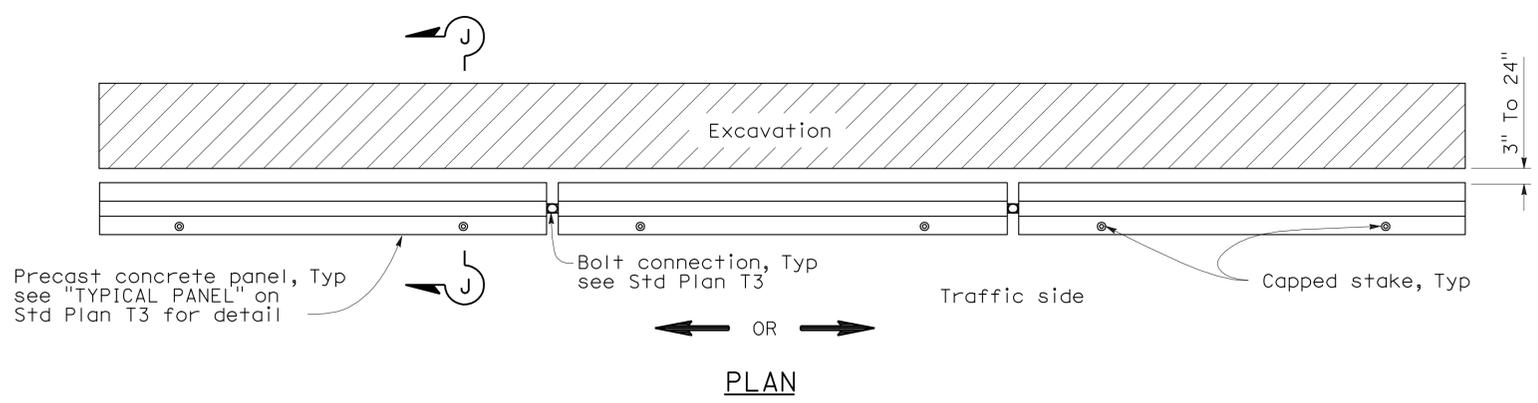
RAILING STAKING CONFIGURATION FOR TWO-WAY TRAFFIC

See Note 1



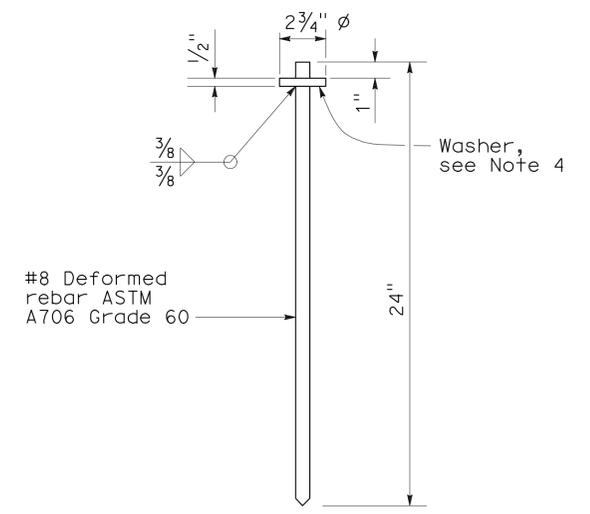
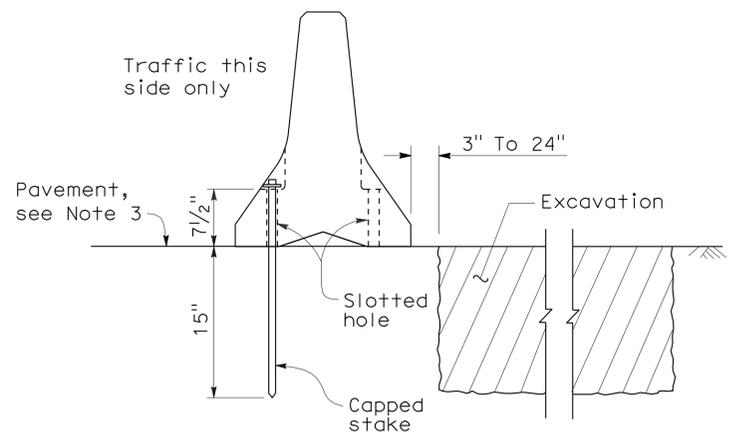
NOTES:

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



RAILING STAKING CONFIGURATION ADJACENT TO AN EXCAVATION

See Note 2



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY RAILING (TYPE K)

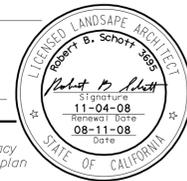
NO SCALE

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

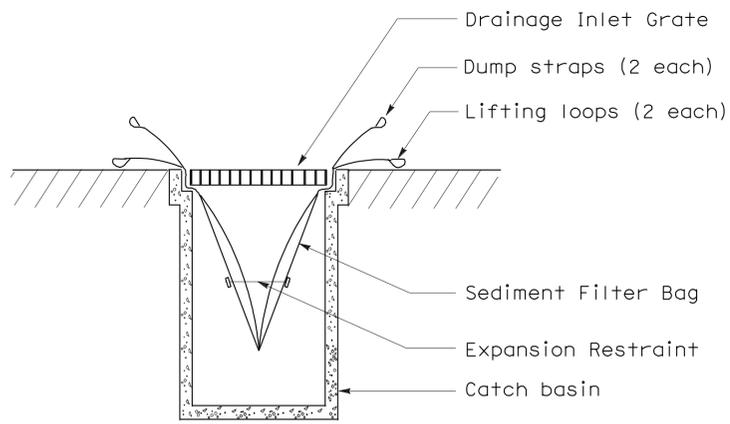
2006 NEW STANDARD PLAN NSP T3A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	805	9.4/13.8	335	346

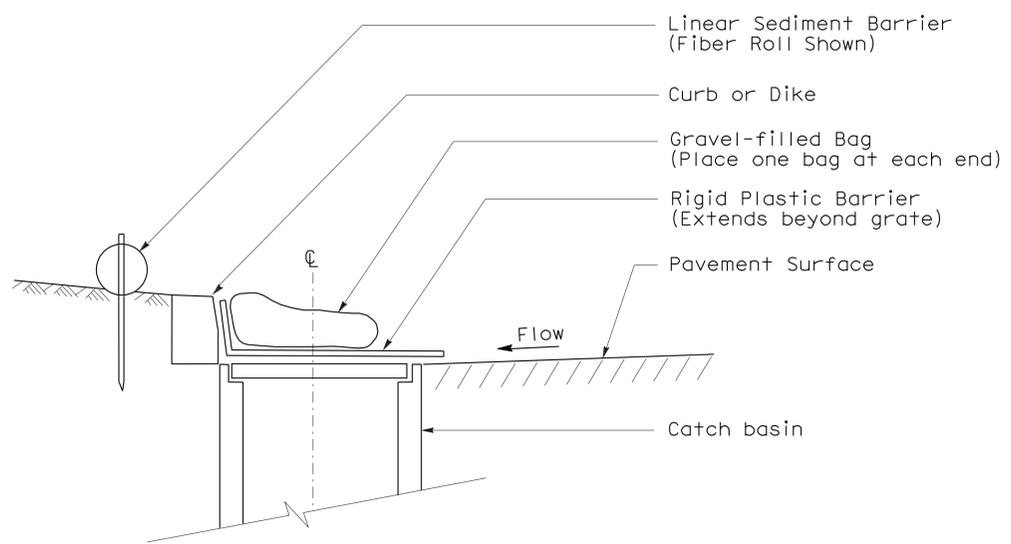
Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT
 August 15, 2008
 PLANS APPROVAL DATE
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



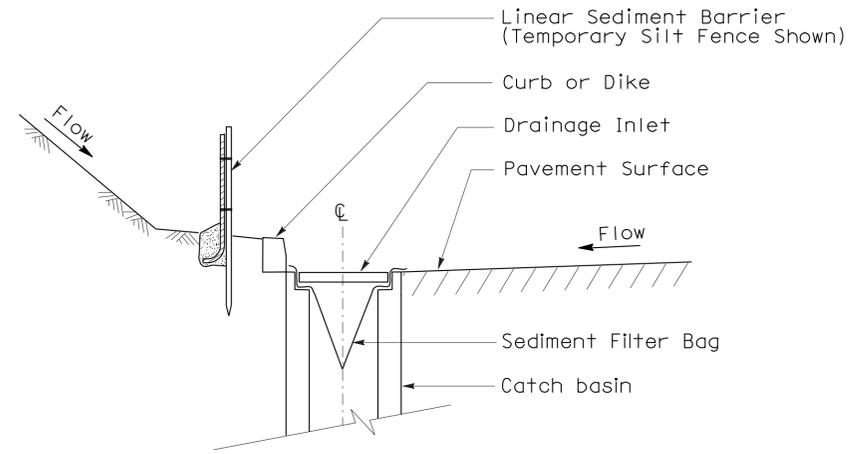
To accompany plans dated 11-7-11



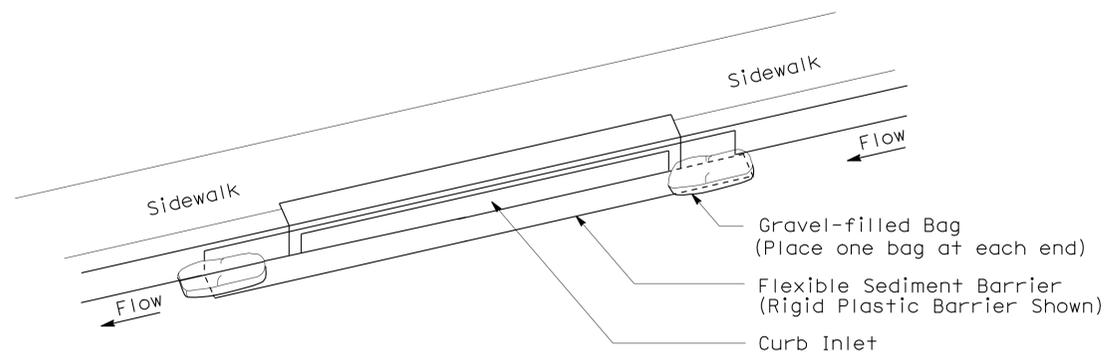
SECTION B-B
SEDIMENT FILTER BAG DETAIL



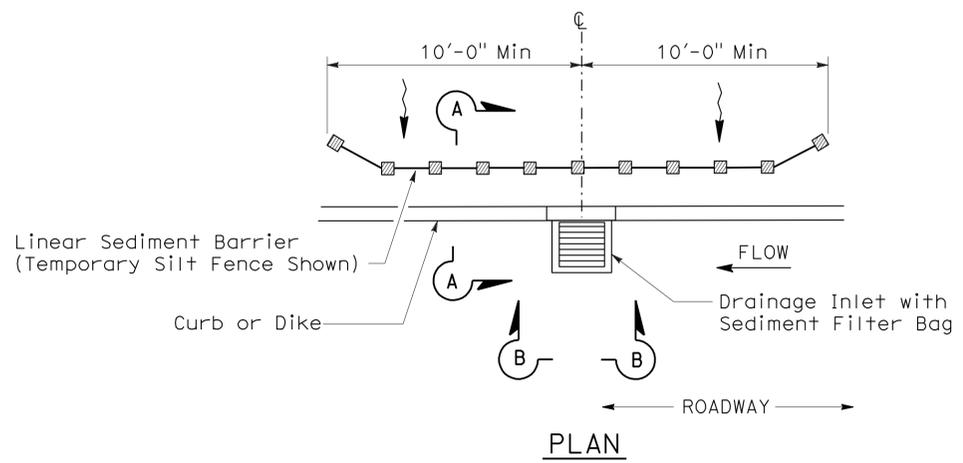
SECTION
TEMPORARY DRAINAGE
INLET PROTECTION (TYPE 6A)
(CATCH BASIN WITH GRATE)



SECTION A-A



PERSPECTIVE
TEMPORARY DRAINAGE
INLET PROTECTION (TYPE 6B)
(CURB INLET WITHOUT GRATE)



PLAN
TEMPORARY DRAINAGE
INLET PROTECTION (TYPE 5)
(SEDIMENT FILTER BAG)

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)

NO SCALE

NSP T64 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP T64

2006 NEW STANDARD PLAN NSP T64

ELECTROLIERS

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

NOTES:

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

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

STANDARD NOTES:

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

ABBREVIATIONS AND EQUIPMENT DESIGNATIONS

PROPOSED EXISTING

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	805	9.4/13.8	336	346

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

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

To accompany plans dated 11-7-11

SOFFIT AND WALL MOUNTED LUMINAIRES

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

NOTE:

Arrow indicates "street side" of luminaire.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(SYMBOLS AND ABBREVIATIONS)**

NO SCALE

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

REVISED STANDARD PLAN RSP ES-1A

2006 REVISED STANDARD PLAN RSP ES-1A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	805	9.4/13.8	337	346

Jeffery G. McRae
 REGISTERED ELECTRICAL ENGINEER
 October 5, 2007
 PLANS APPROVAL DATE
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

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

CONDUIT

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

SIGNAL EQUIPMENT

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

SERVICE EQUIPMENT

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

POLE-MOUNTED SERVICE DESIGNATION



ILLUMINATED OVERHEAD SIGN

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

SIGNAL EQUIPMENT Cont

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

NOTES:

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

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

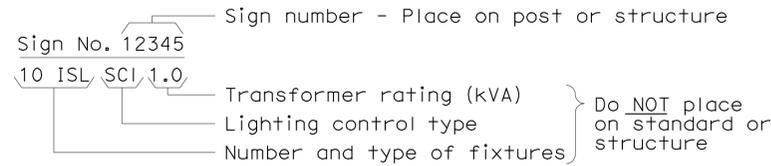
RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B
 DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1B

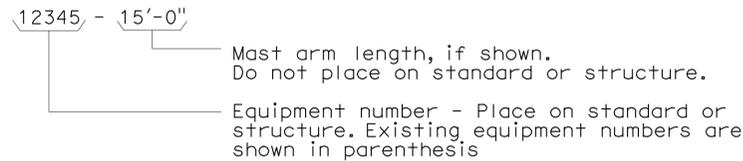
2006 REVISED STANDARD PLAN RSP ES-1B

EQUIPMENT IDENTIFICATION

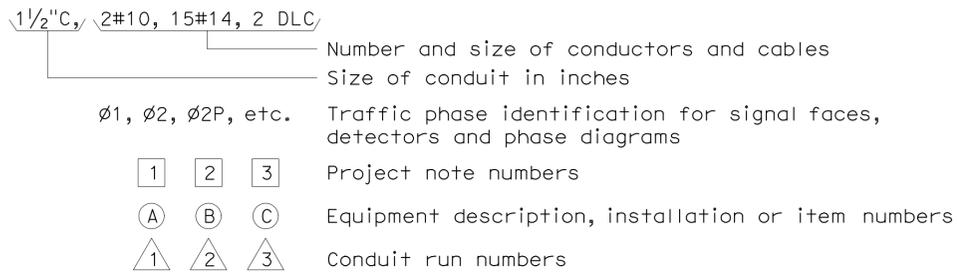
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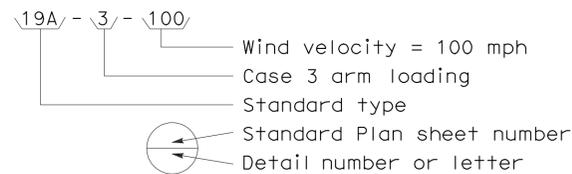
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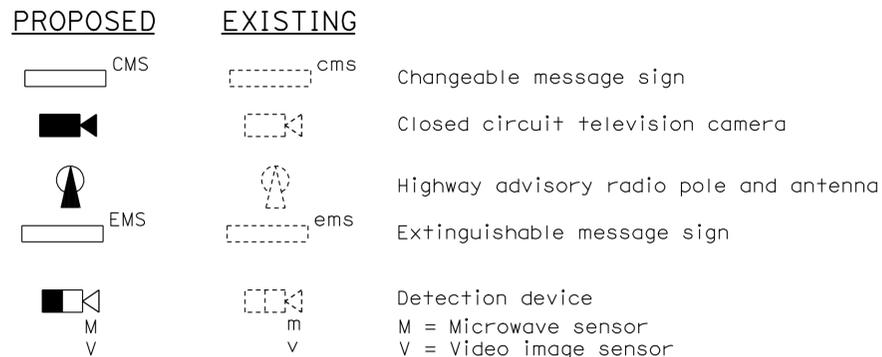
CONDUIT AND CONDUCTOR IDENTIFICATION:



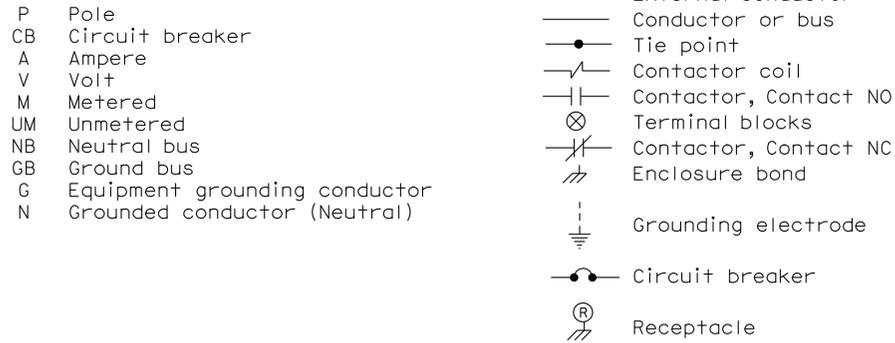
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



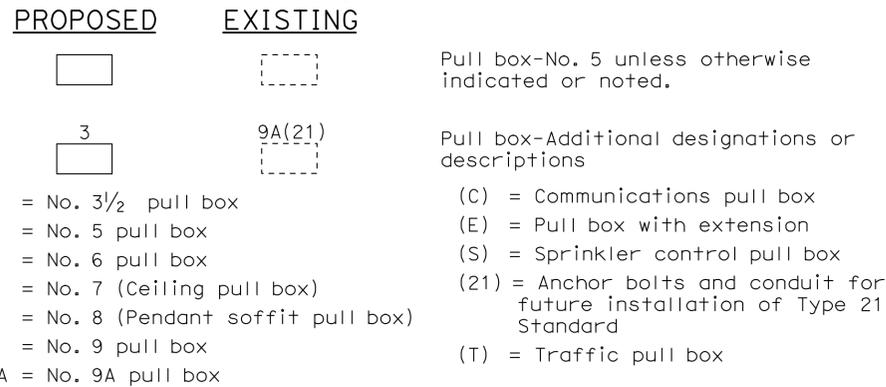
MISCELLANEOUS EQUIPMENT



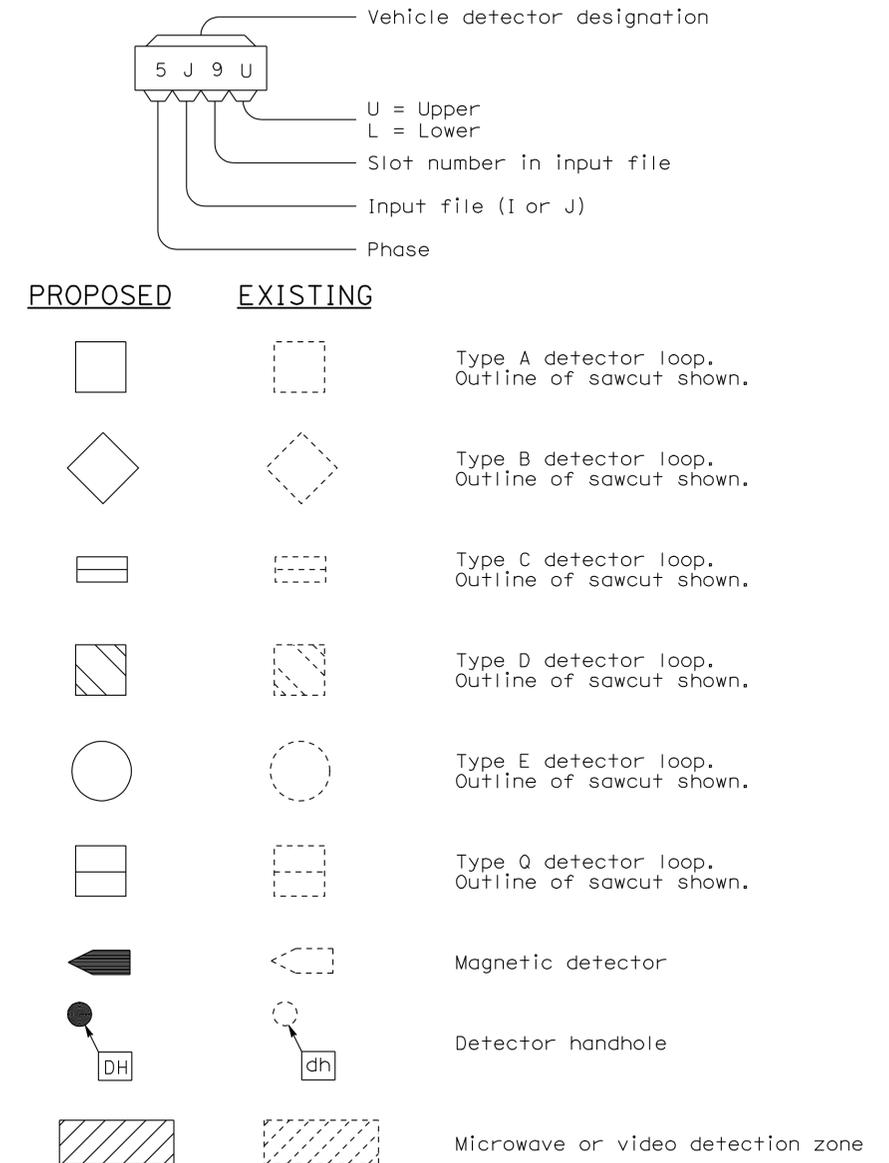
WIRING DIAGRAM LEGEND



PULL BOXES



VEHICLE DETECTORS



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

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

2006 REVISED STANDARD PLAN RSP ES-1C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	805	9.4/13.8	339	346

Jeffery G. McRae
 REGISTERED ELECTRICAL ENGINEER

October 5, 2007
 PLANS APPROVAL DATE

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

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

NOTES-TYPE III SERVICE EQUIPMENT ENCLOSURES:

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

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

To accompany plans dated 11-7-11

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

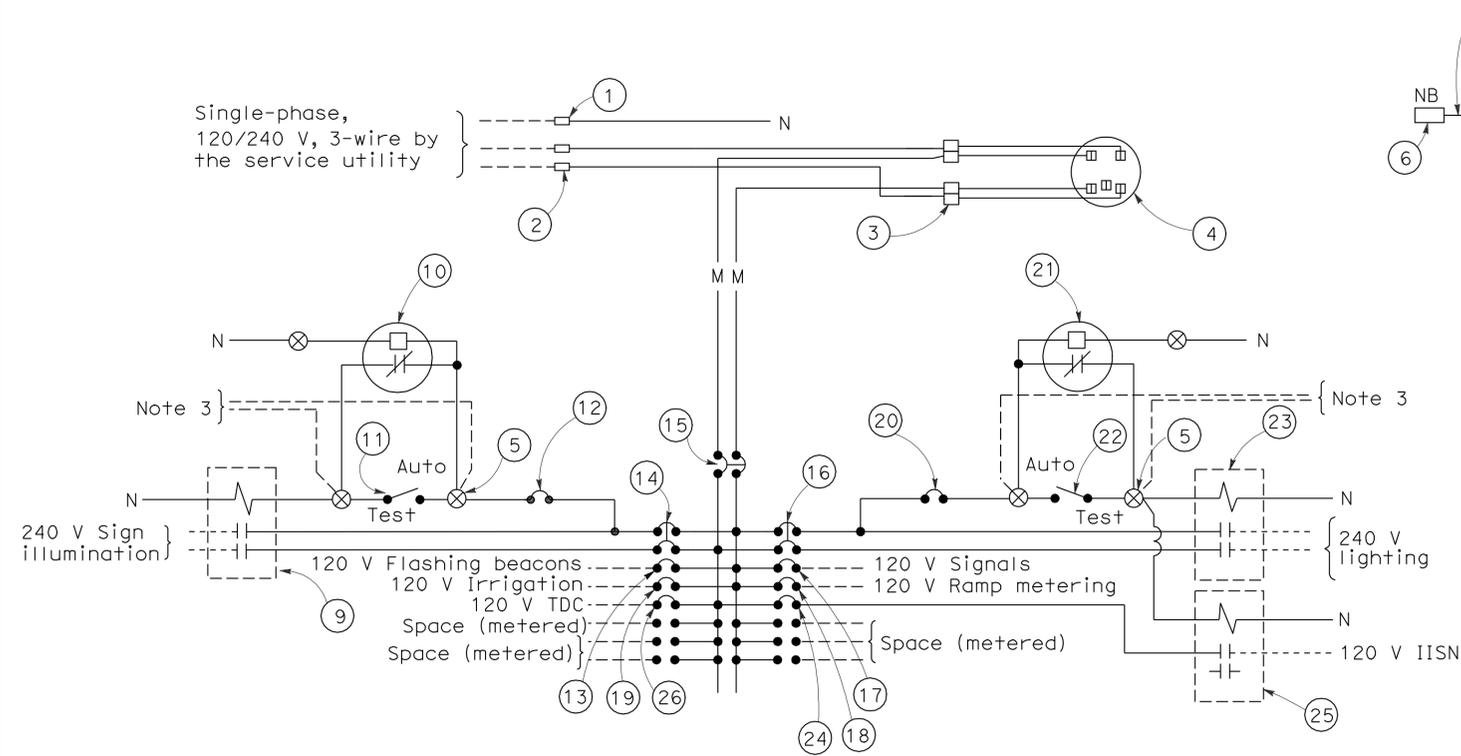
**ELECTRICAL SYSTEMS
(SERVICE EQUIPMENT NOTES
TYPE III SERIES)**

NO SCALE

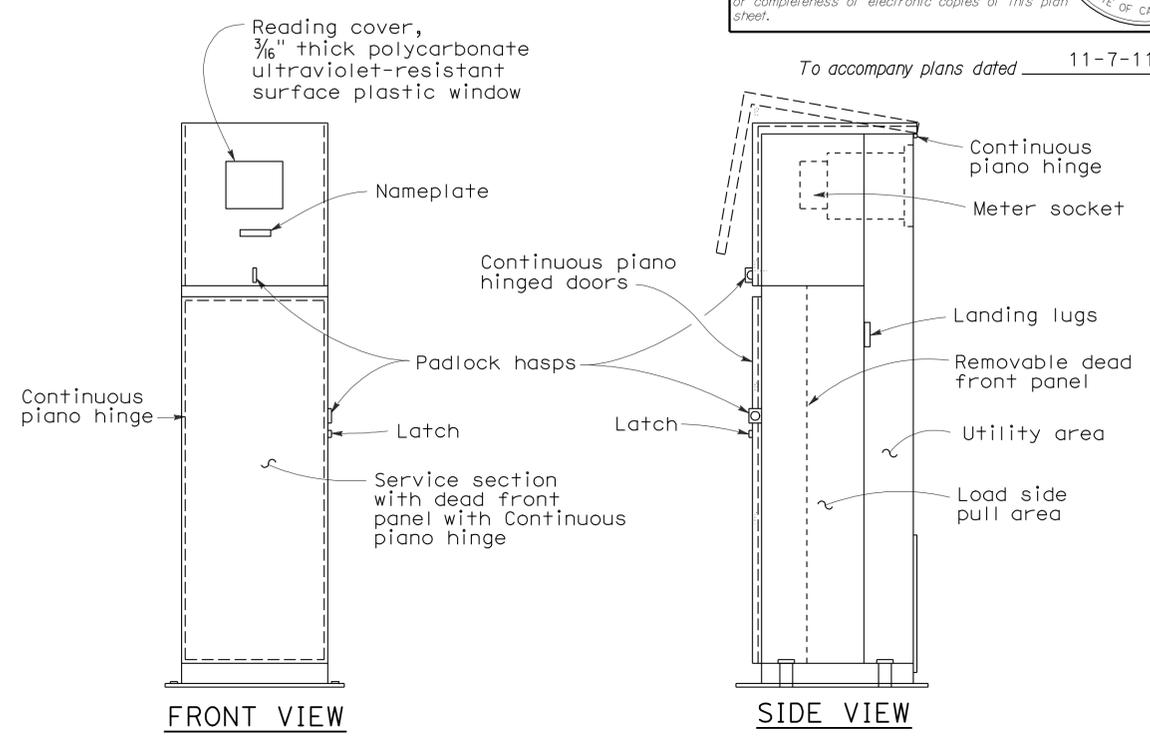
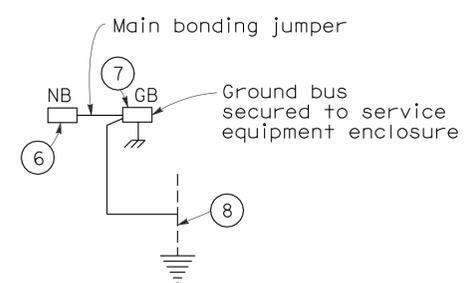
RSP ES-2C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-2C
DATED MAY 1, 2006 - PAGE 405 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-2C

2006 REVISED STANDARD PLAN RSP ES-2C



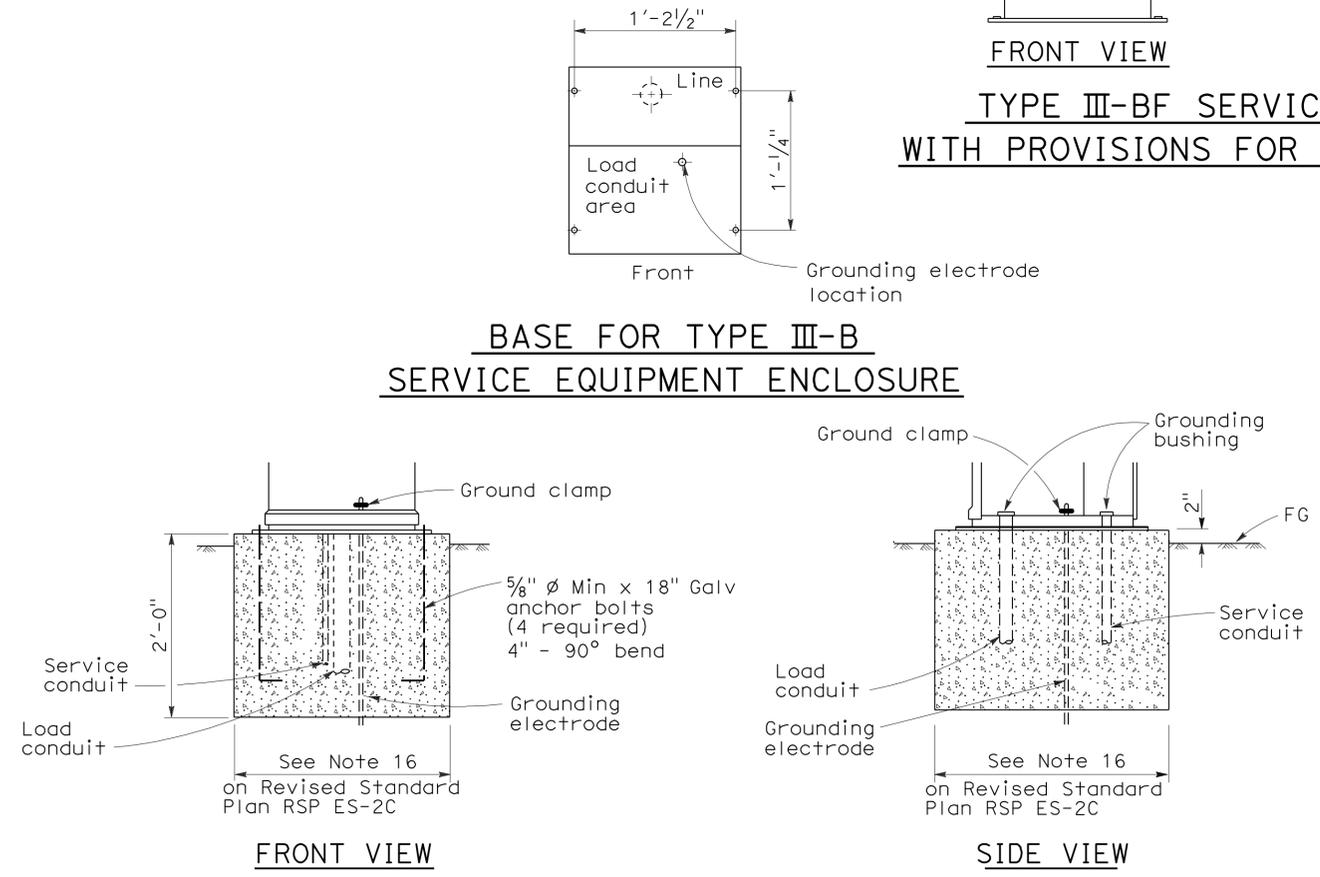
120/240 V SERVICE WIRING DIAGRAM (TYPICAL)



TYPE III-BF SERVICE EQUIPMENT ENCLOSURE WITH PROVISIONS FOR ONE 100 A METER (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, 1P, Test switch	Sign Illumination Test Switch
⑫	15 A, 120 V, 1P, CB	Sign Illumination Control
⑬	15 A, 120 V, 1P, 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, 1P, CB	Signals
⑱	30 A, 120 V, 1P, CB	Ramp Metering
⑲	20 A, 120 V, 1P, CB	Irrigation
⑳	15 A, 120 V, 1P, CB	Lighting Control
㉑	Photoelectric unit (Note 7)	
㉒	15 A, 1P, Test switch	Lighting Test Switch
㉓	60 A, 2PNO Contactor	Lighting
㉔	15 A, 120 V, 1P, CB	IISNS
㉕	30 A, 2PNO Contactor	IISNS
㉖	20 A, 120 V, 1P, CB	Telephone Demarcation Cabinet

BASE FOR TYPE III-B SERVICE EQUIPMENT ENCLOSURE



TYPE III-B SERVICE EQUIPMENT ENCLOSURE FOUNDATION DETAILS

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

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS (SERVICE EQUIPMENT AND TYPICAL WIRING DIAGRAM, TYPE III-B SERIES)
 NO SCALE

RSP ES-2E DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-2E DATED MAY 1, 2006 - PAGE 407 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP ES-2E

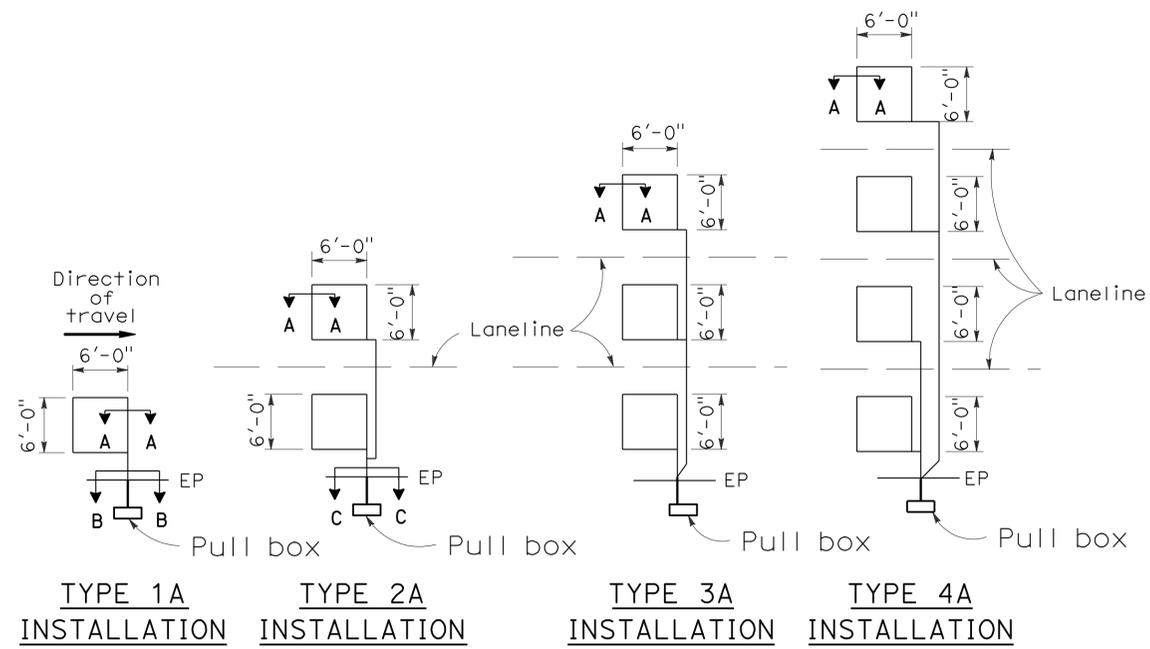
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	805	9.4/13.8	341	346

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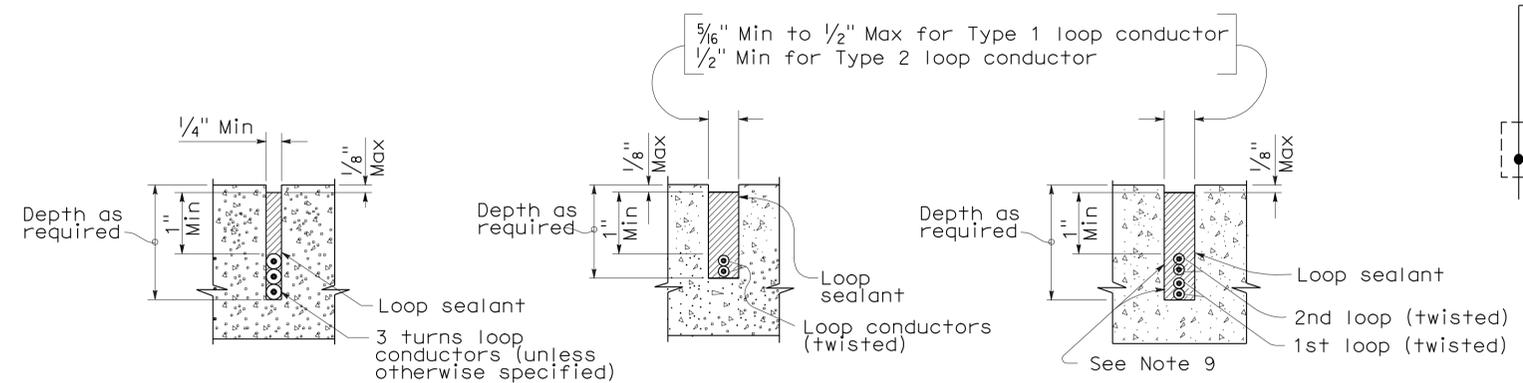
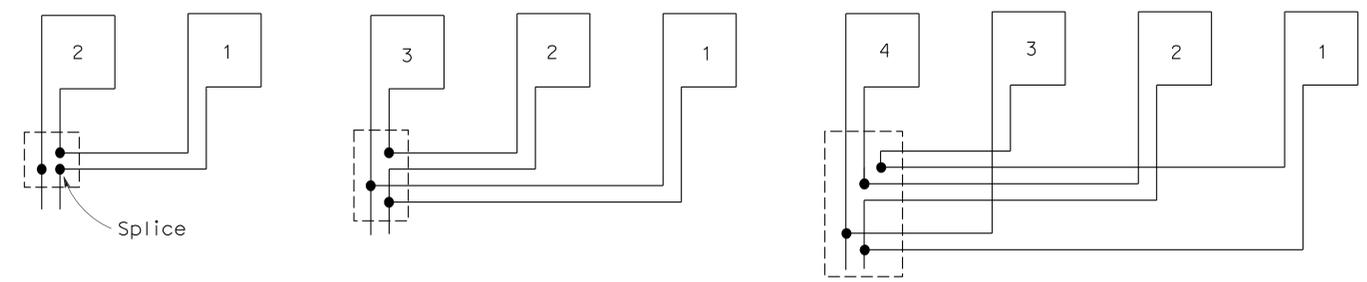
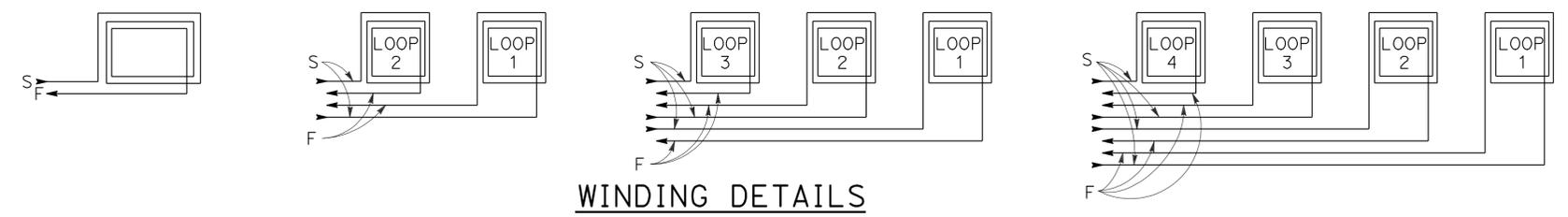
REGISTERED PROFESSIONAL ENGINEER
Jeffery G. McRae
 No. E14512
 Exp. 6-30-08
 ELECTRICAL
 STATE OF CALIFORNIA

LOOP INSTALLATION PROCEDURE

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



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



ELECTRICAL SYSTEMS (DETECTORS)

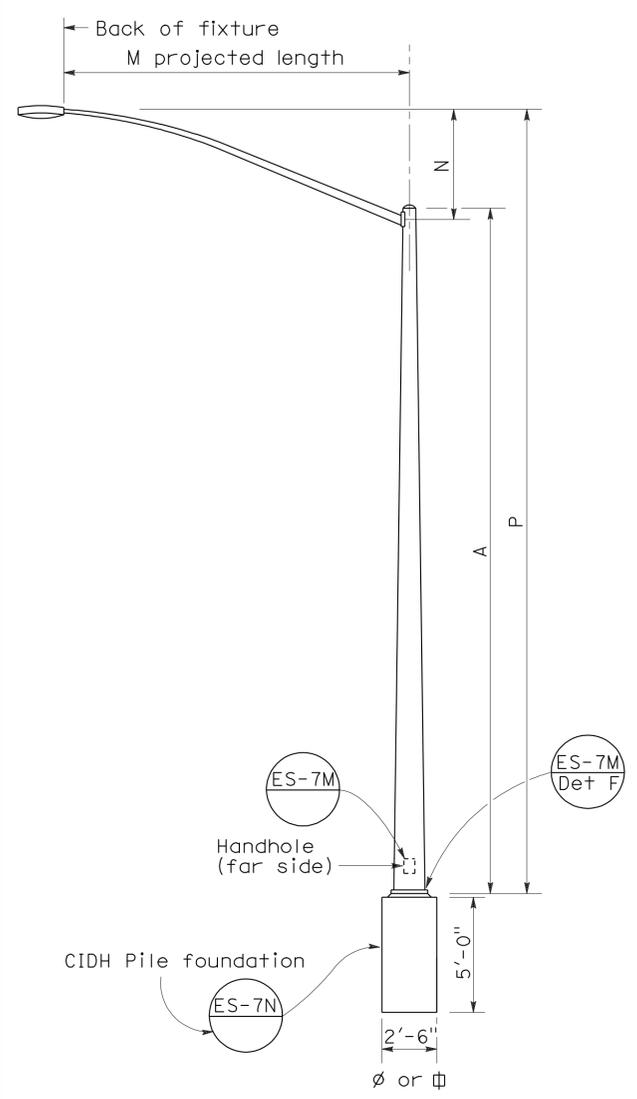
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

NO SCALE

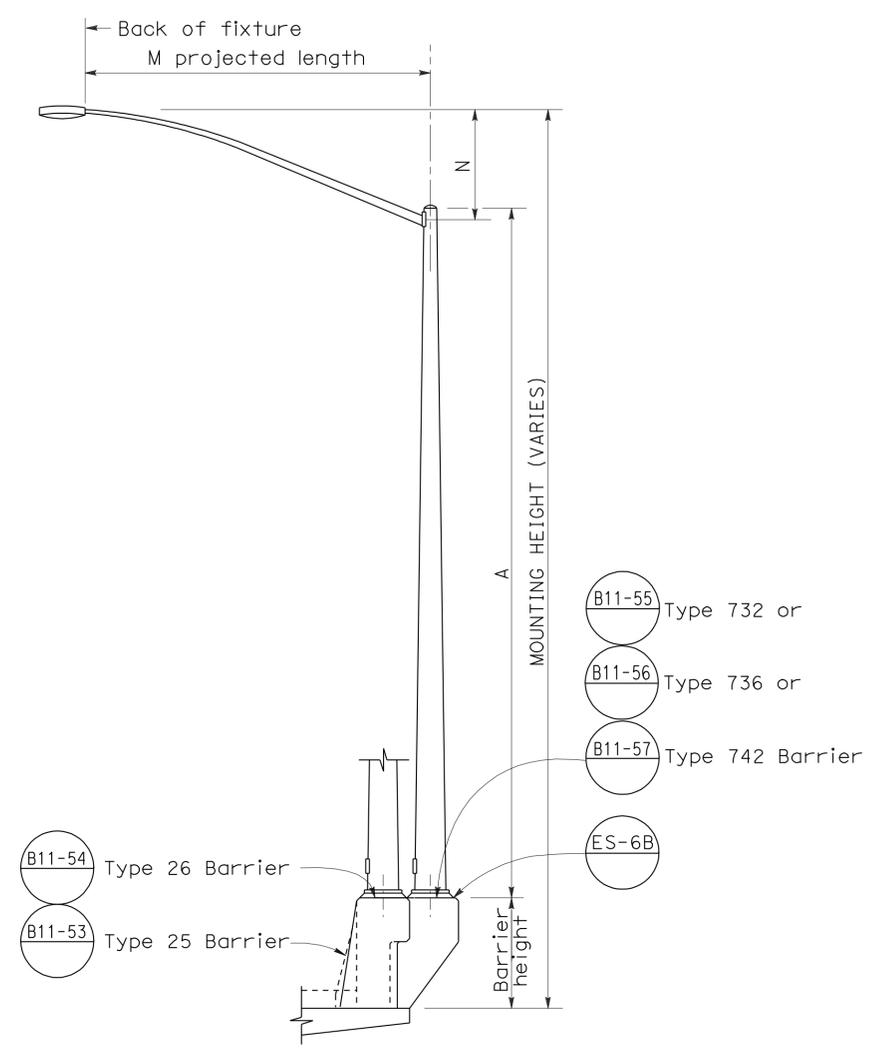
RSP ES-5A DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-5A
DATED MAY 1, 2006 - PAGE 423 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP ES-5A

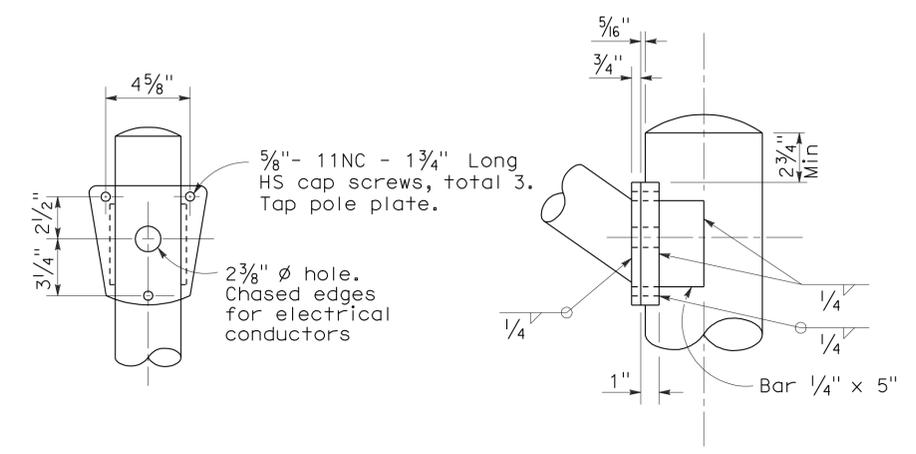
To accompany plans dated 11-7-11



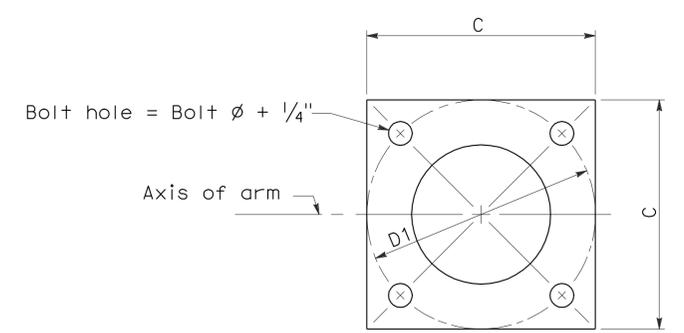
ELEVATION
TYPE 15 AND TYPE 21



ELEVATION
TYPE 15 AND TYPE 21 BARRIER RAIL MOUNTED



DETAIL R
LUMINAIRE ARM CONNECTION



BASE PLATE

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

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

M Projected Length	N Rise	Min OD At Pole	Nominal Thickness	LUMINAIRE ARM DATA	
				Type 15	Type 21
6'-0"	2'-0"±	3/4"	0.1196"	31'-6"±	36'-6"±
8'-0"	2'-6"±	3/2"	0.1196"	32'-0"±	37'-0"±
10'-0"	3'-3"±	3 7/8"	0.1196"	32'-9"±	37'-9"±
12'-0"	4'-3"±	3 7/8"	0.1196"	33'-9"±	38'-9"±
15'-0"	4'-9"±	4 1/4"	0.1196"	34'-3"±	39'-3"±

NOTES:

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

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

NO SCALE

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

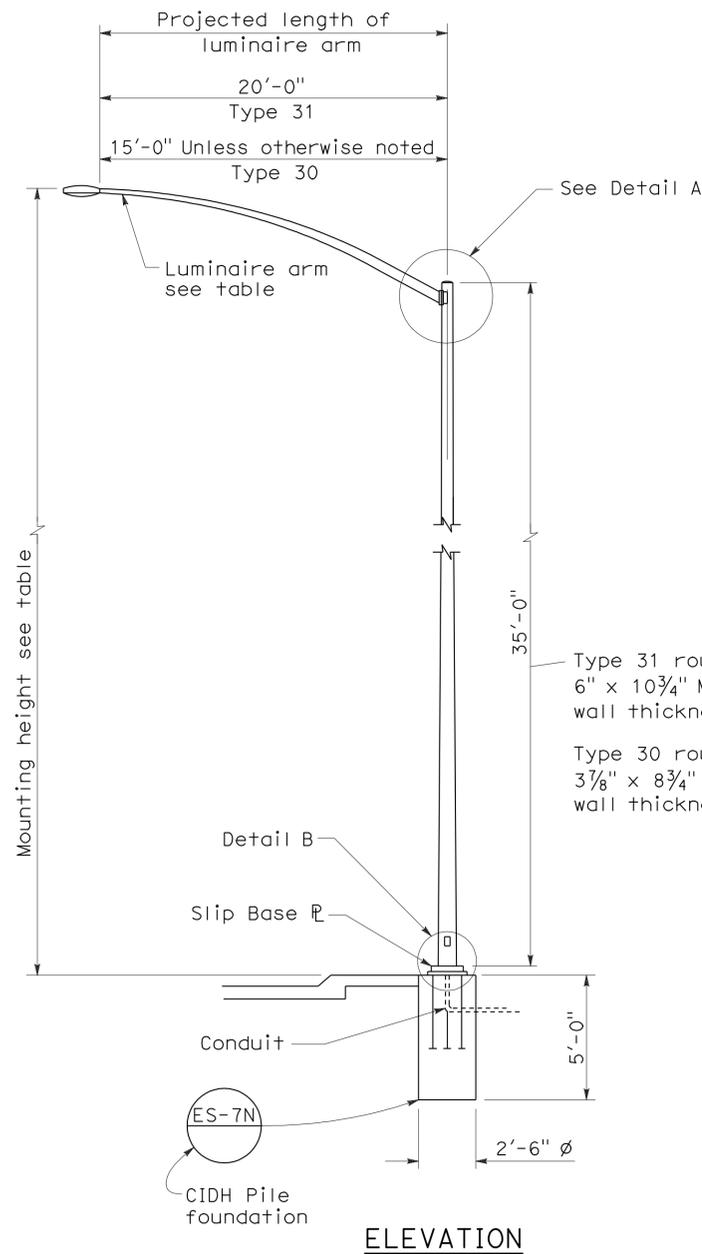
REVISED STANDARD PLAN RSP ES-6A

2006 REVISED STANDARD PLAN RSP ES-6A

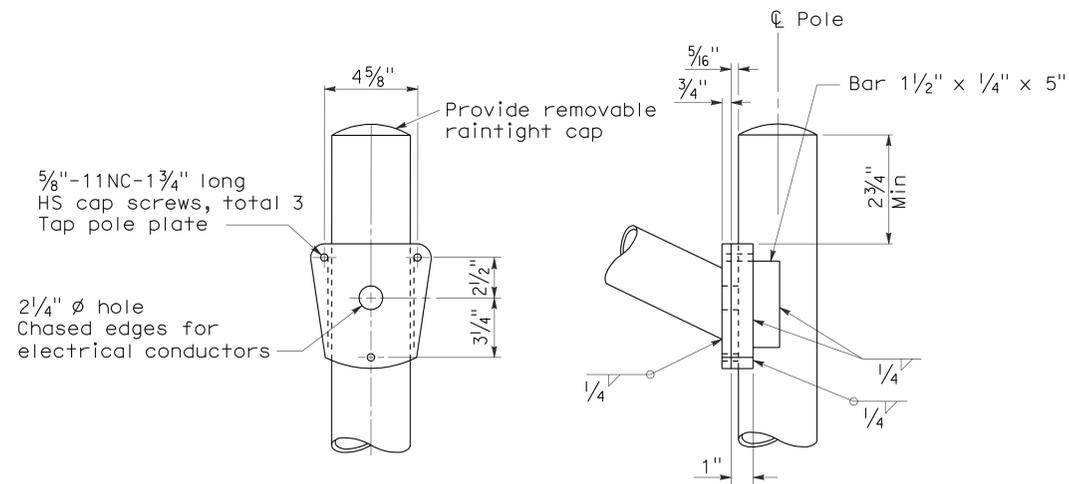
LUMINAIRE ARM DATA

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

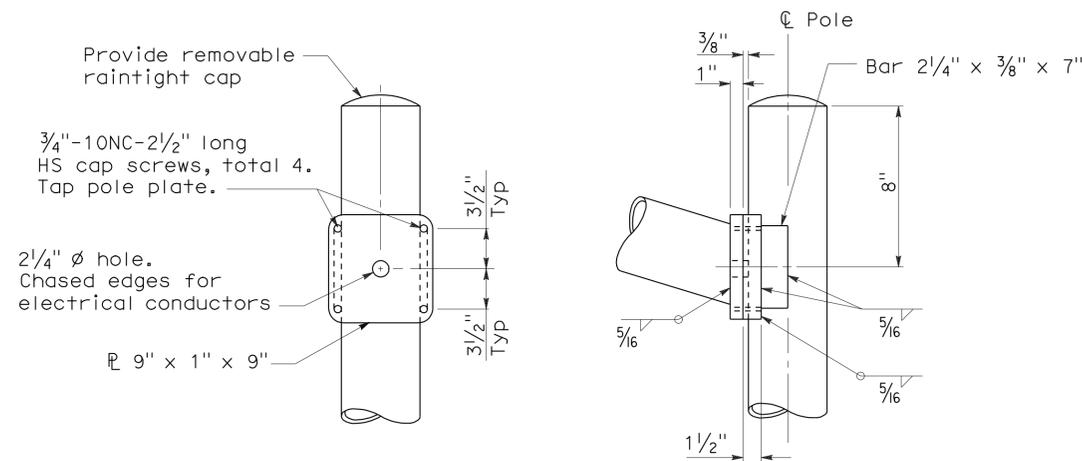
* Type 30 - arm length 6'-0" - 15'-0" maximum
 ** Type 31 - arm lengths 20'-0"



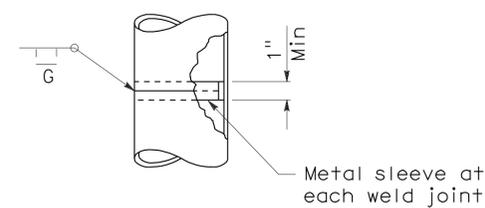
ELEVATION



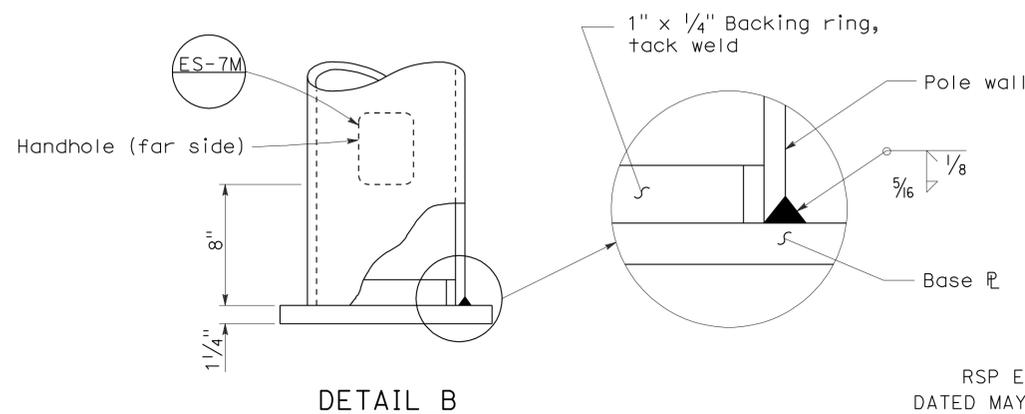
DETAIL A - TYPE 30



DETAIL A - TYPE 31



POLE SPLICE



DETAIL B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	805	9.4/13.8	343	346

Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 January 18, 2008
 PLANS APPROVAL DATE
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To accompany plans dated 11-7-11

NOTES:

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

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (LIGHTING STANDARD
 TYPES 30 AND 31)**

NO SCALE

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

REVISED STANDARD PLAN RSP ES-6E

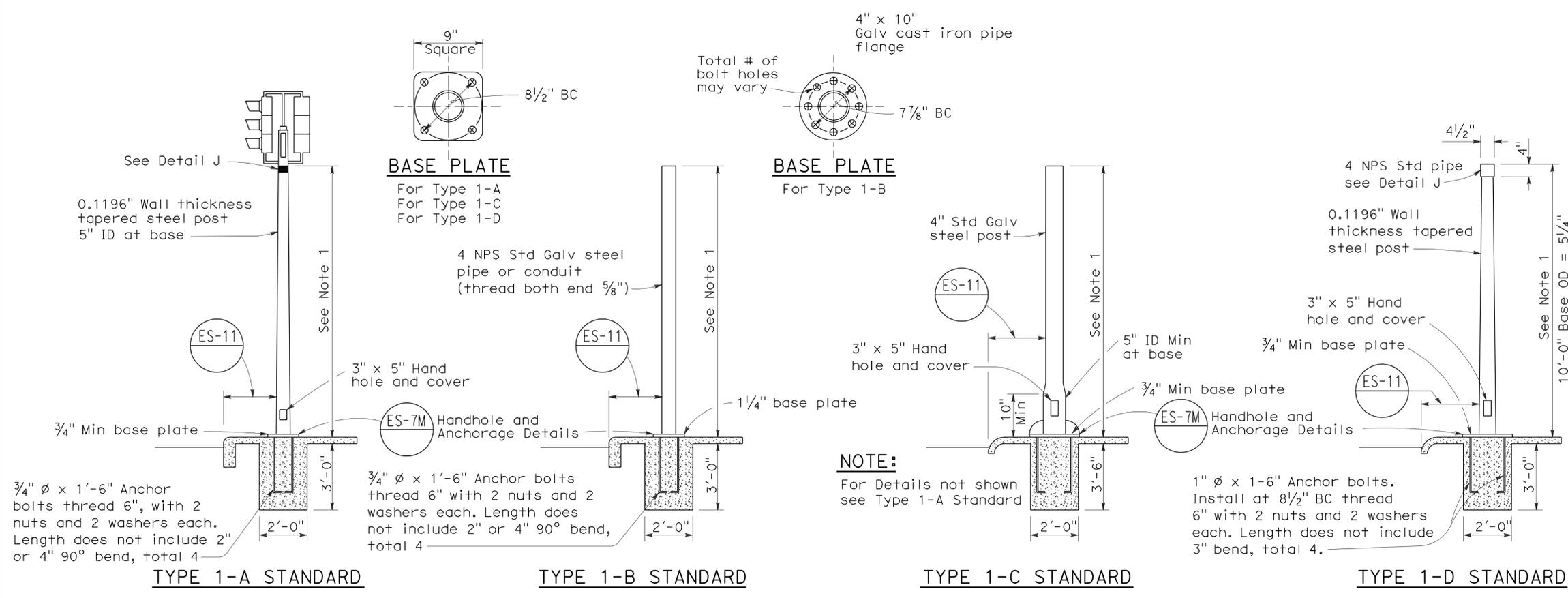
2006 REVISED STANDARD PLAN RSP ES-6E

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	805	9.4/13.8	344	346

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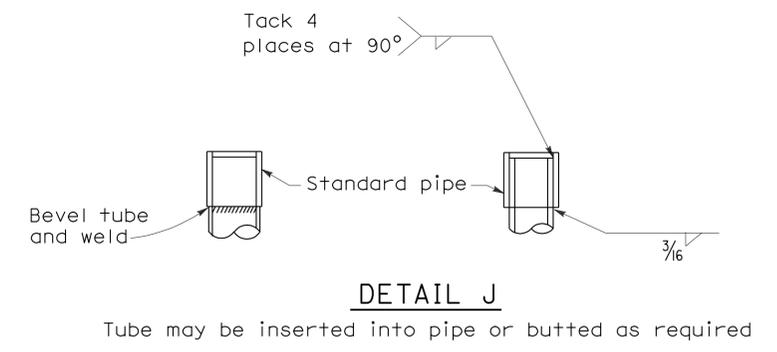
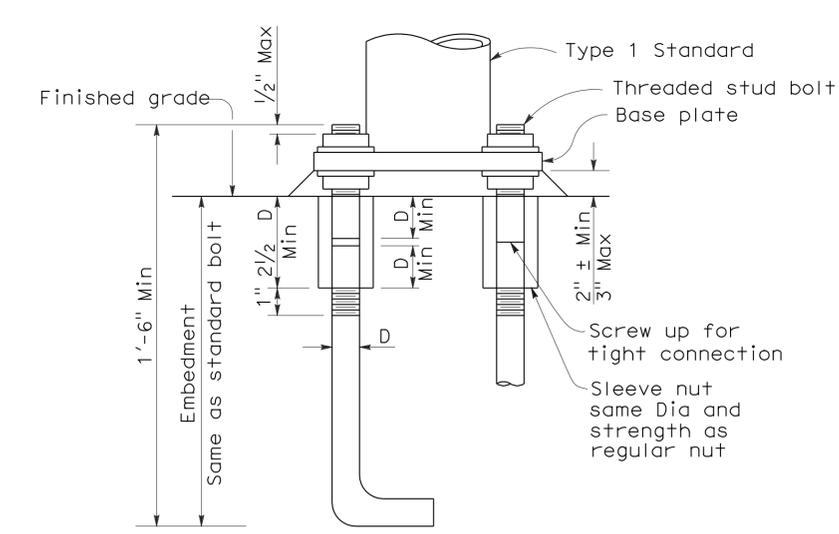
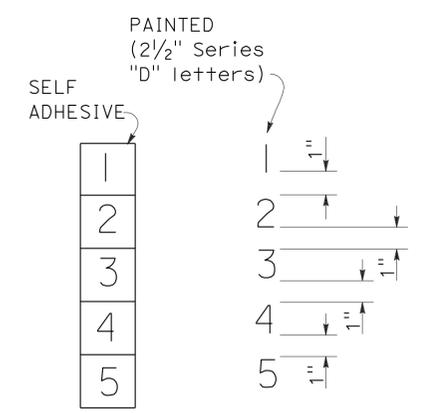
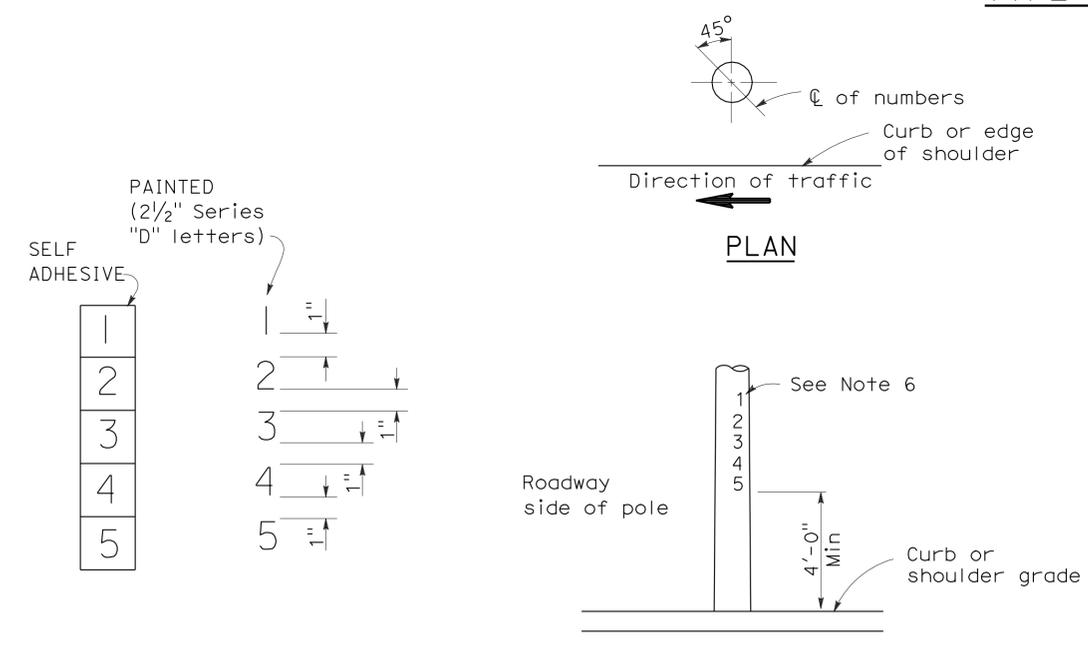
REGISTERED PROFESSIONAL ENGINEER
 Stanley P. Johnson
 No. C57793
 Exp. 3-31-08
 CIVIL
 STATE OF CALIFORNIA

To accompany plans dated 11-7-11



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

TYPE 1 SIGNAL STANDARDS



LOCATION OF EQUIPMENT NUMBERS ON STANDARDS AND POSTS

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

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

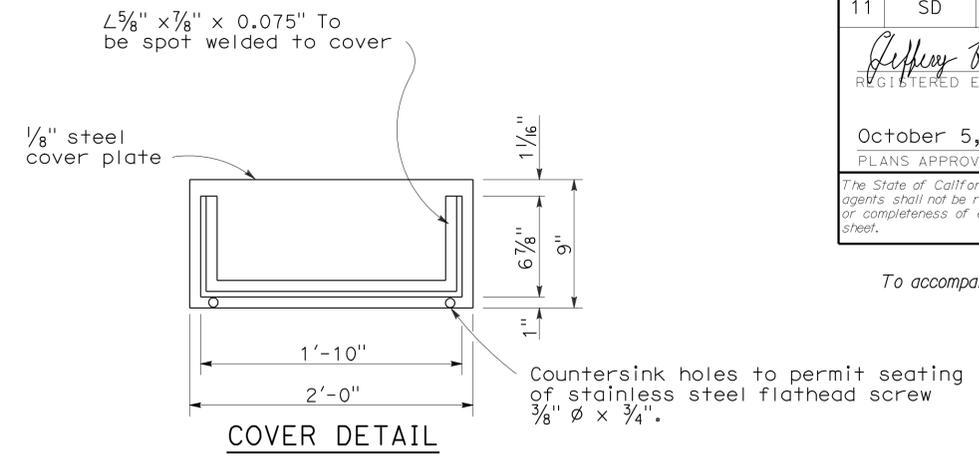
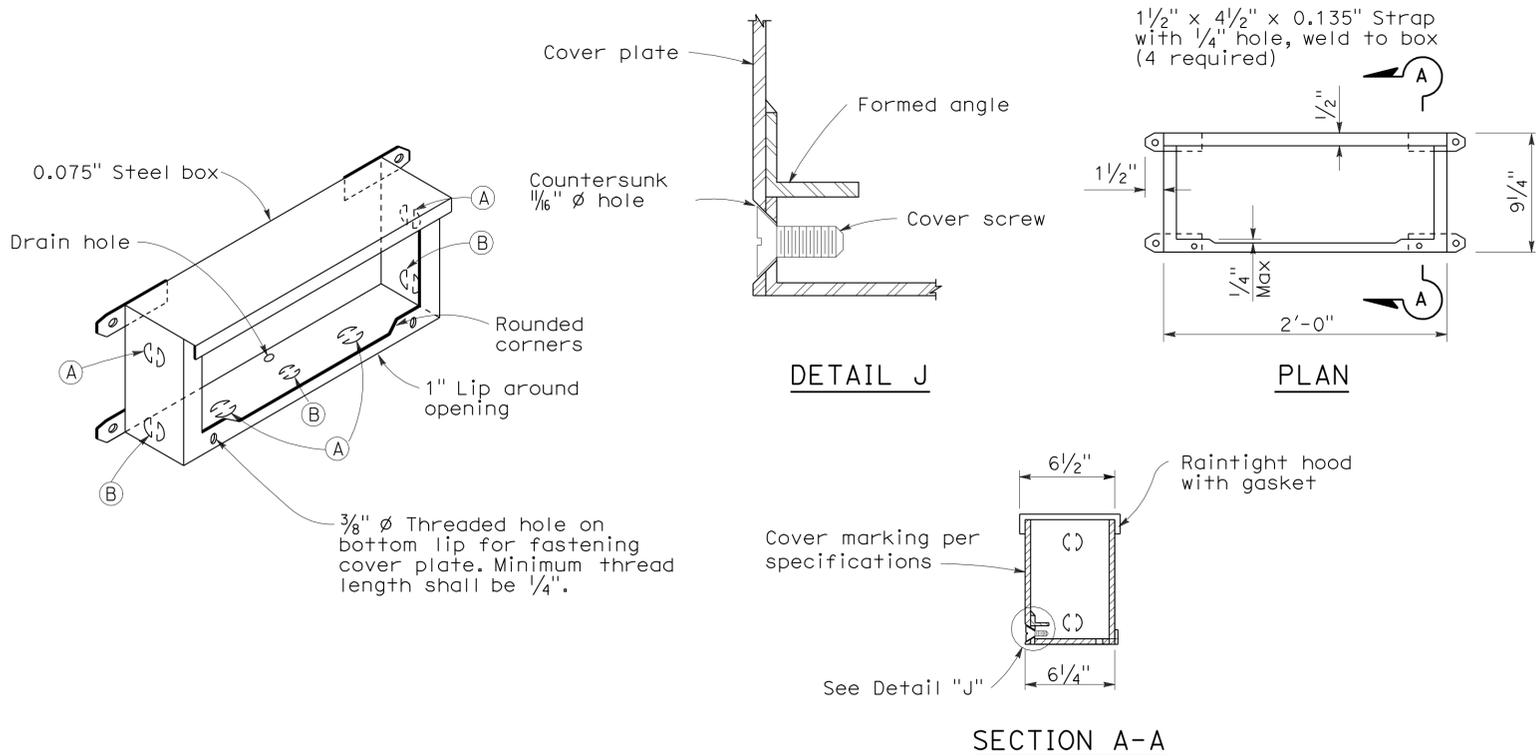
2006 REVISED STANDARD PLAN RSP ES-7B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	805	9.4/13.8	345	346

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

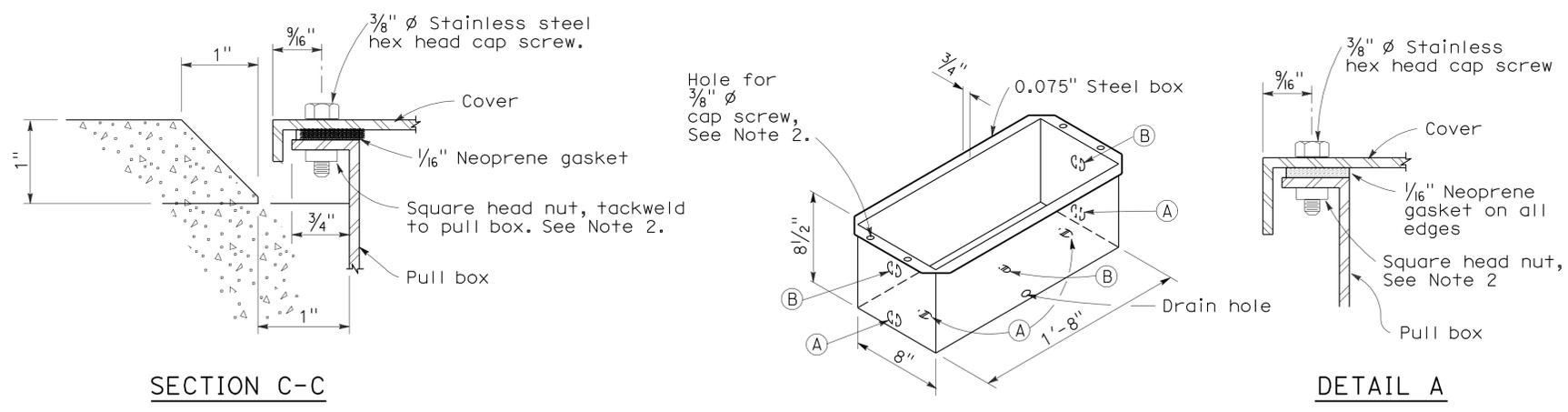
October 5, 2007
 PLANS APPROVAL DATE

To accompany plans dated 11-7-11



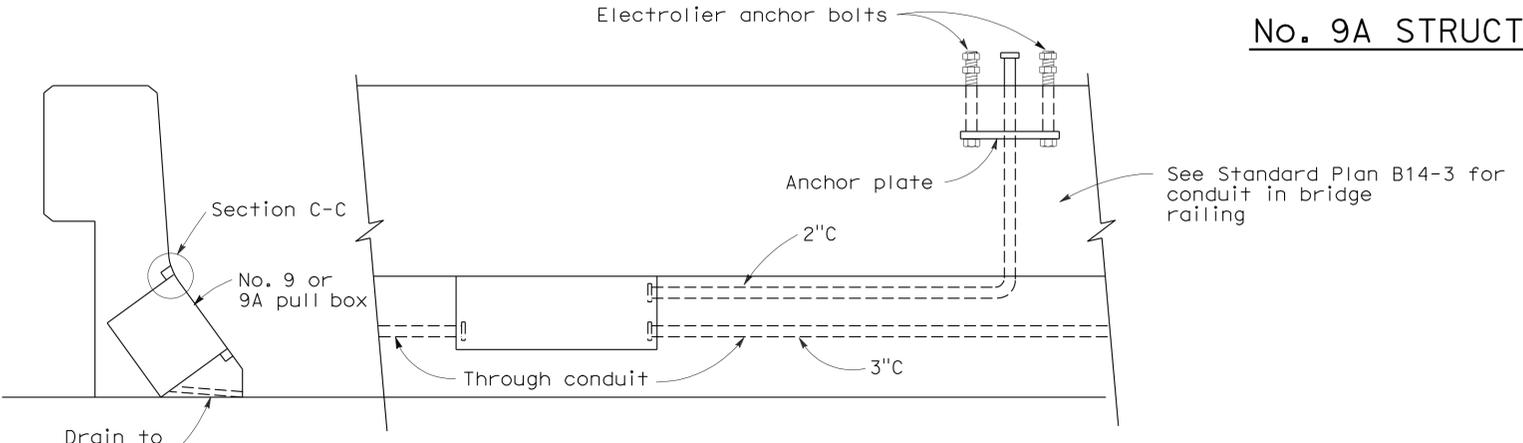
INSTALLATION NOTE:
 Box shall be parallel to top of railing. Close cover box during pouring with 1/4" plywood of sufficient size to provide 1:1 chamfer on 3 sides of cover. Upper edge of plywood shall fit against lower edge of raintight hood.

No. 9 STRUCTURE PULL BOX



- NOTES:** No. 9 and 9A Pull Box
- Corner joints shall be lapped and secured by spot welding or riveting.
 - Where cap screws are used to attach cover to box, either of the following methods of providing adequate threading may be used:
 - Tack weld square nut to bottom of flange (Total 4), or
 - Tack weld a 1/4" x 5/8" x 8" bar beneath flange (Total 2).
 - Pound knockouts flat after punching.
 - Multiple size knockouts shall not be permitted.
 - Pull box covers shall be marked as shown on Standard Plan ES-8.

No. 9A STRUCTURE PULL BOX



- KNOCKOUT SCHEDULE**
No. 9 AND 9A PULL BOX
- (A) 2"C, 1 each end, 2 on bottom.
 - (B) 3"C, 1 each end, 1 on bottom.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
 (ELECTRICAL DETAILS
 STRUCTURE INSTALLATIONS)**

NO SCALE
 RSP ES-9C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-9C
 DATED MAY 1, 2006 - PAGE 456 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-9C

2006 REVISED STANDARD PLAN RSP ES-9C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	805	9.4/13.8	346	346

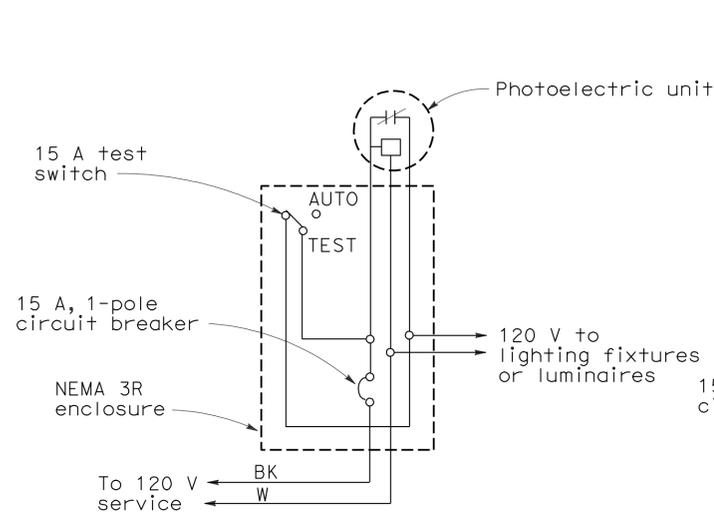
Jeffery G. McRae
 REGISTERED ELECTRICAL ENGINEER
 October 5, 2007
 PLANS APPROVAL DATE
 No. E14512
 Exp. 6-30-08
 ELECTRICAL
 STATE OF CALIFORNIA

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NOTES: (FOR LIGHTING AND SIGN ILLUMINATION CONTROL)

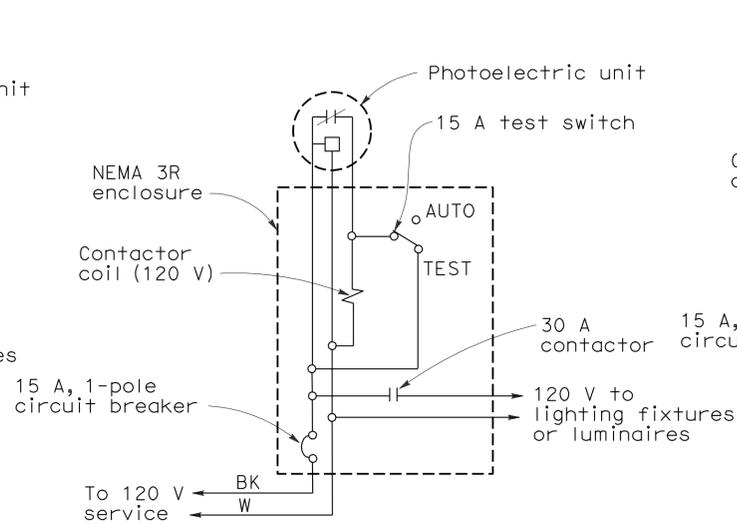
1. The ballast voltages of lighting fixtures and luminaires shall match line service voltages.
2. Voltage rating of photoelectric controls shall conform to the service voltage indicated on the plans.
3. Terminal strip shall be provided for wiring to fixtures.
4. Type SC1A, SC2A, SC3A controls are similar to Types SC1, SC2 and SC3 controls respectively except test switch and wiring are not required.

To accompany plans dated 11-7-11



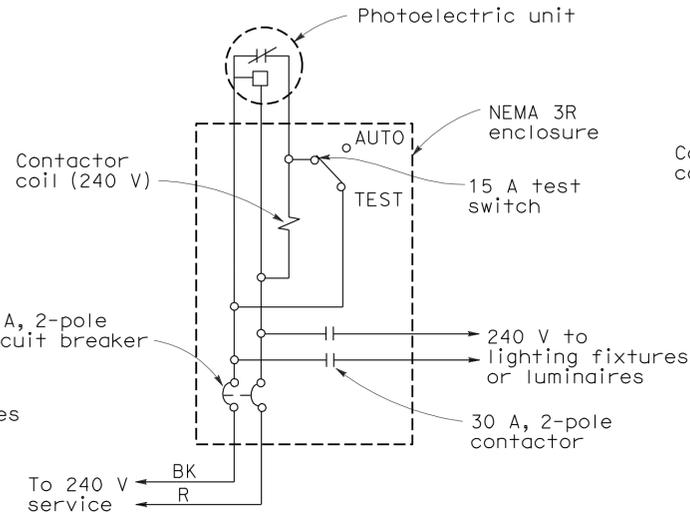
TYPE LC1 CONTROL

For 120 V unswitched circuit with no more than 800 W load.



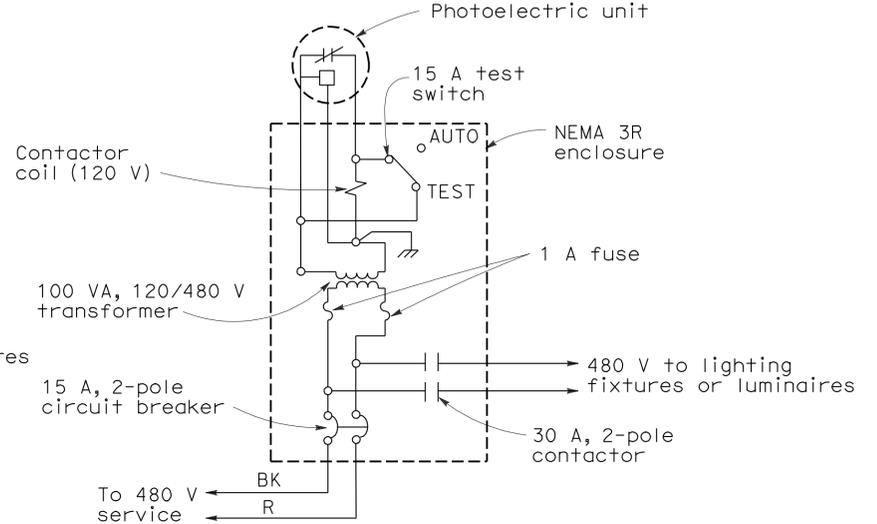
TYPE LC2 CONTROL

For 120 V unswitched circuit



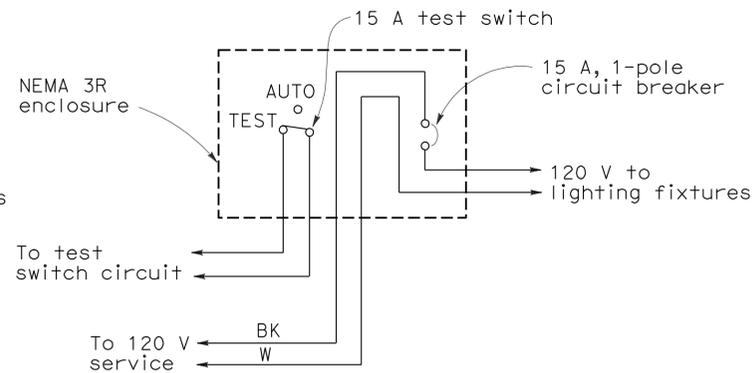
TYPE LC3 CONTROL

For 240 V and 480 V unswitched circuits



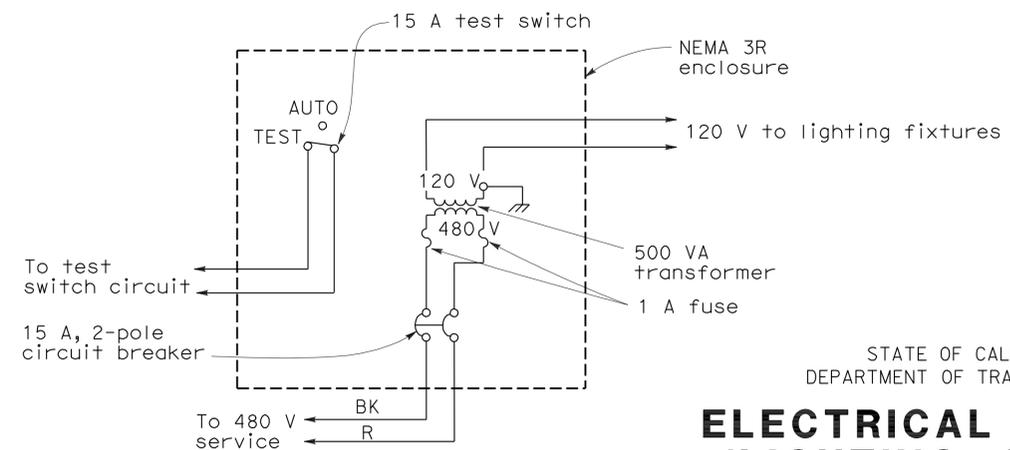
TYPE SC1 CONTROL

For 240 V or 480 V switched circuit, see Note 4 for Type SC1A



TYPE SC2 CONTROL

For 120 V switched circuit, see Note 4 for Type SC2A



TYPE SC3 CONTROL

For 480 V switched sign circuit, see Note 4 for Type SC3A

ELECTRICAL SYSTEMS (LIGHTING AND SIGN ILLUMINATION CONTROL)

NO SCALE

RSP ES-15D DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-15D DATED MAY 1, 2006 - PAGE 472 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-15D

2006 REVISED STANDARD PLAN RSP ES-15D