

INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
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THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.

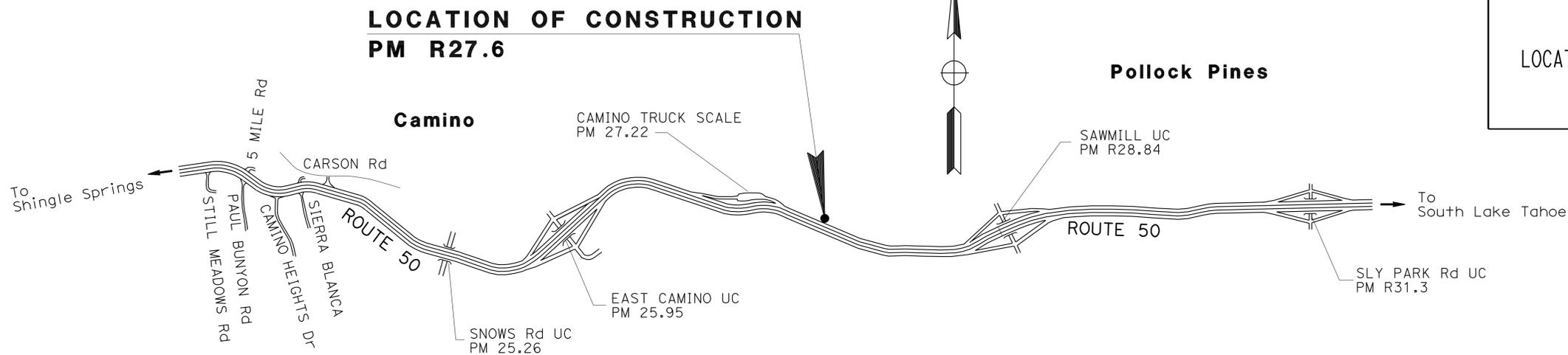
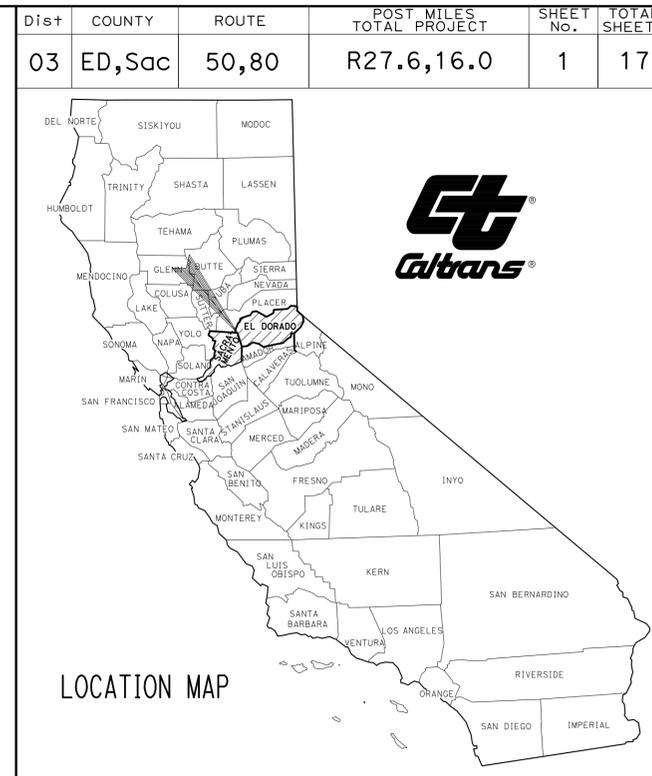
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ACSTP-000C(320)E

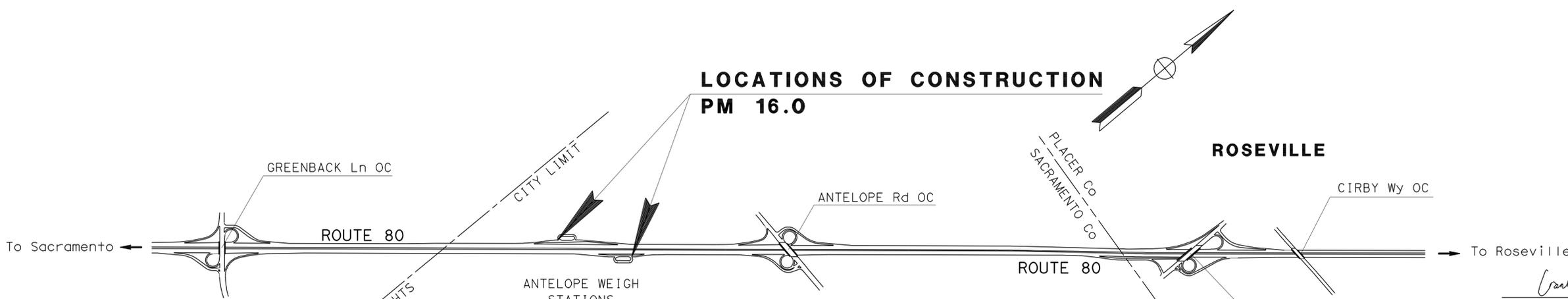
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY

IN EL DORADO COUNTY
AT 0.4 MILE EAST OF CAMINO TRUCK WEIGH STATION
AND IN SACRAMENTO COUNTY
AT ANTELOPE WEIGH STATIONS

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006



EL DORADO COUNTY
NO SCALE



CITRUS HEIGHTS
SACRAMENTO COUNTY
NO SCALE

Crnkul 02-10-10
PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER
March 29, 2010
PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



CONTRACT No. **03-OF5804**
PROJECT ID **030000093**

PROJECT MANAGER
SERGIO ACEVES
DESIGN ENGINEER
AI K. TRAN

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



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	ED,Sac	50,80	R27.6,16.0	3	17

H. Golban 02-10-10
REGISTERED ELECTRICAL ENGINEER

3-29-10
PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER
HABIB GOLBAN
No. E-17928
Exp. 09-30-10
ELECT

GENERAL NOTES:

- FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
- EXACT LOCATION OF THE CABINETS WILL BE DETERMINED BY THE ENGINEER.

PROJECT NOTES:

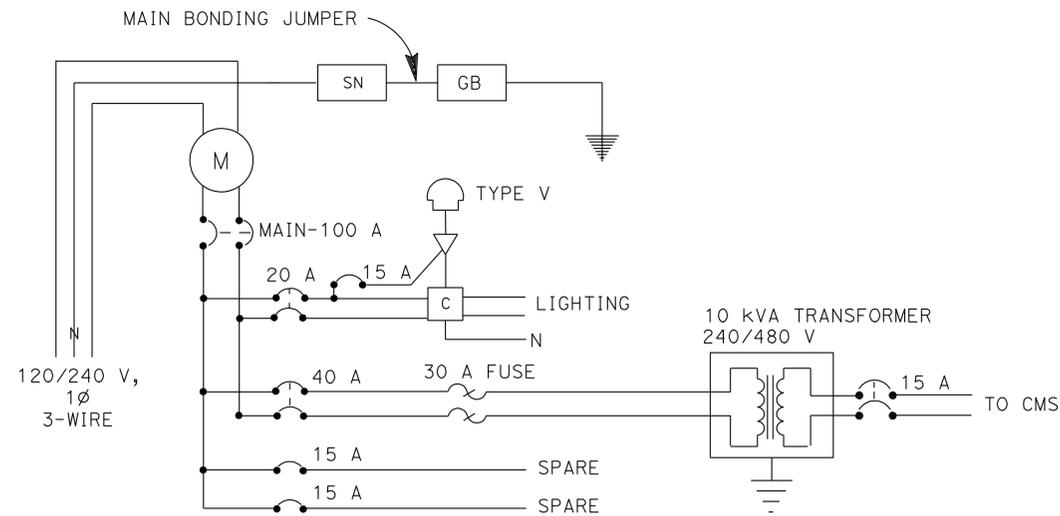
- Exist 2#8.
- Exist SERVICE EQUIPMENT ENCLOSURE CABINET.
- INSTALL TYPE III-AF SERVICE EQUIPMENT ENCLOSURE CABINET (120/240 V), ON NEW FOUNDATION, SINGLE PHASE, 3 WIRE SYSTEM.
- Exist 3#2 (FROM SERVICE POINT).
- Exist TELEPHONE CABLE (FROM SERVICE POINT).
- INSTALL TYPE B TELEPHONE DEMARCATION CABINET, ON NEW FOUNDATION.
- Exist 2#8, 3#14, 2#10, 1 FIBER.
- AB Exist 2#8, 3#14.
- 2"C, 2#2, 1#2(G).
- 2"C, 1 TELEPHONE CABLE.

LEGEND:

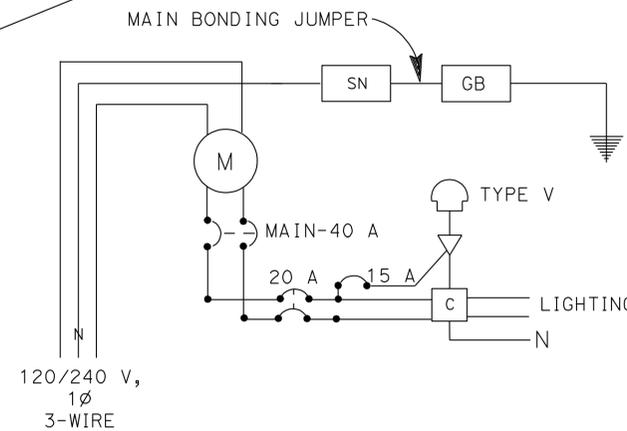
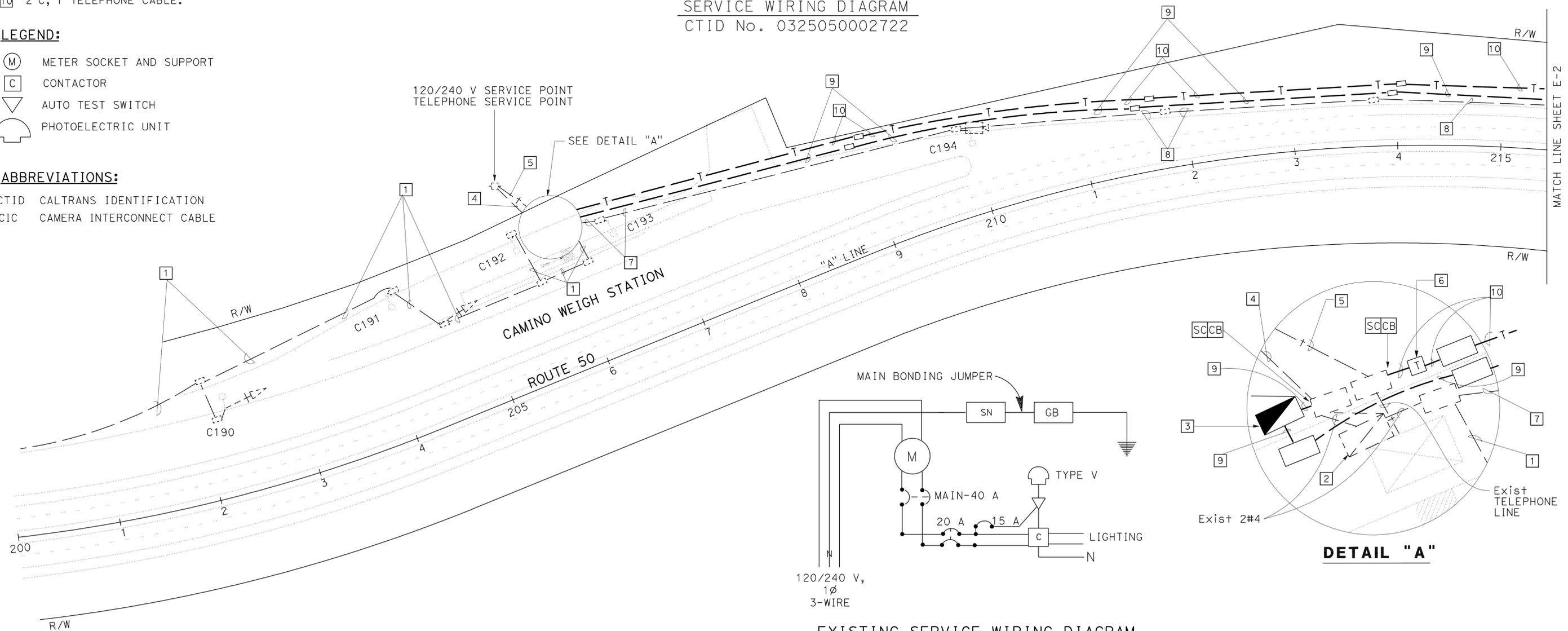
- (M) METER SOCKET AND SUPPORT
- (C) CONTACTOR
- ▽ AUTO TEST SWITCH
- ☉ PHOTOELECTRIC UNIT

ABBREVIATIONS:

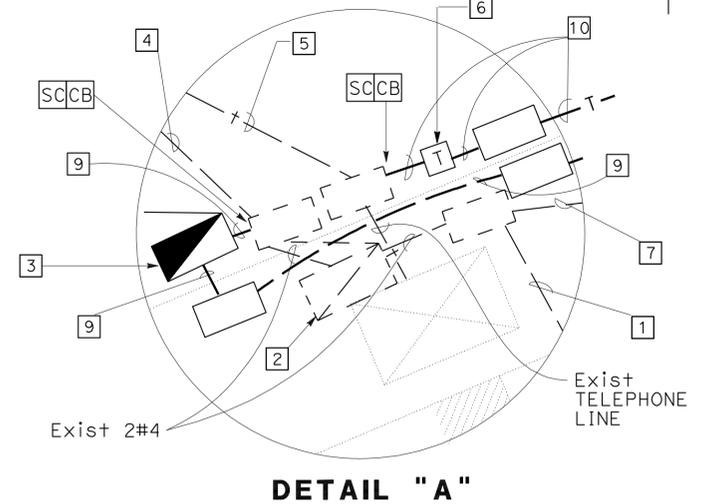
- CTID CALTRANS IDENTIFICATION
- CIC CAMERA INTERCONNECT CABLE



SERVICE WIRING DIAGRAM
CTID No. 0325050002722



EXISTING SERVICE WIRING DIAGRAM



DETAIL "A"

CHANGEABLE MESSAGE SIGN SYSTEM

SCALE: 1" = 50'

E-1

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

RELATIVE BORDER SCALE
IS IN INCHES



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DGN FILE => 30f580uad001.dgn

CU 03380

EA OF5801

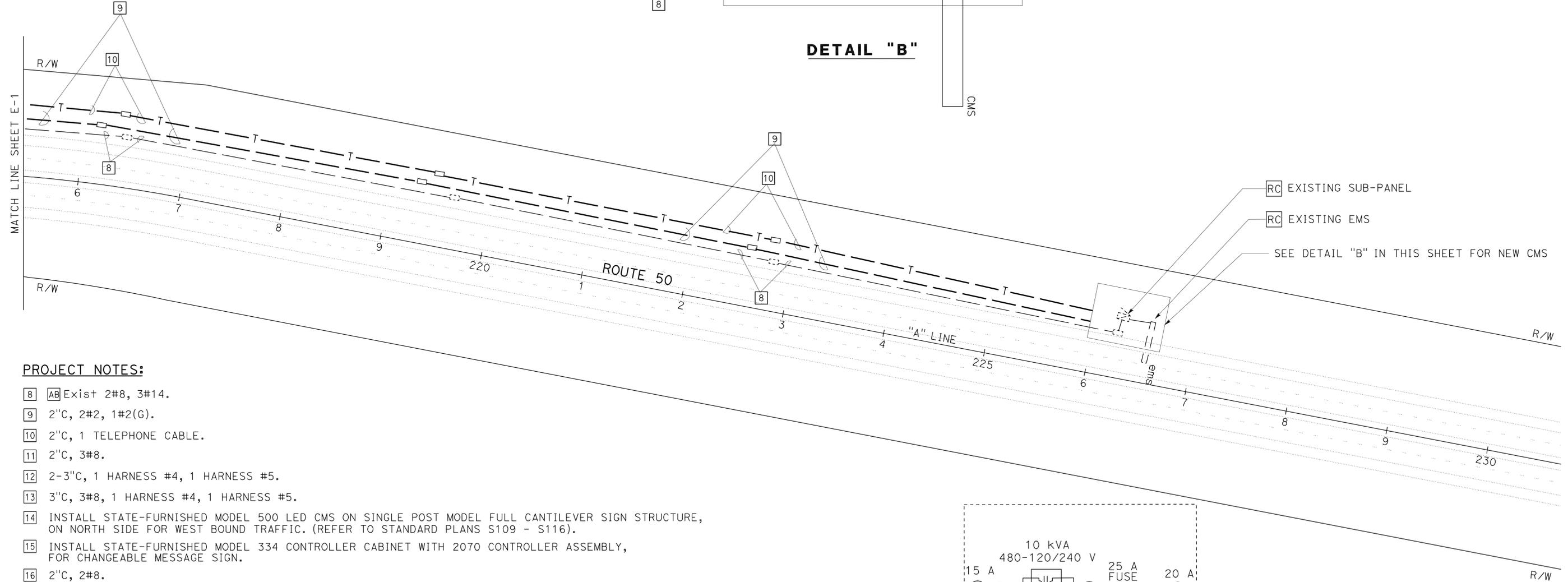
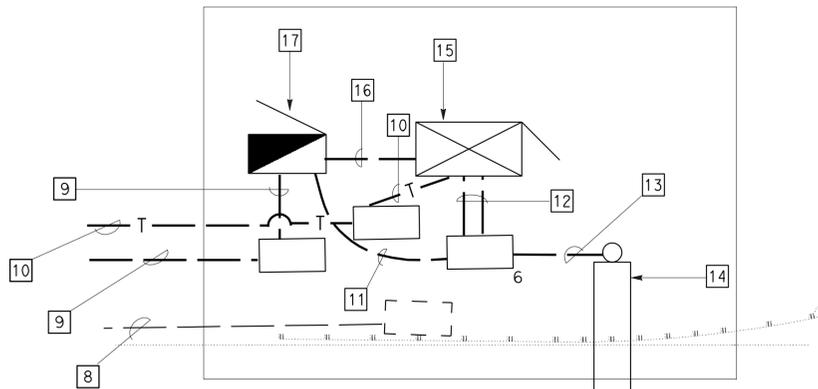
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	ED,Sac	50,80	R27.6,16.0	4	17

H. Golban 02-10-10
REGISTERED ELECTRICAL ENGINEER

3-29-10
PLANS APPROVAL DATE

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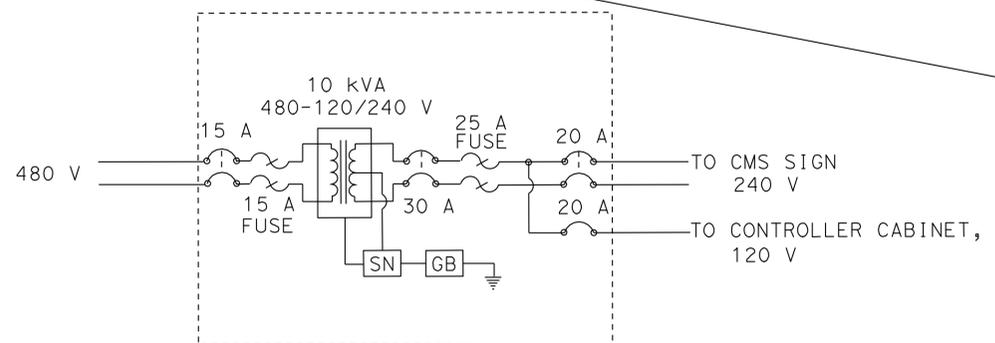
REGISTERED PROFESSIONAL ENGINEER
HABIB GOLBAN
No. E-17928
Exp. 09-30-10
ELECT



- RC EXISTING SUB-PANEL
- RC EXISTING EMS
- SEE DETAIL "B" IN THIS SHEET FOR NEW CMS

PROJECT NOTES:

- 8 AB Exist 2#8, 3#14.
- 9 2"C, 2#2, 1#2(G).
- 10 2"C, 1 TELEPHONE CABLE.
- 11 2"C, 3#8.
- 12 2-3"C, 1 HARNESS #4, 1 HARNESS #5.
- 13 3"C, 3#8, 1 HARNESS #4, 1 HARNESS #5.
- 14 INSTALL STATE-FURNISHED MODEL 500 LED CMS ON SINGLE POST MODEL FULL CANTILEVER SIGN STRUCTURE, ON NORTH SIDE FOR WEST BOUND TRAFFIC. (REFER TO STANDARD PLANS S109 - S116).
- 15 INSTALL STATE-FURNISHED MODEL 334 CONTROLLER CABINET WITH 2070 CONTROLLER ASSEMBLY, FOR CHANGEABLE MESSAGE SIGN.
- 16 2"C, 2#8.
- 17 INSTALL TYPE 3R ENCLOSURE CABINET WITH 10 KVA STEP-DOWN TRANSFORMER 480-120/240 V, FOR WIRING DIAGRAM SEE DETAIL "C" THIS SHEET.



OVERHEAD SIGN DETAILS AND QUANTITIES

CMS TYPE	DETAILS				QUANTITIES					
	STATION	ROUTE	ORIENTATION	"x"	"h"	A	B	FURNISH SIGN STRUCTURE (TRUSS) LBS	INSTALL SIGN STRUCTURE (TRUSS) LBS	5'-0" Dia CIDH PILE FT
500 FULL CANTILEVER	226+50	50	FWBT	18	20	5457.05	5456.86	17,096	17,096	22'

CHANGEABLE MESSAGE SIGN SYSTEM
SCALE: 1" = 50'

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Electrical Design
 BRANCH SACRAMENTO
 FUNCTIONAL SUPERVISOR: NELSON LEE
 H.G. HABIB GOLBAN
 REVISIONS: (None listed)
 CALCULATED/DESIGNED BY: (None listed)
 CHECKED BY: (None listed)

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 OFFICE OF ELECTRICAL DESIGN SACRAMENTO

REVISOR
 REVISION
 DATE

DESIGNED BY
 CHECKED BY

FUNCTIONAL SUPERVISOR

YOUNG TON
 HABIB GOLBAN

NELSON LEE

PROJECT NOTES: (THIS SHEET ONLY)

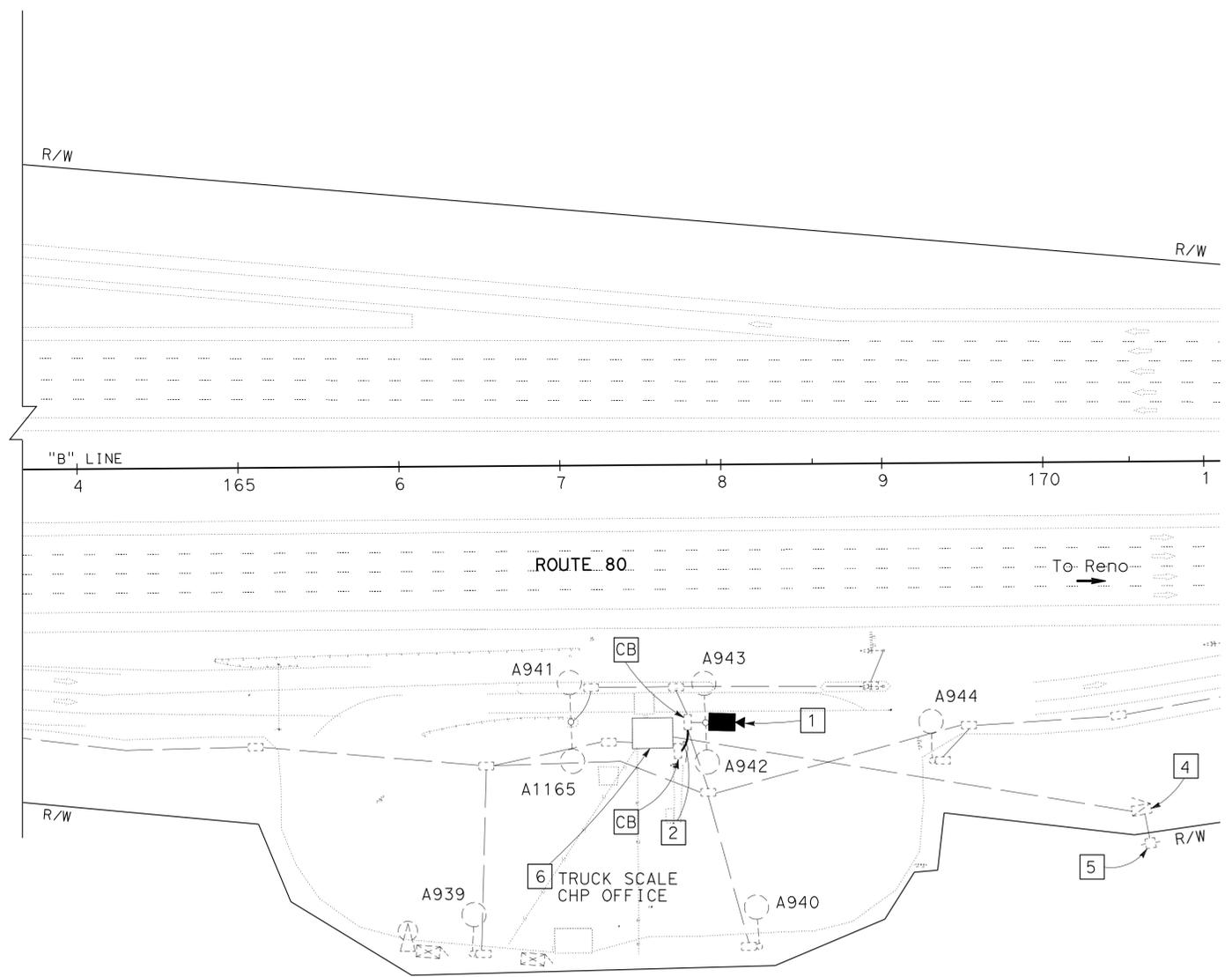
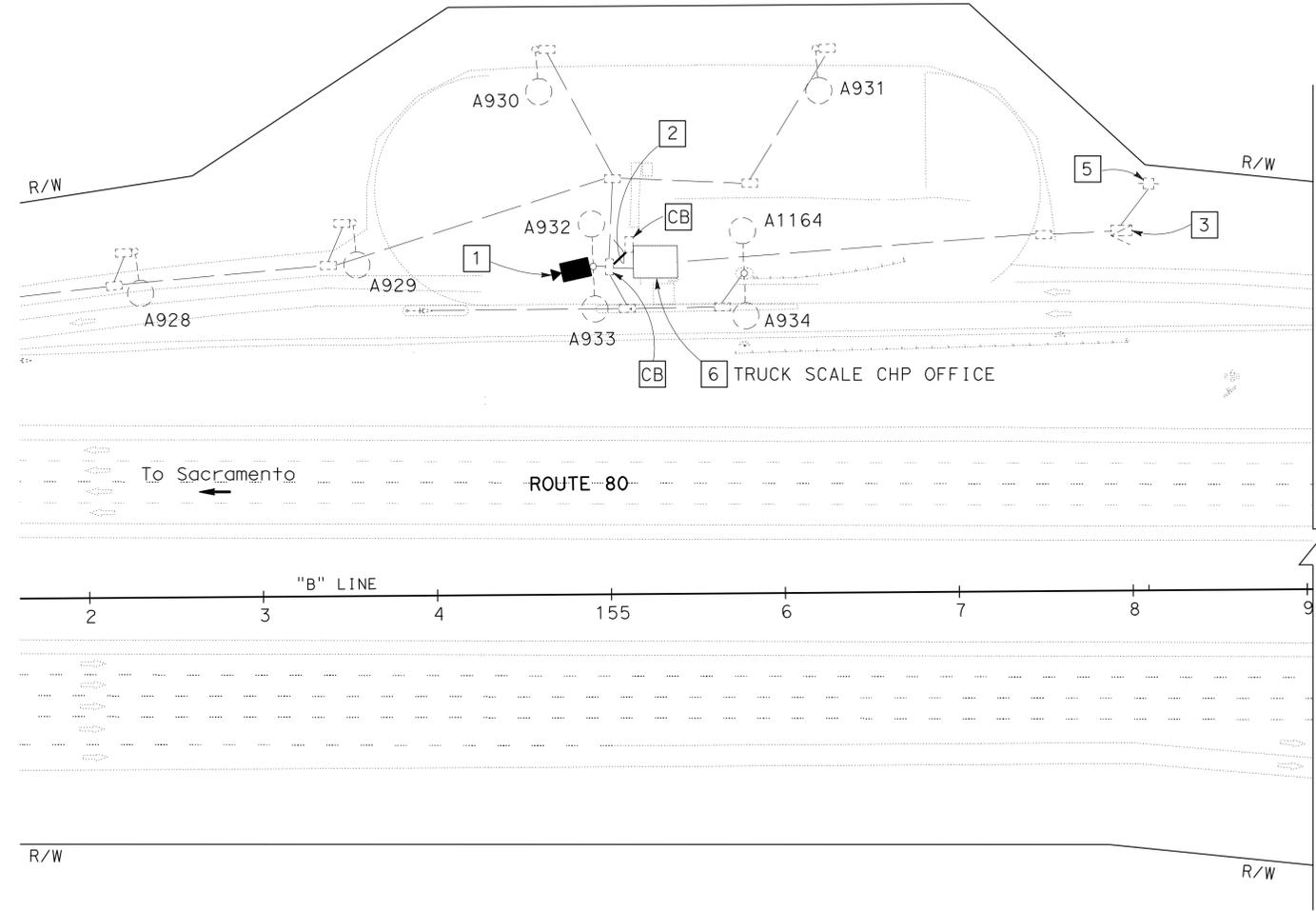
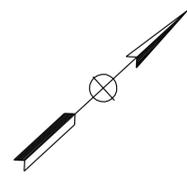
- 1 INSTALL CCTV CAMERA IN ENVIRONMENTAL ENCLOSURE ON EXIST TYPE 15D LUMINAIRE POLE. FOR DETAILS, SEE SHEET E-4 AND E-5. MOUNTING DETAILS TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
- 2 2 "C 1 CIC.
- 3 EXIST TYPE III-AF SERVICE EQUIPMENT ENCLOSURE, CTID No. 03240800016100. FOR EXIST SERVICE WIRING DIAGRAM, SEE DETAIL "A" ON SHEET E-4.
- 4 EXIST TYPE III-AF SERVICE EQUIPMENT ENCLOSURE, CTID No. 03-SP-T-78. FOR EXIST SERVICE WIRING DIAGRAM, SEE DETAIL "B" ON SHEET E-4.
- 5 EXIST SMUD SERVICE POINT, 120/240 V, 1 PHASE, 3 WIRE.
- 6 INSTALL CAMERA CONTROL UNIT/VIDEO ENCODER UNIT AND 15" VIDEO MONITOR INSIDE THE TRUCK SCALE CHP OFFICE, SEE DETAILS ON SHEET E-5.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	ED, Sac	50, 80	R27.6, 16.0	5	17

H. Golban 02-10-10
 REGISTERED ELECTRICAL ENGINEER

3-29-10
 PLANS APPROVAL DATE

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**CLOSED CIRCUIT TELEVISION SYSTEM
 (EB AND WB ENTERLOPE TRUCK SCALES)**

SCALE: 1" = 50'

E-3

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 OFFICE OF ELECTRICAL DESIGN SACRAMENTO

FUNCTIONAL SUPERVISOR
 NELSON LEE

CALCULATED/DESIGNED BY
 CHECKED BY

YOUNG TON
 HABIB GOLBAN

REVISED BY
 DATE REVISED

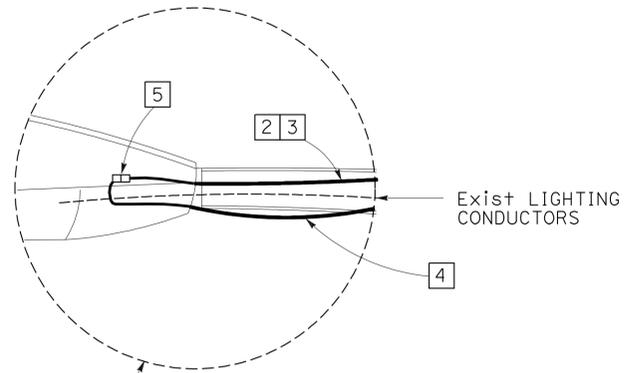
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	ED,Sac	50,80	R27.6,16.0	6	17

H. Golban 02-10-10
 REGISTERED ELECTRICAL ENGINEER

3-29-10
 PLANS APPROVAL DATE

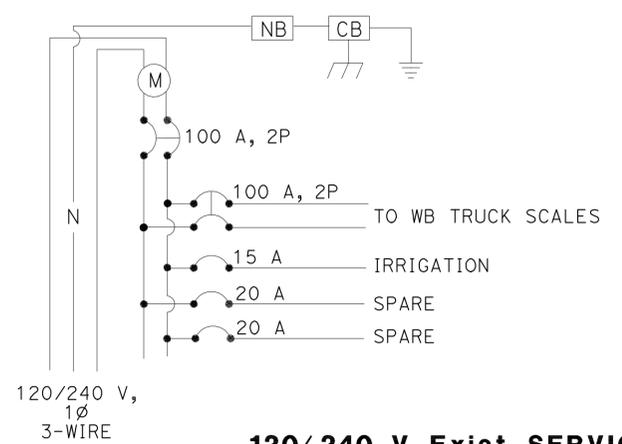
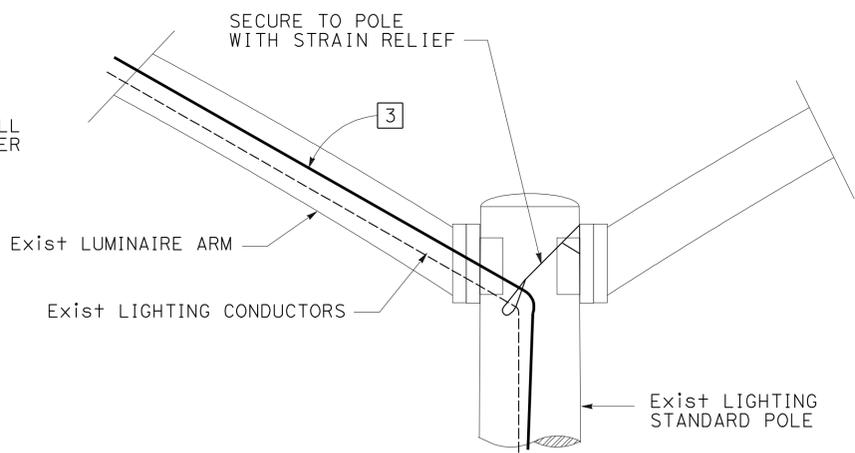
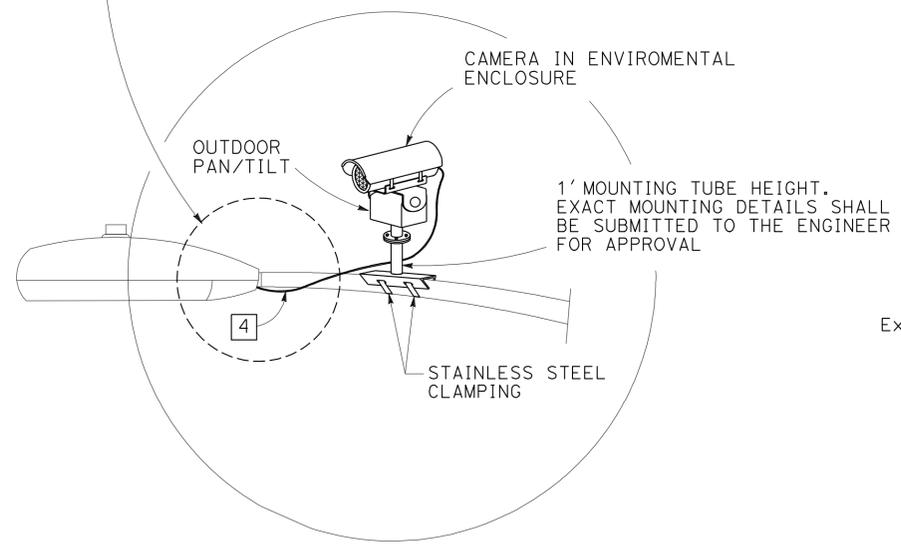
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REGISTERED PROFESSIONAL ENGINEER
 HABIB GOLBAN
 No. E 17928
 Exp. 9-30-10
 ELECTRICAL
 STATE OF CALIFORNIA

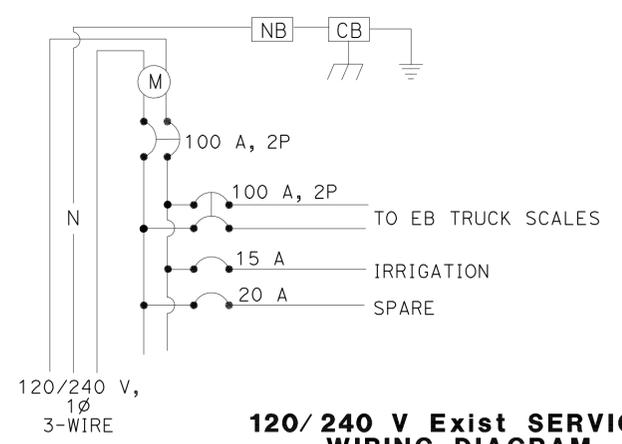


PROJECT NOTES: (THIS SHEET ONLY)

1. THE PAN/TILT SHALL BE POSITIONED SUCH THAT ALL IMPORTANT FEATURES ARE IN THE FIELD-OF-VIEW OF THE CAMERA. THE PAN IS LIMITED TO 350° FIELD-OF-VIEW AND HENCE HAS A 10° DEAD ZONE. ORIENT THE PAN TILT UNIT SUCH THAT THE DEAD ZONE IS IN A DIRECTION WHERE VIEW OF IMPORTANT TRAFFIC FEATURES IS NOT REQUIRED.
- 2 1 CAMERA INTERCONNECT CABLE (CIC).
- 3 CAMERA INTERCONNECT CABLE (CIC) TO RUN CONTINUOUS TO CAMERA CONTROL UNIT/DECODER UNIT IN THE TRUCK SCALE CHP OFFICE.
- 4 RUN CAMERA CABLE IN LUMINAIRE FIXTURE.
- 5 CAMERA INTERCONNECT CABLE TERMINATION.



120/ 240 V Exist SERVICE WIRING DIAGRAM
 CTID No. 03240800016100
 DETAIL "A"



120/ 240 V Exist SERVICE WIRING DIAGRAM
 CTID No. 03-SP-T-78
 DETAIL "B"

CLOSED CIRCUIT TELEVISION SYSTEM (ELECTRICAL DETAILS)
 NO SCALE

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.



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 DGN FILE => 30f580uad004.dgn

CU 003391

EA 0f5801

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	ED,Sac	50,80	R27.6,16.0	7	17

H. Golban 02-10-10
REGISTERED ELECTRICAL ENGINEER

3-29-10
PLANS APPROVAL DATE

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

REGISTERED PROFESSIONAL ENGINEER
HABIB GOLBAN
No. E 17928
Exp. 9-30-10
ELECTRICAL
STATE OF CALIFORNIA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
OFFICE OF ELECTRICAL DESIGN SACRAMENTO

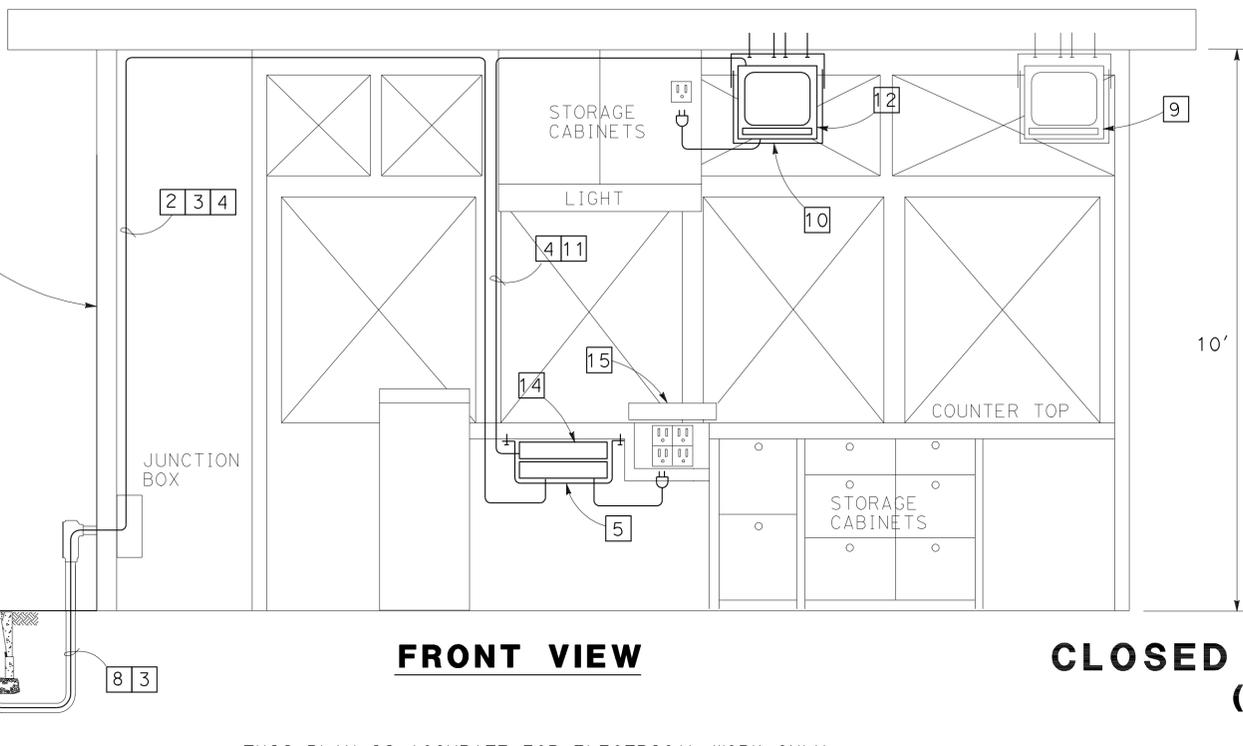
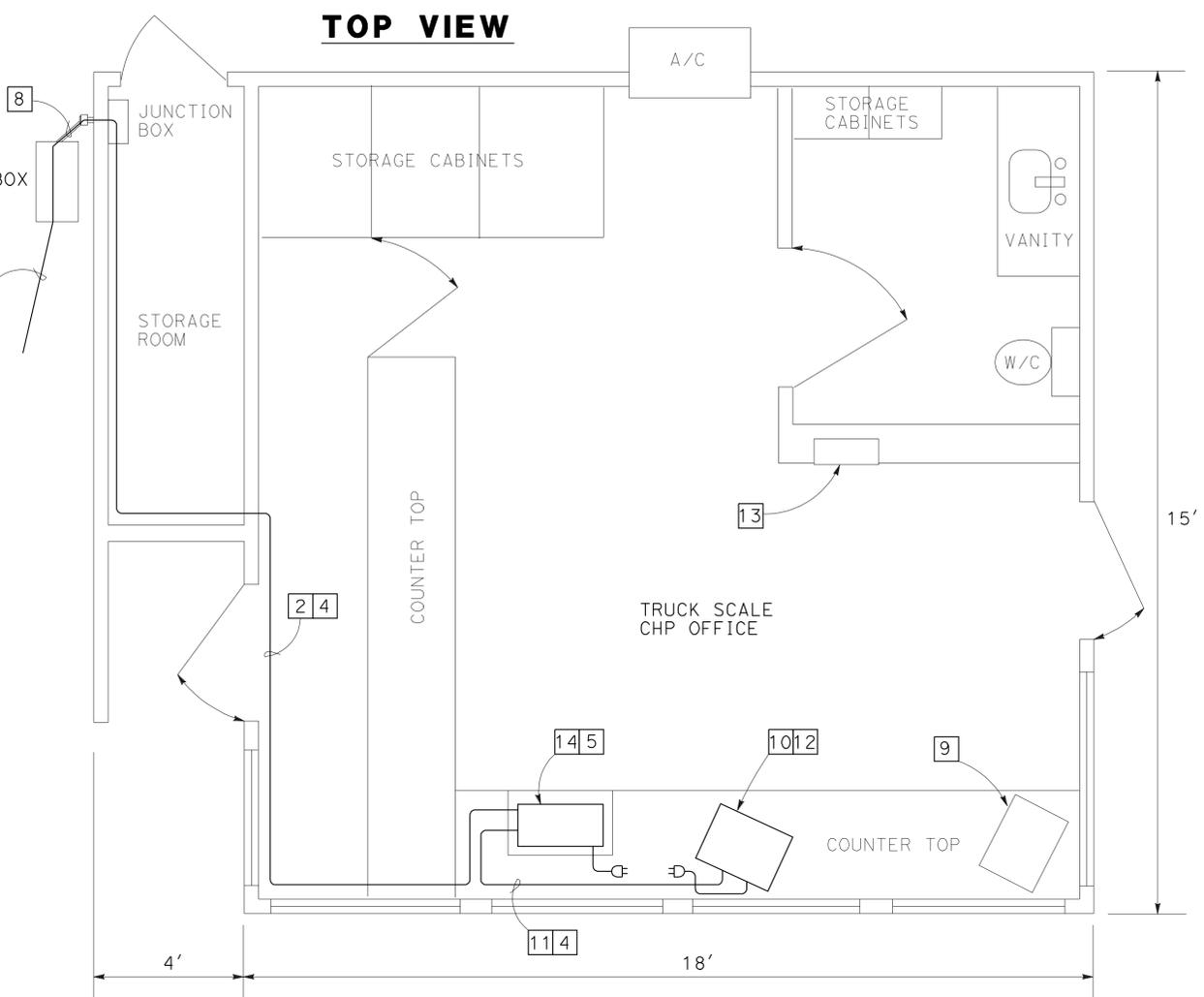
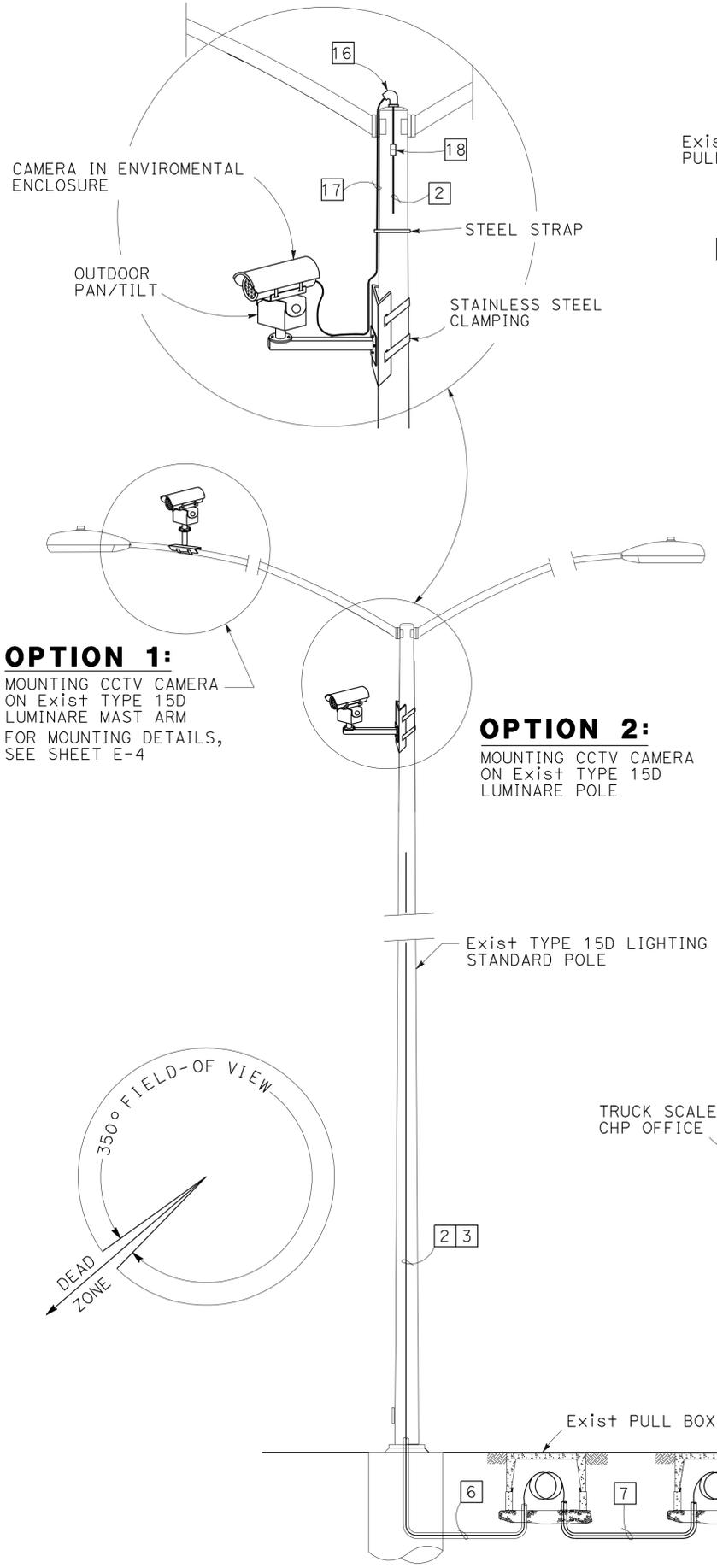
Caltrans

FUNCTIONAL SUPERVISOR: NELSON LEE

CHECKED BY: YOUNG TON, HABIB GOLBAN

REVISOR: YOUNG TON, HABIB GOLBAN

DESIGNER: YOUNG TON, HABIB GOLBAN



- PROJECT NOTES: (THIS SHEET ONLY)**
1. THE PAN/TILT SHALL BE POSITIONED SUCH THAT ALL IMPORTANT FEATURES ARE IN THE FIELD-OF-VIEW OF THE CAMERA. THE PAN IS LIMITED TO 350° FIELD-OF-VIEW AND HENCE HAS A 10° DEAD ZONE. ORIENT THE PAN TILT UNIT SUCH THAT THE DEAD ZONE IS IN A DIRECTION WHERE VIEW OF IMPORTANT TRAFFIC FEATURES IS NOT REQUIRED.
 - 2 1 CIC.
 - 3 CAMERA INTERCONNECT CABLE TO RUN CONTINUOUS TO CAMERA CONTROL UNIT IN THE TRUCK SCALE CHP OFFICE.
 - 4 USE CLAMPS TO SECURE CABLES TO WALL AND CEILING AT 2' SPACING.
 - 5 RC Exist WOOD RACKMOUNT UNDER THE COUNTER TOP. INSTALL NEW CAMERA CONTROL UNITS RACKMOUNT UNDER THE COUNTER TOP. MOUNTING DETAILS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
 - 6 Exist 1 1/2"C, 2#8. ADD 1 CIC.
 - 7 2"C, 1 CIC.
 - 8 Exist 1 1/2"C, 1 TELEPHONE CABLE. ADD 1 CIC.
 - 9 Exist 13" VIDEO MONITOR.
 - 10 INSTALL MONITOR CEILING MOUNT FOR SUSPENDED 15" MONITOR. MOUNTING DETAILS INCLUDING MOUNTING STUDS AND ALLOWS MONITOR TO TILT TO DESIRED ANGLE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
 - 11 1 VIDEO COAXIAL CABLE.
 - 12 INSTALL 13" HIGH RESOLUTION COLOR VIDEO MONITOR.
 - 13 Exist MAIN CIRCUIT BREAKER PANEL.
 - 14 INSTALL CAMERA CONTROL UNIT/VIDEO ENCODER UNIT.
 - 15 Exist CAMERA CONTROL UNIT.
 - 16 INSTALL 2" WEATHERPROOF SERVICE ENTRANCE CAPS.
 - 17 CAMERA CABLE.
 - 18 CAMERA INTERCONNECT CABLE TERMINATION.

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.



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DGN FILE => 30f580u005.dgn

CU 03391 EA 0f5801

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	ED, Sac	50, 80	R27.6, 16.0	8	17

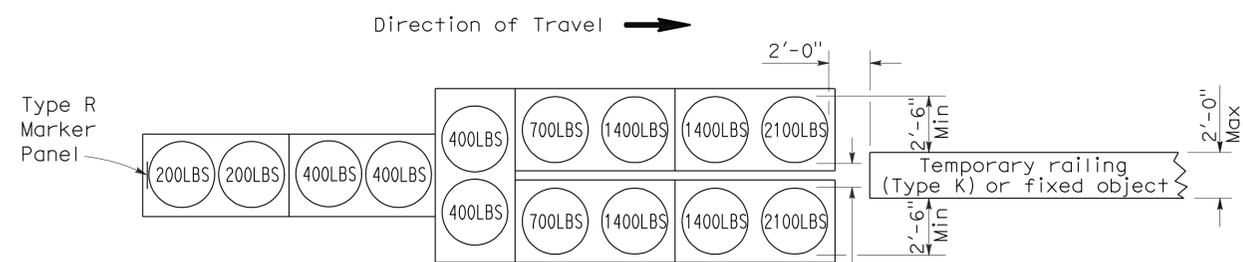
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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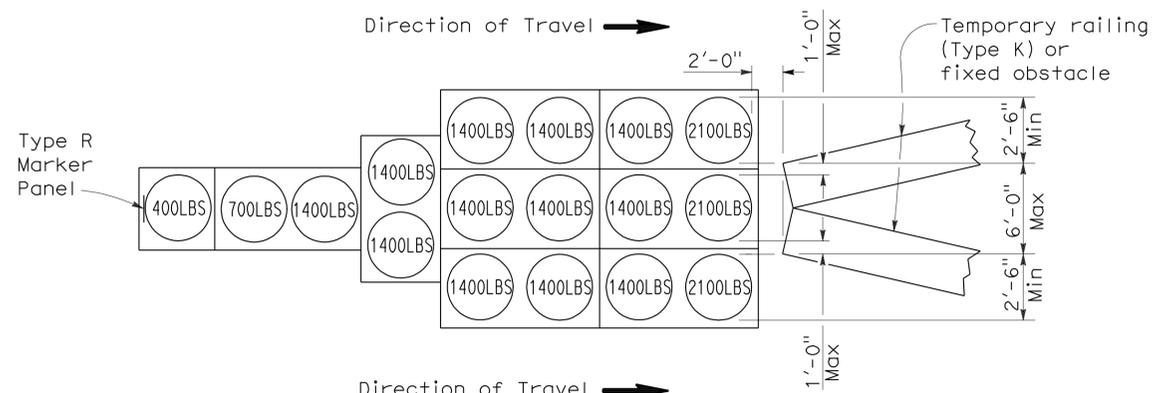
To accompany plans dated 3-29-10

2006 REVISED STANDARD PLAN RSP T1A



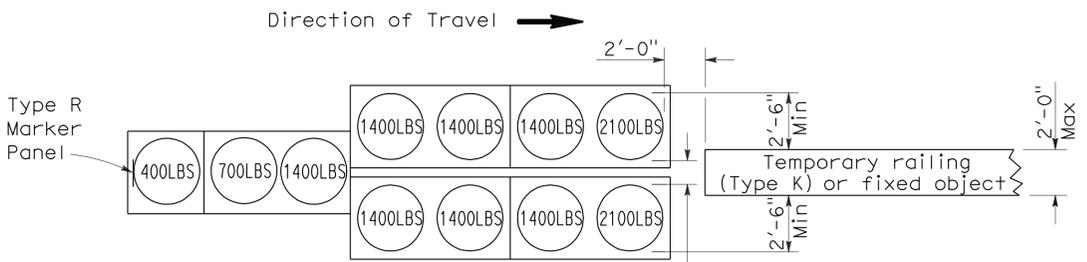
ARRAY 'TU14'

Approach speed 45 mph or more



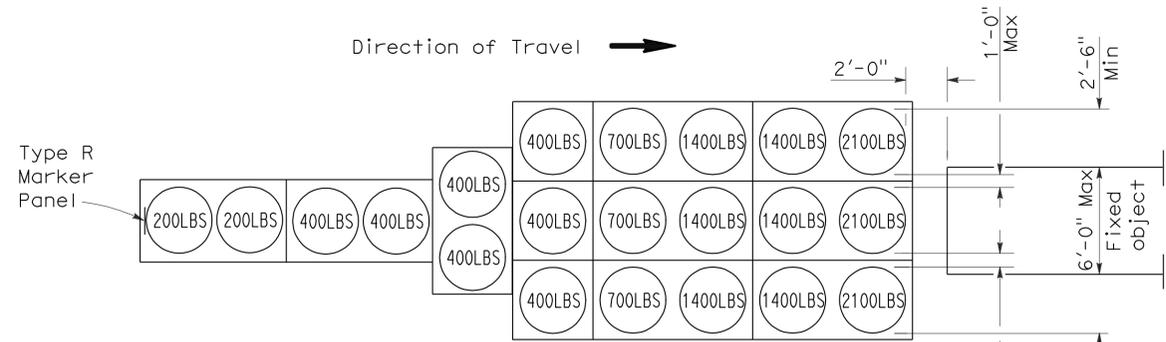
ARRAY 'TU17'

Approach speed less than 45 mph



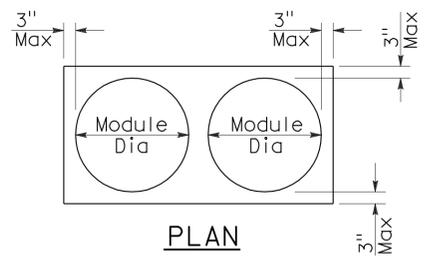
ARRAY 'TU11'

Approach speed less than 45 mph

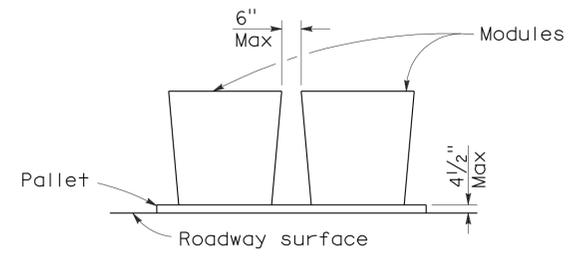


ARRAY 'TU21'

Approach speed 45 mph or more



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

REVISED STANDARD PLAN RSP T1A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	ED, Sac	50,80	R27.6,16.0	9	17

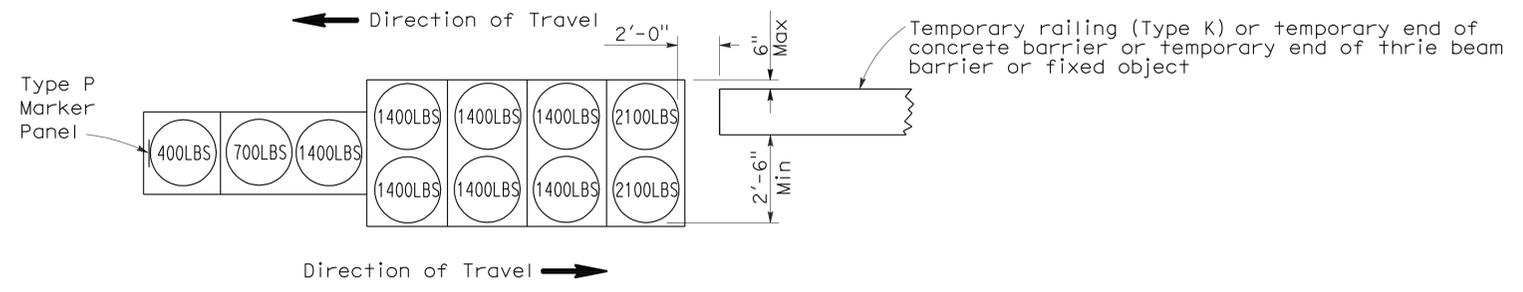
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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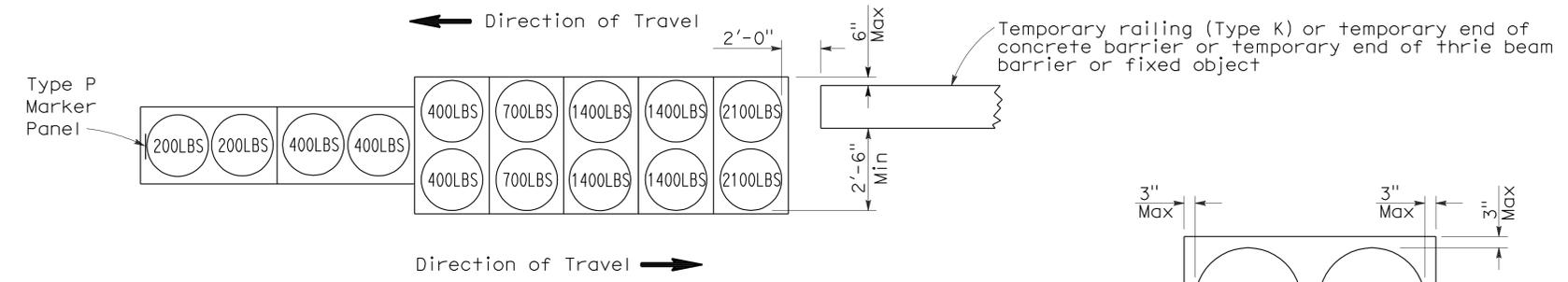
REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

To accompany plans dated 3-29-10



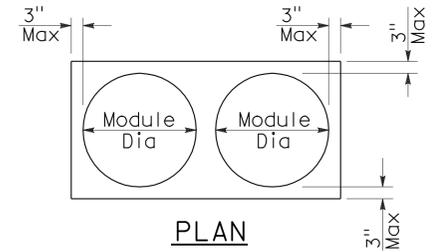
ARRAY 'TB11'

Approach speed less than 45 mph

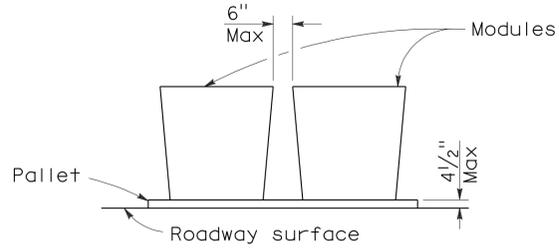


ARRAY 'TB14'

Approach speed 45 mph or more



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

REVISED STANDARD PLAN RSP T1B

2006 REVISED STANDARD PLAN RSP T1B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	ED, Sac	50,80	R27.6,16.0	10	17

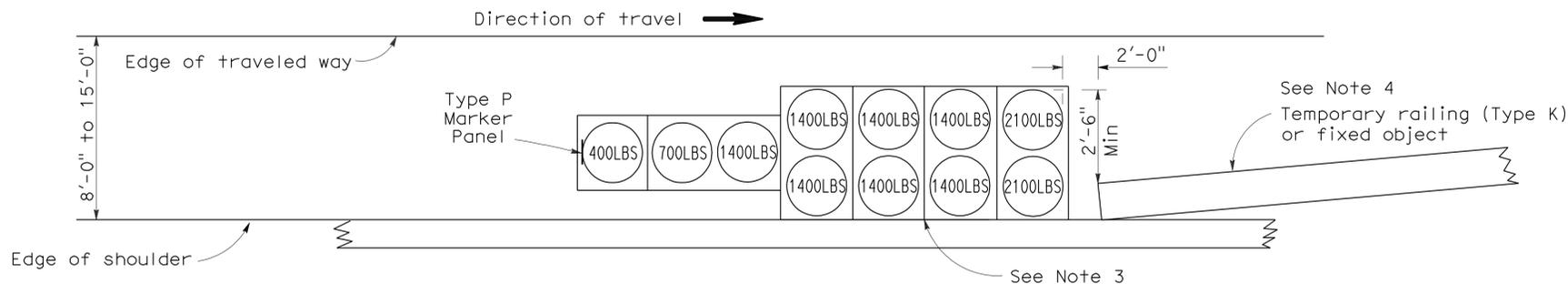
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

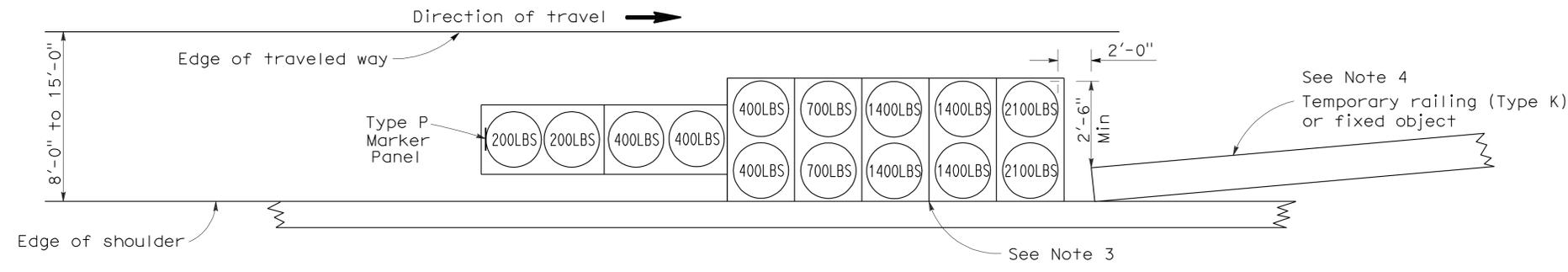
Randell D. Hiatt
REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

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To accompany plans dated 3-29-10



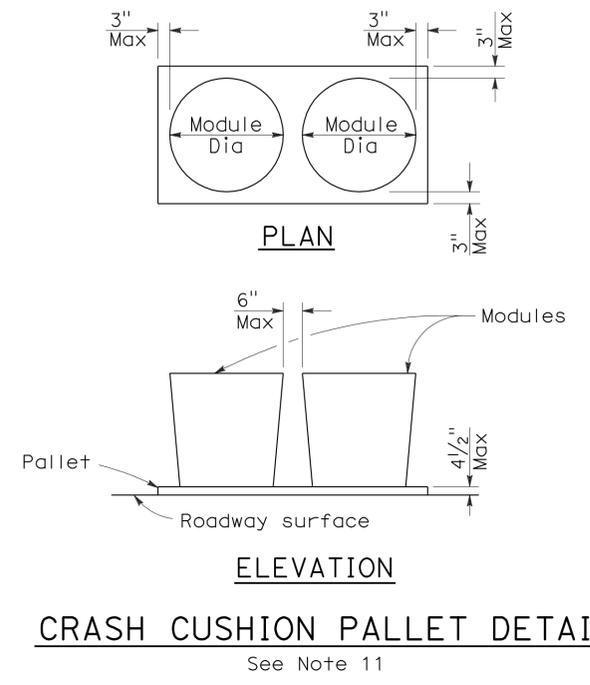
ARRAY 'TS11'
Approach speed less than 45 mph
See Note 9



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

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.



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

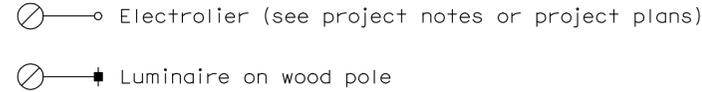
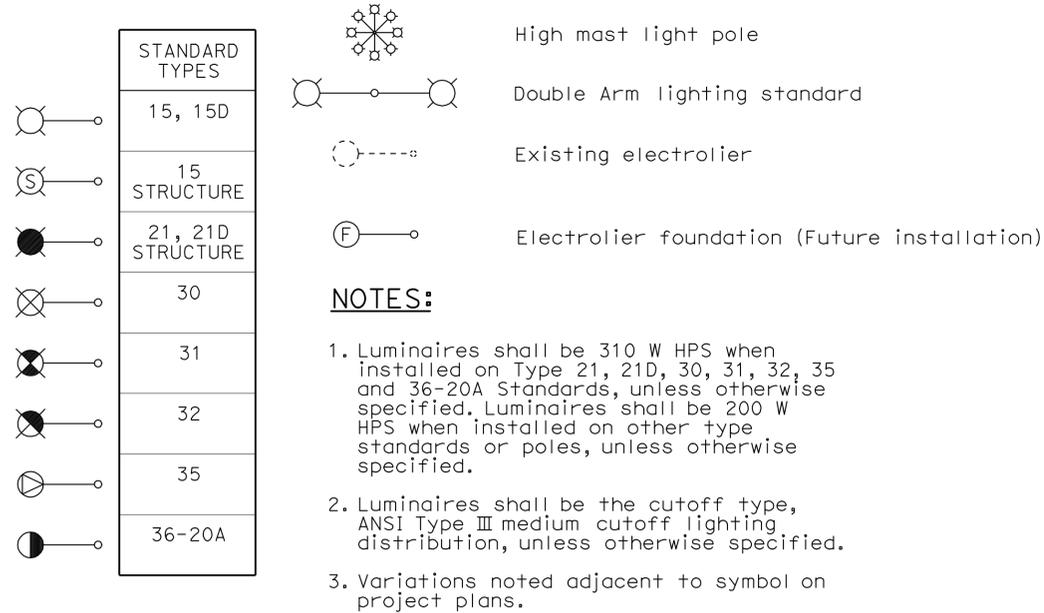
NO SCALE

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

REVISED STANDARD PLAN RSP T2

2006 REVISED STANDARD PLAN RSP T2

ELECTROLIERS



STANDARD 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
03	ED, Sac	50,80	R27.6,16.0	11	17

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

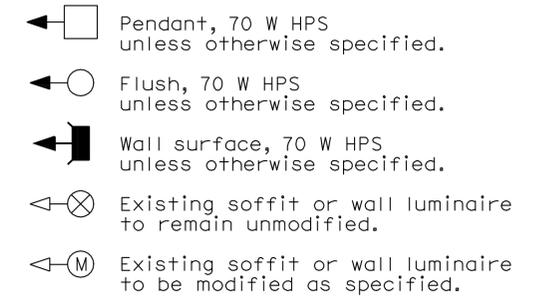
October 5, 2007
PLANS APPROVAL DATE

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

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

To accompany plans dated 3-29-10

SOFFIT AND WALL MOUNTED LUMINAIRES



NOTE:

Arrow indicates "street side" of luminaire.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

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

REVISED STANDARD PLAN RSP ES-1A

2006 REVISED STANDARD PLAN RSP ES-1A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	ED, Sac	50,80	R27.6,16.0	12	17

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

CONDUIT

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

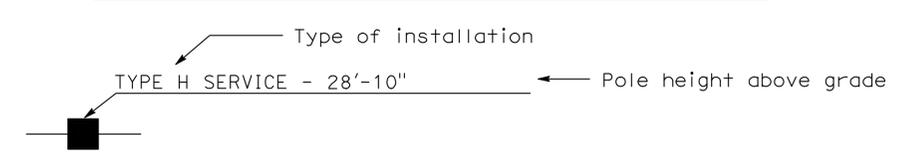
SIGNAL EQUIPMENT

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

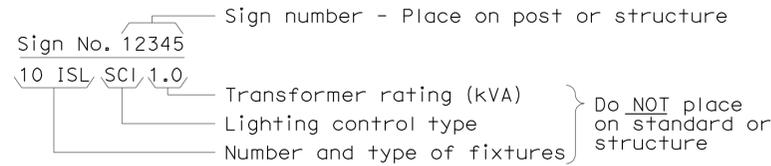
RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B
 DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1B

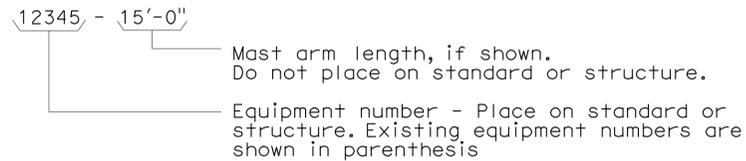
2006 REVISED STANDARD PLAN RSP ES-1B

EQUIPMENT IDENTIFICATION

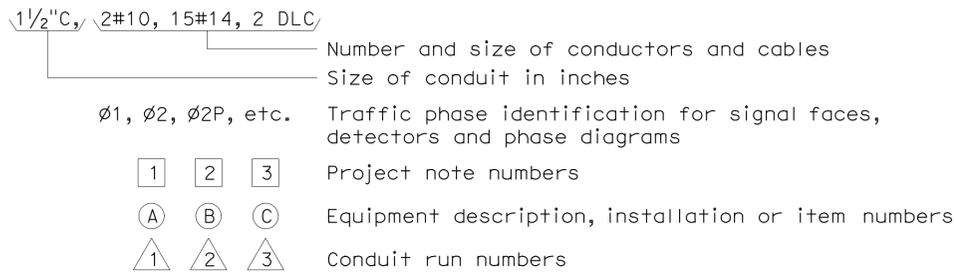
ILLUMINATED SIGN IDENTIFICATION NUMBER:



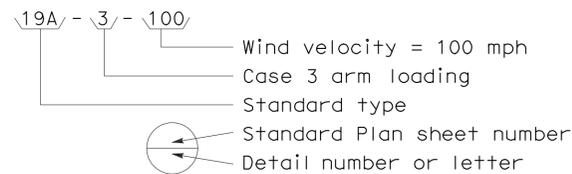
ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



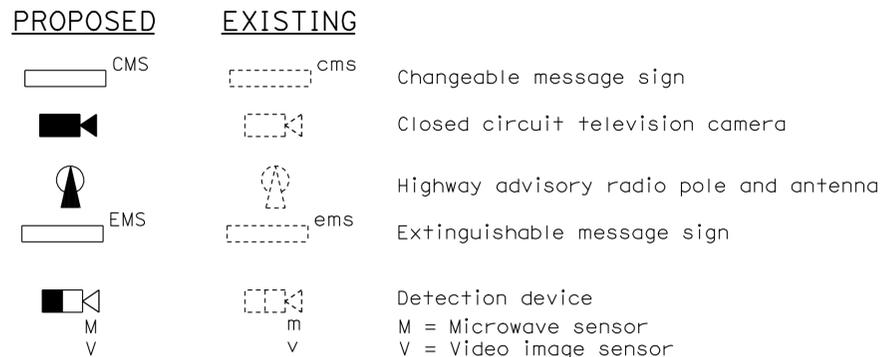
CONDUIT AND CONDUCTOR IDENTIFICATION:



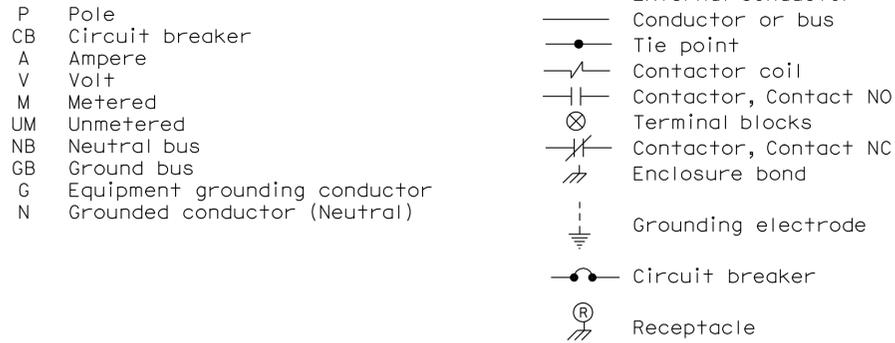
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



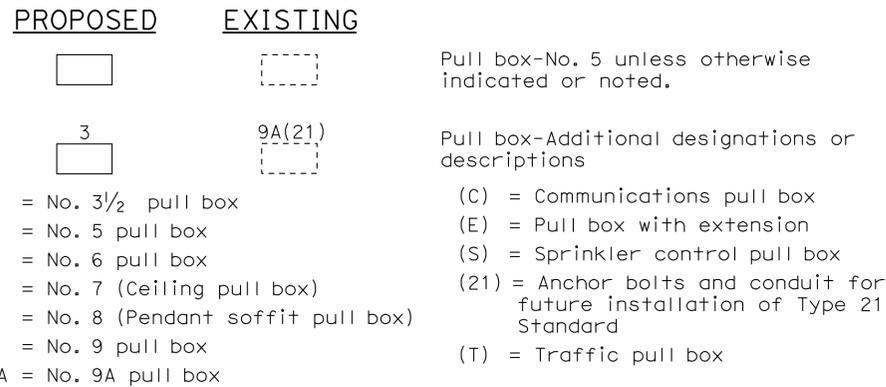
MISCELLANEOUS EQUIPMENT



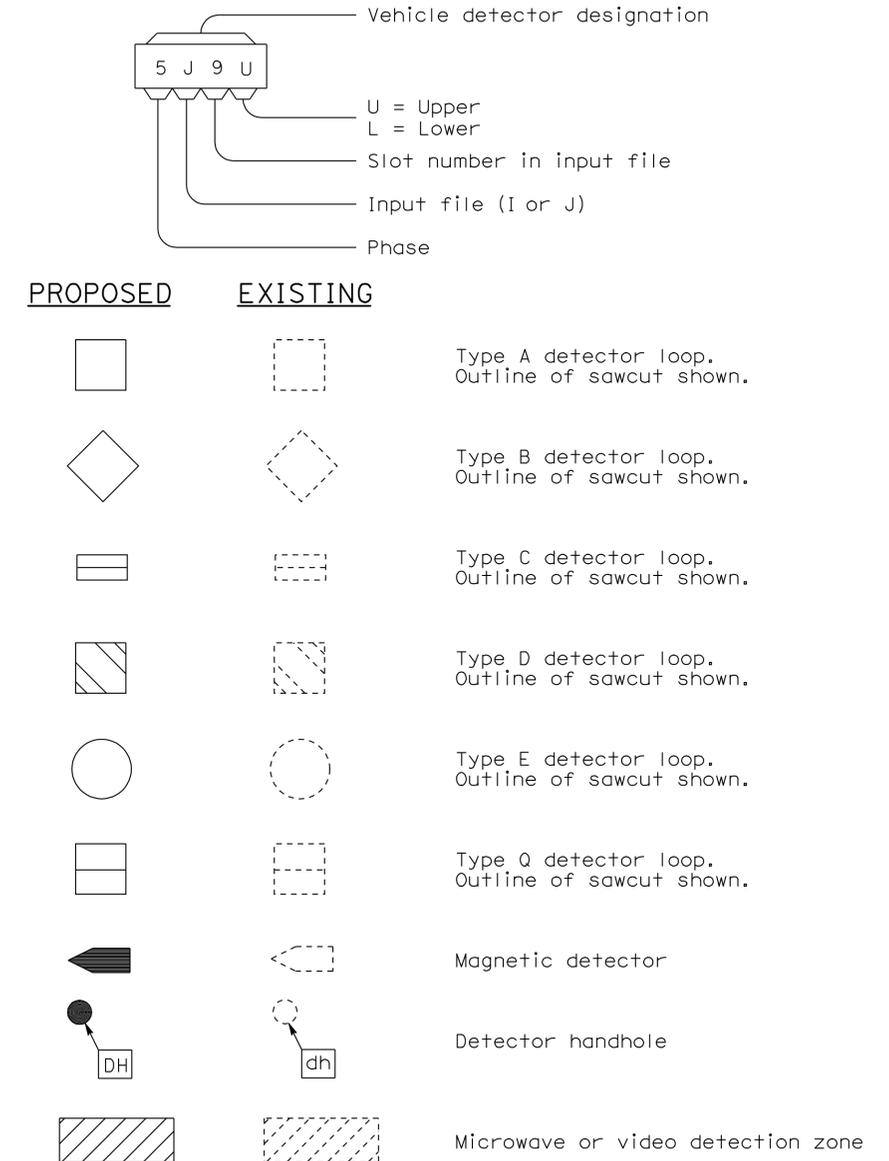
WIRING DIAGRAM LEGEND



PULL BOXES



VEHICLE DETECTORS



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

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

2006 REVISED STANDARD PLAN RSP ES-1C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	ED,Sac	50,80	R27.6,16.0	14	17

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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

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

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 3-29-10

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

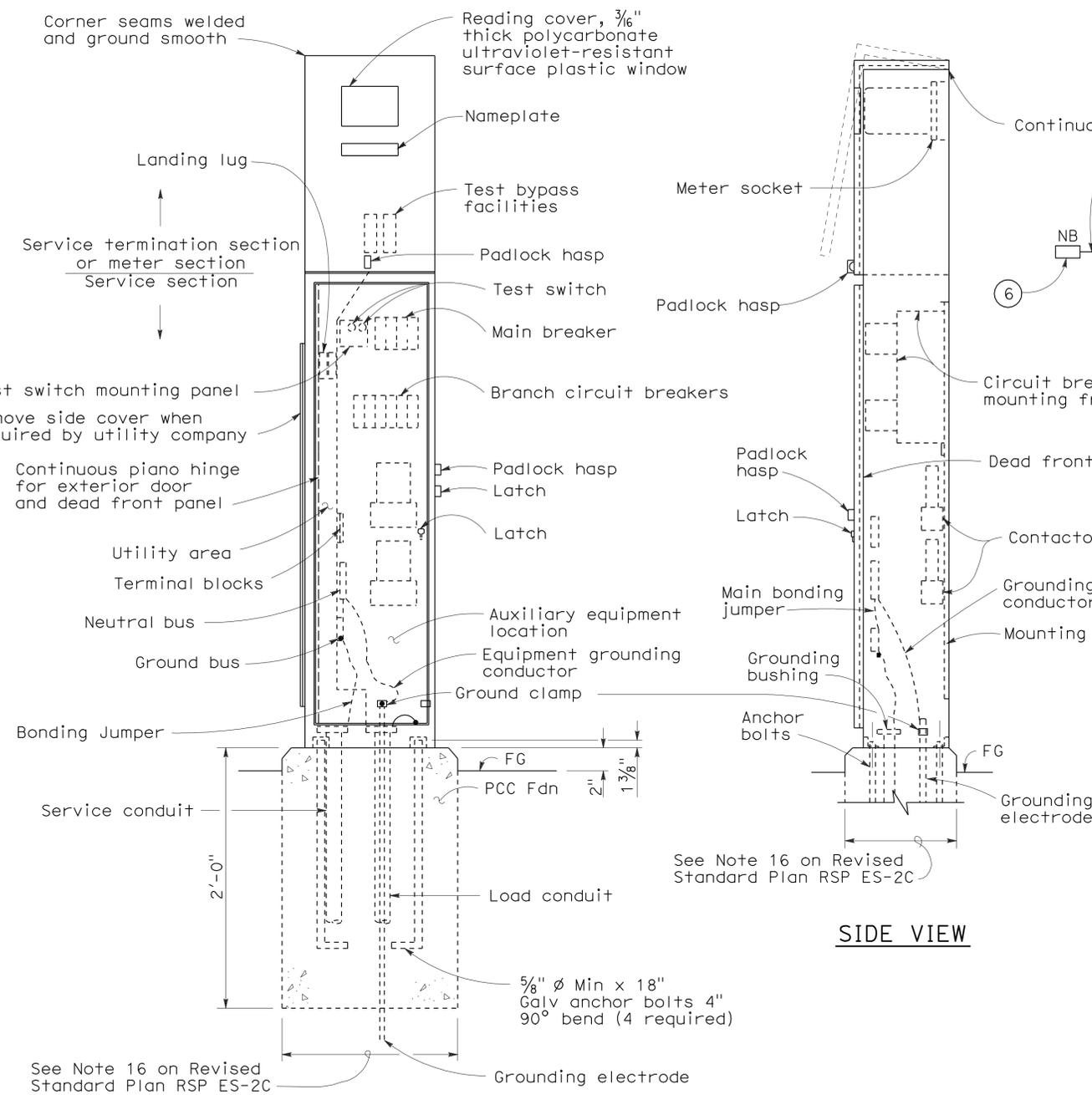
**ELECTRICAL SYSTEMS
(SERVICE EQUIPMENT NOTES
TYPE III SERIES)**

NO SCALE

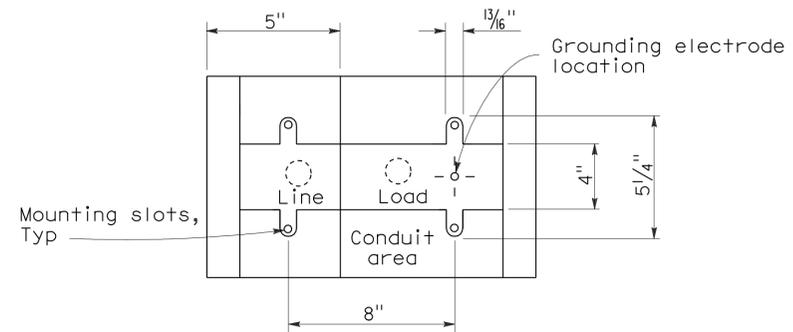
RSP ES-2C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-2C
DATED MAY 1, 2006 - PAGE 405 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-2C

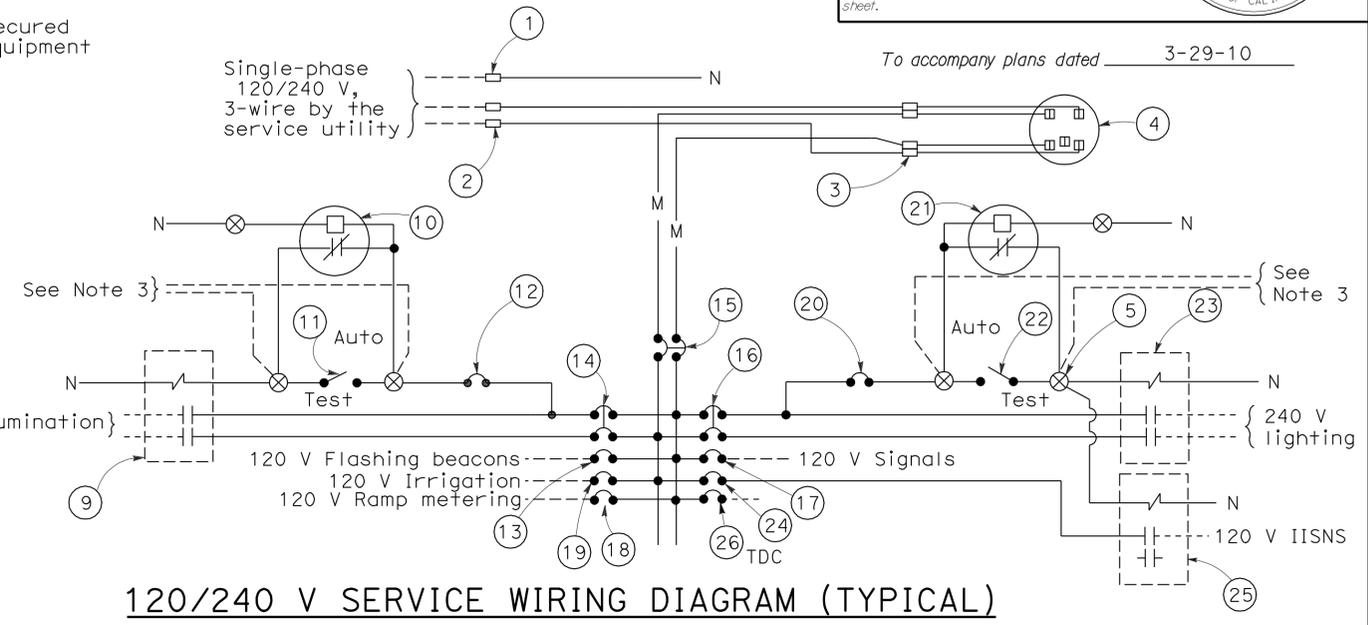
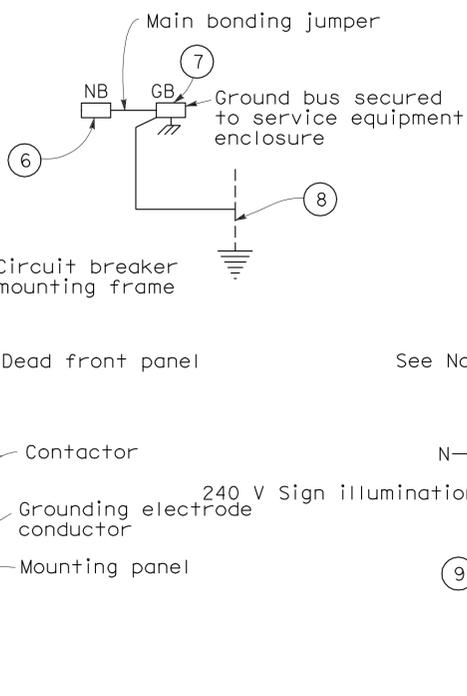
2006 REVISED STANDARD PLAN RSP ES-2C



TYPE III-AF SERVICE EQUIPMENT ENCLOSURE (TYPICAL)



BASE FOR TYPE III-A SERVICE EQUIPMENT ENCLOSURE



120/240 V SERVICE WIRING DIAGRAM (TYPICAL)

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

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

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

NO SCALE

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

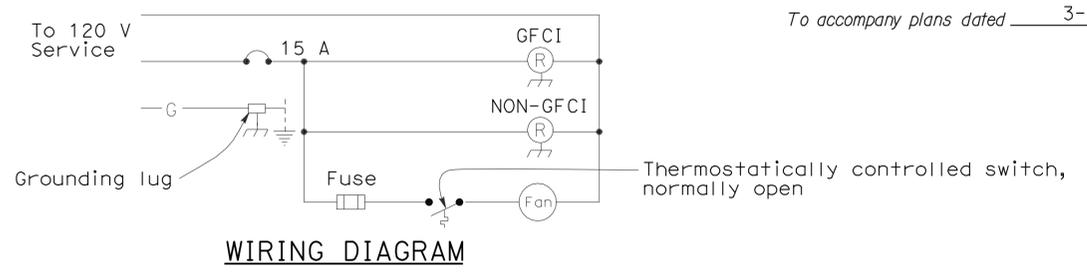
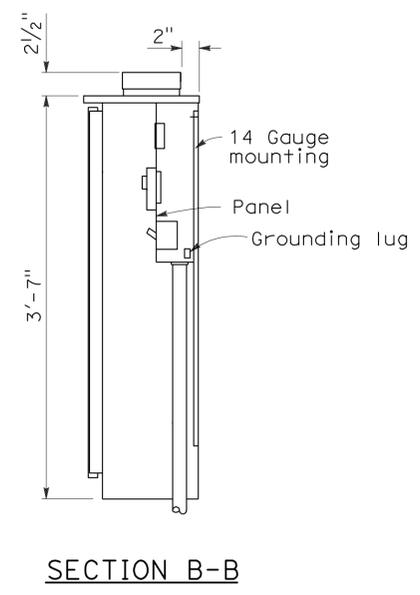
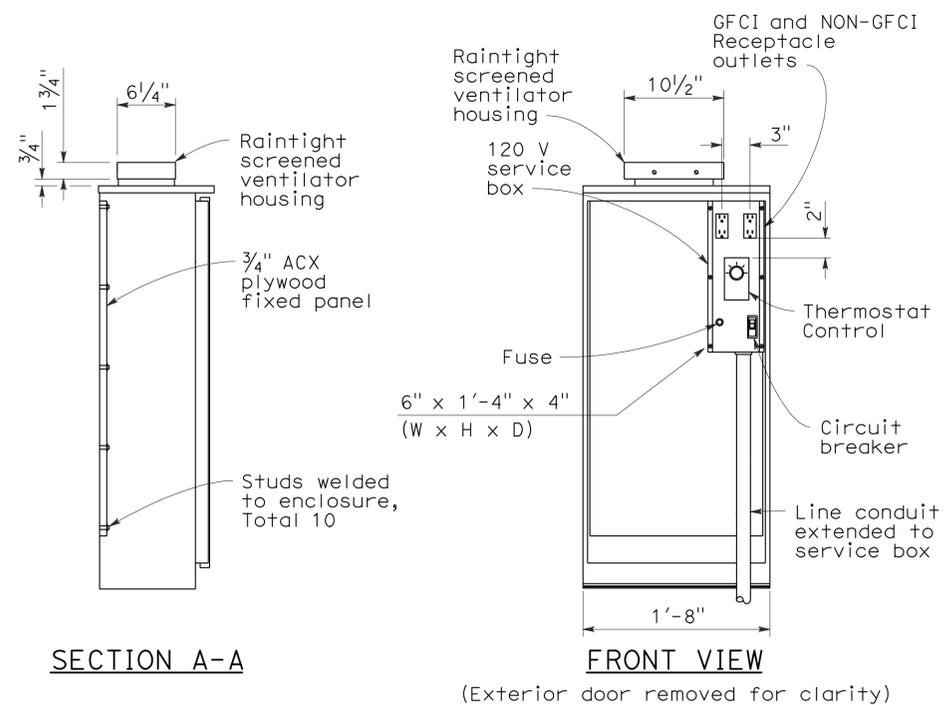
2006 REVISED STANDARD PLAN RSP ES-2D

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	ED,Sac	50,80	R27.6,16.0	16	17

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

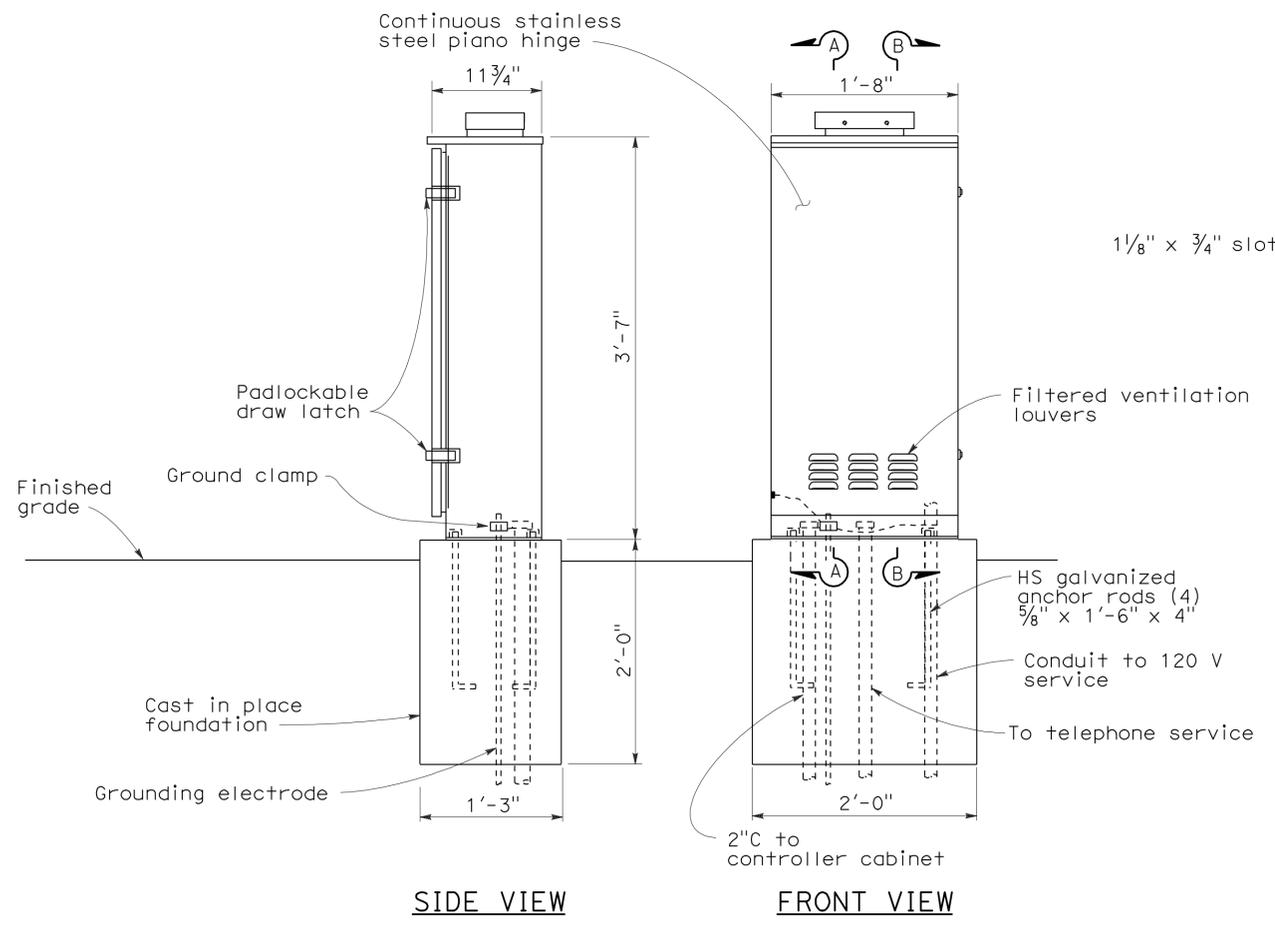
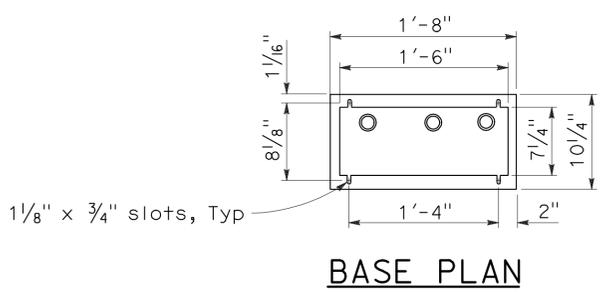
October 5, 2007
 PLANS APPROVAL DATE

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NOTES:

- Telephone demarcation cabinet shall be furnished with a mounting panel, outlets, circuit breaker and deadfront plates in place. Dimensions are nominal.
- An approved mastic or caulking compound shall be placed on the foundation prior to placing the cabinet to seal openings between the bottom of the cabinet and the foundation.
- In unpaved areas, a raised PCC pad shall be placed in front of the telephone demarcation cabinet. Pad shall be 2'-0" x 1'-10" x 4" thick, with 2" above the finished grade.
- All conduits shall be bonded to the enclosure.
- Telephone demarcation cabinet:
 - Material shall be anodized aluminum (1/8" thick).
 - Fabrication shall conform to the requirements of the Standard Specifications.
 - The exterior door shall be side hung and secured with a padlockable draw latch, the padlock hole shall be a minimum diameter of 7/16" to receive a padlock.
 - Ventilation louvers shall be located on the door.
 - Fan shall be mounted in a ventilator housing.
 - Fan shall be thermostatically controlled and adjustable to turn on between 80°F and 130°F.
 - Fan circuit shall be fused at 175 percent of the fan motor capacity.
 - Fan capacity shall be at least 25 cubic feet per minute.
 - Fasten fixed mounting panels with nuts, lock and flat washers to 3/16" ø x 1" studs welded to enclosure.



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(TELEPHONE DEMARICATION
CABINET, TYPE B)**

NO SCALE

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

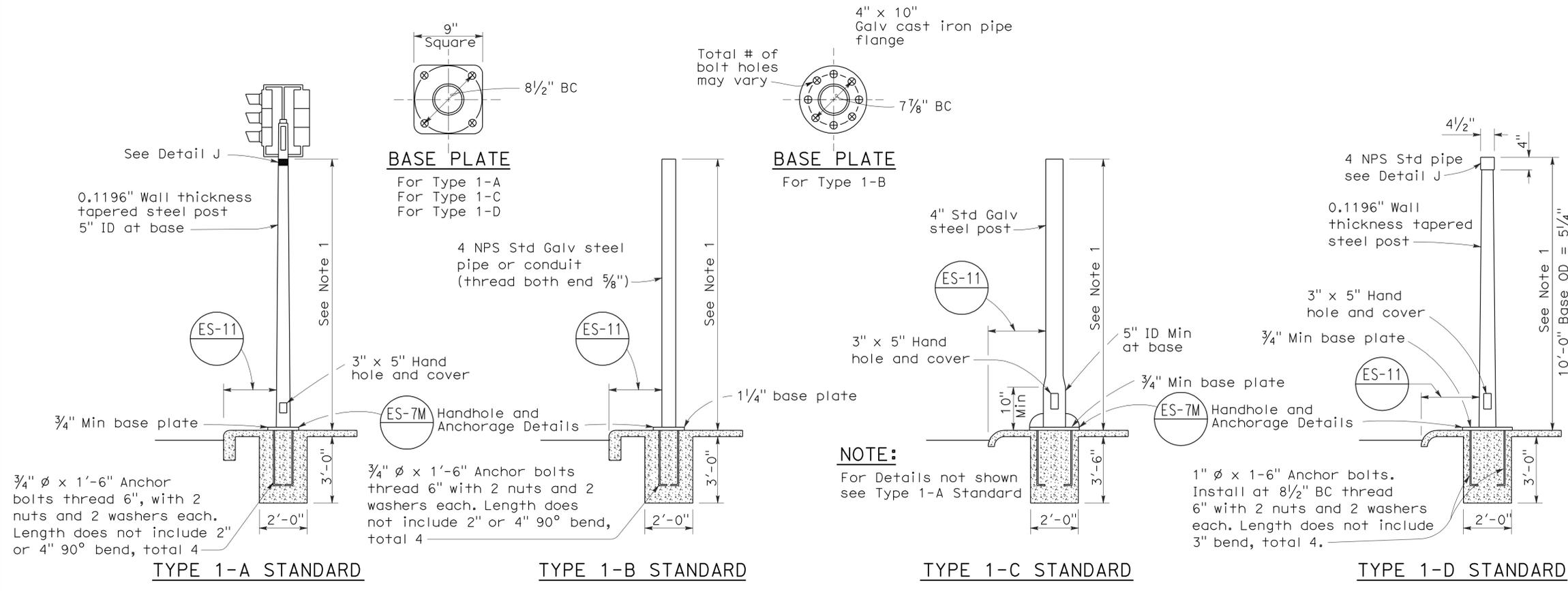
2006 REVISED STANDARD PLAN RSP ES-3E

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	ED,Sac	50,80	R27.6,16.0	17	17

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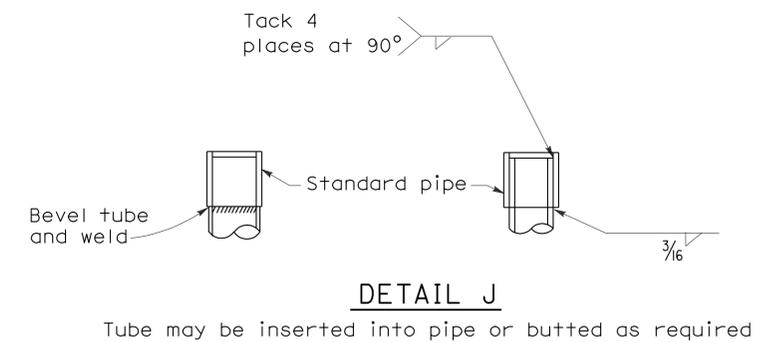
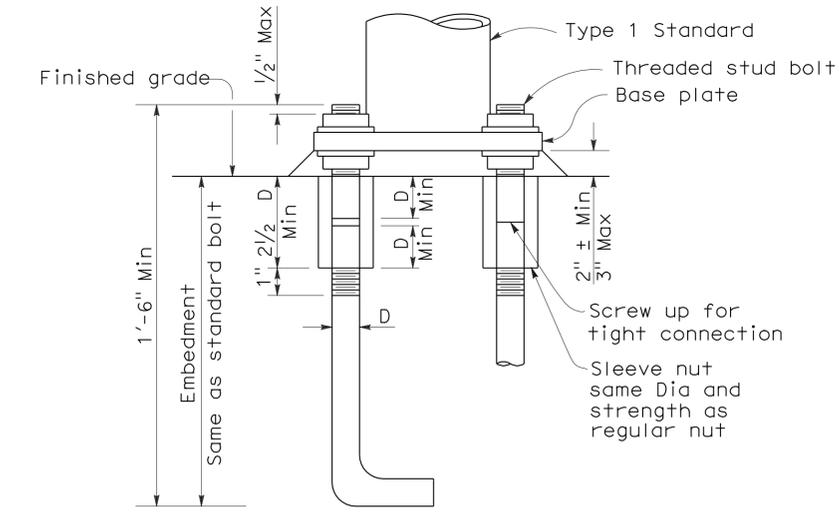
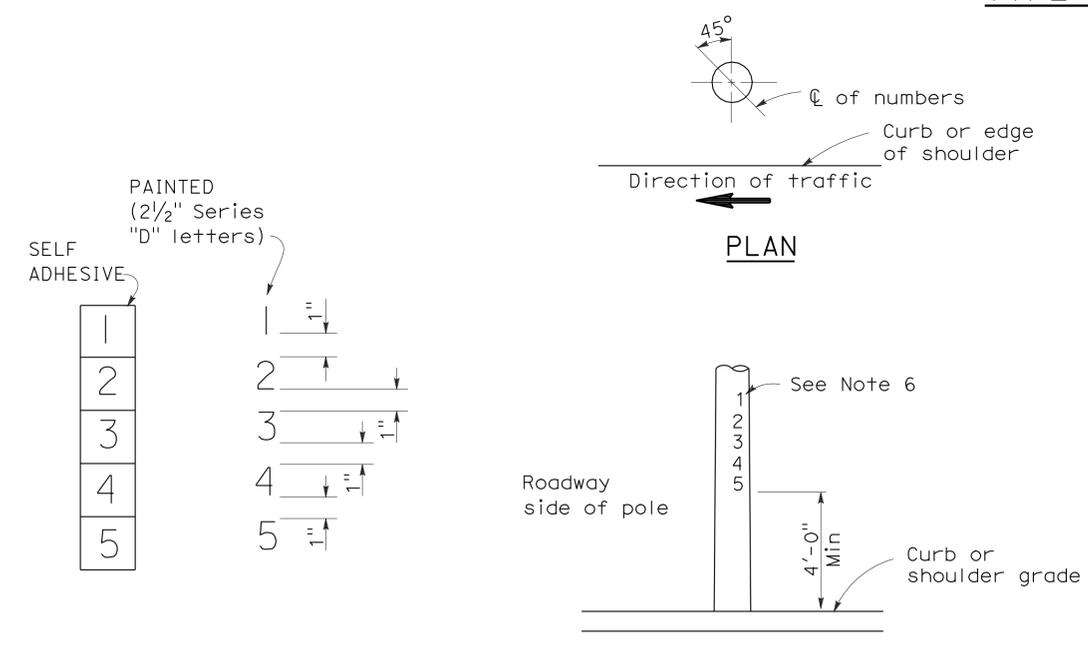
REGISTERED PROFESSIONAL ENGINEER
 Stanley P. Johnson
 No. C57793
 Exp. 3-31-08
 CIVIL
 STATE OF CALIFORNIA

To accompany plans dated 3-29-10



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

TYPE 1 SIGNAL STANDARDS



LOCATION OF EQUIPMENT NUMBERS ON STANDARDS AND POSTS

ANCHOR BOLTS WITH SLEEVE NUTS

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

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

2006 REVISED STANDARD PLAN RSP ES-7B