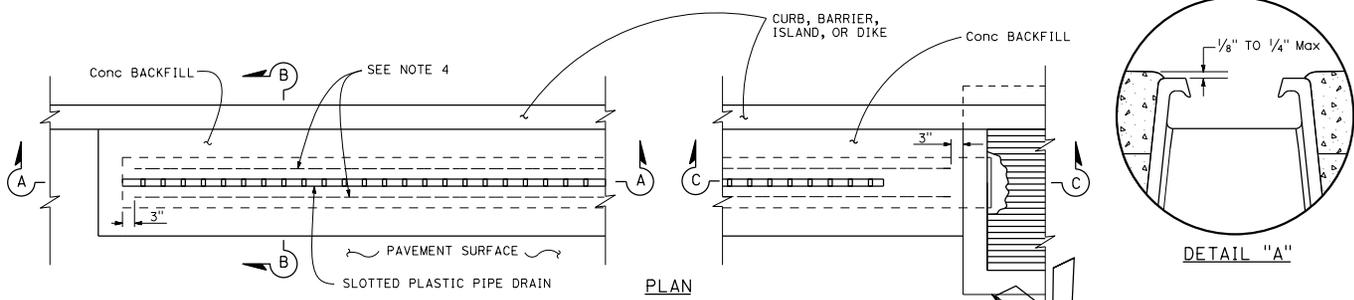
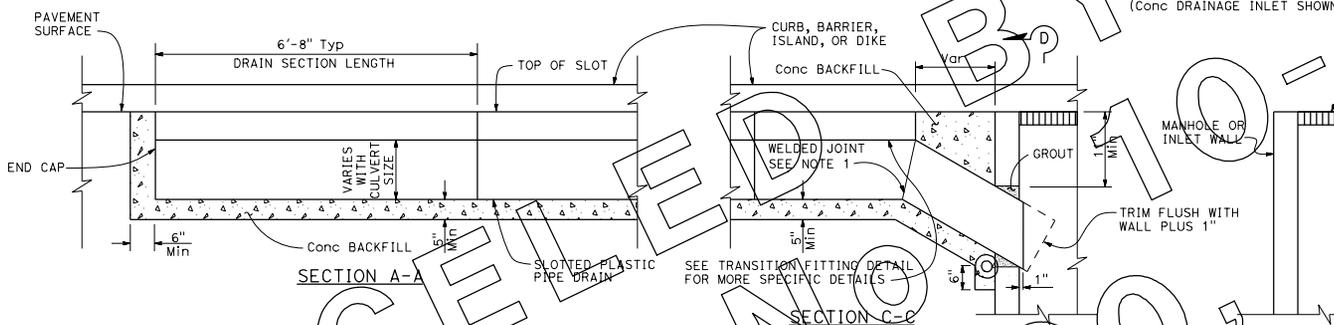


DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

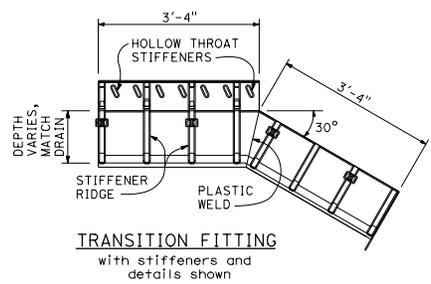
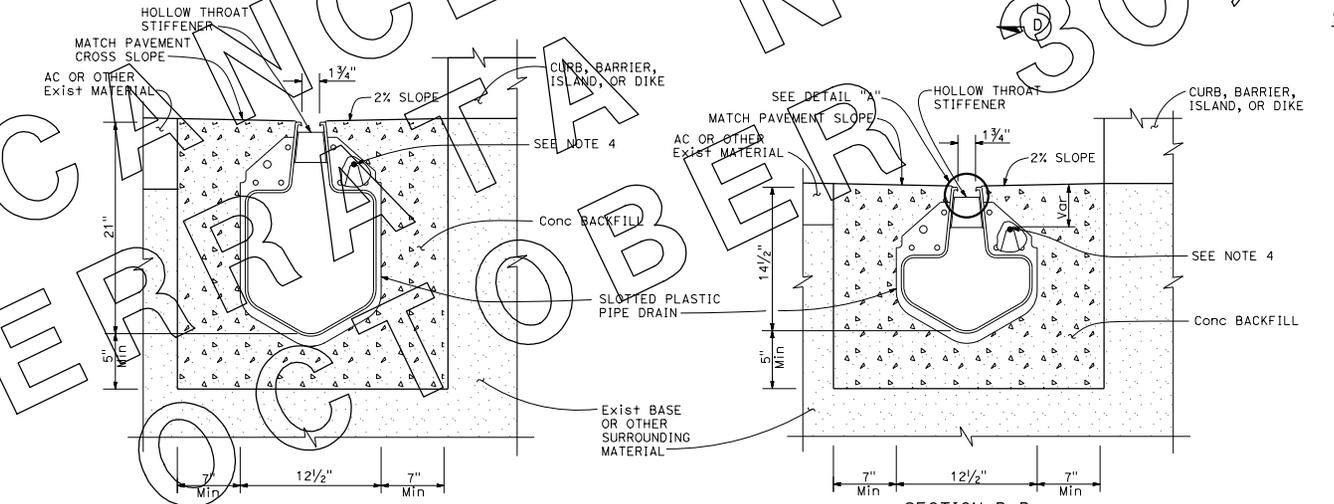
Raymond A. Jester
 REGISTERED CIVIL ENGINEER
 May 20, 2011
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



SLOTTED PLASTIC PIPE DRAIN



- NOTES:**
1. Plastic weld shall be factory fabricated.
 2. When Heel Resistant Grate is to be used, see Standard Plan 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

D98D

209

2010 STANDARD PLAN D98D

NOTES:

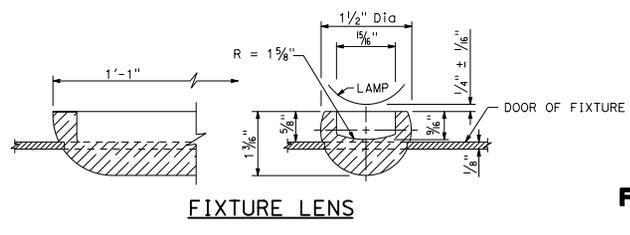
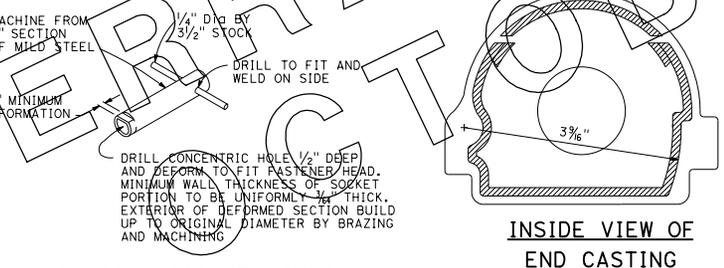
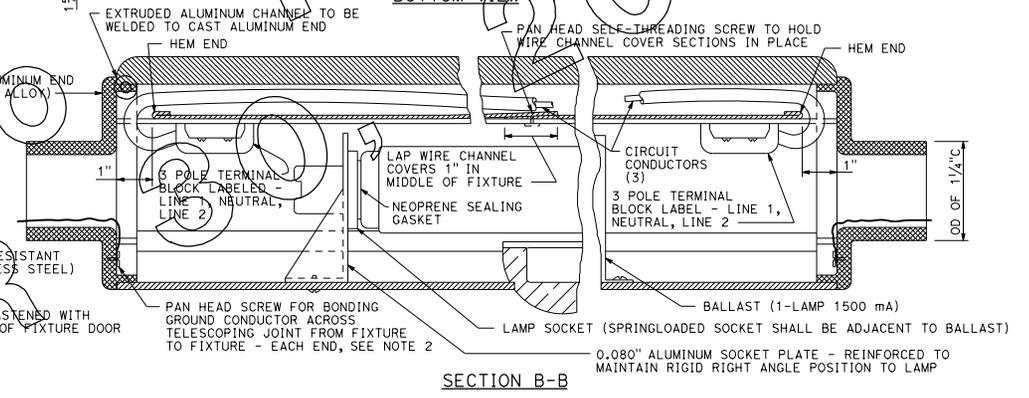
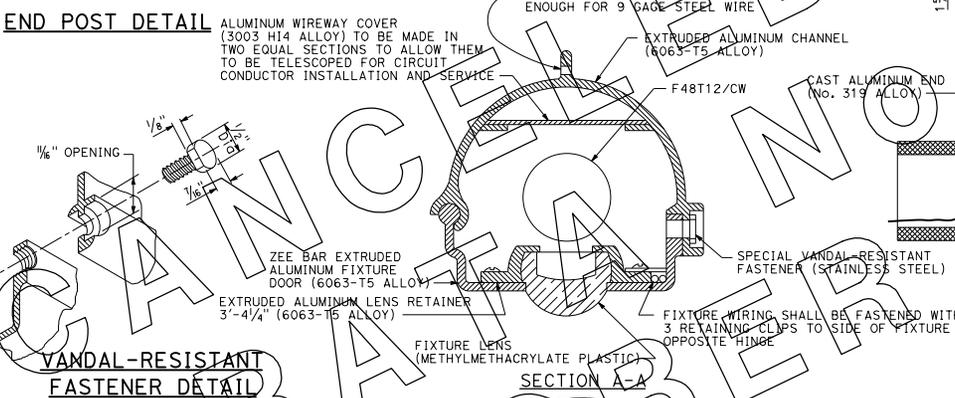
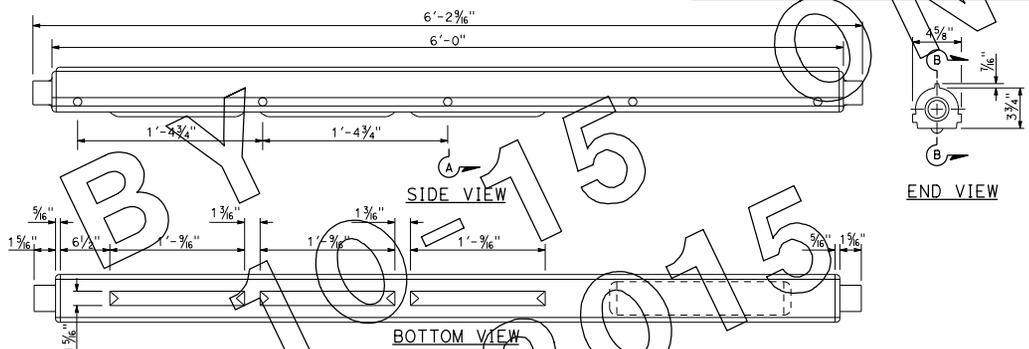
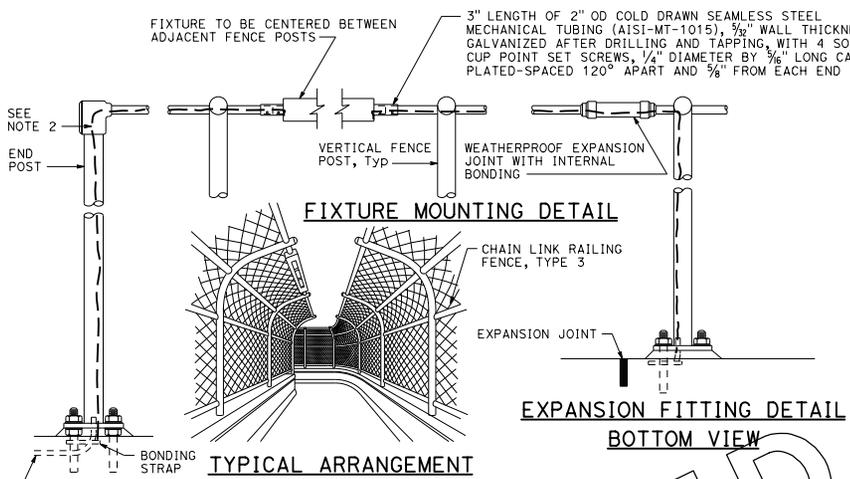
1. The maximum tolerance between door and lens shall be $1/64"$. Casting dimensions of shell are nominal and are subject to such tolerances as are consistent with sound foundry practice.
2. Continuous grounding between fixtures and from fixture to end post carrying conductors shall be provided.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

William G. McFar
 REGISTERED ELECTRICAL ENGINEER
 License No. 41512
 State of California

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 SCANNED COPIES OF THIS PLAN SHEET.



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(PEDESTRIAN OVERCROSSING
FLUORESCENT LIGHTING FIXTURE)**

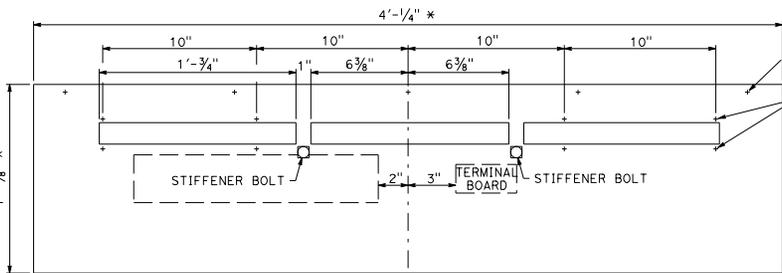
NO SCALE

ES-12A

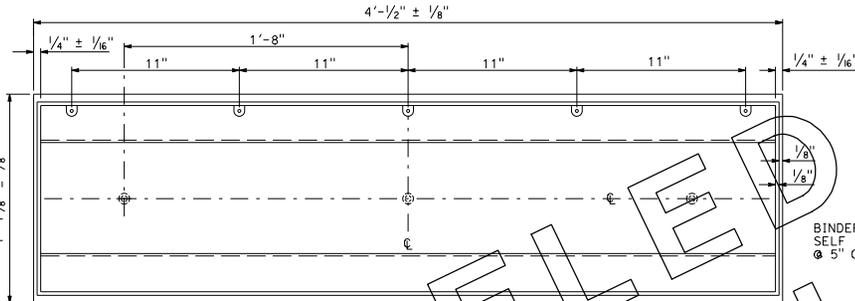
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Jeffrey G. McFar
 REGISTERED ELECTRICAL 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 SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
 Jeffrey G. McFar
 No. 14512
 Exp. 6-30-12
 ELECTRICAL
 STATE OF CALIFORNIA



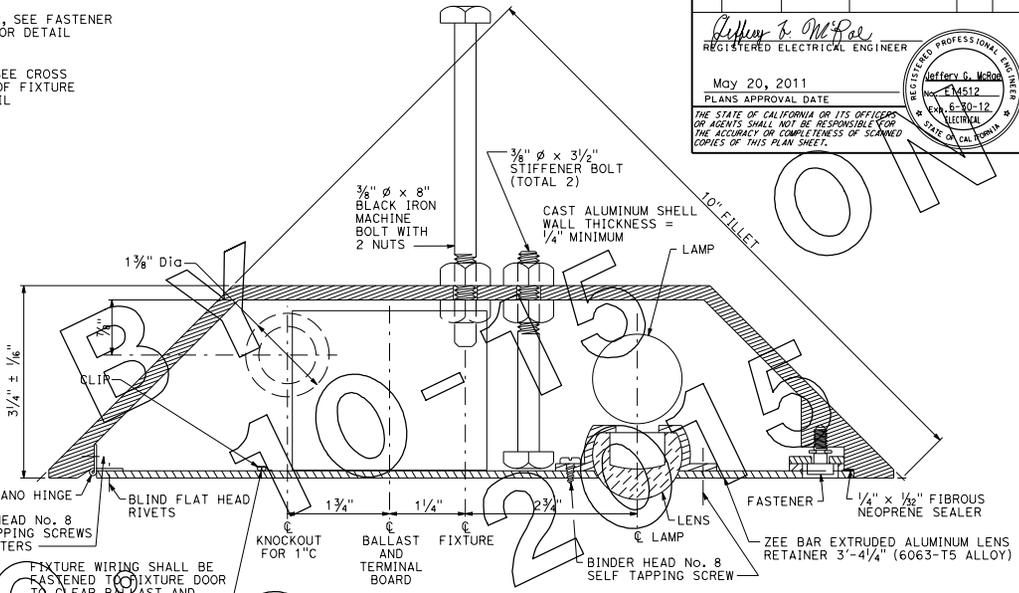
DOOR OF FIXTURE



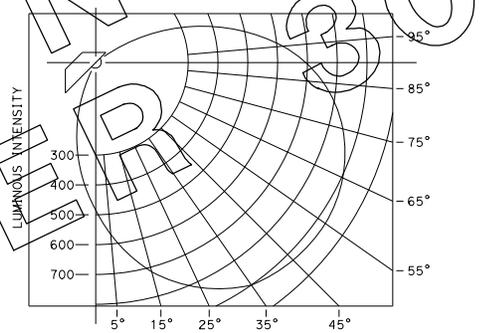
SHELL OF FIXTURE

* DIMENSIONS OF DOOR SHALL VARY TO FIT FIXTURE SHELL WITHIN 1/16" OF ACTUAL DOOR RECESS DIMENSIONS.

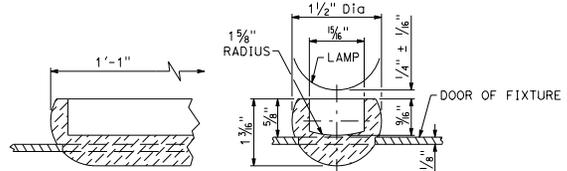
See Notes 3 and 4



CROSS SECTION OF FIXTURE



TYPICAL LUMINOUS INTENSITY DISTRIBUTION



FIXTURE LENS

NOTES:

- When fixture shell is installed, stiffener bolts shall be set with about 1/8" clearance between bolt head and door before placing concrete.
- When fixture door is mounted, stiffener bolts shall be reset to barely clear inside of fixture door and inside nut shall be tightened.
- The maximum tolerance between door and lens shall be 1/64". Casting dimensions of shell are nominal and are subject to such tolerances as are consistent with sound foundry practice.
- Continuous grounding between fixtures and from fixture to grounding electrode.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(PEDESTRIAN UNDERCROSSING
FLUORESCENT LIGHTING FIXTURE)**

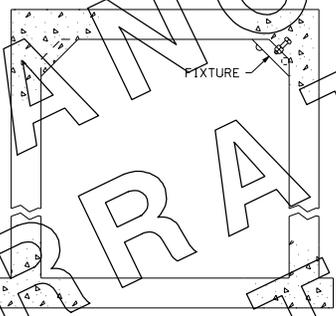
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ES-12B

490

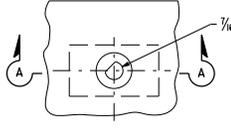
2010 STANDARD PLAN ES-12B

CANCELLED
 ERRATA
 OCTOBER 2011

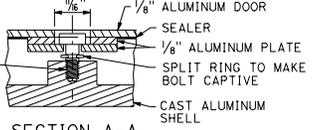


DRILL CONCENTRIC HOLE 1/4" DEEP AND DEFORM TO FIT FASTENER HEAD. MINIMUM WALL THICKNESS OF SOCKET PORTION TO BE UNIFORMLY 1/8" THICK. EXTERIOR OF DEFORMED SECTION BUILD UP TO ORIGINAL DIAMETER BY BRAZING AND MACHINING

SPECIAL SOCKET WRENCH



FASTENER DETAIL



SECTION A-A

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

Dist#	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

Chris A. Risdon
CERTIFIED ENGINEERING GEOLOGIST
October 30, 2015
PLANS APPROVAL DATE

REGISTERED GEOLOGIST
CHRIS A. RISDON
No. 2541
Exp. 12-31-2017
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.

CEMENTATION	
DESCRIPTION	CRITERIA
WEAK	CRUMBLES OR BREAKS WITH HANDLING OR LITTLE FINGER PRESSURE.
MODERATE	CRUMBLES OR BREAKS WITH CONSIDERABLE FINGER PRESSURE.
STRONG	WILL NOT CRUMBLE OR BREAK WITH FINGER PRESSURE.

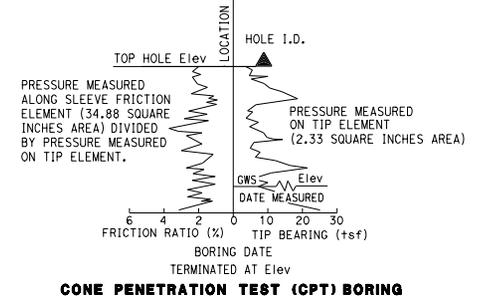
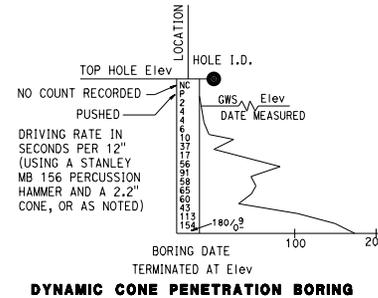
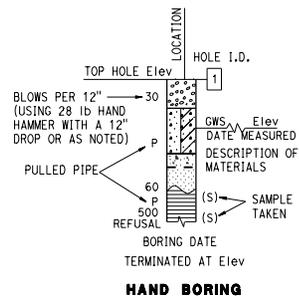
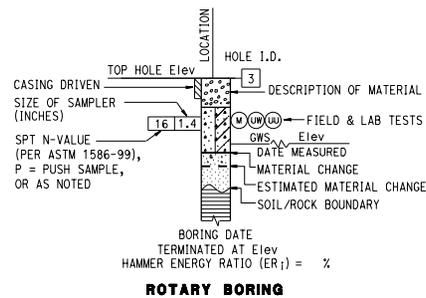
ABBREVIATION:
GWS = Ground Water Surface

TO ACCOMPANY PLANS DATED _____

BOREHOLE IDENTIFICATION		
SYMBOL	HOLE TYPE	DESCRIPTION
	A	AUGER BORING (HOLLOW OR SOLID STEM BUCKET)
	R	ROTARY DRILLED BORING (CONVENTIONAL)
	RW	ROTARY DRILLED WITH SELF-CASING WIRE-LINE
	RC	ROTARY CORE WITH CONTINUOUSLY-SAMPLED, SELF-CASING WIRE-LINE
	P	ROTARY PERCUSSION BORING (AIR)
	R	ROTARY DRILLED DIAMOND CORE
	RC	ROTARY DRILLED DIAMOND CORE, CONTINUOUSLY SAMPLED
	HD	HAND DRIVEN (1-INCH SOIL TUBE)
	HA	HAND AUGER
	D	DYNAMIC CONE PENETRATION BORING
	CPT	CONE PENETRATION TEST (ASTM D 5778)
	O	OTHER (NOTE ON LOTB)

Note: Size in inches.

CONSISTENCY OF COHESIVE SOILS				
DESCRIPTION	SHEAR STRENGTH (tsf)	POCKET PENETROMETER MEASUREMENT, PP, (tsf)	TORVANE MEASUREMENT, TV, (tsf)	VANE SHEAR MEASUREMENT, VS, (tsf)
VERY SOFT	LESS THAN 0.12	LESS THAN 0.25	LESS THAN 0.12	LESS THAN 0.12
SOFT	0.12 - 0.25	0.25 - 0.5	0.12 - 0.25	0.12 - 0.25
MEDIUM STIFF	0.25 - 0.5	0.5 - 1	0.25 - 0.5	0.25 - 0.5
STIFF	0.5 - 1	1 - 2	0.5 - 1	0.5 - 1
VERY STIFF	1 - 2	2 - 4	1 - 2	1 - 2
HARD	GREATER THAN 2	GREATER THAN 4	GREATER THAN 2	GREATER THAN 2



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
LEGEND - SOIL
(SHEET 1 OF 2)
NO SCALE

RSP A10F DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN A10F DATED MAY 20, 2011 - PAGE 6 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A10F

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

GROUP SYMBOLS AND NAMES			
GRAPHIC/SYMBOL	GROUP NAMES	GRAPHIC/SYMBOL	GROUP NAMES
	GW WELL-GRADED GRAVEL		CL LEAN CLAY
	GP POORLY-GRADED GRAVEL		CL LEAN CLAY WITH SAND
	GW-GM WELL-GRADED GRAVEL WITH SAND		CL-ML SILTY CLAY
	GP-GM POORLY-GRADED GRAVEL WITH SAND		CL-ML SILTY CLAY WITH SAND
	GW-GC WELL-GRADED GRAVEL WITH SILT		CL-ML SILTY CLAY WITH GRAVEL
	GP-GC POORLY-GRADED GRAVEL WITH SILT		CL-ML SILTY CLAY WITH GRAVEL
	GW-GC WELL-GRADED GRAVEL WITH SILT AND SAND		CL-ML SANDY SILTY CLAY
	GP-GC POORLY-GRADED GRAVEL WITH SILT AND SAND		CL-ML SANDY SILTY CLAY WITH GRAVEL
	GP-GM POORLY-GRADED GRAVEL WITH CLAY		ML SANDY SILT
	GP-GC POORLY-GRADED GRAVEL WITH CLAY AND SAND		ML SANDY SILT WITH GRAVEL
	GP-GC POORLY-GRADED GRAVEL WITH CLAY AND SAND		ML GRAVELLY SILTY CLAY
	GP-GC POORLY-GRADED GRAVEL WITH CLAY AND SAND		ML GRAVELLY SILTY CLAY WITH SAND
	GM SILTY GRAVEL		OL ORGANIC LEAN CLAY
	GC CLAYEY GRAVEL		OL ORGANIC LEAN CLAY WITH SAND
	GC CLAYEY GRAVEL WITH SAND		OL ORGANIC LEAN CLAY WITH GRAVEL
	GC-GM SILTY, CLAYEY GRAVEL		OL SANDY ORGANIC LEAN CLAY
	GC-GM SILTY, CLAYEY GRAVEL WITH SAND		OL SANDY ORGANIC LEAN CLAY WITH GRAVEL
	GC-GM SILTY, CLAYEY GRAVEL WITH SAND		OL GRAVELLY ORGANIC LEAN CLAY
	SW WELL-GRADED SAND		OL GRAVELLY ORGANIC SILT WITH SAND
	SW WELL-GRADED SAND WITH GRAVEL		OL GRAVELLY ORGANIC SILT WITH SAND
	SP POORLY-GRADED SAND		CH FAT CLAY
	SP POORLY-GRADED SAND WITH GRAVEL		CH FAT CLAY WITH SAND
	SW-SM WELL-GRADED SAND WITH SILT		CH FAT CLAY WITH GRAVEL
	SW-SM WELL-GRADED SAND WITH SILT AND GRAVEL		CH SANDY FAT CLAY
	SW-SM WELL-GRADED SAND WITH SILT AND GRAVEL		CH SANDY FAT CLAY WITH GRAVEL
	SW-SM WELL-GRADED SAND WITH SILT AND GRAVEL		CH GRAVELLY FAT CLAY
	SW-SC WELL-GRADED SAND WITH CLAY		CH GRAVELLY FAT CLAY WITH SAND
	SW-SC WELL-GRADED SAND WITH CLAY AND GRAVEL		CH GRAVELLY FAT CLAY WITH SAND
	SW-SC WELL-GRADED SAND WITH CLAY AND GRAVEL		MH ELASTIC SILT
	SW-SC WELL-GRADED SAND WITH CLAY AND GRAVEL		MH ELASTIC SILT WITH SAND
	SP-SM POORLY-GRADED SAND WITH SILT		MH ELASTIC SILT WITH GRAVEL
	SP-SM POORLY-GRADED SAND WITH SILT AND GRAVEL		MH SANDY ELASTIC SILT
	SP-SM POORLY-GRADED SAND WITH SILT AND GRAVEL		MH SANDY ELASTIC SILT WITH GRAVEL
	SP-SM POORLY-GRADED SAND WITH SILT AND GRAVEL		MH GRAVELLY ELASTIC SILT
	SP-SC POORLY-GRADED SAND WITH CLAY		MH GRAVELLY ELASTIC SILT WITH SAND
	SP-SC POORLY-GRADED SAND WITH CLAY AND GRAVEL		MH GRAVELLY ELASTIC SILT WITH SAND
	SP-SC POORLY-GRADED SAND WITH CLAY AND GRAVEL		OH ORGANIC FAT CLAY
	SP-SC POORLY-GRADED SAND WITH CLAY AND GRAVEL		OH ORGANIC FAT CLAY WITH SAND
	SM SILTY SAND		OH ORGANIC FAT CLAY WITH GRAVEL
	SM SILTY SAND WITH GRAVEL		OH SANDY ORGANIC FAT CLAY
	SC CLAYEY SAND		OH SANDY ORGANIC FAT CLAY WITH GRAVEL
	SC CLAYEY SAND WITH GRAVEL		OH GRAVELLY ORGANIC FAT CLAY
	SC-SM SILTY, CLAYEY SAND		OH GRAVELLY ORGANIC FAT CLAY WITH SAND
	SC-SM SILTY, CLAYEY SAND WITH GRAVEL		OH GRAVELLY ORGANIC FAT CLAY WITH SAND
	PT PEAT		OL/OH ORGANIC SOIL
	PT PEAT		OL/OH ORGANIC SOIL WITH SAND
	PT PEAT		OL/OH ORGANIC SOIL WITH GRAVEL
	PT PEAT		OL/OH SANDY ORGANIC SOIL
	PT PEAT		OL/OH SANDY ORGANIC SOIL WITH GRAVEL
	PT PEAT		OL/OH GRAVELLY ORGANIC SOIL
	PT PEAT		OL/OH GRAVELLY ORGANIC SOIL WITH SAND
	PT PEAT		OL/OH GRAVELLY ORGANIC SOIL WITH SAND

FIELD AND LABORATORY TESTING	
(C)	CONSOLIDATION (ASTM D2435)
(CL)	COLLAPSE POTENTIAL (ASTM D4546)
(CP)	COMPACTION CURVE (CTM 216)
(CR)	CORROSIVITY TESTING (CTM 643, CTM 422, CTM 417)
(CU)	CONSOLIDATED UNDRAINED TRIAXIAL (ASTM D4767)
(DS)	DIRECT SHEAR (ASTM D3080)
(EI)	EXPANSION INDEX (ASTM D4829)
(M)	MOISTURE CONTENT (ASTM D2216)
(OC)	ORGANIC CONTENT-% (ASTM D2974)
(P)	PERMEABILITY (CTM 220)
(PA)	PARTICLE SIZE ANALYSIS (ASTM D422)
(PI)	PLASTICITY INDEX (AASHTO T 90) LIQUID LIMIT (AASHTO T 89)
(PL)	POINT LOAD INDEX (ASTM D5731)
(PM)	PRESSURE METER
(R)	R-VALUE (CTM 301)
(SE)	SAND EQUIVALENT (CTM 217)
(SG)	SPECIFIC GRAVITY (AASHTO T 100)
(SL)	SHRINKAGE LIMIT (ASTM D4943)
(SW)	SWELL POTENTIAL (ASTM D4546)
(UC)	UNCONFINED COMPRESSION-SOIL (ASTM D2166)
(UC)	UNCONFINED COMPRESSION-ROCK (ASTM D7012 - METHOD C)
(UU)	UNCONSOLIDATED UNDRAINED TRIAXIAL (ASTM D2850)
(UW)	UNIT WEIGHT (ASTM D7263 - METHOD B)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Chris A. Risdon
CERTIFIED ENGINEERING GEOLOGIST

October 30, 2015
PLANS APPROVAL DATE

REGISTERED GEOLOGIST
CHRIS A. RISDON
No. 2541
Exp. 12-31-2021
STATE OF CALIFORNIA

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TO ACCOMPANY PLANS DATED _____

APPARENT DENSITY OF COHESIONLESS SOILS	
DESCRIPTION	SPT N ₆₀ (BLOWS / 12 INCHES)
VERY LOOSE	0 - 5
LOOSE	5 - 10
MEDIUM DENSE	10 - 30
DENSE	30 - 50
VERY DENSE	GREATER THAN 50

MOISTURE	
DESCRIPTION	CRITERIA
DRY	NO DISCERNABLE MOISTURE
MOIST	MOISTURE PRESENT, BUT NO FREE WATER
WET	VISIBLE FREE WATER

PERCENT OR PROPORTION OF SOILS	
DESCRIPTION	CRITERIA
TRACE	PARTICLES ARE PRESENT BUT ESTIMATED TO BE LESS THAN 5%
FEW	5% - 10%
LITTLE	15% - 25%
SOME	30% - 45%
MOSTLY	50% - 100%

PARTICLE SIZE		
DESCRIPTION	SIZE	
BOULDER	GREATER THAN 12"	
COBBLE	3" - 12"	
GRAVEL	COARSE	3/4" - 3"
	FINE	1/5" - 3/4"
SAND	COARSE	1/6" - 1/5"
	MEDIUM	1/64" - 1/16"
	FINE	1/300" - 1/64"
SILT AND CLAY	LESS THAN 1/300"	

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
LEGEND - SOIL
(SHEET 2 OF 2)
NO SCALE

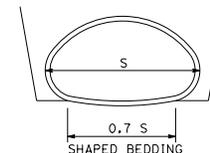
RSP A10G DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN A10G DATED MAY 20, 2011 - PAGE 7 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A10G

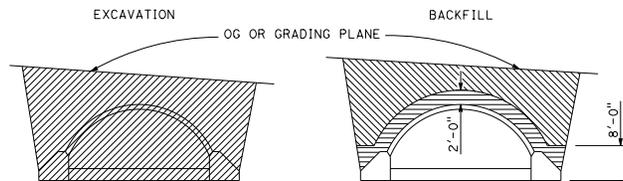
2010 REVISED STANDARD PLAN RSP A10G

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
REGISTERED CIVIL ENGINEER October 30, 2015 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

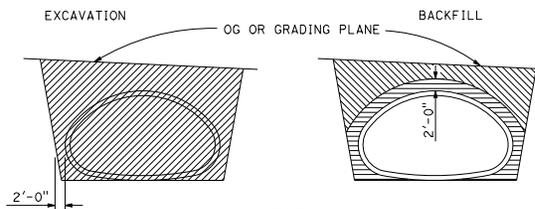
TO ACCOMPANY PLANS DATED _____



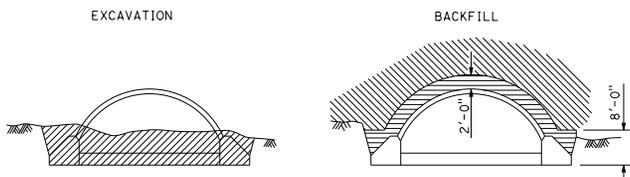
SHAPED BEDDING
S = Larger than 84"



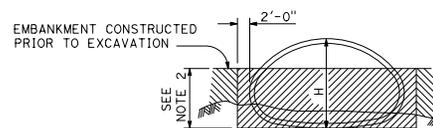
IN TRENCH



IN TRENCH



IN EMBANKMENT
STRUCTURAL STEEL PLATE ARCHES



IN EMBANKMENT
**STRUCTURAL STEEL PLATE PIPE ARCHES
AND VEHICULAR UNDERCROSSING**

NOTES:

1. PIPES: 30" minimum for diameters up to and including 42" then $\frac{2}{3}$ diameter but no more than 60" required. CORRUGATED METAL PIPE ARCHES: 30" maximum.
2. $\frac{2}{3}$ H up to 60" maximum.
3. Slope or shore excavation sides as necessary.
4. Backfill shall be placed full width of excavation except as noted.
5. Diagrams do not apply to overside drains.
6. Dimensions shown are minimum.
7. Construction strutting of structural steel plate pipe, arches and vehicular undercrossing to be used when shown on the project plans. When shown, see Standard Plan D88A for strutting requirements.
8. Excavation below pipe and 80% relative compaction requirements for plastic pipes only.
9. D is the inside diameter (ID) of the pipe.

LEGEND

	STRUCTURE EXCAVATION (CULVERT)		ROADWAY EMBANKMENT
	STRUCTURE BACKFILL (CULVERT)		STRUCTURE BACKFILL (CULVERT)
	95% RELATIVE COMPACTION		80% RELATIVE COMPACTION

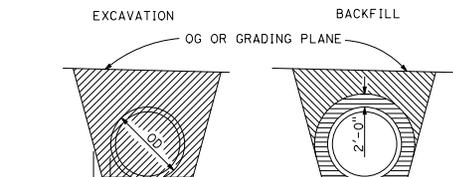
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**EXCAVATION AND BACKFILL
METAL AND PLASTIC CULVERTS**

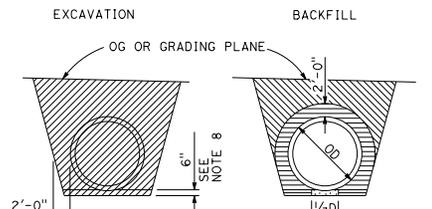
NO SCALE

RSP A62F DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN A62F DATED MAY 20, 2011 - PAGE 26 OF THE STANDARD PLANS BOOK DATED 2010.

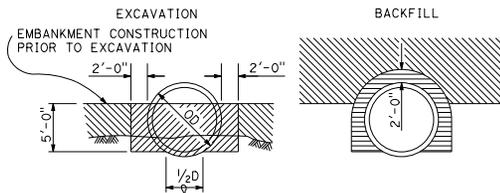
REVISED STANDARD PLAN RSP A62F



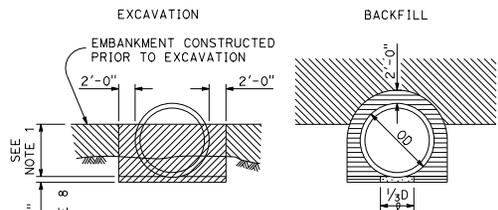
IN TRENCH



IN TRENCH



IN EMBANKMENT
PIPES
Larger than 84"



IN EMBANKMENT
**METAL AND PLASTIC PIPES AND
CORRUGATED METAL PIPE ARCHES**
84" or Smaller

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

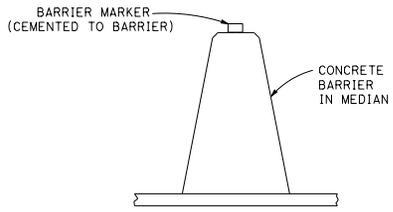
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

October 30, 2015
PLANS APPROVAL DATE

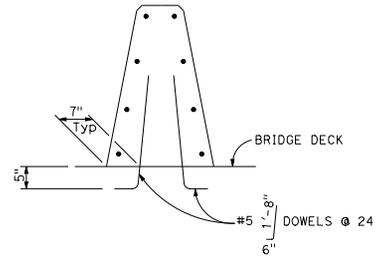
No. C60200
Exp. 6-30-17
CIVIL
STATE OF CALIFORNIA

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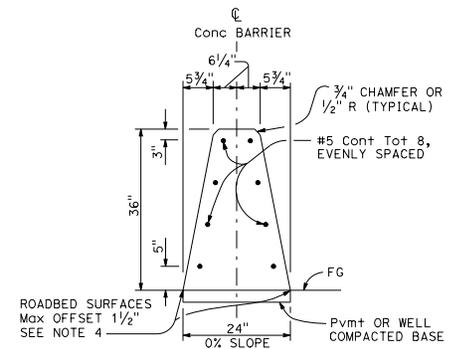
TO ACCOMPANY PLANS DATED _____



CONCRETE BARRIER TYPE 60 DELINEATION
See Note 5



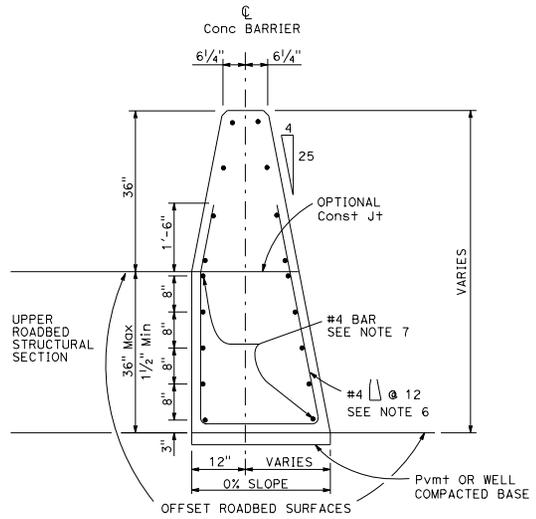
CONCRETE BARRIER TYPE 60A
Details similar to Type 60 except as noted.



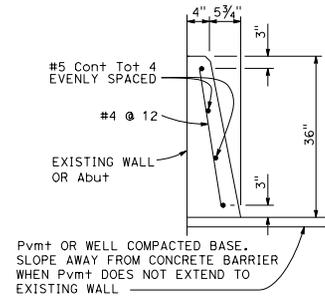
CONCRETE BARRIER TYPE 60

NOTES:

1. 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.
2. See Revised Standard Plan RSP A76C for Concrete Barrier Type 60 transitions at bridge column and sign pedestals.
3. Where glare screen is required on Concrete Barrier Type 60, use Concrete Barrier Type 60C.
4. Where roadbed offset is greater than 1 1/2", see Concrete Barrier Type 60C.
5. See Project Plans for barrier delineation locations.
6. Reinforcing stirrup not required for roadbed offsets less than 1'-0".
7. For roadbed surfaces offset greater than 1 1/2" and less than or equal to 3", no reinforcement required. For roadbed surfaces offset greater than 3" and less than or equal to 8", use two #4 Reinf at 3" above the lower roadbed surface. For roadbed surfaces offset greater than 8" and less than or equal to 12", use two #4 Reinf at 3" above the lower roadbed surface and two #4 Reinf at 8" above the lower roadbed surface. For roadbed surfaces offset greater than 12" and less than or equal to 36", use two #4 Reinf at 3" above the lower roadbed surface and two #4 Reinf at every 8" increment vertical spacing above the first two #4 Reinf.



CONCRETE BARRIER TYPE 60C
Details similar to Type 60 except as noted. Use concrete barrier end anchor when necessary. 36" roadbed surfaces offset shown.



CONCRETE BARRIER TYPE 60D

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
CONCRETE BARRIER TYPE 60
NO SCALE

RSP A76A DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN A76A DATED MAY 20, 2011 - PAGE 34 OF THE STANDARD PLANS BOOK DATED 2010.
REVISED STANDARD PLAN RSP A76A

2010 REVISED STANDARD PLAN RSP A76A

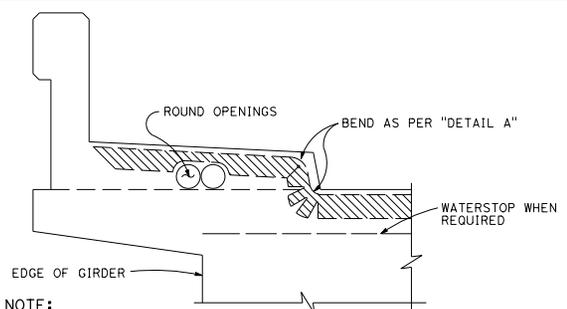
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL SHEETS

REGISTERED CIVIL ENGINEER
 Effthymios Delis
 No. C51434
 Exp. 6-30-17
 CIVIL
 STATE OF CALIFORNIA

October 30, 2015
 PLANS APPROVAL DATE

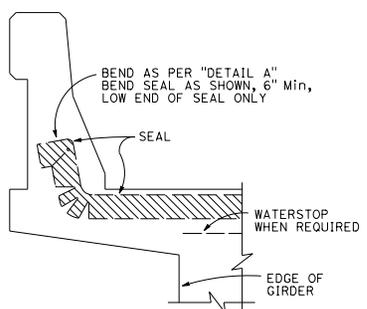
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TO ACCOMPANY PLANS DATED _____

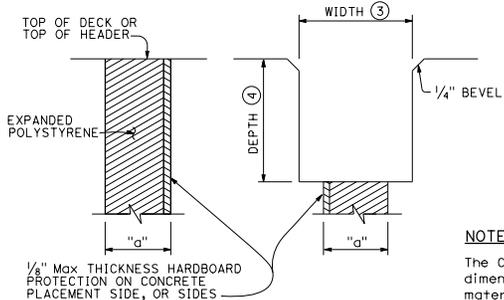


NOTE:
 Type "B" seal shown. Type "A" seals to conform to the general path of seal shown, cuts for bending not required. Bend type "A" seals 3' up into curb or barrier rail on only the low end of the seal.

CONCRETE BARRIER AND SIDEWALK



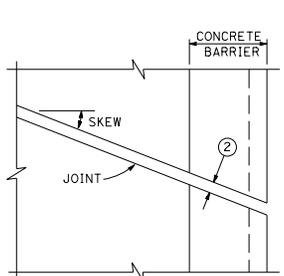
CONCRETE BARRIER



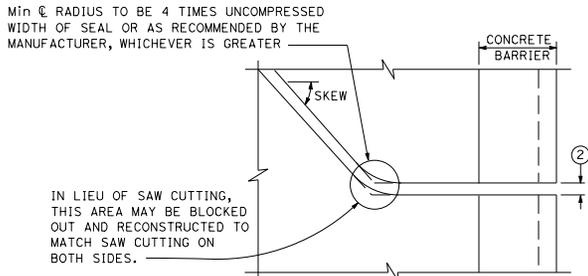
FORMING DETAIL SAWCUT DETAIL

NOTE:
 The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

JOINT SEALS DETAILS

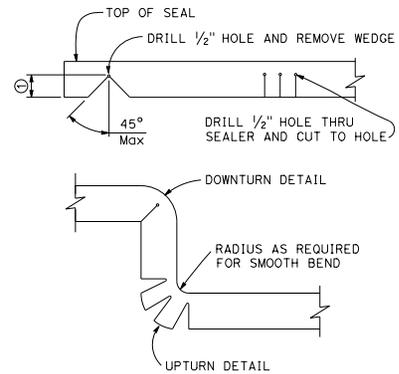


PLAN OF JOINT (SKEW ≤ 20°)



PLAN OF JOINT (SKEW > 20°)

IN LIEU OF SAW CUTTING, THIS AREA MAY BE BLOCKED OUT AND RECONSTRUCTED TO MATCH SAW CUTTING ON BOTH SIDES.

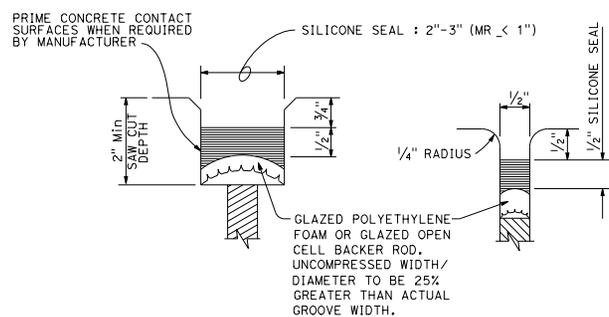


DETAIL A

- NOTES:**
- Make smooth cuts from the bottom of seal to 1 1/2" clear of top leaving at least one complete cell between the top of the cut and top of the seal. When necessary cut back of seal to clear conduit and round openings.
 - Opening in barrier to match width of sawn deck joint.
 - Sawcut groove widths shall be as ordered by the Engineer.
 - Depth of sawcut: Type A - Depth to be 2" minimum. Type B - Depth to be equal to or greater than the depth of seal measured along the contact surface, when compressed to minimum width position (W₂) plus dimensions shown.
 - MR (movement rating) as shown on other plan sheets.
 - Other depths must be approved by the Engineer.
 - A sidewalk joint shall be covered by an expansion joint armor.

DIMENSIONS "a" OF JOINT REQUIRED

MOVEMENT RATING (MR) (5)	BRIDGE TYPE	"a" DIMENSION DECK CONCRETE PLACED		
		WINTER	FALL-SPRING	SUMMER
2"	ALL EXCEPT CIP/PS	1 1/2"	1 1/4"	3/4"
	CIP/PS	1 1/4"	1"	1/2"
1 1/2"	ALL EXCEPT CIP/PS	1 1/4"	1"	1/2"
	CIP/PS	1"	3/4"	1/2"
1"	ALL EXCEPT CIP/PS	1"	3/4"	1/2"
	CIP/PS	3/4"	1/2"	1/2"
1/2"	ALL EXCEPT CIP/PS	3/4"	3/4"	1/2"
	CIP/PS	1/2"	1/2"	1/2"

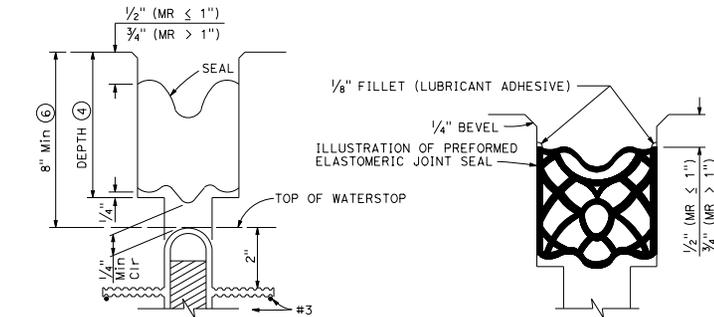


TYPE A SEAL

Movement rating : Silicone = 1" Max

TYPE A1 SEAL

Longitudinal joints only



TYPE B JOINT SEAL IN MINIMUM WIDTH POSITION (W₂)

TYPE B SEAL

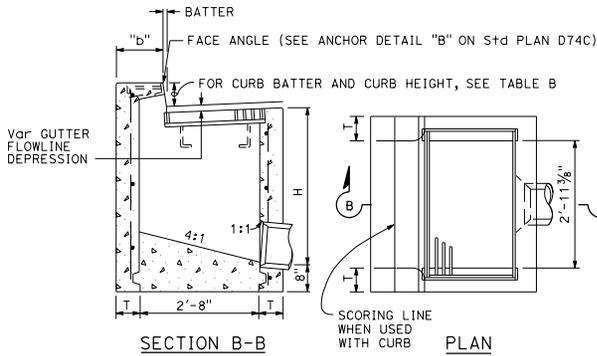
Movement Rating ≤ 2"

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
JOINT SEALS
(MAXIMUM MOVEMENT RATING = 2")

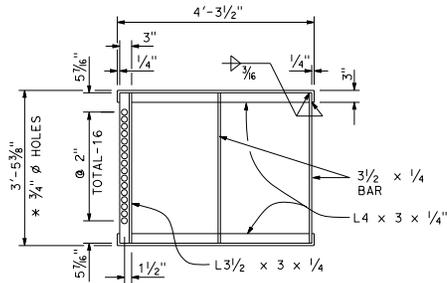
NO SCALE
 RSP B6-21 DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN B6-21 DATED MAY 20, 2011 - PAGE 283 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP B6-21

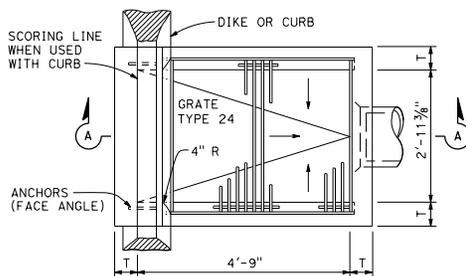
2010 REVISED STANDARD PLAN RSP B6-21



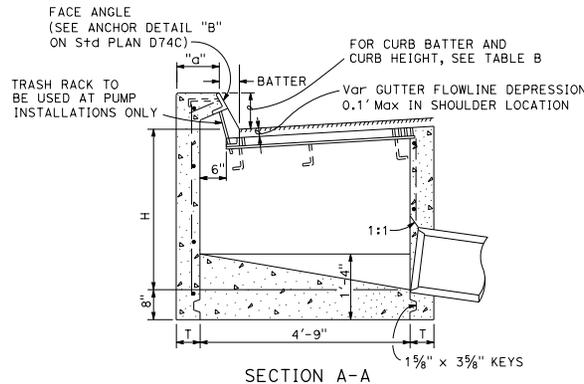
TYPE GO



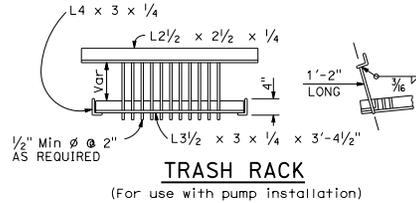
GRATE FRAME FOR TYPE GDO INLET



TYPE GDO



SECTION A-A



TRASH RACK

(For use with pump installation)

TYPE	H=3'-0" TO 8'-0" (T=6")	H=8'-1" TO 20'-0" (T=8")	ADDITIONAL PCC PER FOOT (CY)	
	H=3'-0"	H=8'-1"	H=3'-0"	H=8'-1"
GO	1.24	0.245	3.39	0.346
GDO	1.62	0.322	4.36	0.446

Table based on 8" floor slab, and curb type giving highest quantity of concrete, no deductions or adjustments are to be made to these quantities because of pipe openings, different floor alternatives or different curb type.

CURB TYPE	NORMAL CURB HEIGHT	CURB BATTER	"a" DIMENSION	"b" DIMENSION
A1-6	6"	1/2"	T+7 1/2"	T+6 1/2"
A1-8	8"	2"	T+7"	T+6"
B1-6	6"	4"	T+5"	T+4"
TYPE A DIKE	6"	3"	T+6"	T+5"

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER
 October 30, 2015
 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.

TO ACCOMPANY PLANS DATED _____

NOTES:

- "H" is the difference in elevation between the outlet pipe flow line and the normal gutter grade line undepressed.
- For "T" wall thickness, see Table A below.
- Wall reinforcing not required when "H" is 8'-0" or less and the unsupported width or length is 7'-0" or less. Walls exceeding these limits shall be reinforced with #4 @ 18" centers placed 1/2" clear to inside of box unless otherwise shown.
- Inlet bottom reinforcing not required. See Standard Plan D74C for alternative reinforced bottom.
- Steps - None required where "H" is less than 2'-6" Where "H" is 2'-6" or more, install steps with lowest rung 1'-0" above the floor and highest rung not more than 6" below top of inlet. The distance between steps shall not exceed 1'-0" and shall be uniform throughout the length of the wall. Place steps in the wall without an opening. Step inserts may be substituted for the bar steps. Step inserts shall comply with State Industrial Safety requirements. See Standard Plan D74C for step details.
- When shown on the project plans, place a 3/4" plain round protection bar horizontally across the length of the opening and bend back 4" into the inlet wall on each side.
- Pipe(s) can be placed in any wall.
- Curb section shall match adjacent curb.
- Basin floors shall have wood trowel finish and shall slope toward the outlet pipe as shown.
- See Revised Standard Plans RSP D77A and RSP D77B for grate and frame details and weights of miscellaneous iron and steel.
- See Standard Plan D78A for gutter depression details.
- Complete joint penetration butt welds may be substituted for the fillet welds on all anchors.
- Standard square, hexagon, round or equivalent headed anchors may be substituted for the right angle hooks on the anchors shown on this plan.
- Cast-in-place inlets to be formed around all pipes/stubs intersecting the inlet and concrete poured in one continuous operation. Precast inlets shall have mortared pipe connections conforming to details for Type GCP inlets on Revised Standard Plan RSP D75B. See Standard Specifications for mortar composition.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
DRAINAGE INLETS
NO SCALE

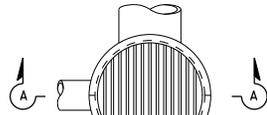
RSP D74B DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN D74B DATED MAY 20, 2011 - PAGE 159 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D74B

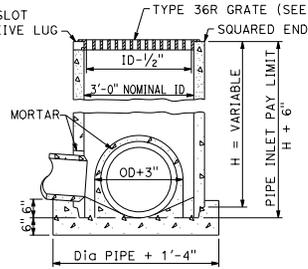
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Raymond Don Isztou
 REGISTERED CIVIL ENGINEER
 No. C37332
 Exp. 6-30-16
 CIVIL
 STATE OF CALIFORNIA

October 30, 2015
 PLANS APPROVAL DATE
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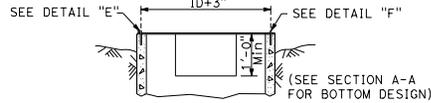
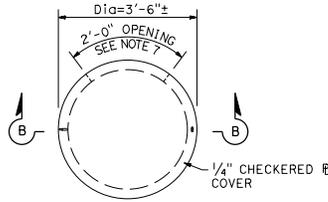


CAST 1" x 2 1/2" SLOT IN PIPE TO RECEIVE LUG



SECTION A-A
TYPE GCP

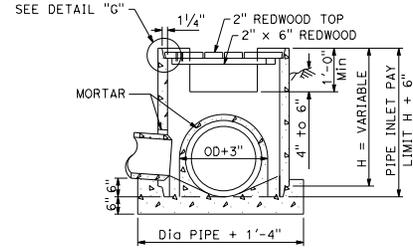
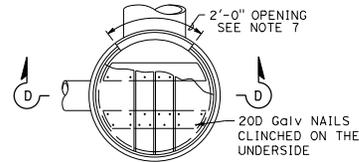
Concrete pipe inlet with grate



SECTION B-B

TYPE OCP or OCPI

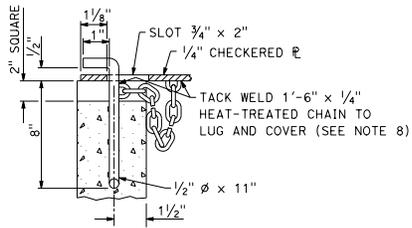
Concrete pipe inlet with steel cover
(See Note 6)



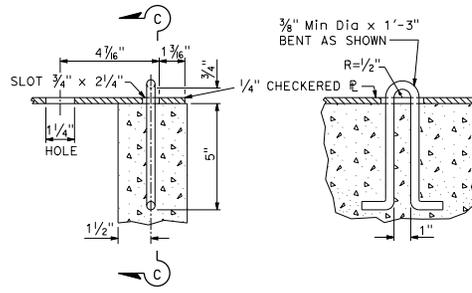
SECTION D-D

TYPE OCP or OCPI

Concrete pipe inlet with redwood cover
(See Notes 6 and 10)

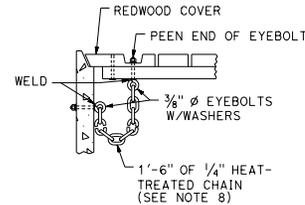


DETAIL "E"



DETAIL "F"

SECTION C-C



DETAIL "G"

NOTES:

- For details of steel pipe inlets, see Standard Plan D75A.
- For details of ladder and steps and when ladder or steps are required, see Standard Plan D75C.
- Inlet pipes shall not protrude into basin.
- Except for inlets used for junction boxes, basin floors shall have minimum slope of 4:1 from all directions toward outlet pipe, and a wood trowel finish.
- See Revised Standard Plans RSP D77A and RSP D77B for Grate and Frame Details and Weights of Miscellaneous Iron and Steel.
- Designation of Type OCPI pipe inlets on plans indicates trash racks are to be furnished and installed on all side openings. See Standard Plan D75C for Trash Rack details.
- More than one side opening may be required. Location and number as ordered by the Engineer. Opening may be cast in pipe.
- Chain to be provided when specified.
- Place pipe so bars of grate will be parallel with main surface flow.
- Redwood covers shall only be placed at locations designated on the plans.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CONCRETE PIPE INLETS

NO SCALE

RSP D75B DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN D75B DATED MAY 20, 2011 - PAGE 162 OF THE STANDARD PLANS BOOK DATED 2010.

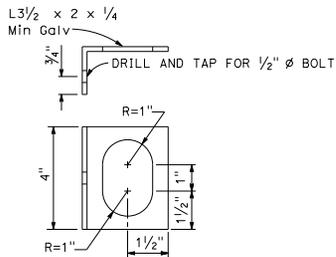
REVISED STANDARD PLAN RSP D75B

2010 REVISED STANDARD PLAN RSP D75B

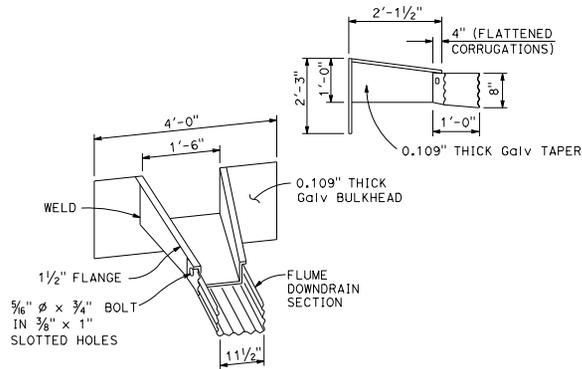
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER	
October 30, 2015	
PLANS APPROVAL DATE	
No. C61257	REGISTERED PROFESSIONAL ENGINEER
Exp. 6-30-17	Bruce D. Swanger
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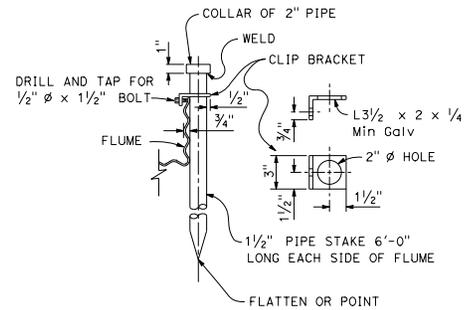
2010 REVISED STANDARD PLAN RSP D87D



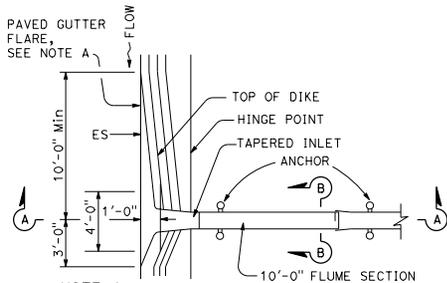
ALTERNATIVE CLIP BRACKET DETAIL



TAPERED INLET



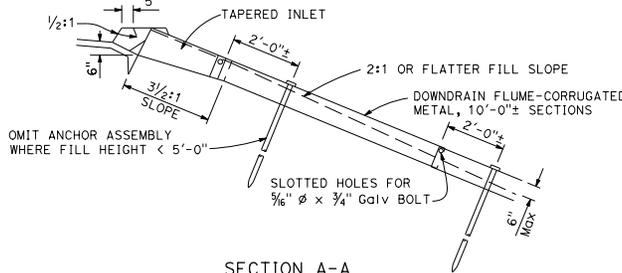
PIPE STAKE ANCHOR DETAIL



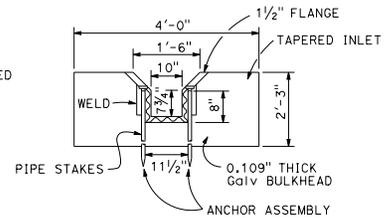
NOTE A
In sag location, use 10'-0" length of paved gutter flare on both sides of inlet.

PLAN

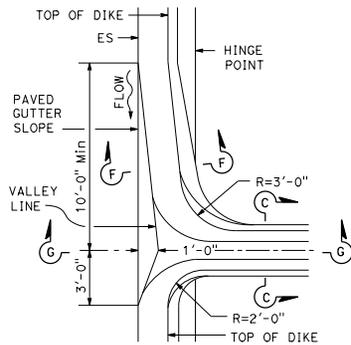
TAPERED INLET AND FLUME DOWNDRAIN



SECTION A-A



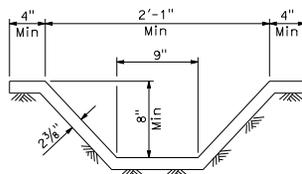
SECTION B-B



PLAN

MOUNTABLE DIKE

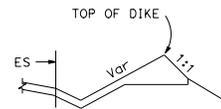
HOT MIX ASPHALT OVERSIDE DRAINS



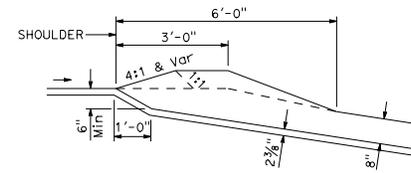
SECTION C-C

NOTE:

1. Cross section of slope ditch may be semicircular, vee or trapezoidal.



SECTION F-F



SECTION G-G

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
OVERSIDE DRAINS

NO SCALE

RSP D87D DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN D87D DATED MAY 20, 2011 - PAGE 185 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D87D

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Raymond Don Isztog
 REGISTERED CIVIL ENGINEER

October 30, 2015
 PLANS APPROVAL DATE

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ANNULAR AND HELICAL PROFILE

COUPLING TYPE	PIPE CORRUGATION	PIPE SIZE	W OR A	PIPE WALL THICKNESS				BAND THICKNESS				ANGLE						
				CSP		CAP		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		
TWO PIECE INTEGRAL FLANGE	1 1/2' x 1/4"	6"	7"	0.064"-0.168"		0.052"												
	1 1/2' x 1/4"	8"-10"	7"	0.064"-0.168"	0.060"-0.164"	0.064"	0.060"											
ANNULAR	2 2/3" x 1/2"	THROUGH 24"	12"	0.064"-0.168"	0.060"-0.164"	0.064"	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"
HUGGER	2 2/3" x 1/2" REROLLED END	THROUGH 24"	10 1/2"	0.064"-0.168"		0.064"		0.079"	1/2"	7/8"	32 ksi							

NOTES:

- 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 1/4" 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.
- For down drain applications, two piece integral flange couplers shall have factory applied sleeve type rubber gaskets with a minimum length of 7" measured along the length of the pipe.

SPIRAL RIB PROFILE

COUPLING TYPE	PIPE CORRUGATION	PIPE SIZE	W	PIPE WALL THICKNESS				BAND THICKNESS				ANGLE						
				SSRP		ASRP		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		
ANNULAR	2 2/3" x 1/2" * REROLLED END	24"	12"	0.064"-0.168"	0.060"-0.164"	0.064"	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"
HUGGER	2 2/3" x 1/2" * REROLLED END	24"	10 1/2"	0.064"-0.168"		0.064"		0.079"	1/2"	7/8"	32 ksi							

* See Note 11.

11. 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" annular corrugations with a minimum of two full corrugations at each end.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**CORRUGATED METAL PIPE
COUPLING DETAILS No. 7
DOWNDRAIN**

NO SCALE

RSP D97G DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN D97G DATED
MAY 20, 2011 - PAGE 202 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D97G

2010 REVISED STANDARD PLAN RSP D97G

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Raymond Don Isztou
 REGISTERED CIVIL ENGINEER
 No. C37332
 Exp. 6-30-16
 CIVIL
 STATE OF CALIFORNIA

October 30, 2015
 PLANS APPROVAL DATE

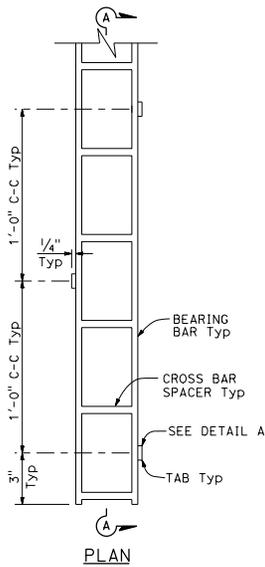
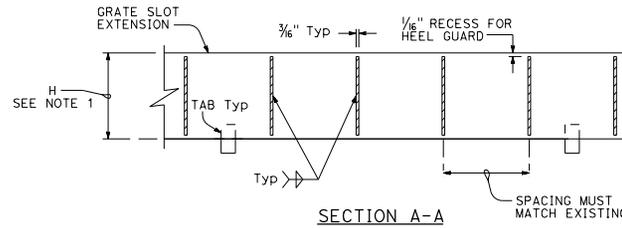
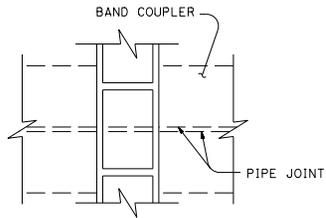
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TO ACCOMPANY PLANS DATED _____

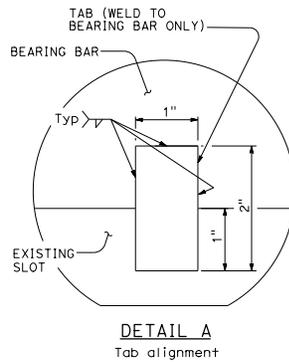
NOTES:

- H must be a minimum of 2 1/2", or otherwise shown on the plans.
- For Slotted Corrugated Steel Pipe Drain Details, see Standard Plans D98A and D98B.
- Use heel guard when shown. See Standard Plan D98B for heel guard details.
- Minimum grate slot extension length is 80".
- The top corners of the grate slot extension's bearing bars must not vary from a straight line more than 1/2" in 20'-0".
- Cross bar spacers must be welded to the grate slot extension's bearing bars to achieve a minimum tensile strength of 12,000 LB normal to the longitudinal axis of the bearing bars.

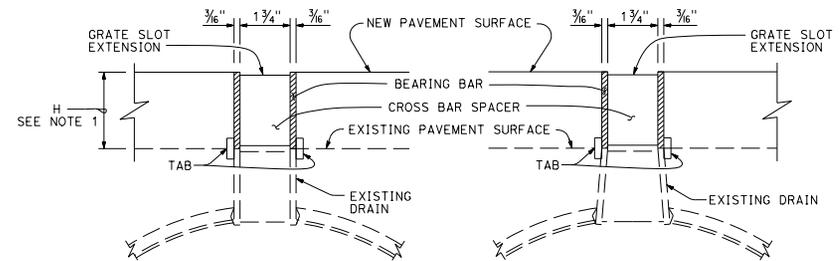
2010 REVISED STANDARD PLAN RSP D98F



SLOTTED CORRUGATED STEEL PIPE
Grate slot extension



DETAIL A
Tab alignment



SECTION
RECTANGULAR SPACER TAPERED SPACER
SLOTTED CORRUGATED STEEL PIPE
Grate slot extension

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
SLOTTED STEEL PIPE GRATE EXTENSION DETAILS

NO SCALE

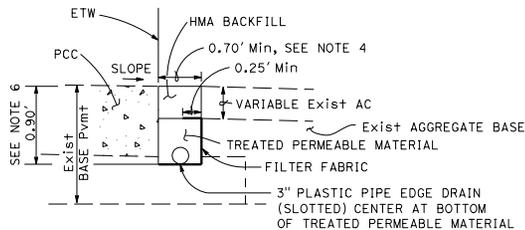
RSP D98F DATED OCTOBER 30, 2015 SUPERSEDES RSP D98F DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D98F

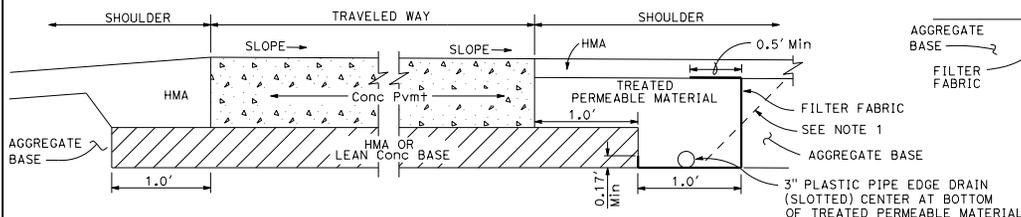
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

William K. Fairbroth
 REGISTERED CIVIL ENGINEER
 No. C49042
 PLANS APPROVAL DATE: October 30, 2015
 Exp. 9-30-16
 CIVIL
 STATE OF CALIFORNIA

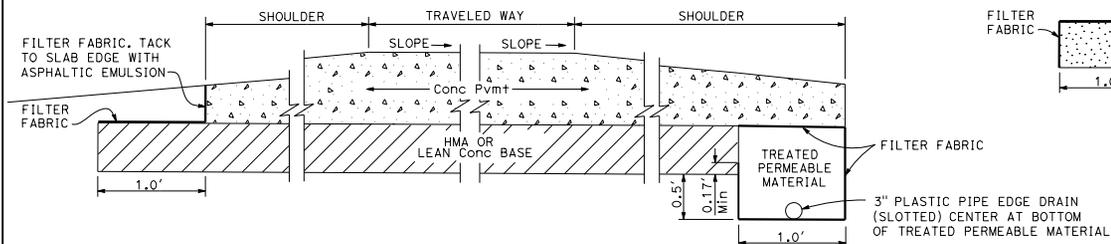
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



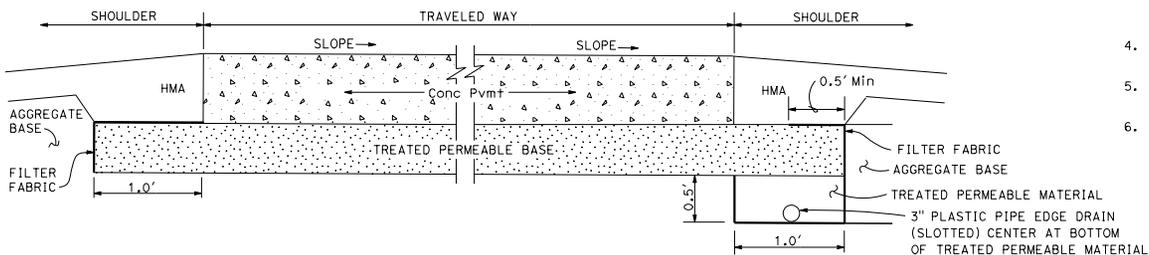
TYPE 1 PAVEMENT STRUCTURE DRAINAGE SYSTEM
(For existing highway facility)



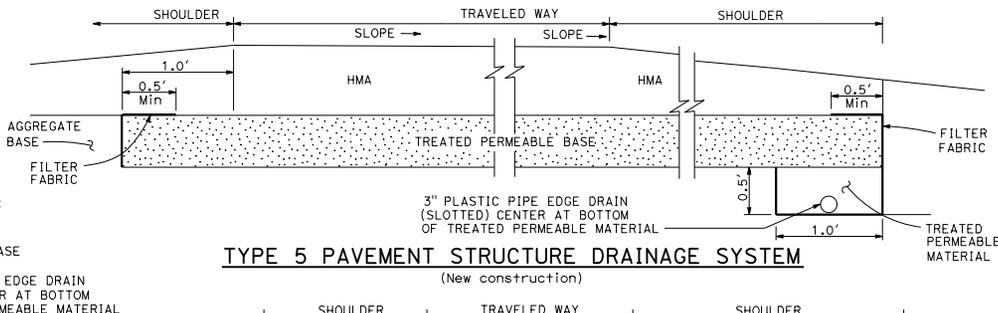
TYPE 2 PAVEMENT STRUCTURE DRAINAGE SYSTEM
(New construction)



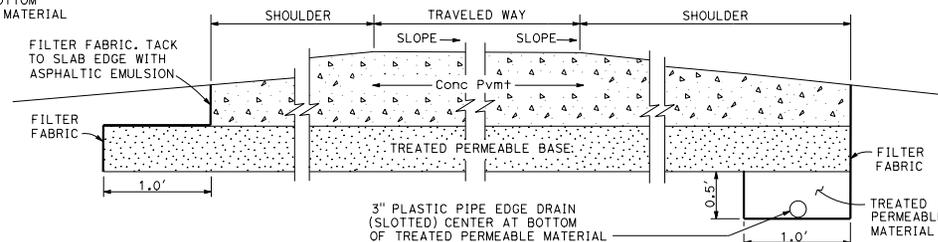
TYPE 3 PAVEMENT STRUCTURE DRAINAGE SYSTEM
(New construction)



TYPE 4 PAVEMENT STRUCTURE DRAINAGE SYSTEM
(New construction)



TYPE 5 PAVEMENT STRUCTURE DRAINAGE SYSTEM
(New construction)



TYPE 6 PAVEMENT STRUCTURE DRAINAGE SYSTEM
(New construction)

NOTES:

1. At the Contractor's option, on new construction, the vertical jointline (including the filter fabric) between the treated permeable material and the shoulder base/subgrade material may be rotated about its midpoint to a slope not flatter than 1:1 as shown by the dashed lines.
2. See the project plans and typical cross sections for pavement structure details.
3. The plan layout for pavement structure drainage collector and outlet systems for new concrete pavement and new hot mix asphalt pavement is the same as that shown on Revised Standard Plan RSP D99B.
4. For plastic pipe edge drain diameter larger than 3", the minimum trench width shall be equal to the outside diameter of the plastic pipe plus 4".
5. For plastic pipe edge drain diameters larger than 3", all details for 3" plastic pipe edge drain shall apply.
6. For pavements thicker than 0.75', the minimum trench depth is 1.0'.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT STRUCTURE DRAINAGE SYSTEM DETAILS
NO SCALE

RSP D99A DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN D99A
DATED MAY 20, 2011 - PAGE 211 OF THE STANDARD PLANS BOOK DATED 2010.

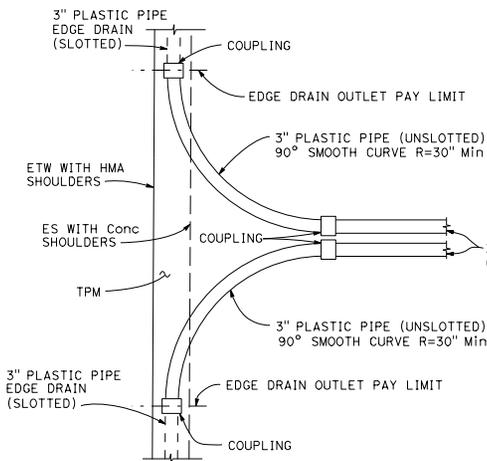
REVISED STANDARD PLAN RSP D99A

2010 REVISED STANDARD PLAN RSP D99A

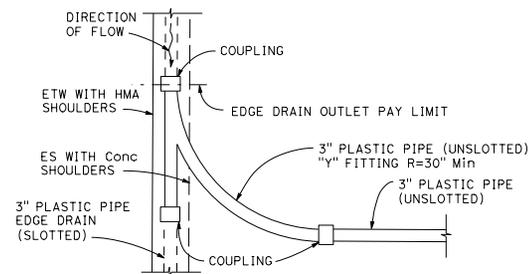
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

William K. Faribach
 REGISTERED CIVIL ENGINEER
 No. C49042
 Exp. 9-30-16
 CIVIL
 STATE OF CALIFORNIA

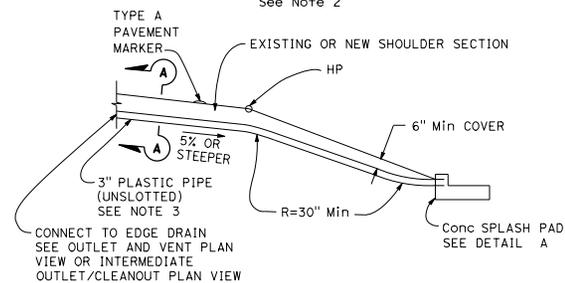
October 30, 2015
 PLANS APPROVAL DATE
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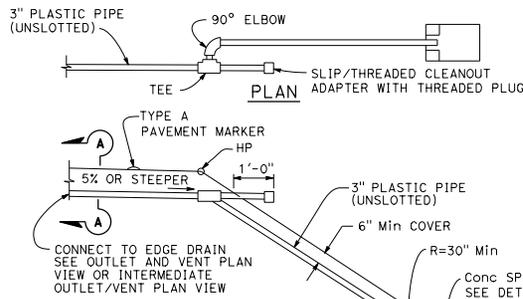
PLAN
DUAL OUTLET AND/OR VENT
See Note 2



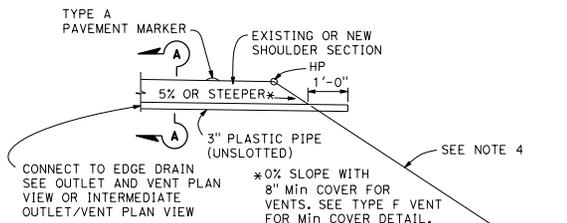
PLAN
INTERMEDIATE OUTLET
See Note 2



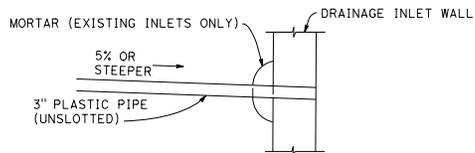
ELEVATION
TYPE A OUTLET



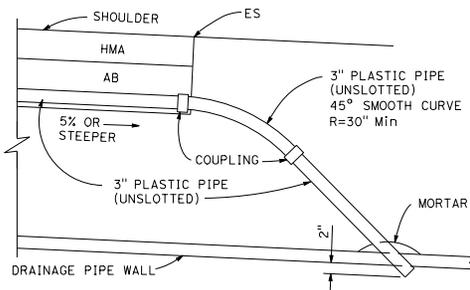
ELEVATION
TYPE B OUTLET



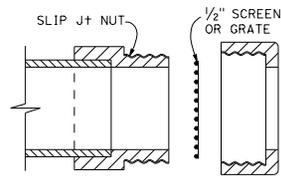
ELEVATION
TYPE C OUTLET AND/OR VENT



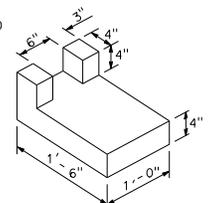
ELEVATION
TYPE D OUTLET CONNECTION TO DRAINAGE INLET



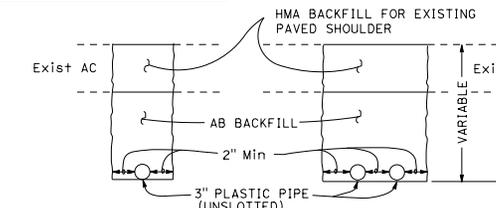
ELEVATION
TYPE E OUTLET CONNECTION TO DRAINAGE PIPE



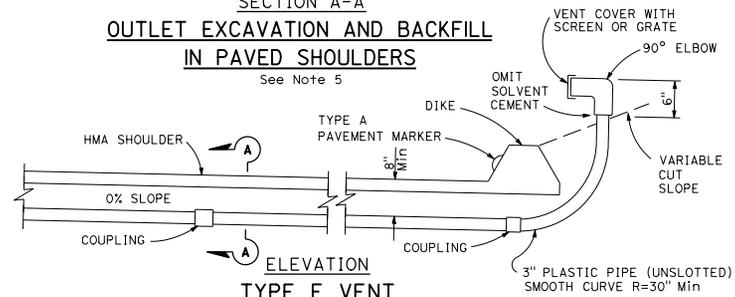
EDGE DRAIN OUTLET AND VENT COVER



DETAIL A
CONCRETE SPLASH PAD



SECTION A-A
OUTLET EXCAVATION AND BACKFILL IN PAVED SHOULDERS
See Note 5



ELEVATION
TYPE F VENT

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
EDGE DRAIN OUTLET AND VENT DETAILS
NO SCALE

RSP D99B DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN D99B
DATED MAY 20, 2011 - PAGE 212 OF THE STANDARD PLANS BOOK DATED 2010.

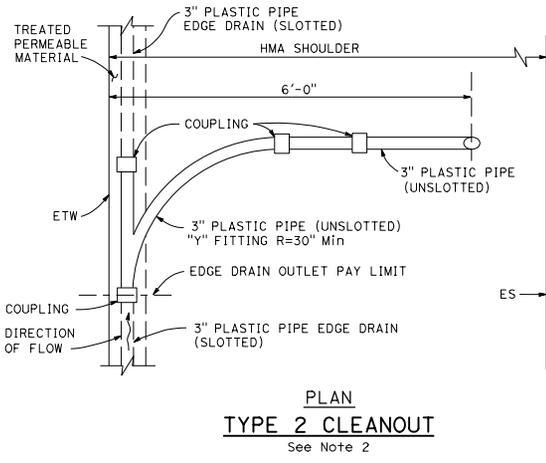
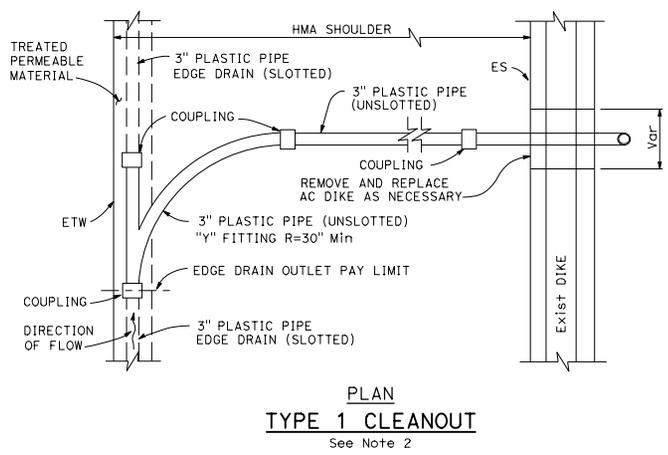
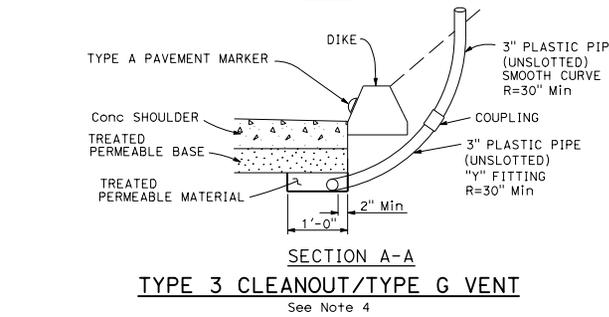
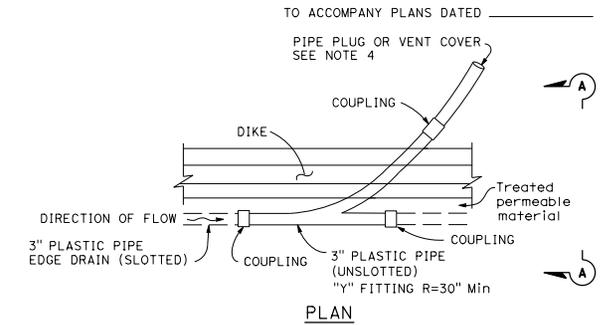
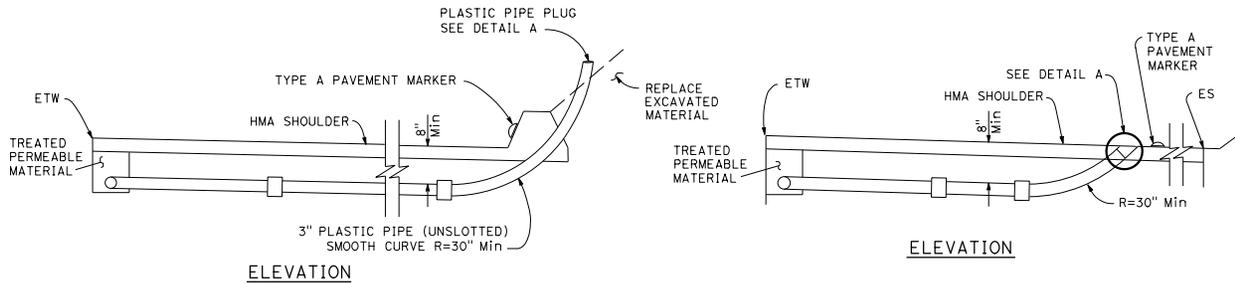
REVISED STANDARD PLAN RSP D99B

2010 REVISED STANDARD PLAN RSP D99B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

William K. Farbach
 REGISTERED CIVIL ENGINEER
 No. C49042
 Exp. 9-30-16
 CIVIL
 STATE OF CALIFORNIA

October 30, 2015
 PLANS APPROVAL DATE
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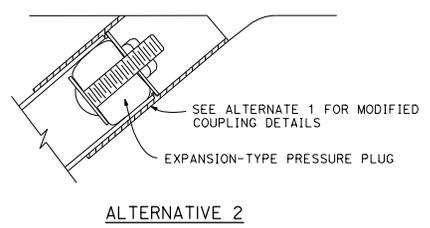
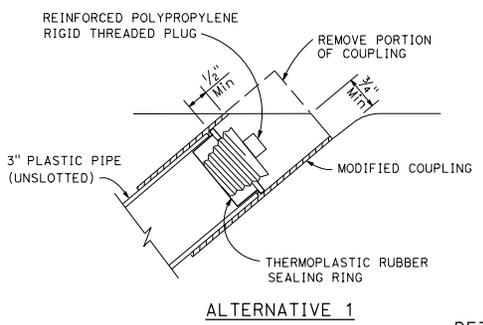
- NOTES:**
1. See project plans for location and type of cleanout or vent installations.
 2. The position of slotted plastic pipe and limits of treated permeable material shown are for the Type 1 structural section drainage system shown on Revised Standard Plan RSP D99A.
 3. Other types of plugs may be substituted with the Engineer's approval.
 4. The Type 3 cleanout and Type G vent is for use with concrete shoulders. The Type 6 structural section drainage system from Revised Standard Plan RSP D99A is shown. Use plastic pipe plug shown in Detail A with Type 3 cleanouts. Use vent cover shown on Revised Standard Plan RSP D99B with Type G vents.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**EDGE DRAIN CLEANOUT
AND VENT DETAILS**

NO SCALE

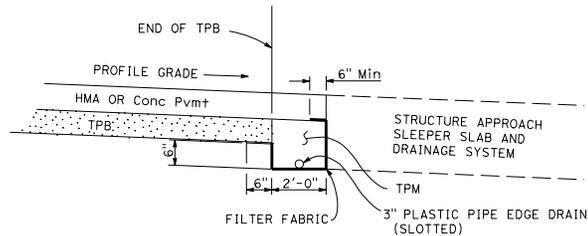
RSP D99C DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN R99C
DATED MAY 20, 2011 - PAGE 213 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D99C

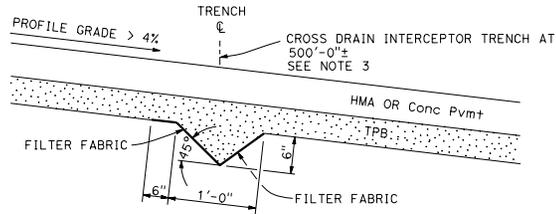


DETAIL A
PLASTIC PIPE PLUG
See Note 3

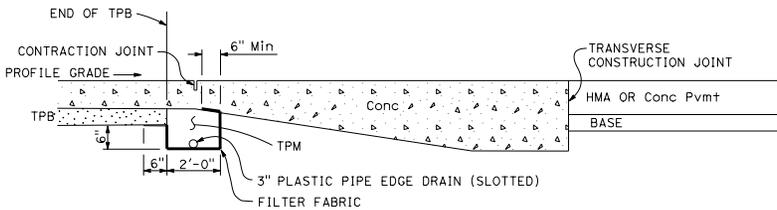
2010 REVISED STANDARD PLAN RSP D99C



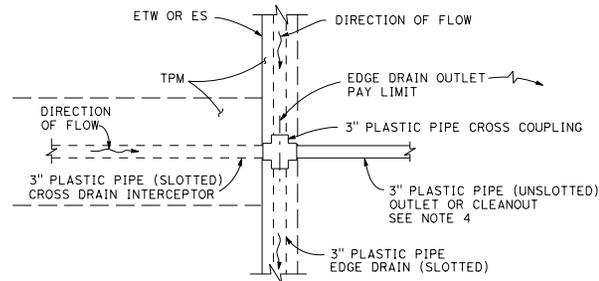
LONGITUDINAL SECTION
CROSS DRAIN INTERCEPTOR AT STRUCTURE APPROACH



LONGITUDINAL SECTION
INTERMEDIATE CROSS DRAIN INTERCEPTOR



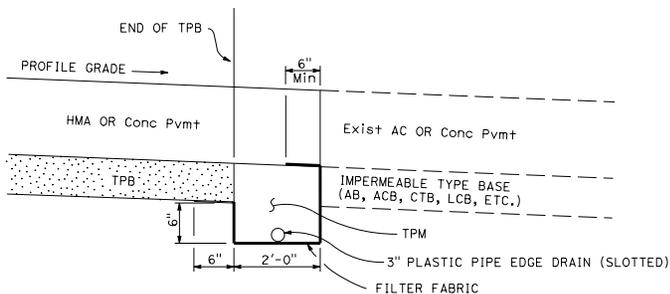
LONGITUDINAL SECTION
CROSS DRAIN INTERCEPTOR AT END ANCHOR
See Note 2



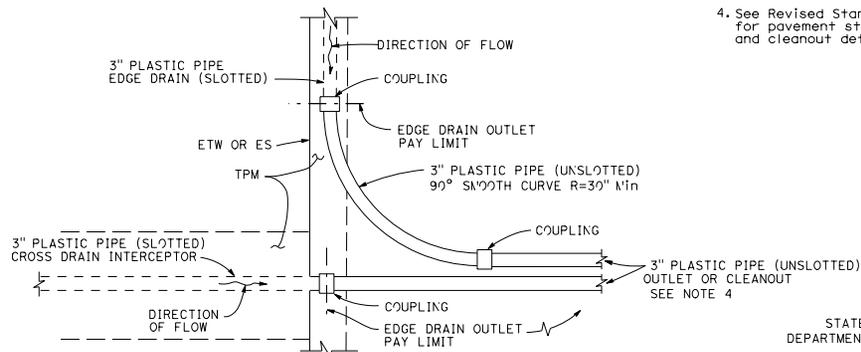
PLAN
CROSS DRAIN INTERCEPTOR OUTLET
CONNECTION DETAILS

NOTES:

1. Cross drain interceptors are for use with treated permeable bases.
2. See Revised Standard Plan RSP P30 for Pavement End Anchor details. A typical pavement end anchor is shown.
3. The cross drain interceptor trench shall slope to drain. See project plans for location and skew of cross drains.
4. See Revised Standard Plans RSP D99B and RSP D99C for pavement structure drainage system outlet and cleanout details, respectively.



LONGITUDINAL SECTION
TERMINAL CROSS DRAIN INTERCEPTOR



PLAN
COMBINED CROSS DRAIN
INTERCEPTOR/EDGE DRAIN
OUTLET DETAILS

CROSS DRAIN INTERCEPTOR
DETAILS

NO SCALE

RSP D99D DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN D99D
DATED MAY 20, 2011 - PAGE 214 OF THE STANDARD PLANS BOOK DATED 2010
REVISED STANDARD PLAN RSP D99D

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

William K. Fairbroth
 REGISTERED CIVIL ENGINEER
 No. C49042
 Exp. 9-30-16
 CIVIL
 STATE OF CALIFORNIA

October 30, 2015
 PLANS APPROVAL DATE
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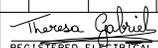
TO ACCOMPANY PLANS DATED _____

LEGEND:

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 TAPE
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
TSP	TELEPHONE SERVICE POINT

ABBREVIATIONS

AC+	UNDERGROUNDED CONDUCTOR	MAT	MAST ARM MOUNTING TOP ATTACHMENT
APS	ACCESSIBLE PEDESTRIAN SIGNAL	MAS	MAST ARM MOUNTING SIDE ATTACHMENT
Ba+t	BATTERY	MBPS	MANUAL BYPASS SWITCH
BBS	BATTERY BACKUP SYSTEM	M/M	MULTIPLE TO MULTIPLE TRANSFORMER MOUNTING
BC	BOLT CIRCLE	Mtg	MERCURY VAPOR LIGHTING FIXTURE
Bik	BLACK	MV	MICROWAVE VEHICLE DETECTION SYSTEM
BP	BYPASS	MVDS	NEUTRAL (GROUNDED CONDUCTOR)
BPB	BICYCLE PUSH BUTTON	N	NEUTRAL BUS
C	CONDUIT	NB	NORMALLY CLOSE
CB	CIRCUIT BREAKER	NC	NORMALLY OPEN
CCTV	CLOSED CIRCUIT TELEVISION	NO	CIRCUIT BREAKER'S POLE
Ck+	CIRCUIT	P	PULL BOX
CMS	CHANGEABLE MESSAGE SIGN	PB	PUSH BUTTON ASSEMBLY
C+id	CALTRANS IDENTIFICATION COMMUNICATION	PBA	PHOTOELECTRIC CONTROL
Comm	COMMUNICATION	PEC	PEDESTRIAN
CntI	CONTROL	PeD	PHOTOELECTRIC UNIT
DF	DEPARTMENT-FURNISHED	PEU	CONDUIT WITH PULL TAPE
DLC	LOOP DETECTOR LEAD-IN CABLE	PT	POWER TRANSFER RELAY
EMS	EXTINGUISHABLE MESSAGE SIGN	PTR	RELOCATED EQUIPMENT
EVUC	EMERGENCY VEHICLE UNIT CABLE	RE	RAMP METERING
EVUD	EMERGENCY VEHICLE UNIT DETECTOR	RM	ROADSIDE WEATHER INFORMATION SYSTEM
FB	FLASHING BEACON	RWIS	SLIP BASE
FBCA	FLASHING BEACON CONTROL ASSEMBLY	SB	SIGNAL INTERCONNECT CABLE
FBS	FLASHING BEACON WITH SLIP BASE	SIC	SIGNAL
FO	FIBER OPTIC	Sig	SIGNAL MAST ARM
G	EQUIPMENT GROUNDING CONDUCTOR	SMA	STREET NAME SIGN
GB	GROUND BUS	SNS	SERVICE POINT
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	SP	TERMINAL BOARD
Grn	GREEN	TDC	TELEPHONE DEMARCATION CABINET
HAR	HIGHWAY ADVISORY RADIO	Temp	TEMPERATURE
Hex	HEXAGONAL	TMS	TRAFFIC MONITORING STATION
HPS	HIGH PRESSURE SODIUM	TOS	TRAFFIC OPERATIONS SYSTEM
IISNS	INTERNALLY ILLUMINATED STREET NAME SIGN	UPS	UNINTERRUPTABLE POWER SUPPLY
ISL	INDUCTION SIGN LIGHTING	UPSC	UNINTERRUPTABLE POWER SUPPLY CONTROLLER
LED	LIGHT EMITTING DIODE	Veh	VEHICLE
LMA	LUMINAIRE MAST ARM	VIVDS	VIDEO IMAGE VEHICLE DETECTION SYSTEM
LPS	LOW PRESSURE SODIUM	Wh+	WHITE
Ltg	LIGHTING	WIM	WEIGH-IN-MOTION
Lum	LUMINAIRE	Xfmr	TRANSFORMER
M	METERED		

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
 REGISTERED ELECTRICAL ENGINEER Theresa Gabriel No. E15129 Exp. 6-30-16 ELECTRICAL ENGINEER STATE OF CALIFORNIA					
October 30, 2015 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.					

TO ACCOMPANY PLANS DATED _____

SOFFIT AND WALL-MOUNTED LUMINAIRES

-  PENDANT SOFFIT LUMINAIRE, 70 W HPS UNLESS OTHERWISE SPECIFIED
-  FLUSH-MOUNTED SOFFIT LUMINAIRE, 70 W HPS UNLESS OTHERWISE SPECIFIED
-  WALL-MOUNTED LUMINAIRE, 70 W HPS UNLESS OTHERWISE SPECIFIED
-  EXISTING SOFFIT OR WALL-MOUNTED LUMINAIRE TO REMAIN UNMODIFIED
-  EXISTING SOFFIT OR WALL-MOUNTED LUMINAIRE TO BE MODIFIED AS SPECIFIED

NOTE:

Arrow indicates "street side" of luminaire.

COMMONLY USED SYMBOLS FOR UNITED STATES CUSTOMARY UNITS OF MEASUREMENT:

SYMBOL	DEFINITIONS
Ω	OHMS
min	MINUTE
s	SECOND
bps	BITS PER SECOND
Bps	BYTES PER SECOND
A	AMPERE
V	VOLT
V _(dc)	VOLT (DIRECT CURRENT)
V _(ac)	VOLT (ALTERNATING CURRENT)
FC	FOOT - CANDLE
W	WATTS
VA	VOLT-AMPERE
M	MEGA
k	KILO
m	MILLI
μ	MICRO
P	PICO
Hz	HERTZ

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (LEGEND AND ABBREVIATIONS)

NO SCALE

RSP ES-1A DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-1A DATED JULY 19, 2013 AND STANDARD PLAN ES-1A DATED MAY 20, 2011 - PAGE 425 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-1A

MISCELLANEOUS ELECTROLIERS

NEW	EXISTING	
		LUMINAIRE ON WOOD POLE
		NON-STANDARD ELECTROLIER (SEE PROJECT LEGEND)
		CITY ELECTROLIER
		ELECTROLIER FOUNDATION (FUTURE INSTALLATION)

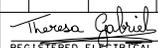
NOTES:

- LED luminaires shall be 235 W when installed on Type 21, 21D, 30, 31 and 32 Standards, unless otherwise specified. LED luminaires shall be 165 W 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.

STANDARD ELECTROLIER

NEW	EXISTING	STANDARD TYPE
		15
		15D
		15 STRUCTURE
		15D STRUCTURE
		21
		21D
		21 STRUCTURE
		21D STRUCTURE
		30
		31
		32

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS


 REGISTERED ELECTRICAL ENGINEER
 Theresa Gabriel
 No. E15129
 Exp. 6-30-16
 ELECTRICAL
 STATE OF CALIFORNIA

October 30, 2015
 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.

TO ACCOMPANY PLANS DATED _____

CONDUIT

NEW	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 ATTACHED TO THE STRUCTURE OR SERVICE POLE

SERVICE EQUIPMENT

NEW	EXISTING	
---OH	---oh	OVERHEAD LINES
		WOOD POLE, "U" INDICATES UTILITY OWNED
		POLE GUY WITH ANCHOR
		UTILITY TRANSFORMER - GROUND MOUNTED
		SERVICE EQUIPMENT ENCLOSURE TYPE. DOOR INDICATES FRONT OF ENCLOSURE
		TELEPHONE DEMARCATION CABINET

POLE-MOUNTED SERVICE DESIGNATION

	TYPE H SERVICE, 28'-10"	TYPE OF INSTALLATION AND POLE HEIGHT ABOVE GRADE
---	-------------------------	--

FLASHING BEACON

NEW	EXISTING	
		FLASHING BEACON (ONE VEHICLE SIGNAL HEAD WITH BACKPLATE AND VISOR) "R" INDICATES RED INDICATION, "Y" INDICATES YELLOW INDICATION
		FLASHING BEACON WITH TYPE 15-FBS STANDARD AND A SIGN.
		FLASHING BEACON WITH TYPES 9, 9A OR 9B SIGN UNLESS OTHERWISE SPECIFIED OR INDICATED

SIGNAL EQUIPMENT

NEW	EXISTING	
		PEDESTRIAN SIGNAL HEAD
		PUSH BUTTON ASSEMBLY POST
		PEDESTRIAN BARRICADE
		VEHICLE SIGNAL HEAD (WITH BACKPLATE AND 3-SECTIONS: RED, YELLOW AND GREEN)
		VEHICLE SIGNAL HEAD WITH ANGLE VISOR
		MODIFICATIONS OF BASIC SYMBOL: "L" INDICATES ALL NON-ARROW SECTIONS LOUVERED "LG" INDICATES LOUVERED GREEN SECTION ONLY "PV" INDICATES ALL 12" SECTIONS PROGRAMMED VISIBILITY "8" INDICATES ALL 8" SECTIONS (ONLY WHEN SPECIFIED)
		VEHICLE SIGNAL HEAD CONSISTING OF RED, YELLOW AND GREEN LEFT ARROW SECTIONS
		VEHICLE SIGNAL HEAD CONSISTING OF RED AND YELLOW SECTIONS WITH AN UP GREEN ARROW SECTION
		VEHICLE SIGNAL HEAD (5 SECTION) CONSISTING OF RED, YELLOW AND GREEN SECTIONS WITH YELLOW AND GREEN RIGHT ARROW SECTIONS
		TYPE 15TS STANDARD WITH VEHICLE SIGNAL HEAD AND LUMINAIRE
		TYPE 21TS STANDARD WITH VEHICLE SIGNAL HEAD AND LUMINAIRE
		STANDARD WITH LUMINAIRE AND SIGNAL MAST ARMS AND ATTACHED VEHICLE SIGNAL HEADS
		TYPE 1 STANDARD WITH ATTACHED VEHICLE SIGNAL HEADS
		STANDARD WITH A SIGNAL MAST ARM, ATTACHED VEHICLE SIGNAL HEADS AND INTERNALLY ILLUMINATED STREET NAME SIGN
		CONTROLLER ASSEMBLY. DOOR INDICATES FRONT OF CABINET

SIGNAL EQUIPMENT Cont

NEW	EXISTING	
		GUARD POST
		TYPE 1 STANDARD WITH RAMP METERING SIGN
		OPTICAL DETECTOR FOR THE EMERGENCY VEHICLE DETECTION

NOTES:

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

ILLUMINATED OVERHEAD SIGN

NEW	EXISTING	
		SINGLE POST, SINGLE ILLUMINATED SIGN, BALANCED BUTTERFLY
		SINGLE POST, DOUBLE ILLUMINATED SIGN, BALANCED BUTTERFLY
		SINGLE POST, SINGLE ILLUMINATED SIGN, FULL CANTILEVER
		DOUBLE POST, SINGLE ILLUMINATED SIGN
		SINGLE ILLUMINATED SIGN MOUNTED ON STRUCTURE
		DOUBLE POST, SINGLE ILLUMINATED SIGN WITH ELECTROLIER

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(LEGEND AND ABBREVIATIONS)**

NO SCALE

RSP ES-1B DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-1B DATED JULY 19, 2013 AND STANDARD PLAN ES-1B DATED MAY 20, 2011 - PAGE 426 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-1B

2010 REVISED STANDARD PLAN RSP ES-1B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

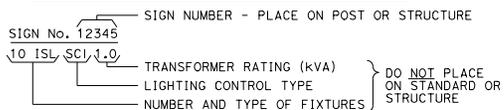
October 30, 2015
PLANS APPROVAL DATE

Theresa Gabriel
No. E15129
Exp. 6-30-16
ELECTRICAL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

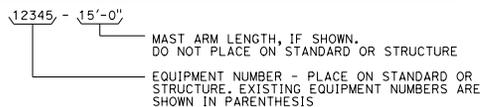
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

EQUIPMENT IDENTIFICATION

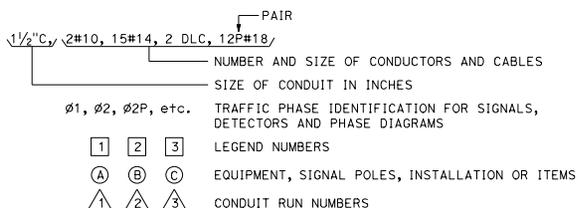
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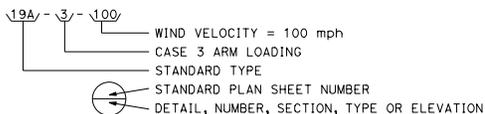
ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



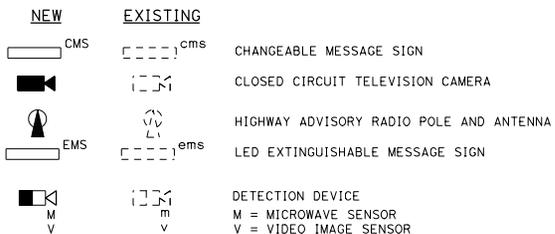
CONDUIT AND CONDUCTOR IDENTIFICATION:



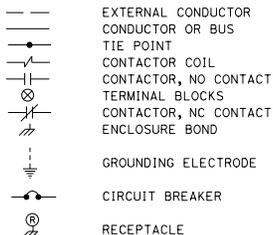
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



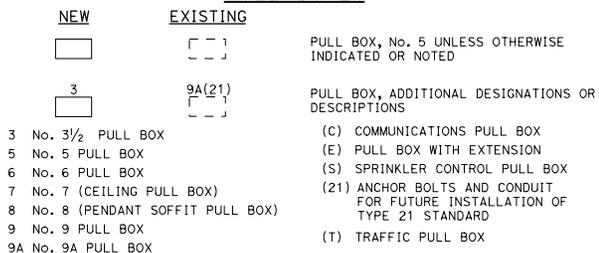
MISCELLANEOUS EQUIPMENT



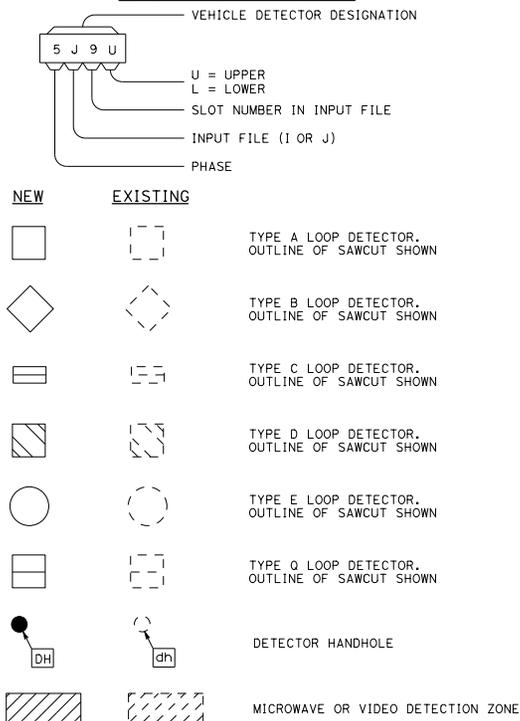
WIRING DIAGRAM LEGEND



PULL BOXES



VEHICLE DETECTORS



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (LEGEND AND ABBREVIATIONS)

NO SCALE

RSP ES-1C DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-1C DATED JULY 19, 2013 AND STANDARD PLAN ES-1C DATED MAY 20, 2011 - PAGE 427 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-1C

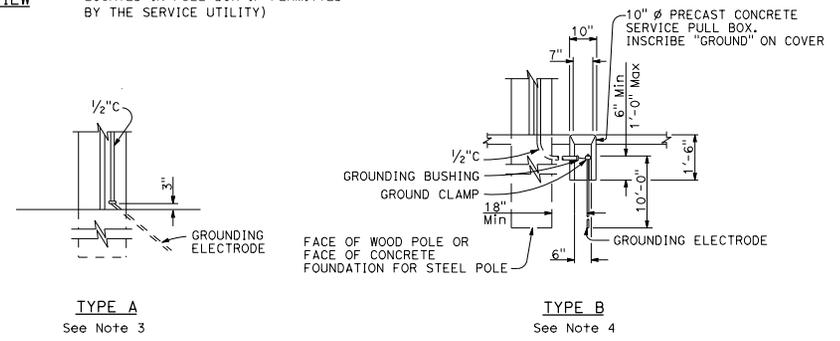
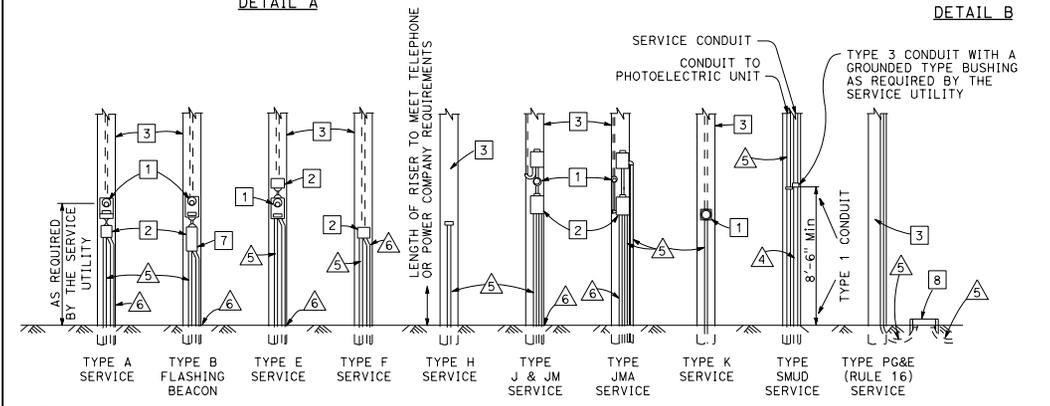
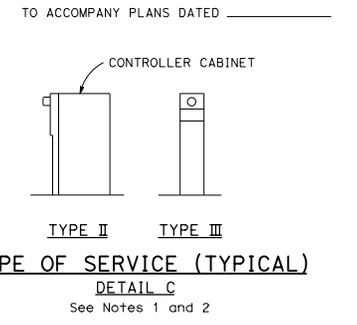
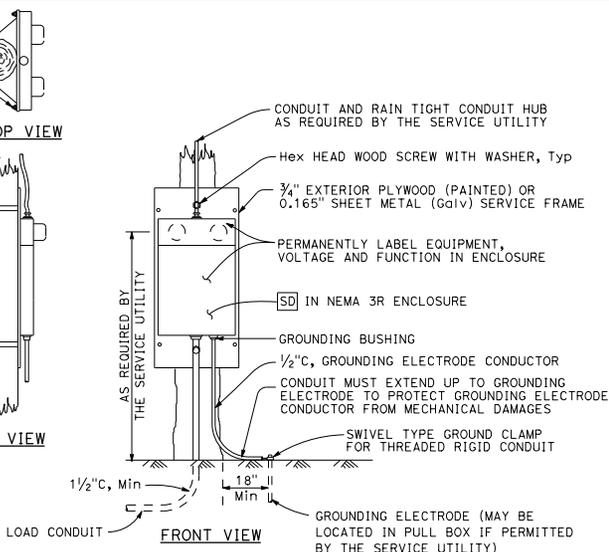
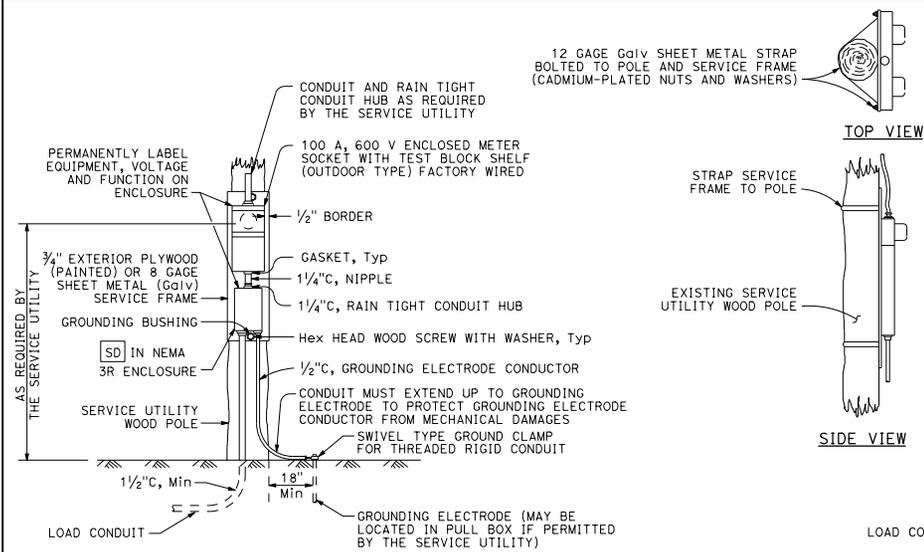
2010 REVISED STANDARD PLAN RSP ES-1C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER
No. E15129
Exp. 6-30-16
ELECTRICAL

October 30, 2015
PLANS APPROVAL DATE

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- LEGEND:**
- 1 METER SOCKET.
 - 2 SERVICE ENCLOSURE WITH A MINIMUM 60 A RATED MAIN CIRCUIT BREAKER, UNLESS OTHERWISE SHOWN.
 - 3 A. UTILITY OWNED POLE. THE SERVICE UTILITY WILL FURNISH AND INSTALL REQUIRED SERVICE RISER, PEU WITH CONDUCTORS AND OTHER EQUIPMENT AS NEEDED.
B. STATE OWNED POLE. THE CONTRACTOR SHALL FURNISH AND INSTALL REQUIRED SERVICE RISER AND EQUIPMENT.
 - 4 2" C, SERVICE CONDUIT MUST HAVE A GROUNDED TYPE BUSHING INSTALLED AT UPPER END OF THE METALLIC POLE RISER CONDUIT. A GROUNDING CONDUCTOR MUST BE ATTACHED TO THE BUSHING, CARRIED THROUGH THE CONDUIT RUN AND ATTACHED TO THE SERVICE EQUIPMENT ENCLOSURE'S GROUNDING ELECTRODE.
 - 5 CONDUIT, LENGTH AND SIZE AS REQUIRED.
 - 6 1/2" C, 1#6. SEE DETAIL E.
 - 7 FLASHING BEACON CONTROL ASSEMBLY.
 - 8 SERVICE PULL BOX, No. 5 UNLESS OTHERWISE NOTED, FURNISHED AND INSTALLED BY THE CONTRACTOR. SERVICE UTILITY SHALL DETERMINE THE EXACT LOCATION.

- NOTES:**
1. Type II service equipment enclosure mounted on the side of a controller cabinet.
 2. Type III complete free-standing service equipment enclosure.
 3. Ground clamp and required fittings must be accessible. Conduit must extend to protect grounding electrode conductor from mechanical damage.
 4. Use where service utility requires 18" clearance between grounding electrode and the pole or service equipment enclosure. Installation shown is for sidewalk or paved areas. In unpaved areas, omit special service pull box and locate ground clamp above ground or locate ground clamp in nearest pull box.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

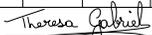
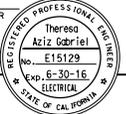
**ELECTRICAL SYSTEMS
(SERVICE EQUIPMENT)**

NO SCALE

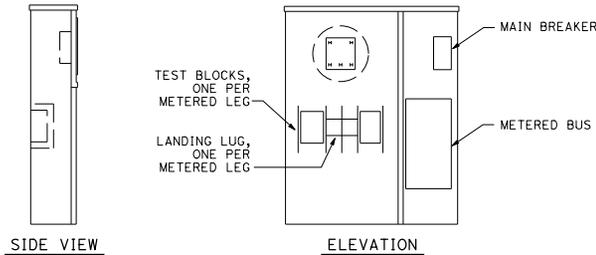
RSP ES-2A DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-2A DATED MAY 20, 2011 - PAGE 428 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-2A

2010 REVISED STANDARD PLAN RSP ES-2A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
 REGISTERED ELECTRICAL ENGINEER					
October 30, 2015 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.					

TO ACCOMPANY PLANS DATED _____



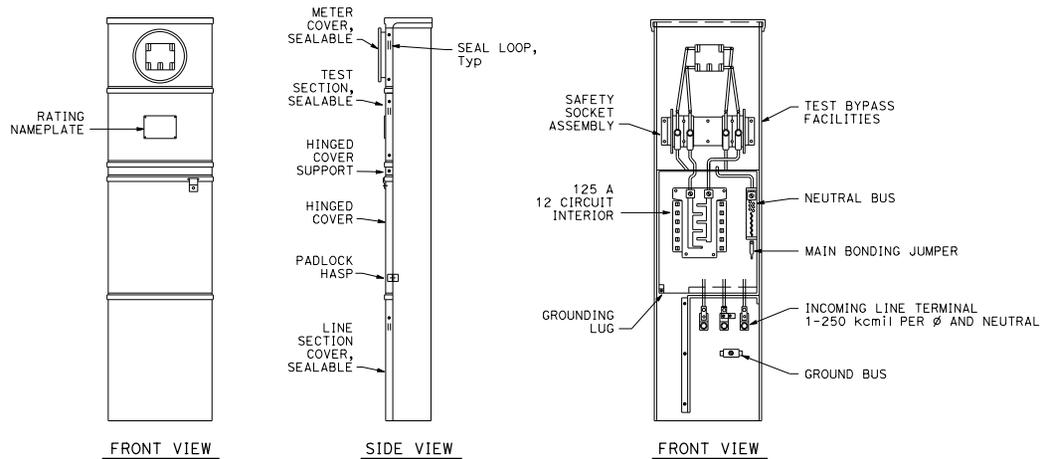
SIDE VIEW

ELEVATION

TYPE II-A

NOTES:

1. In unpaved areas, a raised portland cement concrete pad of 2'-0" x 4" x width of service equipment enclosure or controller cabinet foundation shall be constructed in front of Type II service equipment enclosure.
2. Circuit breakers may be mounted in the vertical or horizontal position.



FRONT VIEW

SIDE VIEW

FRONT VIEW

(Less covers and dead front panel)
For metered circuits only

TYPE II-B

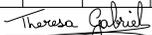
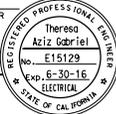
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(SERVICE EQUIPMENT ENCLOSURE
TYPE II SERIES)**

NO SCALE

RSP ES-2B DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-2B DATED
MAY 20, 2011 - PAGE 429 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-2B

2010 REVISED STANDARD PLAN RSP ES-2B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
 REGISTERED ELECTRICAL ENGINEER					
October 30, 2015 PLANS APPROVAL DATE					
					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

TO ACCOMPANY PLANS DATED _____

NOTES:

1. 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.
2. 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.
3. 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.
4. 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.
5. Type III-AR and Type III-BR service equipment enclosure 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.

2010 REVISED STANDARD PLAN RSP ES-2C

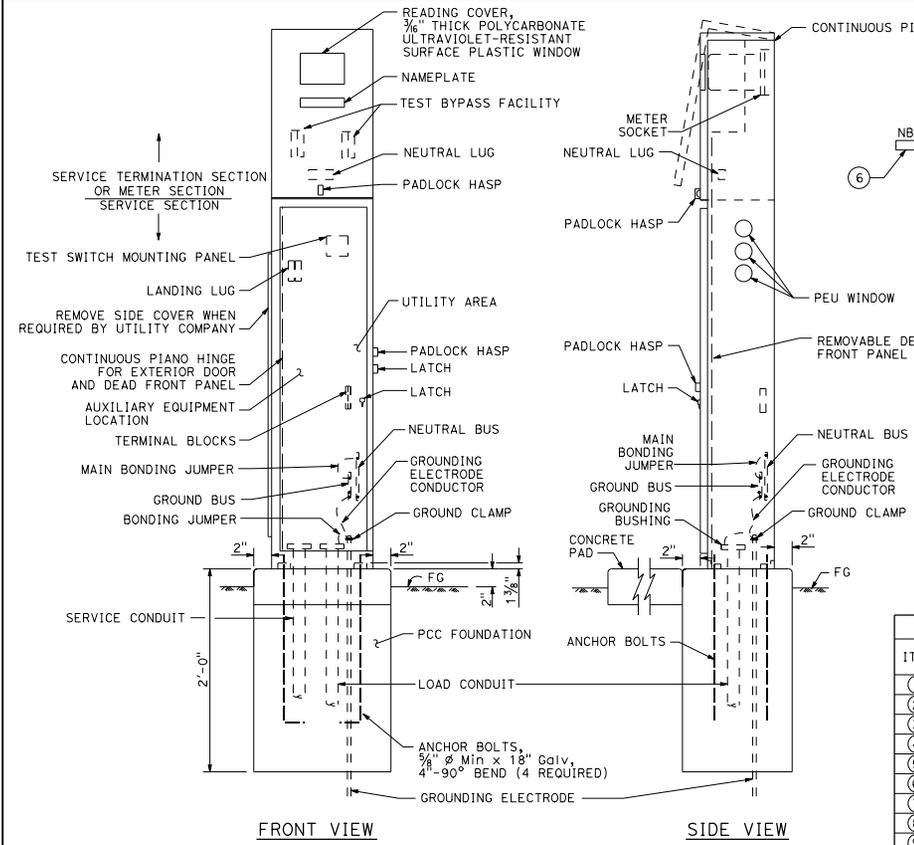
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

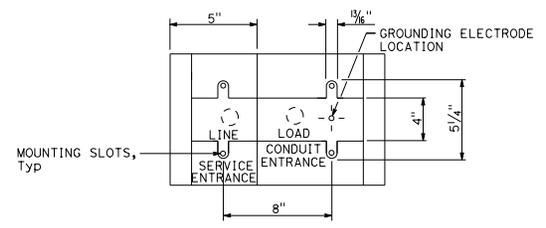
NO SCALE

RSP ES-2C DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-2C DATED
MAY 20, 2011 - PAGE 430 OF THE STANDARD PLANS BOOK DATED 2010.

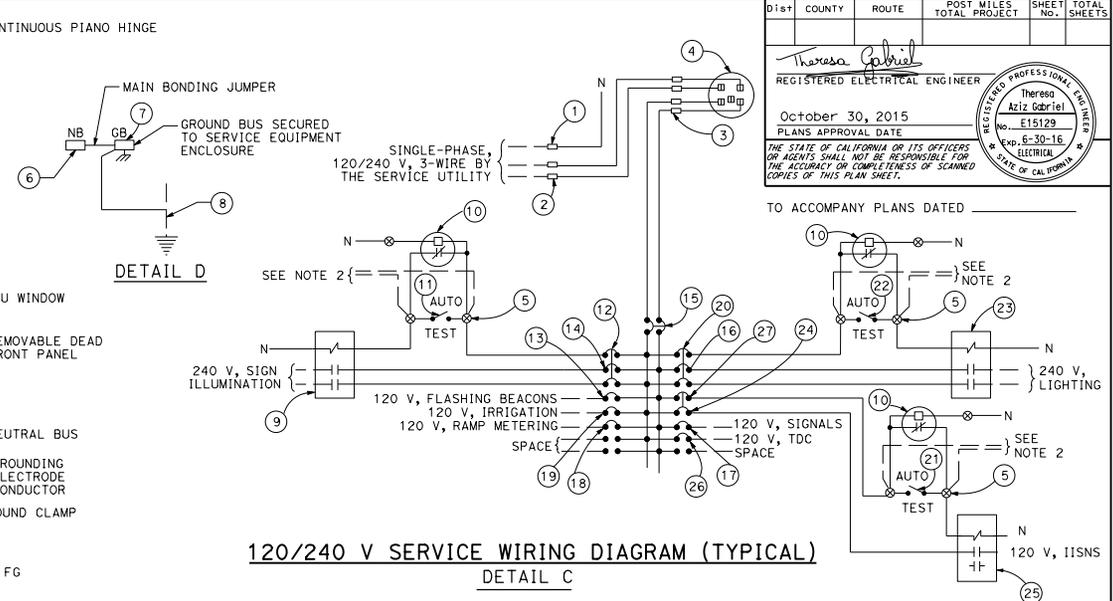
REVISED STANDARD PLAN RSP ES-2C



TYPE III-AF SERVICE EQUIPMENT ENCLOSURE (TYPICAL)
DETAIL A



BASE FOR TYPE III-A SERVICE EQUIPMENT ENCLOSURE
DETAIL B



120/240 V SERVICE WIRING DIAGRAM (TYPICAL)
DETAIL C

TYPE III-A SERVICE EQUIPMENT ENCLOSURE LEGEND (120/240 V)					
ITEM	COMPONENT	NAMEPLATE DESCRIPTION	ITEM	COMPONENT	NAMEPLATE DESCRIPTION
(1)	NEUTRAL LUG		(14)	30 A, 240 V, 2P, CB	SIGN ILLUMINATION
(2)	LANDING LUG		(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)	15 A, 1P, TEST SWITCH	IISNS TEST SWITCH
(9)	30 A, 2P, NO CONTACTOR	SIGN ILLUMINATION	(22)	15 A, 1P, TEST SWITCH	LIGHTING TEST SWITCH
(10)	PHOTOELECTRIC UNIT (NOTE 4)	PEU	(23)	60 A, 2P, NO 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, 2P, NO CONTACTOR	IISNS
(13)	15 A, 120 V, 1P, CB	FLASHING BEACON	(26)	20 A, 120 V, 1P, CB	TELEPHONE DEMARCATION CABINET
			(27)	15 A, 120 V, 1P, CB	IISNS CONTROL

NOTES:

- 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 (1) and (6) shall be isolated from the service equipment enclosure.
- Type I photoelectric control shall be used unless otherwise indicated on the plans.
- Item (12), (24) and (27) shall be ganged operated CB.

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

NO SCALE

RSP ES-2D DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-2D DATED MAY 20, 2011 - PAGE 431 OF THE STANDARD PLANS BOOK DATED 2010.

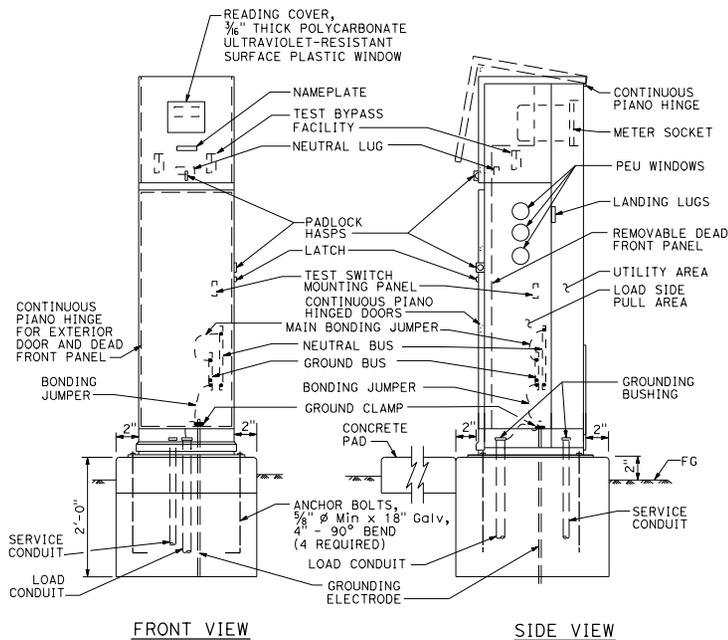
REVISED STANDARD PLAN RSP ES-2D

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

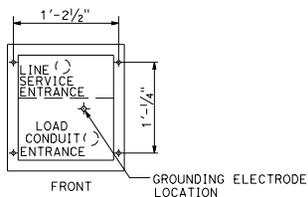
Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER
October 30, 2015
PLANS APPROVAL DATE
No. E15129
Exp. 6-30-16
ELECTRICAL
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED _____

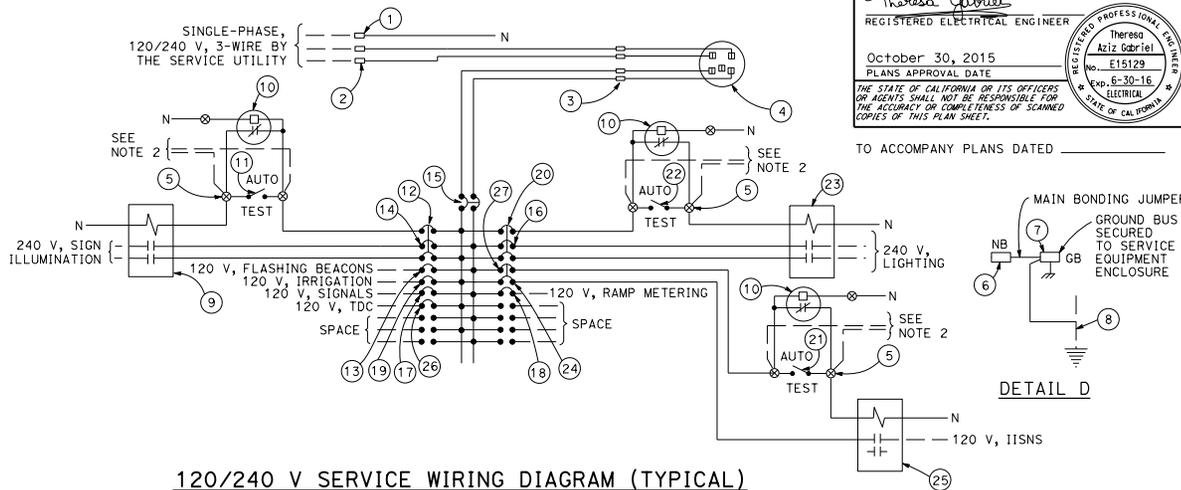
2010 REVISED STANDARD PLAN RSP ES-2D



TYPE III-BF SERVICE EQUIPMENT ENCLOSURE (TYPICAL)
DETAIL A



BASE FOR TYPE III-B SERVICE EQUIPMENT ENCLOSURE
DETAIL B



120/240 V SERVICE WIRING DIAGRAM (TYPICAL)
DETAIL C

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

ITEM	COMPONENT	NAMEPLATE DESCRIPTION	ITEM	COMPONENT	NAMEPLATE DESCRIPTION
①	NEUTRAL LUG		⑭	30 A, 240 V, 2P, CB	SIGN ILLUMINATION
②	LANDING LUG		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	15 A, 1P, TEST SWITCH	IISNS TEST SWITCH
⑨	30 A, 2P, NO CONTACTOR	SIGN ILLUMINATION	㉒	15 A, 1P, TEST SWITCH	LIGHTING TEST SWITCH
⑩	PHOTOELECTRIC UNIT (NOTE 4)	PEU	㉓	60 A, 2P, NO 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, 2P, NO CONTACTOR	IISNS
⑬	15 A, 120 V, 1P, CB	FLASHING BEACON	㉖	20 A, 120 V, 1P, CB	TELEPHONE DEMARCATION CABINET
			㉗	15 A, 120 V, 1P, CB	IISNS CONTROL

NOTES:

- 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 ① and ⑥ shall be isolated from the service equipment enclosure.
- Type I photoelectric control shall be used unless otherwise indicated on the plans.
- Item ⑫, ⑲ and ㉗ shall be ganged operated CB.

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

NO SCALE

RSP ES-2E DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-2E DATED MAY 20, 2011 - PAGE 432 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-2E

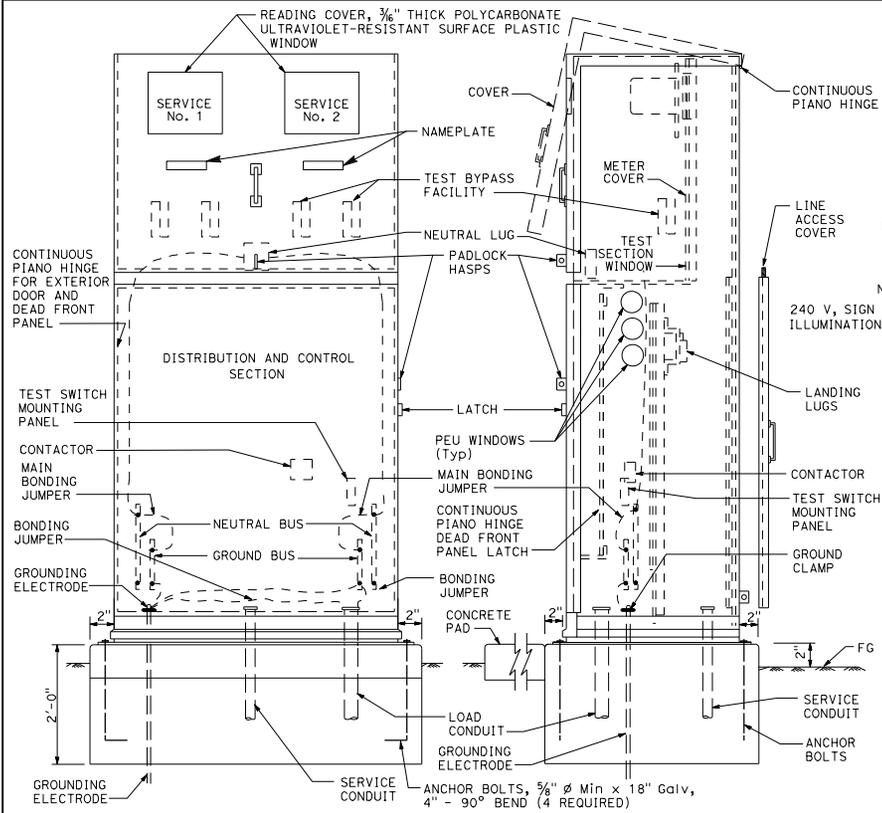
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER
October 30, 2015
PLANS APPROVAL DATE
No. E15129
Exp. 6-30-16
ELECTRICAL
STATE OF CALIFORNIA

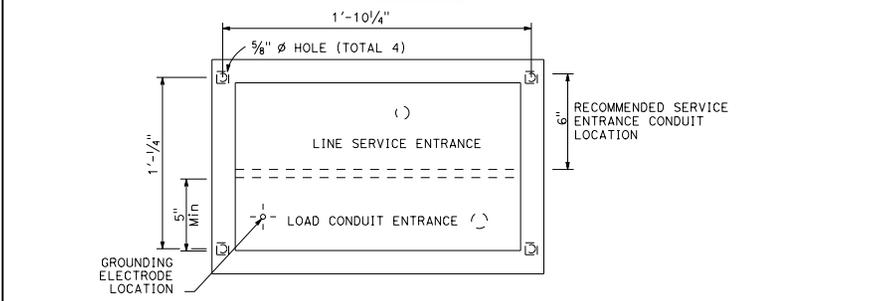
TO ACCOMPANY PLANS DATED _____

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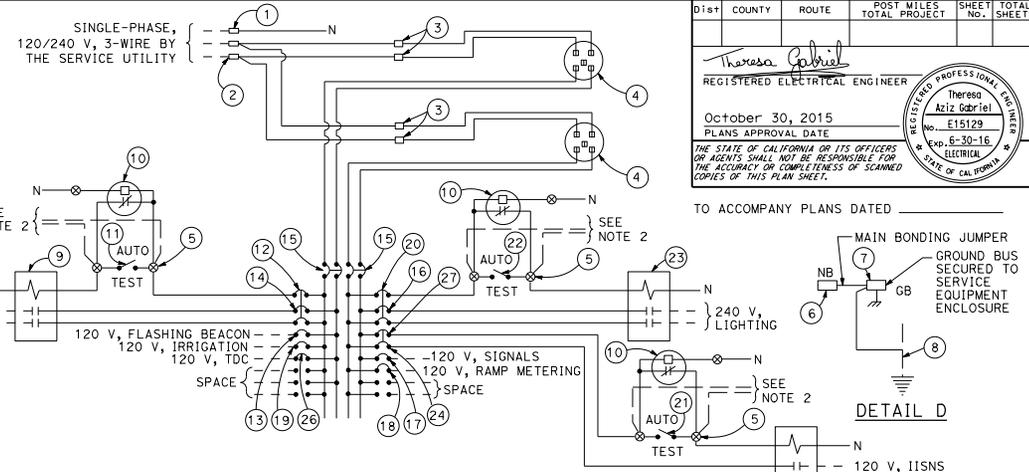
2010 REVISED STANDARD PLAN RSP ES-2E



FRONT VIEW
SIDE VIEW
TYPE III-CF SERVICE EQUIPMENT ENCLOSURE (TYPICAL)
DETAIL A



BASE FOR TYPE III-C SERVICE EQUIPMENT ENCLOSURE
DETAIL B



120/240 V SERVICE WIRING DIAGRAM (TYPICAL)
DETAIL C

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

ITEM	COMPONENT	NAMEPLATE DESCRIPTION	ITEM	COMPONENT	NAMEPLATE DESCRIPTION
①	NEUTRAL LUG		⑭	30 A, 240 V, 2P, CB	SIGN ILLUMINATION
②	LANDING LUG		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	15 A, 1P, TEST SWITCH	IISNS TEST SWITCH
⑨	30 A, 2P, NO CONTACTOR	SIGN ILLUMINATION	㉒	15 A, 1P, TEST SWITCH	LIGHTING TEST SWITCH
⑩	PHOTOELECTRIC UNIT (NOTE 4)	PEU	㉓	60 A, 2P, NO 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, 2P, NO CONTACTOR	IISNS
⑬	15 A, 120 V, 1P, CB	FLASHING BEACON	㉖	20 A, 120 V, 1P, CB	TELEPHONE DEMARCATION CABINET
			㉗	15 A, 120 V, 1P, CB	IISNS CONTROL

- NOTES:**
- 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 ① and ⑥ shall be isolated from the service equipment enclosure.
 - Type I photoelectric control shall be used unless otherwise indicated on the plans.
 - Item ⑫, ⑳ and ㉗ shall be ganged operated CB.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

RSP ES-2F DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-2F DATED
MAY 20, 2011 - PAGE 433 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-2F

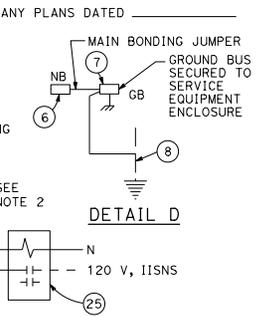
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER
No. E15129
Exp. 6-30-16
ELECTRICAL
STATE OF CALIFORNIA

October 30, 2015
PLANS APPROVAL DATE

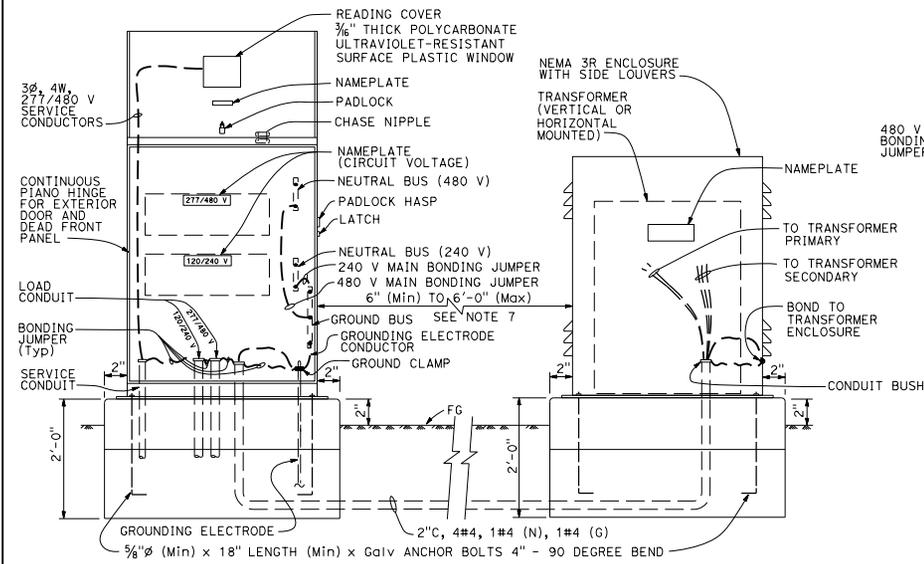
TO ACCOMPANY PLANS DATED _____

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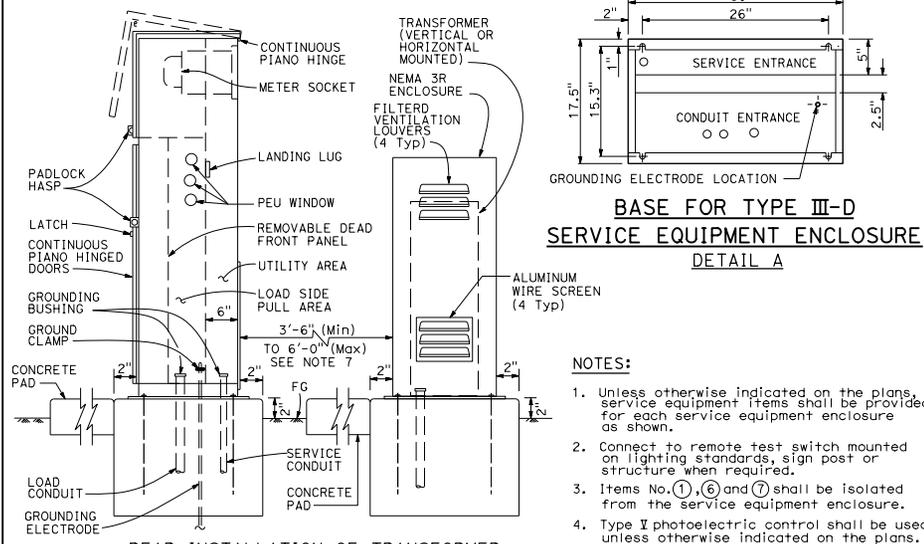


DETAIL D

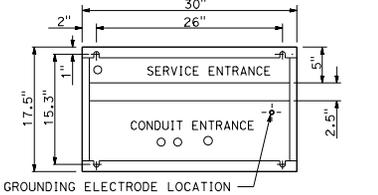
2010 REVISED STANDARD PLAN RSP ES-2F



SIDE INSTALLATION OF TRANSFORMER

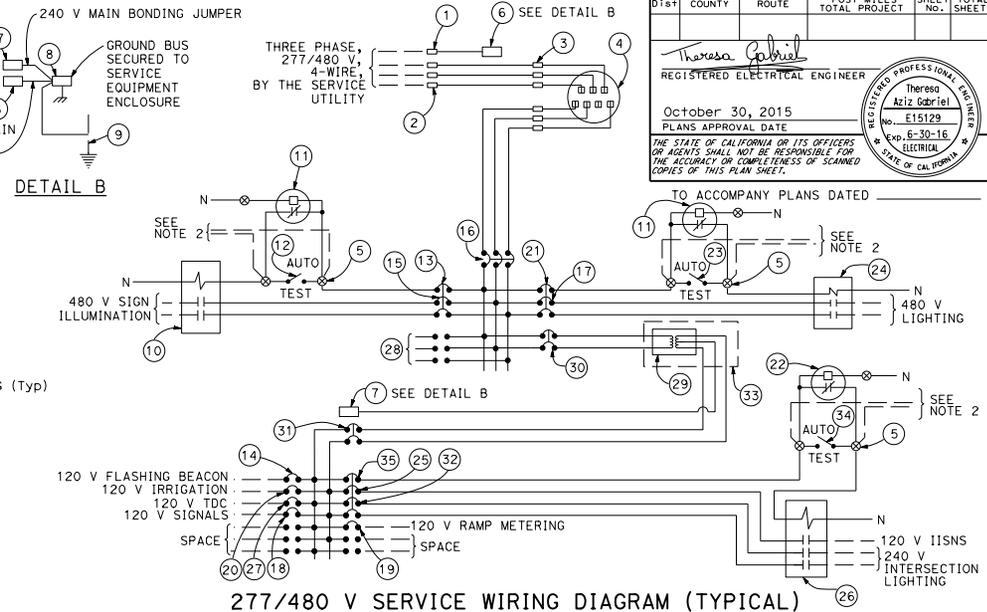


**REAR INSTALLATION OF TRANSFORMER
TYPE III-DF SERVICE EQUIPMENT ENCLOSURE
TYPICAL**



**BASE FOR TYPE III-D
SERVICE EQUIPMENT ENCLOSURE
DETAIL A**

- NOTES:**
1. Unless otherwise indicated on the plans, service equipment items shall be provided for each service equipment enclosure as shown.
 2. Connect to remote test switch mounted on lighting standards, sign post or structure when required.
 3. Items No. ①, ⑥ and ⑦ shall be isolated from the service equipment enclosure.
 4. Type I photoelectric control shall be used unless otherwise indicated on the plans.
 5. Color of insulation of the neutral shall be gray for the 277/480 V system and shall be white for the 120/240 V system.
 6. Items ⑬, ⑰ and ⑳ shall be ganged operated CB.



**277/480 V SERVICE WIRING DIAGRAM (TYPICAL)
DETAIL C**

TYPE III-D SERVICE (277/480 V) EQUIPMENT LEGEND					
ITEM No.	COMPONENT	NAMEPLATE DESCRIPTION	ITEM No.	COMPONENT	NAMEPLATE DESCRIPTION
①	NEUTRAL LUG		⑲	30 A, 120 V, 1P, CB	RAMP METERING (120 V)
②	LANDING LUG		⑳	20 A, 120 V, 1P, CB	IRRIGATION (120 V)
③	TEST BYPASS FACILITY		㉑	10 A, 277 V, 1P, CB	LIGHTING CONTROL (277 V)
④	METER SOCKET AND SUPPORT		㉒	PHOTOELECTRIC UNIT (NOTE 4)	PEU (120/240 V)
⑤	TERMINAL BLOCKS		㉓	15 A, 1P, TEST SWITCH	LIGHTING TEST SWITCH (277 V)
⑥	NEUTRAL BUS	NEUTRAL BUS (480 V)	㉔	30 A, 2P, NO CONTACTOR	LIGHTING (480 V)
⑦	NEUTRAL BUS	NEUTRAL BUS (240 V)	㉕	15 A, 120 V, 1P, CB	IISNS (120 V)
⑧	GROUND BUS		㉖	30 A, 3P, NO CONTACTOR	INTERSECTION LIGHTING (120 V)
⑨	GROUNDING ELECTRODE		㉗	20 A, 120 V, 1P, CB	TELEPHONE DEMARCATION CABINET (120 V)
⑩	30 A, 2P, NO CONTACTOR	SIGN ILLUMINATION (480 V)	㉘	20 A, 480 V, 3P, CB	SPACE
⑪	PHOTOELECTRIC UNIT (NOTE 4)	PEU (277/480 V PEU)	㉙	15 KVA, 480-120/240 V TRANSFORMER	TRANSFORMER, 15 KVA, 480-240 V
⑫	15 A, 1P, TEST SWITCH	SIGN ILLUMINATION TEST SWITCH (277 V)	㉚	40 A, 480 V, 2P, CB	TRANSFORMER PRIMARY (480 V)
⑬	10 A, 277 V, 1P, CB	SIGN ILLUMINATION CONTROL (277 V)	㉛	80 A, 240 V, 2P, CB	TRANSFORMER SECONDARY (240 V)
⑭	15 A, 120 V, 1P, CB	FLASHING BEACON (120 V)	㉜	30 A, 240 V, 2P, CB	INTERSECTION LIGHTING (240 V)
⑮	15 A, 480 V, 2P, CB	SIGN ILLUMINATION (480 V)	㉝	NEMA 3R ENCLOSURE WITH LOUVERS	TRANSFORMER, 15 KVA, 480-240 V
⑯	100 A, 480 V, 3P, CB	MAIN BREAKER (480 V)	㉞	15 A, 1P, TEST SWITCH	IISNS AND INTERSECTION LIGHTING TEST SWITCH (120 V)
⑰	15 A, 480 V, 2P, CB	LIGHTING (480 V)	㉟	10 A, 120 V, 1P, CB	IISNS AND INTERSECTION LIGHTING CONTROL (120 V)
⑱	50 A, 120 V, 1P, CB	SIGNAL (120 V)			

7. The NEMA 3R enclosure shall be located to the side of the service equipment enclosure unless otherwise indicated on the plans.
8. The base dimension for the NEMA 3R enclosure for the transformer shall be as per manufacturer's design.

NO SCALE

REVISED STANDARD PLAN RSP ES-2G

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

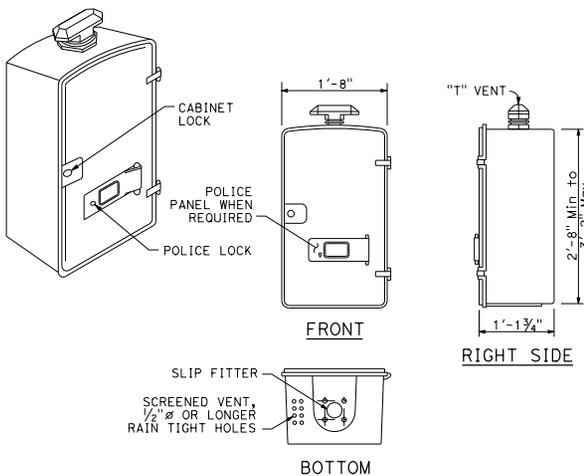
Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER
No. E15129
Exp. 6-30-16
ELECTRICAL
STATE OF CALIFORNIA

October 30, 2015
PLANS APPROVAL DATE

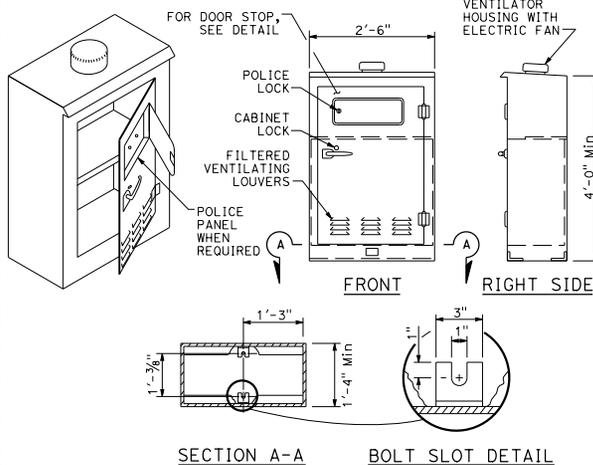
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED _____
SEE NOTE 2

2010 REVISED STANDARD PLAN RSP ES-2G



TYPE G CABINET



TYPE M CABINET

TO ACCOMPANY PLANS DATED _____

NOTES:

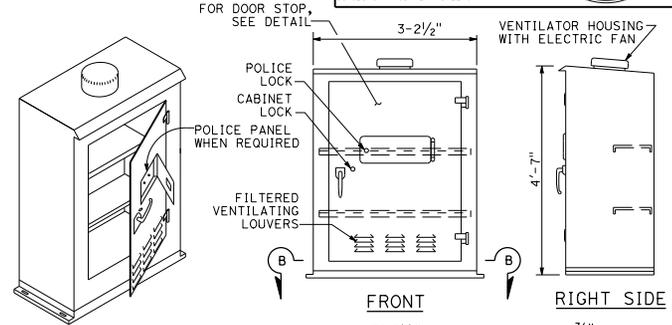
1. Cabinet dimensions are nominal.
2. Cabinet fan may be installed at an alternate location near the top of the cabinet when approved by the Engineer.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

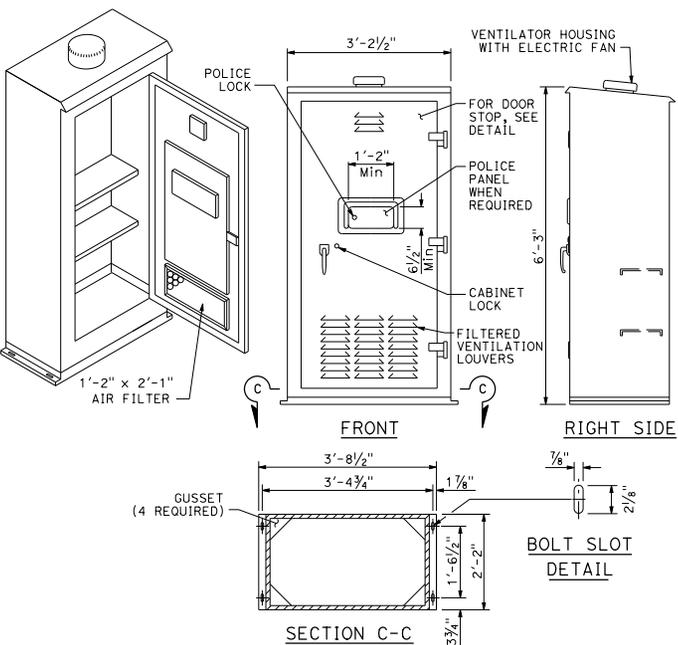
Theresa Gabriel
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October 30, 2015
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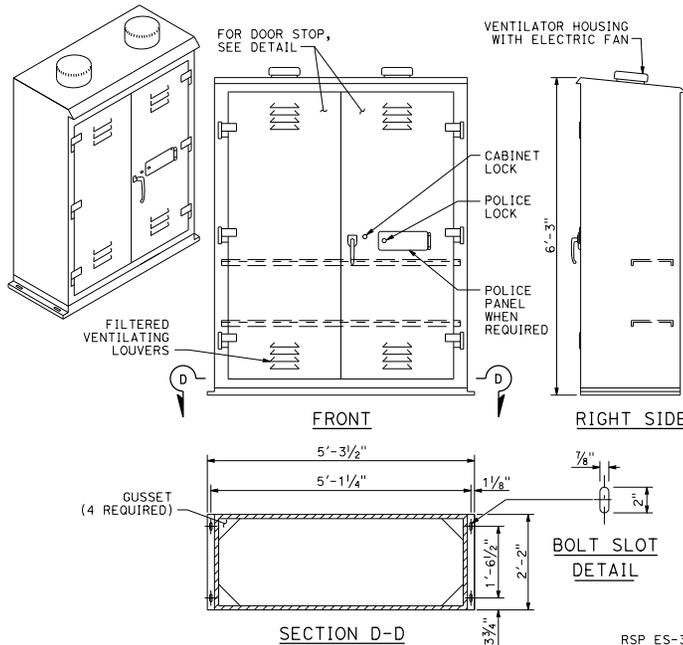
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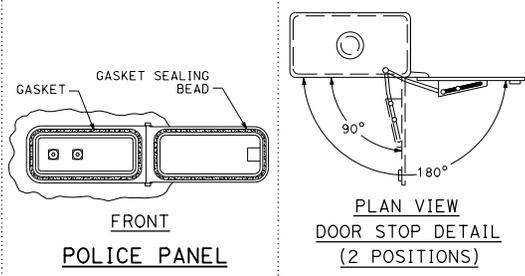
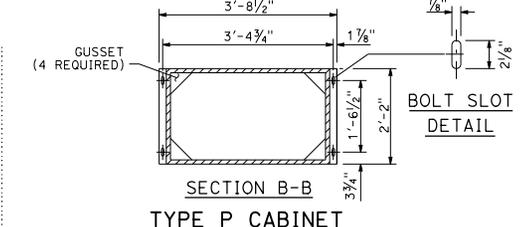
TYPE P CABINET



TYPE R CABINET



TYPE S CABINET



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(CONTROLLER CABINET
DETAILS)**

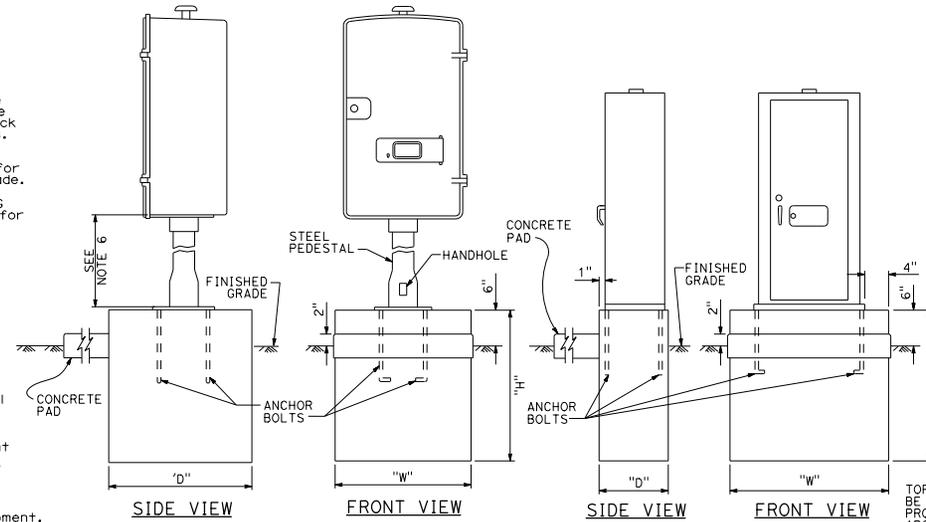
NO SCALE
RSP ES-3A DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-3A DATED MAY 20, 2011 - PAGE 435 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-3A

2010 REVISED STANDARD PLAN RSP ES-3A

NOTES:

- Foundation shall be located to provide 2'-0" minimum clearance between face of curb and any portion of cabinet.
- Type G, M, P, R, S and Model 336L cabinets shall be installed with the back toward the nearest lane of traffic.
- In unpaved areas, a raised portland cement concrete pad shall be constructed in front of each controller cabinet. The pad shall be 3'-0" x 3'-0" x 4" for a Type G cabinet and shall be 3'-0" x 4" thick x width of foundation for Type M, P, R, S and Model 336L cabinets.
- In unpaved areas, the top of foundation for Type G, P, R and S cabinets shall be 6" above surrounding grade. Top of foundation for Type M or Model 336L cabinet shall be 1'-6" above surrounding grade.
- In sidewalks and other paved areas, top of foundation for Type G cabinet shall be level with surrounding grade. Top of foundation for Type P, R and S cabinets shall be 3/2" above surrounding grade.
- The steel pedestal, base plate, bolt circle and foundation for Type G cabinet shall be the same as that shown for a Type 1-C Standard (see ES-7B). Pedestal shall be 2'-1" to 2'-6" in length. Anchor bolts shall be 3/4" ϕ x 1'-6" with a 2" - 90° bend. Four bolts required per cabinet.
- Type G cabinet shall be provided with a slipfitter to permit mounting an 4 1/2" outside diameter pedestal. Slipfitter shall be bolted to bottom of the cabinet.
- A 1" drain shall be provided through the foundation of a Type M or Model 336L cabinet. Drain pipe shall be screened.
- Cabinet shelves shall be adjustable for vertical spacing and shall be removable. Type M, P, R and S cabinets shall be provided with a minimum of two shelves.
- Controller units, plug-mounted equipment, shelf-mounted equipment and wall-mounted equipment shall be located to permit safe and easy removal or replacement without removing any other piece of equipment.
- Where telephone interconnect is required, a minimum of 5" clear vertical space shall be provided inside the cabinet for the equipment.
- Telephone interconnect conductors shall be enclosed in a 3/4" C or larger conduit through the foundation. Type 4 conduit shall be used to separate telephone and power conductors in cabinets or pedestals.
- Anchor bolts for Type M, P, R, S and Model 336L cabinets shall be 3/4" ϕ x 1'-6" with a 2" - 90° bend.

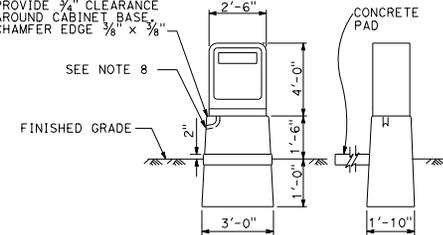


**FOUNDATION FOR
TYPE G CABINET
DETAIL A**

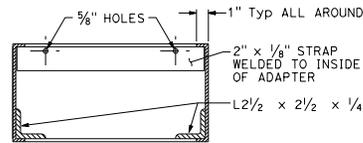
**FOUNDATION FOR
TYPE P, R AND S CABINETS
DETAIL B**

CABINET TYPE	FOUNDATION		
	"W"	"H"	"D"
G	2'-0"	3'-6"	2'-0"
M	3'-2"	2'-6"	1'-6"
P	4'-4 1/2"	1'-6"	2'-4"
R	4'-2"	1'-6"	2'-4"
S	5'-11 1/2"	1'-6"	2'-4"

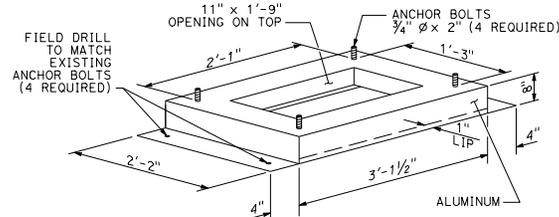
TOP OF PEDESTAL SHALL BE LARGE ENOUGH TO PROVIDE 3/4" CLEARANCE AROUND CABINET BASE. CHAMFER EDGE 3/8" x 3/8"



**FRONT VIEW SIDE VIEW
PEDESTAL FOUNDATION
FOR TYPE M OR
MODEL 336L CABINET
DETAIL C**

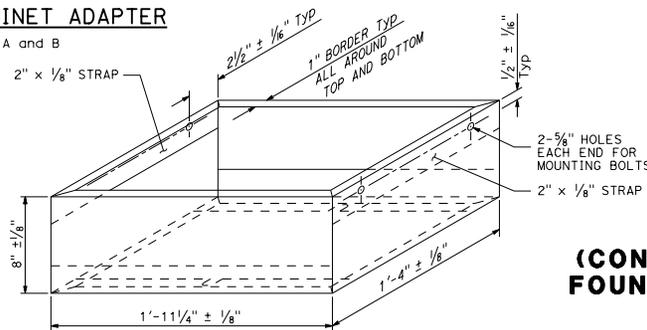


SECTION A-A



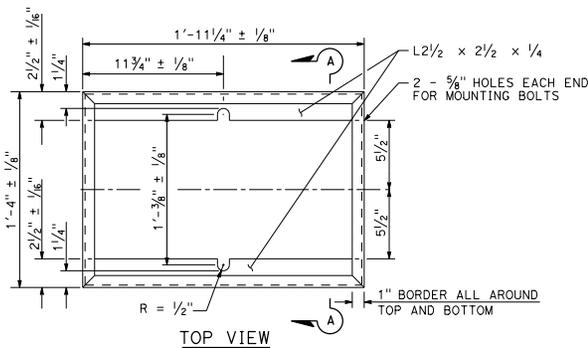
TYPE PR CABINET ADAPTER

See Notes A and B



TYPE M CABINET ADAPTER

See Notes A, C, and D



TOP VIEW

NOTES:

- Material: 0.188" thickness aluminum plate.
- Adapter for Type P or Type R cabinet foundation.
- Adapter for Type M cabinet foundation.
- Mounting bolts shall be 3/8" ϕ minimum size.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(CONTROLLER CABINET ADAPTER,
FOUNDATIONS, AND PAD DETAILS)**

NO SCALE

RSP ES-3B DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-3B DATED MAY 20, 2011 - PAGE 436 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-3B

2010 REVISED STANDARD PLAN RSP ES-3B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

October 30, 2015
PLANS APPROVAL DATE

Theresa Aziz Gabriel
No. E15129
Exp. 6-30-16
ELECTRICAL

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TO ACCOMPANY PLANS DATED _____

NOTES:

1. Foundation shall be located to provide 2'-0" minimum clearance between face of curb and any portion of cabinet.
2. Controller units, plug-mounted equipment, shelf-mounted equipment and wall-mounted equipment shall be located to permit safe and easy removal or replacement without removing any other piece of equipment.
3. Cabinet fan may be installed at an alternate location near the top of the cabinet when approved by the Engineer.
4. Where telephone interconnect is required, a minimum of 5" clear vertical space shall be provided inside the cabinet for the equipment.
5. Telephone interconnect conductors shall be enclosed in a 3/4" or larger conduit through the foundation. Type 4 conduit shall be used to separate telephone and power conductors in cabinets.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

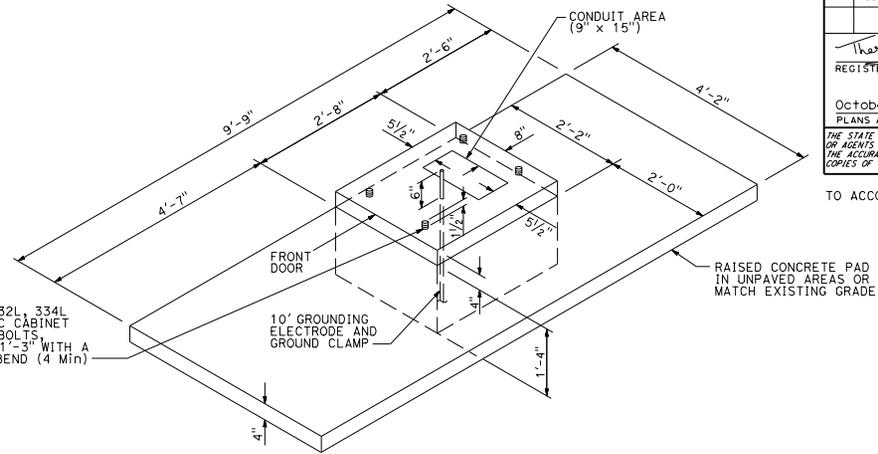
Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

October 30, 2015
PLANS APPROVAL DATE

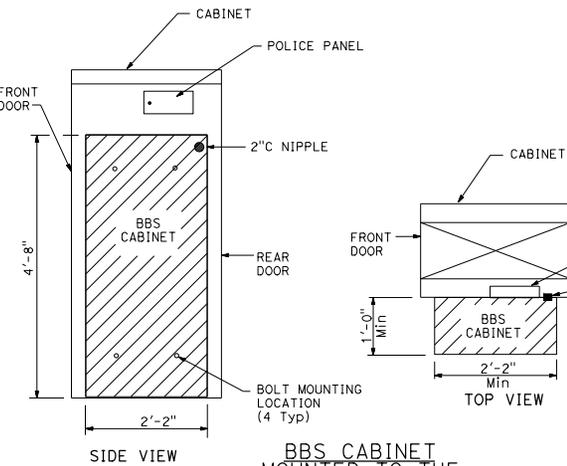
Theresa Aziz Gabriel
No. E15129
Exp. 6-30-16
ELECTRICAL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

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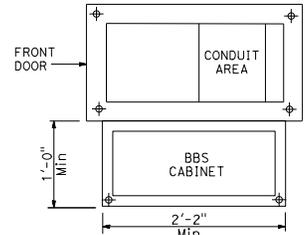
TO ACCOMPANY PLANS DATED _____



FOUNDATION AND PAD DETAIL
Model 332L, 334L and 334LC

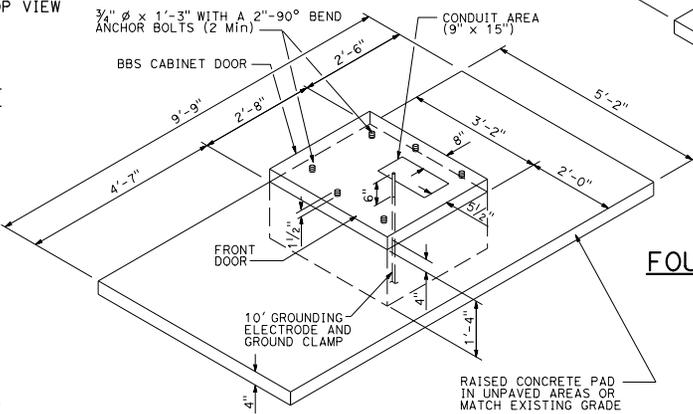


BBS CABINET MOUNTED TO THE MODEL 332L CABINET

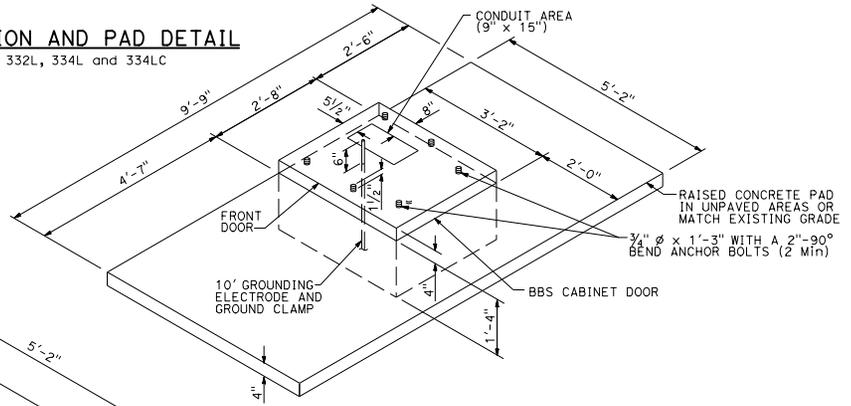


BASE PLAN FOR BBS MOUNTED TO THE MODEL 332L CABINET

(FOR DIMENSIONS AND DETAILS NOT SHOWN, SEE CABINET HOUSING DETAILS OF THE TRANSPORTATION ELECTRICAL EQUIPMENT SPECIFICATION (TEES))



LEFT SIDE INSTALLATION DETAIL A



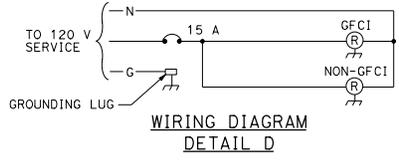
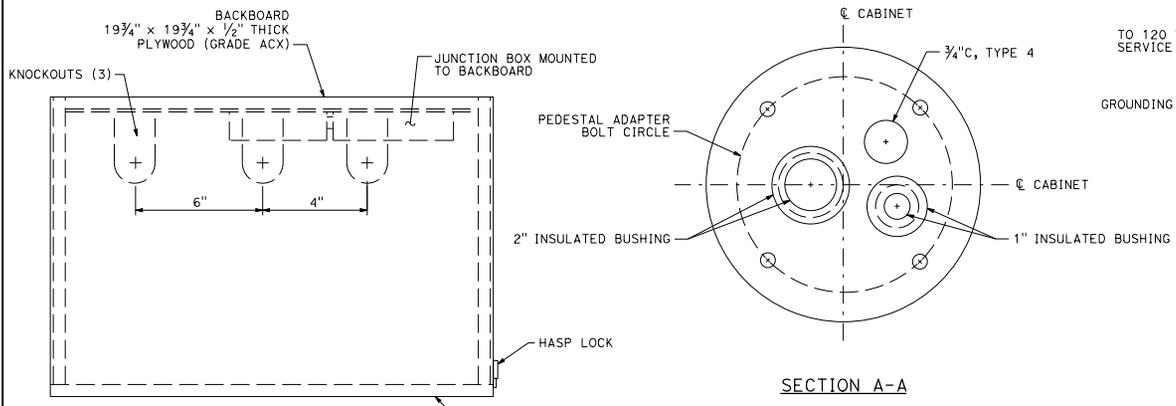
RIGHT SIDE INSTALLATION DETAIL B
MODIFIED MODEL 332L CABINET
FOUNDATION DETAIL FOR BATTERY BACKUP SYSTEM

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(CONTROLLER CABINET
FOUNDATION AND PAD DETAILS)
NO SCALE

RSP ES-3C DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-3C DATED MAY 20, 2011 - PAGE 437 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-3C

2010 REVISED STANDARD PLAN RSP ES-3C



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

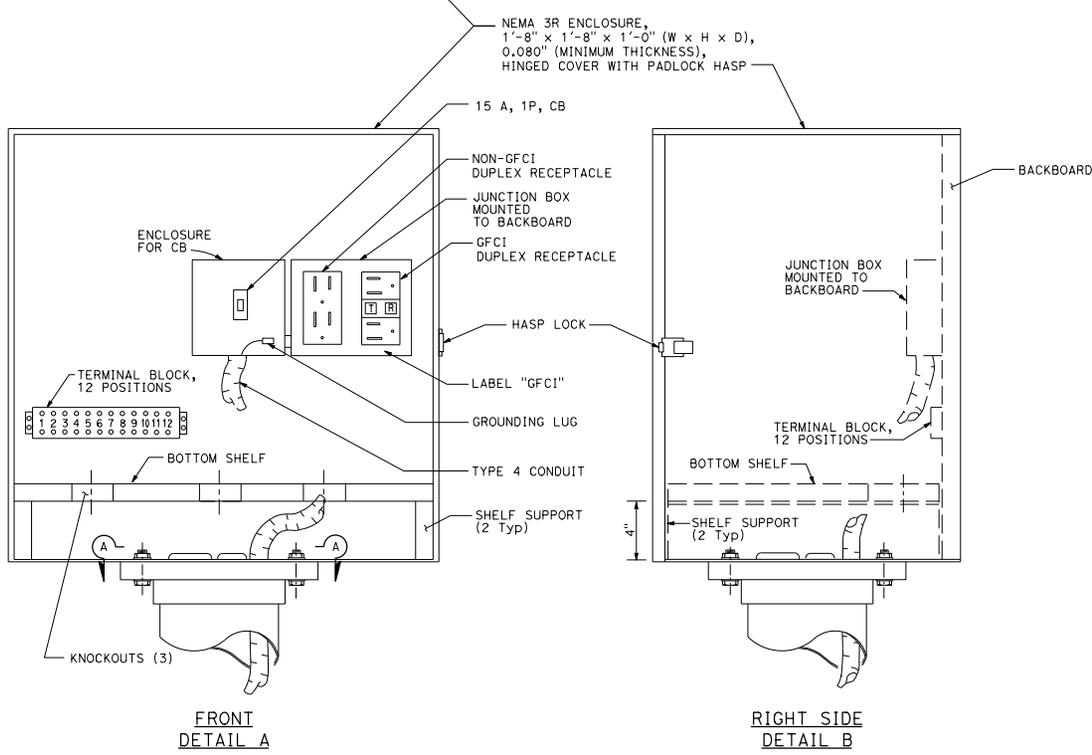
October 30, 2015
PLANS APPROVAL DATE

Theresa Aziz Gabriel
No. E15129
Exp. 6-30-16
ELECTRICAL
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED _____

NOTES:

- Dimensions are nominal.
- The steel pedestal, base plate, bolt circle and foundation for the telephone demarcation cabinet shall be the same as that shown for a Type 1-C Standard. The steel pedestal shall be 2'-1" to 2'-6" in length. Anchor bolts shall be 3/4" ø x 1'-6" with a 2" - 90° bend. Four bolts required per cabinet.
- Telephone interconnect conductors shall be enclosed in a 3/4" C or larger conduit through the foundation. Type 4 conduit shall be used to separate telephone and power conductors in the cabinet and pedestal.
- For termination cabinet:
 - Mount cabinet on Type G cabinet pedestal (see Revised Standard Plan RSP ES-3B).
 - Use Type G cabinet foundation.



FASTENER SCHEDULE

BACKBOARD	4 - 3/4" (LENGTH) WOOD SCREWS
2 SHELF SUPPORTS	4 - 3/4" (LENGTH) WOOD SCREWS
JUNCTION BOX	4 - 1/2" (LENGTH) WOOD SCREWS
TERMINAL BLOCK	4 - 3/4" (LENGTH) WOOD SCREWS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(TELEPHONE DEMARCATION
CABINET, TYPE A)**

NO SCALE

RSP ES-3D DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-3D DATED MAY 20, 2011 - PAGE 438 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-3D

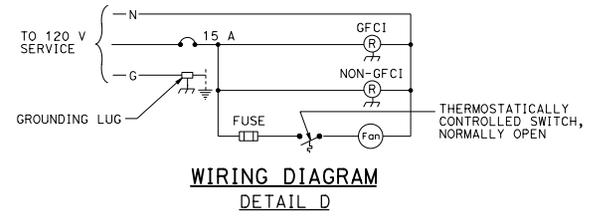
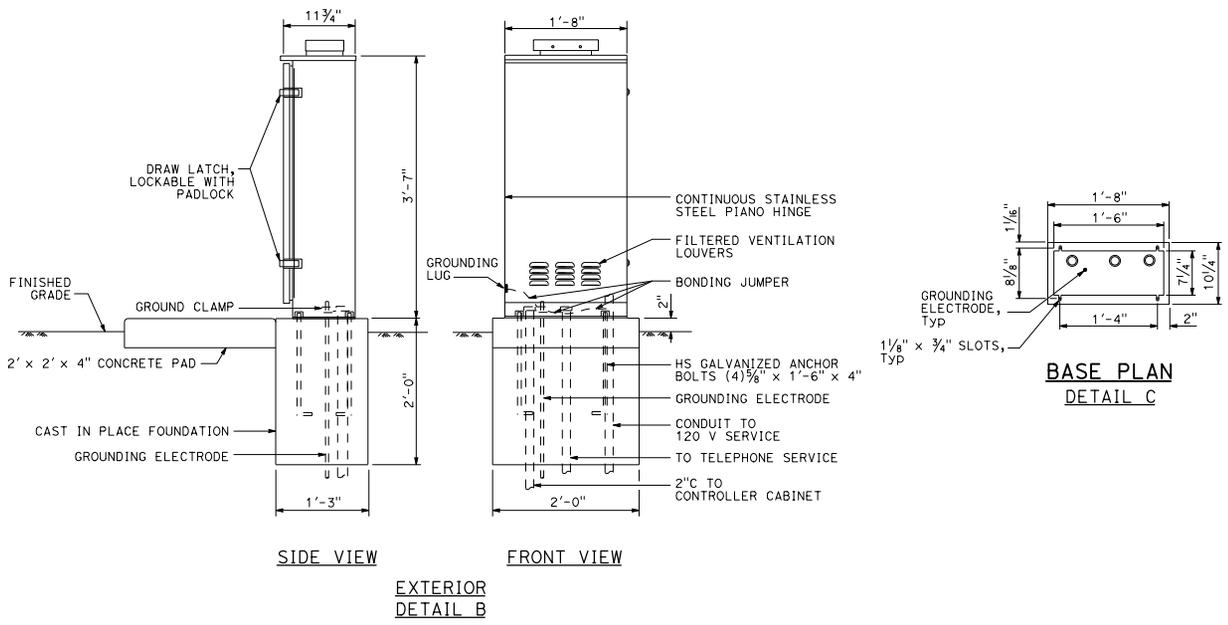
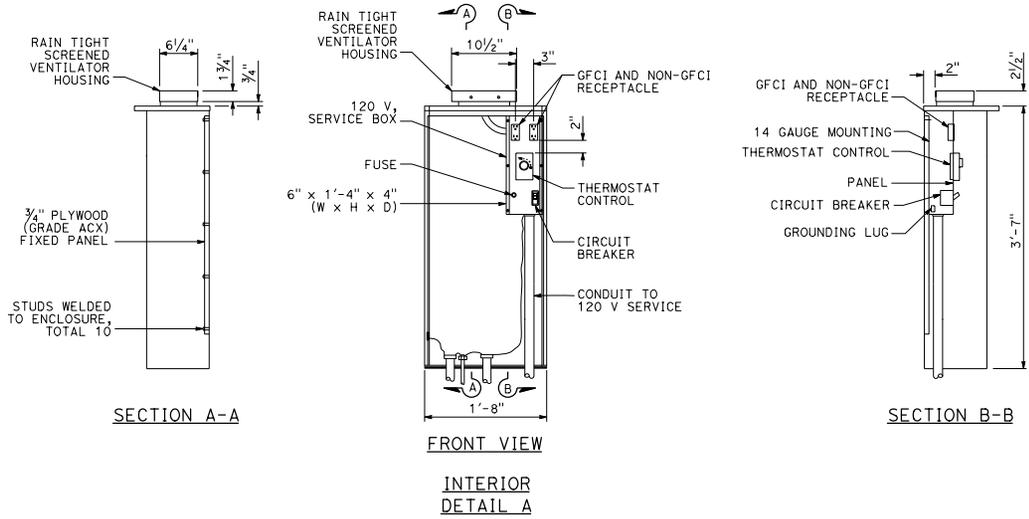
2010 REVISED STANDARD PLAN RSP ES-3D

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE
 Theresa Aziz Gabriel
 No. E15129
 Exp. 6-30-16
 ELECTRICAL
 STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED _____

NOTE:
1. Dimensions are nominal.

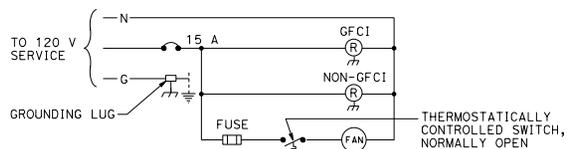


STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(TELEPHONE DEMARCATION
CABINET, TYPE B)**

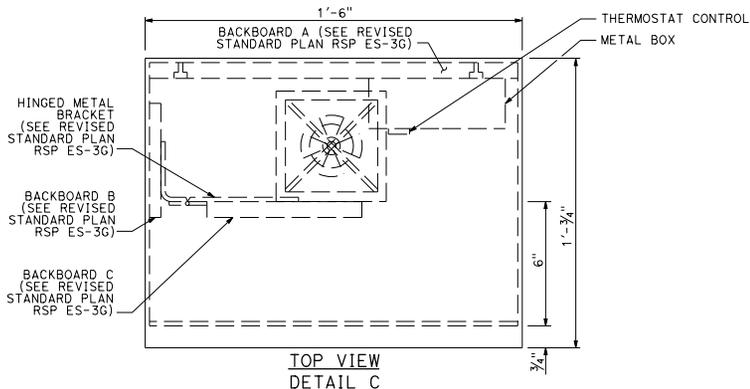
NO SCALE
RSP ES-3E DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-3E DATED MAY 20, 2011 - PAGE 439 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-3E

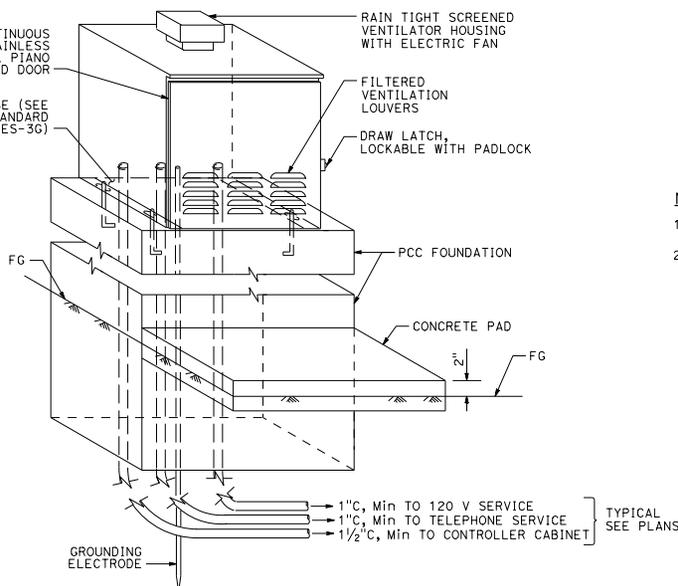
2010 REVISED STANDARD PLAN RSP ES-3E



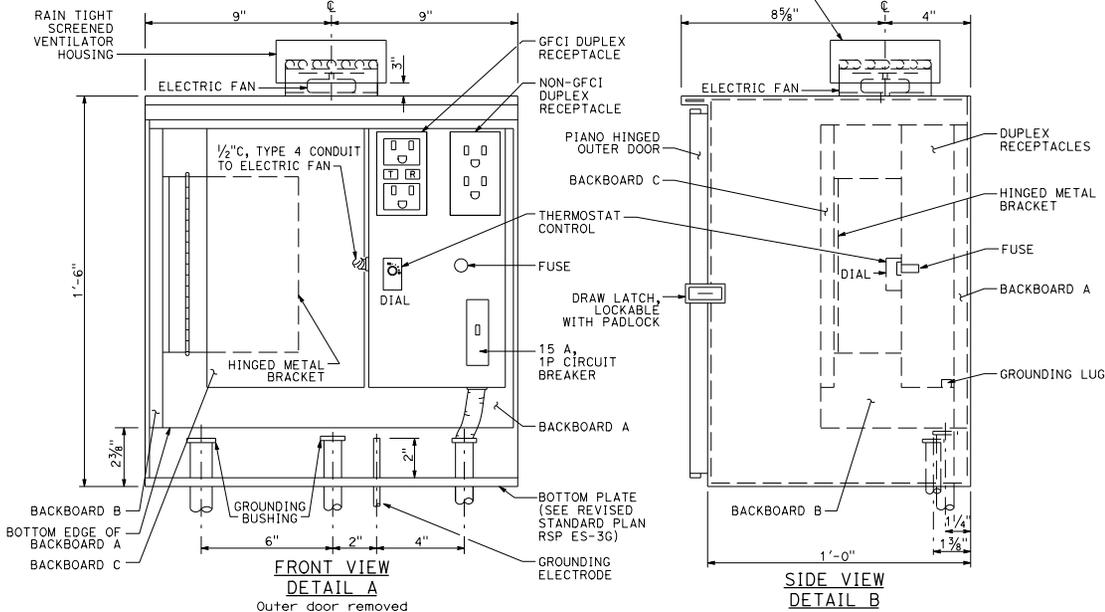
**WIRING DIAGRAM
DETAIL F**



**TOP VIEW
DETAIL C**



DETAIL D



**FRONT VIEW
DETAIL A**

Outer door removed

**SIDE VIEW
DETAIL B**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

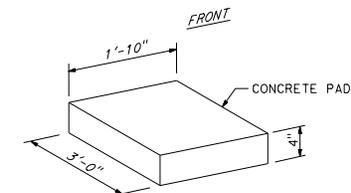
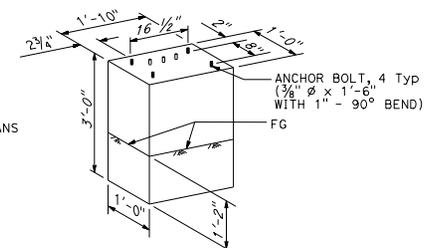
Theresa Gabriel
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October 30, 2015
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ELECTRICAL
STATE OF CALIFORNIA
REGISTERED PROFESSIONAL ENGINEERS

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:

TO ACCOMPANY PLANS DATED _____

- Dimensions are nominal.
- Hardware for fastening of mounting boards:
 - Fasten backboard A and backboard B to telephone demarcation cabinet with 3/8" x 3/4" stainless steel carriage bolts (8 required).
 - Fasten hinged metal bracket to backboard B and backboard C to hinged metal bracket with number No. 10 x 3/4" wood screws (9 required).



**FOUNDATION AND
PAD DETAILS**

DETAIL E

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(TELEPHONE DEMARCATION
CABINET, TYPE C)**

NO SCALE

RSP ES-3F DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-3F DATED MAY 20, 2011 - PAGE 440 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-3F

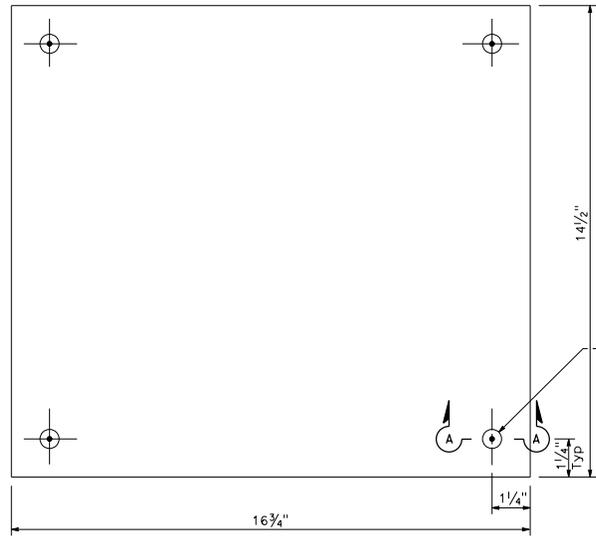
2010 REVISED STANDARD PLAN RSP ES-3F

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

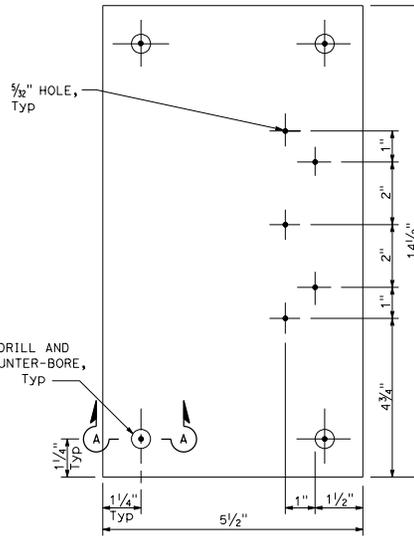
Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE
 Theresa Aziz Gabriel
 No. E15129
 Exp. 6-30-16
 ELECTRICAL
 STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS
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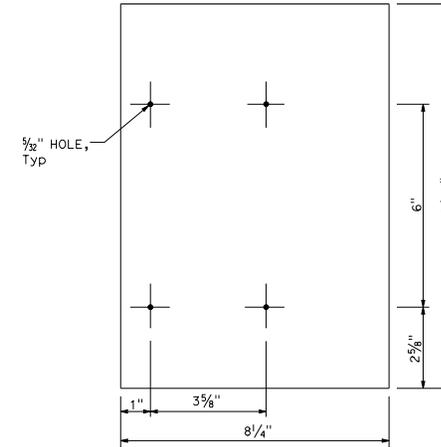
TO ACCOMPANY PLANS DATED _____



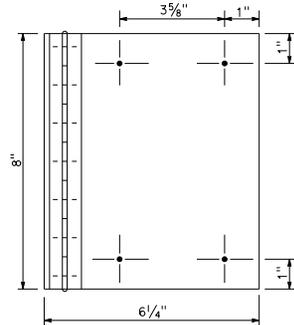
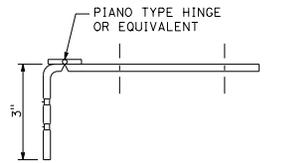
BACKBOARD A
DETAIL A



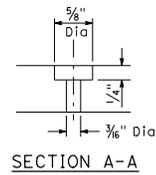
BACKBOARD B
DETAIL B



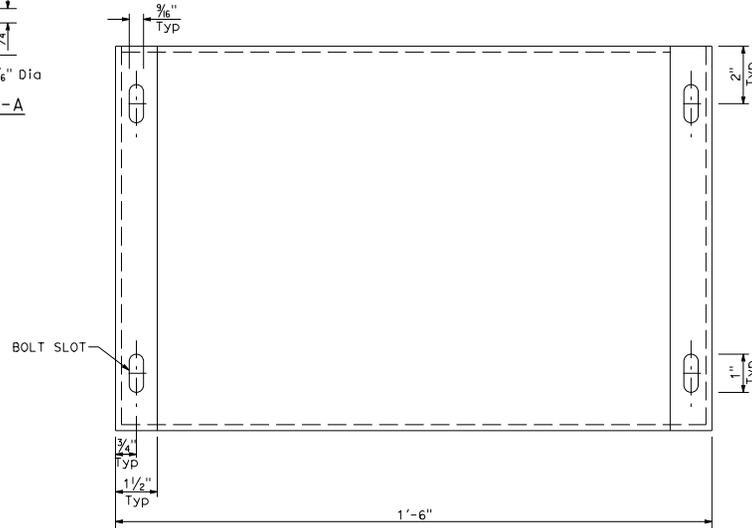
BACKBOARD C
DETAIL C



HINGED METAL BRACKET
DETAIL D



SECTION A-A



CABINET BASE
DETAIL E

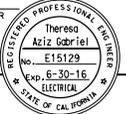
NOTE:
1. Base mounting frame shall be constructed with 0.134" galvanized steel.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(TELEPHONE DEMARCATION
CABINET, TYPE C DETAILS)
NO SCALE

RSP ES-3G DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-3G DATED MAY 20, 2011 - PAGE 441 OF THE STANDARD PLANS BOOK DATED 2010.

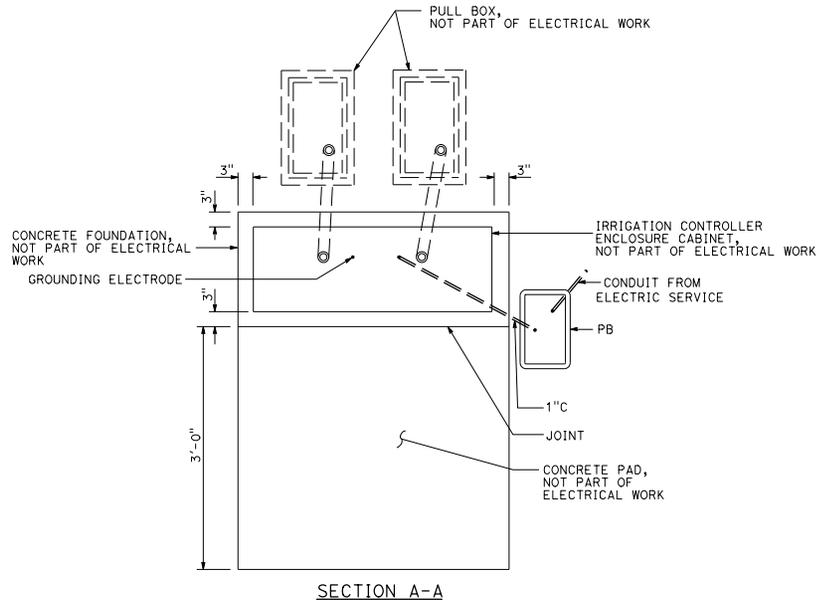
REVISED STANDARD PLAN RSP ES-3G

2010 REVISED STANDARD PLAN RSP ES-3G

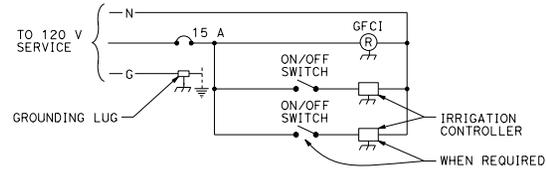
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
					
Theresa Gabriel REGISTERED ELECTRICAL ENGINEER October 30, 2015 PLANS APPROVAL DATE No. E15129 Exp. 6-30-16 <small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

TO ACCOMPANY PLANS DATED _____

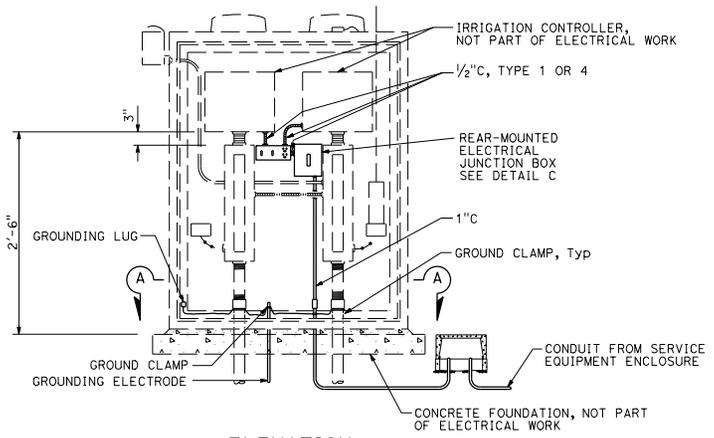
- NOTES:**
1. See Standard Plan H10 for other details.
 2. Underground electrical work done prior to foundation installation.



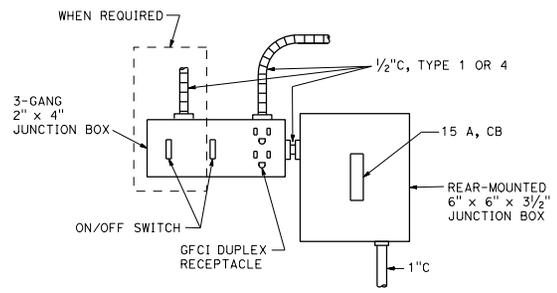
SECTION A-A



IRRIGATION CONTROLLER ENCLOSURE CABINET WIRING DIAGRAM (Typ) DETAIL B



ELEVATION DETAIL A



ELECTRICAL JUNCTION BOX LAYOUT DETAIL C

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(IRRIGATION CONTROLLER
ENCLOSURE CABINET)**

NO SCALE

RSP ES-3H DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-3H DATED MAY 20, 2011 - PAGE 442 OF THE STANDARD PLANS BOOK DATED 2010.

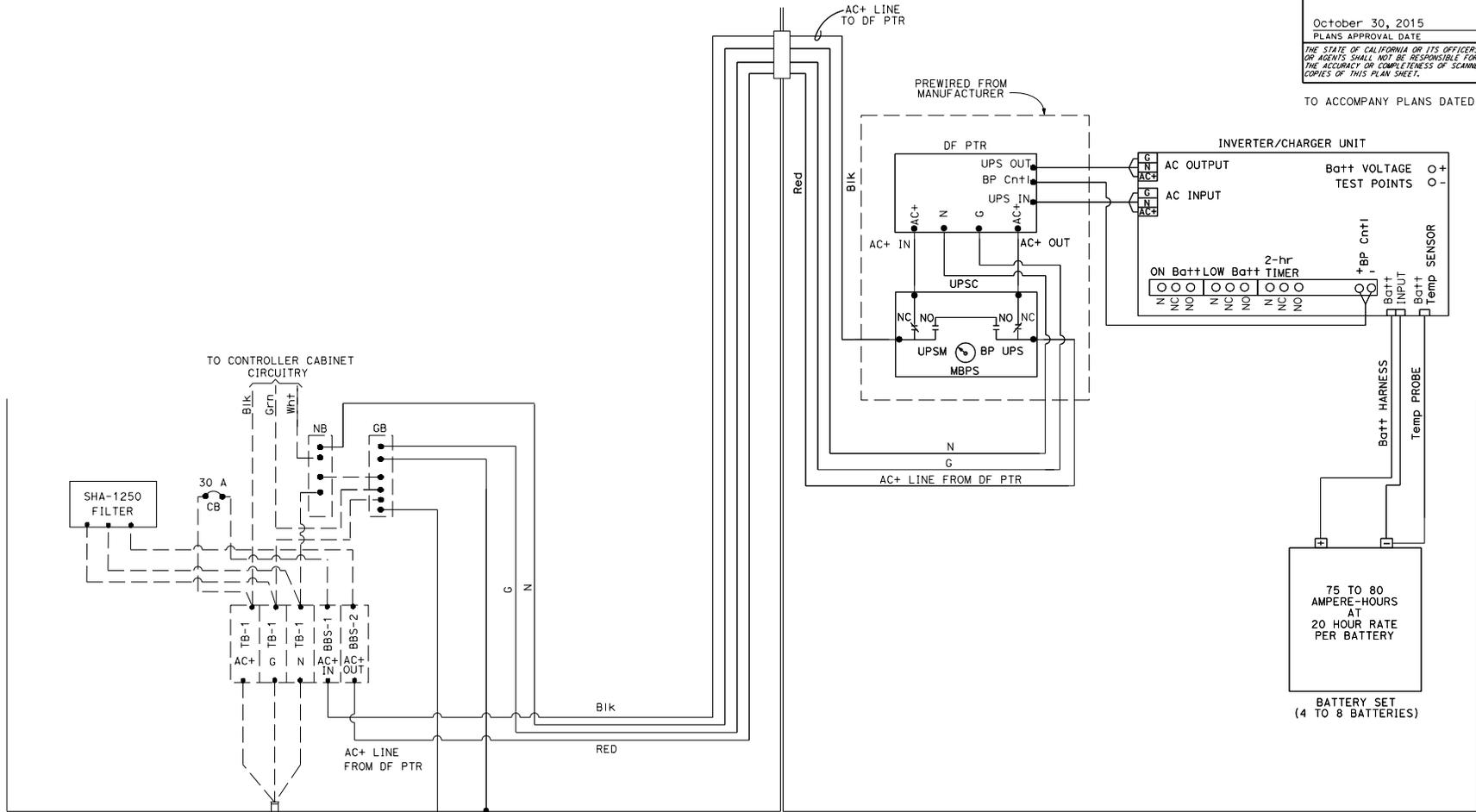
REVISED STANDARD PLAN RSP ES-3H

2010 REVISED STANDARD PLAN RSP ES-3H

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE
 No. E15129
 Exp. 6-30-16
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TO ACCOMPANY PLANS DATED _____



SINGLE-PHASE, 120 V
2-WIRE ckt FROM
SERVICE EQUIPMENT
ENCLOSURE

CONTROLLER CABINET

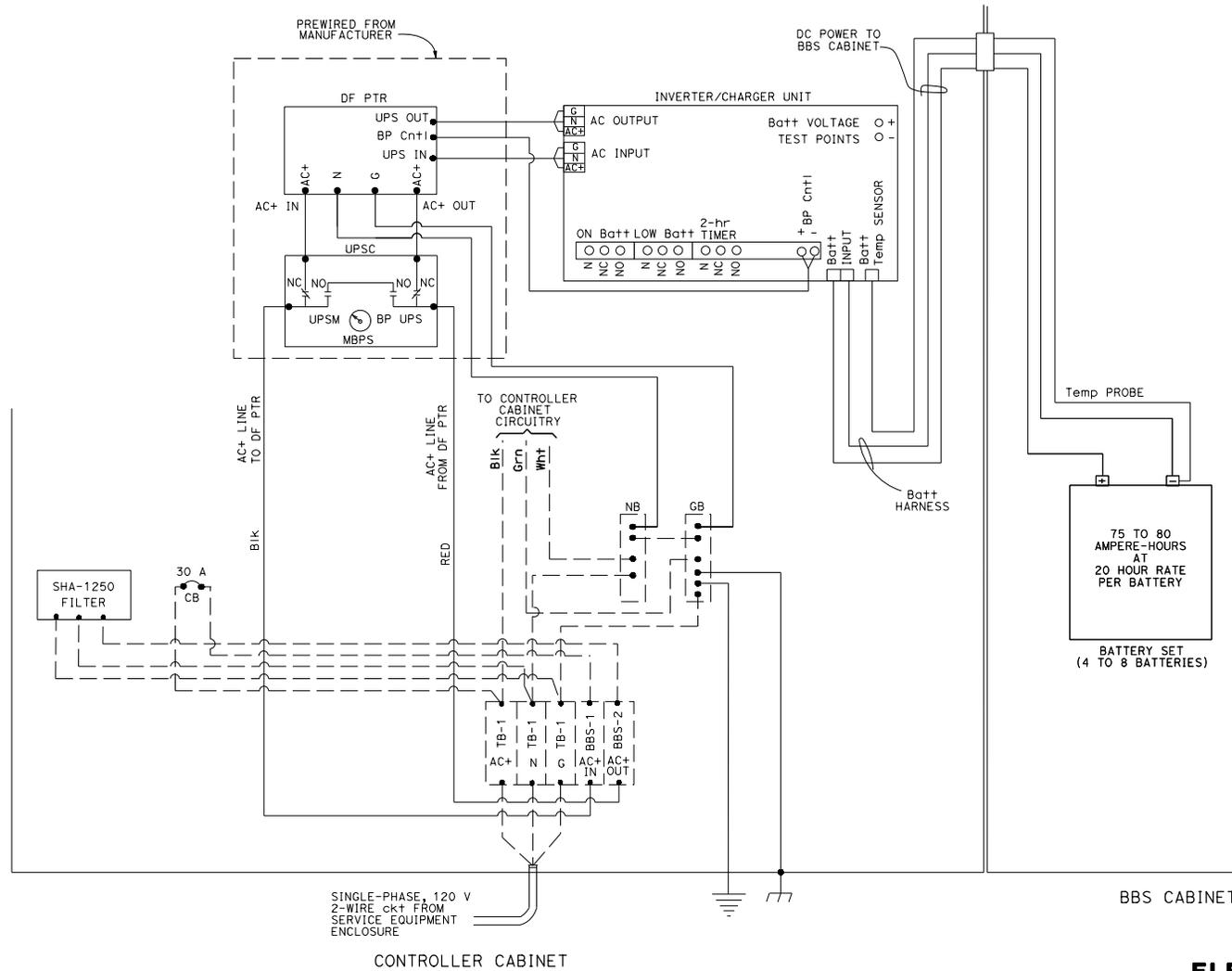
BBS CABINET

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(BBS POWER CONNECTION DIAGRAM,
WITH BYPASS CONTROL LINE)
NO SCALE

RSP ES-31 DATED OCTOBER 30, 2015 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-31

2010 REVISED STANDARD PLAN RSP ES-31



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE
 No. E15129
 Exp. 6-30-16
 PROFESSIONAL ENGINEER
 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.

TO ACCOMPANY PLANS DATED _____

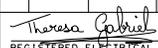
2010 REVISED STANDARD PLAN RSP ES-3J

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(BBS POWER CONNECTION DIAGRAM, WITH BYPASS CONTROL LINE)

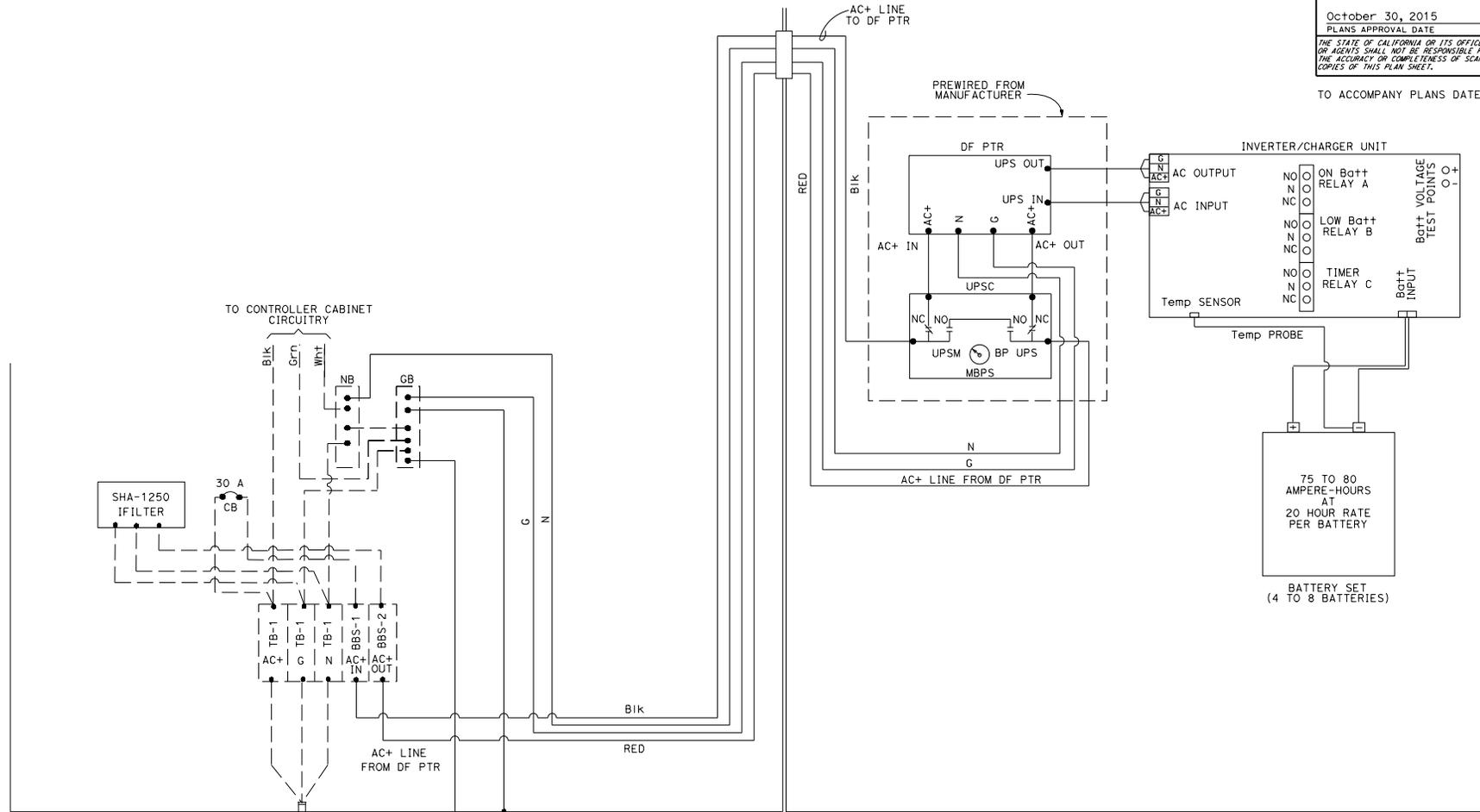
NO SCALE

RSP ES-3J DATED OCTOBER 30, 2015 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-3J

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
 REGISTERED ELECTRICAL ENGINEER					
October 30, 2015 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.					

TO ACCOMPANY PLANS DATED _____



SINGLE-PHASE, 120 V
2-WIRE CKT FROM
SERVICE EQUIPMENT
ENCLOSURE

CONTROLLER CABINET

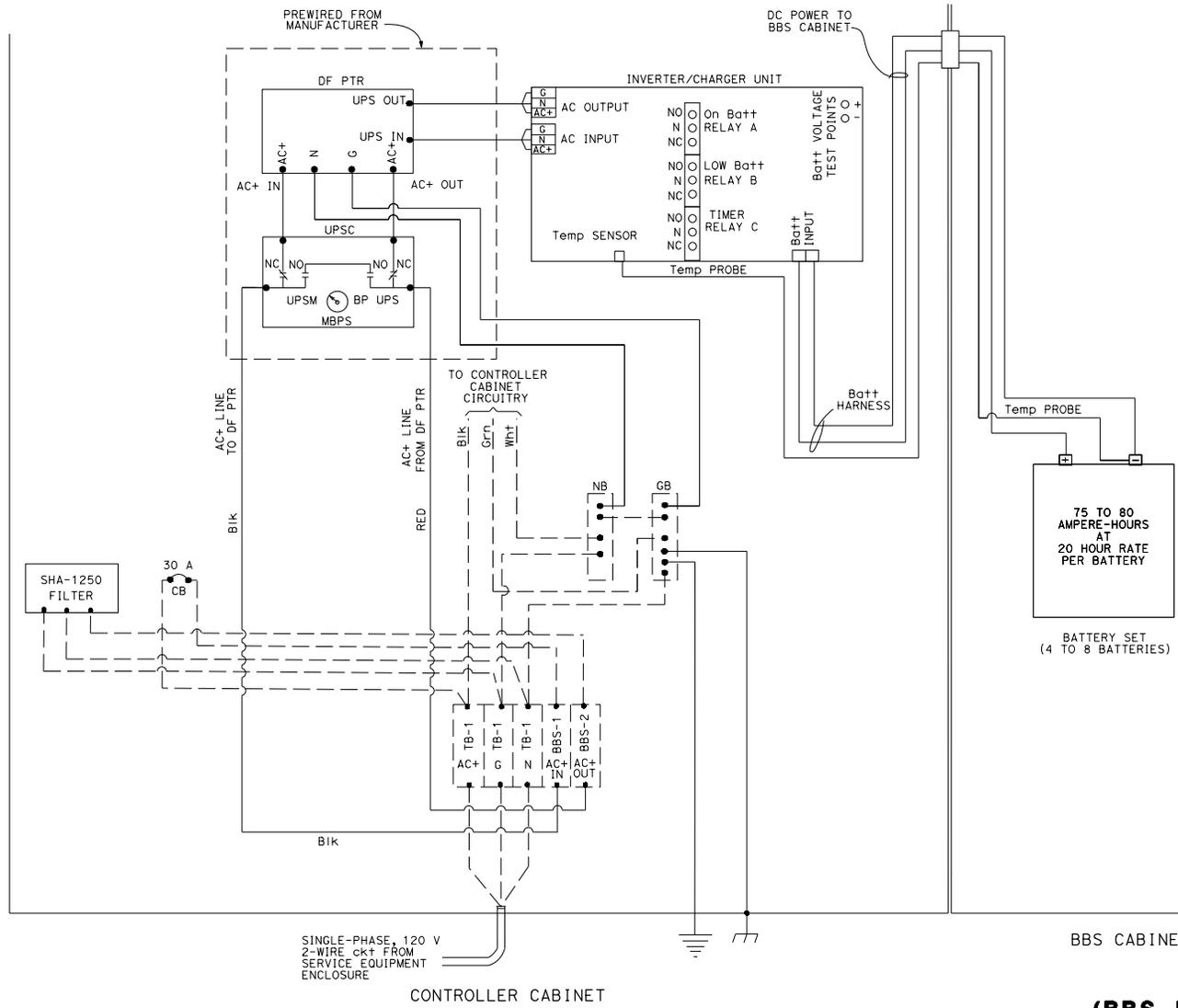
BBS CABINET

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
**(BBS POWER CONNECTION DIAGRAM,
WITHOUT BYPASS CONTROL LINE)**
NO SCALE

RSP ES-3K DATED OCTOBER 30, 2015 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

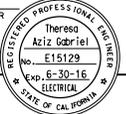
REVISED STANDARD PLAN RSP ES-3K

2010 REVISED STANDARD PLAN RSP ES-3K



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 October 30, 2015
 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.



TO ACCOMPANY PLANS DATED _____

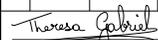
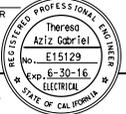
2010 REVISED STANDARD PLAN RSP ES-3L

BBS CABINET
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(BBS POWER CONNECTION DIAGRAM,
WITHOUT BYPASS CONTROL LINE)**
NO SCALE

RSP ES-3L DATED OCTOBER 30, 2015 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-3L

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
 REGISTERED ELECTRICAL ENGINEER Theresa Gabriel No. E15129 PLANS APPROVAL DATE October 30, 2015 <small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					
					

TO ACCOMPANY PLANS DATED _____

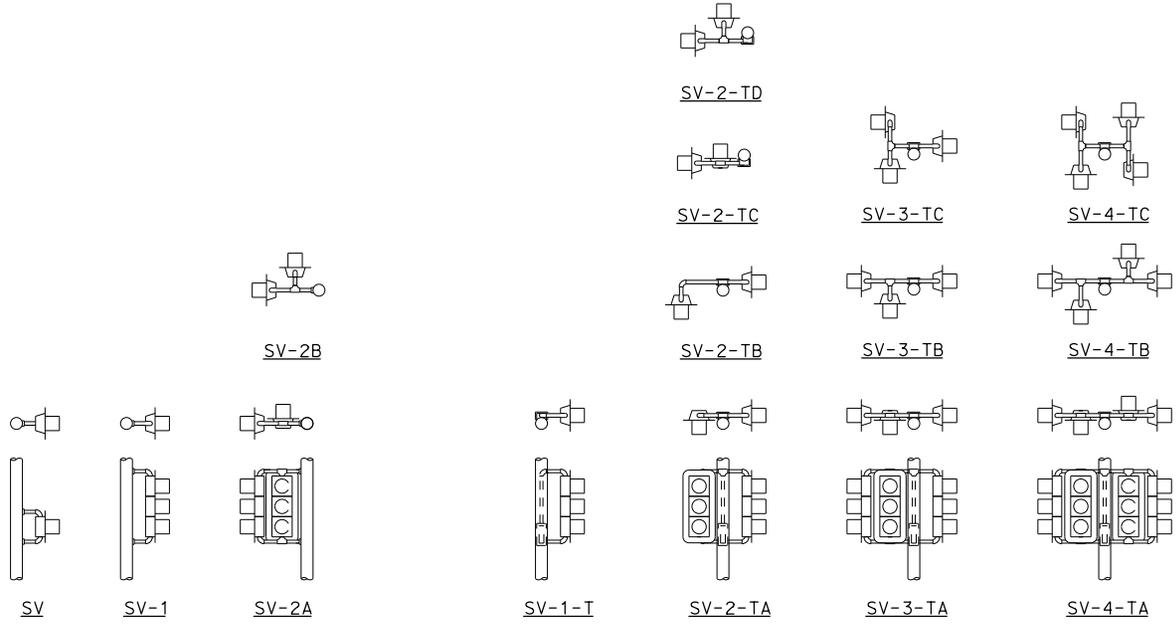
PLAN VIEW OF OTHER
SIDE MOUNTINGS

ABBREVIATIONS:

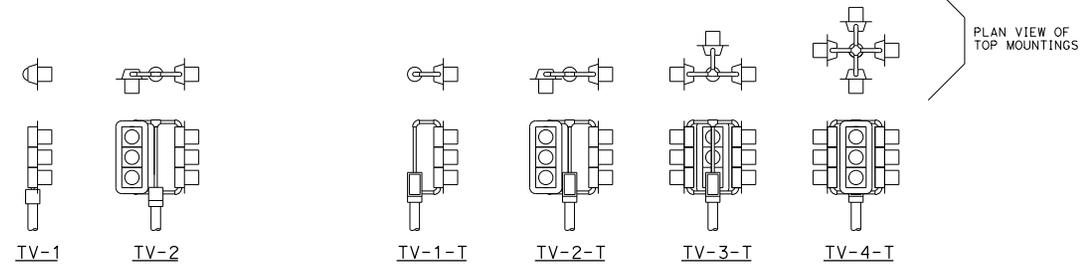
- SV SIDE MOUNTED SIGNAL HEADS
- T TERMINAL COMPARTMENT
- TV TOP MOUNTED SIGNAL HEADS
- 1, 2, 3, 4 NUMBER OF SIGNAL FACES
(3 - SECTION, UNLESS OTHERWISE INDICATED)
- A, B, C, D CONFIGURATION OF SIGNALS

NOTES:

1. Mountings shall be oriented to provide maximum horizontal clearance to adjacent roadway.
2. Bracket arms shall be long enough to permit proper alignment of signals and backplate installation.
3. See Revised Standard Plans RSP ES-4D and RSP ES-4E for attachment fitting details.



SIDE MOUNTINGS



TOP MOUNTINGS

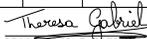
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(SIGNAL HEADS AND MOUNTINGS)**

NO SCALE

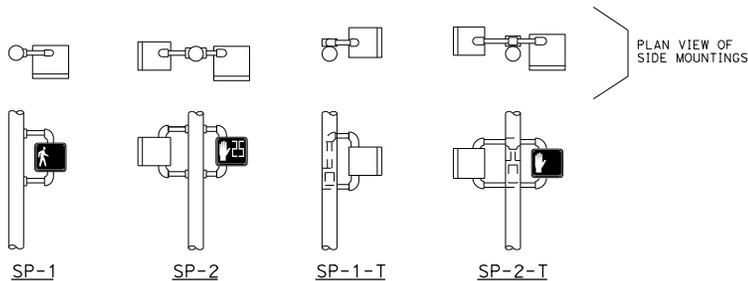
RSP ES-4A DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-4A DATED JULY 19, 2013 AND
STANDARD PLAN ES-4A DATED MAY 20, 2011 - PAGE 443 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-4A

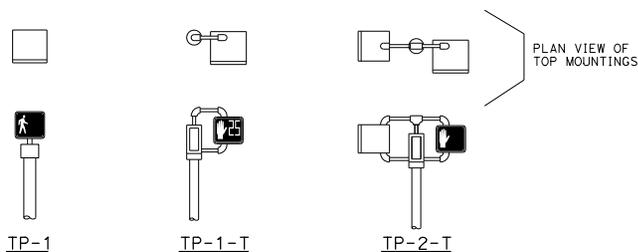
2010 REVISED STANDARD PLAN RSP ES-4A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
 REGISTERED ELECTRICAL ENGINEER					
October 30, 2015 PLANS APPROVAL DATE					
					
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TO ACCOMPANY PLANS DATED _____



SIDE MOUNTINGS



TOP MOUNTINGS

PEDESTRIAN SIGNAL HEAD MOUNTINGS

DETAIL A



PERSON WALKING INTERVAL FLASHING UPRaised HAND INTERVAL STEADY UPRaised HAND INTERVAL
LED COUNTDOWN PEDESTRIAN SIGNAL FACE MODULE

DETAIL B

NOTES:

1. Mounting shall be oriented to provide maximum horizontal clearance to adjacent roadway.
2. Bracket arms shall be long enough to permit proper alignment of signals.
3. See Revised Standard Plan RSP ES-4D for attachment fittings details.

ABBREVIATIONS:

- 1, 2 NUMBER OF SIGNAL FACES
- SP SIDE MOUNTED PEDESTRIAN SIGNAL
- T TERMINAL COMPARTMENT
- TP TOP MOUNTED PEDESTRIAN SIGNAL

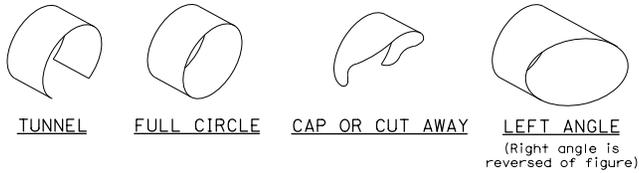
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(PEDESTRIAN SIGNAL HEADS)**

NO SCALE

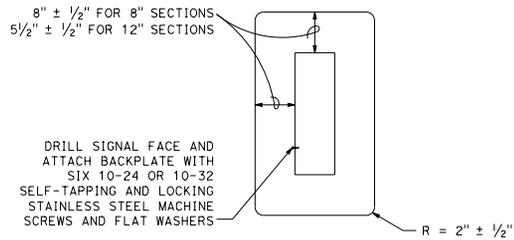
RSP ES-4B DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-4B DATED JULY 19, 2013 AND
STANDARD PLAN ES-4B DATED MAY 20, 2011 - PAGE 444 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-4B

2010 REVISED STANDARD PLAN RSP ES-4B

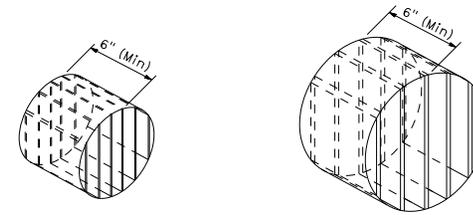


VISORS



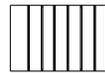
8" AND 12" SECTIONS

BACKPLATE

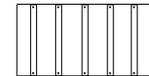


ISOMETRIC VIEW

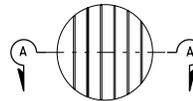
ISOMETRIC VIEW



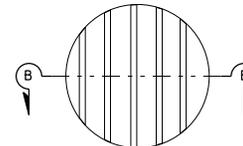
SECTION A-A



SECTION B-B



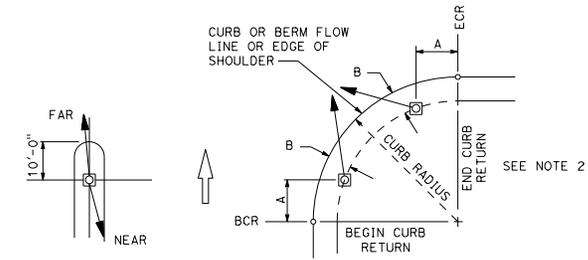
8" DIAMETER FRONT VIEW



12" DIAMETER FRONT VIEW

DIRECTIONAL LOUVER

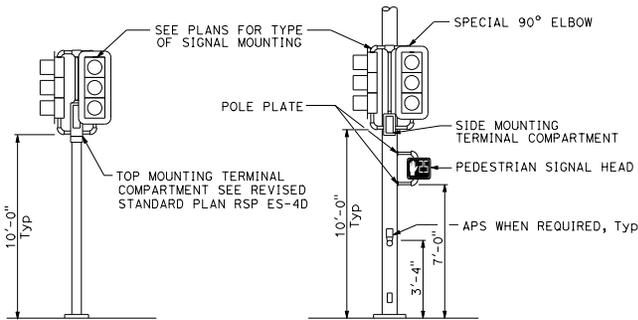
Directional louvers shall be oriented and secured in place with one plated brass machine screw and nut.



NOTES:

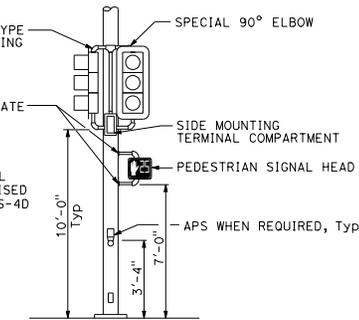
1. Typical signal pole placement unless dimensioned on plans.
2. For A and B dimensions, see Pole Schedule.

SIGNAL STANDARD PLACEMENT DIMENSIONS AND EQUIPMENT LOCATIONS



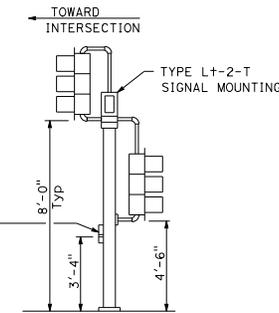
TOP MOUNTED SIGNALS (TV)

Type 1-A, 1-B, 1-C and 1-D standard as indicated on the plans



SIDE MOUNTED SIGNALS (SV AND SP)

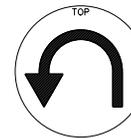
Normally used on standards with luminaire or signal mast arm



LEFT TURN LANE SIGNAL

Type 1-A, 1-B, 1-C and 1-D standard as indicated on plans

TYPICAL SIGNAL HEAD INSTALLATIONS



U-TURN



BICYCLE



LANE CONTROL



LANE CONTROL

SIGNAL FACES

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SIGNAL HEADS AND MOUNTINGS)

NO SCALE

RSP ES-4C DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-4C DATED JULY 19, 2013 AND STANDARD PLAN ES-4C DATED MAY 20, 2011 - PAGE 445 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-4C

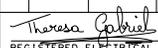
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

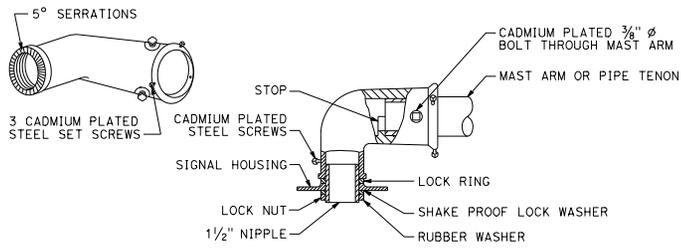
Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER
October 30, 2015
PLANS APPROVAL DATE
No. E15129
Exp. 6-30-16
ELECTRICAL
STATE OF CALIFORNIA

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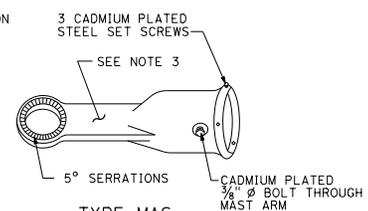
TO ACCOMPANY PLANS DATED _____

2010 REVISED STANDARD PLAN RSP ES-4C

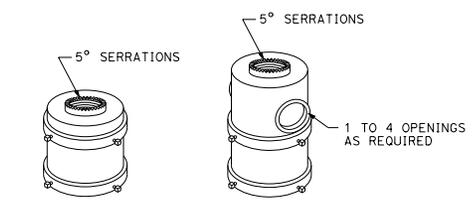
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
 REGISTERED ELECTRICAL ENGINEER Theresa Gabriel No. E15129 Exp. 6-30-16 ELECTRICAL STATE OF CALIFORNIA					
October 30, 2015 PLANS APPROVAL DATE					
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					



TYPE MAT
MAST ARM MOUNTING
For 2 NPS pipe, see Note 1.



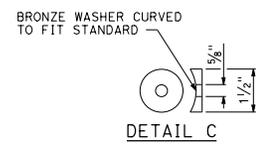
TYPE MAS
MAST ARM MOUNTING
For 2 NPS pipe, see Note 1.



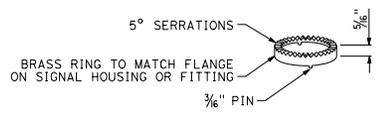
TOP MOUNTINGS
For 4 NPS pipe, see Note 2.

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

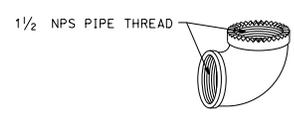
SIGNAL SLIP FITTERS



DETAIL C

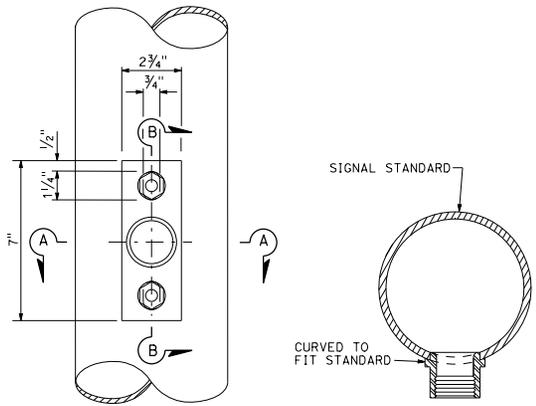


LOCK RING
Use where locking ring is not integral with signal housing or fitting.

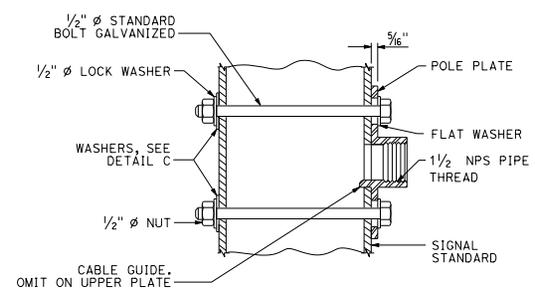


SPECIAL 90° ELBOW
One for each signal head, except those with special slip fitter mounting

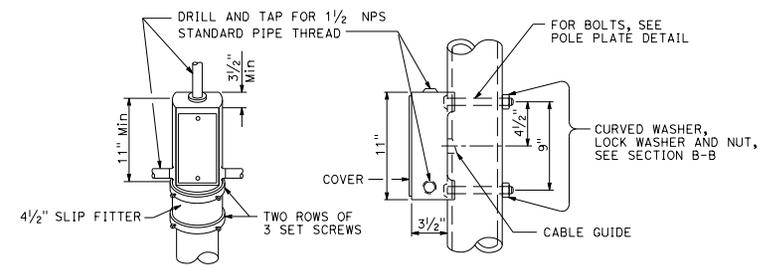
MISCELLANEOUS MOUNTING HARDWARE



POLE PLATE FOR SIDE MOUNTED SIGNAL HEAD WITHOUT TERMINAL COMPARTMENT



SECTION B-B



TERMINAL COMPARTMENT

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(SIGNAL HEAD MOUNTING)
NO SCALE

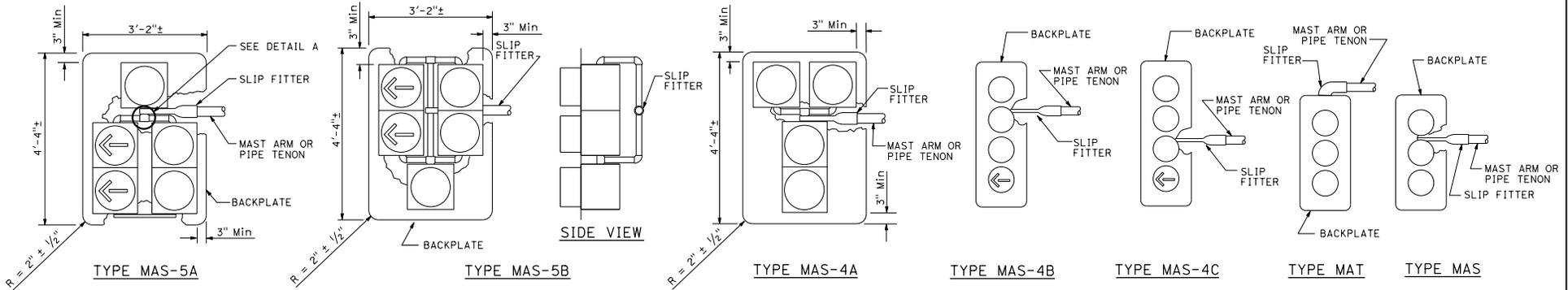
RSP ES-4D DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-4D DATED MAY 20, 2011 - PAGE 446 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-4D

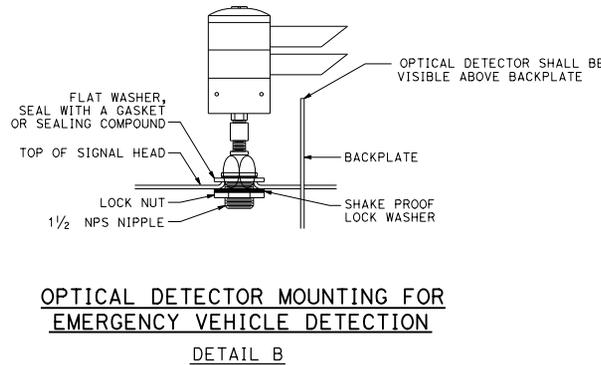
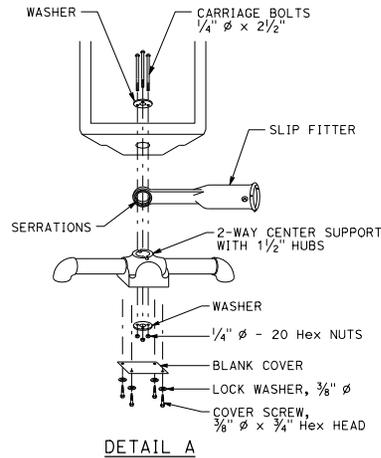
2010 REVISED STANDARD PLAN RSP ES-4D

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
<i>Theresa Gabriel</i> REGISTERED ELECTRICAL ENGINEER					
October 30, 2015 PLANS APPROVAL DATE					
Theresa Aziz Gabriel No. E15129 Exp. 6-30-16 ELECTRICAL STATE OF CALIFORNIA					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

TO ACCOMPANY PLANS DATED _____



MAST ARM MOUNTINGS



**OPTICAL DETECTOR MOUNTING FOR
EMERGENCY VEHICLE DETECTION**

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(SIGNAL HEADS AND
OPTICAL DETECTOR MOUNTING)**

NO SCALE

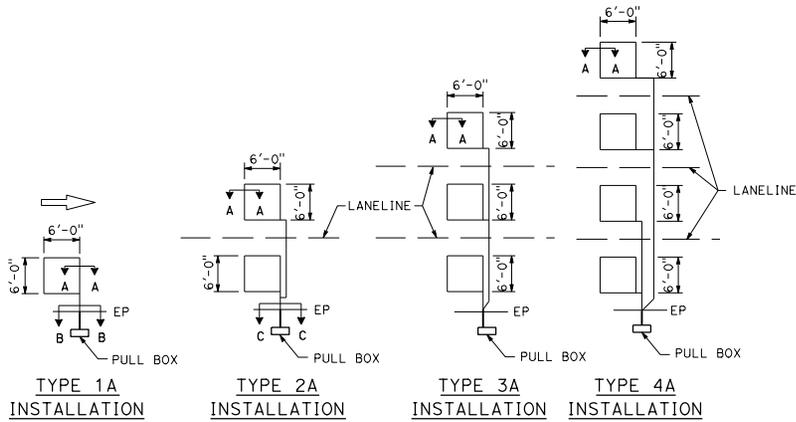
RSP ES-4E DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-4E DATED JULY 19, 2013 AND
STANDARD PLAN ES-4E DATED MAY 20, 2011 - PAGE 447 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-4E

2010 REVISED STANDARD PLAN RSP ES-4E

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
					
Theresa Aziz Gabriel REGISTERED ELECTRICAL ENGINEER October 30, 2015 PLANS APPROVAL DATE No. E15129 Exp. 6-30-16 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.					

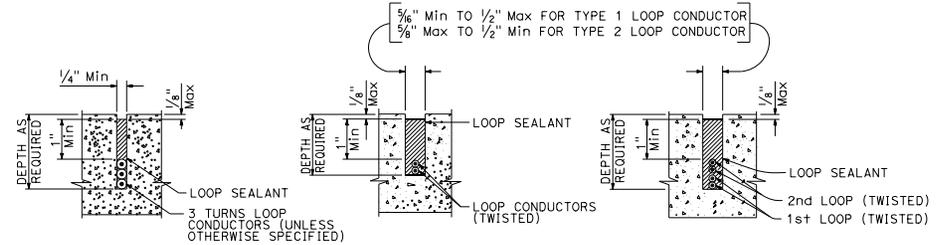
TO ACCOMPANY PLANS DATED _____



SAWCUT DETAILS

Type A loop detector configurations illustrated

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

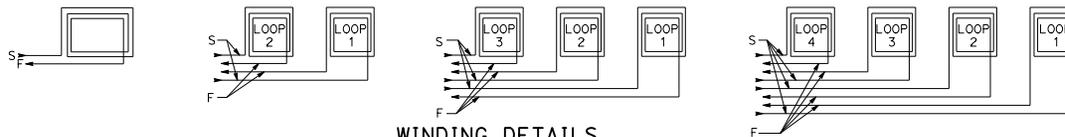


SECTION A-A

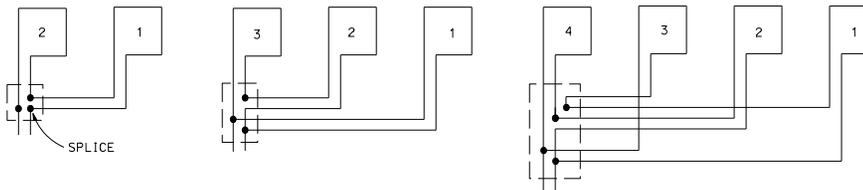
SECTION B-B

SECTION C-C

SLOT DETAILS - TYPE 1 AND TYPE 2 LOOP CONDUCTOR



WINDING DETAILS



TYPICAL LOOP CONNECTIONS

Dashed lines represent the pull box

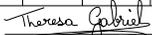
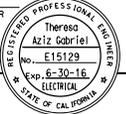
ABBREVIATIONS:

- S - START
- F - FINISH

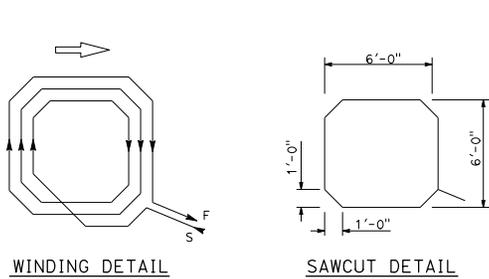
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(LOOP DETECTORS)**

NO SCALE

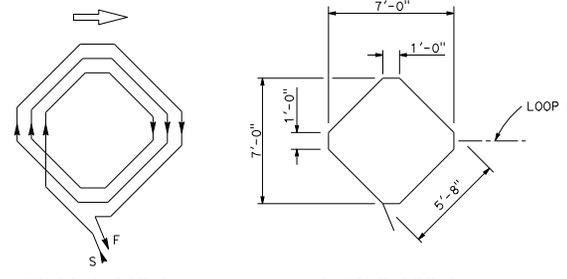
RSP ES-5A DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-5A DATED MAY 20, 2011 - PAGE 448 OF THE STANDARD PLANS BOOK DATED 2010.
REVISED STANDARD PLAN RSP ES-5A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
 REGISTERED ELECTRICAL ENGINEER Theresa Gabriel No. E15129 PLANS APPROVAL DATE October 30, 2015 EXP. 6-30-16 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.					
					

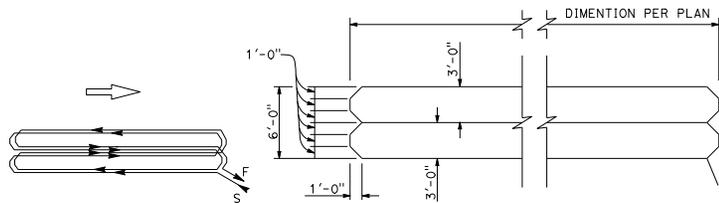
TO ACCOMPANY PLANS DATED _____



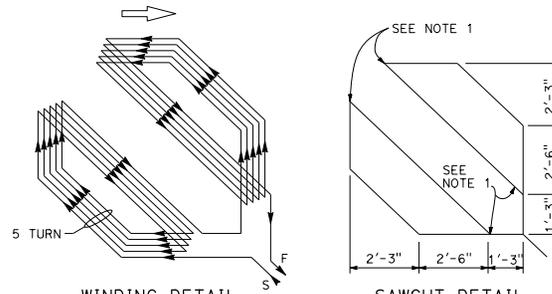
WINDING DETAIL
SAWCUT DETAIL
TYPE A LOOP DETECTOR CONFIGURATION



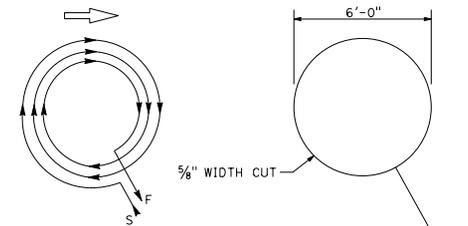
WINDING DETAIL
SAWCUT DETAIL
TYPE B LOOP DETECTOR CONFIGURATION



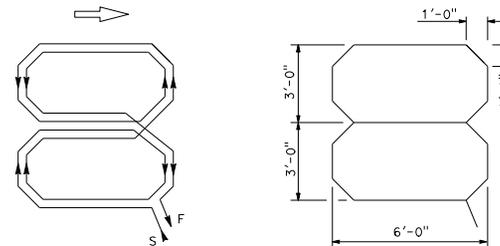
WINDING DETAIL
SAWCUT DETAIL
TYPE C LOOP DETECTOR CONFIGURATION



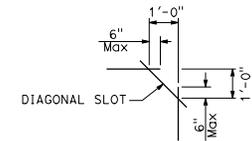
WINDING DETAIL
SAWCUT DETAIL
TYPE D LOOP DETECTOR CONFIGURATION



WINDING DETAIL
SAWCUT DETAIL
TYPE E LOOP DETECTOR CONFIGURATION



WINDING DETAIL
SAWCUT DETAIL
TYPE Q LOOP DETECTOR CONFIGURATION



**PLAN VIEW OF
DIAGONAL SLOT
AT CORNERS**

NOTES:

1. Round corners of acute angle sawcuts to prevent damage to conductors.
2. Typical distance separating loops from edge to edge is 10' for Type A, B, D and E installation in single lane.
3. Use Type D loops for limit line detector installations in left turn and bicycle lanes.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

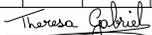
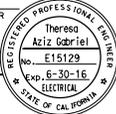
**ELECTRICAL SYSTEMS
(DETECTORS)**

NO SCALE

RSP ES-5B DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-5B DATED JULY 19, 2013 AND
STANDARD PLAN ES-5B DATED MAY 20, 2011 - PAGE 449 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-5B

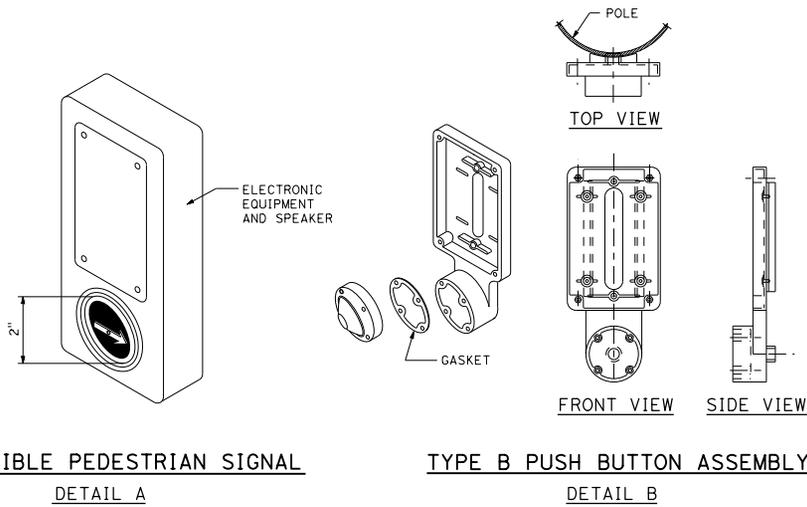
2010 REVISED STANDARD PLAN RSP ES-5B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
 REGISTERED ELECTRICAL ENGINEER					
October 30, 2015 PLANS APPROVAL DATE					
					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

TO ACCOMPANY PLANS DATED _____

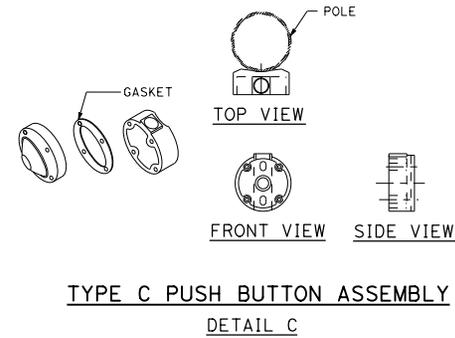
NOTES:

1. Back casting shape to fit curvature of pole.
2. Provide cover fitting for top of post, when PBA is mounted on push button assembly post.
3. Install push button on crosswalk side of standard.
4. Use R10 series regulatory signs and plaques for pedestrian and bicycle facilities.



ACCESSIBLE PEDESTRIAN SIGNAL
DETAIL A

TYPE B PUSH BUTTON ASSEMBLY
DETAIL B



TYPE C PUSH BUTTON ASSEMBLY
DETAIL C

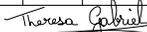
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(ACCESSIBLE PEDESTRIAN SIGNAL
AND PUSH BUTTON ASSEMBLIES)**

NO SCALE

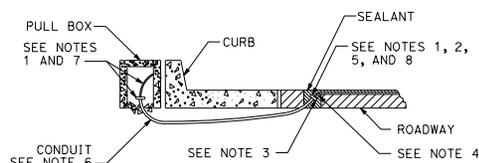
RSP ES-5C DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-5C DATED JULY 19, 2013 AND
STANDARD PLAN ES-5C DATED MAY 20, 2011 - PAGE 450 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-5C

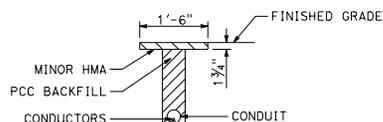
2010 REVISED STANDARD PLAN RSP ES-5C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
 REGISTERED ELECTRICAL ENGINEER No. E15129 October 30, 2015 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.					
					

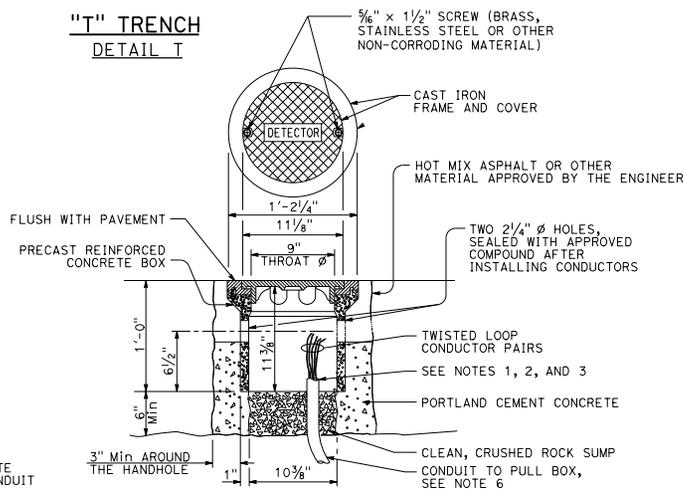
TO ACCOMPANY PLANS DATED _____



TYPE A
CURB TERMINATION DETAIL



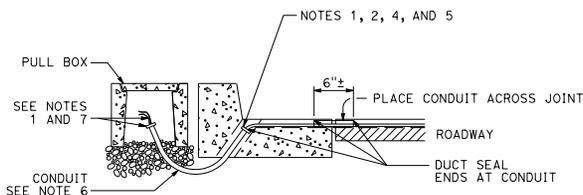
"I" TRENCH
DETAIL T



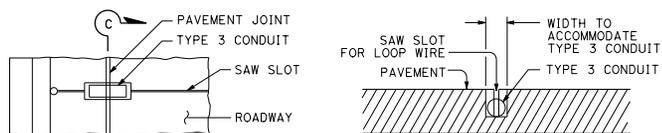
DETECTOR HANDHOLE DETAIL

NOTES:

- Bushing shall be used at end of conduit.
- Tape detector conductors or cables 3" each side of bushings.
- Install duct seal compound to each end of termination conduit before installing sealant.
- Round all sharp edges where detector conductors or cables have to pass.
- End of conduit shall be 3/8" below roadway surface.
- Conduit size Loop conductors
 1"C minimum 1 to 2 pairs
 1 1/2"C minimum 3 to 4 pairs
 2"C minimum 5 or more pairs
- Splice detector conductors or cables to detector lead-in-cable.
- Location of detector handhole when shown on plans.
- When the shoulder and traveled way are paved with the same material and there is no joint between them, the conduit shall extend only 2'-0" into the shoulder pavement.
- 3/4"C, Type 3 conduit 6" long minimum, plug both ends with duct compound to keep out sealant.
- 1/2" Minimum between top of conduit and pavement surface.
- Sawcut shall not exceed 1" in width and 1/8" longer than conduit to be installed.
- Conductors with 1/2" minimum slack inside conduit.
- Inductive loop detector saw slot.



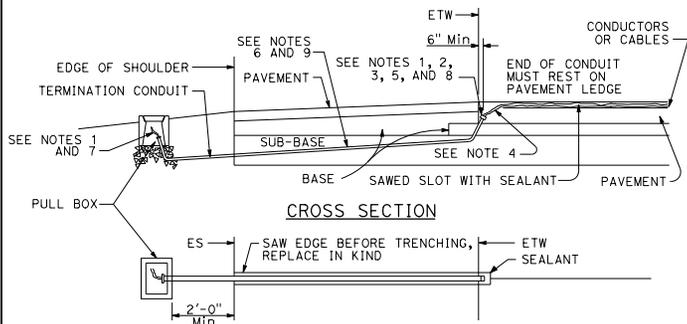
CROSS SECTION



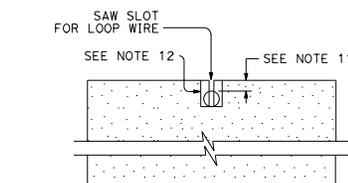
PLAN VIEW

SECTION C-C

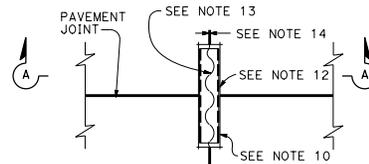
TYPE B
CURB TERMINATION DETAIL



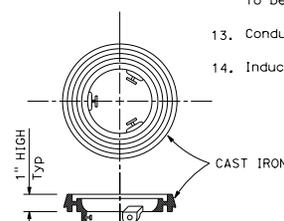
CROSS SECTION
SHOULDER TERMINATION DETAILS



SECTION A-A



PLAN VIEW
TYPICAL LOOP LEAD-IN DETAIL
AT PAVEMENT JOINT



LOCKING GRADE RING

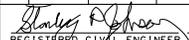
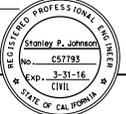
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(CURB AND SHOULDER TERMINATION,
TRENCH, AND HANDHOLE DETAILS)

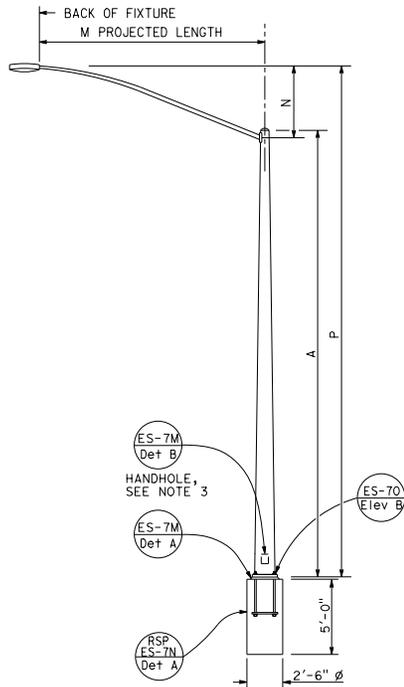
NO SCALE

RSP ES-5D DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-5D DATED JULY 19, 2013 AND STANDARD PLAN ES-5D DATED MAY 20, 2011 - PAGE 451 OF THE STANDARD PLANS BOOK DATED 2010.

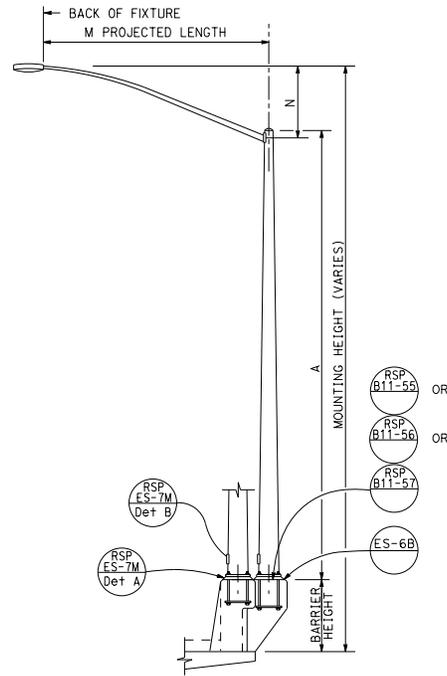
REVISED STANDARD PLAN RSP ES-5D

2010 REVISED STANDARD PLAN RSP ES-5D

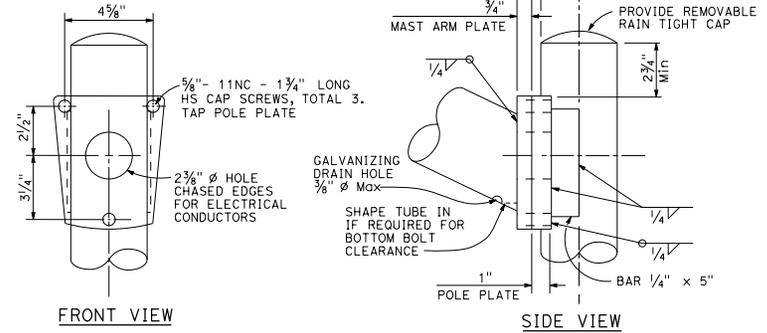
D16+	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
 REGISTERED CIVIL ENGINEER					
October 30, 2015 PLANS APPROVAL DATE					
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					



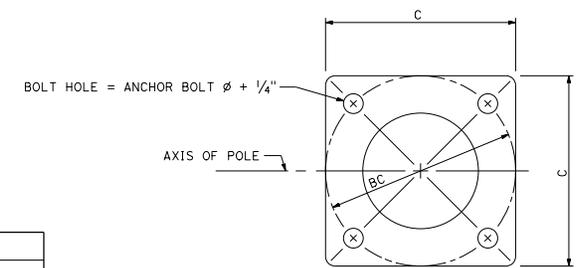
TYPE 15 AND TYPE 21
ELEVATION A



TYPE 15 AND TYPE 21 BARRIER RAIL MOUNTED
ELEVATION B



LUMINAIRE MAST ARM CONNECTION
DETAIL R



BASE PLATE
DETAIL A

POLE TYPE	POLE DATA				BASE PLATE DATA			
	A HEIGHT	Min OD		WALL THICKNESS	C	BC = BOLT CIRCLE	THICKNESS	ANCHOR BOLT SIZE
15	30'-0"	8"	3 1/8"	0.1196"	1'-0"	1'-0"	2"	1" Ø x 3'-0" *
21	35'-0"	8 3/8"	3 3/8"	0.1793"				1 1/4" Ø x 3'-0" *

* FOR BARRIER RAIL BOLTS, SEE STANDARD PLAN ES-6B.

LUMINAIRE MAST ARM DATA							
M PROJECTED LENGTH	N RISE	Min OD AT POLE	NOMINAL THICKNESS	P			
				TYPE 15	TYPE 21		
6'-0"	2'-0"±	3/4"	0.1196"	31'-6"±	36'-6"±		
8'-0"	2'-6"±	3/2"		32'-0"±	37'-0"±		
10'-0"	3'-3"±	3 7/8"		32'-9"±	37'-9"±		
12'-0"	4'-3"±	3 7/8"		33'-9"±	38'-9"±		
15'-0"	4'-9"±	4 1/4"		34'-3"±	39'-3"±		

NOTES:

- Indicates mast 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 Revised Standard Plan RSP ES-6F.
- Handhole shall be located on the downstream side of traffic.
- For additional notes and details, see Revised Standard Plans RSP ES-7M and RSP ES-7N.

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

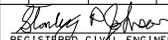
NO SCALE

RSP ES-6A DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-6A DATED MAY 20, 2011 - PAGE 452 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-6A

2010 REVISED STANDARD PLAN RSP ES-6A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS


 REGISTERED CIVIL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE
 Stanley P. Johnson
 No. CS7193
 Exp. 3-31-16
 CIVIL
 STATE OF CALIFORNIA

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

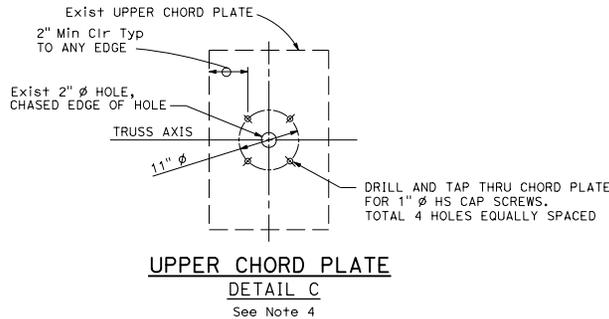
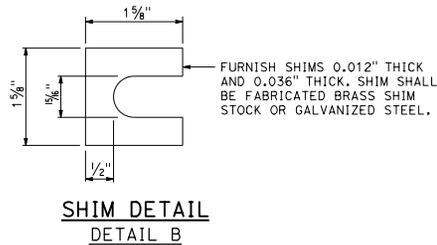
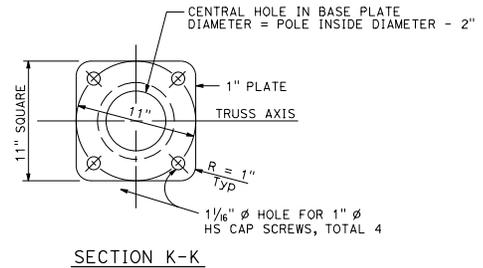
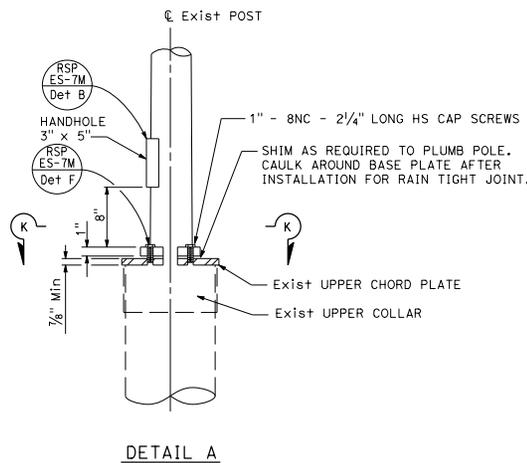
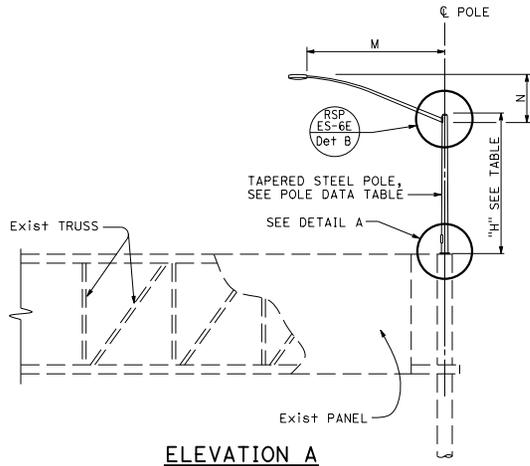
LUMINAIRE MAST ARM DATA			
M PROJECTED LENGTH	N RISE	Min OD AT POLE	NOMINAL THICKNESS
15'-0"	4'-9"±	4 1/4"	0.1196"
20'-0"	2'-6"±	5"	0.1793"

POLE DATA				
POLE EXTENSION TYPE	HEIGHT "H"	Min OD		THICKNESS
		BASE	TOP	
5	5'-0"	6 1/2"	5 1/8"	0.1793"
10	10'-0"	7 1/4"		

TO ACCOMPANY PLANS DATED _____

NOTES:

- The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.
- Bolt hole locations may vary at the discretion of the Engineer.
- Wind Loading (Fastest Mile): 80 mph AASHTO.
- See Standard Plan S13.
- Unit stresses (Structural Steel):
 - fy = 55,000 psi tapered steel tube (pole)
 - fy = 50,000 psi unless otherwise noted



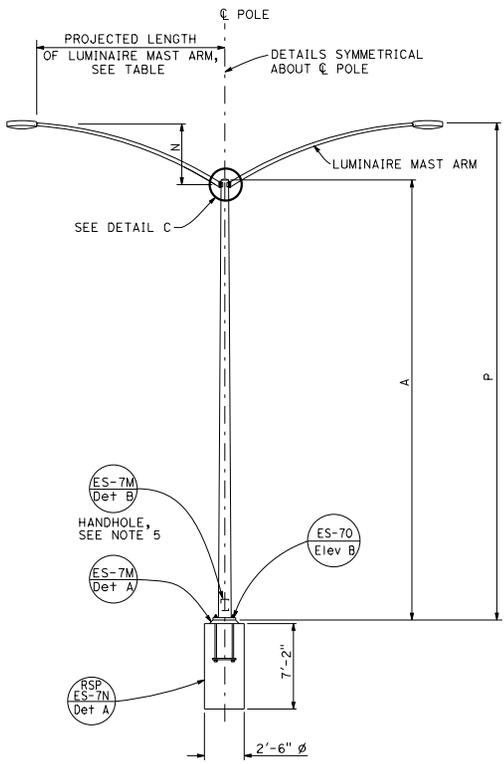
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(LIGHTING STANDARD,
TYPES 5 AND 10,
OVERHEAD SIGN MOUNTED)**

NO SCALE

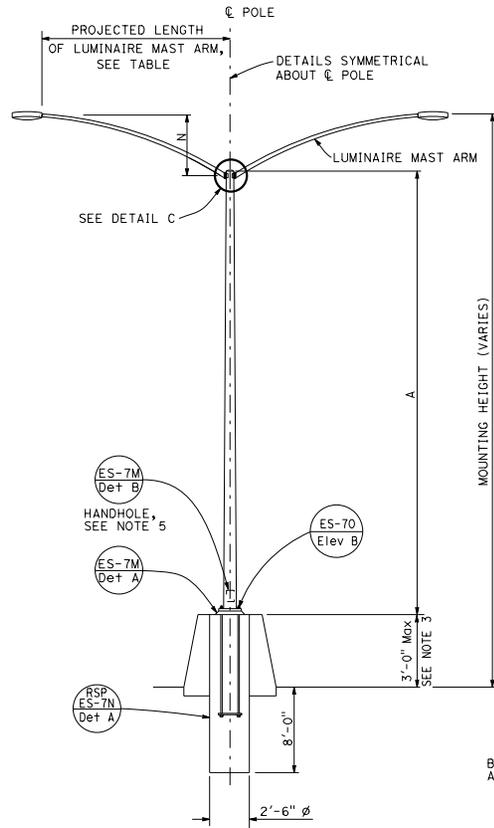
RSP ES-6C DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-6C DATED MAY 20, 2011 - PAGE 454 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-6C

2010 REVISED STANDARD PLAN RSP ES-6C



TYPE 15D AND TYPE 21D
ELEVATION A



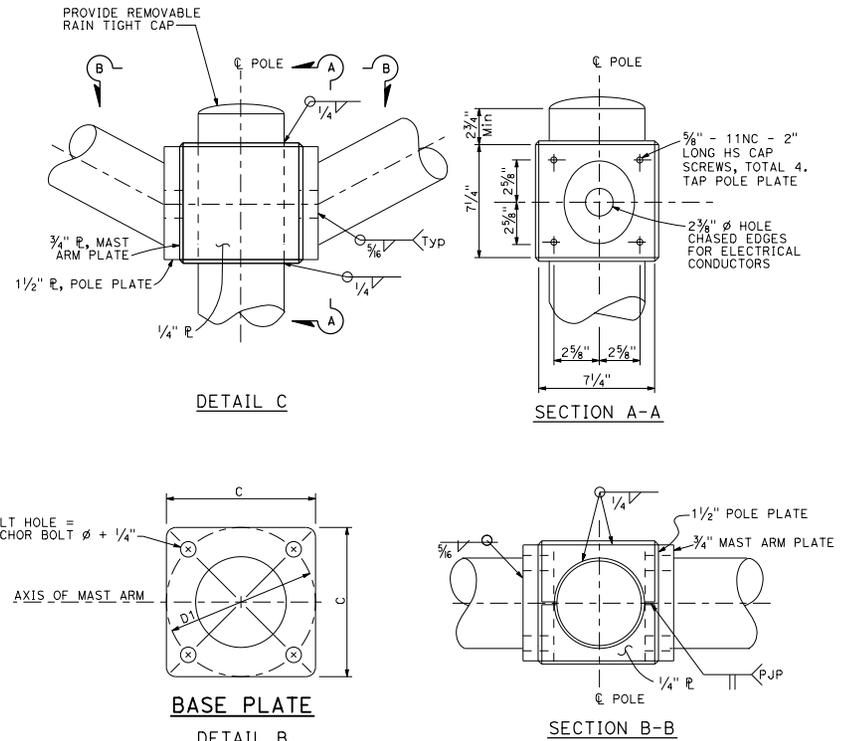
TYPE 15D AND TYPE 21D
MEDIAN BARRIER MOUNTED
ELEVATION B

POLE TYPE	POLE DATA				BASE PLATE DATA			
	A HEIGHT	Min OD BASE	TOP	Min THICKNESS	C	BC = BOLT CIRCLE	THICKNESS	ANCHOR BOLT SIZE
15D	30'-0"	8"	3 1/8"	0.1793"	1'-0"	1'-0"	2"	1 1/4" ϕ x 42"
21D	35'-0"	8 5/8"	3 3/8"					

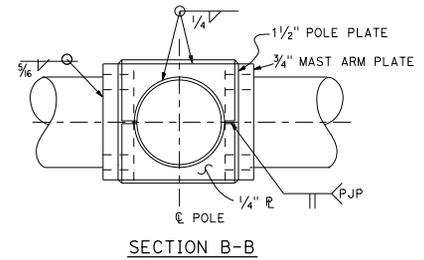
LUMINAIRE MAST ARM DATA					
PROJECTED LENGTH	N RISE	Min OD AT POLE	NOMINAL THICKNESS	P	
				TYPE 15D	TYPE 21D
6'-0"	2'-0" \pm	3 1/4"	0.1196"	31'-6" \pm	36'-6" \pm
8'-0"	2'-6" \pm	3 1/2"		32'-0" \pm	37'-0" \pm
10'-0"	3'-3" \pm	3 3/4"		32'-9" \pm	37'-9" \pm
12'-0"	4'-3" \pm	3 3/8"		33'-9" \pm	38'-9" \pm

NOTES:

1. Indicates mast arm length to be used unless otherwise noted on the plans.
2. For additional notes and details, see Revised Standard Plans RSP ES-7M and RSP ES-7N.
3. See Concrete Barrier Details Type 60E and 60SE.
4. For locations with one arm, plug unused cap screw holes and chased outlet with galvanized cap screws and knockout plug.
5. Handhole shall be located perpendicular to the luminaire mast arm and as directed by the Engineer.



BASE PLATE
DETAIL B



SECTION B-B

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

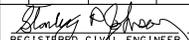
ELECTRICAL SYSTEMS
(LIGHTING STANDARD,
TYPES 15D AND 21D,
DOUBLE LUMINAIRE MAST ARM)

NO SCALE

RSP ES-6D DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-6D DATED MAY 20, 2011 - PAGE 455 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-6D

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS


 REGISTERED CIVIL ENGINEER
 No. CS7193
 Exp. 3-31-16
 CIVIL
 STATE OF CALIFORNIA

October 30, 2015
 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.

TO ACCOMPANY PLANS DATED _____

2010 REVISED STANDARD PLAN RSP ES-6D

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

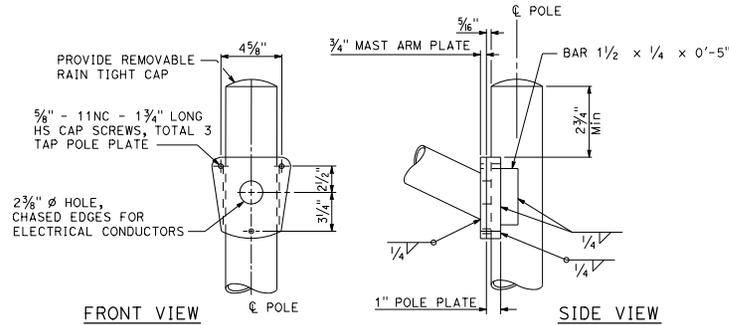
Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 No. CS7793
 Exp. 3-31-16
 CIVIL
 STATE OF CALIFORNIA

October 30, 2015
 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.

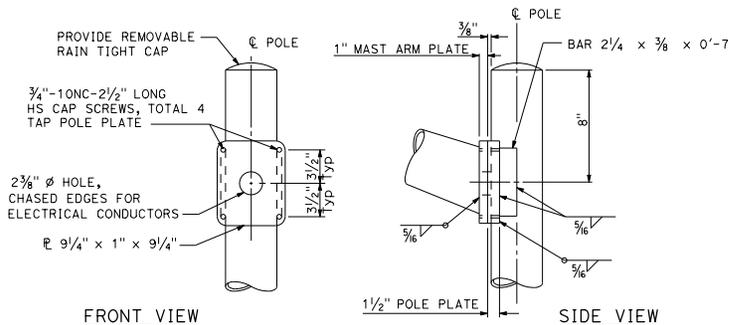
TO ACCOMPANY PLANS DATED _____

LUMINAIRE MAST ARM DATA			
PROJECTED LENGTH	THICKNESS	MINIMUM OD AT 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"±

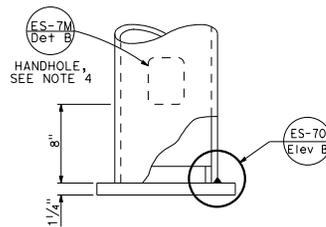
* TYPE 30
** TYPE 31



TYPE 30
DETAIL A



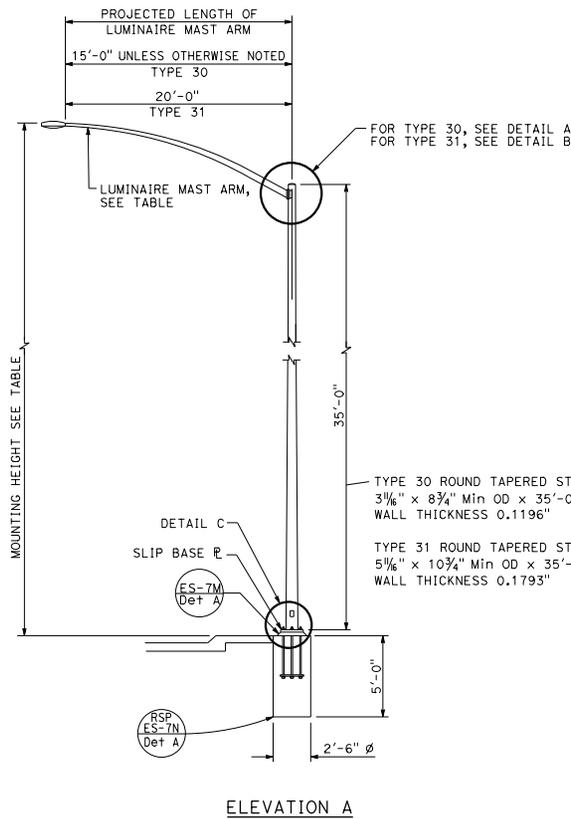
TYPE 31
DETAIL B



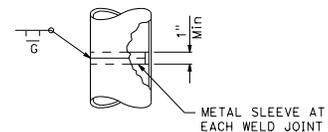
DETAIL C

NOTES:

- For slip base plate details, see Revised Standard Plan RSP 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" anchor bolts.
- For Type 31 fixed base use Type 32 base plate, anchor bolts and foundation on Revised Standard Plan RSP ES-6G.
- Handhole shall be located on the downstream side of traffic.
- For additional notes and details, see Revised Standard Plans RSP ES-7M and RSP ES-7N.



ELEVATION A



POLE SPLICE

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(LIGHTING STANDARD,
TYPES 30 AND 31)**

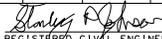
NO SCALE

RSP ES-6E DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-6E DATED MAY 20, 2011 - PAGE 456 OF THE STANDARD PLANS BOOK DATED 2010.

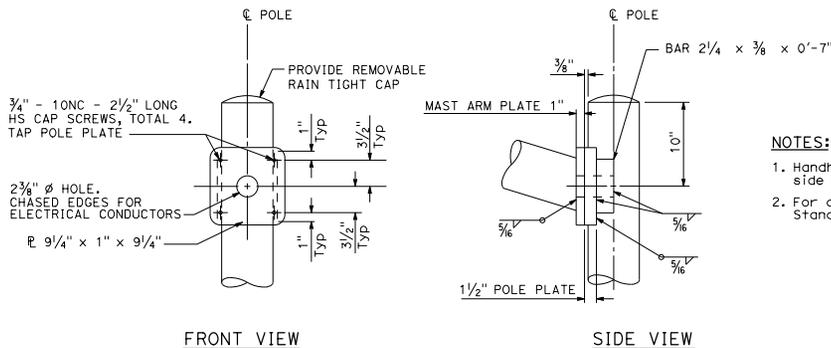
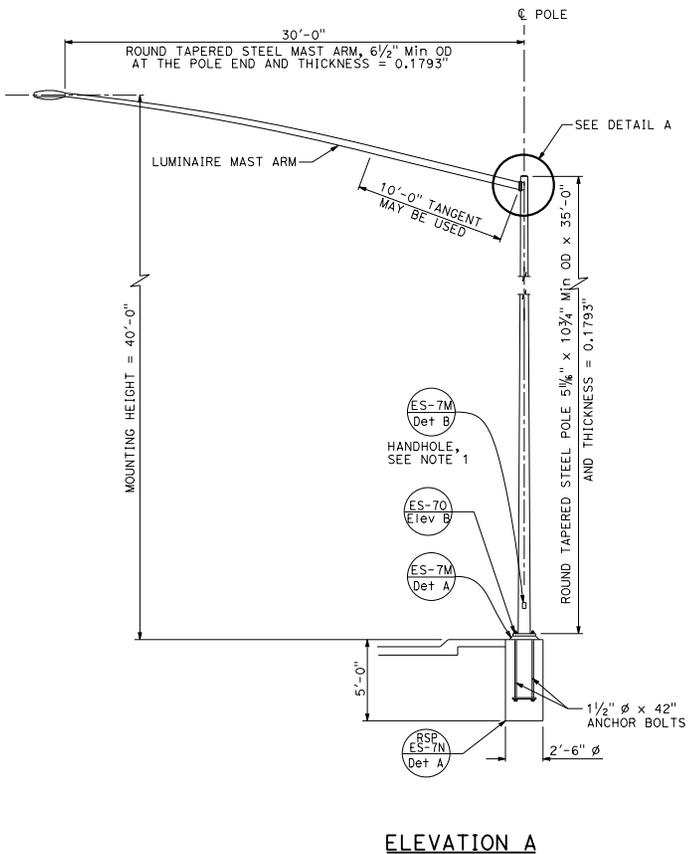
REVISED STANDARD PLAN RSP ES-6E

2010 REVISED STANDARD PLAN RSP ES-6E

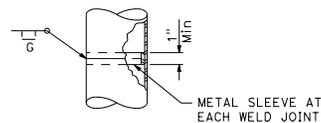
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS


 REGISTERED CIVIL ENGINEER
 No. CS7193
 Exp. 3-31-16
 CIVIL
 STATE OF CALIFORNIA

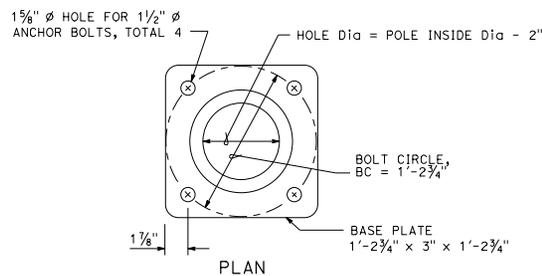
October 30, 2015
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS
 OR AGENTS SHALL NOT BE RESPONSIBLE FOR
 THE ACCURACY OR COMPLETENESS OF SCANNED
 COPIES OF THIS PLAN SHEET.



DETAIL A



POLE SPLICE
DETAIL B



BASE PLATE DETAIL
DETAIL C

NOTES:

1. Handhole shall be located on the downstream side of traffic.
2. For additional notes and details, see Revised Standard Plans RSP ES-7M and RSP ES-7N.

TO ACCOMPANY PLANS DATED _____

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (LIGHTING STANDARD,
 TYPE 32)**

NO SCALE

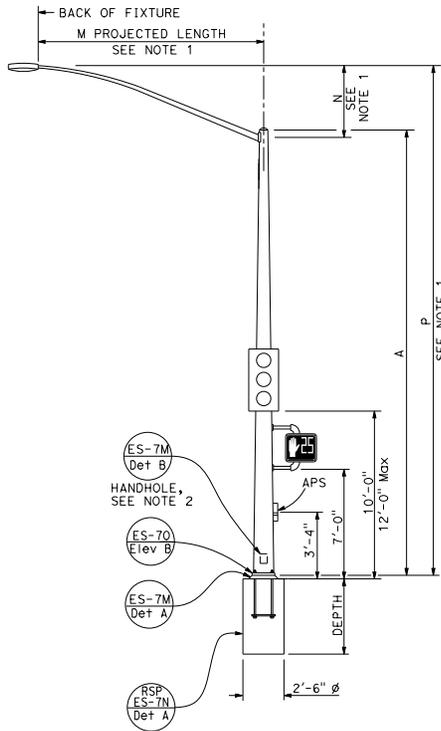
RSP ES-6G DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-6G DATED MAY 20, 2011 - PAGE 458 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-6G

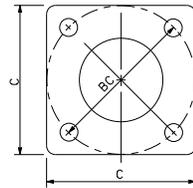
2010 REVISED STANDARD PLAN RSP ES-6G

NOTES:

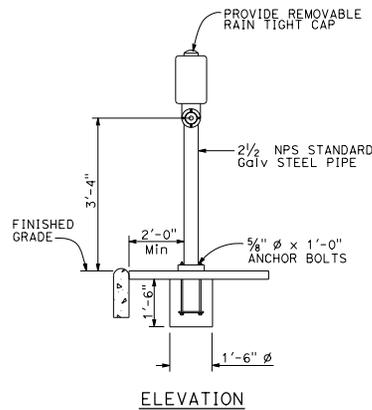
1. For additional notes, details and data for Type 15TS and Type 21TS Standards, see Revised Standard Plan RSP ES-6A.
2. Handhole shall be located on the downstream side of traffic.



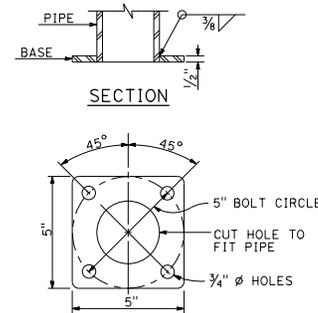
TYPE 15TS AND 21TS STANDARD
ELEVATION A
(See Note 1)



BASE PLATE
TYPE 15TS AND 21TS
DETAIL A



PUSH BUTTON ASSEMBLY POST
DETAIL B



BASE PLATE
PBA POST

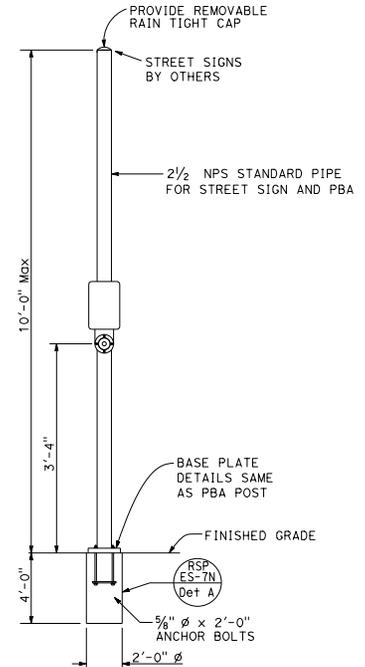
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL SHEETS

Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 No. CS7793
 Exp. 3-31-16
 CIVIL
 STATE OF CALIFORNIA

October 30, 2015
 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.

TO ACCOMPANY PLANS DATED _____



COMBINED STREET SIGN
PUSH BUTTON ASSEMBLY POST
DETAIL C

POLE TYPE	POLE DATA			WALL THICKNESS	BASE PLATE DATA			CIDH
	A HEIGHT	Min OD	TOP		C	BC = BOLT CIRCLE	THICKNESS	
15TS	30'-0"	8"	3 1/8"	0.1793"	1'-1 1/2"	1'-0"	2"	1 1/2" x 42"
21TS	35'-0"	9 3/8"	3 3/8"		1'-3"	1'-2"		

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD, TYPE TS,
AND PUSH BUTTON ASSEMBLY POST)

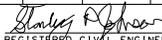
NO SCALE

RSP ES-7A DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-7A DATED JULY 19, 2013 AND STANDARD PLAN ES-7A DATED MAY 20, 2011 - PAGE 462 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-7A

2010 REVISED STANDARD PLAN RSP ES-7A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

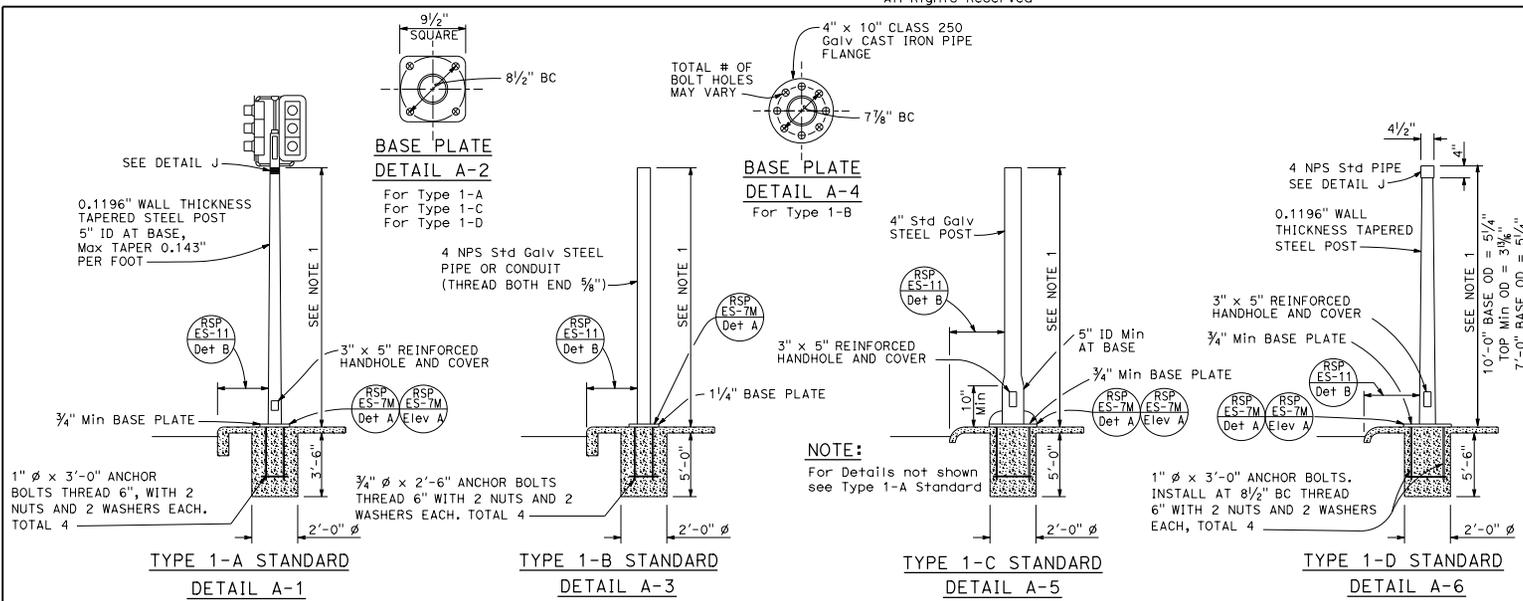

 REGISTERED CIVIL ENGINEER
 No. CS793
 Exp. 3-31-16
 CIVIL
 STATE OF CALIFORNIA

October 30, 2015
 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.

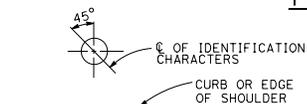
TO ACCOMPANY PLANS DATED _____

NOTES:

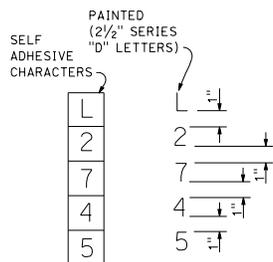
- Standards shall be 10'-0" ± 2" for vehicle signals and 7'-0" ± 2" for pedestrian signals unless shorter pole is noted on project plans.
- Top of standards shall be 4 1/2" OD.
- Conduits shall extend 2" maximum above finished surface of foundation and for types 1-A, 1-C and 1-D shall be sloped toward handhole.
- Anchor bolts shall be bonded to conduit or grounding conductor.
- For additional notes and details, see Revised Standard Plans RSP ES-7M and RSP ES-7N.
- Pour foundation concrete against undisturbed soil.
- For standards with handhole, locate in the downstream side of traffic.
- Coupling nuts to be used only when shown or specified on project plans.



**TYPE 1 SIGNAL STANDARDS
DETAIL A**



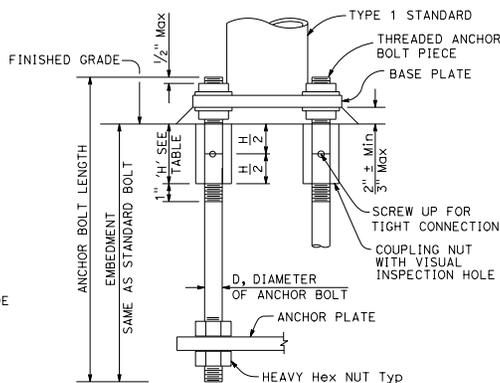
DETAIL B-3



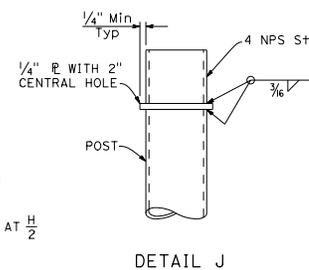
**IDENTIFICATION CHARACTER DETAIL
DETAIL B-1**

**TYPICAL IDENTIFICATION CHARACTER FORMAT
DETAIL B-2**

**LOCATION OF EQUIPMENT IDENTIFICATION CHARACTERS ON STANDARDS AND POSTS
DETAIL B**



**ANCHOR BOLTS WITH SLEEVE NUTS
DETAIL C
(See Note 8)**



DETAIL J

COUPLING NUT TABLE	
BOLT DIAMETER	NUT TABLE THICKNESS 'H'
3/4"	2 1/4"
1"	3"

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

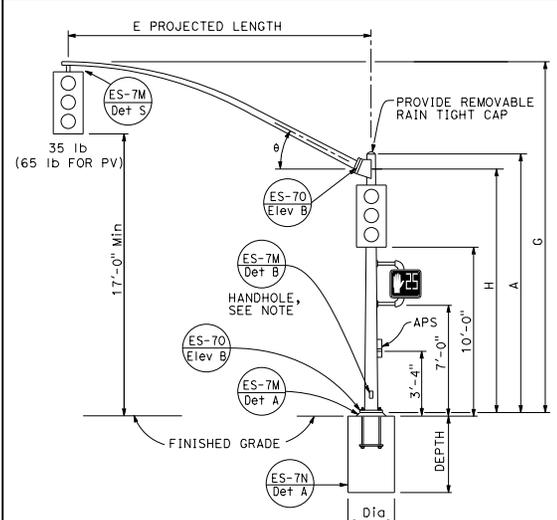
**ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD, TYPE 1
AND EQUIPMENT IDENTIFICATION CHARACTERS)**

NO SCALE

RSP ES-7B DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-7B DATED MAY 20, 2011 - PAGE 463 OF THE STANDARD PLANS BOOK DATED 2010.

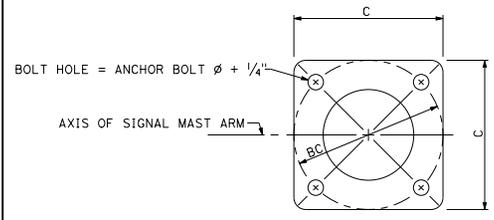
REVISED STANDARD PLAN RSP ES-7B

2010 REVISED STANDARD PLAN RSP ES-7B

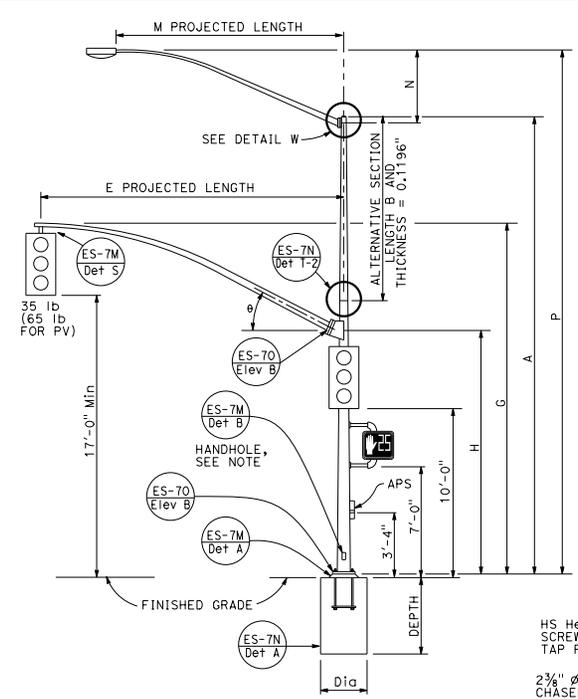


TYPE 16-1-100, 18-1-100

ELEVATION A



BASE PLATE
DETAIL D

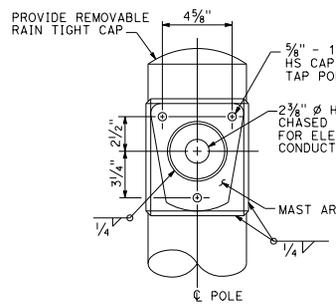


TYPE 19-1-100, 19A-1-100

ELEVATION B

Δ = LUMINAIRE MAST ARM SKEW -90° TO $+90^\circ$
DEFAULT 0°

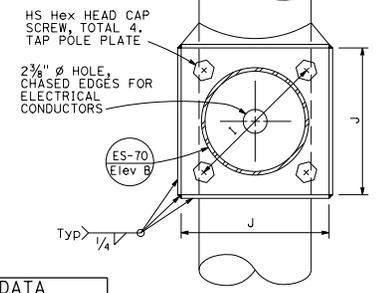
NOTE:
Handhole shall be located on the downstream side of traffic.



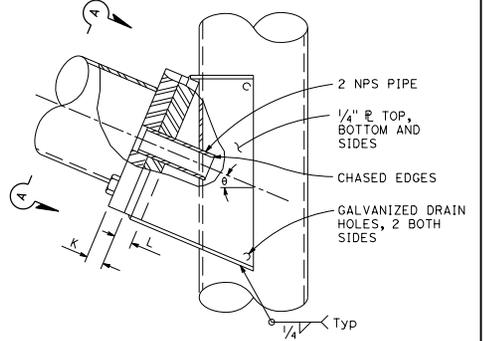
DETAIL W-1

LUMINAIRE MAST ARM CONNECTION

DETAIL W



VIEW A-A



ELEVATION C

SIGNAL MAST ARM CONNECTION

DETAIL C

E PROJECTED LENGTH	G MOUNTING HEIGHT	H	Min OD AT POLE	THICKNESS	I BOLT CIRCLE	HS CAP SCREWS	J PLATE SIZE	K MAST ARM R THICKNESS	L POLE R THICKNESS	θ
15'-0"	21'-8"±	17'-6"	7 3/8"	0.1196"	12"	1 1/4"-7NC-3"	1'-0"	1 1/4"	1 1/2"	23°
20'-0"	22'-8"±	16'-0"								
25'-0"	22'-8"±	16'-0"	8"							
30'-0"	23'-0"±	16'-0"								

M PROJECTED LENGTH	N RISE	Min OD AT POLE	THICKNESS	P MOUNTING HEIGHT	
				30'-0" POLE	35'-0" POLE
6'-0"	2'-0"±	3 1/4"	0.1196"	31'-6"±	36'-6"±
8'-0"	2'-6"±	3 1/2"		32'-0"±	37'-0"±
10'-0"	3'-3"±	3 3/8"		32'-9"±	37'-9"±
12'-0"	4'-3"±	3 7/8"		33'-9"±	38'-9"±
15'-0"	4'-9"±	4 1/4"		34'-3"±	39'-3"±

POLE TYPE	LOAD CASE	WIND VELOCITY (mph)	POLE DATA					BASE PLATE DATA				LUMINAIRE MAST ARM		SIGNAL MAST ARM		CIDH PILE FOUNDATION		
			A HEIGHT	Min OD	THICKNESS	ALTERNATIVE SECTION B LENGTH	TOP	C	BC = BOLT CIRCLE	THICKNESS	ANCHOR BOLT SIZE	DIAMETER	DEPTH	REINFORCED				
16-1-100	1	100	18'-6"	8 1/8"	0.1793"	None		1'-5 1/2"	1'-5 1/2"	3"	1 1/2" ϕ x 42"	NONE	15'-0", 20'-0"	2'-6"	9'-0"	YES		
18-1-100			17'-0"	8 3/8"		None							NONE					
19-1-100			30'-0"	6 1/8"		10'-0"	6 1/8"					7 7/8"	6'-15' [12'-0"]				25'-0", 30'-0"	
19A-1-100			35'-0"	5 1/8"		15'-0"	7 7/8"					5 1/8"	6'-15' [15'-0"]					

□ INDICATES MAST ARM LENGTH TO BE USED UNLESS OTHERWISE NOTED ON PLANS.

D16+	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 No. C57193
 Exp. 3-31-16
 CIVIL
 STATE OF CALIFORNIA

October 30, 2015
 PLANS APPROVAL DATE
 TO ACCOMPANY PLANS DATED _____
 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
ELECTRICAL SYSTEMS (SIGNAL AND LIGHTING STANDARD, CASE 1 SIGNAL MAST ARM LOADING, WIND VELOCITY = 100 MPH AND SIGNAL MAST ARM LENGTHS 15' TO 30')
 NO SCALE

RSP ES-7C DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-7C DATED JULY 19, 2013
 AND STANDARD PLAN ES-7C DATED MAY 20, 2011
 PAGE 464 OF THE STANDARD PLANS BOOK DATED 2010.

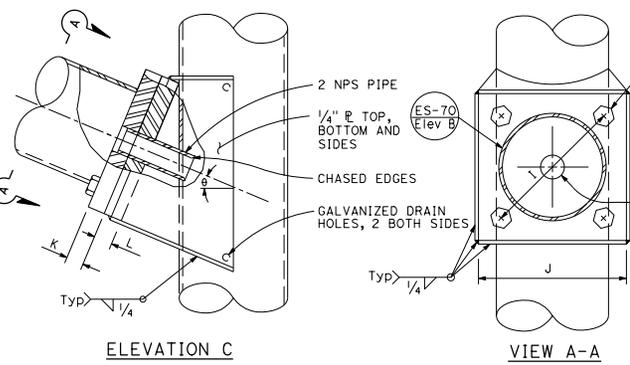
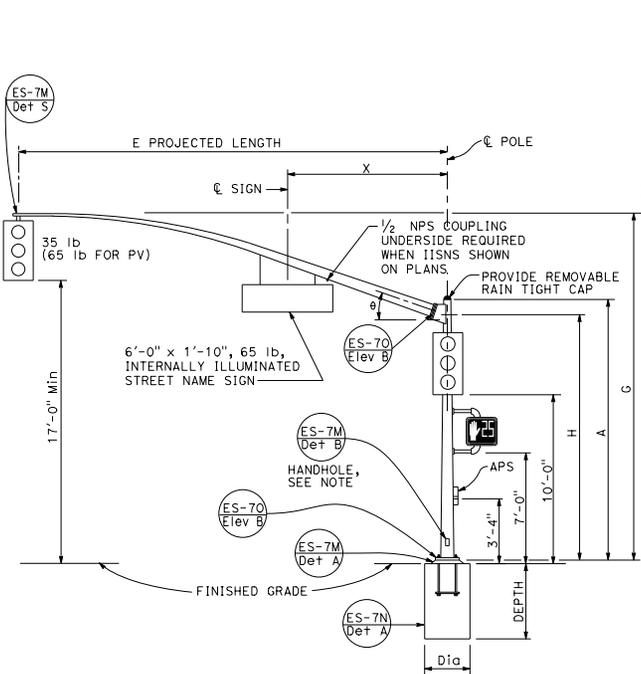
REVISED STANDARD PLAN RSP ES-7C

2010 REVISED STANDARD PLAN RSP ES-7C

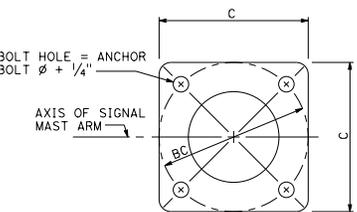
NOTE:
Handhole shall be located on the downstream side of traffic.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL SHEETS

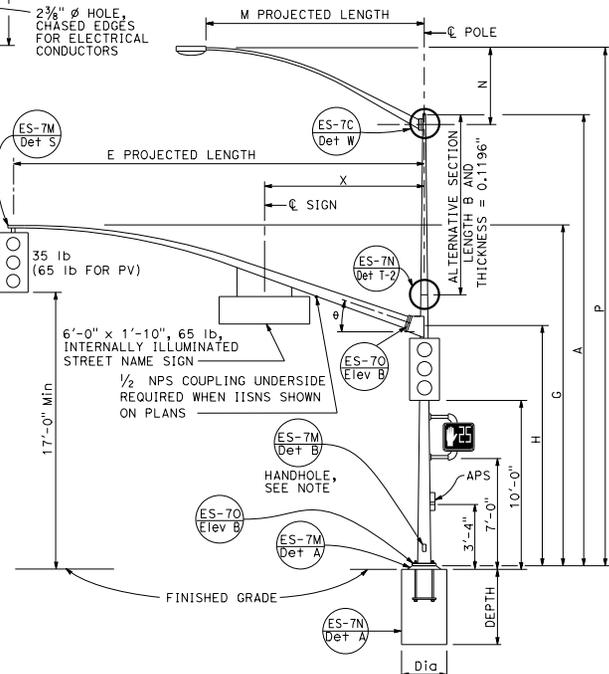
Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



**SIGNAL MAST ARM CONNECTION
DETAIL A**



**BASE PLATE
DETAIL B**



**TYPE 17-2-100, 17A-2-100,
19-2-100, 19A-2-100
ELEVATION B**

E PROJECTED LENGTH	G MOUNTING HEIGHT	H	Min OD AT POLE	THICKNESS	I BOLT CIRCLE	HS CAP SCREWS	J PLATE SIZE	K MAST ARM R THICKNESS	L POLE R THICKNESS	θ	X Max
15'-0"	21'-8"±	17'-6"	7 3/8"	0.1793"	12"	1 1/4"-7NC-3"	1'-0"	1/4"	1 1/2"	23°	10'-6"
20'-0"	21'-8"±	7 3/8"	11'-6"								
25'-0"	22'-8"±	7 3/8"	10'-6"								
30'-0"	23'-0"±	8"	9'-6"								
			8'-6"								

M PROJECTED LENGTH	N RISE	Min OD AT POLE	THICKNESS	P MOUNTING HEIGHT
6'-0"	2'-0"±	3/4"	0.1196"	30'-0" POLE
8'-0"	2'-6"±	3/2"		35'-0" POLE
10'-0"	3'-3"±	3 3/8"		31'-6"±
12'-0"	4'-3"±	3 7/8"		36'-6"±
15'-0"	4'-9"±	4 1/4"		32'-0"±
				37'-0"±
				32'-9"±
				37'-9"±
				33'-9"±
				38'-9"±
				34'-3"±
				39'-3"±

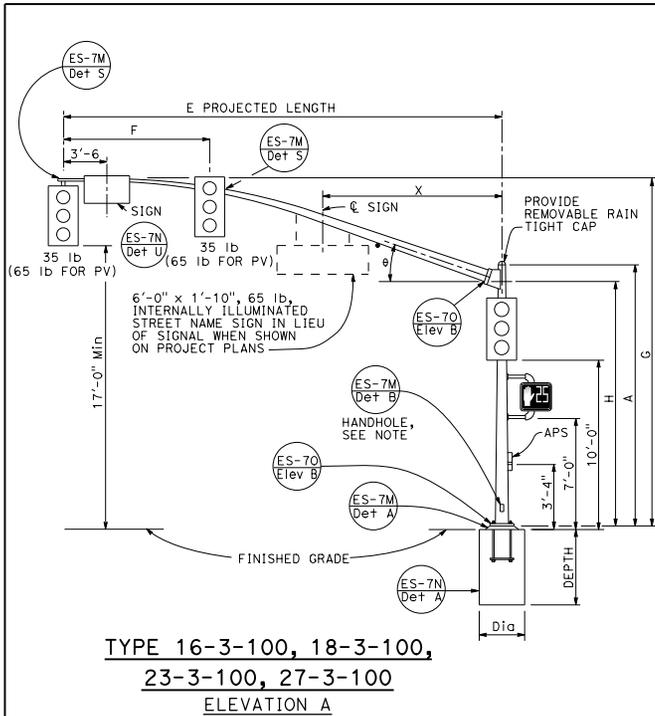
POLE TYPE	LOAD CASE	WIND VELOCITY (mph)	POLE DATA				BASE PLATE DATA				CIDH PILE FOUNDATION							
			A HEIGHT	Min OD BASE	Min OD TOP	THICKNESS	B LENGTH	BOTTOM	TOP	C	THICKNESS	ANCHOR BOLT SIZE	LUMINAIRE MAST ARM	SIGNAL MAST ARM	DIAMETER	DEPTH	REINFORCED	
16-2-100	2	100	18'-6"	8 1/8"	10 3/4"	0.1793"	NONE	7 7/8"	6 7/8"	1'-5 1/2"	1'-5 1/2"	3"	1 1/2" Ø x 42"	NONE	15'-0", 20'-0"	2'-6"	9'-0"	YES
17-2-100			30'-0"	6 7/8"			10'-0"							6'-15' [2'-0"]				
17A-2-100			35'-0"	5 1/8"			15'-0"							6'-15' [15'-0"]				
18-2-100			17'-0"	8 7/8"			NONE							None				
19-2-100			30'-0"	6 7/8"			10'-0"							6'-15' [2'-0"]				
19A-2-100	35'-0"	5 1/8"	15'-0"	6'-15' [15'-0"]	25'-0", 30'-0"	9'-6"												

□ INDICATES MAST ARM LENGTH TO BE USED UNLESS OTHERWISE NOTED ON PLANS.

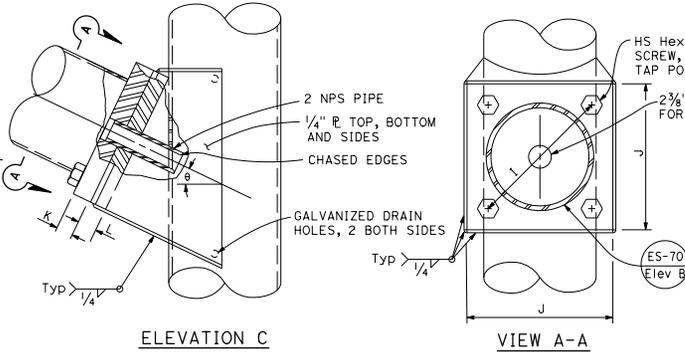
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD,
CASE 2 SIGNAL MAST ARM LOADING,
WIND VELOCITY=100 MPH AND SIGNAL
MAST ARM LENGTHS 15' TO 30')**
NO SCALE
RSP ES-7D DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-7D DATED JULY 19, 2013
AND STANDARD PLAN ES-7D DATED MAY 20, 2011
PAGE 465 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-7D

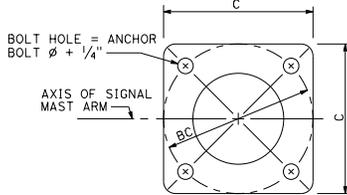
2010 REVISED STANDARD PLAN RSP ES-7D



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



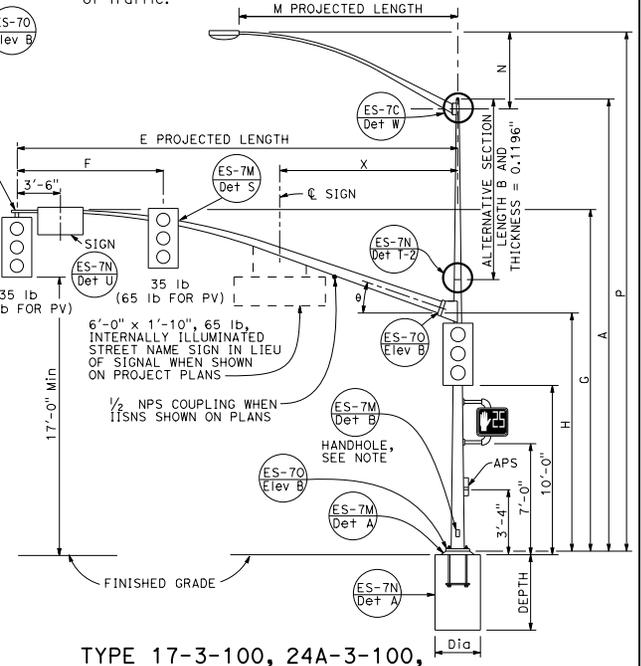
**SIGNAL MAST ARM CONNECTION
DETAIL A**



**BASE PLATE
DETAIL B**

NOTE:
Handhole shall be located on the downstream side of traffic.

TO ACCOMPANY PLANS DATED _____



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

SIGNAL MAST ARM DATA												
E PROJECTED LENGTH	F Min SPACING	G MOUNTING HEIGHT	H	Min OD AT POLE	THICKNESS	I BOLT CIRCLE	HS CAP SCREWS	J PLATE SIZE	K MAST ARM THICKNESS	L POLE R THICKNESS	θ	X Max
15'-0"	8'-0"	21'-8"±	17'-6"	7 3/8"	0.1793"	12"	1 1/4"-7NC-3"	1'-0"	1 1/4"	1 1/2"	23°	-
20'-0"		21'-8"±		7 3/8"								
25'-0"		22'-8"±		7 3/8"								
30'-0"	12'-0"			8"								
35'-0"	14'-0"	23'-0"±	16'-0"	8 3/4"	0.2391"	13"	1'-1"	1 1/2"	1 3/4"	21°	10'-6"	
40'-0"				9 3/8"								
45'-0"	15'-0"	23'-8"±		10 1/8"								
				10 1/8"								

LUMINAIRE MAST ARM DATA						
M PROJECTED LENGTH	N RISE	Min OD AT POLE	THICKNESS	P MOUNTING HEIGHT	30'-0" POLE	35'-0" POLE
6'-0"	2'-0"±	3 1/4"	0.1196"	31'-6"±	36'-6"±	
8'-0"	2'-6"±	3 1/2"		32'-0"±	37'-0"±	
10'-0"	3'-3"±	3 3/8"		32'-9"±	37'-9"±	
12'-0"	4'-3"±	3 7/8"		33'-9"±	38'-9"±	
15'-0"	4'-9"±	4 1/4"		34'-3"±	39'-3"±	

POLE TYPE	LOAD CASE	WIND VELOCITY (mph)	POLE DATA			BASE PLATE DATA				CIDH PILE FOUNDATION								
			A HEIGHT	Min OD BASE	Min OD TOP	THICKNESS	ALTERNATIVE SECTION B LENGTH	TOP	C	BC = BOLT CIRCLE	THICKNESS	ANCHOR BOLT SIZE	LUMINAIRE MAST ARM	SIGNAL MAST ARM	DIAMETER	DEPTH	REINFORCED	
16-3-100	3	100	18'-6"		8 1/2"	0.1793"	NONE			1'-5 1/2"			NONE	15'-0"	8'-6"			
17-3-100			30'-0"	10 3/4"	6 7/8"		10'-0"	7 3/8"	6 7/8"			1 1/2" Ø x 42"	6'-15' 12'-0"	20'-0"				
18-3-100			17'-0"		8 3/8"								NONE		25'-0"	9'-6"		
19-3-100			30'-0"		7 1/2"		10'-0"	9 1/8"	7 1/2"				6'-15' 12'-0"					
19A-3-100			35'-0"		6 5/8"		15'-0"	6 5/8"					6'-15' 15'-0"	30'-0"				
23-3-100			17'-0"	1'-0"	9 3/8"	0.2391"	NONE			1'-7"	1'-5 1/2"	3"	2" Ø x 42"	NONE		3'-0"	11'-0"	YES
23-3-100			17'-0"		9 3/8"													
24-3-100			30'-0"		7 1/4"		10'-0"	7 1/4"						6'-15' 12'-0"	35'-0"			
24A-3-100			35'-0"		6 5/8"		15'-0"	6 5/8"		9 1/8"				6'-15' 15'-0"				
26-3-100			30'-0"		7 3/8"		10'-0"	7 3/8"						6'-15' 12'-0"				
26A-3-100			35'-0"	1'-2"	7 1/8"	0.3125"	15'-0"	9 1/4"	7 1/8"		1'-11"	1'-9"	2 1/2" Ø x 42"	6'-15' 15'-0"	40'-0"	3'-6"	12'-0"	
27-3-100			17'-0"		9 3/8"		NONE							NONE	45'-0"			

□ INDICATES MAST ARM LENGTH TO BE USED UNLESS OTHERWISE NOTED ON PLANS.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD,
CASE 3 SIGNAL MAST ARM LOADING,
WIND VELOCITY=100 MPH AND SIGNAL
MAST ARM LENGTHS 15' TO 45')**
NO SCALE
RSP ES-7E DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-7E DATED JULY 19, 2013 AND
ES-7E DATED MAY 20, 2011 - PAGE 466 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-7E

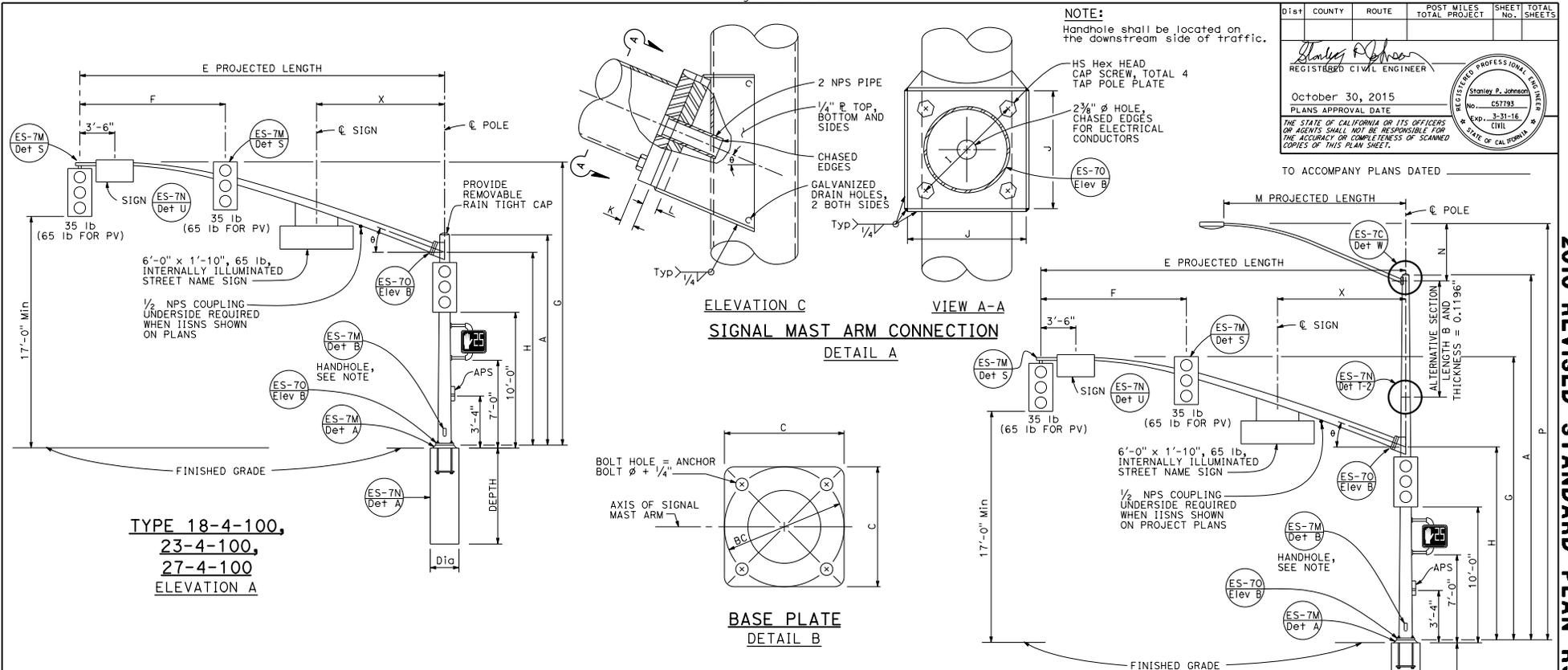
2010 REVISED STANDARD PLAN RSP ES-7E

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

October 30, 2015
PLANS APPROVAL DATE

Stanley P. Johnson
REGISTERED CIVIL ENGINEER
No. C57793
Exp. 3-31-16
CIVIL
STATE OF CALIFORNIA

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 No. C57193
 Exp. 3-31-16
 CIVIL
 STATE OF CALIFORNIA

October 30, 2015
 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.

**TYPE 18-4-100,
23-4-100,
27-4-100
ELEVATION A**

**TYPE 19-4-100, 19A-4-100,
24-4-100, 24A-4-100,
26-4-100, 26A-4-100
ELEVATION B**

SIGNAL MAST ARM DATA											LUMINAIRE MAST ARM DATA							
E PROJECTED LENGTH	F Min SPACING	G MOUNTING HEIGHT	H	Min OD AT POLE	THICKNESS	I BOLT CIRCLE	HS CAP SCREWS	J PLATE SIZE	K MAST ARM ϕ THICKNESS	L POLE ϕ THICKNESS	θ	X Max	M PROJECTED LENGTH	N RISE	Min OD AT POLE	THICKNESS	P MOUNTING HEIGHT	
25'-0"	10'-0"	22'-8"±		7 3/8"	0.2391"	12"	1 1/4"-7NC-3"	1'-0"	1 1/4"	1 1/2"	23°	10'-6"	6'-0"	2'-0"±	3 1/4"	0.1196"	30'-0" POLE	35'-0" POLE
30'-0"	12'-0"		8"	13 1/2"		1'-0"		1 1/4"	1 1/2"	21°	10'-0"	2'-6"±	3 1/2"	31'-6"±	36'-6"±			
35'-0"	14'-0"	23'-0"±	16'-0"	8 1/2"		1'-1 1/2"		1 1/2"	1 3/4"	15°	13'-0"	3'-3"±	3 7/8"	32'-0"±	37'-0"±			
40'-0"	15'-0"	23'-8"±		9 3/8"								12'-0"	4'-3"±	3 7/8"	32'-9"±		37'-9"±	
45'-0"				10 1/4"									33'-9"±	38'-9"±			34'-3"±	39'-3"±

POLE DATA				BASE PLATE DATA				LUMINAIRE MAST ARM				SIGNAL MAST ARM		CIDH PILE FOUNDATION									
POLE TYPE	LOAD CASE	WIND VELOCITY (mph)	A HEIGHT	Min OD BASE	Min OD TOP	THICKNESS	ALTERNATIVE SECTION B LENGTH	ALTERNATIVE SECTION BOTTOM	ALTERNATIVE SECTION TOP	C	BC BOLT CIRCLE	THICKNESS	ANCHOR BOLT SIZE	LUMINAIRE MAST ARM	SIGNAL MAST ARM	Dia	DEPTH	REINFORCED					
18-4-100	4	100	17'-0"	12 1/8"	9 3/8"	0.3125"	NONE	1'-7"	1'-5 1/2"	3"	2" ϕ x 42"	NONE	25'-0", 30'-0"	3'-0"	11'-0"		YES						
19-4-100			30'-0"		7 1/2"		10'-0"											9 1/8"	7 1/2"	6'-15' 12'-0"			
19A-4-100			35'-0"		6 5/8"		15'-0"											6 5/8"	6'-15' 15'-0"				
23-4-100			17'-0"		9 3/8"		NONE																
24-4-100			30'-0"		7 1/2"		10'-0"											7 1/2"	6'-15' 12'-0"				
24A-4-100			35'-0"		6 5/8"		15'-0"											9 1/8"	6 5/8"	6'-15' 15'-0"			
26-4-100			30'-0"		8 3/8"		10'-0"											8 3/8"	6'-15' 12'-0"				
26A-4-100			35'-0"		7 7/8"		15'-0"											9 5/8"	7 7/8"	6'-15' 15'-0"			
27-4-100			17'-0"		10 1/8"		NONE													NONE	40'-0", 45'-0"	3'-6"	12'-0"

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (SIGNAL AND LIGHTING STANDARD,
 CASE 4 SIGNAL MAST ARM LOADING,
 WIND VELOCITY=100 MPH AND SIGNAL
 MAST ARM LENGTHS 25' TO 45')**
 NO SCALE
 RSP ES-7F DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-7F DATED JULY 19, 2013 AND
 ES-7F DATED MAY 20, 2011 - PAGE 467 OF THE STANDARD PLANS BOOK DATED 2010.

□ INDICATES MAST ARM LENGTH TO BE USED UNLESS OTHERWISE NOTED ON PLANS.

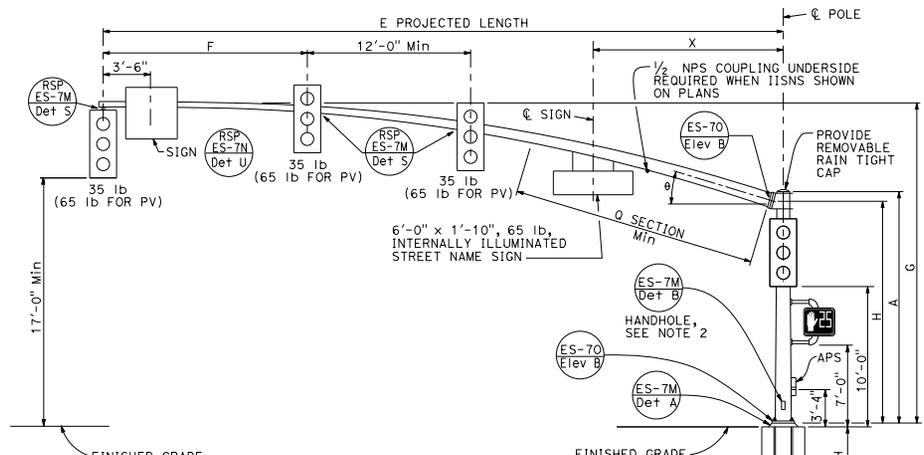
REVISED STANDARD PLAN RSP ES-7F

2010 REVISED STANDARD PLAN RSP ES-7F

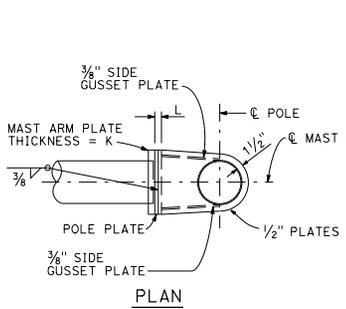
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

October 30, 2015
 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.

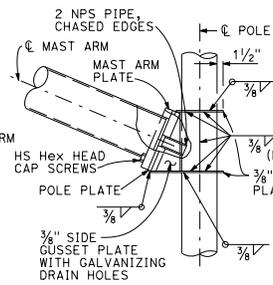
TO ACCOMPANY PLANS DATED _____



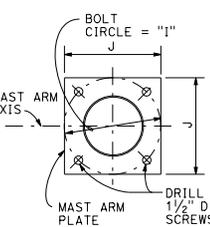
TYPE 60-5-100
ELEVATION A



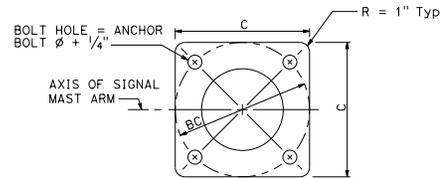
PLAN



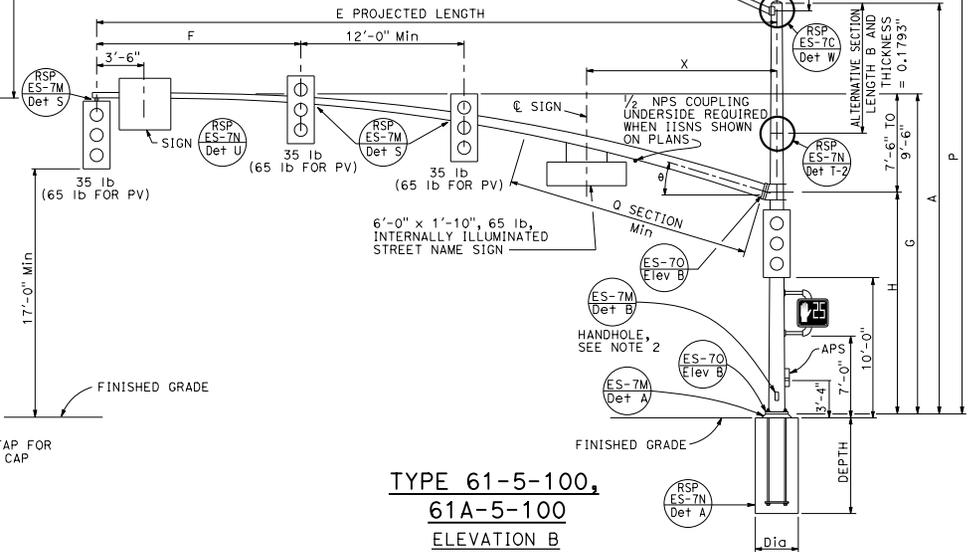
ELEVATION
(See Note 1)



MAST ARM PLATE



BASE PLATE
DETAIL B



TYPE 61-5-100,
61A-5-100
ELEVATION B

E PROJECTED LENGTH	F Min SPACING	G MOUNTING HEIGHT	H	Min OD AT POLE	THICKNESS	I BOLT CIRCLE	HS CAP SCREWS	J PLATE SIZE	K MAST ARM THICKNESS	L Pole THICKNESS	θ	Q SECTION		X Max
												LENGTH	THICKNESS	
60'-0"	15'-0"	23'-7" TO 25'-7"	16'-0"	1'-1 1/2"	0.1793"	20"	1 1/2"-6NC-4"	1'-8"	2"	2"	15°	24'-0"	0.2391"	14'-0"
65'-0"					0.2391"							29'-0"	0.3125"	

M PROJECTED LENGTH	N RISE	Min OD AT POLE	THICKNESS	P MOUNTING HEIGHT
6'-0"	2'-0"±	3/4"	0.1196"	30'-0" POLE
8'-0"	2'-6"±	3/2"		35'-0" POLE
10'-0"	3'-3"±	3 3/8"		31'-6"±
12'-0"	4'-3"±	4"		36'-6"±
15'-0"	4'-9"±	4 1/4"		32'-0"±
				37'-0"±
				32'-9"±
				37'-9"±
				33'-9"±
				38'-9"±
				34'-3"±
				39'-3"±

- NOTES:
- The radial separation between the face of the pole and the adjacent insides of the top and bottom gusset plates shall not exceed 3/8". Fillet weld size to be increased by amount of gap.
 - Handhole shall be located on the downstream side of traffic.

POLE TYPE	LOAD CASE	WIND VELOCITY (mph)	POLE DATA		BASE PLATE DATA				LUMINAIRE MAST ARM	SIGNAL MAST ARM	CIDH PILE FOUNDATION				
			HEIGHT	Min OD		C	BC = BOLT CIRCLE	THICKNESS			ANCHOR BOLT SIZE	DIAMETER	DEPTH	REINFORCED	
				BASE	TOP										
60-5-100			17'-0"	16"	1'-1 1/2"	0.3125"	2'-0"	1'-11"	3"	2 1/2" ø x 60"	NONE	60'-0"	3'-6"	13'-0"	YES
61-5-100	5	100	30'-0"	16"	11 1/8"						6'-15" [15'-0"]	60'-0"	3'-6"	13'-0"	YES
61A-5-100			35'-0"	16"	10 5/8"										

INDICATES MAST ARM LENGTH TO BE USED UNLESS OTHERWISE NOTED ON PLANS.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD,
CASE 5 SIGNAL MAST ARM LOADING,
WIND VELOCITY=100 MPH AND SIGNAL
MAST ARM LENGTHS 60' TO 65')

NO SCALE
RSP ES-7H DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-7H DATED JULY 19, 2013 AND ES-7H DATED MAY 20, 2011 - PAGE 469 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-7H

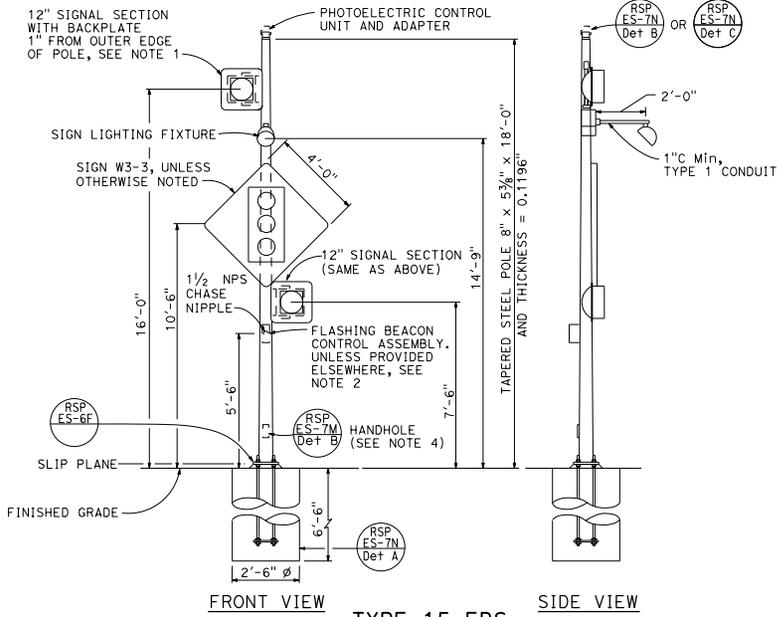
2010 REVISED STANDARD PLAN RSP ES-7H

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

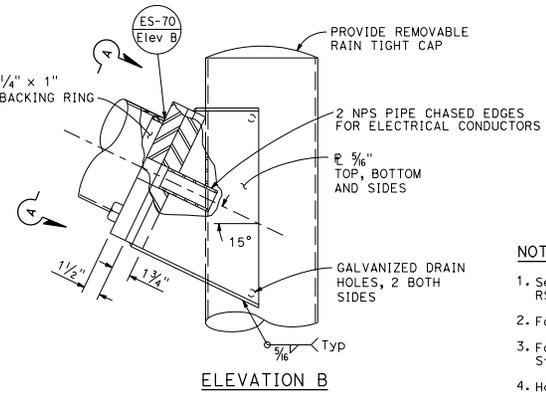
Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 No. CS7793
 Exp. 3-31-16
 CIVIL
 STATE OF CALIFORNIA

October 30, 2015
 PLANS APPROVAL DATE
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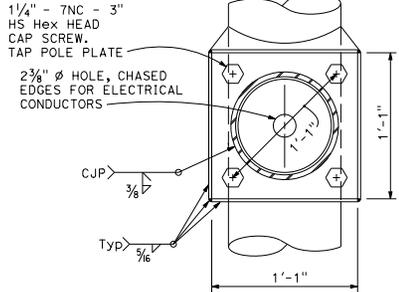
TO ACCOMPANY PLANS DATED _____



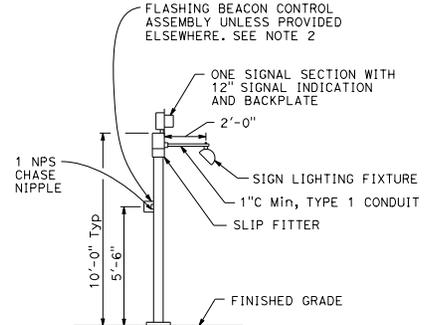
TYPE 15-FBS
ADVANCE FLASHING BEACON WITH SLIP BASE INSTALLATION
DETAIL A



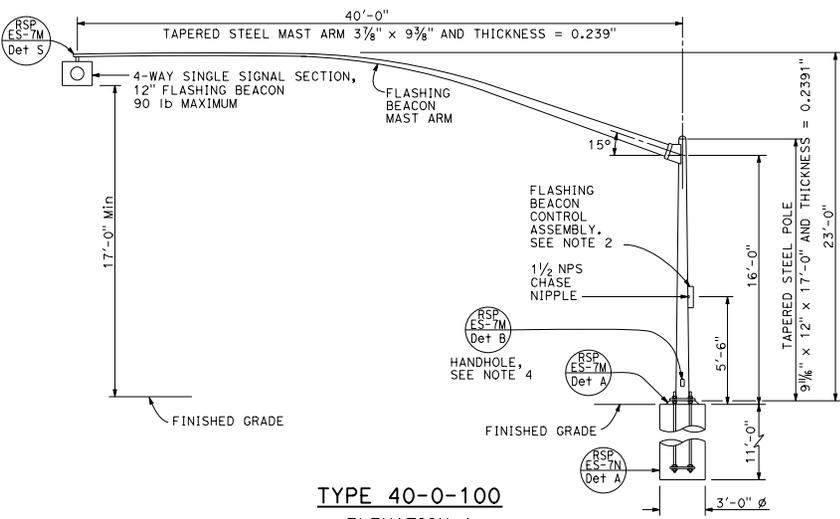
ELEVATION B



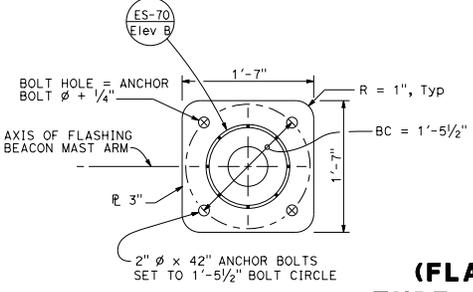
VIEW A-A
FLASHING BEACON MAST ARM
CONNECTION DETAIL
DETAIL B



TYPE 1-A, 1-B, 1-C, AND 1-D
ADVANCE FLASHING
BEACON INSTALLATION
DETAIL D
See Note 5



TYPE 40-0-100
ELEVATION A



BASE PLATE
DETAIL C

ELECTRICAL SYSTEMS
(FLASHING BEACON ON A TYPE 1,
TYPE 15-FBS, AND TYPE 40 STANDARD)
NO SCALE

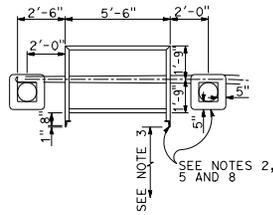
RSP ES-7J DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-7J DATED JULY 19, 2013 AND STANDARD PLAN ES-7J DATED MAY 20, 2011 - PAGE 471 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-7J

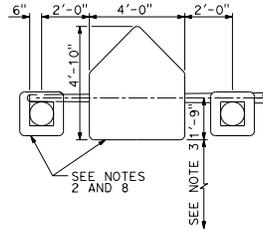
2010 REVISED STANDARD PLAN RSP ES-7J

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

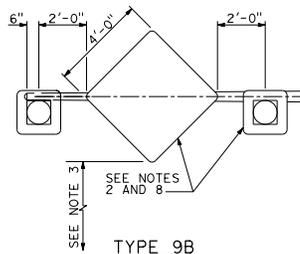
REGISTERED CIVIL ENGINEER Stanley P. Johnson No. C57393 Exp. 3-31-16 CIVIL STATE OF CALIFORNIA	
October 30, 2015 PLANS APPROVAL DATE	
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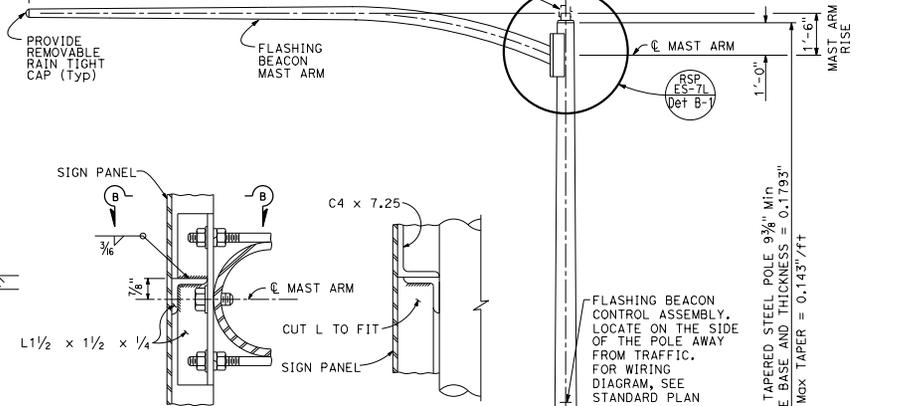
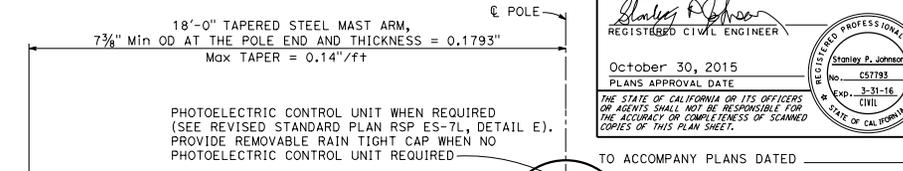
TYPE 9



TYPE 9A

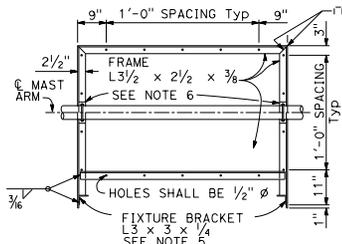


TYPE 9B

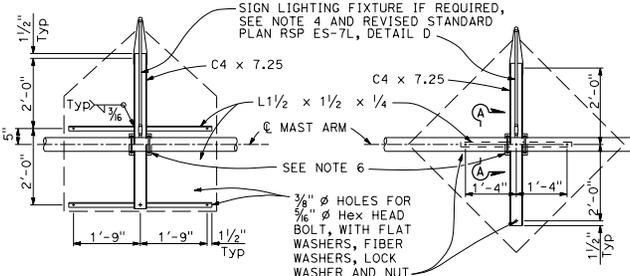


SECTION A-A

SECTION B-B



TYPE 9



TYPE 9A

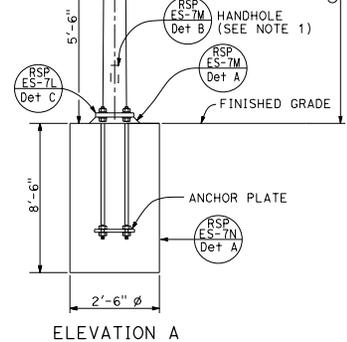
TYPE 9B

FRAME DETAILS
DETAIL A

TYPE 9B
DETAIL B

NOTES:

- Handhole shall be located on the downstream side of traffic.
- Install flashing beacons and sign frame. Flashing beacons shall be MAT mounted on pipe tenon (See Revised Standard Plan RSP ES-7M, Detail S).
- Vertical clearance shall be 17'-0" minimum between roadway and bottom of sign panel or lighting fixture bracket.
- Special provisions or plans will indicate when sign lighting fixture is required on Type 9A or 9B sign frames.
- Type 9 sign frames shall be provided with a 3'-0" fluorescent fixture. For fluorescent lighting details, see Revised Standard Plan RSP ES-7L, Detail F and Standard Plan ES-15B.
- See Revised Standard Plan RSP ES-7L, Detail B, for sign frame mounting details.
- For additional notes and details, see Revised Standard Plan RSP ES-7L, Detail B-3.
- 12" flashing beacon with signal indication, standard visor and 5" x 5" backplate (total 2).



ELEVATION A

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(FLASHING BEACON WITH
TYPE 9, 9A AND 9B SIGN)**
NO SCALE

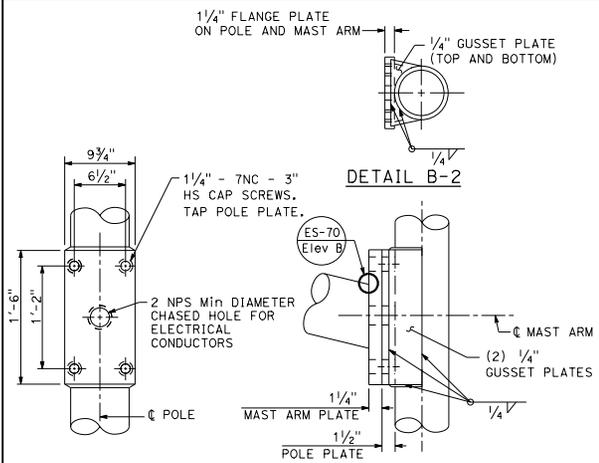
RSP ES-7K DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-7K DATED MAY 20, 2011 - PAGE 472 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-7K

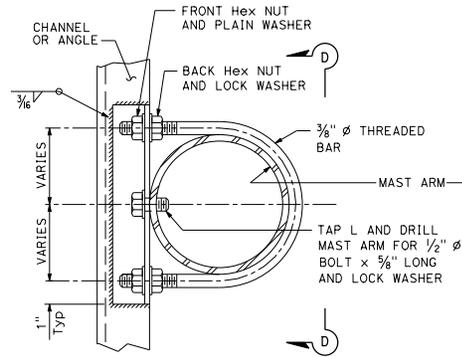
2010 REVISED STANDARD PLAN RSP ES-7K

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS


 Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE
 No. C5793
 Exp. 3-31-16
 CIVIL
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

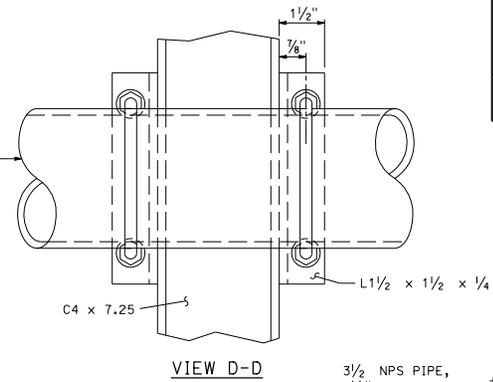


FLASHING BEACON MAST ARM CONNECTION DETAILS
DETAIL B-1

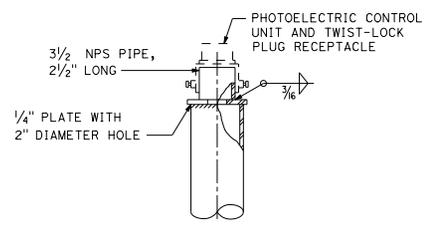


DETAIL B-3
NOTE: Tighten front Hex nuts first, then tighten back Hex nuts.

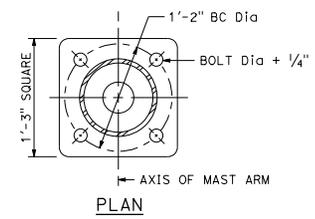
SIGN FRAME MOUNTING DETAILS
All types
DETAIL B



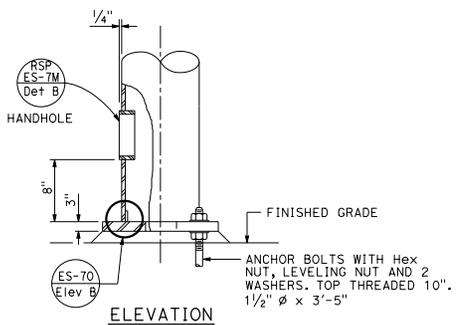
VIEW D-D



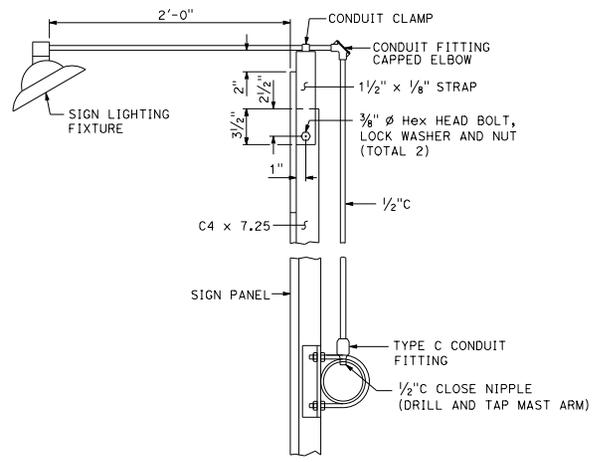
POLE TOP DETAIL
DETAIL E



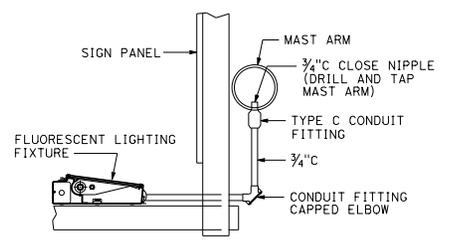
PLAN



BASE PLATE AND ANCHORAGE DETAIL
DETAIL C



SIGN LIGHTING FIXTURE TYPES 9A AND 9B
DETAIL D



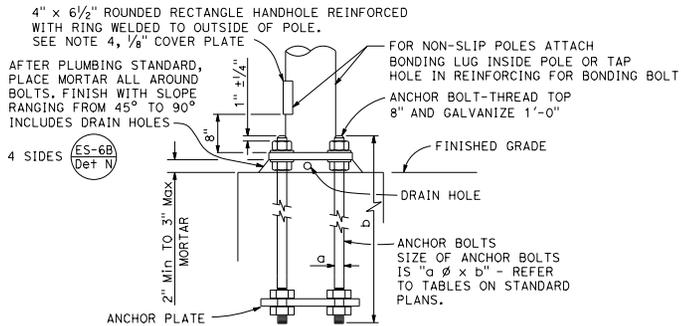
SIGN LIGHTING FIXTURE TYPE 9 FRAME
DETAIL F

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS (FLASHING BEACON WITH TYPE 9, 9A AND 9B SIGN)
NO SCALE

RSP ES-7L DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-7L DATED MAY 20, 2011 - PAGE 473 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-7L

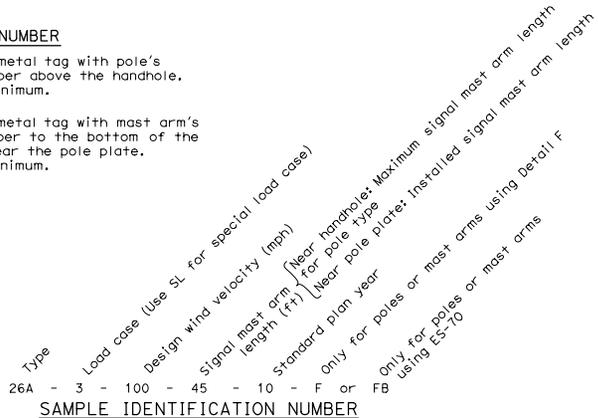
2010 REVISED STANDARD PLAN RSP ES-7L



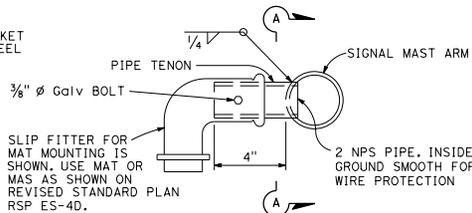
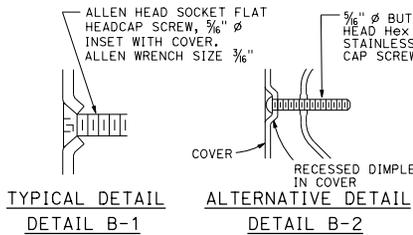
HANDHOLE AND ANCHORAGE
DETAIL A

IDENTIFICATION NUMBER

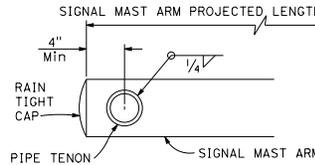
1. Attach a stamped metal tag with pole's identification number above the handhole. 1/4" high number, minimum.
2. Attach a stamped metal tag with mast arm's identification number to the bottom of the signal mast arm near the pole plate. 1/4" high number, minimum.



SAMPLE IDENTIFICATION NUMBER



SIDE TENON
DETAIL S-1

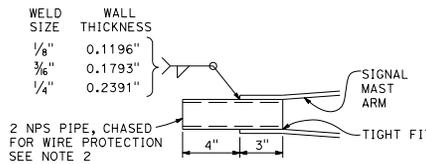


SECTION A-A

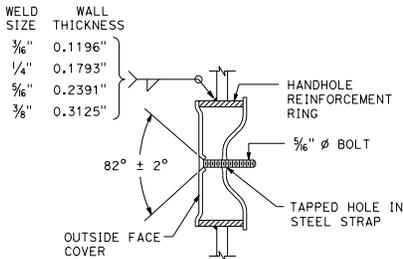
NOTES:

1. Provide a Hex nut, leveling nut and 2 washers for each bolt.
2. Luminaire mast arms shall be round, tapered steel tubes, taper of 0.1375" to 0.143-inch per foot with an end section 2 3/8" OD for mounting hardware. Extensions of 2 NPS Standard pipe and 7" long may be used at the option of the manufacturer. When low pressure sodium luminaires are required, the extension shall be 1'-3".
3. Signal mast arms shall be round, tapered steel tubes, maximum taper 0.143-inch per foot.
4. Handhole reinforcement ring shall be 1/4" x 2" for 0.1196" to 0.2391" thick poles, 3/8" x 2" for 0.3125" thick poles.
5. Handholes shall be located on the downstream side of traffic.
6. Detail F, fatigue resistant weld, is required at socket welded signal mast arm plate and pole base plate.
7. Cap screws shall be tightened by the turn-of-nut method 1/3 turn from a snug tight condition. No washer will be required.
8. Outside diameter, wall thickness, and corresponding section properties of poles and mast arms as shown in the Standard Plans are minimums. Unless otherwise specified, alternative sections shall require approval by the Engineer.
9. Wind Loading (3 seconds gust): 100 mph
10. Unit Stresses (Structural steel):
fy = 55,000 psi (tapered steel tube and anchor bolts)
fy = 50,000 psi (unless otherwise noted)
11. Unit Stresses (Reinforced concrete):
f'c = 3,625 psi
fy = 60,000 psi

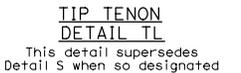
PIPE TENONS
DETAIL S



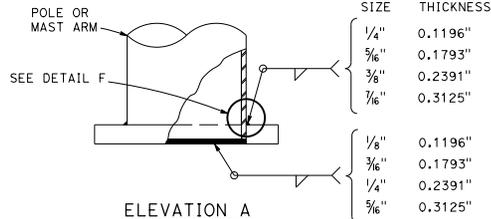
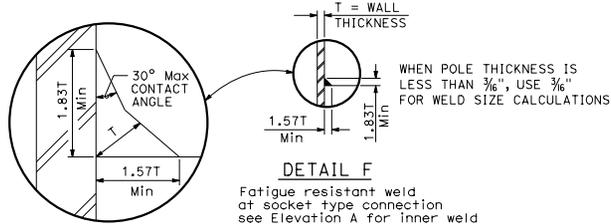
TIP TENON
DETAIL TS



TAMPER RESISTANT HANDHOLE COVER
DETAIL B



This detail supersedes Detail S when so designated



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD,
DETAIL No. 1)

NO SCALE

RSP ES-7M DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-7M DATED MAY 20, 2011 - PAGE 474 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-7M

2010 REVISED STANDARD PLAN RSP ES-7M

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

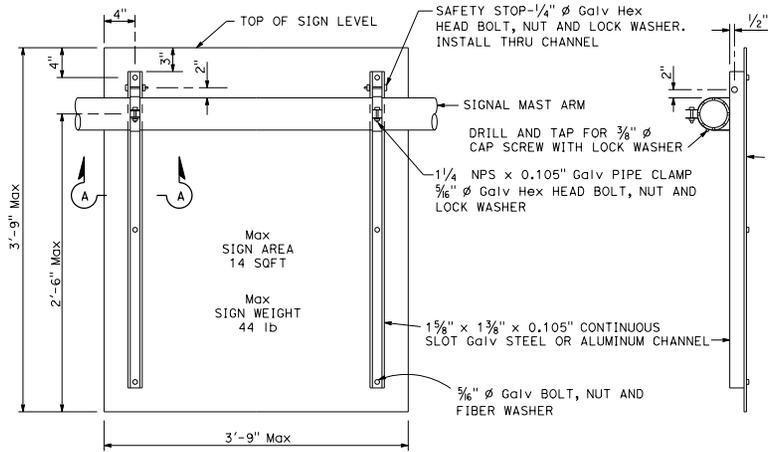
REGISTERED CIVIL ENGINEER

October 30, 2015
PLANS APPROVAL DATE

Stanley P. Johnson
No. C57193
Exp. 3-31-16
CIVIL

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

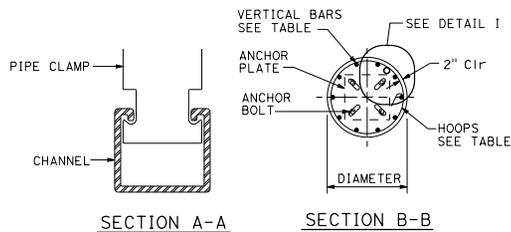
TO ACCOMPANY PLANS DATED _____



REAR VIEW

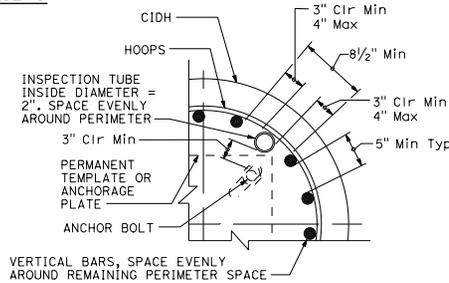
SIDE VIEW

SIGN MOUNTING DETAILS
DETAIL U



SECTION A-A

SECTION B-B

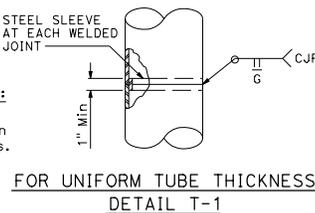


INSPECTION TUBE PLACEMENT
DETAIL I

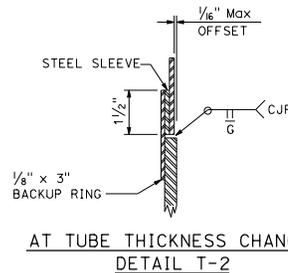
CIDH REINFORCING AND INSPECTION TUBE SCHEDULE

CIDH DIAMETER	VERTICAL BARS	HOOPS (WELDED)	INSPECTION TUBE
2 ft	8-#5	#4 AT 6	2
2.5 ft	10-#6	#5 AT 6	4*
3 ft	12-#7	#5 AT 6	4
3.5 ft	14-#8	2-#4 AT 7	5
4 ft	18-#9	2-#4 AT 7	6
5 ft	22-#10	2-#5 AT 7	7
6 ft	26-#11	2-#6 AT 7	7

* FOR SLIP BASE VERSIONS WITH 3 ANCHOR BOLTS USE 3 INSPECTION TUBES.

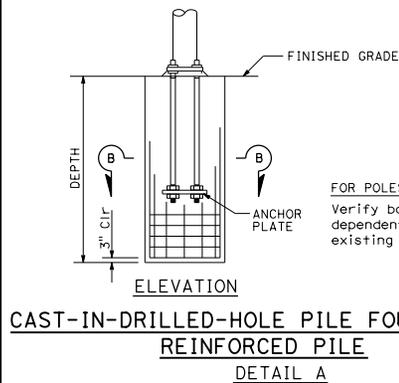


FOR UNIFORM TUBE THICKNESS
DETAIL T-1

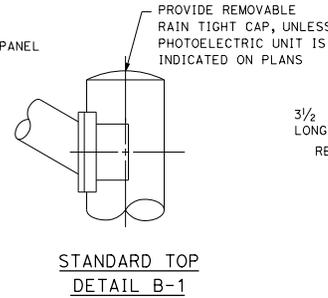


AT TUBE THICKNESS CHANGE
DETAIL T-2

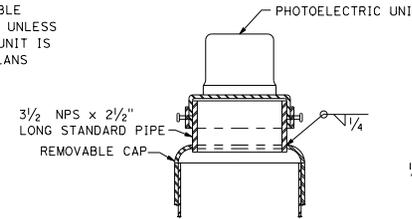
POLE SPLICES
DETAIL T



CAST-IN-DRILLED-HOLE PILE FOUNDATION,
REINFORCED PILE
DETAIL A

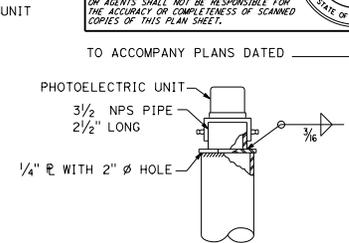


STANDARD TOP
DETAIL B-1

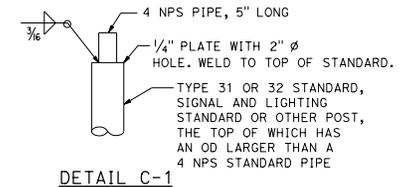


MOUNTING ADAPTER FOR
PHOTOELECTRIC UNIT
DETAIL B-2

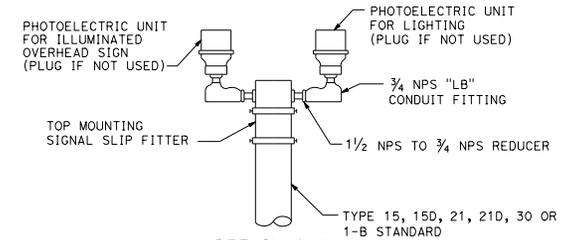
POLE TOP DETAILS
DETAIL B



ALTERNATIVE
MOUNTING ADAPTER
DETAIL B-3



DETAIL C-1



DETAIL C-2

DUAL PHOTOELECTRIC UNIT MOUNTING DETAIL
DETAIL C

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD,
DETAIL No. 2)
NO SCALE

RSP ES-7N DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-7N DATED MAY 20, 2011 - PAGE 475 OF THE STANDARD PLANS BOOK DATED 2010.

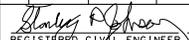
REVISED STANDARD PLAN RSP ES-7N

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL SHEETS

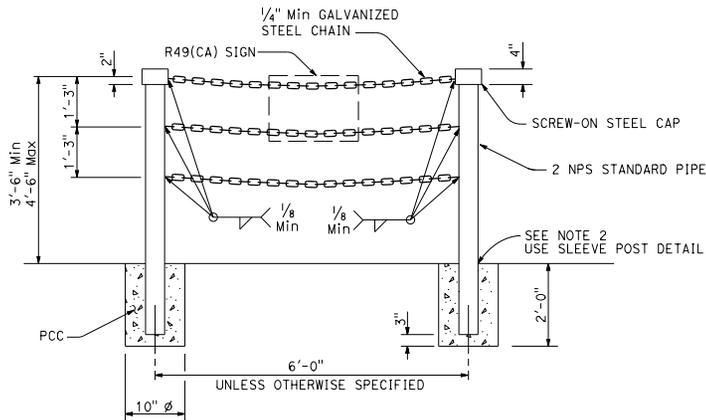
REGISTERED CIVIL ENGINEER
October 30, 2015
PLANS APPROVAL DATE
No. CS793
Exp. 3-31-16
CIVIL
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED _____

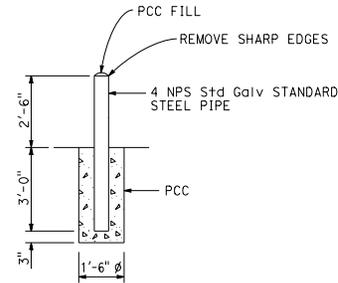
2010 REVISED STANDARD PLAN RSP ES-7N

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
 REGISTERED CIVIL ENGINEER					
October 30, 2015 PLANS APPROVAL DATE					
Stanley P. Johnson No. C57793 Exp. 3-31-16 CIVIL STATE OF CALIFORNIA					
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					

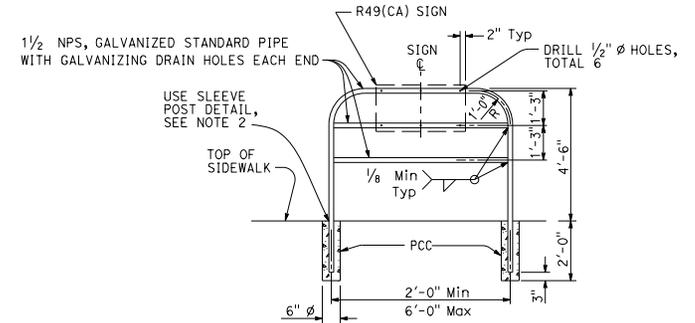
TO ACCOMPANY PLANS DATED _____



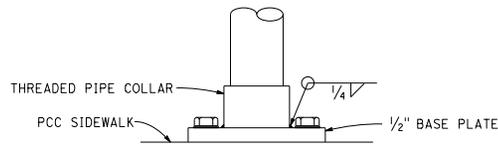
TYPE II
DETAIL A



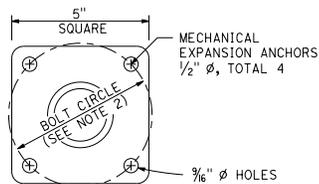
GUARD POST
DETAIL B



TYPE I
DETAIL C



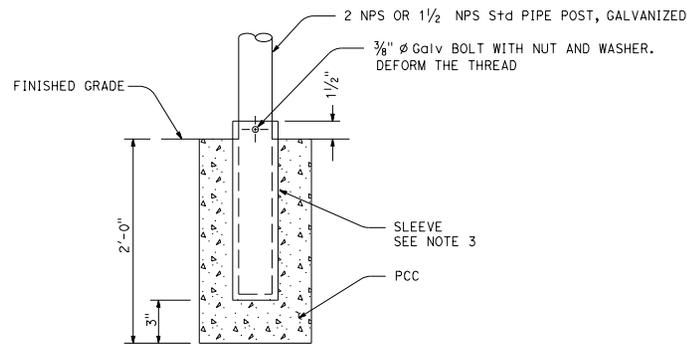
ELEVATION



PLAN

POST ANCHORAGE DETAIL

DETAIL D



SLEEVE POST DETAIL

Use unless otherwise specified or shown on plans

DETAIL E

NOTES:

1. Pipe post to be set 1'-6" back from face of curb unless otherwise specified.
2. Where barricade posts are installed in existing concrete sidewalk, the post may be anchored to the sidewalk as shown in the "Post Anchorage Detail". Bolt circle diameter shall be 4" minimum for Type I barricade and 5" minimum for Type II barricade.
3. Steel sleeve shall be constructed with an inside diameter 1/16" larger than the post's outside diameter. Wall thickness of sleeve shall be same as post or larger.
4. Alternative details may be submitted for approval by the Engineer.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

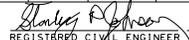
**ELECTRICAL SYSTEMS
(PEDESTRIAN BARRICADES)**

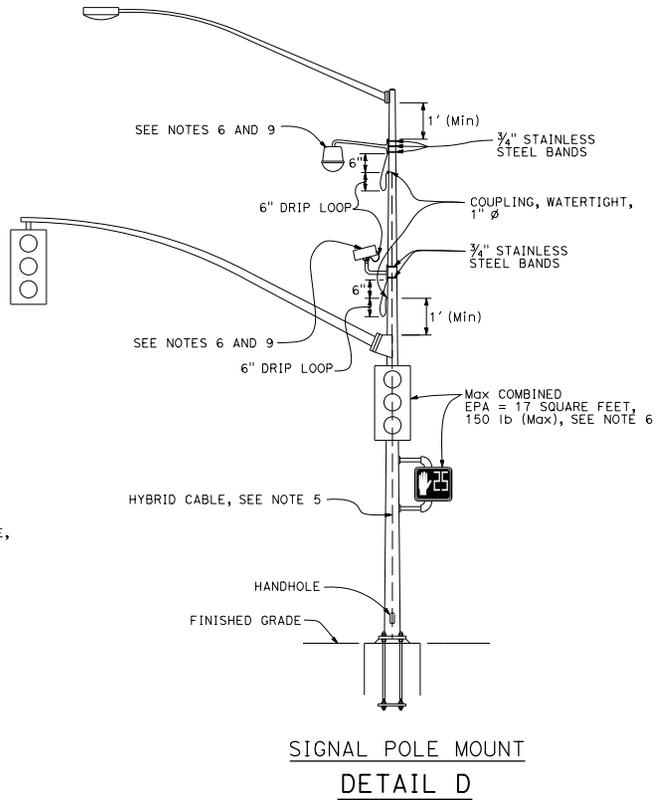
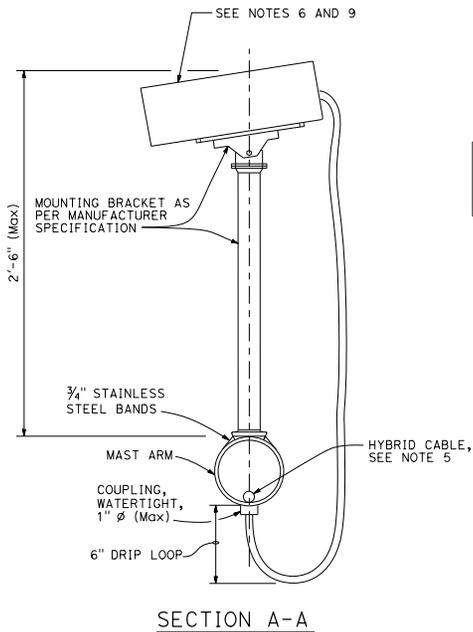
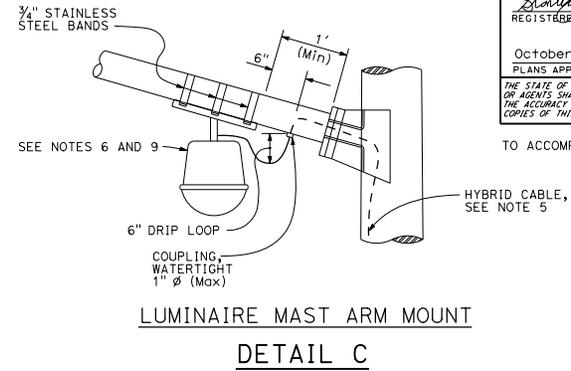
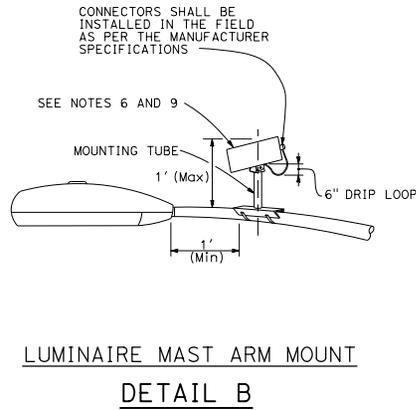
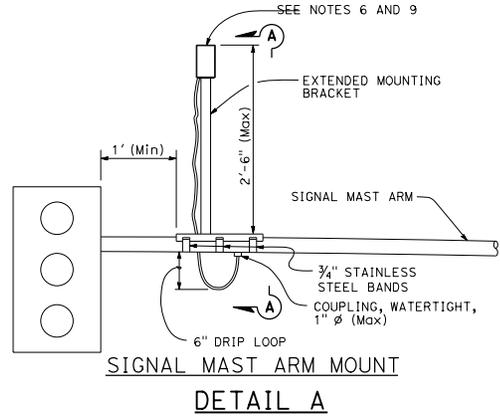
NO SCALE

RSP ES-70 DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-70 DATED
MAY 20, 2011 - PAGE 478 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-70Q

2010 REVISED STANDARD PLAN RSP ES-70

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
 REGISTERED CIVIL ENGINEER October 30, 2015 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.					
					



NOTES:

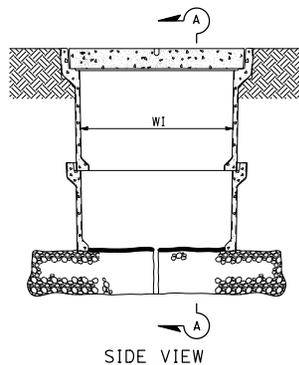
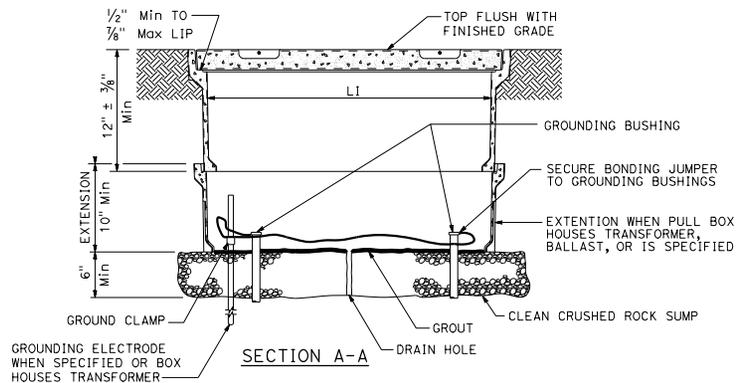
- Exact mounting location of miscellaneous attachment and bracket shall be approved by the Engineer per manufacturer's recommendation.
- Location of cable entrances on signal pole shall be a minimum of 1' from any flange or base plate.
- Hybrid cable entrances on signal pole shall be drilled for weathertight coupling as required.
- Hybrid cable shall have a drip loop at the entrance into signal pole, luminaire mast arm and signal mast arm.
- A single hybrid cable shall run continuous and shall not be twisted from the miscellaneous attachment to the controller cabinet. No splices shall be allowed.
- Use the manufacturer's Effective Projected Area (EPA) for miscellaneous attachment. The maximum EPA for each miscellaneous attachment shall be 1.6 square feet with 10 lb Max.
- Maximum of two miscellaneous attachments per traffic signal standard.
- Maximum of one miscellaneous attachment per mast arm.
- Miscellaneous attachment shall be mounted using clamping devices.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING,
MISCELLANEOUS ATTACHMENT)**
NO SCALE

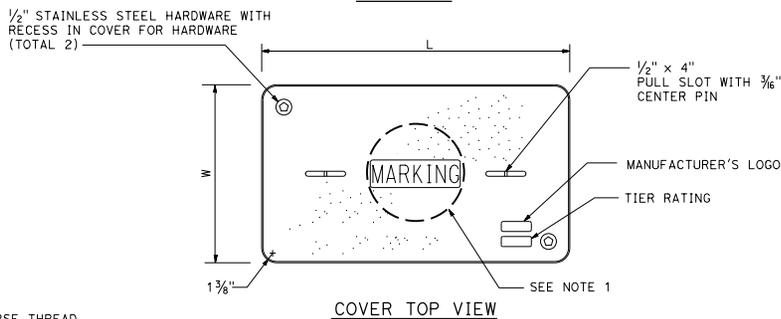
RSP ES-7R DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-7R DATED JULY 19, 2013 AND
STANDARD PLAN ES-7R DATED MAY 20, 2011 - PAGE 479 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-7R

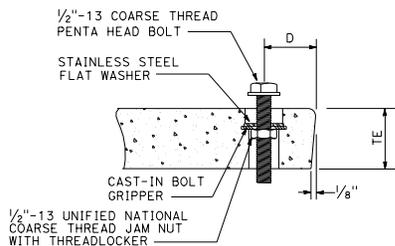
2010 REVISED STANDARD PLAN RSP ES-7R



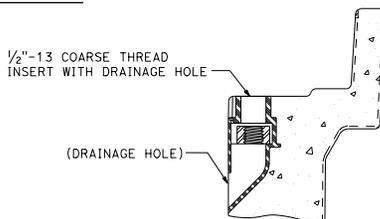
INSTALLATION DETAILS
DETAIL A



COVER TOP VIEW



TYPICAL COVER CAPTIVE BOLT
OR SIMILAR



TYPICAL THREADED INSERT
OR SIMILAR

DIMENSION TABLE

PULL BOX	PULL BOX			COVER						
	MINIMUM DEPTH BOX	MINIMUM DEPTH EXTENSION	MINIMUM WEIGHT	LI Min	WI Min	TE	D	L	W	MINIMUM WEIGHT
No. 3 1/2	12"	N/A	40 lb	1' - 3"	9"	1 3/4"	1 3/4"	1' - 3 1/4" - 1' - 3 3/8"	10" - 10 1/8"	30 lb
No. 5	12"	10"	55 lb	1' - 8"	11"	2"	1 3/4"	1' - 11 1/4"	1' - 1 3/4"	60 lb
No. 6	12"	10"	70 lb	2' - 4 1/4"	1' - 3 1/4"	2"	2"	2' - 6 1/2"	1' - 5 1/2"	85 lb

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

October 30, 2015
PLANS APPROVAL DATE

Theresa Aziz Gabriel
No. E15129
Exp. 6-30-16
ELECTRICAL ENGINEER
STATE OF CALIFORNIA

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TO ACCOMPANY PLANS DATED _____

NOTES:

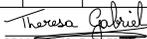
- Pull box covers shall be marked as follows: "SERVICE" Service circuits between service point and service disconnect; "SPRINKLER-CONTROL" sprinkler control circuits, 50 V or less; "CALTRANS" on all pull boxes, except pull boxes marked "SPRINKLER-CONTROL"; and "TELEPHONE" Telephone service;
 - No. 3 1/2 pull box.
 - "SIGNAL" - Traffic signal circuits with or without lighting or sign lighting circuits.
 - "LIGHTING" - Lighting or sign lighting circuits where voltage is under 600 V.
 - No. 5, 6, 9 or 9A pull box.
 - "TRAFFIC SIGNAL" - Traffic signal circuits with or without lighting or sign lighting circuits.
 - "LIGHTING" - Lighting or sign lighting circuits where voltage is under 600 V.
 - "LIGHTING-HIGH VOLTAGE" - Lighting or sign lighting circuits where voltage is above 600 V.
 - "IRRIGATION" - Circuits to irrigation controller 120 V or more.
 - "RAMP METER" - Ramp meter circuits.
 - "COUNT STATION" - Count or speed monitor circuits.
 - "COMMUNICATIONS" - Communication circuits.
 - "TOS COMMUNICATIONS" - TOS communication line.
 - "TOS POWER" - TOS power.
 - "TDC POWER" - Telephone demarcation cabinet power.
 - "CCTV" - Closed circuit television circuits.
 - "TMS" - Traffic monitoring station circuits.
 - "CMS" - Changeable message sign circuits.
 - "HAR" - Highway advisory radio circuits.
 - "BOOSTER PUMP" - Booster pump circuit.
- The nominal dimensions of the opening in which the cover sets shall be the same as the cover dimensions except the length and width dimensions shall be 1/8" greater.
- Covers and boxes shall be interchangeable with California standard male and female gages. When interchanged with a standard male or female gage, the top surfaces shall be flush within 1/8". Top outside radius of covers and pull boxes shall have a 1/8" radius.
- Pull box extension may be another pull box as long as the bottom edge of the pull box can fit into the cover opening.
- Dimensions for the cover for non-traffic pull box are nominal values.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(NON-TRAFFIC PULL BOX)
NO SCALE

RSP ES-8A DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-8A DATED JULY 19, 2013 AND RSP ES-8A DATED JANUARY 20, 2012 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

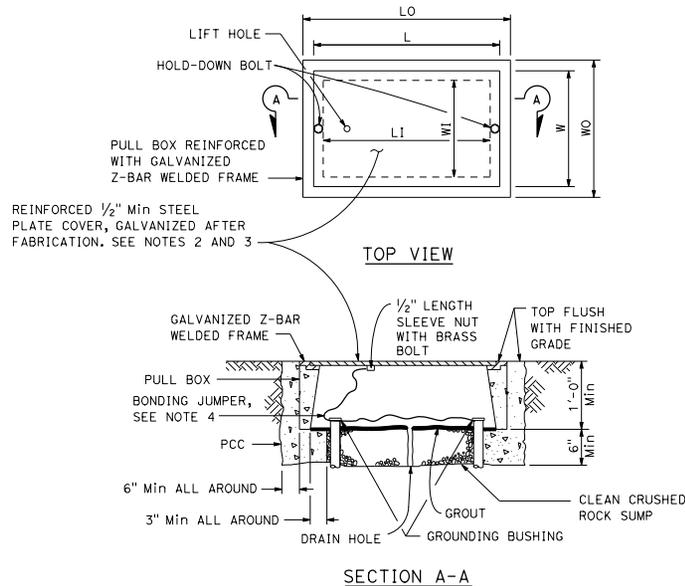
REVISED STANDARD PLAN RSP ES-8A

2010 REVISED STANDARD PLAN RSP ES-8A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
 REGISTERED ELECTRICAL ENGINEER					
October 30, 2015 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.					

Theresa
Aziz Gabriel
No. E15129
Exp. 6-30-16
REGISTERED PROFESSIONAL ENGINEER
ELECTRICAL
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED _____



**No. 3 1/2(T), No. 5(T) AND
No. 6(T) TRAFFIC PULL BOX**

NOTES:

1. Traffic pull box shall be provided with steel cover and special concrete footing. Steel cover shall have embossed non-skid pattern.
2. Steel reinforcing shall be as regularly used in the standard products of the respective manufacturer.
3. Pull box covers shall be marked as follows: "SERVICE" service circuits between service point and service disconnect; "SPRINKLER-CONTROL" Sprinkler control circuits, 50 V or less; "CALTRANS" On all pull boxes, except pull boxes marked "SPRINKLER-CONTROL"; and "TELEPHONE" Telephone service.
 - A) No. 3 1/2(T) pull box.
 - 1) "SIGNAL" - Traffic signal circuits with or without lighting or sign lighting circuits.
 - 2) "LIGHTING" - Lighting or sign lighting circuits where voltage is under 600 V.
 - B) No. 5(T) or 6(T) pull box.
 - 1) "TRAFFIC SIGNAL" - Traffic signal circuits with or without lighting or sign lighting circuits.
 - 2) "LIGHTING" - Lighting or sign lighting circuits where voltage is under 600 V.
 - 3) "LIGHTING-HIGH VOLTAGE" - Lighting or sign lighting circuits where voltage is above 600 V.
 - 4) "IRRIGATION" - Circuits to irrigation controller 120 V or more.
 - 5) "RAMP METER" - Ramp meter circuits.
 - 6) "COUNT STATION" - Count or speed monitor circuits.
 - 7) "COMMUNICATION" - Communication circuits.
 - 8) "TOS COMMUNICATIONS" - TOS communications line.
 - 9) "TOS POWER" - TOS power.
 - 10) "TDC POWER" - Telephone demarcation cabinet power.
 - 11) "CCTV" - Closed circuit television circuits.
 - 12) "TMS" - Traffic monitoring station circuits.
 - 13) "CMS" - Changeable message sign circuits.
 - 14) "HAR" - Highway advisory radio circuits.
 - 15) "BOOSTER PUMP" - Booster pump circuit.
4. Bonding jumper for metal covers shall be 3' long, minimum.
5. The nominal dimensions of the opening in which the cover sets shall be the same as the cover dimensions except the length and width dimensions shall be 1/8" greater.
6. Covers and boxes shall be interchangeable with California standard male and female gages. When interchanged with a standard male or female gage, the top surfaces shall be flush within 1/8".

DIMENSION TABLE								
PULL BOX	PULL BOX				COVER			
	MINIMUM * THICKNESS	MINIMUM DEPTH BOX AND EXTENSION	LO	LI	WO	WI	L **	W **
No. 3 1/2(T)	1 1/2"	1'-0"	1'-10" - 1'-11"	1'-5" - 1'-6 1/2"	1'-3" - 1'-4"	10" - 1'-0"	1'-8" - 1'-8 1/2"	1'-1" - 1'-2"
No. 5(T)	1 3/4"	1'-0"	2'-5" - 2'-6"	2'-0" - 2'-1"	1'-6" - 1'-7"	1'-1" - 1'-2"	2'-3" - 2'-3 1/2"	1'-4" - 1'-4 1/2"
No. 6(T)	2"	1'-0"	2'-11" - 3'-1"	2'-6" - 2'-7"	1'-10" - 2'-0"	1'-5" - 1'-6"	2'-9" - 2'-9 1/2"	1'-8" - 1'-8 1/2"

* EXCLUDING CONDUIT WEB ** TOP DIMENSION

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(TRAFFIC PULL BOX)**
NO SCALE

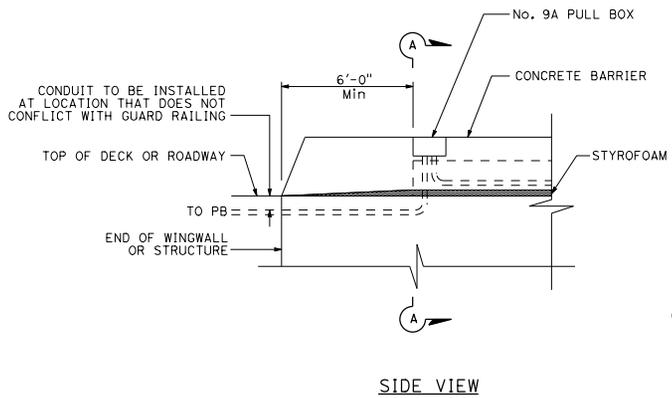
RSP ES-8B DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-8B DATED JULY 19, 2013 AND RSP ES-8B DATED JANUARY 20, 2012 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-8B

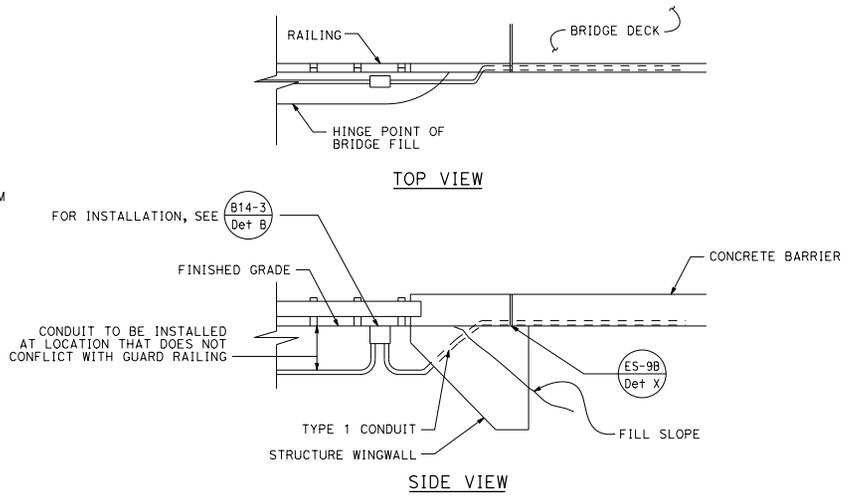
2010 REVISED STANDARD PLAN RSP ES-8B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
<i>Theresa Gabriel</i> REGISTERED ELECTRICAL ENGINEER					
October 30, 2015 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
 Theresa Aziz Gabriel
 No. E15129
 Exp. 6-30-16
 ELECTRICAL
 STATE OF CALIFORNIA



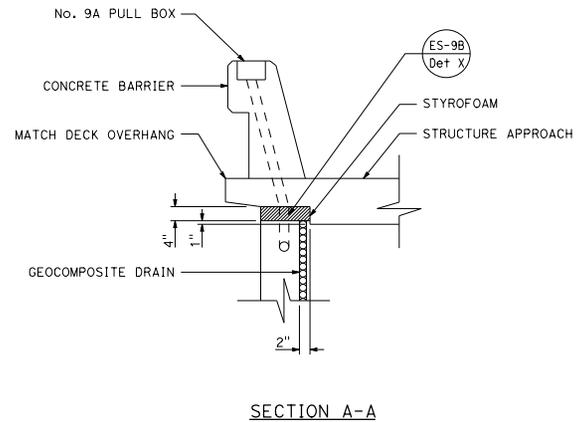
SIDE VIEW



TOP VIEW

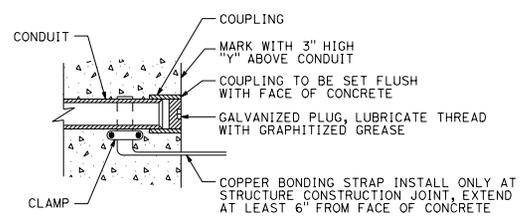
SIDE VIEW

CONDUIT TERMINATION
DETAIL I



SECTION A-A

CONDUIT TERMINATION
DETAIL A



CONDUIT TERMINATION
DETAIL C

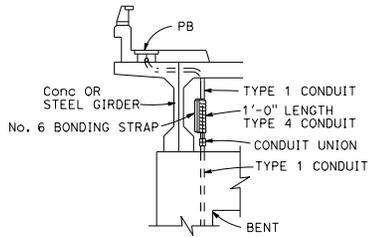
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(STRUCTURE PULL BOX
INSTALLATIONS)

NO SCALE

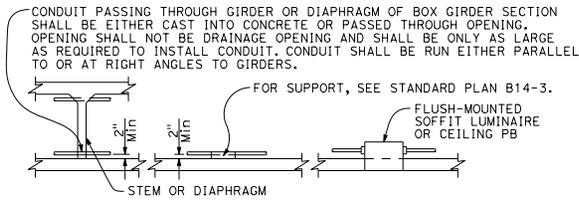
RSP ES-9A DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-9A DATED MAY 20, 2011 - PAGE 481 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-9A

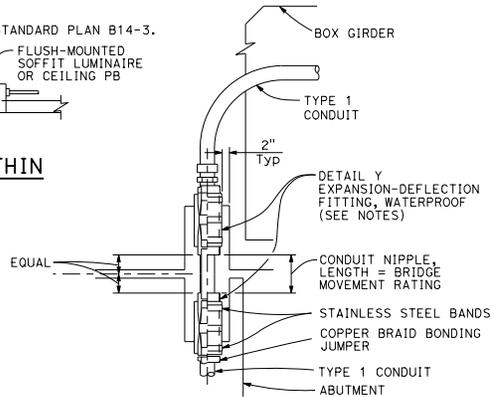
2010 REVISED STANDARD PLAN RSP ES-9A



CONDUIT RISER CONNECTION
DETAIL R

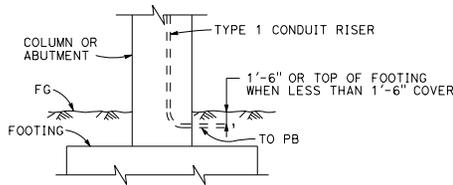


CONDUIT INSTALLATION WITHIN BOX GIRDER SECTIONS
DETAIL S

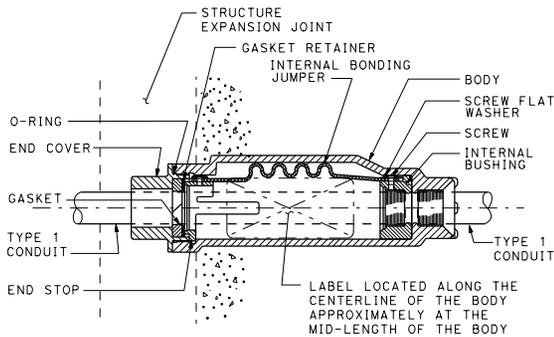


- NOTES:**
1. Fitting and pocket required only where movement can occur between girder and abutment.
 2. Fill pocket around fitting with resilient waterproof compound.

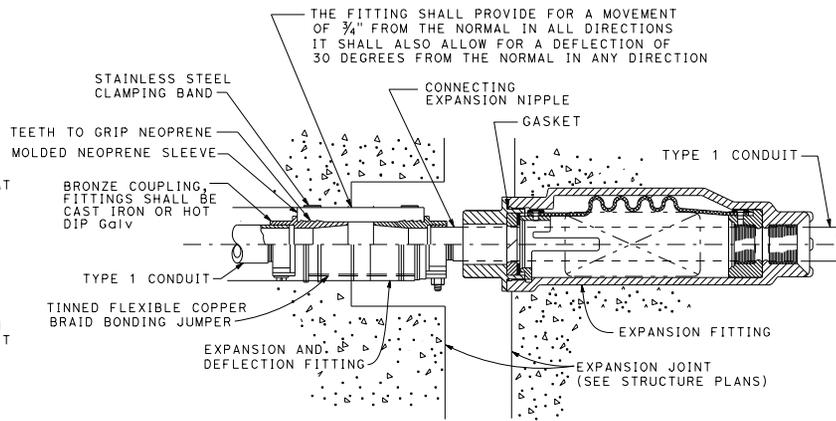
CONDUIT RISER CONNECTION AT COLUMN, ABUTMENT OR STRUCTURE WING WALL
DETAIL Y



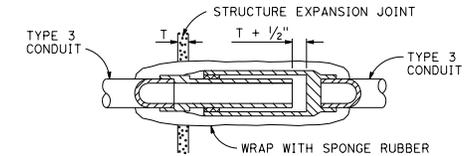
LOWER END OF CONDUIT RISER AT COLUMN OR ABUTMENT
DETAIL T



CONDUIT EXPANSION FITTING
DETAIL X

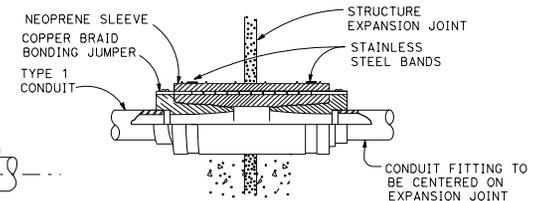


COMBINATION EXPANSION-DEFLECTION FITTINGS METALLIC CONDUIT INSTALLATION
DETAIL XY



NON-METALLIC CONDUIT EXPANSION FITTING INSTALLATION DETAIL
DETAIL V

To be used only when shown or specified on Project Plans



CONDUIT EXPANSION-DEFLECTION FITTING
DETAIL Y

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS (CONDUIT RISER AND EXPANSION FITTING, STRUCTURE INSTALLATIONS)
NO SCALE

RSP ES-9B DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-9B DATED MAY 20, 2011 - PAGE 482 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-9B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

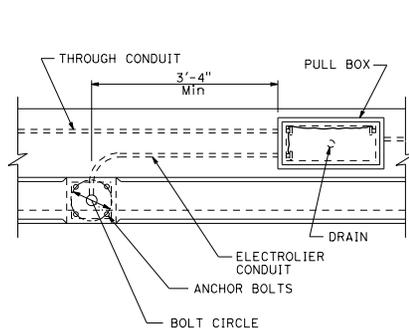
Raywinder & Co.
 REGISTERED ELECTRICAL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE
 No. E18551
 Exp. 12-31-16
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED _____

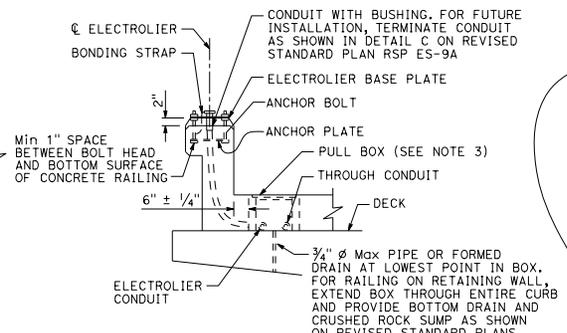
NOTES:

1. Except for sidewalk joints, a conduit expansion fitting or expansion-deflection fitting shall be installed at each 1/2" or greater structure joint, hinge or abutment.
2. Fittings or combination of fittings shall be installed to accommodate the movement rating as shown on the structure plans.
3. Fittings shall be installed parallel to superstructure girders.
4. Where lateral movement greater than 1/4" may occur, a neoprene sleeve expansion-deflection fitting shall be installed straddling the joint.

2010 REVISED STANDARD PLAN RSP ES-9B

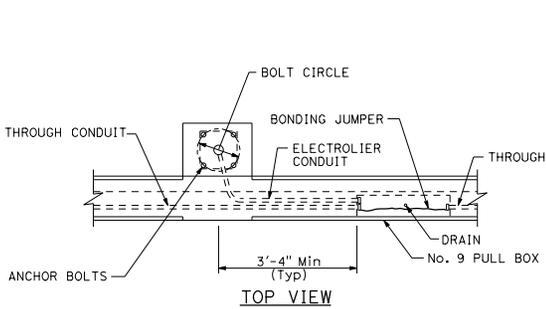


TOP VIEW

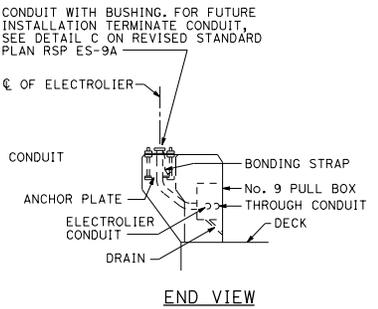


END VIEW

No. 3/2, 5, OR 6 PULL BOX INSTALLATION
DETAIL A

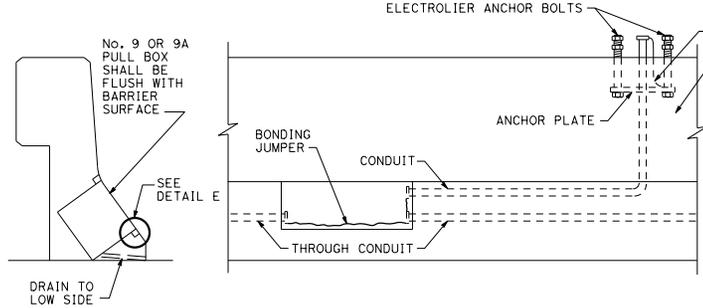


TOP VIEW



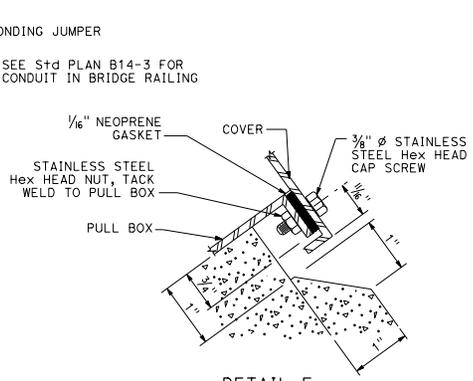
END VIEW

No. 9 PULL BOX INSTALLATION
DETAIL B

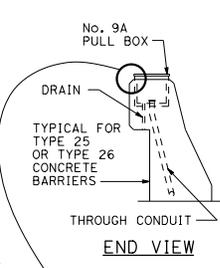


INSTALLATION IN SLOPING PARAPETS

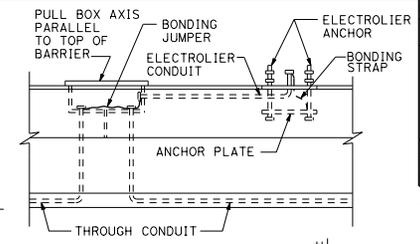
DETAIL D



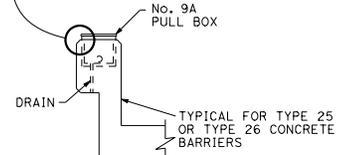
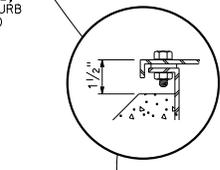
DETAIL E



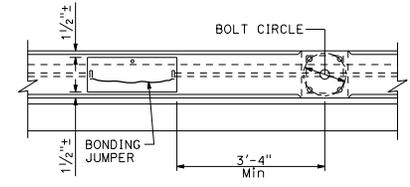
END VIEW



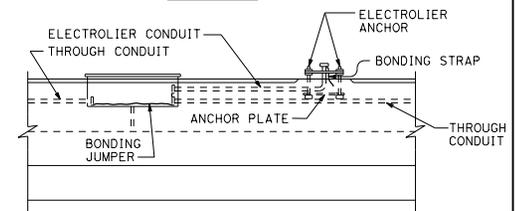
SIDE VIEW



END VIEW



TOP VIEW



SIDE VIEW

No. 9A PULL BOX INSTALLATION
DETAIL C

NOTES:

1. Axis of pull box shall be parallel to top of barrier, sidewalk or railing.
2. See railing sheet for reinforcement and structural details at electroliers and pull boxes.
3. Top of pull boxes in sidewalk areas shall be flush with sidewalk. Modify base of pull box as required.
4. Boxes inside of vertical barrier or railing shall be closed during pouring of PCC 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.
5. Use drain in center if box is horizontal, or at low end if box is inclined. When box is mounted in sloping parapet 1/2" elongated drain hole inside at center or near end as required for drainage.
6. For electrolier anchorage bolts and grouting details, see Standard Plan ES-6B.
7. See Standard Plan B14-3 for conduit in concrete barrier.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(STRUCTURE PULL BOX
INSTALLATIONS)**
NO SCALE

RSP ES-9D DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-9D DATED MAY 20, 2011 - PAGE 484 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-9D

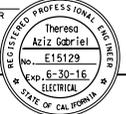
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER
No. E15129
Exp. 6-30-16
ELECTRICAL
STATE OF CALIFORNIA

October 30, 2015
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.

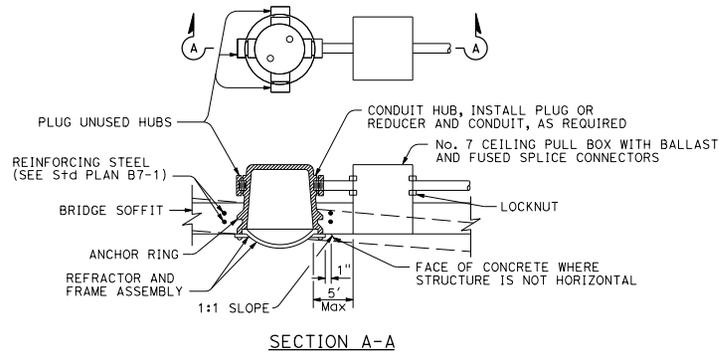
TO ACCOMPANY PLANS DATED _____

2010 REVISED STANDARD PLAN RSP ES-9D

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
					
Theresa Gabriel REGISTERED ELECTRICAL ENGINEER October 30, 2015 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.					

TO ACCOMPANY PLANS DATED _____

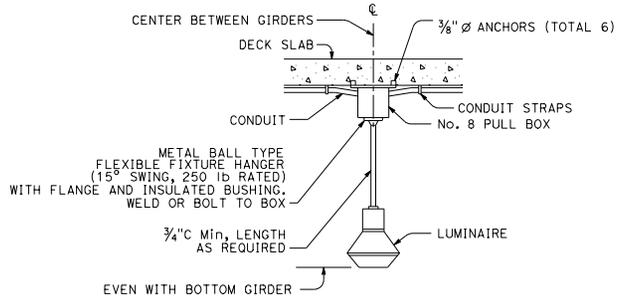
2010 REVISED STANDARD PLAN RSP ES-9E



SECTION A-A

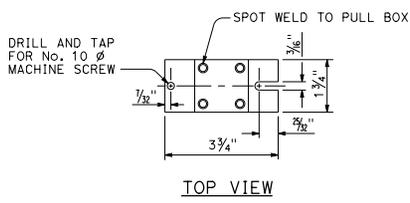
FLUSH-MOUNTED SOFFIT LUMINAIRE INSTALLATION

DETAIL F

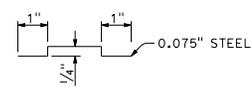


DETAIL P

PENDANT SOFFIT LUMINAIRE INSTALLATION



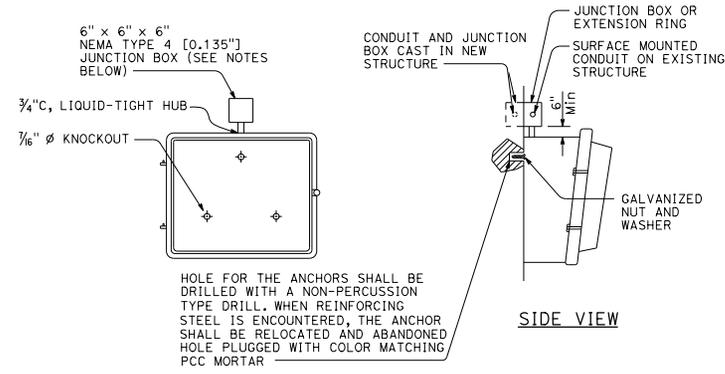
TOP VIEW



SIDE VIEW

TERMINAL BLOCK MOUNTING BRACKET

DETAIL I



SIDE VIEW

WALL-MOUNTED LUMINAIRE INSTALLATION

DETAIL W

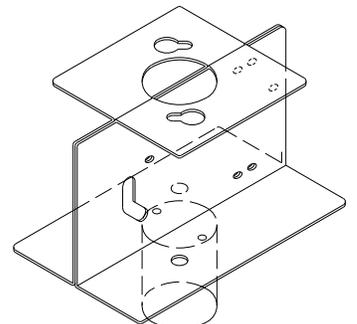
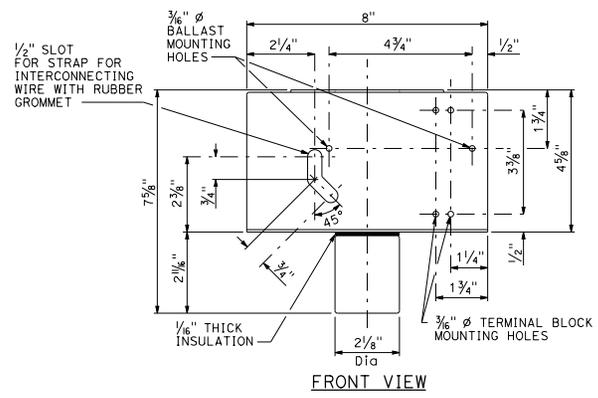
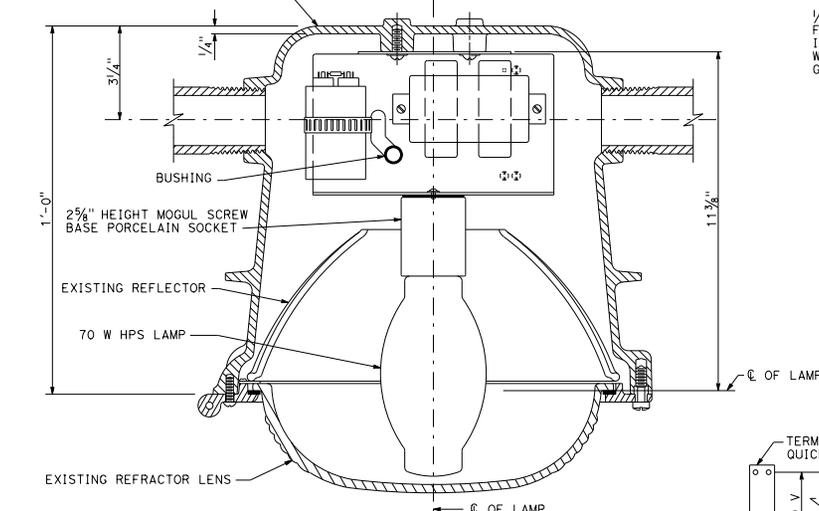
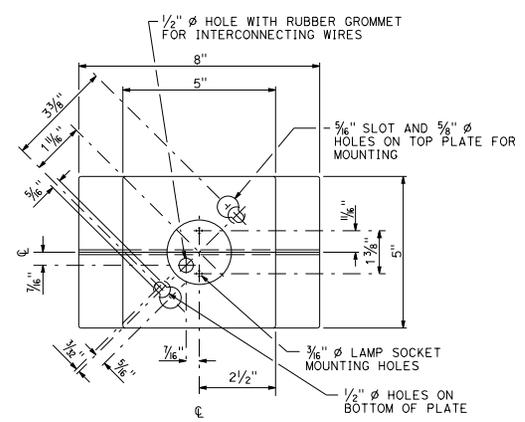
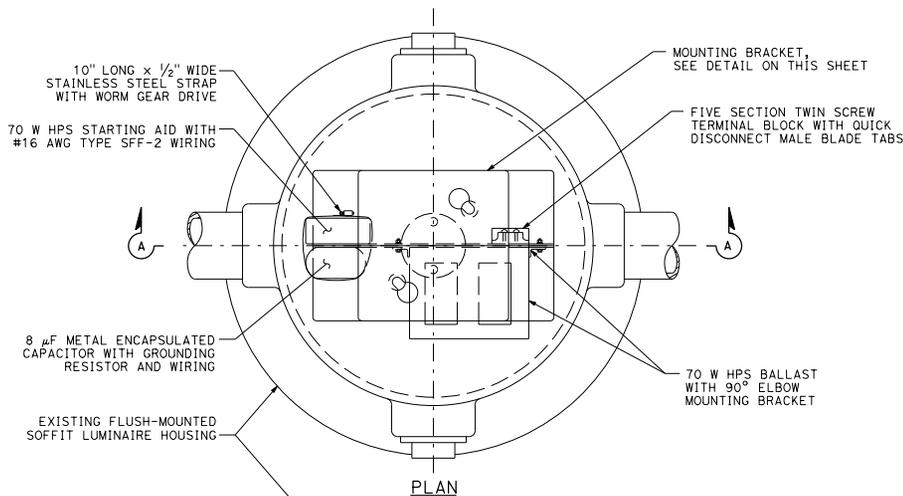
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(FLUSH-MOUNTED SOFFIT, PENDANT SOFFIT
AND WALL-MOUNTED LUMINAIRE
STRUCTURE INSTALLATIONS)**

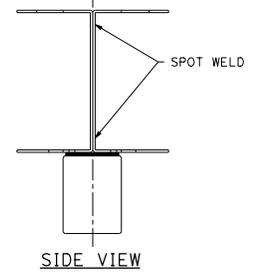
NO SCALE

RSP ES-9E DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-9E DATED MAY 20, 2011 - PAGE 485 OF THE STANDARD PLANS BOOK DATED 2010.

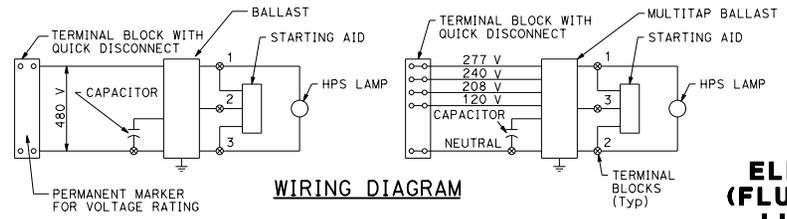
REVISED STANDARD PLAN RSP ES-9E



PREFORM TWO SHEETS 1/16" MILD STEEL AS SHOWN, SPOTWELD TOGETHER IN EACH CORNER WITH FOUR SPOTWELDS.



MOUNTING BRACKET DETAILS



- NOTES:**
1. Use No. 8 Ø machine screws, lockwashers and nuts for mounting ballast and terminal strips.
 2. In-line fuse as required on Standard Plan ES-13B.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

October 30, 2015
PLANS APPROVAL DATE

Theresa Aziz Gabriel
No. E15129
Exp. 6-30-16
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.

TO ACCOMPANY PLANS DATED _____

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(FLUSH-MOUNTED SOFFIT
LUMINAIRE DETAILS)**

NO SCALE

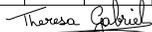
RSP ES-9F DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-9F DATED MAY 20, 2011 - PAGE 486 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-9F

2010 REVISED STANDARD PLAN RSP ES-9F

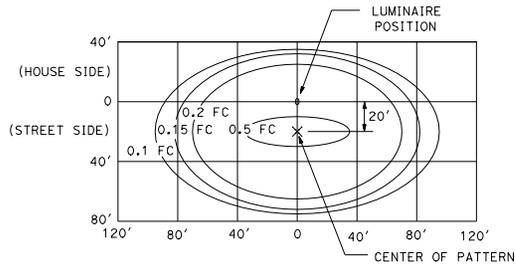
NOTE:

Curves represent the minimum footcandle (FC).

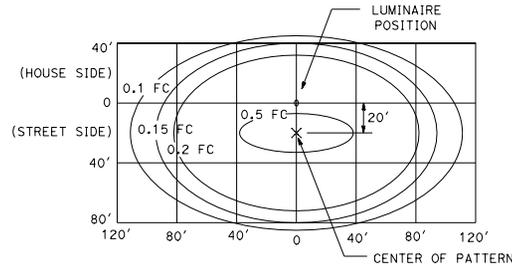
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
 REGISTERED ELECTRICAL ENGINEER No. E15129 Exp. 6-30-16 STATE OF CALIFORNIA					
PLANS APPROVAL DATE					
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					

TO ACCOMPANY PLANS DATED _____

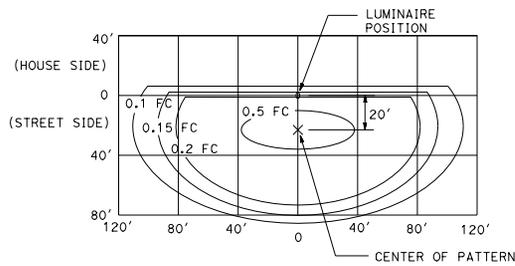
2010 REVISED STANDARD PLAN RSP ES-10A



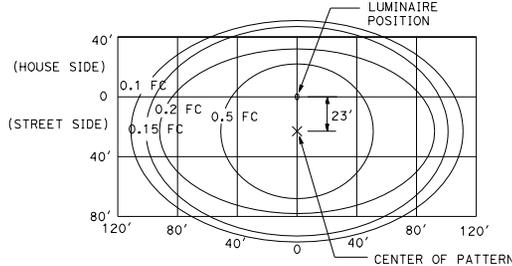
LED LUMINAIRE 165 W
34' Mounting Height



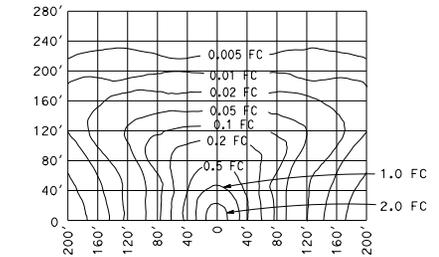
LED LUMINAIRE 235 W
40' Mounting Height



LED LUMINAIRE 235 W
40' Mounting Height
with back side control



LED LUMINAIRE 300 W
40' Mounting Height



LOW-PRESSURE SODIUM LUMINAIRE 180 W
40' Mounting Height
Lamp operated at 33,000 lm

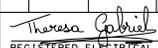
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(ISOFOOTCANDLE CURVES)**

NO SCALE

RSP ES-10A DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-10A DATED JULY 19, 2013
THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

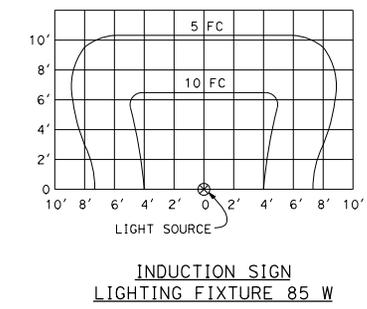
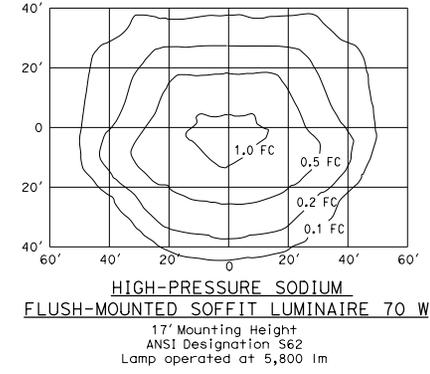
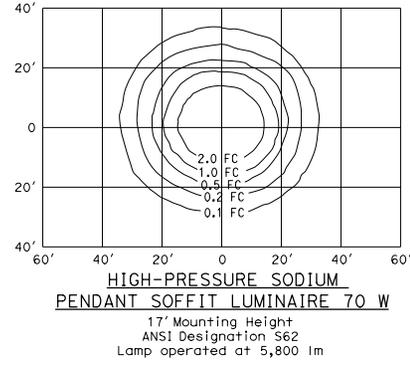
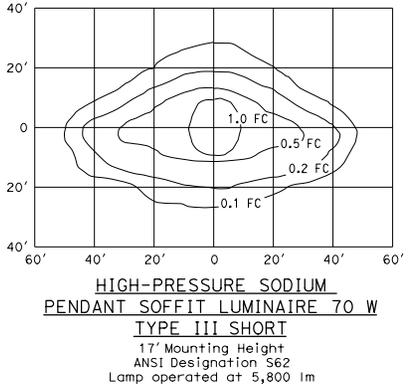
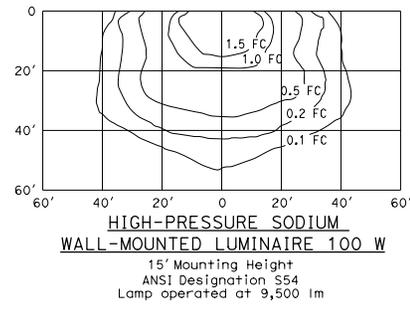
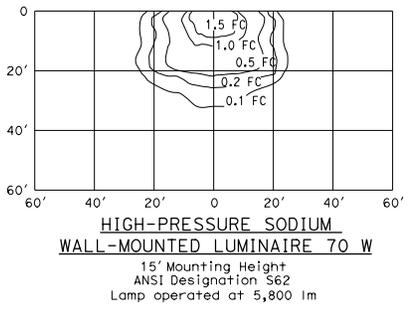
REVISED STANDARD PLAN RSP ES-10A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
 REGISTERED ELECTRICAL ENGINEER					
October 30, 2015 PLANS APPROVAL DATE					
					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

TO ACCOMPANY PLANS DATED _____

NOTE:

Curves represent the minimum footcandle (FC).



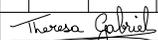
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(ISOFOOTCANDLE CURVES)**

NO SCALE

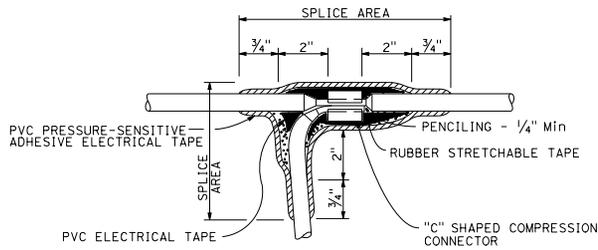
RSP ES-10B DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-10B DATED JULY 20, 2012 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-10B

2010 REVISED STANDARD PLAN RSP ES-10B

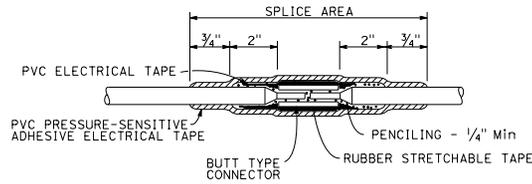
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
 REGISTERED ELECTRICAL ENGINEER					
October 30, 2015 PLANS APPROVAL DATE					
					
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TO ACCOMPANY PLANS DATED _____



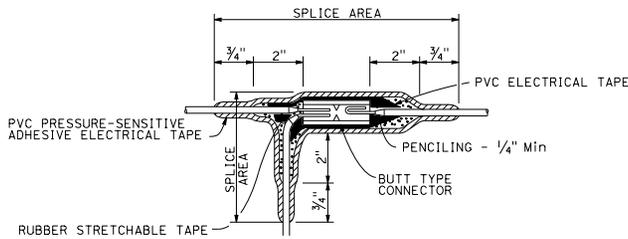
TYPE C SPLICE

See Note 3



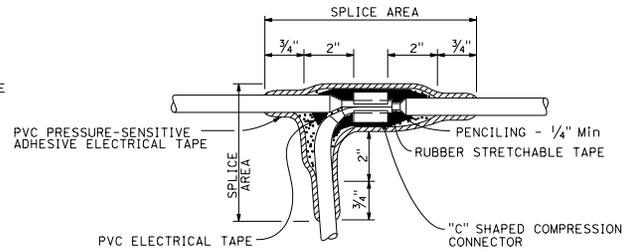
TYPE S SPLICE

See Note 4



TYPE ST SPLICE

See Note 5



TYPE T SPLICE

See Note 5

NOTES:

1. Dimensions are minimum.
2. Rubber tapes shall be rolled after application.
3. Between 1 free-end and 1 through conductor.
4. Between 2 free-end conductors.
5. Between 3 free-end conductors.

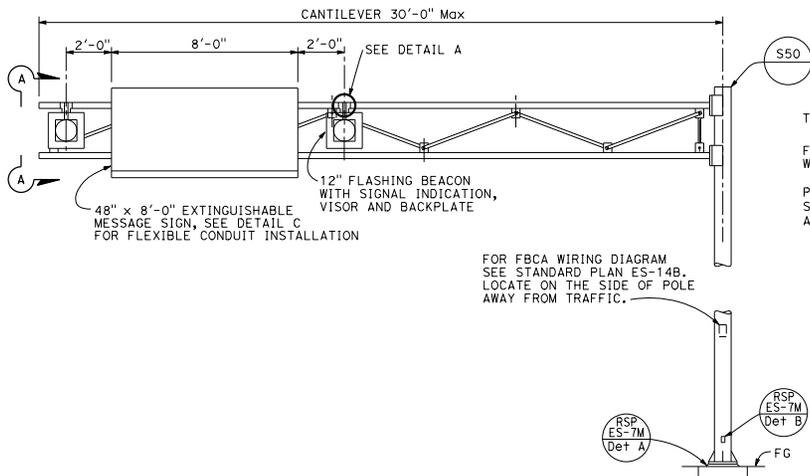
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(SPLICING DETAILS)**

NO SCALE

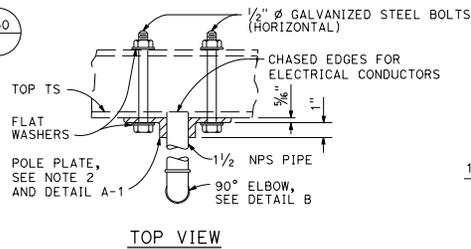
RSP ES-13A DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-13A DATED
MAY 20, 2011 - PAGE 491 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-13A

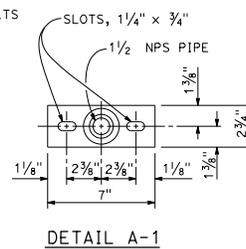
2010 REVISED STANDARD PLAN RSP ES-13A



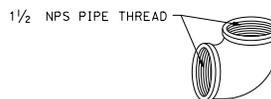
EMS WITH FLASHING BEACONS
ELEVATION A



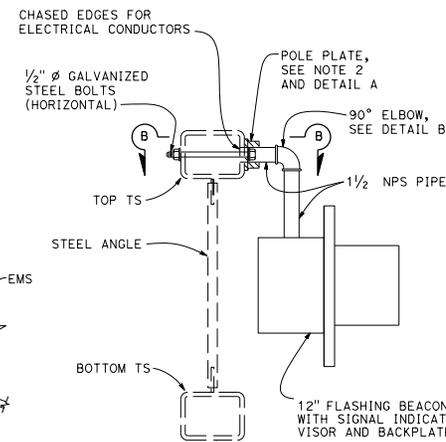
POLE PLATE
DETAIL A



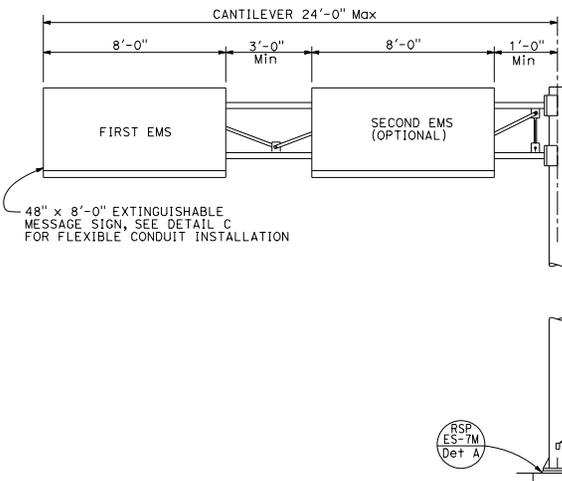
DETAIL A-1



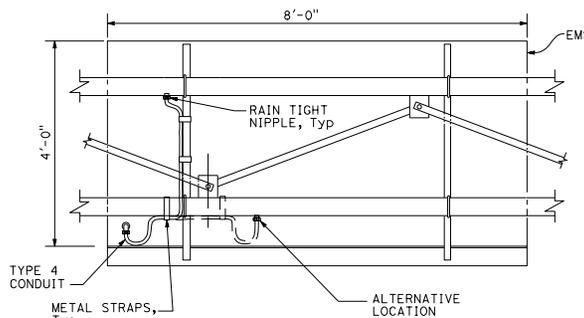
90° ELBOW
DETAIL B



SECTION A-A



EMS WITHOUT FLASHING BEACONS
ELEVATION B



FLEXIBLE CONDUIT INSTALLATION
DETAIL C
Back view of sign

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER
 Stanley P. Johnson
 No. CS7193
 Exp. 3-31-16
 CIVIL
 STATE OF CALIFORNIA

October 30, 2015
 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.

TO ACCOMPANY PLANS DATED _____

NOTES:

1. Pole plate shall be bronze or galvanized ductile iron.
2. For structure information, see Standard Plan S50.
3. Wind loading (3-second gust): 100 mph.
4. Handhole shall be located on the downstream side of traffic.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS
(EXTINGUISHABLE MESSAGE
SIGN ON A FULL CANTILEVER)

NO SCALE

RSP ES-14C DATED OCTOBER 30, 2015 SUPERSEDES RSP ES-14C DATED JULY 19, 2013 AND STANDARD PLAN ES-14C DATED MAY 20, 2011 - PAGE 495 OF THE STANDARD PLANS BOOK DATED 2010.

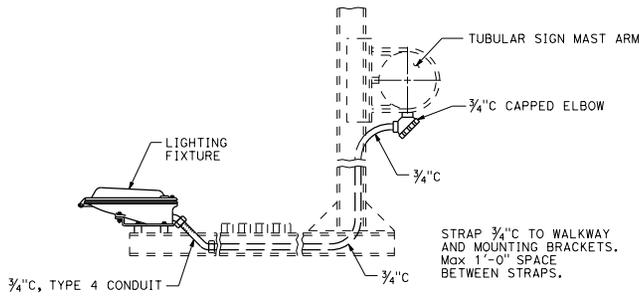
REVISED STANDARD PLAN RSP ES-14C

2010 REVISED STANDARD PLAN RSP ES-14C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

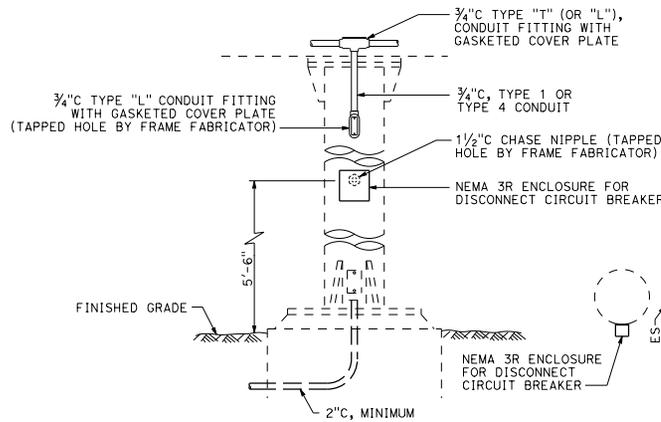
Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE
 Theresa Aziz Gabriel
 No. E15129
 Exp. 6-30-16
 ELECTRICAL
 STATE OF CALIFORNIA

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.



**TYPICAL SIGN ILLUMINATION EQUIPMENT
INSTALLATION FOR OVERHEAD SIGNS TUBULAR**

DETAIL A

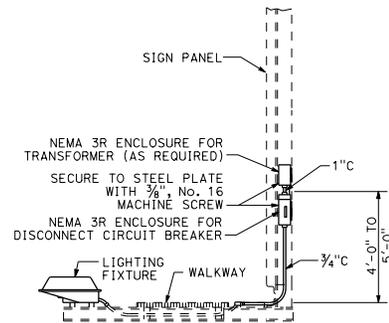


**TYPICAL SIGN ILLUMINATION EQUIPMENT
INSTALLATION FOR OVERHEAD SIGNS ROUND POST**

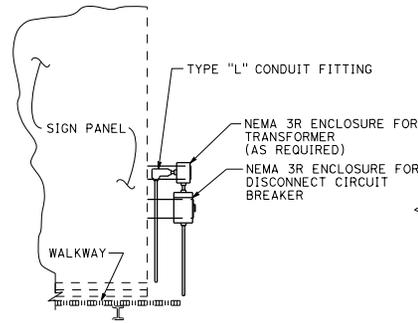
DETAIL B

NOTES:

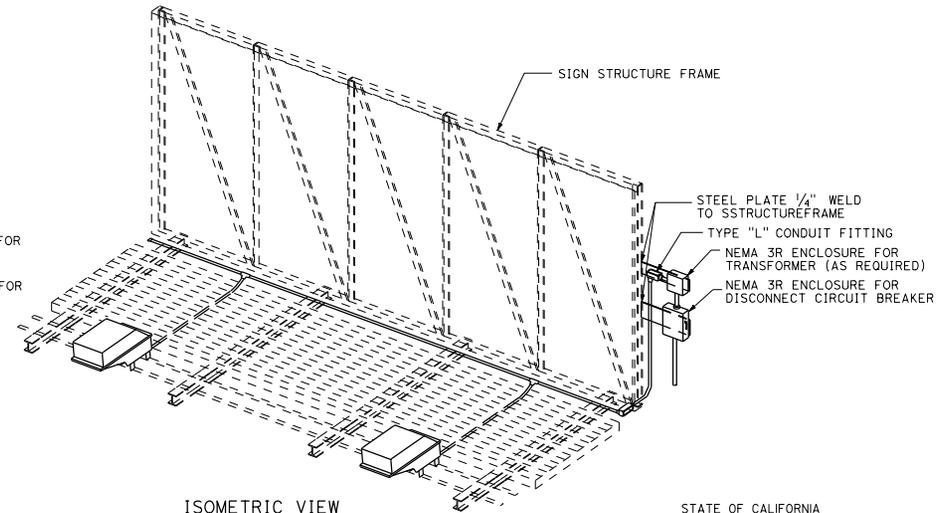
1. Type 4 conduit shall be secured to the nearest walkway bracket using one-hole galvanized malleable iron or steel straps and brass machine screws tapped into the bracket.
2. See Overhead Signs Standard Plans for overhead signs and frame juncture details for photoelectric unit installation.
3. Enclosures and straps shall be secured by 3/8" maximum size screws.
4. The Contactor and test switch enclosures shall be readily accessible from the sign walkway.



SIDE VIEW



FRONT VIEW



ISOMETRIC VIEW

**TYPICAL SIGN ILLUMINATION EQUIPMENT
INSTALLATION FOR OVERHEAD SIGNS
BRIDGE MOUNTED**

DETAIL C

See Note 4

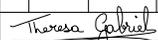
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(SIGN ILLUMINATION EQUIPMENT)**

NO SCALE

RSP ES-15C DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-15C DATED MAY 20, 2011 - PAGE 498 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-15C

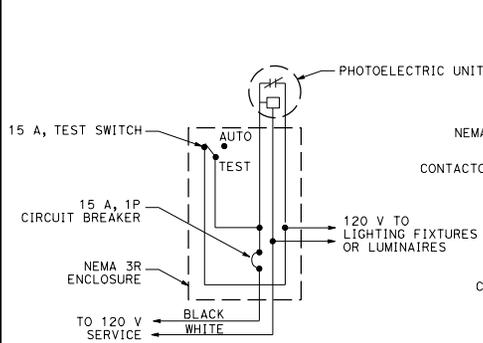
2010 REVISED STANDARD PLAN RSP ES-15C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
 REGISTERED ELECTRICAL ENGINEER No. E15129 Exp. 6-30-16 PROFESSIONAL ENGINEER STATE OF CALIFORNIA					
October 30, 2015 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

TO ACCOMPANY PLANS DATED _____

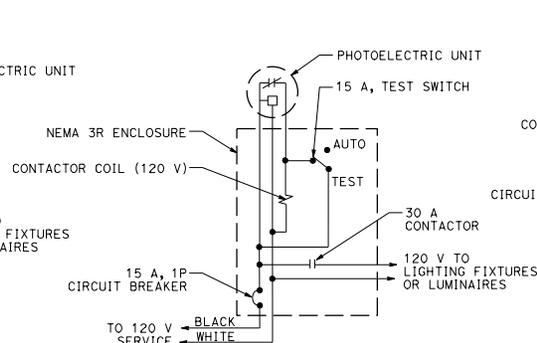
NOTE:

Type SC1A, SC2A, SC3A controls are similar to Types SC1, SC2 and SC controls respectively except test switch and wiring are not required.



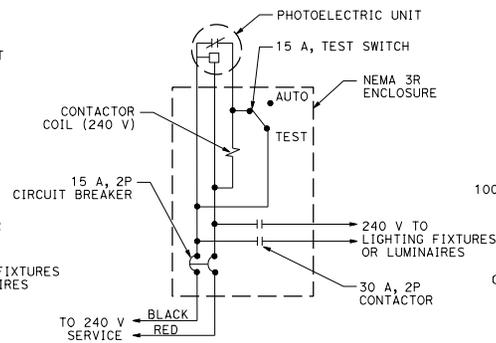
TYPE LC1 CONTROL

For 120 V unswitched circuit with no more than 1000 W load.



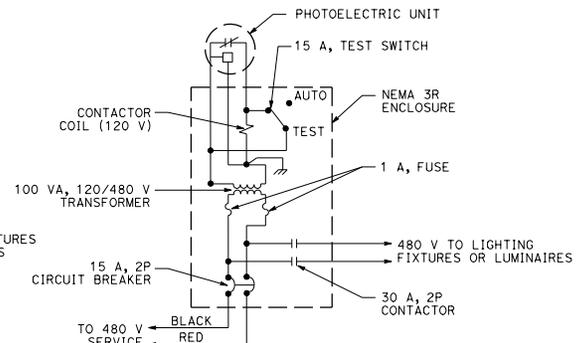
TYPE LC2 CONTROL

For 120 V unswitched circuit



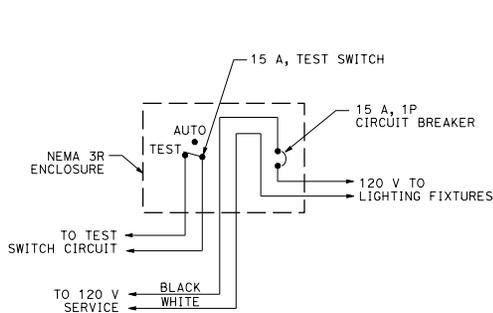
TYPE LC3 CONTROL

For 240 V unswitched circuits



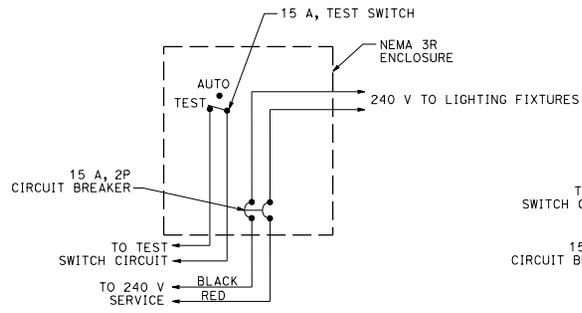
TYPE LC4 CONTROL

For 480 V unswitched circuits



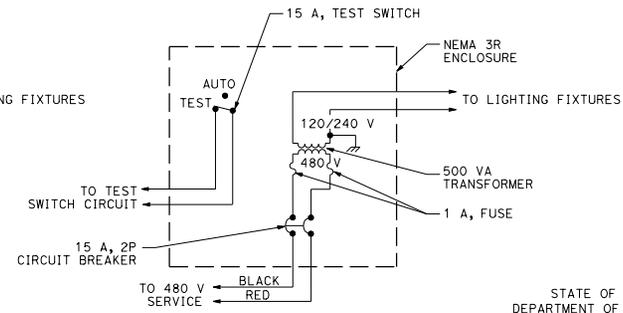
TYPE SC1 CONTROL

For 120 V switched circuit, see Note 1 for Type SC1A



TYPE SC2 CONTROL

For 240 V switched circuit, see Note 1 for Type SC2A



TYPE SC3 CONTROL

For 480 V switched sign circuit, see Note 1 for Type SC3A

**ELECTRICAL SYSTEMS
(LIGHTING AND SIGN
ILLUMINATION CONTROL)**

NO SCALE

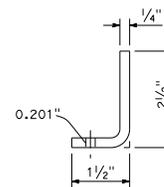
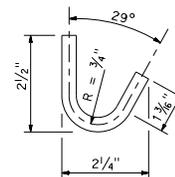
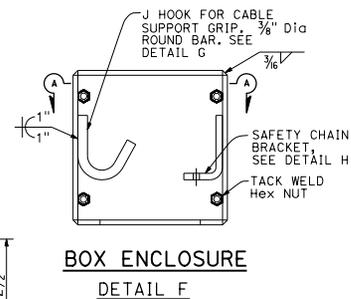
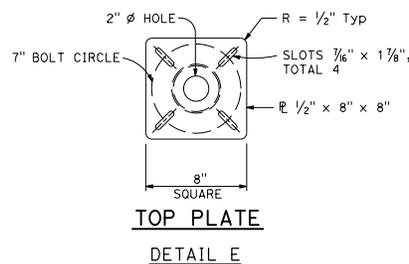
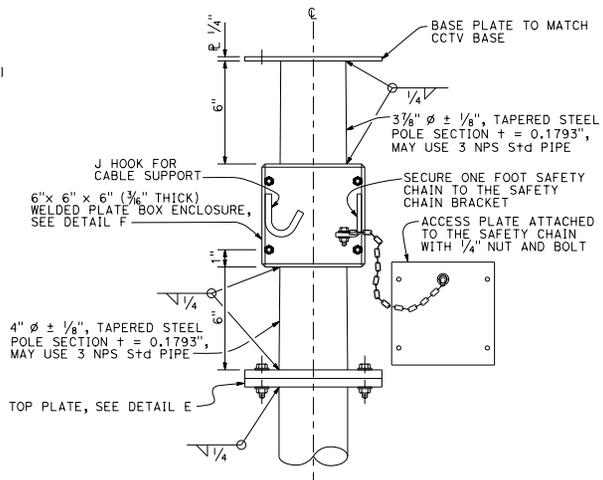
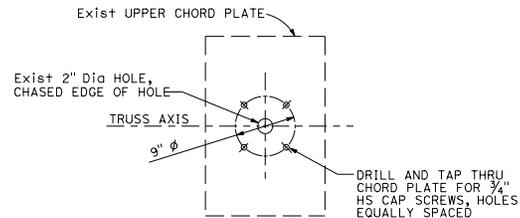
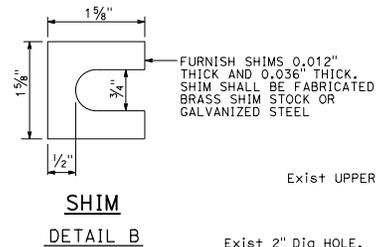
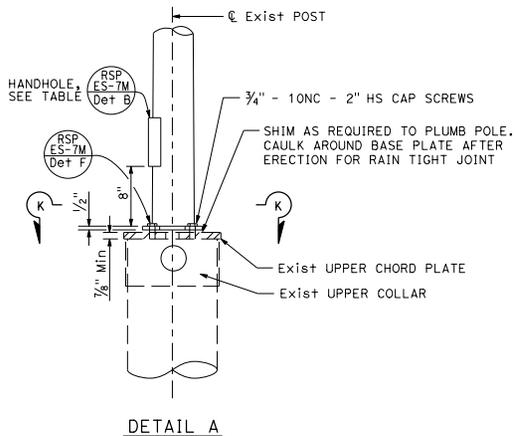
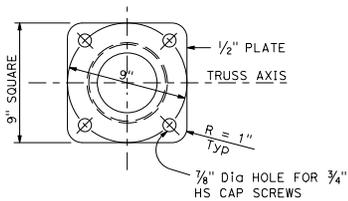
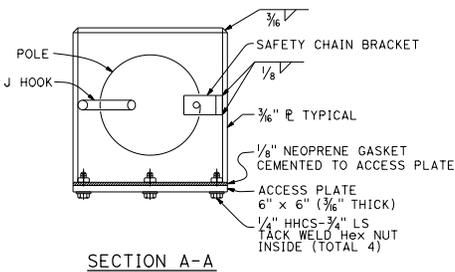
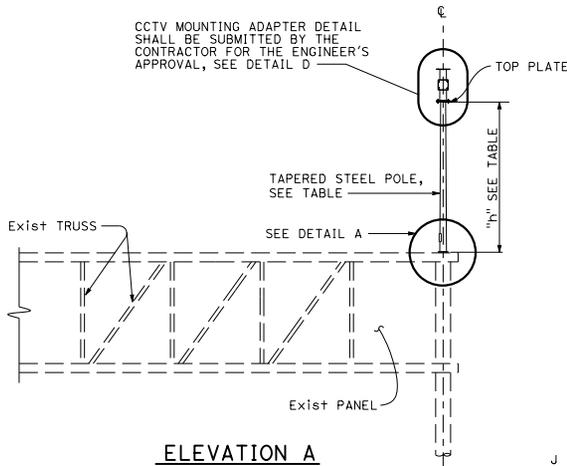
RSP ES-15D DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-15D DATED MAY 20, 2011 - PAGE 499 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-15D

2010 REVISED STANDARD PLAN RSP ES-15D

POLE EXTENSION TYPE	POLE DATA				HANDHOLE SIZE
	HEIGHT "h"	Min OD		THICKNESS	
		BASE	TOP		
CCTV 5	5'	4 $\frac{3}{16}$ "	3 $\frac{3}{4}$ "	0.1793"	3" x 5"
CCTV 10	10'	5 $\frac{1}{4}$ "			
CCTV 15	15'	5 $\frac{5}{8}$ "			

CCTV MOUNTING ADAPTER DETAIL SHALL BE SUBMITTED BY THE CONTRACTOR FOR THE ENGINEER'S APPROVAL, SEE DETAIL D



NOTES:

- Verify controlling field dimensions before ordering or fabricating any material.
- Bolt hole locations may vary at the discretion of the Engineer.
- See Std Plan S13.
- Wind Loadings (3-second gust) : 100 mph.
- Unit Stresses (Structural Steel):
 - fy = 55,000 psi (tapered steel tube)
 - fy = 50,000 psi (unless otherwise noted)

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER
 October 30, 2015
 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.

TO ACCOMPANY PLANS DATED _____

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(CLOSED CIRCUIT TELEVISION,
5' TO 15' OVERHEAD SIGN MOUNTED POLE)**
NO SCALE

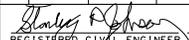
RSP ES-16A DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-16A DATED MAY 20, 2011 - PAGE 500 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-16A

2010 REVISED STANDARD PLAN RSP ES-16A

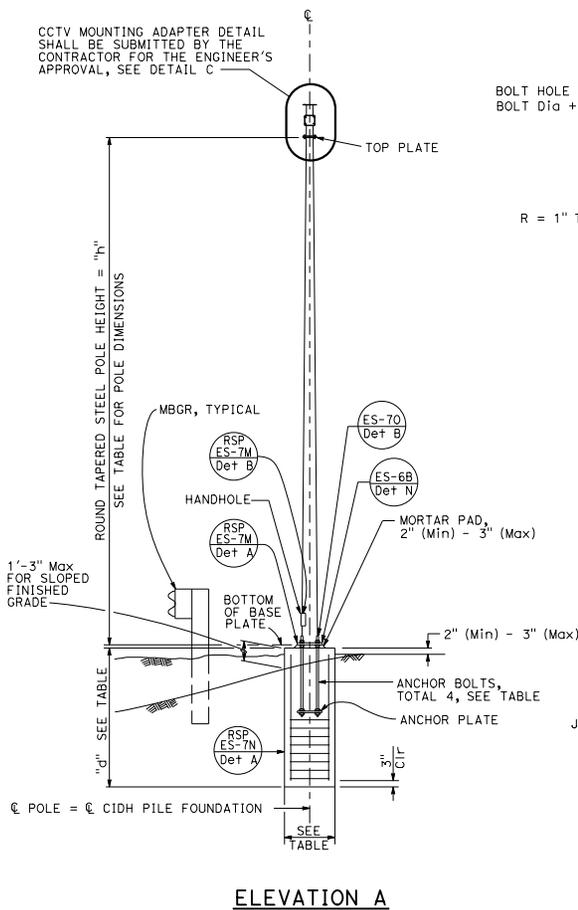
POLE TYPE	POLE DATA			BASE PLATE DATA				CIDH		
	HEIGHT "h"	Min OD		THICKNESS	"c"	THICKNESS	ANCHOR BOLT SIZE	BC = BOLT CIRCLE	Dia	"d"
		BASE	TOP							
CCTV 25	25'	7 3/8"	3 3/4"	0.1793"	1'-1"	1"	1 1/2" ϕ x 36"	1 1/2"	2'-6"	7'-0"
CCTV 30	30'	8"			1'-1 1/2"			1'-0"		7'-6"
CCTV 35	35'	8 5/8"			1'-2"			1'-1"		8'-0"
CCTV 40	40'	9 3/8"			1'-1 1/2"			1'-1 1/2"		
CCTV 45	45'	10"			1'-3"			1'-2"		8'-6"

D16+	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL SHEETS

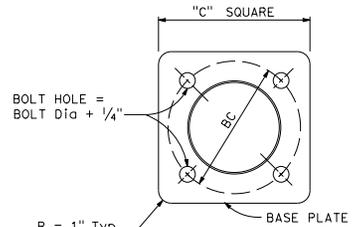

 REGISTERED CIVIL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE
 No. CS7193
 Exp. 3-31-16
 CIVIL
 STATE OF CALIFORNIA

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

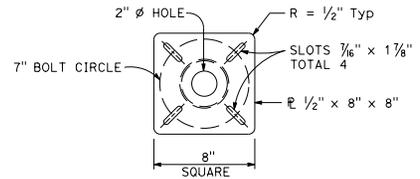
TO ACCOMPANY PLANS DATED _____



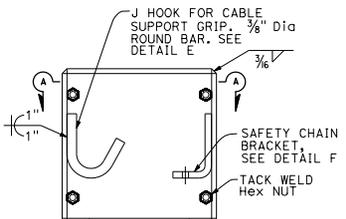
ELEVATION A



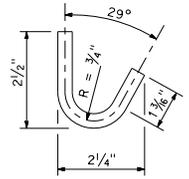
**BASE PLATE
DETAIL A**



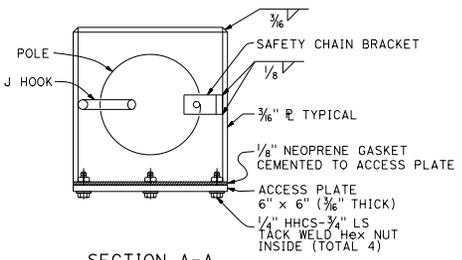
**TOP PLATE
DETAIL B**



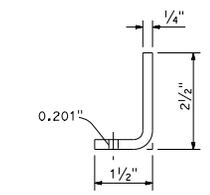
**BOX ENCLOSURE
DETAIL D**



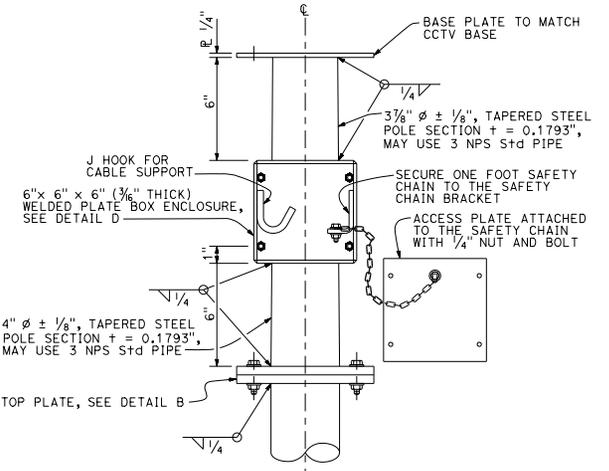
**J HOOK
DETAIL E**



SECTION A-A



**SAFETY CHAIN BRACKET
DETAIL F**



**CLOSED CIRCUIT TELEVISION MOUNTING ADAPTER
DETAIL C**

NOTES:

1. Verify controlling field dimensions before ordering or fabricating any material.
2. During pole installation, the post shall be raked as necessary with the use of leveling nuts to provide a plumb pole axis.
3. Wind Loadings (3-second gust): 100 mph
4. Unit Stresses (Structural Steel):
 - a. $f_y = 55,000$ psi (tapered steel tube and anchor bolts)
 - b. $f_y = 50,000$ psi (unless otherwise noted)
5. Unit Stresses (Reinforced Concrete):
 - a. $f'_c = 3,625$ psi
 - b. $f_y = 60,000$ psi

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (CLOSED CIRCUIT TELEVISION,
 25' TO 45' POLE)**
 NO SCALE

RSP ES-16B DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-16B DATED MAY 20, 2011 - PAGE 501 OF THE STANDARD PLANS BOOK DATED 2010.

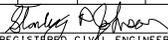
REVISED STANDARD PLAN RSP ES-16B

2010 REVISED STANDARD PLAN RSP ES-16B

POLE TYPE	POLE DATA				BASE PLATE DATA				CIDH PILE DATA			
	HEIGHT "h"	Min OD		Min THICKNESS	Dia	THICKNESS	ANCHOR BOLT SIZE		BC = BOLT CIRCLE	"D"	"L"	PILE Reinf
		BASE	TOP				TOTAL	"d"				
HM CCTV 50	50'	18"	9 3/4"	0.3125" *	28"	3"	12	1 1/2"	23"	3'-6"	12'	13 - #7
HM CCTV 60	60'	20"	10 1/4"		30"				25"	4'-0"	13'	
HM CCTV 70	70'	22"	10 5/8"		33"				27"	14'		
HM CCTV 80	80'	24"	11 1/8"	0.375" *	35"			29"				
HM CCTV 90	90'											

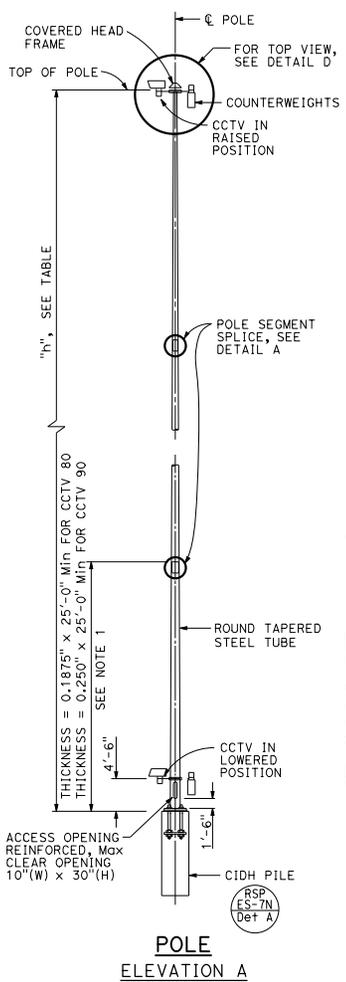
* LOWER POLE SEGMENT THICKNESS, SEE POLE DETAILS

D16+	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

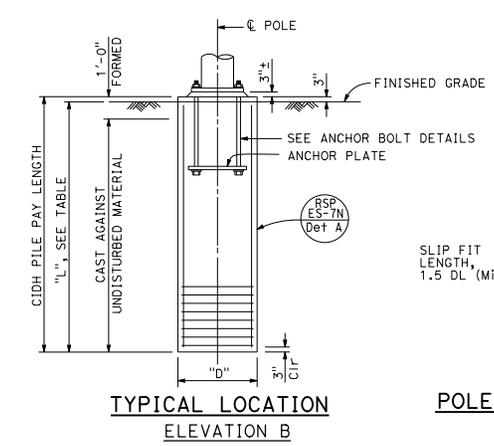

 REGISTERED CIVIL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE
 No. CS793
 Exp. 3-31-16
 CIVIL
 STATE OF CALIFORNIA

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

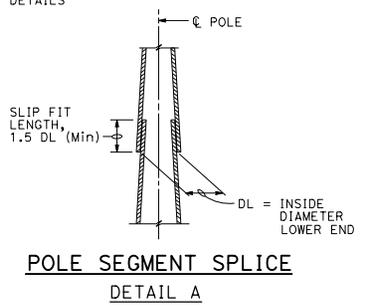
TO ACCOMPANY PLANS DATED _____



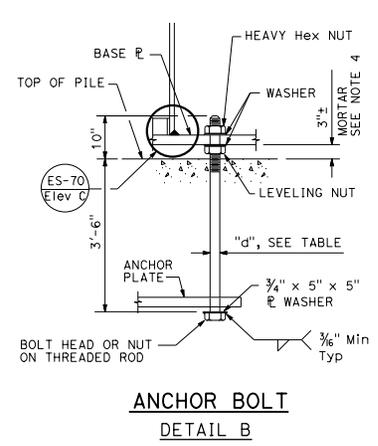
POLE ELEVATION A



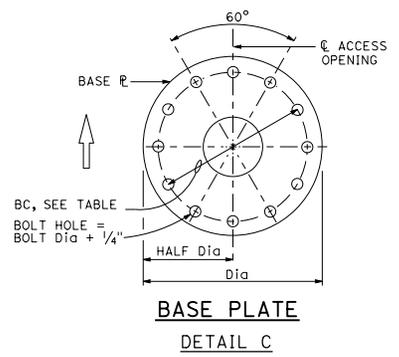
TYPICAL LOCATION ELEVATION B



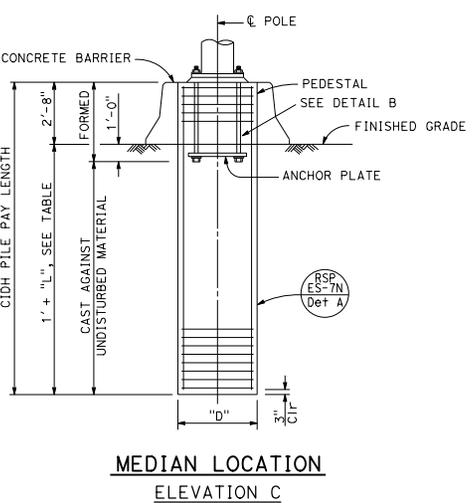
POLE SEGMENT SPLICE DETAIL A



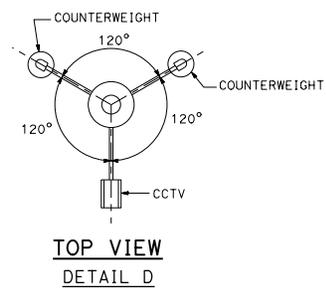
ANCHOR BOLT DETAIL B



BASE PLATE DETAIL C



MEDIAN LOCATION ELEVATION C



TOP VIEW DETAIL D

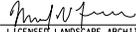
- NOTES:**
- Pole details shall suit the lowering device and this foundation plan. Pole details shall be submitted to the Engineer for approval.
 - For closed circuit television details, see Electrical Plans.
 - Foundation design is based on a maximum wind velocity of 80 mph.
 - For central void and drain holes in mortar, see Standard Plan ES-6B detail N.
 - Wind Loadings (fastest mile): 80 mph
 - Unit Stress (Structural Steel):
 fy = 55,000 psi (tapered steel tube)
 fy = 50,000 psi (unless otherwise noted)
 - Access opening shall be located on the downstream side of traffic unless otherwise determined by the Engineer.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (CLOSED CIRCUIT TELEVISION,
 50' TO 90' HIGH MAST POLE)**
 NO SCALE

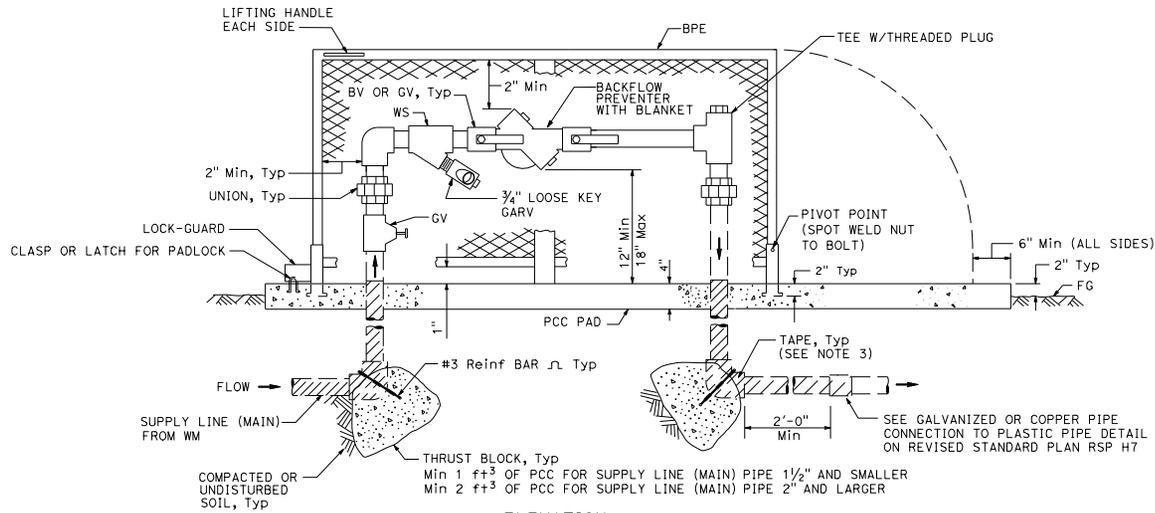
RSP ES-16C DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-16C DATED MAY 20, 2011 - PAGE 502 OF THE STANDARD PLANS BOOK DATED 2010.
REVISED STANDARD PLAN RSP ES-16C

2010 REVISED STANDARD PLAN RSP ES-16C

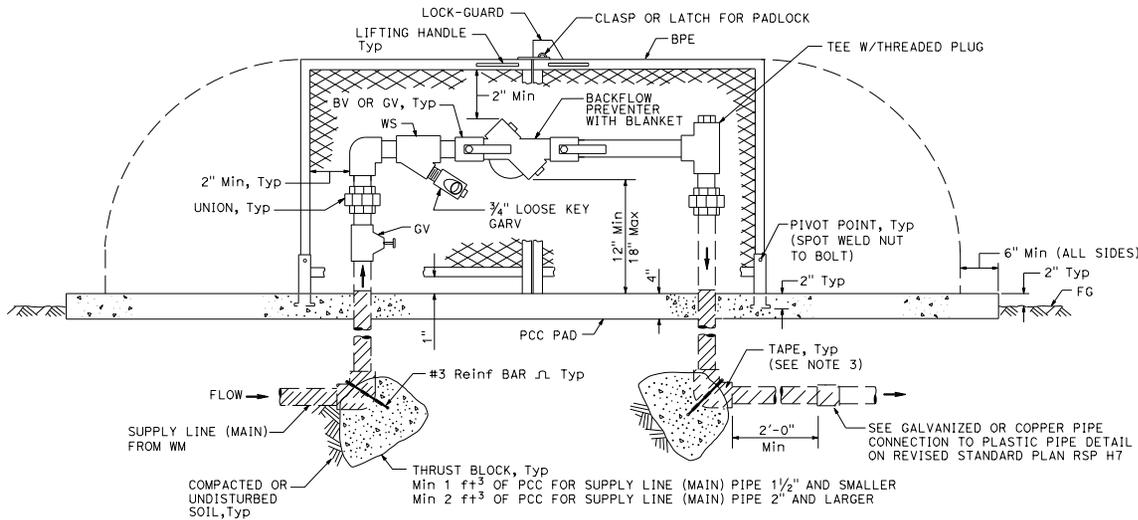
DIS#	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS


 LICENSED LANDSCAPE ARCHITECT
 October 30, 2015
 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.

TO ACCOMPANY PLANS DATED _____



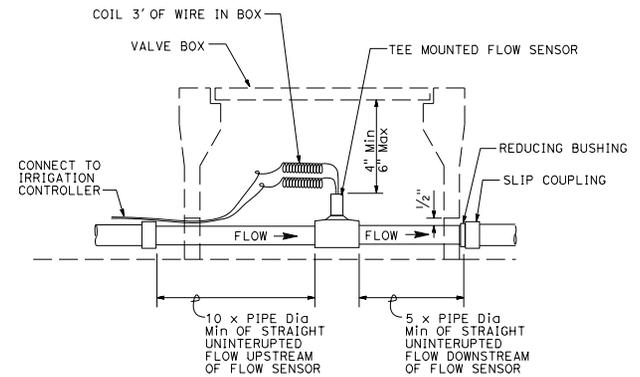
ELEVATION
BACKFLOW PREVENTER ASSEMBLY
IN ONE PIECE ENCLOSURE



ELEVATION
BACKFLOW PREVENTER ASSEMBLY
IN TWO PIECE ENCLOSURE

NOTES:

1. Wye strainer and fittings must be the same size as the backflow preventer shown on the plans.
2. Backflow preventer assembly manifold pipe must be the same pipe as the supply line (main) pipe to be installed from the water meter to the backflow preventer assembly.
3. All metal in contact with soil and Portland Cement Concrete must be wrapped with 2" wide plastic backed adhesive polyethylene tape 20 mil thick with 1/2" overlap.



SECTION
FLOW SENSOR

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
LANDSCAPE DETAILS
NO SCALE

RSP H8 DATED OCTOBER 30, 2015 SUPERSEDES RSP H8 DATED JULY 19, 2013 AND STANDARD PLAN H8 DATED MAY 20, 2011 - PAGE 225 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP H8

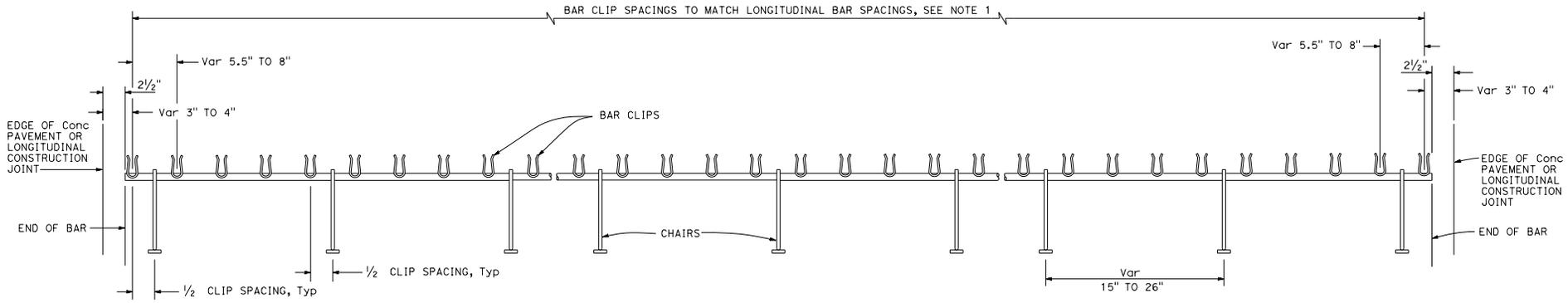
2010 REVISED STANDARD PLAN RSP H8

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Florencio E. Bautista
 REGISTERED CIVIL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE
 No. 054859
 Exp. 6-30-16
 CIVIL
 STATE OF CALIFORNIA

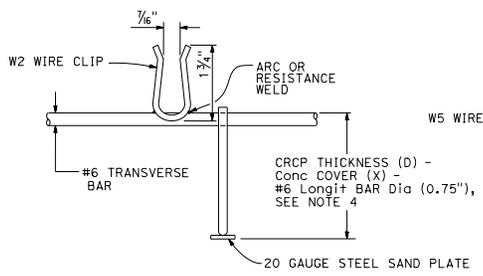
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TO ACCOMPANY PLANS DATED _____

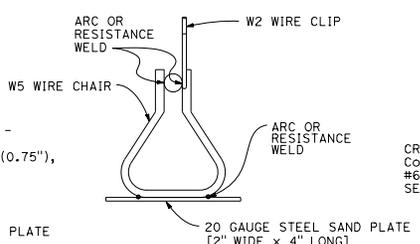


TRANSVERSE BAR ASSEMBLY

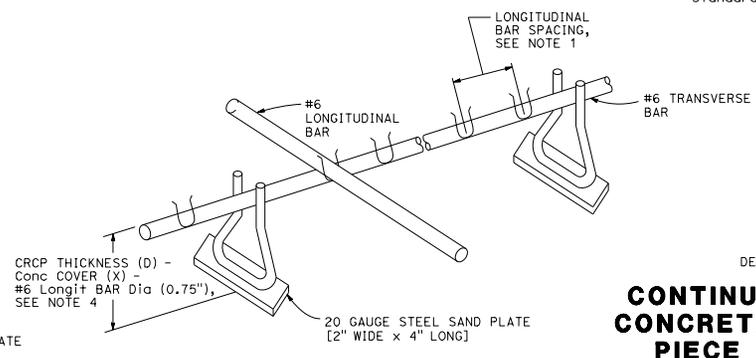
- NOTES:**
1. See Revised Standard Plan RSP P4 for spacing of longitudinal bars.
 2. Tensile strength of chair shall be at least 50,000 psi.
 3. Wire sizes shown are minimum required.
 4. For concrete cover (X), see Table 1 in Revised Standard Plan RSP P4.



#6 BAR CLIP DETAIL



CHAIR DETAIL



ISOMETRIC VIEW OF CHAIR ASSEMBLY

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**CONTINUOUSLY REINFORCED
 CONCRETE PAVEMENT-SINGLE
 PIECE TRANSVERSE BAR
 ASSEMBLY**
 NO SCALE

RSP P13 DATED OCTOBER 30, 2015 SUPERSEDES RSP P13 DATED OCTOBER 19, 2012 AND STANDARD PLAN P13 DATED MAY 20, 2011 - PAGE 133 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP P13

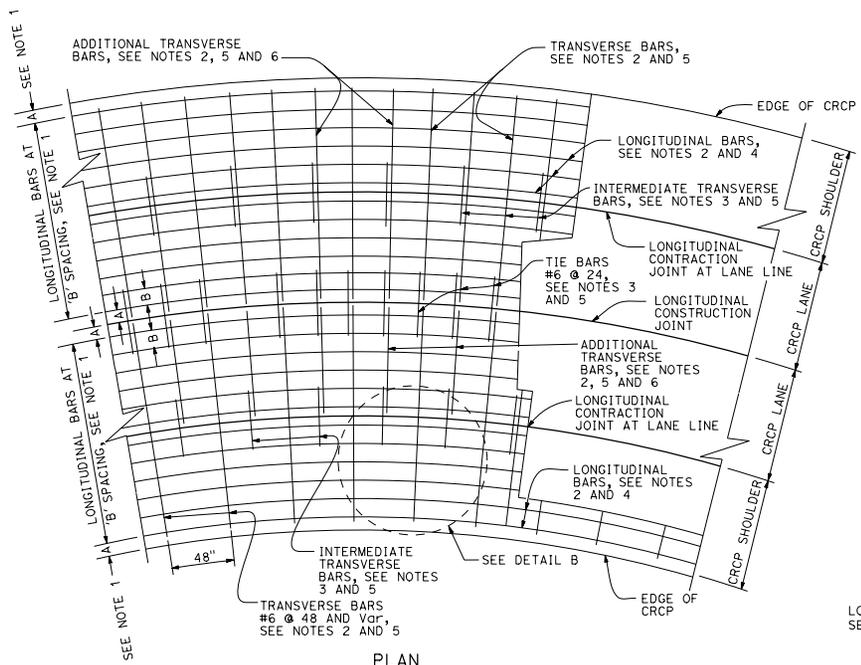
2010 REVISED STANDARD PLAN RSP P13

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Flornante
E. Baurista
 REGISTERED CIVIL ENGINEER
 No. CS4859
 Exp. 6-30-16
 CIVIL
 STATE OF CALIFORNIA

October 30, 2015
 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.

TO ACCOMPANY PLANS DATED _____



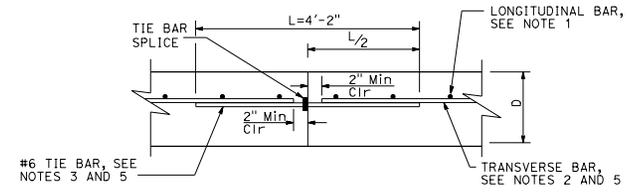
PLAN
CURVED LANES

NOTES:

1. For longitudinal bar spacing and clearances, see Table 1 on Revised Standard Plan RSP P4.
2. The length of lap splices for bar reinforcement must be at least 25".
3. Place tie bars and intermediate transverse bars parallel to and in the same plane as the transverse bars.
4. Place longitudinal bars parallel to roadway curvature.
5. Place transverse bars, additional transverse bars, tie bars and intermediate transverse bars perpendicular to the pavement curvature.
6. Place additional transverse bars where required, see Detail B.
7. The bottom of the saw cut must be at least 0.5" clear of any dowel bar, tie bar and bar reinforcement.

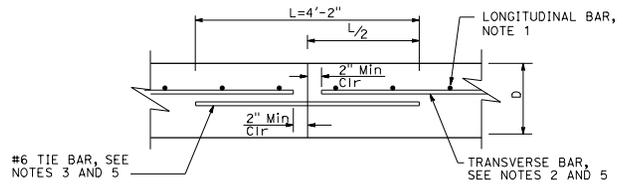
ABBREVIATION:

D = Thickness of CRCP



#6 TIE BAR, SEE NOTES 3 AND 5

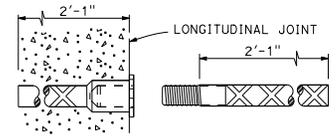
TRANSVERSE BAR, SEE NOTES 2 AND 5



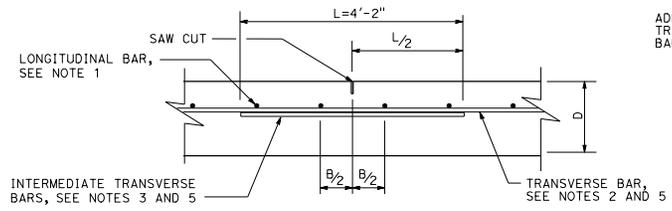
#6 TIE BAR, SEE NOTES 3 AND 5

TRANSVERSE BAR, SEE NOTES 2 AND 5

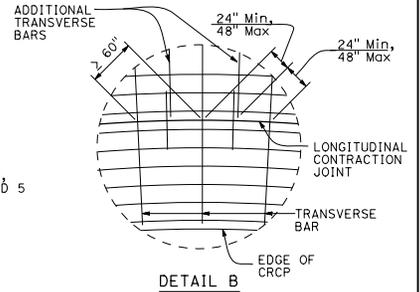
ALTERNATE
LONGITUDINAL CONSTRUCTION JOINT



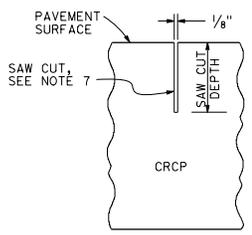
TIE BAR SPLICE COUPLER DETAIL



LONGITUDINAL CONTRACTION JOINT



DETAIL B



CONTRACTION JOINT SAW CUT DETAIL

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**CONTINUOUSLY REINFORCED
CONCRETE PAVEMENT
TIE BARS AND JOINT DETAILS**

NO SCALE

RSP P16 DATED OCTOBER 30, 2015 SUPPLEMENTS RSP P16 DATED JULY 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

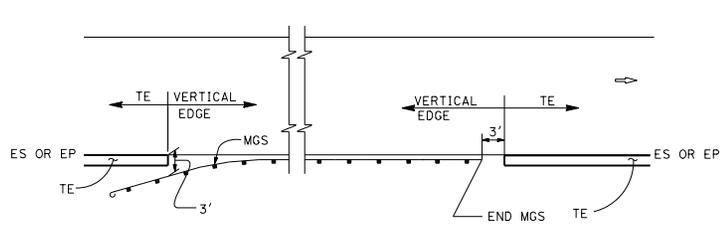
REVISED STANDARD PLAN RSP P16

2010 REVISED STANDARD PLAN RSP P16

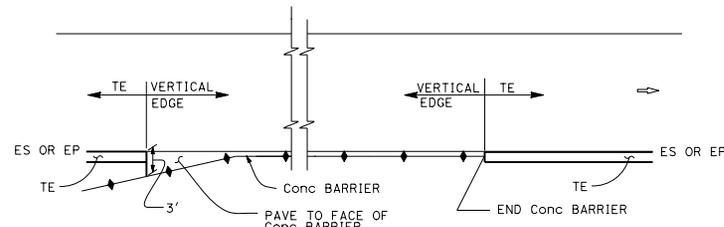
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER
 Srkanth N. Balasubramanian
 No. C56426
 Exp. 6-30-17
 CIVIL
 STATE OF CALIFORNIA

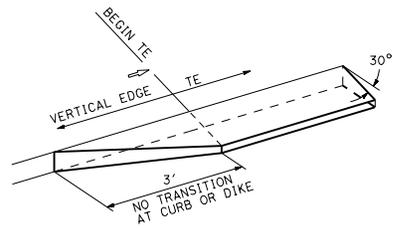
October 30, 2015
 PLANS APPROVAL DATE
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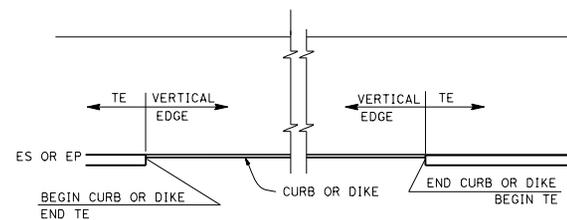
MGS



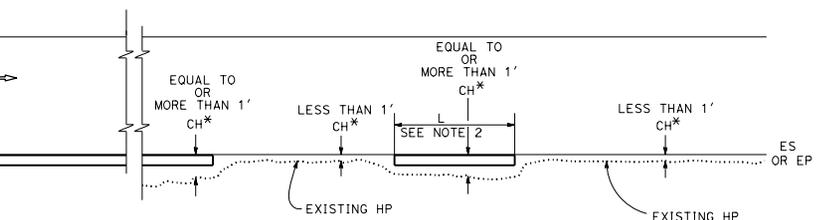
CONCRETE BARRIER



TRANSITION DETAIL FOR CONCRETE ONLY

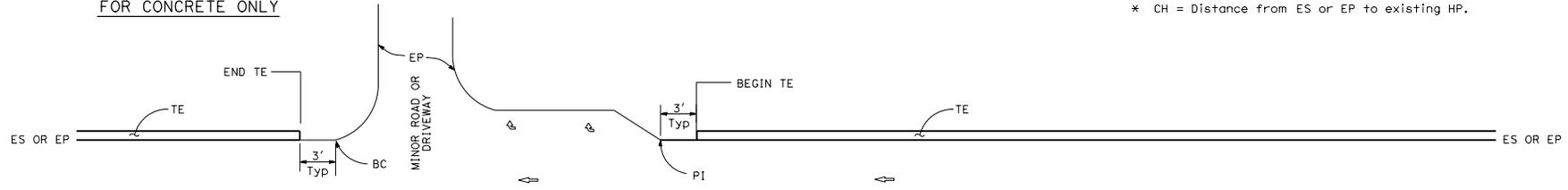


CURB OR DIKE

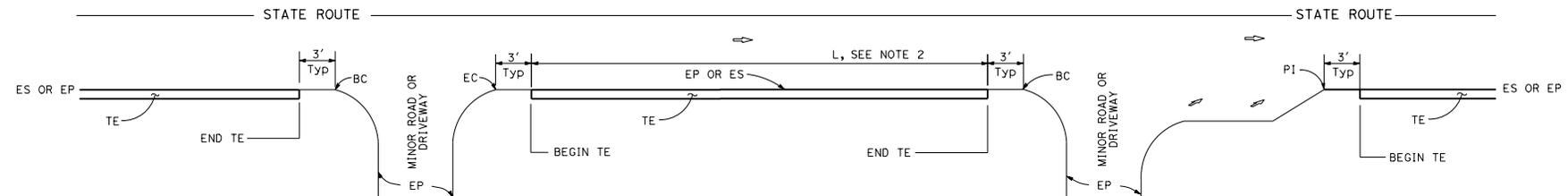


NARROW SIDE SLOPE

* CH = Distance from ES or EP to existing HP.



INTERSECTION



DRIVEWAY AND INTERSECTION

MINOR ROADWAY OR DRIVEWAY

PAVEMENT EDGE TREATMENTS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

NO SCALE

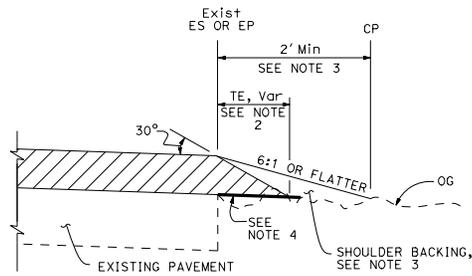
NOTES:

- For details not shown, see Revised Standard Plans RSP P75 and RSP P76.
- Tapered edge is optional when L is less than 30'.

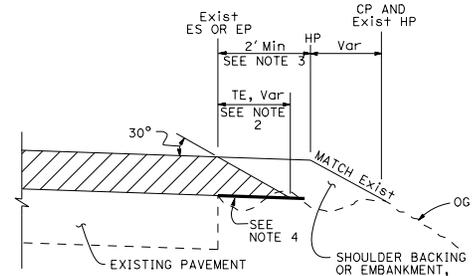
RSP P74 DATED OCTOBER 30, 2015 SUPERSEDES RSP P74 DATED NOVEMBER 15, 2013 AND RSP P74 DATED JANUARY 20, 2012 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP P74

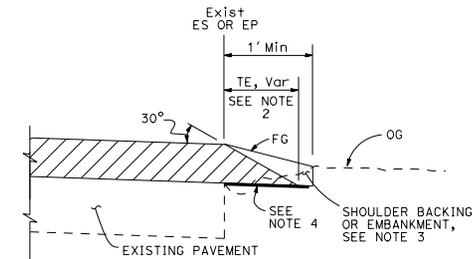
2010 REVISED STANDARD PLAN RSP P74



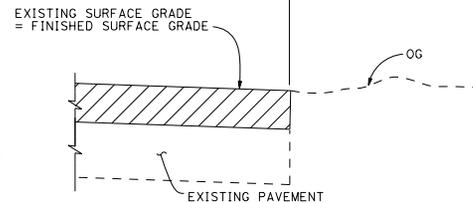
CASE A
Tapered Edge



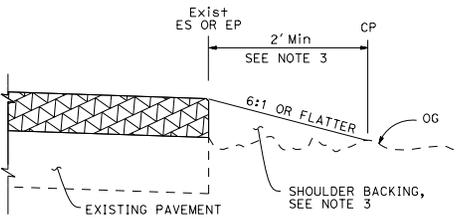
CASE B
Tapered Edge



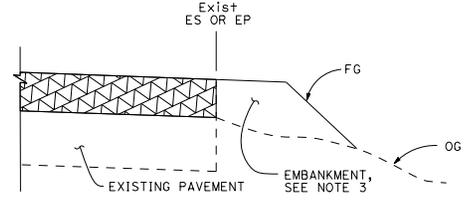
CASE C
Tapered Edge



CASE D
Vertical Edge



CASE E
Vertical Edge

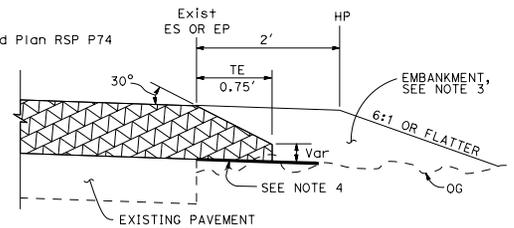


CASE F
Vertical Edge

* See Table A and Revised Std Plan RSP P74

NOTES:

1. For limits of tapered edge and vertical edge treatments, see Revised Standard Plan RSP P74.
2. Details shown for HMA overlay thickness less than 0.43'. See Detail "A" for HMA overlay thickness more than 0.43' or concrete overlay.
3. For locations and limits of shoulder backing or embankment see project plans.
4. Grade existing ground to place tapered edge, 1' minimum width
5. Tapered edge transverse joint must match overlay transverse joint. End of #6 longitudinal bar must be 2" ± 1/2" clear from transverse joint.
6. Tapered edge is not needed in the area of MGS, barrier, right turn lane and acceleration lane. See Revised Standard Plan RSP P74.



DETAIL "A"

For HMA overlay thickness more than 0.43' or concrete overlay

LEGEND:

- HMA OVERLAY
- HMA OR CONCRETE OVERLAY
- CONCRETE OVERLAY

ABBREVIATIONS:

- TE TAPERED EDGE
- TT TOTAL THICKNESS OF TE

TABLE A
EDGE TREATMENT FOR VARIOUS OVERLAY THICKNESS AND CONDITIONS

FIELD CONDITION	OVERLAY THICKNESS	
	LESS THAN 0.15'	0.15' OR MORE
Exist SLOPE 6:1 OR FLATTER	CASE E	CASE A
Exist SLOPE 3:1 TO 6:1	CASE E	CASE B
Exist SLOPE STEEPER THAN 3:1	CASE F	CASE F
CUT SECTION (REPLACE, COLD PLANE, MILL PAVEMENT)	CASE D	CASE C

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER
Srikanth N. Balasubramanian
No. C56426
Exp. 6-30-17
CIVIL
STATE OF CALIFORNIA

October 30, 2015
PLANS APPROVAL DATE

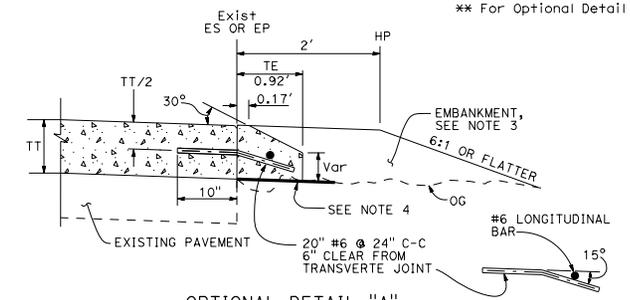
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TO ACCOMPANY PLANS DATED _____

ADDITIONAL HMA OR CONCRETE QUANTITIES FOR TE/SIDE/MILE

TYPICAL CROSS SECTION	TT	TOTAL ADDITIONAL MATERIAL FOR TE/SIDE/MILE		
		HMA (TON)	CONCRETE (CY)*	CONCRETE (CY)**
	0.15'	7.7	NA	NA
	0.20'	13.7	NA	NA
	0.30'	30.9	NA	NA
	0.40'	54.9	NA	NA
	0.45'	69.4	NA	NA
	0.50'	84.2	NA	NA
	0.60'	113.9	NA	NA
	0.70'	143.6	70.9	94.2
	0.80'	173.3	85.6	112.2
	0.90'	203.0	100.3	130.2
	1.00'	232.7	114.9	148.2
	1.10'	262.4	129.6	166.2
1.20'	292.1	144.3	184.2	

* For Detail "A"
** For Optional Detail "A"



OPTIONAL DETAIL "A"

For concrete overlay
See Note 5

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
PAVEMENT EDGE TREATMENTS- OVERLAYS

NO SCALE
RSP P75 DATED OCTOBER 30, 2015 SUPERSEDES RSP P75 DATED NOVEMBER 15, 2013 AND RSP P75 DATED JANUARY 20, 2012 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP P75

2010 REVISED STANDARD PLAN RSP P75

LEGEND:

-  HMA PAVEMENT
-  HMA OR CONCRETE PAVEMENT
-  CONCRETE PAVEMENT

ABBREVIATIONS:

- TE TAPERED EDGE
- TT TOTAL THICKNESS OF TE
- HW HINGE WIDTH, DISTANCE FROM ES OR EP TO HP

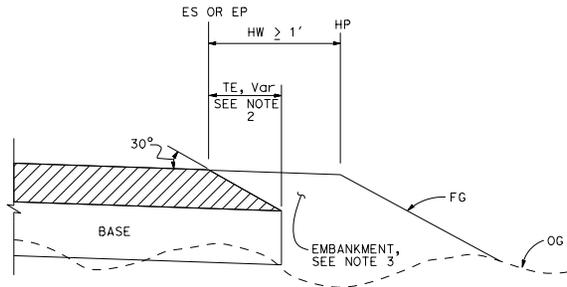
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER
Srikanth N. Balasubramanian
No. C56426
Exp. 6-30-17
CIVIL
STATE OF CALIFORNIA

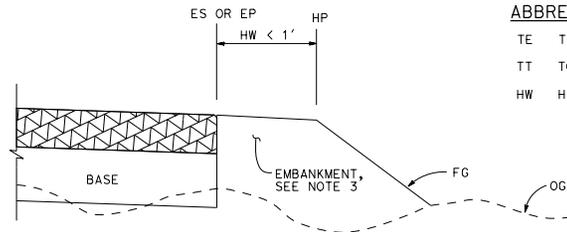
October 30, 2015
PLANS APPROVAL DATE

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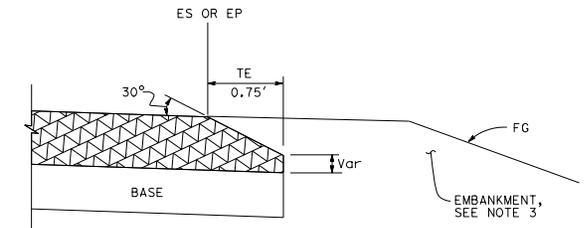
TO ACCOMPANY PLANS DATED _____



CASE K
Tapered Edge - Fill Section, HW > 1'

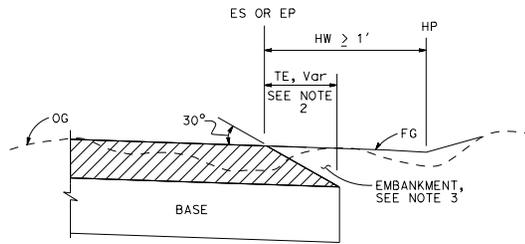


CASE L
Vertical Edge - Fill Section, HW < 1'

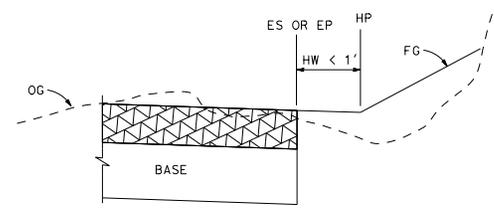


DETAIL "B"
For HMA pavement thickness more than 0.43' or concrete pavement

FILL SECTION

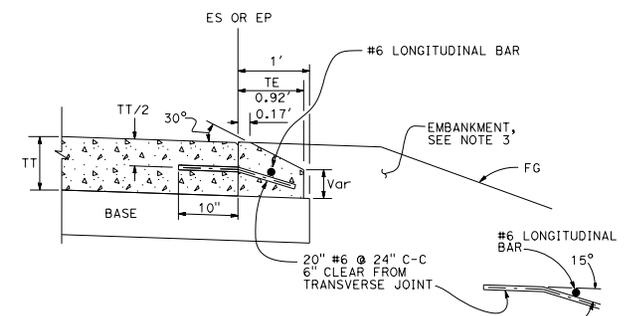


CASE M
Tapered Edge - Cut Section, HW > 1'



CASE N
Vertical Edge - Cut Section, HW < 1'

CUT SECTION



OPTIONAL DETAIL "B"
For concrete pavement
See Note 4

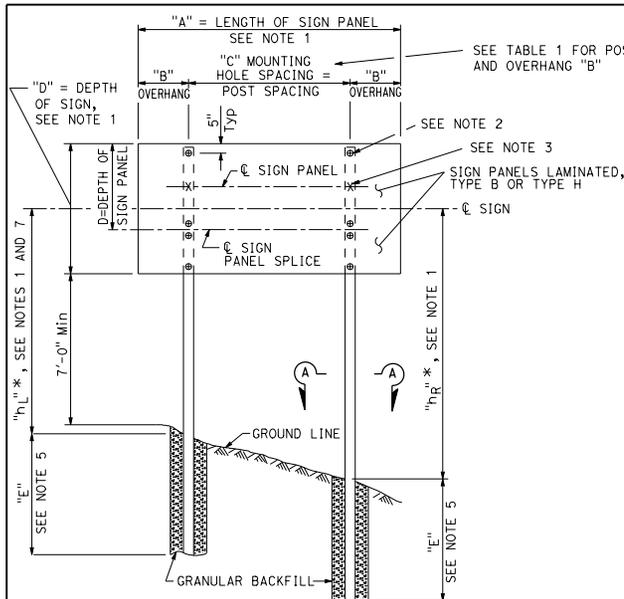
NOTES:

- For limits of tapered edge and vertical edge treatments, see Revised Standard Plan RSP P74
- Details shown for HMA pavement thickness less than 0.43'. See Detail "B" for HMA pavement thickness more than 0.43' or concrete pavement.
- For locations and limits of embankment see project plans.
- Tapered edge transverse joint must match pavement transverse joint. End of #6 longitudinal bar must be 2" ± 1/2" clear from transverse joint.
- Tapered edge is not needed in the area of MGS, barrier, right turn lane and acceleration lane. See Revised Standard Plan RSP P74.

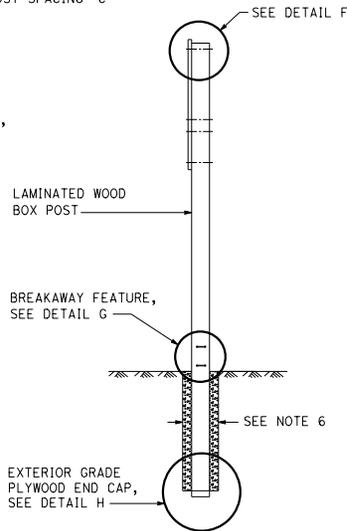
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**PAVEMENT EDGE TREATMENTS-
NEW CONSTRUCTION**
NO SCALE

RSP P76 DATED OCTOBER 30, 2015 SUPERSEDES RSP P76 DATED NOVEMBER 15, 2013 AND RSP P76 DATED JANUARY 20, 2012 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP P76



ELEVATION



SIDE VIEW

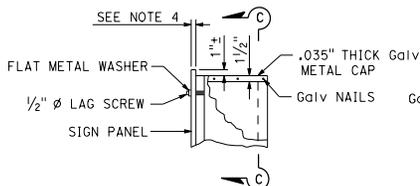
SIGN PANEL LENGTH (SEE NOTE 1)	SIGN PANEL OVERHANG	MOUNTING HOLE SPACING
"A"	"B"	"C"
8'-0"	1'-6"	5'-0"
9'-0"	1'-10"	5'-4"
10'-0"	2'-0"	6'-0"
11'-0"	2'-0"	7'-0"
12'-0"	2'-6"	7'-0"
13'-0"	2'-6"	8'-0"
14'-0"	2'-6"	9'-0"
15'-0"	3'-0"	9'-0"
16'-0"	3'-3"	9'-6"
17'-0"	3'-3"	10'-6"
18'-0"	3'-6"	11'-0"
19'-0"	3'-9"	11'-6"
20'-0"	4'-0"	12'-0"
21'-0"	4'-3"	12'-6"
22'-0"	4'-3"	13'-6"
23'-0"	4'-6"	14'-0"
24'-0"	4'-9"	14'-6"

TABLE 1

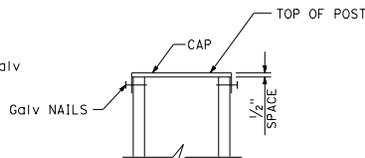
"h _L " OR "h _R " (IN FEET)	TOTAL SIGN AREA SQFT				
	40 TO 90	90+ TO 140	140+ TO 190	190+ TO 240	240+ TO
9'-0" TO 13'-0"	6'	6.5'	7.5'	8.5'	9'
13'-0"+ TO 17'-0"	6'	7'	8'	9'	10'
17'-0"+ TO 21'-0"	6'	7.5'	8'	9'	9'
21'-0"+ TO 26'-0"	7'	8'	9'		

TABLE 2

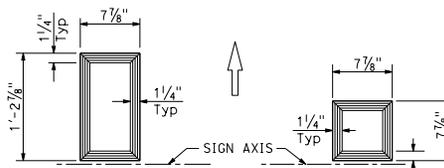
See Note 8



DETAIL F



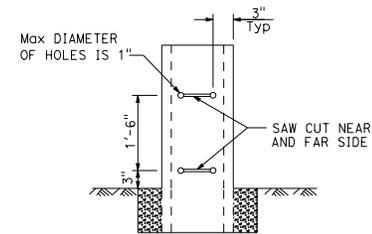
SECTION C-C



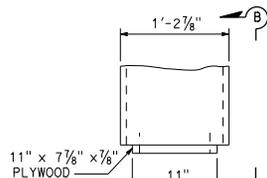
TYPE L POST

TYPE M POST

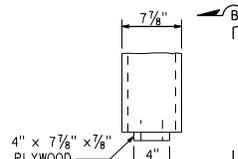
SECTION A-A



DETAIL G



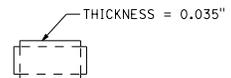
TYPE L POST



TYPE M POST

SECTION B-B

DETAIL H



GALV METAL CAP

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ROADSIDE SIGNS
LAMINATED WOOD BOX POST
TYPICAL INSTALLATION
DETAILS No. 3**

NO SCALE

RSP RS3 DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN RS3
DATED MAY 20, 2011 - PAGE 332 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP RS3

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

Stanley P. Johnson
REGISTERED CIVIL ENGINEER

October 30, 2015
PLANS APPROVAL DATE

Stanley P. Johnson
No. C67935
Exp. 3-31-16
CIVIL
STATE OF CALIFORNIA

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NOTES:

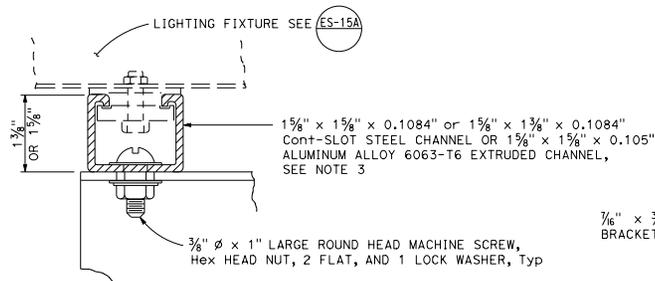
- See Project Plans for:
Location of each sign.
Length of sign panel "A".
Depth of sign "D".
Height "h_L" and "h_R" of centerline of sign above ground line at each post.
Type of post, L and M.
See Standard Plan RS1 for other details.
- "e" Indicates location of 1/2" lag screws and existing holes in panels. Lag screws are to be embedded at least 1" into post using 3/8" diameter pilot holes.
- "x" Indicates location of additional 1/2" lag screws required when the depth of sign panel (d) and the length of sign panel (A) are as follows:

A	d
17'-0" to 24'-0"	5'-0"
19'-0" to 24'-0"	4'-6"
21'-0" to 24'-0"	4'-0"
24'-0"	3'-6"
- Type B laminated sign panels are 1" nominal thick for sign lengths of 15'-0" and less. Panels over 15'-0" in length and Type H laminated sign panels are 2 1/2" nominal thick.
- Embedment "E" for Type L post shall conform to the requirements in Table 2. Embedment for Type M posts shall be 6'-0" minimum.
- Diameter of post holes for Type L posts shall be at least 2'-6". Diameter of post holes for Type M posts shall be at least 2'-0".
- Dimensions shown on project plans are for fabrication. During installation adjust these dimensions to provide A level sign approximately 7'-0" above roadway shoulder.
- Minimum post embedment "E" for Type L post.

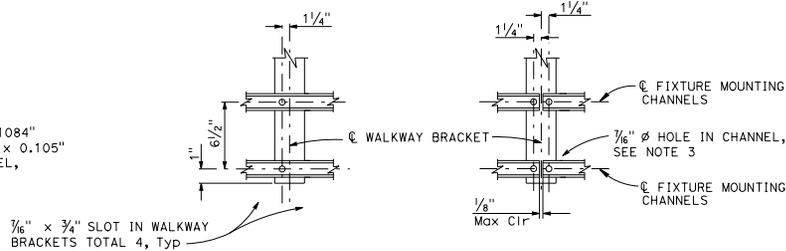
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Jeffrey B. Woody
 REGISTERED CIVIL ENGINEER
 No. C41260
 Exp. 3-31-17
 CIVIL
 STATE OF CALIFORNIA

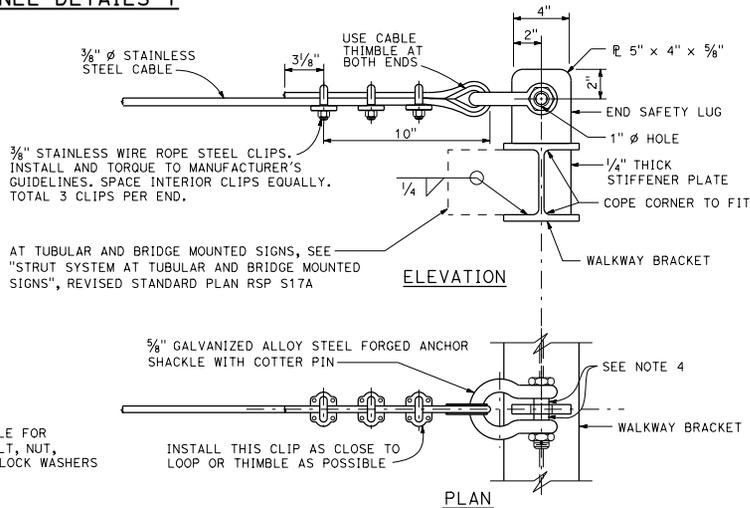
October 30, 2015
 PLANS APPROVAL DATE
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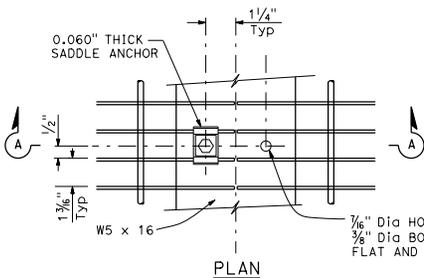
LIGHTING FIXTURE MOUNTING CHANNEL DETAILS 1



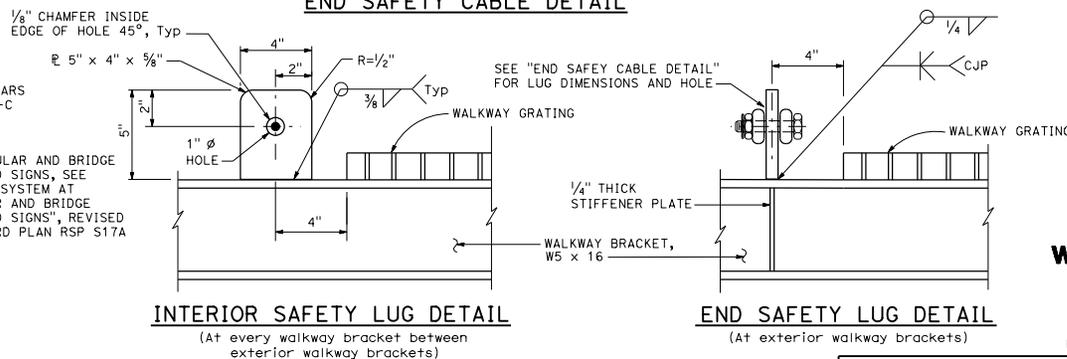
LIGHTING FIXTURE MOUNTING CHANNEL DETAILS 2



END SAFETY CABLE DETAIL



SECTION A-A
WALKWAY GRATING DETAILS
Shown at splice



INTERIOR SAFETY LUG DETAIL
(At every walkway bracket between exterior walkway brackets)

END SAFETY LUG DETAIL
(At exterior walkway brackets)

NOTES:

1. Welded type grating shall have 1/4" x 1/8" bearing bars at 1 3/8" centers with 1/4" diameter (or equal) cross bars at 4" centers. If mechanical lock grating is used, it shall be equal in strength to the welded type. Alternate hold-down clips may be submitted for approval.
2. Walkway grating and light fixture mounting channels to be continuous (no splices) over as many walkway brackets as practical and consistent with fabrication, ease of handling and assembly.
3. Contractor may substitute 1 5/8" x 1 5/8" x .1084" cont-slot steel channel with pre-punched slots not larger than 1/2" x 3". Slots shall be at bottom of channel and shall be parallel to channel. Slots shall be spaced not closer than 4" center to center.
4. Place an equal amount of washers on each side to align cable with end lug without restricting shackle bolt rotation or contacting cable.

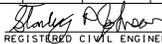
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
OVERHEAD SIGNS
WALKWAY DETAILS No. 2

NO SCALE
RSP S17 DATED OCTOBER 30, 2015 SUPERSEDES
STANDARD PLAN S17 DATED MAY 20, 2011 -
PAGE 350 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP S17

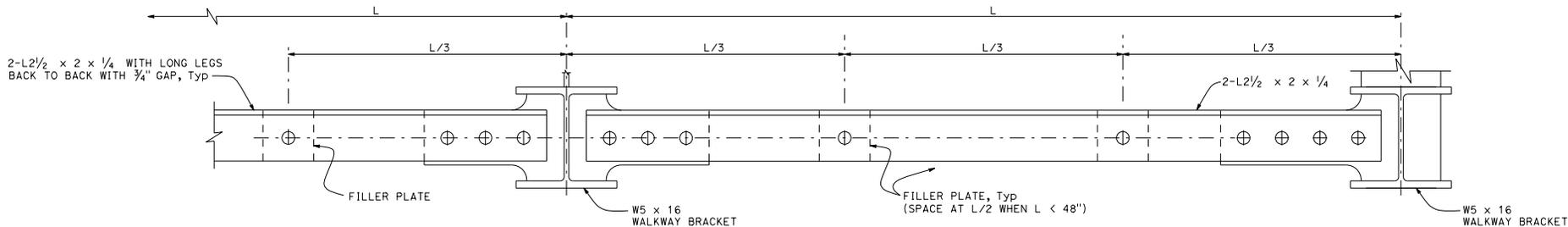
2010 REVISED STANDARD PLAN RSP S17

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS


 REGISTERED CIVIL ENGINEER
 October 30, 2015
 PLANS APPROVAL DATE
 Stanley P. Johnson
 No. CS795
 Exp. 3-31-16
 CIVIL
 STATE OF CALIFORNIA

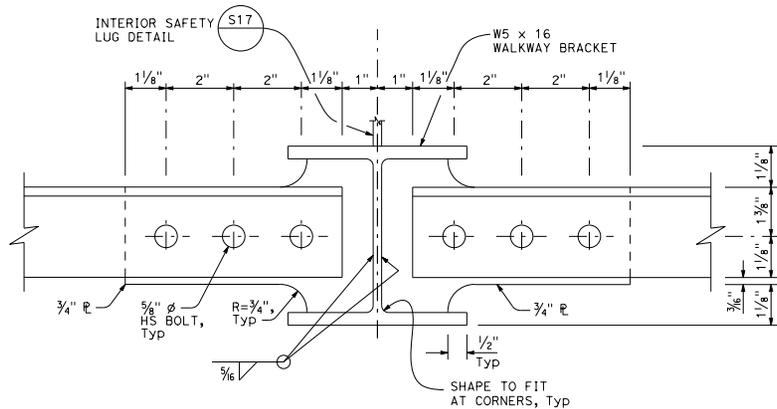
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TO ACCOMPANY PLANS DATED _____

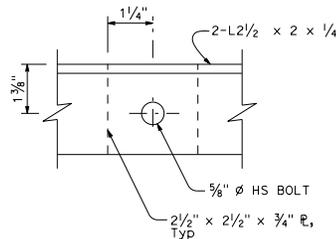


STRUT SYSTEM AT TUBULAR AND BRIDGE MOUNTED SIGNS

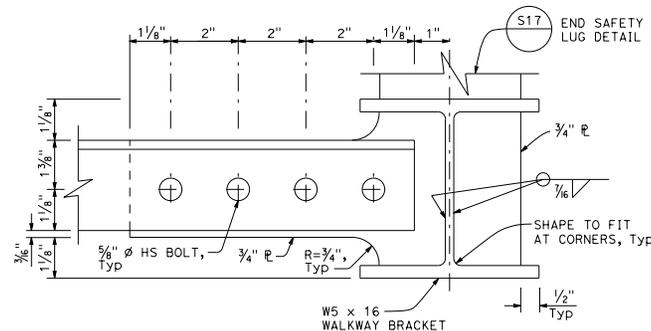
(Continuous between end safety lug locations)



INTERIOR SAFETY LUG LOCATION



FILLER PLATE



END SAFETY LUG LOCATION

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**OVERHEAD SIGNS
WALKWAY DETAILS No. 3**

NO SCALE

RSP S17A DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN S17A
DATED MAY 20, 2011 - PAGE 351 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP S17A

2010 REVISED STANDARD PLAN RSP S17A

NOTES:

See Revised Standard Plan RSP T9 for tables.

Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.

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

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

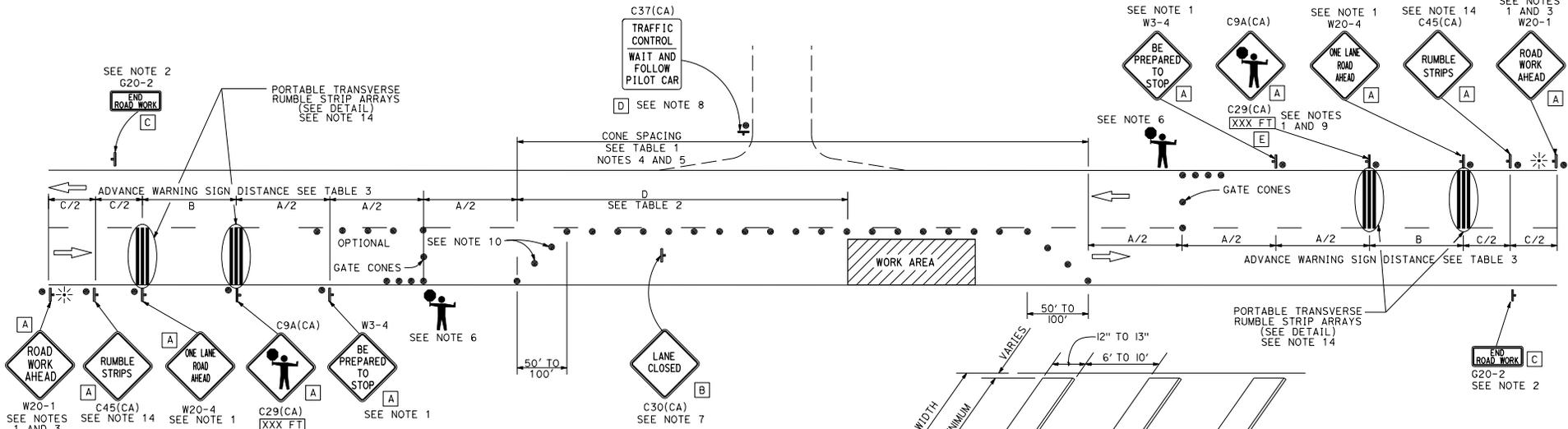
Devinder Singh
REGISTERED CIVIL ENGINEER

October 30, 2015
PLANS APPROVAL DATE

Devinder Singh
No. C50470
Exp. 6-30-17
CIVIL

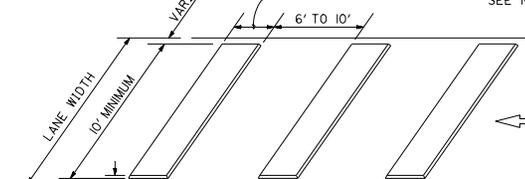
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TYPICAL LANE CLOSURE WITH REVERSIBLE CONTROL



NOTES:

- Each advance warning sign in each direction of travel shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
- A G20-2 "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane control unless the end of work area is obvious, or ends within a larger project's limits.
- If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT _____ MILES", use a W20-4 sign for the first advance warning sign.
- All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
- Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
- Additional advance flaggers may be required. Flagger should stand in a conspicuous place, be visible to approaching traffic as well as approaching vehicles after the first vehicle has stopped. During the hours of darkness, the flagging station and flagger shall be illuminated and clearly visible to approaching traffic. The illumination footprint of the lighting on the ground shall be at least 20' in diameter. Place a minimum of four cones at 50' intervals in advance of flagger station as shown.
- Place C30(CA) "LANE CLOSED" sign at 500' to 1000' intervals throughout extended work areas. They are optional if the work area is visible from the flagger station.
- When a pilot car is used, place a C37(CA) "TRAFFIC CONTROL-WAIT AND FOLLOW PILOT CAR" sign with black legend on white background at all intersections, driveways and alleys without a flagger within traffic control area. Signs shall be clean and visible at all times. Where traffic can not be effectively self-regulated, at least one flagger shall be used at each intersection within traffic control area.
- An optional C29(CA) sign may be placed below the C9A(CA) sign.
- Either traffic cones or barricades shall be placed on the taper. Barricades shall be Type I, II, or III.
- The color of the portable transverse rumble strips shall be black or orange. Use 2 arrays, each array shall consist of 3 rumble strips.
- Portable transverse rumble strips shall not be placed on sharp horizontal or vertical curves nor shall they be placed through pedestrian crossings.
- If the portable transverse rumble strips become out of alignment (skewed) by more than 6 inches, measured from one end to the other, they shall be readjusted to bring the placement back to the original location.
- Portable transverse rumble strips are not required if any one of the following conditions is satisfied:
 - Work duration occupies a location for four hours or less
 - Posted speed limit is below 45 MPH
 - Work is of emergency nature
 - Work zone is in snow or icy weather conditions



PORTABLE TRANSVERSE RUMBLE STRIP ARRAY DETAIL

SIGN PANEL SIZE (Min)

- A 48" x 48"
- B 30" x 30"
- C 36" x 18"
- D 36" x 42"
- E 20" x 7"

LEGEND

- TRAFFIC CONE
- ⊥ TEMPORARY TRAFFIC CONTROL SIGN
- ⊛ PORTABLE FLASHING BEACON
- ⊠ FLAGGER

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON TWO LANE CONVENTIONAL HIGHWAYS

NO SCALE

RSP T13 DATED OCTOBER 30, 2015 SUPERSEDES RSP T13 DATED OCTOBER 17, 2014, RSP T13 DATED JULY 18, 2014 AND RSP T13 DATED APRIL 19, 2013 AND STANDARD PLAN T13 DATED MAY 20, 2011 - PAGE 241 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T13

2010 REVISED STANDARD PLAN RSP T13