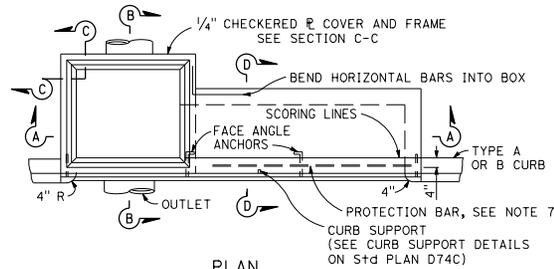
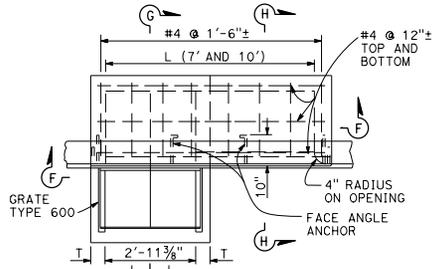


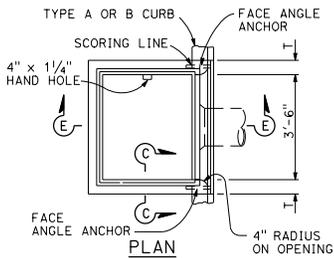
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May 20, 2011 PLANS APPROVAL DATE					
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					



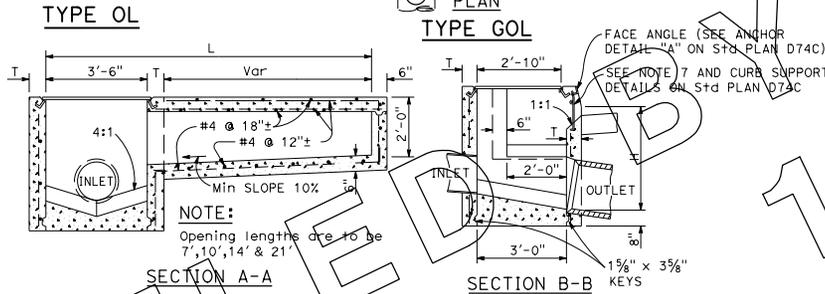
PLAN



PLAN



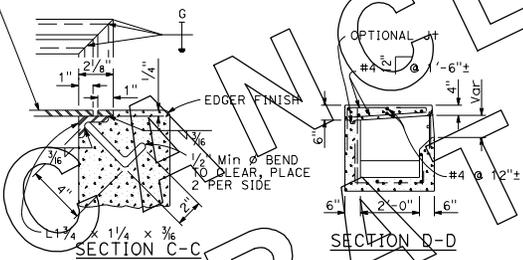
PLAN



SECTION A-A

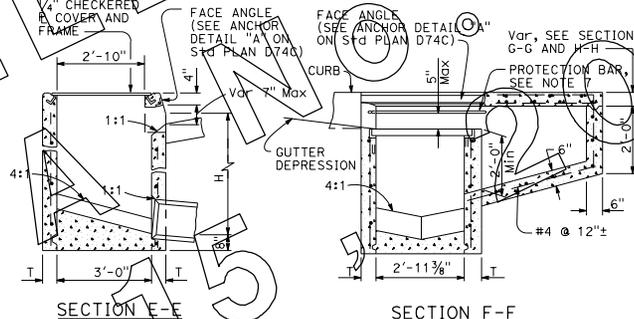
SECTION B-B

PROVIDE ONE 3/8" x 1/2" BRASS FLATHEAD SCREW IN EACH CORNER OF COVER TOTAL 4



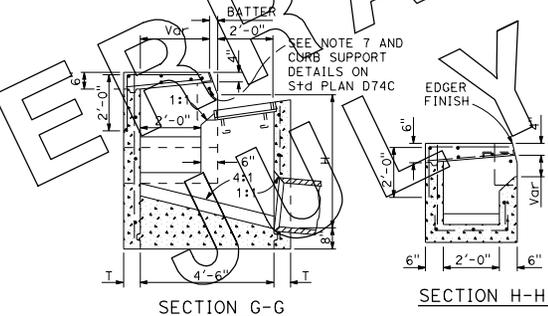
SECTION C-C

SECTION D-D



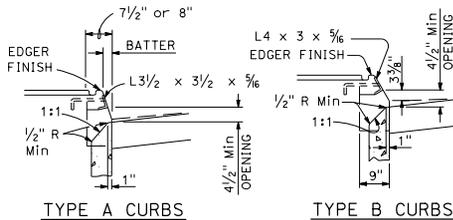
SECTION E-E

SECTION F-F



SECTION G-G

SECTION H-H



TYPE A CURBS

TYPE B CURBS

CURB OPENING DETAILS

NOTES:

- "H" is the difference in elevation between the outlet pipe flow line and the normal gutter grade line undepressed at the curb face.
- For "T" wall thickness, see Table A below.
- Height of curb opening will vary with the type of curb and the depth of the local depression.
- 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 bars @ 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 30". Where "H" is 30" 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 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.
- Except for inlets used as junction boxes, basin floor shall have a minimum slope of 4:1 from all directions toward outlet pipe and shall have a wood trowel finish.
- See Standard Plans D77A and 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 connections conforming to details for Type GCP Inlet shown on Standard Plan D75B. See Standard Specifications for mortar composition.

**TABLE A
CONCRETE QUANTITIES**

TYPE	H=3'-0" TO 8'-0" (T=6")		H=8'-1" TO 20'-0" (T=8")	
	H=3'-0"	ADDITIONAL PCC PER FOOT (CY)	H=8'-1"	ADDITIONAL PCC PER FOOT (CY)
OS	1.41	0.278	3.81	0.387
OL-7	1.92	0.278	4.29	0.387
OL-10	2.39	0.278	4.77	0.387
OL-14	3.06	0.278	5.45	0.387
OL-21	4.42 *	0.278	6.78	0.387
GOL-7	2.33	0.313	4.96	0.434
GOL-10	2.84	0.313	5.47	0.434

* Based on H=3.1'

Table based on 8" floor slab, no deduction for pipe openings, 7" curb openings, 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, different curb types or different height of curb openings.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DRAINAGE INLETS

NO SCALE

D72

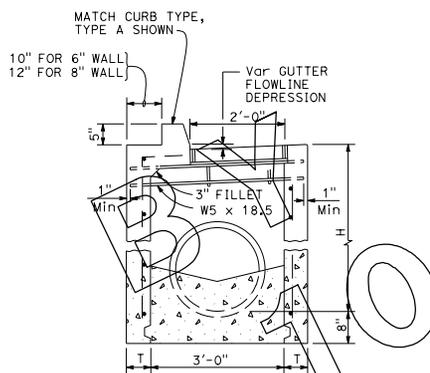
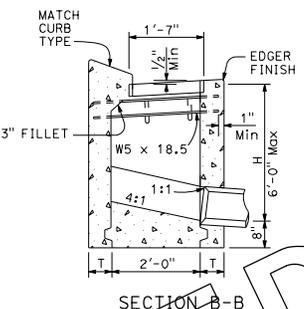
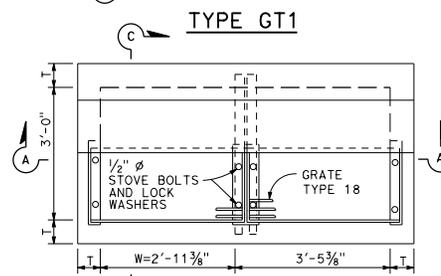
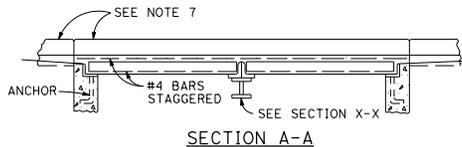
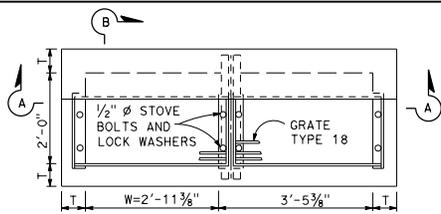
2010 STANDARD PLAN D72

155

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

REGISTERED CIVIL ENGINEER
 Glenn DeCau
 No. 94547
 Exp. 9-30-11
 CIVIL
 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.



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 bars @ 1'-6" ± 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 requirement. See Standard Plan D74C for step details.
- Pipe(s) can be placed in any wall.
- Curb section shall match adjacent curb.
- Basin floors shall have wood trowel finish and a minimum slope of 4:1 from all directions toward outlet pipe.
- W = 2'-11 3/8" for one grate. Add 3'-5 3/8" for additional grates in tandem.
- See Standard Plans D77A and 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 inlet on Standard Plan D75B. See Standard Specifications for mortar composition.

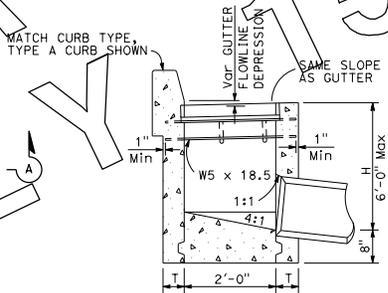
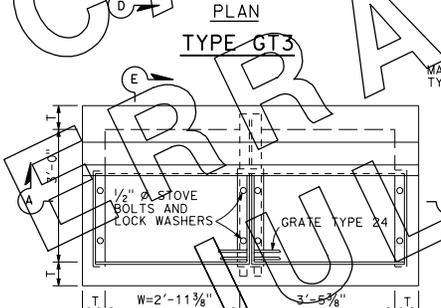
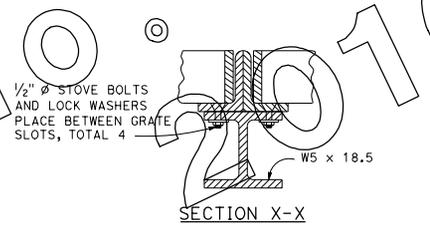
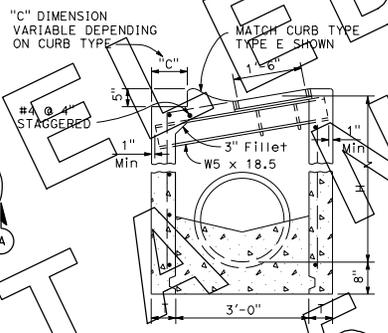
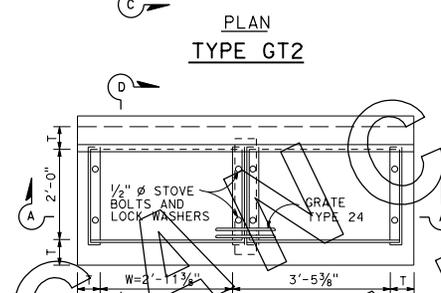


TABLE A
CONCRETE QUANTITIES

TYPE	H=3'-0" TO 8'-0" (T=6")		H=8'-1" TO 20'-0" (T=8")	
	H=3'-0" CY	ADDITIONAL PCC PER FOOT CY	H=8'-1" CY	ADDITIONAL PCC PER FOOT CY
GT1	1.74	0.348	SEE NOTE A	SEE NOTE A
GT2	2.11	0.385	5.40	0.530
GT3	1.73	0.348	SEE NOTE A	SEE NOTE A
GT4	2.18	0.385	5.41	0.530

TABLE BASED ON 8" FLOOR SLAB, NO DEDUCTION FOR PIPE OPENINGS, 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.

NOTE A: Maximum allowable height = 6'-0".

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

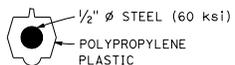
DRAINAGE INLETS

NO SCALE

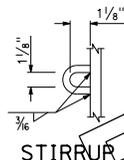
D74A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL SHEETS

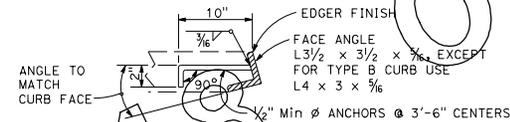
Glenn DeCou
 REGISTERED CIVIL ENGINEER
 May 20, 2011
 PLANS APPROVAL DATE
 Glenn DeCou
 024547
 EXPIRES 9-30-11
 REGISTERED PROFESSIONAL ENGINEER
 CIVIL
 STATE OF CALIFORNIA
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



TYPICAL SECTION
(Step insert)



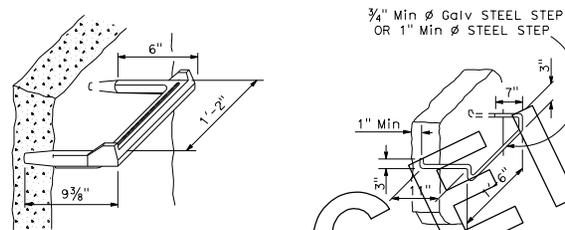
STIRRUP



FACE ANGLE ANCHOR DETAIL "A"

LENGTH OF CURB OPENING	No. OF ANCHORS
3'-6" OR LESS	2
7'-0"	3
10'-0"	4
14'-0"	5
21'-0"	7

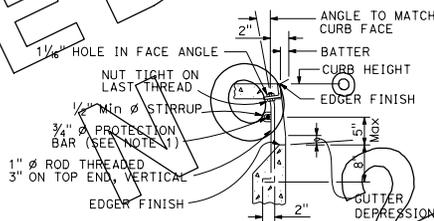
FACE ANGLE DETAIL "A"



STEP INSERT

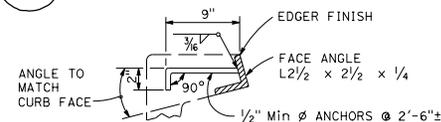
BAR STEP

STEP DETAILS



CURB SUPPORT DETAIL

See Note 2



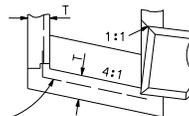
FACE ANGLE ANCHOR DETAIL "B"

NOTES:

- When shown on the project plans, place a 3/4" ϕ plain round protection bar horizontally across length of the opening and bend back 4" into the inlet wall on each side.
- Curb supports shall be evenly spaced and minimal in number such that maximum span of unsupported curb is 7'-0".



ALTERNATIVE HALF ROUND BOTTOM



ALTERNATIVE REINFORCED BOTTOM

#4 @ 1'-0" CENTERS
Min Tot 3

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
DRAINAGE INLET DETAILS

NO SCALE

D74C

2010 STANDARD PLAN D74C

160

TO ACCOMPANY PLANS DATED _____

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

Glenn DeCout
 REGISTERED CIVIL ENGINEER
 October 19, 2012
 PLANS APPROVAL DATE
 Glenn DeCout
 024547
 CIVIL
 9-30-13
 REGISTERED PROFESSIONAL ENGINEER
 STATE OF CALIFORNIA

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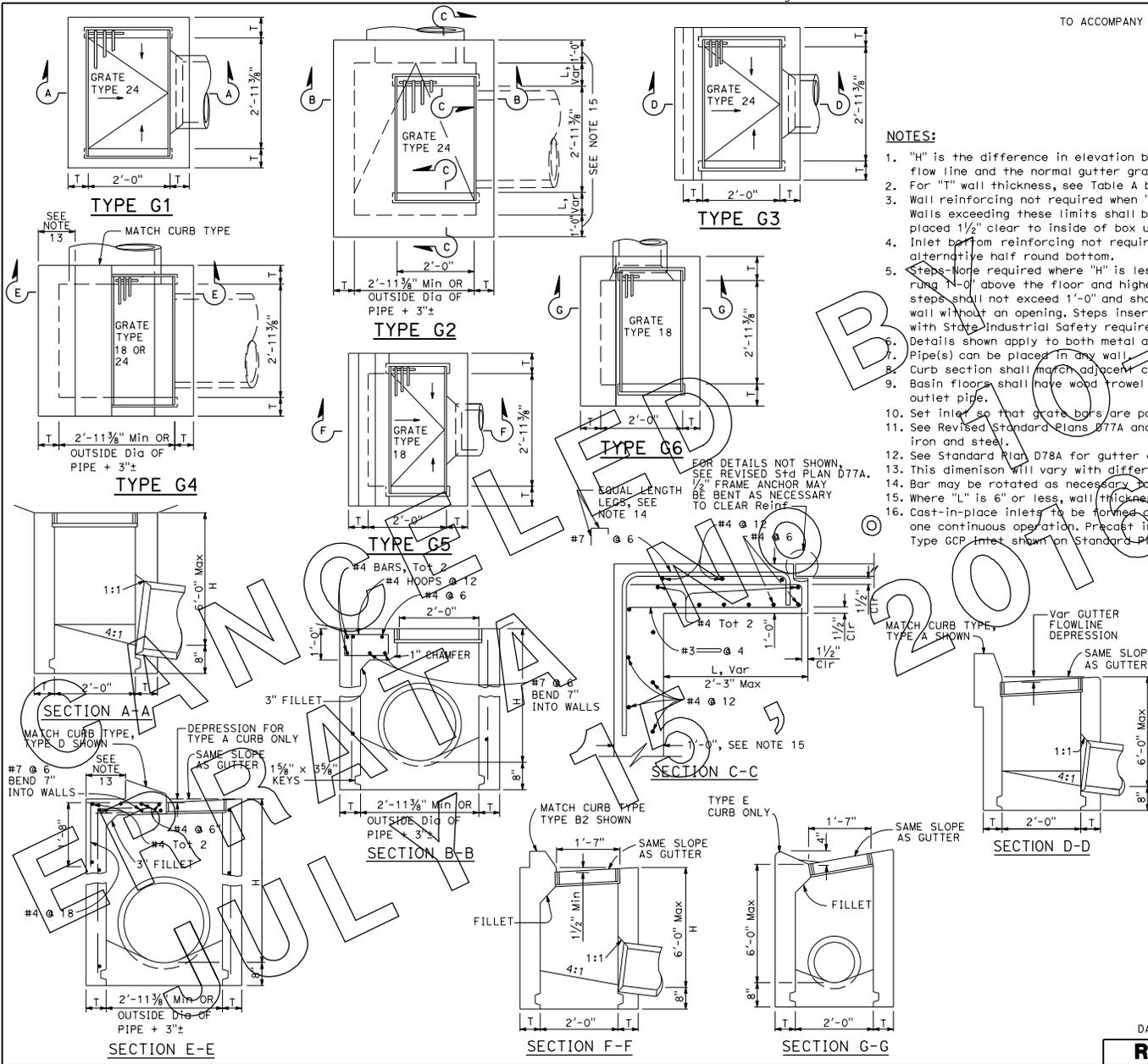


TABLE A
CONCRETE QUANTITIES

TYPE	H=3'-0" TO 8'-0" (T=6")		H=8'-1" TO 20'-0" (T=8")	
	H=3'-0" (CY)	ADDITIONAL PCC PER FOOT (CY)	H=8'-1" (CY)	ADDITIONAL PCC PER FOOT (CY)
G-1	0.95	0.220	See Note A	SEE NOTE A
G-2*	1.31	0.255	3.50	0.357
G-3	1.03	0.220	See Note A	SEE NOTE A
G-4* (TYPE 24)	1.27	0.255	3.48	0.357
G-4* (TYPE 18)	1.30	0.255	3.50	0.357
G-5	1.02	0.220	SEE NOTE A	SEE NOTE A
G-6	1.04	0.220	SEE NOTE A	SEE NOTE A

TABLE BASED ON 8" FLOOR SLAB. NO DEDUCTIONS ARE TO BE MADE TO THESE QUANTITIES BECAUSE OF PIPE OPENINGS, DIFFERENT FLOOR ALTERNATIVES OR DIFFERENT CURB TYPES. * QUANTITIES FOR TYPE G-2 AND G-4 INLETS BASED ON THE MINIMUM INTERIOR DIMENSIONS.

NOTE A:
Maximum allowable height 6'-0".

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
DRAINAGE INLETS
NO SCALE

RSP D73 DATED OCTOBER 19, 2012 SUPERSEDES STANDARD PLAN D73
DATED MAY 20, 2011 - PAGE 156 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D73

2010 REVISED STANDARD PLAN RSP D73

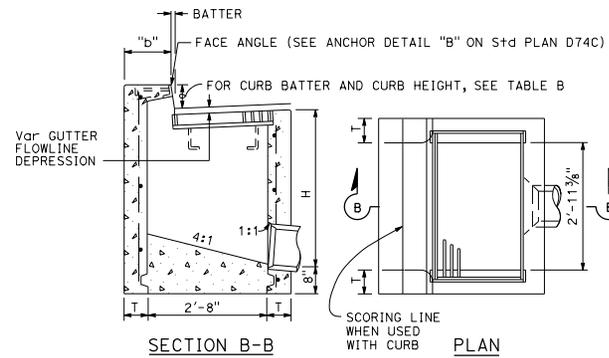
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS



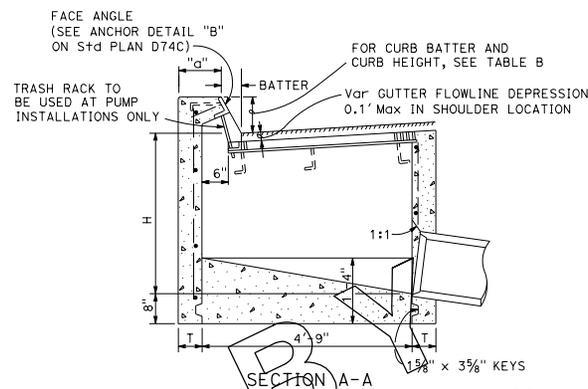
 REGISTERED CIVIL ENGINEER
 Carl W. Dunn
 No. 73976
 Exp. 6-30-16
 STATE OF CALIFORNIA

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.

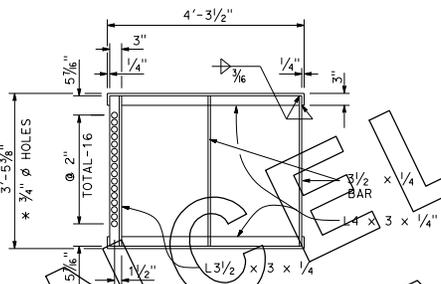
TO ACCOMPANY PLANS DATED



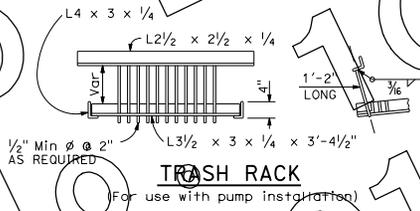
TYPE GO



SECTION A-A



GRATE FRAME FOR TYPE GDO INLET



TRASH RACK

TABLE A
CONCRETE QUANTITIES

TYPE	H=3'-0" TO 8'-0" (T=6")		H=8'-1" TO 20'-0" (T=8")	
	ADDITIONAL PCC PER FOOT (CY)			
GO	0.24	0.245	3.39	0.346
GDO	0.62	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.

TABLE B

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"

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 grade 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.

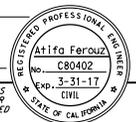
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
DRAINAGE INLETS
NO SCALE

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

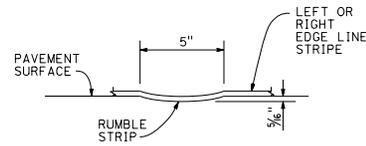
REVISED STANDARD PLAN RSP D74B

2010 REVISED STANDARD PLAN RSP D74B

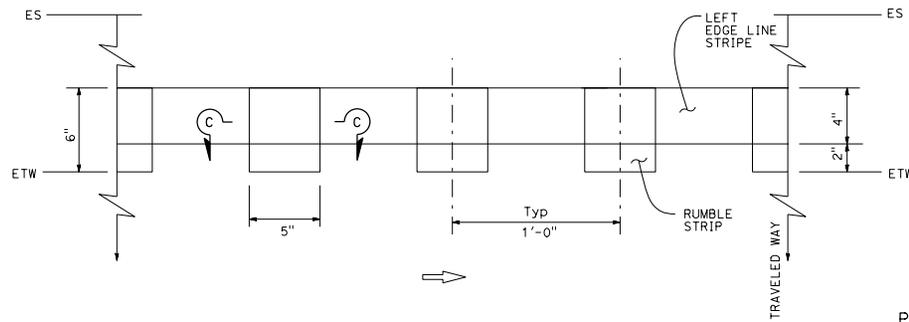
Dist*	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
<i>Atifa Ferouz</i> REGISTERED CIVIL ENGINEER					
July 15, 2016 PLANS APPROVAL DATE					
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					



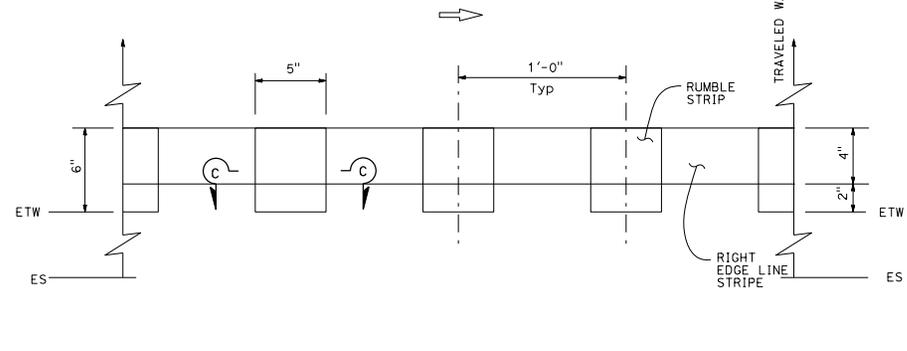
TO ACCOMPANY PLANS DATED _____



SECTION C-C



EDGE LINE RUMBLE STRIP PLACEMENT
LEFT OF DIRECTION OF TRAVEL



EDGE LINE RUMBLE STRIP PLACEMENT
RIGHT OF DIRECTION OF TRAVEL

TYPICAL EDGE LINE RUMBLE STRIP PLACEMENT

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**EDGE LINE RUMBLE STRIP
DETAILS
GROUND-IN INDENTATIONS**

NO SCALE

RSP A40C DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A40C

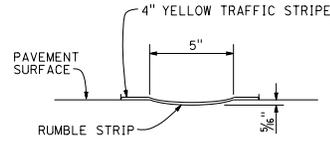
2010 REVISED STANDARD PLAN RSP A40C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
<i>Atifa Ferouz</i> REGISTERED CIVIL ENGINEER					
July 15, 2016 PLANS APPROVAL DATE					
No. C80402 Exp. 3-31-17 CIVIL					
<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>					

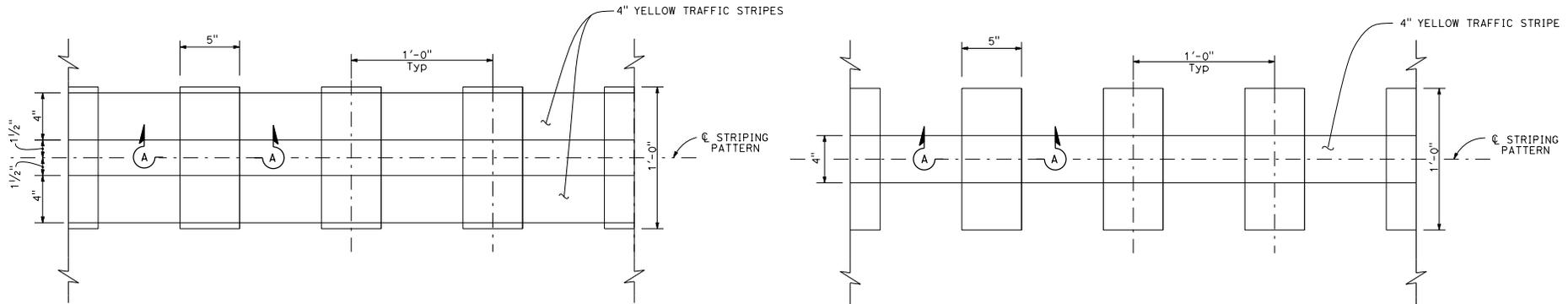
TO ACCOMPANY PLANS DATED _____

NOTE:

Detail 21 and Detail 5 traffic stripes shown, see project plans for traffic stripe details.



SECTION A-A



PLAN

RUMBLE STRIP PLACEMENT IN NO PASSING ZONE

RUMBLE STRIP PLACEMENT IN PASSING ZONE

TYPICAL CENTERLINE RUMBLE STRIP PLACEMENT

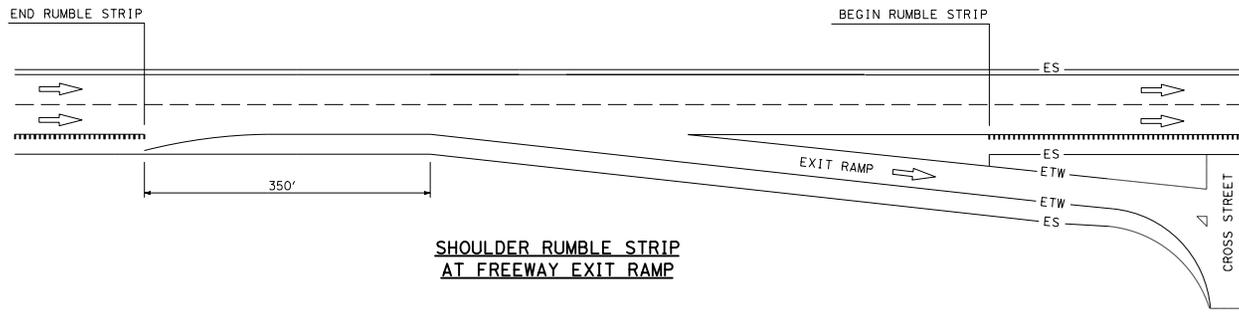
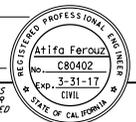
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**CENTERLINE RUMBLE STRIP
DETAILS
GROUND-IN INDENTATIONS**
NO SCALE

RSP A400 DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

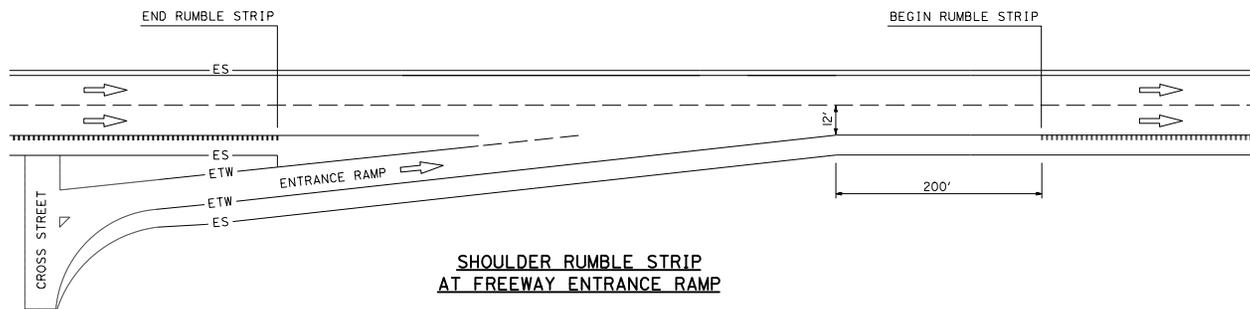
REVISED STANDARD PLAN RSP A40D

2010 REVISED STANDARD PLAN RSP A40D

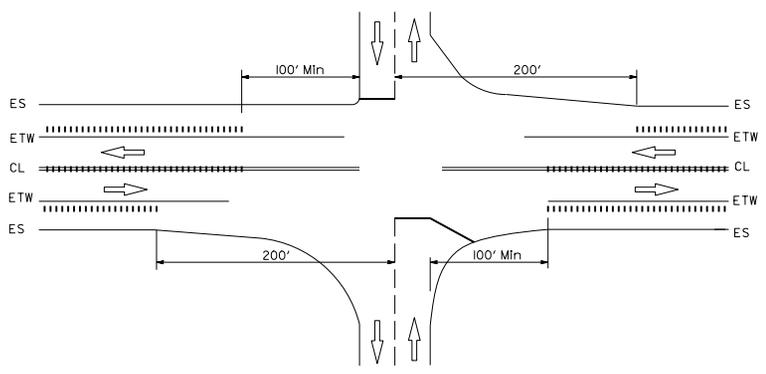
Dist	County	Route	Post Miles Total Project	Sheet No.	Total Sheets
<i>Atifa Ferouz</i> REGISTERED CIVIL ENGINEER					
July 15, 2016 PLANS APPROVAL DATE					
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					
TO ACCOMPANY PLANS DATED _____					



**SHOULDER RUMBLE STRIP
AT FREEWAY EXIT RAMP**



**SHOULDER RUMBLE STRIP
AT FREEWAY ENTRANCE RAMP**



**CENTERLINE AND SHOULDER RUMBLE STRIP
AT GRADE INTERSECTION**

LEGEND
 RUMBLE STRIP (GROUND-IN)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**RUMBLE STRIP PLACEMENT AT
FREEWAY EXIT RAMP,
FREEWAY ENTRANCE RAMP, AND
INTERSECTIONS**

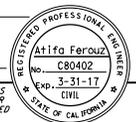
NO SCALE

RSP A40E DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

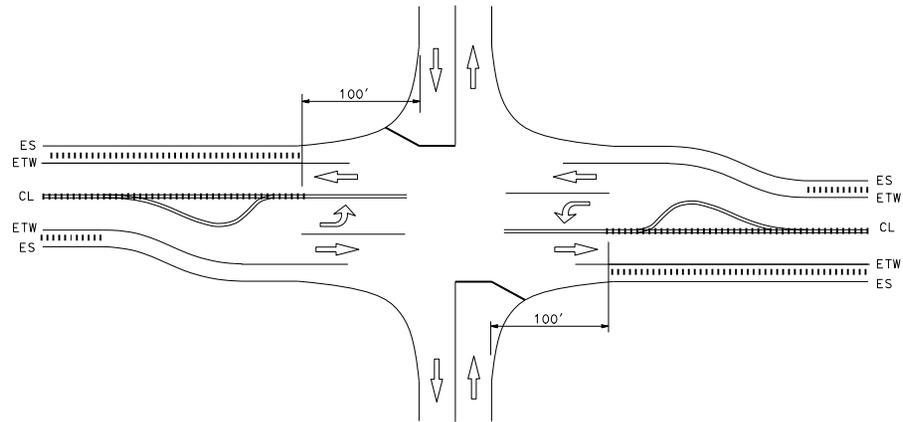
REVISED STANDARD PLAN RSP A40E

2010 REVISED STANDARD PLAN RSP A40E

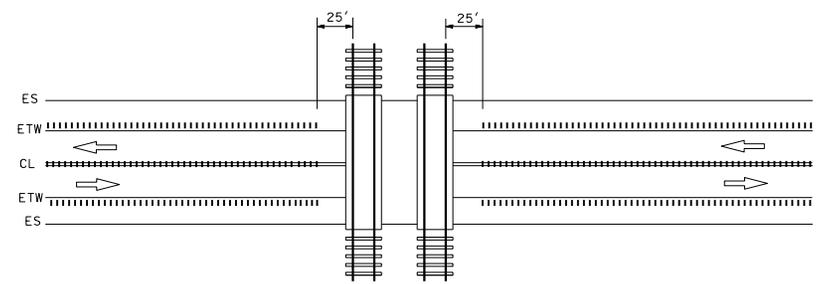
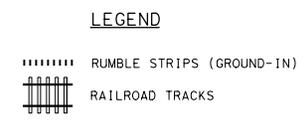
Dist	County	Route	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
<i>Atifa Ferouz</i> REGISTERED CIVIL ENGINEER					
July 15, 2016 PLANS APPROVAL DATE					
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					



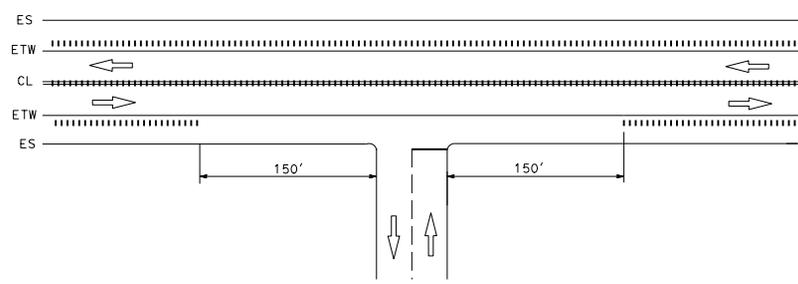
TO ACCOMPANY PLANS DATED _____



**CENTERLINE AND SHOULDER RUMBLE STRIPS
AT INTERSECTION WITH LEFT TURN POCKETS**



**CENTERLINE AND SHOULDER RUMBLE STRIPS
AT RAILROAD CROSSING**



**CENTERLINE AND SHOULDER RUMBLE STRIPS
AT DRIVEWAY/PRIVATE ROAD APPROACH**

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**RUMBLE STRIP PLACEMENT AT
INTERSECTIONS WITH LEFT TURN POCKETS,
RAILROAD CROSSINGS,
PRIVATE ROADS, AND MAJOR DRIVEWAYS**

NO SCALE

RSP A40F DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A40F

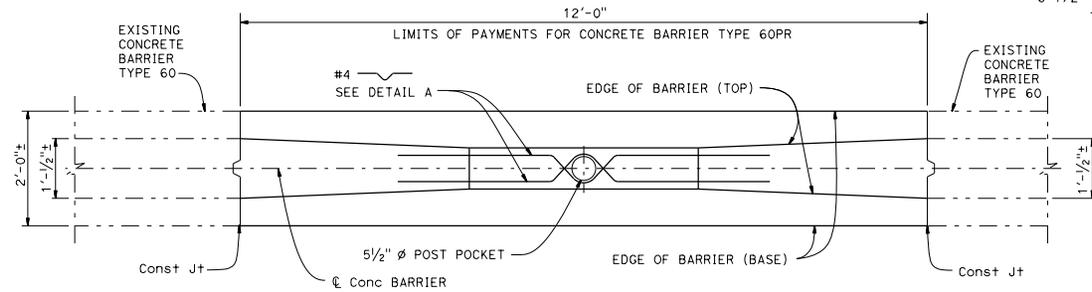
2010 REVISED STANDARD PLAN RSP A40F

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

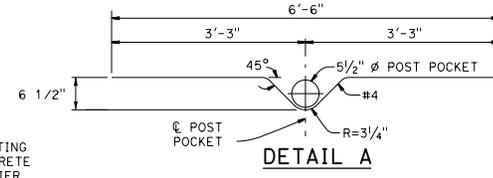
Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 No. C57193
 Exp. 3-31-18
 CIVIL
 STATE OF CALIFORNIA

July 15, 2016
 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.

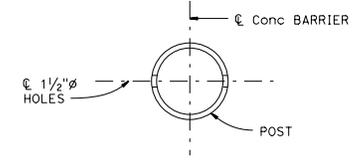
TO ACCOMPANY PLANS DATED _____



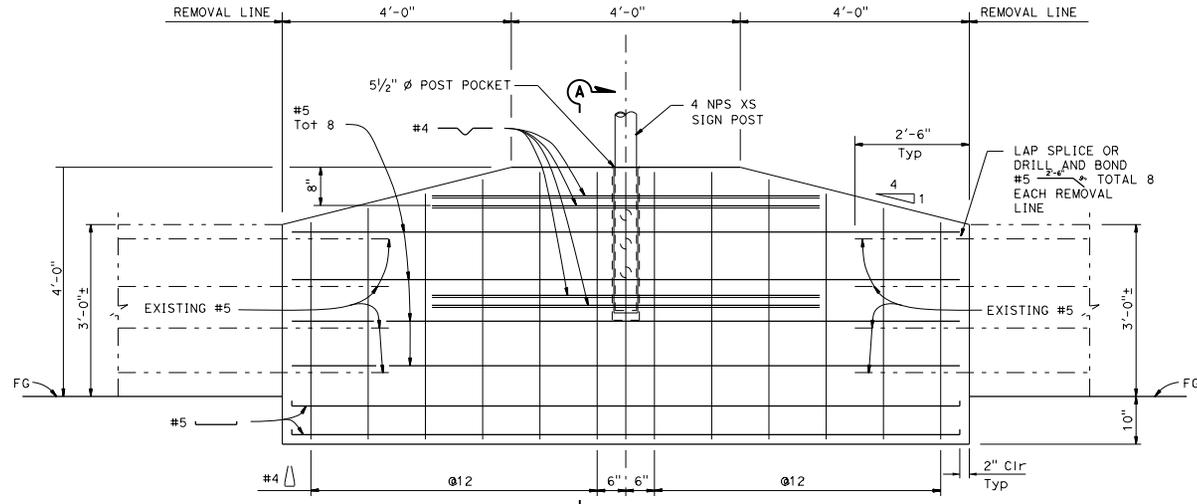
PLAN



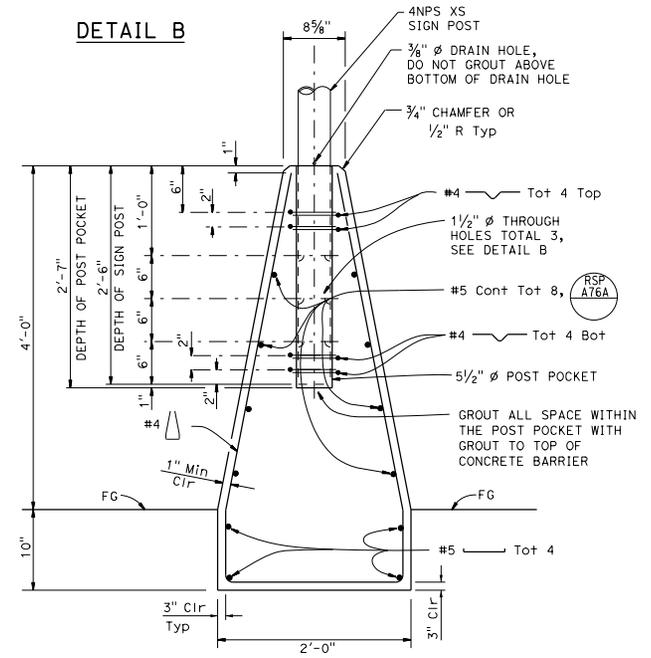
DETAIL A



DETAIL B



ELEVATION



SECTION A-A

NOTE:
 THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

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

RSP A76BB DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

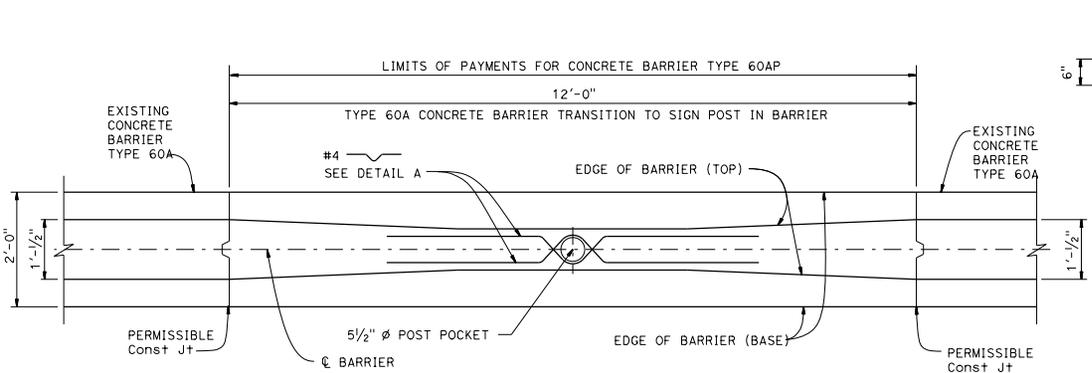
REVISED STANDARD PLAN RSP A76BB

2010 REVISED STANDARD PLAN RSP A76BB

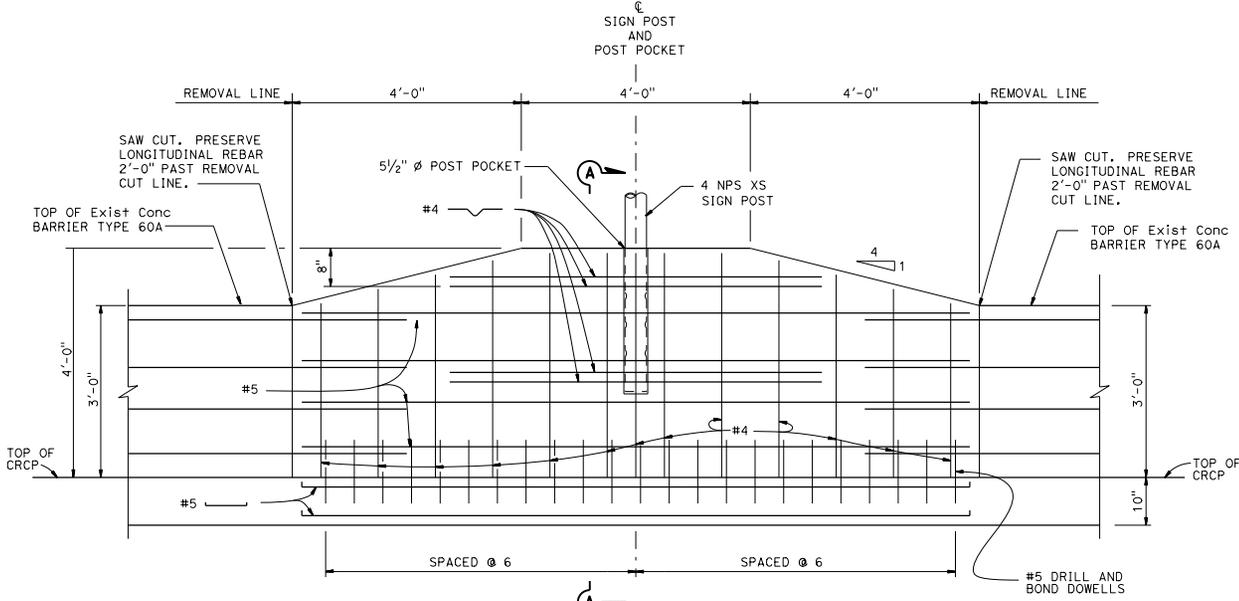
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 No. CS7793
 Exp. 3-31-18
 CIVIL
 STATE OF CALIFORNIA

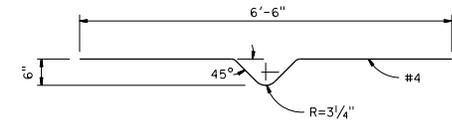
July 15, 2016
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



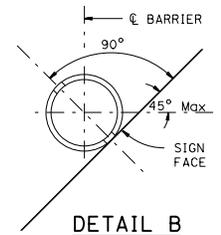
PLAN



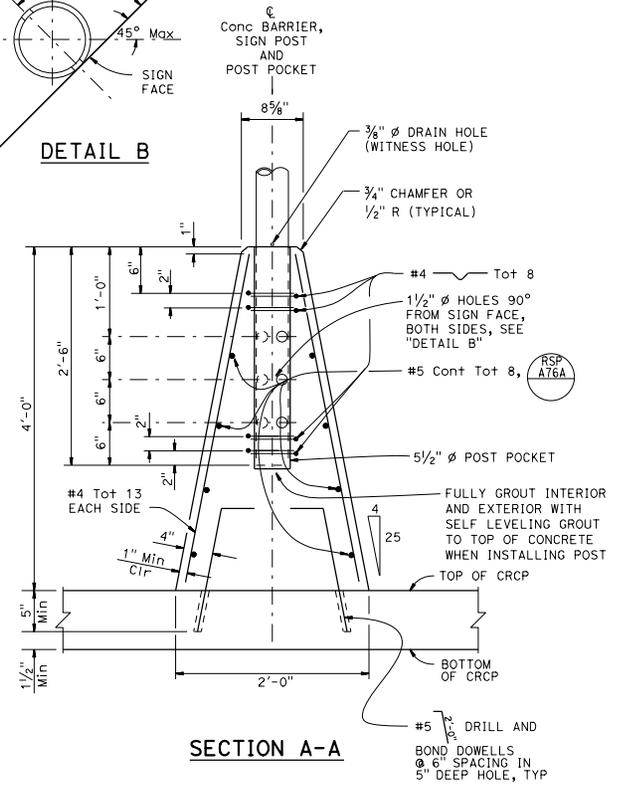
ELEVATION



DETAIL A



DETAIL B



SECTION A-A

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

RSP A76BC DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A76BC

2010 REVISED STANDARD PLAN RSP A76BC

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

Raymond Don Johnston
 REGISTERED CIVIL ENGINEER
 No. C37332
 Exp. 6-30-18
 CIVIL
 REGISTERED PROFESSIONAL ENGINEER
 STATE OF CALIFORNIA

July 15, 2016
 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.

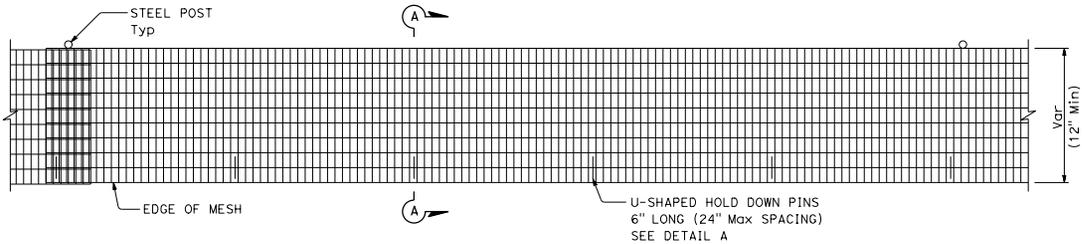
LEGEND:

 Desert Tortoise Habitat

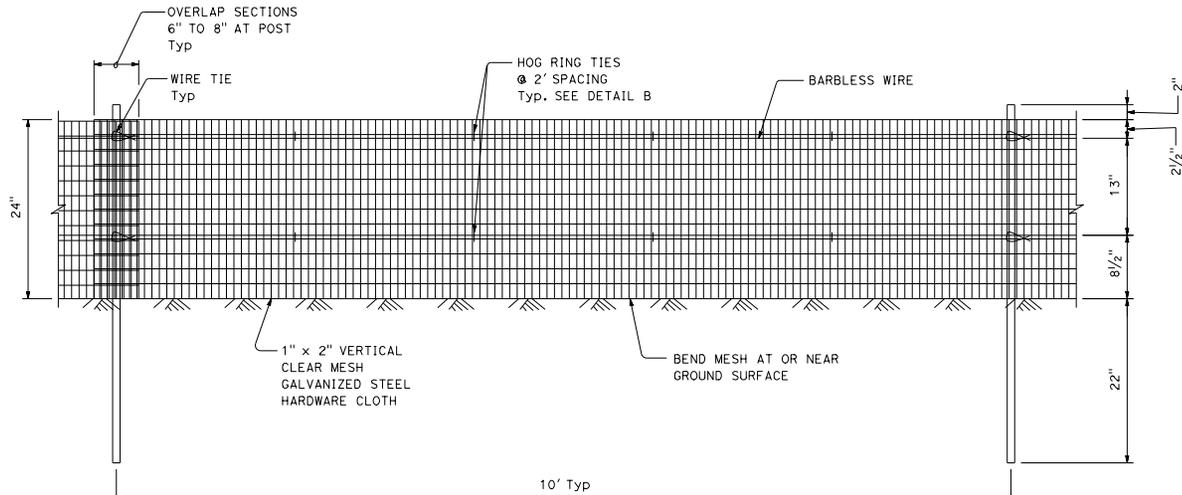
NOTES:

1. Exact locations for temporary desert tortoise fence are shown on the plans.
2. Horizontal portion of hardware cloth must be on habitat side of posts.

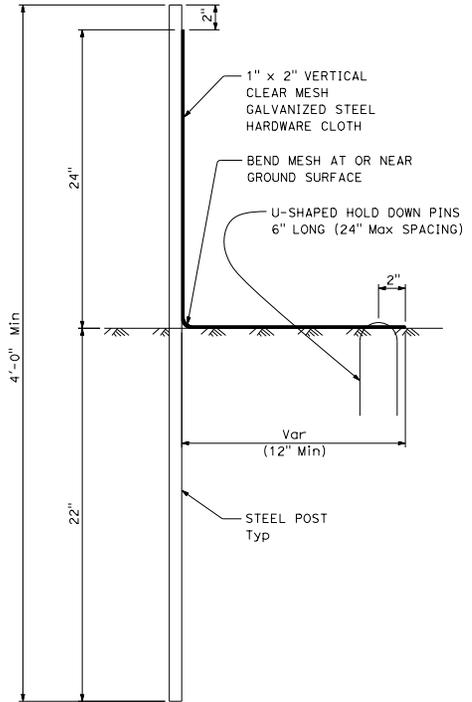
TO ACCOMPANY PLANS DATED _____



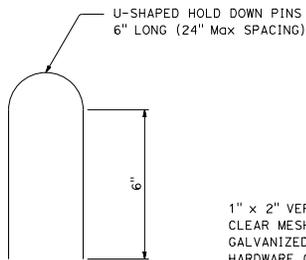
PLAN VIEW



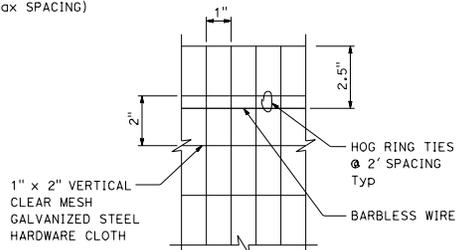
FRONT VIEW



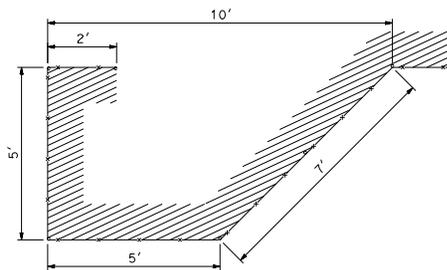
SECTION A-A



DETAIL A



DETAIL B



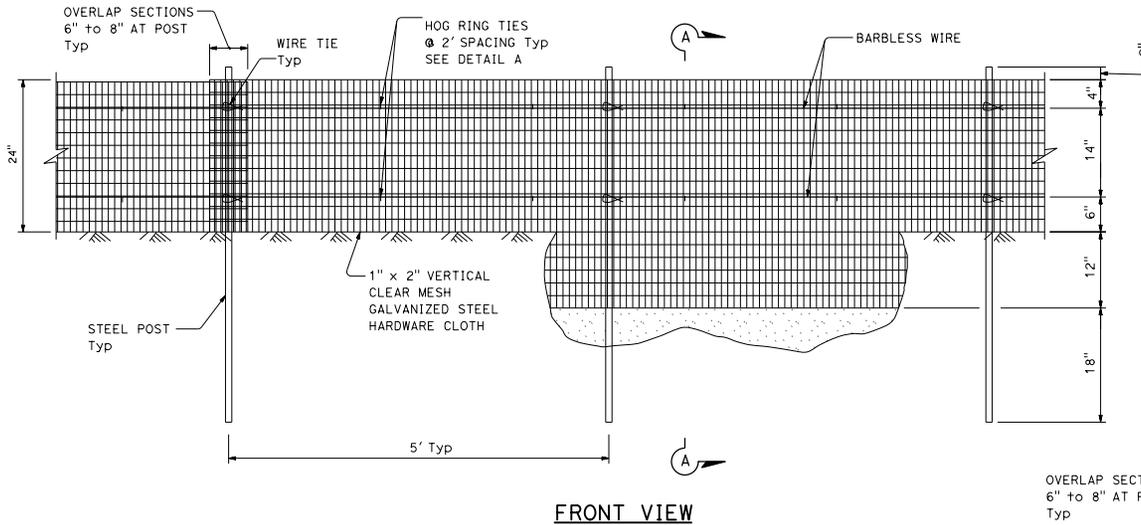
REDIRECTIONAL CONFIGURATION PLAN VIEW

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
TEMPORARY DESERT TORTOISE FENCE
NO SCALE

RSP A84A DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A84A

2010 REVISED STANDARD PLAN RSP A84A



FRONT VIEW

LEGEND:

Desert Tortoise Habitat

NOTE:

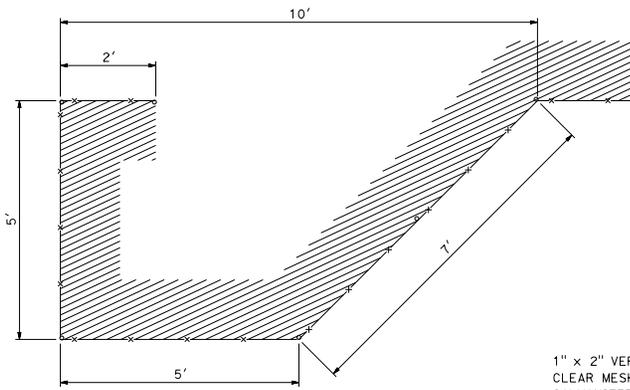
- Exact locations for desert tortoise fence are shown on the plans.

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

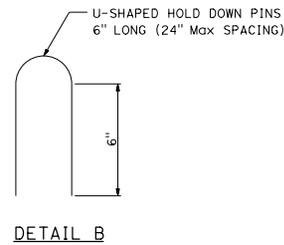
Raymond Don Johnston
 REGISTERED CIVIL ENGINEER
 No. C37332
 Exp. 6-30-18
 CIVIL
 STATE OF CALIFORNIA

July 15, 2016
 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.

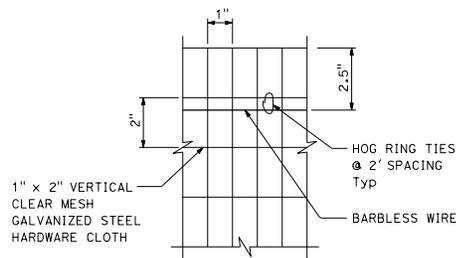
TO ACCOMPANY PLANS DATED _____



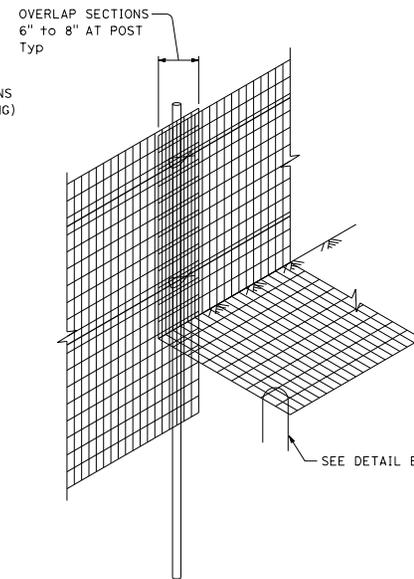
REDIRECTIONAL CONFIGURATION PLAN VIEW



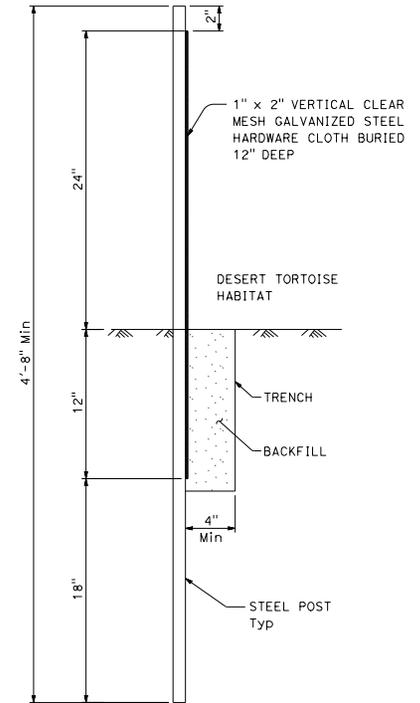
DETAIL B



DETAIL A



FENCE TRANSITION FOR
BEDROCK OR CALICHE SUBSTRATE



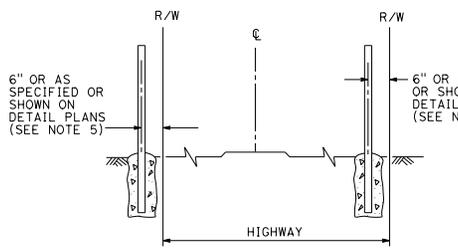
SECTION A-A

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
DESERT TORTOISE FENCE
NO SCALE

RSP A84B DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

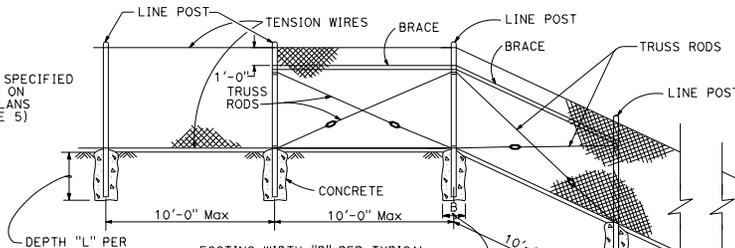
REVISED STANDARD PLAN RSP A84B

2010 REVISED STANDARD PLAN RSP A84B

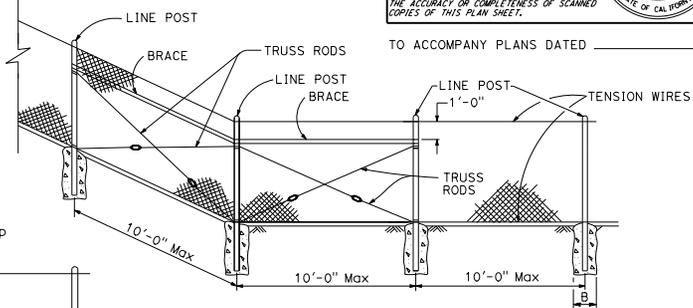


OTHER HIGHWAYS FREEWAYS

FENCE LOCATION



CHAIN LINK FENCE ON SHARP BREAK IN GRADE
DEPTH "L" PER TYPICAL MEMBER DIMENSIONS TABLE
FOOTING WIDTH "B" PER TYPICAL MEMBER DIMENSIONS TABLE AND NOT LESS THAN 3 TIMES MAXIMUM CROSS SECTION OF POST WITH MINIMUM OF 8"

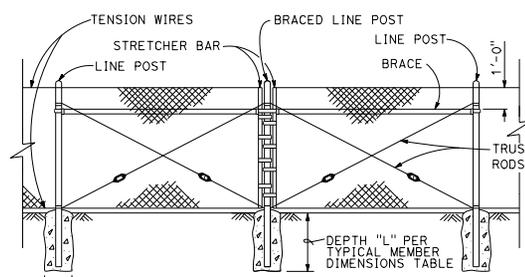


DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

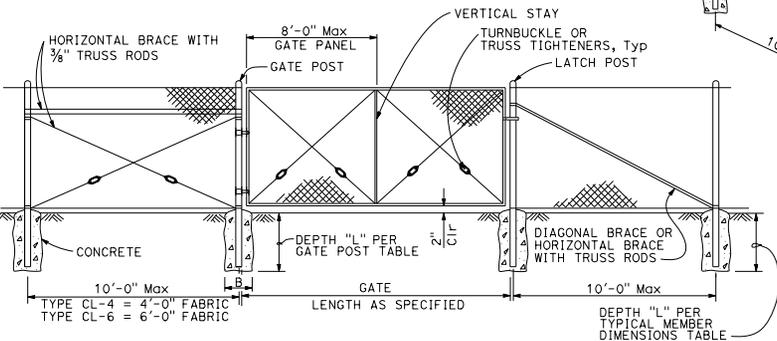
REGISTERED CIVIL ENGINEER
Sukhdeep Singh Sandher
No. C74893
Exp. 12-31-17
CIVIL

PLANS APPROVAL DATE
July 15, 2016

TO ACCOMPANY PLANS DATED _____



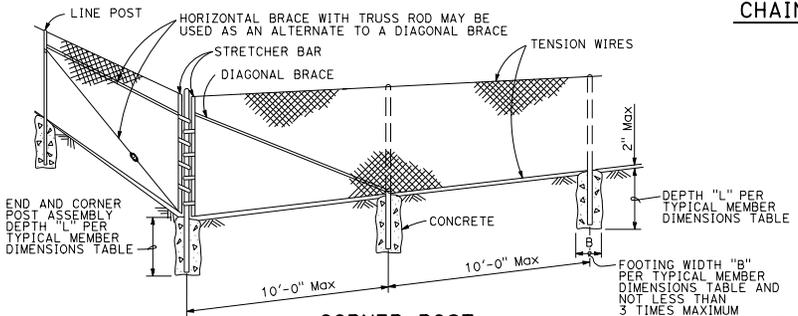
BRACED LINE POST INSTALLATION
Braced line post at intervals not exceeding 1000'



CHAIN LINK GATE INSTALLATION

FENCE HEIGHT (Max)	SLATTED	B (in)	L (ft)	ROUND PIPE		
				SECTION	ROUND OD PIPE	WEIGHT (lb/ft)
				5'-0"	NO	12"
6'-0"	NO	12"	2'-6"	3 Std	3.50"	7.58
8'-0"	NO	12"	3'-0"	3 Std	3.50"	7.58
10'-0"	NO	14"	3'-6"	3 Std	3.50"	7.58
5'-0"	YES	12"	3'-0"	3 1/2 Std	4.00"	9.12
6'-0"	YES	14"	3'-6"	4 Std	4.50"	10.80
8'-0"	YES	18"	3'-6"	5 Std	5.56"	14.60
10'-0"	YES	20"	4'-0"	6 Std	6.63"	19.00

Above post dimensions and weights are minimums. Larger sizes may be used upon approval. Maximum Gate Width is 24'-0".



CORNER POST

- NOTES:**
- The table to the right shows minimum sized posts and braces complying with the specifications. Larger or heavier post and brace sizes may be used upon approval.
 - Sections shown in the tables must also comply with the strength requirements and other provisions of the specifications.
 - Other sections which comply with the strength requirements and other provisions of the specifications may be used upon approval.
 - Options exercised shall be uniform on any one project.
 - Offset to be 2'-0" at monument locations, measured at right angles to R/W lines. Taper to achieve offset to be at least 20'-0" long.
 - See Revised Standard Plan RSP A85B for Brace, Stretcher Bar, and Truss Tightener Details.

TYPICAL MEMBER DIMENSIONS (See Notes)													
FENCE HEIGHT (Max)	SLATTED	B (in)	L (ft)	LINE POSTS				BRACES					
				ROUND PIPE		ROLL FORMED		ROUND PIPE			ROLL FORMED		
				SECTION	ROUND OD PIPE	WEIGHT (lb/ft)	SECTION	WEIGHT (lb/ft)	SECTION	ROUND OD PIPE	WEIGHT (lb/ft)	SECTION	WEIGHT (lb/ft)
				5'-0"	NO	8"	2'-6"	1 1/2 Std	1.90"	2.72	1.875" x 1.625"	1.85	2 Std
6'-0"	NO	10"	2'-6"	2 Std	2.38"	3.66	1.875" x 1.625"	2.40	2 Std	2.38"	3.66	1.625" x 1.250"	1.35
8'-0"	NO	12"	3'-0"	2 1/2 Std	2.88"	5.80	3.250" x 2.500"	4.50	2 Std	2.38"	3.66	1.625" x 1.250"	1.35
10'-0"	NO	14"	3'-6"	3 Std	3.50"	7.58	3.250" x 2.500"	4.50	2 1/2 Std	2.88"	5.80	1.625" x 1.250"	1.35
5'-0"	YES	12"	3'-0"	3 1/2 Std	4.00"	9.12	N/A	-	2 Std	2.38"	3.66	N/A	-
6'-0"	YES	14"	3'-0"	4 Std	4.50"	10.80	N/A	-	2 Std	2.38"	3.66	N/A	-
8'-0"	YES	18"	3'-6"	5 Std	5.56"	14.60	N/A	-	2 Std	2.38"	3.66	N/A	-
10'-0"	YES	20"	4'-0"	6 Std	6.63"	19.00	N/A	-	2 1/2 Std	2.88"	5.80	N/A	-

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
CHAIN LINK FENCE
NO SCALE

RSP A85 DATED JULY 15, 2016 SUPERSEDES RSP A85 DATED JULY 18, 2014 AND STANDARD PLAN A85 DATED MAY 20, 2011 - PAGE 112 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A85

2010 REVISED STANDARD PLAN RSP A85

NOTES:

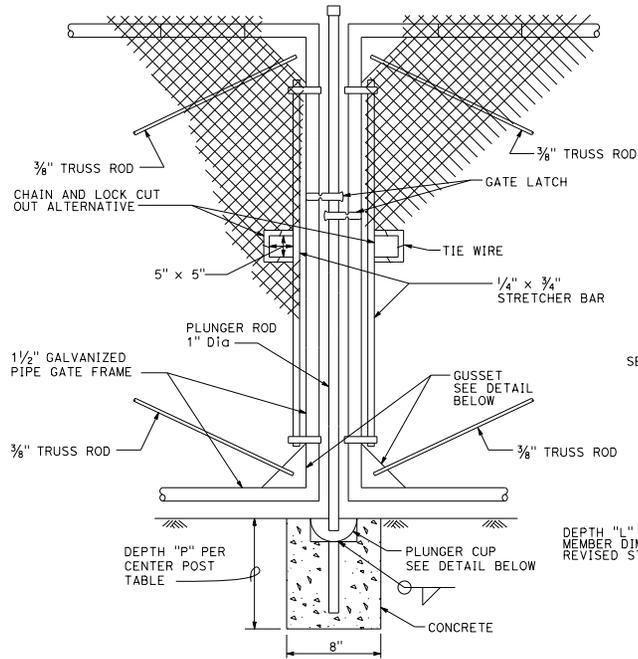
1. B is not less than 3 times maximum cross section of post with minimum of 8".
2. See Revised Standard Plan RSP A85 for Chain Link Fencing dimensions.
3. See Detail A on Standard Plan A86B for connection at headwall.
4. See Detail D on Standard Plan A86B for connection at headwall.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL SHEETS

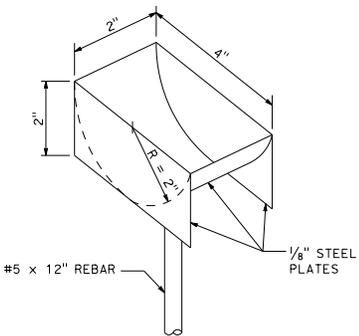


 REGISTERED CIVIL ENGINEER
 July 15, 2016
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

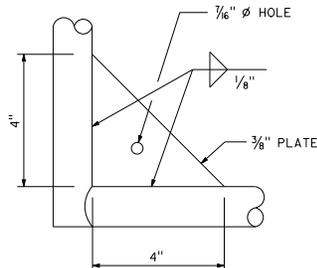
TO ACCOMPANY PLANS DATED _____



**DOUBLE GATE
REMOVABLE CENTER POST**

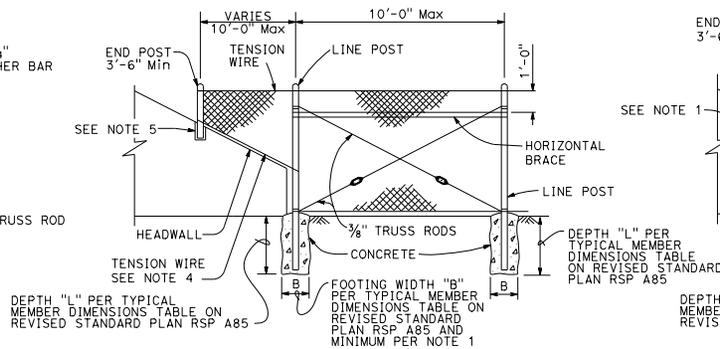


PLUNGER CUP DETAIL

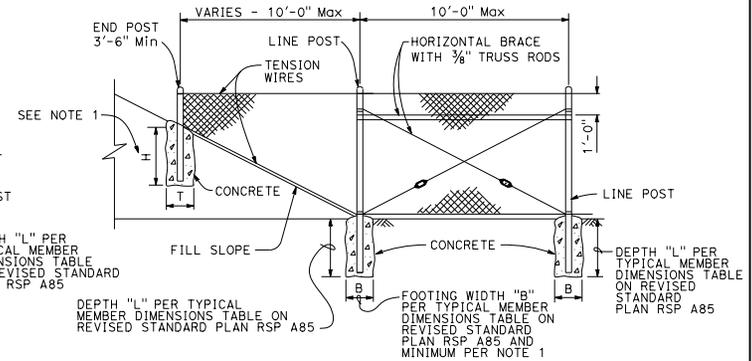


GUSSET DETAIL

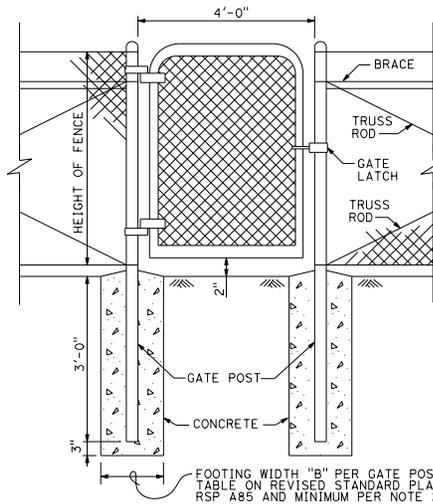
CENTER POST		
FENCE HEIGHT (Max)	SLATTED	P
ALL HEIGHTS	NO	1'-6"
5'-0"	YES	3'-0"
6'-0"	YES	3'-0"
8'-0"	YES	3'-6"
10'-0"	YES	4'-0"



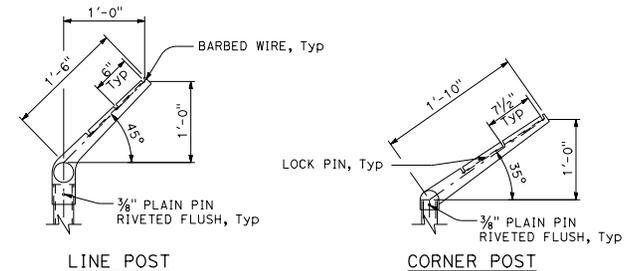
METHOD OF TYING FENCE TO HEADWALL



METHOD OF ERECTING FENCE FOR FILL SLOPE



WALK GATE



BARBED WIRE POST TOP

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
CHAIN LINK FENCE DETAILS
NO SCALE

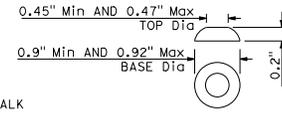
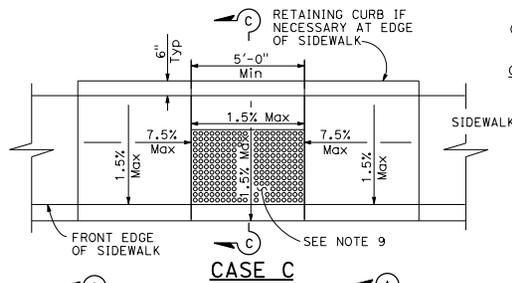
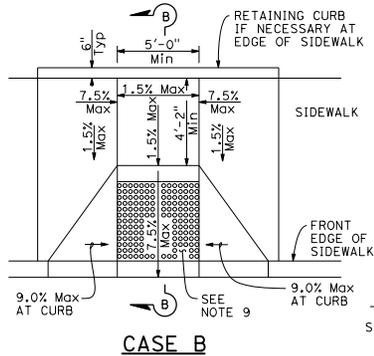
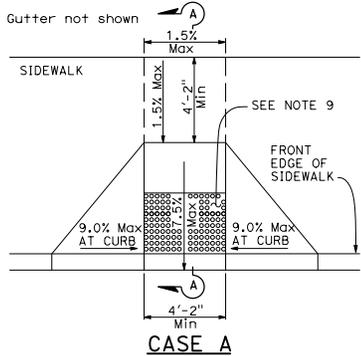
RSP A85A DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN A85A
DATED MAY 20, 2011 - PAGE 113 OF THE STANDARD PLANS BOOK DATED 2010.
REVISED STANDARD PLAN RSP A85A

2010 REVISED STANDARD PLAN RSP A85A

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



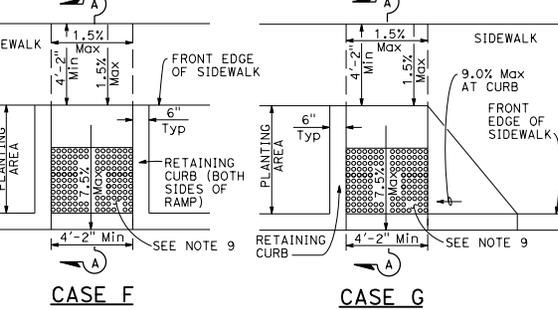
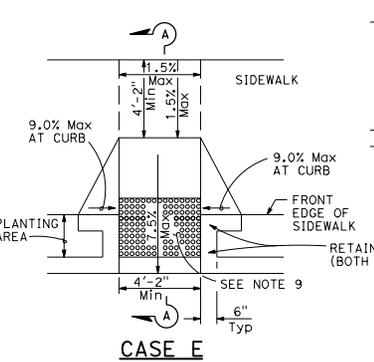
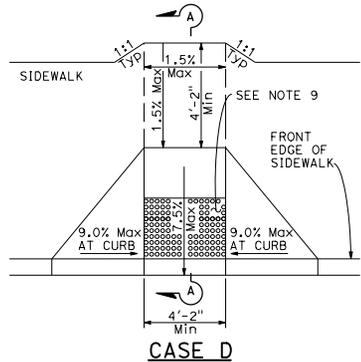
Hector David Cordova
 REGISTERED CIVIL ENGINEER
 July 15, 2016
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



SEE NOTE 9

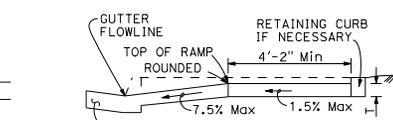
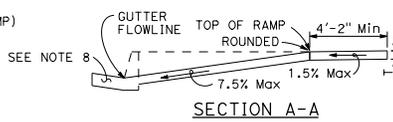
NOTES:

- As site conditions dictate, Case A through Case G curb ramps may be used for corner installations similar to those shown in Detail A and Detail B. The case of curb ramps used in Detail A do not have to be the same. Case A through Case G curb ramps also may be used at mid block locations, as site conditions dictate.
- If distance from curb to back of sidewalk is too short to accommodate ramp and 4'-2" platform (landing) as shown in Case A, the sidewalk may be depressed longitudinally as in Case B, or C or may be widened as in Case D.
- When ramp is located in center of curb return, crosswalk configuration must be similar to that shown for Detail B.
- As site conditions dictate, the retaining curb side and the flared side of the Case G ramp shall be constructed in reversed position.
- If located on a curve, the sides of the ramp need not be parallel, but the minimum width of the ramp shall be 4'-2".
- Side slope of ramp flares vary uniformly from a maximum of 9.0% at curb to conform with longitudinal sidewalk slope adjacent to top of the ramp, except in Case C and Case F.
- The adjacent surfaces at transitions at curb ramps to walks, gutters, and streets shall be at the same level.
- Counter slopes of adjoining gutters and road surfaces immediately adjacent to and within 24 inches of the curb ramp shall not be steeper than 1:20 (5.0%). Gutter pan slope shall not exceed 1" of depth for each 2'-0" of width.
- Curb ramps shall have a detectable warning surface that extends the full width and 3'-0" depth of the ramp. A 4'-0" wide detectable warning surface may be used on a 4'-2" wide curb ramp. Detectable Warning Surfaces shall conform to the requirements in the Standard Specifications.
- Sidewalk and ramp thickness, "T", shall be 3/2" minimum.
- Utility pull boxes, manholes, vaults and all other utility facilities within the boundaries of the curb ramp will be relocated or adjusted to grade by the owner prior to, or in conjunction with, curb ramp construction.
- Detectable warning surface may have to be cut to allow removal of utility covers while maintaining full detectable warning width and depth.

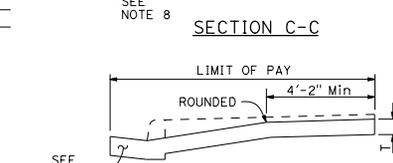
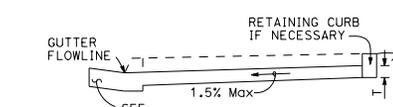


CASE G

See Note 4



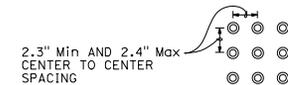
Depress entire sidewalk as required



SEE NOTE 8

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

See Note 9



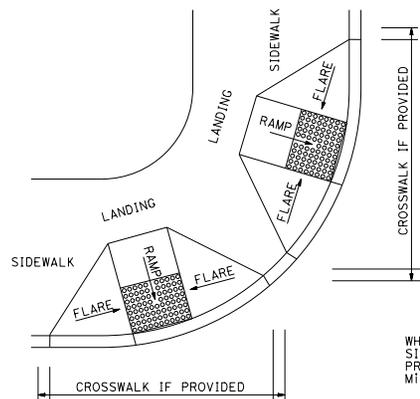
RAISED TRUNCATED DOME PATTERN (IN-LINE) DETECTABLE WARNING SURFACE

See Note 9

CURB RAMP DETAILS
NO SCALE

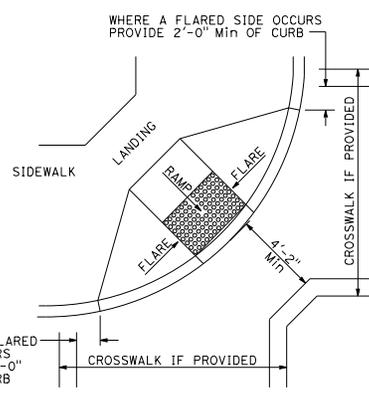
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
RSP A88A DATED JULY 15, 2016 SUPERSEDES RSP A88A DATED JULY 3, 2015,
RSP A88A DATED MARCH 21, 2014 AND RSP A88A DATED JULY 19, 2013 AND
STANDARD PLAN A88A DATED MAY 20, 2011 -
PAGE 121 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A88A



TYPICAL TWO-RAMP CORNER INSTALLATION

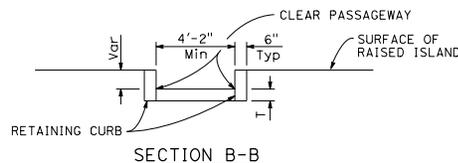
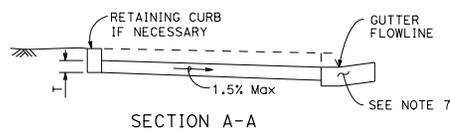
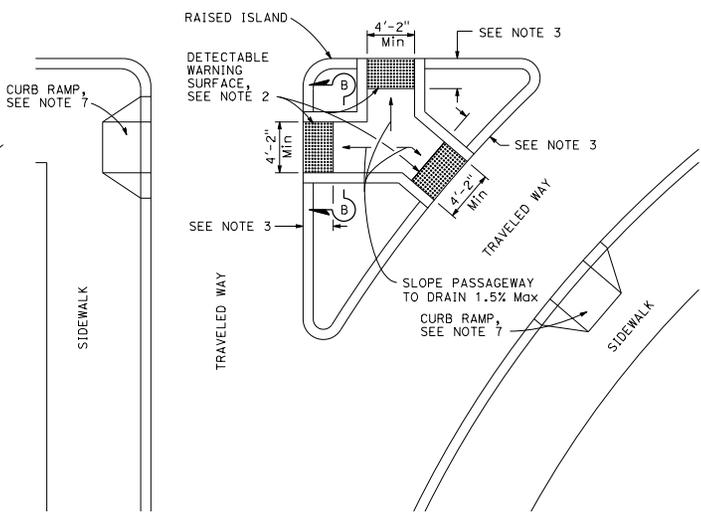
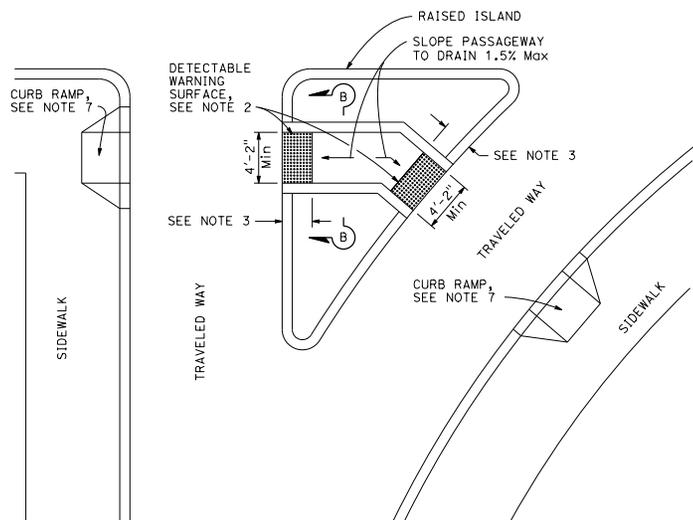
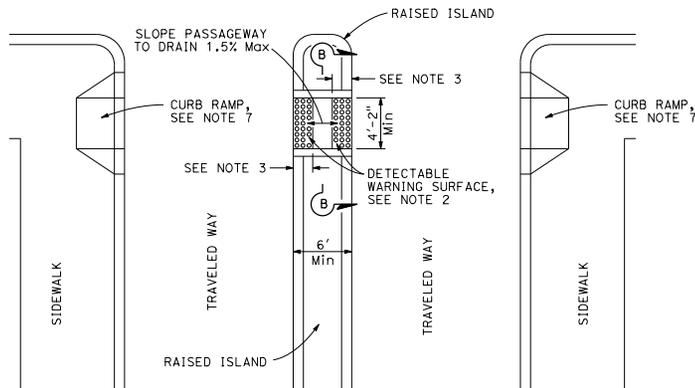
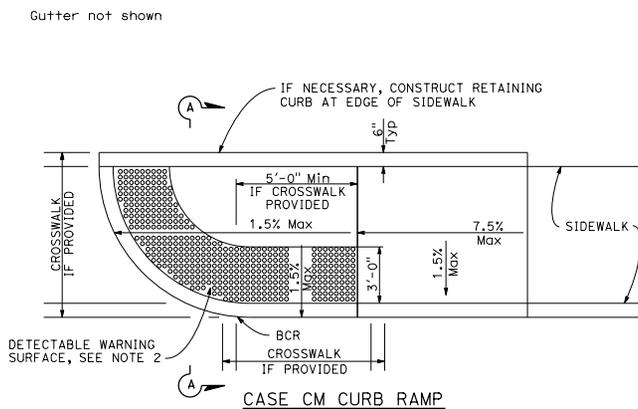
See Note 1



TYPICAL ONE-RAMP CORNER INSTALLATION

See Notes 1 and 3

Gutter not shown



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

H. David Cordova
REGISTERED CIVIL ENGINEER

July 15, 2016
PLANS APPROVAL DATE

Hector David Cordova
No. C41957
Exp. 3-31-18
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 _____

NOTES:

1. Sidewalk, ramp and passageway thickness, "T", shall be 3/2" minimum.
2. For details of detectable warning surfaces, see Revised Standard Plan RSP A88A.
3. Where an island passageway length is greater than or equal to 6'-0", but less than 8'-0", each detectable warning surface shall extend the full width and 2'-0" depth of the passageway length. Where an island passageway length is greater than or equal to 8'-0", each detectable warning surface shall extend the full width and 3'-0" depth of the passageway length. A 4'-0" wide detectable warning surface may be used on a 4'-2" island passageway.
4. The adjacent surfaces at transitions at curb ramps to walks, gutters, and streets shall be at the same level.
5. Utility pull boxes, manholes, vaults and all other utility facilities within the boundaries of the curb ramp will be relocated or adjusted to grade by the owner prior to, or in conjunction with, curb ramp construction.
6. Detectable warning surface may have to be cut to allow removal of utility covers while maintaining full detectable warning width and depth.
7. For additional curb ramp details, see Revised Standard Plan RSP A88A.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CURB RAMP AND ISLAND PASSAGEWAY DETAILS

NO SCALE

RSP A88B DATED JULY 15, 2016 SUPERSEDES RSP A88B DATED JULY 3, 2015,
RSP A88B DATED MARCH 21, 2014 AND RSP A88B DATED JULY 19, 2013 AND
STANDARD PLAN A88B DATED MAY 20, 2011 -
PAGE 122 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A88B

2010 REVISED STANDARD PLAN RSP A88B

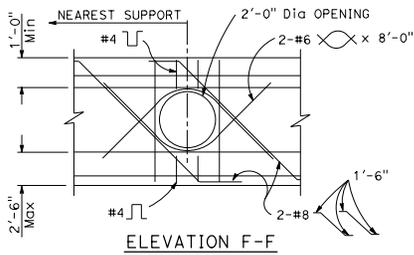
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

Peter W. Norbo
REGISTERED CIVIL ENGINEER

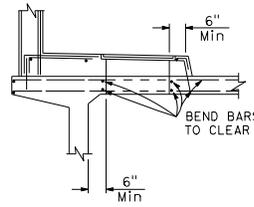
July 15, 2016
PLANS APPROVAL DATE

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.

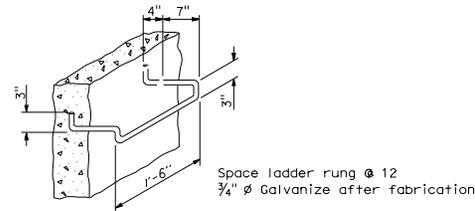
STATE OF CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER
Peter W. Norbo
No. C57519
Exp. 12-31-17
CIVIL



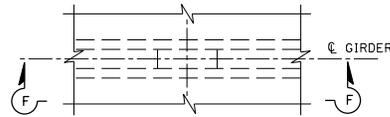
ELEVATION F-F



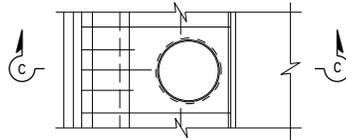
SECTION C-C



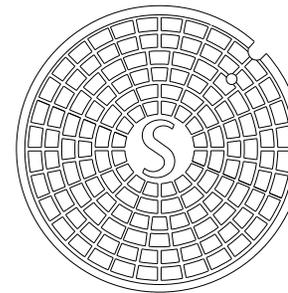
BAR STEP
LADDER RUNG DETAILS
DETAIL U44



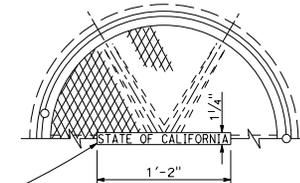
PART PLAN
GIRDER STEM ACCESS OPENING
DETAIL U41



PART PLAN
SIDEWALK ACCESS OPENING
DETAIL U42



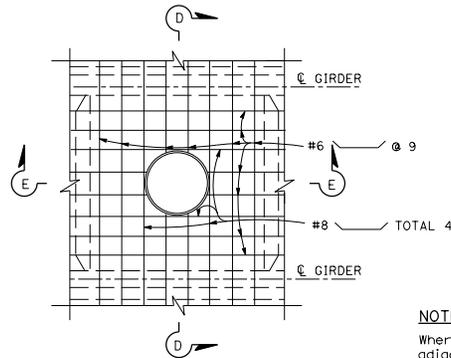
TOP OF MANHOLE COVER



TOP OF MANHOLE FRAME & COVER

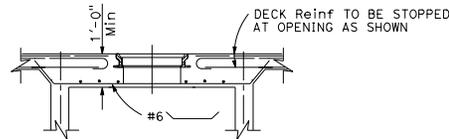
NOTES:

- For exact location of openings see other sheets.
- Location and size of manholes may be modified as directed by the Engineer, provided minimum dimensions are maintained.
- All reinforcement detailed to be placed in addition to reinforcement shown on other sheets.

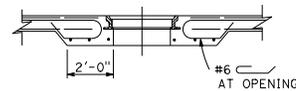


PART PLAN

DECK ACCESS OPENING
DETAIL U43



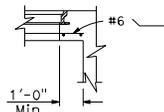
SECTION D-D



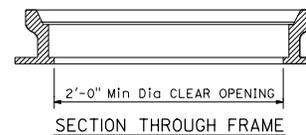
SECTION E-E

NOTE:

Where manhole is located adjacent to a diaphragm or abut, substitute half Section E-E on one side of Section E-E.



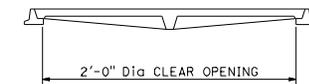
HALF SECTION E-E



SECTION THROUGH FRAME
NON-ROCKING MANHOLE FRAME & COVER
FOR DECKS
DETAIL U45

NOTES:

- Step inserts may be substituted for the standard step detail. Step inserts shall comply with State Industrial Safety requirements.
- Covers for use on sewer structures shall bear the letter "S"; on storm drain structures the letter "D"; on openings for utilities the letter "U".



SECTION THROUGH FRAME & COVER
MANHOLE FRAME & COVER
FOR SIDEWALKS
DETAIL U46

NOTES:

- Frame and cover shall be cast iron.
- Cover shall be supplied with bolt down or locking devices.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
UTILITY DETAILS

NO SCALE

RSP B7-11 DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN B7-11
DATED MAY 20, 2011 - PAGE 290 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP B7-11

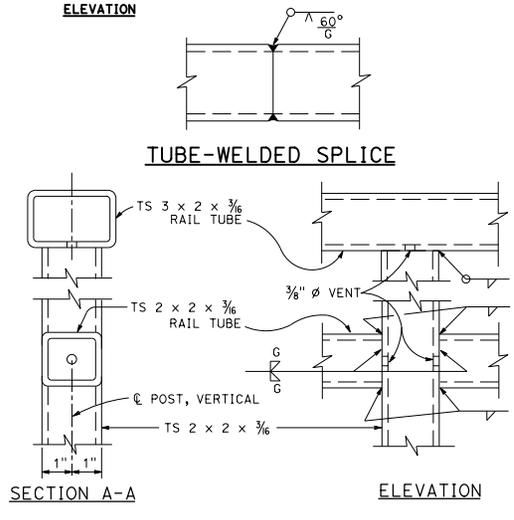
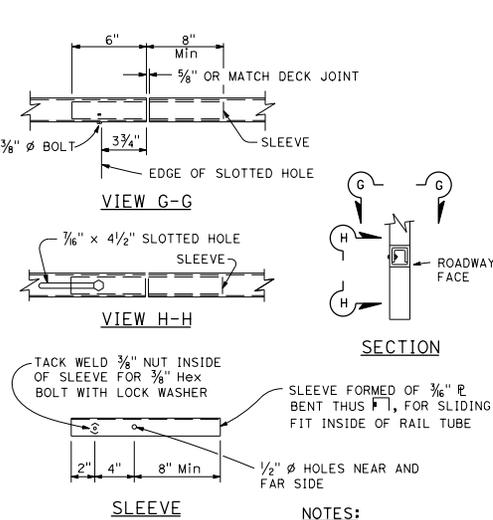
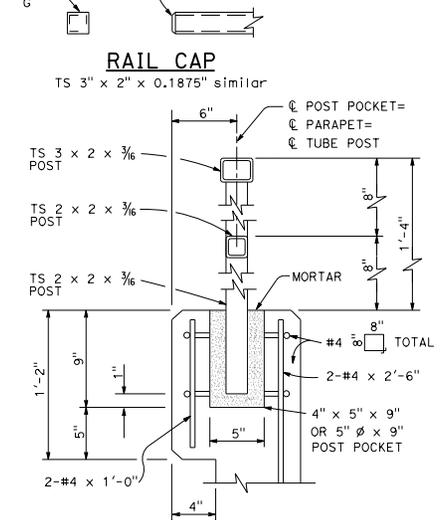
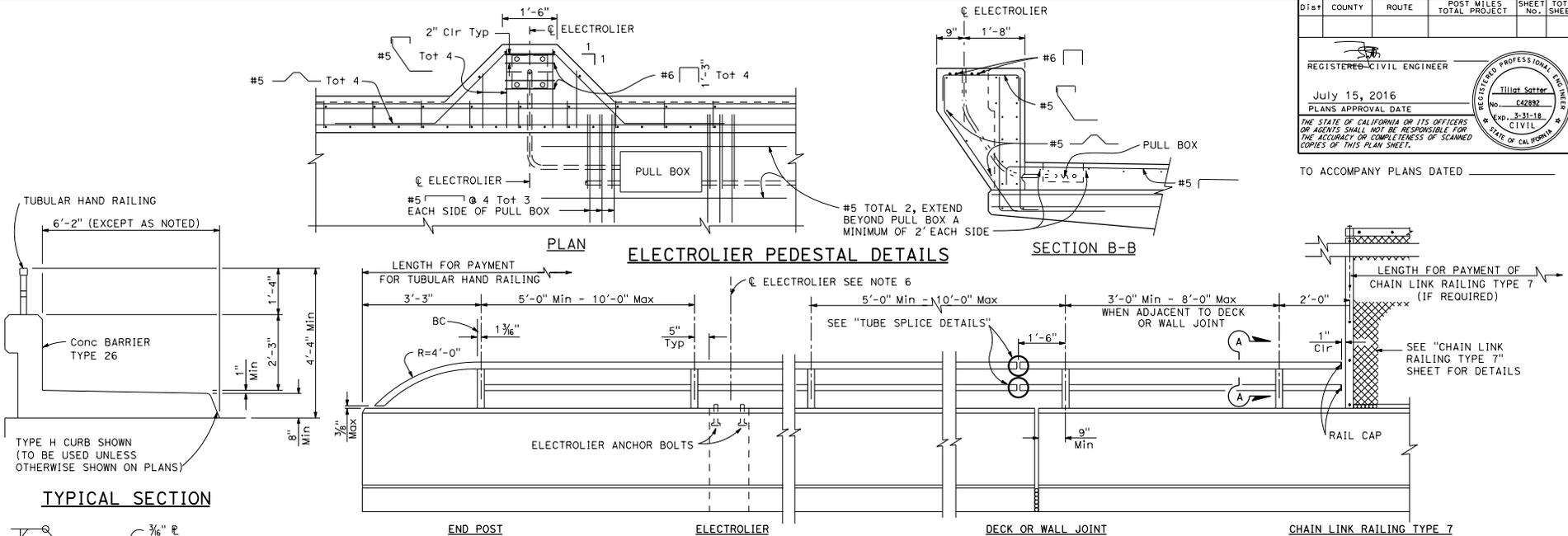
2010 REVISED STANDARD PLAN RSP B7-11

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

REGISTERED CIVIL ENGINEER
Tillot Satter
No. C42892
Exp. 3-31-18
CIVIL
STATE OF CALIFORNIA

July 15, 2016
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. Post shall be normal to railing.
 2. Rail tubes shall be shop bent or fabricated to fit horizontal curve when radius is less than 950'.
 3. Tube splices shall be located in the tubes spanning deck or wall joints. Increase joint width in tubes to match expansion joint width and increase sleeve length correspondingly.
 4. Top rail tube shall be continuous over not less than two posts except a short post spacing is permitted near deck or wall joints, electroliers, or other rail discontinuities as noted.
 5. For details and reinforcement not shown see Revised Standard Plan RSP B11-54.
 6. For electrolier mounting details, see Revised Standard Plans RSP ES-6A and RSP ES-6B.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
TUBULAR HAND RAILING
NO SCALE

RSP B11-51 DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN B11-51 DATED MAY 20, 2011 - PAGE 294 OF THE STANDARD PLANS BOOK DATED 2010.

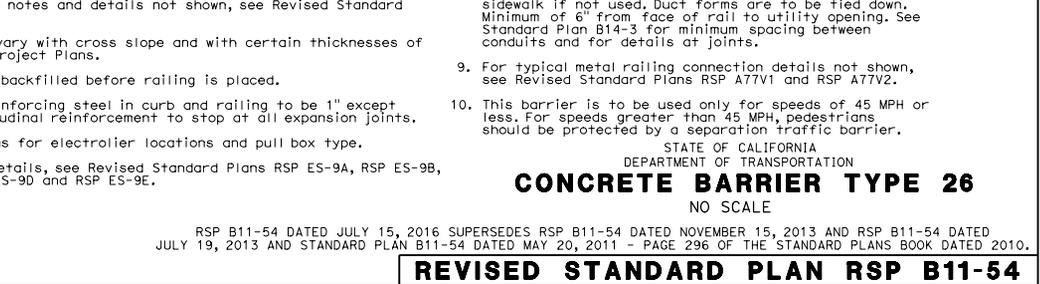
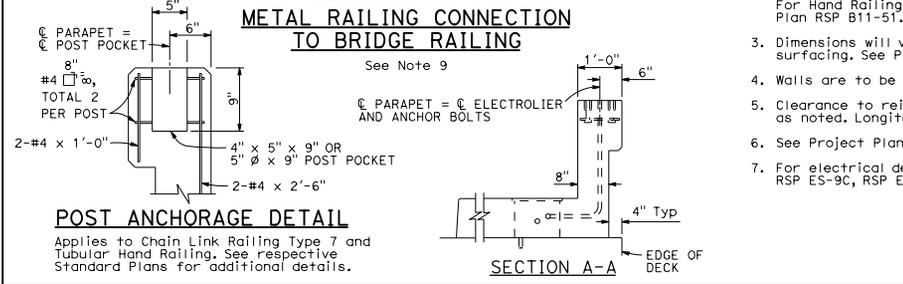
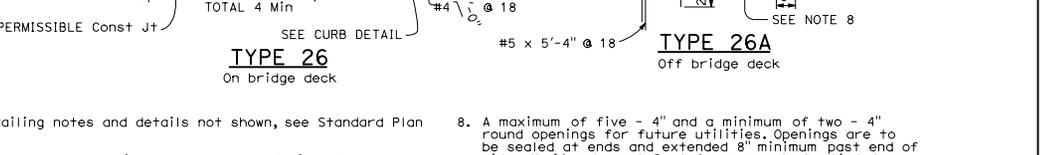
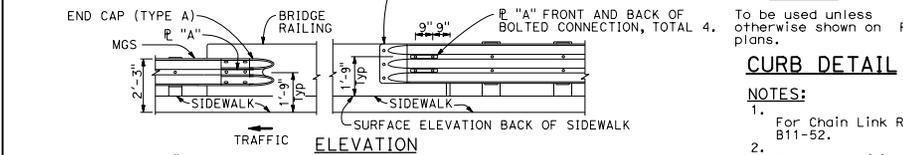
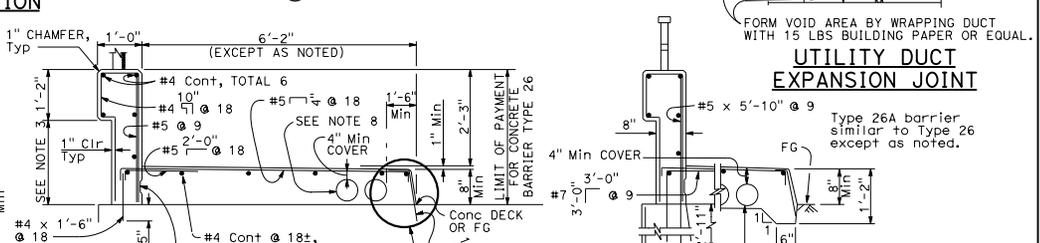
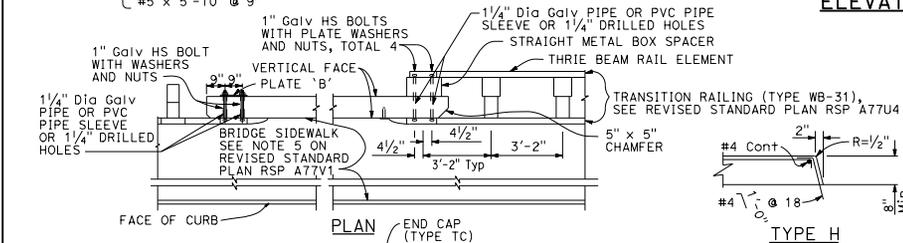
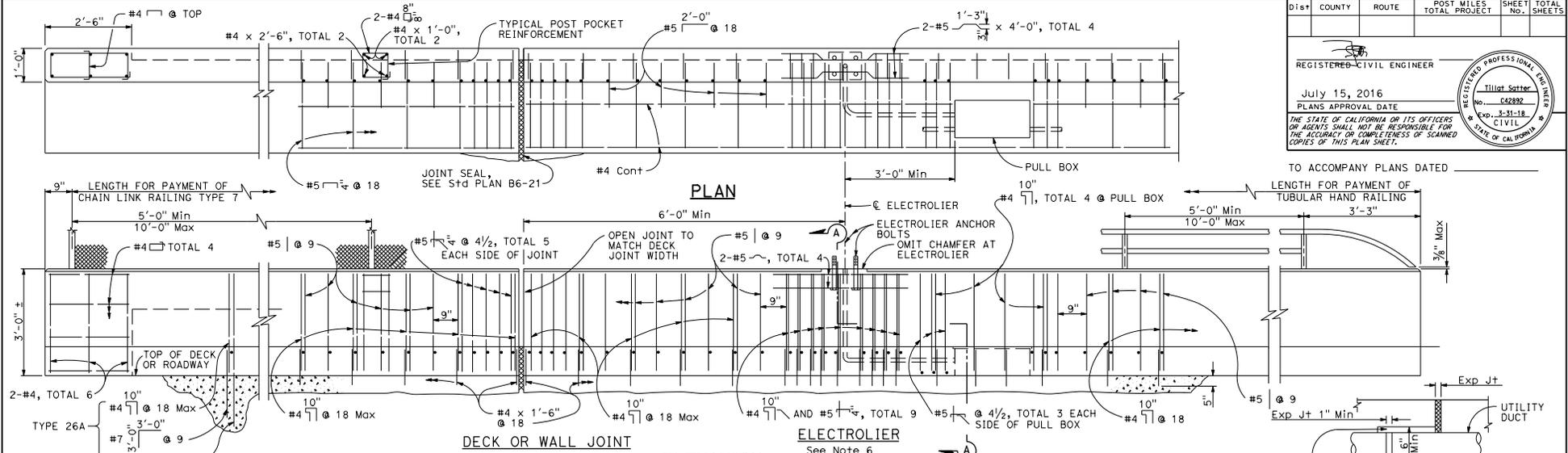
REVISED STANDARD PLAN RSP B11-51

2010 REVISED STANDARD PLAN RSP B11-51

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

REGISTERED CIVIL ENGINEER
Tillot Satter
No. C42892
Exp. 3-31-18
CIVIL
STATE OF CALIFORNIA

July 15, 2016
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.



CURB DETAIL

NOTES:

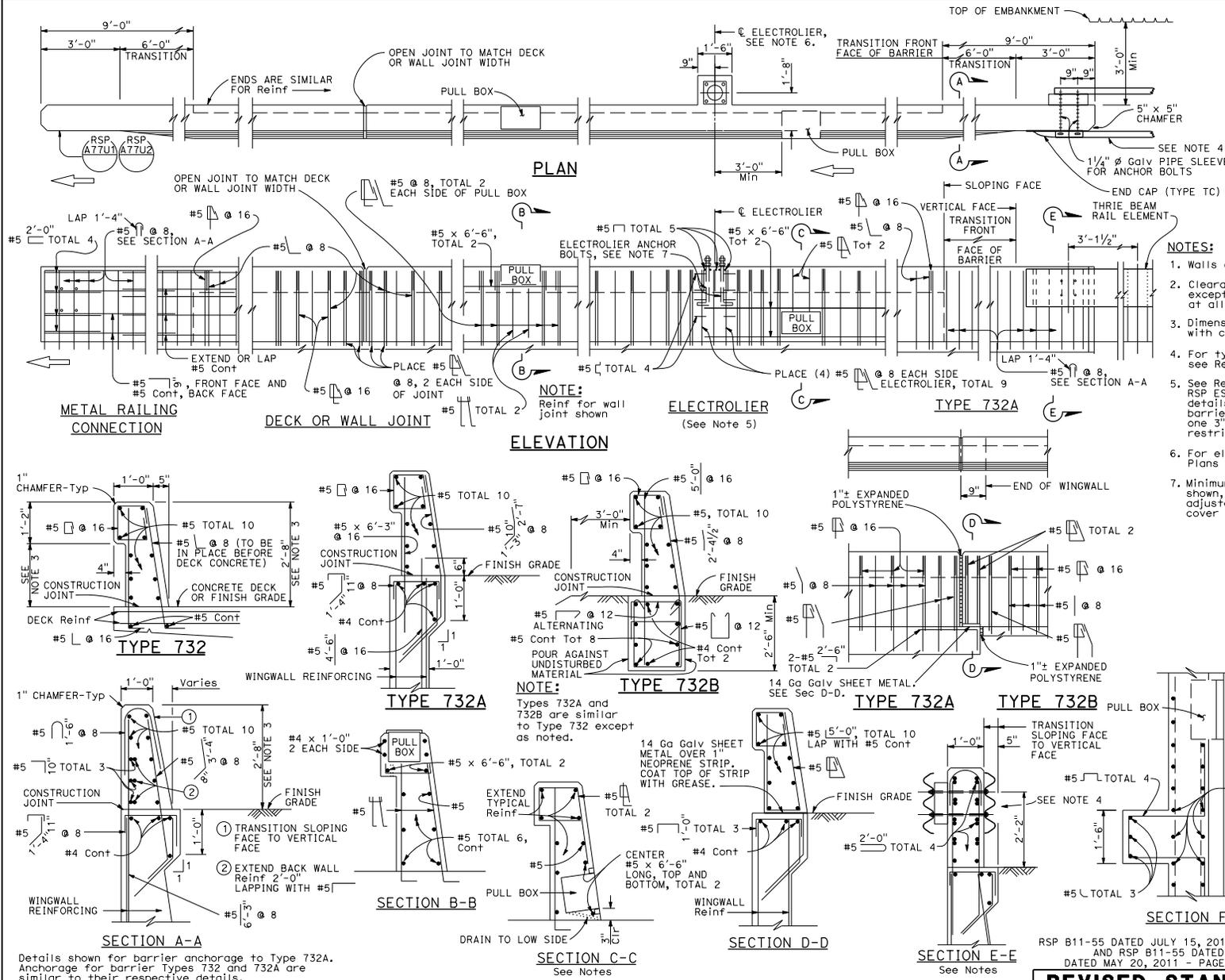
- For Chain Link Railing notes and details not shown, see Standard Plan B11-52.
- For Hand Railing notes and details not shown, see Revised Standard Plan RSP B11-51.
- Dimensions will vary with cross slope and with certain thicknesses of surfacing. See Project Plans.
- Walls are to be backfilled before railing is placed.
- Clearance to reinforcing steel in curb and railing to be 1" except as noted. Longitudinal reinforcement to stop at all expansion joints.
- See Project Plans for electrolier locations and pull box type.
- For electrical details, see Revised Standard Plans RSP ES-9A, RSP ES-9B, RSP ES-9C, RSP ES-9D and RSP ES-9E.
- A maximum of five - 4" and a minimum of two - 4" round openings for future utilities. Openings are to be sealed at ends and extended 8" minimum past end of sidewalk if not used. Duct forms are to be tied down. Minimum of 6" from face of rail to utility opening. See Standard Plan B14-3 for minimum spacing between conduits and for details at joints.
- For typical metal railing connection details not shown, see Revised Standard Plans RSP A77V1 and RSP A77V2.
- This barrier is to be used only for speeds of 45 MPH or less. For speeds greater than 45 MPH, pedestrians, should be protected by a separation traffic barrier.

CONCRETE BARRIER TYPE 26
NO SCALE

RSP B11-54 DATED JULY 15, 2016 SUPERSEDES RSP B11-54 DATED NOVEMBER 15, 2013 AND RSP B11-54 DATED JULY 19, 2013 AND STANDARD PLAN B11-54 DATED MAY 20, 2011 - PAGE 296 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP B11-54

2010 REVISED STANDARD PLAN RSP B11-54



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

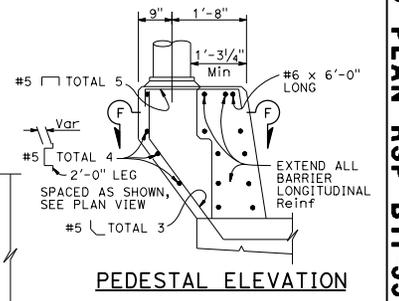
REGISTERED CIVIL ENGINEER
Tilgert Satter
No. C42892
Exp. 3-31-18
CIVIL
STATE OF CALIFORNIA

PLANS APPROVAL DATE
July 15, 2016

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. Walls are to be backfilled before barrier is placed.
 2. Clearance to reinforcing steel in barrier to be 1", except as noted. Longitudinal reinforcement to stop at all expansion joints.
 3. Dimensions may vary with roadway cross slope and with certain thickness of surfacing. See Project Plans.
 4. For typical metal railing connection details not shown, see Revised Standard Plans RSP A77U1 and RSP A77U2.
 5. See Revised Standard Plans RSP ES-9A, RSP ES-9B, RSP ES-9C, RSP ES-9D and RSP ES-9E for electrical details. The maximum number of conduits in the barrier is limited to two 2" conduits along with one 3" conduit. When a 3" conduit is used, it is restricted to the base of the barrier.
 6. For electrolier mounting details, see Revised Standard Plans RSP ES-6A and RSP ES-6B.
 7. Minimum concrete edge distance, to the reinforcing shown, shall be maintained. Edge distance may be adjusted to accommodate increase in concrete cover for architectural treatment.



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**CONCRETE BARRIER
TYPE 732**
NO SCALE

RSP B11-55 DATED JULY 15, 2016 SUPERSEDES RSP B11-55 DATED NOVEMBER 15, 2013 AND RSP B11-55 DATED JULY 19, 2013 AND STANDARD PLAN B11-55 DATED MAY 20, 2011 - PAGE 297 OF THE STANDARD PLANS BOOK DATED 2010.

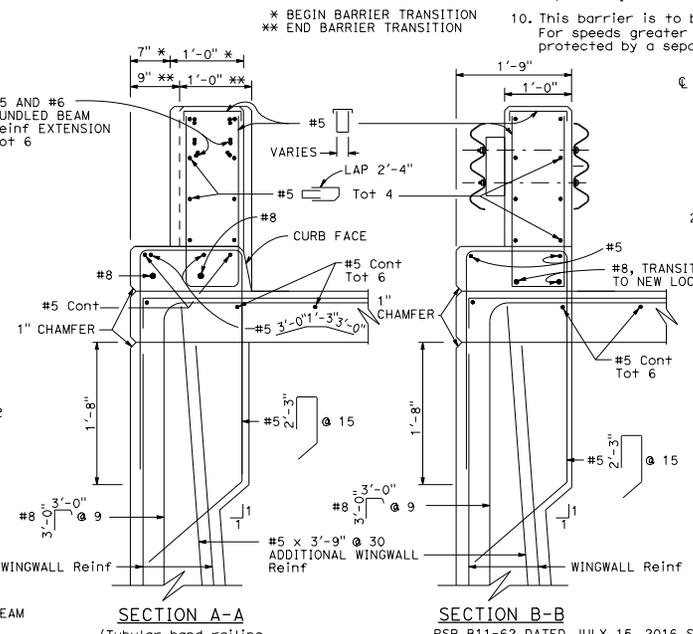
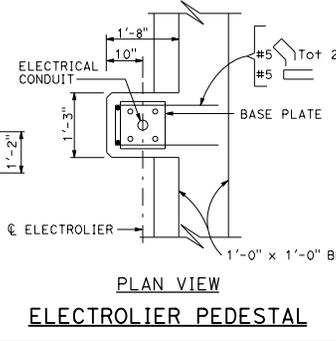
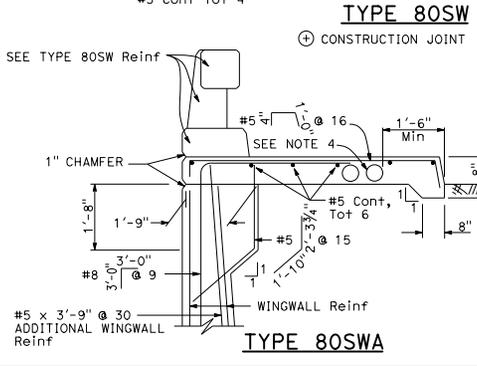
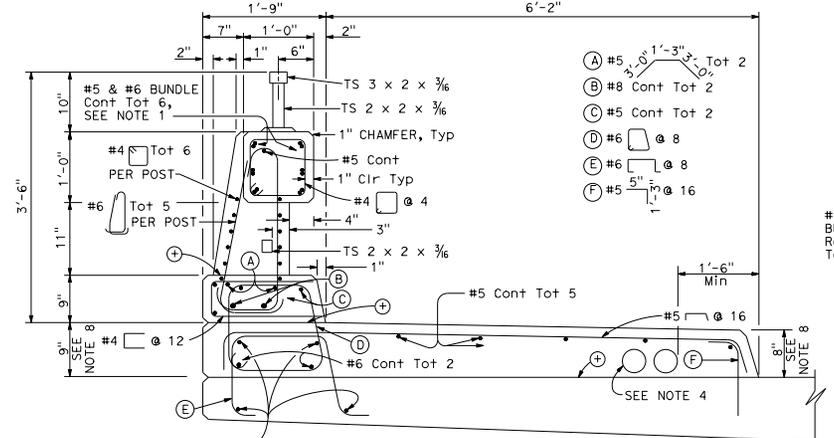
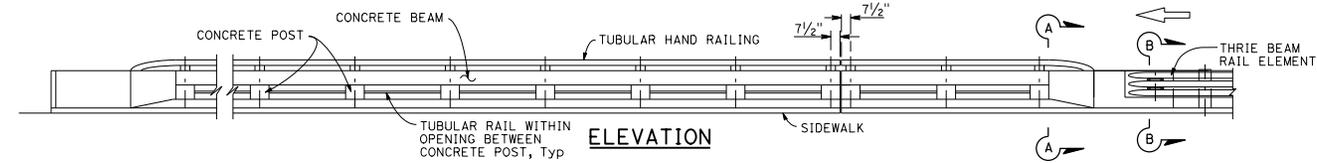
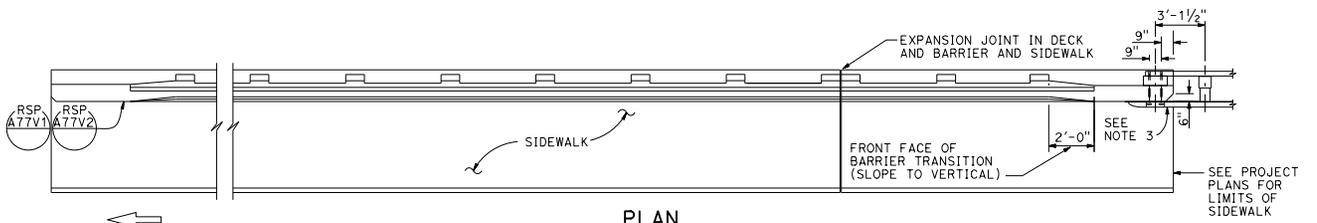
REVISED STANDARD PLAN RSP B11-55

2010 REVISED STANDARD PLAN RSP B11-55

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

REGISTERED CIVIL ENGINEER	
Tillot Satter	
No. C42892	
Exp. 3-31-18	
CIVIL	
STATE OF CALIFORNIA	

July 15, 2016
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:**
- No lap splicing allowed on the longitudinal rail reinforcing. Splicing shall be staggered.
 - For electrical details, see Revised Standard Plans RSP ES-9A, RSP ES-9B, RSP ES-9C, RSP ES-9D and RSP ES-9E. See Project Plans for electrical layout.
 - For typical metal railing connection details not shown, see Revised Standard Plans RSP A77V1 and A77V2.
 - A maximum of five - 4" and a minimum of two - 4" round openings for future utilities. Openings are to be sealed at ends and extended 8" minimum past end of sidewalk if not used. Duct forms are to be tied down. Minimum of 6" from face of rail to utility opening. See Standard Plan B14-3 for minimum spacing between conduits and for conduit details at joints.
 - Chain link railing is not allowed on Type 80SW barrier.
 - Walls are to be backfilled before railing is placed.
 - Terminate all longitudinal curb, sidewalk, and deck reinforcement in standard 90° hooks.
 - Dimensions will vary with cross slope and with certain thickness of surfacing.
 - Expansion joint to match deck joint, see Standard Plan B11-63 for expansion joint details.
 - This barrier is to be used only for speeds of 45 MPH or less. For speeds greater than 45 MPH, pedestrians should be protected by a separation traffic barrier.

BARRIER MODIFICATION FOR ELECTROLIER

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CONCRETE BARRIER TYPE 80SW (SHEET 1 OF 3)

NO SCALE

RSP B11-62 DATED JULY 15, 2016 SUPERSEDES RSP B11-62 DATED NOVEMBER 15, 2013 AND RSP B11-62 DATED NOVEMBER 15, 2013 AND RSP B11-62 DATED JULY 19, 2013 AND STANDARD PLAN B11-62 DATED MAY 20, 2011 - PAGE 302 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP B11-62

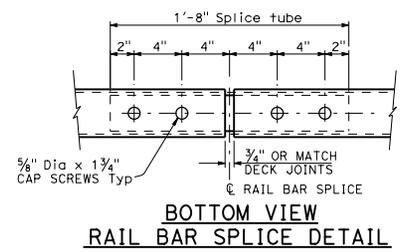
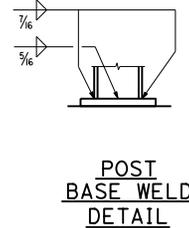
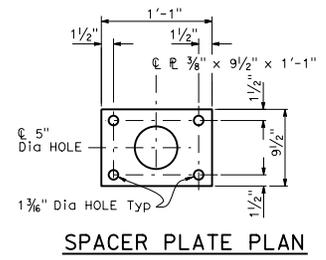
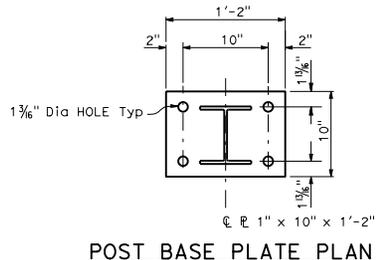
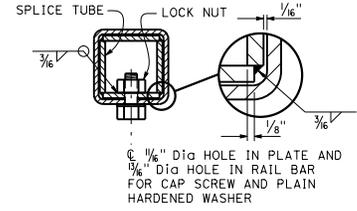
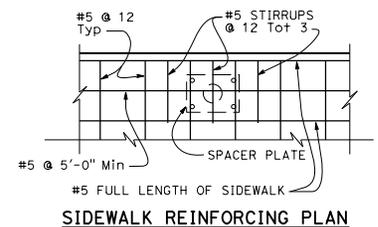
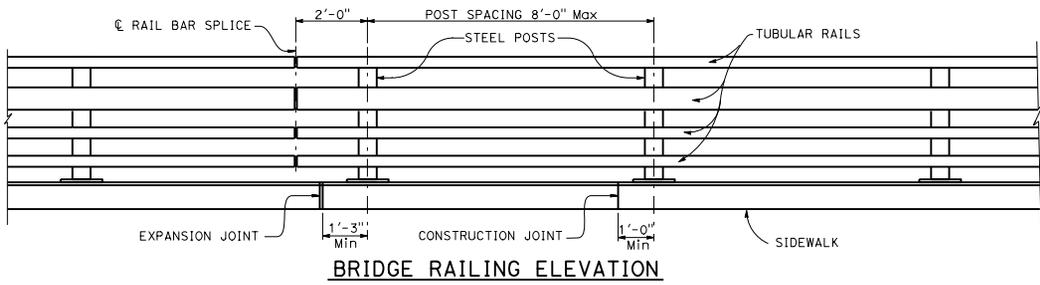
2010 REVISED STANDARD PLAN RSP B11-62

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

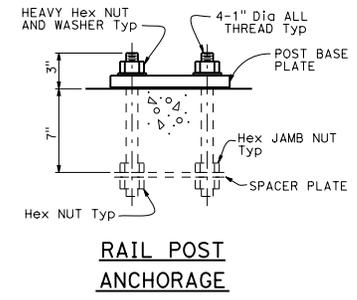
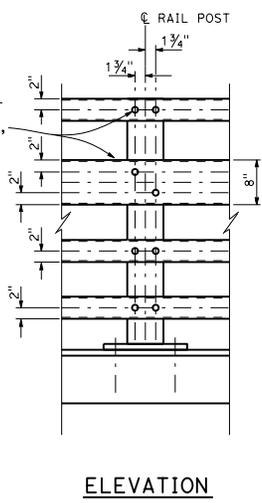
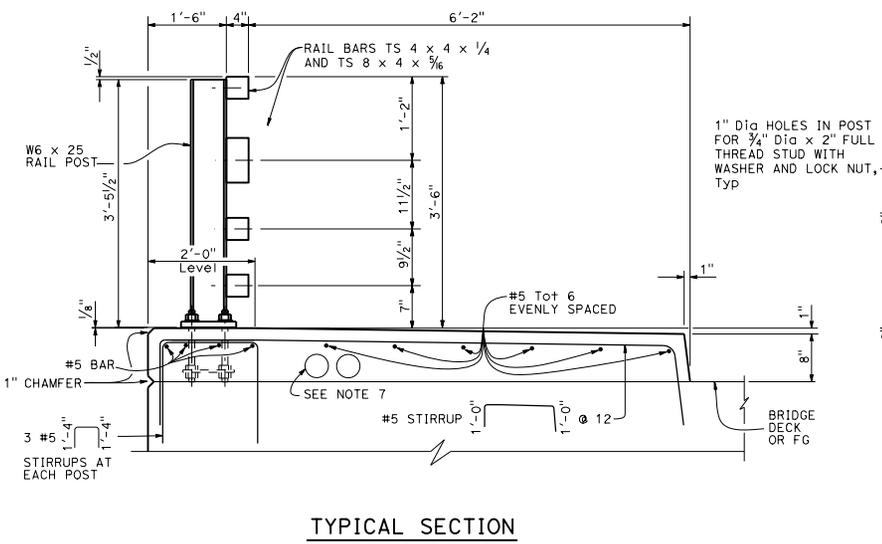
REGISTERED CIVIL ENGINEER
Tilgert Satter
No. C42892
Exp. 3-31-18
CIVIL
STATE OF CALIFORNIA

July 15, 2016
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:**
- All exposed cuts or sheared edges shall be rounded and free of burrs.
 - Rail posts shall be set normal to grade.
 - Lengths of rail bar shall be attached to a minimum of two rail posts.
 - Rail post anchoring nuts shall be tightened to a snug fit and given additional 1/8 turn.
 - Holes in posts for rail bar attachment may be field drilled. Holes shall be coated with an approved zinc-rich paint prior to erection.
 - This barrier is to be used only for speeds of 45 mph or less. For speeds greater than 45 mph, pedestrians should be protected by a separation traffic barrier.
 - A maximum of six - 4" and a minimum of two - 4" round openings for future utilities. Openings are to be sealed at ends and extended 8" minimum past end of sidewalk if not used. Duct forms are to be tied down. Round openings are to be a minimum of 1'-6" from face of sidewalk curb and a minimum of 6" from face of rail. See Standard Plan B14-3 for minimum spaces between conduits and for conduit details at joints.



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**CALIFORNIA ST-40
BRIDGE RAIL
(SHEET 1 OF 2)**
NO SCALE

RSP B11-66 DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN B11-66
DATED MAY 20, 2011 - PAGE 306 OF THE STANDARD PLANS BOOK DATED 2010.
REVISED STANDARD PLAN RSP B11-66

2010 REVISED STANDARD PLAN RSP B11-66

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

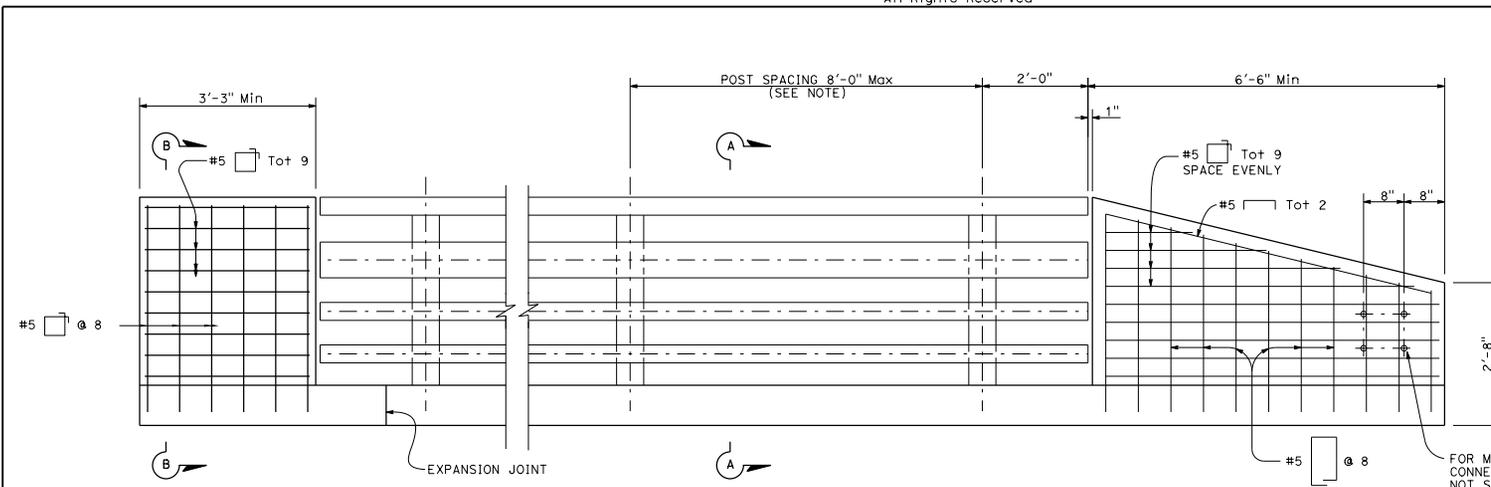
REGISTERED CIVIL ENGINEER

July 15, 2016

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.

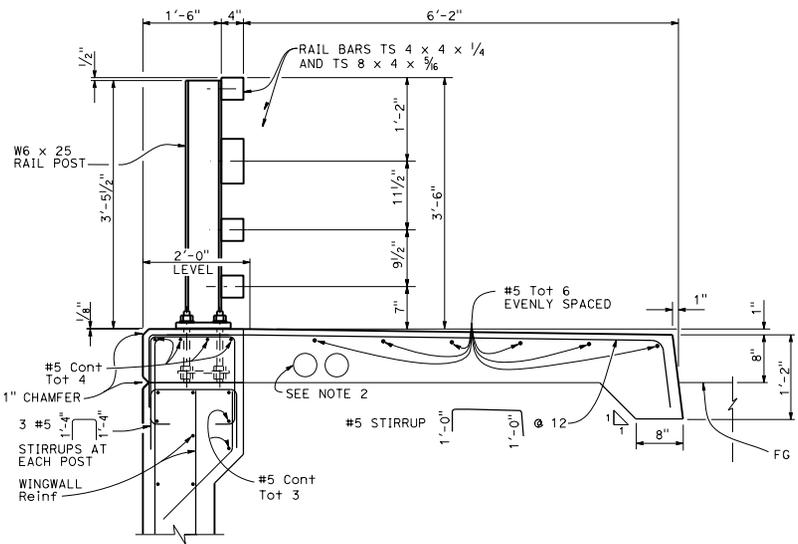
REGISTERED PROFESSIONAL ENGINEER
Tillot Satter
No. C42892
Exp. 3-31-18
CIVIL
STATE OF CALIFORNIA



END OF RAILING ELEVATION

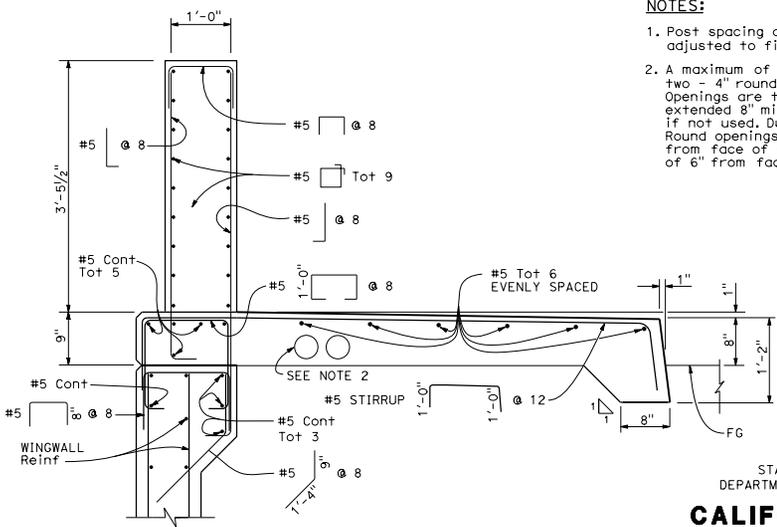
FOR METAL RAILING CONNECTION DETAILS NOT SHOWN, SEE REVISED STANDARD PLANS RSP A77V1 AND RSP A77V2.

TO ACCOMPANY PLANS DATED _____



SECTION A-A

For details not shown, see Typical Section



SECTION B-B

For details not shown, see Typical Section

NOTES:

1. Post spacing and/or end block length to be adjusted to fit bridge length or wingwall length.
2. A maximum of six - 4" and a minimum of two - 4" round openings for future utilities. Openings are to be sealed at ends and extended 8" minimum past end of sidewalk. If not used, Duct Forms are to be tied down. Round openings are to be a minimum of 1'-6" from face of sidewalk curb and a minimum of 6" from face of rail.

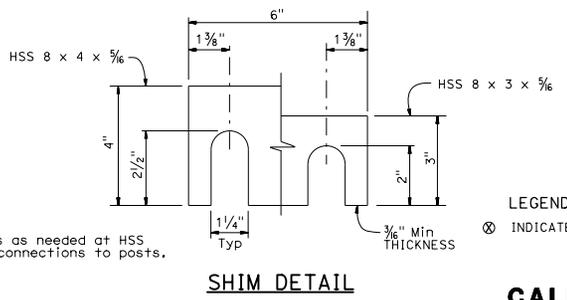
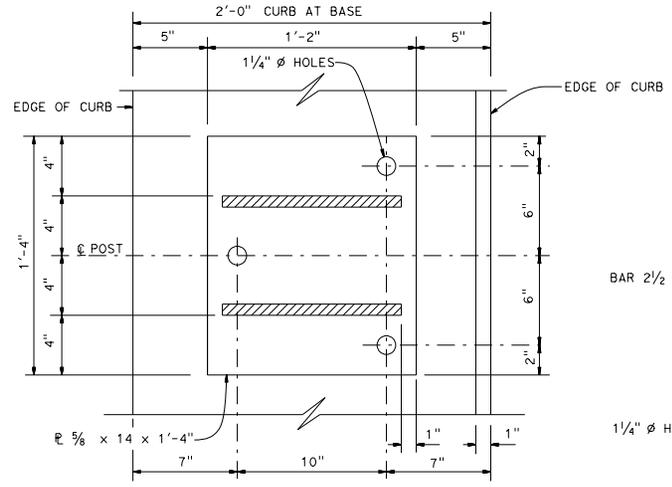
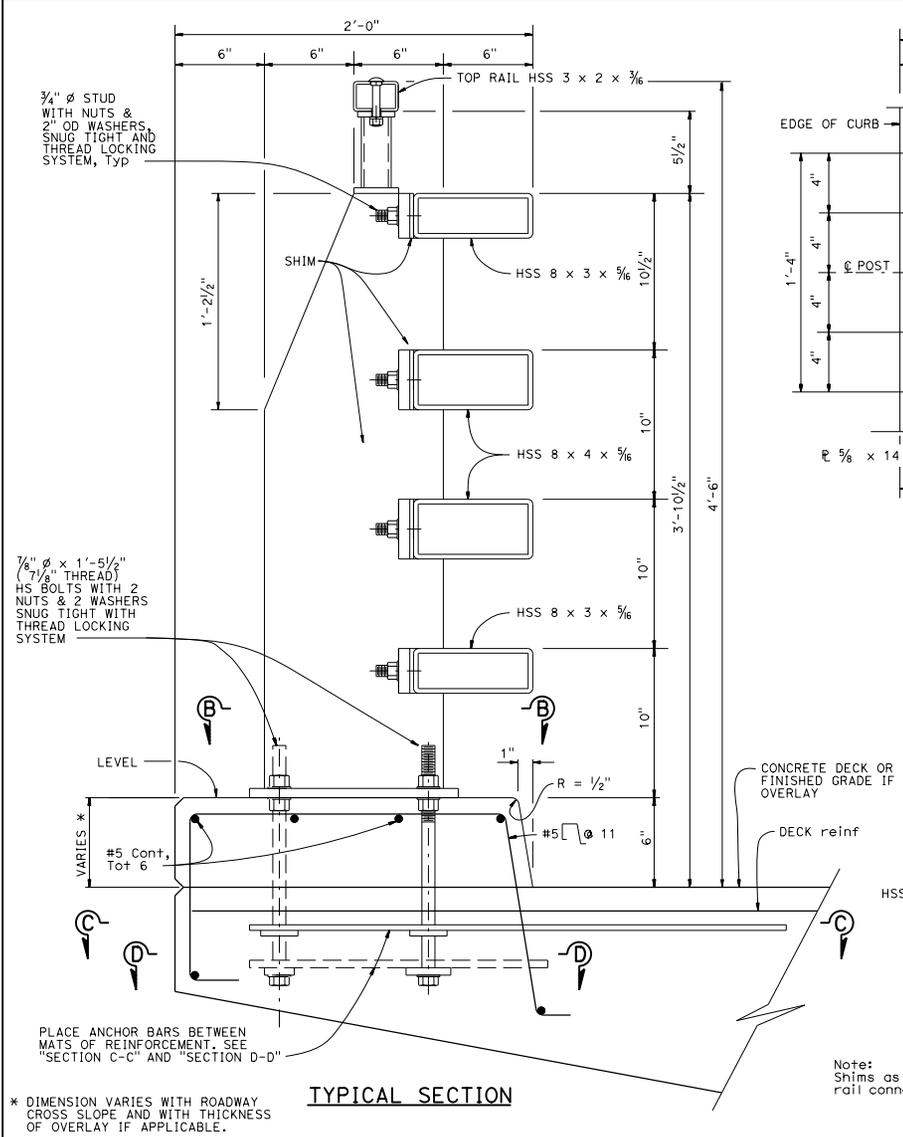
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**CALIFORNIA ST-40
BRIDGE RAIL
(SHEET 2 OF 2)**

NO SCALE

RSP B11-67 DATED JULY 15, 2016 SUPERSEDES RSP B11-67 DATED JULY 19, 2013 AND STANDARD PLAN B11-67 DATED MAY 20, 2011 - PAGE 307 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP B11-67

2010 REVISED STANDARD PLAN RSP B11-67



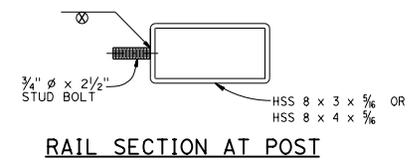
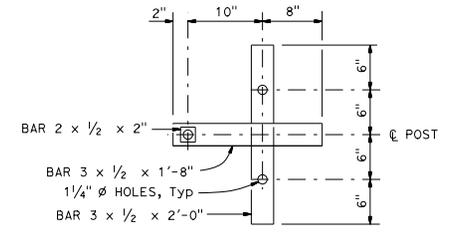
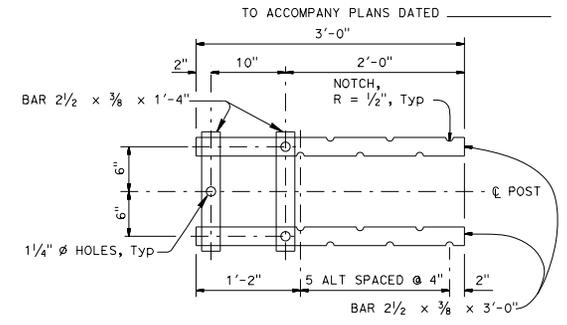
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

Gregory J. Kaderabek
REGISTERED CIVIL ENGINEER

July 15, 2016
PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
Gregory J. Kaderabek
No. C40814
Exp. 3-31-17
CIVIL
STATE OF CALIFORNIA



LEGEND:

⊗ INDICATES STUD WELD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
CALIFORNIA ST-20S BRIDGE RAIL
(SHEET 1 OF 4)
NO SCALE

RSP B11-71 DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP B11-71

2010 REVISED STANDARD PLAN RSP B11-71

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

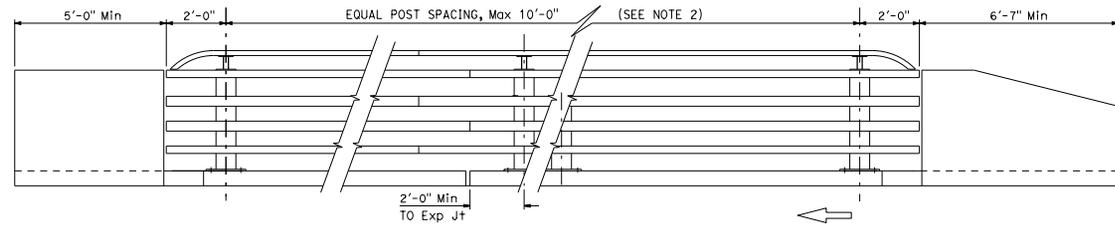
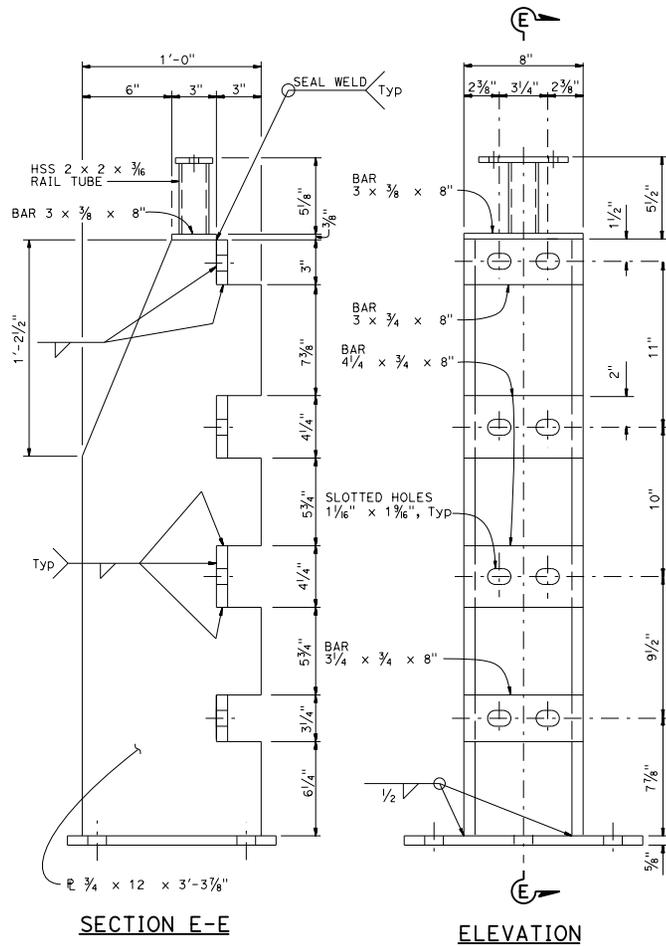
Gregory J. Kaderabek
 REGISTERED CIVIL ENGINEER

July 15, 2016
 PLANS APPROVAL DATE

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 COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
 Gregory J. Kaderabek
 No. C40814
 Exp. 3-31-17
 CIVIL
 STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED _____



ELEVATION

NOTES:

1. For approach and departure end details, see Revised Standard Plan RSP B11-73.
2. Post spacing and/or block length to be adjusted to fit bridge length or wingwall length.
3. All horizontal members are parallel to longitudinal profile grade of deck.
4. Posts are normal to profile grade of structure.
5. Posts are vertical to the transverse cross section.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
CALIFORNIA ST-20S BRIDGE RAIL
(SHEET 2 OF 4)

NO SCALE

RSP B11-72 DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP B11-72

2010 REVISED STANDARD PLAN RSP B11-72

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

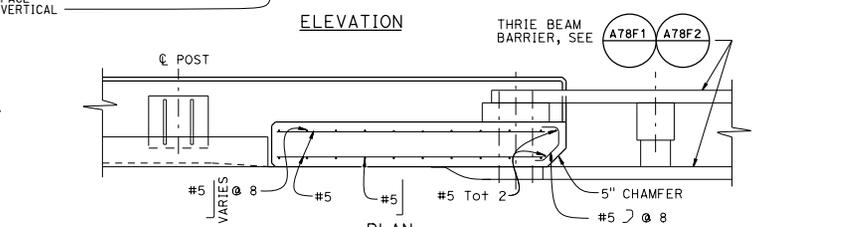
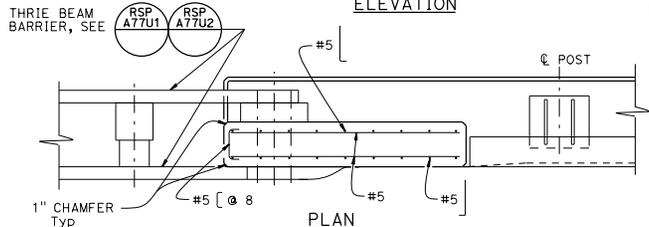
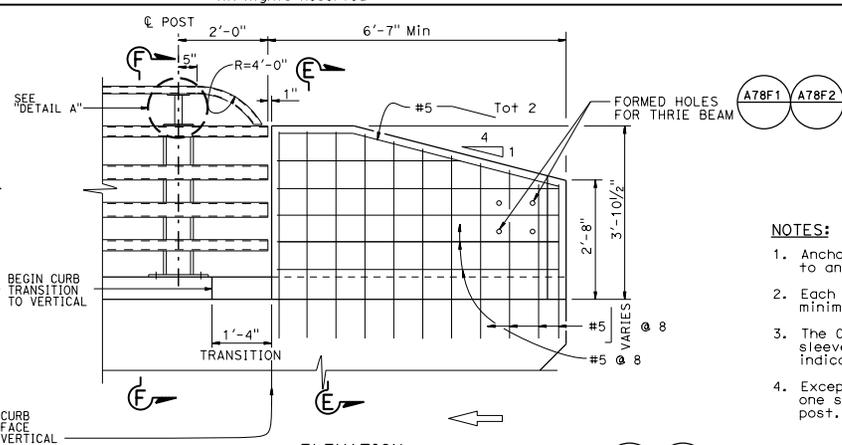
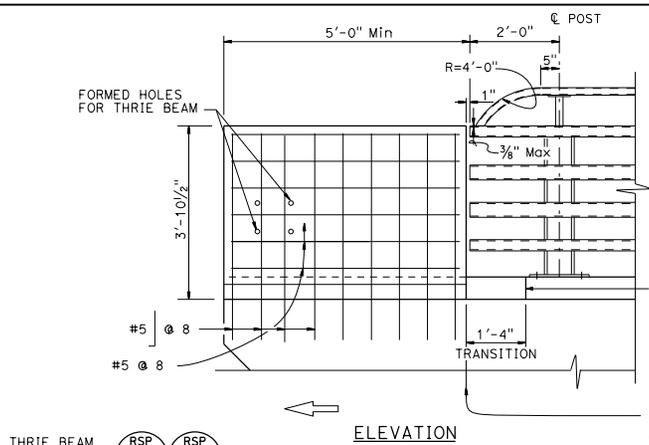
Gregory J. Koderick
 REGISTERED CIVIL ENGINEER
 No. C40814
 Exp. 3-31-17
 STATE OF CALIFORNIA

July 15, 2016
 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 _____

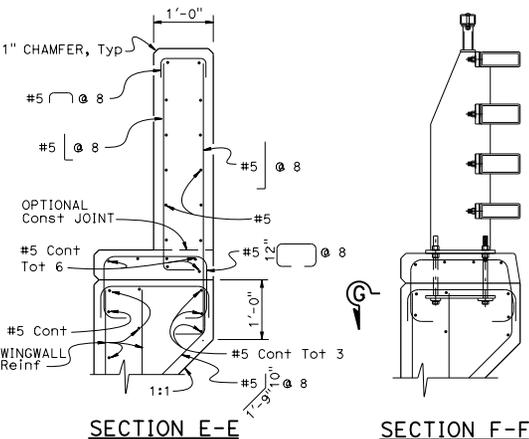
NOTES:

1. Anchor bolts may be tack welded (shop or field) to anchorage.
2. Each rail length must be continuous over a minimum of two posts.
3. The Contractor must check that the tubular sleeve splices conform to the dimensions indicated to assure proper clearance.
4. Except for expansion splices, not more than one splice permitted per same side of post.

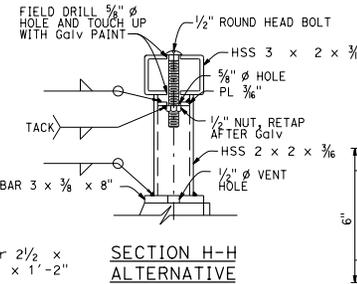
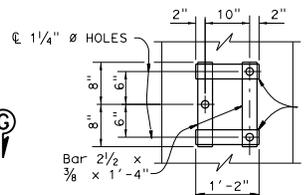


END BLOCK DETAIL

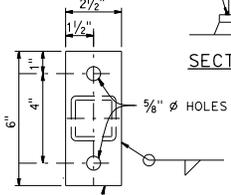
TRANSITION BLOCK DETAIL



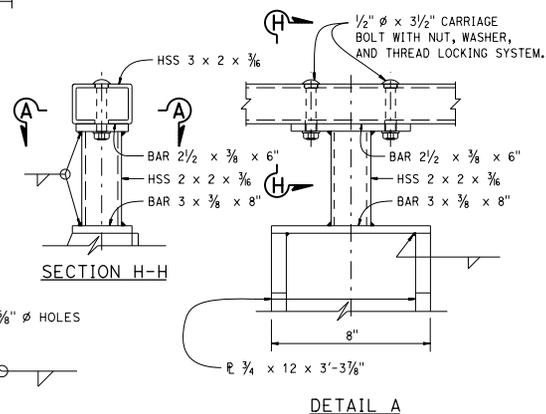
NOTE:
For details not shown, see "SECTION E-E"



SECTION H-H ALTERNATIVE



SECTION A-A



SECTION H-H

DETAIL A

RAIL CONNECTION DETAILS

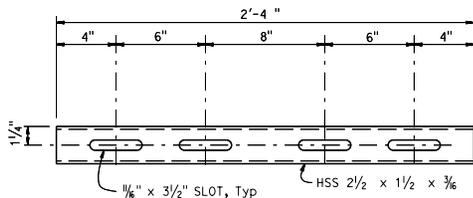
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
CALIFORNIA ST-20S BRIDGE RAIL
(SHEET 3 OF 4)

NO SCALE

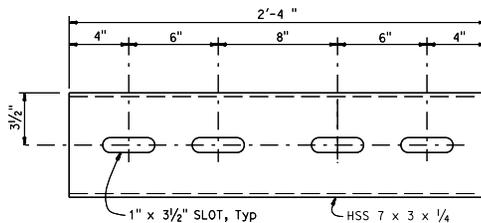
RSP B11-73 DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP B11-73

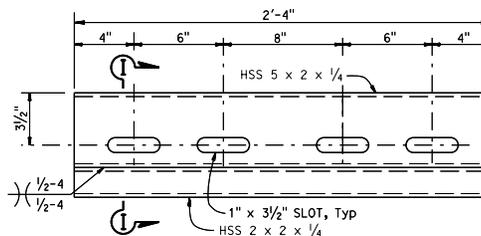
2010 REVISED STANDARD PLAN RSP B11-73



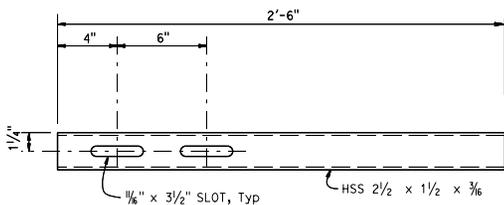
(FOR HSS 3 x 2 x 3/8 RAIL)
STANDARD SLEEVE DETAIL



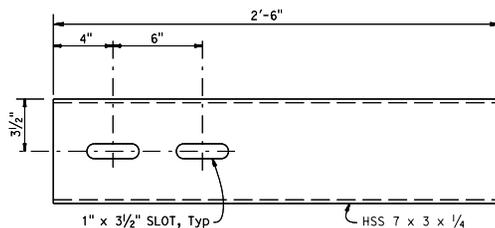
(FOR HSS 7 x 3 x 1/4 RAIL)
STANDARD SLEEVE DETAIL



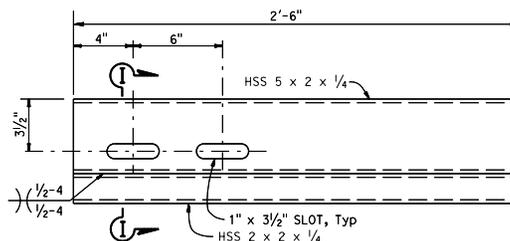
(FOR HSS 8 x 3 x 5/8 RAIL)
STANDARD SLEEVE DETAIL



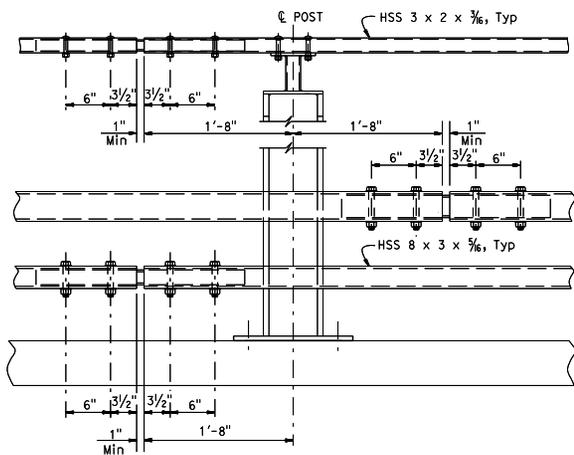
(FOR HSS 3 x 2 x 3/8 RAIL)
EXPANSION SLEEVE DETAIL



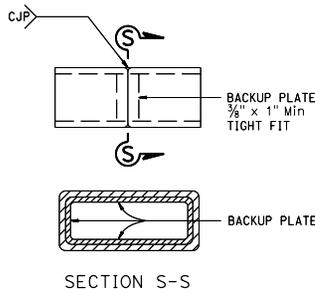
(FOR HSS 8 x 4 x 5/8 RAIL)
EXPANSION SLEEVE DETAIL



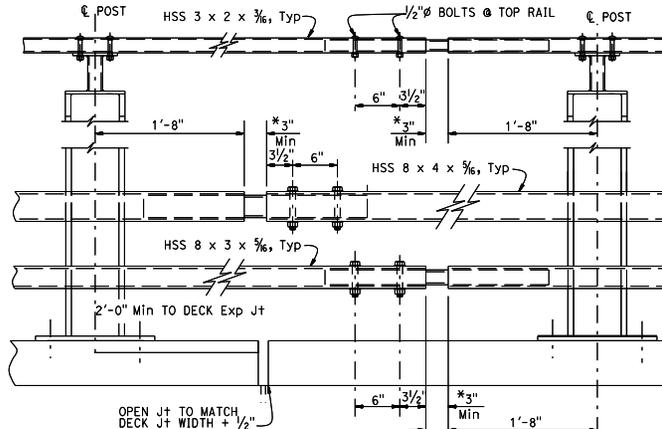
(FOR HSS 8 x 3 x 5/8 RAIL)
EXPANSION SLEEVE DETAIL



STANDARD SPLICE



ALTERNATE TUBE WELDED SPLICE



EXPANSION SPLICE

* MATCH DECK OR WALL JOINT

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**CALIFORNIA ST-20S BRIDGE RAIL
(SHEET 4 OF 4)**

NO SCALE

RSP B11-74 DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP B11-74

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

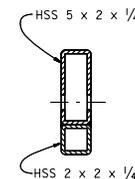
Gregory J. Kaderabek
 REGISTERED CIVIL ENGINEER
 No. C40814
 Exp. 3-31-17
 CIVIL
 STATE OF CALIFORNIA

July 15, 2016
 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:

- HS bolts with nut and washers, snug tightened, and thread locking system.
- Use 1/2"Ø x 3 3/8" (HSS 8 x 2 x 3/8)
Use 3/4"Ø x 4 5/8" (HSS 8 x 3 x 5/8)
Use 3/4"Ø x 5 5/8" (HSS 8 x 4 x 5/8)

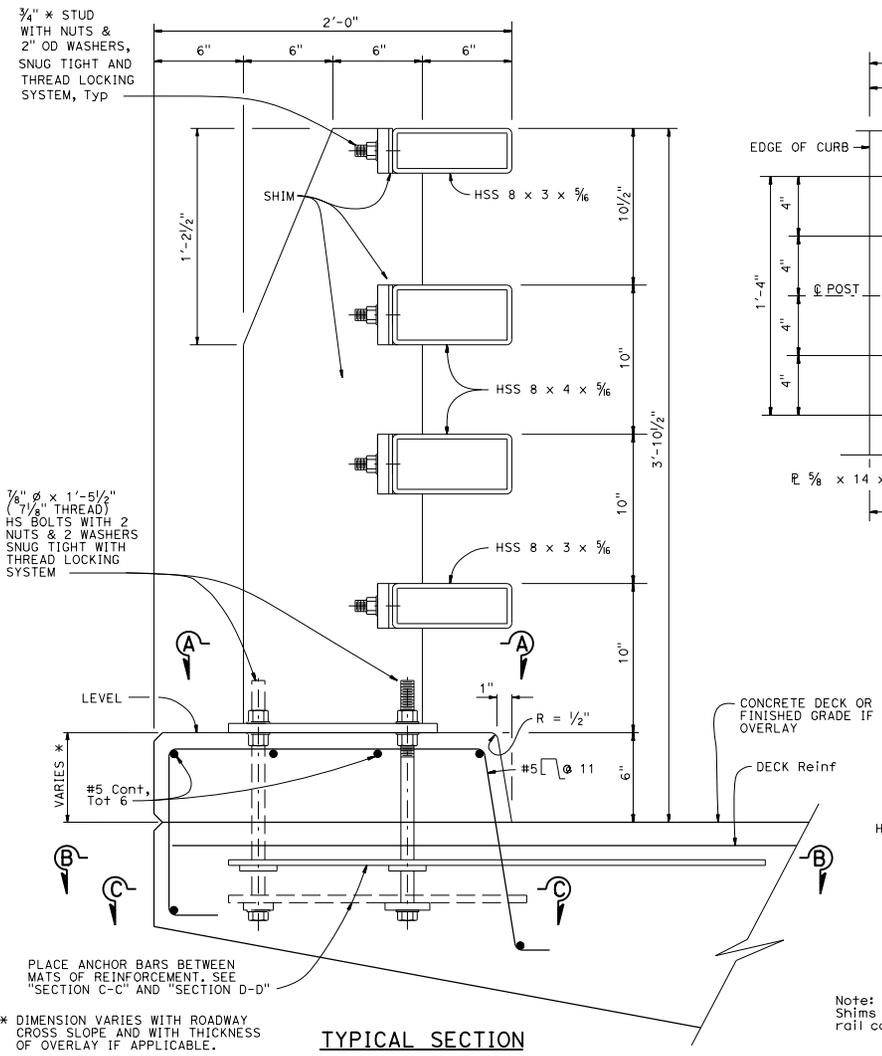


SECTION I-I

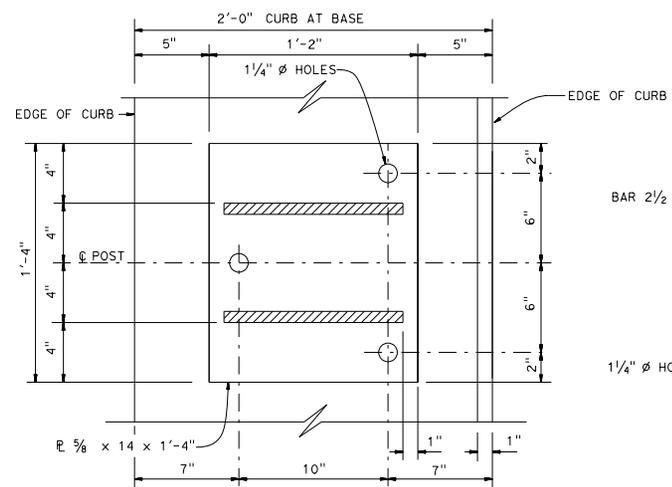
2010 REVISED STANDARD PLAN RSP B11-74

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL SHEETS

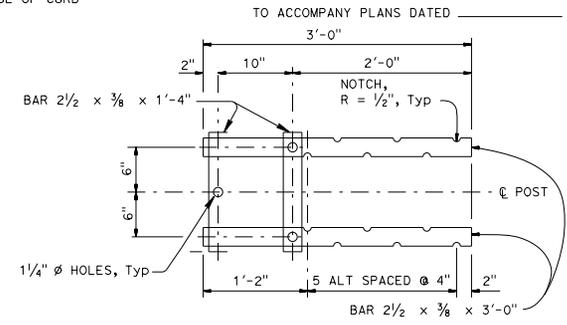
Gregory J. Kaderabek
 REGISTERED CIVIL ENGINEER
 July 15, 2016
 PLANS APPROVAL DATE
 No. C40814
 Exp. 3-31-17
 CIVIL
 STATE OF CALIFORNIA



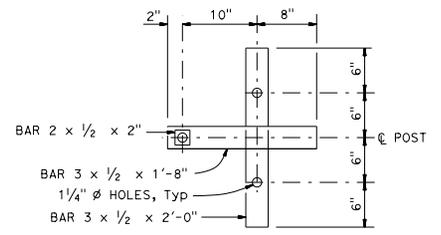
TYPICAL SECTION



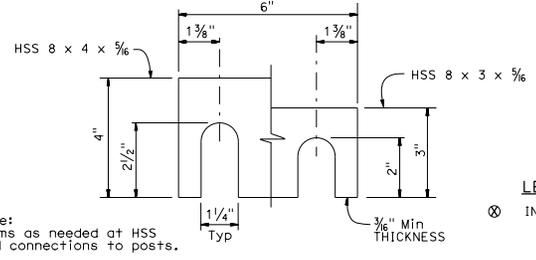
SECTION A-A



SECTION B-B



SECTION C-C



Note: Shims as needed at HSS rail connections to posts.

SHIM DETAIL

LEGEND:

⊗ INDICATES STUD WELD

SECTION AT POST

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**CALIFORNIA ST-70 BRIDGE RAIL
(SHEET 1 OF 4)**

NO SCALE

RSP B11-75 DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP B11-75

2010 REVISED STANDARD PLAN RSP B11-75

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

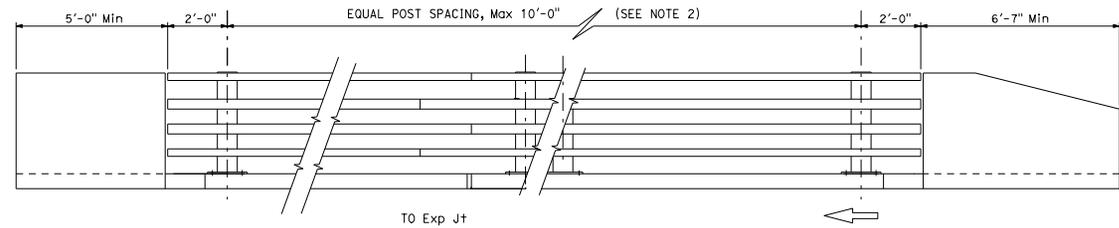
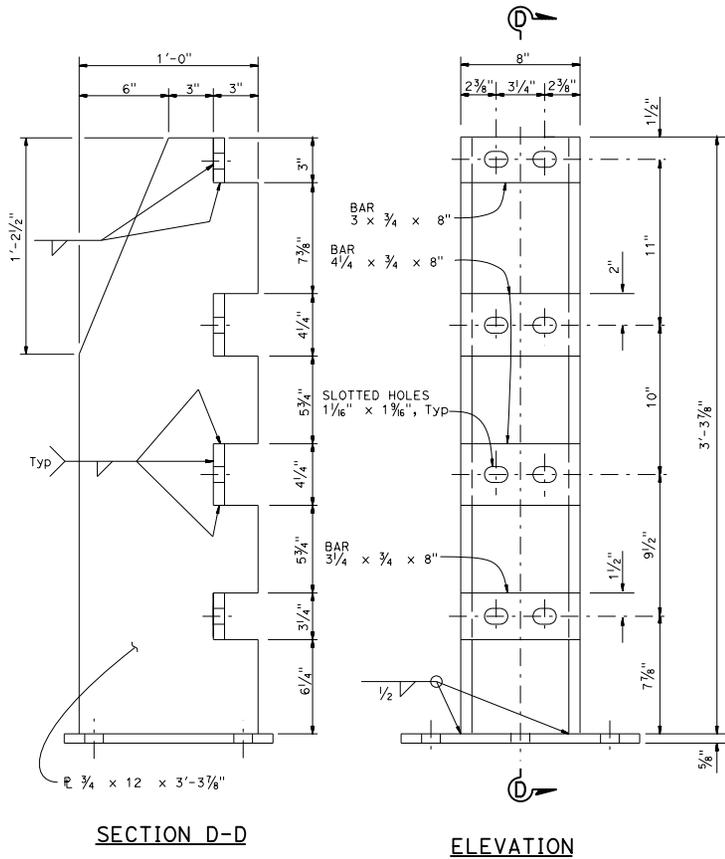
Gregory J. Kaderabek
 REGISTERED CIVIL ENGINEER

July 15, 2016
 PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
 Gregory J. Kaderabek
 No. C40814
 Exp. 3-31-17
 CIVIL
 STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED _____



NOTES:

1. For approach and departure end details, see Revised Standard Plan RSP B11-77.
2. Post spacing and/or block length to be adjusted to fit bridge length or wingwall length.
3. All horizontal members are parallel to longitudinal profile grade of deck.
4. Posts are normal to profile grade of structure.
5. Posts are vertical to the transverse cross section.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
CALIFORNIA ST-70 BRIDGE RAIL
(SHEET 2 OF 4)
NO SCALE

RSP B11-76 DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP B11-76

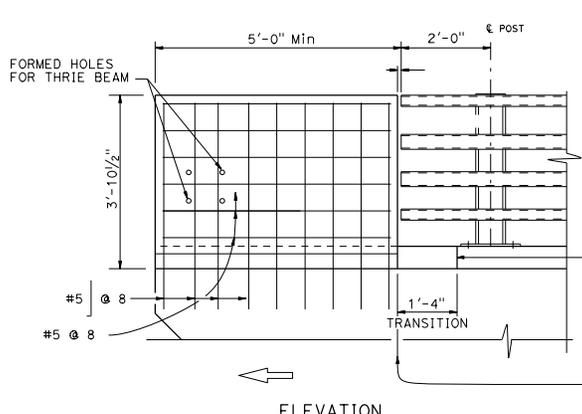
2010 REVISED STANDARD PLAN RSP B11-76

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

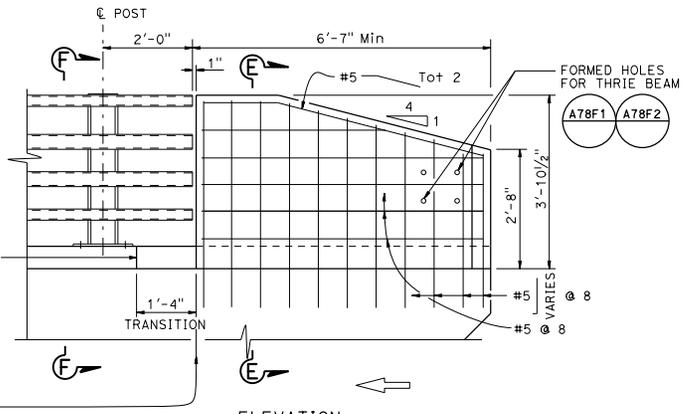
Gregory J. Kaderabek
 REGISTERED CIVIL ENGINEER
 July 15, 2016
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED _____

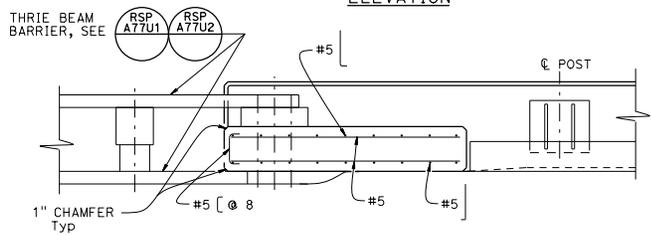
2010 REVISED STANDARD PLAN RSP B11-77



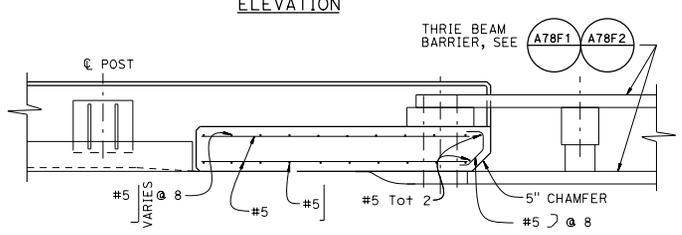
ELEVATION



ELEVATION



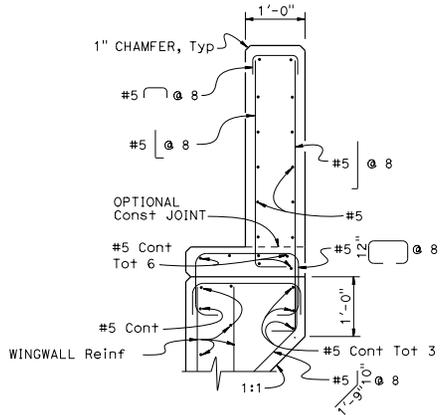
PLAN



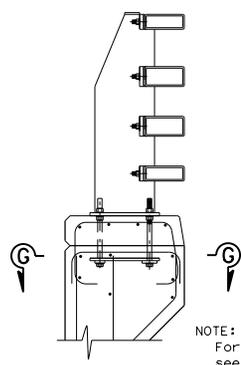
PLAN

END BLOCK DETAIL

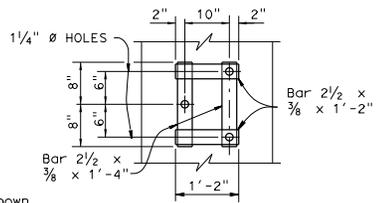
TRANSITION BLOCK DETAIL



SECTION E-E



SECTION F-F



VIEW G-G

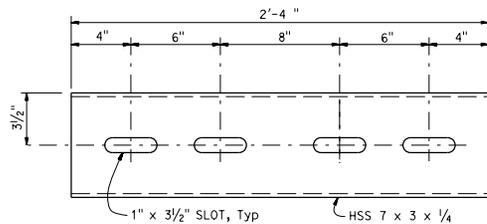
NOTES:

- Anchor bolts may be tack welded (shop or field) to anchorage.
- Each rail length must be continuous over a minimum of two posts.
- The Contractor must check that the tubular sleeve splices conform to the dimensions indicated to assure proper clearance.
- Except for expansion splices, not more than one splice permitted per same side of post.

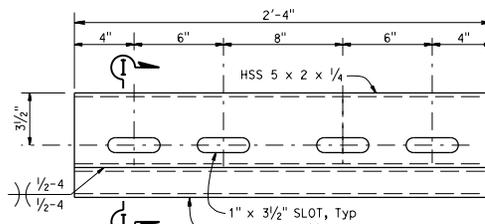
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
CALIFORNIA ST-70 BRIDGE RAIL
(SHEET 3 OF 4)
 NO SCALE

RSP B11-77 DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

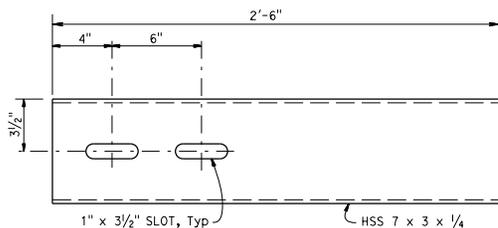
REVISED STANDARD PLAN RSP B11-77



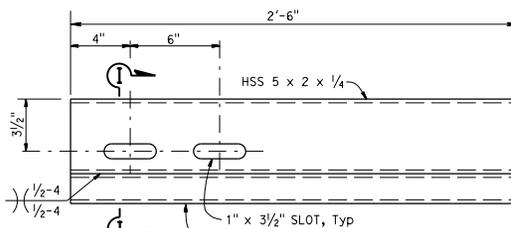
STANDARD SLEEVE DETAIL



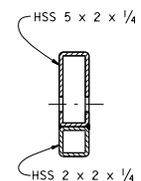
STANDARD SLEEVE DETAIL



EXPANSION SLEEVE DETAIL



EXPANSION SLEEVE DETAIL



SECTION I-I

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

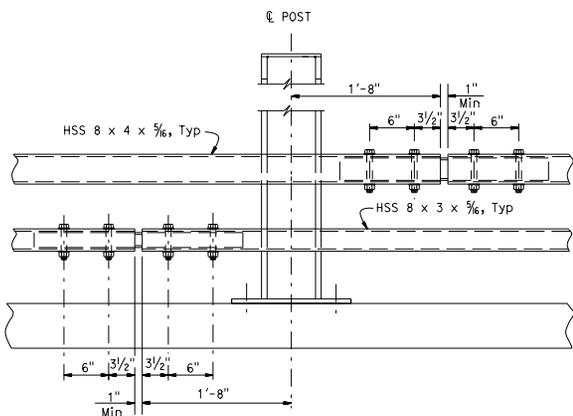
Gregory J. Kaderabek
 REGISTERED CIVIL ENGINEER
 No. C40814
 Exp. 3-31-17
 CIVIL
 STATE OF CALIFORNIA

July 15, 2016
 PLANS APPROVAL DATE
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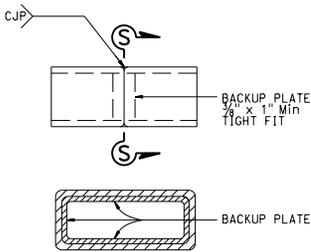
TO ACCOMPANY PLANS DATED _____

NOTES:

1. HS bolts with nut and washers, snug tightened, and thread locking system.
2. Use 3/4"Ø x 4 5/8" (HSS 8 x 3 x 5/16)
Use 3/4"Ø x 5 5/8" (HSS 8 x 4 x 5/16)

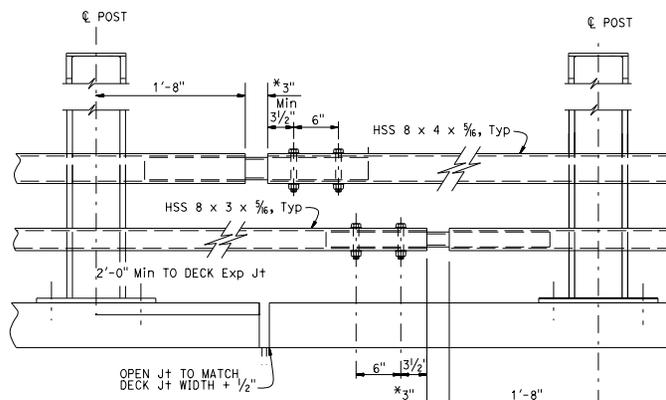


STANDARD SPLICE



SECTION S-S

ALTERNATE TUBE WELDED SPLICE



EXPANSION SPLICE

* MATCH DECK OR WALL JOINT

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**CALIFORNIA ST-70 BRIDGE RAIL
(SHEET 4 OF 4)**

NO SCALE

RSP B11-78 DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

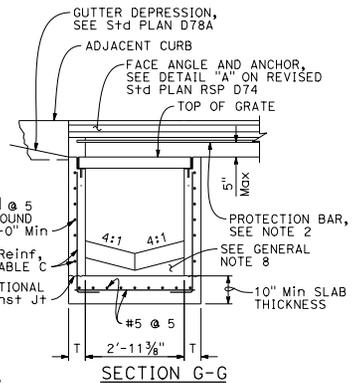
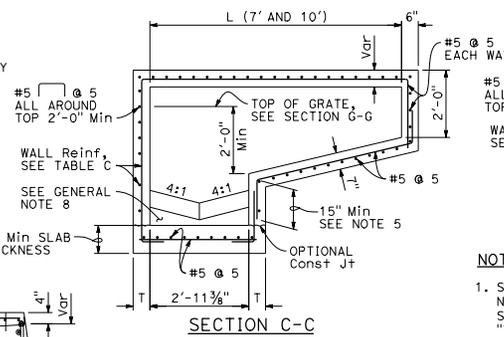
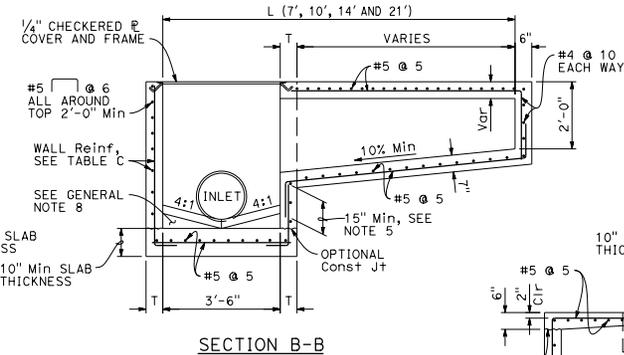
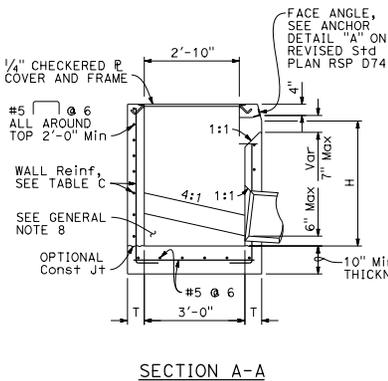
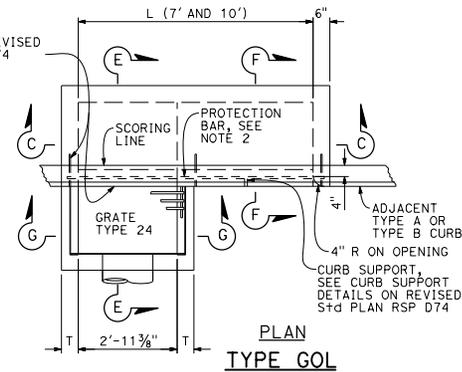
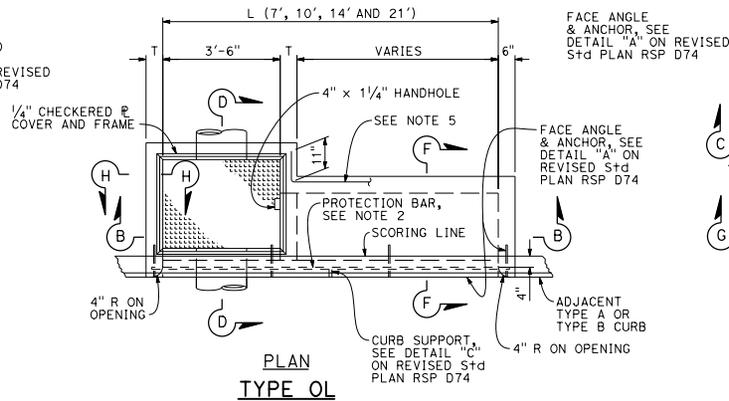
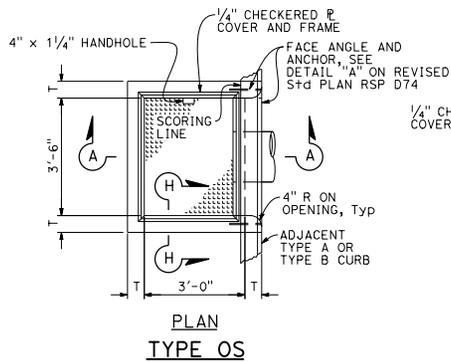
REVISED STANDARD PLAN RSP B11-78

2010 REVISED STANDARD PLAN RSP B11-78

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

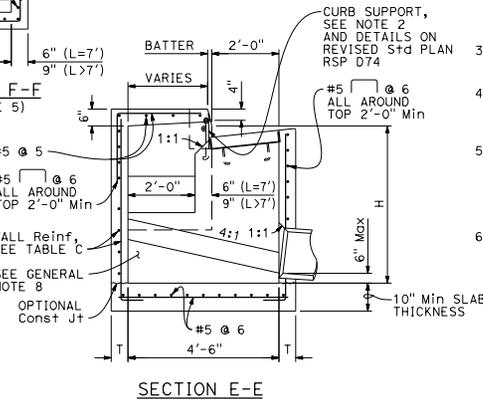
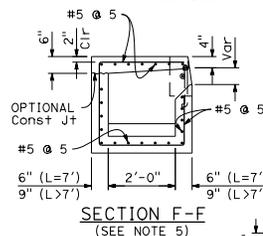
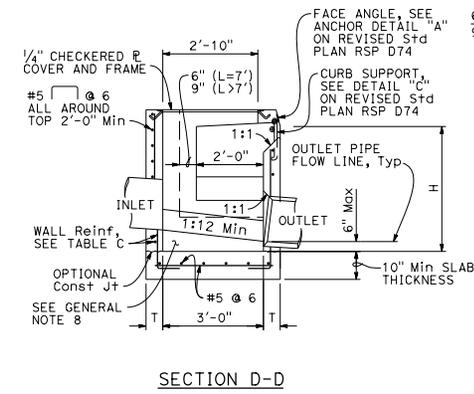
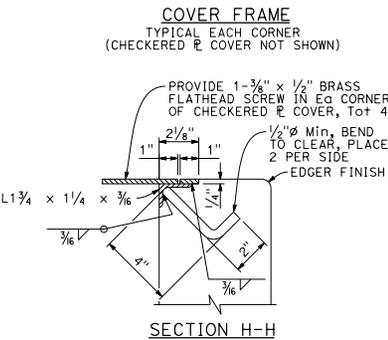
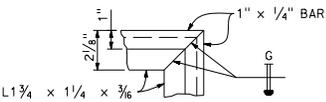


 REGISTERED CIVIL ENGINEER
 July 15, 2016
 PLANS APPROVAL DATE
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NOTES:

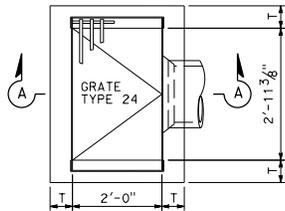
1. See Revised Standard Plan RSP D72F for General Notes and additional details. See Revised Standard Plan RSP D72G for tables, wall thickness "T" and quantities.
2. Where shown on the project plans, place a 3/4 inch diameter plain round protection bar horizontally across the length of the opening and bend back 4 inches into the inlet wall on each side.
3. Complete joint penetration butt welds may be substituted for the fillet welds on all anchors.
4. Standard square, hexagon, round or equivalent headed anchors may be substituted for the right angle hooks on the anchors shown on this plan.
5. Extend all horizontal bars from inlet extensions into adjacent concrete elements of main inlet box a minimum of 15 inches. Where shown, bend horizontal bars into box. If necessary rotate bars to maintain 2 inch clear coverage.
6. Height of curb opening will vary with the type of curb and the depth of the local depression.



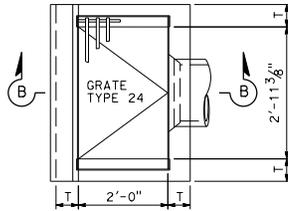
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**CIP DRAINAGE INLETS
TYPES OS, OL AND GOL**
NO SCALE

RSP D72A DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

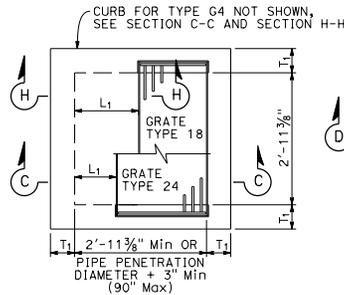
REVISED STANDARD PLAN RSP D72A



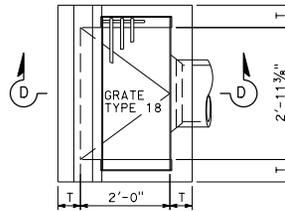
PLAN
TYPE G1



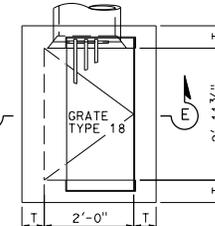
PLAN
TYPE G3



PLAN
STANDARD
TYPE G2 OR G4



PLAN
TYPE G5



PLAN
TYPE G6

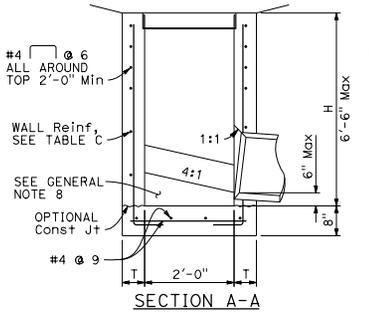
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

July 15, 2016
 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.

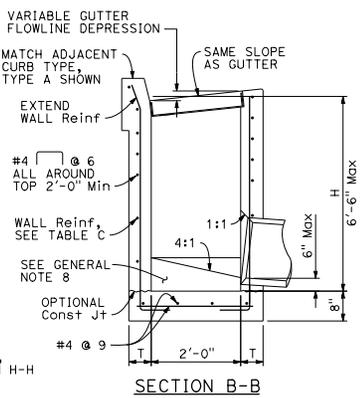
TO ACCOMPANY PLANS DATED _____

NOTE:
1. For notes and Table 2, See Revised Standard Plan RSP D72C.

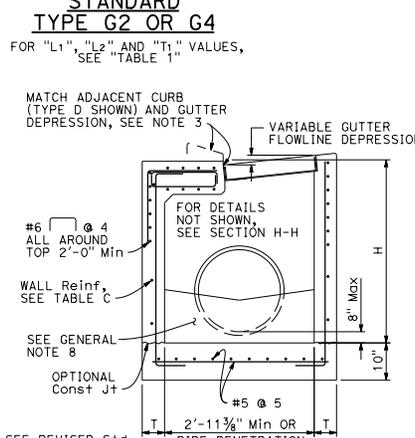
	T ₁	Vert BARS
L ₁ AND L ₂ < 2'-10"	9"	#4 @ 12
L ₁ OR L ₂ > 2'-10"	12"	#5 @ 12



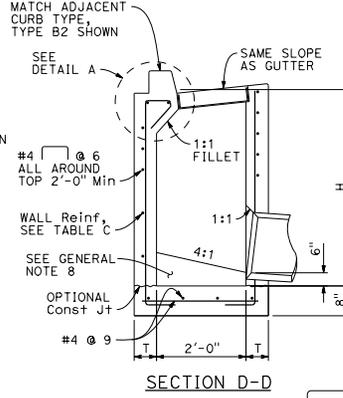
SECTION A-A



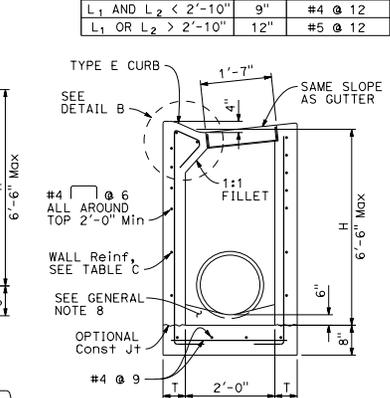
SECTION B-B



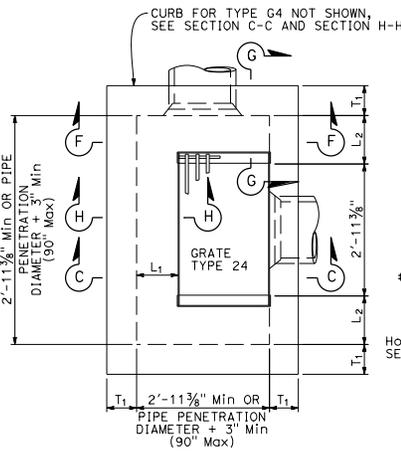
SECTION C-C



SECTION D-D

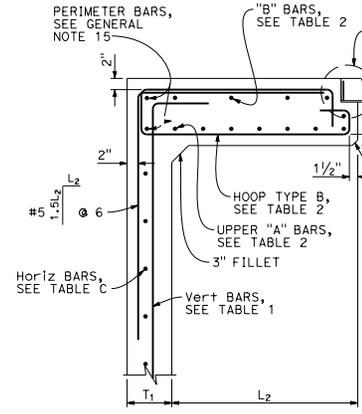


SECTION E-E

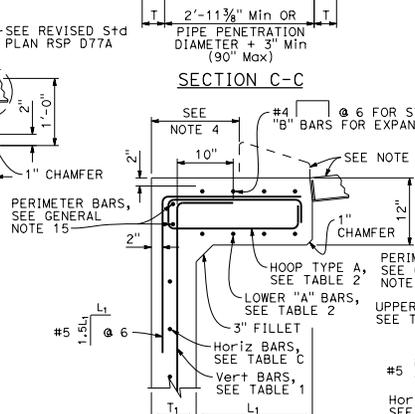


PLAN
EXPANDED
TYPE G2 OR G4

(INTEGRAL TOP ALTERNATIVE)
FOR "L₁" AND "T₁" VALUES, SEE TABLE 1

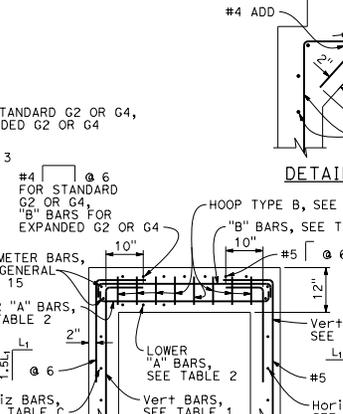


SECTION G-G



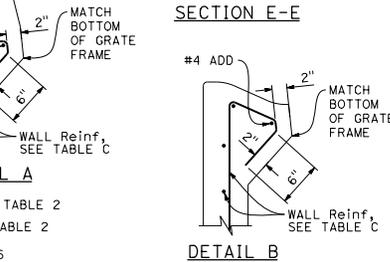
SECTION H-H

FOR "L₁", "L₂" AND "T₁" VALUES, SEE "TABLE 1"



SECTION F-F

FOR "L₁", "L₂" AND "T₁" VALUES, SEE "TABLE 1"



DETAIL A

DETAIL B

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**CIP DRAINAGE INLETS
TYPES G1, G2, G3,
G4, G5 AND G6**
NO SCALE

REVISED STANDARD PLAN RSP D72B

2010 REVISED STANDARD PLAN RSP D72B

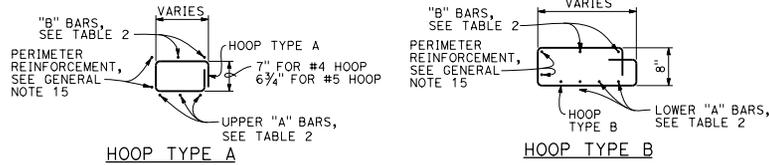
Dist#	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS


 REGISTERED CIVIL ENGINEER

July 15, 2016
 PLANS APPROVAL DATE

No. C59976
 Exp. 6-30-18
 CIVIL

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NOTES:

1. See Revised Standard Plan RSP D72F for General Notes and additional details. See Revised Standard Plan RSP D72G for tables and quantities.
2. Type G4 inlet can use Grate Type 18 or 24. Type G2 inlet uses Grate Type 24.
3. Type G4 inlet details are similar to Type G2 inlet details, except for the addition of a curb and sloped grate to match the adjacent curb and gutter depression.
4. Dimension will vary with different grates, curb types, box width and wall thickness.

TABLE 2 - TOP SLAB REINFORCEMENT		
	W/ CURB	W/O CURB
"A" BARS	#4 @ 5 (2 BARS Min)	#5 @ 5 (3 BARS Min)
"B" BARS	#4 @ 10 (2 BARS Min)	#4 @ 12 (2 BARS Min)
HOOPS ("A" & "B")	#4 @ 5	#5 @ 5

ROTATE "A" AND "B" BARS SO HOOKED ENDS WILL MAINTAIN 2" CLEAR COVERAGE.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**CIP DRAINAGE INLETS
TYPES G1, G2, G3,
G4, G5 AND G6**

NO SCALE

RSP D72C DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D72C

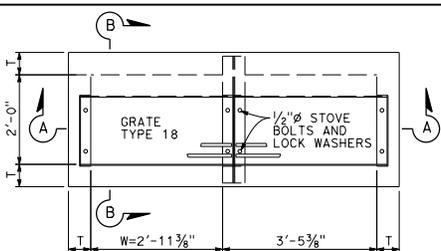
2010 REVISED STANDARD PLAN RSP D72C

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

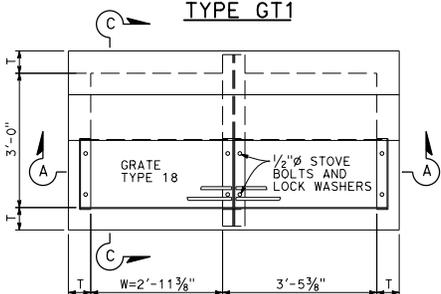


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 July 15, 2016
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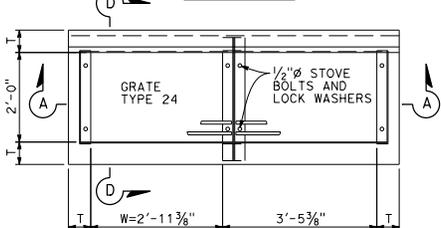
TO ACCOMPANY PLANS DATED _____



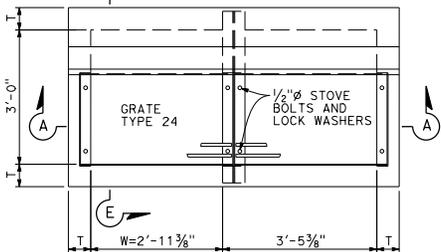
PLAN
TYPE GT1



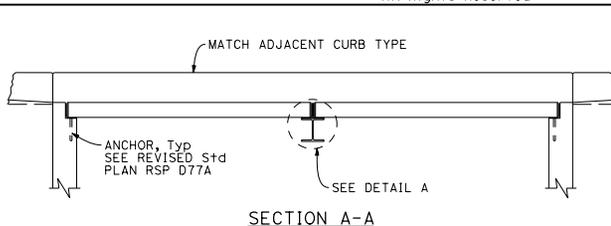
PLAN
TYPE GT2



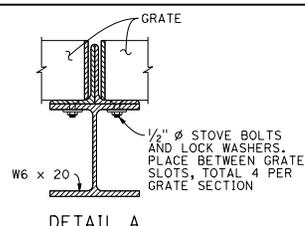
PLAN
TYPE GT3



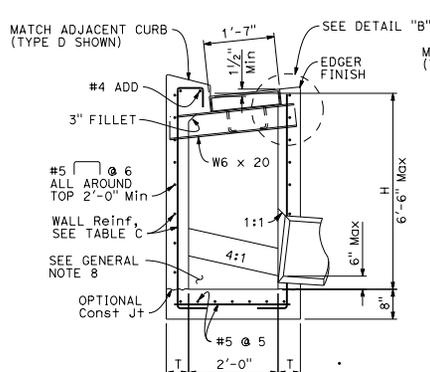
PLAN
TYPE GT4



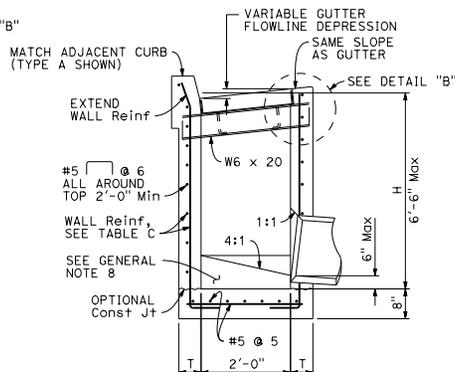
SECTION A-A



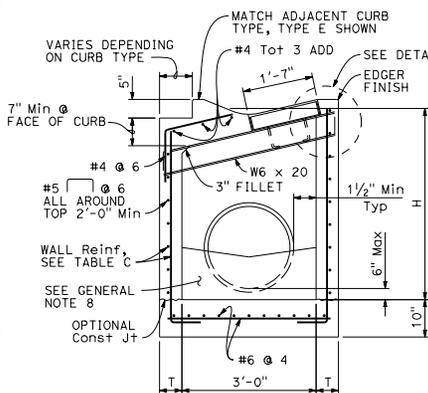
DETAIL A



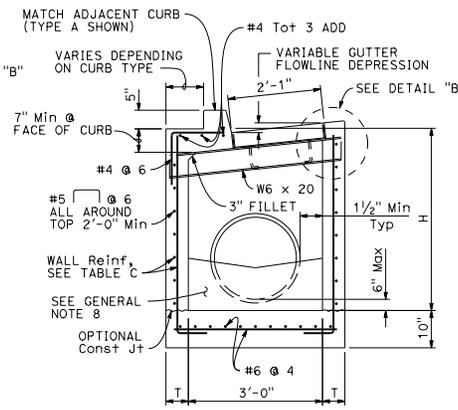
SECTION B-B



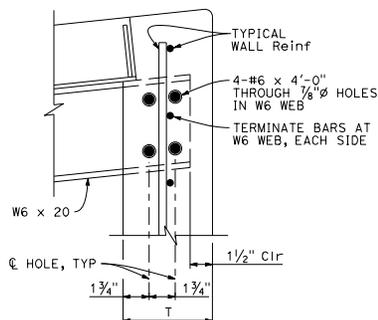
SECTION D-D



SECTION C-C



SECTION E-E



DETAIL "B"
(SIMILAR OPPOSITE END OF W6)

NOTES:

1. See Revised Standard Plan RSP D72F for General Notes and additional details. See Revised Standard Plan RSP D72G for tables, wall thickness "T" and quantities.
2. W=2'-11 3/8" for one grate. Add 3'-5 3/8" for additional grates in tandem.
3. Complete joint penetration butt welds may be substituted for the fillet welds on all anchors.
4. Standard square, hexagon, round or equivalent headed anchors may be substituted for the right angle hooks on the anchors shown on this plan.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**CIP DRAINAGE INLETS
TYPES GT1, GT2,
GT3 AND GT4**

NO SCALE

RSP D72D DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

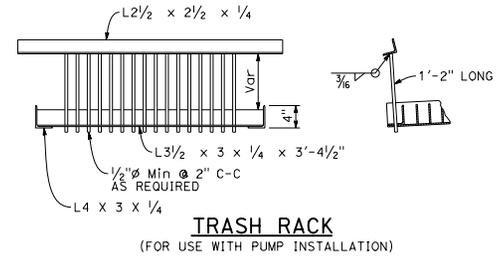
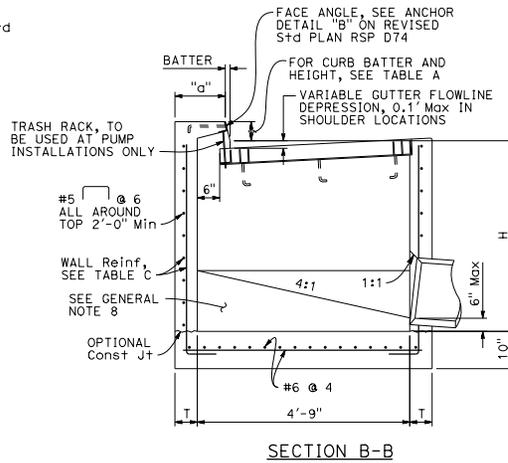
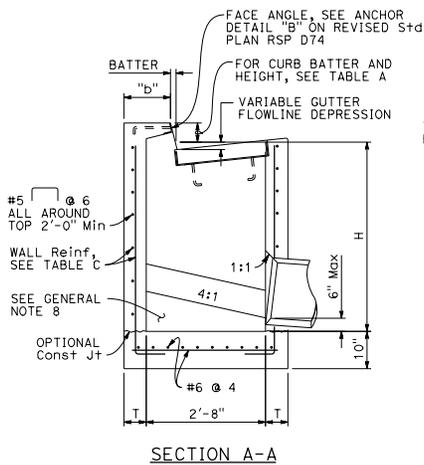
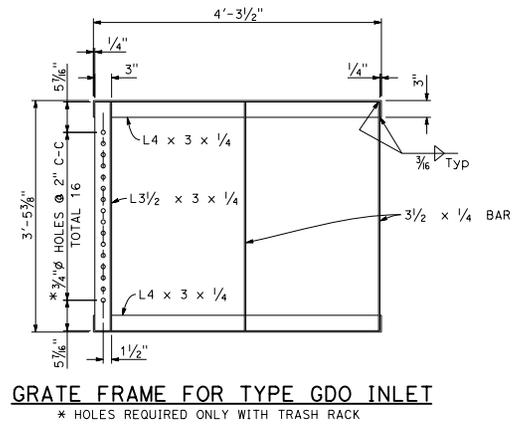
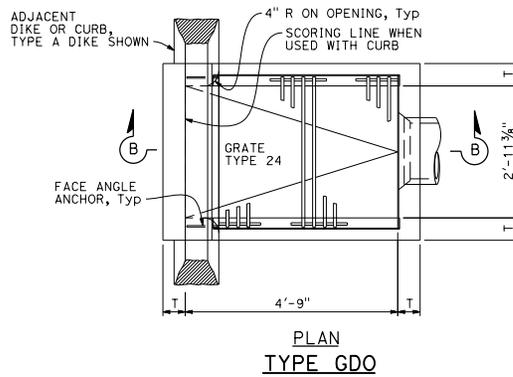
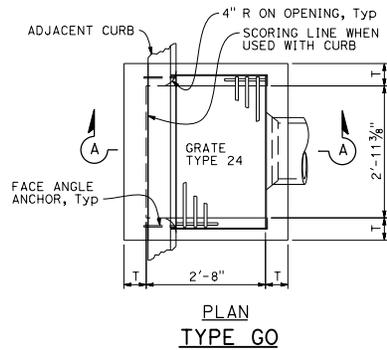
REVISED STANDARD PLAN RSP D72D

2010 REVISED STANDARD PLAN RSP D72D

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



 REGISTERED CIVIL ENGINEER
 July 15, 2016
 PLANS APPROVAL DATE
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NOTES:

- See Revised Standard Plan RSP D72F for General Notes and additional details. See Revised Standard Plan RSP D72G for tables, wall thickness "T" and quantities.
- Where 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.
- 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.

CURB TYPE	NORMAL CURB HEIGHT	CURB BATTER	"a" DIMENSION	"b" DIMENSION
A1-6	6"	1 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"

Height of curb opening will vary with the type of curb and the depth of the local depression.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**CIP DRAINAGE INLETS
TYPES GO AND GDO**

NO SCALE

RSP D72E DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D72E

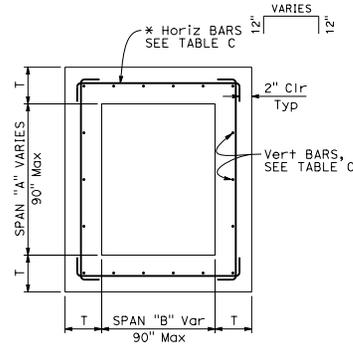
2010 REVISED STANDARD PLAN RSP D72E

GENERAL NOTES:

- "H" is measured from top of bottom slab to the normal gutter grade line undepressed at the curb face.
- For "T" wall thickness and reinforcement, see Table C on Revised Standard Plan RSP D72G.
- Wall reinforcement must be placed in the center of the wall thickness with horizontal bars placed on the exterior face. Bottom slab concrete cover must be 3" clear on the interior face unless otherwise noted. Top slab concrete cover must be 2" clear on the exterior face unless otherwise noted. Reinforcement spacing is in inches unless otherwise noted.
- 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 bottom of lid. The distance between steps must not exceed 1'-0" and be uniform throughout the length of the wall. Place steps in the wall without an opening. Steps inserts may be substituted for the bar steps. Step inserts must comply with State Industrial Safety Requirements. See Revised Standard Plan RSP D74 for step details.
- Pipe(s) can be placed in any wall. Adjacent to each side of the opening, place additional reinforcement equivalent to half the interrupted main reinforcement. For larger pipes greater than or equal to 42" diameter, also add 4 diagonal bars, 1 bar each side. Bars must be the same size as the larger of the main vertical or horizontal bars. Extend bars one development length past the intersection with the adjacent diagonal bar, or where bars intersect mid thickness of adjacent wall bottom or top of non-continuous wall, bend ends as required into same plane.
- Set inlet so that grate bars are parallel to direction of principal surface flow.
- Curb section must match adjacent curb.
- Except for inlets used as junction boxes, basin floors must have wood trowel finish and a minimum slope of 4:1, unless otherwise noted, from all directions toward outlet pipe by casting grout fill on top of the bottom slab. The additional volume to achieve the 4:1 slope may also be achieved by casting the bottom slab and fill as a composite concrete element.
- See Revised Standard Plans RSP D77A and RSP D77B for grate and frame details and weights of miscellaneous iron and steel.
- See Standard Plans D78A and D78B for gutter depression details.
- See Revised Standard Plans RSP A87A and RSP A87B for curb and dike details.
- Details shown apply to metal, concrete and plastic pipe(s).
- The Contractor may use WWR instead of bar reinforcement. The ratio of bar reinforcement to WWR shall be based on the yield strength ratio.
- Cast-in-place (CIP) inlets to be formed around all pipes/stubs intersecting the inlet, and concrete poured in one continuous operation.
- Perimeter reinforcement must not be smaller than main bars and #4 and serves as a rigid frame to position and attach the required structural reinforcement and may be tack welded at outer corners when using ASTM A706 weldable bars.

DESIGN NOTES:

- Design Specifications: AASHTO LRFD Bridge Design Specifications, 6th edition with 2012 Interims and Errata and CA Amendments.
- Live Load (AASHTO LRFD 3.6.1.2):
HL-93, consists of design truck or tandem, and design lane load.
Dynamic Load Allowance, IM = 33%
Multiple Presence Factor, m = 1.0
Design lane load was excluded in Top Slab design.
A wheel load of 8 kips without impact factor was used for top slabs that are above a curb.
- Earth Load:
Vertical pressure = 140 pcf
Lateral pressure:
= 100 pcf for walls with flat embankment
= 140 pcf For walls with slope embankment, 1.5:1 Max
- Downdrag: $\phi = 34^\circ$ and $\gamma_E = 120$ pcf.
- Buoyancy: $\gamma_w = 62.4$ pcf to finished grade
- Reinforced Concrete: $f'_c = 3.6$ ksi, $f_y = 60.0$ ksi.
- Soil pressures shown are factored per AASHTO LRFD and include self-weight, live load and downdrag.



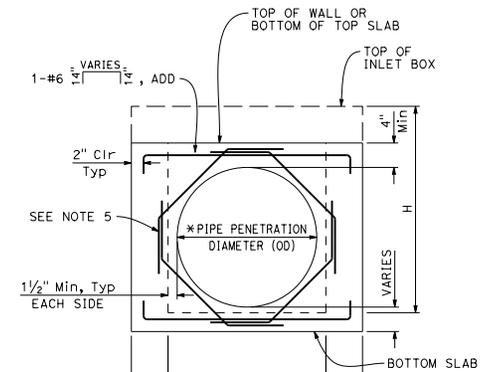
TYPICAL INLET PLAN

* ALTERNATIVE HORIZONTAL BARS

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

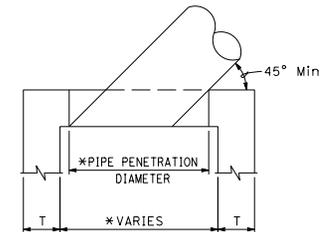
REGISTERED CIVIL ENGINEER
 Carl M. Dunn
 No. C59976
 July 15, 2016
 PLANS APPROVAL DATE
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TO ACCOMPANY PLANS DATED _____



TYPICAL WALL W/ PIPE OPENING

* SEE "SKEWED PIPE PLAN"



SKEWED PIPE PLAN

* ADJUST PIPE PENETRATION AND BOX WIDTH FOR SKEWED PIPES.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CIP DRAINAGE INLET NOTES
NO SCALE

RSP D72F DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D72F

2010 REVISED STANDARD PLAN RSP D72F

TABLE A - CONCRETE QUANTITIES

TYPE	H=3'-0" TO 8'-0"		H=8'-1" TO 20'-0"	
	H=3'-0" (CY)	ADDITIONAL CONCRETE PER FOOT (CY)	H=8'-1" (CY)	ADDITIONAL CONCRETE PER FOOT (CY)
G1	0.95	0.220	SEE NOTE 2	SEE NOTE 2
G2*	2.00	0.411	5.11	0.525
G3	1.03	0.220	SEE NOTE 2	SEE NOTE 2
G4 (TYPE 18)*	2.02	0.411	5.14	0.525
G4 (TYPE 24)*	1.99	0.411	5.10	0.525
G5	1.02	0.220	SEE NOTE 2	SEE NOTE 2
G6	1.04	0.220	SEE NOTE 2	SEE NOTE 2
OS	1.53	0.278	5.08	0.504
OL7	2.06	0.278	6.17	0.566
OL10	2.85	0.278	6.85	0.566
OL14	3.81	0.278	7.78	0.566
OL21	5.71	0.278	9.62	0.566
GOL7	2.48	0.313	6.89	0.630
GOL10	3.41	0.313	7.85	0.630
GT1	1.72	0.248	SEE NOTE 2	SEE NOTE 2
GT2	2.93	0.530	7.73	0.762
GT3	1.74	0.348	SEE NOTE 2	SEE NOTE 2
GT4	2.83	0.530	7.62	0.762
GO	1.26	0.245	4.90	0.506
GDO	1.74	0.322	6.33	0.647

* Quantities are based on the minimum interior dimensions.

TABLE B - REINFORCEMENT QUANTITIES

TYPE	H=3'-0" TO 8'-0"		H=8'-1" TO 20'-0"	
	H=3'-0" (LB)	ADDITIONAL REINFORCEMENT PER FOOT (LB)	H=8'-1" (LB)	ADDITIONAL REINFORCEMENT PER FOOT (LB)
G1	118	22.20	SEE NOTE 2	SEE NOTE 2
G2*	729	86.48	1794	171.79
G3	118	22.20	SEE NOTE 2	SEE NOTE 2
G4 (TYPE 18)*	647	86.48	1675	171.79
G4 (TYPE 24)*	647	86.48	1675	171.79
G5	118	22.20	SEE NOTE 2	SEE NOTE 2
G6	118	22.20	SEE NOTE 2	SEE NOTE 2
OS	245	49.88	1057	120.77
OL7	458	50.53	1324	126.75
OL10	729	50.53	1595	126.75
OL14	982	50.53	1849	126.75
OL21	1453	50.53	2320	126.75
GOL7	644	83.57	1969	148.79
GOL10	883	83.57	2208	148.79
GT1	486	96.91	SEE NOTE 2	SEE NOTE 2
GT2	1040	117.08	2543	233.37
GT3	486	96.91	SEE NOTE 2	SEE NOTE 2
GT4	1001	117.08	2556	237.88
GO	308	32.44	1013	96.56
GDO	519	57.09	1654	165.66

* Quantities are based on the minimum interior dimensions.

TABLE D

INLET	CURB USED IN QUANTITIES
G1	-
G2	-
G3	A1-6
G4 (Type 18)	A1-6
G4 (Type 24)	A1-6
G5	B1-4
G6	1/2E
OS	-
OL7	-
OL10	-
OL14	-
OL21	-
GOL7	-
GOL10	-
GT1	D-6
GT2	E
GT3	A2-8
GT4	A2-8
GO	-
GDO	-

TABLE C - WALL REINFORCEMENT

TYPE	H≤8 (T=6",UON)		8<H≤20 (T=11",UON)	
	HORIZ	VERTICAL	HORIZ	VERTICAL
OS	#4 @ 8	#4 @ 6	#5 @ 6	#6 @ 4.5
OL	#4 @ 6	#4 @ 6	#5 @ 6	#6 @ 4.5
GOL	#5 @ 6	#5 @ 8	#6 @ 5	#6 @ 4.5
G1 (H≤6-6")	#3 @ 6	#3 @ 6	-	-
G2	T=9" #5 @ 5	#5 @ 5	T=11" #6 @ 4	#6 @ 4.5
G3 (H≤6-6")	#3 @ 6	#3 @ 6	-	-
G4	T=9" #5 @ 5	#5 @ 5	T=11" #6 @ 4	#6 @ 4.5
G5 (H≤6-6")	#3 @ 6	#3 @ 6	-	-
G6 (H≤6-6")	#3 @ 6	#3 @ 6	-	-
GT1 (H≤6-6")	#5 @ 6	#5 @ 6	-	-
GT2	T=8" #5 @ 6	#5 @ 6	#6 @ 4	#6 @ 4.5
GT3 (H≤6-6")	#5 @ 6	#5 @ 6	-	-
GT4	T=8" #5 @ 6	#5 @ 6	#6 @ 4	#6 @ 4.5
GO	#4 @ 9	#4 @ 6	#4 @ 6	#6 @ 4.5
GDO	#4 @ 6	#4 @ 6	#5 @ 4	#6 @ 4.5

TABLE E

SOIL PRESSURE BELOW BASE SLAB (ksf)		
TYPE	H=8'-0"	8'-0" < H ≤ 20'-0"
OS	2.93	5.56
OL*	2.93	5.56
GOL*	2.50	5.06
G1	3.67	-
G2	2.99	5.91
G3	3.67	-
G4	2.99	5.91
G5	3.67	-
G6	3.67	-
GT1	3.66	-
GT2	3.91	6.07
GT3	3.86	-
GT4	3.91	6.07
GO	3.42	6.11
GDO	2.52	6.95

* Main Box

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



 REGISTERED CIVIL ENGINEER
 July 15, 2016
 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. No deduction or adjustment was made to the quantities of concrete and reinforcement for pipe openings, floor alternatives or curb type.
2. Maximum allowable height is 6'-6".
3. Quantities are approximate and for design purposes only.
4. Design is based on envelope of level and sloped ground.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CIP DRAINAGE INLET TABLES

NO SCALE

RSP D72G DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

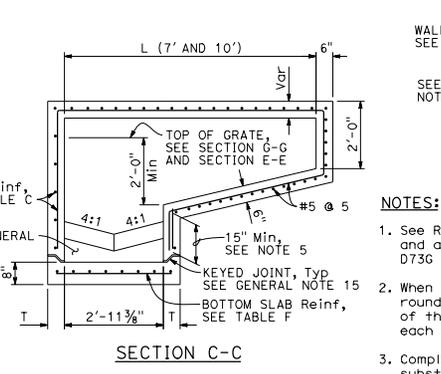
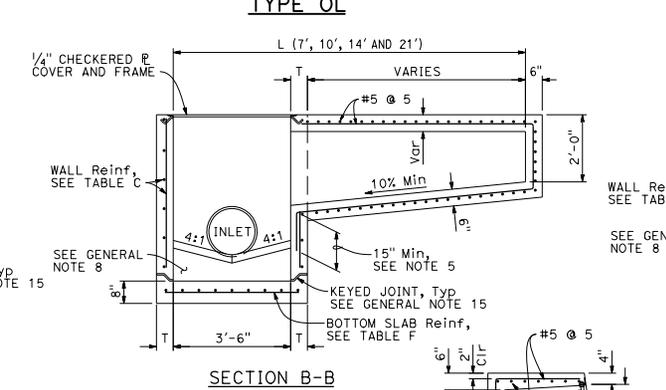
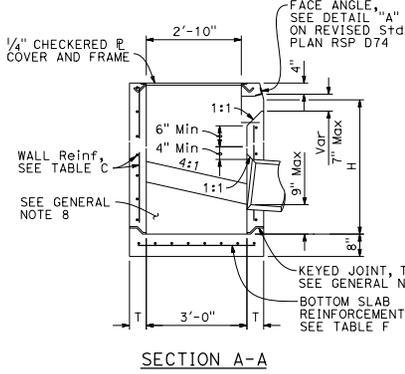
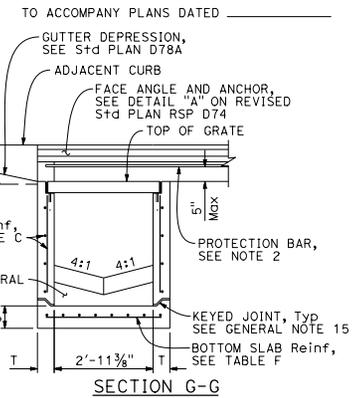
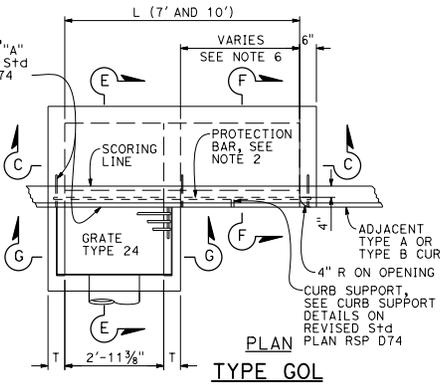
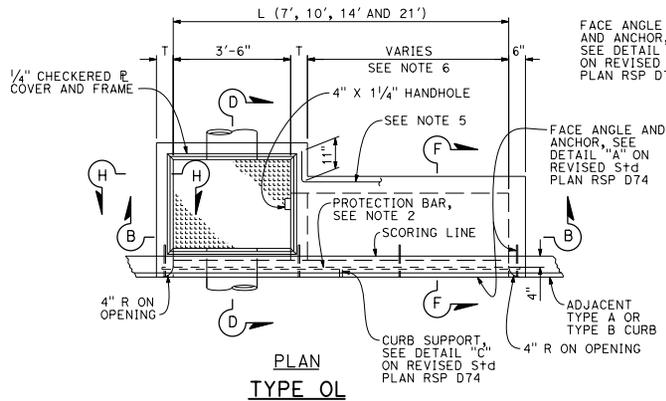
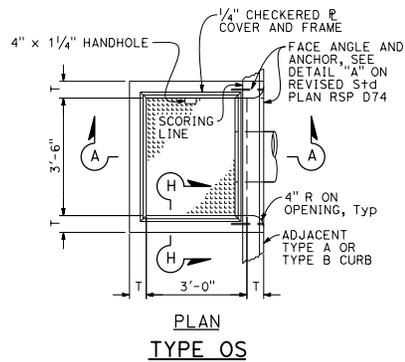
REVISED STANDARD PLAN RSP D72G

2010 REVISED STANDARD PLAN RSP D72G

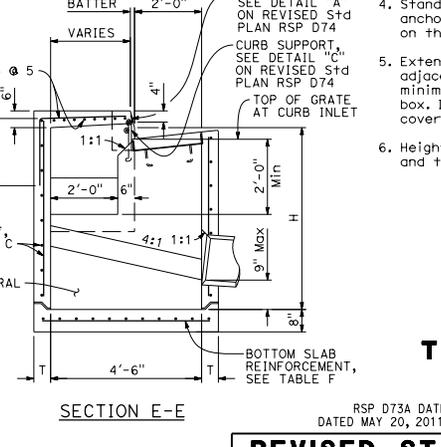
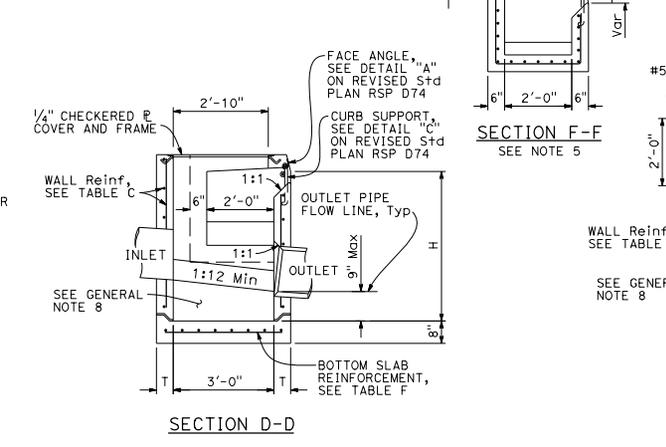
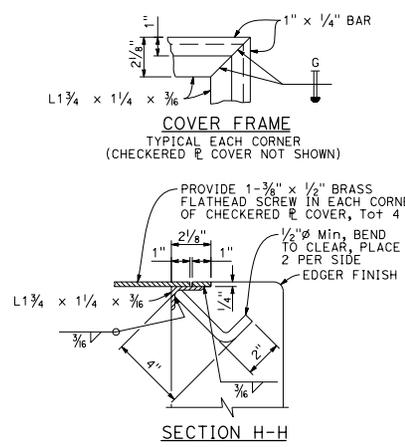
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS



 July 15, 2016
 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.



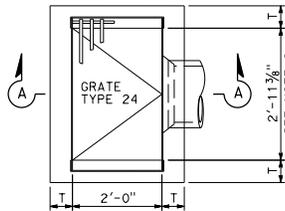
- NOTES:
1. See Revised Standard Plan RSP D73F for General Notes and additional details. See Revised Standard Plan RSP D73G for tables, wall thickness "T" and quantities.
 2. When shown on the project plans, place a 3/4" plain round protection bar horizontally across the length of the opening and bend back 4" into the inlet wall on each side.
 3. Complete joint penetration butt welds may be substituted for the fillet welds on all anchors.
 4. Standard square, hexagon, round or equivalent headed anchors may be substituted for the right angle hooks on the anchors shown on this plan.
 5. Extend all horizontal bars from inlet extensions into adjacent concrete elements of main inlet box a minimum of 15". Where shown, bend horizontal bars into box. If necessary rotate bars to maintain 2" clear coverage.
 6. Height of curb opening will vary with the type of curb and the depth of the local depression.



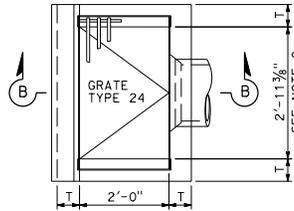
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
PRECAST DRAINAGE INLETS
TYPES OS, OL AND GOL
NO SCALE

RSP D73A DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN D73A DATED MAY 20, 2011 - PAGE 157 OF THE STANDARD PLANS BOOK DATED 2010.
REVISED STANDARD PLAN RSP D73A

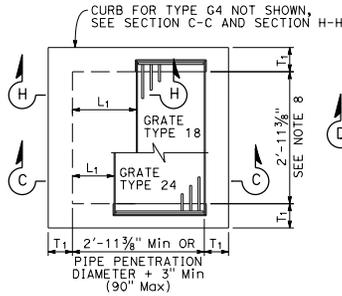
2010 REVISED STANDARD PLAN RSP D73A



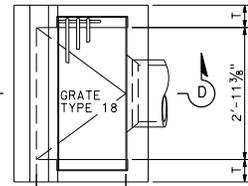
PLAN
TYPE G1



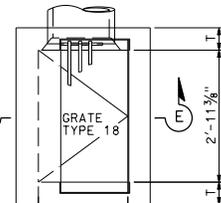
PLAN
TYPE G3



PLAN
STANDARD TYPE G2 OR G4
(INTEGRAL TOP ALTERNATIVE)
FOR "L1" AND "T1" VALUES, SEE TABLE 1



PLAN
TYPE G5



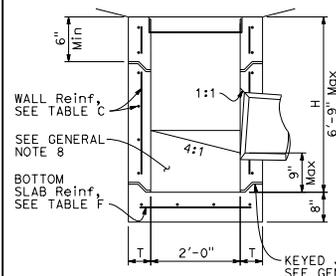
PLAN
TYPE G6

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
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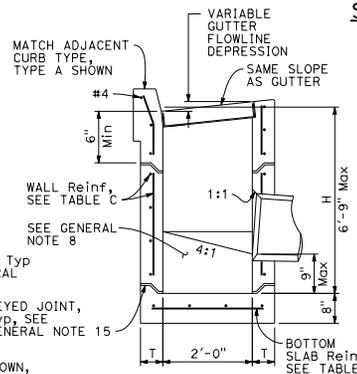
July 15, 2016
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TO ACCOMPANY PLANS DATED _____
NOTE:
 1. For notes and Table 2, See Revised Standard Plan RSP D73C.

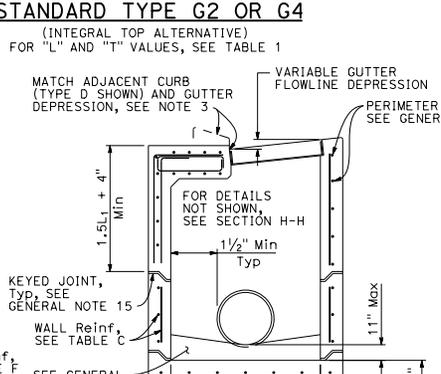
TABLE 1		
	T1	Vert BARS
L1 AND L2 < 2'-10"	8"	#4 @ 12
L1 OR L2 > 2'-10"	12"	#5 @ 12



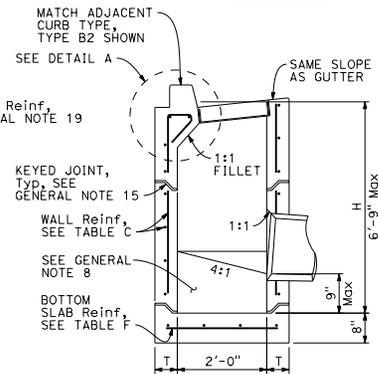
SECTION A-A



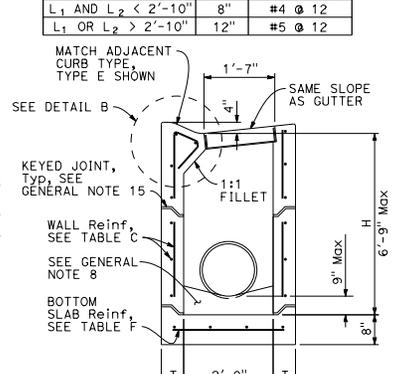
SECTION B-B



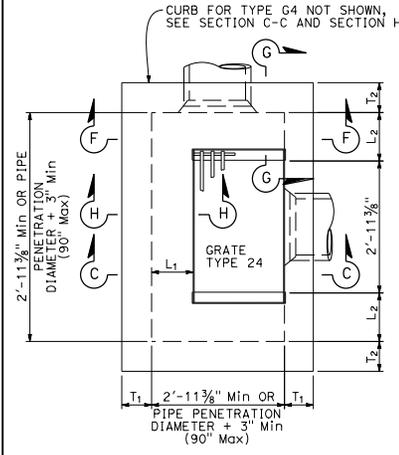
SECTION C-C
FOR "L1", "L2" AND "T1" VALUES, SEE "TABLE 1"



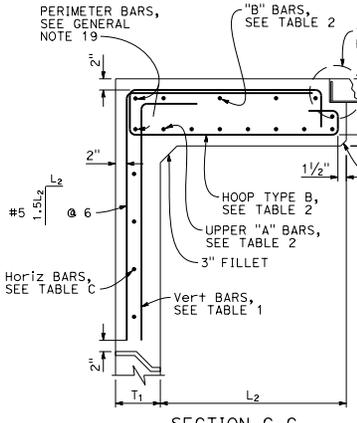
SECTION D-D



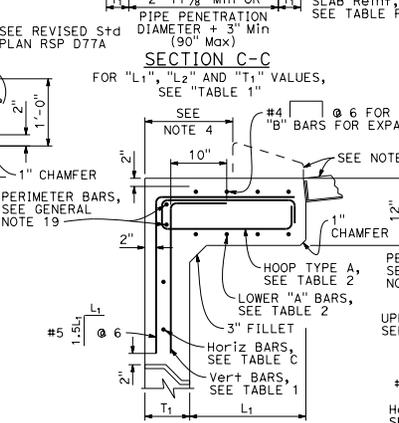
SECTION E-E



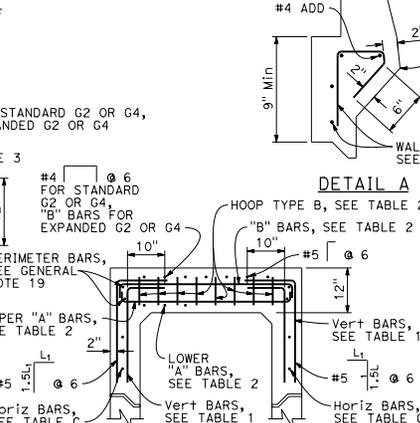
PLAN
EXPANDED
TYPE G2 OR G4
(INTEGRAL TOP ALTERNATIVE)
FOR "L1", "L2" AND "T1" VALUES, SEE "TABLE 1"



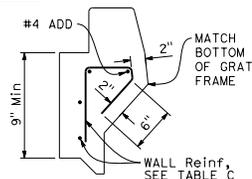
SECTION G-G
FOR "L1", "L2" AND "T1" VALUES, SEE "TABLE 1"



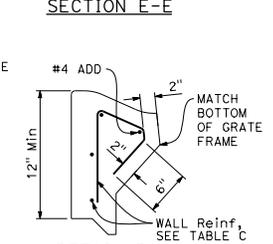
SECTION H-H
FOR "L1", "L2" AND "T1" VALUES, SEE "TABLE 1"



SECTION F-F
FOR "L1", "L2" AND "T1" VALUES, SEE "TABLE 1"



DETAIL A



DETAIL B

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**PRECAST
DRAINAGE INLETS
TYPES G1, G2, G3,
G4, G5 AND G6**
 NO SCALE

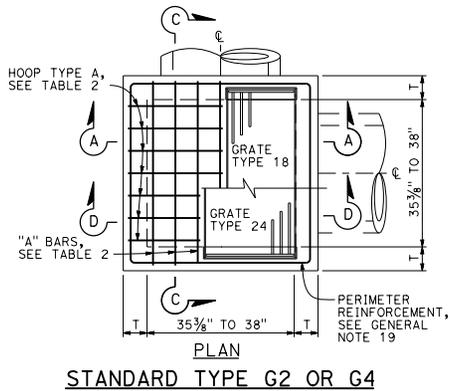
REVISED STANDARD PLAN RSP D73B
 RSP D73B DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP D73B

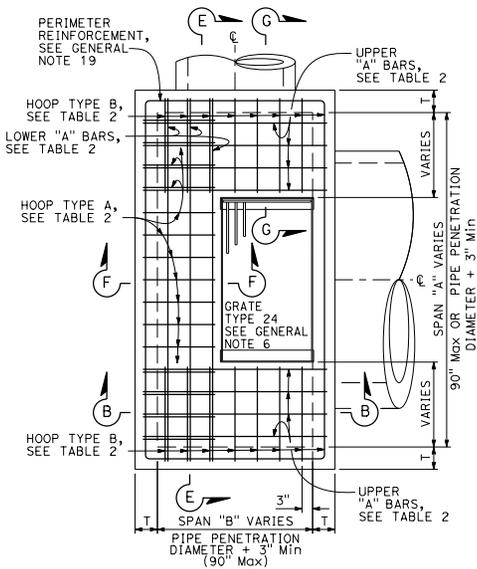
Dist#	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL SHEETS



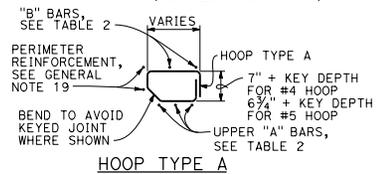
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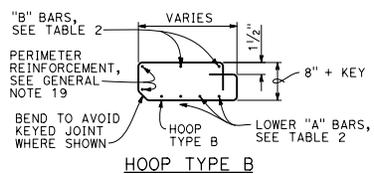
STANDARD TYPE G2 OR G4



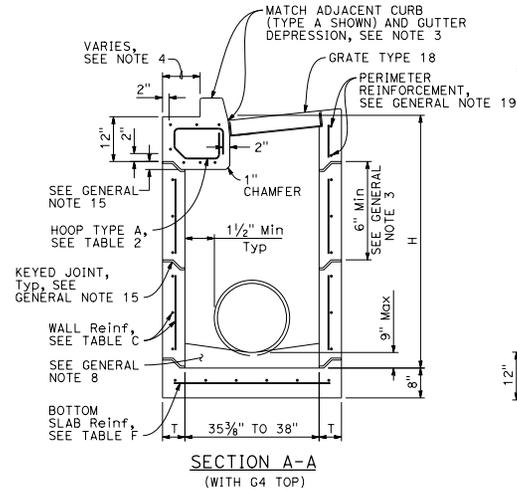
EXPANDED TYPE G2 OR G4
(TOP REBAR NOT SHOWN)



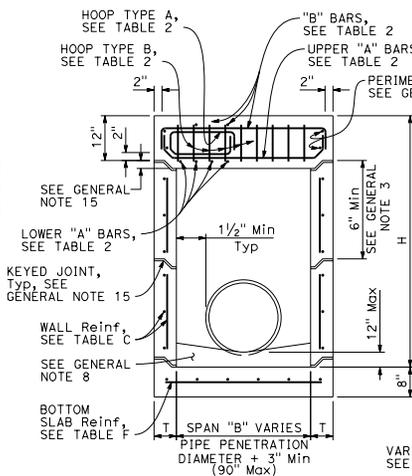
HOOP TYPE A



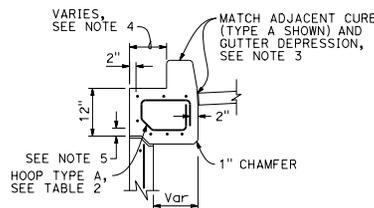
HOOP TYPE B



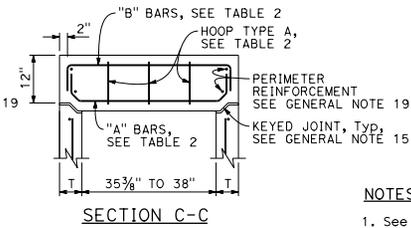
SECTION A-A
(WITH G4 TOP)



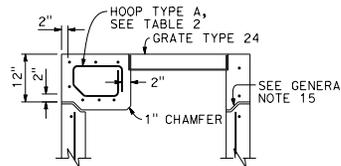
SECTION B-B
(WITH G2 TOP)



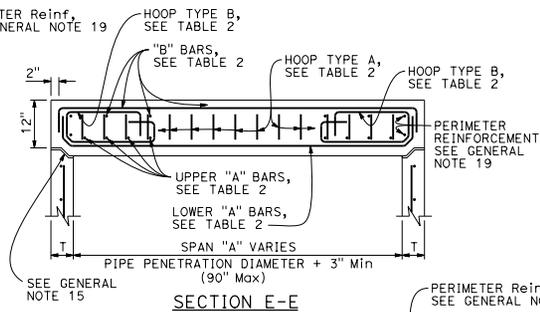
SECTION F-F
(WITH G4 TOP)



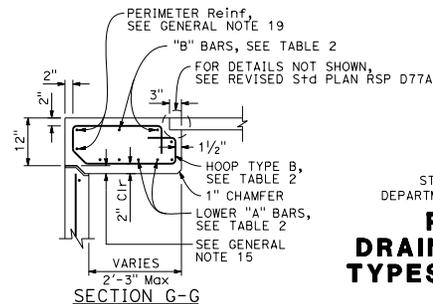
SECTION C-C



SECTION D-D
(WITH G2 TOP)



SECTION E-E



SECTION G-G

NOTES:

1. See Revised Standard Plan RSP D73F for General Notes and additional details. See Revised Standard Plan RSP D73G for additional tables, wall thickness "T" and quantities.
2. Type G4 inlet can use Grate Type 18 or 24. Type G2 inlet uses Grate Type 24.
3. G4 inlet details are the same as the G2 with the addition of a curb and sloped grate that matches the adjacent curb and gutter depression.
4. Dimension will vary with different grates, curb types, box width and wall thickness.
5. 2" unless inlet is expanded in the Span "A" direction, then clearance is 2" plus the diameter of the lower "A" bar.
6. See Revised Standard Plan RSP D73B for integral top slab alternative.
7. Interior dimension of lower sections of inlet may be 3'-0" provided top section conforms to the requirements for frame and grate types on Revised Standard Plan RSP D77A. The wall thickness of top sections may transition from "T" to "T"+5/8" to meet this requirement. Minimum height of thickened wall shall = "T".

TO ACCOMPANY PLANS DATED _____

TABLE 2 - TOP SLAB REINFORCEMENT		
16 BAR DIAMETERS	"A" & "B" BARS	BEND TO AVOID KEYED JOINT WHERE SHOWN
	VARIES	
	W/ CURB	W/O CURB
"A" BARS	#4 @ 5 (2 BARS Min)	#5 @ 5 (3 BARS Min)
"B" BARS	#4 @ 10 (2 BARS Min)	#4 @ 10 (2 BARS Min)
HOOPS ("A" & "B")	#4 @ 5	#5 @ 5

ROTATE "A" AND "B" BARS SO HOOKED ENDS WILL MAINTAIN 2" CLEAR COVERAGE.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**PRECAST DRAINAGE INLETS
TYPES G2 AND G4**
NO SCALE

RSP D73C DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D73C

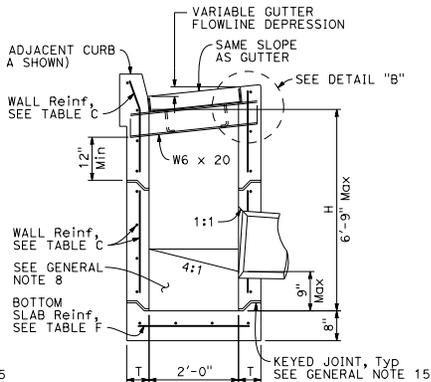
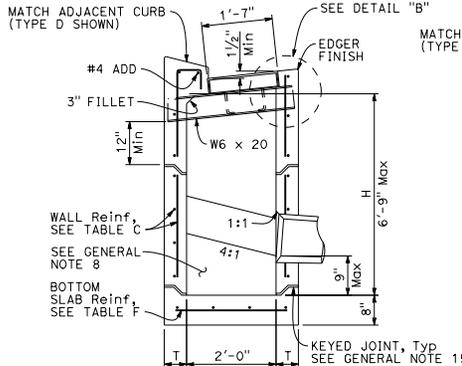
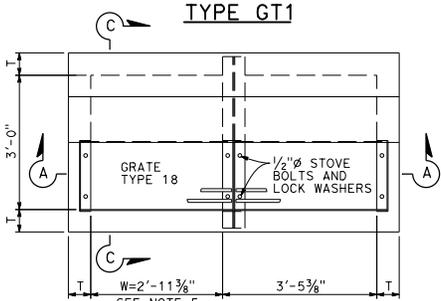
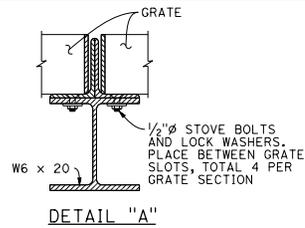
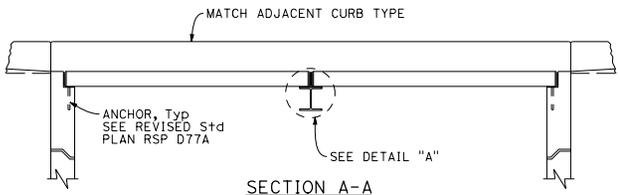
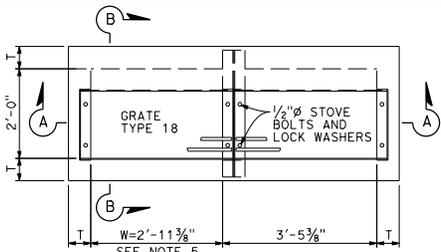
2010 REVISED STANDARD PLAN RSP D73C

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



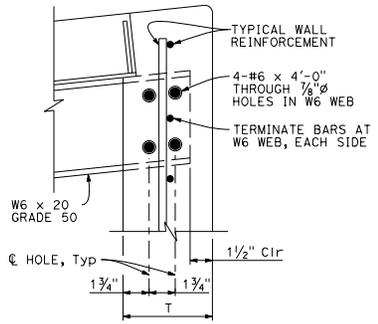
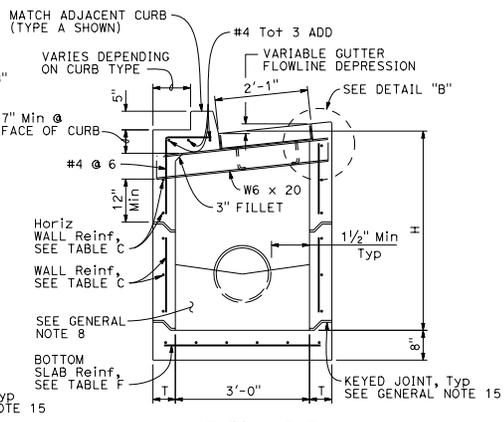
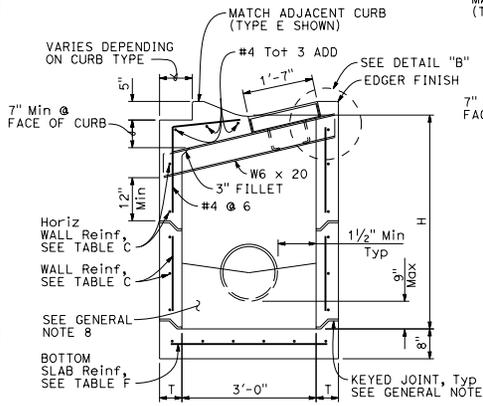
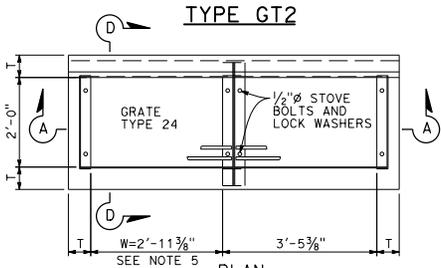
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 July 15, 2016
 PLANS APPROVAL DATE
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TO ACCOMPANY PLANS DATED _____



NOTES:

1. See Revised Standard Plan RSP D73F for General Notes and additional details. See Revised Standard Plan RSP D73G for tables, wall thickness "T" and quantities.
2. W=2'-11³/₈" for one grate. Add 3'-5³/₈" for additional grates in tandem.
3. Complete joint penetration butt welds may be substituted for the fillet welds on all anchors.
4. Standard square, hexagon, round or equivalent headed anchors may be substituted for the right angle hooks on the anchors shown on this plan.
5. Overall interior length of lower sections may be 6'-6" provided top section conforms to the requirements for frame and grate types on Revised Standard Plan RSP D77A. The wall thickness of top sections may transition from "T" to "T"+¹/₈" to meet this requirement. Minimum height of thickened wall shall = "T".

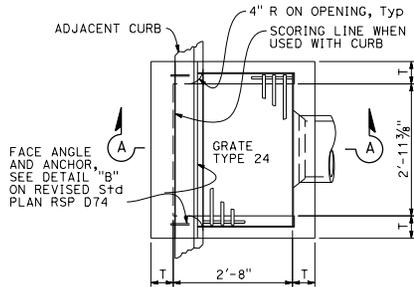


STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**PRECAST
DRAINAGE INLETS
TYPES GT1, GT2,
GT3 AND GT4**
NO SCALE

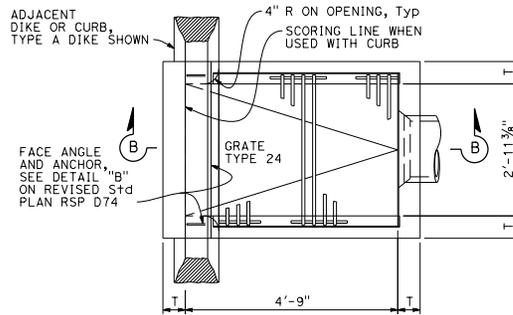
RSP D73D DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D73D

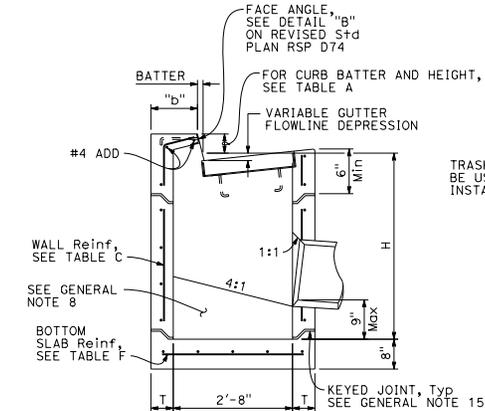
2010 REVISED STANDARD PLAN RSP D73D



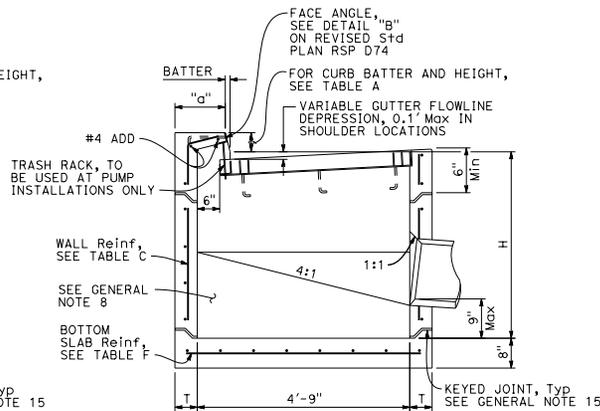
PLAN
TYPE GO



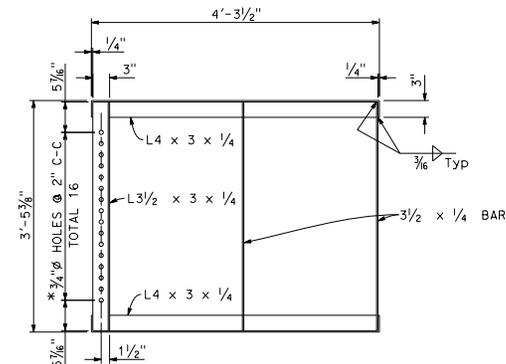
PLAN
TYPE GDO



SECTION A-A

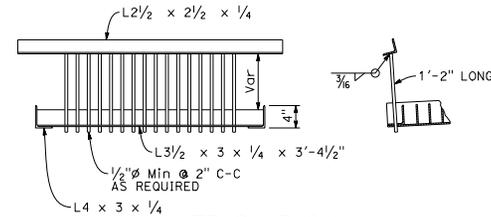


SECTION B-B



GRATE FRAME FOR TYPE GDO INLET

* HOLES REQUIRED ONLY WITH TRASH RACK



TRASH RACK
FOR USE WITH PUMP INSTALLATION

NOTES:

1. See Revised Standard Plan RSP D73F for General Notes and additional details. See Revised Standard Plan RSP D73G for tables, wall thickness "T" and quantities.
2. Where 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.
3. Complete joint penetration butt welds may be substituted for the fillet welds on all anchors.
4. Standard square, hexagon, round or equivalent headed anchors may be substituted for the right angle hooks on the anchors shown on this plan.

TABLE A				
CURB TYPE	NORMAL CURB HEIGHT	CURB BATTER	"a" DIMENSION	"b" DIMENSION
A1-6	6"	1 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"

Height of curb opening will vary with the type of curb and the depth of the local depression.

Dist#	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
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TO ACCOMPANY PLANS DATED _____

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**PRECAST
DRAINAGE INLETS
TYPES GO AND GDO**
NO SCALE

RSP D73E DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D73E

2010 REVISED STANDARD PLAN RSP D73E

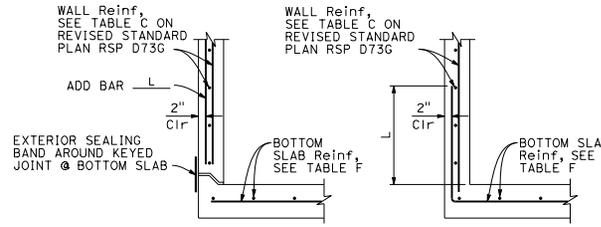
GENERAL NOTES:

- "H" is measured from top of bottom slab to the normal gutter grade line undepressed at the curb face.
- For "T" wall thickness and reinforcement, see Table C on Revised Standard Plan RSP D73G.
- Wall reinforcement must be placed at the center of wall thickness with horizontal bars placed on the exterior face. Bottom slab concrete cover must be 3" clear on the interior side face unless otherwise noted. Top slab concrete cover must be 2" clear on the exterior face unless otherwise noted. Short independent wall sections or height adjustment rings 6" to 24" high must have a minimum of two #4 horizontal bars. Reinforcement spacing is in inches unless otherwise noted.
- 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 bottom of lid. The distance between steps must not exceed 1'-0" and be uniform throughout the length of the wall. Place steps in the wall without an opening. Steps inserts may be substituted for the bar steps. Step Inserts must comply with State Industrial Safety Requirements. See Revised Standard Plan RSP D74 for step details.
- Pipe(s) can be placed in any wall. Adjacent to each side of the opening, place additional reinforcement equivalent to half the interrupted main reinforcement. For larger pipes greater than or equal to 42" diameter, also add 4 diagonal bars, 1 bar each side. Bars must be the same size as the larger of the main vertical or horizontal bars. Extend bars one development length past the intersection with the adjacent diagonal bar, or where bars intersect mid thickness of adjacent wall bottom or top of non-continuous wall, bend ends as required into same plane.
- Set inlet so that grate bars are parallel to direction of principal surface flow.
- Curb section must match adjacent curb.
- Except for inlets used as junction boxes, basin floors must have wood trowel finish and a minimum slope of 4:1, unless otherwise noted, from all directions toward outlet pipe by casting grout on top of the bottom slab. Grout must be placed prior to backfill.
- See Revised Standard Plans RSP D77A and RSP D77B for grate and frame details and weights of miscellaneous iron and steel.
- See Standard Plans D78A and D78B for gutter depression details.
- See Revised Standard Plans RSP A87A and RSP A87B for curb and dike details.
- Details shown apply to metal, concrete and plastic pipe(s).
- The Contractor may use WWR instead of bar reinforcement. The ratio of bar reinforcement to WWR shall be based on the yield strength ratio.
- Seal precast inlets connection openings between wall and pipe with non-shrink grout or resilient connectors as specified in the Special Provisions. Precast inlets shall have mortared connections conforming to details for Type GCP Inlet shown on Revised Standard Plan RSP D75B. See Standard Specifications for mortar composition.
- Where shown, provide precast inlets with separate top sections for final grade adjustment. Provide keyed joints with butyl rubber sealant between the top section and wall, multiple wall sections, and wall and bottom slab. Joint design may vary but must be 1" to 3" in depth. For tongue type joints, tongue down orientation is not allowed. For keyed joints, keyway up, keyway down or tongue up configurations are allowed. Only one key type is allowed for each drainage inlet.
- Non-shrink grout can be used for upper most joint to facilitate final top grade adjustment.
- Provide a level and firm sand bedding on which to place precast inlets. Extend sand bedding under all structure backfill.
- For Integral Base, see Detail "A".
- Perimeter reinforcement must not be smaller than main bars and #4 and serves as a rigid frame to position and attach the required structural reinforcement and may be tack welded at outer corners when using ASTM A706 weldable bars.
- Inlet extensions may be cast in place after placement of main box and placement and compaction of backfill. Concrete strength must be 3.6 ksi minimum. All slab and wall thicknesses must be per Revised Standard Plan RSP D72A. All reinforcement shall extend a minimum of 24" from precast main inlet box.

DESIGN NOTES:

- Design Specifications: AASHTO LRFD Bridge Design Specifications, 6th edition with 2012 Interims and Errata and CA Amendments.
- Live Load (AASHTO LRFD 3.6.1.2): HL-93, consists of design truck or tandem, and design lane load. Dynamic Load Allowance, IM = 33%. Multiple Presence Factor, m = 1.0. Design lane load was excluded in Top Slab design. A wheel load of 8 kips without impact factor was used for top slabs that are above a curb.
- Earth Load:
Vertical pressure = 140 pcf
Lateral pressure:
= 100 pcf for walls with flat embankment
= 140 pcf For walls with slope embankment, 1.5:1 Max
- Downdrag: $\phi = 34^\circ$ and $\gamma_c = 120$ pcf.
- Buoyancy: $\gamma_w = 62.4$ pcf to finished grade.
- Reinforced Concrete: $f'_c = 5.0$ ksi, $f_y = 60.0$ ksi.
- Tables are based on the worst case from the level ground and sloped ground.
- Soil pressures shown are factored per AASHTO LRFD and include self-weight, live load and downdrag.

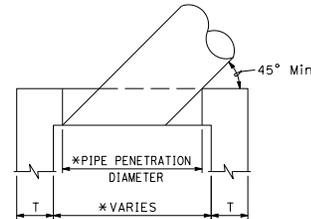
SPAN "A" OR "B" (IN)	L (IN)
<38	34
38 TO 50	40
51 TO 64	47
65 TO 76	53
77 TO 90	60



BASE WITH KEYED JOINT **INTEGRAL BASE**

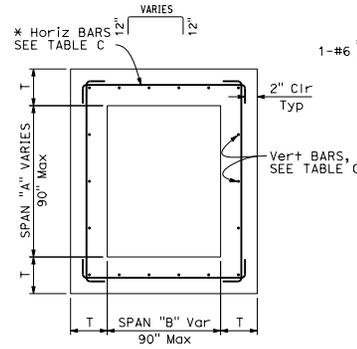
DETAIL "A"

FOR INTEGRAL BASE, CLEARANCE BETWEEN PIPE PENETRATION AND BASE SLAB MAY BE AS SHOWN IN CIP ALTERNATIVE STANDARD PLAN SHEET.



SKEWED PIPE PLAN

* ADJUST PIPE PENETRATION AND BOX WIDTH FOR SKEWED PIPES.



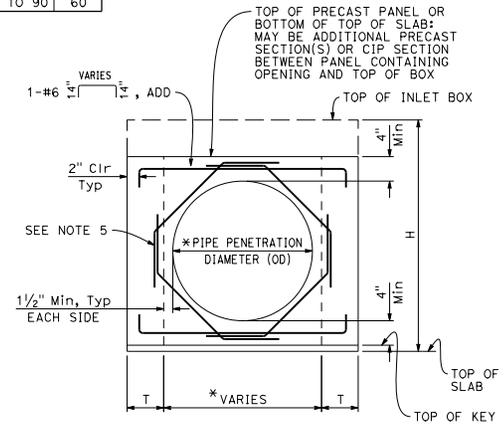
TYPICAL INLET PLAN

* ALTERNATIVE HORIZONTAL BARS

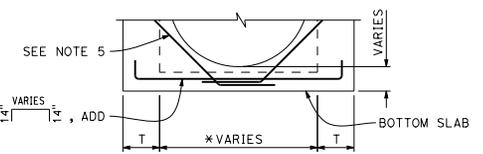


DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

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BASE WITH KEYED JOINT



INTEGRAL BASE

FOR DETAILS NOT SHOWN, SEE "BASE WITH KEYED JOINT"

TYPICAL WALL W/ PIPE OPENING

* SEE "SKEWED PIPE PLAN"

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PRECAST DRAINAGE INLET NOTES

NO SCALE

RSP D73F DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D73F

2010 REVISED STANDARD PLAN RSP D73F

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



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TO ACCOMPANY PLANS DATED _____

TABLE A - CONCRETE QUANTITIES

TYPE	H=3'-0" TO 8'-0"		H=8'-1" TO 20'-0"	
	H=3'-0" (CY)	ADDITIONAL CONCRETE PER FOOT (CY)	H=8'-1" (CY)	ADDITIONAL CONCRETE PER FOOT (CY)
G1	0.95	0.220	SEE NOTE 2	SEE NOTE 2
G2*	1.25	0.255	2.55	0.255
G3	1.06	0.220	SEE NOTE 2	SEE NOTE 2
G4 (TYPE 18)*	1.41	0.255	2.71	0.255
G4 (TYPE 24)*	1.36	0.255	2.65	0.255
G5	1.09	0.220	SEE NOTE 2	SEE NOTE 2
G6	1.14	0.220	SEE NOTE 2	SEE NOTE 2
OS	1.28	0.278	2.69	0.278
OL7	1.92	0.278	3.33	0.278
OL10	2.43	0.278	3.84	0.278
OL14	3.16	0.278	4.57	0.278
OL21	4.58	0.278	5.99	0.278
GOL7	2.36	0.313	4.04	0.434
GOL10	2.84	0.313	4.53	0.434
GT1	2.30	0.480	SEE NOTE 2	SEE NOTE 2
GT2	2.71	0.530	5.40	0.530
GT3	2.29	0.480	SEE NOTE 2	SEE NOTE 2
GT4	2.69	0.530	5.39	0.530
GO	1.25	0.245	2.37	0.245
GDO	1.64	0.322	3.37	0.446

* Quantities are based on the minimum interior dimensions.

TABLE B - REINFORCEMENT QUANTITIES

TYPE	H=3'-0" TO 8'-0"		H=8'-1" TO 20'-0"	
	H=3'-0" (LB)	ADDITIONAL REINFORCEMENT PER FOOT (LB)	H=8'-1" (LB)	ADDITIONAL REINFORCEMENT PER FOOT (LB)
G1	88.5	21.90	SEE NOTE 2	SEE NOTE 2
G2*	151.5	24.54	277.4	38.64
G3	92.9	21.90	SEE NOTE 2	SEE NOTE 2
G4 (TYPE 18)*	134.4	24.54	260.3	38.64
G4 (TYPE 24)*	125.1	24.54	251.0	38.64
G5	92.5	21.90	SEE NOTE 2	SEE NOTE 2
G6	92.5	21.90	SEE NOTE 2	SEE NOTE 2
OS	145.8	35.57	327.8	49.60
OL7	328.0	35.57	510.0	49.60
OL10	467.5	35.57	649.5	49.60
OL14	667.5	35.57	849.5	49.60
OL21	1056.1	35.57	1238.1	49.60
GOL7	474.7	45.17	706.8	74.02
GOL10	604.9	45.17	836.9	74.02
GT1	349.0	80.48	SEE NOTE 2	SEE NOTE 2
GT2	403.7	86.82	849.1	135.15
GT3	347.0	80.48	SEE NOTE 2	SEE NOTE 2
GT4	403.7	86.82	849.1	135.15
GO	99.8	23.75	221.7	37.46
GDO	208.8	46.22	446.2	75.61

* Quantities are based on the minimum interior dimensions.

TABLE D

INLET	CURB USED IN QUANTITIES
G1	-
G2	-
G3	A1-6
G4 (Type 18)	A1-6
G4 (Type 24)	A1-6
G5	B1-4
G6	1/2E
OS	-
OL7	-
OL10	-
OL14	-
OL21	-
GOL7	-
GOL10	-
GT1	D-6
GT2	E
GT3	A2-8
GT4	A2-8
GO	-
GDO	-

TABLE C - WALL REINFORCEMENT

TYPE	H ≤ 8'-0" (T=6", UON)			8'-0" < H ≤ 20'-0" (T=8", UON)		
	HORIZONTAL	VERTICAL	*ADD	HORIZONTAL	VERTICAL	*ADD
OS	#4@6	#3@8	#3@8	#4@4 (T=6")	#3@8	#3@8
OL	#4@6	#3@8	#3@8	#4@4 (T=6")	#3@8	#3@8
GOL	#4@5	#3@8	#3@8	#5@5	#3@6	#3@6
G1 (H ≤ 6'-9")	#4@9	#3@8	#3@8	-	-	-
G2 & G4 (α** ≤ 38")	#4@9	#3@8	#3@8	#4@5 (T=6")	#3@8	#3@8
G2 & G4 (38" < α** ≤ 50")	#4@6	#3@8	#3@8	#4@4 (T=6")	#3@8	#3@8
G2 & G4 (50" < α** ≤ 64")	#4@5	#3@8	#3@8	#5@5	#3@6	#3@6
G2 & G4 (64" < α** ≤ 76")	#5@7 (T=8")	#3@6	#3@6	#5@4	#3@6	#5@6
G2 & G4 (76" < α** ≤ 90")	#5@5 (T=8")	#3@6	#3@6	#5@3	#3@6	#5@6
G3 (H ≤ 6'-9")	#4@9	#3@8	#3@8	-	-	-
G5 (H ≤ 6'-9")	#4@9	#3@8	#3@8	-	-	-
G6 (H ≤ 6'-9")	#4@9	#3@8	#3@8	-	-	-
GT1 (H ≤ 6'-9")	#5@5 (T=8")	#3@6	#3@6	-	-	-
GT2	#5@5 (T=8")	#3@6	#3@6	#5@3	#3@6	#5@6
GT3 (H ≤ 6'-9")	#5@5 (T=8")	#3@6	#3@6	-	-	-
GT4	#5@5 (T=8")	#3@6	#3@6	#5@3	#3@6	#5@6
GO	#4@9	#3@8	#3@8	#4@5 (T=6")	#3@8	#3@8
GDO	#4@5	#3@8	#3@8	#5@5	#3@6	#3@6

* See Detail A on Revised Standard Plan RSP D73F for additional vertical bars at the base.
** a = Larger interior span

TABLE E

SOIL PRESSURE BELOW BASE SLAB (ksf)		
TYPE	H ≤ 8'-0"	8'-0" < H ≤ 20'-0"
OS	2.89	5.68
OL*	2.89	5.68
GOL*	2.36	4.93
G1 (H ≤ 6'-9")	3.51	-
G2 & G4 (α** ≤ 38")	2.96	5.79
G2 & G4 (38" < α** ≤ 50")	2.21	4.51
G2 & G4 (50" < α** ≤ 64")	3.19	4.89
G2 & G4 (64" < α** ≤ 76")	2.50	4.23
G2 & G4 (76" < α** ≤ 90")	2.04	3.56
G3 (H ≤ 6'-9")	3.51	-
G5 (H ≤ 6'-9")	3.51	-
G6 (H ≤ 6'-9")	3.51	-
GT1 (H ≤ 6'-9")	3.41	-
GT2	3.60	6.42
GT3 (H ≤ 6'-9")	3.41	-
GT4	3.60	6.42
GO	3.37	6.46
GDO	2.48	7.30

* Main Box
** a = Larger interior span

NOTES:

- No deduction or adjustment was made to the quantities of concrete and reinforcement for pipe openings, floor alternatives or curb type.
- Maximum allowable height is 6'-9".
- Quantities are approximate and for design purposes only.
- Design is based on envelope of level and sloped ground.

TABLE F

BASE SLAB REINFORCEMENT (T=8", UON)		
TYPE	H ≤ 8'-0"	8'-0" < H ≤ 20'-0"
OS	#4@8 (EW)	#4@5 (EW)
OL*	#4@8 (EW)	#4@5 (EW)
GOL*	#4@6 (EW)	#4@4 (EW)
G1 (H ≤ 6'-9")	#4@10 (EW)	-
G2 & G4 (α** ≤ 38")	#4@10 (EW)	#4@6 (EW)
G2 & G4 (38" < α** ≤ 50")	#4@8 (EW)	#4@5 (EW)
G2 & G4 (50" < α** ≤ 64")	#4@6 (EW)	#4@4 (EW)
G2 & G4 (64" < α** ≤ 76")	#4@5 (EW)	#4@3 (EW)
G2 & G4 (76" < α** ≤ 90")	#4@4 (EW)	#5@3 (EW)
G3 (H ≤ 6'-9")	#4@10 (EW)	-
G5 (H ≤ 6'-9")	#4@10 (EW)	-
G6 (H ≤ 6'-9")	#4@10 (EW)	-
GT1 (H ≤ 6'-9")	#4@4 (EW)	-
GT2	#4@4 (EW)	#5@3 (EW)
GT3 (H ≤ 6'-9")	#4@4 (EW)	-
GT4	#4@4 (EW)	#5@3 (EW)
GO	#4@10 (EW)	#4@6 (EW)
GDO	#4@6 (EW)	#4@4 (EW)

(EW) Each Way
* Main Box
** a = Larger interior span

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PRECAST DRAINAGE INLET TABLES

NO SCALE

RSP D73G DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D73G

2010 REVISED STANDARD PLAN RSP D73G

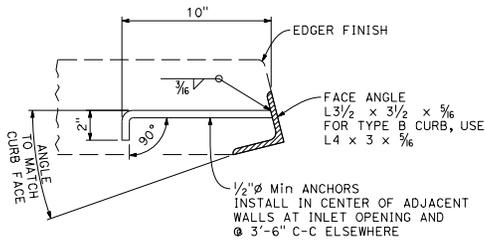
Dist#	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS



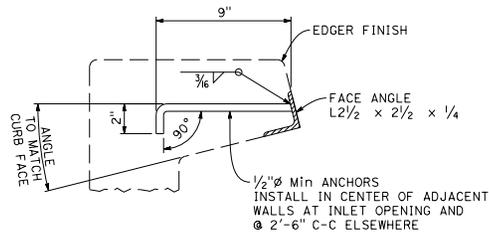
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TO ACCOMPANY PLANS DATED _____

FACE ANGLE DETAIL "A"	
LENGTH OF CURB OPENING	No. OF ANCHORS
3'-6" OR LESS	2
7'-0"	3
10'-0"	4
14'-0"	5
21'-0"	7



DETAIL "A"

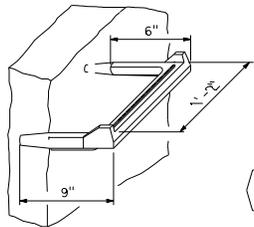


DETAIL "B"

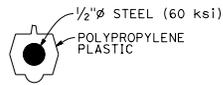
FACE ANGLE AND ANCHOR

NOTE:

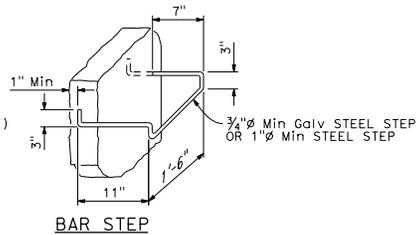
- When shown on the project plans, place a 3/4" plain round protection bar horizontally across the length of the opening and bend back 4" into the inlet wall on each side.



STEP INSERT

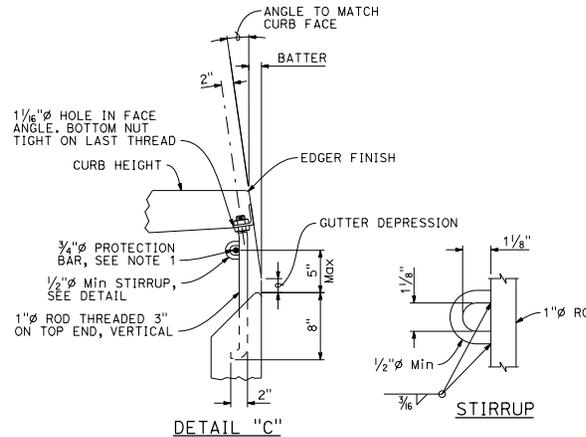


TYPICAL SECTION
(STEP INSERT)



BAR STEP

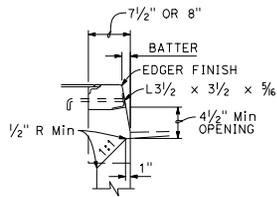
STEP DETAILS



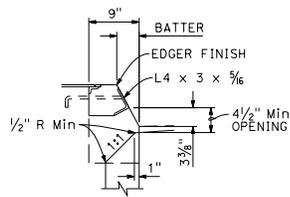
DETAIL "C"

CURB SUPPORT

CURB SUPPORTS SHALL BE EVENLY SPACED AND MINIMAL IN NUMBER SUCH THAT MAXIMUM SPAN OF UNSUPPORTED CURB IS 7'-0".



TYPE A CURBS



TYPE B CURBS

CURB OPENING DETAILS

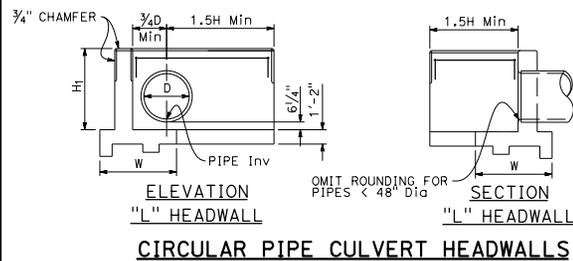
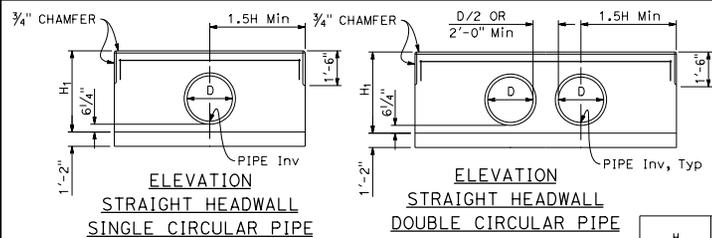
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
DRAINAGE INLET DETAILS

NO SCALE

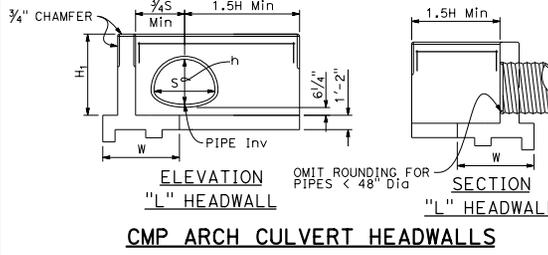
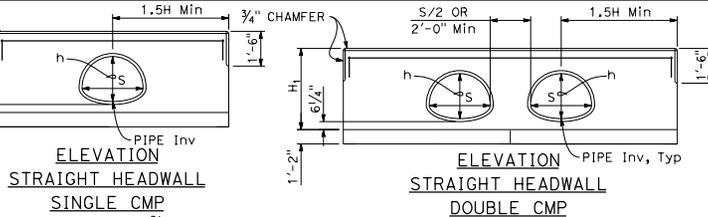
RSP D74 DATED JULY 15, 2016 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D74

2010 REVISED STANDARD PLAN RSP D74



H	CIRCULAR PIPE SIZE D	CMP ARCH SIZE S x h
2'-8"	12"	-
2'-11"	15"	21" x 15"
3'-2"	18"	24" x 18"
3'-5"	21"	28" x 20"
3'-8"	24"	35" x 24"
3'-11"	27"	-
4'-2"	30"	42" x 29"
4'-5"	33"	49" x 33"
4'-8"	36"	-
4'-11"	39"	57" x 38"
5'-2"	42"	64" x 43"
5'-5"	45"	-
5'-8"	48"	71" x 47"
5'-11"	51"	-
6'-2"	54"	-

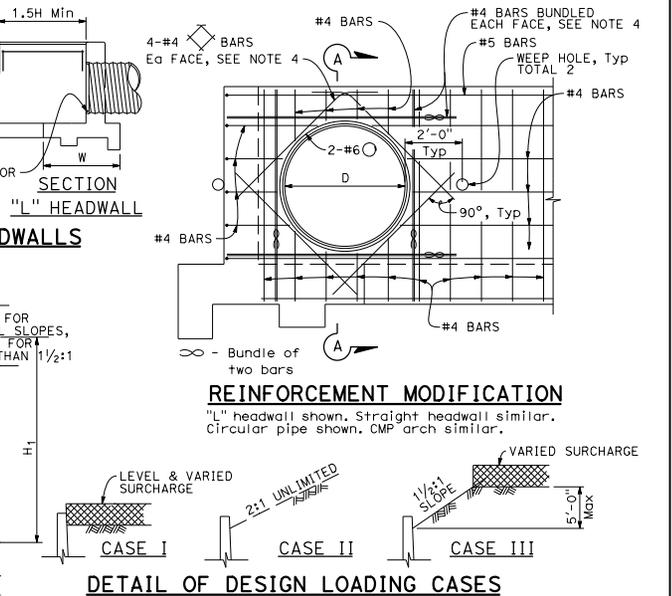
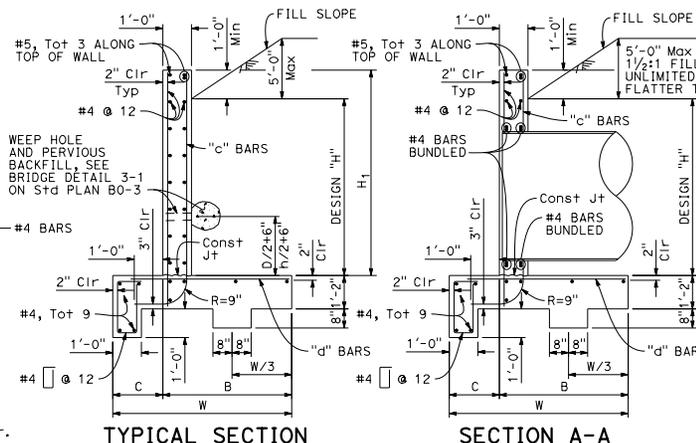
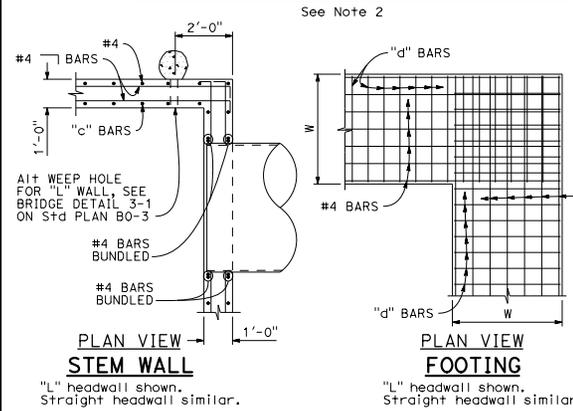


DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
------	--------	-------	--------------------------	-----------	--------------

REGISTERED CIVIL ENGINEER
Carl M. Dugan
No. C59976
Exp. 6-30-18
CIVIL
STATE OF CALIFORNIA

July 15, 2016
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:**
- Length of wall from @ pipe to end of wall is 1.5H Min, unless a greater length is shown on project plans.
 - Single circular pipe or single CMP shown for "L" headwall. For double pipe in "L" headwall, see "ELEVATION STRAIGHT HEADWALL DOUBLE CIRCULAR PIPE" or "ELEVATION STRAIGHT HEADWALL DOUBLE CMP" detail for additional information.
 - Cable railing to be installed on top of headwall when shown on Project Plans. See Revised Standard Plan RSP B11-47 for cable railing details.
 - Adjacent to each side of the opening, place additional reinforcement equivalent to half the interrupted main reinforcement. For pipes 42" diameter and greater, add 4 diagonals, 1 bar each side. Extend bars one development length past the intersection with the adjacent diagonal bar, or where bars intersect mid thickness of adjacent wall, bottom slab or at top of wall, bend ends as required into same plane.
 - Quantities are approximate and for design purposes only. No deduction is made for pipe or arch occupancy.

	H	2'-8"	2'-11"	3'-2"	3'-5"	3'-8"	3'-11"	4'-2"	4'-5"	4'-8"	4'-11"	5'-2"	5'-5"	5'-8"	5'-11"	6'-2"
**CASE I	Ser (a ₀ , B')	0.79, 4.66	0.83, 4.57	0.88, 4.58	0.89, 4.73	0.93, 4.74	0.93, 4.75	1.02, 4.75	1.02, 4.92	1.07, 4.93	1.11, 4.94	1.12, 4.98	1.16, 4.99	1.17, 5.16	1.21, 5.18	1.15, 5.53
	Str (a ₀ , B')	1.48, 1.75	1.53, 1.80	1.65, 1.76	1.64, 1.88	1.76, 1.85	1.89, 1.83	2.02, 1.80	1.97, 1.95	2.08, 1.94	2.20, 1.93	2.28, 1.92	2.39, 1.92	2.31, 2.08	2.41, 2.09	2.17, 2.41
**CASE II	Ser (a ₀ , B')	0.65, 4.16	0.68, 4.27	0.72, 4.29	0.74, 4.44	0.78, 4.46	0.82, 4.47	0.86, 4.47	0.87, 4.63	0.92, 4.63	0.96, 4.64	0.98, 4.69	1.03, 4.69	1.04, 4.84	1.09, 4.84	1.05, 5.18
	Str (a ₀ , B')	0.41, 4.52	0.44, 4.67	0.48, 4.73	0.51, 4.90	0.55, 4.95	0.59, 5.00	0.63, 5.04	0.65, 5.21	0.70, 5.26	0.74, 5.30	0.77, 5.37	0.81, 5.40	0.83, 5.58	0.88, 5.61	0.86, 5.96
**CASE III	Ser (a ₀ , B')	1.05, 4.49	1.10, 4.64	1.15, 4.69	1.19, 4.86	1.24, 4.90	1.30, 4.94	1.36, 4.98	1.39, 5.15	1.46, 5.18	1.52, 5.22	1.56, 5.28	1.62, 5.31	1.62, 5.48	1.72, 5.51	1.69, 5.85
	Str (a ₀ , B')	0.98, 3.90	1.03, 4.00	1.10, 4.01	1.13, 4.15	1.19, 4.15	1.26, 4.15	1.33, 4.14	1.37, 4.28	1.44, 4.27	1.52, 4.26	1.57, 4.29	1.65, 4.28	1.69, 4.41	1.77, 4.40	1.72, 4.71
	Extr (a ₀ , B')	0.61, 4.53	0.64, 4.73	0.68, 4.76	0.70, 4.91	0.74, 4.91	0.79, 4.94	0.83, 4.93	0.85, 5.08	1.17, 4.03	1.23, 4.03	1.27, 4.06	1.34, 4.02	1.36, 4.15	1.43, 4.11	1.36, 4.45
	Str (a ₀ , B')	0.99, 4.28	1.04, 4.67	1.10, 4.69	1.13, 4.83	1.19, 4.82	1.25, 4.83	1.32, 4.82	1.35, 4.95	1.42, 4.95	1.48, 4.95	1.54, 4.95	1.61, 4.95	1.62, 5.14	1.70, 5.24	1.60, 5.72
	Extr (a ₀ , B')	0.90, 3.88	0.95, 3.93	1.01, 3.91	1.04, 4.02	1.11, 3.97	1.18, 3.92	1.25, 3.90	1.28, 4.00	1.35, 3.94	1.43, 3.92	1.51, 3.92	1.58, 3.97	1.67, 3.91	1.74, 4.00	1.60, 4.22

* Quantities include 1'-0" extension above the design "H" limit.
** a₀ = net bearing stress (ksf), B' = effective footing width (ft)

Reinforced Concrete: f_y = 60,000 psi
Earth Density: 120 pcf
Equivalent Fluid Pressure: 36 pcf

2010 REVISED STANDARD PLAN RSP D89

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

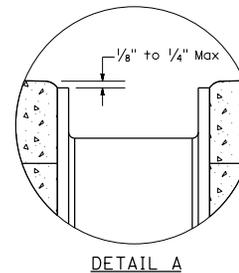
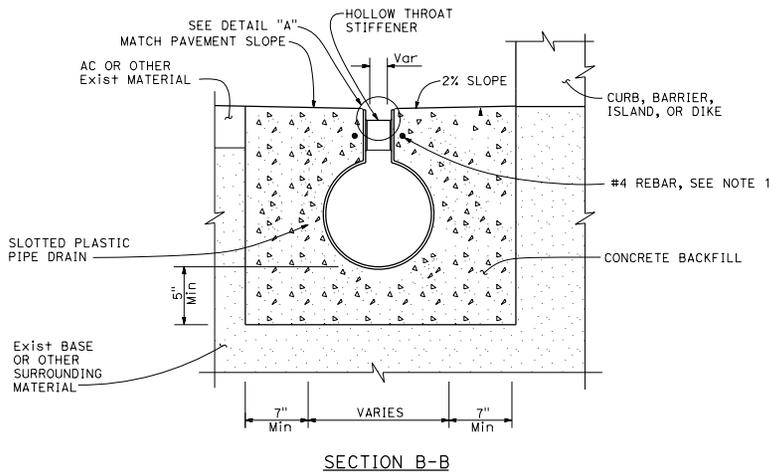
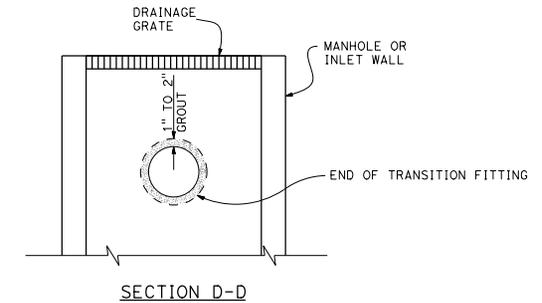
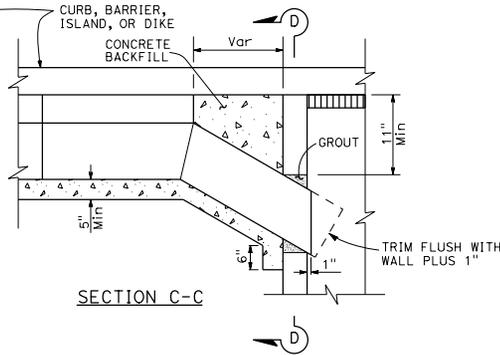
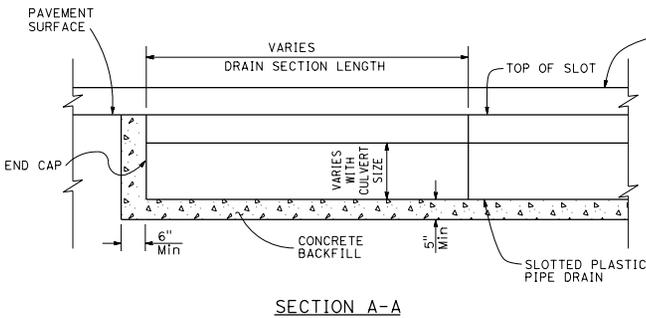
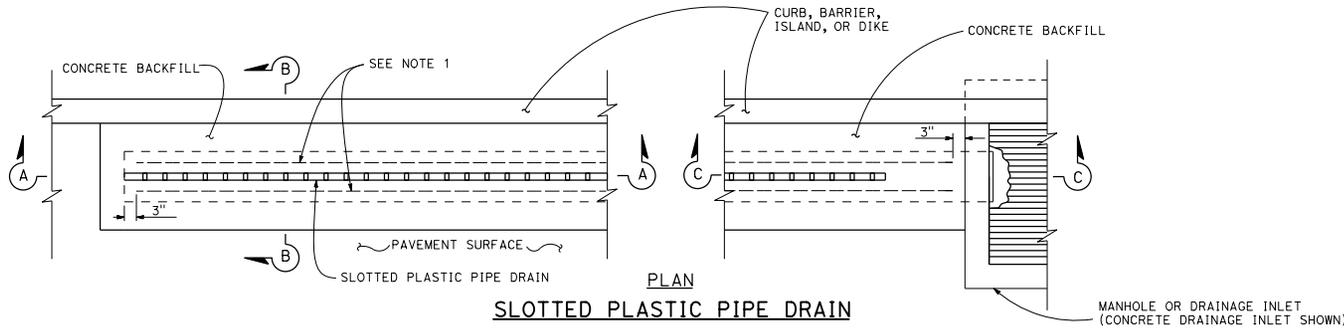
Raymond Don Jester
 REGISTERED CIVIL ENGINEER
 No. C37332
 Exp. 6-30-18
 CIVIL
 STATE OF CALIFORNIA

July 15, 2016
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS
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 THE ACCURACY OR COMPLETENESS OF SCANNED
 COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED _____

NOTES:

1. Lateral support, #4 bar, to be placed on both sides of slotted plastic pipe throat.
2. Slot plastic pipe cross section is a generic shape. Shape shall conform to allowable manufacturer's cross sections.

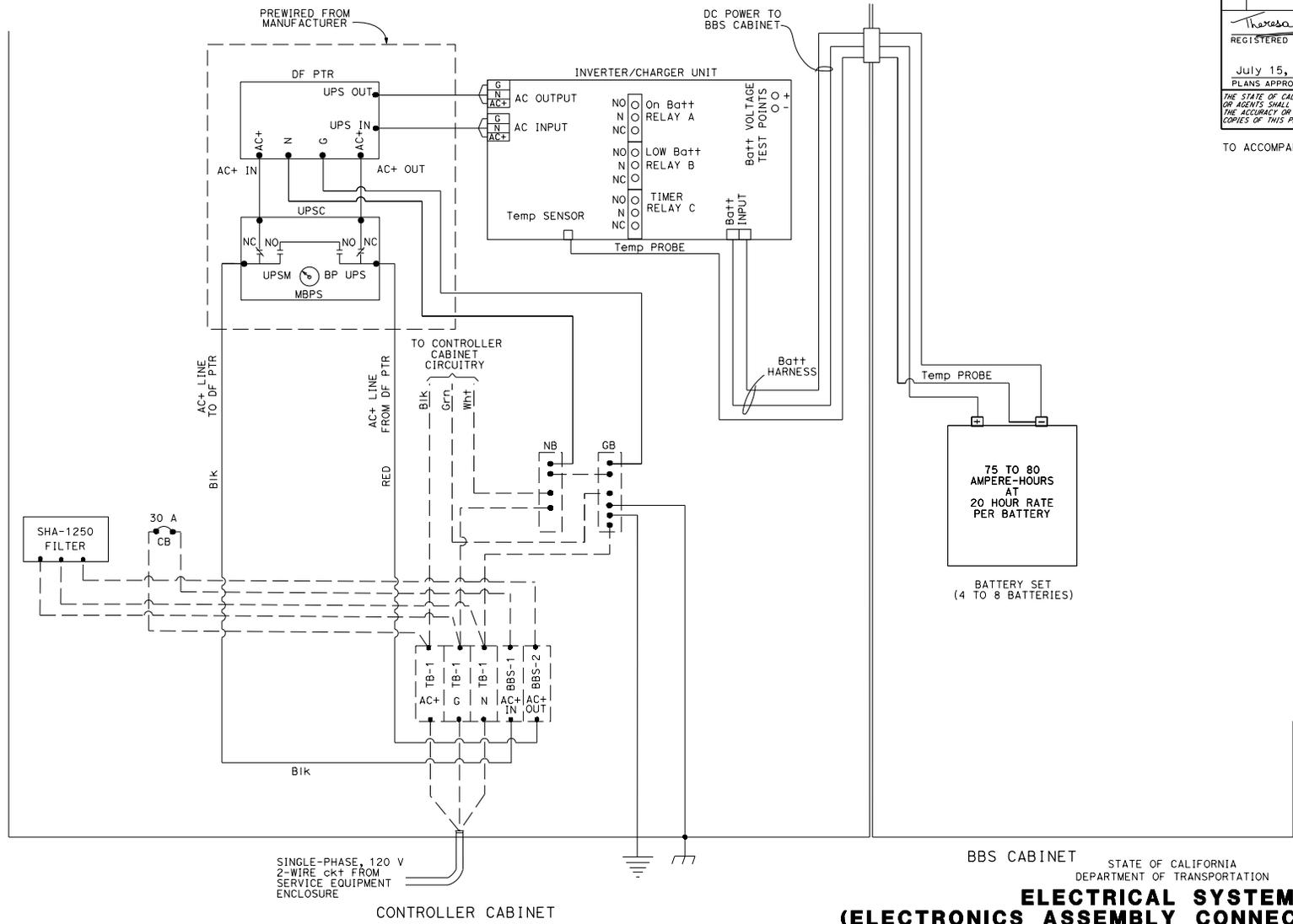


STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**SLOTTED PLASTIC PIPE
DRAIN DETAILS**
NO SCALE

RSP D98D DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN D98D
DATED MAY 20, 2011 - PAGE 209 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP D98D

2010 REVISED STANDARD PLAN RSP D98D



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

Theresa Gabriel
 REGISTERED ELECTRICAL ENGINEER
 No. E15129
 Exp. 6-30-18
 PROFESSIONAL ENGINEER
 STATE OF CALIFORNIA

July 15, 2016
 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 _____

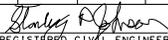
2010 REVISED STANDARD PLAN RSP ES-3L

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

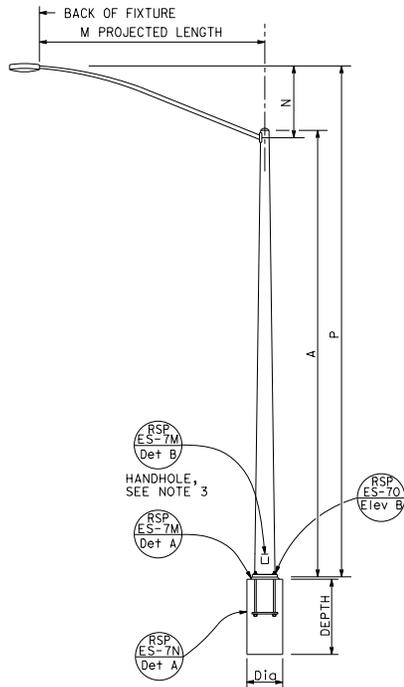
RSP ES-3L DATED JULY 15, 2016 SUPERSEDES RSP ES-3L DATED APRIL 15, 2016 AND RSP ES-3L DATED OCTOBER 30, 2015 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-3L

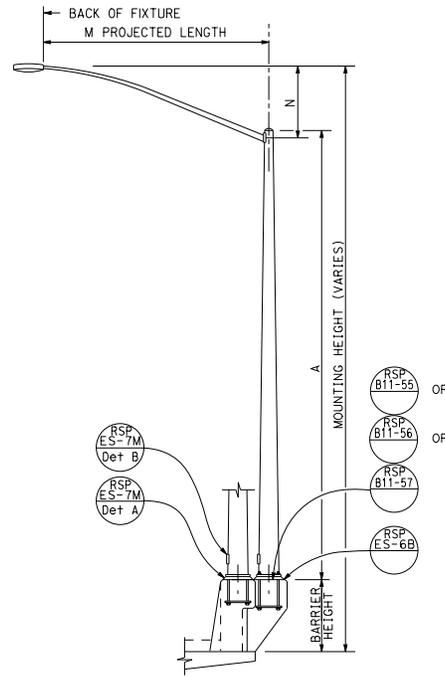
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS


 REGISTERED CIVIL ENGINEER
 No. CS793
 Exp. 3-31-18
 CIVIL
 STATE OF CALIFORNIA

July 15, 2016
 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



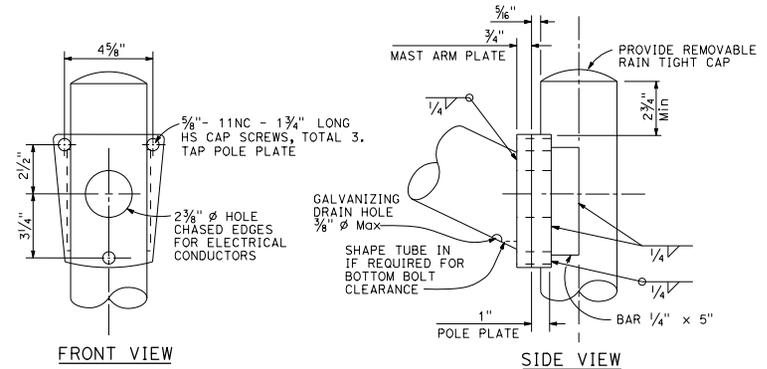
TYPE 15 AND TYPE 21 BARRIER RAIL MOUNTED
ELEVATION B

POLE TYPE	POLE DATA				BASE PLATE DATA				CIDH PILE FOUNDATION	
	A HEIGHT	Min OD BASE	TOP	WALL THICKNESS	C	BC = BOLT CIRCLE	THICKNESS	ANCHOR BOLT SIZE	DiA	DEPTH
15	30'-0"	8"	3 1/8"	0.1196"	1'-0"	1'-0"	1 1/2"	1" ø x 36" *	2'-6"	6'-0"
21	35'-0"	8 3/8"	3 3/8"	0.1793"			2"	1 1/4" ø x 36" *		7'-0"

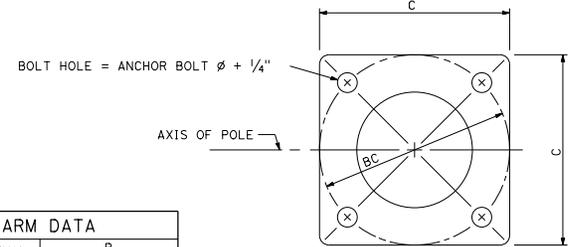
* FOR BARRIER RAIL BOLTS, SEE REVISED STANDARD PLAN RSP ES-6B.

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.



LUMINAIRE MAST ARM CONNECTION
DETAIL R



BASE PLATE
DETAIL A

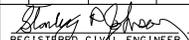
M PROJECTED LENGTH	N RISE	Min OD AT POLE	NOMINAL THICKNESS	P	
				TYPE 15	TYPE 21
6'-0"	2'-0"±	3 1/4"	0.1196"	31'-6"±	36'-6"±
8'-0"	2'-6"±	3 1/2"		32'-0"±	37'-0"±
10'-0"	3'-3"±	3 3/8"		32'-9"±	37'-9"±
(12'-0")	4'-3"±			33'-9"±	38'-9"±
15'-0"	4'-9"±	4 1/4"		34'-3"±	39'-3"±

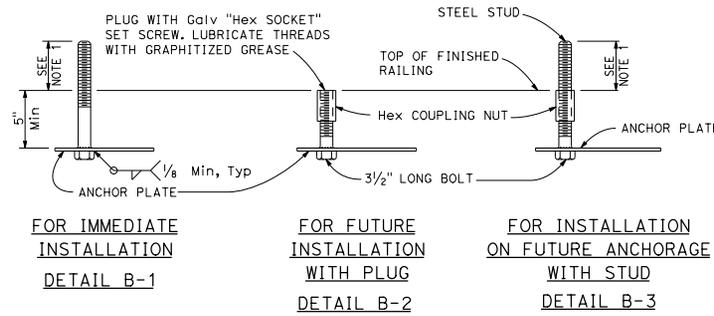
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(LIGHTING STANDARD,
TYPES 15 AND 21)**
NO SCALE

RSP ES-6A DATED JULY 15, 2016 SUPERSEDES RSP ES-6A DATED OCTOBER 30, 2015 AND 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

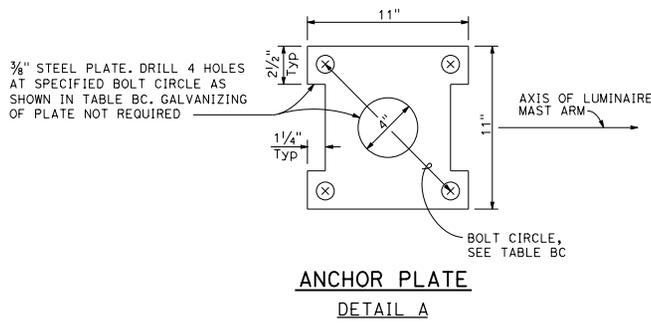
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
 REGISTERED CIVIL ENGINEER					
July 15, 2016 PLANS APPROVAL DATE					
Stanley P. Johnson No. C5735 Exp. 3-31-18 CIVIL STATE OF CALIFORNIA					
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					



ELECTROLIER ANCHORAGES
DETAIL B

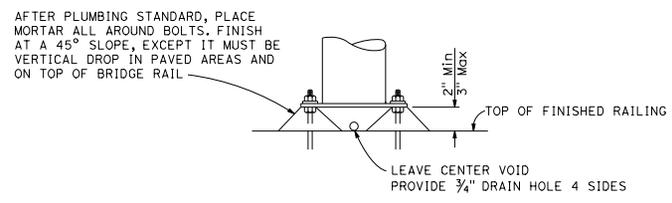
NOTES:

- Anchor bolt or stud length shall be such that thread extends 1/2" maximum above nut on level base plate after grouting. See Detail N.
- Electrolier anchor bolts shall be held in position for pouring by means of anchor plates and suitable templates. Deviation from the true position, vertical and height shall not exceed 1/16".
- See railing sheets for reinforcement and structural details at electroliers and pull boxes.



ANCHOR PLATE
DETAIL A

TABLE BC				
TYPE	BC = BOLT CIRCLE	ANCHOR BOLT DIAMETER	COUPLING NUT BASIC LENGTH	SET SCREW LENGTH DETAIL B-2
15	1'-0"	1"	3"	1 1/2"
21	1'-0"	1 1/4"	3 3/4"	1 7/8"



GROUTING AT ELECTROLIER
DETAIL N

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(ELECTROLIER ANCHORAGE AND
GROUTING FOR
TYPE 15 AND TYPE 21
BARRIER RAIL MOUNTED)**

NO SCALE

RSP ES-6B DATED JULY 15, 2016 SUPERSEDES STANDARD PLAN ES-6B DATED MAY 20, 2011 - PAGE 453 OF THE STANDARD PLANS BOOK DATED 2010.

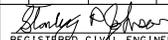
REVISED STANDARD PLAN RSP ES-6B

2010 REVISED STANDARD PLAN RSP ES-6B

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

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

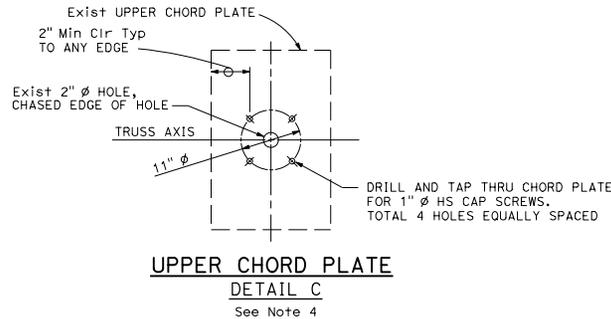
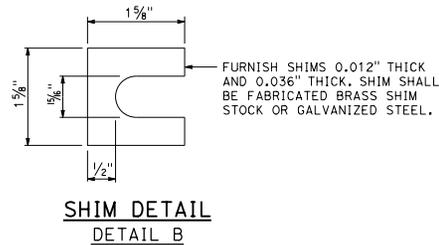
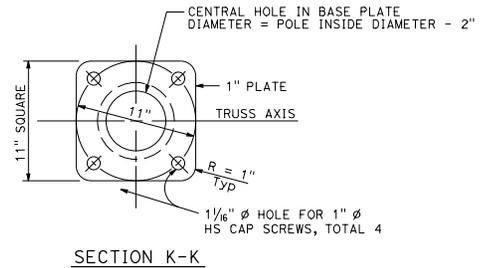
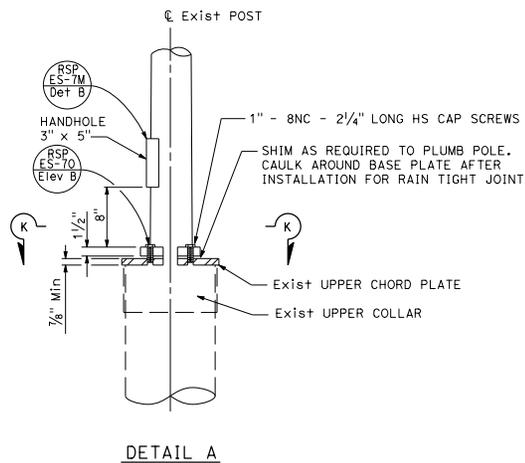
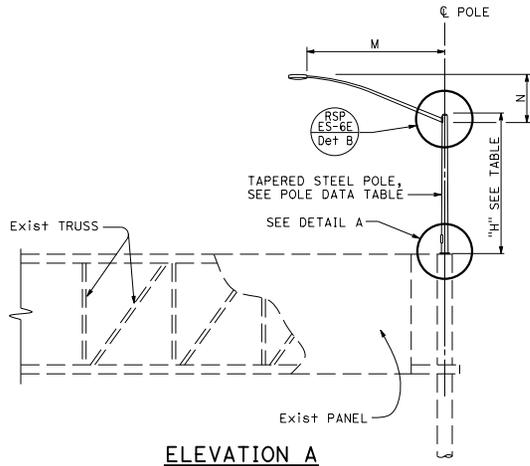

 REGISTERED CIVIL ENGINEER
 July 15, 2016
 PLANS APPROVAL DATE
 Stanley P. Johnson
 No. CS7793
 Exp. 3-31-18
 CIVIL
 STATE OF CALIFORNIA

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 _____

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.
- For Wind Loading see RSP ES-7M.
- See Std Plan S13.
- Materials (Structural Steel):
 - fy = 55,000 psi tapered steel tube (pole)
 - fy = 50,000 psi unless otherwise noted



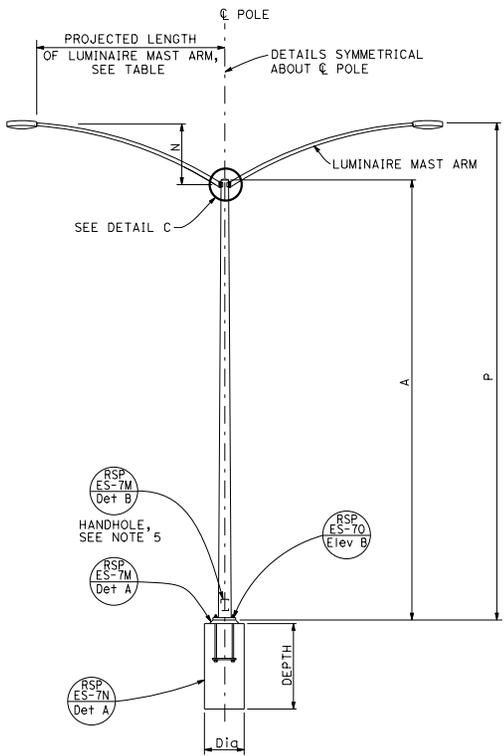
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(LIGHTING STANDARD,
TYPES 5 AND 10,
OVERHEAD SIGN MOUNTED)**

NO SCALE

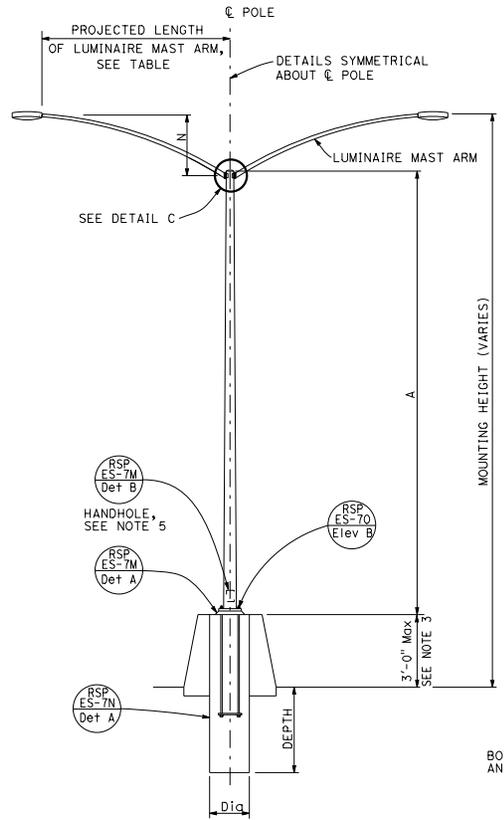
RSP ES-6C DATED JULY 15, 2016 SUPERSEDES RSP ES-6C
DATED OCTOBER 30, 2015 AND STANDARD PLAN ES-6C DATED MAY 20, 2011 -
PAGE 454 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-6C

2010 REVISED STANDARD PLAN RSP ES-6C



TYPE 15D AND TYPE 21D
ELEVATION A



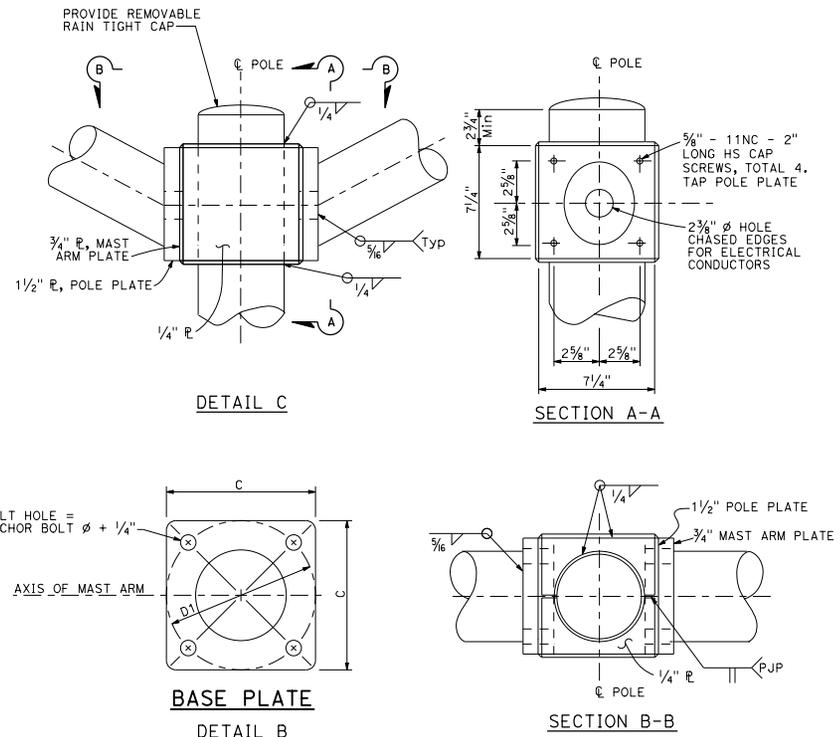
TYPE 15D AND TYPE 21D
MEDIAN BARRIER MOUNTED
ELEVATION B

POLE TYPE	POLE DATA				BASE PLATE DATA			CIDH PILE FOUNDATION	
	A HEIGHT	Min OD	Min THICKNESS	C	BC = BOLT CIRCLE	THICKNESS	ANCHOR BOLT SIZE	Diq	DEPTH
15D	30'-0"	8"	0.1793"	1'-0"	1'-0"	1 1/2"	1 1/4" ø x 42"	2'-6"	7'-0"
21D	35'-0"	8 5/8"	3 1/8"	1'-0"	1'-0"	1 1/2"	1 1/4" ø x 42"	2'-6"	7'-0"

LUMINAIRE MAST ARM DATA					
PROJECTED LENGTH	N RISE	Min OD AT POLE	NOMINAL THICKNESS	P	
				TYPE 15D	TYPE 21D
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 3/4"		32'-9"±	37'-9"±
12'-0"	4'-3"±	3 3/4"		33'-9"±	38'-9"±

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.



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(LIGHTING STANDARD,
TYPES 15D AND 21D,
DOUBLE LUMINAIRE MAST ARM)

NO SCALE
RSP ES-6D DATED JULY 15, 2016 SUPERSEDES RSP ES-6D
DATED OCTOBER 30, 2015 AND STANDARD PLAN ES-6D DATED MAY 20, 2011 -
PAGE 455 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-6D

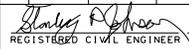
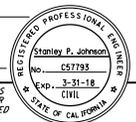
D16+	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL SHEETS

Stanley P. Johnson
REGISTERED CIVIL ENGINEER
No. C67935
EXPIRES 3-31-18
CIVIL ENGINEER PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

July 15, 2016
PLANS APPROVAL DATE
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TO ACCOMPANY PLANS DATED _____

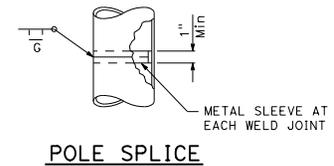
2010 REVISED STANDARD PLAN RSP ES-6D

D16+	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
 REGISTERED CIVIL ENGINEER No. 05795 STATE OF CALIFORNIA					
July 15, 2016 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 _____

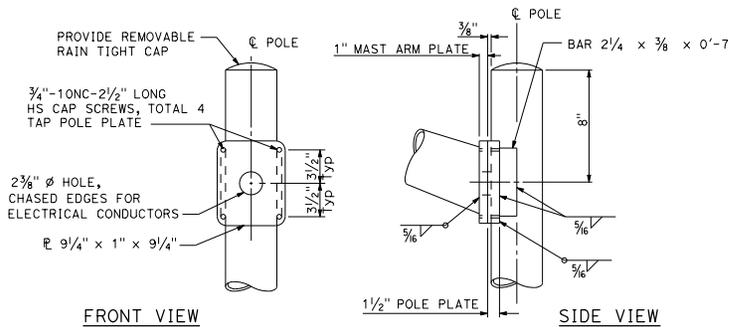
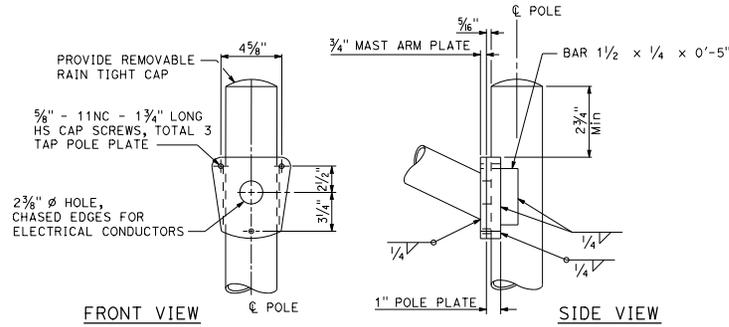
NOTES:

1. For slip base plate details, see Revised Standard Plan RSP ES-6F.
2. For Type 30 fixed base use Type 15 base plate and foundation shown on Revised Standard Plan RSP ES-6A. Use 1/4" Dia x 3'-6" anchor bolts.
3. For Type 31 fixed base use Type 32 base plate, anchor bolts and foundation on Revised Standard Plan RSP ES-6G.
4. Handhole shall be located on the downstream side of traffic.
5. For additional notes and details, see Revised Standard Plans RSP ES-7M and RSP ES-7N.

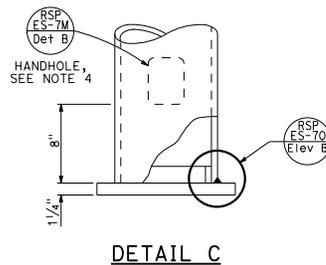
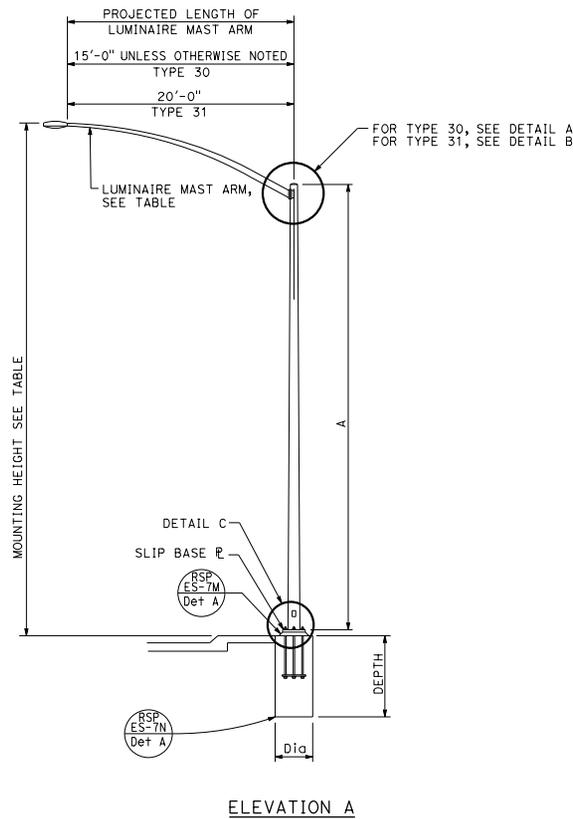


LUMINAIRE MAST ARM DATA			
PROJECTED LENGTH	THICKNESS	MINIMUM OD AT POLE	MOUNTING HEIGHT
* 6'-0"	0.1196"	3 1/4"	36'-9"±
* 8'-0"		3 1/2"	37'-3"±
* 10'-0"		3 7/8"	38'-0"±
* 12'-0"		4"	39'-0"±
* 15'-0"	0.1793"	4 1/4"	39'-6"±
** 20'-0"		5"	37'-0"±

* TYPE 30
** TYPE 31



POLE TYPE	A	POLE DATA			CIDH PILE FOUNDATION	
		Min OD	Min	THICKNESS	Dia	DEPTH
30	35'-0"	8 3/4"	3 1/8"	0.1196"	2'-6"	7'-0"
31		10 3/4"	5 1/8"	0.1793"	3'-0"	8'-0"



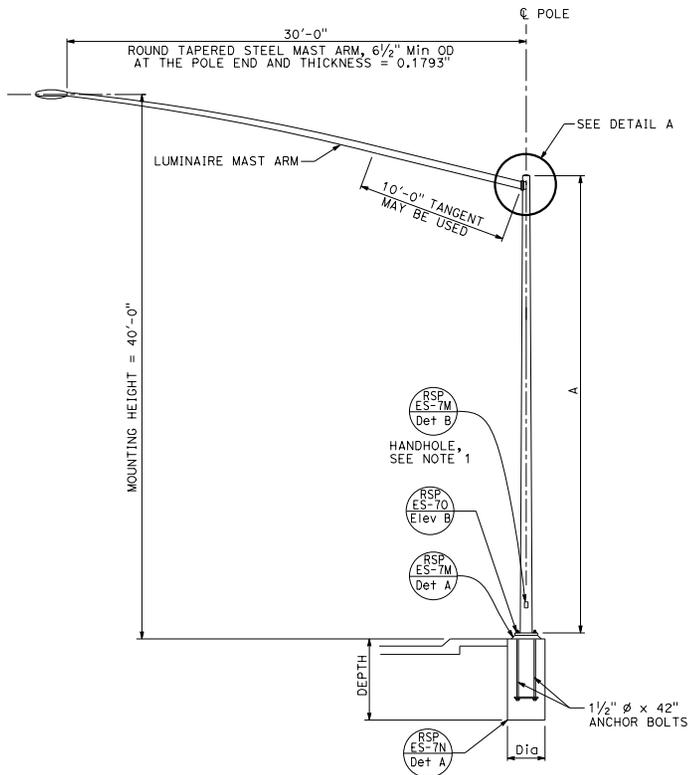
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(LIGHTING STANDARD,
TYPES 30 AND 31)**

NO SCALE

RSP ES-6E DATED JULY 15, 2016 SUPERSEDES RSP ES-6E
DATED OCTOBER 30, 2015 AND STANDARD PLAN ES-6E DATED MAY 20, 2011 -
PAGE 456 OF THE STANDARD PLANS BOOK DATED 2010.

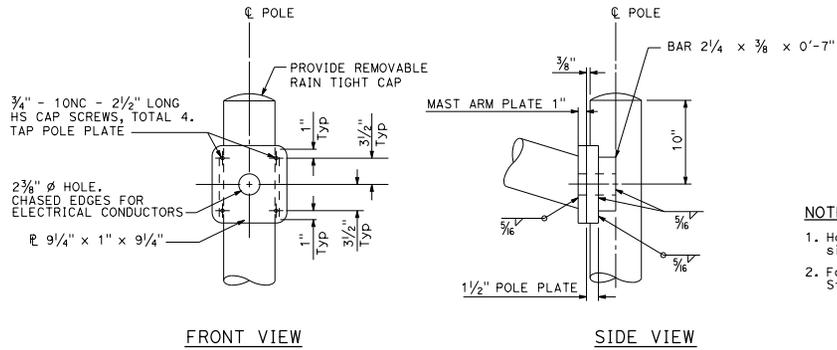
REVISED STANDARD PLAN RSP ES-6E

2010 REVISED STANDARD PLAN RSP ES-6E



ELEVATION A

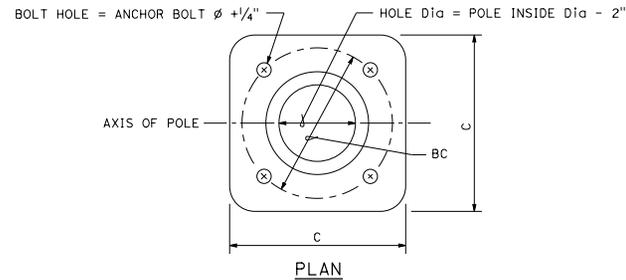
POLE TYPE	POLE DATA				BASE PLATE DATA			CIDH PILE FOUNDATION		
	A HEIGHT	Min OD BASE	TOP	Min THICKNESS	C	BC = BOLT CIRCLE	THICKNESS	ANCHOR BOLT SIZE	Dia	DEPTH
32	35'-0"	10 3/4"	5 1/2"	0.1793"	1'-5"	1'-3"	2"	1 1/2" ϕ x 42"	3'-0"	8'-0"



FRONT VIEW

SIDE VIEW

DETAIL A



**BASE PLATE DETAIL
DETAIL C**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL SHEETS

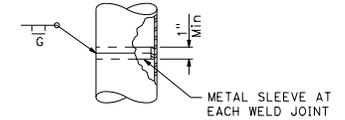
Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 No. C6795
 Exp. 3-31-18
 CIVIL
 STATE OF CALIFORNIA

July 15, 2016
 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. 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.



**POLE SPLICE
DETAIL B**

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

NO SCALE

RSP ES-6G DATED JULY 15, 2016 SUPERSEDES RSP ES-6G DATED OCTOBER 30, 2015 AND STANDARD PLAN ES-6G DATED MAY 20, 2011 - PAGE 458 OF THE STANDARD PLANS BOOK DATED 2010.

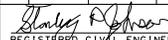
REVISED STANDARD PLAN RSP ES-6G

2010 REVISED STANDARD PLAN RSP ES-6G

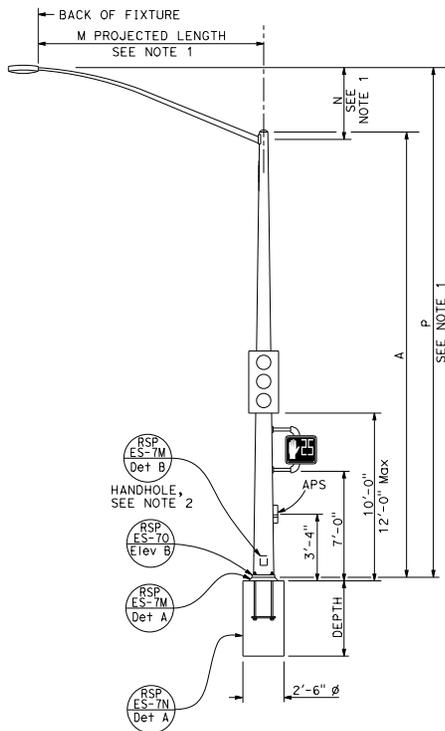
NOTES:

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

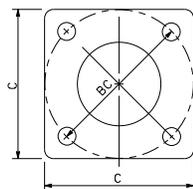
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS


 REGISTERED CIVIL ENGINEER
 No. C5793
 Exp. 3-31-18
 CIVIL
 STATE OF CALIFORNIA

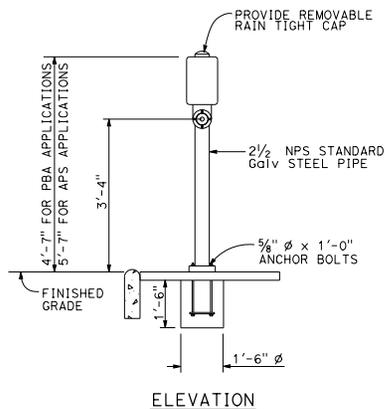
July 15, 2016
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



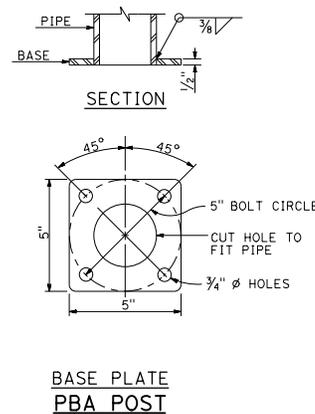
TYPE 15TS AND 21TS STANDARD
ELEVATION A
(See Note 1)



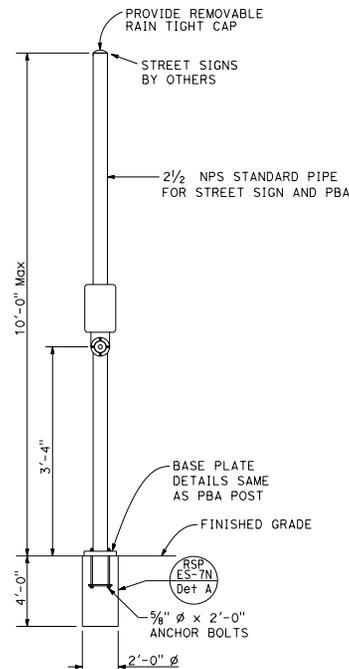
BASE PLATE
TYPE 15TS AND 21TS
DETAIL A



PUSH BUTTON ASSEMBLY POST
DETAIL B



COMBINED STREET SIGN
PUSH BUTTON ASSEMBLY POST
DETAIL C

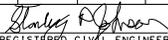


POLE TYPE	POLE DATA			WALL THICKNESS	BASE PLATE DATA			CIDH
	A HEIGHT	Min OD	TOP		C	BC = BOLT CIRCLE	THICKNESS	
15TS	30'-0"	8"	3 1/8"	0.1793"	1'-1 1/2"	1'-0"	2"	1 1/2" ϕ x 42"
21TS	35'-0"	9 3/8"	3 3/8"		1'-3"	1'-2"		

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 JULY 15, 2016 SUPERSEDES RSP ES-7A DATED OCTOBER 30, 2015 AND 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.

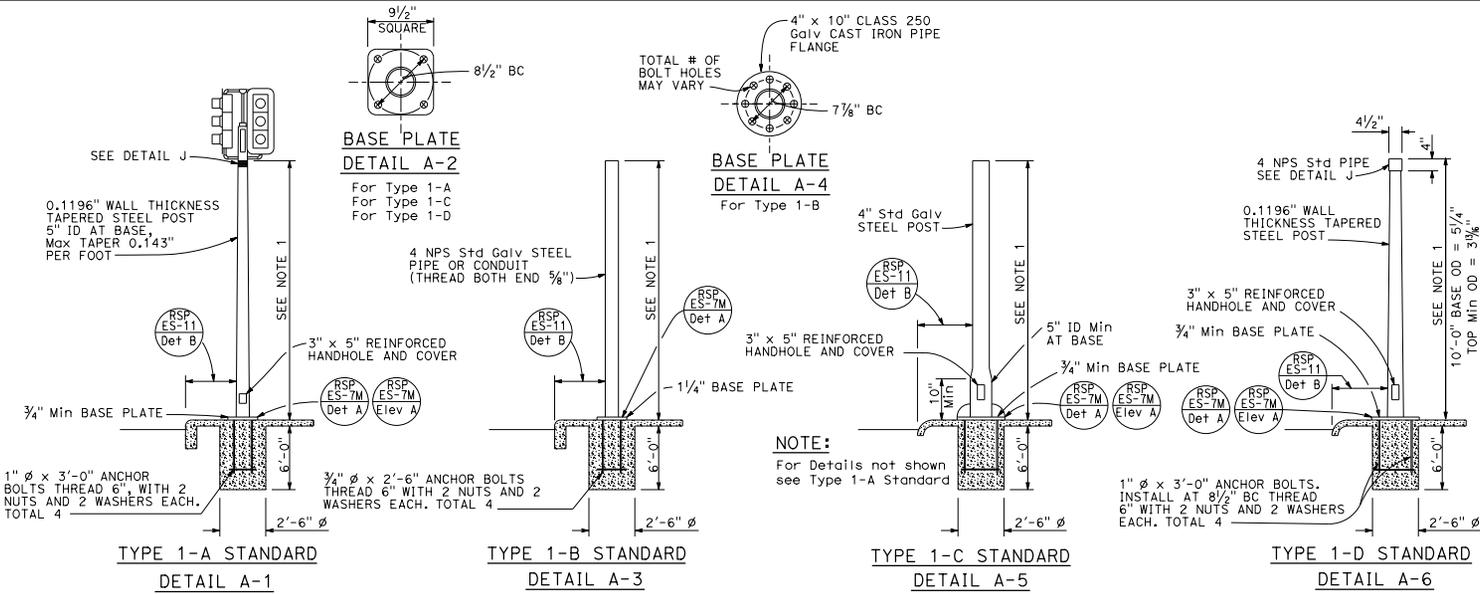
REVISED STANDARD PLAN RSP ES-7A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
 REGISTERED CIVIL ENGINEER					
July 15, 2016 PLANS APPROVAL DATE					
Stanley P. Johnson No. C5793 Exp. 3-31-18 CIVIL STATE OF CALIFORNIA					

TO ACCOMPANY PLANS DATED _____

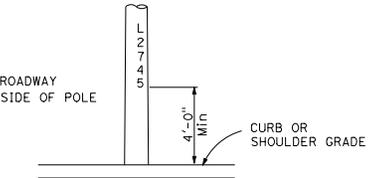
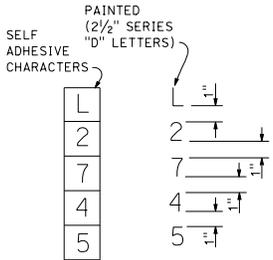
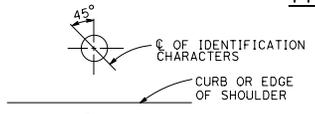
NOTES:

- 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.



NOTE:
For Details not shown see Type 1-A Standard

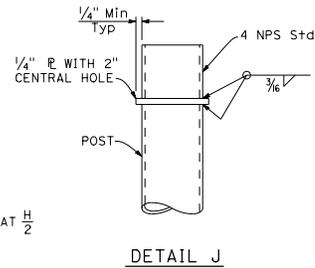
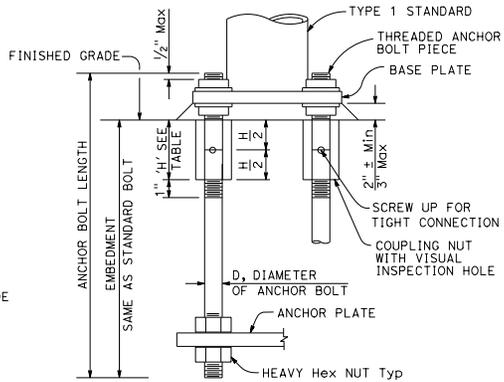
TYPE 1 SIGNAL STANDARDS DETAIL A



IDENTIFICATION CHARACTER DETAIL DETAIL B-1

TYPICAL IDENTIFICATION CHARACTER FORMAT DETAIL B-2

LOCATION OF EQUIPMENT IDENTIFICATION CHARACTERS ON STANDARDS AND POSTS DETAIL B



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

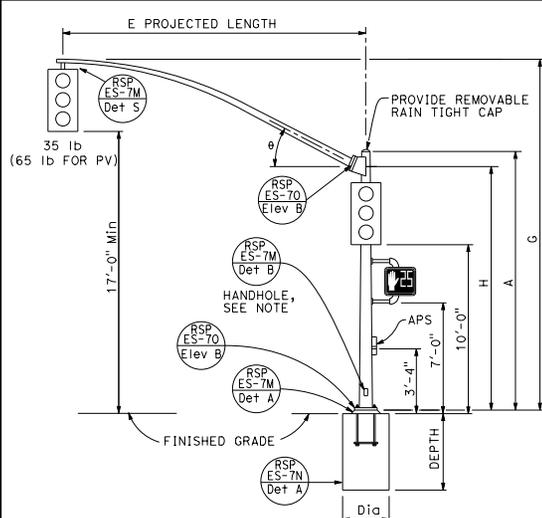
ELECTRICAL SYSTEMS (SIGNAL AND LIGHTING STANDARD, TYPE 1 AND EQUIPMENT IDENTIFICATION CHARACTERS)

NO SCALE

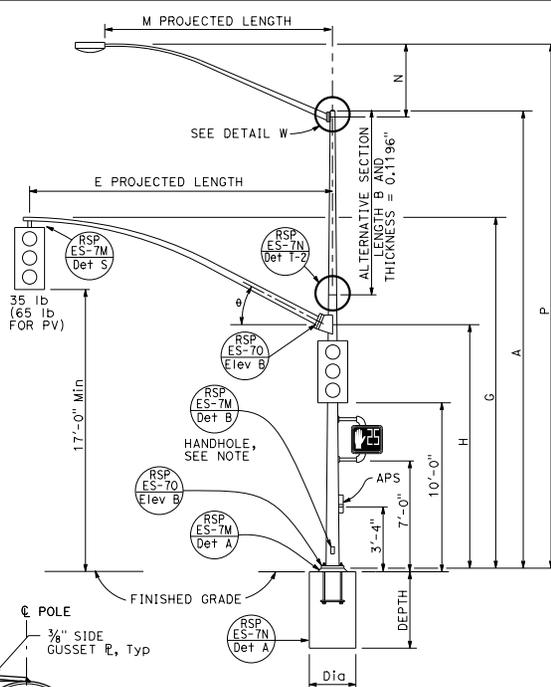
RSP ES-7B DATED JULY 15, 2016 SUPERSEDES RSP ES-7B DATED OCTOBER 30, 2015 AND STANDARD PLAN ES-7B DATED MAY 20, 2011 - PAGE 463 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-7B

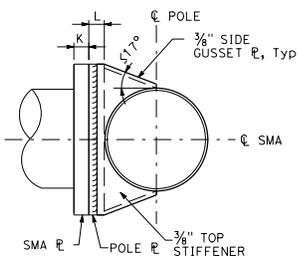
2010 REVISED STANDARD PLAN RSP ES-7B



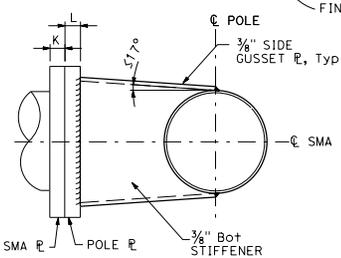
TYPE 16-1-100, 18-1-100
ELEVATION A



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



SECTION B-B



SECTION C-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"	0.1793"	12"	1 1/4"-7NC-3"	1'-1"	1 1/4"	1 1/2"	23°
20'-0"	22'-8"±	16'-0"	8"							
25'-0"	22'-8"±	16'-0"	9"							
30'-0"	23'-0"±	16'-0"	10"							

M PROJECTED LENGTH	N RISE	Min OD AT POLE	THICKNESS	P MOUNTING HEIGHT
6'-0"	2'-0"±	3 1/4"	0.1196"	30'-0" POLE
8'-0"	2'-6"±	3 1/2"		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"±

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		C	BC = BOLT CIRCLE			THICKNESS	ANCHOR BOLT SIZE	Dia	DEPTH				
				BASE	TOP		B LENGTH	BOTTOM									TOP			
16-1-100	1	100	18'-6"	12"	9 3/8"	0.2391"	None		1'-6"	1'-4"	2"	1 3/4" ø x 42"	NONE	15'-0", [20'-0"]	3'-0"	9'-0"				
18-1-100			17'-0"	12"	9 3/8"		None		1'-6"	1'-4"			NONE	15'-0", [20'-0"]	3'-0"	9'-0"				
19-1-100			30'-0"	14"	9 3/4"		10'-0"	9 3/4"	11 1/8"	9 3/4"			1'-10"	1'-8"	2"	2" ø x 42"	6'-15" [12'-0"]	25'-0", [30'-0"]	3'-6"	10'-0"
19A-1-100			35'-0"	14"	9"		15'-0"	11 1/8"	9"	1'-10"			1'-8"	2 1/2"	2" ø x 42"	6'-15" [15'-0"]	25'-0", [30'-0"]	3'-6"	10'-0"	

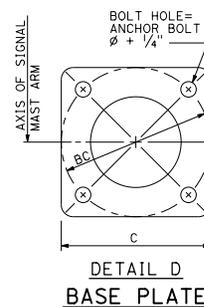
□ INDICATES MAST ARM LENGTH TO BE USED UNLESS OTHERWISE NOTED ON PLANS.

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

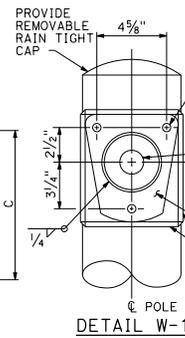
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 No. C67935
 Exp. 3-31-18
 CIVIL
 STATE OF CALIFORNIA

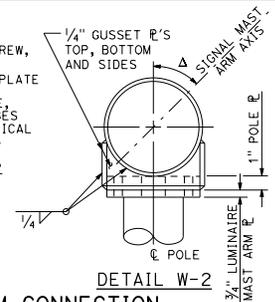
July 15, 2016
 PLANS APPROVAL DATE
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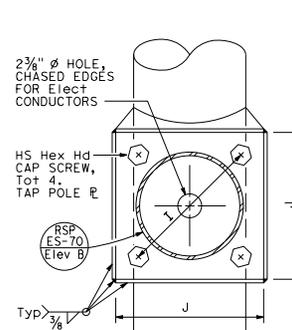
DETAIL D
BASE PLATE



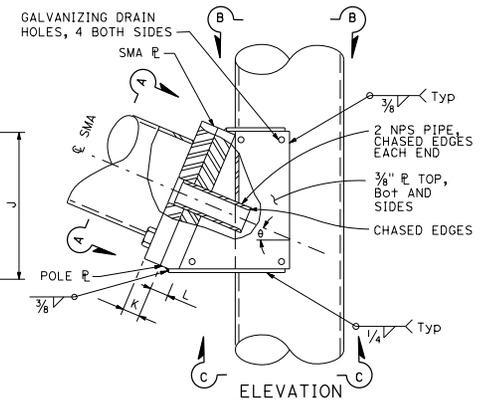
DETAIL W-1
LUMINAIRE MAST ARM CONNECTION



DETAIL W-2
SIGNAL MAST ARM CONNECTION



SECTION A-A



ELEVATION

DETAIL A
SIGNAL MAST ARM CONNECTION

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

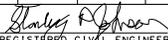
ELECTRICAL SYSTEMS (SIGNAL AND LIGHTING STANDARD, CASE 1 SIGNAL MAST ARM LOADING, WIND VELOCITY = 100 MPH AND SIGNAL MAST ARM LENGTHS 15' TO 30')

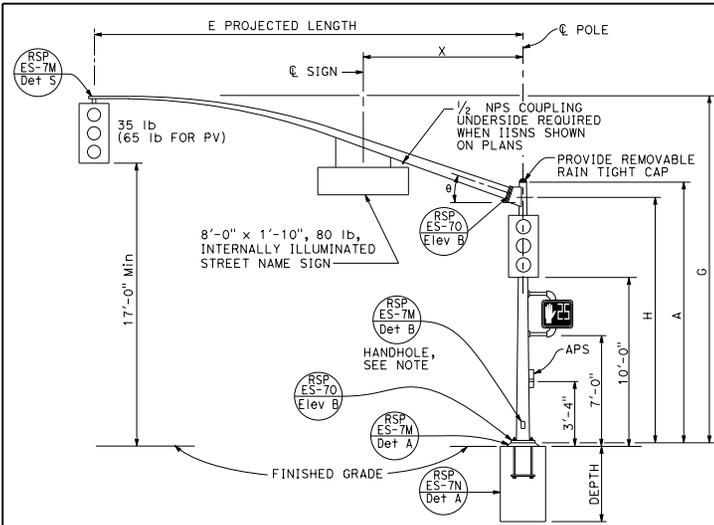
NO SCALE

RSP ES-7C DATED JULY 15, 2016 SUPERSEDES RSP ES-7C DATED OCTOBER 30, 2015 AND 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

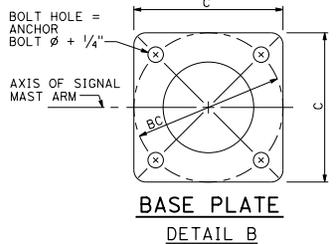
2010 REVISED STANDARD PLAN RSP ES-7C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
 REGISTERED CIVIL ENGINEER No. C67393 Exp. 3-31-18 CIVIL STATE OF CALIFORNIA					
July 15, 2016 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.					



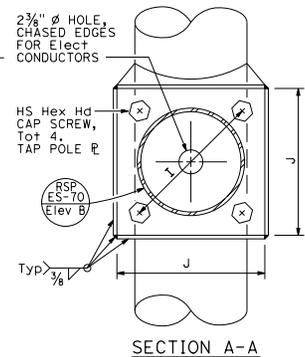
TYPE 16-2-100, 18-2-100

ELEVATION A



BASE PLATE

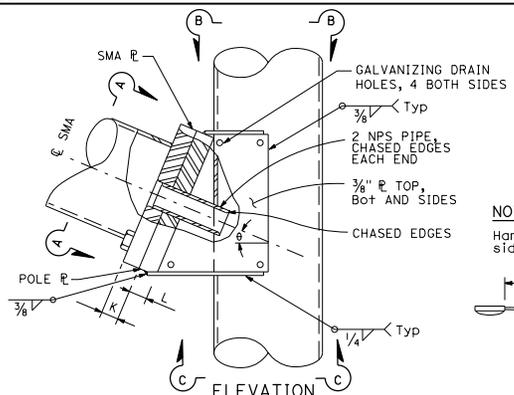
DETAIL B



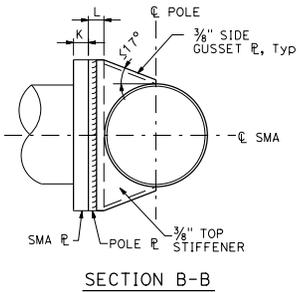
SECTION A-A

SIGNAL MAST ARM CONNECTION

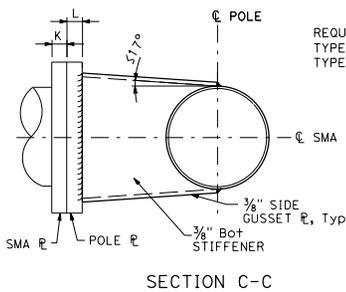
DETAIL A



ELEVATION

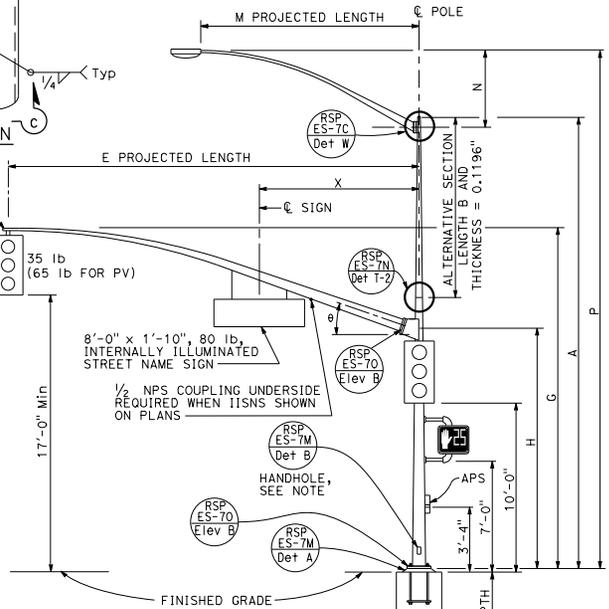


SECTION B-B



SECTION C-C

REQUIRED FOR
TYPE 17-2-100
TYPE 17A-2-100



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

ELEVATION B

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 JULY 15, 2016 SUPERSEDES RSP ES-7D DATED OCTOBER 30, 2015 AND 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

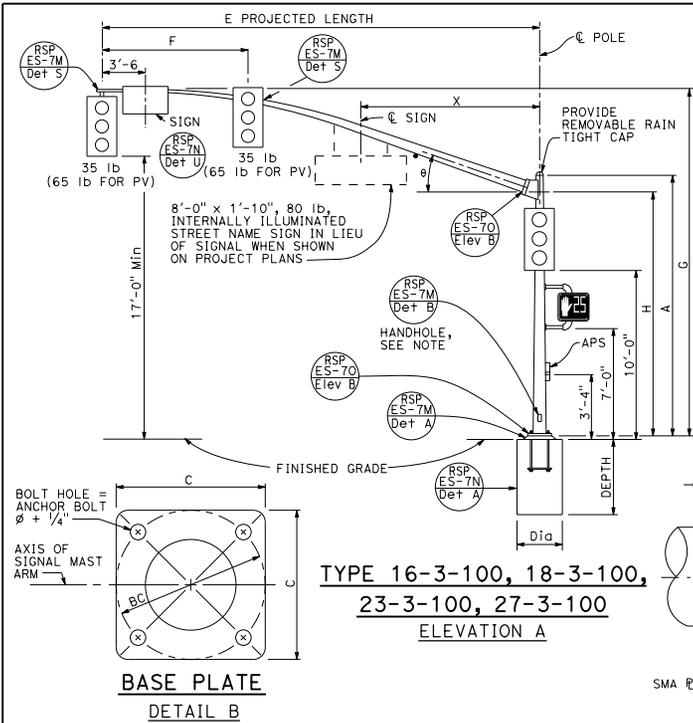
E PROJECTED LENGTH	G MOUNTING HEIGHT	H	Min OD AT POLE	THICKNESS	I BOLT CIRCLE	HS CAP SCREWS	J PLATE SIZE	K MAST ARM R THICKNESS	L POLE R THICKNESS	θ	X Max
15'-0"	21'-8"±	17'-6"	7 3/8"	0.1793"	12"	1 1/4"-7NC-3"	1'-1"	1/4"	1 1/2"	23°	10'-6"
20'-0"	21'-8"±	8"									
25'-0"	22'-8"±	9"									
30'-0"	23'-0"±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

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

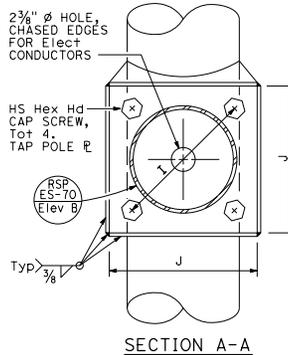
POLE TYPE	LOAD CASE	WIND VELOCITY (mph)	POLE DATA			BASE PLATE DATA			LUMINAIRE MAST ARM	SIGNAL MAST ARM	CIDH PILE FOUNDATION					
			A HEIGHT	Min OD BASE	TOP	THICKNESS	B LENGTH	BOTTOM			TOP	C	BC = BOLT CIRCLE	THICKNESS	ANCHOR BOLT SIZE	Diag
16-2-100	2	100	18'-6"	11 3/8"	0.2391" OR 0.25"	10'-0"	11 1/8"	9 3/4"	1'-10"	1'-8"	2 1/2"	2"Ø x 42"	None	15'-0", 20'-0"	3'-6"	10'-0"
17-2-100			30'-0"	9 3/4"												
17A-2-100			35'-0"	9"												
18-2-100			17'-0"	11 1/8"												
19-2-100			17'-0"	9 3/4"												
19A-2-100	35'-0"	16"	11"	15'-0"	13 1/8"	11"	1'-11"	1'-9"	3"	2 1/4"Ø x 42"	6'-15", 15'-0"	12'-0"				

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

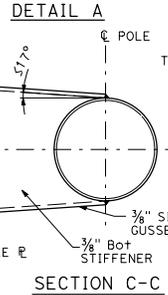
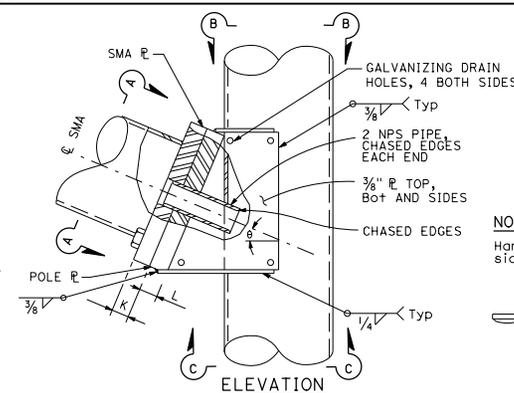
2010 REVISED STANDARD PLAN RSP ES-7D



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



SECTION A-A
SIGNAL MAST ARM CONNECTION



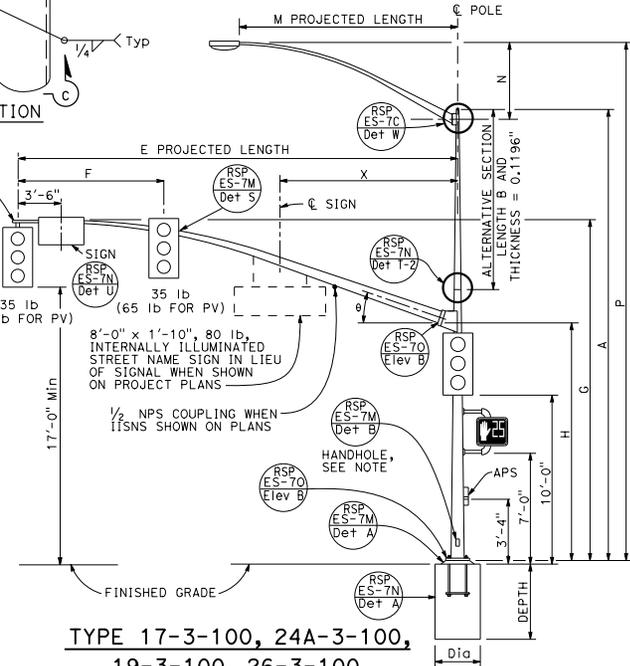
DETAIL A
SECTION B-B
SECTION C-C

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

Stanley P. Johnson
REGISTERED CIVIL ENGINEER
No. C6793
Exp. 3-31-18
CIVIL

July 15, 2016
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.

NOTE:
TO ACCOMPANY PLANS DATED _____
Handhole shall be located on the downstream side of traffic.



TYPE 17-3-100, 24A-3-100,
19-3-100, 26-3-100,
19A-3-100, 26A-3-100, 24-3-100
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	X Max
15'-0"	8'-0"	21'-8"±	17'-6"	7 7/8"	0.1793"	12"		1'-3"	1 1/4"	1 1/2"	23°	-
20'-0"		21'-8"±		7 7/8"								
25'-0"	12'-0"	22'-8"±		7 7/8"								
30'-0"				8"	0.2391"		1 1/4"-7NC-3"					10'-6"
35'-0"	14'-0"	23'-0"±	16'-0"	8 3/4"							21°	
40'-0"				9 3/8"								
45'-0"	15'-0"	23'-8"±		10 1/8"				1'-5"	1 1/2"	1 3/4"	15°	13'-0"

M PROJECTED LENGTH	N RISE	Min OD AT POLE	THICKNESS	P MOUNTING HEIGHT POLE	Q MOUNTING HEIGHT POLE
6'-0"	2'-0"±	3 1/4"	0.1196"	30'-0"	35'-0"
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"±

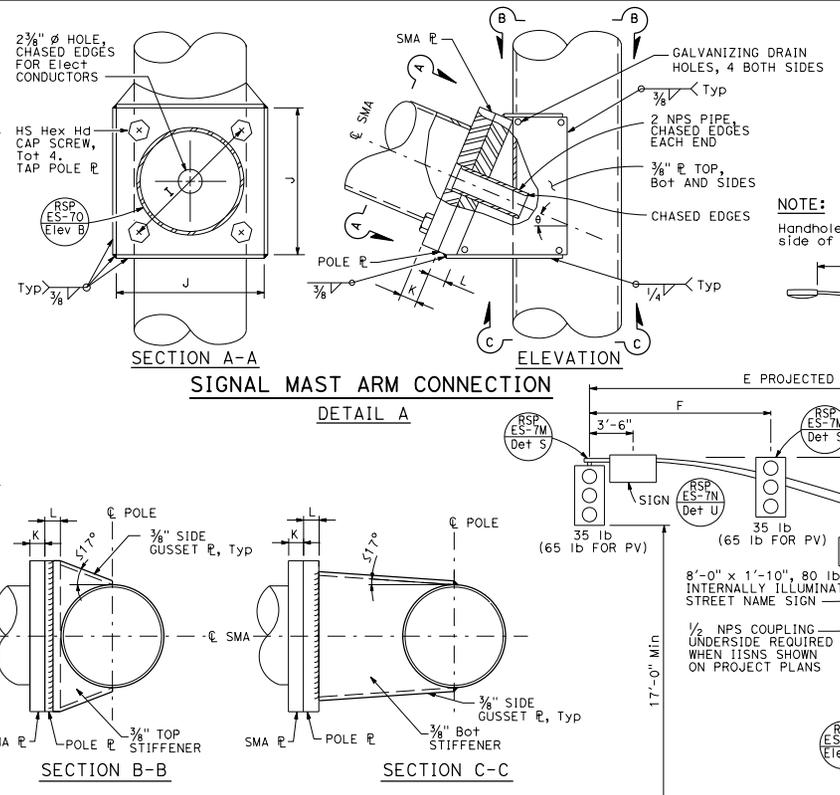
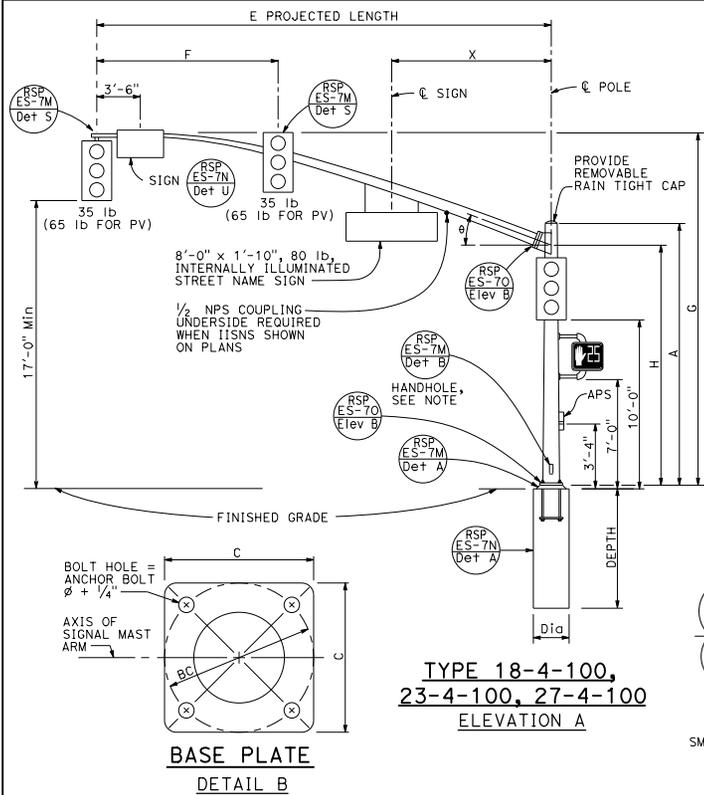
POLE TYPE	LOAD CASE	WIND VELOCITY (mph)	POLE DATA			BASE PLATE DATA			LUMINAIRE MAST ARM	SIGNAL MAST ARM	CIDH PILE FOUNDATION							
			A HEIGHT	Min OD BASE	Min OD TOP	THICKNESS	ALTERNATIVE SECTION B LENGTH	TOP			C	BC = BOLT CIRCLE	THICKNESS	ANCHOR BOLT SIZE	DiA	DEPTH		
16-3-100			18'-6"	13 3/8"	13 3/8"	0.2391" OR 0.25"	10'-0"	13 3/8"	11 3/4"									
17-3-100			30'-0"	11 3/4"	11 3/4"													
18-3-100			17'-0"	13 3/8"	13 3/8"													
19-3-100			30'-0"	11 3/4"	11 3/4"		10'-0"	13 3/8"	11 3/4"	1'-11"	1'-9"							
19A-3-100			35'-0"	11"	11"	0.3125"	15'-0"	13 3/8"	11"									
23-3-100			17'-0"	13 3/8"	13 3/8"	0.2391" OR 0.25"												
24-3-100			30'-0"	11 3/4"	11 3/4"		10'-0"	13 3/8"	11 3/4"									
24A-3-100			35'-0"	11"	11"		15'-0"	13 3/8"	11"									
26-3-100			30'-0"	13 3/8"	13 3/8"	0.3125"	10'-0"	15 3/8"	13 3/4"									
26A-3-100			35'-0"	13"	13"		15'-0"	15"	13"	2'-1"	1'-11"							
27-3-100			17'-0"	15 3/8"	15 3/8"													

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 3 SIGNAL MAST ARM LOADING,
WIND VELOCITY=100 MPH AND SIGNAL
MAST ARM LENGTHS 15' TO 45')
NO SCALE
RSP ES-7E DATED JULY 15, 2016 SUPERSEDES RSP ES-7E DATED OCTOBER 30, 2015 AND RSP ES-7E DATED JULY 19, 2013 AND STANDARD PLAN 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

Stanley P. Johnson
REGISTERED CIVIL ENGINEER
No. C6798
Exp. 3-31-18
CIVIL
STATE OF CALIFORNIA

July 15, 2016
PLANS APPROVAL DATE

NOTE: TO ACCOMPANY PLANS DATED _____
Handhole shall be located on the downstream side of traffic.

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	POLE R THICKNESS	θ	X Max		
25'-0"	10'-0"	22'-8"±		7 3/8"	0.2391"	12"	1 1/4"-7NC-3"	1'-3"	1/4"	1 1/2"	23°	10'-6"		
30'-0"	12'-0"		8"	13 1/2"		1'-3"		1/4"	1 1/2"	1 1/2"	1 3/4"	21°	13'-0"	
35'-0"	14'-0"	23'-0"±	16'-0"	8 1/8"										
40'-0"				9 3/8"										
45'-0"	15'-0"	23'-8"±		10 1/4"										

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"		31'-6"±
10'-0"	3'-3"±	3 3/8"		32'-0"±
12'-0"	4'-3"±			33'-9"±
15'-0"	4'-9"±	4/4"		34'-3"±
				35'-0" POLE
				36'-6"±
				37'-0"±
				37'-9"±
				38'-9"±
				39'-3"±

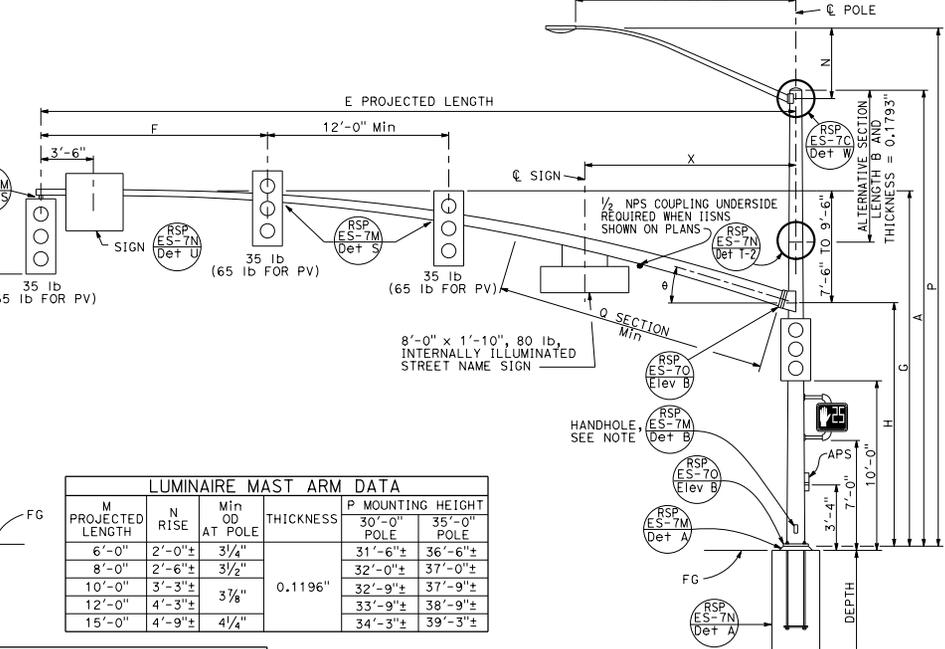
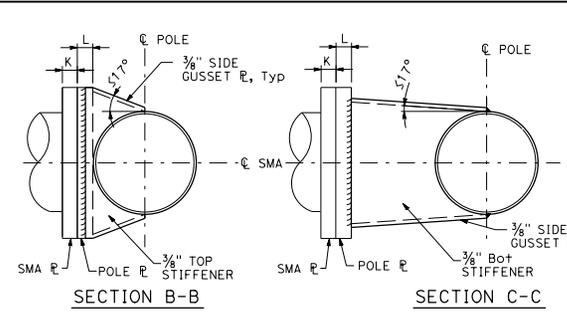
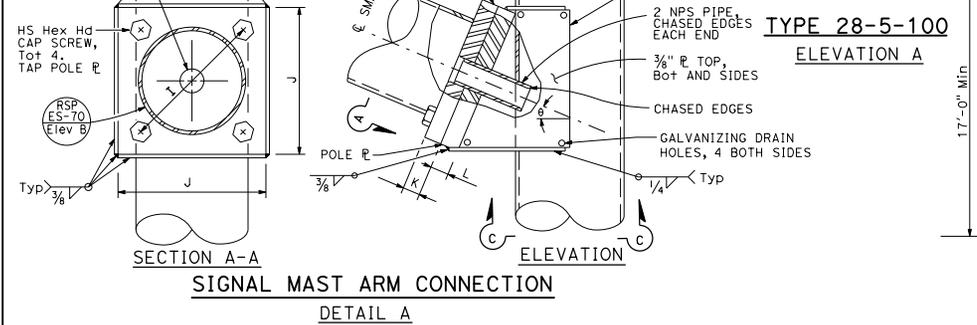
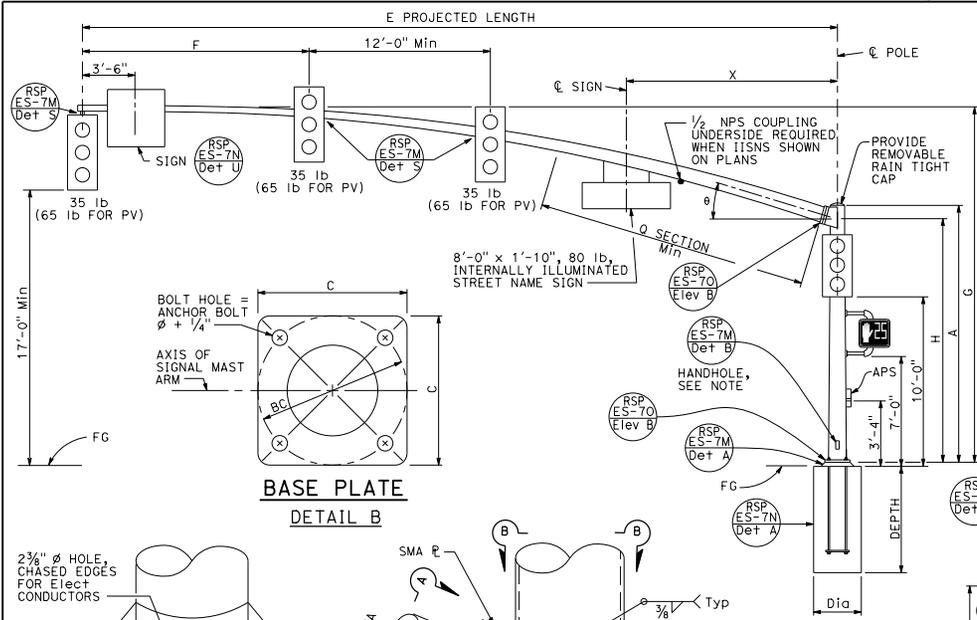
POLE TYPE	LOAD CASE	WIND VELOCITY (mph)	POLE DATA					BASE PLATE DATA				LUMINAIRE MAST ARM	SIGNAL MAST ARM	CIDH PILE FOUNDATION				
			A HEIGHT	Min OD BASE	Min OD TOP	THICKNESS	ALTERNATIVE SECTION			C	BC = BOLT CIRCLE			THICKNESS	ANCHOR BOLT SIZE	Dia	DEPTH	
							B LENGTH	BOTTOM	TOP									
18-4-100	4	100	17'-0"	16"	13 5/8"	0.2391" OR 0.25"	10'-0"	13 3/8"	11 3/4"	1'-11"	1'-9"	3"	2 1/4"Ø x 42"	NONE	25'-0", 30'-0"	12'-0"		
19-4-100			30'-0"		11 3/4"		15'-0"	13 3/8"	11"									
19A-4-100			35'-0"		11"													
23-4-100			17'-0"		13 5/8"													
24-4-100			30'-0"		11 3/4"													
24-4-100			30'-0"	11 3/4"	0.3125"	10'-0"	15 5/8"	13 3/4"										
24A-4-100			35'-0"	11"														
26-4-100			30'-0"	13 3/4"														
26A-4-100			35'-0"	13"														
27-4-100			17'-0"	15 5/8"														

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

REVISED STANDARD PLAN RSP ES-7F

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 JULY 15, 2016 SUPERSEDES RSP ES-7F DATED OCTOBER 30, 2015 AND
RSP ES-7F DATED JULY 19, 2013 AND STANDARD PLAN ES-7F DATED MAY 20, 2011 -
PAGE 467 OF THE STANDARD PLANS BOOK DATED 2010.

2010 REVISED STANDARD PLAN RSP ES-7F



M PROJECTED LENGTH	N RISE	Min OD AT POLE	THICKNESS	P MOUNTING HEIGHT 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 3/4"		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"±

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL SHEETS

Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 No. C67938
 July 15, 2016
 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 _____

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

E PROJECTED LENGTH	F Min SPACING	G MOUNTING HEIGHT	H	Min OD AT POLE	THICKNESS	I BOLT CIRCLE	J HS CAP SCREWS	K PLATE SIZE	L MAST ARM THICKNESS	M POLE R THICKNESS	N	O SECTION LENGTH	X Max
50'-0"	15'-0"	23'-7 1/2" TO 25'-7 1/2"±	16'-0"	11 7/8"	0.1793"	16"	1 1/2"-6NC-3/4"	1'-9"	1 3/4"	1 3/4"	15°	18'-0"	14'-0"
55'-0"				1'-1 1/4"								23'-0"	

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 BASE	Min OD TOP	THICKNESS	ALTERNATIVE SECTION B LENGTH	SECTION TOP	C	BC = BOLT CIRCLE			THICKNESS	ANCHOR BOLT SIZE	D1a
28-5-100	5	100	17'-0"	19 3/8"	0.375"	10'-0"	17 3/4"	2'-6"	2'-4"	3"	2 1/4"Ø x 42"	NONE	50'-0"	4'-0"	14'-0"
29-5-100			30'-0"	17 3/4"		15'-0"	19 1/8"	17"				6'-15" [15'-0"]	[55'-0"]		
29A-5-100			35'-0"	17"											

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

TYPE 29-5-100, 29A-5-100
ELEVATION B

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

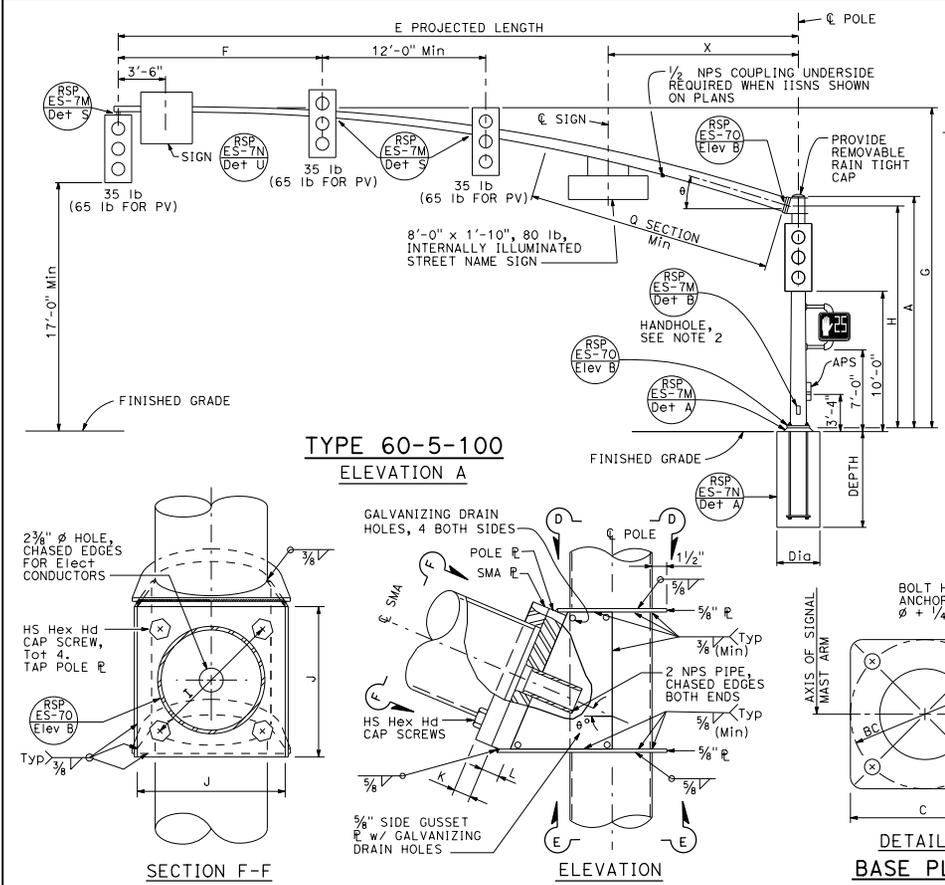
**ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD,
CASE 5 SIGNAL MAST ARM LOADING,
WIND VELOCITY=100 MPH AND SIGNAL
MAST ARM LENGTHS 50' TO 55')**

NO SCALE

RSP ES-7G DATED JULY 15, 2016 SUPERSEDES RSP ES-7G DATED OCTOBER 30, 2015 AND RSP ES-7G DATED JULY 19, 2013 AND STANDARD PLAN ES-7G DATED MAY 20, 2011 - PAGE 468 OF THE STANDARD PLANS BOOK DATED 2010.

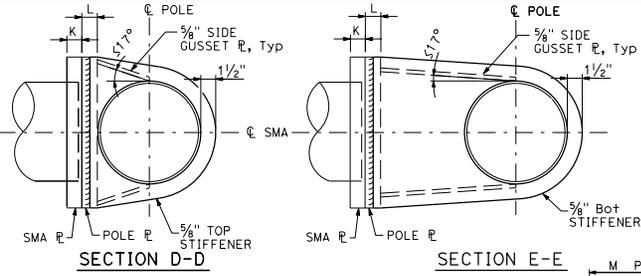
REVISED STANDARD PLAN RSP ES-7G

2010 REVISED STANDARD PLAN RSP ES-7G

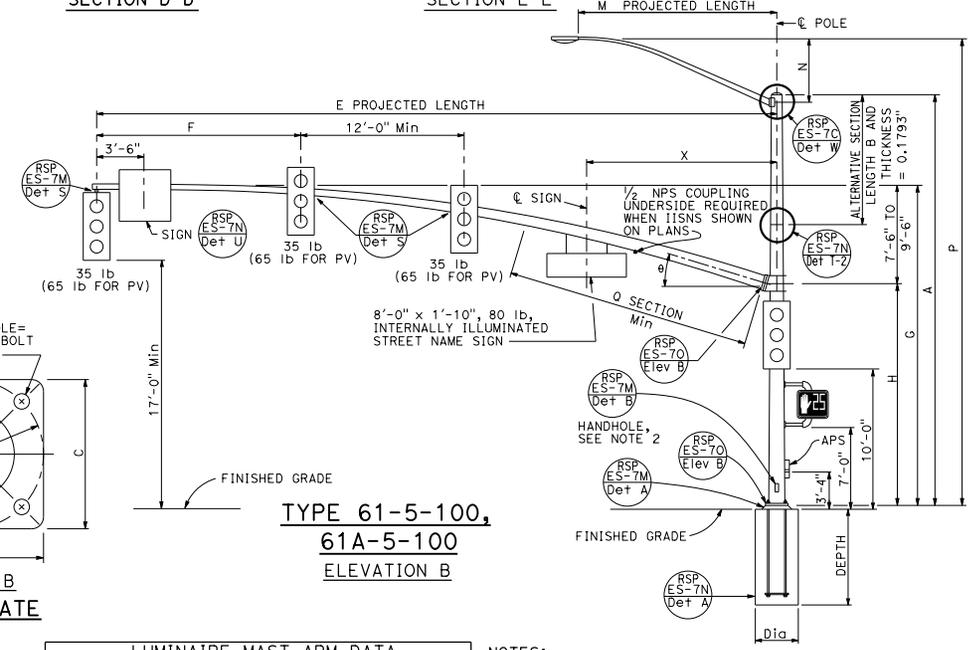


TYPE 60-5-100
ELEVATION A

SIGNAL MAST ARM CONNECTION
DETAIL B



SECTION D-D **SECTION E-E**



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

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

- NOTES:**
- The radial separation between the face of the pole and the adjacent insides of the top and bottom gusset plates shall not exceed 3/16". Fillet weld size to be increased by amount of gap.
 - Handhole shall be located on the downstream side of traffic.

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 THICKNESS	Q SECTION LENGTH THICKNESS	X Max	
60'-0"	15'-0"	23'-7" TO 25'-7"	16'-0"	1'-1 1/2"	0.1793" / 0.2391"	20"	1 1/2"-6NC-4"	2'-0"	2"	2"	24'-0" / 29'-0"	0.2391" / 0.3125"	14'-0"

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 BOTTOM TOP	C	BC = BOLT CIRCLE	THICKNESS	ANCHOR BOLT SIZE	POLE	POLE	DiA	DEPTH
60-5-100	5	100	17'-0"	22"	19 3/4"	0.375"	10'-0"	20 3/4"	2'-6"	2'-4"	2 1/4" ø x 42"	NONE	50'-0"	4'-0"	14'-0"
61-5-100			30'-0"	25"	20 3/4"		15'-0"	22 1/8"	2'-11"	2'-9"	3"	3" ø x 60"	6'-15"	4'-6"	15'-0"

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

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

Stanley P. Johnson
REGISTERED CIVIL ENGINEER
No. 02793
EXPIRES 3-31-18
CIVIL ENGINEER PROFESSIONAL SEAL
STATE OF CALIFORNIA

July 15, 2016
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 _____

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 JULY 15, 2016 SUPERSEDES RSP ES-7H DATED OCTOBER 30, 2015 AND RSP ES-7H DATED JULY 19, 2013 AND STANDARD PLAN 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

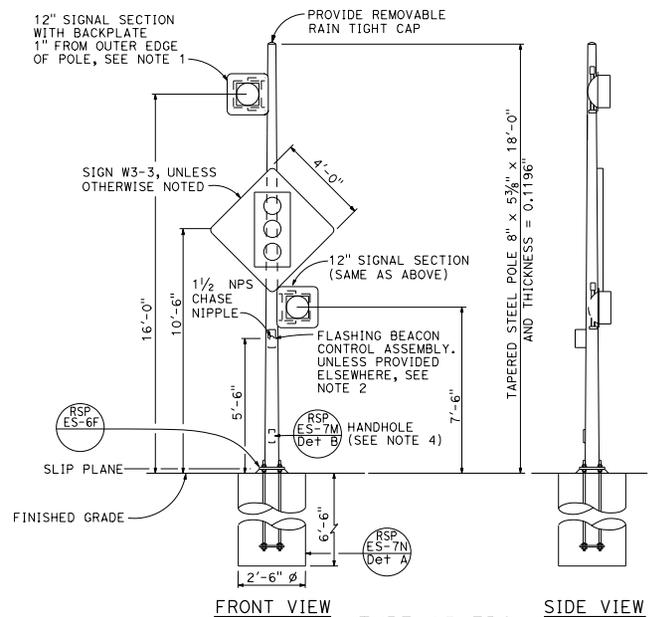
Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 No. C57793
 STATE OF CALIFORNIA

July 15, 2016
 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.

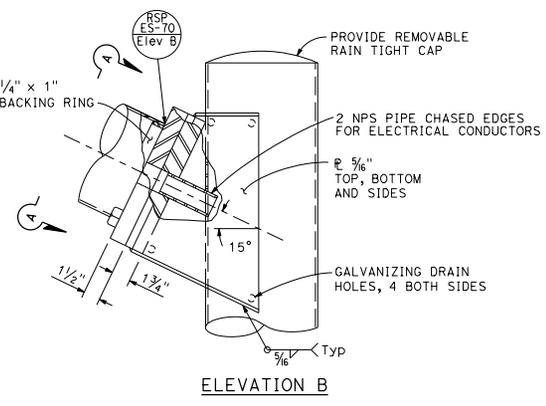
TO ACCOMPANY PLANS DATED _____

NOTES:

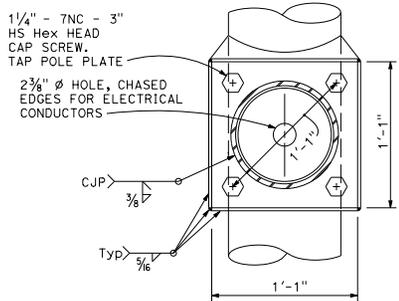
1. See Revised Standard Plans RSP ES-4A and RSP ES-4D for attachment fitting details.
2. For wiring diagram, see Revised Standard Plan RSP ES-14B.
3. For additional notes and details, see Revised Standard Plans RSP ES-7M and RSP ES-7N.
4. Handhole shall be located on the downstream side of traffic.
5. See project plans for type of standard to be installed.



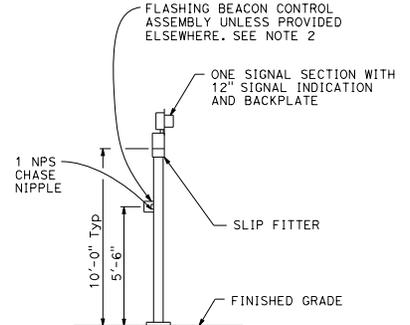
**TYPE 15-FBS
FLASHING BEACON WITH SLIP BASE INSTALLATION
DETAIL A**



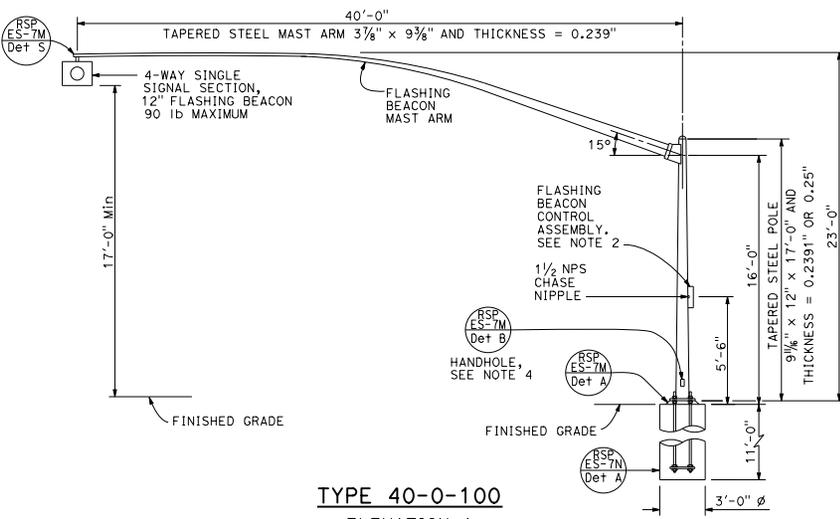
ELEVATION B



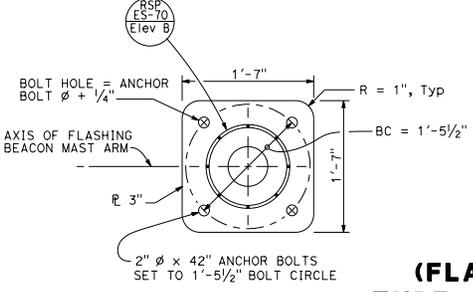
**VIEW A-A
FLASHING BEACON MAST ARM
CONNECTION DETAIL
DETAIL B**



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



**TYPE 40-0-100
ELEVATION A**



**BASE PLATE
DETAIL C**

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(FLASHING BEACON ON A TYPE 1,
TYPE 15-FBS, AND TYPE 40 STANDARD)**

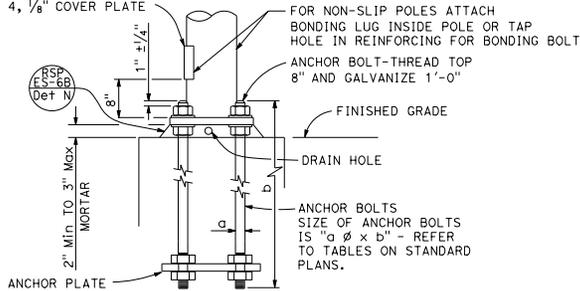
NO SCALE

RSP ES-7J DATED JULY 15, 2016 SUPERSEDES RSP ES-7J DATED APRIL 15, 2016 AND RSP ES-7J DATED OCTOBER 30, 2015 AND 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

4" x 6 1/2" ROUNDED RECTANGLE HANDHOLE REINFORCED WITH RING WELDED TO OUTSIDE OF POLE. SEE NOTE 4, 1/8" COVER PLATE



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.

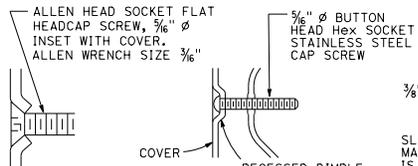
Type Load case (Use SL for special load case) Design wind velocity (mph) Signal mast arm length (ft) Standard plan year Only for poles or most arms using Detail F Only for poles or most arms using RSP ES-70

26A - 3 - 100 - 45 - 10 - F or FB

SAMPLE IDENTIFICATION NUMBER

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
July 15, 2016 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 _____

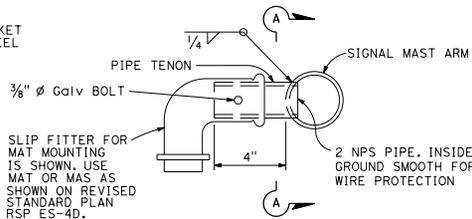


TYPICAL DETAIL

DETAIL B-1

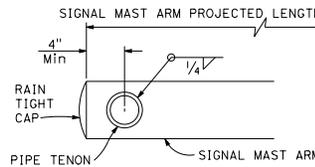
ALTERNATIVE DETAIL

DETAIL B-2



SIDE TENON

DETAIL S-1



SECTION A-A

PIPE TENONS

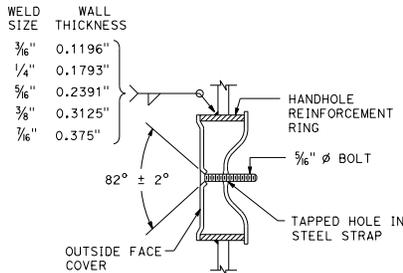
DETAIL S

WELD SIZE	WALL THICKNESS
1/8"	0.1196"
3/16"	0.1793"
1/4"	0.2391"

2 NPS PIPE, CHASED FOR WIRE PROTECTION SEE NOTE 2

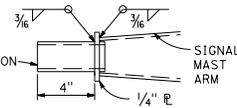
TIP TENON

DETAIL TS



TAMPER RESISTANT HANDHOLE COVER

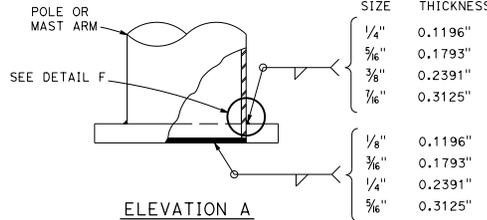
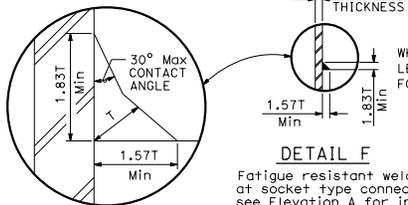
DETAIL B



TIP TENON

DETAIL TL

This detail supersedes Detail S when so designated



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" to 0.375" 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. Design: AASHTO Standard Specifications for Structural Support for Highway Signs, Luminaires, and Traffic Signals, 6th Edition. Basic Wind Speed = 100 mph (3 seconds gust). Yearly Mean Wind Velocity = 15.6 mph.
10. Materials (Structural steel):
fy = 55,000 psi (tapered steel tube and anchor bolts)
fy = 50,000 psi (unless otherwise noted)
11. Materials (Reinforced concrete):
f'c = 3,625 psi
fy = 60,000 psi

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

RSP ES-7M DATED JULY 15, 2016 SUPERSEDES RSP ES-7M
DATED OCTOBER 30, 2015 AND 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

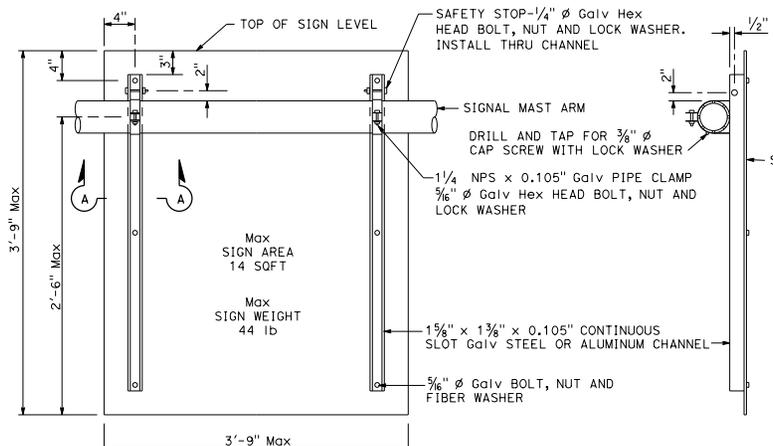
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL SHEETS

Stanley P. Johnson
REGISTERED CIVIL ENGINEER

July 15, 2016
PLANS APPROVAL DATE

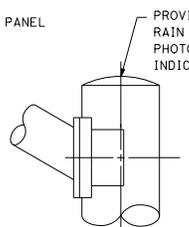
Stanley P. Johnson
No. CS793
Exp. 3-31-18
CIVIL
STATE OF CALIFORNIA

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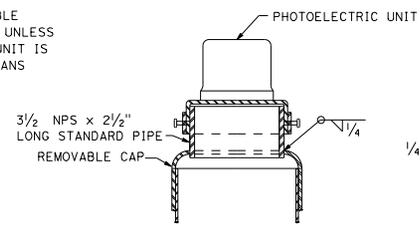


REAR VIEW

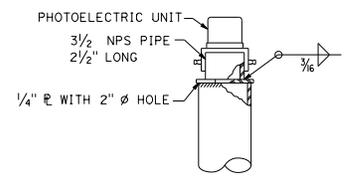
SIDE VIEW



STANDARD TOP
DETAIL B-1



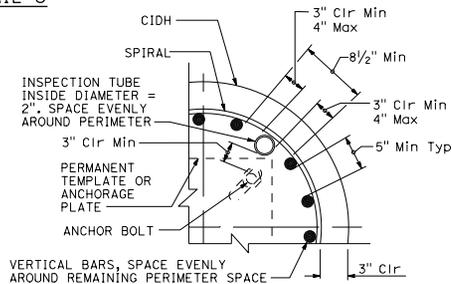
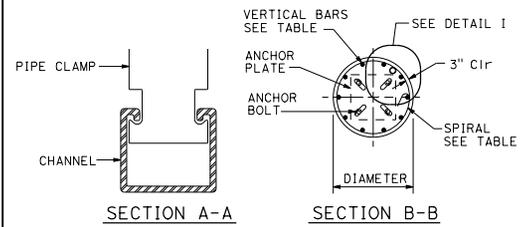
MOUNTING ADAPTER FOR PHOTOELECTRIC UNIT
DETAIL B-2



ALTERNATIVE MOUNTING ADAPTER
DETAIL B-3

POLE TOP DETAILS
DETAIL B

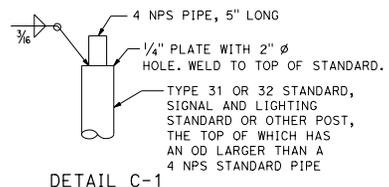
SIGN MOUNTING DETAILS
DETAIL U



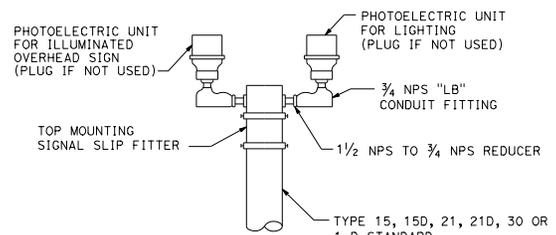
INSPECTION TUBE PLACEMENT
DETAIL I

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

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



DETAIL C-1



DETAIL C-2

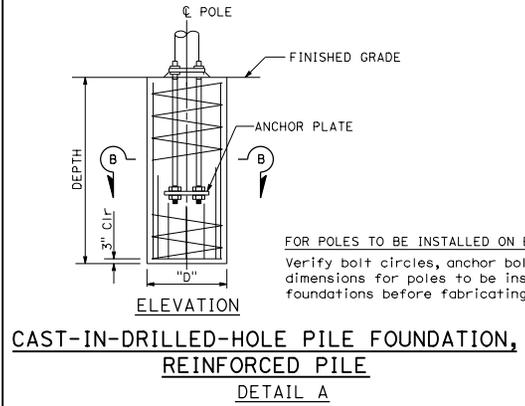
DUAL PHOTOELECTRIC UNIT MOUNTING DETAIL
DETAIL C

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

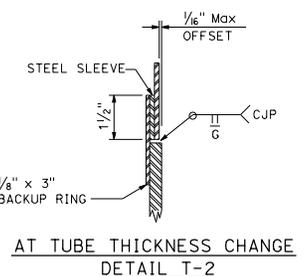
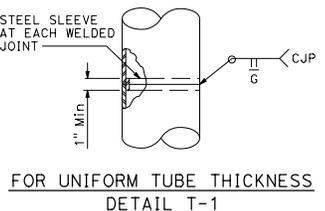
ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD, DETAIL No. 2)

NO SCALE
RSP ES-7N DATED JULY 15, 2016 SUPERSEDES RSP ES-7N DATED OCTOBER 30, 2015 AND STANDARD PLAN ES-7N DATED MAY 20, 2011 - PAGE 475 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-7N



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



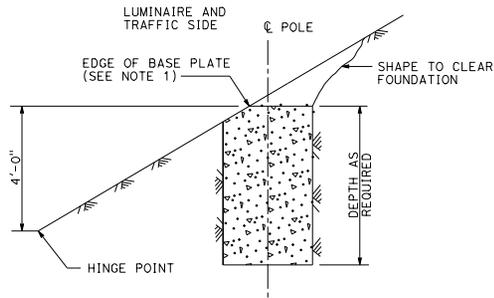
POLE SPLICES
DETAIL T

2010 REVISED STANDARD PLAN RSP ES-7N

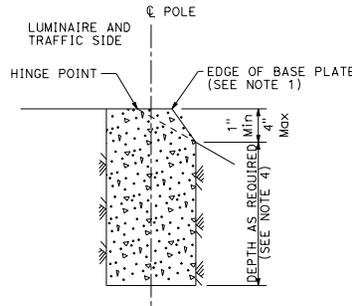
D16+	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
 REGISTERED CIVIL ENGINEER					
July 15, 2016 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

TO ACCOMPANY PLANS DATED _____

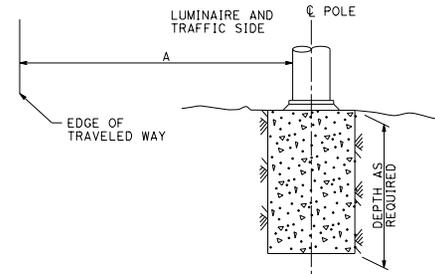
STANDARD TYPE	SETBACK (DIMENSION A)
32	30'-0" (Min)
31	20'-0" (Min)
15, 15D, 15-SB, 21, 21D, 30	ARM LENGTH (Min)



CUT SLOPES
STEEPER THAN 4:1,
LESS THAN 2:1
DETAIL A-1
See Note 2 and 3



FILL SLOPES
STEEPER THAN 4:1,
LESS THAN 2:1
DETAIL A-2
See Note 2 and 3

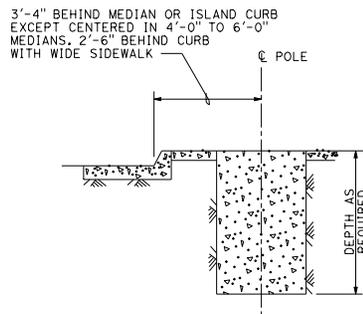


FLAT SECTIONS, CUT OR FILL SLOPES
4:1 OR FLATTER
DETAIL A-3
See Note 2

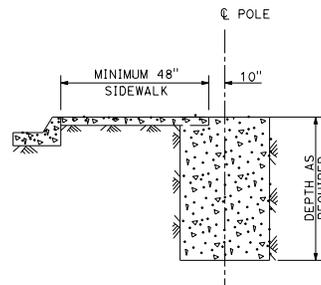
FOUNDATIONS ADJACENT TO ALL ROADWAYS EXCEPT
IN SIDEWALK, MEDIAN AND ISLAND AREAS
DETAIL A

NOTES:

- Where a portion of the foundation is above grade, the top edges shall have a 1" chamfer.
- Slopes shall be horizontal to vertical ratio (Horizontal : Vertical).
- Horizontal setbacks on cut and fill slopes steeper than 4:1 shall not exceed the distance shown for flat sections.
- CIDH embedment depth shall be increased beyond standard depths by the diameter of the CIDH.



MEDIAN, ISLAND
OR WIDE SIDEWALK
DETAIL B-1
7' Wide and wider



NARROW SIDEWALK
DETAIL B-2
Less than 7' wide

FOUNDATIONS IN SIDEWALK, MEDIAN AND ISLAND AREAS
DETAIL B

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(FOUNDATION INSTALLATIONS)

NO SCALE

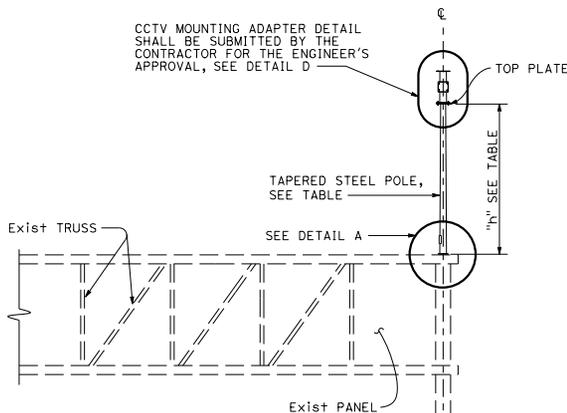
RSP ES-11 DATED JULY 15, 2016 SUPERSEDES RSP ES-11 DATED JULY 19, 2013 AND STANDARD PLAN ES-11 DATED MAY 20, 2011 - PAGE 488 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-11

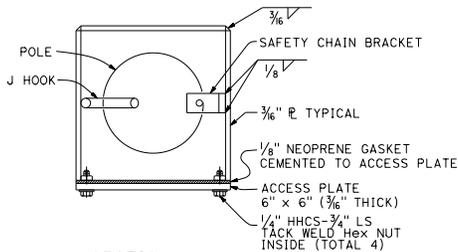
2010 REVISED STANDARD PLAN RSP ES-11

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

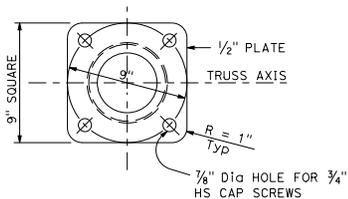
CCTV MOUNTING ADAPTER DETAIL SHALL BE SUBMITTED BY THE CONTRACTOR FOR THE ENGINEER'S APPROVAL, SEE DETAIL D



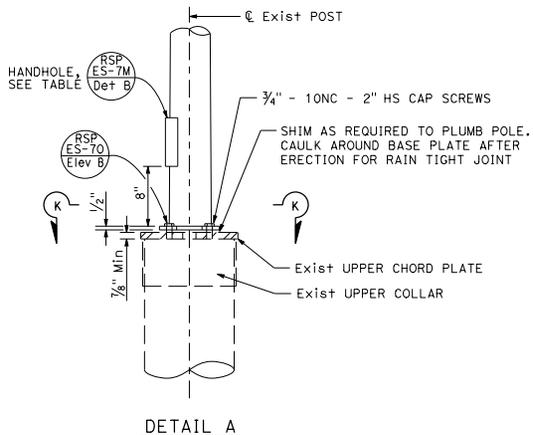
ELEVATION A



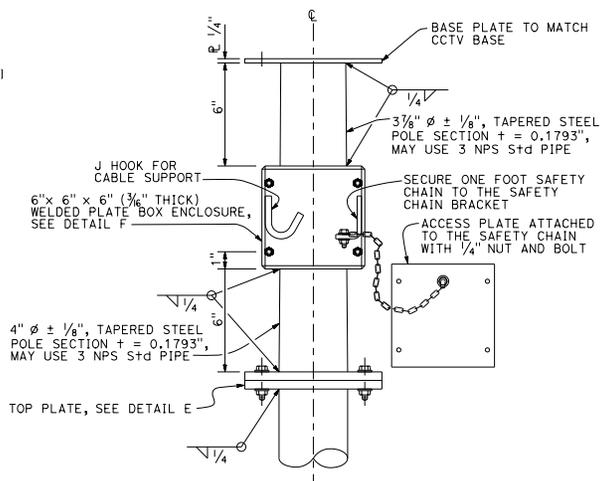
SECTION A-A



SECTION K-K



DETAIL A

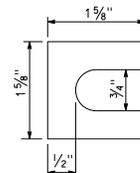


CLOSED CIRCUIT TELEVISION MOUNTING ADAPTER

DETAIL D

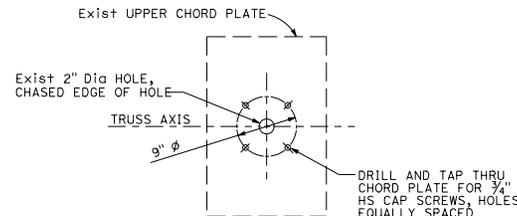
NOTES:

1. Verify controlling field dimensions before ordering or fabricating any material.
2. Bolt hole locations may vary at the discretion of the Engineer.
3. See Std Plan S13.
4. For wind loading see RSP ES-7M.
5. Materials (Structural Steel):
 - a. fy = 55,000 psi (tapered steel tube)
 - b. fy = 50,000 psi (unless otherwise noted)



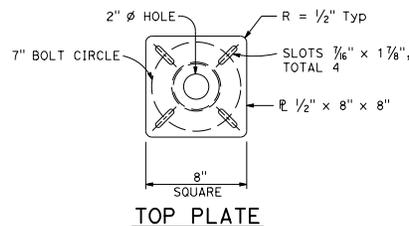
**SHIM
DETAIL B**

FURNISH SHIMS 0.012" THICK AND 0.036" THICK. SHIM SHALL BE FABRICATED BRASS SHIM STOCK OR GALVANIZED STEEL

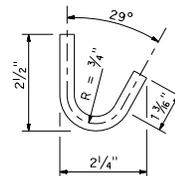


UPPER CHORD PLATE

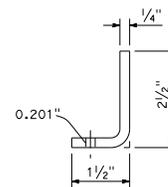
DETAIL C
See Note 3



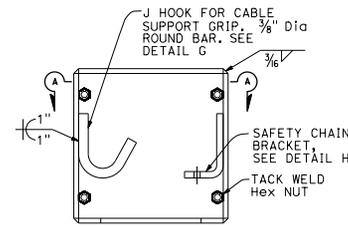
**TOP PLATE
DETAIL E**



**J HOOK
DETAIL G**



**SAFETY CHAIN BRACKET
DETAIL H**



**BOX ENCLOSURE
DETAIL F**

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

Stanley P. Johnson
REGISTERED CIVIL ENGINEER
No. C67795
Exp. 3-31-18
CIVIL
STATE OF CALIFORNIA

July 15, 2016
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 JULY 15, 2016 SUPERSEDES RSP ES-16A DATED OCTOBER 30, 2015 AND STANDARD PLAN ES-16A DATED MAY 20, 2011 - PAGE 500 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-16A

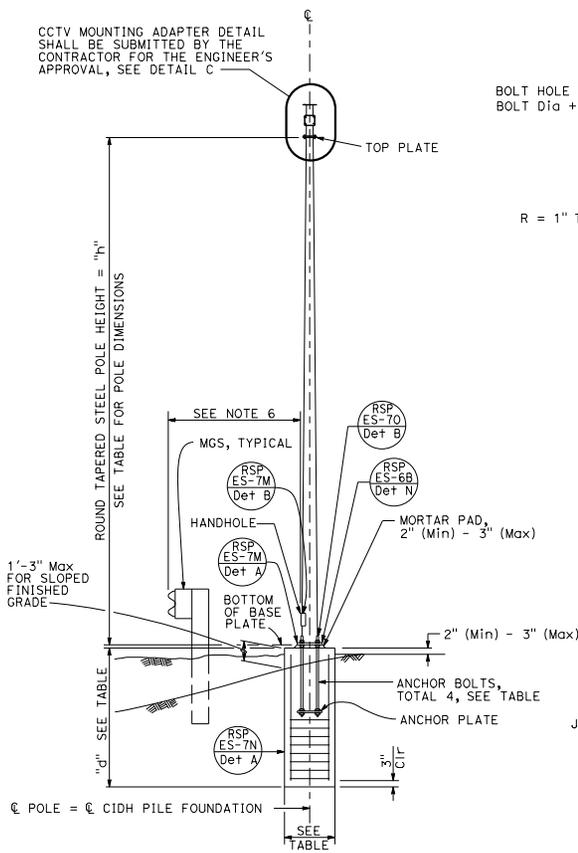
2010 REVISED STANDARD PLAN RSP ES-16A

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"

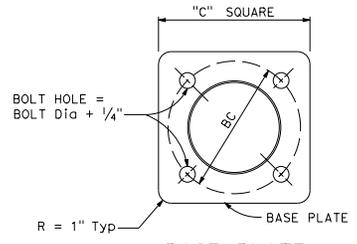
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL SHEETS


 REGISTERED CIVIL ENGINEER
 July 15, 2016
 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.

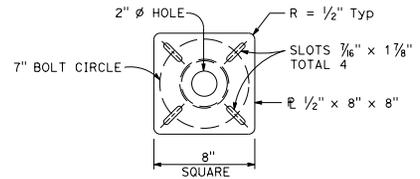
TO ACCOMPANY PLANS DATED _____



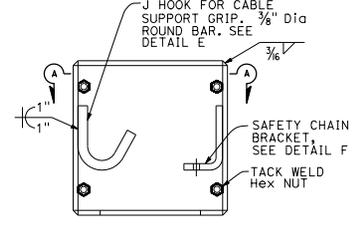
ELEVATION A



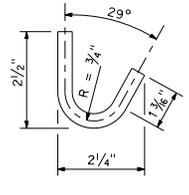
**BASE PLATE
DETAIL A**



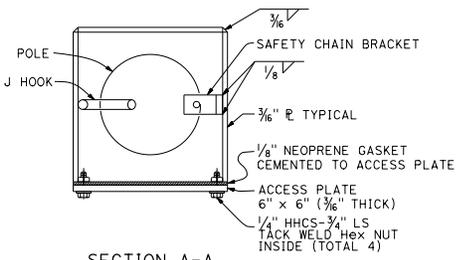
**TOP PLATE
DETAIL B**



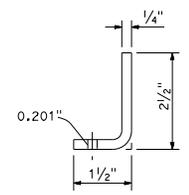
**BOX ENCLOSURE
DETAIL D**



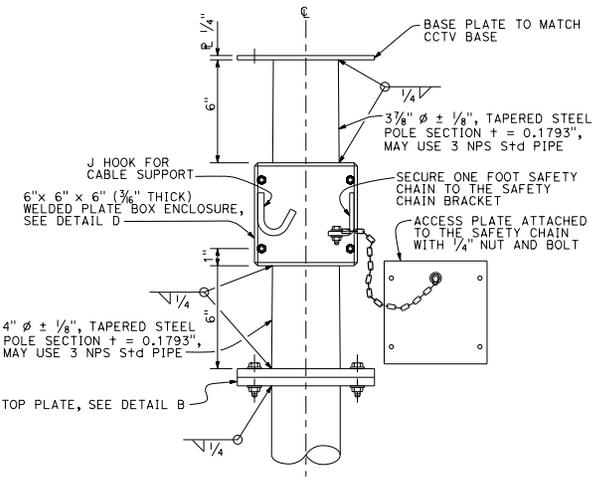
**J HOOK
DETAIL E**



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. For wind loading see RSP ES-7M.
 4. Materials (Structural Steel):
a. fy = 55,000 psi (tapered steel tube and anchor bolts)
b. fy = 50,000 psi (unless otherwise noted)
 5. Materials (Reinforced Concrete):
a. f'c = 3,625 psi
b. fy = 60,000 psi
 6. See  thru 

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(CLOSED CIRCUIT TELEVISION,
25' TO 45' POLE)**

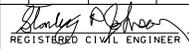
NO SCALE
RSP ES-16B DATED JULY 15, 2016 SUPERSEDES RSP ES-16B
DATED OCTOBER 30, 2015 AND STANDARD PLAN ES-16B DATED
MAY 20, 2011 - PAGE 501 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-16B

2010 REVISED STANDARD PLAN RSP ES-16B

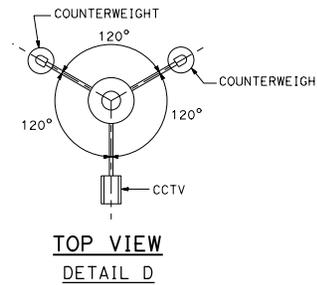
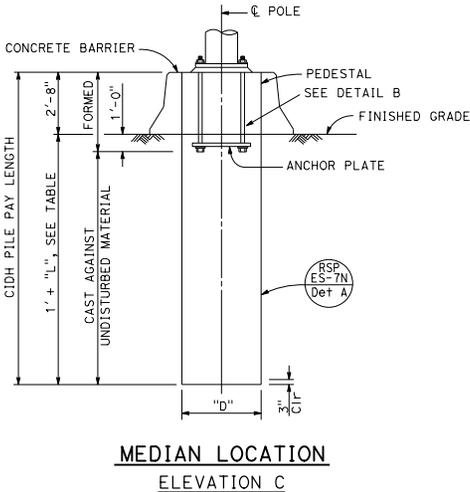
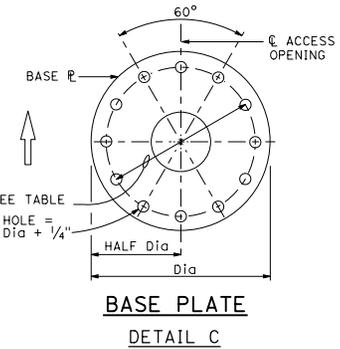
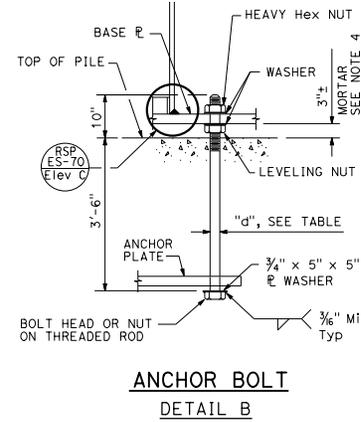
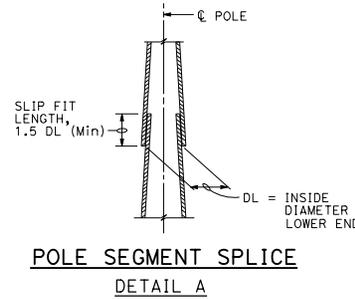
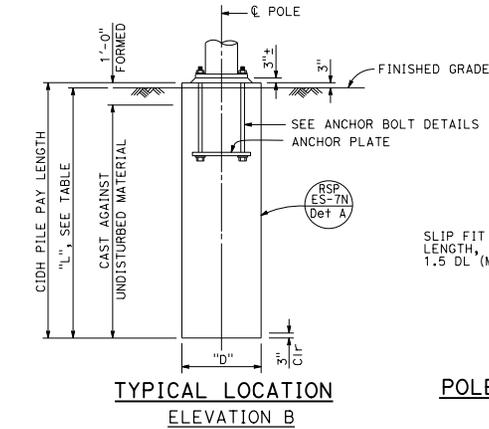
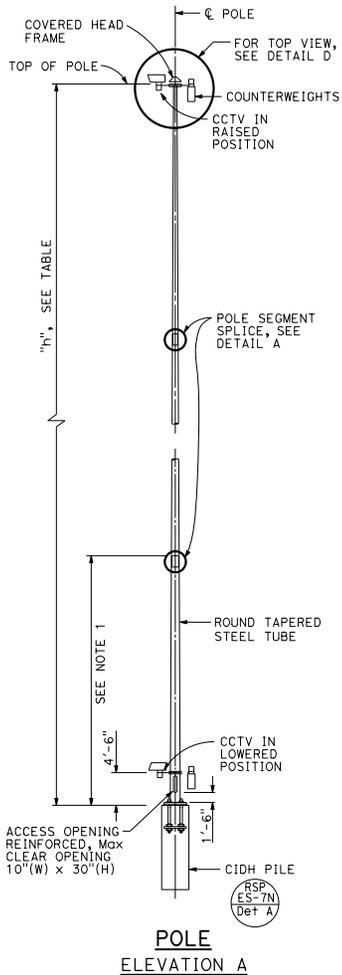
POLE TYPE	POLE DATA					BASE PLATE DATA				CIDH PILE DATA		
	HEIGHT "h"	Min OD		THICKNESS BOTTOM SEGMENT (Min 25" LONG)	Min THICKNESS UPPER SEGMENT(S)	Dia	THICKNESS	ANCHOR BOLT SIZE		BC = BOLT CIRCLE	"D"	"L"
		BASE	TOP					TOTAL	"d"			
HM CCTV 50	50'	18"	10 7/8"	0.3125"	0.1875"	25"	2"	12	2 1/4"	20"	3'-6"	13'-0"
HM CCTV 60	60'		9 1/2"									
HM CCTV 70	70'	22"	12"	0.375"	0.25"	30"	3"	3"	25"	4'-0"	14'-0"	
HM CCTV 80	80'	22"	11 5/8"			33"						
HM CCTV 90	90'	25"	17 1/8"			42"			37"	6'-0"	15'-0"	

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


 REGISTERED CIVIL ENGINEER
 July 15, 2016
 PLANS APPROVAL DATE
 Stanley P. Johnson
 No. C57395
 Exp. 3-31-18
 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 _____



NOTES:

1. Pole details shall suit the lowering device and this foundation plan. Pole details shall be submitted to the Engineer for approval.
2. For closed circuit television details, see Electrical Plans.
3. Foundation design is based on a 3-second wind gust of 100 mph.
4. For central void and drain holes in mortar, see Revised Standard Plan RSP ES-6B detail N.
5. For wind loading see RSP ES-7M.
6. Materials (Structural Steel):
fy = 55,000 psi (tapered steel tube)
fy = 50,000 psi (unless otherwise noted)
7. Access opening shall be located on the downstream side of traffic unless otherwise determined by the Engineer.

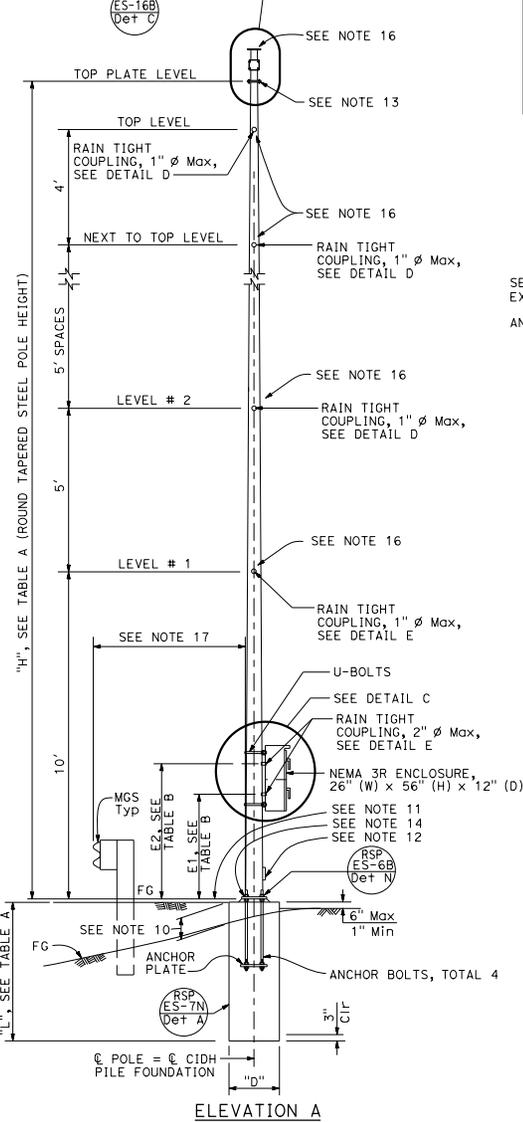
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(CLOSED CIRCUIT TELEVISION,
50' TO 90' HIGH MAST POLE)**
NO SCALE

RSP ES-16C DATED JULY 15, 2016 SUPERSEDES RSP ES-16C DATED OCTOBER 30, 2015 AND 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

WHEN CCTV IS REQUIRED, CCTV MOUNTING ADAPTER DETAIL SHALL BE SUBMITTED BY THE CONTRACTOR FOR THE ENGINEER'S APPROVAL, SEE RSP ES-16B Det C

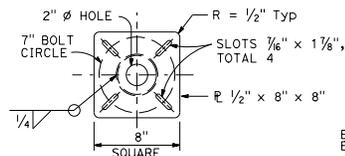
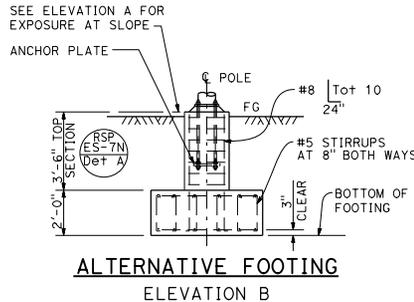


POLE TYPE	POLE DATA				BASE PLATE DATA				CIDH PILE DATA			
	HEIGHT "H"	Min OD		THICKNESS	"C"	THICKNESS	ANCHOR BOLTS SIZE	BC = BOLT CIRCLE	"D"	"L"		
		BASE	TOP							LEVEL GROUND	UP TO 2:1	
VDS 30	30'	8"	3 7/8"	0.11793"	1'-1 1/2"	1 1/2"	1 1/2" ϕ x 3'-0"	1'-0"	2'-6"	6'-0"	8'-0"	
VDS 35	35'	8 3/4"	3 1/8"	0.1196"	1'-6"	2"	1 1/2" ϕ x 3'-0"	1'-4"	3'-0"	7'-0"	9'-0"	
VDS 40	40'	12"	8 5/8"	0.11793"	1'-6"	2"	1 1/2" ϕ x 3'-0"	1'-4"	3'-0"	9'-0"	11'-0"	

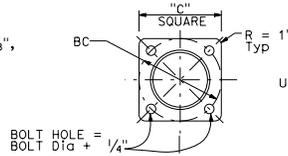
POLE TYPE	COUPLING	
	E1(Max)	E2(Max)
VDS 30		
VDS 35	3'-6"	4'-9"
VDS 40		

GROUND LEVEL	SPREAD FOOTING	
	FOOTING SIZE (LENGTH x WIDTH x DEPTH)	REINFORCEMENT TOP & BOTTOM
	UP TO 2:1	10'-0" x 10'-0" x 2'-0"

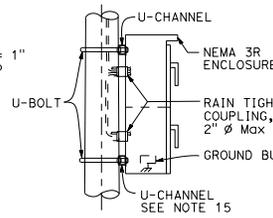
LOCATION	MAXIMUM TOTAL EPA PER LEVEL (SQUARE FEET)	MAXIMUM TOTAL WEIGHT (lb)
LEVEL #1		
LEVEL #2	14	200
LEVEL #3	10 ***	
LEVEL #4 (VDS 35 AND VDS 40 ONLY)		
LEVEL #5 (VDS 40 ONLY)	2.5	50
NEXT TO TOP LEVEL		
TOP LEVEL		
ON TOP PLATE LEVEL **		



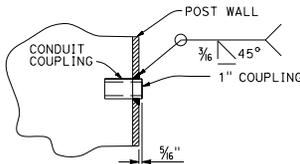
TOP PLATE DETAIL A



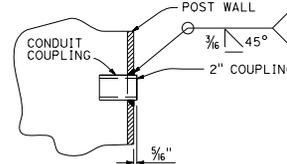
BASE PLATE DETAIL B



DETAIL C



1" COUPLING DETAIL D



2" COUPLING DETAIL E

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

Stanley P. Johnson
REGISTERED CIVIL ENGINEER
No. C67395
Exp. 3-31-18
CIVIL
STATE OF CALIFORNIA

July 15, 2016
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:

- All steel shall be galvanized after fabrication.
- The foundation shall be treated as level ground condition if the slope inclination is flatter than 4 : 1 (Horizontal : Vertical)
- For devices mounted and mounting heights, see TABLE B.
- For wind loading see RSP ES-7M.
- Materials (Structural Steel):
a. fy = 55,000 psi (tapered steel tube)
b. fy = 50,000 psi (unless otherwise noted)
- Anchor bolts: fy = 55,000 psi
- Materials (Reinforced Concrete):
a. f'c = 3,600 psi
b. fy = 60,000 psi
- Verify all controlling field dimension before ordering of fabricating any material.
- When no barriers are used, the NEMA 3R enclosure shall be located on the downstream side and perpendicular to the roadway.
1'-3" (Max) for sloped finished grade.
- Bottom of base plate.
- Handhole. RSP ES-7M Det B, RSP ES-7M Det A
- Top plate. Install a blank flange on the top plate when closed circuit television is not used.
- RSP ES-70 Elev B
- U-channel with bracket.
- Use the manufacturer's Effective Projected Area (EPA) for attachments. Assign attachments to nearest level and sum each level, see Table D for limitations.
- See RSP AT7R1 thru RSP AT7R8

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(CLOSED CIRCUIT TELEVISION WITH
VEHICLE DETECTION SYSTEM,
30' TO 40' POLE)**

NO SCALE

RSP ES-16D DATED JULY 15, 2016 SUPERSEDES RSP ES-16D DATED OCTOBER 30, 2015 AND RSP ES-16D DATED JULY 19, 2013 AND STANDARD PLAN ES-16D DATED MAY 20, 2011 - PAGE 503 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-16D

2010 REVISED STANDARD PLAN RSP ES-16D

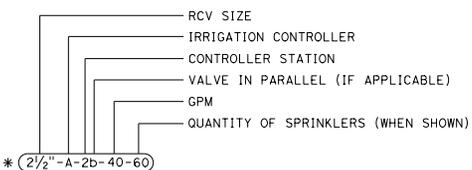
EXISTING	NEW	ITEM DESCRIPTION	EXISTING	NEW	ITEM DESCRIPTION
		WATER METER (WM)			GATE VALVE (GV)
		BACKFLOW PREVENTER ASSEMBLY (BPA)			BALL VALVE (BV)
		BACKFLOW PREVENTER ENCLOSURE (BPE)			QUICK COUPLING VALVE (QCV)
		BOOSTER PUMP (BP)			CAM COUPLER ASSEMBLY (CCA)
		TRUCK LOADING STANDPIPE (TLS)			GARDEN VALVE ASSEMBLY (GARVA)
		FLOW SENSOR (FS)			PRESSURE REGULATING VALVE (PRV)
		MASTER IRRIGATION CONTROLLER (MIC)			PRESSURE RELIEF VALVE (PRLV)
		AUXILIARY IRRIGATION CONTROLLER (AIC)			FLOW CONTROL VALVE (FCV)
		IRRIGATION CONTROLLER (IC) IRRIGATION CONTROLLER (IC) (BATTERY) IRRIGATION CONTROLLER (IC) (SOLAR) IRRIGATION CONTROLLER (IC) (TWO WIRE)			COMBINATION AIR RELEASE VALVE (CARV)
		IRRIGATION CONTROLLER(S) IN CONTROLLER ENCLOSURE CABINET (ICC)			CHECK VALVE (CV)
		ARMOR-CLAD CONDUCTORS (ACC)			FLUSH VALVE (FV)
		CONTROL AND NEUTRAL CONDUCTORS (CNC)			EXISTING NOZZLE LINE W/TURNING UNION
		IRRIGATION CONDUIT			EXISTING IRRIGATION SYSTEM
		IRRIGATION SLEEVE			EXISTING IRRIGATION SYSTEM TO BE REMOVED
		DUCTILE IRON PIPE (SUPPLY LINE) (MAIN) (DIP)			CHAIN LINK GATE
		GALVANIZED STEEL PIPE (SUPPLY LINE) (MAIN) (GSP)			QUICK COUPLING VALVE W/SPRINKLER PROTECTOR
		GALVANIZED STEEL PIPE (SUPPLY LINE) (LATERAL) (GSP)			SPRINKLER W/SPRINKLER PROTECTOR
		PLASTIC PIPE (SUPPLY LINE) (MAIN)			CONNECT TO EXISTING SYSTEM
		PLASTIC PIPE (SUPPLY LINE) (LATERAL)			CAP
		COPPER PIPE (SUPPLY LINE)			CAP EXISTING
		DRIP IRRIGATION TUBING			FIBER ROLL
		REMOTE CONTROL VALVE (RCV) REMOTE CONTROL VALVE (MASTER) (RCVM) REMOTE CONTROL VALVE (MASTER) W/FLOW METER (RCVMF)			COMPOST SOCK
		REMOTE CONTROL VALVE W/PRESSURE REGULATOR (RCVP)			
		EXISTING MANUAL CONTROL VALVE (MCV)			
		DRIP VALVE ASSEMBLY (DVA)			
		WYE STRAINER ASSEMBLY (WSA)			

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

LICENSED LANDSCAPE ARCHITECT
 July 15, 2016
 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 _____



VALVE CODE

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

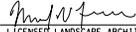
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
LANDSCAPE AND EROSION CONTROL SYMBOLS
NO SCALE

RSP H2 DATED JULY 15, 2016 SUPERSEDES RSP H2 DATED NOVEMBER 15, 2013 AND RSP H2 DATED JULY 19, 2013 AND STANDARD PLAN H2 DATED MAY 20, 2011 - PAGE 219 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP H2

2010 REVISED STANDARD PLAN RSP H2

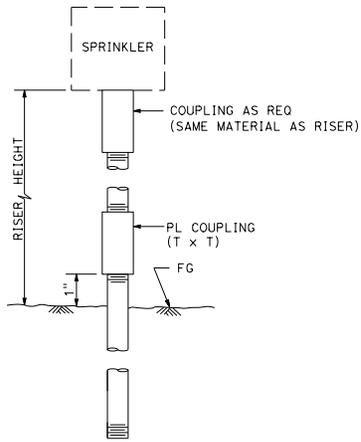
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS


 LICENSED LANDSCAPE ARCHITECT
 July 15, 2016
 PLANS APPROVAL DATE
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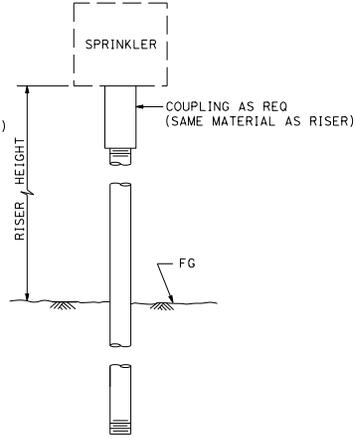
TO ACCOMPANY PLANS DATED _____

NOTES:

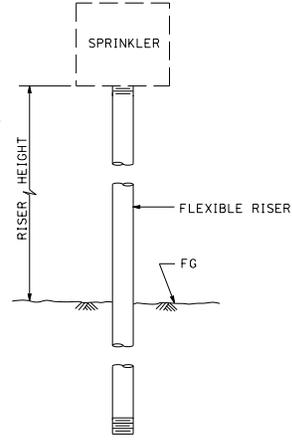
1. Install tree well sprinkler assembly on up-hill side of plant when on slope.
2. Install bubbler within basin.



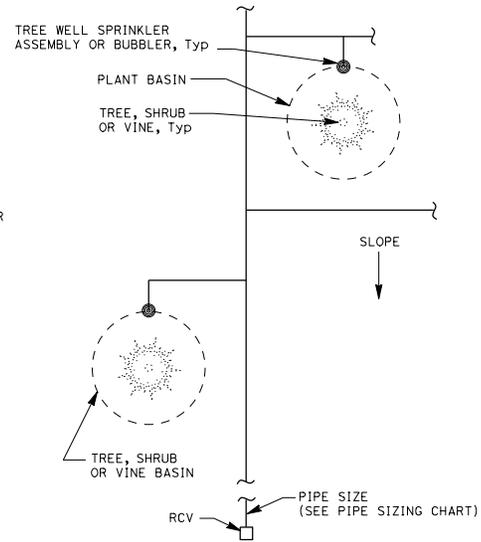
**ELEVATION
RISER TYPE I**



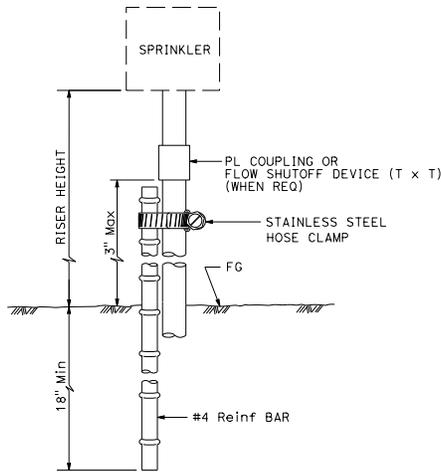
**ELEVATION
RISER TYPE II**



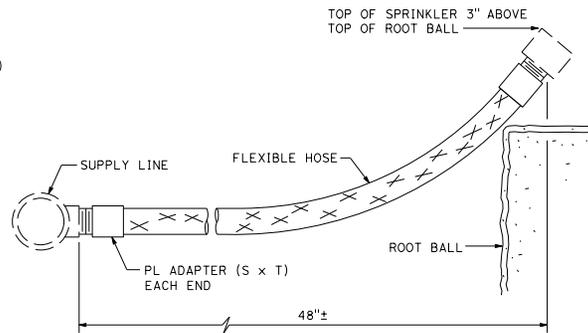
**ELEVATION
RISER TYPE III**



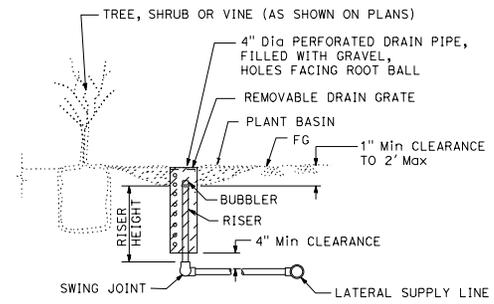
PLAN



**ELEVATION
RISER TYPE IV**



**ELEVATION
RISER TYPE V**



**SECTION
TREE WELL SPRINKLER ASSEMBLY**

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**LANDSCAPE DETAILS
(RISER SPRINKLER ASSEMBLY)**
NO SCALE

RSP H5 DATED JULY 15, 2016 SUPERSEDES RSP H5 DATED JULY 19, 2013 AND STANDARD PLAN H5 DATED MAY 20, 2011 - PAGE 222 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP H5

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

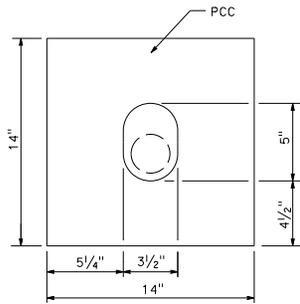
LICENSED LANDSCAPE ARCHITECT

July 15, 2016
 PLANS APPROVAL DATE

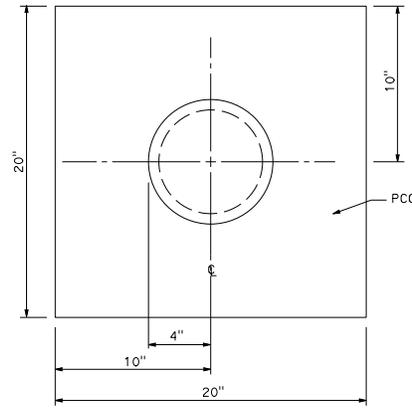
LICENSED LANDSCAPE ARCHITECT
 Paul W. ...
 No. 10117
 Expires 12/31/2016
 STATE OF CALIFORNIA

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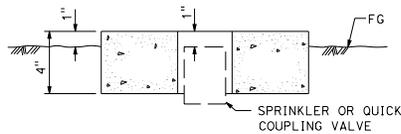
TO ACCOMPANY PLANS DATED _____



PLAN

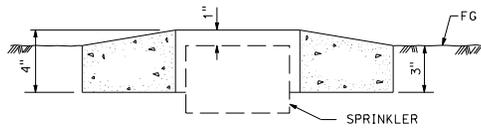


PLAN



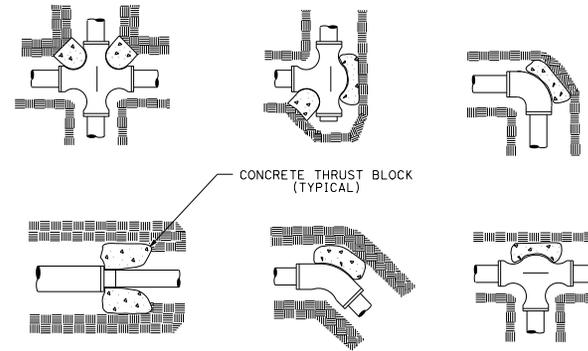
SECTION

SPRINKLER PROTECTOR TYPE I

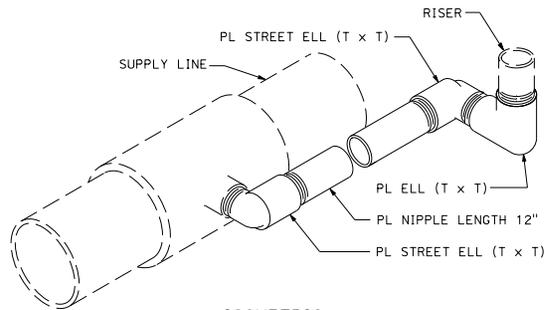


SECTION

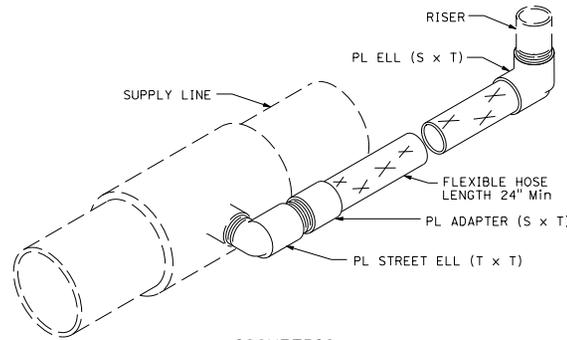
SPRINKLER PROTECTOR TYPE II



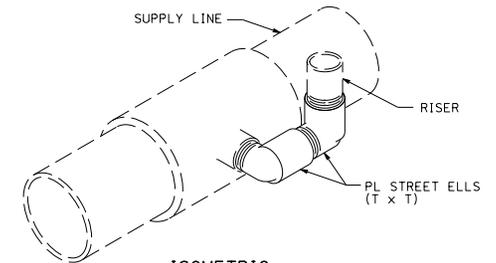
TYPICAL THRUST BLOCKS



ISOMETRIC SWING JOINT TYPE I



ISOMETRIC SWING JOINT TYPE II



ISOMETRIC SWING JOINT TYPE III

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**LANDSCAPE DETAILS
 (SWING JOINT AND PROTECTOR)**
 NO SCALE

RSP H6 DATED JULY 15, 2016 SUPERSEDES RSP H6 DATED JULY 19, 2013 AND STANDARD PLAN H6 DATED MAY 20, 2011 - PAGE 223 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP H6

