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STRUCTURE PLANS

113-117 ROUTE 160 BRIDGES

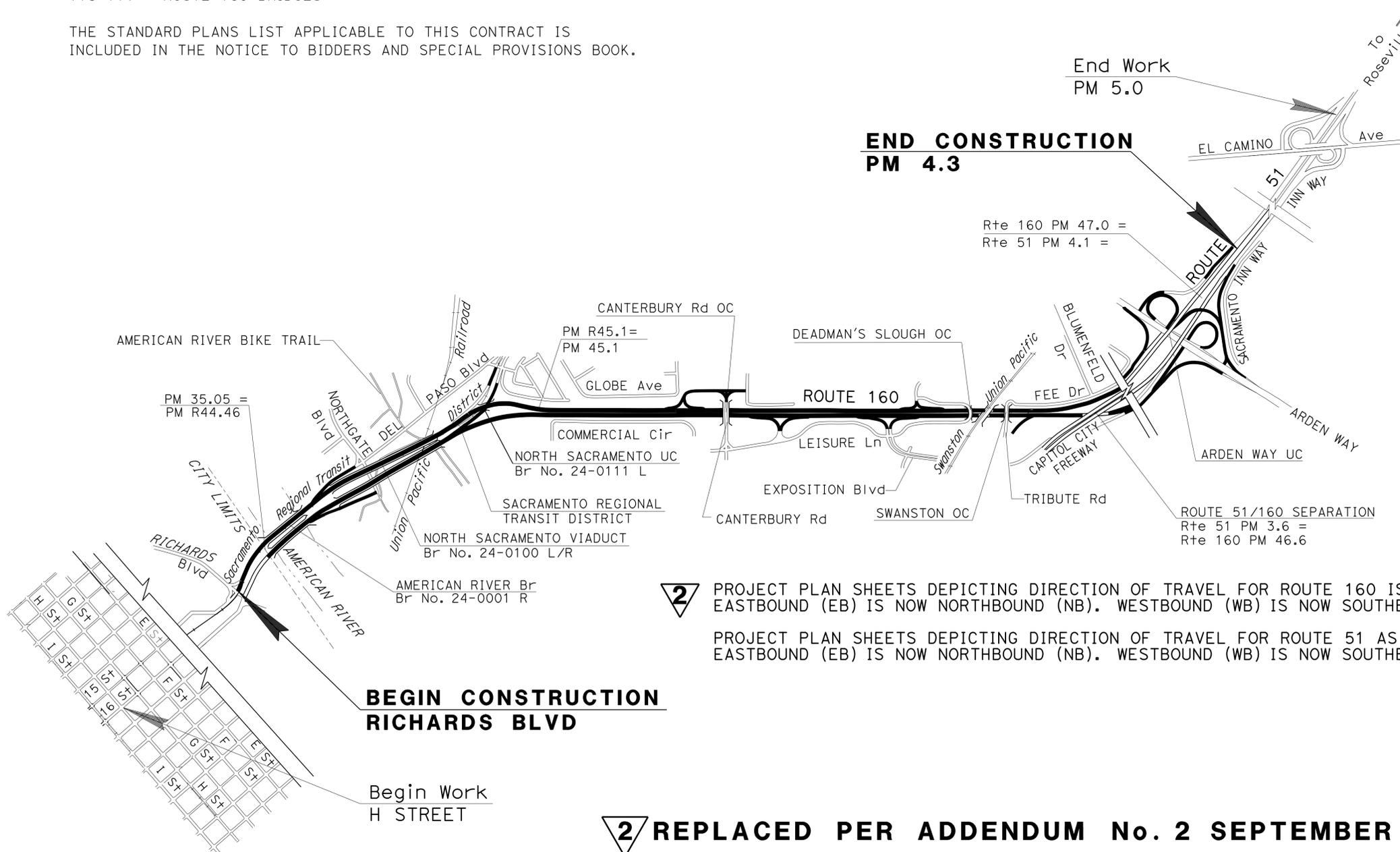
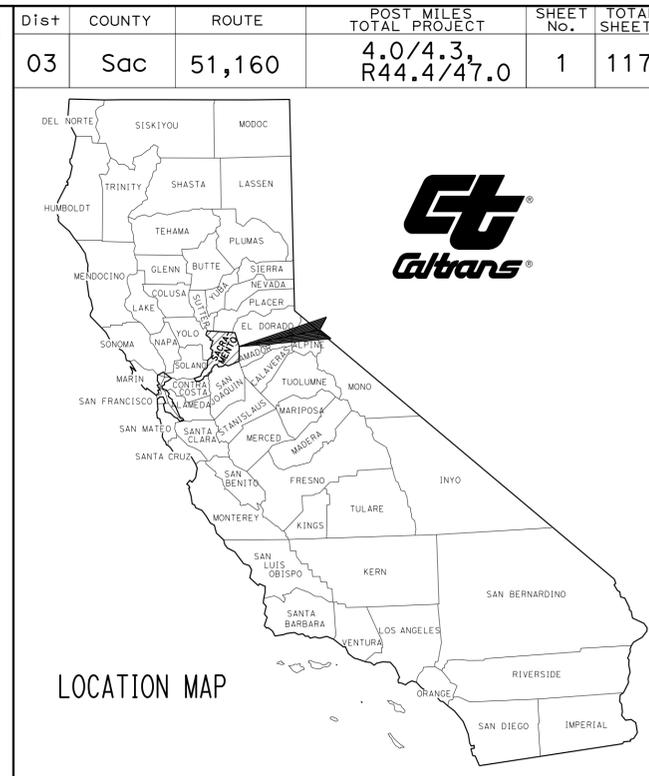
THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ACNH-P160(025)

PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN SACRAMENTO COUNTY
FROM AMERICAN RIVER BRIDGE
TO 0.3 MILE NORTH OF
ARDEN WAY UNDERCROSSING

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010



2 PROJECT PLAN SHEETS DEPICTING DIRECTION OF TRAVEL FOR ROUTE 160 IS CHANGED: EASTBOUND (EB) IS NOW NORTHBOUND (NB). WESTBOUND (WB) IS NOW SOUTHBOUND (SB).
PROJECT PLAN SHEETS DEPICTING DIRECTION OF TRAVEL FOR ROUTE 51 AS EASTBOUND (EB) AND WESTBOUND (WB) IS CHANGED: EASTBOUND (EB) IS NOW NORTHBOUND (NB). WESTBOUND (WB) IS NOW SOUTHBOUND (SB).

2 REPLACED PER ADDENDUM No. 2 SEPTEMBER 15, 2016

NO SCALE

PROJECT MANAGER
CLARK PERI
DESIGN MANAGER
ALI KIANI

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

K. Sudha Kodali 5-2-16
PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER
SUDHA KODALI
No. 79722
Exp. 9/30/16
CIVIL
STATE OF CALIFORNIA
PLANS APPROVAL DATE
May 2, 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.

CONTRACT No. 03-OH11U4
PROJECT ID 0316000035

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Sac	51,160	4.0/4.3 R44.4/47.0	66A	117

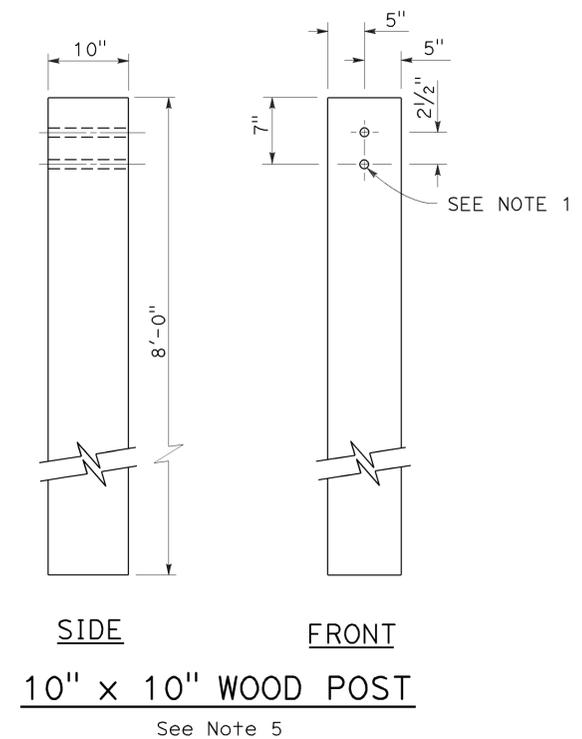
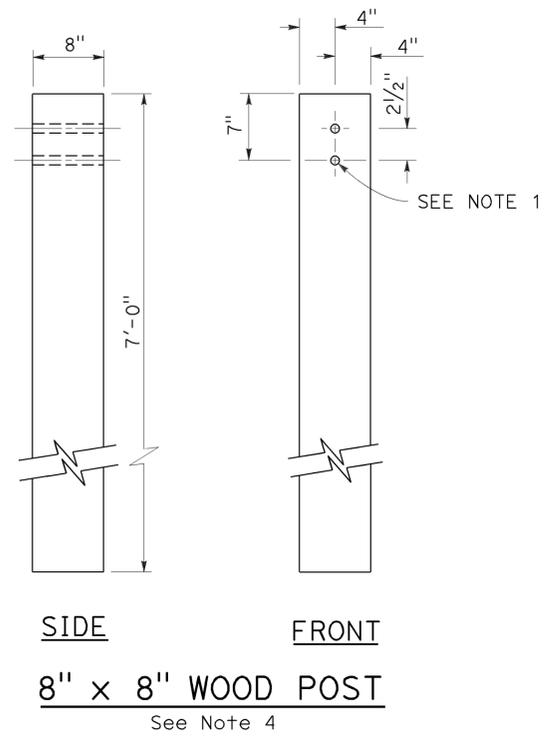
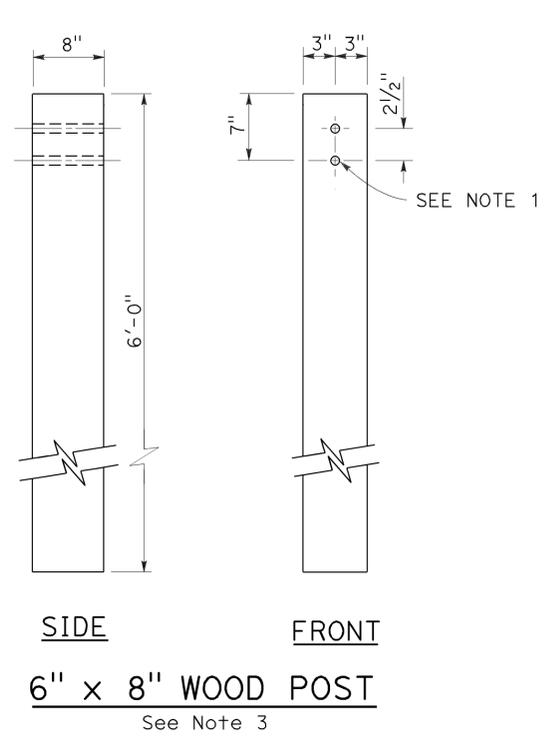
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

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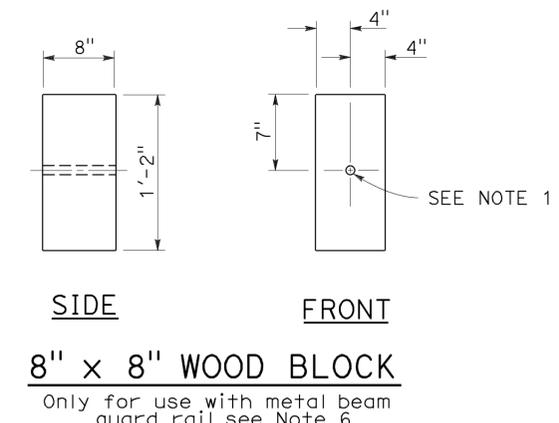
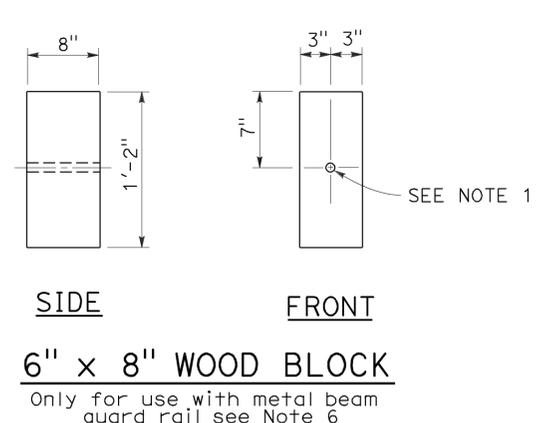
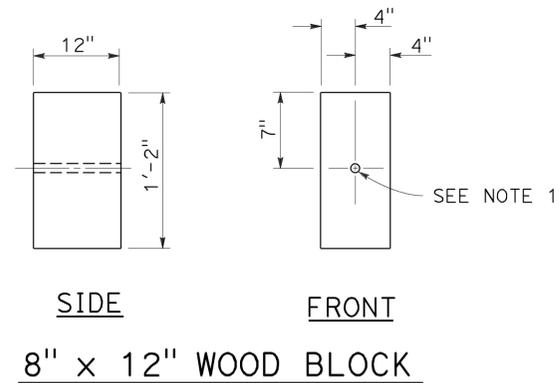
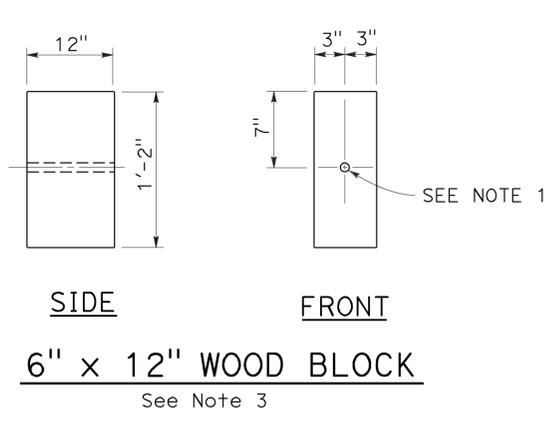
REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 5-2-16



NOTES:

1. All holes in wood posts and blocks shall be 3/4" Dia ± 1/16".
2. Dimensions shown for wood post are nominal.
3. This post and block combination used for standard line post sections of MGS.
4. This post and 8" x 12" block combination used for line post sections of MGS on narrow roadways.
5. This post and 8" x 12" block combination is typically used where strengthened line post sections of MGS are warranted to shield fixed objects.
6. See Revised Standard Plan RSP A77L3 for use of 6" x 8" and 8" x 8" wood blocks.



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM
WOOD POST AND
WOOD BLOCK DETAILS**

NO SCALE

2 ADDED PER ADDENDUM No. 2 DATED SEPTEMBER 15, 2016

RSP A77N1 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77N1

2010 REVISED STANDARD PLAN RSP A77N1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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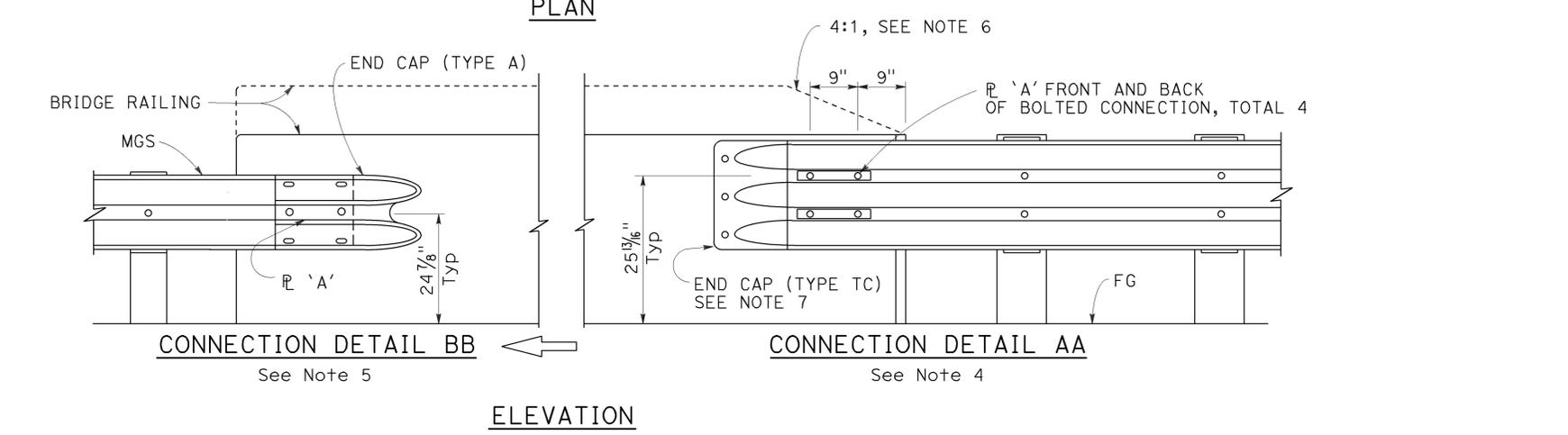
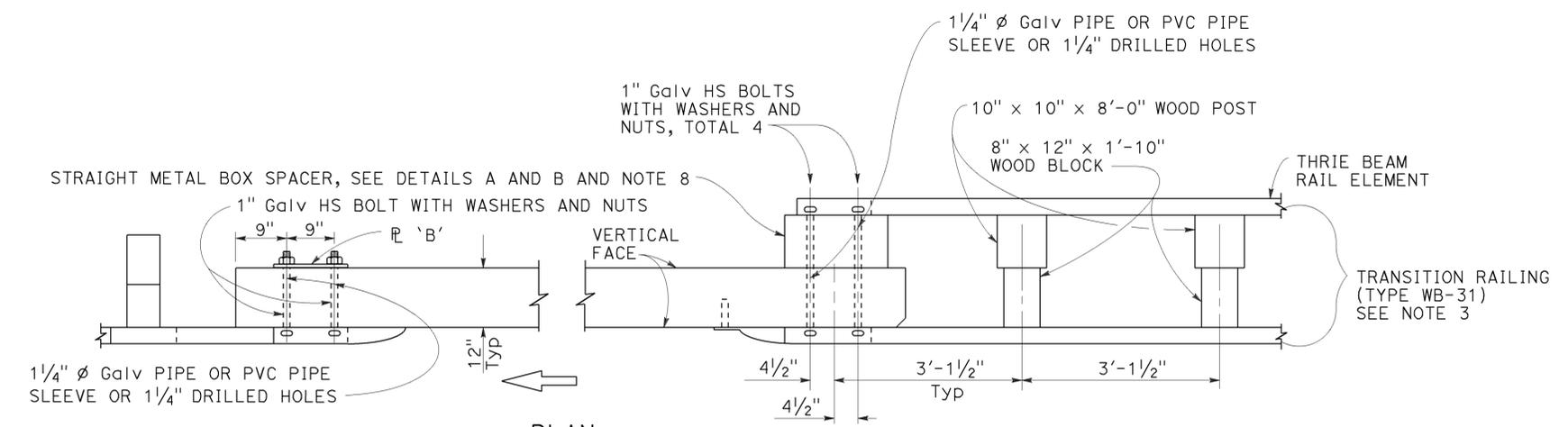
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA

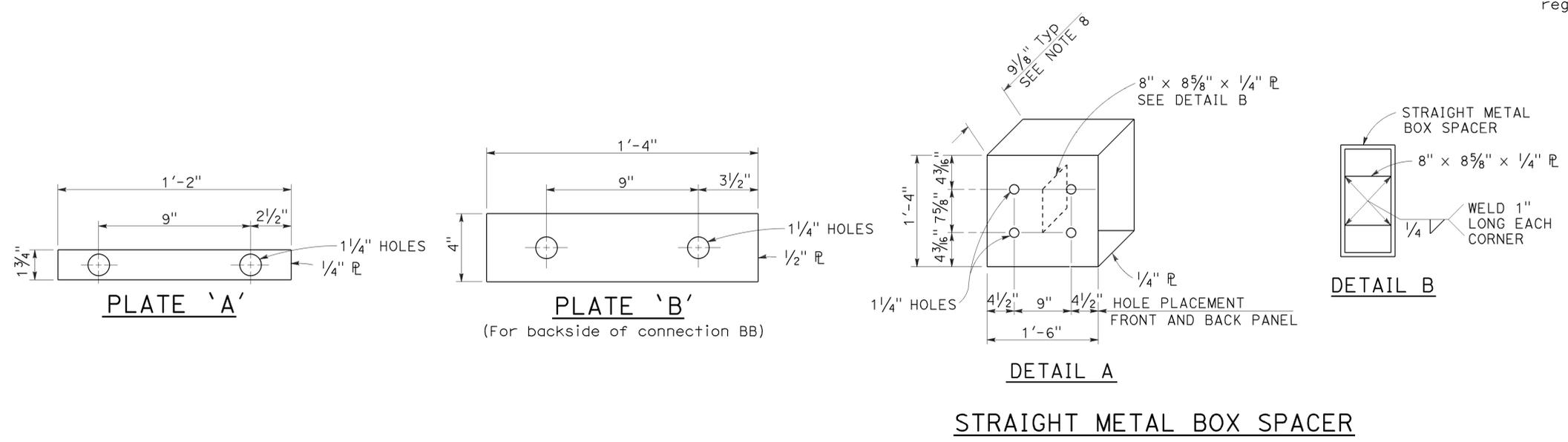
TO ACCOMPANY PLANS DATED 5-2-16



MIDWEST GUARDRAIL SYSTEM CONNECTION TO BRIDGE RAILING WITHOUT SIDEWALK

NOTES:

1. See Revised Standard Plan RSP A77U2 for additional connection details to bridges without sidewalks.
2. Additional details of posts, blocks and hardware are shown on Revised Standard Plans RSP A77M1, RSP A77N1 and RSP A77N2.
3. For additional details of Transition Railing (Type WB-31), see Revised Standard Plan RSP A77U4. Transition Railing (Type WB-31) transitions the 12 gauge MGS railing section to a heavier gage nested thrie beam railing section which is connected to the concrete bridge railing.
4. For typical use of Connection Detail AA, see Layout Types 12A and 12B on Revised Standard Plan RSP A77Q1, Layout Types 12C and 12D on Revised Standard Plan RSP A77Q2, and Layout Type 12E on Revised Standard Plan RSP A77Q3.
5. For typical use of Connection Detail BB, see Layout Type 12D (structure departure railing connection) on Revised Standard Plan RSP A77Q2 and Layout Type 12DD on Revised Standard Plan RSP A77Q5.
6. Where the height of the bridge railing exceeds the height of the thrie beam railing by more than 1" at Connection Detail AA, taper the top of the end of the bridge railing at 4:1 to match the top elevation of the thrie beam rail.
7. For details of End Cap (Type TC), see Revised Standard Plan RSP A77U4.
8. See Revised Standard Plan RSP A77U4 for additional details regarding depth dimension for straight metal box spacer.



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

MIDWEST GUARDRAIL SYSTEM CONNECTIONS TO BRIDGE RAILINGS WITHOUT SIDEWALKS

DETAILS No. 1

NO SCALE

2 ADDED PER ADDENDUM No. 2 DATED SEPTEMBER 15, 2016

RSP A77U1 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77U1

2010 REVISED STANDARD PLAN RSP A77U1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Sac	51,160	4.0/4.3 R44.4/47.0	83B	117

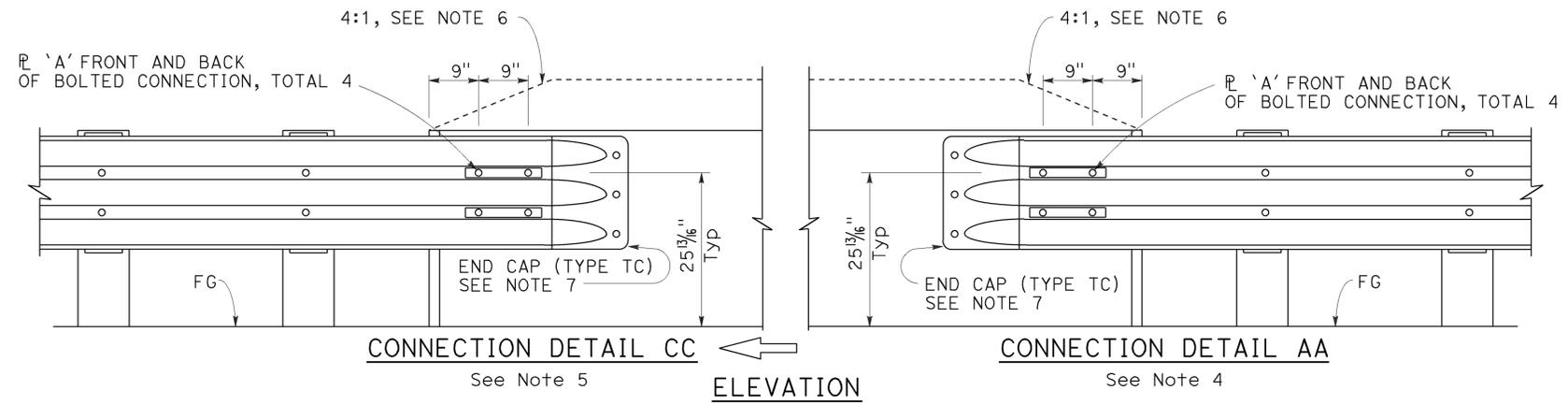
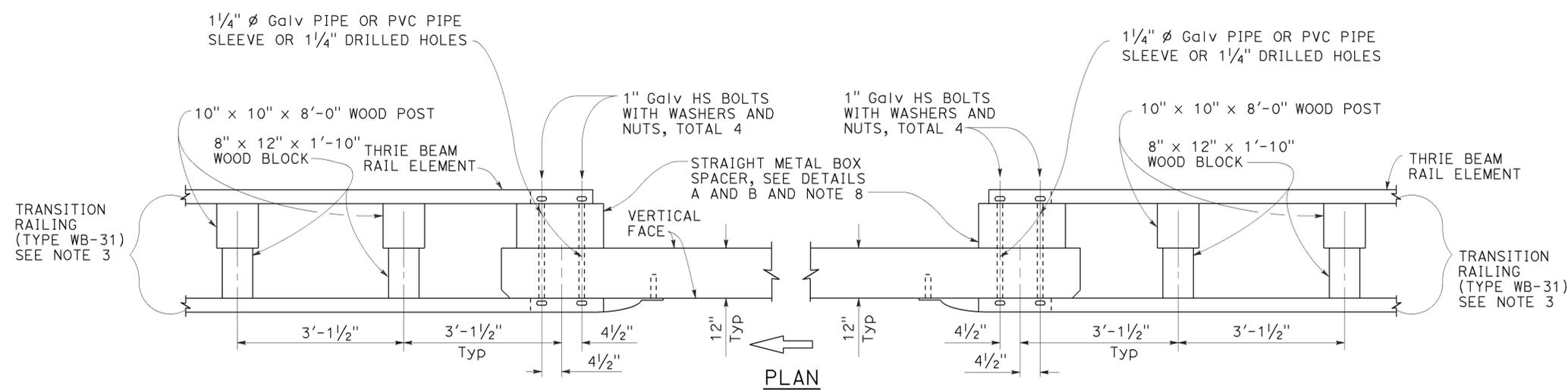
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA

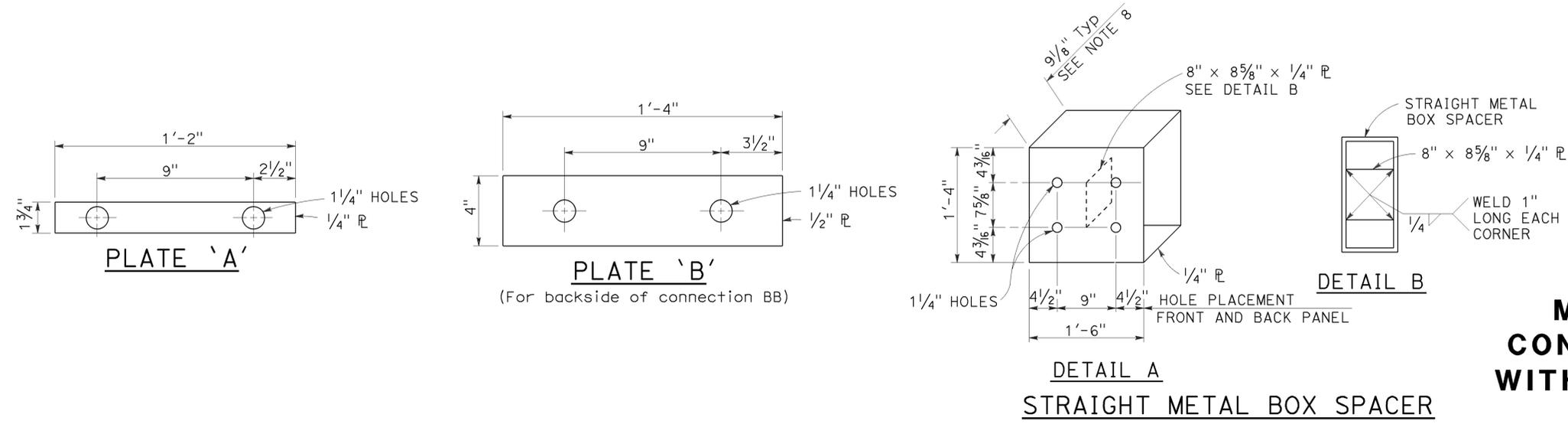
TO ACCOMPANY PLANS DATED 5-2-16



MIDWEST GUARDRAIL SYSTEM CONNECTION TO BRIDGE RAILING WITHOUT SIDEWALK

NOTES:

1. See Revised Standard Plan RSP A77U1 for additional connection details to bridges without sidewalks.
2. Additional details of posts, blocks and hardware are shown on Revised Standard Plans RSP A77M1, RSP A77N1 and RSP A77N2.
3. For additional details of Transition Railing (Type WB-31), see Revised Standard Plan RSP A77U4. Transition Railing (Type WB-31) transitions the 12 gauge MGS railing section to a heavier gage nested thrie beam railing section which is connected to the concrete bridge railing.
4. For typical use of Connection Detail AA, see Layout Types 12A and 12B on Revised Standard Plan RSP A77Q1, Layout Types 12C and 12D on Revised Standard Plan RSP A77Q2, and Layout Type 12E on Revised Standard Plan RSP A77Q3.
5. For typical use of Connection Detail CC, see Layout Types 12AA and 12BB on Revised Standard Plan RSP A77Q4 and Layout Type 12CC on Revised Standard Plan RSP A77Q5.
6. Where the height of the bridge railing exceeds the height of the thrie beam railing by more than 1" at Connection Detail AA and connection Detail CC, taper the top of the end of the bridge railing at 4:1 to match the top elevation of the thrie beam railing.
7. For details of End Cap (Type TC), see Revised Standard Plan RSP A77U4.
8. See Revised Standard Plan RSP A77U4 for additional details regarding depth dimension for straight metal box spacer.



MIDWEST GUARDRAIL SYSTEM CONNECTIONS TO BRIDGE RAILINGS WITHOUT SIDEWALKS DETAILS No. 2

NO SCALE

2 ADDED PER ADDENDUM No. 2 DATED SEPTEMBER 15, 2016

RSP A77U2 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77U2

2010 REVISED STANDARD PLAN RSP A77U2

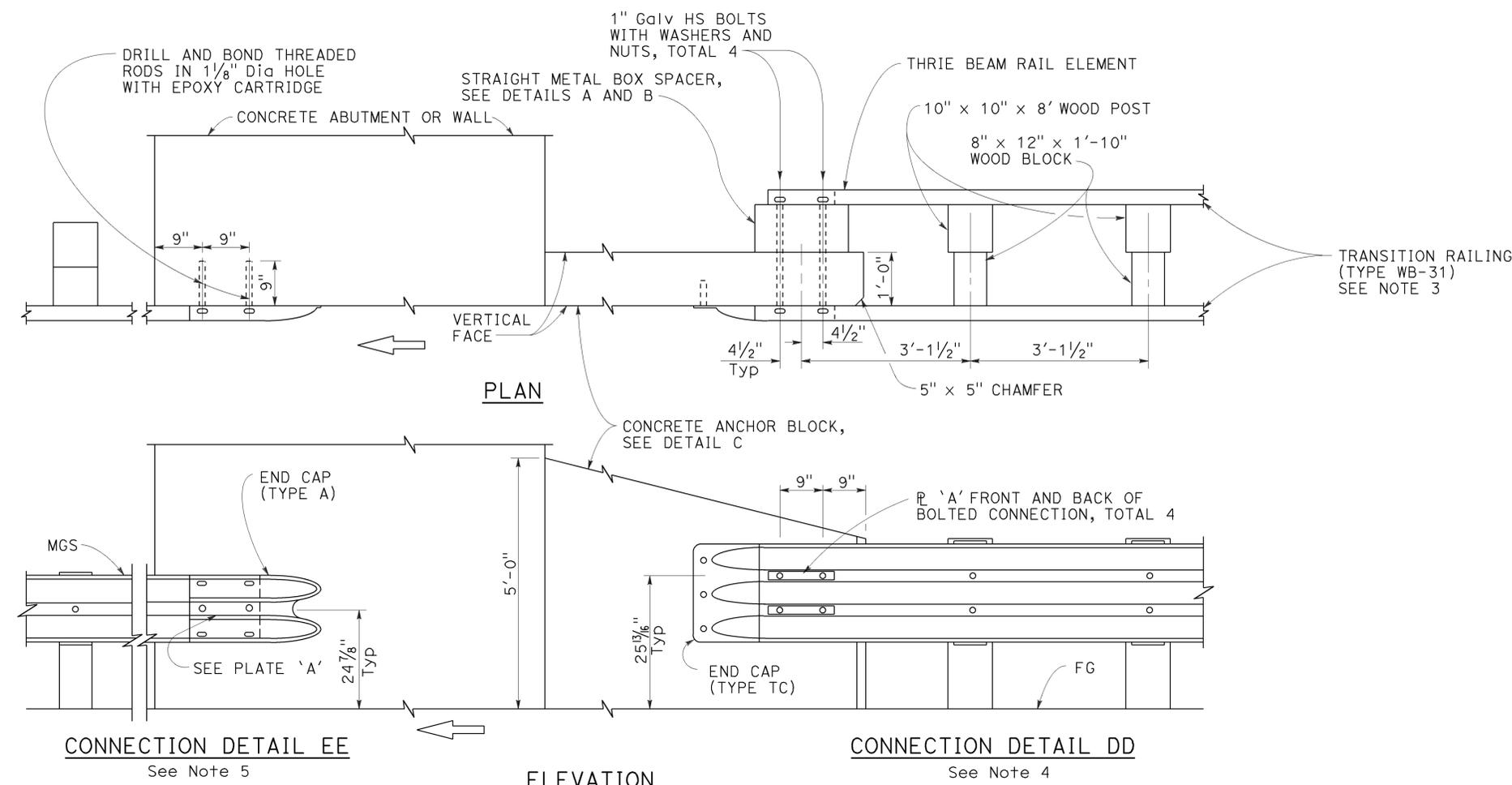
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Sac	51,160	4.0/4.3 R44.4/47.0	83C	117

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

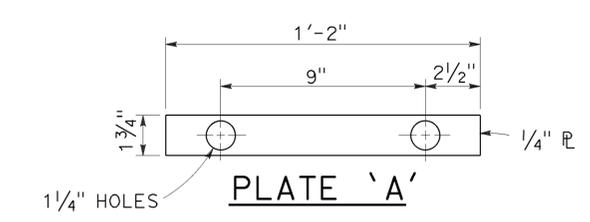
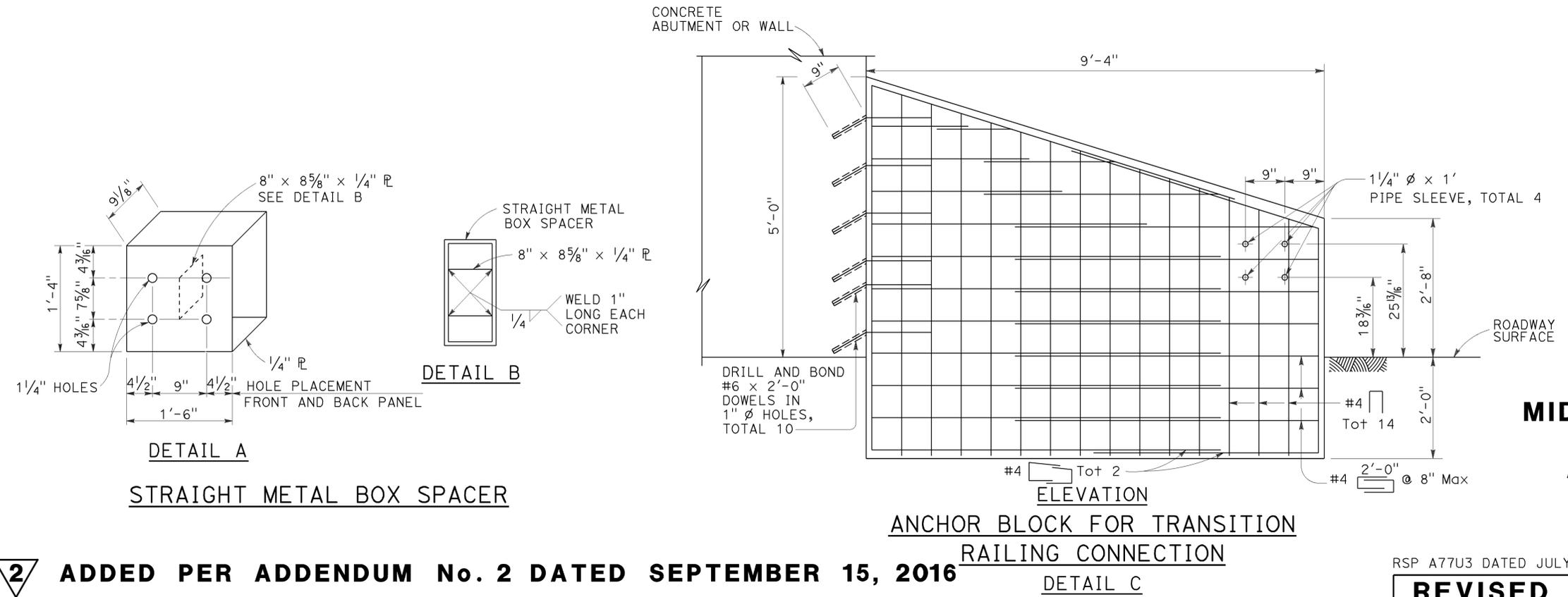
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TO ACCOMPANY PLANS DATED 5-2-16



- NOTES:**
1. These connection details apply to abutments and walls.
 2. Additional details of posts, blocks and hardware are shown on Revised Standard Plans RSP A77M1, RSP A77N1 and RSP A77N2.
 3. For additional details of Transition Railing (Type WB-31), see Revised Standard Plan RSP A77U4. Transition Railing (Type WB-31) transitions the 12 gauge MGS railing section to a heavier gage nested thrie beam railing section which is connected to the concrete anchor block.
 4. For typical use of Connection Details DD, see Layout Types 12A and 12B on Revised Standard Plan RSP A77Q1 and Layout Types 12C and 12D on Revised Standard Plan RSP A77Q2.
 5. For typical use of Connection Detail EE, see Layout Type 12D on Revised Standard Plan RSP A77Q2 and Layout Type 12DD on Revised Standard Plan RSP A77Q5.

MIDWEST GUARDRAIL SYSTEM CONNECTION TO ABUTMENT OR WALL



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

MIDWEST GUARDRAIL SYSTEM CONNECTIONS TO ABUTMENTS AND WALLS

NO SCALE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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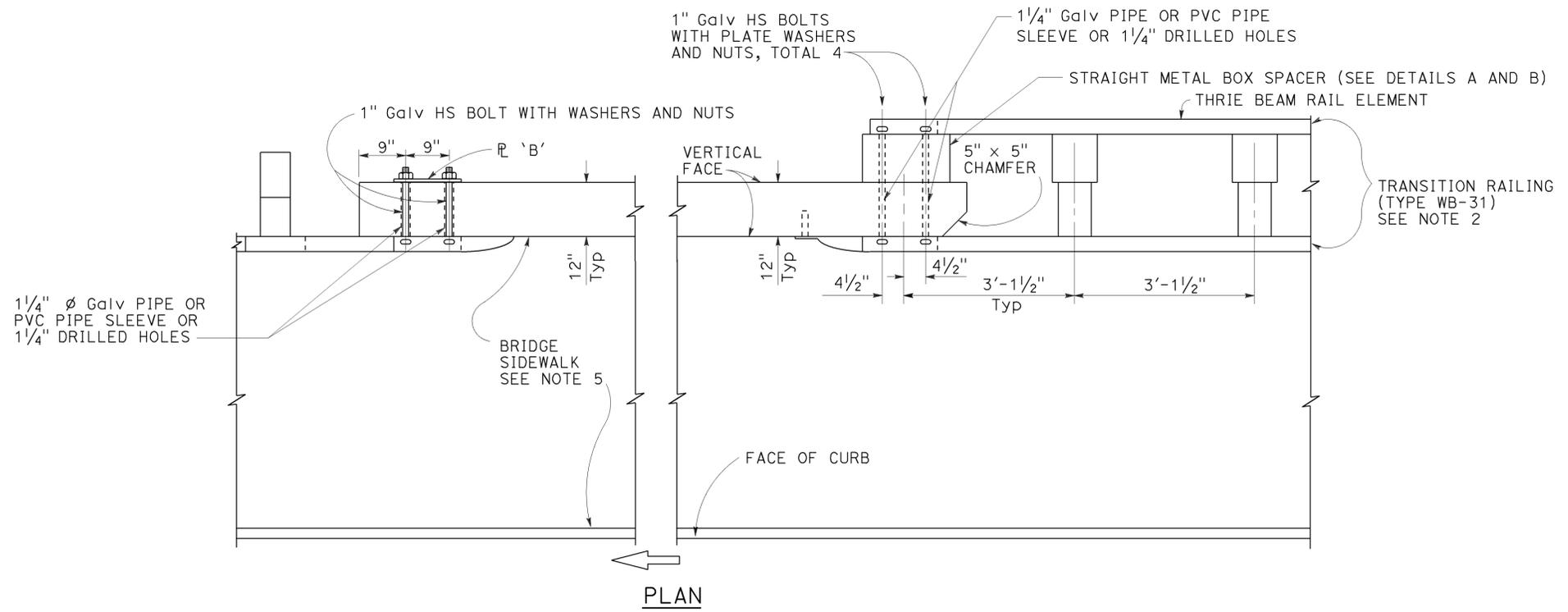
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

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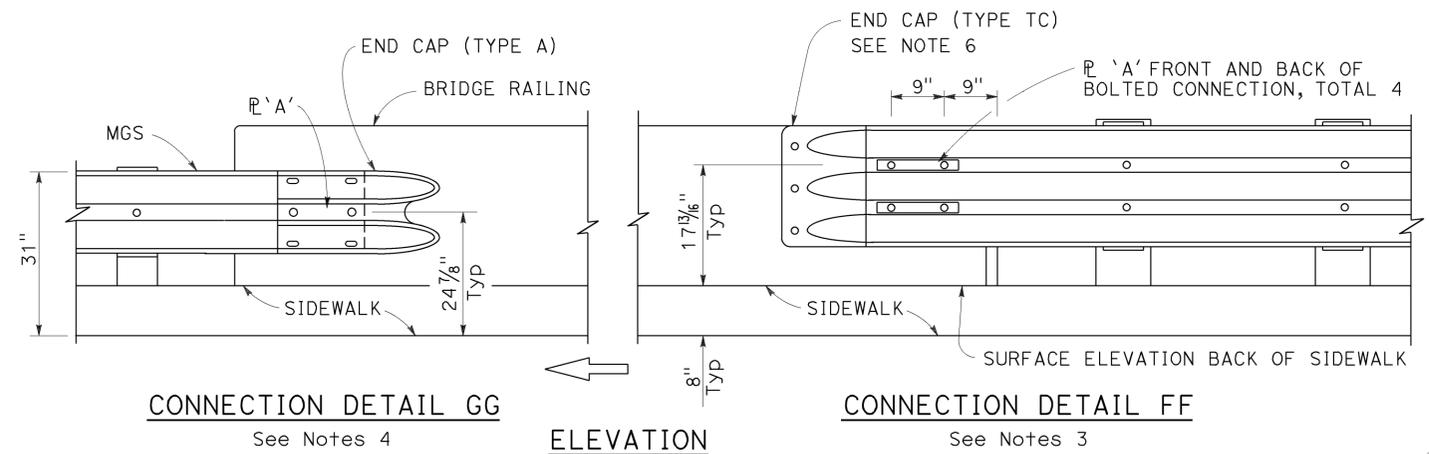
REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-15
CIVIL
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 5-2-16

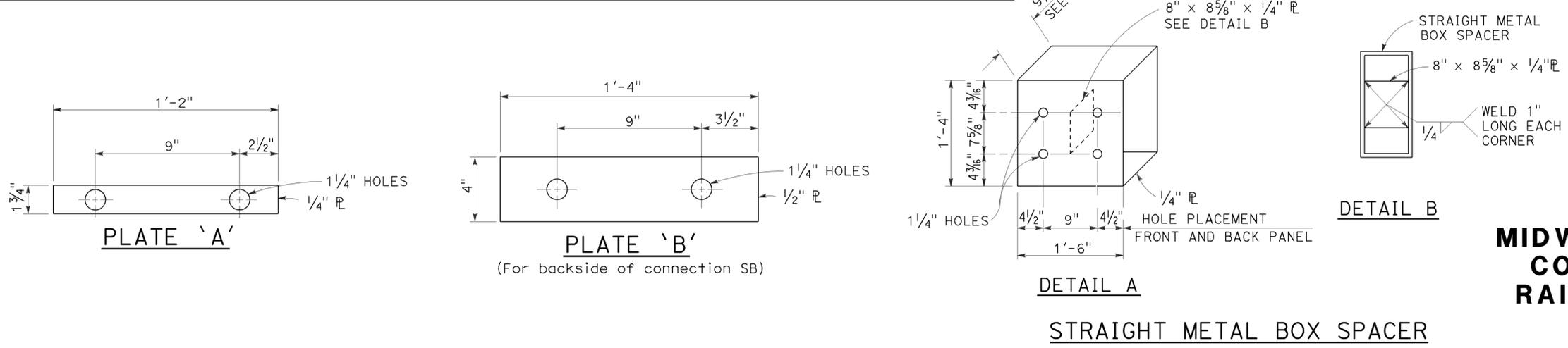


NOTES:

1. See Revised Standard Plan RSP A77V2 for additional connection details to bridges with sidewalks.
2. For additional details of Transition Railing (Type WB-31), see Revised Standard Plan RSP A77U4. Transition Railing (Type WB-31) transitions the 12 gauge MGS railing section to a heavier gage nested thrie beam railing section which is connected to the concrete bridge railing.
3. For typical use of Connection Detail FF, see Layout Types 12A and 12B on Revised Standard Plan RSP A77Q1.
4. For typical use of Connection Detail GG, see Layout Type 12D on Revised Standard Plan RSP A77Q2 and Layout Type 12DD on Revised Standard Plan RSP A77Q5.
5. Where the bridge sidewalk is not continued beyond the end of the bridge railing, the portion of the sidewalk beyond each end of the bridge railing shall be transitioned down from the top elevation of the sidewalk, for its entire width, to the finished grade of the adjacent roadbed. The longitudinal slope of each sidewalk elevation transition shall not exceed 8.33 percent.
6. For details of End Cap (Type TC), see Revised Standard Plan RSP A77U4.
7. See Revised Standard Plan RSP A77U4 for additional details regarding depth dimension for straight metal box spacer.



MIDWEST GUARDRAIL SYSTEM CONNECTION TO BRIDGE RAILING WITH SIDEWALKS



MIDWEST GUARDRAIL SYSTEM CONNECTIONS TO BRIDGE RAILINGS WITH SIDEWALKS DETAILS No. 1

NO SCALE

2 ADDED PER ADDENDUM No. 2 DATED SEPTEMBER 15, 2016

RSP A77V1 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A77V1

2010 REVISED STANDARD PLAN RSP A77V1

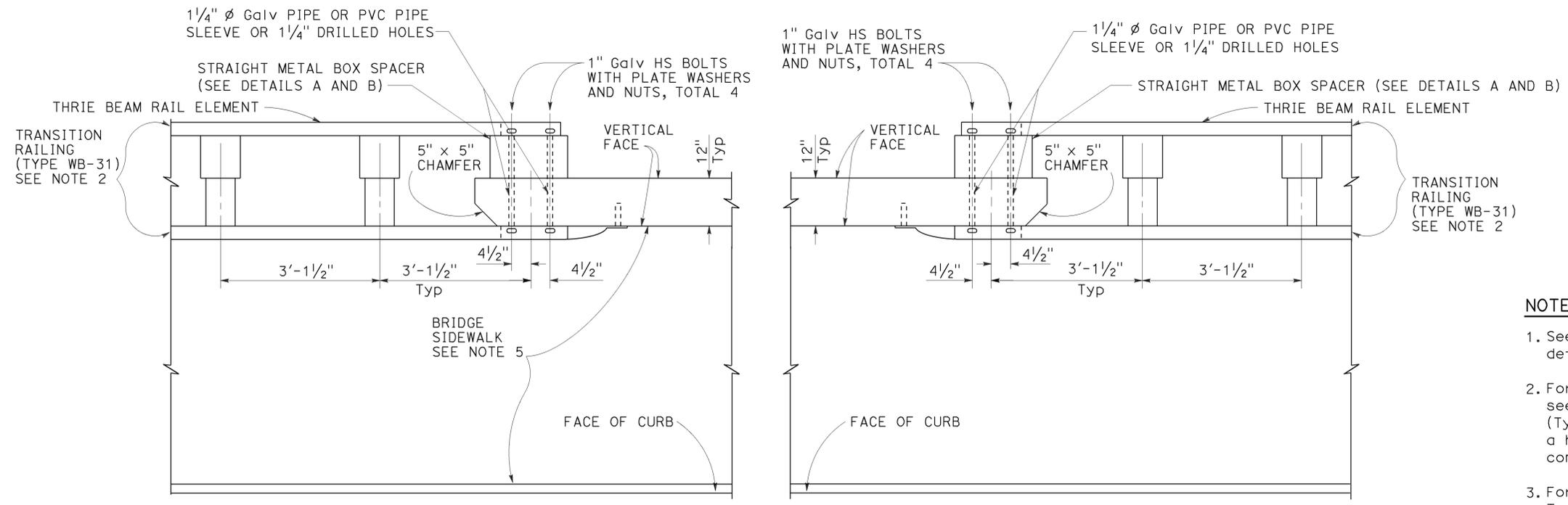
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	03	Sac	51,160	4.0/4.3 R44.4/47.0	83E	117

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

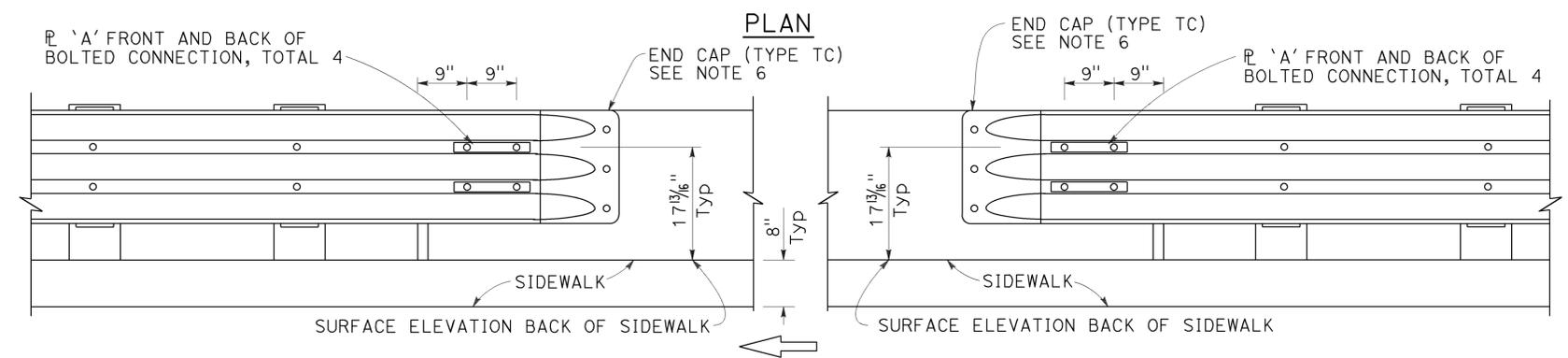
July 19, 2013
PLANS APPROVAL DATE

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TO ACCOMPANY PLANS DATED 5-2-16



PLAN



CONNECTION DETAIL HH

CONNECTION DETAIL FF

See Notes 4

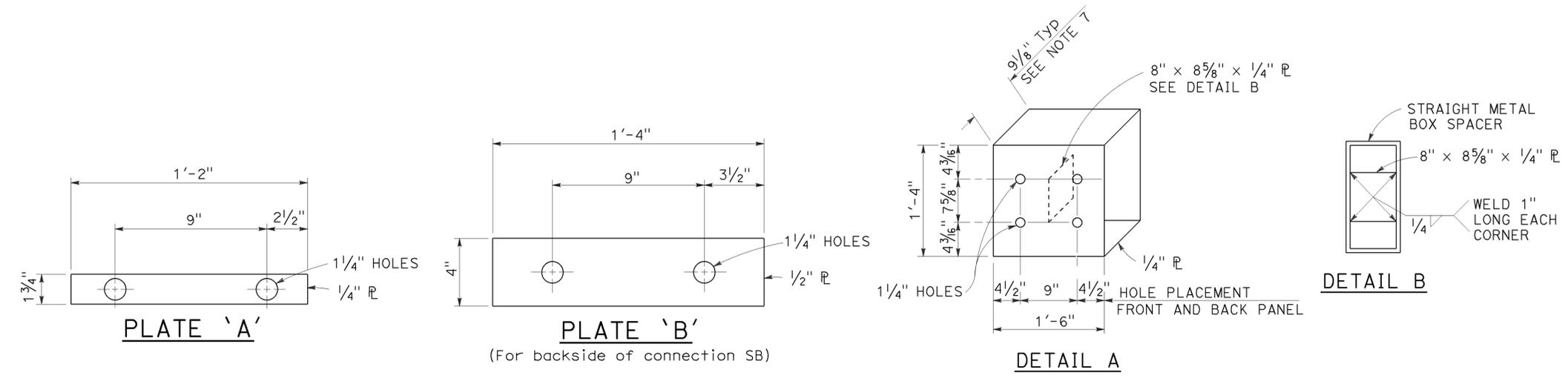
See Notes 3

ELEVATION

MIDWEST GUARDRAIL SYSTEM CONNECTION TO BRIDGE RAILING WITH SIDEWALKS

NOTES:

1. See Revised Standard Plan RSP A77V1 for additional connection details to bridges with sidewalks.
2. For additional details of Transition Railing (Type WB-31), see Revised Standard Plan RSP A77U4. Transition Railing (Type WB-31) transitions the 12 gauge MGS railing section to a heavier gage nested thrie beam railing section which is connected to the concrete bridge railing.
3. For typical use of Connection Detail FF, see Layout Types 12A and 12B on Revised Standard Plan RSP A77Q1.
4. For typical use of Connection Detail HH, see Layout Types 12AA and 12BB on Revised Standard Plan RSP A77Q4.
5. Where the bridge sidewalk is not continued beyond the end of the bridge railing, the portion of the sidewalk beyond each end of the bridge railing shall be transitioned down from the top elevation of the sidewalk, for its entire width, to the finished grade of the adjacent roadbed. The longitudinal slope of each sidewalk elevation transition shall not exceed 8.33 percent.
6. For details of End Cap (Type TC), see Revised Standard Plan RSP A77U4.
7. See Revised Standard Plan RSP A77U4 for additional details regarding depth dimension for straight metal box spacer.



STRAIGHT METAL BOX SPACER

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

MIDWEST GUARDRAIL SYSTEM CONNECTIONS TO BRIDGE RAILINGS WITH SIDEWALKS DETAILS No. 2

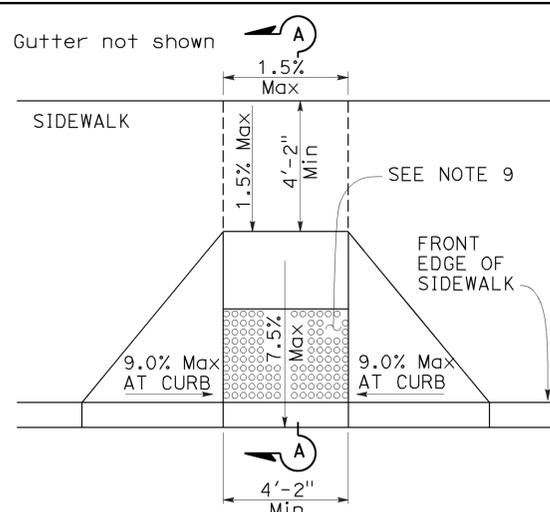
NO SCALE

RSP A77V2 DATED JULY 19, 2013 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

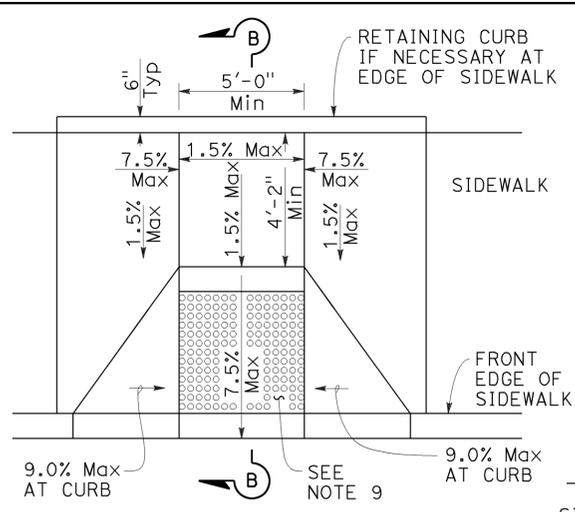
2 ADDED PER ADDENDUM No. 2 DATED SEPTEMBER 15, 2016

REVISED STANDARD PLAN RSP A77V2

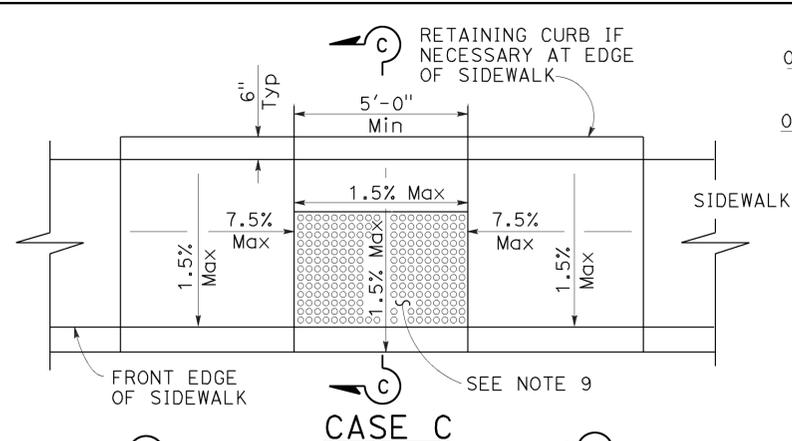
2010 REVISED STANDARD PLAN RSP A77V2



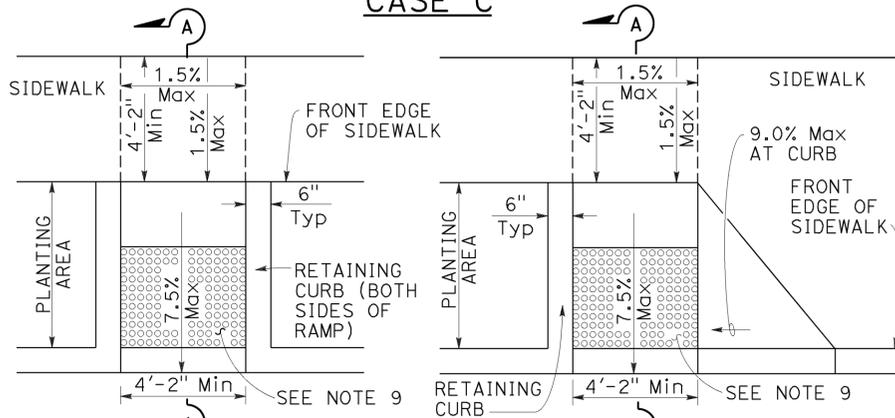
CASE A



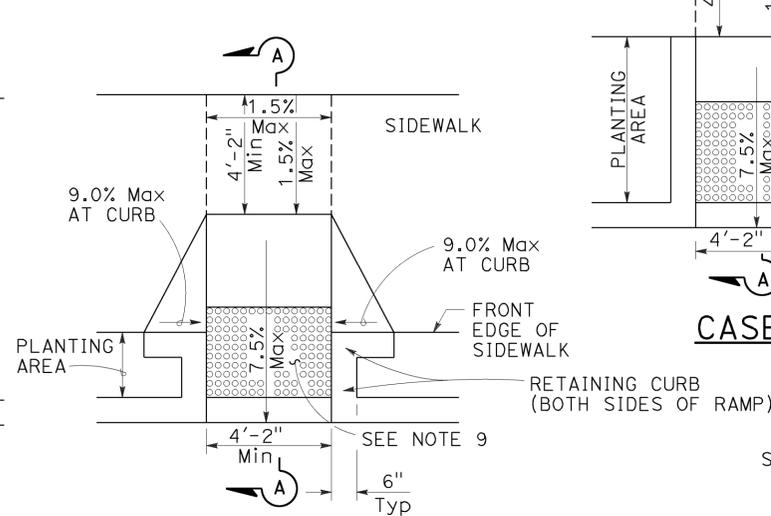
CASE B



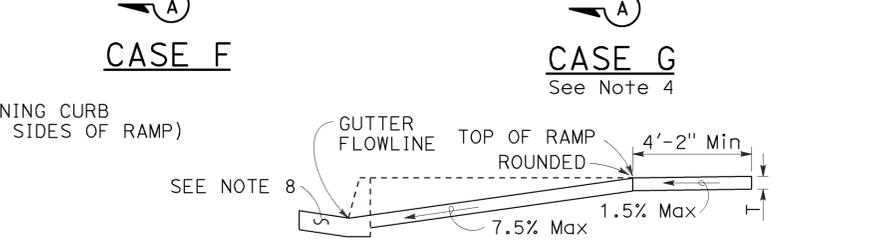
CASE C



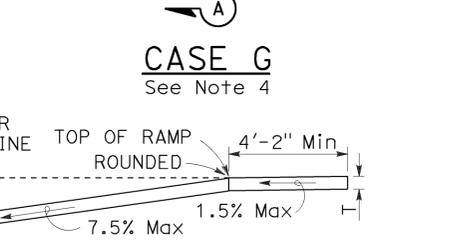
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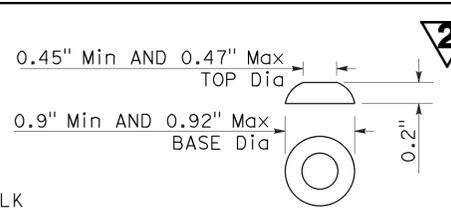
CASE E



CASE F



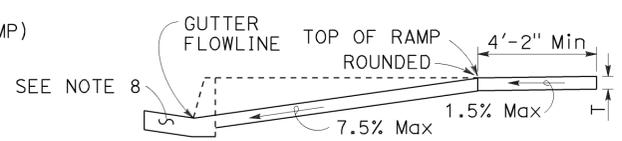
CASE G



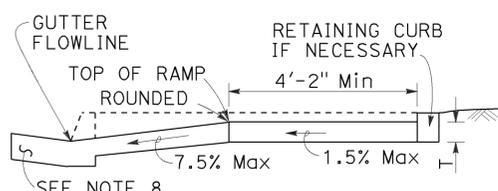
RAISED TRUNCATED DOME

NOTES:

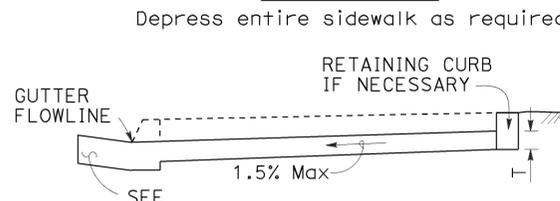
1. As site conditions dictate, Case A through Case G curb ramps may be used for corner installations similar to those shown in Detail A and Detail B. The case of curb ramps used in Detail A do not have to be the same. Case A through Case G curb ramps also may be used at mid block locations, as site conditions dictate.
2. 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.
3. When ramp is located in center of curb return, crosswalk configuration must be similar to that shown for Detail B.
4. As site conditions dictate, the retaining curb side and the flared side of the Case G ramp shall be constructed in reversed position.
5. If located on a curve, the sides of the ramp need not be parallel, but the minimum width of the ramp shall be 4'-2".
6. 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.
7. The adjacent surfaces at transitions at curb ramps to walks, gutters, and streets shall be at the same level.
8. 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.
9. 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.
10. Sidewalk and ramp thickness, "T", shall be 3 1/2" minimum.
11. 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.
12. Detectable warning surface may have to be cut to allow removal of utility covers while maintaining full detectable warning width and depth.



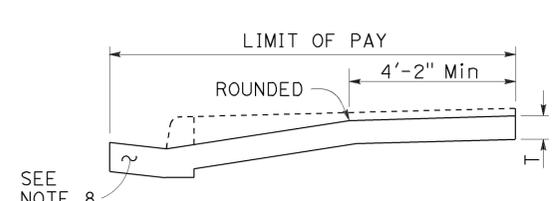
SECTION A-A



SECTION B-B



SECTION C-C



RETROFIT PAY LIMITS



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

See Note 9

CURB RAMP DETAILS
NO SCALE

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

2010 REVISED STANDARD PLAN RSP A88A

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Sac	51,160	4.0/4.3, R44.4/47.0	87	117

H. 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.

Hector David Cordova
REGISTERED PROFESSIONAL ENGINEER
No. C41957
Exp. 3-31-18
CIVIL
STATE OF CALIFORNIA

EXISTING

NEW

ITEM DESCRIPTION

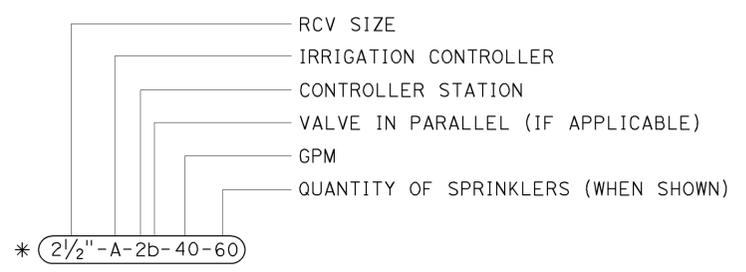
		WATER METER (WM)
		BACKFLOW PREVENTER ASSEMBLY (BPA)
		BACKFLOW PREVENTER ENCLOSURE (BPE)
		BOOSTER PUMP (BP)
		TRUCK LOADING STANDPIPE (TLS)
		FLOW SENSOR (FS)
		MASTER IRRIGATION CONTROLLER (MIC)
		AUXILIARY IRRIGATION CONTROLLER (AIC)
		IRRIGATION CONTROLLER (IC) IRRIGATION CONTROLLER (IC) (BATTERY) IRRIGATION CONTROLLER (IC) (SOLAR) IRRIGATION CONTROLLER (IC) (TWO WIRE)
		IRRIGATION CONTROLLER(S) IN CONTROLLER ENCLOSURE CABINET (ICC)
		ARMOR-CLAD CONDUCTORS (ACC)
		CONTROL AND NEUTRAL CONDUCTORS (CNC)
		IRRIGATION CONDUIT
		IRRIGATION SLEEVE
		DUCTILE IRON PIPE (SUPPLY LINE) (MAIN) (DIP)
		GALVANIZED STEEL PIPE (SUPPLY LINE) (MAIN) (GSP)
		GALVANIZED STEEL PIPE (SUPPLY LINE) (LATERAL) (GSP)
		PLASTIC PIPE (SUPPLY LINE) (MAIN)
		PLASTIC PIPE (SUPPLY LINE) (LATERAL)
		COPPER PIPE (SUPPLY LINE)
		DRIP IRRIGATION TUBING
		REMOTE CONTROL VALVE (RCV) REMOTE CONTROL VALVE (MASTER) (RCVM) REMOTE CONTROL VALVE (MASTER) W/FLOW METER (RCVMF)
		REMOTE CONTROL VALVE W/PRESSURE REGULATOR (RCVP)
		EXISTING MANUAL CONTROL VALVE (MCV)
		DRIP VALVE ASSEMBLY (DVA)
		WYE STRAINER ASSEMBLY (WSA)

EXISTING

NEW

ITEM DESCRIPTION

		GATE VALVE (GV)
		BALL VALVE (BV)
		QUICK COUPLING VALVE (QCV)
		CAM COUPLER ASSEMBLY (CCA)
		GARDEN VALVE ASSEMBLY (GARVA)
		PRESSURE REGULATING VALVE (PRV)
		PRESSURE RELIEF VALVE (PRLV)
		FLOW CONTROL VALVE (FCV)
		COMBINATION AIR RELEASE VALVE (CARV)
		CHECK VALVE (CV)
		FLUSH VALVE (FV)
		EXISTING NOZZLE LINE W/TURNING UNION
		EXISTING IRRIGATION SYSTEM
		EXISTING IRRIGATION SYSTEM TO BE REMOVED
		CHAIN LINK GATE
		QUICK COUPLING VALVE W/SPRINKLER PROTECTOR
		SPRINKLER W/SPRINKLER PROTECTOR
		CONNECT TO EXISTING SYSTEM
		CAP
		CAP EXISTING
		FIBER ROLL
		COMPOST SOCK



VALVE CODE

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Sac	51,160	4.0/4.3 R44.4/47.0	95	117

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 5-2-16

2010 REVISED STANDARD PLAN RSP H2

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

2 REPLACED PER ADDENDUM No. 2 DATED SEPTEMBER 15, 2016

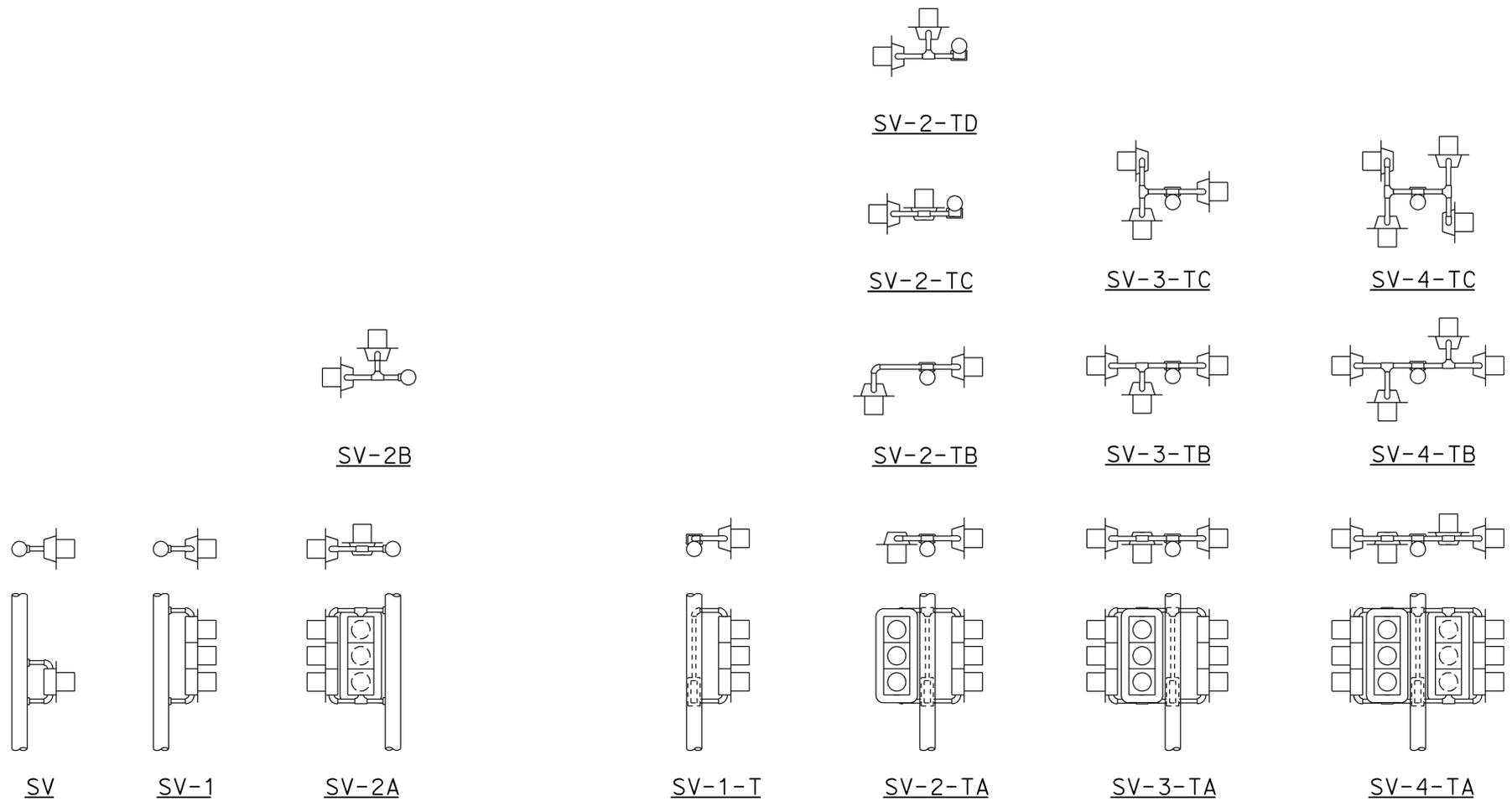
2

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Sac	51,160	4.0/4.3 R44.4/47.0	104A	117
<i>Theresa Gabriel</i> REGISTERED ELECTRICAL ENGINEER					
October 30, 2015 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					



TO ACCOMPANY PLANS DATED 5-2-16

PLAN VIEW OF OTHER SIDE MOUNTINGS



SIDE MOUNTINGS

TOP MOUNTINGS

ABBREVIATIONS:

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

NOTES:

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

PLAN VIEW OF TOP MOUNTINGS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(SIGNAL HEADS AND MOUNTINGS)**

NO SCALE

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

REVISED STANDARD PLAN RSP ES-4A

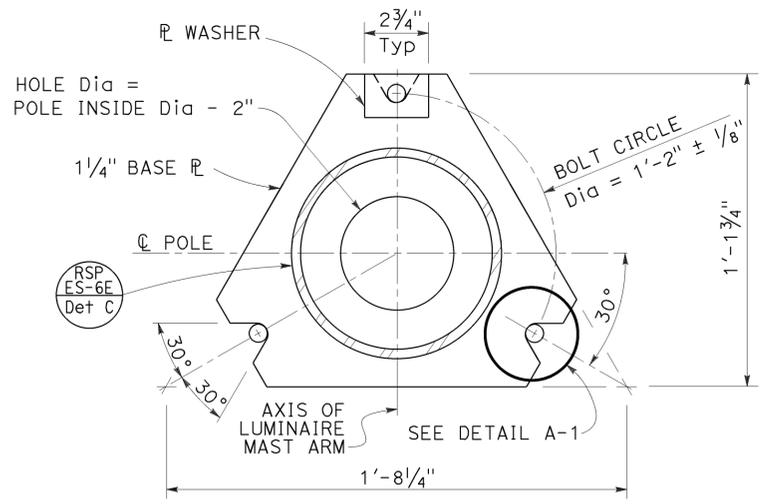
2 ADDED PER ADDENDUM No. 2 DATED SEPTEMBER 15, 2016

2010 REVISED STANDARD PLAN RSP ES-4A

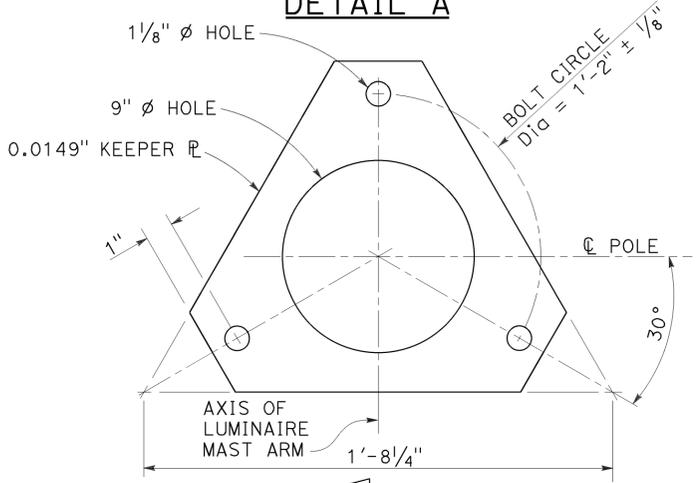
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Sac	51,160	4.0/4.3 R44.4/47.0	107A	117

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

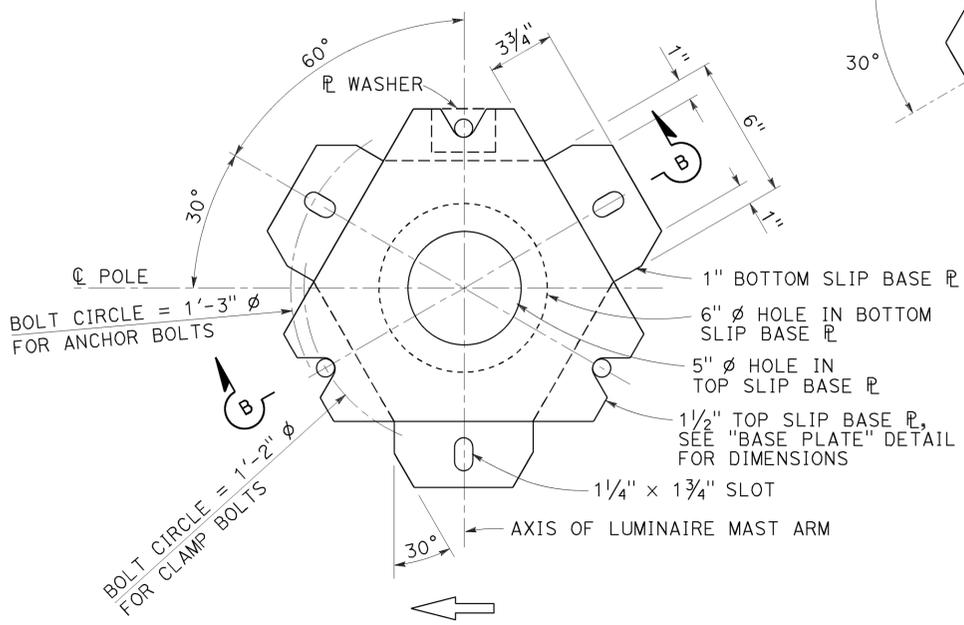
REGISTERED PROFESSIONAL ENGINEER
 Stanley P. Johnson
 No. C57793
 Exp. 3-31-16
 CIVIL
 STATE OF CALIFORNIA



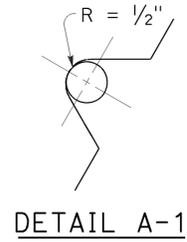
**BASE PLATE
DETAIL A**



**KEEPER PLATE
DETAIL B**

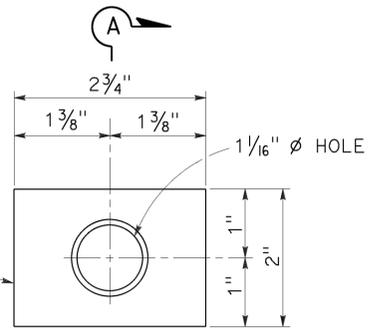


**BOTTOM PLATE
DETAIL C**

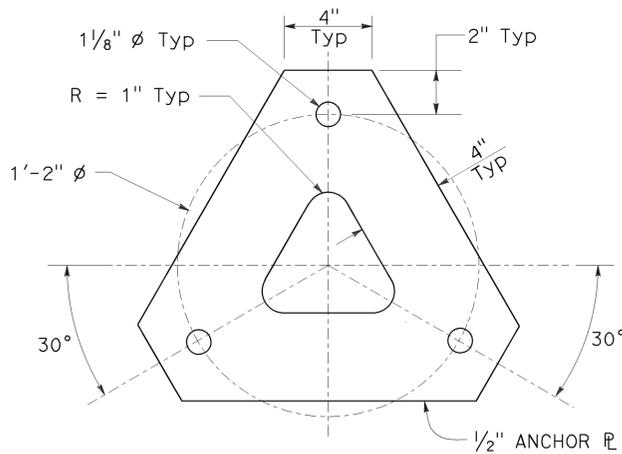


DETAIL A-1

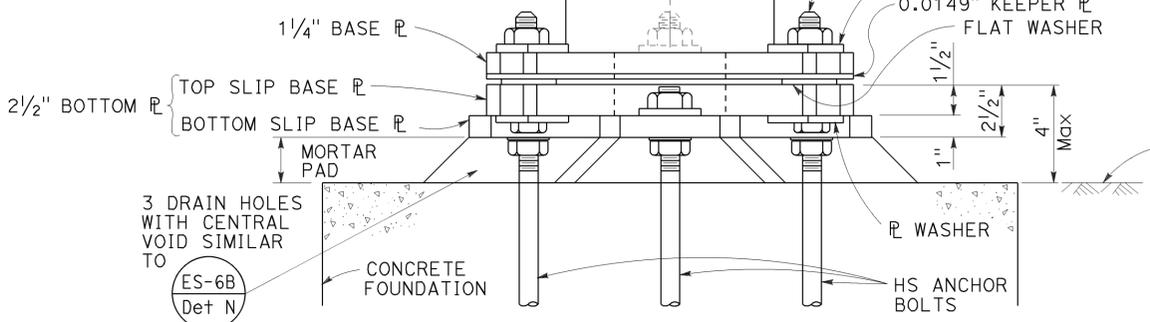
SECTION A-A



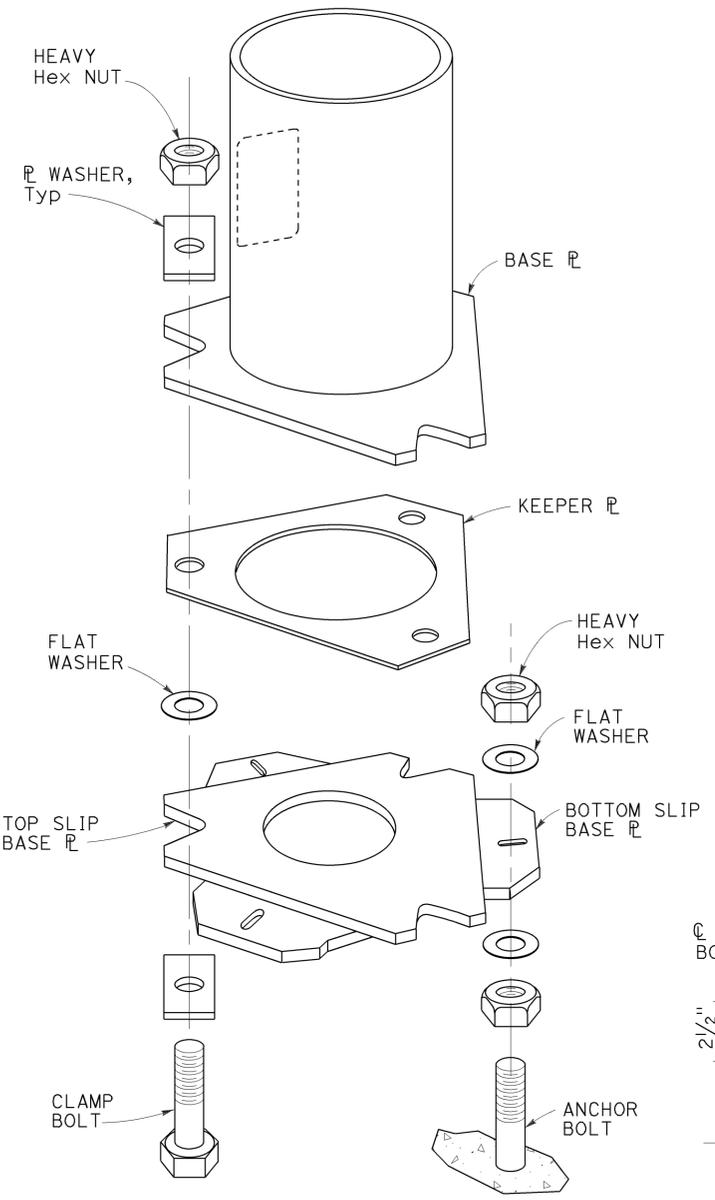
**PLATE WASHER
DETAIL D**



**ANCHOR PLATE
DETAIL E**



**SLIP BASE
ELEVATION A**

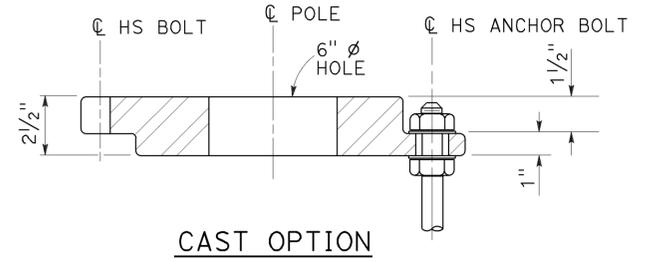


**SLIP BASE DETAIL
DETAIL F**

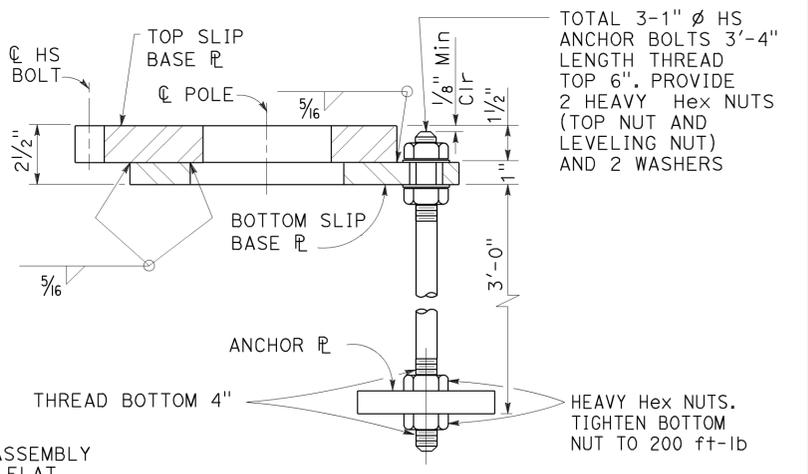
NOTES:

TO ACCOMPANY PLANS DATED 5-2-16

1. 1" Ø HS anchor bolts. For clamp bolts, see specifications.
2. Conduit shall not protrude more than 2" above top of foundation.
3. Handhole shall be located on the downstream side of traffic.
4. For Type 30 fixed base and for Type 31 fixed base, see Notes 3 and 4 on Revised Standard Plan RSP ES-6E.



CAST OPTION



WELDED OPTION

SECTION B-B

**ELECTRICAL SYSTEMS
(LIGHTING STANDARD,
SLIP BASE PLATE)**

NO SCALE

RSP ES-6F DATED OCTOBER 30, 2015 SUPERSEDES STANDARD PLAN ES-6F DATED MAY 20, 2011 - PAGE 457 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-6F

2 ADDED PER ADDENDUM No. 2 DATED SEPTEMBER 15, 2016

2010 REVISED STANDARD PLAN RSP ES-6F

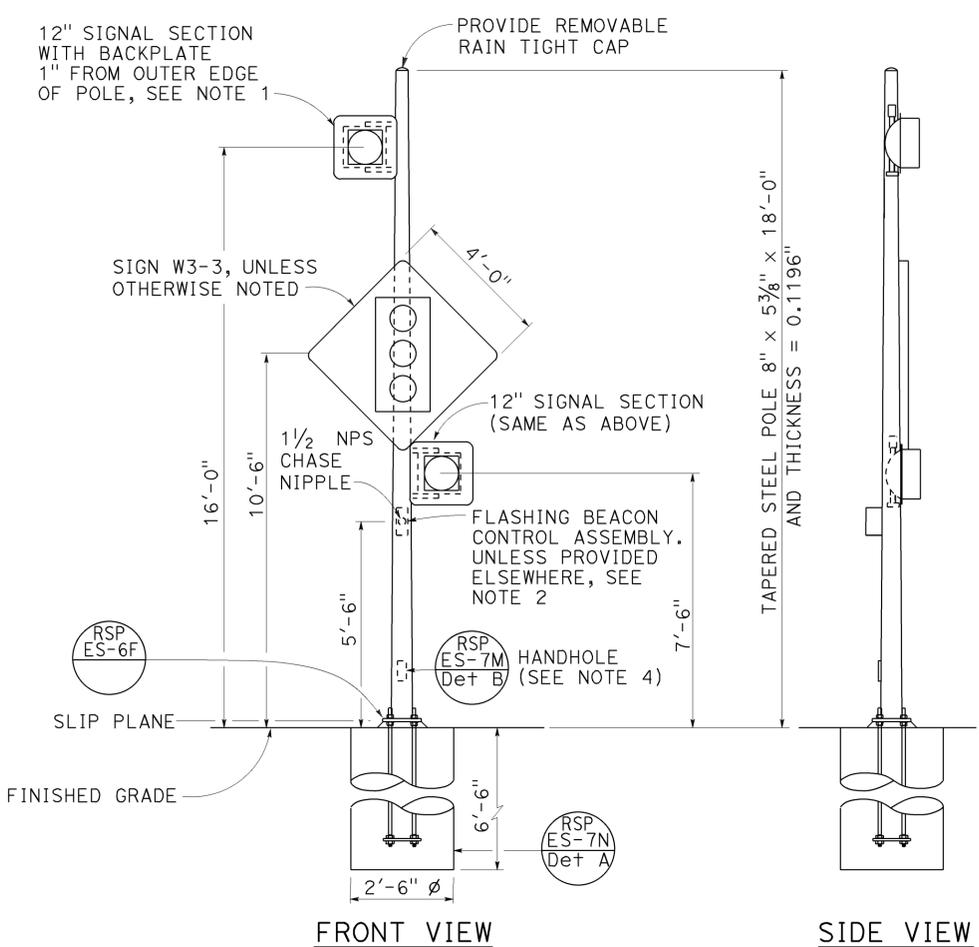
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Sac	51,160	4.0/4.3 R44.4/47.0	108	117

Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 No. C57793
 Exp. 3-31-18
 STATE OF CALIFORNIA
 CIVIL

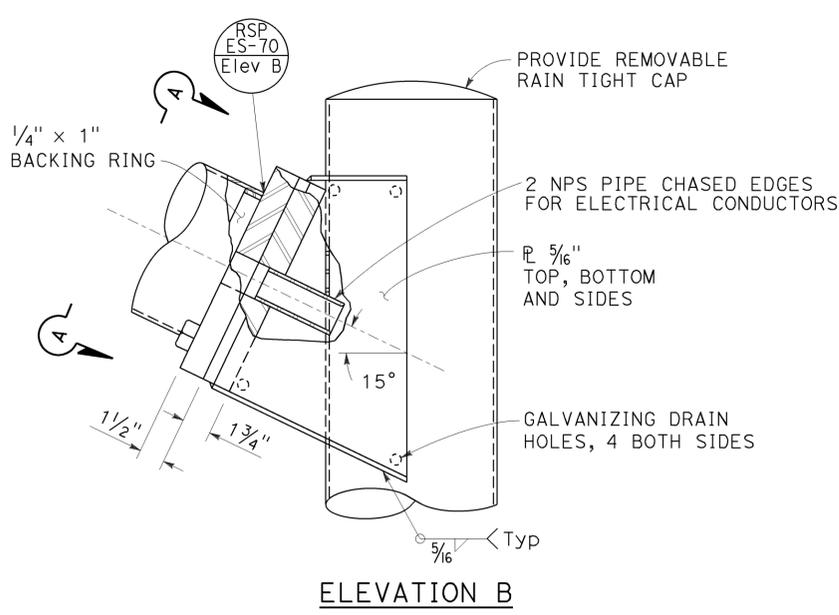
July 15, 2016
 PLANS APPROVAL DATE

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.

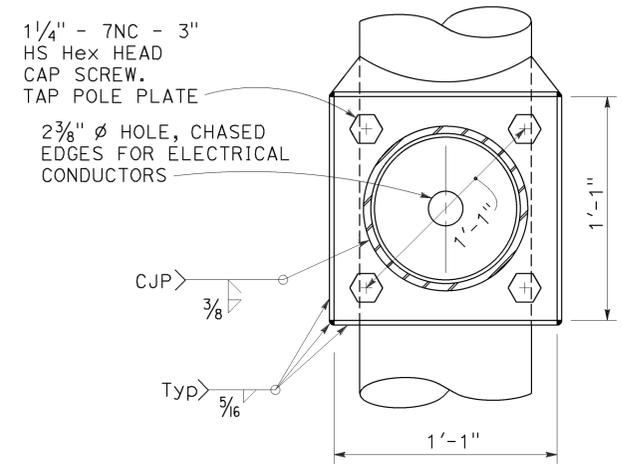
TO ACCOMPANY PLANS DATED 5-2-16



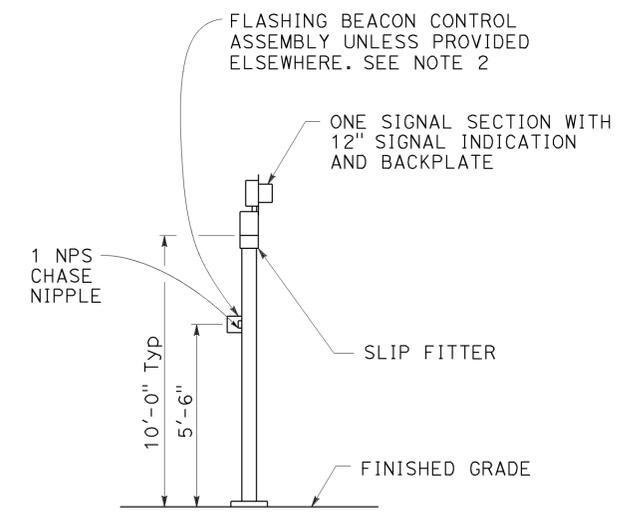
TYPE 15-FBS
FLASHING BEACON WITH SLIP BASE INSTALLATION
DETAIL A



ELEVATION B

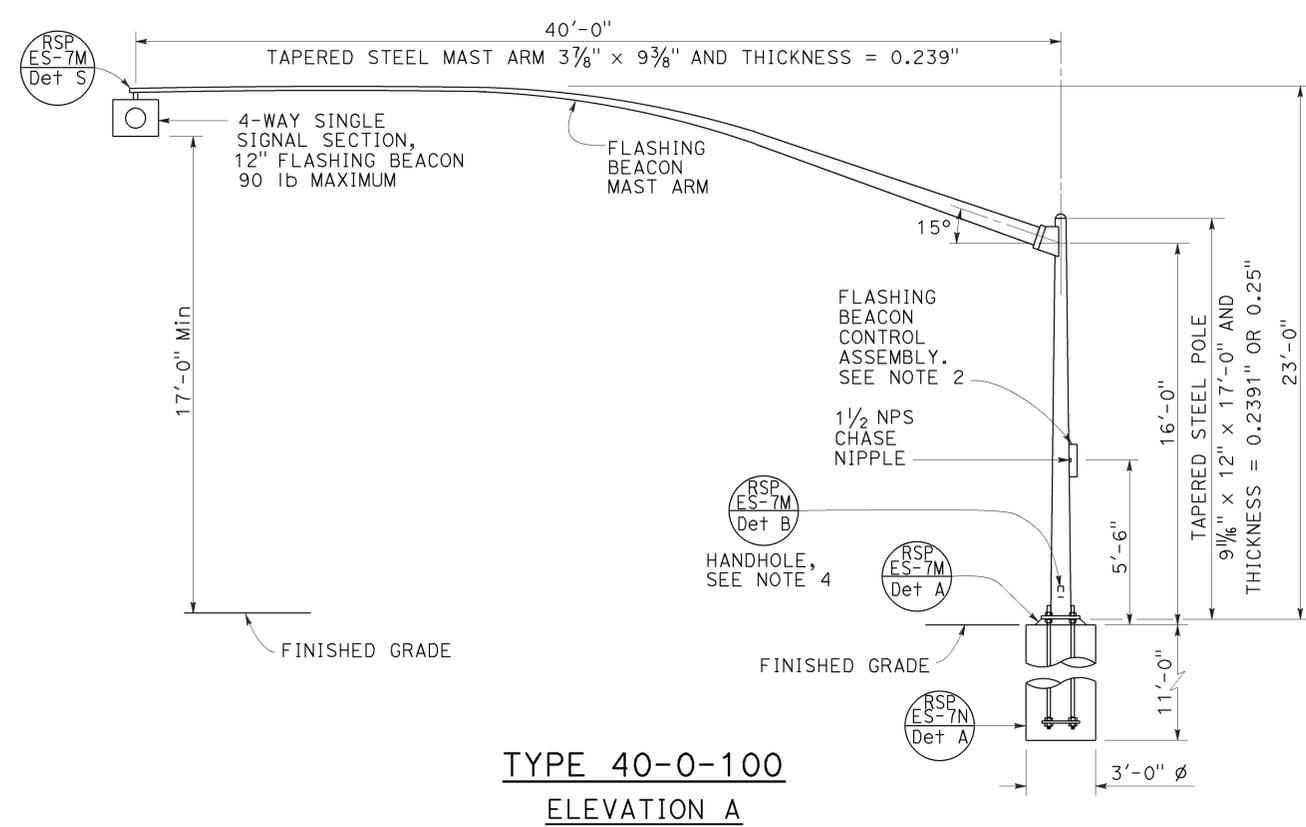


VIEW A-A
FLASHING BEACON MAST ARM
CONNECTION DETAIL
DETAIL B

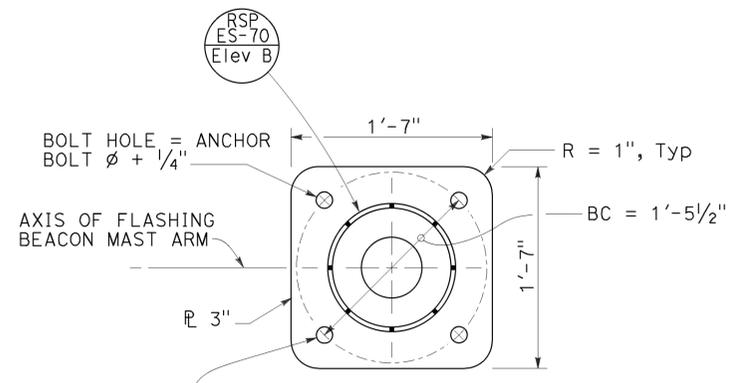


TYPE 1-A, 1-B, 1-C, AND 1-D
FLASHING BEACON INSTALLATION
DETAIL D

See Note 5



TYPE 40-0-100
ELEVATION A



BASE PLATE
DETAIL C

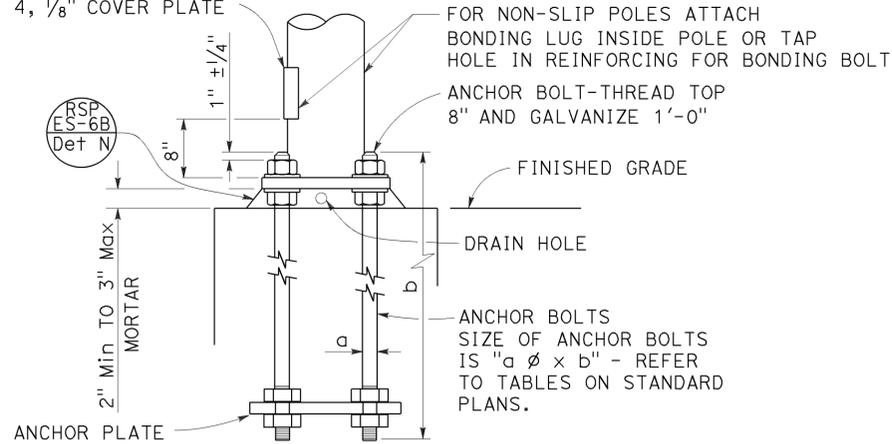
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(FLASHING BEACON ON A TYPE 1, TYPE 15-FBS, AND TYPE 40 STANDARD)
 NO SCALE

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.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Sac	51,160	4.0/4.3 R44.4/47.0	108A	117

Stanley P. Johnson
REGISTERED CIVIL ENGINEER

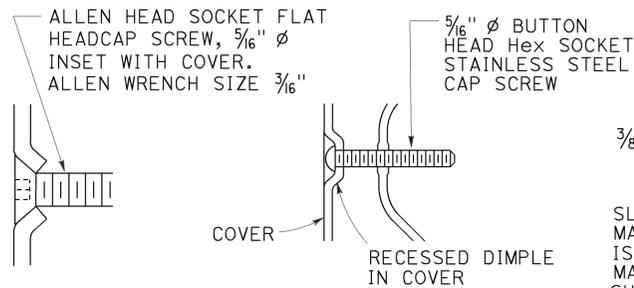
July 15, 2016
PLANS APPROVAL DATE

Stanley P. Johnson
No. C57793
Exp. 3-31-18
CIVIL
STATE OF CALIFORNIA

TO ACCOMPANY PLANS DATED 5-2-16

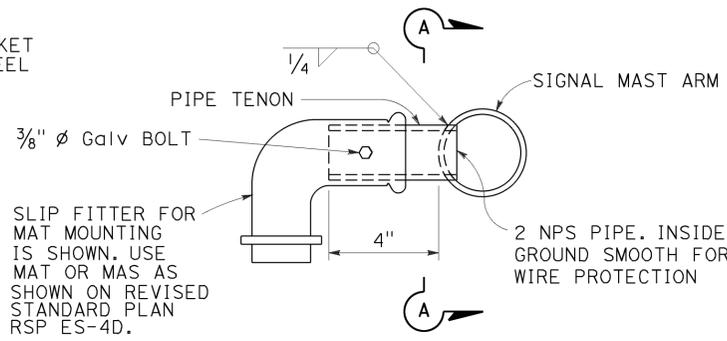
Type 26A - 3 - 100 - 45 - 10 - F or FB
 Load case (Use SL for special load case)
 Design wind velocity (mph)
 Signal mast arm length (ft)
 Standard plan year
 Only for poles or mast arms using Detail F
 Only for poles or mast arms using RSP ES-70

SAMPLE IDENTIFICATION NUMBER

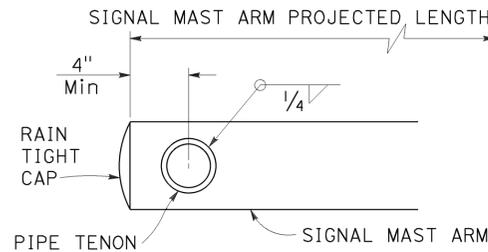


**TYPICAL DETAIL
DETAIL B-1**

**ALTERNATIVE DETAIL
DETAIL B-2**



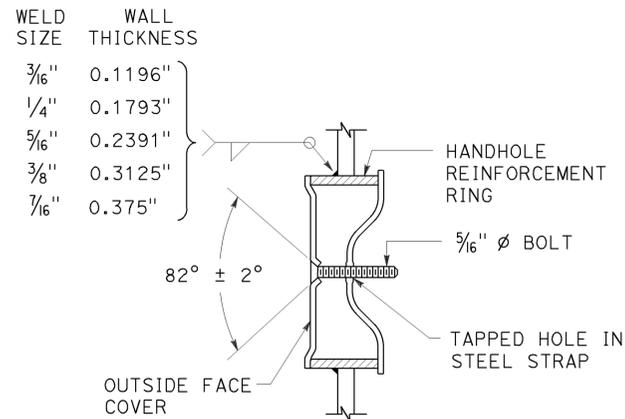
**SIDE TENON
DETAIL S-1**



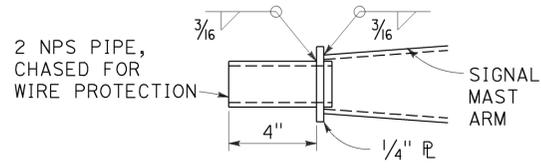
SECTION A-A

NOTES:

1. Provide a Hex nut, leveling nut and 2 washers for each bolt.
2. Luminaire mast arms shall be round, tapered steel tubes, taper of 0.1375" to 0.143-inch per foot with an end section 2 3/8" OD for mounting hardware. Extensions of 2 NPS Standard pipe and 7" long may be used at the option of the manufacturer. When low pressure sodium luminaires are required, the extension shall be 1'-3".
3. Signal mast arms shall be round, tapered steel tubes, maximum taper 0.143-inch per foot.
4. Handhole reinforcement ring shall be 1/4" x 2" for 0.1196" to 0.2391" thick poles, 3/8" x 2" for 0.3125" 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

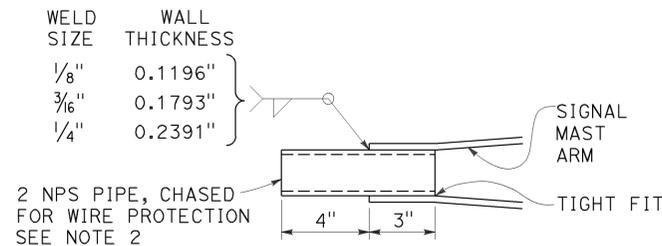


**TAMPER RESISTANT HANDHOLE COVER
DETAIL B**

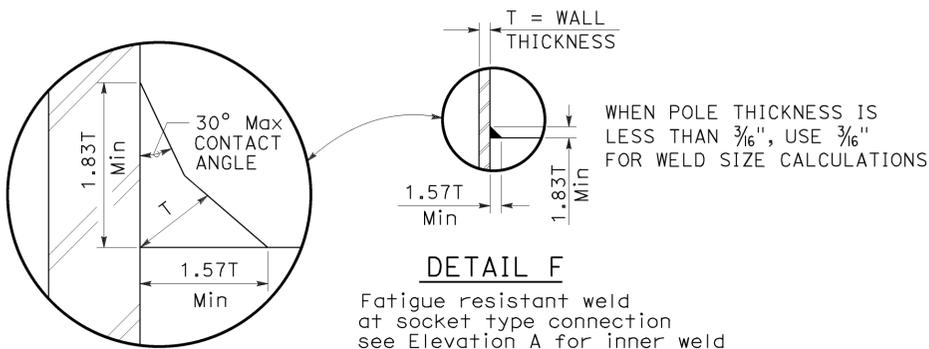


**TIP TENON
DETAIL TL**
This detail supersedes Detail S when so designated

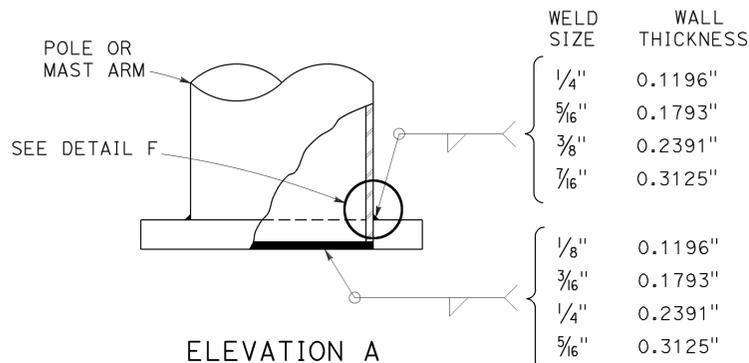
**PIPE TENONS
DETAIL S**



**TIP TENON
DETAIL TS**



DETAIL F
Fatigue resistant weld at socket type connection see Elevation A for inner weld



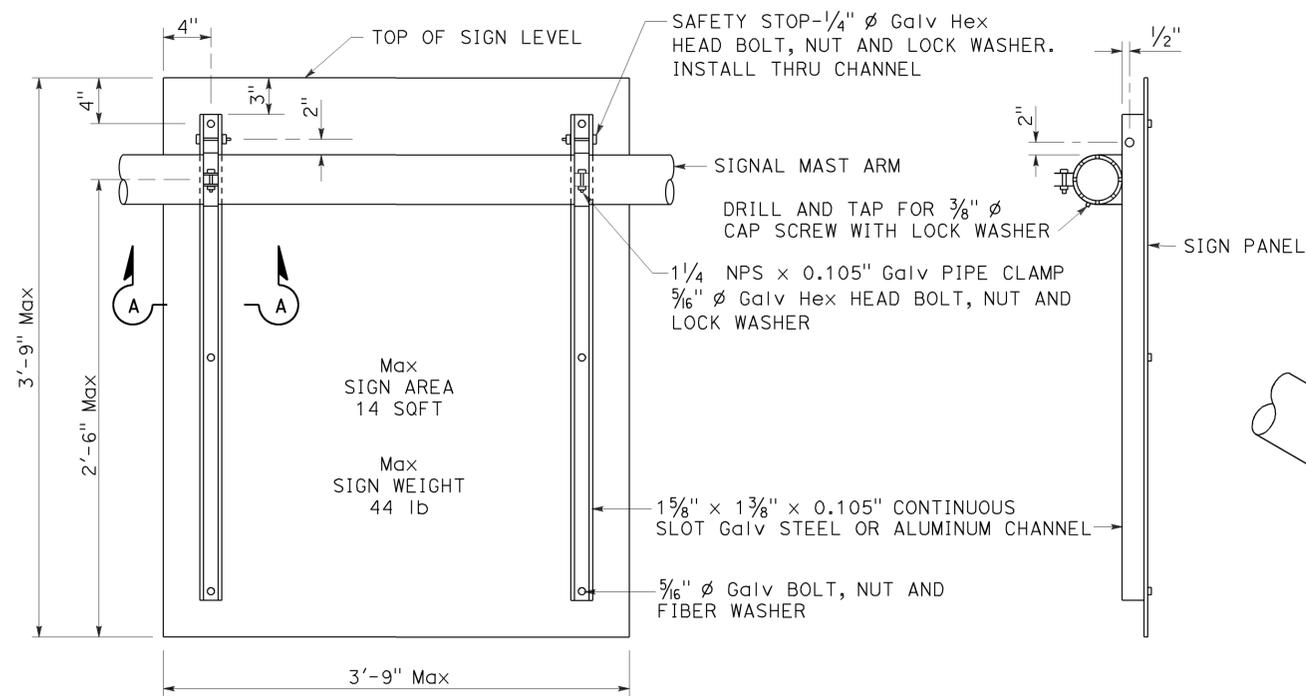
ELEVATION A

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

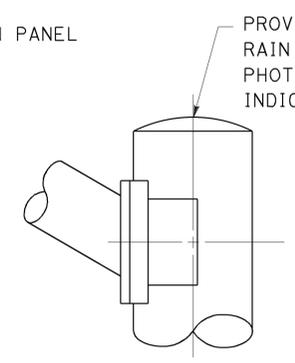
RSP ES-7M DATED JULY 15, 2016 SUPERSEDES RSP ES-7M DATED OCTOBER 30, 2015 AND STANDARD PLAN ES-7M DATED MAY 20, 2011 - PAGE 474 OF THE STANDARD PLANS BOOK DATED 2010.



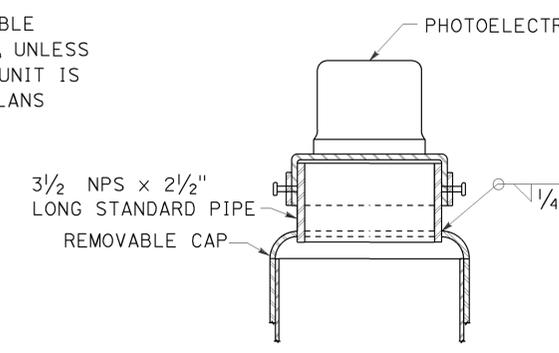
REAR VIEW

SIDE VIEW

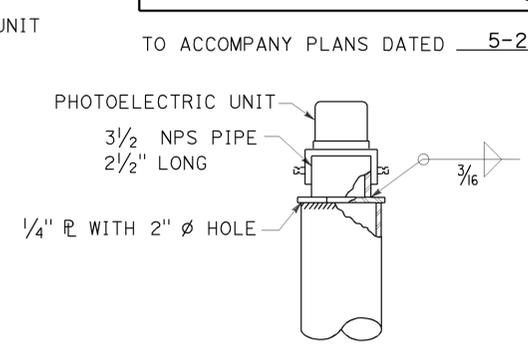
SIGN MOUNTING DETAILS
DETAIL U



STANDARD TOP
DETAIL B-1

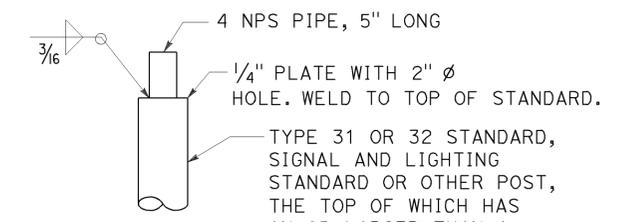


MOUNTING ADAPTER FOR
PHOTOELECTRIC UNIT
DETAIL B-2

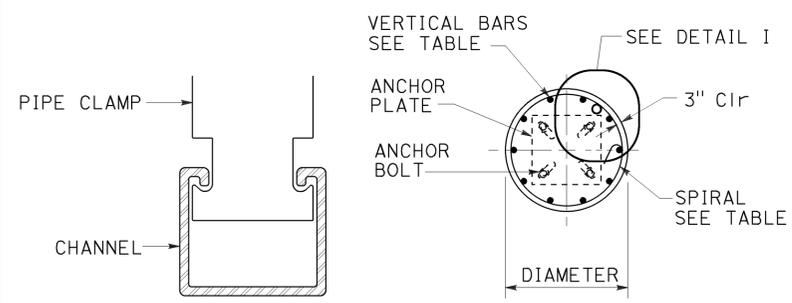


ALTERNATIVE
MOUNTING ADAPTER
DETAIL B-3

POLE TOP DETAILS
DETAIL B

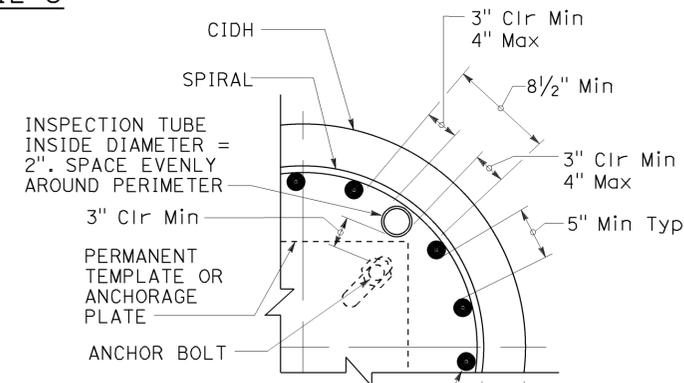


DETAIL C-1



SECTION A-A

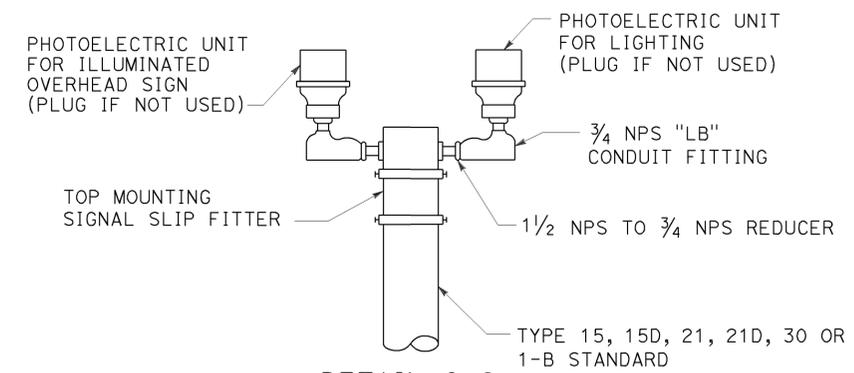
SECTION B-B



INSPECTION TUBE PLACEMENT
DETAIL I

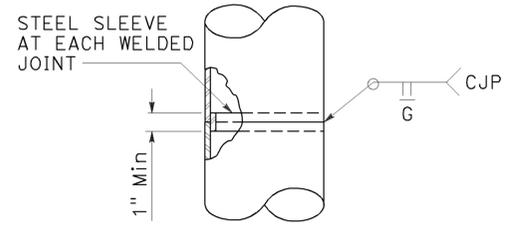
CIDH DIAMETER	VERTICAL BARS	SPIRAL	INSPECTION TUBE
2 ft	8-#5	#4 AT 6	2
2.5 ft	10-#6		4*
3 ft	12-#7		
3.5 ft	14-#8	#5 AT 6	4
4 ft	18-#9	2-#4 AT 7	5
4.5 ft	18-#9	2-#5 AT 7	5
5 ft	22-#10	2-#5 AT 7	6
6 ft	26-#11	2-#6 AT 7	7

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

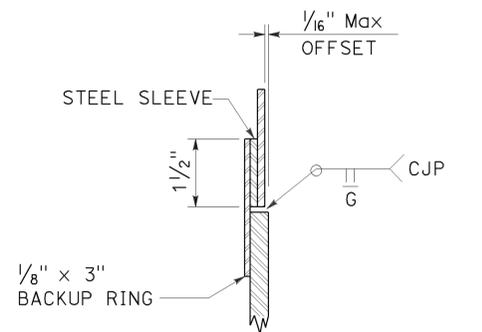


DUAL PHOTOELECTRIC UNIT MOUNTING DETAIL
DETAIL C

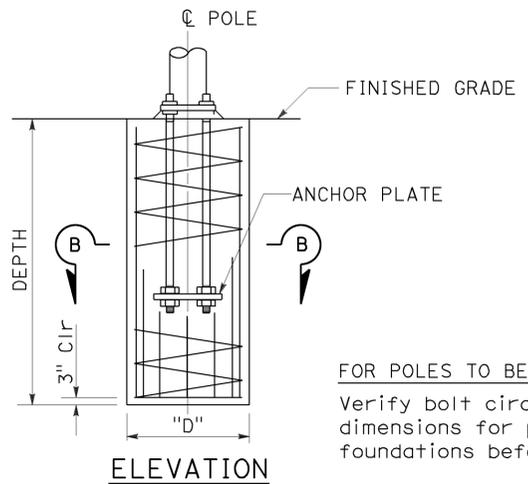
INSPECTION TUBE PLACEMENT
DETAIL I



FOR UNIFORM TUBE THICKNESS
DETAIL T-1



AT TUBE THICKNESS CHANGE
DETAIL T-2



ELEVATION

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

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

2010 REVISED STANDARD PLAN RSP ES-7N

2	DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
	03	Sac	51,160	4.0/4.3 R44.4/47.0	112A	117

Theresa Gabriel
REGISTERED ELECTRICAL ENGINEER

April 15, 2016
PLANS APPROVAL DATE

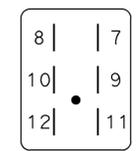
Theresa Aziz Gabriel
No. E15129
Exp. 6-30-16
ELECTRICAL
STATE OF CALIFORNIA

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

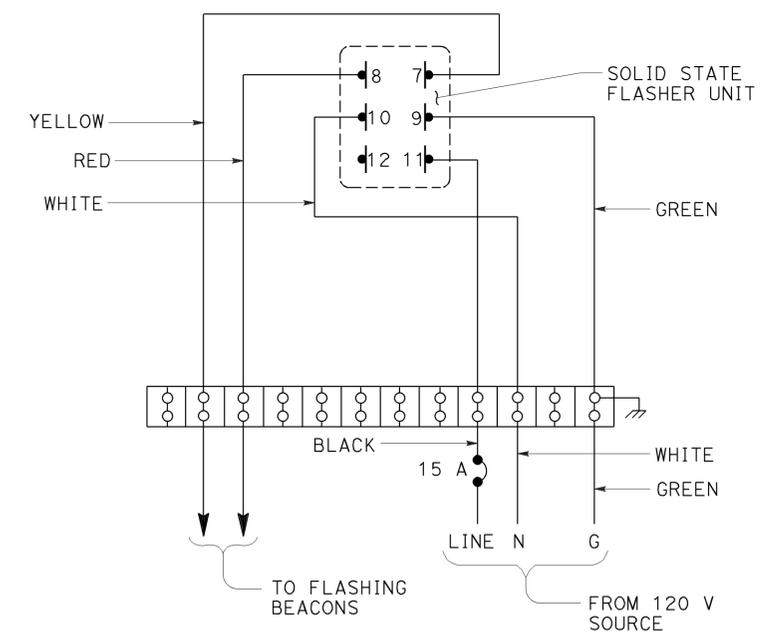
TO ACCOMPANY PLANS DATED 5-2-16

THE FLASHER SHALL MATE WITH A CINCH-JONES SOCKET S-406-SB OR EQUAL AND CONNECTED AS FOLLOWS:

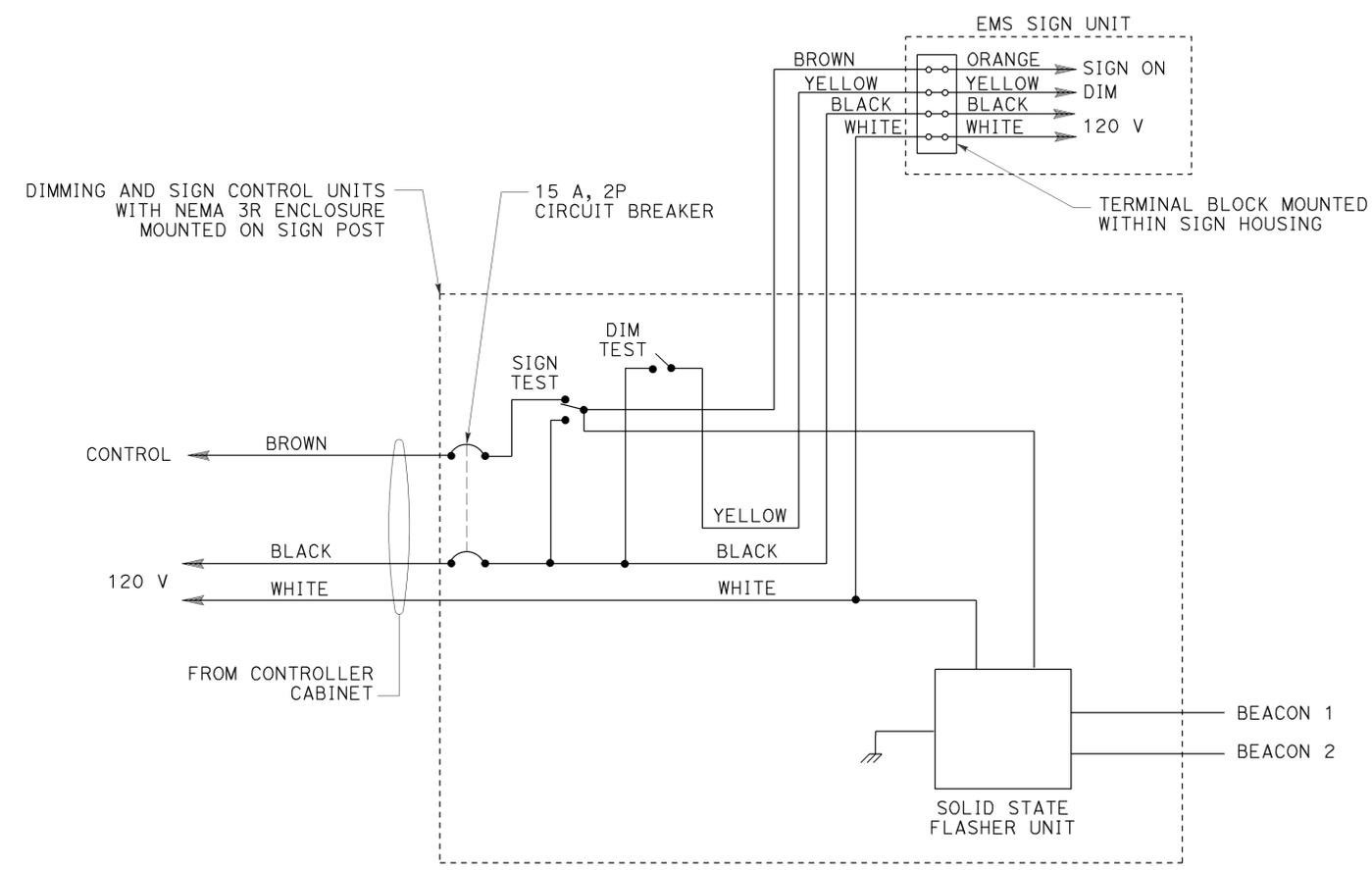
PIN	CIRCUIT	PIN	CIRCUIT
7	LOAD	10	NEUTRAL
8	LOAD	11	LINE
9	CHASSIS GROUND	12	NOT USED



**CONNECTOR SOCKET
SOLID STATE FLASHER UNIT**



**WIRING DIAGRAM
FLASHING BEACON CONTROL ASSEMBLY
DETAIL B**



**WIRING DIAGRAM
LED EXTINGUISHABLE MESSAGE SIGN
DETAIL A**

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(CONTROL ASSEMBLY
WIRING DIAGRAMS)**

NO SCALE

2 ADDED PER ADDENDUM No. 2 DATED SEPTEMBER 15, 2016

RSP ES-14B DATED APRIL 15, 2016 SUPERSEDES STANDARD PLAN ES-14B DATED MAY 20, 2011 - PAGE 494 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP ES-14B

2010 REVISED STANDARD PLAN RSP ES-14B