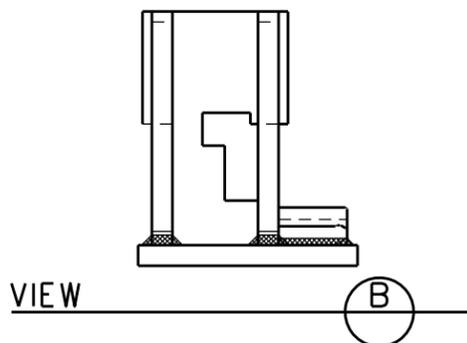
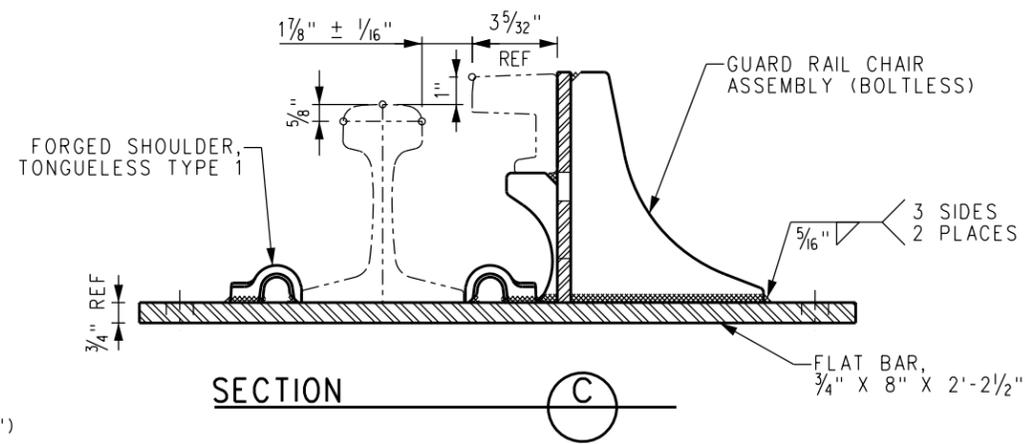
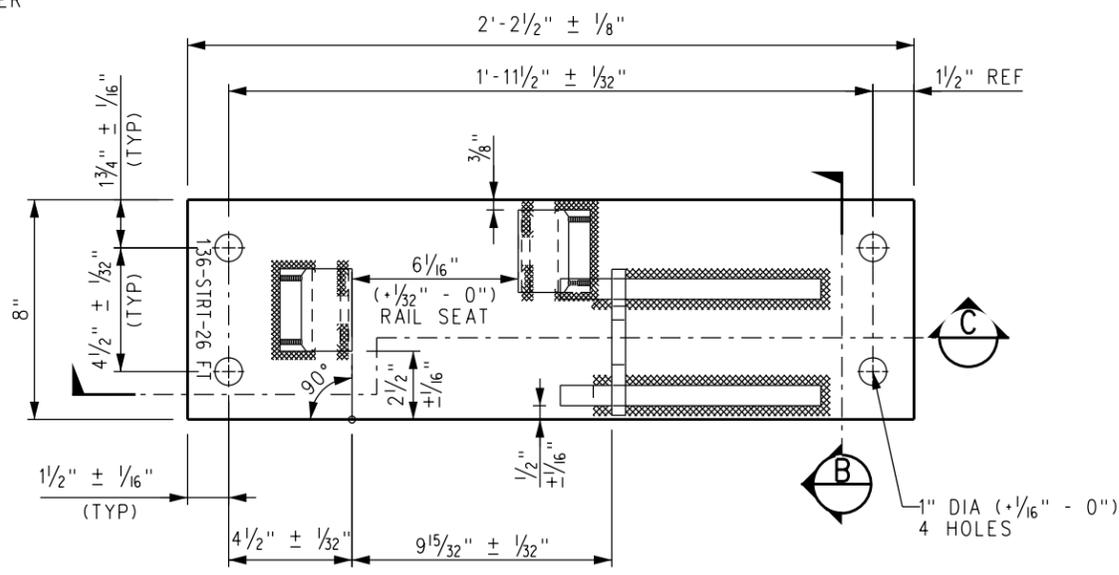
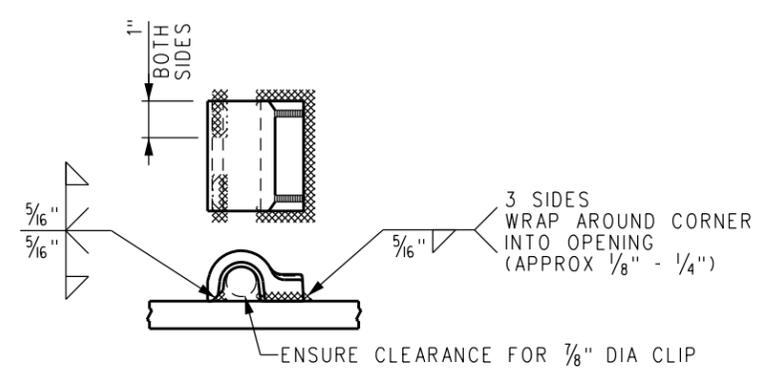
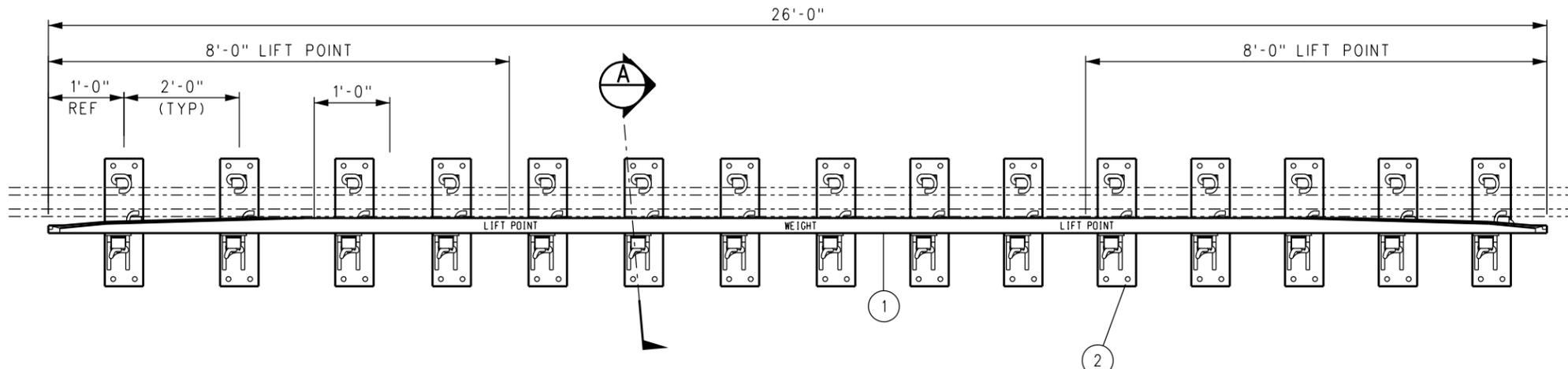
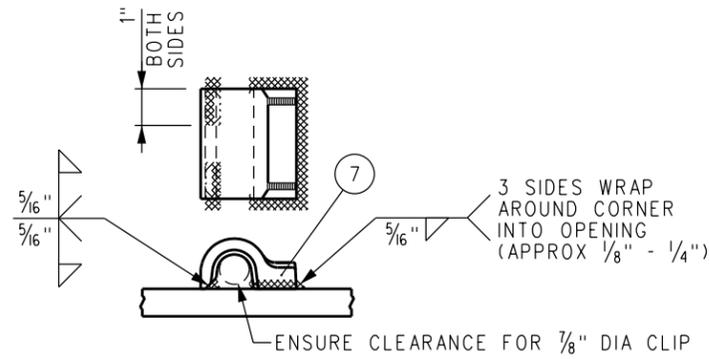


BILL OF MATERIAL				DWG NO	SCRRRA PART NO
ITEM	QTY	DESCRIPTION			
1	1	GUARD BAR, UIC33 1200 SERIES x 26'-0" LONG	-	-	-
2	13	GUARD RAIL PLATE ASSEMBLY, 136 LB RE RAISED 1", STRAIGHT	-	-	-
3	13	H-CLAMP	-	-	-
4	39	CLIP, PANDROL, E2055	-	-	-
5	13	LOCKING BLOCK	-	-	-
6	52	SHIM, 1/8" x 3" x 6"	-	-	-

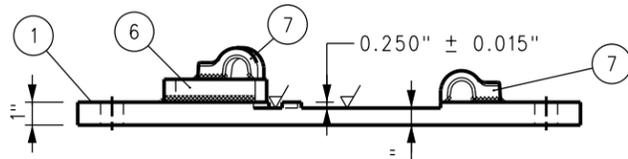
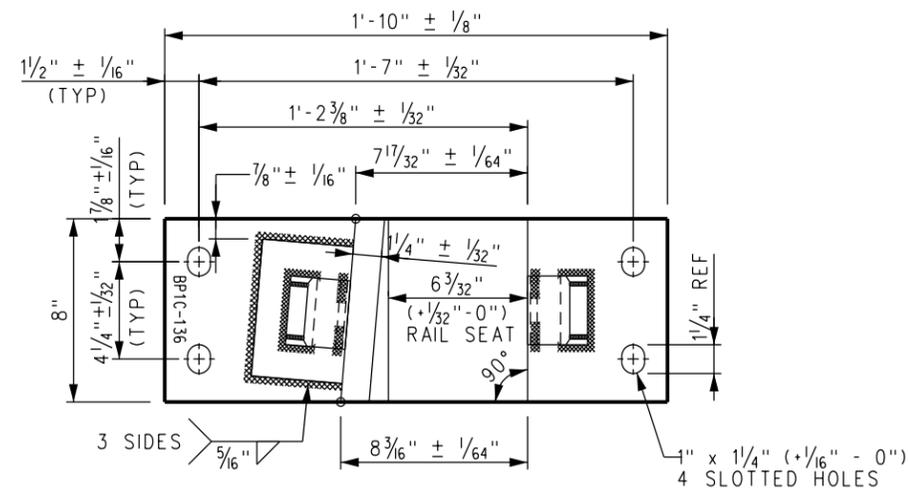


- NOTES:**
1. PLATE SPACING IS SET FOR SHIPPING ONLY. FINAL PLATE SPACING IS TO BE DETERMINED BY TIE SPACING AT TIME OF INSTALLATION.
  2. PANDROL SPRING CLIPS (E2055) TO BE INCLUDED IN ASSEMBLY.
  3. LIFT POINTS AND WEIGHT OF ASSEMBLY TO BE MARKED ON HEAD OF WEAR BAR WITH WHITE PAINT.
  4. PLATE IS TO BE STAMPED WITH PLATE I.D. WITH 1/2" HIGH CHARACTERS AS SHOWN.
  5. GRIND AWAY CORNER OF PANDROL SHOULDER TO CLEAR FOOT OF CHAIR ASSEMBLY.

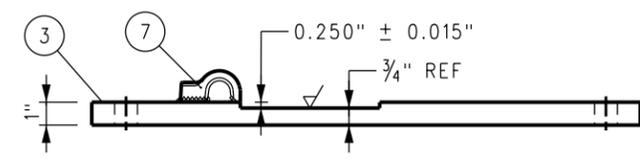
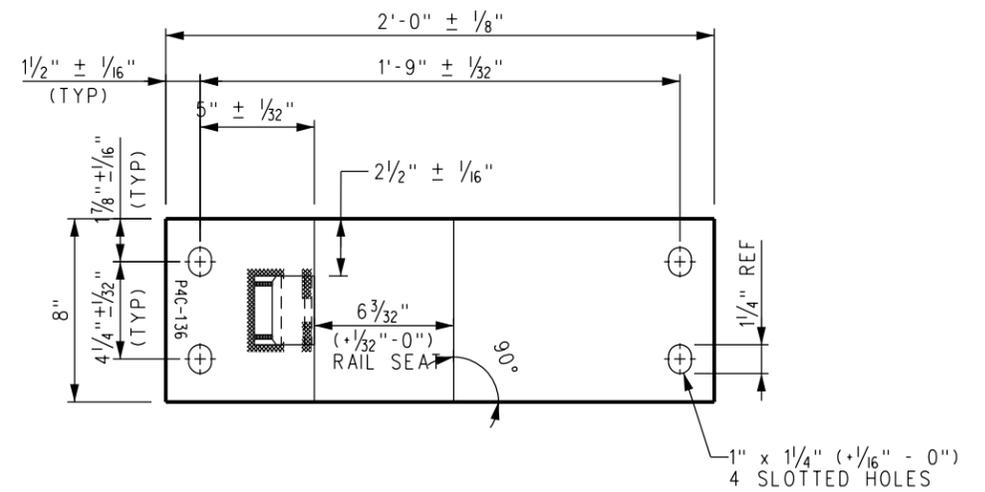
DRAWN BY: <i>Nareh D. Papp</i> HDR DATE: 03/31/2011		<p>SCRRRA ENGINEERING STANDARDS ARE INTENDED FOR SCRRRA APPROVED USES ONLY. FOR NON-SCRRRA APPROVED USES, SCRRRA SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF THE DATA OR INFORMATION CONTAINED HEREIN. THE SELECTION AND USE OF THESE STANDARDS IS THE SOLE RESPONSIBILITY OF THE USER AND SHOULD NOT BE USED WITHOUT CONSULTING A REGISTERED PROFESSIONAL ENGINEER. ALL WARRANTIES AND REPRESENTATIONS OF ANY KIND ARE DISCLAIMED. ANYONE MAKING USE OF THIS INFORMATION AGREES THAT IT ASSUMES ALL LIABILITY ARISING FROM SUCH USE. NO PART OF THESE STANDARDS SHOULD BE REPRODUCED OR DISTRIBUTED IN ANY FORM OR BY ANY MEANS WITHOUT THE PRIOR WRITTEN PERMISSION OF SCRRRA. ALL RIGHTS RESERVED.</p>	<p>SOUTHERN CALIFORNIA REGIONAL RAIL AUTHORITY ONE GATEWAY PLAZA, 12TH FLOOR, L. A., CA. 90012</p>	<p>ENGINEERING STANDARDS</p> <p>GUARD RAIL ASSEMBLY, STRAIGHT WITH PLATES 26'-0" LONG, BOLTLESS, RAISED 1" CONCRETE TIES - 136 LB RE RAIL, 1 7/8" FLANGEWAY</p>	STANDARD 2800
<p>ASSISTANT DIRECTOR: STANDARDS &amp; DESIGN</p> <p><i>William D. Davis</i> DIRECTOR OF ENGINEERING AND CONSTRUCTION</p>					SCALE: NTS
REV. DATE	DESCRIPTION	DES. ENG.			REVISION SHEET 1 OF 1 CADD FILE: ES2800-50



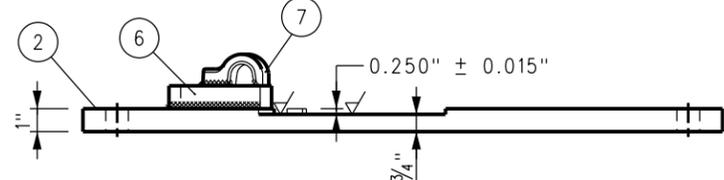
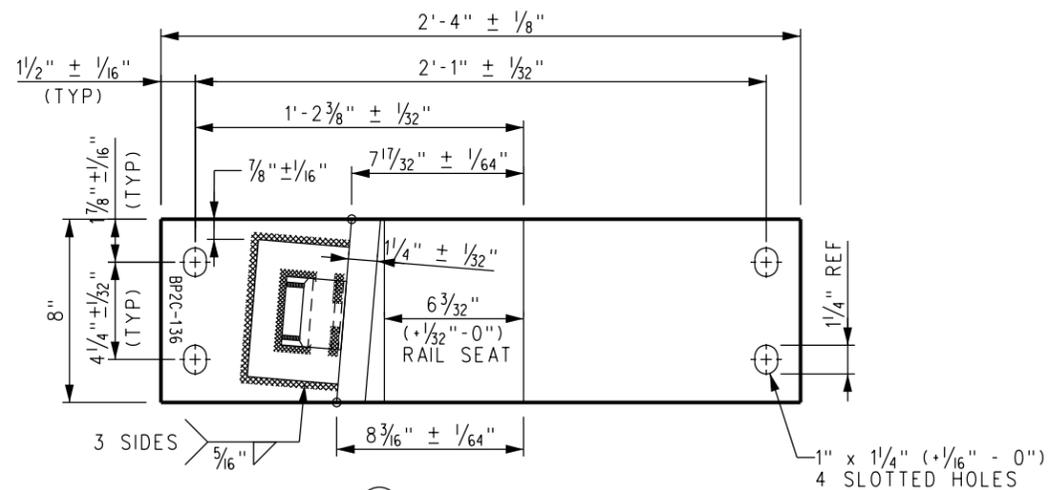
**FORGED SHOULDER WELDING DETAIL**



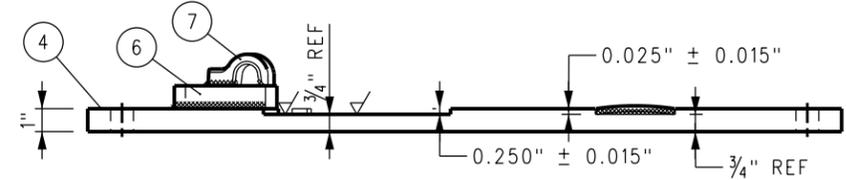
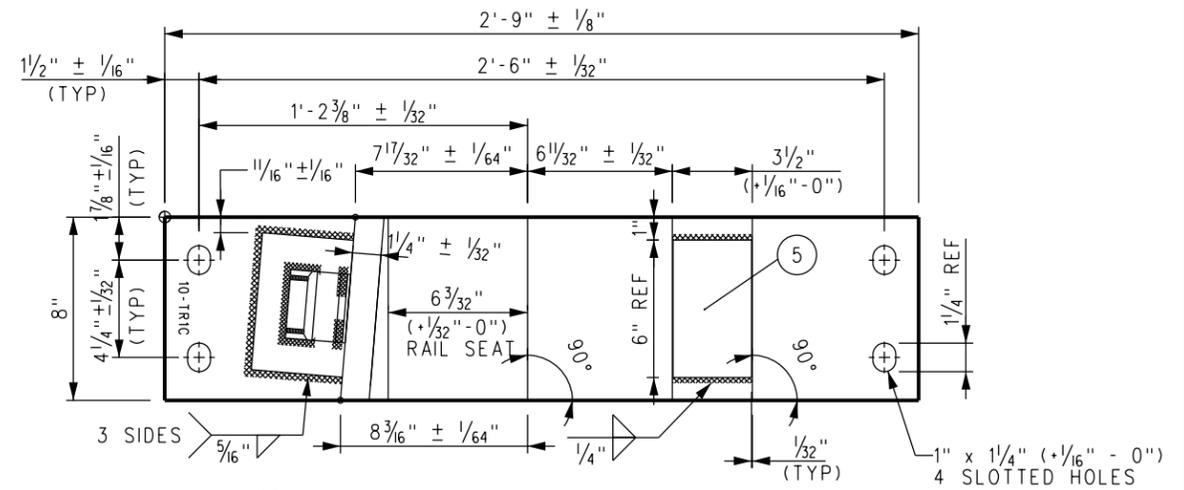
**SWITCH PLATE BRACE BP1C-136**



**SWITCH PLATE P4C-136**



**SWITCH PLATE BRACE BP2C-136**



**SWITCH ROLLER PLATE 10-TRIC**

**NOTES:**

1. I.D. CHARACTERS TO BE 1/2" MINIMUM HEIGHT CLEARLY STAMPED AS SHOWN.
2. WELDS TO BE DRESSED FLUSH WITH SHOULDER & NOT TO PROTRUDE INTO RAIL SEAT.
3. SLOTTED HOLE CENTERS ARE INDICATED ON DRAWING.

BILL OF MATERIALS		BILL OF MATERIALS	
ITEM	DESCRIPTION	ITEM	DESCRIPTION
1	FLAT BAR, ASTM A36, 1" x 8" x 1'-10"	5	RISER FOR ROLLER PLATE, 1/4" THICK x 3 3/16" x 6"
2	FLAT BAR, ASTM A36, 1" x 8" x 2'-4"	6	STOP ASSEMBLY FOR BOLTLESS BRACE, 1" THICK, CONTINUOUSLY WELDED SHOULDER
3	FLAT BAR, ASTM A36, 1" x 8" x 2'-0"	7	SHOULDER, PANDROL, FORGED TONGUELESS, TYPE 5
4	FLAT BAR, ASTM A36, 1" x 8" x 2'-9"		

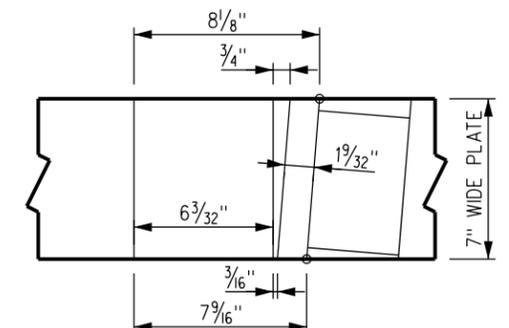
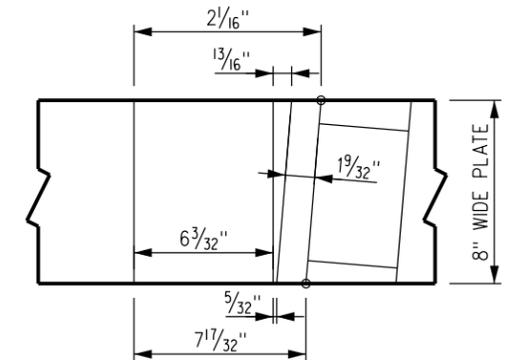
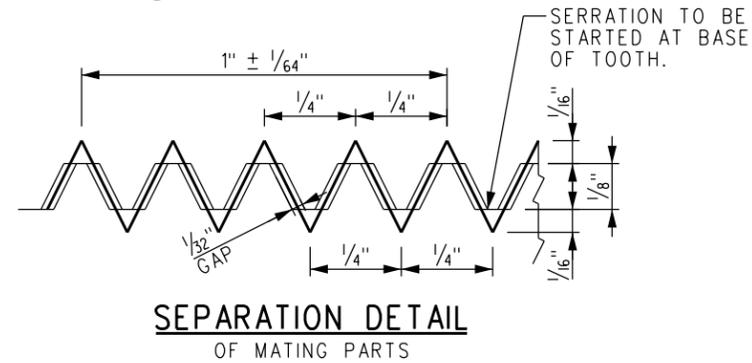
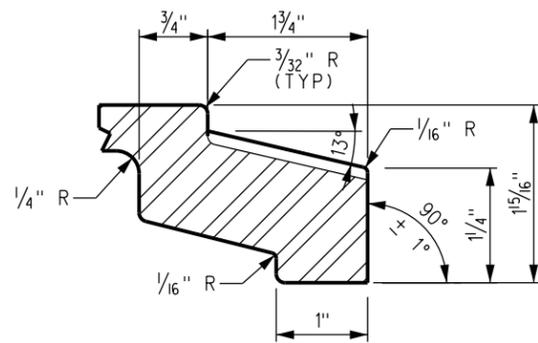
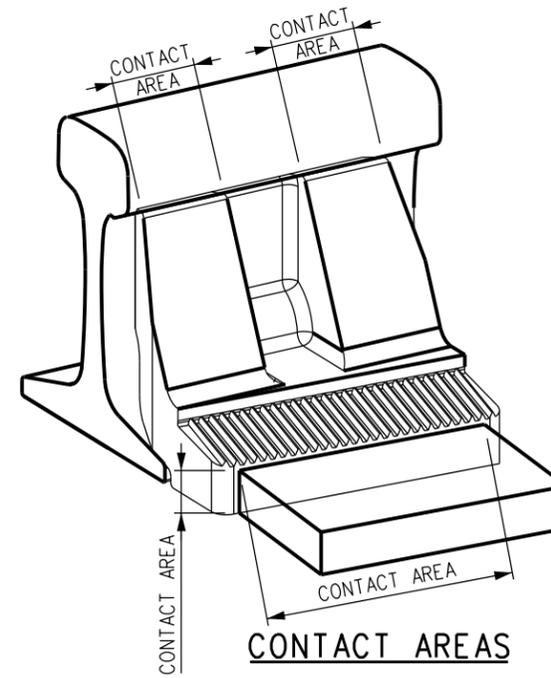
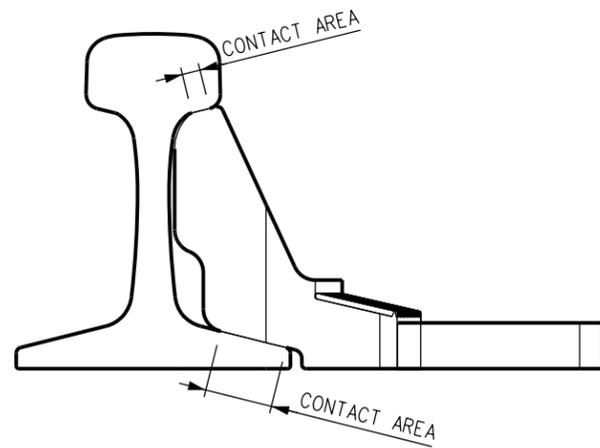
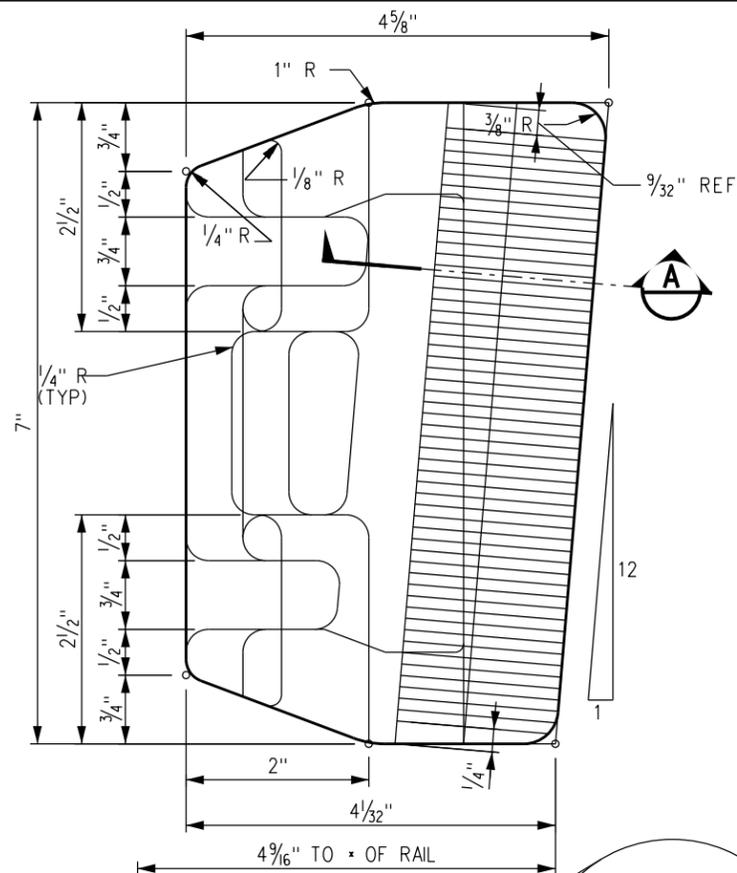
DRAWN BY: <i>Nareh D. Pape</i>		HDR DATE: 03/31/2011	
REVISION		XX XX	
REV.	DATE	DES.	ENG.

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SOUTHERN CALIFORNIA REGIONAL RAIL AUTHORITY  
ONE GATEWAY PLAZA, 12TH FLOOR, L. A., CA. 90012

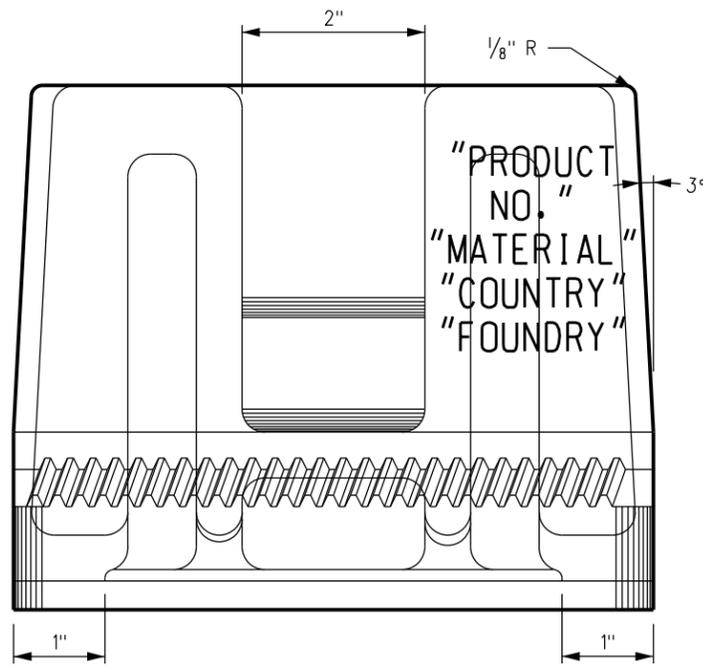
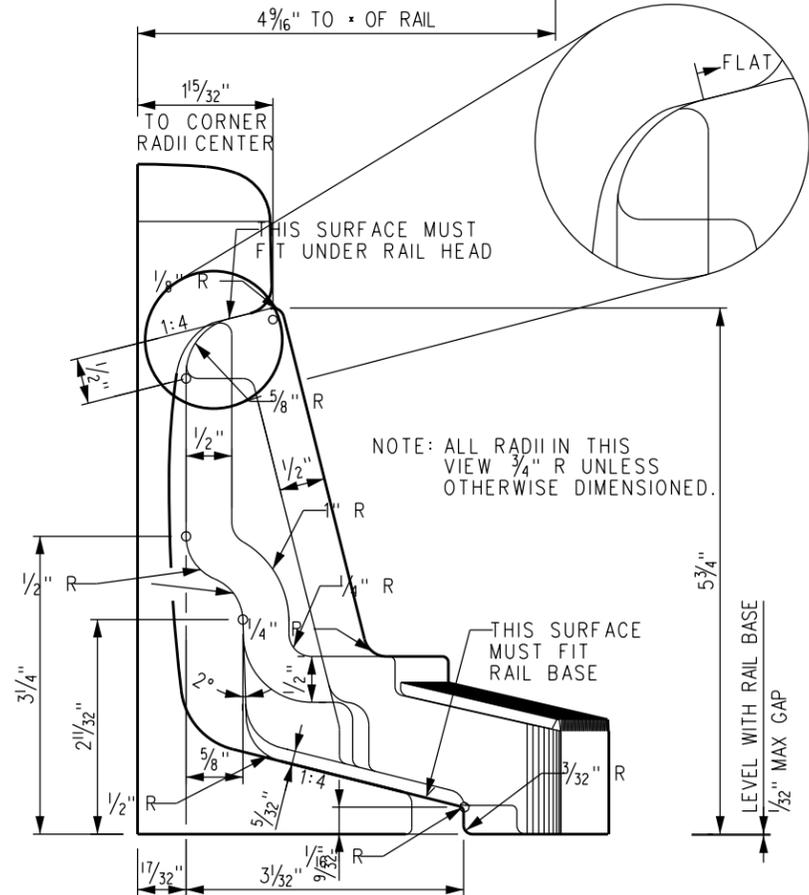
**ENGINEERING STANDARDS**  
SWITCH PLATES BRACES BP1C AND BP2C, PLATE P4C-136 AND ROLLER PLATE 10-TRIC FOR 136 LB RE CONCRETE TIE TURNOUT

STANDARD	2800
SCALE:	NTS
REVISION SHEET	1 OF 1
CADD FILE:	ES2800-80



**PLATE DESIGN REFERENCE DETAILS**

NOTE: VALUES ONLY GOOD FOR 90° PLATES.



**NOTES:**

- "PART ID" CHARACTERS TO BE CAST RAISED WITH TEXT AS FOLLOWS:  
 "PRODUCT NO." ES2800-81  
 "MATERIAL" D.I.  
 "COUNTRY" SEE "COUNTRY OF ORIGIN"  
 "FOUNDRY" LOGO OR ID NOT TO BE GREATER THAN 3/4" x 3/4"
- "COUNTRY OF ORIGIN":  
 CANADA = "CA"; CHINA = "CH"; UNITED STATES = "US".
- TEXT AND LOGOS ARE RAISED 0.030" TO 0.040". THE TEXT FONT IS BLOCK LETTERING AND TEXT SIZE OF 3/8".
- FOR USE WITH 132 LB AND 136 LB RE RAIL ONLY.
- MATERIAL: DUCTILE IRON, ASTM A536 GR 65-45-12
- SEE ES2800-82 FOR SERRATED WASHER DRAWING.

REV.	DATE	DESCRIPTION	DES.	ENG.
X	XX-XX-XX	REVISION	XX	XX

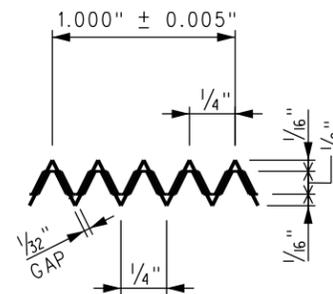
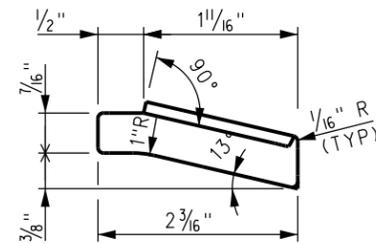
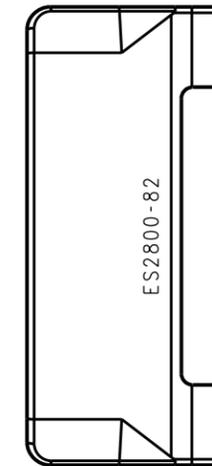
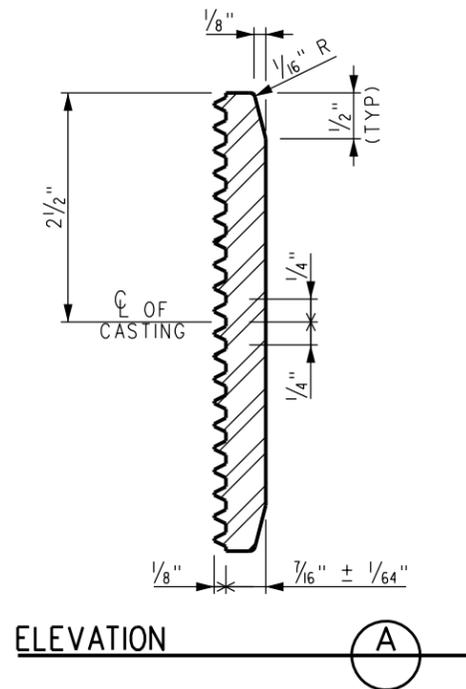
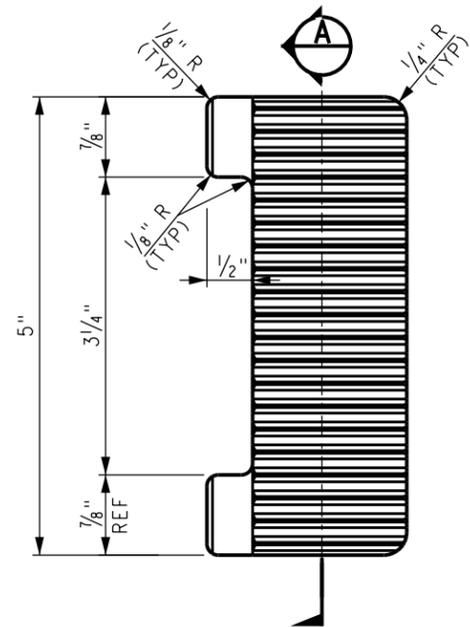
DRAWN BY: HDR DATE: 03/31/2011  
*Nareh D. Pae*  
 ASSISTANT DIRECTOR: STANDARDS & DESIGN  
*William Dava*  
 DIRECTOR OF ENGINEERING AND CONSTRUCTION

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 ONE GATEWAY PLAZA, 12TH FLOOR, L. A., CA. 90012

ENGINEERING STANDARDS  
 BOLTLESS BRACE (TYPE 2)  
 FOR 136 LB RE RAIL

STANDARD	2800
SCALE:	NTS
REVISION SHEET	1 OF 1
CADD FILE:	ES2800-81



**SERRATION DETAIL**  
OF MATING PARTS  
(ALL DIMENSIONS ± 1/64")

**NOTES:**

1. MATERIAL - DUCTILE IRON ASTM Gr 536-G 65-45-12 OR ACCEPTABLE ALTERNATE AISI/SAE 1020
2. PARTS TO BE CAST INDENTED WITH TEXT ES2800-82.

DRAWN BY: <i>Nareh D. Papp</i>		HDR: <i>Wilson Dava</i>		DATE: 03/31/2011	
REVISION		DES.		ENG.	
X	XX-XX-XX			XX	XX
REV.	DATE	DESCRIPTION	DES.	ENG.	

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ONE GATEWAY PLAZA, 12TH FLOOR, L. A., CA. 90012

ENGINEERING STANDARDS

SERRATED WASHER FOR BOLTLESS BRACE

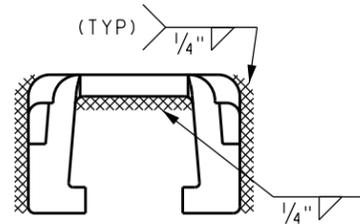
STANDARD	2800
SCALE:	NTS
REVISION SHEET	1 OF 1
CADD FILE:	ES2800-82

BILL OF MATERIAL

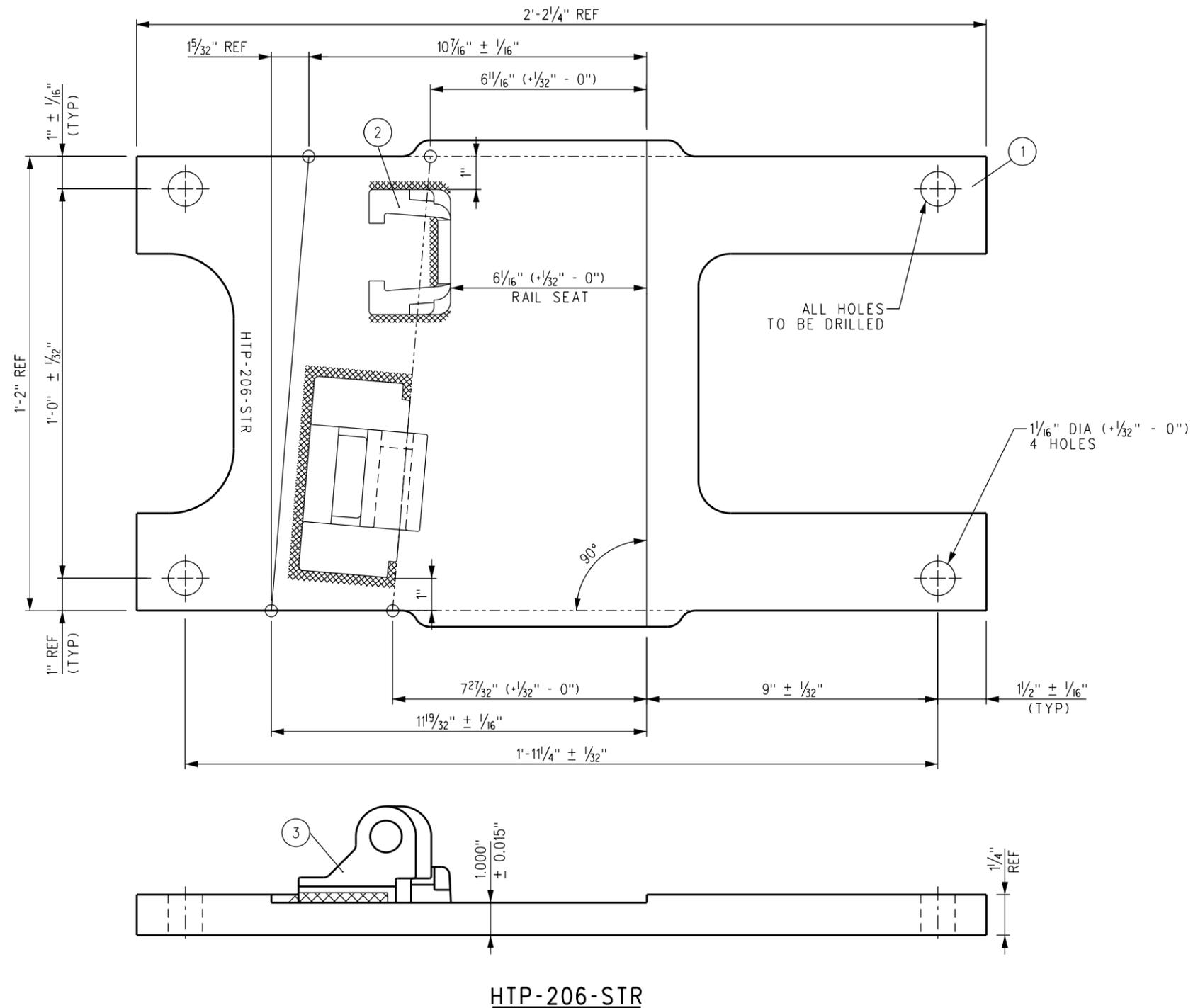
ITEM	QTY FOR HTP-206-STR	DESCRIPTION	DWG NO	SCRRRA PART NO
1	1	BURNED SWITCH PLATE, 1/4" THICK	-	
2	1	SAFELOK SHOULDER	-	
3	1	LV BRACE RETENTION BLOCK	-	

**NOTE:**

1. I.D. CHARACTERS TO BE 5/8" MINIMUM HEIGHT CLEARLY STAMPED AS SHOWN.
2. SLOTTED HOLE CENTERS ARE INDICATED ON DRAWING.



**TYPICAL SAFELOK WELD-ON CAST SHOULDER WELDING DETAILS**



REV.	DATE	DESCRIPTION	DES.	ENG.
X	XX-XX-XX	REVISION	XX	XX

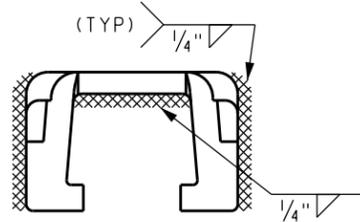
DRAWN BY: *Nareh D. Bae* HDR DATE: 03/31/2011  
 ASSISTANT DIRECTOR: STANDARDS & DESIGN  
*William Dava*  
 DIRECTOR OF ENGINEERING AND CONSTRUCTION

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 ONE GATEWAY PLAZA, 12TH FLOOR, L. A., CA. 90012

ENGINEERING STANDARDS  
 SWITCH PLATES FOR HOLLOW STEEL TIES,  
 136 LB RE RAIL  
 PLATE HTP-206-STR NO SKEW LV BRACE

STANDARD	2800
SCALE:	NTS
REVISION SHEET	1 OF 1
CADD FILE:	ES2800-90

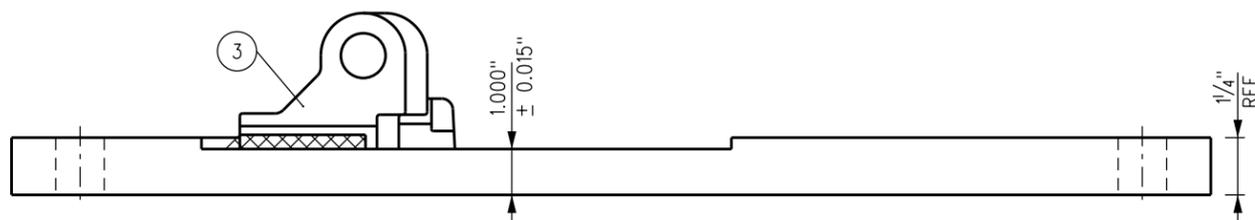
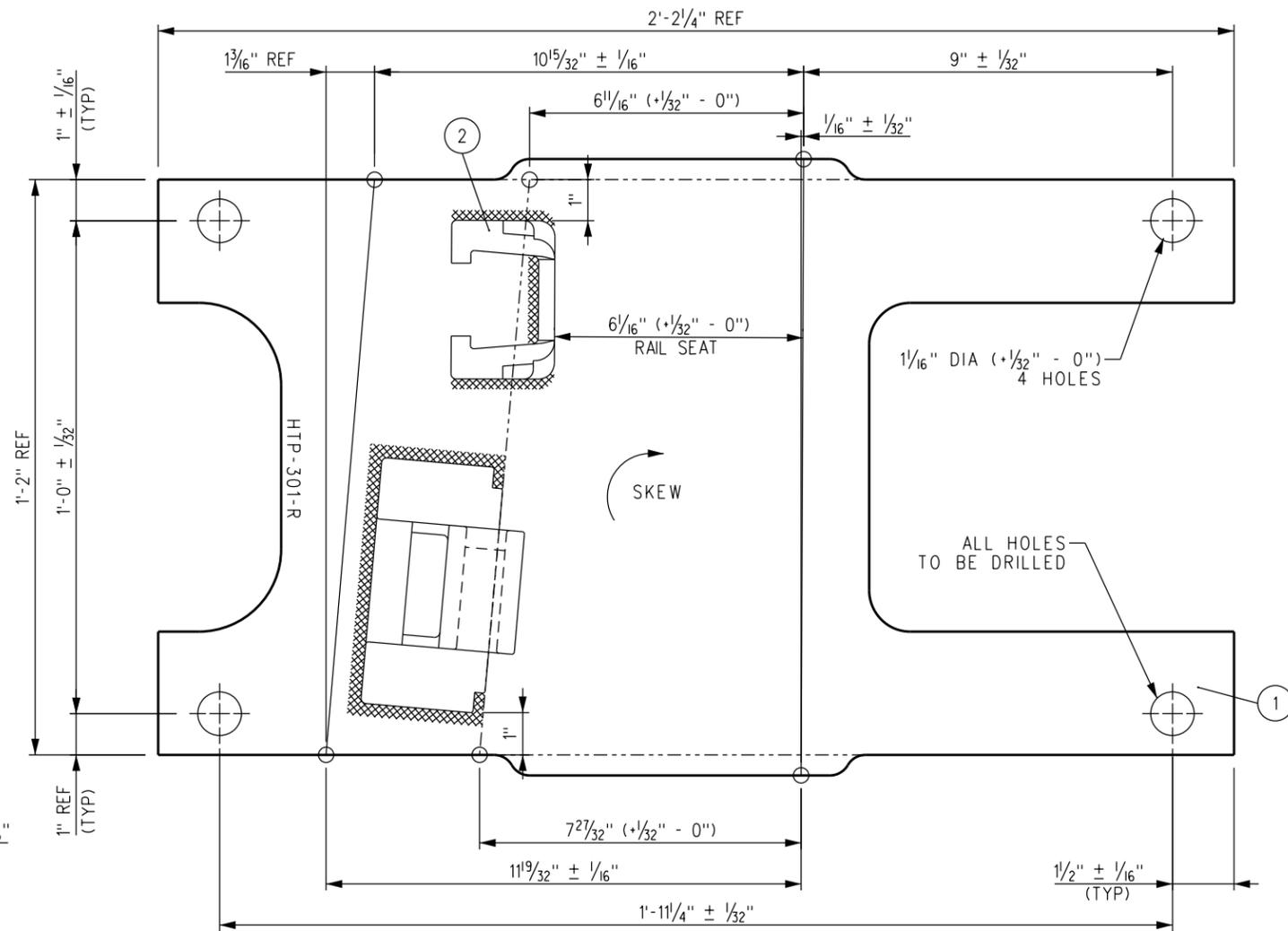
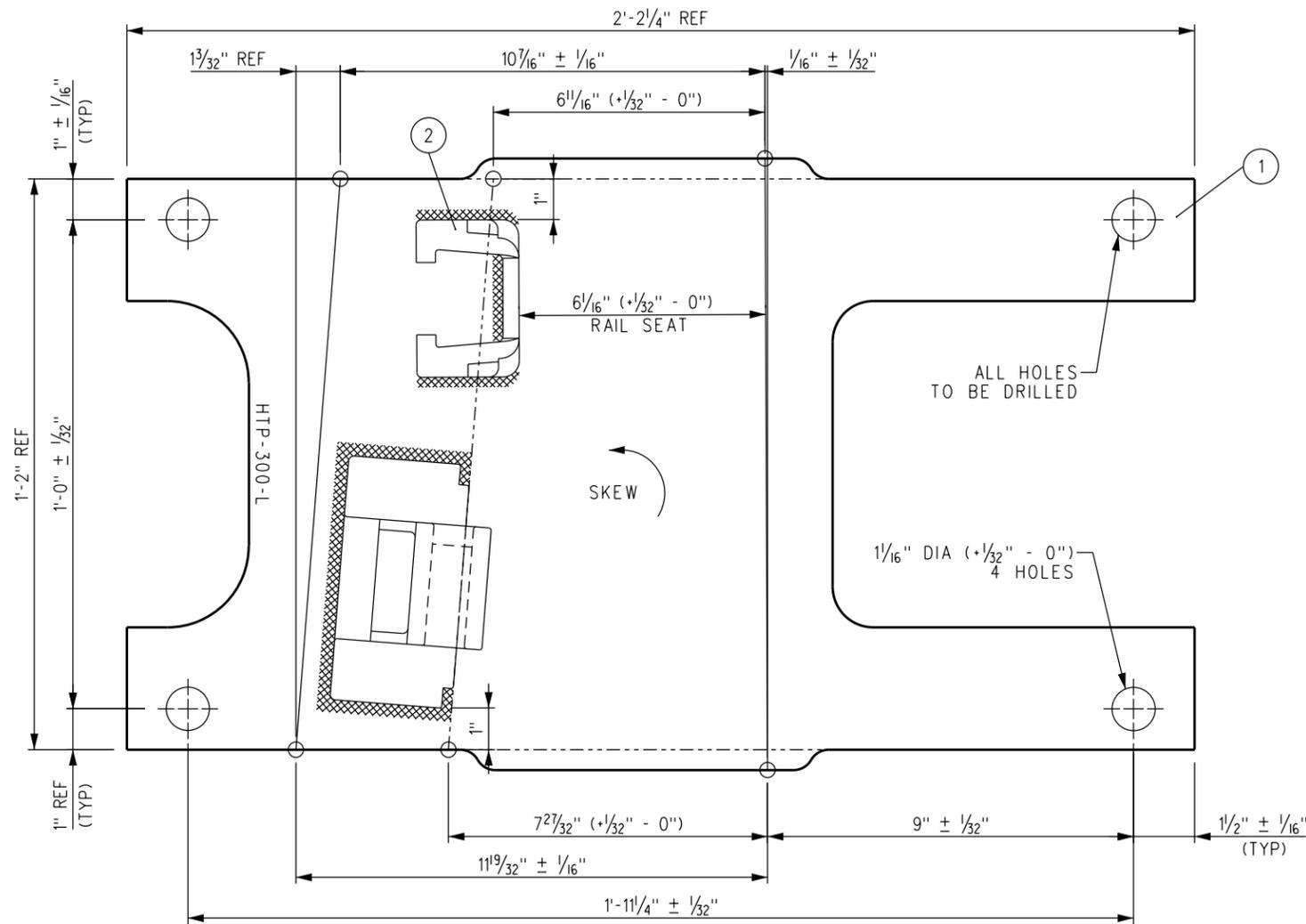


**TYPICAL SAFELOK WELD-ON CAST SHOULDER WELDING DETAILS**

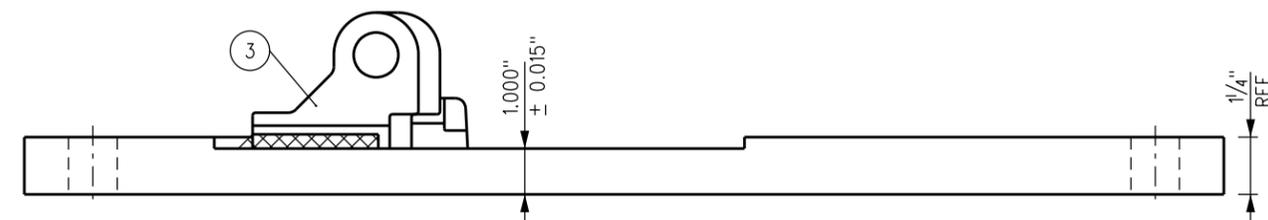
BILL OF MATERIAL					
ITEM	QTY FOR HTP-300-L	QTY FOR HTP-301-R	DESCRIPTION	DWG NO	SCRR PART NO
1	1	1	BURNED SWITCH PLATE, 1/4" THICK	-	
2	1	1	SAFELOK SHOULDER	-	
3	1	1	LV BRACE RETENTION BLOCK	-	

**NOTE:**

1. I.D. CHARACTERS TO BE 5/8" MINIMUM HEIGHT CLEARLY STAMPED AS SHOWN.
2. SLOTTED HOLE CENTERS ARE INDICATED ON DRAWING.



**HTP-300-L**



**HTP-301-R**

REV.	DATE	DESCRIPTION	DES.	ENG.
X	XX-XX-XX	REVISION	XX	XX

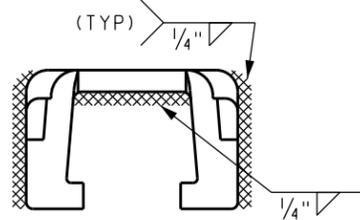
DRAWN BY: *Nareh D. Papp* HDR DATE: 03/31/2011  
 ASSISTANT DIRECTOR: STANDARDS & DESIGN  
*William Davan*  
 DIRECTOR OF ENGINEERING AND CONSTRUCTION

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 ONE GATEWAY PLAZA, 12TH FLOOR, L. A., CA. 90012

**ENGINEERING STANDARDS**  
 SWITCH PLATES FOR HOLLOW STEEL TIES,  
 136 LB RE RAIL  
 PLATES HTP-300-L & HTP-301-R  
 1/16" SKEW LV BRACE

STANDARD	2800
SCALE	NTS
REVISION SHEET	1 OF 1
CADD FILE	ES2800-91

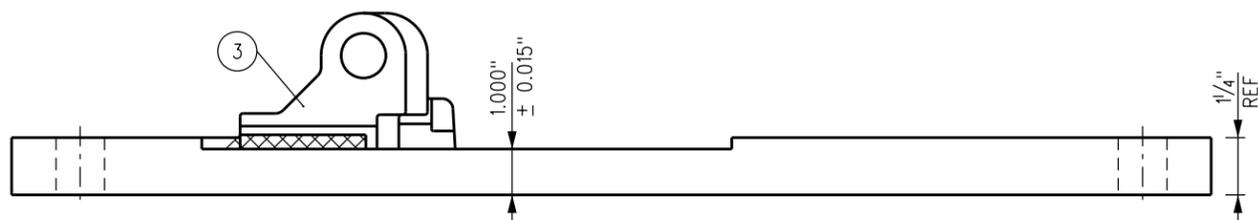
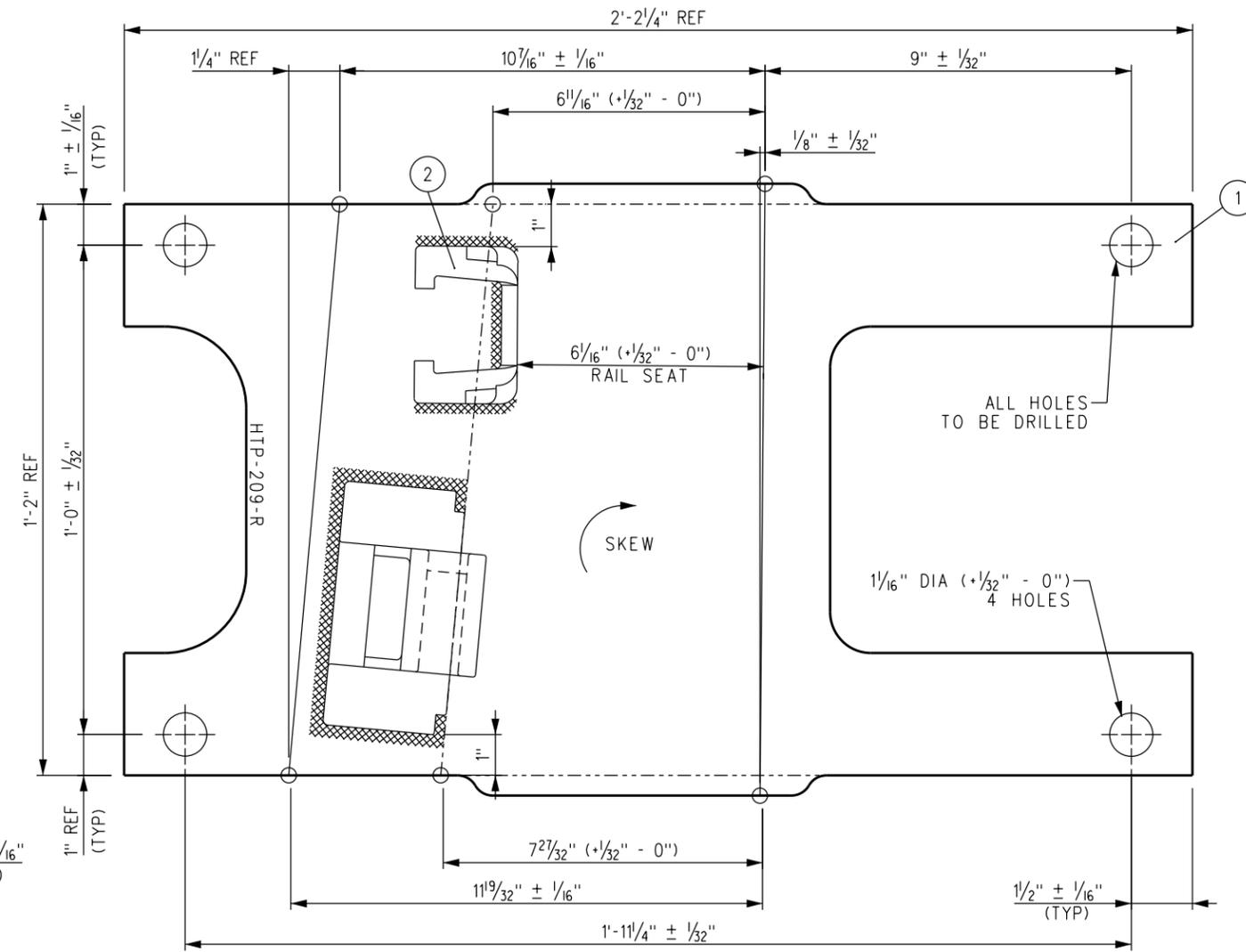
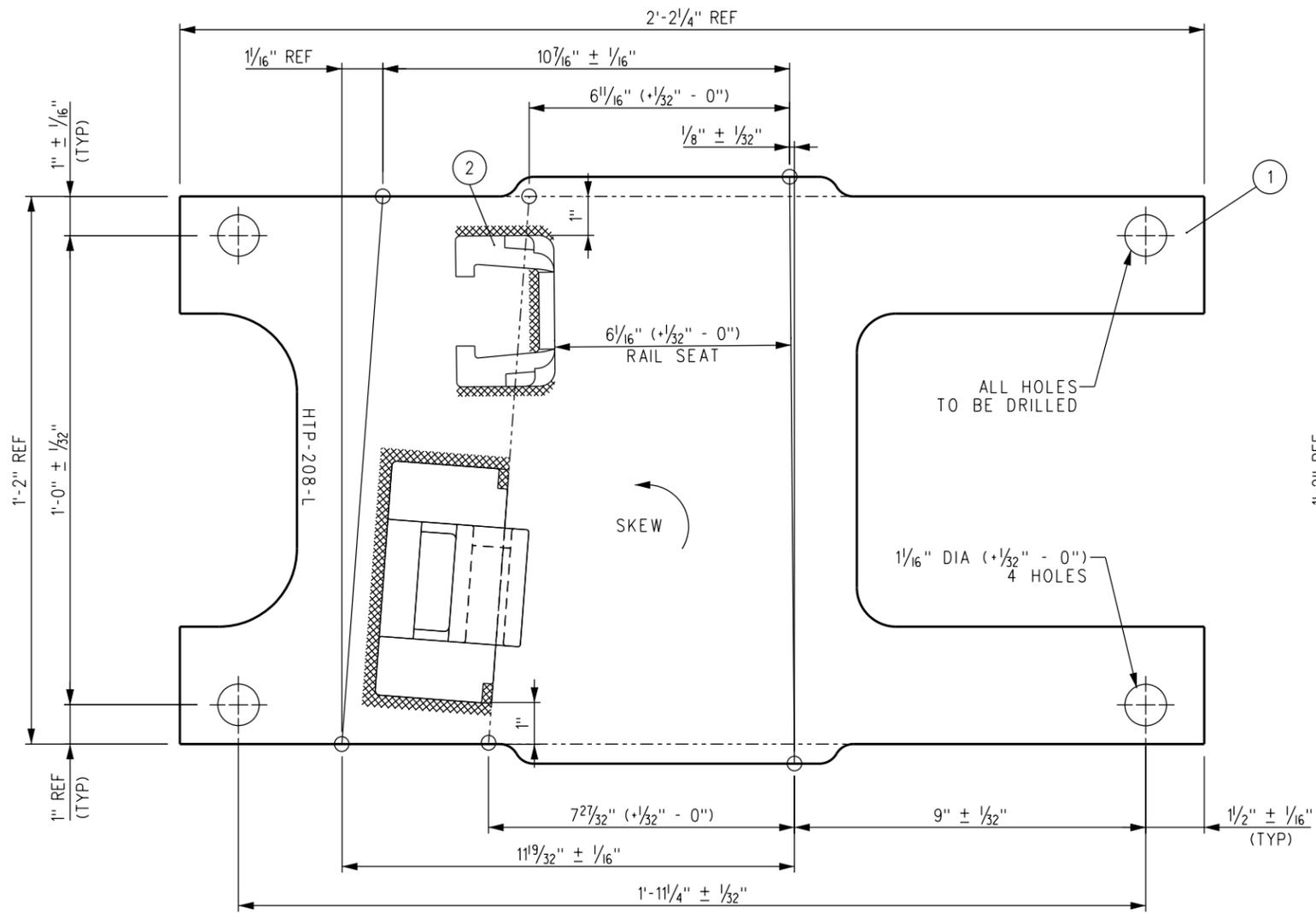


**TYPICAL SAFELOK WELD-ON CAST SHOULDER WELDING DETAILS**

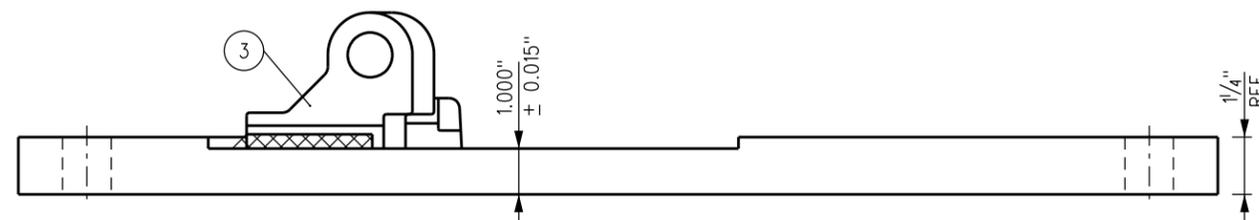
BILL OF MATERIAL					
ITEM	QTY FOR HTP-208-L	QTY FOR HTP-209-R	DESCRIPTION	DWG NO	SCRR PART NO
1	1	1	BURNED SWITCH PLATE, 1/4" THICK	-	
2	1	1	SAFELOK SHOULDER	-	
3	1	1	LV BRACE RETENTION BLOCK	-	

**NOTE:**

1. I.D. CHARACTERS TO BE 5/8" MINIMUM HEIGHT CLEARLY STAMPED AS SHOWN.
2. SLOTTED HOLE CENTERS ARE INDICATED ON DRAWING.



**HTP-208-L**



**HTP-209-R**

REV.	DATE	DESCRIPTION	DES.	ENG.
X	XX-XX-XX	REVISION	XX	XX

DRAWN BY: *Nareh D. Papp* HDR DATE: 03/31/2011  
 ASSISTANT DIRECTOR: STANDARDS & DESIGN  
*William Dava*  
 DIRECTOR OF ENGINEERING AND CONSTRUCTION

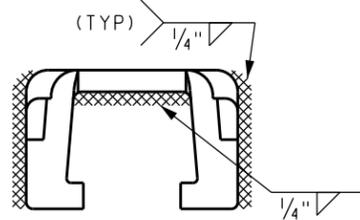
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 ONE GATEWAY PLAZA, 12TH FLOOR, L. A., CA. 90012

ENGINEERING STANDARDS  
 SWITCH PLATES FOR HOLLOW STEEL TIES,  
 136 LB RE RAIL  
 PLATES HTP-208-L AND HTP-209-R  
 18" SKEW LV BRACE

STANDARD	2800
SCALE:	NTS
REVISION SHEET	1 OF 1
CADD FILE:	ES2800-92

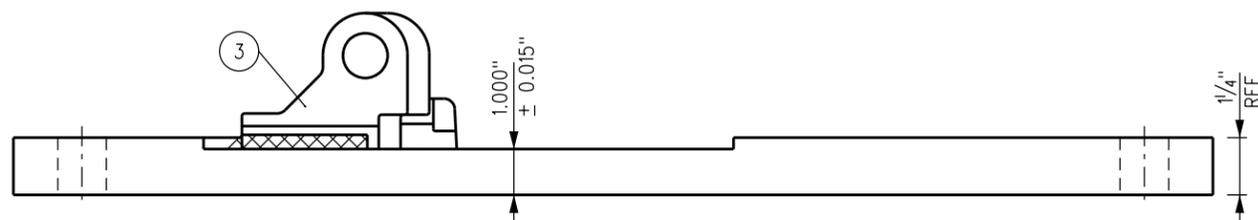
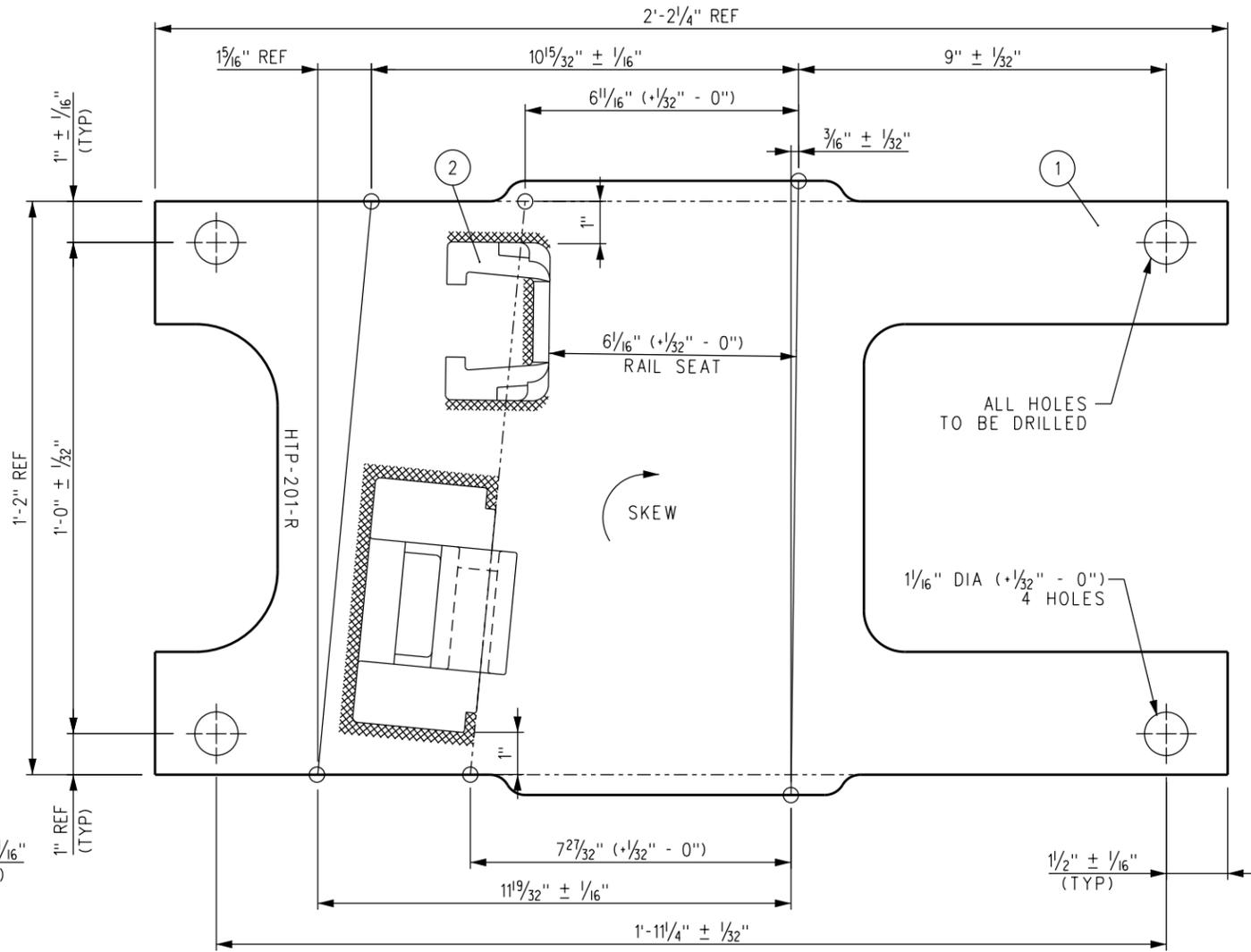
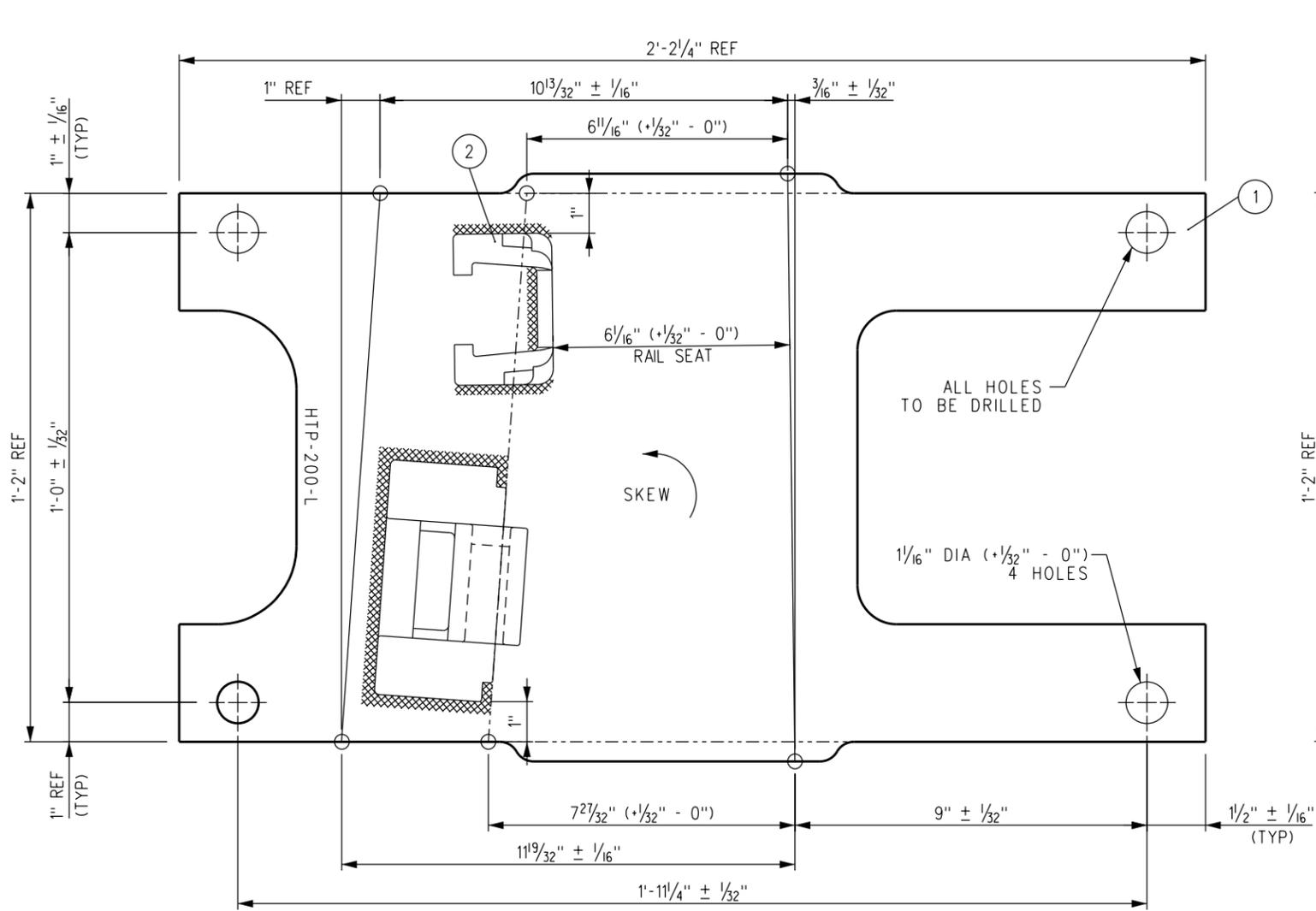


**TYPICAL SAFELOK WELD-ON CAST SHOULDER WELDING DETAILS**

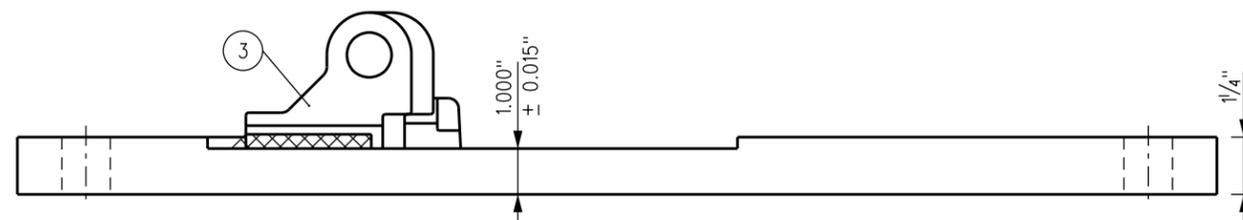
BILL OF MATERIAL					
ITEM	QTY FOR HTP-200-L	QTY FOR HTP-201-R	DESCRIPTION	DWG NO	SCRR PART NO
1	1	1	BURNED SWITCH PLATE, 1/4" THICK	-	
2	1	1	SAFELOK SHOULDER	-	
3	1	1	LV BRACE RETENTION BLOCK	-	

**NOTE:**

1. I.D. CHARACTERS TO BE 5/8" MINIMUM HEIGHT CLEARLY STAMPED AS SHOWN.
2. SLOTTED HOLE CENTERS ARE INDICATED ON DRAWING.



**HTP-200-L**



**HTP-201-R**

REV.	DATE	DESCRIPTION	DES.	ENG.
X	XX-XX-XX	REVISION	XX	XX

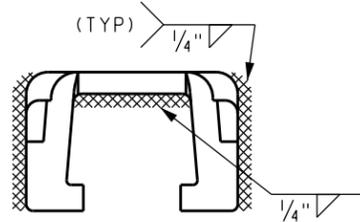
DRAWN BY: *Nareh D. Papp* HDR DATE: 03/31/2011  
 ASSISTANT DIRECTOR: STANDARDS & DESIGN  
*William Davan*  
 DIRECTOR OF ENGINEERING AND CONSTRUCTION

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**METROLINK**  
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 ONE GATEWAY PLAZA, 12TH FLOOR, L. A., CA. 90012

ENGINEERING STANDARDS  
 SWITCH PLATES FOR HOLLOW STEEL TIES,  
 136 LB RE RAIL  
 PLATES HTP-200-L AND HTP-201-R  
 316" SKEW LV BRACE

STANDARD	2800
SCALE:	NTS
REVISION SHEET	1 OF 1
CADD FILE:	ES2800-93

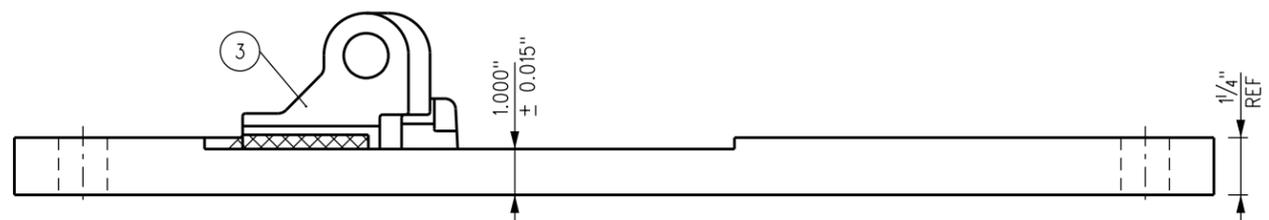
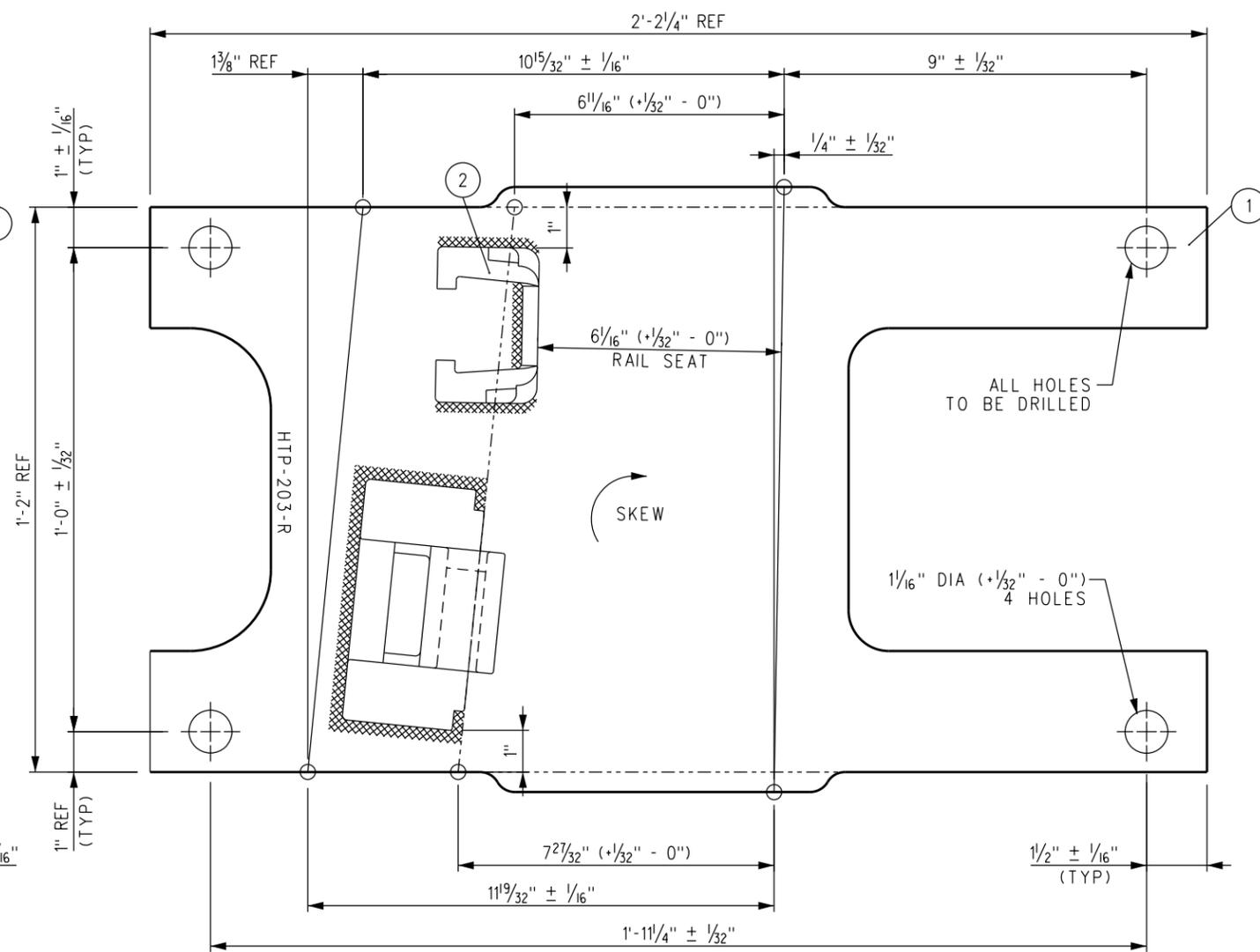
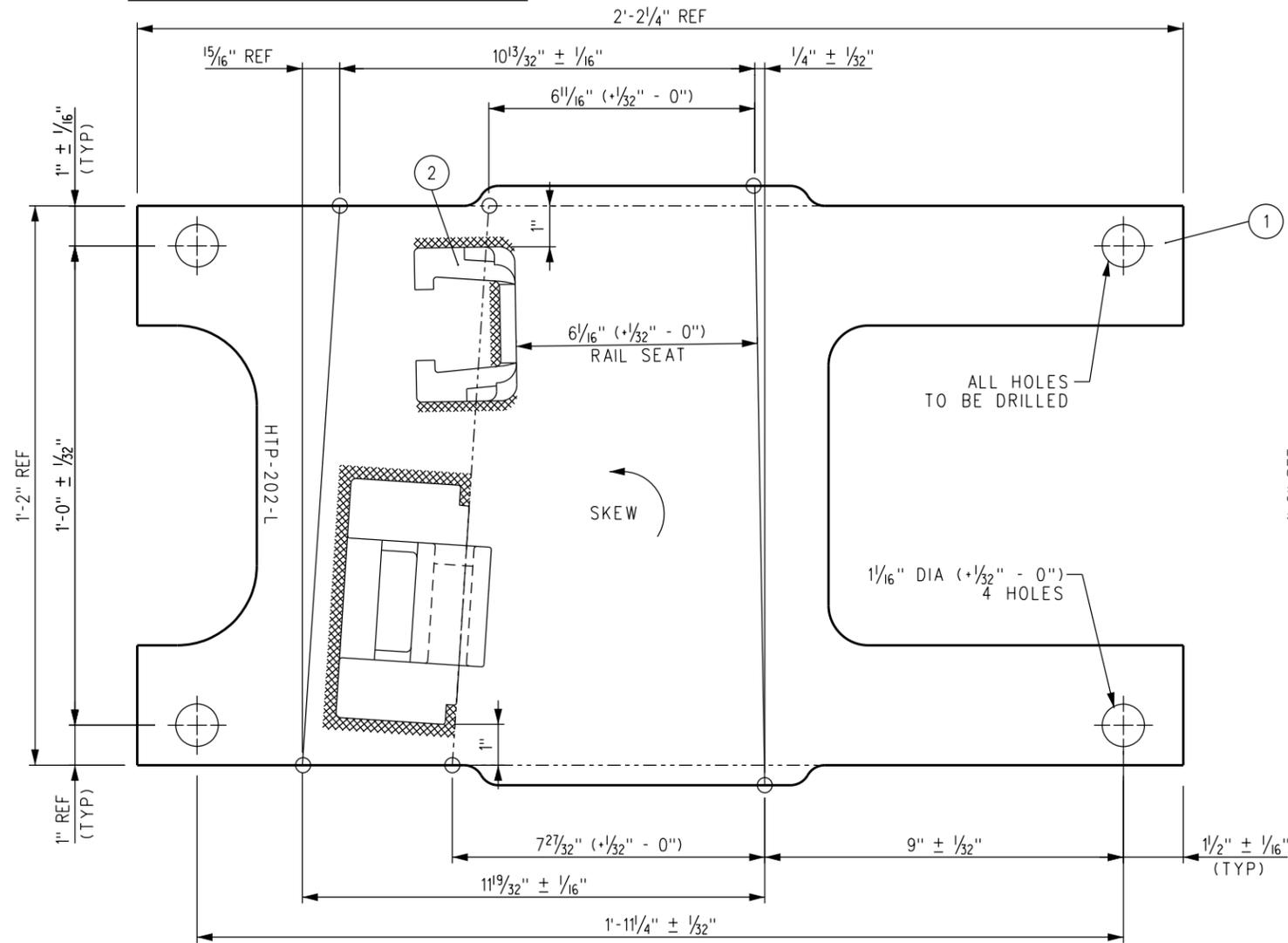


**TYPICAL SAFELOK WELD-ON CAST SHOULDER WELDING DETAILS**

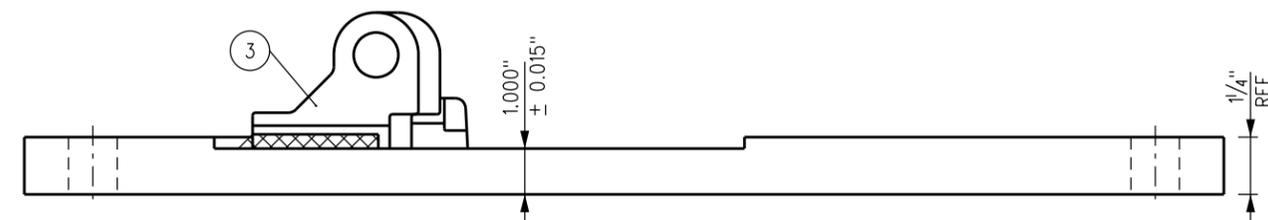
BILL OF MATERIAL					
ITEM	QTY FOR HTP-202-L	QTY FOR HTP-203-R	DESCRIPTION	DWG NO	SCRR PART NO
1	1	1	BURNED SWITCH PLATE, 1/4" THICK	-	
2	1	1	SAFELOK SHOULDER	-	
3	1	1	LV BRACE RETENTION BLOCK	-	

**NOTE:**

1. I.D. CHARACTERS TO BE 5/8" MINIMUM HEIGHT CLEARLY STAMPED AS SHOWN.
2. SLOTTED HOLE CENTERS ARE INDICATED ON DRAWING.



**HTP-202-L**



**HTP-203-R**

REV.	DATE	DESCRIPTION	DES.	ENG.
X	XX-XX-XX	REVISION	XX	XX

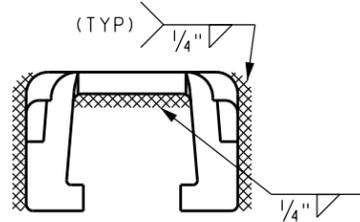
DRAWN BY: *Nareh D. Papp* HDR DATE: 03/31/2011  
 ASSISTANT DIRECTOR: STANDARDS & DESIGN  
*William Davan*  
 DIRECTOR OF ENGINEERING AND CONSTRUCTION

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**METROLINK**  
 SOUTHERN CALIFORNIA REGIONAL RAIL AUTHORITY  
 ONE GATEWAY PLAZA, 12TH FLOOR, L. A., CA. 90012

ENGINEERING STANDARDS  
 SWITCH PLATES FOR HOLLOW STEEL TIES,  
 136 LB RE RAIL  
 PLATES HTP-202-L AND HTP-203-R  
 1/4" SKEW LV BRACE

STANDARD	2800
SCALE:	NTS
REVISION SHEET	1 OF 1
CADD FILE:	ES2800-94

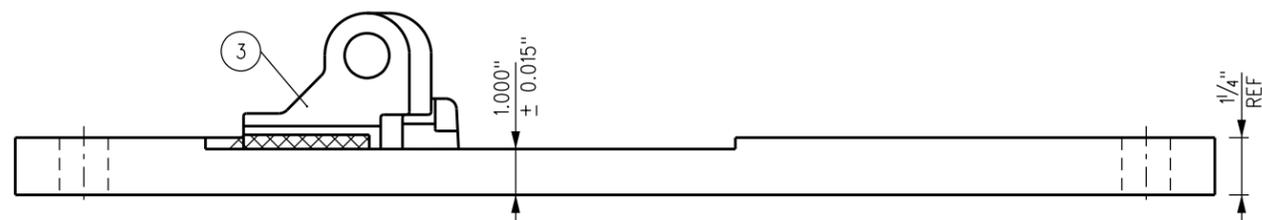
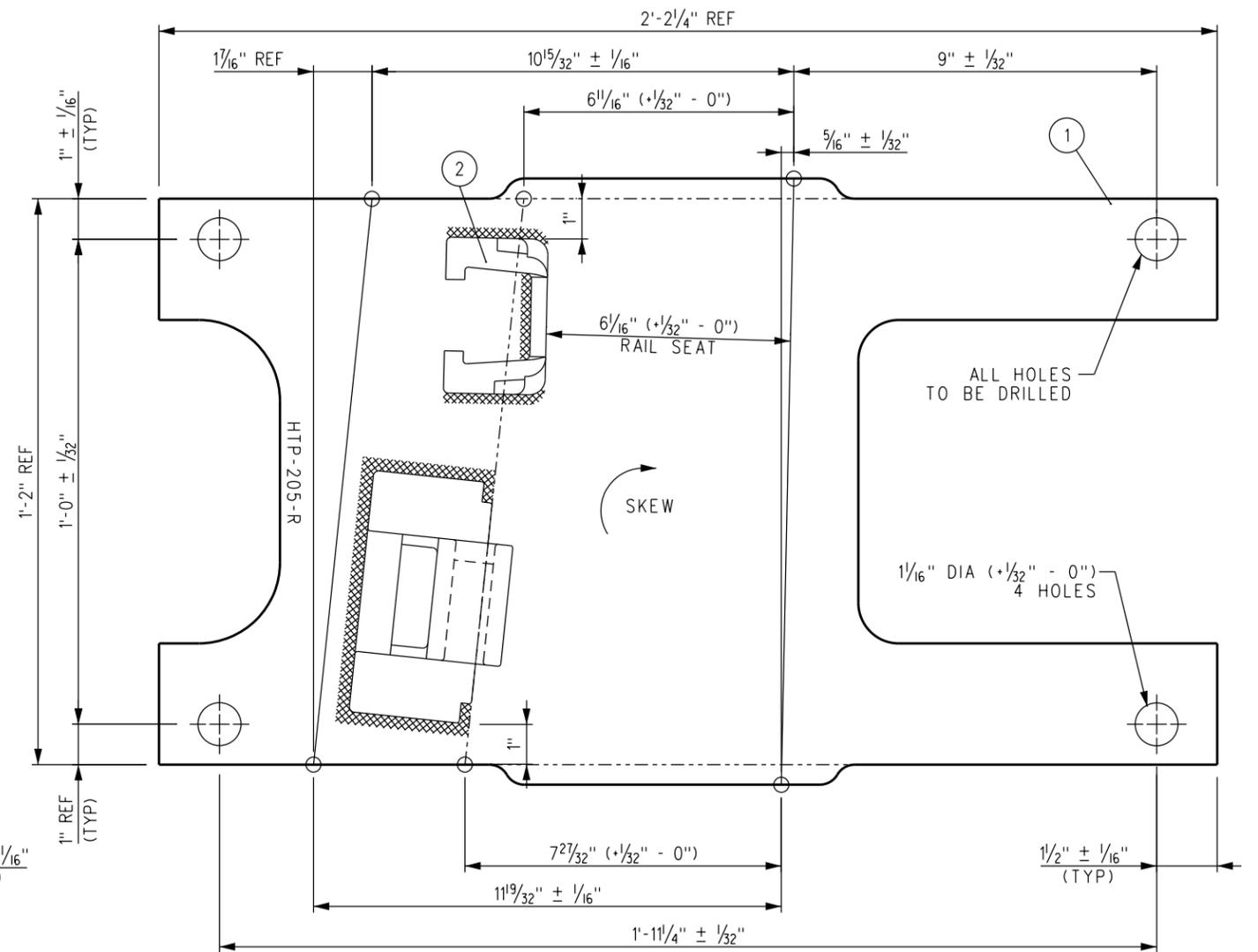
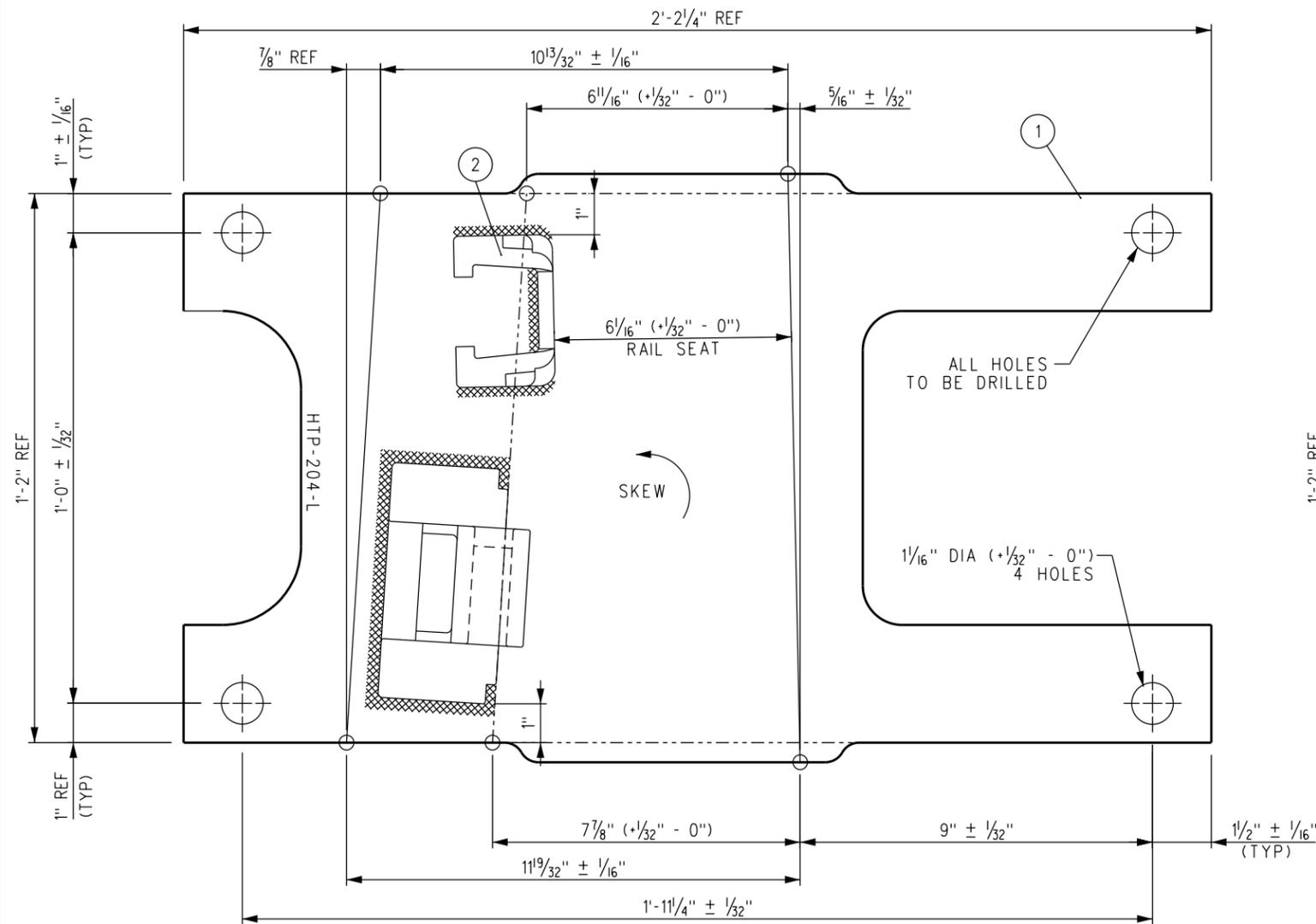


**TYPICAL SAFELOK WELD-ON CAST SHOULDER WELDING DETAILS**

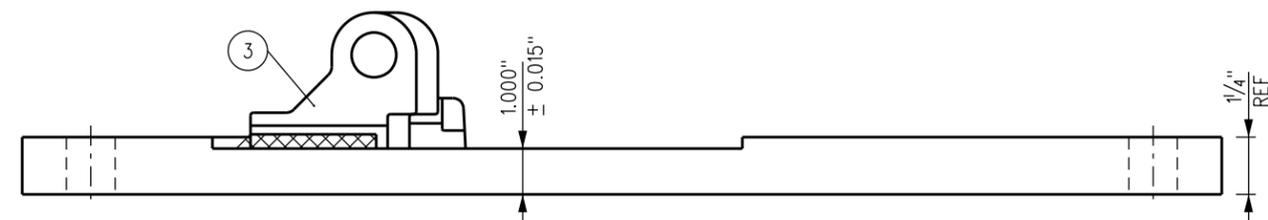
BILL OF MATERIAL					
ITEM	QTY FOR HTP-204-L	QTY FOR HTP-205-R	DESCRIPTION	DWG NO	SCRR PART NO
1	1	1	BURNED SWITCH PLATE, 1/4" THICK	-	
2	1	1	SAFELOK SHOULDER	-	
3	1	1	LV BRACE RETENTION BLOCK	-	

**NOTE:**

1. I.D. CHARACTERS TO BE 5/8" MINIMUM HEIGHT CLEARLY STAMPED AS SHOWN.
2. SLOTTED HOLE CENTERS ARE INDICATED ON DRAWING.



**HTP-204-L**



**HTP-205-R**

REV.	DATE	DESCRIPTION	DES.	ENG.
X	XX-XX-XX	REVISION	XX	XX

DRAWN BY: *Nareh D. Papp* HDR DATE: 03/31/2011  
 ASSISTANT DIRECTOR: STANDARDS & DESIGN  
*William Dava*  
 DIRECTOR OF ENGINEERING AND CONSTRUCTION

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 ONE GATEWAY PLAZA, 12TH FLOOR, L. A., CA. 90012

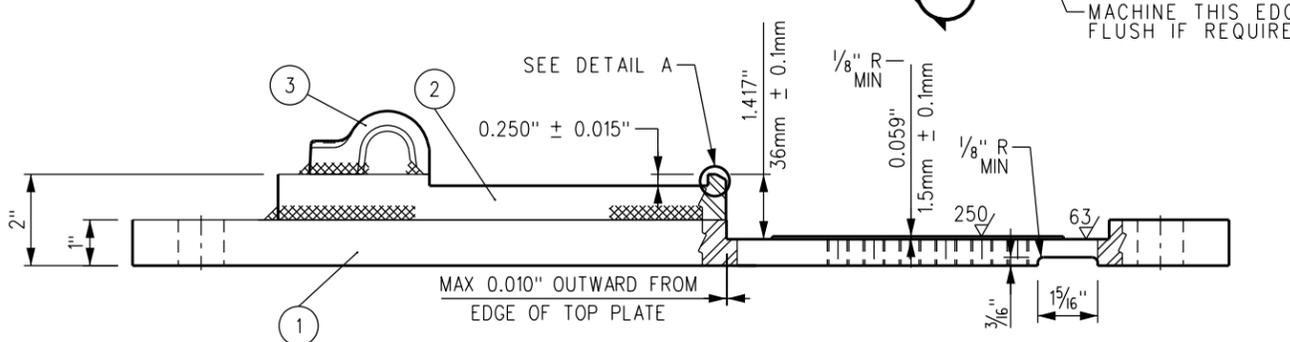
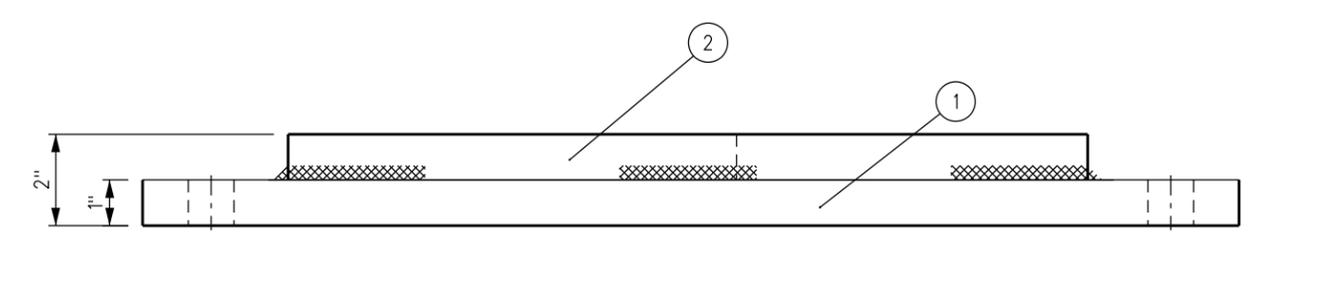
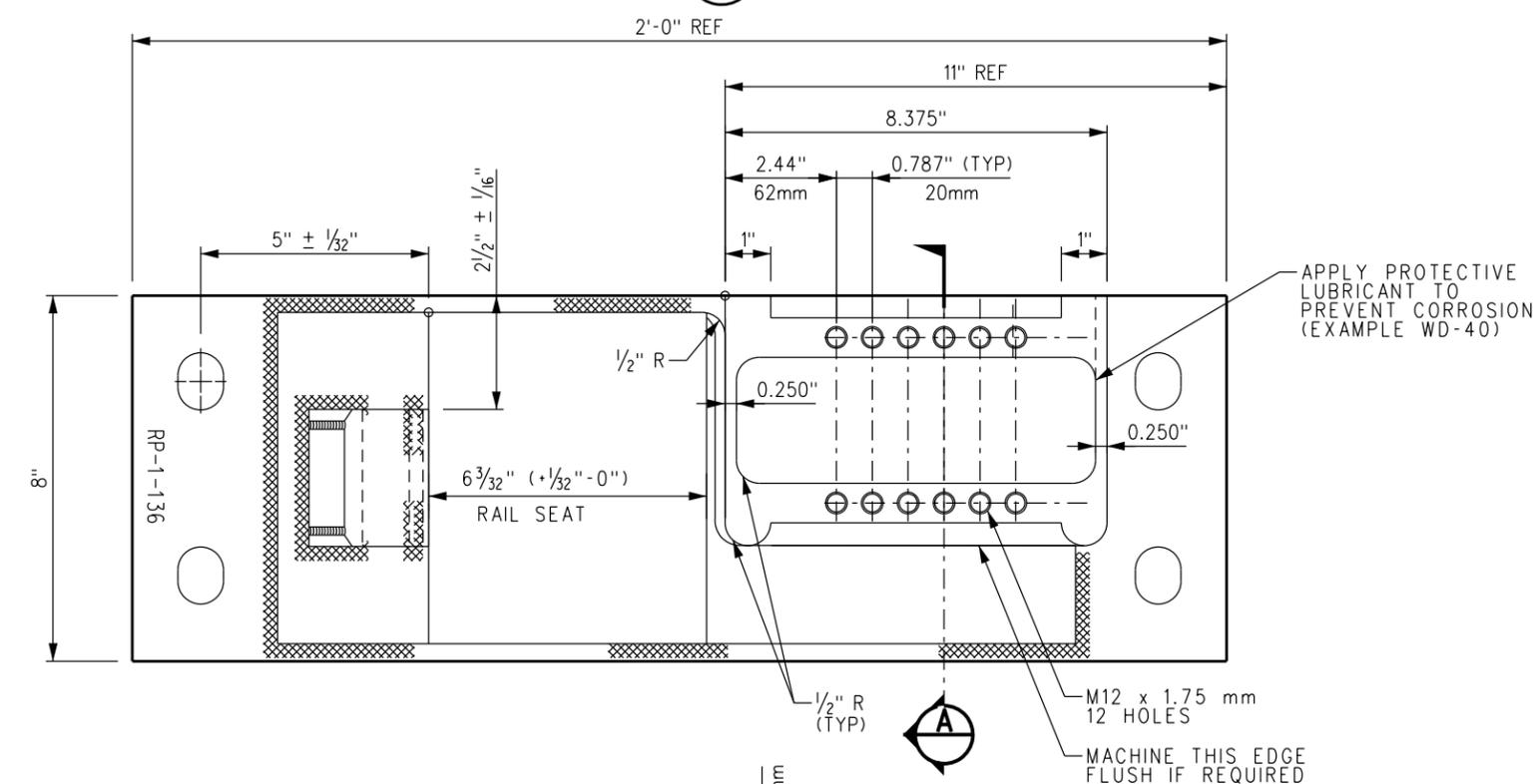
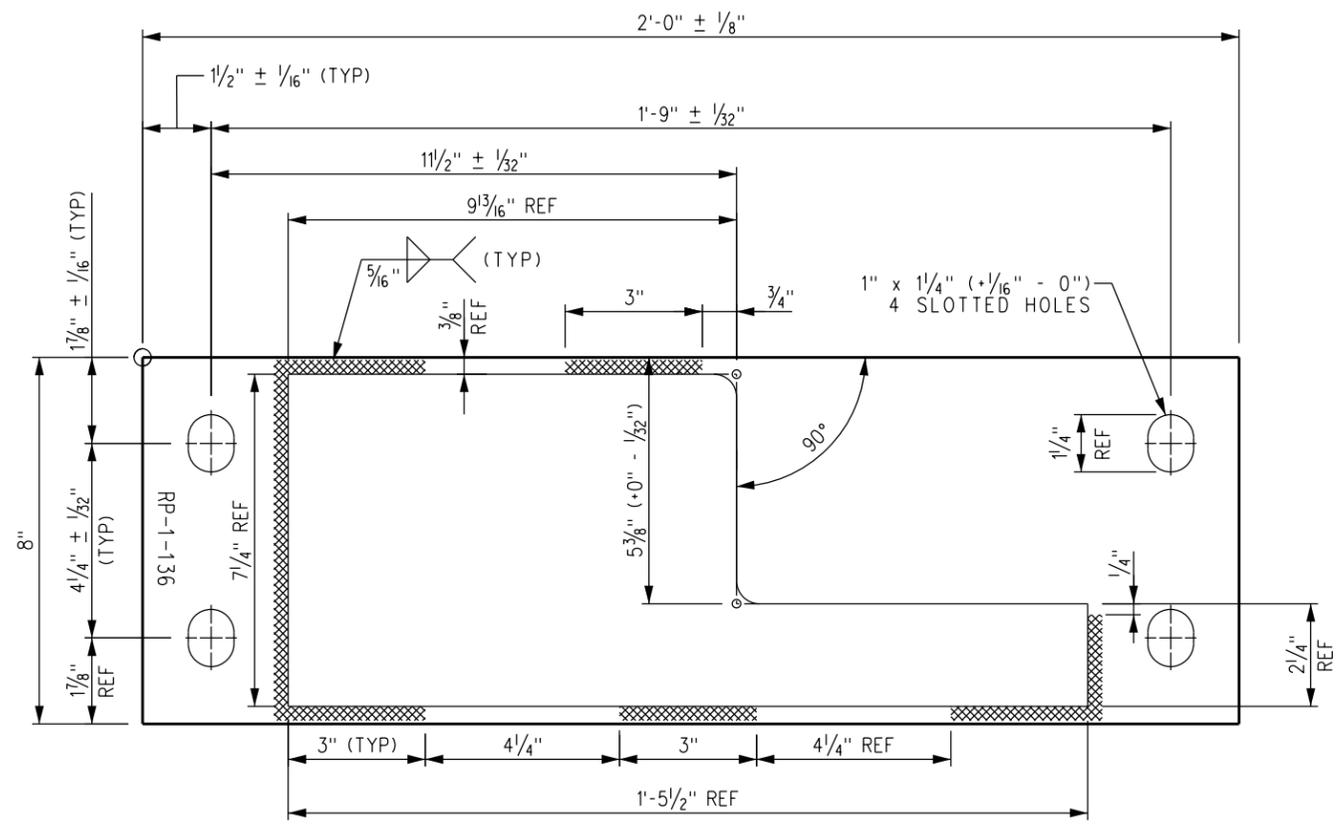
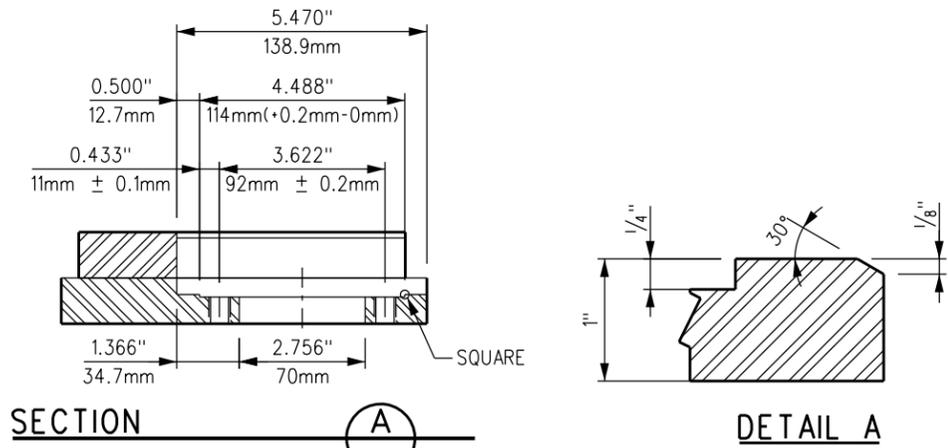
**ENGINEERING STANDARDS**  
 SWITCH PLATES FOR HOLLOW STEEL TIES,  
 136 LB RE RAIL  
 PLATES HTP-204-L AND HTP-205-R  
 516" SKEW LV BRACE

STANDARD	2800
SCALE:	NTS
REVISION SHEET	1 OF 1
CADD FILE:	ES2800-95

BILL OF MATERIALS	
ITEM	DESCRIPTION
1	FLAT BAR, ASTM A36, 1" x 8" x 2'-0" LONG
2	BURNED SWITCH POINT RISER PLATE FOR RP-1-136
3	SHOULDER, FORGED, TYPE 5, ANTI-OVERDRIVE

**NOTES:**

1. I.D. CHARACTERS TO BE 1/2" MINIMUM HEIGHT, STAMPED CLEARLY AS SHOWN.
2. USE IMPERIAL DIMENSIONS WITH THE EXCEPTION OF TOLERANCED METRIC DIMENSIONS AND THREADED HOLES.
3. SURFACE ROUGHNESS 250 AND 63 MICROINCH ARE EQUIVALENT TO N9 AND N7 AND SHOULD TRAVERSE THE ENTIRE MACHINED SURFACE.
4. SLOTTED HOLE CENTERS ARE INDICATED ON DRAWING.
5. DEBUR ALL THREADED HOLES



**SWITCH ROLLER PLATE RP-1-136  
W/O ROLLER WELDING & PUNCHING DETAILS**

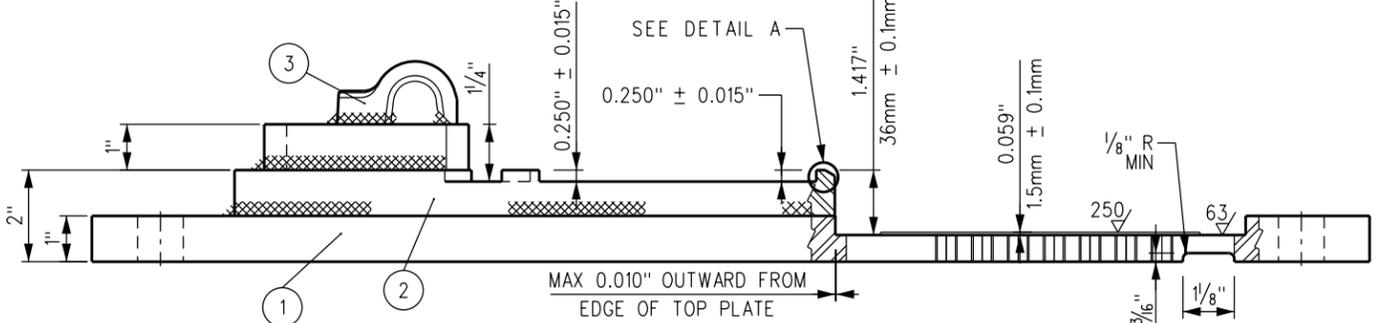
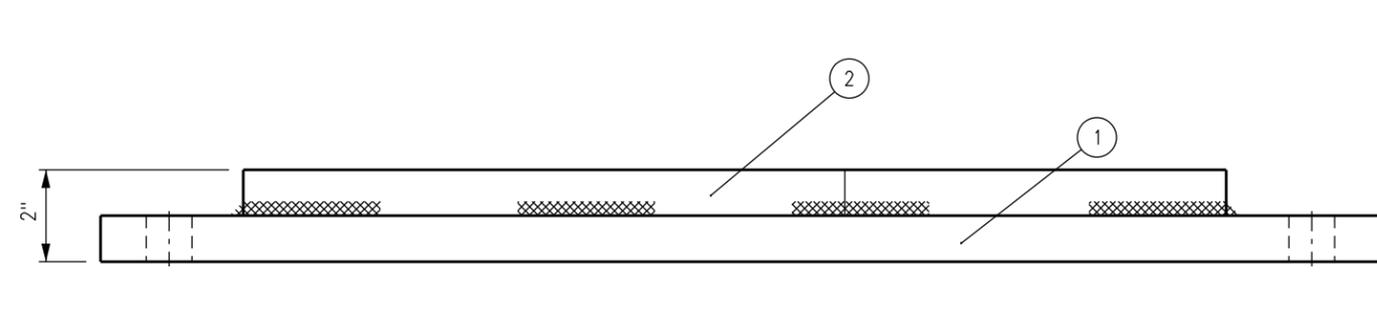
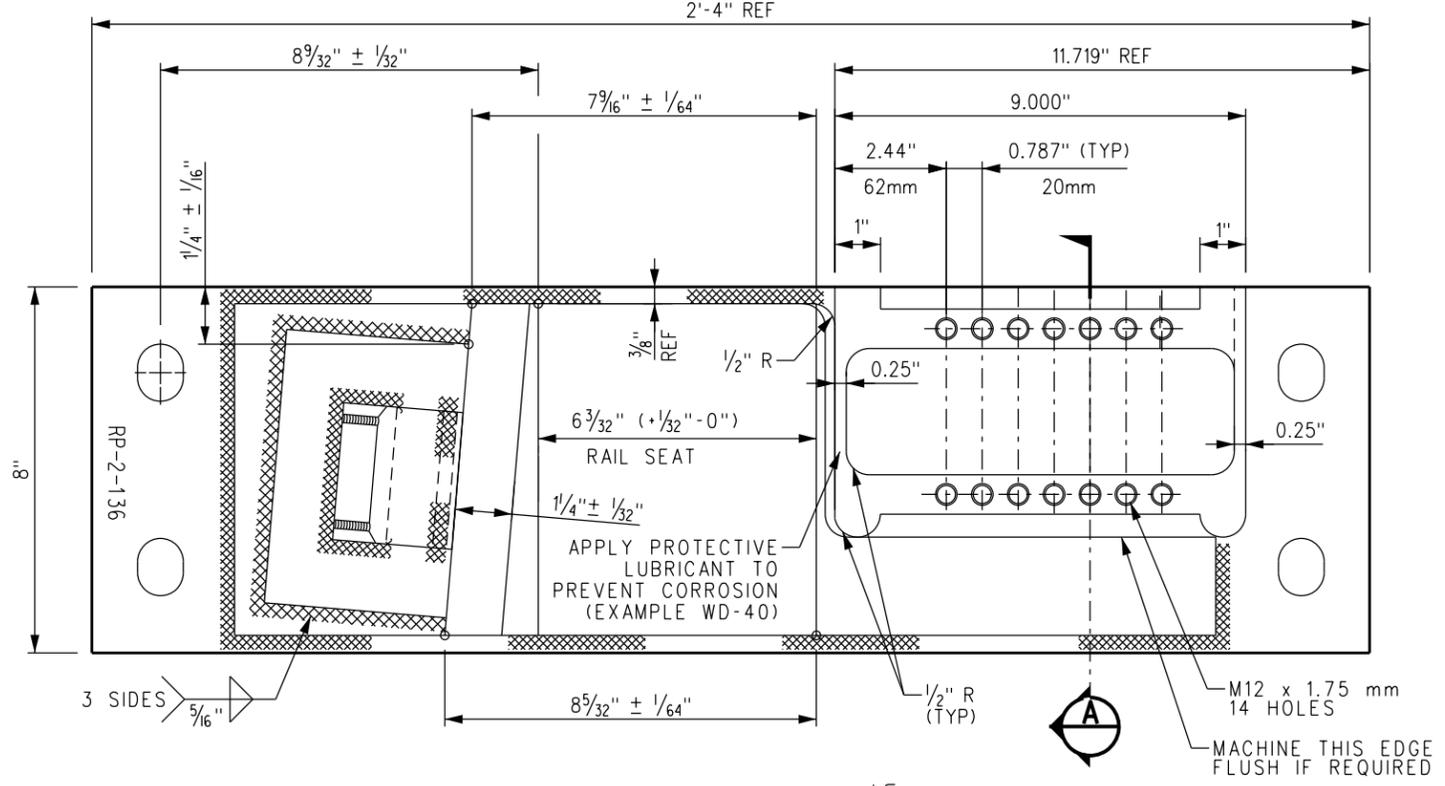
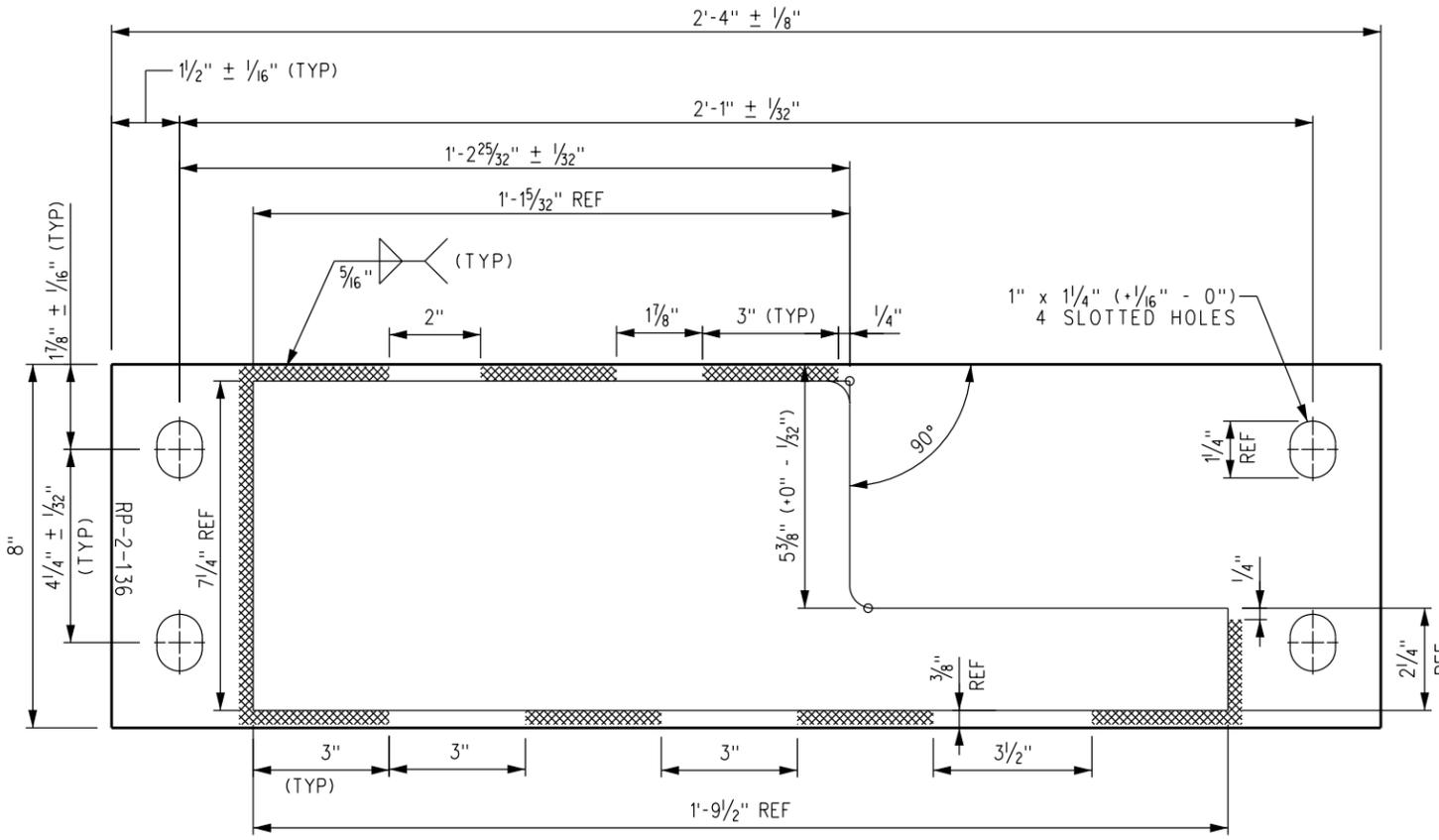
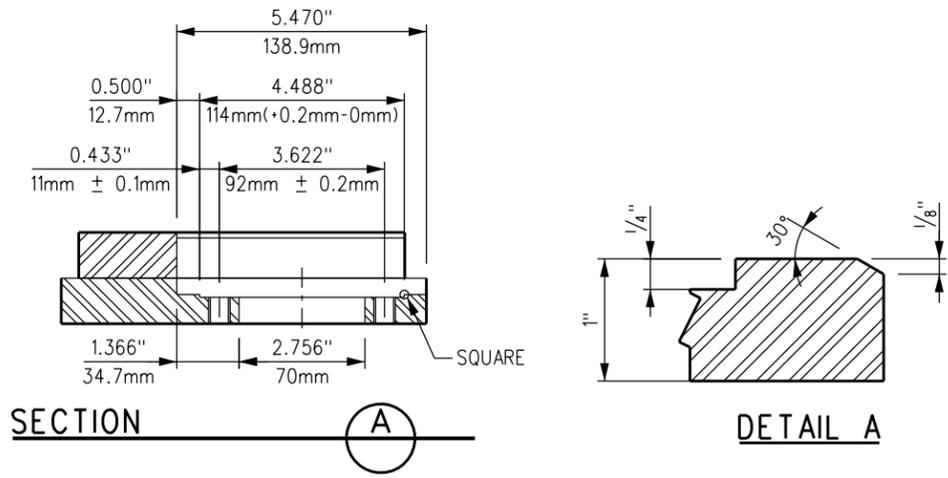
**SWITCH ROLLER PLATE RP-1-136  
W/O ROLLER MACHINING DETAILS**

DRAWN BY: <i>Narek D. Pape</i> HDR DATE: 03/31/2011		SCRR ENGINEERING STANDARDS ARE INTENDED FOR SCRR APPROVED USES ONLY. FOR NON-SCRR APPROVED USES, SCRR SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF THE DATA OR INFORMATION CONTAINED HEREIN. THE SELECTION AND USE OF THESE STANDARDS IS THE SOLE RESPONSIBILITY OF THE USER AND SHOULD NOT BE USED WITHOUT CONSULTING A REGISTERED PROFESSIONAL ENGINEER. ALL WARRANTIES AND REPRESENTATIONS OF ANY KIND ARE DISCLAIMED. ANYONE MAKING USE OF THIS INFORMATION AGREES THAT IT ASSUMES ALL LIABILITY ARISING FROM SUCH USE. NO PART OF THESE STANDARDS SHOULD BE REPRODUCED OR DISTRIBUTED IN ANY FORM OR BY ANY MEANS WITHOUT THE PRIOR WRITTEN PERMISSION OF SCRR. ALL RIGHTS RESERVED.	<b>METROLINK</b> SOUTHERN CALIFORNIA REGIONAL RAIL AUTHORITY ONE GATEWAY PLAZA, 12TH FLOOR, L. A., CA. 90012	ENGINEERING STANDARDS SWITCH PLATE ROLLER SCHWIHAG RP-1-136	STANDARD: 2800
ASSISTANT DIRECTOR: STANDARDS & DESIGN <i>William Davan</i> DIRECTOR OF ENGINEERING AND CONSTRUCTION					SCALE: NTS
REV.	DATE	DESCRIPTION	DES.	ENG.	REVISION SHEET: 1 OF 1 CADD FILE: ES2800-96

BILL OF MATERIALS	
ITEM	DESCRIPTION
1	FLAT BAR, ASTM A36, 1" x 8" x 2'-4" LONG
2	BURNED SWITCH POINT RISER PLATE FOR RP-2-136
3	SHOULDER, FORGED, TYPE 5, ANTI-OVERDRIVE

**NOTES:**

1. I.D. CHARACTERS TO BE 1/2" MINIMUM HEIGHT, STAMPED CLEARLY AS SHOWN.
2. USE IMPERIAL DIMENSIONS WITH THE EXCEPTION OF TOLERANCED METRIC DIMENSIONS AND THREADED HOLES.
3. SURFACE ROUGHNESS 250 AND 63 MICRINCH ARE EQUIVALENT TO N9 AND N7 AND SHOULD TRAVERSE THE ENTIRE MACHINED SURFACE.
4. SLOTTED HOLE CENTERS ARE INDICATED ON DRAWING.
5. DEBUR ALL THREADED HOLES



**SWITCH ROLLER PLATE RP-2-136  
W/O ROLLER WELDING & PUNCHING DETAILS**

**SWITCH ROLLER PLATE RP-2-136  
W/O ROLLER MACHINING DETAILS**

REV.	DATE	DESCRIPTION	DES.	ENG.
X	XX-XX-XX	REVISION	XX	XX

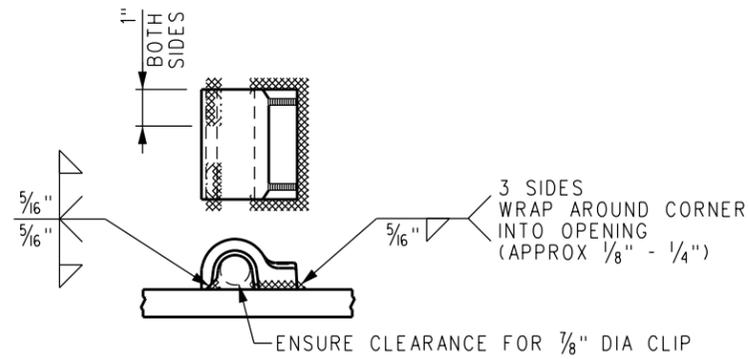
DRAWN BY: *Narek D. Pape* HDR DATE: 03/31/2011  
 ASSISTANT DIRECTOR: STANDARDS & DESIGN  
 DIRECTOR OF ENGINEERING AND CONSTRUCTION

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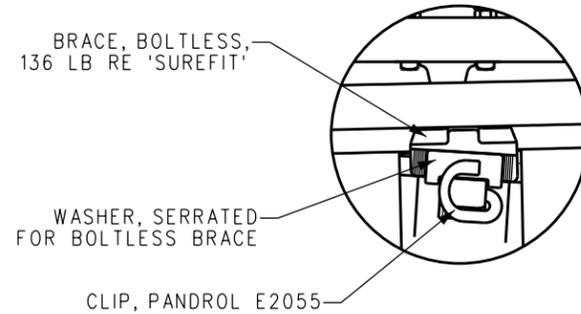
**METROLINK**  
 SOUTHERN CALIFORNIA REGIONAL RAIL AUTHORITY  
 ONE GATEWAY PLAZA, 12TH FLOOR, L. A., CA. 90012

ENGINEERING STANDARDS  
 SWITCH PLATE  
 ROLLER SCHWIHAG RP-2-136

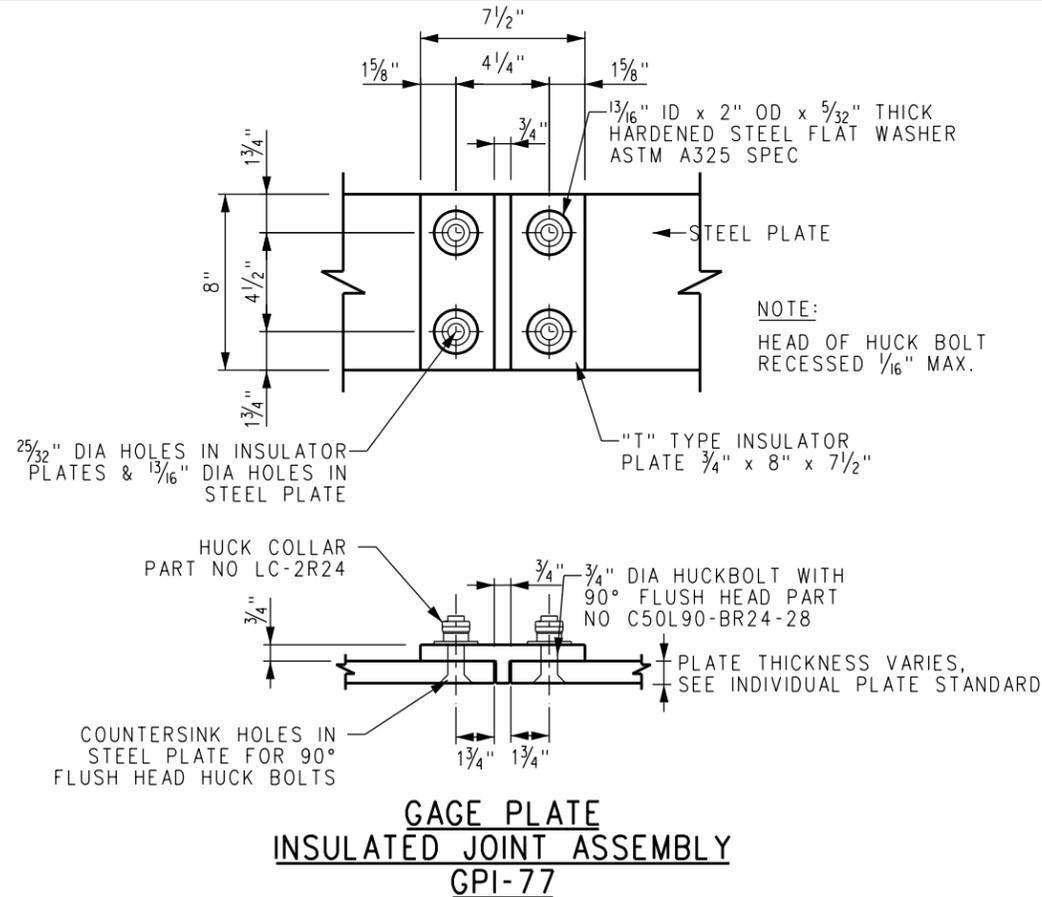
STANDARD	2800
SCALE	NTS
REVISION	SHEET
-	1 OF 1
CADD FILE	ES2800-97



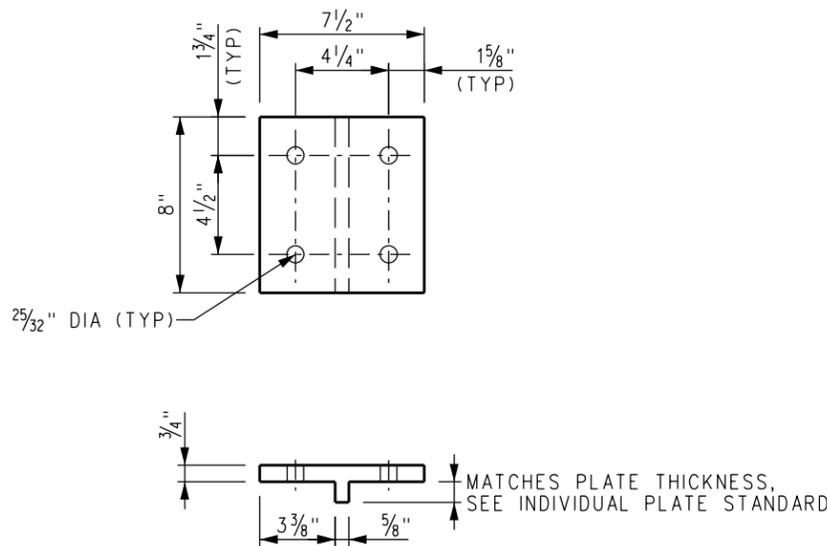
**FORGED SHOULDER WELDING DETAIL**



**TYPICAL BOLTLESS BRACE ASSEMBLY**



**GAGE PLATE  
INSULATED JOINT ASSEMBLY  
GPI-77**



**DETAIL OF INSULATION BLOCK**  
POLYESTER COATED STEEL CORE  
WITH BUSHINGS, PORTEC NO 127-07547-01  
OR FIBERGLASS REINFORCED THERMOSET RESIN.  
PURCHASE PART NO GPI52P05

**INSULATION AT GAGE PLATES**

REV.	DATE	DESCRIPTION	DES.	ENG.
X	XX-XX-XX	REVISION	XX	XX
DRAWN BY: A. CARLOS DATE: 03/31/2011 <i>Nareh D. Pae</i> ASSISTANT DIRECTOR: STANDARDS & DESIGN <i>William Dava</i> DIRECTOR OF ENGINEERING AND CONSTRUCTION				

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ENGINEERING STANDARDS	
MISCELLANEOUS DETAILS	

STANDARD	2800
SCALE:	NTS
REVISION SHEET	1 OF 1
CADD FILE:	ES2800-99