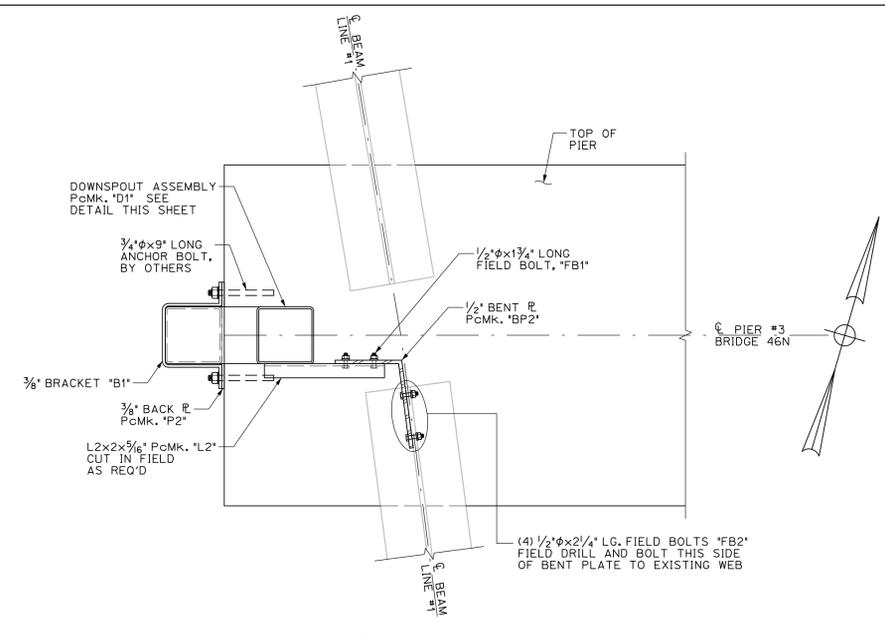
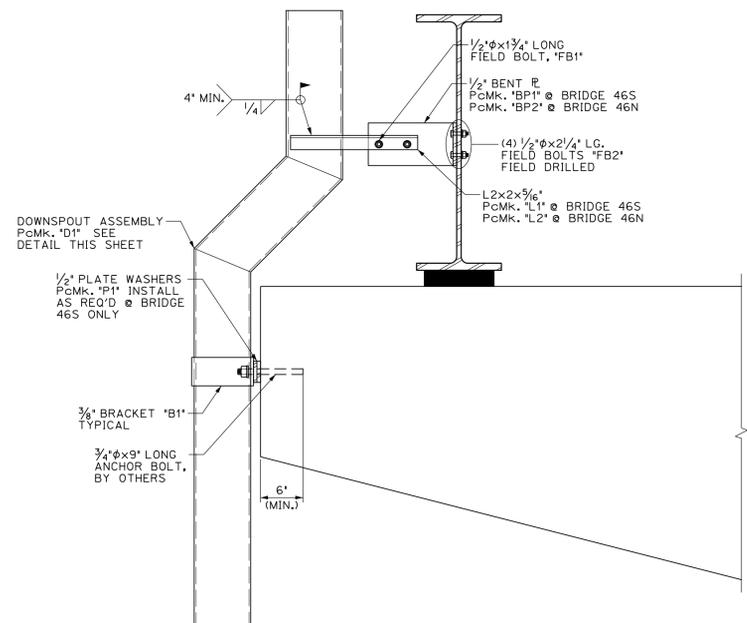


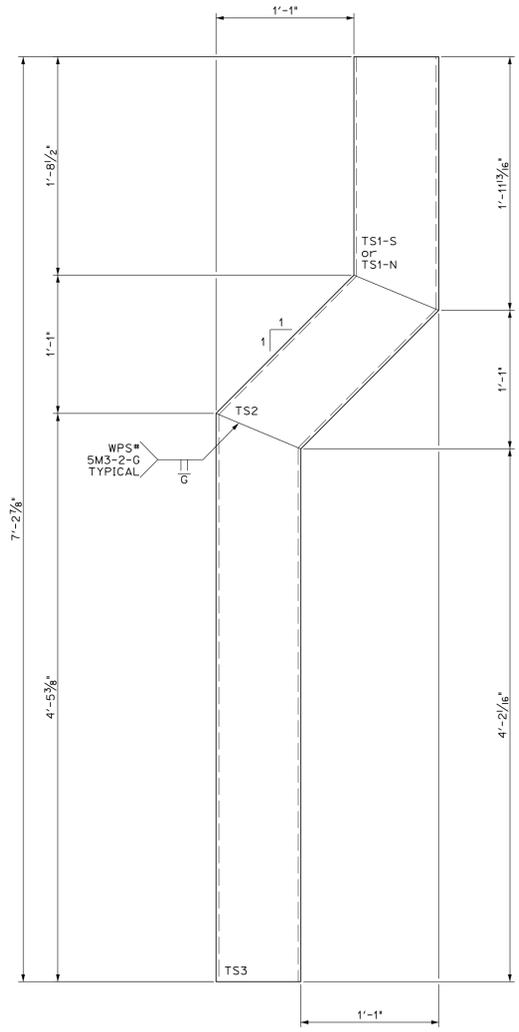
DOWNSPOUT PLAN VIEW @ BRIDGE 46S
SCALE: 1" = 1'-0"



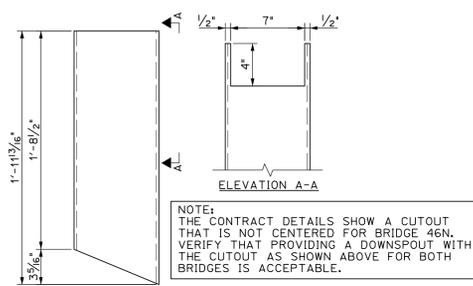
DOWNSPOUT PLAN VIEW @ BRIDGE 46N
SCALE: 1" = 1'-0"



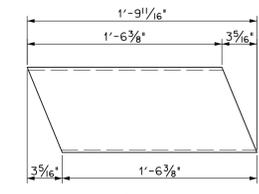
TYPICAL DOWNSPOUT ELEVATION
SCALE: 1" = 1'-0"



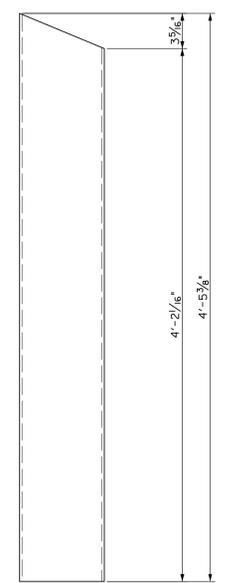
DOWNSPOUT ASSEMBLY, PcMk. "D1"
SCALE: 1/2" = 1'-0"



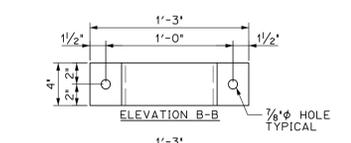
TS8x8x1/4, PcMk. "TS1"
SCALE: 1/2" = 1'-0"



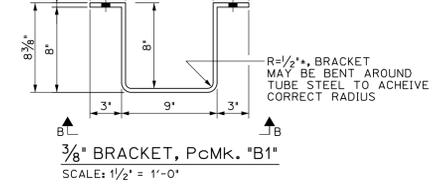
TS8x8x1/4, PcMk. "TS2"
SCALE: 1/2" = 1'-0"



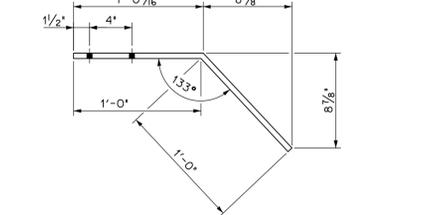
TS8x8x1/4, PcMk. "TS3"
SCALE: 1/2" = 1'-0"



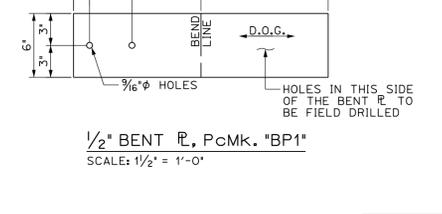
3/8" BRACKET, PcMk. "B1"
SCALE: 1/2" = 1'-0"



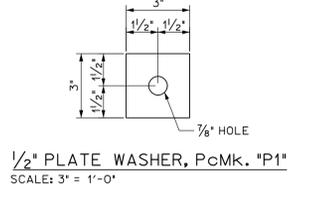
1/2" BENT PLATE, PcMk. "BP1"
SCALE: 1/2" = 1'-0"



1/2" BENT PLATE, PcMk. "BP2"
SCALE: 1/2" = 1'-0"



1/2" BENT PLATE, PcMk. "BP2"
SCALE: 1/2" = 1'-0"



1/2" PLATE WASHER, PcMk. "P1"
SCALE: 3" = 1'-0"

BILL OF MATERIALS									
SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	FINISH	MATERIAL	
2	D1			BRIDGE DOWNSPOUT		220# EACH	GALVANIZE		
		2	TS1	TS 8x8x1/4	1'-11 3/16"	55# EACH		ASTM A500, Gr.B	
		2	TS2	TS 8x8x1/4	1'-9 1/16"	50# EACH		ASTM A500, Gr.B	
		2	TS3	TS 8x8x1/4	1'-11 3/16"	115# EACH		ASTM A500, Gr.B	
2	B1			3/8" x 4" BRACKET	2'-6 1/4"	15# EACH	GALVANIZE	AASHTO M270, Gr.36	
1	L1			L2x2x5/16"	1'-6"	10# EACH	GALVANIZE	AASHTO M270, Gr.36	
1	L2			L2x2x5/16"	1'-6"	10# EACH	GALVANIZE	AASHTO M270, Gr.36	
1	BP1			BENT PL 1/2"x6"	2'-0"	25# EACH	GALVANIZE	AASHTO M270, Gr.36	
1	BP2			BENT PL 1/2"x6"	1'-9"	20# EACH	GALVANIZE	AASHTO M270, Gr.36	
4	P1			PL WASHER 1/2"x3"	3"	1# EACH	GALVANIZE	AASHTO M270, Gr.36	

FIELD BOLTS									
4	FB1			1/2" BOLT w/N&W (GALVANIZED)	1 3/4"		ASTM A325, TYPE 1		
8	FB2			1/2" BOLT w/N&W (GALVANIZED)	2 1/4"		ASTM A325, TYPE 1		

- GENERAL FABRICATION NOTES**
- DOWNSPOUTS SHALL BE GALVANIZED IN ACCORDANCE WITH SUBSECTION 726.08
 - ALL BOLTS AND RELATED HARDWARE SHALL BE ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153.
 - IN AREAS WHERE THE GALVANIZING HAS BEEN REMOVED FROM THE DOWNSPOUT EITHER BY CUTTING, BURNING, WELDING, PLACING, OR ANY OTHER MEANS, IT SHALL BE REPAIRED BY THOROUGHLY CLEANING THE DAMAGED AREAS WITH A WIRE BRUSH AND PAINTING THE DAMAGED AREAS WITH TWO COATS OF AN APPROVED SEALANT.

PROJECT No. IM 089-2(43)
ITEM No. 506.60

FINISH	GALVANIZED
MATERIAL	AS NOTED
HOLES	AS NOTED
ELECTRODES	PER WELD PROCEDURE
WELDS	PER WELD PROCEDURE
SURFACE PREP	

NO	DATE	DESCRIPTION	BY
REVISIONS			

ARC
ENTERPRISES, INC.

ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 - FAX: (207) 265-4054

DRAFTER	JJH	BRIDGES 46S & 46N DOWNSPOUTS	PROJECT NO.	14-148
DATE	NOV. 2014	WATERBURY VT. BRIDGES 46S & 46N	CHECKED	DLM
CHECKED	DLM	1-89 over STOWE ST. & THATCHER BROOK	DATE	NOV. 2014
DATE	NOV. 2014	BECK & BELLUCCI	DWG. NO.	1

WELDING PROCEDURE SPECIFICATION (WPS) YES (X)
PREQUALIFIED _____ QUALIFIED BY TESTING (X) _____
or PROCEDURE QUALIFICATION RECORD (PQR) YES ()

Company Name ARC ENT. INC.
Welding Process(es) GMAW
Supporting PQR No.(s) ARC PQR 5M3-2

Identification # ARC WPS 5M3-2-G
Revision 3 **Date** 2/26/2014 **By** SVH
Authorized by STEVE HOWARD **Date** 2/26/2014
Type - Manual Semi - Automatic
Machine Automatic

Ancillary Use

<p>JOINT DESIGN USED</p> <p>Type <u>TC-P4-GF</u></p> <p>Single <input checked="" type="checkbox"/> Double Weld <input type="checkbox"/></p> <p>Backing <input type="checkbox"/> NO</p> <p>Backing Material _____</p> <p>Root Opening <u>0</u> Root Face Dimension _____</p> <p>Groove Angle <u>45 degrees</u> Radius (J-U) _____</p> <p>Back Gouging _____ Method _____</p> <hr/> <p>BASE METALS</p> <p>Material Spec <u>A709 ASTM514</u></p> <p>Type or Grade <u>36 50 50W</u></p> <p>Thickness _____ Groove _____ Fillet <u>UNLIMITED</u></p> <p>Diameter (Pipe) _____</p> <hr/> <p>FILLER METALS</p> <p style="text-align: center;"><u>LINCOLN L-56</u></p> <p>AWS Specification <u>A5.18</u></p> <p>AWS Classification <u>ER70S-6</u></p> <hr/> <p>SHIELDING</p> <p>Flux _____ Gas <u>98/2</u></p> <p>Composition <u>98Argon 2 oxygen</u></p> <p>Electrode - Flux (Class) _____ Flow Rate <u>36-52 cfh</u></p> <p>Gas Cup Size <u>5/8"</u></p> <hr/> <p>Preheat up to 3/4" - 50 degrees F 3/4"-1 1/2" - 70 degrees F 1 1/2" - 2 1/2" - 150 degrees over 2 1/2" - 225 degrees F</p>	<p>POSITION</p> <p>Position of Groove <u>1G 2G</u> Fillet _____</p> <p>Vertical Progression <input type="checkbox"/></p> <hr/> <p>ELECTRICAL CHARACTERISTICS</p> <p>Transfer Mode (FCAW) _____ Short Circuiting <input type="checkbox"/></p> <p>Globular <input type="checkbox"/> Spray <input checked="" type="checkbox"/></p> <p>Current : AC <input type="checkbox"/> DCEP <input checked="" type="checkbox"/> DCEN <input type="checkbox"/></p> <p>Pulsed <input type="checkbox"/></p> <p>OTHER : _____</p> <hr/> <p>TECHNIQUE</p> <p>Stringer or Weave Bead <u>STRINGER</u></p> <p>Multi-pass or Single Pass (per side) <u>SINGLE/MULTI</u></p> <p>Number of Electrodes <u>ONE</u></p> <p>Electrode Spacing <u>Longitudinal</u></p> <p style="text-align: right;">Lateral _____ Angle _____</p> <p>Contact Tube to Work Distance <u>5/8" - 3/4"</u></p> <p>Peening _____</p> <p>Interpass Cleaning : <u>HAND AND POWER TOOLS</u></p> <hr/> <p>POSTWELD HEAT TREATMENT</p> <p>Temp _____</p> <p>Time _____</p>
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WELDING PROCEDURE

Pass or Weld Layer(s)	S	Filler Metals		Current		Volts	Travel Speed	Joint Details
		Class	Diameter	Type & Polarity	Amps or Wire Feed Speed			
1	3/16"		.035"	DCEP	209-255	24.9-28.5	8.1-9.9 ipm	
1	1/4"		.035"	DCEP	209-255	24.9-28.5	8.1-9.9 ipm	
1	5/16"		"	"	"	"	8.1-9.9 ipm	
2	3/8"		"	"	"	"	8.1-9.9 ipm	
3	7/16"		"	"	"	"	8.1-9 ipm	
3	1/2"		"	"	"	"	8.1-9 ipm	

No welds over 5/16" with this wire for 50W!