



CONSTRUCTION LEADERS

LETTER OF TRANSMITTAL	
DATE: <b>April 23, 2015</b>	PCL JOB NO: <b>5515002</b>
ATTN: <b>Chris Barker</b>	TRANSMITTAL NO: <b>062</b>

To: **State of Vermont Agency of Transportation**  
 One National Life Drive  
 Montpelier, VT 05633-5001  
 (802) 828-0053

Re: Hartford Lateral Slide  
 Project No.: IM 091-2(79)  
 Contract ID.: 12A132

County: Windsor

PCL FILE NO: 5515002-40

WE ARE SENDING  Attached  Under separate cover via   **Email & SP**   the following:  
 Shop drawings  Prints  Plans  Samples  Specifications  
 Copy of Letter  Change Order  Other

COPIES	SPEC.	REVISION	DESCRIPTION
1	Spec. Prov. #89		Certifications for Slide System Steel Fabricator

TRANSMITTED for as checked below:

For approval  Approved as submitted  Resubmit   **1**   Copies for approval  
 For your use  Approved as noted  Submit  Copies for distribution  
 As requested  Returned for corrections  Return  Corrected prints  
 For review and comment

**Remarks:**

Please return an email of this approved submittal to Erich Heymann ([ewheymann@pcl.com](mailto:ewheymann@pcl.com)) and Jeremy Mackling ([jmackling@pcl.com](mailto:jmackling@pcl.com)).

We request the review and return of this submittal within   **7 days**  . Please advise if this request cannot be met so we can plan accordingly.

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By: **Erich Heymann**, Project Engineer

COPY TO: Project Files



**CONSTRUCTION LEADERS**

**SUBMITTAL NO. : 40**  
**Certifications for Slide System Steel Fabricator**

<b>Item No.</b>	<b>Specification</b>	<b>Description</b>
1	Spec. Prov. #89	Certifications for Slide System Steel Fabricator

***PROJECT:***  
**HARTFORD LATERAL SLIDE**  
**PROJECT NO.: IM 091-2(79)**  
**CONTRACT ID.: 12A132**

***OWNER:***  
**STATE OF VERMONT AGENCY OF TRANSPORTATION**

***ENGINEER OF RECORD:***  
**STATE OF VERMONT AGENCY OF TRANSPORTATION**

***CONTRACTOR:***  
**PCL CIVIL CONSTRUCTORS, INC.**

**APRIL 23, 2015**

# *American Institute of Steel Construction*

*is proud to recognize*

## **American Welding Company, Inc.**

West Greenwich, RI

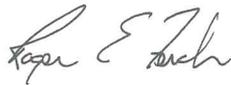
*for successfully meeting the quality certification requirements for*

**Standard for Steel Building Structures**

**Certified Bridge Fabrication - Intermediate (Major)**

**Fracture Critical Endorsement**

**Sophisticated Paint Endorsement-Enclosed**



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Roger E. Ferch



**194051011-2014**

Certificate Number

Certification valid through: May 2015

# AMERICAN WELDING COMPANY, INC.

689 Hopkins Hill Rd.  
West Greenwich, RI

## QUALITY ASSURANCE PROGRAM

Edward Violette

Procedure Approval \_\_\_\_\_  
Quality Control Manager

Richard Silva

Procedure Review \_\_\_\_\_  
General Manager

Date \_\_\_\_\_

Issue Date \_\_\_\_\_

REVISION NO.	DESCRIPTION OF CHANGE	DATE
0	Original Issue	2/10/94
1	Revise Contract Review Form	1/12/95
2	Clarify Requirements in 11.0 Welding Control	6/20/96
3	Review for compliance to operations	4/14/00
4	Revised to comply with AISC Standard	1/21/05
5	Revised section 4.0 Review and Acceptance	3/20/06
6	Revised section 10.0 Records Identification	3/20/06
7	Revised section 15 Drawing and Procedure Control	3/05/07
8	Deleted section 15 Drawing and Specifications Control	3/17/08

Proc. No. AWC - 1  
Rev. 8  
Date: 3/17/08

**This Manual is the property of American Welding Co. and shall NOT be altered in any way.  
This Manual Shall NOT be copied without written permission from American Welding Co.**

## QUALITY ASSURANCE PROGRAM

### 1.0 Purpose

- 1.1 To establish the policies of American Welding Company relative to the responsibilities of the Departments and Personnel involved in the Company.

### 2.0 Scope

- 2.1 To maintain a written Quality Assurance Manual that contains the details for an inspection system and assures conformance to the contract documents.

### 3.0 Responsibilities

- 3.1 The Quality Control Department shall be responsible for the fit, form and function of all aspects of the fabrication process. Controls shall be written and followed as to the inspection of material upon receipt through fabrication to delivery.
- 3.2 The Quality Control Manager is responsible for the issuance of the Quality Control Manual and the administration and implementation of the Quality Control Program. He has the authority and the organizational freedom to identify quality control problems, provide for their solutions, and verify corrective actions. The Quality Control Manager is solely responsible for interpretation of Quality Control Manual requirements.
- 3.3 In the event that a quality problem cannot be resolved in accordance with this Quality Control Program, the problem shall be brought to the Vice President/General Manager for resolution.

### 4.0 Policies and Procedures

- 4.1 This quality assurance manual has been implemented at American Welding to insure that all structural steel and related material furnished by American Welding Co. are fabricated to the requirements that are called out by the contract documents.
- 4.2 Responsibility for the quality control supervision shall be assigned to a competent person who is separate from the production supervision.
- 4.3 Review and acceptance by the general manager and the quality control manager of any manual or procedure shall be performed. When first implemented, altered or revised. The change shall be noted in the revision block on the cover and signed and dated.

5.0 In-House NDT Capabilities

5.1 The nondestructive testing capability consists of Magnetic Particle (MT) and Visual Inspection (VT) conducted by a CWI.

6.0 Qualification of Inspection Personnel

6.1 Performance and Testing of NDT personnel shall be in accordance with Standard Practice SNT-TC-1A and AWC - 11 Standard Practice NDT Personnel.

6.2 NDE Procedures will be performed using written procedures that have been approved by a Level III Examiner, in accordance with AWC - 11. The procedures will provide sufficient detail to assure that Contract requirements are met.

6.3. When required NDE procedures will be submitted for review by the Authorized Inspector. They shall also be demonstrated to his satisfaction prior to performing any NDE when requested.

6.4 The Quality Control Manager shall verify that all NDE personnel are properly qualified for the method, including SNT-TC-IA, Latest Edition requirements, when applicable.

6.5 NDE Reports including radiographic film, shall be evaluated, interpreted, and accepted by a Level II or III Examiner. All reports of NDE, including radiographic film, shall be reviewed and accepted by the Quality Control Manager prior to submittal to the Authorized Inspector for his/her acceptance.

6.6 All RT and UT required by Contract will be performed by a qualified NDE subcontractor whose written procedures, personnel qualifications, and equipment calibration have been reviewed and approved by the Quality Control Manager. The Subcontractor must provide a program whose written practice and personnel qualifications comply with the requirements of SNT-TC-IA.

7.0 Training of Inspection Personnel

7.1 Training and up-dating of inspection personnel's qualifications shall be accomplished in accordance with AWC - 11.

8.0 Shop Fabrication Inspection Program

- 8.1 Fabrication of material is controlled by means of approved drawings issued to the shop by the Shop Super. The drawings are prepared in accordance with contract design drawings, by the Design Engineer.
- 8.2 Prior to the start of fabrication, the Quality Control Manager shall review the Shop drawings and Job Specifications with the Shop Super.
- 8.3 In-process inspections shall be accomplished at random intervals on all jobs in the shop. These inspections shall include: Fit-up, Lay-out, Dimensions, Welding, Blast and Paint. The Quality Control Inspector may complete an inspection report detailing the in-process results.
- 8.4 Final Inspection shall be accomplished when fabrication of a material is completed and shall consist of 100% visual inspection of all welds and at a minimum 10% dimensional on all work unless otherwise required by contract. With the exception of AWS D1.5 projects, then the inspection shall consist of 100% visual and 100% dimensional as well as any other NDT inspections as required by contract or code. The Quality Control Inspector performs a final inspection and identifies the pieces inspected by placing a contrasting color check mark in a conspicuous location.
- 8.5 The completed inspection report and/or computer print-out consisting of main piece marks dimensionally inspected and welder id shall be maintained in the job folder for retention.

9.0 Nonconformity's

- 9.1 The General Manager is responsible for providing appropriate dispositions for non-conformance items. Those items, within the scope of his responsibility, will be properly disposition, approved by him, and returned to the Quality Control Manager for implementation.
- 9.2 Non-conformities that cannot be reconciled are referred to the Project Engineer for disposition. The Project Engineer shall provide for the appropriate engineering dispositions.
- 9.3 Description of Nonconformity's
  - 9.3.1 Use-As-Is -- When the disposition is use-as-is, the Quality Control Inspector will consult with the Quality Control Manager. Any required revisions to drawings, calculations, and procurement documentation will be done, as described in this Manual.
  - 9.3.2 Repair/Rework -- All dispositions requiring repair or rework may be made using standard procedures, or special procedures approved by the Quality Control Manager. For repairs to base metal by welding, the proposed disposition is submitted to the Project Engineer for acceptance of the method and extent of repair prior to execution of the repair.
  - 9.3.3 Scrap/Return to Vendor -- This disposition required Quality Control verification on the Non-conformance Report that the item has been removed from the work area, and clearly marked to prevent its inadvertent use prior to disposal.
- 9.4 The Quality Control Inspector shall re-inspect the items disposition, when the required action has been completed, and item meets specified requirements, he will remove the "Hold" tag or marking, and permit the item to return to its proper sequence of fabrication.

#### 10.0 Records Retention

- 10.1 All records described in this Manual are collected at the completion of the job and reviewed for completeness and correctness.
- 10.2 All records, including a copy of contract drawings, Radiographs and interpretation sheets, Ultrasonic Testing Reports, inspection reports, contract review forms, MTR'S, drawing logs and RFI'S are maintained in the storage files for at least five (5) years.
- 10.3 A job performance review shall be performed to evaluate quality efficiency of the project. Efficiency evaluations may be performed during job operations to determine areas of deficiency and required action.

#### 11.0 Welding Control

- 11.1 All welding will be performed using Welding Procedure Specifications and Welders qualified in accordance with AWS D1.1 & D1.5 in addition to any requirement of the applicable contract specification.
- 11.2 Welding Procedure Specifications - WPS are written and prepared by the Quality Control Department and maintained by the Quality Control Manager. The required test welds are made under his supervision, and testing of the required specimens is conducted by a qualified testing laboratory. The report of test submitted by the laboratory is reviewed by the Quality Control Manager, who then prepares and certifies by signature and date the Procedure Qualification Record - (PQR).
- 11.3 Copies of qualified WPS are provided by the Quality Control Manager to the Shop Super for use by the Welders. The Quality Control Manager is responsible for maintaining copies of the WPS in the work area and instruction the Welders as to the requirements of the applicable Welding Procedure Specification.
- 11.4 Copies of all WPS's and PQR's are made available for review and acceptance when requested by contract documents.
- 11.5 WPS's are revised when there is a change in nonessential variables. A new WPS is prepared and qualified when there has been a change to an essential variable.
- 11.6 The Authorized Inspector has the right to request requalification of a Welder when there is a reason to doubt the ability for him/her to make sound weldments.

11.0 Welding Control Cont.

## 11.7 Qualification of Welders and Welding Operators

11.7.1 All Welders are qualified to the applicable section of AWS D1.1. The Quality Control Manager is responsible for providing the applicable coupons for testing of Welders. He shall assure that they are welded in accordance with AWS requirements and are tested by a qualified person. The report of test shall be completed by the Quality Control Manager. If acceptable, he shall certify the Welder or Welding Operator by completing the Welder Qualification Record.

11.7.2 Welder's Qualification Records are available for review by the Authorized Inspector.

11.8 Requalification of Welders and Welding Operators are requalified when:

- a) A change in Performance Essential Variable occurs;
- b) They have not welded in the specific process for six (6) months.
- c) The Authorized Inspector has reason to question their ability to make sound weldments.

11.9 Maintenance of Welder Qualification is listed on a Welder's Log by the Quality Control Manager and maintained by the Quality Control Inspector. The log identifies WPS's each Welder is qualified to perform. The log will be updated periodically by the Quality Control Inspector to indicate the date each Welder welded in each process during the period.

11.10 The Quality Control Inspector is responsible for verifying that all Welders are qualified for the WPS, prior to welding Contract items.

11.11 Each qualified Welder is issued a unique number by the Quality Control Manager with which to identify each weld he makes. Each welded joint will be identified with the welder's mark on the piece when required by contract.

11.12 All welding materials are purchased and received as described in Section 5. Welding material is stored in a dry storage place. Low hydrogen coated electrodes will be received and stored in hermetically sealed containers. When opened, the electrodes will be placed in a heated oven maintained at the temperature of 250 Deg F.

11.0 Welding Control Cont.

11.13 Coated electrodes are removed only in quantities sufficient to complete the weld, or for a four-hour period, whichever is less. In the event of work performed to AWS D1.5 portable rod ovens shall be used to maintain rod temperature to 250 Deg. F.

11.14 Unconsumed coated electrodes are examined for condition, cleanliness, and identification, prior to returning them to the oven for rebaking. Damaged electrodes are scrapped.

12.0 Calibration of Equipment

12.1 All measurement and test equipment used for Contract items shall be calibrated in accordance with this American Welding Procedure AWC-3.

12.2 All measurement, test, and examination equipment which requires calibration shall be identified by marking with a unique Serial Number.

12.3 The Quality Control Manager is responsible for seeing that all equipment is maintained in calibration, unless out of use and clearly marked "NOT CALIBRATED - DO NOT USE".

12.4 When equipment is found out of calibration, the Quality Control Inspector will tag the equipment "DO NOT USE UNTIL CALIBRATED", remove it from the work area and arrange for its calibration or replacement.

13.0 Authorized Inspector

13.1 The Authorized Inspector is an Inspector employed by a State or Municipality of the United States or an individual designated by the owner. The Authorized Inspector may wish to witness or verify before fabrication starts. Work shall not proceed beyond the Authorized Inspector "Hold" point until it has been inspected and accepted by the Authorized Inspector.

13.2 The Quality Control Manager is the Company's liaison with the Authorized Inspector and is responsible for keeping him advised of the progress of the work so he may make designated inspections.

13.3 The Authorized Inspector shall have access to and be furnished with all drawings, calculations, specs, procedures, repair procedures, records, test results, and any other documents as are required to perform the Authorized Inspector's duties.

14.0 Material Control

- 14.1 Requests for quote are prepared from the advanced bill of material by the Purchasing Manager. All Contract requirements, including specification and type or grade, special requirements, markings and certifications required, and any other contractual requirements are identified on the request.
- 14.2 The Purchasing Manager prepares the Purchase Order (P.O.) by copying, without change, from the approved Bill of Materials/Request for quote. The Purchasing Manager then forwards a copy to the vendor.
- 14.3 Receiving Inspection shall be performed by providing a copy of the Purchase Order identifying the attributes of the material being received. The Receiver, using his copy of the Purchase Order examines the Material for dimensions, marking, condition, and quality per ASTM A6. If acceptable, marks the material with the applicable PO number and Job Number if material was ordered for a specific job, and records the information on the Purchase Order.
- 14.4 Upon completion of the Receiving Inspection, the Receiver releases the material for storage or to the shop for fabrication.
- 14.5 If any material is found that does not meet all Purchase Order requirements it shall be conspicuously marked, segregated when practical and brought to the attention of the purchasing manager.

**AMERICAN WELDING CO. INC.**

LIST OF ATTACHMENTS

- 1 - Material Control HOLD and REJECTED Tags
- 2 - Contract Review Form
- 3 - Contract Document Record
- 4 - Welder Qualification Record
- 5 - Receipt Inspection Form
- 6 - Visual Inspection Form
- 7 - Visual & Magnetic Particle Inspection Form
- 8 - Liquid Penetrant Inspection Record
- 9 - Magnetic Particle Inspection Record
- 10 - Non-conforming Material
- 11 - Bolting Inspection Form
- 12 - Blast & Paint Report

# AMERICAN WELDING COMPANY

HOPKINS HILL RD  
WEST GREENWICH, RI

PRE-QUALIFIED

WELDING PROCEDURE

FLUX-CORE ARC WELDING (FCAW)

NON - FRACTURE CRITICAL PROCEDURE  
STRUCTURAL WELDING AWS D1.1

Procedure Approval   
Quality Control Manager

Procedure Review   
General Manager

Date 4/4/06

Issue Date 4/4/06

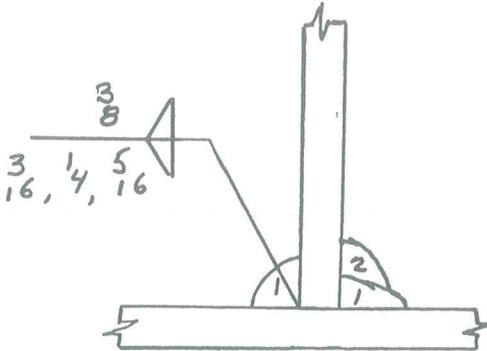
REVISION NO.	DESCRIPTION OF CHANGE	DATE
0	Original Issue	4/4/06

Proc. No. WPS 2-0  
Rev. 0  
Date: 4/4/06

PROCESS: FLUX-CORE ARC WELDING (FCAW)

MATERIAL: CARBON STEEL ASTM A36 , A572 & A992 Through Grades 50

APPLICABILITY/SKETCH



		Base Metal Thickness (U = unlimited)		Groove Preparation		Permitted Welding Positions	Gas Shielding for FCAW	Notes
Welding Process	Joint Designation	T <sub>1</sub>	T <sub>2</sub>	Root Opening	Groove Angle			
GMAW FCAW	B-U2a-GF	U	-	R = 3/16	α = 30°	F, V, OH	Required	A, N
				R = 3/8	α = 30°			
				R = 1/4	α = 45°			

Tolerances	
As Detailed (see 3.13.1)	As Fit-Up (see 3.13.1)
R = +1/16, -0	+1/4, -1/16
α = +10°, -0°	+10°, -6°

FILLET WELD

GROVE WELD

WELDING METHOD  
PASS NUMBER  
WELDING POSITION  
ELECTRODE CLASS & TYPE  
ELECTRODE SIZE  
WELDING CURRENT (AMPS)  
ARC VOLTAGE  
WIRE FEED SPEED (IPM)  
SHIELDING GAS  
FLOW RATE  
CURRENT TYPE AND POLARITY  
PREHEAT  
INTERPASS TEMP.  
TRAVEL SPEED (IPM)  
GAS CUP SIZE  
GAS CUP TO WORK DIST.  
CONTACT TIP TO WORK DIST.  
TOURCH LEAD ANGLE  
TOURCH LAG ANGLE

SEMI-AUTOMATIC  
ALL  
FLAT, HORIZONTAL & VERTICAL  
AWS 5.20 E70 - T1 & E71 - T1  
.045 1/16  
180 - 240 220 - 300  
24 - 29 25 - 30  
200 - 390 230 - 315  
CARBON DIOXIDE CO2  
35 CFH  
DC - REVERSE ELECTRODE POSITIVE  
SEE NOTE 8.0  
450 DEG. F MAX.  
9 - 16 11 - 20  
1/2" - 5/8"  
1/2" - 1"  
1/2" - 1"  
0 DEG.  
0 - 10 DEG.

PROCESS: FLUX-CORE ARC WELDING (FCAW)

GENERAL NOTES

- 1.0 When required by contract specification this procedure shall be subject to all the applicable requirements of AWS D1.1.
- 2.0 Level and range of qualification is defined in AWS D1.1
- 3.0 Welding Technique:
  - 3.1 Adjust current to obtain uniform weld bead with minimum spatter
  - 3.2 Maximum bead width shall not exceed 3/4"
  - 3.3 Vertical progression shall be UP.
  - 3.4 The maximum size of single pass fillet welds and root passes of multiple pass fillet welds shall not exceed 5/16" for the flat and horizontal positions.
- 4.0 Joint Design: All standard structural fillet, butt, groove and tee joint designs are specified in Section 3 of AWS D1.1, Pre-qualification of WPS.
- 5.0 Edge preparation shall be accomplished by oxy-fuel cutting, air-arc gouging, plasma arc cutting, chipping, grinding, burring, and/or automatic oxy-fuel gouging, to the extent required to accomplish a sound weld, or comply to contract specifications.
- 6.0 Power supply: Any constant current motor generator or rectifier having suitable current range.
- 7.0 Preweld Cleaning: The weld surface and adjacent base material shall be free from grease, oil, moisture, gouges, zinc and galvanizing, as well as foreign matter for a distance of 1" on each side of the weld joint. All tools used for cleaning shall be free from oil, grease, or other contaminants which will effect weld quality. Where pneumatic tools are used the air supply should be free of oil and dry.
  - 7.1 Interpass Cleaning: Prior to depositing subsequent weld beads, the previous bead shall be cleaned. The cleaning may consist of wire brushing, grinding, burring or a combination thereof.

8.0 When required a soaking type preheat shall be applied prior to welding.

	(Note 1)	Over 3/4	Over 1-1/2	Over 2-1/2
Material Thickness	to 3/4 in.	to 1-1/2	to 2-1/2	
Pre-heat Required	None	50 Deg. F	150 Deg. F	225 Deg. F

Note 1: When the base metal temperature is below 32 Degrees F., the base metal shall be preheated to at least 70 Deg. F, and this minimum temperature shall be maintained during welding.

# AMERICAN WELDING COMPANY

689 HOPKINS HILL RD  
WEST GREENWICH, RI

## WELDING PROCEDURE

FLUX-CORE ARC WELDING (FCAW)

STRUCTURAL WELDING AWS D1.6

Procedure Approval

*Richard A. Scherer* Production MGR

Quality Control Manager

Procedure Review

*Richard A. Scherer*

General Manager

Date

*4/6/2015*

Issue Date

*4/10/2015*

REVISION NO.	DESCRIPTION OF CHANGE	DATE
0	Original Issue	4/03/15

Proc. No. WPS SS-1  
Rev. 0  
Date: 4/03/15

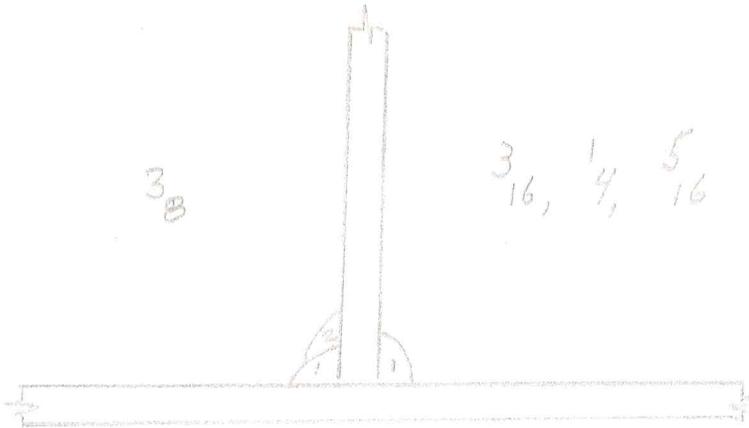
AMERICAN WELDING CO.

WELDING PROCEDURE SPECIFICATION WPS SS-1 Rev. 0

PROCESS: FLUX-CORE ARC WELDING (FCAW)

MATERIAL: CARBON STEEL ASTM A36, A572, A709 & A992 Through Grades 50 to ASTM A304

APPLICABILITY/SKETCH



FILLET WELD ONLY

WELDING METHOD	SEMI-AUTOMATIC
PASS NUMBER	ALL
WELDING POSITION	FLAT, HORIZONTAL
ELECTRODE CLASS & TYPE	AWS 5.22 E309L T1-1
ELECTRODE SIZE	.045 1/16
WELDING CURRENT (AMPS)	135 - 190 170 - 290
ARC VOLTAGE	25 - 29 24 - 29
WIRE FEED SPEED (IPM)	200 - 400 140 - 350
SHIELDING GAS	CARBON DIOXIDE CO2
FLOW RATE	35 - 45 CFH
CURRENT TYPE AND POLARITY	DC - REVERSE ELECTRODE POSITIVE
PREHEAT	SEE NOTE 8.0 - FOR STEEL ONLY
INTERPASS TEMP.	450 DEG. F MAX.
TRAVEL SPEED (IPM)	9 - 16 11 - 20
GAS CUP SIZE	1/2" - 5/8"
GAS CUP TO WORK DIST.	1/2" - 1"
CONTACT TIP TO WORK DIST.	1/2" - 1"
TOURCH LEAD ANGLE	0 DEG.
TOURCH LAG ANGLE	0 - 10 DEG.

GENERAL NOTES

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- 1.0 When required by contract specification this procedure shall be subject to all the applicable requirements of AWS D1.6.
- 2.0 Level and range of qualification is defined in AWS D1.6
- 3.0 Welding Technique:
  - 3.1 Adjust current to obtain uniform weld bead with minimum spatter
  - 3.2 Maximum bead width shall not exceed 3/4"
  - 3.3 Maximum single pass fillet weld shall be 5/16"
- 4.0 Joint Design: All standard structural fillet and tee joint designs are specified in Section 3 of AWS D1.6, Pre-qualification of WPS.
- 5.0 Edge preparation shall be accomplished by oxy-fuel cutting, air-arc gouging, plasma arc cutting, chipping, grinding, burring, and/or automatic oxy-fuel gouging, to the extent required to accomplish a sound weld, or comply with contract specifications.
- 6.0 Power supply: Any constant current motor generator, rectifier or inverter having suitable current range.
- 7.0 Preweld Cleaning: The weld surface and adjacent base material shall be free from grease, oil, moisture, gouges, zinc and galvanizing, as well as foreign matter for a distance of 1" on each side of the weld joint. All tools used for cleaning shall be free form oil, grease, or other contaminates which will effect weld quality. Where pneumatic tools are used the air supply should be free of oil and dry.
  - 7.1 Interpass Cleaning: Prior to depositing subsequent weld beads, the previous bead shall be cleaned. The cleaning may consist of wire brushing, grinding, burring or a combination thereof.
- 8.0 When required a soaking type preheat shall be applied prior to welding.  
 FOR STEEL COMPONENT ONLY – No pre-heat is required on the Stainless Steel
 

	(Note 1)	Over 3/4	Over 1-1/2	Over 2-1/2
Material Thickness	to 3/4 in.	to 1-1/2	to 2-1/2	
Pre-heat Required	None	50 Deg. F	150 Deg. F	225 Deg. F

Note 1: When the base metal temperature is below 32 Degrees F., the base metal shall be preheated to at least 70 Deg. F, and this minimum temperature shall be maintained during welding.

GARY LALIBERTE WELDERS NAME 30 WELDER I.D. # 3/27/14 DATE

WELDING PROCESS FCAW

MANUAL SEMIAUTOMATIC X MACHINE

POSITION 1 G FLAT IF VERTICAL UP DOWN

MATERIAL SPECIFICATION ASTM A 709-50

JOINT THICKNESS 1" THICKNESS RANGE QUALIFIED UNLIMITED FILLER METAL

SPECIFICATION NO. AWS A5.20 CLASSIFICATION NO. E71-T1

DIAMETER AND TRADE NAME 1/16" LINCOLN ELITE

SHIELDING GAS OR FLUX CO2 100%

VISUAL INSPECTION

APPEARANCE ACCEPT UNDERCUT NONE PIPING POROSITY NONE

Table with 4 columns: TYPE, RESULT, TYPE, RESULT. Includes handwritten entries for N/A and SIDE BEND SAT.

RADIOGRAPHY

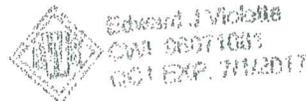
TEST CONDUCTED BY: [Signature] APPROVED [Signature] REJECTED

WE, THE UNDERSIGNED, CERTIFY THAT THE STATEMENTS IN THIS RECORD ARE CORRECT AND THAT THE WELDS WERE PREPARED AND TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF AASHTO/AWS D1.5, (2016) BRIDGE WELDING CODE. (YEAR)

MANUFACTURER OR CONTRACTOR: American Welding Co.

AUTHORIZED BY: [Signature]

DATE: 3/27/14



AMERICAN WELDING CO. INC.  
WELDER QUALIFICATION RECORD

PAGE 1 of 1  
WPS 2-0 Rev. 0

CHERRY RICO  
WELDERS NAME 26  
WELDER I.D. # 4/23/14  
DATE

WELDING PROCESS FCAW

MANUAL \_\_\_\_\_ SEMIAUTOMATIC X MACHINE \_\_\_\_\_

POSITION 3 (9) VERTICAL IF VERTICAL UP ✓ DOWN \_\_\_\_\_

MATERIAL SPECIFICATION ASTM A36

JOINT THICKNESS 3/8" THICKNESS RANGE QUALIFIED 3/4"

FILLER METAL

SPECIFICATION NO. Proc A5-20 CLASSIFICATION NO. E91-T1

DIAMETER AND TRADE NAME .045 LINCOLN ULTRACORE 71C

SHIELDING GAS OR FLUX CO<sub>2</sub> 100%

VISUAL INSPECTION

APPEARANCE Accept UNDERCUT NONE PIPING POROSITY NONE

GUIDED BEND TEST RESULTS

TYPE	RESULT	TYPE	RESULT
<u>N/A</u>		<u>FACE BEND</u>	<u>SAT</u>
		<u>ROOT BEND</u>	<u>SAT</u>

TEST CONDUCTED BY: [Signature] APPROVED ✓  
REJECTED \_\_\_\_\_

WE, THE UNDERSIGNED, CERTIFY THAT THE STATEMENTS IN THIS RECORD ARE CORRECT AND THAT THE WELDS WERE PREPARED AND TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF AASHTO/AWS D1.5, (2010) BRIDGE WELDING CODE. (YEAR)

MANUFACTURER OR CONTRACTOR: AMERICAN WELDING CO.

AUTHORIZED BY: [Signature]

DATE: 4/23/14



BRUCE DUARTE  
WELDERS NAME 21 WELDER I.D. # 3/27/14 DATE

WELDING PROCESS FCAW

MANUAL SEMIAUTOMATIC X MACHINE

POSITION 1 G FLAT IF VERTICAL UP DOWN

MATERIAL SPECIFICATION ASTM A 709-50

JOINT THICKNESS 1" THICKNESS RANGE QUALIFIED UNLIMITED  
FILLER METAL

SPECIFICATION NO. AWS A5.20 CLASSIFICATION NO. E71-T1

DIAMETER AND TRADE NAME 1/16" LINCOLN ELITE

SHIELDING GAS OR FLUX CO2 100%

VISUAL INSPECTION

APPEARANCE ACCEPT UNDERCUT NONE PIPING POROSITY NONE

GUIDED BEND TEST RESULTS			
TYPE	RESULT	TYPE	RESULT
N/A		SIDE BEND	PT

RADIOGRAPHY

Shawn James Permasi		SIDE BEND	PT
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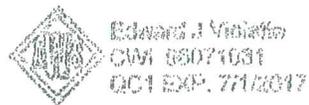
TEST CONDUCTED BY: [Signature] APPROVED V REJECTED

WE, THE UNDERSIGNED, CERTIFY THAT THE STATEMENTS IN THIS RECORD ARE CORRECT AND THAT THE WELDS WERE PREPARED AND TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF AASHTO/AWS D1.5, (2010) BRIDGE WELDING CODE. (YEAR)

MANUFACTURER OR CONTRACTOR: AMERICAN WELDING CO.

AUTHORIZED BY: [Signature]

DATE: 3/27/14



DOUGLAS IRELAND  
WELDERS NAME WELDER I.D. # 42 DATE 3/27/14

WELDING PROCESS FCAW

MANUAL SEMIAUTOMATIC X MACHINE

POSITION 1 G FLAT IF VERTICAL UP DOWN

MATERIAL SPECIFICATION ASTM A 709-50

JOINT THICKNESS 1" THICKNESS RANGE QUALIFIED UNLIMITED  
FILLER METAL

SPECIFICATION NO. AWS A5.20 CLASSIFICATION NO. E71-T1

DIAMETER AND TRADE NAME 1/16" LINCOLN ELITE

SHIELDING GAS OR FLUX CO2 100%

VISUAL INSPECTION

APPEARANCE None UNDERCUT None PIPING POROSITY None

GUIDED BEND TEST RESULTS  
TYPE RESULT TYPE RESULT

N/A 3/16" Beads SAT

RADIOGRAPHY

3/16" Beads SAT

TEST CONDUCTED BY: [Signature] APPROVED [Signature] REJECTED

WE, THE UNDERSIGNED, CERTIFY THAT THE STATEMENTS IN THIS RECORD ARE CORRECT AND THAT THE WELDS WERE PREPARED AND TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF AASHTO/AWS D1.5, (2010) BRIDGE WELDING CODE. (YEAR)

MANUFACTURER OR CONTRACTOR: American Welding Co.

AUTHORIZED BY: [Signature]

DATE: 3/27/14



AMERICAN WELDING CO. INC.  
WELDER QUALIFICATION RECORD

PAGE 1 of 1  
WPS 2-02 Rev. 10

ROSS HUTCHINS  
WELDERS NAME

10  
WELDER I.D. #

1/6/11  
DATE

WELDING PROCESS FCAW

MANUAL \_\_\_\_\_ SEMIAUTOMATIC X MACHINE \_\_\_\_\_

POSITION VERTICAL IF VERTICAL UP ✓ DOWN \_\_\_\_\_

MATERIAL SPECIFICATION ASTM A709

JOINT THICKNESS 1" THICKNESS RANGE QUALIFIED (UNLIMITED)  
FILLER METAL

SPECIFICATION NO. AWS A5.20 CLASSIFICATION NO. E71T1

DIAMETER AND TRADE NAME LINCOLN OUTFOR SHIELD .095

SHIELDING GAS OR FLUX CO<sub>2</sub> 100%  
VISUAL INSPECTION

APPEARANCE ACCEPT UNDERCUT NONE PIPING POROSITY NONE

GUIDED BEND TEST RESULTS	
TYPE	RESULT
<u>SIDE BEND #1</u>	<u>ACCEPTABLE</u>
<u>SIDE BEND #2</u>	<u>ACCEPTABLE</u>

TEST CONDUCTED BY: EDWARD VIOLETTE APPROVED ✓  
REJECTED \_\_\_\_\_

WE, THE UNDERSIGNED, CERTIFY THAT THE STATEMENTS IN THIS RECORD ARE CORRECT AND THAT THE WELDS WERE PREPARED AND TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF AASHTO/AWS D1.5, (2010) BRIDGE WELDING CODE. (YEAR)

MANUFACTURER OR CONTRACTOR: AMERICAN WELDING CO.  
AUTHORIZED BY: [Signature]

DATE: 1/7/11

FORM REVISED 10/7/07

  
[Signature]  
EDWARD J. VIOLETTE  
CWI 56071001  
UCI EXP. 07/01/11

AMERICAN WELDING CO. INC.  
WELDER QUALIFICATION RECORD

PAGE 1 of 1  
WPS 2.02 Rev. 10

JOHN MARTINELLI  
WELDERS NAME  
11  
WELDER I.D. #  
1/3/2011  
DATE

WELDING PROCESS FCAW

MANUAL \_\_\_\_\_ SEMIAUTOMATIC X MACHINE \_\_\_\_\_

POSITION VERTICAL IF VERTICAL UP X DOWN \_\_\_\_\_

MATERIAL SPECIFICATION ASTM A 709

JOINT THICKNESS 1" THICKNESS RANGE QUALIFIED UNLIMITED  
FILLER METAL

SPECIFICATION NO. AWS A 5.20 CLASSIFICATION NO. E91-T1

DIAMETER AND TRADE NAME LINCOLN OXYSHIELD .045

SHIELDING GAS OR FLUX 100% CO<sub>2</sub>  
VISUAL INSPECTION

APPEARANCE SAT UNDERCUT SAT PIPING POROSITY SAT

GUIDED BEND TEST RESULTS	
TYPE	RESULT
<u>SIDE BEND #1</u>	<u>ACCEPTABLE</u>

GUIDED BEND TEST RESULTS	
TYPE	RESULT
<u>SIDE BEND #2</u>	<u>ACCEPTABLE</u>

TEST CONDUCTED BY: [Signature] APPROVED [Signature]  
REJECTED \_\_\_\_\_  
WE, THE UNDERSIGNED, CERTIFY THAT THE STATEMENTS IN THIS RECORD  
ARE CORRECT AND THAT THE WELDS WERE PREPARED AND TESTED IN  
ACCORDANCE WITH THE REQUIREMENTS OF AASHTO/AWS D1.5, (2008)  
BRIDGE WELDING CODE. (YEAR)

MANUFACTURER OR CONTRACTOR: AMERICAN WELDING CO.

AUTHORIZED BY: [Signature]

DATE: 1/4/11



PRODUCTION A. WELDER  
CEN 92071091  
DCI EXP. 07/06/11

PETE DUFFY  
WELDERS NAME

27  
WELDER I.D. #

11/22/04  
DATE

WELDING PROCESS FCAW

MANUAL \_\_\_\_\_ SEMIAUTOMATIC X MACHINE \_\_\_\_\_

POSITION VERTICAL 3G IF VERTICAL UP X DOWN \_\_\_\_\_

MATERIAL SPECIFICATION A36

JOINT THICKNESS 1" THICKNESS RANGE QUALIFIED (AS NOTED)  
FILLER METAL

SPECIFICATION NO. AWS A5.20 CLASSIFICATION NO. E71T1

DIAMETER AND TRADE NAME .045 LINCOLN ELITE

SHIELDING GAS OR FLUX CO2 100%  
VISUAL INSPECTION

APPEARANCE ACCEPT UNDERCUT NONE PIPING POROSITY NONE

GUIDED BEND TEST RESULTS			
TYPE	RESULT	TYPE	RESULT
<u>SIDG BEND #1</u>	<u>SATISFACTORY</u>	<u>NO DEFECTS</u>	
<u>SIDG BEND #2</u>	<u>SATISFACTORY</u>	<u>NO DEFECTS</u>	

TEST CONDUCTED BY: EDWARD VIOLETTE APPROVED X  
REJECTED \_\_\_\_\_

WE, THE UNDERSIGNED, CERTIFY THAT THE STATEMENTS IN THIS RECORD ARE CORRECT AND THAT THE WELDS WERE PREPARED AND TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF AASHTO/AWS D1.5, (02) BRIDGE WELDING CODE. (YEAR)

MANUFACTURER OR CONTRACTOR: AMERICAN WELDING CO.

AUTHORIZED BY: [Signature]

DATE: 11/22/04



AMERICAN WELDING CO. INC.  
WELDER QUALIFICATION RECORD

PAGE 1 of 1  
WPS 202 Rev. 8

WELDERS NAME ROBERT TORENNE WELDER I.D. # 29 DATE 4/10/06

WELDING PROCESS FCAW

MANUAL \_\_\_\_\_ SEMIAUTOMATIC X MACHINE \_\_\_\_\_

POSITION VERTICAL 3G IF VERTICAL UP X DOWN \_\_\_\_\_

MATERIAL SPECIFICATION ASTM A 36

JOINT THICKNESS 1" THICKNESS RANGE QUALIFIED UNLIMITED  
FILLER METAL

SPECIFICATION NO. AWS A5.20 CLASSIFICATION NO. E71-T1

DIAMETER AND TRADE NAME .045 LINCOLN ELITE

SHIELDING GAS OR FLUX CO2 100%

VISUAL INSPECTION

APPEARANCE ACCEPT UNDERCUT NONE PIPING POROSITY NONE

GUIDED BEND TEST RESULTS			
TYPE	RESULT	TYPE	RESULT
<u>SIDE BEND</u>	<u>SATISFACTORY</u>	<u>NO DEFECTS</u>	
<u>SIDE BEND</u>	<u>SATISFACTORY</u>	<u>NO DEFECTS</u>	

TEST CONDUCTED BY: EDWARD VIOLETTE APPROVED X  
REJECTED \_\_\_\_\_

WE, THE UNDERSIGNED, CERTIFY THAT THE STATEMENTS IN THIS RECORD ARE CORRECT AND THAT THE WELDS WERE PREPARED AND TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF AASHTO/AWS D1.5, ( 2002 ) BRIDGE WELDING CODE. (YEAR)

MANUFACTURER OR CONTRACTOR: AMERICAN WELDING CO.

AUTHORIZED BY: [Signature]

DATE: 4/11/06

FORM REVISED 10/7/97



# American Welding Society

*Certifies that Associate Welding Inspector*

**Edward J Violette**

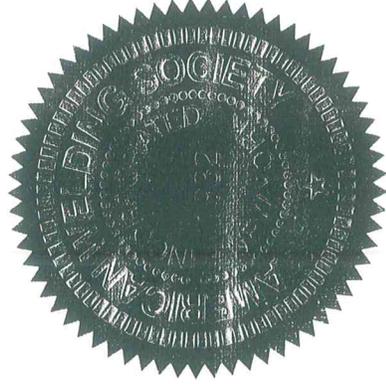
*has complied with the requirements of AWS QC1,  
Standard for AWS Certification of Welding Inspectors*

96071081

CERTIFICATE NUMBER

July 1 2017

EXPIRATION DATE



*Alex R Wilson*

AWS PRESIDENT

*Bill Belcher*

AWS QUALIFICATION COMMITTEE CHAIR

*George Hefler*

AWS CERTIFICATION COMMITTEE CHAIR



**American Welding Society®**

*Certifies that Welding Inspector*

**Wray T Lessard**

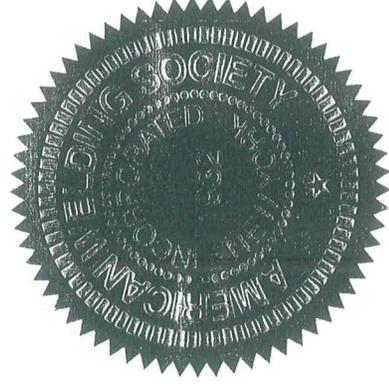
*has complied with the requirements of AWS QC1,  
Standard for AWS Certification of Welding Inspectors*

05060551

CERTIFICATE NUMBER

June 1 2017

EXPIRATION DATE



*Alan R Wilson*

AWS PRESIDENT

*Bill Babiker*

AWS QUALIFICATION COMMITTEE CHAIR

*George Alfiero*

AWS CERTIFICATION COMMITTEE CHAIR

 **American Welding Society**  
CERTIFIED WELDING INSPECTOR

 **Edward J. Violette**  
*Has complied with the requirements of AWS QC-1,  
Standard for AWS Certification of Welding Inspectors*

**96071081**  
Exp. 1 Jul 2017  
With Eye Correction



*James A. ...*  
AWS President

*Henry ...*  
AWS Certification Officer

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**American Welding Society**  
 CERTIFIED WELDING INSPECTOR




**Wray T Lessard**  
 Has complied with the requirements of AWS QC1,  
 Standard for AWS Certification of Welding Inspectors.

**05060551**  
 Exp. 1 Jun 2017  
 Without Eye Correction



*Nancy C. Cole*  
 AWS President

*George H. Heller*  
 AWS Certification Chair

CERTIFIED WELDING INSPECTOR

**American Welding Society**  
 Certifies That  
 WELDING EDUCATOR



**Wray T Lessard**  
 Has complied with the requirements of AWS QCS,  
 Standard for Certification of Welding Educators.

*Nancy C. Cole*  
 AWS President

*George H. Heller*  
 AWS Certification Chair



**9706021E**  
 Certificate Number  
**June 1 2017**  
 Expiration Date

**American Welding Society**  
 8669 NW 36 St., #130  
 Miami, FL 33166-6672  
 Ph. (305) 443-9353 • (800) 443-9353 • Fax (305) 443-5647  
 Visit our website at: [www.aws.org](http://www.aws.org)



MEMBER NUMBER  
**926862**

YEARS OF MEMBERSHIP  
**25**

VALID THRU  
**5/1/2016**

WRAY T LESSARD  
 MEMBER

*David J. ...*  
 AWS PRESIDENT

VALID UPON RECEIPT OF DUES