

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-013986**Date Inspected:** 10-May-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1500**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site

<b>CWI Name:</b>	Bernard Docena, Tony Sherwood, CWI Present on			<b>CWI Present on</b>	Yes	No	
<b>Inspected CWI report:</b>	Yes	No	N/A	<b>Rod Oven in Use:</b>	Yes	No	N/A
<b>Electrode to specification:</b>	Yes	No	N/A	<b>Weld Procedures Followed:</b>	Yes	No	N/A
<b>Qualified Welders:</b>	Yes	No	N/A	<b>Verified Joint Fit-up:</b>	Yes	No	N/A
<b>Approved Drawings:</b>	Yes	No	N/A	<b>Approved WPS:</b>	Yes	No	N/A
				<b>Delayed / Cancelled:</b>	Yes	No	N/A
<b>Bridge No:</b>	34-0006			<b>Component:</b>	SAS OBG East and West		

**Summary of Items Observed:**

The Quality Assurance (QA) Inspector, Rick Bettencourt was on site at the job site between the times noted above. The QA Inspector was on site to randomly observe the in process welding and inspection of the weld joints identified as 2W/3W-E, 3E/4E-E/F, 1W/2W-E 5E/6E and the following observations were made:

**2W/3W-E2**

The QA Inspector randomly observed the ABF welders had previously started the induction heating blankets to ensure the minimum required preheat of 150°F was achieved prior to welding. The QA Inspector randomly verified utilizing a 150°F temperature indicating marker and noted the minimum required preheat had been achieved. The SE QC Inspector Bernard Docena and the QA Inspector performed visual testing of the fit up of the above identified weld joint. It was observed by both Inspectors the fit up of the above identified weld joint appeared to be in general compliance with the contract requirements. The QA Inspector randomly observed the SE QC Inspector identified as Bernard Docena set the FCAW machine to the parameters of the approved WPS. The QA Inspector randomly observed the FCAW parameters were 245 Amps 23Volts and a travel speed of 220mm/min. The QA Inspector randomly observed the ABF welder Song Toa Huang begin the FCAW root/fill pass. The QA Inspector noted the ABF welder was performing the FCAW fill passes for the remainder of the QA Inspectors shift.

**3E/4E-E**

The QA Inspector was informed by the SE QC Inspector Tom Pasqualone, he had completed the ultrasonic testing of the above identified weld joint including the areas which were previously repaired. The QA Inspector randomly performed UT verification between the following Y locations: y=1000mm-1500mm, 3480mm-4160mm and

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5600mm-6200mm. The QA Inspector noted no rejectable indications were located at the time of the testing. See TL-6027 for additional information.

3E/4E-F

The QA Inspector was informed by the SE QC Inspector Tom Pasqualone, he had completed the ultrasonic testing of the above identified weld joint including the areas which were previously repaired. The QA Inspector randomly performed UT verification between the following Y location: y=180-820mm. The QA Inspector noted no rejectable indications were located at the time of the testing. See TL-6027 for additional information.

1W/2W-E1

The QA Inspector randomly observed the American Bridge/Fluor (ABF) welders Rory Hogan and Jeremy Doleman setting up the FCAW machine at the above identified weld joint. The QA Inspector was informed by the QC Inspector Tony Sherwood the back gouge was previously accepted by the SE QC. The QA Inspector performed a random visual and dimensional inspection of the back gouged joint and noted it appeared to meet the general requirements of the contract documents. The QA Inspector randomly observed the ABF welders had previously started the induction heating blankets to ensure the minimum required preheat of 150°F was achieved prior to welding. The QA Inspector randomly verified utilizing a 150°F temperature indicating marker and noted the minimum required preheat had been achieved. The QA Inspector observed the ABF welder to be utilizing a semi automated FCAW track system for welding the above identified weld joint. The QA Inspector randomly observed the SE QC Inspector identified as Tony Sherwood set the FCAW machine to the parameters of the approved WPS. The QA Inspector randomly observed the FCAW parameters were 225 Amps, 23.8 Volts and a travel speed of 150mm/min. The QA Inspector randomly observed the ABF welder Jeremy Doleman begin the FCAW fill pass, once the semi automated track system reached a certain point the ABF welder Rory Hogan would observe the welding arc for the remainder of the weld. The QA Inspector noted the ABF welders did not complete the weld segment E1 on the QA Inspectors shift. The QA Inspector randomly observed and noted the above identified welders did not begin welding until 0945.

1W/2W-C

The QA Inspector randomly observed the ABF welder identified as Bryce Howell performing plasma arc gouging of the above identified weld joint. Upon the arrival of the QA Inspector it was observed the steel backing bar had been previously removed and the back gouging was nearly complete.

5E/6E-A

The QA Inspector randomly observed the ABF erection personnel fitting up and installing a combination of the temporary drift pins and permanent bolts the splices plates and "U" ribs. The QA Inspector noted no fit up of steel backing bars had been completed by this date.

### Summary of Conversations:

The QA Inspector spoke with the QC Lead Inspector Leonard Cross about the frequency of the SE QC Inspectors signing off the charts on the walls pertaining to the visual testing the non destructive testing of the weld joints. The QA Inspector informed Mr. Cross it was difficult for the QA Inspectors to determine which welds were ready for QA verification of VT and NDT. The QA Inspector went on to inform Mr. Cross without the charts being signed off the QA Inspectors have no way of determining if all required QC NDT or if all of the ABF weld repairs had been completed. Mr. Cross informed the QA Inspector he would take care of the issue and discuss the problem

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with the SE QC inspectors.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mohammad Fatemi (916)-813-3677, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Bettencourt,Rick	Quality Assurance Inspector
<b>Reviewed By:</b>	Levell,Bill	QA Reviewer

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