

**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-012727**Date Inspected:** 18-Mar-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1100**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1930**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site

<b>CWI Name:</b>	Listed below.		
<b>Inspected CWI report:</b>	Yes	No	N/A
<b>Electrode to specification:</b>	Yes	No	N/A
<b>Qualified Welders:</b>	Yes	No	N/A
<b>Approved Drawings:</b>	Yes	No	N/A

<b>CWI Present:</b>	Yes	No	
<b>Rod Oven in Use:</b>	Yes	No	N/A
<b>Weld Procedures Followed:</b>	Yes	No	N/A
<b>Verified Joint Fit-up:</b>	Yes	No	N/A
<b>Approved WPS:</b>	Yes	No	N/A
<b>Delayed / Cancelled:</b>	Yes	No	N/A
<b>Component:</b>	Orthotropic Box Girders (OBG)		

**Bridge No:** 34-0006**Summary of Items Observed:**

The Quality Assurance Inspector (QAI), Scott Croff, was present at the Self Anchored Span (SAS) job site to observe the scheduled fabrication and welding of components for the SFOBB project. The following observations were made:

- 1) OBG temporary attachment welding
- 2) OBG L1E/L2E field splice welding (FSW) - plate E
- 3) OBG L1E/L2E - plate B

1) The QAI was asked to verify / photograph the temporary attachments that have been welded onto deck plate (A) stiffeners for the contractor's fitting-up of the OBG field splice welding. The QAI verified that temporary attachments have been welded onto the type 2 and type 10 stiffeners (grade 485W steel) at field splice locations L2E/L3E and L3E/L4E. The QAI observed that all stiffeners (12 total) at these locations have some temporary attachment welded on. It has been previously documented that this welding was being monitored by the contractor's Quality Control (QC) personnel and the QAI has witnessed the QC Inspector Jesus Cayabyab monitoring this welding. The QC Inspector was asked if he was aware that these stiffeners were grade 485W steel and that the contractor did not have an approved Welding Procedure Specification (WPS) or approved welders for this work. The QC Inspector replied that he was unaware of the different material grades during the welding. During this work, the QAI was informed by the ABF Engineer John Callaghan that ABF is documenting the non-conforming temporary attachment welds and un-qualified welder. See the attached photos.

2) The QAI observed ABF personnel welding plate E at L1E/L2E field splice. The QAI noted that this weld is

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complete joint penetration (CJP) with backing bars that will be removed. The QAI noted that (as previously reported) the backing bars are not continuous for the length of the splice. The QAI noted that the QC Inspector Bernie Docena is monitoring this welding. The QAI observed ABF personnel Rory Hogan, ID 3186 and Jeremy Dolman, ID 5042, making the welds with Gas Shielded Flux Cored Arc Welding (FCAW-G). The QAI was informed that ABF-WPS-D15-3042A-1 rev.0 is being used for this welding. The QAI noted that the weld portion from stiffener #24 (edge to plate D) to stiffener #17 is being welded. The QAI randomly measured the preheat, interpass temperature and welding parameters and noted that they appeared to be conforming to the WPS requirements. This work was in progress until the end of the shift.

3) The QAI observed ABF personnel welding plate B at L1E/L2E field splice. The QAI noted that this CJP weld is being completed after the backing bar has been removed. The QAI noted that the QC Inspector Bonifacio Daquinag Jr. is monitoring this welding. The QAI observed ABF worker Jin Quan Huang, ID 9340, making the welds with FCAW-G. The QAI was informed that ABF-WPS-D15-3040B-3 rev.0 is being used for this welding. The QAI randomly measured the preheat, interpass temperature and welding parameters and noted that they appeared to be conforming to the WPS requirements. This work was in progress until the end of the shift.



### Summary of Conversations:

As noted above, the QAI had conversations with QC Inspectors and ABF personnel regarding the welding in progress. Also during the shift, the ABF Engineer John Callaghan inquired with the QAI when and why photos were being taken. The QAI replied that the photos were being taken to document the visual condition of welds in progress and of the temporary attachments on the deck plate (A) stiffeners. The ABF Engineer was informed that the QAI was tasked with documenting the temporary weld attachments for being non-conforming. The QAI was informed that the ABF QC Manager was aware of the issue and has written an incident report as well. The QAI relayed the observations of welding and status of work to the QAI Bill Levell. The QAI also generated a shift turn-over report with this information. There were no other notable observations or conversations during this shift.

### 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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**Inspected By:** Croff, Scott

Quality Assurance Inspector

**Reviewed By:** Levell, Bill

QA Reviewer