

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-024429**Date Inspected:** 15-Jun-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Jobsite**CWI Name:** Tony Sherwood**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** SAS OBG**Summary of Items Observed:**

Quality Assurance inspector (QA) Douglas Frey was at the American Bridge/Fluor (ABF) job site at Yerba Buena Island in California between the times noted above in order to monitor Quality Control functions and the in process work being performed by ABF personnel. The following items were observed:

1. 9E PP79 E3 Lifting Lug Holes #2 and 4
2. 10E 11E C2 Diagonal Plate Splice
3. 9E PP79 E3 Lifting Lug Holes #1 and 3
4. 10W PP88 W3 Lifting Lug Hole #4
5. 5E PP33.9 E1 Drip Rails
6. 9W PP77 W3 Lifting Lug Holes VT, MT and UT
7. 7/8" Stud Welding (Bike Path)
8. Lifting Lug Lamination Scan (UT)

1. 9E PP79 E3 Lifting Lug Holes #2 and 4

The QA Inspector made periodic observations of ABF welder Jorge Lopez performing Shielded Metal Arc Welding (SMAW) in the 4G overhead position on Lifting Lug Holes (LLH) #2 and 4 located at 9E PP79 E3. The QA Inspector observed the QC Inspector Fred Von Hoff as being present in order to monitor the progress and ensure the welding parameters were in compliance pertaining to ABF-WPS-D15-1110A Rev. 1. The work was completed on this date and the QA Inspector noted that the work appeared to be in general conformance with the contract documents.

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### 2. 10E 11E C2 Diagonal Plate Splice

The QA Inspector randomly observed ABF welding operators Jimmy Zhen and Jin Pei Wang performing Flux Core Arc Welding w/gas (FCAW-G) operations in the 3G vertical position on face C2 on the outside of the OBG. The QA Inspector observed the QC Inspector Fred Von Hoff as being present in order to monitor the progress and ensure the welding parameters were in compliance pertaining to ABF-WPS-D15-3042B-1. The work progressed throughout the QA Inspector's shift. The QA Inspector noted that the work was in progress and appeared to be in general conformance with the contract documents.

### 3. 9E PP79 E3 Lifting Lug Holes #1 and 3

The QA Inspector made periodic observations of ABF welder Jorge Lopez performing SMAW in the 4G overhead position on LLH's #1 and 3 located at 9E PP79 E3. The QA Inspector observed the QC Inspector Fred Von Hoff as being present in order to monitor the progress and ensure the welding parameters were in compliance pertaining to ABF-WPS-D15-1110A Rev. 1. The work is in progress and the QA Inspector noted that the work appeared to be in general conformance with the contract documents.

### 4. 10W PP88 W3 Lifting Lug Hole #4

The QA Inspector made periodic observations of ABF welder Darcel Jackson performing SMAW in the 1G flat position on LLH's # 4 located at 10W PP88 W3. The QA Inspector observed the QC Inspector Tony Sherwood as being present in order to monitor the progress and ensure the welding parameters were in compliance pertaining to ABF-WPS-D15-1050A-CU. The work is in progress and the QA Inspector noted that the work appeared to be in general conformance with the contract documents.

### 5. 5E PP33.9 E1 Drip Rails

The QA Inspector randomly observed ABF welder Fred Kaddu performing SMAW in the 2G horizontal position on Drip Rails at 5E PP33.9 E1, PP34.1, PP34.9, PP35.1, PP36.9-PP37.1, PP38.9-PP39.1, and PP40.9-PP41.1. The QA Inspector observed the QC Inspector Fred Von Hoff as being present in order to monitor the progress and ensure the welding parameters were in compliance with ABF-WPS-D15-F1200A. The work is in progress and the QA Inspector noted that the work appeared to be in general conformance with the contract documents.

### 6. 9W PP77 W3 Lifting Lug Holes VT, MT and UT

The QA Inspector performed a Magnetic Particle Test (MT) on LLH's 1- 4 at 9W PP77 W3. The QA Inspector tested 10% of the weld to verify the weld and testing by QC meet the requirements of the contract documents. . The QA Inspector noted that the work appeared to be free of defects and was found to be acceptable and in general conformance with the contract documents. Upon completion of the MT, the QA Inspector performed Ultrasonic Testing utilizing a G.E./Krautkramer USN 60. The QA Inspector also utilized the UT Procedure identified as SE-UT-D1.5-CT-100 Rev.4 during the examination. Upon completion of the testing, it was noted by the QA Inspector that no indications were present and the work was found to be acceptable.

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## 7. 7/8" Stud Welding (Bike Path)

The QA Inspector randomly observed ABF operator Julian Paulk performing Stud Welding in the down hand position of 7/8 studs at the following locations; 6E PP45, PP47, E PP49, E PP51, E PP53, E PP55, and PP57. The QA Inspector observed the QC Inspector Tony Sherwood as being present in order to monitor the progress and ensure the welding parameters were in compliance with ABF-WPS-D15-5001 Stud. The QA Inspector noted that the work appeared to be in general conformance with the contract documents.

## 8. Lifting Lug Lamination Scan (UT)

The QA Inspector performed straight beam Ultrasonic Testing utilizing a G.E./Krautkramer USN 60 on two random lifting lugs in each segment for segment 2 to 8 in the East and West OBG. The scan was performed in the defined UT area on drawings ZPM-04-01-001216 to ZPM-04-01-001219 where accessible. The work is in progress and the QA Inspector noted that the work appeared to be in general conformance with submittal 1635 Rev.00.

### Summary of Conversations:

At the beginning the shift the QA Inspector met with QC Inspector Tony Sherwood and discussed the welders assignments and locations for the shift to include pending issues, ongoing work and required testing.



### 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 Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

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

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