

**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-018715**Date Inspected:** 17-Dec-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:** Jobsite**CWI Name:** See below**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:**

On this date CALTRANS OSM Quality Assurance Inspector (QAI) Bert Madison was present at Yerba Buena Island in California between the times noted above for observations relative to the work being performed by American Bridge/Fluor Enterprises (AB/F) personnel at the locations noted below.

- 1). OBG Field Splice 8E/9E Weld ID: C2, Face A (SMAW)
- 2). OBG Field Splice 7E/8E Weld ID: F1, Face B – (SMAW R-1 Repairs)
- 3). Longitudinal Stiffeners (ALS) Splice at OBG Field Splice 8E/9E (SMAW)
- 4). Longitudinal Stiffeners (ALS) Splice at OBG Field Splice 8E/9E (SMAW Repair)
- 5). OBG Field Welding of East Line Lifting Rod Access Penetration Inserts (SMAW)
- 6). OBG East Line Access Penetration Insert Longitudinal Stiff. (LSW) Splice at 8E PP61.5 E2
- 7). OBG Field Splices of Longitudinal Stiffeners (QA verification)

- 1). OBG Field Splice 8E/9E Weld ID: C2, Face A (SMAW)

The QAI periodically observed AB/F approved welder Song Tao Huang (ID 3794) performing welding of fill and cover passes at the last 1000mm of OBG Field Splice 8E/9E Weld ID: C2. The welding was performed per the Shielded Metal Arc Welding (SMAW) process in the 3G (vertical) position. See photo below. The QAI observed QC Inspector Fred Von Hoff was present periodically to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1040A. The welding of fill passes was completed and cover pass welding was in process. The QAI observed that the work at this location appeared to be in general compliance with contract documents.

- 2). OBG Field Splice 7E/8E Weld ID: F1, Face B – (SMAW R-1 Repairs)

The QAI periodically observed AB/F approved welder Fred Kaddu (ID 2188) performing repair welding of (3)

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three excavated R-1 Ultrasonic Testing (UT) repair areas in the B face (interior) of OBG Field Splice 7E/8E Weld ID: F1. The QAI periodically observed welding per the Shielded Metal Arc Welding (SMAW) process in the 3G (vertical) position. The QAI observed QC Inspector Fred Von Hoff were present periodically to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1000 Repair. The QAI observed that fill and cover passes were completed at the three repair areas and the QAI observed that the work at this location appeared to be in general compliance with contract documents.

### 3). Longitudinal Stiffeners (ALS) Splice at OBG Field Splice 8E/9E (SMAW)

The QAI periodically observed AB/F approved welder Hua Qiang Hwang (ID 2930) at OBG Field Splice 8E/9E ALS-2, performing welding of root, fill and cover passes per the Shielded Metal Arc Welding (SMAW) process in the 3G (vertical) position. See photo below. The welding at this location was first from the North Face and was completed and back grinding of the South face and subsequent back welding was completed. QC Inspector Fred Von Hoff was present periodically to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1012-3. The QAI observed that the work at this location appeared to be in general compliance with contract documents.

### 4). Longitudinal Stiffeners (ALS) Splice at OBG Field Splice 8E/9E (SMAW Repair)

The QAI periodically observed AB/F approved welder Hua Qiang Hwang (ID 2930) performing undercut repair welding per the Shielded Metal Arc Welding (SMAW) process in the 3G (vertical) position on ALS-6 at OBG Field Splice 8E/9E. QC Inspector Fred Von Hoff was present to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1002 Repair. The repair welding on the North face ALS-6 was completed and the QAI observed that the work at this location appeared to be in general compliance with contract documents.

### 5). OBG Field Welding of East Line Lifting Rod Access Penetration Inserts (SMAW Repairs)

Interior: OBG 4E PP25 E4 weld 1

The QAI periodically observed AB/F approved welder Salvador Sandoval (ID 2202)) performing repair welding at OBG 4E PP25 E4 weld 1 per the Shielded Metal Arc Welding (SMAW) process in the 4G (overhead) position. QC Inspector Pat Swain was periodically present to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1001 Repair. Welding was completed and the QAI observed that the work at this location appeared to be in general compliance with contract documents.

### 6). OBG East Line Access Penetration Insert Longitudinal Stiff. (LSW) Splice at 8E PP61.5 E2

The QAI periodically observed AB/F approved welder Xiao Jian Wan (ID 9677) performing back welding per the Shielded Metal Arc Welding (SMAW) process in the 3G (vertical) position on the OBG East Line Access Penetration Insert LSW Splice at 8E PP61.5 E2. QC Inspectors John Pagliero and Fred Von Hoff were present to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1012-3. The welding was completed on the South face of LSW and the QAI observed that the work at this location appeared to be in general compliance with contract documents.

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## 7). OBG Field Splices of Longitudinal Stiffeners (QA verification)

The QAI performed verification Ultrasonic Testing (UT) of 100% of the lengths of OBG Field Splices at the following locations:

LS East, LS West and Transverse Stiffeners at OBG Access Penetration Insert 5E PP29.5 E2, OBG Access Penetration Insert 6E PP46.5 E2 & OBG Field Splice 6E/7E ALS 4, 5 & 6.

The OBG Field Splices verified by the QAI appeared to be in general compliance with contract documents. See Ultrasonic Testing Report Form TL-6027 generated by the QAI on this date.



### Summary of Conversations:

Conversations on this date with Quality Control Inspectors were general in nature and pertained to locations of welding and QC activities and locations of welds released to the QAI for verification 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>	Madison,Bert	Quality Assurance Inspector
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<b>Reviewed By:</b>	Levell,Bill	QA Reviewer
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