

**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:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-017355**Date Inspected:** 07-Oct-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**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 6W/7W weld ID: A1 through A5, Face A - (QC UT of R-1 & R-2 Repairs)
- 2). OBG Field Splice 6W/7W Weld ID: E1 & E2, Face A (FCAW-G)
- 3). OBG Field Splice 6E/7E Weld ID: F1, Face A (SMAW)
- 4). Splice Welds in Backing Bar for OBG Field Splice 8E/9E Weld A - (QC NDE)
- 5). Splice Welds in Backing Bar for OBG Field Splice 8E/9E Weld A - (QAI Verification)

- 1). OBG Field Splice 6W/7W weld ID: A1 through A5, Face A (QC UT of R-1 & R-2 Repairs)

The QAI periodically observed QC Inspector Tom Pasqualone performing Ultrasonic Testing (UT) of weld R-1 & R-2 Repairs in OBG Field Splice 6W/7W weld ID: A1 through A5. Mr. Pasqualone utilized the UT Procedure identified as SE-UT-D1.5-CT-100 Rev.4 during the examination of the splice weld repair areas. The QC technician performed the required shear wave testing during the testing for weld soundness utilizing a .63 x .75 rectangular transducer. The work at this location was completed during this shift and the QAI observed that work appeared to be in general compliance with the contract documents. The QAI observed that Mr. Pasqualone had marked (3) three UT rejectable indications (see photo below) in the following R-1 repair locations:

Weld A1 - Y = 5090, Length = 35mm and Depth = 12mm.

Weld A3 - Y = 3600, Length = 35mm and Depth = 9mm.

Weld A4 - Y = 5400, Length = 40mm and Depth = 11mm.

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2). OBG Field Splice 6W/7W Weld ID: E1 & E2, Face A - (FCAW-G)

The QAI periodically observed AB/F approved welder Song Tao Huang (ID 3794) performing welding per the Flux Cored Arc Welding (FCAW-G) process in the 3G (vertical) position of fill and cover passes on weld ID: E1 & E2. The QAI observed QC Inspector John Pagliero 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-D1.5-3042B-1. See photo below. The QAI observed that the work at this location was in process for the duration of the shift and appeared to be in general compliance with contract documents.

3). OBG Field Splice 6E/7E Weld ID: F1, Face A

The QAI periodically observed AB/F approved welder Fred Kaddu (ID 2188) performing grinding and welding per the Shielded Metal Arc Welding (SMAW) process on the A face of OBG Field Splice 6E/7E Weld ID: F1, to repair undercut. QC Inspector Steve McConnell 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-D1.5-1040B. The QAI observed that the work at this location was completed and appeared to be in general compliance with contract documents.

4). Splice Welds in Backing Bar for OBG Field Splice 8E/9E Weld A – (QC NDE)

The QAI periodically observed QC Inspector John Pagliero performing Magnetic Particle Testing (MT) on all faces of (4) four splice welds in the backing bar for OBG Field Splice 8E/9E Weld A. The QAI observed that the performance and evaluation of the MT appeared to comply with the MT procedure identified as SE-MT-CT-D1.5-101 Rev. 4. The QAI also periodically observed QC Inspector John Pagliero performing Ultrasonic Testing (UT) from one face of (4) four splice welds in the backing bar for OBG Field Splice 8E/9E Weld A. The QAI observed that Mr. Pasqualone utilized the UT Procedure identified as SE-UT-D1.5-CT-100 Rev.4 during the examination of the splice weld. The QC technician performed the required longitudinal wave testing utilizing a 1" diameter transducer for base metal soundness and performed the required shear wave testing during the testing for weld soundness utilizing a .63 x .75 rectangular transducer. See photo below. Testing at this location was completed and appeared to be in general compliance with contract documents.

5). Splice Welds in Backing Bar for OBG Field Splice 8E/9E Weld A – (QAI Verification)

The QAI performed verification Visual Testing (VT), MT and UT of 25% of the splice welds in the backing bar for OBG Field Splice 8E/9E Weld A. The splice weld verified by the QAI appeared to be in general compliance with contract documents. See Magnetic Particle Test Report Form TL-6028 and Ultrasonic Testing Report Form TL-6027 generated by the QAI on this date.

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## Summary of Conversations:

Conversations on this date with Quality Control Inspectors were general in nature and pertained to locations of welding and QC activities.

## 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 Mohammed Fatemi (916) 813 3677, who represents the Office of Structural Materials for your project.

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**Inspected By:** Madison, Bert

Quality Assurance Inspector

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**Reviewed By:** Levell, Bill

QA Reviewer