DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-016546
Date Inspected: 26-Aug-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 700
OSM Departure Time: 1530
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 Fillet Welding 2W/3W Weld ID: Drip Edge
2). OBG Field Splice 4W/5W Weld ID: E1 & E2, Face B - (Grinding)
3). OBG Field Splice 5W/6W Weld ID: E1 & E2, Face A - (FCAW-G in process)
4). OBG Field Splice 5E/6E Weld ID: B1, Face B - (QAI Verification)

1). OBG Fillet Welding 2W/3W Weld ID: Drip Edge

The QAI periodically observed AB/F approved welder Rick Clayborn (ID 2773) performing fillet welding and partial penetration welding per the Shielded Metal Arc Welding (SMAW) process in the 4F (overhead) and 3F (vertical) positions to install drip edge pieces. See photo below. QC Inspector Jim Cunningham 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-F1202 & ABF-WPS-D1.5-1030. The QAI observed that the work appeared to be in general compliance with contract documents.

2). OBG Field Splice 4W/5W Weld ID: E1 & E2, Face B

The QAI periodically observed ABF personnel performing grinding to prepare the groove for back welding. The work at this location was in process for the remainder of the QA Inspectors shift.

3). OBG Field Splice 5W/6W Weld ID: E1, Face A

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 root and fill passes on weld ID: E1. The QAI observed QC Inspector Tony Sherwood 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. 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.

4). OBG Field Splice 5E/6E Weld ID: B1, Face B

The QAI observed the QC OBG Field Splice status board located in the QC Conex office. The QAI noted that an entry dated with today's date indicated that the OBG Field Splice 5E/6E Weld ID: B1 was QC NDT complete and "ready for QA". The QAI spoke with QC Leonard Cross who was present in the office. See Summary of Conversations below. The QAI performed verification Visual Testing (VT) of 100%, Magnetic Particle Testing (MT) of 20% and Ultrasonic Testing (UT) of 20% of the length of OBG Field Splice 5E/6E weld ID: B1 from Face B (interior of OBG). The weld verified by the QAI did not appear to be in general compliance with contract documents with respect to the VT and UT verifications. With respect to the MT verification the 20% of the weld verified by the QAI did appear to be in general compliance with contract documents. The visual indication observed by the QAI was an approximately 25mm long area with insufficient reinforcement (underfill). See Ultrasonic Testing Report Form TL-6027 and Magnetic Particle Testing Report Form TL-6028 generated by the QAI on this date. After performing the QAI verification testing and discovering a rejectable UT indication at this location, the QAI spoke with QC Steve McConnell regarding the QAI finding. See Summary of Conversations below.

Summary of Conversations:

From Item 4).

The QAI in a conversation with QC Leonard Cross asked if the OBG Field Splice 5E/6E Weld ID: B1 was in fact ready for QA verification. Mr. Cross asked QC Steve McConnell if the joint was ready for QA and Mr. McConnell stated that it was.

The QAI in conversation with QC Mr. McConnell stated that a rejectable indication had been found by the QAI in 5E/6E Weld ID: B1 (which Mr. McConnel had ultrasonically tested and accepted). Mr. McConnell requested that the QAI bring his UT instrument into the Conex and both the QC and QA Inspectors verify one another's calibration checks. The QAI and the QC Inspector performed the calibration checks and proceeded to the Weld ID: B1. After examining the area identified by the QAI, Mr. McConnell agreed that the indication was rejectable and stated that he couldn't understand how he could have missed it. He plotted out the indication and marked the

repair info on the steel. He stated that he would let the welders know that there was a weld repair at this location. The QAI pointed out the visual reject (insufficient reinforcement). Mr. McConnell marked the area and stated that it would be weld repaired.

Other 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.

Inspected By:	Madison,Bert	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer