

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:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-012226**Date Inspected:** 18-Feb-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:** Job Site

CWI Name:	Steve McConnell/Bernard Docena			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:	Orthotropic Box Girders (OBG)		

Summary of Items Observed:

Quality Assurance inspector (QA) Michael Foerder was at the American Bridge/Flour (ABF) job site lay down yard at Pier 7 in Oakland, 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. Orthotropic Box Girder (OBG) Lift 4E erection preparation and welding
2. Orthotropic Box Girder (OBG) Lift 1W erection preparation
3. Orthotropic Box Girder (OBG) Lift 4W erection preparation
4. Orthotropic Box Girder (OBG) Lifts 2W and 3W
5. Cross Beam 1 (CB1) erection preparation

Item 1 Lift 4 East

The QA inspector periodically observed ABF personnel performing the following functions in order to prepare the segment for transport to the erection site: Prep work for placing the suspender bracket at Panel Point (PP) 24 on the South side (Bike Path side) of the OBG. ABF personnel are also in the process of periodically placing the components for scaffolding, welding, lighting, walkways, temporary bolts and other miscellaneous items in preparation of mobilizing lift 4 East to the erection site. A one man crew is in the process of cleaning/buffing the bevel edges for the field splice at the West end adjacent to PP24.

The QA inspector was informed early in the shift by WQCM Jim Bowers ABF is planning to perform welding for the temporary attachments to the underside of the OBG. These plates are being added in order to stiffen the area for jacking purposes in the field discussed per Submittal 1459. There is a previous ABF internal non-conformance

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

(NCR ABFJV-001) which was issued due to proper QC procedures not being followed. In this NCR document, a drawing depicts the shim plate being temporarily attached to the bottom of the OBG by welding. At this time this appears to conflict with Submittal 1459 which depicts these plates being set into grout in the field. QA lead Bill Levell was notified of this item in which he relayed he would contact WQCM Jim Bowers regarding the discrepancy and further research of the contract documents will be performed.

The QA inspector noted QC inspector Steve McConnell was present at PP27 and PP25 observing the set up being performed by ABF welding personnel. After a brief discussion between QA, QC and the WQCM it was noted the welder present has not been submitted for this particular project at this time. Mr. Bowers relayed he would inform the welding foreman Tom Gibson of this issue. A short time later Mr. Bowers relayed approved ABF welding personnel Richard Bazewicz would be performing the welding for this item. The QA inspector periodically observed the welding of these locations by Mr. Bazewicz utilizing the shielded metal arc welding (SMAW) process with QC personnel Steve McConnell being present in order to ensure the welding was in conformance with the established welding procedure specification (WPS) noted as ABF-WPS-D15-F1200A. The welder was observed removing the coating at the joint surface and pre heating the area to 65° C. The welding parameters were verified to be 125 amps utilizing 3.2mm diameter Esab Atom Arc 7018 welding electrodes (E7018). The welding progressed throughout the balance of the morning shift with QC inspector Bernard Docena replacing Mr. McConnell mid way through. The work was completed on this date and appeared to be within general conformance with the contract documents with the exception noted above. A digital photo of the in process work is included in the body of this report.

Lift 1 West

The QA inspector did not observe any work being performed at this location during the time of review.

Lift 4 West

The QA inspector did not observe any work being performed at this location during the time of review. Later in the shift the QA inspector periodically observed ABF personnel placing the suspender brackets for this lift at PP 26 and PP28. The crew lifted and aligned the bracket at PP28, installed the shim and placed several preliminary bolts. After this was performed the crew moved to PP26 and proceeded to follow the same procedure. Towards the end of the shift the shim for this suspender bracket was still in process. The QA inspector reviewed the fit up of the bracket at PP28 and measured the the gap between the faying surfaces of the deck plate and suspender bracket to be 3.5mm and 4mm at the time of review with two bolts being placed at this time. See digital photo included in the body of this report for clarification.

Lift 2 West and 3 West

QC personnel Bernard Docena and Bonafacio Daquinag were observed measuring and documenting the field measurement locations for future Ultrasonic Testing purposes in regards to how the location of the closed ribs, fillet weld at the closed ribs and the root face will all interact with one another during ultrasonic testing after field welding. This item is being performed at the request of QCM Jim Bowers with the intent to assist in the interpretation of the multiple UT reflectors anticipated to be present during future testing. The items observed appeared to be in general conformance with the contract documents.

Cross Beam 1 (CB1)

The QA inspector noted and periodically observed two crews of ABF personnel laying out and placing the splice

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

plates for CB1 for the side skin plates and rib stiffeners. This work continued periodically throughout the shift.



Summary of Conversations:

As noted above in summary of items observed.

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.

Inspected By: Foerder, Mike

Quality Assurance Inspector

Reviewed By: Levell, Bill

QA Reviewer