

**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:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-012171**Date Inspected:** 19-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

<b>CWI Name:</b>	Steve McConnell/Bernard Docena			<b>CWI Present:</b>	<b>Yes</b>	<b>No</b>	
<b>Inspected CWI report:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Rod Oven in Use:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Electrode to specification:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Weld Procedures Followed:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Qualified Welders:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Verified Joint Fit-up:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Approved Drawings:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Approved WPS:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
				<b>Delayed / Cancelled:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Bridge No:</b>	34-0006			<b>Component:</b>	Orthotropic Box Girders (OBG)		

**Summary of Items Observed:**

Quality Assurance (QA) Inspectors Bill Levell and Michael Foerder were on site between the times noted above at the Pier 7 job site as part of the arrival inspection team to perform a general arrival inspection and review of OBG sections designated 2 West and 3 West. In addition QA inspector Michael Foerder performed periodic reviews of the in process work being performed by Quality Control (QC) and ABF personnel. The following is a list of the items observed; see individual item numbers in the body of this report for further details.

1. Exterior Sea Fastening Support Locations.
2. Top Deck Plate Wood Support Frame.
3. Bottom Plate Wood Support Frame.
4. Transverse Tie Locations.
5. W OBG Connection Points.
6. In process work at Pier 7.

The QA inspectors arrived at the pier at 0800 and met with ABF personnel, Caltrans Structure personnel, the Structure Material Representative (SMR) and the QC inspection team for a brief general safety and orientation meeting prior to entering and accessing OBG Lift 1 West. The following areas and observations were reviewed and noted by QA personnel with QC personnel Steve McConnell and Bernard Docena and Assistant Structure Representative Thanh Le being present:

LIFT 2 West

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## Item 1 Exterior Sea Fastening Support Locations.

Direct access to the exterior of the OBG for the outward sea fastening locations was not possible at the time of review due to ABF craft personnel utilizing the available man-lifts. The QA inspectors performed a general review from the top deck plate overlooking the edge and from the barge with only minor coating abrasions noted with no significant issues observed from these access areas.

## Item 2 Top Deck Plate Wood Support Frame

No apparent transportation issues observed. It was noted the lifting block attachments will stay in place on the top deck plate until the OBG is erected in the field. The contact points of the attachments will need to be reviewed at these locations at a later date. No apparent issues were observed in the general area surrounding them at this time.

## Item 3 Bottom Plate Wood Support Frame

No apparent issues observed. The contact points from the barge and the OBG currently have bearing pads in place with no apparent issues observed in the general area.

## Item 4 Transverse Tie Locations – No apparent issues observed.

## Item 5 W OBG connection point

No apparent issues observed; however, apparent transportation damage was noted on the full height shear plates located along the W3 and W4 lines adjacent to PP13 where the shear plates meet with the bottom plate. See digital photos included in the body of this report for clarification. The shear plates appeared to have received a lateral force deflecting the plates in the outward direction. The bottom and side plates were reviewed with a straight edge for any vertical upset which could have caused the deflection and no evidence was discovered. The horizontal deflection of the shear plate at the W3 Line was measured to be 20mm affecting an area over 500mm in the vertical direction and approximately 115mm towards PP13. The horizontal deflection of the shear plate at the W4 Line was measured to be 4mm affecting an area approximately 300mm in the vertical direction and less than 150mm towards PP13. QCM Jim Bowers relayed to QA ABF was already aware of these items and had the QC department document this previously.

## LIFT 4 West

## Item 1 Exterior Sea Fastening Support Locations.

Direct access to the exterior of the OBG for the outward sea fastening locations was not possible at the time of review due to ABF craft personnel utilizing the available man-lifts. The QA inspectors performed a general review from the top deck plate overlooking the edge and from the barge with only minor coating abrasions noted with no significant issues observed from these access areas.

## Item 2 Top Deck Plate Wood Support Frame

No apparent transportation issues observed. It was noted the lifting block attachments will stay in place on the top deck plate until the OBG is erected in the field. The contact points of the attachments will need to be reviewed at these locations at a later date. No apparent issues were observed in the general area surrounding them at this time.

## Item 3 Bottom Plate Wood Support Frame

No apparent issues observed. The contact points from the barge and the OBG currently have bearing pads in place

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with no apparent issues observed in the general area.

Item 4 Transverse Tie Locations – No apparent issues observed.

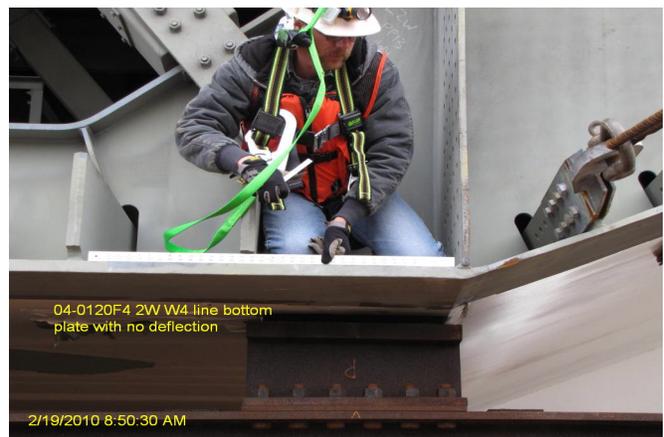
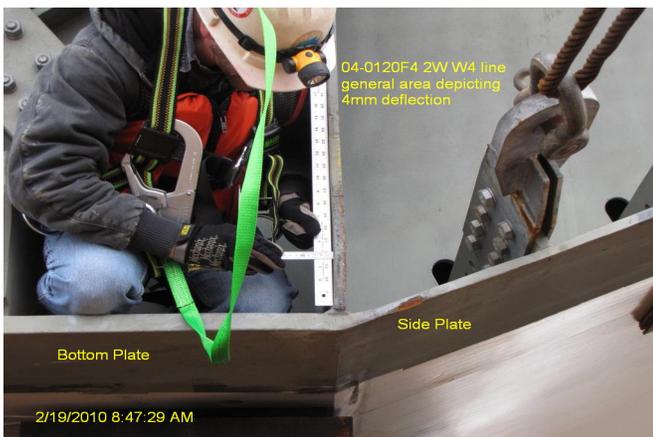
Item 5 W OBG connection point – No apparent issues observed.

Item 6

The QA inspector noted and periodically observed ABF personnel performing the following work in preparation of mobilizing the OBG section to the erection site:

LIFT 1 West - two crews of ABF personnel are in the process of temporarily placing the splice plates for the closed ribs along the top deck plate. This work continued periodically throughout the shift.

LIFT 4 West – ABF personnel are in the process of grinding and buffing the bevel edges in preparation of performing the fit up and welding of the transverse weld seam in the field. The QA inspector noted and periodically observed ABF personnel performing the grinding/buffing of the bevel edge preparation for the transverse field splice location for this lift and performing the cutting of the access holes in the deck plate. The QA inspector noted ABF personnel are 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 West to the erection site.



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## 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.

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

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