

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.25B**QUALITY ASSURANCE -- NON-CONFORMANCE REPORT****Location:** Changxing Island, Shanghai, P.R. China**Report No:** NCR-000680**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 12-Feb-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0647**Type of problem:**

| | | | |
|---------------------|-------------------|---------------------|--|
| Welding | Concrete | Other | |
| Welding | Curing | Procedural | Bridge No: 34-0006 |
| Joint fit-up | Coating | Other | Component: OBG Segment 7BE to 7CE T-Rib Stiffener |
| Procedural | Procedural | Description: | |

Reference Description: Offset of theoretical alignment of some T-Rib Stiffeners for OBG Segment 7BE to 7CE

Description of Non-Conformance:

During the Quality Assurance (QA) random in-process visual inspection of T-Ribs (WT Stiffeners) in the OBG Trial Assembly area, this QA inspector discovered the following issues:

- Offset of theoretical alignment of some T-Rib Stiffener (in Segment 7BE) to T-Rib Stiffener (in Segment 7CE) at welded web joints was found. Locations are listed below.
- The welds are Complete Joint Penetration (CJP) butt welds.
- The maximum out of tolerance offset measurements across the weld per AWS D1.5 2002 is 3mm.
- These offset welded weld joints at the T-rib stiffener webs are listed below:

At OBG Segment 7BE to 7CE Bottom Panel (T-Rib Stiffener numbering from working point E4 (Crossbeam side) to E3 (Bikepath side)):

BP171-001-020, 1st T-Rib, 4mm offset
BP171-001-022, 2nd T-Rib, 7mm offset
BP171-001-024, 3rd T-Rib, 6mm offset
BP171-001-028, 5th T-Rib, 5mm offset
BP171-001-030, 6th T-Rib, 4mm offset
BP117-001-022, 14th T-Rib, 4mm offset
BP117-001-030, 18th T-Rib, 4mm offset

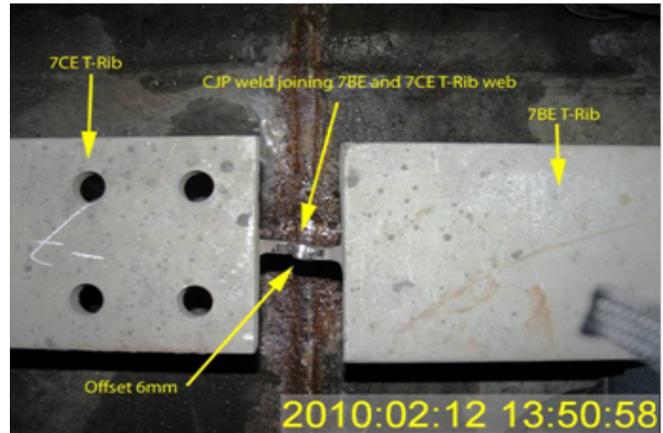
At OBG Segment 7BE to 7CE Side Panel on the Bikepath Side (T-Rib Stiffener numbering from working point E3 (bottom) to E1 (top)):

SP365-001-044, 1st T-Rib, 5mm offset
SP365-001-048, 2nd T-Rib, 4mm offset
SP365-001-052, 3rd T-Rib, 4mm offset

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

SP365-001-056, 5th T-Rib, 5mm offset
SP311-001-063, 13th T-Rib, 6mm offset
SP311-001-061, 14th T-Rib, 5mm offset
SP311-001-059, 15th T-Rib, 6mm offset
SP311-001-057, 16th T-Rib, 5mm offset



Applicable reference:

AWS D1.5 (02) Section 3.3.3; "Parts to be joined by groove welds shall be carefully aligned. Where the parts are effectively restrained against bending due to eccentricity in alignment, the offset from theoretical alignment shall not exceed 10 percent of the thickness of the thinner part joined, but in no case shall be more than 3 mm [1/8 in]."

Who discovered the problem: M. Manikandan

Name of individual from Contractor notified: Li Jingbo

Time and method of notification: 1500 hours, 02-12-10, Verbal

Name of Caltrans Engineer notified: Bill Howe

Time and method of notification: 2100 hours, 02-12-10, Email

QC Inspector's Name: Wubin

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

N/A

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 Mazen Wahbeh, +(86) 134.7247.7571, who represents the Office of Structural Materials for your project.

Inspected By: Tsang, Eric

SMR

Reviewed By: Wahbeh, Mazen

SMR



DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge

333 Burma Road
Oakland CA 94607
Tel: Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

| | | | |
|-------------------|---|---------------------|-----------------------------------|
| To: | AMERICAN BRIDGE/FLUOR, A JV 375 BURMA ROAD OAKLAND CA 95607 | Date: | 15-Feb-2010 |
| Dear: | Mr. Charles Kanapicki | Contract No: | 04-0120F4 04-SF-80-13.2 / 13.9 |
| Attention: | Mr. Thomas Nilsson Project/Fabrication Manager | Job Name: | SAS Superstructure |
| Subject: | NCR No. ZPMC-0647 | Document No: | 05.03.06-000637 |

Reference Description: Offset of theoretical alignment of some T-Rib Stiffeners for OBG Segment 7BE to 7CE

The attached Non-Conformance Report describes an occurrence where the contractor did not comply with a requirement of the contract document as indicated below:

- Material or Workmanship not in conformance with contract documents.
- Quality Control (QC) not performed in conformance with contract documents.
- Recurring QC issue that constitutes a systematic problem in quality control.
- Non-Conformance Resolved.

Material Location: OBG **Lift:** 07

Remarks:

During the Quality Assurance (QA) random in-process visual inspection of T-Ribs (WT Stiffeners) in the OBG Trial Assembly area, this QA inspector discovered the following issues:

- Offset of theoretical alignment of some T-Rib Stiffener (in Segment 7BE) to T-Rib Stiffener (in Segment 7CE) at welded web joints was found. Locations are listed below.
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- BP171-001-030, 6th T-Rib, 4mm offset
- BP117-001-022, 14th T-Rib, 4mm offset
- BP117-001-030, 18th T-Rib, 4mm offset

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NCT

(Continued Page 2 of 2)

SP311-001-063, 13th T-Rib, 6mm offset

SP311-001-061, 14th T-Rib, 5mm offset

SP311-001-059, 15th T-Rib, 6mm offset

SP311-001-057, 16th T-Rib, 5mm offset

Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance with revised procedures to prevent future occurrences. A response for the resolution of this issue is expected within 7 days.

Transmitted by: Bill Howe Sr. Transportation Engineer

Attachments: ZPMC-0647

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, Jason Tom, Contract Files, Ching Chao

File: 05.03.06

NCR PROPOSED RESOLUTION

To: CALTRANS - SAS Superstructure
333 Burma Road
Oakland CA 94607

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000637

Subject: NCR No. ZPMC-0647

Dated: 15-Jun-2010

Contract No.: 04-0120F4
04-SF-80-13.2 / 13.9

Job Name: SAS Superstructure

Document No.: ABF-NPR-000712 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC is providing the dimensional verification records which show that T and I rib splice offset values are within tolerance.

ZPMC is providing the dimensional verification records which show that T and I rib splice offset values are within tolerance. In addition, this item has been removed from the punchlist and been found acceptable by the Department's inspectors. Based on this ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000712R00;

Caltrans' comments:

Status: CLO

Date: 17-Jun-2010

This proposed resolution is acceptable. The Department concurs that Non-Conformance ZPMC-0647 is closed.

Submitted by: Eagen, Sean

Date: 17-Jun-2010

Attachment(s):



No. B-790

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2010-6-12

REGARDING: NCR-000680(ZPMC-0647)

The method what inspector utilized was not specified among three parties. ZPMC is providing the dimension check report for 7BE/7CE T & I Ribs splices what shows all the offset are within allowance. This item has been removed from Punchlist by CT's representative. Based on this, ZPMC is request withdrawal of this NCR.

ATTACHMENT:

NCR-000680(ZPMC-0647)

Inspection Record for Misalignment on T & I Ribs of 7BE/7CE

[Handwritten signature]
6/12/10



DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge
333 Burma Road
Oakland CA 94607
Tel: Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

To: AMERICAN BRIDGE/FLUOR, A JV
375 BURMA ROAD
OAKLAND CA 95607
Date: 15-Feb-2010
Contract No: 04-0120F4
04-SF-80-13.2 / 13.9
Dear: Mr. Charles Kanapicki
Job Name: SAS Superstructure
Attention: Mr. Thomas Nilsson Project/Fabrication Manager
Document No: 05.03.06-000637
Subject: NCR No. ZPMC-0647

Reference Description: Offset of theoretical alignment of some T-Rib Stiffeners for OBG Segment 7BE to 7CE

The attached Non-Conformance Report describes an occurrence where the contractor did not comply with a requirement of the contract document as indicated below:

- Material or Workmanship not in conformance with contract documents.
- Quality Control (QC) not performed in conformance with contract documents.
- Recurring QC issue that constitutes a systematic problem in quality control.
- Non-Conformance Resolved.

Material Location: OBG

Lift: 07

Remarks:

During the Quality Assurance (QA) random in-process visual inspection of T-Ribs (WT Stiffeners) in the OBG Trial Assembly area, this QA inspector discovered the following issues:

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SP365-001-056, 5th T-Rib, 5mm offset

NCT

(Continued Page 2 of 2)

SP311-001-063, 13th T-Rib, 6mm offset

SP311-001-061, 14th T-Rib, 5mm offset

SP311-001-059, 15th T-Rib, 6mm offset

SP311-001-057, 16th T-Rib, 5mm offset

Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance for BP-171-001-022 with revised procedures to prevent future occurrences according to the response to RFI 1869 dated 02-11-10. The other locations mentioned in this NCR are within the fit for purpose range mentioned in RFI 1869 and no further action is required. A response for the resolution of this issue is expected within 7 days.

Transmitted by: Bill Howe Sr. Transportation Engineer

Attachments: ZPMC-0647

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, Jason Tom, Contract Files, Ching Chao

File: 05.03.06

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 DIVISION OF ENGINEERING SERVICES
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Contract #: 04-0120F4
 Cty: SF/ALA Rte: 80 PM: 13.2/13.9
 File #: 69.25B

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

Location: Changxing Island, Shanghai, P.R. China

Report No: NCR-000680

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 12-Feb-2010

Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

NCR #: ZPMC-0647

Type of problem:

Welding **Concrete** **Other**

Welding **Curing** **Procedural**

Joint fit-up **Coating** **Other**

Procedural **Procedural** **Description:**

Bridge No: 34-0006

Component: OBG Segment 7BE to 7CE T-Rib Stiffener

Reference Description: Offset of theoretical alignment of some T-Rib Stiffeners for OBG Segment 7BE to 7CE

Description of Non-Conformance:

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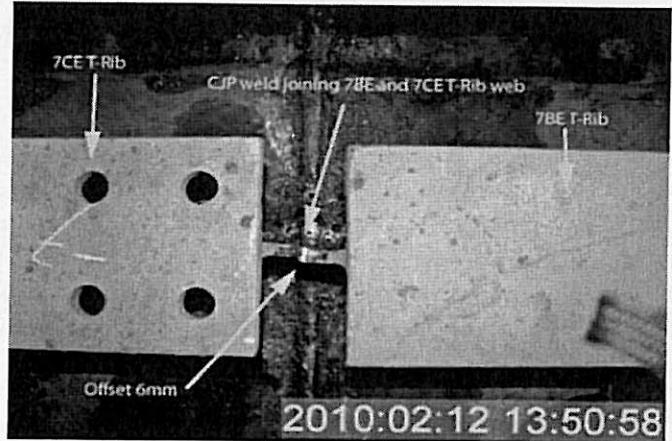
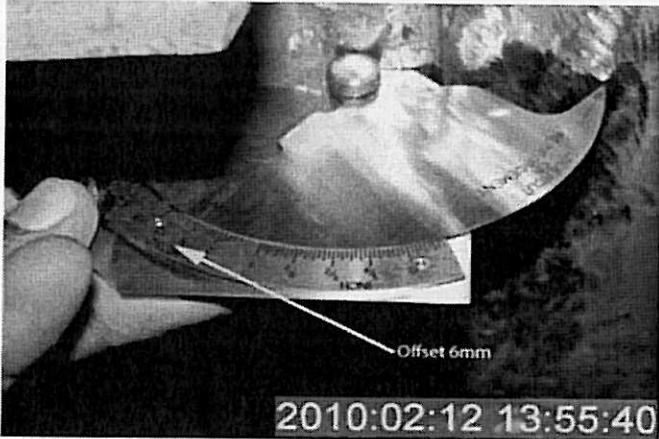
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QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

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Name of individual from Contractor notified: Li Jingbo

Time and method of notification: 1500 hours, 02-12-10, Verbal

Name of Caltrans Engineer notified: Bill Howe

Time and method of notification: 2100 hours, 02-12-10, Email

QC Inspector's Name: Wubin

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

N/A

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 Mazen Wahbeh, +(86) 134.7247.7571, who represents the Office of Structural Materials for your project.

Inspected By: Tsang, Eric

SMR

Reviewed By: Wahbeh, Mazen

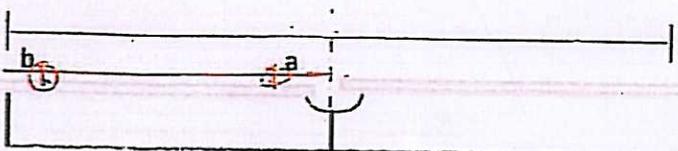
SMR

Inspection Record for Misalignment on T & I Ribs

Location: 7BE/7CE

Date 2010.4.11

| Ind. No | Flange to Flange misalignment-high-low, (No shim for less or equal to 2mm, shim is required for 2mm and above) | | Web to Web misalignment-off-set, (Max off-set = not exceeds 3mm) | Ind. No | Flange to Flange misalignment-high-low (No shim for less or equal to 2mm, shim is required for 2mm and above) | | Web to Web misalignment-off-set, (Max off-set = not exceeds 3mm) |
|-------------------------------|--|-----|--|-------------------------------|---|-----|--|
| LOCATION: DP (A2) I-RIBS | | | | | (a) | (b) | |
| 1 | N/A | N/A | 1 | 10 | 1 | 5 | 0 |
| 2 | N/A | N/A | 2 | 11 | 0.5 | 2 | 0.5 |
| 3 | N/A | N/A | 0.5 | 12 | 1 | 3 | 0.5 |
| LOCATION: EP (B3) I-RIBS | | | | 13 | 1.5 | 0 | 1 |
| 1 | N/A | N/A | 1.5 | 14 | 0.5 | 2 | 1.5 |
| 2 | N/A | N/A | 0.5 | 15 | 2 | 5 | 1 |
| LOCATION: SP (C4&C5) T/I-RIBS | | | | 16 | 1.5 | 4 | 1 |
| 1(I) | N/A | N/A | 1 | 17 | 0.5 | 2 | 1.5 |
| 2(I) | N/A | N/A | 1 | 18 | 3.5 | 5 | 0 |
| 3(I) | N/A | N/A | 1 | LOCATION: SP (E7&E8) T/I-RIBS | | | |
| 4(I) | N/A | N/A | 0 | 1 | 0 | 0 | 1 |
| 5(I) | N/A | N/A | 0.5 | 2 | 0 | 3 | 0 |
| | (a) | (b) | | 3 | 1.5 | 2.5 | 1 |
| 6 | 3 | 1.5 | 1 | | | | |
| 7 | 2 | 5.5 | 2.5 | 4 | 1 | 1 | 2 |
| 8 | 1 | 5 | 0.5 | 5 | 1 | 0 | 1 |
| 9 | 1 | 4 | 0.5 | 6 | 1 | 0 | 1 |
| 10 | 1 | 7.5 | 1 | 7 | 2.5 | 3.5 | 0.5 |
| 11 | 1 | 4 | 0 | 8 | 1 | 4.5 | 2 |
| 12 | 3.5 | 5 | 0 | 9 | 2 | 3 | 2 |
| 13 | 1.5 | 3.5 | 1.5 | 10 | 1.8 | 5.5 | 3 |
| 14 | 1.5 | 3.5 | 0.5 | 11 | 1.5 | 5.5 | 1 |
| 15 | 2.5 | 4.5 | 1 | 12 | 2 | 3.5 | 1 |
| 16 | 1 | 2.5 | 0 | 13 | 1 | 3.5 | 1 |
| 17 | 2.5 | 3.5 | 0.5 | 14 | 0.5 | 4 | 0.5 |
| 18 | 1 | 2 | 0.5 | 15 | 2 | 5 | 0.5 |
| 19 | 0 | 0 | 2 | 16 | 0.5 | 4.5 | 1 |
| 20 | 3 | 5 | 0.5 | 17 | 1.5 | 5.5 | 2 |
| 21 | 2 | 5 | 0.5 | 18 | 2 | 5 | 4.5 ⇒ 3 |
| 22 | 0.5 | 2.5 | 1 | 19 | 2.5 | 3.5 | 5.0 ⇒ 3 |
| 23 | 1 | 4 | 1.5 | 20(I) | N/A | N/A | 3 |
| 24 | 0 | 0 | 1.5 | 21(I) | N/A | N/A | 1 |
| LOCATION: BP (D6) T-RIBS | | | | 22(I) | N/A | N/A | 0.5 |
| 1 | 0.5 | 2 | 0.5 | 23(I) | N/A | N/A | 1.5 |
| 2 | 1 | 3 | 0 | 24(I) | N/A | N/A | 0.5 |
| 3 | 2.5 | 4 | 1.5 | LOCATION: EP (F9) I-RIBS | | | |
| 4 | 0.5 | 1.5 | 1 | 1 | N/A | N/A | 1 |
| 5 | 2.5 | 4 | 1 | 2 | N/A | N/A | 2 |
| 6 | 0 | 0 | 1 | LOCATION: DP (A10) I-RIBS | | | |
| 7 | 0.5 | 1.5 | 1 | 1 | N/A | N/A | 2 |
| 8 | 0.5 | 2 | 0 | 2 | N/A | N/A | 2 |
| 9 | 1.5 | 4.5 | 1 | 3 | N/A | N/A | 1.5 |



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: xx.25A**QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION****Location:** Changxing Island, Shanghai, P.R. China**Report No:** NCS-000682**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 17-Jul-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0647**Type of problem:**

| | | | |
|---------------------|-------------------|---------------------|---------------------------|
| Welding | Concrete | Other | |
| Welding | Curing | Procedural | Bridge No: 34-0006 |
| Joint fit-up | Coating | Other | Component: |
| Procedural | Procedural | Description: | |

Date the Non-Conformance Report was written: 12-Feb-2010**Description of Non-Conformance:**

During the Quality Assurance (QA) random in-process visual inspection of T-Ribs (WT Stiffeners) in the OBG Trial Assembly area, this QA inspector discovered the following issues:

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