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 #: 04-0120F4
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-000341
Prime Contractor: American Bridge/Fluor Enterprises, a JV **Date:** 24-Jun-2009
Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0315

Type of problem:

Welding	☑	**Concrete**	☐	**Other**	☐	
Welding	☑	**Curing**	☐	**Procedural**	☐	**Bridge No:** 34-0006
Joint fit-up	☐	**Coating**	☐	**Other**	☐	**Component:** OBG Lift 5, 6, 7, and 8
Procedural	☐	**Procedural**	☐	**Description:**		

Reference Description: CJP welds replaced with fillet at repair locations prior to engineer's approval

Description of Non-Conformance:

1.Segment 7CE plate X36 at panel point 54.5 fillet weld joints 97 & 98 at E2 location, a fillet weld was discovered welded from the weld joint 97 side only leaving the weld joint 98 exposed. The weld prep of the fillet weld joint # 98 revealed a root opening of 7mm. Maximum allowed root opening for a fillet weld is 5mm. Applicable reference listed as # 1 below.

2. X37A Stiffeners require a tight fit (= 2mm) per approved shop drawing X37A. The X37A stiffener locations listed in the table below were found to
have a dimension greater than 2mm. Applicable reference listed as # 1 below.

Segment	Panel Point	Segment Side	Measurement
7AE	48.75	E2	3mm
7BE	51.25	E2	3mm
7BE	49.25	E2	3.5mm
7CE	53.25	E5	5mm
7CE	53.75	E5	5mm
7EE	58.25	E5	7mm

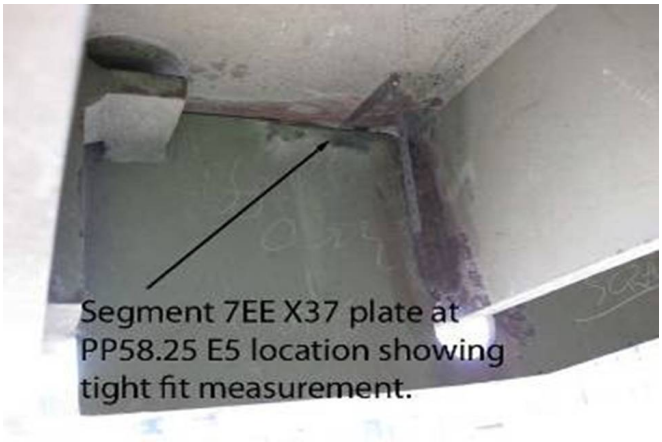
3. Weld locations listed in the table below require a fillet weld per approved shop drawings. ZPMC has changed said welds to complete joint penetration welds due to root opening in excess of specified maximum root opening of 5mm. Applicable reference listed as # 1 below.

Segment	Location	Remarks
6AW	FB Flange to DP Diaphragm Plate Panel Point 37	Entire Length
6AW	FB Flange to DP Diaphragm Plate Panel Point 38	Entire Length
6AW	FB Flange to DP Diaphragm Plate Panel Point 39	Intermittent
6AW	X37 Brackets PP37.5 W2 location	4 locations

6AW	FB Flange to DP Diaphragm Plate Panel Point 40	Intermittent
6BW	FB Flange to DP Diaphragm Plate Panel Point 41	Entire Length
6BW	FB Flange to DP Diaphragm Plate Panel Point 42	Entire Length
6BW	FB Flange to DP Diaphragm Plate Panel Point 43	Entire Length
6BW	X37 Brackets PP42.5 W2 location	5 locations
6CW	FB Flange to DP Diaphragm Plate Panel Point 44	Intermittent
6CW	FB Flange to DP Diaphragm Plate Panel Point 45	Intermittent
6CW	FB Flange to DP Diaphragm Plate Panel Point 46	Intermittent
6CW	FB Flange to DP Diaphragm Plate Panel Point 47	Intermittent
7AW	FB Flange to DP Diaphragm Plate Panel Point 48	Intermittent
7AW	FB Flange to DP Diaphragm Plate Panel Point 49	Intermittent
7BW	FB Flange to DP Diaphragm Plate Panel Point 50	Entire Length
7BW	FB Flange to DP Diaphragm Plate Panel Point 51	Intermittent
7BW	FB Flange to DP Diaphragm Plate Panel Point 52	Intermittent
7BW	X37 Brackets PP49.5 W5 location	2 locations
7CW	FB Flange to DP Diaphragm Plate Panel Point 53	Intermittent
7CW	FB Flange to DP Diaphragm Plate Panel Point 54	Intermittent
7CW	FB Flange to DP Diaphragm Plate Panel Point 55	Entire Length
7DW	FB Flange to DP Diaphragm Plate Panel Point 56	Intermittent
7DW	FB Flange to DP Diaphragm Plate Panel Point 57	Intermittent
7DW	FB Flange to DP Diaphragm Plate Panel Point 58	Intermittent
7EW	FB Flange to DP Diaphragm Plate Panel Point 59	Intermittent
7EW	FB Flange to DP Diaphragm Plate Panel Point 60	Intermittent
CA48	Panel Point 62 Stiffeners (3) to Deck Plate	Various welds
CA48	Panel Point 64 Stiffeners (3) to Deck Plate	Various welds
CA54	Panel Point 68 Stiffeners (3) to Deck Plate	Various welds
CA54	Panel Point 70 Stiffeners (3) to Deck Plate	Various welds
5CE	X37 Brackets PP35.5 E2 location	2 locations
5CE	X37 Brackets PP36.5 E2 location	3 locations
5CE	X37 Brackets PP35.5 E5 location	1 location
5CE	X37 Brackets PP36.5 E5 location	2 locations
5CW	X37 Brackets PP36.5 W2 location	1 location
7AE	X37 Brackets PP47.5 E5 location	6 locations
7AE	X37 Brackets PP48.5 E5 location	4 locations
7AE	X37 Brackets PP47.5 E2 location	6 locations
7AE	X37 Brackets PP48.5 E2 location	4 locations
6BE	X37 Brackets PP41.5 E2 location	2 locations
6BE	X37 Brackets PP42.5 E2 location	1 location
6BE	FB Flange to DP Diaphragm Plate Panel Point 42	Intermittent
7BE	X37 Brackets PP49.5 E2 location	2 locations
7BE	X37 Brackets PP50.5 E2 location	2 locations
7BE	X37 Brackets PP51.5 E2 location	2 locations
7BE	X37 Brackets PP51.5 E5 location	2 locations
7BE	FB Flange to DP Diaphragm Plate Panel Point 50	Intermittent

7BE	FB Flange to DP Diaphragm Plate Panel Point 51	Intermittent
7CE	FB Flange to DP Diaphragm Plate Panel Point 53	Intermittent
7CE	FB Flange to DP Diaphragm Plate Panel Point 54	Intermittent
7CE	X37 Brackets PP52.5 E2 location	5 locations
8BE	X36 Plate to DP Stiffener PP64.5 E5 location	1 location
8BE	X36 Plate to SP Stiffener PP64.5 E2 location	2 locations
8BE	CA FB at PP65 DP, EP, and SP Stiffeners E5 location	7 locations
8BE	FB Flange to DP Diaphragm Plate Panel Point 65	Intermittent
8BE	X36 Plate to SP Stiffener PP65.5 E5 location	4 locations
8BE	X36 Plate to SP Stiffener PP65.5 E2 location	1 location
8BE	CA FB at PP66 DP, EP, and SP Stiffeners E5 location	5 locations
8BE	CA FB at PP66 DP, EP, and SP Stiffeners E2 location	5 locations
8BE	X36 Plate to DP Stiffener PP66.5 E5 location	1 location
8BE	CA FB at PP67 DP, EP, and SP Stiffeners E5 location	1 location
8BE	CA FB at PP67 DP, EP, and SP Stiffeners E2 location	3 locations
8AE	X36 Plate to EP Stiffener PP61.5 E5 location	1 location
8AE	CA FB at PP62 SP Stiffener E5 location	1 location
8AE	CA FB at PP63 EP Stiffeners E5 location	2 locations
8AE	X36 Plate to EP Stiffener PP64 E5 location	1 location
8AE	FB Flange to DP Diaphragm Plate Panel Point 64	Intermittent

4. Corner assembly and Segment drawings list weld specifications for all locations. All welds on corner assemblies have been wrapped when approved drawings do not show any wrapping required. Applicable reference listed as # 3 below.



QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 4 of 4)

Applicable reference:

1. AWS D1.5/2002 Section 3.3.1- "The parts to be joined by fillet welds shall be brought into as close contact as practicable. The root opening shall not exceed 5 mm [3/16 in.] except in cases involving either shapes or plates 75 mm [3 in.] or greater in thickness if, after straightening and in assembly, the root opening cannot be closed sufficiently to meet this tolerance. In such cases, a maximum root opening of 8mm may be used, with a backing weld or suitable backing. If the root opening is greater than 2 mm, the leg of the fillet weld shall be increased by the amount of the root opening or the Contractor shall demonstrate that the required weld size has been obtained."
2. AWS D1.5/2002 Section 3.5.1.10- "Where a tight fit of intermediate stiffeners is specified, it shall be defined as allowing a gap of up to 2mm between stiffener and flange."
3. General Notes GN3- Detail "WT1" Typical Weld Termination.

Who discovered the problem: Erik Prue, Rodney Patterson

Name of individual from Contractor notified: Peter Shaw

Time and method of notification: 1600 hours, Verbal

Name of Caltrans Engineer notified: Stanly Ku

Time and method of notification: 1700 hours, Verbal

QC Inspector's Name: Shen Xuejun

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,(818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Simonis,Jim	QA Inspector
Reviewed By:	Wahbeh,Mazen	SMR

DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge
666 Feng Bin Road Room 708, Changxing Island
Shanghai 201913 PR China
Tel: 021-56856666 ext 207061 Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

To:	AMERICAN BRIDGE/FLUOR, A JV 375 BURMA ROAD OAKLAND CA 95607	**Date:**	05-Jul-2009
		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:**	05.03.06-000302
Subject:	NCR No. ZPMC-0315		

Reference Description: CJP welds replaced with fillet at repair locations prior to engineer's approval

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:**

Remarks:

1.Segment 7CE plate X36 at panel point 54.5 fillet weld joints 97 & 98 at E2 location, a fillet weld was discovered welded from the weld joint 97 side only leaving the weld joint 98 exposed. The weld prep of the fillet weld joint # 98 revealed a root opening of 7mm. Maximum allowed root opening for a fillet weld is 5mm. Applicable reference listed as # 1 below.

2. X37A Stiffeners require a tight fit (= 2mm) per approved shop drawing X37A. The X37A stiffener locations listed in the table below were found to
have a dimension greater than 2mm. Applicable reference listed as # 1 below.

Segment	Panel Point	Segment Side	Measurement
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6AW	FB Flange to DP Diaphragm Plate Panel Point 37	Entire Length
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6CW	FB Flange to DP Diaphragm Plate Panel Point 46	Intermittent
6CW	FB Flange to DP Diaphragm Plate Panel Point 47	Intermittent
7AW	FB Flange to DP Diaphragm Plate Panel Point 48	Intermittent
7AW	FB Flange to DP Diaphragm Plate Panel Point 49	Intermittent
7BW	FB Flange to DP Diaphragm Plate Panel Point 50	Entire Length
7BW	FB Flange to DP Diaphragm Plate Panel Point 51	Intermittent
7BW	FB Flange to DP Diaphragm Plate Panel Point 52	Intermittent
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8BE	CA FB at PP67 DP, EP, and SP Stiffeners E5 location	1 location
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8AE	X36 Plate to EP Stiffener PP64 E5 location	1 location
8AE	FB Flange to DP Diaphragm Plate Panel Point 64	Intermittent

4. Corner assembly and Segment drawings list weld specifications for all locations. All welds on corner assemblies have been wrapped when approved drawings do not show any wrapping required. Applicable reference listed as # 3 below.
please see attached NCR ZPMC-315 for details.

Action Required and/or Action Taken:

Propose a resolution for the identified recurring non-conformance which constitutes a systematic problem on both materials/workmanship and quality control issues with revised procedures to remedy the defected work and to prevent future occurrences. A response for the resolution of this issue is expected within 14 days.

Transmitted by: Ching Chao

Attachments: ZPMC-0315

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

File: 05.03.06

AMERICAN BRIDGE/FLUOR ENTERPRISES, a JV

P.O. BOX 23223 Oakland, CA 94623

Phone (510) 419-0120 / Fax (510) 839-0666

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000302

Subject: NCR No. ZPMC-0315

Dated: **27-Aug-2009**

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

Job Name: SAS Superstructure

Document No.: **ABF-NPR-000353 Rev: 00**

Contractor's Proposed Resolution:

Reference Resolution: ABF and ZPMC have been briefed by CT that any fit-up gap greater than 5mm must first be approved by CT on a case by case basis prior to revising to a CJP weld.

A misunderstanding of the requirement to notify the engineer prior to revising a fillet weld to a CJP occurred. ABF and ZPMC have been briefed by CT that any fit-up gap greater than 5mm must first be approved by CT on a case by case basis prior to revising to a CJP weld. ZPMC will provide repair documentation and inspection reports at a later date to close this NCR.

Submitted by:

Attachment(s): ABF-NPR-000353R00

Caltrans' comments:

Status: AAP

Date: 10-Sep-2009

The response is acceptable, but the Non-Conformance is not closed.

Please provide documentation of the weld repairs that were performed and that the repairs were acceptable. The Department will review the Contractor's proposal to close Non-Conformance ZPMC-0315 at that time.

Submitted by: Wright, Doug

Date: 10-Sep-2009

Attachment(s):

AMERICAN BRIDGE/FLUOR ENTERPRISES, a JV
P.O. BOX 23223 Oakland, CA 94623
Phone (510) 419-0120 / Fax (510) 839-0666

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000302

Subject: NCR No. ZPMC-0315

Dated: **31-Dec-2009**

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

Job Name: SAS Superstructure

Document No.: **ABF-NPR-000353 Rev: 01**

Contractor's Proposed Resolution:

Reference Resolution: As shown in the NCR response by ZPMC, a misunderstanding occurred between two procedures. See the ZPMC response in the attached documentation.

As shown in the NCR response by ZPMC, a misunderstanding occurred between two procedures. ZPMC performed welding a CJP in lieu of a fillet as per an approved procedure, however, after the welding, CT withdrew the procedure as they did not realize that ZPMC would use this procedure for any case that required a CJP in lieu of fillet for fit-up gaps greater than 5mm. CT then provided a form to complete specifying the areas where a CJP would be used in lieu of a fillet. This form is notification to the engineer and provides a case by case review by the engineer for these types of Weld joint modifications and to provide direction of what type of NDT will be required. See the ZPMC response in the attached documentation. ZPMC requests closure of this NCR.

Submitted by: Lawton, Steve

Attachment(s): ABF-NPR-000353R01;

Caltrans' comments:

Status: AAP

Date: 06-Jan-2010

The contractor's response to this NCT has only addressed items no. 1 and 3. However, the response was found to be acceptable for those 2 items. Item no. 2, 2mm tight-fit, and item no. 4, wrapping welds, still required contractor's response.

Submitted by: Chao, Ching

Date: 06-Jan-2010

Attachment(s):

No. B-541

LETTER OF RESPONSE

TO: American Bridge/Flour
DATE: 2009-12-31
REGARDING: NCR-000341(ZPMC-0315)

With this letter of response, ZPMC requests withdrawal of CALTRANS NCR–000341(ZPMC-0315) what mentioned that QA observed CJP welds replaced with fillet at repair locations.

A misunderstanding of the requirement to get engineer's approval prior to fillet welds change to CJP occurred. At February 12, 2009, ZPMC got an approved procedure about methods to repair elements that exceed specified tolerance what mentioned that ZPMC was allowed to using CJPs replace fillet welds. At September 22, 2009, ZPMC received ABF's letter that requested ZPMC to perform notification for Engineer's review and approval prior to get fillet welds change to CJP. During this period, ZPMC was carrying out the old approved procedure. So the QA inspector issued this NCR regarding the requirement to get engineer's approval prior to change fillet welds to CJP at Jun 24, 2009 was thought to be a misunderstanding with the old procedure.

So ZPMC provides the old procedure in February & ABF's letter in September, hoping CALTRANS could take a review and consider **withdraw** this NCR.

ATTACHMENT:
NCR-000341(ZPMC-0315)
Submittal 200, Rev.2 – Methods to Repair Elements that Exceed Specified Tolerance
AFC-ZPM-LTR-000566

12/31/09

DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge
666 Feng Bin Road Room 708, Changxing Island
Shanghai 201913 PR China
Tel: 021-56856666 ext 207061 Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

To: AMERICAN BRIDGE/FLUOR, A JV
375 BURMA ROAD
OAKLAND CA 95607

Date: 05-Jul-2009

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

Job Name: SAS Superstructure

Document No: 05.03.06-000302

Dear: Mr. Charles Kanapicki

Attention: Mr. Thomas Nilsson Project/Fabrication Manager

Subject: NCR No. ZPMC-0315

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Material Location: OBG Lift:

Remarks:

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6BW	FB Flange to DP Diaphragm Plate Panel Point 43	Entire Length
6BW	X37 Brackets PP42.5 W2 location	5 locations
6CW	FB Flange to DP Diaphragm Plate Panel Point 44	Intermittent
6CW	FB Flange to DP Diaphragm Plate Panel Point 45	Intermittent
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6CW	FB Flange to DP Diaphragm Plate Panel Point 47	Intermittent
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7BW	FB Flange to DP Diaphragm Plate Panel Point 51	Intermittent
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7BE	X37 Brackets PP50.5 E2 location	2 locations
7BE	X37 Brackets PP51.5 E2 location	2 locations
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7BE	FB Flange to DP Diaphragm Plate Panel Point 50	Intermittent
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7CE	X37 Brackets PP52.5 E2 location	5 locations
8BE	X36 Plate to DP Stiffener PP64.5 E5 location	1 location
8BE	X36 Plate to SP Stiffener PP64.5 E2 location	2 locations
8BE	CA FB at PP65 DP, EP, and SP Stiffeners E5 location	7 locations
8BE	FB Flange to DP Diaphragm Plate Panel Point 65	Intermittent
8BE	X36 Plate to SP Stiffener PP65.5 E5 location	4 locations
8BE	X36 Plate to SP Stiffener PP65.5 E2 location	1 location
8BE	CA FB at PP66 DP, EP, and SP Stiffeners E5 location	5 locations
8BE	CA FB at PP66 DP, EP, and SP Stiffeners E2 location	5 locations
8BE	X36 Plate to DP Stiffener PP66.5 E5 location	1 location
8BE	CA FB at PP67 DP, EP, and SP Stiffeners E5 location	1 location
8BE	CA FB at PP67 DP, EP, and SP Stiffeners E2 location	3 locations
8AE	X36 Plate to EP Stiffener PP61.5 E5 location	1 location
8AE	CA FB at PP62 SP Stiffener E5 location	1 location
8AE	CA FB at PP63 EP Stiffeners E5 location	2 locations
8AE	X36 Plate to EP Stiffener PP64 E5 location	1 location
8AE	FB Flange to DP Diaphragm Plate Panel Point 64	Intermittent

4. Corner assembly and Segment drawings list weld specifications for all locations. All welds on corner assemblies have been wrapped when approved drawings do not show any wrapping required. Applicable reference listed as # 3 below. please see attached NCR ZPMC-315 for details.

Action Required and/or Action Taken:

Propose a resolution for the identified recurring non-conformance which constitutes a systematic problem on both materials/workmanship and quality control issues with revised procedures to remedy the defected work and to prevent future occurrences. A response for the resolution of this issue is expected within 14 days.

Transmitted by: Ching Chao

Attachments: ZPMC-0315

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

File: 05.03.06

STATE OF CALIFORNIA--BUSINESS,TRANSPORTACTION AND HOUSING AGENCY
Arnold Schwarzenegger, Governor

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

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

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
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

Report No: NCR-000341
Date: 24-Jun-2009
NCR #: ZPMC-0315

Type of problem:

Welding	☑	Concrete	☐	Other	☐
Welding	☑	Curing	☐	Procedural	☐
Joint fit-up	☐	Coating	☐	Other	☐
Procedural	☐	Procedural	☐	Description:	

Bridge No: 34-0006
Component: OBG Lift 5, 6, 7, and 8

Reference Description: CJP welds replaced with fillet at repair locations prior to engineer's approval

Description of Non-Conformance:

1.Segment 7CE plate X36 at panel point 54.5 fillet weld joints 97 & 98 at E2 location, a fillet weld was discovered welded from the weld joint 97 side only leaving the weld joint 98 exposed. The weld prep of the fillet weld joint # 98 revealed a root opening of 7mm. Maximum allowed root opening for a fillet weld is 5mm. Applicable reference listed as # 1 below.

2. X37A Stiffeners require a tight fit (= 2mm) per approved shop drawing X37A. The X37A stiffener locations listed in the table below were found to
have a dimension greater than 2mm. Applicable reference listed as # 1 below.

Segment	Panel Point	Segment Side	Measurement
7AE	48.75	E2	3mm
7BE	51.25	E2	3mm
7BE	49.25	E2	3.5mm
7CE	53.25	E5	5mm
7CE	53.75	E5	5mm
7EE	58.25	E5	7mm

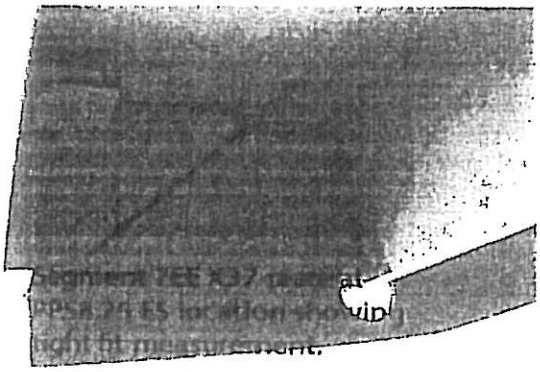
3. Weld locations listed in the table below require a fillet weld per approved shop drawings. ZPMC has changed said welds to complete joint penetration welds due to root opening in excess of specified maximum root opening of 5mm. Applicable reference listed as # 1 below.

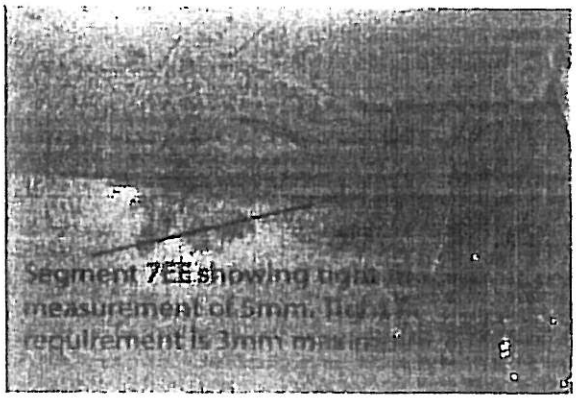
Segment	Location	Remarks
6AW	FB Flange to DP Diaphragm Plate Panel Point 37	Entire Length
6AW	FB Flange to DP Diaphragm Plate Panel Point 38	Entire Length
6AW	FB Flange to DP Diaphragm Plate Panel Point 39	Intermittent
6AW	X37 Brackets PP37.5 W2 location	4 locations

6AW	FB Flange to DP Diaphragm Plate Panel Point 40	Intermittent
6BW	FB Flange to DP Diaphragm Plate Panel Point 41	Entire Length
6BW	FB Flange to DP Diaphragm Plate Panel Point 42	Entire Length
6BW	FB Flange to DP Diaphragm Plate Panel Point 43	Entire Length
6BW	X37 Brackets PP42.5 W2 location	5 locations
6CW	FB Flange to DP Diaphragm Plate Panel Point 44	Intermittent
6CW	FB Flange to DP Diaphragm Plate Panel Point 45	Intermittent
6CW	FB Flange to DP Diaphragm Plate Panel Point 46	Intermittent
6CW	FB Flange to DP Diaphragm Plate Panel Point 47	Intermittent
7AW	FB Flange to DP Diaphragm Plate Panel Point 48	Intermittent
7AW	FB Flange to DP Diaphragm Plate Panel Point 49	Intermittent
7BW	FB Flange to DP Diaphragm Plate Panel Point 50	Entire Length
7BW	FB Flange to DP Diaphragm Plate Panel Point 51	Intermittent
7BW	FB Flange to DP Diaphragm Plate Panel Point 52	Intermittent
7BW	X37 Brackets PP49.5 W5 location	2 locations
7CW	FB Flange to DP Diaphragm Plate Panel Point 53	Intermittent
7CW	FB Flange to DP Diaphragm Plate Panel Point 54	Intermittent
7CW	FB Flange to DP Diaphragm Plate Panel Point 55	Entire Length
7DW	FB Flange to DP Diaphragm Plate Panel Point 56	Intermittent
7DW	FB Flange to DP Diaphragm Plate Panel Point 57	Intermittent
7DW	FB Flange to DP Diaphragm Plate Panel Point 58	Intermittent
7EW	FB Flange to DP Diaphragm Plate Panel Point 59	Intermittent
7EW	FB Flange to DP Diaphragm Plate Panel Point 60	Intermittent
CA48	Panel Point 62 Stiffeners (3) to Deck Plate	Various welds
CA48	Panel Point 64 Stiffeners (3) to Deck Plate	Various welds
CA54	Panel Point 68 Stiffeners (3) to Deck Plate	Various welds
CA54	Panel Point 70 Stiffeners (3) to Deck Plate	Various welds
5CE	X37 Brackets PP35.5 E2 location	2 locations
5CE	X37 Brackets PP36.5 E2 location	3 locations
5CE	X37 Brackets PP35.5 E5 location	1 location
5CE	X37 Brackets PP36.5 E5 location	2 locations
5CW	X37 Brackets PP36.5 W2 location	1 location
7AE	X37 Brackets PP47.5 E5 location	6 locations
7AE	X37 Brackets PP48.5 E5 location	4 locations
7AE	X37 Brackets PP47.5 E2 location	6 locations
7AE	X37 Brackets PP48.5 E2 location	4 locations
6BE	X37 Brackets PP41.5 E2 location	2 locations
6BE	X37 Brackets PP42.5 E2 location	1 location
6BE	FB Flange to DP Diaphragm Plate Panel Point 42	Intermittent
7BE	X37 Brackets PP49.5 E2 location	2 locations
7BE	X37 Brackets PP50.5 E2 location	2 locations
7BE	X37 Brackets PP51.5 E2 location	2 locations
7BE	X37 Brackets PP51.5 E5 location	2 locations
7BE	FB Flange to DP Diaphragm Plate Panel Point 50	Intermittent

7BE	FB Flange to DP Diaphragm Plate Panel Point 51	Intermittent
7CE	FB Flange to DP Diaphragm Plate Panel Point 53	Intermittent
7CE	FB Flange to DP Diaphragm Plate Panel Point 54	Intermittent
7CE	X37 Brackets PP52.5 E2 location	5 locations
8BE	X36 Plate to DP Stiffener PP64.5 E5 location	1 location
8BE	X36 Plate to SP Stiffener PP64.5 E2 location	2 locations
8BE	CA FB at PP65 DP, EP, and SP Stiffeners E5 location	7 locations
8BE	FB Flange to DP Diaphragm Plate Panel Point 65	Intermittent
8BE	X36 Plate to SP Stiffener PP65.5 E5 location	4 locations
8BE	X36 Plate to SP Stiffener PP65.5 E2 location	1 location
8BE	CA FB at PP66 DP, EP, and SP Stiffeners E5 location	5 locations
8BE	CA FB at PP66 DP, EP, and SP Stiffeners E2 location	5 locations
8BE	X36 Plate to DP Stiffener PP66.5 E5 location	1 location
8BE	CA FB at PP67 DP, EP, and SP Stiffeners E5 location	1 location
8BE	CA FB at PP67 DP, EP, and SP Stiffeners E2 location	3 locations
8AE	X36 Plate to EP Stiffener PP61.5 E5 location	1 location
8AE	CA FB at PP62 SP Stiffener E5 location	1 location
8AE	CA FB at PP63 EP Stiffeners E5 location	2 locations
8AE	X36 Plate to EP Stiffener PP64 E5 location	1 location
8AE	FB Flange to DP Diaphragm Plate Panel Point 64	Intermittent

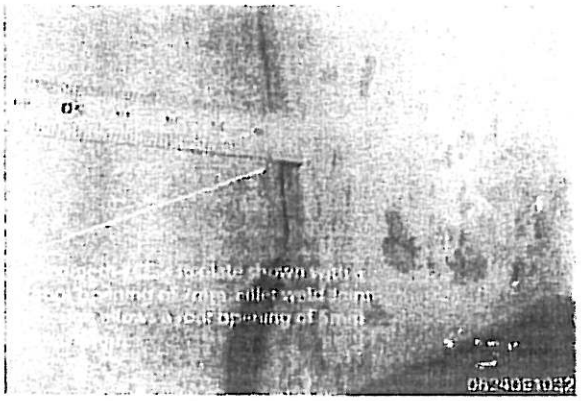
4. Corner assembly and Segment drawings list weld specifications for all locations. All welds on corner assemblies have been wrapped when approved drawings do not show any wrapping required. Applicable reference listed as # 3 below.

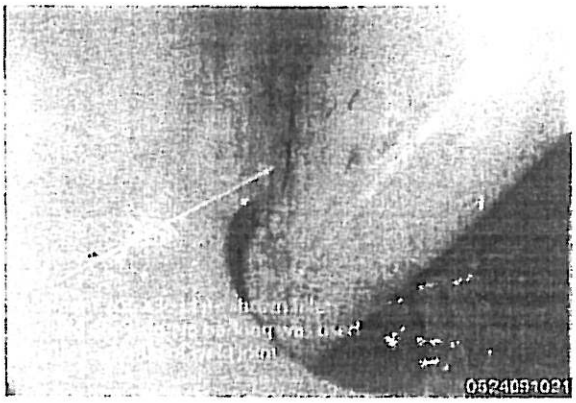




QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 4 of 4)





Applicable reference:

1. AWS D1.5/2002 Section 3.3.1- "The parts to be joined by fillet welds shall be brought into as close contact as practicable. The root opening shall not exceed 5 mm [3/16 in.] except in cases involving either shapes or plates 75 mm [3 in.] or greater in thickness if, after straightening and in assembly, the root opening cannot be closed sufficiently to meet this tolerance. In such cases, a maximum root opening of 8mm may be used, with a backing weld or suitable backing. If the root opening is greater than 2 mm, the leg of the fillet weld shall be increased by the amount of the root opening or the Contractor shall demonstrate that the required weld size has been obtained."
2. AWS D1.5/2002 Section 3.5.1.10- "Where a tight fit of intermediate stiffeners is specified, it shall be defined as allowing a gap of up to 2mm between stiffener and flange."
3. General Notes GN3- Detail "WT1" Typical Weld Termination.

Who discovered the problem: Erik Prue, Rodney Patterson
Name of individual from Contractor notified: Peter Shaw
Time and method of notification: 1600 hours, Verbal
Name of Caltrans Engineer notified: Stanly Ku
Time and method of notification: 1700 hours, Verbal
QC Inspector's Name: Shen Xuejun
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,(818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Simonis,Jim	QA Inspector
Reviewed By:	Wahbeh,Mazen	SMR

STATE OF CALIFORNIA-BUSINESS, TRANSPORTATION AND HOUSING AGENCY ARNOLD SCHWARZENEGGER, Governor
DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge Program
333 Burma Rd.
Oakland, CA 94607
(510) 622-5660, (510) 286-0550 fax

Flex your power
Be energy efficient!

February 12, 2009

Contract No. 04-0120F4
04-SF-80-13.2 / 13.9
Self-Anchored Suspension Bridge
Letter No. 05.03.01-003474

Michael Flowers
Project Executive
American Bridge/Fluor, A JV
375 Burma Road
Oakland, CA 94607

Dear Michael Flowers,

Submittal 200, Rev. 2 - Methods to Repair Elements that Exceed Specified Tolerance

The Department has completed review of Submittal ABF-SUB-000200R02, "Fabrication Procedures - Methods to Repair Elements that Exceed Specified Tolerance," dated January 23, 2009. The submittal is "Approved as Noted," as shown on the attached drawings and as outlined by the following comments:

CATEGORY A:

1. Repair procedures require the Engineer to be notified for each case of repair.
2. The repair methods will be limited to 3 holes per hole pattern (group).
3. Cooling times prior to inspections for SPCMs shall conform to AWS D1.5, Section 12.16.4.and the approved FCP.
4. **Repair Method 4:** Repairs of this type are considered critical repairs and must be addressed on a case by case basis.
5. **Repair Method 5:** Buttering is limited to 10mm or less. Edges and faying surfaces are to be ground flush after buttering. For repairs requiring greater than 10mm thickness, butt weld another plate of the same size and properties to the plate being repaired.

CATEGORY B:

1. Provide, for review and approval, the Weld Procedure Specifications (WPS) to be used.
2. Specify cooling times for the associated UT and MT testing to be performed in accordance with Category A, comment 3 above.

CATEGORY C:

1. Since NDT will be required after welding, when rejectable indications are discovered, they may be removed during subsequent re-drilling operation and the necessity of repairing again could be negated.

If you have any questions, please contact Gary Lai in the Working Drawing Campus.

Sincerely,

GARY PURSELL
Resident Engineer

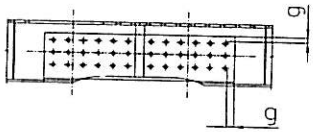
Attachment

cc: Rick Morrow
Stanley Ku
Mazen Wahbeh
Jason Tom
file: 05.03.01, 55.0200

5.超差类型: 螺栓孔孔边距不足

5. Type of out-of-tolerance: Inadequate bolt hole edge distance

Lengthening by welding (buttering) is limited to less than 10mm using an approved WPS.



修复方法:

Rectification method:

当螺栓孔边距g小于图纸要求孔边距时，应进行堆焊处理，可参见AWS D1.5 3.3.4.1要求进行.

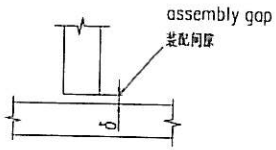
When g is less than the value in the working drawings, remove the splice plate and lengthen it to the right size by buttering per AWS D1.5 Section 3.3.4.1.

6. The out-of-tolerance of assembly gap of T-shaped joint and its repairing

6. T型接头角焊缝装配间隙超差及修复方法(如：角单元顶板肋与隔板接装配间隙或隔板接板与横隔板装配间隙)

6.1 The gap is less than 5mm.

6.1 筋板T型装配间隙在5mm以内超差



Repair method:

1. g<2mm: Accept

2. 2mm≤g≤5mm Enlarge the fillet weld size,The size of weld leg shall increase according to the gap size

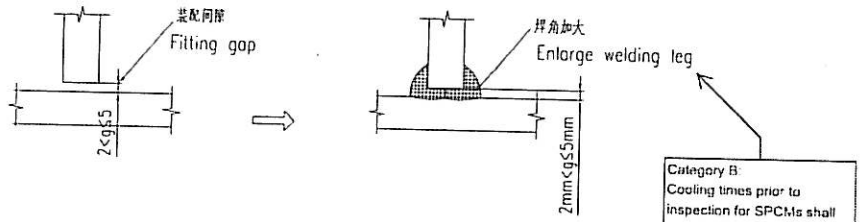
Note: When the gap increases 1mm, the weld leg shall increase 1mm.

修复方法:

1. g<2mm 不作处理

2. 2mm≤g≤5mm 加大角焊缝焊脚尺寸,但焊角尺寸必须按根部间隙值而增加

注：间隙每增大1mm，焊角也相应加大1mm



Category B:
Cooling times prior to inspection for SPCMs shall conform to AWS D1.5, Section 12.16.4, and the approved FCP.

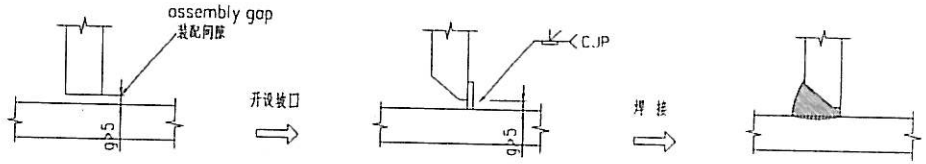
6.2 The gaps is more than 5mm.

6.2 筋板T型装配间隙大于5mm超差

g>5mm Use carbon air arcing to form the bevel and then grind flush. Weld the joint per approved WPS with steel backing. Steel backong shall ~~should~~ be removed. UT will be performed after 24 hours.

Category B
Cooling times prior to inspection for SPCMs shall conform to AWS D1.5, Section 12.16.4, and the approved FCP.

g>5mm 用碳刨方法开出筋板坡口，打磨光滑，贴好衬垫，按CJP要求进行焊接(应参照批准的WPS进行)，并去除衬垫，打磨光滑，对焊缝作UT检验.



注：筋板碳刨时应该有相关检验人员在场.

NO	DATE	REMARKS	BY
		REVISIONS	

ZPMC SHANGHAI ZHENHUA PORT MACHINERY CO., LTD.

SAN FRANCISCO OAKLAND BAY BRIDGE, EAST SPAN SELF-ANCHORED SUSPENSION SPAN

ROUTE 80 EAST OF YERBA BUENA ISLAND, DISTRICT 04, SF COUNTY, CA.

BRIDGE Nos: 34-0006L PM 8.2, KP 13.2 & 34-0006R PM 8.7, KP 13.9

STATE OF CALIFORNIA DEPT OF TRANSPORTATION CONTRACT NO. 04-0120F4

ENGINEER: CALTRANS ---- TYLIN / MOFFATT & NICHOL, JV.

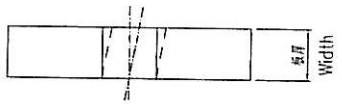
CONTRACTOR: AMERICAN BRIDGE / FLUOR ENTERPRISES, JV.

Methods of repair elements that exceed specified tolerance

DRAWN	4/23/07	Lu Shihua		SHEET NO	ORDER NO
CHECKED	4/23/07	Yu Lianghui		ER-101	SAS-086

1. Type of out-of-tolerance: hole is not perpendicular

1. 超差类型：钻孔时，孔壁与钢板面不垂直



Limited to 3 holes per pattern and QA shall also be notified for each repair.

The doshed lines indicate the actual condition.

虚线表示实际开孔情况

Repair Method:

a. Elongate the hole by arc gouging, and grind smooth the surface. The elongated hole should satisty the joint detail in Repair WPS.

b. Weld the hole longitudinally using string bead, Backing bar shall be removed. Back gouge the root pass.

c. Grind surface flush after welding.

d. Perform UT and MT at the repaired hole.

e. Adjust the verticality between the drill and part, and re-drill the holes.

Category B: Repair shall be performed in accordance with an approved WPS.

Category B: Cooling times prior to inspection for SPCMs shall conform to AWS D1.5, Section 12.16.4, and the approved FCP.

修复方法：

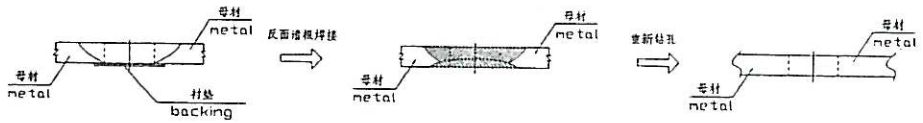
a、将（钻错的）孔采用碳刨的方法拓宽，并打磨平滑，拓宽的孔应符合修补WPS中的接头细节；

b、采用线状焊肌向进行补焊，衬垫可以采用，但必须去除。根部焊道背面碳刨清根；

c、焊后将焊缝磨平；

d、对修补区域进行UT和MT检测；

e、重新调整钻机与零件钻孔面的垂直度，然后进行重新钻孔；



2. Type of out-of-tolerance: diameter deviation

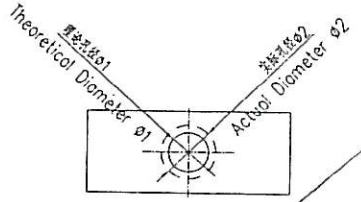
2. 超差类型：孔径超差

Repair Method:

a. If Ø1<Ø2, similar to step 1.

b. If Ø1>Ø2, ream or drill to correct diameter.

Limited to 3 holes per pattern and QA shall also be notified for each repair.



修复方法：

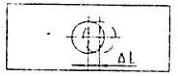
a、当实际孔径超差（比理论孔径大）时，可参见步骤1要求进行；

b、当实际孔径超差（比理论孔径小）时，采取扩孔的方法，使之满足孔径允许公差要求；

3. 钻孔尺寸超差及修复方法

3. Type of out-of-tolerance: miss-located hole

超差类型：钻孔时，孔位发生偏差



The doshed lines indicate the actual condition.

虚线表示实际开孔

Repairing method:

a. Similar to step 1.

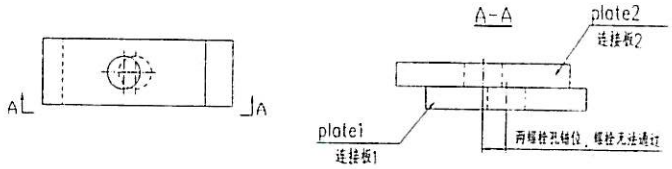
修复方法：

a、可参见步骤1；

This type of repair shall be approved by the Engineer on a case-by-case basis.

4. 连接板栓接匹配时，两螺栓孔错位，螺栓无法通过

4. Misalignment between two bolt holes of the spliced plates.



Repair Method:

a. If the misaligned holes intervene the bolt, ream or drill the hole to meet the matching requirement.

修复方法：

a、当两螺栓孔错位，螺栓无法通过时，可以采取扩孔或铰孔的方法，使之满足连接板栓接匹配要求；

Notes:

1. NDT is performed after welding, prior to re-drilling of holes. Rejectable indications may be removed when re-drilling rather than repairing again.
2. AWS D1.5, Sec. 3.7.7.3 requires WPS and weld tests for hole restoration of quenched and tempered steels.
3. Repairs to SPCMs require approval on a case-by-case basis.

NO	DATE	REMARKS	BY
REVISIONS			

ZPMC SHANGHAI ZHENHUA PORT MACHINERY CO LTD.

SAN FRANCISCO OAKLAND BAY BRIDGE, EAST SPAN SELF-ANCHORED SUSPENSION SPAN

ROUTE 80 EAST OF YERBA BUENA ISLAND, DISTRICT 04, SF COUNTY, CA

BRIDGE Nos: 34-0006L PM 8.2, KP 13.2 & 34-0006R PM 8.7, KP 13.9

STATE OF CALIFORNIA DEPT. OF TRANSPORTATION CONTRACT NO. 04-0120F4

ENGINEER: CALTRANS ---- T.Y.LIN / MOFFATT & NICHOL, JV.

CONTRACTOR: AMERICAN BRIDGE / FLUOR ENTERPRISES, JV.

Methods of repair elements that exceed specified tolerance

DRAWN	4/23/07	Lu Shihua		SHEET NO	ORDER NO
CHECKED	4/23/07	Yu Lianghe		EP-120	SAS-096

American Bridge / FLUOR
A JOINT VENTURE

375 Burma Road
Oakland, CA 94607 USA
Phone 510-808-4600
Fax 510-808-5601

September 22, 2009

AFC-ZPM-LTR-000566

Attention: **Mr. Wu Yun**

ZPMC
Steel Structure Department
Room 203, Building 2
Shanghai, China 200125

PROJECT: **San Francisco Oakland Bay SAS Bridge Superstructure**
Caltrans Contract No. 04-0120F4
ABF Job No. 660110

Subject: **Notification for Engineer's Review and Approval**

Mr. Wu:

American Bridge / Fluor Enterprises, a Joint Venture (ABFJV), is in receipt of Caltrans' letter No. 05.03.01-004548, dated July 1, 2009. The letter changed the review comment for Submittal ABF-SUB-000200R02, Methods to Repair Elements that Exceed Specified Tolerance, from ""Repair procedures require the Engineer to be notified for each case of repair" to "Repair procedures require the Engineer's approval prior to each case of repair". To meet this new requirement, ABFJV is hereby directing Shanghai Zhenhua Port Machinery Co., LTD (ZPMC) to fill in the attached "Notification for Engineer's Review and Approval" form each time a detailed fillet weld is changed to complete-joint-penetration (CJP) weld and submit to Caltrans through ABFJV. Please be reminded that no repair is allowed until Caltrans approves the proposed change.

ABFJV considers it extra work to request for Engineer's approval for each case of repair with CJP weld based on Submittal ABF-SUB-0002000R02, and therefore requests ZPMC to track the cost and schedule impact for each incidence.

Should you have any questions please contact Mr. Thomas Nilsson.

Sincerely,

American Bridge Company / Fluor Enterprises Inc., A Joint Venture
Thomas Nilsson
Project Manager - Fabrication

Attach:
Letter No. 05.03.01-004548
"Notification for Engineer's Review and Approval" form

Submitted by: _____ Date Submitted: _____ Time Submitted: _____
Received by: _____ Date Received: _____ Time Received: _____

Notification for Engineer's Review & Approval

Out-of-tolerance Repair: Excessive Root Gap Turning Fillet Weld to CJP per Submittal 200R2

INFORMATION:

Lift/Segment: _____ Measured Gap Size (mm): _____

Component(s)/Member(s): _____ SPCM Member: ☐ Yes ☐ No

Piece Mark(s) Related: _____

Weld ID#: _____

All Specific Y-locations, Reference Point, Length of Repair (For Intermittent Welds):

_____

_____

- Attached Location Layout Sketch? ☐ Yes ☐ No
- Is the weld a repair or new joint fit up? ☐ Repair ☐ New Joint
- If the repair requires a CWR, has a CWR submitted for Engineer's Approval? ☐ Yes ☐ No
- The cause of this repair: *(Select all applicable)*
  - ☐ misaligned member exceeding the fit-up tolerance
  - ☐ error in cutting/ uneven cut member
  - ☐ flatness or straightness issue
  - ☐ other, please specify _____

Engineer's Approval: Yes/No Reviewed by: _____ Date: _____ Time: _____
Comments: _____

AGREEMENT:

The Contractor agrees to perform the following work in the above referenced locations.

- To incorporate the detail changes to the weld map.
- To reflect the changes in the shop drawings/as-built drawings.
- To reflect the changes on the QA Database. (i.e., CJP weld, intermittent weld length, UT inspection)
- To follow the repair method described in Sec. 6.2 of Submittal 200R2; RFCO 63.
- To provide inspection notification to CT for witnessing and inspecting the work indicated in the checklist below **prior** to starting.

CT INSPECTOR CHECKLIST:

	Yes	No	Insp. ID#	Date
Copy of the applicable WPS in English.	☐	☐		
Acceptable Joint Prep; Proper Steel Backing.	☐	☐		
The CJP weld extends at least 50mm beyond either side of the out of tolerance root gap repair.	☐	☐		
The CJP weld does have reinforcing fillets equal to the replaced fillet welds.	☐	☐		
Acceptable 100% MT result to the backgouged area.	☐	☐		
Acceptable 100% UT result to the CJP weld.	☐	☐		
The CJP weld preparation does have a 1:1 slope or smoother transition at the ends.	☐	☐		

AMERICAN BRIDGE/FLUOR ENTERPRISES, a JV
P.O. BOX 23223 Oakland, CA 94623
Phone (510) 419-0120 / Fax (510) 839-0666

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000302

Subject: NCR No. ZPMC-0315

Dated: **16-Mar-2010**

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

Job Name: SAS Superstructure

Document No.: **ABF-NPR-000353 Rev: 02**

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has removed the X37 stiffeners discussed in item 2 of the NPR response and will be reinstalled and inspected before blasting by all three parties.

ZPMC has removed the X37 stiffeners discussed in item 2 of the NPR response and will be reinstalled and inspected before blasting by all three parties. Item 4, weld wrapping has been deemed acceptable by the Department in locations where weld wrapping has already occurred per ABF-RFI001786R00. Based on this and the previously submitted responses, ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000353R02;

Caltrans' comments:

Status: REJ

Date: 17-Mar-2010

The NCR cannot be closed because the wrapping has not been adequately addressed. RFI 1786 addressed wrapping at the floor beam location only (these are at the corner assemblies)and required wrapping on future welds to discontinue prior to the time the welds in question were completed. Remove the wraps in question or submit an RFI requesting that the wraps remain.

Submitted by: Howe, Bill

Date: 17-Mar-2010

Attachment(s): NPR CT Comments

No. B-681

LETTER OF RESPONSE

TO: American Bridge/Flour
DATE: 2010-3-16
REGARDING: NCR-000341(ZPMC-0315)

Part 1 has been addressed in the lastly response and is now acceptable by engineer.
Part 2. All the X37As were tacked in CA. ZPMC has removed those X37As where the tight fit (=2mm) are not satisfied with the cord requirement. Those removed X37As will be installed before blasting and will be inspected by three parties together. After then, FVT & Green Tags will be achieved.
Part 3 has been addressed in the lastly response and is now acceptable by engineer e.
Part 4. Refer to FRI 1786, the wrapping welds are now acceptable.
Based on the responses above, ZPMC is requesting this NCR to be closed.

ATTACHMENT:
NCR-000341(ZPMC-0315)
ABF-NPR-000353 R1

3/16/10

DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge
666 Feng Bin Road Room 708, Changxing Island
Shanghai 201913 PR China
Tel: 021-56856666 ext 207061 Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

To:	AMERICAN BRIDGE/FLUOR, A JV 375 BURMA ROAD OAKLAND CA 95607	**Date:**	05-Jul-2009
		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:**	05.03.06-000302
Subject:	NCR No. ZPMC-0315		

Reference Description: CJP welds replaced with fillet at repair locations prior to engineer's approval

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:**

Remarks:

1.Segment 7CE plate X36 at panel point 54.5 fillet weld joints 97 & 98 at E2 location, a fillet weld was discovered welded from the weld joint 97 side only leaving the weld joint 98 exposed. The weld prep of the fillet weld joint # 98 revealed a root opening of 7mm. Maximum allowed root opening for a fillet weld is 5mm. Applicable reference listed as # 1 below.

2. X37A Stiffeners require a tight fit (= 2mm) per approved shop drawing X37A. The X37A stiffener locations listed in the table below were found to have a dimension greater than 2mm. Applicable reference listed as # 1 below.

Segment	Panel Point	Segment Side	Measurement
7AE	48.75	E2	3mm
7BE	51.25	E2	3mm
7BE	49.25	E2	3.5mm
7CE	53.25	E5	5mm
7CE	53.75	E5	5mm
7EE	58.25	E5	7mm

3. Weld locations listed in the table below require a fillet weld per approved shop drawings. ZPMC has changed said welds to complete joint penetration welds due to root opening in excess of specified maximum root opening of 5mm. Applicable reference listed as # 1 below.

Segment	Location	Remarks
6AW	FB Flange to DP Diaphragm Plate Panel Point 37	Entire Length
6AW	FB Flange to DP Diaphragm Plate Panel Point 38	Entire Length
6AW	FB Flange to DP Diaphragm Plate Panel Point 39	Intermittent
6AW	X37 Brackets PP37.5 W2 location	4 locations
6AW	FB Flange to DP Diaphragm Plate Panel Point 40	Intermittent

NCT

(Continued Page 2 of 3)

6BW	FB Flange to DP Diaphragm Plate Panel Point 41	Entire Length
6BW	FB Flange to DP Diaphragm Plate Panel Point 42	Entire Length
6BW	FB Flange to DP Diaphragm Plate Panel Point 43	Entire Length
6BW	X37 Brackets PP42.5 W2 location	5 locations
6CW	FB Flange to DP Diaphragm Plate Panel Point 44	Intermittent
6CW	FB Flange to DP Diaphragm Plate Panel Point 45	Intermittent
6CW	FB Flange to DP Diaphragm Plate Panel Point 46	Intermittent
6CW	FB Flange to DP Diaphragm Plate Panel Point 47	Intermittent
7AW	FB Flange to DP Diaphragm Plate Panel Point 48	Intermittent
7AW	FB Flange to DP Diaphragm Plate Panel Point 49	Intermittent
7BW	FB Flange to DP Diaphragm Plate Panel Point 50	Entire Length
7BW	FB Flange to DP Diaphragm Plate Panel Point 51	Intermittent
7BW	FB Flange to DP Diaphragm Plate Panel Point 52	Intermittent
7BW	X37 Brackets PP49.5 W5 location	2 locations
7CW	FB Flange to DP Diaphragm Plate Panel Point 53	Intermittent
7CW	FB Flange to DP Diaphragm Plate Panel Point 54	Intermittent
7CW	FB Flange to DP Diaphragm Plate Panel Point 55	Entire Length
7DW	FB Flange to DP Diaphragm Plate Panel Point 56	Intermittent
7DW	FB Flange to DP Diaphragm Plate Panel Point 57	Intermittent
7DW	FB Flange to DP Diaphragm Plate Panel Point 58	Intermittent
7EW	FB Flange to DP Diaphragm Plate Panel Point 59	Intermittent
7EW	FB Flange to DP Diaphragm Plate Panel Point 60	Intermittent
CA48	Panel Point 62 Stiffeners (3) to Deck Plate	Various welds
CA48	Panel Point 64 Stiffeners (3) to Deck Plate	Various welds
CA54	Panel Point 68 Stiffeners (3) to Deck Plate	Various welds
CA54	Panel Point 70 Stiffeners (3) to Deck Plate	Various welds
5CE	X37 Brackets PP35.5 E2 location	2 locations
5CE	X37 Brackets PP36.5 E2 location	3 locations
5CE	X37 Brackets PP35.5 E5 location	1 location
5CE	X37 Brackets PP36.5 E5 location	2 locations
5CW	X37 Brackets PP36.5 W2 location	1 location
7AE	X37 Brackets PP47.5 E5 location	6 locations
7AE	X37 Brackets PP48.5 E5 location	4 locations
7AE	X37 Brackets PP47.5 E2 location	6 locations
7AE	X37 Brackets PP48.5 E2 location	4 locations
6BE	X37 Brackets PP41.5 E2 location	2 locations
6BE	X37 Brackets PP42.5 E2 location	1 location
6BE	FB Flange to DP Diaphragm Plate Panel Point 42	Intermittent
7BE	X37 Brackets PP49.5 E2 location	2 locations
7BE	X37 Brackets PP50.5 E2 location	2 locations
7BE	X37 Brackets PP51.5 E2 location	2 locations
7BE	X37 Brackets PP51.5 E5 location	2 locations
7BE	FB Flange to DP Diaphragm Plate Panel Point 50	Intermittent
7BE	FB Flange to DP Diaphragm Plate Panel Point 51	Intermittent

7CE	FB Flange to DP Diaphragm Plate Panel Point 53	Intermittent
7CE	FB Flange to DP Diaphragm Plate Panel Point 54	Intermittent
7CE	X37 Brackets PP52.5 E2 location	5 locations
8BE	X36 Plate to DP Stiffener PP64.5 E5 location	1 location
8BE	X36 Plate to SP Stiffener PP64.5 E2 location	2 locations
8BE	CA FB at PP65 DP, EP, and SP Stiffeners E5 location	7 locations
8BE	FB Flange to DP Diaphragm Plate Panel Point 65	Intermittent
8BE	X36 Plate to SP Stiffener PP65.5 E5 location	4 locations
8BE	X36 Plate to SP Stiffener PP65.5 E2 location	1 location
8BE	CA FB at PP66 DP, EP, and SP Stiffeners E5 location	5 locations
8BE	CA FB at PP66 DP, EP, and SP Stiffeners E2 location	5 locations
8BE	X36 Plate to DP Stiffener PP66.5 E5 location	1 location
8BE	CA FB at PP67 DP, EP, and SP Stiffeners E5 location	1 location
8BE	CA FB at PP67 DP, EP, and SP Stiffeners E2 location	3 locations
8AE	X36 Plate to EP Stiffener PP61.5 E5 location	1 location
8AE	CA FB at PP62 SP Stiffener E5 location	1 location
8AE	CA FB at PP63 EP Stiffeners E5 location	2 locations
8AE	X36 Plate to EP Stiffener PP64 E5 location	1 location
8AE	FB Flange to DP Diaphragm Plate Panel Point 64	Intermittent

4. Corner assembly and Segment drawings list weld specifications for all locations. All welds on corner assemblies have been wrapped when approved drawings do not show any wrapping required. Applicable reference listed as # 3 below.
please see attached NCR ZPMC-315 for details.

Action Required and/or Action Taken:

Propose a resolution for the identified recurring non-conformance which constitutes a systematic problem on both materials/workmanship and quality control issues with revised procedures to remedy the defected work and to prevent future occurrences. A response for the resolution of this issue is expected within 14 days.

Transmitted by: Ching Chao
Attachments: ZPMC-0315

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, Doug Coe, Jason Tom, Contract Files, Ching Chao
File: 05.03.06

STATE OF CALIFORNIA--BUSINESS,TRANSPORTACTION AND HOUSING AGENCY Arnold Schwarzenegger, Governor

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 #: 04-0120F4
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
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

Report No: NCR-000341
Date: 24-Jun-2009
NCR #: ZPMC-0315

Type of problem:

Welding	☑	**Concrete**	☐	**Other**	☐
Welding	☑	**Curing**	☐	**Procedural**	☐
Joint fit-up	☐	**Coating**	☐	**Other**	☐
Procedural	☐	**Procedural**	☐	**Description:**	

Bridge No: 34-0006
Component: OBG Lift 5, 6, 7, and 8

Reference Description: CJP welds replaced with fillet at repair locations prior to engineer's approval

Description of Non-Conformance:

1.Segment 7CE plate X36 at panel point 54.5 fillet weld joints 97 & 98 at E2 location, a fillet weld was discovered welded from the weld joint 97 side only leaving the weld joint 98 exposed. The weld prep of the fillet weld joint # 98 revealed a root opening of 7mm. Maximum allowed root opening for a fillet weld is 5mm. Applicable reference listed as # 1 below.

2. X37A Stiffeners require a tight fit (= 2mm) per approved shop drawing X37A. The X37A stiffener locations listed in the table below were found to have a dimension greater than 2mm. Applicable reference listed as # 1 below.

Segment	Panel Point	Segment Side	Measurement
7AE	48.75	E2	3mm
7BE	51.25	E2	3mm
7BE	49.25	E2	3.5mm
7CE	53.25	E5	5mm
7CE	53.75	E5	5mm
7EE	58.25	E5	7mm

3. Weld locations listed in the table below require a fillet weld per approved shop drawings. ZPMC has changed said welds to complete joint penetration welds due to root opening in excess of specified maximum root opening of 5mm. Applicable reference listed as # 1 below.

Segment	Location	Remarks
6AW	FB Flange to DP Diaphragm Plate Panel Point 37	Entire Length
6AW	FB Flange to DP Diaphragm Plate Panel Point 38	Entire Length
6AW	FB Flange to DP Diaphragm Plate Panel Point 39	Intermittent
6AW	X37 Brackets PP37.5 W2 location	4 locations

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 4)

6AW	FB Flange to DP Diaphragm Plate Panel Point 40	Intermittent
6BW	FB Flange to DP Diaphragm Plate Panel Point 41	Entire Length
6BW	FB Flange to DP Diaphragm Plate Panel Point 42	Entire Length
6BW	FB Flange to DP Diaphragm Plate Panel Point 43	Entire Length
6BW	X37 Brackets PP42.5 W2 location	5 locations
6CW	FB Flange to DP Diaphragm Plate Panel Point 44	Intermittent
6CW	FB Flange to DP Diaphragm Plate Panel Point 45	Intermittent
6CW	FB Flange to DP Diaphragm Plate Panel Point 46	Intermittent
6CW	FB Flange to DP Diaphragm Plate Panel Point 47	Intermittent
7AW	FB Flange to DP Diaphragm Plate Panel Point 48	Intermittent
7AW	FB Flange to DP Diaphragm Plate Panel Point 49	Intermittent
7BW	FB Flange to DP Diaphragm Plate Panel Point 50	Entire Length
7BW	FB Flange to DP Diaphragm Plate Panel Point 51	Intermittent
7BW	FB Flange to DP Diaphragm Plate Panel Point 52	Intermittent
7BW	X37 Brackets PP49.5 W5 location	2 locations
7CW	FB Flange to DP Diaphragm Plate Panel Point 53	Intermittent
7CW	FB Flange to DP Diaphragm Plate Panel Point 54	Intermittent
7CW	FB Flange to DP Diaphragm Plate Panel Point 55	Entire Length
7DW	FB Flange to DP Diaphragm Plate Panel Point 56	Intermittent
7DW	FB Flange to DP Diaphragm Plate Panel Point 57	Intermittent
7DW	FB Flange to DP Diaphragm Plate Panel Point 58	Intermittent
7EW	FB Flange to DP Diaphragm Plate Panel Point 59	Intermittent
7EW	FB Flange to DP Diaphragm Plate Panel Point 60	Intermittent
CA48	Panel Point 62 Stiffeners (3) to Deck Plate	Various welds
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5CE	X37 Brackets PP35.5 E5 location	1 location
5CE	X37 Brackets PP36.5 E5 location	2 locations
5CW	X37 Brackets PP36.5 W2 location	1 location
7AE	X37 Brackets PP47.5 E5 location	6 locations
7AE	X37 Brackets PP48.5 E5 location	4 locations
7AE	X37 Brackets PP47.5 E2 location	6 locations
7AE	X37 Brackets PP48.5 E2 location	4 locations
6BE	X37 Brackets PP41.5 E2 location	2 locations
6BE	X37 Brackets PP42.5 E2 location	1 location
6BE	FB Flange to DP Diaphragm Plate Panel Point 42	Intermittent
7BE	X37 Brackets PP49.5 E2 location	2 locations
7BE	X37 Brackets PP50.5 E2 location	2 locations
7BE	X37 Brackets PP51.5 E2 location	2 locations
7BE	X37 Brackets PP51.5 E5 location	2 locations
7BE	FB Flange to DP Diaphragm Plate Panel Point 50	Intermittent

7BE	FB Flange to DP Diaphragm Plate Panel Point 51	Intermittent
7CE	FB Flange to DP Diaphragm Plate Panel Point 53	Intermittent
7CE	FB Flange to DP Diaphragm Plate Panel Point 54	Intermittent
7CE	X37 Brackets PP52.5 E2 location	5 locations
8BE	X36 Plate to DP Stiffener PP64.5 E5 location	1 location
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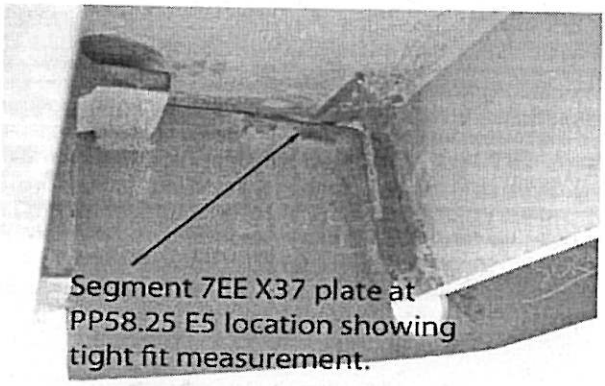
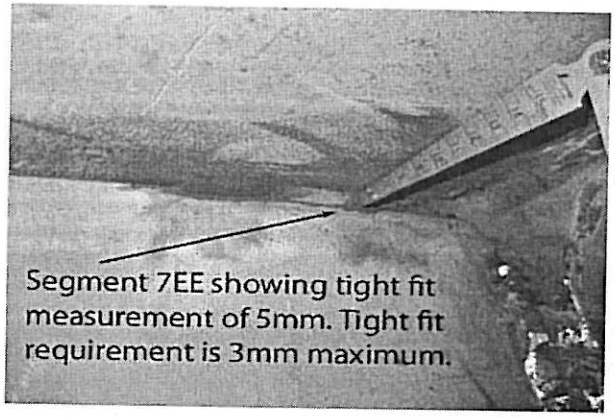
8BE	FB Flange to DP Diaphragm Plate Panel Point 65	Intermittent
8BE	X36 Plate to SP Stiffener PP65.5 E5 location	4 locations
8BE	X36 Plate to SP Stiffener PP65.5 E2 location	1 location
8BE	CA FB at PP66 DP, EP, and SP Stiffeners E5 location	5 locations
8BE	CA FB at PP66 DP, EP, and SP Stiffeners E2 location	5 locations
8BE	X36 Plate to DP Stiffener PP66.5 E5 location	1 location
8BE	CA FB at PP67 DP, EP, and SP Stiffeners E5 location	1 location
8BE	CA FB at PP67 DP, EP, and SP Stiffeners E2 location	3 locations
8AE	X36 Plate to EP Stiffener PP61.5 E5 location	1 location
8AE	CA FB at PP62 SP Stiffener E5 location	1 location
8AE	CA FB at PP63 EP Stiffeners E5 location	2 locations
8AE	X36 Plate to EP Stiffener PP64 E5 location	1 location
8AE	FB Flange to DP Diaphragm Plate Panel Point 64	Intermittent

4. Corner assembly and Segment drawings list weld specifications for all locations. All welds on corner assemblies have been wrapped when approved drawings do not show any wrapping required. Applicable reference listed as # 3 below.



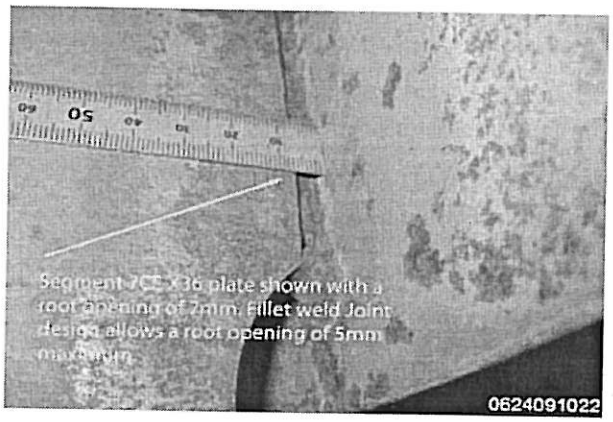
Segment 7EE X37 plate at PP58.25 E5 location showing tight fit measurement.

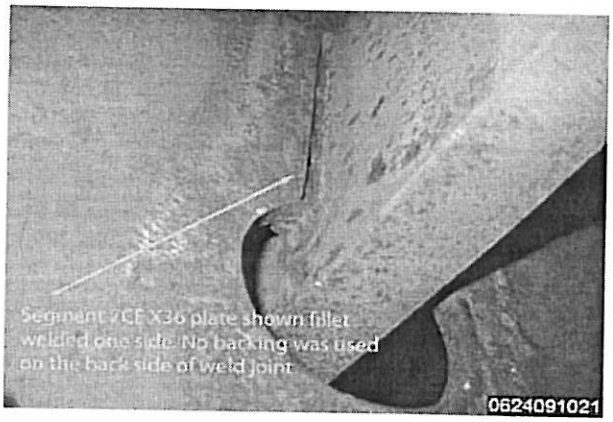


Segment 7EE showing tight fit measurement of 5mm. Tight fit requirement is 3mm maximum.

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 4 of 4)





Applicable reference:

1. AWS D1.5/2002 Section 3.3.1- "The parts to be joined by fillet welds shall be brought into as close contact as practicable. The root opening shall not exceed 5 mm [3/16 in.] except in cases involving either shapes or plates 75 mm [3 in.] or greater in thickness if, after straightening and in assembly, the root opening cannot be closed sufficiently to meet this tolerance. In such cases, a maximum root opening of 8mm may be used, with a backing weld or suitable backing. If the root opening is greater than 2 mm, the leg of the fillet weld shall be increased by the amount of the root opening or the Contractor shall demonstrate that the required weld size has been obtained."
2. AWS D1.5/2002 Section 3.5.1.10- "Where a tight fit of intermediate stiffeners is specified, it shall be defined as allowing a gap of up to 2mm between stiffener and flange."
3. General Notes GN3- Detail "WT1" Typical Weld Termination.

Who discovered the problem: Erik Prue, Rodney Patterson

Name of individual from Contractor notified: Peter Shaw

Time and method of notification: 1600 hours, Verbal

Name of Caltrans Engineer notified: Stanly Ku

Time and method of notification: 1700 hours, Verbal

QC Inspector's Name: Shen Xuejun

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,(818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Simonis,Jim	QA Inspector
Reviewed By:	Wahbeh,Mazen	SMR

AMERICAN BRIDGE/FLUOR ENTERPRISES, a JV
P.O. BOX 23223 Oakland, CA 94623
Phone (510) 419-0120 / Fax (510) 839-0666

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000302

Subject: NCR No. ZPMC-0315

Dated: 31-Dec-2009
Contract No.: 04-0120F4
04-SF-80-13.2 / 13.9
Job Name: SAS Superstructure
Document No.: ABF-NPR-000353 **Rev:** 01

Contractor's Proposed Resolution:

Reference Resolution: As shown in the NCR response by ZPMC, a misunderstanding occurred between two procedures. See the ZPMC response in the attached documentation.

As shown in the NCR response by ZPMC, a misunderstanding occurred between two procedures. ZPMC performed welding a CJP in lieu of a fillet as per an approved procedure, however, after the welding, CT withdrew the procedure as they did not realize that ZPMC would use this procedure for any case that required a CJP in lieu of fillet for fit-up gaps greater than 5mm. CT then provided a form to complete specifying the areas where a CJP would be used in lieu of a fillet. This form is notification to the engineer and provides a case by case review by the engineer for these types of Weld joint modifications and to provide direction of what type of NDT will be required. See the ZPMC response in the attached documentation. ZPMC requests closure of this NCR.

Submitted by: Lawton, Steve

Attachment(s): ABF-NPR-000353R01;

Caltrans' comments:

Status: AAP

Date: 06-Jan-2010

The contractor's response to this NCT has only addressed items no. 1 and 3. However, the response was found to be acceptable for those 2 items. Item no. 2, 2mm tight-fit, and item no. 4, wrapping welds, still required contractor's response.

Submitted by: Chao, Ching

Date: 06-Jan-2010

Attachment(s):

AMERICAN BRIDGE/FLUOR ENTERPRISES, a JV
P.O. BOX 23223 Oakland, CA 94623
Phone (510) 419-0120 / Fax (510) 839-0666

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000302

Subject: NCR No. ZPMC-0315

Dated: **24-Mar-2010**

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

Job Name: SAS Superstructure

Document No.: **ABF-NPR-000353 Rev: 03**

Contractor's Proposed Resolution:

Reference Resolution: The Department stated that it took no exception to leaving all wrap around welds in place at all locations prior to July 6, 2009; The date of the NCR was written was June 24, 2009.

Per ABF-RFI-001786R00, the Department stated that it took no exception to leaving all wrap around welds in place at all locations prior to July 6, 2009 when the RFI was responded to. The date of the NCR was written was June 24, 2009 therefore wrap welds at the locations noted in the NCR are acceptable. Based on this clarification and previously submitted responses, ZPMC requests that this NCR be closed.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000353R03

Caltrans' comments:

Status: CLO

Date: 25-Mar-2010

This proposed resolution is acceptable. The Department concurs that Non-Conformance ZPMC-0315 is closed.

Submitted by: Eagen, Sean

Date: 25-Mar-2010

Attachment(s):

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 #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: xx.25A

QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

Location: Changxing Island, Shanghai, P.R. China **Report No:** NCS-000619
Prime Contractor: American Bridge/Fluor Enterprises, a JV **Date:** 13-Apr-2010
Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0315

Type of problem:

Welding	☑	**Concrete**	☐	**Other**	☐	
Welding	☑	**Curing**	☐	**Procedural**	☐	**Bridge No:** 34-0006
Joint fit-up	☐	**Coating**	☐	**Other**	☐	**Component:**
Procedural	☐	**Procedural**	☐	**Descripton:**		

Date the Non-Conformance Report was written: 24-Jun-2009

Description of Non-Conformance:

1.Segment 7CE plate X36 at panel point 54.5 fillet weld joints 97 & 98 at E2 location, a fillet weld was discovered welded from the weld joint 97 side only leaving the weld joint 98 exposed. The weld prep of the fillet weld joint # 98 revealed a root opening of 7mm. Maximum allowed root opening for a fillet weld is 5mm. Applicable reference listed as # 1 below.

2. X37A Stiffeners require a tight fit (= 2mm) per approved shop drawing X37A. The X37A stiffener locations listed in the table below were found to
have a dimension greater than 2mm. Applicable reference listed as # 1 below.

Segment	Panel Point	Segment Side	Measurement
7AE	48.75	E2	3mm
7BE	51.25	E2	3mm
7BE	49.25	E2	3.5mm
7CE	53.25	E5	5mm
7CE	53.75	E5	5mm
7EE	58.25	E5	7mm

3. Weld locations listed in the table below require a fillet weld per approved shop drawings. ZPMC has changed said welds to complete joint penetration welds due to root opening in excess of specified maximum root opening of 5mm. Applicable reference listed as # 1 below.

Segment	Location	Remarks
6AW	FB Flange to DP Diaphragm Plate Panel Point 37	Entire Length
6AW	FB Flange to DP Diaphragm Plate Panel Point 38	Entire Length
6AW	FB Flange to DP Diaphragm Plate Panel Point 39	Intermittent
6AW	X37 Brackets PP37.5 W2 location	4 locations

6AW	FB Flange to DP Diaphragm Plate Panel Point 40	Intermittent
6BW	FB Flange to DP Diaphragm Plate Panel Point 41	Entire Length
6BW	FB Flange to DP Diaphragm Plate Panel Point 42	Entire Length
6BW	FB Flange to DP Diaphragm Plate Panel Point 43	Entire Length
6BW	X37 Brackets PP42.5 W2 location	5 locations
6CW	FB Flange to DP Diaphragm Plate Panel Point 44	Intermittent
6CW	FB Flange to DP Diaphragm Plate Panel Point 45	Intermittent
6CW	FB Flange to DP Diaphragm Plate Panel Point 46	Intermittent
6CW	FB Flange to DP Diaphragm Plate Panel Point 47	Intermittent
7AW	FB Flange to DP Diaphragm Plate Panel Point 48	Intermittent
7AW	FB Flange to DP Diaphragm Plate Panel Point 49	Intermittent
7BW	FB Flange to DP Diaphragm Plate Panel Point 50	Entire Length
7BW	FB Flange to DP Diaphragm Plate Panel Point 51	Intermittent
7BW	FB Flange to DP Diaphragm Plate Panel Point 52	Intermittent
7BW	X37 Brackets PP49.5 W5 location	2 locations
7CW	FB Flange to DP Diaphragm Plate Panel Point 53	Intermittent
7CW	FB Flange to DP Diaphragm Plate Panel Point 54	Intermittent
7CW	FB Flange to DP Diaphragm Plate Panel Point 55	Entire Length
7DW	FB Flange to DP Diaphragm Plate Panel Point 56	Intermittent
7DW	FB Flange to DP Diaphragm Plate Panel Point 57	Intermittent
7DW	FB Flange to DP Diaphragm Plate Panel Point 58	Intermittent
7EW	FB Flange to DP Diaphragm Plate Panel Point 59	Intermittent
7EW	FB Flange to DP Diaphragm Plate Panel Point 60	Intermittent
CA48	Panel Point 62 Stiffeners (3) to Deck Plate	Various welds
CA48	Panel Point 64 Stiffeners (3) to Deck Plate	Various welds
CA54	Panel Point 68 Stiffeners (3) to Deck Plate	Various welds
CA54	Panel Point 70 Stiffeners (3) to Deck Plate	Various welds
5CE	X37 Brackets PP35.5 E2 location	2 locations
5CE	X37 Brackets PP36.5 E2 location	3 locations
5CE	X37 Brackets PP35.5 E5 location	1 location
5CE	X37 Brackets PP36.5 E5 location	2 locations
5CW	X37 Brackets PP36.5 W2 location	1 location
7AE	X37 Brackets PP47.5 E5 location	6 locations
7AE	X37 Brackets PP48.5 E5 location	4 locations
7AE	X37 Brackets PP47.5 E2 location	6 locations
7AE	X37 Brackets PP48.5 E2 location	4 locations
6BE	X37 Brackets PP41.5 E2 location	2 locations
6BE	X37 Brackets PP42.5 E2 location	1 location
6BE	FB Flange to DP Diaphragm Plate Panel Point 42	Intermittent
7BE	X37 Brackets PP49.5 E2 location	2 locations
7BE	X37 Brackets PP50.5 E2 location	2 locations
7BE	X37 Brackets PP51.5 E2 location	2 locations
7BE	X37 Brackets PP51.5 E5 location	2 locations
7BE	FB Flange to DP Diaphragm Plate Panel Point 50	Intermittent

7BE	FB Flange to DP Diaphragm Plate Panel Point 51	Intermittent
7CE	FB Flange to DP Diaphragm Plate Panel Point 53	Intermittent
7CE	FB Flange to DP Diaphragm Plate Panel Point 54	Intermittent
7CE	X37 Brackets PP52.5 E2 location	5 locations
8BE	X36 Plate to DP Stiffener PP64.5 E5 location	1 location
8BE	X36 Plate to SP Stiffener PP64.5 E2 location	2 locations
8BE	CA FB at PP65 DP, EP, and SP Stiffeners E5 location	7 locations
8BE	FB Flange to DP Diaphragm Plate Panel Point 65	Intermittent
8BE	X36 Plate to SP Stiffener PP65.5 E5 location	4 locations
8BE	X36 Plate to SP Stiffener PP65.5 E2 location	1 location
8BE	CA FB at PP66 DP, EP, and SP Stiffeners E5 location	5 locations
8BE	CA FB at PP66 DP, EP, and SP Stiffeners E2 location	5 locations
8BE	X36 Plate to DP Stiffener PP66.5 E5 location	1 location
8BE	CA FB at PP67 DP, EP, and SP Stiffeners E5 location	1 location
8BE	CA FB at PP67 DP, EP, and SP Stiffeners E2 location	3 locations
8AE	X36 Plate to EP Stiffener PP61.5 E5 location	1 location
8AE	CA FB at PP62 SP Stiffener E5 location	1 location
8AE	CA FB at PP63 EP Stiffeners E5 location	2 locations
8AE	X36 Plate to EP Stiffener PP64 E5 location	1 location
8AE	FB Flange to DP Diaphragm Plate Panel Point 64	Intermittent

4. Corner assembly and Segment drawings list weld specifications for all locations. All welds on corner assemblies have been wrapped when approved drawings do not show any wrapping required. Applicable reference listed as # 3 below.

Contractor's proposal to correct the problem:

Remove X37A brackets and address fit up issues, supply NDT records verifying CJPs installed in lieu of fillets are acceptable. Contractor is of the understanding that all weld wrapping was accepted prior to July 6, 2009, and fillet to CJP changes were made in accordance with Submittal 200, prior to the institution of the form for changing weld details.

Corrective action taken:

X37A brackets were removed and fit up issues were adjusted to be in conformcane with Contract specifications. NDT documentation for the welds which were changed from fillets to CJPs will be supplied via the electronic data base. Contractor is of the understanding that no action is required for the weld wrapping issues as the Department accepted all wrapped welds prior to July 6, 2009. Future weld joint changes will be approved by the Engineer prior to performing work.

Did corrective action require Engineer's approval? ☐ **Yes** ☑ **No**

If so, name of Engineer providing approval: **Date:**

Is Engineer's approval attached? ☐ **Yes** ☑ **No**

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 Jim Simonis 152.1675.3703, who represents the Office of Structural Materials for your project.

QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

(Continued Page 4 of 4)

Inspected By:	Simonis,Jim	Quality Assurance Inspector
Reviewed By:	Wahbeh,Mazen	QA Reviewer