

**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-000406**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 27-Aug-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0380**Type of problem:**

<b>Welding</b>	<b>Concrete</b>	<b>Other</b>
<b>Welding</b>	<b>Curing</b>	<b>Procedural</b>
<b>Joint fit-up</b>	<b>Coating</b>	<b>Other</b>
<b>Procedural</b>	<b>Procedural</b>	<b>Description:</b>

**Bridge No:** 34-0006**Component:** T-Stiffener Splice in OBG Segment 10CE**Reference Description:** Improper backing bar fit-up and unidentifiable material**Description of Non-Conformance:**

This Quality Assurance Inspector (QA) observed that the contractor has performed T-stiffeners splice weld between panel point 93 and 94 in Segment 10CE. The contractor used a steel backing on a T-Stiffener that does not conform to the code requirements. This steel backing bar is from an unknown material source and is not in intimate contact with the base metal. The location of this joint is on SP633A closest to the bottom panel.



# QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 2 of 2 )



## Applicable reference:

1. AWS D1.5 Section 3.13.1 Backing: Steel backing shall conform to the following requirements: (1) When welding any approved steel described in 1.2.2, backing may be of any of the steels described in 1.2.2 except that Grade 690 (100) or 690W (100W) backing shall not be used on lower strength steels.
2. AWS D1.5 Section 3.13.5: Steel backing shall be placed and held in intimate contact with the base metal. The maximum gap between steel backing and the base metal at the weld root shall be 2 mm [1/16 in.], as shown in Figure 3.2(A).
3. AWS D1.5 Figure 3.2 (A)-Workmanship Tolerances in Assembly of Groove Welded Joints (see 3.3.4)
4. AWS D1.5 Section 3.3.4.1: Root openings wider than those allowed in 3.3.4, but not greater than twice the thickness of the thinner part or 20 mm [3/4 in.], whichever is less, may be corrected by welding to acceptable dimensions prior to joining the parts by welding.

**Who discovered the problem:** Tim McClendon

**Name of individual from Contractor notified:** Li Man Kit

**Time and method of notification:** 1300 hours, verbal

**Name of Caltrans Engineer notified:** Ching Chao

**Time and method of notification:** 1330 hours, verbal

**QC Inspector's Name:** Wang Lu

**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.

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<b>Inspected By:</b>	Tsang, Eric	SMR
<b>Reviewed By:</b>	Wahbeh, Mazen	SMR

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**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-Sep-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:** 05.03.06-000369

**Subject:** NCR No. ZPMC-0380

**Reference Description:** Improper backing bar fit-up and unidentifiable material

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:** 10

**Remarks:**

This Quality Assurance Inspector (QA) observed that the contractor has performed T-stiffeners splice weld between panel point 93 and 94 in Segment 10CE. The contractor used a steel backing on a T-Stiffener that does not conform to the code requirements. This steel backing bar is from an unknown material source and is not in intimate contact with the base metal. The location of this joint is on SP633A closest to the bottom panel.

**Action Required and/or Action Taken:**

Submit a repair plan to the engineer that includes use of the proper steel and correct fit up.

**Transmitted by:** Bill Howe

**Attachments:** ZPMC-0380

**cc:** Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, Doug Coe, 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:** 05.03.06-000369

**Subject:** NCR No. ZPMC-0380

**Dated:** 23-Oct-2009

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000413 **Rev:** 00

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**Contractor's Proposed Resolution:**

**Reference Resolution:** ZPMC acknowledges Caltrans' comments and ZPMC QA department has discussed this issue with ZPMC Production to avoid future occurrences.

ZPMC acknowledges Caltrans' comments and ZPMC QA department has discussed this issue with ZPMC Production to avoid future occurrences. ZPMC proposes to provide NDT documents to show the weld is acceptable. The documents will be submitted at a later date. ZPMC requests closure of this NCR.

**Submitted by:**

**Attachment(s):** ABF-NPR-000413R00

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**Caltrans' comments:**

**Status:** AAP

**Date:** 22-Dec-2009

The Engineer will review the NDT documents when they are submitted and close the NCR if they are found to be sufficient.

**Submitted by:** Chao, Ching

**Date:** 22-Dec-2009

**Attachment(s):**

## NCR PROPOSED RESOLUTION

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

**Attention:** Pursell, Gary  
Resident Engineer

**Ref:** 05.03.06-000369

**Subject:** NCR No. ZPMC-0380

**Dated:** 04-Dec-2009

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000413 Rev: 01

---

**Contractor's Proposed Resolution:**

**Reference Resolution:** ZPMC is providing NDT documentation that the CJP weld is sound. Based on this ZPMC is requesting closure of this NCR.

ZPMC is providing NDT documentation that the CJP weld is sound. Based on this ZPMC is requesting closure of this NCR.

**Submitted by:** Ishibashi, Joshua

**Attachment(s):** ABF-NPR-000413R01;

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**Caltrans' comments:**

**Status:** AAP

**Date:** 13-Dec-2009

The NDT documentation submitted has been reviewed by the Engineer. The UT report did not have the correct weld ID number referenced in the NCR (SP633A). (UT report had SEG003B-50 and SEG003C-50.)

**Submitted by:** Chao, Ching

**Attachment(s):**

**Date:** 13-Dec-2009



No. B-512

## LETTER OF RESPONSE

**TO: American Bridge/Flour**

**DATE: 2009-12-03**

**REGARDING: NCR-000406(ZPMC-0380)**

With this letter of response, ZPMC requests closure for Caltrans NCR-000406(ZPMC-0380) what mentioned that QA observed incorrect welding with backing was performing. ZPMC acknowledged this problem and has issued interior NCR to warn workers. ZPMC will enhance our QC's control on site. UT was performed to warrant weld quality. So ZPMC provided the NDT documentations, hoping Caltrans could take a review and consider close these NCRs.

**ATTACHMENT:**

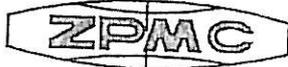
NCR-B-259(ZPMC-0380)

NCR-000406(ZPMC-0380)

B787-UT-9848

A handwritten signature in black ink, appearing to be "Jing" followed by a stylized flourish.

12/03/09



# Nonconformance Report

不符合项报告

Project Name: S.F.O.B.B  
 项目名称: 美国加州海湾大桥  
 NCR Number:  
 NCR 编号: NCR-B-259 (ZPMC-0380)

Item: Improper backing bar fit-up  
 Item Number:  
 件号:  
 Drawing:  
 图号: 10CE  
 名称描述: 与要求不符合的钢衬垫

Location: BAY 14  
 位置: 14 车间  
 Date:  
 日期: 2009-9-19

Description of Nonconformance:  
 不符合项状态描述:  
 This Quality Assurance Inspector (QA) observed that the contractor has performed T-stiffeners splice weld between panel point 93 and 94 in Segment 10CE. The contractor used a steel backing on a T-Stiffener that does not conform to the code requirements. This steel backing bar is from an unknown material source and is not in intimate contact with the base metal. The location of this joint is on SP633A closest to the bottom panel.

加州检验员发现 ZPMC 在焊接 10CE PP93 到 PP94 之间的 T 型钢拼缝时所使用的钢衬垫与标准要求不符合。这种钢衬垫所使用的材料上面无任何材料跟踪信息，并且没有与母材密切接触。这个拼缝位置在 SP633A 靠近底板处。

Work By: 施工方: 张也刚  
 Prepared by: Zhang Yide 准备:  
 Reviewed by QCE: Zhang Shengde 质量工程师批准:  
 Drawing Error 图纸错误  
 Material Defect 材料缺陷  
 Fabrication Error 制作错误  
 Other 其他原因 9.19

Disposition: 处理措施:  
 Use as is 回用  
 Repair 返修  
 Reject 拒收

Recommendation: 建议:

Prepared by: 准备  
 Approved by QCA: 质量经理批准

Reason for Nonconformance: 不符合原因:  
钢衬垫材质选用不符合要求 施工不到位  
 Base metal of steel backing didn't meet requirement.

Prevention of Re-occurrence: 预防措施:  
加强零件的材料稽核 施工中要严格按 wps 执行  
 Enhance supervision of base metal transpation, and perform according to wps requirement.

Approved by/批准:

*[Signature]*

Technical Justification for Use-As-Is/Repair:  Attachment  Non-attachment

回用或返修的技术依据:

对焊缝做 NDT 检测, 合格, 附件, 回用.

无附件

Perform NDT inspection to the welds. use as is if the result is acceptable.

Reviewed/批准: Manly 10/13/09

Verification:  Acceptable  Unacceptable

确认: 可接受 不可接受

已进行焊缝检测

Verified by QCI/质检确认: zhu zhonghai Reviewed by QCA/质检主任审核: \_\_\_\_\_

2009.11.26

#R787-QCP-1300

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

NON-CONFORMANCE REPORT TRANSMITTAL

To: AMERICAN BRIDGE/ELUOR, A JV  
375 BURMA ROAD  
OAKLAND CA 94607

Date: 15-Sep-2009

Contract No: 04-0120F4  
04-SF-80-13 2 / 13 9  
Job Name: SAS Superstructure  
Document No: 05.03.06-000369

Dear: Mr. Charles Kanapicki  
Attention: Mr. Thomas Nilsson Project/Fabrication Manager  
Subject: NCR No. ZPMC-0380

Reference Description: Improper backing bar fit-up and unidentifiable material

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: 10

Remarks:

This Quality Assurance Inspector (QA) observed that the contractor has performed T-stiffeners splice weld between panel point 93 and 94 in Segment 10CE. The contractor used a steel backing on a T-Stiffener that does not conform to the code requirements. This steel backing bar is from an unknown material source and is not in intimate contact with the base metal. The location of this joint is on SP633A closest to the bottom panel.

Action Required and/or Action Taken:

Submit a repair plan to the engineer that includes use of the proper steel and correct fit up.

Transmitted by: Bill Howe

Attachments: ZPMC-0380

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

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

Bay Area Branch  
690 Walnut Ave. St. 15C  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4  
City: 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-000406

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 27-Aug-2009

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

NCR #: ZPMC-0380

Type of problem:

Welding  Concrete  Other

Welding  Curing  Procedural

Joint fit-up  Coating  Other

Procedural  Procedural  Description:

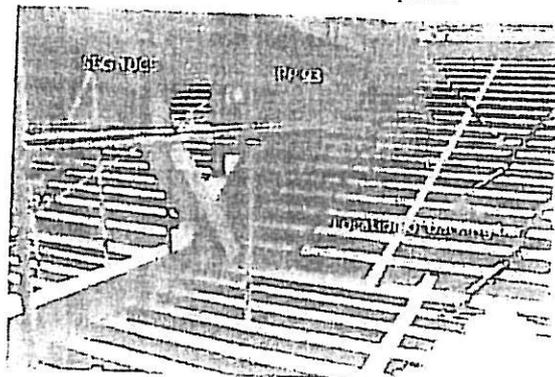
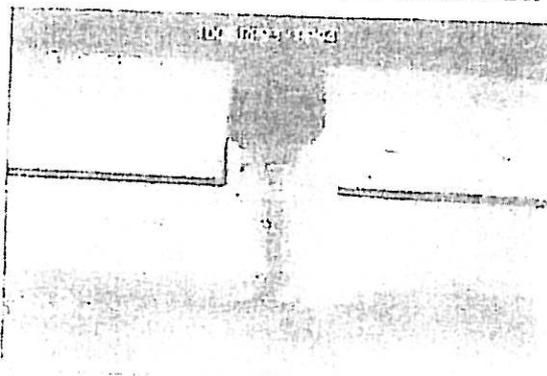
Bridge No: 34-0006

Component: T-Stiffener Splice in OBG Segment 10CE

Reference Description: Improper backing bar fit-up and unidentifiable material

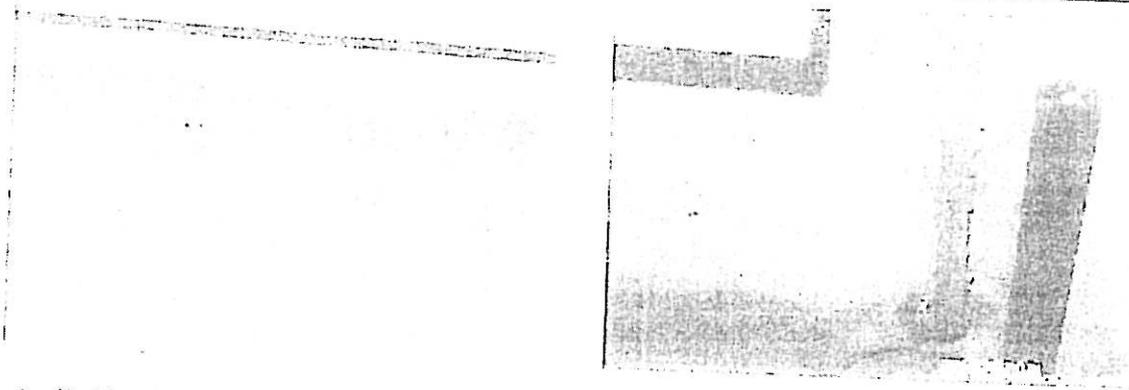
Description of Non-Conformance:

This Quality Assurance Inspector (QA) observed that the contractor has performed T-stiffeners splice weld between panel point 93 and 94 in Segment 10CE. The contractor used a steel backing on a T-Stiffener that does not conform to the code requirements. This steel backing bar is from an unknown material source and is not in intimate contact with the base metal. The location of this joint is on SP633A closest to the bottom panel.



# QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 2 of 2 )



### Applicable reference:

1. AWS D1.5 Section 3.13.1 Backing: Steel backing shall conform to the following requirements: (1) When welding any approved steel described in 1.2.2, backing may be of any of the steels described in 1.2.2 except that Grade 690 (100) or 690W (100W) backing shall not be used on lower strength steels.
2. AWS D1.5 Section 3.13.5: Steel backing shall be placed and held in intimate contact with the base metal. The maximum gap between steel backing and the base metal at the weld root shall be 2 mm [1/16 in.], as shown in Figure 3.2(A).
3. AWS D1.5 Figure 3.2 (A)-Workmanship Tolerances: in Assembly of Groove Welded Joints (see 3.3.4)
4. AWS D1.5 Section 3.3.4.1: Root openings wider than those allowed in 3.3.4, but not greater than twice the thickness of the thinner part or 20 mm [3/4 in.], whichever is less, may be corrected by welding to acceptable dimensions prior to joining the parts by welding.

Who discovered the problem: Tim McClendon

Name of individual from Contractor notified: Li Man Kit

Time and method of notification: 1300 hours, verbal

Name of Caltrans Engineer notified: Ching Chao

Time and method of notification: 1330 hours, verbal

QC Inspector's Name: Wang Lu

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 Wabbeh, +(86) 134 7247.7571, who represents the Office of Structural Materials for your project

Inspected By: Tsang, Eric

SMR

Reviewed By: Wabbeh, Mazen

SMR





# REPORT OF ULTRASONIC EXAMINATION

## UT探伤报告

REPORT NO. 报告编号 B787-UT-9848      DATE 2009.11.26      PAGE 1 OF 1      Revision No: 0

PROJECT NO.: 工程编号 ZP06-787      CONTRACTOR: CALTRANS

ITEMS NAME: 1AAW+1AW      DRAWING NO.: OBW1      CALTRANS CONTRACT NO.: 04-0120F4  
 部件名称 LONGITUDINAL      图号      加州工程编号  
 DIAPHRAGM

REFERENCING CODE 参考规范      ACCEPTANCE STANDARD 接受标准      PROCEDURE NO. 程序编号  
 AWS D1.5-2002      AWS D1.5-2002(Table 6.3)      ZPQC-UT-01

WELDING PROCESS 焊接方法      JOINT TYPE 焊缝类型      CALIBRATION DUE DATE 仪器校正有效期  
 SMAW      BUTT      Dec. 28<sup>ST</sup>, 2009

EQUIPMENT 设备      MANUFACTURER 制造商      MODEL NO. 样式编号      SERIAL NO. 序列编号  
 UT SCOPE      PANAMETRICS      EPOCH-4B      071565311, 061488510,  
 061495811, 070152011,

CALIBRATION BLOCK 试块      COUPLANT 耦合剂      MATERIAL/THICKNESS 材料厚度  
 AWS IIV BLOCK TYPE II      C.M.C      A709M-345      35/45mm

### TRANSDUCER 探头

MANUFACTURER 制造商	ANGLE 角度	FREQUENCY 频率	SIZE 尺寸	MANUFACTURER 制造商	ANGLE 角度	FREQUENCY 频率	SIZE 尺寸
Changchao	70°	2.5MHz	18×18mm				
Changchao	0°	2.5MHz	20mm	Reference Level 参考灵敏度		20dB	

Base metal inspected per AWS D1.5-2002 Section 6.19.5      0° UT OK.

WELD IDENTIFICATION 焊缝部件编号	INDICATION NO. 指示号	PROBE ANGLE 探测角度	FROM FACE 检测面	LEG (次数)	DECIBELS分贝				DISCONTINUITY 不连续性					Discontinuity Evaluation 缺陷估计	Remark 备注
					Indication Level	Reference Level	Attenuation Factor	Indication Rating	LOCATION OF DISCONTINUITY 不连续位置(mm)						
									a	b	c	d	Length 长度		
SEG003B-50		70				34								ACC.	100%
SEG003C-50		70				34								ACC.	100%

AFTER HSR1(B)-7416

BLANK


EXAMINED BY 主探 <i>Xu Ronggang</i> 09.11.26 LEVEL - II SIGN / DATE	REVIEWED BY 审核 <i>Xu Ronggang</i> 09.11.26 LEVEL - II SIGN / DATE
质量经理 / QCM _____ 签字 SIGN / 日期 DATE	用户 CUSTOMER _____ 签字 SIGN / 日期 DATE

## NCR PROPOSED RESOLUTION

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

**Dated:** 13-Jan-2010

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

**Attention:** Pursell, Gary  
Resident Engineer

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000413 Rev: 02

**Ref:** 05.03.06-000369

**Subject:** NCR No. ZPMC-0380

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### Contractor's Proposed Resolution:

**Reference Resolution:** ZPMC has now included the documentation as requested by CT. ZPMC requests closure of this NCR.  
ZPMC has now included the documentation as requested by CT. ZPMC requests closure of this NCR.

**Submitted by:** Lawton, Steve

**Attachment(s):** ABF-NPR-000413R02;

---

### Caltrans' comments:

**Status:** CLO

**Date:** 13-Jan-2010

The documentation received is sufficient to close this NCR.

**Submitted by:** Howe, Bill

**Date:** 13-Jan-2010

**Attachment(s):**



No. B-556

## LETTER OF RESPONSE

**TO: American Bridge/Flour**

**DATE: 2010-1-6**

**REGARDING: NCR-000406(ZPMC-0380)**

With this letter of response, ZPMC requests closure of CT NCR-000406(ZPMC-0380), what mentioned that QA observed improper backing bar been used.

According to CT's comments in NPR, ZPMC provides the correct UT report, hoping CT could take a review and consider close this NCR.

**ATTACHMENT:**

ABF-NPR-000413 R1

NCR-000406(ZPMC-0380)

VT REPORT

B787-UT-10607

A handwritten signature in black ink, appearing to be "J. W.", is located below the attachment list.

1/6/10



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: 05.03.06-000369

Subject: NCR No. ZPMC-0380

Dated: 04-Dec-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000413 Rev: 01

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### Contractor's Proposed Resolution:

Reference Resolution: ZPMC is providing NDT documentation that the CJP weld is sound. Based on this ZPMC is requesting closure of this NCR.

ZPMC is providing NDT documentation that the CJP weld is sound. Based on this ZPMC is requesting closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000413R01;

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### Caltrans' comments:

Status: AAP

Date: 13-Dec-2009

The NDT documentation submitted has been reviewed by the Engineer. The UT report did not have the correct weld ID number referenced in the NCR (SP633A). (UT report had SEG003B-50 and SEG003C-50.)

Submitted by: Chao, Ching

Attachment(s):

Date: 13-Dec-2009



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-Sep-2009

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

**Dear:** Mr. Charles Kanapicki  
**Attention:** Mr. Thomas Nilsson Project/Fabrication Manager

**Job Name:** SAS Superstructure

**Subject:** NCR No. ZPMC-0380

**Document No:** 05.03.06-000369

**Reference Description:** Improper backing bar fit-up and unidentifiable material

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:** 10

**Remarks:**

This Quality Assurance Inspector (QA) observed that the contractor has performed T-stiffeners splice weld between panel point 93 and 94 in Segment 10CE. The contractor used a steel backing on a T-Stiffener that does not conform to the code requirements. This steel backing bar is from an unknown material source and is not in intimate contact with the base metal. The location of this joint is on SP633A closest to the bottom panel.

**Action Required and/or Action Taken:**

Submit a repair plan to the engineer that includes use of the proper steel and correct fit up.

**Transmitted by:** Bill Howe

**Attachments:** ZPMC-0380

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

**File:** 05.03.06

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-000406

**Prime Contractor:** American Bridge/Fluor Enterprises, a JV

**Date:** 27-Aug-2009

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

**NCR #:** ZPMC-0380

**Type of problem:**

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

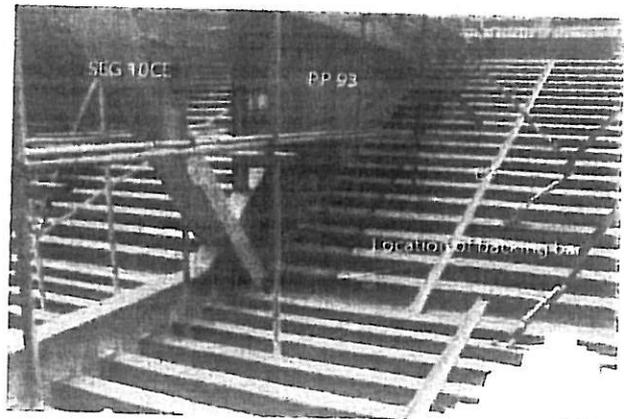
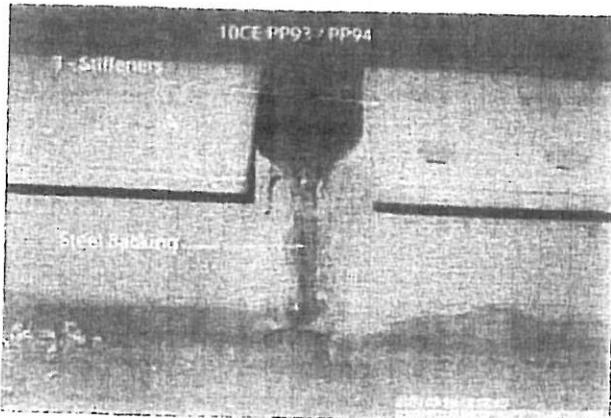
**Bridge No:** 34-0006

**Component:** T-Stiffener Splice in OBG Segment 10CE

**Reference Description:** Improper backing bar fit-up and unidentifiable material

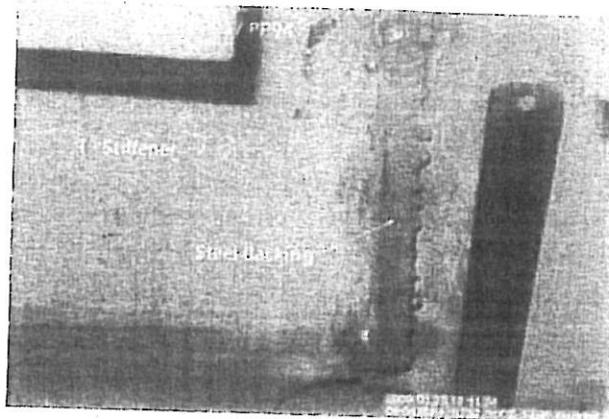
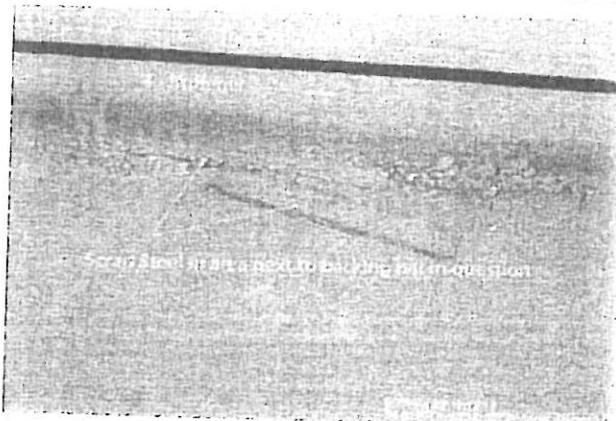
**Description of Non-Conformance:**

This Quality Assurance Inspector (QA) observed that the contractor has performed T-stiffeners splice weld between panel point 93 and 94 in Segment 10CE. The contractor used a steel backing on a T-Stiffener that does not conform to the code requirements. This steel backing bar is from an unknown material source and is not in intimate contact with the base metal. The location of this joint is on SP633A closest to the bottom panel.



## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



### Applicable reference:

1. AWS D1.5 Section 3.13.1 Backing: Steel backing shall conform to the following requirements: (1) When welding any approved steel described in 1.2.2, backing may be of any of the steels described in 1.2.2 except that Grade 690 (100) or 690W (100W) backing shall not be used on lower strength steels.
2. AWS D1.5 Section 3.13.5: Steel backing shall be placed and held in intimate contact with the base metal. The maximum gap between steel backing and the base metal at the weld root shall be 2 mm [1/16 in.], as shown in Figure 3.2(A).
3. AWS D1.5 Figure 3.2 (A)-Workmanship Tolerances in Assembly of Groove Welded Joints (see 3.3.4)
4. AWS D1.5 Section 3.3.4.1: Root openings wider than those allowed in 3.3.4, but not greater than twice the thickness of the thinner part or 20 mm [3/4 in.], whichever is less, may be corrected by welding to acceptable dimensions prior to joining the parts by welding.

**Who discovered the problem:** Tim McClendon

**Name of individual from Contractor notified:** Li Man Kit

**Time and method of notification:** 1300 hours, verbal

**Name of Caltrans Engineer notified:** Ching Chao

**Time and method of notification:** 1330 hours, verbal

**QC Inspector's Name:** Wang Lu

**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**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave. St. 150  
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(707) 649-5493

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-000456**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 14-Jan-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0380**Type of problem:**

<b>Welding</b>	<b>Concrete</b>	<b>Other</b>	
<b>Welding</b>	<b>Curing</b>	<b>Procedural</b>	<b>Bridge No:</b> 34-0006
<b>Joint fit-up</b>	<b>Coating</b>	<b>Other</b>	<b>Component:</b>
<b>Procedural</b>	<b>Procedural</b>	<b>Description:</b>	

**Date the Non-Conformance Report was written:** 27-Aug-2009**Description of Non-Conformance:**

This Quality Assurance Inspector (QA) observed that the contractor has performed T-stiffeners splice weld between panel point 93 and 94 in Segment 10CE. The contractor used a steel backing on a T-Stiffener that does not conform to the code requirements. This steel backing bar is from an unknown material source and is not in intimate contact with the base metal. The location of this joint is on SP633A closest to the bottom panel.

**Contractor's proposal to correct the problem:**

Perform required NDT to verify weld quality.

**Corrective action taken:**

Contractor submitted NDT reports verifying the weld is in conformance with Contract specifications.

**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, who represents the Office of Structural Materials for your project.

**Inspected By:** Simonis, Jim

Quality Assurance Inspector

**Reviewed By:** Wahbeh, Mazen

QA Reviewer