

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, PRC**Report No:** NCR-000267**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 24-Apr-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0241**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: OBG Segment 1BW
Procedural	Procedural	Description:	

Reference Description: Continuity Plate Retrofit, Doubler Plates**Description of Non-Conformance:**

At locations where there are consecutive doubler plates between the closed ribs, trimming the corners of the doublers is necessary for proper fit-up. On Segment 1BW, Panel points PP11.5 and PP12.5, the bolt hole edge distance to the trimmed (flame cut) edge of the doubler plates was observed to be 22mm (edge of hole to edge of plate). This does not meet the minimum edge distance requirement of 1.75D, which in this case is 28.5mm from the edge of the 27mm hole to the edge of plate.

**Applicable reference:**

Approved Contract Drawing sheet # 625C-Typical Girder Details # 1 (Bolt Dimension Table)

Who discovered the problem: Mark Miller**Name of individual from Contractor notified:** Peter Shaw**Time and method of notification:** 0800 hours, 04-23-09, Verbal**Name of Caltrans Engineer notified:** Ching Chao**Time and method of notification:** 1000 hours, 04-24-09, Verbal

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

QC Inspector's Name: Wang Lu

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

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 Eric Tsang, +(86) 1500.042.2372, who represents the Office of Structural Materials for your project.

Inspected By:	Guest,Skylar	SMR
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Reviewed By:	Wahbeh,Mazen	SMR
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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: 15-May-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: 05.03.06-000232

Subject: NCR No. ZPMC-0241

Reference Description: Continuity Plate Retrofit, Doubler Plates

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:

At locations where there are consecutive doubler plates between the closed ribs, trimming the corners of the doublers is necessary for proper fit-up. On Segment 1BW, Panel points PP11.5 and PP12.5, the bolt hole edge distance to the trimmed (flame cut) edge of the doubler plates was observed to be 22mm (edge of hole to edge of plate). This does not meet the minimum edge distance requirement of 1.75D, which is 42mm.

Action Required and/or Action Taken:

Please propose a resolution for the identified non-conformance to prevent future occurrences.

Transmitted by: Stanley Ku Sr. Bridge Engineer

Attachments: ZPMC-0241

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Brian Boal, Doug Coe, Jason Tom, Doug Wright, 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: 05.03.06-000232

Subject: NCR No. ZPMC-0241

Dated: 27-May-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000236 **Rev:** 00

Contractor's Proposed Resolution:

Reference Resolution: Fitting these plates required trimming the corners, in doing so, ZPMC violated the edge distance. ZPMC will grind the Flame cut edge sufficiently and submit an RFI requesting to leave as is.

Fitting these plates required trimming the corners, in doing so, ZPMC violated the edge distance. ZPMC will grind the Flame cut edge sufficiently and submit an RFI requesting to leave as is.

Submitted by:

Attachment(s): ABF-NPR-000236R00

Caltrans' comments:

Status: REJ

Date: 09-Jun-2009

The proposed resolution is not acceptable. The Request for Information (RFI) mentioned in this proposed resolution has not been received.

Please re-submit the proposed resolution when the RFI regarding this issue has been resolved. The Department will review the Contractor's proposal to close Non-Conformance ZPMC-0241 at that time.

Submitted by: Wright, Doug

Date: 09-Jun-2009

Attachment(s):

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000232

Subject: NCR No. ZPMC-0241

Dated: 13-Jul-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000236 Rev: 01

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has responded to the NCR and has attached the necessary documents for closure. ZPMC requests closure of this NCR.

ZPMC has responded to the NCR and has attached the necessary documents for closure. ZPMC requests closure of this NCR.

Submitted by:

Attachment(s): ABF-NPR-000236R01;

Caltrans' comments:

Status: CLO

Date: 15-Jul-2009

The proposed resolution is acceptable. RFI-1783 approved these bolt hole edge distances as fit for purpose at these locations. The Department concurs that Non-Conformance ZPMC-0241 is closed.

Submitted by: Wright, Doug

Date: 15-Jul-2009

Attachment(s):



No. B-365

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2009-6-11

REGARDING: NCR-00267(ZPMC-0241)

With this letter of response, ZPMC requests closure for Caltrans NCR-00267(ZPMC-0241). We have prepared one internal NCR for the fabrication, with the response from the technology, the bolt hole edge distance should be within the tolerance of the AISC specification, in the code we can find the minimum distance should be 34mm, and subtract the radius, then we think the 20.5mm is enough and also reach the requirement.

So base on the above explanation and attached AISC's provision, ZPMC applies to close the caltrans's report NCR-00267(ZPMC-0241).

Please reference attached documentation for acceptance and closure the NCR-00267(ZPMC-0241).

ATTACHMENT:

NCR-00267(ZPMC-0241)

Zpmc internal non-conformance report

The AISC specification corresponding item

Zhao Shuangbao

2009.6.11



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-B-153(NCR-000267)
 NCR 编号:

Item: Continuity Plate Retrofit, Item Number: Drawing:
 Doubler plates
 名称描述: U 肋贴板安装 件号: NA 图号: 1BW

Location: 1BW PP11.5 & PP12.5 Date: 2009-5-20
 位置: 日期:

Description of Nonconformance:

不符合项状态描述:

At locations where there are consecutive doubler plates between the closed ribs, trimming the corners of the doublers is necessary for proper fit-up. On Segment 1BW, Panel points PP11.5 and PP12.5, the bolt hole edge distance to the trimmed (flame cut) edge of the doubler plates was observed to be 22mm (edge of hole to edge of plate). This does not meet the minimum edge distance requirement of 1.75D, which in this case is 28.5mm from the edge of the 27mm hole to the edge of plate. See attached photo.

顶板 U 肋之间外部贴板位置, 贴板需要进行恰当的安装。在 1BW 箱体, PP11.5 和 PP12.5 位置, 螺栓孔孔边距 (从孔边缘到贴板边缘的距离) 实测为 22mm。这个不符合孔边距最小为 1.75 倍孔径的要求, 按此要求的话 27mm 的孔边缘到贴板边缘距离应该为最小 28.5mm。详见附件照片。

Work By: 谢承彬 Prepared by: Li Lu 05/20/09 Reviewed by QCE: Zhaoshuangbo
 施工方: 质量工程师批准:
 Drawing Error Material Defect Fabrication Error Other 09.5.20
 图纸错误 材料缺陷 制作错误 其他原因

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

Recommendation:

建议:

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

Reason for Nonconformance:

不符合原因:

孔边缘到自由边距离不符合图纸要求。

The bolt hole edge distance to free edge wasn't according to drawing requirement

预防措施:

以后同类的贴板安装到位后打孔前必须先经 QC 和 ABF 检查。
 It shall check by QC and ABF before drilling holes after assembly the similar plate.
 确认后再进行钻孔。

Approved by/批准: 李刚

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

回用或返修的技术依据:

Reviewed /批准: Tang Yangbo Meet requirement according to AISC standard.
 符合 AISC 标准 无附件

Verification: Acceptable Unacceptable

确认: 可接受 不可接受

Verified by QCI/质检确认: _____ Reviewed by QCA/质检主任审核: _____



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NON-CONFORMANCE REPORT TRANSMITTAL

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

Date: 15-May-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: 05.03.06-000232

Subject: NCR No. ZPMC-0241

Reference Description: Continuity Plate Retrofit, Doubler Plates

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:

At locations where there are consecutive doubler plates between the closed ribs, trimming the corners of the doublers is necessary for proper fit-up. On Segment 1BW, Panel points PP11.5 and PP12.5, the bolt hole edge distance to the trimmed (flame cut) edge of the doubler plates was observed to be 22mm (edge of hole to edge of plate). This does not meet the minimum edge distance requirement of 1.75D, which is 42mm.

Action Required and/or Action Taken:

Please propose a resolution for the identified non-conformance to prevent future occurrences.

Transmitted by: Stanley Ku Sr. Bridge Engineer

Attachments: ZPMC-0241

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Brian Boal, Doug Coe, Jason Tom, Doug Wright, Ching Chao

File: 05.03.06

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

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

Location: Changxing Island, Shanghai, PRC

Report No: NCR-000267

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 24-Apr-2009

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

NCR #: ZPMC-0241

Type of problem:

Welding **Concrete** **Other**

Welding **Curing** **Procedural**

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

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

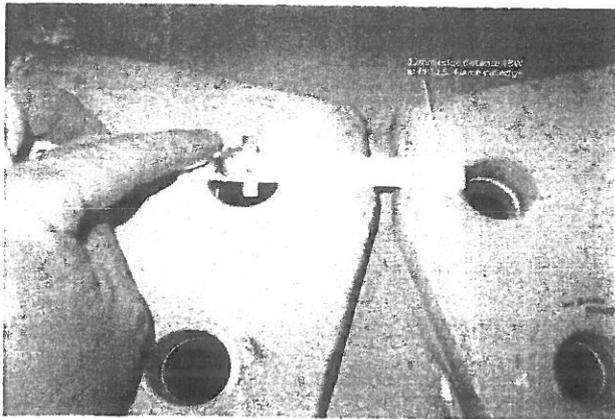
Bridge No: 34-0006

Component: OBG Segment 1BW

Reference Description: Continuity Plate Retrofit, Doubler Plates

Description of Non-Conformance:

At locations where there are consecutive doubler plates between the closed ribs, trimming the corners of the doublers is necessary for proper fit-up. On Segment 1BW, Panel points PP11.5 and PP12.5, the bolt hole edge distance to the trimmed (flame cut) edge of the doubler plates was observed to be 22mm (edge of hole to edge of plate). This does not meet the minimum edge distance requirement of 1.75D, which in this case is 28.5mm from the edge of the 27mm hole to the edge of plate.



Applicable reference:

Approved Contract Drawing sheet # 625C-Typical Girder Details # 1 (Bolt Dimension Table)

Who discovered the problem: Mark Miller

Name of individual from Contractor notified: Peter Shaw

Time and method of notification: 0800 hours, 04-23-09, Verbal

Name of Caltrans Engineer notified: Ching Chao

Time and method of notification: 1000 hours, 04-24-09, Verbal

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

QC Inspector's Name: Wang Lu

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

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 Eric Tsang, +(86) 1500.042.2372, who represents the Office of Structural Materials for your project.

Inspected By: Guest, Skyler

SMR

Reviewed By: Wahbeh, Mazen

SMR

TABLE J3.4
Minimum Edge Distance,^(a) in., from
Center of Standard Hole^(b) to Edge of
Connected Part

Bolt Diameter (in.)	At Sheared Edges	At Rolled Edges of Plates, Shapes or Bars, or Thermally Cut Edges ^(c)
1/2	7/8	3/4
5/8	1 1/8	7/8
3/4	1 1/4	1
7/8	1 1/2 ^(d)	1 1/8
1	1 3/4 ^(d)	1 1/4
1 1/8	2	1 1/2
1 1/4	2 1/4	1 5/8
Over 1 1/4	1 3/4 × d	1 1/4 × d

^(a) Lesser edge distances are permitted to be used provided provisions of Section J9.10, as appropriate, are satisfied.
^(b) For oversized or slotted holes, see Table J3.5.
^(c) All edge distances in this column are permitted to be reduced 1/4 in. when the hole is at a point where required strength does not exceed 25 percent of the maximum strength in the element.
^(d) These are permitted to be 1 1/4 in. at the ends of beam connection angles and shear end plates.

TABLE J3.4M
Minimum Edge Distance,^(a) mm, from
Center of Standard Hole^(b) to Edge of
Connected Part

Bolt Diameter (mm)	At Sheared Edges	At Rolled Edges of Plates, Shapes or Bars, or Thermally Cut Edges ^(c)
16	28	22
20	34	26
22	38 ^(d)	28
24	42 ^(d)	30
27	48	34
30	52	38
36	64	46
Over 36	1.75d	1.25d

^(a) Lesser edge distances are permitted to be used provided provisions of Section J9.10, as appropriate, are satisfied.
^(b) For oversized or slotted holes, see Table J3.5M.
^(c) All edge distances in this column are permitted to be reduced 3 mm when the hole is at a point where required strength does not exceed 25 percent of the maximum strength in the element.
^(d) These are permitted to be 32 mm at the ends of beam connection angles and shear end plates.

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: xx.25A**QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION****Location:** Changxing Island, Shanghai, PRC**Report No:** NCS-000263**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 24-Aug-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0241**Type of problem:**

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

Date the Non-Conformance Report was written: 24-Apr-2009**Description of Non-Conformance:**

At locations where there are consecutive doubler plates between the closed ribs, trimming the corners of the doublers is necessary for proper fit-up. On Segment 1BW, Panel points PP11.5 and PP12.5, the bolt hole edge distance to the trimmed (flame cut) edge of the doubler plates was observed to be 22mm (edge of hole to edge of plate). This does not meet the minimum edge distance requirement of 1.75D, which in this case is 28.5mm from the edge of the 27mm hole to the edge of plate.

Contractor's proposal to correct the problem:

Submit internal NCR.

Corrective action taken:

Bolt holes were determined to be fit for purpose by RFI 1783.

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**