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-000747
Prime Contractor: American Bridge/Fluor Enterprises, a JV **Date:** 27-May-2010
Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0710

Type of problem:

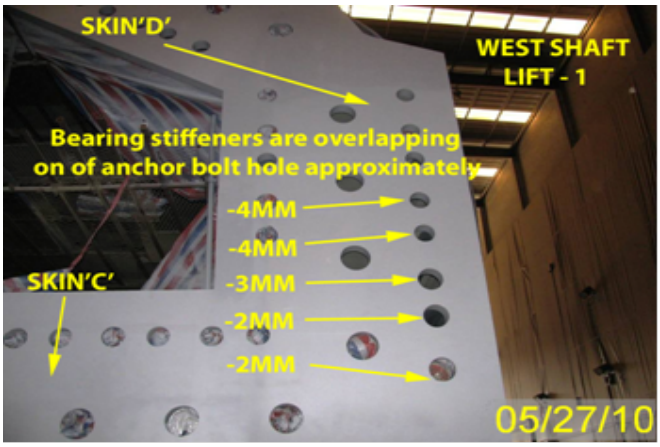
Welding	☑	**Concrete**	☐	**Other**	☐	
Welding	☐	**Curing**	☐	**Procedural**	☐	**Bridge No:** 34-0006
Joint fit-up	☑	**Coating**	☐	**Other**	☐	**Component:** Bearing stiffener to Base plate
Procedural	☐	**Procedural**	☐	**Description:**		

Reference Description: West Shaft: The Bearing Stiffeners overlap on the anchor bolt holes at External Skin D.

Description of Non-Conformance:

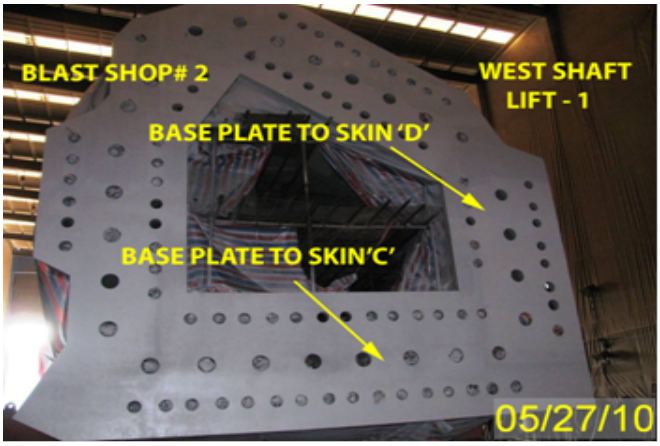
During the Quality Assurance Inspection of Anchor Bolt Hole to Bearing stiffener distance measurement at West shaft Skin D External side, this Quality Assurance Inspector discovered the following issue:

- Type 2 Bearing stiffeners are overlapping on top of anchor bolt hole.
- Type 2 Bearing stiffeners to Anchor bolt hole distances at five (5) different locations found approximately -2 mm, -2mm, -3mm, -4mm, -4mm.
- The Anchor bolt holes found inappropriate readings are consecutive from Skin 'D' side. (For readings see above)
- This bearing stiffener is found in Skin D of External West Shaft Lift 1.
- The location is Skin D, near CD Corner.



QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Applicable reference:

RFI 2024 – "To facilitate fabrication and to avoid rework, the distorted (interior) bearing stiffener PL #2 's in Lift 1 East Shaft are acceptable as fit-for-purpose, provided that all of the following conditions are met:"

"1. Bearing stiffener PL #2 shall not conflict with the anchor bolt holes in the base plate..."

Who discovered the problem: Naddi Sandeep Kumar

Name of individual from Contractor notified: Mr Bi Dewei

Time and method of notification: 1430/ verbal

Name of Caltrans Engineer notified: Ken Lee

Time and method of notification: 0930/ email

QC Inspector's Name: Mr. Qie Wen

Was QC Inspector aware of the problem: ☐ **Yes** ☑ **No**

Contractor's proposal to correct the problem:

Proposal is pending form the contractor

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:	Ng,Michael	QA Inspector
Reviewed By:	Wahbeh,Mazen	SMR

DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge
333 Burma Road
Oakland CA 94607
Tel: 510-808-4618 Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

To:	AMERICAN BRIDGE/FLUOR, A JV 375 BURMA ROAD OAKLAND CA 95607	**Date:**	31-May-2010
		Contract No:	04-0120F4 04-SF-80-13.2 / 13.9
Dear:	Mr. Charles Kanapicki	**Job Name:**	SAS Superstructure
Attention:	Mr. Thomas Nilsson Project/Fabrication Manager	**Document No:**	05.03.06-000708
Subject:	NCR No. ZPMC-0710		

Reference Description: Bearing Stiffeners overlap on the anchor bolt holes/ Tower / West Shaft External Skin D.

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: Tower **Lift:** 01

Remarks:

During the Quality Assurance Inspection of Anchor Bolt Hole to Bearing stiffener distance measurement at West shaft Skin D External side, this Quality Assurance Inspector discovered the following issue:

- Type 2 Bearing stiffeners are overlapping on top of anchor bolt hole.
- Type 2 Bearing stiffeners to Anchor bolt hole distances at five (5) different locations found approximately -2mm, -2mm, -3mm, -4mm, -4mm.
- The Anchor bolt holes found inappropriate readings are consecutive from Skin ’D’ side. (For readings see above)
- This bearing stiffener is found in Skin D of External West Shaft Lift 1.
- The location is Skin D, near CD Corner.

RFI 2024 – “To facilitate fabrication and to avoid rework, the distorted (interior) bearing stiffener PL #2 ’s in Lift 1 East Shaft are acceptable as fit-for-purpose, provided that all of the following conditions are met:”

“1. Bearing stiffener PL #2 shall not conflict with the anchor bolt holes in the base plate...”

Action Required and/or Action Taken:

Propose a resolution for this non-conformance that addresses the failure of Quality Control to identify the deficiencies at this location. Provide documentation of the steps/actions taken by the Quality Control Manager to prevent future occurrences.

In addition to the Quality Control non-conformance, address the material/workmanship for the identified non-conformance including documentation that the deficiencies has been brought into compliance with the contract requirements. Additionally address the probable causes for the indications and the actions that will be taken to limit future occurrences.

The response for the resolution of this issue is requested within 7 days.

NCT

(Continued Page 2 of 2)

Transmitted by: Ken Lee Transportation Engineer

Attachments: ZPMC-0710

cc: Rick Morrow, Gary Pursell, Mark Woods

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: 05.03.06-000708

Subject: NCR No. ZPMC-0710

Dated: **18-Jun-2010**

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

Job Name: SAS Superstructure

Document No.: **ABF-NPR-000716 Rev: 00**

Contractor's Proposed Resolution:

Reference Resolution: Attached is the contract drawing showing that the holes are oversized and the conflicts of 4mm, 3mm, and 2mm is not an issue because of the large oversized holes.

Despite the conflicts that were noted in the NCR, the bolt holes were designed to be oversized to account for any potential issues during installation. Attached is the contract drawing showing that the holes are oversized and the conflicts of 4mm, 3mm, and 2mm is not an issue because of the large oversized holes. Based on this ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000716R00;

Caltrans' comments:

Status: AAP

Date: 20-Jun-2010

Although the bearing stiffeners were not built to contract tolerances, there is enough flexibility in the design to account for the potential conflict during installation of the anchor rods. This NCR is conderisered accepted with action pending and will be closed once final installation of the anchor rods has been achieved in Oakland without conflict.

Submitted by: Rizzardo, Gina **Date:** 20-Jun-2010

Attachment(s):

No. T-145

LETTER OF RESPONSE

TO: American Bridge/Flour JV

DATE: 2010-6-18

REGARDING: NCR-000747(ZPMC-0710)

ZPMC received NCR-000747(ZPMC-0710), it mentioned that CT inspector discovered 5 bearing stiffeners conflicted with anchor bolt holes at west shaft skin D external side.

ZPMC acknowledge this issue, and it was submitted to ZPMC technician and ABF for evaluation as soon as we found at site. The further information about anchor bolt Dia and oversize hole Dia was shown on the drawing, we could find the hole Dia is 70mm bigger than the anchor bolt Dia. This means there is flexible to the installation in America in despite of the conflict by 4mm, 4mm, 3mm, 2mm and 2mm. The space is still enough to the anchor bolt.

So ZPMC hope CT could take a review and close this NCR.

ATTACHMENT:

NCR-000747(ZPMC-0710)

Drawing: Tower Anchorage Details No.6

2010-6-18

DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge
333 Burma Road
Oakland CA 94607
Tel: 510-808-4618 Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

To:	AMERICAN BRIDGE/FLUOR, A JV 375 BURMA ROAD OAKLAND CA 95607	Date:	31-May-2010
		Contract No:	04-0120F4 04-SF-80-13.2 / 13.9
Dear:	Mr. Charles Kanapicki	Job Name:	SAS Superstructure
Attention:	Mr. Thomas Nilsson Project/Fabrication Manager	Document No:	05.03.06-000708
Subject:	NCR No. ZPMC-0710		

Reference Description: Bearing Stiffeners overlap on the anchor bolt holes/ Tower / West Shaft External Skin D.

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: Tower **Lift:** 01

Remarks:

During the Quality Assurance Inspection of Anchor Bolt Hole to Bearing stiffener distance measurement at West shaft Skin D External side, this Quality Assurance Inspector discovered the following issue:

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- Type 2 Bearing stiffeners to Anchor bolt hole distances at five (5) different locations found approximately -2mm, -2mm, -3mm, -4mm, -4mm.
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- The location is Skin D, near CD Corner.

RFI 2024 – "To facilitate fabrication and to avoid rework, the distorted (interior) bearing stiffener PL #2 's in Lift 1 East Shaft are acceptable as fit-for-purpose, provided that all of the following conditions are met:"

"1. Bearing stiffener PL #2 shall not conflict with the anchor bolt holes in the base plate..."

Action Required and/or Action Taken:

Propose a resolution for this non-conformance that addresses the failure of Quality Control to identify the deficiencies at this location. Provide documentation of the steps/actions taken by the Quality Control Manager to prevent future occurrences.

In addition to the Quality Control non-conformance, address the material/workmanship for the identified non-conformance including documentation that the deficiencies has been brought into compliance with the contract requirements. Additionally address the probable causes for the indications and the actions that will be taken to limit future occurrences.

The response for the resolution of this issue is requested within 7 days.

NCT

(Continued Page 2 of 2)

Transmitted by: Ken Lee Transportation Engineer
Attachments: ZPMC-0710

cc: Rick Morrow, Gary Pursell, Mark Woods
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
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.25B

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

Location: Changxing Island, Shanghai, P.R. China
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

Report No: NCR-000747
Date: 27-May-2010
NCR #: ZPMC-0710

Type of problem:

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

Bridge No: 34-0006
Component: Bearing stiffener to Base plate

Reference Description: West Shaft: The Bearing Stiffeners overlap on the anchor bolt holes at External Skin D.

Description of Non-Conformance:

During the Quality Assurance Inspection of Anchor Bolt Hole to Bearing stiffener distance measurement at West shaft Skin D External side, this Quality Assurance Inspector discovered the following issue:

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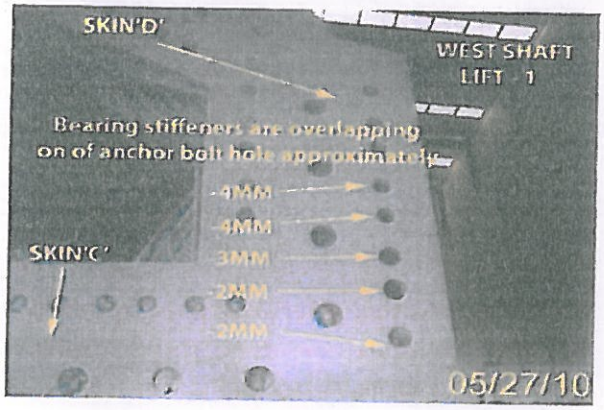
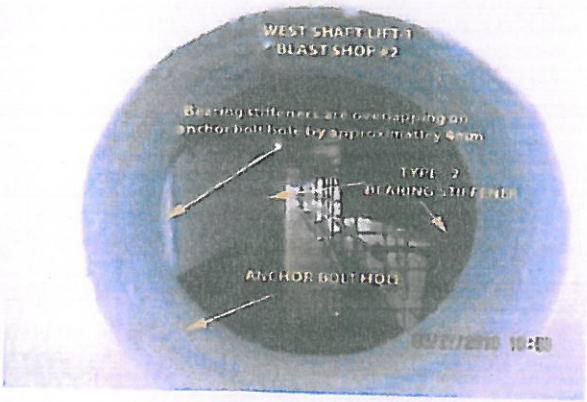
- The location is Skin D, near CD Corner.





QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

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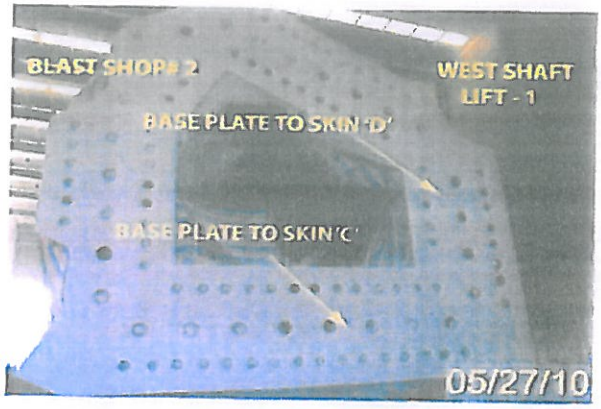

Applicable reference:
RFI 2024 – "To facilitate fabrication and to avoid rework, the distorted (interior) bearing stiffener PL #2 's in Lift 1 East Shaft are acceptable as fit-for-purpose, provided that all of the following conditions are met:"
"1. Bearing stiffener PL #2 shall not conflict with the anchor bolt holes in the base plate..."

Who discovered the problem: Naddi Sandeep Kumar
Name of individual from Contractor notified: Mr Bi Dewei
Time and method of notification: 1430/ verbal
Name of Caltrans Engineer notified: Ken Lee
Time and method of notification: 0930/ email
QC Inspector's Name: Mr. Qie Wen
Was QC Inspector aware of the problem: ☐ Yes ☑ No
Contractor's proposal to correct the problem:
Proposal is pending form the contractor
Comments:
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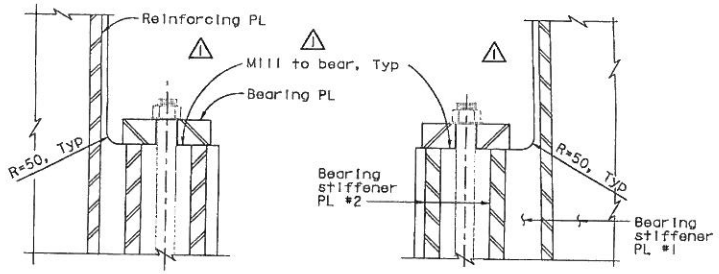
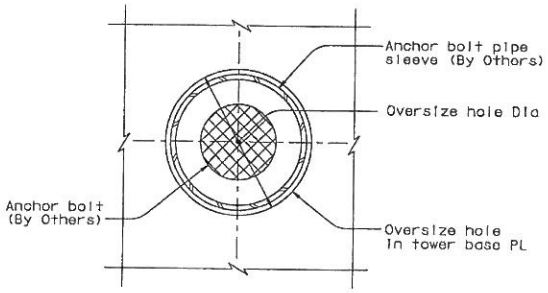
Inspected By:	Ng,Michael	QA Inspector
Reviewed By:	Wahbeh,Mazen	SMR



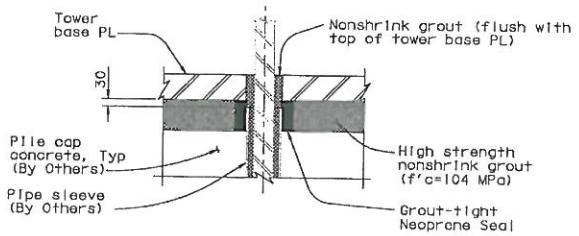
DETAIL B
1:10

DETAIL C
1:10



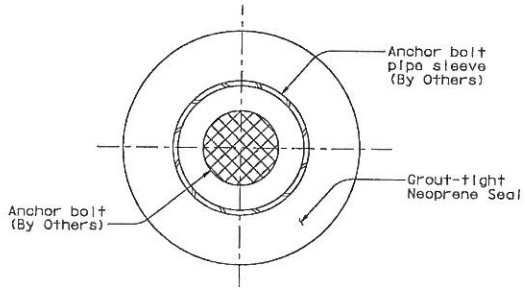
AT TOWER BASE PLATE

ANCHOR BOLT HOLE PLAN VIEW
1:2.5



AT TOWER BASE PLATE

ANCHOR BOLT ELEVATION VIEW
1:10



GROUT-TIGHT NEOPRENE SEAL PLAN VIEW (see Note 4)
NTS

Anchor Bolt Dia	75	100
Oversize hole Dia	145	170

LEGEND:

- Point of Tangency

NOTES:

1. Information provided in Table 1 and Table 2 is for information only. The Contractor shall verify these values. A smaller radius may be used at locations where the gap is zero, if necessary.
2. Anchor bolt pipe sleeve shall be filled with nonshrink grout. For additional prestressing details, see "Prestressing Notes" sheet.
3. The Contractor shall develop a scheme for grouting the anchor bolts and submit for review and approval by the Engineer.
4. Grout-tight neoprene seal shown is schematic and is for information only. The seal shall prevent any high strength nonshrink grout from seeping inside the anchor bolt pipe sleeves during grouting of the tower base plate. This is necessary for proper stressing of the anchor bolts. Once final stressing of the anchor bolts is complete, the pipe sleeves shall be grouted (see Note 2). The Contractor shall submit seal details consistent with his means and methods to the Engineer for review and approval.

MARK	DATE	DESCRIPTIONS	BY	CH'D
1	06/23/06	DELETE GAP TABLES	MN	NV

REVISIONS

CONTRACT CHANGE ORDER NO. ____
SHEET ____ OF ____

DIST.	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SF	80	13.2/13.9	598R1	1204

REGISTERED ENGINEER - CIVIL
12-6-04
PLANS APPROVAL DATE

Marwan N. Nader, No. C 054426, Exp. 12/31/07, CIVIL, REGISTERED PROFESSIONAL ENGINEER, STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

T.Y. LIN / MOFFATT & NICHOL
825 BATTERY STREET
SAN FRANCISCO, CA 94111

To get to the web site, go to: http://www.dot.ca.gov

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

R. Valizadeh/V. Toan/Y. L./N.L./F.C.
DESIGN OVERSIGHT
SIGN OFF DATE 06/23/06
Rev. Date: 5-16-88

	BY	CHECKED
DESIGN	M. Nader	S. Camo
DETAILS	L. Rus	S. Camo
QUANTITIES	L. Rus	Y. Zhang

PREPARED FOR THE STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

R. Manzanarez
PROJECT ENGINEER

BRIDGE NO. 34-0006L/R
KILOMETER POST 13.2/13.9

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 04
EA 0120F1

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY)

SAN FRANCISCO OAKLAND BAY BRIDGE
EAST SPAN SEISMIC SAFETY PROJECT
SELF-ANCHORED SUSPENSION BRIDGE
(SUPERSTRUCTURE & TOWER)

TOWER ANCHORAGE DETAILS NO. 6

SHEET 181R1 OF

FILE => p:\bb\04-0120f1\sas ready august 2005\eco#21\aatwa06.dgn

USERNAME => vigratov
DATE PLOTTED => 21 JUN 2006
TIME PLOTTED => 17:07:05
100 % PS&E

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: 05.03.06-000708

Subject: NCR No. ZPMC-0710

Dated: **26-Aug-2010**

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

Job Name: SAS Superstructure

Document No.: **ABF-NPR-000716 Rev: 01**

Contractor's Proposed Resolution:

Reference Resolution: All four Tower shafts in Lift 1 have been successfully installed in Oakland. Based on this ZPMC requests closure of this NCR.

All four Tower shafts in Lift 1 have been successfully installed in Oakland. Based on this ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000716R01

Caltrans' comments:

Status: CLO

Date: 26-Aug-2010

This proposed resolution is acceptable and the Department concurs that Non-Conformance ZPMC-0716R01 is closed.

Submitted by: Rizzardo, Gina

Date: 26-Aug-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-000849
Prime Contractor: American Bridge/Fluor Enterprises, a JV **Date:** 26-Aug-2010
Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0710

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: 27-May-2010

Description of Non-Conformance:
During the Quality Assurance Inspection of Anchor Bolt Hole to Bearing stiffener distance measurement at West shaft Skin D External side, this Quality Assurance Inspector discovered the following issue:

- Type 2 Bearing stiffeners are overlapping on top of anchor bolt hole.
- Type 2 Bearing stiffeners to Anchor bolt hole distances at five (5) different locations found approximately -2 mm, -2mm, -3mm, -4mm, -4mm.
- The Anchor bolt holes found inappropriate readings are consecutive from Skin 'D' side. (For readings see above)
- This bearing stiffener is found in Skin D of External West Shaft Lift 1.
- The location is Skin D, near CD Corner.

Contractor's proposal to correct the problem:
Contractor to assess the impact of the mis-alignments of the anchor bolts on the erection, proposes to leave as-built if no interference to site erection. The issue will be re-addressed in Oakland and the NCR will only be closed subject to the successful erection, corrective action to be taken by ABF otherwise.

Corrective action taken:
Construction/Design confirmed the mis-alignment appear to have no impact on the erection as designed. No retrofit works was neccessary. Erection of the base plate was completed successfully in Oakland.

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:
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QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

(Continued Page 2 of 2)

Inspected By:	Ng,Michael	Quality Assurance Inspector
Reviewed By:	Devey,Jim	QA Reviewer