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, China **Report No:** NCR-000910
Prime Contractor: American Bridge/Fluor Enterprises, a JV **Date:** 24-Nov-2010
Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0872

Type of problem:

Welding	☑	**Concrete**	☐	**Other**	☐	
Welding	☐	**Curing**	☐	**Procedural**	☐	**Bridge No:** 34-0006
Joint fit-up	☐	**Coating**	☐	**Other**	☐	**Component:** OBG Segment 13AE welds
Procedural	☑	**Procedural**	☐	**Description:**		

Reference Description: New Welding Procedure Not Followed (Rager/McQuaid)

Description of Non-Conformance:

During Caltrans QA in process observations of the fabrication of Orthotropic Box Girder (OBG)13AE welds SEG3007Y-334, SEG3007J-047, SEG3007L-045, SEG3007L-046 and SEG3007C-175 this QA discovered the following issues: ZPMC welding personnel did not appear to be following the NEW WELD PROCEDURE (Rager/McQuaid)

The following requirements were not followed:
4. Welding (4C)
5. Postweld Thermal Treatment (5A, 5C, 5D)

NOTE: The above references are relative to sections 4 ~ 5 of the NEW WELD PROCEDURE (Rager/McQuaid)and the corresponding paragraph letters.

Issue number 1
The weld was identified as SEG3007Y-334
The welding process used was FCAW
The area was preheated using electric strip heaters
The weld is a complete joint penetration weld that joins Floor Beam FB3111A to Bottom Plate SA3012A FB3111A and SA3012A are designated on the approved shop drawings as Seismic Performance Critical Members.

Issue number 2
The weld was identified as SEG3007J-047
The welding process used was FCAW
The area was preheated using electric strip heaters
The weld is a complete joint penetration weld that joins Longitudinal Diaphragm SA3019A to Side Plate

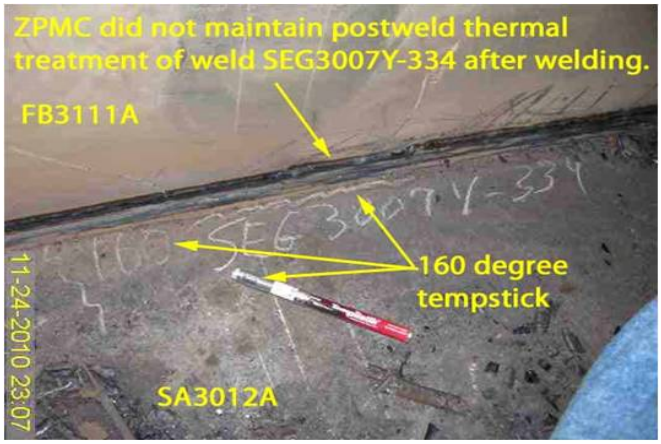
SP3069A
SA3019A and SP3069A are designated on the approved shop drawings as Seismic Performance Critical Members.

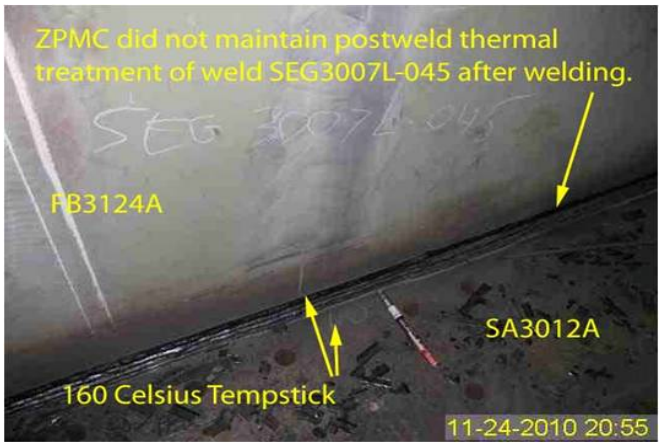
Issue number 3
The weld was identified as SEG3007L-045
The welding process used was FCAW
The area was preheated using electric strip heaters
The weld is a complete joint penetration weld that joins Floor Beam FB3124A to Bottom Plate SA3012A
FB3124A and SA3012A are designated on the approved shop drawings as Seismic Performance Critical Members.

Issue number 4
The weld was identified as SEG3007L-046
The welding process used was FCAW
The area was preheated using electric strip heaters
The weld is a complete joint penetration weld that joins Floor Beam FB3124A to Side Plate SP3068A
FB3124A and SP3068A are designated on the approved shop drawings as Seismic Performance Critical Members.

Issue number 5
The weld was identified as SEG3007C-175
The welding process used was FCAW
The area was preheated using electric strip heaters
The weld is a complete joint penetration weld that joins Longitudinal Diaphragm LD3026A to Floor Beam FB3120A
LD3026A and FB3120A are designated on the approved shop drawings as Seismic Performance Critical Members.

See attached photographs for additional detail.





Applicable reference:

NEW WELD PROCEDURE (Rager/McQuaid)

4) Welding

C. The CWI shall verify that the welder understands that all starts and stops are to be ground before an arc is struck on them to remove weld craters and provide a means to tie the next weld pass into the end of the weld.

5) Postweld Thermal Treatment.

A. After welding is completed but before the temperature falls below that of the preheat temperature, post heat

shall be applied to maintain the temperature in the area of the weld at 165 C - 225°C.
C. For material thickness over 25mm, post heating times will be increased by 1/2 hour for each increment of 12 mm or fraction thereof.
D. After the post weld heating time has been reached the repair shall be cooled by removing the heating source and leaving the blankets in place

Who discovered the problem: Paul Dawson
Name of individual from Contractor notified: Bao Qian
Time and method of notification: 22:30hrs, Verbal, 11-24-2010
Name of Caltrans Engineer notified: Laraine Woo
Time and method of notification: 13:00hrs, Email, 11-25-2010
QC Inspector's Name: Zhong Yong Gang
Was QC Inspector aware of the problem: ☐ **Yes** ☑ **No**
Contractor's proposal to correct the problem:
NA
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:	Devey,Jim	SMR
Reviewed By:	Wahbeh,Mazen	SMR

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

NON-CONFORMANCE REPORT TRANSMITTAL

To:	AMERICAN BRIDGE/FLUOR, A JV 375 BURMA ROAD OAKLAND CA 95607	**Date:**	25-Nov-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:**	05.03.06-000867
Subject:	NCR No. ZPMC-0872		

Reference Description: New Welding Procedure Not Followed (Rager/McQuaid)

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:** 13

Remarks:

During Caltrans QA in process observations of the fabrication of Orthotropic Box Girder (OBG)13AE welds SEG3007Y-334, SEG3007J-047, SEG3007L-045, SEG3007L-046 and SEG3007C-175, this QA discovered the following issues:
ZPMC welding personnel did not appear to be following the NEW WELD PROCEDURE (Rager/McQuaid)
The following requirements were not followed:

4. Welding (4C)
5. Postweld Thermal Treatment (5A, 5C, 5D)

NOTE: The above references are relative to sections 4 ~ 5 of the NEW WELD PROCEDURE (Rager/McQuaid)and the corresponding paragraph letters.

Issue number 1
The weld was identified as SEG3007Y-334
The welding process used was FCAW
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FB3111A and SA3012A are designated on the approved shop drawings as Seismic Performance Critical Members.

Issue number 2
The weld was identified as SEG3007J-047
The welding process used was FCAW
The area was preheated using electric strip heaters
The weld is a complete joint penetration weld that joins Longitudinal Diaphragm SA3019A to Side Plate SP3069A
SA3019A and SP3069A are designated on the approved shop drawings as Seismic Performance Critical Members.

Issue number 3
The weld was identified as SEG3007L-045
The welding process used was FCAW
The area was preheated using electric strip heaters
The weld is a complete joint penetration weld that joins Floor Beam FB3124A to Bottom Plate SA3012A
FB3124A and SA3012A are designated on the approved shop drawings as Seismic Performance Critical Members.

Issue number 4
The weld was identified as SEG3007L-046
The welding process used was FCAW
The area was preheated using electric strip heaters
The weld is a complete joint penetration weld that joins Floor Beam FB3124A to Side Plate SP3068A
FB3124A and SP3068A are designated on the approved shop drawings as Seismic Performance Critical Members.

Issue number 5
The weld was identified as SEG3007C-175
The welding process used was FCAW
The area was preheated using electric strip heaters
The weld is a complete joint penetration weld that joins Longitudinal Diaphragm LD3026A to Floor Beam FB3120A
LD3026A and FB3120A are designated on the approved shop drawings as Seismic Performance Critical Members.

Action Required and/or Action Taken:

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

Transmitted by: Laraine Woo Transportation Engineer
Attachments: ZPMC-0872

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, Contract Files, Ching Chao, Bill Casey
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: Siegenthaler, Peter
Resident Engineer

Ref: 05.03.06-000867

Subject: NCR No. ZPMC-0872

Dated: **01-Dec-2010**

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

Job Name: SAS Superstructure

Document No.: **ABF-NPR-000865 Rev: 00**

Contractor's Proposed Resolution:

Reference Resolution: As this NCR was written without a contractual basis it should be withdrawn.

The "NEW WELD PROCEDURE (Rager/McQuaid)" quoted as the basis for this NCR is not a contract document only a recommendation from the QA/QC Committee. If the Department wants to incorporate the QA/QC committee's recommendations as a contract requirement a contract change order should be issued. As this NCR was written without a contractual basis it should be withdrawn.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000865R00

Caltrans' comments:

Status: REJ

Date: 03-Dec-2010

CT acknowledges contractor's response. However, successful NDT will close this NCR.

Submitted by: Chao, Ching

Date: 03-Dec-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: Siegenthaler, Peter
Resident Engineer

Ref: 05.03.06-000867

Subject: NCR No. ZPMC-0872

Dated: **08-Dec-2010**

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

Job Name: SAS Superstructure

Document No.: **ABF-NPR-000865 Rev: 01**

Contractor's Proposed Resolution:

Reference Resolution: We understand your response and we will not submit the normal NCR closure package with NDT reports for this and expect that CT will close these as the green tags for these components are issued.

We understand your response and we will not submit the normal NCR closure package with NDT reports for this and expect that CT will close these as the green tags for these components are issued.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000865R01

Caltrans' comments:

Status: REJ

Date: 09-Dec-2010

Normal NCR closure package with NDT reports shall be submitted with the NPR to close out the NCR.

Submitted by: Woo, Laraine

Date: 09-Dec-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: Siegenthaler, Peter
Resident Engineer

Ref: 05.03.06-000867

Subject: NCR No. ZPMC-0872

Dated: **28-Feb-2011**

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

Job Name: SAS Superstructure

Document No.: **ABF-NPR-000865 Rev: 02**

Contractor's Proposed Resolution:

Reference Resolution: ZPMC is providing NDT results of the welds in question to show they are acceptable.

ZPMC is providing NDT results of the welds in question to show they are acceptable. Based on this ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000865R02;

Caltrans' comments:

Status: AAP

Date: 28-Feb-2011

This NPR for NCR ZPMC-0872 is Accepted with Action Pending. The NDT Report for Weld ID SEG3007Y-334 still needs to be submitted.

Submitted by: Eagen, Sean

Date: 28-Feb-2011

Attachment(s):

REPORT OF ULTRASONIC EXAMINATION
UT探伤报告

REPORT NO. 报告编号	DATE	PAGE	Revision No:
B787-UT-18379R1-2	2011.01.25	1 OF 3	0

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

ITEMS NAME: 部件名称	DRAWING NO.: 图号	CALTRANS CONTRACT NO.: 加州工程编号
13AE PLATE PANEL SPLICE	SEG3007	04-0120F4

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	T JOINT	Dec. 28ST ,2011

EQUIPMENT 设备	MANUFACTURER 制造商	MODEL NO. 样式编号	SERIAL NO. 序列编号
UT SCOPE	GE	USM35	10526a

CALIBRATION BLOCK 试块	COUPLANT 耦合剂	MATERIAL/THICKNESS 材料厚度
AWS IIW BLOCK TYPE II	C.M.C	A709M-345T2/F2 100/35/25mm

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
AMERICA	70°	2.25MHz	0.75×0.625 in				
				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	Sound Path 声程	Depth from Surface 距表面深度	From'X 距X	From'Y 距Y		
SEG3007G-048	1R1	69.6				39								ACC.	100%
	2R1	69.6				39								ACC.	100%
	3R1	69.6				39								ACC.	100%
	4R1	69.6				39								ACC.	100%
	5R1	69.6				39								ACC.	100%
	6R1	69.6				39								ACC.	100%
	7R1	69.6				39								ACC.	100%
√SEG3007J-047	1R1	69.6				39								ACC.	100%

EXAMINED BY主探	REVIEWED BY 审核
Tang Xing Shan	Li Li Ming
LEVEL - II SIGN / DATE 1/25/11	LEVEL - II SIGN / DATE 1/25/11

质量经理 / QCM	用户CUSTOMER
签字 SIGN / 日期 DATE	签字 SIGN / 日期 DATE

(FORM# ZPQC-UT01)

REPORT OF ULTRASONIC EXAMINATION
UT探伤报告

REPORT NO. 报告编号 B787-UT-18379R1-2 DATE 2011.01.25 PAGE 2 OF 3 Revision No: 0

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	Sound Path 声程	Depth from Surface 距表面深度	From'X 距X	From'Y 距Y		
	2R1	69.6				39								ACC.	100%
	3R1	69.6				39								ACC.	100%
	4R1	69.6				39								ACC.	100%
SEG3007G-049	1R1	69.6				39								ACC.	100%
	2R1	69.6				39								ACC.	100%
	3R1	69.6				39								ACC.	100%
	4R1	69.6				39								ACC.	100%
	5R1	69.6				39								ACC.	100%
	6R1	69.6				39								ACC.	100%
	7R1	69.6				39								ACC.	100%
	8R1	69.6				39								ACC.	100%
✓SEG3007L-045	1R1	69.6				39								ACC.	100%
✓SEG3007L-046	1R1	69.6				39								ACC.	100%
	2R1	69.6				39								ACC.	100%
	3R1	69.6				39								ACC.	100%
	4R1	69.6				39								ACC.	100%
	5R1	69.6				39								ACC.	100%
	6R1	69.6				39								ACC.	100%
	7R1	69.6				39								ACC.	100%
	8R1	69.6				39								ACC.	100%
	9R1	69.6				39								ACC.	100%
	10R1	69.6				39								ACC.	100%
	11R1	69.6				39								ACC.	100%

EXAMINED BY主探 Tang Xingshan
LEVEL - II SIGN / DATE 1/25/11

REVIEWED BY 审核 Li LiMing
LEVEL - II SIGN / DATE 1/25/11

质量经理 / QCM
签字 SIGN / 日期 DATE

用户CUSTOMER
签字 SIGN / 日期 DATE

(FORM# ZPQC-UT01)

REPORT OF ULTRASONIC EXAMINATION
UT探伤报告

REPORT NO. 报告编号 B787-UT-18379R1-2 DATE 2011.01.25 PAGE 3 OF 3 Revision No: 0

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	Sound Path 声程	Depth from Surface 距表面深度	From'X 距X	From'Y 距Y		
	12R1	69.6				39								ACC.	100%
	13R1	69.6				39								ACC.	100%
	14R1	69.6				39								ACC.	100%
	15R1	69.6				39								ACC.	100%
AFTER B-WR18552~18554 18556 18557															
BLANK															

EXAMINED BY主探 Tang Xingshan
LEVEL - II SIGN / DATE 1/25/11

REVIEWED BY 审核 Li Liming
LEVEL - II SIGN / DATE 1/25/11

质量经理 / QCM
签字 SIGN / 日期 DATE

用户CUSTOMER
签字 SIGN / 日期 DATE

(FORM# ZPQC-UT01)

REPORT OF ULTRASONIC EXAMINATION
UT探伤报告

REPORT NO. 报告编号	B787-UT-18355R1	DATE	2010.12.27	PAGE	1 OF 3	Revision No: 0

PROJECT NO. :工程编号 ZP06-787		CONTRACTOR : CALTRANS
ITEMS NAME: 13AE 部件名称	DRAWING NO.: SEG3007 图号	CALTRANS CONTRACT NO.: 04-0120F4 加州工程编号 ZP06-787

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
FCAW	T-JOINT	Dec. 28ST ,2010

EQUIPMENT 设备	MANUFACTURER 制造商	MODEL NO. 样式编号	SERIAL NO. 序列编号
UT SCOPE	AMERICA	EPOCH 4B	071565511
CALIBRATION BLOCK 试块	COUPLANT 耦合剂	MATERIAL/THICKNESS 材料厚度	
AWS IIW BLOCK TYPE II	C.M.C	A709M-345T2/F2	18/20/25/35mm

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
AMERICA	70°	2.25MHz	0.75×0.625in				
				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	Sound Path 声程	Depth from Surface 距表面深度	From'X 距X	From'Y 距Y		
SEG3007L-014	1R1	70				38								ACC.	100%
	2R1	70				38								ACC.	100%
	3R1	70				38								ACC.	100%
	4R1	70				38								ACC.	100%
	5R1	70				38								ACC.	100%
	6R1	70				38								ACC.	100%
SEG3007L-016	1R1	70				38								ACC.	100%

EXAMINED BY主探 Tang Xing Shan
LEVEL - II SIGN / DATE 12/27/10

REVIEWED BY 审核 Li Li Ming
LEVEL - II SIGN / DATE 12/27/10

质量经理 / QCM
签字 SIGN / 日期 DATE

用户CUSTOMER
签字 SIGN / 日期 DATE

(FORM# ZPQC-UT01)

REPORT OF ULTRASONIC EXAMINATION
UT探伤报告

REPORT NO. 报告编号 B787-UT-18355R1 DATE 2010.12.27 PAGE 2 OF 3 Revision No: 0

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	Sound Path 声程	Depth from Surface 距表面深度	From'X 距X	From'Y 距Y		
	2R1	70				38								ACC.	100%
	3R1	70				38								ACC.	100%
	4R1	70				38								ACC.	100%
SEG3007J-034	1R1	70				38								ACC.	100%
	2R1	70				38								ACC.	100%
	3R1	70				38								ACC.	100%
	4R1	70				38								ACC.	100%
	5R1	70				38								ACC.	100%
SEG3007J-036	1R1	70				38								ACC.	100%
	2R1	70				38								ACC.	100%
	3R1	70				38								ACC.	100%
	4R1	70				38								ACC.	100%
	5R1	70				38								ACC.	100%
SEG3007G-018	1R1	70				38								ACC.	100%
	2R1	70				38								ACC.	100%
	3R1	70				38								ACC.	100%
SEG3007G-020	1R1	70				38								ACC.	100%
	2R1	70				38								ACC.	100%
	3R1	70				38								ACC.	100%
√SEG3007C-175	1R1	70				38								ACC.	100%

EXAMINED BY主探 Tang Xing Shan
LEVEL - II SIGN / DATE 12/27/10

REVIEWED BY 审核 Li Ming
LEVEL - II SIGN / DATE 12/27/10

质量经理 / QCM Liu Jianhua
签字 SIGN / 日期 DATE

用户CUSTOMER
签字 SIGN / 日期 DATE

(FORM# ZPQC-UT01)

REPORT OF ULTRASONIC EXAMINATION
UT探伤报告

REPORT NO. 报告编号 B787-UT-18355R1 DATE 2010.12.27 PAGE 3 OF 3 Revision No: 0

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	Sound Path 声程	Depth from Surface 距表面深度	From'X 距X	From'Y 距Y		
	2R1	70				38								ACC.	100%
	3R1	70				38								ACC.	100%
	4R1	70				38								ACC.	100%
	5R1	70				38								ACC.	100%
	6R1	70				38								ACC.	100%
AFTER B-WR18395~18401															

EXAMINED BY主探 Tang Ying Shan
LEVEL - II SIGN / DATE 12/27/10

REVIEWED BY 审核 Li Li Ming
LEVEL - II SIGN / DATE 12/27/10

质量经理 / QCM
签字 SIGN / 日期 DATE

用户CUSTOMER
签字 SIGN / 日期 DATE

(FORM# ZPQC-UT01)

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: Siegenthaler, Peter
Resident Engineer

Ref: 05.03.06-000867

Subject: NCR No. ZPMC-0872

Dated: **09-Mar-2011**

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

Job Name: SAS Superstructure

Document No.: **ABF-NPR-000865 Rev: 03**

Contractor's Proposed Resolution:

Reference Resolution: The weld identified as SEG3007Y-0334 was welded in the same manner as the other welds noted in this NCR acceptable NDT.

The weld identified as SEG3007Y-0334 was welded in the same manner as the other welds noted in this NCR acceptable NDT of the welds has been provided showing that in this case where the post weld heat treatment was not performed did not adversely affect the weld. Based on this and ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): re-flash;

Caltrans' comments:

Status: CLO

Date: 09-Mar-2011

This proposed resolution is acceptable. The documentation received is sufficient and the Department concurs that Non-Conformance ZPMC-0872 is closed.

Submitted by: Eagen, Sean

Date: 09-Mar-2011

Attachment(s):

REPORT OF ULTRASONIC EXAMINATION
UT探伤报告

REPORT NO. 报告编号	DATE	PAGE	Revision No:
B787-UT-18379R1-2	2011.01.25	1 OF 3	0

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

ITEMS NAME: 部件名称	DRAWING NO.: 图号	CALTRANS CONTRACT NO.: 加州工程编号
13AE PLATE PANEL SPLICE	SEG3007	04-0120F4

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	T JOINT	Dec. 28ST ,2011

EQUIPMENT 设备	MANUFACTURER 制造商	MODEL NO. 样式编号	SERIAL NO. 序列编号
UT SCOPE	GE	USM35	10526a

CALIBRATION BLOCK 试块	COUPLANT 耦合剂	MATERIAL/THICKNESS 材料厚度
AWS IIW BLOCK TYPE II	C.M.C	A709M-345T2/F2 100/35/25mm

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
AMERICA	70°	2.25MHz	0.75×0.625 in				
				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	Sound Path 声程	Depth from Surface 距表面深度	From'X 距X	From'Y 距Y		
SEG3007G-048	1R1	69.6				39								ACC.	100%
	2R1	69.6				39								ACC.	100%
	3R1	69.6				39								ACC.	100%
	4R1	69.6				39								ACC.	100%
	5R1	69.6				39								ACC.	100%
	6R1	69.6				39								ACC.	100%
	7R1	69.6				39								ACC.	100%
√SEG3007J-047	1R1	69.6				39								ACC.	100%

EXAMINED BY主探	REVIEWED BY 审核
Tang Xing Shan	Li Li Ming
LEVEL - II SIGN / DATE 1/25/11	LEVEL - II SIGN / DATE 1/25/11

质量经理 / QCM	用户CUSTOMER
签字 SIGN / 日期 DATE	签字 SIGN / 日期 DATE

(FORM# ZPQC-UT01)

REPORT OF ULTRASONIC EXAMINATION
UT探伤报告

REPORT NO. 报告编号 B787-UT-18379R1-2 DATE 2011.01.25 PAGE 2 OF 3 Revision No: 0

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	Sound Path 声程	Depth from Surface 距表面深度	From'X 距X	From'Y 距Y		
	2R1	69.6				39								ACC.	100%
	3R1	69.6				39								ACC.	100%
	4R1	69.6				39								ACC.	100%
SEG3007G-049	1R1	69.6				39								ACC.	100%
	2R1	69.6				39								ACC.	100%
	3R1	69.6				39								ACC.	100%
	4R1	69.6				39								ACC.	100%
	5R1	69.6				39								ACC.	100%
	6R1	69.6				39								ACC.	100%
	7R1	69.6				39								ACC.	100%
	8R1	69.6				39								ACC.	100%
✓SEG3007L-045	1R1	69.6				39								ACC.	100%
✓SEG3007L-046	1R1	69.6				39								ACC.	100%
	2R1	69.6				39								ACC.	100%
	3R1	69.6				39								ACC.	100%
	4R1	69.6				39								ACC.	100%
	5R1	69.6				39								ACC.	100%
	6R1	69.6				39								ACC.	100%
	7R1	69.6				39								ACC.	100%
	8R1	69.6				39								ACC.	100%
	9R1	69.6				39								ACC.	100%
	10R1	69.6				39								ACC.	100%
	11R1	69.6				39								ACC.	100%

EXAMINED BY主探 Tang Xingshan
LEVEL - II SIGN / DATE 1/25/11

REVIEWED BY 审核 Li LiMing
LEVEL - II SIGN / DATE 1/25/11

质量经理 / QCM
签字 SIGN / 日期 DATE

用户CUSTOMER
签字 SIGN / 日期 DATE

(FORM# ZPQC-UT01)

REPORT OF ULTRASONIC EXAMINATION
UT探伤报告

REPORT NO. 报告编号 B787-UT-18379R1-2 DATE 2011.01.25 PAGE 3 OF 3 Revision No: 0

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	Sound Path 声程	Depth from Surface 距表面深度	From'X 距X	From'Y 距Y		
	12R1	69.6				39								ACC.	100%
	13R1	69.6				39								ACC.	100%
	14R1	69.6				39								ACC.	100%
	15R1	69.6				39								ACC.	100%
AFTER B-WR18552~18554 18556 18557															
BLANK															

EXAMINED BY主探 Tang Xingshan
LEVEL - II SIGN / DATE 1/25/11

REVIEWED BY 审核 Li Liming
LEVEL - II SIGN / DATE 1/25/11

质量经理 / QCM
签字 SIGN / 日期 DATE

用户CUSTOMER
签字 SIGN / 日期 DATE

(FORM# ZPQC-UT01)

REPORT OF ULTRASONIC EXAMINATION
UT探伤报告

REPORT NO. 报告编号	B787-UT-18355R1	DATE	2010.12.27	PAGE	1 OF 3	Revision No: 0

PROJECT NO. :工程编号 ZP06-787		CONTRACTOR : CALTRANS
ITEMS NAME: 13AE 部件名称	DRAWING NO.: SEG3007 图号	CALTRANS CONTRACT NO.: 04-0120F4 加州工程编号 ZP06-787

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
FCAW	T-JOINT	Dec. 28ST ,2010

EQUIPMENT 设备	MANUFACTURER 制造商	MODEL NO. 样式编号	SERIAL NO. 序列编号
UT SCOPE	AMERICA	EPOCH 4B	071565511
CALIBRATION BLOCK 试块	COUPLANT 耦合剂	MATERIAL/THICKNESS 材料厚度	
AWS IIW BLOCK TYPE II	C.M.C	A709M-345T2/F2	18/20/25/35mm

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
AMERICA	70°	2.25MHz	0.75×0.625in				
				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	Sound Path 声程	Depth from Surface 距表面深度	From'X 距X	From'Y 距Y		
SEG3007L-014	1R1	70				38								ACC.	100%
	2R1	70				38								ACC.	100%
	3R1	70				38								ACC.	100%
	4R1	70				38								ACC.	100%
	5R1	70				38								ACC.	100%
	6R1	70				38								ACC.	100%
SEG3007L-016	1R1	70				38								ACC.	100%

EXAMINED BY主探 Tang Xing Shan
LEVEL - II SIGN / DATE 12/27/10

REVIEWED BY 审核 Li Li Ming
LEVEL - II SIGN / DATE 12/27/10

质量经理 / QCM
签字 SIGN / 日期 DATE

用户CUSTOMER
签字 SIGN / 日期 DATE

(FORM# ZPQC-UT01)

REPORT OF ULTRASONIC EXAMINATION
UT探伤报告

REPORT NO. 报告编号 B787-UT-18355R1 DATE 2010.12.27 PAGE 2 OF 3 Revision No: 0

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	Sound Path 声程	Depth from Surface 距表面深度	From'X 距X	From'Y 距Y		
	2R1	70				38								ACC.	100%
	3R1	70				38								ACC.	100%
	4R1	70				38								ACC.	100%
SEG3007J-034	1R1	70				38								ACC.	100%
	2R1	70				38								ACC.	100%
	3R1	70				38								ACC.	100%
	4R1	70				38								ACC.	100%
	5R1	70				38								ACC.	100%
SEG3007J-036	1R1	70				38								ACC.	100%
	2R1	70				38								ACC.	100%
	3R1	70				38								ACC.	100%
	4R1	70				38								ACC.	100%
	5R1	70				38								ACC.	100%
SEG3007G-018	1R1	70				38								ACC.	100%
	2R1	70				38								ACC.	100%
	3R1	70				38								ACC.	100%
SEG3007G-020	1R1	70				38								ACC.	100%
	2R1	70				38								ACC.	100%
	3R1	70				38								ACC.	100%
√SEG3007C-175	1R1	70				38								ACC.	100%

EXAMINED BY主探 Tang Xing Shan
LEVEL - II SIGN / DATE 12/27/10

REVIEWED BY 审核 Li Ming
LEVEL - II SIGN / DATE 12/27/10

质量经理 / QCM Liu Jianhua
签字 SIGN / 日期 DATE

用户CUSTOMER
签字 SIGN / 日期 DATE

(FORM# ZPQC-UT01)

REPORT OF ULTRASONIC EXAMINATION
UT探伤报告

REPORT NO. 报告编号 B787-UT-18355R1 DATE 2010.12.27 PAGE 3 OF 3 Revision No: 0

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	Sound Path 声程	Depth from Surface 距表面深度	From'X 距X	From'Y 距Y		
	2R1	70				38								ACC.	100%
	3R1	70				38								ACC.	100%
	4R1	70				38								ACC.	100%
	5R1	70				38								ACC.	100%
	6R1	70				38								ACC.	100%
AFTER B-WR18395~18401															

EXAMINED BY主探 Tang Ying Shan
LEVEL - II SIGN / DATE 12/27/10

REVIEWED BY 审核 Li Li Ming
LEVEL - II SIGN / DATE 12/27/10

质量经理 / QCM
签字 SIGN / 日期 DATE

用户CUSTOMER
签字 SIGN / 日期 DATE

(FORM# ZPQC-UT01)

AMERICAN BRIDGE/FLUOR ENTERPRISES, a JV

375 Burma Road
Oakland, CA 94607
Telephone (510) 808-4600 Fax (510) 808-4601

NCR PROPOSED RESOLUTION

To:	California Department of Transportation	**Dated:**	28-Feb-2011
	333 Burma Road	**Contract No.:**	04-0120F4
	Oakland, CA 94607		04-SF-80-13.2/13.9
Attention:	Siegenthaler, Peter	**Job Name:**	Self-Anchored Suspension Bridge
	Resident Engineer	**Document No:**	ABF-NPR-000865 **Rev:** 2
Ref:	05.03.06-000867		
Subject:	NCR No. ZPMC-0872		

Contractor's Proposed Resolution:

Reference Resolution: ZPMC is providing NDT results of the welds in question to show they are acceptable.

ZPMC is providing NDT results of the welds in question to show they are acceptable. Based on this ZPMC requests closure of this NCR.

Submitted By: Ishibashi, Joshua

Attachment(s): ABF-NPR-000865R02;

Status: AAP

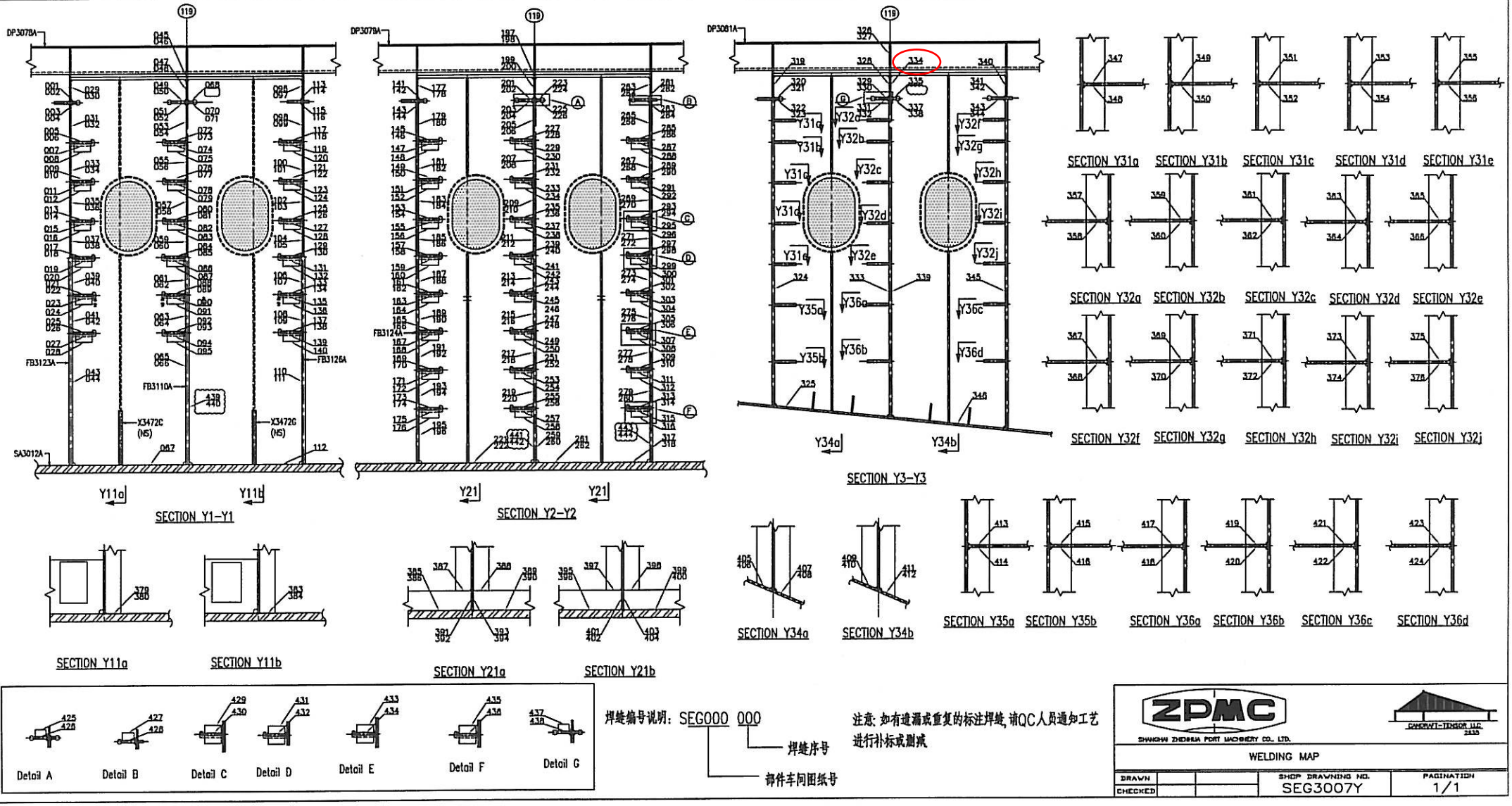
Caltrans' comments:

Date: 28-Feb-2011

This NPR for NCR ZPMC-0872 is Accepted with Action Pending. The NDT Report for Weld ID SEG3007Y-334 still needs to be submitted.

Submitted By: Eagan, Sean **Date:** 28-Feb-2011

Attachment(s): ABF-NPR-000865



2011-1-21 13:32:46, 陆鑫

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, China **Report No:** NCS-000947
Prime Contractor: American Bridge/Fluor Enterprises, a JV **Date:** 09-Mar-2011
Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0872

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-Nov-2010

Description of Non-Conformance:

During Caltrans QA in process observations of the fabrication of Orthotropic Box Girder (OBG)13AE welds SEG3007Y-334, SEG3007J-047, SEG3007L-045, SEG3007L-046 and SEG3007C-175 this QA discovered the following issues: ZPMC welding personnel did not appear to be following the NEW WELD PROCEDURE (Rager/McQuaid)

The following requirements were not followed:
4. Welding (4C)
5. Postweld Thermal Treatment (5A, 5C, 5D)

NOTE: The above references are relative to sections 4 ~ 5 of the NEW WELD PROCEDURE (Rager/McQuaid)and the corresponding paragraph letters.

Issue number 1
The weld was identified as SEG3007Y-334
The welding process used was FCAW
The area was preheated using electric strip heaters
The weld is a complete joint penetration weld that joins Floor Beam FB3111A to Bottom Plate SA3012A FB3111A and SA3012A are designated on the approved shop drawings as Seismic Performance Critical Members.

Issue number 2
The weld was identified as SEG3007J-047
The welding process used was FCAW
The area was preheated using electric strip heaters
The weld is a complete joint penetration weld that joins Longitudinal Diaphragm SA3019A to Side Plate

SP3069A
SA3019A and SP3069A are designated on the approved shop drawings as Seismic Performance Critical Members.

Issue number 3
The weld was identified as SEG3007L-045
The welding process used was FCAW
The area was preheated using electric strip heaters
The weld is a complete joint penetration weld that joins Floor Beam FB3124A to Bottom Plate SA3012A
FB3124A and SA3012A are designated on the approved shop drawings as Seismic Performance Critical Members.

Issue number 4
The weld was identified as SEG3007L-046
The welding process used was FCAW
The area was preheated using electric strip heaters
The weld is a complete joint penetration weld that joins Floor Beam FB3124A to Side Plate SP3068A
FB3124A and SP3068A are designated on the approved shop drawings as Seismic Performance Critical Members.

Issue number 5
The weld was identified as SEG3007C-175
The welding process used was FCAW
The area was preheated using electric strip heaters
The weld is a complete joint penetration weld that joins Longitudinal Diaphragm LD3026A to Floor Beam FB3120A
LD3026A and FB3120A are designated on the approved shop drawings as Seismic Performance Critical Members.

See attached photographs for additional detail.

Contractor's proposal to correct the problem:
Contractor to provide NDT reports to prove the welds are acceptable.

Corrective action taken:
Contractor provided the NDT reports of all the welds in question except for SEG3007Y-334 and the welds are acceptable. The weld ID SEG3007Y-0334 was welded in the same manner as the other welds noted in this NCR which are acceptable so it proves that SEG3007Y-0334 the lack of post weld heat treatment has no adverse affect on all the welds.

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 Wahbeh, Mazen 818-292-0659, who represents the Office

of Structural Materials for your project.

Inspected By:	Ng,Michael	Quality Assurance Inspector
Reviewed By:	Wahbeh,Mazen	QA Reviewer