



**Bridge Factors Factual Report Attachment 22 – BPA Cracks Report No. 2 - Email from
Mr. Jose Morales of BPA to Mr. Rodrigo Isaza of MCM dated February 28, 2018**

Miami, FL

HWY18MH009

(10 pages)

From: Jose Morales
Sent: Wednesday, February 28, 2018 3:32 PM
To: Rodrigo Isaza [REDACTED]
Cc: [REDACTED]; Ernie Hernandez [REDACTED]; Pedro Cortes; Rafael Urdaneta; [REDACTED]; Carlos Chapman; Maria Christina Acosta
Subject: Main Span 1 - Cracks Inspection on Truss Members after formwork / scaffolding removal
Attachments: CRACKS REPORT AFTER SHORING REMOVAL.pdf

Rodrigo,

Please refer to the pictures attached regarding some cracks seen on truss members of Span 1 after the removal of the formwork.

Forward to the EOR for their information. We will monitor these or any other developing cracks on the bridge, but we would like to the EOR to provide a response and determine if these were expected during the bridge stressing. The one due the size that we believe needs special attention is the crack shown in photos 5,6 &7.

Thanks,

Jose E. Morales, P.E. | CEI Dept. Manager

 Bolton Perez & Associates
Consulting Engineers

7205 Corporate Center Drive, Suite 201
Miami, Florida 33126

PHOTO # 1



PHOTO # 2



PHOTO # 3



PHOTO # 4



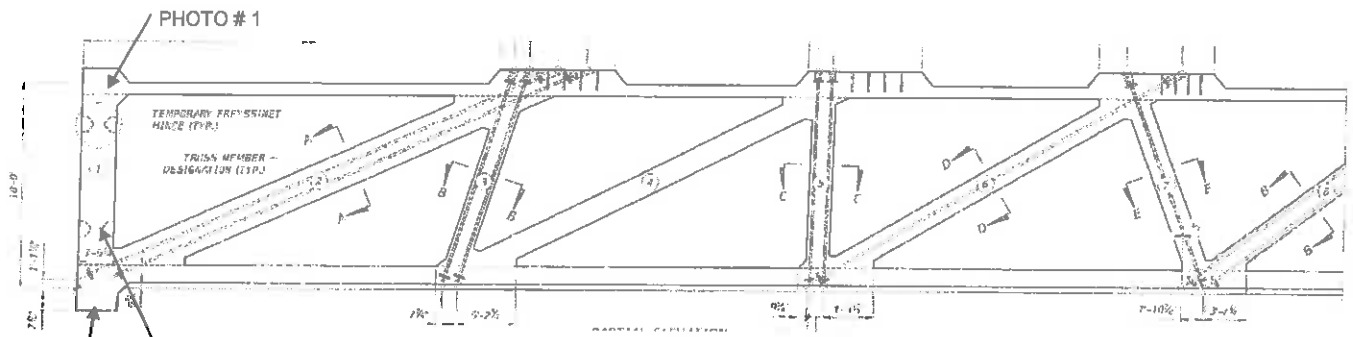
PHOTO # 5



PHOTO # 6



CRACKS LOCATION



Rafael Urdaneta

Response from MCM/FIGG

Report #2

From: Rodrigo Isaza [REDACTED]
Sent: Thursday, March 8, 2018 10:06 AM
To: Jose Morales
Cc: Alberto Delgado; Ernie Hernandez; Pedro Cortes; Rafael Urdaneta; [REDACTED] Carlos Chapman; Maria Christina Acosta; 'Patrick Meagher'
Subject: FW: Main Span 1 - Cracks Inspection on Truss Members after formwork / scaffolding removal

Jose,
Below please find self-explanatory email from the EOR regarding the crack inspection report post falsework removal. If you have further questions, please let us know.
Thank you

RODRIGO ISAZA | Sr. Project Manager [REDACTED]
MCM | 6201 SW 70th St., 2nd Floor, Miami, FL 33143 | www.mcm-us.com.
Please consider the environment before printing. A reminder from MCM, Building Excellence

From: Feliciano, Manuel [REDACTED]
Sent: Thursday, March 8, 2018 9:48 AM
To: Rodrigo Isaza
Cc: Dempsey, Dwight; Hango, Erika N.; Ernie Hernandez; Pedro Cortes; Pate, Denney
Subject: RE: Main Span 1 - Cracks Inspection on Truss Members after formwork / scaffolding removal

Rodrigo,

The deflections of span 1 after removal of the falsework are within the expected deflections. Regarding MCM's photos, we will need a better description of the locations and widths of the cracks in order to provide you with our evaluations. In general, the cracks seem to be very small and some of them appear to be shrinkage cracks.

Let me know if you have further questions.

Thank you,

Manuel Feliciano, P.E.
FIGG
Regional Bridge Engineer
[REDACTED]

Manuel Feliciano, P.E.
FIGG
Regional Bridge Engineer
[REDACTED]

From: Rodrigo Isaza [REDACTED]
Sent: Wednesday, March 07, 2018 6:22 PM

To: Feliciano, Manuel [REDACTED]
Cc: Dempsey, Dwight [REDACTED]; Hango, Erika N. [REDACTED]; Ernie Hernandez [REDACTED]; Pedro Cortes [REDACTED]; Pate, Denney [REDACTED]
Subject: RE: Main Span 1 - Cracks Inspection on Truss Members after formwork / scaffolding removal

Manuel,

We will forward these comments to the CEI. However, do you have any comments regarding MCM's photos and deflection reaction data following the false work removal?

RODRIGO ISAZA | Sr. Project Manager [REDACTED]
MCM | 6201 SW 70th St., 2nd Floor, Miami, FL 33143 | www.mcm-us.com.
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From: Feliciano, Manuel [REDACTED]
Sent: Wednesday, March 7, 2018 2:17 PM
To: Rodrigo Isaza
Cc: Dempsey, Dwight; Hango, Erika N.; Ernie Hernandez; Pedro Cortes; Pate, Denney
Subject: RE: Main Span 1 - Cracks Inspection on Truss Members after formwork / scaffolding removal

Rodrigo,

FIGG received a Crack Inspection Report prepared by CEI on February 28, 2018. We have evaluated this Reports and have the following general comment for your consideration:

- CEI Report only contains three (3) pages of photos and one (1) page that shows the elevation view of Span 1 titled Cracks Location. The general locations of the cracks are depicted on this elevation view. Using the information provided by CEI, it is not clear from which side of the span the photos were taken since there is not a description of the location for each photo. Therefore, FIGG requests a more descriptive report of the crack locations and width.

In the meantime, FIGG provides the following preliminary comments that MCM can share with CEI:

- Photo number 1 appears to be a delamination of the concrete surface of member number 1 near the canopy of Span 1. FIGG does not have a structural concern about this type of imperfection in the finish of the member. MCM will have to repair this imperfection after Span 1 is moved to its final position.
- Photo number 2 shows two very small cracks adjacent to the temporary top hinge in vertical member 1. FIGG is not concerned about these very small cracks in this region. Cracks near the temporary hinge were expected.
- The elevation of Span 1 shows that photo 3 was taken from the underside of diaphragm number 1. However, the photo appears to be taken at the deck level and its orientation seems to be parallel to the longitudinal axis of member number 2. FIGG is not concern about this type of crack which seem to be very small and confined to the reinforced concrete chamfer region.
- The cracks that are shown on photos 4, 5 and 6 appear to be in the reinforced concrete chamfer region of member 11. The elevation view locates these cracks on the downstation side of diaphragm number 2. It appears that the arrow that shows the general location of the crack was misplaced in the elevation view. These cracks developed at the boundary between the diagonal compression member and its reinforced concrete bottom chamfer. It is anticipated that MCM will seal these cracks in accordance with FDOT Standard Specifications.

Please let us know if you have any questions or comments.

Thank you,

Manuel Feliciano, P.E.
FIGG

[REDACTED]

From: Rodrigo Isaza [REDACTED]
Sent: Wednesday, March 07, 2018 7:44 AM
To: Feliciano, Manuel [REDACTED]
Cc: Dempsey, Dwight [REDACTED]; Hango, Erika N. [REDACTED]; Ernie Hernandez [REDACTED]; Pedro Cortes [REDACTED]
Subject: RE: Main Span 1 - Cracks Inspection on Truss Members after formwork / scaffolding removal

Manuel,
Does FIGG have any comments on this matter?
Thank you

RODRIGO ISAZA | Sr. Project Manager [REDACTED]
MCM | 6201 SW 70th St., 2nd Floor, Miami, FL 33143 | www.mcm-us.com.
Please consider the environment before printing. A reminder from MCM, Building Excellence

From: Rodrigo Isaza
Sent: Wednesday, February 28, 2018 6:07 PM
To: Feliciano, Manuel
Cc: Dempsey, Dwight; 'Hango, Erika N.'; Ernie Hernandez; Pedro Cortes
Subject: FW: Main Span 1 - Cracks Inspection on Truss Members after formwork / scaffolding removal

Dwight/Manuel,
Following our conversation of yesterday attached please find the items discussed under MCM's photos as well as the deflection reaction following the false work removal. In addition, reference below and attached a crack inspection report issued by the CEI.

Please review and comment as deem applicable and/or confirm if these were anticipated as part of this phase of construction.

Thank you

RODRIGO ISAZA | Sr. Project Manager [REDACTED]
MCM | 6201 SW 70th St., 2nd Floor, Miami, FL 33143 | www.mcm-us.com.
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Sent: Wednesday, February 28, 2018 3:32 PM
To: Rodrigo Isaza
Cc: [REDACTED]; Ernie Hernandez; Pedro Cortes; Rafael Urdaneta; [REDACTED]; Carlos Chapman; Maria Christina Acosta
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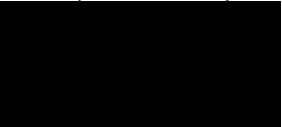
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Thanks,

Jose E. Morales, P.E. | CEI Dept. Manager

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 Consulting Engineers

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Miami, Florida 33126



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