



Bridge Factors Factual Report Attachment 30 – BPA 3/15/18 Meeting Minutes

Miami, FL

HWY18MH009

(4 pages)



FIGG Structural Analysis Presentation
University City Prosperity Project (BT-904)
Pedestrian Bridge over Tamiami Trail US
41 Contract No.: ARI73 FM No.: 434688-1

Date: 03/15/18 Time: 9:00 AM Location: MCM Field Office

● **Overview**

- Discuss temporary construction loading condition and temporary mechanism to capture nodal zone
- Summarized review of before and after movement bridge conditions
- Overview of FIGG's analysis presentation
- Questions & Answers discussion

● **Attendees**

- FIGG: Denney Pate, Eddy Leon, Dwight Dempsey (on the phone)
- MCM: Rodrigo Isaza, Ernie Hernández, Pedro Cortes
- FDOT: Alfredo Reyna
- FIU: John Cal, Patrick Meagher
- BPA/CEI: Jose Morales, Rafael Urdaneta, Carlos Chapman, Maria Christina Acosta

● **FIGG's Presentation Summary**

- FIGG pointed out that the cracks look more significant in person than on photographs after site inspection performed prior to the presentation
- FIGG presented a power point presentation (attached).
- Temporary construction loading condition
- Bridge was loaded onto the permanent supports on 03/10/18
- Immediately after the move, CEI & FIGG inspection showed nothing before distressing members 2 & 11
- On 03/12/18, MCM e-mailed FIGG documentation regarding the cracks and FIGG instructed MCM to install the recommended temporary shims in the pylon base directly below member 12 (nodal area of members 11/12) between the permanent support shims
- FIGG presented calculations and recommendations to the group
- FIGG assured that there was no concern with safety of the span suspended over the road
- FIGG noted that the spalled areas were not replicated by the engineering analysis
- The importance of the pylon diaphragm pour and back span construction was discussed
- A temporary mechanism to capture the nodal zone and the time frame to deliver the plan was discussed
- Refer to attached analysis presentation photographs (first few slides were not photographed)



- **Questions & Answers**

- CEI to FIGG: Do we need temporary shoring?
 - FIGG responded that it was not necessary. Rather than carry weight, carry load off that number/node. Steel channels to 10/9 node & PT Bars to capture some of that force which is better than vertical support. The diagonal member is what needs to be captured
- FIGG mentioned that no repairs should be done now. Once back span is there, member 11 force will decrease, then repair can begin. FIGG also stated that the prudent action is to share the load carried to 9/10 and construct pylon diaphragm
- CEI to FIGG: Will the mechanism to capture the load from the node have to be integrated with the pylon diaphragm and will it remain in the structure?
 - FIGG answered that the temporary mechanism to capture the node, preferably will not remain in the structure, but the option for the mechanism was not ultimately decided and was not yet complete. The decision would need to be made later.
- MCM showed concerned of the timeline between using grout versus white concrete as per workability.
 - FIGG commented that they will coordinate with MCM to address the concern. FIGG prefers the grout material but if it helps expedite the process to use otherwise, FIGG will be okay
- MCM to FIGG: Will the temporary shim remain in the structure?
 - FIGG replied that the temporary shim shall be removed, however, if it cannot be removed, we will work something out
- FIU to CEI: What is the CEI opinion on presentation analysis from FIGG?
 - FDOT to FIGG: FDOT requests a copy of FIGG's analysis presentation to give to their structural group
 - CEI: At this point we cannot comment, will follow up on this request and expedite in 2-3 days with Jake Perez and Luis M. Vargas
- FIGG comments that the analysis predicts diagonal cracking
- CEI to FIGG: Requested clarification on amount of transferred PT assumed for the nodal shear stability analysis
 - FIGG: Clamping action only on transverse strands
- FIU commented to FIGG that nothing predicted this cracking
- FIGG mentioned that the P.T. bars in their permanent condition have less stress than under construction condition
- CEI/MCM to FIGG: Are there any restrictions of any load on that side?
 - FIGG answered that until further restraining of the node, no load other than necessary is needed. Also, member 11 is going to be tensioned today 03/15/18
- CEI to FIGG/MCM: Will there be a crack monitoring plan? CEI had been monitoring the cracks and asked FIGG/MCM to perform the crack monitoring as well
 - FIGG had no response. MCM commented that it already had measures in place to monitor crack movement.
- MCM to CEI: Have the cracks increased in length or depth?
 - CEI confirmed cracks have increased in length daily



- FDOT to FIGG: Are you going to continue to figure out why it happened?
 - FIGG responded that all we “know is that it just happened”
- MCM to FIGG: Will there be a further inspection inside the cracks before restressing?
 - FIGG answered that they don’t want to core concrete out. They want to move forward and seal cracks before being covered
- FIGG insisted that right now to not do any repairing of cracks until stabilizing the node and pylon diaphragm. The rest of any corrective actions will be after construction of back span
- FIU to FIGG: this concrete is sticky (flowable) because of the titanium dioxide. FIU is concerned to be used under the pylon diaphragm
 - FIGG reassured that means and methods will be considered when used in pour
- FIU to FIGG: Why is the bridge less than 950 tons versus Barnhart’s weight?
 - FIGG and CEI confirmed that it was built as per plans and the approximate weight of 950 tons included an increase factor
- MCM to FIGG: What is the time frame for temporary mechanism to capture nodal zone?
 - FIGG: Saturday
- CEI/MCM to FIGG: Are you staying for the P.T. procedure being done today?
 - FIGG replied that they will not be staying for the procedure. FIGG was going back right after this presentation because they had work to do on this
- CEI to FIGG: Requesting a copy of the power point presentation
 - FIGG/MCM will provide
- CEI to FIGG: Has it been peer reviewed? CEI requested that it wanted more eyes on this and that the more eyes on this, the better
 - FIGG concurred
- CEI to FIGG/MCM: Provide to CEI the stressing procedure that will be performed on 03/15/18
 - MCM responded that we will provide to CEI. MCM clarified that VSL was currently on site to perform the stressing operation with the corresponding stressing procedure. MCM also indicated that the procedure provided by FIGG was for both PT bars on member 11 to be stressed to the 280 kips stressing forces as listed on plan sheet B-69. These are to be done in 50 kip increments each, starting with the top PT bar, then bottom PT bar, then back to the top PT bar until complete. FIGG confirmed this and added that it is recommended and prudent to do so to bring the span to its previous state where it sat on temporary supports.
- FIGG requested to MCM the compressive strength test results. MCM stated that laboratory results on concrete had exceeded the design compressive strength
- CEI to MCM: When do you have in your schedule the completion of the construction of the pylon diaphragm and back span and are you planning on rushing the completion of construction of them?
 - MCM responded that they are following the schedule and sequence of construction but that they will expedite the construction of the pylon diaphragm and back span.
- FIU requested the progress meeting to be moved to 03/19/18