



**STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION**

**CONSTRUCTION DIVISION**  
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COMMISSIONER

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September 11, 2018

**MEMORANDUM**

<b>PROJECT:</b>	<b>PIN 107298.02</b>
	Dyer County I-155 Bridge No. 23-I155-0.00 over Mississippi River
<b>SUBJECT:</b>	<b>CONSTRUCTABILITY REVIEW MEETING SUMMARY</b>
<b>DATE:</b>	August 21 & 22, 2018
<b>NOTES BY:</b>	Laura Doss TDOT Construction Division

A Constructability Review meeting was held on August 21<sup>st</sup> & 22<sup>nd</sup>, 2018 with Construction Industry Representatives, TDOT Structures, TDOT HQ Construction Division, and TDOT Region 4 Operations and Project Development staff. The scope of the review was to integrate construction expertise early into the project development process for the I-155 bridge repair construction project.

The construction plans were specifically reviewed as part of the meeting.

**AGENDA:**

1. Introductions
2. Purpose: Existing Conditions
3. Project Overview: Construction/Maintenance
4. Work Session

**ACTION ITEMS:**

1. Constructability Concerns

## 2. Placement Verification

### **SUMMARY:**

This project was originally let in June 2018, but was rejected. The original plans were used for this review. Plans showed placing large sandbags, rip-rap, and ajax along the footings of piers 15,16,17, and 18 to remediate scour. The purpose of the meeting was to find the most cost-effective, safest option for scour remediation. As discussion progressed about the issues, it became clear there were two major issues that needed to be addressed. Placement of the sandbags, rip-rap, and a-jacks was identified as the first major issue. The second major issue was the cost of the proposed plan. It became clear that the original design would not be the best solution so several different options were discussed.

Several concerns were identified in placement of the materials. The original plans call for divers to be present during placement. Everyone agreed that having divers in the water constantly would be very dangerous and a major safety concern. The divers were to be used for placement verification, but limited visibility was also brought up as a concern. Different options were discussed, while a definite decision was not made, it was determined that a daily verification may not be necessary. Suggestions were made to verify each pier individually once placement was complete so as to prevent the contractor from coming back out at the end to address any issues. Many different systems were discussed to allow for real-time placement verification. The use of A-jacks were also a major topic. A-jacks are required to be tethered together once placement is complete which would require a diver. A-jack placement is also very important. If not tethered and placed correctly, the a-jacks will not perform as intended. Two major concerns with the A-jacks are that no one has experience placing them in deep water and they are not the most cost-effective option for this specific situation.

Multiple suggestions were made to use large rip-rap instead of the A-jacks. Missouri DOT, who is partnering with TDOT, has experience with similar projects in which they used rip-rap to mitigate scour. TDOT Structures will reach out to Missouri DOT about their former projects in hopes of incorporating those methods. The fill material for the sandbags was also discussed. The plans called for coarse aggregate which some took to mean #57 aggregate size. Suggestions were made to use a different aggregate size, such as #10, that may reduce the cost.

Letting times were discussed to ensure work could be performed in low water.