

Memorandum

To: Steve Boylan, P.E. – GAI Consultants, Inc.

From: Elias Jammal, P.E. – Terracon Consultants, Inc.
Rick Acree, P.E. – Terracon Consultants, Inc.

Date: 1/30/2014

Re: 238275-7-32-02: Wekiva Parkway (SR 429/SR 46) – Section 6

This is in regard to a preliminary evaluation what is anticipated to create the least amount of turbidity between extracting piles and cutting off existing piles at Wekiva River, for the proposed bridge construction. Based on our understanding and discussion with multiple individuals with construction experience, it appears that cutting off existing piles will create less disturbance/turbidity than extracting the piles.

In discussing this with FDOT project managers, an important item of note that was brought up has to do with artesian concerns/conditions; which have been observed at this site. If piles are extracted, there may also be a potential of creating water boils/springs in the river.

It is also our understanding from discussion with a local contractor that cutting off the existing piles is expected to create less of a disturbance than extracting the piles. The contractor mentioned that there is a shearing device that can be attached to a pile and lowered to the necessary depth to cut off the pile. This will most likely generate some turbidity but we understand that it is not expected to be as much as extracting the pile. For the contractor to extract an existing pile, they will most likely need to vibrate the piles out and may also need to use jetting.

Another consideration in regard to cutting off the piles: if approval can be obtained from the FDOT to cut the piles off at the mudline, this will further help with minimizing disturbance within the river.

Based on the where the existing piles are, and the anticipated locations of the new piles, it looks like there are conflicting piles at 2 locations: proposed piers 8 & 9 at existing bridge bents 4 & 11. These do not appear to fall within the waterway; so, there may not be as much of a concern, disturbance-wise, if the only option is to extract the existing piles at these locations.