

Herb Darling

From: John Fowler <john.fowler@rileymountain.engineering>
Sent: Thursday, April 05, 2018 9:35 AM
To: Herb Darling
Subject: Inks lake analysis review

Herb:

As we discussed on the phone, I've read through the information provided by Mr. Charles Kaough, P.E.

The approach described seems reasonable. The results for the proposed excavation to elevation 892 show no rise; this is appropriate and required. The results for the excavation to elevation 894 show a small rise, but greater than zero. My understanding is that a zero rise is required; therefore, this proposal does not meet requirements.

In order to perform a more detailed review, the engineer's basic submittal should contain more data:

1. The letter should contain a more detailed description of the grading/excavation to be performed. Is material to be removed from the excavated area, or simply relocated? Will storage volume be affected? Will spoils be removed to approved areas?
2. The letter should specifically contain a reference to the electronic version (file name) of the HEC-RAS model used to produce the proposed results, along with references to the geometry file(s) and flow file(s) used for analysis.
3. An electronic version of the HEC-RAS model should be provided for review.
4. Before final approval, the developer should submit detailed plans (including survey data) showing the existing and proposed conditions to allow verification of the data in the HEC-RAS model. Appropriate construction supervision (by your office) should be applied to ensure completion according to approved plans.

Following your authorization, I will review the revised letter and HEC-RAS model and provide engineering recommendations (in letter form signed and sealed by me) related to the consistency and correctness of the modeling effort applied. I expect this task to require approximately 8 hours of engineering time at a billing rate of \$170 per hour, or a total of: \$1,360.

At a later date, if authorized to do so, I will provide a detailed review of the construction plans provided and provide engineering recommendations (in letter form signed and sealed by me) related to the consistency of the plans versus the data used in the HEC-RAS model. I expect this task to require an additional 8 hours of engineering time at a billing rate of \$170 per hour, or a total of: \$1,360.

Additional time or effort required for construction inspection or supervision is not included in the scope of services addressed by this proposal. Engineering effort related to other permitting issues, or LCRA requirements, is not included in the scope of services addressed by this proposal.

John G. Fowler, PE, CFM
Riley Mountain Engineering, LLC
9807 CR 312
PO Box 610

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