



Geotechnical Systems and Structures PE, PLLC

215 Valley Rd.
Mexico, NY 13114

March 5, 2013

Mr. Andy Peterson
Peterson Geotechnical Construction, LLC
1551 E. Genesee St.
Skaneateles, NY 13152

Re: Request For Information
VTans Bennington ER BHF 010-1(45)
Bennington, Vermont

Dear Andy,

Per your request, Geotechnical Systems and Structures PE, PLLC (GS&S) has reviewed the Contract Documents for the above referenced project in preparation to commence design services. Upon review of the documents, GS&S presents the following questions and requests that will require response from the Owner:

- 1) Micropiles are required to be designed per AASHTO Bridge Design Specifications 6th Edition which requires LRFD design methods. The loading requirement of the verification piles is 2.5 times the extreme load (467.5 Kips) whereas the governing load case of the production piles is only the extreme load (187 Kips). The loading schedule appears to be an artifact from allowable stress design methods and is not necessarily appropriate in this application.

AASHTO indicates that the purpose of a verification piles is to confirm adequacy of the grout to ground estimation and confirm constructability. Therefore, GS&S requests the Owner consider allowing modification to the verification test and allow testing to geotechnical failure (at a presumed lower load). The verification pile would have a nominal 15-ft bond length and anticipated failure load is in the range of 220 – 270 Kips.

Benefits to the proposed revised testing protocol includes: grout to ground bond stress would be tested and known; bond horizon of verification test is more similar to that of production piles; lower jack load will provide for a inherently more safe test; and settlement of the reaction cribs would be less under lower load.

- 2) Contract documents indicate the unbraced length of all piles to be 25.75-ft and the required cased length of all piles is 40-ft. What is the intention of cased lengths extending 14.25-ft below the unbraced length?

Please forward Owner response to the questions above so that we can expediently provide design submittals. We would be happy to talk with the Owners' Engineer directly if allowed.

Sincerely Yours,
GS&S

Jason G. Sperry, P.E.
Geotechnical Engineer and Owner