



VIRTUAL RESEARCH & INNOVATION  
**2020** **Poster Symposium**

## Questions, Comments and Responses

### Advanced Geotechnical Methods of Exploration (A-GaME) Implementation

Stephen Madden, Geotechnical Engineer

[Stephen.madden@vermont.gov](mailto:Stephen.madden@vermont.gov)

Q1. Do you have a 'favorite' geophysical survey method based on research so far?

A1. Based on the research conducted to this point we are more actively pursuing the option of acquiring equipment to perform seismic surveys. We have identified a need to supplement our traditional boring program with equipment that will allow for better profiling of shallow bedrock when encountered. Presently we rely on advancing bedrock probes to supplement soil borings but our ability to do so is limited by site access (such as overhead restrictions or slopes that cannot be traversed by our drilling equipment etc.). In areas where bedrock elevation is highly variable, the benefit of being able to evaluate bedrock elevations more accurately would be greatly beneficial for both design and construction in terms of limiting risk and reducing uncertainty. Currently we rely on consultants to perform these surveys on our behalf, so there is an opportunity to save time and money if we can perform surveys in-house.

Q2. Will data from seismic surveys be easier to process in-house vs GPR data?

A2. That is the hope, yes. No-one in our section is trained as a geophysicist so there will be limitations to the amount of interpretation that can be performed by our staff, however, we hope that with adequate training, and as we develop familiarity with the equipment, we can independently perform seismic surveys to gather, post-process, and interpret the data, and use that information to make informed decisions and supplement the other data that we gather during the course of a sub-surface investigation.