

# PROJECT HIGHLIGHT

## SONIC DELIVERS WHEN THERE IS LITTLE ROOM FOR ERROR

On infrastructure projects where precision and accuracy counts, choosing the right drilling technology is key. Sonic drilling offers very tight vertical tolerances and continuous core sampling, which makes it ideal for providing plumb boreholes while collecting additional information for project planning.

**PROJECT:** Dam in Southeastern US

**TECHNOLOGY:** Sonic

**SERVICE:** Drilling

### PROJECT OVERVIEW

After a sinkhole and muddy discharge were discovered near the base of the embankment at a dam in the southeast US, dam safety experts and engineers investigated and discovered the structure was at risk of internal erosion and potential dam failure.

In addition to several other sonic drilling applications being performed on-site, Cascade was again hired to carry out a new and unique sonic application. The client needed to install a series of plumb PVC guide casings as a construction guide for the drilling of a much larger secant pile, in order to form a cut-off wall through the dam. They also required information about the subsurface in situ for subsequent construction work. Sonic technology was selected because of its tight verticality tolerance while drilling, ability to drill without the use of fluids or air in the embankment zone, and its ability to provide a continuous core sample in both rock and soils.

### RESULTS

During the initial test phase of the project, Cascade successfully drilled and installed three 8" PVC pilot casings well within specification—which was less than 0.5% total bore deviation. Cascade proceeded to install more than 50 casing installations.



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