

Quincy Dam Reconstruction

Project Description

The original Quincy Reservoir Dam (located in Braintree, Mass.) was built in 1888 to create a water supply reservoir on Town Brook in Quincy, Mass. Severe erosion and seepage prompted a reconstruction of the original dam.



Earthwork placement and compaction

To alleviate flooding along Town Brook, the United States Army Corps of Engineers redesigned and rebuilt the dam. Reconstruction took place from 1999 to 2002, at a cost \$10.2 million.

The project included

- complete removal of the old embankment and appurtenant structures

- preparation of the foundation for the embankment and dike
- construction of a combined spillway, outlet works and reservoir drain structure
- and construction of a rolled-earth dam and dike embankment.

GeoTesting Express' Role

GeoTesting Express, Inc. (GTX) provided the Corps of Engineers with on-site quality assurance of its soil compaction testing during the construction of the rolled-earth dam and of the dike embankment. GTX also maintained a full-time field presence during placement and compaction of materials used on the project.

In addition, GTX provided laboratory testing on soils proposed for use in construction. Included were index, permeability and strength tests. An example of a strength test conducted on soils containing high amounts of gravel was 6" diameter x 12" high consolidated undrained triaxial shear (ASTM D 4767).

Overall fees for services provided to the Corps of Engineers were over \$45,000.

Benefits to Client

GTX's ability to provide highly qualified field personnel to perform quality assurance oversight was a key part of the success for this project. Since rapid turn-around on laboratory soil testing was essential to the project meeting its construction schedule, GTX performed triaxial testing on soils containing high amounts of gravel in-house. By eliminating the use of lower-tiered subcontractors, GTX streamlined the entire laboratory testing process and provided much quicker results to the Corps than is typically available.



Completed dam