

PROJECT DESCRIPTION

Lock E8 Rehabilitation



Location:
Scotia, New York

Client:
TVGA Consultants for
New York State Canal
Corporation

Client Contact:
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Test Boring from a Barge to Measure Aquifer Thickness next to the Lock

MMCE served as the geotechnical engineering consultant to TVGA Consultants to complete seepage analyses for the rehabilitation of Lock E8 on the New York State Barge Canal System. The Canal Corporation had experienced an unstable floor and water seepage through cracks in the floor in Lock E8 when it dewatered it for various maintenance activities. It engaged TVGA Consultants to explore the causes for this and to design other improvements to the lock.

MMCE reviewed data from test borings previously completed for the lock and monitored additional borings that were made to measure the thickness of the sand and gravel deposit surrounding the lock foundation. MMCE measured properties of soil samples from the borings and measured the permeability of the soil with tests in the boreholes.

MMCE analyzed the subsurface conditions and recommended constructing a seepage barrier around the lock to cut off ground water flow. This would enable the Canal Corp. to dewater the lock and repair the cracks in the floor. MMCE recommended installing steel sheet piles and a jet grout wall for the barrier.