

PROJECT DESCRIPTION

Letchworth Park Railroad Slope



Location:
Portageville, New
York

Client:
Norfolk Southern
Corporation

Client Contact:
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Trenching Machine Installing Ground Water Collection System

A Norfolk Southern mainline track crosses the Genesee River in Letchworth State Park and continues westward. The land on the north side of the track, west of the river, slopes downward towards the park about 100 feet.

The slope had shown signs of movement over the past several years. Recently, the slope's instability affected railroad operations, requiring frequent re-surfacing and re-alignment of the track. A scarp located on the south side of the railroad indicates that the slide intersects the railroad track in two locations.

Norfolk Southern requested that MMCE explore the extent of the slope movement. MMCE made test borings and installed inclinometers and a piezometer. MMCE collected data from the instruments on a regular schedule to identify the rate and amount of movement in the slope and the depth of the scarp. The data showed a correlation between the ground water elevation and the rate of ground movement.

MMCE used this information to evaluate various remediation options and designed a ground water depression trench to collect ground water and discharge it into a nearby stream. Norfolk Southern constructed the system in the fall of 2004. MMCE prepared construction plans and technical specifications for this remediation and monitored the trench construction for Norfolk Southern.