

## PROJECT DESCRIPTION

### *Tonawanda Creek at West Phalinger Road – Slope Remediation*

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**Location:**  
Clarence, New York

**Client:**  
Greenman-Pedersen,  
Inc. for Erie County  
Department of Public  
Works

**Client Contact:**  
Mr. Glenn Blake,  
716-633-4844

***View of Dry Soil Mixing Operations***

A slope failure along Tonawanda Creek damaged a portion of Tonawanda Creek Road between Transit Road and Westphalinger Road in the Town of Clarence. A section of Tonawanda Creek Road, approximately 250 feet long dropped about 10 feet and pushed soil into Tonawanda Creek. Subsurface explorations indicated that a thick deposit of soft clay was beneath the road.

MMCE developed design recommendations for remediating the soft clay conditions.



***Soil Cement Column Installation***

Mixing dry cement with the soft clay soils to increase the strength and decrease the compressibility of the soft clay deposit was the selected remediation. MMCE completed stability analysis to determine the amount of improvement that was required to support the reconstructed roadway. Based on the stability analysis, MMCE developed design plans showing the extent of the dry soil mixing improvements. MMCE provided construction monitoring services throughout the project. The project was completed in the winter and early spring of 2009.