

Centre for Urban Ecology at Humber College Toronto, Ontario

| Challenge

A grade separation was required immediately adjacent to the campus facility. The subsurface profile consisted of up to 4.5m of clayey silt with sand fill to highly organic fill/peat overlying a stiff to very dense clayey silt and sandy silty till. This created significant instability and bearing capacity issues for the proposed structure. A caisson supported load transfer platform would not be feasible and overexcavation and replacement was not possible within this tight work site.

| Solution

The Geopier® Rammed Aggregate Pier system was selected for the retaining wall to completely avoid overexcavation and replacement of up to 4.5m of organic fill. Rammed Aggregate Pier® elements were installed to support a granular pad, which in turn supported the 3.65m high MSE wall. The flexibility of the GP3® installation method allowed for installation during inclement weather in poor working surface conditions.

| Outcome

The Geopier system matched the bearing capacity of the dig-replace option the team was considering, while leaving the poor organic soils in place. This system improved the project schedule and eliminated the need for overexcavation, which would not have been financially or practically feasible to the project.



Substantial savings on this unique structure were realized by utilizing the Geopier® Rammed Aggregate Pier system

Project Team

General Contractor

J.D. Strachan Construction Ltd.

Geotechnical Engineer

GeoTerre

Architect

Taylor Hazell Architects

Ground Improvement - Rigid Inclusions - Piling Systems - Slope Stability - Ground Reinforcement

Before you Remove It or Go Through It, contact us to *Improve It*
at (905) 266-2599 or email us at solutions@geosolv.ca