

Georgian Bay District Secondary School Midland, Ontario

| Challenge

A new 2-storey school to replace the ageing existing school was planned on the current location of the field/track for the existing school. The challenge for building this new school was that the soil consisted of a layer of topsoil, underlain by silty sand to sand fill (with some isolated silt layers) to depths of up to 5.0 metres. The fill layer was underlain predominantly by competent sandy native soil. This loose fill created problems for the structural engineer in founding the building's footings and slab. Deep over-excavation and replacement was an expensive option to provide the necessary bearing capacity. Further complicating matters, test pits revealed cobbles and boulders in the fill.



RIC proved to be an invaluable solution to this important community improvement initiative

| Solution

The Rapid Impact Compaction (RIC) was selected to improve the fill soils and was the best option for its cost-effectiveness, avoiding the need for costly dig/replace methods and would provide a sufficient bearing capacity of 150 kPa SLS while leaving the existing fill in place.

| Outcome

The RIC system provided a sound solution in very challenging soils and provided well above the required amount of densification for the proposed structure. The RIC system was installed rapidly, which in turn significantly sped up the project timeline.

Project Team

General Contractor
Pre-Eng Contracting

Structural Engineers
Stephenson Engineering

Geotechnical Engineer
Terraprobe (Barrie)

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

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