



Lockview CSO Tank

St. Catharines, Ontario

The GP3® System Was Recommended by the Site Services Designer as Compared to Other Alternative Foundation Support Solutions

Description: This project provided support to a portion of a 2,500 cubic meter combined sewer overflow tank base where soft soil conditions existed. The tank base supported is 10 meters by 21.6 meters with overall tank dimensions of 21.6 meters by 46 meters. The tank base pressures ranged from 119 kPa to 175kPa.

Subsurface Conditions: The subsurface conditions at the site consisted of up to 4 meters of soft and sensitive clay underlain by sandy silt till.

Geopier Solution: The GP3® system was recommended to support the portion of the tank where the disturbed/soft soils had been and to match the portion of the tank where settlement had occurred naturally in more competent clays. The installed Rammed Aggregate Pier® (RAP) elements had a 0.76 meter diameter and a shaft length that ranged from 3 to 5 meters below the ground surface. The RAP elements were installed in caving soils and the site had very limited working space and accessibility.



PROJECT TEAM

Owner:

City of St. Catharines

Geotechnical Engineer:

Inspec-Sol, Inc.

General Contractor:

ROMAG Contracting Ltd.

Geopier Installer:

GeoSolv Design/Build Inc.

Geopier Designer:

GeoSolv Design/Build Inc.