

“Be in the front, to provide top services.”



FRONTOP ENGINEERING LIMITED

Instrumentation & Monitoring Department

WHAT'S OUR GOAL?

Stay in front of geotechnical instrumentation and monitoring consulting firms in Ontario, we aim to deliver the top services to our clients for not only a cost effective monitoring solution, but also a fully project specified, well designed, reliable and robust monitoring solution. So our clients can focus on their professional field, do not need to worry about the potential construction related impact on ambient environment, including adjacent people, buildings or structures.

Phone: (905) 947 0900
Fax: (905) 305 9370
E-mail: info@frontop.ca

WHO WE ARE?

Established in 2005, Frontop has been steadily growing rapidly for the past few years and becoming one of the top engineering consulting firms in Ontario. We are over fifty (50) employees with twenty (20) experts - comprises of Professional Engineers of Ontario, Instrumentation and Monitoring specialists, Computer Science and Software Engineers and Noise and Vibration experts.

Frontop provides multiple engineering services including: real-time noise and vibration monitoring, geotechnical instrumentation and monitoring, computer science and software developing engineering.

WHAT WE DO?

Provide fully integrated, customized, cost-effective monitoring solutions for:

- Shored excavations
- Tunnels
- Rail tracks
- Road infrastructure
- Dewatering projects
- Slope stability

The monitoring solutions vary from manually read points to fully automated, remote, real-time reading systems with online data publishing.

WHAT WE MEASURE?

We install instrumentation to measure various parameters including:

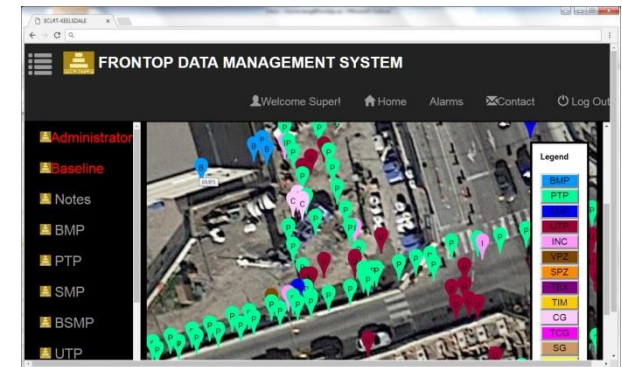
- lateral displacement
- settlement/heave
- tilt
- strain
- load/pressure
- water pressure
- water level
- temperature
- noise
- vibration

WHAT WE DID?

In past decade, we have accomplished hundreds instrumentation & monitoring projects, from the multi-million dollar value infrastructure projects to commercial /residential developments, partially listed below.

- Eglinton Crosstown LRT - Segment 1- Keele and Mt Dennis Stations
- Eglinton Crosstown LRT - Segment 5- Kennedy Station
- MTO2015-2004 HWY400 at HWY 9 from 19th Side Rd to N of S Canal Bridge Project
- South Blair Road/Rail Grade Separation and Access Road, Town of Whitby, Ontario (Tender No. IT-2013-CI-019)

For most updated list, please visit our web site: Frontop.ca



Web Based Monitoring Data Management System

Frontop Engineering Limited

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Markham, ON L3R 3B2

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WHAT WE PROVIDE?

We continue to endeavor in achieving our clients' needs and expectations through embedding state-of-the-art technology in our building designs, plus providing all services you need for a new development, from geotechnical service to environmental and hydrogeological services. So our clients can focus on their professional field and get all they need in on stop.

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Introduction of Engineering Design and Other Services

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Markham, ON L3R 3B2

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E-mail: info@frontop.ca

Engineering Design

Buildings define contemporary urban lives and shape city images. Knowing that the place you live and work in is safe and comfortable is a basic necessity for every person. Frontop understands how building performance could interact with people's daily work and life. We continue to endeavor in achieving our clients' needs and expectations through embedding state-of-the-art technology in our building designs. Our motivation for success is driven by our client's satisfaction.

Frontop's design team is new and growing, with diverse expertise joining our team regularly. Our specialists pursue excellence both technically and efficiently while delivering designs that meet the needs and ideas of our clients. We focus on design for residential, industrial and commercial buildings, institutions, public assemblies to businesses renovation. Our services include:

- Structural Design
- Civil Design
- HVAC System Design
- Plumbing System Design
- Fire Protection System Design
- Building Addition and Alteration
- Building Permit Application
- Government Paperwork Handling

Geotechnical Engineering & Material Testing

Similar to all types of foundations in life, foundations in construction are the most important aspect of a structure. A solid and well-built foundation is the first and most important step in the building process. Geotechnical engineering is concerned with the behavior of earth materials occurring on the surface and below ground. A good understanding of soil and rock mechanics can help determine all relevant properties of the material and evaluate how they respond.

Our Geotechnical Engineering department provides many services but can be generally be summarized in the following sections:

- Geotechnical Investigation and Reporting
- Soil and Rock Mechanics
- Rock, Concrete and Asphalt Coring
- Shoring Installation Supervision and Tie-back Load Testing
- Slope Evaluation and Stability Analysis
- Pavement Design and Evaluation
- Piling Driving and Analysis
- Footing Inspection, Subgrade Inspection, Caisson Inspection, Grouting Inspection, Reinforcing Steel and Structural Steel Inspection
- Concrete and Mortar Testing, Soil and Asphalt Testing, Concrete Pull-Out and LOK Testing, Percolation Testing

Environmental Engineering

- Soil and Groundwater Chemical Testing Result Analysis and Reporting
- Environmental Site Assessments (Phase I, II & III)
- Contaminant Site Cleanup and Decommissioning
- Soil and Groundwater Remediation
- Contaminant Transport
- Groundwater Monitoring
- Peer Reviews
- Feasibility and Cost-Benefit Evaluation
- Record of Site Condition (RSC)

Hydrogeological Engineering

- Percolation Testing
- Design and Construction of Monitoring Networks and Monitoring Wells
- PTTW (Permit To Take Water) Application
- Hydrogeological Study and Assessment for Residential Subdivision and Environmental Projects
- Water Sample Chemical Testing Result Analysis and Reporting
- Underground Water Investigation and Mapping
- Development of Groundwater Supplies