



# GEMTEC

[www.gemtec.ca](http://www.gemtec.ca)

## Nova Scotia Office

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## About Us

Whether you are building on it, or digging through it, GEMTEC knows the ground.

Since 1986, GEMTEC has grown from a small New Brunswick geotechnical engineering, materials testing and environmental engineering firm into a leading multidisciplinary company with offices and CCIL-certified laboratories across Eastern and Atlantic Canada. Employee-owned with more than 150 engineers, scientists, technical personnel and support staff, GEMTEC is founded on the solid technical expertise and experience of our highly educated and skilled specialists. For over 30 years, we have served our clients and the public interest with honesty and respect, while providing cost-effective and innovative solutions.

GEMTEC is built on a solid foundation of experience, knowledge and integrity. Build on GEMTEC.



# Our Services

## Civil Engineering

### Municipal

- Water supply and distribution
- Wastewater collection and treatment
- Stormwater management and flood plain mapping
- Parking lot layout and design
- Municipal road design and bridge rehabilitation / replacement
- Subdivision servicing and design
- Topographical surveying

### Geotechnical Engineering

- Geotechnical/subsurface investigations
- Soil and rock mechanics
- Consolidation testing and analysis
- Slope stability assessments and remediation
- Engineered fill design

### Environmental Engineering

- Phase one environmental site assessments (ESA)
- Phase two environmental site assessments (ESA)
- Contaminant delineation and remediation
- Environmental screening
- Landfill design

### Pavement Engineering

- Surface distress mapping and condition surveys
- Subsurface investigations
- Pavement structural evaluation
- Design of new and rehabilitated pavement structures using AASHTO, MTO, Asphalt Institute, ACPA and other
- Laboratory materials testing

### Hydrogeological Services

- Groundwater quality and quantity assessments
- Hydrogeologic and terrain analysis
- "Permit to Take Water" applications with

### Materials Testing & Inspection

#### Field Services

- Compaction testing for soil, aggregate, and asphalt (MTG-certified)
- Foundation subgrade assessments
- Blast monitoring
- Concrete testing (MTO/ ACI/CCIL-certified)
- Frost-protection inspections

### Marine Services

- Dredging assessment
- Collaborative structural, electrical, and mechanical design
- Specification preparation, tendering, and contract award
- Public, regulator, and stakeholder consultations
- Coastal engineering and modelling

- Forensic investigations for foundations
- Foundation design
- Pile foundation design and dynamic pile (PDA) testing
- Pile-drivability analysis (WEAP)
- Shear-wave velocity testing

- Underground storage tank removal
- Brownfield redevelopment
- Sewer-use compliance testing
- Septic system design
- Grading and drainage plans
- Consultation for construction in regulated areas (e.g., flood plains)

- Forensic evaluation of premature distress or failures
- Pavement management and preservation treatment selection
- Life-cycle costing
- Evaluation of pavement texture and friction
- Ground penetrating radar surveys

- Ministry of the Environment and Climate Change (MOECC)
- Water sampling and analysis
- Hydrogeological studies for land

- Footing formwork inspections
- Dynamic pile (PDA) testing
- Rebar inspections
- Dowel and rebar pull-out testing
- Pile-driving inspections
- Asphalt and concrete coring
- Construction QA/QC

### Transportation

- Alignment selection
- Constraint mapping
- Stakeholder consultation
- Geometric design
- Asphalt and concrete mix design, and pavement assessment
- Drainage design
- Watercourse crossing with fish passage
- Wildlife crossing
- Intersection and interchange design
- Concrete trial mix, and damage consultation

- Geophysical surveys, analysis, and data modelling
- Seismic and liquefaction assessments
- Mining pre-feasibility and feasibility assessment
- Geological study

- Hydrogeologic Engineering:
- Water supply assessment
- Pump test design and analysis
- Wellfield/watershed protection study
- Environmental management in mining
- Mine closure and reclamation

- Seasonal Load Restriction evaluation
- Registered with Ontario Ministry of Transportation (MTO) under the Registry, Appraisal and Qualification System (RAQS) for all High Complexity Pavement Engineering specialties

- severances and rural subdivision developments
- Water well supply studies

#### Laboratory Materials Testing

- Asphalt concrete
- Concrete (MTO/CCIL-certified)
- Soils and aggregate testing (MTO/CCIL-certified)
- Consolidation testing
- Estimation of percolation rate ("T" time)
- Grout and mortar testing