



**REQUEST FOR QUOTATION  
2025-YAR-RFQ-02  
GEOTECHNICAL ENGINEERING SERVICES**

Issue Date: **November 14<sup>th</sup>, 2025**

Response Receipt Location: 400 Main Street, Yarmouth, NS, B5A 1G2

The Town requests that responses be submitted by **2:00 P.M. AST on November 27<sup>rd</sup>, 2025**

Contact Person: Rob Chetywnd , CET.

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## **SCOPE OF WORK**

### **GEOTECHNICAL ENGINEERING SERVICES**

#### **1. General**

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The Town of Yarmouth (hereafter referred to as “the Town”) owns and operates the Yarmouth Wastewater Treatment Plant (WWTP), which serves the Town residents and some surrounding areas. The WWTP requires upgrades to address regulatory compliance and capital maintenance needs.

To support the planned upgrades, the Town requires geotechnical engineering services. Accordingly, the Town invites qualified geotechnical engineering firms (hereafter referred to as the “Consultant”) to submit proposals for a geotechnical investigation to evaluate subsurface conditions at the site and provide geotechnical recommendations for the design and construction of the proposed WWTP upgrades.

#### **2. Project Background**

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Yarmouth WWTP, located at 1 Water Street, Yarmouth, was commissioned in 1992. The plant was originally configured to allow upgrade to secondary treatment if effluent regulations became more stringent in the future. The Town is working towards complying with the federal Wastewater Systems Effluent Regulations (WSER) by operating under a transitional authorization that would see the Town requiring an upgrade to secondary treatment prior to January 1, 2041. With the existing plant now more than 30 years old, many of its components are at or beyond their original design life.

The Town is planning upgrades to the existing WWTP, including a new two-storey headworks and UV disinfection building and four (4) SBR tanks as components of the required upgrades for secondary treatment. Additionally, there is potential for a future digester tank on the north side of the site.

#### **3. Geotechnical Investigation Requirements**

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The Consultant shall ensure that all geotechnical investigation activities are conducted under the supervision and guidance of an experienced Geotechnical Engineer.

The Consultant is responsible for ensuring that all drilling, field testing, laboratory testing, and engineering analyses are performed and interpreted in accordance with applicable ASTM standards and accepted geotechnical engineering practices.

Prior to commencing field work, the Consultant shall identify and locate all existing underground utilities and services, including gas, telecommunications, and water/wastewater lines, at or near the proposed borehole locations. The Consultant shall be responsible for any damage to underground infrastructure resulting from the investigation activities and shall perform any necessary repairs at no additional cost to the Town.

### 3. Scope of Work

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The geotechnical investigation shall include, but not be limited to, the following:

- Review available background information, including surficial and bedrock geology mapping, aerial photographs, topographic data, and any previous geotechnical investigation reports if available.
- Develop and submit a proposed borehole location plan indicating the anticipated drilling locations for review and acceptance by the Town before field activities begin.
- Develop site-specific drilling and safety plans outlining methodology, hazard identification and control measures, emergency response plan, personal protective equipment (PPE) requirements and key site personnel.
- Identify and locate all existing underground utilities and services prior to commencing field work, engaging a private utility locator if necessary. The Town will assist in identifying its own underground utilities and services prior to the start of the investigation.
- Perform drilling and sampling work in accordance with ASTM D1586.
- With reference to Figure 1, advance boreholes for the proposed/future developments satisfying the following target depths:
  - For the proposed SBR tanks: boreholes BH1, BH2, BH3 and BH5 to a depth of 12 metres, provided competent soils are encountered ( $N > 15$  for two (2) consecutive samples).

- For the proposed process building: boreholes BH4, BH6 and BH7 to a depth 6 metres, provided competent soils are encountered (N > 15 for two (2) consecutive samples).
- For the potential future digester tank: boreholes BH8 and BH9 to a depth 12 metres, provided competent soils are encountered (N > 15 for two (2) consecutive samples).
- Perform Standard Penetration Testing (SPT) and sampling of overburden soils at 0.75-metre intervals in the upper 6 metres and at 1.5-metre intervals thereafter.
- If encountered within the stated borehole depths, core bedrock a minimum depth of 3.0 metres at a minimum of three (3) borehole locations. Recover bedrock core continuously at 1.5-metre intervals.
- Install a monitoring well in three (3) boreholes to triangulate the site and assist with static groundwater level determination. Monitoring wells shall be installed at the following locations: one (1) within the proposed SBR tank area, one (1) within the proposed process building area, and one (1) within the area of the potential future digester tank area. Allow for a return trip a minimum of 48 hours following the geotechnical investigation to collect stabilized groundwater levels. Monitoring wells may be left in place to be decommissioned at the time of construction.
- Locate borehole locations with handheld construction-grade GPS equipment to an accuracy of 10 cm. Reference UTM Zone 20N and CGVD2013.
- Provide a detailed boring log for each boring location. Soil identification and classification are to be in accordance with ASTM 2488 and boring log graphics in accordance with ASTM D2487.
- At the completion of each boring, backfill with drill cuttings and silica sand, as appropriate. Any boreholes advanced through concrete or asphalt surfaces are to be restored to pre-drilling conditions with appropriate grouting materials.
- Remove all equipment, tools, materials and supplies. Properly dispose of drill cuttings and excess materials; leave the site clear of debris and minimize surface disturbances.
- Transport all soil and rock samples to a testing facility for laboratory index testing. At a minimum:
  - Moisture content (ASTM D2216) and sieve analysis (ASTM D422) are to be completed for each soil stratum encountered.

- o Atterberg Limits (ASTM D4318) are to be determined for each cohesive soil stratum encountered; and
- o Uniaxial compressive strength (UCS; ASTM D7012) shall be determined on a minimum of one sample for each 1.5-metre run of core.
- o Additional laboratory testing on overburden soil and rock to complement design and construction recommendations are at the Engineer's discretion.
- Evaluate the adequacy of the investigation program and promptly notify the Town if additional subsurface exploration or testing is deemed necessary.
- All samples shall be retained in the Consultant's laboratory for a period of three (3) months following submission of the final report, after which they may be disposed of.



**Figure 1 Proposed borehole locations**

Following the completion of the geotechnical investigation, a formal **Geotechnical Investigation Report**, signed and sealed by a Professional Engineer licensed to practice in the province of Nova Scotia, shall be electronically submitted. The report is to include the following:

- Regional surface and bedrock geology.
- Information on existing site conditions, including access, constraints to construction, and former land use.
- Field observations.
- Description of the investigation program including detailed borehole logs and location plan.
- Detailed subsurface conditions.
- Observed groundwater conditions.
- Laboratory and field test results.
- Geotechnical design and construction recommendations shall include, but not be limited to: site preparation, general earthwork, surface water and erosion control, dewatering of excavations, suitability of onsite materials, design frost depth, recommended foundation system for building and bearing capacity (ULS), recommended foundation system for SBR tanks and bearing capacity (ULS), design parameters for retaining structures, seismic site classification<sup>1</sup>, potential geohazards, and winter construction guidelines.

<sup>1</sup>Seismic site classification is to be in accordance with Table 4.1.8.4.-B of NBCC2020 based on the energy-corrected SPT results determined during the subsurface investigation.

#### 4. Additional Requirements

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- The Consultant shall obtain site access permission from the Town and coordinate site entry.
- All work shall comply with safety standards, current ASTM standards and relevant codes.
- All boreholes shall be backfilled to the surface immediately after completion.
- Any unexpected subsurface conditions (e.g., contamination, buried debris, groundwater inflow) shall be reported to the Town immediately.
- If sulphide bearing rock is suspected, ARD (acid-rock drainage) testing is to be completed, with approval from the Town. Include the cost as a separate line item in the bid form.
- If, following the geotechnical investigation, it is the opinion of the Engineer that Seismic Site Classification A or B are achievable with shear wave velocity testing,

this is to be completed, with approval from the Town. Include the cost as a separate line item in the bid form.

## 5. Proposal Submission

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Proposals shall include:

- A brief description of the firm's experience and qualifications in geotechnical investigations for municipal and wastewater infrastructure projects.
- A list of key personnel highlighting:
  - their professional designation;
  - role on the team; and
  - relevant experience with wastewater treatment plants (WWTPs).
- Proposed drilling subcontractor.
- A proposed project schedule identifying key milestones and critical path activities.
- A cost proposal itemizing fieldwork, laboratory testing, reporting, and disbursements.
- Proof of professional liability insurance.

## TERMS AND CONDITIONS:

1. **Bidders' Questions:**

All questions related to this tender are to be directed to: Rob Chetwynd, CET - Chief Operator Water and Wastewater Treatment, by email to [chiefoperator@townofyarmouth.ca](mailto:chiefoperator@townofyarmouth.ca). Questions directed at other sources will not be answered.

2. **Non-Mandatory Site Visit:**

A non-mandatory site visit is proposed for Wednesday November 19<sup>th</sup>, 2025, at 10:00AM on site. If bidders are unable to attend the scheduled non-mandatory site visit but still wish to visit the site, they must notify Mr. Chetwynd in advance to arrange an alternative time prior to the scheduled date.

3. **Clarification and Addenda:**

Notify the above party not less than 3 working days before tender closing of omissions, errors or ambiguities found in these specifications. If it is deemed necessary that a correction, explanation or interpretation is required, a written addendum will be issued. It is the Bidder's sole responsibility to obtain addenda in which the Owner will not bear any responsibility for the failure of potential bidders to obtain all bid documents before submitting a bid.

4. **Payment:**

Payment shall be based on net 30 days from date of invoice following completion of the work.

5. **Taxes:**

The total bid price shall include 14% HST.

6. **Safety Certification:**

The successful bidder must provide a copy of current and valid safety accreditation issued by Nova Scotia Workers' Compensation Board or Certificate of Recognition (COR) issued by Construction Safety Nova Scotia prior to execution of the contract.

Out of Province tenderers with a current and valid COR from a Canadian Federation of Construction Safety Associations member shall obtain and submit, with tender, a current and valid Letter of Good Standing from Construction Safety Nova Scotia. Contractor is responsible for compliance with all Provincial Safety standards and Labour Regulations.

7. **Workers Compensation:**

The successful bidder must provide a copy of their current valid clearance letter issued by the Workers' Compensation Board of Nova Scotia prior to execution of the contract.

Out of province tenderers shall submit, with tender, a current and valid clearance letter from a government workers' compensation board but must register with the Nova Scotia

Workers' Compensation Board prior to being awarded the contract. Contractor shall ensure compliance with the Workers' Compensation Act and any regulations thereunder.

8. **SITE SPECIFIC SAFETY PLAN:**

Contractor to provide Job Procedure included in a Site Specific Safety Plan.

9. **INSURANCE:**

The successful contractor shall provide evidence of commercial liability insurance in the amount of no less than \$2 million.

10. **ACCEPTANCES, REVOCATION AND REJECTION OF TENDERS:**

The Town reserves the right to reject all tenders or any tender; not necessarily accept the lowest tender; waive any irregularities, formalities, informalities, or technicalities; and to accept or reject any offer whatsoever as considered by the owner to be in its best interest.

11. **REQUIREMENTS FOR FINAL INSPECTION:**

All items must be completed prior to final inspection. No exceptions will be made, and final payment will be delayed until all items are complete.

12. **INDEMNIFICATION:**

The contractor agrees to indemnify and save harmless the Town of Yarmouth from and against all claims, actions, losses, expense, costs or damages of every nature and kind whatsoever which may occur through the performance of this contract.

13. **GRATUITIES:**

The Town of Yarmouth may, by written notice to a proponent, cancel any contract if it is found by the Town of Yarmouth that gratuities, in the form of entertainment, gifts, or otherwise, were offered or given by the proponent, or the agent or representative of the proponent, to any employee or agent of the project with a view toward securing favorable treatment with respect to the awarding or amending, or making any determination with respect to performing of such contract.