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May 27, 2024  
File: 165681082.021

Town of Amherstburg  
512 Sandwich Street South  
Amherstburg, Ontario, N9V 3R2

**Attention: Mr. Todd Hewitt**  
**Manager of Engineering & Operations**

Dear Mr. Hewitt,

**Reference: Proposal for Engineering Services**  
**Amherstburg Water Treatment Plant Process Waste Residuals Management**

Per our recent discussions, we have prepared and are pleased to submit our proposal for consulting engineering services to improve the process waste residuals management at the Amherstburg Water Treatment Plant (AWTP).

This proposal outlines our scope of services, professional fees, and terms & conditions to carry out the assignment.

## **1.0: UNDERSTANDING OF ASSIGNMENT**

The Amherstburg Water Treatment Plant supplies potable water to the Town of Amherstburg as well as portion of surrounding communities of Lasalle and Essex. The plant has a rated capacity of 18,184 m<sup>3</sup>/d. The AWTP receives its source water from the Detroit River, which links Lake St. Clair with Lake Erie.

The AWTP consists of the follow major treatment process units: pre-chlorination for zebra mussel control, clarification with chemical addition of aluminum sulfate and polyelectrolytes, dual media (sand-anthracite) filtration, and chlorination. Other post-treatment chemical additions include fluoride and powered activated carbon. Process residuals including clarification/sedimentation sludge, filter backwash water, and filter-to-waste, discharge to the Detroit River.

According to Design Guidelines for Drinking-Water Systems issued by the Ministry of the Environment, Conservation and Parks (MECP), handling, treatment and environmentally acceptable disposal of water treatment process waste residuals is required. Therefore, provisions should be made for proper treatment and disposal of water treatment plant process residuals at the AWTP.

In the preliminary design phase, Stantec will gather and review background information, perform site investigations, assess quantity and quality characteristics of process residues, review possible alternatives for process residues management, determine preferred alternative, prepare preliminary concept plan, and preliminary cost estimates.

This preliminary design phase will be followed by Design Services including the preparation of construction drawings and specifications with contract documents; Tender Support Services during the public tender period; and Contract Administration and Field Services during construction. The following sections outlines our scope of services in greater detail.

## **2.0: SCOPE OF SERVICES**

The following sections summarize the specific tasks making up our scope of services.



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### ***2.1: Preliminary Engineering Services***

- 1) Gather and Review Background Information
  - Collect background information including existing inspection and lab analysis reports on process waste residuals, operation and maintenance complaints/service records, as-built drawings, and other documents prepared by or for the Town of Amherstburg.
  - Field investigation for visual inspection of existing plant sewer systems conveying process waste residuals from existing clarifier and filters.
  - Review background information to develop an understanding of existing clarifier and filters operation and maintenance as well as plant process waste residuals discharges.
- 2) Development and Evaluate Alternatives for Process Waste Residuals Management
  - Assess quantity and characteristics of process residuals.
  - Identify possible alternatives for process waste residuals management.
  - Evaluate and identify preferred alternative solution to process waste residuals.
  - Propose conceptual level modifications to manage process waste residuals.
- 3) Preliminary Design Report
  - Document background review, site investigation, and other data.
  - Develop the preferred solution to process waste residuals.
  - Define process waste residues management needs (design basis, layout, PFD, P&ID, hydraulic profile, etc.).
  - Evaluate and identify the location of process waste residuals management facility, and the route of waste residual discharge piping from clarifier and filters to the residuals management facility.
  - Prepare conceptual drawings of the proposed process waste residuals management facility.
  - Provide predesign report documenting recommendations and opinion of probable costs for the implementation of the proposed process waste residuals management facility.
  - Assist the Town/OCWA in application of permits and approvals (MECP, ERCA, etc.).

### ***2.2: Detailed Design Services***

- 1) Preparation of detailed construction drawings including structural, process mechanical, electrical, control & instrumentation trades for proposed new process waste residuals management facility.
- 2) Preparation of project specifications.
- 3) Preparation of contract documents for tendering purposes.
- 4) Preparation of Pre-Tender Opinion of Probable Construction Cost.
- 5) Submit above preliminary design documents to the Town at 70% and 100% complete for review and comment.
- 6) Revise and finalize contract documents for review and approval.
- 7) Finalize and issue Tender documents to Town for tendering purposes.

### ***2.3: Tender Period Services***

- 1) Assist Town with tender advertisement.
- 2) Answer questions and issue addenda during tender period. Town to manage communication with prospective bidders and plan takers.
- 3) Review and report on tenders.



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**2.4: Construction Period Services**

- 1) Contract Administration
  - a) Attend and chair pre-construction meeting and ongoing site meetings including preparation and distribution of meeting minutes.
  - b) Review of project schedules, shop drawings and submittals.
  - c) **Part-time inspection services to review general conformance based on total of 3 site visits per week (total 15 hours) over an estimated 24-week construction period for total allowance of 360 hours.**
  - d) Review and address Contractor's request for information (RFI) including issuance of contemplated change orders (CCOs), as needed.
  - e) Review of changes, costs and preparation of change orders as needed.
  - f) Preparation of monthly progress payment certificates as needed.
- 2) Commissioning
  - a) Review of contractors' commissioning plans.
  - b) Witness equipment commissioning and start-up.
  - c) Provide support during contractor commissioning.
  - d) Report on deficiencies and advise on rectification.
  - e) Conduct on-site meetings with Town to review improvements, including equipment operation and maintenance procedures and requirements.
  - f) Review installation of arc flash labels per Town's requirements.
- 3) Project Closeout
  - a) Preparation, monitoring, and updating of deficiency lists following construction.
  - b) Preparation of substantial performance, release of holdback, completion, and final certificates.
  - c) Coordinate assembly of close-out documents such as O&M manuals and as-built drawings.
  - d) Assist with review of close-out documents.

**3.0: PROJECT SCHEDULE**

Based on our experience on similar work, the following project schedule is proposed:

MILESTONES	DURATION	COMPLETION DATE
Preliminary Engineering Services	12 weeks	September 2024
Detailed Engineering Services	16 weeks	January 2025
Tender Advertisement	1 weeks	February 2025
Tender Closing	2 weeks	February 2025
Construction Award and Start	2 weeks	April 2025
Substantial Performance	30 weeks	November 2025

The above schedule is based on receiving an authorization to proceed with the assignment from the Town prior to June 25, 2024. Upon project award, through the project initiation meeting, the schedule is to be adjusted based on feedback from the City. Stantec is to endeavor to complete the project ahead of schedule and keep the City informed of work progress while providing updates on scheduling changes during regular project meetings.



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**4.0: ENGINEERING BUDGET**

Please note that our engineering fee has been prepared based on the following assumptions:

- Our fee doesn't include consulting services for geotechnical investigation and excess soil characterization survey during design. We will assist the Town to engage a geotechnical consultant to carry out the required works and identify design criteria for building and tank foundations.
- Our fee doesn't include consulting services for excess soil management during construction. We will prepare tender documents, specifying that the contractor will be required to provide all testing & reporting and retain a Qualified Person (QP) to comply with all regulatory excess soil management requirements.
- Topographic survey work may be needed to carry out this assignment. Our fee doesn't include allowance for Stantec to engage a local survey firm to carry out such work.
- Our budget fee doesn't include any archaeological assessment and natural heritage assessment.
- Our budget engineering fee does not include any allowance for advertising and/or venue costs nor for any application fees required by any regulatory agency. All costs and fees related to the above noted particulars including permits and approvals are not included in our fee and will be the responsibility of and at the total expense of the Town.
- The above budget engineering fee has been established based on our experience on similar projects. This fee is to be reviewed with the Town at the end of each project meeting and adjustments made to the work plan to maintain the fee as requested. Any clear changes in the scope of the work is to be identified and discussed with the Town, as they occur, and the budget fee revised to suit as needed.

If the foregoing assumptions are incorrect, please advise us and we will amend our work plan and engineering budget to suit.

Our engineering budget fee is made up as follows:

<b><i>Preliminary Engineering Services</i></b>	<b><i>\$45,000</i></b>
<b><i>Detailed Design Engineering Services</i></b>	<b><i>\$95,000</i></b>
<b><i>Tender Period Services</i></b>	<b><i>\$8,000</i></b>
<b><i>Construction Period Services</i></b>	<b><i>\$103,000</i></b>
<b><i>Post-Construction Period Services</i></b>	<b><i>\$8,000</i></b>
<b><i>Sub Total - Professional Fees</i></b>	<b><i>\$259,000</i></b>
<i>FRD @ 8% Flat Rate of Professional fees</i>	<i>\$20,720</i>
<b><i>Total Engineering Budget Fee</i></b>	<b><i>\$279,720</i></b>

Professional fees shown are in Canadian dollars for engineering work related to the scope of work outlined herein. Expenses, including mileage, incidental printing costs, communications and general office expenses are covered under the Flat Rate Disbursement. The above total budget engineering fee is to be viewed as an upset budget limit for the engineering services outlined in this proposal. Work is to be invoiced on an hourly basis for the actual time & effort necessary to carry out the assignment up to the upset budget amount.



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Should any significant and/or unforeseen project specific expenses arise during the project, which is not covered under this proposal, then the Town shall reimburse Stantec for the total cost of the expense plus a 10% markup. Also note that the above total budget fee does not include any allowance for advertising costs nor for any applications required by any regulatory agencies. Fees related to permits and approvals have also not been included in our fees and will be the responsibility of and at the total expense of the Town.

Overall, should it become apparent that the scope of work expands beyond that identified in this proposal and additional engineering services are required to ensure the successful completion of this assignment; then Stantec shall advise and request authorization from the Town prior to proceeding with any additional work and the associated additional fees negotiated.

We trust that you will find our proposal fully meets your needs. We are prepared to commence work immediately upon the execution of a mutually acceptable professional services agreement (PSA).

Should you have any questions or require clarifications or additional information with respect to this proposal, please contact the undersigned at your convenience.

Sincerely yours,

**Stantec Consulting Ltd.**

A handwritten signature in black ink that reads "Chrissy Jung".

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**Chrissy Jung**, M.A.Sc., P.Eng.  
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A handwritten signature in black ink that reads "Jian Li".

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