

Municipality of Lakeshore – Report to Council

Operations

Capital Projects



To: Mayor & Members of Council

From: Krystal Kalbol, P.Eng
Corporate Leader, Operations

Date: September 8, 2021

Subject: Tender Award – Denis St. Pierre Water Pollution Control Plant Expansion

Recommendation

Award the tender for the Denis St. Pierre Water Pollution Control Plant Expansion Project to North America Construction (1993) Ltd. in the amount of \$43,911,679.00 (plus applicable HST);

Approve external debt to be taken in the principal amount of \$45,281,427.72 for the Plant Expansion; and,

Approve additional funds in the amount of \$2,368,697.60 for the Rourke Line Road Reconstruction to be funded in the 2022 budget from the roads reserve, all as described in the September 14, 2021 Council report.

Background

The Denis St. Pierre Water Pollution Control Plant (the Plant) was identified to be nearing hydraulic capacity in the Municipality of Lakeshore's Water and Wastewater Master Plan Update (completed in May 2018). Based on this, Council approved a total budget of \$200,000 in 2019 to undertake the Environmental Assessment (EA) for the proposed plant expansion. The EA was undertaken and completed in May of 2020. The EA confirmed that the Denis St. Pierre Water Pollution Control Plant Expansion Project would increase the peak operational capacity of the Plant by approximately 70%.

At the end of 2019, the average flows (for 2019) indicated that the Plant was operating at 92% of its rated capacity.

Based on the continued growth across the Municipality and the continued increase in flows at the Plant, Council approved a total budget of \$2,200,000 in 2020 to complete the Design of the Denis St. Pierre Water Pollution Control Plant Expansion and Outfall.

A further review of the plant flow at the end of 2020 identified significantly higher flows than in 2019. The experience in 2020 saw a total increase to the plant's average flow by approximately 13%, at the time operating, on average, at 105% of its rated capacity.

As part of the outfall design (required as part of the Plant expansion), it was determined that the roadway along Rourke Line from the Plant to Lake St. Clair would require reconstruction. Council approved a total budget of \$100,000 in 2021 to complete the design for the Rourke Line road reconstruction.

Further, Council addressed the capacity issue by expediting the funding for the construction of the Denis St. Pierre Water Pollution Control Plant Expansion and in 2021 Council approved a total budget of \$7,500,000 for a portion of the construction costs of the Plant expansion, so that the project could commence with construction in late 2021.

Upon completion of the detailed design, OCWA recommended that parts of the Plant's existing SCADA system be upgraded in advance of the commencement of the Plant expansion in order to be compatible with the expansion's new system. The upgrade was completed in April of 2021 and the cost of this upgrade was \$124,292.07 as part of the Plant expansion.

Design of the Plant expansion was completed in June of 2021. Ministry of the Environment, Conservation and Parks (MECP) approval for the plant expansion was issued on July 12, 2021.

The Denis St. Pierre Water Pollution Control Plant Expansion Project tender was publicly advertised on Bids & Tenders on Friday July 16, 2021, and closed on Friday August 20, 2021.

Comments

The below 4 tenders were received prior to tender closing and opened in accordance with the online bidding process:

Tenderer	Price (excluding HST)	Price (including non- refundable HST)
North America Construction (1993) Ltd.	\$43,911,679.00	\$44,684,524.55
HIRA Ltd.	\$44,462,200.00	\$45,244,734.72
Maple Reinders Constructors Ltd.	\$45,155,650.00	\$45,950,389.44
ASCO Construction (Toronto) Ltd.	\$46,295,527.00	\$47,110,328.28

Administration is satisfied that the lowest tendering party has the required equipment and labour expertise to undertake this project and recommends the award of the Denis St. Pierre Water Pollution Control Plant Expansion Project to North America Construction (1993) Ltd.

In addition to the above tendered project, design documents have been completed, for the Road Reconstruction of Rourke Line (from approximately 400 m meters north of County Road 22 to Caille Avenue), the effluent sewer line and the installation of a new outfall structure to accommodate the Denis St. Pierre Water Pollution Control Plant Expansion.

The Rourke Line Road reconstruction and outfall project is scheduled to be tendered in late 2021/early 2022 for construction to commence in early 2022. Construction completion is expected to occur prior to the commissioning and operation of the Plant expansion.

Financial Impacts

A detailed breakdown of the costs and budget are included below:

Denis St. Pierre Water Pollution Control Plant Expansion And Outfall	Total Project Cost (including applicable HST)	Budget
Environmental Assessment & Engineering Design		
Environmental Assessment	\$115,018.00	
Engineering Design fees for Plant Expansion and Outfall Structure	\$2,049,134.52	
Construction Costs		
SCADA upgrades (to existing plant system)	\$122,142.31	
Tender Price including Provisional and Contingency Allowances	\$43,911,679.00	
Sewer effluent and Outfall (estimate – to be awarded in 2022)	\$4,800,000.00	
Permits	\$29,658.13	
On-Site and Contract Administration fees, Construction of Plant Expansion and Outfall.	\$3,199,400.00	
Non Refundable HST	\$954,395.76	
Total Cost including HST	\$55,181,427.72	
Approved Funding in the 2019 Wastewater Budget - Environmental Assessment		\$200,000.00

Approved Funding in the 2021 Wastewater Budget – Design Plant Expansion		\$2,200,000.00
Approved Funding in the 2021 Wastewater Budget – Construction of Plant expansion and Outfall		\$7,500,000.00
Total Approved Funding		\$9,900,000.00
Total Surplus/(Deficit)		(\$45,281,427.72)

The initial estimate provided in the 2019 EA for the Plant expansion (entire project) was \$29,220,893.00. This did not consider permits or the SCADA upgrades at the existing plant that were required.

Based on the above, the following contributed to the increase in expected deficit:

- The estimated cost noted above was based on 2019 values;
- Further, changes in project scope to improve existing plant operations was discussed and implemented in the pre-design discussions and report; and
- The primary cause for the cost increase is the result of unprecedented price increases for materials and equipment over the last 14 months due to soaring metal costs, COVID-19 shutdowns and strong demand for construction materials.

Administration engaged Watson & Associates Economists Ltd. (Watson) to evaluate the financing options for the Plant expansion. Watson has prepared the attached report with three funding options, which include the following:

1. Finance the remaining project costs with external debt only; or
2. Finance the remaining project costs with internal reserves and reserve funds; or
3. Finance the remaining project costs with a combination of external debt and internal reserve funds.

The total financing required would be \$57,000,000 which is the \$45,281,427.72 plus interest over the 20 year period.

Option 1 – External Debt Only

Benefits

- The project is 90% growth-related, therefore 90% of the principal and interest charges may be funded from the Wastewater Development Charges.
- Spreading out the cost of capital projects over the project's useful life. The cost of the capital project will be borne by both current and future users/rate payers.

- Decreased pressure on current tax and user rates, preventing a substantial one-time increase in rates.
- Interest rates are at a historic low. The use of debt instruments while interest rates are low leaves more capacity in reserves and reserve funds to internally finance future projects. Any subsequent increases in interest rates will make debt financing a less attractive option for future projects.

Risk

- If borrowing from Infrastructure Ontario, the Municipality will be locked in to the term and interest rate negotiated upon the issuance of the debt. The Municipality will not have the ability to extinguish the debt early, as such the interest costs will be fixed.
- The use of debt financing results in additional costs being added to the project, as the Municipality will need to pay interest.
- Setting aside funds for repaying debt may inhibit the Municipality's fiscal flexibility for future projects, as financing options may be limited

Other Financial Considerations

- In the attached report, Watson estimates that the total financing required will be approximately \$57,000,000. As mentioned above, 90% of the principal and interest associated with this debt may be funded from Development Charges. The annual transfer from the Waste Water Development charge would need to be approximately \$2,856,000. Currently, the projected annual revenues are approximately \$600,000, leaving a deficiency of revenues over debt servicing costs of \$2,256,000 annually. Since the next DC Study is scheduled for 2025, the Municipality has two alternatives in relation to development charges which are:
 - Alternative 1: Continue collecting development charges in accordance with the current Development Charge Study, funding the shortfall from grants and other reserves. OCIF Funding for the Non-Growth Related Costs (up to the \$5.3M) and the Federal Gas Tax Funding (approximately \$1,777,000 annually) may cover a portion of the shortfall, however the risk in using either or both of these funding sources is that one or both of the funding sources will be reduced or eliminated in the future. Any further shortfalls would need to be cash-flowed from current user fees and rates. This is the funding strategy outlined in Appendix A. Over time, the Development Charge reserve would need to repay the Wastewater capital reserves.
 - Alternative 2: Engage external consultants to perform an update to the current Development Charges study. This will enable the Municipality to adjust the current Waste Water charges to account for the shortfall. The financial impact of this adjustment would be an increase of approximately \$4,000. The fee associated with an update would be

approximately \$8,000. There is a risk that the increase in development charges would reduce development, impacting the development charge revenue.

Option 2 – Internal Reserves and Reserve Funds

Benefits

- The Municipality would not be locked in to a specified term and would have the ability to repay the debt at a period that is beneficial.
- Interest costs would be paid by the Development Charge reserve to other reserve and reserve funds, rather than external agencies.

Risks

- Non-wastewater reserves and reserve funds would have to cash flow the costs of the expansion project. As these funds have been set aside for specific purposes, the ability for the Municipality to move forward with other projects may be inhibited. Over time, the Development Charge reserve will need to repay the internal borrowings, with interest.

Option 3 – Combination of External Debt and Internal Reserves and Reserve Funds

The risks and benefits of both the preceding options are carried through into this option.

Recommendation

The recommendation by Watson and Associates, as supported by Administration, is Option 1- External Debt, to finance the project.

The interest costs and principal payments would need to be funded by the Wastewater Development Charge Reserve. Given the current shortfall of annual revenues over anticipated debt servicing costs, Administration does recommend proceeding with an update on the development charge study, as the additional revenue to be collected will assist in generating the cash flow and decrease the reliance on grants funding. The update to the study will be brought forward in the 2022 budget.

A detailed breakdown of the costs and budget for the Rourke Line Road Reconstruction Project are included below:

Rourke Line Road Reconstruction	Total Project Cost (including applicable HST)	Budget
Engineering Design	\$100,000.00	
Estimated Road Reconstruction Costs	\$2,200,000.00	

Tender, On-Site and Contract Administration of Road Reconstruction	\$126,000.00	
Non Refundable HST	\$42,697.60	
Total Cost (including HST)	\$2,468,697.60	
Approved Funding in the 2021 Budget - Roads Lifecycle Reserve Budget for Design		\$100,000
Total Surplus/(Deficit)		(\$2,368,697.60)

The deficit for the completion of the Rourke Line Road Reconstruction will be carried forward in the 2022 budget, to be funded from the Roads Reserve.

Attachments

Memo: Watson and Associates - Denis St. Pierre Water Pollution Control Plant Expansion Financing

Appendix A: Funding Strategy of Denis St. Pierre

Report Approval Details

Document Title:	Tender Award - Denis St. Pierre Water Pollution Control Plant Expansion, Outfall and Rourke Line Road Reconstruction.docx
Attachments:	- Memo- Watson and Associates - Denis St. Pierre Water Pollution Control Plant Expansion Financing.pdf - Appendix A- Funding Strategy Denis St Pierre.xlsx
Final Approval Date:	Sep 10, 2021

This report and all of its attachments were approved and signed as outlined below:

Jessica Gaspard

Kristen Newman

Truper McBride