
Subject: Gross Budget Increase for 2023-T-128 Quaker Road Sanitary Trunk Sewer

Report to: Public Works Committee

Report date: Tuesday, March 4, 2025

Recommendations

1. That the gross capital budget for the Quaker Road Sanitary Trunk Sewer **BE INCREASED** by \$3,530,000 and that the increase **BE FUNDED** as follows:
 - Capital Variance Project – Wastewater - \$353,000
 - Development Charges – Wastewater - \$3,177,000
2. That an amendment to increase construction contract 2023-T-128 with Peters Excavating Inc. in the amount of \$3,331,368 (including 13% HST) **BE APPROVED** for a total revised contract value of \$15,398,257 (including 13% HST) for the Quaker Road Sanitary Trunk Sewer project, in a form satisfactory to the Director of Legal and Court Services.

Key Facts

- On-site soil conditions are worse than expected, so an alternative construction method (specialized tunneling) is needed to minimize the risk of disrupting the large water transmission main that supports all of Pelham.
- This report seeks Council's approval to increase the gross capital budget for project 20001149 (Quaker Road Sanitary Trunk Sewer) by \$3,530,000 and amend the construction contract with Peters Excavating Inc. to include these additional required works in the amount of \$2,948,113 (excluding 13% HST).
- The construction contract for the project underwent a competitive procurement process and was awarded to Peters Excavating Inc. in November 2023 in the amount of \$10,678,663 (excluding 13% HST) pursuant to PW 41-2023.
- The current approved capital budget for project 20001149 is \$12,198,468. Upon approval of the proposed capital budget adjustment of \$3,530,000, the total gross project budget will be \$15,728,468.
- Per the Budget Control By-Law Section 6.5(c)(iii), Council approval is required for Capital Variance requests greater than \$250,000.

- Although the original contract was competitively bid and awarded to Peters Excavating Inc. via PW 41-2023, the additional work is treated as a single source purchase pursuant to the Procurement By-law and requires Council approval given that cumulative value of the additional work is greater than \$1,000,000.

Financial Considerations

A gross capital budget adjustment of \$3,530,000 funded from the Capital Variance Project – Wastewater (\$353,000), and Development Charges – Wastewater (\$3,177,000), is being requested through report PW 6-2025 to complete the construction of the Quaker Road Sanitary Trunk Sewer.

- Project 20001149 Quaker Road Trunk Sewer Replacement is 90% DC recoverable and currently has an approved capital budget of \$12,198,468 including cost sharing expenditures with the Town of Pelham and the City of Welland for design, construction, contract administration and inspection as detailed in Appendix 1 to Report PW 6-2025 – Total Estimated Project Costs.
- In June 2023 through PW 23-2023, a gross capital budget adjustment of \$3,727,895 (including an increase to cost sharing expenses of \$868,939) was approved by Council as the consultant's estimate for construction had increased due to the rising cost of labour and materials, resulting in a revised total project budget of \$12,198,468.
- There is a cost-sharing agreement in place with both the Town of Pelham and the City of Welland as work for both Local Area Municipalities (LAMs) is being undertaken as part of this project. The cost share estimates for the LAMs are \$3,151,813 and \$1,584,699 respectively which remains unchanged from Report PW 41-2023.
- Due to the unforeseen geotechnical issues and poor soils conditions that arose with the project, additional funds are required to proceed with an alternative construction method to install the sanitary trunk sewer four metres below the Region's 750mm water transmission main to mitigate risk.
- The total spent and committed on this project as of January 31, 2025, is \$11,890,340. Upon approval of the proposed capital budget adjustment of \$3,530,000, the total gross project budget will be \$15,728,468. A full budget breakdown is presented in Appendix 1 to Report PW 6-2025 – Total Estimated Project Costs.

- Although the original contract was competitively bid and awarded to Peters Excavating Inc., the required additional work is treated as a single source purchase which requires Council approval, as per Schedule B, and Section 18(a)(i) of the Procurement By-law, as the value is greater than \$1,000,000, and continuation of the required works by the contractor is a paramount consideration to complete this project.

Analysis

Support for Growth in Pelham and Welland

The purpose of this project is to increase the capacity of the wastewater collection system and support growth for both Pelham and Welland by constructing a new sanitary trunk sewer from Pelham Street in the Town of Pelham to Rice Road in the City of Welland. The Town of Pelham and City of Welland are cost sharing partners in the project and are utilizing the opportunity to improve their own infrastructure. The depth of the new sanitary trunk sewer ranges from five to nine metres deep.

The new trunk sewer crosses below a large water transmission main that feeds all of Pelham. The sanitary trunk sewer is to be installed four metres below the Region owned 750mm water transmission main at the intersection of Quaker Road and Clare Avenue. The original scope of work was to have the contractor support the water transmission main from above while excavating and installing the sanitary trunk sewer below. To complete this task with minimal risk, a relatively narrow trench would have to be maintained.

Alternative Construction Methods Required

At the start of construction, on-site soil conditions proved more challenging than indicated in the geotechnical reports. The soil was less stable than anticipated, causing material to collapse into the excavation before support could be installed, requiring significantly wider trenches. Surface trench widths have consistently exceeded double the design assumption, compromising the ability to safely support the water transmission main. To prevent damage, the remaining sanitary trunk sewer section must be tunneled beneath the main instead of using open-cut excavation. It should be noted that this water transmission main is the only feed to the Town of Pelham and acts as a back-feed to the Welland water system to provide adequate system pressures at peak times and during fire flow events.

A failure of the pipe would result in a watermain break, threatening the excavation and those within it, as well as result in approximately 14,000 residents in Pelham being without water for an indeterminate amount of time. It would also put the Welland water system at risk as there would be no emergency back-feed to support it. Proceeding with the microtunneling approach to installing the sanitary trunk sewer allows the water transmission main to remain operational for the duration of the work, and greatly reduces the risk to the water transmission main and the public.

Council Approval Needed to Move Forward

Although the original contract was competitively bid and awarded to Peters Excavating Inc., the required additional work is treated as a single source purchase which requires Council approval, as per Schedule B, and Section 18(a)(i), respectively, of the Procurement By-law, as the value is greater than \$1,000,000, and continuation of the required works by the contractor is a paramount consideration to complete this project.

Alternatives Reviewed

Approve the increase of funds and addition of required work to the existing contract (Recommended). This will allow the contractor to complete the final section of sanitary trunk sewer using a microtunneling approach under the existing Region owned water transmission main, which will greatly reduce the risk to the construction project, as well as public health and safety.

Do not approve the increase in funds/addition of the required work to the existing contract (Not Recommended). It's not feasible to competitively procure the additional work because it would cause project delays, leading to high standby and remobilization costs for the contractor. The contractor will be unable to construct the remaining section of sewer and therefore, the sewer will not be operational, and development in the Town of Pelham will be limited until the sewer is complete.

Relationship to Council Strategic Priorities

Additional funding will allow for the Quaker Road Sanitary Trunk Sewer Project to be successfully completed with minimal risk to public health and safety, which supports the following Council priority.

[Council Priority: Green and Resilient Region](https://www.niagararegion.ca/priorities) (<https://www.niagararegion.ca/priorities>) requires that the Water and Wastewater Division ensure Region owned transmission

and collection infrastructure can support growth and be resilient against the impacts of climate change.

Other Pertinent Reports

[PW 23-2023 - Gross Budget Increase from Cost-sharing Agreement with the City of Welland and Town of Pelham Trunk Sewer Replacement](#)

(<https://pub-niagararegion.escribemeetings.com/Meeting.aspx?Id=14ca1390-5f44-4d85-9749-984f77b232a2&Agenda=Agenda&lang=English&Item=15&Tab=attachments>)

[PW 41-2023 - Award of Contract 2023-T-128 Quaker Road Sanitary Trunk Sewer Between Pelham Street and Rice Road in the Town of Pelham and City of Welland](#)

(<https://pub-niagararegion.escribemeetings.com/Meeting.aspx?Id=50280174-8c6e-4d8c-8f6e-53a5cec5340f&Agenda=Agenda&lang=English&Item=16&Tab=attachments>)

Prepared by:

Richard Gabel, P. Eng.
Manager Capital Projects, Engineering
Water-Wastewater Services

Recommended by:

Terry Ricketts, P. Eng.
Commissioner of Public Works
Public Works Department

Submitted by:

Michelle Sergi, MCIP, RPP
Deputy CAO
Office of the DCAO

This report was prepared in consultation with Lucas Smith, Project Manager; Tony Cimino, Associate Director, W-WW Engineering; Dan Ane, Senior Program Financial Specialist; Michelle Rasiulis, Procurement Manager; Janet Rose, Communications Consultant; and reviewed by Donna Gibbs, Director Legal Services and Phill Lambert, Director W-WW Services.

Appendices

Appendix 1 Total Estimated Project Cost

PW 6-2025 - Appendix 1**Total Estimated Project Cost****Gross Budget Increase for 2023-T-128 Quaker Road Sanitary Trunk**

Total Estimated Project Cost (200001149)*	Council Approved Budget Per PW 41-2023	Budget Increase/ Reallocation	Revised Council Approved Budget	Expended & Committed as of 01/31/25	Contract Award/ Forecast	Budget Remaining
Project Element	(A)	(B)	(C) = (A) + (B)	(D)	(E)	(F) = (C)-(D)- (E)
(a) Construction (including Construction Contingency and 1.76% non-recoverable HST)**	-	-	-	-	-	-
i. Niagara Region	5,612,956	3,660,676	9,273,632	6,273,632	3,000,000	-
ii. Cost Sharing - Town of Pelham	3,151,813	-	3,151,813	3,008,276	143,537	-
iii. Cost Sharing - City of Welland	1,584,699	-	1,584,699	1,584,699	-	-
(b) Project Contingency	849,000	(549,000)	300,000	-	300,000	-
(c) Property Acquisition	-	-	-	-	-	-
(d) Consulting Engineering Services	-	-	-	-	-	-
i. Detailed Design	252,000	6,019	258,019	258,019	-	-
ii. Contract Administration & Inspection	-	504,516	504,516	360,656	143,860	-
iii. Geotechnical Service-Quality Control	-	325,289	325,289	325,289	-	-
(e) Project Management (In-House) and Operations	586,000	(417,500)	168,500	79,769	88,731	-
(f) Traffic Signals and Signs	-	-	-	-	-	-
(g) Utility Relocation	-	-	-	-	-	-
(h) Subsurface investigation	-	-	-	-	-	-
(i) Warranty	162,000	-	162,000	-	162,000	-
Total Estimated Project Cost	12,198,468	3,530,000	15,728,468	11,890,340	3,838,128	-

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Development Charges Wastewater (WW) (90%) **	(7,176,060)	(3,177,000)	(10,353,060)	(7,011,469)	(3,341,591)	-
Capital Variance Project - Wastewater	(285,896)	(353,000)	(638,896)	(285,896)	(353,000)	-
Municipal Cost Sharing - Pelham	(3,151,813)	-	(3,151,813)	(3,008,276)	(143,537)	-
Municipal Cost Sharing - Welland	(1,584,699)	-	(1,584,699)	(1,584,699)	-	-
Total Project Funding Sources	(12,198,468)	(3,530,000)	(15,728,468)	(11,890,340)	(3,838,128)	-

*All costs include 1.76% non-recoverable HST

** Please note that the DC Recovery % changed from 100% in the 2017 study to 90% in the 2022 DC Study