
Subject: Award of Contract 2018-T-127 (RN 18-27) Stamford Interceptor Rehabilitation Phase 1

Report to: Public Works Committee

Report date: Tuesday, September 25, 2018

Recommendations

1. That Report PW 29-2018 **BE RECEIVED** for information.

Key Facts

- Special Reference
 - Given Section 275 of the *Municipal Act, 2001*, and Regional Council's delegated authority to the Chief Administrative Officer via report GM 8-2018, that the Chief Administrative Officer consider and authorize:
 - That this report will incur expenditures or liability which exceeds \$50,000; and
 - That staff proceed with awarding Contract 2018-T-127 (RN 18-27) - Stamford Interceptor Rehabilitation Phase 1 to Liqui-Force Services (Ontario) Inc. at their bid price (for the Niagara Region- Stamford Interceptor and St. Catharines Valley Road Sewer Rehabilitation works only) of \$10,597,980.20 (including HST), subject to confirmation of cost sharing by the City of St. Catharines.
 - That staff proceed with the gross budget increase for the Stamford Interceptor Rehabilitation Phase 1 Project (10SW1512) of \$2,088,632 (inclusive of non-refundable HST) for the regional portion of the work and that the increase be funded from the Capital Variance – Wastewater Project
 - That staff proceed with the gross budget increase for the share of work done on behalf of the City of St. Catharines totalling \$823,192 (inclusive of non-refundable HST) funded in full through cost sharing agreements.
 - Should the Chief Administrative Officer incur an expenditure or liability greater than \$50,000, then the CAO will report to the new Council all steps taken pursuant to this decision.
- The project is required to renew approximately 2,314 meters of trunk sanitary sewer ranging in diameter from 1050 to 1200 mm including respective manholes from Dorchester Road to the CN Railway (approximately 900m north of Morrison Street) in the City of Niagara Falls. In 2014, a condition assessment was completed and it was confirmed that this sewer displayed significant structural damage due to

hydrogen sulphide corrosion. Since then, the Region has had to install construction fencing around the first manhole due to severe deterioration resulting in safety concerns. This sewer services a large area of Niagara Falls with a serviced population of approximately 30,000 residents including major tourism destinations such as Marineland. Failure of this sewer would be catastrophic. See Appendix 1 - Key Plan.

- A prequalification of General Contractors for the project was undertaken through 2017-RFPQ-10 on November 1, 2017. A total of four (4) General Contractors (Pipeflo, Insituform, Liqui-Force, and Clean Water Works) were prequalified.
- Following 2017-RFPQ-10, the four (4) prequalified General Contractors were then invited to submit bids for the project. The tendering process was completed three (3) times as there were issues with the compliance and completeness of the tender submissions. Purchasing and Legal staff were consulted throughout the entire procurement process
- This project has been approved for \$1,549,667 Federal and \$774,833 provincial funding, for a total of \$2,324,500 through the Clean Water and Wastewater Fund (CWWF) with a project completion deadline of March 31, 2020.

Financial Considerations

Project 10SW1512 (Sewer & Forcemain Prgm – Stamford Interceptor) has a previously approved capital budget of \$7,650,000. The total estimated project cost after the award of Contract 2018-T-127 (RN 18-27) is \$10,561,824 (inclusive of non-refundable HST) as detailed in Appendix 2 – Total Estimated Project Cost.

The contract award includes both regional components as well as components for the City of St. Catharines. The regional portion of the contract award is \$8,720,617 (inclusive of non-refundable HST). The contract costs for the components related to the City of St. Catharines (inclusive of non-refundable HST) is \$823,192. Total contract award is \$9,543,809 (inclusive of non-refundable HST).

Total regional costs are expected to be \$9,738,632. The initially approved project budget for the regional portion of costs was \$7,650,000, therefore a budget increase of \$2,088,632 is required; to be funded from the Capital Variance – Wastewater Project. It should be noted also that partial funding of \$2,324,500 (\$1,549,667 Federal and \$774,833 Provincial) has been previously awarded through the Clean Water and Wastewater Fund (CWWF).

The total cost of \$823,192 for work to be performed on behalf of the City of St. Catharines was not included in the original budget of \$7,650,000. A gross budget adjustment will therefore be required to further increase the project budget by this

amount and will be fully recovered through cost sharing agreement with the City of St. Catharines, with no regional cost impact. The City has indicated they are requesting the necessary budget adjustments to fund their works from their respective council. If necessary, these portions of works can be removed from the Contract based on the conditions set out in the Contract.

Analysis

In 2014, the Region undertook a condition assessment of 71 sections of sewers within four (4) various trunk sanitary sewers including the Stamford Interceptor sewer immediately upstream to the Niagara Falls WWTP. Sewer sections were reviewed using CCTV inspections and in-field robotic testing of the interior wall of select sewer pipes that were found to be in the worst visual condition during the CCTV Review. Manhole condition assessments consisted of CCTV and man entry inspections which documented and photographed evidence of deterioration. Phase 1 of the Stamford Interceptor sewer condition assessment consisted of 23 sewer sections and 24 manholes. This assessment identified numerous areas of spalled concrete exposing the re-enforcing steel within the concrete sewers due to hydrogen sulphide corrosion and was therefore recommended for immediate rehabilitation. Since then, the Region has had to install construction fencing around the first manhole due to severe deterioration resulting in safety concerns. This sewer services a large area of Niagara Falls with a serviced population of approximately 30,000 residents including major tourism destinations such as Marineland.

In addition, this project was scheduled to be completed cooperatively and cost shared between the Region, Town of Fort Erie, City of St. Catharines and City of Niagara Falls. The Town of Fort Erie and City of St. Catharines had included rehabilitation works on their respective sewer systems along Dominion Road (Lakeshore Road to Beachview Avenue) and Valley Road respectively to promote cost savings by sharing the Contractor's mobilization and general administration costs between the various projects. The City of Niagara Falls had included Section 6 of the Millennium Trail along the Stamford Interceptor alignment located within the OPG corridor between Dorchester Road and Drummond Road. By including the Millennium Trail scope to this project, the Region and City were expediting the trail construction which would have otherwise been delayed until the Stamford Interceptor works was completed due to Ministry of Labour requirements for contractor separation of working zones.

GHD was retained by Niagara Region through 2015-RFP-26 to complete the detailed design, tendering and contract administration and inspection for this project on November 13, 2015. GHD was also retained through informal quote to complete geotechnical investigations during design. Their contract will be extended to conduct materials testing and inspection services during construction.

A prequalification process was initiated through 2017-RFPQ-10 and a total of four (4) General Contractors (Pipeflo, Liqui-Force, Insituform, Clean Water Works), who have performed similar complex rehabilitation projects in the past, were prequalified. These contractors were then invited to submit tenders for the Stamford Interceptor Rehabilitation Phase 1 through 2018-T-118 initiated on May 11, 2018. The tender was issued as a two envelope process, which included a technical validation to allow the Project team the opportunity to validate specified high risk items for compliance prior to opening of prices. A total of two (2) submissions were received on June 12, 2018 from three of the prequalified Contractors (Pipeflo, Liqui-Force with Insituform). Upon submission, GHD conducted the technical validation to confirm that submissions were in accordance with contract specifications. It was determined that each submission was deemed technically non-compliant due to missing or incomplete information. Given that there were no compliant bidders, Tender 2018-T-118 was cancelled. Each Contractor was notified of their non-compliances and their unopened cost envelope was returned.

Purchasing and Legal staff were consulted extensively during this process to ensure proper measures for notification and re-tendering were adhered to.

Tender 2018-T-118 was cancelled and reissued on June 20, 2018 to all four (4) pre-qualified bidders through Tender 2018-T-125. The tender was issued as a two envelope process, however, the Project team included a submission checklist as well as simplified the forms required for the technical validation for ease of bidding. One (1) submission was received on June 29, 2018 from Liqui-Force with Insituform as a subcontractor. Upon validation check, it was noted that required pages were again omitted, as such, the submission was deemed incomplete and disqualified. Given that there were no compliant bidders, Tender 2018-T-125 was cancelled.

Following 2018-T-125, Purchasing and W&WW Engineering staff conducted separate debrief sessions with each of the pre-qualified contractors to identify issues with the tendering process in order to address concerns prior to reissuing the tender so as to encourage multiple compliant bid submissions.

Feedback from the debrief sessions was considered and incorporated in a revised Contract package. As such, the project completion dates were extended to ensure a feasible schedule and some of the technical validation submittal requirements were deferred until after the contract award by the successful proponent. The tender was reissued on July 16, 2018 to all four (4) pre-qualified bidders through Tender 2018-T-127. One (1) submission was received on August 3, 2018 from Liqui-Force with Insituform using a two envelope process. Envelope One (technical validation) underwent a technical review and determined that the submission was technically compliant. Liqui-Force was notified and invited to attend the public opening of Envelope Two (bid submission) on July 3, 2018.

The tender submission included Addendums No. 1 and 2 as well as the necessary tender deposit and Agreement to Bond. The tender was reviewed and a few minor arithmetic errors were found. The tender price for Liqui-Force Services Inc. was revised to \$11,953,352.26 (including HST). The following is a breakdown of the bid received (including HST) per Municipality.

- Niagara Region – Stamford Interceptor: \$9,683,861.32
- St. Catharines – Valley Road Sewer Rehabilitation: \$914,118.88
- Fort Erie – Sewer & Manhole Rehabilitation: \$308,052.33
- Niagara Falls – Millennium Trail & Landscaping: \$1,047,319.73

GHD has reviewed the bids and have provided a recommendation to award Contract 2018-T-127 (RN 18-27) to Liqui-Force Services (Ontario) Inc.

Unfortunately, following the tender close, the Region received formal notification from the Town of Fort Erie and City of Niagara Falls to indicate their withdrawal from the project due to shortfall of approved funds and that neither Fort Erie nor Niagara Falls intended to proceed with any budget adjustments. These municipalities will review and adjust their respective scope of work and proceed with their project on their own. This scope is being deleted from the contract award in accordance with the Contract documents.

The adjusted Contract price as a result of deleting these respective works is \$10,597,980.20 (including HST). Staff therefore recommends that the tender submitted by Liqui-Force Services (Ontario) Inc be accepted as revised following the Niagara Falls and Fort Erie deletions.

Contract award requires resources from Enterprise Resource Management Services in order to execute the required contract documents. Water & Wastewater staff will be providing resources throughout the project in order to manage the contract with assistance from Enterprise Resource Management Services on contract/project payments. The City of St. Catharines and City of Niagara Falls will be notable participants in the project. GHD will be completing Contract Administration, Inspection and Materials Testing services on this project.

Alternatives Reviewed

Option 1 – Proceed with Contract Award

This alternative would enable staff to proceed with Contract Award to Liqui-Force Services (Ontario) Inc. to address the maintenance issues with this sewer and ensure reliable infrastructure for the residents of Niagara Falls. As per the Contract documents, the Region reserves the right to remove scope as needed. The Contract award includes the City of St. Catharines scope and excludes the Town of Fort Erie and the City of Niagara Falls scope.

This is the preferred option as it would not only address the degrading condition of the existing sewer system but also permit the local municipalities to complete their respective rehabilitation and pedestrian trail works.

Option 2 - Do Nothing

This alternative does not address the maintenance issues with this sewer and does not ensure reliable infrastructure to support growth and economic development. Structural failure of this sewer is imminent if this sewer is not rehabilitated promptly and is permitted to continue to suffer deterioration, due to the hydrogen sulphide gases. Failure of this trunk sewer would cause a catastrophic loss of service and result in a significant amount of untreated sewage spilled to the Sir Adam Beck #2 Hydro Power Canal along with residential basement flooding.

Option 3 – Cancel Tender & Reissue as Multiple Tenders

This alternative would consist of cancelling the current tender (2018-T-127) and revising the project scope of work to develop multiple smaller contracts. Priority can be given to the critical areas which are of imminent failure.

This alternative is not preferred because of the indirect costs associated with the bypass pumping system and general administration. These items would be required for each contract and therefore increase the total overall project cost. Furthermore, this would also lengthen the construction period due to the re-tendering process and the time to complete each contract consecutively.

Although the City of Niagara Falls has withdrawn from the Region's project, the City is anticipating to proceed on their own with construction of the Millennium Trail. This trail cannot be constructed until the Stamford Rehabilitation works are complete as the construction activities for the Stamford project would impact the area and therefore damage the trail. Delay in the Region's project would in turn delay the trail works.

Staff recommends Option 1 and to proceed with Contract Award.

Relationship to Council Strategic Priorities

This recommendation is related to the Fostering Growth strategic priority since the planned rehabilitation will ensure reliable infrastructure to support growth and economic development within the City of Niagara Falls and City of St. Catharines.

Other Pertinent Reports

- None

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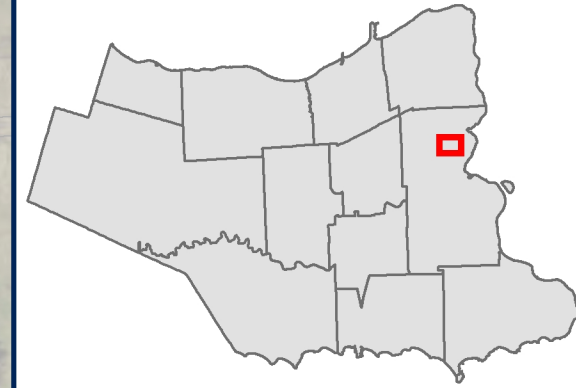
Submitted by:

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Chief Administrative Officer

This report was prepared in consultation with Lisa Vespi, P.Eng. Senior Project Manager, W-WW Engineering; Michael Leckey, Program Financial Specialist W-WW, Tracie Byrne, Manager Purchasing Services, and reviewed by Joseph Tonellato, P.Eng., Director W-WW; Bart Menage, Director, Procurement and Strategic Acquisitions, and Donna Gibbs, Director Legal & Court Services.

Appendices

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Legend

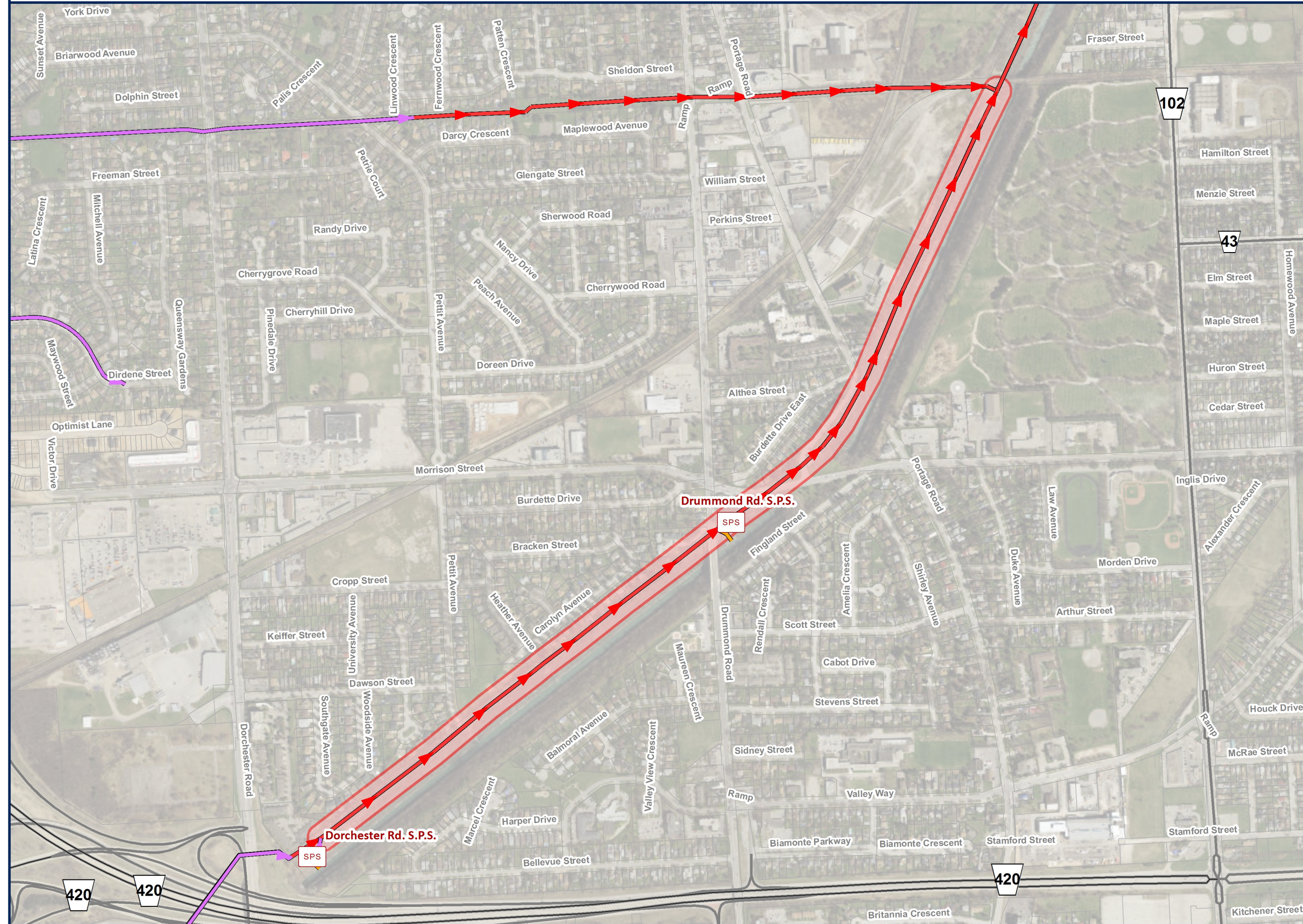
- Notice of Project Extents
- Wastewater Treatment Plant
- Sewage Pumping Station
- Force Main
- Sanitary Gravity Pipe

0 100 200 400M

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This map was compiled from various data sources and is current as of July, 2018.

Niagara Region makes no representations or warranties whatsoever, either expressed or implied, as to the accuracy, completeness, reliability, currency or otherwise of the information shown on this map.



**PW 29-2018 APPENDIX 2
TOTAL PROJECT BUDGET
Contract Award**

Contract 2018-T-127 (RN18-27) Stamford Interceptor Rehabilitation Phase 1, in the City of Niagara Falls

Total Estimated Project Cost (10SW1512) *

	Total Council Approved Budget	Revisions per PW 29-2018	Revised Project Budget	Expended & Committed as of June 29, 2018	Forecast / Contract Award	Budget Remaining
(a) Construction **						
i. Regional portion (includes 7% contract contingency) **	5,634,000	3,086,617	8,720,617	-	8,720,617	-
ii. Cost Sharing - City of St. Catharines **	-	823,192	823,192	-	823,192	-
(b) Project Contingency	433,000	-	433,000	-	433,000	-
(c) Consulting Engineering Services						
i. Detailed Design	400,000	(200,000)	200,000	147,317	52,683	-
ii. Contract Administration & Inspection	-	250,000	250,000	-	250,000	-
iii. Peer Reviews	-	18,262	18,262	18,262	-	-
(d) Project Management (In-House) and Operations	233,000	(158,000)	75,000	23,596	51,404	-
(e) Materials Testing	-	25,952	25,952	-	25,952	-
(f) Miscellaneous	950,000	(934,199)	15,801	15,801	-	-
Total Estimated Project Cost	7,650,000	2,911,824	10,561,824	204,976	10,356,848	-

Project Funding Sources

Regional reserves & debt (includes Federal Gas Tax funding)	(5,325,500)	(2,088,632)	(7,414,132)			
CWWF	(2,324,500)	-	(2,324,500)			
Municipal Cost Sharing - St. Catharines	-	(823,192)	(823,192)			
	(7,650,000)	(2,911,824)	(10,561,824)			

* All costs above include the non-refundable 1.76% portion of HST.

**Total contract cost includes both Regional and municipal cost sharing amounts. The total contract award is \$10,597,980 including 13% HST. The \$9,543,809 amount included above is the amount with only the 1.76% non-refundable portion of HST included.