



Report to: General Committee

Report Date: April 03, 2017

**SUBJECT:** Award of Contract 260-R-16: 2017 Sanitary Sewer System Rehabilitation and Upgrade Program

**PREPARED BY:** David Huynh, Infrastructure Project Engineer, Ext. 2400  
Tony Casale, Senior Construction Buyer, Ext. 3190

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**RECOMMENDATIONS:**

- 1) THAT the report entitled “Award of Contract 260-R-16: 2017 Sanitary Sewer System Rehabilitation and Upgrade Program” be received;
- 2) AND THAT Contract ‘A’ for Sanitary Sewer Spot Repairs, Cured-In-Place-Pipe Lining & Manhole Repairs be awarded to the highest ranked and lowest priced bidder Capital Sewer Services Inc., in the total amount of \$188,359.80 inclusive of HST;
- 3) AND THAT Contract ‘B’ for Sanitary Sewer Testing and Grouting at Joints be awarded to the highest ranked and lowest priced bidder D.M. Robichaud Associates Ltd., in the total amount of \$314,334.60, inclusive of HST;
- 4) AND THAT Contract ‘C’ for Sanitary Sewer Lateral Repairs and Cured-In-Place-Pipe Lining be awarded to the highest ranked and lowest priced bidder D.M. Robichaud Associates Ltd., in the total amount of \$360,026.88, inclusive of HST;
- 5) AND THAT a contingency in the amount of \$25,881.64 (3%) ( $(\$188,359.80 + \$314,334.60 + \$360,026.88) \times 3\%$ ), inclusive of HST be established to cover any additional costs, and that authorization to approve expenditures of this contingency amount up to the specified limit be in accordance with the Expenditure Control Policy;
- 6) AND THAT the 2017 award in the total amount of \$888,602.92 ( $\$188,359.80 + \$314,334.60 + \$360,026.88 + \$25,881.64$ ) be funded from the Waterworks capital project 17220 Sanitary Sewer System Upgrade Program (account 053-6150-17220-005) with a current budget available of \$1,278,700.00;
- 7) AND THAT the budget remaining in the amount of \$390,097.08 inclusive of HST be returned to the original funding source;
- 8) AND THAT the term of the three Contracts ‘A’, ‘B’ and ‘C’ be approved for one year (2017), with an option to extend the contract for one additional year (2018), at the same terms, conditions and pricing;
- 9) AND THAT the Director of the Environmental Services and the Senior Manager of Purchasing and Accounts Payable be authorized to extend the contract for one additional year (2018), subject to Council approval of the 2018 budget based on the same terms, conditions and pricing;

10) AND THAT Staff be authorized and directed to do all things necessary to give effect to this resolution.

**EXECUTIVE SUMMARY:**

Not Applicable

**PURPOSE:**

The purpose of this report is to obtain Council's approval to award the following contracts;

- Contract 'A' - Sanitary Sewer Spot Repairs, Cured-In-Place-Pipe Lining & Manhole Repairs,
- Contract 'B' - Sanitary Sewer Testing and Grouting at Joints, and
- Contract 'C' - Sanitary Sewer Lateral Repairs and Cure-In-Place-Pipe Lining

**BACKGROUND:**

The Sanitary Sewer System Upgrade and Rehabilitation Program is a preventive maintenance and upgrading program, which is implemented annually, to maintain the sanitary sewer system in good working condition, reduce service interruptions and Inflow/Infiltration (I/I) into the system, reduce risks and liabilities due to poor maintenance, and maintain the sewer infrastructure life expectancy at capacity as technically requested.

This annual capital works program addresses and fixes several structural defects found in sanitary sewer pipes, manholes and laterals, as identified and prioritized for repairs through the previous year's sanitary CCTV inspection program. A trenchless repairing method called "Cure-In-Place-Pipe" ("CIPP") lining will be applied to sewer pipes and laterals, together with conventional methods for manhole repair and for testing/grouting at joints, all to fix the identified structural defects without excavations, reducing surface and traffic disturbance, minimizing service interruptions and negative impacts on the environment.

Defects usually found in sewer pipes are cracks and fractures, broken and deformed pipes, and root and grease/calcite deposits. Sewer defects are repaired with short-section liners ("spot CIPP lining") that will be placed and cured inside the sewers through manhole access points, after high-pressure jet flushing and mechanical reaming/cleaning the sewers using robotic equipment. If defects are found in several places within one sewer, the entire section will be lined in its full-length ("full-length CIPP lining"). Defective laterals are structurally repaired in a similar method, however with more complex equipment and material due to its small sizes. Lateral CIPP lining is performed up to the property line.

For manhole repairs and testing/grouting at joints, defective spots or joints will be injected with special grout material, to prevent infiltration and stop further defective development. Structural cement parge and protective coating are also completed in manholes as needed.

In order to attract more bidders in the CIPP industry and sewer rehabilitation market, the sanitary sewer upgrade and rehabilitation project was issued as a multi-year contract, issued earlier in the year and the scope of work was divided into three separate contracts as outlined below:

**Contract A: Sanitary Sewer Spot Repairs, CIPP Lining and Sanitary Manhole Repairs**

The 2017 scope of work includes the following for various locations across the City:

- 3 full-length CIPP lining sections, total length 278m, size 250mm;
- 24 spots CIPP lining on several sections, total length of 2,000m, sewer size 200mm to 525mm; and,
- 88 spots of manhole repair, in 67 sanitary sewer manholes;

**Contract B: Sanitary Sewer Testing & Grouting at Joints**

The 2017 scope of work includes the following through 5,496m of sanitary sewer mainlines:

- testing and grouting of approximately 405 defective sewer joints; and,
- testing and grouting of 12 mainline-lateral joint sealing;

**Contract C: Sanitary Sewer Lateral Repairs and CIPP Lining**

The 2017 scope of work includes the following:

- reaming, cleaning and CCTV inspection of 10 partially blocked laterals; and,
- 42 lateral short-length and long-length CIPP lining in various locations;

All three 2017 Contracts 'A', 'B' and 'C' are scheduled to commence in May 2017, and be completed by December 2017.

**OPTIONS/ DISCUSSION:****Bid Information**

Advertised	ETN
Bid closed on	January 12, 2016
Number picking up the Bid document	20
Number responding to the Bid	7

**Proposal Evaluation**

The Evaluation Team was comprised of staff from the Environmental Services Department, and facilitated by staff from the Purchasing Department. The evaluation process was conducted in three separate evaluations for Contracts 'A', 'B' and 'C' as outlined in the Bid document. The evaluations were based on pre-established evaluation criteria as outlined in the Request for Proposal: 15% Qualifications and Experience of the Company, 20% Qualifications and Experience of the Contractor's Key Personnel and Equipment (including Sub-Contractor's), 35% Proposed Methodology, Materials, Schedule, Quality Control and Work Plan, and 30% Price, totalling 100%.

**Contract 'A' Sanitary Sewer Repairs / CIPP Lining and Manhole Repairs**

Company	Technical (70 points)	Price (30 points)	Total Score (100 points)	Overall Ranking
Capital Sewer Services Inc.	66.00	30.00	96.00	1
D.M. Robichaud Associates Ltd.	66.00	15.68	81.68	2
Clearwater Structures Inc.	51.00	21.11	72.11	3
PipeFlo Contracting Corp.	58.00	11.66	69.66	4
Liqui-Force Services (Ontario) Inc.	61.00	0.00	61.00	5
9215-2909 Quebec Inc Fjord Fusion	36.00	0.00	36.00	6
Nieltech Services Ltd.	26.00	0.00	26.00	7

Note: Bid prices ranged from to \$188,359 to \$599,370 (inclusive of HST).

**Contract 'B' Sanitary Sewer Testing & Grouting at Joints**

Company	Technical (70 points)	Price (30 points)	Total Score (100 points)	Overall Ranking
<b>D.M. Robichaud Associates Ltd.</b>	62.00	30.00	92.00	1
Sewer Technologies Inc.	64.00	15.13	79.13	2
PipeFlo Contracting Corp.	59.00	13.72	72.72	3
Liqui-Force Services (Ontario) Inc.	57.00	4.68	61.68	4
Nieltech Services Ltd.	12.00	0.00	12.00	5

Note: Bid prices ranged from to \$314,334 to \$955,239 (inclusive of HST).

**Contract 'C' Sanitary Sewer Lateral Repairs / CIPP Lining**

Company	Technical (70 points)	Price (30 points)	Total Score (100 points)	Overall Ranking
<b>D.M. Robichaud Associates Ltd.</b>	63.00	30.00	93.00	1
Liqui-Force Services (Ontario) Inc.	63.00	25.11	88.11	2

Note: One Bidder was disqualified, as they did not meet the mandatory requirements as specified in the Bid document. Bid prices ranged from to \$360,026 to \$418,742 (inclusive of HST).

In Contract A, the proposal from Capital Sewer Services Inc ("Capital Sewer Services") demonstrated a very good understanding of the project requirements. They have more than 17 years experience in full-length and spot CIPP lining. They proposed a strong working team, good equipment and materials to be specifically used in mainline lining and manhole repairs, good quality control plan, good customer service and coordination plan to complete the work by December 2017, which meets the City's required project timeline.

In Contract B, the proposal from D.M. Robichaud Associates Ltd. ("D.M. Robichaud") demonstrated a strong understanding of the project requirements. They have more than 12 years experience in sanitary sewer testing and grouting at joints. They proposed satisfactory methodology, good materials, truck and crews to test and grout the joints, with a proposed construction schedule that meets the City's timeline.

In Contract C, the proposal from D.M. Robichaud demonstrated a very good understanding of the project requirements. They have more than 15 years experience in the lateral CIPP lining work. They proposed a strong working team, a good work methodology, sufficient documentation about the liner material, good quality plan, and a satisfactory schedule to complete the lining work within 6 months.

As compared to 2016, the pricing from the highest ranked lowest priced Bidder for Contract 'A' (Capital Sewer Services) represents a cost reduction of 28% or (\$71,892.42) (including of HST). Pricing for Contract 'B' (D.M. Robichaud) represents an increase of 4% or \$10,666.48 (including of HST) and pricing for Contract 'C' (D.M. Robichaud) represents a cost reduction of 5% or (\$19,537.92) (including of HST).

Capital Sewer Services has worked with the City on similar mainline CIPP contracts in 2011 and 2014. D.M. Robichaud has worked with the City on similar testing and grouting contracts in 2015 and 2016, and on similar lateral CIPP lining contracts in 2011 and 2015. Staff is confident that both Contractors have the experience, qualifications, and capability

to undertake projects of this size and scope. Their previous contracts were all completed on time, within budget, and their works quality met the City's technical requirements.

#### **FINANCIAL CONSIDERATIONS AND TEMPLATE:**

Original Budget & Account #	\$ 1,338,700.00	053-6150-17220-005 Sewer System Upgrade Program
Current budget available	\$ 1,278,700.00	Budget allocated for this award
Less cost of award	\$ 188,359.80	Capital Sewer Services Inc. (Contract A)
	\$ 314,334.60	D.M. Robichaud (Contract B)
	\$ 360,026.88	D.M. Robichaud (Contract C)
	\$ 25,881.64	Contingency (3%)
	\$ 888,602.92	Total cost of award (inclusive of HST)
Budget Surplus/Shortfall	\$ 390,097.08	

The budget remaining in the amount of \$390,097.08 will be returned to original source of funding.

#### **Operating Budget and Life Cycle Impact:**

The Water Reserve Study will be updated to reflect the updated costs for the Sewer System Upgrade Program. There is no operating budget impact.

#### **HUMAN RESOURCES CONSIDERATIONS:**

Not Applicable

#### **ALIGNMENT WITH STRATEGIC PRIORITIES:**

The proposed program is in line with City's goal to ensure the reliability of the corporation's services, by providing quality water and wastewater services to the residents and businesses in Markham that meet, if not exceed, legislative requirements, and to ensure adequate capacities in sewers and watermain in managing growth in Markham. The proposed program is consistent with the Corporation's strategic goal in Safe and Sustainable Community infrastructure management.

#### **BUSINESS UNITS CONSULTED AND AFFECTED:**

Purchasing Department and Finance Department have been consulted, provided input and reviewed this report.

#### **RECOMMENDED BY:**

X 

Phoebe Fu, P.Eng, PMP  
Director, Environmental Services

X 

Brenda Librecz  
Commissioner, Community & Fire Services

#### **ATTACHMENTS:**

None