



Report to: General Committee

Meeting Date: January 30, 2024

SUBJECT: 268-R-23 Consulting Engineering Services for Short Term Flow Monitoring, Data Collection and Delivery (2024 – 2028)

PREPARED BY: Prathapan Kumar, Senior Manager, Infrastructure,
Environmental Services, Ext. 2989
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RECOMMENDATION:

- 1) THAT the report entitled “Award of RFP 268-R-23 Consulting Engineering Services for Short Term Flow Monitoring, Data Collection and Delivery (2024 – 2028)” be received;
- 2) THAT Contract 268-R-23 Consulting Engineering Services for Short Term Flow Monitoring, Data Collection and Delivery (2024 – 2028) be awarded to the highest ranked/ lowest priced bidder “AECOM Canada Ltd.” in the 2024 amount of \$123,445.36, inclusive of HST; and
- 3) THAT a 10% contingency in the amount of \$12,344.54 inclusive of HST, be established to cover any additional costs in 2024 and that authorization to approve expenditures of this contingency amount up to the specified limit be in accordance with the Expenditure Control Policy; and
- 4) THAT the total cost for 2024, in the amount of \$135,789.90 (\$123,445.36 + \$12,344.54), be funded from Capital Project 23266 “Wastewater Flow Monitoring” with an available budget of \$261,800.00; and
- 5) THAT the remaining budget in the amount of \$126,010.10 (\$261,800.00 - \$135,789.90) be returned to the original funding source; and
- 6) THAT Staff be authorized to exercise the option to renew the contract for four (4) additional years (2025 - 2028), subject to performance and adoption of the 2025 - 2028 capital budgets as follows:
 - 2025: \$96,421.69 (Inclusive of Contingency and HST)
 - 2026: \$99,437.14 (Inclusive of Contingency and HST)
 - 2027: \$102,554.08 (Inclusive of Contingency and HST)
 - 2028: \$105,775.18 (Inclusive of Contingency and HST)
- 7) AND THAT Staff be authorized and directed to do all things necessary to give effect to this resolution.

EXECUTIVE SUMMARY:

Not Applicable

PURPOSE:

To obtain approval to award the contract for consulting engineering services to undertake Short term sanitary flow monitoring, data collection and delivery for a one-year term (2024) with an option to renew for four additional years (2025 – 2028) with annual increases, subject to performance and adoption of the 2024 - 2028 capital budgets.

BACKGROUND:

Sanitary flow monitoring and data collection are essential to support system planning, management and operation. Flow data needs to be collected at critical/ strategic locations to characterize system flow conditions under both dry weather and wet weather periods to evaluate system performance, identify any capacity constraints, prioritize Inflow/Infiltration (I/I) reduction areas, quantify I/I reduction effectiveness, and to support the identification of system upgrades through basement flood control studies, and to confirm capacity to accommodate new development.

The City's short-term flow monitoring project is being harmonized with York Region's I/I reduction initiatives. The Region has installed long-term flow monitoring meters in Markham's sanitary sewer system to characterize relatively large catchment conditions. The City's short-term flow monitoring project focus on smaller catchment levels in order to refine modeling results for local areas of interest, to refine the location of I/I sources, and to evaluate post I/I reduction flow conditions in specific small local catchments.

To meet the short-term local monitoring needs, 18 monitoring locations are scheduled in 2024 and 12 locations thereafter from 2025 to 2028.

The scope of work includes:

- Flow monitoring site selection and inspection
- Equipment installation and removal
- Flow data management and analysis
- Operation and maintenance of the flow monitoring equipment
- Produce final report analyzing the data

BID INFORMATION:

Bids closed on	October 27, 2023
Number picking up bid documents	7
Number responding to bid	5

OPTIONS/ DISCUSSION:**Proposal Evaluation:**

The two-staged evaluation was based on pre-determined criteria as detailed in the Request for Proposal: 20% for experience/past performance, 20% for qualification and experience of the project manager and team, 30% for project delivery, and 30% for price, totaling 100%.

Bidder	Score
AECOM Canada Ltd.	98.0

Bid prices ranged from \$490,889.08 to \$788,945.28, inclusive of HST Impact and exclusive of contingency.

The recommended consultant, AECOM Canada Ltd., demonstrated a good understanding of the project, had an acceptable qualified project team and illustrated a satisfactory plan and methodology for the project.

FINANCIAL CONSIDERATIONS

Recommended bidder	AECOM Canada Ltd. (Highest ranked / lowest priced bidder)	
Current budget available	\$261,800.00	760-101-5699-23266 Wastewater Flow Monitoring
Less cost of award	\$123,445.36 \$ 12,344.54 \$135,789.90	2024 Cost of Award Contingency (10%) 2024 Total Award inclusive of HST & 10% Contingency
	\$ 96,421.69 \$ 99,437.14 \$102,554.08 \$105,775.18 \$539,977.99	2025 Award inclusive of HST & 10% Contingency* 2026 Award inclusive of HST & 10% Contingency* 2027 Award inclusive of HST & 10% Contingency* 2028 Award inclusive of HST & 10% Contingency* Total Award (2024 – 2028)
Budget remaining after award	\$126,010.10	* (\$261,800.00 - \$135,789.90)

*Subject to performance and adoption of the 2025 - 2028 capital budgets.

**Remaining balance of \$126,010.10 will be returned to original funding source

The 2025-2028 award amounts represent unit price changes submitted for each year. In 2025, the prices increase by 7% and in 2026-28, the price increases each year by 3%. However, when compared to the previous contract (2017-2023), the cost of monitoring per station decreased by \$3,701.06 or 36%, from \$10,649.14 to 6,858.08, mainly due to reduction in reporting requirements in the new contract and competitive market prices.

OPERATING BUDGET AND LIFE CYCLE IMPACT:

The 2024 Water Reserve Life Cycle study and Waterworks budget will be updated to reflect the cost of this proposed contract~~current rates~~. As this is a capital project, there is no incremental impact to the operating budget.

ENVIRONMENTAL CONSIDERATIONS:

Flow data collected are used to support I/I reduction from the sanitary sewer system which has extensive environmental benefits including reducing risk of sanitary sewer backups into basements and overflows, reducing energy costs of sanitary flow pumping and treatment.

HUMAN RESOURCES CONSIDERATIONS

Not Applicable.

ALIGNMENT WITH STRATEGIC PRIORITIES:

This project's goals are consistent with the Building Markham's Future Together strategic priority on providing a "Safe and Sustainable Community" through the proactive management of infrastructure to reduce flood risks, and the management of growth, by supporting the effective design and operation of the sanitary sewer system. This project supports the sanitary system downspout disconnection program.

BUSINESS UNITS CONSULTED AND AFFECTED:

Finance department has been consulted and their comments have been incorporated.

RECOMMENDED BY:

Eddy Wu, Director, Environmental Services

Morgan Jones, Commissioner,
Community Services

ATTACHMENTS:

None