

Report to Civic Works Committee

To: Chair and Members
Civic Works Committee
From: Kelly Scherr, P.Eng., MBA, FEC
Deputy City Manager, Environment and Infrastructure
Subject: RFP 2023-189 Large Diameter Watermain Inspection
Date: January 30, 2024

Recommendation

That, on the recommendation of the Deputy City Manager, Environment and Infrastructure, the following actions **BE TAKEN** with respect to the award of consulting services for the Large Diameter Watermain Inspection project:

- a) GHD Limited **BE APPOINTED** to conduct consulting engineer services in the amount of \$1,275,707.94 including contingency, excluding HST, in accordance with Section 12.2(b) of the City of London's Procurement of Goods and Services Policy;
- b) the financing for the project **BE APPROVED** in accordance with the "Sources of Financing Report" attached hereto as Appendix 'A;'
- c) the Civic Administration **BE AUTHORIZED** to undertake all the administrative acts that are necessary in connection with this project;
- d) the approvals given herein **BE CONDITIONAL** upon the Corporation entering into a formal contract; and,
- e) the Mayor and City Clerk **BE AUTHORIZED** to execute any contract or other documents, if required, to give effect to these recommendations.

Executive Summary

This report recommends that GHD Limited be appointed as the consultant to undertake the large diameter watermain inspection of the Elviage Drive to Byron Baseline Road, White Oak Road, Southdale Road East, Springbank Drive, and Industrial Road pipelines.

The inspection of trunk watermains in an annual program designed to ensure the reliability of the City of London's water supply and allow staff to make informed decisions regarding condition and need for repair. This information helps mitigate the risk of catastrophic watermain breaks and helps to better manage our critical watermain assets.

The consultant recommended for award in this report will provide analysis of the noted watermains including leak detection, structural integrity assessment, structural evaluation, and remaining service life reporting. This will inform and aid decision making on future replacement projects and ensure appropriate budget allocation.

Linkage to the Corporate Strategic Plan

This project supports the 2023-2027 Strategic Plan through Climate Action and Sustainable Growth:

- The infrastructure gap is managed for all assets.
- Infrastructure is built, maintained, and secured to support future growth and protect the environment.

Analysis

1.0 Background Information

1.1 Previous Reports Related to this Matter.

- January 19, 2021 Civic Works Committee Report - RFP 20-60 Large Diameter Watermain Inspection
- February 5, 2019 Civic Works Committee Report - 2019 Large Diameter Watermain Inspection
- July 21, 2014 Civic Works Committee Report - Long-Term Large Diameter Pipe Inspection Strategy and Single Source Procurement
- May 29, 2012 Civic Works Committee Report - Concrete Pressure Pipe Inspection Fiber Optic Installation Amendment of Existing Contract

2.0 Discussion and Considerations

The City of London's trunk watermains are critical infrastructure in London's water supply system, ensuring adequate water supply and reliability for customers. The trunk watermains supply water to the smaller diameter pipelines which in turn supply water to individual customers.

Inspection of the City's trunk watermains will secure the reliability of the City of London's water supply and allow staff to make informed decisions regarding condition and need for repair. This year's annual inspection will identify the need to conduct maintenance on the trunk watermains, reducing the potential for catastrophic watermain breaks in the future. The decision of which sections of pipeline are inspected each year is based on pipe age, pipe material, criticality, and anticipated construction projects for that section.

For this iteration of the inspection program, five sections of pipe were identified for inspection with a total length of approximately 13.33 km. The inspections will be completed over a two-year period. The details of the pipelines being inspected are as follows:

- Elviage Rd to Byron Baseline Rd. Pipe is 2.6 kilometres of 600-millimetre steel, installed in 1962.
- White Oak Rd from Southdale Rd E to 137m West of Exeter Rd. Pipe is 2.16km of 600-milimeter Concrete SSP-381 installed in 1958.
- Southdale Rd E from Wellington Rd to Pond Mills Rd. Pipe is 2.4km of 400-milimeter DI CL-51 installed in 1974 and 1975.
- Springbank Dr from Wonderland Rd S to Intersection with 1200 concrete trunk main. Pipe is a double watermain of 1.6km each, 3.2km total of 450 CI installed in 1938.
- Industrial Rd from Veteran Memorial Parkway to Oxford St E, Oxford St E from Industrial Rd to Cuddy Blvd, Cuddy Blvd from Oxford St E to Page St, Page St from Cuddy Blvd to Crumlin Side Road and Crumlin Side Road from Cuddy Blvd to Dundas. Pipe is 2.97km total made up of 400 DI CL51 and 450 C301L installed in 1985 and 1986.

The consultant and their vendors will adopt Dynamic Response Imaging (DRI) technology. DRI technology incorporates a wave generator to introduce vibratory signals into the pipeline based on pipe type and material. The use of different frequencies with various algorithms enables the technology to detect leaks while assessing the distress indicator at the same inspection run. The technology is non-invasive, using existing features (eg. fire hydrants, valves, air valves, etc) and daylight potholes in absence of existing features.

3.0 Financial Impact/Considerations

3.1 Consulting Engineer Services

The inspections assignments were awarded on an individual basis and the two Proponents submitted separate technical and cost proposals for each of the five

inspections. These watermains were assessed by the Water Engineering Department before the request for proposal was issued and it was determined that the different technologies offered by each of the respective Proponents would be able to provide the desired level of inspection. In November of 2023, two engineering firms responded to the open Request for Proposal in accordance with section 12.2(b) of the City of London's Procurement of Goods and Services Policy.

After evaluation of the Request for Proposal submissions, the City's evaluation team determined that GHD Limited provided the best value, at a cost of \$1,275,707.74 (excluding HST), and their technology presented the least amount of operational risk for all five inspections. The technical proposals and fee submissions were evaluated in accordance with the City of London's Procurement of Goods and Services Policy, and it was found that the proposals met all the key project requirements and provided the best value to the City for inspection services.

Conclusion

GHD Limited has experience undertaking similar work while providing useful and actionable information for large diameter watermain repairs. GHD Limited has functioned as a subcontractor in a similar capacity for the City of London in the past, their team has experience with similar work and is professionally qualified to undertake the required inspections.

Based on the results of the request for proposal submissions and based on the review by the evaluation team, it is determined that retaining GHD Limited is in the best financial and technical interests of the City. It is recommended that GHD Limited be awarded this contract in the amount of \$1,275,707.94 (excluding H.S.T.) to undertake all tasks related to the five large diameter watermain inspections.

Prepared by:	Aaron Rozentals, GDPA, P.Eng., Division Manager, Water Engineering
Submitted by:	Ashley Rammeloo, MMSc., P.Eng. Director, Water, Wastewater, and Stormwater
Recommended by:	Kelly Scherr, P. Eng., MBA, FEC Deputy City Manager, Environment & Infrastructure
Appendix 'A'	Source of Financing
CC:	Audrey Kester, Water Demand Manager John Simon, Division Manager – Water Operations Dan Berringer, GHD Limited

Appendix "A"

#24014

January 30, 2024

(Award Contract)

Chair and Members

Civic Works Committee

RE: RFP 2023-189 Large Diameter Watermain Inspection

(Subledger NT24EW01)

Capital Project EW371722 - Watermain Condition Inspection

GHD Limited - \$1,275,707.94 (excluding HST)

Finance Supports Report on the Sources of Financing:

Finance Supports confirms that the cost of this project can be accommodated within the financing available for it in the Capital Budget and that, subject to the approval of the recommendation of the Deputy City Manager, Environment and Infrastructure, the detailed source of financing is:

Estimated Expenditures	Approved Budget	Committed To This Date	This Submission	Balance for Future Work
Engineering	1,423,452	23,201	1,298,160	102,091
Construction	586,432	0	0	586,432
Total Expenditures	\$2,009,884	\$23,201	\$1,298,160	\$688,523

Sources of Financing

Capital Water Rates	2,009,884	23,201	1,298,160	688,523
Total Financing	\$2,009,884	\$23,201	\$1,298,160	\$688,523

Financial Note:

Contract Price	\$1,275,708
Add: HST @13%	165,842
Total Contract Price Including Taxes	1,441,550
Less: HST Rebate	-143,390
Net Contract Price	\$1,298,160

Jason Davies

Manager of Financial Planning & Policy

ah