

TO:	CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON FEBRUARY 19, 2020
FROM:	KELLY SCHERR, P. ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL AND ENGINEERING SERVICES AND CITY ENGINEER
SUBJECT:	SOLE SOURCE AWARD ACOUSTIC FIBRE OPTIC MONITORING CONTRACT

RECOMMENDATION

That, on the recommendation of the Managing Director, Environmental and Engineering Services and City Engineer, the following actions **BE TAKEN** with respect to the Acoustic Fibre Optic (AFO) Monitoring Contract:

- (a) The contract value for Pure Technologies Ltd., 3rd Floor, 705-11 Avenue SW, Calgary, Alberta, T2R 0E3, **BE APPROVED**, in accordance with section 14.3 (c) of the Corporation of the City of London's Procurement of Goods and Services Policy, in the total amount of \$632,441.66 (excluding HST) for a four year period (2020-2023) to continuously monitor 15.86 km of the City's most critical watermains;
- (b) the Civic Administration **BE AUTHORIZED** to undertake all the administrative acts that are necessary in connection with this project;
- (c) the Mayor and City Clerk **BE AUTHORIZED** to execute any contract or other documents, if required, to give effect to these recommendations.

PREVIOUS REPORTS PERTINENT TO THIS MATTER
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- Sole Source: Concrete Pressure Pipe Inspection – Fibre Optic Installation, April 14, 2010, Board of Control
- Sole Source Award: Acoustic Fibre Optic Monitoring Contract, February 21, 2017, Civic Works Committee
- Sole Source Award: Acoustic Fibre Optic Monitoring Contract, February 6, 2018, Civic Works Committee
- Sole Source Award: Acoustic Fibre Optic Monitoring Contract, March 6, 2019, Civic Works Committee

2019-2023 STRATEGIC PLAN

This report supports the Strategic Plan in the following areas:

- Building a Sustainable City:
 - Infrastructure is built, maintained and operated to meet the long-term needs of our community; and
 - Growth and development is well planned and sustainable over the long term.
- Leading in Public Service:
 - Exceptional and valued customer service; and
 - Leader in public service as an employer, a steward of public funds, and an innovator of service.

BACKGROUND

Purpose

This report recommends the approval of a four-year acoustic fibre optic (AFO) monitoring contract required to continuously monitor the condition of the City's most critical watermains from the Arva Pumping Station to the Springbank Reservoirs.

Context

In 2010, the City began installing acoustic fibre optic cable, developed by Pure Technologies, inside its most critical large-diameter watermain which links the Arva Pumping Station to the Springbank Reservoirs. To date, approximately 16 km of acoustic fibre optic cable has been installed at an approximate capital cost of \$3M. This proprietary technology allows the City to monitor the condition of this watermain in order to defer capital costs related to replacement and to reduce the social and economic risks of a watermain break.

Pure Technologies provides real-time monitoring of the City's critical water infrastructure. When a problem is detected, Pure Technologies emails City staff with the relevant information on the location and severity of the issue. Should the detected problem constitute an emergency, Pure Technologies will directly call the City's water emergency number. This Pure Technologies monitoring data has allowed the City to proactively replace compromised water pipeline well before a catastrophic failure occurs, reducing both costs and impacts to the public.

DISCUSSION

Monitoring Results

In 2017, this monitoring system identified a number of wire breaks in the Arva-Huron pipeline which links the Arva Pumping Station to the Springbank Reservoirs. This information prompted a more invasive inspection of the critical section. The inspection confirmed the pipe was distressed and at risk of failure. Staff used this information to plan and schedule the pipe's replacement. This proactive planning also allowed staff to operationally plan for the pipe to be out of service during replacement. A sudden break in this large main would have cost significantly more to repair and would have caused more disruption compared to the preventative replacement that was completed. The preventative replacement was a proactive step made possible by the AFO monitoring system.

2020 Monitoring Program Extension

Pure Technologies has proposed a contract to continue to provide monitoring services in accordance with the following fee schedule:

Period	Length (m)	Base (\$)	Unit Rate (\$/m/year)	Warranty (\$)	Total Fee (\$)
2020	15,858	10,000.00	7.456	25,500.00	153,737.25
2021	15,858	10,000.00	7.605	26,010.00	156,610.09
2022	15,858	10,000.00	7.757	26,530.20	159,540.71
2023	15,858	10,000.00	7.913	27,060.80	162,545.15
				Total	632,441.66

The total fee increase each year is 2%. The 2020 fee is 2% higher than the fee paid for this program in 2019. The warranty component of the contract covers all materials associated with the AFO monitoring system. In 2015, a component of the system was replaced under the warranty. Had the warranty not been in place, the cost to replace this component alone would have been \$75,000. There are also cancellation clauses included in the proposed contract which will allow the City to reserve the right, at its absolute sole discretion, to cancel this contract in either of these scenarios:

- With thirty days written notice, without cause and without penalty; and
- With seven days written notice, with cause and without penalty.

Contract Procurement

Section 14.3 (c) of the Procurement of Goods and Services Policy allows a procurement to be conducted using a sole source if the service is unique to one supplier with no alternative or substitution. As the AFO monitoring system owned by the City is proprietary in nature, Pure Technologies is the only firm that is able to provide the required monitoring services.

Due to the operational nature of the work, the AFO Monitoring contract is proposed to be moved from the capital budget to the Water Operating budget in the tabled 2020-2023 multi-year budget. There is no proposed change to the annual budget amount. This will facilitate entering into a multi-year contract, which will ensure continuity in the monitoring program and improve administrative efficiencies as it will reduce staff and Council time spent vetting and approving multiple similar contracts. Pure Technologies has provided monitoring services since the AFO was installed in 2010.

CONCLUSIONS

It is proposed that Pure Technologies be retained, in accordance with Section 14.3 (c) (Sole Source) of the Procurement of Goods and Services Policy, to continue to provide AFO monitoring services of the City’s most critical watermain. The proprietary equipment required to undertake this task is already in place in the water distribution system, and it is Pure Technologies’ unique proprietary system that is needed to provide the City with this monitoring service.

PREPARED BY:	REVIEWED & CONCURRED BY:
AARON ROZENTALS, P. ENG. DIVISION MANAGER, WATER ENGINEERING	SCOTT MATHERS, P. ENG. MPA DIRECTOR, WATER AND WASTEWATER
RECOMMENDED BY:	
KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL AND ENGINEERING SERVICES AND CITY ENGINEER	

February 6, 2020

- CC. John Freeman – City of London
 Gary McDonald – City of London
 Stephen Romano – City of London
 Allison Biggar – Pure Technologies Ltd.