

TO:	CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON JUNE 7, 2017
FROM:	KELLY SCHERR, P. ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL AND ENGINEERING SERVICES & CITY ENGINEER
SUBJECT:	CLEAN WATER AND WASTEWATER FUND IRREGULAR RESULT: ARVA PUMPING STATION OPTIMIZATION AND ENERGY EFFICIENCY STUDY

RECOMMENDATION

That, on the recommendation of the Managing Director, Environmental and Engineering Services & City Engineer, the following actions **BE TAKEN** with respect to the Arva Pumping Station Optimization and Energy Efficiency Study:

- (a) The bid submitted by AECOM Canada Ltd in the amount of \$179,468 (excluding H.S.T.) **BE APPROVED** in accordance with Section 19.4(c) of the City of London's Procurement of Goods and Services Policy;
- (b) The financing for this project **BE APPROVED** as set out in 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 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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[Infrastructure Canada Phase 1 - Project Requests - Clean Water and Wastewater Fund - October 4, 2016, Civic Works Committee, Agenda Item #8](#)

BACKGROUND

Purpose

The purpose of this report is to award the Clean Water and Wastewater Works (CWWF) Project, Arva Pumping Station Optimization and Energy Efficiency Study, to AECOM Consulting Ltd.

Context

The proposed optimization and energy efficiency study will investigate opportunities to reduce operating costs and increase reliability of the Arva Pumping Station. This study was included in the list of approved CWWF projects at a value of \$407,000.

DISCUSSION

Clean Water and Wastewater Fund

The first phase of funding for the CWWF is a 2 year - \$2 Billion Government of Canada investment to meet immediate priorities for clean water and wastewater to support a cleaner and healthier environment for communities. CWWF focuses on investing in projects that:

- Rehabilitate and optimize water, storm water and wastewater related infrastructure;
- Improve asset management approaches including pilots and studies;
- Plan for future upgrades to wastewater treatment and collection infrastructure;
- Include new construction projects like naturalized systems.

Undertaking the Arva Pumping Station Optimization and Energy Efficiency Study will allow the City to rehabilitate and optimize water related infrastructure, and will improve asset management approaches through conducting this study.

This study has approved funding up to \$407,000 from the CWWF.

Project Description

The Arva Pumping Station provides the largest and most critical supply of water to the City of London, supplying approximately 85% of water used by all customers. In 2016 the volume was over 38 billion Litres. As the largest pumping station in the City, it also consumes the greatest amount of electricity. Since this pumping station supplies the majority of the City's water, reviewing its operation and equipment is critical to maintain and ensure that the pumping station is reliable.

Built in 1967, the Arva Pumping Station was constructed to boost the pressure of water supplied from Lake Huron prior to entering the City's water distribution system. There are currently five 700hp pumps and one 900hp pump in operation at this pumping station, as well as a reservoir to hold water supplied by the Regional Water System. Energy efficiency studies have been completed in previous years to gain a better understanding of the individual pump performance. This study will be the first complete energy audit of the entire pumping station and will make recommendations regarding water pumping strategies in effort to save money on electrical costs and to increase pumping station reliability.

Procurement Process

In April of 2017, three engineering firms were invited to respond to an RFP in accordance with section 15.2 (d) of the City of London's Procurement of Goods and Services Policy. Of the three firms invited, only one firm submitted a proposal. After consultation with the City's Purchasing Department, the decision was made to open the sole proposal. Upon evaluating the RFP, the City's evaluation team recommends awarding the study to AECOM as an irregular result in accordance with section 19.4 (c) of the Procurement of Goods and Services Policy. AECOM's fee submission is below the anticipated budget by approximately \$227,000, and after evaluation of the proposal by the project's evaluation team the proposal was found to be appropriate.

Consulting Services

AECOM and their sub-consultants (HydraTek and VIP Energy) have extensive knowledge of energy audit practices, the Ontario electricity marketplace, pump testing, and in particular the City of London's water system. In addition, AECOM successfully completed a similar study for the Regional Water Supply system in 2013. The proposed consulting team has extensive experience with similar work, and is well qualified to undertake this study.

CONCLUSIONS

Given their related project experience and extensive knowledge of the City of London water system, AECOM is well qualified to complete the Arva Pumping Station Optimization and Energy Efficiency Study. Based on the proposal evaluation team's review, it is recommended that retaining AECOM is in the best financial and technical interest of the City.

Acknowledgements

This report was prepared by Kevin Graham, E.I.T., of the Water Engineering Division.

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

May 26, 2017

Attach: Appendix "A" – Sources of Financing
Appendix "B" – Project Location

CC. AECOM Canada Ltd.
John Freeman – Manager, Purchasing & Supply