

## **Award of Contract Number RFP-20ECS-MI-02AB to CH2M HILL Canada Limited for Professional Services for Detailed Design, Contract Administration and Post-Construction Services for a New Biosolids Pelletizer Facility at the Ashbridges Bay Treatment Plant**

**Date:** March 9, 2021

**To:** Infrastructure and Environment Committee

**From:** Chief Engineer and Executive Director, Engineering and Construction Services and Chief Procurement Officer, Purchasing and Materials Management

**Wards:** 14 (Toronto-Danforth)

### **SUMMARY**

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The purpose of this report is to advise of the results of Request for Proposals Number Doc2561182391 (Contract RFP-20ECS-MI-02AB) for the Provision of Professional Services for Design, Contract Administration and Post Construction Services for the New Pelletizer Facility at the Ashbridges Bay Treatment Plant and to request award of the Request for Proposals to CH2M Hill Canada Limited, in the amount of \$27,708,606 net of all applicable taxes and charges, \$28,196,277 net of HST recoveries.

### **RECOMMENDATIONS**

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The Chief Engineer and Executive Director of Engineering and Construction Services and the Chief Procurement Officer, Purchasing and Materials Management recommend that:

1. The Infrastructure and Environment Committee, in accordance with Section 195-8.4A of the Toronto Municipal Code Chapter 195 (Purchasing By-Law), grant authority to award, Request for Proposals Number Doc2561182391 (Contract Number RFP-20ECS-MI-02AB) to CH2M Hill Canada Limited, having submitted the highest scoring proposal meeting the requirements of the Request for Proposals to provide Professional Engineering Services for Design, Contract Administration and Post Construction Services for the New Pelletizer Facility at the Ashbridges Bay Treatment Plant in the amount of \$27,708,606 net of all applicable taxes and charges, \$28,196,277 net of HST recoveries, including disbursements, provisional allowances and contingency, where the agreements are established by major task categories as follows:

a) Preliminary Design and Detailed Design services of the New Pelletizer Facility at the Ashbridges Bay Treatment Plant in the amount of \$14,908,858 net of HST, including labour, disbursements, provisional allowances and contingency. This amount includes provisional allowances of \$4,290,000 and a contingency allowance of \$2,000,000 net of HST, for additional services, if necessary and authorized by the Chief Engineer and Executive Director, Engineering and Construction Services.

b) Contract Administration Services during construction of the New Pelletizer Facility at the Ashbridges Bay Treatment Plant in the amount of \$12,101,364 net of HST, including labour, disbursements and provisional allowances. This amount includes provisional allowances of \$2,453,200 net of HST, for additional services, if necessary and authorized by the Chief Engineer and Executive Director, Engineering and Construction Services.

c) Post-Construction Services of the New Pelletizer Facility at the Ashbridges Bay Treatment Plant in the amount of \$698,384 net of HST, including labour, disbursements and provisional allowances. This amount includes provisional allowances of \$360,000 net of HST, for additional services, if necessary and authorized by the Chief Engineer and Executive Director, Engineering and Construction Services.

For each of a), b) and c), all agreements are to be in accordance with the terms and conditions as set out in the Request for Proposals and any other terms and conditions satisfactory to the Chief Engineer and Executive Director, Engineering and Construction Services, in a form satisfactory to the City Solicitor, and the services and dollar amounts set out to be executed as three (3) distinct consulting agreements and the issuance of three (3) Purchase Orders.

## **FINANCIAL IMPACT**

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The total value of the contract award for Request for Proposals Number Doc2561182391 (Contract RFP-20ECS-MI-02AB) for the Provision of Professional Services for Detailed Design, Contract Administration and Post-Construction Services for a New Pelletizer Facility at the Ashbridges Bay Treatment Plant is \$31,310,725 including HST and all applicable charges. This includes a total contingency amount of \$2,260,000 including HST and a total provisional sum amount of \$8,026,616 including HST. The total cost to the City for the project is \$28,196,278 net of HST recoveries including \$2,035,200 in contingency amount and \$7,228,216 in provisional sums.

Funding for this contract is included in the Toronto Water's approved 2021 Capital Budget and 2022-2030 Capital Plan under WSB Element CWW043-08 (Pelletizer Facility) with forecasted expenditures as shown in the Table 1 (net of HST recoveries).

**Table 1: Financial Impact Summary**

<b>Year</b>	<b>Forecasted Expenditures</b>
2021	\$3,380,000
2022	\$3,300,000
2023	\$2,955,000
2024	\$6,767,690
2025	\$3,078,587

<b>Year</b>	<b>Forecasted Expenditures</b>
2026	\$3,078,587
2027	\$3,694,304
2028	\$1,364,686
2029	\$355,338
2030	\$222,086

The Chief Financial Officer and Treasurer has reviewed this report and agrees with the financial impact information.

## **DECISION HISTORY**

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At its meeting held on May 14, 2014, the Bid Committee adopted the recommendations in the staff report from the Director of Purchasing and Materials Management, dated May 5, 2014, and authorized the retention of Associated Engineering (Ontario) Limited, for provision of Engineering Study Services for the Contracted Professional Engineering Services for the Pelletizer Facility Condition Assessment Study at the Ashbridges Bay Treatment Plant. A copy of the Bid Committee Decision can be found at: <http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2014.BD180.4>

At its meeting held on November 1, 2017, the Bid Award Panel adopted BA48.2 Award of Request for Proposals No. 9117-17-7197 to AECOM Canada Limited, for Professional Engineering Services for Design, Construction Administration, and Post Construction Services for Pelletizer Upgrades at Ashbridges Bay Treatment Plant, and granted authority to award the contract in accordance with the Contract Details set out in the report (October 23, 2017) from the Director, Purchasing and Materials Management.

A copy of the Bid Award Panel Decision can be found at:

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2017.BA48.2>

## **COMMENTS**

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### **Background**

The Ashbridges Bay Treatment Plant services a customer base of over 1.6 million people and has a rated average design capacity of 818 megalitres per day. The plant treats wastewater from a large sewershed which includes combined sewers in the older

part of the City. Due to the combined sewers, the plant can receive peak flows during wet weather in excess of 3,300 megalitres per day. The plant effluent is discharged to Lake Ontario.

In addition, the plant also produces biosolids that are the nutrient-rich, organic materials resulting from treated sewage sludge. As a common industry practice, biosolids are beneficially used as fertilizer and soil amendment products and is consistent with the City's Biosolids Masterplan and Council direction.

### **Existing Pelletizer Facility**

The plant produces approximately 160,000 wet tonnes of biosolids each year. Approximately 50% of the biosolids are processed by the on-site Pelletizer Facility (operated and maintained by Veolia Water Canada Incorporated) and the remainder is hauled off-site for direct land application or for further processing into soil amendment and fertilizer products by other biosolids vendors under separate contracts with the City. At the Pelletizer Facility, biosolids are heated in the dryer to evaporate water. It is accomplished by direct contact of dewatered biosolids with a stream of hot air. Dried biosolids are then routed to a vibrating screen for classification producing finished pellets typically 2 to 4mm in size and that look like nearly round, semi-hard granules that are more than 90% dried solids. The finished material is sold as a bulk fertilizer to the agricultural sector by Veolia.

In 2014, the City retained Associated Engineering to undertake a technical condition assessment of the existing Pelletizer Facility in order to determine the remaining useful life and to recommend necessary improvements. This condition assessment, completed in 2016, included a review of the architectural, structural, process, mechanical, electrical, and instrumentation aspects of the Pelletizer Facility.

The condition assessment provided recommendations categorized as short-term and long-term. The short-term recommendations listed critical upgrades that should be implemented immediately, including upgrades to electrical equipment and process/mechanical systems. The long-term recommendations concluded that the existing Pelletizer dryer could reach the end of service life as soon as 2028, and should be replaced. The dryers are the critical Pelletizer component and they would need to be decommissioned before the wear reaches critical levels. As the manufacturer of the dryers in the existing Pelletizer Facility no longer supports or produces these dryers, the dryers cannot be replaced like-for-like. There was therefore a need to further assess what options the City has to replace the existing Pelletizer Facility with new drying technology before reaching the end of its service life. Since each drying technology is unique, and includes specific drying equipment with the associated auxiliary components, the entire existing Pelletizer Facility must be replaced.

Based on the above recommendations the City initiated the following in 2016:

- Implementation of annual checks of the internal components by Veolia including operational/maintenance measures to extend, where possible, the life of the dryers and to confirm ongoing operability.

- Implementation of short-term critical upgrade recommendations from the condition assessment to extend, where possible, the life of the existing Pelletizer Facility to 2028. This was addressed through the issuance of a Request for Proposals for an assignment which included the engineering design, contract administration and post-construction services to implement the recommended critical upgrades. In July 2017, through a competitive Request for Proposals process, AECOM was retained to undertake this work. The design is currently nearing completion with the construction to be tendered in 2021 and expected to be completed by 2024.
- A full assessment of the Pelletizer Facility replacement options including a review of the latest biosolids dryer technologies. This assessment was undertaken through Associated Engineering as an expansion to the scope of work of their original assignment. This additional scope included investigation of the most current thermal drying technologies and a feasibility assessment of replacing the existing Pelletizer Facility with a new facility. Six (6) dryer technologies were evaluated and a short-list of three technologies was recommended. The six (6) dryer technologies were evaluated and ranked based on a number of criteria including technical viability, performance, feasibility, operational reliability, capital cost, and long term operating and maintenance costs.

## **New Pelletizer Facility**

The scope of work, which is the subject of the contract award associated with this report, was derived from the recommendations of the Associated Engineering report and focuses on replacement of the existing Pelletizer Facility with a new Pelletizer Facility that will include the most suitable and current dryer technology to provide a reliable long term biosolids management system. This contract includes a further assessment of the three short-listed dryer technologies, validation of the preferred technology and incorporating this preferred technology in the design of the new Pelletizer Facility.

The detailed scope of work associated with this contract includes the engineering design, contract administration and post-construction services for:

- A new Pelletizer Facility, including building electrical service, plumbing and ventilation systems; and a minimum of two (2) dryers (depending on the technology) with all the associated ancillary systems, (i.e., mechanical, electrical, instrument and controls system) and all connections to the existing plant systems.
- New odour control facilities for the new Pelletizer Facility.
- New pellet storage silos and truck loading equipment including dust suppression systems and/or dust and odour controls as well as facilities to weigh and transfer the pellets to haulage trucks.
- Connection of the new Pelletizer Facility to two (2) on-site electrical substations plus the provision of standby power facilities.
- Demolition of an existing building(s) to allow construction of the new Pelletizer Facility.
- Miscellaneous related alterations to the existing Pelletizer Facility to allow connection and the eventual transition of the biosolids feed to the new Pelletizer Facility.

Given the complexity and scale of the project scope, it is estimated that the engineering design will take approximately three (3) years to complete and the subsequent construction phase will take a minimum of four (4) years to complete. The plan calls for the commissioning of the new Pelletizer Facility prior to 2028.

## **Request for Proposals**

A Request for Proposals was prepared by Engineering and Construction Services with Toronto Water, in conjunction with the Purchasing and Materials Management Division to procure the necessary professional engineering services.

Request for Proposals Number Doc2561182391 (Contract Number RFP-20ECS-MI-02AB) was issued by the Purchasing and Materials Management Division, and was advertised on both the City's Internet and Ariba Discovery websites on August 20, 2020. Eight (8) Addenda to the Request for Proposals were issued.

An optional virtual information meeting was held on August 27, 2020, which four (4) firms attended. In addition, optional site information meetings were held on September 2, 2020 and September 3, 2020. Due to COVID-19 restrictions, this was available by appointment only and for a maximum of one site visit per firm, which four (4) firms attended.

A total of three (3) Proposal submissions were received by Purchasing and Materials Management on the October 22, 2020, submission deadline from the following firms:

- AECOM Canada Limited
- Associated Engineering Limited
- CH2M Hill Canada Limited

The Request for Proposals presented the scope of work and described the proposal evaluation process and criteria. The evaluation process consisted of three stages:

Stage 1: Mandatory Submission Requirements

Stage 2: Technical Proposal Structure, Attributes and Contents

Stage 3: Cost of Services

Two (2) out of the three (3) submissions complied with the mandatory Request for Proposals requirements. The submission from Associated Engineering Limited, did not meet the mandatory requirements and was declared non-compliant. In accordance with the Request for Proposals requirements the non-compliant proposal submission was not further evaluated and the Technical Proposal and the Cost of Services were not reviewed.

Two (2) Technical Proposals from AECOM Canada Limited and CH2M Hill Canada Limited, were evaluated by a Selection Committee comprised of six (6) City staff from Toronto Water and Engineering and Construction Services.

The suppliers' Technical Proposals were first evaluated and scored independently by all Selection Committee members, in accordance with the pre-established criteria and the Request for Proposals Evaluation Guide provided by Purchasing and Materials Management Division. The scores were then jointly reviewed by all members of the Selection Committee under the guidance of the Purchasing and Materials Management Division Senior Corporate Buyer. Scores were assigned based on the content of the Technical Proposal as well as referenced appendices.

Both proposals met the minimum threshold score for the Technical Proposal, and their Cost of Services proposals were opened and scored in compliance with the Request for Proposals criteria. The Total Score was the sum of the Technical Proposal and Cost of Services scores, and the supplier with the highest overall Total Score was ranked first.

On completion of the above process, CH2M Hill Canada Limited, was ranked first with the highest overall Total Score and is being recommended for the contract award.

The Fair Wage Office has reported that the recommended firm has indicated that it has reviewed and understands the Fair Wage Policy and Labour Trades requirements and has agreed to comply fully.

Suppliers' scores by criteria, price comparison and a staff analysis of the evaluation results can be provided in a closed session presentation if requested by Committee Members.

### **Application of the City's Social Procurement Policy**

This Request for Proposals was selected by Engineering and Construction Services in consultation with the Purchasing and Materials Management Division and the Social Procurement working group, as a project to implement the City's Social Procurement Policy. The Request for Proposals required the suppliers to submit a proposal on workforce development. CH2M Hill Canada Limited, detailed a Workforce Development Plan that is aligned with the City's objectives and provides a good basis for working together towards successful Workforce Development outcomes, within the Social Procurement framework. In particular, CH2M Hill Canada Limited, focused on implementation of the Diversity Policy, Workforce Development requirements including; local hiring from Neighbourhood Improvement Areas, engagement with Social Purpose Enterprises for subcontracts, and the potential for trades and apprenticeship training projects, which have all been proposed as part of the Plan.

As described under the recommendations section above, three (3) Purchase Orders will be issued for Request for Proposals Number Doc2561182391 (Contract Number RFP-20ECS-MI-02AB) for the Professional Engineering Services for the New Pelletizer Facility at the Ashbridges Bay Treatment Plant to CH2M Hill Canada Limited, in the total amount of \$27,708,606 (net of all applicable taxes and charges), \$28,196,277 (net of HST recoveries).

## **CONTACT**

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Simon Hopton, P. Eng., Director, Major Infrastructure, Engineering and Construction Services, Telephone: 416-395-6270, Email: [Simon.Hopton@toronto.ca](mailto:Simon.Hopton@toronto.ca)

Allison Phillips, Manager, Professional Services, Purchasing and Materials Management Division, Telephone: 647-882-9803, Email: [Allison.Phillips@toronto.ca](mailto:Allison.Phillips@toronto.ca)

## **SIGNATURE**

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Michael D'Andrea, M.E.Sc., P.Eng.  
Chief Engineer and Executive Director, Engineering and Construction Services

Michael Pacholok, JD  
Chief Procurement Officer, Purchasing and Materials Management