

6

AWARD OF EQUIPMENT PRE-PURCHASE CONTRACTS FOR THE STAGE 3 INFLUENT PUMPING STATION PROJECT AS PART OF STAGE 3 PROCESS EXPANSION AT DUFFIN CREEK WATER POLLUTION CONTROL PLANT, PROJECT 73720

The Environmental Services Committee recommends the adoption of the recommendations contained in the following report dated March 28, 2012, from the Commissioner of Environmental Services.

1. RECOMMENDATION

It is recommended that:

1. Council authorize the Chief Administrative Officer to award and execute contracts to pre-purchase the following equipment for the Stage 3 Influent Pumping Station as part of Stage 3 Expansion Projects at the Duffin Creek Water Pollution Control Plant:
 - A proposal for high voltage switchgear and control systems tendered through provisions of the Purchasing By-law for a total estimated upset limit of \$1.2 million; and
 - Procurement of a standby generator and low voltage switchgear under the sole source provisions of the Purchasing By-law to be executed with Wajax GP Holdco Inc. for reasons of compatibility with other similar equipment components currently installed at an upset limit of \$2 million.

2. PURPOSE

This report requests authority to award equipment pre-purchase contracts (one sole-source proposal and one open bid proposal over \$500,000) for the Stage 3 Influent Pumping Station Project at the Duffin Creek Water Pollution Control Plant.

3. BACKGROUND

The York-Durham Sewage System is the main sewage collection system used to manage sewage from York and Durham Regions to the Duffin Creek Water Pollution Control Plant for treatment prior to discharge to Lake Ontario. Recent hydraulic studies performed on the York-Durham Sewage System dictate that sewage levels in the York-Durham Sewage System need to be lowered to facilitate construction and to mitigate risks as follows:

- To facilitate the new Southeast Collector Trunk Sewer connection to the existing York-Durham Sewage System currently scheduled for early 2014.
- To prevent exceedance of the structural integrity of the existing Primary Trunk Sewer and of the existing and new Southeast Collector Trunk Sewers created by surcharge pressures.

As part of the Stage 3 Expansion work, the Region commissioned a consultant to undertake engineering and construction administration services for a new pumping station (Duffin Creek Water Pollution Control Plant Stage 3 Influent Pumping Station), which is intended to operate in parallel with Stages 1 and 2 pumping station upgrades to convey sewage to the Stage 3 Liquids Process Expansion. Operating both these pumping stations on a continuous basis enables control of surcharge conditions.

Currently, detailed design of the Stage 3 Influent Pumping Station is in the final stages for issue of tender. To meet schedule constraints, the New Stage 3 Influent Pumping Station must be operational prior to the final connection of the new Southeast Collector Trunk Sewer into the existing, flowing Primary Trunk Sewer; therefore staff issued a Request for Pre-qualification of General Contractors, Mechanical Sub-contractors and Electrical Sub-contractors for the Stage 3 Influent Pumping Station construction contract. It is estimated that approximately fourteen to sixteen months will be required for construction of the pump station facility after excavation and foundations are complete.

Award of proposals over \$500,000 and sole source tenders require Council authority. Accordingly, it is requested that Council delegate authority to the Chief Administrative Officer to ensure these contracts can be awarded expeditiously to meet the stringent timing requirements.

4. ANALYSIS AND OPTIONS

Strategies for procurement of pre-purchase equipment and construction contracts

To allow the safe and secure connection of the new Southeast Collector Trunk Sewer in 2014, while maintaining flow to the existing York-Durham Sewage System, the Stage 3 Influent Pumping Station should be substantially performed by the end of 2013. This urgency in delivery of the Stage 3 Influent Pumping Station initiated the need to accelerate design and procurement processes. Currently the final design is almost complete. Preparation of tender and proposal documents for construction and pre-purchasing of equipment are being finalized.

Process equipment pre-purchases

Pre-purchase of specialized equipment is required prior to the construction contract for several reasons:

1. To expedite delivery of the Stage 3 Influent Pumping Station to facilitate meeting critical schedule constraints.
2. Highly specialized equipment has very long delivery periods. Pre-purchase of this equipment prior to tendering the construction contract is required so delivery can be timed to coincide with facility construction.
3. Certain engineering information on the specialized equipment is required by the consultants prior to completion of the design of the facility, i.e. dimensions, weight, capacity, etc.
4. Pre-purchasing some process equipment through provisions of the sole source process, as outlined in the Purchasing By-Law, is also necessary for the purposes of compatibility with the existing equipment on-site and to provide necessary engineering information required to complete the design layouts. Certain components of the existing equipment, particularly the standby generator and electronic control equipment associated with large machinery will only communicate with similar components, thus requiring the sole-source compatibility.

Table 1 below summarizes anticipated pre-purchase equipment (one sole source proposal and one open-bid proposal).

Table 1
Equipment Procurement

Equipment Description	Reason for Pre-purchase	Proposed Tender Method	Estimated value
Pre-Purchase 4160V Switchgear and Control Systems	1,2,3	Open-bid proposal	\$1.2M
Pre-Purchase Standby Generator and low voltage switchgear *	1,2,3,4	Sole source tender	\$2.0M

*Procured through vendor: Wajax GP Holdco Inc.

Link to Key Council-approved Plans

Construction of infrastructure to accommodate growth in York Region is a major consideration in all York Region's plans and visions for the future. Improvements to the Region's wastewater infrastructure aligns with the Regional Official Plan and the 2011 to 2015 Strategic Plan. Construction activities currently committed at Duffin Creek Water Pollution Control Plant will continue to deliver and sustain the Region's critical infrastructure.

5. FINANCIAL IMPLICATIONS

The conceptual design cost estimate for the overall construction of the Stage 3 Influent Pumping Station is \$55,000,000. This amount is included under the Total Project Budget Authority in the approved 2012 10-year Capital Plan and required construction and equipment will be procured in 2012 through multiple contracts in accordance with the Region's Purchasing By-law.

Costs Shared with Durham Region

Costs for refurbishment of the existing facility and the Stage 3 Influent Pumping Station will be shared with the co-owner, Durham Region. The exact cost sharing split is currently being negotiated.

6. LOCAL MUNICIPAL IMPACT

Stage 3 Process Expansion Projects at the Duffin Creek Water Pollution Control Plant provide the required wastewater treatment capacity to accommodate approved growth in York Region and within the local municipalities in accordance with approved regional official plan and the water and wastewater master plan. Excellent effluent quality discharged from the water pollution control plant protects Lake Ontario, which is the primary source of drinking water for these same residents.

7. CONCLUSION

The new Southeast Collector Trunk Sewer requires that the Stage 3 Influent Pumping Station project be substantially completed prior to the end of 2013. To meet this strict delivery schedule, adoption of the proposed strategy for pre-purchase of equipment and timely award of construction contracts as detailed in Section 4 of this report will ensure timely deliveries to site, compatibility with existing equipment and provide the design engineers with the technical information required to complete accurate construction documents.

For more information on this report, please contact Daniel Kostopoulos, Director, Capital Planning and Delivery, Environmental Services at (905) 830-4444. Ext. 5070.

The Senior Management Group has reviewed this report.