

TO:	CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON JULY 18, 2016
FROM:	JOHN BRAAM, P. ENG. MANAGING DIRECTOR, ENVIRONMENTAL AND ENGINEERING SERVICES AND CITY ENGINEER
SUBJECT:	APPOINTMENT OF CONSULTING ENGINEER FOR DETAILED DESIGN OF THE FOX HOLLOW SWM FACILITY NO. 3 (ES3020-FH3) AND TRUNK SANITARY SEWER (ES5236-16)

RECOMMENDATION

That, on the recommendation of the Managing Director, Environmental & Engineering Services and City Engineer, the following actions **BE TAKEN** with respect to appointment of a consultant to complete detailed design associated with the construction of the Fox Hollow No. 3 SWM Facility and trunk sanitary sewer:

- a) Stantec Consulting Ltd **BE APPOINTED** Consulting Engineer to complete the detailed design of the Fox Hollow No. 3 SWM Facility, including geotechnical at their quoted price of \$72,464.70 including contingency, excluding HST, based upon the Fee Guideline for Professional Engineering Services, recommended by the Ontario Society For Professional Engineers; and in accordance with single source provision of the Procurement of Goods and Services Policy Section 14.4 e);
- b) Stantec Consulting Ltd **BE APPOINTED** Consulting Engineer to complete the preliminary and detailed design of a trunk sanitary sewer at their quoted price of \$72,160.00 including contingency, excluding HST, based upon the Fee Guideline for Professional Engineering Services, recommended by the Ontario Society For Professional Engineers; and in accordance with single source provision of the Procurement of Goods and Services Policy Section 14.4 e);
- c) That the approved funding for this purchase **BE APPROVED** as set out in the Source of Finance Report attached hereto as Appendix "A";
- d) Civic Administration **BE AUTHORIZED** to undertake all the administrative acts that are necessary in connection with this purchase;
- e) Approval hereby given **BE CONDITIONAL** upon the Corporation entering into a formal contract relating to the subject matter of this approval; and,
- f) 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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CWC – March 23, 2015 - Appointment of Consulting Engineer for Detailed Design and Contract Administration for the Construction of the Fox Hollow SWM Facility No. 3 (ES3020-FH3)

CSC – August 26, 2013 - Statement of Development Charge Reserve Fund Activity – City Services Reserve Funds for the 2013 Year

CWC – November 12, 2012 – Fox Hollow Development Area Stormwater Management Facilities Nos. 1 and 3

CWC – June 19, 2012 – Phasing of Stormwater Management Facilities

BACKGROUND

Purpose

This report recommends the appointment of Stantec Consulting Ltd. to carry out detailed design and engineering services necessary to complete tendering of the Fox Hollow Development Area SWM Facility No. 3 (attached: Appendix “B” Location Map) as well as a preliminary and detailed design of a new trunk sanitary sewer servicing new development.

Context

The Fox Hollow Community Area is located within the “Medway Creek Subwatershed”. This area of approximately 365 hectares is bounded by Sunningdale Road to the north, Wonderland Road to the east, Fanshawe Park Road to the south and Hyde Park Road to the west. In addition, some external lands north of Sunningdale Road beyond the Urban Growth Boundary are a part of this catchment area.

In May 2010, the City engaged Stantec Consulting Ltd. for the functional and detailed design of stormwater servicing and sanitary servicing works for the Fox Hollow development area in accordance with the addendum to the Fox Hollow Development Area Municipal Class Environmental Assessment (EA Addendum) for Storm/Drainage, SWM and Sanitary Servicing works finalized in July 2010.

Construction of the Fox Hollow Development Area SWM Facility No. 3 will be the fourth municipally built component of the Fox Hollow Community Area SWM System and will allow for approximately 146.3 ha of land to be developed. This will allow for the development of approximately 1204 units (561 single family and 643 medium density units). Storm flows from these areas will be captured by the SWM Facility and conveyed by a channel to the Heard Drain, providing water quality, erosion, and peak flow attenuation to protect the downstream Medway Creek system.

A new trunk sewer alignment has been proposed adjacent to the channel and SWM Facility as an alternative to routing the sanitary sewer through internal subdivision streets where it would be considerably deeper (up to 8 meters). This sewer linkage represents an extension to trunk sewers previously constructed through the Fox Hollow Development Area and it is believed that funding for the sewer project could be absorbed by the existing Development Charges rates.

DISCUSSION

Stormwater Facility Revised Construction Approach

In early 2015 AMEC Foster Wheeler was retained to complete the detailed design, inspection, and general construction administration related to the Fox Hollow SWM Facility. AMEC Foster Wheeler provided a design that met the requirements as set out in the functional design and Environmental Compliance Approval granted by the Ministry of Environment and Climate Change. The estimated cost of this design was approximately twice the approved budget.

In order to reconsider the proposed design, Stantec Consulting Ltd was appointed to undertake a technical peer review of the proposed SWM Facility design. Stantec has significant experience in constructing stormwater infrastructure within the area as they have completed design and construction administration for Fox Hollow SWM Facility 1 Phase 1, Fox Hollow SWMF Facility 2, and the Heard Drain (Appendix ‘B’ Location Map). Stantec’s review identified a different construction approach and calculated an estimated cost reduction of \$4M. Stantec’s basis and comfort level with the new approach is primarily based on their previous experience constructing stormwater facilities in this specific area.

Trunk Sanitary Sewer Design

Staff wish to advance funding to undertake the preliminary engineering design for a new sanitary trunk sewer alignment adjacent to the channel and SWM Facility. The new trunk sanitary sewer alignment offers the opportunity to reduce the depth of sanitary sewers due to favourable grading through the SWM block and the opportunity to reduce local sanitary sewer depths, reduce future asset replacement costs, and improve the city's ability to maintain these sewers and carry out future repair work. This consultant would be well suited to review design constraints with planned infrastructure (headwall, retaining walls, trunk storm sewer, etc.) and review conditions such as geotechnical, hydrogeological, clay liner construction, and other potential conflicts.

Subject to favorable outcome of the preliminary design, a new sanitary sewer linkage would be added and detailed design of the sewer undertaken. Construction of the sanitary trunk sewer would be proposed to be undertaken in conjunction with the channel and SWM Facility.

Fox Hollow SWMF No.3 Budget Implications

The remaining budget for the construction of the Fox Hollow No. 3 (SWM facility, conveyance channel, and agreed upon off-site works), is \$3.9 M excluding HST. This budget number was established and approved by Council in 2009. Noting that this value was no longer sufficient, the anticipated increase was included in the 2017 GMIS stormwater reserve fund analysis. A budget adjustment request will be requested in the future tendering report for the Fox Hollow No.3 SWM Facility.

CONCLUSIONS

Stantec Consulting Ltd has demonstrated an understanding of the City requirements for this project and has extensive knowledge in projects of this nature. It is recommended that the engineering fee of 72,464.70, excluding H.S.T. to carry out the detailed design revisions associated with the Fox Hollow SWMF 3 and the engineering fee of 72,160.00, excluding H.S.T. to carry out the preliminary and detailed design of a sanitary trunk main. The assignment will result in significantly lower construction costs for the SWM Facility for this Development charges funded project. The consulting assignment related to the construction administration and supervision work related to the SWM facility and sewer project will be brought forward to Committee with the tender award.

This document has been prepared by Chris McIntosh, P.Eng., Environmental Services Engineer within the Stormwater Engineering Division.

SUBMITTED BY:	REVIEWED AND CONCURRED BY:
SCOTT MATHERS, MPA, P.ENG. MANAGER OF STORMWATER ENGINEERING DIVISION	TOM COPELAND, P. ENG. DIVISION MANAGER WASTEWATER AND DRAINAGE ENGINEERING
REVIEWED AND CONCURRED BY:	RECOMMENDED BY:
JOHN LUCAS, P.ENG. DIRECTOR, WATER AND WASTEWATER ENGINEERING	JOHN BRAAM, P.ENG. MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES & CITY ENGINEER

July 11, 2016

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