



Report to: General Committee

Date Report Authored: November 17, 2014

SUBJECT: Award of West Thornhill Flood Control Implementation – Phase 1C and Phase 2 Detailed Design

PREPARED BY: Prathapan Kumar, Asset Management, Ext. 2989
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RECOMMENDATION:

- 1) THAT the report entitled “Award of West Thornhill Flood Control Implementation – Phase 1C and Phase 2 Detailed Design” be received;
- 2) AND THAT the contract for the detailed design of storm sewer and watermain for the Phase 2 area (Grandview) and watermain for Phase 1C – South (Canadiana Drive) be awarded to R.V. Anderson Associates Ltd. in the amount of \$412,364.08 inclusive of provisional item, disbursements and HST;
- 3) AND THAT a 10% contingency in the amount of \$41,236.41 inclusive of HST be established to cover any additional costs and that the authorization to approve expenditures of this contingency amount up to the specified limit be in accordance with the Expenditure Control Policy;
- 4) AND THAT the storm sewer detailed design component in the amount of \$278,362.44 inclusive of contingency and HST be funded from “Flood Control Implementation – West Thornhill Phase 2” 058-6150-14271-005;
- 5) AND THAT the watermain replacement detailed design component in the amount of \$175,238.05 inclusive of contingency and HST be funded from the “Waterworks Stabilization/Capital Reserve” and a new Waterworks capital project be established for ‘Watermain Detailed Design - for Phase 1C and Phase 2’;
- 6) AND THAT the procurement process be waived in accordance with Purchasing By-Law 2004-341, Part II, Section 7 Non Competitive Procurement, item 1 (c), which states “When the extension of an existing contract would prove more cost-effective and beneficial”;
- 7) AND THAT Staff be authorized and directed to do all things necessary to give effect to this resolution.

PURPOSE:

The purpose of this report is to obtain Council approval to award the West Thornhill Flood Control Implementation – Phase 1C and Phase 2 Detailed Design.

BACKGROUND:

Stormwater flood remediation has been approved in West Thornhill in accordance with the City’s November 2010 Class EA Study. The first phase of the remediation includes storm

sewer capacity upgrades in the Bayview Glen neighbourhood and the second phase includes the Grandview area. Construction of these upgrades provides an opportunity to concurrently replace aged cast iron watermain in these areas and to avoid disturbance of the restored roadway and neighborhood twice.

In May 2012, Council approved the award of contract 247-R-11 “West Thornhill Flood Control Implementation Alternative Refinement, Preliminary and Final Design” to R.V. Anderson Associates Ltd through a competitive bidding process. This contract award included the following:

Storm Sewers:

- (a) Preliminary Design for Phases 1A and 1B (Bayview Glen) and Phase 1C – South (Canadiana Dr) and Phase 2 (Grandview) areas
- (b) Detailed Design for Phases 1A and 1B (Bayview Glen) and Phase 1C – South (Canadiana Dr)

Later in November 2013, Council approved to increase RVA’s contract to include the watermain design for the following:

Watermain:

- (a) Preliminary Design for Phases 1A and 1B (Bayview Glen), Phase 1C – South (Canadiana Dr) and Phase 2 (Grandview) areas
- (b) Detailed Design for Phases 1A and 1B (Bayview Glen) and Phase 1C – South (Canadiana Dr)

In June 16, 2014 Council approved the award for construction of Phase 1A of West Thornhill storm sewer and watermain replacement in the amount of \$11.8M.

OPTIONS/ DISCUSSION:

This recommendation is seeking Council approval to award the detailed design for the following:

Storm Sewers:

- (a) Detailed Design for Phase 2 (Grandview) areas

Watermain:

- (a) Detailed Design for Phase 2 (Grandview) areas
- (b) Preliminary and Detailed Design of additional areas identified by Waterworks in Phase 1C – South (Canadiana Drive) and Phase 2 areas (total of 1,177m)

R.V. Anderson Associates Ltd. is currently carrying out the storm sewer and watermain design works for Phase 1 through contract 247-R-11 and Staff has identified the following synergies and cost efficiencies by awarding the Phase 2 detailed design to R.V. Anderson Associates Ltd.:

1. Value for money: The contract award to R.V. Anderson Associates Ltd. under 247-R-11 for the preliminary and detailed design fee for Phase 1 was 7.02% of construction cost. The quote from R.V. Anderson Associates for Phase 2 preliminary and detailed design is 4% (2% for preliminary design and 2% for detailed design) of the estimated construction cost. In reviewing eight recently completed projects, the design fees were in the range of 5.72% to 23.2% of construction costs. Due to continuity and familiarity

of the design alternatives, RVA was able to reduce their fee structure to 4% for Phase 2 works from 7.02%.

2. Continuity of Work – Since R.V. Anderson Associates Ltd. was involved in the model refinement and design alternatives; it is more efficient in both technical and financial aspects to continue with R.V. Anderson Associates Ltd. A new consultant will require more time to familiarize themselves with the model and design concepts.

Watermain Replacement:

The watermain can be designed and replaced at the same time as storm sewer upgrades in the West Thornhill flood remediation areas. This option will offer cost efficiencies in terms of preliminary and detailed design efforts, capital cost and use of staff resources for administration of design and construction contracts. This combined replacement of services will also minimize disruption to the local community by avoiding replacement of watermains and repair of the roadway at a later date.

A total of 4,259 metres of existing cast iron watermain has been identified for replacement in the Phase 1C – South (Canadiana Drive) and Phase 2 areas. The 2014 budget request for West Thornhill Flood Control Implementation included a watermain component of \$2,470,800 inclusive of HST for Phases 1A and 1B watermain construction.

West Thornhill Flood Control Implementation Schedule:

Construction tender for Phase 2A will be released to market in Feb/March 2016 and the anticipated construction completion time is Q2, 2017. For Phases 3 and 4, a design consultant will be retained through competitive RFP process in 2016. Following is the anticipated implementation schedule for construction:

Area	Schedule
Phase 1A Bayview Glen Area	2014 - 2015
Phase 1B Bayview Glen Area	2015 - 2016
Phase 1C Canadiana Road	2015 - 2016
Phase 2 Grandview Area	2016 - 2019
Phase 3 Clark Ave/Henderson Ave Area	2019 - 2021
Phase 4 Bay Thorn/Royal Orchard/Romfield Area	2021 – 2024

FINANCIAL CONSIDERATIONS AND TEMPLATE

Staff recommends the award to R.V. Anderson Associates Ltd. in the amount of \$453,600.49 for the storm sewer detailed design for Phase 2 area (\$278,362.44) and watermain detailed design for Phase 1C – South (Canadiana Drive) and Phase 2 areas (\$175,238.05). A new 2014 Waterworks capital project will be established for the water component of \$175,238.05 and funded from the Waterworks Stabilization/Capital Reserve.

The following table summarizes the financial considerations for Detailed Design for Phase 1C and Phase 2:

Original Budget and Account #	\$13,423,123.00	058-6150-14271-005 Flood Control Implementation - West Thornhill Phase 2
Total Budget Available for this Project (A)	\$278,362.44	058-6150-14271-005 Flood Control Implementation - West Thornhill Phase 2
Less: Storm Sewer - Detailed Design: Phase 2 All Areas	\$253,056.77	Awarded to R.V. Anderson Associates Ltd. (total: \$278,362.44)*
Less: 10 % Contingency	\$25,305.68	
Less: Watermain - Detailed Design: Phase 1C South & All Phase 2 Areas	\$159,307.32	Awarded to R.V. Anderson Associates Ltd. (total:\$175,238.05)
Less: 10% Contingency	\$15,930.73	
Total Detailed Design Cost (B)	\$453,600.50	
Budget Shortfall (A - B)	(\$175,238.06)	**

Note: figures above includes HST impact

**Storm Sewer component of \$278,362.44 will be funded from account #14271 and includes a \$25,000 provisional sum for the design of stormwater quality control facilities.*

***Budget shortfall represents the watermain replacement detailed design component in the amount of \$175,238.05 inclusive of contingency and HST to be funded from the Waterworks Stabilization/Capital Reserve and a new Waterworks capital project be established for 'Watermain Detailed Design - for Phase 1C and Phase 2.'*

HUMAN RESOURCES CONSIDERATIONS:

Not Applicable.

ALIGNMENT WITH STRATEGIC PRIORITIES:

This project is in line with the City's strategic priority of delivering municipal services in the most effective and efficient manner (i.e., Service, Value) as outlined in Building Markham's Future Together.

BUSINESS UNITS CONSULTED AND AFFECTED:

Environmental Services and Finance Department has been consulted, provided input and reviewed this report.

RECOMMENDED BY:

10/11/2014

X 

Phoebe Fu
Director, Asset Management

11/11/2014

X 

Brenda Librecz
Commissioner, Community and Fire Services

07/11/2014

X 

Trinela Cane
Commissioner, Corporate Services

ATTACHMENTS:

[Attachment "A" – Map showing Phase 1A and 1B Area \(Bayview Glen\)](#)

[Attachment "B" – Map showing Phase 1C - South Area \(Canadiana Dr\)](#)

[Attachment "C" – Map showing Phase 2 Areas \(Grandview\)](#)

[Attachment "D" – Map showing Phase 3 Area \(Clark Ave/ Henderson Ave\)](#)

[Attachment "E" – Map showing Phase 4 Area \(Bay Thorn/Royal Orchard/Romfield\)](#)