



Report to: Development Services Committee

Meeting Date: April 21, 2021

SUBJECT: Request to Increase Purchase Order for Consulting Engineering Services to Design Extension of Trunk Sewer and Watermain in Highway 404 North Secondary Plan Area (Ward 2)

PREPARED BY: Nhat-Anh Nguyen, Senior Manager, Development Engineering and Environmental Engineering, extension 2849

RECOMMENDATION:

1. That the report entitled “Request to Increase Purchase Order for Consulting Engineering Services to Design Extension of Trunk Sewer and Watermain in Highway 404 North Secondary Plan Area” be received; and
2. That Purchase Order PD 18309 issued to SCS Consulting Group Ltd. for the detailed design of the extension of the existing trunk watermain and trunk sanitary sewer on Woodbine Avenue be increased by \$391,404.58 inclusive of HST impact, to cover the additional design work required for the project; and
3. That Purchase Order PD 18310 for the contingency for the detailed design of the trunk watermain and trunk sanitary sewer on Woodbine Avenue be increased by \$39,140.46 inclusive of HST impact, to cover any additional design work required for the project and that authorization be granted to approve expenditures of this contingency amount up to the specified limit in accordance with the Expenditure Control Policy; and
4. That the Engineering Department Capital Administration Fee in the amount of \$54,665.40 , inclusive of HST impact, be transferred to revenue account [640-998-8871(Capital Admin Fees); and
5. That the 2019 Engineering Capital Account 19257 (Consulting Engineering Services for Hwy 404 North Sec Plan) be increased to cover the additional project estimates in the amount of \$485,210.44 inclusive of HST impact, and funded from City Wide Hard Development Charges Reserve, and further,
6. 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:

- Increase Purchase Order PD 18309 with SCS Consulting Group in the amount of \$391,404.58, to cover the additional detailed design work to extend the trunk

watermain and trunk sanitary sewer to service the 404 North Secondary Plan Area;

- Increase the Contingency Purchase Order in the amount of \$39,140.46 , to cover any additional detailed design work;
- Transfer the Capital Administration Fee in the amount of \$54,665.40 to the Engineering Department's Capital Administration Fee revenue account [640-998-8871]; and
- Increase the 2019 Engineering Capital Account 19257 (Consulting Engineering Services for Hwy 404 North Sec Plan), and be funded from City Wide Hard Development Charge Reserve, to cover the cost for the additional design work

BACKGROUND:

Council at its meeting of September 18, 2018 adopted staff's recommendation to award a consulting engineering services contract to SCS Consulting Group Ltd. (SCS) to design the extension of the existing trunk sanitary sewer and trunk watermain on Woodbine Avenue north to service the Highway 404 North Secondary Plan. The reason for starting the detailed design is to minimize delays for business corporations that are considering investing and developing lands in the 404 North Secondary Plan that are currently beyond the limits of municipal services. SCS was recommended to be retained for this work as they had prepared the Master Servicing Study for the Highway 404 North Secondary Plan and have the background to design the extension of the infrastructure.

OPTIONS/ DISCUSSION:

The Sanitary Sewer Servicing Concept Was Updated

The Master Servicing Study (2010) prepared in support of the Highway 404 North Secondary Plan contemplated extending the trunk sanitary sewer north on Woodbine Avenue to just south of the TransCanada Pipeline before turning north-west and running within the hydro corridor north to 19th Avenue. When the project team discussed the design of the extension of the trunk sanitary sewer early in the project, it was determined that constructing a sanitary sewer within the hydro corridor would be very expensive. In addition, obtaining approval to install a municipal sewer within the hydro corridor would be very difficult and a lengthy process. Accordingly, a new design concept was explored that would keep the extension of the trunk sanitary sewer within the Woodbine Avenue right-of-way.

However, the Woodbine sewer alignment is not without challenge and there are a number of physical constraints (such as crossings under the TransCanada Pipeline pipes, Enbridge pipes, and the Berczy Creek Tributary) which became apparent after engineering fieldwork was completed. In addition, this concept will result in a sewer that

is quite flat and will not meet the City's design criteria of minimum slope. A flat sewer will have long-term implications to the operations and maintenance of the sewer.

A Different Sewer Alignment Is Required to Resolve Constraints

A further refinement to the alignment for the trunk sanitary sewer is required to address the physical constraints and meet the City's design criteria. The project team and SCS have discussed an alternative sewer alignment that would follow the alignment of the proposed collector roads within the Hwy 404 North Secondary Plan that was recently established through a Class Environmental Assessment (Class EA) Study. This conceptual alignment is appended to this report as **Attachment 'A'**. SCS has indicated that the additional engineering work is estimated to cost \$256,587.84, inclusive of HST impact.

Watermain Design Scope Change

There is also a scope change required for the trunk watermain design on Woodbine Avenue. The available drawings show the watermain terminates at a point just south of the hydro corridor. Upon field investigation work by SCS, it was confirmed that the existing truck watermain terminates at Honda Boulevard, approximately 600m south of the anticipated location. While staff will investigate and report back to a future Development Services Committee the implications this discrepancy has on the design and future construction costs, it is necessary to change the project scope to design from the existing termination of the watermain. The conceptual alignment for the watermain is appended to this report as **Attachment 'B'**. SCS has indicated that the engineering work required to support the revised design scope for the trunk watermain is estimated to cost \$134,816.74, inclusive of HST impact.

Contingency

As per typical awards, staff recommend a 10% contingency for the proposed scope increase as identified above. Staff recommend a contingency amount of \$39,140.46, to cover any additional design revisions or field investigation.

FINANCIAL CONSIDERATIONS

The table below provide a detailed summary of the financial requirements for this report:

Table 1 – Design Cost Increase

Description	Amount (inc. HST Impact)	Comments
Original Award	\$1,230,502.27	PD 18309
Original Award – Contingency	\$123,050.22	PD 18310
Total Original Award	\$1,353,552.49	
Sanitary Trunk Alignment	\$ 256,587.84	
Watermain Extension Alignment	\$ 134,816.74	
Sub-total:	\$ 391,404.58	Increase to PO PD 18309
10% Contingency	\$ 39,140.46	Increase to PO PD 18310
Sub-total:	\$ 430,545.04	
Engineering Capital Admin Fee	\$ 54,665.40	640-998-8871
Total:	\$ 485,210.44	

In accordance with the City's Expenditure Control Policy, the proposed Purchase Order increase (greater than \$100,000 and no available funding) requires Council approval.

Table 2 – Financial Summary

Description	Amounts (inc. HST Impact)
Budget (Project 19257) (A)	\$ 1,402,357.00
Expenses/Commitments (B)	(\$ 1,402,357.00)
Current Balance Available (C=A+B)	\$ 0.00
PO Increase for Design (D)	(\$ 430,545.04)
Capital Admin Fee (E)	(\$ 54,665.40)
Shortfall Requiring Additional Funding (F=C+D+E)	(\$ 485,210.44)

Based on the above, staff recommends that the 2019 Engineering Capital Account 19257 be increased to cover the additional project costs in the amount of \$485,210.44, inclusive of HST impact, and be funded from City Wide Hard Development Charge Reserve.

It is not anticipated that there will be any further increases to PO PD18309.

HUMAN RESOURCES CONSIDERATIONS

Not applicable

ALIGNMENT WITH STRATEGIC PRIORITIES:

This project aligns with the City's strategic priority of ensuring the reliability of the Corporation's services by proactively managing our infrastructure and developing plans to facilitate investment and employment growth.

BUSINESS UNITS CONSULTED AND AFFECTED:

The Finance Department was consulted and their comments have been addressed in this report.

RECOMMENDED BY:

Brian Lee, P. Eng.
Director of Engineering

Arvin Prasad, MCIP, RPP
Commissioner, Development Services

ATTACHMENTS:

Attachment 'A' – Conceptual Sanitary Sewer Alignment
Attachment 'B' – Conceptual Watermain Alignment