



City of  
**Peterborough**

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**To:** **Members of the General Committee**

**From:** **Cynthia Fletcher**  
**Commissioner of Infrastructure and Planning Services**

**Meeting Date:** **March 9, 2020**

**Subject:** **Report IPSENG20-007**  
**Central Area (Bethune Street) Flood Reduction Project: Budget Increase and Pre-Commitment of 2021 Capital Budget**

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## **Purpose**

A report to recommend an increase in the capital budget for the Central Area Flood Reduction Project, funded by various budget transfers, and a pre-commitment of the 2021 Capital Budget.

## **Recommendations**

That Council approve the recommendations outlined in Report IPSENG20-007 dated March 9, 2020, of the Commissioner of Infrastructure and Planning Services, as follows:

- a) That the Capital Budget for the Central Area (Bethune Street) Flood Reduction Project be increased by \$18,735,900 from \$33,940,000 to \$52,675,900 and that the \$18,735,900 be funded as outlined in Table 2 of this report.
- b) That the \$1,900,000 pre-commitment approved as part of the 2020 Capital Budget be increased by \$3,615,600 resulting in a \$5,515,600 total 2021 budget pre-commitment for the Central Area (Bethune Street) Flood Reduction Project; and
- c) That a Debenture By-law be passed authorizing the issuance of \$5,063,300 of Area Specific Development Charge supported debentures and the issuance of \$1,957,000 of City Wide Development Charge (Engineering Services Roads and Related) supported debentures for the Central Area (Bethune Street) Flood Reduction Project as further detailed in Table 2 (line reference 3 and 4) of this report.

## Budget and Financial Implications

The total estimated project costs (net of HST rebate) of \$52,675,900 including AECOM's engineering design costs, construction contracts 1 and 2, contingency allowance, cost incurred to date and project management costs are detailed in Table 1.

**Table 1 – Updated Bethune Street Project Costs**

Line	Description	Amount
1	<b>Costs incurred or committed to date</b> – including AECOM engineering design, Construction Contract 1 - Tender ITT-018-19 Jackson Creek Flood Diversion - Diversion Sewer Outlet Construction and George Street Bridge Rehabilitation (including provisional work), property costs, utility relocations and project management	<b>\$ 12,974,025</b>
2	Construction Cost Estimate for Contract 2	\$ 33,185,974
3	Contingency on Contract 2 (10%)	\$ 3,318,597
4	Remaining Utility Relocation Cost Estimate	\$ 1,985,000
5	Geotechnical and Material Testing Allowance	\$ 250,000
6	<b>Sub-total</b>	<b>\$ 51,713,596</b>
7	HST Payable by the City	\$ 682,304
8	Remaining Project Management	\$ 280,000
9	<b>Total Project Costs (Net of HST Rebate)</b>	<b>\$ 52,675,900*</b>

The project cost will be funded as proposed in Table 2.

The total approved budget for the Central Area (Bethune Street) Flood Reduction Project is comprised of both the Bethune Street Diversion Shared Funding Project (2020 Capital Budget Ref #5-5.01 and the Bethune Street Diversion City Funded Project (2019 Capital Budget Ref #5-6.02). In addition, as part of the 2020 Budget, Council approved Report CLSFS19-056, Recommendation (h) which pre-committed \$1,900,000 in 2021 capital funding for the Bethune Street Diversion – City Funded project for a total approved budget of \$33,940,000.

**Table 2 - Proposed Funding Sources for the Bethune Street Project**

Ref	Description (1)	Original Funding (2)	Additional Funding Required (3)	Revised Funding (4)
1	<b>Direct Revenue - Ontario Grant (SCF)</b>	7,970,150		7,970,150
2	<b>Direct Revenue - Canada Grant (SCF)</b>	7,970,150		7,970,150
3	<b>Area Specific Development Charges</b>			
	DC - Chemong East	246,909		246,909
	DC - Chemong West	386,191		386,191
	DC - Carnegie East	240,300		240,300
	DC - Carnegie West	126,600		126,600
	DC Debt - Chemong East	196,800	929,000	1,125,800
	DC Debt - Chemong West	308,000	1,845,200	2,153,200
	DC Debt - Carnegie East	171,200	1,510,200	1,681,400
	DC Debt - Carnegie West	124,000	778,900	902,900
4	<b>City Wide Development Charges (Engineering Roads and Related)</b>			
	DC Debt	887,000	1,957,000	2,844,000
	DC Reserve	820,900		
5	<b>Reserves:</b>			
	FRMP Reserve - CL	9,097,500		9,097,500
	FRMP Reserve - SS	300,000	1,500,000	1,800,000
	WWRF	821,800	1,500,000	2,321,800
6	Capital Levy & Tax Supported Debentures	2,372,500		2,372,500
7	Flood Reduction Subsidy Program (FRMP-SS)		3,510,000	3,510,000
8	Byersville Creek EA (FRMP-CL and CL Reserve)		1,590,000	\$1,590,000
9	Pre-commitment of 2021 Capital Budget	1,900,000	\$3,615,600	\$5,515,600
10	<b>Total Funding</b>	<b>\$33,940,000</b>	<b>\$18,735,900</b>	<b>\$52,675,900</b>

Included in the recommended budget and reserve transfers detailed in Table 2, Column 3, is a further 2021 Capital Budget pre-commitment of \$3,615,600 that is required to fully fund the project. The total pre-commitment of \$5,515,640 will be funded using one or more municipal sources of funding such as capital levy, tax supported debt, reserves and / or federal gas tax, as determined through the 2021 budget process.

The uncommitted balance in the Wastewater Reserve Fund after the recommended transfer of \$1,500,000 is \$104,238.

The uncommitted balance in the the Flood Reduction Master Plan – Sewer Surcharge Reserve after the recommended transfer of \$1,500,000 is \$52,669.

## **Background**

### **Brief Description of the Work**

In July 2004, the City of Peterborough was hit by a severe rainfall event that caused significant flood damage in an excess of \$100 million in direct physical damages to private and public property. In response, the City developed a Flood Reduction Master Plan and associated funding to implement projects that ensure community resiliency in adapting to Climate Change.

In 2014 the City applied for funding through the Small Communities Fund. In 2015, the City received notice of funding approval in the amount of \$15,940,300 for the Climate Adaptation project that would see:

- 1) installation of the storm sewer to divert high flows in Jackson Creek to mitigate flood damage;
- 2) the reconstruction of Bethune Street from Dublin Street to Townsend Street; and
- 3) increase in sanitary sewer capacity to support growth in the north-end developments of Peterborough.

While the project has been referred to as the Bethune Street or Jackson Creek Flood Diversion project, the more appropriate project title is the Central Area Flood Reduction Project. The project will result in new storm and sanitary infrastructure, increased capacity, storm water diversion. This project will protect the Central Area and the City for decades against major flooding events and is a key piece of the City's Climate Adaptation plan.

The project has evolved in both scope and cost as detailed in Report IPSEC18-024 BethuneScape Project Update and Increase in Agreement for Detailed Design and Contract Administration, dated August 27, 2018.

At that time and at 60% detailed design, the projected total cost of the project was \$45.9 million in 2018 dollars. This amount included a \$6.3 million provision for the design and

construction of Charlotte Street West (Aylmer Street to Park Street), leaving a \$39.6 million estimate for the Bethune Street Flood reduction portion of the project. Currently, the approved budget for the project is at \$33.9 million (Table 2), leaving a shortfall of approximately \$6.0 million (if escalator is added), related to the 2018 cost estimate at 60% detailed design. In the absence of 90% detailed design, sufficient additional funding was not secured in the 2019 and 2020 budgets. The funding shortfall was further compounded by other key projects, like Parkhill Road, competing for available budget dollars.

The Bethune Street project has been phased in two stages, Contract 1 and Contract 2. Tender ITT-18-19, Jackson Creek Flood Diversion - Contract 1 (Diversion Sewer Outlet Construction and George Street Bridge Rehabilitation) was awarded in September 2019. Contract 2 is scheduled to go to tender in April 2020 and will consist of the inlet and both the sanitary and storm sewer components along Townsend and Bethune Streets. To fulfill the funding agreement timelines, the project must be substantially complete by October 31, 2021.

### **Project Cost Estimate Increase**

In January 2020, the City received construction cost estimate at 90% detailed design for the Central Area (Bethune Street) Flood Reduction Project, resulting in a total estimated project budget (not including Charlotte Street components) of \$52.7 million. This results in a budget shortfall of \$18.7 million (see Table 2) which is detailed as follows:

- 1) Construction Cost Indexing (2018 - 2020) RS Means Construction Index 7.3% - These costs are related to construction cost increases as a result of inflation and market conditions over the two-year term from the last cost estimate: \$2,900,000;
- 2) Outlet structure: increased costs associated with additional structural work, material contamination costs, scope for utilities and 127 George Street restorations. These costs are related to Contract 1 scope that increased from the previous cost estimate. Contract 1 included costs for additional structural work related to requirements for earth piles and vehicle barriers. It also included greater scope of contaminated material remediation and additional scope related to remediation and restoration of 127 George Street: \$3,300,000;
- 3) Upsizing of Townsend Street Outlet Storm Sewer for 100 year diversion of Rink Street Flows (referenced in Report IPSEC18-024) : Installing a larger unit for the Townsend Street Outlet Storm Sewer to accommodate the 100 year Rink Street flows will cost an estimated additional \$1.57 million but will save an estimated \$4 million in future costs by eliminating the need to construct a separate storm sewer along Rink Street south of the now proposed Townsend Street box culvert: \$1,570,000;
- 4) Bethune Street streetscape detailed design and related increased drainage components: These costs refer to additional storm sewer costs that incorporate storm water quality components as well as drainage associated with the Bethune Street streetscape: \$1,440,000;

- 5) Increase in Electrical Costs associated with decorative street lighting and traffic signals: These costs reflect increases that result from the refinement of estimates associated with the decorative street lighting proposed and the scope of traffic signal work required: \$1,810,000;
- 6) Utility Relocations: These additional costs are associated with the multitude of utility conflicts and relocations required in order to accommodate the Jackson Creek Flood Diversion sewer. Costs have increased from earlier estimates as the conflicts and scope have been refined following the advancement of the detailed design: \$1,680,000; and
- 7) Funding shortfall at 60% design stage: As noted above, there is currently insufficient approved budget to fund the 2018 cost estimate at 60% detailed design (prior to the cost estimate increases noted in items 1-6): \$6,000,000.

To summarize, the two key drivers resulting in the request for \$18.7 million increased budget are:

1. Additional project costs (\$12.7 million) outlined in items 1-6 above; and
2. Insufficient funding reflected in difference between current budget and the 2018 cost estimates at 60% design ~(\$6.0 million); item 7 above.

### **Budget transfers and 2021 Pre-Commitment Required**

The total approved budget for the Bethune Street project is \$33,940,000. This is comprised of both the Bethune Street Diversion Shared Funding Project (2020 Capital Budget Ref #5-5.01 and the Bethune Street Diversion City Funded Project (2019 Capital Budget Ref #5-6.02).

Given the total project cost estimate of \$52,675,900, there is a funding shortfall of \$18,735,900. The recommended budget transfers and pre-commitment of funding in 2021 are required to move the project forward (Table 2, Column 3). Tendering Contract 2 in April 2020 is imperative to meet the timelines of the SCF grant, with the project needing to achieve substantial completion by October 31, 2021.

Funds transferred from the Flood Reduction Subsidy Program is recommended as there has been limited past uptake on the program and a significant amount of flood reduction funding available in this budget. If there is renewed interest in the program and applications are received, there may be a need for additional future funding, but it is anticipated that the amount would be limited based on past uptake.

The transfer of budget from the Byersville Creek EA is making use of available funds for flood reduction that are not anticipated to be utilized in the near future for the main Byersville Creek flood control project. This project is for a storm water management facility that has had preliminary design works but has experienced obstacles in property acquisition and agency approvals. It may be necessary to budget for this project in the future if the obstacles can be overcome.

### **Charlotte Street and Bethunescape Projects:**

These works will be reflected as individual projects in future budgets, with associated funding allocations.

### **Charlotte Street (Aylmer-Park Streets):**

A funding request of \$6.85M for the Charlotte Street (Aylmer-Park Streets) work is reflected in the 2021-2023 budgets. Design work for Charlotte Street will become a focus, once the Central Area (Bethune Street) Flood Reduction project is further along. Cost estimates and budgets for this portion of the work will be refined and, depending on the design elements and features, the allocation may need to be increased. Costs associated with the Charlotte Street works will be reviewed as part of future budget(s) or as a separate Council report. Design work is anticipated to resume in Fall of 2020.

### **Bethunescape Work:**

The current project contract includes “laying the canvas” for Bethune Street (ie road surface, cycling lanes, curbs, sidewalks). The Bethunescape work was always contemplated to be a future project. Future work will develop specific features, associated detailed designs and cost estimates.

## **Summary**

This report outlines a request for budget increase through budget and reserve transfers and a further pre-commitment of a future budget to complete the Central Area (Bethune Street) Flood Reduction project (Jackson Creek Flood Diversion Project Contract 2 on Bethune Street and Townsend Street).

The Central Area (Bethune Street) Flood Reduction Project is an important part of the City’s overall Flood Reduction Master Plan. The outcome of the project will protect the community and is a key piece of the City’s Climate Adaptation plan, related to Climate Change. The installation of new and larger capacity infrastructure ensures a much more resilient community.

Submitted by,

Cynthia Fletcher  
Commissioner of Infrastructure and Planning Services

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