

## Report to Civic Works Committee

**To:** Chair and Members  
Civic Works Committee

**From:** Kelly Scherr, P.Eng., MBA, FEC  
Deputy City Manager, Environment & Infrastructure

**Subject:** Mud Creek East Branch Phase 2A and 2B: RFT-2023-128 —  
Culvert Installation Project and Consultant Fee Increases

**Date:** May 22, 2024

## Recommendation

That, on the recommendation of the Deputy City Manager, Environment and Infrastructure, the following actions **BE TAKEN** with respect to the RFT-2023-128 - Mud Creek East Branch Phase 2A (Culvert Installation) and Mud Creek Phase 2B (Channel Remediation) Projects:

- a) Mud Creek East Branch Phase 2A – Culvert Installation Project (Tender RFT-2023-128) construction contract value with Birnam Construction Ltd. **BE INCREASED** by \$954,027, including contingency, for a total contract value of \$3,356,250.56 (excluding HST) in accordance with Section 20.3 (e) of the Procurement of Goods and Services Policy;
- b) The engineering design fees for AECOM Canada Ltd. **BE INCREASED** in accordance with the estimate on file, by \$322,091.24, excluding HST, from \$942,832.61 to a total upset amount of \$1,264,923.85 in accordance with Section 15.2 (g) of the Procurement of Goods and Services Policy;
- c) The Contract Administration fees for AECOM Canada Ltd. **BE INCREASED** in accordance with the estimate on file, by \$44,924.25, excluding HST, from \$127,098 to a total upset amount of \$172,022.25 in accordance with Section 15.2 (g) of the Procurement of Goods and Services Policy;
- d) the financing for these projects **BE APPROVED** as set out in the Sources of Financing Report attached hereto as Appendices 'A.'
- e) the Civic Administration **BE AUTHORIZED** to undertake all the administrative acts that are necessary in connection with these projects; and,
- f) the Mayor and City Clerk **BE AUTHORIZED** to execute any contract or other documents, if required, to give effect to these recommendations.

## Executive Summary

The City requested Birnam Excavating Ltd. to provide a dewatering plan to accommodate the proposed Permit to Take Water (PTTW) daily amount of 3.4 million litres per day. This report recommends the award of the additional costs to undertake this work.

In addition, AECOM Canada Ltd. has incurred fees for scope changes from the original assignment due to added field investigations, design changes, expanded geotechnical investigations, approval agency coordination with the Upper Thames River Conservation Authority (UTRCA), and public consultations and stakeholder meetings.

Also, due to the extension of the construction period and unforeseen issues related to

dewatering and existing watermain experienced during construction in the Fall, AECOM Canada Ltd. had to put forth additional efforts. This includes site inspection, contract administration time due to watermain issues, dewatering, winter restoration, extended contract costs (PM time, extra PC draws, rate escalation in 2024) and the inclusion of additional AECOM staff and subconsultant staff.

## Linkage to the Corporate Strategic Plan

This recommendation supports the following 2023-2027 Strategic Plan areas of focus:

- Climate Action and Sustainable Growth:
  - Infrastructure is built, maintained, and secured to support future growth and protect the environment.

## Analysis

### 1.0 Background Information

#### 1.1 Previous Reports Related to this Matter.

- CWC – June 13, 2023 - Appointment of Consulting Engineers for Contract Administration Services: Stormwater Infrastructure and Channel Remediation Projects
- CWC – July 26, 2022 – Consultant Contract Increase for Mud Creek Phase 2 Detailed Design.

#### 1.2 Mud Creek Project.

Phase 2 of the Mud Creek project involves Phase 2A: a new culvert crossing at Oxford Street and Phase 2B: expanding the capacity of over 700m of the main Mud Creek channel from the CN Rail culvert crossing, northerly to Oxford Street, all to alleviate the frequent flooding of Oxford Street and promote 54 hectares of infill development in the area. The Phase 2A tender was awarded to Birnam Construction Ltd. in Fall 2023. Phase 2B will be tendered shortly with the award to Council to be recommended in summer 2024.

### 2.0 Discussion and Considerations

#### 2.1 Discussion

In fall 2023, the contractor of the Phase 2A project encountered more groundwater than was originally anticipated for the installation of the Oxford Street culvert. The tender was issued with an Environmental Activity and Sector Registry (EASR) permit which only allowed up to 400,000 litres per day of dewatering. During the initial phase of the culvert installation, it was determined that the existing dewatering would exceed the issued EASR permit and a more significant Permit to Take Water (PTTW) would be required. The PTTW permit was issued in spring 2024 which estimated a dewatering rate of 3.4 million litres per day. The additional dewatering rate requires an extensive dewatering program to be implemented to facilitate the construction of the culvert under Oxford Street.

In addition to the above, AECOM has incurred additional cost for both the Phase 2A contract administration tasks and Phase 2B design tasks.

### 3.0 Financial Impact/Considerations

The identified funds will cover the cost of the dewatering program as well as accommodate future watermain needs in the area:

i. Permit to Take Water Dewatering Plan

An additional \$600,000 is recommended to be added to the contract with Birnam Excavating Limited to implement the proposed dewatering plan to complete the installation of the proposed culvert on Oxford Street. The funding is available in the Mud Creek Phase 2 budget per the Source of Financing attached as Appendix 'A'.

ii. Additional Construction Related Costs

An additional \$60,000 is required to accommodate a steel casing under the proposed culvert for a future 600mm diameter trunk watermain under Oxford Street. The diameter and length of this casing was increased after the tender close to accommodate the watermain material type for the proposed 600 mm trunk watermain.

Also, due to the temporary shutdown of the project due to the PTTW approvals, additional costs were incurred to temporarily restore Oxford Street during the winter months. The road restoration cost of \$185,000 when the culvert installation is complete be covered by the additional construction related costs.

| Item                                  | Additional Costs |
|---------------------------------------|------------------|
| Dewatering Program                    | \$600,000        |
| Watermain Casing                      | \$169,027        |
| Additional Construction Related Costs | \$185,000        |
|                                       |                  |
| <b>Total =</b>                        | <b>\$954,027</b> |

The budget required to complete the additional scope of work for AECOM is as follows:

| Item  | Additional Costs    |
|---|---------------------|
| Additional Design and Consultation Task           | \$191,843.40        |
| Additional Field work and Tendering Support       | \$80,333.84         |
| Project Management                                | \$29,914.00         |
| Trunk Sanitary Sewer Design                       | \$20,000            |
| Phase 2A – Additional Construction Administration | \$44,924.25         |
|   |                     |
| <b>Total =</b>                                    | <b>\$367,015.49</b> |

|                      |                       |
|----------------------|-----------------------|
| <b>Report Total=</b> | <b>\$1,321,042.49</b> |
|----------------------|-----------------------|

### Conclusion

In accordance with Section 20.3 (e) of the Procurement of Goods and Services Policy, it is recommended that the contract value be amended for Mud Creek Phase 2A – Culvert Installation Project, and in accordance with Section 15.2 (g) of the Procurement of Goods and Services Policy, it is recommended that AECOM's design and contract administration budget for Mud Creek Phase 2A and 2B be increased.

**Prepared by:** **Shawna Chambers, DPA, P.Eng.**  
**Division Manager, Stormwater Engineering**

**Submitted by:** **Ashley M. Rammeloo, MMSc., P.Eng.**  
**Director, Water, Wastewater, and Stormwater**

**Recommended by:** **Kelly Scherr, P. Eng., MBA, FEC**  
**Deputy City Manager, Environment and Infrastructure**

**Attach:** Appendix 'A' – Sources of Financing

Appendix 'B' – Location Map

**cc:** Paul Titus, Stormwater Engineering  
Gary McDonald, Budget Analyst, Finance & Corporate Services

**Appendix "A"**

#24088

May 22, 2024

(Contract Increase)

Chair and Members  
Civic Works Committee

RE: RFT-2023-128 - Culvert Installation Project  
(Subledger SWM21003)

Capital Project ES241424 - Infrastructure Renewal Program - Sanitary Sewers

Capital Project ES2681-2 - Mud Creek East Branch Phase 2 (CN to Oxford)

Capital Project EW376523 - Infrastructure Renewal Program - Watermains

Birnam Excavating Ltd. - \$954,027.00 (excluding HST)

AECOM Canada Ltd. - \$367,015.49 (excluding HST)

**Finance Supports Report on the Sources of Financing:**

Finance Supports confirms that the cost of this purchase can be accommodated within the financing available for it in the Capital Budget and that, subject to the approval of the Deputy City Manager, Environment and Infrastructure, the detailed source of financing is:

| <b>Estimated Expenditures</b>                                     | <b>Approved Budget</b> | <b>Committed To Date</b> | <b>This Submission</b> | <b>Balance for Future Work</b> |
|---|------------------------|--------------------------|------------------------|--------------------------------|
| <b>ES241424 - Infrastructure Renewal Program - Sanitary Sewer</b> |                        |                          |                        |                                |
| Engineering   | 2,000,000              | 891,496                  | 20,352                 | 1,088,152                      |
| Construction  | 13,445,971             | 4,606,007                | 0                      | 8,839,964                      |
| City Related Expenses   | 25,000                 | 0                        | 0                      | 25,000                         |
| <b>ES241424 Total</b>   | <b>15,470,971</b>      | <b>5,497,503</b>         | <b>20,352</b>          | <b>9,953,116</b>               |
| <b>ES2681-2 - Mud Creek East Branch Phase 2</b>                   |                        |                          |                        |                                |
| Engineering   | 1,699,688              | 1,346,566                | 353,122                | 0                              |
| Construction  | 16,871,057             | 8,132,379                | 798,816                | 7,939,862                      |
| City Related Expenses   | 98,855                 | 97,062                   | 0                      | 1,793                          |
| <b>ES2681-2 Total</b>   | <b>18,669,600</b>      | <b>9,576,007</b>         | <b>1,151,938</b>       | <b>7,941,655</b>               |
| <b>EW376523 - Infrastructure Renewal Program - Watermains</b>     |                        |                          |                        |                                |
| Engineering   | 2,974,905              | 1,591,517                | 0                      | 1,383,388                      |
| Construction  | 17,725,306             | 14,773,247               | 172,002                | 2,780,057                      |
| Relocate Utilities  | 1,457                  | 0                        | 0                      | 1,457                          |
| City Related Expenses   | 993                    | 993                      | 0                      | 0                              |
| <b>EW376523 Total</b>   | <b>20,702,661</b>      | <b>16,365,757</b>        | <b>172,002</b>         | <b>4,164,902</b>               |
| <b>Total Expenditures</b>   | <b>\$54,843,232</b>    | <b>\$31,439,267</b>      | <b>\$1,344,292</b>     | <b>\$22,059,673</b>            |

**Sources of Financing**

|   |                     |                     |                    |                     |
|---|---------------------|---------------------|--------------------|---------------------|
| <b>ES241424 - Infrastructure Renewal Program - Sanitary Sewer</b> |                     |                     |                    |                     |
| Capital Sewer Rates   | 2,500,250           | 2,500,250           | 0                  | 0                   |
| Drawdown from Sewage Works Renewal Reserve Fund                   | 10,720,721          | 747,253             | 20,352             | 9,953,116           |
| Canada Community-Building Fund                                    | 2,250,000           | 2,250,000           | 0                  | 0                   |
| <b>ES241424 Total</b>   | <b>15,470,971</b>   | <b>5,497,503</b>    | <b>20,352</b>      | <b>9,953,116</b>    |
| <b>ES2681-2 - Mud Creek East Branch Phase 2</b>                   |                     |                     |                    |                     |
| Drawdown from Sewage Works Renewal Reserve Fund                   | 11,780,517          | 6,042,460           | 726,873            | 5,011,184           |
| Drawdown from City Services - Stormwater Reserve Fund (Note 1)    | 6,889,083           | 3,533,547           | 425,065            | 2,930,471           |
| <b>ES2681-2 Total</b>   | <b>18,669,600</b>   | <b>9,576,007</b>    | <b>1,151,938</b>   | <b>7,941,655</b>    |
| <b>EW376523 - Infrastructure Renewal Program - Watermains</b>     |                     |                     |                    |                     |
| Capital Water Rates   | 12,193,444          | 12,193,444          | 0                  | 0                   |
| Drawdown from Water Works Renewal Reserve Fund                    | 7,084,217           | 2,747,313           | 172,002            | 4,164,902           |
| Canada Community-Building Fund                                    | 1,425,000           | 1,425,000           | 0                  | 0                   |
| <b>EW376523 Total</b>   | <b>20,702,661</b>   | <b>16,365,757</b>   | <b>172,002</b>     | <b>4,164,902</b>    |
| <b>Total Financing</b>  | <b>\$54,843,232</b> | <b>\$31,439,267</b> | <b>\$1,344,292</b> | <b>\$22,059,673</b> |

**Appendix "A"**

#24088

May 22, 2024

(Contract Increase)

Chair and Members  
Civic Works Committee

RE: RFT-2023-128 - Culvert Installation Project  
(Subledger SWM21003)

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Birnam Excavating Ltd. - \$954,027.00 (excluding HST)

AECOM Canada Ltd. - \$367,015.49 (excluding HST)

| <b>Financial Note (AECOM)</b>        | <b>ES241424</b> | <b>ES2681-2</b>  | <b>Total AECOM</b> |
|--------------------------------------|-----------------|------------------|--------------------|
| Contract Increase                    | \$20,000        | \$347,015        | \$367,015          |
| Add: HST @13%                        | 2,600           | 45,112           | 47,712             |
| Total Contract Price Including Taxes | 22,600          | 392,127          | 414,727            |
| Less: HST Rebate                     | -2,248          | -39,005          | -41,253            |
| Net Contract Increase                | <u>\$20,352</u> | <u>\$353,122</u> | <u>\$373,474</u>   |

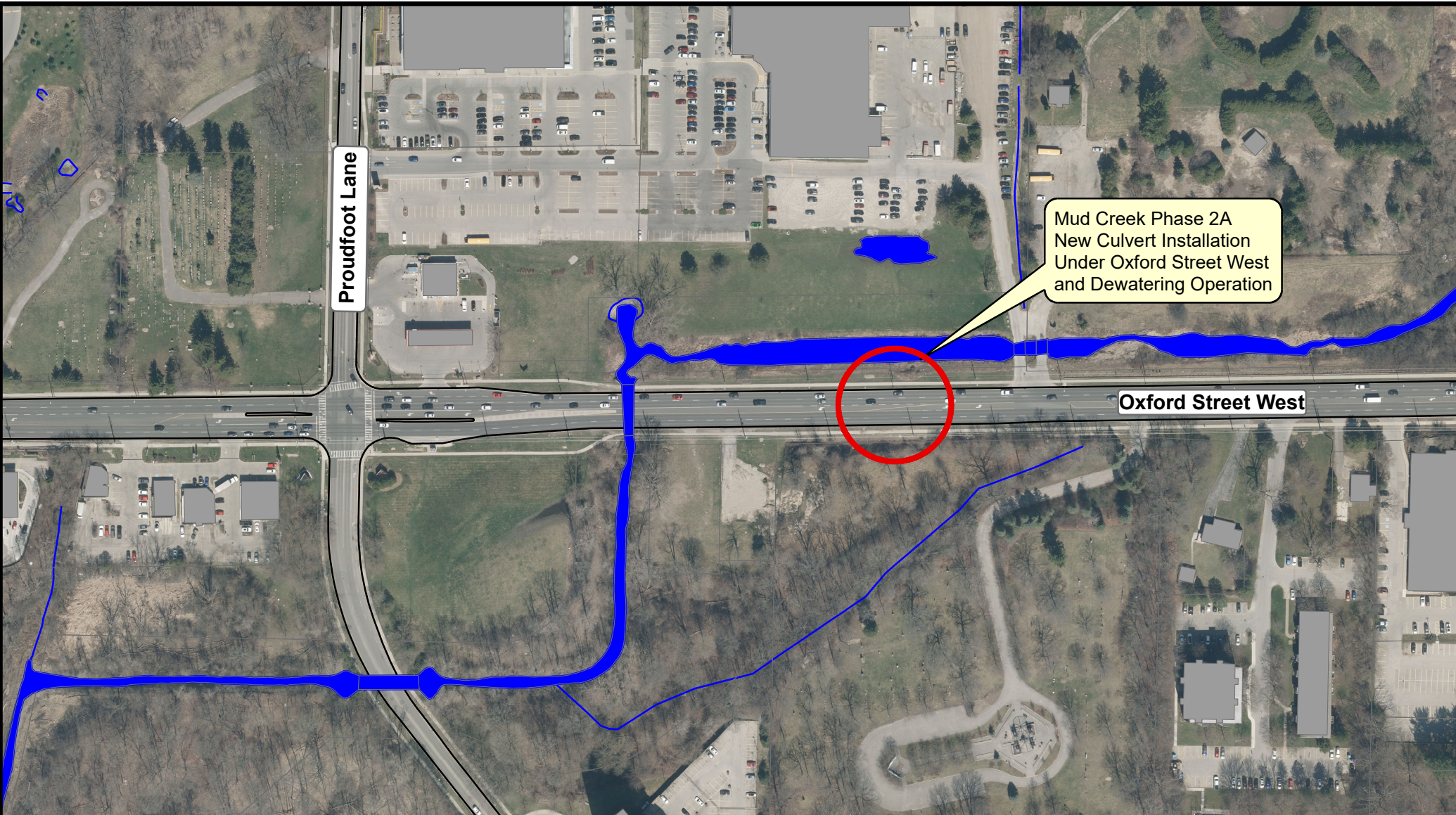
| <b>Financial Note (Birman)</b>       | <b>ES2681-2</b>  | <b>EW376523</b>  | <b>Total Birman</b> |
|--------------------------------------|------------------|------------------|---------------------|
| Contract Increase                    | \$785,000        | \$169,027        | \$954,027           |
| Add: HST @13%                        | 102,050          | 21,974           | 124,024             |
| Total Contract Price Including Taxes | 887,050          | 191,001          | 1,078,051           |
| Less: HST Rebate                     | -88,234          | -18,999          | -107,233            |
| Net Contract Increase                | <u>\$798,816</u> | <u>\$172,002</u> | <u>\$970,818</u>    |

| <b>Financial Note</b>                | <b>Total</b>       |
|--------------------------------------|--------------------|
| Contract Increase                    | \$1,321,042        |
| Add: HST @13%                        | 171,735            |
| Total Contract Price Including Taxes | 1,492,777          |
| Less: HST Rebate                     | -148,485           |
| Net Contract Increase                | <u>\$1,344,292</u> |

**Note 1:** Development charges have been utilized in accordance with the underlying legislation and the approved 2019 Development Charges Background Study and the 2021 Development Charges Background Study Update.

Jason Davies  
Manager of Financial Planning & Policy  
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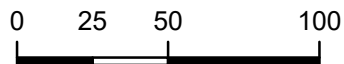




## APPENDIX B - MUD CREEK PHASE 2A PROJECT LOCATION



1:2,500



Meters

### Legend



Mud Creek Phase 2A  
New Culvert Installation  
and Dewatering Operation



Land Parcel



Existing Mud Creek



London  
CANADA