

## 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:** Contract Amendment: Detailed Design for Bradley Avenue  
Extension – Wharncliffe Road South to Jalna Boulevard

**Date:** February 22, 2023

## Recommendation

That, on the recommendation of the Deputy City Manager, Environment & Infrastructure, the following actions **BE TAKEN** with respect to the additional engineering fees for the detailed design of the Bradley Avenue Extension:

- (a) The contract with WSP E&I Canada Limited **BE INCREASED** by \$293,625.75 to \$801,634.75 (excluding HST) to complete additional detailed design activities for drainage improvements to the White Oaks Drain culvert, in accordance with Section 20.3 (e) of the Procurement of Goods and Services Policy;
- (b) The financing for this appointment **BE APPROVED** as set out in the Sources of Financing Report attached hereto as Appendix A;
- (c) The Civic Administration **BE AUTHORIZED** to undertake all the administrative acts that are necessary in connection with this contract amendment; and,
- (d) 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 Bradley Avenue Extension Environmental Assessment (EA) Addendum recommended that the White Oaks Drain culvert be assessed at the detailed design stage, and upgraded to mitigate flood impacts and ensure compliance with applicable City and Provincial standards.

This report seeks the approval of Council to increase the existing Bradley Avenue Extension engineering consultant contract with WSP E&I Canada Limited by \$293,625.75 to \$801,634.75 to complete additional detailed design activities required for drainage improvements to the White Oaks Drain.

In accordance with the City's Procurement of Goods and Services Policy, Council approval of this contract amendment is required.

## Linkage to the Corporate Strategic Plan

The following report supports the Strategic Plan through the strategic focus area of Building a Sustainable City by:

- improving London's resiliency to respond to potential future challenges;
- increasing actions to respond to climate change and severe weather;

- building infrastructure to support future development and protect the environment; and,
- improving safety for all modes of transportation.

## Analysis

### 1.0 Background Information

#### 1.1 Previous Reports Related to this Matter

- Environment and Transportation Committee – August 2005 – Bradley Avenue Extension, White Oak Road to Bostwick Road – Environmental Study Report
- Civic Works Committee – June 19, 2012 – London 2030 Transportation Master Plan
- Civic Works Committee – December 1, 2015 – Bradley Avenue Extension – Wharncliffe Road South to Wonderland Road South Appointment of Consulting Engineer
- Civic Works Committee – April 24, 2017 – Contract Award: Tender No. 17-57 – 2017 Bradley Avenue West Extension
- Civic Works Committee – June 19, 2018 – Bradley Avenue Extension – Phase 2 Wharncliffe Road South to Jalna Boulevard Detailed Design Appointment of Consulting Engineer
- Strategic Priorities and Policy Committee – October 20, 2020 – 2021 Development Charges Update Covering Report and Proposed By-law
- Civic Works Committee – June 22, 2021 – Appointment of Consulting Engineer for the Dingman Creek Subwatershed Stage 2 Lands: Schedule C Municipal Class Environmental Assessment
- Civic Works Committee report September 13, 2022 – Bradley Avenue Extension, White Oak Road to Jalna Boulevard (West Leg) Municipal Class Environmental Assessment Addendum

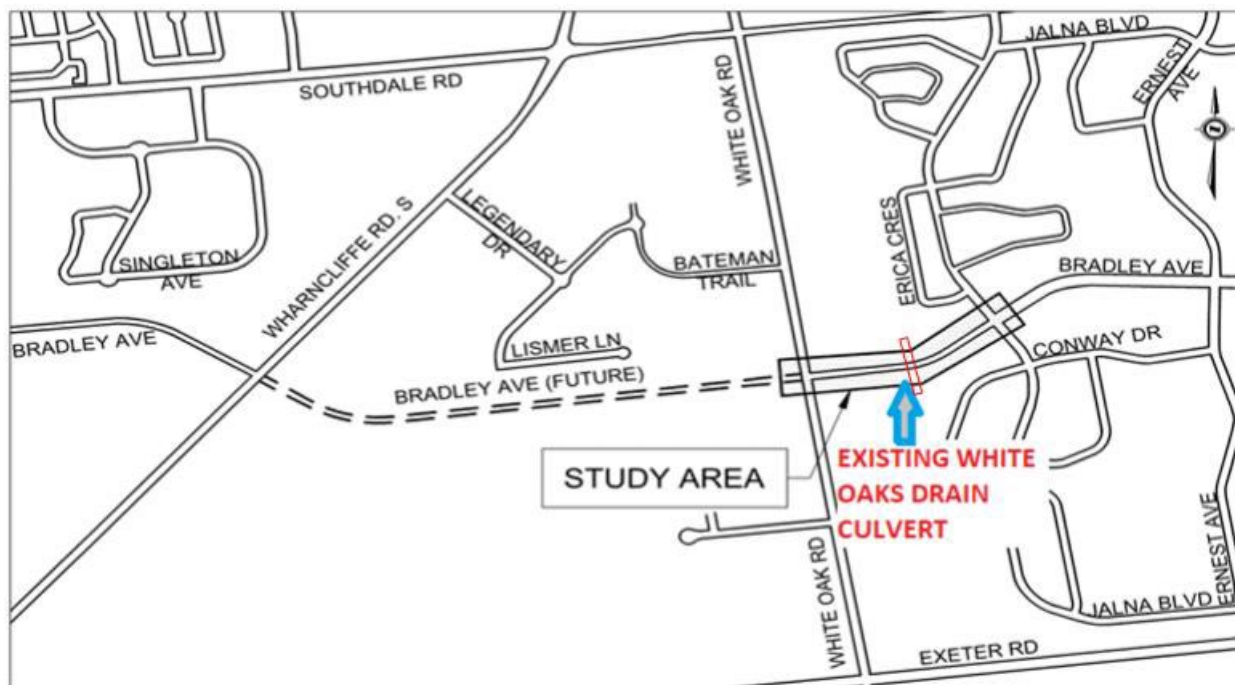
### 2.0 Discussion and Considerations

#### 2.1 Background

In 2005, the City completed a Municipal Class Environmental Assessment (EA) to determine the preferred alignment to extend Bradley Avenue between Bostwick Road and White Oak Road. This new Urban Thoroughfare/Civic Boulevard connection has long been envisioned in the City's Official Plan and surrounding developments have been coordinated with the connection. The preferred alternative in the 2005 EA recommended that the Bradley Avenue extension, between Wharncliffe Road South and White Oak Road, be constructed to a four-lane cross-section, with bicycle facilities, localized turning lanes and urbanized with curbs, sidewalks, and illumination. The section between Wonderland Road and Wharncliffe Road was constructed in 2017. The next phase planned for implementation is between Wharncliffe Road and White Oak Road and can be seen below in Figure 1, labelled as "Bradley Ave (Future)". The project, which includes continuity improvements on the east limit is currently in the detailed design stage.

In order to manage continued growth in the City's southwest and to provide corridor lane continuity between the future four lane configuration on Bradley Avenue west of White Oak Road, and the existing four lane configuration east of Jalna Boulevard (west leg), the current Transportation Master Plan identified the need for a four lane configuration for the short gap from White Oak Road to Jalna Boulevard. This section on the east side of White Oak Road was identified as part of the next phase of the Bradley Avenue projects in the Transportation Development Charges Background Study

and Growth Management Implementation Strategy. The City of London has completed an addendum to the Bradley Avenue Extension EA to extend the improvements through the “Study Area” shown in Figure 1.



**Figure 1:** Study area of the EA Addendum for Bradley Avenue, between White Oak Road and Jalna Boulevard (west leg)

During consultation for the Bradley Avenue Extension EA Addendum, Upper Thames River Conservation Authority (UTRCA) identified flood hazards associated with the White Oaks Drain crossing of Bradley Ave. Modelling from the UTRCA and the on-going Dingman Creek Subwatershed Stage 2 Lands Municipal Class EA confirmed the White Oaks Drain culvert crossing is undersized and does not meet regulatory flow conveyance standards for arterial roads.

The Bradley Avenue Extension EA Addendum recommended improvements to the White Oaks Drain culvert be established during detailed design to mitigate flood impacts and ensure compliance with the applicable hydraulic requirements of the City of London, Ministry of Transportation (MTO), and Ministry of Natural Resources and Forestry (MNRF). The EA Addendum study also recommended improvements to the White Oaks Drain channel by removing an existing concrete weir structure just upstream of the culvert to improve capacity and conveyance of the watercourse as requested by UTRCA.

On September 27, 2022, Council accepted the Municipal Class Environmental Assessment Addendum for the Bradley Avenue Extension. The EA included a review with the Transportation Planning and Design Climate Emergency Screening Tool. The Addendum was available for public review from October 13, 2022 to November 14, 2022. The detailed design for the Study Area roadworks is in progress; however, improvements to the White Oaks Drain culvert crossing was not in the initial detailed design scope.

## 2.2 Discussion

Wood Environment & Infrastructure Solutions, now known as WSP E&I Canada Limited was appointed the consulting engineer for the design of the Bradley Avenue Extension in June 2018. The appointment followed a competitive process in accordance with Section 15.2 (e) of the Procurement of Goods and Services Policy. The need for culvert work was not known at the time of this appointment.

WSP E&I Canada Limited has prepared a proposal for the detailed design required for the improvements to the White Oaks Drain culvert to be included as part of the Phase 2 of the Bradley Avenue Extension from Wharncliffe Road South to Jalna Boulevard (west leg). Extending the current design assignment to include drainage improvements to the White Oaks Drain with WSP provides value because the design and construction will be integrated into the design and contract preparation underway. Cost efficiencies and value is achieved in this approach as there is significant background knowledge within the firm and many of the same staff working on the project.

The negotiated consultant fees for this scope change includes the following additional engineering services required to complete the detailed design, contract drawings, and tender package for the White Oak Drain culvert improvements:

1. Culvert Assessment and Channel Design: Options for the White Oaks Drain crossing under Bradley Aveune will be hydraulically assessed. Options to improve culvert capacity include construction of a supplemental culvert and culvert replacement. If the replacement option is selected, provisional items are included for additional culvert and drainage design. Channel design is included to tie the new culvert into the existing channel.
2. Fluvial Geomorphology Assessment: Watershed and watercourse characterization will be assessed to support the crossing and channel design.
3. Environmental: Desktop and field surveys will be completed to determine the existing natural environmental conditions within the study area. The findings will be documented in a natural heritage memo to support permitting and approvals for the project. A tree inventory, arborist report and tree protection and replacement plans will be completed. WSP will prepare and submit applications to regulatory agencies to obtain the required permits and/or approvals for the project.
4. Structural Engineering: A provisional item for structural engineering is included if the culvert replacement option is selected. Possible culvert replacement options include a larger span multi-cell box culvert, or an open footing precast concrete arch or three sided structure.
5. Geotechnical Engineering: Field investigations consist of boreholes to inform the structural engineering design. Provisional items are included for additional drilling and decommissioning of the monitoring well.
6. Roadway and Municipal Engineering: It is anticipated that the existing watermain which crosses the existing culvert is in conflict with the works and the design for lowering of the watermain to accommodate the proposed culvert is included. The staging design for Bradley Avenue will be modified to accommodate the deep excavation for the culvert replacement. It is anticipated that the current design of Bradley Avenue will not require alteration due to the proposed work. A provisional item is included if the new culvert sizing requires modifications to the roadway profile.
7. Public Update Meeting: Working with the Communications service area, a future public update meeting will be held prior to construction.

The fees include a 10% contingency in the event of unforeseen requirements. Subject to project performance, WSP E&I will be considered for the construction administration phase of the project.

### 3.0 Financial and Schedule Considerations

An additional \$293,625.75 (excluding HST) is requested for the contract with WSP E&I Canada Limited to complete the design of the White Oaks Drain culvert improvements. Funds are available in Bradley Avenue Extension capital project account. The Source of Financing Report is appended to this report as Appendix A.

A two phased construction schedule is proposed to accommodate the additional culvert work and minimize traffic impacts in the area. The new Bradley Avenue Extension from Wharncliffe Road South to White Oak Road is scheduled for start in mid-2023 and continue through 2024. The adjacent improvements from White Oak Road to Jalna Boulevard (west leg) including the culvert works is now planned to start in 2024 and will progress in parallel with the roadworks west of White Oak Road.

### Conclusion

WSP E&I Canada Limited has demonstrated an understanding of the requirements for this project, has completed the Bradley Avenue Extension EA Addendum for the improvements between White Oak Road and Jalna Boulevard (west leg), and is currently completing the detailed design of the Bradley Avenue Extension from Wharncliffe Road South to Jalna Boulevard (west leg). The original contract value was \$508,009.00. It is recommended WSP E&I Canada Limited's contract be increased by \$293,625.75 to \$801,634.75 to allow the consultant to complete the additional work associated with the detailed design of the White Oaks Drain culvert improvements to mitigate flood impacts. This approach will result in cost efficiencies and provides good value for the city.

**Prepared by:** Garfield Dales, P. Eng. Division Manager  
Transportation Planning & Design

**Submitted by:** Doug MacRae, P. Eng., MPA Director Transportation & Mobility

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

Schedule A: Source of Financing

c: Steve Mollon, Senior Manager, Procurement & Supply  
Jiten Patel, CET, Technologist II  
Andrew Denomme, P.Eng., Transportation Design Engineer  
Adrienne Sones, P.Eng., Environmental Services Engineer

**Appendix "A"**

**#23023**

February 22, 2023  
(Contract Award Increase)

Chair and Members  
Civic Works Committee

RE: Contract Amendment: Detailed Design for Bradley Avenue Extension - Wharncliffe Road South to Jalna Boulevard  
(Subledger RD180003)  
Capital Project TS1523-2 - Bradley Ave Extension Jalna to Wharncliffe  
WSP E&I Canada Limited - \$801,634.75 (excluding HST)

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

Finance Supports confirms that the cost of this project can be accommodated within the financing available for it in the Capital Budget and that, subject to the approval of the recommendation 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 This Date</b>	<b>This Submission</b>	<b>Balance for Future Work</b>
Engineering	825,553	526,760	298,793	0
Land Acquisition	1,688,555	1,103,117	0	585,438
Construction	50,165	50,165	0	0
Utilities	644,000	0	0	644,000
City Related Expenses	2,833	2,833	0	0
<b>Total Expenditures</b>	<b>\$3,211,106</b>	<b>\$1,682,875</b>	<b>\$298,793</b>	<b>\$1,229,438</b>

**Sources of Financing**

Drawdown from City Services - Roads Reserve Fund (Development Charges) (Note 1)	3,211,106	1,682,875	298,793	1,229,438
<b>Total Financing</b>	<b>\$3,211,106</b>	<b>\$1,682,875</b>	<b>\$298,793</b>	<b>\$1,229,438</b>

**Financial Note:**

Contract Price	\$801,635
Less amount previously approved	508,009
Contract Price	293,626
Add: HST @13%	38,171
Less: HST Rebate	-33,004
Net Contract Price	\$298,793

**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.

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Jason Davies  
Manager of Financial Planning & Policy