

Date: 2021-01-28

Subject: **Recommendation for Option and Request to begin procurement for the Scott Street bridge replacement (Ward # 1)**

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Report Number: Public Works & Engineering-2021-178

Recommendations:

1. **That the report titled: Recommendation for Options and Request to begin procurement for the Scott Street bridge replacement. (Ward # 1, File: 17-5220-261)** to the Committee of Council Meeting of February 24, 2021, be received; and,
2. That Council direct staff to proceed with the design and construction of the temporary pre-fabricated steel truss structure that will accommodate pedestrians and cyclists (Option 4)
3. That the Purchasing Agent be authorized to commence the procurement for the replacement of the Scott Street Bridge.

Overview:

- **The Scott Street Bridge deck has reached the end of its service life and has been closed as of March 2020.**
- **Numerous options were reviewed that reviewed costs, timing as it relates to the Downtown Flood Mitigation project and scope.**
- **Option 4 is recommended which would include the installation of a temporary pre-fabricated steel truss bridge with asphalt deck. This option would only accommodate pedestrian and bicycle traffic.**
- **This option would provide active transportation connectivity for the residents in the area while the final design of Scott Street Bridge replacement is considered as part of the Downtown Flood Mitigation Project.**

- **Option 4 would require notification of the nearby residents and businesses in accordance with the Municipal Engineers Act.**
- **This option can be accommodate within the existing budget funding.**

Background:

On March 20, 2020, the Scott Street Bridge was closed after receiving a complaint from a resident that there was concrete falling from the underside of the Scott St. Bridge over the Etobicoke Creek diversion channel. Upon inspection by the structural engineer, the bridge was deemed unsafe for vehicular traffic and as a result was closed for all traffic except pedestrians and bikes. The Scott Street Bridge, which was constructed in 1952, saw repairs in 1982 and 2003 but was under regular inspection as it was reaching the end of its service life.

Current Situation:

This bridge is slated for a complete replacement as part of the Downtown Brampton Flood Protection works, a component of the larger Riverwalk transformational initiative. The Environmental Assessment (EA) for that project has recently been finalized and partial funding for the project has been announced as part of the Disaster Mitigation and Adaptation Fund (DMAF). A companion report titled “Downtown Brampton Flood Mitigation Implementation Plan” will also be presented at the Committee of Council meeting of February 24th, 2021 to request the start of the design and present options for funding to implement the project; the flood protection works are estimated to cost around \$106M based on preliminary estimates derived in the EA.

The Downtown Flood Mitigation EA has identified the Scott Street Bridge as requiring complete replacement with a larger span in order to implement the flood protection solution proposed in the EA. At this time, the construction start for the bridge would be contingent on a completed design for the entire project, obtaining the required approvals and securing funding for the remaining budget. Estimates at this time are that the construction for the Downtown Flood Mitigation project could begin earliest in 2023 and take about 3 years to complete. The start date however, is dependent on design completion, land acquisitions and permits prior to starting. Given the uncertainty and length of time until the construction may start on the Downtown Flood Mitigation project and on this bridge in particular, options were reviewed in order to determine a ‘meantime’ strategy for the Scott Street Bridge so that the proposed temporary solution will continue to provide service and connectivity to the area in the interim period.

A brief summary of the options considered is below:

Option	Estimated Cost	Issues to consider
1) Do nothing	Maintenance	<ul style="list-style-type: none"> • Deferred capital cost, least construction disruption, bridge remains closed. • Deterioration continues, winter maintenance still required, no firm time on Riverwalk.
2) Minor Repairs only	\$500K	<ul style="list-style-type: none"> • Minimized capital cost but throwaway • Can only accommodate 8 ton load, only extend bridge life for 3 years, 2x construction disruption
3) Install two lane steel deck baily bridge	\$1.2M	<ul style="list-style-type: none"> • Some capital cost but throwaway, can accommodate all travel, extends bridge life for 10 years • Optics of replacing with Riverwalk solution if early, 2X construction disruption
4) Install single lane steel deck baily bridge for active transportation only	\$800K	<ul style="list-style-type: none"> • Some capital cost but throwaway, promotes AT, extends bridge life for 10 years • Optics of replacing with Riverwalk solution if early, 2X construction disruption • This option will trigger a Municipal Class EA (Schedule A+)
5) Like for Like replacement	\$4M	<ul style="list-style-type: none"> • Large capital cost but throwaway, can accommodate all travel, extends bridge life for 75 years • Optics of replacing with Riverwalk solution if early 2X construction disruption
6) Riverwalk solution	\$10M	<ul style="list-style-type: none"> • Large capital cost, uncertainty in Riverwalk timing, one and done construction

A complete analysis of options was completed for the bridge and the details are in the attached Option Matrix (Appendix 1). The recommended option is to remove the existing bridge deck and install a temporary pre-fabricated steel truss bridge with asphalt deck life expectancy of 10 years and which can accommodate pedestrian and bicycle traffic at a capital cost of \$800k.

The construction cost of the temporary pre-fabricated steel truss bridge with asphalt deck is approximately 30% of the cost to replace the structure with a new concrete bridge and the construction can be completed in approximately 4 months.

It should be noted that for Option 4, where access will be for pedestrians and bicycles only, the change in bridge capacity will require a Municipal Class EA (Schedule A+) as a result of the change in use. The Municipal Engineering Act requires the affected

property/business owners in the area be informed of the proposed changes. This report would serve as the required public document indicating the proposed construction and staff will notify the affected property/business owners closer to commencement of construction. We note there have been a few residents in the area that have raised concerns about the road being closed to vehicles, as would be the case were Option 4 to be selected.

Project Timing (Anticipated):

Description	Timing
Council Approval	February 2021
Issue for Tender	May 2021
Tender Closing	June 2021
Purchase Order Issued	July 2021
Construction Start	August 2021
Completion	November 2021 (subject to weather conditions)

Corporate Implications:

Financial Implications:

The required funding will depend on the selected option that staff is directed to proceed with. However, there is sufficient funding available within the Public Works & Engineering approved capital budget for options 2, 3 and 4.

Other Implications:

Purchasing Comments:

A public Procurement Process will be conducted and the lowest compliant Bid will be eligible for contract award. Purchase approval shall be obtained in accordance with the Purchasing By-law.

All communication with Bidders involved in the procurement must occur formally, through the contact person identified in the Bid Document.

Realty Services Comments:

Acquisitions of the property rights for this structure is not required as the structure will be built on the existing bridge footprint. The structure is located within the City of Brampton's Right of Way.

Strategic Plan and Term of Council Priorities:

This report achieves the Strategic Plan priorities for growth management by improving the roadway network to move people more efficiently and to support the advancing urbanization and development within the City of Brampton.

Living the Mosaic - 2040

Upgrading Brampton's deteriorated bridge/culvert structures through planned replacements and rehabilitations will provide a mosaic of safe, integrated transportation choices and new modes of transportation to the Brampton's residents. Also, this will positively contribute towards the civic sustainability by emphasizing walking, cycling and efficient transit system as promoted within Brampton's 2040 Vision.

Conclusion:

This report recommends that Council approve the design and construction of a temporary pre-fabricated steel truss bridge with asphalt deck to replace the existing Scott Street Bridge which has reached the end of its service life. While both Options 3 and 4 provide connectivity for the residents in the area until the full replacement can take place under the Downtown Flood Mitigation Project, staff are recommending Option 4 at this time to promote the City's support of active transportation. This report also recommends the Purchasing Agent be authorized to commence the procurement as described in this report.

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Attachments:

1. Scott Street Bridge Scenario Matrix
2. Scott St Bridge- re-evaluation Memorandum
3. Key Plan: Structure Location
4. Typical Bailey bridge