

Municipality of Chatham-Kent

Infrastructure and Engineering Services

Engineering and Transportation Division

To: Mayor and Members of Council

From: Jason Cikatricis, C.E.T.,
Engineering Technologist

Date: February 23, 2021

Subject: Structural steel repairs to the Tupperville Bridge over the Sydenham River – Community of Tupperville

Recommendations

It is recommended that:

1. The proposal in the amount of \$53,675.00 (including HST) for Consulting Engineering Services for the work associated with the structural steel repairs to the Tupperville Bridge over the Sydenham River, Community of Tupperville, be awarded to GM BluePlan Engineering Limited.
2. Construction costs in the amount of \$73,450 (including HST) for the work associated with the structural steel repairs to the Tupperville Bridge over the Sydenham River, Community of Tupperville, be awarded to Clarke Construction Inc.
3. The Mayor and Clerk be authorized to enter into the recommended agreements.

Background

The Tupperville Bridge (Tupperville Road over Sydenham River) was built in 1965, has a north-south orientation, and is located on Tupperville Road 0.04 km north of Glasgow Line in the Community of Tupperville. This swing bridge carries two lanes of predominantly vehicular traffic across the Sydenham River in four non-continuous spans, with a total crossing length of 82.7 m and a maximum clearance of 7.0 m. The deck has a travelled width of 8.53 m and an overall width of 11.95 m. This road has an Average Annual Daily Traffic volume (AADT) of 900 and the speed limit at this location is 60 km/hr.

Bi-annual inspections have been conducted by the Municipality of Chatham-Kent (as legislated under the *Public Transportation and Highway Improvement Act*) to continually monitor the condition of the structures and to ensure public safety. All structures form part of the comprehensive 20 Year Plan managed by the Engineering and Transportation Division.

As per the 2020 Ontario Structure Inspection Manual (OSIM) inspection, deterioration and perforations of some of the existing structural steel under the swing span were noted. To ensure public safety, GM BluePlan Engineering, Chatham-Kent Engineering and Chatham-Kent Public Works attended the bridge site on Friday December 18, 2020 to do a preliminary inspection. The inspection was limited due to access, but GM BluePlan engineering staff performed their inspection from the 3 existing hatches, and from the shore of the Sydenham River.

On Tuesday December 22, 2020, GM BluePlan Engineering issued a report to confirm there were no immediate safety concerns, but an interim load posting of 16 / 32 / 44 tonnes should be implemented until they have an opportunity to have a hands-on look and evaluation with improved access. Load posting signs with values of 16 / 32 / 44 tonnes were installed by Chatham-Kent Public Works on December 23, 2020 and currently remain in place.

On Monday January 18, 2021, GM BluePlan Engineering and Clarke Construction attended the bridge site to do a hands-on inspection using a barge and scaffolding supplied by Clarke Construction. This inspection confirmed the amount of deterioration and confirmed the proposed structural steel repairs.

The Procurement By-law #166-2020, was adopted by Council on December 14, 2020. The Procurement By-law Section 36 – Administrative Approval allows for the direct appointment of professional services (consultants, architects etc.) up to \$75,000.

The Procurement By-law #166-2020 was adopted by Council on December 14, 2020. The Procurement By-law Section 111 – Roster allows for the direct appointment of goods and/or services under the Roster list (contractors etc.) up to \$100,000.

Comments

The proposed structural steel repairs and full load evaluation on the structure will improve the existing load posting, and increase the size of the loads that can cross the bridge. This increase will be beneficial to the public, particularly to the farming industry and the grain company located in Tupperville.

These repairs will continue to provide a safe crossing over the Sydenham River in the Community of Tupperville and should allow for a flexible 2 year construction window, to leverage the best possible pricing, when a complete rehabilitation is completed in approximately 3-5 years.

Areas of Strategic Focus and Critical Success Factors

The recommendations in this report support the following areas of strategic focus:

- Economic Prosperity:
Chatham-Kent is an innovative and thriving community with a diversified economy

- A Healthy and Safe Community: Chatham-Kent is a healthy and safe community with sustainable population growth
- People and Culture:
Chatham-Kent is recognized as a culturally vibrant, dynamic, and creative community
- Environmental Sustainability:
Chatham-Kent is a community that is environmentally sustainable and promotes stewardship of our natural resources

The recommendations in this report support the following critical success factors:

- Financial Sustainability:
The Corporation of the Municipality of Chatham-Kent is financially sustainable
- Open, Transparent and Effective Governance:
The Corporation of the Municipality of Chatham-Kent is open, transparent and effectively governed with efficient and bold, visionary leadership
- Has the potential to support all areas of strategic focus & critical success factors
- Neutral issues (does not support negatively or positively)

Financial Implications

Project fees associated with this contract will be funded as summarized in the following table:

Financial Implications
Consulting Engineering Services and Construction Services for
Temporary Structural Steel Repairs – Tupperville Bridge over the Sydenham River
Project Costs

Direct Assignment Fees for Consulting Engineering Services (Including HST)	\$ 53,675.00
Roster Assignment Fees for Construction Services (Including HST)	\$ 73,450.00
Total Recommended Fees (Including HST)	\$127,125.00
Less HST Rebate 11.24%	\$ 12,645.00
Total Current Project Costs	\$114,480.00
Total Current Project Funding	\$114,480.00

The total current project costs listed above will be funded from the Bridge Lifecycle Reserve, which includes funds under the Association of Municipalities of Ontario (AMO) Federal Transfers of Federal Gas Tax Funding Agreement.

Prepared by:

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Attachments: None

(RTC:\Infrastructure & Engineering\I&ES\2021\4349 – Structural Steel repairs to the Tupperville Bridge, Community of Tupperville)