



Staff Report

Report Title: H38 Rehabilitation

Prepared By: John Yungblut, Director of Public Works

Department: Public Works

Date: Feb. 17, 2023

Report Number: PW-2023-02-4

File Number: T11 H38 23

Attachments: BM Ross Letter, Detour Map

Recommendation:

That the Township of Huron-Kinloss Council hereby receives for information Report Number PW2023-02-4 prepared by John Yungblut, Director of Public Works.

Background:

The rehabilitation of structure H38 located on Lake Range Dr. between Bell Dr. and Con. 4 (also known as the Bell Bridge) is scheduled to be completed in 2023. The scope of work included is explained in the attached letter from our consulting engineer, BM Ross and Associates.

Due to the relatively high volume of traffic that crosses this bridge on a daily basis and the lengthy detour route that would require the use of Highway 21 exclusively (see the attached detour map), Township staff have discussed the possibility of staging the project instead of a full bridge closure. The staged approach would allow for travel across the bridge on a single lane which would be controlled by a temporary traffic signal.

The attached letter from BM Ross provides a detailed cost breakdown of the two options plus some information regarding a hybrid approach:

Option 1 – Full Closure

Estimated Cost: \$710,250 plus HST

Estimated Construction Duration: 12 weeks

The bridge will be closed to all forms of transportation, including all vehicles, pedestrians, and cyclists. Because there is no in-water work required, there is the

possibility of tendering this project early and specifying a late July completion date or not allowing construction to begin until late July with a late October completion date, which will allow some use of the bridge during the summer months. The downside of requiring construction in the spring and fall months is that it could result in construction delays due to weather conditions.

Option 2 – Staged Construction

Estimated Cost: \$1,292,250 plus HST

Estimated Construction Duration: 18 weeks

The contractor will complete work on half of the structure at a time, leaving a 3.3m (11 ft) wide lane open during construction. This process is considerably more labour intensive, so both the cost and duration are considerably greater than the fully closed option. Due to the lengthy construction duration, this project would have to begin in May or early June for the project to be completed by October. Once again, there is the possibility that this timeline could be extended if inclement weather becomes an issue.

Option 3 – Hybrid Construction

Estimated Cost: \$1,000,000 plus HST

Estimated Construction Duration: 15 weeks

In this option, the contractor will complete the work that is most difficult in a staged approach, such as the replacement of the expansion joints and concrete removals, on a fully closed bridge and open one lane during the remainder of the project. The full bridge closure is estimated to be 10 weeks in duration and the staged portion is estimated to be completed in 5 weeks.

Discussion:

The signed detour for this project will be lengthy in comparison other bridge projects with a travel distance of 10.4 km from Con. 4 to Con. 8 via Highway 21, compared to a distance of 4.2 km via Lake Range Dr. Most other projects along the Lakeshore have had an alternate route for slow moving vehicles that avoids the use of provincial highways. One example is the rehabilitation of H66 on Con. 8, which had a posted detour via Highway 21 and Con. 10, however, slow moving vehicles had the option of traveling on Con. 6 W and the Baseline sideroad instead of Highway 21.

In a fully closed situation, slow moving vehicles will have the ability to use Con. 6 W, instead of Con. 8, but travel on Highway 21 will still be required because South Baseline does not cross the Pine River and connect to Con. 6 W. Con. 6 W is not a suitable detour route for the majority of the 1400 vehicles per day that cross the bridge in the summer months because it has a gravel surface and it is not designed for that traffic volume.

In the opinion of Township staff, Option 1 and Option 2 are the only reasonable options to consider. Option 3 only reduces the fully closed period by two weeks at an estimated \$300,000 premium.

In any scenario, this project will need to be tendered in late February to allow for the successful bidder to begin construction in the spring of 2023. If Option 2 or 3 are preferred by Council, our consulting engineer will need to revise the tender drawings to allow for this type of construction.

There is the possibility of tendering later in the year for the 2024 construction period, however, this could result in inflated pricing from bidders because it is difficult to predict what construction costs will be that far ahead, especially, in the current economic environment.

Financial Impacts:

The proposed 2023 Capital Budget includes \$750,000 for the rehabilitation of structure H38, which will be funded by our allotment from the Canada Community-Building Fund (CCBF) and the Bridge Replacement Reserve. Option 2 would deplete the Bridge Replacement Reserve that is intended to fund future bridge rehabilitation projects.

Strategic Alignment / Link:

The information provided in this report is consistent with and in keeping with the Municipality's Vision & Mission. The recommendations contribute to our goals in achieving a prosperous community that continues to grow in a sustainable manner by investing in infrastructure.

Respectfully Submitted By:

John Yungblut, Director of Public Works.

Approved By:

Mary Rose Walden, Chief Administrative Officer