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Date: September 4, 2018

To: Mayor and Council

Author: Tim Del Greco, Manager of Municipal Services

RE: Culvert # 503 - McCallum Drive over Mill Creek

Report No.: MS 2018 - 34

AIM

To advise Council of replacement of Culvert # 503 - McCallum Drive over Mill Creek.

BACKGROUND

Biennial inspection of bridges and culverts with a span equal to or exceeding 3.0 meters in length is mandated by the Public Transportation and Highway Improvement Act. In 2017, Keystone Bridge Management Corporation was procured to facilitate such inspection within the Town of Kingsville. Following inspection, a report was generated for each bridge and culvert indicating current condition ratings, recommendations for rehabilitation or replacement if required, and an estimation of costs for any recommended works.

DISCUSSION

McCallum Drive Culvert over Mill Creek is a steel structure built in 1980 and measures 21.6 meters in length and 3.7 meters in width. The 2017 bridge inspection report as attached in Appendix A indicates the following deficiencies:

- Perforations in east and west walls
- Loss of backfill material through perforated walls
- Road surface wear as a result of the above conditions

The recommendation of the engineer at the time of inspection was full culvert replacement within the next year.

Dillon Consulting Limited was retained in 2018 to begin preparation of the necessary drawings, specifications, and tender documents. The final tender package seeking culvert replacement was advertised to the public on August 8, 2018 with a closing date of August 22, 2018. The results (excluding HST) are as follows:

| Contractor/Vendor Name | Bid |
|-------------------------------|---------------|
| Nevan Construction Inc. | \$ 452,140.00 |

| | |
|----------------------------------|---------------|
| SLR Contracting Group Inc. | \$ 464,205.00 |
| Southshore Contracting Inc. | \$ 524,200.00 |
| SheaRock Construction Group Inc. | \$ 549,000.00 |

Dillon Consulting conducted an analysis of the proposals and provided the Town with a summary of their results (attached in Appendix B). This summary indicates that during review of Nevan Construction it became questionable as to whether or not this firm has sufficient experience and expertise to complete the work in a timely and proficient manner. Therefore, to mitigate any risk associated with the successful completion of this project, it is recommended to proceed with SLR Contracting Group. SLR is able to satisfy requirements relating to experience with similar projects, bonding, and insurance while providing the second lowest cost proposal. It is worth noting there are several provisions within this tender package that provide the Town the flexibility to award this project to any bidder the Town deems appropriate.

A secondary inspection of Culvert # 503 was conducted on September 13th, 2018 by Dillon Consulting. The resulting recommendation is:

It is our opinion due to uncertainties in the structural response to the occurring failure that should construction be postponed until 2019 that the road be closed as soon as possible at the culvert location to reduce the risk of a safety hazard occurrence and monitored for blockage of the stream to avoid flooding.

LINK TO STRATEGIC PLAN

To become a leader in sustainable infrastructure renewal and development.

FINANCIAL CONSIDERATIONS

\$359,000.00 is allocated in the 2018 Municipal Budget for engineering and construction of Culvert # 503. This budgeted amount was based upon initial estimates as provided by Keystone Bridge Management Corporation (inspection engineer). In June of 2018, Dillon Consulting (design engineer) provided the Town with an updated construction estimate of \$453,000.00.

The typical process for bridge replacement entails engineering and design in year one with construction in year two. This method allows for further revision of construction estimates based on actual design work, and prior to seeking Council approval. In this specific case, engineering and construction were budgeted concurrently in 2018 using estimates as provided by Keystone in order to expedite the process and satisfy the recommendation of the inspection engineer.

\$464,205.00 will be required for the procurement of construction services through SLR Contracting Group. An additional \$60,800.00 will be expensed towards engineering. Therefore, total cost of culvert replacement excluding HST is \$525,005.00.

Additional funding will be required to offset the above deficit. Two sources of 2018 capital surplus include \$111,253.40 from the Road 10 Patterson Bridge replacement as well as \$149,919.00 in unallocated Gas Tax Funding. The C.A.O. will exercise her discretion to approve the project and reallocation of funds in accordance with the delegated authority conferred upon her by By-law 78-2018, as a result of s.275 of the *Municipal Act, 2001*.

Below is a table summarizing the aforementioned financials:

| | |
|--|---------------------|
| Engineering and Contract Admin | \$60,800.00 |
| Cost of Construction | \$464,205.00 |
| Total (excluding HST) | \$525,005.00 |
| Total (including HST tax burden) | \$534,455.09 |
| | |
| Approved Funding in 2018 Municipal Budget | \$359,000.00 |
| Road 10 Patterson Bridge Capital Project Surplus | \$111,253.40 |
| Unallocated Gas Tax Funds | \$149,919.00 |
| Total Funding Available | \$620,172.40 |

CONSULTATIONS

Kingsville Administration
Dillon Consulting Limited
SLR Contracting Group

RECOMMENDATION

That Council receive the report regarding the replacement of Culvert # 503 – McCallum Drive over Mill Creek.

Tim Del Greco

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G. A. Plancke

G.A. Plancke, Civil Eng. Tech (Env.)
Director of Municipal Services

Peggy Van Mierlo-West

Peggy Van Mierlo-West, C.E.T.
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