

Subject: Management Options for the Reconstruction and Roadway Improvements of Sulphur Springs Road between Luffman Drive and Orchard Hill Road

Recommendation:

THAT Committee of the Whole receive Report #2020-0024 for information;

AND THAT Committee recommend that Council approve the award of an engineering assignment to complete a Municipal Class Environmental Assessment Study to determine the preferred alternative with respect to rehabilitation options, and complete the detailed design and preparation of tender documents to CIMA+ in the amount of \$129,878 (plus HST).

Background:

Sulphur Springs Drive has been eroding at two locations since it was first reported in February 2016. Site 1 is located 200 meters north of Luffman Drive, and Site 2 is located 200 meters south of Orchard Hill Drive (please see Appendix A for Site Location Map). Since then, conditions have deteriorated and the road has been closed from accepting local traffic from Effingham Street.

Water's Edge Environmental Solutions Team were retained to complete a feasibility study and prepare a report with recommended rehabilitation solutions for both sites.

In the report received from Water's Edge the recommendation was to complete the restoration of both sites using an engineered reinforced slope. The scope of work for both sites included removal and replacement of the existing roadway and creek bank and reinstatement with a new two lane roadway and stabilizing the banks of the creek using steep bank grades so the roadway remained on its existing footprint. The rehabilitation involved the reconstruction of the creek banks using layers of geo-grid to provide stability, along with a 1:1 mechanically engineered slope. In addition, in order to mitigate negative impacts against species at risk it was contemplated to place riverstone at the toe of the slope to provide additional

stability while enhancing fish habitat.

The rehabilitation options provided for Site 1 and Site 2 were the preferred reinstatement techniques following consultations and discussions with both the design consultant and Trout Unlimited. The approach was considered as a soft approach which will be environmentally sustainable and provide an engineered solution that will not negatively impact the 12 Mile Creek.

Because there are residents located between the two failure sites it was contemplated that both sites would need to be restored using a staged approach. Site 1 would need to be completed before Site 2 to ensure road access to the existing properties being removed during construction.

The cost to complete the rehabilitation work at both sites was estimated at \$500,000. The approved budget in 2019 was \$250,000. Based on the recommendations in the feasibility report prepared by Water's Edge the budget was increased by \$300,000 in 2020 for a total project budget of \$550,000 (excluding applicable taxes).

In a report to Council on July 15th, 2019, (Report 2019-0031), staff recommended proceeding with the rehabilitation of both sites and restoring the roadway to its original condition. At this meeting Council directed Staff to look into the possibility of permanently closing Sulphur Springs Drive at Site 1. In order to permanently close the roadway, the Town of Pelham will need to follow the requirements under the *Ontario Environmental Assessment Act*. The purpose of the Act is to provide for the protection, conservation and wise management of the environment. In applying the requirements under the EA Act to undertakings, the EA Act identifies two types of environmental assessment planning and approval processes: Individual Environmental Assessments and Class Environmental Assessments. The Class EA establishes a process whereby municipal projects can be planned, designed, constructed, operated, maintained, rehabilitated and retired without having to obtain project-specific approval under the EA Act. (See Appendix B – Municipal Class EA Planning and Design Process Flow Chart).

Analysis:

Following-up on the request of Council, Staff prepared a Request for Proposal (RFP) for an engineering assignment to complete a Class EA study on Sulphur Springs Drive. In addition, the terms of reference in the RFP included the development of the preferred solution, completing the detailed design for the rehabilitation project, obtaining the necessary permits from approval and review agencies (such as the NPCA, NEC, MOE, and the DFO) and to prepare the tender documents and assist in

the tendering phase.

The Town received one (1) submission with respect to the above RFP from CIMA+ (Canada Inc.) located in Burlington, Ontario. The cost to complete the Municipal Class EA, complete the detailed design based on the preferred alternative, and obtain the necessary permits and approvals from the approval and review agencies is estimated at \$129,878 (excluding applicable taxes).

CIMA+ has identified the requirements to complete additional studies in order to successfully complete a restoration project at one or both sites such as a Natural Heritage Assessment, a DFO review, a Species at Risk Assessment, a Tree Inventory, Archaeological Investigation, a Cultural Heritage, Air Quality, Noise and Vibration Assessment. These additional studies were not completed by the previous consultant as part of the feasibility study. It is recommended that these actions be completed in order to successfully complete the Municipal Class EA process and to obtain the necessary permits and approvals for the successful rehabilitation of Sulphur Spring Drive based on the preferred alternative.

Due to the sensitivity with respect to the 12 Mile Creek the timing for construction can only occur (in-water) between July 1st and September 15th. In the consultant's proposal they have provided a schedule to complete the Municipal Class EA, complete the detailed design based on the preferred alternative, and obtain the necessary permits and approvals from the review agencies. It is expected that the Municipal Class EA will take approximately 6 months to complete. Further, it is expected that the permits required to complete the preferred rehabilitation from the various review and approval agencies will not be obtained in time to permit construction in 2020.

As a result, the rehabilitation of the roadway will most likely be deferred until July 1st of 2021. As a precautionary measure CIMA+ is prepared to work with Town Staff to ensure that the roadway remains open to the public and emergency services until such time that the preferred alternative is implemented.

Staff have reviewed the submission by CIMA+ and recommend awarding the assignment to complete the Municipal Class EA process, complete the detailed design, obtain the necessary permits and approvals from the review agencies and assist Town Staff with the tendering of a rehabilitation project based on the preferred alternative.

Financial Considerations:

The current approved project budget for the rehabilitation of Sulphur Spring Drive is \$550,000. The engineering assignment to complete a Municipal Class EA, perform the studies and investigations required to receive approvals from the applicable review and approval agencies, complete the detailed design based on the preferred alternative and to assist the town in the preparation of contract documents for public tendering is \$129,878 (excluding applicable taxes).

In addition, the Town may be required to complete additional geotechnical work including advancing additional boreholes at Site 2 as this exercise was not completed as part of the original assignment awarded to Water's Edge. It is estimated that the additional geotechnical work would be approximately \$15,000 to complete.

There are sufficient funds available in the 2020 Capital budget to award the above assignment to CIMA+ and complete the above works in preparation of a 2021 rehabilitation project.

The remaining budget to be carried forward in 2021 (following the engineering assignment awarded to CIMA+ and the additional geotechnical investigations) will be approximately \$405,122. Staff will prepare a follow-up report to Council with estimated costs for construction based on the result of the Municipal Class EA process and the development of the preferred alternative. If there are insufficient funds available to complete the rehabilitation works in 2021, with the available budget carried forward, a recommendation will be made to increase the project budget as part of the 2021 capital budget request.

Alternatives Reviewed:

Council may choose not to approve the works, and Sulphur Springs Drive would remain closed to through traffic. The condition of the roadway will continue to be monitored by Public Works Staff.

Strategic Plan Relationship: Risk Management

Providing an environmentally friendly engineering solution to address the roadway failure on Sulphur Spring Drive will ensure that the risk associated with negatively impacting the 12 Mile Creek and the risk associated with not providing safe access to private properties is minimized.

Consultation:

Town of Pelham Engineering Staff have consulted with representatives from CIMA+ to discuss the details of their proposal.

Other Pertinent Reports/Attachments:

Appendix A – Site Location Map

Appendix B – Municipal Class EA Planning and Design Process Flow Chart

Prepared and Recommended by:

Jason Marr, P. Eng.
Director of Public Works

Derek Young
Manager of Engineering

Prepared and Submitted by:

David Cribbs, BA, MA, JD, MPA
Chief Administrative Officer