

April 8, 2024

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Mr. Heide:

RE: *Edgewater Street Redevelopment*

Project Description

This project generally includes the redevelopment of Edgewater Street and specifically the following key items:

- ▶ Shoreline protection and rehabilitation.
- ▶ Multiuse trail to run along Edgewater Street on top of the shoreline protection.
- ▶ A pedestrian bridge to connect the multiuse trail to the downtown area.
- ▶ Sewer and water extension from Parish Street to near north end of Edgewater Street.
- ▶ New lighting and underground power in the parklands owned by the Town along Edgewater Street.
- ▶ Replacement of overhead power with underground power along Edgewater Street.
- ▶ New concrete sidewalks to connect the multiuse trail to existing cross walks and church sidewalk to the existing parking lot.

Shoreline Protection

The need for shoreline protection was identified in the Mahone Harbour Flood Prevention and Shoreline Enhancement Plan prepared by CBCL Limited (CBCL) in 2016. This plan showed that wave overtopping and storm surge will increase with climate change and this will result in increased frequency and risk of flooding along this section of road. A green shoreline protection method was developed that would use vegetation, compared to a hard surface such as armour stone, to protect the shoreline from erosion. The green shoreline option would generate recreational opportunities and promote habitat regeneration along this section of shoreline. To provide protection from storm surge and wave overtopping a berm will need to be constructed along the shoreline with a top elevation of 3.0 m. Coastal flooding can still result however at each end of the berm, until the flood protection is extended further along the coast.

The top of the berm will be designed to be a multiuse trail connecting the north end of Edgewater Street to the downtown. A portion of the shoreline protection was completed in 2022, and the second phase is currently being designed. The remainder of the shoreline protection will be completed as part of this project. A description of the previous work is provided below and presented in Figure 1.

In 2022, Phase 1 of the shoreline protection was completed and was referred to as “Living shoreline (LS) Pilot” and consisted of about 60 m of shoreline protection. This work also included widening the existing trail.

Engineering of phase 2 is currently underway and will include a 100 m extension to Phase 1 which may be combined with this project. As part of this work a geotechnical program covering the entire 900 m length of shoreline to be protected was completed in January 2024 and will be used to support future design of shoreline protection and multiuse trail.



Figure 1: Shoreline Protection Phasing

Multiuse Trail and Pedestrian Bridge

The multiuse trail was proposed as a way of incorporating the shoreline protection and active transportation into one project. The objective of the multiuse trail is to provide a trail that connects areas of the Town that are not serviced by active transportation infrastructure. Figure

2 shows the proposed trail and location of the pedestrian bridge. Figure 3 shows typical multiuse trail and shoreline protection cross section. Both figures were taken from the 2016 CBCL report.



Figure 2: Concept Plan of Trail

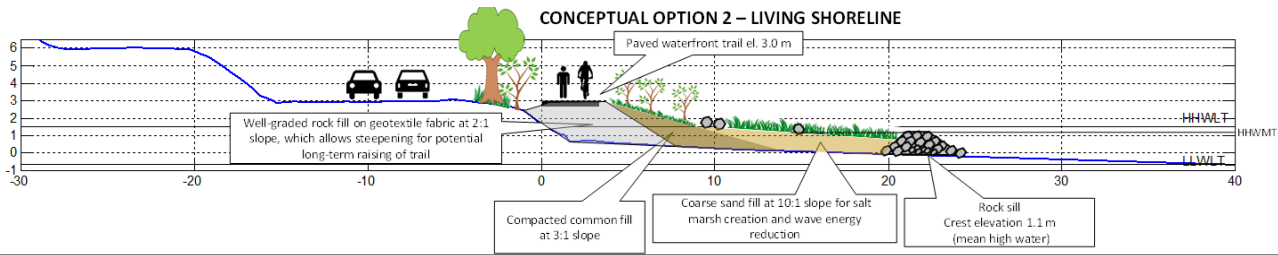


Figure 3: Typical Multiuse Trail and Shoreline Protection Section

Sewer and Water Extension

Approximately 1,000 m of new sewer and water is proposed from Parish Street to near Mushamush River. This extension will allow for servicing of currently undeveloped lands along Edgewater Street and provide central wastewater collection and water to the existing road front property owners. This will eliminate existing straight pipes from discharging into the Harbour. This section of road is fairly flat and will require 2 pump stations. Bedrock is suspected to be close to surface.



Power Extension

Underground power distribution is being planned along Edgewater Street to support the existing properties and future developments. A preliminary scoping study was completed by Strum Engineering Associates Ltd and is included in Appendix A. The report presented two options. The second option was recommended which shows the reconductoring of circuit 74W-212 along School Street, Pleasant Street, Main Street, to Orchard Street, some upgrading of lines to three-phase along Orchard Street to a new riser pole positioned near the United Church on Edgewater Street, and then proceeding underground along Edgewater Street and then turning left on Clearland Road and ending at the site of interest. The approximate alignment of the new underground section of the power extension is provided to the right.



Miscellaneous Improvements

Miscellaneous improvement to local sidewalk connectivity to connect existing sidewalks to existing parking lots and the new trail. All sidewalks will be designed to be accessible. Local lighting and underground power to the park will be upgraded with power boxes to allow for connecting seasonal decorations and for use for special events.

Opinion of Probable Construction Costs

In December of 2023 CBCL prepared a Class D opinion of probable construction costs for all items described above except for the Miscellaneous Site Improvements. These costs are presented on the following page.

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Item	Opinion of Probable Costs
Shoreline Protection	\$1,886,000
Multiuse Trail	\$1,362,000
Pedestrian Bridge	\$1,340,000
Sewer and Water Extension	\$3,369,000
Miscellaneous Site Improvements	\$100,000
U/G Power Extension ¹	\$903,000
Contingency (20%)	\$1,792,000
Total	\$10,752,000
Engineering Allowance	\$896,000
Project Budget	\$11,648,000

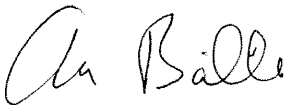
Notes:

1 U/G power scope and OPC developed by Strum Engineering Associates Ltd.

The project budget does not include tax, property acquisition, legal fees, or Town expenses. Attached in Attachment B is an engineering proposal to complete the design and tender services for this project. Construction services will be determined once a contractor has been selected. Please reach out if you have any questions or comments. We look forward to being part of the implementation of this exciting project.

Yours very truly,

CBCL Limited



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Attachments: A Strum Engineering Associates Ltd – Preliminary Assessment for Provision of a 4160 V Distribution Circuit to Serve Kedy's Landing
 B Engineering Fee Proposal

Proposal No. 248405.26