

STAFF REPORT

THE CORPORATION OF THE TOWN OF COBOURG



Report to:	Mayor and Council Members	Priority:	<input type="checkbox"/> High <input checked="" type="checkbox"/> Low
Submitted by:	Laurie Wills Director, Public Works lwills@cobourg.ca	Meeting Type: Open Session <input checked="" type="checkbox"/> Closed Session <input type="checkbox"/>	
Meeting Date:	January 21, 2021		
Report No.:	Public Works-005-21		
Submit comments to Council			

Subject/Title: Wood Boardwalk Replacement Justification

RECOMMENDATION:

THAT Council receive this report for information purposes.

1. STRATEGIC PLAN

NA

2. PUBLIC ENGAGEMENT

Upon receiving Council approval for the design of the replacement boardwalk, Staff will ensure that public consultation is incorporated into the design scope of work including circulation of information to the Parks and Recreation Advisory Committee, the Accessibility Advisory Committee, the Sustainability and Climate Change Advisory Committee, and the Transportation Advisory Committee.

3. PURPOSE

To provide further background information regarding the need to replace the wooden boardwalk.

4. ORIGIN AND LEGISLATION

2021 budget deliberations

5. BACKGROUND

The wooden boardwalk was constructed over 15 years ago and Public Works has historically conducted the repairs and maintenance. In 2020, Public Works conducted a thorough inspection of the wooden boardwalk similar to how the sidewalks are inspected on an annual basis. Required repairs were conducted to eliminate tripping hazards over 2cm in accordance with Minimum Maintenance Standards set out by the Municipal Act.

Repair work is labour intensive since due to limited access, Staff are required to transport a small trailer/dolly to the boardwalk and load all materials and tools required onto the dolly and pull it along the boardwalk to the repair location. Large machinery cannot gain access to the existing boardwalk.

During the repairs, it was noted by Staff that the boardwalk is severely rotted throughout its length and further repairs would not be justified nor may they even be possible due to the poor condition of the wood underneath the surface deck boards. The wood frame of the boardwalk is sitting on sand and is continually exposed to rain, snow, ice, blowing sand, sun, wind and foot traffic all of which have contributed to its end of life. Replacement of sections instead of spot repairs is not considered to be financially justifiable as there are so few sections that may be salvageable, if any.

Staff also receive comments from the public as well as from the Accessibility Advisory Committee, Transportation Advisory Committee as well as local cyclist's, that the boardwalk is too narrow for all of the activities it is being used for such as cycling and mobility aids. Currently the boardwalk is 3 m wide and in accordance with the Ontario Traffic Manual Book 18: Cycling Facilities, the minimum width for two-way active transportation facilities is 3 m however the desired width is 4 m where possible.

During the 2021 budget deliberations, Staff proposed the full replacement of the wooden boardwalk as well as investigate during the design if the boardwalk can be widened to 4 m and if other accessible design features can be incorporated such as a more accessible configuration of benches or the need for railings or edge protection.

Public inquiries on the scope of work have since prompted a more detailed justification of why and how the boardwalk will be replaced.

6. ANALYSIS

In 2020, the Community Services Division prepared a Request for Proposal (RFP) for the procurement of design services for the West Harbour and West

Headlands area which included investigating new boardwalk reaches in accordance with the Waterfront User Needs Study. Public Works intended to have the existing boardwalk replaced in 2022 when the new reaches of boardwalks were constructed and the public consultation process involved with the RFP would determine the materials and details of the boardwalk which would be applied to all new and existing boardwalks. When the RFP was cancelled, Public Works still requires the existing boardwalk to be replaced in 2022 due to its deteriorating condition. Therefore, it is being proposed that a design be conducted in 2021 that provides and evaluates boardwalk material options, construction methods, and other details as noted as 'options' from the Waterfront User Needs Study ie. Lighting. Additional reaches of boardwalk that extend south to the west beach as suggested in the Waterfront User Needs Study are not being considered during this design process. Any new reaches that are considered in the future could be easily constructed at a later date using the same typical sections, material specifications and construction details that will be prepared for the existing boardwalk replacement.

Throughout the design process, Staff will be working closely with the GRCA to ensure that the proposed construction materials and methods will be permitted. Restoration works as well as erosion and sediment control plans will be required for GRCA approval. After preliminary inquiries with GRCA, it is not anticipated that additional environmental studies will be required.

Recently, the Parks and Recreation Advisory Committee have put forth a motion to Council requesting a Natural Systems Stewardship Plan be prepared prior to the design of the boardwalk replacement. Staff are suggesting that the Stewardship Plan be prepared concurrently with the design so as not to delay construction in 2022. It is anticipated that GRCA would be thoroughly involved in both the preparation of the design as well as the Stewardship Plan ensuring consistency across all components under consideration.

7. FINANCIAL IMPLICATIONS/BUDGET IMPACTS

The Boardwalk is approximately 600 m in total length including the extensions from Ontario, Bagot and Durham Street. A preliminary cost estimate for construction could range significantly depending on whether it is raised or at grade, materials, width, and added options such as lighting, accessories, edge protection, etc. Depending on the number of public meetings required and the variety of options that are determined to be evaluated and subsequently designed, the design budget could also vary significantly.

Approximately half of the boardwalk at the west end is below the high water level. To properly design a walkway, consideration should be made to either elevate a wooden boardwalk at the west end or construct an asphalt or concrete structure that would require a toe wall of sorts to protect it from being undermined from high waters. The east half can remain at grade. A combination of two materials could be a good option in consideration of potentially two different design requirements for the east and west sections.

When considering material options, the lifecycle of each and maintenance requirements must also be evaluated. A very rough idea of material comparisons has been provided as follows:

Material	Cost	Lifecycle (approx. years)	Maintenance \$
Asphalt	\$	40	\$\$
Concrete	\$\$	50-70	\$\$
Wood	\$\$\$	10-15	\$\$\$\$
Wood-plastic Composite	\$\$\$\$	20-25	\$\$\$
Concrete Boardwalk	\$\$\$\$\$	50-75	\$

Prices of lumber today have skyrocketed due to the pandemic, meaning there is not as much of a price gap between the expenses of wood versus a composite wood material.

Additional accessories that may also be desired such as garbage/recycling cans, signage, benches, railings could also add to the cost anywhere from \$50k-\$75k all of which will cost the Town more to source, price, consult with the public about and purchase.

Should lighting be a priority, additional electrical engineering design will be required as well as consulting to source and price product options and construction could range from \$100k to \$200k.

The following is a high level construction cost estimate for three (3) different construction options, all of which do not include design, landscaping, lighting or accessories:

1. Replace wood boardwalk as is ie. Same construction, location, size (material only– constructed by public works*) \$170k
2. 4m width wood/composite boardwalk (labour/materials) \$680k-\$725M
3. Raised wood boardwalk for west section, at grade asphalt/concrete for east section (labour/materials) \$370k-\$440k

*other annual PW operations potentially required to be contracted out if time does not permit staff to conduct both the boardwalk construction and other annual maintenance work ie. Crack sealing.

An example of a nice concrete at grade boardwalk:



Should the boardwalk be partially elevated or required to have a protective toe wall, additional design engineering will be required. Staff have currently proposed a \$30,000 design budget which shall include one (1) public meeting. However; based on the range of construction options and costs noted above and considering engineering is typically 10% of construction costs, it is suggested that this be a preliminary design budget and that a provisional \$20,000 also be approved should additional design services be required for engineering such as structural, hydraulic or electrical as a result of the preliminary design and public consultation.

8. CONCLUSION

Report Approval Details

Document Title:	Wooden Boardwalk Replacement - Public Works-005-21.docx
Attachments:	
Final Approval Date:	Jan 20, 2021

This report and all of its attachments were approved and signed as outlined below:

Tracey Vaughan, Chief Administrative Officer - Jan 20, 2021 - 5:22 PM