

## ***Proposal***

**SHOREPLAN**

**To:** Sheldon Randall, Director of Operations  
Town of Niagara-on-the-Lake  
1593 Four Mile Creek Road  
PO Box 100  
Virgil, Ontario L0S 1T0

**Email:** [srandall@notl.org](mailto:srandall@notl.org)

**From:** J. Graham, P. Eng.

**Date:** May 17, 2017

**Re:** Waterfront Parklands Link - Shore Protection Design  
Our Proposal File: 17-2603

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Dear Mr Randall

Further to recent our meeting, we understand that the Town of Niagara-on-the-Lake requires design of shoreline protection improvements along the park shoreline between 25 Delater Street and 85 River Beach Road. The park shoreline is eroding and a historical outlet is vulnerable to wave action. Recent storm events have caused flooding in the back shore. We understand that the Town wishes to improve the park shoreline protection while maintaining the existing headland bay system and trees in the park as much as possible. We have not been provided terms of reference for this project. Based on our discussions we propose the following tasks:

1. We will visit the site and complete a visual assessment of the site and conditions. Shoreplan staff will carry out a topographic and bathymetric survey along and offshore of the park shoreline. This information combined with your mapping will be used to create a base plan for our design work.
2. We will carry out a coastal analysis to determine the design wave conditions at the site.
3. We will prepare up to three conceptual design alternatives for shoreline protection improvements. The park land is low lying and is vulnerable to flooding. We will develop concepts that utilize the existing shore protection as much as possible while improving protection against erosion and flooding. The designs will protect the foundation of the existing historical outlets and consider wave uprush and armour stability under design wave conditions. The design will also consider protection of the existing trees and connection to the properties to the east and west of the park. No protection along the north side of the adjacent property will be included in the design. Cost estimates for each concept will be provided.

4. We will meet with the Town to review the concepts and select a preferred alternative.
5. Following the meeting, we will prepare the detailed design of the shoreline protection improvements for the Town's preferred concept .
6. We will complete the detail design drawing(s) and specifications. Specifications for the works will be incorporated into the design drawings. We will submit the design drawing(s) to you for review at about 80% completion, and finalize as per your comments. These drawings will be suitable for submission to the approving agencies.
7. We will prepare a brief letter style report summarizing our design procedure. The report and drawing(s) will be submitted to Ministry of Natural Resources and Forestry (MNR) and Niagara Peninsula Conservation Authority (NPCA) for approval. We will complete a screening under Fisheries Act and, if required, make a submission to the Department of Fisheries and Oceans (DFO) for their review. We have included nominal time for follow up with DFO while they are reviewing the submission. No time is included for further work, should DFO decide that an Authorization is required.

**SHOREPLAN**

The cost of the above described work is estimated to be \$39,000 plus HST. We offer this as a lump sum fee for the described work. A breakdown of the cost is provided on the attached Table 1 for your information. This amount includes professional fees and expenses associated with our work. We will invoice the Town monthly for work completed in the month. We require a written authorization (see page 3) or a purchase order to initiate our work.

Our fees include submission to the regulatory agencies and limited follow-up based on our understanding of the project. Additional follow-up will be on an hourly basis at the rates outlined in Table 1. NPCA will require a permit fee. The cost of the permit fee is **not** included in our fees.

Please note that no other analysis is being proposed as part of our work. No fisheries impact, tree inventory, or assessment of natural environment other than coastal processes are included. We can assist with arranging for such services should these be requested by the approving agencies.

The work described in items 1 to 3 can be completed in approximately 8 weeks of receiving written authorization and the Town's base mapping.

Should you find this proposal acceptable, please sign the authorization below and mail back to our office.

Yours truly  
Shoreplan Engineering Limited



J. Graham, P. Eng.



**NOTL - Waterfront Parklands Link  
Shore Protection Improvements**



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**Table 1**

Staff:	Principal	Senior Engineer	Staff Engineer	Senior Technician	Support Staff	Total Fees	Expenses	Total Cost
<b>Hourly Rate:</b>	<b>\$200.00</b>	<b>\$150.00</b>	<b>\$125.00</b>	<b>\$90.00</b>	<b>\$60.00</b>			
<b>Hours:</b>	<b>16.0</b>	<b>84.0</b>	<b>52.0</b>	<b>130.0</b>	<b>30.0</b>			
<b>Cost:</b>	<b>\$3,200</b>	<b>\$12,600</b>	<b>\$6,500</b>	<b>\$11,700</b>	<b>\$1,800</b>	<b>\$35,800</b>	<b>\$3,200</b>	<b>\$39,000</b>
<b>Phase 1: Concept Design</b>								
1 Site Visit and Topographic & Bathymetric Survey	4.0	6.0	0.0	36.0	24.0	\$6,380	\$2,600	\$8,980
2 Coastal Analysis	0.0	40.0	0.0	0.0	0.0	\$6,000	\$200	\$6,200
3 Concept Design	4.0	12.0	4.0	36.0	0.0	\$6,340	\$0	\$6,340
4 Concept Design Meeting	0.0	6.0	0.0	0.0	0.0	\$900	\$300	\$1,200
<b>Phase 2: Detailed Design</b>								
5 Detailed Design	3.0	8.0	16.0	16.0	0.0	\$5,240	\$0	\$5,240
6 Design Drawings and Specifications	3.0	4.0	16.0	40.0	0.0	\$6,800	\$50	\$6,850
7 Design Brief and Approval Submissions	2.0	8.0	16.0	2.0	6.0	\$4,140	\$50	\$4,190
<b>Total Hours :</b>	<b>16.0</b>	<b>84.0</b>	<b>52.0</b>	<b>130.0</b>	<b>30.0</b>			
<b>Total Cost :</b>	<b>\$3,200</b>	<b>\$12,600</b>	<b>\$6,500</b>	<b>\$11,700</b>	<b>\$1,800</b>	<b>\$35,800</b>	<b>\$3,200</b>	<b>\$39,000</b>

**NOTE: HST will be charged in addition to the estimated amount.**