

Section II – Items for Executive Action

TO: Chair and Members of the Executive Committee
Meeting #6/18, Friday, August 10, 2018

FROM: Nick Saccone, Senior Director, Restoration and Infrastructure

RE: **TORONTO ISLANDS FLOOD CHARACTERIZATION AND RISK ASSESSMENT PROJECT**
Contract #10008379

KEY ISSUE

Award of Contract #10008379 for flood characterization and risk assessment engineering services for Toronto Islands.

RECOMMENDATION

THAT Contract #10008379 for flood risk characterization and risk assessment engineering services for the Toronto Islands be awarded to W.F. Baird & Associates Coastal Engineers Ltd. at a total cost not to exceed \$174,092.00, plus HST, as they are the highest ranked bidder that best meets Toronto and Region Conservation Authority (TRCA) specifications;

THAT TRCA staff be authorized to approve additional expenditures to a maximum of 10% of the total cost of the contract as a contingency allowance, if deemed necessary;

THAT should staff be unable to execute an acceptable contract with the awarded contractor, staff be authorized to enter into and conclude contract negotiations with the other contractors that submitted tenders, beginning with the next lowest bidder meeting TRCA specifications;

AND FURTHER THAT authorized TRCA officials be directed to take all necessary actions to implement the contract, including the signing and execution of any documents.

BACKGROUND

In the spring of 2017, water levels in Lake Ontario were at their highest recorded level in more than 100 years. The effect of this flooding has been felt along the entire length of Toronto's waterfront, and particularly on the Toronto Islands where over 800 residents, almost 30 businesses and two schools were forced to adapt to rising waters and service disruptions. Notably, the closure of the Islands during peak season presented a major disruption in tourist and recreational activity which is an important source of revenue to the City and local businesses. The island parks also experienced significant shoreline erosion, damage and debris accumulation over the spring and summer of 2017. The flooding resulted in the activation of the City of Toronto Emergency Operations Centre and in notable financial impacts in the range of \$8 Million in direct damages, mitigation costs and lost revenue.

In 2015, the federal government established the National Disaster Mitigation Program (NDMP), allocating \$200 million over five years toward initiatives aimed at reducing the impacts of natural disasters, specifically flooding. Under this program, Public Safety Canada can fund up to 50 percent of project costs, to a maximum of \$1.5 million in federal funding per project.

Item 9.3

TRCA and the City of Toronto have been collaborating to reduce the damages caused by this event. TRCA successfully applied for \$150,000 in grant funding from the NDMP, with the City of Toronto matching \$150,000 for a total of \$300,000 for the Toronto Islands Flood Characterization and Risk Assessment Project. This project will serve to characterize the lake-based flood hazard on the Toronto Islands, and will help facilitate an understanding of the community and infrastructure vulnerabilities, potential impacts and risk to residents and municipal assets, and inform future structural and non-structural flood mitigation investments. This project will provide the necessary assessment, flood mapping and mitigation planning that will lead to future mitigation projects in collaboration with the City of Toronto on the Toronto Islands.

The project can be broken down into four major modules:

1. Flood Characterization

The flood characterization will first provide a description of the climatic and meteorological conditions that caused the 2017 high lake level situation, and second will generate updated return period lake levels for both static lake level and storm surge conditions. These updated return periods will take into account both future climate conditions, and the impact of the new lake regulation as per the International Joint Commission's (IJC's) Plan 2014. In addition, the flood characterization report will discuss the historic and anticipated frequency of waves of various heights, which will allow for inundation maps to take into account the expected wave run-up.

2. Flood Risk Assessment

The Flood Risk Assessment portion will serve to estimate the average annual damages that could be expected from high lake-level flooding. These damage estimates will be calculated at a fine spatial scale (structure level) so that the risk assessment will be useful in informing mitigation alternatives. Damage estimates will include direct tangible damages (structure and content damages for inundated structures, public infrastructure, parks and environmental damages), indirect tangible damages (loss of revenue and population displacement), as well intangible damages (such as increase in depression, insecurity, resulting loss of productivity, injury, or death, unmet level of service for critical recreational and cultural amenities). The intention of the flood risk assessment is to capture all flood-related impacts as accurately as possible so that the subsequent sections of the project can be well-informed.

3. Flood Response Plan

The development of a flood emergency response plan document and maps for the Toronto Islands is a critical part of the project. The flood emergency response plans will be informed by the flood characterization, flood risk assessment, and input from City of Toronto and TRCA.

4. Flood Mitigation Alternatives Study

The detailed average annual flood damage estimates from the flood risk assessment will allow for informed recommendations for permanent flood mitigation alternatives. This portion of the project will provide high level recommendations for permanent mitigation, concept plans for the mitigation alternatives, and should detail the next steps, study requirements and cost estimates for mitigation alternatives.

The Toronto Islands Flood Characterization and Risk Assessment Project will serve to gather critical information that will inform future flood preparedness, emergency communication and response, and permanent flood mitigation measures, all of which are crucial to ensuring the long-term resilience of the islands as a residential, recreational, cultural and tourism asset for the City.

Item 9.3

RATIONALE

The Request for Proposal (RFP) #10008379 was publically advertised on the electronic procurement website *Biddingo* (www.biddingo.com) on June 11, 2018. The document was downloaded for review by 29 vendors. The submissions were evaluated on a weighted scoring system consisting of 70% technical criteria and 30% financial criteria. The evaluation criteria included the following:

- Conformance with the terms of the RFP;
- Experience and qualifications of the consultant project manager and its team proposed for the services, availability of personnel, as well as experience with projects of a similar scope;
- Understanding the project and the scope of work, identification of project difficulties and solutions, proposed methodology and workplan, and innovative approaches to meeting project objectives;
- Reasonableness of cost.

Proposals closed on June 29, 2018 at 11:00 am and were formally opened by the Procurement Opening Committee (Lisa Moore, Leena Eappen and Danielle Dellandrea) on June 29, 2018.

Members of the Procurement Evaluation Committee consisted of TRCA staff (Danny Moro, Rebecca Elliot, Nathan Plato and Danielle Dellandrea). Submitted proposals were reviewed and evaluated based on the set of criteria described above. The results of the evaluation are as follows:

Bidders	Technical Rank (70%)	Financial Rank (30%)	TOTAL TENDER AMOUNT (plus HST)	Overall Ranking
W.F. Baird & Associates Coastal Engineers Ltd.	2	3	\$174,092.00	1
Zuzek Inc.	1	5	\$199,871.00	2
IBI Group	3	4	\$180,129.00	3
Dillon Consulting	5	1	\$156,831.00	4
Wood Environmental & Infrastructure Solutions	4	2	\$170,453.00	5

Based on the evaluation of the received proposals, the two top rank technical proposals were within a 3% difference. Therefore, it was determined that the combined technical and fee proposal submitted by W.F. Baird & Associates Coastal Engineers Ltd. (Baird) offered the best service value amongst the consultants whose technical capacity matched the project needs. Furthermore, based on Baird's coastal engineering specialization and extensive project experience in coastal risk assessment and resilience it was determined that they are capable of undertaking the scope of work for this project on the Toronto Islands.

Therefore, staff recommends that W.F. Baird & Associates Coastal Engineers Ltd. be awarded Contract # 10008379 at a total amount not to exceed \$174,092.00, plus 10% contingency, plus HST.

Item 9.3

This project is in line with TRCA's 10 Year Strategic Plan # 2 'Manage our regional water resources for current and future generations' and Strategic Plan # 8 'Gather and share the best urban sustainability knowledge' as the deliverables of this project will reduce flood risks on the Toronto Islands, provide a deeper understanding of the complex climate, ecological, social and economic systems and how to respond to future flooding events, as well as strengthen TRCA's partnership with the City of Toronto.

FINANCIAL DETAILS

Funding for the consulting services required as part of this project will be provided by the NDMP and City of Toronto under account 251-87. TRCA has received \$150,000 in grant funding from the NDMP and \$150,000 will come from the City of Toronto to cover all project costs, including consulting services.

Report prepared by: Danielle Dellandrea, extension 5240

Emails: ddellandrea@trca.on.ca

For Information contact: Karen McDonald 5248, Danny Moro extension 5372

Emails: kmdonald@trca.on.ca , dmoro@trca.on.ca

Date: July 13, 2018