



Toronto and Region Conservation Authority

Board of Directors Meeting Agenda

#5/20

June 26, 2020

9:30 A.M.

The meeting will be conducted via a video conference
Members of the public may view the livestream at the following link:

<https://video.isilive.ca/trca/live.html>

Pages

1.	ACKNOWLEDGEMENT OF INDIGENOUS TERRITORY	
2.	MINUTES OF MEETING #4/20, HELD ON MAY 22, 2020 <u>Meeting Minutes Link</u> (May 22, 2020 Closed Session Minutes will be circulated to Board Members separately)	
3.	DISCLOSURE OF PECUNIARY INTEREST AND THE GENERAL NATURE THEREOF	
4.	DELEGATIONS	
5.	PRESENTATIONS	
6.	CORRESPONDENCE	
7.	SECTION I - ITEMS FOR BOARD OF DIRECTORS ACTION	
7.1	BLACK CREEK AT ROCKCLIFFE SPECIAL POLICY AREA FLOOD REMEDATION AND TRANSPORTATION FEASIBILITY STUDY	8
7.2	DOWNTOWN BRAMPTON FLOOD PROTECTION PROJECT ENVIRONMENTAL ASSESSMENT Update on Progress	21

7.3	DELEGATED AUTHORITY TO AWARD CONTRACT 10021166 FOR ASHBRIDGES BAY PARK MAJOR MAINTENANCE PROJECT	29
7.4	DELEGATED AUTHORITY TO AWARD CONTRACT 10034683 FOR CLAIREVILLE CONSERVATION AREA WATERMAIN REPLACEMENT PROJECT	33
7.5	REQUEST FOR TENDER FOR PETTICOAT CREEK CONSERVATION AREA HYDRO SERVICE INFRASTRUCTURE REPLACEMENT Petticoat Creek Conservation Area – Urgent Hydro Service and Electrical Infrastructure Procurement (RFT No. 10033092)	35
7.6	REQUEST FOR TENDER FOR THE SUPPLY AND DELIVERY OF VARIOUS AGGREGATES AT LAKEVIEW WATERFRONT CONNECTION PROJECT- NORTH ISLAND RFT No. 10033249	38
8.	SECTION III - ITEMS FOR THE INFORMATION OF THE BOARD	
8.1	COVID-19 UPDATE	42
8.2	FLOOD RISK PUBLIC AWARENESS AND EDUCATION PROGRAM National Disaster Mitigation Program Funded Outreach Program Summary	48
8.3	PICKERING AND AJAX DYKE RESTORATION CONSERVATION ONTARIO CLASS ENVIRONMENTAL ASSESSMENT Update on Progress	60
8.4	BRUCE'S MILL CONSERVATION AREA Repair, Restoration and Adapted Re-use of the Grist Mill at Bruce's Mill Conservation Area	72
9.	MATERIAL FROM EXECUTIVE COMMITTEE MEETING #4/20, HELD ON JUNE 12, 2020 Meeting Minutes Link	
9.1	SECTION I - ITEMS FOR BOARD OF DIRECTORS ACTION	
9.1.1	2019 AUDITED FINANCIAL STATEMENTS The 2019 audited financial statements are recommended for approval. (Executive Committee RES.#B23/20) PDF Page 2/173	

9.1.2 GREENLANDS ACQUISITION PROJECT FOR 2016-2020 (6351 STEELES AVENUE EAST)

Acquisition of property located south of Steeles Avenue East and east of Tapscott Road, municipally known as 6351 Steeles Avenue East, in the City of Toronto, under the “Greenlands Acquisition Project for 2016-2020,” Flood Plain and Conservation Component, Rouge River Watershed (CFN 62393 and CFN 62396).

(Executive Committee RES.#B24/20)

PDF Page 65/173

9.1.3 GREENLANDS ACQUISITION PROJECT FOR 2016-2020 (12785 NINTH LINE, TOWN OF WHITCHURCH-STOUFFVILLE)

Acquisition of 3 property parcels located south of Bethesda Sideroad and east of Ninth Line, known as 12785 Ninth Line, in the Town of WhichurchStouffville, Regional Municipality of York, under the “Greenlands Acquisition Project for 2016-2020,” Flood Plain and Conservation Component, Rouge River watershed (CFN 63122).

(Executive Committee RES.#B25/20)

PDF Page 69/173

9.1.4 GREENLANDS ACQUISITION PROJECT FOR 2016-2020 (50 HUMBERWOOD BOULEVARD, CITY OF TORONTO)

Acquisition of two property parcels, one property parcel located on the northeast corner of Humberwood Boulevard and Rexdale Boulevard municipally known as 50 Humberwood Boulevard, in the City of Toronto (“Parcel 1”), and the second property parcel located on the west side of Humberwood Boulevard south of Honeyview Place, in the City of Toronto (“Parcel 2”) under the “Greenlands Acquisition Project for 2016-2020,” Flood Plain and Conservation Component, Humber River watershed (CFN 63121).

(Executive Committee RES.#B26/20)

PDF Page 73/173

9.1.5 CITY OF VAUGHAN REQUEST FOR A PERMANENT EASEMENT

Receipt of a request from the City of Vaughan, for a permanent easement of Toronto and Region Conservation Authority (TRCA) owned lands located east of Canada Company Avenue and south of Major Mackenzie Drive, in the City of Vaughan, Regional Municipality of York, required for Canada Company Avenue Road Rehabilitation Project, Humber River watershed (CFN 63205).

(Executive Committee RES.#B27/20)

PDF Page 77/173

9.1.6 CITY OF TORONTO REQUEST FOR PERMANENT EASEMENT

Receipt of a request from the City of Toronto, for Permanent Easements on Toronto and Region Conservation Authority-owned lands in Baby Point located between Old Mill Drive to Home Smith Road in the City of Toronto, required for the Baby Point Force Main Replacement Project, Humber River watershed (CFN 63119).

(Executive Committee RES.#B28/20)

PDF Page 81/173

9.1.7 CITY OF TORONTO REQUEST FOR PERMANENT EASEMENT

Receipt of a request from the City of Toronto, for a Permanent Easement on Toronto and Region Conservation Authority (TRCA) owned lands located at the northwest corner of Leslie Street and Sheppard Avenue East in the City of Toronto, required for the Sheppard Avenue East and Leslie Street Dry Weather Storage Tank and Sanitary Sewer Upgrades, Don River watershed (CFN 62982).

(Executive Committee RES.#B29/20)

PDF Page 85/173

9.1.8 SOUTH MIMICO CREEK TRAIL – CITY OF TORONTO – CONSENT TO ENTER INTO ENCROACHMENT AND MAINTENANCE AGREEMENTS

Receipt of a request from the City of Toronto (City) for consent of Toronto and Region Conservation Authority (TRCA) to allow for the City to negotiate an encroachment and enter into a maintenance agreement with three condominium corporations to address trail connections from adjacent condominium buildings to the South Mimico Creek Trail (CFN 63123).

(Executive Committee RES.#B30/20)

PDF Page 89/173

9.1.9 PROPOSAL TO LEASE TRCA-OWNED LAND FOR ADVERTISING PURPOSES

Receipt of a proposal from Pattison Outdoor Advertising LP, to lease Toronto and Region Conservation Authority-owned lands for the construction and operation of both electronic and static advertising signs (CFN 62783).

(Executive Committee RES.#B31/20)

PDF Page 93/173

**9.1.10 VENDORS OF RECORD FOR SUPPLY AND DELIVERY OF
VARIOUS AGGREGATE – CONTRACT EXTENSION**

Extension of Contract No. 10021054 expiry date from July 1, 2020 to July 1, 2021

(Executive Committee RES.#B32/20)

PDF Page 101/173

**9.1.11 VENDOR OF RECORD ARRANGEMENT FOR RENTAL
OF CONSTRUCTION EQUIPMENT**

Award of Request for Proposal (RFP) No. 10033257 for a Vendor of Record (VOR) arrangement for rental of construction equipment from August 1, 2020 to August 1, 2021.

(Executive Committee RES.#B33/20)

PDF Page 104/173

**9.1.12 REQUEST FOR TENDER FOR SUPPLY AND DELIVERY OF 100-
700 MILLIMETRE CORE STONE MATERIAL FOR THE
ASHBRIDGES BAY TREATMENT PLANT LANDFORM PROJECT**

Award of Request for Tender (RFT) No. 10033378 for the supply and delivery of 148,000 tonnes of 100-700 millimetre core stone material for the Cell 2 perimeter berm of the Ashbridges Bay Treatment Plant Landform Project.

(Executive Committee RES.#B34/20)

PDF Page 107/173

**9.1.13 REQUEST FOR TENDER FOR CONSTRUCTION SERVICES FOR
PALACE PIER COURT HEADLAND MAINTENANCE PROJECT**

Award of Request for Tender (RFT) No. 10033095 for the supply of all labour, equipment and materials necessary to repair a failing armourstone revetment and gravel trail along the Lake Ontario shoreline for the Palace Pier Court Headland Maintenance Project in the City of Toronto.

(Executive Committee RES.#B35/20)

PDF Page 112/173

9.2 SECTION II - ITEMS FOR EXECUTIVE ACTION

9.2.1 REQUEST TO ENTER INTO SINGLE SOURCE AGREEMENT WITH PORTSTORONTO FOR DREDGING OF COATSWORTH CUT

RFT No. 10033498. Approval to enter into single source agreement with PortsToronto (formally Toronto Port Authority) for dredging of Coatsworth Cut Channel near Ashbridges Bay Park in the City of Toronto in accordance with the established Memorandum of Understanding (MOU).

(Executive Committee RES.#B36/20)

PDF Page 117/173

9.2.2 REQUEST FOR TENDER FOR THE SUPPLY AND DELIVERY OF VARIOUS AGGREGATES AT LAKEVIEW WATERFRONT CONNECTION PROJECT- NORTH ISLAND

Award of Request for Tender (RFT) No. 10033247, 10033248 and 10033300, for the supply and delivery of various aggregate material for the Lakeview Waterfront Connection Project.

(Executive Committee RES.#B37/20)

PDF Page 121/173

9.2.3 REQUEST FOR PROPOSAL FOR EAST DON TRAIL DETAILED DESIGN FOR A TUNNEL AND PEDESTRIAN OVERPASS WITHIN THE METROLINX BALA SUBDIVISION RAILWAY CORRIDOR

Award of Request for Proposal (RFP) No. 10021137 for the detailed design, securement of permits/ approvals, and tender and contract administration support for the construction of a pedestrian tunnel and bridge within the Metrolinx Bala Subdivision Railway Corridor located in the City of Toronto.

(Executive Committee RES.#B38/20)

PDF Page 125/173

9.3 SECTION III - ITEMS FOR THE INFORMATION OF THE BOARD

9.3.1 2020 INSURANCE PROGRAM UPDATE

Report Summarizing Toronto and Region Conservation Authority's (TRCA) Insurance and Surety Programs.

(Executive Committee RES.#B39/20)

PDF Page 130/173

9.3.2 2020 RISK MANAGEMENT PROGRAM UPDATE

Update on Toronto and Region Conservation Authority's (TRCA) Risk Management Program.

(Executive Committee RES.#B40/20)

PDF Page 134/173

9.4 SECTION IV - ONTARIO REGULATION 166/06, AS AMENDED

Receipt of Ontario Regulation 166/06, as amended, for applications 10.1-10.4, which were approved or received at the Executive Committee Meeting #4/20, held on June 12, 2020

(Executive Committee RES.#B41/20 and RES.#B42/20)

PDF Page 139/173

9.5 CLOSED SESSION MINUTES

(Executive Committee RES.#B46/20 and RES.#B47/20)

PDF Page 172/173

(The confidential Minutes will be circulated to Board Members separately)

9.5.1 2020 LITIGATION SUMMARY

(Executive Committee RES.#B46/20)

9.5.2 TRCA'S NEW ADMINISTRATIVE BUILDING VERBAL UPDATE

(Executive Committee RES.#B47/20)

10. CLOSED SESSION

10.1 BRUCE'S MILL CONSERVATION AREA PROPOSED HERITAGE DESIGNATION

Pursuant to Section C.4.(l) of the TRCA Board of Directors Administrative By-law, as the subject matter consists of a position, plan, procedure, criteria or instruction to be applied to any negotiations carried on or to be carried on by or on behalf of TRCA.

(The confidential report will be circulated to Board Members separately).

10.2 TRCA'S NEW ADMINISTRATIVE BUILDING UPDATE

Verbal Update

Pursuant to Section C.4.(l) of the TRCA Board of Directors Administrative By-law, as the subject matter consists of a position, plan, procedure, criteria or instruction to be applied to any negotiations carried on or to be carried on by or on behalf of TRCA.

11. NEW BUSINESS

NEXT MEETING OF THE BOARD OF DIRECTORS #6/20, TO BE HELD ON SEPTEMBER 25, 2020 AT 9:30 A.M. LOCATION TO BE DETERMINED.

John MacKenzie, Chief Executive Officer

/am

Section I – Items for Board of Directors Action

TO: Chair and Members of the Board of Directors
Meeting #5/20, Friday, June 26, 2020

FROM: Sameer Dhalla, Director, Development and Engineering Services

RE: **BLACK CREEK AT ROCKCLIFFE SPECIAL POLICY AREA FLOOD
REMEDICATION AND TRANSPORTATION FEASIBILITY STUDY**

KEY ISSUE

Approval to adopt the Black Creek at Rockcliffe Special Policy Area Flood Remediation and Transportation Feasibility Study as prepared by Toronto Region Conservation Authority Engineering Services staff and Wood Environment and Infrastructure Solutions.

RECOMMENDATION

WHEREAS the Black Creek at Rockcliffe area is the highest ranked flood vulnerable cluster within TRCA's jurisdiction;

AND WHEREAS Toronto and Region Conservation Authority (TRCA) and the City of Toronto have completed Environmental Assessment studies, and most recently reported on flood risk in the Black Creek Rockcliffe area including next steps in pursuing flood remediation at Authority meeting #2/18 held on March 23, 2018;

THEREFORE, LET IT BE RESOLVED THAT the Black Creek at Rockcliffe Special Policy Areas Flood Remediation and Transportation Feasibility Study be received;

THAT TRCA staff be directed to develop and enter into an agreement with the City of Toronto to undertake, as a co-proponent in collaboration with the City, a Municipal Class Environmental Assessment that will finalize the flood remediation recommendations, while addressing transportation issues, along Black Creek and its tributaries within the Rockcliffe area;

THAT the Chief Executive Officer be granted delegated authority to approve the EA procurement process to further expedite study timelines in light of the September 2020 Board of Directors meeting;

AND FURTHER THAT TRCA report back upon completion of the Environmental Assessment study.

BACKGROUND

The Rockcliffe neighbourhood is located in Ward 5 (York South-Weston) of the City of Toronto and within the regulatory floodplain of Black Creek. Historical development in the floodplain and alterations to the river channel prior to modern floodplain management practices has resulted in significant risk. It is an area with a high concentration of structures in the floodplain, and is the highest ranked Flood Vulnerable Cluster in TRCA's jurisdiction in terms of flood risk and consequence, according to the 2018 Flood Risk Assessment and Ranking study results, which were received by the Board of Directors via Resolution #A180/19, on October 25, 2019. Development in the area is controlled by Special Policy Area (SPA) policies originally approved

Item 7.1

in 1991. Based on updated hydraulic modelling there are approximately 366 buildings located within the regulatory floodplain. Many of these structures have experienced surface and basement flooding during severe storms in July 2013, August 2018, and July 2019 due to both riverine flooding and/or pluvial flooding from the City's sewer systems.

TRCA and the City of Toronto have been coordinating efforts to reduce flooding risks in the Rockcliffe area. In 2014, the TRCA and the City completed two separate Environmental Assessment (EA) studies that examined options to reduce riverine and sewer system related flooding, respectively. These EA studies are:

- 1) Black Creek (Rockcliffe Area) Riverine Flood Management Class Environmental Assessment, completed in 2014 by Amec Foster Wheeler – this TRCA EA study investigated riverine flooding and recommended riverine flood remediation measures; and,
- 2) Basement Flooding Study Area 4 and Combined Sewer Overflow Control Environmental Assessment, completed August 2014 by XCG – this City of Toronto EA study investigated sewer system flooding and recommended sewer system improvements to reduce basement flooding.

Since the completion of the 2014 Class Environmental Assessment, TRCA has undertaken several technical modeling studies within the Black Creek and broader Humber River watersheds using new data, updated software and meteorological and flood information from the 2013 and 2018 storm events. These studies include a comprehensive watershed hydrology update resulting in new regulatory and design storm flow estimates for floodplain delineation (2015 Humber River Hydrology Update), and a high resolution two-dimensional (2D) hydraulic model leveraging detailed data inputs like LiDAR within the Rockcliffe community (2018 Black Creek at Rockcliffe 2D Model and Floodplain Mapping Update).

With many properties experiencing flood risk during more frequent storms and the recognition of the various riverine, pluvial, and transportation considerations at play, the results of TRCA's refined models and subsequent discussions with City of Toronto staff resulted in the need to re-assess and evaluate the feasibility of the recommended flood remediation alternatives developed in the 2014 Environmental Assessment. The reassessment of flood remediation solutions formed the basis for the "Black Creek at Rockcliffe Special Policy Area Flood Remediation and Transportation Feasibility Study" (Feasibility Study).

At Board of Directors Meeting #5/19, held on May 24, 2019, Resolution #A82/19 was approved as follows:

THEREFORE LET IT BE RESOLVED THAT Request for Proposal (RFP) No. 10009033 for engineering consulting services to undertake the Black Creek at Rockcliffe SPA Flood Remediation and Transportation Feasibility Study be awarded to Wood Environment & Infrastructure Solutions at a total cost not to exceed \$498,126 plus applicable taxes, to be expended as authorized by TRCA staff;

AND FURTHER THAT TRCA report back to the Board of Directors upon completion of the study.

RATIONALE

Flood Risk Management Activities in Rockcliffe

TRCA identifies and ranks areas at risk of riverine flooding through the Flood Risk Assessment and Ranking (FRAR) process. Areas with a high concentration of structures in the floodplain were grouped together as Flood Vulnerable Clusters (FVCs). Many of these areas correspond to historical Flood Damage Centres and provincially designated Special Policy Areas, where development occurred near rivers prior to land use planning for hazard mitigation and section 28 permitting regulations under the CA Act. Since 2008, the Rockcliffe area has been ranked among the top five priority areas for riverine flood risk, and with the most recent iteration of the risk assessment is currently ranked the highest priority area for riverine flood risk within TRCA's jurisdiction. Rockcliffe was the first flood risk priority area selected by the TRCA to commence an EA study to investigate riverine flooding and recommend solutions.

TRCA activities in flood risk management extend beyond capital works and land-use planning, and include emergency management planning with partner municipalities, flood forecasting and warning, and education and outreach. In addition to the 2014 TRCA EA study, actions taken by the TRCA to support the reduction of riverine flood risks in the Rockcliffe area include:

- The identification of the Rockcliffe area as a priority area for risk communications and flood education programs
- A dedicated real-time monitoring water level gauge, installed at Black Creek downstream of Alliance Avenue in 2016, as well as the installation of a real-time camera and precipitation gauge in the catchment to further enhance flood forecasting, warning, and emergency preparedness activities.
- The development of an updated two-dimensional hydraulic model (2D model), which provides enhanced riverine flood risk information (i.e., flood depth, velocity, risk to life parameters) that was used as the basis for the ensuing feasibility and conceptual design studies.
- The joint development of site-specific emergency response procedures together with the Toronto Office of Emergency Management and applicable City divisions.
- Continued investments for the operation and maintenance of flood infrastructure within the Black Creek watershed, namely:
 - Black Creek Dam Safety Review (2017)
 - Black Creek Reservoir Dredging and Maintenance Project (2017)
 - Black Creek Channel Restoration (2013 - 2016)
 - Black Creek Channel Guardrail Installation (2016)

In 2020, TRCA and the City collaboratively completed the Feasibility Study, which revisited the 2014 TRCA EA preferred solution using new modelling and a more thorough assessment of impacts to traffic and infrastructure. The sections below discuss the findings of the Feasibility Study in more detail.

Summary of Feasibility Study Alternatives

The objective of the Feasibility Study was a thorough re-assessment of the flood remediation alternatives developed in TRCA's 2014 EA, in light of model refinements, infrastructure considerations and flood observations. The study examined the performance of the recommended flood remediation solutions using a new MIKE FLOOD 2D hydraulic model, which explicitly considers the influence of the Lavender Creek tributary, as well as the updated

Item 7.1

watershed flows from the 2018 “Humber River Hydrology Update Addendum”. The Feasibility Study also comprehensively assessed traffic impacts (using Synchro and SimTraffic Models) and included site investigations (Boreholes and Sub-Surface Engineering).

Through the Feasibility Study, an improved flood remediation solution was identified, which significantly reduces the number of properties in the floodplain under all storm events (see **Attachment 1**). For example, in the 350-year storm event, the number of buildings in the floodplain drops from 215 to 3.

Revised flood mitigation alternatives were investigated for the various sections of the Rockcliffe cluster and are summarized below.

Jane Street to Alliance Avenue

The 2014 TRCA EA identified Jane Street crossing as a major constriction to flow conveyance and recommended it be upsized to a 200 m span bridge. The revised modelling undertaken for the Feasibility Study examined three additional alternatives:

- Alternative 1: 200 m span bridge and valley shaping as per the 2014 TRCA EA,
- Alternative 2: lowered culvert invert (1.5m +/-)
- Alternative 3: 102 m span bridge with 72 m minimum bottom width
- Alternative 4: Two (2) 5.4 m diameter supplemental culverts in addition to the existing culvert

Attachment 2 shows the number of buildings still impacted by riverine flooding after the Jane Street crossing was upsized.

For the Jane Street crossing, additional modeling and geotechnical analysis found a 102 m span bridge (Alternative 3) would provide the same flood benefit as the 200m crossing while providing significant cost savings.

The Jane Street crossing hydraulic analysis revealed important information about the nature of flooding in this reach. Given the similar performance of the Alternatives for events with return periods equal to or less than 350 years, and the fact that the majority of buildings impacted by flooding are upstream of Rockcliffe Boulevard, it was clear that the existing bottleneck at the Jane Street crossing is not the only factor influencing riverine flooding within the area. As a result, flood mitigation measures were extended upstream. In addition to upsizing the Jane St crossing, the Feasibility Study recommends widening the channel between downstream of Jane St to Rockcliffe Blvd from 15.2 m wide to 55 m wide and upsizing the Rockcliffe Blvd crossing to a 52 m span bridge. Rockcliffe Court is proposed to be realigned to fit around the widened crossing. Upstream of Rockcliffe Blvd the channel is also proposed to be widened to 55m, before it is tied into existing grades downstream of Alliance Ave. Throughout this reach the widened channel is deepened for better hydraulic performance. In summary the flood remediation solutions for this reach are to:

- Replace the existing 10.7 m span structure at Jane Street with a 102 m span bridge.
- Naturalize, widen, and deepen Black Creek from Jane Street to Rockcliffe Blvd. (55 m top width).
- Upgrade the existing 15.2 m by 4.6 m Rockcliffe Blvd. bridge to a 52 m span by 4.9 m rise bridge with a lower invert.
- Naturalize, widen, and deepen Black Creek from Rockcliffe Blvd. to downstream of Alliance Ave. (55 m top width).

Item 7.1

The above noted mitigation strategy provides flood relief up to the 350-year event and is illustrated on Attachment 1.

Lavender Creek

The 2014 EA did not examine the impacts of Lavender Creek, however based on experienced flooding from the recent storm events after 2014, TRCA included a detailed flood analysis of Lavender Creek in the Feasibility study. Under existing conditions, the properties along Hilldale Drive are the most flood vulnerable locations in the study area due to their close proximity to Lavender Creek. The 0.9 m x 3.66 m culvert under Symes Road is undersized. Furthermore, the creek itself and the two driveway crossings downstream of Symes Road have limited flow capacity. The Feasibility Study, which utilized updated hydraulic modelling that explicitly accounted for Lavender Creek, examined this area under different scenarios. The scenarios ranged from realigning Lavender Creek to varying crossings and channel widths. The selected flood mitigation solution for Lavender Creek is to:

- Naturalize and widen Lavender Creek to 22.5 m top width from Black Creek to Symes Road
- Remove the south driveway crossing of Lavender Creek
- Replace Lavender Creek northern driveway crossing (4.8 m by 2.3 m) with a 20 m span by 3.87 m rise crossing
- Replace the existing Symes Road crossing (3.66 m by 0.90 m rise, 40.2 m long), with twin 5.4 m span by 1.8 m rise culverts

This solution was found to provide flood protection up to the Regional Storm along Hilldale Ave, while also minimizing property acquisition and infrastructure impacts, all while maintaining existing transportation routes. The 2014 TRCA EA had originally proposed flood protection berms along Lavender Creek; these berms are no longer required under the Feasibility Study flood solution, the proposed flood mitigation strategy for Lavender Creek is shown on **Attachment 3**.

Alliance Avenue to Weston Road

The Feasibility Study modelling demonstrated that with the downstream flood improvements implemented, the Black Creek channel between Alliance Ave. to Weston Rd. could convey the 350-year storm without overtopping. The study team completed a qualitative assessment of the channel requirements for the Humber Boulevard area and concluded that due to the amount of infrastructure within the Humber Boulevard right of way, any proposed flood remediation works would be extremely costly and difficult to implement. Discussions with the City confirmed that the level of riverine flood control service for the Rockcliffe area would be to a minimum the 350 year event. Given this high service standard, TRCA and the City decided that no additional flood mitigation works are required for this reach.

Upstream of Weston Road

Hydraulic modelling revealed that in the 350-year storm event, water overtopped Weston Road and flowed into the Rockcliffe SPA area. To address this, a number of alternatives were explored, such as enlarging the crossing size, constructing flood walls, and the combination of the flood walls and crossing upgrades. The Feasibility Study concluded that a 0.5 m high flood protection wall would be the most practical and feasible solution to prevent flooding into the neighbourhood from flow upstream of Weston Rd. in the 350-year event.

Attachment 3 provides a map of the study area identifying locations of the flood remediation works developed through the feasibility study.

Costing

Cost estimates have been prepared based upon conceptual design assumptions and represent a preliminary estimate for the proposed works, which include a mix of structure works, channel works, as well as infrastructure. Through the subsequent MCEA, the conceptual cost estimates will be reviewed and refined as further details are determined.

The cost estimates for the preferred alternatives have been summarized in **Attachment 4**. The estimated capital construction cost for implementing all recommended alternatives is approximately \$57 million; it should be noted that these are preliminary estimates which include costing elements for the proposed structure works, channel modifications, municipal infrastructure, and utility considerations; at this time design, permitting and land costs have not been included in the estimate, these costs will be assessed at the next stage of planning.

Prioritization Plan/Phasing

A preliminary Prioritization Plan (suggested phasing of alternatives) has been developed based on the principle of being able to demonstrate action within flood risk areas early. The plan focuses on lower cost and less complex alternatives first which would work towards reducing flood risks, followed by those alternatives providing the greatest flood risk benefit, albeit more costly and more complex to implement. The following is the preliminary recommended phasing strategy and associated justification for the various flood mitigation alternatives.

1. Upgrade Symes Road Crossing of Lavender Creek and Widen/Deepen Lavender Creek to Southern Private Crossing

The primary focus of this phase would be to upgrade the Symes Road crossing of Lavender Creek and the associated channel widening/deepening to accommodate the new structure. The existing structure overtops and results in overland flooding during the 2-year event. Improving the conveyance capacity of this crossing will result in an immediate flood risk benefit related to high frequency flooding, which will be further improved through the implementation of the subsequent alternatives.

2. Remove Southern Private Crossing of Lavender Creek

The removal of the southern private crossing on Lavender Creek is proposed to be implemented as the crossing is not in use and does not require replacement, therefore the structure removal will mitigate any local hydraulic constraints.

3. Construct Flood Wall/Berm at Weston Road

The flood wall proposed at Weston Road is the lowest cost alternative, with limited impacts to municipal infrastructure and utilities. This alternative will provide a 350 year level of service (once downstream improvements are in place), by eliminating the overtopping of Weston Road, therefore reducing the overland flooding into the Cordella Avenue area of the neighborhood.

4. Upgrade Jane Street Crossing

The upgrade of the Jane Street crossing is the highest cost of the proposed alternatives, however, will provide significant flood risk benefit.

5. Naturalize, Widen and Deepen Black Creek – Jane Street to Rockcliffe Blvd.

Black Creek is proposed to be naturalized and widened to approximately 50 to 55 m (top width) channel, to provide improved conveyance and accommodate the upgrade of the Jane Street bridge to a 102 m span. In addition to widening, the channel will also be lowered from Jane Street to Rockcliffe Blvd to provide a uniform bottom slope.

6. Upgrade Rockcliffe Blvd. Crossing

With the proposed channel works along Black Creek completed downstream of Rockcliffe Blvd, this can facilitate the construction of the proposed Rockcliffe Blvd bridge to a 52 m span structure. This should be completed subsequent to the Jane Street crossing upgrade and proposed channel works

7. Naturalize, Widen and Deepen Black Creek – Rockcliffe Blvd. to Alliance Avenue

The Black Creek channel works are proposed to continue upstream of the widened Rockcliffe Blvd. crossing, until downstream of Alliance Avenue. The creek bed slope will be maintained in the proposed channel works, to ensure a uniform slope from Alliance Ave to Jane Street.

8. Widen and Deepen Lavender Creek from Southern Private Crossing to Confluence with Black Creek & Upgrade Northern Private Crossing

The channel widening and deepening of Lavender Creek from the southern private crossing to the confluence with Black Creek would be the final stage. With the proposed channel works, the northern private crossing can be upgraded to accommodate the 22.5 m top width of the channel. The proposed works for this section of Lavender Creek should be completed once the flood mitigation alternatives for Black Creek have been implemented as the backwater conditions from Black Creek significantly influence the flooding conditions and hydraulic performance of Lavender Creek.

Flood Remediation Plan Next Steps

In addition to identifying feasible solutions to reduce flood risk within the Rockcliffe community, the study team was also tasked with identifying subsequent phases of study, including Environmental Assessment (EA) and Detailed Design requirements, a prioritized list of flood remediation works focusing on highest risk areas, and developing preliminary implementation costs. Combined, these considerations provide TRCA and the City with a road map towards implementing a viable flood remediation plan for the Rockcliffe community.

Future Study Requirements

The study team has confirmed that a new Environmental Assessment, including public consultation for the Rockcliffe community would be required to be completed in order to fulfill the EA Act requirements. Undertaking a new EA for the area is also a reflection of the new list of flood remediation solutions, which are considerably different from the previous preferred solutions identified in TRCA's 2014 EA.

As many of the proposed works involve modifications to crossings, which are municipal infrastructure, much of the flood remediation works identified through the feasibility study fall within the Municipal Class Environmental Assessment (MCEA) process. The study team also notes that none of the proposed flood remediation works would be precluded from the Conservation Ontario Class Environmental Assessment (COEA) process which would also allow TRCA to advance an EA for the community independent of the City, if required. The feasibility study further recommends that the EA be completed under a Schedule C EA process which includes the following key components;

Item 7.1

- Notice of Study Commencement (MCEA) / Notice of Intent (COEA)
- Establish Mailing List (MCEA)/Establish Community Liaison Committee (COEA)
- Environmental Inventory
- Evaluate Alternatives
- Determine Preferred Recommended Solution(s)
- Prepare Environmental Study Report
- Publish Notice of Completion (MCEA) / Notice of Filing (COEA) for Review

Given TRCA's extensive knowledge of managing flood risk and its ability to effectively deliver flood remediation projects and complex environmental assessments, the City has requested that TRCA undertake the EA process as the study lead with the City as Co-proponent. The TRCA and the City are currently developing a Service Level Agreement (SLA) for the EA study which will strengthen TRCA's ability to deliver the EA through; defining rolls and responsibilities of each organization and the project management team, establishing effective communications protocols including Board and Council reporting, and study budget.

TRCA and City staff have estimated the project budget to be approximately \$2.9 million which includes consulting fees and staff time. Following a competitive procurement process for a multi-disciplinary consulting team, the EA study will commence in October 2020 and will take approximately 18 months to complete, assuming no complications and the timely receipt of agreements and agency comments with no Part 2 Order requests. Upon completion of the EA, detailed design work would be required. Pursuant to additional discussions with the City, capital budget would need to be allocated to implement the EA findings from 2022 onwards.

TRCA and City staff are collaborating on ways to potentially accelerate the phasing of works in consultation with the Minister of the Environment Conservation and Parks

Relationship to Building the Living City, the TRCA 2013-2022 Strategic Plan

This report supports the following strategies set forth in the TRCA 2013-2022 Strategic Plan:

Strategy 2 – Manage our regional water resources for current and future generations

Strategy 4 – Create complete communities that integrate nature and the built environment

FINANCIAL DETAILS

In 2019 TRCA staff were successful in securing Federal National Disaster Mitigation Program (NDMP) funding to complete the feasibility study project. Financial contributions for the Black Creek at Rockcliffe SPA Flood Remediation Feasibility Study were provided by the City of Toronto through TRCA's Black Creek at Rockcliffe Flood Remediation Phase 3 EA and Design Project account 133-36, and NDMP account 107-72, Black Creek at Rockcliffe SPA Flood and Transportation Feasibility Study, which included staff time and consulting fees.

Discussions are underway with City staff on the costing for the integrated EA, detailed design and future potential capital budget requirements for this project. TRCA and the City will continue to apply for senior government funding through the Disaster Mitigation Adaptation Fund and other applicable programs.

Item 7.1

Report prepared by: Nick Lorrain, extension 5278

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For Information contact: Nick Lorrain, extension 5278

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Date: June 26, 2020

Attachments: 4

Attachment 1: Summary of Affected Buildings

Attachment 2: Comparison of properties that experience flooding with Jane Street alternatives

Attachment 3: Location of Feasibility Study recommended flood protection measures

Attachment 4: Preferred Alternatives cost estimate

Attachment 1 – Summary of Affected Buildings

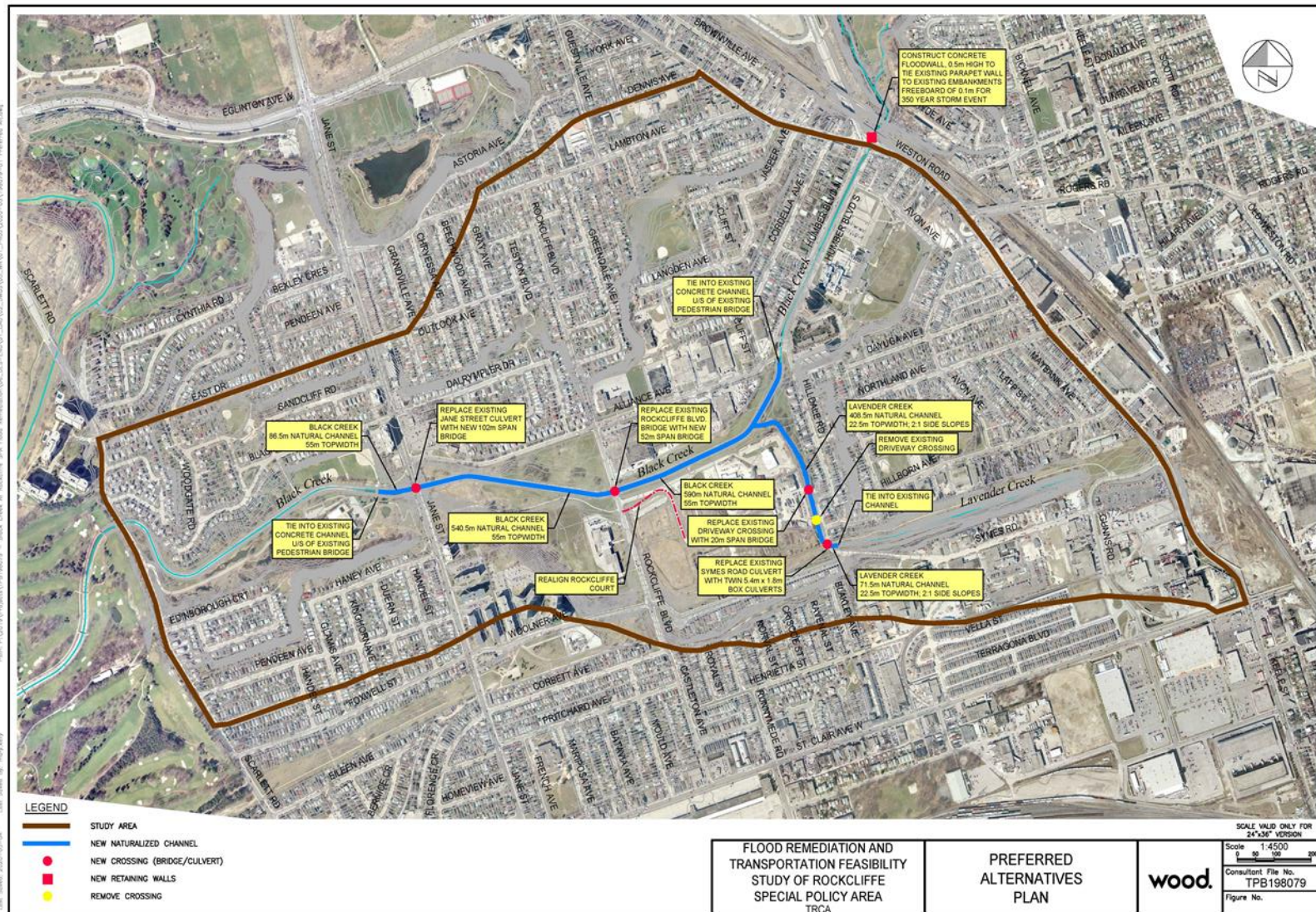
Storm Event Return Period	Existing Conditions	Preferred Alternatives
Regional Storm	366	184
350-Yr	215	3
100-Yr	113	3
50-Yr	57	3
25-Yr	47	2
10-Yr	33	0
5-Yr	26	0
2-Yr	15	0

Attachment 2 – Comparison of properties that experience flooding with Jane Street Alternatives

	Regional	350 Yr	100 Yr	50 Yr	25 Yr	10 Yr	5 Yr	2 Yr
Existing	366	215	113	57	47	33	26	15
Alternative 1 200 m Span Bridge	282 (84)	173 (42)	82 (31)	18 (39)	11 (36)	5 (28)	1 (25)	0 (15)
Alternative 2 Lowering Channel	301 (65)	173 (42)	82 (31)	18 (39)	11 (36)	5 (28)	1 (25)	0 (15)
Alternative 3 72 m Span Bridge	282 (84)	173 (42)	82 (31)	18 (39)	11 (36)	5 (28)	1 (25)	0 (15)
Alternative 4 Relief Culverts	290 (76)	173 (42)	82 (31)	18 (39)	11 (36)	5 (28)	1 (25)	0 (15)

*Values shown in parenthesis indicate numbers of properties or buildings benefiting from alternatives, in comparison with the existing scenario.

Attachment 3 – Location of Feasibility Study recommended flood protection measures



Attachment 4 - Preferred Alternatives cost estimate

Preferred Alternative	Conceptual Cost Estimates
Jane Street Bridge Expansion	\$ 28,000,000
Black Creek Channel Widening – Jane Street to Rockcliffe Boulevard	\$ 6,250,000
Rockcliffe Boulevard Bridge Expansion	\$ 6,000,000
Black Creek Channel Widening – Rockcliffe Boulevard to Alliance Avenue	\$ 5,800,000
Weston Road Flood Protection Wall	\$ 360,000
Lavender Creek Channel Widening	\$ 2,900,000
Symes Road Culvert and Private Crossing Bridge	7,400,000
Sub-Total Cost Estimate	\$ 56,710,000 (round-up \$57 million)

Note: that these preliminary estimates include costing elements for the proposed structure works, channel modifications, municipal infrastructure and utility considerations; at this time there has been no allowance for design, permitting and land costs

Section I – Items for Board of Directors Action

TO: Chair and Members of the Board of Directors
Meeting #5/20, Friday, June 26, 2020

FROM: Michael Tolensky, Chief Financial and Operating Officer

RE: **DOWNTOWN BRAMPTON FLOOD PROTECTION PROJECT
ENVIRONMENTAL ASSESSMENT**
Update on Progress

KEY ISSUE

An update on the progress for the Downtown Brampton Flood Protection Project Environmental Assessment, approval to amend the existing agreement with the City of Brampton to implement aspects of the project and delegation of approval authority for Chief Executive Officer to approve any time sensitive required procurements prior to the September 2020 Board of Directors meeting.

RECOMMENDATION

THAT the update on the Downtown Brampton Flood Protection Environmental Assessment be received;

THAT Toronto and Region Conservation Authority (TRCA) be authorized to amend the existing fee for service agreement with the City of Brampton should they agree to fund additional works required during the transition of the project from the planning phase to detailed design;

THAT the Chief Executive Officer be granted delegated authority to approve any procurements required as a result of additional works authorized by the City of Brampton, should there be a need to expedite prior to the September 2020 Board of Directors meeting;

AND FURTHER THAT TRCA report back to the Board of Directors in the fall of 2020 to provide an update on the status of the project and next steps.

BACKGROUND

At Board of Directors Meeting #5/18, held on July 20, 2018, Resolution #A119/18 was approved as follows:

THAT Contract #10007828 for Planning and Engineering Consulting Services for the technical planning and Environmental Assessment management of the Downtown Brampton Flood Protection Project, in the City of Brampton, be awarded to AECOM, for a total cost not to exceed \$248,870, plus contingency of 30% to be expended as authorize by Toronto and Region Conservation Authority (TRCA) staff, plus HST, it being the highest rank proposal for value meeting TRCA specifications;

THAT Contract #10008216 for the retention of a Senior Project Manager to represent TRCA in the day-to-day project management of an Environmental Assessment (EA) for the Downtown Brampton Flood Protection Project, in the City of Brampton, be awarded to Anneliese Grieve Strategic Environmental Planning Solutions, for a total cost not to

Item 7.2

exceed \$220,590, plus contingency of 30% to be expended as authorized by TRCA staff, plus HST, it being the only proposal meeting TRCA specifications;

THAT Contract #10007940 for Water Resources Engineering Consulting Services to lead the hydrologic and hydraulic modelling, flood protection design on behalf of TRCA for the Downtown Brampton Flood Protection Project, in the City of Brampton, be awarded to Matrix Solutions Inc., for a total cost not to exceed \$173,670, plus contingency of 30% to be expended as authorized by TRCA staff, plus HST, it being the highest rank proposal for value meeting TRCA specifications;

THAT Contract #10008102 for Geotechnical, Geoenvironmental and Hydrogeological Consulting Services on behalf of TRCA for the Downtown Brampton Flood Protection Project, in the City of Brampton, be awarded to WSP, for a total cost not to exceed \$99,983, plus contingency of 30% to be expended as authorized by TRCA staff, plus HST, it being the bidder with the highest rank proposal for value meeting TRCA specifications;

AND FURTHER THAT pending an authorized Master Service Agreement between TRCA and the City of Brampton, staff be authorized and directed to take all necessary actions to implement the foregoing, including the signing and execution of documents.

The City of Brampton's downtown is subject to flooding during extreme storm events (the Regulatory Flood event). It is, therefore, subject to land use development restrictions under a Special Policy Area designation. The City of Brampton and TRCA have considered alternative ways to protect downtown Brampton from future flood events and unlock potential for revitalization through the Downtown Brampton Flood Protection Environmental Assessment (DBFP EA). The purpose of the DBFP EA is to identify a preferred alternative for providing flood protection for the City of Brampton's downtown while considering urban design and land use opportunities for the City of Brampton. Figure 1 shows the EA location and local study area.

RATIONALE

A Notice of Commencement was published on August 23, 2018, which signaled the beginning of the DBFP EA project. Since then, the project team has been working through the phases of the Municipal Class Environmental Assessment (EA), Schedule C process.

Planning for a preferred alternative required continued engagement with a variety of stakeholders. This includes engaging local landowners, the Region of Peel, Metrolinx, and Canadian National Railway (CN). In addition, the project team has been, and is currently engaging with, the City of Brampton's Urban Design Master Plan team.

Through the EA process, the project team (TRCA and City of Brampton staff) engaged the public through various meetings including three community liaison committee (CLC) meetings held on October 31, 2018, May 15, 2019, and November 21, 2019 and three public information centers (PIC) held on November 7, 2018, May 30, 2019, and December 5, 2019. All PIC material is available on the project website: <https://trca.ca/dbfpea>

In consultation with the Ministry of Environment, Conservation and Parks (MECP), the following Indigenous Communities were engaged with throughout the DBFP EA project: Haudenosaunee Confederacy c/o Haudenosaunee Development Institute (HDI), Huron-Wendat Nation, Mississaugas of the Credit First Nation, and Six Nations of the Grand River. The four First Nations and Indigenous Communities were provided with notifications and circulated documents when requested.

Item 7.2

The flood risk is caused by an upstream spill into the old creek valley north of Church Street and a downstream spill into the old creek valley south of the CN rail bridge in the vicinity of Moor Crescent (Figure 2). These two spills are distinct; therefore, unique alternative solutions were presented for each of the sections. Alternative solutions were presented at the first PIC (November 21, 2019). Based on the feedback received, and the evaluation of the alternative solutions, a preliminary preferred alternative solution was selected for both the upstream and downstream spill areas. These preliminary preferred alternative solutions were presented at the second PIC (May 30, 2019). Finally, the project team developed alternative design concepts for the preliminary preferred alternative. A preferred alternative was selected and presented at the third PIC (December 5, 2019).

The overall preferred alternative consists of the following components to improve conveyance (Figure 3):

- Upstream
 - Widening (to 50 m) and deepening (by 1.2 m) the by-pass channel
 - Re-aligning Ken Whillans Drive and re-grading Church Street and the valley north of Church Street
 - Bridge replacements at Church Street, Scott Street, and Queen Street
 - Modifications to the CN rail bridge,
 - Relocation or replacement of the pedestrian bridge in Centennial Park
- Downstream
 - Do-Nothing approach was selected as it was determined that none of the downstream alternative solutions would eliminate the downstream spill, the upstream alternative solution would have a positive impact on the downstream spill, and the limited benefit of implementing any of the downstream alternative solutions does not outweigh the impacts and cost.

To address climate change, the DBFP EA addresses the flood risk from extreme events, such as the Regulatory Flood, and provide resilience to climate change. The preferred alternative is designed to address the Regulatory Flood event plus 25% increase in flow (i.e. 25% contingency). To confirm the resiliency to future extreme weather and address any uncertainties associated with climate change, additional simulations with a 0.5 m freeboard (i.e., the minimum clearance between the bottom of a bridge and the Regulatory Flood) to account for climate change were completed.

With the implementation of the DBFP EA project, partial or full removal of the downtown SPA north of Wellington Street can be achieved. The removal of the downtown SPA is paramount to attaining the goals of Vision 2040 and Riverwalk plans and will allow for the revitalization of the downtown core by lifting the restrictions to development.

The project team released a draft Environmental Study Report (ESR) for a 30-day review period from January 30, 2020 to February 28, 2020. The draft ESR was provided to a government review team, the members of whom were provided by the MECP, consisting of both federal and provincial agencies, and was made broadly available to all members of the public. The ESR is available on the project website: <https://trca.ca/dbfpea>. Following the review period, the ESR was revised based on the feedback provided and finalized for formal submission to MECP.

On June 4, 2020, a Notice of Completion for the final ESR was published. Copies of the ESRs

Item 7.2

would typically be placed for public review at Brampton City Hall, a local library branch within the project location, and at TRCA Head Office. Due to the ongoing COVID-19 pandemic and as a result of the closures to these locations, the project team made the decision to extend the review period from the required 30-days to 60-days. This results in a review period occurring from June 4, 2020 to August 2, 2020. Interested parties are also able to request that a hard copy be made available to them. Members of public and agencies are encouraged to access the electronic version of the ESR on the project website.

Relationship to Building the Living City, the TRCA 2013-2022 Strategic Plan

This report supports the following strategies set forth in the TRCA 2013-2022 Strategic Plan:

Strategy 2 – Manage our regional water resources for current and future generations

Strategy 4 – Create complete communities that integrate nature and the built environment

Strategy 7 – Build partnerships and new business models

FINANCIAL DETAILS

Funding for the DBFP EA is available through a delivery agreement with the City of Brampton within account 193-01, the National Disaster Mitigation Program, and TRCA Region of Peel Climate Budget (2018). The preliminary cost estimate for the preferred alternative ranges from \$85,107,550 to \$106,384,450.

While the detailed design and implementation of this project is currently not funded, the City of Brampton is exploring funding opportunities. They have recently been invited to resubmit an application to the Federal National Disaster Mitigation Adaptation Fund (DMAF) program to continue work on the DBFP project. TRCA has offered to support the preparation of this application and will work closely with the City of Brampton leading up to the July 17th deadline.

DETAILS OF WORK TO BE DONE

The project team is continuing to follow the phases of a Municipal Class EA (Schedule C) process. During this review period, members of the public can submit a Part II Order request under the *Environmental Assessment Act*. Should Part II Order request(s) be submitted, the project team will be required to address request(s). If no Part II Order request(s) are submitted, the DBFP EA project is approved and can move to the detailed design and implementation phase (pending available funds).

Upon approval of the EA, TRCA will work with the City of Brampton on future funding applications which would allow the project to continue to progress to detailed design and ultimately implementation. Should additional works be required during the projects transition between the EA planning process and detailed design, The City of Brampton has indicated that they are prepared to amend the existing fee for service agreement to allow for the transfer of additional funds to TRCA to support required works. This may include, but is not limited to, additional planning and project management support, property and legal services and other activities supporting the DBFP project.

Report prepared by: Meg St John, extension 5621

Emails: meg.stjohn@trca.ca

For Information contact: Meg St John, extension 5621 or Lisa Turnbull, extension 5645

Emails: meg.stjohn@trca.ca; lisa.turnbull@trca.ca

Date: May 28, 2020

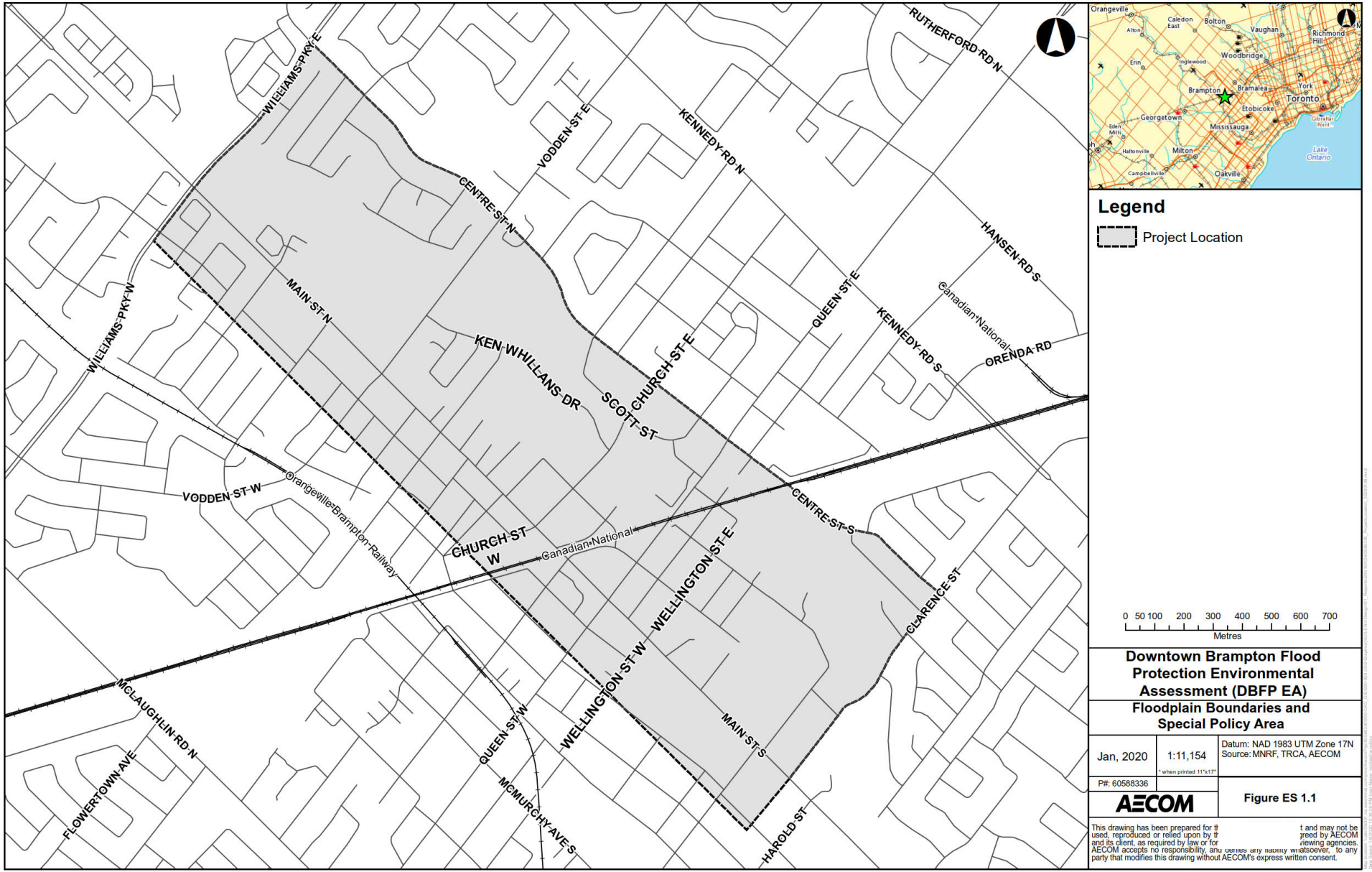
Attachments: 3

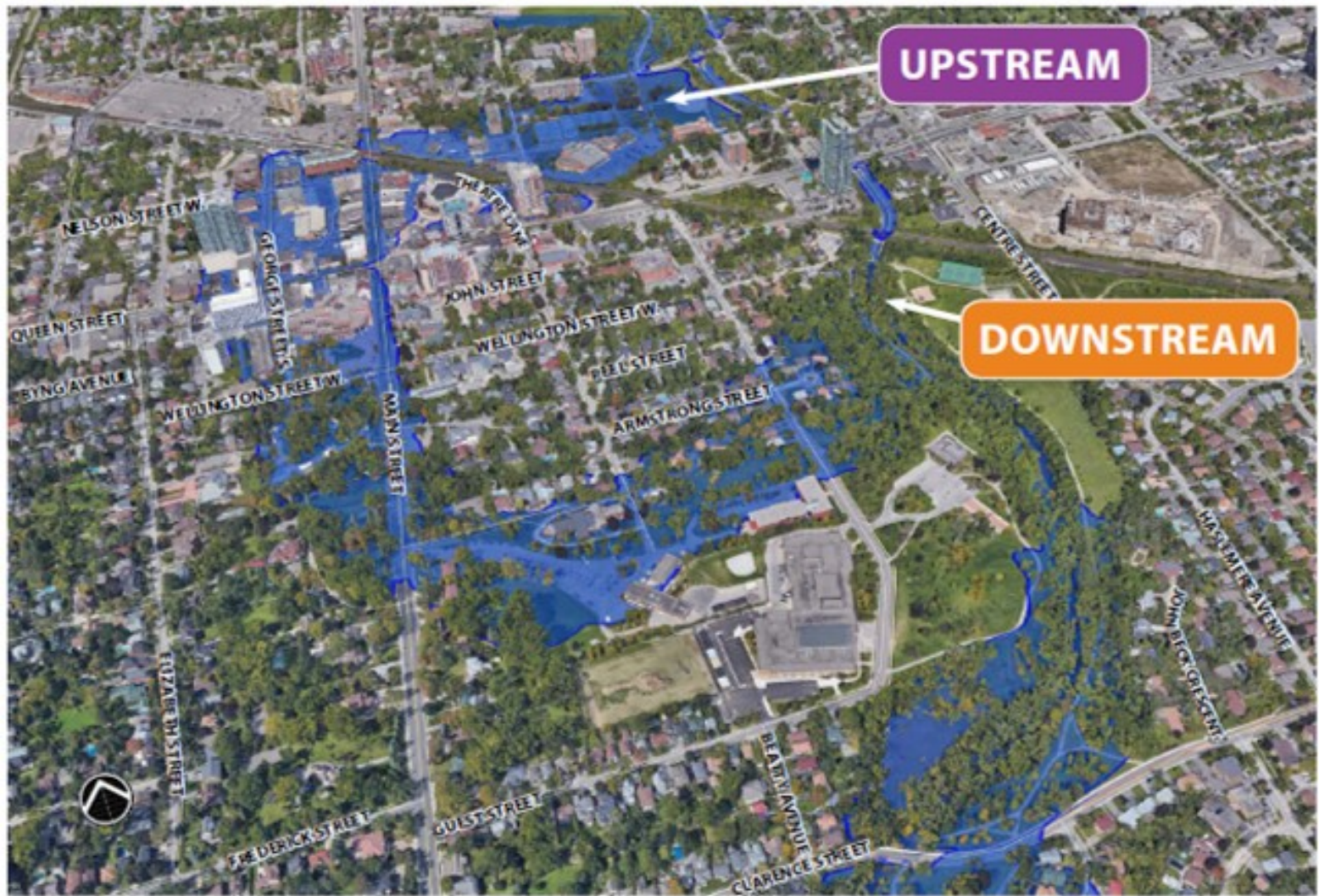
Item 7.2

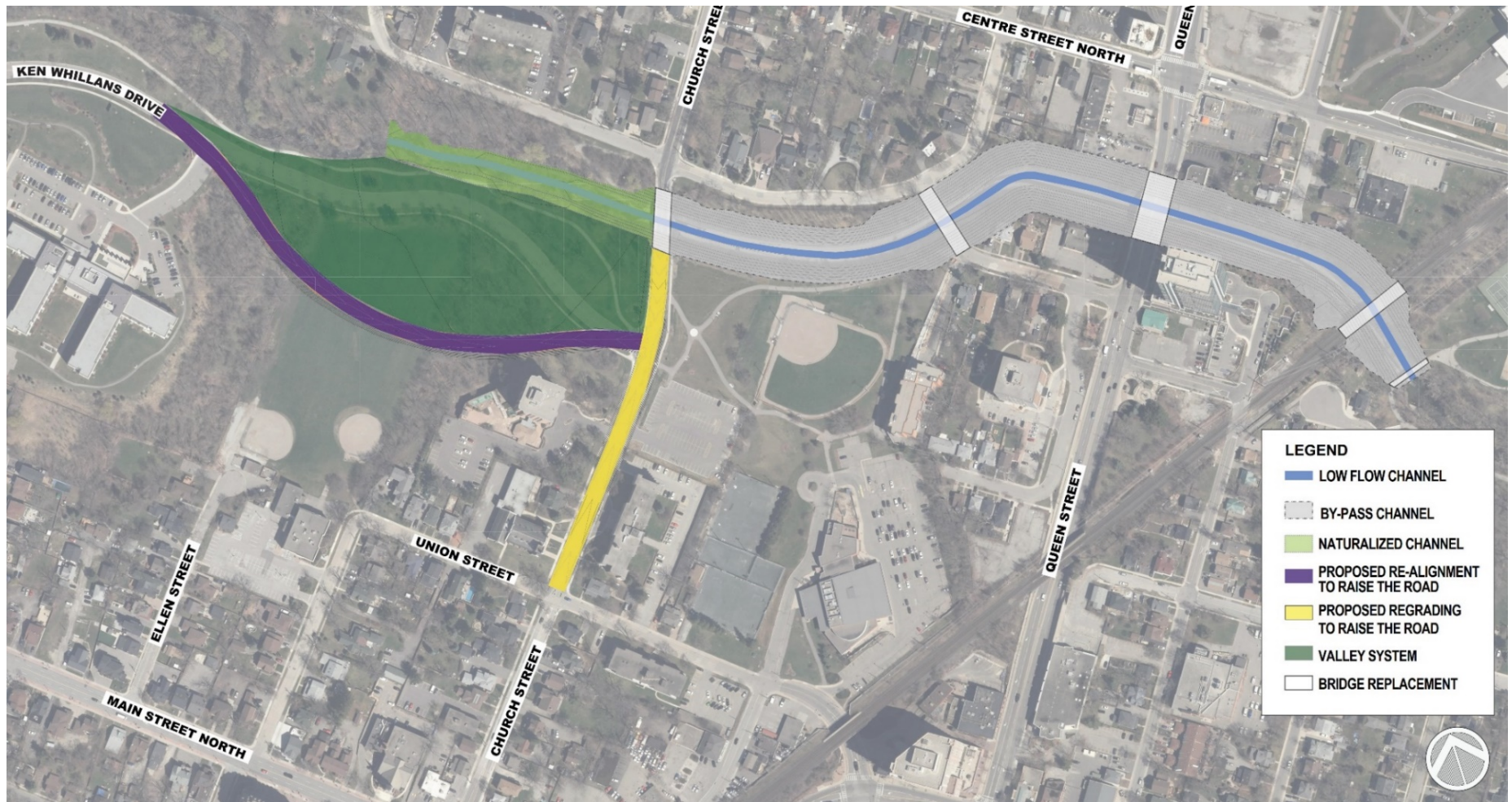
Attachment 1: Figure 1 – Project Location

Attachment 2: Figure 2 – Upstream and Downstream Spills

Attachment 3: Figure 3 – Preferred Alternative







Section I – Items for Board of Directors Action

TO: Chair and Members of the Board of Directors
Meeting #5/20, Friday, June 26, 2020

FROM: John MacKenzie, Chief Executive Officer

RE: **DELEGATED AUTHORITY TO AWARD CONTRACT 10021166 FOR
ASHBRIDGES BAY PARK MAJOR MAINTENANCE PROJECT**

KEY ISSUE

Staff request to the Board of Directors to delegate approval authority to the Chief Executive Officer (CEO) to award this contract in August 2020. The next Board of Directors Meeting is in September 2020 and this measure will help to avoid a delay and risks to the project schedule.

RECOMMENDATION

WHEREAS no meetings of the Executive Committee and Board of Directors are scheduled for the months of July and August 2020;

AND WHEREAS Resolution #A184/19, adopted at the October 25, 2019 Board of Directors meeting previously delegated the approval of all time sensitive procurements for the months July and August 2020 to the Chief Executive Officer or his designate;

THEREFORE, LET IT BE RESOLVED THAT the Chief Executive Officer be delegated authority to award Contract 10021166;

AND FURTHER THAT staff report back on the contract award to the Board of Directors at the September meeting.

BACKGROUND

Toronto and Region Conservation Authority (TRCA) is planning for major maintenance works on an existing engineered erosion control beach within Ashbridges Bay Park along the north shore of Lake Ontario. Typical coastal conditions, significantly exacerbated by the 2017 and 2019 high lake levels and the 2018 severe windstorm, have resulted in displacement and loss of original beach material. This loss of erosive force protection has led to backshore erosion, loss of tableland trees, and damage to park paths, and is placing the safety of park users at risk. TRCA's Erosion Risk Management Program has classified the beach as a failing structure since 2011 and as a high priority as of 2017.

In September 2018, Baird and Associates was retained to develop detailed designs for the restoration of the existing engineered beach system. Through collaborative discussions involving TRCA R&I staff, DFO regulatory biologists, Baird and Associates coastal engineers, and our funding partners at Parks, Forestry and Recreation (PF&R), staff have decided to implement a shoreline rip rap beach along the western portion of the site and a nearshore underwater rip rap reef along the eastern third of the site. These structures will limit the in-water footprint and the underwater reef will provide a unique aquatic habitat feature for the area.

In order to implement this final solution, TRCA requires the supply, delivery and placement of approximately 25,000 tonnes of 300 – 900 millimetre rip rap by barge.

Item 7.3

RATIONALE

TRCA is in possession of detailed design drawings from Baird Engineering and are in a position to tender out the implementation by barge immediately. At the time of writing this report, staff are waiting on a decision from the Department of Fisheries and Oceans Canada (DFO) on whether the maintenance works will require Authorization under the Fisheries Act. Should Authorization be required, design drawings will need to be adjusted to allow for further habitat offsetting measures, delaying the project until the fall. In this instance, TRCA staff will bring the report to the appropriate Board of Directors Meeting in the standard fashion. However, should Authorization under the Fisheries Act not be required, TRCA staff will be in a position to award this tender in August during the Executive Committee and Board of Directors summer hiatus.

As this work is being completed by barge in an open coast environment, award of this contract as soon as possible will minimize the chances of severe weather events, which happen more frequently in the fall and winter, and result in the work being completed more efficiently, cost effectively, and safely.

As such, staff request the Board of Directors grant delegated Authority to the CEO to award Contract 10021166 in August 2020 to ensure timely implementation of this priority project. Once the contract has been approved, staff will prepare a report for the Board of Directors Meeting #6/20 scheduled for September 25, 2020 to provide the Board with the contract award information.

Relationship to Building the Living City, the TRCA 2013-2022 Strategic Plan

This report supports the following strategic priority set forth in the TRCA 2013-2022 Strategic Plan:

Strategy 2 – Manage our regional water resources for current and future generations

Strategy 7 – Build partnerships and new business models

FINANCIAL DETAILS

Funds for the contract will be recovered from Parks, Forestry and Recreation through the City of Toronto Master Service Agreement dated August 15, 2018. Expenses are being tracked through account code 186-32.

Report prepared by: Jet Taylor, extension 5526

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For Information contact: Jet Taylor, extension 5526

Emails: jet.taylor@trca.ca

Date: May 13, 2020

Attachments: 2

Attachment 1: Map of the Ashbridges Bay Park project area

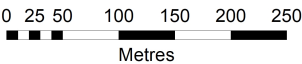
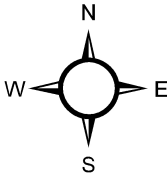
Attachment 2: Photo of erosion hazard



ASHBRIDGES BAY MAJOR MAINTENANCE PROJECT

Legend

- Highways
- Local Roads
- Major Roads
- Beach



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July 25, 2019
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Section I – Items for Board of Directors Action

TO: Chair and Members of the Board of Directors
Meeting #5/20, Friday, June 26, 2020

FROM: Michael Tolensky, Chief Financial and Operating Officer

RE: **DELEGATED AUTHORITY TO AWARD CONTRACT 10034683 FOR
CLAIREVILLE CONSERVATION AREA WATERMAIN REPLACEMENT
PROJECT**

KEY ISSUE

Staff request that the Board of Directors delegate approval authority to the Chief Executive Officer (CEO) to award this contract prior to the next Board of Directors meeting in September 2020.

RECOMMENDATION

WHEREAS no meetings of the Executive Committee and Board of Directors are scheduled for the months of July and August 2020;

AND WHEREAS Resolution #A184/19, adopted at the October 25, 2019 Board of Directors meeting previously delegated the approval of all time sensitive procurements for the months of July and August 2020 to the Chief Executive Officer or his designate;

THEREFORE, LET IT BE RESOLVED THAT the Chief Executive Officer be delegated authority to award Contract 10034683;

AND FURTHER THAT staff report back on the contract award to the Board of Directors at the September 2020 meeting.

BACKGROUND

The Claireville Conservation Area (CCA) is located in the City of Brampton, Regional Municipality of Peel and is approximately 450 hectares of land. The CCA lands are bounded by Highway 407 to the south, Goreway Drive to the west, lands north of Queen Street East (Regional Road 107) and south of Castlemore Road to the north and Regional Road 50 and The Gore Road to the east. The CCA is one of the largest tracts of land that TRCA owns. It contains significant natural and cultural heritage features. It is highly accessible to the public and has recreation, tourism and education facilities and programs. It is an integral part of the City of Brampton's natural heritage system, cultural heritage fabric, and an important regional recreation destination.

Due to aging infrastructure and numerous watermain breaks within the property, TRCA is proposing to replace the existing water distribution system. The existing system and its components were assessed and were deemed to be at the end of its useful life as the system dates back to the 1960's. As a result, TRCA retained a professional engineering firm, Candevcon Limited, to design a new watermain system that meets current water supply demands and fire flow conditions to satisfy Ontario Building Code requirements for occupancy and on-site fire suppression. The detailed design considered the future growth of park amenities and programming and best management practices for construction utilizing proper erosion and sediment control (ESC) and restoration plans to mitigate impacts.

RATIONALE

TRCA has completed detailed design drawings and have submitted permit applications to agencies having jurisdiction on the review and approval of watermain infrastructure in April 2020. Due to the subsequent COVID-19 pandemic, the permitting process was delayed which in turn delayed the release of the tender call for general contractors. TRCA's Engineer has received agency review comments and is currently working in a timely manner to address those comments. TRCA staff are currently preparing tender documents in anticipation of obtaining all permits in July 2020. It is expected that TRCA staff will likely be in a position to award this tender in August. The cost savings and site conditions for implementing watermain work during more ideal weather would benefit the project.

To maintain momentum on this project, staff request that the Board of Directors grant delegated Authority to the CEO to award Contract 10034683 to ensure timely implementation of this project. If the contract is awarded in accordance with the recommendations outlined in this report, staff will prepare a report for the Board of Directors Meeting #6/20 scheduled for September 25, 2020 to provide the Board with the contract award information.

Relationship to Building the Living City, the TRCA 2013-2022 Strategic Plan

This report supports the following strategies set forth in the TRCA 2013-2022 Strategic Plan:

Strategy 3 – Rethink greenspace to maximize its value

Strategy 5 –Foster sustainable citizenship

FINANCIAL DETAILS

Funds for the contract will be recovered from the Region of Peel Asset Management Implementation. Expenses are being tracked through account code 006-63.

Report prepared by: Aaron J. D'Souza, extension 5775

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For Information contact: Chris Ellis, extension 5641

Emails: chris.ellis@trca.ca

Date: June 1, 2020

Section I – Items for Board of Directors Action

TO: Chair and Members of the Board of Directors
Meeting #5/20, Friday, June 26, 2020

FROM: Michael Tolensky, Chief Financial and Operating Officer
Richard Ubbens, Director, Parks and Culture

RE: **REQUEST FOR TENDER FOR PETTICOAT CREEK CONSERVATION AREA
HYDRO SERVICE INFRASTRUCTURE REPLACEMENT**
Petticoat Creek Conservation Area – Urgent Hydro Service and Electrical
Infrastructure Procurement (RFT No. 10033092)

KEY ISSUE

Award of Request for Tender (RFT) No. 10033092 for the supply of all labour, equipment and materials necessary to install a new hydro service within Petticoat Creek Conservation Area (PCCA), in the City of Pickering, Region of Durham and next steps regarding TRCA efforts with partners financing this required infrastructure upgrade and other required infrastructure projects at Petticoat Creek Conservation Area.

RECOMMENDATION

WHEREAS Toronto and Region Conservation Authority (TRCA) staff recommend the urgent replacement of the existing failing hydro service and electrical infrastructure within PCCA;

AND WHEREAS TRCA staff have assessed the existing hydro service and electrical infrastructure, generated a report with the required recommendations, and received tenders to complete the work;

AND WHEREAS TRCA solicited tenders through a publicly advertised process;

THEREFORE, LET IT BE RESOLVED THAT Request for Tender (RFT) No. 10033092 for Hydro Service Replacement Project be awarded to Dilisado Enterprises at a total cost not to exceed \$537,000 plus applicable taxes, to be expended as authorized by TRCA staff;

THAT TRCA staff be authorized to approve additional expenditures to a maximum of \$53,700 (approximately 10% of the project cost), plus applicable taxes, in excess of the contract cost as a contingency allowance if deemed necessary;

THAT should TRCA staff be unable to negotiate a contract with the above-mentioned proponent, staff be authorized to enter into and conclude contract negotiations with other Proponents that submitted quotations, beginning with the next lowest bid meeting TRCA specifications;

THAT authorized TRCA officials be directed to take whatever action may be required to implement the contract, including the obtaining of necessary approvals and the signing and execution of any documents;

AND FURTHER THAT TRCA staff fund the urgent procurement using unrestricted reserves and approach both the City of Pickering and the Region of Durham to reimburse

TRCA and determine funding mechanisms for further infrastructure projects at PCCA.

BACKGROUND

In accordance with Toronto and Region Conservation Authority's (TRCA) Strategic Business Planning Policy and Procedure (SBPPP), all potential new projects/programs or proposed modifications to existing initiatives must proceed through the SBPPP workflow, including reporting to the Board of Directors for informational purposes.

The electrical infrastructure at PCCA was originally installed in the early 1970's. Since this time, the PCCA has seen significant growth in amenities and infrastructure, more notably the PCCA's Aquatic Facility and a Rogers Telecommunications Tower. These additional power requirements, in combination with the age of the infrastructure, several electrical failures and subsequent numerous repairs, have caused significant negative impact on park operations and use. In order to ensure the safety of staff and park users, and the continued capacity to operate the facility including its pool, splash pad, washrooms, day use areas, maintenance shop and cell tower, an assessment and replacement of the current system was required.

In May 2016, TRCA staff retained Kavski Engineering to provide professional electrical engineering services to assess and make recommendations for upgrades to PCCA's entire electrical infrastructure. The engineer focused their assessment on maintaining a high level of safety for staff and the general public through recommendations that incorporate recent electrical code changes and the future growth and needs of the facility. Results from the assessment determined that key infrastructure such as transformers and switches are past their performance life cycle. The transformers would need to be replaced with higher capacity units which would additionally require the replacement of cabling and electrical panels within the building. This new infrastructure will alleviate both safety concerns and the growing need for upgraded hydro services to continue to offer a high level of service.

TRCA staff have also undertaken a comprehensive review of the current conditions of infrastructure across Petticoat Creek Conservation Area. This review highlighted several pressing issues that will require funding in the near future, including the following:

- The office/workshop requires a new metal roof, interior demolition and reinstatement of the office/staff lunchroom, as well as a new heating system for winterization operations. The current condition is a health and safety issue for the staff using the facility resulting in the need for a temporary office on site. A cost estimate for this work is being prepared.
- The driveway entrance into the park requires major reconstruction. The existing roadway has resulted in complaints and incidents for both vehicles, pedestrians and cyclists and is a liability to TRCA. This project will incorporate a formal pathway which is not part of the existing driveway and will strive to meet AODA requirements. A preliminary estimate of this work is anticipated to be \$275,000.
- The aquatic facility requires a comprehensive review and condition assessment to help diagnose and address the ongoing mechanical issues. The pool is the main attraction at PCCA and the potential for a mechanical failure would force the closure of the facility during operating season. Currently there is no estimated budget as an engineering forensic review is required.

RATIONALE

The electrical supply for the Petticoat Creek and all its amenities (pool, splash pad, change rooms, washrooms, day use areas, Rogers cell tower, lighting, maintenance shop etc.) is past the end of its useful life and is experiencing multiple emergency repairs. Further failures continue to occur despite ongoing repairs and the system has significantly deteriorated. The

Item 7.5

system is unsafe and insufficient to meet the current demand for power. TRCA will lose significant revenues and even face park closure if the system fails. Currently an area of the park has no power and as a result the south washroom and other amenities are not available for usual camp use. An annual revenue loss of \$110,000 per year is expected in a normal operating year.

With the current closure of the facility, TRCA has the unique opportunity to replace the failing electrical system without impeding the operations of the facility. A Request for Tender (RFT) was publicly advertised on the public procurement website www.biddingo.com on March 5th, 2020 with a mandatory site meeting on March 11th, 2020. The RFT closed on March 26th, 2020.

The Procurement Opening Committee opened the Tenders on April 5, 2019 at 10:00am with the following results:

Proponent	Fee (Plus HST)
Dilisado Enterprises	\$ 537,000
KPC Power	\$630,753
Black and McDonald	\$ 695,160
Avertex	\$ 751,377

Staff reviewed the bid received from Dilisado Enterprises against its own cost estimate and has determined that the bid is of reasonable value and meets the requirements as outlined in the RFT documents. Therefore, it is recommended that contract No. 10033092 be awarded to Dilisado Enterprises at a total cost not to exceed \$537,000.00, plus 10% contingency, plus applicable taxes, it being the lowest bid meeting TRCA's specifications.

Relationship to Building the Living City, the TRCA 2013-2022 Strategic Plan

This report supports the following strategy set forth in the TRCA 2013-2022 Strategic Plan:

Strategy 3 – Rethink greenspace to maximize its value

Strategy 7 – Build partnerships and new business models

FINANCIAL DETAILS

TRCA staff recommend that reserves be used to fund the emergency project and explore a payback strategy that will include a request of onetime special project funding from the City of Pickering, Region of Durham and private stakeholders to support this initiative and future infrastructure projects at PCCA.

Report prepared by: Aaron J. D'Souza, extension 5775

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For Information contact: Michael Tolensky, extension 5965 or Richard Ubbens, extension 5672

Emails: michael.tolensky@trca.ca, richard.ubbens@trca.ca

Date: June 26, 2020

Section I – Items for Board of Directors Action

TO: Chair and Members of the Board of Directors
Meeting #5/20, Friday, June 26, 2020

FROM: John MacKenzie, Chief Executive Officer

RE: **REQUEST FOR TENDER FOR THE SUPPLY AND DELIVERY OF VARIOUS AGGREGATES AT LAKEVIEW WATERFRONT CONNECTION PROJECT-NORTH ISLAND**
RFT No. 10033249

KEY ISSUE

Award of Request for Tender (RFT) No. 10033249, for the supply and delivery of various aggregate material for the Lakeview Waterfront Connection Project.

RECOMMENDATION

WHEREAS Toronto and Region Conservation Authority (TRCA) is engaged in the Lakeview Waterfront Connection Project that requires 9,100 tonnes of 3-5 tonne armourstone material, for shoreline protection of the North Island;

AND WHEREAS TRCA solicited tenders through a publicly advertised process;

THEREFORE, LET IT BE RESOLVED THAT RFT No. 10033249 be awarded to Gott Natural Stone '99 Inc at a total cost not to exceed \$575,575, plus applicable taxes, plus a contingency of 10% to be expended as authorized by TRCA staff;

THAT should TRCA staff be unable to negotiate a contract with the above-mentioned proponent, staff be authorized to enter into and conclude contract negotiations with other Proponents that submitted quotations, beginning with the next lowest bid meeting TRCA specifications;

AND FURTHER THAT authorized TRCA officials be directed to take whatever action may be required to implement the contract, including the obtaining of necessary approvals and the signing and execution of any documents.

BACKGROUND

The Regional Municipality of Peel, Credit Valley Conservation, and Toronto and Region Conservation Authority (TRCA) are collaborating in the development of a new natural waterfront park amenity along the eastern waterfront in the City of Mississauga, known as the Lakeview Waterfront Connection. The project goals and objectives are to provide public access to and along the waterfront, recreate lost coastal wetlands, allow fish access to Serson Creek, re-establish extensive new meadow and forest coastal habitats, and to soften the existing shoreline by increasing the amount of beach habitat within the area.

The Lakeview Waterfront Connection Project is being constructed in various stages which includes construction of three off-shore islands as part of the overall project implementation. Rubble core filling of the North Island was completed in 2019 with final protection scheduled to commence in July 2020 to coincide with the warm water fisheries window for in water work. Contract No. 10033249 is for the supply and delivery of materials for shoreline protection of the North Island.

Item 7.6

RATIONALE

A Request for Tender was publicly advertised on the public procurement website www.biddingo.com on April 8, 2020 and closed on April 22, 2020. Optional site visits were coordinated by the Supervisor, Construction in accordance with the procedures of Incident Management System for the COVID-19 pandemic.

Eighteen (18) firms from TRCA vendor list were invited and additional sixteen (16) firms downloaded the documents from www.Biddingo.com. Six (6) digital bids were received via www.biddingo.com from the following Proponents:

- Atlantis Marine Construction
- CDR Young Aggregates
- Elite Stone Quarry
- Glenn Windrem Trucking
- Gott Natural Stone '99 Inc.
- Rafat General Contractor

The bids were opened on Wednesday, April 22, 2020 with the following results:

RFT # 10033249 for supply and delivery of 9,100 tonnes of 3 – 5 tonne non- stackable armourstone

Proponent	Fee (Plus HST)
Gott Natural Stone '99 Inc.	\$ 575,575
Elite Stone Quarry	\$ 636,545
Glenn Windrem Trucking	\$ 639,275
Atlantis Marine Construction Inc.	\$ 646,100
CDR Young Aggregates	\$ 727,909
Rafat General Contractor	\$ 1,046,500

Staff reviewed the bids received against its own cost estimate and has determined that the bids are of reasonable value and meets the requirements as outlined in the RFT documents.

Based on the bids received, staff recommend that:

- Gott Natural Stone '99 Inc. be awarded Contract No. 10033249 for the supply and delivery of 9,100 tonnes of 3 – 5 tonne non-stackable armourstone at a total cost not to exceed \$575,575, plus HST; it being the lowest bidder meeting TRCA staff specifications.

This contract is subject to a 10% contingency to be expended as authorized by TRCA staff.

Given the fact that Gott Natural Stone were the lowest bidder for another six (6) contracts of the same tender, staff conducted both a questionnaire and a quarry visit to ensure that Gott Natural Stone will be capable of fulfilling the contracts successfully. Reference checks were also conducted with positive feedback. All three (3) reference clients confirmed the bidder's ability to supply quality stone on schedule. The bidder's representative has also provided written confirmation that they can supply all the stone to fulfill all of the contracts, and that they have no concerns regarding the production and delivery of the stone of the subject contracts.

TRCA staff will be conducting quarry inspections during the period of the contracts as necessary to verify that the material is of good quality and meets contract specifications.

Item 7.6

The licenses of the quarries which the lowest bidders will use to supply the aggregates have been verified to be legitimate and fully licensed using the Ontario government's "find pits and quarries" online tool with the following link: <https://www.ontario.ca/page/find-pits-and-quarries>

Relationship to Building the Living City, the TRCA 2013-2022 Strategic Plan

This report supports the following strategies set forth in the TRCA 2013-2022 Strategic Plan:

Strategy 3 – Rethink greenspace to maximize its value

Strategy 4 – Create complete communities that integrate nature and the built environment

Strategy 7 – Build partnerships and new business models

FINANCIAL DETAILS

Funding for this project is available from the Region of Peel capital budget, Account, 252-53.

DETAILS OF WORK TO BE DONE

Supply and Delivery of Various Aggregates for Lakeview Waterfront Connection Project - North Island.

Report prepared by: Ahmed Al-Allo, extension 5610

Emails: ahmed.alallo@trca.ca

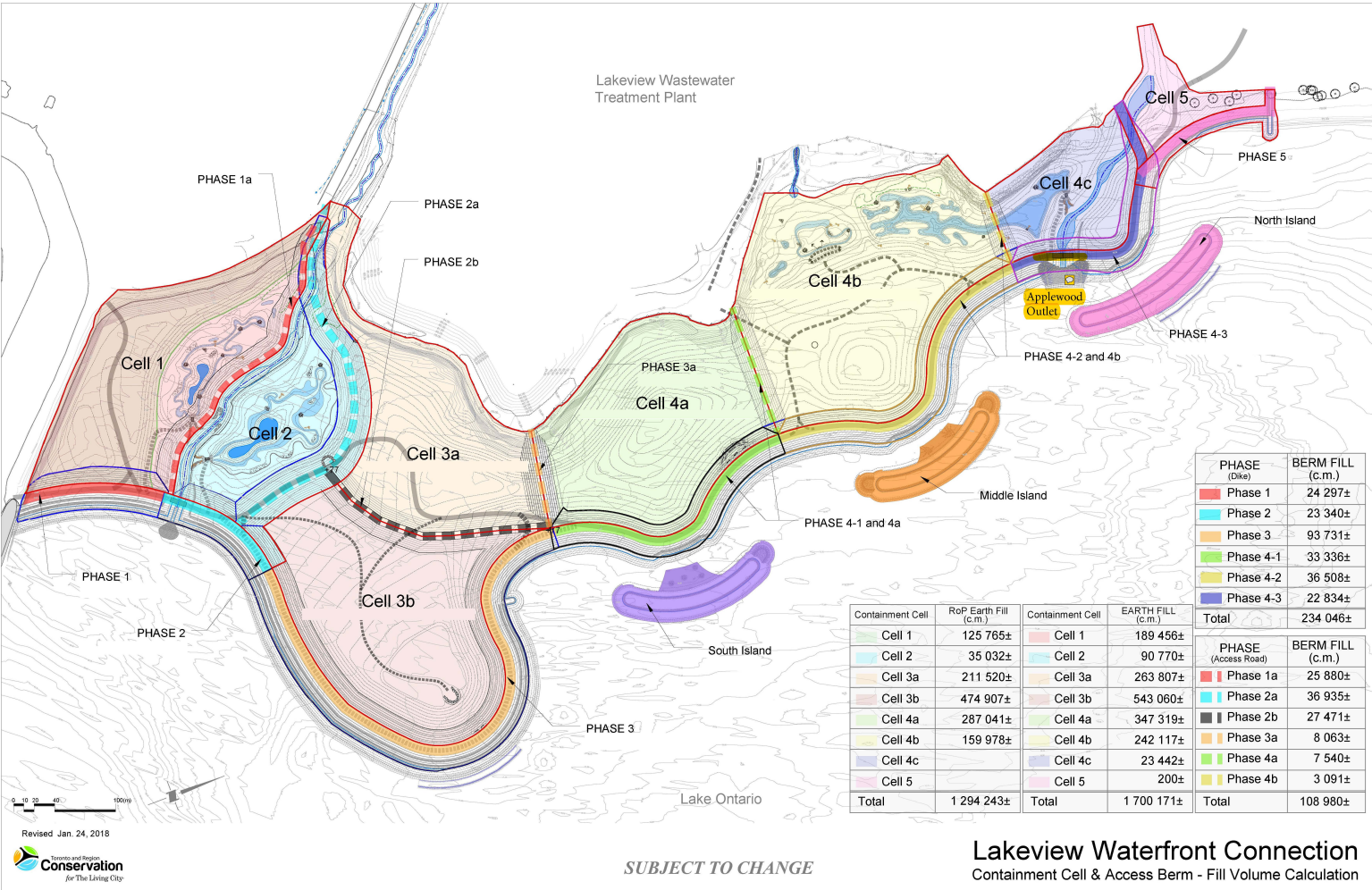
For Information contact: Ahmed Al-Allo, extension 5610

Emails: ahmed.alallo@trca.ca

Date: May 20, 2020

Attachments: 1

Attachment 1: Phasing Plan



PHASE (Dike)	BERM FILL (c.m.)
Phase 1	24 297±
Phase 2	23 340±
Phase 3	93 731±
Phase 4-1	33 336±
Phase 4-2	36 508±
Phase 4-3	22 834±
Total	234 046±

Containment Cell	RoP Earth Fill (c.m.)	Containment Cell	EARTH FILL (c.m.)
Cell 1	125 765±	Cell 1	189 456±
Cell 2	35 032±	Cell 2	90 770±
Cell 3a	211 520±	Cell 3a	263 807±
Cell 3b	474 907±	Cell 3b	543 060±
Cell 4a	287 041±	Cell 4a	347 319±
Cell 4b	159 978±	Cell 4b	242 117±
Cell 4c		Cell 4c	23 442±
Cell 5		Cell 5	200±
Total	1 294 243±	Total	1 700 171±

PHASE (Access Road)	BERM FILL (c.m.)
Phase 1a	25 880±
Phase 2a	36 935±
Phase 2b	27 471±
Phase 3a	8 063±
Phase 4a	7 540±
Phase 4b	3 091±
Total	108 980±

SUBJECT TO CHANGE

Lakeview Waterfront Connection Containment Cell & Access Berm - Fill Volume Calculation

Section III – Items for the Information of the Board

TO: Chair and Members of the Board of Directors
Meeting #5/20, Friday, June 26, 2020

FROM: Michael Tolensky, Chief Financial and Operating Officer

RE: **COVID-19 UPDATE**

KEY ISSUE

To provide an update to Toronto and Region Conservation Authority's (TRCA) Board of Directors regarding the ongoing strategic and tactical response to COVID-19 and the mitigation of risks to employees and members of the public.

RECOMMENDATION

IT IS RECOMMENDED THAT this COVID-19 Update report be received.

BACKGROUND

Since the commencement of COVID-19's impact on TRCA operations in March 2020, staff have provided updates to the Board of Directors regarding the ongoing response to the pandemic in the form of reports, memos, and presentations. These updates provide an overview of the changing circumstances around the work environment, financial implications, and operational restrictions that TRCA continues to face. These updates outlined TRCA's response through prevention, control, and recovery to manage the uncertain and constantly changing circumstances as part of the pandemic response. Below is a list of previous reports that have contained information regarding COVID-19 impacts and response:

- April 24, 2020 Presentation: *Board of Directors COVID-19 Briefing* – N. Blake
- April 24, 2020 Board Report: *2020 Budget* – M. Tolensky
- April 24, 2020 Board Report: *2020 Budgetary Update COVID19 Impact* – M. Tolensky
- April 24, 2020 Board Report: *TRCA Administrative Office Building Project* – M. Tolensky
- May 1, 2020 Executive Report: *2020 Three Month Financial Report* – M. Tolensky
- May 22, 2020 Board Report: *TRCA Administrative Office Building Project* - M. Tolensky
- May 22, 2020 Board Report: *TRCA Enforcement and Compliance During COVID-19* - S. Dhalla

The Province of Ontario announced on June 2, 2020 that they were extending Emergency Orders to June 30, 2020 under the *Emergency Management and Civil Protection Act*. This extension has been made to continue to protect the health and safety of the public during the COVID-19 outbreak. The health and safety of employees and the public continue to be TRCA's top priority. The Senior Leadership Team established TRCA's COVID-19 Recovery Playbook which lays the foundation for TRCA's staged approach to reopening, which directly aligns with the Provincial direction and their *Framework for Reopening our Province*. The Senior Leadership Team will continue to review Provincial directions to determine the course of action on how to safely reopen elements of operations and move through our Recovery Playbook.

RATIONALE

The COVID-19 pandemic and Provincially declared emergency has resulted in closures of TRCA facilities as well as the cancellation of TRCA events and regularly scheduled programming. Continued restrictions have dramatically impacted TRCA's business models and

Item 8.1

associated revenues, primarily in the Education and Training and Parks and Culture Divisions. With the safety and wellbeing of employees and members of the public being the top priority for TRCA, procedures to mitigate risks for all staff. This includes alternative working arrangements for all staff with the ability to perform their duties from home. At this time, minimal impacts to business continuity related to working from home are anticipated.

TRCA will continue to follow provincial and municipal guidelines for public health and safe re-opening procedures. Across TRCA's vast service offerings, adjustments have been made to conventional operations – everything from sanitary protocols, health and safety protocols, social distancing protocols and fee adjustments – to allow for the gradual re-opening in accordance with the recovery playbook and government direction. The following addresses the major COVID-19 impacts on select TRCA service areas and employees:

Employee Redeployment

To mitigate the impacts of COVID-19 on displaced employees, the Senior Leadership Team with Human Resources rolled out a robust Redeployment Program on April 8, 2020 to lessen the financial impact on employees resulting from COVID-19. All displaced employees were offered an opportunity to participate in TRCA's Redeployment Program. Human Resources received approximately 14% uptake in participating in the program with twelve displaced employees successfully being temporarily redeployed to other TRCA positions. A second call out to displaced employees for redeployment opportunities was issued May 26, 2020 which resulted in a much smaller interest rate of approximately 2%. Human Resources is currently reviewing redeployment displacement opportunities for these individuals.

Employee Reskilling

Employees have been organically participating in reskilling through the support of their supervisors to address skills gaps and meet ongoing operational needs. This exercise has increased the transferrable skills of our workforce, while mitigating impacts resulting from COVID-19. Organic reskilling has enabled the Senior Leadership Team to keep displacement at a level having the least impact on staff and operations, while remaining fiscally prudent in workforce budgeting.

Water Risk Management and Regional Biodiversity

For those staff performing field work, additional protocols have been put in place including additional required communication, awareness and required training; personal hygiene and illness monitoring; general safety procedures, vehicle usage and fueling protocols; safety standards for working around the general public and all contractors and deliveries; as well as additional safety meetings and document Management.

Greenspace Securement and Management

As of March 30th, 2020, TRCA closed all parking lots at trail head locations to minimize the opportunity for social gatherings and transmission of the virus. All green spaces in parks, trails, ravines, and conservation areas remained open for walkthrough access only with instructions to users to maintain the safe physical distance of at least two meters from others as per the Provincial directives. Additional signage was installed at all parking lot entrances, and trail access points which included standard information regarding ways to reduce exposure and transmission of the virus. As of May 22, 2020, TRCA has been moving forward with the re-opening of parking lots and access points in consultation with partner municipalities. Protocols will continue to be updated in alignment with Provincial directives and partner municipality guidelines.

Tourism and Recreation

Effective Saturday, May 30, 2020 TRCA opened Conservation Areas and parking lots for passive use, walking, and hiking without access to any additional facilities. Glen Haffy, Albion Hills, Heart Lake, Boyd, Bruce's Mill and Petticoat Creek Conservation Areas are open to members of the public, for paid access. Senior Leadership Team made the decision to open these facilities without full media recognition to limit the number of visitors to these facilities. Health and safety protocols and procedures have been established for staff working in the conservation areas including personal hygiene and illness monitoring; general safety procedures and require personal protective equipment, vehicle usage and fueling protocols; safety standards for working around the general public; as well as additional safety meetings and document Management. Protocols have also been established around the management and cleanliness of washroom facilities within Conservation Parks. These protocols are aligned to partner municipality guidelines. As announced on June 8, 2020 water recreational facilities such as outdoor splash pads and wading pools, and all swimming pools may be part of future Stage 2 openings. TRCA will continue to work with partner municipalities to develop potential protocols that will be required to ensure the safety of staff and public.

All third-party agreements, partnerships, and events including filming contracts and Tree Top Trekking, have been on hold with operations being limited due to the Provincial directives. This has had a significant impact on revenues which is forecasted to continue throughout the remainder of 2020 while restrictions are still in place. As of June 8, 2020, the Province announced film and television production activities, with limits to enable physical distancing once Phase 2 begins. Partners such as Tree Top Trekking are now beginning to open in Niagara and Hamilton and are thinking about steps to open in Heart Lake and Bruce's Mill within Provincial limitations.

Camping

Initiated in early May, in accordance with Provincial criteria being met, seasonal camping was opened for those users that do not have alternative residence in Canada and could provide their own access to utilities. As of early June, all campers with access to self-sustaining utilities are now able to access the campgrounds. The full reopening of all facilities is expected in June when the protocols around the management and cleanliness of facilities can be established.

Golf Course

On May 23, 2020 following a Provincial announcement regarding the opening of golf courses, Bathurst Glen Golf Course and Driving Range, along with Bruce's Mill Driving Range were opened in a phased manner with reduced hours and staffing. Following this successful reopening and utilizing the additional training and health and safety protocols that were put in place, both facilities have now opened with full seasonal hours.

Black Creek Pioneer Village (BCPV) - Public Use

Although BCPV is not currently open to the public, staff are examining the current operations and new protocols to prepare for a phased opening plan with options synchronized with those outlined in the Education and Outreach section of this report pending the financial viability of implementing Provincial direction for the safe and responsible reopening of public museum facilities. Regular inspections and maintenance of the grounds, infrastructure, and artifacts have continued to ensure that the level of care standards are being met.

Planning and Development Review

Based on current workload, revenue targets for Planning and Development are anticipated to meet 2020 targets.

Education and Outreach

TRCA's education centers, and associated programming including the Kortright Centre for Conservation and BCPV, remain closed to the public with a reopening date currently unknown. To adapt to this uncertainty, over the past 2 months, TRCA has initiated alternative programming and delivery methods as a means of adapting business operations to the changing circumstances while continuing to stay relevant. This includes inviting participants to take part in TRCA's *#AtHomeWithNature* and *#VillageAtHome* series on Facebook, along with several other home-based family activities, live interactive workshops, learning modules for students, and online exhibits.

While the timeline for reopening of regularly scheduled programming is not known at this time, staff are exploring opportunities to leverage the education facilities that will engage residents in natural and cultural heritage learning activities that will continue to ensure visitor safety. Some of the new offerings currently under review are:

Virtual Aquatic Plants Program

The Aquatic Plants Program (APP) will be a curriculum-linked, hands-on educational experience offered at no charge to teachers and students. Participating teachers will receive e-learning resources to share with their students through online classroom platforms like Google Classroom. Teachers will also have opportunity to receive native plant seeds for them to grow or share with their students. Once mature, participants are invited to transplant their plants into their backyard, balcony, or windowsill.

Neighborhood Nature Camps (We Come To You)

TRCA is currently exploring a new delivery model where interested participants pre-book a nature camp experience. TRCA will deliver the programming onsite at your location. This half day experience offers the opportunity for TRCA educators and teaching professionals to teach participants about local nature in the comfort and safety of their yard. TRCA will bring activities to help explore micro-ecosystems and other similar program offerings.

Pre-Booked Public Programs (You Come To Us)

TRCA will offer guided, pre-booked nature and cultural heritage experiences for family groups of up to four people of the same household. Highlighting the unique ecological and heritage assets of TRCA, these programs will be delivered at TRCA sites in compliance with provincial health directives. Opportunities (examples) include:

- Guided nature hike of the Kortright Centre
- Guided tour of Black Creek Pioneer Village
- Personalized canoe tour of Lake St. George
- Mountain bike excursion at Albion Hills CA
- Campfire at Claremont Field Centre

Virtual At Home Camps

TRCA will offer daily pre-booked virtual camp experiences covering a range of topics. Camp sessions will provide programming from unique natural and cultural heritage learning centres (Kortright, Black Creek, Tommy Thompson Park, Field Centres) that engages children and families in interactive activities. Participating families will receive tailored resources for home activities.

Item 8.1

BCPV has also undertaken a process to adapt their education programming through the creation of several home-based alternative activities and offerings including:

- Virtual camps and activities created in partnership with environmental educators at Toronto and Region Conservation Authority creating a unique way to explore the cultural and natural heritage of the region;
- Workshops and activities for participants to complete at home, including 19th century recipes;
- Online exhibits featuring rarely seen items from the collection of artifacts showcasing the history of the Toronto region; and
- Virtual “field trips” for classes with grade-specific educational activities launching in fall 2020.

Sustainable Communities

With physical distancing requirements in place, all regularly scheduled events and in-person meetings have either been cancelled or adapted for a virtual audience. This includes Partner in Project Green, SNAP, and the TRIECA conference (March) which is being adapted to online events (31 in total) that feature webinars and online resources rather than an in-person conference. Many of the community and industry focused programs have adapted to allow for an online presence and learning opportunities, minimizing the impacts to business continuity.

Corporate Services

TRCA’s Health and Safety Specialist is facilitating the bulk purchasing of COVID-19 related personal protective equipment (PPE) on behalf of the organization. Health and Safety is continuing to work in partnership with Procurement Services and key representatives from each division to identify needs and distribute supplies appropriately to ensure that all safety protocols can be followed using the required resources.

Relationship to Building the Living City, the TRCA 2013-2022 Strategic Plan

This report supports the following strategies set forth in the TRCA 2013-2022 Strategic Plan:

Strategy 3 – Rethink greenspace to maximize its value

Strategy 7 – Build partnerships and new business models

Strategy 10 – Accelerate innovation

FINANCIAL DETAILS

Since March 2020, staff have continued to track the year to date impacts of the COVID-19 restrictions on TRCA’s revenues to adjust and appropriately scale ongoing operations. This is inclusive of generating and revising the financial forecasts for the remainder of 2020 to facilitate related operational decisions. As previously reported 169 staff were placed on emergency leave in April with 12 staff being redeployed and nine (9) returning to their base position to date.

Moving forward, staff will continue to prepare these reports and forecasts as the restrictions are adjusted and operations begin to reopen. TRCA will also maintain ongoing communications with partner municipalities to ensure that the impacts continue to be reported accordingly.

ONGOING WORK

The Human Resources team established TRCA’s COVID-19 Recovery Playbook that the Senior Leadership Team has developed and is in the process of implementing. The Playbook lays the foundation for TRCA’s staged approach to reopening its offices and facilities, which directly aligns with the Provincial direction and their Framework for Reopening the Province. The Playbook details the criteria that TRCA will utilize on this staged recovery approach and

Item 8.1

highlights the agility of the Recovery Playbook to be able to adopt adjusting legislative and public health recommendations and requirements during this period of transition. The Playbook also provides flexibility to address any future COVID-19 outbreaks which may necessitate TRCA reverting to previous stages to manage.

As outlined in the COVID-19 Recovery Playbook, each corporate division is required to implement a staggered return plan, aligned to each of the facilities plan to ensure employees are adhering to physical distancing requirements. This plan is required to ensure adherence to recommendations, requirements and as a means of risk reduction. The divisional plans will need to determine which employees are required to return to work immediately and those who may gradually be brought back. Consideration around the reopening of schools, daycare centers and other priority services will influence the timelines around reopening and the return of staff to the office.

TRCA's Human Resources team will continue to lead the monitoring of public health, legislative changes, and partner municipality practices to ensure TRCA is legislatively compliant and has adopted the most current public health requirements and recommendations and is aligned to our partners. Environmental scanning and best practice reviews will continue with our peer conservation authorities, municipalities, not-for-profits, and related associations. This will ensure the sharing of information and alignment of practices with peers and partners. Additionally, TRCA will continue to review and update TRCA's Pandemic Flu and Infectious Illness Policy as required.

Additionally, a report on the financial implications of COVID-19 on the organization will be included in the Six-Month Financial Report, to be provided to the Board in September 2020.

Report prepared by: Michael Tolensky, extension 5965

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Date: June 26, 2020

Section III – Items for the Information of the Board

TO: Chair and Members of the Board of Directors
Meeting #5/20, Friday, June 26, 2020

FROM: Sameer Dhalla, Director, Development and Engineering Services

RE: **FLOOD RISK PUBLIC AWARENESS AND EDUCATION PROGRAM**
National Disaster Mitigation Program Funded Outreach Program Summary

KEY ISSUE

Summary of the digital, print, and in-person, outreach activities undertaken in flood vulnerable neighbourhoods as part of the National Disaster Mitigation Program (NDMP) funded Flood Risk Public Awareness and Education Program.

RECOMMENDATION

IT IS RECOMMENDED THAT this staff report, summarizing the Flood Risk Public Awareness and Education Program activities be received.

BACKGROUND

Many people inhabiting flood-prone communities are not fully aware of the risks to themselves and their property. A 2017 survey by the University of Waterloo found that only a small percentage of residents living in flood prone areas are aware of their flood risk (Thistlethwaite et. al., 2017). Pro-actively communicating risks to vulnerable communities can lessen the impact of flooding to these areas, as residents can take preparatory steps to protect themselves and their homes. The comprehensive and sensitive delivery of risk communication, in advance of a flood emergency, can support effective crisis communications during a flood emergency. In this context, risk communication is meant to enable audiences to analyze, evaluate, and synthesize information that will be valuable in the face of a potential emergency. Crisis communication, by contrast, is meant to trigger audiences to remember known information, understand simple directions, and apply key actions to lessen the impact of the crisis. The flood messages issued by conservation authorities are an example of crisis communications. Pro-actively providing information to increase awareness in flood prone neighbourhoods is an example of risk communications, which can prime these audiences to follow the protective actions outlined in the flood messages.

While the Toronto and Region Conservation Authority (TRCA) has historically made floodplain information available to the public via general website content and partnerships with municipal emergency management activities, the inclusion of flood outreach activities as a method of non-structural flood risk reduction under the National Disaster Mitigation Program (NDMP) presented a unique opportunity for more targeted communication with residents and businesses in flood vulnerable neighbourhoods.

At Authority Meeting #6/16, held on July 22, 2016, Resolution #A109/16 was approved as follows:

THAT TRCA staff, in partnership with TRCA's municipal partners, continue to pursue National Disaster Mitigation Program funding to accelerate flood risk mitigation projects;

Recognizing the opportunity to leverage federal funding to undertake a dedicated flood risk

Item 8.2

outreach program, TRCA successfully secured funding in 2018 through Intake 4 of the NDMP to actively reach out to flood vulnerable communities in TRCA's jurisdiction. Thus, the Flood Risk Public Awareness and Education Program was launched, which included two broad program objectives. First, to disseminate information on flood risk and current initiatives in risk reduction to municipal partners, and second, to jointly deliver (together with municipal partners) risk information to flood vulnerable neighbourhoods via a combination of digital, print, and in-person campaigns. These endeavours were supported through the following resolutions.

At Board of Directors Meeting #6/19, held on June 21, 2019, Resolution #A109/19 was approved as follows:

THAT TRCA staff be directed to continue to work with municipal staff and the insurance industry to share information from NDMP projects to advance and improve flood communications

Furthermore, at Board of Directors Meeting #9/19, held on October 25, 2019, Resolution #A181/19 was approved as follows:

THAT TRCA staff, together with municipal partners, pursue opportunities to pro-actively share important flood risk information with residents living in flood vulnerable areas, through measures including dedicated open houses hosted in conjunction with partner municipalities, as well as informational mail-outs that direct them to neighbourhood-specific web content.

RATIONALE

Areas in TRCA's jurisdiction where there is a high concentration of buildings within the regulatory floodplain are termed Flood Vulnerable Clusters (FVCs). Many of these areas correspond to communities that were developed prior to land-use planning practices for natural hazard management. TRCA recently ranked the 41 FVCs through the Flood Risk Assessment and Ranking (FRAR) study, and identified residents and businesses who live or work in the highest ranked Flood Vulnerable Clusters as being target audiences for enhanced risk communications.

Prior to undertaking public outreach in these areas, however, the Flood Risk Public Awareness and Education Program involved a municipal outreach component, in order to share the results of the FRAR study with municipal partner staff, and set the stage for collaboration on public outreach initiatives in the target neighbourhoods. Internal groups, such as the Government and Community Relations and Sustainable Neighbourhood Action Program teams, were also consulted to help identify target neighbourhood characteristics, and the Regional Watershed Alliance was consulted to identify possible FAQs and information topic areas. TRCA's Communications, Marketing and Events business unit was also a key partner in executing the program.

Municipal Partner Engagement

In June of 2019, Flood Risk Management staff undertook four full-day workshops with municipal partner staff, with over 100 staff from diverse departments amongst TRCA's municipal partners, including Durham Region, the City of Pickering, Town of Ajax, York Region, City of Markham, City of Richmond Hill, Town of Whitchurch-Stouffville, City of Vaughan, City of Toronto, Peel Region, City of Brampton, Town of Caledon, and City of Mississauga. These workshops provided an opportunity for TRCA to share location specific information on Flood Vulnerable Clusters, review roles and responsibilities, and establish the working groups, and workplans, for

Item 8.2

the delivery of the public outreach component. Municipal partners were also given the opportunity to review and provide input into the digital and print materials that were subsequently produced. Initial target clusters for public engagement were selected based on their risk ranking, but the final list of target clusters, and the corresponding strategies, were developed through these meetings and the subsequent communication with municipal partners, who identified their own priority areas and strategies. Where the outreach events were organized and hosted by the Flood Risk Management team, TRCA staff liaised with the local and regional councillors in the target areas either through direct meetings or through presentations to council or committee meetings. Local elected officials were often in attendance and highly supportive of the events held.

Internal and Industry Partner Engagement

In addition to municipal partners, other agencies with active program areas in flood risk outreach were invited to participate in applicable open houses. Agencies that attended included the Electrical Safety Authority to provide information on post-flood recovery practices, the Intact Centre on Climate Adaptation to provide information on lot-level flood protection measures, and the Insurance Bureau of Canada to field questions on insurance coverage options. Each municipal partner's respective Emergency Management staff also attended, thus providing a 'one-stop-shop' for residents to inform themselves about various elements of flood risk.

Public Outreach Events and Materials

Where existing public engagement events were already planned in the area by municipal partners or other TRCA departments, Flood Risk Management staff leveraged the existing event opportunity and attend the related event, providing panels, takeaway materials, and the opportunity to answer questions. Where no public engagement opportunity already existed in the highest priority clusters, TRCA pursued active outreach, with methods that were jointly developed with municipal partners over the course of six months. These tactics comprised direct mail campaigns, social media advertising, targeted websites for each cluster with more detailed flood risk information, and finally hosting dedicated open houses for the public to provide information and answer questions. Key messages were established to outline risk information, clarify roles and responsibilities, and provide targeted tips for enhancing flood preparedness. Cluster-specific flood risk webpages were developed with this content, with a goal to drive residents and business towards this information through further engagement. Given the diversity of municipal partner approaches, as well as the unique demographics of each cluster, the engagement methods were tailored for each cluster, and are summarized in the table below.

Table 1 – Target cluster and strategy summary

Cluster Name (rank)	Municipality	Outreach strategy- in-person	Date of in-person event	Digital Content developed	Advertising strategy
Rockcliffe (1)	Toronto	Attendance at existing event organized by local councillor	June 11, 2019	Directed to existing project page	N/A
Oak Ridges/ Lake Wilcox (8)	Richmond Hill	Attendance at existing event organized by Fire and Emergency Services	October 5, 2019	Dedicated flood risk webpage	

Item 8.2

Cluster Name (rank)	Municipality	Outreach strategy-in-person	Date of in-person event	Digital Content developed	Advertising strategy
Woodbridge (21)	Vaughan	Attendance at existing community event – Woodbridge Fall Fair	October 12, 2019	Dedicated flood risk webpage	Community centre posters; geo-targeted social media campaign
Pickering Village (4)	Pickering/Ajax	Attendance at existing Public Information Centre (PIC) related to flood infrastructure improvements	October 30, 2019	Directed to existing project page	N/A – note that the PIC itself was advertised per Environmental Assessment (EA) requirements
Jane-Wilson (2)	Toronto	Attendance at existing PIC for Basement Flooding Area 45 Master Plan and Black Creek Trunk Sewer Improvement Study	December 11, 2019	Dedicated flood risk webpage	Geotargeted social-media campaign (PIC itself was advertised by the City of Toronto)
Bolton Core (5)	Caledon	Dedicated flood risk public open house	January 7, 2020	Dedicated flood risk webpage	Hand-delivered invitation letters
Stouffville Centre (27)	Whitchurch-Stouffville	Dedicated flood risk public open house	January 20, 2020	Dedicated flood risk webpage	Town recreation guide; geo-targeted social media campaign
Avondale /Spring Creek (6)	Brampton	Dedicated flood risk public open house	January 30, 2020	Dedicated flood risk webpage	Hand-delivered lenticular postcards; geotargeted social media campaign
Vellore Woods (29)	Vaughan	Attendance at existing community event – Vaughan Winterfest	February 9, 2020		Community centre posters
Dixie-Dundas (3)	Mississauga	Dedicated flood risk public open house	March 2, 2020	Dedicated flood risk webpage	Mailed letter invites; geotargeted social media campaign
Markham Industrial / Don Mills Channel (10)	Markham	Dedicated door-to-door information campaign	March 5 & 6, 2020	Dedicated flood risk webpage	Door-to-door delivery of employee safety poster

Where Flood Risk Management staff hosted dedicated public open houses, the format included informational panel displays with staff on-hand to answer questions, followed by a short presentation, and question and answer session. A professional facilitator was engaged as a

Item 8.2

neutral point of contact, to guide the question and answer sessions, and to collect qualitative feedback. Event summaries, panels, and presentation slides were posted to landing pages to ensure continued access to the information for members who were not able to attend in-person. A variety of methods were used to advertise the open houses, including geo-targeted social media campaigns, community centre posters, and print invitations whose format varied from formal letters to visually arresting postcards (examples are included in Appendix 1). Each of the print materials were equipped with links and QR codes to direct readers towards the online information; this also allowed for the collection on the effectiveness of the campaigns, as it was possible to determine how many website visits originated from these print campaigns. Overall traffic to the Flood Risk Management sections of TRCA's website was also tracked.

Summary of Program Reach

Over the course of a 10-month period; Flood Risk Management staff hosted or attended events with an attendance of over 2,400 people combined, and created campaigns that reached 50,000 people digitally, and 1,949 people by mail. From these, 3,100 people accessed the flood risk specific webpages to learn more about their risk, and there were over 200 meaningful in-person conversations with residents and business owners living in TRCA's flood vulnerable clusters. Furthermore, the number of new public signups to receive flood forecasting and warning messages between January and March 2020 (the most active period of the campaign) was more than four times the average of new self-subscriptions in a given quarter. Attendance at open houses can be influenced by a variety of factors, ranging from the weather on the day to the demographics of the audience, to whether or not the community was already 'over-engaged'. Of the public open houses that were organized specifically for this campaign, the two that were the most well-attended were where:

- There had recently been a major flood event (Bolton Core)
- The direct mail campaign was the most visually arresting (Avondale/Spring Creek)

While the attendance at open houses on average corresponded to only 10% of the target audiences, the continued presence of the key information on the cluster specific webpages will allow for growth, over time, in the proportion of residents and businesses that are aware of their flood risk.

Key Themes

Attendees at the dedicated open houses hosted by Flood Risk Management staff were given a simple survey to determine their prior risk knowledge as well as the degree to which the information presented was useful. Although approximately only 25% of attendees completed surveys, the facilitator hired by TRCA for these events also captured qualitative information on key themes.

From the survey, it was possible to glean that:

- Most respondents heard about the open house through TRCA's direct mail efforts
- Most respondents (75%) now know what to do during a flood
- Almost all attendees found the information presented to be useful

From the qualitative observations provided by the facilitator, several themes emerged with respect to public perception around flood risk, as well as roles and responsibilities. Key themes included that:

- Residents wanted to share their anecdotal experience of flood risks and have a desire to supplement the data gathered during real flood events with their 'eyes on the ground' information.

Item 8.2

- Residents sought clarity on whom to call (TRCA, the municipality, or first responders) for flooding situations; residents did not see a distinction between urban or riverine flooding
- Many residents expressed concerns around debris removal and channel cleanups
- Residents and business owners sought information on specific measures they could take on their own properties
- Attendees were appreciative of the information being shared

As this program represented the first opportunity of its kind, the lessons learned from each outreach event were applied to subsequent events where possible and will continue to be applied towards future flood risk communications initiatives. Content to directly address the key themes above is already being generated.

Conclusion

The Flood Risk Public Awareness and Education Program was in its final stages when the new Ontario Flooding Strategy was released, which underscored the importance of increasing awareness as a method to reduce flood risk. Ensuring Ontarians are aware of flood risks is one of five overarching objectives within the strategy, and TRCA has exhibited leadership in this realm through the delivery of the Flood Risk Awareness and Education Program. While the ability to undertake dedicated public open houses and door-to-door in-person campaigns will be limited in the absence of follow-up funding to the National Disaster Mitigation Program, education and outreach remains a key program area within the Flood Risk Management group. Broad-range activities in this realm that are expected to continue in collaboration with municipal partners. Key activities for this year include the continued development of site-specific content for high-risk flood vulnerable clusters, with expanded information on remediation and infrastructure projects, as well as an overhaul of the main Flood Risk Management website to incorporate the key areas in which residents and business owners seek information. Objectives also include the development of informational videos explaining concepts like the '100-year storm', flashy watersheds, and the process of creating floodplain maps, as well as factsheets on seasonal flood risks, such as ice-jams and thunderstorms. Social media campaigns will continue to be developed to address the key theme areas identified from the public open houses, such as clarity on roles and responsibilities during flood events. Additional engagement with flood vulnerable cluster residents will continue to occur as opportunities arise. A key target audience for the coming years includes the real estate and insurance industry, to leverage their touchpoints with homeowners in order to increase awareness of flood risks, a tactic that is explicitly identified within Ontario's Flooding Strategy. Although this year's Emergency Preparedness Week events were cancelled due to COVID-19, Flood Risk Management staff will continue to work with municipal partners to identify unique opportunities to connect with and inform residents and business owners living in flood vulnerable neighbourhoods

Relationship to Building the Living City, the TRCA 2013-2022 Strategic Plan

This report supports the following strategies set forth in the TRCA 2013-2022 Strategic Plan:

Strategy 2 – Manage our regional water resources for current and future generations

Strategy 8 – Gather and share the best sustainability knowledge

FINANCIAL DETAILS

General flood risk awareness and communications activities are funded through the Flood Risk and Communications operating account 115-62. The specific Flood Risk Public Awareness and Education Program was completed using funds provided by the National Disaster Mitigation Program, City of Toronto, and the regional municipalities of Peel, York and Durham. Funding was allocated in account 107-54.

Item 8.2

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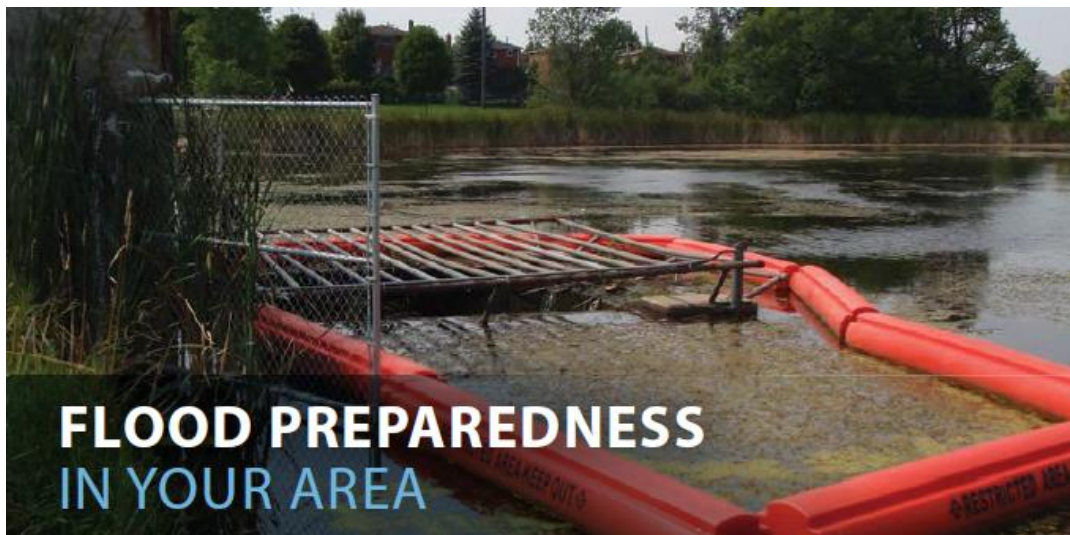
Emails: rehana.rajabali@trca.ca

Date: May 22, 2020

Attachments: 1

Attachment 1: Direct Mail Examples

Town of Whitchurch-Stouffville Open House Direct Mail Flyer



Toronto and Region Conservation Authority (TRCA) invites business owners and residents living/conducting business downstream from Stouffville Dam, along Stouffville Creek, to a public open house about the Dam Emergency Preparedness Plan and general flood readiness.

STOUFFVILLE CENTRE RIVERINE FLOODING OPEN HOUSE

January 20, 2020 | 6:30pm – 8:30pm
Latham Hall - 8 Park Dr, Whitchurch-Stouffville

AGENDA:

6:30 PM – 7:00 PM: Open house with information panels and staff available to answer questions

7:00 PM – 7:30 PM: Presentations

7:30 PM – 8:00 PM: Q&A

8:00 PM – 8:30 PM: Open house with information panels and staff available to answer questions



This event is open to all interested parties. You can register to attend at trca.ca/flood-risk-stouffville-centre or simply drop in.

Learn more: trca.ca/flood-risk-stouffville-centre | Follow us: @TRCA_flood
Sign up to receive flood messages: trca.ca/floodmessages



City of Brampton: Lenticulare Postcard – Front



City of Brampton: Lenticulare Postcard – Rear

With increased urbanization and severe weather events expected to happen more frequently, being prepared and understanding the risks to you, your family and property during river flooding is your best defense.

Come to a **free open house information session** about river flooding potential in Spring Creek and how you can protect what is important to you.

SPRING CREEK RIVERINE FLOODING OPEN HOUSE

January 30, 2020 | 6:30pm–8:30pm | Civic Centre -150 Central Park Dr.

Staff from Toronto and Region Conservation Authority (TRCA) and the City of Brampton will be on hand to address specific concerns about flooding in your area and to provide advice, resources and information to help you become better prepared in the event of flooding.

Share this information with your neighbours!

Can't make it? Find out more and how you can prepare:

- Visit our website at trca.ca/flood
- Leave us a message at **416-661-6514**
- Follow us on Twitter @**TRCA_Flood**
- Sign up to receive flood warning emails at trca.ca/floodmessages

This event is open to all interested residents. You can register to attend at trca.ca/flood-risk-spring-creek or simply drop in.



*Artistic rendering. Actual flood levels may vary.

Supported by:



City of Mississauga: Hybrid Open House Flyer



**NOT TO ALARM YOU, BUT YOUR HOME
IS IN A FLOOD RISK AREA.**

We can help you become better prepared.



DIXIE DUNDAS RIVERINE FLOODING OPEN HOUSE
March 2, 2020 | 6:00pm – 8:00pm

Fleetwood Room, Burnhamthorpe Community Centre
1500 Gulleden Drive, Mississauga, ON L4X 2T7

This open house will focus on the types of flooding a homeowner could experience in this neighbourhood. Staff from Toronto and Region Conservation Authority (TRCA), the Region of Peel, and the City of Mississauga will be on hand to address specific concerns and to provide advice, resources and information to help you become better prepared in the event of flooding.

This event is open to all interested residents. You can register to attend at trca.ca/flood-risk-dixie-dundas or simply drop in.



Learn more: trca.ca/flood-risk-dixie-dundas | Follow us: @TRCA_flood
Sign up to receive flood messages: trca.ca/floodmessages

In collaboration with:



Woodbridge Community Centre Poster



trca.ca/flood-risk-woodbridge

Flooding can happen at any time of year. There are two types of flooding that occur in developed areas:

River flooding occurs when the water levels of rivers rise, overflowing their banks. Reducing riverine flood risk is the mandate of Conservation Authorities.

Urban or pluvial flooding occurs when local drainage systems overflow, causing street and basement flooding and flooding of other low-lying areas. Municipalities are responsible for managing this type of flooding.

Learn more: trca.ca/flood | Follow us: @TRCA_flood
Sign up to receive flood messages: trca.ca/floodmessages

Supported by:



Section III – Items for the Information of the Board

TO: Chair and Members of the Board of Directors
Meeting #5/20, Friday, June 26, 2020

FROM: Sameer Dhalla, Director, Development and Engineering Services

RE: **PICKERING AND AJAX DYKE RESTORATION CONSERVATION ONTARIO
CLASS ENVIRONMENTAL ASSESSMENT**
Update on Progress

KEY ISSUE

An update on the progress for the Pickering and Ajax Dyke Restoration Conservation Ontario Class Environmental Assessment.

RECOMMENDATION

WHEREAS the Village East and the Notion Road/Pickering Village area is the fourth highest ranked flood vulnerable cluster within TRCA's jurisdiction in terms of flood risk;

AND WHEREAS Toronto and Region Conservation Authority (TRCA) has completed a number of technical studies, and last reported on flood risk in the Pickering Village/Notion Road area including next steps in pursuing an Environmental Assessment for dyke restoration at Authority meeting #5/18 held on June 22, 2018;

THEREFORE, LET IT BE RESOLVED THAT the Pickering and Ajax Dyke Restoration Conservation Ontario Class Environmental Assessment Update on Progress be received;

AND FURTHER THAT TRCA report back to the Board of Directors in the fall of 2020 to provide an update on the status of the project and next steps.

BACKGROUND

The Village East and the Notion Road/Pickering Village communities in the City of Pickering (Ward 3) and Town of Ajax (Ward 1) are located within the regulatory floodplain of the Duffins Creek watershed. These neighborhoods, which were originally developed prior to modern land-use planning practices for natural hazard management, comprise one of the 41 Flood Vulnerable Clusters in TRCA's jurisdiction. This area has a long history of flooding with 634 buildings susceptible to flooding in the regulatory flood scenario and was ranked #4 in terms of flood risk and consequence according to the 2018 Flood Risk Assessment and Ranking study. Due to the flood vulnerability of the community, the area was designated as a Special Policy Area (SPA) to provide for the continued viability of existing uses and address the significant social and economic hardships to the community that would result from strict adherence to provincial policies concerning development in a floodplain. In addition, flood protection measures were constructed in the 1980's to provide flood protection up to and including the 500-year storm. The flood protection measures consisted of two flood protection dykes, one in each municipality. A location map of the study area is provided in **Attachment 1**.

Item 8.3

In 2007, a major erosion scar was identified in the Pickering Dyke and temporarily repaired with rip rap in 2008. In 2009, TRCA undertook a detailed fluvial geomorphic assessment of the reach and level of service study of the channel and dyke systems to identify a permanent erosion management solution. One of the key recommendations from the 2009 study was to undertake a detailed geotechnical assessment, including the drilling of boreholes within the dyke systems to quantify the structural competence of the materials used when the dykes were originally constructed. In response to the recommendations from the 2009 analysis, TRCA commissioned the Pickering and Ajax Special Policy Areas Two-Dimensional Hydraulic Model and Dykes Assessment Study. The study was completed in 2018 by Valdor Engineering. The objectives of the 2018 study included characterizing flood conditions within the SPA, assessing the level of service, and structural competency, and developing a preliminary restoration strategy for the Pickering and Ajax flood control dykes.

The following outcomes were identified through the 2018 study

- It was determined that the targeted level of flood protection to the 500-year event is not provided by the existing flood control dykes. The Pickering Dyke provides flood protection for the 100-year storm and the Ajax Dyke provides flood protection for the 50-year storm. The loss in service is associated with settling of the materials used to construct the dykes, informed by improved hydraulic modelling. An analysis of the modelling work completed during the original design process has confirmed significantly lower boundary conditions than TRCA's current hydraulic model.
- Additionally, it was determined that increasing the level of service of the dykes beyond what is currently provided, 100-year for the Pickering Dyke and 50-year from the Ajax Dyke, would constrain flows resulting in increased flood risk in nearby areas, as well as create adverse ecological and property impacts
- Several significant structural deficiencies were identified based on field and geotechnical investigations. The results of the geotechnical stability analysis indicate that the dykes do not meet current engineering design standards for stability. As such there is a high potential of dyke failure under an extreme storm event.

The 2018 study examined 9 options to rehabilitate the dykes to address the structural deficiencies. The preferred option consisted of installing a steel sheet pile wall part way down the existing wet side of the dyke. The retrofit of the Pickering and Ajax dykes based on this option would enable construction to be completed within the existing dyke footprint and would not require the acquisition of private property or easements. The estimated cost of the proposed construction works to rehabilitate the flood dykes to maintain the current level of protection was approximately \$6,200,000 for the Pickering Dyke and approximately \$2,400,000 for the Ajax Dyke.

To move forward on the rehabilitation plans, the 2018 study recommended that further study be undertaken by TRCA in accordance with the Conservation Ontario Class Environmental Assessment for Remedial Flood and Erosion Control Projects (EA).

Upon completion of the 2018 study, TRCA staff sought funding opportunities through the federal government and municipal partners. At the Committee of the Whole meeting on February 6, 2018, Durham Region Council committed to funding 50% of the project budget provided TRCA staff was successful in securing the remaining 50% through the National Disaster Mitigation Program (NDMP). In March of 2019 TRCA received notice from the NDMP that it had been successful in securing federal funding of \$250,000, which was matched by the Region of Durham for a total project budget of \$500,000.

RATIONALE

Environmental Assessment Process

The Pickering and Ajax Dyke Rehabilitation Environmental Assessment (PADR EA) is being completed through the “Conservation Ontario Class Environmental Assessments for Remedial Flood and Erosion Control Projects” (COEA) process. The COEA process is specifically used by Conservation Authorities for flood and erosion control works and meets the requirements of the Environmental Assessment Act. Further the COEA process is similar in scope to a Schedule B project within the Municipal Class EA process which is commonly used by municipalities for infrastructure related projects.

The project objectives of the Pickering and Ajax Dykes Rehabilitation Conservation Ontario Class EA study have been to:

- Complete a Conservation Ontario Class Environmental Assessment and obtain approval of the Environmental Study Report (ESR);
- Identify the preferred alternative for the rehabilitation of the existing Pickering and Ajax Dykes to meet current engineering standards and factors of safety while maintaining the existing level of flood protection; and,
- Prepare 30% design level drawings, supporting calculations/modelling and construction cost estimate reflecting a feasible design of the preferred alternative.

The project included the following key components:

1. Project Initiation

The study team confirmed the project objectives, work plan and schedule. Available background information was reviewed and data gaps and methods to fill those gaps were identified. The study team developed a stakeholder registry and prepared and published the Notice of Intent to Undertake a Remedial Project in the local Ajax Pickering News Advertiser.

2. Baseline Inventory

Baseline conditions include existing physical, biological, cultural, socioeconomic, flooding and erosion characteristics. The study team documented the known baseline conditions and filled data gaps by undertaking investigations and collecting information from other sources. This included undertaking subsurface utility investigations and a review of existing infrastructure under/through the dykes. Also, a thorough geotechnical investigation was completed to further investigate existing dyke characteristics and potential material disposal options.

3. Identify and Evaluate Alternative Solutions

Based on the findings of the first 2 phases of the study, the project team developed new alternatives to address the dyke stability issues in addition to the nine alternatives identified in the previous 2018 study. All the alternatives were evaluated against robust criteria to identify the preferred solution which balances flood protection requirements, social and environmental needs, cost, and constructability. The study team have identified permit and approval requirements that will be required for design and implementation.

4. Detailed Environmental Analysis of Alternative Design Concepts for the Preferred Solution

The study team completed preliminary design of the preferred alternative to a 30% level of detail (i.e. established preliminary structure footprints). Multiple variations of the design were prepared based on construction methodology, materials and surface treatments. A preferred design concept has been identified that optimizes flood protection requirements, social and environmental needs, cost, and constructability.

5. Completion of Environmental Study Report

The study team has prepared a comprehensive report documenting all findings, evaluations, public/stakeholder consultation and decisions made throughout the project. The report includes a detailed Environmental Monitoring Plan which is to be implemented during and after construction, and a long-term operation and maintenance plan for the dykes. The complete report will be presented to the Community Liaison Committee and made available for review by the general public, prior to approval of the project.

6. Public Consultation Process

Public consultation has been undertaken throughout the Class EA study at key milestones, as required by the Class EA process. These include:

- Publication of notices of the progression of the study and public information centers (PICs) in local media as well as direct notification to identified stakeholders/interested parties.
- Meetings with the broader public including two (2) PIC's as well as three (3) Community Liaison Committee (CLC) meetings comprised of local stakeholder representatives to inform the public of study findings and obtain public input and comments.
- Two (2) meetings each with the Technical Advisory Committee and an Executive Steering Committee (comprised of TRCA and municipal senior leadership members) to obtain technical review/input and senior level input, respectively.
- At the completion of the Class EA study the final report (Environmental Study Report) will be made available for public review and comment prior to approval of the project.

Due to Covid-19 and the provincial direction for public health during the pandemic, TRCA staff had to postpone the 2nd PIC in late March. Due to project timelines the study team decided to leverage digital conferencing technology and on April 28th TRCA hosted its first ever virtual PIC which was attended by over 30 participants. The virtual PIC was developed in consultation with the Ministry of the Environment, Conservation and Parks (MECP) and included considerations of a typical PIC, which included the ability to have one on one walkthroughs of panels outlining the study process and preliminary designs with study team members, a presentation by TRCA staff, and a question and answer period involving a panel of technical experts from the project management team.

In consultation with the MECP, the following First Nations were notified of the commencement of the PADR EA: the Huron-Wendat Nation, Curve Lake First Nation, Hiawatha First Nation, Alderville First Nation, Mississaugas of Scugog Island First Nation, as well as the Coordinator for the Williams Treaties First Nations. These First Nations will continue to receive project updates and invitations to PADR public information centers (PIC).

Preferred Dyke Restoration Alternatives

TRCA retained the KGS Group to provide consulting services to advance rehabilitation planning and design of the Pickering and Ajax Flood Control Dykes which will ensure that the dykes meet current engineering standards and factors of safety (FOS) and reduce the associated risk to public safety and loss of property.

While the original target level of flood protection, when the dykes were designed in the 1980's, was the 500-year storm flood, the 2018 study found that the current height of the dykes only allows protection up to a 100-year storm flood event (Pickering Dyke) and a 50-year storm flood event (Ajax Dyke). For greater flood events, including the 500-year and the Regulatory Flood, updated modeling has shown that flood waters would circumvent the Pickering dyke increasing flood risk within the area. Since the combined dykes alone cannot protect for these greater flood events, TRCA established that the objective for the dyke rehabilitation was to meet current engineering standards and FOS while providing at minimum the level of flood protection associated with the existing dyke crest elevations. However, due to technical considerations including updated flood modelling, the study team concluded that increasing the level of service for the Ajax Dyke would be a viable alternative without adversely impacting adjacent areas. As part of the Conservation Ontario Class EA, a baseline inventory of the Project Study Area was carried out that included consideration of the physical, natural and built environment, cultural and socioeconomic environment, as well as technical engineering aspects. The project included the definition and evaluation of alternative solutions for the dyke rehabilitation and their refinement into design concepts. These were evaluated with criteria that reflected the various considerations identified during the baseline inventory and consultation process. As noted previously a comprehensive consultation process was undertaken with stakeholder agencies, the public and three dedicated committees.

The preferred alternative solutions were:

- Hard Engineering Solution, consisting of dyke configurations that include a hard structural component like sheet piles (corrugated metal plates) driven through the dyke and rock embankments to ensure achieving the required stability factors of safety for the dykes. This was selected for those areas of the Pickering Dyke where there is limited space for the rehabilitation works between the creek and private properties. The design concept for the Hard Engineering Solution can be found on **Attachment 2**.
- Soft Engineering Solution, consisting of dyke configurations that do not include a hard structural component for stability; but instead rely on providing earthen embankment slopes that are stable and more gradual than those of the existing dykes. This was selected for areas of the Pickering Dyke where the space available for the rehabilitation work was wide enough to fit this solution without impacting private properties or the watercourses. This alternative solution was also selected as preferred for the entire Ajax Dyke. The design concept for the Soft Engineering Solution can be found on **Attachment 3**.

It was also decided that these preferred solutions would be developed with the required dyke height to protect up to a 100-year storm for both the Pickering and Ajax Dykes, meaning the 100-year level of flood control service for the Pickering Dyke remains the same, however the level of service for the Ajax Dyke would be raised from a 50-year to a 100-year level of service. Further development of the preferred alternative solutions included the definition and evaluation of design concepts that advanced these solutions to a 30% level of design. Various concepts were evaluated using criteria that included consideration of the physical, natural and built environment, cultural and socioeconomic environment, as well as technical engineering

Item 8.3

aspects. These criteria incorporated feedback received during the consultation process. The preferred design concepts were:

- For the hard engineering solution of the Pickering Dyke: the rehabilitation of the dyke with side slopes similar to existing, enhanced with a granular toe drain on the dry side slope and internal sheet pile combined with a vegetated rock buttress on the wet side slope.
- For the soft engineering solution of both the Pickering and Ajax Dykes: the rehabilitation of the dyke with more gradual slopes of maximum 4H:1V, a wider dyke and the incorporation of a granular filter on the dry side slope.

Recommendations were provided for further development of the design concepts during the detailed design phase that would occur after the completion of this Environmental Assessment Project.

Additional design concepts that were considered but not selected as preferred included the use of various types of sheet piles, concrete walls, mechanically stabilized earth walls (MSE), and various seepage cut-off methods.

The estimated capital cost of the preferred design concepts, including contingency values appropriate for a 30% level of design, were:

- \$7.0 Million for the hard engineering solution on the segment of the Pickering Dyke with restricted space for the rehabilitation work
- \$3.0 Million for the soft engineering solution on the segment of the Pickering Dyke without restricted space for the rehabilitation work
- \$2.6 Million for the soft engineering solution of the Ajax Dyke

Preliminary dyke footprints for the Pickering and Ajax Dykes can be viewed on **Attachment 4**.

Next Steps

The study team is currently completing the ESR which has been tentatively scheduled to be released to the public in early September. As per the direction of the Ministry of the Environment, Conservation and Parks, due to Covid-19, TRCA staff will increase the public review period from the typical 30-day review to a 60-day review period and will make hard copies of the ESR available for public review.

Staff will continue to work with the Region of Durham, City of Pickering, and Town of Ajax and senior levels of government to secure and identify funding opportunities to undertake the detailed design process and implementation. As a critical piece of flood control infrastructure, the restoration of the Pickering and Ajax Dykes represents an important example of a capital project focused in disaster risk reduction. Staff will continue to work with our Municipal partners to pursue funding opportunities, such as through the federal Disaster Mitigation and Adaptation Fund (DMAF) if and when a new intake opportunity under DMAF occurs. If funding is secured, TRCA staff can initiate the detailed design process which can be completed within a 12 to 16 month timeline. Construction can occur once the detailed design process is complete and all necessary permits have been obtained.

Relationship to Building the Living City, the TRCA 2013-2022 Strategic Plan

This report supports the following strategies set forth in the TRCA 2013-2022 Strategic Plan:
Strategy 2 – Manage our regional water resources for current and future generations

Item 8.3

Strategy 4 – Create complete communities that integrate nature and the built environment

FINANCIAL DETAILS

In 2019 TRCA staff were successful in securing Federal National Disaster Mitigation Program (NDMP) funding to complete the Environmental Assessment project. Financial contributions for the PADR EA were provided by the Region of Durham and the NDMP through account 107-69, Pickering and Ajax Flood Control Dyke Restoration Environmental Assessment, which included staff time and consulting fees. Staff will continue to flag the importance of implementation funds for this project in budget discussions with Durham Region staff.

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Date: June 26, 2020

Attachments: 4

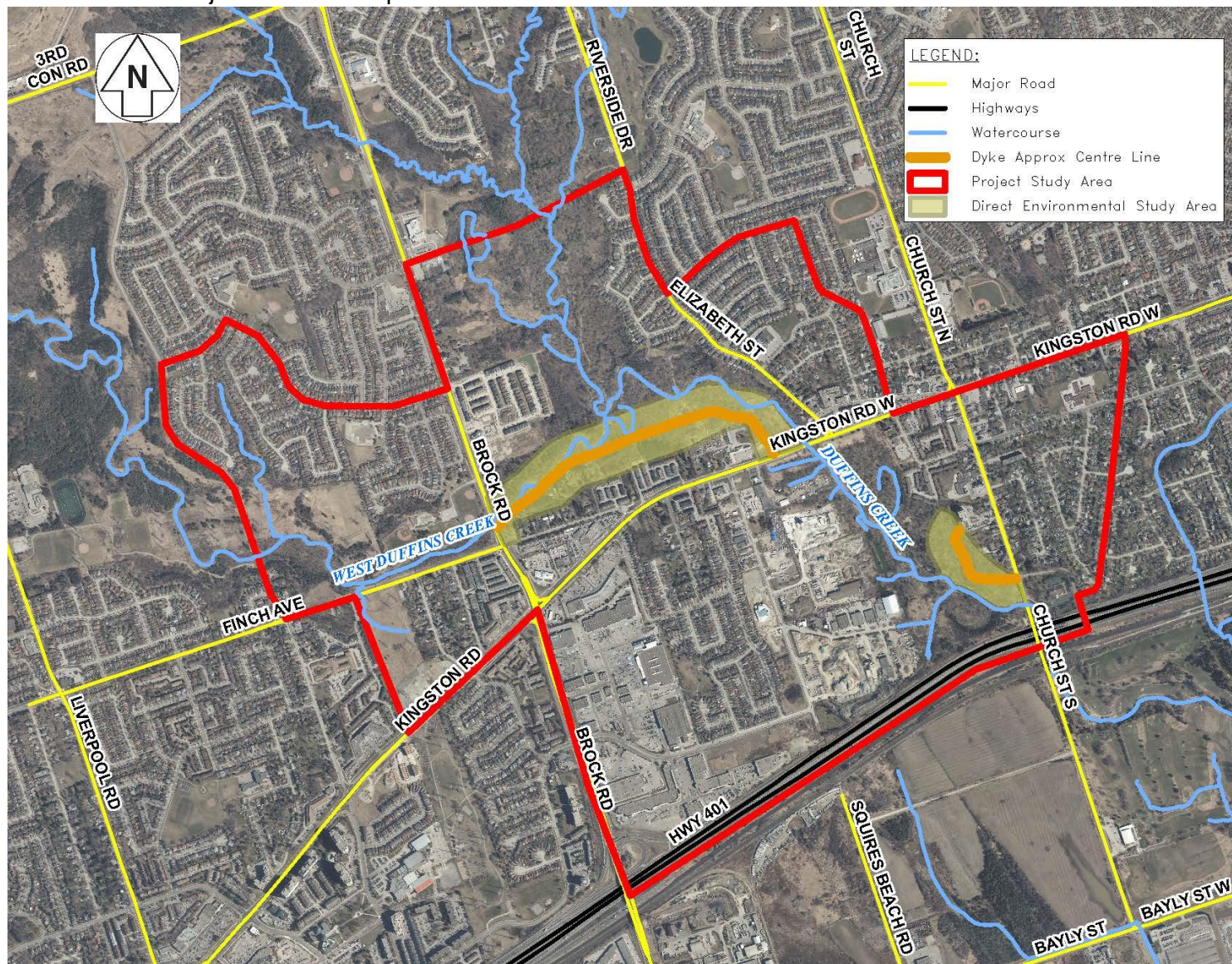
Attachment 1: Project Location Map

Attachment 2: Hard Solution Design Concept

Attachment 3: Soft Solution Design Concept

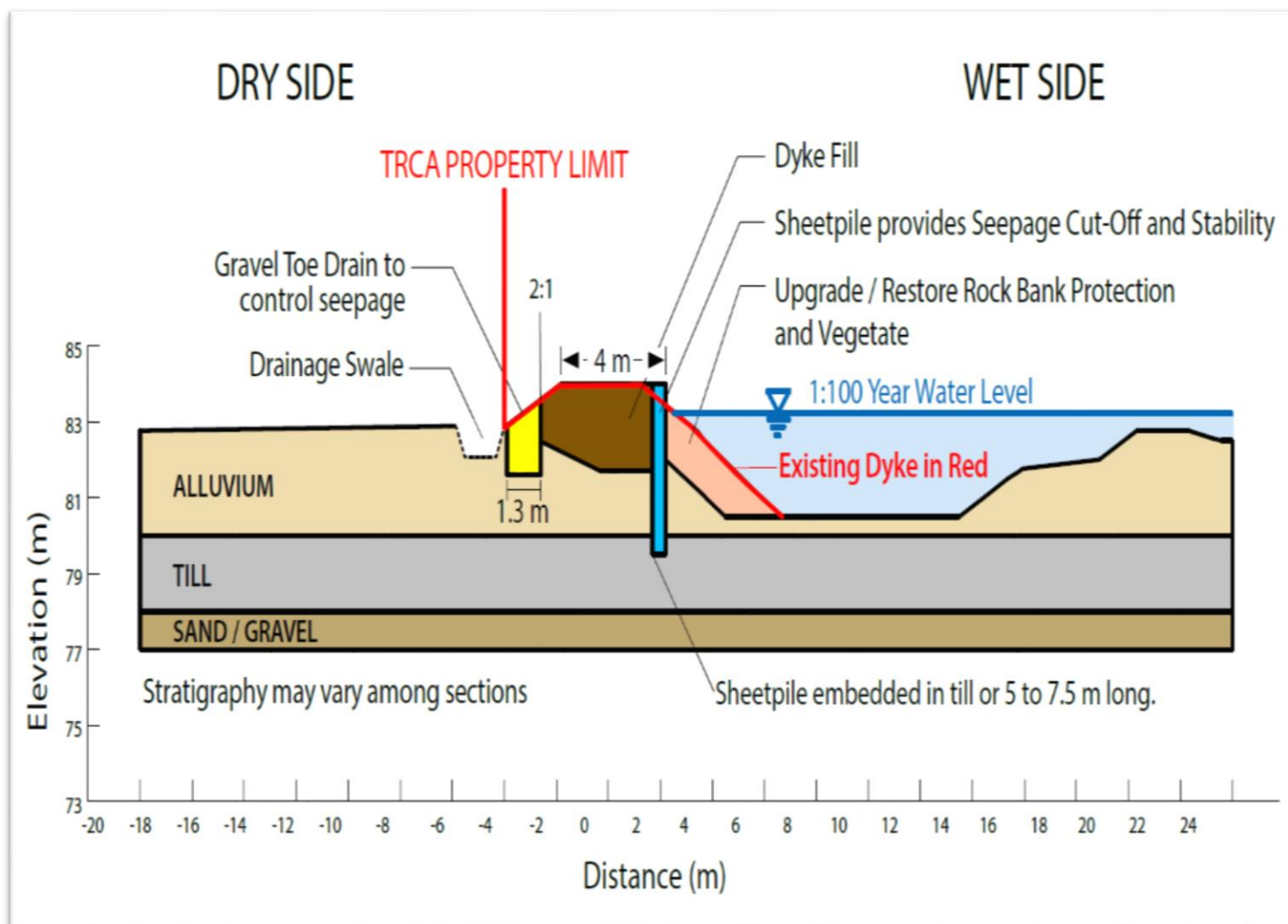
Attachment 4: Preferred Solution Extents

Attachment 1: Project Location Map



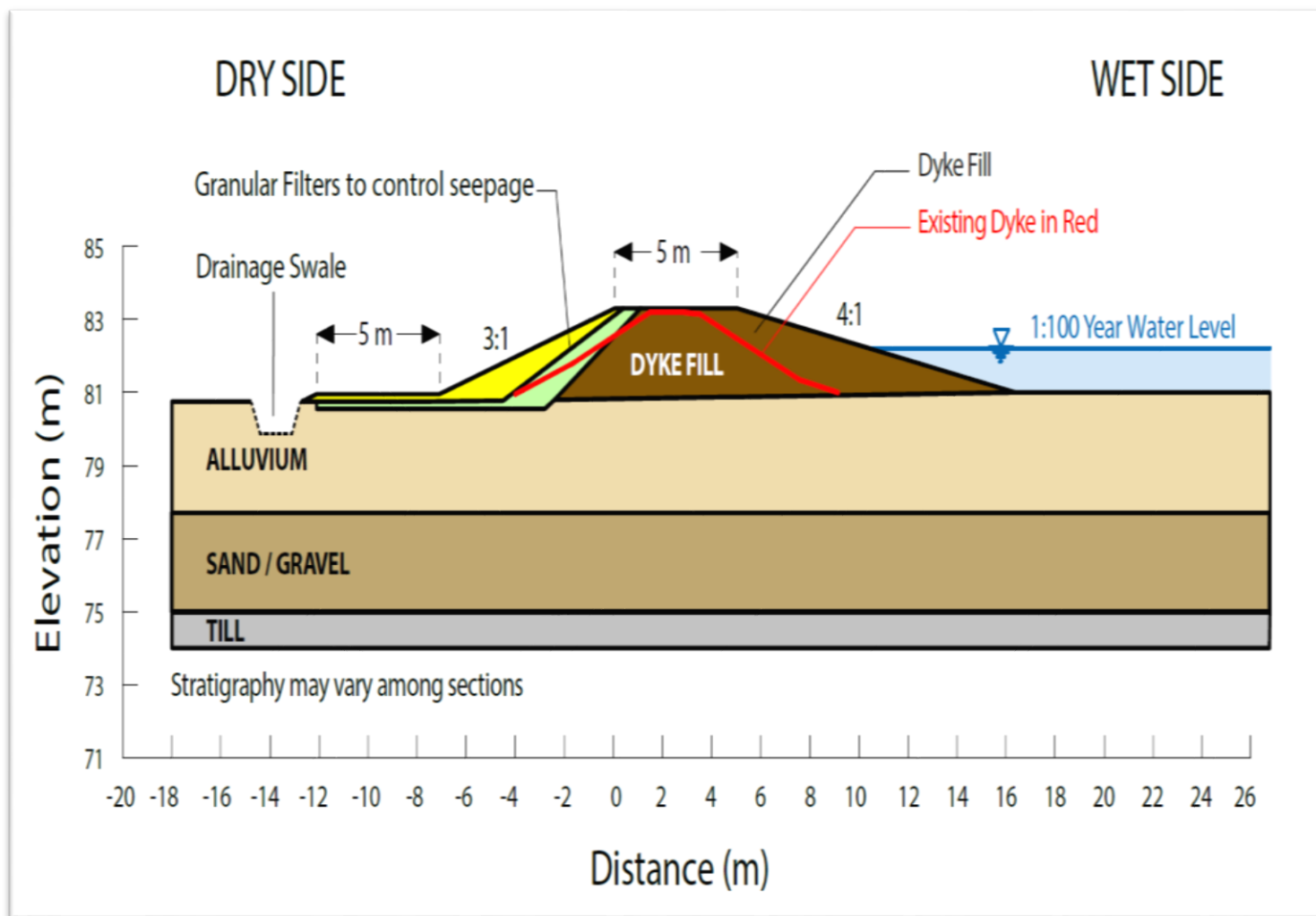
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Attachment 2: Hard Solution Design Concept



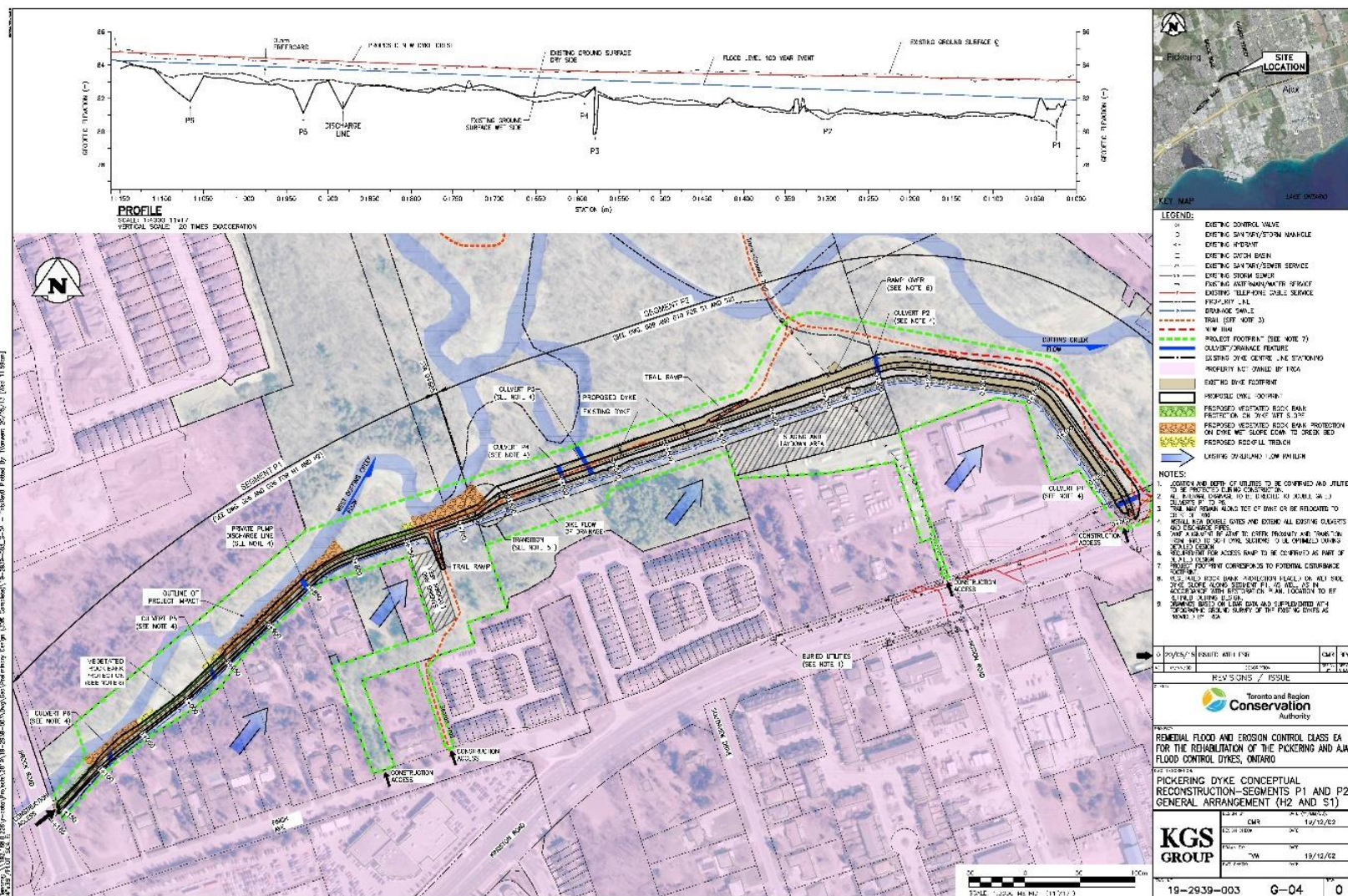
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Attachment 3: Soft Solution Design Concept

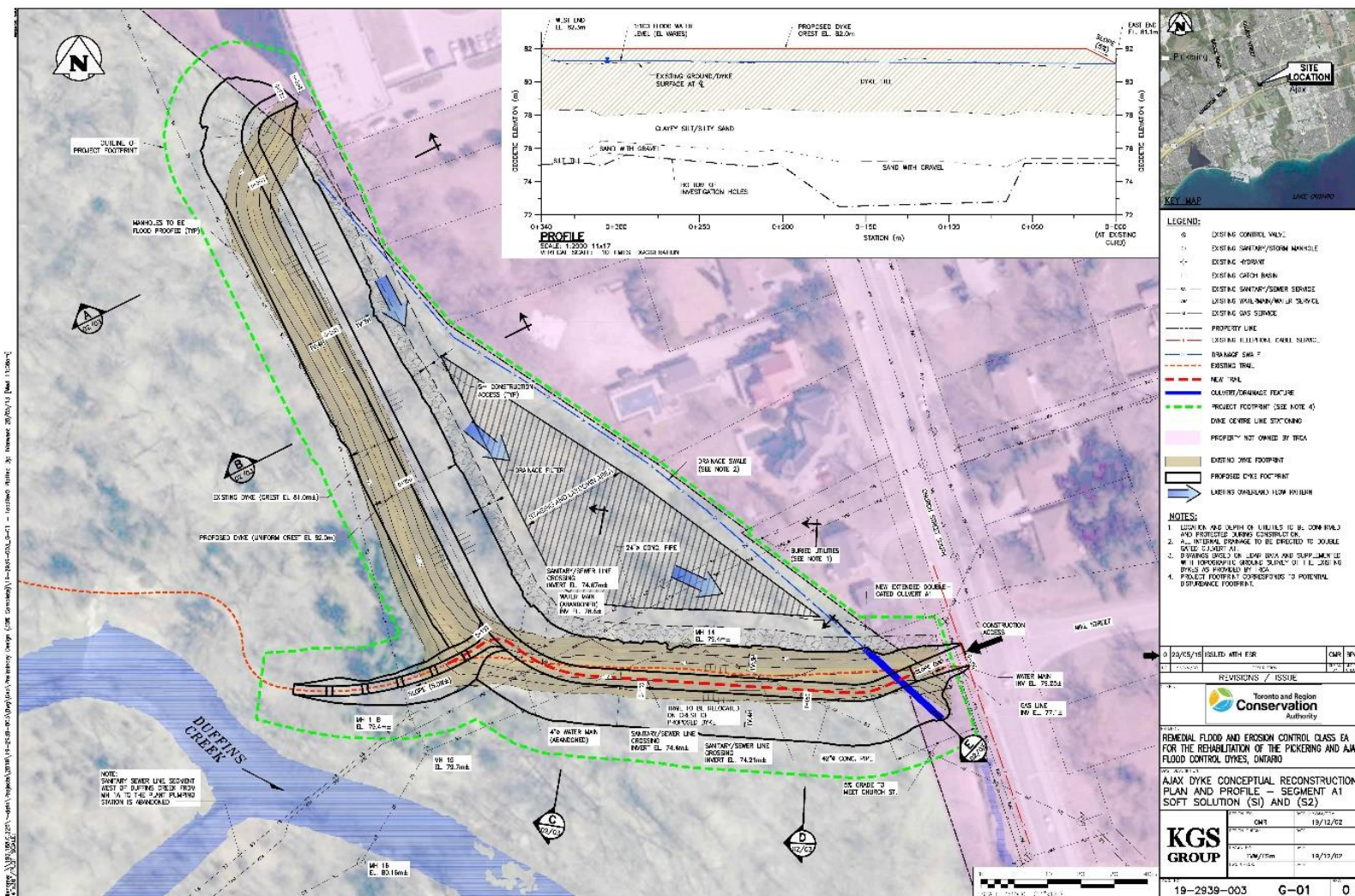


Item 8.3

Attachment 4: Preferred Solution Extents



Item 8.3



Section III – Items for the Information of the Board

TO: Chair and Members of the Board of Directors
Meeting #5/20, Friday, June 26, 2020

FROM: Michael Tolensky, Chief Financial and Operating Officer

RE: **BRUCE’S MILL CONSERVATION AREA**
Repair, Restoration and Adapted Re-use of the Grist Mill at Bruce’s Mill
Conservation Area

KEY ISSUE

To provide an update regarding the potential repair, restoration and adaptive re-use of the Grist Mill building at Bruce’s Mill Conservation Area.

RECOMMENDATION

IT IS RECOMMENDED THAT the information report regarding the repair, restoration and adaptive re-use of the Grist Mill be received.

BACKGROUND

General Background

Toronto and Region Conservation Authority (TRCA) operates Bruce’s Mill Conservation Area. Included on this 108 ha. site is a house, a Grist Mill, and dam which historically operated but currently is not being utilized. The house was relocated to the entrance of the site and remains part of the TRCA rental portfolio. The Grist Mill structure contains a 160-year-old post and beam building of timber frame construction with wood clapboard cladding, on a fieldstone foundation. The building has an approximate internal area of 4,458 sq. ft. across 3 floors with a basement of approximately 440 sq. ft. The dam has been lowered and it is no longer possible to operate the mill under waterpower. The building remains vacant and the entire building is showing signs of deterioration, particularly wood decay and peeling paint.

Expression of Interest

The Grist Mill is in a poor building state condition. The latest building condition assessment report (2008) reflects the total capital cost of remediation to be \$405,750 (2008 dollars). As reflected in the Bruce’s Mill Conservation Area Master Plan (2011) TRCA recognizes the potential for this building to be integrated into park planning and redevelopment.

On September 23, 2019 an Expression of Interest (EOI) for the repair, restoration and adaptive re-use of the Grist Mill Building at Bruce’s Mill Conservation Area was issued, to solicit interest from parties with the creativity, expertise and potential financial capacity to partner with TRCA, to preserve the building for community use.

The EOI process resulted in only one response being received by TRCA from ERA Architects Inc. After review of the Response, a meeting with a representative of ERA Architects took place in late December 2019. During the discussion it was determined that before any work be considered for the Grist Mill, that emphasis be placed on determining a user/operator for the building. Without a user/operator, it would not be considered financially responsible to undertake a restoration for a building to continue to sit vacant.

Item 8.4

Private Developer Interest

Staff has been approached by a private developer who is proposing a redevelopment of the Grist Mill site to a mixed restaurant/event space. The proposal requires substantial capital investment by the TRCA or a partner and, similar to the ERA Architect Proposal, no long-term user/operator is proposed. The proposal will require substantial building additions and upgrades along with a long-term lease agreement in order for it to be viable and to maximize the potential for successful adaptive re-use.

Any redevelopment will likely require the relocation of the Grist Mill and or mitigation measures as it is subject to flooding in weather events exceeding a 5-year storm. Additionally, redevelopment of the site will require an increase in servicing of the building site, as there are no utilities or water/sewer services. The extent and possibilities of a renovation is conditional on the extent of heritage designation protections that are required which are currently being determined through settlement negotiations between the Town and TRCA.

Attachment 1 is a sketch illustrating the location of the subject lands. Attachment 2 is an orthophoto illustrating the location of the subject lands. Attachment 3 is an aerial photo of the Grist Mill.

Relationship to Building the Living City, the TRCA 2013-2022 Strategic Plan

This report supports the following strategies set forth in the TRCA 2013-2022 Strategic Plan:

Strategy 3 – Rethink greenspace to maximize its value

Strategy 6 – Tell the story of the Toronto region

Strategy 7 – Build partnerships and new business models

DETAILS OF WORK TO BE DONE

Staff will continue conversations with potential developers/operators for partnership opportunities for restoring the Grist Mill for community use. Staff will also continue to flag the capital costs with York Region and the Town of Whitchurch-Stouffville and pursue applicable grant opportunities.

Report prepared by: Lori Colussi, extension 5303

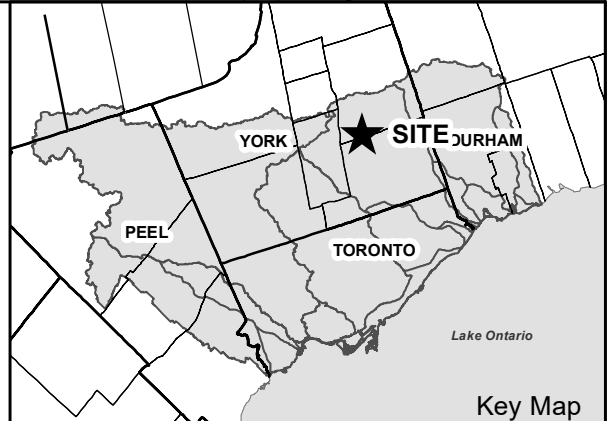
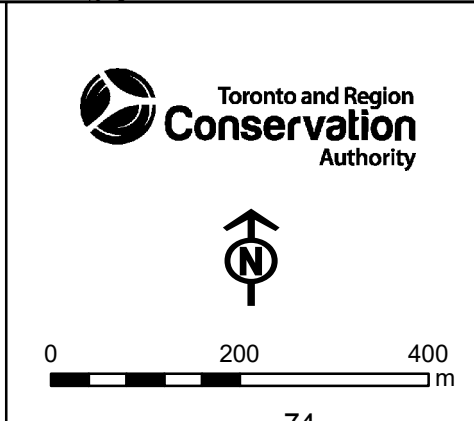
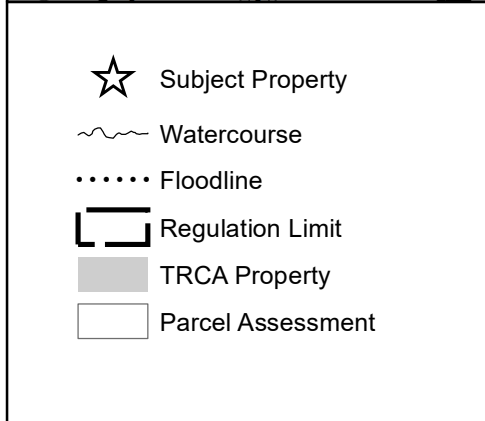
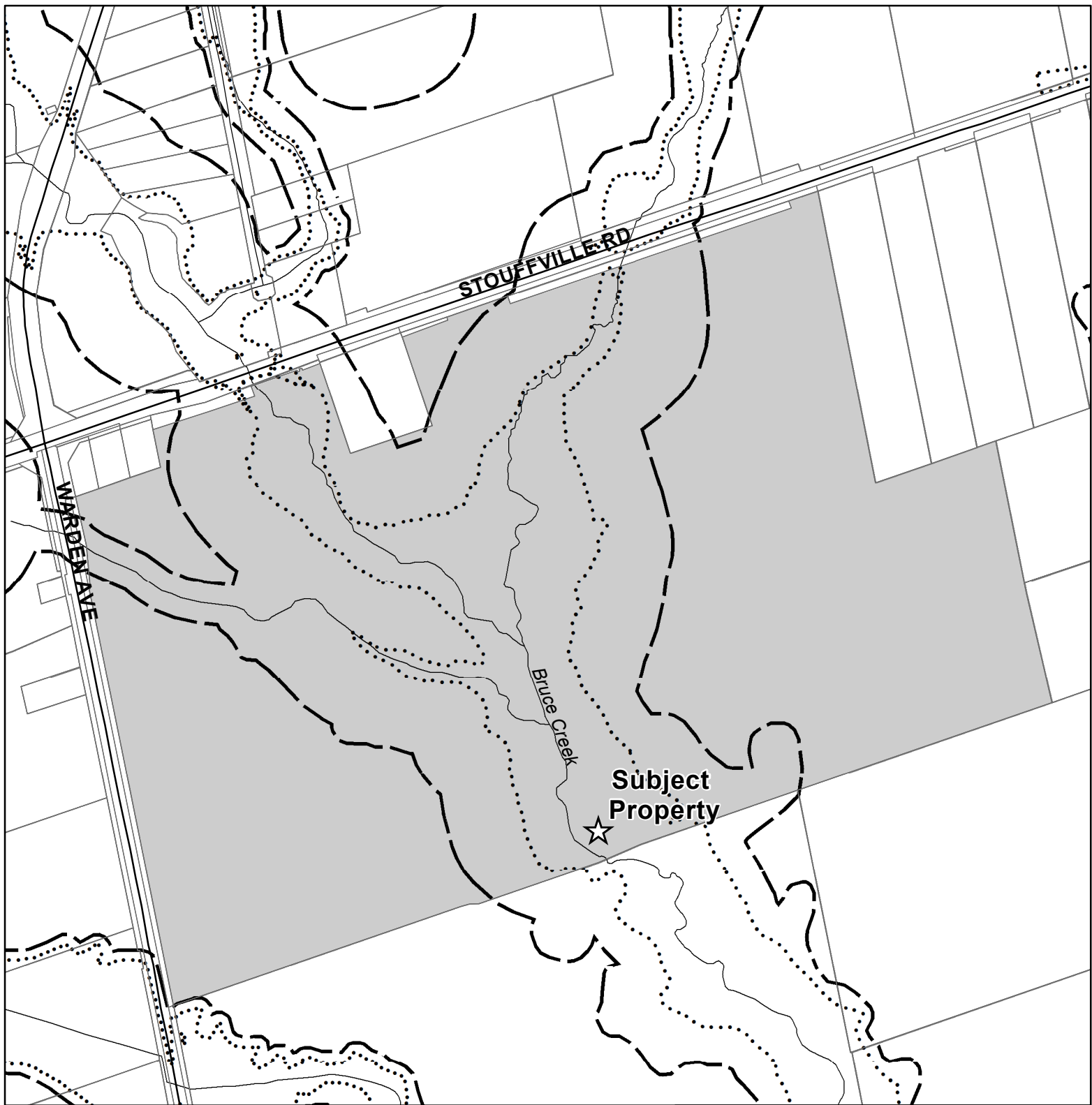
Emails: lori.colussi@trca.ca

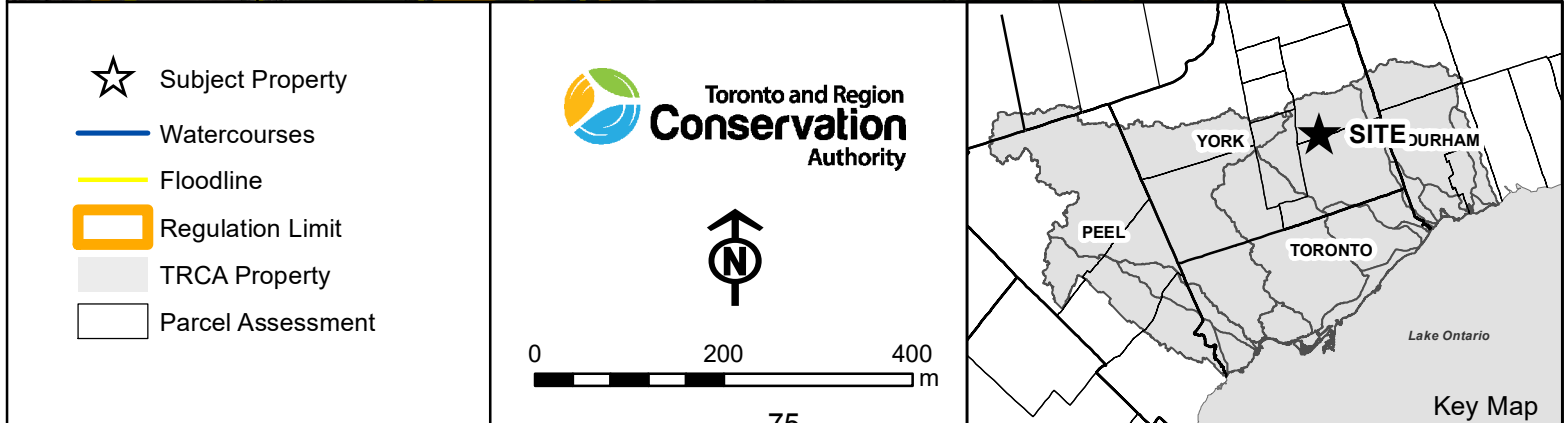
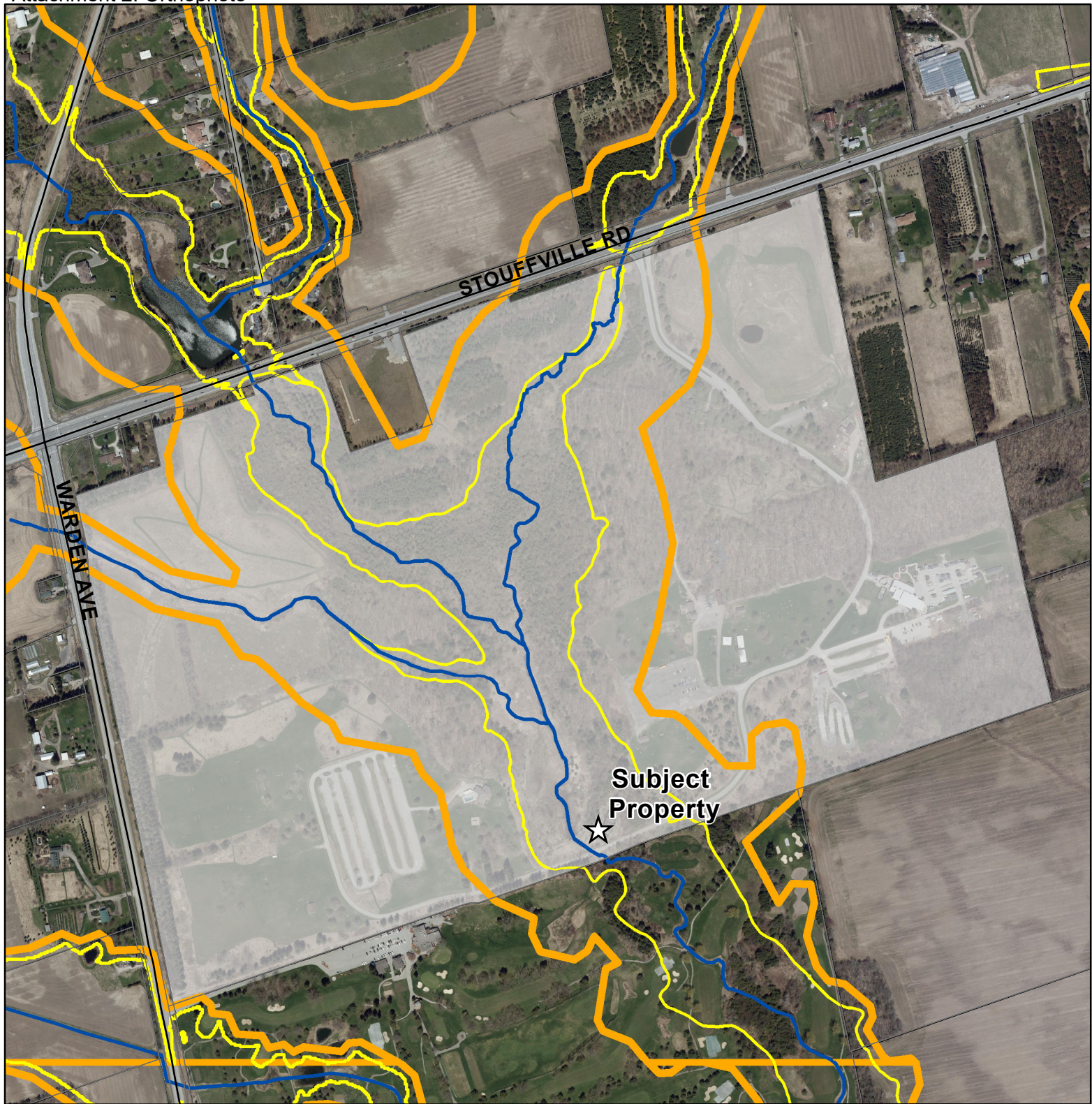
For Information contact: Lori Colussi, extension 5303 or Daniel Byskal, extension 6452

Emails: lori.colussi@trca.ca or daniel.byskal@trca.ca

Date: June 15, 2020

Attachments: 3







Bruce's Mill



Watercourses



Parcel Assessment

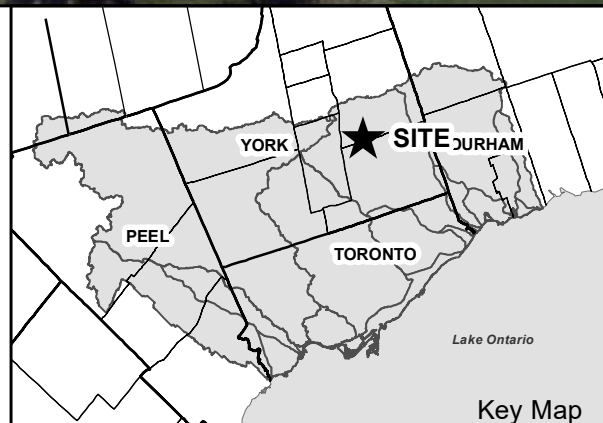


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Key Map