

## Section IV – Ontario Regulation 166/06, As Amended

**TO:** Chair and Members of the Executive Committee  
Meeting #9/19, November 1, 2019

**FROM:** Sameer Dhalla, Director, Development and Engineering Services

**RE:** **APPLICATIONS FOR PERMITS PURSUANT TO ONTARIO REGULATION 166/06, AS AMENDED**  
Development, Interference with Wetlands and Alterations to Shorelines and Watercourses

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### KEY ISSUE

Pursuant to Ontario Regulation 166/06, as amended, written permission from the Authority is required for:

- a) straightening, changing, diverting or interfering in any way with the existing channel of a river, creek, stream or watercourse, or for changing or interfering in any way with a wetland;
- b) development, if in the opinion of the Authority, the control of flooding, erosion, dynamic beaches or pollution or the conservation of land may be affected by the development.

A permit may be refused through a Hearing Process, if in the opinion of the Authority, the control of flooding, erosion, dynamic beaches, pollution or the conservation of land is affected.

### RECOMMENDATION

**THAT permit be granted in accordance with Ontario Regulation 166/06, as amended, for the application which is listed below:**

### **MAJOR PERMIT APPLICATION 10.1 – REGULAR – FOR APPROVAL**

Applications that involved a more complex suite of technical studies to demonstrate consistency with policies; applications that cover a significant geographic area, extensive modifications to the landscape, major infrastructure projects, applications requiring site specific conditions and permissions that extend beyond two years.

## **CITY OF TORONTO (TORONTO AND EAST YORK COMMUNITY COUNCIL AREA)**

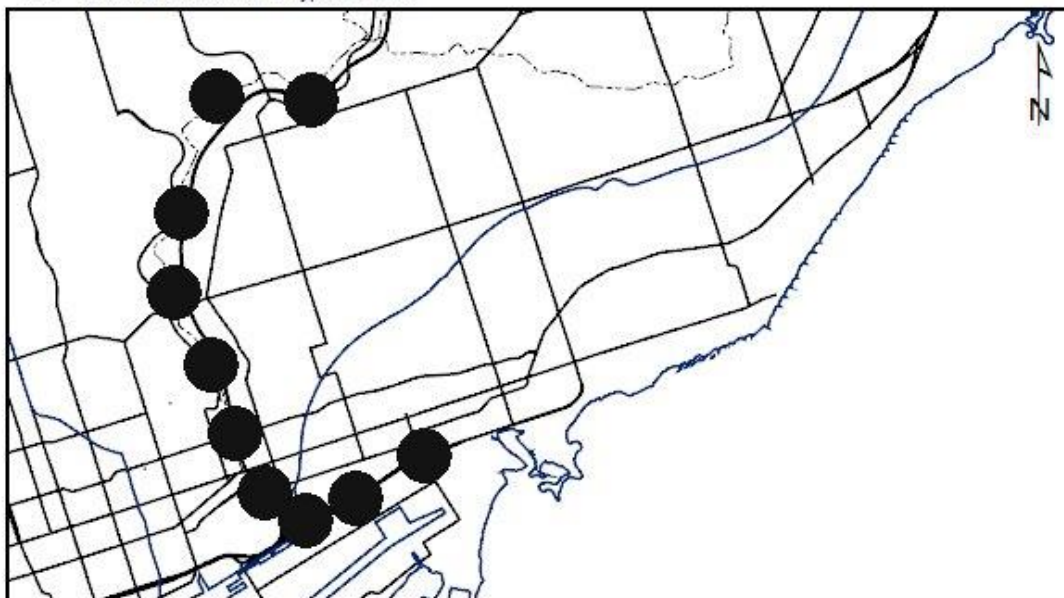
### **10.1 CITY OF TORONTO**

To construct, reconstruct, erect or place a building or structure, site grade and temporarily or permanently place, dump or remove any material, originating on the site or elsewhere, from Lake Shore Avenue East and Leslie Street to Coxwell Ravine Park, in the City of Toronto (Toronto and East York Community Council Area), Don River Watershed as located on the property owned by City of Toronto. The purpose is to construct the 6.3m wide Coxwell Bypass tunnel from Ashbridges Bay Treatment Plant (IHES-2B) within sound bedrock approximately fifty (50) meters below ground surface, using a tunnel boring machine across the Don River valley just south of the railway

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corridor at Lake Shore Boulevard for approximately 10.5 km upstream, to the Coxwell Ravine Park (CX-1A), located just west of Taylor Massey Creek, in the City of Toronto. There are no inwater works associated with this project.

**MAP LOCATION:** Coxwell Bypass Tunnel



The permit will be issued for the period of November 1, 2019 to October 31, 2021 in accordance with the following documents and plans which form part of this permit:

- **Drawing #: 1078-2014-02-02; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Drawing List (1 of 2); prepared by City of Toronto; Revision No. 1; dated March 23, 2018; received by TRCA on April 23, 2019;**
- **Drawing #: 1078-2014-02-03; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Drawing List (2 of 2); prepared by City of Toronto; Revision No. 1; dated March 23, 2018; received by TRCA on April 23, 2019;**
- **Drawing #: 1078-2014-02-04; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Process and Flow Diagram; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 22, 2018; received by TRCA on April 23, 2019;**
- **Drawing #: 1078-2014-02-05; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, General Notes; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 23, 2018; received by TRCA on April 23, 2019;**
- **Drawing #: 1078-2014-02-06; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Tunnel Curve Data & Survey Control (1 of 2); prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 23, 2018; received by TRCA on April 23, 2019;**
- **Drawing #: 1078-2014-02-07; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Tunnel Curve Data & Survey Control (2 of 2); prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 23, 2018; received by TRCA on April 23, 2019;**
- **Drawing #: 1078-2014-02-08; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Plan & Profile STA. 1+000 to STA. 1+250; prepared by Black & Veatch**

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in association with R.V. Anderson Associates Limited on behalf of City of Toronto;  
Revision No. 1; dated March 23, 2018; received by TRCA on April 23, 2019;

- Drawing #: 1078-2014-02-09; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Plan & Profile STA. 1+250 to STA. 1+550; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 23, 2018; received by TRCA on April 23, 2019;
- Drawing #: 1078-2014-02-10; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Plan & Profile STA. 1+550 to STA. 1+850; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 23, 2018; received by TRCA on April 23, 2019;
- Drawing #: 1078-2014-02-11; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Plan & Profile STA. 1+850 to STA. 2+200; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 23, 2018; received by TRCA on April 23, 2019;
- Drawing #: 1078-2014-02-12; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Plan & Profile STA. 2+200 to STA. 2+500; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 23, 2018; received by TRCA on April 23, 2019;
- Drawing #: 1078-2014-02-13; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Plan & Profile STA. 2+500 to STA. 2+800; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 23, 2018; received by TRCA on April 23, 2019;
- Drawing #: 1078-2014-02-14; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Plan & Profile STA. 2+800 to STA. 3+100; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 23, 2018; received by TRCA on April 23, 2019;
- Drawing #: 1078-2014-02-15; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Plan & Profile STA. 3+100 to STA. 3+400; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 23, 2018; received by TRCA on April 23, 2019;
- Drawing #: 1078-2014-02-16; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Plan & Profile STA. 3+400 to STA. 3+725; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 23, 2018; received by TRCA on April 23, 2019;
- Drawing #: 1078-2014-02-17; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Plan & Profile STA. 3+725 to STA. 4+075; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 23, 2018; received by TRCA on April 23, 2019;
- Drawing #: 1078-2014-02-18; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Plan & Profile STA. 4+075 to STA. 4+425; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 23, 2018; received by TRCA on April 23, 2019;
- Drawing #: 1078-2014-02-19; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Plan & Profile STA. 4+425 to STA. 4+750; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 23, 2018; received by TRCA on April 23, 2019;
- Drawing #: 1078-2014-02-20; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Plan & Profile STA. 4+750 to STA. 5+100; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 23, 2018; received by TRCA on April 23, 2019;

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- Drawing #: 1078-2014-02-21; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Plan & Profile STA. 5+100 to STA. 5+450; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 23, 2018; received by TRCA on April 23, 2019;
- Drawing #: 1078-2014-02-22; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Plan & Profile STA. 5+450 to STA. 5+750; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 23, 2018; received by TRCA on April 23, 2019;
- Drawing #: 1078-2014-02-23; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Plan & Profile STA. 5+750 to STA. 6+100; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 23, 2018; received by TRCA on April 23, 2019;
- Drawing #: 1078-2014-02-24; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Plan & Profile STA. 6+100 to STA. 6+400; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 23, 2018; received by TRCA on April 23, 2019;
- Drawing #: 1078-2014-02-25; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Plan & Profile STA. 6+400 to STA. 6+750; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 23, 2018; received by TRCA on April 23, 2019;
- Drawing #: 1078-2014-02-26; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Plan & Profile STA. 6+750 to STA. 7+050; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 23, 2018; received by TRCA on April 23, 2019;
- Drawing #: 1078-2014-02-27; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Plan & Profile STA. 7+050 to STA. 7+375; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 23, 2018; received by TRCA on April 23, 2019;
- Drawing #: 1078-2014-02-28; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Plan & Profile STA. 7+375 to STA. 7+700; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 23, 2018; received by TRCA on April 23, 2019;
- Drawing #: 1078-2014-02-29; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Plan & Profile STA. 7+700 to STA. 8+050; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 23, 2018; received by TRCA on April 23, 2019;
- Drawing #: 1078-2014-02-30; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Plan & Profile STA. 8+050 to STA. 8+400; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 23, 2018; received by TRCA on April 23, 2019;
- Drawing #: 1078-2014-02-31; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Plan & Profile STA. 8+400 to STA. 8+700; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 23, 2018; received by TRCA on April 23, 2019;
- Drawing #: 1078-2014-02-32; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Plan & Profile STA. 8+700 to STA. 9+000; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 23, 2018; received by TRCA on April 23, 2019;
- Drawing #: 1078-2014-02-33; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Plan & Profile STA. 9+000 to STA. 9+300; prepared by Black & Veatch

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- in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 23, 2018; received by TRCA on April 23, 2019;
- **Drawing #: 1078-2014-02-34; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Plan & Profile STA. 9+300 to STA. 9+625; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 23, 2018; received by TRCA on April 23, 2019;**
  - **Drawing #: 1078-2014-02-35; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Plan & Profile STA. 9+625 to STA. 9+950; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 23, 2018; received by TRCA on April 23, 2019;**
  - **Drawing #: 1078-2014-02-36; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Plan & Profile STA. 9+950 to STA. 10+300; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 23, 2018; received by TRCA on April 23, 2019;**
  - **Drawing #: 1078-2014-02-37; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Plan & Profile STA. 10+300 to STA. 10+600; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 23, 2018; received by TRCA on April 23, 2019;**
  - **Drawing #: 1078-2014-02-38; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Plan & Profile STA. 10+600 to STA. 10+900; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 23, 2018; received by TRCA on April 23, 2019;**
  - **Drawing #: 1078-2014-02-39; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Plan & Profile STA. 10+900 to STA. 11+250; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 23, 2018; received by TRCA on April 23, 2019;**
  - **Drawing #: 1078-2014-02-40; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Plan & Profile STA. 11+250 to STA. 11+505; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 23, 2018; received by TRCA on April 23, 2019;**
  - **Drawing #: 1078-2014-02-289; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Tunnel Instrumentation – 4SPK-4W08 Metrolinx Crossing 12; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 3; dated March 22, 2018; received by TRCA on April 23, 2019;**
  - **Drawing #: 1078-2014-02-288; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Tunnel Instrumentation – 4MTS Metrolinx Crossing 11; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 2; dated March 22, 2018; received by TRCA on April 23, 2019;**
  - **Drawing #: 1078-2014-02-287; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Tunnel Instrumentation – 4MAT Metrolinx Crossing 10; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 2; dated March 22, 2018; received by TRCA on April 23, 2019;**
  - **Drawing #: 1078-2014-02-286; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Tunnel Instrumentation – 4SUN/4QUE Metrolinx Crossing 9; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 2; dated March 22, 2018; received by TRCA on April 23, 2019;**

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- **Drawing #: 1078-2014-02-106; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Tunnel Instrumentation – Prince Edward Viaduct; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 22, 2018; received by TRCA on April 23, 2019;**
- **Drawing #: 1078-2014-02-105; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Tunnel Instrumentation – Gerrard Street Crossing; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 22, 2018; received by TRCA on April 23, 2019;**
- **Drawing #: 1078-2014-02-104; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Tunnel Instrumentation – Dundas Street Crossing; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 22, 2018; received by TRCA on April 23, 2019;**
- **Drawing #: 1078-2014-02-103; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Tunnel Instrumentation – Queen Street Crossing; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 22, 2018; received by TRCA on April 23, 2019;**
- **Drawing #: 1078-2014-02-102; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Tunnel Instrumentation – Eastern Avenue Crossing; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 22, 2018; received by TRCA on April 23, 2019;**
- **Drawing #: 1078-2014-02-101; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Tunnel Instrumentation – Don Valley Parkway Crossing; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 22, 2018; received by TRCA on April 23, 2019;**
- **Drawing #: 1078-2014-02-100; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Tunnel Instrumentation – Keating Rail Yard Track Crossing; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 22, 2018; received by TRCA on April 23, 2019;**
- **Drawing #: 1078-2014-02-99; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Tunnel Instrumentation – Metrolinx Crossing 8 & Millwood Rd.; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 2; dated March 22, 2018; received by TRCA on April 23, 2019;**
- **Drawing #: 1078-2014-02-98; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Tunnel Instrumentation – Metrolinx Crossing 7; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 2; dated March 22, 2018; received by TRCA on April 23, 2019;**
- **Drawing #: 1078-2014-02-97; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Tunnel Instrumentation – Metrolinx Crossing 6; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 2; dated March 22, 2018; received by TRCA on April 23, 2019;**
- **Drawing #: 1078-2014-02-96; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Tunnel Instrumentation – Metrolinx Crossing 5; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 3; dated March 22, 2018; received by TRCA on April 23, 2019;**
- **Drawing #: 1078-2014-02-95; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Tunnel Instrumentation – Metrolinx Crossing 4; prepared by Black &**

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- Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 2; dated March 22, 2018; received by TRCA on April 23, 2019;
- **Drawing #: 1078-2014-02-94; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Tunnel Instrumentation – Metrolinx Crossing 3; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 2; dated March 22, 2018; received by TRCA on April 23, 2019;**
  - **Drawing #: 1078-2014-02-93; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Tunnel Instrumentation – Metrolinx Crossing 2; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 2; dated March 22, 2018; received by TRCA on April 23, 2019;**
  - **Drawing #: 1078-2014-02-92; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Tunnel Instrumentation – Metrolinx Crossing 1; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 3; dated March 22, 2018; received by TRCA on April 23, 2019;**
  - **Drawing #: 1078-2014-02-91; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Instrumentation Details and Schedule; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 3; dated March 22, 2018; received by TRCA on April 23, 2019;**
  - **Drawing #: 1078-2014-02-143; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Precast Concrete Tunnel Lining Geometric Layout; prepared by Black & Veatch in association with R.V. Anderson Associates Limited on behalf of City of Toronto; Revision No. 1; dated March 22, 2018; received by TRCA on April 23, 2019.**

### **RATIONALE**

The application was reviewed by staff on the basis of the following information:

#### Proposal:

The City of Toronto is embarking on a comprehensive program to construct a new wet weather flow system to greatly reduce combined sewer overflows (CSOs) currently flowing into the Don River which will eventually help improve the water quality of the Don River and Inner Harbor. The intent of the program is to provide an optimized solution that ultimately delist the Don River and Inner Harbor as an Area of Concern under the Canada-United States Great Lakes Water Quality Agreement as well as improve the dry weather flow (DWF) sewer system's efficiency and security.

The City completed an Environmental Assessment (EA) in 2012 to identify solutions for improvements that were built upon the results of the [City's 2003 Wet Weather Flow Master Plan \(WWFMP\)](#). TRCA was involved in the EA review and provided technical comments on the preferred solutions which included the [Lower Don Tunnel/Coxwell Tunnel](#); [Taylor Massey Creek Tunnel](#), Inner Harbor Tunnel, several underground storage tanks; upgrades to North Toronto Treatment Plant, a new treatment facility south of the existing Ashbridges Bay Treatment Plant and a new pumping station at Ashbridges Grove Park. Due to funding allocations, the City is proposing to implement the preferred solution in five stages, and over a 25-year time frame; and this proposal is part of the first phase of project implementation.

This phase of the project implementation includes construction of a 10.5 kilometer long tunnel which will be approximately 6.3m diameter wide within the bedrock about 50m below the ground surface. The tunnel will commence just south of Lake Shore Boulevard at Shaft 1 (IHES-2B) at Ashbridges Bay Treatment Plant travelling westwards and northwards after crossing the Don River valley just south of the railway corridor at Lake Shore Boulevard, intercepted by five (5)



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access shafts and thirteen (13) adit shafts (also known as the Wet Weather Flow Connections), terminating at the Coxwell Ravine Park, located just west of Taylor Massey Creek. The 5 access shafts (also known as Shafts IHES-2B, LDS-3B, BB-1, NTTPT-1, and CX-1A) are approximately 21.5 m wide in diameter and intercept the tunnel approximately three to six kilometers apart.

Construction will occur using a tunnel boring machine (TBM) within the Georgian Bay Formation bedrock and excavated in a single pass using a shielded rock TBM equipped with a vacuum erection system. A tail tunnel connection will be built from Shaft IHES 2 (b) to the new pumping station (IPS) at the Ashbridges Bay Treatment Plant (ABTP) and another connection from CX 1(a) to the existing Coxwell Sanitary Trunk Sewer shaft at the Coxwell Ravine Park.

The TBM will be lowered into Shaft 1 (IHES-2B) near the ABTP and would be driven about 10.5 km upstream passing through all 5 access shafts and 13 adit tunnels to the terminus Shaft 5 - CX-1A. The TBM will be removed from Shaft 5 and trucked away. Each shaft will be excavated down to the tunnel invert before the TBM reaches it to facilitate inspection and maintenance of the TBM. All of the excavated rock will be loaded onto a conveyor belt at the back end of the TBM and the conveyor belt will transport all of the excavated rock to Shaft 1. All excavated rock will be removed at Shaft 1 and then hauled to an appropriate disposal site.

Since the TBM is equipped with a vacuum erection system, installation of the pre-cast segmental tunnel lining (PCTL) within the tunnel, will occur immediately behind the TBM cutter head using precast concrete segments. The tunnel will have a final lined inside diameter of 6.3m (excavated diameter will be approximately 7.3m). All of the segments required to line the tunnel between Shafts 1 and 3 will be lowered into the tunnel at Shaft 1 and hauled to the back end of the TBM by a train. Similarly, all of the segments required to line the tunnel between Shafts 3 and 5 will be lowered into the tunnel at Shaft 3. Grout will be used to fill the annular space between the excavated rock and the outside of the liner segments. Grouting will be completed immediately after each ring of segments is assembled inside the tunnel. Grout will be delivered to each of the shaft sites and pumped to the TBM.

Groundwater inflows into the tunnel are expected to be minor as the tunnelling is occurring within the Georgian Bay Formation bedrock; however, any inflows will be localized and appropriately controlled by pumping from sumps. There are no vegetation removals, flood or erosion hazard impacts associated with this phase of the project as all works will occur underground approximately fifty (50) meters below the existing ground surface. TRCA has issued separate permits for each shaft construction. Construction of the tunnel is proposed to commence during the winter of 2019 over several years.

### Control of Flooding:

Although the project site is located within the Don River flood plain, the proposed works are not anticipated to impact flooding, flood storage or conveyance of flood waters. As a precautionary measure and upon TRCA request, the City construction contractor will implement a flood contingency plan during the construction period to ensure the protection of life and property as well as to allow for flood water conveyance. Once construction is complete, all construction equipment and staging materials will be removed from the site, then the shaft sites will be regraded and restored to its original condition or better.

### Pollution:

Erosion and sediment control measures installed for each shaft location will be in place during the construction of the tunnel including sedimentation traps (2), sedimentation ditches, silt



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fences, and catch basin protection. These measures will be implemented to prevent the release of construction generated sediments into Taylor Massey Creek, Yellow Creek and the Don River. Erosion and sediment control measures have been provided in accordance with the Greater Golden Horseshoe Area Conservation Authorities Erosion and Sediment Control Guidelines for Urban Construction (2006).

Dynamic Beaches:

Not applicable.

Erosion:

There are no impacts identified to slope stability or erosion as a result of these works.

Conservation of Land:

There are no inwater works associated with this project.

*Plantings*

The City of Toronto Tree Protection Policy and Specifications for Construction near trees will be adhered to during the construction period for each shaft site. There are no vegetation removals associated with the tunnel construction. Surface site restoration will occur at each shaft location in accordance other TRCA permits for the shaft construction.

Policy Guidelines:

This proposal complies with Section 8.9, Infrastructure Policies of The Living City Policies for Planning and Development in the Watersheds of the Toronto and Region Conservation Authority.

**CFN: 57946 - Application #: 0678/17/TOR**

**Report Prepared by: Renee Afoom-Boateng, extension 5714**

**Email: [renee.afoom-boateng@trca.ca](mailto:renee.afoom-boateng@trca.ca)**

**For information contact: Renee Afoom-Boateng, extension 5714**

**Email: [renee.afoom-boateng@trca.ca](mailto:renee.afoom-boateng@trca.ca)**

**Date: October 23, 2019**