

PERMIT APPLICATION 11.17 IS A MAJOR APPLICATION - REGULAR

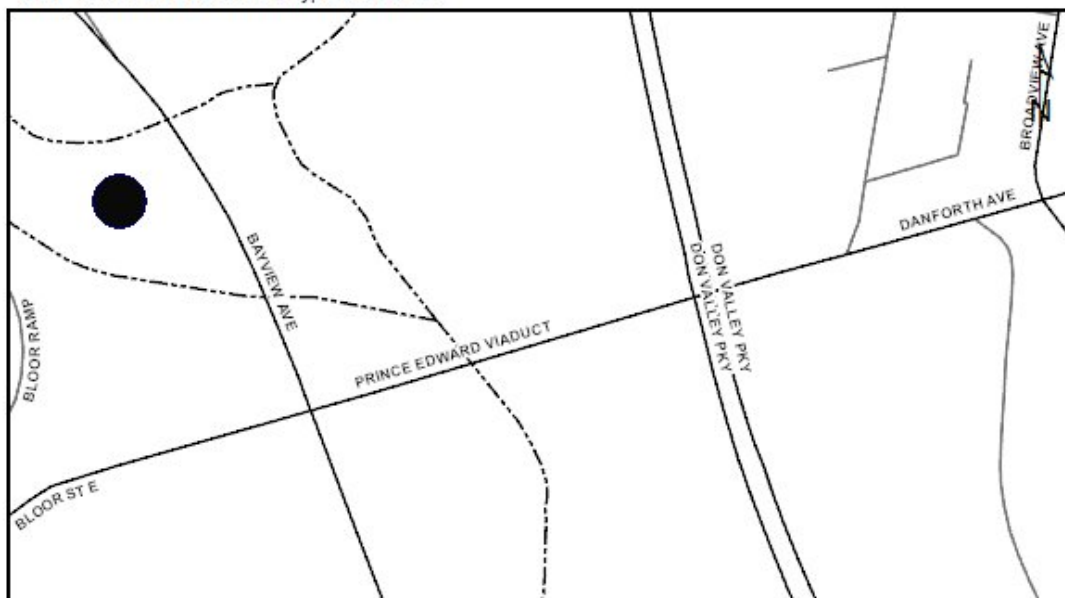
Applications that involved a more complex suite of technical studies to demonstrate consistency with policies; applications that cover a significant geographic area (e.g. subdivisions, stormwater management ponds), extensive modifications to the landscape, major infrastructure projects, emergency infrastructure works, resolution of violations/after the fact permits, trail construction.

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

11.17 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 on, (northwest quadrant of Bayview Avenue below the Prince Edward Viaduct, near Castle Frank Road and Bloor Street East), 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 implement the first stage of the Don River and Central Waterfront project which involves the construction of a twenty one (21) m diameter stormwater shaft near the Bloor Street and Bayview Avenue ramp, in the City of Toronto. This shaft is one of five shafts proposed as part of a comprehensive program to greatly reduce combined sewer overflows (CSOs) flowing into the Don River. This shaft will be located south of Yellow Creek, near Bayview Avenue on an area used as a sports field by the Toronto District School Board, located just north of the Prince Edward Viaduct. The shaft will be constructed from the ground surface to connect to the 10.4 km long and 6.3m diameter tunnel located approximately fifty (50) meters below ground surface. The warm water construction timing window of July 1 to March 31 will apply to this proposal.

MAP LOCATION: Coxwell Bypass Shaft BB-1



The permit will be issued for the period of September 7, 2018 to September 6, 2020 in accordance with the following documents and plans which form part of this permit:

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- **Sheet C20 – Drawing No. 1078-2014-02-25; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Plan & Profile Sta. 6 + 400 to Sta. 6 + 750; Prepared by R.V. Anderson Associates Limited and Black & Veatch on behalf of City of Toronto; Dated September 2017; Issued for Construction on March 2018, received by TRCA on August 22, 2018;**
- **Sheet C21 – Drawing No. 1078-2014-02-26; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Plan & Profile Sta. 6 + 750 to Sta. 7 + 050; Prepared by R.V. Anderson Associates Limited and Black & Veatch on behalf of City of Toronto; Dated September 2017; Issued for Construction on March 2018, received by TRCA on August 22, 2018;**
- **Sheet C57 – Drawing No. 1078-2014-02-62; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, BB1 Construction Compound – Removal Plan; Prepared by R.V. Anderson Associates Limited and Black & Veatch on behalf of City of Toronto; Dated October 2017; Issued for Construction on March 2018, received by TRCA on August 22, 2018;**
- **Sheet C58 – Drawing No. 1078-2014-02-63; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, BB1 Construction Compound – Site Plan; Prepared by R.V. Anderson Associates Limited and Black & Veatch on behalf of City of Toronto; Dated September 2017; Issued for Construction on March 2018, received by TRCA on August 22, 2018;**
- **Sheet C59 – Drawing No. 1078-2014-02-64; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, BB1 Construction Compound – Erosion and Sediment Control Plan; Prepared by R.V. Anderson Associates Limited and Black & Veatch on behalf of City of Toronto; Dated September 2017; Issued for Construction on March 2018, received by TRCA on August 22, 2018;**
- **Sheet C60 – Drawing No. 1078-2014-02-65; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, BB1 Construction Compound – Site Restoration; Prepared by R.V. Anderson Associates Limited and Black & Veatch on behalf of City of Toronto; Dated September 2017; Issued for Construction on March 2018, received by TRCA on August 22, 2018;**
- **Sheet C61 – Drawing No. 1078-2014-02-66; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, BB1 Construction Compound – Traffic Control Plan; Prepared by R.V. Anderson Associates Limited and Black & Veatch on behalf of City of Toronto; Dated September 2017; Issued for Construction on March 2018, received by TRCA on August 22, 2018;**
- **Sheet C62 – Drawing No. 1078-2014-02-67; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, BB-1 Permanent Site Plan; Prepared by R.V. Anderson Associates Limited and Black & Veatch on behalf of City of Toronto; Dated September 2017; Issued for Construction on March 2018, received by TRCA on August 22, 2018;**
- **Sheet C63 – Drawing No. 1078-2014-02-68; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, BB-1 Construction Compound – Ventilation Shaft Plan and Profile; Prepared by R.V. Anderson Associates Limited and Black & Veatch on behalf of City of Toronto; Dated September 2017; Issued for Construction on March 2018, received by TRCA on August 22, 2018;**
- **Sheet C64 – Drawing No. 1078-2014-02-69; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, BB-1 Construction Compound – Grading Sections (1 of 2); Prepared by R.V. Anderson Associates Limited and Black & Veatch on behalf of City of Toronto; Dated September 2017; Issued for Construction on March 2018, received by TRCA on August 22, 2018;**

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- **Sheet C65 – Drawing No. 1078-2014-02-70; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, BB-1 Construction Compound – Grading Sections (2 of 2); Prepared by R.V. Anderson Associates Limited and Black & Veatch on behalf of City of Toronto; Dated September 2017; Issued for Construction on March 2018, received by TRCA on August 22, 2018;**
- **Sheet C81 – Drawing No. 1078-2014-02-86; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Construction Compound Site Plan Details; Prepared by R.V. Anderson Associates Limited and Black & Veatch on behalf of City of Toronto; Dated September 2017; Issued for Construction on March 2018, received by TRCA on August 22, 2018;**
- **Sheet C82 – Drawing No. 1078-2014-02-87; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Construction Compound Siltation and Erosion Control Details 1; Prepared by R.V. Anderson Associates Limited and Black & Veatch on behalf of City of Toronto; Dated September 2017; Issued for Construction on March 2018, received by TRCA on August 22, 2018;**
- **Sheet C84 – Drawing No. 1078-2014-02-89; Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel, Construction Compound – General Site Fencing; Prepared by R.V. Anderson Associates Limited and Black & Veatch on behalf of City of Toronto; Dated September 2017; Issued for Construction on March 2018, received by TRCA on August 22, 2018;**
- **Sheet S13 – Drawing No. 1078-2014-02-121, Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel; BB -1- General Arrangement – Platforms, Ladders & Piping; Prepared by R.V. Anderson Associates Limited and Black & Veatch on behalf of City of Toronto; Dated September 2017; Issued for Construction on March 2018, received by TRCA on August 22, 2018;**
- **Sheet S14 – Drawing No. 1078-2014-02-122, Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel; BB -1- Shaft Plans; Prepared by R.V. Anderson Associates Limited and Black & Veatch on behalf of City of Toronto; Dated September 2017; Issued for Construction on March 2018, received by TRCA on August 22, 2018;**
- **Sheet S15 – Drawing No. 1078-2014-02-123, Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel; BB -1- Shaft Sections; Prepared by R.V. Anderson Associates Limited and Black & Veatch on behalf of City of Toronto; Dated September 2017; Issued for Construction on March 2018, received by TRCA on August 22, 2018;**
- **Sheet S16 – Drawing No. 1078-2014-02-124, Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel; BB -1 - Shaft Reinforcement Details; Prepared by R.V. Anderson Associates Limited and Black & Veatch on behalf of City of Toronto; Dated September 2017; Issued for Construction on March 2018, received by TRCA on August 22, 2018;**
- **Sheet S17 – Drawing No. 1078-2014-02-125, Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel; BB -1- Shaft Details; Prepared by R.V. Anderson Associates Limited and Black & Veatch on behalf of City of Toronto; Dated September 2017; Issued for Construction on March 2018, received by TRCA on August 22, 2018;**
- **Sheet S18 – Drawing No. 1078-2014-02-126, Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel; BB -1- Ventilation Chamber Reinforcement Details; Prepared by R.V. Anderson Associates Limited and Black & Veatch on behalf of City of Toronto; Dated September 2017; Issued for Construction on March 2018, received by TRCA on August 22, 2018;**
- **Sheet S31 – Drawing No. 1078-2014-02-139, Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel; General – Typical Structural Details 1; Prepared by R.V. Anderson Associates Limited and Black & Veatch on behalf of City of Toronto;**

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Dated May 2016; Issued for Construction on March 2018, received by TRCA on August 22, 2018;

- Sheet S32 – Drawing No. 1078-2014-02-140, Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel; General – Typical Structural Details 2; Prepared by R.V. Anderson Associates Limited and Black & Veatch on behalf of City of Toronto; Dated August 2017; Issued for Construction on March 2018, received by TRCA on August 22, 2018;
- Sheet S33 – Drawing No. 1078-2014-02-141, Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel; General – Shaft Temporary Works; Prepared by R.V. Anderson Associates Limited and Black & Veatch on behalf of City of Toronto; Dated May 2016; Issued for Addendum 3 on November 2017, received by TRCA on August 22, 2018;
- Sheet S39 – Drawing No. 1078-2014-02-159, Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel; General – Typical Structural Details 3; Prepared by R.V. Anderson Associates Limited and Black & Veatch on behalf of City of Toronto; Dated December 2017; Issued for Construction on March 2018, received by TRCA on August 22, 2018;
- Sheet A1 – Drawing No. 1078-2014-02-150, Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel; BB - 1 – Vent Shaft Enclosure Plans; Prepared by R.V. Anderson Associates Limited and Black & Veatch on behalf of City of Toronto; Dated September 2017; Issued for Construction on March 2018, received by TRCA on August 22, 2018;
- Sheet A2 – Drawing No. 1078-2014-02-151, Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel; BB -1 – Vent Shaft Enclosure Sections; Prepared by R.V. Anderson Associates Limited and Black & Veatch on behalf of City of Toronto; Dated September 2017; Issued for Construction on March 2018, received by TRCA on August 22, 2018;
- Sheet A7 – Drawing No. 1078-2014-02-156, Don & Waterfront Wet Weather Flow System, Coxwell Bypass Tunnel; Vent Shaft Enclosure Details; Prepared by R.V. Anderson Associates Limited and Black & Veatch on behalf of City of Toronto; Dated September 2017; Issued for Construction on March 2018, received by TRCA on August 22, 2018;
- Letter of Undertaking, dated September 5, 2018 prepared by Samantha Fraser (City of Toronto), to provide additional information including flood contingency plans, environment management and site specific information and to address all outstanding concerns and issues to TRCA's satisfaction, received by TRCA on September 5, 2018.

Application-Specific Permit Conditions

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

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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. The first phase of project implementation include approximately 10.4 kilometer long tunnel which will be approximately 6.3m diameter wide within the bedrock; starting from Shaft IHES 2 (b) south of the Lakeshore Boulevard East, to the Coxwell Shaft CX 1 (a) located at the Coxwell Ravine Park. A tail tunnel connection will be built from Shaft IHES 2 (b) to the new pumping station (IPS) at the Ashbridges Bay Treatment Plant and another connection from CX 1(a) to the existing Coxwell Sanitary Trunk Sewer shaft at the Coxwell Ravine Park.

BB-1 shaft is approximately 21.4m wide shaft constructed from the existing ground surface to approximately 51m below existing grades using a Tunnel Boring Machine (TBM) and connecting to the wet weather flow tunnel approximately 6.3m wide. Currently, while the site is owned by the City of Toronto, it is used as a sports field by the Toronto District School Board and is characterized by a baseball diamond, sports tracks and fence. The City has made alternative lease arrangements with the School Board to allow for the use of the site for construction staging. The entire staging area will be secured by a site hoarding fence and double swing gates at the access point. During construction, the shaft site will be overlaid by geotextile and 450mm granular top surface and limestone, and will contain a dewatering discharge equipment, crane pad for crane trailers and parking areas. The shaft will be constructed using secant pile walls from the surface through to the overburden bedrock. The tunnel will be connected by a 21m long 2.1m diameter ventilation pipe, ventilation connection box and (1.8m by 4m wide) air ventilation chamber. The air ventilation chamber will be approximately 1m above the ground level and above the regional flood elevations, with a protective access hatch. The surface of the BB 1 shaft will be buried approximately 0.5m below the restored grade of the sports field with the only surface feature visible being the air ventilation chamber. The baseball field will be regraded to existing conditions and removal of all construction staging details including access road, sediment control and dewatering system, and construction equipment. The site will be reseeded with a 300mm clean topsoil and sports track to be restored in same location and with similar surface and sub base materials. Construction is proposed to commence in 2018 for sixty (60) months (till 2022).

This project is related to TRCA Permit No. C180724/CITY OF TORONTO (CFN 54144) that was approved by the TRCA Executive Board on July 6, 2018 to allow for the construction of Shaft LDS 3 (B) located at the Keating Rail Yard area in Toronto.

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

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equipment and staging materials will be removed from the site, then the construction site grades, and sport field surfaces will be restored to its original condition or better.

Pollution:

Erosion and sediment control measures including, rock check dams, sedimentation traps (2) , sedimentation ditches, silt fences, catch basin protection will be installed prior to construction and maintained for the entire duration of construction. These measures will be implemented to prevent the release of construction generated sediments into 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:

The proposal will not have any implications to dynamic beaches.

Erosion:

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

Conservation of Land:

The warm water construction timing window of July 1 to March 31 will apply to this proposal.

Plantings

The City of Toronto Tree Protection Policy and Specifications for Construction near trees will be adhered to during the construction period. Approximately 21 trees will be removed to prepare the site for construction. Tree removals will occur outside of the breeding bird period (April 1st to August 15th) to reduce impacts to wildlife. These trees will be replaced in line with the City of Toronto Tree removals ratio of 3:1. Since the baseball field will be regraded to existing conditions, the site will be reseeded with a 300mm clean topsoil and sports track to be restored in same location using the similar surface and sub base materials. The replacement trees will be planted as part of a comprehensive habitat improvement plan in an area adjacent to the North Toronto Treatment Plant further upstream of the site.

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: 54141 - Application #: 0602/15/TOR

Report Prepared by: Renee Afoom-Boateng 5714 rafoom-boateng@trca.on.ca

For information contact: Renee Afoom-Boateng 5714 rafoom-boateng@trca.on.ca

Date: September 5, 2018