Don River Replacement Project – Final Monitoring Report

FINAL REPORT

June 28, 2021

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Sign-off Sheet

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Abbreviations

DVP	Don Valley Parkway
Enbridge	Enbridge Gas Inc.
ER	Environmental Report
FPL	Flood Protection Landform
LTC	Leave to Construct
NPS	Nominal Pipe Size
OEB	Ontario Energy Board
ROW	Right-of-Way
Stantec	Stantec Consulting Ltd.
TRCA	Toronto Region Conservation Authority
TWS	Temporary Workspace

1.0 INTRODUCTION

On November 29, 2018, the Ontario Energy Board (OEB) granted Enbridge Gas Inc. (Enbridge) the Leave to Construct (LTC) for the Nominal Pipe Size (NPS) 30 Don River Replacement Project ("the Project"). As part of the *OEB's EB-2018-0108 Decision and Order, Schedule B - Conditions of Approval* (OEB 2018) Enbridge is required to complete a Final Monitoring Report to be filed to the OEB within 15 months of the in-service date. As reported to the OEB, the project's in-service date was April 21, 2020, making the filing date for the Final Monitoring Report July 21, 2021.

In support of the Project, Enbridge conducted various studies (see Table 1) to assist in the design and planning and permitting process, identify environmental and socio-economic constraints potentially resulting from construction, and to minimize and mitigate impacts through the application of documented mitigation measures.

Table 1: Studies Completed for the Project

Report Title	Author	Date
Proposed NPS 30" Don River Natural Gas Replacement Environmental Report	Stantec Consulting Ltd.	August 15, 1017
Environmental Protection Plan NPS 30" Don River Natural Gas Replacement Project	Stantec Consulting Ltd.	September 2017
Stage 1 Archaeological Assessment NPS 30 Don River Replacement Supply Project EA, City of Toronto, Ontario	Stantec Consulting Ltd.	March 21, 2018
Geotechnical and Hydrogeological Investigation Report NPS 30 Don River Crossing via Micro-tunneling	Stantec Consulting Ltd.	January 25, 2019
Water Taking and Discharge Report NPS 30 Don River Crossing via Micro-tunneling	Stantec Consulting Ltd.	July 22, 2019
Arborist Report DVP & Eastern Ave – NPS 30 Replacement Ward 30 – R1	Fredi Buob	August 10, 2018
Displacement Monitoring Program NPS 30 Don River Crossing via Micro-tunneling Metrolinx Railway Crossing	Stantec Consulting Ltd.	December 4, 2018
Displacement Monitoring Program Toronto and Region Conservation Authority Flood Protection Landform NPS 30 Don River Crossing via Micro-tunneling	Stantec Consulting Ltd.	December 11, 2018
NPS 30 Don River Replacement Cultural Heritage Assessment Report	Stantec Consulting Ltd.	August 1, 2018
NPS 30 Don River Replacement Heritage Impact Assessment	Stantec Consulting Ltd.	August 15, 2018

1.1 SCOPE

The scope of this Final Monitoring Report has been prepared in address the following *EB-2018-0108 Decision and Order, Schedule B - Conditions of Approval*:

- *Enbridge shall implement all the recommendations of the Environmental Report filed in the proceeding, and all the recommendations and directives identified by the Ontario Pipeline Coordinating Committee review.*
- *Both during and after construction, Enbridge shall monitor the impacts of construction, and shall file with the OEB one paper copy and one electronic (searchable PDF) version of each of the following reports:*
  - *a post construction report, within three months of the in-service date, which shall:*
    - *i. provide a certification, by a senior executive of the company, of Enbridge's adherence to Condition 1;*
    - *ii. describe any impacts and outstanding concerns identified during construction;*
    - *iii. describe the actions taken or planned to be taken to prevent or mitigate any identified impacts of construction;*
    - *iv. include a log of all complaints received by Enbridge, including the date/time the complaint was received, a description of the complaint, any actions taken to address the complaint, the rationale for taking such actions; and*
    - *v. provide a certification, by a senior executive of the company, that the company has obtained all other approvals, permits, licences, and certificates required to construct, operate and maintain the proposed project.*
  - *a final monitoring report, no later than fifteen months after the in-service date, or, where the deadline falls between December 1 and May 31, the following June 1, which shall:*
    - *i. provide a certification, by a senior executive of the company, of Enbridge's adherence to Condition 3;*
    - *ii. describe the condition of any rehabilitated land;*
    - *iii. describe the effectiveness of any actions taken to prevent or mitigate any identified impacts of construction;*
    - *iv. include the results of analyses and monitoring programs and any recommendations arising therefrom; and*

> *v. include a log of all complaints received by Enbridge, including the date/time the complaint was received, a description of the complaint, any actions taken to address the complaint, the rationale for taking such actions*

A *Post-Construction Interim Monitoring Report EB-2018-0108* (Enbridge 2020) was filed with the OEB on August 4, 2020 addressing condition 6a of the *Conditions of Approval*.

This Final Monitoring Report documents the status and the remaining site restoration activities associated with the Project and will be filed with the OEB no later than July 21, 2021 pursuant to condition 6b of the *Conditions of Approval.* Specifically, this report summarizes the following:

- the conditions of the temporary workspace (TWS) and right-of-way (ROW) including plans or actions taken to mitigate impacts from construction
- The status of the monitoring programs conducted in support of the Project that were summarized in the Post-Construction Interim Monitoring Report and/or were required upon the completion of construction
- All complaints or issues either unresolved or occurred since the filing of the Post-Construction Interim Monitoring Report (Enbridge 2020)
- A discussion of the success of mitigation measures and restoration activities which were outlined in the Post-Construction Interim Monitoring Report
- Outstanding restoration and/or monitoring requirements

1.2 SITE VISIT

A monitoring site visit was conducted on May 21, 2021 to assess the conditions of the ROW and TWS in support of the Final Monitoring Report to the OEB. The site visit included a reconnaissance assessment to visually assess the following:

- vegetation establishment and growth
- stabilization of the site and identification of locations that may be susceptible to erosion
- subsidence at either TWS
- outstanding reclamation requirements

The purpose of the site visit was to determine if additional mitigation measures, restoration or monitoring will be required.

1.3 CERTIFICATION

Certification, by a senior executive of Enbridge as part of the Conditions of Approval is included in Appendix C of this report.

2.0 NPS 30 DON RIVER REPLACEMENT PROJECT

2.1 PROJECT DESCRIPTION

Enbridge replaced and abandoned approximately 0.35 km of extra high-pressure steel NPS 30 natural gas pipeline supplying the City of Toronto, Ontario. The replaced section of pipeline was partially located on bridge infrastructure owned by Enbridge that spans the Don River.

The replaced segment originates at the existing NPS 30 pipeline on the west side of the Don River, 25 m north of the bridge. From here, it travels south along Bayview Avenue, east across the Don River and Don Valley Parkway (DVP) via a trenchless crossing. The replaced section of pipeline terminates at Sunlight Park Road, where it connects to the existing NPS 30 pipeline (see Figure 1: Appendix A for Project Overview).

2.2 SCHEDULE

Construction of the Project began on May 14, 2019 and was energized with an in-service date of April 21, 2020. Enbridge filed notifications of these Project milestones with the OEB. in accordance with the Conditions of Approval.

2.3 RESTORATION AND CURRENT CONDITIONS

Restoration of the site was conducted upon completion of the installation in April/May 2020. Excavations were backfilled and packed in lifts to limit the potential for subsidence that may result given the depth of the excavations at the entry and exit pits.

Disturbed areas were either terraseeded or hydroseeded at the appropriate time of year to promote the greatest potential for vegetation establishment for stabilization. Disturbed areas were seeded with an appropriate ground vegetation cover crop to promote long-term stabilization of the soils.

2.3.1 West Side of Don River

Previously disturbed areas of the TWS on the west side of the Don River were terraseeded on a subsoil base (see Photo 1, Appendix B) during the appropriate season (early spring 2020). Terraseed was used to add an organic surface to the replaced soil and as a stabilizer on the reclaimed slope. Final restoration also included repairs to a recreational walking pathway through the TWS within the Corktown Common municipal park. The terraseeding occurred at the appropriate time of year to promote the highest potential for seed germination and vegetation survival.

Vegetation establishment ranged from moderate/good (see Photo 2, Appendix B) of predominately white clover (*Trifolium repens*) on the slope where the TWS was located. Vegetation establishment was poor/moderate at the bottom of the slope (see Photos 3 and 4, Appendix B). Bare areas are more concentrated at the base of the slope near the walking path which may require re-seeding to limit the

establishment of weeds at the site. There was no ponding of water nor visual observations of subsidence within the TWS on the west side of the Don River. However, the site is actively being monitored for settling (see Section 2.4.1).

No erosion concerns (rills or gullies) were identified along the slopes due to the establishment of the clover and the existing organic matter retained on the slope from the initial application of terraseed. There are also no signs of significant deposition at the bottom of the slope that would indicate active sedimentation. Based on the conditions of the site visit, additional seeding will occur to reduce the potential for weeds to establish on the slope; however, no additional erosion control measures are recommended.

The walking path through Corktown Common was reinstated during final reclamation and remains in excellent condition with no evidence of subsidence, cracking or damage (see Photos 5 and 6, Appendix B).

2.3.2 East Side of Don River

The TWS was located within the interchange from the eastbound lane of Eastern Avenue onto the Don Valley Parkway (DVP) and along the northern curb of Sunlight Park Road. The area within the interchange was hydroseeded in May 2020 (see Photo 7 in Appendix B) upon the completion of backfilling of the excavation and restoration of the site. Concrete sidewalks/curbs and asphalt road allowances were also reinstated along Sunlight Park Road as part of the final restoration.

Overall, areas that were hydroseeded in 2020 within the interchange have good to excellent vegetation establishment throughout. See Photos 8 to 12 in Appendix B for the general condition of vegetation establishment on the TWS inside the DVP off-ramp. There were no evidence of subsidence, erosion, sedimentation or large bare areas noted within this area of the TWS. Overall, the site is very stable and does not require additional re-vegetation. Areas with moderate vegetation establishment are anticipated to revegetate naturally.

No obvious settling at the drill entry pit, along Sunlight Park Road or major cracks in the sidewalk were noted (see Photos 13 and 14, Appendix B). Overall, the restoration work completed on hardened surfaces appeared to be in good condition. There were some bare vegetation areas adjacent the repaired sidewalk that appeared similar to the surrounding vegetation and is likely a result of poor growing conditions in summer 2020. Additional seeding during appropriate conditions (fall 2021) may improve the area aesthetically; however, the area is not at risk of erosion.

2.4 MONITORING PROGRAMS

Monitoring programs in support of the Project after the submission of the Post-Construction Interim Monitoring Report (Enbridge 2020) included a displacement monitoring program for the Toronto Region Conservation Authority (TRCA) of the Flood Protection Landform (FPL) for the Don River. No other monitoring programs were completed since the Post-Construction Interim Monitoring Report was filed with the OEB.

2.4.1 Settlement Monitoring

The *Post-Construction Interim Monitoring Report* (Enbridge 2020) indicated that monitoring continues on the FPL on the west side of the Don River crossing as committed to the TRCA. Results of the monitoring from 2019 to May 2021 suggested that some settling of the FPL and the area around the FPL had, and continues to occur. However, recent data collected indicates that settlement rates appear to have slowed during 2021. Monitoring locations and the scope of the assessment has continued to increase/expand since monitoring commenced to support the data obtained during the program.

The TRCA permit commitment requires completing settlement monitoring twice per year for 4 years until 2026. Currently, Enbridge is collecting monthly readings while the settlement continues including adding supplementary monitoring points and the installation of some boreholes to monitor change in groundwater levels.

3.0 STAKEHOLDER RELATIONS AND COMPLIANT LOG

This section of the Final Monitoring Report describes complaints received after the filing of the *Post-Construction Interim Monitoring Report* (Enbridge 2020) and the status of the unresolved complaints documented in the Post-Construction Interim Monitoring Report.

Enbridge tracked and responded to comments and complaints received throughout the duration of the construction and post-construction periods. Enbridge managed a communication log for the Project to track complaints received and the correspondence and actions executed to resolve the complaints. The log is a living document in which content is added as complaints, actions and resolutions are managed.

3.1 SUMMARY OF OUTSTANDING COMPLAINTS

During the construction and restoration phases of the Project, there were twenty-six (26) recorded complaints received by Enbridge. The 26 complaints were addressed prior to the filing of the *Post-Construction Interim Monitoring Report.* There were no residual concerns with the comments included in the *Post-Construction Interim Monitoring Report*.

Upon completion of construction, there have been no complaints received since the filing of the *Post-Construction Interim Monitoring Report.* Since there were no residual concerns associated with the construction and no complaints have been received since the filing of the *Post-Construction Interim Monitoring Report,* no consultation log has not been included in this report.

4.0 OUTSTANDING COMMITMENTS

4.1 RESTORATION

Final restoration occurred in April/May 2020 following completion of construction. The TWS was cleaned up and either terraseeded or hydroseeded with an appropriate seed mix to stabilize the site. The vegetation is well established on the eastern side of the Don River with excellent vegetation germination across most of the TWS with no significant erosion observed. No additional restoration is recommended on the east side of the Don River.

There are some bare areas noted on the west side of the Don River within Corktown Common. Although no erosion nor sedimentation of concern is visible, additional seeding will occur during appropriate conditions (fall 2021) to supress the potential for weed establishment across the site.

4.2 MONITORING PROGRAMS

4.2.1 Settlement Monitoring

The post-construction settlement monitoring program has been extended because the lands around the TWS on the west side of the Don River (Corktown Common) continues to settle. Additional monitoring points were established in December of 2020 and Stantec is in the process of permitting for additional borehole work within proximity to the remediated and backfilled excavated area. Results of the settlement monitoring program will continue (see Section 2.4.1) to be reported to the TRCA until the settling stops to the satisfaction of the TRCA.

5.0 SUMMARY

This Final Monitoring Report has been prepared in accordance with the *EB-2018-0108 Decision and Order, Schedule B - Conditions of Approval*. It documents the final conditions after construction and restoration activities were completed as part of the Project.

Measures implemented during construction and restoration activities have been successful. Enbridge will return to the site in fall 2021 to supplement the seeding efforts on the west side of the Don River. Results of the settlement monitoring program will continue to be reported to the TRCA until settlement stops to the satisfaction of the TRCA.

6.0 REFERENCES

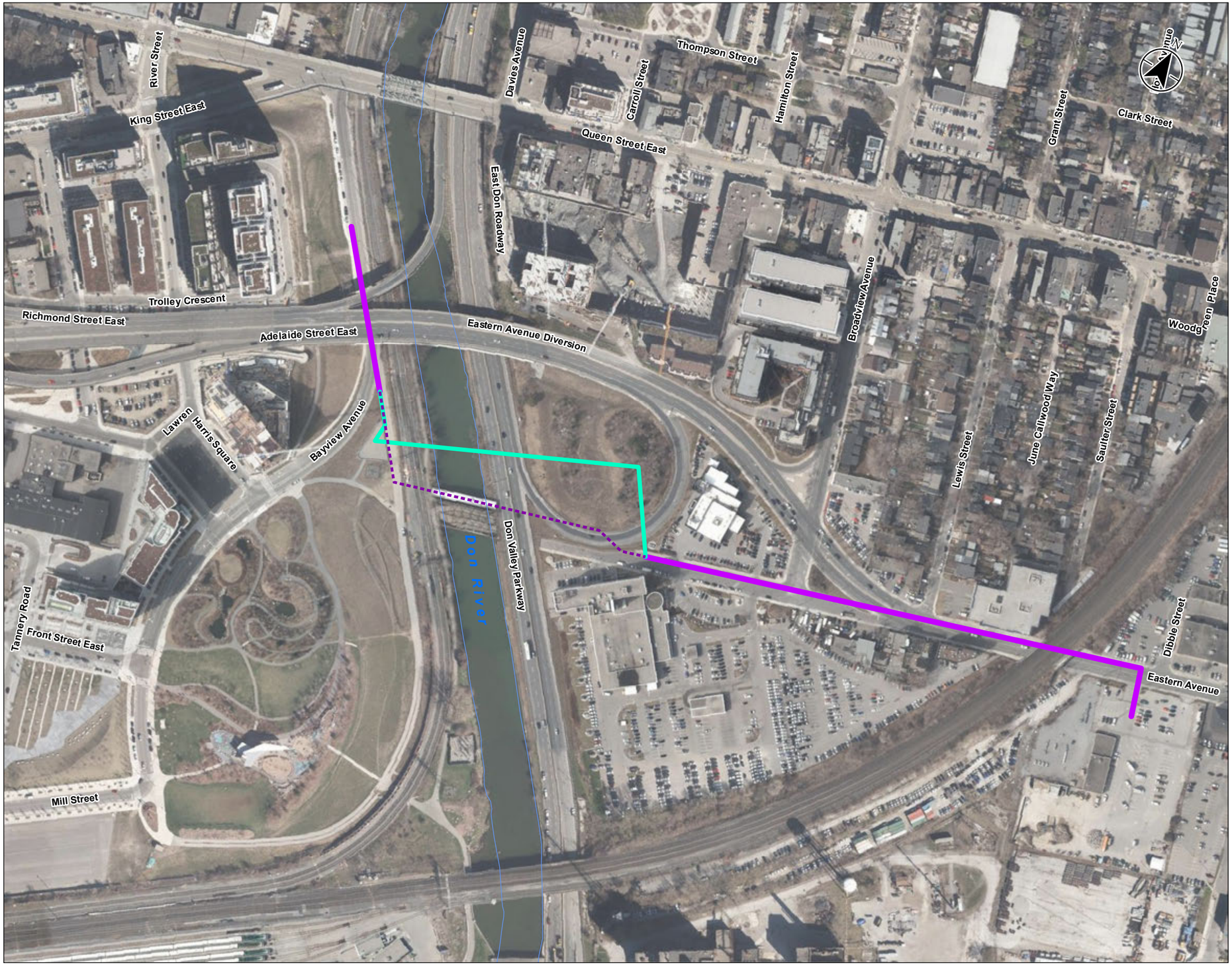
OEB. 2018. *Decision and Order EB-2018-0108 Enbridge Gas Distribution Inc. Don River 30" Pipeline Project.* November 29, 2018.

Enbridge 2020. *Post-Construction Interim Monitoring Report EB-2018-0108*. August 4, 2020.

Stantec 2021. *Displacement Monitoring Report 43 Instrumentation and Monitoring for Pipeline Installation via Microtunnelling, TRCA FPL, Toronto, Ontario.* Prepared for Enbridge. May 27, 2021.

APPENDIX A

Figures



Stantec

Legend

Enbridge Gas Features

- Existing NPS 30 Don Valley Gas Main
- Existing NPS 30 Don Valley Gas Main to be Abandoned
- Replacement Route

Natural Features

- Watercourse
- Waterbody

0 60 120 metres

1:3,000 (At original document size of 11x17)

Notes

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2018.
3. Orthoimagery © First Base Solutions, 2018. Imagery Date, 2017.

Project Location
City of Toronto

160950954 REVA
Prepared by SPE on 2018-07-30
Technical Review by PW on 2018-03-15

Client/Project
ENBRIDGE GAS DISTRIBUTION INC.
PROPOSED DON RIVER 30 INCH
NATURAL GAS PIPELINE REPLACEMENT

Figure No.
1

Title
Project Overview

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APPENDIX B
Photo Log

Photo 1: Terraseed application on TWS in Corktown Common (May 2020)

Photo 2: White clover established on slope of TWS in Corktown Common (May 2021)

Photo 3: Poor vegetation establishment within the TWS along the edge of the waling path in Corktown Common (May 2021)

Photo 4: Poor vegetation establishment within the TWS along the edge of the waling path in Corktown Common (May 2021)

Photo 5: Repaired walking path on the north section of the TWS at Corktown Common (May 2021)

Photo 6: Repaired walking path at the south section of the TWS at Corktown Common (May 2021)

Photo 7: East side of Don River TWS at Eastern Avenue and DVP Interchange, hydroseeded in 2020 (May 2020)

Photo 8: Drainage swale on Eastern Avenue offramp on to the DVP on the east side of the Don River (May 2021)

Photo 9: Vegetated TWS at the Eastern Avenue and DVP Interchange on the east side of the Don River (May 2021)

Photo 10: Vegetated TWS at the Eastern Avenue and DVP Interchange on the east side of the Don River (May 2021)

Photo 11: Vegetated TWS at the Eastern Avenue and DVP Interchange on the east side of the Don River (May 2021)

Photo 12: Enbridge pipeline marker adjacent to active construction at the Eastern Avenue and DVP Interchange (May 2021)

Photo 13: Conditions of grassed area and sidewalk on ROW along Sunlight Park Road (May 2021)

Photo 14: Repaired asphalt and sidewalk along Sunlight Park Road (May 2021)

APPENDIX C
Executive Certifications