

Creating Cycling Routes along Rail Lines

Date: November 21, 2019

To: Infrastructure & Environment Committee

From: General Manager, Transportation Services

Wards: All

SUMMARY

The purpose of this report is to provide information requested by City Council regarding the creation of off-road cycling routes along rail lines that traverse Toronto.

The Cycling Network Plan Update (2019) and the Bikeway Trails Implementation Plan (2012) each support the development of an extensive cycling network of on-street and off-road routes, and include several major trail projects along rail lines.

There are many corridors throughout Toronto that present opportunities for constructing multi-use trails, but there are also many corridors that come with significant barriers. Transportation Services, often in partnership with Parks, Forestry & Recreation, will continue to pursue trails along rail lines where possible, while recognizing the approach comes with a number of challenges:

- Property ownership and cost,
- Conflicts with future rail line expansions, and
- Safety and proximity requirements.

Transportation Services recognizes the importance of continuous, high order cycling routes, and as part of the Cycling Network Plan Update (2019) proposed a network of approximately 800 km of "Major City-Wide Cycling Routes", of which approximately 225 km (28%) are in place today. These corridors provide significant east - west and north - south cycling connections, some of which are off-road through hydro corridors, trails, and along rail lines, and many of which follow the street network.

Of the 800 km existing and proposed Major City-Wide Cycling Routes, approximately 115 km (14%) are off-road through ravines, hydro corridors, along rail lines and the waterfront, 115 km (14%) of which are existing¹.

¹ Trails are counted as centreline km, and routes along streets in lane km. If equated equally, trails actually account for approximately 40% of the 800 km network.

FINANCIAL IMPACT

The information in this report has no financial impact at this time. The capital funding required to implement new multi-use trails will be brought forward to Council for approval as part of future Capital Budget & Plan submissions.

The Chief Financial Officer and Treasurer has reviewed this report and agrees with the financial impact information.

EQUITY IMPACT STATEMENT

The City's Equity Lens Tool has been used to review the high level objective of creating off-road cycling connections through hydro corridors, ravines, and along rail lines. An equity lens will continue to be employed through all phases of prioritization, consultation, and delivery of multi-use trail projects.

Rail corridors can create barriers and physically isolate the communities they border and cut through. The prioritization and development of paths and safe crossings have, in many places, exacerbated inequality by concentrating resources in wealthier and more affluent neighbourhoods².

Identifying potential locations for future multi-use trails within ravine, rail and hydro corridors in historically underserved communities may have positive impacts on equity-seeking groups by improving multi-modal connections, reducing physical and social isolation, and encouraging healthy lifestyles through increased opportunities for regular physical movement. It is important, especially for vulnerable populations, that trails be well-lit, maintained, and provide frequent access points.

This process must engage equity-seeking groups in the identification and redevelopment of space in their communities in order to ensure the proposed connections and infrastructure meet their needs.

DECISION HISTORY

On July 17, 2019, the Cycling Network Plan Update was adopted, with amendments, by City Council. As part of its decision, City Council requested the General Manager, Transportation Services to report back with information on creating off-road cycling super highways along the rail lines that traverse Toronto, from the north to the south, and from the east to the west.

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2019.IE6.11>

2 O'Manique, S. (2019). Railroad blues. Canadian Centre for Policy Alternatives. <https://www.policyalternatives.ca/publications/monitor/railroad-blues>

On June 6, 2012, the Bikeway Trails Implementation Plan was adopted without amendments by City Council. One of the recommendations of the report was to authorize the General Manager, Transportation Services, and General Manager Parks, Forestry and Recreation and, where appropriate, the Toronto and Region Conservation Authority (TRCA) to undertake site assessments, design, public consultation, project management and construction for the new trail connections contained in the Bikeway Trails Implementation Plan.

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2012.PW15.2>

COMMENTS

Toronto is home to an extensive ravine system, several hydro corridors, and many active railways (Attachment 1) which have long been viewed as an opportunity to connect Toronto through off-road multi-use trails. Since amalgamation, the City of Toronto has completed several studies and strategies focused on identifying and implementing opportunities to connect the city through off-street facilities: *Inventory of Cycling Trail Opportunities in Rail and Hydro Corridors (1998)*, *Pre-Engineering / Cost Assessment of Trail Opportunities in Rail and Hydro Corridors (2000)*, *Bikeway Trails Implementation Plan (2012)*, and *Multi-Use Trail Design Guidelines (2015)*.

The Toronto and Region Conservation Authority (TRCA) recently released their *Trail Strategy for the Greater Toronto Region (September 2019)*³, which serves as a framework to protect potential trail alignments, and to guide the planning, development, and management of these trails.

Another complementary initiative is the *Ravine Strategy (2017)* developed by Parks, Forestry and Recreation, City Planning and Toronto Water, in consultation with other City divisions, the TRCA, the public and a wide range of stakeholders. The five guiding principles of the strategy are to protect, invest, connect, partner, and celebrate Toronto's ravines.⁴

Today, the City has 345 km of trails including the following categories as shown in Attachment 2:

- 30 km along hydro corridors,
- 126 km along ravines, and
- 23 km along active and former railways.

This report identifies challenges and opportunities to further connect the off-street trail network.

³ <https://trca.ca/conservation/greenspace-management/trail-strategy/>

⁴ <https://www.toronto.ca/wp-content/uploads/2017/10/9183-TorontoRavineStrategy.pdf>

Challenges to Rail Line Cycling Routes

Unlike rail corridors through rural landscapes, those traversing Toronto pass through complex urban environments and present a number of challenges including property ownership, cost, rail line expansions, and safety and liability concerns.

Challenges: Property Ownership, Cost, and Rail Line Expansions

The rail lines in Toronto are most commonly owned by Canadian National Railway (CNR), Canadian Pacific Railway (CPR), and Metrolinx. Any use of the line right of way for trails requires the cooperation of the line owner and easement agreements.

The railway infrastructure built to allow freight and commuter trains to cross ravines and highways was often constructed with minimal widths and clearances. The available space makes it challenging to retrofit additional pedestrian / cyclist bridges and tunnels to accommodate adjacent trails. Infrastructure adjacent to active railways must also allow for maintenance vehicles and personnel to safely conduct inspections and repairs.

One of the key reasons rail line owners, such as Metrolinx, may decline to allow trails along their corridors is to preserve them for future expansions. Metrolinx is currently working through corridor expansions on the Kitchener, Barrie, Stouffville, and Lake Shore East and West lines. However, there are also evolving corridor needs on each line as a result of laybys, grade-separations, and other issues.

Where space is available adjacent to, and outside of, the railway right of way limits, it can be challenging to reach easement agreements with private land owners. If a land owner is willing to sell or grant an easement, land costs can be prohibitive and raise project costs beyond budgets. Expropriation of land, where necessary, is often costly, time consuming, and sometimes politically challenging.

Coordinating at the earliest possible stage with Metrolinx, CN, and CPR on proposed rail corridor projects is key to effective collaboration and ensures clarity of expectations, timing, design, as well as property and construction requirements.

Challenges: Safety and Liability

One of the primary issues for railroad owners and municipalities is increased legal liability and risk for the trail manager and railroad in the event of an injury of a trail user. The typical spacing requirements involve a 5.0 m to 7.0 m buffer from the rail line to the trail, and the provision of fences or retaining walls on sunken or raised rail corridors⁵.

Rail corridors that have been abandoned provide greater opportunities from a space and safety perspective, but the most recent inventory for Toronto identified only short segments of spurs (from 0.3 km to 3.2 km in seven locations), compared to over 225 km of active rail lines.

5 US Department of Transportation. (2002). Rails-with-Trails: Lessons Learned. <https://altaplaning.com/wp-content/uploads/railswithtrails-document.pdf>

Personal safety is also a concern along trail segments in isolated areas, especially those previously closed to the public where lighting, sightlines, and access may be poor. It is important to follow best practices, such as those outlined in Toronto's Multi-Use Trail Design Guidelines, to maximize the frequency of escape routes, and to ensure appropriate open sightline zones and sufficient lighting (posts every 25 m).⁶

Opportunities: Existing and Planned Rail Line, Ravine and Hydro Corridor Trails

In 1998, an *Inventory of Cycling Trail Opportunities in Rail and Hydro Corridors* was developed for the City of Toronto, which investigated over 400 km of potential routes, many of which were found to not be feasible. One of the general findings was that hydro corridors are typically more feasible than rail corridors due to their wider widths and underutilized space.

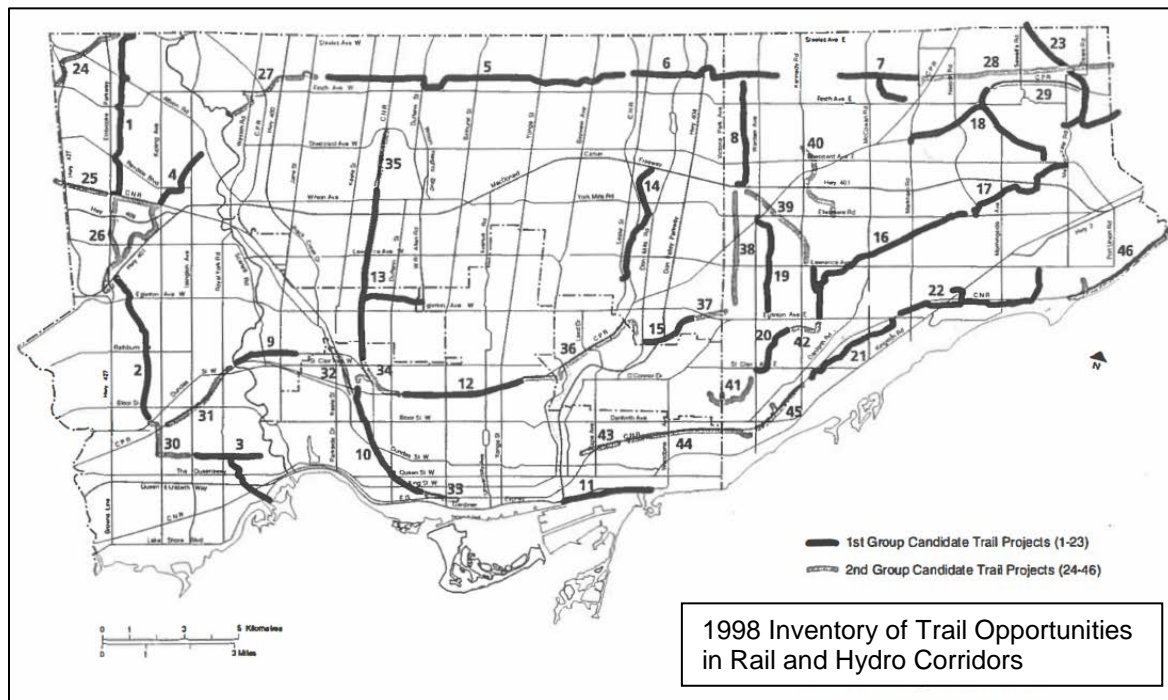


Figure 1. 1998 Inventory of Trail Opportunities in Rail and Hydro Corridors

Several of these candidate trails have been built over time, such as lengthy sections of the Finch Hydro Corridor, the Gatineau Trail, and the West Toronto Railpath, with further extensions of these planned in the near future, as illustrated in Attachment 2 and detailed below:

⁶ City of Toronto Transportation Services and Parks, Forestry & Recreation. (2015). Toronto Multi-Use Trail Design Guidelines. https://www.toronto.ca/wp-content/uploads/2017/11/96a5-TORONTO_TRAIL_DESIGN_GUIDELINES.pdf

West Toronto Railpath

- Existing: A multi-use trail exists from Dundas St W to Cariboo Ave (just north of Dupont St) along the rail corridor (2 km).
- Underway: Detailed design is underway for an extension of the West Toronto Railpath from Dundas St W / Sterling Rd to Sudbury St / Abell St (2 km).
- Planned: Opportunities to connect the West Toronto Railpath northerly to Eglinton as part of the St. Clair Transportation Master Plan. There is no space along the Kitchener Corridor north of the existing terminus where the rail corridor drops into a trench. Therefore, the railpath will be connected on-road along Osler St to Davenport Rd, joining a separated facility on the Davenport extension to Union St and Gunns Rd extension. The City has requested that Metrolinx attempt to accommodate a railpath within the corridor as part of their electrification design as long as safety and engineering design is not compromised. Space for a railpath extension north of Gunns Rd will be investigated once the corridor electrification design is complete.



Figure 2. West Toronto Railpath

Finch Hydro Corridor

- Existing: A multi-use trail, with a few gaps, exists from Norfinch Dr to Pineway Blvd (15 km), and from Birchmount Rd to Middlefield Rd (5 km).
- Underway: To extend farther west, cycling infrastructure is currently being designed as part of the Finch West LRT construction from Keele St to Highway 27 (10 km); and to the east a multi-use trail from Birchmount Rd to Pharmacy Ave (1.7km).
- Planned: New multi-use trail from Pharmacy Ave to Pineway Blvd (4 km).

Gatineau Hydro Corridor

- Existing: A multi-use trail exists from Eglinton Ave E to Ellesmere Ave, with an on-street connection around Midland Ave (10 km).
- Existing: Victoria Park Ave southwest to Eglinton Ave E (600 m); includes signalized crossing of Victoria Park Ave.
- Planned: Eglinton Ave E southwest to Bermondsey Rd; includes signalized crossing of Eglinton Ave E (800 m).
- Planned: The Meadoway Class Environmental Assessment is underway to complete the 16 km link between Rouge National Urban Park and downtown Toronto, via the future East Don Trail. The EA is focusing on three incomplete sections of the hydro corridor (Kennedy Rd to Marcos Blvd, Scarborough Golf Club Rd to Neilson Rd, and Neilson Rd to Conlins Rd) where no multi-use trail currently exists. The Toronto and Region Conversation Authority (TRCA) is the lead project proponent, and the City of Toronto is a co-proponent.

Humber Trail

- Existing: A multi-use trail exists through the ravine system, with an 800 m on-street section and 600 m gap, from the Waterfront Trail to Steeles Ave W (25 km).
- Planned: The feasibility study of the Mid-Humber Gap is complete; with an Environmental Assessment planned in 2020 (600 m).

Don Trail

- Existing: A multi-use trail exists through the ravine system from Lake Shore Blvd to Steeles Ave with several gaps (Lower Don Trail, Don River Trail East and West, Don Mills Trail) (20 km).
- Underway: Phase 1 East Don Trail from Lower Don Trail northeast to Bermondsey Rd, over Taylor Massey Creek along the Don River (3.1 km), includes four bridges and one tunnel.
- Underway: Phase 2 East Don Trail north of Wynford Heights Cres southeast to Elvaston Dr (1.4 km), includes three bridges.
- Planned: Phase 3 East Don Trail from Eglinton Ave E south to Gatineau Hydro Corridor (500m). Design expected to be initiated by 2021.

Scarborough Railpath

- Existing: Connecting from Finch Ave E to Rouge National Urban Park is a multi-use path that runs along the abandoned CP "Scarborough Pit" Spur (3 km).

Leaside Spur Trail

- Existing: Now called the Don Mills Trail, this multi-use path extends from York Mills Rd south to a disconnected end point on the abandoned CN Leaside Branch (4 km).
- Planned: Connection from the southern end of the trail to future cycling route on Leslie St, connecting to Eglinton Ave and the West Don River Trail (800 m).

Railpath North of Kennedy Station along Scarborough Line 3

- Existing: A multi-use trail runs along the tracks of Scarborough Line 3 from Kennedy Station to the Gatineau Hydro Corridor Trail (1 km).

Barrie Line Railpath (Davenport Grade Separation)

- Planned: Multi-use trail from Davenport Rd / EarlsCourt Park to Bloor St W (1.5 km). Design is complete; construction of grade separation to start in Q1 2020.
- Planned: Multi-use trail from Bloor St W to Sterling Rd / Dora Ave as part of the track construction, with an underpass connecting Sterling Rd / Dora Ave (0.6 km).
- Planned: A future multi-use trail from Sterling Rd / Dora Ave to Dundas St W is being investigated and consultation for a trail connection to Dundas St W is underway as well as a connection between the Kitchener and Barrie corridors along the north side of Dundas St W (0.3 km).

Martin Goodman / Waterfront Trail

- Existing: The Martin Goodman Trail (MGT) is part of the larger Great Lakes Waterfront Trail, and stretches from Toronto's western to eastern beaches (over 20 km).
- Planned: The Scarborough Waterfront Project, led by TRCA, will create a system of greenspaces along the Lake Ontario shoreline between Bluffer's Park and East Point Park / Highland Creek, including a multi-use trail (10 km). The Ministry of Environment, Conservation and Parks (MECP) has completed their Ministry Review of the Final EA, and recently closed the public comment period.



Figure 3. Martin Goodman Trail

The Waterfront, Don, Humber, and Gattineau trails are all part of the Pan Am Path - a legacy route and "art relay" stretching 80 km from Pickering to Brampton, developed to showcase Toronto's communities as part of the 2015 Pan Am and Parapan Am games. The East Don extension and The Meadoway will replace two significant on-street sections of the Pan Am Path with a more continuous multi-use trail.

The Bikeway Trails Implementation Plan proposed 40 km of new connections, including 5.7 km specifically of railpaths. Some of the City of Toronto's greatest opportunities remain on-street, especially in the districts outside the downtown core where roadways and boulevards are wider.

Opportunities: Major City-Wide Cycling Routes

In several countries around the world, the term "cycle superhighways" has been used to describe dedicated cycling routes, where the needs of people riding bicycles have been given the highest priority. In some places these routes coincide with rail corridors, and in others they follow the street network. In all cases, a true cycle superhighway includes major infrastructure interventions, such as bridges and tunnels, which provide uninterrupted routes for those travelling by bicycle.

While routes along rail lines and true cycle superhighways may not always be feasible, the Major City-Wide Cycling Routes map (Attachment 3), developed as part of the 2019 Cycling Network Plan Update, illustrates the City's commitment to providing significant cycling corridors that cross the city from east to west and north to south.

The network of Major City-Wide Routes consists of approximately 800 km. Approximately 225 km (28%) of the Major City-Wide Routes are in place today, with another 185 km underway. This includes 70 km currently in design or construction, almost 45 km with an Environmental Assessment or study underway, and another 70 km planned for study in the near-term (2019-2021).⁷

The target completion year for all of the Major City-Wide Routes is 2041, with an interim goal of reaching 60% (480 km) by 2030.

Metrolinx's 2041 Regional Transportation Plan (RTP) envisions a sustainable transportation system that provides safe, convenient and reliable connections, and supports a high quality of life, a prosperous and competitive economy, and a protected environment.

The RTP's corresponding Cycling Network Study identifies cycling routes across the Greater Toronto and Hamilton Area that are regionally significant corridors (those that support cycling to rapid transit stations; cross municipal boundaries; link urban growth centres; or facilitate cycling long distances). The Regional Cycling Network aligns well with the Major City-Wide Cycling Routes identified in the Cycling Network Plan Update, with overlapping corridors such as Bloor - Danforth, Waterfront Trail, Eglinton Avenue, and the Finch Hydro Corridor / Avenue.

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⁷ Trails are counted as centreline km, and routes along streets in lane km.

ATTACHMENTS

Attachment 1 - Map of All Rail and Hydro Corridors

Attachment 2 - Map of Trails along Railways, Hydro Corridors, and Ravines

Attachment 3 - Map of Major City-Wide Cycling Routes