

# 11 Implementation

## 11.1 Staff to Deliver Infrastructure Projects

While increased capital funding is necessary to ensure an increase in Capital projects, an increase in the rate of cycling project delivery is also contingent upon appropriate staffing levels to deliver these projects, or to oversee consultants contracted to deliver the projects.

The Budget Scenarios developed include staffing increases that correspond to the capital funding increases as shown in Exhibit 11-1.

Exhibit 11-1: Recommended Staffing Increases Corresponding to Capital Funding Increases

Start Year	Scenario 1 8M	Scenario 2 12M	Scenario 3 16M	Scenario 4 20M	Scenario 5 25M
2017	0	2	4	4	4
2018	0	0	2	4	4
2018	0	0	0	2	4
<b>Total New FTE</b>	<b>0</b>	<b>2</b>	<b>6</b>	<b>10</b>	<b>12</b>

## 11.2 Cycling Projects and Other Agencies

The City of Toronto will partner with a number of agencies who will have responsibilities for the following types of projects.

### **Bikeway Trails Projects:**

For a number of Bikeway Trails Plan projects, Transportation Services will partner with other divisions or agencies for project delivery. These include Parks, Forestry and Recreation, Toronto Water, as well as the Toronto Region Conservation Authority (TRCA), Metrolinx and Waterfront Toronto. Some examples of trails projects where Transportation Services will be working with other divisions and agencies are Chorley Park Trail, Dentonia Trail, the East Don Trail, Etobicoke Creek Trail North and Sherway, Highland Creek / Gatineau Connection, Mimico Creek Trail, Unwin Trail, West Toronto Railpath (South) Phase 2 and Mid-Humber Gap Phase 2.

### **Light Rail Transit Projects:**

Metrolinx is including the following cycling projects as part of the design scope for Light Rail Transit projects in the City of Toronto:

- **Eglinton Crosstown LRT** – Cycling facilities on Eglinton Avenue from Mt. Dennis Station to Jane Street, and from Laird Drive to Kennedy GO Station east of Kennedy Road, and cycle tracks on Eglinton Avenue from Keele Street to Laird Street at the LRT stations (estimated year of completion 2021);
- **Finch West LRT** – Multi-use trail along Hwy. 27 from Humber College Blvd to Finch Avenue; cycle track or buffered bike lane on Finch Avenue from Hwy. 27 to Weston Road; multi-use trail on Finch Avenue from Weston Road to between Norfinch and York Gate Blvd.; and cycle track or buffered bike lanes on Finch Avenue from between Norfinch and York Gate Blvd to Tangiers Road (estimated year of completion 2023); and,

- **Sheppard LRT** – Cycle track or buffered bike lanes on Sheppard Avenue from Pharmacy Avenue to Conlins Road (after completion of Finch West LRT)

#### **Environmental Assessment Studies:**

A number of significant Environmental Assessment Studies are underway, which may result in new roadways that would include cycling infrastructure. These include: The Downsview Area Major Roads Class EA, Gardiner East EA, King High Line EA, Lower Yonge Precinct Transportation Master Plan EA, Park Lawn / Lake Shore Area Transportation Master Plan EA, Port Lands and South of Eastern Transportation and Servicing Master Plan, The St. Clair Avenue West Transportation Master Plan EA, Scarborough Waterfront EA. Future EA studies will continue to provide opportunities for considering cycling facilities.

#### **City Planning Studies:**

TOcore is a comprehensive and integrated look at Toronto's Downtown and its relationship to the city and region around it. With the current unprecedented pace of growth set to continue in the foreseeable future, it is essential to step back and better understand the impacts that this growth will have on our infrastructure and services.

Midtown in Focus is an inter-divisional initiative led by City Planning, which is a response to the rapid intensification and change underway in parts of the Yonge-Eglinton Secondary Plan area. The study seeks to ensure that growth positively contributes to the vitality and quality of life in one of Toronto's most dynamic neighbourhoods.

For a complete list of Secondary Plans, Avenue Studies, Interchange Feasibility Studies, Functional Planning Studies, Traffic Management Studies and similar master plans underway at the time that the Ten Year Cycling Network was in development, please refer to Appendix F.

### **11.3 Resources for Cycling Network Maintenance**

The facilities built on new Cycling Network routes will be determined following the design and consultation for each project. At the time that the facility type is being chosen, the benefits of Cycle Track, or Trail type facilities must be considered against the operational cost of maintaining them.

If cycling facilities are physically separated from the rest of the roadway, they may require an operational budget allocation for street sweeping. If the cycle track or trail is intended for year round use, then operational budget for winter maintenance must be allocated when the decision to build such a facility is made.

In the case of "retrofit" Cycle Tracks, installed using flex posts or similar traffic separators, operational budget must be allocated at the time that this facility type is selected to ensure that funds are available to replace posts which are destroyed by wear and tear.

Exhibit 11-2: Winter and Summer Maintenance of Cycle Tracks<sup>xxvi</sup>



On March 17, 2014 Toronto's Public Works and Infrastructure Committee adopted the City's "Cycling Snow Routes Network". New, higher standards for snow plowing, salting, and snow removal on these routes were identified.

The routes in the report were identified as "high volume" cycling routes, which would benefit from an enhanced level of winter maintenance. Routes where 2,000+ cyclists a day have been counted are considered high volume cycling routes.

The winter of 2015 / 16 was the first year that cycling-specific winter maintenance was undertaken. As more separated routes are added, or found to be high-volume, new routes may be added to the cycling snow routes network.

## 12 Setting and Tracking Objectives

The setting and tracking of objectives for the Ten Year Cycling Network Implementation Plan involves reporting and monitoring on Network Program Delivery and evaluating the impact of the infrastructure once delivered.

Network Program Delivery refers to the tracking of the quantity of infrastructure delivered, relative to the delivery forecasts approved in the Ten Year Cycling Network Implementation Plan program as adopted by City Council. These targets will inform whether the infrastructure delivery objectives of "connecting, growing and renewing" the Cycling Network are being realized.

The evaluation of the network's impact refers to the monitoring and reporting of indicators that describe the ridership and safety goals of the Toronto Bike Plan.

### 12.1 Tracking Infrastructure Delivery

A measurement of the linear distance covered by cycling projects installed each year may be used as the starting point to gauge the growth and renewal of Toronto's Cycling Network.

Approximately 264 centreline kilometres of Cycling Network routes have been installed since the adoption of the Toronto Bike Plan in 2001. The Cycling Network program average since 2001 is approximately 13 centreline kilometres (or 26 lane kilometres) of dedicated cycling routes per installation season. The year with the highest number of dedicated bike lanes installed was 34 lane kilometres in 2008. The year with the lowest growth of dedicated network routes was 2011, when 14.5 lane kilometres were removed.

The first focus of the Bike Plan's project delivery between 2002 – 2004 was the undertaking of road diets to reduce the number of motor vehicle travel lanes and install painted bike lanes. This was followed by a significant rollout of signed routes to help cyclists navigate Quiet Streets. The number of signed routes more than doubled between 2004 and 2007, mostly in Toronto's midtown neighbourhoods.

Starting in 2009, a significant expansion of multi-use trails in Toronto's history began. This expansion was possible in part as a result of funding from Recreation Infrastructure Canada (RIc). Following the momentum created by this federal funding City Council approved the Bikeway Trails Implementation Plan on June 6, 2012.

Exhibit 12-1: Wellesley Street Cycle Track<sup>xxvii</sup>



The City's first use of Shared Lane Pavement Markings "sharrows" also began in 2009. Like many other North American Cities, Toronto has evaluated the use of sharrows on arterial roads. Today the installation of new sharrows on arterial roads are not preferred, although sharrow markings are not being actively removed from the roads where they exist.

Toronto first started to change its intersection designs in 2009-2010, to include "bike boxes", and in 2011, standards to mark bike lanes through intersections using skip lines and chevrons began.

In 2013, the City began constructing its first physically separated bicycle lanes or "Cycle Tracks". Toronto now has Cycle Tracks on seven arterial roadways in the downtown area. As part of these designs, standards were developed for the use of green markings to highlight the cyclist path of travel through "conflict zones".

It is anticipated that the project delivery may be increased as a greater number of Major Capital Infrastructure Coordination Opportunities are realized, however an accelerated rate of project delivery is contingent upon the resources allocated to fund the program. Please see Appendix E to this report, which describes annual program targets which may be achieved for each funding scenario.

It is important to recognize that capital coordination opportunities change and with that the City's ability to install some types of new cycling infrastructure may be affected.

It is also important to recognize that the best practices for cycling infrastructure design continue to evolve and change. These changing standards represent a need to balance the upgrading and renewal of existing routes with the installation of new routes. New design concepts may also impact the cost of new routes.

## 12.2 Evaluating the Impact of the Cycling Network

The 2001 Bike Plan identified the purpose of installing a Cycling Network in the City as having two main goals: to increase the number of trips being made by bicycle, as a percentage of total trips, and to reduce the number of bicycle collisions and injuries. The policy direction of these goals remains true today. Network outcomes may therefore be evaluated by monitoring and reviewing Mode Share Tracking and Collision Data.

### 12.2.1 Evaluating Proposed Network Routes

It is recommended that the City continue to expand its bicycle counting program to accurately capture before, after and seasonal cycling volumes along routes where cycling infrastructure is programmed and installed. The practice of referring to collision data provided by the Toronto Police Service should continue as each Cycling Network project is initiated.

In addition to these baseline route performance indicators, the mapping and project rating undertaken as part of the Cycling Network Implementation Plan's Cycling Impact may further be used to understand neighbourhood trends beyond the cycling volumes and collision numbers collected along the cycling route.

Subsequent review reports which are to be prepared for the benchmark years 2 and 5 of the Network Program rollout may also cite additional cycling impact ratings to enhance the understanding of network achievements. For example, if a project is constructed which is of a short linear distance, but crosses significant physical barriers, then these aspects of high-network value projects should be recognized as part of the evaluation reporting.

### **12.2.2 Evaluating Proposed Major Corridor Studies**

Beyond the regular before and after bicycle traffic counts undertaken for all Ten Year Cycling Network Implementation Plan projects, additional rigour will be applied to evaluate projects proposed as Major Corridor Studies.

The monitoring methodology employed will be similar in approach to the monitoring and evaluation used for the Richmond and Adelaide Cycle Tracks Pilot Project or Bloor Street Pilot installation. As appropriate, the methodology for Major Corridor Studies may include measurement of parallel corridors and an assessment of the impact to on-street parking which is in higher demand. Transportation Services would monitor the study areas to address operational adjustments that may be required:

- Observations of traffic impacts to identify possible signal timing modifications along the corridor;
- Observations of pedestrian impacts, including possible issues with crossing pilot project bike lanes or cycle tracks;
- Identification and mitigation of possible traffic infiltration issues on local streets;
- Traffic counts to measure possible cut-through traffic infiltration before and after installation of pilot projects;
- Parking counts to measure reduced availability of space for parking permit holders, based on feedback from area residents; and,
- Modifications for loading issues as they may arise, in consultation with business owners and property managers, based on feedback from local businesses.

## 13 Conclusions

The Ten Year Cycling Network Implementation Plan is the culmination of two years of analysis and consultation to identify a comprehensive roadmap and work plan for investments by the City of Toronto's Cycling Unit over 2016-2025.

The intention of this plan is not to preclude opportunities for cycling projects, which may be supplemental to the proposed Cycling Network. The purpose of this report, and its recommendations is to ensure that within a coordinated capital program, the necessary resourcing is available to install and study cycling infrastructure annually. All projects have undergone a feasibility assessment to ensure a sound business case for their inclusion within Toronto's Cycling Network.

In June 2016, Toronto City Council adopted, in principle, the Ten Year Cycling Network Implementation Plan, excluding the proposed Major Corridor Studies except those already underway, with implementation of individual projects in the plan subject to future City Council approval and public consultation. The City Council decision included direction for the General Manager, Transportation Services to consider, as part of the annual capital and operating budget process, the capital funding required to implement the proposed plan at a rate of \$16 million dollars annually as outlined in Scenario 3.

One of the adopted recommendations was to review the plan in two years, with a report back to Public Works and Infrastructure Committee. The report is scheduled to go to PWIC in 2019, and is directed to include information regarding implementation progress and a review of project timing, potential increase in funding levels and recommendations for the initiation of additional Major Corridor Studies including a strategy for funding and implementation of the Eglinton Crosstown bikeway.