



## STAFF REPORT INFORMATION ONLY

### Toronto Bike Plan - New Strategic Directions

<b>Date:</b>	May 25, 2009
<b>To:</b>	Public Works and Infrastructure Committee
<b>From:</b>	General Manager, Transportation Services
<b>Wards:</b>	All Wards
<b>Reference Number:</b>	P:2009\ClusterB\tra\tim\pw09011tim

#### SUMMARY

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The Toronto Bike Plan makes recommendations for improving cycling conditions and encouraging cycling in six key program areas: building bicycle friendly streets policies; expanding the bikeway network; improving bicycle safety; promoting cycling for everyday travel; providing secure bicycle parking; and improving the links between cycling and transit. Progress has been made in implementing the Bike Plan's recommendations in all six program areas.

Since the Bike Plan was adopted by City Council in 2001 there have been a number of important new cycling-related developments in the City and new bicycle planning trends in North American cities. In response to the experience of the first seven years of the Bike Plan's implementation and these new trends, this report presents six new strategic directions for achieving the Bike Plan's goals for the period 2009-11.

The Bike Plan new directions are to:

- launch a Toronto Public Bicycle System by Spring 2010;
- expand the downtown bikeways to support the Public Bicycle System;
- accelerate construction of the Bikeway Network trails;
- expand high-security bicycle parking facilities;
- develop a comprehensive research and evaluation program; and
- develop a new promotion and communications strategy.

## **Financial Impact**

A total of \$69.3 million is planned for cycling infrastructure within the Transportation Services Approved 5-Year Capital Plan for the years 2009-2013. However, \$28.8 million of the total approved plan is dependant on funding from external sources that has not been received yet by the City. This is the estimated amount to design and construct approximately 49 km of bikeway trails in the Finch and Gattineau hydro corridors. The City of Toronto funding, in the amount of \$40.5 million is sufficient to complete the balance of the cycling infrastructure elements of the Bike Plan, including bicycle parking facilities, on-street bikeways and bikeway trails within parks and open space under the City's jurisdiction.

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

## **DECISION HISTORY**

By adopting the Clean Air, Climate Change and Energy Efficiency Action Plan in June 2007, Council has directed staff to complete the Toronto Bike Plan by 2012. The Budget Committee, during consideration of the 2008 Capital Budget, requested that the General Managers of Transportation and Parks, Forestry and Recreation develop an implementation plan to complete the Toronto Bike Plan by 2012.

## **ISSUE BACKGROUND**

The Toronto Bike Plan was adopted by City Council in July, 2001 "as the strategic plan for implementing cycling policies, programs and infrastructure improvements over the 10 year period, 2002-2011." The Toronto Bike Plan implements the following policy of the Toronto Official Plan: "Policies, programs and infrastructure will be introduced to create a safe, comfortable and bicycle friendly environment that encourages people of all ages to cycle for everyday transportation and enjoyment including:

- a. an expanded bikeway network;
- b. provision of secure bicycle parking facilities in new developments;
- c. provision of adequate and secure bicycle parking at rapid transit stations; and;
- d. measures to improve the safety of cyclists through the design and operation of streets and through education and promotion programs."

The Toronto Bike Plan makes recommendations for improving cycling conditions and encouraging cycling in six key program areas:

- building bicycle friendly streets;
- expanding the bikeway network;
- improving bicycle safety;
- promoting cycling;
- providing secure bicycle parking; and
- improving the links between cycling and transit.

Since the Bike Plan's adoption, progress has been made in implementing the Plan's recommendations in all six program areas. Key Bike Plan achievements include:

- Bikeway Network (bicycle lanes, routes and trails) expanded from 166 km to 403 km;
- Post-and-ring bike racks have been doubled from 7,500 to over 16,000;
- Toronto has installed more bike parking than any other North American city;
- Bike racks have been installed on buses on 53% of TTC bus routes; 85% of TTC bus routes will be equipped with bike racks by the end of 2009;
- Bike Week expanded to Bike Month, with over 100 City and community-led events;
- Toronto's first Bicycle Station opened at Union Station in May 2009;
- Award winning Kids Can-Bike Camps offered by Parks, Forestry and Recreation;
- Waterfront Toronto has developed and implemented significant improvements to the Martin Goodman Waterfront Trail;
- New bicycle parking guidelines for provision of secure bicycle parking for new developments; and
- Martin Goodman Waterfront Trail maintained through winter 2008-9 for the first time.

The Toronto Bike Plan recommended a very ambitious 10-year implementation timeframe. However, the 2001 staff report acknowledged that "ultimately, the schedule for implementing the Plan's recommendations will be subject to available resources as determined by Council's annual budget review process." In August, 2005 Transportation Services submitted a report to the Works Committee as part of the 2006 budget review process which documented that the Bike Plan implementation was not keeping pace with the recommended 10-year timeframe. In that report, Transportation Services advised that the following three changes were required to accelerate implementation of the Bike Plan:

- Increase annual capital funding to deliver more bikeway projects;
- Increase staff resources in line with the increased project delivery; and
- Streamline the approval process for bicycle lanes.

All three of these recommended changes have been achieved over the past two years, resulting in a more effective organizational structure (and reporting and approval process) to deliver cycling infrastructure and programs. At the Bike Plan's inception the

responsibilities for delivering Bike Plan infrastructure and promotions and education programs resided in three Divisions - Transportation Services, City Planning and Parks, Forestry and Recreation. During the 2008 budget review process the cycling promotion and education functions and the relevant staff were transferred from the City Planning Division to Transportation Services (Pedestrian and Cycling Infrastructure Unit). As part of the 2009 budget review process the responsibility for planning, design and construction of the Bike Plan trail projects was transferred from Parks, Forestry and Recreation to Transportation Services. This transfer has consolidated all capital funding for Bikeway Network projects, both on-street and off-street bikeways, within the Transportation Services capital budget. In addition, Parks, Forestry and Recreation has assumed responsibility for the Can-Bike Program, including the Kid's Can-Bike Camps, and is incorporating these important programs into their recreation programs. The restructuring will be complete in mid-2009 when the Pedestrian and Cycling Infrastructure Unit's pedestrian functions are transferred to the new Public Realm Section, resulting in a dedicated cycling group, within the Transportation Services Division, whose sole focus will be implementing the Bike Plan and developing new initiatives.

Another important change in 2007 was the decision by City Council to have all bicycle lane reports considered by the Public Works and Infrastructure Committee. This change has streamlined the reporting process by enabling staff to group bicycle lanes projects, from different Community Council areas, in a single report to be considered by Public Works and Infrastructure Committee. Reporting to a standing committee with a city-wide mandate reinforces the principle that the Bikeway Network is a city-wide program and must be implemented in a coordinated fashion across the city.

The newly consolidated cycling infrastructure capital budget was increased substantially in 2009 to accelerate implementation of the bikeway network. Transportation Services is forecasted to spend \$69.3 million for cycling infrastructure within the Division's 5-Year Capital Budget for the years 2009-2013. However, \$28.8 million of the total approved budget is dependant on funding from external sources, specifically to construct the 49 km of bikeway trails in the Hydro Corridors. The City of Toronto funding, in the amount of \$40.5 million is sufficient to complete the balance of the cycling infrastructure elements of the Bike Plan, including bicycle parking facilities, on-street bikeways and bikeway trails within parks and open space under the City's jurisdiction.

## **COMMENTS**

### **New Cycling Trends and Opportunities**

A number of new cycling infrastructure trends and opportunities have emerged since the Bike Plan was adopted in 2001. Perhaps the most significant and innovative cycling trend is the advent of technologically sophisticated public bicycle programs (also known as Bike Share). Bikeway design has also evolved as North American cities experiment with new design treatments and pavement markings, such as shared-lane markings (sharrows),

bike boxes, coloured bicycle lanes, special conflict zone markings and bicycle signals. Some of these devices were untested when the Toronto Bike Plan was developed. There has also been more widespread acceptance of physically separated or buffered bicycle lanes and a growing trend to provide higher security bicycle parking facilities.

With this report Transportation Services is setting out a new strategic direction for the final three years of the 10-year Bike Plan. Given the continuously evolving world of bicycle planning and design, Transportation Services will update the Bike Plan every four years coinciding with Council's four year term. Following the completion of the first 10-year Plan timeframe, Transportation Services will prepare an updated Bike Plan action plan for each term of Council, commencing with the 2011-2014 term. This report outlines the Bike Plan priorities for 2009 to 2011, which are summarized by the following six points:

- launch a Toronto Public Bicycle System by Spring 2010;
- expand the downtown bikeways to support the Public Bicycle System;
- accelerate construction of the Bikeway Network trails;
- expand high-security bicycle parking facilities;
- develop a comprehensive research and evaluation program; and
- develop a new promotion and communications strategy.

## **Launch a Toronto Public Bicycle System by Spring 2010**

The Paris Velib public bicycle system, which operates with 20,000 “shared bicycles” located all over Paris, is the largest program and has received the most international attention. Many other European cities have also launched public bicycle systems or are in the process of developing a system. Montreal developed their “BIXI” public bicycle system over the past two years and launched the system in May 2009 with 2,400 bicycles located around the city. Other North American cities are in the process of researching and developing similar programs.

Public bicycle systems generally operate more like an extension of the public transit system than like a bicycle rental system. The bicycles are intended to be used for one-way trips of less than 30 minutes in duration. Regular users purchase a membership or “pass” for periods ranging from one month to one year. Registered members use their membership card at any of the fully automated bicycle parking stations to sign out a bicycle. For registered members there is no trip fee if the bicycle is returned to a bicycle parking station within 30 minutes. Bicycles can be picked up and dropped off at any bicycle parking station in the system. A rental fee is charged for any trip longer than 30 minutes or for any trip by an unregistered user, who accesses the system with a credit card.

Transportation Services staff are planning to launch a public bicycle system in Spring 2010. The proposed start-up service area would be bounded approximately by High Park in the west, Broadview Avenue in the east, Bloor Street in the north and Lake Ontario to

the south. Approximately 3,000 bicycles and 4,500 "bicycle parking spaces" would be required to service this start-up area. The bicycle parking stations would be closely spaced, generally no more than 250-300 metres apart, to provide maximum convenience for users. The service area and the number of bicycles and bicycle parking stations would be expanded year-by-year based on customer demand.

## **Expand the Downtown Bikeways to Support the Public Bicycle System**

The Toronto Bike Plan recommends a 1,004 km Bikeway Network, comprised of three bikeway types: bicycle lanes, shared roadway routes; and off-street trails. Since the adoption of the Bike Plan the Bikeway Network has been expanded from 166 km to 403 km. Completing the Bikeway Network recommended by the 2001 Toronto Bike Plan requires 599 km of new bikeways, as illustrated in TABLE 1 below.

TABLE 1: Status of the Bikeway Network, May 15, 2009

Status	Bikeway Types			Total
	Bike Lanes	Shared Roadways	Off-road Paths	
Planned	495	260	249	1004
Completed	101*	138	166	405
Remaining	394	122	83	599

\* a further 28 km of bicycle lanes were approved in 2008 and will be installed in 2009.

The development of the recommended Bikeway Network was based on the principle that all Toronto residents should be able to access the nearest bikeway within five minutes of their home. This resulted in the selection of routes approximately 2 km apart, so that a cyclist would have to ride at most 1 km, or 5 minutes, to access the nearest north-south or east-west bikeway. While there are notable exceptions where geographic or other physical barriers made it difficult to achieve the 2 km spacing, this network planning objective was achieved for the majority of the city.

There have been a number of developments in the eight years since the Bike Plan was adopted which suggest the original network planning objective (i.e. to achieve a 2 km spacing between bikeways) should be revisited. First, Transportation Services has shifted focus in the past few years to give greater priority to cycling in addition to walking and transit. Most of the recommended bikeways in the downtown area have been completed or will be completed in the next few years. The majority of the on-street bikeways remaining to be completed are in the Etobicoke York, North York and Scarborough districts. The 200 km Transit City program is incorporating bicycle lanes into the redesign of the roadway wherever physically possible, which will result in many kilometres of new bicycle lanes on the Transit City routes.

Further, the launch of the Public Bicycle System in Spring 2010 will introduce thousands of additional cycling trips on downtown streets. In order to encourage and support these new bicycle trips many more bikeways will have to be provided in the Public Bicycle System service area. There is also a growing demand for higher-order, physically separated bicycle lanes to provide greater protection for cyclists of all ages and abilities.

Completion of the on-street bikeways envisioned in the 2001 Bike Plan would require Transportation Services staff to direct the majority of their effort on bikeway projects in the three suburban districts, where daily cycling activity is the lowest. Alternatively, Transportation Services is launching a new strategic direction for the Bikeway Network over the next three years, to refocus staff efforts and infrastructure investment where cycling activity is highest. The key priorities of this new strategic direction for the Bikeway Network are:

- significantly expand the Bikeway Network in the Toronto East York District, with new bikeways not identified in the Bike Plan, to support the Public Bicycle System;
- conduct pilot projects to implement and evaluate new bikeway design treatments, including: physically separated or buffered bicycle lanes, bike boxes, shared-use lane marking (sharrows), conflict zone markings, time-of-day bicycle lanes and intersection markings, with a goal of more widespread use of special markings and designs; and
- Construct major new trail systems, particularly the 49 km of bikeway trails in the Finch and Gattineau hydro corridors.

In addition to these new priorities, Transportation Services will continue to expand the Bikeway Network in all districts. Special emphasis will be put on continuing to close the gaps in the on-street bikeways and the existing off-street trails to achieve continuous, uninterrupted routes.

Transportation Services staff have begun to review new opportunities to significantly expand the bikeway network in the Toronto East York district. Queen's Park Crescent and University Avenue, between Bloor Street West and Richmond Street West, have emerged as the streets with the most potential to establish physically separated or buffered bicycle lanes serving the downtown. This major north-south route through the core could connect to existing bicycle lanes on Hoskin Avenue, Wellesley Street, College Street and Gerrard Street West. In combination with planned bicycle lanes on Simcoe Street, the Queen's Park Crescent-University Avenue bikeway would also provide a major new connection to Queen's Quay and the waterfront Martin Goodman Trail. Transportation Services will continue to evaluate and report back on opportunities to expand the downtown Bikeway Network to support a future public bicycle system, in consultation with the affected Ward Councillors.

In October 2007, City Council adopted the Sustainable Transportation - Short Term Initiatives report, which among other things, directed the General Manager, Transportation Services "to report on the feasibility of establishing a bikeway on Bloor

Street and Danforth Avenue, from Royal York Road to Victoria Park Avenue." Transportation Services has completed a preliminary evaluation of existing parking and traffic conditions and potential bikeway design options for the Bloor-Danforth corridor, with the goal of maintaining the existing parking and traffic capacity. Given the varying conditions on Bloor Street and Danforth Avenue, it is not feasible to accommodate a consistent bikeway design along the entire corridor and maintain the existing parking supply and traffic capacity. However, the preliminary evaluation indicates that some of the wider roadway sections have the potential to accommodate bicycle lanes with minimal impacts.

Transportation Services will be retaining the services of a transportation consultant to undertake the next phase of work: a comprehensive analysis of traffic and parking needs along the corridor; a detailed evaluation of the bikeway design options and their impacts on traffic and parking; an evaluation of measures to mitigate any impacts on traffic and parking. The bikeway study will consider the various planning studies along the Bloor-Danforth corridor including, the Bloor-Dundas Avenue Study, the Bloor Visioning Study, the Kingston Road Transit Class Environmental Assessment Study, and others.

The Transportation consultant will prepare detailed drawings of the proposed design options for the review and consideration of the affected local Councillors. The consultant will also manage a comprehensive public consultation strategy to engage the business and residential communities along the corridor in a review of the design options and their impacts. The results of this design and consultation process and a proposed phased implementation strategy will be reported to Council.

## **Accelerate Construction of Bikeway Network Trails**

The consolidation of funding for all Bike Plan-related trails within Transportation Services will result in better coordination for the planning, design and construction of bikeway trail projects. The Transportation Services and Parks, Forestry and Recreation Division are working in partnership to deliver all of the outstanding bikeway trails recommended by the Bike Plan and to bring the existing trails up to current design standards. One of the priorities over the next five years is to complete hydro corridor trails. The Gatineau and Finch hydro corridors represent a very significant opportunity to create almost 49 km of new bikeway trails, linking several existing trail systems. The Gatineau corridor extends diagonally across Scarborough district and could function as the “spine” of the bikeway network in Scarborough. The Finch hydro corridor extends across Etobicoke, North York and Scarborough districts just north of Finch Avenue and connects to several major existing trail systems. Pre-engineering feasibility studies have been completed for most Hydro Corridor bikeway trail sections.

The Hydro Corridors are owned by the Province and managed by Ontario Realty Corporation. Access to these lands must be negotiated with the Provincial Government to determine the cost of licences and property tax payments, as part of the overall cost of constructing and maintaining bikeway trails in these corridors. Transportation Services

will begin detailed design for the Hydro Corridor bikeway trails so that construction contracts can be tendered as soon as the access and funding issues have been resolved. In addition to securing access to the Hydro Corridors, the construction of these bikeway trails is dependant on securing an estimated \$28.8 million in funding from external sources that has not been received yet by the City. Staff will be negotiating with the Provincial Government to secure an access agreement and to begin discussions with appropriate government agencies to secure funding for the construction of the Hydro Corridor bikeway trails.

## **Expand High-security Bicycle Parking Facilities**

Toronto has one of the oldest and most successful bicycle parking programs in North America. More than 16,000 post and ring bicycle racks have been installed on city streets and a new ring design will be launched in 2009, as part of the street furniture program. Over the next several years the existing bicycle rings will be retro-fitted with the new more secure ring design. The ubiquitous post and ring bicycle rack has very successfully provided convenient, short term parking for cyclists for 25 years. In addition, City Planning has been securing bicycle parking facilities in new residential and commercial developments since the mid-1990's.

Despite the City's longstanding bicycle parking programs, concern about bicycle theft is a significant deterrent to bicycle commuting for many cyclists. Transportation Services and City Planning have developed new initiatives in response to the demand for more secure bicycle parking facilities. Toronto's first Bicycle Station, a high-security bicycle parking facility at Union Station, opened in May, 2009. A second Bicycle Station is in the planning stage as part of the Nathan Phillips Square Revitalization and is planned to open in 2011. In addition, Toronto Transit Commission and Transportation Services are working in partnership to develop a program for incorporating secure bicycle parking facilities at new and renovated TTC subway stations. For TTC stations where there is no planned construction work scheduled for several years, staff are investigating opportunities to install bicycle lockers and other forms of sheltered bicycle parking facilities at these locations.

## **Develop a Comprehensive Research and Evaluation Program**

The Toronto Bike Plan recommends a bicycle data collection program to evaluate progress towards achieving the primary goals of the Toronto Bike Plan: doubling the number of bicycle trips and reducing the number of bicycle collisions and injuries. The Bike Plan identified four types of data to be collected and analyzed as part of the bicycle data collection program: bicycle traffic counts; focussed user surveys; public attitude surveys; and bicycle collision data.

Since the Bike Plan was adopted in 2001, the City has collected and analyzed some of this bicycle data. A very detailed bicycle collision study was completed in 2005 and reliable bicycle collision data has been collected and reported on an annual basis. Transportation Services is currently developing the first follow-up survey to the 1999 Toronto Cycling Survey to collect data on ridership levels and cycling attitudes. However, the City does not have reliable, high quality data for analyzing bicycle traffic patterns, ridership trends and cyclist attitudes. Bicycle ridership and trend data is currently available from a variety of sources, including Census Canada, the Transportation Tomorrow Survey (TTS), traffic counts, and user surveys.

The Bike Plan recognized that a bicycle data collection program was needed in order to collect consistent and reliable bicycle traffic data for analyzing trends over time, because existing sources of information, described above, generally capture bicycle data as a subset of a larger collection exercise, and therefore are not designed to measure bicycle use in ideal conditions.

Transportation Services is developing a more comprehensive bicycle data collection and analysis program. As recommended in the Bike Plan, the focus of this program will be to evaluate the City's progress towards doubling the number of bicycle trips and reducing the number of bicycle collisions and injuries.

The bicycle data collection program will consist of the following research components:

- analysis of Census Canada and TTS data to monitor bicycle ridership levels and trends at both the city-wide and the census tract level;
- automatic bicycle counters at a number of bikeway network locations to monitor changes in ridership levels during different parts of the day, week, month, and year;
- regular analysis of bicycle collision data every three to four years;
- Toronto Cycling Survey in 2009 and every four years afterward to collect consistent data on bicycle attitudes that can be used for multi-year analysis; and
- focussed research and data collection for broader research purposes, such as for evaluating new bikeway designs and other facilities and programs (bike lockers, bike stations, etc.).

This research and bicycle data collection program will assist in guiding decisions on program delivery, facility design and investment, so that the City's cycling infrastructure and services are more effective in encouraging new bicycle trips and reducing collisions. The information gleaned from the research and data analysis would also support the City's bicycle promotion and communications efforts to encourage cycling.

## **Develop a New Promotion and Communications Strategy**

Promoting cycling for everyday travel and recreation is an important part of the effort to achieve the Toronto Bike Plan goal to double the number of bicycle trips made every year. The City operates several programs to promote and encourage cycling. Bike Month, the annual celebration of Toronto's vibrant cycling culture, is marking its 20th anniversary in 2009. The Bicycle Friendly Business Awards are presented annually to businesses and other organizations in Toronto that demonstrate leadership in encouraging cycling by employees and clients. The 2009 Awards were presented in partnership with the Toronto Cyclists Union. The Cycling Ambassadors are a team of cycling experts who attend community events across the city during the summer to promote the City's cycling infrastructure and services, deliver safety messages and to encourage cycling. The Ambassadors are especially important in the suburban neighbourhoods where there is tremendous opportunity to increase the number of trips made by bicycle.

These important promotion and encouragement programs have never been funded to the level recommended by the Bike Plan. Transportation Services is conducting a review of the current promotions programs in order to develop a comprehensive promotion and communications strategy for consideration during the 2010 budget review process. The goals of the promotion and communications strategy are to promote the City's cycling infrastructure and services, to encourage cycling and to deliver important safety information to cyclists and drivers.

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### **SIGNATURE**

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