



**STAFF REPORT  
ACTION REQUIRED**

**Waterfront Transit Update**

<b>Date:</b>	November 13, 2017
<b>To:</b>	TTC Board
<b>From:</b>	Chief Executive Officer

**Summary**

---

The Waterfront Transit Reset (WTR) is a joint City of Toronto-TTC-Waterfront Toronto project that began in 2015. The project has two major goals:

- Develop recommendations for a through transit service along the Waterfront, from Long Branch in the west to Woodbine Avenue in the east; and
- Resolve the issue related to new streetcar service from the East Bayfront, along Queens Quay East, to Union Station, including the streetcar terminal issue at Union Station.

An initial Phase 1 report was published in October 2016. Work on this second phase began in late 2016. Two rounds of public meetings were held in early 2016. Stakeholder meetings were held in March, June, and September 2017. A final round of public meetings was held in September 2017. A report on the work done in this second phase, will be on the agenda of the City of Toronto Executive Committee at its meeting on November 29, 2017, and at City of Toronto Council at its meeting on December 6, 7, 8 2017.

This TTC report is a summary of the WTR study, and seeks approval from the TTC Board for necessary actions resulting from that study.

**Recommendations**

---

**It is recommended that the TTC Board:**

1. Direct TTC staff to report back to the Board upon completion of the 30% design of the exclusive TTC transit right-of-way extension between the Exhibition Loop and the Dufferin Gate Loop; on the next steps for design and construction, and associated financial implications.

2. Direct TTC staff to begin work, with the participation of City of Toronto and Metrolinx staff, on the design and project approval for a Humber Bay link dedicated streetcar right of way, from The Queensway to Exhibition Place contingent on funding approval;
3. Direct TTC staff to work in partnership with the General Manager Transportation Services and with Metrolinx to expedite the conversion of the existing streetcar track on Lake Shore Boulevard between Legion Road and Humber Loop to a dedicated transit right of way, and to report back to the Board in Q2 2018;
4. Direct TTC staff to work in partnership with City of Toronto, Waterfront Toronto, and Metrolinx staff, as appropriate, to complete a focused feasibility study of streetcar and automated funicular technology options for connecting transit below grade between Union Station and Queens Quay, and the extension of streetcar service along Queens Quay East, and report back on the preferred overall solution, including a refined cost estimate and next steps for design and construction, to the Board in Q2 2019 or earlier;
5. Direct TTC staff to work in partnership with the General Manager Transportation Services and with Waterfront Toronto, as appropriate, to undertake a focused review of improvements to transit operations at the following locations, and to report back to the Board in Q3 2018:
  - Lake Shore Blvd, between Long Branch and Legion Rd;
  - Intersection of Bathurst St/Fleet St/Lake Shore Blvd;
  - Queens Quay West from Spadina Avenue to the transit tunnel entrance between York Street and Bay Street.

## **Financial Summary**

The Council approved 10-Year Capital Plan includes \$3.6 million in funding to complete 30% design of the TTC transit right-of-way extension between the Exhibition Loop and the Dufferin Gate Loop. \$1.8 million of the project funding has been secured through the Federal Public Transit Infrastructure Fund (PTIF) program (Phase 1). In keeping with the PTIF guidelines, this project must be complete by March 31, 2019.

As per Council decision during its meeting of November 7, 2017, the budget for this requirement was transferred from the City to the TTC. The TTC has concerns with the ability to complete this project within the current PTIF guidelines. TTC staff will continue to work with City staff to mitigate the financial risks associated with completion of the project outside of the current PTIF timelines.

Upon completion of 30% design, staff will report back to the Board on anticipated cost for remaining design and project construction. The approved 10-Year Capital Plan does not include any additional funding beyond \$3.6 million for this work. Funding required to complete the TTC transit right-of-way extension

between the Exhibition Loop and the Dufferin Gate Loop will need to be considered as part of future budget process against other TTC/City unfunded capital priorities.

As detailed in Appendix 1 of this report, City staff has provided an initial preliminary (pre-design) cost estimate for completion of the entire Waterfront Transit Network. Initial City cost estimates for Waterfront Transit improvements are in the range of \$1.980 billion to \$2.310 billion in 2017 dollars.

These costs will be further refined as design for each element of the projects progresses to 30%. Waterfront Transit Network Improvements currently reflect an unfunded capital priority for the City, however the financial impact may be reduced as the City has identified this as a priority project for Federal PTIF funding, under the upcoming Phase 2 program and has included it in the City wide Development Charge By-law review.

The Integrated Bilateral Agreements (IBAs) between the Federal Government and the province and territories for Phase 2 of the PTIF program are on-going, and expected to conclude by March 2018. Once the Canada-Ontario IBA and program details are finalized, City and TTC staff will review the eligibility of City Council's identified priority projects based on program criteria.

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

### **Accessibility/Equity Matters**

The TTC has made significant progress in moving towards providing barrier-free, accessible transit services to all customers. New accessible low-floor streetcars are also currently being put into service in order to make all TTC streetcar routes accessible. The TTC's Easier Access Program will make all existing subway stations accessible to everyone, regardless of their level of mobility, by 2025.

Improved connections along busy transit corridors, such as along the waterfront, will make transit more attractive to all potential customers. This also supports objectives of the Wheel-Trans' Family of Services concept, and the City's Poverty Reduction Strategy and Seniors Strategy, of making conventional transit more accessible and attractive to everyone as a means of improving access to employment, educational, and cultural opportunities.

Stakeholder consultation about the Waterfront Transit Reset took place with the Advisory Committee on Accessible Transportation in October 2017.

## Decision History

### *Board Motion:*

At its March 23, 2016 meeting, in considering the item “Presentation: Emerging Transit Plans”, the Board adopted the following motion:

“5. The TTC report separately ASAP on the issue of the connection between Queen’s Quay/Union Station, specifically addressing the state of the issue and possible strategies for effective connectivity.”

## Issue Background

Various waterfront transit proposals, mostly involving streetcars or light rail transit, have been studied since the early 1990s. An Environmental Assessment (EA) of a waterfront west streetcar line was approved in 1993. While the entire project was not constructed, that EA was used to construct the relocated Exhibition Loop (1995-96) and the Spadina-Bathurst Queens Quay connection (1999-2000). Further studies on a westerly extension were started in the late 2000s as part of the Transit City project, but were not completed. Environmental Assessments and transportation planning studies for the East Bayfront streetcar between Bay Street and Parliament Street, and for extensions east into the Portlands, were completed within the last ten years.

In an effort to completed some of these earlier projects City Council in November 2015 directed City staff in consultation with the TTC and Waterfront Toronto to undertake a Phase 1 comprehensive review of waterfront transit initiatives and options. This review process was named the "Waterfront Transit Reset". Link: [EX9.9 Waterfront Transit Reset](#) . A vision for guiding the future waterfront transit network was established in that report:

"Provide high quality transit that will integrate waterfront communities, jobs, and destinations and link the waterfront to the broader City and regional transportation network."

In July 2016, City Council directed City staff to initiate a second phase of the Waterfront Transit "Reset", to deliver the vision identified in the first phase. Council further directed staff to move to 30% design for the extension of the exclusive streetcar network from the Exhibition Loop to the Dufferin Gate Loop. Link: [EX16.17 Waterfront Transit Network Vision](#) .

The second phase work has been carried out by a study team led by City Planning, in partnership with the TTC and Waterfront Toronto. Metrolinx and the City of Mississauga have been consulted during the course of the study. The second phase includes further development and costing of alignment concepts, detailed analysis of transit operations and ridership, identification of priority segments, as well as the creation of a Business Case and implementation strategy for delivering a coordinated waterfront transit solution.

The second phase report on the Waterfront Transit Reset (WTR) project will be considered at the City of Toronto Executive Committee meeting on November 29, 2017, and then at the City of Toronto Council meeting on December 6,7,8, 2017. This TTC report responds to the TTC Board motion of March 23, 2016, and seeks the approval of the Board for the recommendations contained in the WTR study.

## **Comments**

An initial goal of the WTR project was to identify a through transit service along the waterfront from Long Branch Loop in the west to Woodbine Avenue in the east. Detailed transportation demand modelling has subsequently shown that there is not sufficient demand for a single through service along the entire study area. The demand along the corridor is very diverse, with many origins and destinations, and varying travel patterns. As a result, this project recommends a series of streetcar infrastructure projects that will support a range of route and service options that will allow different future demands to be served. The infrastructure projects can also be built at varying times, and are not all dependent on the completion of other improvements. The actual services to be operated would be approved by the TTC Board at a later date, when the infrastructure is ready.

The City's regional transportation modelling tool, currently established for the 2041 horizon year, was used to forecast the waterfront transit demand. The forecasting confirmed that high capacity streetcar technology will support future transit demand along the waterfront between Long Branch and Leslie St, and south of King Street, to 2041. The forecasting confirmed previous study findings that the existing TTC transit network infrastructure in some areas along the waterfront is inadequate to accommodate latent and future transit demands. These areas include the Union Station-East Bayfront area, the Liberty Village – Exhibition Place area, and Humber Bay Shores. Improvements to transit in these areas should be prioritized over all other areas of the waterfront network.

The forecasting revealed that existing transit infrastructure in some other areas of the waterfront can accommodate latent and future transit demands to 2041. These areas include southwestern Etobicoke, and the western central waterfront between York Street and Bathurst Street. Because these areas are integral parts of an overall future network, they should be reviewed for operational improvements to further optimize network reliability. Operational improvements may include transit signal priority, turning restrictions, and improving transit connectivity to, and reducing potential conflict with, other transportation modes.

Overall, an extended and improved TTC streetcar service network along the waterfront would serve multiple roles – longer distance trips, local trips, recreational/cultural/special event-based trips, and connections to other

sustainable transportation modes, providing a resilient and flexible transportation system for the 21st century.

The resulting detailed directions from the Waterfront Transit Reset study, from west to east, are described below. TTC staff agree with City of Toronto staff and Waterfront Toronto staff on these actions.

Attached as Appendix 1 is a table that includes project priorities and initial preliminary capital construction cost estimates for completing the waterfront transit network. Project priorities are categorized according to the next 10-year period, and the post 10-year period for longer term improvements.

### **Long Branch to Park Lawn**

The City, in conjunction with the TTC, would implement various enhanced streetcar infrastructure projects along this section. These could include transit signal priority; improved TTC-GO connections at Long Branch; improved streetcar stop access, including platforms; and other operational changes. The projected peak ridership in 2041 is approximately 1100 people per hour, which is not high enough to warrant a dedicated streetcar right of way along this section. These targeted operational changes would improve the speed, reliability, and access to the streetcar service. These changes would require additional technical investigation by staff, and further public consultation.

### **Park Lawn area**

The City, in conjunction with the TTC, would start planning for a new streetcar and bus loop east of Park Lawn Road, north of Lake Shore Boulevard, to be integrated into new roads on a potential redevelopment site. This work would follow on from the City's Lake Shore Park Lawn Transportation Master Plan Study, which is currently under way, and which is supported by TTC staff. This new transit terminal would allow more frequent service to be operated as far west as Park Lawn, and would better serve the existing and future developments in this area. The terminal could also connect to a GO train station on the site, if one is required by Metrolinx in the future. This planning project will require further work by staff, and further public consultation.

### **Park Lawn to Humber**

The City, in conjunction with the TTC, will start the design and construction process of converting the existing mixed traffic streetcar lanes between Park Lawn Road and Humber Loop to dedicated transit right of way, along with associated changes to road traffic lanes. A recommendation to this effect is included in this report. This is a high priority project for the TTC and the City, and would reduce the significant delays caused to streetcar customers by left turning automobiles. This track was realigned in 2002 to permit future conversion to

dedicated transit right of way, is currently being replaced in the same position, and the conversion should take place without realigning or rebuilding the new tracks.

### **Humber to Exhibition**

The TTC, in conjunction with the City and Metrolinx, will start the planning process for a new Humber Bay Link streetcar line to be built along Lake Shore, branching off from The Queensway at Colborne Lodge Drive, and running to Exhibition Place. A recommendation to this effect is included in this report. This line would provide a higher-capacity connection from south Etobicoke and Swansea to downtown, would improve reliability for customers travelling from south Etobicoke, would provide additional flexibility in the TTC streetcar network, and would provide capacity relief to the existing streetcar routes on Queen Street and King Street. This line does not need to be built until ridership levels have increased enough to warrant the investment, but identification of this new line at this time will allow the City to include it in a future update of the Official Plan.

Alternative alignments were examined that would serve the King/Queen/Roncesvalles intersection and then proceed over the railway and Gardiner Expressway to Exhibition Place. These were determined to be technically impractical, in part because of Metrolinx's GO train electrification plans.

### **Exhibition Place**

The TTC, in conjunction with the City and Metrolinx, will seek funding for the completion of design and construction of a new streetcar connection between the Dufferin Gate Loop and the Exhibition Loop. A recommendation to this effect is included in this report. Approvals for this key link were granted in 2008, and funding has been secured through the federal Public Transit Infrastructure Fund (PTIF) Phase 1 to take this to 30% design. This project should be a high priority for full funding and construction. It would be used as an interim link in the streetcar network between King Street, the Exhibition, and Queens Quay, and will be a useful part of the TTC's streetcar network independently of the other projects to the west. It is required for the operation of the Humber Bay Link, described above, which can be built later. The design of the connection will be tied to Metrolinx work on improved pedestrian access to their Exhibition GO Station, and to the City's work on replacing the Dufferin Street bridges over the Gardiner Expressway and the Lakeshore West GO line.

### **Exhibition to Bay**

The City, in conjunction with the TTC, would implement various enhanced streetcar infrastructure projects along this section. These could include improved transit signal priority; improved signs, signals, and delineation of transit,

pedestrian, and cycling space; and other operational changes. These operational improvements would improve the speed and safety of the streetcar service. These changes would require additional technical investigation by staff.

### **Bathurst/Lake Shore/Fleet**

The City, in conjunction with the TTC, would start planning for changes to the alignment of the streetcar tracks in the Bathurst/Lake Shore/Fleet area, including associated changes to road traffic patterns. The changes would include moving the streetcar tracks on Bathurst Street to the west side of the road, to reduce delays to streetcar customers from automobile traffic. These changes would require additional technical investigation by staff, and further public consultation. The tracks are not currently due for replacement, and so these changes should take place in the future, when funding is available for track replacement. In the interim, some operational improvements to the existing network would be identified.

### **Queens Quay East, Bay to Parliament**

The City, Waterfront Toronto, and the TTC would carry out the approved plans for a new streetcar line along Queens Quay East in the East Bayfront area. This line would connect to the existing line at Bay Street, and the issues around that area are discussed below, in the Union Station-Queens Quay link section. Development is already proceeding along the East Bayfront, and additional projects have been recently announced. While three bus routes currently serve the area, adding higher-quality, higher-capacity streetcar service is an urgent priority for the TTC, the City, and Waterfront Toronto. Projected peak demand in 2041 on this section is approximately 2400 people per hour, and serving this very high level of demand requires high-quality streetcar service in a dedicated right of way.

### **East of Parliament to Woodbine**

The City, Waterfront Toronto, and the TTC would carry out the approved plans for new streetcar lines in the Portlands area, east of Parliament Street and south of Lake Shore Boulevard. East of Leslie Street, the projected demand to 2041 of 150 people per hour is too low to justify streetcar service, and so the area to the east would continue to be served by bus services until at least that date, after which the future construction of a streetcar line would be examined.

### **Union Station to Queens Quay link**

This is the most significant section of the Waterfront Transit Reset study. The existing streetcar infrastructure which consists of a tunnel under Bay Street from Queens Quay Station to Union Station, opened in 1990. This is one of the



busiest links in the TTC streetcar network, and provides direct access to Line 1, GO trains, and the downtown core.

The present streetcar terminal at Union Station has been inadequate for many years, because of its single, curved streetcar platform, on a single track, with insufficient space for present volumes of waiting and alighting customers. The 2010 EA for the East Bayfront line included approval for an appropriate rebuilding of the existing Union Station streetcar loop, as well as the construction of a connection from the streetcar tunnel to the new line to the east on Queens Quay. The approved EA design for Union Station would provide four platforms, and bypass tracks at each, so that streetcars on any route could serve customers while streetcars on the other routes could run past them to their own platforms. Design work to 30% was prepared in 2010-11 for the approved EA option. Funding was never identified for this project, and the work has not taken place.

Resolving the issue of streetcar customer access to Union Station is crucial to the entire waterfront transit network. New streetcar service to the Portlands via the East Bayfront and Queens Quay East cannot proceed until it is determined how the customers on this service will connect to Union Station. The existing loop is inadequate for present service levels, to and from the west only, and the loop would not function effectively or safely if additional service from the east was added. The projected peak demand between Union Station and Queens Quay Station in 2041 is 3700 people per hour, and this level of demand cannot be accommodated at the present loop.

A number of options were previously examined to resolve these issues and in 2011-12 cost estimates were developed to expand the loop. Additional options to solve the Union-Queens Quay connection issue have been evaluated by the Waterfront Transit Reset project team. The WTR study identifies two options for further detailed study, costing, and evaluation. These are:

- An improved streetcar terminal, as previously approved in the 2010 EA; with consideration of some additional cost saving modifications; and
- A cable-hauled funicular in a repurposed tunnel, connecting with east-west streetcar service on Queens Quay, and no streetcar service to Union.

A third option, a repurposed underground connection for pedestrians with a moving walkway component in one tunnel, has been screened out from further consideration, based on feedback at the public meetings, and because it would not provide a two-way accessible transit connection.

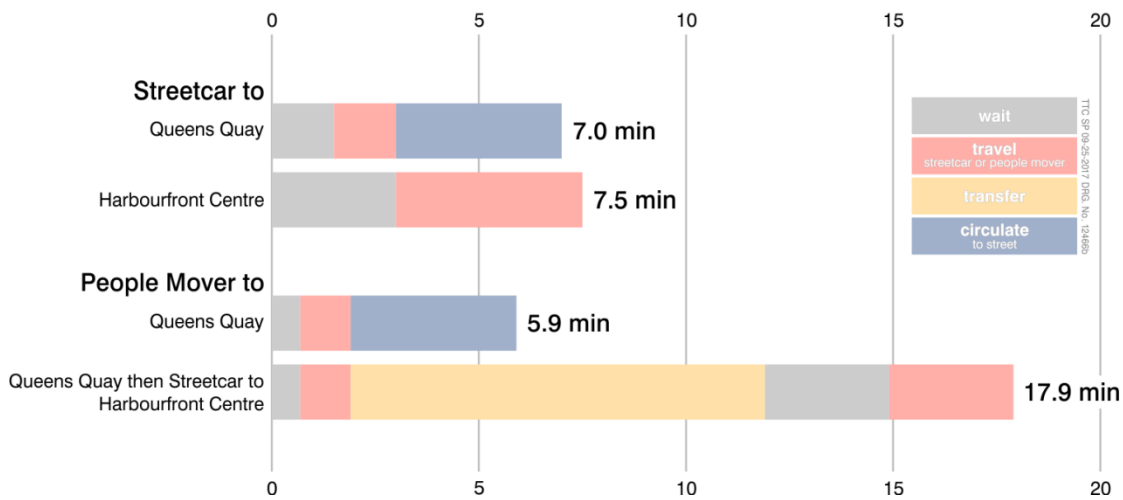
The proposed funicular is a separate system of passenger carrying vehicles, such as are used in airports to connect terminals. A local example is the Link train at Pearson Airport, which connects the two terminals and a car parking garage. The option would have two trains operating in each of the two bores of the streetcar tunnel. Each tunnel would have a cable with two trains attached;

these would shuttle between Union Station and Queens Quay Station. Customers would board the funicular at Union and at Queens Quay at similar locations to the present streetcar platforms. Boarding would be level, and the trains would be accessible. Potential travel time between the two stations is reported to be less than two minutes, similar to or slightly faster than the present streetcar service. Waiting time for a train is reported to be approximately one minute. Some demolition and excavation would be required at both stations to accommodate the cable-hauled technology. Excavation of bypass tracks under Bay Street, half way along the tunnel, would be required to operate the four-train funicular, as these bypass tracks would allow trains to pass each other.

TTC staff have expressed concerns with any proposal that would eliminate direct streetcar service to Union Station, such as the option of a funicular in a repurposed tunnel. Direct connections between surface and subway are a fundamental planning principle for the TTC network. There are approximately 15,000 customer-trips each day made in the Bay Street tunnel, and this number has been increasing. If the tunnel is repurposed and streetcars are removed from Union Station, most of these customers would have to alight from the streetcar and transfer to the funicular for the last part of their journey, which is about 540 metres in length. Depending on the option chosen, this may require a multi-level transfer, from street to tunnel level. It is well established that forcing an additional transfer is a significant inconvenience for customers and could result in a loss of customers. The principle is reflected in the Board's approved Service Standards, which weight an additional transfer as the most onerous change that could be imposed on customers.

The attached table shows TTC's staff initial evaluation of the relative weighted passenger minute effects on customers travelling from Union Station to Queens Quay, and beyond, with both the present streetcar service and the service that would be provided if the tunnel and terminal was repurposed for a funicular. While travel time between the stations would be similar or slightly faster with the funicular, for all customers travelling beyond Queens Quay Station the weighted travel time would increase significantly. This is because customers now have a direct streetcar connection at Union Station, but would in the future have to ride the funicular to Queens Quay, and then transfer at Queens Quay to the streetcar.

## Weighted Travel Time Comparison for Union-Queens Quay Connection Options



Both options can provide sufficient passenger-carrying capacity, compared to the present and future projected ridership levels.

During the proposed follow up study on this Union-Queens Quay segment, TTC staff will raise the following issues about the repurposed tunnel option. Not all of these concerns can be quantified at this time, as insufficient detailed technical work has been done on the funicular option. These include:

- the costs of building and operating the funicular, which need to be quantified in detail;
- accessibility, safety, and capacity issues related to passenger access to/from the streetcars at Queens Quay Station, particularly in relation to how customers would cross the streetcar tracks to reach a funicular, and how much space must be provided at the streetcar stops to safely and conveniently accommodate boarding and alighting customers;
- the location of fare collection equipment and non-fare paid access to the street from the funicular at Union Station, which may require additional alterations to the TTC Union Station or the Union railway station;
- governance issues related to a proposed funicular and whether it would be part of the TTC system, or a separate system;
- engineering concerns about installing mechanical equipment in a tunnel with high water levels, and excavating in an area known to have poor soil conditions;
- wastage of significant newly-upgraded streetcar assets (rail, overhead, cabling) in the Bay Street tunnel, much of which were just renewed during the 2012-2014 closure of the tunnel during Queens Quay construction.

Separate from specific transit issues related to the Union-Queens Quay link, City of Toronto staff note that growing pedestrian demands south from Union Station along Bay Street to present and future developments are an increasing

concern. As part of the Waterfront Transit Reset project, City staff have identified these pedestrian issues as an additional goal that the study must address. Solving these issues will take additional time and work, and determining the relationship between meeting transit demands, and potentially repurposing transit assets to meet pedestrian demands, will be a challenge as further work is undertaken in the next phase of this study.

## **Summary**

The Waterfront Transit Reset Phase 2 work has involved considerable detailed evaluation of many options for improved streetcar service along waterfront. Many of the recommendations will improve service for transit customers, can be implemented as and when required, and should be supported by the Board.

There are currently two options to connect Union Station and Queens Quay Station, a streetcar option and a funicular option. A focused feasibility study of these two options should be carried out as a next phase of the work.

## **Contact**

Jacqueline Darwood  
Head of Strategy and Service Planning  
416-393-4499  
[Jacqueline.Darwood@ttc.ca](mailto:Jacqueline.Darwood@ttc.ca)

## Appendix 1: Transit Infrastructure Priorities and Preliminary Cost Estimates

The table below, provided to the TTC by City staff, includes project priorities and initial preliminary (pre-design) capital construction cost estimates in 2017 dollars for completing the waterfront transit network. Project priorities are categorized according to the next 10-year period, and the post 10-year period for longer term improvements. Once schedules for project delivery are established, the forecasted estimates will be updated to reflect the year of expenditure.

Order of magnitude cost estimates are intended for planning purposes only and will be refined as detailed design and project planning advances. Further design work is required to provide an increased level of confidence and greater precision with regard to project elements, feasibility and risks suitable for budget authorization. Per best practice established by the Association for the Advancement of Cost Engineering International (AACE) and consistent with the Stage Gate approach, the project budget and schedule should be established once a Class 3 cost estimate has been achieved.

### **Recommended Waterfront Transit Network Improvements**

<b>NETWORK SEGMENT (West to East)</b>	<b>RECOMMENDED IMPROVEMENT</b>	<b>Cost Estimate (Status)</b>	<b>Cost (\$M, 2017)</b>	
			<b>10 Year</b>	<b>10+ Year</b>
Lake Shore Blvd, between Long Branch and Legion Rd	Targeted improvements to mixed-traffic streetcar operations & improved multi-modal area connectivity	Class 5 (0-1% design)	70	50
Lake Shore Blvd, between Legion Rd and Humber Loop	Convert mixed traffic streetcar operations to exclusive transit right-of-way	Class 5 (EA Approved, 1-5% design)	35	N/A
Humber Bay Link, from The Queensway & Colborne Lodge Dr, under Gardiner Expressway & Rail Corridor & along Lake Shore Blvd to Dufferin Street	Exclusive transit right-of-way on new alignment & reconfiguration of Lake Shore Boulevard at Jameson Avenue and Marilyn Bell Park	Class 5 (1% design)	100	300-350
From Dufferin Gate Loop on the Dufferin bridge over the Gardiner Expressway & Rail Corridor to Exhibition Loop	Exclusive transit right of way on new alignment	Class 4/5 (EA Approved, 30% design underway)	90	N/A

NETWORK SEGMENT (West to East)	RECOMMENDED IMPROVEMENT	Cost Estimate (Status)	Cost (\$M, 2017)	
			10 Year	10+ Year
Intersection of Bathurst St/ Fleet St/Lake Shore Blvd	Improve all travel modes and public realm	Class 5 (0-1% design)	5	275-325
Bathurst St, from Fort York/Bremner Blvd to Queens Quay	Convert mixed traffic streetcar to exclusive transit right-of-way & shift to west side Introduce new north-south multi-use trail			
Queens Quay, from Bathurst St to Spadina Ave	Shift existing exclusive streetcar right-of-way to south side			
Bay St, from Union Station to Queens Quay	Expansion of existing streetcar loop or replacement by automated funicular connection - subject to further analysis	Class 4/5 (funicular - 1% design) (LRT – 5% - 30% design)	440-620	N/A
Queens Quay, between Bay St and Parliament St	Exclusive streetcar right-of-way on new alignment, integrated with solution for Bay Street connection to Union Station	Class 4/5 (1% - 30% design)		
Port Lands, including: - Parliament St to Broadview Ave via Queens Quay, Cherry St and Commissioners St - Broadview Ave Extension from Queen St to Commissioners St - Commissioners St between Broadview Ave Extension and Leslie Barns -Cherry St between the West Don Lands Loop and the Ship Channel	Exclusive streetcar right of way	Class 5 (EA approved, 0-1% design)	350-400	190
Operational Infrastructure for Phasing (e.g. facilities, loop)			75	N/A
TOTAL COSTS (LOW)* (\$M)			1165	815
TOTAL COSTS (HIGH)* (\$M)			1395	915

\*Costs do not include rolling stock.