TTC-TWRC Waterfront Transit EAs
Demand Forecasting Report
- Addendum

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1 INTRODUCTION AND PURPOSE

This addendum to the Waterfront East EA Demand Forecasting Report documents the analysis undertaken to address the planning alternatives developed through the community consultation process as part of the development of terms of Reference for the TTC-TWRC Waterfront Transit EA studies.

The alternatives assessed were the following:

- Investigate enhancing transit through the Waterfront. These services include :
  - Through streetcar service along the Waterfront;
  - Waterfront East streetcar operating between West Don and Union Station via Queens Quay East;
  - Express bus service operating locally in the Beach and Portlands areas, and expressing to Union station via Lake Shore Boulevard; and
  - Parliament service between Castle Frank Station and Union Station via Queens Quay East.

- Investigate the effect of a People Mover operating between Queens Quay and Union Station.

- Investigate the option of expanding the downtown core looping of the Lake Shore Express bus service.

2 ENHANCED TRANSIT SERVICE IN STUDY AREA

The following table summarises the additional transit services that were included in the transit network used in the demand forecasting model.

Table 2-1: Description of Additional AM Peak Transit Services in Study Area

Additional Transit Services	Description
515 Waterfront streetcar speed 17.2kph headway 10 min	Operating between Dufferin loop and Queen E. / Leslie. The purpose of this is to provide service to customers who want to travel along the waterfront without having to transfer at Union Station.
567 West Don streetcar speed 17.0kph headway 4 min	Operating between West Don area and Union Station via Cherry and Queens Quay. The transit network in the original forecasting work did not have a direct service from the West Don to Union station.
566 Lake Shore Express bus speed 20kph on Lake Shore, Cherry and Commissioners speed 16kph on Queen E. headway 4min	Operating between Neville loop and Union Station via Queen E., Leslie, Commissioners, Cherry, Lake Shore E. to on-street loop to serve Union Station. Local and limited stop service on Queen E. and on Commissioners. The purpose of this service to provide quicker service for Beach and Portlands customers who were originally forecast to take a Queens Quay E. streetcar to get to Union Station.

565 Parliament bus speed 17kph on Queens Quay speed 12kph on Parliament headway 7 min	Operating between Castle Frank station and Union station via Parliament, Queens Quay E. to Union Station. The purpose of this is to provide service to Union Station for customers along Parliament.
514 King speed 17kph on Commissioners speed 12.4kph Cherry to Spadina headway 4 min	Operating along King St. between Spadina and Commissioners serving the West Don Lands precinct. The new routing now uses Cherry St. to connect King St. E with Commissioners.
504 King speed 12.4kph headway 4 min	The original diversion into the West Don area has been removed and all 504 King service is operating as per today's routing.

The transit services listed in Table 2-1 were added to the original base 2021 network as described in the Demand Forecasting report. The resulting network is shown in Exhibit 2-1. It is referred to as the Enhanced 2021 network.

Exhibit 2-1: Enhanced 2021 Transit Network

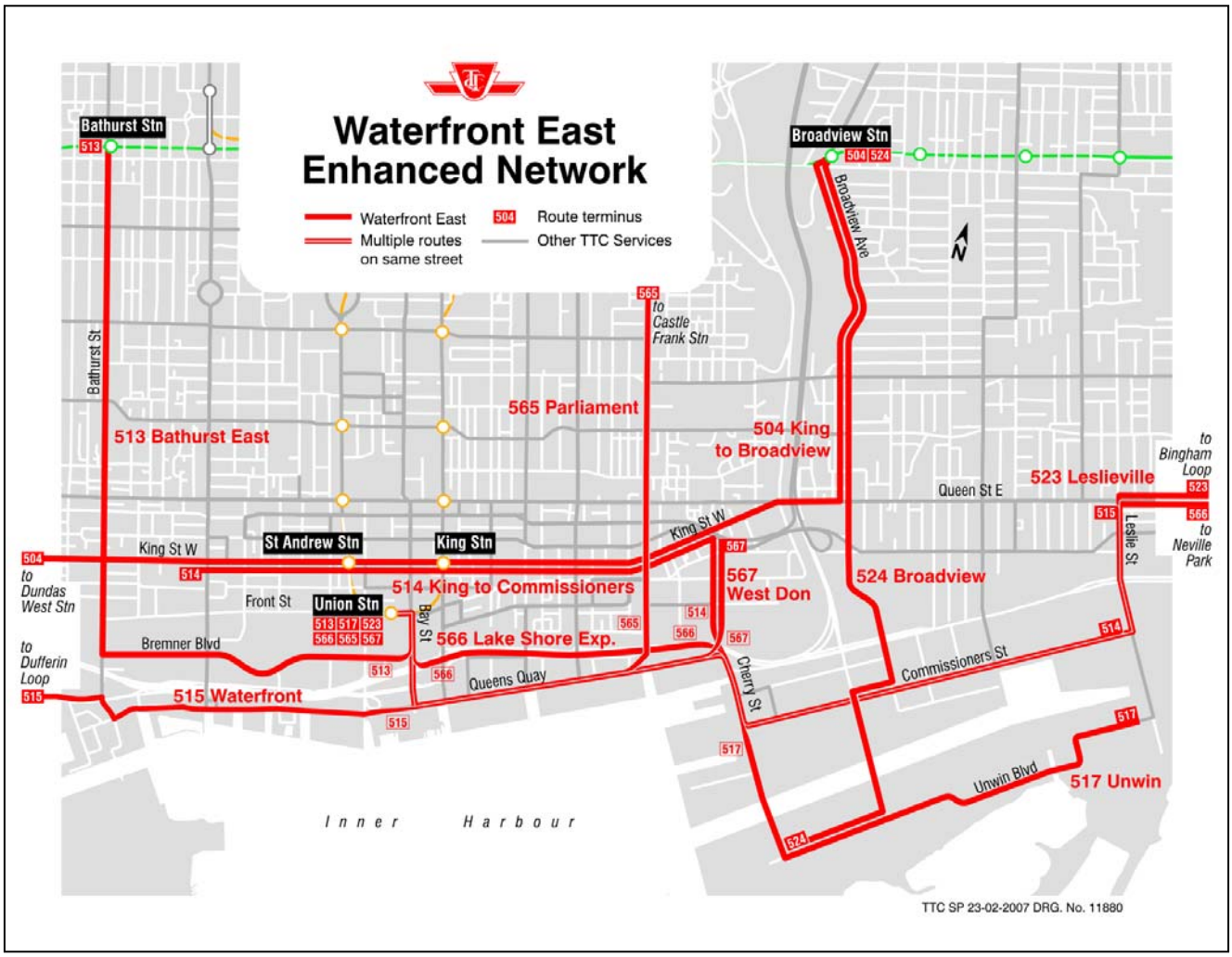


Table 2-2 lists the AM peak hour transit volumes on specific roads in the Waterfront East. These volumes and those for the rest of the Waterfront are shown in Exhibit A-1 in Appendix A.

Table 2-2: Transit Link Volumes at Selected Locations

Location	Direction	2021 Transit AM Peak Hr Volume
Queens Quay East		
west of Jarvis	WB	2200
west of Jarvis	EB	1400
west of Cherry	WB	3500
west of Cherry	EB	2200
King St. East		
west of Parliament	WB	1800
west of Parliament	EB	700
Cherry St.		
north of CN tracks	NB	900
north of CN tracks	SB	350
crossing channel	NB	3200
crossing channel	SB	2000
Lake Shore Blvd. E. (566 Lake Shore Express)		
west of Parliament	WB	1600
west of Parliament	EB	1200
Parliament St.		
north of King	NB	500
north of King	SB	350
south of Wellesley	NB	550
south of Wellesley	SB	500
Queens Quay and Yonge (515 Waterfront streetcar)		
through riders westbound	WB	140
through riders eastbound	EB	80

Table 2-3 shows the new modal split figures for the Enhanced 2021 network. This table is comparable to Table 6.5 of the July 2006 report showing the mode split forecast for the 2021 "Base Network" analysis.

Table 2-3: Modal Split Tables
Mode Split Table derived from GTA Model for Waterfront East Enhanced 2021 network
Mode Split Summary of AM Peak Period Person-Trips to and from Precincts

	# AM Peak Trips Destined to Precincts			# AM Peak Trips Originating from Precincts		
	East Bayfront	West Don Lands	Port Lands	East Bayfront	West Don Lands	Port Lands
Auto	1480	1650	10960	2730	2010	7690
Transit	1120	1310	5370	2850	2040	7030
Walk/Cycle/ Other	460	450	1100	1390	960	1570
Total	3060	3410	17430	6970	5010	16290
Modal Split						
Auto	48%	48%	63%	39%	40%	47%
Transit	37%	39%	31%	41%	41%	43%
Walk/Cycle/ Other	15%	13%	6%	20%	19%	10%
Total	100%	100%	100%	100%	100%	100%

The table, in comparison with Table 6-5 of the previous report, shows that, as expected, transit mode split is 1% to 2% higher with the higher quality and quantity of transit service in the Waterfront Area provided by the "enhanced" network.

3 PEOPLE MOVER TO UNION STATION

This section contains the results from investigating the effects of having a People Mover operating between Union station and Queens Quay. The purpose of the People Mover is to provide a short but frequent service to transfer customers between Union Station and Queens Quay, thus allowing continuous streetcar service on Queens Quay between the east and west.

A travel time elasticity approach was used to estimate the loss of customers due to the inconvenience of having an additional transfer. The resulting mode split figures are shown in Table 3-1. When compared to Table 2-3, one can see that the transit mode split for AM peak trips originating from the precincts decrease to about 34% from 42%.

Table 3-1: Adjusted Mode Split Table – Enhanced 2021 Network with People Mover

	# AM Peak Trips Destined to Precincts			# AM Peak Trips Originating from Precincts		
	East Bayfront	West Don Lands	Port Lands	East Bayfront	West Don Lands	Port Lands
Auto	1704	1912	12034	3300	2418	9096
Transit	896	1048	4296	2280	1632	5624
Walk/Cycle/ Other	460	450	1100	1390	960	1570
Total	3060	3410	17430	6970	5010	16290
Modal Split						
Auto	56%	56%	69%	47%	48%	56%
Transit	29%	31%	25%	33%	33%	35%
Walk/Cycle/ Other	15%	13%	6%	20%	19%	10%
Total	100%	100%	100%	100%	100%	100%

4 EXPANDED BUS LOOP IN DOWNTOWN CORE

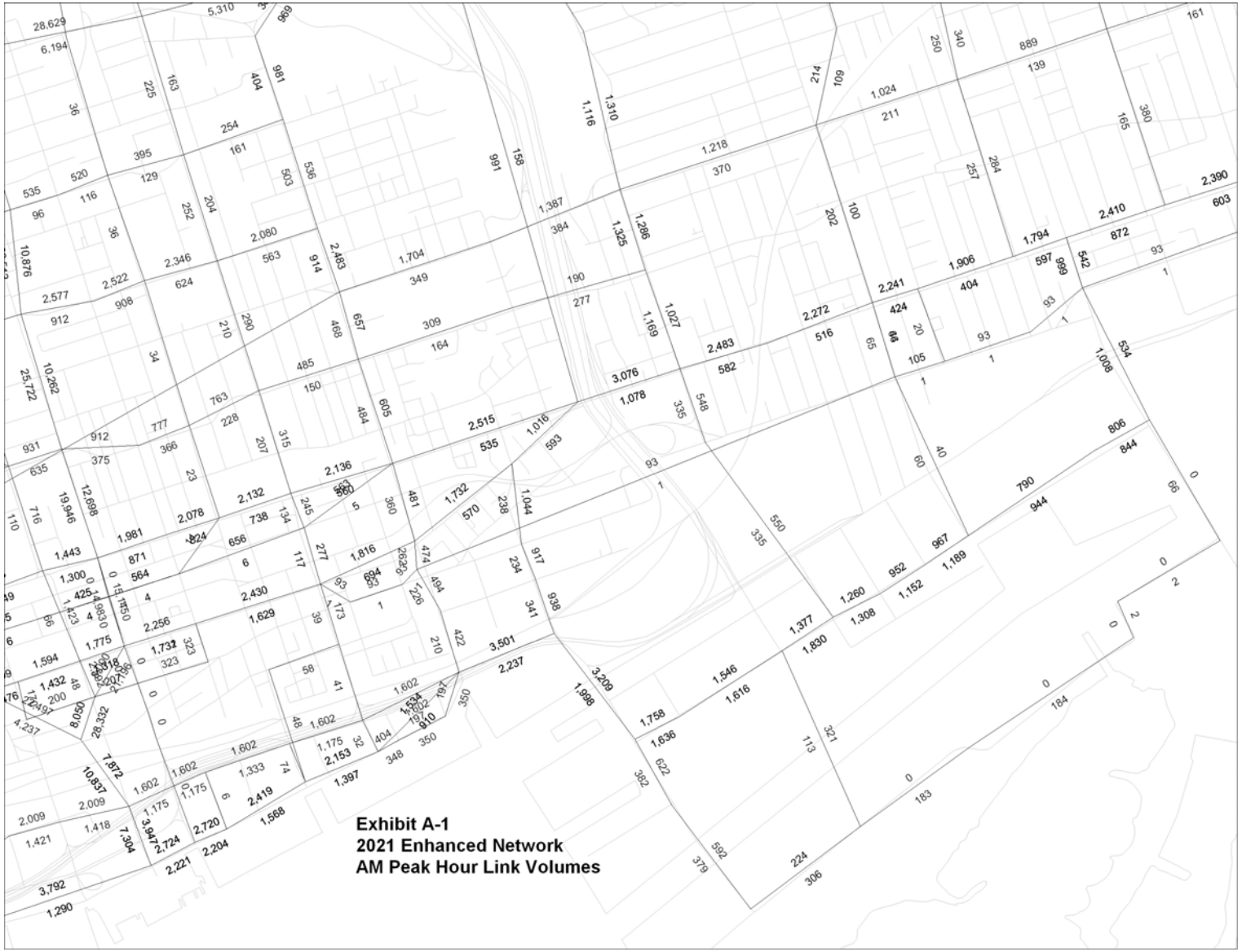
There was a request to investigate expanding the downtown operation of the Lake Shore Express bus route from the Queens Quay-York-Front-Bay on-street bus loop to a loop further north to Adelaide Street. The forecasting results from the Enhanced 2021 network scenario were used to analyse this loop expansion.

TTC staff looked at the AM peak transit trips originating from the precincts and destined to the zones in the downtown area via transit services on Queens Quay or Lake Shore Boulevard (see Exhibit B-1 in Appendix B). The analysis indicated that the smaller southern loop will accommodate approximately 10% of the transit trips while the expanded loop to Adelaide Street will accommodate approximately 14% of the transit trips. The additional 4% corresponds to approximately 200 trips.

5 SUMMARY

This addendum report documented the analysis undertaken to address the planning alternatives developed through the community consultation process.

Appendix A - 2021 Enhanced Network – AM Peak Hour Link Volume Forecasts



Appendix B – Plot of Precinct Transit Trips Destined to Downtown

Exhibit B-1: Plot of Precinct Transit Trips Destined to Downtown

There approximately 5300 AM peak period transit trips that originate from the precincts and are travelling along the Waterfront corridor ie Queens Quay E. / Lake Shore E. to Union station. Approximately 500 or 10% of the trips are destined to the area south of Queen St. between Spadina Ave. and Church St. This area is assumed to be the catchment area for the on-street loop of Queens Quay-York-Front-Bay. The catchment area is assumed to be extended to Dundas St. if the on-street loop were to be further north to Adelaide St. The area adds another 200 trips or 4%.