



## STAFF REPORT ACTION REQUIRED

### Subway Closures - 2017 Review and 2018 Forecast

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

#### Summary

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The purpose of this report is to outline the following:

- An overview of the 2017 Subway Closure schedule, including accomplishments and initiatives implemented to improve service during closures
- The forecast schedule for 2018 Subway Closures

#### Recommendations

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**It is recommended that:**

1. The Board approve the subway closures including those requested by Metrolinx in support of the construction for the Eglinton Crosstown; and
2. Staff forward this report to the City for information.

#### Financial Summary

This report has no financial impact beyond what has been approved in the current year's 2017-2026 Capital program. The costs associated for the closures are absorbed by the respective capital programs, mainly State of Good Repair and Signals ATC project.

As outlined in a report to the Board on November 18, 2013, under the Metrolinx-City of Toronto-TTC Master Agreement costs associated with any closures for Eglinton Crosstown are to be absorbed by Metrolinx.

The cost of each closure varies, as it is contingent on many variables including duration, distance and complexity of the closure. Costs are attributed to the operating costs for the buses and operators, customer service contracted support staff, staff to supervise the closure, paid duty officers, parking enforcement and advertising.

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

## **Accessibility/Equity Matters**

The TTC communicates closures in advance, via multiple communication channels and accessible formats, so all of the TTC's customers are aware of the closures.

During subway closures, the TTC ensures that accessibility is maintained with the alternative service provided. Wheel-Trans vehicles are scheduled to be at terminals connecting customers to an accessible subway station. Elevator and Escalator crews are stationed at terminals ensuring all accessible equipment is in good working condition throughout the closure.

## **Decision History**

On November 18, 2013 a report was presented to the Board explaining the Metrolinx-Eglinton Crosstown Light Rail Transit Project:

[https://www.ttc.ca/About the Ttc/Commission reports and Information/Commission Meetings/2013/November 18/Reports/Yonge-Eglinton and E.pdf](https://www.ttc.ca/About%20the%20Ttc/Commission%20reports%20and%20Information/Commission%20Meetings/2013/November%2018/Reports/Yonge-Eglinton%20and%20E.pdf)

On August 19, 2014 a report was presented to the Board explaining the need and purpose of subway closures:

[https://www.ttc.ca/About the TTC/Commission reports and information/Commission meetings/2014/August 19/Reports/Explanation of Subway Closures.pdf](https://www.ttc.ca/About%20the%20TTC/Commission%20reports%20and%20information/Commission%20meetings/2014/August%2019/Reports/Explanation%20of%20Subway%20Closures.pdf)

On January 18, 2017 an information report and presentation of the Subway Closures – 2016 Year in Review and 2017 Forecast was made to the Board:

[https://www.ttc.ca/About the TTC/Commission reports and information/Commission meetings/2017/January 18/Reports/10\\_Presentation%20Subway%20Closures%20202016%20Year%20in%20Review%20and%202017.pdf](https://www.ttc.ca/About%20the%20TTC/Commission%20reports%20and%20information/Commission%20meetings/2017/January%2018/Reports/10_Presentation%20Subway%20Closures%20202016%20Year%20in%20Review%20and%202017.pdf)

## **Issue Background**

The TTC is committed to providing safe, reliable and efficient service. In order to do so, the TTC needs to carry out inspection and repairs of its infrastructure and some of this work can only be done when the subway is not operating. With a closing time of between 2 and 3 am, and an opening time of 6 am six days per week and 8 am on Sundays, staff has only three hours on weeknights and Saturdays and approximately five hours on Saturday night into Sunday morning to carry out work within the subway tunnels. Because of the constraints on time in the usual overnight maintenance hours

required from moving equipment into place and setting up work zones, typically less than two hours of quality work can be achieved each night, meaning one full weekend closure is equivalent to five weeks of night work.

ATC and Eglinton Crosstown are two major projects with publicly committed completion dates. ATC is scheduled to be complete by December 2019 and the Eglinton Crosstown scheduled to be constructed and in operation by 2021. Subway closures related to those projects are required in order to carry out the work for each respective project because it would be unachievable otherwise.

These are the typical classifications of subway closures:

1. Late start: a section of a line is closed for approximately four hours and regular scheduled service begins at approximately noon, one day only.
2. One full day closure: a section of a line is closed for one day, for example from end of service Friday night to start of service Sunday morning.
3. Full weekend closure: a section of a line is closed for two days, for example from end of service Friday night to start of service Monday morning.

The TTC's ridership data shows there are fewer customers travelling during weekends than during the week, therefore subway closures are scheduled on weekends to minimize disruption. During all subway closures, the TTC provides alternate service for customers via replacement buses or increasing service on existing service routes affected by the subway closure. The TTC works closely with City departments and the Toronto Police to ensure the alternate service provided moves as effectively as possible. This is achieved by:

- Modifying traffic signals along the shuttle bus route to give priority to shuttle buses and to minimize traffic congestion along the shuttle bus route
- Having parking restrictions applied along the shuttle bus route so that traffic congestion is minimized
- Co-ordinating planned subway closures around City events
- Co-ordinating planned subway closures around City construction projects

## **Comments**

### **2017 Accomplishments**

In 2017, there were 35 subway closures. There were 20 closures on Line 1 Yonge-University, 10 on Line 2 Bloor-Danforth, four on Line 3 Scarborough and one on Line 4 Sheppard. Attachment 1 lists the closures by month and subway line. Between April and August there was a closure every weekend. These closures enabled staff to complete a significant amount of work, including the following:

#### Line 1

- Replaced rail at six locations across the line for a total of 2083m where rail was heavily worn and approaching the end of its serviceable life.
- Installed 181,000m of cable, along with hundreds of pieces of signalling equipment, enabling the successful introduction of ATC from Dupont to Yorkdale on October 22.
- Performed complex maintenance on 16 track switches at six locations, leading to higher availability of the assets and a decrease in track and signal problems resulting in greater reliability of subway service for customers.

#### Line 2

- Replaced rail at five locations across the line for a total of 1578m where rail was heavily worn and approaching the end of its serviceable life.
- Replaced 400 wood rail ties with concrete or composite ties in key areas, helping to reduce fire and smoke incidents.
- Performed complex maintenance on six track switches at three locations and repaired or replaced more than 20 insulated joints across the line, leading to a decrease in track and signal problems, resulting in greater reliability of subway service for customers.

#### Line 3

- Performed rail profile grinding on 6500m of track across the line, improving ride quality and extending the life of rail and wheels.
- Replaced 950m of power rail, track fasteners, ties and communication cables, decreasing the frequency of vehicle malfunctions on the line, thereby significantly reducing both the total incidents and total minutes of delay.

#### Line 4

- Performed complex maintenance of three track switches, improving reliability at the critical Don Mills end terminal.

### **2018 Subway Closure Proposed Schedule**

There are a total of 43 subway closures scheduled for 2018, and seven late Sunday openings. The subway closures are attributable to the ATC project, state of good repair programs, and construction activities for the interchange station for the Eglinton Crosstown at Yonge and Eglinton. Attachment 1 lists the closures and the project and subway line affected.

<b>Line 1</b>			<b>Closures</b>	<b>Days</b>
ATC Project	St Clair West	Union	4	8
ATC Project	Wilson	Finch West	1	3
ATC Project	Bloor	Union	4	8
ATC Project	Lawrence West	Finch West	4	8
ECLRT*	St Clair	Lawrence	15	30
ECLRT + SOGR	St Clair	Sheppard	8	16
ECLRT + SOGR	St Clair	Finch	1	2
<b>Total</b>			<b>37</b>	<b>75</b>

\*Eglinton Crosstown LRT

ATC construction and testing teams will require the 13 subway closures in order to start installation of ATC equipment for Phase 3 of the project. The subway closures are required to maintain the current master project schedule of activities targeted in 2018, including connecting Wilson Yard onto the main line just south of Sheppard West Station, and achieving the milestone of being able to operate in ATC from Vaughan Metropolitan Centre down to Dupont by September 2018, and being in a position to commission the Phase 3 territory by Q1 of 2019.

Eglinton Crosstown will perform their closures on Line 1 over 24 weekends, with combined state of good repair projects extending the northern boundaries of those closures on nine weekends. TTC staff has a number of state of good repair projects that are scheduled to replace critical infrastructure in the north Yonge section of the line, including switch and rail replacement, which cannot be efficiently completed during the typical maintenance window.

Crosslinx Transit Solution (CTS), the consortium that is constructing Eglinton Crosstown, has stated that they will attempt to complete their planned work as early as possible within the scheduled closures and notify TTC and Metrolinx if they are able to do so. TTC and Metrolinx have stated that they will co-operate in this regard, including providing contractual relief to CTS from penalties for late notification of the cancellation of a closure, but that CTS will inform TTC and Metrolinx at the earliest possible time that they determine that a closure is not required.

There are 26 closures left to be planned for 2019-2020 to complete TTC's contractual obligations for Eglinton Crosstown.

On Line 2, the TTC requires two full weekend subway closures to address state of good repair work. There will also be seven late Sunday openings for the Prince Edward (Bloor) Viaduct beam replacement program.

<b>Line 2</b>			<b>Closures</b>	<b>Days</b>
SOGR	Kipling	Jane	1	2
SOGR	Woodbine	Kennedy	1	2
<b>Total</b>			<b>2</b>	<b>4</b>

Seven late Sunday openings from Broadview to St George are also proposed

Line 3 will have four closures with only one of them being scheduled over a two day weekend. All other closures will be done on one day.

### **Communications**

The TTC uses several means to communicate closure information to customers so that they can adjust their travel plans, including:

- Media relations
- PA announcements in stations, in the days leading up to and during all closures
- Station signage, along the line where the closure is occurring
- Platform Video Screens and Station Information Screens in all stations
- A feature on the home page of TTC.ca
- Tweets from @ttcnotices and @ttchelps before and during the closures
- Weekly ads in 24 Hours commuter newspaper

### **Contact**

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### **Attachments**

Attachment 1: Subway Closures 2018 Forecast

**ATTACHMENT 1  
SUBWAY CLOSURES 2018 FORECAST**

Type of Closure/Event	Date	Project / Event	Line #	Limit 1	Limit 2	Comments
	Jan 6-7 2018					
Subway	Jan 13-14 2018	ATC	1	St Clair West	Union	
	Jan 20-21 2018					
	Jan 27-28 2018					
Subway	Feb 3-4 2018	ATC	1	St Clair West	Union	
Subway	Feb 10-11 2018	ECLRT	1	St Clair	Lawrence	
Subway	Feb 17-18 2018	ECLRT	1	St Clair	Lawrence	
Event	Feb 19 2018	Family Day Stat Holiday	Event			
Subway	Feb 24-25 2018	ECLRT+TTC	1	St Clair	Sheppard	
Subway	March 3-4 2018	ECLRT	1	St Clair	Lawrence	
Subway	March 10-11 2018	ATC	1	St Clair West	Union	
Event	March 11 - 17 2018	March Break				
Subway	March 17-18 2018	SRT	3	Kennedy	McCowan	
	March 24-25 2018					
Event	March 25 2018	Greek Independence Parade	Event			
Event	March 30 2017	Good Friday	Event			
Subway	March 30 - April 1 2018	ATC	1	Wilson	Finch West	**3 Day Closure Confirm Boundaries
Event	April 1 2018	Easter	Event			
	April 7-8 2018					
Subway	April 14-15 2018	SI	2	Kipling	Jane	
Subway	April 21-22 2018	ATC	1	St Clair West	Union	
Subway	April 28-29 2018	SI	2	Woodbine	Kennedy	
Subway	May 6 2018	SRT	3	Kennedy	McCowan	
Event	May 6 2018	Goodlife Marathon	Event			
Subway	May 12-13 2018	ECLRT	1	St Clair	Lawrence	
Event	May 13 2018	Mothers Day	Event			
Subway	May 13 2018	PEV	2	St George	Broadview	Late opening. Subway Service will resume by Noon

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SUBWAY CLOSURES 2018 FORECAST**

Type of Closure/Event	Date	Project / Event	Line #	Limit 1	Limit 2	Comments
Subway	May 19-20 2018	ECLRT	1	St Clair	Lawrence	
Event	May 21 2018	Victoria Day	Event			
Subway	May 26-27 2018	ATC	1	Lawrence West	Finch West	
Subway	May 27 2018	PEV	2	St George	Broadview	Late opening. Subway Service will resume by Noon
Subway	June 2-3 2018	ECLRT+TTC	1	St Clair	Sheppard	
Event	June 3 2018	Ride for Heart	Event			
Subway	June 9-10 2018	ATC	1	Lawrence West	Finch West	
Event	June 9 2018	Shoppers				
Subway	June 10 2018	PEV	2	St George	Broadview	Late opening. Subway Service will resume by Noon
Subway	June 16-17 2018	ECLRT+TTC	1	St Clair	Sheppard	
Event	June 16 2018	10 K Waterfront Run	Event			
Subway	June 24 2018	SRT	3	Kennedy	McCowan	
Event	June 22-24 2018	Pride Weekend	Event			
Subway	June 30 - July 1 2018	ECLRT	1	St Clair	Lawrence	
Event	July 1 2018	Canada Day	Event			
Subway	July 7-8 2018	ECLRT+TTC	1	St Clair	Sheppard	
Subway	July 8 2018	PEV	2	St George	Broadview	Late opening. Subway Service will resume by Noon
Subway	July 14-15 2018	ECLRT	1	St Clair	Lawrence	
Subway	July 21-22 2018	ECLRT+TTC	1	St Clair	Sheppard	
Subway	July 22 2018	PEV	2	St George	Broadview	Late opening. Subway Service will resume by Noon
Subway	July 28-29 2018	ATC	1	Lawrence West	Finch West	
Event	Aug 4-5 2018	Caribbean Carnival	Event			



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SUBWAY CLOSURES 2018 FORECAST**

Type of Closure/Event	Date	Project / Event	Line #	Limit 1	Limit 2	Comments
Event	Aug 5 2018	Simcoe Day	Event			
Subway	Aug 11-12 2018	ECLRT+TTC	1	St Clair	Finch	
Subway	Aug 18-19 2018	ECLRT	1	St Clair	Lawrence	
Event	Aug 18 - Sept 3 2018	CNE	Event			
Subway	Aug 25-26 2018	ATC	1	Lawrence West	Finch West	
Subway	Sept 1-2 2018	ECLRT	1	St Clair	Lawrence	
Event	Sept 3 2018	Labor Day	Event			
Event	Sept 6 - 9 2018	TIFF	Event			
Subway	Sept 8-9 2018	ECLRT	1	St Clair	Lawrence	
Subway	Sept 9 2018	PEV	2	St George	Broadview	Late opening. Subway Service will resume by Noon
Subway	Sept 15-16 2018	ATC	1	Bloor	Union	
Subway	Sept 22-23 2018	ECLRT+TTC	1	St Clair	Sheppard	
Subway	Sept 23 2018	PEV	2	St George	Broadview	Late opening. Subway Service will resume by Noon
	Sept 29-30 2018					
Event	Sept 29 2018	Nuit Blanche	Event			
Event	Sept 20 2018	Run for the Cure	Event			
Subway	Oct 6-7 2018	ATC	1	Bloor	Union	
Event	Oct 8 2018	Thanksgiving	Event			
Subway	Oct 13-14 2018	ECLRT+TTC	1	St Clair	Sheppard	
Subway	Oct 20-21 2018	ECLRT	1	St Clair	Lawrence	
Subway	Oct 27-28 2018	ECLRT+TTC	1	St Clair	Sheppard	
Event	Oct 31 - Nov 7 2018	World Religions Week	Event			
Subway	Nov 3-4 2018	ECLRT	1	St Clair	Lawrence	
Subway	Nov 10-11 2018	ATC	1	Bloor	Union	

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SUBWAY CLOSURES 2018 FORECAST**

Type of Closure/Event	Date	Project / Event	Line #	Limit 1	Limit 2	Comments
Event	Nov 11 2018	Remembrance Day	Event			
Subway	Nov 17 2018	SRT	3	Kennedy	McCowan	
Event	Nov 18 2018	Santa Claus Parade	Event			
Event	Nov 24 2018	Cavalcades of Light	Event			
Subway	Nov 24-25 2018	ECLRT	1	St Clair	Lawrence	
Subway	Dec 1-2 2018	ATC	1	Bloor	Union	
Subway	Dec 8-9 2018	ECLRT	1	St Clair	Lawrence	
Subway	Dec 15-16 2018	ECLRT	1	St Clair	Lawrence	
	Dec 22-23 2018					
	Dec 29-30 2018					
Event	Dec 31 2018	New Years Eve	Event			

37

**Line 1**

2

**Line 2**

7 Late Openings

4

**Line 3**

27

**Major Event**

43

**Total weekend Subway  
Closures for 2018**