## For Action



# Subway Closure and Streetcar Diversions – 2022 Review and 2023/2024 Forecast

Date: January 19, 2023

**To:** TTC Board

From: Chief Operations and Infrastructure Officer

## Summary

This report summarizes the work achieved and the infrastructure enhancements made through the use of subway closures and streetcar diversions in 2022, including initiatives implemented to improve service during closures and diversions. It also provides the forecast for subway closures and streetcar diversions in 2023 and 2024. The 2023 forecasts are similar to 2022 overall with an increase in the number of planned streetcar diversions and a slight reduction to planned subway closures.

#### Recommendations

It is recommended that the TTC Board:

- Endorse the 2023 Subway Closure and Streetcar Diversion Forecast, and direct staff to report on changes to the Closure/Diversion Forecast through the Chief Executive Officer's Report.
- 2. Direct staff to forward this report to the General Manager, Transportation Services, City of Toronto for information.

## Financial Summary

Incremental costs associated with bus shuttles and diversions for streetcar and subway closures are funded from the underlying project or initiative.

The 2023 Subway Closures and Streetcar Diversions Forecast includes requirements associated with the TTC Capital Projects and these costs are included as part of the TTC's 2023-2032 Capital Budget and Plan, approved by the TTC Board on January 9, 2023 and will be considered by City Council on February 14, 2023, primarily within various state-of-good-repair (SOGR) projects and Engineering, Construction and Expansion (ECE) projects such as Easier Access, Automatic Train Control and Station Finishes.

For the Provincial Priority Subway Expansion (PPSE) programs, the TTC is anticipating that all incremental costs to maintain service capacity through construction activities will be funded by Metrolinx. Specific arrangements under the PPSE programs are subject to the finalization of a service disruption policy.

Closure costs are variable and dependent upon duration and distance of the closure territory, along with the complexity of the work. The cost for each closure is attributed to the incremental costs for buses, advertising and staffing. This includes operators, contracted customer service support staff, TTC staff to supervise the closure, paid duty police officers and parking enforcement officers. The average subway early closure cost is approximately \$40,000 per evening and the average full, two-day weekend closure cost is \$500,000 per weekend (\$250,000 per day).

Closure of the subway and streetcar networks with no revenue vehicles operating offer larger maintenance windows to complete maintenance and construction work and allow for the scheduling of more complicated and challenging scopes of work.

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

## **Equity/Accessibility Matters**

The TTC continues to work to provide a barrier-free transit system for all, in accordance with the Accessibility for Ontarians with Disabilities Act, 2005 (AODA).

The TTC is a proud leader in providing accessible transit in the city of Toronto and continues to work towards an inclusive and barrier-free transit system for all customers, as accessibility is a key priority of the organization. All projects and programs are designed to be in compliance with AODA. Providing reliable and accessible transit service includes carrying out necessary inspections and infrastructure repairs on the transit system, while minimizing the impact on customers.

Service closures result in route diversions and other temporary changes to transit service. These changes affect access to transit service for various TTC customers, including families, people with disabilities and seniors.

While the TTC does its best to minimize the impact on its customers by replacing regularly scheduled service with alternate bus shuttle service in between the closure and diversion boundaries, it is important to note that shuttle services cannot duplicate the carrying capacity of subway trains or streetcars.

During subway closures and streetcar diversions, the TTC provides various alternate services by:

 Replacing lost subway and streetcar capacity by operating accessible shuttle buses along the affected portion of the subway or streetcar line and servicing closed stations and adding resources to maintain capacity on other routes affected by the subway closure or streetcar diversion;

- Modifying traffic signals to give priority to shuttle buses, minimizing traffic congestion and improving shuttle bus efficiency;
- Using scheduled construction buses along routes impacted by subway closures and surface construction projects (including Eglinton Crosstown and Finch West construction);
- Employing Toronto Police Paid Duty Officers to assist shuttle buses through busy intersections, as well as Toronto Parking Enforcement Officers, to enforce parking restrictions along the shuttle route;
- Staffing stations and shuttle bus stops with supervisory staff and customer service representatives to provide customer information and respond to the needs of customers. Staff and customer service representatives are trained on the AODA and the Ontario Human Rights Code in order to respond to the needs of customers;
- Communicating to customers in advance of, and during, all closures and diversions through signage, announcements and social and traditional media outlets;
- Providing Wheel-Trans buses that are available upon request to assist customers to reach an accessible subway station; and
- Using accessible, low-floor buses equipped with ramps and a kneeling feature.
   These buses have route destination signs as well as automated audible and visual next stop announcements.

The TTC provides advance notification of subway closures or streetcar diversions and temporary and extended service disruptions and delays to customers via:

- Media releases.
- Audible and visual displays on video screens on subway or streetcar platforms and stations.
- Website postings at <u>Service Advisories</u>, on <u>Twitter@ttcnotices</u> 

  , on <u>Instagram</u> 

  and Facebook 

  .
- E-mail alerts to customers who registered to My TTC e-Alerts.
- Information updates at mywheel-trans.ttc.ca when booking a trip.
- Escalator and elevator disruption information posted on the TTC website at
   <u>Elevators and escalators planned maintenance</u>. Status is also available by calling
   416-539-5438 (LIFT), Telecommunications Relay Service 1-800-855-0511, or by e mail at <u>My TTC e-Alerts</u> (elevators only).

## **Decision History**

At its meeting on August 19, 2014, the Board received a report that explained the need for, and purpose of, subway closures:

**Explanation of Subway Closures** 

Each year since 2017, staff have made presentations to the TTC Board on subway closures, most recently in February 2022:

Subway Closures – 2021 Review and 2022 Forecast

Detailed transit network expansion decision history is described in the February 10, 2021 report, September 15, 2021 report, February 10, 2022 report and July 14, 2022 report to the Board linked below, which included updates on the Provincial Priority Subway Expansion Programs: Ontario Line, Scarborough Subway Extension, Yonge North Subway Extension and Eglinton Crosstown West Extension:

February 10, 2021 Transit Network Expansion Update
September 15, 2021 Transit Network Expansion Update
February 10, 2022 Transit Network Expansion Update
July 14, 2022 Transit Network Expansion Update

## **Issue Background**

The TTC is committed to providing safe, reliable, accessible and efficient service. In order to do so, the TTC performs regular inspections and major repairs to its subway infrastructure nightly at the conclusion of service.

Currently, the subway system opens at 6 a.m., six days a week and at 8 a.m. on Sundays, with a closing time between 2 a.m. and 3 a.m. These operating hours result in a small window of opportunity to carry out required maintenance work. On weeknights and Saturdays, TTC staff have an approximate three-hour time frame for work, and from Saturday night into Sunday morning, a five-hour time frame is available. Further, because the nature of the work requires TTC staff to set up work zones and move equipment into the work area, typically less than two hours of actual work can be achieved each night.

The TTC typically uses five types of subway closures. These include:

**Weeknight Early Closure**: A section of the line is closed early, at 11 p.m. on weeknights, Monday to Thursday. This approach was trialed in the fall of 2018 and was fully implemented in 2019 and has been utilized since.

One Day Weekend Closure (Single Day): A section of the line is closed for one day from end of service the previous night to the start of service the following morning.

**Full Weekend Closure**: A section of the line is closed for two days from end of service Friday night to the start of service on Monday morning. One properly planned and executed full weekend closure is equivalent to approximately five regular weeks of night work for many projects.

**One Day Late Opening**: A section of the line is closed, usually on a Sunday, for approximately four hours and regular scheduled service begins at 12 p.m.

**Station By-Pass**: Whereby trains are operating through the station but not stopping at the station. A variation of this type of closure may result in single platform operations if at an end terminal station.

The full implementation of ATC on Line 1 has enabled the TTC to provide single-line train operation, allowing customers to remain on the train operating in one direction, while allowing work to proceed on the other direction. This results in less customer trip impacts and requires fewer resources for bus diversions. The TTC will continue to explore the use of the single-line train operation in 2023 to increase its maintenance window while attempting to minimize customer impacts.

The costs associated with closures (shuttles, overtime, etc.) are budgeted by the respective capital programs and the intention is always to minimize the disruption on customers and local businesses as much as possible.

The streetcar network runs 24-hour service on most major routes, with a frequency of every 30 minutes or better. As a result of this service level, there is limited opportunity to establish a maintenance period. The majority of required maintenance work on the streetcar network is performed during service, in mixed traffic, using temporary work zones with flag persons. Minor repairs and inspections are performed during service however, when power isolation or a rail replacement is required, there is a need for a streetcar diversion.

The TTC typically uses four types of streetcar diversions. These include:

**Capital Projects**: A section of the network is closed for an extended period of time. These projects are closely coordinated with the City of Toronto and the TTC's Service Planning division. These diversions support TTC and City of Toronto state-of-good-repair works requiring a streetcar service diversion for longer than one board period. A board period is a six-week period where Operators select their work based on the service planning schedule.

**Nightly Diversion**: A section of the line is diverted temporarily during off peak service hours, typically from 11 p.m. until 4 a.m.

**One Day Diversion**: A section of the line is diverted for one day from 11 p.m. the previous night to the start of service the following morning.

**Full Diversion**: A section of the line is diverted for more than one day; typically, a full diversion is two days from end of service Friday night to the start of service on Monday morning.

Overall, the number of weekend subway closures and streetcar diversions has remained consistent over the past several years given the extensive work planned.

The TTC works with the City of Toronto and partners (i.e. Metrolinx) to co-ordinate closures for transit expansion projects, such as the Scarborough Subway Extension, Ontario Line Project and the Yonge North Subway Extension. These projects, along with the Major Capital Projects required in the Streetcar Infrastructure Department, comprise the majority of the anticipated 2023 closures and diversions.

The benefit of closures, such as a full weekend subway closure is the equivalent to about five weeks of night work and provide more than 50 uninterrupted hours of work availability, larger maintenance windows to schedule more complicated scopes of work, and allows multiple groups to participate to maximize the boundaries of the closure. Closures and diversions are co-ordinated to keep the level of disruption to TTC customers and road users to a minimum.

## **Comments**

## 2022 Subway Closure Review

In 2022, the TTC planned 35 full weekend closures, eight late openings, 177 nights of early closures and 20 days of station by-pass.

Due to the return of City events, some of the originally planned closures were cancelled, resulting in a total of 24 full weekend closures, six single-day closures, eight late openings and 116 nights of early closures actually utilized.

The 2022 subway closures that were executed on Line 1 Yonge-University-Spadina and Line 2 Bloor-Danforth allowed for a significant amount of work to be completed – particularly on Line 1 to maintain the schedules for the Automatic Train Control (ATC) and the Eglinton Crosstown Light Rail Transit (ECLRT) projects. The benefits of these and other projects, including network, customer and service reliability enhancements, are noted below:

## **Major Capital Projects**

- ATC Project
  - ATC phase 5 (Eglinton to Finch) was commissioned. ATC is now fully operational
    on the entirety Line 1 from Vaughan Metropolitan Centre to Finch Stations. This
    enhanced the customer experience by increasing train frequency and providing a
    more efficient and reliable subway service.
- Easier Access Project
  - This program includes the installation of elevators, accessible doors and updated signage and wayfinding at all subway stations. In 2022, work was performed concurrently at 14 stations and the Lawrence Station elevator installation work commenced which required four subway closures. Lansdowne Station was completed in December, 2022. Once completed, this work enhances the customer experience by making the station accessible for all patrons.

## **Transit Expansion Projects**

Expansion projects will enhance the customer experience by providing customers with the ability to travel further, during more times of the day, while providing customers additional transit options via new lines and additional routes.

- Eglinton Crosstown Light Rail Transit (ECLRT) Project
  - The majority of work at Eglinton Station for the ECLRT project was completed and the remaining work is anticipated to be completed in 2023.

- Scarborough Subway Extension (SSE) Project
  - The SSE project commenced on Line 2 by performing necessary electrical cabling relocations to facilitate planned future tunnel extension work.

## **Service Reliability Enhancements**

- Yard Trackside Heater Installations
  - Additional signalling equipment and trackside heating assets were installed in Wilson Yard to improve safe and reliable service by mitigating delays and disruptions during periods of inclement weather.
- State-of-good-repair (SOGR) Projects
  - Full track turnout replacement in Greenwood Yard and at Keele Station was completed. These projects were planned with predictive maintenance in mind and designed to replace assets in advance of critical failure.

#### 2022 Streetcar Diversion Review

In 2022, the TTC supported 26 full diversions, 89 nightly diversions and 12 capital projects extending more than one board period.

## **Major Capital Projects**

These projects enhance customer experience as they are planned with predictive maintenance in mind and designed to maintain infrastructure assets in a state-of-good-repair to ensure a safe and reliable service for customers. The following is a list of locations in 2022 where major capital projects were completed involving TTC streetcar track and/or overhead assets replaced:

- King/Queensway/Queen/Roncesvalles intersection
- The Queensway from Glendale Avenue to Parkside Avenue
- Sunnyside Streetcar Loop
- Lakeshore Avenue and Kipling Avenue
- Kipling Streetcar Loop
- Lakeshore Boulevard west from Mimico Avenue to Louisa Street
- Carlton Street and Church Street
- King Street and Shaw Street
- College Street from Bay Street to Bathurst Street
- Wellington Street east from Yonge Street to King Street

These City-TTC partnership projects bundle multiple utility and infrastructure upgrades such as new hydro, watermains, sidewalks, roadway and streetscaping where feasible. Outreach is undertaken in advance and throughout these projects with the local Councillor(s), stakeholders, Business Improvement Areas (BIAs), residential community and customers. As one example, in 2022, extensive track, overhead and infrastructure renewal was implemented on College Street from Bathurst to Bay Street, with staging to best facilitate access to our colleagues at the University of Toronto who were undertaking major construction on campus with required access from College Street.

## **Service Reliability Enhancements**

- SOGR Car Stop Replacements
  - The Car Stop Replacement program aims to replace worn rail at streetcar stops in advance of potential failures. The following is a list of locations where the car stop rail was replaced in 2022: Lakeshore Boulevard and 20th Street; Gerrard Street west of Sackville; King Street and Ontario Street; Bathurst Street south of Ulster Street; Queen Street West of Carrol Street, King Street East of Cowan Avenue; and King Street West of Brant Street.
- SOGR Streetcar Track and Overhead Inspections
  - Preventative maintenance designed to proactively inspect and correct components to ensure safe and reliable service.
  - In 2022, routine asset management inspections were performed under service diversions at: Spadina/Bloor Tunnel, Harbourfront Tunnel and St Clair West Station.
- SOGR Streetcar Track and Overhead Intersection Overhaul
  - Scheduled corrective maintenance utilized to mitigate damage to TTC vehicles and improve safety of passengers, cyclists and pedestrians.
  - In 2022, SOGR work was completed at: Dufferin and King; King and York; St Clair West and Bathurst; King and Parliament; and Fleet and Bathurst.
- SOGR Rail Repair
  - Corrective maintenance to mitigate damage to TTC vehicles and improve safety of passengers, cyclists and pedestrians.
  - In 2022, SOGR rail repairs were completed at: King at Blue Jays Way; Bathurst and Wellington; King West between Bathurst and Shaw; King West at Niagara; and Spadina and Nassau.

## **2023 Subway Closures Forecast**

As a result of demands due to transit enhancement and expansion projects, along with various network upgrades planned, the following is the tentative 2023 subway closure plan:

SOGR = State of Good Repair; ECE = Engineering, Construction and Expansion; ATC = Automatic Train Control; YNSE = Yonge North Subway Extension;

SSE = Scarborough Subway Extension

CLOSURE TYPE	LINE	SOGR	ECE	ATC	YNSE	SSE	TOTAL
	YUS Line 1	1	12	2	-	-	15
Full Weekend	BD Line 2	1	2	3	-	3	9

CLOSURE TYPE	LINE	SOGR	ECE	ATC	YNSE	SSE	TOTAL
Single Day	YUS Line 1	-	-	1	-	-	1
Late Opening	BD Line 2	8	-	-	-	-	8
Forly Wooknight	YUS Line 1	68	-	-	-	-	68
Early Weeknight	BD Line 2	48	-	-	-	-	48
Station Bypass	YUS Line 1	-	1	-	29	-	29

The tentative 2023 Subway Closures Forecast has been scheduled to ensure that projects, such as ATC Line 2 enabling work, the YNSE project, the SSE project, ECE Easier Access program and the Station Finishes program are prioritized and executed in as efficient a manner possible to minimize customer disruptions, while permitting modifications where possible.

Coordination of these closures take place in a larger context of what is happening throughout the City of Toronto and days/weekends where major City events may occur are avoided to maintain seamless customer experience.

The calendar provides eight weekends worth of flexibility to allow for any additional work needs that may arise, mindful of scheduled streetcar diversions, unconfirmed City of Toronto events and available shuttle bus resources.

#### **2023 Streetcar Diversions Forecast**

The forecasted 2023 Streetcar Diversion Forecast, per route is shown below:

SOGR = State of Good Repair; OL = Ontario Line Project

DIVERSION TYPE	LINE	SOGR	SOGR Car Stops	SOGR Inspections	SOGR Rail Repair	SOGR Intersection Overhaul	SOGR Margin Repair	SOGR Welding	OL	TOTAL
	501 Queen	-	2	-	3	-	-	-	-	5
Full Diversion	503 Kingston Rd	-	-	-	-	-	1	-	-	1
	504 King	-	1	-	-	2	-	-	-	3

DIVERSION TYPE	LINE	SOGR	SOGR Car Stops	SOGR Inspections	SOGR Rail Repair	SOGR Intersection Overhaul	SOGR Margin Repair	SOGR Welding	OL	TOTAL
	505 Dundas	-	-	-	-	1	-	-	-	1
	506 Carlton	-	2	-	-	-	-	-	-	2
	509 Harbourfront	-	-	7	-	1	-	-	-	8
	510 Spadina	-	-	3	-	-	-	-	-	3
	511 Bathurst	-	1	-	1	-	1	-		3
	512 St Clair	-	2	1	-	-	-	-		3
	501 Queen	2	-	-	-	-	-	-	2	4
Capital	504 King	4	-	-	-	-	-	-		4
Projects	506 Carlton	1	-	-	-	-	-	-		1
	512 St Clair	1	-	-	-	-	-	-		1
	501 Queen	-	-	12	-	-	-	12	-	24
	504 King	-	-	21	-	-	-	3	-	24
	505 Dundas	-	-	6	-	-	-	3	-	9
Nightly Diversion	506 Carlton	-	-	9	-	-	-	3	-	12
	510 Spadina	-	-	33	-	-	-	-	-	33
	511 Bathurst	-	-	6	-	-	4	3	-	13
	512 St Clair	-	-	12	-	-	-	-	-	12

Attachment 1 of this report outlines in detail the subway closure activities and Attachment 2 outlines the streetcar diversion activities.

## 2024 Preliminary Forecasted Full Weekend Subway Closures and Streetcar Diversions

The TTC plans to continue to use full weekend and single-day closures, early weeknight closures as well as late Sunday openings to enable the ATC project, SSE project and various SOGR to progress. Streetcar diversions will continue to be utilized to support upcoming major capital projects as well as SOGR maintenance and repairs. The following closures and diversions are tentatively proposed for 2024, but will be finalized at the end of 2023 after a thorough review of existing work and in correspondence with City of Toronto Planning staff:

SOGR = State of Good Repair; ECE = Engineering, Construction and Expansion; ATC = Automatic Train Control; SSE Scarborough

CLOSURE/DIVERSION TYPE	LINE	SOGR	ECE	ATC	SSE	TOTAL
Full We alread	YUS Line 1	2	18	-	-	20
Full Weekend	BD Line 2	4	7	3	3	17
Capital Projects	501 Queen	4	-	-	-	4
	504 King	1	-	-	-	1
	506 Carlton	2	-	-	-	2
	510 Spadina	1	-	-	-	1
	512 St Clair	1	-	-	-	1

#### Contact

Fortunato Monaco, Chief Operations and Infrastructure Officer 416-393-4406 fortunato.monaco@ttc.ca

## **Signature**

Fortunato Monaco Chief Operations and Infrastructure Officer

## **Attachments**

Attachment 1 – 2023 Subway Closures Forecast

Attachment 2 – 2023 Streetcar Diversions Forecast

## Attachment 1 – 2023 Subway Closures Forecast

DATE	CLOSURE TYPE	PROJECT	OTHER PROJECT	SHUTTLE BUS SERVICE
Jan 21 – 23	FW	ECE Easier Access Lawrence Station Elevator Access		Eglinton to Sheppard
Jan 30 – Feb 3	EA	SOGR Structure Maintenance: Concrete Rehabilitation		Osgoode to King
Feb 6 – 10	EA	SOGR Structure Maintenance: Concrete Rehabilitation		Osgoode to King
Feb 13 – 17	EA	SOGR Structure Maintenance: Concrete Rehabilitation		Osgoode to King
Feb 20 – 24	EA	SOGR Structure Maintenance: Concrete Rehabilitation	+SOGR Track Maintenance Fast Clip Installations	Osgoode to College
Feb 27 – Mar 3	EA	SOGR Structure Maintenance: Concrete Rehabilitation	+SOGR Track Maintenance Fast Clip Installations	Osgoode to College
Mar 4 – 6	FW	ATC Line 1 Phase 6		Bloor to York Mills
Mar 6 – 10	EA	SOGR Structure Maintenance: Concrete Rehabilitation	+SOGR Track Maintenance Fast Clip Installations	Osgoode to College
Apr 8 – 10	FW	ATC Line 1 Phase 6		St Clair to Sheppard
Apr 9	LO	SOGR Structure Maintenance PEV Beam Replacement		St George to Broadview
Apr 15 – 17	FW	ECE Station Finishes (U60-9)	+SOGR Track Maintenance: Delkor Plates Installation	St Clair West to St Andrew
Apr 23	LO	SOGR Structure Maintenance PEV Beam Replacement		St George to Broadview
Apr 24 – 28	EA	SOGR Structure Maintenance: Asbestos Abatement	_	Eglinton to Sheppard

DATE	CLOSURE TYPE	PROJECT	OTHER PROJECT	SHUTTLE BUS SERVICE
May 1 – 5	EA	SOGR Track Maintenance: Open cut maintenance		Woodbine to Kennedy
May 6 – 7	SD	ATC Line 1 Phase 6		St Clair to Sheppard
May 8 – 12	EA	SOGR Track Maintenance: Open cut maintenance		Woodbine to Kennedy
May 13 – 15	FW	ATC Line 2 Enabling Works		Victoria Park to Kennedy
May 15 – 19	EA	SOGR Track Maintenance: Open cut maintenance		Woodbine to Kennedy
May 20 – 22	FW	ECE Station Finishes (U60-9)	+SOGR Track Maintenance: Delkor Plates Installation	St Clair West to St Andrew
May 22 – 26	EA	SOGR Track Maintenance: Open cut maintenance		Kipling to Keele
May 23 – Jun 6	SBY	ECE YNSE Metrolinx		Finch Platform (NB) to Finch Tail Track
May 28	LO	SOGR Structure Maintenance PEV Beam Replacement		St George to Broadview
May 29 – Jun 2	EA	SOGR Track Maintenance: Open cut maintenance		Kipling to Keele
Jun 3 – 5	FW	ATC Line 2 - Enabling Works		Victoria Park to Kennedy
Jun 5 – 9	EA	SOGR Track Maintenance: Open cut maintenance		Kipling to Islington
Jun 6 – 20	SBY	ECE YNSE Metrolinx Project		Finch Platform (SB) to Finch Tail Track
Jun 12 – 16	EA	SOGR Track Maintenance: Open cut maintenance		Kipling to Islington

DATE	CLOSURE TYPE	PROJECT	OTHER PROJECT	SHUTTLE BUS SERVICE
Jun 18	LO	SOGR Structure Maintenance PEV Beam Replacement		St George to Broadview
Jun 20 – 24	EA	SOGR Track Maintenance PREP for Greenwood WYE weekend closure		Broadview to Woodbine
Jun 24 – 26	FW	SOGR O&I Maintenance: Greenwood WYE		Broadview to Woodbine
Jun 26 – 30	EA	SOGR Track Maintenance Post Greenwood WYE weekend closure		Broadview to Woodbine
Jul 2	LO	SOGR Structure Maintenance PEV Beam Replacement		St George to Broadview
Jul 3 – 7	EA	SOGR Track Maintenance: Davisville Yard - Major maintenance of switches DS12S & DS14S		St Clair to Lawrence
Jul 12 – 15	EA	SOGR Track Maintenance: Davisville Yard - Major maintenance of switches DS12S & DS14S		St Clair to Lawrence
Jul 15 – 17	FW	ECE Hydrovac (6149, Retrofit of CH & Shop traction power pendent system)	+SOGR Track Maintenance: Davisville Yard - Major maintenance of switches DS12S & DS14S	St Clair to Lawrence
Jul 17 – 21	EA	SOGR Track Maintenance: Davisville Yard - Major maintenance of switches DS12S & DS14S		St Clair to Lawrence
Jul 22 – 24	FW	ECE Station Finishes (U60-9)		St George to St Andrew
Jul 23	LO	SOGR Structure Maintenance PEV Beam Replacement		St George to Broadview

DATE	CLOSURE TYPE	PROJECT	OTHER PROJECT	SHUTTLE BUS SERVICE
Aug 12 – 14	FW	ECE Station Finishes (U60-9)		St George to St Andrew
Aug 19 – 21	FW	ATC Line 2 - Enabling Works		Victoria Park to Kennedy
Aug 27	LO	SOGR Structure Maintenance PEV Beam Replacement		St George to Broadview
Sep 11 – 15	EA	SOGR Track Maintenance: Wilson Yard - Full turnout replacement of WS2		St Clair West to Sheppard West
Sep 15 – 18	FW	ECE SSE Kennedy Station Hoarding		Warden to Kennedy
Sep 19 – 23	EA	SOGR Track Maintenance: Wilson Yard - Full turnout replacement of WS2		St Clair West to Sheppard West
Sep 23 – 25	FW	SOGR Track Maintenance: Wilson Yard - Full turnout replacement of WS2		St Clair West to Sheppard West
Sep 24	LO	SOGR Structure Maintenance PEV Beam Replacement		St George to Broadview
Sep 25 – 29	EA	SOGR Track Maintenance: Wilson Yard - Full turnout replacement of WS2		St Clair West to Sheppard West
Oct 2 – 6	EA	ECE / Track Maintenance Kipling Storage Track – Prep for Kipling weekend closure		Kipling to Islington
Oct 7 – 9	FW	ECE Station Finishes (U60-9)		St George to St Andrew
Oct 10 – 14	EA	ECE / Track Maintenance Kipling Storage Track – Prep for Kipling weekend closure		Kipling to Islington

DATE	CLOSURE TYPE	PROJECT	OTHER PROJECT	SHUTTLE BUS SERVICE
Oct 14 – 16	FW	ECE / Track Maintenance Kipling Storage Track		Kipling to Islington
Oct 16 – 20	EA	ECE / Track Maintenance Kipling Storage Track – post Kipling weekend closure		Kipling to Islington
Oct 21 – 23	FW	ECE Easier Access Lawrence Station Elevator Access	+SOGR Track Major Maintenance (York Mills Centre Track)	St Clair to Sheppard
Oct 28 – 30	FW	ECE Station Finishes (U60-9)		St George to St Andrew
Oct 30 – Nov 3	EA	SOGR Structure Maintenance: Asbestos Abatement		Eglinton to Sheppard
Nov 4 – 6	FW	ECE Easier Access Lawrence Station Elevator Access	+SOGR Track Major Maintenance (York Mills Centre Track)	St Clair to Sheppard
Nov 4 – 6	FW	ECE / Signals Maintenance Kipling Storage Track		Kipling to Islington
Nov 6 – 10	EA	SOGR Structure Maintenance: Asbestos Abatement		Eglinton to Sheppard
Nov 11 – 13	FW	ECE SSE Kennedy Station Vent Shafts		Warden to Kennedy
Nov 13 – 17	EA	SOGR Structure Maintenance: Asbestos Abatement		Eglinton to Sheppard
Nov 25 – 27	FW	ECE Station Finishes (U60-9)		St George to St Andrew
Nov 27 – Dec 1	EA	SOGR Structure Maintenance: Asbestos Abatement		Eglinton to Sheppard
Dec 2 – 4	FW	ECE SSE Kennedy Station Vent Shafts		Warden to Kennedy
Dec 9 – 11	FW	ECE Station Finishes (U60-9)		St George to St Andrew

EA Early Weeknight Closure SD Single Day Closure ECLRT Eglinton Crosstown Light Rail Transit SOGR State-of-Good Repair SSE Scarborough Subway Extension FW Weekend Closure LO Late Opening ATC Automatic Train Control ECE Engineering, Construction & Expansion YNSE Yonge North Subway Extension

## Attachment 2 – 2023 Streetcar Diversions Forecast

DATE	DIVERSION TYPE	PROJECT	OTHER PROJECT
Jan 24 – 27	ND	SOGR Inspection - St Clair West Station	
Feb 6 – Nov 18	СР	SOGR Gerrard Street East	
Feb 7 – 10	ND	SOGR Inspection - Bloor/Spadina Loop	
Feb 17 – 20	FW	SOGR Harbourfront Tunnel Maintenance	
Feb 27 – Mar 26	СР	SOGR King Street West	
Feb 28 – Mar 3	ND	SOGR Inspection - King & Bathurst	
Mar 3 – 6	FW	SOGR Bloor Tunnel Maintenance	
Mar 7 – 10	ND	SOGR Inspection - Bloor/Spadina Loop	
Mar 10 – Oct 29	СР	SOGR Dufferin Loop	
Mar 14 – 17	ND	SOGR STW Welding - College & Spadina	
Mar 17 – 20	FW	SOGR Intersection Overhaul - King & Dufferin	
Mar 21 – 24	ND	SOGR Inspection - Queen & Bathurst	
Mar 24 – Nov 28	СР	SOGR Queen Street East (Carlaw to Leslie & Leslie to Greenwood)	
Mar 24 – 27	FW	SOGR Carstop – Queen St at NEC Waverly WB rail	
Mar 26 – May 6	СР	SOGR King Street East	
Mar 28 – Jun 20	СР	SOGR King Street West	
Mar 31 – Apr 7	FW	SOGR Intersection Overhaul - King & Church	
Apr 4 – 7	ND	SOGR Inspection - Bloor/Spadina Loop	

DATE	DIVERSION TYPE	PROJECT	OTHER PROJECT
Apr 7 – 10	FW	SOGR Carstop – Queen St E of Wineva WB	
Apr 11 – 14	ND	SOGR STW Welding - King & Spadina	
Apr 14 – 17	FW	SOGR Harbourfront Tunnel Maintenance	
Apr 18 – 21	ND	SOGR Inspection - Neville Loop	
Apr 25 – 28	ND	SOGR Inspection - St Clair West Station	
May 1 – Nov 29	СР	SOGR York - Queen to Adelaide	
May 2 – 5	ND	SOGR Inspection - Bloor/Spadina Loop	
May 2 – 5	ND	SOGR STW Welding - Queen & Spadina	
May 6 – Jul 8	СР	SOGR Gerrard & Coxwell	
May 6 – Nov 21	СР	SOGR Russell Yard	
May 7 – Dec 31	СР	OL Queen & Yonge (Joint Corridor enabling work)	
May 7 – Jun 17	СР	SOGR Parliament to Dufferin & KQQR stage 3	
May 7 – Sep 10	СР	SOGR Queen Station	
May 9 – 12	ND	SOGR Inspection - McCaul Loop	
May 9 – 12	ND	SOGR Inspection - Bathurst & Fleet, Fleet Loop, CNE Loop	

DATE	DIVERSION TYPE	PROJECT	OTHER PROJECT
May 12 – 15	FW	SOGR Carstop – Gerrard NS E of Golfview WB	
May 14 – Nov 8	СР	SOGR Broadview (Danforth to Gerrard & Broadview Station Loop)	
May 15 – 19	ND	SOGR Rail Grinding - Gerrard	
May 16 – 19	ND	SOGR Inspection - Springhurst Loop	
May 16 – 19	ND	SOGR STW Welding - Queen & Broadview	
May 22 – 26	ND	SOGR Rail Grinding - Gerrard	
May 26 – 29	FW	SOGR Harbourfront Tunnel	
May 29 – Jun 2	ND	SOGR Rail Grinding - King	
Jun 2 – 5	FW	SOGR Carstop – Gerrard E of Boulton	
Jun 2 – 5	FW	SOGR Rail Repair - Queen St E & Parliament	
Jun 5 – 9	ND	SOGR Rail Grinding – King	
Jun 6 – 9	ND	SOGR STW Welding - Dundas & Broadview	
Jun 9 – 12	FW	SOGR Margin Repair - Kingston Rd & Scarborough EB	+ SOGR Margin Repair - Kingston Rd & Main EB
Jun 13 – 16	ND	SOGR Inspection - Bloor/Spadina Loop	
Jun 13 – 16	ND	SOGR Inspection - Dundas W Station	

DATE	DIVERSION TYPE	PROJECT	OTHER PROJECT
Jun 16 – 19	FW	SOGR Bloor Tunnel Maintenance	
Jun 18 – Jul 29	СР	SOGR King & Parliament	
Jun 20 – 23	ND	SOGR Inspection - Queen & Bathurst	
Jun 23 – 26	FW	SOGR Rail Repair - Queen St E (between Jarvis & St George)	
Jun 27 – 30	ND	SOGR Inspection - King & Bathurst	
Jun 27 – 30	ND	SOGR Inspection - Bathurst Station	
Jul 4 – 7	ND	SOGR Inspection - Degrassi Underpass	
Jul 4 – 7	ND	SOGR Inspection - Bloor/Spadina Loop	
Jul 7 – 10	FW	SOGR Harbourfront Tunnel	
Jul 8 – 9	FW	SOGR Inspection - St Clair West Station	
Jul 14 – 17	FW	SOGR Intersection Overhaul - Parliament & Dundas	
Jul 18 – 21	ND	SOGR Inspection - Main Station	
Jul 21 – 24	FW	SOGR Margin Repair - Bathurst (south of College to south of Dundas)	
Jul 30 – Sep 2	СР	SOGR Russell Yard Stage 1	
July 30 – Nov 18	СР	OL Queen & Degrassi (Joint Corridor enabling work)	

DATE	DIVERSION TYPE	PROJECT	OTHER PROJECT
Aug 1 – 4	ND	SOGR Inspection - King & Bathurst	
Aug 4 – 7	FW	SOGR Carstop – St Clair W E of Earlscourt WB	
Aug 4 – 7	FW	SOGR Intersection Overhaul - Fleet Loop	
Aug 8 – 11	ND	SOGR Inspection - Bloor/Spadina Loop	
Aug 11 – 14	FW	SOGR Carstop – St Clair W, E Bathurst EB	
Aug 11 -14	FW	SOGR Harbourfront Tunnel	
Aug 15 – Aug 18	ND	SOGR Inspection - St Clair West Station	
Aug 18 – 21	FW	SOGR Carstop – Bathurst St at Harbord St SB	
Aug 18 – 21	FW	SOGR Rail Repair - Queen St E (Willow & Silver Birch)	
Aug 22 – Aug 25	ND	SOGR Inspection - Broadview Station	
Sep 3 – Oct 2	СР	SOGR Broadview Station Loop	
Sep 7 – Oct 29	СР	SOGR Queen Street East (Parliament to River & Davies to Broadview)	
Sep 19 – 22	ND	SOGR Inspection - Bloor/Spadina Loop	
Sep 22 – 25	FW	SOGR Harbourfront Tunnel	
Sep 26 – 29	ND	SOGR STW Welding - King & Bathurst	

DATE	DIVERSION TYPE	PROJECT	OTHER PROJECT
Oct 3 – 6	ND	SOGR Inspection - St Clair West Station	
Oct 3 – 6	ND	SOGR STW Welding - College & Bathurst	
Oct 6 – 9	FW	SOGR Harbourfront Tunnel	
Oct 6 – 9	FW	SOGR Rail Repairs - Bathurst (between King and Adelaide)	
Oct 8 – Dec 16	СР	SOGR Oakwood Loop	
Oct 9 – 12	ND	SOGR Margin Repair - Bathurst (between Carr & Austin Terrace)	
Oct 16 – Feb 12	СР	SOGR St Clair West Station	
Oct 17 – 20	ND	SOGR Inspection - Bloor/Spadina Loop	
Oct 17 – 20	ND	SOGR STW Welding - Queen & Bathurst	
Oct 24 – 27	ND	SOGR Inspection - Queen & Bathurst	
Nov 3 – 6	FW	SOGR Carstop – King St W at Strachan WB	
Nov 7 – 10	ND	SOGR Inspection - Degrassi Underpass	
Nov 10 – 13	FW	SOGR Bloor Tunnel Maintenance	
Nov 14 – 17	ND	SOGR Inspection – Bloor/Spadina Loop	
Nov 21 – 24	ND	SOGR Inspection - Springhurst Loop	

DATE	DIVERSION TYPE	PROJECT	OTHER PROJECT
Nov 27 – 30	ND	SOGR Inspection - King & Bathurst	

ND Nightly Diversion SD Single Day Closure SOGR State-of-Good Repair

CP Capital Project FW Full Diversion (greater than 24 hours)