



Making Headway

Capital Investments to Keep Transit Moving 2019-2033

January 24, 2019



A full and clear view of:

- **The capital investments required to keep Toronto transit moving**
 - **What is funded and unfunded**
 - **The value of investing**
- + Result of a 12-month review of base capital needs (current system without expansion)
 - + Includes state-of-good-repair and ridership growth investments required through 2033
 - + Based on preliminary estimates for planning purposes, to be refined as project planning and maturity occurs

**Among the most
integrated multi-
modal transit systems
in the world**

**1.7 million
rides every
weekday**



**Accounts for 85 per
cent of all transit trips
in the GTA**

**Low operating
government subsidy**

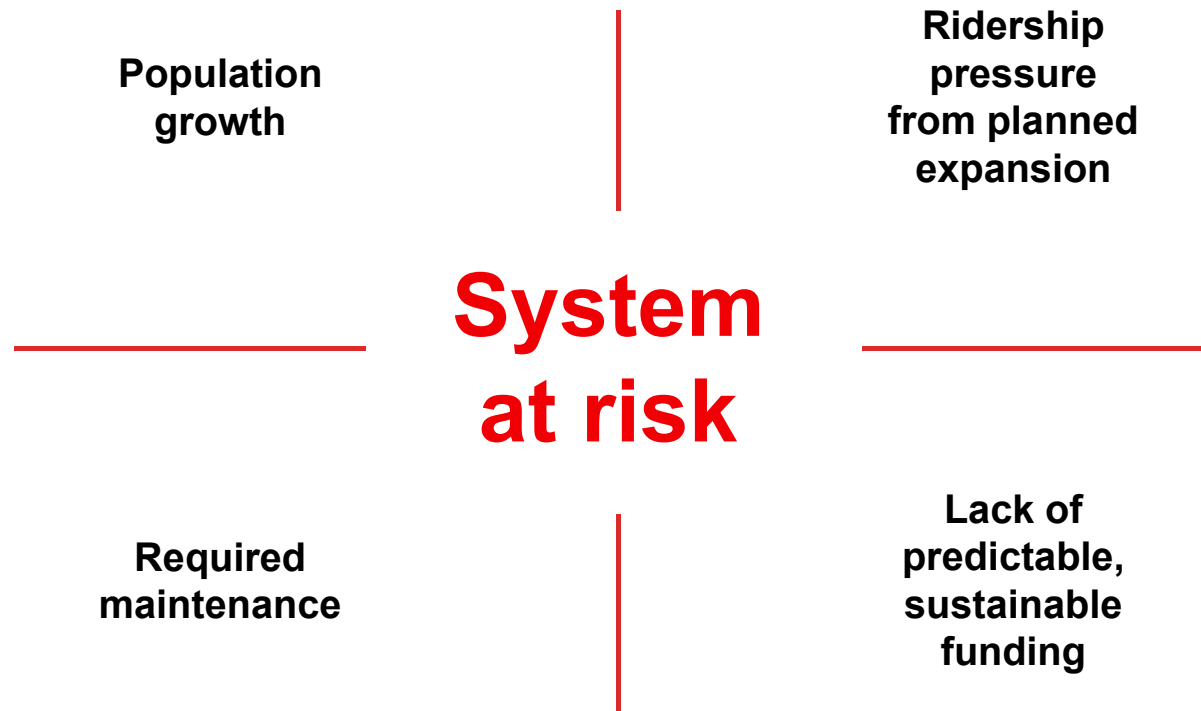


Capital Investment Plan

The backlog of deferred maintenance is growing and additional needs are imminent.

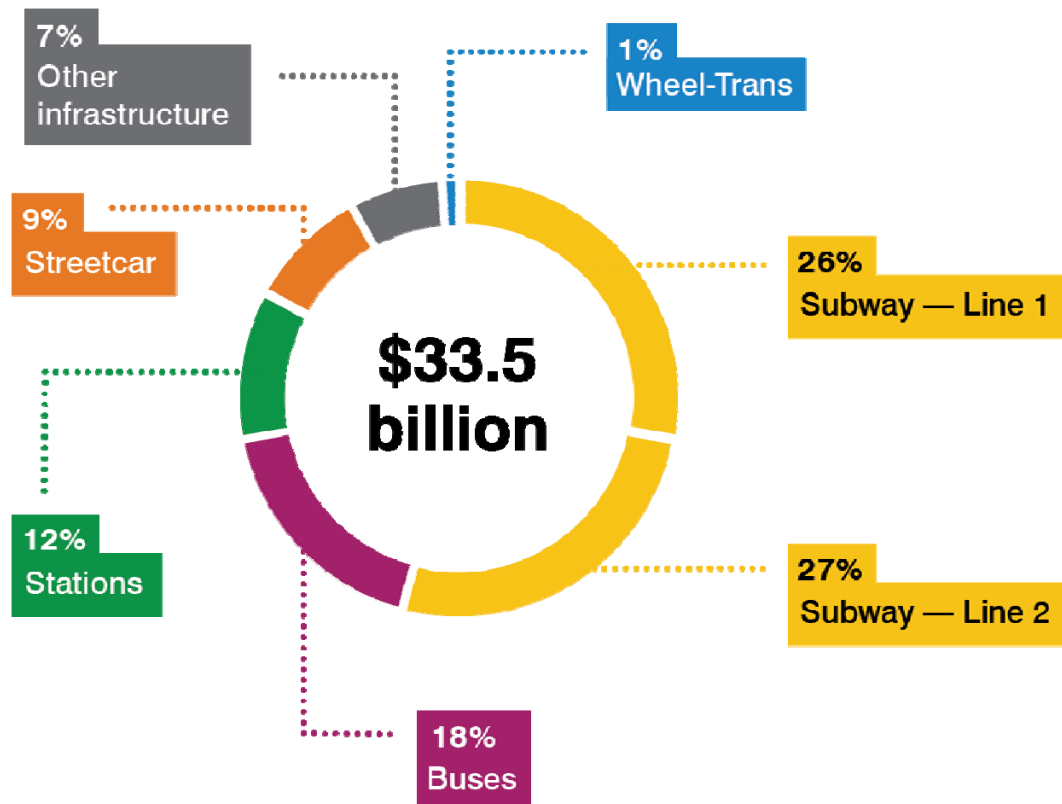
Investing to properly maintain and increase the capacity of our *existing* system is required, along with transit expansion.

Without these investments, service reliability and service levels could decline.

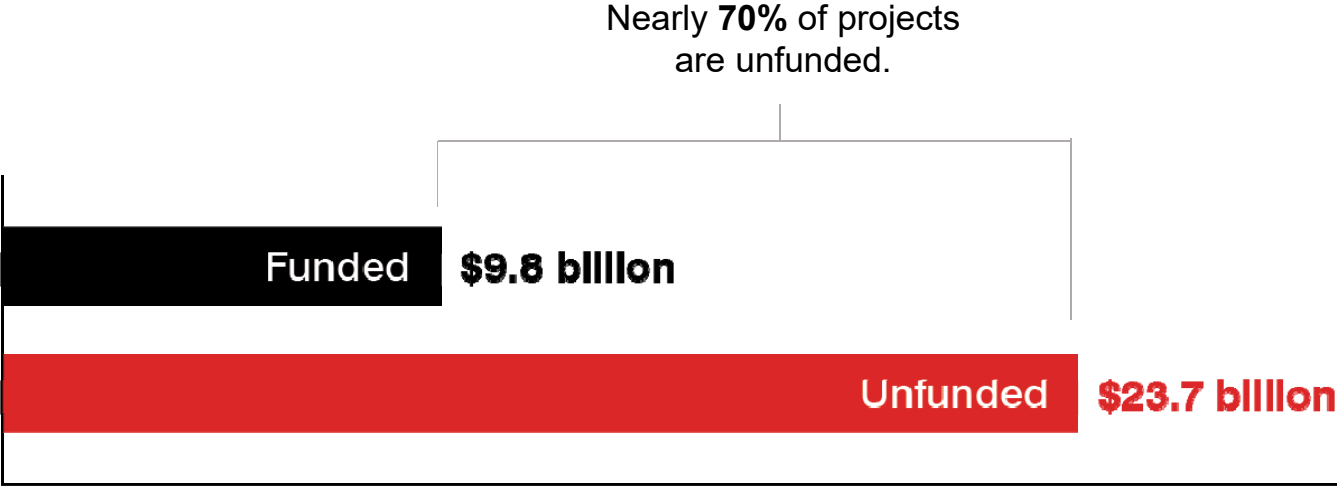


Investment Summary

Required Investment Outlook 2019–2033



The Funding Gap



Each year since 2014, the list of “unfunded projects” in the TTC’s annual budget submissions has grown, including necessary state-of-good-repair, safety, legislated, reliability-improvement and capacity-enhancement projects.

2019-2033 **Keeping Transit Moving: Base Capital Investments**



What's needed to move more customers more reliably?



More Capacity

Improvements to track, signals, power and stations will make it possible for fleet to move through the system faster and more reliably.



More Fleet

A larger fleet of accessible subway cars, buses, Wheel-Trans vehicles and streetcars deliver the benefit of increased capacity to move more customers per hour.



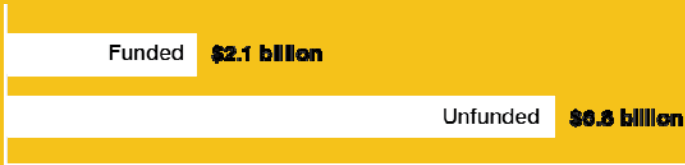
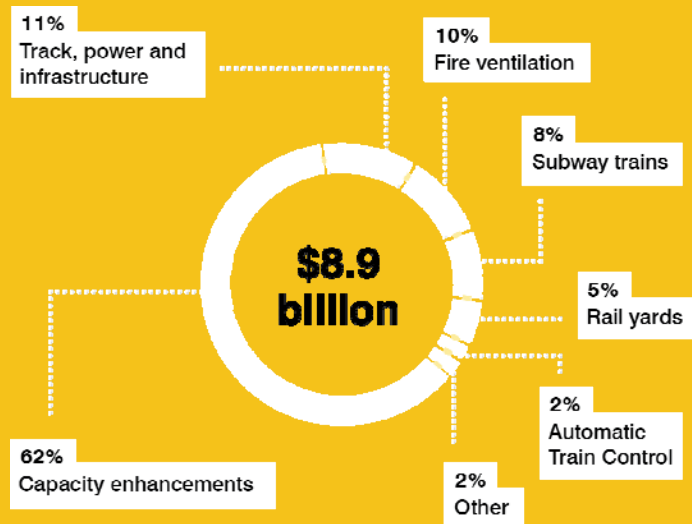
More Maintenance & Storage

More garages, shops, carhouses and yards to maintain and store the larger fleet.

Subway Line 1

Investment Summary

Required Investment Outlook 2019–2033



Key Investments

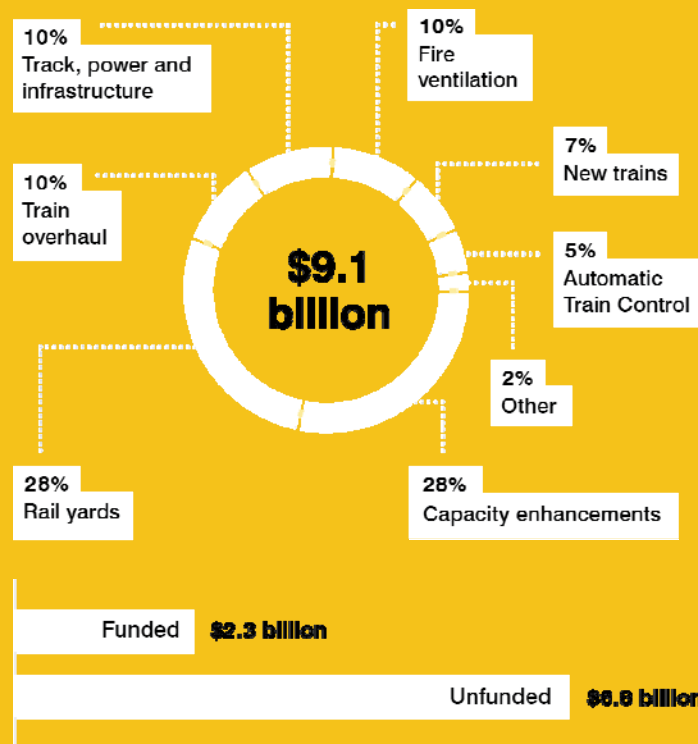
| | | |
|--|--------------------------|-------------------------------|
| Line 1 capacity enhancement | Upgraded power | Northern train yard |
|--|--------------------------|-------------------------------|

- + Complete installation of **Automatic Train Control (ATC)**
- + **Purchase 44 new subway trains** — a 50 per cent increase in the size of the Line 1 fleet
- + **Upgrade traction power** to support more trains running on the line
- + **Build a new train yard and repair and maintenance facility** in the north end to accommodate larger fleet

Subway Line 2

Investment Summary

Required Investment Outlook 2019–2033



Key Investments

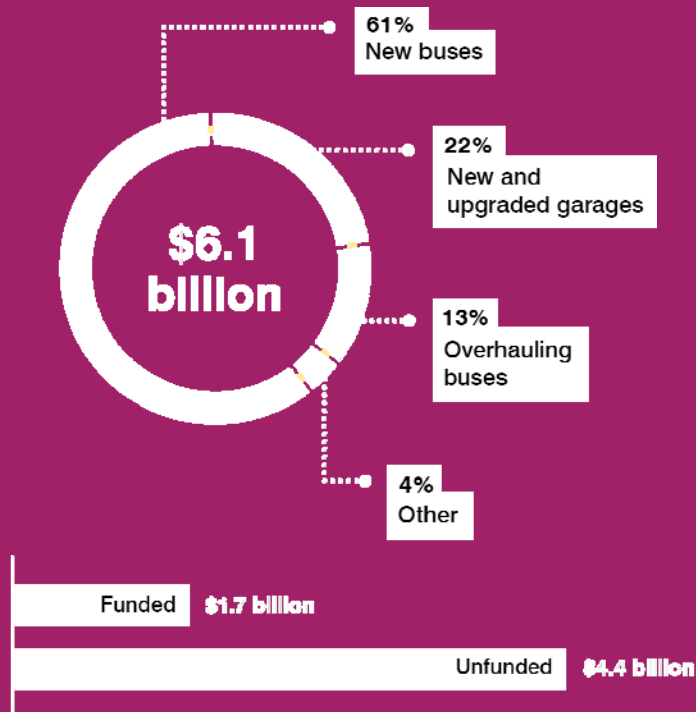
Line 2 capacity enhancement
Overhaul trains
Western train yard

- + Complete installation of **Automatic Train Control (ATC)**
- + **Upgrade traction power** to support more trains running on the line
- + **Overhaul 30-year-old** trains to extend their useful life by another ten years
- + **Construct new Western** train yard for storage and maintenance of the larger fleet of Line 2 cars

Buses

Investment Summary

Required Investment Outlook 2019–2033



Key Investments

2,300

low/zero-emission buses purchased

2,500

buses overhauled at mid-life

2

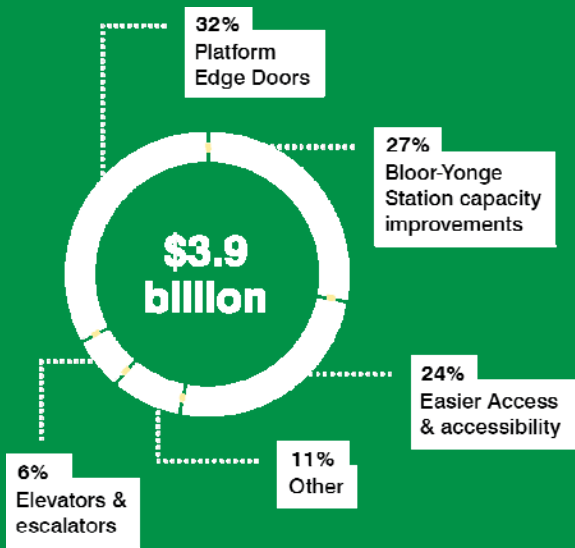
new bus garages

- + **120-160 buses required each year** to maintain current service; currently no funding beyond 2022
- + Purchase of **2,300 new low/zero-emission buses** will reduce CO2 emissions by 1.7 million tons
- + Complete construction of **McNicoll Garage**, already under construction
- + **Ninth bus garage**, which will include maintenance, charging and storage facilities for electric vehicles

Stations

Investment Summary

Required Investment Outlook 2019–2033



Key Investments

Bloor-Yonge Station expansion

Platform Edge Doors installed (as possible) on Lines 1 & 2

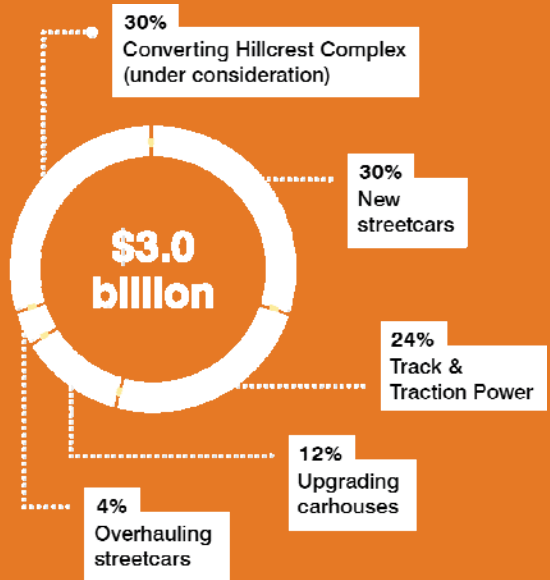
AODA-compliant all stations by 2025

- + Expand Bloor-Yonge Station, including building a **second platform** for Line 2, to increase capacity system-wide
- + Improvements at most stations, including state-of-good-repair, passenger flow improvements, and escalator and elevator repair and replacement
- + Consider installing **platform edge doors (PEDs)** on Lines 1 and 2 as possible
- + Complete **Easier Access program**, making all stations accessible by 2025

Streetcars

Investment Summary

Required Investment Outlook 2019–2033



Key Investments

204

streetcars delivered, completing current order

Consider

Converting Hillcrest Complex to streetcar-only

Up to 100

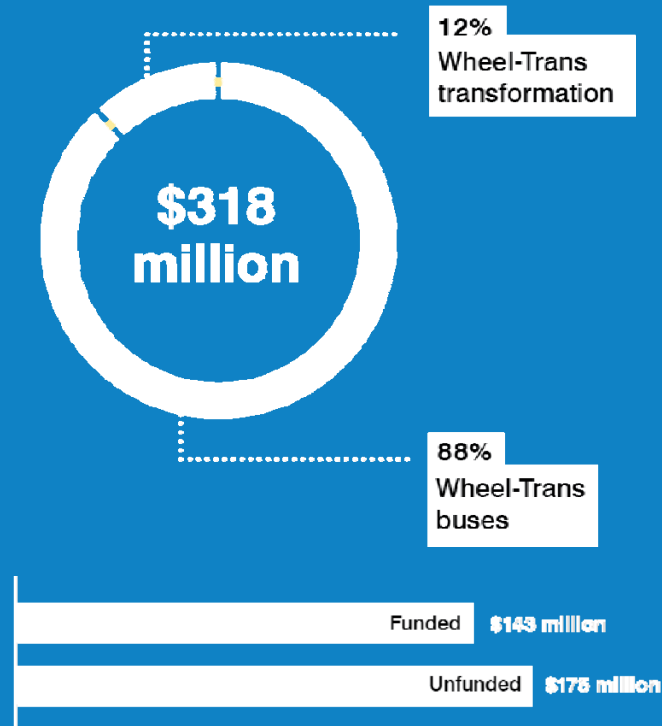
more streetcars purchased to accommodate ridership growth

- + **Complete current purchase** of 204 streetcars from Bombardier
- + **Up to 100 additional streetcars** from 2025 to 2028 to accommodate ridership growth
- + Consider converting **Hillcrest Complex** to a streetcar-only maintenance and storage facility – a five-fold increase in capacity to overhaul streetcars

Wheel-Trans

Investment Summary

Required Investment Outlook 2019–2033



Key Investments

829

new Wheel-
Trans buses

Transformation

to enable an accessible
TTC Family of Services

- + Purchase **829 Wheel-Trans buses**, to both replace buses at the end of their useful life and grow the operating fleet by nearly 60 per cent
- + Wheel-Trans transformation includes a suite of investments required to make our system **AODA-compliant** and enable the TTC Family of Services, including the creation of Access Hubs

**Benefits
of investing**

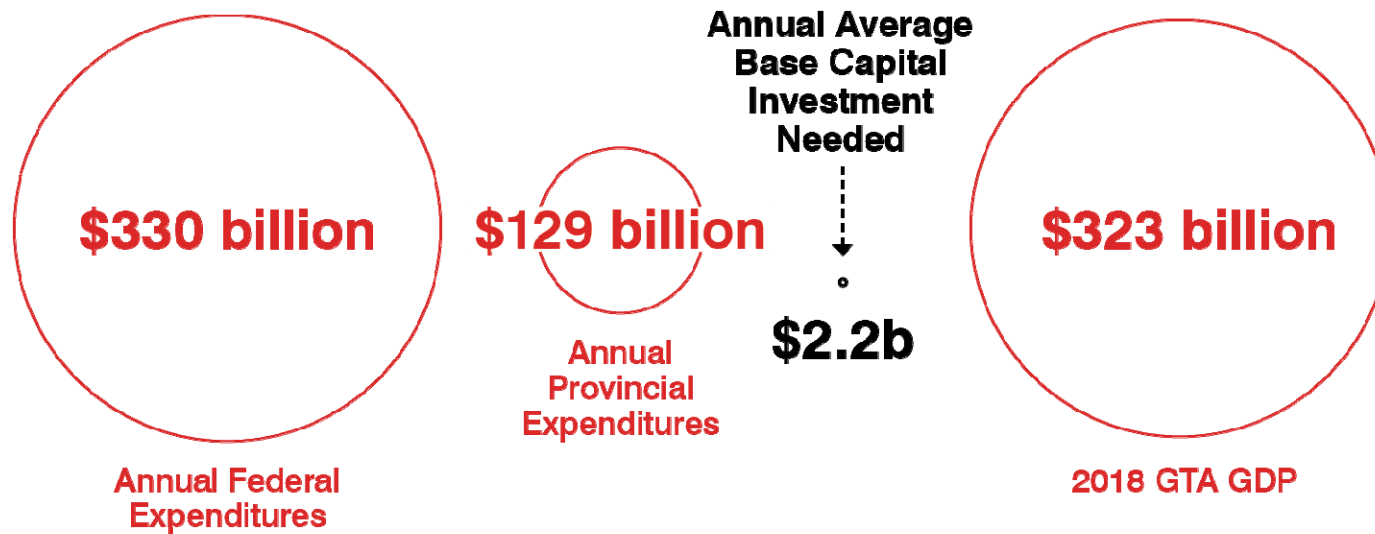
- + More frequent service
- + Less crowding on key routes
- + Improved service reliability for customers
- + Reduction of 1.7 million tons of CO2

**Risks of failing
to invest**

- + Less frequent service and a decrease in reliability
- + More breakdowns of aging fleet, resulting in higher maintenance costs
- + More delays, poor customer service and extreme overcrowding
- + Continued pollution and failure to meet climate targets

A new approach to predictable, sustainable capital funding is needed.

Relative Size of Investment Needed



Recommended 10-Year Capital Budget & Plan

| Description \$Millions | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 10-Year Total |
|--------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|------------------|
| TTC Base Capital Requirements | 1,674 | 1,884 | 1,908 | 2,003 | 2,890 | 3,549 | 3,399 | 2,798 | 1,962 | 1,881 | 23,946 |
| Funded | 1,490 | 1,199 | 805 | 599 | 411 | 416 | 360 | 397 | 396 | 380 | 6,453 |
| Capacity to Spend Reductions | 48 | 82 | 82 | 74 | 66 | 73 | 74 | 80 | 88 | 89 | 755 |
| Unfunded | 136 | 603 | 1,021 | 1,330 | 2,413 | 3,060 | 2,965 | 2,320 | 1,478 | 1,412 | 16,738 |

TTC Base Capital Budget and Plan

- Capital Investment Plan 15 Years ↔ Capital Budget and Plan 10 Years
 - 10-year Capital Budget and Plan nearly **\$24 billion**
 - 10-year funding shortfall of \$17.5 billion
 - Unfunded Projects - \$16.7 billion
 - Capacity to spend reductions – \$0.8 billion (also unfunded)

Recommended 10-Year Capital Budget & Plan

| Description \$Millions | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 10-Year Total |
|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|------------------|
| Transit Expansion Projects | 312.4 | 496.5 | 412.0 | 551.0 | 487.5 | 608.1 | 459.3 | 227.5 | 225.9 | 51.7 | 3,831.8 |
| Line 2 East Extension (formerly Scarborough Subway Extension) | 117.1 | 243.9 | 387.8 | 551.0 | 487.5 | 608.1 | 459.3 | 227.5 | 225.9 | 51.7 | 3,359.7 |
| Relief Line South | 135.0 | 250.1 | | | | | | | | | 385.0 |
| Waterfront Transit | 0.3 | 2.6 | 24.2 | | | | | | | | 27.1 |
| Toronto-York Spadina Subway Extension | 60.0 | | | | | | | | | | 60.0 |

TTC Capital Budget and Plan – Expansion Projects (additional to Base Capital)

- Line 2 East Extension - Stage Gate 3 updated budget and schedule estimate expected in April 2019
- Relief Line South - \$385 million
 - Planning and design - \$60 million
 - Schedule improvements and early work opportunities - \$325M
- Waterfront Transit - Planning and Design
- TYSSE - Project closeout
 - Consistent with prior budget approvals (no new funding)

10-Year Capital Plan – \$6.5B Funded Projects

- Health & Safety and Legislative requirements (e.g. Easier Access projects)
- Maintenance and repair of capital assets (e.g. subway track, surface track and traction power projects)
- Completion of capital projects and past contractual commitments or obligations:
 - Completion of capital projects (e.g. McNicoll Bus Garage and Automatic Train Control - Line 1)
 - Public Transit Infrastructure Fund (PTIF) funded projects that must be completed by March 31, 2020
 - Continued delivery of past vehicle orders (e.g. streetcars and buses)

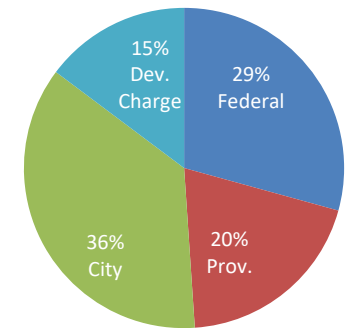
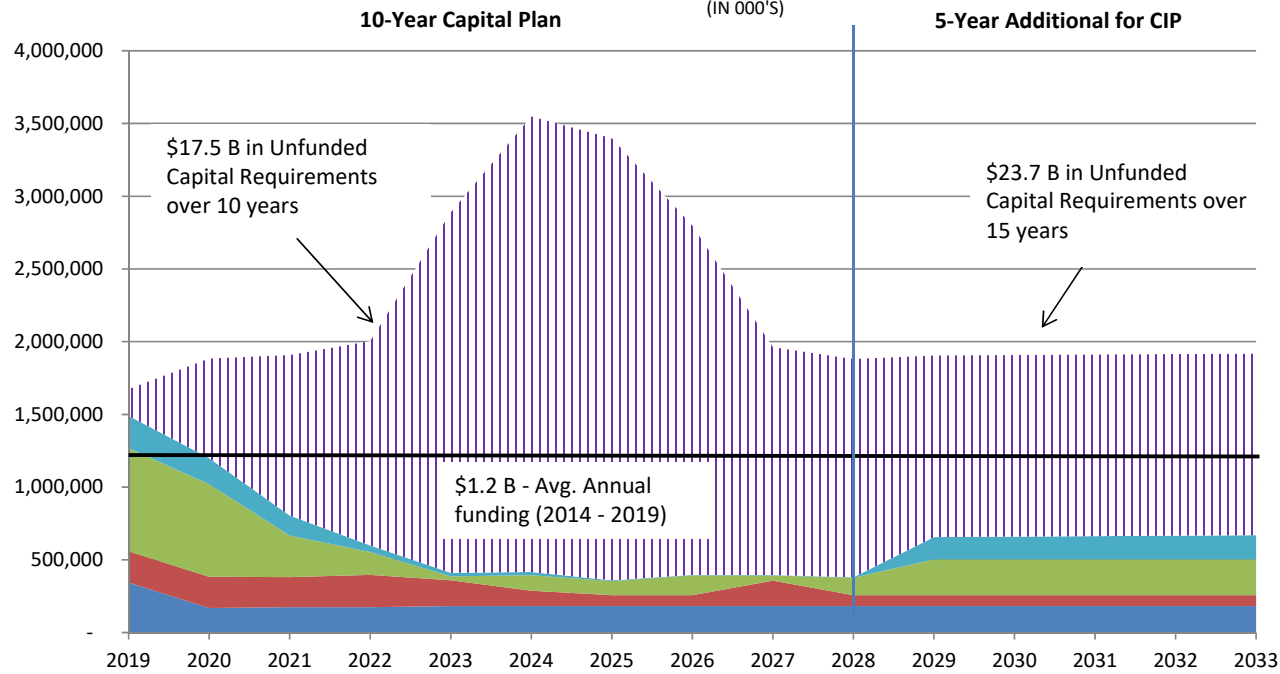
CIP – Changes from the 2018 Budget Process

| Description \$Billions | Years 1 - 10 | Years 11 - 15 | 15-Year Total |
|--|-----------------|------------------|------------------|
| 2018 Capital Budget Process | | | |
| 2018 - 2027 Funded 10-Year Plan | 6.5 | 0.0 | 6.5 |
| Unfunded Projects | 2.7 | 0.5 | 3.2 |
| Projects for Future Consideration | 2.2 | 2.8 | 5.0 |
| Deferred Consideration | 1.2 | 0.0 | 1.2 |
| 2018 Capital Budget Process (sub-total) | 12.6 | 3.3 | 15.9 |
| Capital Investment Plan Changes | | | |
| Line 1 Capacity Enhancements | 5.5 | | 5.5 |
| Line 2 Capacity Enhancements | 1.0 | 1.5 | 2.5 |
| Western Yard (Excluding Land Acquisition) | 2.1 | | 2.1 |
| Ninth Bus Garage | 0.5 | | 0.5 |
| Bus Procurement Program (Increase Only) | 0.9 | 1.4 | 2.3 |
| T1 (Subway car) Life Extension Overhaul | 0.7 | | 0.7 |
| Added Years 11 - 15 and Other Changes | 0.6 | 3.4 | 4.0 |
| Capital Investment Plan Changes (sub-total) | 11.3 | 6.3 | 17.6 |
| Capital Investment Plan Total | 23.9 | 9.6 | 33.5 |

- **\$15.9B** in base capital needs identified as part of the 2018 Budget process
 - **\$12.6B** in the 10 year planning period
- **\$3.2B** in approved unfunded projects:
 - Purchase of Buses (\$270M)
 - Purchase of 60 added Streetcars (\$361M)
 - Purchase of Subway Cars (\$1.4B)
- **\$5.0B** in projects for future consideration:
 - Bloor-Yonge Capacity Improvements (\$1.0B)
 - Platform Edge Doors (\$1.2B)
 - Fire Ventilation Upgrades (\$1.5B)
- **\$1.2B** in deferred consideration of projects
 - Purchase of Buses (\$613M)
 - Warden Station Redevelopment (\$71M)

Capital Funding Summary

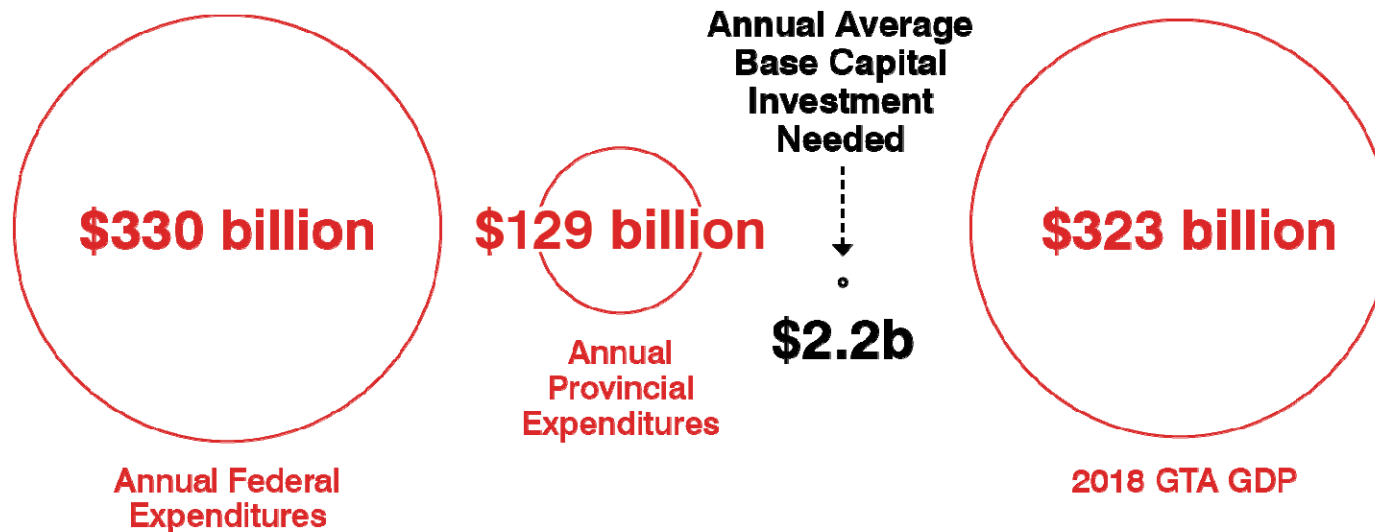
TORONTO TRANSIT COMMISSION
 Proposed 2019-2033 CAPITAL BUDGET AND PLAN
 SOURCES OF FUNDING (\$9.8B)
 (IN 000'S)



- Development Charges (via City) \$1.4 B
- City Funding \$3.6 B
- Provincial Funding \$1.9 B
- Federal Funding \$2.9 B

A new approach to predictable, sustainable capital funding is needed.

Relative Size of Investment Needed



Next Steps

Staff are recommending that the TTC Board

1. Receive the Capital Investment Plan, Making Headway – Capital Investments to Keep Transit Moving;
2. Direct the CEO to maintain the Capital Investment Plan on an annual basis, refining cost and schedule estimates as projects progress through stage gates;
3. Direct the CEO to begin steps required to prioritize critical base capital needs in advance of the Board's consideration of the 2020 Capital Budget;
4. Direct the CEO to engage the City Manager to pursue a tri-party partnership between the Federal government, Provincial government and the City of Toronto for a dedicated, long-term, stable and predictable funding plan to address the TTC's rolling stock, state-of-good-repair, capacity building, service improvement and growth needs;
5. Forward the Capital Investment Plan to the City Budget Committee and the City Manager to inform the City's Long-term Financial Plan;
6. Approve the recommended TTC 10-Year Capital Budget & Plan; and
7. Forward this report to the City Budget Committee and the City Manager as the official 2019 - 2028 Capital Budget and Plan submission for the Toronto Transit Commission.

