



2017-2026 TTC Capital Budget

Board Meeting
November 21, 2016





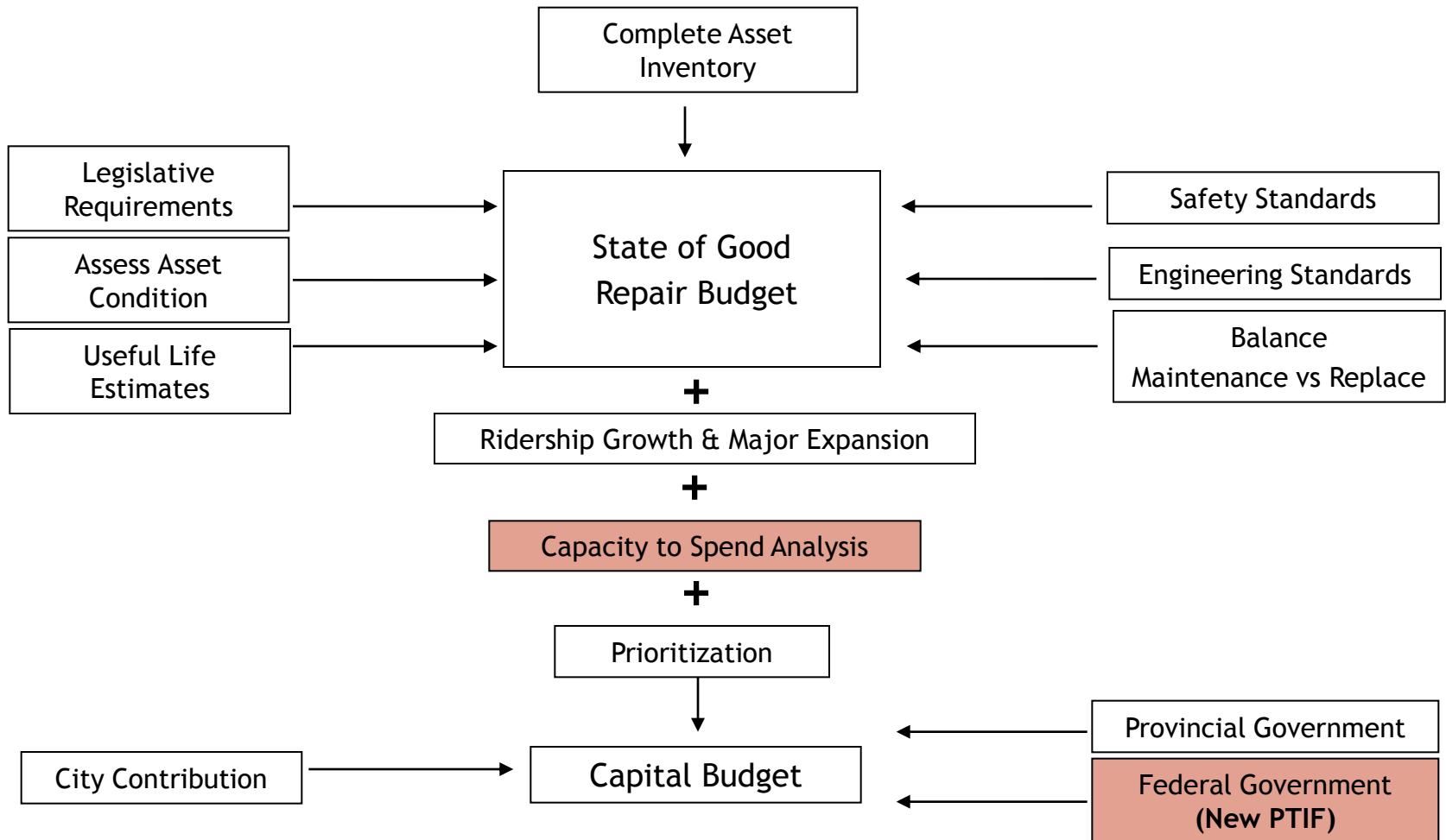
Overview

- Constructing the Capital Budget
- Proposed 2017-2026 Capital Budget
- Funding
- 2017-2026 Base Capital Budget
- Summary of Changes
- Capital Workforce changes
- Toronto York Spadina Subway Extension
- Scarborough Subway Extension
- Recommendation





Constructing the Capital Budget





Proposed 2017 – 2026 Capital Budget

• Base Capital Budget	\$ 9.4B
• TYSSE	\$ 0.7B
• Scarborough Subway Extension	<u>\$ 3.5B</u>
TOTAL REQUEST*	<u>\$13.6B</u>

** Does not include projects for Future Consideration*

Transit Projects to be Funded from other Budgets:

- Smart Track
- Relief Line
- Yonge-North Subway Extension
- Waterfront Initiatives





10 - Year Capital Budget Comparison

Base Budget

(\$Billions)

	2014 - 2023 <u>Approved</u>	2015 - 2024 <u>Approved</u>	2016 - 2025 <u>Approved</u>	2017 - 2026 <u>Request</u>
Budget/Request	9.036	9.268	9.316	9.440
Capacity to Spend Reduction		(0.573)	(0.346)	(0.482)
Funding Available	<u>6.493</u>	<u>6.901</u>	<u>6.637</u>	<u>7.005</u> *
Shortfall	<u>2.543</u>	<u>1.794</u>	<u>2.333</u>	<u>1.953</u> **

Note:

* Includes Federal Public Transit Infrastructure Fund (PTIF) of \$1.160 b (gross)





FUNDING

Base Capital Budget:

- Short Term - fully funded 2017
- Medium Term – fully funded from 2017-2020
- Long Term - \$2.0 billion shortfall from 2017-2026 (after factoring in PTIF and capacity to spend reduction of \$0.5 billion)





Federal Public Transit Infrastructure Fund (PTIF)

- Federal funding of up to 50% for eligible projects (City to match)
- Allocated based on ridership - \$856 million to City of Toronto
- April 1, 2016 to March 31, 2018
 - possible one year extension of up to 25% of funds
- Requirement for incrementality
- Preliminary project list:

TTC	\$1.363 billion
City	<u>\$0.349 billion</u>
Total	\$1.712 billion
- Project list subject to Federal approvals





TTC PTIF Project List

	<u>Gross \$</u>
<u>Unfunded (based on Council Approved 2016-2025 CB)</u>	
Purchase 4 of 99 Low Floor 40 ft Diesel Buses for Customer Service Initiatives (29 if 3 yrs)	19.816
Purchase 496 OF 805 Low Floor 40 ft Diesel Buses (accelerated 805 buses)	325.277
400 Wheel-Trans Buses	21.469
Sub-Total	366.562
<u>New Projects (included in the 2017-2026 CB Request)</u>	
Stations Transformation (incl Zone Hubs)	20.371
Subway Workcars	29.340
Wheel Trans Transformation Program	19.555
APC expansion to remainder of TTC 40' bus fleet and ALRVs	9.318
Skylight Replacement Program (new scope)	27.356
Platform Modifications to Accommodate Articulated Buses (new scope)	20.000
Bus Stop Improvements for Accessibility (new scope)	20.000
Opportunities to Improve Transit Service - Transit Priority Measures (New scope)	20.000
Sub-Total	165.940



2017-2026 TTC Capital Budget



	<u>Gross \$</u>
<u>Balance (funded based on Council Approved 2016-2025 CB)</u>	
Toronto Rocket / T1 Rail Yard Accommodation	48.707
Surface Way Building Replacement	33.169
Reconstruction of Streetcar Overhead	15.438
Bus Washracks	10.111
Purchase 76 of 108 40 foot LF Buses	46.110
Purchase 97 of 272 40 foot LF Buses (182 if 3 years)	123.908
Replacement of Orion VII Hybrid Bus Components	21.525
Orion VII Diesel & Nova Artic Bus Rebuild Program	115.107
Maintenance of Joint TTC / Toronto Transportation Bridges	9.695
Structure Rehabilitation Program	25.438
Storage Tanks	1.237
Easier Access Phase III	6.550
VISION (CAD/AVL)	30.000
Train Door Monitoring System - T1 & TR (Overhaul and Communications)	36.518
T1 Subway Cars - 20 Year Overhaul	23.705
T1 Subway Cars - 15 Year Overhaul	24.608
Life Extension Overhaul of 30 Articulated Light Rail Vehicles (ALRVs)	17.310
Customer Facing Information Screens (CFIS)	5.000
Sub-Total	594.136



2017-2026 TTC Capital Budget



	<u>Gross \$</u>
<u>Partial Funded (based on Council Approved 2016-2025 CB)</u>	
Subway Facility Renewal Program	7.603
Subway Pump Replacement Program	10.275
Bridges/Structures Maintenance	13.545
Backflow Preventers	1.904
Subway Track Rehabilitation Program	63.488
Subway Turnout Rehabilitation Program	29.773
Subway Rail Grinding	14.140
On Grade Paving	8.994
Surface Track Replacement Program	42.924
Surface Special Trackwork Replacement Program	13.569
Bus Hoists	3.820
Roofing Rehabilitation Program	26.684
Sub-Total	236.719
Total - TTC	1,363.357

Total - City (under review)	349.555
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Total - TTC & City	1,712.912
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Notes:

- (1) Project list is subject to Federal approval and may be modified in order to ensure eligibility requirements are met and that all available funding can be received. Projects are to be funded 50% Federal/50% City of Toronto.
- (2) One year extension (to March 31, 2019) required for 21 discrete projects.
- (3) Federal Treasury Board approval required for bus purchases and bus rebuilds.





Capacity to Spend

- Multi-year analysis of capital spend rates
- TTC Budget Committee endorsed the concept of a capacity to spend reduction (September 6, 2016)
- After consultation with City staff, it was agreed the reduction can only be applied to non-PTIF, ongoing Capital projects





Capacity to Spend

- \$482 million reduction incorporated into budget based on 20% for the first 4 years (2017-2020) and 15% for the last 6 years (2021-2026)
- Performance will be reviewed annually and the capacity to spend reduction will be adjusted as appropriate





Base Budget Funding

2017-2026 Capital Budget Funding Summary											
\$Millions											
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total
2017-2026 Gross Capital Budget Request	1,561	1,542	1,161	882	731	843	683	604	698	735	9,440
Capacity to Spend Budget Reduction	22	43	61	70	45	40	51	49	47	54	482
Net 2017-2026 Budget Request	1,539	1,499	1,100	812	686	803	632	555	651	681	8,958
Provincial	120	218	149	75	75	75	75	75	75	75	1,014
Federal	467	401	208	167	167	167	167	167	167	167	2,247
City Debt (including City PTIF)	272	597	491	419	235	65	105	78	84	126	2,471
Other Funding	405	197	251	150	79	67	49	46	13	17	1,273
Total Funding	1,264	1,413	1,099	811	556	374	396	366	339	386	7,005
Shortfall	275	86	1	1	130	429	236	189	312	295	1,953

Note: Does not include TYSSE, SSE or projects for future consideration





Base Budget Unfunded Projects

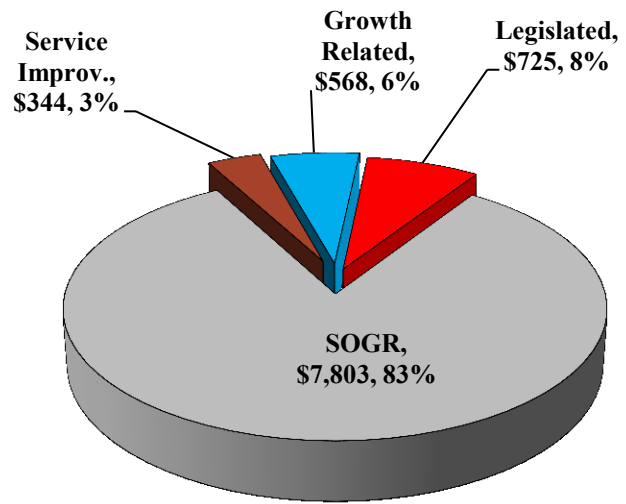
** Required to address funding shortfall*

2017-2026 UNFUNDED PROJECT LIST	
(\$Millions)	
	2017-2026
Fire Ventilation Upgrade	163
Purchase of Buses	244
Purchase of 60 Light Rail Vehicles (LRVs)	361
Purchase of 372 New Subway Cars (T1 replacements)	1,185
TTC 2017-2026 Unfunded Projects	1,953

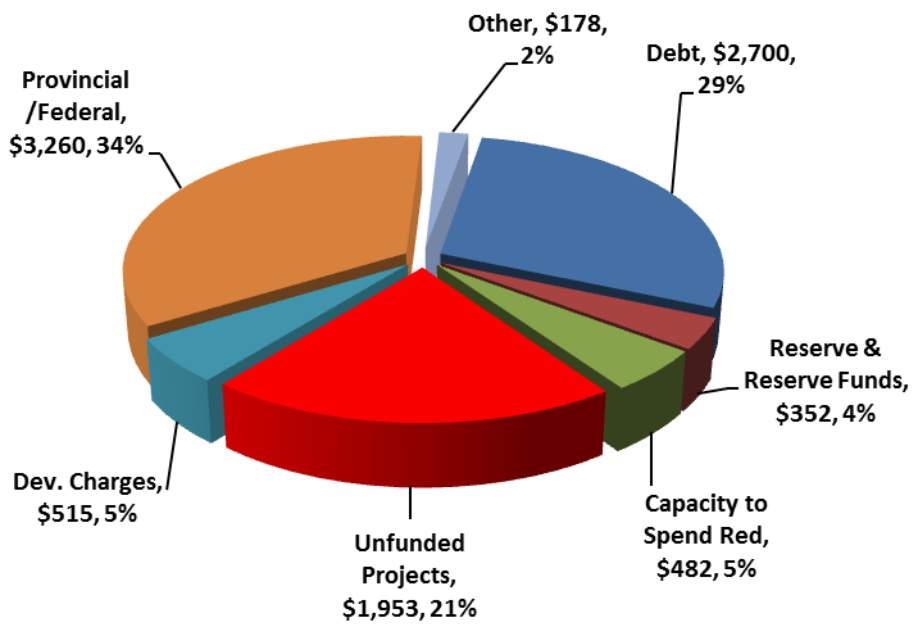




Where the Money Goes
\$9,440 Million



Where the Money Comes From
\$9,440 Million

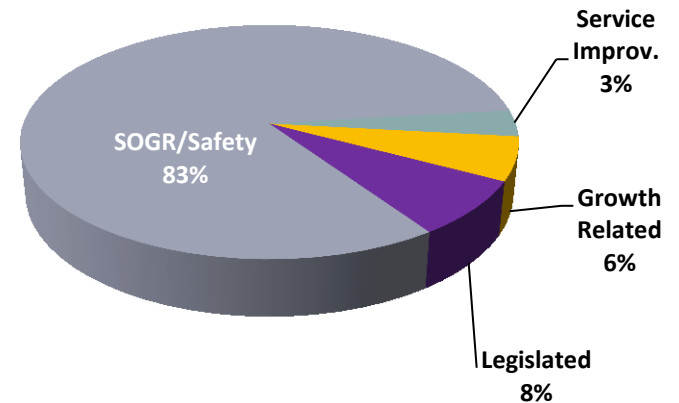




2017-2026 BASE CAPITAL BUDGET

Ten Year Envelope
By Category
(\$Millions)

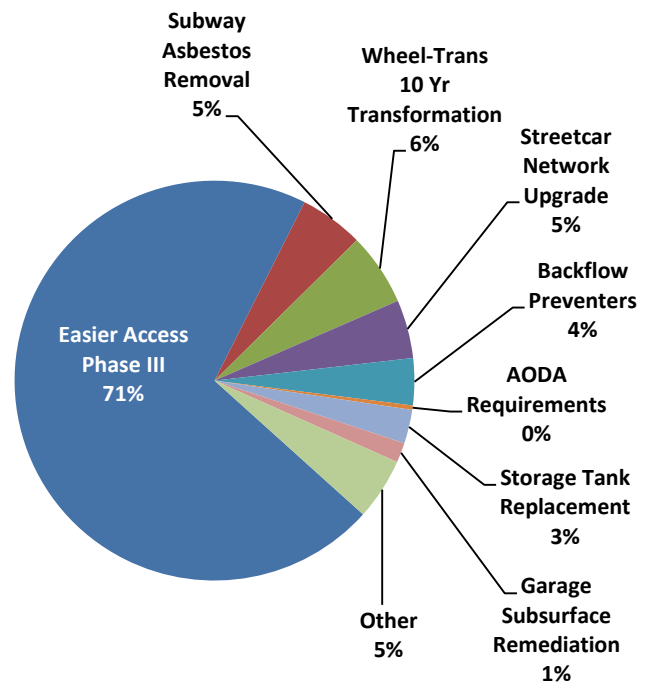
	<u>2017</u>	<u>2017-2026</u>	
Legislated	85	725	8%
SOGR/Safety	1,102	7,803	83%
Service Improvement	61	344	3%
Growth Related	313	568	6%
<i>Total</i>	1,561	9,440	100%





LEGISLATED 2017-2026 (\$Millions)

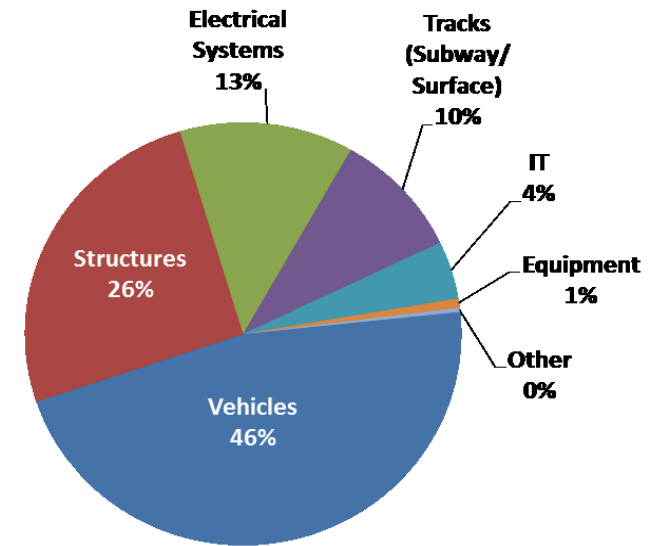
	2017	2017-2026	%
Easier Access Phase III	43	513	71%
Subway Asbestos Removal	3	37	5%
Wheel-Trans 10 Yr Transformation	7	43	6%
Streetcar Network Upgrade	2	34	5%
Backflow Preventers	2	27	4%
AODA Requirements	3	3	0%
Storage Tank Replacement	4	20	3%
Garage Subsurface Remediation	0	12	1%
Other	22	36	5%
Total	86	725	100%





STATE OF GOOD REPAIR/SAFETY 2017-2026 (\$Millions)

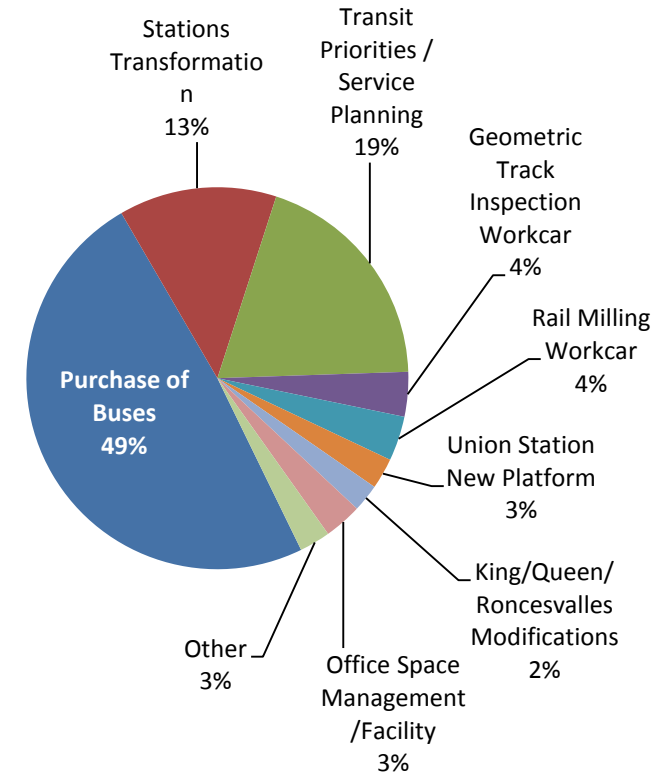
	2017	2017-2026	%
Vehicles	520	3,626	46%
Structures	246	1,991	26%
Electrical Systems	138	1,006	13%
Tracks (Subway/Surface)	84	756	10%
IT	83	345	4%
Equipment	14	54	1%
Other	17	25	0%
Total	1,102	7,803	100%





SERVICE IMPROVEMENT 2017-2026 (\$Millions)

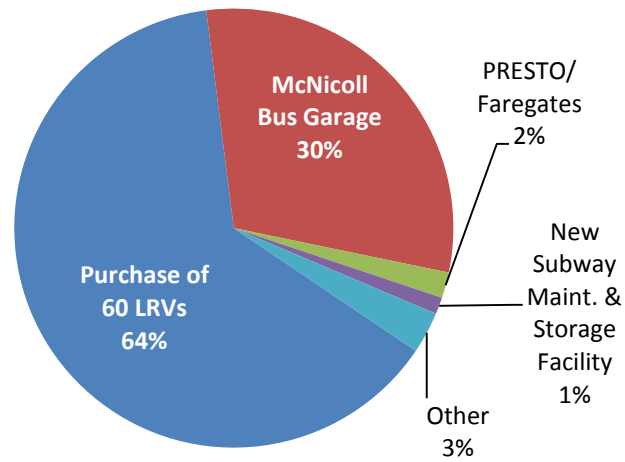
	2017	2017-2026	%
Purchase of Buses	3	168	49%
Stations Transformation	9	46	13%
Transit Priorities / Service Planning	29	67	19%
Geometric Track Inspection Workcar	0	13	4%
Rail Milling Workcar	0	13	4%
Union Station New Platform	9	9	3%
King/Queen/Roncesvalles Modifications	0	8	2%
Office Space Management/Facility	4	11	3%
Other	7	9	3%
Total	61	344	100%





GROWTH RELATED 2017-2026 (\$Millions)

	2017	2017-2026	%
Purchase of 60 LRVs	275	361	64%
McNicoll Bus Garage	15	172	30%
PRESTO/Faregates	9	11	2%
New Subway Maint. & Storage Facility	0	7	1%
Other	14	17	3%
Total	313	568	100%



2017-2026 TTC Capital Budget



TTC 2017-2026 BASE CAPITAL BUDGET REQUEST

Vehicles:

	(\$Millions)		
Purchase of Buses	1,101	}	\$4,184 44%
Purchase of Subway Cars	1,210		
Purchase of LRVs	972		
Vehicle Overhaul Programs (Bus, Subway, Streetcar)	781		
Purchase of NRV/NRV Overhaul	120		

Infrastructure Projects:

Track Programs	768	}	\$5,256 56%
Electrical Systems	389		
Signal Systems (Incl. Line 1 (YUS - \$240) and Line 2 (BD - \$300))	626		
Finishes	157		
Equipment	228		
Yards & Roads	179		
Bridges & Tunnels	417		
Building & Structures:			
- Fire Ventilation Upgrade	284		
- Easier Access Phase III	513		
- TR/T1 Rail Yard Accommodation	341		
- McNicoll Bus Garage	172		
- Leslie Barns	26		
- Wheel-Trans 10 Yr Transformation Program	43		
- Stations Transformation	46		
- LRV Carhouse Facility	46		
- Subway Facility Renewal	57		
- Wilson Garage Ventilation Upgrade	49		
- Wilson Backup Centre	28		
- Duncan Shop Ventilation Upgrade	36		
- Backflow Preventers	27		
- Other Building & Structure Projects	<u>229</u>		
Environmental Projects	69		
Information Technology	345		
Other Projects	182		

Total - Base Program Request

\$9,440





ARTICULATED BUSES





Bus Fleet & Facilities (\$Millions)

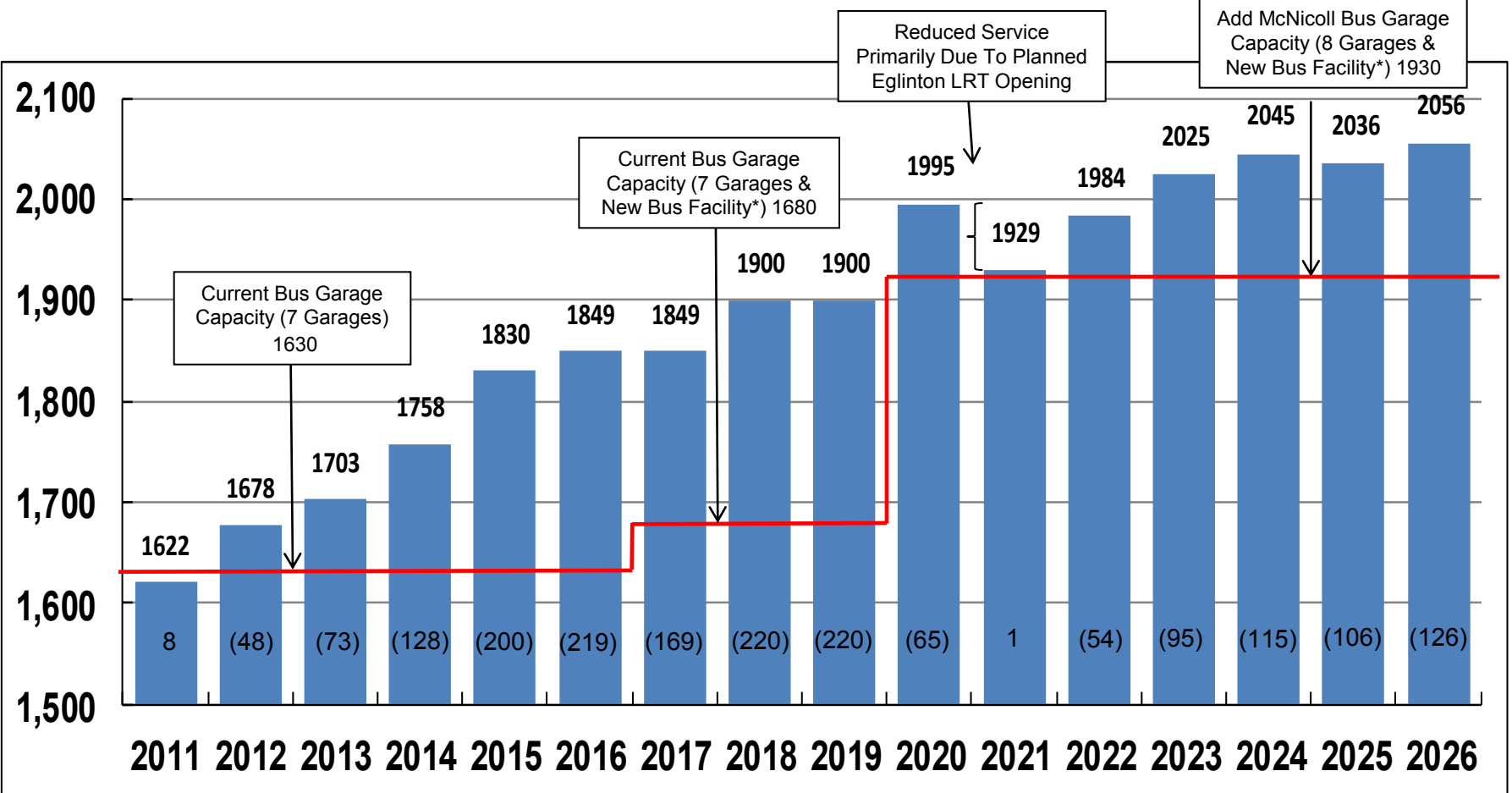
	Program	2017-2026	EFC
Vehicles	Purchase of Buses - SOGR (2017 to 2026)	846	1,073
	Purchase of Buses - Service Improvements (2017 to 2023)	168	198
	Purchase of 400 Future Wheel-Trans Buses (2019 - 2026)	87	87
	Bus Overhaul	493	700
Facilities	McNicoll Bus Garage	172	8
	Wheel-Trans 10-Yr Transformation Program	43	43
	Bus Garage/Shops Facility Renewal & Modifications	28	124
Other	Bus Cleaning Equipment Programs	9	15
	Bus Hoist	47	76
	Bus Washracks	19	29
	Bus Maintenance & Shop Equipment/Other	11	22
	Proposed Total	1,924	2,375





BUS FLEET & FACILITY PLAN

Bus Facility Plan - Interim Garage 2017 & McNicoll Garage 2020



* Based on the purchase of new Bus Maintenance Facility.





NEW LRVs





LRV Fleet & Facilities (\$Millions)

	Program	2017-2026	EFC
Vehicles	Purchase of 204 LRVs (To 2019)	611	1,187
	Purchase of 60 LRVs (2016 - 2021)	361	361
	LRV Overhaul	27	39
	ALRV Life Extension	10	26
	AODA Requirements - Streetcars	1	2
Facilities	Leslie Barns	26	523
	LRV Carhouse Facility Renewal Program/Other	47	98
Other	Surface Track	361	616
	Streetcar Network Upgrades for LRV	34	78
	Reconstruction of Streetcar Overhead	58	123
	Traction Power Substations/Other	108	216
	O/H Pole Replacement	15	57
	Streetcar Trackswitch & Controllers Rehabilitation, Replacement & Equipm	20	27
	Streetcar Shelter Reconstruction	3	4
Proposed Total		1,682	3,357





TORONTO ROCKETS





Subway Fleet & Facilities (\$Millions)

	Program	2017-2026	EFC
Vehicles	Purchase of 234 New Subway Cars (To 2015)	-	650
	Replacement of 126 H6 Subway Cars (To 2017)	11	295
	Purchase of 60 New Subway Cars (To 2018)	14	222
	Purchase of 372 New Subway Cars (2018 to Post 2026)	1,185	1,737
	Subway Car Overhaul	251	386
Facilities	Wilson Facility Modifications/Garage Ventilation	49	51
	New Subway Maintenance and Storage Facility	7	7
	TR/T1 Rail Yard Accommodation	341	973
	Station Transformations	46	51
	Subway Facility Renewal	69	110
	Subway Equipment	151	278
	Subway Track	406	557
Other	Line 1 (YUS) ATC Resignalling	240	563
	Line 2 (BD) ATC Resignalling	300	431
	Proposed Total	3,070	6,311





SUBWAY FACILITIES

- Wilson Facility Modifications for new TR trains nearing completion
- Wilson Garage Ventilation Upgrade
- TR/T1 Rail Yard Accommodation
 - 2015 to 2021; Post 2026
 - Additional storage tracks for increased fleet size
 - Consolidation of T1 trains on BD line
 - Address service dispatching challenges and capacity constraints
 - Rail Yard Study underway





ACCESSIBILITY

- AODA Provincial goal of full accessibility by 2025
- Need Provincial commitment to long-term sustainable funding for accessibility
 - Easier Access Phase III
 - AODA Projects
 - Wheel-Trans Operating impact





FARE RELATED ISSUES

PRESTO

- TTC working with Metrolinx, PRESTO and GTA Transit Agencies
- All vehicles and stations to be fully PRESTO enabled by end of 2016

Faregates

- Replace all faregates by end of 2017





Information Technology Services (I.T.S.)

- SAP – Modernize back office systems (HR, Finance)
- VISION - Computer Aided Dispatch/Automatic Vehicle Location
 - Replace Communication Information System (CIS)
- SMS - Subway Maintenance System (Vehicle)

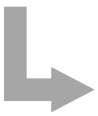


2017-2026 TTC Capital Budget



SUMMARY OF CHANGES (\$Millions)

\$9,440 TTC Request 2017-2026
\$5,526 2016-2025 Council Approved Budget (2017-2025)
\$3,913 Total Change 2017-2026 (from 2016-2025 Council Approved)
(\$ 735) 2026 Additional year for existing and new projects



\$3,178 Net Increase from 2016-2025 Council Approved
(\$2,551) Unfunded Projects added back



\$627 Net Increase
(\$282) Slippage/Carry Forward



\$345 Net Change to 2017-2025
(\$216) New Projects (2017-2025)



\$129 Net Change to Existing Projects





The \$735 Million request relates to the 10th Year -2026 for Existing Projects including:

- \$270 million for Purchase of Subway Cars (T-1 Replacement)
- \$ 79 million for Track Work (Subway and Surface)
- \$ 72 million for Bus Overhauls
- \$ 52 million for Line 2 (BD) ATC Resignalling
- \$ 47 million for Bridges/Tunnels
- \$ 36 million for IT Systems
- \$ 28 million for Traction Power & Power Distribution
- \$ 26 million for Subway Car Overhaul
- \$ 15 million for Purchase of Buses
- \$ 25 million for Finishes & Equipment
- \$ 14 million for Yards & Roads
- \$ 12 million for Fire Ventilation Upgrades
- \$ 12 million for Streetcar Overhauls
- \$ 11 million for Communications Program
- \$ 11 million for Other Buildings & Structures
- \$ 25 million for Other Projects





For 2016-2025, there is \$2,551 million for previously identified but Unfunded Projects including:

- \$915 million for Purchase of 372 Subway Cars
- \$514 million for Purchase of 675 Low Floor Buses
- \$361 million for Purchase of 60 LRVs (Ridership Growth)
- \$261 million for Bus Overhaul
- \$182 million for Fire Ventilation Upgrade
- \$ 76 million for Purchase of Future Wheel Trans Buses
- \$ 59 million for Subway Track Program
- \$ 57 million for Buildings & Structures
- \$ 51 million for Surface Track Program
- \$ 23 million for Finishes (Roofing Rehab)
- \$ 21 million for Traction Power Program
- \$ 20 million for On-Grade Paving Rehabilitation Program
- \$ 11 million for Equipment





For 2017-2025, there is \$216 million for New Projects including:

- \$ 68 million for Purchase of Buses
- \$ 49 million for Station Transformation
- \$ 43 million for Wheel Trans 10 YR Transformation Program
- \$ 28 million for Rail Non-Revenue Vehicle (purchases & overhauls)
- \$ 9 million for IT System
- \$ 7 million for New Subway Maintenance and Storage Facility
- \$ 7 million for Bus Maintenance Facility
- \$ 5 million for Industrial Network Replacement





For 2017-2025, \$129 million* is for changes to Existing Projects; Included major programs are:

- \$ 119 million for Easier Access III
- \$ 69 million for Other Service Planning
- \$ 47 million for the Purchase of Buses
- \$ 27 million for Skylight Replacement
- \$ 18 million for Bus Overhaul
- \$ 12 million for Subway Track Rehabilitation
- \$ 8 million for Communications
- \$ 4 million for Power Distribution
- \$ 3 million for Subway Car Overhaul
- \$ 3 million for Other Buildings & Structures
- \$ (53) million for Signal Systems
- \$ (36) million for Bridges & Tunnels
- \$ (27) million for Streetcar Overhaul
- \$ (20) million for Environmental Programs
- \$ (10) million for Rail Non-Rev Vehicle (purchases & overhauls)
- \$ (11) million for Automotive Non-Rev Vehicles
- \$ (10) million for Information Technology
- \$ (14) million for Other

* *Note: Net of carryforward of \$282 million*



2017-2026 TTC Capital Budget

TTC 2017 BASE CAPITAL BUDGET

	<u>Gross Request (\$Millions)</u>		
<u>Vehicles:</u>			
Purchase of Low Floor 40' Diesel Buses	230	}	\$801 51%
Purchase of Wheel Trans Buses	7		
Purchase of remaining TR Subway Cars	21		
Purchase of 204 (\$140M) & 60* (\$275M) LRV Cars	415		
Vehicle Overhaul Programs (Bus, WT, Subway, Streetcar)	113		
Other (Non-Revenue Vehicle Purchase & Overhaul)	15		
<u>Infrastructure Projects:</u>			
Track Programs	87	}	\$760 49%
Electrical Systems	62		
Signal Systems (Incl. Line 1 (YUS) and Line 2 (BD))	78		
Finishes	19		
Equipment	36		
Yards & Roads	13		
Bridges & Tunnels	43		
Building & Structures:			
- Fire Ventilation Upgrade	14		
- Easier Access Phase III	43		
- TR/T1 Rail Yard Accommodation	48		
- McNicoll Bus Garage	15		
- Leslie Barns	20		
- Other Building & Structure Projects	<u>106</u>		
Environmental Projects	7		
Information Technology	83		
Other Projects	86		
Total - Base Program Request **	<u><u>\$1,561</u></u>		

Note: * 60 LRVs unfunded
 ** Capacity to Spend Reduction applied





CAPITAL WORKFORCE CHANGES @ Dec. 31, 2017:

• Recoverable from External Parties (Metrolinx)	10
• VISION (CAD/AVL) support	33
• Workcar fleet growth	22
• SRT Life Extension	18
• T1 – 20 year Overhaul	16
• T1 – 15 year Overhaul	(14)
• ATC	15
• Closures and Diversions	12
• SAP	10
• Work Area Warning	8
• Bus Overhaul Program	(22)
• Other (net)	(1)
<hr/>	
TOTAL CAPITAL WORKFORCE INCREASE	107





Toronto York Spadina Subway Extension (EFC \$3.2B)

- The Toronto-York Spadina Subway Extension project is jointly funded by the Government of Canada, the Province of Ontario, the City of Toronto and the Regional Municipality of York;
- The in service date is targeted for late 2017;
- Management Action Plan
 - Working with contractors (claims design backlog)
 - Implemented claims resolution plan
 - Expedited design outstanding issues
 - Established handover dates for System Contractors areas
 - Expediting design and City of Toronto approval processes
 - Work has been accelerated, integrated plan in place





Scarborough Subway Extension (EFC\$3.6B)

- Replace aging Scarborough RT with a Scarborough Subway Extension;
- Scarborough Subway also includes:
 - SRT Life Extension – Facilities, Equipment & Vehicles
 - SRT Decommissioning & Demolition





RECOMMENDATIONS

- Approve the 2017-2026 TTC Capital Budget (including TYSSE and Scarborough Subway Extension)
 - ❖ Noting that there are \$2.0 billion of Unfunded Projects
- Forward the 2017-2026 TTC Capital Budget to the City for approval

