



STAFF REPORT ACTION REQUIRED

Federal Public Transit Infrastructure Fund (PTIF)

Date:	November 21, 2016
To:	TTC Board
From:	TTC Budget Committee

Summary

The purpose of this report is to provide an update on the details of Phase I of the Federal Public Transit Infrastructure Fund (PTIF) and to seek Board approval, including necessary project approvals, on the TTC projects that will be submitted for consideration and inclusion.

Recommendations

It is recommended that the Board:

- 1) Approve the list of Toronto Transit Commission's priority capital projects for funding under the Federal Public Transit Infrastructure Fund (PTIF) in the amount of \$1.363 billion as outlined in Appendix A.
- 2) Authorize PTIF related amendments to the 2016-2025 Capital Budget as follows:
 - a) Increase the project approval for the 2016 approved Capital projects for the Toronto Transit Commission projects list as summarized in Appendix A;
 - b) Provide project approval for those projects that were deemed previously unfunded (in the 2016-2025 Council approved Capital Budget) and for new initiatives that are included in the 2017-2026 Capital Budget as summarized in Appendix A.
- 3) Forward this report to City Council for approval.

Implementation Points

This report should be considered in conjunction with the companion report on the "2017-2026 TTC Capital Budget".

Financial Summary

The total Phase I Federal PTIF allocation announced for the City of Toronto is in the order of \$1.712 billion of which funding will be split equally (50%/50%) between the Federal government and City of Toronto. Based on the terms and conditions of this program, funding is available between April 1, 2016 and March 31, 2018 with provision (based on a demonstrated need) that a 1 year extension (to March 31, 2019) may be granted, provided that funds in the third year do not exceed 25% of the allocated amount (i.e. \$428 million).

Since the September 6, 2016 Budget Committee meeting, work has been ongoing to maximize the utilization of the Federal PTIF funding allocation while also streamlining the number of projects included under this funding opportunity. Of the \$1.712 billion, City of Toronto projects make up \$349 million and the TTC's list of projects amount to \$1.363 billion – all subject to Federal Government approval of the project submission and the one year extension for the 21 projects that are anticipated to be completed by March 31, 2019.

The funding assumptions included in previous TTC's budgets incorporated \$250 million in anticipated future Federal/Provincial programs under the Capital Financing Reserve (ie. Asset Monetization). The TTC's 2017-2026 Capital Budget and Sources of Funding has recognized the City PTIF contributions separately and adjusted the Capital Financing reserve balance accordingly. Please note that the list of projects included for PTIF funding is subject to City of Toronto, Federal government and Treasury Board approval and may be modified to meet eligibility requirements and to ensure all available funding can be received.

Exhibit 1 provides a summary of the anticipated cashflows by year for the TTC PTIF projects:

Project Title	(\$ Millions)					Total	Anticipated Fed Funding
	2016	2017	2018	2019			
Subway State of Good Repair	71	141	131	17	360	180	
Streetcar State of Good Repair	16	70	3	-	89	45	
Bus State of Good Repair	88	284	270	44	686	343	
Customer Service Improvements	10	45	10	-	65	33	
Accessibility	2	33	21	11	68	34	
Structures and Stations	16	41	31	8	96	48	
Total - PTIF	203	614	466	80	1,364	682	

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

Accessibility/Equity Matters

Under the 10-year Capital Budget, all capital expenditures needed to make the TTC fully compliant with AODA requirements and to meet TTC equity goals have been fully provided for.

Decision History

A report entitled “Public Transit Infrastructure Fund (PTIF)” was considered by the TTC Budget Committee at its meeting on September 6, 2016. The report outlined details of the PTIF program and the preliminary list of projects to be included. The Committee approved the report as submitted.

Link to the September 6, 2016 Budget Committee Meeting:

http://www.ttc.ca/About_the_TTC/Commission_reports_and_information/Committee_meetings/Budget/2016/September_6/Reports/2_Federal_Public_Transit_Infrastructure_Fund_PTIF.pdf

Discussion

2016 Federal Budget

On March 22, 2016, the 2016 Federal Budget was announced and included a plan to invest more than \$120 billion in infrastructure over the next 10 years. This plan will be implemented in two phases. Phase I – Canada’s New Infrastructure Plan – the government will focus primarily on infrastructure investments to modernize and rehabilitate public transit, water and wastewater systems, provide affordable housing, and protect existing infrastructure from the effects of climate change. This phase of the Government’s infrastructure plan proposes to provide \$11.9 billion over five years, including \$3.4 billion over three years to upgrade and improve public transit systems across Canada.

To get projects moving quickly, the Government announced that they will fund up to 50 per cent of eligible costs for projects. Funding under the Public Transit Infrastructure Fund (PTIF) program will be allocated to municipalities based on ridership. Based on this formula, it was estimated that the City of Toronto would receive up to \$840 million in federal funding through the PTIF program.

Projects eligible for funding must meet the following criteria:

- Project is approved within the 10-Year Capital Budget, with consideration given to whether the capital financing strategy assumed future provincial/federal funding;
- Projects will only be considered eligible if awarded and incurred after April 1, 2016 and all work must be completed by March 31, 2018 (note: Infrastructure Canada (INFC) may

consider and grant extensions beyond the 2 year program framework for specific projects that require additional time to achieve substantial completion).

- Project meets criteria of funding program objectives, including project readiness, deliverability and timeline for completion;
- City Council gave direction to seek funding for unfunded (below-the-line) projects;
- Application of best practices in capital planning and budgeting, including prioritizing projects that maintain assets in a state of good repair; and
- Alignment with Council's Long-Term Fiscal Direction and Strategic Actions.

In August 2016, the Government of Canada and the Government of Ontario signed a bilateral agreement that will provide Ontario with \$1.49 billion of Federal funding to cover up to 50 per cent of initiatives supported under this agreement. In September 2016, the City of Toronto's allocation (Federal share) of \$856 million was confirmed by the Province of Ontario.

Since the TTC Budget Committee on September 6th, further analysis has been undertaken to streamline the number of projects to be included in the PTIF program while also maximizing the Federal allocation of \$856 million. Of the gross allocation of \$1.712 billion, the preliminary City of Toronto project list is approximately \$349 million and the TTC project list is \$1.363 billion with an anticipated Federal funding share of \$682 million.

Appendix A groups the PTIF list of projects according to:

- Unfunded Projects – based on the 2016-2025 Council approved Capital Budget
- New Projects – that are included in the 2017-2026 Capital Budget request
- Partially Funded – based on 2016-2025 Council approved Capital budget based on projects that were partially funded
- Balance – projects have full project approval

Board and Council approval is required for those projects that do not have sufficient project approval in order to proceed. Furthermore, this list is also subject to the Federal government's approval of the PTIF project submission (including Federal approval of a 1 year extension for the 21 discrete projects noted). There are also two projects, the purchase of buses and the bus overhaul program, that will require Federal Treasury Board approval as these projects are in excess of \$100 million each.

A detailed description of each project (including gross and anticipated Federal funding dollars) is included in Appendix B.

2016 Federal budget – March 22, 2016

<http://www.budget.gc.ca/2016/docs/plan/budget2016-en.pdf>

New: Federal Public Transit Infrastructure Fund

<http://www.infrastructure.gc.ca/plan/ptif-ftc/ptif-program-programme-eng>

Board Meeting – July 11, 2016

[http://www.ttc.ca/About the TTC/Commission reports and information/Commission meetings/2016/July 11/Reports/4 2016 Provincial and Federal Budgets and Announcements.pdf](http://www.ttc.ca/About%20the%20TTC/Commission%20reports%20and%20information/Commission%20meetings/2016/July%2011/Reports/4%202016%20Provincial%20and%20Federal%20Budgets%20and%20Announcements.pdf)

Attachments

Appendix A – TTC PTIF Project List and Additional Project Approvals

Appendix B – TTC Priority Projects for the Federal Public Transit Infrastructure Fund

Contact

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November 14, 2016

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TTC PTIF Project List*			Appendix A
	Gross \$		Additional Project Approval Req.d
Unfunded (based on Council Approved 2016-2025 CB)			
Purchase 4 of 99 Low Floor 40 ft Diesel Buses for Customer Service Initiatives (29 if 3 yrs)	19.816	**	19.816
Purchase 496 OF 805 Low Floor 40 ft Diesel Buses (accelerated 805 buses)	325.277	**	325.277
400 Wheel-Trans Buses	21.469	**	21.469
Sub-Total	366.562		366.562
New Projects (included in the 2017-2026 CB Request)			
Stations Transformation (incl Zone Hubs)	20.371	**	20.371
Subway Workcars	29.340	**	29.340
Wheel Trans Transformation Program	19.555	**	19.555
APC expansion to remainder of TTC 40' bus fleet and ALRVs	9.318	**	9.318
Skylight Replacement Program (new scope)	27.356	**	27.356
Platform Modifications to Accommodate Articulated Buses (new scope)	20.000	**	20.000
Bus Stop Improvements for Accessibility (new scope)	20.000	**	20.000
Opportunities to Improve Transit Service - Transit Priority Measures (New scope)	20.000	**	20.000
Sub-Total	165.940		165.940
Partial Funded (based on Council Approved 2016-2025 CB)			
Subway Facility Renewal Program	7.603		0.000
Subway Pump Replacement Program	10.275	**	0.000
Bridges/Structures Maintenance	13.545	**	0.000
Backflow Preventers	1.904		0.000
Subway Track Rehabilitation Program	63.488	**	0.000
Subway Turnout Rehabilitation Program	29.773	**	16.500
Subway Rail Grinding	14.140	**	11.060
On Grade Paving	8.994		0.000
Surface Track Replacement Program	42.924		0.000
Surface Special Trackwork Replacement Program	13.569		0.000
Bus Hoists	3.820		0.000
Roofing Rehabilitation Program	26.684		0.000
Sub-Total	236.719		27.560
Balance (funded based on Council Approved 2016-2025 CB)			
Toronto Rocket / T1 Rail Yard Accommodation	48.707	**	0.000
Surface Way Building Replacement	33.169	**	0.000
Reconstruction of Streetcar Overhead	15.438		0.000
Bus Washracks	10.111		0.000
Purchase 76 of 108 40 foot LF Buses **	46.110		0.000
Purchase 97 of 272 40 foot LF Buses (182 if 3 years) ***	123.908	**	0.000
Replacement of Orion VII Hybrid Bus Components ***	21.525	**	0.000
Orion VII Diesel & Nova Artic Bus Rebuild Program ***	115.107	**	11.818
Maintenance of Joint TTC / Toronto Transportation Bridges	9.695		5.695
Structure Rehabilitation Program	25.438		1.197
Storage Tanks	1.237		0.000
Easier Access Phase III	6.550		0.000
VISION (CAD/AVL)	30.000		0.000
Train Door Monitoring System - T1 & TR (Overhaul and Communications)	36.518		0.000
T1 Subway Cars - 20 Year Overhaul	23.705		0.000
T1 Subway Cars - 15 Year Overhaul	24.608		0.000
Life Extension Overhaul of 30 Articulated Light Rail Vehicles (ALRVs)	17.310		0.000
CUSTOMER FACING INFORMATION SCREENS (CFIS)	5.000		0.000
Sub-Total	594.136		18.710
Total - TTC	1,363.357		578.772
Total - City (under review)	349.555		
Total - TTC & City	1,712.912		
* Note: This 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.			
** One year extension (to March 31, 2019) required			
*** Federal Treasury Board approval required			

TTC Priority Projects for the Federal Public Transit Infrastructure Fund

Part I - Toronto Transit Commission Projects

Project Title	Project Description	Gross PTIF	Anticipated Federal Share
Bridges/ Structures Maintenance	Rehabilitation of deteriorated bridges and tunnels.	13,545,000	6,772,500
Toronto Rocket / T1 Rail Yard Accommodation	Design and construction of various Subway car facilities and yards to ensure the proper delivery, maintenance and storage of the new fixed 6-car Toronto Rocket (TR) subway trains at Wilson. This will also include the consolidation of the T1 trains on the Bloor-Danforth (BD) line and related impacts of the TR/T1/H series cascading plan on the applicable maintenance facilities.	48,707,000	24,353,500
Subway Facility Renewal Program	Modifications/renewals at 7 subway facilities across the transit system.	7,603,000	3,801,500
Subway Pump Replacement Program	Replacement of existing subway sanitary and storm drainage pumping systems.	10,275,000	5,137,500
Backflow Preventers	Backflow preventer installation on water lines supplying TTC properties.	1,904,000	952,000
On Grade Paving	On-going rehabilitation of the Commission's pavement surfaces at various locations within the transit system, including divisional paved facilities.	8,994,000	4,497,000

Project Title	Project Description	Gross PTIF	Anticipated Federal Share
Skylight Replacement Program	Repairs or replacement of leaking skylight systems at numerous locations. The scope of the project includes the repairs of the Yorkdale station skylight.	27,356,000	13,678,000
Stations Transformation (incl Zone Hubs)	Stations Hubs at key interchange and line stations.	20,371,000	10,185,500
Subway Track Rehabilitation Program	If track is not replaced once rail wear has reached its maximum allowable head or gauge wear of one-half inch, a safe reliable track system cannot be assured. Ties and ballast must be replaced to ensure stable and secure foundation for train operation	63,488,000	31,744,000
Subway Turnout Rehabilitation Program	The special track work components are heavily worn and are approaching their service limits.	29,773,000	14,886,500
Subway Rail Grinding	In certain areas of the mainline Subway, the running rail is damaged by normal train operation. In these areas, the unique nature of the wheel/rail interaction results in two predominate types of rail wear conditions; rolling contact fatigue and rail corrugation.	14,140,000	7,070,000
Train Door Monitoring System - T1 & TR (Overhaul and Communications)	Modifications to the TR trains needed to support the installation of the Train Door Monitoring system.	36,518,000	18,259,000
T1 Subway Cars - 20 Year Overhaul	The 20 year overhaul of 370 T1 cars which will commence in 2015 and will be completed in 2022.	23,705,000	11,852,500

Project Title	Project Description	Gross PTIF	Anticipated Federal Share
T1 Subway Cars - 15 Year Overhaul	The 15 year overhaul of T1 cars.	24,608,000	12,304,000
Subway Workcars	Retrofit of existing workcars (27) and purchase of the following types of workcars: production tamper, vacuum excavator, geometric/NDT track inspection workcar (1), paper vacuum workcar and crane flatcar (2).	29,340,000	14,670,000
Surface Track Replacement Program	Rail/Roadbed is beyond acceptable standards in certain locations. Replacement of the track structure	42,924,000	21,462,000
Surface Special Trackwork Replacement Program	Replacement of worn special trackwork as it approaches the end of its useful life.	13,569,000	6,784,500
Reconstruction of Streetcar Overhead	Upgrades to the existing Overhead Contact System on revenue service routes, as well as the three legacy yards.	15,438,000	7,719,000
Life Extension Overhaul of 30 Articulated Light Rail Vehicles (ALRVs)	Due to deteriorating state of the ageing vehicles the mechanical condition (wheels and trucks) as well as body condition (roof leaks) necessitate their overhaul before these vehicle fail while in service.	17,310,000	8,655,000
Bus Hoists	Bus hoist replacements. Other work includes Implementation of bus hoist safety zones at all hoist positions and the required facility modifications.	3,820,000	1,910,000
Bus Washracks	Upgrade existing bus washing system to improve the quality of washes and to reduce the amount of maintenance required at garages.	10,111,000	5,055,500

Project Title	Project Description	Gross PTIF	Anticipated Federal Share
Platform Modifications to Accommodate Articulated Buses	Reconstruct bus pads and lengthen bus bays on up to 6000 bus stops on bus routes where articulated buses are currently deployed and are planned to be deployed.	20,000,000	10,000,000
Opportunities to Improve Transit Service - Transit Priority Measures	Installation of signal priority equipment at existing signalized intersections or new signal equipment, and queue jump lanes.	20,000,000	10,000,000
Purchase of 29 of 99 Low Floor 40 ft Diesel Buses for Customer Service Initiatives	Buses to reduce passenger wait times and crowding and to provide more reliable and expanded services.	19,816,000	9,908,000
Purchase of 76 of 108 LF 40ft Diesel Buses	Buses to reduce passenger wait times and crowding and to provide more reliable and expanded services.	46,110,000	23,055,000
Purchase of 182 of 272 LF 40ft Diesel Buses	Buses to reduce passenger wait times and crowding and to provide more reliable and expanded services.	123,908,000	61,954,000
Purchase of 496 LF 40ft Diesel buses	Buses to reduce passenger wait times and crowding and to provide more reliable and expanded services.	325,277,000	162,638,500
Orion VII Diesel & Nova Artic Bus Rebuild Program	Mid-life rebuild of the Orion VII Diesel, Orion VII Hybrid and Nova Articulated Bus Fleets.	115,107,000	57,553,500

Project Title	Project Description	Gross PTIF	Anticipated Federal Share
Replacement of Orion VII Hybrid Bus Components	Orion VII Hybrid Bus Fleet components. These include the following major hybrid components: AC Traction Generator, AC Traction Motor & Propulsion Control System.	21,525,000	10,762,500
APC expansion to remainder of TTC 40' bus fleet and ALRVs	Purchase and installation of approx. 1160 Automatic Passenger Counting (APC) systems for 40' bus fleet.	9,318,000	4,659,000
Customer Facing Information Screens (CFIS)	Deploy (a) LED displays at up to 250 shelters, (b) LED/LCD displays at 6 TYSSE stations and (c) Alternate Energy Pilot at 5 stops.	5,000,000	2,500,000
VISION (CAD/AVL)	This project will deliver: CAD/AVL functionality; integrated vehicle borne systems; integration with automated stop displays; automated stop announcements; onboard camera replacement or integration with existing; tools and automation of selected business rules for route management; mobile supervision tools; integration with maintenance system to automate work order generation, Asset Management; Yard Management System; KPI reporting; system interfaces to existing enterprise applications including the planned enterprise data warehouse for reporting; dashboards and analytics.	30,000,000	15,000,000
Easier Access Phase III	Modifications to make remaining subway/SRT stations accessible to persons with disabilities, through the addition of elevators easier access fare gates, automatic sliding doors and minor modifications.	6,550,000	3,275,000
400 Wheel-Trans Buses	Replacement buses in order to maintain a reliable service for our customers.	21,469,000	10,734,500
Bus Stop Improvements for Accessibility	Reconstruct the concrete pads at about 1400 bus stops to make them accessible to customers using mobility devices and comply with AODA	20,000,000	10,000,000

Project Title	Project Description	Gross PTIF	Anticipated Federal Share
Wheel Trans Transformation Program	Implementation of IT systems to provide improved abilities to manage customer information, customer relationships, ride reservations, scheduling and dispatch. Construction of Mobility Transfer Hubs.	19,555,000	9,777,500
Maintenance of Joint TTC / Toronto Transportation Bridges	Major maintenance of deteriorated structures.	9,695,000	4,847,500
Structure Rehabilitation Program	Deteriorated bridge and tunnel structures will be rehabilitated to ensure that an acceptable level of structural adequacy is maintained for the delivery of safe and reliable service.	25,438,000	12,719,000
Storage Tanks - Oil Interceptors	Replacement of Underground Storage Tanks (UST) and Aboveground Storage Tanks (AST).	1,237,000	618,500
Roofing Rehabilitation Program	On-going planned rehabilitation of full or partial roof replacement of TTC facilities as identified in a five-year matrix schedule.	26,684,000	13,342,000
Surface Way Building Replacement	Design and construction of a new rail bending building with the capability to bend long pieces of rail, office area and a Mobile Dispatch Area (MDA) to prepare crew vehicles for daily operations and provide an area for assignment of work activities at the Hillcrest complex.	33,169,000	16,584,500
Total – TTC		1,363,357,000	681,678,500

- *Federal funding represents 50% of total eligible costs, with the remainder to be funded by the City of Toronto*
- *Note: Projects are subject to Federal government approval; furthermore, the Purchase of Buses and Bus Overhaul programs are also subject to Treasury Board approval*