

TORONTO TRANSIT COMMISSION REPORT NO.

MEETING DATE: June 8, 2011

SUBJECT: 2012-2016 CAPITAL PROGRAM AND 10 YEAR FORECAST

ACTION ITEM

RECOMMENDATION

It is recommended that the Commission:

- (1) Approve the preliminary 2012-2016 Capital Program and 10 Year Forecast as described in this report and as summarized in Appendix A, including the following:
 - (a) the 2012 Capital Budget in the amount of \$1,095.7 million, noting that identified capital funding sources are more than sufficient to fund the 2012 capital budget request;
 - (b) the 2012-2016 Capital Program in the amount of \$4.603 billion, noting that the capital expenditures needed to maintain the existing transit system in a state-of-good-repair over this 5 year period exceed currently identified capital funding sources by \$1.336 billion;
 - (c) the 2012-2021 TTC Capital Forecast in the amount of \$6.999 billion, noting that the capital expenditures needed to maintain the existing transit system in a state-of-good-repair over this 10 year period exceed currently identified capital funding sources by about \$1.508 billion;
 - (d) Note that the 10 year capital funding shortfall is a continuation of the long term pattern of insufficient long-term capital funding for the TTC's capital needs. Over recent years, each capital budget process shows sufficient funding in the short-term and a significant lack of identified funding in the mid to long term. Also contained in this report is a series of funding package requests for the Provincial and Federal governments that, if funded, would eliminate this 10 year shortfall;
 - (e) the budget for the Toronto-York Spadina Subway Extension with an estimated final cost of \$2.634 billion, including \$685.5 million in 2012 and \$1.963 billion for the years 2012-2016;
 - (f) the Capital Workforce Plan summarized in this report;

- (2) Confirm support for the Strategic Funding Packages outlined in this report, and direct staff, in consultation with the City of Toronto, to prepare appropriate requests to the Province of Ontario, Metrolinx, and the Government of Canada in pursuit of funds for the TTC's base capital program needs as outlined in this report.
- (3) Forward this report to the City of Toronto as the TTC's preliminary capital budget request for approval by City Council.
- (4) Forward this report to the Ontario Minister of Transportation, the Ontario Minister of Public Infrastructure Renewal, and to the Ontario Minister of Finance, for consideration of TTC's base capital funding needs.
- (5) Forward this report to the Federal Minister of Transport, Infrastructure and Communities, for consideration of TTC's base capital funding needs.
- (6) Forward this report to Metrolinx, for consideration of TTC's base capital funding needs.

BUDGET CONTEXT

The 2011-2015 Capital Program and 10 Year Forecast included all known funding and while City debt levels were significant in the initial years, there remained a significant funding shortfall over the ten years in the order of \$2.4 billion. Due to the lack of long term funding commitments, action was taken to defer certain project work to provide a Council approved plan that was affordable in the short term, while noting that project deferrals would need to be reassessed during the development of the 2012-2016 Capital Program and ten year forecast and acknowledging once again that a longer term, predictable and sustainable funding model was sorely needed. The combined impact of these capital budget reductions was in the order of \$256 million for the period from 2011 to 2013. This included significant adjustments to the following projects: Fire Ventilation Upgrades, Easier Access (elevator installation), Industrial Facility and Facility Renewal Requirements, Bus Purchases and Platform Edge Doors. Following these amendments, the capital program was approved by City Council on February 23, 2011. At that time there still remained a gap of approximately \$2.1 billion between projected capital expenditures and the funding available over the ten year period.

For the current capital budget cycle, the City of Toronto has established clear debt guidelines for funding of capital expenditures in order to ensure compliance with the policy of restricting debt service costs to no more than 15% of the property tax levy. For the TTC, the debt target for our base or state-of-good-repair capital program is \$2.322 billion for the ten year period from 2012 to 2021. (For the Spadina Subway Extension, the debt target during this same period is \$214.4 million.) This debt target, together with other identified sources of funding such as Federal and Provincial gas taxes, the Canada Strategic Infrastructure Fund

(CSIF), the Infrastructure Stimulus Fund (ISF), Development Charges, and other smaller sources, comprise the means by which the TTC's capital program is funded.

For the 2012 to 2021 Capital Program, as shown later in this report (see the Base Program Funding section), it is currently projected that there is a \$1.508 billion funding shortfall between what is needed to fund the base budget versus funding that is currently identified. While there is sufficient funding available to fully cover the 2012 capital expenditures, there is insufficient funding for the future starting in 2013. In order to fulfil all of the capital needs and plans, this additional funding will have to be secured in some form from federal and provincial governments.

This pattern of enough money in the short-term and insufficient money in the long-run has been a constantly reoccurring theme ever since the Province moved away from the 75% capital funding formula that was in place during the 1970s and 1980s through to the mid 1990s. Since then, each year the funding shortfall is identified, a set of possible funding requests of the two upper levels of government is prepared, a formal request is made and, after a period of consideration, an announcement may be made on available funding. This process is not conducive to the effective planning and budgeting necessary to ensure that the transit system is adequately maintained. What is required is a return to the funding stability and planning certainty of earlier decades.

At the same time, while expansion of the transit system is critical to the long-term viability of the City of Toronto and the broader GTA, given the Commission's capital investment priorities and the existing ridership base, it would be inappropriate to spend money on system expansion if state-of-good-repair replacement and rehabilitation of the existing system is not fully funded. While some progress was achieved over the past several years with Metrolinx and the Provincial government to provide system expansion funding, as well as some additional base funding, further long term commitments are required to fund the base Capital budget.

To address the substantial projected base program funding shortfalls noted above, staff has continued to work with City, Provincial and Federal officials to consider funding of proposed funding packages and further discussions are expected to continue in the hopes that these efforts will result in the identification of ongoing, predictable and long term funding for the TTC's base capital program. A significant portion of this funding shortfall can be attributed to the maturity or completion of specific program based contribution funding programs such as CSIF, ISF, TS, OBRP, Quickwins, etc., which provided significant contributions in past years but which have not yet been extended or identified as having a successor program for the continuing capital needs. Until such time as a sustainable funding formula can be developed, staff has prepared a list of possible funding packages that would form the basis of discussion with both the federal and provincial governments.

If actions by TTC and City officials prove to be unsuccessful in securing a commitment or announcement of funding of sufficient magnitude to address the existing funding shortfall

requirements, staff will be required to take appropriate further action. This action may include a review of the TTC operation and services with respect to available funding and directed priorities to assess the impacts of revising levels of services/operations/staffing to match the system to a level which is affordable from both a capital investment and operating subsidy perspective.

Staff will report back to the Commission in the fall with the status of funding package decisions and to update on City service level review outcomes and to recommend and/or seek direction on further actions required to address remaining funding shortfalls and to finalize the 2012-2016 Capital Program and 10 Year Forecast.

BUDGET HIGHLIGHTS

The 2012-2016 Capital Program is consistent with Commission priorities and the plan approved by City Council last year. While project timing and cash flows have been adjusted to reflect more current information, there has been no significant change in the overall budget requirement: the 2011 probable and the 2012 request are both lower than the approved budget and the 2011-2015 five year budget envelope has increased by about 1.1% (primarily due to 2010 deferrals), while the 2011-2020 ten year forecast is down by 2.1% (primarily as a result of deferral of platform edge doors projects outside of this timeframe). Funding continues to represent the greatest challenge to moving forward with the base capital program. Highlights of the 2012-2016 Capital Program are as follows:

- \$1,096 million is budgeted for 2012 for the base capital program:
 - \$658 million for infrastructure and related projects, including \$394 million for rehabilitation of buildings, structures, tunnels, bridges, yards and roads, \$53 million for track work, \$155 million for signals, electrical and communications equipment, and \$28 million for various information technology projects and, \$28 million for various facility, equipment and environmental projects.
 - \$438 million for vehicles, including \$189 million toward the purchase of 234 Toronto Rocket Subway Cars, \$61 million toward the procurement of 60 buses and 198 new Wheel-Trans buses, \$124 million toward the purchase of 204 LRV's, \$54 million for bus, subway car and streetcar overhaul programs and, \$10 million for the acquisition or overhaul of various non-revenue vehicles.
 - Based on current funding assumptions, there is more than sufficient funding available to cover the 2012 budgeted expenditures.
- \$4.603 billion is budgeted for the five years from 2012 to 2016 for the base capital program, including \$2.904 billion for infrastructure and related projects and \$1.699 billion for the procurement and overhaul of vehicles. Based on current funding assumptions, this will leave a funding shortfall of \$1.336 billion for the base program over the next five

years.

- \$6.999 billion is forecasted as the overall requirement for the base capital program for the ten years from 2012 to 2021, including \$4.790 billion for infrastructure and related projects and \$2.209 billion for the procurement and overhaul of vehicles. Based on current funding assumptions, this will leave a funding shortfall of \$1.508 billion over the next ten years.
- A summary of expenditures for key program elements in the base program is included as Appendix A.
- \$685 million is required in 2012 and \$1.963 billion from 2012 to 2016 for the construction of the Toronto-York Spadina Subway Extension. Provincial funding has been provided in advance and Federal funding has been committed.
- The budget requirements for 2012 and beyond for the Eglinton Crosstown and Sheppard East & West Subway extension projects have not yet been identified and will be the subject of future reporting to the Commission.

2012-2016 CAPITAL PROGRAM

With an investment approaching \$11 billion in existing assets (many of which last for decades) and ridership volumes at record levels, the existing transit network must remain the TTC's first priority. The base capital program covers the acquisition of new and replacement transit assets needed by the TTC for the provision of public transit services within the City of Toronto and under contract with adjacent municipalities. In establishing the budget, a life-cycle approach is used. Detailed system inventories of each class of capital asset are maintained. Budgets are set to replace or rehabilitate assets based on condition assessments, engineering standards, legislative requirements or safety/environmental implications. A one-year budget, five-year program and ten-year forecast are developed: all designed to keep the TTC's capital assets in proper working order. The capital plan was constructed using the Commission's long standing capital budget priorities which remain:

1. State-of Good-Repair and Safety
2. Legislative
3. Capacity Enhancement
4. Improvement
5. Expansion

In view of the continuing funding constraints for the state-of-good-repair capital program, during preparation of the 2012-2016 Capital Program budget and 10 year forecast a re-assessment of every element of the budget was undertaken. Critical rehabilitation work, infrastructure development for fleet accommodation and, replacement of vehicles are

included in the proposed capital plan.

The cash flow for each program or project element is set out in the 2012-2016 Capital Program Blue Pages. Note that Blue Binders with current project documentation have not been prepared for the 2012-2016 Capital Program and 10 Year forecast as a result of the limited time available to meet the advanced budget schedule stipulated by the City of Toronto. Expansion initiatives, including the Toronto-York Spadina Subway Extension, a Transportation/Transit Plan as well as the Yonge North Subway Extension, and various Other TTC Recommended projects and Waterfront Initiatives are outside of the base capital program.

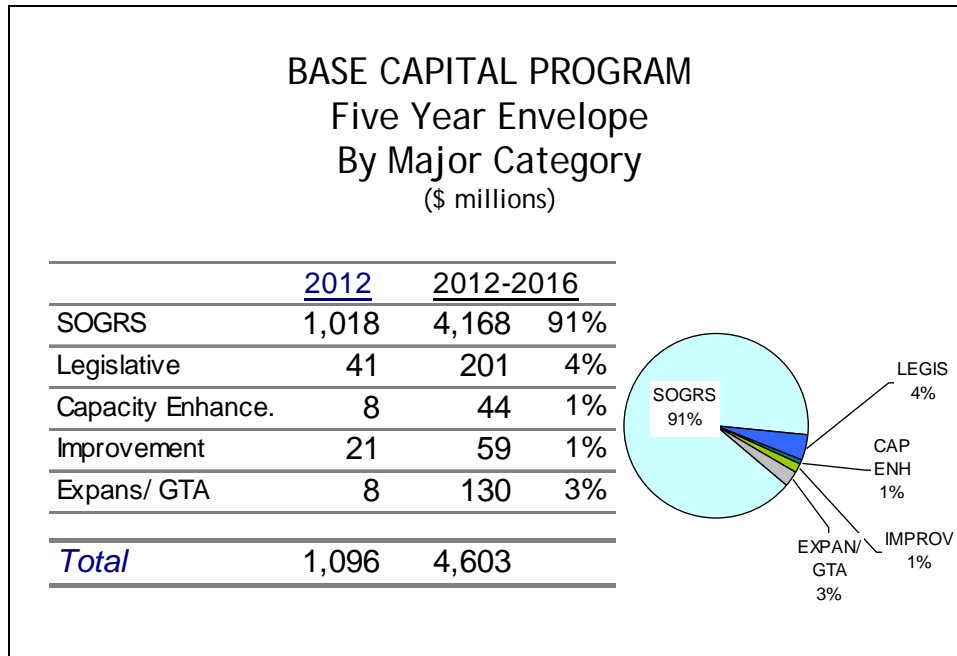
Key elements of the \$1.096 billion in the base capital program for 2012 are shown in Exhibit 1.

Exhibit 1

TTC - PROPOSED 2012 BASE CAPITAL PROGRAM		
(\$ millions)		
Delivery of 60 Diesel Buses + WT Vehicles	61	}
Purchase of 234 + 126 Subway Cars (delivery of first 138 cars & milestone payments)	189	
Purchase of 204 LRV Cars (milestone payments - first delivery 2012)	124	
Vehicle Overhaul Programs (Bus, WT, Subway, Streetcar)	53	}
3.1-3.3 Finishes, Equip, Yards & Roads	65	
3.4 Bridges & Tunnels	53	}
3.9 LRV & CH (156), EA II&III (22), Facility Renewal (9), QW/MD/Birch Gar (11)	198	
3.9 Fire Ventilation (26), Wilson CH & FA (28), , TR Mods (4)	58	
1.x Track Programs	53	}
2.x Signals Electrical Communications, OH & Poles (17), YUS ATO (92)	155	
4.2x NRV (10), 5.x Equipment (6), 6.1 Environ (14), 7.x IT (28)	58	
Other projects	<u>29</u>	}
TTC REQUEST LEVEL	<u>\$1.096</u>	

Expenditures for the next five years from 2012 to 2016 are budgeted in the order of \$4.6 billion as shown in Exhibit 2.

Exhibit 2



As can be seen from the exhibit, almost \$4.4 billion about 95% of the capital budget for the five years from 2012 to 2016 is committed to state-of-good-repair/safety and legislative projects. Notably, 37% of budgeted expenditures for the next five years are for vehicle procurements and overhauls. Key elements of the base capital program over the next five years include:

- acquisition of:
 - 400 diesel 40' equivalent buses (\$242 million)
 - 360 Toronto Rocket Subway cars (\$460 million)
 - 204 LRV's (\$604 million)
 - 198 Wheel-Trans buses (\$34 million)
- the overhaul of revenue service vehicles (\$325 million)
- construction of a new LRV storage and maintenance facility (\$370 million)
- TR/T1 Rail Yard Accommodation (\$335 million)
- installation of automatic train operation and re-signaling on the Y-U-S subway line (\$276 million)
- various signals, electrical and communications projects (\$263 million)
- track replacement (\$259 million)
- fare systems (\$152 million)
- installation of elevators in the subway (\$147 million)
- upgrading of fire ventilation equipment and second exits in the subway (\$135 million)
- upgrades to information technology assets (\$113 million)
- on-grade and structural paving (\$88 million)

- roofing rehabilitation (\$76 million)
- carhouse modifications to accommodate new LRVs (\$58 million)

Approximately \$7.0 billion is required over the next 10 years from 2012 to 2021 for the base capital program as shown in Exhibit 3.

Exhibit 3												
(\$ Millions)	2012	2013	2014	2015	2016	2012-2016	2017	2018	2019	2020	2021	2012-2021
Infrastructure	658	734	566	476	469	2,904	410	370	363	359	383	4,790
Vehicles	438	381	284	330	266	1,699	185	159	89	38	39	2,209
TOTAL	1,096	1,115	851	806	736	4,603	595	529	452	397	422	6,999

Expenditures over the next decade are dominated by (i) the need to overhaul and replace aging buses (\$597 million) and subway cars (\$651 million), (ii) the acquisition of 204 LRVs (\$855 million), (iii) the construction of an LRV Storage and Maintenance Facility (\$370 million) and replacement of subway track (\$229 million) and streetcar track work (\$312 million), (iv) rail yard accommodation for the Toronto Rocket and T1 subway cars (\$498 million), (v) major structural rehabilitation of the Commission's bridges and tunnels (\$391 million), (vi) installation of elevators in the subway system (\$261 million), (vii) upgrade of fire ventilation equipment and second exits in the subway (\$203 million), (viii) installation of automatic train operation and re-signaling on the Yonge-University-Spadina line (\$288 million) and the Bloor-Danforth line (\$391 million), and (ix) the need to upgrade the Commission's information technology assets (\$232 million). In addition, several other major projects will be undertaken requiring significant investment including: various signal, electrical and communications projects (\$367 million), roofing rehabilitation at various TTC locations (\$138 million), on-grade and structural paving (\$226 million), fare systems (\$180 million), and escalator and elevator overhauls (\$98 million).

It should be noted that there are a number of initiatives currently included in the 2012-2021 capital program which involve study work and detailed analysis of existing conditions and capital requirements, and current plans are based on assumptions of currently known conditions, for which changes resulting from the ongoing assessment activities may impact existing capital priorities and will be considered in future budget cycles (commencing with the 2013-2017 budget cycle). For example, detailed analysis is currently being undertaken for the accessibility project involving elevator installations (EA III) which may have a potential cost increase in the order of \$120+ million due to experienced complexity of design/construction and property implications within the existing station infrastructure.

Key program elements for the base capital program over the next 10 years are outlined in the Appendix A.

BUDGET COMPARISON

Exhibit 4 shows the changes in the requested budget from that approved by City of Toronto Council in February of this year.

Exhibit 4

BUDGET COMPARISON			2011 to 2015	2011 to 2020
<i>(\$Millions)</i>	2011	2012	<i>Envelope</i>	<i>Envelope</i>
Approved - Base Capital Program	870	1,132	4,666	7,592
Requested - Base Capital Program	852	1,096	4,720	7,429
Change in Base Program	(18)	(37)	53	(163)
City 2010 Carry Forward Request	(44)	-	(44)	(44)
Net Change in Base Program	(62)	(37)	9	(207)

The 2012-2016 Capital Program and 10 Year Forecast requirements for the proposed base capital program have been identified with the following impacts:

- 2011 will be under-spent by \$18 million (excluding carry forwards) primarily as a result of delayed progress on the new LRT Maintenance & Storage Facility (-\$39 million) offset by the timing of payments for the 204 LRV car order (+ \$21 million).
- 2012 will be under the approved budget by \$37 million primarily as a result of additional scope for the YUS ATC resignalling project (+ \$27 million), slippage on the LRT Maintenance & Storage Facility (-\$33 million) and, timing and scope reductions on the PRESTO/GTA Farecard and POP Legacy projects (-\$32 million).
- 2011-2015 capital requirements will increase by \$53 million or 1.1% largely as a result of the following:
 - increased scope of work on the YUS ATC resignalling project (+ \$57 million)
 - added back scope on the Fire Ventilation Upgrade project

- (+ \$38 million)
 - timing of elevator installation on the Easier Access III project (+ \$31 million), noting there may be additional costs of \$120 million relating to complexities of design/construction/property experienced at existing stations and this will be reviewed in 2013 budget cycle
 - deferral of the installation of Platform Edge Doors on the YUS line (- \$165 million)
 - add back of 120 bus purchases (+ \$73 million)
 - cash flow timing adjustment on the 204 LRV order (+ \$77 million)
 - reduced scope on the POP Legacy Streetcar fare equipment (-\$44 million)
- 2011-2020 capital requirements will decrease by \$163 million. The primary source of these plan changes (over the ten year period 2011-2020) includes the following:
 - Purchase of replacement buses (+ \$75 million)
 - Purchase of replacement Wheel-Trans buses (-\$35 million)
 - Temporary Bus Storage at Mt. Dennis Garage (+ \$23 million)
 - TR/T1 rail yard accommodation (-\$63 million)
 - YUS ATC (+ \$65 million)
 - BD ATC (-\$71 million)
 - Removal of platform edge doors on the YUS (-\$165 million)
 - Streetcar Network Upgrades (+ \$25 million)
 - Easier Access III (+ \$32 million)
 - Temporary Bus Storage Facility (+ \$23 million)
 - Industrial facility requirements (-\$21 million)
 - McBrien Building Renovations (-\$10 million)
 - ERP – System Replacement (-\$30 million)
 - other project changes (-\$11 million)

BASE PROGRAM FUNDING

Funding for TTC capital expenditures comes from several sources. There are federal and provincial gas taxes; both federal and provincial governments have also provided funding under various programs such as the CSIF (Canada Strategic Infrastructure Fund), ISF (Infrastructure Stimulus Fund), OBRP (Ontario Bus Replacement Program), Metrolinx Quick Wins and numerous other sources of funding. These types of funds are mostly project specific and expire once the funds are exhausted or the time limits expire.

The City of Toronto also provides direct capital funding to the TTC. The bulk of this is in the form of debt issuance and the City sets annual debt affordability targets. Ideally, all of the available funding sources added together would match the capital needs of the system. As set out in this report, that is not the case.

In addition to government funding noted above, the TTC has a depreciation charge levied

against the TTC Operating Budget. This is normally in the order of \$20-\$25 million per year and provides a source of funding for expenditures paid towards short duration capital assets that qualify for capitalization for accounting purposes, but are shorter than the 10 year minimal debt issuance by the City of Toronto. Other funding is also provided through third party arrangements as well as through Development Charges which are levied under the Municipal Bylaw.

All of these funding sources are summarized in Exhibit 5.

Exhibit 5

TTC 2011-2020 CAPITAL PROGRAM REQUIREMENTS & SOURCES OF FUNDING							
	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2011-2015</u>	<u>2012-2016</u>	<u>2011-2020</u>	<u>2012-2021</u>
<i>(\$Millions)</i>							
Vehicles	339	438	381	1,772	1,699	2,509	2,209
Infrastructure / Other	513	658	734	2,948	2,904	4,920	4,790
Proposed Capital Program Budget	852	1,096	1,115	4,720	4,603	7,429	6,999
Funding Sources:							
Total Provincial Funding	249	309	173	978	850	1,481	1,306
Total Federal Funding	197	168	160	851	821	1,642	1,600
Total City Debt	452	602	355	1,786	1,447	2,600	2,322
Total Other Funding	58	40	30	179	149	299	263
Total Funding	955	1,118	718	3,795	3,267	6,022	5,491
Funding Shortfall (Surplus)	(103)	(22)	397	925	1,336	1,407	1,508
Net Funding Shortfall with 2011 Surplus applied					1,233	1,405	

Note: Funding for the Spadina Subway Extension, Transit Expansion, Waterfront, and Other TTC Recommended projects are shown separately from the base program requirements.

For the base capital program Exhibit 5 shows that:

- For 2012, there is a net surplus of \$22 million compared to anticipated expenditures.
- For 2012-2016, there is currently projected to be a \$1.336 billion funding shortfall.
- For 2012-2021, there is currently projected to be a \$1.508 billion funding

shortfall.

No funding has been assumed beyond what has been currently committed to or announced by the Provincial and Federal governments and it will be necessary to identify appropriate tools to address these funding shortfalls such as allocation of the 2011 funding surplus and continued pursuit of funding for identified strategic funding packages.

The full 10 year expenditure requirements and funding sources are summarized in Appendix B.

FUNDING PACKAGES FOR PROVINCIAL AND FEDERAL GOVERNMENT

Key Project Funding Packages have been identified as summarized in Exhibit 6 and consistent with previously identified packages. These should continue to be pursued with the intent of securing additional funding to address the \$1.5 billion funding gap for the base program. If 1/3 funding was secured from each of the provincial and federal governments, the resulting funding shortfall would be eliminated for the ten years 2021-2021.

Exhibit 6

SUMMARY OF KEY PROJECT PACKAGE ITEMS				
Program / Project Description / (\$Millions)	Year 2012	Year 2013	2012 to 2016	2012 to 2021
<u>SUBWAY CAPACITY</u>	29	168	673	1,227
<u>LEGACY STREETCARS</u>	163	181	470	487
<u>BUS FLEET</u>	65	87	496	671
<u>ACCESSIBILITY</u>	48	39	191	311
<u>FARE COLLECTION</u>	2	6	40	47
TOTAL - PACKAGE ITEMS	307	480	1,870	2,743
<i>FUNDING ASSUMPTION - 1/3 SHARE FROM EACH OF PROV / FED GOVTS</i>	\$ 205	\$ 320	\$ 1,247	\$ 1,828
<i>CURRENT FUNDING SHORTFALL 2011-2020 CAPITAL BUDGET & PLAN (with 2010 CF)</i>	\$ (22)	\$ 397	\$ 1,336	\$ 1,508
<u>REVISED FUNDING SHORTFALL WITH GOVT FUNDING PACKAGES</u>	(227)	77	89	(320)

Following is a description of each of these packages (cash flows for these packages are more fully detailed in Appendix C).

1. Subway Capacity

The Yonge-University-Spadina subway is largely operating at maximum capacity during rush hour, particularly southbound from Finch station in the mornings, utilizing the existing technology of the line. These measures are all underway to improve the carrying capacity on the line from 26,000 per hour to 38,000 passengers per hour. To increase that capacity, the TTC has the following project plans which are already in place:

60 Toronto Rocket (TR) Trains (H4, H5 & H6 replacement and growth) are designed to be more reliable than current trains and can carry an extra 10% more riders. This increase in reliability and extra passenger carrying capacity effectively means we can carry more riders on the existing system than we are currently able to. In addition, through the exclusive operation of the TR fleet on the Y/U/S line, there will be the earlier realization of associated benefits such as: increased safety, reliability and efficiency.

- YUS Re-Signaling and Automatic Train Control: is one of the most significant initiatives the TTC has for increasing the capacity of the Yonge Subway. The existing signal system was installed when the line was built over 50 years ago. By replacing it with industry standard, state-of-the-art signaling equipment and equipping the line with automatic train control, closer headways (the time between trains) coupled with the new TR subway trains will result in a significant increase in carrying capacity and regularity of service will be achieved.
- Double crossovers to be installed south of College and south of St Clair and north of King will allow for more efficient system operation and replace obsolete signaling equipment.
- Union Station 2nd Platform (funded through Waterfront Toronto) will help alleviate the current overcrowding of the station and significantly increase the passenger boarding capacity of the station and should markedly reduce the dwell time at the station for trains loading and off-loading customers; contributing to more regular service on the YUS subway.

Yonge Bloor Capacity Improvements - (\$1 million): Yonge/Bloor is a major transfer point in the subway system and a study in 2011/2012 will evaluate the effectiveness of improvements in vertical capacity and dwell times to best accommodate increasing demand which would otherwise be a capacity constraint at this station. Additionally operating improvements to address the diversion of passengers to less populated cars at the Y-B station will improve the dwell time constraints at this station. This study may result in the identification of additional capital requirements for which there is an unbudgeted project presented below the line (\$200 million) which contemplates new platforms and station expansion to address vertical circulation constraints.

Automatic Train Control – (\$568 million): In 2007 the Province agreed to fully fund the

installation of Automatic Train Control and Re-signalling of the Yonge-University-Spadina line as part of a Quick Wins program initiative. While the commitment was substantial and work is progressing, the announcement was limited to the Quick Wins term of 2009-2012 and there remains a funding shortfall of \$177 million for this project for the remaining scope to 2018. This work is necessary not only to replace the 50 year old signals, but, to assist in the introduction of automatic train control which will enhance the vehicle capacity of the line. In addition, following the completion of ATC work on the YUS line, the installation of ATC on the Bloor-Danforth (BD) line will improve safety and service reliability and efficiency of service which is also approaching capacity, noting that once the TR trains are received, T1 cars will be redeployed to the BD line and equipped with ATC equipment to improve headway and the interoperability between the two lines particularly at the transfer points. The ATC project on the BD line is a \$431 million project with costs of \$391 million over the next 10 years.

10 Additional TR Trains – (\$161 million): Fleet growth cars with delivery scheduled by 2015 will facilitate line expansion or reduced headway operation.

TR/T1 Rail Yard Accommodation – (\$498 million): The rail amalgamation study completed in 2010 identified modifications required to various subway yard complexes and facilities to accommodate proper delivery, storage and maintenance of up to 80 TR trains on the YUS line and the series cascading impacts from the transfer of all T1 cars to the BD line. Over time, the increased requirement to get additional trains into service will need to be revisited with alternatives including closing the subway early or building a North Yonge Tail track for storage. A reassessment of shop facilities design has resulted in \$64 million savings to the \$594 million project.

Platform Edge Doors (PEDs) for YUS: The retrofit of PED features for existing stations on the YUS would improve service reliability and customer safety as well as improve platform environmental and debris conditions. This project is estimated to cost in the order of \$550 million, however, despite its benefits, it has been deferred beyond 2021 due to existing funding constraints. PED installation on the BD line would follow subsequently at an estimated cost in excess of \$600 million.

All of these improvements are needed to address subway capacity requirements before the alternative of building a Downtown Relief Line would be warranted.

2. LRV Facilities

LRV Maintenance & Storage Facility (MSF) – (\$370 million): While one-third provincial funds have been secured for the acquisition of 204 LRV's to replace the TTC's current fleet of streetcars that are reaching the end of their 30-year life (\$1.164 billion), staff has had some discussions with government officials to consider the support of the cost for the facility to accommodate running repairs and maintenance for the full LRV fleet as well as storage for 100 cars. The Ashbridges MSF project has a total cost of \$437 million with

necessary construction by 2013 to accommodate the commencement of vehicle delivery.

Existing Carhouse Modifications New LRV – (\$68 million): Modifications at existing aging carhouse facilities (Roncesvalles, Russell) are required to accommodate the light maintenance and some storage requirements for the new LRV cars. The total project cost is \$75 million. These include modifications to address state of good repair or replacement, operational and health and safety standards and new design impacts of the LRV cars technology.

Streetcar Network Upgrades for LRT – (\$49 million): The streetcar network involves 11 lines with 757 unique streetcar stops, including 114 with island platforms. The majority of stops provide on-street boarding only and most need to be modified to become fully accessible and accommodate passengers with disabilities upon deployment of new low-floor LRV vehicles. This includes curb cuts, island modification/reconstruction and wider platforms.

3. Bus Fleet Requirements

Bus Hoist Replacements - (\$63 million): The bus garage facilities has a fleet of 146 bus hoist which are aging as well as require updating to address safety zone or parallelogram lift standards and 103 are scheduled for replacement over the next 11 years.

Bus Rebuild Program - (\$319 million): With the changes in the fleet for new vehicle procurements and changing technology, as well as pending a review of the standard bus life, the bus rebuild program was removed from the 2010 capital plan. A review was undertaken last year and this program was re-introduced as part of the 2011-2015 capital program to provide for 120-240 bus rebuilds annually (over 1500 over the next 10 years).

Bus Procurement - (\$244 million): The purchase of 400 clean diesel buses is planned over the next 10 years based on the standard bus life of 18 years.

Temporary Bus Storage Facility - (\$23 million): There is a shortage of bus storage capacity and based on the forecasted bus fleet plan, a new bus garage would be required by 2016. To address the short term bus storage capacity need, work will be undertaken to expand the storage capacity at Mt.Dennis and Arrow Bus Garages to accommodate an additional 100 buses. A new bus garage is recommended as a long term solution and to help to accommodate future ridership growth, however this project is unbudgeted and is currently shown below the line (\$120 million).

4. Accessibility

The Accessibility for Ontarians with Disabilities Act (AODA) requires full accessibility by 2025. The TTC is moving forward to achieve this goal with its bus fleet by 2012, its stations by 2025 and light rail by 2018. A senior government commitment for long-term sustainable funding for accessibility would assist with projects underway or required to meet AODA requirements such as vehicle modifications and standards compliance (\$TBD), installation of elevators in all stations (\$261 million), replacement of escalators at the end of their useful life (\$16 million) and, Wheel-Trans vehicles (\$34 million) - as well as a contribution towards the Wheel-Trans operating budget.

5. Fare Collection

GTA Farecard (PRESTO) – (\$202 million not currently budgeted): This project reflects the costs (above and beyond the CSIF included funds of \$140 million) estimated a total of \$342 million to implement the PRESTO fare collection system at the TTC. Staff is currently assessing the business case for an open payments system as directed by the Commission in May 2010 versus PRESTO and pending this decision, funding from senior levels of government may change.

POP LRV Fare Collection – (\$47 million): The new LRV cars will require ticket vending equipment on board the vehicle and off-board at select TTC streetcar stops. In addition, infrastructure work is required for concrete pads and power to support the installation of off-board equipment at 150 street level stops.

Given the Commission's capital investment priorities, it would be inappropriate to spend money on expanding the system if the normal state-of-good-repair replacement and rehabilitation of the existing system is not fully funded. To address this important concern, staff has continued to meet with City, Provincial, Metrolinx and Federal officials in an effort to gain a commitment on approaches to close this funding gap.

WORKFORCE IMPLICATIONS

At the end of 2011, the TTC had an approved capital workforce of 1,853. Almost 40% these positions are for hourly-rated workers who perform most of the major rehabilitation work on the Commission's assets covering everything from track installation to structural work in the subway to signals, electrical and communication equipment work to revenue vehicle rebuilds. The bulk of the rest of the employees are for design and project management for major capital projects. The positions are tied to specific capital projects and once those projects (or series) of projects are completed, the employees are transferred to other projects for which they are suited. In addition, the Commission utilizes a series of external consultants, mostly for design and IT project services, when the volume or skill of internal employees is not sufficient to complete the capital program.

It is projected that capital workforce will increase in 2012 as follows:

AREA	2011	2012	CHANGE
Engineering/Construction	330	330	-
Spadina Subway Extension	34	35	1
Transit Expansion Department *	278	278	-
ITS Projects	18	18	-
All Other	1193	1255	62
Total	1853	1916	63

* No change in workforce for the Transit Expansion Department has been identified pending confirmation of the delivery models for the Eglinton Crosstown and Sheppard Subway Extension projects.

These capital positions will be included in the 2012 TTC Organization Charts, which list each position at the Commission.

BUDGET CONCLUSIONS

The TTC is charged with the responsibility of providing efficient, safe and affordable public transit to the residents of the City of Toronto. The Capital Program set out in this report is structured to keep the existing system in a state-of-good-repair, while maximizing the use and life of assets to meet existing and future transit needs. However, while the plans are practical and achievable, they are dependent upon funding from all three orders of government – funding that is predictable and long term.

The following conclusions or observations can be made:

1. The TTC's priorities for capital investment remain unchanged.
2. The 2012-2016 Capital Program is consistent with the plan approved by the Commission and City Council last year.
3. The 2012 budget is \$37 million below the Council approved amount contained in the 2011-2015 Capital Program. The proposed 2012 budget is affordable within the City approved debt guidelines. After factoring in anticipated Federal and Provincial funding programs there is a \$22 million funding surplus for 2012.

