



STAFF REPORT ACTION REQUIRED

Transit Project Assessment Process (TPAP) Amendment for Train Storage Facility Yonge Subway Extension

Date:	March 13, 2015
To:	Planning and Growth Management Committee
From:	Chief Planner and Executive Director, City Planning Division
Wards:	All
Reference Number:	P:\2015\Cluster B\PLN\PGMC\PG15057

SUMMARY

This report was requested by the Planning and Growth Committee at the January 9, 2015 meeting and provides: i) the estimated cost to construct the Below Grade Storage Facility outlined in the report from the Toronto Transit Commission (TTC) and the estimated cost for an alternate option to construct the facility above grade; ii) a review of option 5 from the 2009 Subway Rail Yard Needs Strategy which would utilize the Wilson and Davisville Yards plus a Sheppard Subway mainline connection from Wilson Yard to Yonge Street and operational relief this would provide on the transit system; and, iii) a review of the ridership relief a Sheppard Subway mainline connection from Yonge Street to Wilson Yard using current and projected ridership data including the planned line extension to York Region.

The costs for the Below Grade Storage Facility recommended in the report from the TTC and the alternative option of an above grade storage facility are estimated in 2011 dollars at \$250M and \$258M respectively. TTC staff revisited option 5 from the Subway Rail Yard Needs Strategy and have again determined that Wilson and Davisville Yards will be unable to accommodate train storage for the extension of Line 1 to Richmond Hill. City Transportation Planning staff have concluded that there is not sufficient information at this time to assess the potential redistribution of ridership from the Yonge subway line to the University-Spadina subway line as a result of providing an extension of the Sheppard Subway connecting these two services.

A storage facility in Richmond Hill will be required when Line 1 is extended to Richmond Hill. The Below Grade Storage Facility approved by the TTC Board on August 19, 2014 is the most cost effective way to accommodate the future storage requirements for the extension.

RECOMMENDATIONS

The City Planning Division recommends that:

1. Planning and Growth Management Committee receive this report for information.

Financial Impact

There are no financial impacts resulting from the adoption of this report.

DECISION HISTORY

At its meeting on Tuesday, August 19, 2014, the TTC Board approved a report entitled “TPAP Amendment for Train Storage Facility Yonge Subway Extension” and forwarded the report to the City of Toronto on August 26, 2014, for approval through an appropriate Committee of Council. The report was subsequently forwarded to the Planning and Growth Committee for consideration at the January 9, 2015 meeting as Agenda Item PG1.5 (<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2015.PG1.5>).

Planning and Growth Committee referred the item to the Deputy City Manager, Cluster B, with the request for a report back to the April 13, 2015 meeting of the Committee concerning: the estimated cost to construct the Below Grade Storage Facility outlined in report from the Toronto Transit Commission; the estimated cost for the alternate option to construct this facility at the above grade option; and, a review of Option 5 from the 2009 Subway Rail Yard Needs Strategy which would utilize the Wilson and Davisville Yards plus the Sheppard Subway mainline connection from Wilson Yard to Yonge Street, including a review any ridership or operational relief this would provide on the transit system using current and projected ridership data including the planned line extension to York Region.

ISSUE BACKGROUND

On April 6, 2009, the Minister of the Environment for the Province of Ontario issued a Notice to Proceed to the Regional Municipality of York (York Region), the Toronto Transit Commission (TTC), York Region Rapid Transit Corporation (YRRTC) and the City of Toronto to construct the Yonge Subway Extension (YSE).

The City of Toronto approved the project subject to a number of conditions including the completion of a Subway Rail Yard Needs Strategy to support the Yonge Subway Extension and service increases on the Yonge-University-Spadina subway (Line 1)

The Subway Rail Yard Needs Strategy was completed in 2009 and identified a requirement for the storage of 14 trains at the north end of the extension in Richmond Hill. Design and cost estimate for the 14 train storage facility was included in the Yonge Subway Extension Conceptual Design Study completed in 2012. The addition of the train storage facility was considered a significant change to the approved project and therefore required an amendment to the currently approved Transit Project Assessment Process (TPAP).

COMMENTS

Cost Estimates for the Storage Facility

Design and cost estimate work for the “Below Grade Storage Facility” was done during the Yonge Subway Extension Conceptual Design Study which was completed in 2012. At that time the cost estimate to construct the proposed below grade train storage facility in Richmond Hill was estimated to be \$250M in 2011 dollars. A conceptual design and cost estimate has been prepared based on relocating this below grade storage facility to above grade. The cost of the above grade option is estimated at \$258M in 2011 dollars. The cost of the above grade storage facility itself is actually less than that of the below grade facility, however, due to the depth of the Richmond Hill Station a 760 m transition track (portal) is required to reach grade which results in it being a higher cost option. The cost savings associated with less excavation and reduced shoring is offset by an additional 680 m of triple track which is required for the above grade facility. Further, due to the increased length of the transition track, the above grade facility would no longer follow the proposed alignment of a future extension to 16th Avenue and would have to be demolished if the subway were to be extended past Richmond Hill Centre Station resulting in significant throw away costs.

2009 Subway Rail Car Needs Strategy - Option 5

At the request of City Council in 2009, Option 5 of the Rail Yards Needs Strategy, analyzed the use of Wilson and Davisville Yards for train storage plus the Sheppard Subway mainline connection from Wilson Yard to Yonge Street to accommodate operational needs. The analysis concluded that Wilson and Davisville Yards could not be expanded to accommodate the additional trains required to support service on the extension of Line 1 to Richmond Hill. The study further concluded that in order to support operations an additional 14 train storage facility was required at the north end of the extension. While a mainline connection of the Sheppard Subway from Wilson Yard to Yonge Street did provide some operational flexibility and potential operating cost savings they alone did not provide sufficient justification to support the capital cost of the connection.

In revisiting Option 5, TTC staff advised that they are currently in the process of initiating a Rail Accommodation Study to revisit maintenance and storage requirements for both Line 1 and Line 2 as the current and proposed maintenance and storage facilities will not accommodate future growth. The study includes as part of the scope the requirement to investigate the Maintenance Time Window, the nightly period during service shutdown in which heavy maintenance is conducted, and any options which may be implemented to increase the maintenance window. This study is anticipated to take two years and may identify operational relief that a mainline connection of the Sheppard Subway from Wilson Yard to Yonge Street may provide.

Ridership Relief on The Transit System

Transportation Planning staff have concluded that additional work is required to specifically address the extent of potential ridership redistribution from the Yonge Subway to the University subway as a result of providing this connection. The current review of the City of Toronto's Official Plan transportation policies (Feeling Congested?) is considering 25 transit initiatives, one of which is the westerly extension of the Sheppard line. Transportation Planning Staff are analyzing these initiatives to determine ridership forecasts and transit network priorities. This work will be reported back through the Planning and Growth Management Committee in early 2016.

CONTACT

Tim Laspa
Director
Transportation Planning
Tel. No.: 416-392-8100
Fax No.: 416-392-3821
E-mail: tlaspa@toronto.ca

Paul Millett
Chief Project Manager
Toronto Transit Commission
Tel. No.: 416-397-8738
Fax No.: 416-338-0412
E-mail: paul.millett@ttc.ca

SIGNATURE

Jennifer Keesmaat, MES, MCIP, RPP
Chief Planner and Executive Director
City Planning Division