METROLINX

MEMORANDUM

To: Metrolinx Board of Directors

From: Leslie Woo, Chief Planning and Development Officer

Date: March 1, 2018

Re: **GO Expansion RER New Stations Business Cases**

Recommendations

THAT based on the recommendations in the report prepared by the Chief Planning and Development Officer, entitled "GO Expansion RER New Stations Business Cases", and any further amendments directed by the Board at its meeting on March 8, 2018,

1. **THAT** staff continue the delivery of all the twelve new stations identified at the Metrolinx Board meeting of June 28, 2016; subject to further policy, infrastructure and operating refinements;

2. **THAT** staff advance the Park Lawn location to the Preliminary Design Business Case; and

3. **THAT** staff be requested to continue to work with municipal officials to ensure that current policy and planning information continues to be incorporated through to the next stage.

Executive Summary

This report confirms that twelve (12) Preliminary Design Business Cases (PDBC) have been completed, five (5) IBCs have been updated, and two (2) additional IBCs have been initiated.

In June 2016 the Metrolinx Board approved twelve station locations on the basis of Initial Business Cases. Since then, the GO Expansion RER (GO RER) program has progressed significantly. Key policy, infrastructure and operational details have been reviewed and adjusted to improve the level of benefits, while optimising the capital costs. These 12 Preliminary Design business cases have jointly delivered benefits over 60 years totalling $6.703 billion for an equivalent investment of $2.105 billion.

Out of the remaining five station locations where IBCs were also completed in June 2016, the Park Lawn station location has benefits that exceed costs and should advance to a Preliminary Design Business Case.

GO Expansion RER Program Development

Positive progress is being made to realise the GO RER program. The Metrolinx Benefits Management process focuses on continuous program and scope optimization through the lifecycle of a program. It also guides planning and design for new stations to deliver positive net benefits as the program advances to open market procurement in late 2018. As part of this process, Metrolinx will procure the optimal market value by maintaining the commercial confidentiality of the cost assumptions for individual stations.

Metrolinx has worked closely with municipalities to ensure that all the current municipal population, employment projections and future transit network service with the catchment area of each station location information have been incorporated

In addition, three key policy, infrastructure and operational advancements have been made that have a positive impact on the station benefits. These three advancements are included in the model assumption as follows: the use of express services, in the same way that other jurisdictions do; the introduction of level boarding; and removing fare barriers. In all the cases the benefits have increased.

- An all-stop service (as in the IBC) means that the upstream riders are delayed at every new station, which is a negative economic benefit. This negative benefit is compared to the positive economic benefit from the new riders joining at the station and the time savings they will make from using GO. It is much more optimal to have an express service (rather than all-stop) that selectively stops at those stations and at those intervals when the new riders joining would be substantial enough to justify the stop. This is best practice in service planning in all jurisdictions.

- By the same logic of minimizing the time of every stop at every station, implementing level boarding (as opposed to low platforms and a delay from stepping up/down and positioning the train) reduces the negative impact of the station on the economic benefits of the upstream riders.

- The business cases now assume that all fare barriers have been removed with an integrated fare system in place. The economic benefits of fare integration is estimated to exceed the cost by a factor of 12 (ie a BCR or Benefit Cost Ratio of 12).

Station designs have advanced to provide a Class-3 cost estimate reflecting detailed site-specific analysis, such as refined property acquisition costs, utility relocation costs, and rail signal modifications and track realignments. In most cases costs have increased.

Business Case Updates

SmartTrack Stations PDBCs: For the City of Toronto's SmartTrack program the benefits of the six stations exceed the costs. The combined net benefits are $4.59B and the combined costs are $1.195B.

- East Harbour and Liberty Village benefit from their proximity to current or proposed major employment nodes.
- Finch-Kennedy, Gerrard-Carlaw, Lawrence-Kennedy and St Clair-Old Weston stations are expected to attract boardings from nearby residential areas and provide overall transportation user benefits. The positive benefits of these stations generally exceed impacts by attracting new off-peak riders.

Other GO RER Stations PDBCs: For the other six GO RER stations, the combined benefits exceed the costs. The combined net benefits are $2.12B and the combined costs are $0.91B.

- Spadina-Front station benefits from the current and planned intensification of residential and employment growth in the Downtown Central Waterfront area
- Bloor-Lansdowne provides connection to existing frequent transit services.
- Breslau, Innisfil, and Kirby stations provide an access point to the GO system and serve larger catchment areas. Further service plan refinements are still to be completed to further evaluate the benefits at Mulock.

Table 1.0 New Station Preliminary Design Business Cases[1]

New Stations Business Cases Summary Table									
		2031 Ridership		Costs and Benefits					
		AM Peak Period (boardings + alightings)	Daily (boardings + alightings)	Change in Cost from IBC	Change in Benefits from IBC	Benefits Compared to Cost	Benefits (60 yr lifecycle)	Capital Costs (including property) 2022$
Preliminary Design BC	Smart Track Stations							
	East Harbour (Don Yard/Unilever)	17,700	68,100	Increase	Increase	Benefits are Positive and Greater Than Costs	$4.590 B	$1.195 B
	Finch-Kennedy	1,100	4,200	Increase	Increase	Benefits are Positive but Less Than Costs		
	Gerrard-Carlaw	3,500	13,500	Decrease	Increase	Benefits are Positive but Less Than Costs		
	Lawrence-Kennedy	2,400	9,200	Increase	Increase	Benefits are Positive but Less Than Costs		
	King Liberty (Liberty Village)	5,100	19,600	Increase	Increase	Benefits are Positive and Greater Than Costs		
	St. Clair-Old Weston	2,300	8,900	Increase	Increase	Benefits are Positive but Less Than Costs		
	Other GO Stations							
	Bloor-Lansdowne	2,200	8,500	Increase	Increase	Benefits are Positive but Less Than Costs	$2.120 B	$0.910 B
	Spadina-Front	10,200	39,300	Increase	Increase	Benefits are Positive and Greater Than Costs		
	Breslau	1,100	3,100	Increase	Decrease	Benefits are Positive and Greater Than Costs		
	Innisfil	1,000	2,800	Increase	Decrease	Benefits are Positive and Greater Than Costs		
	Kirby	3,800	10,600	Increase	Increase	Benefits are Positive and Greater Than Costs		
	Mulock	1,500	4,200	Decrease	Decrease	Benefits are Negative due to Network Impacts		

[1] refer to Attachment A for technical details.

Updated Initial Business Cases: For the five other station locations which underwent IBCs in 2016, station concept designs were updated as needed to align with operating patterns, and updates of the station cost estimates were undertaken. Higher levels of contingency and cost allowances were also applied. Through this work the Park Lawn station location results in benefits that are positive and greater than costs.

Table 2.0 Updated Initial Business Cases[2]

		2031 Ridership		Costs and Benefits		
		Ridership (AM Peak Period)	Ridership (Daily)	Change in Cost from IBC	Change in Benefits from IBC	Benefits Compared to Cost
Updated Initial BC	Stations in City of Toronto					
	Ellesmere	1,200	4,600	Increase	Increase	Benefits are Negative due to Network Impacts
	Park Lawn	2,600	10,000	Decrease	Increase	Benefits are Positive and Greater Than Costs
	St. Clair West (Barrie Line)	1,600	6,200	Increase	Increase	Benefits are Negative due to Network Impacts
	Stations Outside City of Toronto					
	Highway 7-Concord	1,900	5,500	Increase	Increase	Benefits are Negative due to Network Impacts
	Whites Road	1,200	3,500	Increase	Increase	Benefits are Positive but Less Than Costs

In June 2016, staff were directed to undertake IBCs for two new locations; Walkers Line and Woodbine-Highway 27 stations. These are currently under development, and staff will report back in June 2018 on this work.

Next Steps

All twelve stations will now progress to the next stage, for more detailed design in preparation for procurement and integration with the Full RER Business Case to confirm scope prior to procurement in late 2018. This work will include further policy, infrastructure and operating refinements for the following locations: Bloor-Lansdowne, Finch East, Gerrard- Carlaw, Lawrence East, Mulock and St Clair-Weston

Attachment A GO Expansion RER New Stations Business Cases

[2] ibid