



INFORMATION REPORT

TO:	Chair and Members Public Works Committee
COMMITTEE DATE:	October 3, 2016
SUBJECT/REPORT NO:	Expansion of Redhill Valley Parkway (RHVP) and Lincoln Alexander Parkway (LINC) – (PW16084) (City Wide) (Outstanding Business List Item)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Alan Kirkpatrick (905) 546-2424, Extension 4173
SUBMITTED BY:	John Mater, C.E.T. Director of Corporate Assets & Strategic Planning Public Works Department
SIGNATURE:	

Council Direction:

November 11th, 2015

Expansion of Red Hill Valley Parkway and the Lincoln M. Alexander Parkway

- (a) That staff be directed to report to the Public Works Committee on the total costs and feasibility to expand the Red Hill Valley Parkway and the Lincoln M. Alexander Parkway from the current four to six lanes;
- (b) That the report consider the highway expansion as part of the City's overall Master Transportation Plan; and;
- (c) That subject to subsection (a) and with the future support of Council, the Province of Ontario and the Federal Government is approached to cost share in this capital infrastructure project.

Information:

During this review staff from Engineering Services, Traffic Engineering/Operations, Road Operations and Policy and Programs and Finance staff were consulted.

Costs and Feasibility

Feasibility

The Red Hill Valley Parkway (RHVP) and Lincoln M. Alexander Parkway (LINC) could be widened to add an additional lane in each direction throughout the majority of the two highway facilities however there are many factors to consider. Although this widening is feasible, and was considered in the original design, the key problem is the restrictions at

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the connection points of the Highway 403 and the Queen Elizabeth Way. These facilities (Hwy 403 and QEW) have congestion levels exceeding capacity for the foreseeable future in the extended peak traffic period for the majority of each weekday which will not solve the reported traffic problems on the RHVP and the LINC. Providing extra lanes on the parkway may relieve some of the congestion in the middle sections of the facility, but the excessive congestion at the highway connection points will not be solved with a widening of this roadway infrastructure.

The traffic problems being experienced and anticipated on Highway 403 and the QEW are the key congestion points in this matter. There may be more traffic lanes on the LINC/RHVP for more vehicles, but the vehicles hoping to access the adjacent regional highway network will experience greater congestion and bottlenecks at these connection points because the highways are congested or the access ramps are limited. These conditions will result in continued and worsening back-ups on the parkway facilities, including slower speeds, longer travel time, delays to access the parkway and longer peak traffic periods. This may also lead to motorists exiting the parkways and utilizing City streets to get around congestion.

In addition, widening of the parkways will increase the potential for speeding/accidents in the non-peak periods. Furthermore, with speeding comes the potential for additional noise and public complaints.

Consideration has been given in the past for a Freeway Traffic Management System (FTMS) to be included on the Parkways. This is similar to the cameras and large changeable message boards the MTO utilizes on area highways. The addition of this system provides motorists with travel information to make trip decisions. If the Parkways are considered for widening, it would be recommended that the FTMS be included at an estimated cost of \$10 million. Integrating this system with the MTO FTMS would be also explored.

It should also be pointed out that at the Niagara escarpment crossing point on the RHVP; the maximum expansion has been constructed; three (3) upbound lanes plus a truck climbing lane and two (2) down bound lanes. No additional lanes can be provided at this point.

In order to widen the LINC portion of this road network an Environmental Assessment (EA) would be required. The timing of an EA for this type of infrastructure could take approximately two (2) years for the notice of study completion to be finalized. Following that there could be potential Part II Orders (appeals) which would extend the completion of the project. The cost of doing an EA of this magnitude could be in the order of approximately \$500,000.

During the EA process different alternatives would need to be reviewed such as high occupancy vehicle (HOV) lanes and road tolling.

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The original approval of the EA for the Redhill Valley Parkway allows for the possibility of expansion from the existing four (4) lane facility to six (6) lanes. Aside from the approval, any consideration for widening of the Parkway would require the involvement of the Joint Stewardship Board of the Redhill Valley and a discussion of proposed changes.

In addition to the capital cost to expand the Parkways, operational costs would also increase, i.e. winter control activities, road maintenance. The additional operational costs are estimated to be \$596,000 annually.

Prior to undertaking the process to add lanes to the RHVP and LINC, there are a number of steps that should be considered to mitigate the issues as much as possible before undertaking the time and expense to expand the parkway, including:

Improvement	Implementation
Freeway Traffic Management System (FTMS)	Similar to the MTO Compass System for road performance, conditions and incident detection. Provides motorists with information on conditions ahead.
Ramp metering	Controlling the vehicles entering the facility at controlled access points
Speed enforcement	Police presence
Improved Transit	Reducing the number of vehicles on the road
Smart Commute programs and Transportation Demand Management (TDM) Initiatives	Car Pooling, Ride Sharing, Ride matching, Work-shifting strategies, Telecommuting, After-hours delivery programs – increasing ways to reduce the number of vehicles on the road during peak periods

Cost Estimate

The following is a cost estimate range of work in order for infrastructure to be completed.

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Action	Redhill Valley Parkway (south side of Redhill Creek bridge at the MTO limit to the north side of the escarpment viaduct bridge)	Lincoln Alexander Parkway (median from Highway 403 limit to the end of the urban section east of Upper Ottawa)
Includes Excavation, Removals, Construction, Traffic Control & protection, Contingency, Engineering Design & Administration	\$16,000,000 - \$23,000,000	\$25,000,000 - \$38,000,000
Estimated annual operational costs for road maintenance and winter control	\$330,000 Note: Does not include street lighting	\$267,000 Note: Does not include street lighting
Environmental Assessment (EA)	EA completed	\$500,000

In addition to the capital and operating costs associated with expanding the LINC and RHVP, to include the recommended Freeway Traffic Management System (FTMS) on these highway facilities, and integrating it into the Traffic Operations Centre (TOC), the estimated cost would be \$10,000,000

As per the May 20, 2016 Information Update that was prepared for Council, traffic safety improvements for the RHVP and LINC have been initiated and will continue until 2017.

Therefore, expanding the RHVP and LINC is possible at an estimated capital cost range of \$41,000,000 to \$61,000,000 (excluding street lighting) plus the additional estimated annual operational cost of \$597,000. Additional estimated costs of \$10,000,000 for an FTMS and \$500,000 for an EA on the LINC would be added. This capital cost is currently not in the City's Capital Budget and Forecast. Identification of these costs will be made to senior levels of government if City Council wishes to pursue this matter. The additional lanes, one in each direction, may provide some relief in the centre section of the parkway facilities, however, congested end points, connecting to interregional highways, will potentially result in increased congestion and back-ups on the parkway facilities, which is not the intended outcome, particularly during the weekday peak traffic periods. Other improvements/changes might be considered before expanding the parkway facilities, such as the provision of an FTMS, Ramp metering, increased speed enforcement, increase public transit and other TDM measures.

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