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HIGHWAY 407 INTERCHANGE IMPROVEMENTS STUDY FINAL REPORT

The Planning and Economic Development Committee recommends the following:

- 1. The communication from Sandra Yeung Racco, Councillor, City of Vaughan, October 1, 2008, be received;**
- 2. Recommendations 1, 3, 4 and 5 contained in the following report dated September 11, 2008, from the Commissioner of Planning and Development Services and Commissioner of Transportation Services, be adopted; and**
- 3. Recommendation 2 be referred to staff for further consultation with the City of Vaughan.**

1. RECOMMENDATIONS

It is recommended that:

1. Regional Council endorse the June 2008 Final Report for the Traffic and Financial Model Study for Highway 407 Interchange Improvements.
2. Regional Council endorse the recommendation to the City of Vaughan to protect lands for a possible future partial interchange at Centre Street.
3. Regional Council authorise staff to work with the City of Vaughan, 407ETR, and the Ontario Ministry of Transportation to pursue the implementation of a Martin Grove Road interchange.
4. Regional staff report back to Council on the status of any discussions with 407ETR and the progress of the interchange implementation projects and future needs.
5. The Regional Clerk forward a copy of this report to the Clerk of the City of Vaughan, and Towns of Markham and Richmond Hill, 407ETR, and Ontario Ministry of Transportation.

2. PURPOSE

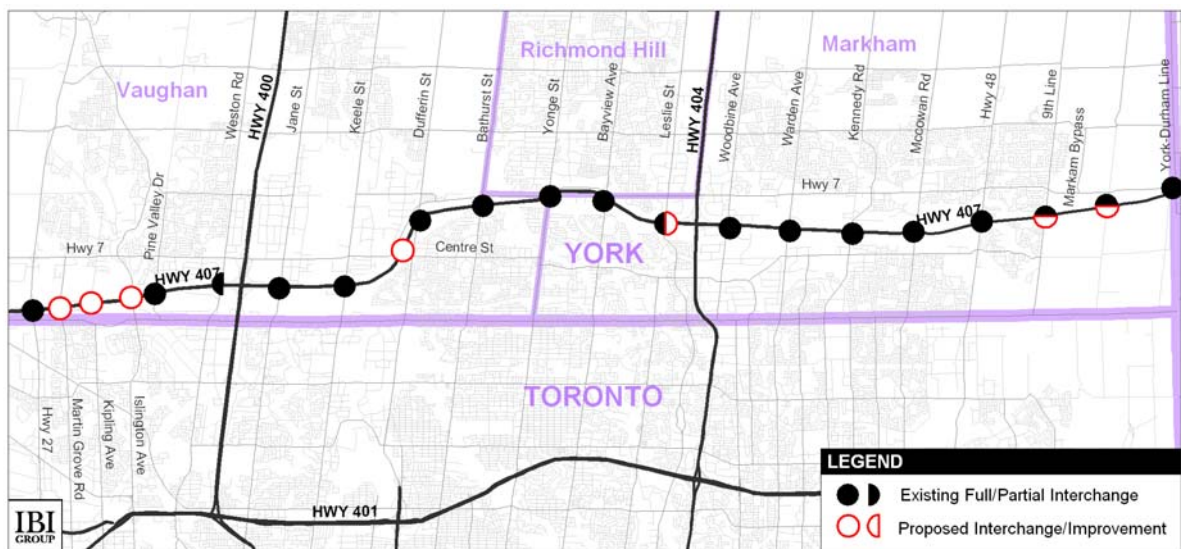
This report seeks Council's endorsement of the final report for the Highway 407 Interchange Improvements Study and authorization for staff to recommend and develop positions with the City of Vaughan to consider future interchanges at Martin Grove Road and Centre Street.

3. BACKGROUND

A comprehensive study of additional Highway 407 interchange improvements covering the entire southern York Region to provide a business case

In response to a request from Town of Markham Council to conduct a study for additional ramps on Highway 407 at 9th Line and Donald Cousens Parkway, York Region staff recommended expanding the traffic and financial study to comprehensively cover the entire southern York Region. The study examined Highway 407 interchange improvement potential at the following locations:

- Donald Cousens Parkway
- 9th Line.
- Leslie Street.
- Centre Street.
- Islington Avenue.
- Kipling Avenue.
- Martin Grove Road.



York Region retained the consultancy firm of IBI Group and the study commenced in March 2007. A Technical Advisory Committee was established for the project and included staff from the Towns of Markham and Richmond Hill, City of Vaughan, Ontario Ministry of Transportation (MTO), and 407ETR.

The purpose of the study was to assess the feasibility of potential interchange improvements and provide 407ETR with a business case for any recommended

improvements. 407ETR will continue to monitor the system with York Region and review the studies and business cases to determine when improvements are needed.

4. ANALYSIS AND OPTIONS

Study showed opportunities for interchange improvements at several locations

The final report for the *Traffic and Financial Model Study for Highway 407 Interchange Improvements* is presented in Committee Attachment 1. The report documents the approach and technical analyses carried out to assess the construction feasibility, traffic and revenue forecasts by location. The financial analysis includes forecasts to year 2031 with a five-year net present value assessment for a payback period.

Table 1 summarizes the findings of the study and the feasibility of various ramp improvements at each location.

Table 1
Study Conclusions for Highway 407 Interchange Improvements

Interchange Location(s)	Improvement Options and Combinations	Construction Feasibility	Implementation for Five-Year Payback
Don Cousens Pkwy (DCP)	• south to west ramp only • south to east ramp only	Yes Yes	Now About 2021
9 th Line	• south to west and south to east ramps	Yes	Now
9 th Line and Don Cousens Pkwy	• 9 th Line from south and DCP south to west ramps	Yes	Now
Leslie Street	• 2 design concepts considered	No	N/A
Centre Street	• 2 partial interchanges with ramps in the NW and SW or SE quadrants	Yes	About 2021
Islington Avenue	• ramps to/from the west	No	N/A
Kipling Avenue	• ramps to/from east and one from the west only	Yes ¹	About 2031
Martin Grove Road	• ramps to/from the east	Yes ¹	Now

Notes: N/A = Not Applicable

1. Kipling Avenue and Martin Grove Road ramps cannot be constructed together

The results show that several ramp improvements can be implemented immediately or in the future subject to approvals under the *Environmental Assessment Act*, while some are not feasible as follows:

Immediate Implementation

- 9th Line south to west and east ramps
- Donald Cousens Parkway south to west ramp
- Martin Grove Road ramps to/from east

Future Implementation

- Donald Cousens Parkway south to east ramp
- Centre Street partial interchange
- Kipling Avenue partial interchange (only if Martin Grove Road ramps are not constructed)

Not Feasible

- Leslie Street ramps to/from east (numerous physical, operational, safety, and property constraints)
- Islington Avenue ramps to/from west (major environmental and cost constraints)

Potential 9th Line and Donald Cousens Parkway ramp improvement combinations are currently feasible

The study showed that various ramp combinations at the 9th Line and Donald Cousens Parkway can be feasible and provide a five year payback to 407ETR if implemented now.

Ramp Improvements at 9th Line and Donald Cousens Parkway were negotiated with 407ETR

In February 21, 2008, Regional Council authorized Senior Management to negotiate with 407ETR on interchange ramp improvements recommended for the 9th Line and Donald Cousens Parkway locations. These negotiations were urgently needed because of the 2009 construction schedule for the Highway 407 widening project from Markham Road to York-Durham Line.

Chairman Bill Fisch carried out the negotiations for the 9th Line and Donald Cousens Parkway interchange ramps with 407ETR in May 2008. As a result, 407ETR will be implementing the south to west loop ramp at 9th Line immediately and work with the Region to monitor the other ramps.

Leslie Street interchange additional ramps to and from the east are not feasible

The Leslie Street interchange currently has ramps to and from the west. Two design concepts were considered in the study to demonstrate the constraints to and from the east. The study concluded that there are no feasible opportunities to provide additional ramps

to and from the east at the Leslie Street interchange due to numerous physical, operational, safety, and property constraints.

Centre Street partial interchange options are possible

Three options for a Centre Street interchange were considered, two of them being partial interchange configurations and the third being a full interchange configuration that was deferred from construction obligation by 407ETR. The full interchange option did not show a financial payback within the 2031 timeframe considered in this study, while the two partial interchange options had a five-year payback if the project was implemented around 2021. The two partial interchange options at Centre Street consists of:

1. A loop ramp in the northeast quadrant and a directional ramp in the southwest quadrant.
2. A loop ramp in the northeast quadrant and a loop ramp in the southeast quadrant.

Recommend protection of property for possible future partial interchange at Centre Street

In terms of recognizing the potential for a future interchange at Centre Street, Amendment No. 1 of the Highway 407 Concession and Ground Lease Agreement between the Province and 407ETR deferred the construction of a Centre Street interchange to year 2020. It also indicates that an independent study of the technical and financial viability of a Centre Street interchange is to be commissioned by 407ETR prior to this timeframe.

However, the City of Vaughan Council at its Committee of the Whole meeting of August 25, 2003, resolved to request the Province and 407ETR to remove any plans for construction of an interchange at Highway 407 and Centre/Dufferin Streets. Reasons for this position were mainly based on opposition by area residents and potential adverse impacts to the community. This position was based on a full-interchange concept for Centre Street which would be a very expensive undertaking and have significant impacts. Whereas, this study has considered two partial interchange options which are much more feasible with less impact.

In light of these matters, Regional staff recommend that the City of Vaughan protect lands in the vicinity of Highway 407 and Centre Street until such time as 407ETR's obligation for a technical and financial viability study is fulfilled for the Centre Street interchange. Based on findings from this current study, staff recommend that lands in the northeast, southwest and southeast quadrants be protected for a possible future partial interchange at Highway 407 and Centre Street.

Only a Martin Grove Road interchange or Kipling Avenue interchange is possible, but not both

The interchange improvement options in the western part of Vaughan included an assessment of potential configurations at Islington Avenue, Kipling Avenue, and Martin Grove Road, or a combination of these locations. Options at Islington Avenue were eliminated given major environmental, regulatory, and cost issues.

Both the Martin Grove Road and Kipling Avenue locations had interchange options which were carried forward in the financial analysis. The results showed that a partial interchange to and from the east at Martin Grove Road would provide a five-year payback if implemented immediately while the configuration at Kipling Avenue due to some significant environmental and property impacts would not be financially viable until 2031. It was noted that due to the proximity and geometric constraints of the two locations, only a Martin Grove interchange or Kipling Avenue interchange can be built, but not both.

Staff to work with City of Vaughan to pursue the implementation of a Martin Grove Road interchange

The business case showed that a Martin Grove Road partial interchange with ramps to and from the east would provide a financial return that could justify its immediate construction. Implementation of an interchange at the Martin Grove Road location would mean that a Kipling Avenue interchange configuration would not be possible. However, a Kipling Avenue interchange is currently identified in the Highway 407 Concession and Ground Lease Agreement as a potential interchange location deferred until 2020. As such, an amendment to the Agreement may be required in order for the Martin Grove Road interchange to be constructed.

Martin Grove Road and Kipling Avenue are currently under the jurisdiction of the City of Vaughan. It is understood that on June 15, 2005, Vaughan Council at its Committee of the Whole endorsed a recommendation from the City's Commissioner of Engineering and Public Works to request the Province to implement an interchange at Highway 407 and Martin Grove Road. Given the City's position and the significant positive impacts on traffic patterns and accessibility in the adjacent communities and nearby arterial roads, it is recommended that Regional staff work with the City of Vaughan, 407ETR, and MTO to pursue the implementation of a Martin Grove Road interchange.

Staff will report back to Council on the status of the projects and needs

Regional staff will report back to Council on the status of any discussions with 407ETR and MTO on the progress of interchange implementation projects and future needs.

5. FINANCIAL IMPLICATIONS

This report does not have any direct financial implications.

6. LOCAL MUNICIPAL IMPACT

The study has addressed the Town of Markham's request to examine Highway 407 ramp improvement opportunities at 9th Line and Donald Cousens Parkway. As well, the study scope has been expanded to include other interchange opportunities in southern York Region. The comprehensive study assessed Highway 407 accessibility and ramp opportunities to help divert traffic from Regional and local municipal roads and reduce circuitous, undesirable and unsafe turning movements to/from the highway.

The study Technical Advisory Committee included staff representatives from the Towns of Markham and Richmond Hill, and the City of Vaughan.

7. CONCLUSION

A study to assess the feasibility of potential Highway 407 interchange improvements and provide 407ETR with a business case for any recommended improvements was completed. This report seeks Council's endorsement of the Final Report for the Traffic and Financial Model Study for Highway 407 Interchange Improvements.

The study recommends the following interchange improvements and timeframe for implementation subject to approval under the *Environmental Assessment Act*:

Immediate Implementation

- 9th Line south to west and east ramps
- Donald Cousens Parkway south to west ramp
- Martin Grove Road ramps to/from east

Future Implementation

- Donald Cousens Parkway south to east ramp
- Centre Street partial interchange
- Kipling Avenue partial interchange (only if Martin Grove Road ramps are not constructed)

The study shows that there is potential for a future partial interchange configuration at the Centre Street location, however, further study is required as part of 407ETR's obligation and deferral of the Centre Street interchange construction to 2020. This report seeks Council's endorsement of a recommendation to the City of Vaughan to protect lands for a possible partial interchange at Highway 407 and Centre Street.

Regional staff also seek Council's authorization to work with the City of Vaughan to pursue a partial interchange to/from the east on Highway 407 at Martin Grove Road. As Martin Grove Road and Kipling Avenue are under the jurisdiction of the City of Vaughan, staff believe that supporting Vaughan's position on the Martin Grove Road interchange would have traffic relief benefits on the adjacent communities and surrounding arterial road network.

Staff will also continue to monitor and advocate for the remaining Highway 407 ramps at 9th Line and Donald Cousens Parkway.

For more information on this report, please contact Richard Hui, Program Manager in Transportation Planning, at 905-830-4444, Ext. 1578, or Loy Cheah, Manager, Transportation Planning at Ext. 5024.

The Senior Management Group has reviewed this report.

(The attachment referred to in this clause is attached to this report.)