



Corporate Report

Clerk's Files

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MG.23.REP

DATE: October 18, 2011

TO: Chair and Members of General Committee
Meeting Date: November 2, 2011

General Committee

NOV 02 2011

FROM: Martin Powell, P. Eng.
Commissioner of Transportation and Works

SUBJECT: **Ministry of Transportation Ontario – Highway 401 Improvements from East of the Mavis Road Interchange to East of the Credit River (Wards 5 & 11)**

- RECOMMENDATION:**
1. That a replacement of the Second Line West bridge across Highway 401 not be pursued by the City of Mississauga.
 2. That the City of Mississauga support the provision of a cyclist/pedestrian underpass trail crossing Highway 401 as part of the construction of the Fletchers Creek bridge component of the widening of Highway 401.
 3. That the funding requirement estimated at approximately \$2.5M required to accommodate the cyclist/pedestrian underpass trail be considered through the Capital Budget process.
 4. That the City of Mississauga arrange with the MTO to undertake a feasibility design review of the proposed future Belgrave Road connection at the Highway 401/Mavis Road interchange.

BACKGROUND: The Ministry of Transportation Ontario (MTO) conducted a Class Environmental Assessment for the expansion of Highway 401 from the Highway 410/403 interchange westerly to east of the Credit River.

A Transportation Environmental Study Report (TESR) was filed for public view and input in August 2005 and the final clearance was obtained in 2007.

The TESR recommends that many improvements be phased in over a number of years, including:

- widening of Highway 401 from a basic six-lane configuration to a twelve-lane express/collector configuration
- reconstruction of the Hurontario Street interchange, including replacement of the structure over Highway 401 (currently under construction)
- reconstruction of the Mavis Road interchange, including expansion of the existing structure over Highway 401
- permanent removal of the Second Line West structure over Highway 401
- completion of the Highway 410/403 interchange by adding new ramps from Highway 401 eastbound to Highway 403 southbound and from Highway 403 northbound to Highway 401 westbound
- construction of a new structure to carry the collector lanes over Fletchers Creek

Due to the size and complexity of this project, the construction work is being undertaken in two phases. Phase 1, which is currently under construction, is the expansion of Highway 401 from the Highway 410/403 interchange to east of the Mavis Road interchange. Phase 2 includes the widening of Highway 401 from east of the Mavis Road interchange to east of the Credit River. The MTO has recently commenced the detailed design for Phase 2, with an expected completion date in 2013.

COMMENTS:

Staff from the Transportation and Works Department continues to meet with representatives from the MTO and their consultant regarding the detailed design of Phase 2 of the project. Several aspects of the project are under discussion and the MTO requires the City's direction concerning the key issues identified below:

Second Line West

In 1998, the City of Mississauga entered into an agreement with the

MTO, pursuant to which the City undertook the design and construction of the proposed Mavis Road and Highway 401 interchange. As part of this agreement, the Second Line West bridge over Highway 401 would be eliminated to accommodate the highway widening and a replacement for the vehicle bridge would only be considered if feasible and fully funded by the City. The cost to replace the structure is estimated in the range of \$15M.

The road network north and south of Highway 401 was designed in anticipation of the permanent removal of the structure and included the construction of the Derry Road By-pass and the disconnection of Second Line West on either side of the by-pass. This created a circuitous Old Derry Road and a local road network that would significantly reduce traffic infiltration through Meadowvale Village and the surrounding neighbourhood. The daily traffic volume on Second Line West north of the bridge averages 4300 vehicles.

A transportation study focusing on the impact of removing the bridge was recently completed by Transportation and Works staff. The study was requested by Councillor Carlson due to concerns expressed by several residents. The study had a particular focus on traffic on Sombrero Way, which is the primary collector road north of the highway which connects Second Line West and Mavis Road. There is some history pertaining to resident concerns with peak hour traffic volumes on Sombrero Way.

Briefly, the results of the study, while confirming that there is insufficient traffic on Second Line West to support replacement of the bridge, indicated that the impact on Sombrero Way will be marginal. The traffic concerns on Sombrero Way exist today with the bridge in operation and will not be improved by the construction of a replacement bridge.

It is therefore recommended that a replacement bridge not be pursued by the City.

Cyclist/Pedestrian Connection

The City's Cycling Master Plan has identified Second Line West as an important cycling (and pedestrian) connection across Highway 401. Ideally, the route would accommodate a variety of cyclists, including

commuters, which would suggest that an overpass would be preferred. In theory, this could be constructed once the vehicle bridge has been removed; however, there are a number of factors which indicate that this is not a feasible option.

The MTO's TESR study did not include a cyclist/pedestrian connection across the highway and therefore a new overpass connection would require environmental approval either through an addendum to the existing MTO TESR study or a new Municipal Class Environmental Assessment Study. The TESR recommends closure of the Second Line West connection at Highway 401 and the utilization of the lands on the north side of Highway 401 for the introduction of a storm water management facility and naturalization of the Meadowvale Station Woods area. This proposed storm water management facility and naturalization could be impacted should an overpass cycling connection be included. In discussions with staff, the MTO has indicated a reluctance to initiate an addendum to their approved TESR as it may delay their current project schedule. The construction cost for a cyclist/pedestrian overpass is estimated in the \$4-\$5 million range, which would have to be funded by the City.

As part of the Highway 401 widening, the MTO is proposing to replace the existing Fletchers Creek culvert, located about 135 metres (443 feet) west of Second Line West, with a new bridge structure. MTO staff have suggested an option that the proposed Fletchers Creek structure be designed wide enough to allow for a cyclist/pedestrian crossing under rather than over Highway 401. This structure modification will not likely require any major environmental approval other than approval from the Ministry of Natural Resources (MNR) and Credit Valley Conservation. The cost of the modification is estimated at \$2.5M, which the MTO has indicated would be the responsibility of the City. The cost includes the construction of additional trail network north and south of Highway 401 which would provide connections to the structure and Second Line West.

The Transportation and Works Department would prefer the construction of an overpass. An overpass would be better suited to accommodate pedestrians and all levels of cyclists, would be a more direct crossing and would be safer. However, the challenges associated with this option such as higher construction costs, environmental approvals, potential conflicts with the proposed

stormwater management pond and delay in MTO's Highway 401 widening project are recognized.

Although an underpass would not be the preferred connection, it would satisfy the desire to connect communities north and south of the highway at much lower cost to the City. The City would still be required to negotiate agreements to use the existing trails on either side of the highway currently situated on MTO and Credit Valley Conservation properties. The MTO would construct the trail improvements necessary to connect directly to Second Line West.

Belgrave Road

The connection between the eastbound Highway 401 off-ramp at Mavis Road and Belgrave Road is identified in the City's Official Plan. It is not identified in the MTO's approved TESR and therefore requires environmental approval, either by undertaking an addendum to the existing MTO's TESR or by undertaking a new Municipal Class Environmental Assessment Study. It should be noted that the MTO's preference would be for the City to undertake a separate Municipal Class Environmental Assessment Study.

This future ramp connection would be a significant addition to the City's arterial road network, particularly with the potential removal of two lanes of traffic on Hurontario Street due to the implementation of Light Rail Transit. Construction costs are estimated in the range of \$5-\$10M. In view of the estimated cost and the environmental approval challenges, the Transportation and Works Department recommends that this connection be implemented in the future, when required, rather than as part of the current MTO highway widening project. However, it is important that the MTO's design of the Mavis Road and Highway 401 interchange not preclude this future connection. Transportation and Works staff has therefore requested that the geometric feasibility of this road connection be undertaken concurrently with the detailed design of this interchange in order to determine all property, cost and environmental implications. In terms of continuity and simplicity, the Transportation and Works Department will fund and coordinate this review through the MTO in order that it can be completed by the existing MTO consultant undertaking the detailed design of the Highway 401 widening project. The cost is estimated at \$45,000.

FINANCIAL IMPACT: Although the MTO is funding the Highway 401 widening project including the removal of the existing Second Line bridge structure, any additional works, including cycling/pedestrian connections, will be the responsibility of the City. If an overpass is constructed, the estimated cost is approximately \$4 –\$5M, whereas an underpass connection has been estimated at about \$2.5M. If an Environmental Assessment is required for the cycling bridge option, an additional cost of \$250K is estimated. Funding for the underpass construction option would need to be included in a future capital budget.

The City will be responsible for costs associated with consulting services necessary for undertaking a geometrical feasibility review of the future connection between the eastbound Highway 401 off-ramp at Mavis Road and Belgrave Road, at an estimated cost of \$45,000. Funding is available in the 2011 Capital Budget for this work.

CONCLUSION: In summary, there are a number of factors which combine to make the construction of a new vehicular bridge across a widened Highway 401 not feasible: low traffic volumes observed across the Second Line bridge across Highway 401, the need for a storm water management facility and the high cost. The MTO is working on an ambitious schedule of detailed design with an objective of commencing construction in 2013. They have indicated a reluctance to accommodate any additions or revisions to the approved TESR.

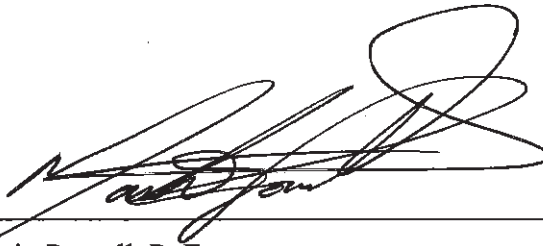
A cycling connection across Highway 401 was identified in the Mississauga Cycling Master Plan. An opportunity to achieve this connection may be available as part of the widening of Highway 401. Although an overpass is preferred, the cost is estimated at \$4- \$5M which would be the responsibility of the City. An overpass would also require an Environmental Assessment to be undertaken by the City and would be difficult to coordinate with the ongoing MTO design exercise. An underpass connection is a viable option, although somewhat less preferred. However, since the MTO will be replacing the culvert accommodating Fletcher's Creek, the underpass connection could be accommodated and at a lesser cost, estimated at \$2.5M.

It is essential that a geometric feasibility review of the future road connection between the eastbound Highway 401 off-ramp at Mavis Road and Belgrave Road be undertaken as part of the MTO design exercise. The Transportation and Works Department is in the process of coordinating this review through the MTO and their existing design consultant at an estimated cost of \$45K.

ATTACHMENTS:

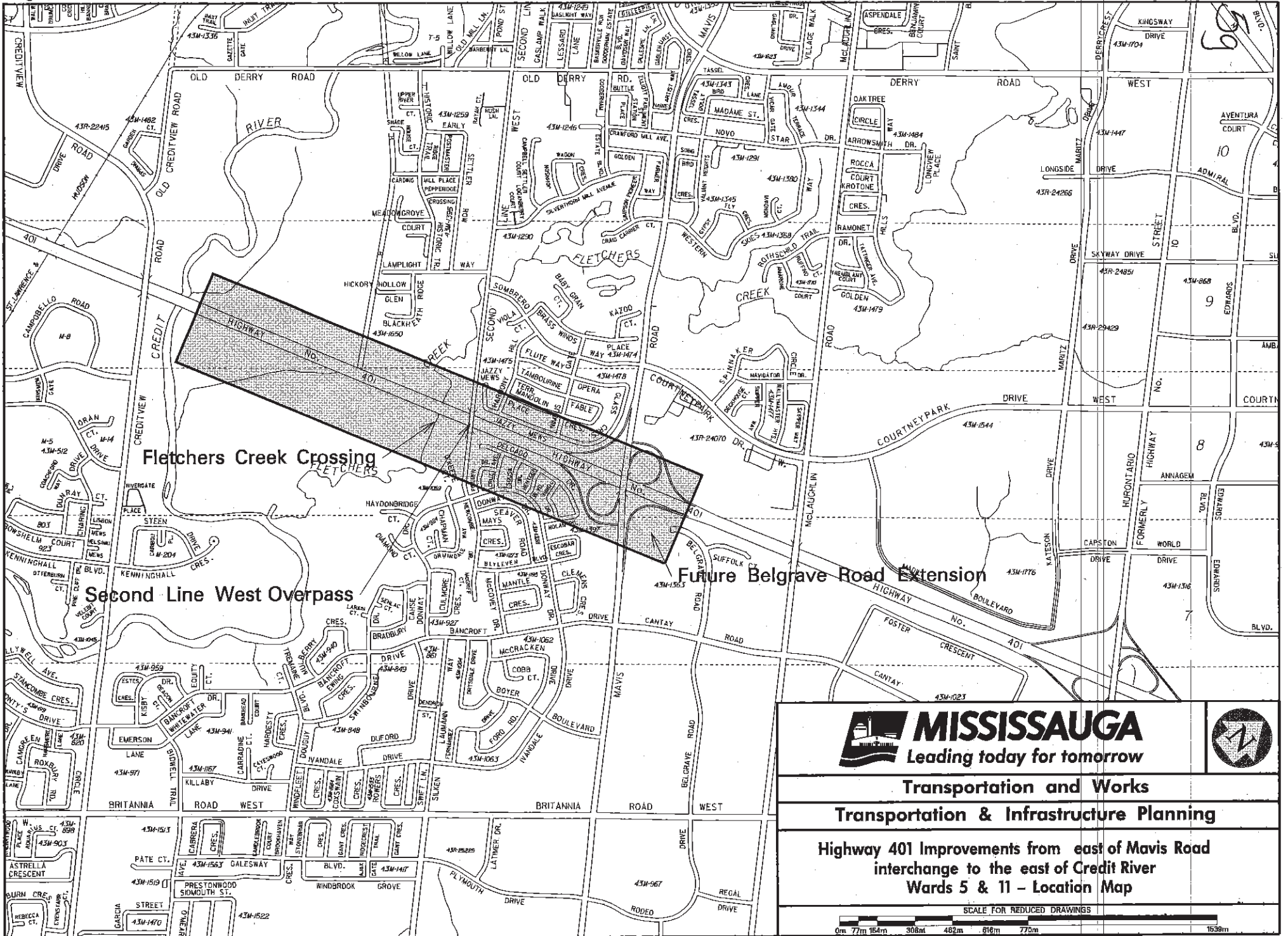
Appendix 1: Location Map

Appendix 2: Excerpts from the Mavis Road and Highway 401 Agreement



Martin Powell, P. Eng.
Commissioner of Transportation and Works

*Prepared By: Abdul Shaikh, P.Eng., PMP
Transportation Project Manager*



Transportation and Works

Transportation & Infrastructure Planning

**Highway 401 Improvements from east of Mavis Road
interchange to the east of Credit River
Wards 5 & 11 - Location Map**



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THE CORPORATION OF THE CITY OF MISSISSAUGA

BY-LAW NUMBER ...481-99...

A by-law to authorize the execution of an agreement with Her Majesty the Queen, in right of the Province of Ontario, as represented by the Minister of Transportation for the design, construction and cost sharing of the proposed Mavis Road and Highway 401 interchange and related structures.

WHEREAS the Council of the Corporation of the City of Mississauga desires to enter into an agreement with the Minister of Transportation setting forth the terms, provisions and conditions pursuant to which The Corporation of the City of Mississauga shall undertake the design and construction of the proposed Mavis Road and Highway 401 interchange and the terms of cost sharing with the Minister of Transportation in relation to such works all in accordance with Section 39 of the Public Transportation and Highway Improvement Act R.S.O. Chapter P.50;

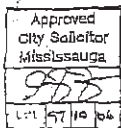
NOW THEREFORE the Council of The Corporation of the City of Mississauga hereby ENACTS as follows:

1. That the Commissioner of Works and Transportation and the City Clerk be authorized to execute and affix the Corporate Seal to the Agreement between The Corporation of the City of Mississauga and Her Majesty the Queen, in right of the Province of Ontario, as represented by the Minister of Transportation, setting forth the terms, provisions and conditions pursuant to which the Corporation of The City of Mississauga shall undertake the design and construction of the proposed Mavis Road and Highway 401 interchange and related structures and the terms of cost sharing with Her Majesty the Queen, in right of the Province of Ontario, as represented by the Minister of Transportation in relation to such works, subject to prior final approval for execution by the Office of the City Solicitor.

ENACTED AND PASSED this 15th day of October, 1997.

[Handwritten signature of Mayor]

MAYOR



[Handwritten signature of Deputy Clerk]

DEPUTY CLERK

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THIS AGREEMENT made in triplicate this 8th day of Dec., one thousand nine hundred and ninety seven.

BETWEEN:

HER MAJESTY THE QUEEN in right of the Province of Ontario, represented by the Minister of Transportation for the Province of Ontario,

hereinafter referred to as "the Ministry",
OF THE FIRST PART;

-AND-

THE CORPORATION OF THE CITY OF MISSISSAUGA,
hereinafter referred to as "the City",
OF THE SECOND PART:

WHEREAS the City wishes to complete the Mavis Road corridor from Britannia Road in Mississauga northerly to the Mississauga/Brampton boundary;

AND WHEREAS the City has agreed to act as the proponent in carrying out all works required to design and construct a new interchange at Highway 401 and Mavis Road ("interchange");

AND WHEREAS the work of or incidental thereto is described in Clause 4 and illustrated in Schedule "1" attached hereto and is hereinafter referred to as "the project";

AND WHEREAS the Ministry and the City anticipate that the part of the project on which the interchange is situated may be subject to further construction by the Ministry at an unspecified future date due to the addition of extra lanes on Highway 401 ("core-collector system");

AND WHEREAS in anticipation of the possible construction by the

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14. Should the City choose to retain the Second Line West crossing at the time of the core-collector expansion, the City guarantees that the Ministry shall not be financially responsible for any costs which may be attributable to the City's desire to retain Second Line West. All such costs shall be borne entirely by the City.

15. All schedules referred to in this Agreement and attached hereto form part of this Agreement, but should there be conflict between the clauses contained in the schedules attached hereto, and the clauses contained in the body of this Agreement, the clauses contained in the body of this Agreement shall prevail.

16. Any changes, alterations or amendments hereto, other than as herein specifically authorized shall be made in writing signed by the City and by the Director or his nominee;

17. All notices, demands or requests sent to a party to this Agreement may be served personally or mailed by registered mail, postage prepaid (at any time other than during a general discontinuance of postal services due to a strike, lockout or otherwise or sent by facsimile transmission) and addressed to the party to whom it is given as follows:

If to the Ministry:

The Regional Director of
Planning, Engineering and Construction
Central Region
Ministry of Transportation
2nd Floor, Atrium Tower
1201 Wilson Avenue
Downsview, Ontario
M3M 1J8

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THIS AGREEMENT shall enure to the benefit of and be binding upon the Parties hereto and their respective successors and assigns.

IN WITNESS WHEREOF the Minister of Transportation on behalf of the Party of the First Part has hereunto set his hand and the Party of the Second Part has hereunto affixed its Corporate Seal under the hands of its proper officers duly authorized in that behalf.

SIGNED AND SEALED this 27th day of January A.D. 1998

HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF ONTARIO, REPRESENTED BY THE MINISTER OF TRANSPORTATION FOR THE PROVINCE OF ONTARIO

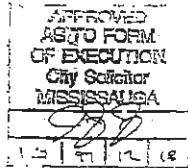
[Handwritten Signature]

MINISTER OF TRANSPORTATION (ONTARIO)

THE CORPORATION OF THE CITY OF MISSISSAUGA

[Handwritten Signature]

COMMISSIONER OF TRANSPORTATION AND WORKS THE CITY OF MISSISSAUGA



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CITY CLERK