Appendix C.5

Selected Correspondence
Pre-TPAP

- 407 ETR Concession Company Limited
- Enbridge Gas Distribution Inc.
- Hydro One Networks Inc.
- Infrastructure Ontario
- Metrolinx
- Ministry of Aboriginal Affairs
- Ministry of Environment
- Oxford Properties Group
- PPP Canada
- Toronto and Region Conservation Authority
March 23, 2012

Dear [CONTACT NAME],

The City of Mississauga and the City of Brampton initiated a Hurontario/Main Street Study in 2008 to develop a Corridor Master Plan that integrates rapid transit, land use and urban design along the project corridor (please refer to corridor map on Page 4 of this letter). The Master Plan study supported the vision identified by the cities and Metrolinx for moving people and goods, and accommodating future urban growth. The Metrolinx Regional Transportation Plan (November 2008) identified rapid transit for the Hurontario-Main LRT corridor as a priority project for the Greater Toronto and Hamilton Area (GTHA). For details on the Hurontario/Main Corridor Master Plan, please visit the project website at http://www.hurontario-main.ca/.

In October 2011, the Cities of Mississauga and Brampton selected SNC-Lavalin Inc. and its consortium for the provision of consulting services to complete the Preliminary Design and Transit Project Assessment Process (TPAP) for the identified Master Plan corridor (October 2010). The proposed time frame for the Preliminary Design/TPAP Phase is November 2011 to October 2013.

Government Agency Involvement

Your agency has been identified as a potentially affected stakeholder within the project limits. As we proceed with completing all the necessary technical studies and preliminary design, the SNC-Lavalin consultant team may require input from your agency to assist in fulfilling the requirements of the TPAP. As such, we would like to establish the appropriate contact with your agency to facilitate consultation with respect to:

- the collection of baseline information;
- presentation of the conceptual alternatives and the preferred design scheme;
• establishment of/agreement on evaluation criteria for assessing the potential impacts of the project;
• identification of potential environmental impacts, protection/mitigation measures and monitoring requirements; and
• receiving comments and approval in principle in the foregoing regards as the study progresses.

Next Steps

The SNC-Lavalin consultant team will facilitate the appropriate level of contact with your agency during the environmental assessment process. Please complete and return (by facsimile or email) Page 5 of this notice, indicating whether your agency is interested in participating in the study and the most appropriate technical contact for the purposes of information collection and dissemination. Should you have any questions, please do not hesitate to contact the undersigned.

On behalf of the cities and the consultant team, thank you in advance for your co-operation and partnership throughout the Preliminary Design/TPAP Phase of the Project.

Sincerely,

[Signature]

Ian K. Upjohn, MCIP, RPP
Environmental Lead
SNC-Lavalin Team
Tel.: 416.679.6700
Direct Line: 416.679.6289
Email: ian.upjohn@snclavalin.com

cc: Matthew Williams, City of Mississauga, Project Lead
Khurram Tunio, City of Brampton, Senior Project Engineer
The SNC-Lavalin consultant team is building upon the cities’ Master Plan (concluded in 2010) that identified the preferred corridor alignment (see adjacent map) and the preferred technology as light rail transit (LRT).

The cities of Mississauga and Brampton have a vision for Hurontario-Main: a modern, vibrant, sustainable corridor – a main street for the 21st Century – from the lakeshore in Port Credit to downtown Brampton.

Central to this vision is a proposed LRT system. This project will have a transformative effect, and we need your participation as part of the project’s success.

During the next six to eight months, the SNC-Lavalin team will be specifically assessing issues, opportunities and alternatives to identify a suitable corridor design that meets the project-wide objectives. Our team is looking forward to working in collaboration with you throughout all phases of the Preliminary Design/TPAP process.
INITIAL HURONTARIO-MAIN LRT PROJECT CONTACT AND COMMENTS

Preliminary Design/TPAP Phase (2011 – 2013)

______________________________
Name of Organization

I would like to be kept informed   ☐

Would like to provide technical input ☐ ______________________________

______________________________
Name/Title/Telephone/Email of Technical Contact

No need for further contact ☐

Please use the following space to describe project-specific areas of interest or concern relative to your agency’s mandate, and any other general comments you may have at this time.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

______________________________
Signature

Please submit your response by April 23, 2012 via e-mail or fax to:
Elham Ramandi, BSc., MEnv., EPt
Environmental Coordinator
SNC-Lavalin Inc.
Fax: 416.231.5356
Email: elham.ramandi@snclavalin.com
407 ETR Concession Company Limited
March 28th, 2012

Mr. Craig White
Vice President, Highway and Tolling Operations
407 ETR Concession Company Limited
6300 Steeles Avenue West,
Woodbridge, ON L4H 1J1

Project Title: Hurontario-Main LRT Project, Preliminary Design/TPAP Phase (2011 – 2013)

Project Location: City of Mississauga and City of Brampton

RE: Project Introduction – Engineering

Dear Mr. White:

Your organization is identified as a potentially affected Engineering stakeholder or directly affected by the Hurontario-Main Light Rail Transit (LRT) Project extending from Port Credit in Mississauga to downtown Brampton. Our project team requires input from key personnel in your organization to determine the extent that your infrastructure may be affected. Please review the information to follow.

Background and Timeline
The City of Mississauga and the City of Brampton initiated a Hurontario/Main Street Study in 2008 to develop a Corridor Master Plan that integrates rapid transit, land use and urban design along the project corridor (refer to corridor map on last page). This study supported the vision identified by the cities and Metrolinx for moving people and goods, and accommodating future urban growth. The Metrolinx Regional Transportation Plan has identified rapid transit for the Hurontario-Main LRT corridor as a key priority project for the Greater Toronto and Hamilton Area (GTHA).

In October 2011, the Corporation of the City of Mississauga entered into a contract with SNC-Lavalin and its consortium for the provision of consulting services to complete the Preliminary Design and Transit Project Assessment Process (TPAP) for the Identified Master Plan corridor (Oct 2010). The current Preliminary Design/TPAP Phase is November 2011 to October 2013.
Upcoming Engineering Meetings
Your organization is identified as a potentially affected stakeholder within the project limits. As we proceed with the development of alignment options for the LRT system, the SNC-Lavalin consultant team will need your input and cooperation in determining the extent that your infrastructure may be affected. As such, we would like to meet with a designated individual from your staff to work with our project team to:

- collect / confirm base line information;
- present the preferred alignment design;
- define the extent of your infrastructure in this corridor;
- establish an agreement on evaluation criteria for assessing the potential impact of the project;
- receive comments and approval in principle to proceed as the study progresses to the preliminary engineering level of effort.

It is anticipated that relocation of utilities will be at the forefront of the construction process. Your input into the preliminary utility relocation design and envisaged construction schedule and ultimate phasing is of utmost importance to secure a buildable design and a future successful project delivery.

Next Steps
It is anticipated that initial utility stakeholders meetings will be held in the second quarter of 2012 (e.g. Apr - June) to present the alignment of the preferred corridor and obtain your organization’s input. Such meetings will be used as working sessions to understand opportunities and constraints your organization may identify prior to developing the utility relocation strategy.

The SNC-Lavalin consultant team will be in contact with you to arrange the appropriate meetings. In the interim, please refer to the last page of this document should you wish to provide key contact information prior to us contacting you. Should you have any questions, please do not hesitate to contact the undersigned.

On behalf of the cities and the consultant team, thank you for your co-operation and partnership throughout the Preliminary Design/TPAP Phase of the Project.

Sincerely,

Juan Umana, M.E. Sci, P.Eng
Engineering Lead
SNC-Lavalin Team
416.252.5315 ext. 4999

Cc: Matthew Williams, City of Mississauga, Project Lead
    Khurram Tunio, City of Brampton, Senior Project Engineer
The SNC-Lavalin consultant team is building upon the cities' Master Plan (concluded in 2010) that identified the preferred corridor alignment (see adjacent map) and the preferred technology as light rail transit (LRT).

The cities of Mississauga and Brampton have a vision for Hurontario-Main: a modern, vibrant, sustainable corridor—a main street for the 21st Century—from the lakeshore in Port Credit to downtown Brampton.

Central to this vision is a proposed LRT system. This project will have a transformative effect, and we need your participation as part of the project's success.

During the next six to eight months, the SNC-Lavalin team will be specifically assessing issues, opportunities and alternatives to identify a suitable corridor design that meets the project-wide objectives. Our team is looking forward to working in collaboration with you throughout all phases of the Preliminary Design/TPAP process.
INITIAL HURONTARIO-MAIN LRT PROJECT CONTACT AND COMMENTS
Preliminary Design/TPAP Phase (2011 – 2013)

Name of Organization

I would like to be kept informed ☐

Would like to provide technical input ☐

Name/Title/Telephone/Email of Technical Contact

No need for further contact ☐

Please use the following space to describe project-specific areas of interest or concern relative to your agency’s mandate, and any other general comments you may have at this time.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Signature

Please submit your response by April 7, 2012 via e-mail or fax to:

Mr. Juan Umana, M. E. Sci, P.Eng
SNC-Lavalin Project Team
E-mail: juan.umana@sncalvalin.com
Fax: 416.231.5356
October 12, 2012

Mr. Craig White  
Vice President, Highway and Tolling Operations  
407 ETR  
6300 Steeles Avenue West,  
Woodbridge, ON  
L4H 1J1

Project Title: Hurontario-Main LRT Project, Preliminary Design/TPAP Phase (2011 – 2013)

Project Location: City of Mississauga and City of Brampton

RE: Engineering Drawing Review and Your Input Required

Dear Mr. White:

Further to our previous letter of introduction from Juan Umaña, your organization is identified as a potentially affected Engineering stakeholder or directly affected by the Hurontario-Main Light Rail Transit (LRT) Project extending from Port Credit in Mississauga to downtown Brampton.

Our Engineering staff requires input from key personnel in your organization to determine the extent that your infrastructure may be affected.

Please review the information contained in the attached drawings showing the existing utilities and LRT Alignment. Our staff will be in contact with you to arrange a meeting to discuss strategies for mitigating conflicts with the utilities.

If you have maps or electronic files of your utility, we would appreciate if you would send them directly to me, as I have taken over the lead Engineering for Juan Umaña in this regard.

If you have any questions prior to us contact you, please do not hesitate to contact the undersigned.

Sincerely,

[Signature]  
Asen Delchev, M. Eng.  
Engineering Lead  
Hurontario-Main LRT Project  
SNC-Lavalin Team  
416-252-5315 ext 3773  
Asen.Delchev@snc-lavalin.com

Cc: Matthew Williams, Khurram Tunio, Jeff Booker
April 10th, 2012

Mr. Jeff Booker,
Highway Operations Officer
407 ETR,
6300 Steeles Ave West,
Woodbridge, ON
L4H 1J1

Project Title: Hurontario-Main LRT Project, Preliminary Design/TPAP Phase (2011 – 2013)

Project Location: City of Mississauga and City of Brampton

RE: Project Introduction – Engineering

Dear Mr. Booker,

Your organization is identified as a potentially affected Engineering stakeholder or directly affected by the Hurontario-Main Light Rail Transit (LRT) Project extending from Port Credit in Mississauga to downtown Brampton. Our project team requires input from key personnel in your organization to determine the extent that your infrastructure may be affected. Please review the information to follow.

Background and Timeline
The City of Mississauga and the City of Brampton initiated a Hurontario/Main Street Study in 2008 to develop a Corridor Master Plan that integrates rapid transit, land use and urban design along the project corridor (refer to corridor map on last page). This study supported the vision identified by the cities and Metrolinx for moving people and goods, and accommodating future urban growth. The Metrolinx Regional Transportation Plan has identified rapid transit for the Hurontario-Main LRT corridor as a key priority project for the Greater Toronto and Hamilton Area (GTHA).

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Upcoming Engineering Meetings
Your organization is identified as a potentially affected stakeholder within the project limits. As we proceed with the development of alignment options for the LRT system, the SNC-Lavalin consultant team will need your input and cooperation in determining the extent that your infrastructure may be affected. As such, we would like to meet with a designated individual from your staff to work with our project team to:

- collect / confirm base line information;
- present the preferred alignment design;
- define the extent of your infrastructure in this corridor;
- establish an agreement on evaluation criteria for assessing the potential impact of the project;
- receive comments and approval in principle to proceed as the study progresses to the preliminary engineering level of effort.

It is anticipated that relocation of utilities will be at the forefront of the construction process. Your input into the preliminary utility relocation design and envisaged construction schedule and ultimate phasing is of utmost importance to secure a buildable design and a future successful project delivery.

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The SNC-Lavalin consultant team will be in contact with you to arrange the appropriate meetings. In the interim, please refer to the last page of this document should you wish to provide key contact information prior to us contacting you. Should you have any questions, please do not hesitate to contact the undersigned.

On behalf of the cities and the consultant team, thank you for your co-operation and partnership throughout the Preliminary Design/TPAP Phase of the Project.

Sincerely,

[Signature]

Juan Umana, M.E. Sci, P.Eng
Engineering Lead
SNC-Lavalin Team
416.252.5315 ext. 4999

Cc: Matthew Williams, City of Mississauga, Project Lead
    Khurram Tunio, City of Brampton, Senior Project Engineer
    Craig White, 407 ETR, Vice President, Highway and Tolling Operations
The SNC-Lavalin consultant team is building upon the cities’ Master Plan (concluded in 2010) that identified the preferred corridor alignment (see adjacent map) and the preferred technology as light rail transit (LRT).

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During the next six to eight months, the SNC-Lavalin team will be specifically assessing issues, opportunities and alternatives to identify a suitable corridor design that meets the project-wide objectives. Our team is looking forward to working in collaboration with you throughout all phases of the Preliminary Design/TPAP process.
INITIAL HURONTARIO-MAIN LRT PROJECT CONTACT AND COMMENTS
Preliminary Design/TPAP Phase (2011 – 2013)

Name of Organization

I would like to be kept informed ☐

Would like to provide technical input ☐

Name/Title/Telephone/Email of Technical Contact

No need for further contact ☐

Please use the following space to describe project-specific areas of interest or concern relative to your agency’s mandate, and any other general comments you may have at this time.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Signature

Please submit your response by April 7, 2012 via e-mail or fax to:

Mr. Juan Umana, M. E. Sci, P.Eng
SNC-Lavalin Project Team
E-mail: juan.umana@snc-lavalin.com
Fax: 416.231.5356
October 12, 2012

Mr. Jeff Booker
Highway Operations Officer
407 ETR
6300 Steeles Avenue West,
Woodbridge, ON
L4H 1J1

Project Title: Hurontario-Main LRT Project, Preliminary Design/TPAP Phase (2011 – 2013)

Project Location: City of Mississauga and City of Brampton

RE: Engineering Drawing Review and Your Input Required

Dear Mr. Booker:

Further to our previous letter of introduction from Juan Umaña, your organization is identified as a potentially affected Engineering stakeholder or directly affected by the Hurontario-Main Light Rail Transit (LRT) Project extending from Port Credit in Mississauga to downtown Brampton.

Our Engineering staff requires input from key personnel in your organization to determine the extent that your infrastructure may be affected.

Please review the information contained in the attached drawings showing the existing utilities and LRT Alignment. Our staff will be in contact with you to arrange a meeting to discuss strategies for mitigating conflicts with the utilities.

If you have maps or electronic files of your utility, we would appreciate if you would send them directly to me, as I have taken over the lead Engineering for Juan Umaña in this regard.

If you have any questions prior to us contact you, please do not hesitate to contact the undersigned.

Sincerely,

Asen Delchev, M. Eng.
Engineering Lead
Hurontario-Main LRT Project
SNC-Lavalin Team
416-252-5315 ext 3773
Asen.Delchev@snc-lavalin.com

Cc: Matthew Williams, Khurram Tunio, Craig White
From: Brenham, Trevor [mailto:Trevor.Brenham@sncalavalin.com]
Sent: 2013/09/06 4:45 PM
To: Buckman, Leslie; Matthew Williams; Tunio, Khurram; Li, Rebecca (MTO)
Subject: FW: HMLRT - Documents to 407 on FTP Site

Please confirm if you are available on the morning of 17 September to meet with 407ETR. They have requested a review meeting to discuss concerns related to the HMLRT.

Trevor Brenham, P.Eng.
Project Manager
Transportation
Tel.: +1 416 252 5315 x 54193
SNC-Lavalin Inc.

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From: Jeff Booker [mailto:jbooker@407ETR.com]
Sent: September 6, 2013 16:39
To: McLeod, Cecile; Brenham, Trevor
Cc: Delchev, Asen; McCarthy, Chris
Subject: RE: HMLRT - Documents to 407 on FTP Site

Cecile/Trevor;

We would like to set up a meeting to discuss the following

- General comments/concerns
- Additional structural concerns
- Traffic comments/concerns

The best date for 407 and MTO (SHMO) is September 17, 2013 @ 407 ETR office - 9 am to 11:00 am.

Would this date be acceptable to meet.

Sincerely,

Jeff Booker
Manager, Highway Engineering Services
Highway 407 ETR
6300 Steeles Avenue
Woodbridge, ON
L4H 1J1
Tel (905) 265-4070 Ext 5485
Fax (905)264-5379
jbooker@407etr.com
Hi Jeff:

The following reports for the Hurontario-Main LRT project (HMLRT) have been placed on an FTP site for your review and comments.

- Plan and Profile drawings immediately adjacent to the 407
- Future Year Model Report
- DW2 Appendices (Modeling Report Basis)
- Modelling Reports establishing the basis of modeling methodology and model calibration
  - DW2.0 Results Spreadsheets
    - Hurontario Journey Times A.M.
    - Hurontario Journey Times P.M.
    - Hurontario Model Summary – Combined All Scenarios
  - VISSIM Backgrounds
- Hurontario Base Model Report April 2013
- SNC’s Responses to 407 Comments on the Structural Report (as an attachment to this e-mail).

*PLEASE NOTE: The Plan and Profile drawings are an engineering development of DW2 drawings.*

The information to access the FTP are as follows:

1- Open Windows Explorer or CuteFTP, the only software allowed to access the FTP servers at SNC-Lavalin.

For Windows Explorer, follow these steps:
- Move the mouse cursor over the « Start » button situated in the lower left corner of your screen.
- With the right button on the mouse, click « Start »
- In the window that appears, select « Explore », and Windows Explorer will start.

2- Type in the "Address" field: [ftp://gate04.snclavalin.com/3551temp82](ftp://gate04.snclavalin.com/3551temp82)

3- The FTP Access will be displayed, please enter:
   - your user name: FTP3551TEMP82
   - your password: Waqaxe62 (IMPORTANT: The first letter in uppercase and subsequent letters in lowercase).
   *For security reasons, do not check "Save password".*

Note: The above information is valid for 2 business days. After that delay, the account will be disabled and the folder
content will be erased. If you need an extension, please contact the GIT Service Desk in Montreal at 514-393-8000, extension 53551 and mention the reference number 2113984.

Jeff I will call you next week to arrange a meeting to further discuss all the above.

Let me know if you have any questions or concerns.

Thank you,

Cecile McLeod
Administrative Assistant
Transportation Division

Tel.: 416-252-5315 x 52562

Transportation Division
195 The West Mall
Toronto | Ontario | Canada | M9C 5K1
September 25, 2013

Mr. Trevor Brenham, P. Eng.
Consultant Team Deputy Project Manager
Transportation Division
SNC-Lavalin Inc.
195 The West Mall
Toronto, Ontario M9C 5K1

Dear Mr. Brenham:

RE: Hurontario-Main LRT Project

Further to the meeting held at our offices on September 17th we are writing to formalize and document the position of 407 ETR as a stakeholder who will be affected by the proposed Hurontario LRT. Of foremost importance to 407 ETR is safety, in regards to safety, all applicable standards and best practices must be followed. This includes things such as but not limited to:

- Lane widths
- Barrier wall heights
- Sidewalk / Multi Use Trail widths
- Queues on ramps must not extend back to mainline

Appropriate studies and design enhancements must be carried out and presented to 407 ETR to ensure such issues are appropriately addressed, and measures are taken as appropriate and to the satisfaction of 407 ETR.

A second principle that is required to be met by 407 ETR is that our structure not be overloaded in any manner. Appropriate analysis, design and mitigation measures must be carried out and presented to 407 ETR and approved by 407 ETR. Cost for such work and measures are for the account of the LRT proponent.

The final key principle for 407 ETR is that there will be no decrease in our value proposition to our customers, no increase in our liability, no increase in our costs and no increase in our risks as a result of the LRT being implemented and crossing the 407 ETR land and 407 ETR bridge structure. This means that the arterial road capacity on Hurontario Street as exists now and as existed when we purchased Highway 407 must be maintained, that is Hurontario Street should continue to provide 6 lanes of automobile traffic through the 407 ETR bridge structure and lands under 407 ETR control. We further request that this 6 lane cross section for automobile traffic be carried through to meaningful points north and south of Highway 407. As a minimum, this cross section should extend north to Ray Lawson Blvd. and south to Derry Road.

We request that the above 407 ETR requirements be formally acknowledged and addressed in the EA document and carried through to the design process. We anticipate that additional meetings will be held to confirm how specific design elements affecting 407 ETR generally accepted design practice and what forms of mitigation will be provided to protect Highway 407 safe and efficient operations.

Sincerely,

Craig D. White, P. Eng.
VP Highway & Tolling Operations

c: Khurram Tunio - City of Brampton
Matthew Williams - City of Mississauga
Cecile McLeod – SNC-Lavalin
Ray Bacquie – 407 ETR
Jeff Booker – 407 ETR
Tony Angelo – 407 ETR
Frank Martins - MTO
November 8, 2013

Mr. Craig White, P. Eng.
VP Highway and Tolling Operations
407ETR Concession Company Ltd.
6300 Steeles Avenue West
Woodbridge, Ontario
L4H 1J1

Dear Mr. White

Ref: Hurontario-Main LRT Project – Preliminary Design/Transit Project Assessment Process

Thank you for your letter dated September 25th, 2013, in which you explained 407ETR’s interests and concerns with respect to the Hurontario-Main LRT project. In your response, you summarized three key principles you require the project to respect and uphold as:

1) **Preserve safety**, by ensuring that traffic queues on the 407ETR exit ramps do not back up onto the 407ETR mainline, and that LRT project elements carried through the 407ETR/Huronntario Interchange are designed to the appropriate traffic operations and pedestrian/cyclist safety standards;

2) **Preserve integrity of the bridge structure**, by avoiding overloading in any manner;

3) **Preserve the value proposition to your customers**, without an increase in liability. In relation to this third principle, you are requesting that the current six traffic lanes across the bridge be preserved even with the addition of the LRT line, and that Hurontario Street be widened between Ray Lawson Boulevard and Derry Road to do so.

In response to your request to have your interests formally addressed and responded to in the EA document, we offer you the following commentary. The HMLRT project is committed to working with key stakeholders both now through the Preliminary Design and TPAP phase, and through later design and construction phases. As a Concession Company, we trust you recognize that finalization of some of the issues you raise cannot be resolved until the HMLRT project advances into its implementation phase, at which point commitment to and resolution of commercial and legal agreements can be addressed.

With respect to the aforementioned three principles, we can advise you as follows:

1) Preserving public safety is a primary objective of the project, and we share 407ETR’s interests in this regard. Our traffic analysis performed to date has not indicated a problem with traffic backing up onto the 407ETR mainline, but we recognize you are still reviewing traffic data provided on the project and you may have further comments. In the EPR, we will identify options / solutions to consider improvements such as signal timing, and extending storage length for exit ramps. Options
will be investigated during the next phase of the project.

2) Preserving structural integrity of the bridge crossing is important. Our current design for the LRT makes use of techniques and materials that keep within the existing structural capacity of the bridge.

3) We have performed a preliminary assessment to evaluate the impact of accommodating your final request to widen the Hurontario Street right-of-way from Ray Lawson Boulevard to Derry Road, and have confirmed that such a widening would materially impact 22 residential homes and a historic cemetery.

We recognize that, as a Concession Company, the Concession and Ground Lease Agreement (CGLA) under which you operate establishes certain commitments and representations between 407ETR and the Province, and that introduction of the HMLRT project along the corridor may have commercial implications. Such matters are not within the purview of the HMLRT project team and so these issues are being referred for comment to the Ministry of Transportation, which we understand administers the CGLA with 407ETR.

We continue to be committed to working with 407ETR to find an acceptable solution that meets the joint interests of the HMLRT project and 407ETR. Please be advised at this time that we do not intend to materially change the EPR, but we will include your letter and comments as part of the public consultation outreach and we will provide written commentary on the points you have raised.

Sincerely

[Signature]

Chris McCarthy, P. Eng.,
Project Manager,
SNC-Lavalin Team
Tel.: 416-252-5315 x54650
E-mail: chris.mccarthy@snlavalin.com

Cc: Matthew Williams, City of Mississauga, Project Lead
Bishnu Parajuli, City of Brampton, Project Engineer
January 6, 2014

Mr. Chris McCarthy, P. Eng.
Project Manager
SNC-Lavalin Transportation Team
195 The West Mall
Toronto, ON M9C 5K1

Dear Mr. McCarthy:

Re: Hurontario-Main LRT Project – Preliminary Design/Transit Project Assessment Process

I am extremely disappointed with the response provided in your letter of November 8th, 2013. This letter states that a preliminary assessment has been done in regard to accommodating our request that Hurontario Street be widened across our structure and between Ray Lawson Boulevard and Derry Road to avoid the loss of general purpose lanes in this area. The conclusion that has been presented implies that such widening is not possible, furthermore your letter states that; “such a widening would materially impact 22 residential homes and a historic cemetery”. I believe this statement is erroneous and shows a lack of effort or the creativity that should be employed to assess such issues!

There is a median on Hurontario Street to the north of 407 that is over 5m wide and there are grassy boulevards on both sides of the road that are of varying widths that could be used to facilitate a widening of Hurontario Street, albeit one side of the road has a sidewalk. Furthermore, the historic cemetery that is mentioned is approximately 5 to 6m from the roadway behind the boulevard. And finally with regard to the homes that you have suggested would be “materially impacted”; in the unlikely event that any land was required from the private properties along Hurontario Street, it would be vacant yard space from the very back of the property, no homes would be impacted. To the south of the 407 it appears land would be available to widen Hurontario Street to Derry Road.

We do not accept that a widening is not feasible and do not believe a diligent effort has been put into assessing this situation. Please advise if this is something that will be undertaken by SNC or will we need to hire an engineering firm at the cost of the proponent to carry out a proper analysis?

In closing please be advised that the bridge that carries Hurontario Street over Highway 407 is owned by 407 ETR and that the use of this bridge and any modifications to this structure are subject to the conditions and terms set by the owner of such structure. We will continue to work with the Cities of Brampton and Mississauga in good faith as we have always done including trying to reasonably accommodate the HMLRT, but it must be accomplished in such a manner that does not diminish the safety or the efficiency of our business.

Sincerely,

Craig D. White, P. Eng.
VP, Highway & Tolling Operations

c: Chris Duyvestyn – City of Brampton
Matthew Williams – City of Mississauga
Cecile McLeod – SNC-Lavalin
Ray Bacque – 407 ETR
Jeff Booker – 407 ETR
Tony Angelo – 407 ETR
Frank Martins - MTO
EGD File Number: 9068982
Re: HMLRT - Existing Utility Alternative A Brampton

GENERAL LOCATION

- Please refer to the attached drawings for information on our existing or proposed gas plant.
- The depth of the existing gas plant cannot be confirmed.
- Test Holes are required to determine actual depth of gas plant. Depth of gas plant in test holes is not indicative of gas plant depth at all locations. Fittings with reduced depth may be attached to the top of gas plant between test holes.
- The information provided is for GENERAL LOCATION ONLY. You must re-submit your detailed drawings for sign off by Enbridge Gas Distribution Inc.

NO-CONFLICT-

- We have NO OBJECTION to your proposed plant as indicated. Please refer to the attached drawings for information on our existing or proposed gas plant. GAS MAINS MUST BE FIELD LOCATED. Before digging, please call ONTARIO ONE CALL. 5 day in advance at 1-800-400-2255 for free gas locates service.
- See “Third Party Requirements” booklet for definitions, requirements & contact information.
- Test Holes are required to determine actual depth where infrastructure crosses gas plant.
- Depth of gas plant in test holes is not indicative of gas plant depth at all locations.

CONFLICT

- We have an OBJECTION to your proposed plant as indicated. Please refer to the attached drawings for information on our existing or proposed gas plant. Review your proposal and make changes to your plant to satisfy these requirements.
- See “Third Party Requirements” booklet for definitions, requirements & contact information.
- If relocation of our plant is required, contact Manager of Special Projects:
  - Toronto Region: Tim Dykas 416-753-4667
  - Central Region West Bhavini Mistry 905-458-2166
  - Central Region East Mike Miller 905-927-3300
  - Niagara Region Rhonda Nicholson 905-641-4815
  - Eastern Region Ottawa Farzeen Rizvi 613-748-6768

NEB PERMIT REQUIRED

- An application form needs to be filed when crossing or working within 30 m of the right-off-way of the NEB regulated natural gas pipeline.
- Find enclosed booklet containing information and permit application form.
- If you want to discuss NEB permit process contact the Enbridge Gas Distribution Land Dept.: 416-753-6929

VITAL MAIN

- You are working within 3 m of a Vital Main Pipeline. A representative of the company must be contacted three (3) days prior to commencement of work. A member of our field force must be present while excavation of the main takes place and prior to backfilling. Please contact the Enbridge Gas Distribution Damage Prevention Dept: 1(866) 922-3622.
- See “Third Party Requirements” booklet for definitions, requirements & contact information.

For Enbridge Internal Use:

- ENGINEERING COORDINATION REQUIRED
- EXCAVATION, REPAVING OR GRADING - SPECIAL PROJECTS REVIEW REQUIRED

Kind Regards,
Hydro One Networks Inc.
OK, thank you!

Rick

From: Brenham, Trevor [mailto:Trevor.Brenham@snclavalin.com]
Sent: Monday, July 22, 2013 2:05 PM
To: SCHATZ Richard
Cc: Upjohn, Ian; McCarthy, Chris; ZIEGLER Brian
Subject: RE: HMLRT Crossings - Impact on HONI

Rick,

We are working on a redesign at that locations now and once complete we will send through the drawings establishing a lowering of the conductor wire by a minimum of 1.5m.

Trevor Brenham, P.Eng.
Project Manager
Transportation

Tel.: +1 416 252 5315 x 4193

SNC-Lavalin Inc.

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Thank you.

Richard (Rick) Schatz
Senior Real Estate Coordinator

Hydro One Networks Inc.
P. 905-946-6233
F. 905.946.6049
From: Brenham, Trevor [mailto:Trevor.Brenham@snclavalin.com]
Sent: Monday, July 15, 2013 11:17 AM
To: SCHATZ Richard
Cc: Upjohn, Ian; McCarthy, Chris; ZIEGLER Brian
Subject: RE: HMLRT Crossings - Impact on HONI

Rick,

As this stage of the work will not included detail design, we are not seeking 'final approval'. We will be looking for a letter establishing that there is:

- Agreement in principle from HONI to the preliminary designs being presented; and,
- Any concerns or restrictions that would be placed on any detail design, so that they can formally laid out as conditions for inclusion in any detail design.

This agreement is being sought in the context of an Infrastructure Ontario Class EA process. Final approval would only be sought during the preparation of detail designs, once funding of the system is approved.

Trevor Brenham, P.Eng.
Project Manager
Transportation
Tel.: +1 416 252 5315 x 4193
SNC-Lavalin Inc.

---

From: rick.schatz@HydroOne.com [mailto:rick.schatz@HydroOne.com]
Sent: July 15, 2013 10:45
To: Brenham, Trevor
Cc: Upjohn, Ian; McCarthy, Chris; brian.ziegler@HydroOne.com
Subject: RE: HMLRT Crossings - Impact on HONI

Hi Trevor,

Approval would come only after we have reviewed and approved your detailed designs. It would come either in the form of a Conditions letter or a Construction agreement. Our approvals are good for a one year period. After that point we would have to revisit the plans to confirm they are still acceptable (as standards change).
Regards,

Richard (Rick) Schatz
Senior Real Estate Coordinator

Hydro One Networks Inc.
P. 905-946-6233
F. 905.946.6049
C. 416.735.2909

From: Brenham, Trevor [mailto:Trevor.Brenham@snclavalin.com]
Sent: Monday, July 15, 2013 10:20 AM
To: SCHATZ Richard
Cc: Upjohn, Ian; McCarthy, Chris
Subject: RE: HMLRT Crossings - Impact on HONI

Rick,

Thanks for the feedback. We are reviewing our requirements for approvals. What is needed for Hydro One Networks Inc. to be able to register that they have no opposition to the project crossing their corridor?

Based on the comments received from HONI and other considerations we will not be proceeding with an elevated option at the 403 and are presently pursuing an at grade option running over a modified 403 Bridge. We are also in the process of modifying the design on Hurontario at station 37 +660 to lower our alignment to provide sufficient clearance without requesting changes to the HONI infrastructure.

Sincerely,

Trevor Brenham, P.Eng.
Project Manager
Transportation
Tel.: +1 416 252 5315 x 4193
SNC-Lavalin Inc.

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From: rick.schatz@HydroOne.com [mailto:rick.schatz@HydroOne.com]
Sent: June 18, 2013 13:15
To: Brenham, Trevor
Subject: RE: HMLRT Crossings - Impact on HONI

Hi Trevor,
We have now had a chance to review your drawings showing the proposed crossings of the LRT under our hydro corridors.

Here are the comments:

What follows is a brief summary of the conflicts re the above project:

- Hwy 403 Bridge (Above Grade Option) - insufficient clearance south towerline, substandard +/- 4.75m
- Station 37+660 - insufficient clearance, substandard +/- 1.5m

All other crossings meet/exceed minimum CSA clearances.

It should be noted that this preliminary review is based on Hydro Ones' profile drawings only and once the final route has been established more exacting figures will be determined via field survey.

As well, this review was for determining clearances only and in no way constitutes approval of the submitted design.

If you have any questions, please let me know.

Richard (Rick) Schatz  
Senior Real Estate Coordinator

Hydro One Networks Inc.  
Facilities and Real Estate  
P.O. Box 4300 (185 Clegg Road)  
Markham, Ont. L3R 5Z5  
Tel 905-946-6233  
Cell 416-735-2909  
E-mail Rick.Schatz@HydroOne.com
FYI

Asen Delchev, M.Eng.
Project Manager
Infrastructure & Environment
Tel.: (416)252-5311 x 3773
SNC-Lavalin Inc.

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From: rick.schatz@HydroOne.com [mailto:rick.schatz@HydroOne.com]
Sent: October 30, 2012 2:06 PM
To: Delchev, Asen
Cc: Brenham, Trevor; Ashley.Curtis@sdgworld.net
Subject: RE: Hurontario LRT Project

Hello Asen,

We have had a chance to review your conceptual plans pertaining to the Hurontario / Main LRT project and offer the following comments:

Site Specific Condition:

For the three of the five locations that involve crossing the Hydro One corridor, the following comments apply:
- The access path must not be obstructed, at any time, during construction or after the facilities are in service. The site must be kept free of all debris which could prohibit access to the towers.
- A flat 15.0 meter radius around the existing Hydro One towers/poles must remain undisturbed to preserve the work zone required for line maintenance
- Where paving is required, a two meter radius surrounding each of the tower
footings must remain unpaved.

- The proponent must ensure no excavation is carried out within 10 meters of the tower footings in order to protect the tower foundations.

For the two locations that have a longitudinal alignment, the following comments apply:

- Longitudinal alignment of LRT is not allowed on Hydro Corridor as per policy. This area is a part of a contiguous corridor and was acquired with plans for future expansion. Although timing of the expansion is uncertain, Hydro One needs to reserve the ability to construct, operate and maintain future transmission lines.

- Final engineering drawings of the redesigned subject proposal must be submitted to System Investment for review and approval. The drawings must show locations of all existing Hydro One structures, their centrelines, existing access roads as well as the existing and proposed grades, and the distance from the proposed work to the footings of Hydro One towers.

All installations must be able to withstand the loads created by Hydro One maintenance vehicles. The proposed work must be designed to withstand the following loads

- Moving Heavy Equipment: CS-300 loading according to CSA S6
- Moving Mobile Cranes: 267 KN per tandem axle, dual wheel, 1.53 axle spacing, 360mm tires

Access Path:

The access path to Hydro One Facilities must have a minimum width of 6m. The access path must not be obstructed, at any time, during construction or after the facilities are in service. The site must be kept free of all debris which could prohibit access to the towers.

Vertical Clearance:

Please note that the proponent must be cognizant of the fact that construction of the proposed work will be carried out directly under transmission lines.

The proponent must ensure that the proposed work provides adequate vertical clearance to the overhead transmission lines as stated in the General Requirements attached.

The maximum height of Heavy equipment inside the ROW should satisfy both OSHA and CSA (C22.3-No 6-M91) standards.

- The height of the electrical line that supports the LRT will not be an issue provided it is +/-5 metres above the top of rail. Of more importance is determining adequate clearances to the top of rail. In order to determine if there are sufficient vertical clearances the proponent must provide plans/profiles showing exactly where they propose to install the LRT and associated attachments. As the elevation of our conductors is different along
all points of a particular span it is important that we know the exact point of
crossing. The drawings must show the existing and proposed elevations of the LRT
top of rail at each centreline X centreline point of crossing. The Hydro One
centrelines and offset distance to the closest tower must also be shown.

Clearance Around Towers

In the case of emergency work, the proponent may be required to suspend its
operations until Hydro One crews have completed their maintenance.

· The proponent must ensure no excavation is carried out using heavy
machinery within 10 meters of the tower footings. Within 10 meters of tower
footings, excavation must be carried out by hand or by using a hydro VAC system
in order to protect the tower foundations.

· Where paving is required, a two meter radius surrounding each of the
tower footings must remain unpaved.

Storm Water Management

The proponent must ensure the proposed work does not interfere with the
natural drainage patterns along this stretch of the Hydro One corridor and
does not result in standing water within 15.0 meters of the existing Hydro One
structure bases or anywhere else on the corridor.

The proponent will be held liable for any damage to Hydro One facilities as a
result of flooding caused by the subject project.

Safety & Security

It is the constructor’s responsibility to ensure that safe working clearances
specified in the OHSA for workers and equipment is maintained at all times
during construction activities.

The proponent is responsible for maintaining security of the site and for the
safety of the people working within the corridor.

Liabilities

Hydro One will not be held responsible for any liability issues associated
with the subject secondary land use such as, falling ice, etc.

The proponent will assume all liability associated with the use of the
secondary land use on Hydro One corridor.

Corridor Condition

The Hydro One corridor must be restored to pre-construction condition once the
subject works are completed

Please also be aware of our General Requirements (attached).

Thank you,
**TRANSMITTAL**

<table>
<thead>
<tr>
<th>TO:</th>
<th>FROM:</th>
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| Rick Schatz  
Hydro One Networks  
185 Clegg Road  
Markham, ON L6G 1B7 | Hurontario-Main LRT  
Chris McCarthy – Project Manager |

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<th>DATE</th>
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<th>PURCHASE ORDER #</th>
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<td>508956</td>
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**SUBJECT:** Hurontario-Main Light Rail Transit LRT Project

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<td>Plan and Profile Drawing No. LRT-RD-NCO55 &amp; Letter w/ref no. 508956-4TCB-0098</td>
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**SIGNATURE**

**RECEIVED BY:**

**DATE:**

**DISTRIBUTION:**

RECIPIENT TO SIGN AND RETURN ONE COPY AS ACKNOWLEDGEMENT
January 29, 2014

Mr. Rick Schatz  
Hydro One Network Inc.  
185 Clegg Road  
Markham, Ontario  
L3R 5Z5

Dear Mr. Schatz,

Ref: Hurontario-Main LRT Alignment at 407 Corridor

Further to your e-mail on November 28th, 2013, please find attached plan and profile drawing for the proposed Hurontario-Main LRT system where it crosses Hydro One Networks Inc.’s 500kV corridor south of the 407. HONI previously identified that all crossing shown in the preliminary design were within CSA guidelines except crossing at station 37+660.

Drawing LRT-RD-NC055 attached, demonstrates our revisions to the design based on HONI comments to our letter dated November 25th, 2013. These revisions achieve a 1.5m reduction in elevation of the LRT infrastructure by lowering the rail bed in a trench and adds protection for adjacent traffic.

We feel that this design revision adequately addresses the above concern raised by HONI. We request official notice of HONI’s position on the project including any requirements for approvals and restrictions to be respected during detailed design phase of the project.

Sincerely,

Chris McCarthy, P. Eng.,  
Project Manager,  
SNC-Lavalin Team  
Telephone: 416-252-5315 x54650  
E-mail: chris.mccarthy@snclavalin.com

Cc: Bishnu Parajuli, City of Brampton, Project Engineer  
Matthew Williams, City of Mississauga, Project Lead
February 12, 2014

Trevor Brenham  
Project Manager  
Transportation Division  
195 The West Mall  
Toronto, Ontario M9C 5K1

Re: HMLRT - Alignment at 407 Corridor  
Plan and Profile Drawing no. LRT-RD-NC055

We have reviewed the above referenced plan and based on today’s operating conditions, clearances would be acceptable. As previously discussed, the clearance issues will need to be revisited closer to the projects actual construction to confirm that they continue to meet the most current clearance standards.

If you have any questions or concerns, please do not hesitate to contact me.

Sincerely,

[Signature]

Richard (Rick) Schatz  
Senior Real Estate Coordinator
September 11, 2012

Thank you for circulating Infrastructure Ontario (formerly the Ontario Realty Corporation) on your Notice. Infrastructure Ontario (IO) is the strategic manager of the provincial government’s real estate property with a mandate of maintaining and optimizing value of the portfolio, while ensuring real estate decisions reflect public policy objectives of the government.

As you may be aware, IO is responsible for managing real estate property that is owned by Her Majesty the Queen in Right of Ontario as represented by the Minister of Infrastructure (MOI). There is a potential that IO manages lands that fall within your study area. As a result, your proposal may impact IO managed properties and/or the activities of tenants present on IO-managed lands. In order to determine if IO property is within your study area, IO requires that the proponent of the project conduct a title search by reviewing parcel register(s) for adjoining lands, to determine the extent of ownership by MOI or its predecessors (listed below) ownership. Please contact IO if any ownership of provincial government lands are known to occur within your study area and are proposed to be impacted. IO is obligated to complete due diligence for any realty activity on IO managed lands and this should be incorporated into all project timelines. IO managed lands can include within the title but is not limited to variations of the following: Her Majesty the Queen/King, OLC, ORC, Public Works, Hydro One, PIR, MGS, MBS, MOI, MTO, MNR and MEI*. Please ensure that a copy of your notice is also sent to the ministry/agency on title. As an example, if the study area includes a Provincial Park, then MNR is to also to be circulated notices related to your project.

Potential Negative Impacts to IO Tenants and Lands

General Impacts
Negative environmental impacts associated with the project design and construction, such as the potential for dewatering, dust, noise and vibration impacts, and impacts to natural heritage features/habitat and functions, should be avoided and/or appropriately mitigated in accordance with applicable regulations best practices and Ministry of Natural Resources (MNR) and Ministry of the Environment (MOE) standards. Avoidance and mitigation options that characterize baseline conditions and quantify the potential impacts should be present as part of the EA project file. Details of appropriate mitigation, contingency plans and triggers for implementing contingency plans should also be present.

Impacts to Land holdings
Negative impacts to land holdings, such as the taking of developable parcels of IO managed land or fragmentation of utility or transportation corridors, should be avoided. If the potential for such impacts is present as part of this undertaking, you should contact the undersigned to discuss these issues at the earliest possible stage of your study.

If takings are suggested as part of any alternative these should be appropriately mapped and quantified within EA report documentation. In addition, details of appropriate mitigation and or next steps related to compensation for any required takings should be present. IO requests circulation of the draft EA report prior to finalization if potential impacts to IO-managed lands are present as part of this study.
Heritage Management Process & Class Environmental Assessment (EA) Process

Should the proposed activities impact cultural heritage features on IO managed lands, a request to examine cultural heritage issues which can include the cultural landscape, archaeology and places of sacred and secular value could be required. The IO (formerly Ontario Realty Corporation) Heritage Management Process should be used for identifying and conserving heritage properties in the provincial portfolio (this document can be downloaded from the Heritage section of our website: http://www.ontariorealty.ca/What-We-Do/Heritage.htm). Through this process, IO identifies, communicates and conserves the values of its heritage places. In addition, the Class EA ensures that IO considers the potential effects of proposed undertakings on the environment, including cultural heritage.

Potential Triggers Related to MOI's Class EA

IO is required to follow the MOI Class Environmental Assessment Process for Realty Activities Not Related to Electricity Projects (MOI Class EA). The MOI Class EA applies to a wide range of realty and planning activities including leasing or letting, planning approvals, dispostion, granting of easements, demolition and property maintenance/repair. For details on the MOI Class EA please visit the Environment and Heritage page of our website found at http://www.infrastructureontario.ca/What-We-Do/Buildings/Realty-Services/Environmental-Management/Class-EAs/

Please note that completion of any EA process does not necessarily provide an approval for IO’s EA process unless the alternative EA incorporates IO’s applicable Class EA requirements.

If the MOI Class EA is triggered, and deferral to another ministry’s or agency’s Class EA or individual EA is requested, the alternative EA will be subject to a critical review prior to approval for any signoff of a deferral by the proponent. The alternative EA needs to fulfill the minimum criteria of the MOI Class EA. When evaluating an alternative EA there must be explicit reference to the corresponding undertaking in the MOI Class EA (e.g., if the proponent identifies the need to acquire land owned by MOI, then “acquisition of MOI-owned land”, or similar statement, must be referenced in the EA document). Furthermore, sufficient levels of consultation with MOI’s/IO’s specific stakeholders, such as the MNR, must be documented with the relevant information corresponding to MOI’s/IO’s undertaking and the associated maps. In addition to archaeological and heritage reports, a Phase I Environmental Site Assessment (ESA), on IO lands should also be incorporated into the alternative EA study. Deficiencies in any of these requirements could result in an inability to defer to the alternative EA study and require completing MOI’s Class EA prior to commencement of the proposed undertaking.

In summary, the purchase of MOI-owned/IO-managed lands or disposal of rights and responsibilities (e.g. easement) for IO-managed lands triggers the application of the MOI Class EA. If any of these realty activities affecting IO-managed lands are being proposed as part of any alternative, please contact the Sales and Marketing Group through IO’s main line (Phone: 416-327-3937, Toll Free: 1-877-863-9672), and contact the undersigned at your earliest convenience to discuss next steps.
Specific Comments

If an EA for this project is currently being undertaken and **only if** the undertaking directly affects all or in part any IO-managed property, please send the undersigned a copy of the DRAFT EA report and allow sufficient time (minimum of 30 calendar days) for comments and discussion prior to finalizing the report to ensure that all MOI Class EA requirements can be met through the EA study.

Please remove IO from your circulation list, with respect to this project, if there are no IO managed lands in the study area. In addition, in the future, please send only **electronic copies of notices** for any projects impacting IO managed lands to:
Keith.Noronha@infrastructureontario.ca

Thank you for the opportunity to provide initial comments on this undertaking. If you have any questions on the above I can be reached at the contacts below.

Sincerely,

Lisa Myslicki
Environmental Advisor, Environmental Management
Infrastructure Ontario
1 Dundas Street West,
Suite 2000, Toronto, Ontario
M5G 2L5
(416) 212-3768
lisa.myslicki@infrastructureontario.ca

* Below are the acronyms for agencies/ministries listed in the above letter
OLC: Ontario Lands Corporation
ORC: Ontario Realty Corporation
PIR: Public Infrastructure and Renewal
MGS: Ministry of Government Services
MBS: Management Board and Secretariat
MOI: Ministry of Infrastructure
MTO: Ministry of Transportation
MNR: Ministry of Natural Resources
MEI: Ministry of Energy and Infrastructure
September 18, 2012

Infrastructure Ontario
1 Dundas Street West,
Suite 2000, Toronto, Ontario
M5G 2L5

Attention: Ms. Lisa Myslicki, Environmental Advisor, Environmental Management

Huronntario-Main LRT Project, Preliminary Design/TPAP Phase (2011 – 2013)
Re: MOI Class Environmental Assessment Process

Dear Ms. Myslicki,

Thank you for your September 11, 2012 letter response to our project introductory notification and information package, in which you described Infrastructure Ontario’s (“IO”) mandate as strategic manager of the provincial government’s real property assets.

In recognition that IO manages lands that fall within our study area, and that the project may impact IO managed properties and/or the activities of tenants present on IO-managed lands, we have engaged in consultation with stakeholders that may be affected, including Hydro One and MTO. Identification of these stakeholders has been based on information assembled during the preceding Hurontario/Main Street Corridor Master Plan phase, as well as our own investigations into the ownership/management of potentially affected lands adjoining the Hurontario-Main corridor.

We are currently in the process of finalizing the Preferred Concept for the LRT project. Once this phase has been completed, we will be able to more definitively identify IO property that may be affected. In the interim, we will continue to consult with IO, IO tenants and other provincial agencies that own land in the study area.

With respect to potential impacts to heritage resources on IO-managed lands, our cultural heritage resources consultant has been provided with a copy of your letter and is familiar with IO’s Heritage Management Process.

We also recognize that IO is obligated to complete due diligence for any realty activity on IO-managed lands, including land disposition, leasing and licensing (most likely for this project) and this has been incorporated the project work scope and timelines. The project is proceeding under the Transit Project Assessment Process (O.Reg. 231/08) and will account for the environmental components prescribed in the Ontario Environmental Assessment Act under the Regulation. Per your request, IO will receive a
copy of the Draft Environmental Project Report for information and comment, if IO-managed lands are potentially affected by the project.

In the context of the MOI Class EA, if the need for an environmental assessment is determined in consultation with your office, it will be prepared in accordance with the parent Class EA. This process may include consideration of substitution of the TPAP EA for the IO EA if it incorporates IO’s applicable Class EA requirements. This would include all prescribed references to the corresponding undertaking in the MOI Class EA; consultation with IO client agencies; and completion of the required technical investigations, which would allow IO to defer to the TPAP EA. Again, the potential and procedural details for substitution would be determined through consultation with your office.

Your request with respect to sending only electronic copies of notices to Mr. Keith Noronha has been noted and our contact list has been updated accordingly. As indicated above, we will continue to consult your office on environmental assessment matters unless you advise us differently.

Thank you again for your advice on this matter.

Sincerely,

Ian K. Upjohn, MCIP, RPP
Environmental Lead
SNC-Lavalin Team
Tel.: 416.252.5311
Direct Line: 416.679.6289
Email: ian.upjohn@snclavalin.com

cc: Matthew Williams, City of Mississauga, Project Lead
    Khurram Tunio, City of Brampton, Senior Project Engineer
    C. McCarthy/T. Brenham/S. Webster, SLI
    A. Curtis, SDG
October 5, 2012

Re: Streamlining the Ministry of Infrastructure’s (MOI) Class EA with other Class EA processes

Thank for Contacting Infrastructure Ontario (formerly the Ontario Realty Corporation) regarding the proposed undertaking and MOI (IO) Class EA requirements.

IO is required, by the MOE and the environmental assessment act, to follow the “MOI Class EA Process for Realty Activities Other Than Electricity Projects (approved April 2004, amended September 11, 2008)” – now MOI - prior to any activities on IO managed lands.

The Class EA parent document can be found at:
http://www.infrastructureontario.ca/What-We-Do/Buildings/Realty-Services/Environmental-Management/Class-EAs/

Issue #1: Identification of undertaking(s) and trigger to MOI Class EA

Generally, for EA projects, IO is consulted regarding the applicability of alternative Class EA processes and requirements when a proponent’s proposed undertaking may directly or indirectly affect lands or facilities owned by MOI and managed by IO. This would ensure that the correct undertaking described in the MOI Class EA is clearly identified and addressed. Please refer to section 9.7 of the Class EA, referenced in the preceding section, which explains that despite a proponent receiving an approval under the EA Act (“Act”), MOI, IO, or an authorized agency under MOI (“MOI/IO/Agency”), are still responsible for meeting the requirements of the Act when carrying out an undertaking on behalf of the proponent. (For example, this means that if a proponent’s undertaking includes acquiring an easement or transfer of ownership of land owned by MOI and transacted by IO on the ministry’s behalf, then such realty activities to be conducted by IO must be clearly identified and assessed in the proponent’s EA study; otherwise, MOI/IO/Agency must conduct a separate EA under the MOI Class EA process to meet its requirements under the Act.)

In addition, please ensure to include any lands that have been, or are subject to, an easement that include Hydro One towers and transmission lines on Bill 58 lands. MOI/IO’s realty undertaking should be clearly identified, and be made separate from undertakings conducted by Hydro One. MOI is the owner for all Bill 58 lands and is solely responsible for granting any easements or conducting any disposition of such lands to another party.

For a description of Bill 58 lands and the Provincial Secondary Land Use Program please follow the following link: http://www.ontariorealty.ca/What-We-Do/Managing-Hydro-Corridor-Lands/PSLUP.htm

The proponent is requested to identify how the EA meets MOI/IO’s minimum EA requirements by referring to the seven point analysis, as described in section 4.2, Step B1 of the MOI Class EA and detailed within the Consultation and Documentation Report template located in Appendix 3.

According to the MOI Class EA, an undertaking is defined on Page 9-11, in the Glossary of Terms. Undertakings are broken down into components; that is, one or more actions which may apply to one or more subgroups. MOI/IO/Agency undertakings need to be identified as real
estate activities, including the issuance of a license/lease, granting of an easement, or disposition. Each undertaking has a different category level of consultation and analysis associated with it, as identified in Figure 2.2 EA Category Listing Matrix of the MOI Class EA.

**Issue #2: Identifying the associated EA Category and ability to defer to an alternative EA**

Please note that different undertakings in combination with the type of land to be impacted, determines the IO EA Class. As an example, granting an easement on IO managed lands is considered a Category “B” and an easement on Bill 58 lands, managed by Hydro One, is considered a Category “A”. Category “A” is applied to undertakings that are minor in scale and have minimal or no adverse environmental effects. Based on the criteria of a Category “A” EA and depending on the scale of the area to be impacted by an undertaking, proper due diligence of an easement, impacting hydro corridor land, could require an elevation to a Category “B”. Please note that licenses and leases on Hydro corridor lands are considered a Category “A” and therefore, generally do not require any EA work; however, the purchase of Hydro corridor lands is considered a Category “B” EA, according to the Figure 2.2 Category Listing Matrix.

As stated previously, the EA must meet the 7 point analysis identified in the MOI/IO’s Class EA.

**Issue #3: Consultation with IO Stakeholders**

MOI/IO/Agency is required to circulate major stakeholders prior to land transfer, dispositions or easements, depending on the type of land to be impacted and it is possible under the MOI Class EA Process to defer to an alternative EA, if the client ministry or agency’s EA circulates the appropriate stakeholder. One major stakeholder that is required to be contacted is the MNR. Often the MNR is not a significant contributor to the MEA process; however, they are to IO’s Class EA, as the MNR has a greater interest in IO projects (being another government agency). This is where confusion lies between a Municipal Class EA and IO’s Class EA. Because of MNR’s significant role in the IO EA, especially where there are significant natural features, we need to ensure that there comments are addressed. It would create potential future problems, with the MNR, if we choose to ignore there concerns, especially when they could be quite reasonable. As such, a “no response” is not sufficient for IO. IO will require a letter indicating the MNR is choosing to decline and this documentation of consultation with the stakeholder is required.

**Issue #4: Phase I Environmental Site Assessment and Stage 1/II Archaeological Assessments/Cultural Heritage Assessments**

Depending on the type of realty activity to be completed, there is potential, based on the MOI Class EA Process, that a Phase I/II Environmental Site Assessment (ESA), Stage I/II Archaeological Assessment or Cultural Heritage Assessment may be required. Please note that if a Phase I ESA was not completed within the EA document, for the IO managed lands, the deferral to the EA is still possible; however, the Phase I ESA must still be completed prior to disposition or granting of the easements according to the standards indicated. Please note that any required technical reports are to be procured and paid for by the proponent of the project.

IO has certain standards for a Phase I ESA. The Phase I Environmental Site Assessment must be conducted in accordance with Schedule D of the Revised Brownfield Regulation. In addition to a site visit and interviews, the site history and records review shall include all the relevant
sources to ensure compliance with Schedule D. Although Part VII is focused on risks to soil and groundwater, IO expects the Phase I ESA work done for this assignment to include investigation and comment on designated substances and typical hazardous building materials. This is intended to capture topics such as asbestos, PCB-containing electrical equipment, lead-based paints, mercury containing materials, UFFI, mould, etc. With respect to Section 16(3)(c) of Schedule D, the likelihood of contaminants affecting the property must be presented as either high, medium, low or minimal for each potential risk identified. Please note that *full* reliance of the report is required to be extended to the IO **without any liability cap**. IO will require written confirmation of this, from the proponent’s consultant.

**Issue #5: Ability to defer**

The ability to defer to an alternative EA is determined if the EA meets MOI’s Class EA seven point analysis. The identification of the MOI realty undertaking and sufficient consultation must be adequately documented. When the EA has been reviewed by IO staff, and approval to defer has been granted, then the proponent will be required to complete and sign a deferral sheet acknowledging that the EA meets IO’s/MOI’s Class EA requirements.

**Concluding Remarks**

If the proposed undertaking has a potential to cause impacts to MOI-owned property, it also has the potential to cause net negative environmental effects. Our comments are intended to ensure that outstanding issues of environmental, socio-economic and cultural heritage concerns related to this property, as well as complying with all regulations, will be appropriately addressed prior to the commencement of this undertaking. IO looks forward to continuing communication regarding this project.

Please note that in addition to the above requirements, and depending on the type of agreement, IO may also be required to circulate First Nations regarding the undertaking. Should First Nations consultation be a requirement of your EA, I recommend you contact IO for further details regarding this subject.

Please contact the undersigned if you have any questions.

Regards,

Lisa Myslicki
Environmental Advisor
Infrastructure Ontario – Environmental Management
1 Dundas Street West,
Suite 2000, Toronto, Ontario
M5G 2L5
(416) 212-3768
lisa.myslicki@infrastructureontario.ca
Metrolinx
February 6, 2014

Janice Baker
City Manager
City of Mississauga
300 City Centre Drive
Mississauga, ON L5B 3C8

John Corbett
Chief Administrative Officer
City of Brampton
2 Wellington Street West
Brampton, ON L6Y 4R2

Dear Ms. Baker & Mr. Corbett,

RE: Hurontario-Main Light Rail Transit Roles and Responsibilities

As the Hurontario-Main Light Rail Transit (HMLRT) project in Mississauga and Brampton moves forward into the Transit Project Assessment Process (TPAP) in 2014 and towards next stages of implementation design, Metrolinx and their municipal partners must define the roles and responsibilities of each stakeholder.

Metrolinx supports the full vision of the HMLRT, stretching from Port Credit to Downtown Brampton, as outlined in the Big Move regional transportation plan, the 2010 Hurontario-Main LRT Benefits Case Analysis, and the Investment Strategy.

Metrolinx will officially join Mississauga and Brampton as co-proponent for the TPAP, providing support to the cities as they continue to lead the process with their current project team. In parallel to the TPAP, Metrolinx looks forward to working with the cities on further defining the path forward to project delivery, including:

- An update to the business case to support community relations, communications, and the seeking of funding from all potential sources;
- Submission of a PPP Canada federal funding application; and
- Development of an eventual Master Agreement to facilitate Mississauga, Brampton, and Metrolinx working together.

The HMLRT remains an unfunded priority Next Wave project in the Metrolinx regional transportation plan. Metrolinx will continue to advance the discussion around successful implementation of the Investment Strategy and look to Mississauga and Brampton for continued
support in this critical conversation.

I look forward to building on the excellent cooperation and partnership demonstrated to date on this exciting and important project.

Sincerely,

Bruce McCuaig
President and Chief Executive Officer

---

c. Martin Powell, Commissioner, Transportation and Works, City of Mississauga
   Ed Sajecki, Commissioner, Planning and Building, City of Mississauga
   Paul Mitcham, Commissioner, Community Services, City of Mississauga
   Gary Kent, Commissioner & Chief Financial Officer, Corporate Services, City of Mississauga
   Geoff Wright, Director, Transportation Project Office and Business Services, City of Mississauga
   Matthew Williams, Project Lead, LRT, City of Mississauga
   Julian Patteson, Chief, Public Services Officer, City of Brampton
   Marilyn Ball, Chief, Planning and Infrastructure Services, City of Brampton
   Peter Simmons, Chief, Corporate Services, City of Brampton
   Dennis Cutajar, Chief, Operating Officer, City of Brampton
   Klaus Stolch, Director, Engineering & Construction, City of Brampton
   Robert Siddall, Chief Financial Officer, Metrolinx
   Jack Collins, Executive Vice President, Rapid Transit Implementation, Metrolinx
   Leslie Woo, Vice President, Policy, Planning & Innovation, Metrolinx
   Judy Pfeifer, Vice President, Strategic Communications, Metrolinx
   Michael Wolczyk, Vice President, GO Capital Infrastructure, Metrolinx
   Michael Sutherland, Director, Economic Analysis & Investment Strategy, Metrolinx
February 6, 2014

Agatha Garcia-Wright
Director, Environmental Approvals Branch
Ontario Ministry of the Environment
2 St. Clair Avenue West, Floor 12A
Toronto, ON
M4V 1L5

Dear Ms. Garcia-Wright,

RE: Hurontario-Main Light Rail Transit Proponent

I would like to take this opportunity to advise the Ministry of the Environment (the Ministry) that Metrolinx will officially join Mississauga and Brampton as co-proponent for the Hurontario Main Light Rail Transit project (HMLRT).

Metrolinx will bring our expertise in the development, planning and delivery of transit projects to the transit project assessment process for the HMLRT. Metrolinx has previously been involved as a major stakeholder throughout the preliminary planning and feasibility stages of the HMLRT and are now formalizing our role as co-proponent in advance of issuing the HMLRT’s Notice of Commencement.

As co-proponent Metrolinx, along with Mississauga and Brampton, will play a key role in the delivery of the HMLRT though providing direct support, leadership and management of the project throughout the transit planning assessment process (TPAP). The Environmental Project Report for the HMLRT will further describe Metrolinx’s role as co-proponent for the HMLRT.

Attached to this letter is correspondence from myself to the Chief Administrative Officers of both municipalities that highlight the role Metrolinx will play as a co-proponent on this project.

Please do not hesitate to contact Jason Ryan, Manager of Environmental Programs at (416)869-3600 ext.5478 or jason.ryan@gotransit.com if you have any questions related to this exciting and important project.

Sincerely,

Bruce McCuaig
President & Chief Executive Officer
c. Janice Baker, City Manager/CAO, City of Mississauga
   John Corbett, CAO, City of Brampton
   Robert Siddall, Chief Financial Officer, Metrolinx
   Jack Collins, Executive Vice-President, Rapid Transit Implementation, Metrolinx
   Leslie Woo, Vice-President, Policy, Planning & Innovation, Metrolinx
   Judy Pfeifer, Vice-President, Strategic Communications, Metrolinx
   Jason Ryan, Manager, Environmental Programs, Metrolinx
Ministry of Aboriginal Affairs
Reference: 202
June 1, 2012

Sandy E. Webster, MA
Communications Director
SNC – Lavalin Consultant Team
195 The West Mall
Toronto, ON, M9C 5K1

Re: Hurontario – Main Light Rail Transit (LRT) Project

Dear Ms. Vader:

Thank you for informing the Ministry of Aboriginal Affairs (MAA) of your project. Please note that MAA treats all letters, emails, general notices, etc. about a project as a request for information about which Aboriginal communities may have rights or interests in the project area.

As a member of the government review team, the Ministry of Aboriginal Affairs (MAA) identifies First Nation and Métis communities who may have the following interests in the area of your project:

- reserves;
- land claims or claims in litigation against Ontario;
- existing or asserted Aboriginal or treaty rights, such as harvesting rights; or
- an interest in your project’s potential environmental impacts.

MAA is not the approval or regulatory authority for your project, and receives very limited information about projects in the early stages of their development. In circumstances where a Crown-approved project may negatively impact a claimed Aboriginal or treaty right, the Crown may have a duty to consult the Aboriginal community advancing the claim. The Crown often delegates procedural aspects of its duty to consult to proponents. Please note that the information in this letter should not be relied on as advice about whether the Crown owes a duty to consult in respect of your project, or what consultation may be appropriate. Should you have any questions about your consultation obligations, please contact the appropriate ministry.

You should be aware that many First Nations either have or assert rights to hunt and fish in their traditional territories. For First Nations, these territories typically include lands and waters outside of their reserves.
In some instances, project work may impact aboriginal archaeological resources. If any Aboriginal archaeological resources could be impacted by your project, you should contact your regulating or approving Ministry to inquire about whether any additional Aboriginal communities should be contacted. Aboriginal communities with an interest in archaeological resources may include communities who are not presently located in the vicinity of the proposed project.

With respect to your project, and based on the brief materials you have provided, we can advise that the project appears to be located in an area where First Nations may have existing or asserted rights or claims in Ontario's land claims process or litigation, that could be impacted by your project. Contact information is below:

<table>
<thead>
<tr>
<th>Mississaugas of the New Credit First Nation</th>
<th>Chief Bryan LaForme</th>
</tr>
</thead>
<tbody>
<tr>
<td>2789 Mississauga Rd., R.R. #6</td>
<td>(905) 768-1133</td>
</tr>
<tr>
<td>HAGERSVILLE, Ontario</td>
<td>(Fax) 768-1225</td>
</tr>
<tr>
<td>NOA 1HO</td>
<td><a href="mailto:brylaniforme@newcreditfirstnation.com">brylaniforme@newcreditfirstnation.com</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Six Nations of the Grand River Territory</th>
<th>Chief William K. Montour</th>
</tr>
</thead>
<tbody>
<tr>
<td>P.O. Box 5000</td>
<td>(519) 445-2201</td>
</tr>
<tr>
<td>Ohsweken, Ontario</td>
<td>(Fax) 445-4208</td>
</tr>
<tr>
<td>N0A 1M0</td>
<td><a href="mailto:wkm@sixnations.ca">wkm@sixnations.ca</a></td>
</tr>
<tr>
<td></td>
<td><a href="mailto:arleenmaracle@sixnations.ca">arleenmaracle@sixnations.ca</a></td>
</tr>
</tbody>
</table>

| Haudenosaunee Confederacy                | Hohahes Leroy Hill    |
| Chiefs Council                           | Secretary to Haudenosaunee Confederacy |
| 2634 6th Line Road                       | Chiefs Council        |
| RR 2 Ohsweken,                           | Cell 519 717 7326     |
| ON N0A 1M0                               | jocko@sixnationssns.com |

Through Aboriginal Affairs and Northern Development (AANDC), the Government of Canada sometimes receives claims that Ontario does not receive, or with which Ontario does not become involved. AANDC's Consultation and Accommodation Unit (CAU) established a "single window" to respond to requests for baseline information held by AANDC on established or potential Aboriginal Treaty and rights. To request information from the Ontario Subject Matter Expert send an email to: UCA-CAU@aadnc-aandc.gc.ca

Additional details about your project or changes to it that suggest impacts beyond what you have provided to date may necessitate further consideration of which Aboriginal communities may be affected by or interested in your undertaking. If you think that further consideration may be required, please bring your inquiry to whatever government body oversees the regulatory process for your project. MAA does not wish to be kept informed of the progress of the project; please be sure to remove MAA from the mailing list.
The information upon which the above comments are based is subject to change. First Nation or Métis communities can make claims at any time, and other developments can occur that could result in additional communities being affected by or interested in your undertaking.

Yours truly,

Wendy Cornet
Manager, Consultation Unit
Aboriginal Relations and Ministry Partnerships Division
Ministry of Environment
March 30, 2012

Ministry of the Environment
Environmental Assessment and Approvals
2 St. Clair Avenue West, Floor 12A
Toronto, ON M4V 1L5

Attention: Mr. Gavin Battarino, Project Officer, EA Project Coordination

Hurontario-Main LRT Project, Preliminary Design/TPAP Phase (2011 – 2013)
Re: Light Rail Vehicle Sound Characteristics and Air Quality Modelling

Dear Mr. Battarino,

Pursuant to discussions at our February 7, 2012 meeting with Ministry of the Environment staff to discuss the noise and vibration criteria proposed for use in the environmental assessment on the subject project, please find attached correspondence from J. E. Coulter Associates Limited addressing Action Item 3.6 from the meeting (providing MOE with additional information and rationale for use of the proposed noise modelling procedure).

In addition, with respect to meeting Action Item 4.2 (MOE request that existing ambient air quality be compared to future ambient air quality), this will confirm that our team will provide the requested information as part of the air quality impact assessment component.

With respect to the noise impact assessment modelling procedure, the Coulter letter outlines the reasons for the proposal to adopt the noise level equivalent of two medium-sized trucks as a proxy for each Light Rail Vehicle (LRV) for use in the STAMSON model, rather than using the CLRV/ALRV vehicle currently used by STAMSON, based on current LRV technology in use internationally, including the Bombardier Flexity Low Floor Light Rail Vehicle that is proposed to replace existing CLRV streetcars in Toronto in the near term. It is noteworthy that this approach has already been used and approved by MOE in the Toronto Eglinton Crosstown LRT and the Hamilton B-Line LRT noise impact assessments, and used in the Waterloo LRT noise impact assessment.

The Cities of Mississauga and Brampton intend to procure modern LRV technology for use on the Hurontario-Main LRT project. CLRV/ALRV technology is obsolete and is being phased out of
operation. This technology would/could not be used on the Hurontario-Main LRT project, since it does not meet the proposed system criteria guiding the design of the project.

The Coulter letter cites noise characteristics for suitable LRVs for your consideration, including some older models that meet the aforementioned system criteria. Selected graphic representations of these vehicles are included with this package.

We trust that this information package satisfactorily addresses the MOE concerns expressed at our February 7 meeting, but are prepared to discuss this matter further with ministry staff, as required. If staff still have concerns or require clarification of the rationale presented herein, please advise me by April 18, 2012.

We look forward to reaching agreement on a mutually acceptable basis for assessing potential noise and vibration impacts associated with this undertaking and moving forward with the environmental assessment process in a timely manner.

Sincerely,

Ian K. Upjohn, MCIP, RPP
Environmental Lead
SNC-Lavalin Team
Tel.: 416.252.5311
Direct Line: 416.679.6289
Email: ian.upjohn@snclavalin.com

cc: Matthew Williams, City of Mississauga, Project Lead
Khurram Tunio, City of Brampton, Senior Project Engineer
March 23, 2012

SNC-Lavalin Inc.
195 The West Mall
Toronto, Ontario
M9C 5K1

Attention: Mr. Ian K. Upjohn

Re: HURONTARIO-MAIN LRT
PRELIMINARY DESIGN/TPAP
LIGHT RAIL VEHICLE SOUND CHARACTERISTICS

Gentlemen:

At the request of SNC-Lavalin Inc., J. E. Coulter Associates Limited has been tasked with modelling the potential noise and vibration impacts associated with the proposed Hurontario-Main Light Rail Transit (LRT) system, for input to the preliminary design and environmental assessment process under O.Reg. 231/08 (Transit Projects and Metrolinx Undertakings).

On February 7, 2012 a meeting with Ministry of the Environment staff was arranged by the Hurontario-Main LRT Project Team to discuss the noise and vibration criteria proposed for use in the environmental assessment. Based on experience with similar vehicles, this office has proposed to use, as a proxy, two medium-sized trucks to represent the sound characteristics of a light rail vehicle, since this is deemed to more accurately represent the actual noise generated by the prospective vehicles that will be used on the Hurontario-Main project than the noise generated by the vehicle currently used in MOE’s noise model (STAMSON). Subsequent to the meeting with the Ministry of the Environment, in which Ministry staff expressed concerns over the use of this approach, the following rationale has been prepared to demonstrate that newer, light rail vehicles (LRVs) are significantly quieter than the 35-year-old Canadian Light Rail Vehicle (CLR) and Articulated Light Rail Vehicle (ALRV) streetcars in use in Toronto. The ALRVs are longer (23 m long vs. 15 m long), articulated versions of the CLRV.

MOE staff have suggested that the sound calculation for the new LRVs be based on STAMSON’s (ORNAMENT’s) custom Articulated Light Rail Vehicle (ALRV) profile to more conservatively represent the future noise environment. In the assessment method proposed by the Project Team for the Hurontario-Main LRT, each full length LRV would be modelled as two medium-sized trucks in ORNAMENT. The suggestion from the MOE is that the new vehicle be modelled as a single ALRV profile. At a speed of 40 km/h, two medium-sized trucks together in STAMSON produce a maximum passby sound level of approximately 74 dBA at 15 m (equivalent to 80 dBA
at 7.5 m) while a single ALRV in STAMSON produces a sound level of approximately 79 dBA at 15 m (equivalent to 85 dBA at 7.5 m). The difference in the two approaches is that the ALRV generates sound levels that are approximately 5 dB higher than the case of two medium-sized trucks, which is considerable: equal to the increase in sound level that is deemed to be "significant" under the EA process. A 5 dB increase in overall sound levels requires consideration of mitigation under the current noise impact assessment protocol.

Regarding the MOE suggestion to use a single ALRV in place of the proxy of two medium-sized trucks, we note the following:

1. There are a number of information sources from around the world that indicate that modern LRVs are noticeably quieter than the older vehicles still in service in Toronto (i.e., the CLRV and ALRV). This office has directly observed, without measurements, new light rail transit systems in Bordeaux, Paris, Brussels, Jerusalem, and Karlsruhe and we have found the LRVs on those lines to be significantly quieter than those streetcars currently in use in Toronto.

2. The existing TTC specification for its new LRVs sets a maximum sound pressure level limit of 82 dBA at 7.5 m from an LRV moving at 40 km/h on concrete-encased track. It also sets a maximum sound pressure level limit equivalent to 82 dBA at 7.5 m from an LRV accelerating from standstill up to 30 km/h on concrete encased track. These are maximum allowable sound levels from any given vehicle and typically occur when the vehicle is at full speed and travelling under full load. The ALRV profile in STAMSON is based on a vehicle that averages approximately 85 dBA maximum at 7.5 m. In reality, the typical LRV will operate a good deal of the time at lower speeds and/or lower loads through most of the corridor. This will result in an average sound level that is lower by several dB than the maximum allowable sound level specification (of 82 dBA at 7.5 m). This is true for trucks and cars modelled by ORNAMENT as well; they also use average maximum pass-by sound levels, not the highest specified sound level under SAE standards J2889 (road vehicles) and J366 (heavy vehicles).

The data for the various LRT systems/platforms cited are summarized in Table 1, below. The sound data have been normalized to a reference distance of 15 m and 7.5 m so that they are more comparable.
Table 1: Average Maximum Vehicle Sound Levels from Other LRT Systems/Platforms Compared to STAMSON

<table>
<thead>
<tr>
<th>Vehicle Name/Description</th>
<th>Location</th>
<th>Maximum Sound Level Normalized to 15 m (dBA)</th>
<th>Maximum Sound Level Normalized to 7.5 m (dBA)</th>
<th>Speed (km/h)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alstom Citadis 302</td>
<td>Jerusalem, Israel</td>
<td>69</td>
<td>75</td>
<td>40</td>
</tr>
<tr>
<td>Alstom Citadis 302</td>
<td>La Rochelle, France</td>
<td>70</td>
<td>76</td>
<td>40</td>
</tr>
<tr>
<td>Bombardier Flexity Toronto Low Floor LRV</td>
<td>Expected Sound Level</td>
<td>72</td>
<td>78</td>
<td>40</td>
</tr>
<tr>
<td>Bombardier Flexity Outlook</td>
<td>Milan, Italy</td>
<td>66</td>
<td>72</td>
<td>40</td>
</tr>
<tr>
<td>Siemens S70 Avanto</td>
<td>Houston, Texas</td>
<td>75</td>
<td>81</td>
<td>56</td>
</tr>
<tr>
<td>Cobra</td>
<td>Zurich, Switzerland</td>
<td>72</td>
<td>78</td>
<td>42</td>
</tr>
<tr>
<td>Combino</td>
<td>Berne, Switzerland</td>
<td>72</td>
<td>78</td>
<td>40</td>
</tr>
<tr>
<td>AnsaldoBreda SIRIO</td>
<td>Specifications/Limit</td>
<td>71</td>
<td>77</td>
<td>40</td>
</tr>
<tr>
<td>Bombardier Flexity Swift</td>
<td>Porto, Portugal</td>
<td>65</td>
<td>71</td>
<td>60</td>
</tr>
<tr>
<td>Two Medium-Sized Trucks</td>
<td>ORNAMENT (STAMSON)</td>
<td>74</td>
<td>80</td>
<td>40</td>
</tr>
<tr>
<td>ALRV</td>
<td>STAMSON</td>
<td>79</td>
<td>85</td>
<td>40</td>
</tr>
</tbody>
</table>

3. Bombardier’s Flexity Low Floor Light Rail Vehicle (proposed to replace existing CLRV streetcars in Toronto) is expected to produce 78 dBA maximum at 7.5 m while moving at 40km/h on concrete-encased track, based on data provided by the manufacturer. This is 6 dB lower than the ALRV profile in STAMSON. The Bombardier Flexity LFLRV is similar to what is also proposed for new light rail transit lines proposed for various municipalities in Ontario. These measurements confirm our previous assertions that the future LRVs are substantially quieter than the ALRV model in STAMSON would otherwise imply.

4. The Bombardier Flexity Swift used in Portugal’s Porto Expresss line was measured to produce 71 dBA at 7.5 m while travelling at a speed of 60 km/h. This vehicle is also very similar to what is to replace the TTC’s CLRVs and ALRVs, and could also be similar to the vehicles used on the Eglinton-Scarborough Crosstown LRT.

5. Recent measurements of the vehicle chosen for the Jerusalem LRT indicate maximum sound levels of 75 dBA at a distance of 7.5 m when the vehicle is moving at 40 km/h on concrete track. These actual measurements are 9 dB lower than the custom ALRV profile in
STAMSON. The Jerusalem LRV is an Alstom Citadis 302. Additional measurements near Alstom’s facility in La Rochelle, France yielded a similar maximum sound level of 76 dBA at a distance of 7.5 m when the vehicle was travelling at 40km/h on concrete encased track.

6. One of the main changes over previous technologies is that modern LRVs incorporate wheel covers that reduce the wheel noise radiation. In addition, the track is to be resiliently-encased in rubber, which helps damp the track noise radiation. The wheels are damped and, to meet noise specifications, the undercarriages often incorporate sound absorption. These measures have helped reduce the sound levels generated by new vehicles.

7. The Milan LRT in Italy was measured to produce 72 dBA at 7.5 m maximum while travelling at 40km/h. The Milan LRT uses Bombardier’s Flexity Outlook vehicles, similar to those proposed for the former Transit City network in Toronto and what will likely be used for other LRT systems in Ontario.

8. The Siemens S70 Avanto LRT used on Houston’s Metro Rail produced a maximum sound level of 75 dBA at 15 m while running at 35 mph (approximately 56 km/h).

9. The Cobra trams operated by VBZ in Zurich produce maximum sound levels of approximately 78 dBA at 7.5 m while travelling at 42 km/h. These vehicles are somewhat older and have accrued mileage of over 6,600 km. These sound level measurements were taken at a point 637 km after the vehicle’s last rail grinding/wheel trueing.

10. The Combino trams operated by Bernemobil in Berne produce maximum sound levels of 78 dBA at 7.5 m while travelling at 40 km/h, even after more than 21,000 km travelled.

11. The AnsaldoBreda SIRIO LRV platform (for use in Europe) has been specified to produce a maximum sound level of approximately 77 dBA at 7.5 m while travelling at 40 m/hr.

12. According to the ORNAMENT procedure, a single medium truck produces 71 dBA at 15 m while travelling at 40 km/h. Thus, modelling each LRV consist (train) as two medium-sized trucks (with a resultant 73-74 dBA maximum at 15 m) slightly overestimates the LRT system noise, based on the measurements from systems currently in use in other parts of the world, but is deemed to be representative of the actual sound levels that can be expected from this technology, without undue overestimation.

13. The TTC expects its replacement streetcars to be delivered in 2013. By the time the Hurontario-Main LRT begins operation, there may not be a CLRV or ALRV left in operation in Ontario, making any noise assessment based on the use of this technology completely obsolete by the time the project is brought into operation (proposed to be in 2015).
14. Finally, MOE staff have indicated that trucks cannot be used to represent rail-bound vehicles as they are different modes of transportation. It should be noted that ORNAMENT is based on A-weighted sound levels integrated over a pass-by to produce an SEL (sound exposure level, also known as single event level). The SELs are then summed, after taking the anti-log and squaring, and are corrected for the desired time period. The logarithm is then taken and adjusted to obtain an equivalent sound level (Leq). Accordingly, it does not matter if the sound is coming from a truck or a rail vehicle.

15. The primary difference in the propagation of sound between using a truck profile and the LRT profile is the source height. The LRT source height is closer to the ground than the source height of a medium-sized truck. The overhead catenary does not figure into the noise generation issue at normal street transit operating speeds. Since the topography throughout most of the project area corridors (sections where there is dense development on either side of the roadway) is hard reflective ground, ground effect is irrelevant, and the source height has no bearing on the final sound level. Thus, there would be no difference in the distance correction effect and the topography effect between rail and automotive sources. For larger setbacks, the low source height of the LRT will create more ground effect than that for trucks. There will also be a greater effect from any barriers or obstructions. Hence, using the truck propagation model for the transit is conservative (i.e., the sound level calculated is overestimated) at larger distances and representative at shorter distances. Thus, the profile of two medium-sized trucks more closely matches the sound emission of the new LRVs than the CLRVs/ALRVs currently used in STAMSON.

Given the above points, we believe that modelling the Hurontario-Main LRT project's vehicles as CLRVs or ALRVs, as suggested by MOE, would exaggerate the estimated future sound levels. Using the actual expected sound levels of the proposed vehicles, in our opinion, would better serve the public's need for accurate, up-to-date information as part of the Transit Project Assessment Process. This approach has already been used and approved by MOE in the Toronto Eglinton Crosstown LRT and the Hamilton B-Line LRT noise impact assessments and has been used in the Waterloo LRT noise impact assessment.

The proponent has a responsibility to provide an accurate assessment of the potential environmental effects of the project to the community, including future riders, pedestrians and cyclists using the corridor, and people living nearby. Exaggerating the impacts by being overly conservative can create unnecessary anxiety and misinformed opposition from stakeholders. We recommend that the potential noise impacts of the project be represented as accurately as possible in the report, using the proposed modelling approach, and that the report include a sensitivity analysis that points out the implications if the transit project proponent does not adopt current industry-accepted best noise management practices and uses older LRV technology due to financial or other constraints.

We trust the above will assist in the review of this project. Should there be any questions, please do not hesitate to contact the undersigned.
Yours truly,

J. E. COULTER ASSOCIATES LIMITED

Sam Kulendran, B.A.Sc.

John E. Coulter, B.A.Sc., P.Eng.

SK:jcc
Noise Levels for LRT

S70 (Siemens):

70% low-floor LRT
Interior 72 dBA
Exterior 78 dBA (Vehicle running at 65 mph)

**Variotram (German: Variobahn):**

100% low-floor Tram

$L_{pA_{\text{max}}}$ (maximum pass-by noise level), 25m, ISO 3095 :68-70 dBA At 80km/h

TEL (Transit exposure level), 7.5m: 76 dBA

**DT4 Underground Trainset (German):**

Subway

$L_{pA_{\text{max}}}$, 25m, ISO 3095 :70 dBA At 80km/h

TEL, 7.5m: 77 dBA

**Cobra:**

100% low-floor Tram

Sound exposure level right or left of the tram in 7.5m spacing on asphalt:

- From right on asphalt: 75.1 dBA
- From left on asphalt: 75.9 dBA

Sound exposure level right or left of the tram in 7.5m spacing on openwork:

- From right on asphalt: 72.2 dBA
- From left on asphalt: 71.7 dBA
Combino:

100% low-floor Tram

Sound exposure level right or left of the tram in 7.5m spacing on asphalt:

From right on asphalt: 78.1 dBA

From left on asphalt: 79.3 dBA

**Sirio:**

100% low-floor Tram

The noise level in the conditions specified in prEN ISO 3381 and prEN ISO 3095, will not exceed the values stated below:

<table>
<thead>
<tr>
<th>Speed (km/h)</th>
<th>Noise level in interior (dBA) Pr EN ISO 3381</th>
<th>Noise level audible at 7.5m to the vehicle (dBA) Pr EN ISO 3095</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>74</td>
<td>80</td>
</tr>
<tr>
<td>40</td>
<td>72</td>
<td>77</td>
</tr>
<tr>
<td>0</td>
<td>65</td>
<td>61</td>
</tr>
</tbody>
</table>

### LRT:

<table>
<thead>
<tr>
<th>Method of Transportation</th>
<th>Pass-by Lmax (dBA)</th>
<th>Acceleration/ Deceleration (dB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LRT – Electric</td>
<td>72</td>
<td>60-65</td>
</tr>
<tr>
<td>(Scarborough Malvern Rapid Transit)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LRT – Diesel</td>
<td>74</td>
<td>NA</td>
</tr>
<tr>
<td>(Ottawa LRT)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The data was collected from 15m distance and 1.5m height at 65kph.


### Flexity Outlook tram:

100% low-floor light-rail tram

Summary of measured wayside sound pressure levels ($L_{Aeq}$) on the reference track

<table>
<thead>
<tr>
<th>Speed (km/h)</th>
<th>Bogie skirt</th>
<th>Driven bogies LpA</th>
<th>Non-driven bogie LpA</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>No</td>
<td>76.3</td>
<td>75.2</td>
</tr>
<tr>
<td>46</td>
<td>No</td>
<td>78.5</td>
<td>76.8</td>
</tr>
<tr>
<td>41</td>
<td>No</td>
<td>76.0</td>
<td>75.4</td>
</tr>
<tr>
<td>43</td>
<td>Yes</td>
<td>74.4</td>
<td>74.4</td>
</tr>
<tr>
<td>42</td>
<td>Yes</td>
<td>74.5</td>
<td>74.8</td>
</tr>
<tr>
<td>40</td>
<td>Yes</td>
<td>74.8</td>
<td>74.3</td>
</tr>
<tr>
<td>63</td>
<td>No</td>
<td>83.2</td>
<td>81.7</td>
</tr>
<tr>
<td>60</td>
<td>No</td>
<td>82.4</td>
<td>81.3</td>
</tr>
<tr>
<td>63</td>
<td>No</td>
<td>83.5</td>
<td>82.3</td>
</tr>
<tr>
<td>61</td>
<td>Yes</td>
<td>80.2</td>
<td>79.4</td>
</tr>
<tr>
<td>65</td>
<td>Yes</td>
<td>80.2</td>
<td>79.9</td>
</tr>
<tr>
<td>62</td>
<td>Yes</td>
<td>80.0</td>
<td>79.7</td>
</tr>
</tbody>
</table>

Measured sound pressure levels ($L_{Aeq}$) close to HVAC sources

Sound from outside – 7.5m aside from the vehicle, 1.2m height from the ground:

From the driver’s cab – 50.5 dBA
From the passenger compartment – 54.5dBA
Inside noise level – 3m height from the ground:
From the driver’s cab – 59.0 dBA
From the passenger compartment – 64.4 dBA
Inside noise level – 4.5m height from the ground:
From the driver’s cab – 67 dBA
From the passenger compartment – 73 dBA

The French Standard Tram (TFS) in Paris:
100% low-floor light-rail tram
Noise contribution of the TFS auxiliary “CVS”
data on pass-by at 20 km/h – 60 dBA
Noise contribution of the TFS motor
data on pass-by at 40 km/h – 70 dBA
Noise contribution of the TFS rolling noise
data on pass-by at 40 km/h – 76 dBA
Noise level at 7.5m from the vehicle
At 20km/h, wheel – 60 dBA, motor – 54 dBA
At 40km/h, wheel – 72 dBA, motor – 66 dBA
At 60km/h, wheel – 79 dBA, motor – 74 dBA

**CITADIS 302 in Paris:**

100% low-floor light-rail tram

Noise contribution of the TFS motor
data on pass-by at 20 km/h – 63 dBA

Noise contribution of the ventilation of driver’s cab
data on pass-by at 40 km/h – 61 dBA

Noise contribution of the TFS auxiliary “CVS”
data on pass-by at 40 km/h – 66 dBA

Noise contribution of the TFS rolling noise
data on pass-by at 20 km/h – 72 dBA

Noise level at 7.5m from the vehicle

At 20km/h, wheel – 62 dBA , motor – 53 dBA
At 40km/h, wheel – 74 dBA , motor – 62 dBA
At 60km/h, wheel – 81 dBA , motor – 66 dBA

**Citadis @ Lyon:**

100% low-floor light-rail tram

At 40km/h: Inside: \( \leq 65 \text{ dBA} \)

Outside at 7.5m distance: \( \leq 74 \text{ dBA} \)

---

**TTC LRV:**

LRV – Proposed Eglinton Crosstown LRT

At 40 km/h – 68-72 dBA (interior)

At 40km/h – 78-82 dBA (exterior), 7.5m distance with 1.2m height from the ground

Ian,

Pursuant to your submission of March 30, 2012, on behalf of the Cities of Brampton and Mississauga, please find below a response prepared by Mr. Header Merza which outlines the Ministry of the Environment's position regarding the additional information and rationale for the proposed noise modeling procedure.

If you have any questions or concerns please let me know.

Gavin

Hi Gavin,

I have reviewed the following documents:

(1) Letter prepared by SNC-Lavalin dated March 30, 2012 and signed by Ian K. Upjohn; and

(2) Letter prepared by J. E. Coulter Associates (JECAL), dated March 23, 2012 and signed by Sam Kulendran and John E. Coulter

Copies of both letters are attached.

Both letters discussed the approach being proposed by JECAL to predict the sound levels due to Light Rail Vehicles (LRV) using the STAMSON program (the computerized version of the MOE’s noise prediction model, ORNAMENT).

STAMSON predicts the sound levels due to LRT systems using CLRV (Canadian Light Rail Vehicle) and/or ALRV (Articulated Light Rain Vehicle) vehicles.

JECAL is proposing to use 2 medium trucks in lieu of CLRV/ALRV vehicles to predict the sound levels due to the proposed LRT system. This approach is not conservative as it results in sound levels that are approximately 5 dBA lower than the CLRV/ALRV sound levels. A 5 dBA difference in sound levels is considered acoustically significant and may warrant the investigation/application of noise control measures.

If the proposed LRT system is quieter than the CLRV/ALRV vehicles, then the Custom
Source setting in STAMSON may be used, where the source emission level and height are entered manually. If this sound level modelling procedure is used, then JECAL should qualify it as a technical condition in their noise report. It is also recommend that the JECAL noise report be revised when the actual noise emission level of the proposed LRT system become available.

I trust the above would be of assistance to you.

If you have any questions, please give me a call.

Regards,

Header Merza, P.Eng.
Senior Noise Engineer
Environmental Approval Services Section
Environmental Approvals Branch

Ministry of the Environment
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario M4V 1L5
T: 416-327-6575 or 1-800-461-6290
F: 416-314-8452
E-Mail: header.merza@ontario.ca

---

From: Battarino, Gavin (ENE)
Sent: March 30, 2012 3:24 PM
To: Merza, Header (ENE)
Subject: FW: HURONTARIO-MAIN LRT PROJECT: PRELIMINARY DESIGN/TPAP - NOISE/VIBRATION AND AIR QUALITY IMPACT ASSESSMENT CRITERIA

fyi

---

From: Upjohn, Ian [mailto:Ian.Upjohn@snclavalin.com]
Sent: March 30, 2012 12:15 PM
To: Battarino, Gavin (ENE)
Cc: Matthew Williams; Tunio, Khurram; Brenham, Trevor; Curtis, Ashley; Ramandi, Elham; jecoulter@jecoulterassoc.com; Sam Kulendran
Subject: HURONTARIO-MAIN LRT PROJECT: PRELIMINARY DESIGN/TPAP - NOISE/VIBRATION AND AIR QUALITY IMPACT ASSESSMENT CRITERIA

Good afternoon, Gavin.

Please see the attached information package in response to action items from our February 7, 2012 meeting with MOE staff. A hard copy will follow by courier.

I trust this will be satisfactory. Please confirm receipt.

Regards.

Ian Upjohn, MCIP, RPP
Principal Planner
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May 4, 2012

Ministry of the Environment
Environmental Assessment and Approvals
2 St. Clair Avenue West, Floor 12A
Toronto, ON M4V 1L5

Attention: Mr. Gavin Battarino, Project Officer, EA Project Coordination

Hurontario-Main LRT Project, Preliminary Design/TPAP Phase (2011 – 2013)
Re: Light Rail Vehicle Sound Characteristics

Dear Mr. Battarino,

Thank you for your April 19, 2012 email in which you passed along the comments of Header Merza (MOE Senior Noise Engineer) on our information package on Light Rail Vehicle sound characteristics and the modelling parameters proposed by our noise consultant, J. E. Coulter Associates Limited (JECAL) for use in the noise impact assessment on the Hurontario-Main LRT Project.

Mr. Merza’s comments suggest that if the proposed LRT system is quieter than the CLRV/ALRV vehicles (used in the current STAMSON model), then the Custom Source setting in STAMSON may be used, where the source emission level and height are entered manually. JECAL appreciates this suggestion, but has reiterated its proposal to use the two medium-sized trucks proxy for the reasons stated below.

The MOE suggestion to use the STAMSON Custom Source setting would involve manually entering the sound level each time the speed profile along the route changes (i.e., numerous times during the modeling process). With the proposed use of the two medium-sized trucks proxy, the values will be identical, eliminating labour intensive manual entries. Using this proxy would also eliminate the potential for data entry errors that may result from using the custom setting a hundred or so times. Because much of the corridor consists of hard reflective ground, and most areas do not have noise barriers, the source height is not critical. Where there is a noise barrier, the higher source height for medium-sized trucks would yield a higher sound level, which introduces the conservative element that the Ministry has expressed a desire to have incorporated in the assessment. The two medium-sized trucks proxy automatically
adjusts for height, speed, and peak levels. Thus, the only data needed to be input to the program are the receptor distance and LRV quantity.

In the text of the noise impact assessment report, JECAL will provide a graphic showing the sound level versus the speed of the proposed Light Rail Vehicle (this sound level profile is basically identical to that of two medium-sized trucks in STAMSON). This will avoid confusing the public and will also simplify the calculations. In this respect, the report will also qualify the use of the proxy as a technical condition of the assessment, as requested by MOE.

With respect to the MOE recommendation that the JECAL noise report be revised when the actual noise emission level of the proposed LRT system becomes available, the actual LRVs to be used in on the Hurontario-Main LRT Project will likely be determined some time after completion of the Transit Project Assessment Process. If this is the case, the need for more detailed noise and vibration investigations during the post-TPAP phases of the project will be considered and the associated commitments will be made accordingly.

Sincerely,

Ian K. Upjohn, MCIP, RPP
Environmental Lead
SNC-Lavalin Team
Tel.: 416.252.5311
Direct Line: 416.679.6289
Email: ian.upjohn@snclavalin.com

cc: Matthew Williams, City of Mississauga, Project Lead
Khurram Tunio, City of Brampton, Senior Project Engineer
A. Curtis/T. Brenham, HMLRT Project Team
Marinha: thanks for your feedback. Here are some further clarifications in response to your questions:

- **Selection of 3 contaminants**: we would run the future build model first, and based on results screen out contaminants that are low compared to criteria.
- **NAPS stations to be used**: Mississauga, Clarkson and Brampton stations
- **Selection of sensitive receptors**: the selection will be dependent upon our review of traffic data, which will identify areas where a) traffic is high, b) there are nearby receptors (e.g., residences), and c) there is a significant increase in traffic as a result of the project.

Please let me know you’ve received this, and whether you have any further questions or comments.

Regards,
Alain

**********************

Alain Carrière
Senior Project Manager
PM Leader (East)
RWDI AIR Inc.
Consulting Engineers & Scientists

650 Woodlawn Road West
Guelph, Ontario  N1K 1B8
Tel:  519 823 1311 x-2398
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Fax: 519 823 1316
Email: alain.carriere@rwdi.com
www.rwdi.com

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Hi Alain,

I apologise for the delay in the response to your email. I had the opportunity to review the proposed scope of work for the Air Quality Impact assessment in support to the Hurontario LRT EA submitted on July 4, 2012. Please find below my comments for each of the items that you had summarized.

1. **Base Case Scenario**
Based on the proposed approach for the base case scenario it meets what we typically ask for. Central Region Technical Support Section of the ministry recommends modelling 3 parameters in order to assess the impacts from current conditions so it can be compared with future undertaking (build).

The selection of the 3 parameters is not noted on the email below. However, based on RWDI submissions in the past, selection of the parameters for air dispersion modelling is based on its emissions / criteria ratios which will then determine the 3 highest contaminants. Based on this exercise, the 3 parameters typically are NO2, PM2.5 and benzene. Please confirm how the selection of the contaminants will be done which can be discussed via phone at your convenience.

2. Ok – No additional comments.
3. Agree – No additional comments.
4. Ambient PAH levels from Mississauga NAPS data will be considered in the air quality impact assessment. Which NAPS Station are you referring to?
5. Agree – the intent of this is to focus primarily on the impacts at the worst impacted sensitive receptors along the study area.

One question - Selection of sensitive receptors – what criteria will be used for this specific project when the study area is quite extensive?

I hope I have clarified your questions. If you would like to set up a teleconference to discuss the above and the question in regards to the selection of sensitive receptors, I am available the rest of this week.

Thanks,

Marinha Antunes  
Air Quality Analyst  
Central Region, Technical Support  
Ministry of the Environment  
5775 Yonge Street, 8th Floor  
Toronto, ON M2M 4J1  
Tel: 416 326-3526  Fax: 416-325-6347  
e-mail: marinha.antunes@ontario.ca

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From: Alain Carriere [mailto:Alain.Carriere@rwdi.com]  
Sent: August 15, 2012 3:55 PM  
To: Antunes, Marinha (ENE)  
Cc: Mike Lepage; Ian.Upjohn@snclavalin.com  
Subject: RE: Update on review of RWDI AQ modelling approach

Thanks for the reply, Marinha. I'll follow up with you next week.  
Regards,  
Alain
Hi Allan,

I was just thinking of this task today. I just have to finalize a couple of times - will it be ok if I provide my feedback by early next week.

Thanks,

Marinha

Marinha Antunes
Air Quality Analyst
Central Region, Technical Support
Ministry of the Environment
5775 Yonge Street, 8th Floor
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Tel: 416 326-3526 Fax: 416-325-6347
e-mail: marinha.antunes@ontario.ca

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Alain Carriere
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Marinha: my apologies, I realize now by looking more closely that I had mis-spelled your e-mail address. Thanks for returning my voice mail to let me know you had not received my e-mails. Here you go. Let
me know if this captures what we discussed back in February.

Regards,
Alain

*************

Dear Marinha:

As discussed during our meeting at MOE offices on February 7, 2012, regarding the Hurontario LRT EA, I’m following up to confirm our approach to assessing potential air quality impacts. Let me know if you have any questions about these points, so that we can make sure we are in agreement on the approach before we get under way with our assessment.

1. You indicated that you would wants us to address existing conditions, in comparison with future build AQ impacts. Although not formally part of the EA (which assesses the impact of the proposed project compared to the no-build scenario) it is understandable that it is of interest to stakeholders to compare future build to existing conditions. We had initially suggested a "scaling" approach essentially to estimate existing AQ based on a comparison of current and future no-build traffic volumes (as an approximate approach). Upon reflection, we suggest it would be better actually to model existing AQ based on current traffic volumes. We would, however, limit the scope of this modelling to selected contaminants (2-3) that are of most relevance for impacts associated with vehicle emissions.

2. We confirm, as requested, that we will address the usual VOC compounds, namely: acrolein, 1,3-butadiene, formaldehyde, acetaldehyde and benzene.

3. You had asked how we would assess "how many cars would be removed" by the LRT project, in order to estimate overall reductions in GHG emissions. This is a fairly complex question, however we will provide calculations based on traffic modal split information that SDG has confirmed they will be able to provide.

4. You had suggested using other monitoring stations besides Clarkson for B[a]P, since that station location is in an industrial area and overestimates background levels for this project. We will consider data from other monitoring stations (such as Mississauga).

5. You had also mentioned that our report should note the location of the existing exceedances, where these occur due to background levels. The modelling of existing air quality mentioned in Item 1 will also allow us to comment on this question.

We trust the above point cover off your questions regarding the AQ assessment. Please either confirm this accurately reflects our discussion and addresses your questions, or contact me if you have any further questions or clarifications.

Regards,
Alain

Alain Carrière
Senior Project Manager
Leader, Canada PM Group
RWDI AIR Inc.
Consulting Engineers & Scientists

650 Woodlawn Road West
Guelph, Ontario N1K 1B8
Tel: 519 823 1311 x-2398
Cell: 519 212 3495
Re: List of Agencies to assist in identifying interested Aboriginal Communities & Notice of Commencement

Thank you for your June 14, 2012 email regarding the City of Mississauga’s Hurontario –Main LRT. As required under the regulation you must request from the ministry a list of agencies that can assist you in identifying interested Aboriginal communities. The ministry has determined that your June 14, 2012 email is this request.

Aboriginal communities must be contacted prior to issuing a Notice of Commencement for the project. In response to your request, the ministry recommends that if you have not already done so that you contact the following organizations and resources to assist you in identifying interested Aboriginal communities for this project.


The ministry is pleased that you intend to follow the accelerated transit project assessment process as per Ontario Regulation 231/08 for your projects. Please provide us with advance notice prior to publishing your Notice of Commencement of the transit assessment process.

Should you have any further questions related to Ontario Regulation 231/08 and its requirements, please contact, the undersigned or the Project Officer assigned to your file, Gavin Battarino.

Yours Truly

Solange Desautels
Solange Desautels, Special Project Officer
Project Coordination Unit
Environmental Assessment Services Section
Environmental Approvals Branch
Ministry of the Environment
2 St. Clair Ave W
Toronto ON M4V 1L5
Ph: (416) 314-8360
Fax: (416) 314-8452

From: Upjohn, Ian [mailto:Ian.Upjohn@snclavalin.com]
Sent: June 14, 2012 4:12 PM
To: Battarino, Gavin (ENE)
Cc: Desautels, Solange (ENE); Ramandi, Elham
Subject: RE: Hurontario - Main LRT Aboriginal Consultation

Hi, Gavin,

We have contacted the agencies highlighted on the attached list (initially generated from the GRT List provided by MOE, which is what we normally get in the form of a response for advice on contacts – i.e., we already had a list of bodies to contact) with respect to identification of Aboriginal bodies/communities that should be contacted, but not you or the Director’s office. We can still do that if absolutely necessary – i.e., we need a written record. The list of Aboriginal bodies/communities identified and contacted to date are also in this attachment for your reference. Note the two tabs on the FN list (Introductory and PIC #1). The information request letter to AANDC and the AANDC and MAA responses are attached, as well.

The following tasks have also been completed or are under way/ongoing:

- Introductory/Study Commencement letters have been sent to FNs by Matthew Williams (proponent Project Lead) – see attached template;
- SLI has initiated the first phase follow-up (email) for those groups that have not responded;
- SLI will initiate the second phase follow-up (telephone) for groups that do not responded to first phase follow-up;
- PIC #1 notice, with covering letter, has been sent to FNs by SLI via registered mail (June 8) - attached.

Please review the attached material and advise me immediately if you have any further questions or concerns, or want a formal request letter to the Director. In the latter regard, would the information in this email, with a request to supplement as necessary, be adequate?

Thanks.
Ian

Ian K. Upjohn, MCIP, RPP
Principal Planner
Environment Division
SNC-Lavalin Inc.
195 The West Mall
Toronto, Ontario M9C 5K1
Tel.: 416.252.5311
Direct Line: 416.679.6289
Fax: 416.231.5356
Email: ian.upjohn@snclavalin.com

From: Battarino, Gavin (ENE) [mailto:Gavin.Battarino@ontario.ca]
Sent: Thursday, June 14, 2012 11:43 AM
To: Upjohn, Ian
Cc: Desautels, Solange (ENE)
Subject: Hurontario - Main LRT Aboriginal Consultation

Ian,

I was just updating the Hurontario-Main LRT project file and noticed that it did not include a formal request for assistance with the identification of Aboriginal bodies/communities that should be contacted as part of the TPAP process. Could you please confirm whether or not the required request has been submitted and responded to.

Thank you,

Gavin

Gavin Battarino, Project Officer
Environmental Approvals Branch
Ministry of the Environment
2 St. Clair Avenue West, Floor 12A
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Phone: (416)212-4279
Fax: (416)314-8452

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September 12, 2013

Ministry of the Environment
Environmental Approvals Branch
2 St. Clair Avenue West, Floor 12A
Toronto, ON M4V 1L5

Attention: Ms. Agatha Garcia-Wright, Director VIA COURIER

Hurontario-Main LRT Project - Preliminary Design/Transit Project Assessment Process
Re: Deferral of MOI Public Work Class EA Process to TPAP

Dear Ms. Garcia-Wright,

The Hurontario-Main Light Rail Transit (HMLRT) Project is being implemented in accordance with Ontario Regulation 231/08, Transit Projects and Greater Toronto Transportation Authority Undertakings (Transit Projects Regulation) of the Environmental Assessment Act. The HMLRT project team is following the Transit Project Assessment Process (TPAP) prescribed in the Regulation.

The HMLRT Project has triggered the Ministry of Infrastructure (MOI) Public Work Class Environmental Assessment (PW Class EA)\(^1\), since lands owned by the Ontario Infrastructure and Lands Corporation (IO) and leased/managed by other users (MTO, Hydro One, utilities companies) are to be used for project operations (i.e., approximately 10.5 ha for construction of a new Maintenance and Storage Facility (MSF) in the Parkway Belt West Northern Link; and approximately 0.2 ha for construction of a new LRT guideway in the Parkway Belt West Southern Link).

In the context of the PW Class EA, the associated undertaking for IO with respect to transfer of the lands would comprise: i) “disposition” (taking steps toward the sale, disposal, grant or transfer of title of a property not containing or affecting any Environmentally Significant Areas, as defined in the PW Class EA); ii) licensing (any non-exclusive grant or use, occupation or access to property that is not a grant of an interest in land); and iii) any other related realty activities. An “operational land transfer” would occur on lands currently occupied by Hydro One, with the LRT spur track from Hurontario Street into the MSF constituting a Secondary Use.

\(^{1}\) Ministry of Infrastructure Public Work Class Environmental Assessment. Office Consolidation, October 2012.
This would require IO to follow the PW Class EA process for a Category B Project, culminating with the preparation of a Consultation and Documentation (C&D) Report. Undertakings in Category B have some potential for adverse environmental effects. These effects are well understood from a technical perspective and are minor in nature.

The PW Class EA (s. 9.7.2) includes a regulatory provision allowing MOI/IO to use another EA process approved under the Environmental Assessment Act to fulfill the requirements of the PW Class EA, where that EA process covers the undertaking contemplated by MOI/IO, including the required environmental assessment scope. MOI/IO must receive written confirmation (“declaration”) from the proponent that its EA process covers the proposed undertaking through preparation and submission of a Declaration Order.

The HMLRT project team has consulted MOI with respect to the aforementioned PW Class EA provision and has elected to adhere to the procedure for application of a Declaration Order, since the undertaking is deemed to involve a variety of realty activities, including property disposition and exchange, and the scope of TPAP EA requirements is similar. The project team’s approach on this matter has been developed based on experiential advice from, and in collaboration with, MOI EA staff. Acceptance of the Declaration Order will permit MOI to defer to the environmental assessment completed under the TPAP, rather than having to prepare its own EA for transferring the aforementioned lands to the proponent, thus facilitating the land transfer process.

The PW Class EA Category B environmental assessment process includes a prescriptive consultation component and completion of a 7-point site-specific screening analysis that can be deemed to have been addressed by the TPAP. In addition to providing the Declaration Order to MOI, Table 1 (attached hereto) has been prepared to summarize how the TPAP completed for the HMLRT Project will be consistent with and fulfill the requirements of the MOI PW Class EA.

In summary, we believe that this is the most comprehensive and integrated approach to completion of the MOI PW Class EA process on this project, since it:

- is consistent with the substitution provisions of MOI’s PW Class EA, and it is appropriate to make use of those provisions in this case. In this regard, please also note that it is entirely possible that Metrolinx will ultimately be the HMLRT Project proponent, so the s. 9.7.2 language pertaining to deferral to a client/other provincial ministry or agency can be readily placed in context;

- provides reliance on an environmental assessment process and associated deliverables for MOI that are actually broader in technical scope, stakeholder consultation/outreach, and documentation requirements than are required for the PW Class EA; and
• adheres to the spirit and intent of the Transit Regulation, which is to provide proponents with a streamlined process to complete an environmental assessment for environmentally sustainable transit projects in the most expeditious manner possible.

We trust that this approach is acceptable and look forward to continuing our collaborative working relationship with your staff in implementing this high priority transit project.

Sincerely,

Ian K. Upjohn, MCIP, RPP
Environmental Lead
SNC-Lavalin Team
Tel.: 416.252.5311
Direct Line: 416.679.6289
Email: ian.upjohn@snclavalin.com

cc: J. Ryan, MOE EAB
    G. Battarino, MOE EAB (Project Officer)
    D. Panko, MOE Central Region
    J. Brohman/L. Myslicki, Infrastructure Ontario
    Matthew Williams, City of Mississauga, Project Lead
    Khurram Tunio, City of Brampton, Senior Project Engineer
    McCarthy/T. Brenham/E. Ramandi, SLI
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<th>PW Class EA Requirement</th>
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<td><strong>Steps 1 to 4</strong></td>
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<td>STEP 1: Identify and Describe Undertaking</td>
<td>Conduct preliminary planning studies to identify, assess, and evaluate rationale for alternatives to the transit project (e.g. strategic, conceptual, feasibility, demand analysis)</td>
<td>Hurontario-Main Street Corridor Master Plan Preliminary Maintenance and Storage Facility Assessment Report Design Workbooks 1, 2 and 3 EPR Chapter 2; Appendix A</td>
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<td>STEP 2: Find Undertaking in Category Listing</td>
<td>Describe selected transit project</td>
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<td>STEP 3: Match Detailed Description in PW Class EA</td>
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<td>STEP 4: Apply Screening Questions (if required)</td>
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<td><strong>Step B1: Describe Undertaking</strong></td>
<td>Perform 7-point site-specific analysis, including description of existing conditions</td>
<td>Determine and conduct appropriate studies on a project-specific basis during Pre-TPAP phase, in consultation with regulatory agencies.</td>
<td>Chapter 1 Chapter 3 Appendices</td>
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<td>1)</td>
<td>Existing land use status, including official plan designation and zoning by-law designations including floodplain zones, specialty croplands and prime agricultural lands (Classes 1-3) (unless designated for development in an Official Plan) and existing land use. In carrying out the site specific analysis, MOI/IO will consider the effects of the undertaking on prime agricultural lands and any resulting change in use or designation.</td>
<td>Identify applicable land use planning policy framework Identify major land development proposal Inventory existing land uses Proximity and effect on priority development areas, existing and planned uses</td>
<td>Sections 1.5, 3.2.1 Appendix B.5 (Socio-Economic Environment Assessment Report)</td>
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<td>2)</td>
<td>Environmental Condition of the Property. This section addresses the environmental liabilities that may be on the property as a result of past uses or adjacent land uses. Traditionally this is done through the completion of a Phase I Environmental Site Assessment and a Phase II Environmental Site Assessment, as necessary.</td>
<td>Environmental Site Assessments (soil, groundwater contamination), including completion and submission to IO of a Phase I ESA, with commitments to undertake Phase II ESAs, as required, as part of future design stages</td>
<td>Section 3.3.4 Appendix B.3 (Phase I ESA Report)</td>
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<td>3)</td>
<td>Environmentally Significant Areas (ESAs)</td>
<td>Identify areas designated as Environmentally Significant Areas, Environmentally Sensitive Areas, and</td>
<td>Section 3.3.2 Appendix B.1 (Natural Heritage Report)</td>
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<td>PW Class EA Requirement</td>
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<td>Environmental Protection Areas designated by municipal and provincial agencies</td>
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| 4)                      | Distinctive environmental features, such as floodplain, high groundwater level, groundwater wells, streams, rivers, natural corridors (e.g., hedgerows), woodlots, wetlands, springs, water bodies, topography, prevailing slope direction, steep slopes, ravines and rock outcrops | Natural heritage feature inventories/assessments:  
  - Streams  
  - Wetlands  
  - Floodplains and other areas regulated by Conservation Authorities  
  - Surface water and groundwater quality/quantity  
  - Plant and animal species and related habitat  
  - Rare, threatened, or endangered species and related habitat  
  - Forests, woodlots, roadside vegetation | Sections 3.3.1, 3.3.2, 3.3.3  
Appendix B.1 (Natural Heritage Report)  
Appendix B.2 (Hydrogeology Report)  
Appendix B.4 (Drainage and Stormwater Management Report) |
| 5)                      | Servicing capacity of the surrounding infrastructure (roads, water, sewer and drainage) or, where on-site servicing is being considered, the feasibility of on-site sewage disposal and access to an adequate supply of potable water | Existing and planned provincial and municipal transit system infrastructure (physical inventory and capacity modeling), including integration with designated Mobility Hubs  
Existing and planned provincial and municipal road infrastructure (physical inventory and capacity modeling)  
Existing and planned public and private servicing infrastructure (capacity; potential conflicts) | Sections 3.1.1, 3.1.2, 3.1.3, 3.1.4  
Appendix B.9 (Structural Assessment Report)  
Appendix B.13 (Preliminary Maintenance and Storage Facility Assessment Report)  
Utilities Relocation Report |
| 6)                      | Cultural heritage resources, including archaeological, built, cultural landscapes, sacred and traditional use sites and cemeteries of cultural significance. All properties with potential heritage concern must be assessed and receive a Cultural Heritage Evaluation | Built heritage feature assessment, with commitment to conduct full Heritage Impact Assessment, as required  
Cultural heritage landscape assessment  
Stage 1 Archaeological Assessment, with commitment to conduct Stage 2 AA when property requirements have been fully defined (Detail Design phase) and access to undisturbed lands with archaeological potential is available | Sections 3.4.1, 3.4.2  
Appendix B.8 (Built Cultural Heritage Report)  
Appendix B.9 (Archaeological Report) |
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<th>PW Class EA Requirement</th>
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<td>7) Social and Economic Effects. For undertakings that do not require an application under the Planning Act, could the undertaking cause long-term changes, beyond existing background variations (based on standard demographic measures), to the social structure or the demographic characteristics of the surrounding community?</td>
<td>Characterization of existing socio-economic environment, including identification of “character areas” Noise environment Air quality Identification of and consultation with potentially affected Aboriginal communities</td>
<td>Sections 3.2.2, 3.2.3, 3.2.4 Appendix B5 (Socio-Economic Environment Assessment Report Appendix B.6 (Noise and Vibration Assessment Report) Appendix B.7 (Air Quality Assessment Report)</td>
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**Step B2:** Description of Environmental Effects, Mitigation and Monitoring

Describe potential effects of the undertaking and conclusions with respect to mitigation and/or site suitability. This should include descriptions of the standard mitigation measures to be employed, including any potential contributions to rehabilitating and enhancing existing degraded conditions.

Develop and apply evaluation criteria to assess the potential environmental condition changes (positive and negative effects of the transit project)

- An assessment and evaluation of the impacts that the preferred method of carrying out the transit project and other methods might have on the environment;
- A description of any measures proposed by the proponent for mitigating any negative impacts that the preferred method of carrying out the transit project might have on the environment; and
- A description of the means the proponent proposes to use to monitor or verify the effectiveness of proposed mitigation measures.

Chapter 4 (discipline-specific assessments)

- Evaluation Criteria;
- Construction and operations phase impacts; and
- Mitigation and monitoring

Chapter 2; Appendix A.2 Streetscape and Urban Design Strategy (enhancement) Appendix B (discipline-specific assessments)

**Step B3:** Consult with directly affected agencies and the public

Directly affected parties must be contacted and provided with a written description of the undertaking, its need, purpose, scope and timing, as well as the conclusions of the seven point site specific analysis, including any problems identified and planned mitigation measures.

Provide additional information as required (C&D Report; results of additional investigations)

Pre-TPAP phase consultation in conjunction with technical studies

The proponent is required to distribute TPAP Notice of Commencement to:

- Every assessed property owner within 30 metres of the site of the transit project;
- MOE EAB Director;
- MOE Regional Director;
- Every Aboriginal community identified by those bodies

Chapter 2 (consultation in assessing project alternatives)

Chapter 6 Appendix C (Consultation Record)
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<th>PW Class EA Requirement</th>
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<td>Provide 30 calendar days for the interested agency or party involved to provide comments Provision for objections and elevation of project to Category C undertaking</td>
<td>specified by the Director, and any other Aboriginal community the proponent thinks may be interested in the transit project Every other person that the proponent considers may be interested in the transit project. Consultation mechanisms:</td>
<td>Public Information Centres Project website Social media (Facebook; Twitter) Interest group presentations Presence at community events Regular newsletters Postcard mail drops Door-to-door outreach Project team accessibility Prescribed consultation information content (per EPR requirements)</td>
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<td><strong>Step B4: Reporting</strong></td>
<td>The results of consultation with directly affected agencies and members of the public must be summarized in a “Consultation and Documentation Report”. This document will set out the potential impacts identified through the public consultation, including a brief description of the issues and concerns raised, and how these were addressed or resolved. Preparation of discrete technical documentation (e.g., Phase I ESA)</td>
<td>Preparation of an Environmental Project Report containing: A statement of the purpose of the transit project and a summary of any background information relating to the transit project; A final description of the transit project, including a map showing the site of the transit project; A description of the local environmental conditions at the site of the transit project, as well as a description of all studies carried out; The assessment and evaluation of the impacts of the preferred method of carrying out the transit project and other methods, as well as proposed mitigation and monitoring; A description of any municipal, provincial, federal, or other approvals or permits that may be required.</td>
<td>Chapter 1 Chapter 2; Appendix A Chapter 3; Appendix B Chapter 4; Appendix B Chapter 5 Chapter 6; Appendix C</td>
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<td>- A consultation record</td>
<td>Chapter 1; Chapter 5 (process)</td>
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Note: In both the PW Class EA Category B process and TPAP, the assessment of alternatives to the undertaking is not included, since this has occurred under another planning framework (i.e., in each case, the project has been defined prior to initiating the process considered here).
October 11, 2013

Mr. Ian K. Upjohn
Environmental Lead
SNC-Lavalin Transportation Team
195 The West mall
Toronto ON M9C 5K1

Dear Mr. Upjohn:

Thank you for your letter of September 12, 2013, on behalf of the City of Mississauga and the City of Brampton, about the requirements under the Ministry of Infrastructure (MOI) Public Work Class Environmental Assessment (PW Class EA) and how they relate to the Hurontario-Main Light Rail Transit Project.

I understand from your letter that the above noted Transit Project, if approved, will be subject to an “operational land transfer” in order to acquire the use of property currently owned by the MOI. As the transfer of land is designated as a Category B Project under the PW Class EA, the MOI will be required to complete a screening process before the use of the land can be granted to the Cities of Mississauga and Brampton. Given the similarities between the requirements under PW Class EA process, for Category B Projects, and those under the Ontario Regulation 231/08 (Transit Projects Regulation), the Cities of Mississauga and Brampton are requesting to use the current Transit Project Assessment Process for the Hurontario-Main Light Rail Transit Project to fulfill the requirements under the PW Class EA. In support of this request, the Cities of Mississauga and Brampton have cited section 9.7.2 of the PW Class EA, which states “that the MOI will, in some cases, carry out, in whole or in part, undertakings for client Ministry or its agencies that have their own Class EAs. In such cases, the client Ministry or its agency may wish to apply their own Class EA”.

I would like to take this opportunity to inform you that section 9.7.2 of the PW Class EA only applies to those Ministries or ministry agencies that are proponents of a Class Environmental Assessment (Class EA) document. As the Cities of Mississauga and Brampton are not proponents of a Class EA, they are not entitled to the provisions under section 9.7.2 of the PW Class EA.

Please note that the Ministry of the Environment recognizes that there may be times when components of an undertaking being planned under the Transit Projects Regulation may also be subject to the requirements of a Class EA. In such situations there may be opportunities to integrate or coordinate the planning approval processes under the Transit Projects Regulation with those in a Class EA. It should be understood that the integrating or coordinating of approvals means that the planning for a Transit Projects Regulation undertaking must be carried
out at the same time as the Class EA process, and meet all regulatory requirements jointly. It is also important to note that when integrating or coordinating the approval requirements under the Transit Projects Regulation with those in a Class EA, it does not alleviate the proponent's requirements under the Transit Projects Regulation or a Class EA. Integration and coordinating is about doing all of the work required in the Transit Projects Regulation and in a Class EA, and completing each planning process independently, in such a way that it reduces duplication by sharing documentation and consultation requirements so that the different planning processes can be completed in a more timely and efficient manner.

For further information about integrating or coordinating the requirements under the Transit Projects Regulation with those under the PW Class EA, please contact Ms. Lorna Zappone, Special Project Officer, who is the Transit Project Coordinator with the Ministry of the Environment's Environmental Approvals Branch, at 416-314-7106 or by e-mail at lorna.zappone@ontario.ca.

Yours sincerely,

[Signature]

Agatha Garcia-Wright
Director
Environmental Approvals Branch
December 11, 2013

TO: Gavin Battarino
   Project Officer
   Environmental Approvals Branch

FROM: Header Merza, P. Eng.
   Senior Noise Engineer
   Environmental Approvals Branch

RE: Noise & Vibration Comments
    Hurontario-Main LRT Project
    Preliminary Design/TPAP
    Environmental Project Report
    Draft October 2013
    EA Noise File No. E-0002-12

As per your request, we reviewed the noise and vibration aspects of the following reports:

(a) Environmental Project Report Draft October 2013; and


The following are our noise and vibration review comments:

**Noise**

(1) Section 4.2: The sound level emissions of the LRT are given at speeds of 40 and 50 km/h. The sound level emissions of the LRT at speeds of 60 and 80 km/h (ref. Table 1) should also be given. These sound level emissions should be used in the modelling in Appendix C.

(2) Section 4.3: the Highway 407 traffic data (AADT volume and truck percentages) used in the modelling to establish the ambient sound levels at the houses near the proposed Maintenance and Storage Facility (MSF), are based on un-verified assumptions. If the actual Highway 407 traffic data cannot be obtained, then the ambient sound levels
should be established by means of field measurements preferably over a period of four days including two week days, Saturday and Sunday.

The assessment of the MSF noise impact should be based on the best available data at the time of writing the report. If no data is available on the proposed MSF, then an existing comparable MSF should be used as a proxy facility for the purpose of noise impact modelling and assessment.

(3) Section 4.4: tonality is not specified in the listed sound emission level of the proposed Traction Power Substation (TPSS). Confirmation should be provided to indicate that the specified TPSS sound emission level includes or excludes the 5 dB tonality adjustment in accordance with Publication NPC-104. If tonality is not included, then all the TPSS noise impacts should be revised to include the 5 dB adjustment. If tonality is included, then TPSS 18 should be moved further by at least 6 metres (not 5 metres) from point of reception POR14 in order to be in compliance with the 45 dBA nighttime noise limit.

(4) Table 1: the listed LRT speeds in km/h do not correspond with the LRT speeds used in the noise modelling (ref. Appendix C). The modelled LRT speeds should be consistent throughout the report.

(5) Table 7: the impact of wheel squeal is underestimated during the day and night. The correct LRT sound levels with wheel squeal adjustment should be used to determine the LRT noise impact

(6) Figure 14: a space allowance should be provided to construct a sound barrier (wall, berm or a combination thereof), if needed along the north side of the proposed MSF in order to shield it from the nearby houses to the north-west.

(7) Appendix C: the modelled LRT sound levels at points of reception POR2, POR6 and POR11 are based on a speed of 40 km/h. This is inconsistent with the LRT speeds listed in Table 1 (a range of 40 to 80 km/h) at the selected points of reception POR1 to POR14. The modelled LRT speeds should be based on the values listed in Table 1.

**Vibration**

(8) Section 5.4: Level 2 vibration isolation is recommended at five locations where special trackwork will be employed. This recommendation should be included in Table 17.

(9) Figures 23 to 34: the recommended vibration isolation measures depicted in these figures should be consistent with the data included in Table 17 and Section 5.4.

(10) Field monitoring is not recommended in the report. It is prudent to consider monitoring post-project sound and vibration levels at representative points of reception to document the potential noise and vibration impacts of the proposed LRT system.
We trust the above noise and vibration review comments would be of assistance to you.

If you have any questions, please call Header Merza, P.Eng., Senior Noise Engineer at (416)327-6575.

_______________________________

H. Merza, P.Eng.
Senior Noise Engineer

_______________________________

I. Greason, P.Eng.
Director
appointed for the purposes of Part II.1 of the
Environmental Protection Act
MEMORANDUM

DATE: December 3, 2013

TO: Gavin Battarino, Project Officer, EAB

FROM: Chunmei Liu, EA and Planning Coordinator, CR

RE: Hurontario-Main LRT Project
TSS Comments on the Environmental Project Report, October 2013

Central Region Technical Support Section has reviewed the draft Environmental Project Report (EPR) and its supporting documents for the Hurontario-Main LRT project and provides the following comments for consideration:

Air Quality

The Air Quality Assessment Report (AQA Report) prepared by RWDI Consulting Engineers & Scientists, dated October 31, 2013, was reviewed by Technical Support following the scope of work discussed previously during a pre-consultation meeting. The following comments and clarification are required:

1. Selection of the Study Area

The criteria for selecting the three study areas as summarized in Section 2.2 of the AQA Report are high traffic volumes, large increases in traffic, and proximity to residential receptors. These study area criteria are acceptable. The three study areas selected are situated in the center and south of the LRT corridor (21 km in length). Since the study areas did not include the northern section of the LRT, please clarify how the air quality impacts compare with the modelled study areas.

2. Air Quality Thresholds & Ambient Background Measurements

The Canadian Ambient Air Quality Standards (CAAQS) for PM$_{2.5}$ (28 µg/m$^3$) was selected as a threshold to assess impacts at sensitive receptors. However, this threshold is not consistent with the criterion reported in Table 3-24 of the EPR which refers to the Canada Wide Standard of 30 µg/m$^3$. Table 3-24 also lists the overall PM$_{2.5}$ average as 17 µg/m$^3$, which in fact is 16 µg/m$^3$. Lastly, Table 3-24 in the EPR does not summarize benzo(a)pyrene measurements. We recommended that Table 3-24 in the EPR be updated so that it is consistent with the criteria and measurements reported in the AQA Report.

3. CAL3QHCR Modelling Files

Section 4.1 of the AQA Report states that the modelling input and output files (CAL3QHCR) can be found in Appendix F of the AQA Report. Appendix F is not included in the hard copy. Please provide these files electronically for our review.
4. MOVES Emission Factors

Appendix C of the AQA Report summarizes the emission factors for the different compounds at different times of the day, that is, during the morning (AM), midday (MD), evening (PM) and overnight (ON). Please clarify why the idle emission factors for PM$_{2.5}$ and PM$_{10}$ would vary at different times of the day when the emission factor is in g/hour.

5. General Comments

The comments listed below are minor editorial comments, which does not change or alter the conclusions stated in the AQA Report.

- The units in Appendix D of the AQA Report for the CO average refer to ppb where in fact the concentrations are in ppm. Also there are minor typos in the ppb units for the averages for NO$_2$ and O$_3$ in Appendix D.

- The maximum 24-hr and the 24-hr 90$^{th}$ Percentile for PM$_{10}$ reported in Appendix D for CAS ID 44086 does not match Figure 5-8 of the Clarkson Airshed Study Report Part II – The Ambient Air Monitoring Program (MOE, November 2006). The revised 90$^{th}$ Percentile PM$_{10}$ concentration will result in a small change on the average; however this will not alter the conclusions discussed in the AQA Report.

- Lastly, the maintenance service facility, depending on its activities, may require an Environmental Compliance Approval (ECA).

Surface Water

The draft EPR acknowledges that a “permit to take water” (PTTW) will be required from the MOE if dewatering volume exceeds 50,000 L/day. The draft EPR does not estimate that the PTTW requirement related to dewatering or diversion of flow from watercourses via mechanical means (pumping) will likely require.

The proponent should refer to the MOE’s Guideline B-6 – Guidelines for Evaluating Construction Activities Impacting on Water Resources when developing erosion and sediment control plans.

Within the proposed LRT Alignment, three of the four locations were identified as having a significant increase in impervious area outlet directly to a creek. Two other catchment areas are described as being significantly changed because they were previously 100% permeable. Additional discussion and stormwater management commitments should be provided to address these permeability changes.

As per the MOE Stormwater Management Planning and Design Manual, the Ministry recommends that maximum peak flow rates must not exceed pre-development values for storms with return periods ranging from 2 to 100 years.

In “Appendix B – Drainage Impact Assessment Table, certain contents within the “Description” column of the “Screening Analysis: Change in Impervious Area” for catchment area IDs 24, 25, 26, 27, 31, 32 appear to be missing and should be provided.

The commitment to achieving Enhanced (Level 1 protection) is consistent with the Ministry’s recommendation, based on the MOE’s Stormwater Management Planning and Design Manual (2003).
The SWM report should clarify how the other stormwater management ponds located within the catchment area will be impacted by the proposed development.

Design data for stormwater controls should be reviewed by the ministry’s Environmental Approvals Branch in conjunction with the ECA application.

Groundwater

Appendix B.2 notes that a PTTW will be required for areas along the route where construction will require dewatering and it will be necessary to apply for the PTTW from the MOE. Appendix B.2 also notes that more detailed hydrogeological studies will be required at that time and to be submitted as part of the PTTW application process. Appendix B.2 also indicates that there may be areas along the proposed route where soil and groundwater contamination may be encountered. The ministry agrees with this assessment. These issues may be required to be addressed when or if contamination is encountered and any other dewatering issues will need to be addressed in the proposed PTTW applications.

The proposed site is mainly in developed areas serviced by the respective municipalities and therefore unlikely to cause interference with any existing groundwater users as an alternative water supply is available and most nearby properties will be serviced by the municipality.

Conclusion

No significant concerns are identified in our review regarding groundwater issues. We recommend that the above comments for air quality and surface water issues should be addressed before the final EPR is released.

Please contact me if you have any questions on the above comments.

Sincerely,

Chunmei Liu
EA and Planning Coordinator
Technical Support Section
December 11, 2013

MEMORANDUM

TO: Mr. Ian K. Upjohn
    Environmental Lead
    SNC-Lavalin Transportation Team
    195 The West mall
    Toronto ON  M9C 5K1

FROM: Mr. Gavin Battarino
    Project Officer
    Environmental Approvals Branch
    Ministry of the Environment

RE: Draft Environment Project Report for the City of Mississauga and the City of Brampton’s proposed Hurontario-Main Light Rail Transit Project

The Ministry of the Environment’s Environmental Approvals Branch, Environmental Assessment Services Section, has completed its review of the City of Mississauga and the City of Brampton’s draft Environment Project Report (EPR) for the proposed Hurontario-Main Light Rail Transit Project. The review was carried out to determine whether or not the draft EPR meets the requirements and expectations set forth in the Ministry of the Environment’s Guide: Ontario’s Transit Project Assessment Process and the requirements set forth in Ontario Regulation 231/08, Transit Projects and Greater Toronto Transportation Authority Undertakings (Transit Projects Regulation).

The Ministry of the Environment’s Environmental Approvals Branch has prepared the following comments, pertaining to the identified sections of the draft EPR documentation, for consideration by the Cities of Mississauga and Brampton when finalizing the EPR.

Section 1.0 Introduction

a) Subsection 1.2 of the draft EPR, entitled “Study Area”, explains that the study area for the Hurontario-Main Light Rail transit project is the corridor shown in Figure 1.1. Although the Figure does present an adequate representation of the study area, a brief description of the study area, including an explanation of the study area boundaries, would be useful. Consideration should therefore be given to providing a description of the study area within which the activities associated with the project are to occur, and a delineation of the boundaries within which the potential effects of the project have been studied.
b) Subsection 1.3.2 of the draft EPR, entitled “Ministry of Public Works Class Environmental Assessment Process”, explains that, if approved, the proposed undertaking will be subject to an “operational land transfer” in order to acquire the use of property currently owned by the Ministry of Infrastructure (MOI). As the transfer of land is designated as a Category B Project under the Public Work Class Environmental Assessment (PW Class EA), the MOI will be required to complete a screening process before the use of the land can be granted to the Cities of Mississauga and Brampton.

The draft EPR further explains that given the similarities between the requirements under PW Class EA process, for Category B Projects, and those under the Ontario Regulation 231/08 (Transit Projects Regulation), the Cities of Mississauga and Brampton are proposing to use the current Transit Project Assessment Process for the Hurontario-Main Light Rail Transit Project to fulfill the requirements under the PW Class EA. In support of this proposal, the draft EPR cites section 9.7.2 of the PW Class EA, which states “that the MOI will, in some cases, carry out, in whole or in part, undertakings for client Ministry or its agencies that have their own Class EAs. In such cases, the client Ministry or its agency may wish to apply their own Class EA”.

Please be advised that Subsection 9.7.2 of the PW Class EA only applies to those Ministries or agencies that are proponents of a Class Environmental Assessment (Class EA) document. As the Cities of Mississauga and Brampton are not proponents of a Class EA, they are not entitled to the provisions under Subsection 9.7.2 of the PW Class EA. As per the Ministry of the Environment’s interpretation, set forth above, the draft EPR should be amended accordingly.

In addition, the Ministry of the Environment does recognize that there may be times when components of an undertaking being planned under the Transit Projects Regulation may also be subject to the requirements of a Class EA. In such situations there may be opportunities to integrate or coordinate the planning approval processes under the Transit Projects Regulation with those in a Class EA. It should be understood that the integrating or coordinating of approvals means that the planning for a Transit Projects Regulation undertaking must be carried out at the same time as the Class EA process, and meet all regulatory requirements jointly. It is also important to note that when integrating or coordinating the approval requirements under the Transit Projects Regulation with those in a Class EA, it does not alleviate the proponent’s requirements under the Transit Projects Regulation or a Class EA.

Please be advised that should the Cities of Mississauga and Brampton choose to integrate or coordinate the approval process under the Transit Projects Regulation with the approval requirements under the PW Class EA, the Cities are responsible for completing each planning process independently.

Section 4.0 Project Environmental Effects, Mitigation and Monitoring

a) The Ministry of the Environment’s review of the draft EPR has noted that Section 4.0, entitled “Project Environmental Effects, Mitigation and Monitoring”, does not adequately identify the methodology that was used to identify and evaluate the potential effects of
the proposed Hurontario-Main Light Rail Transit Project on the TPAP study area environment.

The Ministry of the Environment considers the identification and evaluation of potential effects a key component of the TPAP. An EPR should clearly explain the methodology that was used to identify and evaluate potential effects of the proposed transit project for each component of the study area environment, as defined under the Environmental Assessment Act, which include: the natural environment; social environment; economic environment; cultural environment; and, built environment. The purpose of which is to ensure that the identification and evaluation of potential impacts to each component of the study area environment is undertaken in a systematic, transparent and replicable manner. It is the Ministry’s expectation that the identification and evaluation of potential effects should be consistent with the principles of good environmental planning; and, the guidance set forth in the Ontario Ministry of the Environment’s Code of Practice for Preparing and Reviewing Environmental Assessments in Ontario (2008) and the Guide to Ontario’s Transit Assessment Process (2009).

Consideration should be given to providing a more detailed summary of the methodology that was used in identifying and evaluating the potential effects of the proposed Hurontario-Main Light Rail Transit Project on the TPAP study area environment. In particular, it is suggested that an explanation be provided to clarify how the potential effects were identified and considered; how each potential effect was evaluated in order to determine its significance; how the net effects of the project were assessed and evaluated; and, how the consideration of stakeholder participation and consultation throughout the TPAP influenced the assessment and evaluation process.

Section 6.0 Public and Agency Consultation

a) The Ministry of the Environment’s review of the draft EPR has noted that Section 6.0, entitled “Communications and Consultation Process”, provides an overview of the consultation program that was carried out to engage members of the public, government agencies and Aboriginal communities during the TPAP.

The Ministry of the Environment review of the draft EPR has noted that although the draft EPR does identify the consultation activities that were carried out during the TPAP, the draft EPR does not provide adequate details about the results of the consultation process or how the input obtained from interested members of the public, government agencies and Aboriginal communities was considered during the preparation of the draft EPR. It is the Ministry of the Environment’s expectation that proponents will consult with any members of the public, government agencies or Aboriginal communities that the proponent considers may be interested in the transit project. Consultation allows the proponent to:

• Properly identify, inform or notify persons, groups, Aboriginal communities and regulatory agencies that may be potentially affected by the transit project;
• Identify and assess the range of potential environmental impacts of the transit project; and,
• Respond to the concerns of interested persons, groups, Aboriginal communities or regulatory agencies that may be affected by some aspect of the project.

A consultation program prepared for the TPAP must include certain matters based on Section 8 of the Transit Projects Regulation and Subsection 3.2 of the Ministry of the Environment’s Guide: Ontario’s Transit Project Assessment Process. This includes, but is not limited to, the following:

• Providing information about the basis on which the transit project was selected, which includes; the assessment and evaluation of the impacts of the transit project and other methods considered; the criteria for the assessment and evaluation of those impacts; and, any studies completed with respect to those impacts.
• Providing information about the proposed measures for mitigating any potential negative impacts of the transit project.
• Providing information about the way the proponent intends to monitor and verify the effectiveness of the proposed mitigation measures.
• Discussing with Aboriginal communities any constitutionally protected Aboriginal or treaty right that is identified as potentially being negatively impacted by the transit project.
• Discussing with Aboriginal communities any measures identified by the Aboriginal community for mitigating potential negative impacts on constitutionally protected Aboriginal or treaty rights.

Consideration should be given to expanding upon the description of the consultation carried out during the TPAP. It is suggested that the description of the consultation process include a summary of the results of the consultation process, and an explanation as to how the input obtained from interested members of the public, government agencies and Aboriginal communities was considered during the preparation of the EPR.

In addition, the Ministry of the Environment review of the draft EPR has also noted that the draft EPR does not make specific reference to a Consultation Record. In order to qualify for the exemption in the Transit Projects Regulation, an EPR must contain a Consultation Record that includes, but is not limited to, the following:

• A description of the consultations and follow up efforts carried out with interested members of the public, government agencies and Aboriginal communities;
• A list of the interested members of the public, government agencies and Aboriginal communities who participated in the consultations;
• Summaries of the comments submitted by interested members of the public, government agencies and Aboriginal communities;
• A summary of any discussions with Aboriginal communities including discussions of any potential impacts of the transit project on constitutionally protected Aboriginal or treaty rights, and copies of all written comments submitted by Aboriginal communities; and,
A description of what the proponent did to respond to concerns expressed by interested members of the public, government agencies and Aboriginal communities.

It is the Ministry of the Environment’s expectation that when an EPR is submitted to the Ministry for a decision, it will include the required Consultation Record. Consideration should be given to including the required Consultation Record as part of the final EPR documentation. It is also suggested that an overview of the Consultation Record be included in the main body of the EPR.

b) The Ministry of the Environment’s review of the draft EPR has noted that Subsection 6.2.3, entitled “Summary of Consultation with Aboriginal Communities”, explains that Aboriginal communities were engaged during the TPAP. The Ministry is concerned that the explanation about consultation with Aboriginal communities does not contain enough detail to determine if the Aboriginal consultation requirements under the Transit Projects Regulation have been met.

Consultation with Aboriginal communities during the TPAP is intended to allow a proponent to identify and respond to concerns that may be raised by Aboriginal communities, to provide an opportunity to receive information about potential Aboriginal concerns; and, to facilitate meaningful input into the review and development of a transit project. In addition, Aboriginal consultation is important because it is also used to identify any duty to consult that the Crown may have in relation to constitutionally protected Aboriginal or treaty rights that may be impacted by a transit project, and may be relied upon by the Crown.

To the extent that any Crown duties of consultation may be triggered for a particular project, the TPAP sets out some of the actions and procedural aspects of consultation that proponents are required to take with respect to consultation with Aboriginal communities. It should be noted that whether or not the Crown has a constitutional duty to consult with Aboriginal communities, proponents must still engage Aboriginal communities in consultation because Aboriginal communities are also considered interested stakeholders for the purposes of consultation in the TPAP.

Please be advised that the Transit Projects Regulation includes several specific requirements with respect to consulting with Aboriginal communities. Specifically, proponents are required to:

• Contact the Director of the Ministry of the Environment’s Environmental Assessment Branch for a list of bodies that would be able to assist in identifying Aboriginal communities that may be interested in a transit project;
• Contact those bodies and request the bodies to identify Aboriginal communities.
• Give each Aboriginal community identified by those bodies and any other Aboriginal community that may be interested, a copy of the Notice of Commencement.
• Request the Aboriginal community to advise the proponent in writing of the nature of any interest it may have in the transit project when giving the Notice of Commencement.
• Ensure that the Aboriginal community is given the opportunity to participate in the consultation.
• Discuss potential negative impacts of the transit project on any constitutionally protected Aboriginal or treaty right that may be identified and the measures to mitigate these negative impacts; and,
• Respond to concerns expressed by the Aboriginal community.

It is the Ministry of the Environment’s expectation that in discharging the requirements of the Transit Projects Regulation, proponents will make a consolidated effort to proactively engage Aboriginal communities throughout the TPAP, such as:

• Following up with telephone calls and electronic mail to ensure and confirm that potentially impacted Aboriginal communities are aware of the transit project;
• Providing Aboriginal communities with notification of consultation events such as open houses and meetings;
• Confirming receipt of any relevant transit project documentation, and other information when requested.
• Considering providing flexibility and the unique needs of Aboriginal communities, such as additional time to review documents, language requirements, communication styles/preferences and access to communication tools.

If a proponent or Aboriginal community identifies that the transit project may have a potential negative impact on a constitutionally protected Aboriginal or treaty right, the Director of the Ministry of the Environment’s Environmental Assessment Branch should be notified. This is to ensure that appropriate actions are taken so that the Crown’s duty to consult, if it arises, is satisfied.

When considering which Aboriginal communities or peoples to contact, proponents should be encouraged to be mindful that the traditional territories, treaty areas, or areas of rights claims involving Aboriginal or treaty rights are extensive. As a result, it may be insufficient to consult only with Aboriginal communities or peoples with reserve lands in the vicinity of the proposed project or activity. Proponents are directed to consult with the Ministry of the Environment or the Ministry of the Environment’s Environmental Assessment webpage to obtain a list of government organizations that can assist in the identification of Aboriginal communities or peoples that may be affected by a proposed project being carried out under Transit Projects Regulation. In the event that there is an indication that an Aboriginal or treaty right may be affected by a project or activity, proponents should be directed to contact the Director of the Ministry of the Environment’s Environmental Assessment Branch to determine how to proceed.

Consideration should be given to providing an explanation as to why each identified Aboriginal community was determined to be potentially affected by the proposed transit project. It is also suggested that consideration be given to expanding upon the description of the Aboriginal consultation that was carried out during the TPAP. This should include, but not be limited to, identifying the key milestones during the TPAP at which consultation with Aboriginal communities took place; identifying the consultation activities that were carried out with Aboriginal communities; detailing the results of the Aboriginal consultation activities that were carried out; and, explaining how the input
obtained from Aboriginal communities was considered during the preparation of the EPR.

It is also the Ministry of the Environment’s expectation that the EPR include an explanation, and supporting information, to confirm that each of the Aboriginal communities that were identified as part of TPAP consultation program were aware of the transit project; and, that each Aboriginal community received all relevant transit project documentation.

In addition to the comments set forth above, please find attached to this memorandum comments from the Ministry of the Environment’s Central Region Office Technical Support Section (Appendix A) and The Environmental Approvals Branch Approval Services Section (Appendix B).

Please note that the above comments and those attached to this memorandum, along with any comments received by other government agencies, Aboriginal communities and the public, should be considered by the Cities of Mississauga and Brampton as the Cities prepare the final EPR for submission to the Ministry of the Environment. It is the expectation of the Ministry that proponents seeking approval for a project under the Transit Projects Regulation should attempt to address or resolving any issues, concerns or formal comments raised during the TPAP.

In closing, I would like to extend an invitation to the Cities of Mississauga and Brampton to meet with Ministry of the Environment staff to discuss the comments on the draft EPR, and the next steps in the approvals process. Should you have any questions or concerns, or to set up a meeting, please feel free to contact the undersigned, at (416) 212-4279 or by e-mail at gavin.battarino@ontario.ca.

Yours sincerely,

Gavin Battarino
Project Officer
Environmental Assessment and Approvals Branch
Oxford Properties Group
April 12th, 2013

Mr. Martin Powell
Commissioner of Transportation and Works
Transportation and Works Department
201 City Centre Drive
Mississauga, ON
L5B 2T4

Mr. Ed Sajecki
Commissioner of Planning
300 City Centre Drive
10th Floor
Mississauga, ON
L5B 3C1

Re: Downtown Mississauga LRT Routing near Square One

Dear Martin and Ed

On March 27, 2013, we met with the City of Mississauga’s LRT design team including Geoff Wright, Mathew Williams and Ashley Curtis of Stear Davies Gleave. They presented two alternative routes for the LRT through the downtown area. In the first option, the LRT ran up City Centre Drive and then eastward along Square One Drive to Duke of York and then southward. The second option was the previously proposed LRT route along Rathburn Road.

We have reviewed these options in depth with our planning, development, and engineering team. We have concluded that the best route for the east-west portion of the LRT line is Rathburn Road. We feel that the LRT will be a critical catalyst to restart office development in the Downtown. In order to accomplish this, the LRT must be close, convenient and visibly relative to the future office precinct.

Our master plan and the City’s new Zoning By-Law indicate that the future office precinct should be centred on the Rathburn Road corridor. With the proposed office development centered on Rathburn Road, it is the natural location for the LRT to be convenient and visible for the office users. In our view it is vital for the success of both the LRT and the office precinct, to deliver transit at the doorstep of the future office buildings. Furthermore we feel that the LRT, Miway, and Go Transit Service can be more closely integrated in a new or expanded terminal on Rathburn Road. The LRT will still be close enough to the shopping centre to be very convenient for shoppers.

In comparison the Square One Drive routing would severely limit the possibilities for creating a pedestrian-friendly shopping street along the north face of the shopping center over time. The size, speed and close spacing of the LRT vehicles would create an environment which would be intimidating for pedestrians crossing Square One Drive to shop at the street-facing retail or to enter the shopping centre.
The LRT plan also contained an unusual road configuration that has persisted, without sufficient justification, since the original DT-21 sketches. The configuration in question is the replacement of the Duke of York and Rathburn Road intersection with a curve and a new diamond shaped block. The effect of this configuration is to direct westbound Rathburn Road traffic south onto Duke of York instead of continuing on Rathburn Road. This road configuration is not consistent with the intent of the DT-21 plan to increase connectivity between the Downtown and the surrounding areas. Currently Burnhamthorpe and Rathburn Road are the only two western access points for Downtown, and this plan effectively eliminates one of them by directing traffic to the south. It does not make sense to restrict such a major connection for the Downtown in the face of increasing traffic expectations, especially when additional connections, such as to the north over the 403 are being proposed at great expense.

We trust you understand the concerns we have expressed and hope that you will maintain Rathburn Road as the LRT corridor. We would be pleased to meet with you at your convenience to explain our views in more detail.

Yours truly,
Oxford Properties Group

[Signature]
John Filipetti
Vice President, Development

Cc: Marilyn Ball, City of Mississauga
Frank Dale, City of Mississauga
Jeff Hess, Oxford Properties Group
Grant Charles, StoneCap Realty Group
September 13, 2013

Martin Powell
Commissioner
Transportation and Works Department
201 City Centre Drive
Mississauga, Ontario
L5B 4E4

Dear Mr. Powell

RE: Mississauga LRT Plan comments from BA Group Consultants

Please find attached a letter detailing our comments and concerns related to the Hurontario Main Street LRT plans presented at the May 4th, 2013 Public Information Centre.

As we have stated in the past, the ownership of Square One and its adjacent lands are in favour of delivering this vital new transportation infrastructure to the region and the Downtown in particular.

We have engaged BA Group to review the LRT plans and provide comments, concerns, and suggestions which we think will provide a balanced and successful transportation infrastructure to Mississauga.

The following are a few key concerns included in the BA letter:

- It is important the LRT plan recognizes that Square One is a regional shopping destination which will continue to draw visitors from beyond the catchment area served by the LRT and thus the car will remain a very important part of the transportation mix in the future. Future mixed-use development will cause both traffic and transit volumes to increase

- Downtown Mississauga will be competing for new office users with Vaughan Metro Centre and Downtown Markham as well as with existing sites on the 401 corridor.

- A high-quality, seamless, weather protected interchange station is required at Rathburn Road, as well as Port Credit and Cookstown to ensure Downtown is competitive with other emerging transit modes such as Downtown Markham and Vaughan Metro Centre.
Rathburn Road is a very important east-west link for the Downtown and should be retained in its current alignment.

The early construction of the Duke of York – 403 bridge and North Service Road are critical to maintaining access to the Downtown when Rathburn Road, Hurontario, and the Hurontario – 403 bridge are under construction.

Please refer to the BA letter attached for details. We would welcome the opportunity to write the LRT design team to address those concerns. We look forward to advancing the LRT planning process.

Please contact me should you wish to discuss this further.

Regards,
OXFORD PROPERTIES GROUP

[Signature]
John Filipetti
Vice President, Development

CC: Craig Coleman
    Grant Charles
    Jeffrey Hess
    Ralph Bond
    Lisa Chandler
    Frank Lewinburg
    Frank Dale
    Geoff Wright
    Leslie Pavan
August 6, 2013

John Filipetti
Vice President, Development
Oxford Properties Group
200 Bay Street, Suite 900
Royal Bank Plaza, North Tower
Toronto, Ontario
M5J 2J2

Dear Mr. Filipetti:

Re: Mississauga City Centre – LRT Planning

As per your request, BA Group has attended three Public Information sessions at the Mississauga City Hall on Oxford’s behalf in order to understand the potential benefits and impacts associated with the proposed LRT Transit Loop through the City Centre area. The most recent concept presented at the May 14, 2013 Open House reflects some of the comments received by the City regarding the earlier versions and a more detailed review of design issues in the City Centre. It is a substantial improvement on earlier concepts. An additional Open House is to be scheduled for the fall of 2013.

While the Hurontario LRT line loop through the City Centre should significantly increase transit use in the medium and long term, the majority of trips to/from the area will continue to be made by people travelling by car. With this in mind, it will be very important to design the LRT loop in a manner that minimizes impacts on site access and provides a reasonable level of service for people travelling to and through the area by car. With due diligence and creativity, we believe this critical balance can be achieved.

Square One shopping centre, at some 1.7 million square feet of gross leasable area is one of the largest regional shopping centres in Canada. It has a trade area that includes the entire City of Mississauga as well as parts of Brampton, Oakville and Halton Region, attracting some 22 million customers per year, of which 70% travel by car. Maintaining the prominence of the downtown core as a retail commercial centre is listed as development goal in the recently revised Mississauga Official Plan. In order to maintain and enhance this important regional retail centre, it is critical that a good level of service continue to be provided to the 15.4 million people who currently access the centre via private vehicle.

There is also considerable future development potential on the Oxford properties including:

- expansions of the regional shopping centre, two of which are now in the planning process;
- development of additional urban oriented retail, restaurant and service uses;
- substantial new office development along the Rathburn Road corridor near Highway 403.

In addition to the Oxford properties, there is considerable development potential on the lands owned by others in the City Centre, including Morguard Properties, GWL and Desjardins in the immediate vicinity of
Square One. The employees, residents and visitors generated by these many new developments will be able to take advantage of the new LRT line but will also continue to add to the demand for vehicle trips on the street system.

Based upon the information we have seen to date re the LRT plan, we have the following primary comments:

1. We support the May 2013 version of the plan for Rathburn Road that recognizes the critical importance of maintaining two through lanes per direction plus left turn lanes at key intersection locations for vehicular movement on this important street;

2. It is essential that the existing signalized access to Square One at Rathburn and Hammerson Drive be maintained as per the May 2013 concept;

3. The existing bus transit terminal should be relocated and enhanced in order to provide seamless, weather protected, pedestrian friendly transfers between the LRT, BRT, GO and local bus system. This will also facilitate improved pedestrian/vehicular connectivity between development blocks by reinstating a north south street in the location of the existing bus terminal with signalized access to Rathburn Road;

4. Rathburn Road should be maintained as a continuous road west of Duke of York;

5. It is desirable that the LRT line continue straight up Hurontario Street rather than divert to City Centre Drive at Square One Drive;

6. A more detailed review of the proposed relocation of the LRT line from Living Arts Drive to Duke of York Blvd. should be undertaken in order to make sure that sufficient vehicular access can be provided to the Square One lands on the east side of the street;

7. We encourage the development of a well thought out and seamless connection between the LRT and the Cooksville GO Station in order to enhance longer distance transit accessibility to the City Centre;

8. In addition to the LRT, GO Transit should investigate the need for providing additional express bus service from longer distance destinations in order to enhance transit accessibility for people working in the City Centre who reside in the Region of Halton and northwest Brampton.

The arrival of Hurontario LRT service presents the opportunity to rethink and dramatically improve existing transit interface in the area by creating a modern new mobility hub that will provide seamless connectivity between all transit modes in a convenient manner and allow for multi-modal access. For example, relocation of the existing bus terminal to the northeast or southeast corner of Station Gate Road and Rathburn Road would allow for the convenient interface of BRT, LRT, GO and local bus service all in one location on the same side of the street. The new terminal should be integrated with future hi-rise residential or office development. This will also allow Station Gate Road to be extended south to Square One Drive, thereby restoring an important access link, improving local area connectivity for all modes and enhancing the future development potential of the lands on both sides of Rathburn Road. We also recommend that the BRT rapid-way presently proposed in a trench along the north side of Rathburn Road be covered over in order to maintain an urban pedestrian environment along this important street.
Rathburn Road is an important arterial road (presently mis-classified as a major collector road in the City’s OP) which provides an alternative east west route to Burnhamthorpe Road, including connections to Mavis Road and the Mavis interchange with Highway 403. This alternative route will become more important as the number of lanes on Burnhamthorpe is reduced in order to accommodate the LRT loop into the City Centre. With this in mind, the proposed southwest curvature of Rathburn into Living Arts Drive is undesirable from a connectivity and transportation capacity perspective and would be unnecessarily confusing to people unfamiliar with the area. We would urge the City to maintain the existing alignment.

We support the most recent proposal to maintain the LRT on Hurontario Street as far north as Square One Drive because it increases transit convenience and accessibility for existing and future office development along the east side of Hurontario Street. It also eliminates problematic site access and loading issues that would arise if the LRT is diverted to City Centre Drive. The option that illustrates the LRT continuing straight up Hurontario Street with a widened bridge over Highway 403 is preferable to the option that briefly diverts it to City Centre Drive via Square One Drive, as it will have much less impact on the vehicular accessibility of the development sites located along City Centre Drive.

The recent proposal to place the west leg of the City Centre LRT loop along Duke of York Blvd. instead of Living Arts Drive will improve transit accessibility to the Square One lands. However, vehicular access to/from the west will become very constrained with City Centre closed at Celebration Square, Square One Drive at Sheridan College calmed and not directly connected to Rathburn, plus the LRT turning through the Burnhamthorpe and Rathburn intersections at either end. Duke of York is a more important access street in the City Centre than Living Arts Drive because it will ultimately connect with the new North Service Road via a future bridge over Highway 403 and because it provides direct access to the Square One site and its substantial future development potential. The proposed placement of the LRT along the east side of the street will reduce vehicular access potential to Square One development blocks. The LRT line also reduces the number of through travel lanes on Duke of York from two to one lane per direction. Shifting the LRT to the middle of the street and maintaining four through lanes plus left turn lanes would significantly improve this situation and merits consideration. We also understand that placing the LRT in the median rather than the east side of the street will facilitate the relocation of existing storm and sanitary sewer service from Square One property into the east side of the street right of way.

There are also some critical phasing issues regarding the implementation of the alternative access options and new streets that have been identified by various parties. For example, the new North Service Road that will run between Mavis Road and Hurontario Street should be implemented in advance of the LRT construction in order to maintain a reasonable level of service to the City Centre while the LRT is being constructed.

We stand ready to discuss these matters with the City and assist them in thoroughly assessing the options.

Sincerely,

BA Consulting Group Ltd.

[Signature]

Ralph F. Bond
Executive Chairman
September 13, 2013

Wendy Alexander  
Director, Transportation and Infrastructure Planning, and Transportation and Works  
300 City Centre Drive  
Mississauga, Ontario  
L5B 3C1

Dear Wendy,

RE: Downtown Mississauga Movement Plan

Thank you for inviting me to the Movement Plan update with Steer Davies Gleave on July 30th, 2013.

As we understand it, one of the principle objectives of this study are ensuring the LRT project is well integrated with the improvement of the public urban realm and with appropriate forms of future land development. In addition, the study seeks to optimize the integration with other modes of transportation including the BRT, GO, local bus, car and active transportation.

We concur that these objectives are critical to ensuring that Mississauga derives the maximum long term benefits from the LRT.

We offer the following comments:

- At the beginning of the presentation, the consultants indicated they were using the Downtown 21 Plan as the basis for their analysis and planning. We think this approach will limit both the possibilities for improving on DT-21, and the ability to respond to more recent issues such as the Holt Renfrew development.

- We hope the consultants’ team is instructed to respect the principles of DT-21 while approaching the specific design expression of the plan with some flexibility in mind.

- The relocation of the LRT to Duke of York creates constraints within the right-of-way for the scale of sidewalks required under DT-21, as well as for installation of additional underground services. This change will also further restrict car access on the west side of Square One, which is already constrained by the closure of City Centre Drive at Celebration Square, and the potential transition of Rathburn Road west of Duke of York. This area requires careful study and a collaborative design approach to succeed.
As noted in your presentation, the design of the key LRT interchange stations are critical, and nowhere more so than the Rathburn Road Station. A convenient, safe, and weather protected station will be essential to the success of the immediate area and the LRT.

In general we would like to ensure that the movement plan strikes a balance that acknowledges the car will still have a major role to play in serving both the regional scale retail of Square One and the future new office development.

For your information I have attached a copy of the detailed comments on the LRT plans prepared by BA Group on behalf of Square One.

We look forward to engaging with you to resolve these issues and to advance the design of the LRT.

Yours Truly,

OXFORD PROPERTIES GROUP

[Signature]

John Filippetti
Vice President, Development
August 6, 2013

John Filipetti
Vice President, Development
Oxford Properties Group
200 Bay Street, Suite 900
Royal Bank Plaza, North Tower
Toronto, Ontario
M5J 2J2

Dear Mr. Filipetti:

Re: Mississauga City Centre – LRT Planning

As per your request, BA Group has attended three Public Information sessions at the Mississauga City Hall on Oxford’s behalf in order to understand the potential benefits and impacts associated with the proposed LRT Transit Loop through the City Centre area. The most recent concept presented at the May 14, 2013 Open House reflects some of the comments received by the City regarding the earlier versions and a more detailed review of design issues in the City Centre. It is a substantial improvement on earlier concepts. An additional Open House is to be scheduled for the fall of 2013.

While the Hurontario LRT line loop through the City Centre should significantly increase transit use in the medium and long term, the majority of trips to/from the area will continue to be made by people travelling by car. With this in mind, it will be very important to design the LRT loop in a manner that minimizes impacts on site access and provides a reasonable level of service for people travelling to and through the area by car. With due diligence and creativity, we believe this critical balance can be achieved.

Square One shopping centre, at some 1.7 million square feet of gross leasable area is one of the largest regional shopping centres in Canada. It has a trade area that includes the entire City of Mississauga as well as parts of Brampton, Oakville and Halton Region, attracting some 22 million customers per year, of which 70% travel by car. Maintaining the prominence of the downtown core as a retail commercial centre is listed as development goal in the recently revised Mississauga Official Plan. In order to maintain and enhance this important regional retail centre, it is critical that a good level of service continue to be provided to the 15.4 million people who currently access the centre via private vehicle.

There is also considerable future development potential on the Oxford properties including:

- expansions of the regional shopping centre, two of which are now in the planning process;
- development of additional urban oriented retail, restaurant and service uses;
- substantial new office development along the Rathburn Road corridor near Highway 403.

In addition to the Oxford properties, there is considerable development potential on the lands owned by others in the City Centre, including Morguard Properties, GWL and Desjardins in the immediate vicinity of
Square One. The employees, residents and visitors generated by these many new developments will be able to take advantage of the new LRT line but will also continue to add to the demand for vehicle trips on the street system.

Based upon the information we have seen to date re the LRT plan, we have the following primary comments:

1. We support the May 2013 version of the plan for Rathburn Road that recognizes the critical importance of maintaining two through lanes per direction plus left turn lanes at key intersection locations for vehicular movement on this important street;

2. It is essential that the existing signalized access to Square One at Rathburn and Hammerson Drive be maintained as per the May 2013 concept;

3. The existing bus transit terminal should be relocated and enhanced in order to provide seamless, weather protected, pedestrian friendly transfers between the LRT, BRT, GO and local bus system. This will also facilitate improved pedestrian/vehicular connectivity between development blocks by reinstating a north-south street in the location of the existing bus terminal with signalized access to Rathburn Road;

4. Rathburn Road should be maintained as a continuous road west of Duke of York;

5. It is desirable that the LRT line continue straight up Hurontario Street rather than divert to City Centre Drive at Square One Drive;

6. A more detailed review of the proposed relocation of the LRT line from Living Arts Drive to Duke of York Blvd. should be undertaken in order to make sure that sufficient vehicular access can be provided to the Square One lands on the east side of the street;

7. We encourage the development of a well thought out and seamless connection between the LRT and the Cooksville GO Station in order to enhance longer distance transit accessibility to the City Centre;

8. In addition to the LRT, GO Transit should investigate the need for providing additional express bus service from longer distance destinations in order to enhance transit accessibility for people working in the City Centre who reside in the Region of Halton and northwest Brampton.

The arrival of Hurontario LRT service presents the opportunity to rethink and dramatically improve existing transit interface in the area by creating a modern new mobility hub that will provide seamless connectivity between all transit modes in a convenient manner and allow for multi-modal access. For example, relocation of the existing bus terminal to the northeast or southeast corner of Station Gate Road and Rathburn Road would allow for the convenient interface of BRT, LRT, GO and local bus service all in one location on the same side of the street. The new terminal should be integrated with future hi-rise residential or office development. This will also allow Station Gate Road to be extended south to Square One Drive, thereby restoring an important access link, improving local area connectivity for all modes and enhancing the future development potential of the lands on both sides of Rathburn Road. We also recommend that the BRT rapid-way presently proposed in a trench along the north side of Rathburn Road be covered over in order to maintain an urban pedestrian environment along this important street.
Rathburn Road is an important arterial road (presently mis-classified as a major collector road in the City’s OP) which provides an alternative east west route to Burnhamthorpe Road, including connections to Mavis Road and the Mavis interchange with Highway 403. This alternative route will become more important as the number of lanes on Burnhamthorpe is reduced in order to accommodate the LRT loop into the City Centre. With this in mind, the proposed southwest curvature of Rathburn into Living Arts Drive is undesirable from a connectivity and transportation capacity perspective and would be unnecessarily confusing to people unfamiliar with the area. We would urge the City to maintain the existing alignment.

We support the most recent proposal to maintain the LRT on Hurontario Street as far north as Square One Drive because it increases transit convenience and accessibility for existing and future office development along the east side of Hurontario Street. It also eliminates problematic site access and loading issues that would arise if the LRT is diverted to City Centre Drive. The option that illustrates the LRT continuing straight up Hurontario Street with a widened bridge over Highway 403 is preferable to the option that briefly diverts it to City Centre Drive via Square One Drive, as it will have much less impact on the vehicular accessibility of the development sites located along City Centre Drive.

The recent proposal to place the west leg of the City Centre LRT loop along Duke of York Blvd. instead of Living Arts Drive will improve transit accessibility to the Square One lands. However, vehicular access to/from the west will become very constrained with City Centre closed at Celebration Square, Square One Drive at Sheridan College calmed and not directly connected to Rathburn, plus the LRT turning through the Burnhamthorpe and Rathburn intersections at either end. Duke of York is a more important access street in the City Centre than Living Arts Drive because it will ultimately connect with the new North Service Road via a future bridge over Highway 403 and because it provides direct access to the Square One site and its substantial future development potential. The proposed placement of the LRT along the east side of the street will reduce vehicular access potential to Square One development blocks. The LRT line also reduces the number of through travel lanes on Duke of York from two to one lane per direction. Shifting the LRT to the middle of the street and maintaining four through lanes plus left turn lanes would significantly improve this situation and merits consideration. We also understand that placing the LRT in the median rather than the east side of the street will facilitate the relocation of existing storm and sanitary sewer service from Square One property into the east side of the street right of way.

There are also some critical phasing issues regarding the implementation of the alternative access options and new streets that have been identified by various parties. For example, the new North Service Road that will run between Mavis Road and Hurontario Street should be implemented in advance of the LRT construction in order to maintain a reasonable level of service to the City Centre while the LRT is being constructed.

We stand ready to discuss these matters with the City and assist them in thoroughly assessing the options.

Sincerely,

BA Consulting Group Ltd.

[Signature]

Ralph F. Bond
Executive Chairman
PPP Canada
September 26, 2012

Geoff Wright
Director, Transportation Project Office
City of Mississauga
201 City Centre Drive, Suite 800
Mississauga, ON L5B 2T4

Dear Mr. Wright,

On behalf of PPP Canada, I would like to thank you for your interest in Round Four of the P3 Canada Fund. Following the close of Round Four applications on June 15, I am writing to inform you of the outcome of the screening assessment for the proposed Hurontario – Main LRT project.

The P3 Canada Fund is both merit-based and competitive. To be considered for funding, project submissions must meet assessment criteria that are applied at two stages, known as the screening decision and the investment decision. At the completion of each assessment, the results are considered by our Board of Directors, who weigh the merits of each project and determine which submissions show the greatest potential for success.

Based on the project information submitted and the proposed DBFOM P3 model, the Hurontario – Main LRT project has been retained for further analysis. We will be contacting your officials to discuss specific requirements of the project.

Thank you again for your interest in the P3 Canada Fund. Should you have any questions about your submission or the P3 Canada Fund process, please feel free to contact Mr. Carol Beaulieu, Vice President, Business Development at (613) 992-5577.

Sincerely,

[Signature]

John McBride

cc. Steve Rchacek, Vice President, Business Development & Lending, Infrastructure Ontario
October 7, 2013

Geoff Wright
Director, Transportation Project Office
City of Mississauga
201 City Centre Drive, Suite 800
Mississauga ON L5B 2T4

Dear Mr. Wright,

On behalf of PPP Canada, I would like to thank you for your interest in the Round Five call for proposals for the P3 Canada Fund. Following the close of the Round on June 14, I am writing to inform you on the outcome of the screening assessment for the proposed Hurontario-Main LRT project.

The P3 Canada Fund is both a merit-based and competitive process. To be considered for funding, project submissions must meet a number of assessment criteria that are applied at the screening phase. At the completion of the screening phase, the results are considered by our Board of Directors, who weigh the merits of each project and determine which submissions show the greatest potential for success and to achieve the objective of broadening the application of P3s in Canada.

Based on the project information submitted and the proposed P3 DBFOM model, the Hurontario-Main LRT project has been retained for further analysis. We will be contacting you shortly to discuss the specific requirements of the P3 Canada Fund as your team moves ahead to complete the P3 Business Case.

Thank you again for your interest in the P3 Canada Fund. Should you have any questions about your submission or the P3 Canada Fund process, please feel free to contact Mr. Carol Beaulieu, Vice President, Project Development at (613) 992-5577.

Sincerely,

John McBride

cc. Steve Rohacek, Senior Vice President, Municipal Business Development and Lending, Infrastructure Ontario
Toronto and Region Conservation Authority
May 27, 2011

BY MAIL AND EMAIL (Matthew.Williams@mississauga.ca)

Mr. Matthew Williams
City of Mississauga
Transportation and Works Department
201 City Centre Drive, Suite 800
Mississauga, ON L5B 2T4

Dear Mr. Williams:

Re: Response to Hurontario/Main Street Corridor Master Plan
Municipal Class Environmental Assessment (EA) – Schedule C (Phases 1 and 2)
Etobicoke Creek Watershed
City of Mississauga and City of Brampton; Regional Municipality of Peel

Toronto and Region Conservation Authority (TRCA) staff received the Final Master Plan and accompanying appendices dated October 2010 on January 27, 2011. It is our understanding that as a result of forecasted population growth within both the City of Mississauga and City of Brampton it is anticipated that densities will be aimed at making the Hurontario/Main Street corridor an urban and pedestrian friendly street. Detailed comments on the Request for Proposal for the next phase of this work were provided on May 18, 2011 and included comments regarding required background reports and studies. Detailed comments on the final Master Plan are provided in Appendix A.

Preferred Option
The Master Plan recommends a Light Rail Transit (LRT) system, with implementation by 2016. The preferred plan involves:

- An LRT system along Hurontario Street between downtown Brampton and the Port Credit waterfront
- Use of innovative technologies such as transit signal priority to improve speed and reliability of transit operations
- Conversion of the existing six-lane cross-section segments to four lanes for auto use and two reserved transit lanes (south of Nanwood Drive) with reserved lanes in the centre of the road. Segments that are currently four lanes will have the LRT operate in shared lanes (Downtown Brampton to Nanwood Drive)
- LRT stations with three to five metre wide platforms located in the middle of the street
- A maintenance/storage facility proposed for the southeast quadrant near the Hurontario Street and Highway 407 intersection

The recommended option involves the LRT operating as a one way loop that turns west on Wellington Street, then north on George Street and passes through a new tunnel under the CN rail corridor returning to Main Street north of the rail Corridor. However, this alternative is predicated on being able to redesign the GO station and tunneling under the CN rail line. Should it become evident in the next stage of the process that this is not possible, then the preferred option will be a transit line on Main Street with the route ending at Nelson Street near the Downtown Transit Terminal, and a future extension into the Brampton GO Station via Main and Church Streets.
It is also recommended that the bridge crossings over Etobicoke Creek, north of Charolais Boulevard and north of Nanwood Drive be replaced due to their current capacity and age. A detailed analysis of the extent of the bridge replacement will need to be completed during the next phase of the EA process.

**Future Development and the Special Policy Area (SPA)**

The ultimate vision for the Corridor, development, phasing and recommended policies and guidelines are discussed throughout the Master Plan, as well as implementing the recommendations of the strategy into a zoning by-law amendment. The report also discusses intensification opportunities to accommodate future growth through revitalization and infill/intensification, and identifies an urban growth centre in Downtown Brampton which is located within flood hazard areas. The report then notes that development is discouraged within flood plains and that re-development is subject to approval by the Conservation Authority and that municipal policies and Conservation regulations related to a recognized flood plain or SPA take precedence over policies and guidelines that deal with development or redevelopment within a recognized flood plain or designated SPA.

As noted in previous correspondence, there are several areas along the Corridor within the City of Brampton that are subject to significant flooding hazards during a Regional Storm event. Review of the SPAs located within the City of Brampton are currently underway by the Province, the City and TRCA. However, at this time consideration for whether the intensification objectives and the infrastructure requirements can be met in this present location should be analyzed, as flood related damages to the new infrastructure within this area could result in significant additional risk to life and property.

Furthermore, the preferred route alignment through Downtown Brampton shows the LRT as passing through a tunnel under the rail corridor. It is our understanding that this loop would eliminate the need for an on-street crossover track in reserved lanes should the LRT vehicles need to turn around. Although vehicles will be double-ended, an emergency plan will be required for these areas that are prone to flood hazards to allow for LRT vehicles to evacuate the area, should the area be impassable.

**Projects Within the Study Area**

TRCA staff have undertaken several projects within the general study area over the past several years. Erosion control works and plantings have been completed on conservation lands within the Etobicoke Creek valley. The Sustainable Neighbourhood Retrofit Action Plan (SNAP) for County Court (east of Hurontario/Main Street between Steeles Avenue and Highway 407) is also underway in partnership with the City of Brampton, Region of Peel and TRCA. SNAP is a pilot program aimed at creating a local action plan to prepare the neighbourhood for climate change, and to transform it to a more environmentally sustainable community. Plans and objectives within this neighbourhood include, but are not limited to, a stormwater management pond retrofit, community park improvements, eco-friendly landscaping, improving rain water management, increasing natural cover, conserving energy and water, and incorporating Low Impact Development (LID) measures. The SNAP program is a showcase project that will encourage and track sustainable action in the neighbourhood, and wherever possible help advance public transit and active transportation efforts of the City and Region. The City of Brampton is encouraged to consider innovative and sustainable design solutions, such as the possibility of retrofits to bus shelters (i.e., solar panels), enhanced streetscaping or vegetation along this corridor as well as LID measures, particularly at the Sir Lou and Ray Lawson transit stops. These stops are gateways into the neighbourhood and represent a great opportunity for the City, Region and local community partners to showcase their community renewal efforts.

**Next Steps**

This Master Plan addresses Phases 1 and 2 of the Municipal Class EA process. Implementation of the LRT line is conditional on the completion of the next two phases of the EA process (Phases 3 and 4), or the undertaking of the Transit Project Assessment Process (TPAP). It is recommended within this report that the cities proceed with the 6 month TPAP to streamline the approval process through the Ministry of the Environment. This includes a 120 day period beginning with a Notice of Commencement and includes consulting on the proposed project, as well as preparing an Environmental Project Report.
Once the Notice of Completion has been issued, a 30 day review period begins at which time agencies and the public can review the final EPR. The Minister of the Environment then has 35 days to review the EPR. Once this process has been completed, the Hurontario/Main Street study can proceed to implementation and construction.

As a result of this expedited process, it is important that TRCA staff be kept informed through this next phase of work, particularly as it relates to passage within the Brampton downtown core, emergency response plans and design, and sizing of the bridges at Etobicoke Creek. Please also include the provision for 2 copies of any background reports as well as 4 hard copies of the complete draft EPR and 1 copy of the final EPR.

Should you have any questions, please contact me at extension 5717 or by email at slingertat@trca.on.ca

Yours truly,

Sharon Lingertat
Acting Senior Planner, Environmental Assessment Planning
Planning and Development

Encl: Flood Plain Mapping

BY EMAIL

cc: Mississauga: Abdul Shaikh (Abdul.Shaikh@mississauga.ca)
   Brampton: Khurram Tunio (Khurram.Tunio@brampton.ca)
   TRCA: Beth Williston, Senior Manager, Environmental Assessment Planning
          Carolyn Woodland, Director, Planning and Development
          Quentin Hanchard, Senior Manager, Development, Planning and Regulation
          Chandra Sharma, Etobicoke/Mimico Watershed Specialist
          Margie Kenedy, Assistant Archaeologist
APPENDIX A: TRCA COMMENTS

1. It is recommended that the proposed LRT would be a one-way at-grade loop (Option 3) for sections through Downtown Brampton. The proposed route would pass through a new tunnel under the CN rail corridor. Please note that this section of the corridor is located entirely within the Regulatory Floodplain and has been designated as a SPA. The flooding risk for the proposed corridor is shown on the attached map.

Please provide a detailed engineering study, which includes, but is not limited to the following:
- an update to TRCA's hydraulic model that includes the design of the proposed option
- comparison of flooding risk (e.g. flood frequency, velocity and depth of flooding) for existing and proposed conditions
- proposed flood damage mitigation measures
- proposed emergency evacuation plans (including emergency access during flooding events)

2. Between Harold Street and Charolais Boulevard, the proposed LRT route will pass over two crossings of Etobicoke Creek. It is proposed to replace both crossings as part of this project. Please note that under the current configuration, both crossings will be overtopped during the Regional storm event. A fluvial geomorphic study for this reach of Etobicoke Creek and a detailed hydraulic analysis for the proposed crossings will be required. Please show that the proposed crossings will not create or increase flooding and erosion risks upstream and downstream of the structures.

3. As indicated in Comments 1 and 2, the proposed LRT will pass through the floodplain of Etobicoke Creek. Typically, the roadway is designed to convey major storms (e.g. up to the 100 year). Please clarify if the operation of the LRT system will be compromised when the corridor is inundated with water.

4. The Master Plan identifies a preferred maintenance facility site located south of Highway 407. Please note that there is an existing watercourse located within the site that may be impacted by the proposed maintenance facility. Please clarify what will be proposed for the watercourse.

5. It is unclear whether modifications to the right-of-way and ultimately TRCA lands at Etobicoke Creek will be required. Please confirm whether TRCA property will be impacted. Should TRCA property be required for access, staging, or construction for example, the TRCA property department will need to be contacted, archaeological investigations may be required by TRCA archaeology staff and additional investigation fees will be charged.

6. Impacts to Etobicoke Creek will need to be examined as part of the next phase of work, particularly if the bridges will be replaced. It is our understanding that all background reports (i.e., natural heritage, stormwater management/hydrology/hydraulics, geotechnical, hydrogeology) will be provided for review and comment in the next phase of work.

7. It is noted in Table 3.8.1 that implementation will have no effect on the surrounding aquatic biology. Should it be decided that the bridges at Etobicoke Creek will be replaced, impacts to the watercourse, fish and fish habitat, conservation lands and terrestrial habitat will need to be evaluated and impacts mitigated.

8. Staff note that the transit stops near County Court are labeled as Sir Lou and Ray Lawson. Given the landmark that the Court House represents, the historical institutional buildings within this area, and the SNAP undertaking within this area, consideration should be given to possibly re-naming these stops "County Court North" and "County Court South".

9. Please ensure that previous TRCA comments are included in the report.
Dear Mr. Upjohn:

Re: Response to Notice of Preliminary Design and Transit Project Assessment Process (TPAP) Hurontario/Main Street Light Rail Transit (LRT) – Phase 2011 to 2013
Etobicoke Creek Watershed
City of Mississauga and City of Brampton; Regional Municipality of Peel

Toronto and Region Conservation Authority (TRCA) staff received the Notice of Preliminary Design and Transit Project Assessment Process (TPAP) for the Hurontario/Main Street Light Rail Transit (LRT) corridor dated March 23, 2012, on March 30, 2012. TRCA staff previously reviewed the Hurontario/Main Street Master Plan and comments were provided.

Please ensure TRCA staff is involved as this project is completed. TRCA property is located within the study area, as are several areas which are regulated under Ontario Regulation 166/06. Please also refer to our comments from May 27, 2011 (enclosed) regarding flooding hazards within the area, and the need for an emergency plan. Floodlines and modeling were provided to the attention of Khurram Tunio on December 9, 2011 for work within TRCA’s jurisdiction.

We look forward to reviewing the next phase of this work. Should you have any questions, please contact me at extension 5717 or by email at slingertat@trca.on.ca

Yours truly,

Sharon Lingertat
Senior Planner, Environmental Assessment Planning
Planning and Development

Encl: TRCA comment letter dated May 27, 2011

BY EMAIL
cc: Mississauga: Matthew Williams (Matthew.Williams@mississauga.ca)
Brampton: Khurram Tunio (Khurram.Tunio@brampton.ca)
TRCA: Beth Williston, Senior Manager, Environmental Assessment Planning
Chandra Sharma, Etobicoke/Mimico Watershed Specialist
Margie Kenedy, Assistant Archaeologist
April 23, 2012

BY MAIL AND EMAIL (inquiries@hurontario-main.ca)

Ms. Sandy Webster
SNC-Lavalin Transportation Team
195 The West Mall
Toronto, ON M9C 5K1

Dear Ms. Webster:

Re: Response to Notice of Project Open Houses
Hurontario/Main Street Light Rail Transit (LRT) – Phase 2011 to 2013
Etobicoke Creek Watershed
City of Mississauga and City of Brampton; Regional Municipality of Peel

Toronto and Region Conservation Authority (TRCA) staff received the Notice of Open Houses scheduled for April 25 and 26, 2012, on April 20, 2012. Further to TRCA correspondence dated April 18, 2012, staff has expressed interest in this project. While staff is unable to attend the meetings, please forward one copy of any handouts or display materials from these meetings for our files. Please include a digital copy of all materials as part of your submission.

We look forward to reviewing the next phase of this work. Should you have any questions, please contact me at extension 5717 or by email at sllingrat@trca.on.ca.

Yours truly,

Sharon Lingerat
Senior Planner, Environmental Assessment Planning
Planning and Development

BY EMAIL
cc: Mississauga: Matthew Williams (Matthew.Williams@mississauga.ca)
Brampton: Khurram Tunio (Khurram.Tunio@brampton.ca)
TRCA: Beth Williston, Senior Manager, Environmental Assessment Planning
Chandra Sharma, Etobicoke/Mimico Watershed Specialist
Dear Ms. Lingertat,

Thank you for your response letter dated April 23, 2012 regarding the Hurontario/Main Street LRT Open Houses held on April 25 and 26, 2012. The handouts and display materials from these meetings have now been uploaded to the following website: http://lrt-mississauga.brampton.ca/EN/Public-Consultation/Pages/Welcome.aspx.

April 25 & 26, 2012 Open House Display and Print Material

- Open House Display Panels April 2012
- Project Update April 2012
- Frequently Asked Questions April 2012
- Kids FUN Sheet April 2012
- Comment Sheet April 2012
- Open House Postcard Invitation April 2012

Regards,

Elham Ramandi, BSc., MEnv., EPt
Environmental Planner
Environment Division
SNC-Lavalin Inc.
195 The West Mall
Toronto, Ontario M9C 5K1

416-252-5315 x 3635
elham.ramandi@snclavalin.com

Signature Block_EN.jpg
June 20, 2012

BY MAIL AND EMAIL (sandy.webster@snclavalin.com)

Ms. Sandy Webster
SNC-Lavalin Inc.
195 The West Mall
Toronto, ON  M9C 5K1

Dear Ms. Webster:

Re: Response to Notice of Public Information Centre #1
    Hurontario/Main Street Light Rail Transit (LRT)
    Etobicoke Creek Watershed
    City of Mississauga and City of Brampton; Regional Municipality of Peel

Toronto and Region Conservation Authority (TRCA) staff received the Notice of Public Information Centres (PIC) scheduled for June 25, 2012 and June 26, 2012, on June 11, 2012. Further to TRCA correspondence dated April 23, 2012, staff has expressed interest in this project. While staff is unable to attend the meetings, please forward one copy of any handouts or display materials from these meetings for our files. Please include a digital copy of all materials as part of your submission.

We look forward to reviewing the next phase of this work. Should you have any questions, please contact me at extension 5717 or by email at slingertat@trca.on.ca

Yours truly,

Sharon Lingertat
Senior Planner, Environmental Assessment Planning
Planning and Development

BY EMAIL
cc: Mississauga: Matthew Williams (Matthew.Williams@mississauga.ca)
     Khurram Tunio (Khurram.Tunio@brampton.ca)
     Beth Williston, Senior Manager, Environmental Assessment Planning
     Chandra Sharma, Etobicoke/Mimico Watershed Specialist

Brampton:
TRCA:

F:\Home\Public\Development Services\EA\Letters for Mailing\45846 - PIC#1.doc
September 16, 2013

BY E-MAIL ONLY (Ian Upjohn@sncalvalin.com)

Ian Upjohn
SNC Lavalin Environmental
195 The West Mall
Toronto, ON M9C 5K1

Dear Mr. Upjohn:

Re: Hurontario/Main Street Light Rail Transit (LRT) Storage Site (Revised Plan)
Etobicoke Creek Watershed; City of Brampton; Regional Municipality of Peel

Toronto and Region Conservation Authority (TRCA) staff received a cross-sectional drawing, Figure 1 showing the floodline cross-sections, figures showing the Hurontario/Main Street LRT proposed station configuration and associated connection to Hurontario/Main Street, digital modeling and a letter report on the delineation of existing flood lines at the proposed site, all received on August 14, 2013.

Staff has reviewed the information provided and appreciates the efforts to relocate the station to reduce ecological impacts to the larger tributary and associated wetland. Further to a site visit held on August 28, 2013, TRCA staff confirmed a second watercourse on site that will be impacted by the construction of the station. A map showing the location of the features is enclosed for your records. Detailed comments are provided in Appendix A.

Should you have any questions, please contact me at extension 5717 or at slingertat@trca.on.ca.

Sincerely,

Sharon Lingertat
Senior Planner, Environmental Assessment Planning
Planning and Development

Encl: Figure showing the location of the watercourses identified on site.

BY E-MAIL
cc: Mississauga: Matthew Williams (Matthew.Williams@mississauga.ca)
Brampton: Bishnu Parajuli (Bishnu.Parajuli@brampton.ca)
Consultant: Khurram Tunio (Khurram.Tunio@brampton.ca)
William Clarke (wgclarke@sympatico.ca)
Elham Ramandi (Elham.Ramandi@sncalvalin.com)
TRCA: Beth Williston, Senior Manager, Environmental Assessment Planning
<table>
<thead>
<tr>
<th>Flow – Hydraulic Assessment</th>
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<tr>
<td>1. According to the Ministry of Natural Resources (MNR) Technical Guideline for River and Stream Systems: Flooding Hazard Limit, for small drainage areas (generally &lt; 1 km²) due to short times of concentration, the 100 year flood event can exceed the Hurricane Hazel flood. In such cases, the 100 year standard should be used for defining the flood plain for the small drainage areas. The Technical Guideline indicates that stormwater management facilities may not be used to provide any reduction in flood flows. Also, the future condition (i.e., approved Official Plan) for the study area and upstream contributing drainage area should be utilized to establish the flow.</td>
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<tr>
<td>a) Based on the above, please clarify whether the 100 year uncontrolled flow or the Regional flow (without SWM ponds) governs for the subject tributary. Please refer to the comment below regarding the flood storage immediately upstream of the 1.0 m diameter culvert.</td>
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<td>b) As noted in the Etobicoke Creek Hydrology Update (MMM, July 2013), the 12 hour AES storm should be utilized for the (2 year through to) 100 year storm. The 12 hour duration for the Hurricane Hazel storm should be utilized with CN values under AMC III conditions. Please update the 100 year and Regional storm flows accordingly and provide a digital copy of the VO₂ model.</td>
</tr>
<tr>
<td>2. TRCA Engineering staff recognize that the constraints downstream of cross-section 12.6 (i.e., culvert, building and roads) are permanent and the flood storage immediately upstream may attenuate the flow. However, as noted in the comment above, ponds are typically not utilized to establish the Regulatory floodplain. For comparison purposes, please determine the Regulatory flow without the flood storage upstream of the 1.0 m culvert and determine the upstream flood plain. The comments below regarding the hydraulics should also be considered when determining the flood plain.</td>
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<th>Hydraulics</th>
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<td>3. The hydraulic assessment and mapping may be utilized in TRCA’s flood plain mapping program. Therefore, the base mapping and flood plain mapping must meet TRCA standards. Please contact Mike Todd at <a href="mailto:mtodd@trca.on.ca">mtodd@trca.on.ca</a> or 416-661-6600 ext. 5663 for TRCA’s mapping standards.</td>
</tr>
<tr>
<td>4. The HEC-RAS model utilizes Manning’s roughness values of 0.02 and 0.06 for the channel and over banks, respectively. Please update these values to TRCA’s standard values for the watershed and hydraulic modeling. TRCA’s standard values for the Manning’s roughness for the channel and overbanks are 0.035 and 0.08, respectively.</td>
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<td>5. It appears that the location of the overbanks and channel for most of the HEC-RAS cross-sections are not located properly. Please adjust the left bank and right bank stations for each HEC-RAS cross-section accordingly.</td>
</tr>
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<td>6. The expansion and contraction values in the vicinity of the crossings were not adjusted as required for a culvert/bridge crossing. Also, ineffective area was not utilized for each crossing/culvert. Please update the values for the expansion and contraction coefficients and apply the ineffective flow area to the crossings/culverts.</td>
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### TRCA COMMENT (September 16, 2013)

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<th>#</th>
<th>Comment</th>
<th>RESPONSE</th>
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<td>7</td>
<td>It appears that the flood plain upstream of the 1.0 m diameter culvert to approximately cross-section 250 is backwater. The flood plain illustrated on Figure 5 (and other figures) appears to be “cut-off” immediately north and upstream of cross-section 150, which is just downstream of the study area. Please adjust the HEC-RAS model and/or mapping to illustrate the extent of the flood plain within the study area (east limit).</td>
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<td>8</td>
<td>Geometry data includes three files; original, culverts and culverts_new exten. The culverts_new exten file appears to have a longer/more bridge deck at the 327.6 culvert than the culvert file. Please clarify the relevance of this lateral bridge deck extension.</td>
<td></td>
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<td>9</td>
<td>Please provide more details on the realignment of the east tributary which extends from the Highway 407 ponds. Please demonstrate that the realigned channel will convey the Regulatory flow (uncontrolled 100-year flow or Hurricane Hazel flow). It is suggested that the channel be designed with natural channel features.</td>
<td></td>
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### Maintenance Storage Facility Details and Additional Information:

| 10 | Please illustrate TRCA’s Regulation Line on the B-B’9 profile figure.                                                                                                                                                          |          |
| 11 | It is our understanding that the purpose of this submission is to establish the flood plain under existing conditions and that another submission will be provided with the post development condition (e.g., culverts/crossings). Please ensure the following information is provided as a part of that submission. |
| | a) Please provide a proposed condition hydraulic analysis which includes the proposed crossing(s)/culvert(s) to access the MSR from the west/Huronario.                                                                                               |          |
| | b) Please provide a report describing the stormwater management strategy for the MSF. Details and supporting calculations for the various mitigation measures proposed to achieve the SWM criteria should be provided. |          |
| 12 | Where feasible please incorporate Low Impact Development (LID) measures at this site.                                                                                                                                            |          |

### Natural Features

<p>| 13 | TRCA staff had the opportunity to walk and visually inspect the smaller tributary feature to the east of the property on August 28, 2013. This feature is considered contributing fish habitat and is therefore regulated under Ontario Regulation 166/06. The linear pockets of cattail marsh within and along the feature indicate that some areas of the feature do remain wet throughout the year, likely due to shallow sub-surface lenses of interflow. The existing hydraulic and ecological functions of the feature should be maintained by keeping it open and in a natural state. The existing proposal shows the feature to be re-routed around the new LRT station. Please ensure the full length of the feature is naturalized and planted. |          |
| 14 | Another small drainage feature was observed just south of the existing driveway, west of Kennedy Road. This feature is in essence a drainage ditch having small pocket wetlands along its length, similar to the watercourse feature mentioned above. The current proposal shows a new road crossing this feature. This feature does have some ecological and hydraulic function and as such should be kept open and left naturalized. Consideration should be given to placing a culvert under the road crossing to maintain flows and drainage to this specific area to ensure the feature is maintained post development. |          |
| 15 | Although the site has been shifted to further reduce impacts to the larger watercourse, staff still has |          |</p>
<table>
<thead>
<tr>
<th>#</th>
<th>TRCA COMMENT (September 16, 2013)</th>
<th>RESPONSE</th>
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<tbody>
<tr>
<td>14</td>
<td>Concerns regarding the impacts of the proposed crossing of the main tributary on this site. a) Impacts to this feature will need to be qualified and quantified and appropriate compensation measures prescribed. b) Please clearly show on the drawing the length of watercourse that will be enclosed as a result of the track crossings.</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Please pull the proposed retaining wall away from the TRCA regulated area around the main tributary, to the extent possible.</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>A SWM pond is shown on the plans that outlets to the west. Please clearly show the outfall location(s) as the outlet appears to end at the access road.</td>
<td></td>
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<tr>
<td>18</td>
<td>Please ensure that any additional drainage features that may be present along the proposed access road from Hurontario Street are kept open and as natural as possible throughout and post construction.</td>
<td></td>
</tr>
<tr>
<td><strong>Geotechnical</strong></td>
<td></td>
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<tr>
<td>19</td>
<td>Please ensure that geotechnical information is provided as part of the EA and design stages to confirm subsurface conditions.</td>
<td></td>
</tr>
</tbody>
</table>
TPAP

- 407 ETR Concession Company Limited
- Alfonso Gallucci General Construction Limited
- Baif Developments Limited
- Credit Valley Conservation Authority
- Metrolinx
- Ministry of Environment
- Ministry of Natural Resources
- Ministry of Tourism, Culture & Sport
- Ministry of Transportation
- Morguard Investments Limited
- Oxford Properties Group
- Region of Peel
- Toronto and Region Conservation Authority
407 ETR Concession Company Limited
February 26, 2014

Mr. Craig White, P. Eng.
VP Highway and Tolling Operations
407ETR Concession Company Ltd.
6300 Steeles Avenue West
Woodbridge, Ontario
L4H 1J1

Dear Mr. White

Ref: Hurontario-Main LRT Project – Preliminary Design/Transit Project Assessment Process

Further to the meeting of February 18, 2014 between the 407ETR Concession Company (407ETR), the Cities of Mississauga and Brampton, Metrolinx, MTO and the Hurontario Main LRT consultant team (HMLRT), it is our understanding that 407ETR’s preferred position is that the HMLRT project address safety and capacity concerns by:

- the widening of the bridge structure over highway 407 at Hurontario Street to maintain six general purpose traffic lane; and
- sufficient widening north and south of the noted crossing to permit smooth merging of traffic.

Per direction from the Cities we have developed a design proposal which we feel addresses 407ETR’s needs.

The attached sketches provide the above noted road cross section from the intersection of Hurontario Street and Topflight Drive, in the south, to a point on Hurontario Street approximately 300m north of the highway 407 southbound to westbound ramp bullnose. We hope that this proposed partial corridor widening is acceptable to 407ETR.

If these sketches are accepted we will proceed to include them in our base design and develop revised preliminary engineering drawings and carry out confirmatory modelling for the concept. Final development and detailed design of this concept will be conducted as part of the implementation phase of the project and will be subject to 407ETR review, permitting requirements, and interface agreements.

We ask that a preliminary response be provided to the project team by March 3, 2014 in order to permit inclusion of these details in our public information centre materials. Once agreed we request that 407ETR provide the project team a letter indicating that they have no opposition to the project and establish any commitments that the 407ETR asks of the project to be included in the implementation phase of the project. If 407ETR wishes to further discuss these design concepts we are happy to meet to go through any issues that they feel have not been addressed.
407ETR is also welcome to join us for our two public information centres covering the whole of the alignment. These centres will be held from 15h00 to 20h00 as follows:

- March 26, 2014 in the Great Hall of Mississauga City Hall – 300 City Centre Drive, Mississauga, and
- March 27, 2014 in the Atrium of the Rose Theatre – 1 Theatre Lane, Brampton

We look forward to your response.

Sincerely

Chris McCarthy, P. Eng.,
Project Manager,
SNC-Lavalin Team
Tel.: 416-252-5315 x54650
E-mail: chris.mccarthy@snclavalin.com

Encl: 1

Cc: Matthew Williams, City of Mississauga, Project Lead
    Bishnu Parajuli, City of Brampton, Project Engineer
    Ray Baequie; 407ETR
    Jeff Booker; 407ETR
March 6, 2014

Mr. Chris McCarthy, P. Eng.
Project Manager
SNC-Lavalin Transportation Team
195 The West Mall
Toronto, ON M9C 5K1

Dear Mr. McCarthy:

Re: Hurontario-Main LRT Project – Preliminary Design/Transit Project Assessment Process (TPAP)

We have reviewed your letter of February 26, 2014 in response to the 407 ETR requirements expressed through previous correspondence and meetings. The design concept, which includes a widening of the 407 ETR bridge structure and a widening of Hurontario Street from Topflight Drive to approximately 300-450m north of the westbound ramp terminal, meets the minimum acceptable configuration subject to confirmation of acceptable traffic operations by 407 ETR.

The proposed configuration will allow for 6 general purpose lanes of traffic to be retained across Highway 407 and through the Highway 407 intersections with Hurontario Street. However, we will require that the Hurontario-Main LTR Project demonstrate to our satisfaction that the operation of Hurontario Street will be able to accommodate traffic flows exiting Highway 407 with the reduced traffic capacity proposed on Hurontario Street to the north and south. This analysis will include queuing and delay analysis of the network along Hurontario Street and the Highway 407 ramps. We must be satisfied that the analysis includes reasonable traffic volume assumptions in the corridor.

We acknowledge that we are in receipt of the notice of study commencement for the TPAP since our last meeting. We also note that the 407 ETR requirements were raised prior to the initiation of the TPAP and it is our expectation that proponents will respond fully to address these requirements within the TPAP process.

We further recommend that the proponents of the LRT (Metrolink, Mississauga, Brampton) enter into discussion with 407 ETR to define the terms of an agreement for the bridge widening as well as responsibilities for operation, maintenance and rehabilitation. Such an agreement will reduce the potential for conflict should these proponents decide to proceed with the LRT as a Concession type project. Recognizing that any such future concession will have to be synchronized with the Highway 407 Concession Agreement, which is already in place, and controls the rights and responsibilities of 407 ETR related to the use of the Highway 407 lands.

As previously stated, the bridge that carries Hurontario Street over Highway 407 is owned by 407 ETR and that the use of this bridge and any modifications to this structure are subject to the conditions and terms set by the owner of such structure. We will continue to work with the Cities of Brampton and Mississauga in good faith in an effort to reasonably accommodate the HMLRT, but it must be accomplished in such a manner that does not diminish the safety or the efficiency of our business.

Sincerely,

Craig D. White, P. Eng.
VP, Highway & Tolling Operations

c: Chris Duyvestyn – City of Brampton
Matthew Williams – City of Mississauga
Cecile McLeod – SNC-Lavalin
Ray Bacquie – 407 ETR
Jeff Booker – 407 ETR
Tony Angelo – 407 ETR
Frank Martins - MTO
April 8, 2014

City of Mississauga
201 City Centre Drive, Suite 800
Mississauga, Ontario
L5B 2T4

Attention: Mr. Matthew Williams, LRT Project Manager – Hurontario Corridor

Dear Mr. Williams:

Re: Hurontario – Main LRT Project
Transit Project Assessment Process (TPAP)

We are the solicitors representing Alfonso Gallucci General Construction Limited (the “Owner”), owner of the property situated at the southeast corner of Hurontario Street and Nahani Way in the City of Mississauga. This is a zoned high-rise apartment site which our client intends to develop in the near future. We are currently revising the approved proposal and have an active rezoning application being processed by the City of Mississauga. This property is located along the corridor of the Hurontario-Main Light Rail Transit Project and is directly affected by the project.

Representatives of the Owner attended Public Information Centre #3 on March 26, 2014, which was intended to be a consultation with stakeholders and the public to present the proposed HMLRT Project. At the presentation, exhibits showed plans for a Traction Power Sub-Station (TPSS) on the Owner’s lands and specifically, on the corner of Hurontario and Nahani Way. We understand that the TPSS consists of a building 10m x 20m in size and that there would be land requirements for adjacent parking spaces for maintenance vehicles and access for large equipment delivery.

We advise that the Owner strongly objects to any proposal to locate a TPSS on their land and does not agree to the designation or sale of any part of their land for this purpose. The proposed TPSS which essentially renders the approved and revised development unfeasible. The land is currently zoned to permit a 25-storey apartment building and the TPSS conflicts with
development plans that have been submitted to the City of Mississauga. There is a current rezoning application that seeks to increase the height and density of the development and also to include a retail commercial component on the ground floor. One of the major elements of the site plan is retail floor space on the ground floor with its primary entrance situated close to the streetlines and directly oriented to the intersection of Hurontario and Nahani Way. The design of the development is such that the building covers almost the entire property and all parking is provided in an underground garage. In addition, the site is already being reduced in size as a result of the City’s road requirements on the east part of the property. Accordingly, there is no space for such a facility on this land and locating a TPSS on this land would seriously jeopardize the viability of this land as a development site. We request that you plan to locate this facility elsewhere.

Would you please acknowledge receipt of this objection to the proposed location of a TPSS on the southeast corner of Hurontario and Nahani Way and keep those listed below informed of further consultations planned for the LRT.

Yours truly,

BRATTYS LLP

Barry A. Horosko

CC    John Gallucci, Alfonso Gallucci General Construction Limited
      Janice Robinson, Goldberg Group
      Hurontario-Main LRT Project Consultation Team, SNC-Lavalin Transportation Division
June 10, 2014

Mr. Barry A. Horosko
BRATTYS BARRISTERS AND SOLICITORS
7501 Keele Street, Suite 200
Vaughan, Ontario L4K 1Y2

Dear Mr. Horosko:

We have received your letter dated April 8, 2014 regarding the Hurontario-Main LRT Project Transit Project Assessment Process. We also acknowledge Alfonso Gallucci General Construction Limited’s (the owner) current opposition to the placement of a traction power sub-station on the property on the south-east corner of Nahani Way and Hurontario Street.

Traction power sub-stations are critical infrastructure for the Hurontario-Main LRT (HMLRT). As part of preliminary engineering, the locations of the sub-stations were identified based on key factors regarding power distribution, and spatial requirements and are being included in the Environmental Project Report for the Transit Project Assessment Process. The site noted meets the needs of the project; however, the precise location on the site is not fixed and can be adjusted, within limits.

The final location of the station on the site can be revised; however, any such re-location would need to provide:

• Adequate space for the traction power equipment
• Adequate ventilation for the traction power equipment
• Access for maintenance
• Parking for maintenance vehicles (can be shared)
• If underground, adequate access for installation and removal of equipment.

The project team is committed to working with property owners impacted by the project to find solutions beneficial for all parties in conjunction with development review and as the project moves further towards implementation. We look forward to coming to a resolution to this matter as the project progresses.

Sincerely,

Matthew Williams
Project Manager, HMLRT
905-615-3200, ext. 5834
Baif Developments Limited
June 10, 2014

Elizabeth Gillin, MSc., MCIP, RPP
Senior Planner Associate
MMM GROUP LIMITED
100 Commerce Valley Drive West
Thornhill, ON L3T 0A1

Dear Ms. Gillin:

Thank you for your correspondence on behalf of Baif Developments Limited, dated April 29, 2014 with respect to the Hurontario-Main Light Rail Transit Public Information Centre #3 (March 26, 1014) and regarding the preliminary LRT alignment plan (Burnhamthorpe, sheet 6 of 19).

In your correspondence, you noted a discrepancy in the manner in which Main Street in Downtown Mississauga has been depicted between the Public Information Centre (PIC) #2 and PIC #3. The PIC #3 drawing illustrated a limited north/south connection across Burnhamthorpe Road.

As per our discussion on April 14, 2014, the Environmental Project Report (EPR) of Hurontario-Main LRT Project will be protecting for a future full move signalized intersection of Main Street at Burnhamthorpe Road with turning lanes from Burnhamthorpe Road to future Main Street (north and south). The information will be labelled as “Future Turn Lane” and “Main Street (Future)” on the preferred design plates included with the EPR. The final intersection configuration and construction would be subject to future detailed design.

Thank you again for the support of the City’s vision for the Downtown Core as identified in your letter and please contact me if you have any further questions.

Sincerely,

Matthew Williams
Project Manager, HMLRT
905-615-3200, ext. 5834
Credit Valley Conservation Authority
March 18, 2014
Credit Valley Conservation
1255 Old Derry Road
Mississauga, Ontario
L5N 6R4

Project Title: Hurontario-Main LRT Project, Preliminary Design/TPAP Phase
Project Location: City of Mississauga and City of Brampton

RE: PRE-FILING REVIEW OF DRAFT ENVIRONMENTAL PROJECT REPORT

Dear Mr. Kilis

As part of the Pre-Planning Phase of the Hurontario-Main LRT Project, the Project Team prepared the Draft Environmental Project Report (EPR). The Project Team subsequently commenced the Transit Project Assessment Process (TPAP) on February 19, 2014.

As part of the TPAP consultation program, we are submitting herewith selected sections of the Draft Environmental Project Report (EPR) for your review (a detailed transmittal is attached for your reference). The information package has been tailored to your legislative and regulatory mandate. The pre-filing review of the Draft EPR is a step in the TPAP that is expected to facilitate preparation and publication of a Final EPR that is acceptable to the Ministry of the Environment and principal stakeholders, including your agency. Therefore, at this time, we are seeking comments on the Draft EPR that are specifically related to your mandate, including (as appropriate) agreement in principle or sign-off on the report content, project proposals, and commitments to further investigations and consultation.

Please note that the Draft EPR being provided for review is the same document provided to MOE for review in November 2013. It does not fully reflect the implications of Metrolinx having become a project co-proponent in January 2014 (e.g., there will be changes to the range of permits and approvals needed now that a provincial agency is a project proponent).

To assist us in incorporating and responding to any input that you may have within the prescribed 120-day TPAP consultation period, please provide your response by April 25, 2014.
If you require clarification on any component of the Draft EPR package, please contact:

Ms. Elham Ramandi, BSc., MEnv.
Environmental Planner
SNC-Lavalin Inc.
195 The West Mall
Toronto, Ontario M9C 5K1
416-252-5315 Ext.53635
elham.ramandi@snclavalin.com

We look forward to receiving your comments and working collaboratively to finalize the document.

Sincerely,

Ian K. Upjohn, MCIP, RPP
Environmental Lead

cc: M. Williams, City of Mississauga
    B. Parajuli, City of Brampton
    M. Bot, Metrolinx
    C. McCarthy/T. Brenham/E. Ramandi, SLI
TO: Jakub Kilis  
Date: March 18, 2014
Location: Credit Valley Conservation  
Project name: Hurontario-Main LRT Project, Preliminary Design/TPAP Phase

Your reference: Sender: Elham Ramandi; Ian Upjohn

TYPE OF DOCUMENTS: DELIVERY TYPE: REASON:

Drawings: ☒ By mail: ☒ For approval: ☐
Report: ☒ By messenger: ☐ For Comments: ☒
Specification: ☐ Hand: ☐ For construction: ☐
Book: ☐ Other: ☐ Inter Library Loan: ☐
Other: ☐ Other: ☐

Number of copies Description
One (1) Hard Copy  
One (1) Digital Copy  
• Main Text  
• Appendix A (Design Plates)  
• Appendix B.1 Natural Environment Report  
• Appendix B.2 Hydrogeology Report  
• Appendix B.4 Drainage and Stormwater Management Report  
• Appendix B.10 Preliminary Structural Assessment Report

Remarks/Comments:

Dear Mr. Kilis,

To facilitate the Ministry of the Environment's review of the “Hurontario-Main LRT October 2013 Draft Environmental Project Report (including selected Appendices)”, one (1) hard copy and one (1) CD has been submitted for your review and comment. Please note that the CD has been placed inside the rear cover of the hard copy of the main report.

Please feel free to contact me if you require any further information.

Regards,

Elham Ramandi, BSc., MEnv.  
Environmental Planner  
Environment Division  
SNC-Lavalin Inc.  
195 The West Mall  
Toronto, Ontario M9C 5K1  
416-252-5315 ext.53635  
elham.ramandi@snclavalin.com

cc: M. Williams, City of Mississauga  
B. Parajuli, City of Brampton  
M. Bot, Metrolinx  
C. McCarthy/T. Brenham/I. Upjohn, SLI
Hardeep,

CVC staff has had a chance to review the Preliminary Design/TPAP submission for the Hurontario-Main LRT Project and offer the following comments for your consideration:

General Comments:
1. CVC staff has been working with the project team and reviewing alternatives in areas of interest to CVC throughout this process. Through these reviews CVC is generally satisfied in principle with the preliminary design specifically in the areas around Mary Fix Creek and Cooskville Creek. CVC expects to continue working with the project team as the project moves through the next phases and to detail design and permitting and to review refined details as they become available.

Report Specific Comments:
1. Table 3-7: Summary of Existing Fish and Fish Habitat Conditions (pg 3-20)– Fletcher’s Creek Sites D3, D4, D5 and D6. CVC does not consider these feature to be watercourses and therefore these are not regulated by CVC under Ontario Regulation 160/06.
2. Figure 3-13 (pg 3-30) – Table name is incorrect – should be Cooksville Creek not Etobicoke Creek.
3. Figure 3-14 (pg 3-31) – Table name is incorrect – should be Mary Fix Creek not Etobicoke Creek.
4. Section 4.3.1 Surface Water and Aquatic Ecosystems (pg 4-13) - For Site PC (Mary Fix Creek) the description states that the new bridge structure will be 17.6m by 9.1m however, the Drainage and Stormwater Management Report (Appendix B.4) in Section 6.6.10 recommends that the proposed bridge have a minimum 11.2m span. Please address/correct.
5. Section 5.1 (pg 5-1) – CVC permit requirements are listed under the municipal heading. CVC permits are issued under provincial legislation and should be relocated as part of the Provincial approvals under Section 5.2.

Appendix A Comments:
1. Plan and Profile - Sta N10+775 to Sta N11+075 - The preliminary design shows a TPSS located at the northwest corner of Hurontario St and the CN rail line. This location is within the floodplain of Mary Fix creek and in very close proximity to the channel. Further, this location impacts the already narrow Mary Fix corridor. CVC cannot support a TPSS in this location and an alternate location must be selected which is outside of the floodplain and at a suitable setback to Mary Fix creek.

Please let me know if you have any question or comments.

Regards,
Jakub
message may contain information that is privileged, confidential and exempt from disclosure under the Municipal Freedom of Information and Protection and Privacy Act and by the Personal Information Protection Electronic Documents Act. The use of such personal information except in compliance with the Acts, is strictly prohibited. If you have received this message in error, please notify the sender immediately advising of the error and delete the message without making a copy. Thank you.
Metrolinx
June 9, 2014

Bruce McCuaig  
President and Chief Executive Officer  
Metrolinx  
97 Front Street West  
Toronto, Ontario M5J 1E6

Bruce,

Re: Hurontario-Main Light Rail Transit Roles and Responsibilities

Further to your correspondence dated February 6, 2014, the City of Mississauga is pleased to have Metrolinx support the full vision behind the Hurontario-Main Light Rail Transit Project and join us as a co-proponent through the Transit Project Assessment Process (TPAP) and beyond.

The City of Mississauga is currently working with Metrolinx on the update to the business case and we support all efforts to develop a submission for PPP Canada for funding and the development of Master Plan Agreements or Memorandum of Understanding that would advance project implementation.

We look forward to the scheduling of the next municipal Metrolinx Meeting to discuss progress on these issues.

Sincerely,

Janice M. Baker, FCPA, FCA  
City Manager and Chief Administrative Officer

c: Martin Powell, Commissioner, Transportation and Works
Ministry of Environment
February 25, 2014

Mr. Ian K. Upjohn
Environmental Lead
SNC-Lavalin Transportation Team
195 The West mall
Toronto ON M9C 5K1

Dear Mr. Upjohn:

Re: Acknowledgement Hurontario-Main Light Rail Transit Project Notice of Commencement

Thank you for your e-mail dated February 19, 2014, on behalf of the Cities of Mississauga and Brampton, notifying the Ministry of the Environment of the Notice of Commencement for the Hurontario-Main Light Rail Transit Project.

The Ministry understands that this Notice of Commencement was first made public on February 19, 2014, officially starting the 120-day Environmental Project Report development period.

Should you have any further questions related to Ontario Regulation 231/08 and its requirements, please contact Mr. Gavin Battarino, the Project Officer of the Environmental Approvals Branch, at 416-212-4279 or by e-mail at gavin.battarino@ontario.ca.

Yours sincerely,

Agatha Garcia-Wright
Director
Environmental Approvals Branch
Ministry of Natural Resources
March 18, 2014

Ministry of Natural Resources
50 Bloomington Road West,
Aurora, Ontario
L4G 0L8

**Project Title:** Hurontario-Main LRT Project, Preliminary Design/TPAP Phase

**Project Location:** City of Mississauga and City of Brampton

**RE: PRE-FILING REVIEW OF DRAFT ENVIRONMENTAL PROJECT REPORT**

Dear Mr. Strong,

As part of the Pre-Planning Phase of the Hurontario-Main LRT Project, the Project Team prepared the Draft Environmental Project Report (EPR). The Project Team subsequently commenced the Transit Project Assessment Process (TPAP) on February 19, 2014.

As part of the TPAP consultation program, we are submitting herewith selected sections of the Draft Environmental Project Report (EPR) for your review (a detailed transmittal is attached for your reference). The information package has been tailored to your legislative and regulatory mandate. The pre-filing review of the Draft EPR is a step in the TPAP that is expected to facilitate preparation and publication of a Final EPR that is acceptable to the Ministry of the Environment and principal stakeholders, including your agency. Therefore, at this time, we are seeking comments on the Draft EPR that are specifically related to your mandate, including (as appropriate) agreement in principle or sign-off on the report content, project proposals, and commitments to further investigations and consultation.

Please note that the Draft EPR being provided for review is the same document provided to MOE for review in November 2013. It does not fully reflect the implications of Metrolinx having become a project co-proponent in January 2014 (e.g., there will be changes to the range of permits and approvals needed now that a provincial agency is a project proponent).

To assist us in incorporating and responding to any input that you may have within the prescribed 120-day TPAP consultation period, please provide your response by **April 25, 2014**.
If you require clarification on any component of the Draft EPR package, please contact:

Ms. Elham Ramandi, BSc., MEnv.
Environmental Planner
SNC-Lavalin Inc.
195 The West Mall
Toronto, Ontario M9C 5K1
416-252-5315 Ext.53635
elham.ramandi@snclavalin.com

We look forward to receiving your comments and working collaboratively to finalize the document.

Sincerely,

Ian K. Upjohn, MCIP, RPP
Environmental Lead

cc: M. Williams, City of Mississauga
    B. Parajuli, City of Brampton
    M. Bot, Metrolinx
    C. McCarthy/T. Brenham/E. Ramandi, SLI
TO: Steve Strong
Location: Ministry of Natural Resources
50 Bloomington Road West,
Aurora, Ontario
L4G 0L8

Date: March 18, 2014
Project name: Hurontario-Main LRT Project,
Preliminary Design/TPAP Phase

Your reference: Sender: Elham Ramandi; Ian Upjohn

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Number of copies Description
One (1) Hard Copy • Main Text
One (1) Digital Copy • Appendix A (Design Plates)
• Appendix B.1 (Natural Environment Report)
• Appendix B.13 (Preliminary Maintenance and Storage Facility Assessment Reports)

Remarks/Comments:

Dear Mr. Strong,

To facilitate the Ministry of the Environment's review of the “Hurontario-Main LRT October 2013 Draft Environmental Project Report (including selected Appendices)”, one (1) hard copy and one (1) CD has been submitted for your review and comment. Please note that the CD has been placed inside the rear cover of the hard copy of the main report.

Please feel free to contact me if you require any further information.

Regards,

Elham Ramandi, BSc., MEnv.
Environmental Planner
Environment Division
SNC-Lavalin Inc.
195 The West Mall
Toronto, Ontario M9C 5K1
416-252-5315 ext.53635
elham.ramandi@snclavalin.com

cc: M. Williams, City of Mississauga
B. Parajuli, City of Brampton
M. Bot, Metrolinx
C. McCarthy/T. Brenham/I. Upjohn, SLI
Good morning Elham,

MNR has received the subject report. Please be advised that MNR may have an interest should there be any proposal to direct discharge to watercourses identified as occupied or recovery Redside Dace habitats (namely Fletchers Creek). Should this be the case, MNR should be consulted.

Sincerely,

Jackie Burkart
District Planner
Ministry of Natural Resources | 50 Bloomington Road, Aurora, ON L4G 0L8 | Phone: 905-713-7368 | Fax: 905-713-7360 |
Email: jackie.burkart@ontario.ca
Thank you for your e-mail Jackie, I have forwarded to our Environmental group and Project team.

Cecile McLeod  
*Administrative Assistant*  
*Transportation Division*  
Tel.: 416-252-5315 x 52562  
*Transportation Division*  
195 The West Mall  
Toronto | Ontario | Canada | M9C 5K1

---

**From:** Burkart, Jackie (MNR)  
**Sent:** June 2, 2014 3:09 PM  
**To:** McLeod, Cecile  
**Cc:** Heaton, Mark (MNR)  
**Subject:** RE: Hurontario-Main LRT Notice of Commencement

Cecile,

Further to MNR’s previous comments the study area does appear to include portions of the Downtown Brampton Special Policy Area (SPA). MNR should be advised of any proposals that may affect, or be affected by, the SPA.

Sincerely,

Jackie Burkart  
*District Planner*  
*Ministry of Natural Resources | 50 Bloomington Road, Aurora, ON L4G 0L8 | Phone: 905-713-7368 | Fax: 905-713-7360 | Email: jackie.burkart@ontario.ca*
To: 'Cecile.McLeod@snclavalin.com'
Cc: Heaton, Mark (MNR)
Subject: Hurontario-Main LRT Notice of Commencement

Good afternoon Cecile,

MNR will likely have limited concerns with this EA as the area appears to be highly developed. Please note that there are Redside Dace in the Credit River to the west of the study area. Any overland flows directed to the Credit watershed will require sediment and erosion controls be implemented and impeccably maintained during construction and until all areas are stabilized.

Please advise the MNR of any areas of the study area where overland flows are being/will be directed to the Credit River watershed.

Sincerely,

Jackie Burkart
District Planner
Ministry of Natural Resources | 50 Bloomington Road, Aurora, ON   L4G 0L8 | Phone: 905-713-7368 | Fax: 905-713-7360 | Email: jackie.burkart@ontario.ca

From: Bethke, Lindsey
Sent: February 18, 2014 5:19 PM
To: McLeod, Cecile
Subject: Hurontario-Main LRT Notice of Commencement

Please find attached the Notice of Commencement for the Hurontario-Main Light Rail Transit (LRT) Project.

The Notice of Commencement was officially issued on February 19, 2014, and marks the beginning of the Transit Project Assessment Process (TPAP) for the Hurontario-Main LRT Project in the cities of Mississauga and Brampton, Ontario.

The TPAP is a focused impact assessment process that includes providing information and consultation opportunities, an assessment of potential positive and negative impacts to the environment including the natural, cultural, social and economic environments), commitments to mitigate negative impacts and monitor outcomes, and documentation in the form of an Environmental Project Report (EPR).

As part of the TPAP, the Project Team will be holding the third and final Public Information Centre (PIC) for this phase of the project in March 2014. PIC #3 will build upon the results from PIC #1 (June 2012) and PIC #2 (May 2013). This will provide an opportunity for the public to review the final stage of Preliminary Design of the LRT alignment, segregated lane configurations, and LRT stops. Information on the scope of associated environmental studies, including an assessment of potential impacts and proposed mitigation measures, will also be presented. Staff will also be available to answer questions.

PIC #3 is scheduled for March 26 at the Civic Centre in Mississauga (300 City Centre Drive) and March 27 at the Rose Theatre in Brampton (1 Theatre Lane). The public is welcome to attend this PIC to review the recommended Preliminary Design for the LRT, and associated street modifications and improvements, and provide feedback. However, if time doesn’t permit attending in person, all information and feedback forms will be posted to the project website on March 26, 2014. Feedback will be considered and/or used to inform the recommended Preliminary Design for the LRT system in
Mississauga and Brampton.

For background information, please visit the project online at www.hurontario-main.ca.

If you wish to be removed from this mailing list, please let us know by return email or phone 416-252-5315 extension 53806.

Should you have any questions, please contact me directly.

Kind regards,

Lindsey

Lindsey Bethke
Communications Advisor
Hurontario-Main LRT Project
SNC-Lavalin Inc.

P: 416.252.5311 ext 53806
Email: lindsey.bethke@snclavalin.com
March 18, 2014

Ministry of Tourism, Culture & Sport
401 Bay Street, 17th Floor
Toronto, Ontario
M7A 0A7

**Project Title:** Hurontario-Main LRT Project, Preliminary Design/TPAP Phase

**Project Location:** City of Mississauga and City of Brampton

**RE: PRE-FILING REVIEW OF DRAFT ENVIRONMENTAL PROJECT REPORT**

Dear Ms. Zirger,

As part of the Pre-Planning Phase of the Hurontario-Main LRT Project, the Project Team prepared the Draft Environmental Project Report (EPR). The Project Team subsequently commenced the Transit Project Assessment Process (TPAP) on February 19, 2014.

As part of the TPAP consultation program, we are submitting herewith selected sections of the Draft Environmental Project Report (EPR) for your review (a detailed transmittal is attached for your reference). The information package has been tailored to your legislative and regulatory mandate. The pre-filing review of the Draft EPR is a step in the TPAP that is expected to facilitate preparation and publication of a Final EPR that is acceptable to the Ministry of the Environment and principal stakeholders, including your agency. Therefore, at this time, we are seeking comments on the Draft EPR that are specifically related to your mandate, including (as appropriate) agreement in principle or sign-off on the report content, project proposals, and commitments to further investigations and consultation.

Please note that the Draft EPR being provided for review is the same document provided to MOE for review in November 2013. It does not fully reflect the implications of Metrolinx having become a project co-proponent in January 2014 (e.g., there will be changes to the range of permits and approvals needed now that a provincial agency is a project proponent).

To assist us in incorporating and responding to any input that you may have within the prescribed 120-day TPAP consultation period, please provide your response by **April 25, 2014**.
If you require clarification on any component of the Draft EPR package, please contact:

**Ms. Elham Ramandi, BSc., MEnv.**
Environmental Planner
SNC-Lavalin Inc.
195 The West Mall
Toronto, Ontario M9C 5K1
416-252-5315 Ext.53635
elham.ramandi@snclavalin.com

We look forward to receiving your comments and working collaboratively to finalize the document.

Sincerely,

![Signature]

Ian K. Upjohn, MCIP, RPP
Environmental Lead

cc: M. Williams, City of Mississauga
    B. Parajuli, City of Brampton
    M. Bot, Metrolinx
    C. McCarthy/T. Brenham/E. Ramandi, SLI
TO: Rosi Zirger  
Location: Ministry of Tourism, Culture & Sport  
401 Bay Street, Suite 1700  
Toronto, Ontario  
M7A 0A7

Date: March 18, 2014  
Project name: Hurontario-Main LRT Project,  
Preliminary Design/TPAP Phase  
Sender: Elham Ramandi; Ian Upjohn

TYPE OF DOCUMENTS:  
- Drawings: ☒  
- Report: ☒  
- Specification: ☐  
- Book: ☐  
- Other: ☐

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One (1) Hard Copy • Main Text  
One (1) Digital Copy  
• Appendix A (Design Plates)  
• Appendix B.8 (Cultural Heritage Report)  
• Appendix B.9 (Archaeological Environment Assessment Report)

Remarks/Comments:

Dear Ms. Zirger,

To facilitate the Ministry of the Environment’s review of the “Hurontario-Main LRT October 2013 Draft Environmental Project Report (including selected Appendices)”, one (1) hard copy and one (1) CD has been submitted for your review and comment. Please note that the CD has been placed inside the rear cover of the hard copy of the main report.

Please feel free to contact me if you require any further information.

Regards,

Elham Ramandi, BSc., MEnv.  
Environmental Planner  
Environment Division  
SNC-Lavalin Inc.  
195 The West Mall  
Toronto, Ontario M9C 5K1  
416-252-5315 ext.53635  
elham.ramandi@snclavalin.com

cc: M. Williams, City of Mississauga  
B. Parajuli, City of Brampton  
M. Bot, Metrolinx  
C. McCarthy/T. Brenham/I. Upjohn, SLI
April 30, 2014

Hardeep Maraj
Environmental Technician, Environment & Water
SNC-Lavalin
195 The West Mall
Toronto, ON  M9C 5K1

Dear Mr. Maraj,

Project: Hurontario–Main LRT
Location: Cities of Mississauga and Brampton
MTCS File: 21EA082

The Ministry of Tourism, Culture and Sport (MTCS) has received the October 2013 draft of the Environmental Project Report (EPR) for the project mentioned above. As part of the TPAP process, the MTCS has an interest in the conservation of cultural heritage resources including archaeological resources, built heritage resources, and cultural heritage landscapes. We have reviewed draft EPR for this study and offer the following comments.

The stage 1 archaeological assessment completed for this project identifies archaeological potential in certain portions of the study area, and recommends further stages of assessment in those areas. Similarly, the cultural heritage assessment report recommends a detailed heritage impact assessment for certain heritage resources, including CHL 1, BHR 21 and BHR 22, to identify and mitigate potential impacts to heritage values. These recommendations are reflected in the body of the EPR. However, it is preferable that any necessary archaeological and heritage impact assessment work be carried out early enough in the TPAP process that its findings can inform the selection of alternatives and preliminary design.

This ministry is referred to in the EPR variously as MTC and MTCS. Please note that as the ministry is now called the Ministry of Tourism, Culture and Sport, the latter acronym is correct.

In the event that human remains are encountered during archaeological or project work, you must immediately notify the police, the coroner's office and the Registrar of Cemeteries. The Cemeteries Regulation Unit of the Ministry of Consumer Services may be contacted at toll free 1-800-889-9768. In situations where the remains are associated with archaeological resources, the Ministry of Tourism, Culture and Sport should also be notified to ensure that the site is not subject to unlicensed alterations which would be a contravention of the Ontario Heritage Act.

Thank you for the opportunity to review and provide comment on this EA project.

Best Regards

Dan Minkin
Heritage Planner
416-314-7147
dan.minkin@ontario.ca
Dear Dan Minkin;

The level of assessment presented in the Stage 1 Archaeological Assessment and the Cultural Heritage Assessment Report for the Hurontario-Main LRT Project in the Cities of Mississauga and Brampton is appropriate for the EA and for informing the preliminary design. Stage 2 Archaeological Assessments and Heritage Impact Assessments are recommended to be conducted during Detail Design when property requirements have been more clearly identified and permission to enter can be secured for additional investigations.

Regards,

Lindsay Popert, MA
Cultural Heritage Specialist

Paul David Ritchie, MA
Staff Archaeologist
Ministry of Transportation
Mr. Khan,

Per your request the VISSIM base files will be submitted to you within the next two days.

As we have received no further comments beyond those of Route Planning and Transit Initiatives I will take this opportunity to address their two comments. Graham DeRose Wrote the following regarding the MSF Spur and its interface with the LRT (our comments are in Red Bold):

- The 407 Transitway station will be relying on Topflight Drive and Edwards Blvd to access the station, which will be a high volume use. We request clarification as to how the Light Rail and road users will co-exist on Topflight Drive and Edwards Blvd. And further, how the Light Rail access will separate from Edwards Blvd and how this will impact traffic. - The MSF spur functions to support deployment and return to base for the LRT fleet. The majority of vehicle will deploy in the early morning and return either late night or in off peak periods. There will be occasional mixing of Light Rail Vehicles on Topflight only, as the vehicles on Edwards are designated as side running and segregated from general purpose traffic. This operation will be similar to traffic sharing the road with any other heavy vehicle operating under the Highway Traffic Act. The exception being signal priority. Currently the signals are planned to give priority to the Light Rail Vehicles but not pre-emption. The LRT will have to wait until it receives the appropriate signal phase to cross at the intersection. Scheduling and control of this phase will be subject to the detailed design phase of the project.

- We have given further consideration to the LRT access where it impacts the 407 Transitway station envelope. We request clarification as to whether the study team examined any other LRT alignment alternatives that would avoid the 407 Transitway station envelope entirely. Such options would have to be within the Hydro Corridor (such as on the attached sketch). – The study team examined other alternates for the spur and selected the most direct route from Edwards Blvd based on the requirements of Hydro One Networks Inc. (HONI). Running on the south side of the Hydro Corridor was not considered as this zone is designated for the addition of a new 230kV line of Hydro Pylons to the HONI system. If alternate routes are to be used they can be developed in subsequent stages of the work in coordination with MTO and HONI.

We hope that the delivery of the files and these responses will allow MTO to register its support and requirements for future work for the projects.
Sincerely,

Trevor Brenham, P.Eng.
Consultant Team Deputy Project Manager
Hurontario Main LRT Project

Tel.: +1 416 252 5315 x 54193
Cell.: +1 647 680 7754

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From: Khan, Moin (MTO) [mailto:Moin.Khan@ontario.ca]
Sent: April 30, 2014 1:59 PM
To: McLeod, Cecile
Cc: Brenham, Trevor; Pascos, Chris (MTO)
Subject: RE: Hurontario-Main LRT - FTP Site with Future Year VISSIM Model Report

Thanks

Trevor:
Further to you phone call, please provide the VISSIM files also
Thanks
Moin

---

From: McLeod, Cecile [mailto:Cecile.McLeod@snclavalin.com]
Sent: April 30, 2014 11:58 AM
To: Khan, Moin (MTO)
Cc: Brenham, Trevor
Subject: Hurontario-Main LRT - FTP Site with Future Year VISSIM Model Report

Hello Moin:
Please see below for information to our FTP Site. I have uploaded the Future Year VISSIM Model Report on this site.

**Please also note that you will have 2 business days to access the information.**

******

Hello,

Your temporary access to the 3551 FTP folder has been set.

To access the server, proceed as follows:

1- Open Windows Explorer or CuteFTP, the only software allowed to access the FTP servers at SNC-Lavalin.

For Windows Explorer, follow these steps:

- Move the mouse cursor over the « Start » button situated in the lower left corner of your screen.
- With the right button on the mouse, click « Start » or in Windows 7
- In the window that appears, select « Windows Explorer », and Windows Explorer will start.

2- Type in the "Address" field: ftp://gate04.snclavalin.com/3551temp15

3- The FTP Access will be displayed, please enter:
- your user name: FTP3551TEMP15
- your password: Zyniji88 (IMPORTANT: The first letter in uppercase and subsequent letters in lowercase).

For security reasons, do not check "Save password".

Note: The above information is valid for 2 business days. After that delay, the account will be disabled and the folder content will be erased. If you need an extension, please contact the GIT Service Desk in Montreal at **514-393-8000**, extension **53551** and mention the reference number **2322313**.

Should you have any questions or problems, do not hesitate to contact me.

Thank you,

**Cecile McLeod**
**Administrative Assistant**
Transportation Division

Tel.: 416-252-5315 x 52562

**Transportation Division**
195 The West Mall
Toronto | Ontario | Canada | M9C 5K1
Mr. Khan,

Attached is our letter summarising the interactions between the MTO and the HMLRT project team. Due to MTO file size restrictions I am splitting this email into two parts:

Part 1 – The Letter, A memo on EMME2 modelling to date, and the 403 crossing life cycle analysis
Part 2 – Plan and profile around the MTO structures and the MSF site

Please confirm receipt of both parts. If the plan and profile is not received we will transmit to you via FTP Monday morning.

Sincerely,

Trevor Brenham, P.Eng.
Consultant Team Deputy Project Manager
Hurontario Main LRT Project
Tel.: +1 416 252 5315 x 54193
Cell.: +1 647 680 7754
195 The West Mall
Toronto | Ontario | Canada | M9C 5K1

LRT_title_4Block_SMALL

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Hello Don, the memo seems to captures the essence of our telephone discussions and agreement over the past year. Please proceed with the recommended approach.

Thanks
Muhammad

Hi Muhammad, and Happy New Year! I hope you had a safe and happy break from work, and of course that you had electricity through our ice storm!

Please find attached a memo summarizing the materials that we’ve sent to MTO for this project over the past year, and also summarizing our model comparison findings. I trust that, as you and I discussed mid-November, this helps you to provide a basis for the recommendation of macro modelling inputs for the next VISSIM analysis.

Please let me know your response, or if you would like to discuss further.

Cheers,
Don

Don Cleghorn, P.Eng.
Director, Civil Engineering
Transportation Division

Phone: 1-416-252-5315 x 52206
Mobile: 1-416-464-8723
Fax: 1-416-231-5356

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Memorandum

Title: HOT model results for 400s and QEW highways
Date: 13 December 2013
Circulation: MTO
Originator: Leslie Buckman, Steer Davies Gleave

Introduction

The Hurontario-Main Light Rail Transit (HMLRT) project, shown below, crosses four Provincial highways (407, 401, 403 and QEW) and MTO have a need to understand the impacts the project will have on the operation of these highways.
As part of the project development, extensive transit and traffic modelling has been undertaken to inform the design process, understand the traffic impacts and to provide information for the Benefits Case Analysis (BCA). The Higher Order Transit (HOT) model is used to forecast the ridership and wider transport impacts of the HMLRT project, while VISSIM microsimulation models have been developed to consider the detailed traffic impacts along the HMLRT corridor.

This note provides a summary of the data provided to MTO as part of the discussions around the HOT model results and robustness thereof for the purpose of forecasting the demand changes along the HMLRT corridor used in the VISSIM analysis. The main focus is on the flows and changes therein from 2006 to 2031 BAU; 2031 LRT impacts are covered at a higher level.

**Approach to the Transportation Modelling**

The HOT model is used to forecast the ridership and wider transport impacts of the HMLRT project. The HOT Model was developed by MMM and Professor Eric Miller for use in the Hurontario Main Street MasterPlan Study undertaken in 2010. It uses a combination of the Greater Toronto Area (GTA) model versions 2 and 3, which have been developed over a number of years, primarily by Professor Eric Miller and his team at the University of Toronto. From this, the model was refined in the HMLRT corridor with finer zoning and network updates, and the model calibrated to replicate 2006 demand and network conditions. Further review and refinement of the HOT model was undertaken as part of the current study.

The HOT model consists of a four stage transportation model, in which the trip generation, distribution and mode split stages are coded and run through the bespoke xtmf software developed by Professor Miller. The xtmf front end software allows users to input data, call procedures and implement model runs. The assignment models are run in EMME and stored in an EMME databank which can be called through the xtmf front end.

The model is fully synthetic i.e. demand matrices are created based on the use of key assumptions and parameters within the modelling process, rather than being based on observed data. Observed data was
used in the original calibration and validation process, with all demand matrices and assigned flows being based on the forecast synthetic matrices.

It represents the AM peak period, with zoning and networks representative of the GTA area. The model is of a typical structure and functionality for considering strategic changes to a transportation network.

For the traffic modelling, the focus of the project analysis is on the VISSIM analysis of the corridor. The HOT model is used to forecast and understand the changes in traffic flow that are expected between 2006 and the forecast 2031 BAU or 2031 LRT. These changes are applied, in absolute terms, to the 2011 observed flows on the HMLRT corridor within the VISSIM modelling. This is illustrated in the figure below. This process reflects the fact that models such as the HOT model, or the GGHM, will not be particularly robust at forecasting absolute flow levels on an individual link basis, but that the broad changes are more reliable.

Planning data
Planning data in the HOT model for the forecast year of 2031 are consistent with the original Growth Plan forecasts, with disaggregation to municipality and finer provided by the respective Cities. The table below summarizes the City totals within Peel, the City of Toronto and the Region totals elsewhere.

<table>
<thead>
<tr>
<th></th>
<th>Population</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2006</td>
<td>2031</td>
</tr>
<tr>
<td>Caledon</td>
<td>57,725</td>
<td>78,962</td>
</tr>
<tr>
<td>Brampton</td>
<td>452,622</td>
<td>737,892</td>
</tr>
<tr>
<td>Mississauga</td>
<td>697,778</td>
<td>811,603</td>
</tr>
<tr>
<td>Area</td>
<td>2006</td>
<td>2031 BAU</td>
</tr>
<tr>
<td>---------------------</td>
<td>--------</td>
<td>----------</td>
</tr>
<tr>
<td>Toronto CBD</td>
<td>190,937</td>
<td>266,165</td>
</tr>
<tr>
<td>Toronto (excl CBD)</td>
<td>2,405,602</td>
<td>2,615,349</td>
</tr>
<tr>
<td>Durham</td>
<td>606,396</td>
<td>1,000,009</td>
</tr>
<tr>
<td>York</td>
<td>893,992</td>
<td>1,507,490</td>
</tr>
<tr>
<td>Halton</td>
<td>429,903</td>
<td>703,387</td>
</tr>
<tr>
<td>Hamilton</td>
<td>514,994</td>
<td>597,268</td>
</tr>
<tr>
<td>TOTAL</td>
<td>6,249,949</td>
<td>8,318,125</td>
</tr>
</tbody>
</table>

General demand patterns

Data were provided on the 2006 and 2031 demand patterns of auto and transit users; these are shown in Appendix A of this note. These show a 38% increase in auto use and a 45% increase in transit use across the GTA, with lower increases in areas with relatively mature and stable land use, while higher growth levels are seen in areas of continued development. Auto demand (trips) in the general HMLRT corridor increases by 19%.

Highway ramp flows

Data on the mainline and ramp terminal flows have been provided to MTO in spreadsheet form. The table below summarises the ramp flows for the 4 interchanges, as the specific interest is on how the ramp terminals in particular operate and whether the 2031 scenarios will lead to excessive queuing onto the respective mainlines. The table shows data on current (2010) flows and forecast flows for 2006 and 2031 from the GGHM and HOT models respectively. (The current flows shown are that observed from 1-day MTO counts and the flow in the VISSIM model, derived using the MTO counts. The two datasets are very close, any differences arising from the need to balance counts along the corridor

<table>
<thead>
<tr>
<th></th>
<th>Observed</th>
<th>VISSIM</th>
<th>GGHM</th>
<th>HOT model</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2010</td>
<td>2010</td>
<td>2006</td>
<td>2031 BAU</td>
</tr>
<tr>
<td>407 ETR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EB-off (to Hurontario N&amp;S)</td>
<td>730</td>
<td>405</td>
<td>1,602</td>
<td>1,197</td>
</tr>
<tr>
<td>WB-off (to Hurontario N&amp;S)</td>
<td>919</td>
<td>381</td>
<td>952</td>
<td>571</td>
</tr>
<tr>
<td>NB-on to 407 East</td>
<td>450</td>
<td>597</td>
<td>1,130</td>
<td>533</td>
</tr>
<tr>
<td>SB-on to 407 East</td>
<td>492</td>
<td>268</td>
<td>708</td>
<td>440</td>
</tr>
<tr>
<td>NB-on to 407 West</td>
<td>273</td>
<td>1</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>SB-on to 407 West</td>
<td>418</td>
<td>58</td>
<td>338</td>
<td>280</td>
</tr>
<tr>
<td>401</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EB-off (to Hurontario N&amp;S)</td>
<td>399</td>
<td>891</td>
<td>1,532</td>
<td>641</td>
</tr>
<tr>
<td>WB-off (to Hurontario N&amp;S)</td>
<td>1,910</td>
<td>1,738</td>
<td>1,373</td>
<td>-365</td>
</tr>
<tr>
<td>NB-on to 401 East</td>
<td>1,135</td>
<td>1,327</td>
<td>1,328</td>
<td>1</td>
</tr>
</tbody>
</table>
Focusing on the off-ramps therefore, and bearing in mind that it is the changes between the model years that are input to the VISSIM modelling:

407  
- the GGHM has a larger increase for the EB-off ramp, but from a low 2006 value  
- the WB increases are comparable, with neither model starting from a robust 2006 position  
- **Recommendation: both models poorly replicate the 2006 Base and so continue with HOT model**

401  
- EB-off increases are comparable, with both models too high in 2006  
- The HOT model shows an increase in the WB-off direction, whereas GGHM shows a reduction  
- **Recommendation: continue with HOT model as worst case**

403  
- For the EB-off, both models show a good fit for 2006, but GGHM shows drop to 2031, HOT model essentially unchanged  
- For the WB-off, but both models show modest change  
- **Recommendation: continue with HOT model**

QEW  
- For the EB-off ramp, the GGHM shows a better 2006 fit, with a large increase to 2031. Conversely, the HOT model has a poorer 2006 fit, with a drop to 2031  
- For the WB-off ramp, both models show a poor match in 2006, and both show a modest change by 2031  
- **Recommendation: maintain use of WB from HOT model, but derive hybrid change for EB using the average of GGHM and HOT change (+123)**
The resulting 2031 BAU AM peak hour flows modelled in VISSIM are set out below, along with an indication of the capacity available (based on existing traffic flows and signal timings). Comparison with modelled flows show that all the VISSIM ramp flows are within capacity.

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Off-Ramp</th>
<th>2010 VISSIM</th>
<th>Change to 2031 BAU*</th>
<th>2031 BAU flow</th>
<th>Existing capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>407</td>
<td>Eastbound</td>
<td>730</td>
<td>350</td>
<td>1,080</td>
<td>1,400</td>
</tr>
<tr>
<td></td>
<td>Westbound</td>
<td>919</td>
<td>348</td>
<td>1,267</td>
<td>1,800</td>
</tr>
<tr>
<td>401</td>
<td>Eastbound</td>
<td>371</td>
<td>571</td>
<td>942</td>
<td>1,300</td>
</tr>
<tr>
<td></td>
<td>Westbound</td>
<td>1,769</td>
<td>418</td>
<td>2,187</td>
<td>2,700</td>
</tr>
<tr>
<td>403</td>
<td>Eastbound</td>
<td>1,045</td>
<td>8</td>
<td>1,053</td>
<td>1,500</td>
</tr>
<tr>
<td></td>
<td>Westbound</td>
<td>1,331</td>
<td>40</td>
<td>1,371</td>
<td>2,200</td>
</tr>
<tr>
<td>QEW</td>
<td>Eastbound</td>
<td>832</td>
<td>98</td>
<td>930</td>
<td>1,700</td>
</tr>
<tr>
<td></td>
<td>Westbound</td>
<td>1,219</td>
<td>216</td>
<td>1,435</td>
<td>1,600</td>
</tr>
</tbody>
</table>

*80% of the HOT model flow change is applied, reflecting the differences in model years

A review of flows on Hurontario has also been undertaken to understand the degree to which demand growth is being constrained by capacity limitations on the corridor and how this therefore may limit growth on the MTO interchange off-ramps. Flows immediately adjacent to the MTO interchanges are shown in the table below. In the AM peak, the southbound is the peak direction, with demand near capacity southbound at 407 and 403. At the 403, around 80% of the WB off-ramp traffic turns south, so while the ramp intersection may provide sufficient capacity, Hurontario itself limits any material increases in demand from the ramp.

<table>
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<th>Intersection</th>
<th>Off-Ramp</th>
<th>2010 AM Peak VISSIM</th>
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</thead>
<tbody>
<tr>
<td>407</td>
<td>Northbound on north side</td>
<td>1,016</td>
</tr>
<tr>
<td></td>
<td>Southbound on south side</td>
<td>2,740</td>
</tr>
<tr>
<td>401</td>
<td>Northbound on north side</td>
<td>1,512</td>
</tr>
<tr>
<td></td>
<td>Southbound on south side</td>
<td>2,372</td>
</tr>
<tr>
<td>403</td>
<td>Northbound on north side</td>
<td>1,920</td>
</tr>
<tr>
<td></td>
<td>Southbound on south side</td>
<td>2,770</td>
</tr>
<tr>
<td>QEW</td>
<td>Northbound on north side</td>
<td>2,266</td>
</tr>
<tr>
<td></td>
<td>Southbound on south side</td>
<td>1,325</td>
</tr>
</tbody>
</table>

**Downtown Mississauga**

Given the locational importance of Downtown Mississauga, the following table summarises the planning data for this area of the model and the resulting trips to and from the downtown area, split by auto and transit and active modes. Overall, within the HOT 2031 BAU model trips to and from the downtown grow commensurately with land use growth. Split by mode, auto trips grow at a slower rate, with transit growing faster. This reflects the wider use of parking charges and greater supply of transit modelled in 2031, along with transit starting from a lower baseline. The rates of increase in trip making closely mirror the rates of population and employment growth.
<table>
<thead>
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<th>2006</th>
<th></th>
<th>2031</th>
<th></th>
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<tr>
<td></td>
<td>Population</td>
<td>Employment</td>
<td>Population</td>
<td>Employment</td>
</tr>
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<td>34,160</td>
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<tr>
<td>% increase</td>
<td>86%</td>
<td>55%</td>
<td></td>
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</tr>
<tr>
<td>Origin</td>
<td></td>
<td></td>
<td>Origin</td>
<td></td>
</tr>
<tr>
<td>Destination</td>
<td></td>
<td></td>
<td>Destination</td>
<td></td>
</tr>
<tr>
<td>Total person trips</td>
<td>11,601</td>
<td>18,413</td>
<td>21,982</td>
<td>27,192</td>
</tr>
<tr>
<td>% increase</td>
<td>89%</td>
<td>48%</td>
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<td></td>
</tr>
<tr>
<td>Auto (person) trips</td>
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<td>16,445</td>
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<td>21,592</td>
</tr>
<tr>
<td>% increase</td>
<td>65%</td>
<td>31%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transit and active modes (person) trips</td>
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<td>1,968</td>
<td>7,236</td>
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<td>% increase</td>
<td>171%</td>
<td>185%</td>
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</tr>
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</table>

**Focus on 403 ramp flows**

Given the importance of downtown Mississauga to the HMLRT project and the need to ensure robust traffic and LRT operations, particularly around the 403 ramps, more detailed data and analysis was undertaken. This comprised select link analysis of the flows on the off-ramps to understand the trip patterns from these ramps and if and how this changes by 2031, particularly given the stable flows on the ramps and the growth in the downtown. The resulting data are presented in Appendix B.

In general, the eastbound off-ramp maintains comparable volumes and patterns between 2006 and 2031. Conversely, the westbound off-ramp, while also maintain comparable demand to 2031, does show a ‘tighter’ pattern of trips. This may arise from additional local growth for the ramp causing wider area trips on the ramp to divert to other routes, e.g. trips from Brampton decline while those from closer origins like East Mississauga and Toronto increase.

**LRT ridership**

While the focus has been on the 2031 BAU forecast flows, the 2031 LRT forecasts show the following:

- 2031 LRT ridership of 24,900 in the weekday AM peak period
- 15% of LRT demand are new transit users in the HMLRT corridor

The stop-stop matrix for the two LRT routes operated (Brampton GO – downtown Mississauga and Port Credit GO – downtown Mississauga) are shown in Appendix C.

Within the HOT model, testing of the LRT scenario reflects the capacity reductions along the Hurontario-Main corridor arising from conversion of a traffic lane to the LRT right of way, as well as the resulting traffic signal constraints. Resulting VISSIM traffic analysis has been used to identify and design out any material traffic impacts, for example resulting in additional infrastructure at 403 and QEW to maintain traffic capacity on Hurontario.
Summary and Way Forward

The purpose of this note is to demonstrate that the HOT model is a reasonable basis for deriving ramp flows for use in VISSIM traffic analysis along the HMLRT corridor. Comparison with GGHM flows does indicate differences in absolute 2006 and 2031 flow levels; however, in most cases, the flow changes are higher in the HOT model, the key exception being the QEW EB off-ramp.

On that basis, we would ask that MTO agree that using the HOT model derived flow changes, adjusting for the QEW EB off-ramp flow in the manner described, is a reasonable basis for the next iteration of VISSIM modelling.
Appendix A – superzone highway and transit demand patterns

The figure below sets out the superzone system used in the following matrices, with around 1km either side defining the superzones along the corridor. Numbers 1 to 7 in the figure show the superzones along the HMLRT corridor and correspond to the first seven superzones listed in the matrices, while 8/9 correspond to West Mississauga, 10/11 to East Mississauga and 17 to Brampton. The remaining superzones in the matrices are self explanatory.
<table>
<thead>
<tr>
<th>2006 AUTO DRIVE</th>
<th>Brampton to steeles</th>
<th>Steeles to 407</th>
<th>407 to 401</th>
<th>401 to 403</th>
<th>Square one</th>
<th>Burnthamthorpe to QEW</th>
<th>QEW to Port Credit</th>
<th>Mississauga West</th>
<th>Mississauga East</th>
<th>Toronto</th>
<th>DT Toronto</th>
<th>S&amp;W GTA</th>
<th>NW of Brampton</th>
<th>N&amp;E GTA</th>
<th>Brampton</th>
<th>External Zones</th>
<th>TTC P&amp;R</th>
<th>GO-Rail P&amp;R</th>
<th>Total</th>
</tr>
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<td>Square one</td>
<td>Burnhamthorpe to QEW</td>
<td>QEW to Port Credit</td>
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<td>Mississauga East</td>
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<td>DT Toronto</td>
<td>S&amp;W GTA</td>
<td>NW of Brampton</td>
<td>N&amp;E GTA</td>
<td>Brampton</td>
<td>External Zones</td>
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<td>GO-Rail P&amp;R</td>
<td>Total</td>
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## Appendix B – 403 ramp flows

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2006 403 WB off ramp:
- Brampton to Steeles: 2
- Steeles to 407: 6
- 401 to 403: 133
- Burnhamthorpe to QEW: 0
- QEW to Port Credit: 0
- Mississauga West: 0
- Toronto: 0
- DT Toronto: 0
- S&W GTA: 0
- NW of Brampton: 0
- N&L GTA: 0
- Brampton: 0
- External Zones: 0
- TTC P&R: 0
- GO-Rail P&R: 0
- Total: 348

2031 403 WB off ramp:
- Brampton to Steeles: 133
- Steeles to 407: 126
- 401 to 403: 348
- Burnhamthorpe to QEW: 0
- QEW to Port Credit: 0
- Mississauga West: 0
- Toronto: 0
- DT Toronto: 0
- S&W GTA: 0
- NW of Brampton: 0
- N&L GTA: 0
- Brampton: 0
- External Zones: 0
- TTC P&R: 0
- GO-Rail P&R: 0
- Total: 733
Appendix C – LRT demand patterns (2031, AM Peak period)

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MEMORANDUM

The Hurontario-Main Light Rail Transit system (HMLRT) is proposed to run for approximately 24 km from a southern terminus in Port Credit, Ontario north to the GO station in downtown Brampton, with possible future northern extensions. In order to service downtown Mississauga, a loop around the Square One Shopping Centre is proposed. A number of alignment alternatives were considered for this loop. The preferred alignment runs along Burnhamthorpe Rd. West, Duke of York Blvd., and Rathburn Road West and rejoins Hurontario St. between Rathburn Road and Highway 403. At the Highway 403 crossing, the LRT guideway will be constructed in the median of Hurontario Street on the existing underpass bridge, which will be widened to the west in order to accommodate additional lanes along Hurontario Street. This has been presented to MTO in a previous memo entitled Highway 403 Crossing – Preferred Alternative, dated August 21, 2013.

MTO has requested that a life-cycle cost analysis be carried out in order to assess the life-cycle cost of the preferred alternative against that of full replacement of the existing underpass bridge. This memo will present the results of this analysis.

Considered Alternatives:

Alternative 1: Widening and Rehabilitation

This alternative includes construction of a new widening portion, along with rehabilitation of the existing portion in order to allow it to carry LRT guideway and extend its useful service life. A preliminary General Arrangement drawing for this alternative is provided in Appendix B of this memorandum. It should be noted that due to the potential conflict of the HMLRT construction with MTO’s plans to rehabilitate this structure, two scenarios were considered for this work:

1. Rehabilitation of the bridge is completed as per MTO’s schedule, before commencement of the LRT construction.
2. The bridge rehabilitation is completed concurrently with the LRT construction.

In order to maintain flexibility in the HMLRT schedule, both scenarios must be considered at this time. For this life cycle analysis, the first scenario is assumed since the overall cost associated with this scenario is expected to be higher.

Alternative 2: Full Replacement

This alternative includes replacement of the existing bridge with a new bridge. A preliminary General Arrangement drawing for this alternative is provided in Appendix C of this memorandum.

Full replacement of this structure will be challenging, since removal of each of the twin structures will need to be completed with all traffic detoured off the twin structure being replaced. Each of the structures has an existing roadway width of approximately 11.9m and cannot accommodate two lanes in each direction. If two lanes in each direction need to be maintained during construction, a temporary modular bridge will be necessary.
Assumptions:
The life cycle cost analysis was carried out over a 50 year period, with assumed discount rates of 3% and 4%. The structures are assumed to be rehabilitated on a 25 year cycle, with the exception of the existing bridge, which is assumed to require replacement in 42 years. This is based on:

- A 75 year life cycle; and
- The bridge was constructed in 1980 and is approximately 33 years old.

Rehabilitation of the widened portion is assumed to be carried out at the same time as replacement of the original portion.

Conclusions:
The results of the analysis indicate that over the 50 year period considered, the net present value of life cycle costs for Alternative 1 is $4,590,287 less than Alternative 2 assuming a discount rate of 3%; and $5,598,988 less than Alternative 2 assuming a discount rate of 4%. The analysis is enclosed as Appendix A to this report. It is concluded that Alternative 1 is the most economical option given that its net present value is less than the net present value of Alternative 2 for all assumed discount rates.
Appendix A – Life Cycle Cost Analysis
### Discount Rate = 3%

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**Net Present Value**

$15,804,621

($4,590,287)

### Discount Rate = 4%

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**Net Present Value**

$13,926,778

($5,598,988)
Appendix B – General Arrangement Drawing – Alternative 1
Appendix C – General Arrangement Drawing – Alternative 2
March 14, 2014

Moin Khan, P.Eng.
Senior Project Engineer
HIGHWAY ENGINEERING - PEEL AND HALTON
Bldg D, 4th Floor
1201 Wilson Ave
Downsview ON M3M 1J8

Hurontario/Main LRT – Summary of Ministry of Transportation Ontario (MTO) Engagement

Dear Mr. Khan,

This letter is intended to introduce you to the Hurontario/Main LRT (HMLRT) project and the engagement which has occurred between the HMLRT team and MTO over the past year.

The HMLRT is a 23km urban style light rail transit (LRT) system proposed to connect from the Port Credit GO station in Mississauga to Brampton GO station in Brampton. This system will provide a key north south higher order transit corridor connecting to three GO Stations the Mississauga Transitway, four proposed east-west higher order transit corridors (Queen St., 407 Transitway, Dundas St., and Lakeshore), and local transit. The system is also intended to provide impetus for the development of Hurontario/Main Street from its current sub-urban condition to a more walkable accessible urban built form.

The HMLRT project has currently initiated the consultation period for the transit project approval process under the 231/08 Transit Projects Regulation by issuing a ‘Notice of Study Commencement’ on 19 February, 2014. We are seeking as part of this consultation period, agreement-in-principle from the MTO for the proposed project.

In order to permit the MTO to provide this agreement the project has met on multiple occasions with the MTO previously to discuss:

- The project scope
- Project impacts on the MTO 407 Transitway project
- Impacts on MTO highway ramp terminal operation and design at:
  - The Queen Elizabeth Way and Hurontario Street;
  - Highway 403 and Hurontario Street; and
  - Highway 401 and Hurontario Street.
- Traffic impacts at the terminus stops and approaches at both the strategic and operational level; and
- Modifications to MTO structures associated with Hurontario Street

To give a clear picture of the present status of the project, we have included with this letter the latest plan and profile drawings for the alignment, including the Maintenance and Storage Facility, our Life Cycle Costing of the proposed 403 highway structure, and our memoranda establishing agreement with SAFO for the inputs to the VISSIM modelling along the corridor.
To date we have received MTO staff comments from SAFO, Central Region Traffic (modelling and signals) and Central Region structural engineering.

Highway 407 Transitway and Maintenance and Storage Facility Interfaces.

The Maintenance and Storage Facility is the main operational and maintenance hub serving the entire system. The facility is located on the Parkway Belt lands bounded by the 407 on the north, Kennedy Road on the East, the Mississauga/Brampton city limit on the south and Hurontario Street on the west. The original layout of this site required modification of the 407 Transitway Hurontario stop parking arrangement and access.

This design has developed and primarily due to concerns from the TRCA the MSF was moved eastwards on the site. The revised location and a change to the rail spur connecting the mainline to the MSF at the request of Hydro One Networks Inc. has limited the impacts on the Transitway facilities to now affect a reduced number of parking spots located in the south east corner of the Transitway parking. It is the opinion of the HMLRT team these impacts can be further refined and resolved during the detailed design phase of the Transitway facilities.

The current site layout is included in the attached plan and profile drawings.

Structural Review

Structural comments regarding this crossing were addressed directly between Clement Shin of MTO and Victor Zubac of SNC-Lavallin Inc. The only outstanding item was completion of high level life cycle costing for the bridge replacement options comparing full teardown and rebuild of a new widened bridge versus widening of the existing bridge. The Life Cycle Costing analysis is attached to this letter for your information, and was conducted in accordance with MTO guidelines.

We understand since completion of our structural assessment, MTO has decided the 403 bridge should be replaced in its entirety. As our design establishes the general arrangement of the bridge required, the plan of the structure as an ultimate condition should form the basis of work going forward. As to the final profile and cross section of the bridge with regards to slope, variation from the structural general arrangement drawings can be managed during detailed design.

The items that will have to be determined as the bridge replacement and LRT projects move forward will be the best method of staging the work. We feel final determination of the staging approach will have to be left to a future stage as the design requirements of the MTO will need to be incorporated in the implementation of the overall LRT system. If the MTO bridge replacement is conducted prior to the LRT works starting the proponent will need to incorporate the final 403 structure into any LRT procurement documents.

MTO Crossings Geometric and Signal Comments

We received comments with regards to physical arrangement and signalling concerns from Tim Apostolopoulos, Senior Project Manager Signals. Where possible our design development has taken his comments into consideration. Responses to comments on the specific structures are noted below.
QEW Second Underpass

From our previous submission to the MTO the design included with this submission includes modification to provide:
- Lengthened left turning queues in the underpass area;
- Removal of pedestrian markings on the free flow ramps; and
- A pedestrian area of refuge at the south QEW ramp.

Mr. Apostolopoulos also noted several other considerations. His concerns and our responses are noted below.
1. Clearance times to address the size of intersection will increase. - This is correct, however, the traffic modelling completed to date does not show undue reductions in traffic performance.
2. Northbound left turning at the north ramp will not see off ramp traffic - This is only a concern for individuals running a red. We cannot design for all cases. The alternate would be to provide a turning arrangement with a shorter queue and can be modified in the next stage of design. In addition all turning movements across the LRT will be controlled using protected left turning phases. Final timing will be confirmed as part of the next phase of works. Initial timing has been based on the use of leading left turning phases.
3. WB LT would have difficulty determining their receiving lane – This case can be mitigated using lane line markings.

403 Bridge Widening and Ramp Terminals

The designs previously issued have been slightly revised; however, Mr Apostolopoulos' correctly notes that the design will increase the width of the road and with it clearance times. His other concerns were:
1. At the north ramp the WB right turn lane is noted as having shared right and left turns – This is correct. Our microsimulation of this ramp has indicated that in order to alleviate back-ups on the westbound ramp from the 403 three left turning lanes are required. This was chosen to manage queuing distance in lieu of providing additional queuing length.
2. At the north ramp east arm to north arm turning the arrangement may preclude double right turns in future and large truck turning – the radii of this turn is per the existing and this design would allow for a dedicated right and a shared left and right turn in future.
3. At the south ramp the right turning arrangement may conflict with trains approaching from behind – Train movements will be controlled by a separate protected signal phase.

401 Arrangement

The arrangement of the 401 intersections have been clarified to address Mr. Apostolopoulos' questions regarding west to north truck turning, and the removal of the northbound left turn lane. These items are included in the attached plan and profile drawings.
EMME 2 Modelling

Modelling of the project has been completed using the City of Mississauga owned EMME2 model housed by the University of Toronto. This model was originally developed by MMM Group on a base established by Dr. Eric Miller of the U of T. Challenges were raised with regards to the outputs of this model in comparison with the MTO Greater Golden Horseshoe model. We have consulted with the MTO SAFO and the communications are summarised in the attached memo from our team and the acknowledging email from Muhammed Khan of SAFO.

The agreement allows the project to continue to use the outputs from the HMLRT project model as the basis of the VISSIM microsimulation with the exception of the QEW westbound ramp. At this ramp we will be applying the GGH model output for the increase in traffic in 2031.

VISSIM Microsimulation

The project has completed two rounds of VISSIM microsimulation as part of the project in order to fully assess the impacts of the project on the Hurontario-Main corridor and the intersecting streets. Model results have been provided to the MTO Central Region Traffic office for their review.

We understand from communication with Chris Pascos that the method of modelling, including calibration and validation have been accepted. The area that had been outstanding was confirmation that the EMME2 inputs were acceptable to SAFO. With the SAFO agreement in place then the modelling results can now be interrogated by Central Region Traffic.

We are presently finalising our modelling effort to include the final road arrangement as will be presented at our final PIC including a widening of the 403 structure negotiated with 407 ETR Concession Company, and the noted agreement with regards to the QEW westbound ramp. These final results will be available in April.

We are confident that the changes will not fundamentally change the results previously issued to MTO as the design at the QEW exceeded the requirements of our previous modelling figures and now meets or exceeds the present left turning queue lengths to access the QEW ramps. Although there will be changes in ramp terminal operations the modelling outputs to date show traffic operations either within acceptable norms or where operations are constrained the LRT has not worsened the condition notably beyond the no LRT business as usual condition.

Next steps

As part of this submission we include the Plan and Profile drawings which form the basis of our Environmental Project Report. These drawings include our revisions based on comments from the MTO and others where we can address them within the limits of study. We ask that in consideration of the works produced to date that the MTO review the attached materials and modelling data submitted to date and agree to the HMLRT project in principle noting that any works produced herein are preliminary in nature and may be subject to change in the next stage of the work.

As part of the next stage of work the MTO will be approached for the review of any detail designs, including modelling, and will have further opportunity to review and influence the final
implemented design. Along with the agreement in principle we ask that the MTO establish any additional commitments to review and consultation that the project needs to make to as part of the implementation phase.

I trust the above information satisfies your previous request and as per your e-mail correspondence, we would be available to attend an MOE meeting on March 24th to discuss further prior to the planned Public Information Centres on March 26th and March 27th.

Sincerely,

Chris McCarthy P Eng  
Project Manager  
HuronARIO/Main LRT  
t. 416.252.5315x54650  
m. 416.895.1154  
e. chris.mccarthy@snclavalin.com

Enclosures: Plan & Profile over each of the MTO structures, and across the MSF site  
Life Cycle Costing Analysis of the 403 Crossing  
Memoranda related to the EMME modelling, and Muhammed Khan’s response

cc: Frank Martins, MTO  
Matthew Williams, City of Mississauga  
Bishnu Parajuli, City of Brampton  
Trevor Brenham, SNC-Lavalin Inc.  
Joseph Lai, MTO  
Abdul Shaikh, City of Mississauga  
Morgan Bot, Metrolinx
Part 2 of 2 – Please acknowledge receipt.
May 29, 2014

Thanga Murugesu, P.Eng.
Senior Project Engineer
Ministry of Transportation Central Region
Highway Engineering - Peel and Halton Section
Bldg D, 4th Flr
1201 Wilson Ave
Downsview ON M3M 1J8

Hurontario/Main LRT – Response to MTO Comments on HMLRT TPAP Proposed Project

Dear Mr. Murugesu,

Thank you for the comments received over the past several weeks from the Ontario Ministry of Transportation staff. We note that the comments from the MTO are in three major areas:

- Geometric comments
- Assessment of the VISSIM Modelling for the project
- Impacts on the future planned 407 Transitway stop and parking layout

All comments received in this round of review are included in the attached comment review table; however, the key issues are addressed here.

**Geometric Issues -**

*Unacceptable triple left turning arrangement at the westbound Highway 403 Ramp terminus at Hurontario Street*

Per communication with the MTO the requirement for this triple left turn has been reassessed and can be reduced to a more typical double left turn and dedicated right turn arrangement. This change will be accompanied by signal timing revisions to give priority to the ramp traffic. Draft drawings have been submitted to MTO for information and this change will be reflected in the modelling updates along with comments from other stakeholders.

**Through Lanes Converting to ‘Must Exit’ Lanes**

At the 403 and QEW the development of either additional queue length or improved flow has required lanes to span across intersections. The drawings provided give indicative road markings to communicate flow and are not intended to act as road marking drawings. In the next stage of design road marking drawings will be generated and it will be recommended that these lanes be provided with signage to communicate that they are for turning traffic accessing the highway only.

**LRT Link at the 403 Eastbound Ramp Terminus**
The MTO has expressed a concern that the connection point of the LRT to the noted intersection is too close to the ramp terminus and may impact ramp operations. The intent of this connection is that it will act as a fifth arm to this intersection and will function on a dedicated signal phase. There will be an impact on the operation of this ramp terminus and the current VISSIM modelling submitted to the MTO documents the resulting changes to intersection. The changes to ramp operation are within acceptable norms.

The remainder of the comments appear to us to be detailed in nature and are addressed in the attached response summary sheet.

The project team will provide an updated copy of the project drawings to the MTO once complete.

**Modelling Review**

MTO staff initially indicated that they would not review modelling results until all the geometric issues had been addressed. Per follow-up discussion with Chris Pascos of the MTO Central Region Traffic Office, they will provide review of the current modelling results to confirm the impacts the proposed project as presented to the public has on MTO operations. Comments on the modelling will be submitted to the project team and address along with comments from other stakeholder bodies and revised results submitted to the MTO at the completion of this stage of work.

**407 Transitway Impacts**

Concerns were raised by MTO Route Planning and Transit Initiatives regarding impacts on the current 407 Transitway station access and design due to shared running along Topflight Drive and the crossing of Edwards Boulevard.

**Topflight and Edwards Impacts**

At this intersection the LRT will be crossing a proposed access route to the future 407 Transitway facility. When the LRT is present it will be running on Topflight but adjacent to Edwards. There will be some delay to through and eastbound to northbound left turning traffic on Edwards attempting to access the Station when the LRT is crossing Edwards. This movement will be signal controlled and southbound to west bound and eastbound to southbound movements will be unhindered. This is considered acceptable as the prime impacts will be during early morning deployment, late night return and off peak return and deployment.

**Impacts on Transitway Facilities**

The current design of the LRT Maintenance and Storage Facility Spur does impact one row of parking in the South East Corner of the current Transitway Stop layout. No buildings or Transitway structures are impacted by this design. Alternate routes have been limited as the current policy of Hydro One Networks Inc. (HONI) (confirmed in preparation of this response) is that crossing of their right-of-way must be done perpendicular to their power lines, no parallel running of road or rail is permitted in their corridor right-of-way. The HONI right-of-way currently extends to the south limit of this section of the Parkway Belt West
Is this message below on the communication record?

**Trevor Brenham, P. Eng.**  
*Project Manager*  
*Urban Transit & Rail Systems*  
*SNC-Lavalin Inc.*

Begin forwarded message:

---

**From:** "Murugesu, Thanga (MTO)" <Thanga.Murugesu@ontario.ca>  
**Date:** June 5, 2014 at 2:21:56 PM EDT  
**To:** "Brenham, Trevor" <Trevor.Brenham@snclavalin.com>  
**Cc:** "Lai, Joseph (MTO)" <Joseph.Lai@ontario.ca>, Matthew Williams <matthew.williams@mississauga.ca>, "McLeod, Cecile" <Cecile.McLeod@snclavalin.com>, Abdul Shaikh <abdul.shaikh@mississauga.ca>, Bishnu Parajuli <bishnu.parajuli@brampton.ca>, Morgan Bot <Morgan.Bot@metrolinx.com>  
**Subject:** RE: HMLRT - to MTO’s Comments on HMLRT TPAP Proposed Project

Hello Trevor,

Thank you for providing your response to MTO’s comments on HMLRT TPAP project. Your response is being reviewed by our project team. I will be compiling their comments and sending to you shortly.

Moin emailed you on March 18, 2014 on what steps need to be taken before MTO issues you a letter demonstrating general agreement with the project. The first step is buy-in from the MTO review staff, which we are yet to achieve. Your response provided in your email of May 29, 2014 to our comments is helpful in this regard. I have arranged an internal meeting to seek input from the team on this. I will be communicating with you after the meeting on outstanding issues from different disciplines. After the staff buy-in, I can work with you to schedule a date for your presentation to our Senior Management to seek their endorsement. These steps are necessary before we issue a letter demonstrating general agreement with the project.

**Thanga**  
Thanga Murugesu, P.Eng.  
Senior Project Engineer  
*Ministry of Transportation | Central Region*  
Highway Engineering – Peel & Halton Section

---
Hello Thanga:

Please find attached a letter with SNC-Lavalin’s response to MTO’s comments on HMLRT TPAP proposed project.

The original will follow in the mail.

Cecile McLeod
Administrative Assistant
Transportation Division
Tel.: 416-252-5315 x 52562

Transportation Division
195 The West Mall
Toronto | Ontario | Canada | M9C 5K1
Morguard Investments Limited
June 2nd, 2014

Mr. Matthew Williams  
LRT Project Manager  
Transportation Project Office  
Transportation and Works Department  
City of Mississauga  
201 City Centre Dr., 8th Floor  
Mississauga, ON  
L5B 2T4

Dear Mr. Williams:

Re: Hurontario-Main LRT Concepts at Mississauga City Centre

Morguard Investments Limited represents owners of four properties in the Mississauga City Centre area, including 33, 55, 77 and 201 City Centre Drive, all of which have significant future development potential in addition to the office buildings already in place as illustrated in the master plans we have shared with the City to date. We are generally supportive of the Hurontario-Main LRT concept, including the City Centre area loop, which with careful planning and execution will support enhanced development in the area.

We attended the March 26, 2014 Public Information Centre to review the latest concept plans for the LRT and are pleased to see that the alignment has been relocated from the previously proposed east portion of City Centre Drive onto Hurontario Street where it will have much less impact on adjacent properties and facilitate more convenient access to the LRT from existing and future office development along Hurontario Street.

We also note that the west side LRT alignment has been moved from Living Arts Drive onto Duke of York Boulevard. The Duke of York LRT proposal combined with the future Main Street alignment along the east boundary of the site and the uncertainty regarding the future availability of City Centre Drive between Celebration Square and the City Hall, could pose significant access challenges for the future redevelopment of 201 City Centre Drive. Earlier versions of the LRT concept plans illustrated a future access driveway for 201 City Centre site along Burnhamthorpe Road whereas the current plan does not. We urge the City to investigate and clarify how access to 201 City Centre Drive will be provided in the future.

We also wish to work with the City to choose the most appropriate location for the LRT traction power station on Hurontario Street in the vicinity of 33 and 55 City Centre Drive that is supportive of the future development of the site.
We attach a letter from BA Consulting Group, who also attended the March PIC on our behalf, which outlines their comments on the LRT plan.

We stand ready to meet with the City in order to resolve these important issues as the LRT plan is refined.

Yours truly

[Signature]

Margaret Knowles  
Senior Vice President Development  
Morguard Investments Limited

CC  
Ralph Bond, BA Group  
Salman Noor Ali, Morguard Investments Limited
May 15, 2014

SALMAN NOOR ALI
Director, Development
Morguard Properties Inc.
55 City Centre Drive, Suite 800
Mississauga, Ontario L5B 1M3

RE: Mississauga City Centre Properties – LRT Considerations

Dear Mr. Ali:

As per your request, we briefly summarize below our comments regarding the latest LRT Concept Planning for the Mississauga City Centre area, as provided at the March 26, 2014 Public Information Centre, the third in a series of such events.

Overall, the LRT design concept for the City centre has changed from earlier versions in the following important respects:

- The west side alignment of the downtown loop has been moved east one street from Living Arts Drive to Duke of York Boulevard
- The east side alignment of the downtown loop has been moved from City Centre Drive to Hurontario Street

The relocation of the east side loop to Hurontario Street has eliminated a substantial number of concerns that Morguard had regarding the impact of the previous proposal that routed the LRT from Hurontario Street through its properties at 33/55 City Centre Drive.

We note that the latest concept plans do not show access locations for your properties that were previously illustrated on earlier plans as noted below:

- The access point on Hurontario Street opposite Absolute Drive that would form the fourth leg of this existing signalized intersection and service future development on the 33/55 City Centre Drive sites is no longer shown
- The access point on Burnhamthorpe Road between Duke of York and the future new Main Street that would service 33 City Centre Drive is no longer shown

Both of the access points are important for the future development of your properties and should be reinstated on the concept plans so that it is clear as more detailed design for the LRT proceeds, that they are intended for future use.
We also note that a transformer station is proposed on the west side of Hurontario Street at your 33 City Centre Drive site which could impact the future provision of a right turn in/out access driveway and street level building entrances along Hurontario Street as per your master plan concept for the sites. It will be important to work with the City to ensure that the transformer station is located such that pedestrian and vehicular access to the site can be provided.

We stand ready to discuss these issues with the City should you so desire.

Sincerely,
BA Consulting Group Ltd.

[Signature]

Ralph F. Bond
Executive Chairman
June 10, 2014

Ms. Margaret Knowles, Senior Vice-President Development
MORGUARD INVESTMENTS LIMITED
55 City Centre Drive, Suite 800
Mississauga, Ontario  L5B 1M3

Dear Ms. Knowles:

Further to the previous correspondence on this project provided by Morguard and your most recent letter on the Hurontario-Main LRT Concepts at Mississauga City Centre dated June 2, 2014, please find our response below.

You identified that there was general support for the Hurontario-Main LRT (HMLRT) project including the City Centre area loop and raised two key comments:

- **Alignment on Duke Of York Boulevard and access to your properties at 201 City Centre Drive**

  The proposed LRT configuration identified in the Transit Project Assessment Process (TPAP) transitions from a centre-running system on Burnhamthorpe Road to an east-side running system on Duke of York Boulevard. Public Information Centre #2 materials depicted a potential future right-in/right-out access west of the future Main Street on Burnhamthorpe Road for information based upon the Downtown 21 Master Plan. As the Downtown Mississauga road network is being examined in further detail through a separate Downtown Mississauga Movement Plan and this access link is not included in the road network identified through the City of Mississauga Official Plan Amendment No.8, it has not been included in the final TPAP documentation. The future Main Street intersection has been incorporated and protected though the LRT project design and TPAP. Additional access points such as the one you identified (right in/right out) would be examined separately as part of the development review process.

- **The location of the Traction Powered Sub-Station in the vicinity of 33 and 55 City Centre Drive.**

  Traction power sub-stations are critical infrastructure for the HMLRT project. As part of preliminary engineering, the locations of the sub-stations were identified based on key factors regarding power distribution, and spatial requirements and are being included in the Environmental Project Report for the TPAP. The site noted meets the needs of the project; however, the precise location on the site is not fixed and can be adjusted, within limits.
The final location of the station on the site can be revised; however, any such re-location would need to provide:

- Adequate space for the traction power equipment
- Adequate ventilation for the traction power equipment
- Access for maintenance
- Parking for maintenance vehicles (can be shared)
- If underground, adequate access for installation and removal of equipment.

The project team is committed to working with property owners impacted by the project to find solutions beneficial for all parties in conjunction with development review and as the project moves further towards implementation.

Sincerely,

[Signature]

Matthew Williams
Project Manager, HMLRT
905-615-3200, ext. 5834
Oxford Properties Group
June 12, 2014

Mr. John Filipetti, Vice-President, Development
OXFORD PROPERTIES
Royal Bank Plaza, North Tower
200 Bay Street, Suite 900
Toronto, Ontario MSJ 2J2

Dear Mr. Filipetti,

Further to your previous correspondence and emails on the Mississauga LRT Plan (Hurontario-Main Street LRT Project) and our subsequent meeting of May 23, 2014, please find our response below.

In the Oxford correspondence, it was identified that there was general support for delivering the LRT project with a few key concerns, including:

• Need to keep Downtown Mississauga competitive and acknowledge it is supported by a large catchment area that will continue to require auto movements as an important component of the transportation network.

The proposed LRT is one component of the future transportation network intended to help maintain the competitiveness of the City. A Downtown Mississauga Movement Plan (DMMP) has been initiated to examine the future transportation and road network in more detail, in addition to work being conducted on the Downtown Roads Master Plan Environmental Assessment. The DMMP is expected to be completed by the end of this year and is not anticipated to be formally presented to Council, but will form a base line analysis for examining the Downtown Mississauga vision and undertaking future sensitivity analysis as that vision evolves and is updated. The sensitivity analysis includes the ability to test scenarios using alternative land uses as the LRT Project analysis has utilized the officially approved Hemson land use forecast. As part of the LRT project, some road network changes have been identified to accommodate the LRT design or mitigate directly-related transportation impacts. These have included: protecting for four lanes on Rathburn Road; reducing Duke of York Boulevard to two through lanes; moving the recommended LRT alignment from City Centre Drive to Hurontario Street and widening the Highway 403 bridge structure.
• The project needs to consider a “high-quality, seamless, weather-protected interchange station” at Rathburn Road and other key locations."

The LRT project is still in the preliminary design stage and the details of the stop design are to follow, however, we are protecting for the development of stops not only to accommodate passenger volumes, but also a range of amenities from shelters to electronic information and fare media. While most corridor LRT stops are designed to a 5m width, anticipated user volumes in the Mississauga Downtown have required enhanced design requirements of up to 8m at the Rathburn Stop location.

As to the issues of seamless integration, those details will need to be worked out through the subsequent final design LRT design work, a review of the Mississauga Transitway (BRT) configuration through the Downtown, and with the integration of new development. We would be happy to work with Oxford to identify any opportunities related to your lands as well as consulting with Oxford as we undertake the detailed LRT design and review of the Mississauga Transitway in the Downtown.

• It was also raised that the proposed North Service Road and the Duke of York bridge connection would be important linkages to maintain access while the LRT project is under construction and that maintaining the current Rathburn Road alignment was also an important component.

The DMMP is tasked with reviewing these broader road network linkages while the current LRT project has completed the corridor preliminary design and is assessing the environmental impacts of the LRT project. The DMMP will be assessing the various network links, technical feasibility issues and potential triggers that would impact their implementation. Decision on the timing of the proposed North Service Road and roadway connections to it will be subject to more detailed design, environmental assessment review, provincial highway approvals, justification analysis and the municipal budget approval process.

When the LRT project proceeds to implementation phase, a detailed plan will be required to assess and minimize construction impacts and Oxford will have the opportunity to provide input.

• In addition, BA Group provided various additional comments in their attached correspondence.

Please note that as per the comments raised by BA Group in the attached, the LRT project preliminary design has considered these items along with other input received and as such:

1. Maintains two through lanes on Rathburn Road as requested;

2. Protects for the existing intersection movement at Hammerson Drive and the future extension northward as requested;
3. Focussed on examining transit exchanges between GO Bus and Miway services and a review of the existing Mississauga City Centre Transit Terminal location was not part of this review. However, the City would like further discussions with Oxford regarding opportunities to improve City Centre transit integration in this vicinity as described below;

4. Maintains the current configuration of Rathburn Road at Living Arts for the LRT analysis as requested. However, the DMMP is tasked with reviewing the greater road network in the Downtown and any potential changes to the configuration of this intersection are being reviewed through that work;

5. Relocated the recommended LRT alignment from City Centre Drive to use Hurontario Street as requested;

6. Analysed the transportation network through the use of a four-stage transportation model linked to a more detailed area model using Vissim. Additional localized assessments are also being carried out through the DMMP and the Downtown Roads Master Plan Environmental Assessment and we would be happy to continue working with Oxford towards resolving any outstanding roadway capacity concerns;

7. Identified preliminary design requirements at the LRT stops and has examined the potential development of a direct pedestrian overhead connection between the LRT stop and the GO Rail facilities at Cooksville. The City would welcome opportunities to improve the seamless connectivity of the LRT stops with adjacent development through detailed design and implementation;

8. Has not considered additional GO express bus services as GO transit is responsible for their annual service development plans and they review service levels in an ongoing manner based upon available resources and passenger demands.

In addition, we discussed the flexibility of incorporating the Traction Powered Sub-Station and are open to reviewing the location during the detailed LRT design in conjunction with the development plans for your lands. Furthermore, it is recognized that the LRT project will have property impacts on Oxford as identified through the Transit Project Assessment Process that will need to be finalized as this project moves towards detailed design and implementation.

As agreed upon at the meeting of May 23rd the LRT preliminary design and Transit Project Assessment Process has addressed some of the issues raised by Oxford and the remaining outstanding issues are to be addressed through a commitment to:

- On-going discussions with Oxford to look at opportunities to improve and coordinate transit integration within the Downtown with: GO bus services, MiWay bus services and development of the LRT and Mississauga Transitway within the Downtown. This will need to be conducted in conjunction with the corresponding pedestrian and traffic movements in the vicinity of the Oxford lands along Rathburn Road;
• Work with Oxford towards resolving concerns raised about traffic capacity requirements and truck access/turning movements relating to Duke of York Boulevard through the Downtown Mississauga Roads Master Plan Environmental Assessment and the Downtown Mississauga Movement Plan. The timing of this additional work should be expedited to ensure coordination with anticipated significant utility requirements over the short-term and the Downtown Mississauga Roads Master Plan Environmental Assessment.

Thank you for your general support for the LRT Project. We look forward to advancing the discussion with Oxford on the outstanding items raised through this letter.

Sincerely,

[Signature]

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

Enclosure

c: Andy Harvey, City of Mississauga
Matthew Williams, City of Mississauga
Steve Barrett, City of Mississauga
Abdul Shaik, City of Mississauga
Lesley Pavin, City of Mississauga
Ralph Bond, BA Consultants
Fausto Natarelli, Metrolinx
Region of Peel
May 1, 2014

Ms. Laverne Soodeen
The Region of Peel
10 Peel Centre Drive
Brampton ON
L6T 4B9

Ref: Hurontario-Main Light Rail Transit (HLMRT) Transit Project Assessment Process Summary of Region of Peel Engagement

Dear Laverne:

As you know from the engagement program between the HMLRT project team and Regional staff, the HMLRT is a 23km urban style light rail transit (LRT) system proposed to connect from the Port Credit GO station in Mississauga to Brampton GO station in Brampton. This system will provide a key north south higher order transit corridor connecting to three GO Stations, the Mississauga Transitway, four proposed east-west higher order transit corridors (Queen St., 407 Transitway, Dundas St., and Lakeshore), and local transit. The system is also intended to provide impetus for the development of Hurontario/Main Street from its current sub-urban condition to a more walkable accessible urban built form.

The HMLRT project has currently initiated the consultation period for the transit project assessment process under the 231/08 Transit Projects Regulation by issuing a 'Notice of Study Commencement' on 19 February, 2014. We are seeking as part of this consultation period, written agreement-in-principle from the Region of Peel for the proposed project. For the letter to be included in the final EPR we would need a response by 20 May, 2014.

In order to permit the Region to provide this agreement, the project team has met with Regional staff on a number of occasions to discuss:

- The Project Scope;
- Potential project impacts on Regional water and waste water infrastructure; and
- Impacts on traffic movements along the corridor.

To date the Region has had visibility on all key documents produced including:

- Main line EMME2 modelling outputs;
- Developing VISSIM modelling outputs;
- Alignment plan and profile development;
- ITS concepts development;
- Utilities relocation development; and

Outstanding works which the Region had not previously received were:

- Our final VISSIM report which assess the corridor plus 50m on the connecting cross streets; and
• Offline Synchro modelling.

These deliverables have now been completed and have been submitted to the Region for review.

These reports show some impact on Regional roads but within manageable levels in the 2031 condition when compared to a 2031 ‘Business As Usual’ case.

In the case of the offline impact we have examined all offline intersections which had an increase of greater than 20% of existing traffic with more than 100 vehicles per movement at the intersection when comparing the business as usual case with the LRT case.

The Regional Road intersections which met these criteria were:

• McLaughlin Road and Steeles Avenue West;
• Mavis Road and Ray Lawson Boulevard;
• Mavis Road and the 407 Ramp terminals; and
• Derry Road and Kennedy Road.

Of these intersections only the intersection of McLaughlin and Steeles was shown to have an impact in the LRT scenario notably greater than the business as usual case. It should be noted that this impact only occurs in the westbound left turning movement, and not the whole of the intersection.

As part of the next stage of work, the Region of Peel will be approached for the review of any detailed road and utility designs which impact their infrastructure. This will include any revised traffic modelling. As such, the Region of Peel will have further opportunity to influence the final implemented design.

Along with the Region’s agreement in principle, we ask that the Region establish any additional commitments to review and consultation that the project needs to make as part of the implementation phase.

Please contact the undersigned if you have any questions related to the project or issues related to the requested response timeline.

Chris McCarthy P. Eng.
Project Manager
Huronario/Main LRT
t. 416.252.5315 x54650
m. 416.895.1154
e. chris.mccarthy@snc-lavalin.com

CC: Matthew Williams, City of Mississauga
Abdul Shaikh, City of Mississauga
Bishnu Parajuli, City of Brampton
Trevor Brenham, SNC-Lavalin Inc.
Hi All,

As you may be aware tomorrow is my last day at the Region.  
As a follow up to the email below, has SNC and the City come to an agreement regarding the request below?  
Steve is under the impression that his email below is sufficient. If that is the case, please confirm.  
Also please note, Steve will be acting as Project Coordinator until my position gets filled.

Thanks!

Laverne Soodeen  
Technical Analyst, Infrastructure Programming & Studies  
Transportation Division, Region of Peel  
10 Peel Centre Drive, Brampton, ON  
L6T 4B9  
Tel: 905-791-7800, ext. 7834  
Fax: 905-791-1442  
Email: laverne.soodeen@peelregion.ca

Laverne

Hello Chris:
Further to your May 1st letter addressed to Laverne and my voicemail of May 5th, I was wondering if you could either call me directly or respond in email to clarify the nature of your request, in particular “written agreement-in-principle” from the Region of Peel. As you may be aware, staff do not have the delegated authority to approve projects on behalf of the Region. Approval of this kind would come from a Council resolution. Your request date of May 20 for the written agreement does not provide sufficient time to table a report before Council. I recognize the urgency to file this project under the TPAP. Is “written agreement-in-principle” a requirement under the Municipal Class EA process for Transit Projects and Metrolinx Undertakings, O. Reg 354/12?

As your letter notes the Region will be approached to review any detailed road and utility designs which impact our infrastructure. I would suggest that this further consultation with the Region serve as the venue to establish commitments that may apply.

Regards,

Steve

Steve Ganesh, MCIP, RPP
Manager, Infrastructure Programming & Studies
Transportation Division, Public Works
10 Peel Centre Drive, Brampton, ON
4th Floor, L6T 4B9
Tel: 905-791-7800, 7824
Fax: 905-791-1442
Email: steve.ganesh@peelregion.ca
Hi Steve,

Please see attached letter from the HMLRT project team.

Thanks!
Laverne

Hi Laverne:

Please find attached, letter with the above subject line.

Original will be sent in the mail.

Cecile McLeod
Administrative Assistant
Transportation Division

Tel.: 416-252-5315 x 52562

Transportation Division
195 The West Mall
Toronto | Ontario | Canada | M9C 5K1
Toronto and Region Conservation Authority
February 24, 2014

BY E-MAIL ONLY (Matthew.Williams@mississauga.ca)

Matthew Williams
LRT Project Manager – Hurontario Corridor
City of Mississauga
201 City Centre Drive, Suite 800
Mississauga, ON L5B 2T4

Dear Mr. Williams:

Re: Response to Notice of Commencement (Transit Project Assessment Process) and Public Information Centre #3
   Hurontario/Main Street Light Rail Transit Project
   Etobicoke Creek Watershed; City of Mississauga/City of Brampton; Region of Peel

Toronto and Region Conservation Authority (TRCA) staff received the Notice of Commencement for the Transit Project Assessment Project (TPAP) as well as the notice of upcoming Public Information Centres (PIC) scheduled for March 26 and March 27, 2014. Staff has expressed interest in this project and while we are unable to attend the meetings, please forward one copy of any handouts or display materials from these meetings for our files. Please include a PDF copy of all materials as part of your submission, with drawings pre-scaled to print on 11”x17” pages. Materials may be submitted on discs, via e-mail (if less than 2.5 MB), or through file transfer protocol (FTP) sites (if posted for a minimum of two weeks).

In addition, staff has been involved with the review of the Master Plan and proposed depot location. Please keep us informed and involved throughout this next phase of work.

Should you have any questions, please contact me at extension 5717 or at slingertat@trca.on.ca.

Sincerely,

Sharon Lingertat
Senior Planner, Environmental Assessment Planning
Planning and Development

BY E-MAIL
cc: TRCA: Beth Williston, Senior Manager, Environmental Assessment Planning
    Chandra Sharma, Etobicoke/Mimico Watershed Specialist
March 18, 2014

Toronto and Region Conservation Authority
5 Shoreham Drive
Downsview, Ontario
M3N 1S4

Project Title: Hurontario-Main LRT Project, Preliminary Design/TPAP Phase
Project Location: City of Mississauga and City of Brampton

RE: PRE-FILING REVIEW OF DRAFT ENVIRONMENTAL PROJECT REPORT

Dear Ms. Lingertat,

As part of the Pre-Planning Phase of the Hurontario-Main LRT Project, the Project Team prepared the Draft Environmental Project Report (EPR). The Project Team subsequently commenced the Transit Project Assessment Process (TPAP) on February 19, 2014.

As part of the TPAP consultation program, we are submitting herewith selected sections of the Draft Environmental Project Report (EPR) for your review (a detailed transmittal is attached for your reference). The information package has been tailored to your legislative and regulatory mandate. The pre-filing review of the Draft EPR is a step in the TPAP that is expected to facilitate preparation and publication of a Final EPR that is acceptable to the Ministry of the Environment and principal stakeholders, including your agency. Therefore, at this time, we are seeking comments on the Draft EPR that are specifically related to your mandate, including (as appropriate) agreement in principle or sign-off on the report content, project proposals, and commitments to further investigations and consultation.

Please note that the Draft EPR being provided for review is the same document provided to MOE for review in November 2013. It does not fully reflect the implications of Metrolinx having become a project co-proponent in January 2014 (e.g., there will be changes to the range of permits and approvals needed now that a provincial agency is a project proponent).

To assist us in incorporating and responding to any input that you may have within the prescribed 120-day TPAP consultation period, please provide your response by April 25, 2014.
If you require clarification on any component of the Draft EPR package, please contact:

Ms. Elham Ramandi, BSc., MEnv.
Environmental Planner
SNC-Lavalin Inc.
195 The West Mall
Toronto, Ontario M9C 5K1
416-252-5315 Ext.53635
elham.ramandi@snclavalin.com

We look forward to receiving your comments and working collaboratively to finalize the document.

Sincerely,

Ian K. Upjohn, MCIP, RPP
Environmental Lead

cc: M. Williams, City of Mississauga
    B. Parajuli, City of Brampton
    M. Bot, Metrolinx
    C. McCarthy/T. Brenham/E. Ramandi, SLI
Dear Ms. Lingertat,

To facilitate the Ministry of the Environment’s review of the “Hurontario-Main LRT October 2013 Draft Environmental Project Report (including selected Appendices)”, one (1) hard copy and one (1) CD has been submitted for your review and comment. Please note that the CD has been placed inside the rear cover of the hard copy of the main report.

Please feel free to contact me if you require any further information.

Regards,

Elham Ramandi, BSc., MEnv.
Environmental Planner
Environment Division
SNC-Lavalin Inc.
195 The West Mall
Toronto, Ontario M9C 5K1
416-252-5315 ext.53635
elham.ramandi@snclavalin.com

cc: M. Williams, City of Mississauga
B. Parajuli, City of Brampton
M. Bot, Metrolinx
C. McCarthy/T. Brenham/I. Upjohn, SLI
Hi Sharon,

Thank you for your response.

If you haven't already done so, I encourage you to visit our website www.hurontonario-main.ca which contains all the materials and resources that were presented/handed out at our PIC 3 events in Mississauga and Brampton two weeks ago.

As always, if you have any further questions, please feel free to contact me.

Kind regards,

Lindsey

Lindsey Bethke
Communications Advisor
Hurontonario-Main LRT Project
SNC-Lavalin Inc.

Office 416.252.5311 ext 53806
Email: lindsey.bethke@snclavalin.com
Please find attached our response to the Notice of Commencement/PIC.

Regards,
Sharon