

APPENDIX J.10

COMMENTS ON DRAFT ESR AND RESPONSES

Amanda Selig

From: Amanda Selig
Sent: Friday, March 04, 2016 11:18 AM
To: 'stevebu@haltonhills.ca'; 'maureenv@haltonhills.ca'; 'MatthewR@haltonhills.ca'; 'trevor.bell@ontario.ca'; 'lisa.myslicki@infrastructureontario.ca'; 'Matthew.Iannetta@infrastructureontario.ca'; 'rosi.zirger@ontario.ca'; 'Aurora.McAllister@ontario.ca'; Paul Bond (pbond@hrca.on.ca)
Cc: Alvaro Almuina (aalmuina@uemconsulting.com); Jakaitis, Alicia <Alicia.Jakaitis@halton.ca> (Alicia.Jakaitis@halton.ca); Monaghan, Patrick - Transportation Services <Patrick.Monaghan@halton.ca> (Patrick.Monaghan@halton.ca); Reid, Jeffrey
Subject: Ninth Line Class EA Study - Draft ESR Available for Review
Importance: High

Hello all,

This email is to notify you that the *Ninth Line Schedule C Class EA Draft ESR* is available online for review. The last day to provide comments is **Friday, April 15, 2016** as Halton Region is committed to filing the Notice of Study Completion on April 28, 2016. If you requested a hard-copy of the Draft ESR, it should arrive at some point today.

To access the Draft ESR, log-in to the project FTP site through Internet Explorer:

ftp://portal.uemconsulting.com
Username: HaltonNinthLineEA
Password: HaltonRegion

To view this FTP site in Windows Explorer: press **Alt**, click **View**, and then click **Open FTP Site in Windows Explorer**. If you are unable to connect using the Internet Explorer method explained above, you can use an **FTP Client** to connect to the same address. Free FTP Clients include:

- FileZilla Client
- WinSCP
- FTPVoyager
- CoreFTP

If you have any questions, please contact Alvaro Almuina, the Consultant Project Manager for this Class EA Study, at (905) 212-9722 ext. 45 or aalmuina@uemconsulting.com. Please respond to this email once you have completed your review and indicate whether or not you will be providing comments on behalf of your organization.

Thank you,

Amanda Selig, BES, EMAGC, EPt

Urban & Environmental Management Inc. (UEM)

4701 St. Clair Avenue, Suite 301

Niagara Falls, Ontario, L2E 3S9

T (905) 371 - 9764 x 230 | Direct Line (289) 271 - 7353 | F (905) 371 - 9763

e-mail: aselig@uemconsulting.com | Website: www.uemconsulting.com

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Amanda Selig

From: Amanda Selig
Sent: Tuesday, May 03, 2016 11:00 AM
To: Amanda Selig
Subject: FW: Ninth Line - Preliminary Preferred Design

From: Trimble, Jennifer
Sent: Wednesday, April 06, 2016 3:41 PM
To: Jakaitis, Alicia
Subject: RE: Ninth Line - Preliminary Preferred Design

Alicia,

I apologize for the lateness of my reply. I've reviewed the documents supplied and appreciate that the previous comments from Joseph and Tony have been incorporated. My only comment is to request that the consultant review the potential to incorporate a channelized right turn for W-N traffic at Steeles/Ninth.

Please let me know if you have any questions or if I can help in any way.

Regards

Jennifer

Jennifer Trimble
Project Manager
Engineering & Construction | Public Works

P. (905) 825 6000 or 1 866 4HALTON, ext. 7690 | E. Jennifer.Trimble@halton.ca
Mailing Address 1151 Bronte Road, Oakville, Ontario, L6M 3L1
Office Location 1075 North Service Road West, Unit 27, Oakville, Ontario, L6M 2G2
Region of Halton | www.halton.ca



 Please consider the environment before printing this e-mail.

From: Jakaitis, Alicia
Sent: Thursday, March 03, 2016 11:28 AM
To: Trimble, Jennifer
Cc: Monaghan, Patrick; Green-Battiston, Melissa
Subject: FW: Ninth Line - Preliminary Preferred Design

Hi Jenn,

Below is link to the preliminary preferred design for Ninth Line. Do you mind taking a look and letting me know what you think. I have attached previous emails/comments from Tony.

Please let me know if comments by April 4th works for you. Please also let me know if a pre-meeting to walk you through the plans would be helpful since you coming in at the end of the project.

Alicia

Alicia Jakaitis

Acting Senior Transportation Planner

Transportation Planning | Infrastructure Planning & Policy

Public Works, Halton Region

(905) 825-6000 ext. 7556

alicia.jakaitis@halton.ca

From: Amanda Selig [<mailto:ASelig@uemconsulting.com>]

Sent: Wednesday, March 02, 2016 3:42 PM

To: Jakaitis, Alicia; Monaghan, Patrick

Cc: Alvaro Almuina

Subject: Ninth Line - Preliminary Preferred Design

Hello Alicia and Patrick,

Alvaro asked me to upload all of our 'Appendix K – Preliminary Preferred Design' files to the FTP site for you to review with your Engineering and Construction Department.

The files are saved in the "Revised ESR" folder on the project FTP site:

Link: <ftp://portal.uemconsulting.com> (use Internet Explorer)

Username: HaltonNinthLineEA

Password: HaltonRegion

Regards,

Amanda Selig, BES, EMAGC, EPt

Urban & Environmental Management Inc. (UEM)

4701 St. Clair Avenue, Suite 301

Niagara Falls, Ontario, L2E 3S9

T (905) 371 - 9764 x 230 | Direct Line (289) 271 - 7353 | F (905) 371 - 9763

e-mail: aselig@uemconsulting.com | Website: www.uemconsulting.com

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immediately by telephone, fax or e-mail and permanently delete the original transmission from us, including any attachments, without making a copy.

Thank you



May 2, 2016
UEM Project No. 14-508

Sent via email only: Jennifer.trimble@halton.ca

Jennifer Trimble
Project Manager
Engineering & Construction, Public Works
Halton Region
1151 Bronte Road
Oakville, Ontario, L6M 3L1

Dear Ms. Trimble:

**Re: Schedule 'C' Class Environmental Assessment Study
Ninth Line (Regional Road 13) Transportation Corridor Improvements, Town of Halton Hills
Project Team Response to Halton Region Engineering and Construction Department
Comment on Draft Environmental Study Report**

Thank you for your email dated April 6, 2016 commenting on the Ninth Line Corridor Preliminary Preferred Design prepared in support of the Ninth Line Class EA. The Project Team has reviewed your comment and has prepared the following response:

Comment: "My only comment is to request that the consultant review the potential to incorporate a channelized right turn for W-N traffic at Steeles/Ninth."

Response: Thank you for your comment. A commitment has been added to Commitments Table (Item 4H) in Section 7.6 of the Environmental Study Report (ESR) that reassessment of the geometrics at the intersection of Steeles Avenue at Ninth Line be undertaken during detailed design to ensure that the current intersection design will accommodate the transportation demands.

The project team is in the process of finalizing the ESR based on comments received from regulatory agencies during the Draft ESR review period. You will receive a copy of the Notice of Study Completion when the ESR is filed. Should you have any questions or comments, please contact me at (905) 212-9722 extension 45 or by email at aalmuina@uemconsulting.com.

Yours very truly,
URBAN & ENVIRONMENTAL MANAGEMENT INC.



Alvaro L. Almuina, P.Eng.
Project Manager

c: Alicia Jakaitis, Jeffery Reid, Patrick Monaghan (Halton Region)
Amanda Selig (UEM)

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URBAN & ENVIRONMENTAL MANAGEMENT INC.
5100 Orbitor Drive, Suite 300, Mississauga, ON Canada L4W 4Z4
Tel 905.212.9722 Fax 905.212.9397
www.uemconsulting.com

Ministry of Tourism, Culture & Sport

Heritage Program Unit
Programs and Services Branch
401 Bay Street, Suite 1700
Toronto ON M7A 0A7

Tel.: 416 314-7159
Fax: 416 212-1802

Ministère du Tourisme et de la Culture

Unité des programmes patrimoine
Direction des programmes et des
services
401, rue Bay, Bureau 1700
Toronto ON M7A 0A7
Tél.: 416 314-7159
Télééc.: 416 212-1802



April 7, 2016 (by email only)

Mr. Alvaro Almuina
Project Manager
Urban & Environmental Management Inc.
5100 Orbitor Drive Suite 300
Mississauga, ON

Dear Mr. Almuina,

Project: Ninth Line Corridor Improvements from Hwy 407 to 10 Side Road
Location: Town of Halton Hills
MTCS File: 0001681

Thank you for sending the Ministry of Tourism, Culture and Sport (MTCS) **DRAFT Environmental Study Report** (Draft ESR) dated March 2016 prepared by UEM. MTCS's interest in this EA project relates to its mandate of conserving Ontario's cultural heritage, which includes archaeological resources, built heritage resources, and cultural heritage landscapes.

MTCS has reviewed the Draft ESR and offers the following comments and recommendations:

The ESR proposes that Ninth Line be widened from a two-lane rural road to four-lanes in addition to intersection and operational improvements.

Section 3.4.1 summarizes existing archaeological conditions based on the results of the Stage 1 Archaeological Assessment Report. MTCS records show we have received the Stage 1 report (PIF P017-0322-2014 dated October 2, 2015). However, in a letter dated March 11, 2016 the ministry requested your archaeologist revise and re-submit the report. As yet we have not received the revised report. Please be aware that depending on the required revisions the ESR may have to be further revised (and possibly the map in Figure 3-10 replaced).

Section 7.3.1 states the mitigation measure recommends a Stage 2 archaeological assessment of areas with archaeological potential prior to commencing detail design. MTCS has no issues with this recommendation. However, please ensure that any further assessment is based on the revised Stage 1 (see comment above).

The second paragraph of section 7.3.1 provides standard default mitigation. Please add a paragraph to address accidental finds of human remains. Suggested wording is:

In the event that human remains are encountered during project work, work will immediately halt and the police, the coroner's office and the Registrar of Cemeteries will be notified.

Section 7.3.2 and Table 7-2 outline the recommendations of the Cultural Heritage Resource report. Two of the nine properties identified are subject to potential impacts as a result of the proposed project for which mitigation measures are recommended (e.g. avoid or minimize impacts to trees etc.). These recommendations should be included as commitments in Table 7-3.

Table 7-3: Category 3. Cultural Heritage Environment

A commitment (e.g. 3c) should be added to address the recommendations summarized in Section 7.3.2 and Table 7-2.

Appendix C Archaeological Assessment (Stage 1)

As mentioned above, in reviewing this Stage 1 report ministry staff requested that the licensee (archaeologist) revise and re-submit the report. Please ensure that the ESR appends the revised Stage 1 and that the revisions in the Stage 1 report are reflected in the ESR as necessary (including maps if required).

Appendix D: Cultural Heritage Assessment Report

MTCS has previously reviewed this revised report and has no further comments.

Additional MTCS Recommendation

If not already done, please ensure that the Heritage Planning Staff for the Town of Halton receive a copy of the Cultural Heritage Assessment Report and the Draft ESR for review and comment. The reports should also be made available to local organizations or individuals who have expressed their interest in heritage.

Thank you for the opportunity to comment on the Draft ESR. We look forward to receiving the final documents when they are available. Please contact me as necessary.

Sincerely

Rosi Zirger
Heritage Planner
416-314-7159
rosi.zirger@ontario.ca

copy to: Amanda Selig, UEM

Amanda Selig

From: Amanda Selig
Sent: Thursday, April 07, 2016 1:35 PM
To: 'Zirger, Rosi (MTCS)'; Alvaro Almuina
Subject: RE: Ninth Line Draft ESR Review-MTCS comments Apr 7, 2016
Attachments: Ninth Line Revised

Hello Rosi,

Thank you for providing comments on the Draft ESR before the deadline. Just so you know, Garth submitted the revised Stage 1 AA report to MTCS yesterday (see attached).

We will incorporate your suggestions into the final ESR.

Regards,

Amanda Selig, BES, EMAGC, EPt

Urban & Environmental Management Inc. (UEM)

4701 St. Clair Avenue, Suite 301

Niagara Falls, Ontario, L2E 3S9

T (905) 371 - 9764 x 230 | Direct Line (289) 271 - 7353 | F (905) 371 - 9763

e-mail: aselig@uemconsulting.com | Website: www.uemconsulting.com

From: Zirger, Rosi (MTCS) [mailto:Rosi.Zirger@ontario.ca]
Sent: Thursday, April 07, 2016 12:19 PM
To: Alvaro Almuina <aalmuina@uemconsulting.com>; Amanda Selig <ASelig@uemconsulting.com>
Subject: Ninth Line Draft ESR Review-MTCS comments Apr 7, 2016

Hello Amanda and Alvaro

The Ministry of Tourism, Culture and Sport (MTCS) has reviewed the DRAFT ESR for the Ninth Line EA. Attached please find MTCS recommendations for revision to the report.

Please contact me as necessary. I would be pleased to have further discussion with you.

Sincerely
Rosi

Rosi Zirger

Heritage Planner

Ministry of Tourism, Culture & Sport

Culture Division | Programs & Services Branch | Heritage Programs Unit

401 Bay Street, Suite 1700 Toronto, Ontario M7A 0A7

Tel. 416.314.7159 | Fax 416.212-1802 | E-mail: rosi.zirger@ontario.ca



May 2, 2016
UEM Project No. 14-508

Sent via email only: Rosi.Zirger@ontario.ca

Rosi Zirger
Heritage Planner
Heritage Program Unit – Programs and Services Branch
Ministry of Tourism, Culture and Sport
401 Bay Street, Suite 1700
Toronto, Ontario, M7A 0A7

Dear Ms. Zirger:

**Re: Schedule 'C' Class Environmental Assessment Study
Ninth Line (Regional Road 13) Transportation Corridor Improvements, Town of Halton Hills
Project Team Responses to MTCS Comments on Draft Environmental Study Report**

Thank you for your letter dated April 7, 2016 summarizing your comments on the Draft Environmental Study Report (ESR) prepared in support of the Ninth Line Class EA. The Project Team has reviewed your comments and has prepared the following responses as to how your comments will be addressed in the Final ESR.

Comment #1: Section 3.4.1 summarizes existing archaeological conditions based on the results of the Stage 1 Archaeological Assessment Report. MTCS records show we have received the Stage 1 report (PIF) P017-0322-2014 dated October 2, 2015). However, in a letter dated March 11, 2016 the ministry requested your archaeologist revise and re-submit the report. As yet we have not received the revised report. Please be aware that depending on the required revisions the ESR may have to be further revised (and possibly the map in Figure 3-10 replaced).

Response #1: A revised Stage 1 Archaeological Assessment Report dated April 6, 2016 was submitted to MTCS via email on April 6, 2016, one day before these comments were issued. Confirmation from MTCS that the revised report meets the Ministry's 2011 Standards and Guidelines for Consultant Archaeologists has been received and entered into the Ontario Public Register of Archaeological Reports as of April 14, 2016 (MTCS File #0001681).

The Final ESR will reflect the changes made to the revised Stage 1 Archaeological Assessment Report dated April 6, 2016 (e.g. **Figure 3-10** will be updated).

Comment #2: Section 7.3.1 states the mitigation measure recommends a Stage 2 archaeological assessment of areas with archaeological potential prior to commencing detailed design. MTCS has no issues with this recommendation. However, please ensure that any further assessment is based on the revised Stage 1 (see Comment [#1] above).

Response #2: The revised Stage 1 Archaeological Assessment Report that was submitted to MTCS on April 6, 2016, and reviewed and approved by MTCS on April 14, 2016 will be included in the Final ESR in **Appendix C**, which will be provided to the Detailed Design Consultant. The requirement to complete the Stage 2 Archaeological Assessment prior to detailed design is also included in **Table 7-3: Summary of Study Commitments** in the ESR as **Item #3A**.

Comment #3: The second paragraph of Section 7.3.1 provides standard default mitigation. Please add a paragraph to address accidental finds of human remains. Suggested wording is:

"In the event that human remains are encountered during project work, work will immediately halt and the police, the coroner's office and the Registrar of Cemeteries will be notified."

Response #3: The suggested wording provided in Comment #3 has been added to the second paragraph of **Section 7.3.1** in the Final ESR.

Comment #4: Section 7.3.2 and Table 7-2 outline the recommendations of the Cultural Heritage Resource Report. Two of the nine properties identified are subject to potential impacts as a result of the proposed project for which mitigation measures are recommended (e.g. avoid or minimize impacts to trees, etc.). These recommendations should be included as commitments in Table 7-3.

Response #4: A new line item (#3C) has been added to the commitment table (**Table 7-3**) to ensure that the Detailed Design Consultant implements the recommended mitigation measures to mitigate any negative impacts that the preferred design has on the abovementioned cultural heritage resources.

Comment #5: Table 7-3: Category 3. Cultural Heritage Environment. A commitment (e.g. 3c) should be added to address the recommendations summarized in Section 7.3.2 and Table 7-2.

Response #5: See Response #4.

Comment #6: Appendix C: Archaeological Assessment (Stage 1). As mentioned [in Comment #1] above, in reviewing this Stage 1 report ministry staff requested that the licensee (archaeologist) revise and re-submit the report. Please ensure that the ESR appends the revised Stage 1 and that the revisions in the Stage 1 report are reflected in the ESR as necessary (including maps if required).

Response #6: The revised Stage 1 Archaeological Assessment Report (dated April 6, 2016) will be provided in **Appendix C** of the Final ESR. The following sections of the ESR have been reviewed and updated (as necessary) based on the revisions to the Stage 1 Archaeological Assessment Report:

- Section 3.4.1
- Figure 3-10
- Section 7.3.1
- Table 7-3

Comment #7: Appendix D: Cultural Heritage Assessment Report. MTCS has previously reviewed this revised report and has no further comments.

Response #7: No response required.

Comment #8: Additional MTCS Recommendation. If not already done, please ensure that the Heritage Planning Staff for the Town of Halton [Hills] receive a copy of the Cultural Heritage Assessment Report and the Draft ESR for review and comment. The reports should also be made available to local organizations or individuals who have expressed their interest in heritage.

Response #8: A hard-copy and electronic copy of the Draft ESR was provided to three Town of Halton Hills staff members (Planning Policy Department, Transportation and Development Engineering Department, and Infrastructure Services Department) for review and internal distribution. The

Town of Halton Hills had one comment on the Draft ESR (regarding the multi-use path) and no comments on the Cultural Heritage Assessment. Two Town of Halton Hills staff members were consulted by the Cultural Heritage Assessment Consultant during the course of the study and preparation of the report (as indicated on Page 3 of the Cultural Heritage Assessment Report under the *Acknowledgments* section).

The Mississaugas of the New Credit First Nation has expressed interest in the Ninth Line Class EA through a letter dated July 6, 2015 (provided in Appendix J.9 of the ESR), specifically with respect to potential archaeological resources in the study area and environmental impacts. A copy of the revised Stage 1 Archaeological Assessment Report will be provided by Halton Region in addition to the Notice of Study Completion and an invitation will be sent for a Field Liaison Representative to be on-site during future Stage 2 Archaeological Assessment field work. A copy of the Natural Science Report (Appendix B of ESR) will also be provided.

The project team is in the process of finalizing the ESR based on comments received from regulatory agencies during the Draft ESR review period. You will receive a copy of the Notice of Study Completion when the ESR is filed. Should you have any questions or comments, please contact me at (905) 212-9722 extension 45 or by email at aalmuina@uemconsulting.com.

Yours very truly,

URBAN & ENVIRONMENTAL MANAGEMENT INC.



Alvaro L. Almuina, P.Eng.
Project Manager

c: Alicia Jakaitis, Jeffery Reid, Patrick Monaghan (Halton Region)
Amanda Selig (UEM)

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Amanda Selig

From: Daniel Ridgway <DanielR@haltonhills.ca>
Sent: Friday, April 15, 2016 4:48 PM
To: Amanda Selig; Alvaro Almuina
Cc: alicia.jakaitis@halton.ca; patrick.monaghan@halton.ca; Jeffrey.Reid@halton.ca; Maureen Van Ravens
Subject: RE: Ninth Line Class EA Study - Draft ESR Available for Review

Hi Amanda,

Thank you for the opportunity to review the draft ESR for Ninth Line. We have completed our review and submit the following comment for your consideration in finalizing the ESR.

Note 3 on page 80 of the Draft ESR notes that Halton Region and The Town of Halton Hills decided that only one multi-use path would be constructed along the west side of Ninth Line. The Town was not involved in making this decision. As such, this reference to the Town of Halton Hills decision should be removed. Please provide additional explanation, if possible, for why this change was made.

It remains the preference of the Transportation and Development Engineering that multi-use paths be included on both sides of Ninth Line as presented in Figures 4-3, 4-4, and 4-5.

Thank you,

Daniel Ridgway, MCIP, RPP
Transportation Planner
Town of Halton Hills
905-873-2601 ext.2369
DanielR@haltonhills.ca

From: Amanda Selig [<mailto:ASelig@uemconsulting.com>]
Sent: March-04-16 11:24 AM
To: Steve Burke; Maureen Van Ravens; Matthew Roj; trevor.bell@ontario.ca; lisa.myslicki@infrastructureontario.ca; Matthew.Iannetta@infrastructureontario.ca; rosi.zirger@ontario.ca; Aurora.McAllister@ontario.ca; Paul Bond (pbond@hrca.on.ca)
Cc: Alvaro Almuina; Jakaitis, Alicia <Alicia.Jakaitis@halton.ca> (Alicia.Jakaitis@halton.ca); Monaghan, Patrick - Transportation Services <Patrick.Monaghan@halton.ca> (Patrick.Monaghan@halton.ca); Reid, Jeffrey
Subject: Ninth Line Class EA Study - Draft ESR Available for Review
Importance: High

Hello all,

This email is to notify you that the *Ninth Line Schedule C Class EA Draft ESR* is available online for review. The last day to provide comments is **Friday, April 15, 2016** as Halton Region is committed to filing the Notice of Study Completion on April 28, 2016. If you requested a hard-copy of the Draft ESR, it should arrive at some point today.

To access the Draft ESR, log-in to the project FTP site through Internet Explorer:

ftp://portal.uemconsulting.com

Username: HaltonNinthLineEA

Password: HaltonRegion

To view this FTP site in Windows Explorer: press **Alt**, click **View**, and then click **Open FTP Site in Windows Explorer**. If you are unable to connect using the Internet Explorer method explained above, you can use an **FTP Client** to connect to the same address. Free FTP Clients include:

- FileZilla Client
- WinSCP
- FTPVoyager
- CoreFTP

If you have any questions, please contact Alvaro Almuina, the Consultant Project Manager for this Class EA Study, at (905) 212-9722 ext. 45 or aalmuina@uemconsulting.com. Please respond to this email once you have completed your review and indicate whether or not you will be providing comments on behalf of your organization.

Thank you,

Amanda Selig, BES, EMAGC, EPt

Urban & Environmental Management Inc. (UEM)

4701 St. Clair Avenue, Suite 301

Niagara Falls, Ontario, L2E 3S9

T (905) 371 - 9764 x 230 | Direct Line (289) 271 - 7353 | F (905) 371 - 9763

e-mail: aselig@uemconsulting.com | Website: www.uemconsulting.com

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May 2, 2016
UEM Project No. 14-508

Sent via email only: danielr@haltonhills.ca

Daniel Ridgway, MCIP, RPP
Transportation Planner
Town of Halton Hills
1 Halton Hills Drive
Halton Hills, Ontario, L7G 5G2

Dear Mr. Ridgway:

**Re: Schedule 'C' Class Environmental Assessment Study
Ninth Line (Regional Road 13) Transportation Corridor Improvements, Town of Halton Hills
Project Team Responses to Town of Halton Hills Comment on Draft Environmental Study
Report**

Thank you for your email dated April 15, 2016 commenting on the Draft Environmental Study Report (ESR) prepared in support of the Ninth Line Class EA. The Project Team has reviewed your comment and has prepared the following response as to how this comment will be addressed in the Final ESR:

Comment: "[Footnote] 3 on page 80 of the Draft ESR notes that Halton Region and The Town of Halton Hills decided that only one multi-use path would be constructed along the west side of Ninth Line. The Town was not involved in making this decision. As such, this reference to the Town of Halton Hills decision should be removed. Please provide additional explanation, if possible, for why this change was made. It remains the preference of the Transportation and Development Engineering that multi-use paths be included on both sides of Ninth Line as presented in Figures 4-3, 4-4, and 4-5."

Response: Comment noted; the reference to Town of Halton Hills in Footnote #3 in Section 4.5 has been removed. The multi-use paths (MUP) were reduced from both sides of the roadway to a single side as a result of further refinements of the stormwater management strategy in response to comments from Conservation Halton. Conservation Halton required that the preferred preliminary design include trapezoidal ditches to enhance stormwater quality treatment, which requires greater right-of-way than a traditional V-shaped ditch. The incorporation of trapezoidal ditches and MUPs on both sides of Ninth Line could not be accommodated without impacts beyond the designated 42 metre right-of-way limits and further disturbance to adjacent natural features. The MUP on one side of the roadway, as proposed in the ESR aligns with the Halton Region Active Transportation Master Plan (November 2015) and is consistent with what is proposed for the Trafalgar Road Corridor in Halton Hills.

The project team is in the process of finalizing the ESR based on comments received from regulatory agencies during the Draft ESR review period. You will receive a copy of the Notice of Study Completion when the ESR is filed.

Should you have any questions or comments, please contact me at (905) 212-9722 extension 45 or by email at aalmuina@uemconsulting.com.

Yours very truly,

URBAN & ENVIRONMENTAL MANAGEMENT INC.



Alvaro L. Almuina, P.Eng.
Project Manager

c: Alicia Jakaitis, Jeffery Reid, Patrick Monaghan (Halton Region)
Maureen Van Ravens (Town of Halton Hills)
Amanda Selig (UEM)

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Amanda Selig

From: Amanda Selig
Sent: Wednesday, May 04, 2016 5:01 PM
To: 'Daniel Ridgway'; 'Maureen Van Ravens'
Cc: Alvaro Almuina; 'alicia.jakaitis@halton.ca'; 'patrick.monaghan@halton.ca'; 'Jeffrey.Reid@halton.ca'
Subject: RE: Ninth Line Class EA Study - Draft ESR Available for Review

Hello Daniel and Maureen,

We have just been informed that the Region and the Town have recently decided to evaluate the feasibility of including a sidewalk on the east side of Ninth Line during detailed design. The purpose of this email is to inform you that a new item has been added to the study commitments table (Table 7-3) to cover this – Item 4H – which reads:

“The Region, in consultation with the Town of Halton Hills, will confirm the type and location of Active Transportation Off-Road facilities, through the detail design process. Consideration will be given to providing a 2.0m sidewalk on the east-side of Ninth Line, where property is available.”

Best regards,

Amanda Selig, BES, EMAGC, EPt

Urban & Environmental Management Inc. (UEM)

4701 St. Clair Avenue, Suite 301

Niagara Falls, Ontario, L2E 3S9

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From: Amanda Selig
Sent: Monday, May 02, 2016 4:39 PM
To: 'Daniel Ridgway' <DanielR@haltonhills.ca>
Cc: Alvaro Almuina <aalmuina@uemconsulting.com>; alicia.jakaitis@halton.ca; patrick.monaghan@halton.ca; Jeffrey.Reid@halton.ca; Maureen Van Ravens <MaureenV@haltonhills.ca>
Subject: RE: Ninth Line Class EA Study - Draft ESR Available for Review

Hello Daniel,

On behalf of Alvaro, please find attached the Project Team's response to the comment that you provided on the Ninth Line Draft ESR.

Best regards,

Amanda Selig, BES, EMAGC, EPt

Urban & Environmental Management Inc. (UEM)

4701 St. Clair Avenue, Suite 301

Niagara Falls, Ontario, L2E 3S9

T (905) 371 - 9764 x 230 | Direct Line (289) 271 - 7353 | F (905) 371 - 9763

e-mail: aselig@uemconsulting.com | Website: www.uemconsulting.com

From: Daniel Ridgway [<mailto:DanielR@haltonhills.ca>]
Sent: Friday, April 15, 2016 4:48 PM
To: Amanda Selig <ASelig@uemconsulting.com>; Alvaro Almuina <aalmuina@uemconsulting.com>

Cc: alicia.jakaitis@halton.ca; patrick.monaghan@halton.ca; Jeffrey.Reid@halton.ca; Maureen Van Ravens
<MaureenV@haltonhills.ca>

Subject: RE: Ninth Line Class EA Study - Draft ESR Available for Review

Hi Amanda,

Thank you for the opportunity to review the draft ESR for Ninth Line. We have completed our review and submit the following comment for your consideration in finalizing the ESR.

Note 3 on page 80 of the Draft ESR notes that Halton Region and The Town of Halton Hills decided that only one multi-use path would be constructed along the west side of Ninth Line. The Town was not involved in making this decision. As such, this reference to the Town of Halton Hills decision should be removed. Please provide additional explanation, if possible, for why this change was made.

It remains the preference of the Transportation and Development Engineering that multi-use paths be included on both sides of Ninth Line as presented in Figures 4-3, 4-4, and 4-5.

Thank you,

Daniel Ridgway, MCIP, RPP
Transportation Planner
Town of Halton Hills
905-873-2601 ext.2369
DanielR@haltonhills.ca

From: Amanda Selig [<mailto:ASelig@uemconsulting.com>]

Sent: March-04-16 11:24 AM

To: Steve Burke; Maureen Van Ravens; Matthew Roj; trevor.bell@ontario.ca; lisa.myslicki@infrastructureontario.ca; Matthew.Iannetta@infrastructureontario.ca; rosi.zirger@ontario.ca; Aurora.McAllister@ontario.ca; Paul Bond (pbond@hrca.on.ca)

Cc: Alvaro Almuina; Jakaitis, Alicia <Alicia.Jakaitis@halton.ca> (Alicia.Jakaitis@halton.ca); Monaghan, Patrick - Transportation Services <Patrick.Monaghan@halton.ca> (Patrick.Monaghan@halton.ca); Reid, Jeffrey

Subject: Ninth Line Class EA Study - Draft ESR Available for Review

Importance: High

Hello all,

This email is to notify you that the *Ninth Line Schedule C Class EA Draft ESR* is available online for review. The last day to provide comments is ***Friday, April 15, 2016*** as Halton Region is committed to filing the Notice of Study Completion on April 28, 2016. If you requested a hard-copy of the Draft ESR, it should arrive at some point today.

To access the Draft ESR, log-in to the project FTP site through Internet Explorer:

<ftp://portal.uemconsulting.com>
Username: HaltonNinthLineEA
Password: HaltonRegion

To view this FTP site in Windows Explorer: press **Alt**, click **View**, and then click **Open FTP Site in Windows Explorer**. If you are unable to connect using the Internet Explorer method explained above, you can use an **FTP Client** to connect to the same address. Free FTP Clients include:

- FileZilla Client

- WinSCP
- FTPVoyager
- CoreFTP

If you have any questions, please contact Alvaro Almuina, the Consultant Project Manager for this Class EA Study, at (905) 212-9722 ext. 45 or aalmuina@uemconsulting.com. Please respond to this email once you have completed your review and indicate whether or not you will be providing comments on behalf of your organization.

Thank you,

Amanda Selig, BES, EMAGC, EPt

Urban & Environmental Management Inc. (UEM)

4701 St. Clair Avenue, Suite 301

Niagara Falls, Ontario, L2E 3S9

T (905) 371 - 9764 x 230 | Direct Line (289) 271 - 7353 | F (905) 371 - 9763

e-mail: aselig@uemconsulting.com | Website: www.uemconsulting.com

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Ministry of the Environment and
Climate Change

Central Region
Technical Support Section

5775 Yonge Street, 8th Floor
North York, Ontario M2M 4J1

Tel. (416) 326-6700
Fax. (416) 325-6345

Ministère de l'Environnement et de l'Action
en matière de changement climatique

Région du Centre
Section d'appui technique

5775, rue Yonge, 8^{ième} étage
North York, Ontario M2M 4J1

Tél. (416) 326-6700
Téléc. (416) 325-6347



April 14, 2016

File No.: EA 01-06-05

Ms. Alicia Jakaitis
Transportation Coordinator
Halton Region
1151 Bronte Road
Oakville, Ontario L6M 3L1

**RE: Ninth Line (Regional Road 13) Transportation Corridor Improvements
Highway 407 to 10 Side Road (Regional road 10)
Halton Region
Municipal Class Environmental Assessment Schedule C
Response to Draft Environmental Study Report, March 2016**

Dear Ms. Jakaitis,

We have reviewed the Draft Environmental Study Report (ESR) for the above noted project, and understand the preferred alternative design concept is a combination of Alternatives 1, 2, and 3 (Widening of Ninth Line about the centre, to the east, and to the west, respectively). The following comments are offered for your consideration.

General Comments

1. We recommend including a project mailing list with Technical and Review Agency contacts in Appendix J.

Surface Water Comments

1. The ESR should clearly indicate the percent increase in impervious surface due to the road widening.
2. We disagree with the assertion that enhanced level of treatment can be achieved through the use of the proposed ditches. We recommend the ESR be revised to include a clear commitment to achieve, at a minimum, enhanced level of treatment for an area equivalent to the additional impervious area from the road widening. We also encourage Halton Region (Region) to explore the feasibility of providing enhanced level of treatment for runoff from the existing road surface area. We recommend the final design include a treatment train approach to satisfy the requirement to achieve the enhanced level of treatment. We

understand the SWM system for the widened road will need to be approved through the ECA process and it may be prudent to hold early consultation with staff at the Ministry of Environment and Climate Change (MOECC) Environmental Approvals Branch on whether the stormwater management (SWM) design meets the criteria or not.

3. Notwithstanding our reservations regarding the ability of ditches to achieve enhanced level of treatment, it is uncertain whether trapezoidal ditches will be incorporated as a SWM technique in the preferred design alternative. Section 4.7.1 of the draft ESR states that trapezoidal ditches were evaluated and this type of ditch design was not brought forward into the preferred design alternative due to property impacts. However, section 6.7 of the Draft ESR and section 5.0 in the SWM Report in Appendix E state that shallow sloped, trapezoidal, vegetated ditches with strategically placed check dams will be evaluated during the final design. It remains unclear whether trapezoidal ditches will be used to achieve enhanced level of treatment. Please clarify this discrepancy and ensure the ESR and appendices are consistent with respect to SWM design features.
4. Please ensure that you consult with the MOECC Central Region Permit to Take Water (PTTW) Coordinator prior to detailed design to confirm any approval requirements for water takings during construction or operation. This includes groundwater or surface water extraction, and the active diversion of surface water flows by pumping in exceedance of 50,000 liters/day. If a PTTW is required for construction dewatering, a monitoring program for discharge water quality and quantity, as well as a mitigation program, will need to be developed.

Air Quality, Dust, and Noise Comments

1. In addition to PM_{2.5}, CO, NO₂ and SO₂, formaldehyde, acetaldehyde, benzene, 1,3-butadiene and acrolein are also associated with vehicle emissions. Concentrations of these volatile organic compounds should be predicted in the modelling scenarios.
2. Please specify the dates of the aerial photographs used, as mentioned in section 4.1 "Identification of Sensitive Areas" of the Air Quality Impact Assessment (AQIA) in Appendix H of the Draft ESR.
3. Section 4.2 "Background Air Quality" of the AQIA should explain how the background stations chosen are representative of the study area. This section should also explain why a representative MOECC station that measures all of the contaminants of concern was not selected.
4. Please clarify why the model Mobile 6.2C was chosen as opposed to MOVES. Please also provide the input parameters to the Mobile 6.2C model.
5. Section 4.3.2.1 "Estimation of Road Traffic Volumes" of the AQIA mentions that the hourly road traffic flows were based on the average hourly traffic profiles, rather than the maximum. Therefore, further explanation is required regarding how the emissions scenario modelled is representative of a reasonable worst-

case scenario.

6. Section 4.4.1 "CAL3QHCR" of the AQIA mentions that the signal cycle was assumed to be 90 seconds long. Please indicate whether this is an average or a maximum assumption.
7. Please provide the settling and deposition velocities used in the CAL3QHCR model.
8. Although construction impacts are not assessed, a section on mitigation measures for construction activities should be added to the AQIA.
9. During construction, please apply best management practices to mitigate any air quality impacts caused by construction dust. Please note that the ministry recommends that non-chloride dust suppressants be applied.

For a comprehensive list of fugitive dust prevention and control measures, please refer to Cheminfo Services Inc. Best Practices for the Reduction of Air Emissions from Construction and Demolition Activities. Report prepared for Environment Canada. March 2005.

10. The new widening will bring the road closer to certain residential developments. Therefore, we recommend vegetating the areas that are most impacted by particulate levels in order to reduce the cumulative particulate impacts.

Planning and Policy Comments

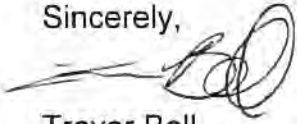
1. Section 3.3.1 of the Draft ESR provides an overview of the *Provincial Policy Statement* (2014) (PPS) and the Growth Plan for the Greater Golden Horseshoe (2006) (GPGGH). The ESR should reference relevant policies in the PPS and the GPGGH and demonstrate how the proposed project is consistent with these policies.

Mitigation and Monitoring Comments

1. Table 7.1 of the Draft ESR indicates that suitable habitat for Eastern Wood-peewee, Barn Swallow, and Bobolink are present in the study area (Eastern Wood-peewee habitat is listed as possible in the study area), and that these species were observed along Ninth Line during field surveys in June 2014. Section 7.1.3 of the Draft ESR concludes that, with the exception of Bobolink, no species at risk (SAR) are expected to be impacted within 120 metres of the proposed road widening. It is unclear how this conclusion was reached, and the Draft ESR should be revised to include a detailed justification of this conclusion. Please note that Barn Swallow, along with Bobolink, receives habitat protection in Ontario under the *Endangered Species Act* (2007) (ESA). The Region may wish to contact a Management Biologist in the Ministry of Natural Resources and Forestry's Aurora District Office to confirm whether any permits under the ESA may be required.

Thank you for the opportunity to comment on this Draft ESR. Should you or any member of your project team have any questions or concerns, feel free to contact me directly by phone at 416-326-3577 or by email at trevor.bell@ontario.ca.

Sincerely,



Trevor Bell
Environmental Resource Planner and EA Coordinator
Air, Pesticides, and Environmental Planning

c: Alvaro Almuina, Project Manager, UEM Inc.
Paul Martin, APEP Supervisor, MOECC
Tina Dufresne, Manager, Halton Peel District, MOECC
A&P File



May 2, 2016
UEM Project No. 14-508

Sent by email only: trevor.bell@ontario.ca

Trevor Bell
Environmental Resource Planner and EA Coordinator
Air, Pesticides, and Environmental Planning
Ministry of Environment and Climate Change
5775 Yonge Street, 8th Floor
North York, Ontario, M2M 4J1

Dear Mr. Bell:

**Re: Schedule 'C' Class Environmental Assessment Study
 Ninth Line (Regional Road 13) Transportation Corridor Improvements, Town of Halton Hills
 Project Team Responses to MOECC Comments on Draft Environmental Study Report**

Thank you for your letter dated April 14, 2016 summarizing your team's comments on the Draft Environmental Study Report (ESR) prepared in support of the Ninth Line Class EA. The Project Team has reviewed your comments and has prepared the following responses as to how your comments will be addressed in the Final ESR:

General Comments

Comment #1: We recommend including a project mailing list with Technical and Review Agency contacts in Appendix J.

Response #1: Comment noted. The project contact list for technical and review agencies has been added to Appendix J.2 of the ESR.

Surface Water Comments

Comment #1: The ESR should clearly indicate the percent increase in impervious surface due to the road widening.

Response #1: Comment noted. The road widening will increase the impervious Ninth Line road surface area from 2.2% of the study area to 4.5% of the 457ha study drainage area. This information has been added to Section 4.0 of the Stormwater Management Report provided in Appendix E of the ESR.

Comment #2: We disagree with the assertion that enhanced level treatment can be achieved through the use of the proposed ditches. We recommend the ESR be revised to include a clear commitment to achieve, at a minimum, enhanced level of treatment for an area equivalent to the additional impervious area from the road widening.

We also encourage Halton Region (Region) to explore the feasibility of providing enhanced level of treatment for runoff from the existing road surface area. We recommend the final design include a treatment train approach to satisfy the requirement to achieve the enhanced level of treatment. We understand the SWM system for the widened road will need to be approved through the ECA process and it may be prudent to hold early consultation with staff

at the Ministry of Environment and Climate Change (MOECC) Environmental Approvals Branch on whether the stormwater management (SWM) design meets the criteria or not.

Response #2: Details on the proposed treatment train approach involving vegetated trapezoidal ditches, wet swales/sediment traps, check dams, oil grit separators, and porous asphalt bicycle lanes in select sections of the corridor, are provided in Section 5.0 of the Stormwater Management Report provided in Appendix E of the ESR.

MOECC's recommendation for pre-consultation with MOECC during detailed design is noted and has been added to the ESR Summary of Commitments Table (Table 7-3) as Item 1H.

Comment #3: Notwithstanding our reservations regarding the ability of ditches to achieve enhanced level of treatment, it is uncertain whether trapezoidal ditches will be incorporated as a SWM technique in the preferred design alternative. Section 4.7.1 of the draft ESR states that trapezoidal ditches were evaluated and this type of ditch design was not brought forward into the preferred design alternative due to property impacts. However, section 6.7 of the Draft ESR and section 5.0 in the SWM Report in Appendix E state that shallow sloped, trapezoidal, vegetated ditches with strategically placed check dams will be evaluated during the final design. It remains unclear whether trapezoidal ditches will be used to achieve enhanced level of treatment. Please clarify this discrepancy and ensure the ESR and appendices are consistent with respect to SWM design features.

Response #3: The preferred preliminary design does include trapezoidal ditches as part of the treatment train approach and Section 4.7.1 of the ESR has been revised accordingly.

Comment #4: Please ensure that you consult with the MOECC Central Region Permit to Take Water (PTTW) Coordinator prior to detailed design to confirm any approval requirements for water takings during construction or operation. This includes groundwater or surface water extraction, and the active diversion of surface water flows by pumping in exceedance of 50,000 liters/day. If a PTTW is required for construction dewatering, a monitoring program for discharge water quality and quantity, as well as a mitigation program, will need to be developed.

Response #4: The requirement for the Detailed Design Consultant to consult with an MOECC PTTW Coordinator prior to detailed design has been added to the study commitments table (Table 7-3) as Item 1H.

Air Quality, Dust, and Noise Comments

Comment #1: In addition to PM_{2.5}, CO, NO₂ and SO₂, formaldehyde, acetaldehyde, benzene, 1,3-butadiene and acrolein are also associated with vehicle emissions. Concentrations of these volatile organic compounds should be predicted in the modelling scenarios.

Response #1: Comment noted. The modelling scenarios have been updated accordingly.

Comment #2: Please specify the dates of the aerial photographs used, as mentioned in section 4.1 "Identification of Sensitive Areas" of the Air Quality Impact Assessment (AQIA) in Appendix H of the Draft ESR.

Response #2: The aerial photographs used were taken in Spring 2013. The date has been added to Section 4.1 of the AQIA Report.

Comment #3: Section 4.2 "Background Air Quality" of the AQIA should explain how the background stations chosen are representative of the study area. This section should also explain why a representative MOECC station that measures all of the contaminants of concern was not selected.

Response #3: Comment noted. Section 4.2 of the AQIA Report was updated accordingly.

Comment #4: Please clarify why the model Mobile 6.2C was chosen as opposed to MOVES. Please also provide the input parameters to the Mobile 6.2C model.

Response #4: MOBILE6.2C was used for vehicle emission estimates as opposed to MOVES as it represents emission factors adjusted for typical Canadian vehicle as opposed to conditions represented in the United States, as does the MOVES program. The model outputs provided emission factors in grams per vehicle kilometer travelled (g/VKT) for all contaminants of concern. All expected technological and regulatory changes affecting future emissions are built into the MOBILE6.2C model run, in order to generate the most representative emission factors possible.

MOBILE 6.2C produces CO₂ emission factors, however, it does not provide estimates of CH₄ and N₂O emission factors. As noted in the MTO Guide (2012), this is due to the paucity of emission data for these latter two greenhouse gases. To estimate CH₄ and N₂O, the MTO Guide recommends using the ratios of CH₄ and N₂O emission factors with CO₂ factors for a given class of vehicle as available from Environment Canada's National Inventory Report (NIR), 1990-2012 – Greenhouse Gas Sources and Sinks in Canada. This is considered an adequate approach, given the smaller amounts of CH₄ and N₂O produced by road vehicles.

The input parameters to the Mobile 6.2C model are provided in Section 4.3.2.2 of the AQIA Report.

Comment #5: Section 4.3.2.1 "Estimation of Road Traffic Volumes" of the AQIA mentions that the hourly road traffic flows were based on the average hourly traffic profiles, rather than the maximum. Therefore, further explanation is required regarding how the emissions scenario modelled is representative of a reasonable worst-case scenario.

Response #5: The hourly traffic count data was collected in 2013, and the annual growth rates from Halton Region were used to project these traffic volumes to the anticipated construction year and the horizon year for the assessment of air quality impacts (2031), which represents expected maximum hourly traffic flows.

Comment #6: Section 4.4.1 "CAL3QHCR" of the AQIA mentions that the signal cycle was assumed to be 90 seconds long. Please indicate whether this is an average or a maximum assumption.

Response #6: This was a maximum signal cycle assumption.

Comment #7: Please provide the settling and deposition velocities used in the CAL3QHCR model.

Response #7: To model PM_{2.5} emissions, size specific settling and deposition velocities of 0.02 cm/s and 0.1 cm/s respectively were input to the model.

Comment #8: Although construction impacts are not assessed, a section on mitigation measures for construction activities should be added to the AQIA.

Response #8: Mitigation measures to avoid impact of construction on air quality are provided in Section 7.1.5 of the ESR.

Comment #9: During construction, please apply best management practices to mitigate any air quality impacts caused by construction dust. Please note that the ministry recommends that non-chloride dust suppressants be applied.

For a comprehensive list of fugitive dust prevention and control measures, please refer to Cheminfo Services Inc. Best Practices for the Reduction of Air Emissions from Construction and Demolition Activities. Report prepared for Environment Canada, March 2005.

Response #9: Recommendation has been noted and added to Section 7.1.5 (Air Quality) of the ESR.

Comment #10: The new widening will bring the road closer to certain residential developments. Therefore, we recommend vegetating the areas that are most impacted by particulate levels in order to reduce the cumulative particulate impacts.

Response #10: Recommendation noted. More vegetation will be added along the corridor in accordance with the Region's Tree Canopy Replacement Policy. In addition, during the property acquisition phase of the project, the Region's Realty Services Department will discuss with property owners whether they would like existing vegetation relocated (if possible) or new trees/shrubs added to their property frontage.

Planning and Policy Comments

Comment #1: Section 3.3.1 of the Draft ESR provides an overview of the Provincial Policy Statement (2014) (PPS) and the Growth Plan for the Greater Golden Horseshoe (2006) (GPGGH). The ESR should reference relevant policies in the PPS and the GPGGH and demonstrate how the proposed project is consistent with these policies.

Response #1: Section 3.3.1 of the ESR has been updated to provide details on applicable policies and explains how the Ninth Line preferred alternative aligns with those respective PPS and GPGGH policies.

Mitigation and Monitoring Comments

Comment #1: Table 7.1 of the Draft ESR indicates that suitable habitat for Eastern Wood-peewee, Barn Swallow, and Bobolink are present in the study area (Eastern Wood-peewee habitat is listed as possible in the study area), and that these species were observed along Ninth Line during field surveys in June 2014. Section 7.1.3 of the Draft ESR concludes that, with the exception of Bobolink, no species at risk (SAR) are expected to be impacted within 120 metres of the proposed road widening. It is unclear how this conclusion was reached, and the Draft ESR should be revised to include a detailed justification of this conclusion.

Please note that Barn Swallow, along with Bobolink, receives habitat protection in Ontario under the Endangered Species Act (2007) (ESA). The Region may wish to contact a Management Biologist in the Ministry of Natural Resources and Forestry's Aurora District Office to confirm whether any permits under the ESA may be required.

Response #1: Eastern wood peewee uses the interior portions of the wood lot which are not expected to be altered by the road widening. Barn swallow habitat is associated with building structures which are also not impacted by the proposed works. Both species are aerial insectivores and there are adequate feeding areas in the surrounding fields. Neither species nests or feeds near the road. As such, the road widening will not impact the species behaviour or their associated habitat. This explanation has been added to the Natural Science Report provided in Appendix B of the ESR.

The Draft ESR was provided to a MNRF staff member from the Aurora District Office. MNRF has not provided any comments related to SAR or the ESR in general.

The project team is in the process of finalizing the ESR based on comments received from regulatory agencies during the Draft ESR review period. You will receive a copy of the Notice of Study Completion when the ESR is filed. Should you have any questions or comments, please contact me at (905) 212-9722 extension 45 or by email at aalmuina@uemconsulting.com.

Yours very truly
URBAN & ENVIRONMENTAL MANAGEMENT INC.



Alvaro L. Almuina, P.Eng.
Project Manager

c: Alicia Jakaitis, Jeffery Reid, Patrick Monaghan (Halton Region)
Amanda Selig (UEM)

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April 14, 2016

Alvaro Almuina, P.Eng.
Urban & Environmental Management Inc.
5100 Orbitor Drive, Suite 300
Mississauga, ON
L4W 4Z4

Dear Mr. Almuina:

**Re: Ninth Line Transportation Corridor Improvements - Region of Halton PR2876
Draft ESR (UEM - March 2015) – CH Comment
CH File: MPR 664 - Ninth Line Class EA**

CH staff have reviewed the Draft ESR copy dated March 2016 (received by CH March 4, 2016) and offer the following comments. As you know, CH comments on Appendix B – Natural Sciences Report (LCA Environmental Consultants) were provided earlier under separate cover via letter dated April 12, 2016. The following comments address our review of the draft ESR itself.

The majority of our issues including previous comments on the draft swm submission have generally been addressed and incorporated into the ESR. Evaluation of the overall impacts to the natural environment remains a concern to CH and are noted in our comments below. Additional discussion and comment respecting the impact of modified flow routes on wetland water balance have been provided below as well.

Section 3.2 – Natural Environment Existing Conditions

1. If there is no current or historical information regarding the potential to support a fish community in the channel, was more detailed aquatic sampling considered? Staff are concerned that the information presented in this section, the conclusions drawn from it (Section 7.0 Potential Impacts, Mitigation and Monitoring, page 118) and the commitments generated from it (Table 7-3, page 125-128) do not adequately describe the impacts predicted, and thus potential mitigating measures. As has been demonstrated (Muotka & Laasonen, 2002; Meyer et al. 2007), headwater features provide numerous important functions for both receiving watercourses and in situ aquatic organisms, when connectivity allows. Maintaining healthy headwaters has even been shown to bolster environmental resistance in the face of climate change (Thomas et al. 2016). Headwater features are considered important sources of food, sediment, water, nutrients and organic matter. Staff

recognize this watercourse to have important perennial functions but require additional field work to confirm. The presence of refuge pools through the warmest months can indicate year round groundwater discharge (i.e. seeps, springs, wetlands or upwellings). For these reasons, we would ask that the ESR be revised to consider this headwater habitat and commit to further field investigation and natural channel design of any realignment at the detailed design stage to ensure impacts are avoided or mitigated.

2. Section 3.2.1 notes that the general water quality parameters fall into the general range for aquatic organisms. Please provide the data analysis results for these water quality tests.

Section 4.2 - Key Considerations and Issues

3. Further to our February 25, 2016 comments on the draft SWM Report (item 7, page 2) – *“Please provide additional discussion and clarification/rationale for the diversion of the 7.9 hectares in Area N2B to the south”* we note that this comment has been partially addressed. Page 104 includes the following text “...the potential impact of the modified flow route on wetland water balance will be assessed and addressed during detailed design.” The impacts of the drainage diversion, which are a result of the proposed changes to the road, should be assessed as part of the EA and not left to detailed design. If the proposed urbanization of the road section through this area prohibits maintenance of the existing 8ha of drainage to the wetland/woodlot feature west of Ninth Line and North of No. 5 Side Road, the preferred design and/or urban cross section for the road section will need to be revised to accommodate existing drainage patterns. There is a commitment provided in Table 7-3, Section 1b that recommends verifying the water balance and impact to the wetland during detailed design however the feasibility of this option should be reviewed prior to the approval of the EA. In reviewing the design concepts in Appendix K of the ESR (8 of 22 through to 11 of 22), staff request that consideration be given to splitting the storm sewer into two sections, one north of No. 5 Side Road and one to the south. This approach would allow a cross culvert to remain north of the intersection to maintain current drainage boundaries. It would also have the benefit of reducing pipe sizes to the south. For the pipe sections where frost depth cannot be achieved (between MH6 and headwall for north section), insulation could be considered. Alternatively, the north section could end at MH6 and discharge into a short ditch as is proposed to the south of the intersection. A short section of roadside ditch/swale may be needed on the NW corner of the intersection to assist in achieving/matching an invert of approximately 228m. *See attached Figure 1 for additional information.*

Section 6.6 – Culverts & Stormwater Drainage

4. Staff recommend that open-footed culverts be considered for the remaining culverts (i.e. discharge points 0, 1 and 3). In the absence of fisheries, benthic invertebrate and groundwater data, staff assume that groundwater inputs are of significant importance to these watercourses and their receiving habitats.
5. Staff support the proposed details for the main crossing, as described on page 102.
6. Staff note that no details were included regarding proposed substrate for each of the culverts. We recommend that substrate be sized based on the fluvial geomorphic function

requirements of the watercourse to allow for natural channel migration, fish/terrestrial passage and sediment transport.

7. Staff support the assessments described on page 104 to ensure that changing flow regimes will not have an adverse impact on receiving watercourses.

Section 6.7 – Stormwater Management

8. Section 6.7.1 describes recommendations for the management of stormwater along this stretch of road. CH requests that the wet swales designed for the length of the project be designed to incorporate infiltration to deal with the sediment issue as described. This will counteract the problem of accumulated sediment as described by LCA Environmental Consultants, based on early field reconnaissance. We understand that a great deal of sediment has been introduced to the watercourses via the ditches, altering the geometry of the creek bed and potentially requiring realignment.

Additional Comments


- Staff recommend that a construction staging and phasing plan be prepared for the construction of Culvert 4 (and associated creek works) in conjunction with the Construction Traffic Management Plan. We would ask that this be incorporated into Table 7.3 “Summary of Study Commitments”.

Summary:

Staff appreciate the collaborative approach and interaction with the Region and consulting team for the Ninth Line project. As previously noted, most of our issues and comments have been addressed in the draft ESR provided. There are some issues identified and discussed herein which we believe have the potential to impact/change the preferred design alternative and therefore should not be deferred to the detail design stage (where costly delays could be incurred). CH staff are available to discuss these further with you, and look forward to assisting with finalizing this draft version of the ESR. We anticipate further discussion on our Natural Sciences Report “draft for discussion” comments as well prior to finalization of the ESR.

We trust the above is of assistance. If you require additional information please contact the undersigned at extension 2257.

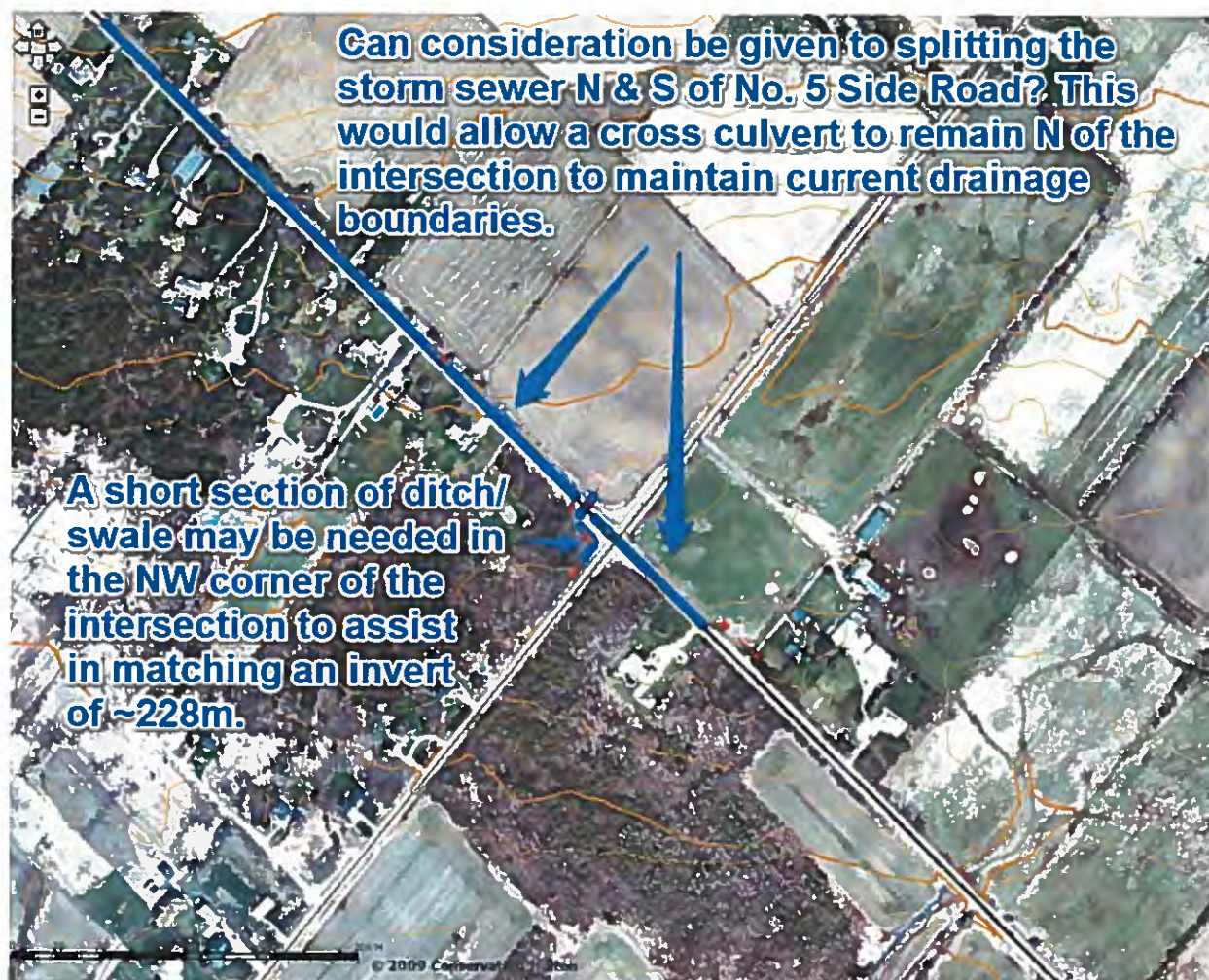
Yours truly,



Paul Bond
Environmental Planner/Team Lead
Regional Infrastructure Team
PB/

cc: Alicia Jakaitis and Jeff Reid, Region of Halton (via e-mail)

Figure 1



May 2, 2016
UEM Project No. 14-508

Sent via email only: pbond@hrca.on.ca

Paul Bond
Environmental Planner/Team Lead
Regional Infrastructure Team
Conservation Halton
2596 Britannia Road West
Burlington, Ontario L7P 0G3

Dear Mr. Bond:

**Re: Schedule 'C' Class Environmental Assessment Study
Ninth Line (Regional Road 13) Transportation Corridor Improvements, Town of Halton Hills
Project Team Responses to Conservation Halton Comments on Draft Environmental Study
Report**

Thank you for your letter dated April 14, 2016 summarizing your team's comments on the Draft Environmental Study Report (ESR) prepared in support of the Ninth Line Class EA. The Project Team has reviewed your comments and has prepared the following responses as to how your comments will be addressed in the Final ESR.

Section 3.2 – Natural Environment Existing Conditions

Comment #1: If there is no current or historical information regarding the potential to support a fish community in the channel, was more detailed aquatic sampling considered? Staff are concerned that the information presented in this section, the conclusions drawn from it (Section 7.0 Potential Impacts, Mitigation and Monitoring, page 118) and the commitments generated from it (Table 7-3, page 125-128) do not adequately describe the impacts predicted, and thus potential mitigating measures. As has been demonstrated (Muotka & Laasonen, 2002; Meyer et al. 2007), headwater features provide numerous important functions for both receiving watercourses and in situ aquatic organisms, when connectivity allows. Maintaining healthy headwaters has been shown to bolster environmental resistance in the face of climate change (Thomas et al. 2016). Headwater features are considered important sources of food, sediment, water, nutrients and organic matter. Staff recognize this watercourse to have important perennial functions but require additional field work to confirm. The presence of refuge pools through the warmest months can indicate year round groundwater discharge (i.e. seeps, springs, wetlands or upwellings). For these reasons, we would ask that the ESR be revised to consider this headwater habitat and commit to further field investigation and natural channel design of any realignment at the detailed design stage to ensure impacts are avoided and mitigated.

Response #1: A more comprehensive aquatic habitat assessment at the detailed design stage of the project is recommended, once the culvert and road details have been determined, to provide more complete baseline data for the post-construction monitoring, as well as, provide an indication of the channel features that need to be re-instated and/or enhanced. In addition, fish habitat mapping as per the MTO Environmental Guide for Fish and Fish Habitat (2009) should be

completed at the detailed design stage in order to determine the suitable natural channel design features that should be incorporated into the culvert and channel areas impacted by the chosen design. This information will assist in completing the risk assessment framework in terms of potential impacts which will be required for the Fisheries Authorization. Implementing an open bottom culvert design will eliminate the need to assess groundwater through the culvert area or the need for a benthic assessment provided that similar substrate is re-instated in the bottom of the channel. These commitments are captured in Section 2.2.1 of the revised Natural Sciences Report (Appendix B of ESR) and Item 1F of the ESR Commitments Table (Table 7-3 of the ESR).

Comment #2: Section 3.2.1 notes that the general water quality parameters fall into the general range for aquatic organisms. Please provide the data analysis results for these water quality tests.

Response #2: The water chemistry within the channel was relatively good during the June 2014 site visit with a temperature of 13.9 degrees Celsius and relatively low conductivity despite the lack of flow. Water quality was taken in a small isolated instream pool of water upstream of the culvert in July due to the dry channel conditions. The water temperature was still relatively low (16.6 °C), however conductivity was very high (2972 uS/cm) and dissolved oxygen was very low (2.13 mg/L). The dry channel conditions likely affected the water quality. The general water quality parameters measured in the field are provided in Section 2.2.1 of the Natural Sciences Report (Appendix B of ESR).

Section 4.2 – Key Considerations and Issues

Comment #3: Further to our February 25, 2016 comments on the draft SWM Report (item 7, page 2) – *“Please provide additional discussion and clarification/rationale for the diversion of the 7.9 hectares in Area N2B to the south”* we note that this comment has been partially addressed. Page 104 includes the following text *“...the potential impact of the modified flow route on wetland water balance will be assessed and addressed during detailed design.”* The impacts of the drainage diversion, which are a result of the proposed changes to the road, should be assessed as part of the EA and not left to detailed design. If the proposed urbanization of the road section through this area prohibits maintenance of the existing 8ha of drainage to the wetland/woodlot feature west of Ninth Line and North of No. 5 Side Road, the preferred design and/or urban cross section for the road section will need to be revised to accommodate existing drainage patterns. There is a commitment provided in Table 7-3, Section 1b that recommends verifying the water balance and impact to the wetland during detailed design however the feasibility of this option should be reviewed prior to the approval of the EA. In reviewing the design concepts in Appendix K of the ESR (8 of 22 through to 11 of 22), staff request that consideration be given to splitting the storm sewer into two sections, one north of No. 5 Side Road and one to the south. This approach would allow a cross culvert to remain north of the intersection to maintain current drainage boundaries. It would also have the benefit of reducing pipe sizes to the south. For the pipe sections where frost depth cannot be achieved (between MH6 and headwall for north section), insulation could be considered. Alternatively, the north section could end at MH6 and discharge into a short ditch as is proposed to the south of the intersection. A short section of roadside ditch/swale may be needed on the NW corner of the intersection to assist in achieving/matching an invert of approximately 228m. *See attached Figure 1 for additional information.*

Response #3: The Project Team held a meeting with Conservation Halton staff on April 21, 2016 to explore this alternative. UEM revised the preferred design to incorporate this concept to maintain

existing drainage patterns (refer to Sheets 11 and 22 of the preferred design concept in Appendix K of the ESR).

Section 6.6 – Culverts & Stormwater Drainage

Comment #4: Staff recommend that open-footed culverts be considered for the remaining culverts (i.e. discharge points 0, 1 and 3). In the absence of fisheries, benthic invertebrate and groundwater data, staff assume that groundwater inputs are of significant importance to these watercourses and their receiving habitats.

Response #4: Open bottom culverts are proposed for Discharge Points 0, 1, 3 and 4 (Main Culvert).

Comment #5: Staff support the proposed details for the main crossing, as described on page 102.

Response #5: Noted. No revisions required.

Comment #6: Staff note that no details were included regarding proposed substrate for each of the culverts. We recommend that substrate be sized based on the fluvial geomorphic function requirements of the watercourse to allow for natural channel migration, fish/terrestrial passage and sediment transport.

Response #6: Item 1C of the commitments table indicates that a detailed fluvial geomorphic assessment will be undertaken during detailed design, at which time the substrate size will be determined.

Comment #7: Staff support the assessments described on page 104 to ensure that changing flow regimes will not have an adverse impact on receiving watercourses.

Response #7: Noted. No revisions required.

Section 6.7 – Stormwater Management

Comment #8: Section 6.7.1 describes recommendations for the management of stormwater along this stretch of road. CH requests that the wet swales designated for the length of the project be designed to incorporate infiltration to deal with the sediment issue as described. This will counteract the problem of accumulated sediment as described by LCA Environmental Consultants, based on early field reconnaissance. We understand that a great deal of sediment has been introduced to the watercourses via the ditches, altering the geometry of the creek bed and potentially requiring realignment.

Response #8: Section 7.0 of the SWM Report and Section 6.7.1 of the ESR both mention that the purpose of the wet swales is to address sediment issues and channel erosion.

Additional Comments

Comment #9: Staff recommend that a construction staging and phasing plan be prepared for the construction of Culvert 4 (and associated creek works) in conjunction with the Construction Traffic Management Plan. We would ask that this be incorporated into Table 7-3 "Summary of Study Commitments".

Response #9: The construction and phasing for the construction of Culvert 4 has been added as a consideration under Item 4C and the development of a Construction Staging and Phasing Plan has been added to Item 4D of Table 7-3.

The project team is in the process of finalizing the ESR based on comments received from regulatory agencies during the Draft ESR review period. You will receive a copy of the Notice of Study Completion when the ESR is filed. Should you have any questions or comments, please contact me at (905) 212-9722 extension 45 or by email at aalmuina@uemconsulting.com.

Yours very truly
URBAN & ENVIRONMENTAL MANAGEMENT INC.



Alvaro L. Almuina, P.Eng.
Project Manager

c: Alicia Jakaitis, Jeffery Reid, Patrick Monaghan (Halton Region)
Amanda Selig (UEM)

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