

Minutes

Date: February 8, 2017; Revised February 27, 2017
File #: TPB166090
Meeting Date & Time: January 11, 2017
Meeting at: MTO Central Region, 159 William Hearst Avenue, Building D, 7th Floor Boardroom
Subject: McLaughlin Road and E/W Spine Road Class EA Meeting #2 with MTO

Attendees:

Kant Chawla, Town of Caledon
 Haiqing Xu, Town of Caledon
 Pramod KC, MTO Traffic
 Kashif Hussain, MTO Traffic
 Branko Zivkovic, MTO Traffic
 Mike Marinelli, MTO P&D
 Lukasz Grobel, MTO P&D
Fabio Saccon – MTO Traffic

Rina Kulathinal, MTO P&D
 Joseph Lai, MTO P&D
 Ted Lagakos, MTO Corridor Management
 Sylvester Tuz, MTO Corridor Management
 Andre Lower, Amec Foster Wheeler
 Neal Smith, Amec Foster Wheeler
 Jason Stahl, Amec Foster Wheeler
 David Sinke, Amec Foster Wheeler

MATTERS DISCUSSED

ACTION BY:

Introduction

1. The purpose of the meeting was to discuss the status of the Spine Road connection to the Hurontario Street / Valleywood Boulevard interchange with Highway 410 and present the conceptual connection alternatives.

Project Update

2. Amec Foster Wheeler led with a summary of the project to date. The current McLaughlin Road / Spine Road Class EA is building on the Town Council approved Mayfield West Phase 2 Transportation Master Plan (MW2-TMP).
3. A review of the minutes from the previous meeting held on November 15th, 2016 was completed. The following comments were provided by those in attendance:

PLEASE NOTE: If there is any comment or amendment to be made to these meeting notes, they should be brought to the notice of Amec Foster Wheeler within five (5) business days of issue and confirmed in writing.

MATTERS DISCUSSED

ACTION BY:

- a. The PDR completed for the Highway 410 extension is dated 2000 rather than 1991.
 - b. The reference to the ARGO subdivision is to the development that was constructed on the east side of Highway 10 north of the Hurontario interchange. MTO did not allow the developer to connect Dougall Avenue to Highway 10.
 - c. MTO asked for clarification on the reference to the OMB for the commercial development directly across from the Spine Road connection. The Town clarified that the application is currently under review by the OMB, and the Town cannot comment on the status of the access at this time. MTO stated that they are not bound by any decision made by the OMB.
4. MTO questioned the process of approvals and timelines for the MW2 TMP. The MTO noted that TMP used 2007 traffic counts, and did not show the extension of Highway 410. Amec FW noted that the purpose of the current Class EA is to confirm and if needed succeed the recommendations made by the MW2 TMP.
 5. MTO noted that based on their estimation, improvements to the interchange of Highway 410 and Mayfield Road would be required to service the MW2 development area. The Town noted that the MW2 TMP, which was approved by MTO-Town Council in March 2016, did not determine this improvement. MTO noted that Development Charges should cover the cost of improvements to the Highway 410/Mayfield Road interchange (if required).
 6. MTO questioned the need and justification for the Spine Road, including the connection to Highway 410. The Town advised that the proposed road network for the development is well established and approved through the MW2-TMP. In addition, the connection of the Spine Road to the interchange is critical to allow the MW2 community to function as designed. MTO did note that they had commented on the MW2 TMP, but did not receive the final version. The Town clarified that the staff report along with the full copy of the MW2-TMP was formally sent to the MTO with the request to participate in the following EA process for the Spine Road and its connection with Hurontario/410 Interchange.
 7. The MTO noted that they have not approved any connection configuration, and further traffic analysis is required to confirm the need and justification of the Spine Road. In addition, any proposed configuration will likely not meet the MTO Access Management Guidelines. The Town requested that MTO confirm if they will accept a configuration that does not meet the guidelines, but does operate efficiently from a traffic perspective. The MTO deferred decision on this point to a later date. MTO noted that their Access Management Guidelines indicate that exceptions can be made where shown to be

MTO

Continued...

Meeting Date: January 11, 2017

MATTERS DISCUSSED

ACTION BY:

justified by a traffic impact study (see MTO Access Management Guidelines, Table 4 (pg 47)).

8. Furthermore, the MTO questioned whether McLaughlin Road and Chinguacousy Road could be used as the main access points, without a connection to Hurontario Street. The Town noted that the TMP analyzed this scenario, and this scenario was found to function poorly.
9. A letter from MTO was reviewed, dated December 3rd, 2015 titled *Notification of Adoption of OPA 222, Mayfield West Phase 2 Secondary Plan Lot 6, Conc. 2 SDS, Oakville, Highway 410/Hurontario Street*. Many in attendance were not familiar with this letter. A copy of the letter is attached for reference. The MTO letter dated December 3rd 2015 stated that:

- a) Proposed Spine Road connection to Hurontario Street between the highway interchange and Collingwood Avenue is unacceptable. The distance between the interchange ramp terminal and the proposed spine road intersection does not comply with the MTO Access Management Guidelines.
- b) MTO staff reiterated these comments at a meeting with Town of Caledon staff and the Town's consultants' on July 23, 2015. MTO staff indicated at this meeting that there is not sufficient distance between the Hwy410/Hurontario Street interchange ramp terminal and the existing Hurontario Street/Collingwood Avenue intersection to provide a new access/intersection which will comply with the MTO Access Management Guidelines.
- a)c) MTO staff informed the Town of Caledon staff that other alternatives should be investigated to ensure that future proposals will comply with MTO Access Management Guidelines, and suggested that Caledon could explore the use of Collingwood Avenue as access to Hurontario Street, as one possible alternative that may be acceptable to the MTO.

Post Meeting Note: A copy of the letter was provided to Ted Lagakos (MTO) after the meeting via email. Additionally, the staff report approving the MW2-TMP was also sent to the MTO.

GTA West

10. Rina Kulathinal from the GTA West project team reviewed the current status of GTA West. In summary, GTA West is on hold until further notice. As a result, the three alternatives for the extension of Highway 410 to GTA West are still being protected, of which one is extension of Highway 410 along the existing Highway 10 alignment. Given this, the interchange at Hurontario Street and Highway 410 is under protection until GTA West is reactivated. In particular, it is likely that a service road will be required to maintain access points to existing properties north of the interchange.

Continued...

Meeting Date: January 11, 2017

MATTERS DISCUSSED

ACTION BY:

11. Given the uncertainty, it was proposed that Amec Foster Wheeler will complete the traffic assessment with and without the GTA West. The MTO was generally in agreement with this approach but with no definite consensus.
12. MTO noted that all of the alternatives submitted prior to the meeting via email would not be reviewed at this time, as they potentially impact the ability for the MTO to reconfigure the Highway 410/Hurontario Street interchange to service GTA West.
13. The Town requested that an interim connection be considered, with the understanding that the connection would be revised after a decision regarding GTA West is made. The MTO did not accept this approach. The MTO will allow the portion of the development outside of the GTA West study area and outside of the limits of their Controlled Access Highway.
14. The Town noted that they have an obligation to meet the Provincial growth plan targets and objectives, and preventing the Town from fully developing the MW2 area will affect their ability to deliver on these requirements. In addition, a significant investment has been made to date, and delay by MTO will result in significant costs to the Town and the landowners. The Region of Peel Official Plan also has identified a shopping mall and transit connection immediately west of the Spine Road connection to Highway 410/Hurontario Street interchange.
15. Amec Foster Wheeler offered to determine an alternative that protected for GTA West. A functional design would be completed utilizing an interchange alternative with a service road. The MTO was somewhat favorable to this idea, but noted approval for the Spine Road connection would not be guaranteed until GTA West is reactivated.

**Amec Foster
Wheeler**

**Amec Foster
Wheeler**

Review of Connection Alternatives / TOR for Traffic Assessment

16. MTO requested that the interests of the Valleywood community be considered in the traffic assessment and preliminary geometric design. Included in the assessment should be consideration of human factors (wayfinding) to ensure the road users do not affect the Valleywood community. Given the configuration of the interchange and progression of traffic northerly on Hurontario, when first constructed, northbound traffic did not intuitively find the northbound ramp.
17. The MTO TOR for the Traffic Assessment is to be strictly followed with the addition of a human factor analysis to be completed. Further discussion on the scope of the Traffic Assessment will be completed later.

**Amec Foster
Wheeler**

Conclusion

Continued...

Meeting Date: January 11, 2017

MATTERS DISCUSSED

ACTION BY:

18. The MTO strongly encouraged the Town to proceed with the portion of the MW2 development outside of the GTA West study area. MTO cannot guarantee that connection of the Spine Road to the Highway 410/Hurontario Street interchange will be allowed. In the opinion of the MTO representatives present, there is a strong possibility that the MTO may never grant permission for the Spine Road connection, and the development should plan for an alternative where the Spine Road is a cul-de-sac.
19. The Town reiterated that the connection of the Spine Road is an integral part to the MW2 community, and they cannot accept an alternative that does not connect to Hurontario Street. Also, as the MTO is limiting the Town's ability to grow, MTO will be preventing implementation of the Region of Peel Official Plan.

Next Steps

20. Further discussion amongst the Town and Amec Foster Wheeler is required to confirm next steps. A follow-up meeting with the MTO was discussed but a specific date was not identified, but MTO gave no commitment to hold the meeting.

Meeting Minutes prepared by:

Amec Foster Wheeler Environment & Infrastructure
A division of Amec Foster Wheeler Americas Limited



Per: Jason Stahl, P. Eng.
Project Engineer

JS/kf



**Ministry of
Transportation**

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**Ministère des
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December 3, 2015

Kathie Kurtz
Senior Policy Planner
Town of Caledon
6311 Old Church Road
Caledon, ON, L7C 1J6

Dear Kathie:

**Notification of Adoption of OPA 222, Mayfield West Phase 2 Secondary Plan
Lot 6, Conc. 2 SDS, Oakville, Highway 410 / Hurontario Street**

The MTO has received the above Notice of Adoption. The document includes various references regarding access from Highway 410/Hurontario Street to a Spine Road and/or Mixed Use Commercial areas (immediately adjacent to Hurontario Street) within the lands described in the Mayfield West Phase 2 secondary plan. The Schematic drawings in the document indicate a proposed access road for the planned development connecting to Hurontario Street between the Hwy 410/Hurontario Street interchange ramp terminal and the existing Hurontario Street intersection with Collingwood Avenue intersection. This proposal does not comply with the MTO Access Management Guidelines and is unacceptable to the MTO.

Please note that the MTO provided written comments in response to the Transportation Master Plan submissions received from Caledon, informing the Town that the proposed Spine Road connection to Hurontario Street between the highway interchange and Collingwood Avenue is unacceptable. The distance between the interchange ramp terminal and the proposed spine road intersection does not comply with the MTO Access Management Guidelines.

MTO staff reiterated these comments at a meeting with Town of Caledon staff and the Town's consultants' on July 23, 2015. MTO staff indicated at this meeting that there is not sufficient distance between the Hwy 410/Hurontario Street interchange ramp terminal and the existing Hurontario Street/Collingwood Avenue intersection to provide a new access/intersection which will comply with the MTO Access Management Guidelines.

MTO staff informed the Town of Caledon staff that other alternatives should be investigated to ensure that future proposals will comply with MTO Access Management Guidelines, and suggested that Caledon could explore the use of Collingwood Avenue as access to Hurontario Street, as one possible alternative that may be acceptable to the MTO.

MTO Permits are required for any construction/development within the MTO's area of permit control, prior to the commencement of any construction activities taking place. This OPA which the Town has adopted MTO staff is anticipating that Caledon will explore and evaluate for recommendation, alternatives (that may include Collingwood Avenue) that will comply with our Access Management Guidelines for proposal in future submissions.



**Ministry of
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Télé: 416 235-4267

Please contact me if you have any questions.

Sincerely

Nick Prestinaci

Nick Prestinaci
Senior Project Manager, MTO
416-235-5135

Cc.

Tom Hewitt, MTO
Shawn Aurini, MTO
Graham Routledge, MTO
Adrian Firmani, MTO

Minutes

Date: May 26th, 2017
File #: TPB166090
Meeting Date & Time: April 11th, 2017
Meeting at: MTO Central Region, 159 William Hearst Avenue, Building D, 4th Floor Boardroom
Subject: McLaughlin Road and E/W Spine Road Class EA Meeting #3 with MTO

Attendees:

Joseph Lai – MTO	Fabio Saccon – MTO
Mike Marinelli – MTO	Branko Zikovic – MTO
Lucas Grobel – MTO	Sylvester Tuz – MTO
Kashif Hussain – MTO	Ted Lagakos – MTO
Haiqing Xu – Town of Caledon	Margherita Bialy – Town of Caledon
David Sinke – Amec Foster Wheeler	Jason Stahl – Amec Foster Wheeler

MATTERS DISCUSSED

ACTION BY:

Introduction

1. The purpose of the meeting was to discuss the status of the Spine Road connection to the Hurontario Street / Valleywood Boulevard interchange with Highway 410.

Review of previous meeting minutes

2. Minutes from the January 11th 2017 meeting were reviewed by Amec Foster Wheeler. No issues were noted by those in attendance.

External discussion since last meeting

3. The external discussions completed outside of the group in attendance were reviewed. The following key points were identified by the Town:
 - a. The Town of Caledon Mayor and Minister of Transportation met at the Ontario Good Roads conference;
 - b. The Town was directed to contact Teepu Khawja – Regional Director, Central Region;

PLEASE NOTE: If there is any comment or amendment to be made to these meeting notes, they should be brought to the notice of Amec Foster Wheeler within five (5) business days of issue and confirmed in writing.

Continued...

Meeting Date: April 11th, 2017

MATTERS DISCUSSED

ACTION BY:

- c. Teepu indicated that another meeting should be held with MTO staff to discuss the issues, and
 - d. The meeting between the developer group and the MTO was noted.
4. The Town further stated their position, as follows:
 - a. Town indicated that delays are costing the Town and Region potential tax revenue from new residents;
 - b. Development group has spent much time and money to complete necessary background plans/studies;
 - c. Region of Peel has 'front-ended' infrastructure construction (WM, Sani, Roads);
 - d. Town has frozen most of the developable lands to accommodate GTA West;
 - e. Given the delays, the Town is not able to meet Provincial growth targets, and
 - f. The large investment made by various parties has not been recouped.
 5. The MTO noted that the background studies completed by the Development group were not completed to the requirements of the MTO, and were not approved by the MTO.

Review of Planning Studies

6. Amec Foster Wheeler completed a brief presentation on the previously completed planning studies for the Spine Road connection (copy of presentation is attached). Highlights included:
 - a. Review of Highway 410/10 Interchange Report (dated June 1992), and
 - b. Review of MTO involvement in Mayfield West Phase 2 Transportation Master Plan (MW2 TMP).
7. The MTO highlighted that both the Highway 410/10 Interchange Report and the MW2 TMP had identified a flyover for northbound traffic to transition directly from Hurontario Street to Highway 10.

Review of Alternatives

8. Amec Foster Wheeler presented the five alternatives submitted to the MTO in December 2016. The MTO provided detailed comments on the alternatives, as follows:
 - a. Alternative #1 – Not acceptable given signage requirements to ensure proper wayfinding by road users (up to 6 pieces of info needed on signage). This comment was heavily weighted based on past experiences with signage for existing interchange.
 - b. Alternative #2 – Not acceptable as movement to continue northbound is not intuitive. Safety risk for road users unfamiliar with the area, which might continue straight

MATTERS DISCUSSED

ACTION BY:

- through onto the realigned off-ramp, which is a Wrong Way move onto the off-ramp.
- c. Alternative #3 – Not acceptable given concerns expressed for Alternative #1, along with the operational concerns about too much queueing on approaches and weaving over a very short distance.
 - d. Alternative #4 – Not acceptable given weaving requirements for southbound traffic in a short distance (ie. from off-ramp across at least two lanes into left turn in 185m)
 - e. Alternative #5 – Not acceptable given concerns expressed for Alternative #1 and Alternative #3
9. MTO noted their general approval towards the following:
- a. A variation of Alternative #2, where a flyover is constructed for northbound traffic. This configuration was identified at Scheme 3 in the 1992 report, and was presented at the May 26, 2014 TAC meeting for MW2 TMP. The cost for this alternative would be 100% borne by the Town/development.
 - b. Stage development of MW2 lands from west to east, without connecting the Spine Road to Hurontario. Other connections to arterial/collector roads would serve the development (McLaughlin Road, Chinguacousy Road, Mayfield Road, Collingwood Avenue, Robertson Davies Drive).
10. The potential phased approach was discussed as part of the overall implementation strategy. Further detailed traffic analysis / modelling / sensitivity analysis will be completed by the Town / Amec FW to provide more clarity regarding the timing of the flyover.

Schedule / Next Steps

- 11. A meeting to discuss specifics for the traffic modelling will be required prior to commencement of the Traffic Impact Study.
- 12. Next meeting will be targeted for May 2017.

Meeting Minutes prepared by:

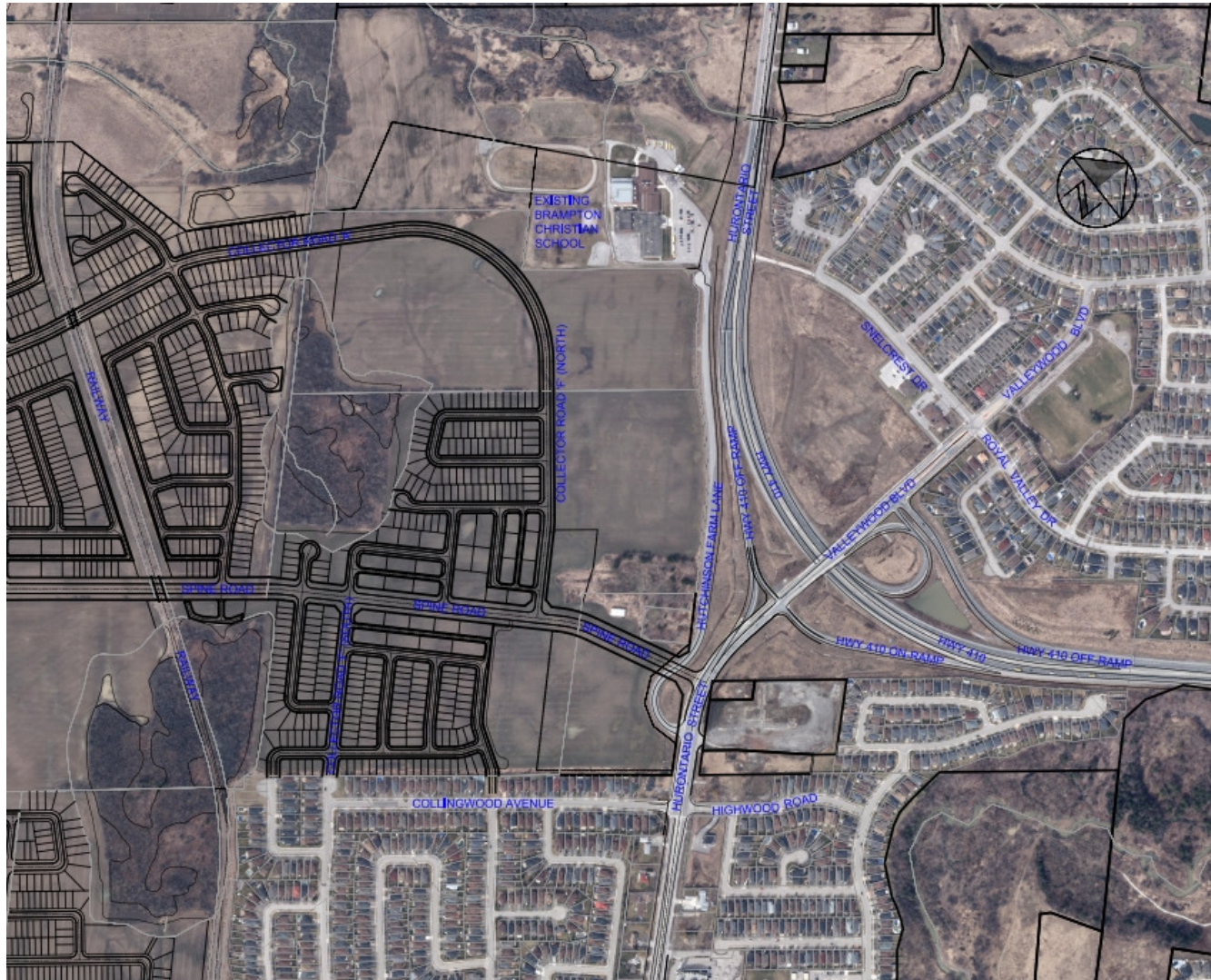
Amec Foster Wheeler Environment & Infrastructure
A division of Amec Foster Wheeler Americas Limited



Per: Jason Stahl, P. Eng.
Project Engineer

JS/js
cc. Kant Chawla, Town of Caledon

McLaughlin Road and E/W Spine Road Class EA Meeting #3 with MTO

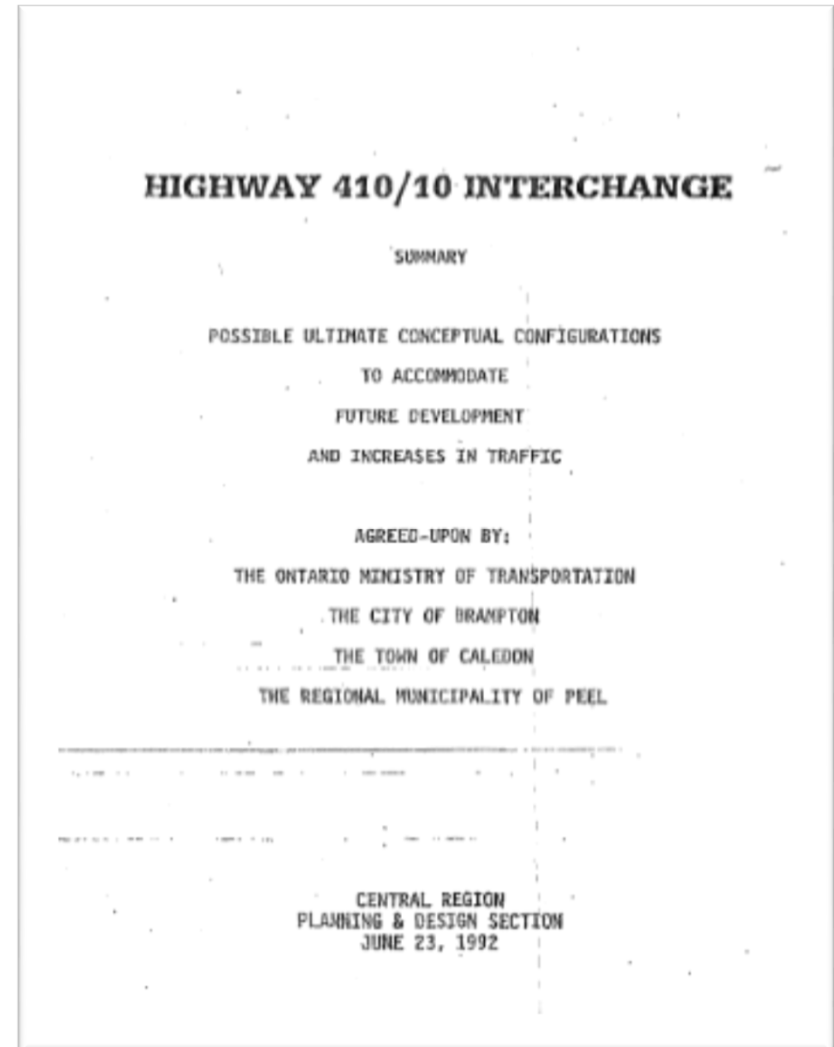


Agenda

- 1. Review of previous meeting minutes**
- 2. External discussions since Meeting #2**
- 3. Review of Planning Studies**
- 4. Review of Alternatives**
- 5. Schedule**
- 6. Next Steps**

Review of Planning Studies

- **Highway 410/10 Interchange Report (June 1992)**
- Relevant excerpts:
 - ‘Should industrial development of Lots 13 & 20, Con 1 WHS (West of Hurontario Street) take place after the future Highway 410/10 interchange (Scheme 1) is constructed, this configuration could be readily converted to accommodate direct road access from the industrial development, at a signalized intersection on Highway 10. This four-way intersection, (is) depicted conceptually in Scheme 2.’ (ref. pg. 5)
 - ‘As the provision of the new road access to the highway would be purely development-driven, all costs associated with the reconfiguration of the interchange would be borne by the parties developing the lands west of Highway 10.’ (ref. pg. 6)





Review of Planning Studies

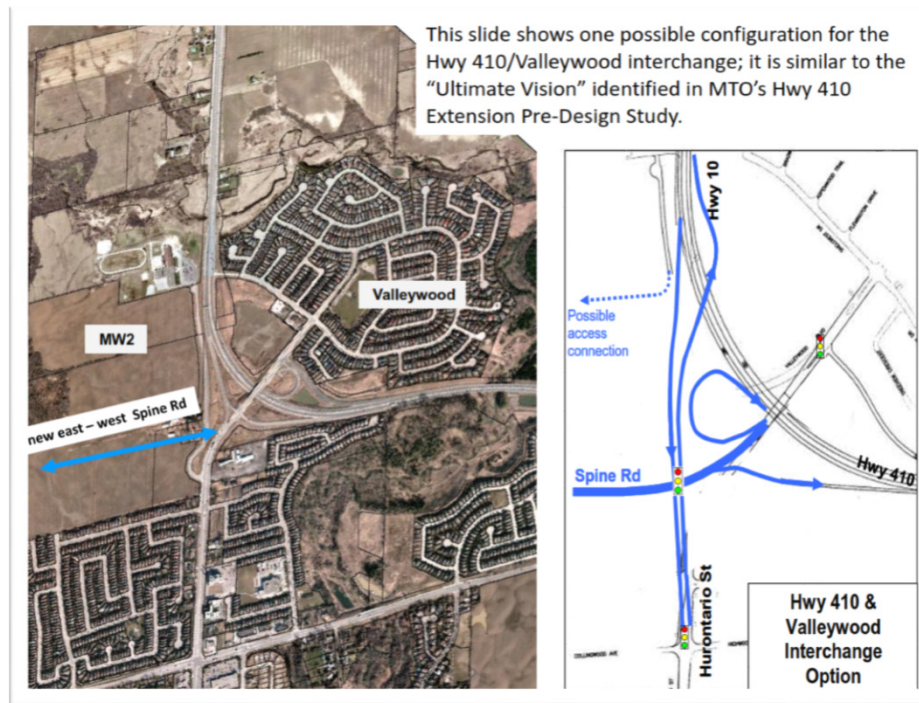


Scheme 2 as presented in the Highway 410/10 Interchange Report (1992)

Review of Planning Studies

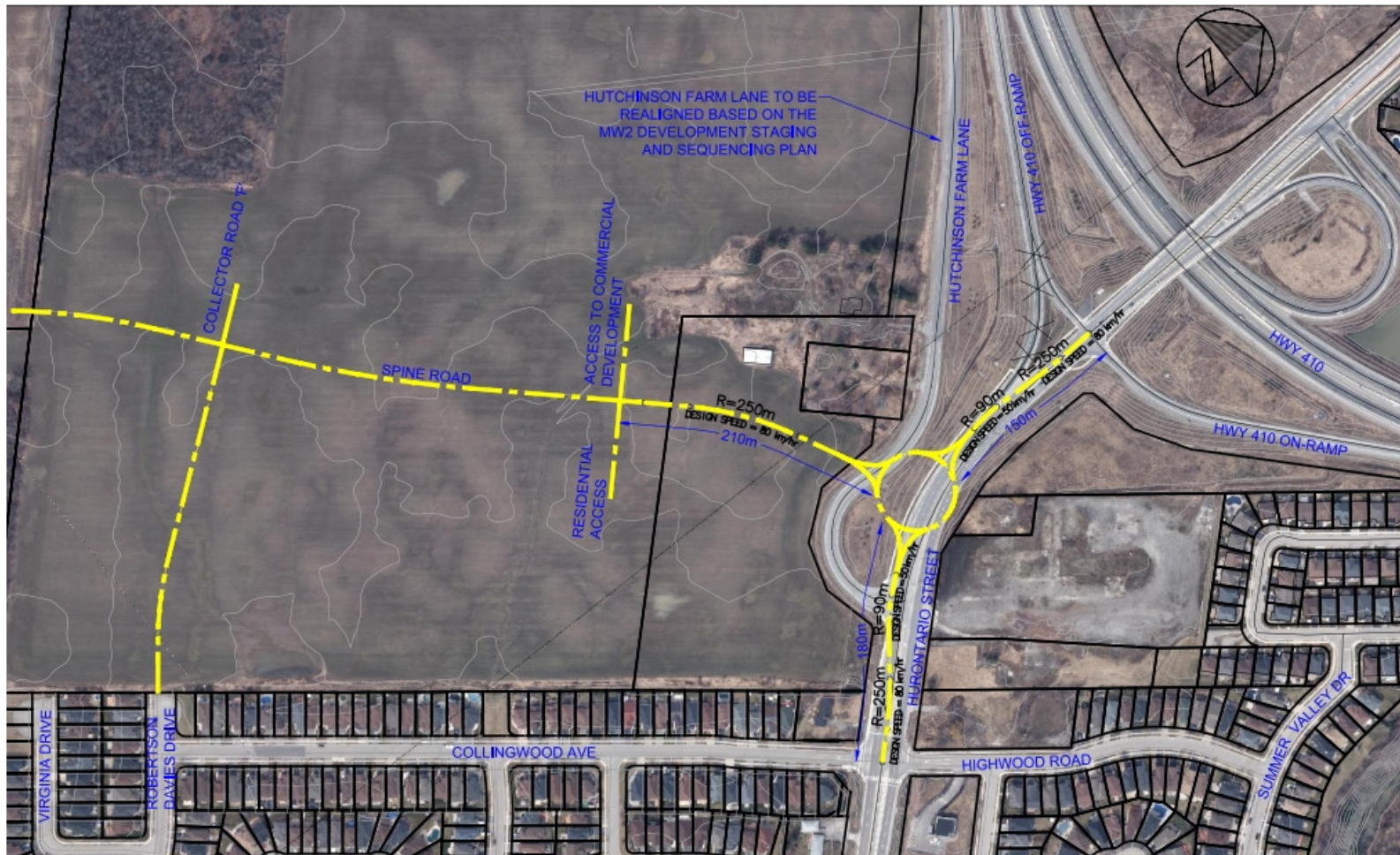
Mayfield West Phase 2 Transportation Master Plan (TMP)

- MTO involvement in the TMP included attendance at the various Technical Advisory Committee (TAC) meetings as follows:
 - September 25 2008, November 18 2008 (Trevor Greenman)
 - May 26, 2014 (Natalie Rouskov)
- The following slide was presented at the May 26, 2014 meeting:





Review of Alternatives



Alternative #1



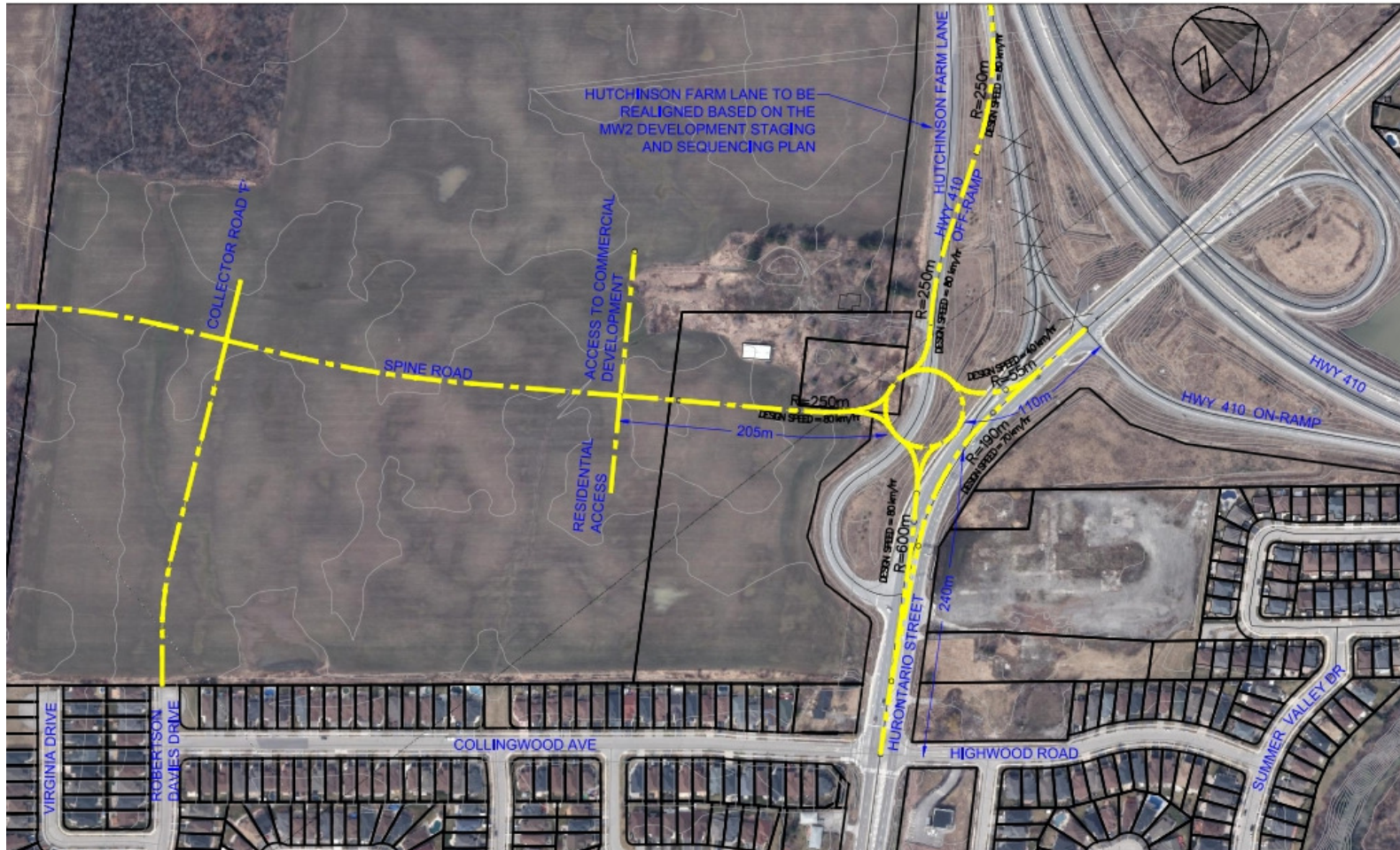
Review of Alternatives



Alternative #2



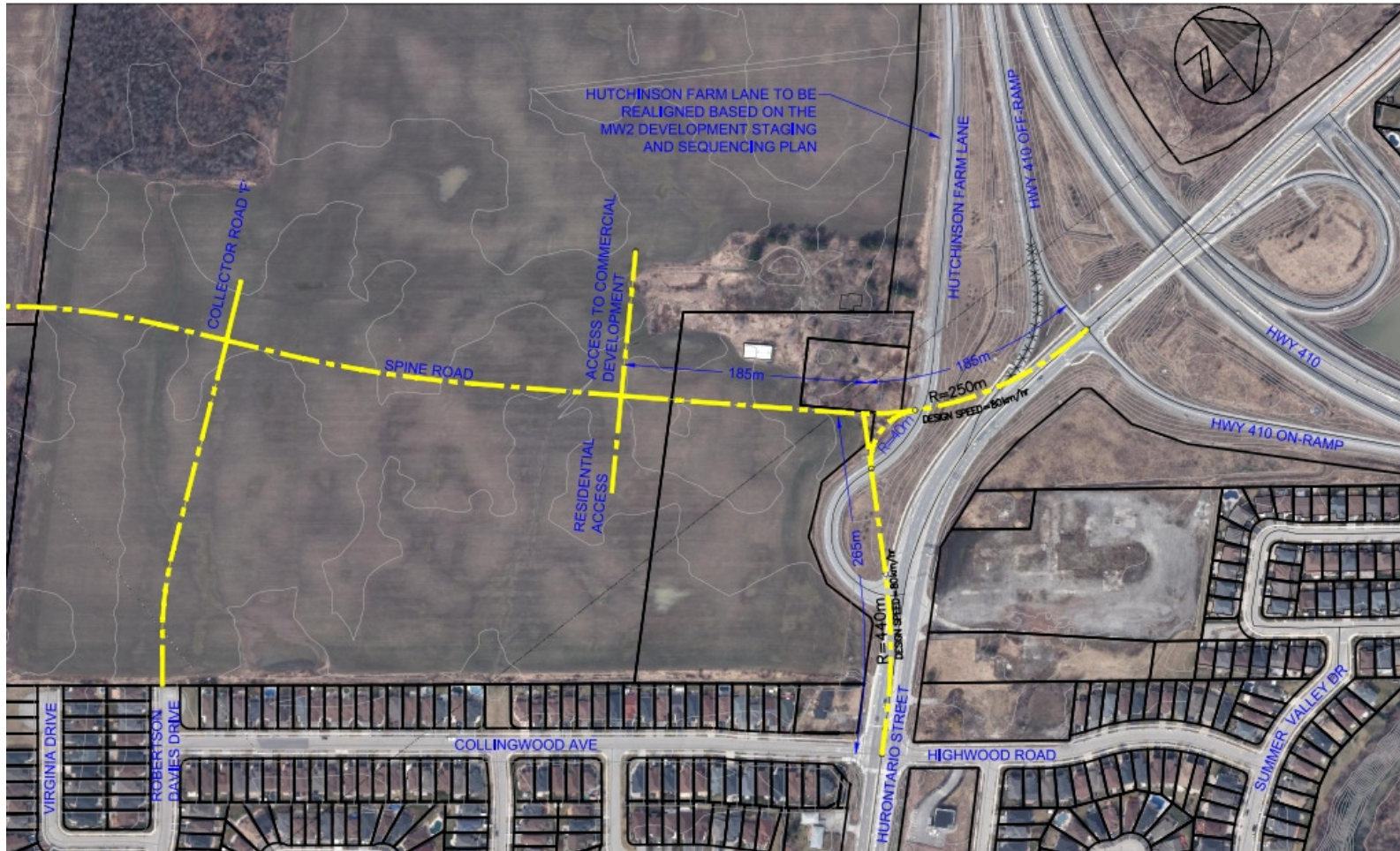
Review of Alternatives



Alternative #3



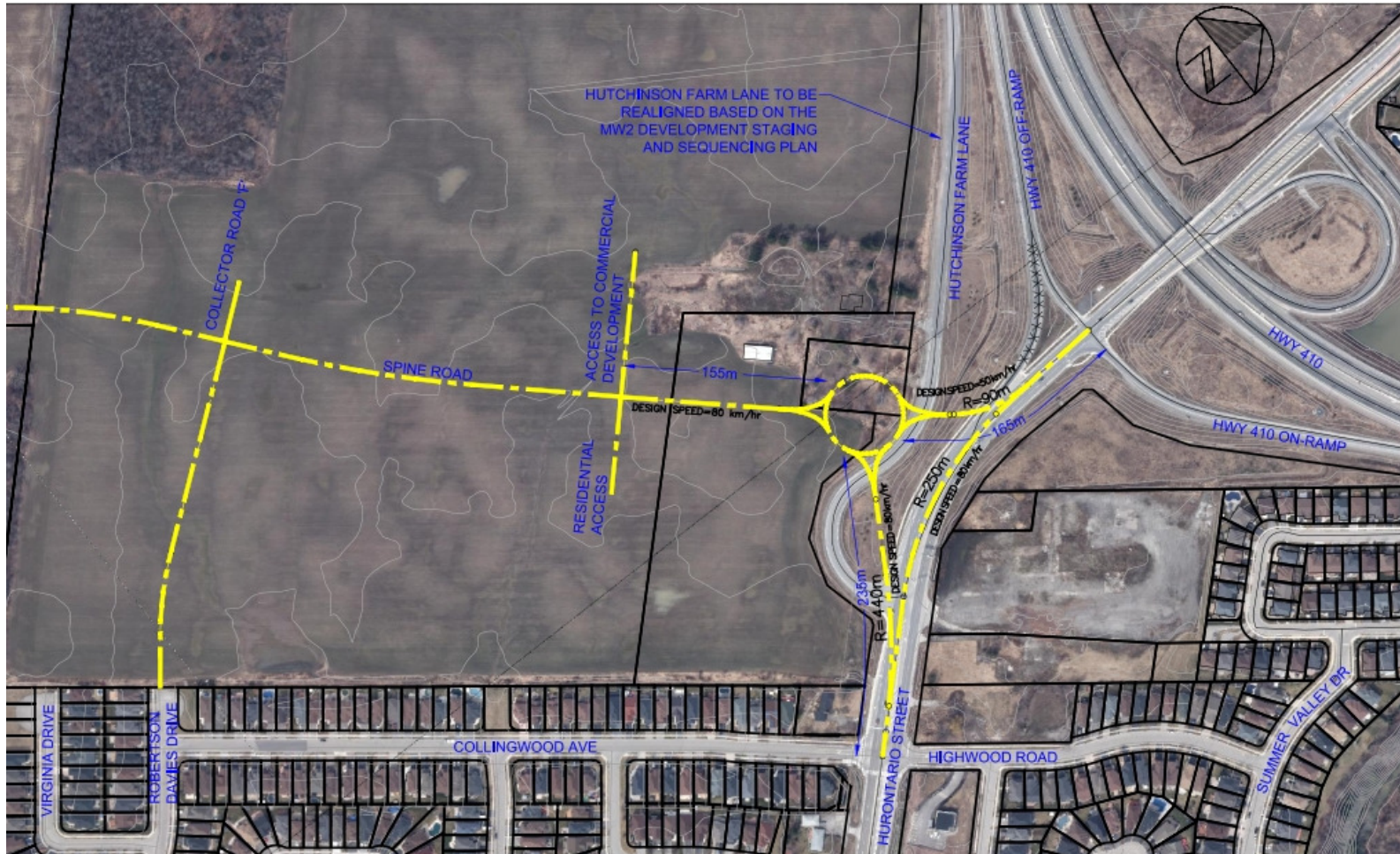
Review of Alternatives



Alternative #4



Review of Alternatives



Alternative #5

Minutes

Date: August 29th, 2017
File #: TPB166090
Meeting Date & Time: June 20th, 2017
Meeting at: MTO Central Region, 159 William Hearst Avenue, Building D, 1st Floor Boardroom
Subject: McLaughlin Road and E/W Spine Road Class EA Meeting #4 with MTO

Attendees:

Pramod KC – MTO	Kashif Hussein – MTO
Branko Zivkovic – MTO	Mike Marinelli – MTO
Ted Lagakos – MTO	Kant Chawla – Town of Caledon
Ravi Bhim – Amec Foster Wheeler	Andre Lower – Amec Foster Wheeler
Jason Stahl – Amec Foster Wheeler	

MATTERS DISCUSSED

ACTION BY:

Introduction

1. The purpose of the meeting was to discuss the approach to the traffic modelling of the proposed improvements to the Highway 410 / Hurontario Street / Valleywood Boulevard interchange to accommodate the connection of the Spine Road.

Review of Previous Meetings

2. Amec FW provided a summary of the previous meeting. The following items were highlighted:
 - a. The planning studies were reviewed, including the 1992 PDR and the Mayfield West Phase 2 (MW2) Transportation Master Plan.
 - b. The five alternatives determined by Amec FW were reviewed, and none were deemed acceptable by MTO.
 - c. MTO identified two acceptable alternatives, including Scheme 3 as identified in the 1992 PDR and that the MW2 development area be serviced without the connection to Hurontario Street.

PLEASE NOTE: If there is any comment or amendment to be made to these meeting notes, they should be brought to the notice of Amec Foster Wheeler within five (5) business days of issue and confirmed in writing.

Continued...

Meeting Date: June 20th, 2017

MATTERS DISCUSSED

ACTION BY:

- d. The Town will explore phasing of the flyover based on a sensitivity analysis to determine the horizon year that the flyover would be warranted from a traffic perspective.
3. MTO requested that the preferred alternative be selected. Amec FW / Town confirmed that Scheme 3 as identified in the 1992 PDR was selected and will be modelled as part of the traffic impact study.
4. MTO noted that the phasing of the flyover would not be accepted given the human factors issues identified at the previous meeting. The flyover will be required to be constructed as part of the reconfiguration of the interchange to accommodate the connection of the Spine Road. However, the Town insisted that as part of the detailed traffic assessment, sensitivity analysis will be carried out to determine when the flyover will be warranted.

Review of Traffic Modelling Methodologies

5. Clarification on the data requirements for the existing conditions model was completed. MTO has indicated that all requested/available data for the study area has been provided. Amec FW to review data received and confirm if there are any anomalies or missing data set. MTO noted that any existing traffic counts must not be more than three years old.
6. Study limits were also discussed. The limits as agreed in the meeting are attached for reference. MTO noted that one interchange on either side of the study interchange to be included. In addition, on the arterial, one signalized intersection before the ramp terminals should be included on either side of the interchange.
7. MTO requested that two scenarios, With and Without GTA West, be included in the assessment.
8. The Region of Peel's EMME modelling forecast will be utilized for this study.
9. MTO to provide direction with respect to the GTA West assumptions at it relates to this study. To ensure the assumptions made regarding the location of the interchanges for the scenario which includes GTA West, along with the other parameters identified above, a summary document will be sent to MTO for circulation to the SAFO and GTA West Planning group. Amec FW will submit this document to Mike Marinelli for circulation.
10. For the study time periods and demand horizons, it was determined that the 2021 and 2031 horizon years would be completed. For the purposes of the model, full build-out of the MW2 development will be assumed for 2021. It will also be assumed that GTA West will be fully constructed with all interchanges by 2031.

Amec FW

Amec FW

Continued...

Meeting Date: June 20th, 2017

MATTERS DISCUSSED

ACTION BY:

11. Both the AM and PM weekday peak periods (3 hours each) will be included in the Vissim microsimulation model. The methodology to factor peak hour traffic volume data to generate pre and post peak hour data was deemed acceptable by MTO.
12. The need for weekend Visism modelling will be revisited after confirming the LU on big box stores within the development and the magnitude of generated trips to/from adjacent roadway network. Weekend modelling will not be conducted if weekend peak hour volumes are lower than weekday peak hour volumes. **Amec FW**
13. MTO requested that calibration/validation of existing conditions Vissim models be completed based on the FHWA Microsimulation Guidelines. Once the calibration/validation of the existing conditions Vissim models are completed, Amec FW will provide the results to the Ministry for approval before proceeding with the future conditions modelling.
14. MTO agreed to provide the travel time and speed data against which the existing conditions model is to be validated to. **MTO**
15. The final report is to include the standard material typical for submission, with a focus on:
 - a. Calibration and Validation thresholds for existing condition models
 - b. Detail traffic operation of the study limits which will include at a minimum for all scenarios outlined above:
 - i. Average delay, v/c, LOS and 95th percentile queues for all movements at signalized intersections within the study limits
 - ii. Throughput volume for all intersections
 - iii. Speed contour plots and lane by lane speed diagrams on Highway 410/Hwy 10 and ramps for all horizon years (existing, 2021, and 2031 ect.)
 - c. Copies of the modelling files (Visism and Synchro)
16. MTO requested clarification on the phasing of the development. The Town noted that the development group has completed a plan to phase development in two parts. However, full build-out is targeted for 2021.

Schedule / Next Steps

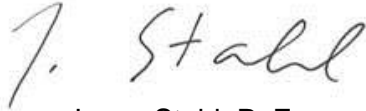
17. The details of the next meeting were not discussed, but another meeting with MTO is anticipated once the initial results of the model have been compiled.

Meeting Minutes prepared by:

Continued...

Meeting Date: June 20th, 2017

Amec Foster Wheeler Environment & Infrastructure, A division of Amec Foster Wheeler
Americas Limited

A handwritten signature in black ink that reads "J. Stahl". The signature is written in a cursive, slightly slanted style.

Per: Jason Stahl, P. Eng.
Project Engineer

JS/al/rb

cc. Kathy Ash, Town of Caledon
Haiqing Xu, Town of Caledon
David Sinke, Amec Foster Wheeler
Neal Smith, Amec Foster Wheeler

McLaughlin Road and Spine Road Class EA MTO Meeting #6 Progress Review



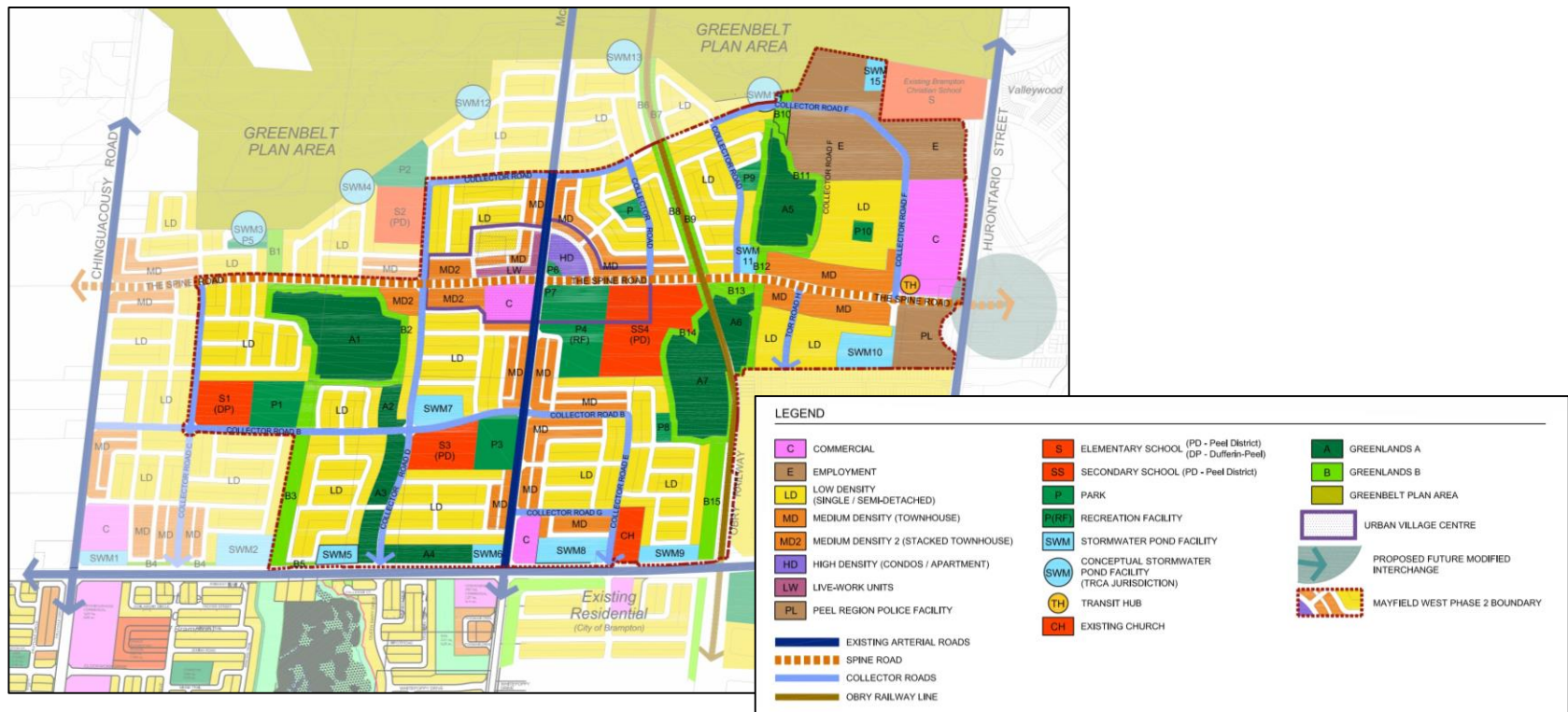
Agenda

1. Review of Previous Planning Studies
2. Preferred Alternative
3. Traffic Assessment
4. Work Plan for Preliminary Design and Class EA
5. Schedule
6. Next Steps



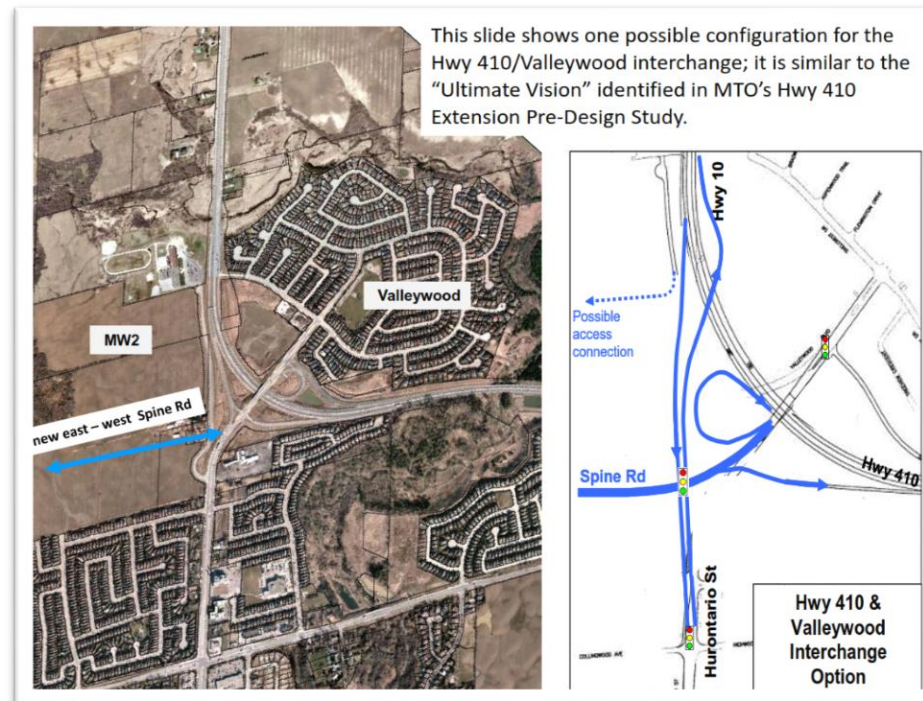
Mayfield West Phase 2

- New urban area for 17,000 residents and 6,000 jobs;
- Mix of residential, commercial, parks, schools, and public spaces, and
- Transportation Master Plan (MW2 TMP) identified a new east/west Spine Road to intersect with Hurontario Street near the Hurontario Street/Valleywood Boulevard/Highway 410 interchange to a 'T' intersection configuration.



MTO Involvement in MW2 TMP

- MTO involvement in the TMP included attendance at the various Technical Advisory Committee (TAC) meetings as follows:
 - September 25, 2008 and November 18, 2008 (Trevor Greenman)
 - May 26, 2014 (Natalie Rouskov)
- The following slide was presented at the May 26, 2014 meeting:





Preferred Alternative



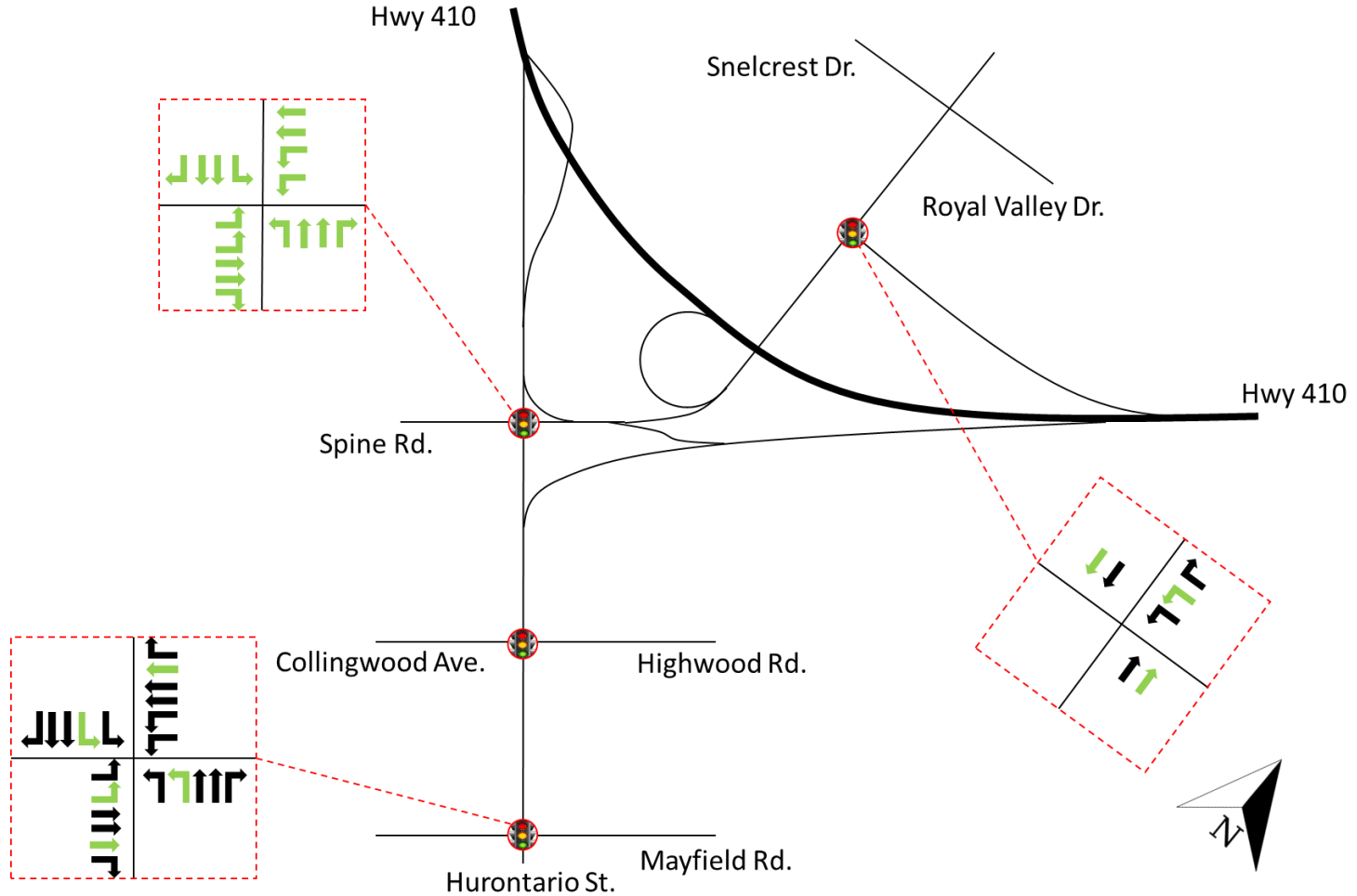
Traffic Assessment

- Traffic assessment of existing and proposed conditions has been completed;
- Existing conditions submitted and accepted by MTO;
- Proposed conditions submitted and is under review by MTO Traffic / SAFO staff;
- Report concludes:
 - Under Proposed Geometric Modification of Valleywood Interchange, 2021 and 2031 Traffic Demand can be accommodated.
 - Site trips can access the mainline and ramps without major impacts to surrounding network.
 - LOS at Spine Road intersection expected to operate at E or better.



Traffic Assessment

- Recommended Lane Configurations:





Work Plan for Preliminary Design/Class EA

- Preliminary Design to follow Municipal Engineers Association (MEA) Class EA framework;
- MTO to approve recommendations before they are presented to the public, filing of the ESR, or commencing detailed design;
- The following key tasks will be completed:
 - Transportation (geometrics, grading, layout, property, cost estimates);
 - Structural Design (new flyover);
 - Drainage / SWM;
 - Natural Environment;
 - Noise and Air Quality;
 - Traffic / Human Factors / Safety;
 - Geotechnical;
 - Built Heritage / Cultural Heritage / Stage 1 Archaeology;
 - Electrical Existing Conditions, and
 - Public Consultation.

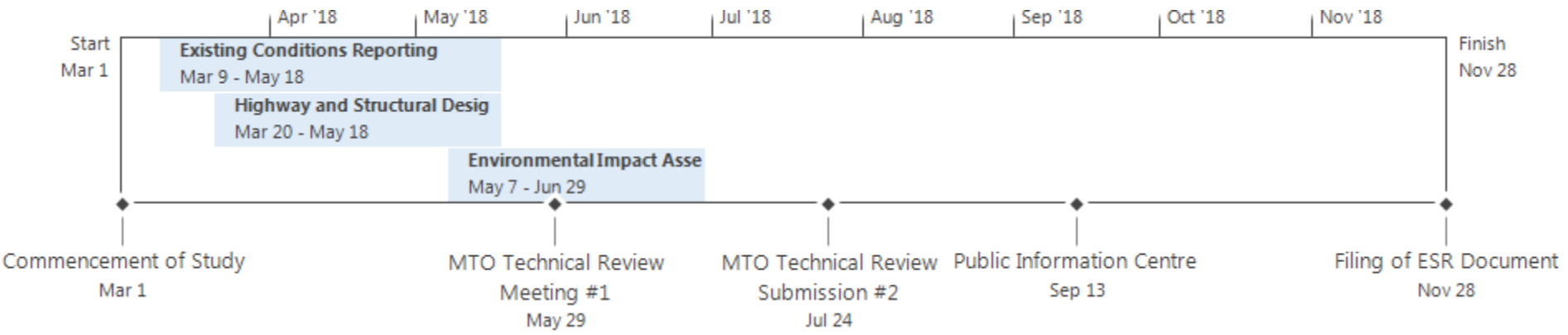


Work Plan for Preliminary Design/Class EA

- Other items required by MTO based on initial review of the work plan:
 - Detailed Consultation Plan;
 - Land Use Investigation;
 - Groundwater Investigations;
 - Landscape Plan;
 - Waste Report (excess materials and DSS), and
 - Erosion and Sediment Control Plan.



Schedule



Next Steps

- Complete review of traffic assessment;
- Finalize work plan based on MTO comments;
- Finalize schedule, and
- Notify residents/agencies of interchange modification study.



MTO Senior Management Meeting – May 7, 2018

Proposed Modifications to Highway 410 / Valleywood Boulevard / Hurontario Street Interchange

woodplc.com



Agenda

1. Introduction
2. Study Area
3. Project Background
4. Study and Assessment
5. Design Alternatives
6. MTO Technical Comments
7. Next Steps



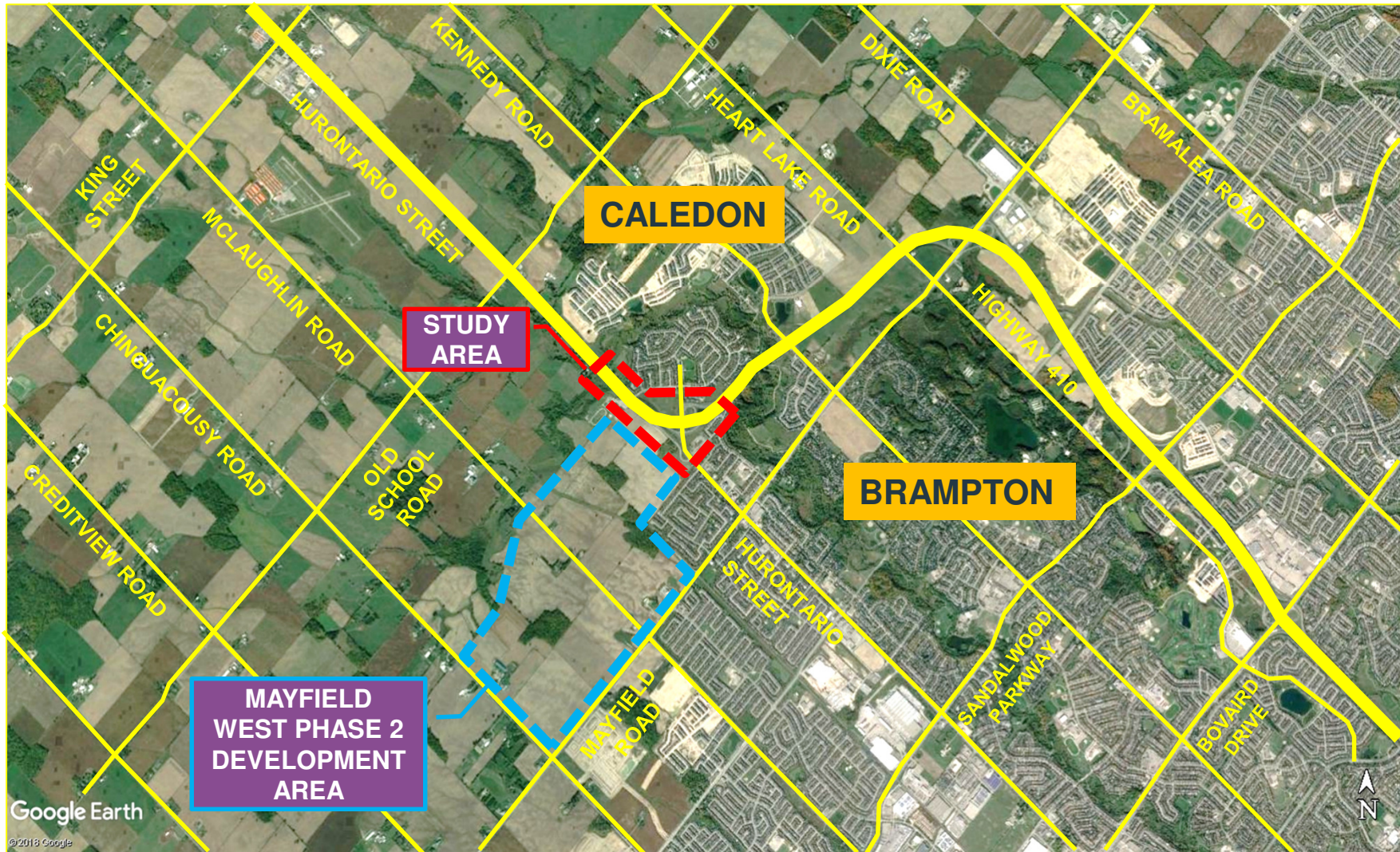
Introduction

In October 2017, Amec Foster Wheeler Americas Limited became a wholly owned subsidiary of John Wood Group plc.

- Wood is a global leader in the delivery of project, engineering and technical services to energy and industrial markets
- Wood's Environmental & Infrastructure Solutions draws on an experienced local footprint with a wide geographical reach to support our customers' needs related to environmental engineering, consulting and construction.



Study Area

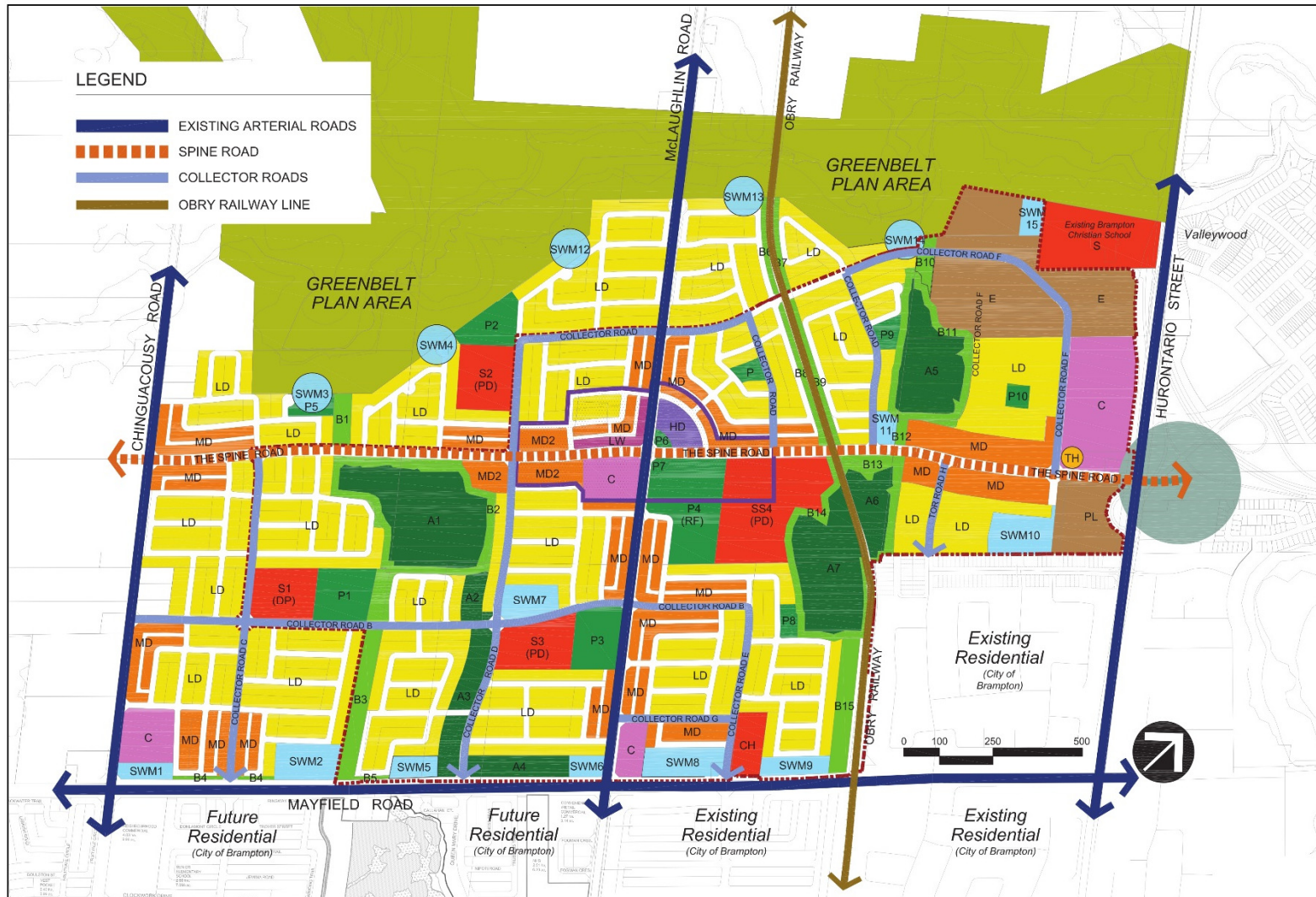


Project Background

- Mayfield West Phase 2 (MW2) development is anticipated to accommodate 16,138 residents and 4,449 jobs.
- A new east-west arterial roadway was proposed in the MW2 Transportation Master Plan (MW2 TMP), known as the Spine Road, to service the development.
- In the MW2 TMP, the Spine Road was proposed to connect to Hurontario Street / Valleywood Boulevard immediately south of the interchange with Highway 410.
- In 2016, a Class EA study was initiated by the Town of Caledon to determine the specifics of this connection.



Mayfield West Phase 2



Study and Assessment

- The Class EA study team has met with MTO Technical Staff to discuss the connection.
- The following key requirements were communicated by MTO Staff to the study team:
 - The 'T' connection to Hurontario Street identified by the MW2 TMP did not meet standards, as the spacing between the new intersection and the nearby ramp terminals was less than 400m, and
 - Additional alternatives would need to be assessed and a preferred alternative selected to satisfy MTO's requirements.



Alternatives

- The following alternatives were presented to MTO:
 1. 'T' intersection immediately south of the interchange with a roundabout at the intersection of Spine Road with Hurontario Street;
 2. Connect Spine Road to Valleywood Blvd, with Hurontario Street ending at the intersection with Spine Road and reconfiguration of the interchange;
 3. Same as Alternative 2, but with a roundabout at the intersection of Spine Road / Hurontario Street / Valleywood Blvd;
 4. Connect Spine Road to Valleywood Drive, but shift connection to Hurontario Street westerly and maintain current interchange configuration, and
 5. Same as Alternative 4, but with a roundabout at the intersection of Spine Road / Hurontario Street / Valleywood Blvd.



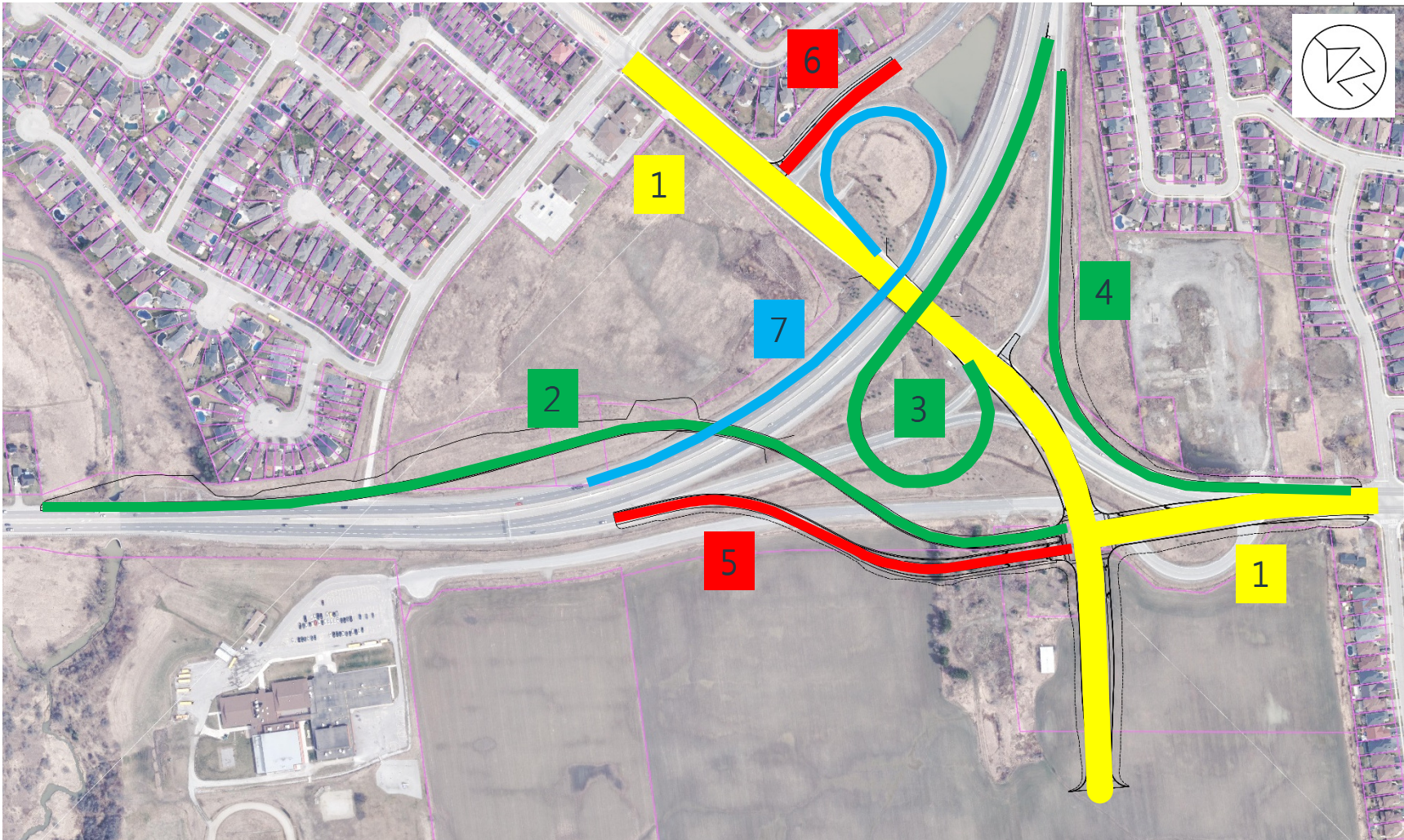
Preferred Alternative

Based on a review of all alternatives, Alternative 2 was selected, with the addition of a new flyover for the northbound movement. This alternative is consistent with Scheme 3 from the Highway 410 PDR (2001). The preferred alternative consists of the following:

1. Realignment of Hurontario Street and Valleywood Boulevard;
2. New single lane E/W-N on-ramp;
3. New single lane N-E on-ramp;
4. New single lane S-E on-ramp (connecting to existing ramp);
5. Realignment of existing N-E/W off-ramp;
6. Additional left turn lane for E-N/S off-ramp, and
7. Removal of the N-W on-ramp.



Preferred Alternative



Preferred Alternative

- For the new E/W-N on-ramp, a flyover of Highway 410 (mainline) is needed
- Span of the flyover will be determined in consultation with MTO Planning staff (ie. confirm number of future lanes, horizontal alignment and vertical profile)
- Alternative structural types and configurations will be assessed as part of subsequent phases of design
 - Post-tensioned deck vs steel girders vs precast concrete girders
 - Factors to be considered include durability, construction clearances, future inspection/maintenance, and economics.



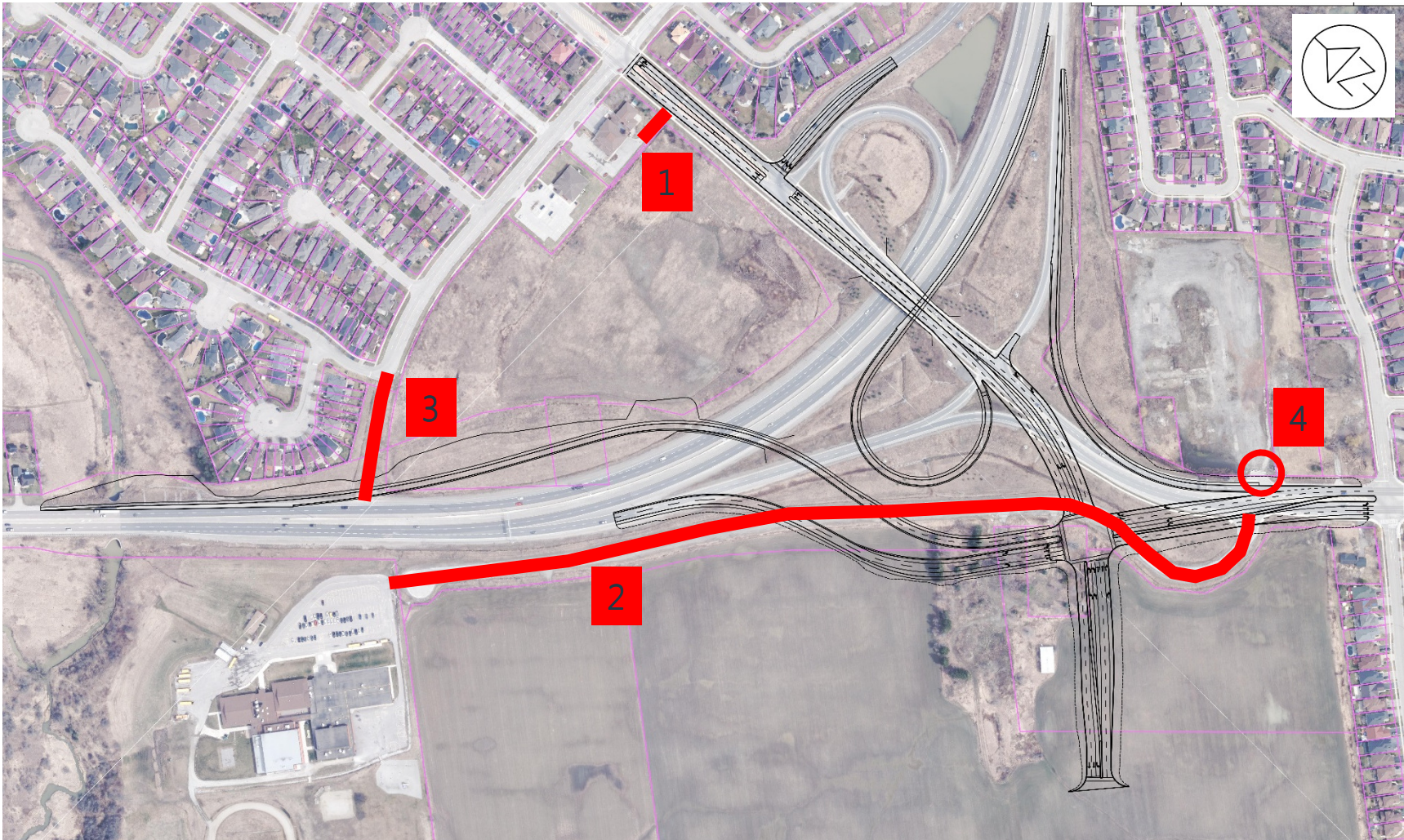
MTO Technical Comments

Access:

- 1) From Volunteer Fire Hall to Valleywood Boulevard
Recommendation: Under proposed conditions reinstate access to match the current configuration.
- 2) From School to Hurontario Street (Hutchinson Farm Lane)
Recommendation: Reroute access and connect to MW2 internal road network.
- 3) Existing emergency access from Snelcrest Drive to Highway 410
Recommendation: Consider connecting emergency access to new on-ramp.
- 4) From vacant lands north of Highwood Road to Hurontario Street
Recommendation: Town will require developer permanently close access to Hurontario Street and connect to Highwood Road.



Access



MTO Technical Comments

Stormwater Management (SWM):

- SWM has not been assessed at this phase of the study
- Subsequent phases of design will complete an existing conditions assessment along with an impact assessment
- Existing culverts will need to be reconfigured to facilitate the proposed modifications



MTO Technical Comments

Geometrics:

- Preliminary design based on TAC Geometric Design Guide (2017) with MTO Design Supplement
- Draft design criteria has been submitted to outline the various design parameters for each alignment
- Profiles and vertical clearances are based on high level contour data, which will be refined in subsequent iterations of the preliminary design



MTO Technical Comments

Bridge Engineering:

- Modifications to the existing Valleywood Boulevard underpass are required to facilitate the new on-ramp
- Removal and modification of the existing concrete slope paving will be required
- Excavation will also be required within the 7V:10H zone beneath the base of the false abutment/RSS panels
- Temporary slope protection (soil grouting and/or shoring) will be required during construction
- For permanent conditions, a short retaining wall/toe wall will need to be designed and constructed



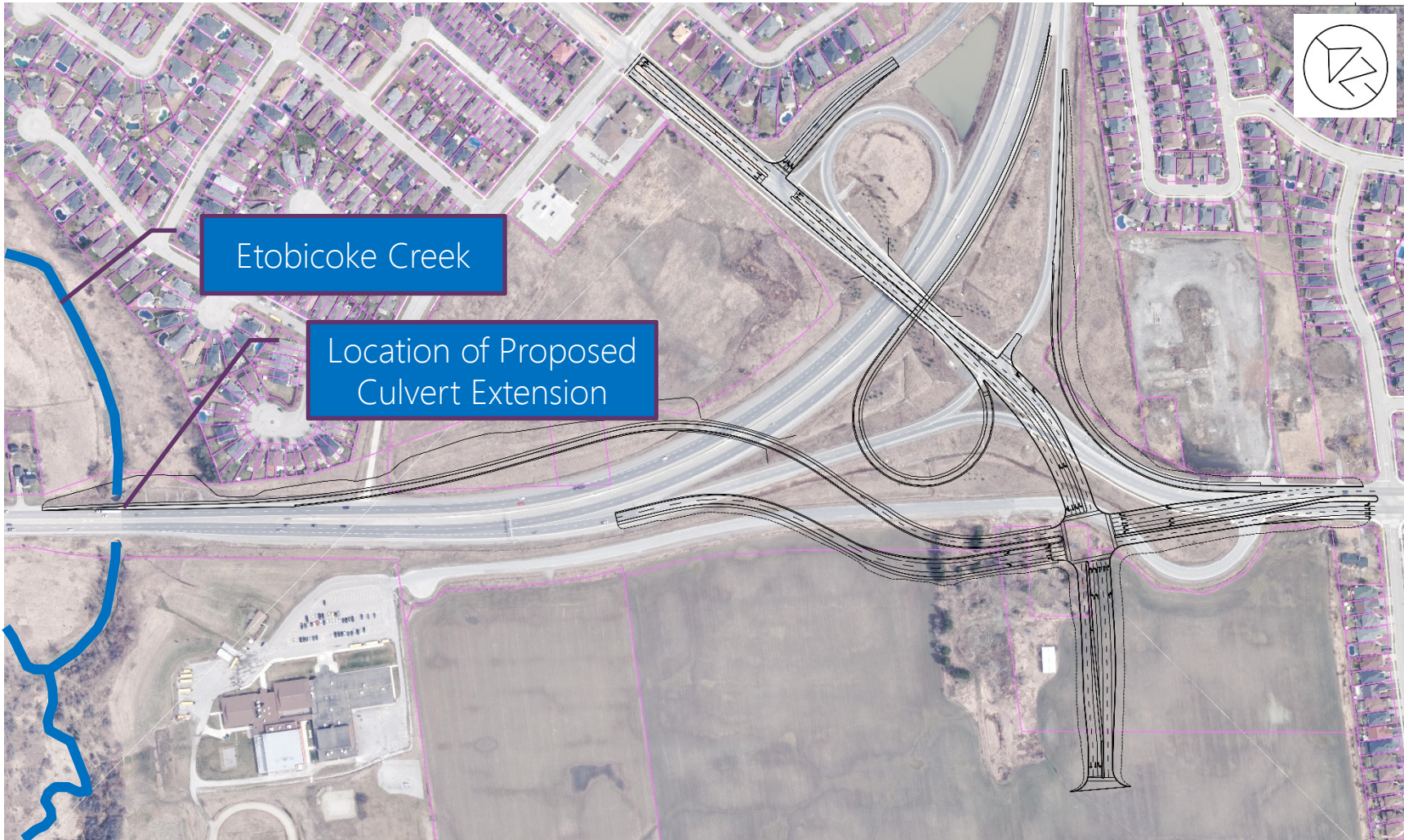
MTO Technical Comments

Natural Environment:

- The existing culvert at Etobicoke Creek will need to be extended for the new northbound on-ramp
- Etobicoke Creek is a permanent stream flowing in a well defined valley
- A fisheries assessment will be completed as part of subsequent phases of the design



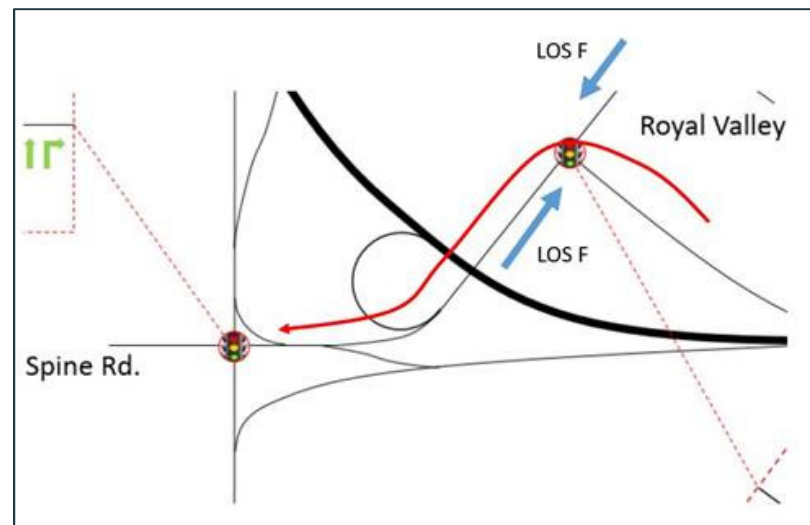
Environmental Impacts



MTO Technical Comments

Traffic:

- MTO Traffic has expressed concern with the following movement (shown in red)



Recommendation: Optimize signal timing to give priority to the identified movement



Next Steps

- Review and address any MTO concerns moving forward;
- Obtain MTO Senior Management endorsement to proceed to Public Information Centre and present the preferred alternative to the public on July 5, 2018;
- Complete existing conditions assessment of the interchange;
- Complete impact assessment of the proposed modifications, and
- Complete an Environmental Study Report and File for 30-day public review.



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Minutes

Date: June 1, 2018
File #: TPB166090
Meeting Date & Time: May 24, 2018 2:00pm – 4:30pm
Meeting at: 6311 Old Church Road, Caledon ON L7C 1J6
Subject: Technical Agency Meeting

Attendees:

Jason Solnik, TRCA	Annette Lister, TRCA
Leilani Lee-Yates, TRCA	Sylvia Kirkwood, Town of Caledon
Kant Chawla, Town of Caledon	David Hurst, Town of Caledon
Arash Olia, Town of Caledon	Eric Chan, Town of Caledon
Tina Detaramani, Peel Region	Jeffrey Smith, Peel Region
Jerry Kulyk, Peel Region	Ghaz Mohammad, City of Brampton
George Golding, CVC	Dorothy Diberto, CVC
Paul Tripodo, CVC	Marcus Sanderson, Ontario Provincial Police
Anthony Stamschia, Caledon Fire	Darryl Bailey, Caledon Fire
David Sinke, Wood	Jason Stahl, Wood
Erin Hellinga, Wood	Joel Elgersma, Wood
Aniqa Shams, Wood	

MATTERS DISCUSSED

ACTION BY:

Introductions

1. The purpose of the meeting was to review the status of the McLaughlin Road and Spine Road Class EA, with a focus on the planned modifications to the interchange which will facilitate the connection of the Spine Road to the arterial road network / freeway system.
2. Wood presented the material with the assistance of a Powerpoint presentation. A copy of the presentation is attached for reference.

PLEASE NOTE: If there is any comment or amendment to be made to these meeting notes, they should be brought to the notice of Wood within five (5) business days of issue and confirmed in writing.

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a Division of Wood Canada Limited
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Registered in Canada No. 773289-9; GST: 899879050 RT0008; DUNS: 25-362-6642

MATTERS DISCUSSED

ACTION BY:

Summary of Project Background

3. Wood provided a summary of the project and the history of the area. The following key points were identified:
 - a. A key driver for the Class EA is the Mayfield West Phase 2 development (MW2);
 - b. MW2 is projected to accommodate 16,138 residents and 4,449 jobs;
 - c. A new E/W Spine Road is needed to service the new development;
 - d. Study has been expanded to include details associated with the connection of the Spine Road to the Hurontario Street / Valleywood Boulevard / Highway 410 interchange;
 - e. All aspects of the study (including the modifications to the interchange) has followed the Municipal Class EA process;
 - f. Currently the study is completing Phase 3 of the Class EA process;
 - g. Key stakeholders to date includes MW2 Development Group and Ministry of Transportation Ontario (MTO);
 - h. Key reports for the study are the MW2 TMP, the Environmental Implementation Report (EIR), and the Functional Servicing Report (FSR), and
 - i. The development will add approximately 13,000 vehicles to the road network during both the AM and PM peak hours;

Results from Discipline-Specific Reports

4. Wood provided a summary of all discipline specific reports. The following key points were identified:
 - a. Seven heritage resources were identified in the study area, with 3 resources affected by the proposed works. Supplemental study is required for the interchange modification area;
 - b. Geotech reporting for the study area determined the recommended pavement structure for McLaughlin Road and Spine Road, rehabilitation techniques for McLaughlin Road, and reporting on chemical analysis of existing soils. Supplemental study is planned for the interchange area to support the design of the new flyover;
 - c. Hydrogeology assessment was completed, and the proposed works are not anticipated to impact surface water or private wells. Supplemental study is planned for the interchange area.
 - d. Stormwater management study was completed, and the study area will be incorporated into the SWM plans for the MW2 development area. SWM will be analyzed for the interchange area in more detail as part of subsequent portions of the study.
 - e. A Natural Environment study was completed, and some of the study area contributes to Fletcher's Creek, which is inhabited by Redside

MATTERS DISCUSSED

ACTION BY:

- Dace. The balance of the study area is contained within the Etobicoke Creek watershed.
- f. Terrestrial Habitat survey observed Butternut, Wood Thrush and Eastern Wood-Pewee, and Barn Swallow.
5. Wood noted that MTO has requested several additional studies to support the planned modifications to the interchange, as follows:
- a. Noise assessment;
 - b. Air Quality assessment;
 - c. Structural Preliminary Design (for new flyover);
 - d. Traffic/Human Factors/Safety;
 - e. Archaeology (Stage 1), and
 - f. Electrical Existing Conditions Report.
6. The following comments were made during the presentation of the discipline-specific reports:

Slide 17

- City of Brampton inquired which part of the road has been identified with high petroleum hydrocarbons.
- Wood to provide response post-meeting. *Post Meeting Note:* High petroleum hydrocarbons were found in BH8 (on McLaughlin Road approx. 350m north of the McLaughlin Road / Mayfield Road intersection)

Slide 23

- CVC and TRCA asked questions regarding the Redside Dace habitat found in the nearby vicinity of the study area and whether MNRF was notified.
- Wood stated that MNRF was notified and is interested with the findings of the natural heritage reports. No further field work for Spine Road will be completed, however field work for the interchange area is ongoing. Details about the field investigations will be sent to TRCA and CVC.

Wood

Slide 27

- Region of Peel asked questions concerning the property impacts resulting from the proposed works and if any additional property assessment reports would be completed by the study team.
- Wood responded noting that any property impacts and approximate proposed property limits will be identified in the Environmental Study Report.
- Region of Peel was specifically concerned with the jug-handle portion of the intersection of Hutchinson Farm Lane with Hurontario Street. With

MATTERS DISCUSSED

ACTION BY:

previous correspondence, the Region of Peel has identified this parcel of land is to be acquired from MTO once the property requirements for the Spine Road are determined.

- Questions were raised regarding when property acquisitions can be initiated within the Class EA process. Wood clarified that property acquisition requires a completed and filed Class EA before formal purchase proceedings can begin. However, it is common to not begin the acquisition process until after the detailed design determines what property is required based on more detailed information.

Presentation of Preferred Design Alternative

7. The following modifications to the interchange are proposed:
 - a. Realignment of Hurontario Street and Valleywood Boulevard;
 - b. New single lane northbound on-ramp;
 - c. New single lane eastbound/southbound on-ramp;
 - d. New single lane eastbound/southbound channelization (connecting to existing ramp);
 - e. Realignment of existing southbound off-ramp;
 - f. Additional left turn lane for westbound/northbound off-ramp, and
 - g. Removal of the northbound on-ramp.
8. A few specific areas of the proposed interchange modifications were identified by Wood, as follows:
 - a. A new intersection will be constructed for the Hurontario Street / Valleywood Boulevard / Spine Road / MTO ramps. Four through lanes will be provided in all directions, along with left and right turn lanes. For some approaches, double left turn lanes are warranted based on the projected traffic volumes. Wood noted that some refinements to the identified lane layout are being considered in consultation with MTO.
 - b. An additional southbound lane will be added at the intersection of Valleywood Boulevard and Snelcrest Drive / Royal Valley Drive. One lane northbound will be maintained.
 - c. The existing Highway 410 northbound off-ramp will be widened to include an additional left turn lane. The intersection of this ramp with Valleywood Boulevard will be signalized.
 - d. A new northbound on-ramp is proposed at the interchange with Highway 410, including a new flyover structure. The existing crossing of Highway 10 / Etobicoke Creek will be modified to accommodate the new on-ramp.
 - e. The north leg of the Hurontario Street / Collingwood Avenue / Highway Road will be modified to accommodate the proposed

MATTERS DISCUSSED

ACTION BY:

interchange improvements. Closure of the entrance to the existing vacant lot will need to be closed.

9. The following comments were made during the presentation of the preferred design alternative:

Slide 12

- OPP provided input regarding the Valleywood Boulevard / Highway 410 northbound off-ramp intersection. Residents in the nearby community have noted to the OPP that left turns at this intersection are difficult. OPP asked if there is a plan to resolve this issue.
- Wood confirmed that the intersection is planned to be signalized.
- OPP is also mentioned that there is a wayfinding issue in this area and complaints are received regularly.

Slide 28

- Active transportation was a concern for many in attendance and discussed in depth. The City of Brampton asked if trails and bike lanes were considered as part of the design. The City of Brampton also wanted to know if this area will be serviced by transit. Questions were also raised regarding the possibility of multi-modal level of service within the interchange, for examples if transportation demand management strategies will be utilized.
- The Project Team explained that active transportation was identified through the Transportation Master Plan and is also consistent with MTO direction. MTO is more concerned with geometric design than multimodal service. Currently, Wood is completing further active transportation specific studies. Incorporating active transportation within an interchange is difficult given the projected vehicle volumes. In addition, the north side of Spine Road will be serviced by Brampton Transit and will include a transportation hub. Trail access will be maintained and included in the ESR.
- A question from TRCA was also raised regarding the limits of the McLaughlin Road portion of the study area
- Wood confirmed that the study area stops south of Etobicoke Creek (about 1700m north of the intersection of McLaughlin Road and Mayfield Road).

Slide 29 and 30

- Question were raised regarding the access to the Brampton Christian School (from Hutchinson Farm Lane)

MATTERS DISCUSSED

ACTION BY:

- Wood responded that in the interim, access to the school will be maintained, however the developer will eventually connect the school to the MW2 road network.

Slide 31

- City of Brampton asked about the proposed lane widths.
- Town of Caledon stated that it will be the MTO standard 3.75m for the interchange, and 3.25/3.50 for McLaughlin Road and Spine Road (as defined by MW2 TMP).
- City of Brampton mentioned that the City is currently reviewing their lane width standards in order to improve safety and encourage active transportation.
- Wood will review lane widths and will identify the selected widths in the ESR document.

Open Discussion

10. The following summarizes the comments discussed during the 'open discussion' portion of the presentation:

New Highway 410 northbound on-ramp

- Wood asked OPP and emergency services if the possibility of using the ramp in the opposite direction/wrong way will cause a problem to use the existing emergency access.
- OPP responded that this is not a problem and officers are dispatched all over the Region. OPP asked if the current access will be removed or restricted in any way.
- Wood confirmed that access will be maintained. Under current conditions, a gate prevents access by the general public, and this gate is proposed to be reinstated after the interchange modifications are completed.

Slide 31

- Questions were asked about retaining access to the existing volunteer Fire Hall on Valleywood Drive.
- Wood responded that existing conditions will be maintained.

Alignment

- CVC asked whether there was a preferred alignment for Spine Road
- Wood stated that the FSR was the guiding document for the alignment of the Spine Road
- CVC made a comment on the most recent version of the FSR to alter the alignment to the north

MATTERS DISCUSSED

ACTION BY:

- Wood will review and determine a recommended alignment at this location

Natural Heritage System

- CVC stated that a portion of the Spine Road will interfere with the buffer and will intersect the natural heritage system. CVC asked if the Class EA will explore wildlife crossings.
- Wood will review the specifics of wildlife crossing as part of the ESR document.

Stormwater Management

- CVC and TRCA are both interested in LID strategies. CVC suggested placing LID on public property to ensure that it will be maintained. Often times, LID is planned during the Class EA phase, but not implemented in detailed design or construction due to cost and spatial constraints. TRCA suggests selecting specific systems to be implemented (including a cost/spatial analysis) during the Class EA stage to avoid any issues later with implementation.
- Wood will take this into consideration during subsequent phases.
- TRCA asked about stormwater management for the interchange.
- Wood is currently completing stormwater management report for the interchange.

Traffic Calming

- Traffic calming measures are requested on Spine Road.
- Traffic calming measures will be reviewed in more detail by Wood as part of subsequent phases of the Class EA process.

Spine Road Emergency Access Routes

- Concerns raised by emergency services regarding access to the community south of Spine Road. Based on the construction schedule, the developer is planning to construct throughout the entire area concurrently, prior to the improvements to the interchange being completed. This will require alternate routing to Mayfield Road, which will result in an unacceptable level-of-service. The route requires vehicles to travel south on Hurontario, west on Mayfield and north on McLaughlin (approx. 14 minute response). Emergency Services is requesting an access be built for emergency access only (Gated access- not open to the public). Emergency Services would like access to be established prior to any construction.
- Town of Caledon stated that they will discuss construction phasing with the developers.

MATTERS DISCUSSED

ACTION BY:

- The Region of Peel offered access through their lands if needed. Further discussion will be completed on this matter as part of the Town's approval process for the MW2 development.

Sewer

- The Region of Peel noted concerns with the proposed right-of-way (ROW) widths for McLaughlin Road. Based on the ROW's established by the MW2 TMP and the submitted draft plans, servicing (for both watermain and sanitary sewers) is challenging as there is limited space to fit the required infrastructure. Wood noted that the ROW's were established as part of the MW2 TMP, and are not anticipating any changes to the ROW widths. Further investigation will be completed as part of the Class EA process.

Chinguacousy Road

- OPP asked why Chinguacousy Road was not included in the Class EA.
- The MW2 TMP recommended Spine Road and McLaughlin Road be completed first. Chinguacousy Road will be studied as part of a future study.

FSR and EIR

- TRCA is concerned the findings in the FSR and EIR will be different from the ESR findings.
- Wood stated that the report findings will be consistent.
- CVC has not provided comments on all aspects of the FSR and EIR, and will be sending comments shortly.

Area north of Collingwood

- Question asked whether MTO will retain control of area north of Collingwood.
- Wood responded that this will be determined at the detailed design/permitting stage.

Other

- Wood asked Caledon Fire about the signage at the Fire Hall. The signs facing Valleywood Boulevard indicates no entry.
- Caledon Fire clarified that the sign is for the public only and does not apply to emergency vehicles which use the station.

Caledon Public Works

- Town of Caledon Public Works asked if the results of the active transportation study will be presented at the PIC.

Continued...
Meeting Date: 5/24/18

MATTERS DISCUSSED

ACTION BY:

- Wood stated that all studies are scheduled to be completed prior to PIC and the intent is to present all results at the PIC
- Attendees requested a second meeting focusing on Spine Road prior to PIC. Attendees concerned that this meeting only focused on the interchange and not Spine Road.
- The Town of Caledon will consider this further.

Alternative Design Concept and Criteria

- Question asked about whether alternative design concept and corresponding criteria will be presented to the public.
- Town of Caledon explain that alternative designs and criteria will be presented at the PIC. Alternative design and criteria were not presented at the meeting because MTO has approved the proposed modifications.

Next Steps

11. Wood to forward all reports, presentation boards and alternative design concepts to attendees. *Post Meeting Note:* All reports can be downloaded from the following link:
https://www.dropbox.com/sh/3athkrqtar4kya9/AADix0PN1Q4W5R1DR9Te766_a?dl=0
12. A Public Information Centre is scheduled for July 5, 2018. All in attendance at the TAC meeting are encouraged to attend.

Meeting Minutes prepared by:

Wood Environment & Infrastructure Solutions
a Division of Wood Canada Limited



Per: Jason Stahl, P. Eng.
Project Engineer

Technical Agency Meeting

Schedule “C” Municipal Class Environmental Assessment
Widening of McLaughlin Road, Construction of new East-West Spine Road (Mayfield West Phase 2) and Modifications to Highway 410 / Valleywood Boulevard Interchange



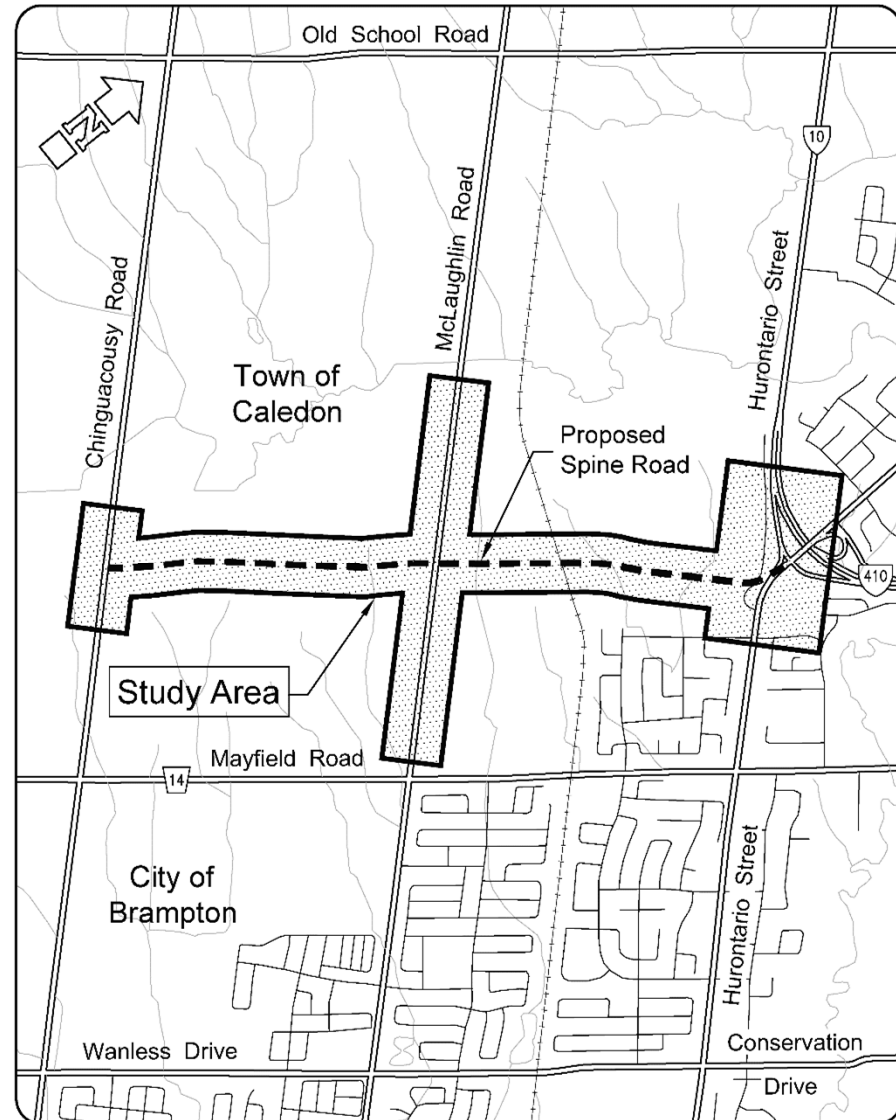
Date: May 24, 2018, Town of Caledon Town Hall
Time: 2:00pm to 4:30pm

Agenda

1. Introductions
2. Summary of Project Background
3. Results from Discipline-Specific Reports
4. Presentation of Preferred Design Alternative
5. Open Discussion
6. Preparations for PIC
7. Next Steps

Study Area

The study area is McLaughlin Road from Mayfield Road northerly approximately 1700 metres and the construction of the new east-west Spine Road from Hurontario Street to Chinguacousy Road. The study area includes the Highway 410 interchange with Hurontario Street / Valleywood Boulevard.



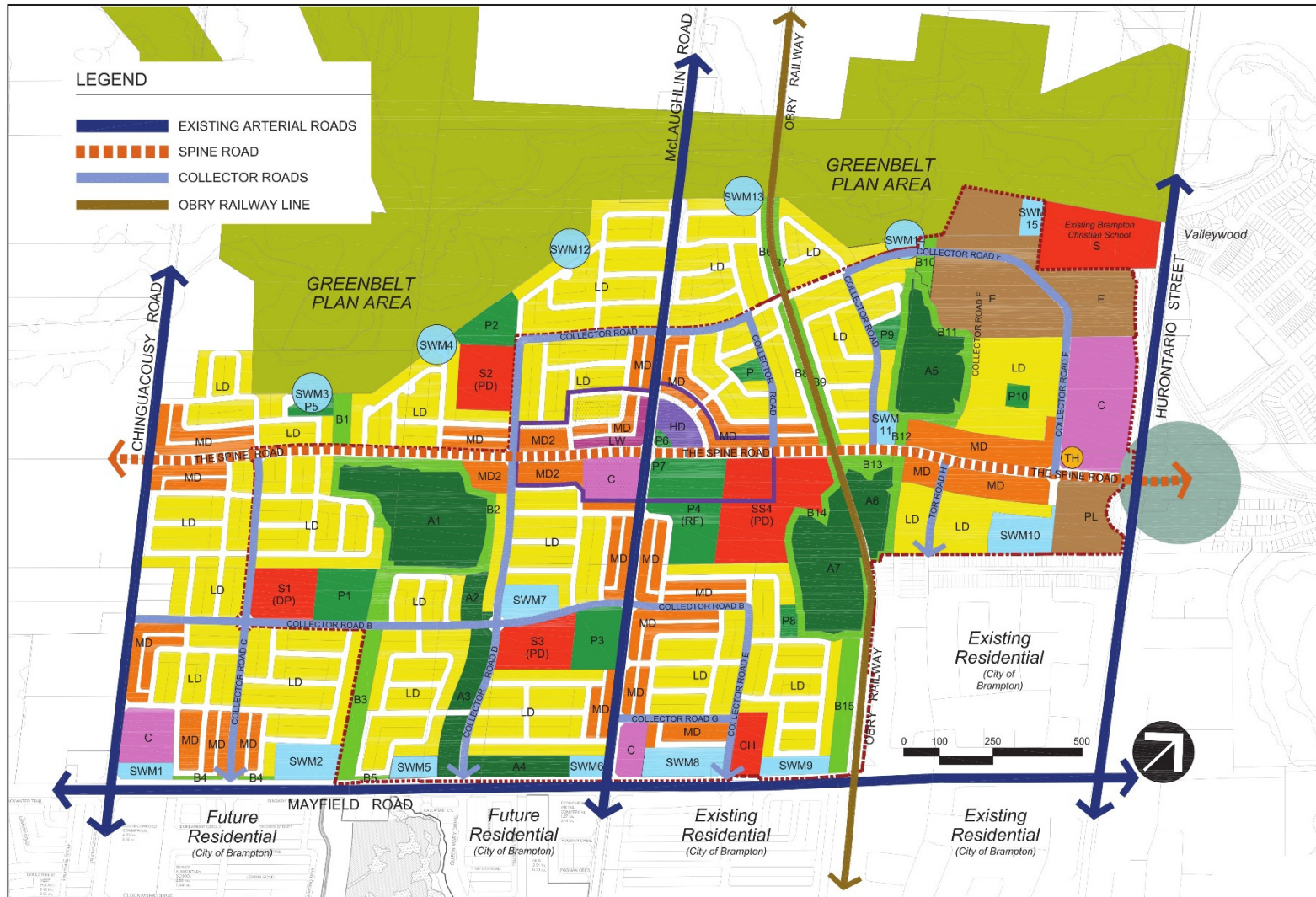
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- In the MW2 TMP, the Spine Road was proposed to connect to Hurontario Street / Valleywood Boulevard immediately south of the interchange with Highway 410.
- In 2016, a Class EA study was initiated by the Town of Caledon to determine the specifics of this connection.



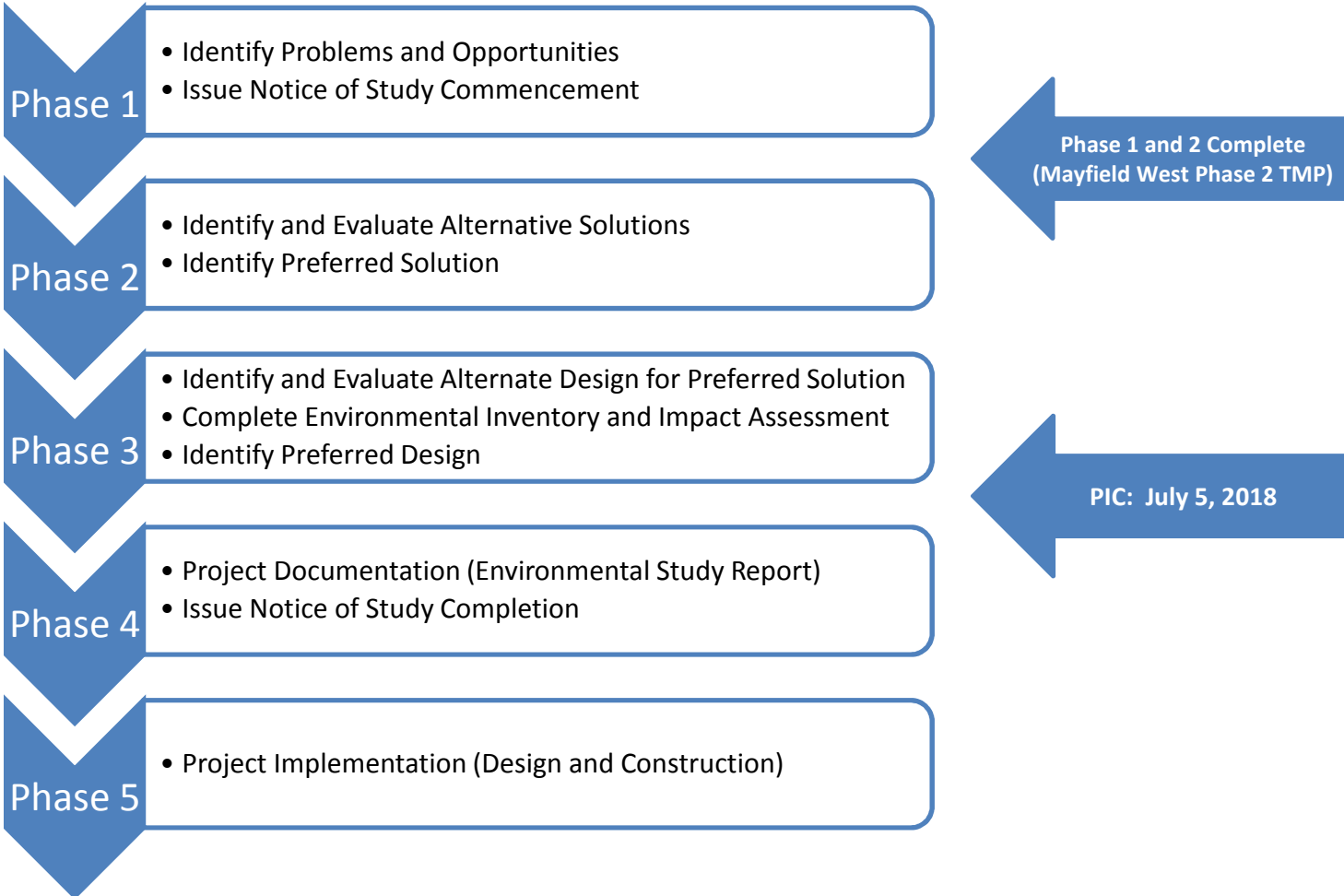
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Mayfield West Phase 2

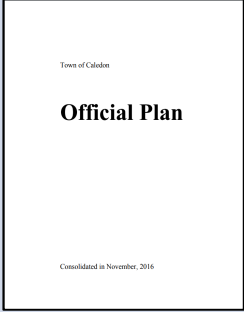
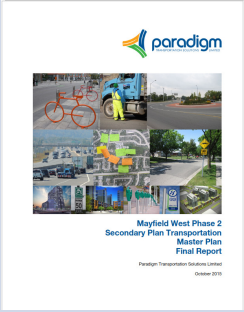
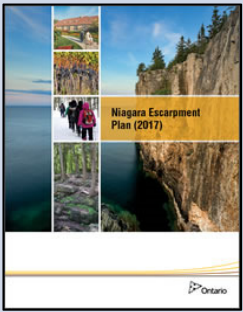
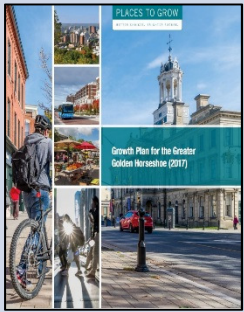
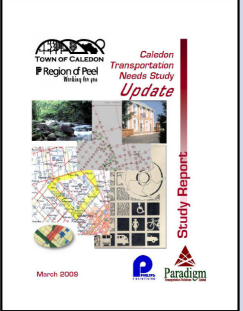
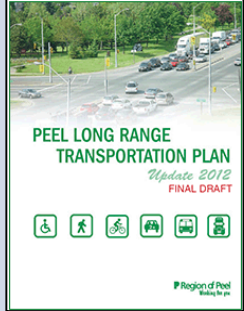
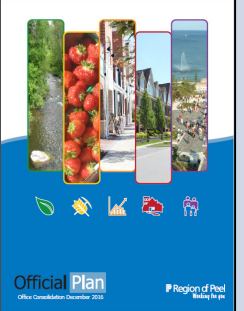
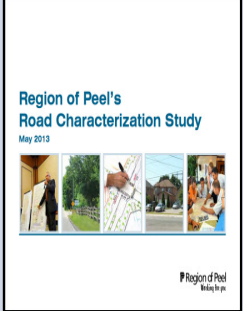
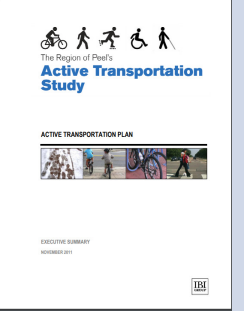




Class Environmental Assessment Process



Planning and Policy Context

Description	Town of Caledon – Official Plan (2016)	Mayfield West Phase 2 – Secondary Plan Transportation Master Plan (2015)	Niagara Escarpment Plan (2017)	Places to Grow – Growth Plan for the Greater Golden Horseshoe (2017)
<p>The Provincial, Regional and Local policy documents relevant to Widening of McLaughlin Road and Construction of new East-West Spine Road Environmental Assessment.</p>	 <p>Official Plan provides direction to Council and Municipal departments regarding land use policies. Study area falls within the Mayfield West Land Use Plan.</p>	 <p>The Transportation Master Plan identifies strategic actions in order to meet the Town's future transportation needs in the Mayfield West area.</p>	 <p>The Niagara Escarpment Plans purpose is to protect the geological features of the Niagara Escarpment and the surrounding land.</p>	 <p>This document focuses on future growth projections and provides guidance to manage development and land use patterns.</p>
<p>Caledon Transportation Needs Study Update (2009)</p>	<p>Region of Peel Long Range Transportation Plan (2012)</p>	<p>Region of Peel Official Plan (2016)</p>	<p>Region of Peel Road Characterization Study (2013)</p>	<p>Region of Peel Active Transportation Study (2011)</p>
 <p>This plan was a joint effort by the Region of Peel and the Town of Caledon in order to identify the potential transportation improvements required to meet future traffic demand.</p>	 <p>This plan helps identify the possible transportation challenges faced by the Region over the next 20 years and the corresponding strategies.</p>	 <p>The Official Plan seeks to provide long-term policy framework for the entire region for decision making purposes.</p>	 <p>The purpose of this study is to analyze the different roadways in the region in terms of usership, transportation options, health impacts and local context.</p>	 <p>The purpose of this document is to state the Regional goals in terms of active transportation and recommend polices, guidelines and programs that will help meet those expectations.</p>

Town of Caledon Official Plan (2016)

The Official Plan indicates the commitment to implement sustainable development patterns and urban design throughout the Town.

Mayfield West (All Phases)

- Major educational, recreational and commercial facilities will be built
- New residential and employment opportunities will be available in Mayfield West
 - Majority of development will be low to medium density
 - High density prestige employment planned (ex. office/business park)
- Mayfield West will be planned as a compact community
 - Land uses, housing, and economic development opportunities anticipated in Mayfield West
 - Compact communities defined as:
“To achieve compact and efficient urban forms, optimize the use of existing infrastructure and services, revitalize and/or enhance developed areas, increase the availability and diversity of housing and business opportunities and create mixed-use, transit-supportive, pedestrian-friendly urban environments through intensification.”
(Section 4.2.1.2.1, Town of Caledon Official Plan, 2016)

Problem and Opportunity Statement

The problem and opportunity statement is as follows:

“The Mayfield West Phase 2 planning area currently lacks a transportation system that will be capable of accommodating anticipated future travel needs generated by the planned new community in an efficient, effective and sustainable manner.” (Source: Mayfield West Phase 2 Transportation Master Plan)

The specific problems and opportunities to be addressed are as follows:

- Future traffic operations, safety, travel demand, transit and active transportation;
- Access to Provincial Freeway System (Highway 410);
- Road alignment and profile;
- Pavement conditions;
- Drainage deficiencies and opportunities for stormwater management, and
- Provision for future municipal services and utilities.

MW2 Landowners Consultation

- Existing and proposed conditions for the majority of the study area is well defined by the following planning studies:
 - Environmental Implementation Report (EIR) for the Mayfield West Phase 2 Secondary Plan Area
 - Functional Servicing Report (FSR) for the Mayfield West Phase 2 Secondary Plan Area
 - Mayfield West Phase 2 Secondary Plan - Transportation Master Plan
- These resources are being used as key building blocks to complete this Class EA
- The MW2 Landowners Group is being consulted to ensure the Class EA is coordinated with the planning process currently being completed for the Secondary Plan area

MTO Consultation

- A key component of the Class EA is to determine the specifics of the Spine Road connection to Hurontario Street
- The Class EA study team has met with MTO Technical Staff to discuss this connection
- The following key requirements were communicated by MTO Staff to the study team:
 - The ‘T’ connection to Hurontario Street identified by the MW2 TMP did not meet MTO’s corridor access control standards;
 - Additional alternatives would need to be assessed and a preferred alternative selected to satisfy MTO’s requirements, and
 - A detailed traffic assessment of the existing conditions along with a traffic impact assessment of the preferred alternative was required.

Traffic Conditions

Existing Interchange

- Westbound left turn at stop-controlled intersection of Hwy 410 NB off-ramp at Valleywood Boulevard operates as LOS F during peak PM hour
- Intersections within the study area currently operating with an overall acceptable level-of-service during peak hours

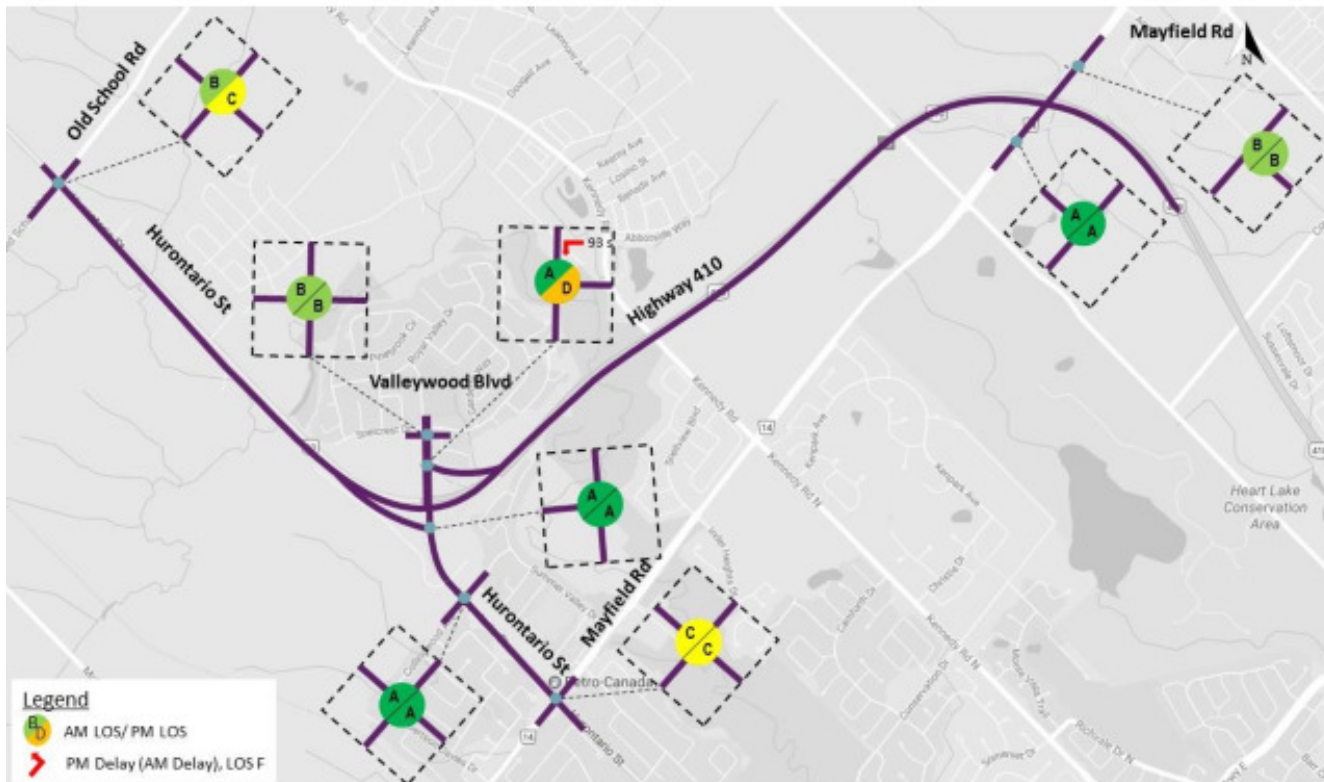
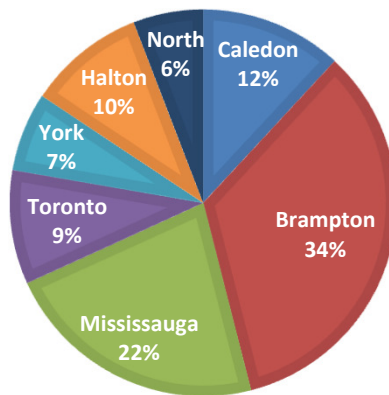


Figure 2: Existing Conditions Intersection LOS for AM and PM Peak Periods

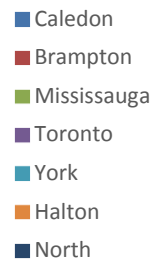
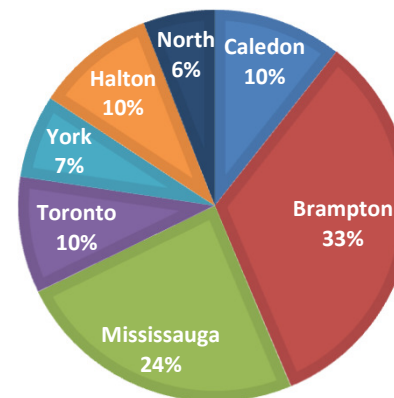
Future Traffic Conditions

- Based on the overall results, an estimate of 53% (7,137) of the total Mayfield West Phase 2 site trips (13,390) will be using Spine Road and Mayfield Road to access the development
- Table: Total trips expected to enter and exit the new development site using Spine Road and Mayfield Road

TOTAL TRIPS PM



TOTAL TRIPS AM



Time Period	Total Trips Using Spine Road and Mayfield Road	Total Trips	
		Inbound	Outbound
AM	3,171	1,377	1,794
PM	3,966	2,181	1,785

Environmental Inventories

The following investigations and inventories have been completed as part of the Class EA:

Cultural Heritage Evaluation Report

Identifies properties and areas of having cultural heritage resource significance and provides recommendations.

Geotechnical Assessment

Determines the existing soil conditions and provides recommendations for pavement structure and rehabilitation, soil preparation for construction, and soil management considerations.

Hydrogeological Assessment

Determines the impacts of the proposed construction on the surrounding private well users and groundwater.

Stormwater Management Report

Determines stormwater management techniques to be used and proposes drainage infrastructure.

Natural Environment Existing Conditions Report

Identifies aquatic and fish habitat, Species At Risk, and significant natural areas found within the study area.

Cultural Heritage Evaluation Report

- Seven cultural heritage resources identified within the study area;
- Four of the listed built heritage properties will not be affected by the road works;
- Mature trees along the laneway for two listed properties (12502 McLaughlin Road and 12324 McLaughlin Road) will be impacted, and
- Credit Valley Railway corridor will be impacted.

Recommendations

- Encroachment onto former Credit Valley Railway lands will be minimized in order to preserve the historic appearance of the railway corridor;
- Trees along laneway for both listed properties will be removed only where required. Remaining trees will be protected from construction (i.e. fencing or tree hoarding);
- Standard road construction techniques will be used where possible, excluding all avoidable construction techniques (i.e. deep foundation work or piling) that could cause structural damage to heritage resources;
- All trees that cannot be saved will be replaced with large caliper nursery stock that are appropriate for roadside use (i.e. salt resistant), and
- Replacement trees will replicate as closely as possible the heritage appearance, assortment and placement of the current trees.

Cultural Heritage Evaluation Report (Interchange)

- A supplemental report will be completed to document any heritage resources within the footprint of the existing interchange
- This report will be completed as part of subsequent phases of the Class EA process
- No significant impacts to existing heritage resources is expected

Geotechnical

- Based on the visual pavement condition survey, McLaughlin Road is in fair to poor condition
- The new pavement structure depths to facilitate widening of McLaughlin Road and construction of Spine Road is:

Road	HMA	Granular Base	Granular Sub-base
McLaughlin Road	150mm	150mm	300mm
Spine Road	150mm	150mm	400mm

- Four (4) soil samples exceeded Table 1 and 3 for sodium absorption ratio, and one (1) sample failed Table 1 for petroleum hydrocarbons (F4)

Geotechnical (Interchange)

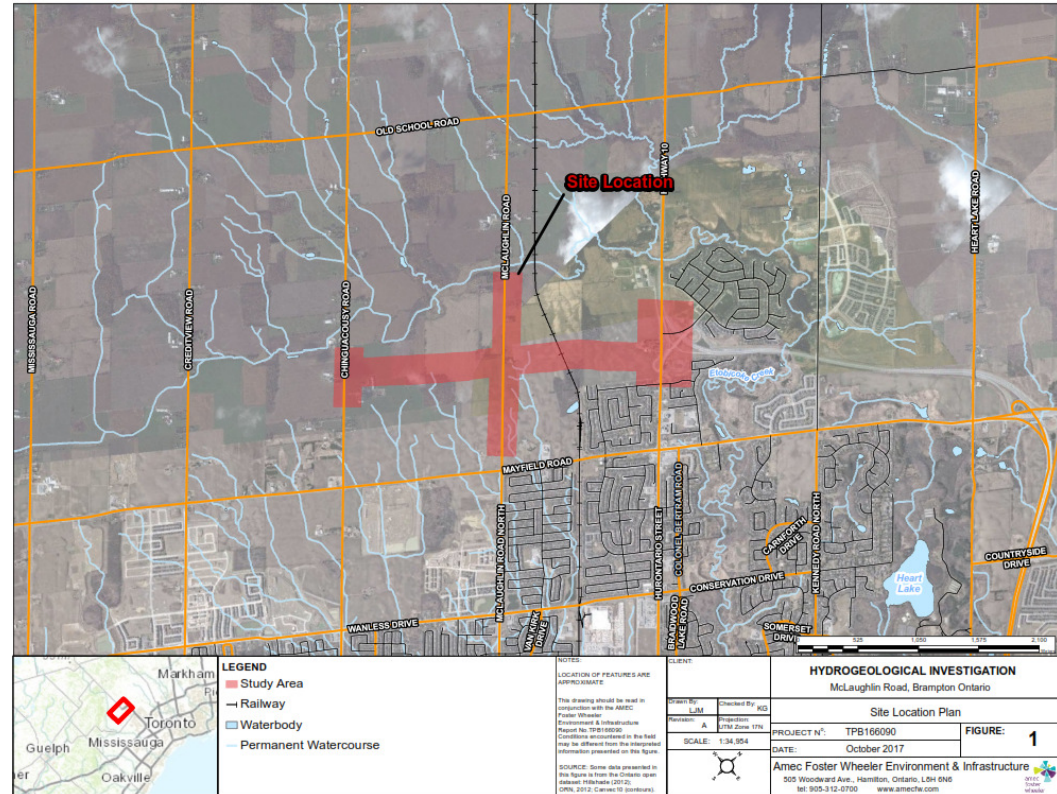
- Additional geotechnical work will be completed to support the interchange modifications
- The additional investigation will be completed as part of subsequent phases of the Class EA process
- Investigation will focus on the structural aspects of the planned interchange modification (ie. new northbound flyover)

Hydrogeological Assessment

- No impacts to surface water recharge is expected during the completion of construction activities.
- Private wells are not expected to be impacted by the construction activities.

Recommendations

- A private well survey will be completed within a 500 m radius prior to construction to establish the number and condition of active wells that are present nearby and the quality and quantity of the water produced by these wells.



Hydrogeological Assessment (Interchange)

- Monitoring wells will be installed as part of the additional geotechnical assessment identified previously
- Monitoring will focus on recording groundwater elevations within the interchange
- Reporting will be provided with the additional geotechnical study

Stormwater Management

Recommendations

- Stormwater management is required to mitigate impacts to stormwater quality, erosion, water balance, and flood potential;
- Segments of the Spine Road lie within drainage areas which contribute to sensitive habitat, and new stormwater infrastructure will continue to direct runoff to these areas;
- It is recommended that the stormwater management plan for the future expansion of McLaughlin Road and the Spine Road be incorporated into the drainage and stormwater management plan for the adjacent development areas in accordance with the various planning studies, and
- Low Impact Development Best Management Practices (LID BMP's) are recommended to mitigate thermal enrichment of storm runoff, as well as to manage water budget.

Low impact development (LID) is a stormwater management strategy that seeks to mitigate the impacts of increased runoff and stormwater pollution by managing runoff as close to its source as possible. (U.S. EPA, 2007)

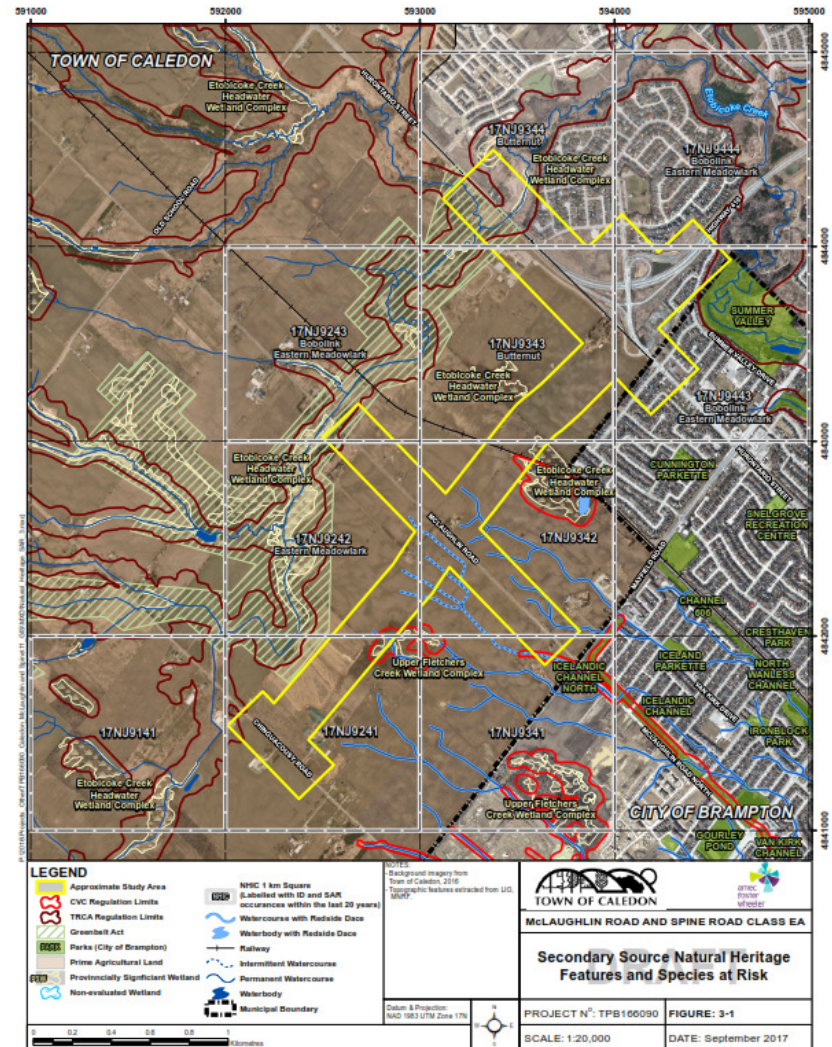
Stormwater Management (Interchange)

- Stormwater management for the interchange has not been assessed at this phase of the study
- Subsequent phases will complete an existing conditions assessment along with an impact assessment
- Existing culverts will need to be reconfigured to facilitate the proposed modifications

Natural Environment

Aquatic Habitat

- Redside Dace habitat is present in Fletcher's Creek (downstream of study area);
Further consultation with the MNRF will be required during the Detailed Design phase to ensure the appropriate permitting/clearance is acquired and suitable mitigation measures are employed to prevent impacts within contributing habitat and to downstream occupied reaches.
- Four of the six woodlands within the study area contain areas of wetland which have been evaluated and designated as Provincially Significant Wetlands (PSW). The PSWs are part of the Upper Fletchers Creek Wetland Complex and the Etobicoke Creek Headwater Wetland Complex.
- Drainage features are ephemeral, dry and do not provide fish habitat.
- Roadside drainage features were found to have standing water but no flow.
- No direct fish habitat



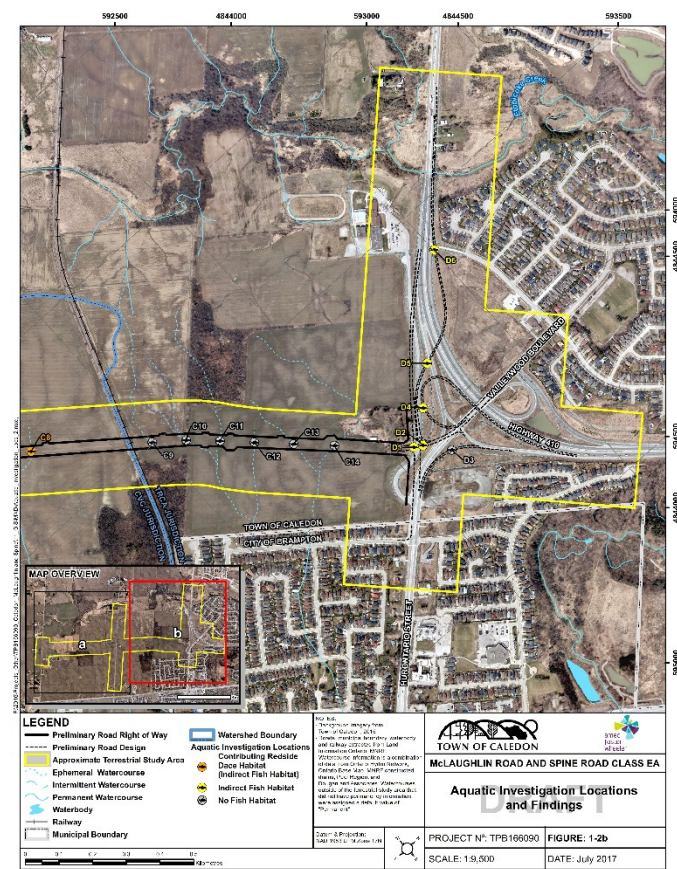
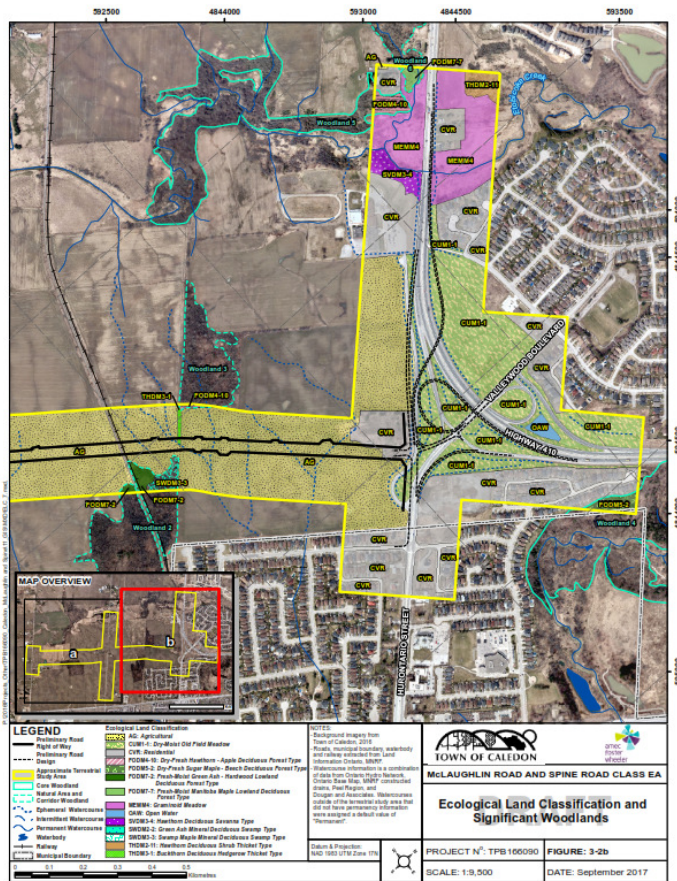
Natural Environment

Terrestrial Habitat

- Wildlife and vegetation surveys were completed (on existing roadway and PTE granted areas): May 24 and 26, June 15 and 16, and July 5 and 6, 2017
 - One endangered species observed (Butternut);
 - Two special concern species observed (Wood Thrush and Eastern Wood-Pewee);
 - One threatened species observed (Barn Swallow);
 - Rare bats potentially located in the study area (but not observed during field investigations): Eastern Small-footed Myotis, Little Brown Myotis, Northern Long-eared Myotis, and Tri-colored Bat;
 - Rare reptile species potentially located in the study area (but not observed during field investigations): Blanding's Turtle (Threatened), Common Snapping Turtle and Northern Map Turtle (Both are Special Concern).
 - No rare reptiles or amphibians were observed within the study area during field investigations.
- Small portion of the study area falls within the Greenbelt.
- Suitable amphibian and reptile habitat is limited within the study area and primarily located along vegetated drainage features.
- Several candidate significant wildlife habitats are present within the study area
 - Raptor wintering areas
 - Bat maternity colonies
 - Turtle wintering areas
 - Colonially nesting bird breeding habitat (trees/shrubs)
 - Water fowl nesting areas
 - Amphibian woodland breeding habitats
 - Special concern and rare wildlife species habitats
 - Amphibian movement corridor habitat

Natural Environment (Interchange)

- Consists mainly of Dry-Moist Old Field Meadow, with some meadowlands and existing residential lands
- Etobicoke Creek contains significant fish habitat with the balance of the study area containing indirect fish habitat



Natural Environment (Interchange)

- The existing culvert at Etobicoke Creek will need to be extended to allow for a new northbound on-ramp
- Etobicoke Creek is a permanent stream flowing in a well defined valley
- A fisheries assessment will be completed as part of subsequent phases of the study

Add't Studies for MTO

The following investigations and inventories not identified previously will be completed to satisfy the requirements outlined by MTO:

Noise Assessment

Will identify any significant noise increases caused by the planned interchange modifications.

Air Quality Assessment

Will determine impact on air quality caused by the interchange modifications.

Structural Design

A preliminary design of various structural elements to support the interchange modifications will be completed.

Traffic/Human Factors/Safety

Building off the traffic impact assessment, details such as performance metrics (LOS, delays, v/c, 95th % queues), human factors analysis, and a detailed safety audit will be completed.

Archaeology (Stage 1)

Will review background material to determine if there are any areas of archaeological interest.

Electrical Existing Conditions Report

Will document the existing lighting system at the interchange, and discuss the required modifications to facilitate the proposed interchange works.

Preliminary Preferred Design Concept

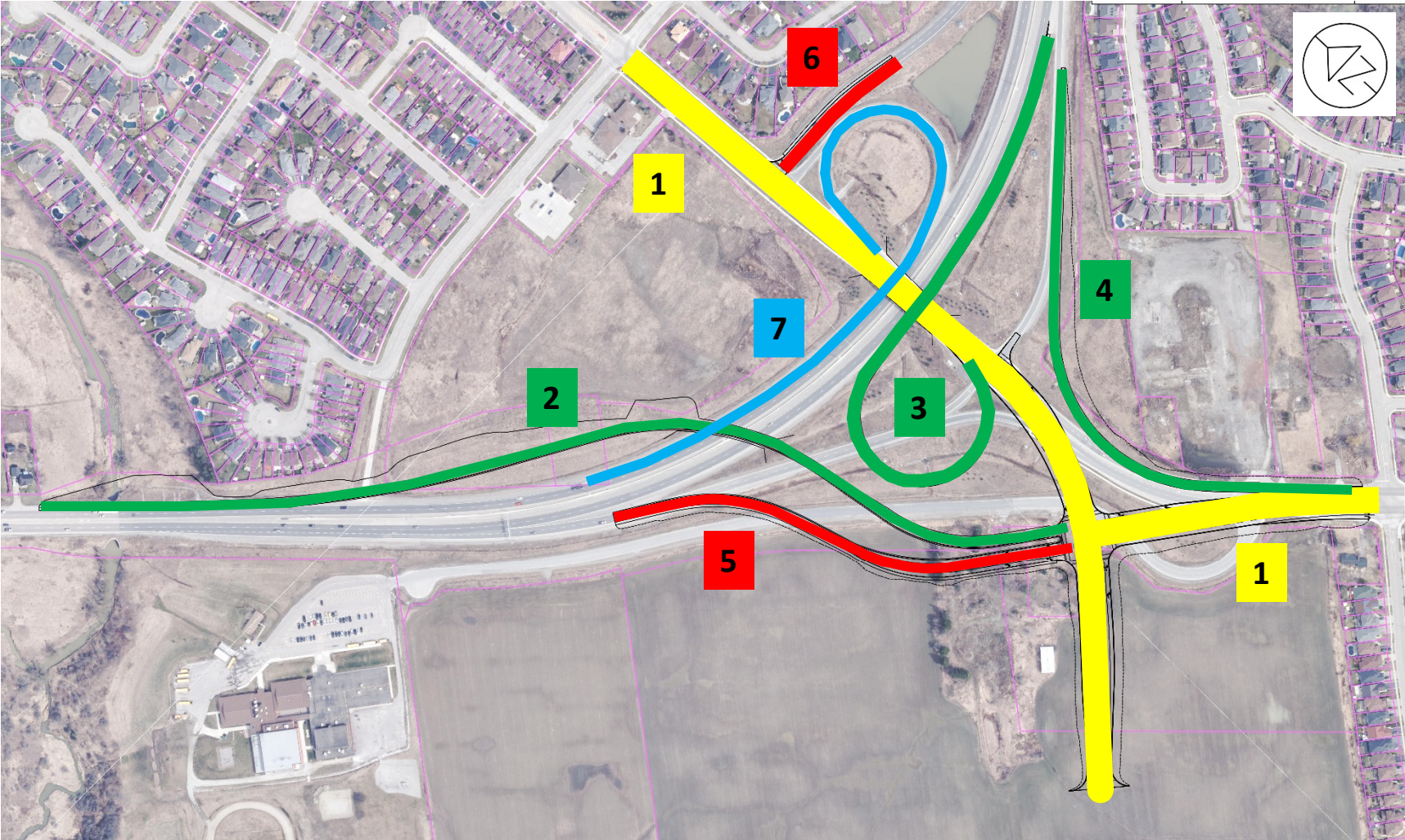
- Both McLaughlin Road and Spine Road are contained within the Mayfield West Phase 2 development area
- As part of the Draft Plan application process, a Functional Servicing Report (FSR) was completed by Urbantech Consulting
- The FSR defined in detail the following roadway elements for both McLaughlin Road and Spine Road:
 - Horizontal Alignments;
 - Vertical Alignments;
 - Curb Locations;
 - Raised Median;
 - On-street Parking;
 - Sidewalks, and
 - Grading Elevations.
- A review of the FSR was completed by the Class EA study team to ensure the design fulfills the recommendations of the Mayfield West Phase 2 Transportation Master Plan
- Further coordination will be completed as part of subsequent phases of the Class EA study

Preliminary Preferred Design Concept (Interchange)

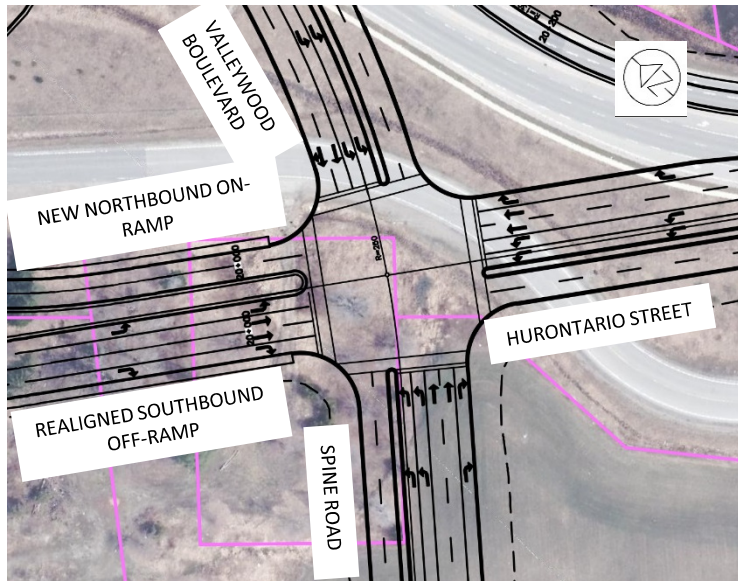
Based on a review of alternatives with MTO, the following modifications to the existing interchange is recommended:

1. Realignment of Hurontario Street and Valleywood Boulevard;
2. New single lane northbound on-ramp;
3. New single lane eastbound/southbound on-ramp;
4. New single lane eastbound/southbound channelization (connecting to existing ramp);
5. Realignment of existing southbound off-ramp;
6. Additional left turn lane for westbound/northbound off-ramp, and
7. Removal of the northbound on-ramp.

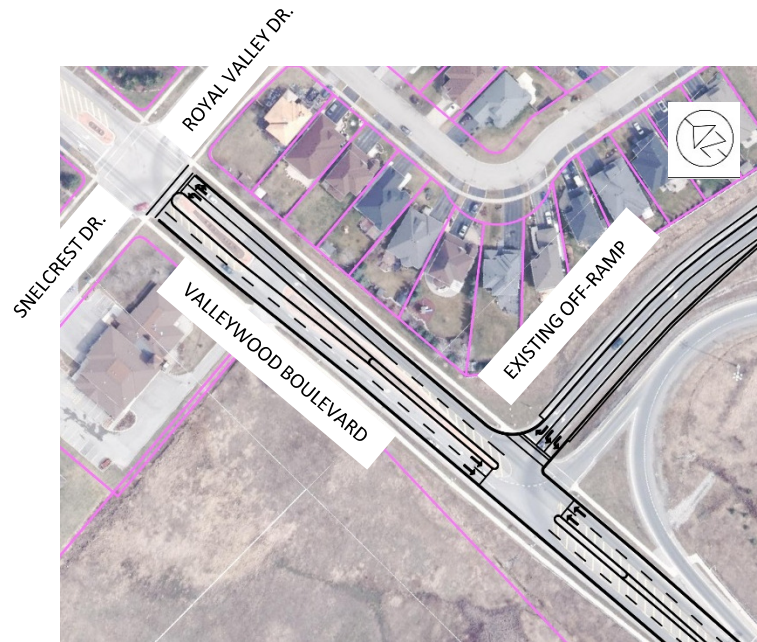
Preliminary Preferred Design Concept (Interchange)



Preliminary Preferred Design Concept (Interchange)

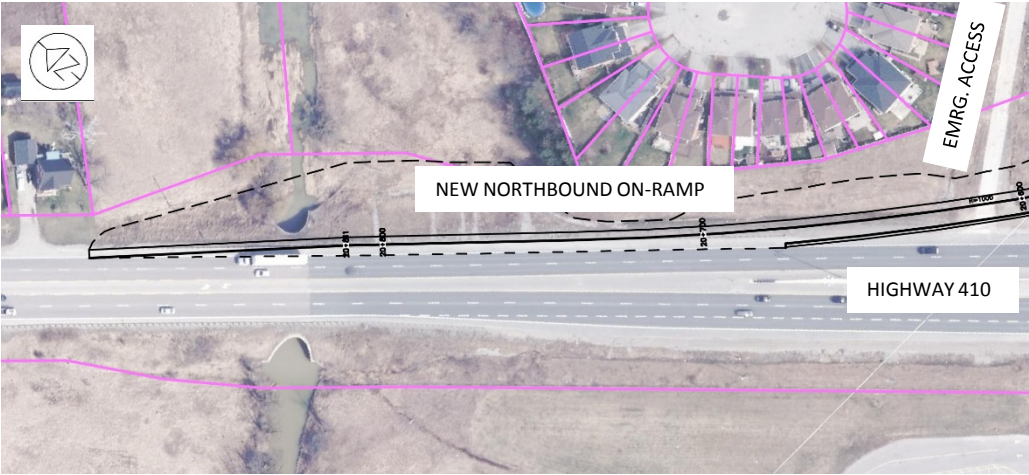


PROPOSED LANE CONFIGURATION AT NEW HURONTARIO STREET/VALLEYWOOD BOULEVARD/SPINE ROAD/MTO RAMPS INTERSECTION

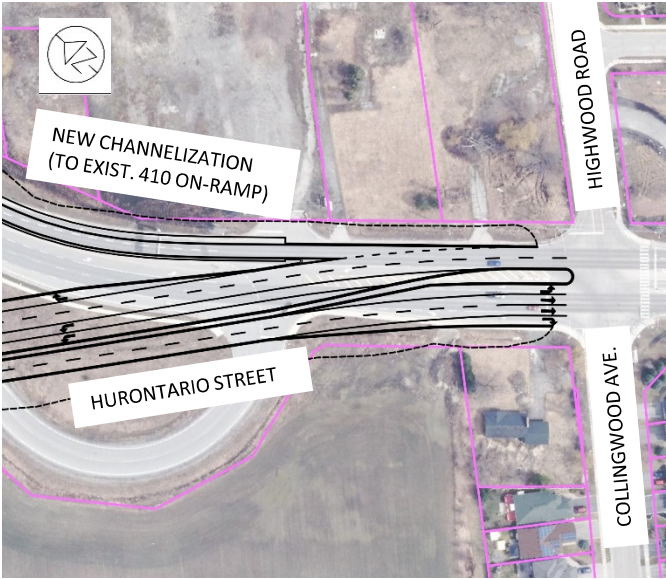


PROPOSED LANE CONFIGURATION AT EXISTING OFF-RAMP AND INTERSECTION WITH VALLEYWOOD BOULEVARD/SNELCREST DRIVE/ROYAL VALLEY DRIVE

Preliminary Preferred Design Concept (Interchange)



PROPOSED RAMP CONFIGURATION FOR NEW NORTHBOUND ON-RAMP (INCLUDING EMERGENCY ACCESS)



PROPOSED LANE CONFIGURATION AT INTERSECTION WITH HURONTARIO STREET/COLLINGWOOD AVENUE/HIGHWOOD ROAD

OPEN DISCUSSION

Next Steps

- Review and address any stakeholder/agency concerns moving forward;
- Proceed to Public Information Centre and present the preferred alternative to the public on July 5, 2018;
- Complete existing conditions assessment of the interchange;
- Complete impact assessment of the proposed modifications, and
- Complete an Environmental Study Report and File for 30-day public review.



McLaughlin Road and Spine Road Class EA

MTO Progress Meeting
November 27, 2018

woodplc.com



Agenda

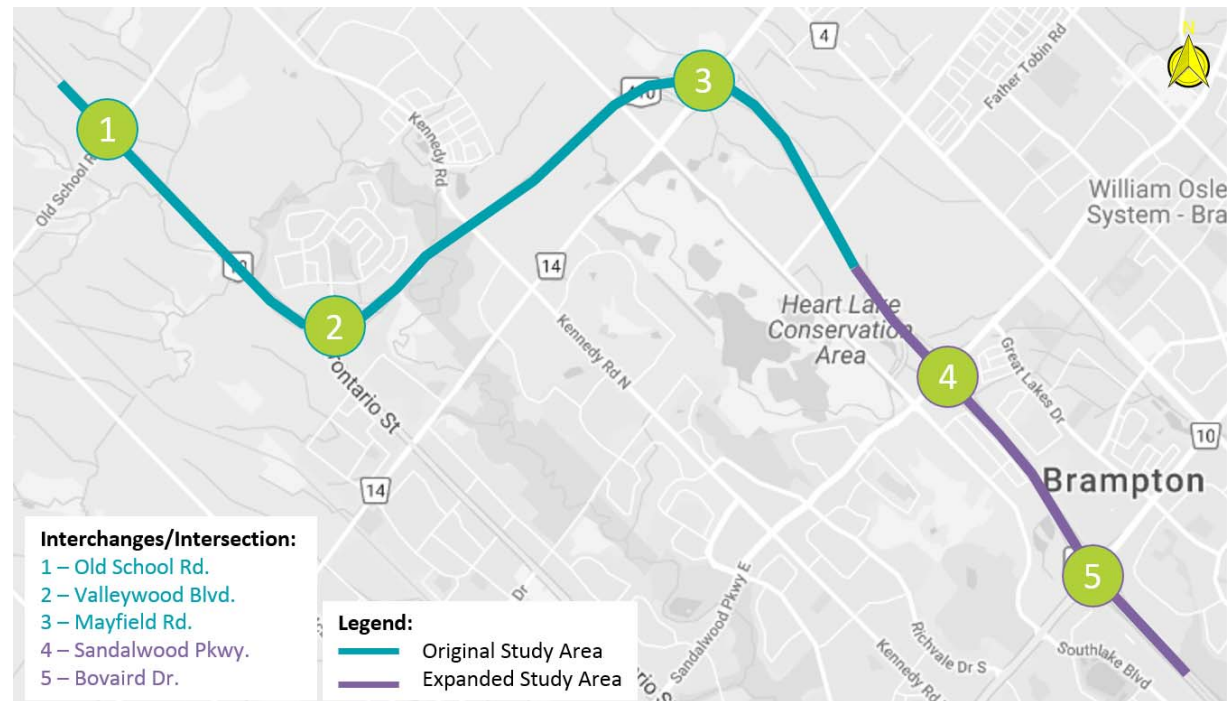
- Traffic Modelling
- Review of Submitted Material
- Forthcoming Reports
- Next Steps



Traffic Modelling

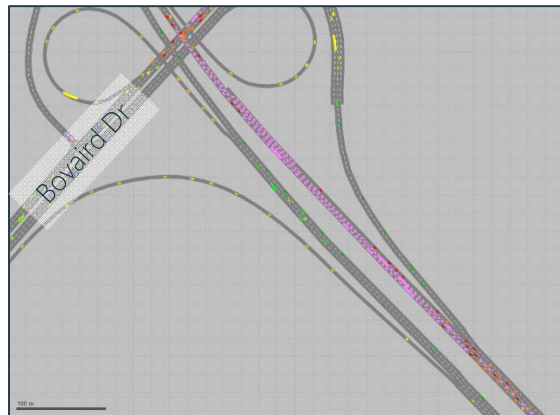
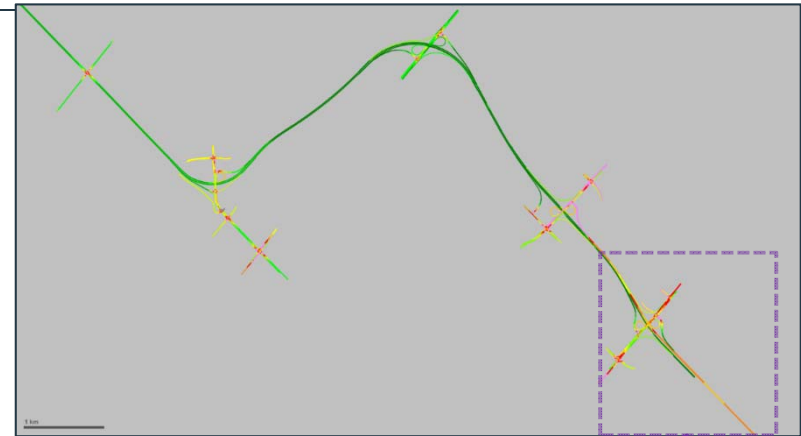
Updated Study Limits

- 2 Interchanges added
 1. Sandalwood Parkway
 2. Bovaird Drive
- Objective was to identify operations along mainline
 - Identify number of metered trips

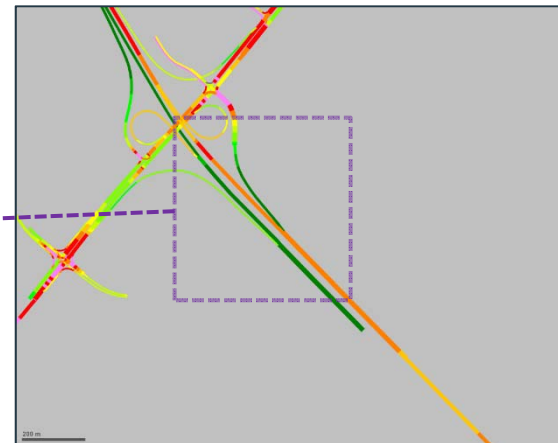


Traffic Operations – 2031 (Do-Nothing)

- Lane drop Hwy 410 NB at Bovaird Dr.
- Long queues along Hwy 410 NB mainline at Bovaird Dr. IC
- Potential queue spill back to Williams Pkwy IC

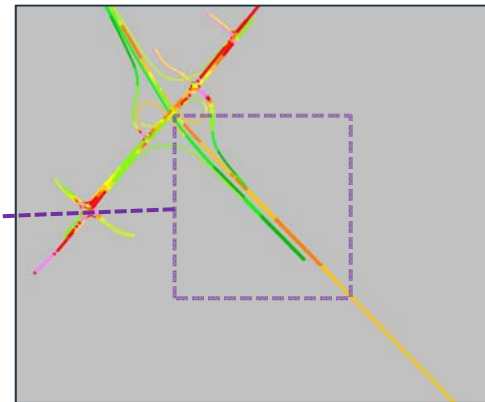
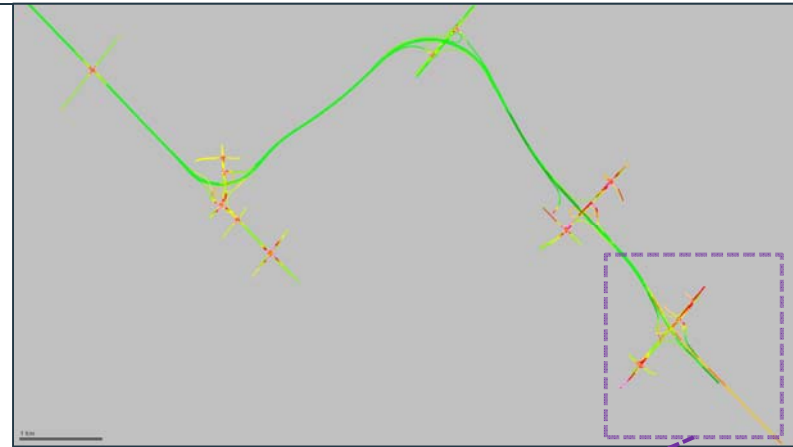


Speed (km/h)	
0	10
10	20
20	30
30	40
40	50
50	60
60	80
80	100

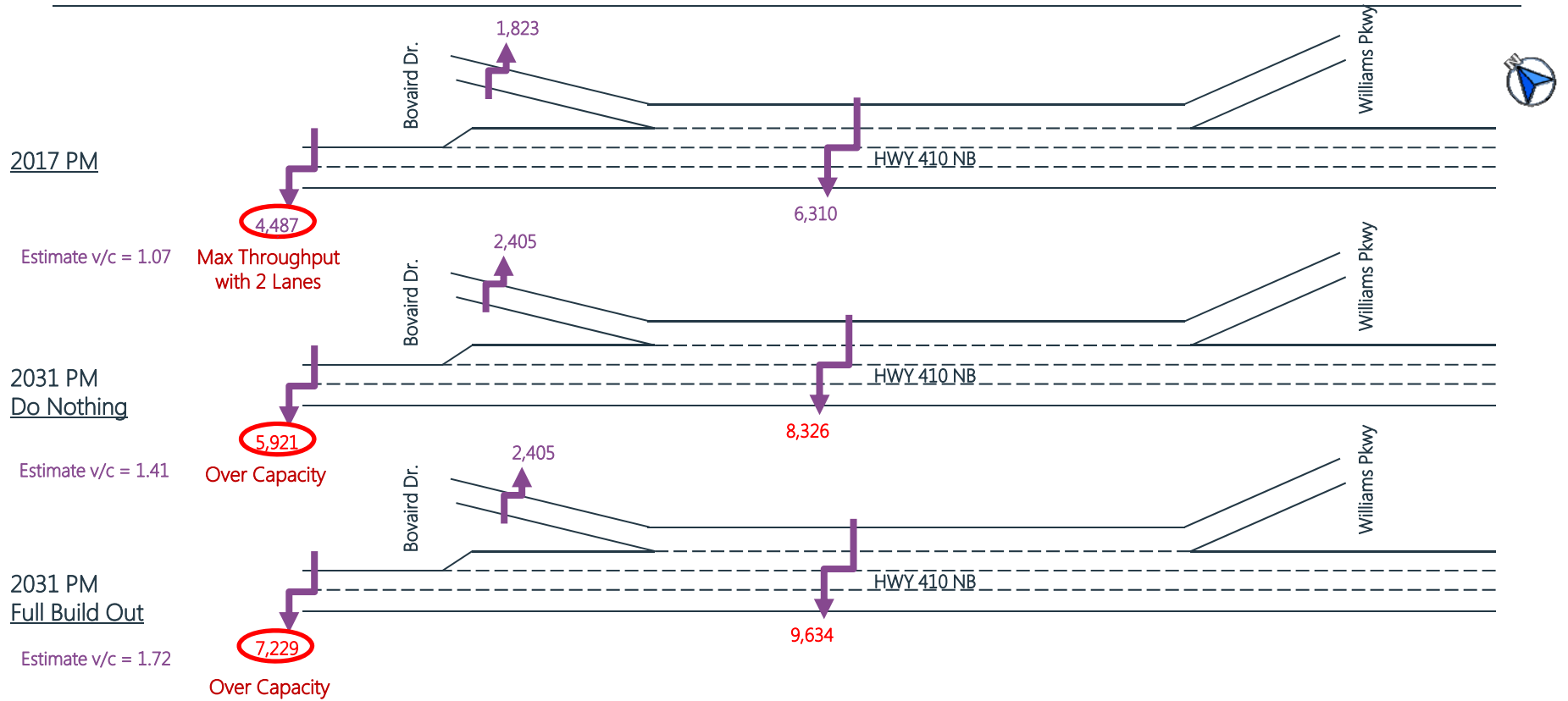


Traffic Operations – 2031 (Full-Build Out)

- Lane drop Hwy 410 NB at Bovaird Dr.
- Long queues along Hwy 410 NB mainline at Bovaird Dr. IC
- Potential queue spill back to Williams Pkwy IC



Highway 410 Mainline Volumes at Bovaird Dr. IC



Traffic Operations – Metered Impact

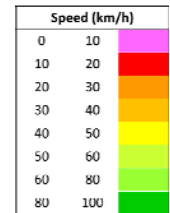
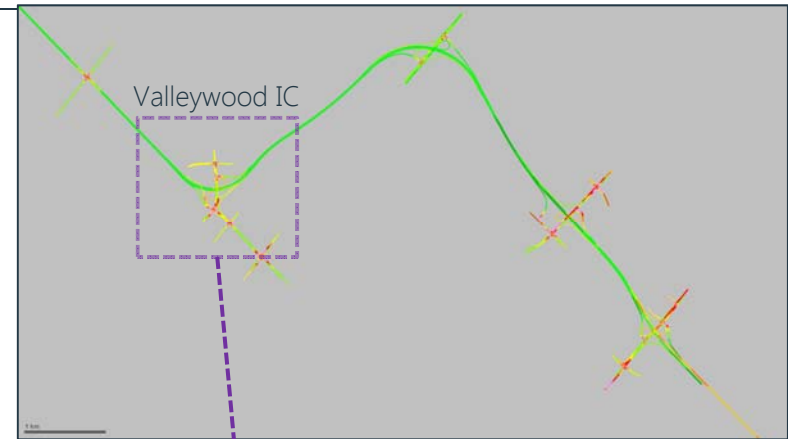
WB Off Ramp at Valleywood IC – Extended Model

Period	Planned	Modelled	Difference
Pre-Peak	2,017	1,472	545
Peak	2,217	1,509	708
Post-Peak	2,128	1,486	642

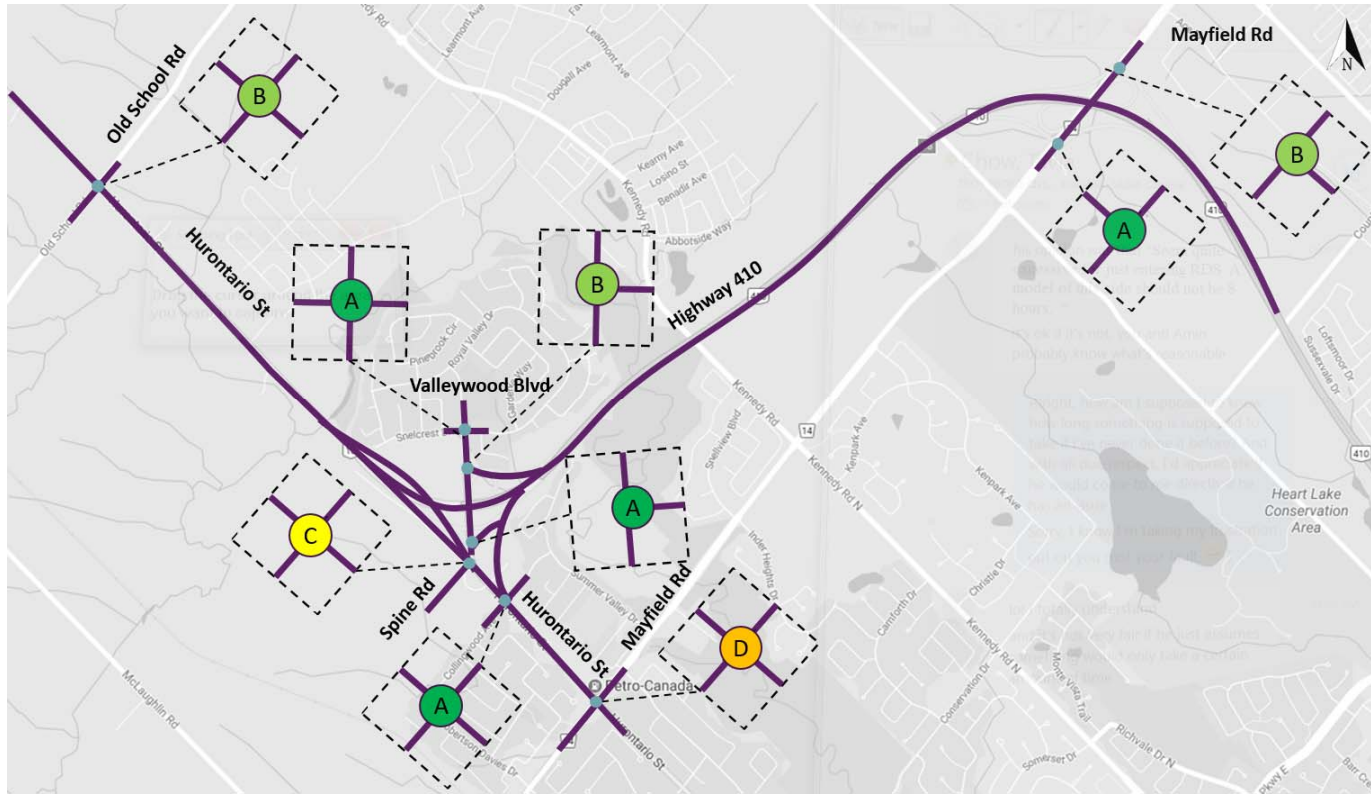
Hwy 410 NB – Extended Model

Period	Planned	Modelled	Difference
Pre-Peak	3,960	2,969	991
Peak	4,352	2,935	1,417
Post-Peak	4,178	2,950	1,228

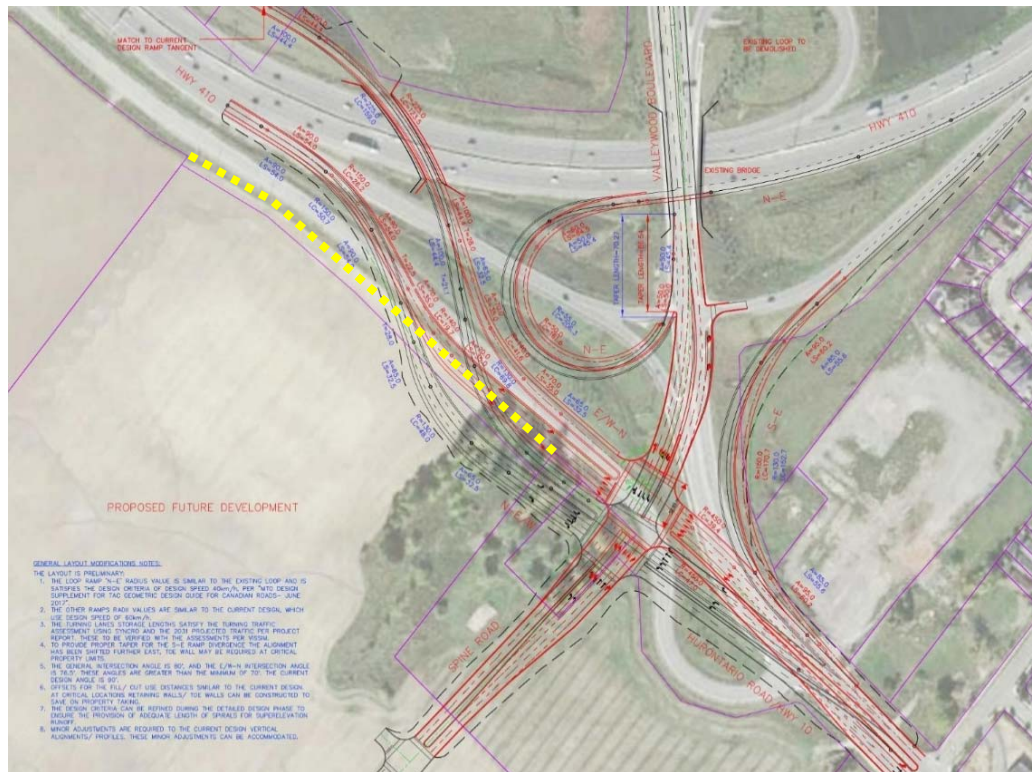
- Less trips being served in the extended model at Valleywood IC
- Approximately 700 trips will be metered at Bovaird IC



2031 Full Build Out LOS



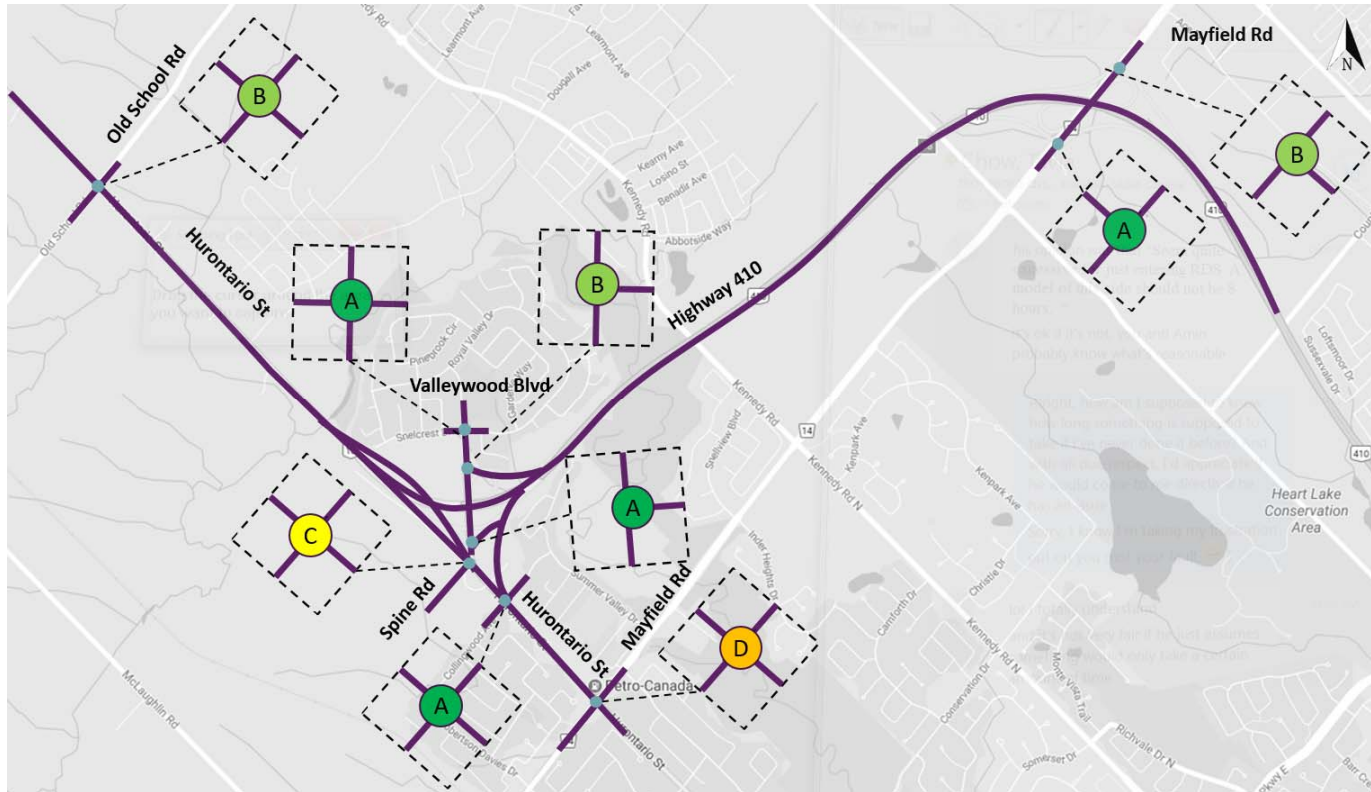
Adjusted Alignment – Key Changes



- Intersection shifted north-east approximately 50 metres to fit within MTO ROW
- Original Intersection Separation from NB Off Ramp = 390 m
- Adjusted Intersection Separation from NB Off Ramp = 340 m



2031 Full Build Out LOS (Adjusted Alignment)



Revision to Cycle Lengths at Valleywood IC

Valleywood Blvd / Hwy 410 WB Off Ramp

- Decrease in trips arriving at the Valleywood IC presents opportunity to decrease cycle lengths to 110 seconds
 - As per Ministry's comment on maximum cycle length of 120 seconds

Movement	Green Time (sec)	Yellow Time (sec)	Red Time (sec)	Cycle Length
NBT	19	4	2	110 seconds
SBT	19	4	2	
WBL	79	4	2	

Spine Rd / Hurontario St

- Pedestrian Clearances are maintained

Movement	Green Time (sec)	Yellow Time (sec)	Red Time (sec)	Cycle Length
NBT	34	4	2	110 seconds
NBL	13	3	2	
SBT	16	4	2	
WBT	64	4	2	
WBL	23	3	2	
EBT	36	4	2	



Summary


- Capacity constraint on Mainline at Hwy 410 and Bovaird Dr. IC affects throughput:
 - Only 2 lanes are available on Hwy 410 mainline, NB direction
- Comparison of previously served trips at Valleywood IC with extended model shows approximately 700 trips during the peak hour are metered by operations upstream.
- Operations at the Valleywood IC are within Ministry acceptable thresholds with respect to LOS, Delays and 95th Percentile Queues for the entire 3-hour modelling period.
- Reduction of trips at Valleywood IC shows that the East Ramp Terminal and the intersection of Spine Road and Hurontario Street can operate with a reduced cycle length of 110 seconds.



Review of Submitted Reports

Design Criteria

- Key design parameters documented for MTO review and approval
- Includes discussion on key elements of design, including: pavement, cross-fall, superelevation, drainage, roadside safety, signing, illumination, traffic signals, entrances, intersections, and structures.



Ministry of Transportation / Ministère des Transports
PRELIMINARY DESIGN CRITERIA
 Page: 1 of 14
 Date: November 2010

WORK PROJECT NO. WBO HWY No. 410 TYPE OF PROJECT Grading, Drainage, Hot Mix Paving, Electrical, Structural

LOCATION Highway 410 at Hurontario Street / Valleywood Boulevard LENGTH N/A

LIMITS FROM STA N/A TO STA N/A PLAN N/A

MUNICIPAL JURISDICTIONS
 Geographic Township(s) Town of Caledon
 County of Region of Peel
 Spine Road / Valleywood Boulevard

HIGHWAY CLASSIFICATION	PRESENT CONDITIONS	DESIGN STANDARDS	PROPOSED STANDARDS
	LAUTO	LAUTO	LAUTO
MINIMUM STOPPING SIGHT DISTANCE	N/A	105	105
EQUIVALENT MINIMUM "K" FACTOR	CREST	20	17
	SAD	N/A	10-12 ⁽¹⁾
GRADES MAXIMUM	3.25 %	6 %	3.25 %
RADIUS MINIMUM	N/A	190	250
PAVEMENT WIDTH	2 x 3.05 m	2 x 3.05 m ⁽²⁾	4 x 3.75 m
SHOULDER WIDTH	N/A	N/A	N/A
SHOULDER ROUNDING	N/A	N/A	N/A
MEDIAN WIDTH	Varies 6 - 11 m	N/A	Varies 6 - 9.5 m
R.O.W. WIDTH	N/A	N/A	30.0 m
POSTED SPEED	60 km/h	60 km/h	60 km/h
MISCELLANEOUS	N/A	N/A	N/A

RECOMMENDED BY:

Signature: _____

Printed Name: _____

Date: _____

MTO PROJECT MANAGER / ENGINEER

HEAD, PLANNING AND DESIGN

APPROVED BY:

Signature: _____

Printed Name: _____

Date: _____

REGIONAL MANAGER, ENGINEERING

APPROVED BY:

Signature: _____

Printed Name: _____

Date: _____

REGIONAL MANAGER, TRAFFIC

Notes:

(1) Assumed that the Spine Road / Valleywood Boulevard will be illuminated

(2) Lane widths based on Region of Peel standards



Geometrics

- Proposed modification to new intersection due to property constraints



Intersection Configuration presented at May 2018 SM Meeting



Revised Intersection Configuration November 2018

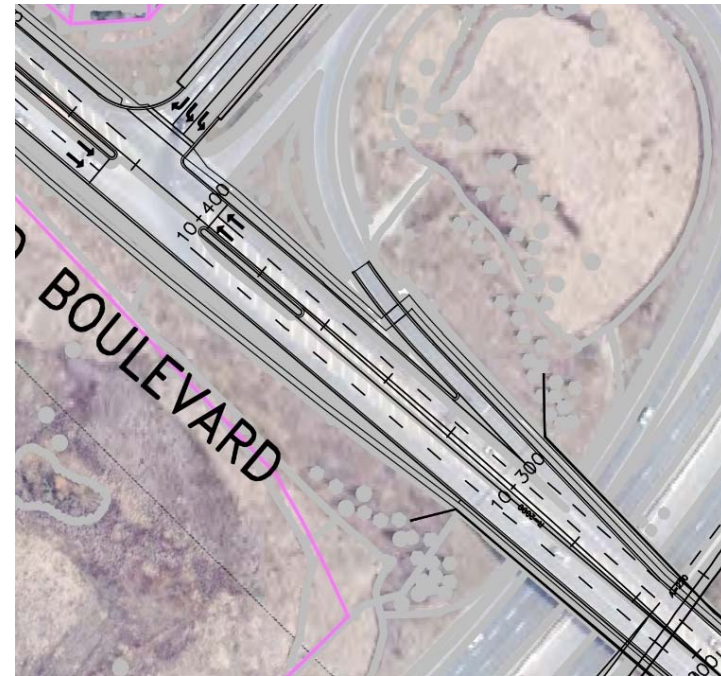


Geometrics

- Maintain existing S-W Ramp



Ramp Configuration presented at May 2018 SM Meeting

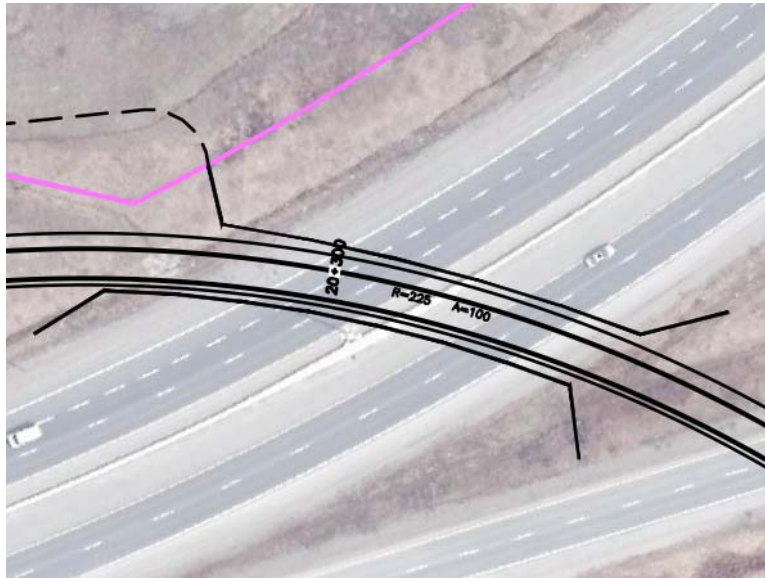


Revised Configuration November 2018

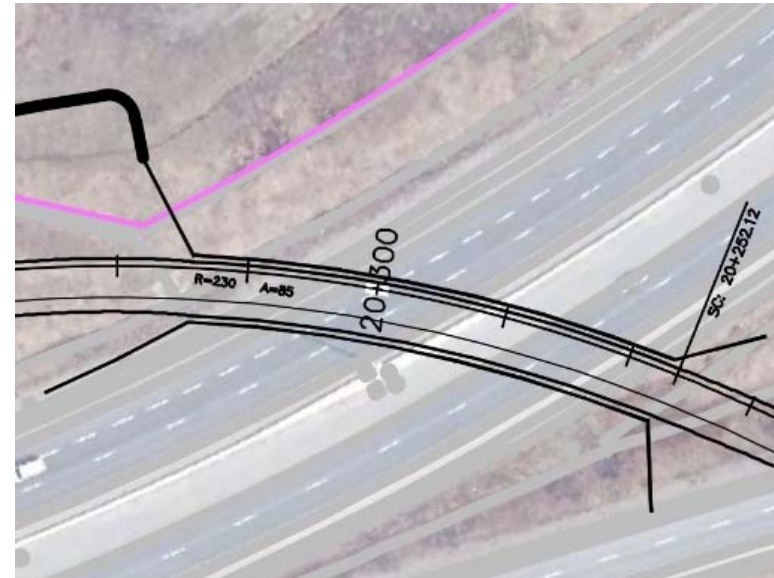


Geometrics

- Wider left shoulder on flyover to address sight distance (2.5m vs. 1.0m)



Configuration presented at May 2018 SM Meeting

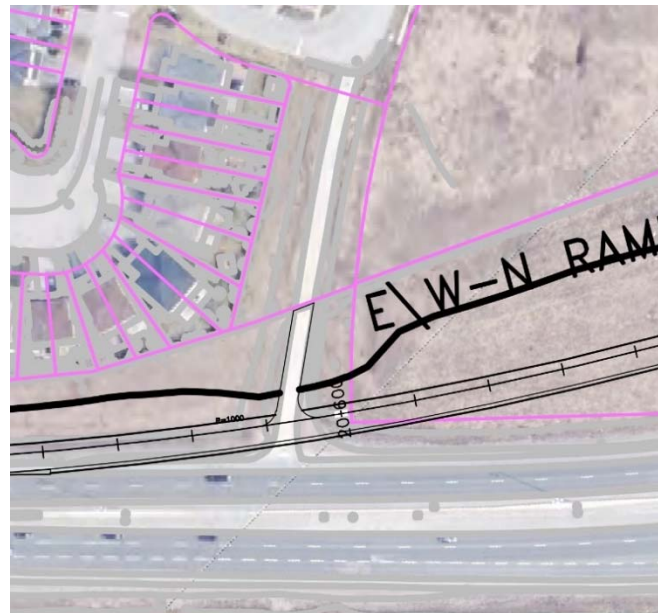


Revised Configuration November 2018



Geometrics

- Reinstatement of gated emergency access
- Emergency services confirmed vehicles can continue to access under modified conditions



Geometrics

- New E/W-N Ramp ends prior to residential access points
- Mainline posted speed 80 km/h (assumed design speed 100 km/h)
- Table 10.6.5 (TAC 2017) identifies acceleration length from controlling curve 210m – 525m
- Proposed acceleration length 400m from controlling curve
- Downgrade (from flyover to mainline) 2.1% to 2.5% (PI at 20+707)
- Allows taper to start just south of Etobicoke Creek culvert (sensitive watercourse)

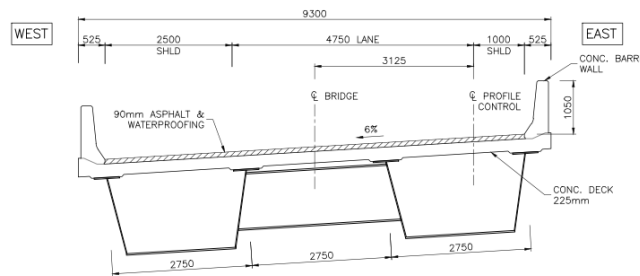
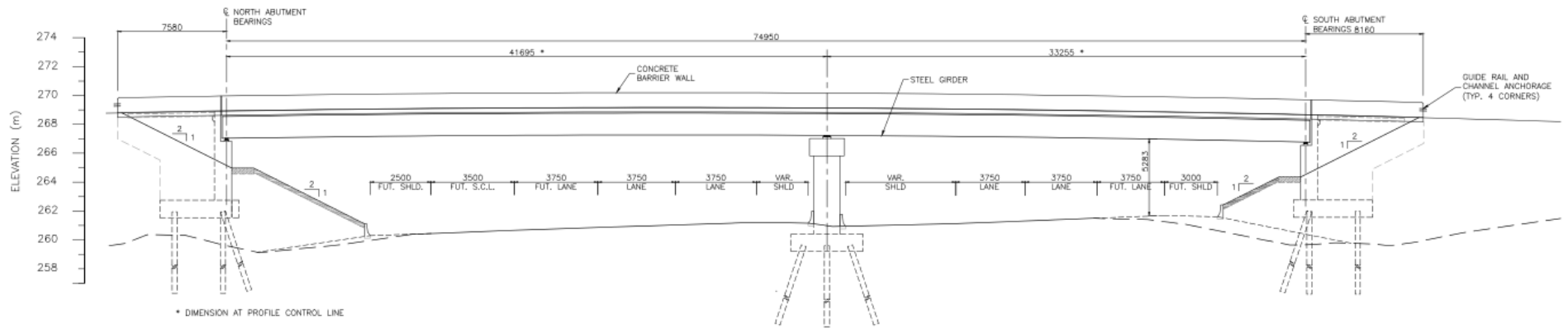


Flyover (Structural)

- Alternative assessment of structure types completed; structure types considered include:
 - 2 spans post-tensioned deck;
 - 2 spans on steel plate girder, and
 - 2 spans slab on steel box girder.
- Proposed alternative is 2 spans slab on steel box girders
 - uncoated weathering steel except coating for ends 3.0m under expansion joint;
 - expansion joint at both abutments since integral or semi-integral abutment not recommended for a curved bridge;
 - span arrangement accommodates future widening of Hwy 410 (one additional lane in each direction);
 - piled foundation (based on prelim geotechnical recommendation), and
 - vertical clearance governed by future widening of Hwy 410 on low side of superelevation.

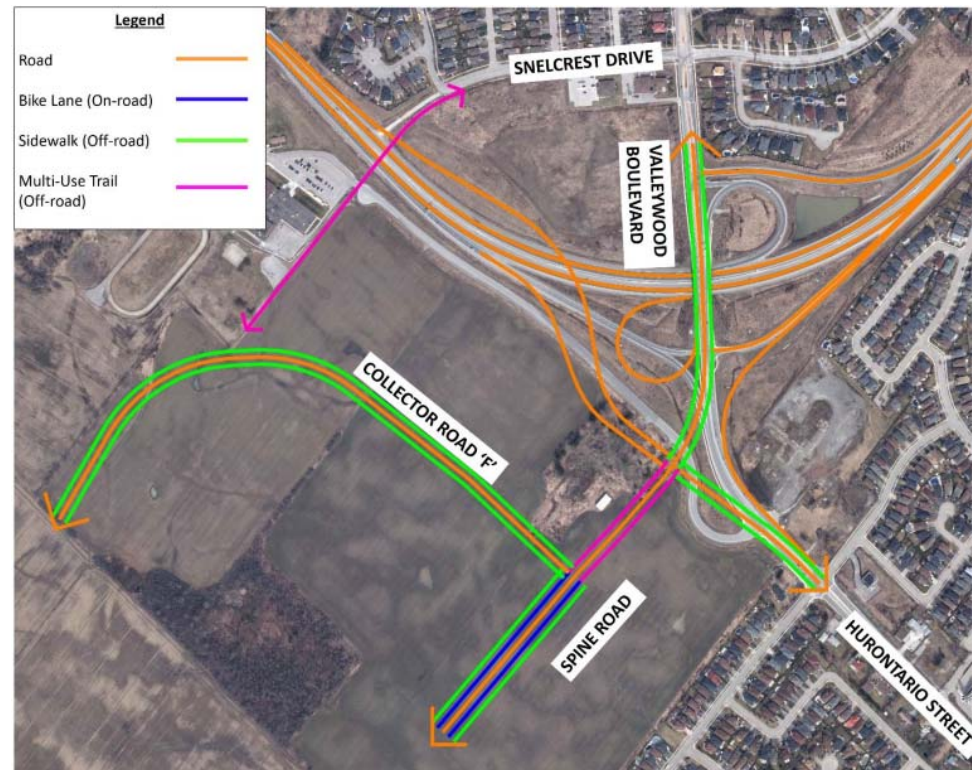


Flyover (Structural)



Active Transportation

- Analysis of active transportation movements within interchange completed
- Recommend to maintain existing configuration (sidewalk on either side of Valleywood Boulevard) on existing overpass
- Alternative routes available via existing Etobicoke Creek Trail and potential future dedicated pedestrian / cyclist crossing of Highway 10



Aquatic Habitat

- Supplemental memo to previously provided Natural Environment Existing Conditions Report, 2018
- Reviewed fish and fish habitat specific to Highway 10 crossing
- Two site visits completed: May 2018 and August 2018
- Impacts to watercourse expected to be minimal; as such, standard mitigation is recommended



Photo from May 2018 Site Visit

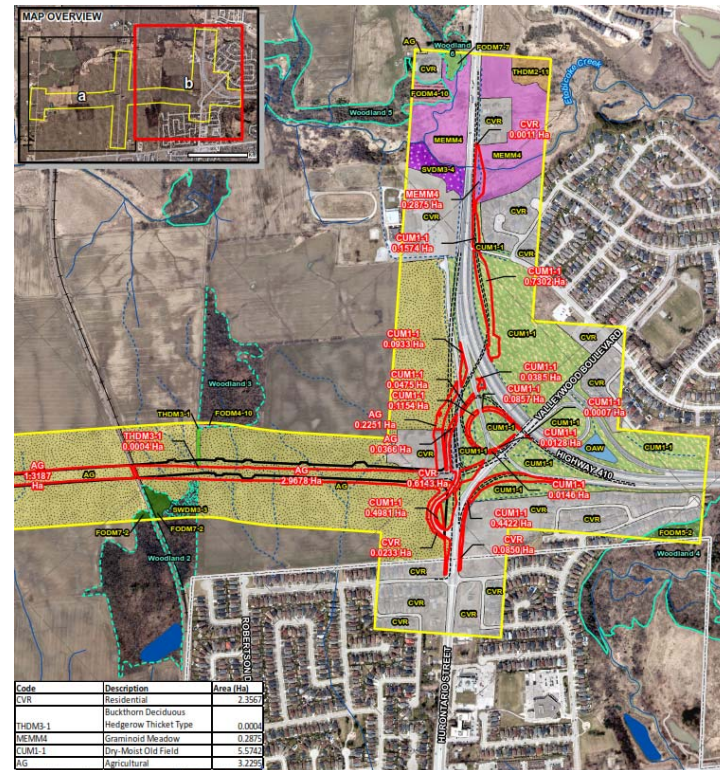


Photo from August 2018 Site Visit



Environmental Impact Assessment

- Determined potential environmental impacts and provides mitigation measures to eliminate and/or minimize impacts
- Impacts to existing terrestrial features will be minimal
- Interchange modifications will impact Barn Swallow (SAR); discussion with MNRF for mitigation will be required.



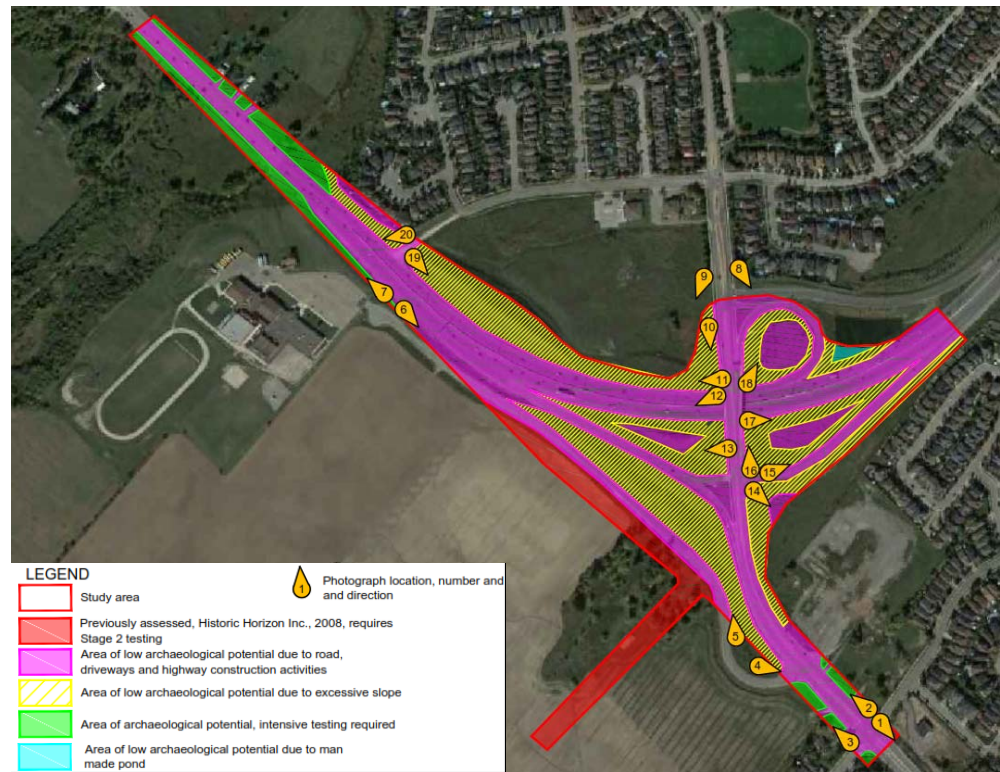
Noise Study

- Noise impact study completed to address noise impacts of the proposed interchange modifications and traffic forecast;
- Evaluated existing (2017), future 'no-build' (2031) and future 'build' (2031) scenarios;
- Five receivers found to exceed 65 dBA criterion. However, these locations represented the most exposed façade, and the Outdoor Living Areas (OLA) are expected to be below the 65 dBA criterion.



Stage 1 Archaeology

- Stage 1 assessment completed in accordance with MTCS Standards and Guidelines for Consultant Archaeologists (2011)
- Recommended Stage 2 be completed at select locations (6% of study area within interchange footprint)



Forthcoming Reports

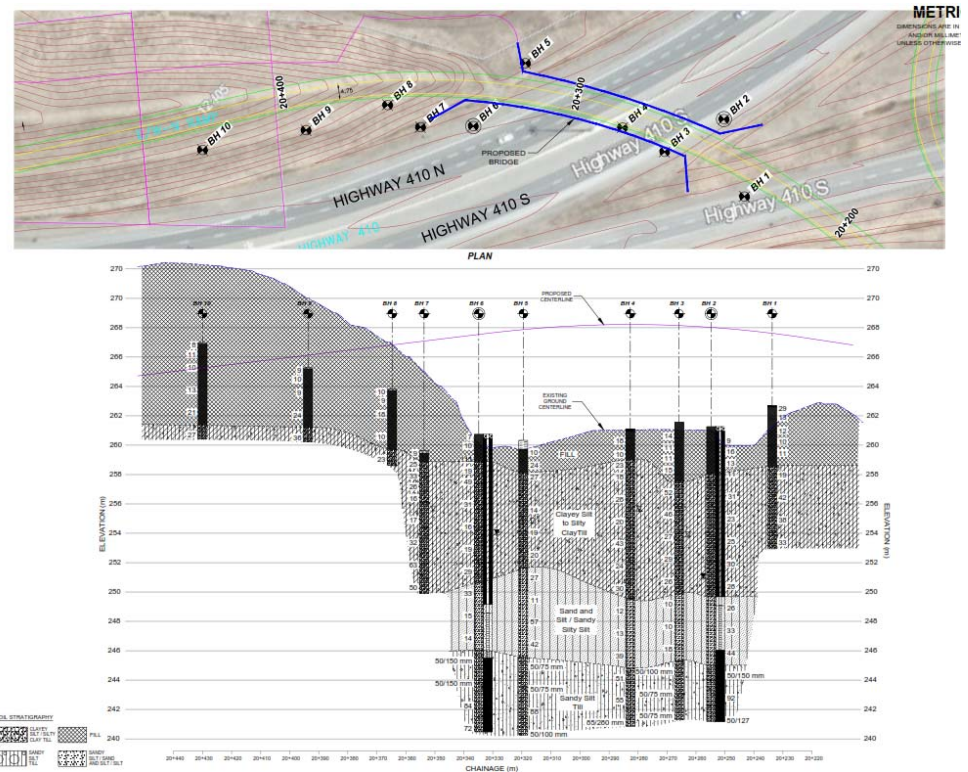
Drainage / SWM

- Both existing and proposed conditions will be evaluated to determine if any modifications are required to the existing storm sewers, SWM pond, and overland drainage features (ie. ditches and culverts)
- Evaluation being completed based on material provided by MTO, Town of Caledon, and TRCA
- Meeting between Wood and MTO Stormwater Engineers is requested to review specifics of SWM modelling



Geotechnical

- Assessment of existing soil conditions has commenced to support the preliminary design of the new flyover and approaches
- Includes 8 boreholes, monitoring wells, soil classification tests, and chemical analysis
- Preliminary recommendation on flyover foundations has been provided; report is forthcoming



Next Steps

Next Steps

- Finalize remaining reports and circulate to MTO for review;
- Address comments from MTO on submitted material;
- Meet with MTO Senior Management on December 10, 2018 to review;
- Complete Draft ESR and circulate to MTO for review, and
- File ESR for 30-day public review.



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Highway 410 /
Valleywood Boulevard /
Hurontario Street
Interchange Modifications

MTO Senior Management Meeting
December 10, 2018

woodplc.com



Agenda

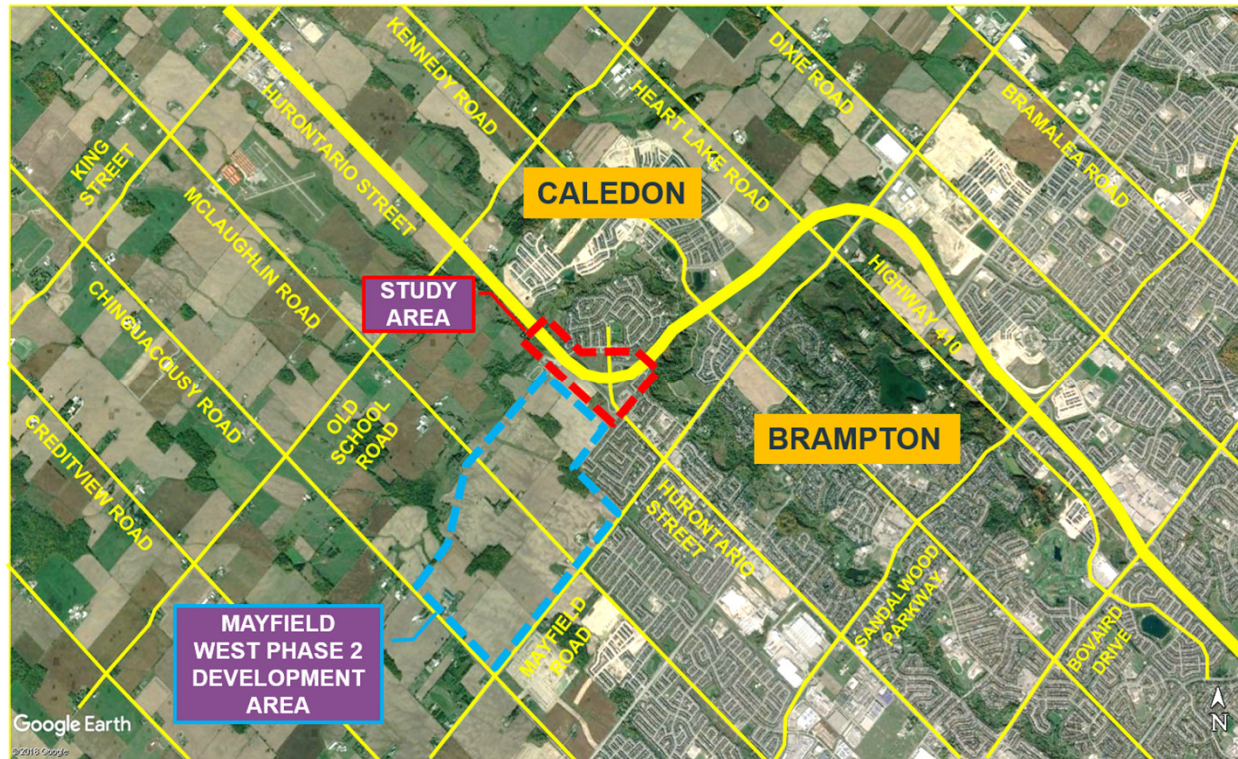
- Background
- Timeline
- Preferred Design
- Technical and Environmental Studies
- Next Steps



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Background

Study Area

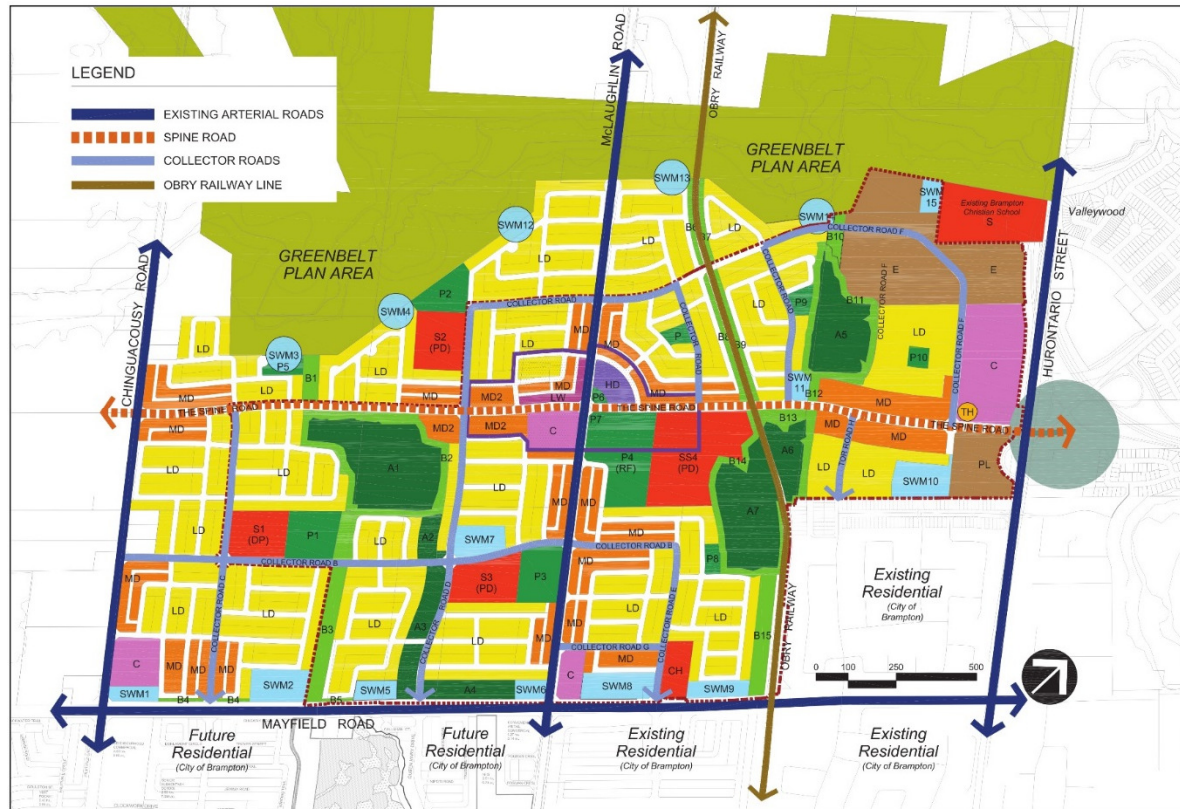


Project Background

- Mayfield West Phase 2 (MW2) development is anticipated to accommodate 18,000 residents and 4,700 jobs.
- A new east-west arterial roadway was proposed in the MW2 Transportation Master Plan (MW2 TMP), known as the Spine Road, to service the development.
- In the MW2 TMP, the Spine Road was proposed to connect to Hurontario Street / Valleywood Boulevard immediately south of the interchange with Highway 410.
- In 2016, a Class EA study was initiated by the Town of Caledon to determine the specifics of this connection.

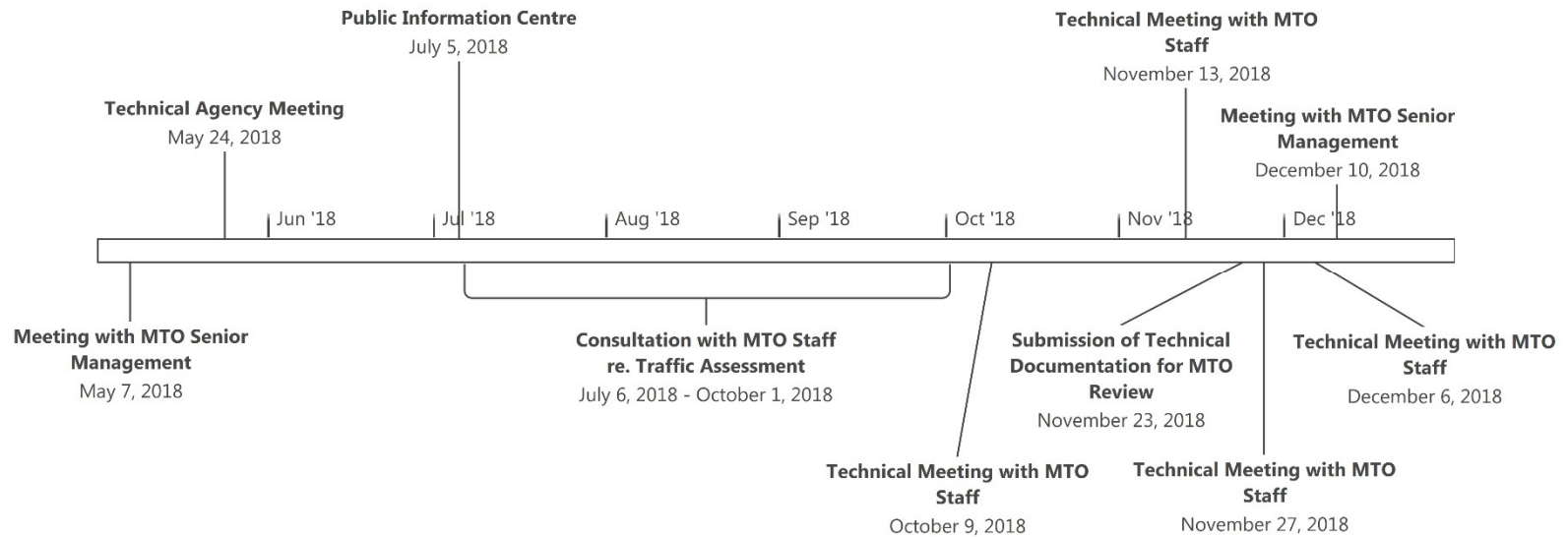


Mayfield West Phase 2



Timeline

Timeline



PIC Comments

Comment	Response
Concerns with increase in noise	A noise impact study was completed. The study found that the increase in traffic noise would be under the threshold requiring additional noise mitigation.
Access to school at end of Hutchinson Farm Lane	Access to school will be maintained under both interim and ultimate conditions.
Traffic signals at end of Highway 410 off-ramp	Traffic signals will be installed as part of the construction of interchange modification.
Second access required for Valleywood	A second access will be explored as part of the Town's update to the Transportation Master Plan.
Property impacts	Impacts to property will be minimized to the extent possible.



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Preferred Design

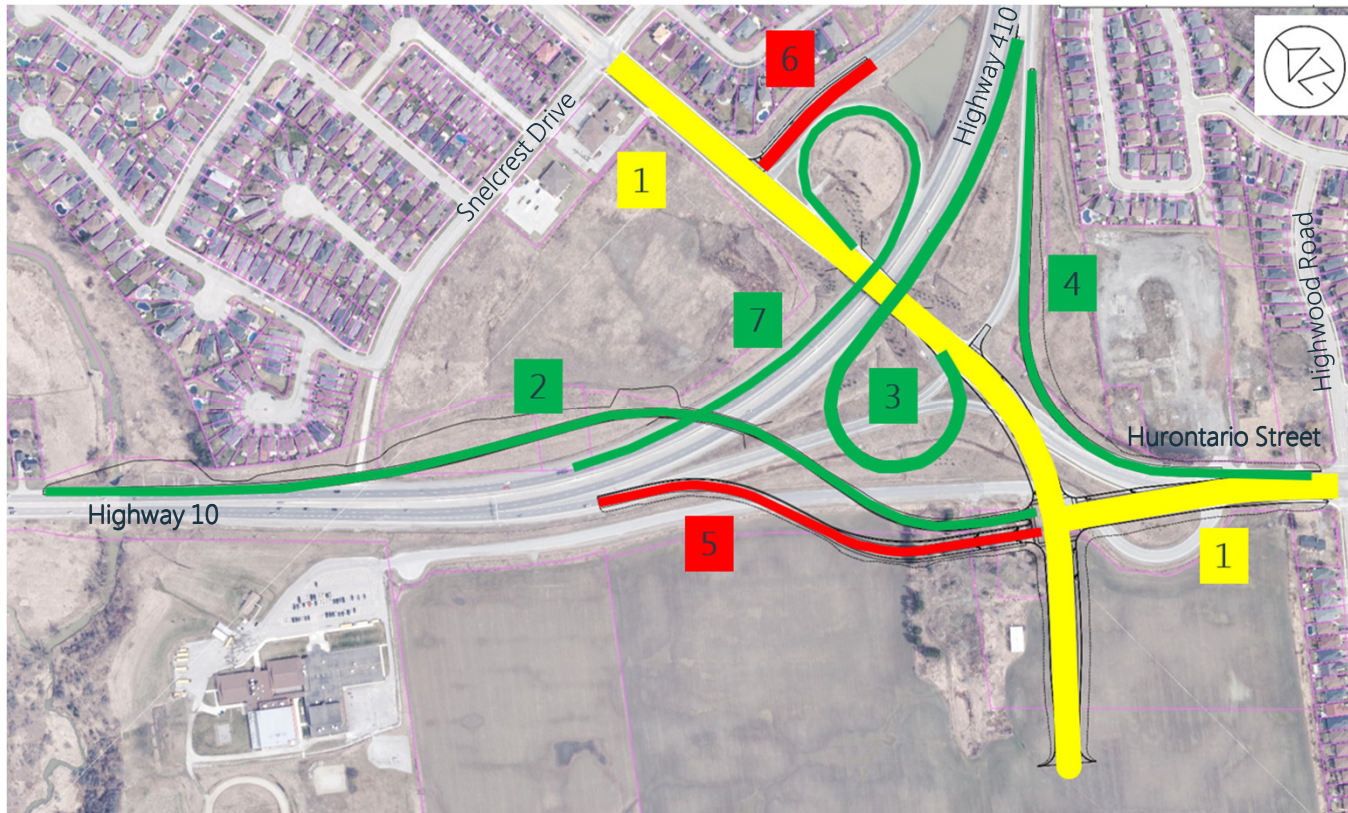
Preferred Design

In consultation with MTO Staff and with the support of the technical and environmental investigations, the modifications noted below are recommended. This recommendation is consistent with Scheme 3 from the Highway 410 PDR (2001).

1. Realignment of Hurontario Street and Valleywood Boulevard;
2. New single lane S/E-N on-ramp;
3. New single lane N-E on-ramp;
4. New single lane S-E on-ramp (connecting to existing ramp);
5. Realignment of existing N-E/W/S off-ramp;
6. Additional left turn lane for E-N/S off-ramp, and
7. Maintain the existing S-N on-ramp.

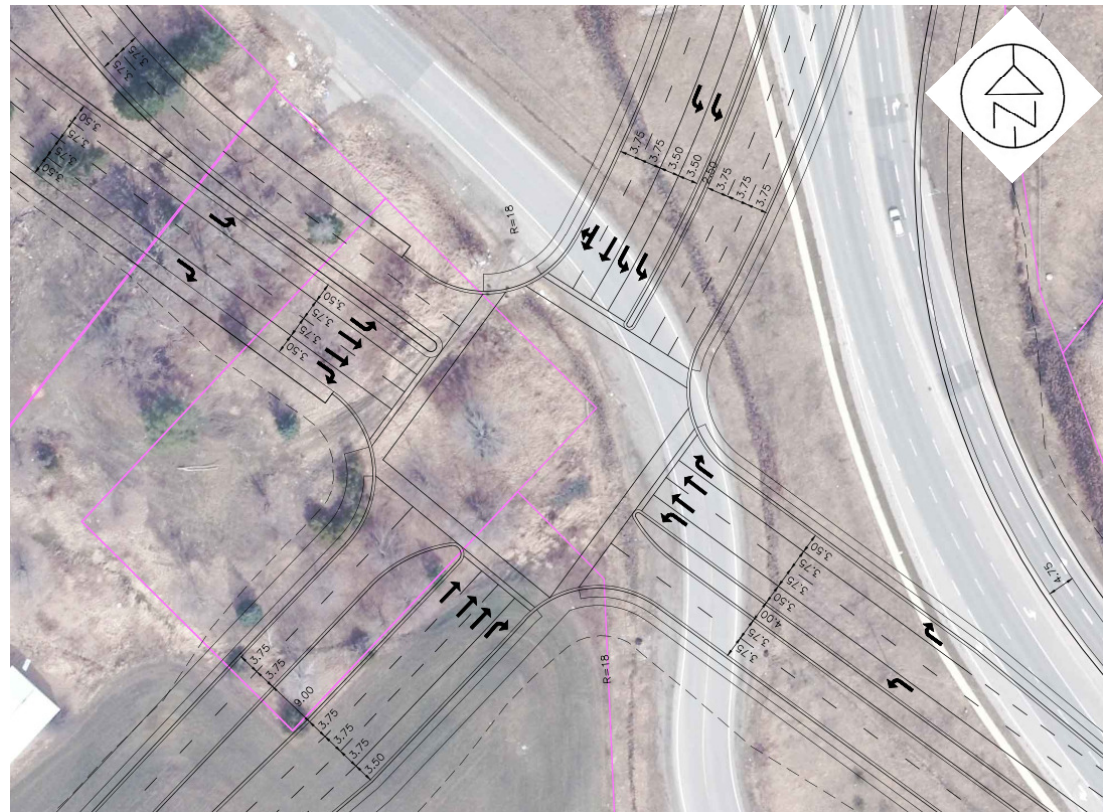


Preferred Design



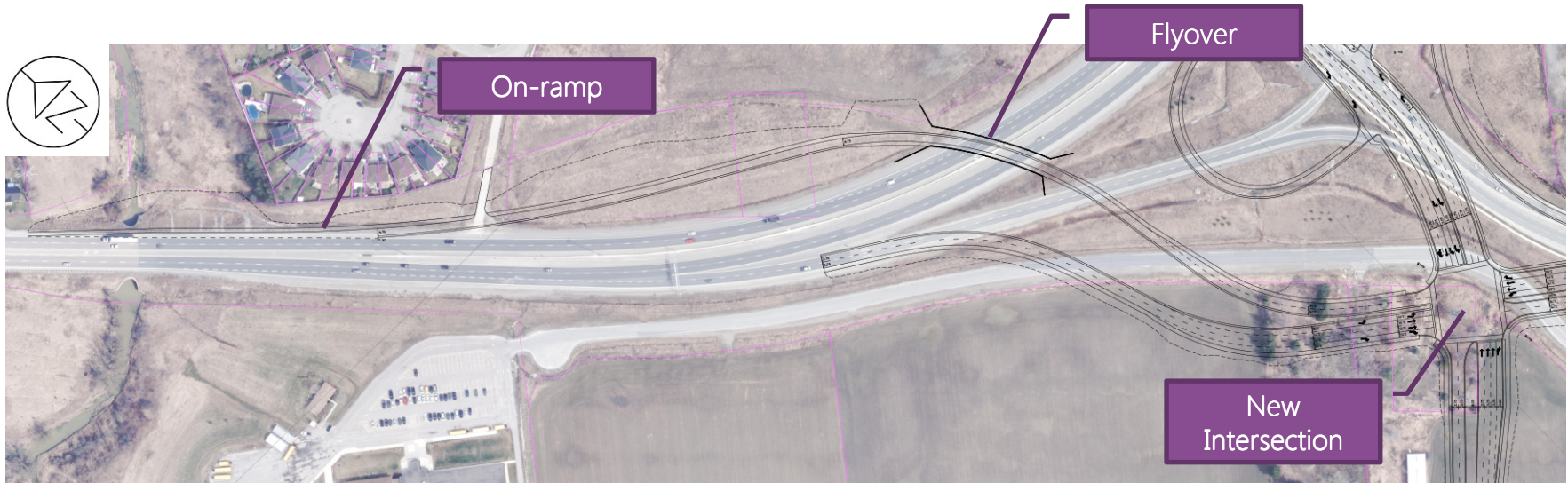
Preferred Design

- New intersection between Hurontario Street, Valleywood Boulevard, Spine Road, and On/Off ramps



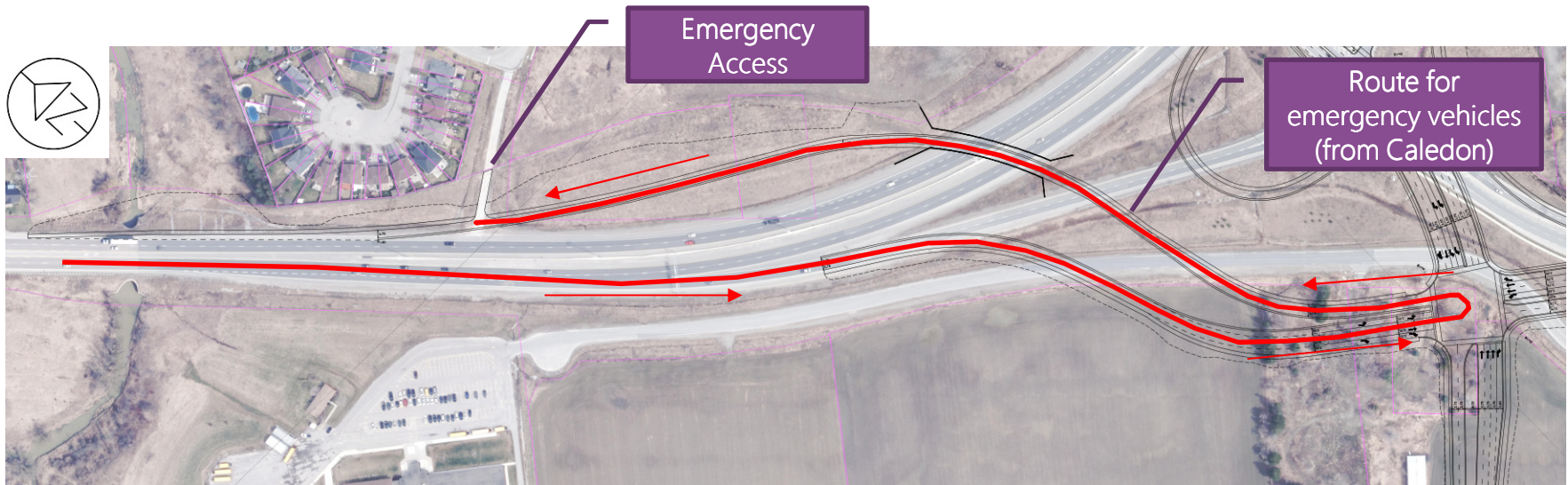
Preferred Design

- For the new S/E-N on-ramp, a flyover of Highway 410 (mainline) will be constructed



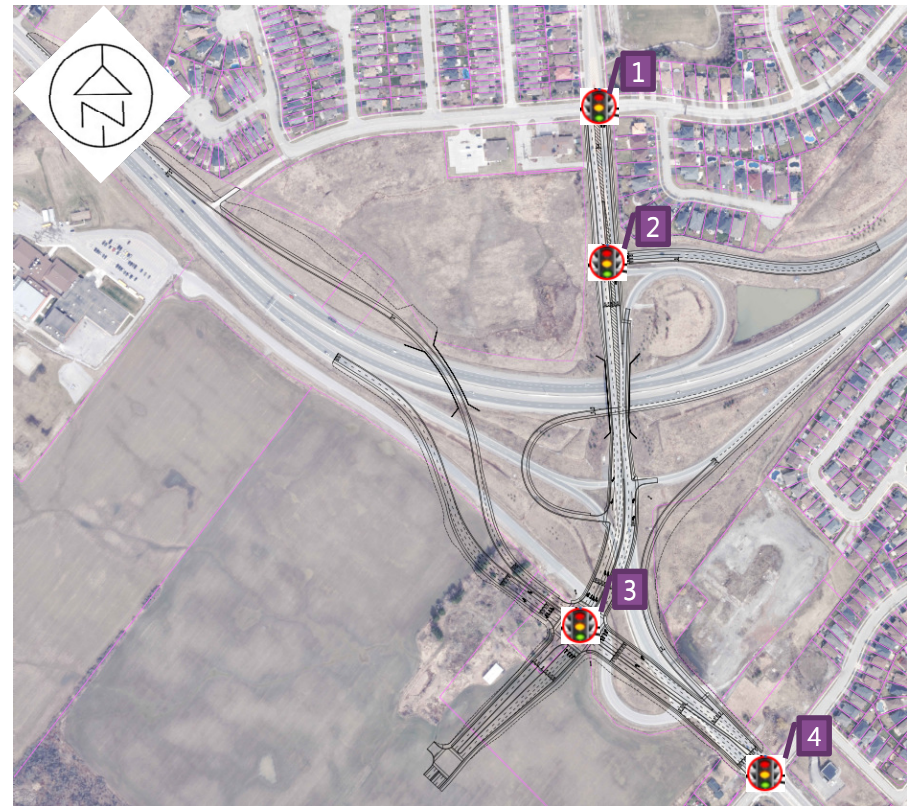
Preferred Design

- Existing emergency access to Snelcrest Drive to be maintained but restricted to right-in/right-out



Signalized Intersection Locations

- 1) Valleywood Blvd. at Snelcrest Dr. / Royal Valley Dr. (New)
- 2) Valleywood Blvd. at E-N/S Ramp (New)
- 3) Spine Rd. / Valleywood Blvd. at Hurontario St. / On and off-ramps (New)
- 4) Hurontario St. at Collingwood Ave. / Highwood Rd. (Existing)



Other Design Comments from December 6th Meeting

Comment	Response
Lengthen additional left turn lane at existing off-ramp	Additional left turn lane extended to match traffic model
Discrepancies in lane configuration between May 2018 design and the recent traffic model	Lane configuration revised to match traffic model
Two northbound lanes into the Valleywood community problematic based on past experience	Design revised to include one northbound lane into Valleywood, with the second lane forced onto the on-ramp
Operational and safety concerns for high volume of traffic coming from Spine Road EB weaving to enter Highway 410 SB on-ramp	Specifics of advanced signage for Spine Road EB to be determined as part of detailed design
Opportunity to normalize new inner loop ramp to improve safety for active transportation	Inner loop ramp has been revised as noted
Improve merging for S-E Ramp by extending acceleration lane	Acceleration lane extended as noted
Explore opportunities to improve safety for 3 adjacent residential driveways immediately north of new on-ramp (ex. wide shoulder)	Further review will be completed as part of detailed design



Technical and Environmental Studies

Traffic

- Capacity constraint on Mainline at Hwy 410 and Bovaird Dr. IC affects throughput:
 - Only 2 lanes are available on Hwy 410 mainline, NB direction
- Comparison of previously served trips at Valleywood IC with extended model shows approximately 700 trips during the peak hour are metered by operations upstream.
- Operations at the Valleywood IC are within Ministry acceptable thresholds with respect to LOS, Delays and 95th Percentile Queues for the entire 3-hour modelling period.
- Reduction of trips at Valleywood IC shows that the E-N/S off-ramp and the intersection of Spine Road and Hurontario Street can operate with a reduced cycle length of 110 seconds.



Traffic

- MTO Staff have identified the following operational issues (to be addressed in detailed design)
 - Signal coordination required between existing off-ramp and new intersection;
 - Traffic signal cycle to have over 80% green time for heavy left turn movements (as per model);
 - Overlap right turn signal phase for northbound-eastbound right turns during westbound-southbound dual left protected phase, and
 - Over 370m of queuing into MW2 (during peak hours)

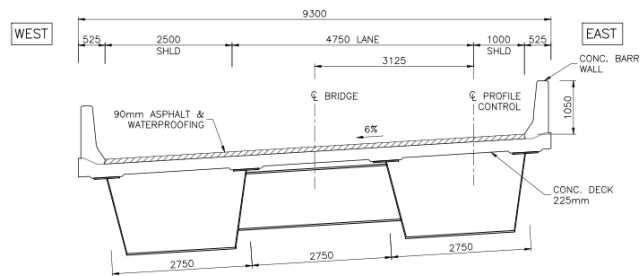
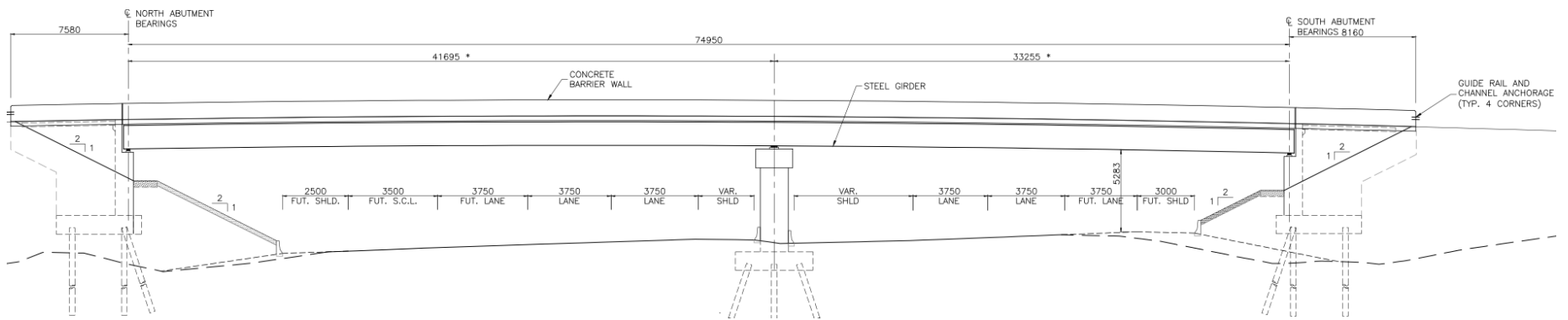


Flyover (Structural)

- Alternative assessment of structure types completed; structure types considered include:
 - 2 spans post-tensioned deck;
 - 2 spans on steel plate girder, and
 - 2 spans slab on steel box girder.
- Proposed alternative is 2 spans slab on steel box girders
 - uncoated weathering steel except coating for ends 3.0m under expansion joint;
 - expansion joint at both abutments since integral or semi-integral abutment not recommended for a curved bridge;
 - span arrangement accommodates future widening of Hwy 410 (one additional lane in each direction);
 - piled foundation (based on prelim geotechnical recommendation), and
 - vertical clearance governed by future widening of Hwy 410 on low side of superelevation.

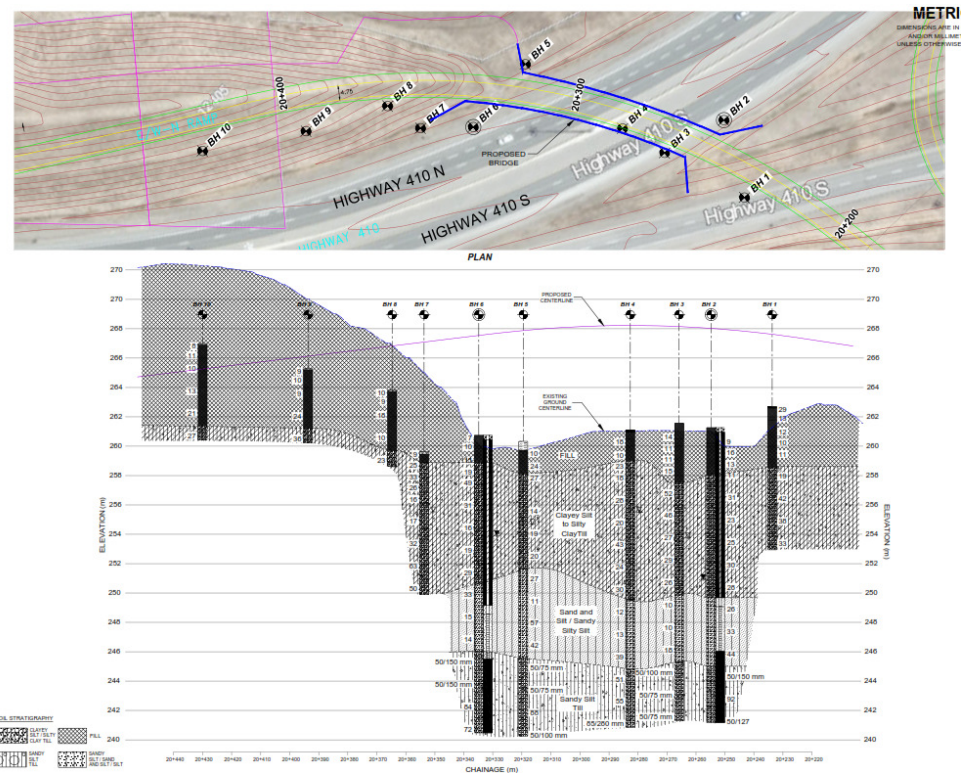


Flyover (Structural)



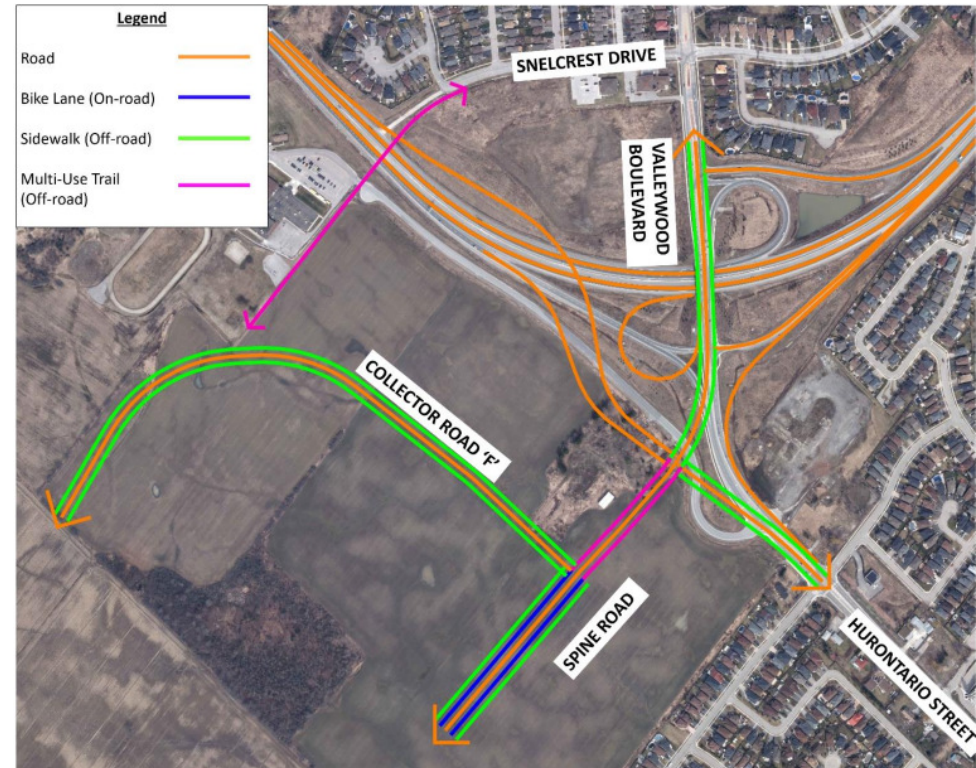
Geotechnical

- Foundation investigation has been completed to support the preliminary design of the new flyover and approaches
- Included 10 boreholes, groundwater monitoring wells, soil classification tests, and chemical analysis



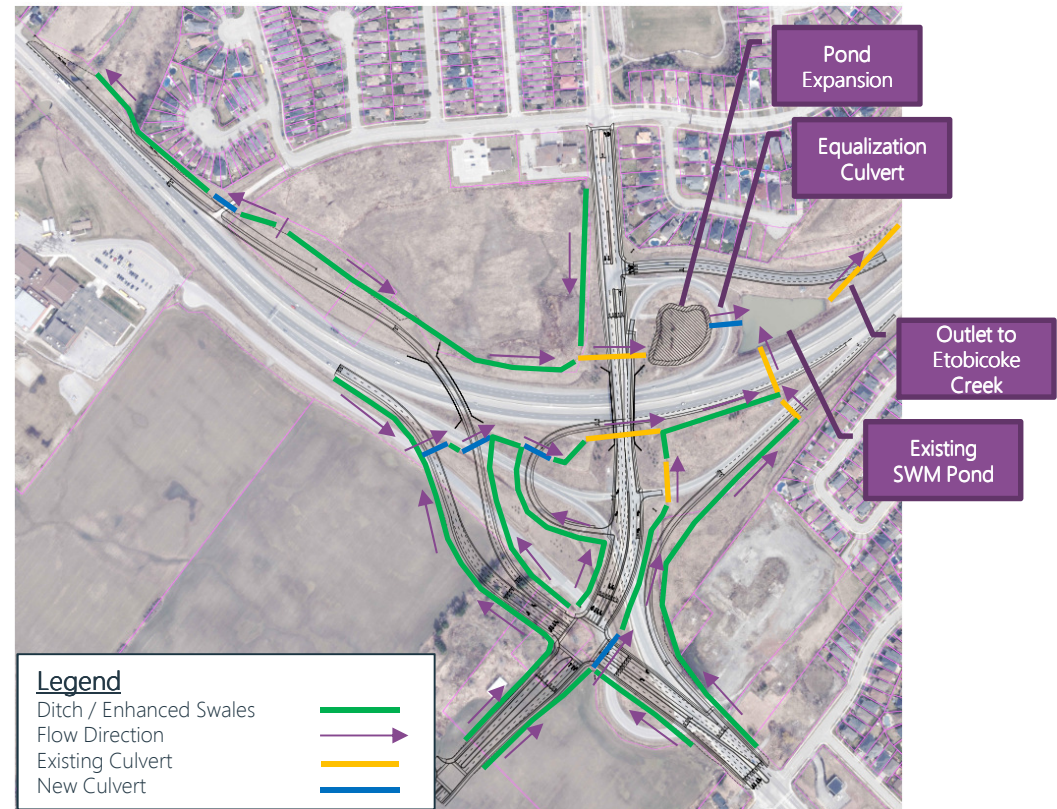
Active Transportation

- Analysis of active transportation within interchange completed
- Recommend to maintain existing configuration (sidewalk on either side of Valleywood Boulevard) on existing overpass
- Alternative routes available via existing Etobicoke Creek Trail and potential future dedicated pedestrian / cyclist crossing of Highway 10



Drainage / SWM

- Existing and proposed drainage system reviewed
- Recommend to expand existing SWM pond and construct grass swales to satisfy water quality criteria
- Locations for enhanced grass swales will be investigated further as part of detailed design



Aquatic Habitat

- Supplemental memo to Natural Environment Existing Conditions Report, 2018
- Reviewed fish and fish habitat specific to Highway 10 crossing
- Two site visits completed: May 2018 and August 2018
- Impacts to watercourse expected to be minimal; as such, standard mitigation is recommended



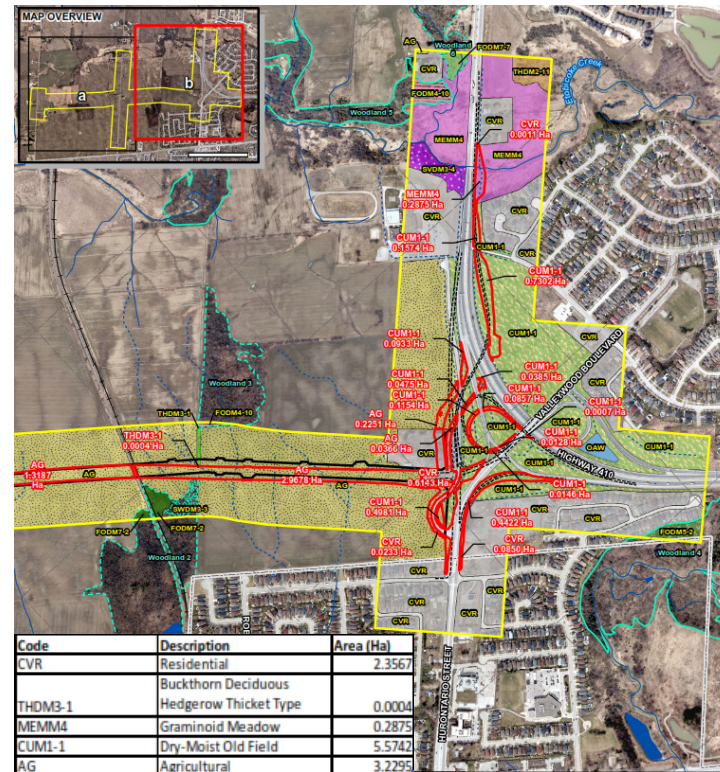
Photo from May 2018 Site Visit



Photo from August 2018 Site Visit

Environmental Impact Assessment

- Determined potential environmental impacts to terrestrial and aquatic features and provides mitigation measures to eliminate and/or minimize impacts
- Includes analysis of potential Species at Risk (SAR) or Provincially Rare Species
- Impacts to existing terrestrial and aquatic features will be minimal
- Interchange modifications will impact Barn Swallow (SAR); discussion with MNRF for mitigation will be required.



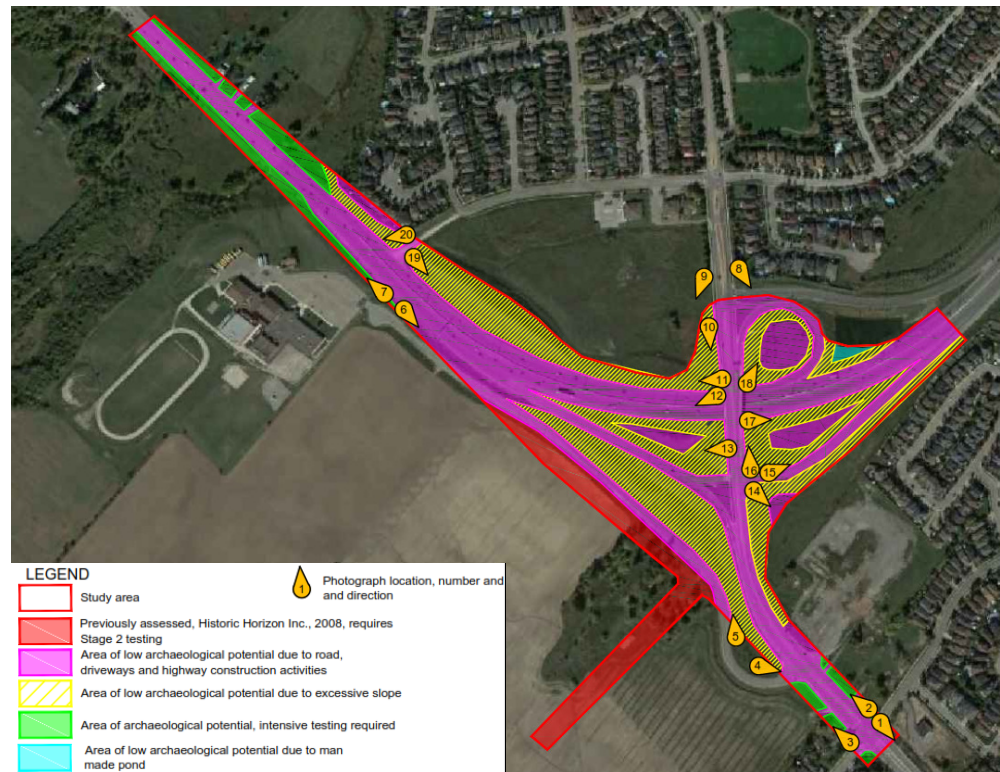
Noise Study

- Noise impact study completed to address potential noise impacts due to proposed interchange modifications and traffic forecast;
- Evaluated existing (2017), future 'no-build' (2031) and future 'build' (2031) scenarios;
- Five receivers found to exceed 65 dBA criterion. However, these locations represented the most exposed façade, and the Outdoor Living Areas (OLA) are expected to be below the 65 dBA criterion.



Stage 1 Archaeology

- Stage 1 assessment completed in accordance with MTCS Standards and Guidelines for Consultant Archaeologists (2011)
- Recommended Stage 2 be completed at select locations (6% of study area within interchange footprint)



Next Steps

Next Steps

Steps / Tasks	Anticipated Completion
Complete Draft Environmental Study Report and Circulate to Agencies and Key Stakeholders	January 2019
Agency and Key Stakeholder Review	February 2019
Complete Final Environmental Study Report and File	Mid-March 2019
30-day Public Review Period (Mandatory)	Mid-April 2019
Commence Detailed Design	Summer 2019
Complete Detailed Design	Summer/Fall 2020
Complete Property Acquisition / Utility Relocation	Winter 2020/21
Construction Commencement	Spring 2021
Construction Completion	Summer 2023



Thank You!
Questions / Comments

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woodplc.com

From: Annette Lister <alister@trca.on.ca>
Sent: Wednesday, July 04, 2018 2:47 PM
To: Kant Chawla
Cc: Sinke, David; Stahl, Jason; Dragan Zec; Dorothy DiBerto; Sharon Lingertat; Leilani Lee-Yates; Vince D'Elia; Alyssa Roth
Subject: CFN 59620 Spine Road EA - TRCA Areas of Interest and Comments
Attachments: CFN 59620 Spine Road - Notice of PIC, Study Area Revisions, TAC Meeting - Response Letter - July 4, 2018.pdf; CFN 59620 Spine Road EA Comment Table - July 4, 2018.docx

Hello Kant,

TRCA staff received various documents and notices, including the Notice of Public Information Centre and Study Area Revisions on June 22, 2018, and preliminary preferred design alternative for the Highway 410 and Hurontario Street interchange and draft technical reports on June 1, 2018.

Please see the attached letter for TRCA staff response. TRCA staff would like to schedule a site visit to review the existing conditions at the Etobicoke Creek crossing within the interchange project area. At your convenience, please contact me to schedule a site visit.

Should you have any questions, please do not hesitate to contact me.

Thank you,
Annette

Annette Lister, M.A.Sc.
Planner
Environmental Assessment Planning | Planning and Development

T: 416.661.6600 ext. 5266
E: alister@trca.on.ca
A: 101 Exchange Avenue, Vaughan ON L4K 5R6

Toronto and Region Conservation Authority (TRCA) | trca.ca

From: Singh, Amar <amar.singh@peelsb.com>
Sent: Tuesday, July 03, 2018 9:41 AM
To: aniq.shams@woodplc.com
Subject: RE: Notice of PIC and Study Area Revisions – Schedule 'C' Municipal Class EA Study - Widening of McLaughlin Road and Construction of new East-West Spine Road (Mayfield West Phase 2)

Hi Aniq,

Thank you for this Notice of PIC. The Board is very interested in this project since we have several schools proposed within the Mayfield West Phase 2 area.

Please keep us informed on the status of this project and provide us with any information you have available so that we may monitor its progress and provide comments as necessary.

Regards,

Amar Singh | Planner

Planning & Accommodation Support Services
Peel District School Board
P. 905-890-1010 ext. 2217
Email: amar.singh@peelsb.com

From: Shams, Aniq [<mailto:aniq.shams@woodplc.com>]
Sent: Friday, June 22, 2018 2:29 PM
Cc: Kant Chawla; Sinke, David; Stahl, Jason
Subject: Notice of PIC and Study Area Revisions – Schedule 'C' Municipal Class EA Study - Widening of McLaughlin Road and Construction of new East-West Spine Road (Mayfield West Phase 2)

Good Afternoon,

The Town of Caledon is completing a Schedule 'C' Municipal Class Environmental Assessment Study for the Widening of McLaughlin Road and Construction of new East-West Spine Road (Mayfield West Phase 2).

We have enclosed for your information a copy of the Notice of Public Information Centre, which is scheduled for July 5, 2018.

For further information or if you wish to provide input regarding this project, please contact the undersigned at 905-335-2353 x 3045 or via email at jason.stahl@woodplc.com

Kind Regards,

Jason Stahl, P. Eng.

Project Engineer, Transportation
3450 Harvester Road, Suite 100, Burlington ON, L7N 3W5
Direct: +1 905 335 2353 x 3045
jason.stahl@woodplc.com
www.woodplc.com

July 4, 2018

CFN 59620
XREF CFN 41732

BY E-MAIL ONLY (kant.chawla@caledon.ca)

Kant Chawla
Senior Transportation Planner
Town of Caledon
6311 Old Church Road
Caledon, ON L7C 1J6

Dear Mr. Chawla:

Re: Response to Notice of Public Information Centre, Study Area Revisions, Technical Advisory Committee Meeting Materials, Preferred Design Alternative and Technical Reports New East-West Spine Road and McLaughlin Road Widening (Mayfield West Phase 2) Municipal Class Environmental Assessment – Schedule C Etobicoke Watershed; Town of Caledon; Regional Municipality of Peel

Toronto and Region Conservation Authority (TRCA) staff received the Notice Public Information Centre (PIC) scheduled for July 5, 2018, and the Notice of Study Area Revisions to include the Highway 410 interchange with Hurontario Street/ Valleywood Boulevard for above noted Municipal Class Environmental Assessment (MCEA) on June 22, 2018. Furthermore, TRCA staff attended a Technical Agency Committee (TAC) meeting that was held on May 24, 2018. Subsequent to the meeting, staff received a copy of the TAC meeting presentation materials, preliminary design drawing of the preferred alternative for the Highway 410 interchange, and technical reports including a Draft Natural Environment Existing Conditions Report (September 2017), Geotechnical Investigation (April 12, 2018), Hydrogeological Assessment (October 16, 2017), Stormwater Management Memo (September 21, 2017) and Tree Inventory Report Memo (September 13, 2017). As a recognized commenting agency under the Ontario Environmental Assessment Act, TRCA has interests in this project.

PROJECT OVERVIEW

It is our understanding that this undertaking involves the construction a new east-west Spine Road from Hurontario Street to Chinguacousy Road, widening of McLaughlin Road from Mayfield Road northerly approximately 1700 m, and modifications to the Highway 410 and Hurontario Street/ Valleywood Boulevard interchange including the Etobicoke Creek crossing, in the Town of Caledon. The requirement for this EA study was triggered by the network requirements set out in the approved Mayfield West Phase 2 Transportation Master Plan (MW2-TMP) which fulfilled the requirements of Phases 1 and 2 of the MCEA. It is our understanding that this EA study will fulfill Phases 3 and 4 of the MCEA process, as well as to determine the preferred configuration of the Highway 410 and Hurontario Street/ Valleywood Boulevard interchange.

It is our understanding that these new road connections and improvements are required in order to service the new Mayfield West Phase 2 (MW2) development. It is further understood that the existing and proposed conditions for the study area, with exception to the Spine Road connection to the Highway 410 and Hurontario Street/ Valleywood Boulevard interchange and the interchange itself, were largely defined through planning studies completed as a part of the MW2 secondary plan and development, including the Environmental Implementation Report (EIR), Functional Servicing Report (FSR) and MW2-TMP. Please note that the outcomes of this EA study should reflect the outcomes of the MW2 EIR and FSR, and vice versa. Any modifications to the alignment of Spine Road as a result of the EA study should also be updated in the MW2 EIR and FSR

accordingly.

As the scope of these planning studies do not include the Spine Road connection to the Highway 410 and Hurontario Street/ Valleywood Boulevard interchange and the interchange itself, it is our understanding that a key component of this EA study is determine the configuration of the Spine Road connection and the interchange. It is further understood that reconfiguration of the interchange will include modifications to the existing Etobicoke Creek culvert crossing located along Hurontario Street, north of the interchange. Staff notes that most of the submitted technical reports do not include assessments of the Spine Road connection and interchange. Please also contact the undersigned to arrange a site visit with TRCA staff to review the existing slope and site conditions at the location of the Etobicoke Creek crossing.

Please also note that Urbantech Consulting (Urbantech) has provided TRCA staff with preliminary detailed design drawings in advance of the EA study for our information and records. From our email correspondence with Urbantech dated April 8, 2018, it is our understanding that it is the expectation of the MW2 Landowner's Group that the detailed design process run concurrently with the ongoing EA. However, Urbantech has confirmed that detailed comments are not expected from TRCA staff prior to the completion of the MW2 EIR and FSR, and EA study.

Please see **Appendix A** for further comments on the submitted materials.

TRCA AREAS OF INTEREST

In relation to this application, TRCA staff has identified a number of areas of interest within the study area, including:

1. TRCA Program and Policy Areas
 - A. Natural System Programs and Policies
 - B. Sustainability Programs and Policies
2. Provincial Program Areas
3. Federal Program Areas

Further details are provided in **Appendix B: TRCA Areas of Interest**.

In relation to these areas of interest, please be advised that TRCA has select digital data available through an open data platform on the [TRCA website](#) that should be used in the selection of the preferred alternative. Upon request, TRCA can provide additional data for areas of interest not available on the web. Please contact the undersigned as needed.

ASSESSMENT OF ALTERNATIVES

In developing, evaluating and selecting alternatives, staff require the LCP policies be considered. Staff recommends the preferred alternative meets the policies of Section 7. Furthermore, staff requires that the preferred alternative will meet the detailed design to meet the policies of Section 8 at the detailed design stage in order to fulfil requirements of Ontario Regulation 166/06.

In particular, the following should be addressed:

1. Prevent risk associated with flooding, erosion or slope instability
2. Protect and rehabilitate existing landforms, features and functions
3. Provide for and enhance, aquatic and terrestrial habitat, function and connectivity
4. Address TRCA property and heritage resource concerns
5. Minimize water and energy consumption and pollution
6. Provide for community and public realm benefits wherever possible

Prior to selecting the preferred alternative solution and design, please arrange a meeting to discuss issues that relate to TRCA Areas of Interest.

PRE-DESIGN BRIEF

TRCA staff recommends that a summary of detailed design commitments be included in the EA as a Pre-design Brief. This summary should include, but not be limited to:

- a. An aerial photo indicating the study area, regulated area, existing conditions and preferred solution/design;
- b. Text indicating the preferred alternative solution/design;
- c. A Reference list of alternative solutions and designs considered;
- d. A synopsis of all TRCA requirements and technical commitments.

It is intended that the proponent and their consultants, as well as TRCA, would use the Pre-design Brief during the preliminary stages of detailed design. In the Pre-design Brief, commitments made during the EA would be clearly articulated in order to facilitate a 90 % detailed design submission to TRCA for all required permits. TRCA staff would then be able to review the required studies, reports or plans; and confirm any additional study requirements or revisions to the submitted materials. Ideally, the completion of the Pre-Design Brief will result in a more timely and streamlined permit approval process in the future.

PUBLIC INFORMATION CENTRE

Staff acknowledges that an upcoming PIC is scheduled for Thursday July 5, 2018. While staff will not be attending the meeting, please forward one copy of any handouts or display materials from this meeting for our files, as we have interest in this project.

RECOMMENDED CONTACT POINTS WITH TRCA

A summary chart of **Service Delivery Standards - Recommended TRCA Contact Points** is attached for your reference as **Appendix C**. We recommend you refer to these submission standards during the study to facilitate TRCA review. In addition, please add TRCA's Etobicoke-Mimico Creek Watershed Project Manager, Vince D'Elia (vdelia@trca.on.ca), to the project mailing list to receive any public information updates.

SUBMISSION REQUIREMENTS

As this project proceeds through the various stages of the environmental assessment process, please ensure the following is provided to TRCA for review and comment as the appropriate time:

Paper Copies

1. Four hard copies of the Phase 3 Report and associated reports and documents
2. Four hard copies of the Draft EA Document
3. One hard copy of the Final EA Document.

Digital Submissions

1. Notices of public meetings and display material and handouts
2. A copy of the of the Phase 3 Report
3. A copy of the of the Draft EA Document
4. A copy of the Final EA Document.

Ensure all materials are submitted in PDF format, with drawings pre-scaled to print on 11"x17" pages. Materials submitted through e-mail must be less than 2.5 MB. Materials submitted through a file transfer protocol (FTP) site must be posted a minimum of two weeks.

REVIEW FEES

Please be advised that this application is subject to a **\$13,315** application review fee as per our 2018 [Fee Schedule](#). Please note:

1. **To ensure accurate processing of your fee, please ensure your accounting department references CFN XYZX when making any payments.**
2. Payment method and timing must be noted in your covering letter response.
3. Additional fees are applied as per the fee schedule for reviews beyond three (3) submissions, including the final.
4. Payments can be made by:
 - a. Cheque: please attach the cheque to your resubmission. Alternatively, if sending separately through your accounting department, please request your accounting department submit the cheque to the attention of Rina Bhagat - Administrative Assistant, Environmental Assessment Planning, TRCA.
 - b. Credit Card: please contact Rina Bhagat at extension 5681 for payments made over the phone.
 - c. Electronic Fund Transfer: this option may be available through your accounting department.

Should you have any questions, please contact me at extension 5266 or at alister@trca.on.ca.

Yours truly,



Annette Lister
Planner, Environmental Assessment Planning
Planning and Development

AL/

Attached: Appendix A: TRCA Comments
Appendix B: TRCA Areas of Interest
Appendix C: Service Delivery Standards - Recommended TRCA Contact Points

BY E-MAIL

cc:

Wood: David Sinke, Project Manager (david.sinke@woodplc.com)
Urbantech: Dragan Zec, Partner (dzec@urbantech.com)
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TRCA: Sharon Lingertat, Senior Planner, Environmental Assessment Planning
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Alyssa Roth, Coordinator, Source Water Protection

APPENDIX A: TRCA COMMENTS

ITEM	TRCA COMMENTS (July 4, 2018)	PROPONENT RESPONSE
General Comments		
1.	It is staff understanding that the configuration of Highway 410 and Hurontario Street/ Valleywood Boulevard interchange and Spine Road connection to the interchange, was not within the scope of the MW2-TMP, FSR, EIR or any other planning studies related to the MW2 secondary plan and development. From the May 24, 2018 TAC meeting, staff further understands that Ministry of Transportation (MTO) staff has only provided approval of the preferred design alternative for the interchange that was presented within the TAC meeting presentation. Although staff understands the constraints related to MTO design requirements, please note that the other considered alternatives should nonetheless be presented to other stakeholders (including TRCA) for consideration, and should also be documented within the draft ESR for review. Please provide staff with the other alternatives for the interchange, and provide the reasons and correspondence as to why these other alternatives were discounted by MTO.	
2.	Please note that TRCA property is present just east of the Hurontario Street right-of-way at the Etobicoke Creek crossing. Please advise if there will be any impacts to TRCA property at this location. Please note that any disturbance to TRCA property will require an archaeological assessment by a TRCA Archaeologist.	
3.	At the detailed design stage, all engineering drawings should be prepared showing all necessary details and specifications, and signed and sealed by a Licensed Professional Engineer.	
4.	At the detailed design stage, please ensure that erosion and sediment control (ESC) plan, construction sequencing, staging/ storage, access, dewatering plan, removals, restoration and compensation plan, and other pertinent information is provided. Please refer to the Erosion and Sediment Control Guideline for Urban Construction for further guidance.	
Stormwater Management Comments		
5.	<p>As the runoff from the proposed Spine Road and McLaughlin Road work will be draining to the proposed stormwater management (SWM) ponds within the MW2 project, the quantity, quality and erosion control criteria will be achieved using the proposed ponds. No further information is required for the proposed road work covered under planning studies related to the MW2 secondary plan and development.</p> <p>It is staff understanding that construction of the MW2 developments and the Spine and McLaughlin Road work will be proceeding concurrently, and that the proposed MW2 SWM ponds will be constructed to ultimate size and will fulfill SWM requirements for both the MW2 developments and Spine and McLaughlin Roads. However, if the construction of Spine and McLaughlin Road will proceed in advance of the developments, please note that temporary SWM control will be required for the roads. Please provide confirmation that the construction of the proposed MW2 developments and Spine and McLaughlin Road work will proceed concurrently.</p>	
6.	Staff notes that SWM for the interchange and Spine Road connection has not been considered or provided within the submitted SWM Memo. Please provide the SWM memo/ report for the interchange and Spine Road connection in accordance with TRCA Stormwater Management Criteria (August 2012). Please ensure that the land and budget required to adequately meet SWM criteria is acquired and reserved early in the process to ensure measures can be implemented at the detailed design stage.	
7.	Staff notes that several Low Impact Development (LID) measures are proposed to achieve water balance criteria for the proposed road project. It is also mentioned that the runoff will be pre-treated before it is discharged to the LID measures.	

ITEM	TRCA COMMENTS (July 4, 2018)	PROPONENT RESPONSE
	<p>The proposed LID measures include grassed swales, oil-grit separators (OGS) and/ or goss traps. As highly trafficked roads are sources of hydrocarbons that are pollutants, please consider measures that have the capacity to remove hydrocarbons.</p> <p>Please also ensure that sufficient space and within the road right-of-way and budget are allocated to accommodate the proposed LID measures at the EA stage, so that LID measures are implementable at the detailed design stage. It is staff understanding that the detailed design work is running concurrently with the EA study. As such, please consider which specific LID measures will be implemented within the roadway at this point in time, so that these measures may be integrated into the detailed design work by Urbantech. Please see the Low Impact Development Stormwater Management Planning and Design Guide (2010) for further guidance and information.</p>	
Etobicoke Creek Crossing Comments		
8.	It is staff understanding that the proposed interchange reconfiguration may involve modifications to the existing Etobicoke Creek crossing along Hurontario Street, north of the interchange. Modifications may potentially include a culvert extension at this location. Please complete a hydraulic assessment for any modifications to the existing culvert crossing, including any changes to the culvert itself, road profile, grading, etc. Please contact TRCA staff for an updated HEC-RAS model of the area.	
9.	Where valley slopes exist (i.e. Etobicoke Creek culvert along Hurontario Street, north of the interchange) and where Etobicoke Creek meanders close to Hurontario Street north of the crossing, please provide a slope stability and erosion hazard assessment to ensure that the proposed work is not undermined by erosion hazards in the long-term, or does not destabilize the valleys. The position of the Long-Term Stable Top of Slope needs to be delineated with a minimum safety factor of 1.50 to define the setback required from the existing top of bank/slope. Please contact TRCA staff to arrange a site visit to review existing site conditions.	
10.	At detailed design, all culverts should be designed by a qualified engineer using the geotechnical information. Suitable foundation is required for culverts as per ground condition.	
Natural Environment Comments		
11.	It is staff understanding that the two (2) wetland and woodland features located north and south of the proposed Spine Road alignment within TRCA jurisdiction have been identified and the boundaries have been staked. Please ensure and confirm that the alignment of Spine Road at both the EA and detailed design stages are appropriately setback from the features and established buffers.	
12.	In Section 2 of the draft Natural Environment Existing Conditions Report, please include the results of the Headwater Drainage Feature Assessment (HDFA) undertaken as part of the Mayfield West Comprehensive Environmental Impact Study and Management Plan (CEISMP) process. For TRCA's jurisdiction within the study area, the HDFA is the classification system that determines the management options for headwater features.	
13.	In Section 4, please include impacts to terrestrial connectivity, and to headwater drainage features.	
14.	In Section 5, please include the specific direction from the CEISMP and EIR regarding terrestrial connectivity between the Northeast and Southeast wetlands/woodlands. The detailed design drawings from Urbantech do not appear to provide any details for ensuring connectivity is maintained.	
15.	In Section 5, please confirm the specific direction from the CEISMP and EIR regarding management of headwater drainage features. If the mapped and classified features are added to Section 2, it can be determined if construction of the	

ITEM	TRCA COMMENTS (July 4, 2018)	PROPONENT RESPONSE
	Spine Road would require feature alteration and compensation.	
16.	Please note that the CEISMP and EIR provide direction on wetland water balance. In Section 5, please include requirements for providing external flows to the Southeast wetland from the drainage area north of the Spine Road. The detailed design drawings from Urbantech do not appear to provide any details for conveying mitigating flows.	
17.	The boundaries of the significant woodlands, as discussed on page 34, should be referenced from studies undertaken as part of the CEISP process. Please revise and include as part of the report.	
18.	The requirement for updated breeding bird surveys for Bobolink and Eastern Meadowlark, as mentioned on page 32 of the report, should be directed to the MNRF.	
19.	Staff notes that the submitted Tree Inventory Report Memo (September 13, 2017) does not include an inventory of any trees within the interchange area, including at the Etobicoke Creek crossing. Please provide an inventory for the entire study area, which includes diameter at breast height (dbh) and species. This information will be required to assess the extent and impact of any required tree removals, and to determine appropriate restoration and compensation for disturbances to natural features. Please also include dbh and species information for tree inventory along the Spine Road alignment.	
Hydrogeology Comments		
20.	Staff notes that the current EA recommendations appears to be based on a single water level measurement that was recorded in March 2016, according to the submitted Hydrogeological Assessment (October 16, 2017). Staff recommends that fresh groundwater level measurements be carried out and repeated on several occasions to determine highest groundwater level.	
21.	Please provide groundwater quality characterization, as recommended in the Hydrogeological Assessment (October 16, 2017) report.	
22.	At detailed design, please provide drawings that show borehole information on both the plan and profile views.	
Geotechnical Comments		
23.	At detailed design, a detailed geotechnical study is required in support of the proposed undertaking to assess the ground condition along the alignment and to provide the geotechnical design recommendations for the various components of the proposed undertaking.	
24.	At detailed design, please provide cross-sections along the alignment in adequate intervals and in critical locations, showing the proposed grade with respect to the existing ground. The cross-sections should be extended enough to show all the features and slopes/banks where they exist. The extent of the proposed grading should also be shown on the plan view drawing along the alignment.	
25.	At detailed design, please note that the proposed embankments and cuts should be studied and designed by a geotechnical engineer. A stability assessment is required for the proposed embankments, and cuts for the side slopes to confirm that a minimum safety factor of 1.50 is achieved.	

APPENDIX B: TRCA AREAS OF INTEREST

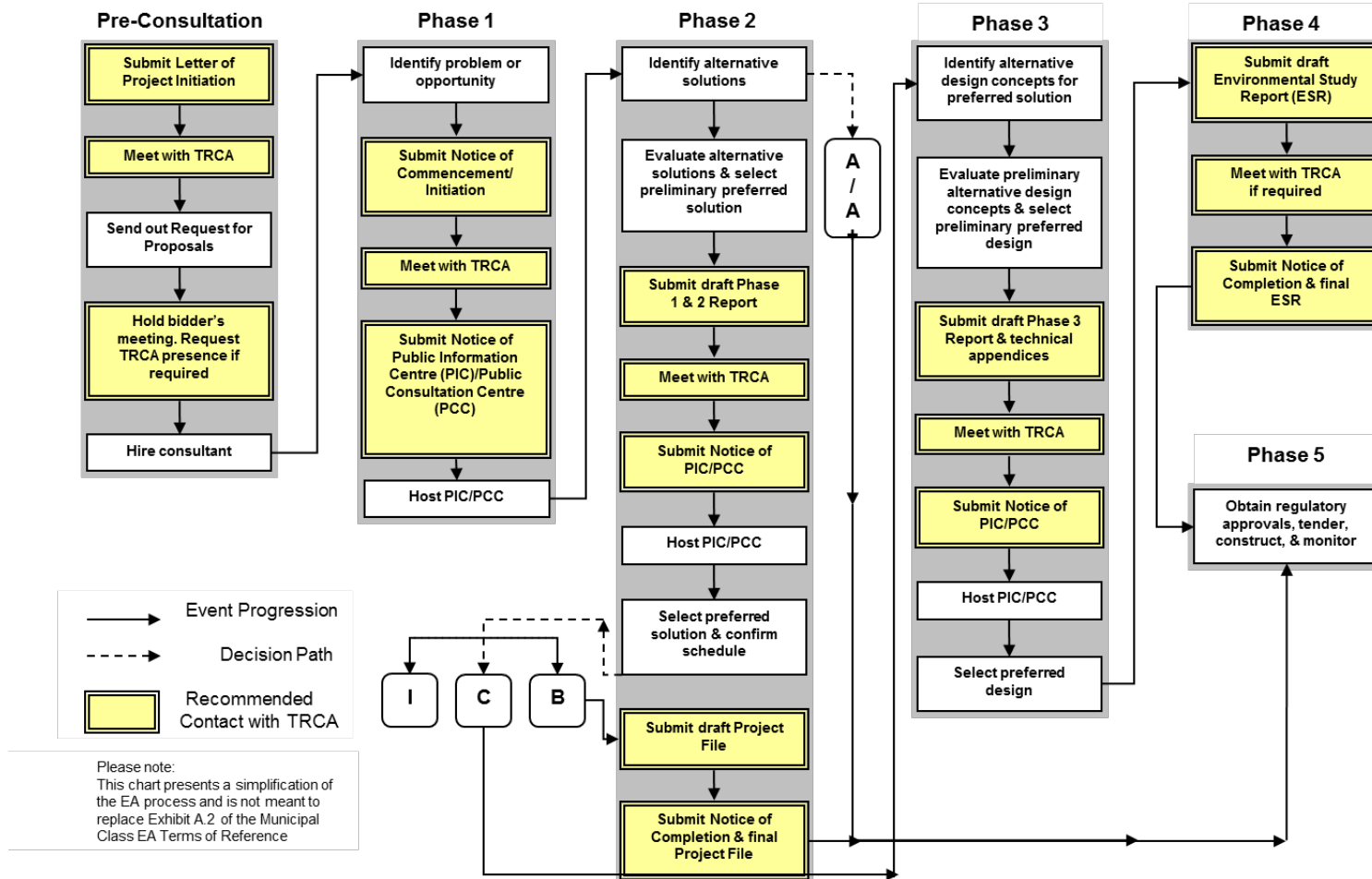
TRCA PROGRAM AND POLICY AREAS	
Note: Additional program and policy information may be available at www.trca.on.ca , or by request.	
Natural System Programs and Policies	
Natural System Structure and Functions	TRCA follows a “systems approach” to natural heritage protection in which all features and water resources within the Natural System are considered in relation to each other and the broader landscape in which they occur. This “systems approach” recognizes the role that linkages and connectivity within the Natural System has in supporting ecological and hydrologic processes and functions that are vital to maintaining a healthy and robust Natural System that is resilient against the impacts of urbanization and climate change. These processes and functions include water quality and quantity, stream channel processes and dynamics, and terrestrial and aquatic habitat quality and connectivity, including wildlife passage and pedestrian access where required. Furthermore, a robust and connected Natural System has an additional role in climate change mitigation, as a carbon reduction strategy, and adaptation, through flood storage and attenuation.
Aquatic Systems, Species and Habitat	<p>The aquatic system includes watercourses, wetlands and flora and fauna species. Aquatic species and habitat should be assessed based on their conservation status according to sensitivity to disturbance and specialized ecological needs, as well as rarity.</p> <p>TRCA has prepared watershed plans or strategies, as well fisheries management plans for some watersheds. TRCA may require an assessment of the existing aquatic system, together with an evaluation as to how the proposal will meet the objectives articulated in the watershed plan or fisheries management plan, as well as prevent negative impacts to the aquatic system.</p>
Terrestrial Systems, Species and Habitat	<p>The terrestrial system includes landscape features, vegetation communities and flora and fauna species. Terrestrial species and habitat should be assessed based on their conservation status according to sensitivity to disturbance and specialized ecological needs, as well as rarity.</p> <p>TRCA has identified the need to improve both the quality and quantity of terrestrial habitat. TRCA’s Terrestrial Natural Heritage System Strategy sets measurable targets for attaining a healthier natural system by creating an expanded and targeted land base. It includes strategic directions for stewardship and securement of the land base, a land use policy framework to help achieve the target system, and other implementation mechanisms.</p> <p>TRCA may require an assessment of the existing terrestrial species and habitat, together with an evaluation as to how the proposal will meet the objectives articulated in the watershed plan or terrestrial natural heritage strategy, as well as prevent negative impacts to the aquatic system. In addition, relevant legislation (e.g. Endangered Species Act, Species at Risk Act) should be applied.</p>
Groundwater Systems	
Aquifers and Hydrogeological Features and Functions	Groundwater systems include aquifers and their functional connections to surface water. The extraction and discharge of groundwater has the potential to negatively impact surrounding natural features and their functions. Even small amounts of groundwater extraction may reduce contributions to groundwater dependent features such as wetlands, springs, or fish spawning habitat. In addition, the discharge of groundwater must be controlled to avoid impacts to watercourses and fish habitat from temperature, erosion and sedimentation, as

TRCA PROGRAM AND POLICY AREAS	
Note: Additional program and policy information may be available at www.trca.on.ca , or by request.	
	<p>well other water quality issues.</p> <p>TRCA may require geotechnical or hydrogeological investigations to confirm dewatering and discharge requirements, and to identify appropriate mitigation measures with respect to potential impacts to natural features and functions. In addition, relevant legislation (e.g. Clean Water Act) should be applied.</p>
Surface Water Systems	
Watercourses	Typically, watercourses are associated with aquatic species and habitat. Any alteration or interference to a watercourse (e.g. straightening, diverting, realigning, altering baseflow) has the potential to impact fish communities, but may also affect the Regulatory Flood Plain, erosion or other natural channel processes. TRCA may require an environmental study or site confirmation of watercourse locations.
Regulatory Flood Plain	<p>The Regulatory Flood Plain is the approved standard used in a particular watershed to define the limit of the flood plain for regulatory purposes. Within TRCA's jurisdiction, the Regulatory Flood Plain is based on the greater of the regional storm, Hurricane Hazel, and the 100-year flood.</p> <p>Any development or alterations to existing structures within the Regulatory Flood Plain may introduce risk to life or property, and may not be compatible with existing natural features. TRCA's framework for Flood Plain Management is the Living City Policies.</p> <p>TRCA may require a flood study or hydraulic update to confirm that there will be no impacts to the storage or conveyance of flood waters.</p>
Wetlands	Wetlands are sensitive natural habitats that play an important role in numerous physical, chemical and biological processes, including storm water control, natural habitat and water quality improvement. Most wetlands are designated by the Ministry of Natural Resources as Provincially Significant or Locally Significant. Other wetlands have also been identified on a site specific basis by TRCA. All of these are regulated under Ontario Regulation 166/06. TRCA may require an environmental study or site confirmation of wetlands locations.
Stormwater Management and Green Infrastructure	<p>Stormwater management is integral to the health of streams, rivers, lakes, fisheries and terrestrial habitats, and source water protection is integral for managing the quality and quantity of drinking water at its source.</p> <p>The TRCA LCP requires all development, infrastructure and site alteration meet the criteria in the TRCA 2012 Stormwater Management Criteria document for water quantity, water quality, erosion control, discharge water temperature, and water balance for groundwater recharge and natural features.</p> <p>Some of the Stormwater Management Criteria can be met through the implementation of Green Infrastructure, including Low Impact Development (LID) measures. Green Infrastructure and LID measures are also able to maximize ecosystem services, and mitigate the impacts of urbanization and potential impacts of climate change. For further information, please refer to https://sustainabletechnologies.ca/home/urban-runoff-green-infrastructure, particularly the 2010 Low Impact Development Stormwater Management Planning and Design Guide.</p>

TRCA PROGRAM AND POLICY AREAS	
Note: Additional program and policy information may be available at www.trca.on.ca , or by request.	
Valley Slopes	
Crest of Slope	<p>Valley and stream corridors are dynamic systems that provide important natural functions and linkages for the physical, chemical and biological processes of wildlife, watercourses, and other natural features. The crest of slope identifies the physical limit of these corridors; however, due to ecological sensitivities, development restrictions typically extend beyond the actual crest of slope.</p> <p>TRCA may require the determination of the long term stable crest of slope (or toe of slope) through a staking with TRCA staff, as well as a geotechnical assessment.</p>
Sustainability Programs and Policies	
TRCA Property and Archaeological Resources	<p>If TRCA property is needed for the implementation of the preferred alternative, permission and approval from TRCA and the Minister of Natural Resources are required. The design must demonstrate that TRCA program and policy objectives are met. Formal approval typically takes 12 to 18 months from the completion of the EA document.</p> <p>TRCA may require a Stage 1, 2, 3, or 4 archaeological assessments to confirm impacts to these resources. Note that an archaeological investigation by TRCA's archaeological staff must precede any disturbance to TRCA property, at the cost of the proponent. Scheduling will be subject to weather, seasonal programs and other field work.</p>
PROVINCIAL PROGRAM AREAS	
Greenbelt Plan	<p>The Greenbelt consists of more than 2 million acres of environmentally sensitive land, urban river valleys and agricultural land in the Golden Horseshoe. The Greenbelt Plan identifies limits to urbanization to provide permanent protection to the agricultural land base and the ecological features and functions occurring within this landscape. Please contact the Ministry of Municipal Affairs and Housing for more details.</p> <p>The preferred alternative design must conform with Section 4.2 Infrastructure Policies and Section 6 Urban River Valley Policies of the Greenbelt Plan.</p>
Credit Valley – Toronto and Region – Central Lake Ontario Source Protection Plan (CTC SPP)	<p>The Clean Water Act ensures communities protect their drinking water supplies through prevention – by developing collaborative, watershed-based source protection plans that are locally driven and based on science. Please be advised that the subject property appears to fall within the following vulnerable areas under the Credit Valley - Toronto and Region - Central Lake Ontario Source Protection Plan (CTC SPP): Highly Vulnerable Aquifer (HVA)</p> <p>The CTC SPP contains policies to protect vulnerable areas from “prescribed threats”, which is defined as an activity or condition that adversely affects or has the potential to adversely affect the quality or quantity of any water that is or may be used as a source of drinking water, and includes an activity or condition that is prescribed by source protection regulation as a drinking water threat. The Province has an identified list of activities that, if present in vulnerable areas, now or in the future, could pose a prescribed threat. For further information and the CTC Source Protection Plan, please refer to www.ctcswp.ca.</p> <p>TRCA supports the legislated protection of municipal drinking water sources through the Clean Water Act, and acts as a technical advisor to municipalities for some aspects of the CTC SPP. However, municipalities are the approval authority responsible for ensuring that Planning Act applications conform to the</p>

TRCA PROGRAM AND POLICY AREAS	
Note: Additional program and policy information may be available at www.trca.on.ca , or by request.	
	<p>CTC SPP. Please contact Jennifer Stephens (jstephens@trca.on.ca), CTC Source Protection Region Program Manager, for further information and guidance.</p> <p>Vulnerable Areas</p> <p>Highly Vulnerable Aquifers (HVA): A HVA can be easily changed or affected by contamination from both human activities and human processes as a result of its intrinsic susceptibility (as a function of the thickness and permeability of overlaying layers), or by preferential pathways to the aquifer.</p>
<p>Please contact the Ministry of Natural Resources and Forestry (MNRF) to confirm if there are program interests related to this project for:</p> <ul style="list-style-type: none">• Areas of Natural and Scientific Interest (ANSI)• Provincially Significant Wetlands (PSW)• Provincially Endangered Species under the Species at Risk Act <p>Please be advised that this list is not inclusive and the onus is on the proponent and its consultants to consult with other provincial agencies, as required, to ensure that requirements of their respective legislation is met.</p>	
FEDERAL PROGRAM AREAS	
<p>Please contact the relevant federal agency to confirm if there are issues related to:</p> <ul style="list-style-type: none">• Asian Long-horned Beetle Regulated Area• Federally Endangered Species under the Endangered Species Act• The Fisheries Act <p>Please be advised that this list is not inclusive and the onus is on the proponent and its consultants to consult with other federal agencies, as required, to ensure that requirements of their respective legislation is met.</p>	

APPENDIX C: SERVICE DELIVERY STANDARDS – RECOMMENDED TRCA CONTACT POINTS



From: EnviroOnt <EnviroOnt@tc.gc.ca>
Sent: Friday, June 22, 2018 4:47 PM
To: Shams, Aniqua
Subject: RE: Notice of PIC and Study Area Revisions - Schedule 'C' Municipal Class EA Study - Widening of McLaughlin Road and Construction of new East-West Spine Road (Mayfield West Phase 2)

Greetings,

Thank you for your correspondence.

Please note Transport Canada **does not** require receipt of all individual or Class EA related notifications. We are requesting project proponents to self-assess if their project:

1. Will interact with a federal property and/or waterway by reviewing the Directory of Federal Real Property, available at www.tbs-sct.gc.ca/dfrp-rbif/; and
2. Will require approval and/or authorization under any Acts administered by Transport Canada* available at <http://www.tc.gc.ca/eng/acts-regulations/menu.htm>.

Projects that will occur on federal property prior to exercising a power, performing a function or duty in relation to that project, will be subject to a determination of the likelihood of significant adverse environmental effects, per Section 67 of the *Canadian Environmental Assessment Act, 2012*.

If the aforementioned does not apply, the Environmental Assessment program should not be included in any further correspondence and future notifications will not receive a response. If there is a role under the program, correspondence should be forwarded *electronically* to: EnviroOnt@tc.gc.ca with a **brief description of Transport Canada's expected role**.

*Below is a summary of the most common Acts that have applied to projects in an Environmental Assessment context:

- **Navigation Protection Act (NPA)** – the Act applies primarily to works constructed or placed in, on, over, under, through, or across scheduled navigable waters set out under the Act. The Navigation Protection Program administers the NPA through the review and authorization of works affecting scheduled navigable waters. Information about the Program, NPA and approval process is available at: <http://www.tc.gc.ca/eng/programs-621.html>. Enquiries can be directed to NPPONT-PPNONT@tc.gc.ca or by calling (519) 383-1863.
- **Railway Safety Act (RSA)** – the Act provides the regulatory framework for railway safety, security, and some of the environmental impacts of railway operations in Canada. The Rail Safety Program develops and enforces regulations, rules, standards and procedures governing safe railway operations. Additional information about the Program is available at: <https://www.tc.gc.ca/eng/railsafety/menu.htm>. Enquiries can be directed to RailSafety@tc.gc.ca or by calling (613) 998-2985.
- **Transportation of Dangerous Goods Act (TDGA)** – the transportation of dangerous goods by air, marine, rail and road is regulated under the TDGA. Transport Canada, based on risks, develops safety standards and regulations, provides oversight and gives expert advice on dangerous goods to promote public safety. Additional information about the transportation of dangerous goods is available at: <https://www.tc.gc.ca/eng/tdg/safety-menu.htm>. Enquiries can be directed to TDG-TMDOntario@tc.gc.ca or by calling (416) 973-1868.

- **Aeronautics Act** – Transport Canada has sole jurisdiction over aeronautics, which includes aerodromes and all related buildings or services used for aviation purposes. Aviation safety in Canada is regulated under this Act and the Canadian Aviation Regulations (CARs). Elevated Structures, such as wind turbines and communication towers, would be examples of projects that must be assessed for lighting and marking requirements in accordance with the CARs. Transport Canada also has an interest in projects that have the potential to cause interference between wildlife and aviation activities. One example would be waste facilities, which may attract birds into commercial and recreational flight paths. The *Land Use In The Vicinity of Aerodromes* publication recommends guidelines for and uses in the vicinity of aerodromes, available at: <https://www.tc.gc.ca/eng/civilaviation/publications/tp1247-menu-1418.htm>. Enquires can be directed to at tc.aviationservicesont-servicesaviationont.tc@tc.gc.ca or by calling 1 (800) 305-2059 / (416) 952-0230.

Please advise if additional information is needed.

Thank you,

Environmental Assessment Program, Ontario Region

Transport Canada / Government of Canada / 4900 Yonge St., Toronto, ON M2N 6A5

EnviroOnt@tc.gc.ca / Facsimile : (416) 952-0514 / TTY: 1-888-675-6863

Programme d'évaluation environnementale, Région de l'Ontario

Transports Canada / Gouvernement du Canada / 4900, rue Yonge, Toronto, ON, M2N 6A5

EnviroOnt@tc.gc.ca / télécopieur: (416) 952-0514

From: Shams, Anika [mailto:anika.shams@woodplc.com]

Sent: Friday, June 22, 2018 1:18 PM

Cc: Stahl, Jason <jason.stahl@woodplc.com>; Sinke, David <david.sinke@woodplc.com>; Kant Chawla <Kant.Chawla@caledon.ca>

Subject: Notice of PIC and Study Area Revisions – Schedule 'C' Municipal Class EA Study - Widening of McLaughlin Road and Construction of new East-West Spine Road (Mayfield West Phase 2)

Good Afternoon,

The Town of Caledon is completing a Schedule 'C' Municipal Class Environmental Assessment Study for the Widening of McLaughlin Road and Construction of new East-West Spine Road (Mayfield West Phase 2).

We have enclosed for your information a copy of the Notice of Public Information Centre, which is scheduled for July 5, 2018.

For further information or if you wish to provide input regarding this project, please contact the undersigned at 905-335-2353 x 3045 or via email at jason.stahl@woodplc.com

Kind Regards,

Jason Stahl, P. Eng.

Project Engineer, Transportation

3450 Harvester Road, Suite 100, Burlington ON, L7N 3W5

Direct: +1 905 335 2353 x 3045

jason.stahl@woodplc.com
www.woodplc.com

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