



**ADDENDUM to the
2006 Municipal Class Environmental Assessment
for the 2 to 4 lane widening on Mississauga Road
from Queen Street West to Bovaird Drive West**

January 10, 2019

Table of Contents

Introduction	3
Current Environmental Assessment and Addendum Report.....	3
2. Background	4
2.1 Overview of the Municipal Class EA Addendum Process	4
2.2 Study Approach and Organization	5
3. Proposed Change to the 2006 Approved Environmental Study Report	5
3.1 Circumstances Necessitating the Change	5
a) 2016 Transportation and Traffic Analysis Report	5
a) Land Use Planning.....	6
b) Planning Context.....	6
3.2. Rationale for the Proposed Additional Widening	10
3.2.1 Details of the Proposed Design for the Additional Widening	11
3.2.2 Stormwater Management.....	12
3.3 Property Requirements.....	14
3.4 Preliminary Cost Estimate	15
4. Environmental Implications of the Proposed Change	15
4.1 Summary of the Potential Effects and Recommended Mitigation Measures	15
4.1.1. Natural Environment Implications of the Proposed Change	15
4.1.2. Fluvial Geomorphic Assessment of the Proposed Change	16
4.1.3. 2016 Stage 1 Background Study and 2017 Stage 1 & 2 Archaeological Assessments	16
4.1.4. Built Heritage and Cultural Heritage Landscape Assessment of the Proposed Change	16
4.1.5. Geotechnical Investigation of the Proposed Change.....	17
4.1.6. Road Traffic Noise Impact of the Proposed Change	17
4.1.7. Air Quality of the Proposed Change.....	17
5. Agency and Stakeholder Consultation	17
5.1 Agency Meetings.....	17
5.2 Indigenous Consultation	19
5.3. Public Consultation	20
5.4. Notice of Filing of Addendum	22

LIST OF APPENDICES

APPENDIX A: Transportation and Traffic Analysis Report

APPENDIX B: Technical Memorandum for the Natural Environment Existing Conditions

APPENDIX C: Fluvial Geomorphic Assessment

APPENDIX D: 2016 Stage 1 Background Study and
2017 Stage 1 and 2 Archaeological Assessment

APPENDIX E: Built Heritage and Cultural Heritage Landscape Assessment Report

APPENDIX F: Technical Memorandum for the Geotechnical Investigation

APPENDIX G: Road Traffic Noise Impact Study

APPENDIX H: Air Quality Assessment Report

APPENDIX I: Stormwater Management Report

APPENDIX J: Agency and Stakeholder Meeting Minutes

APPENDIX K: Indigenous Consultation

APPENDIX L: Notices and Public Information Centre

APPENDIX M: Correspondence

APPENDIX N: Design Plates

Introduction

Current Environmental Assessment and Addendum Report

In 2015 the Region of Peel (Peel) initiated a Schedule C Class Environmental Assessment (EA) for the proposed widening of Mississauga Road from Financial Drive to Queen Street West and to complete the required updates to the technical studies to support this Addendum study, allowing for efficiencies in study costs.

For the purpose of this Addendum study and shown in Figure 1, the section from Financial Drive to Queen Street West has been labelled as Location 1 and the section from north of Queen Street West to south of Bovaird Drive West is labelled Location 2, which is the EA Addendum. The addition of two lanes to Location 2 is the subject of this EA Addendum. The Addendum, including 30 per cent detailed design and updates to the technical studies, has been conducted as an in-house project. Peel retained Wood (formerly AMEC Foster Wheeler) as the consultant for the Location 1 study and the technical reports for Location 2.



Figure 1: Addendum Study Area – Location 2: North of Queen Street West to South of Bovaird Drive West

The purpose of this Environmental Assessment Addendum study is to document:

- the rationale for the proposed additional widening (4-6) of Mississauga Road from 300 metres north of Queen Street West to 100 metres south of Bovaird Drive West
- the details of the proposed design for the additional widening
- potential environmental condition changes associated with proposed design changes and proposed mitigation measures to address any adverse environmental effects, and,
- the results of consultation with stakeholders that may be affected by the proposed design changes

This Addendum addresses the proposed additional widening required to properly serve travel demand along the Mississauga Road corridor and include in the cross section those amenities that serve adjacent development.

2. Background

In 2006 the Region of Peel completed the Class EA Study for the two to four lane widening on Mississauga Road from Queen Street to Bovaird Drive, in the City of Brampton. The purpose of the study was to address the existing capacity deficiency and future requirements on Mississauga Road from Queen Street northerly to Bovaird Drive. The Class EA for this project was conducted as a Schedule C undertaking in accordance with the Municipal Engineers Association's (MEA) *Municipal Class Environmental Assessment* (June 2000) document. The Environmental Study Report (ESR) documenting the planning and consultation process and the preferred design was filed in November 2006.

In 2012 Peel's Long Range Transportation Plan identified the need and justification to widen Mississauga Road from Financial Road to Bovaird Drive and improve other infrastructure such as transit and active transportation facilities to provide the efficient movement of people and goods. Peel also identified the need to widen Mississauga Road from four lanes with a centre turning median, to six lanes with a centre turning median north of Queen Street West by 2015.

Due to delays in construction, the four lanes on Mississauga Road has only been partially completed and the Region of Peel has determined the need to amend the 2006 approved EA Study Report for Mississauga Road from Queen Street West to Bovaird Drive West to allow for the future construction of six lanes. This Addendum Report documents the proposed change, the rationale and implications of the change and a summary of the consultation with stakeholders.

2.1 Overview of the Municipal Class EA Addendum Process

The two to four road lane widening for the Mississauga Road from Queen Street to Bovaird Drive was carried out as a Schedule C activity pursuant to the Municipal Class EA. Section A.4.3. of the Municipal Class EA allows the proponent to issue an addendum to the ESR if there is a "modification to the project or change in the environmental setting for the project" from that originally anticipated. Any significant change that occurs after filing the ESR requires a review to be carried out to:

- Identify the circumstances necessitating the change
- Determine the potential environmental implications of the proposed changes along with any measures for mitigating potential adverse environmental effects
- Document the proposed changes, rationale, implications and mitigation measures in an Addendum to the ESR, and
- File the Addendum and ESR for a period of 30 calendar days, with the Notice of Filing of Addendum issued to potentially affected members of the public, review agencies and indigenous groups.

Only the proposed changes documented in this Addendum Report are subject to review by the public and agencies. The remaining portions of the preferred design set out in the 2006 Mississauga Road ESR remain approved under the EA Act.

2.2 Study Approach and Organization

The Study was carried out under the direction of Peel staff and the updates to the Traffic and Natural Environment reports were prepared by Wood Environment & Infrastructure Solutions (Wood) consultants on behalf of the Region of Peel.

Member	Role
Sally Rook, C.E.T.	Manager, Infrastructure Program Planning & Studies
Asha Saddi	Technical Analyst
Arthur Lee	Technical Analyst

The consultant team specialists were:

Member	Role
David Sinke	Project Manager, Wood
Jason Stahl	Project Engineer, Wood
Neal Smith	Senior Technologist, Wood

The project team recognized that there were different interests within the study area and the need to provide all affected stakeholders with an opportunity to become involved in the study. Consultations included soliciting feedback from:

- Affected property owners along Mississauga Road, residents and business owners within the surrounding community
- Technical Agencies, including the Credit Valley Conservation, City of Brampton, Ministry of Natural Resources and Forestry, Ministry of Tourism, Culture & Sport, Parks Canada, Historic Site and Monument Site, Fisheries and Oceans Canada and the Ministries of Transportation and Environment, Conservation and Parks
- Indigenous groups
- Utilities, including Alectra (formerly Brampton Hydro), Enbridge, Bell, Hydro One Networks, and, the
- general public

3. Proposed Change to the 2006 Approved Environmental Study Report

3.1 Circumstances Necessitating the Change

a) 2016 Transportation and Traffic Analysis Report

In 2016 Paradigm Transportation Solutions Limited prepared the Transportation and Traffic Analysis Report for Wood to address the short and long term transportation needs related to planned growth to the year 2031 along Mississauga Road from Financial Drive to south of Bovaird Drive West and which includes this Addendum section.

Based on the traffic analysis completed for the Addendum Study, it is recommended that Mississauga Road be widened to six lanes from Queen Street West to south of Bovaird Drive West, with intersection and road safety improvements. The Traffic Report confirmed the recommendations of the 2012 Region of Peel Long Range Transportation Plan and reiterated the need and justification to widen the road. The Transportation and Traffic Analysis Report can be viewed at Appendix A.

a) Land Use Planning

Land use along the study area has changed. Since 2006 several land use and development applications that affect traffic operations in the Mississauga Road corridor have been completed, including block plans and development applications to develop lands on both the east and west side of Mississauga Road between Queen Street West and Bovaird Drive West. This substantial population growth in the area has resulted in an increase in traffic volumes and the need for roadway improvements to accommodate the new traffic demand.

Subsequent to the filing of the 2006 ESR, land development applications include:

1) Four X Developments Inc., File 21T-10020B

This subdivision plan to build 404 single detached dwellings and a neighbourhood park north of Queen Street West and south of Williams Parkway and west of Mississauga Road was approved and issued for construction. Registration, construction and development commenced in December 2016.

2) Bluegrass Valley (Stanford Homes), File 21T-05037B

This subdivision plan to create a residential subdivision of both single and semi-detached homes, two school blocks, a valleyland and stormwater management pond, has been constructed and is located at the north-east corner of Mississauga Road and Williams Parkway. Approval for registration, construction and development was December 6, 2016

b) Planning Context

1) Provincial Policy

The Provincial Growth Plan and the Greater Golden Horseshoe and the Provincial Policy Statement provide planning guidance for Peel’s Long Range Transportation Plan.

- i. Ontario’s Growth Plan (2017)



The Growth Plan guides decisions on transportation, infrastructure planning, land-use planning, urban form, housing, achieving complete communities, transit, cultural and natural heritage, resource protection and climate change. To ensure sustainable growth, Section 3.2.2 of Places to Grow addresses the infrastructure required to support growth.

Growth within the Region of Peel is mandated by the Province’s Growth Plan. Peel’s Official Plan complies with the Province’s Plan and includes both new and infill / intensification developments. It

is the responsibility of the Region of Peel to ensure that the transportation network can support planned growth and provide for efficient movement not only locally, but, on a neighbourhood and a regional level.

The planning of Mississauga Road improvements is consistent with direction in the Growth Plan, which is to provide connections among and between communities, support efficient transit services, support multi-modal uses through provisions for pedestrians and cyclists, increase efficiency and flexibility of the transportation network, reduce delays for residents and businesses, mitigate the effects of climate change and to relieve demands on arterial roads.

ii. The Provincial Policy Statement

The 2014 Provincial Policy Statement provides a vision for Ontario’s land use planning, built environment and management of land and resources to achieve liveable and resilient communities.

With reference to this study, Section 1.6.7 promotes Transportation Systems which are “safe, and facilitate the movement of people and goods that are appropriate to address projected needs”. Transportation demand strategies are also encouraged. Section 1.6.8.2 notes that “major goods movement facilities and corridors should be protected for long term”, which supports the use of Mississauga Road as a goods movement corridor and section 1.1.1 supports that healthy, liveable and safe communities are sustained.

2) Municipal Planning

i. Region of Peel Strategic Plan (2015-2035) and Term of Council Priorities (2015-2019)

Peel’s Strategic Plan is a twenty year plan with a Vision for a community for life, where residents will choose to live and work because of the quality of life, and, the Mission *Working with You* to create a healthy, safe and connected community.

ii. Region of Peel 2012 Long Range Transportation Plan Update



The Long Range Transportation Plan (LRTP) considers Peel’s planned population and employment growth (land use, geographic distribution), population and employment trends, demographics and health trends to identify the key challenges that Peel expects to face over the next several decades, such as, population growth; increasing traffic congestion, dependence on cars, increasing work trip lengths, intra-regional trips, need to increase transit modal share, need to maintain economic competitiveness, aging population and environmental impacts of transportation and the promotion of walking, cycling and transit. The LRTP sets out a number of on-going and planned transportation and transit initiatives to address these key challenges.

To meet existing and future needs the LRTP identified the need to:

1. Widen Mississauga Road from Financial Drive to Bovaird Drive, and,
2. Improve other infrastructure such as transit and active transportation facilities to provide efficient movement of people and goods

The 2012 LRTP Update was conducted as a Region-wide master plan that followed the requirements of the Master Plan process, as defined in the Manual of the Municipal Engineer's Association Municipal Class Environmental Assessment including Phases I and II of the EA process. The LRTP therefore provides the need and justification for the widening of Mississauga Road and fulfills Phases I and II of the Municipal Engineer's Association Municipal Class Environmental Assessment.

The 2012 LRTP Update can be viewed at: <http://www.peelregion.ca/pw/transportation/planning-residents/long-range.htm>

iii. Region of Peel Official Plan

Peel's Official Plan is a long term plan used to assist Peel in managing growth and development. The main theme of the Plan is sustainability supported by environmental, social, economic and cultural imperatives that are reflected through the specific policies.

Since the completion of the 2006 ESR, amendments to the Region of Peel and the City of Brampton Official Plans have been completed and which have influenced the widening proposal of the Queen Street West to Bovaird Drive West section of Mississauga Road. The main amendments that are of significance for this Addendum is the Region of Peel Official Plan Amendment (ROPA) 22 and 27.

ROPA Amendment 22 (2009)

Policy 5.9.4.2.6 of ROPA 22 allows for the location of six lane roads within rights-of-way between 45 metres and 55 metres in width. The proposed widening of the Queen Street West to Bovaird Drive West section of Mississauga Road under consideration in this Addendum is consistent with this policy direction.

ROPA Amendment 27 (2017)

ROPA 27 promotes the design of more walkable, connected and accessible neighbourhoods. The design of Peel communities influences health outcomes for people in every stage of life and ROPA 27 focuses on health and the built environment and age friendly communities.

3) City of Brampton Official Plan

2015 City of Brampton Official Plan and Secondary Plans

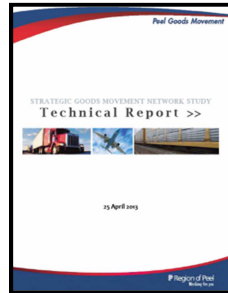
The City's Official Plan directs land use decision making with the City of Brampton to 2031 and guides development and infrastructure decisions. A significant portion of the City's planned population and employment growth will occur primarily in west Brampton and in the following Secondary Plan Areas:

- Bram West (Secondary Plan Area 40)
- Huttonville North (52)
- Mount Pleasant (51), and,

- Mount Pleasant (53)

4) Supporting Background Studies

i. Region of Peel Goods Movement Strategic Plan (2016-2021)



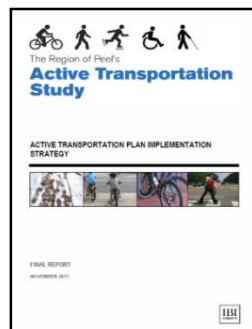
The 2016-2021 Goods Movement Strategic Plan serves as an update to the 2012-2016 Goods Movement Strategic Plan and identifies a plan of action to improve how goods are moved both within and through the Region of Peel and includes pursuing infrastructure improvements and the optimization of existing infrastructure.

The Goods Movement Network includes Mississauga Road as a primary truck route.

The Strategic Goods Movement Plan can be viewed at:

<http://www.peelregion.ca/pw/transportation/goodsmovement/pdf/goods-movement-strategic-plan-2017-2021.pdf>

ii. Region of Peel Active Transportation Plan (2011)



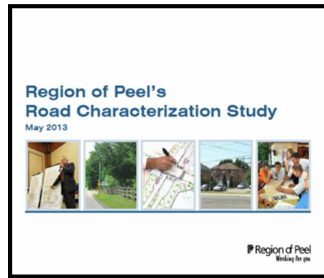
The Active Transportation (AT) Plan provides a framework for how Peel will increase the share of trips by walking and cycling; enhance multi-modal integration, such as linking active modes of transportation with transit, and, create a pedestrian and cycling friendly environment.

The AT Plan sets out policies that direct the practices of the Region of Peel to support:

- more walking and cycling
- active transportation improvements to the existing cycling and pedestrian networks, and,
- strategies / programs to shift travel behavior

Improvements that enable walking and cycling to be a transportation choice will be important to achieve Peel's objectives for long-term growth and for healthy and livable communities. This is also supported by Peel's Public Health department.

iii. Region of Peel Road Characterization Study



The Road Characterization Study (RCS) provides recommendations for balancing the needs of all road users within a right of way, applicable to all Regional Roads. The RCS maintains the arterial road classification of all Regional Roads while assigning one of six character typologies that describe the land use and transportation patterns along a segment of Regional Road.

The RCS defines Mississauga Road within the study corridor as a suburban connector. Suburban connector routes are generally the link between strip commercial retail development hubs and suburban housing.

The Road Characterization Plan can be viewed at:

<http://www.peelregion.ca/pw/transportation/business/rcs-may2013.htm>

iv. City of Brampton Transit and Transportation Master Plan 2015

The 2015 Brampton Transit and Transportation Master Plan provides a blue print for strategic planning and decision-making to achieve a balanced transportation network that addresses the City's growth and development needs over the long term. Brampton's Master Plan makes strategic recommendations for a sustainable, safe and efficient multi-modal City-wide network, addressing roads, transit, active transportation, goods movement and transportation demand management. The 2015 Transportation Master Plan Update sets a vision for how people and goods will travel within and through the City until 2041 and places a strong emphasis on transit, cycling, walking and carpooling.

3.2. Rationale for the Proposed Additional Widening

The 2006 ESR recommended widening Mississauga Road from two to four lanes to improve traffic operations, enhance traffic safety and meet the existing and future traffic demands. The widening would increase the overall capacity of Mississauga Road and fully realize the arterial function of Mississauga Road. However, a six lane roadway would be required after 2015.

Paradigm Transportation Solutions Limited was retained by Wood consultants to undertake a traffic analysis of the Mississauga Road corridor from Financial Drive to the south of Bovaird Drive to address the short and long term transportation needs related to planned growth to the year 2031. Opportunities to better facilitate the movement of vehicles, transit, goods movement, walking and cycling were also reviewed. Paradigm's 2017 Transportation and Traffic Analysis Report (at Appendix A) identified existing traffic volumes to be exceeding capacity throughout Mississauga Road while all intersections along Mississauga Road were found to be operating at an overall acceptable level. The Traffic and

Transportation Analysis Report also outlines 2031 future conditions volumes are expected to exceed capacity along Mississauga Road and some intersections will operate at a poor level of service. The recommendation in the Traffic and Transportation Analysis Report confirmed the LRTP need and justification to widen Mississauga Road and it is therefore recommended to widen Mississauga Road to six lanes. Further, to accommodate 2031 future traffic conditions a second westbound left turn lane is recommended at the intersection of Mississauga Road and Williams Parkway. The intersection of Mississauga Road and Beacon Hill Drive is recommended to be signalized with the west leg to be opened due to the proposed development

3.2.1 Details of the Proposed Design for the Additional Widening

The two to four lane widening recommended in the 2006 ESR was a semi urban section with a curb and gutter on the east side and an open ditch on the west side. The four lane design had 4.25 meters curb lanes with 3.75 meters through lanes and 5.5 meters for the median. The east side of the four lane section would be urbanized with curb/gutter one metre splash pad and three metres multi use trail (MUT) for pedestrians and cyclists. The west side of the four lane section has a two metres shoulder and a one metre flat bottom ditch.

The widening of the roadway from four to six lanes would be constructed on the west side. The west side will be urbanised to match the existing east side with curb/gutter, one metre splash pad and three metres MUT and the east side of Mississauga Road will remain as is. The curb lane will be reconfigured from the existing 4.25 meters to 3.75 meters wide; the through lanes will be reconfigured from existing 3.75 meters to 3.65; and the median will be reconfigured from existing 5.5 meters to 4.9 meters wide (shown in Figure 2 below). The proposed right of way will be 50.5 meters and the posted speed limit will be 80 km/hour.

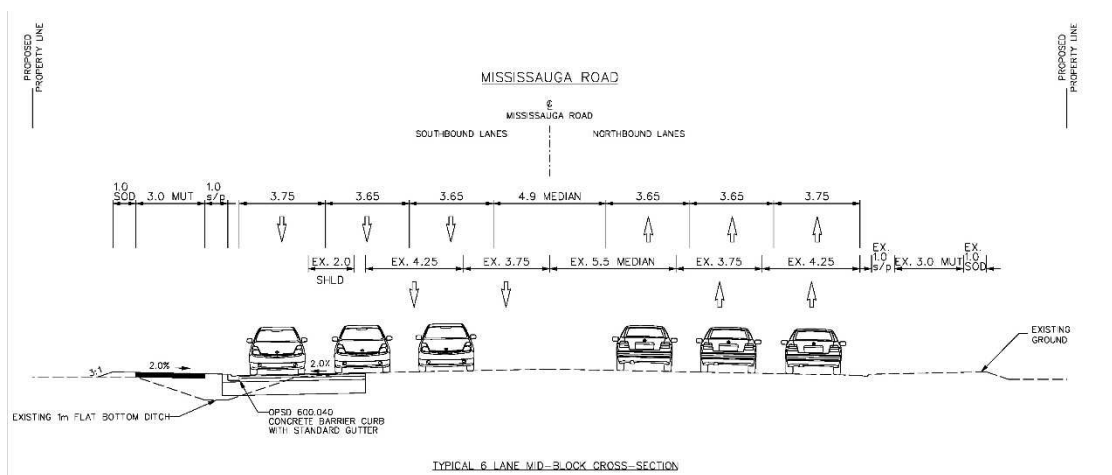


Figure 2: Typical 6 Lane Mid-Block Cross Section

Crossrides are recommended at all intersections to allow cyclists to ride their bicycle within the crossing and without dismounting. At signalized intersections such as Mississauga Road and Williams Parkway, the crossride is separated from the pedestrian crossing (shown in Figure 3 below). At unsignalized

intersections with low volume of crossings a mixed crossride is recommended. A mixed crossride allows cyclists and pedestrians to mix while crossing (shown in Figure 4 below).

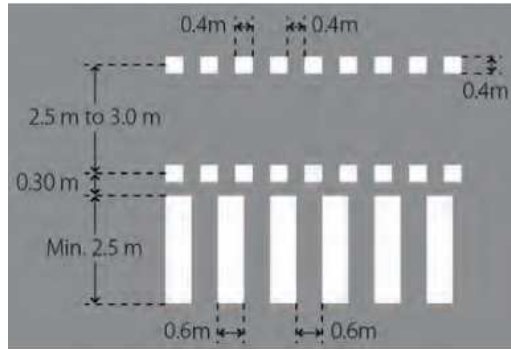


Figure 3: Separate Crossride Source: OTM Book 18 Figure 5.35

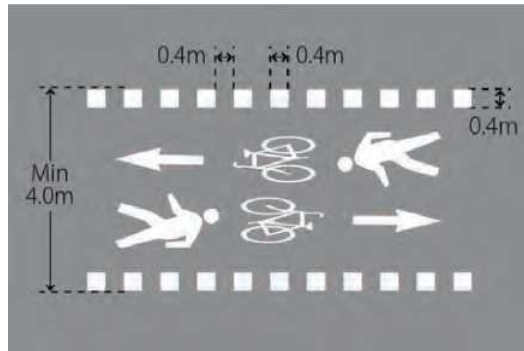


Figure 4: Mixed Crossride Source: OTM Book 18 Figure 5.37

Following consultation with the City of Brampton staff, southbound ZUM bus stop is proposed at Mississauga Road and Williams Parkway and Brampton Transit stops are also proposed at Mississauga Road and Beacon Hill and 230 meters south of Williams Parkway as well as northbound and southbound at Royal West Drive.

The design plates at Appendix N show the design along the corridor.

The anticipated construction of the four to six lane widening along Mississauga Road is anticipated to be 2025.

3.22 Stormwater Management

The existing roadway drainage is divided between three watercourses: Huttonville Creek, the Credit River and a tributary to the Credit River. The existing Mississauga Road encompasses a series of storm sewers conveying minor system flows and a series of urban and semi-urban right-of-ways conveying major system flows.

The existing stormwater infrastructure is found to be insufficient in providing a reduction of existing and future condition peak flow target rates for storm events under the ultimate six lane right-of-way

configuration. To mitigate the lack of quantity control two underground storage tanks are recommended to provide water detention storage, the units would be placed on the west side of Mississauga Road under the boulevard. Existing orifice plates on control manholes will be reconfigured to reduce future peak flows to match pre-development target rates.

An infiltration trench is recommended on the west side of Mississauga Road under the proposed MUT and running from Ostrander Boulevard to Bovaird Drive. The infiltration trench will provide storm water quality control and maintain water balance. Erosion control can also be achieved depending on soil conditions. Flow splitter devices such as weirs are recommended at catchbasins and manholes to divert water to the infiltration trench for the first 27mm of all storm events.

Under the ultimate six lane right-of-way configuration the existing stormwater facility located along Royal West Drive, south of Williams Parkway (H3) will be able to provide quality control for the section of Mississauga Road draining to it, with no impacts to the Huttonville Creek. Also, the existing stormwater facility located at Queen and Mississauga Road (W1) will be able to provide quality control for the section of Mississauga Road draining to it, with no impacts to the Credit River Tributary.

The Stormwater Management Report can be viewed at Appendix I.

Mississauga Road and Settlers Field/Beacon Hill Drive

In October 2018 the Region installed traffic control signals at the intersection of Settlers Field/Beacon Hill Drive and Mississauga Road due to pedestrian safety concerns.

Design Standards

The existing posted speed limit within the study area is 80km/h with a design speed of 90km/h. The Region of Peel has indicated that the proposed posted speed for the future “build” scenario is 70km/h with a design speed of 80km/h. Staff plan to submit a report to Council recommending that the existing posted speed limit be reduced from 80km/h to 70km/h on Mississauga Road from 400 metres north of Queen Street West to 200 metres north of Mayfield Road. Pending Council approval, the subsequent Detailed Design for the section of Mississauga Road covered under this EA Addendum will need to incorporate the lower posted and design speeds while being in compliance with the latest Transportation Association of Canada (TAC) design standards.

Cross rides

At the time of filing the EA Addendum report the current design for cross rides is under review. The EA Addendum design for cross rides will be updated through the Detailed Design based on the updated/most current design standards.

Low Impact Development (LID) Easement

An additional 20 meters by 4 meters LID easement is proposed on the west side of Mississauga Road at STA 12+570 for future site planning and storm servicing, to maintain water balance and provide storm water quality control. The LID easement can be viewed on design plate PP-08.

Shale Protection Policies

Lands in Northwest Brampton are currently protected for shale extraction in advance of urban development. The Region of Peel Council had endorsed revisions to the shale protection policies and these are subject to consultation with stakeholders and the Province. At the time of filing the EA Addendum report, shale protection policies were still in effect on the northwest Brampton lands.

3.3 Property Requirements

The purchase of property requirements will be required on the west side of Mississauga Road. Property requirements will be confirmed during detailed design. Preliminary property requirements are summarized in Table 1.

Address/Location	Property Acquisition Area (Sq.m)
9234 Mississauga Road	210
9220 Mississauga Road	207
9210 Mississauga Road	285
9178 Mississauga Road	271
Farm on west side across Walmart Plaza	1,616
East side along Walmart Plaza	17
Farm on west side at William Parkway	1,596
9602 Mississauga Road	164
9612 Mississauga Road	166
9624 Mississauga Road	166
Farm on west side at Royal West Drive	1,943
9980 Mississauga Road	3,312
TOTAL Sq.m	9,953

Table 1: Preliminary property requirements for the project

3.4 Preliminary Cost Estimate

Table 2 displays the preliminary cost estimate for the project.

Description	Cost
Utility Relocation	\$2,160,000
Road Widening 4 - 6 lanes	\$10,785,350
Street Lights	\$1,317,330
Intersection	\$725,535
Traffic Signals	\$1,826,055
Multi-Use Trail	\$803,250
Streetscaping and Trees	\$1,429,785
Property Requirement	\$1,300,000
Design	\$2,547,682
Stormceptors	\$212,510
TOTAL	\$23,107,497

Table 2: Cost of 6 lane design - Mississauga Road from North of Queen Street West to south of Bovaird Drive (2.4 Km)

The above costs are estimates only and must be updated on detailed design. 13% H.S.T. is not included in the above cost estimate.

4. Environmental Implications of the Proposed Change

4.1 Summary of the Potential Effects and Recommended Mitigation Measures

The potential environmental effects and proposed mitigation measures associated with the preferred design identified in the 2006 EA for the two to four lane widening of the Mississauga Road from Queen Street to Bovaird Drive are documented in Section 7 of the ESR. The ESR identified the potential environmental effects and mitigation measures for the following environmental conditions:

- Natural Heritage
- Stormwater Management
- Built Heritage and Cultural Landscape
- Archaeological Features
- Environmental Noise Impact

The previous EA required updates to support the additional work for the six lane widening along Mississauga Road and as such the following studies were undertaken:

4.1.1. Natural Environment Implications of the Proposed Change

The 2016 field investigations site conditions indicated considerable changes to the terrestrial environment since those observed in 2005 and reported in the 2006 ESR. The majority of the area to be impacted by the proposed road widening consists of previously disturbed areas.

1. Natural Ecosystem Protection

There are concerns associated with wetlands and woodlands adjacent to the study area. Disturbance to wetlands can be minimized by utilizing temporary matting to disperse weight loads of equipment and to prevent disturbance as a result of equipment tacks and tires. In woodland areas and locations with individual trees that do not require removal, tree exclusion zones can be installed to protect trees adjacent to the project works.

2. Aquatic Ecosystem Protection

The protection of Redside Dace and their protected habitat located downstream of Crossing C1 (see Appendix B) and other cross drainage culverts located adjacent to Huttonville Creek in the study area is of concern. Aquatic habitat within the west limits of the project area has remained unchanged with the exception of the replacement of the culvert at Crossing C1 (see Appendix B).

The technical memorandum for the natural environment existing conditions can be viewed at Appendix B.

4.1.2. Fluvial Geomorphic Assessment of the Proposed Change

There are no environmental implications associated with the roadway widening. The fluvial geomorphology assessment can be viewed at Appendix C.

4.1.3. 2016 Stage 1 Background Study and 2017 Stage 1 & 2 Archaeological Assessments

In 2016 Wood completed a Stage 1 archaeological assessment to serve as an Addendum to the 2006 EA. Following this assessment however, the proposed widening improvements were shifted from the east side to the west side of Mississauga Road to avoid any impacts to the Huttonville Cemetery. As the area of the proposed widening on the west side had not been included in the 2016 Stage 1 assessment, the Stage 2 activities in the 2017 report were preceded by a supplementary Stage 1 assessment. On the basis of the 2017 Stage 1 property inspection and a review of recent land use history the Wood identified that 97.5% of the study area did not require a Stage 2 assessment due to recent construction activities and excessive slope. The balance (2.5% / 0.2 hectares) has archaeological potential and warrants Stage 2 assessment.

Before commencing the Stage 2 activities, Peel requested Wood to provide information sharing letters to the Mississaugas of the New Credit First Nations, Six Nations Lands of the Grand River and Haudenosaunee Development Institute indigenous organizations (see Appendix D). The 2017 Stage 2 assessment found no cultural artifacts were encountered and no new archaeological sites were identified. No further archaeological assessment was required.

The 2016 Stage 1 Background Study and the 2017 Stage 1 and 2 Archaeological Assessments can be viewed at Appendix D.

4.1.4. Built Heritage and Cultural Heritage Landscape Assessment of the Proposed Change

Updated findings of the built heritage and cultural heritage landscape assessment recommended mitigation measures to avoid the encroachment on the built heritage properties and cultural heritage

landscapes, and, if necessary, to conduct a heritage impact assessment. The use of heritage plants and themes are also recommended in landscaping and noise abatement structures.

The built heritage and cultural landscape assessment report can be viewed at Appendix E.

4.1.5. Geotechnical Investigation of the Proposed Change

There are no environmental implications associated with the roadway widening. The additional geotechnical investigations are recommended to be completed at detailed design.

The technical memorandum for the geotechnical investigation can be viewed at Appendix F.

4.1.6. Road Traffic Noise Impact of the Proposed Change

The noise impact study was completed only for improvements and widening of Mississauga Road from Bovaird Drive to Adamsville Road as the segment between Adamsville Road to Queen Street is built out to the ultimate six lane configuration. Consideration for noise mitigation is not required for the proposed widening of Mississauga Road between Bovaird Drive and Adamsville Road.

The road traffic noise impact study can be viewed at Appendix G.

4.1.7. Air Quality of the Proposed Change

The future traffic volume along Mississauga Road is not expected to have a negative effect on local air quality.

The air quality assessment report can be viewed at Appendix H.

5. Agency and Stakeholder Consultation

5.1 Agency Meetings

Agency Kick- Off meeting/Workshop – January 21, 2016

A joint meeting was held for both the Environmental Assessment section which is Location 1 and shown in Figure 1, with the study limits from 300m north of Financial Drive to 300m north of Queen Street, and, the Addendum section, which is Location 2, also shown in Figure 1. The kick-off meeting was attended by agency representatives including the City of Brampton, Brampton Transit, Credit Valley Conservation (CVC) and the Region of Peel. The purpose of the meeting was to receive feedback from agency representatives on the opportunity and constraints along the Mississauga Road corridor for both locations and to solicit comment on the evaluation criteria for Location 1 (meeting minutes can be viewed at Appendix J).

Ministry of Natural Resources and Forestry (MNRF) and the Credit Valley Conservation (CVC) meeting held on March 4, 2016

A meeting was held with representatives from MNRF and CVC to discuss the project activities and to receive feedback on the main issues/constraints as well as opportunities with both studies at Location 1 and 2 (meeting minutes can be viewed at Appendix J).

Ministry of Natural Resources and Forestry (MNRF) and the Credit Valley Conservation (CVC) meeting held on October 11, 2016

A meeting was held with representatives from MNRF and CVC to provide them with an update on the study for Locations 1 and 2. A considerable focus was around the constraints and opportunities at the crossing of the Credit River were noted (meeting minutes can be viewed at Appendix J).

Technical Agency Committee Meeting No. 1 held on November 8, 2016

A meeting was held with agency representatives including the City of Brampton, Brampton Transit, CVC, MNRF and the Region of Peel. The purpose of the meeting was to review the technical studies that had been completed, the initial assessment of planning alternatives and a review of the existing constraint mapping for Mississauga Road (meeting minutes can be viewed at Appendix J).

Ministry of Natural Resources and Forestry (MNRF), Credit Valley Conservation (CVC) and Region of Peel meeting held on January 10, 2017

A meeting was held with representatives from the MNRF, CVC and Region of Peel to discuss the background information for stormwater management, including completed design reports and drawings and existing and proposed infrastructure within the Mississauga Road right-of-way (meeting minutes can be viewed at Appendix J).

Ministry of Natural Resources and Forestry (MNRF), Credit Valley Conservation (CVC) and Region of Peel meeting held on July 11, 2017

A meeting was held with representatives from the MNRF, CVC and the Region of Peel to review the preliminary design for the Mississauga Road EA and the status of the stormwater modelling for the Addendum section (notes of the meeting can be viewed at Appendix J).

Ministry of Natural Resources and Forestry (MNRF), Credit Valley Conservation (CVC) and Region of Peel meeting held on September 13, 2017

A meeting was held with representatives from the MNRF, CVC and the Region of Peel to review the preliminary design for the Mississauga Road EA and the recommendations of the stormwater modelling for the Addendum section (notes of the meeting can be viewed at Appendix J).

Region of Peel meeting with Brampton Transit held on August 1, 2018

A meeting was held with Brampton Transit to discuss the design for bus pads against the multi-use trail (notes of the meeting can be viewed at Appendix J).

Technical Agency Committee Meeting held on September 7, 2018

A meeting was held with agency representatives including the City of Brampton, Credit Valley Conservation and the Region of Peel. The purpose of the meeting was to review the proposed preliminary design for the Addendum study. A project overview was also provided including the reasons for an Addendum and project background. The presentation slides for the meeting and the meeting minutes can be viewed at Appendix J.

5.2 Indigenous Consultation

Indigenous consultation is a key component of the Municipal Class EA process and as the Region of Peel conducted the studies for Location 1 and 2 simultaneously the consultations undertaken were for both Location 1 and 2.

Identification of Indigenous Groups

Initial consultation was completed with the Ministry of Aboriginal Affairs (MAA) in the letter dated February 22, 2016 requesting the Ministry's assistance in identifying Indigenous Groups that may have a potential interest in the project. No response was received from the MAA and dialogue was held with the Ministry of the Environment, Conservation and Parks (MECP) about next steps for identifying Indigenous Groups that may have an interest in the project. Following discussion with the MECP it was determined that the MECP would provide direction on which Indigenous Groups should be contacted. Wood provided a request to the MECP (dated March 10, 2016) to confirm the Indigenous Groups that should be contacted for the project, the request included copies of letters, Project Information Sheet and Notice of Commencement that were sent to the following Indigenous Groups:

1. Mississauga of the New Credit First Nation
2. Six Nations of the Grand River
3. Haudenosaunee Development Institute, and,
4. Metis Nation of consultation completed to date.

A response was provided from the MECP dated March 15, 2016 confirming that the identified Indigenous Groups should be engaged about this project. The following is a summary of the Indigenous consultations:

1. Mississauga of the New Credit First Nation (MNCFN)

Introductory Letter and Information Package – February 26, 2016 – the purpose of this letter was to introduce the project and determine if the MNCFN has an interest in the study.

Follow-up Phone Call – March 15 and 21, 2016 – Follow-up phone calls were made to determine the level of interest in this project. An introductory meeting was scheduled.

Letter from MNCFN – April 19, 2016 – The Region of Peel received a letter from the MNCFN that identified that they do not have a high level of concern regarding the project. MNCFN did request to be kept informed through the sharing of environmental and archaeological reports and be notified if there are any changes to the project. The MNCFN also requested that Field Liaison Representatives (FLRs) be on location when any field work for environmental and/or archaeological assessment is undertaken.

Introductory Meeting – April 13, 2016 – an initial introductory meeting was held on April 13, 2016 with representatives from the MNCFN, the Region of Peel and Wood. During the meeting the MNCFN identified an interest in the project and would like to participate. The MNCFN requested the following information:

- Existing environmental and archaeological reports
MNCFN requested copies of any existing studies associated with the Study Areas for review. Peel provided a link to the 2006 Mississauga Road EA documents on April 14, 2016.

- Contact details for developers in the Study Areas
MNCFN required participation of their monitors (FLRs) during fieldwork. An agreement between Peel and MNCFN would be developed to support this participation. As part of this, the Region would fund the participation. The Region requested a copy of the agreement and budget so that they can begin the necessary internal processes. MNCFN issued a draft agreement on April 15, 2016. The Region requested a schedule and list of field studies to be completed so that the MNCFN can prepare a budget and schedule participation.

2. Six Nations of the Grand River (SNGR)

Introductory Letter and information Package – February 26, 2016 – the purpose of this letter was to introduce the project and determine if the SNGR has an interest in the study.

Follow-up Phone Call – March 15, 2016 – a follow-up phone call was made to determine the level of interest in this project. SNGR identified that they had not received the information. Wood resent the information and confirmed receipt. No response has been provided to date.

3. Haudenosaunee Development Institute (HDI)

Introductory Letter and information Package – February 26, 2016 – the purpose of this letter was to introduce the project and determine if the HDI has an interest in the study.

Follow-up Phone Calls – March 15 and 16, 2016 – follow-up phone calls were made to determine the level of interest in this project. HDI identified they would like to meet and will require archaeological and environmental field monitors to be present during the field investigations. Several attempts to meet were unsuccessful.

Follow-up consultation – March 30, 2016 to January 2019 – continued correspondence to HDI was issued throughout the study. A letter and Notice of Filing Addendum was mailed to HDI in January 2019.

4. Metis Nation of Ontario (MNO)

Introductory Letter and information Package – February 26, 2016 – the purpose of this letter was to introduce the project and determine if the MNO has an interest in the study.

Follow-up Phone Call – March 15, 2016 – a follow-up phone call was made to determine the level of interest in this project. The MNO had not seen the information yet and identified that they would not have an interest in the project but would like to be kept informed about the study.

Correspondence related to Indigenous Consultations can be viewed at Appendix K.

5.3. Public Consultation

Public consultation is a mandatory component of the Class EA process. The Region of Peel completed the following activities as part of the public consultation process:

- Newspaper notice for the study commencement appeared in the Brampton Guardian on October 29, 2015. Copies of the notice were sent by mail to all property owners in the study area and to all required agencies. A copy of the Notice can be seen at Appendix L.
- Newspaper notice for the Public Information Notice appeared in the Brampton Guardian on January 26 and February 2, 2017. A copy of the Notice was sent by mail to all property owners in the study area and to all required agencies.
- Newspaper notice for the study completion and Filing of the Addendum appeared in the Brampton Guardian on January 10, 2019 and January 17, 2019. A copy of the Notice was sent by mail to all property owners in the study area and to all required agencies.
- The notices for the study commencement, Public Information Centre, and, study completion and Filing of the Addendum were advertised on Peel’s website at:
<http://www.peelregion.ca/pw/transportation/construction/environmental-assessment/mississauga-road.asp>

Public Information Centre

A joint Public Information Centre (PIC) for this study (Location 2) and Location 1 was held on Thursday, February 9, 2017 from 6:00 p.m. – 8:00 p.m. at the Lionhead Golf and Conference Centre. Notification of the PIC was sent to stakeholders, local residents and agencies including indigenous groups by mail. Notices were placed in the Brampton Guardian on January 26, 2017 and February 2, 2017. Information regarding the PIC was also advertised on the Region of Peel project website.

The PIC was hosted by representatives from the Region of Peel along with the consulting team from Wood. The PIC took an open house drop-in format including boards and maps detailing the progress of the project. There was information presented for both studies including the Class EA (Mississauga Road from Financial Drive to Queen Street West) and this EA Addendum section. Representatives from the Region of Peel Long Range Transportation Master Plan update team were also available at the PIC to discuss this Region of Peel initiative.

The display boards were prepared to summarize:

- Study Area
- Class EA Addendum Process
- Next Steps
- Preliminary Design Drawing

Comment Sheets were provided to give members of the public and agencies the opportunity for input/comment. They were encouraged to provide feedback on the project by submitting their comments on site, via mail, fax, website or email. All comments were requested to be returned by February 24, 2017. The project team noted the comments made on the Comment Sheet received for Location 2 and which can be viewed at Appendix L. The comments regarding snow removal were referred to the appropriate Peel staff.

Subsequent to the holding of the PIC, correspondence was also received from a planning consultant acting on behalf of an owner of vacant subject lands. The planning consultant advised that they were in support of the improvements proposed for Mississauga Road as well as the proposed road alignment. A

copy of the correspondence can be viewed at Appendix M. Correspondence received throughout the study can also be viewed at Appendix M.

All PIC information was available on the Region of Peel's website at:

<http://www.peelregion.ca/pw/transportation/construction/environmental-assessment/mississauga-road.asp>

A copy of the PIC minutes was prepared by Wood and can be viewed at Appendix L.

5.4. Notice of Filing of Addendum

The Notice of Filing of Addendum was issued to property owners in the study area, the review agencies and indigenous groups and a notification of the filing of this EA Addendum was published in the Brampton Guardian newspaper on January 10, 2019 and January 17, 2019.

The Addendum report was made available for public review on January 10, 2019 and ending on February 11, 2019, at the following locations:

Region of Peel
Clerk's Department
10 Peel Centre Drive, Suite A
Brampton, ON
Hours:
Mon-Fri: 8:30 a.m. to 4:30 p.m.

City of Brampton
Clerk's Office – City Hall
2 Wellington Street West
Brampton, ON
Hours:
Mon-Fri: 8:30 a.m. to 4:30 p.m.

A review period of not less than thirty (30) calendar days will be provided, during which comments will be received from stakeholders and agencies. Should stakeholders raise issues that cannot be resolved through discussion with the Region of Peel and consultant staff, the stakeholder may request the Minister of the Environment, Conservation and Parks to require the Region of Peel to complete an individual EA in accordance with Part II of the Environmental Assessment Act, R.S.O. 1990. This is known as a Part II Order Request. However, it is anticipated that all concerns will be resolved through discussion between the Region of Peel and the concerned party.

Written comments should be provided to Asha Saddi, Technical Analyst, Infrastructure Programming and Studies at the Region of Peel, within the 30-day calendar review period. If your concern can not be addressed, you may request that the Minister of the Environment, Conservation and Parks make an Order for the project to comply with Part II of the Environmental Assessment Act, which addresses individual environmental assessments. The Minister must receive the request at the address provided below, by 4:30p.m. on February 11, 2019.

The Honorable Rod Phillips, Minister of the Environment, Conservation and Parks
77 Wellesley Street West, Floor 11, Toronto, ON
M7A 2T5
Fax: 416-314-8452

The decision on whether a Part II Order (bump up) is appropriate or necessary rests with the Minister of the Environment, Conservation and Parks. If no Part II Order requests are outstanding by the end of the 30 calendar-day review period, the project is considered to have met the requirements of the Class EA and the Region of Peel may proceed to subsequent phases of design and construction subject to meeting any commitments documented in the Addendum and obtaining the necessary environmental approvals.