

## Meeting Minutes

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Date: May 14, 2010  
Our File: 109089-75

**Subject:** Bovaird Drive Class Environmental Assessment  
From Lake Louise Drive/Worthington Avenue to 1.45 km west of Heritage Road  
Meeting with City of Brampton

**Date:** April 14, 2010

**Time:** 11:00 am

**Location:** 3<sup>rd</sup> Floor –Board Room – 9445 Airport Road, Brampton

**In Attendance:**

Hitesh Topiwala	➤	Region of Peel
Neal Smith	➤	Region of Peel
Junior Mohammad	➤	Region of Peel
Bishnu Parajuli	➤	City of Brampton
Compton Bobb	➤	City of Brampton
David Kuperman	➤	City of Brampton
John Allison	➤	City of Brampton
Tahar Singh	➤	City of Brampton
Derek Dalgleish	➤	Genivar
David Sinke	➤	AMEC
Steve Chipps	➤	AMEC
Heather Dearlove	➤	AMEC

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### **MATTERS DISCUSSED**

### **ACTION BY:**

1. The purpose of the meeting was to present and discuss the traffic study and the preliminary planning alternatives as well as to discuss any comments or concerns the City of Brampton may have.
2. David Sinke from AMEC proceeded with the formal presentation which reviewed existing conditions, the structural investigation, the pavement condition report, environmental investigations completed, needs and opportunity statement, review and assessment of the planning alternatives considered, and the preferred planning alternative. Derek Dalgleish from Genivar presented the results of the traffic study including existing traffic operations and projected traffic operations for the year 2021 and 2031.
3. The following is a summary of the comments received from the City of Brampton staff:

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- a. Bishnu Parajuli inquired if in the Traffic Study Report there should be a double left southbound at Ashby Field Road. Derek commented that the figure was incorrect but the text is correct which does not recommend a double left at this location.
- b. Bishnu Parajuli inquired if the recommendations from HP BATS were incorporated into the Traffic Study and if the Traffic Study was consistent with the Brampton Transportation and Transit Master Plan. The recommendations protect for the worst case scenario. There is nothing in the Traffic Study that is contradictory to the Brampton Transportation and Transit Master Plan.
- c. Tahar Singh provided some comments on future transit improvements planned for the Bovaird Drive corridor. The City of Brampton is planning a Bus Rapid Transit route along Bovaird Drive within the roadway. Major stations are planned at the major intersections, similar to what is constructed along Queen Street. Hitesh Topiwala to send a preliminary plan to the City of Brampton for mark-up of proposed station locations. **Post meeting** –plans were sent to City Staff on April 30, 2010. **REGION**
- d. John Allison commented that a multi-use path along Bovaird Drive is included in the Master Plan, similar to the existing path at Lake Louise Drive. Illumination of the path is proposed to be by street lighting. John Allison also commented that the multi-use path will have to be located behind the bus stations on Bovaird Drive to maintain continuity of the trail.
- e. Bishnu W Parajuli requested copies of the Archaeological Report and Cultural Heritage report be sent to his attention so he can pass them to the City's Heritage Department. **AMEC**
- f. Bishnu Parajuli also requested copies of the Public Information Centre storyboards. AMEC to send once they have been finalized **Post meeting** – draft Public Information Centre storyboards were sent to City Staff on April 30, 2010. **AMEC**
- g. Bishnu Parajuli requested copies of the Preliminary Constraint Assessment for Terrestrial Resources, Preliminary Fish and Fish Habitat Assessment, Stage 1 Archaeological Assessment and the Built Heritage and Cultural Heritage Landscape Assessment reports. **Post meeting** – hard copies were sent by Hitesh Topiwala on April 28, 2010 and digital copies were forwarded on May 3, 2010. **AMEC REGION**

Meeting Minutes prepared by,

AMEC EARTH & ENVIRONMENTAL  
A division of AMEC Americas Limited

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Per: Heather Dearlove, B.Sc.  
Environmental Planner

HD/hd

c.c. All present +  
Dawnett Allen AMEC  
Jason Stahl AMEC

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Environmental Planner

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Jason Stahl AMEC

## Meeting Minutes

Date: May 14, 2010  
Our File: 109089-75

**Subject:** Bovaird Drive Class Environmental Assessment  
From Lake Louise Drive/Worthington Avenue to 1.45 km west of Heritage Road  
Meeting with Credit Valley Conservation Authority and the Ministry of Natural Resources

**Date:** April 14, 2010

**Time:** 9:30 am

**Location:** 3<sup>rd</sup> Floor –Board Room – 9445 Airport Road, Brampton

<b>In Attendance:</b>	Arbinder Hundal	➤ The Municipal Infrastructure Group
	Mark Heaton	➤ Ministry of Natural Resources
	Jakub Kilis	➤ Credit Valley Conservation Authority
	Liam Marray	➤ Credit Valley Conservation Authority
	Sally Rook	➤ Region of Peel
	Hitesh Topiwala	➤ Region of Peel
	Neal Smith	➤ Region of Peel
	Alex Sales	➤ Region of Peel
	Cam Portt	➤ C.Portt and Associates
	Steve Hill	➤ Dougan and Associates
	Jim Dougan	➤ Dougan and Associates
	Dirk Gevaert	➤ AMEC
	David Sinke	➤ AMEC
	Steve Chipps	➤ AMEC
	Heather Dearlove	➤ AMEC

### MATTERS DISCUSSED

### ACTION BY:

1. The purpose of the meeting was to present and discuss the results of the environmental investigations and the preliminary planning alternatives for Bovaird Drive, as well as to discuss any comments or concerns the CVC or MNR may have.
2. David Sinke from AMEC proceeded with the formal presentation which reviewed the purpose and objective of the study, the Municipal Class Environmental Assessment process, existing conditions, needs and opportunities identified for the project, planning alternatives considered and the assessment of planning alternatives. The recommended alternative is to widen Bovaird Drive with supporting transit, pedestrian and cycling facilities.

## **MATTERS DISCUSSED**

## **ACTION BY:**

### **Terrestrial Environment**

3. Steve Hill from Dougan and Associates reviewed the results of the terrestrial investigation. The major constraint areas include the Greenbelt Protected Countryside, Core Area Valleylands and Woodlots, Linkage Corridors, and Species at Risk. Additional field work is required this summer to further define these areas. **DOUGAN**
4. Mark Heaton commented that the Natural Heritage System developed for the North West Brampton Study needs to be included in the Terrestrial assessment. **DOUGAN**

### **Drainage**

5. Steve Chipps from AMEC reviewed the Drainage Assessment that has been completed to date. AMEC reviewed the most recent North West Brampton 2G Plan and those recommendations will be incorporated into the study. Any stormwater management proposed for the Bovaird Drive corridor will need to be consistent with the North West Brampton Study. A preliminary Drainage Plan was presented.
6. Liam Marray commented that the stormwater management for Bovaird Drive should utilize existing stormwater management plans developed for the Mount Pleasant Lands. Hitesh noted that there have been some issues in the past with working in conjunction with developers with respect to stormwater management. A full range of options will be reviewed for the Bovaird Drive corridor and may include stand alone facilities in which the Region will purchase land for a stormwater management facility.

### **Fish and Fish Habitat Assessment**

7. Cam Portt from C.Portt and Associates reviewed the Fish and Fish Habitat Assessment completed to date. The two systems that were ranked as high sensitivity are watercourse 2a and Huttonville Creek. Red Side Dace, which is a Species at Risk, has been found within Huttonville Creek, which will require additional investigation. Field review will be carried out this summer on watercourses to confirm the watercourses' overall sensitivity.
8. Mark Heaton provided additional guidance on what the MNR will require with respect to any potential changes to the Huttonville Creek culvert at Bovaird Drive. The Redside Dace is protected under the Endangered Species Act and alteration of the culvert/watercourse will require a permit from MNR. The MNR will require a full assessment of alternatives for the culvert at Huttonville Creek which may include full replacement of the culvert with an open span structure. The MNR would also be interested in restoring wildlife passage at this location.
9. Steve Hill inquired if there are any guidelines or enhancement strategies that should be reviewed for the Redside Dace. The MNR is currently working on some guidelines that should be available within the next six months. **MNR**



**MATTERS DISCUSSED**

**ACTION BY:**

- 10. David Sinke inquired if a meander belt width has been already determined for Huttonville Creek. The acceptable meander belt width has been determined to be approximately 17m. An assessment of the meander belt width was also undertaken by Parish Geomorphic for the North West Brampton Study. Parish Geomorphic will be providing direction to the study team for the Bovaird Drive Class Environmental Assessment.

**Groundwater Investigation**

- 11. Dirk Gevaert presented the findings of the preliminary Groundwater Investigation. The overall impact to groundwater resources is expected to be minimal.
- 12. Liam Marray from CVC commented that some hydrogeological work has been completed for the Mississauga Road project specifically related to the Huttonville Creek. Subsequent to the meeting, AMEC made contact with the Mississauga Road team in order to share data.

**AMEC**

**Additional Comments**

- 13. Arbinder Hundal from the Municipal Infrastructure Group reviewed the proposed design for the Mississauga Road and Bovaird Drive intersection that his company is currently working on. Both the current detail design for a four lane Bovaird Drive, and a potential design for future six lane Bovaird Drive were presented. The six lane design will require extension of the Huttonville Creek culvert, north and south of Bovaird Drive. The Region's preference would be to complete all work including culvert extension for future widening, with the current detail design contract. The Region's intention is to complete all works one time to avoid disturbance to the sensitive area.
- 14. Mark Heaton suggested that the Region should organize a meeting with MNR and CVC to discuss issues related to Huttonville Creek and multiple capital projects around the area. Hitesh Topiwala to discuss this issue internally and arrange a meeting.

**REGION**

Meeting Minutes prepared by,

AMEC EARTH & ENVIRONMENTAL  
A division of AMEC Americas Limited



Per: Heather Dearlove, B.Sc.  
Environmental Planner

HD/hd

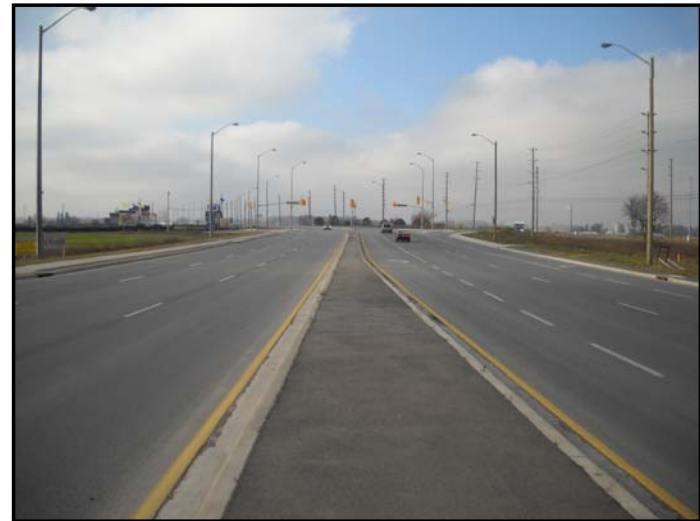
c.c.	All present +	
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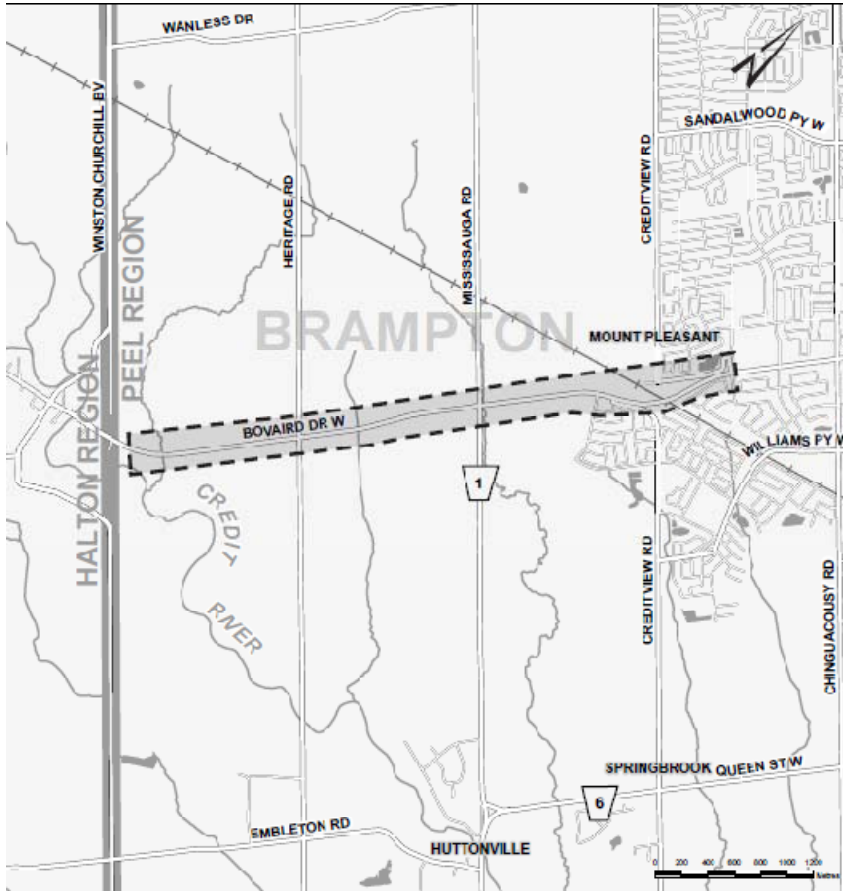
# Presentation to CVC and MNR

## Bovaird Drive (Regional Road 107) From Lake Louise Drive/Worthington Avenue to 1.45 km west of Heritage Road Class Environmental Assessment

April 14, 2010



# Study Area



The Study Area extends from Lake Louise Drive/Worthington Avenue to 1.45 km west of Heritage Road.

# Purpose of Meeting and Agenda

**Purpose:** To review existing conditions and provide input into the assessment and determination of a preferred planning alternative.

**Agenda:**

1. Background Information
  - Purpose and Objectives
  - Existing Conditions
  - Need and Opportunity
2. Environmental Inventories
  - Groundwater
  - Terrestrial
  - Drainage
  - Fish and Fish Habitat
3. Discussion and Preliminary Assessment of Planning Alternatives
4. Next Steps

# Purpose and Objectives

**Purpose:** To address existing and future deficiencies of Bovaird Drive, from Lake Louise Drive/Worthington Avenue to 1.45 km west of Heritage Road.

## Objectives:

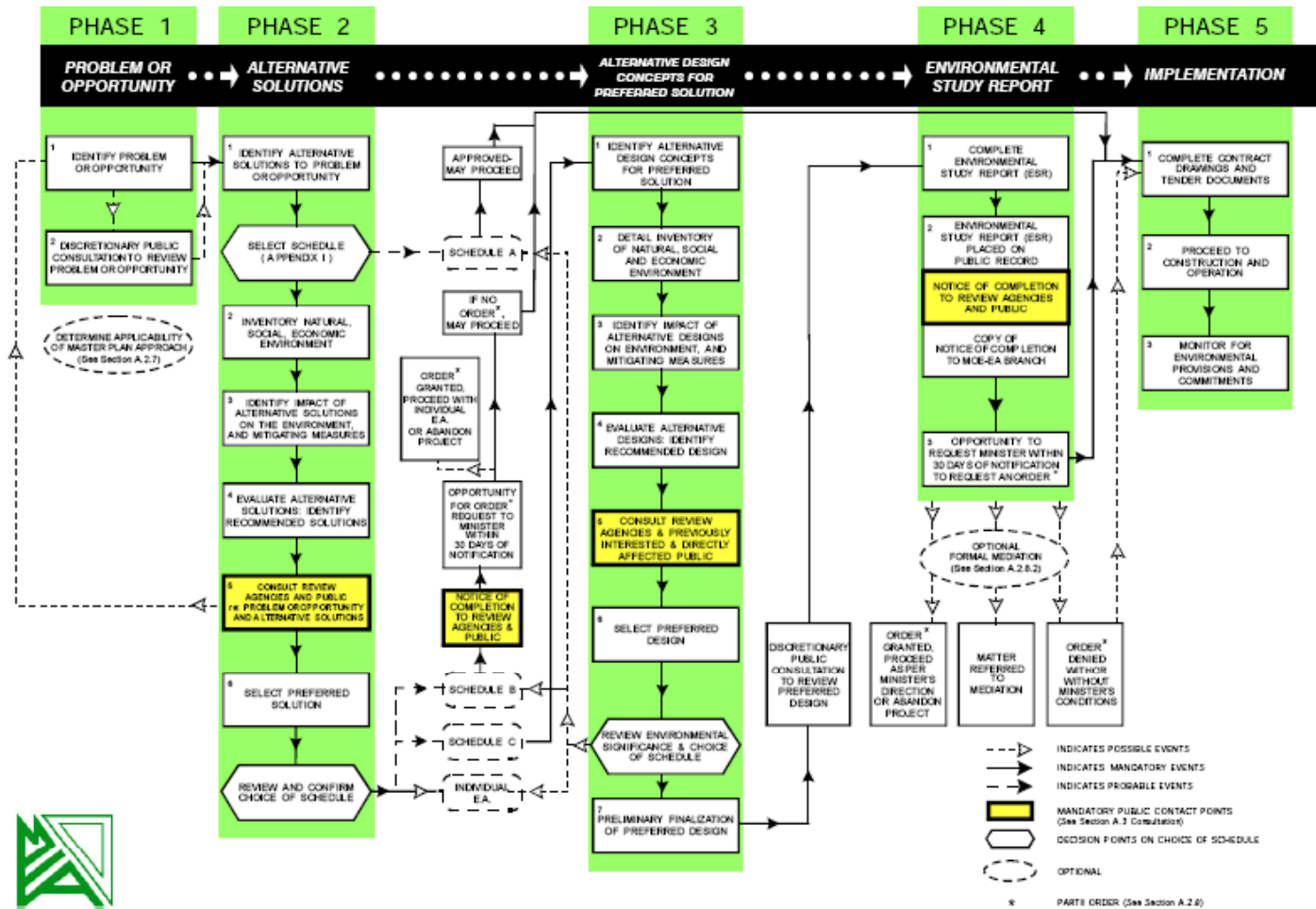
- Generate and evaluate options for resolution of deficiencies identified;
- Consult with a wide range of stakeholders to identify and resolve or mitigate issues of concern, and
- Meet requirements of the Municipal Class Environmental Assessment Process to permit the Region of Peel to proceed to detail design, and ultimately, construction.

# Municipal Class EA Process

EXHIBIT A.2

MUNICIPAL CLASS EA PLANNING AND DESIGN PROCESS

NOTE: This flow chart is to be read in conjunction with Part A of the Municipal Class EA

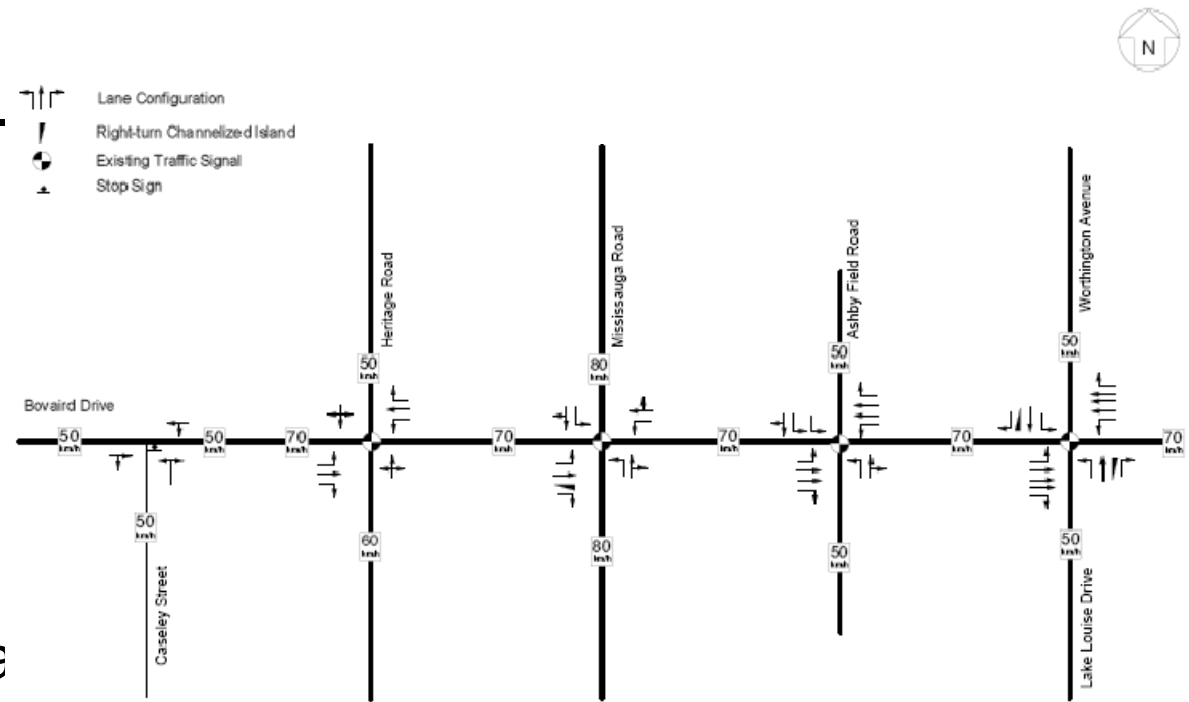


BOVAIRD DRIVE CLASS ENVIRONMENTAL ASSESSMENT



# Existing Conditions – Transportation

- Urban six-lane cross section from Lake Louise Drive to Ashby Field Road.
- Rural two-lane cross section from Ashby Field Road to western study boundary.
- Posted speed limit is generally 70 km/h.
- Functionally classified as a major arterial roadway, under the jurisdiction of the Region of Peel.



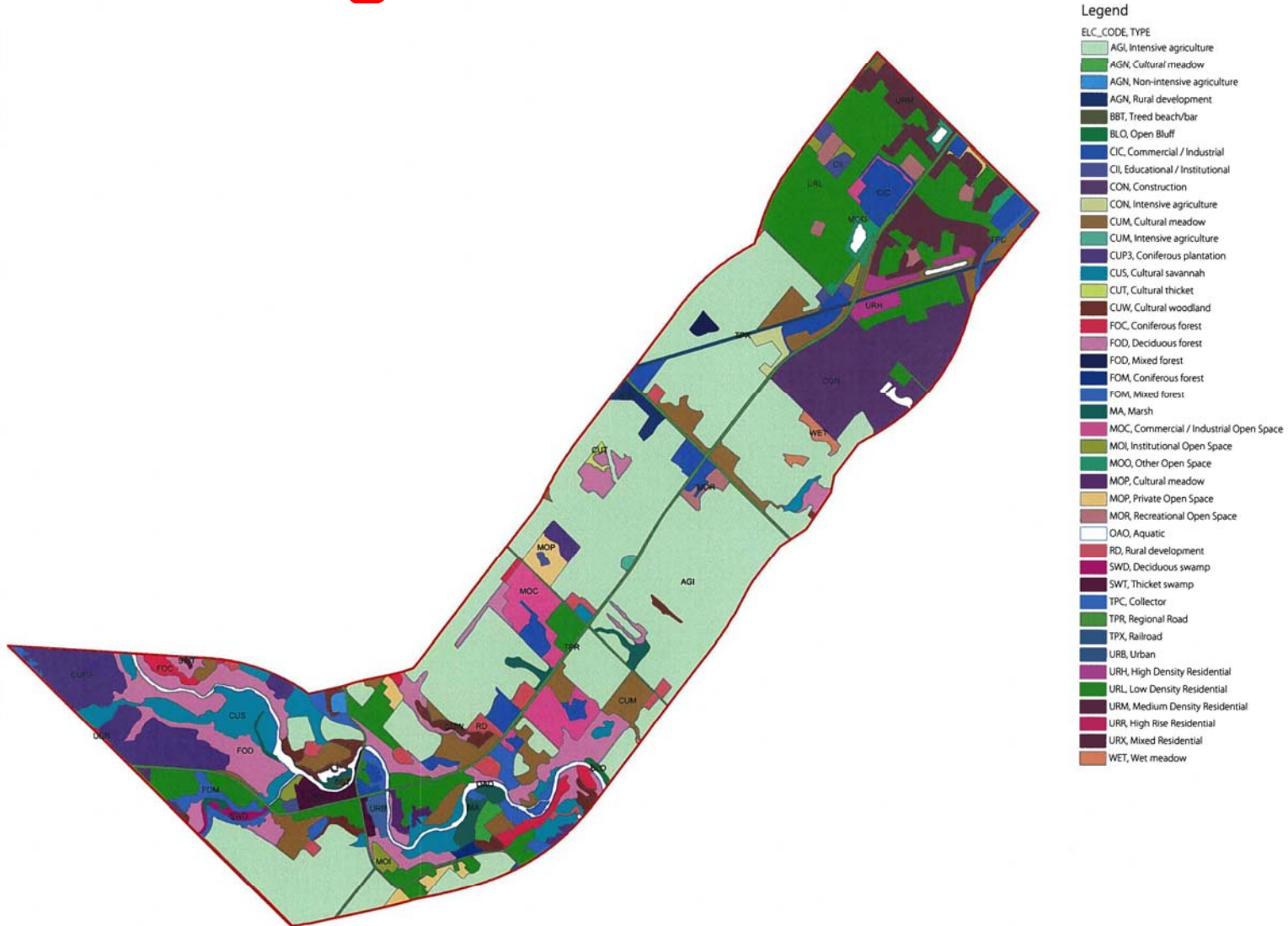


# Existing Conditions – Land Use

- *Lake Louise Drive to Ashby Field Road* - a mix of residential and commercial land use, as well as a GO Station.
- *Ashby Field Road to Mississauga Road* - mainly rural with some proposed urban development and existing commercial development at Mississauga Road.
- *Mississauga Road to Caseley Street* - agricultural with some existing residential, commercial and institutional development.



# Existing Conditions – Land Use



# Needs and Opportunities for Improvements Along Bovaird Drive

Based on a review of existing and future conditions, as well as preliminary consultation with stakeholders, the following needs/ opportunities have been identified:

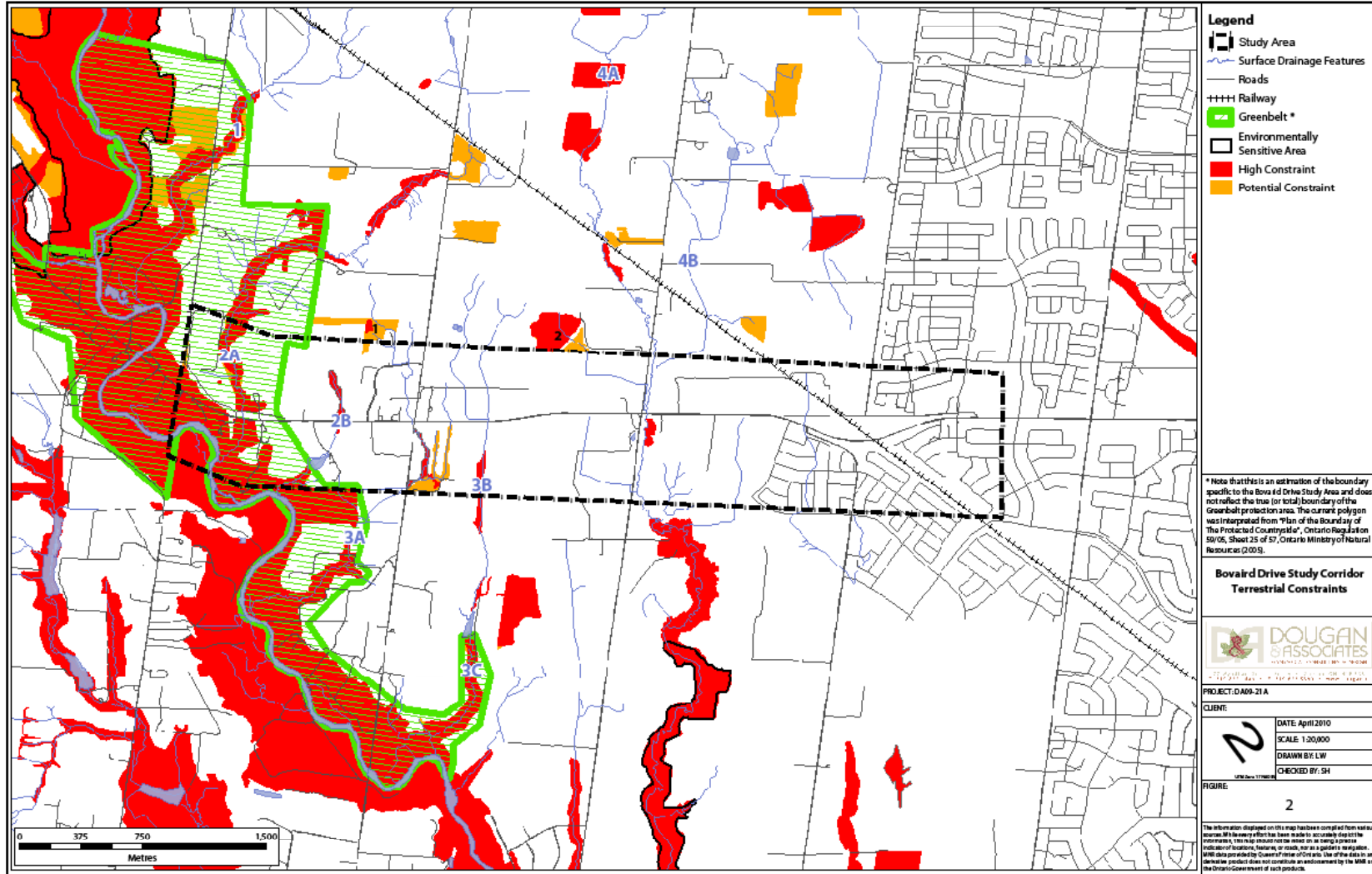
- Accommodate existing and future traffic demands;
- Accommodate future transportation network improvements (i.e. North-South Transportation Corridor);
- Accommodate transit system expansion along the corridor;
- Address deteriorating pavement condition;
- Address drainage deficiencies and opportunities for Stormwater Management;
- Address culvert structure deficiencies;
- Address deficiencies at CNR structure;
- Accommodate pedestrian and cyclist movements through the corridor, and
- Address lack of illumination.

# Terrestrial Environment

A terrestrial resources review was completed as part of this study (Dougan and Associates, March 2010):

- Potential constraint areas include Greenbelt Protected Countryside, Core Area Valleylands and Woodlots, Linkage Corridors, and Species at Risk.
- The most likely feature to be impacted by development are the valleylands of the Credit River and its tributaries.
- Further work will focus on evaluating sensitivity of vegetation and wildlife associated with these natural features.
- Emphasis will be placed on planned improvements and potential for mitigation and enhancements to improve linkages between disjointed natural features and protected areas.

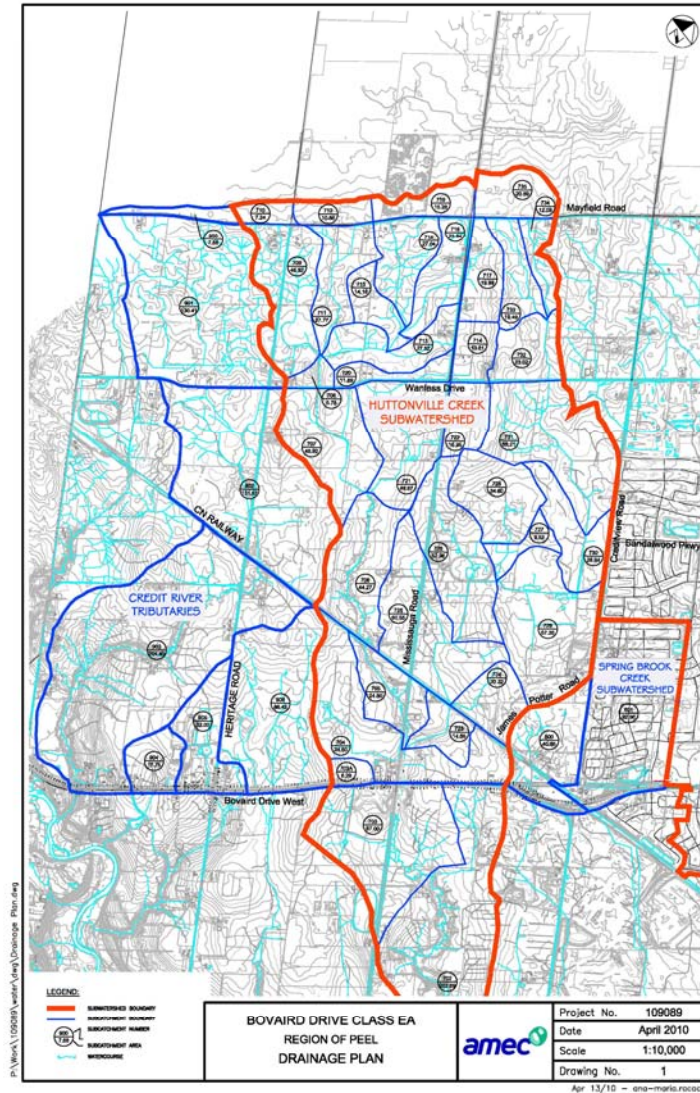
# Terrestrial Constraints



# Drainage

- The Bovaird Drive corridor drains to Springbrook Creek, Huttonville Creek and Credit River tributaries.
- The Springbrook subwatershed will be urbanized with completion of Mount Pleasant Village. Storm runoff is piped across Bovaird Drive.
- Land use within the Huttonville Creek subwatershed is currently predominantly agricultural, but is slated for development as part of the Mount Pleasant Secondary Plan. The widening of Bovaird Drive would need to comply with the recommendations of the ongoing subwatershed study.
- Land use within the Credit River tributaries is currently predominantly agricultural, but areas within these subwatersheds are ultimately slated for development, east of the greenbelt.
- All of the proposed road widening would require erosion control, water quality control and flood control to be implemented utilizing stormwater management measures.

# Drainage



# Fish and Fish Habitat Assessment

A fish and fish habitat assessment was completed as part of this study (C.Portt and Associates, March 2010)

- Seven tributary watersheds were identified within the study limits, all flowing to the Credit River.
- The drainage features range from short reaches between piped sections to natural streams containing the endangered reddsidedace.
- Habitat, fish community, and overall sensitivity vary depending on the tributary.



# Fish and Fish Habitat Assessment

Watercourse	Flow Status at Bovaird Drive	Channel form at Bovaird Drive	Fish community at Bovaird Drive	Fish community downstream	Habitat sensitivity	Fish community sensitivity	Overall Sensitivity
2a	permanent	natural	warmwater and migratory salmonids	coolwater	high	medium to high	high
2b	intermittent/ephemeral	none upstream; straight, constructed downstream	none or seasonal warmwater	unknown	low	low	low
3a	permanent	natural upstream; naturalized but constructed along Heritage Road	unknown	unknown	medium to high	medium to high	medium
3b	intermittent	straight, constructed upstream; across cultivated field downstream	none	coldwater	low	low	low
Huttonville Creek	permanent	natural	Endangered redbreasted dace	coldwater	high	high	high
Springbrook Creek	ephemeral	straight, constructed	none	coldwater	low	low	low
Fletcher's Creek	permanent or intermittent	constructed	none	warmwater baitfish?	low	low	low

# Groundwater Investigation

A Hydrogeological Assessment was completed to determine the hydrogeological conditions along the alignment with detailed focus on stream crossing to determine any potential impacts of the road on groundwater resources during and after construction (AMEC, April 2010). The overall impact to surface water, groundwater or water supply wells from the reconstruction of Bovaird Drive and its associated structures (culverts, bridges) is expected to be minimal.

The following recommendations were provided:

- Locate all groundwater monitors installed and equip with data logging equipment to measure groundwater levels for six to nine months.
- Complete a door-to-door water well survey for all water supply wells.
- Review the potential for impacts of discharge to surface water and impacts to wetlands.

# Planning Alternatives Considered

**Alternative 1:** Maintain Bovaird Drive in its present configuration as a two-lane road (i.e. “do nothing”). Continue regular maintenance and periodic resurfacing of the roadway.

**Alternative 2:** Improve adjacent parallel arterial roadways to accommodate the projected future traffic demand for Bovaird Drive.

**Alternative 3:** Improve existing public transit service within the City of Brampton, and connect to the major activity areas of the Greater Toronto Area (GTA), to encourage a shift in modal choice for automobile to public transit modes.

**Alternative 4:** Incorporate Travel Demand Management (TDM) measures aimed at shifting travel behaviour to reduce peak hour vehicular traffic demand. Such measures may include increasing the number of car-pool parking facilities, creating high occupancy vehicle (HOV) lanes and introduction of flexible work hours by major employers.

**Alternative 5:** Implementation of traffic control improvements along Bovaird Drive which may include the optimization of signal timing.

**Alternative 6:** Widen Bovaird Drive, including geometric improvements to intersections and the addition of continuous traffic lanes.

**Alternative 7:** A combination of two or more of the alternatives mentioned above.

# Discussion and Preliminary Assessment of Planning Alternatives

Component	Area of Study	Issues and Assessment
Natural Environment	<b>Wetlands and Vegetation</b>	There are 4 potential constraint areas including Greenbeld Protected Countryside, Core Area Valleylands and Woodlots, Linkage Corridors, and Species at Risk. Alternatives 1 to 5 would have no adverse effects on vegetation. Alternatives 6 and 7 have potential adverse effects on vegetation. Adverse effects would be avoided to the extent possible, and mitigation would be provided.
	<b>Wildlife Habitat</b>	Alternatives 1 to 5 would have minimal adverse effects on wildlife. Alternatives 6 and 7 have potential adverse effects on wildlife habitat, however, adverse effects would be avoided to the extent possible, and mitigation would be provided.
	<b>Groundwater/ Surface Water/ Drainage</b>	There is potential for changes in stormwater quantity and quality with Alternatives 6 and 7. Potential mitigation measures will be documented in a stormwater management report that will be prepared as a component of this project.
	<b>Fisheries and Water Quality</b>	There are seven tributary watersheds that may be impacted. Two of the tributaries (2a and Huttonville Creek) have an overall sensitivity rating of high. Alternatives 1 to 5 would have no adverse effects on fisheries and water quality. Alternatives 6 and 7 have potential adverse effects on vegetation. Adverse effects would be avoided to the extent possible, and mitigation would be provided.
Socio-Economic Environment	<b>Land Use</b>	Alternatives 1 to 5 would have no adverse affect on the existing land use. Alternatives 6 and 7 may have potential adverse effects on existing land use, but will provide enhanced access to properties. For Alternatives 6 and 7, adverse effects would be avoided to the extent possible, and/or mitigation would be provided, where possible.
	<b>Noise</b>	Alternatives 1 to 5 will have no effect on traffic noise. Alternatives 6 and 7 may affect traffic noise levels and would need to be investigated further as a component of this study.
	<b>Archaeology and Cultural Heritage Resources</b>	A Stage 2 Archaeological Assessment is recommended for the high and moderate potential lands. A Stage 2 Archaeological Assessment will be completed as a component of this project, at a later date. A Built Heritage and Cultural Landscape Assessment identified ten buildings within the study area that are considered to have heritage value. For Alternatives 6 and 7, adverse effects would be avoided to the extent possible, and/or mitigation would be provided, where possible.

# Discussion and Preliminary Assessment of Planning Alternatives

Component	Area of Study	Issues and Assessment
<b>Socio-Economic Environment</b>	<b>Agricultural</b>	Alternatives 1 to 5 would have no adverse affect on existing agricultural land use. Alternatives 6 and 7 may have potential adverse effects on existing agricultural land use. For Alternatives 6 and 7, adverse effects would be avoided to the extent possible, and/or mitigation would be provided, where possible.
	<b>Access Considerations</b>	All of the alternatives will allow all existing property access to be maintained.
	<b>Utilities</b>	Alternative 1-5 will have no adverse effect on utilities. Alternatives 6 and 7 may require the relocation of existing utilities.
	<b>Construction Disruptions</b>	Potential adverse effects with Alternatives 6 and 7 only.
<b>Engineering Factors</b>	<b>Safety</b>	Potential improvements with Alternatives 6 and 7 only.
	<b>Travel Delay/Traffic Capacity</b>	Potential minor capacity improvement with Alternatives 3, 4 and 5. Potential major capacity improvements with Alternatives 6 and 7.
	<b>Cost</b>	Alternatives 6 and 7 have the highest capital cost.
<b>Other</b>	<b>Compatibility with Region and Municipal Plans</b>	Consistent with the City of Brampton and the Region of Peel Official Plan.

# Assessment of Alternatives (1)

**Alternative 1:** Dropped from further consideration, as it fails to address key deficiencies, particularly existing and future congestion, deficient pavement conditions and lack of accommodation of pedestrian and cyclists.

**Alternative 2:** Improvements to other roadways are planned by Region of Peel and have been considered in the traffic projections. Even with planned improvements to other roadways, there will still be significant increases in peak hour traffic demands on Bovaird Drive. Therefore, Alternative 2 fails to address the identified deficiencies.

**Alternative 3:** The study anticipates that provision of additional public transit service in this area will attract some growth in transit usage. The Brampton Transit and Transportation Master Plan recommends a sustainable, balanced transportation network. This planning alternative does not eliminate the need for physical improvements, but may be considered in a conjunction with other planning alternatives proposed.

# Assessment of Alternatives (2)

**Alternative 4:** Traffic Demand Management (TDM) strategies generally need to be applied on regional or larger area scales to achieve their desired effect. Although TDM measures may decrease travel demand, TDM measures alone are not seen as a viable strategy for Bovaird Drive.

**Alternative 5:** Traffic signals are optimized on a regular basis, based on changing traffic patterns and volumes. Potential traffic control improvements would not have a significant effect on traffic congestion.

# Assessment of Alternatives (3)

**Alternative 6:** Widening the existing roadway on Bovaird Drive and provision of additional lane capacity is necessary to accommodate traffic demand along the corridor. Alternative 6 is the only alternative that addresses the need for pedestrian and cyclist provisions in the corridor.

**Alternative 7:** A combination of Alternative 2 - 6 with one or more of the above alternatives could accommodate the projected future traffic demand along the Bovaird Drive corridor while minimizing environmental impacts.



# Preferred Alternative

The preferred planning alternative is ***Alternative 7***: A combination of Alternative 6 with one or more of the above alternatives.

# Next Steps

- Public Information Centre No.1 – May 2010;
- Review and confirm preferred planning alternatives and assessment in light of comments received from the public and agencies;
- Complete Environmental Inventory;
- Develop alternative design concepts;
- Complete detailed impact analysis;
- Develop proposals for mitigation of negative effects;
- Second meeting with agencies and stakeholders
- PIC No. 2 – Fall 2010, and;
- Prepare and File Environmental Study Report.

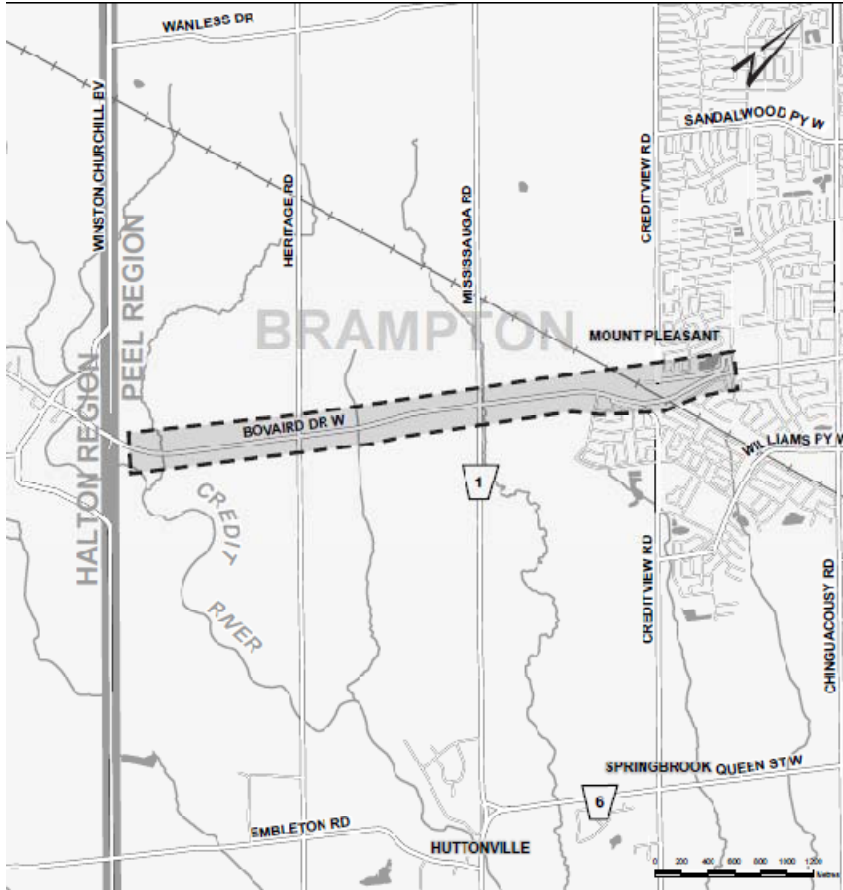
# Presentation to City of Brampton

## Bovaird Drive (Regional Road 107) From Lake Louise Drive/Worthington Avenue to 1.45 km west of Heritage Road Class Environmental Assessment

April 14, 2010



# Study Area



The Study Area extends from Lake Louise Drive/Worthington Avenue to 1.45 km west of Heritage Road

# Purpose of Meeting and Agenda

**Purpose:** To review existing conditions and provide input into the assessment and determination of a preferred planning alternative.

## **Agenda:**

1. Background Information and Purpose and Objectives
  - Existing Conditions Transportation and Land Use
  - Structural
  - Pavement Condition
  - Traffic
  - Future Traffic Conditions
  - Transit Requirements
2. Discussion and Preliminary Assessment of Planning Alternatives
3. Next Steps

# Purpose and Objectives

**Purpose:** To address existing and future deficiencies of Bovaird Drive, from Lake Louise Drive/Worthington Avenue to 1.45 km west of Heritage Road.

## **Objectives:**

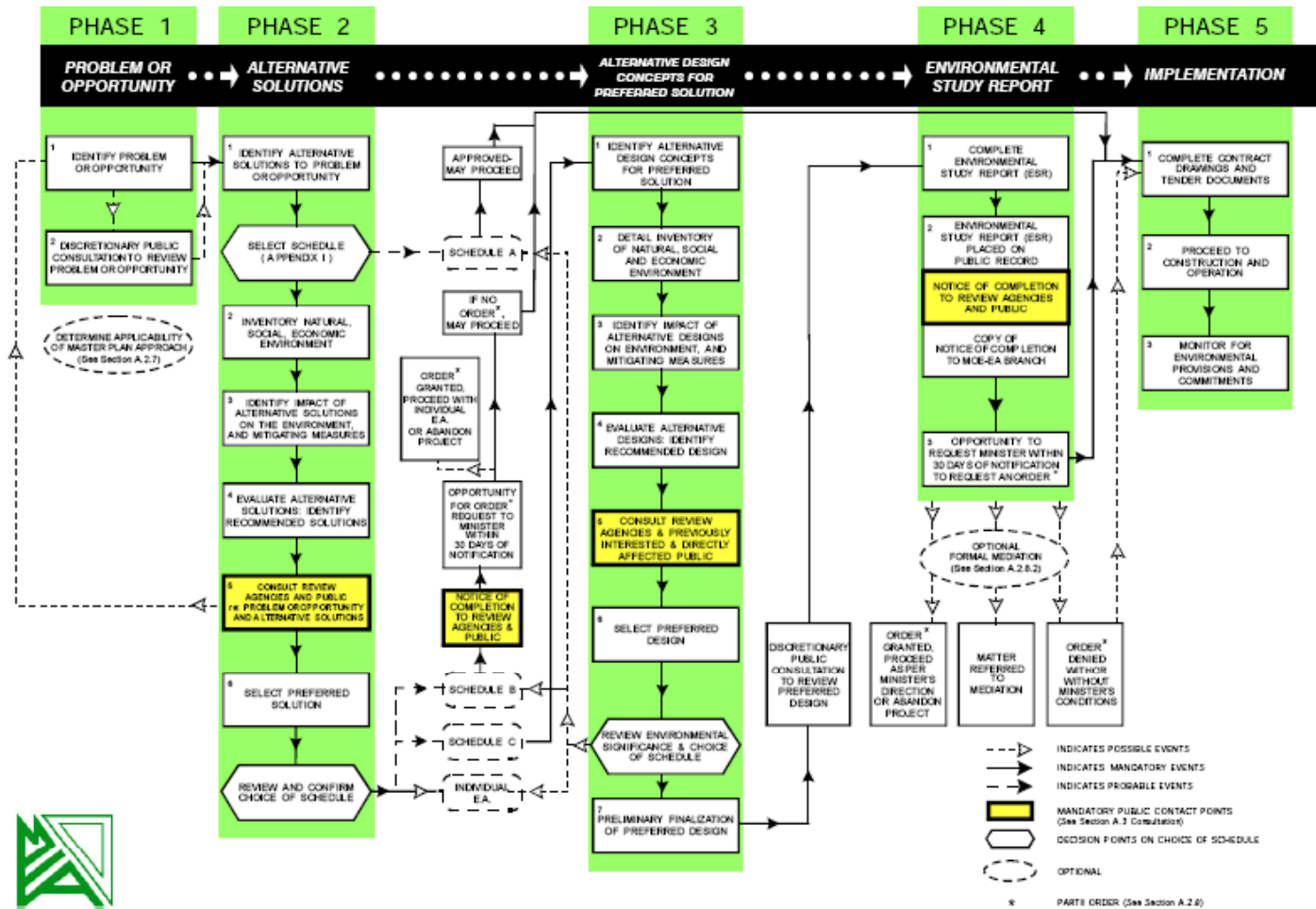
- Generate and evaluate options for resolution of deficiencies identified;
- Consult with a wide range of stakeholders to identify and resolve or mitigate issues of concern, and
- Meet requirements of the Municipal Class Environmental Assessment Process to permit the Region of Peel to proceed to detail design, and ultimately, construction.

# Municipal Class EA Process

EXHIBIT A.2

MUNICIPAL CLASS EA PLANNING AND DESIGN PROCESS

NOTE: This flow chart is to be read in conjunction with Part A of the Municipal Class EA

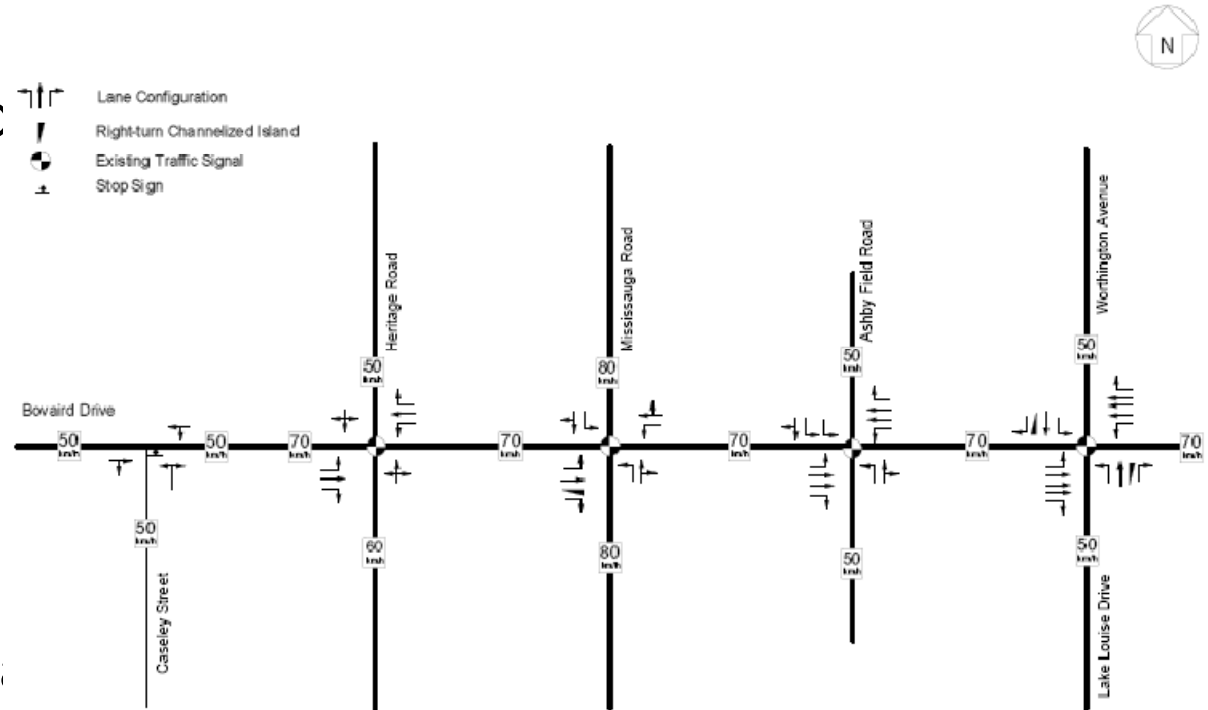


BOVAIRD DRIVE CLASS ENVIRONMENTAL ASSESSMENT



# Existing Conditions – Transportation

- Urban six-lane cross section from Lake Louise Drive to Ashby Field Road
- Rural two-lane cross section from Ashby Field Road to western study boundary.
- Posted speed limit is generally 70 km/h.
- Functionally classified as a major arterial roadway, under the jurisdiction of the Region of Peel.



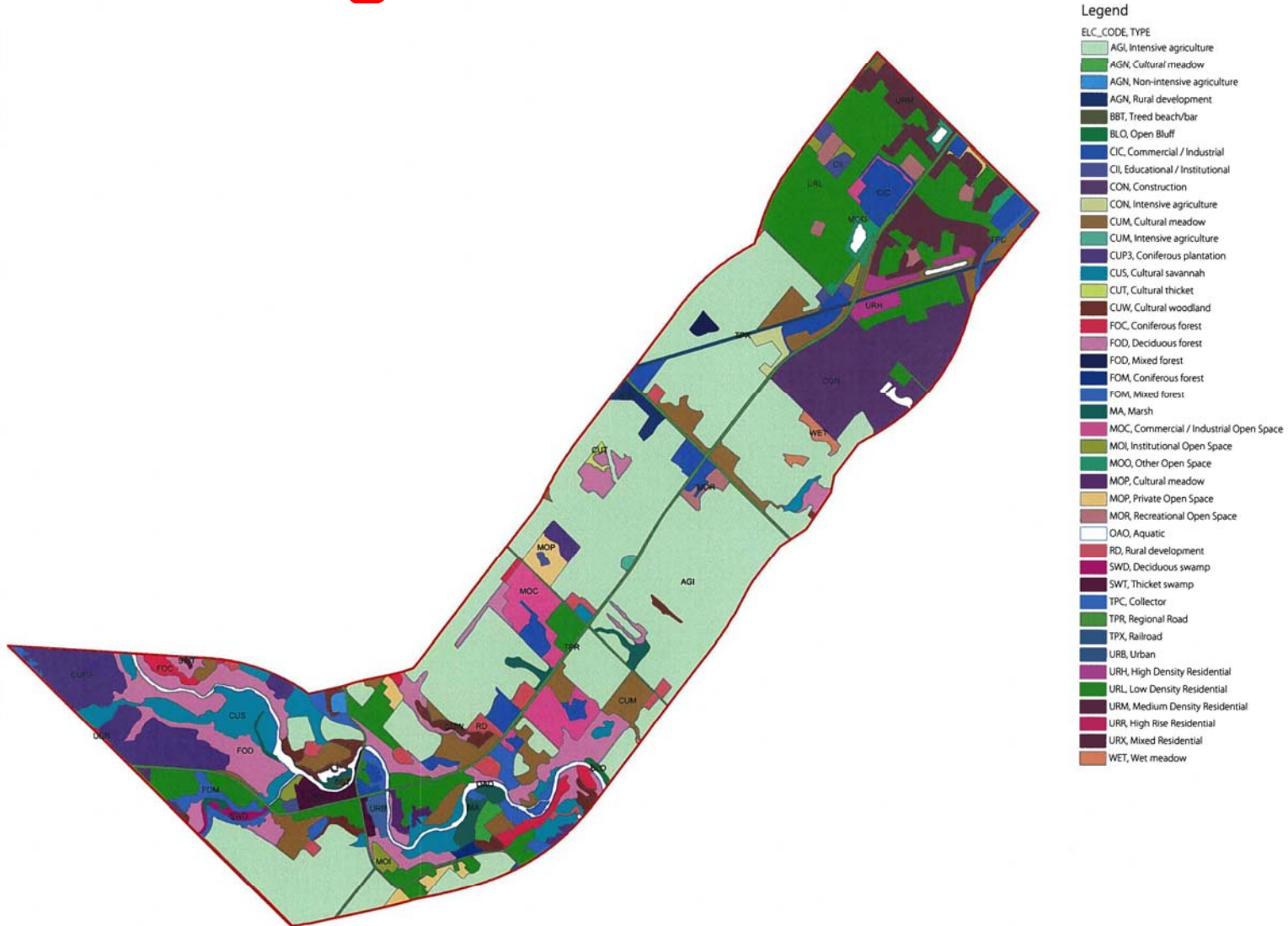


# Existing Conditions – Land Use

- *Lake Louise Drive to Ashby Field Road* - a mix of residential and commercial land use, as well as a GO Station.
- *Ashby Field Road to Mississauga Road* - mainly rural with some proposed urban development and existing commercial development at Mississauga Road.
- *Mississauga Road to Caseley Street* - agricultural with some existing residential, commercial and institutional development.



# Existing Conditions – Land Use



# Structural Investigation

- A structural investigation was undertaken as part of this study.
- Structures within the study area include small CSP culverts, concrete box culverts, open footing culverts, and two adjacent 30m bridges spanning the CNR.
- Four CSP culverts are recommended to be replaced.
- Westbound lane structure over CNR requires rehabilitation or replacement.
- Other structures that are in fair condition may be extended or replaced, depending on results of the hydraulic assessment.



# Pavement Condition

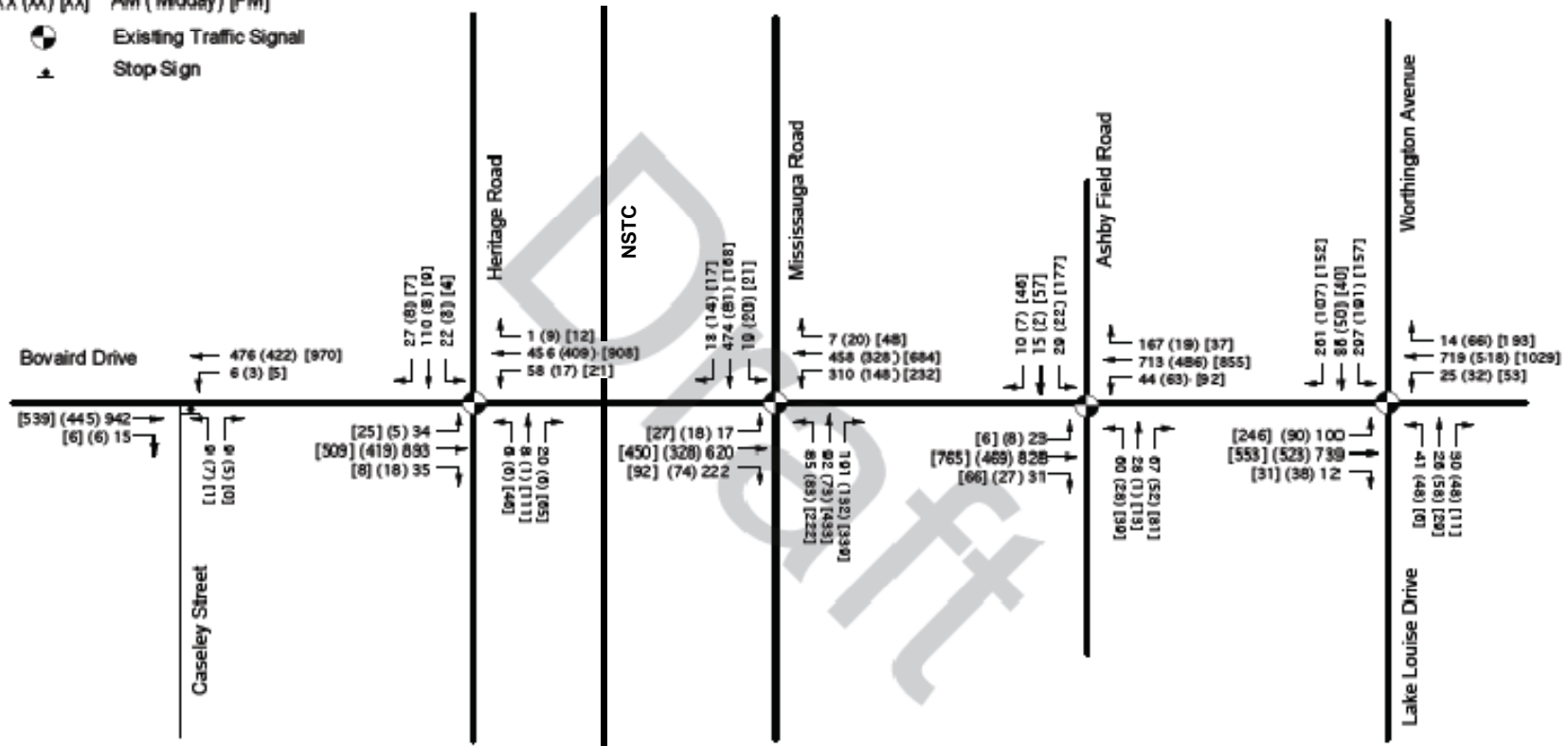
A geotechnical investigation was completed as part of this study (AMEC, February 2010).

- 1. Lake Louise Drive / Worthington Avenue to Mississauga Road:** This section of road is considered to be in 'good' condition, except for some severe mid-lane cracking in westbound lanes 1 and 2 across the CNR bridge, and some joint cracking.
- 2. Mississauga Road to Heritage Road:** The pavement is in 'fair' condition with raveling, wheel track rutting, and some cracking of varying severity.
- 3. Heritage Road to 1.45 km west of Heritage Road:** The pavement is in 'fair' condition with raveling, ripping, shoving, and cracking of varying severity.

# Traffic Study Overview – Existing

xx (xx) [xx] AM ( Midday) [PM]

-  Existing Traffic Signal
-  Stop Sign



Schematic

Exhibit 5  
Existing Traffic Volumes, Roadway Peak Hours  
Bovaird Drive Class EA

20-084g10-01-18Figures

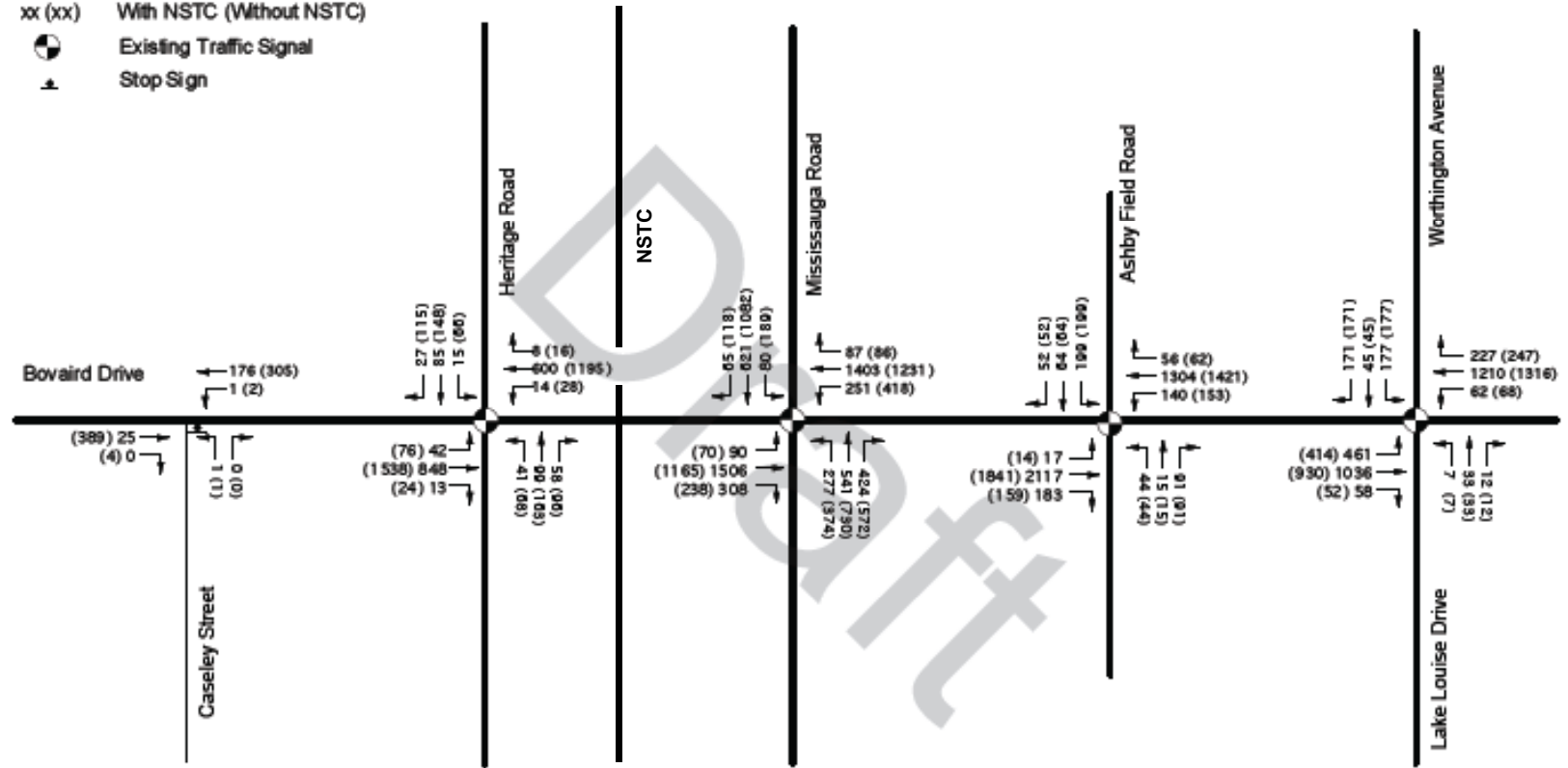


Plan revision: 09/01/21



# Traffic Study Overview – Year 2021

xx (xx) With NSTC (Without NSTC)  
 Existing Traffic Signal  
 Stop Sign



Schematic

Exhibit 14  
 2021 Projected Traffic Volumes, PM Peak Hour  
 Bovaird Drive Class EA

29-488/10-01-18/Figures

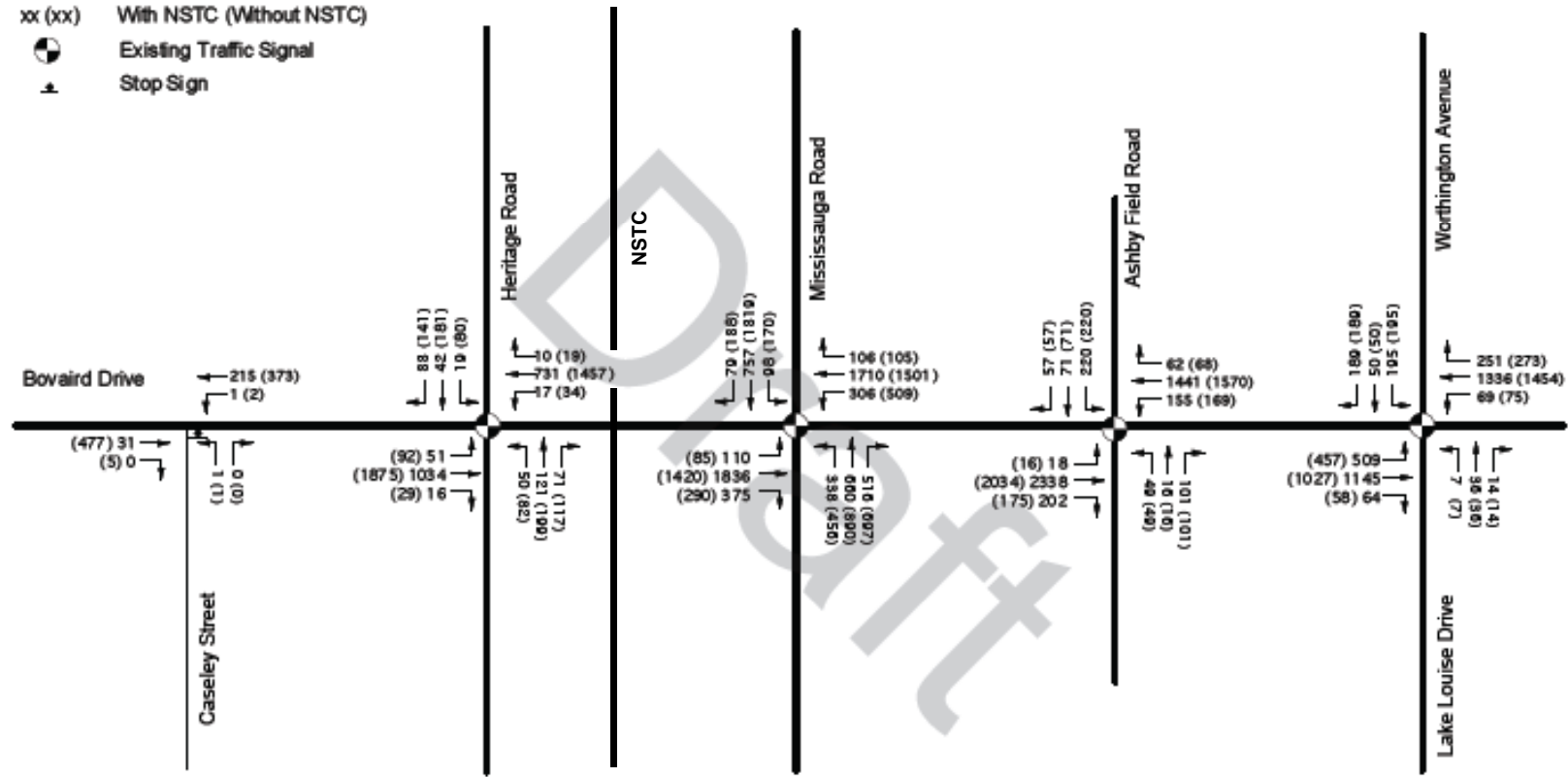


Form revision: 00/00/01



# Traffic Study Overview – Year 2031

- xx (xx) With NSTC (Without NSTC)
-  Existing Traffic Signal
-  Stop Sign



Schematic

Exhibit 21  
2031 Projected Traffic Volumes, PM Peak Hour  
Bovaird Drive Class EA

20488/10-01-10/Figures

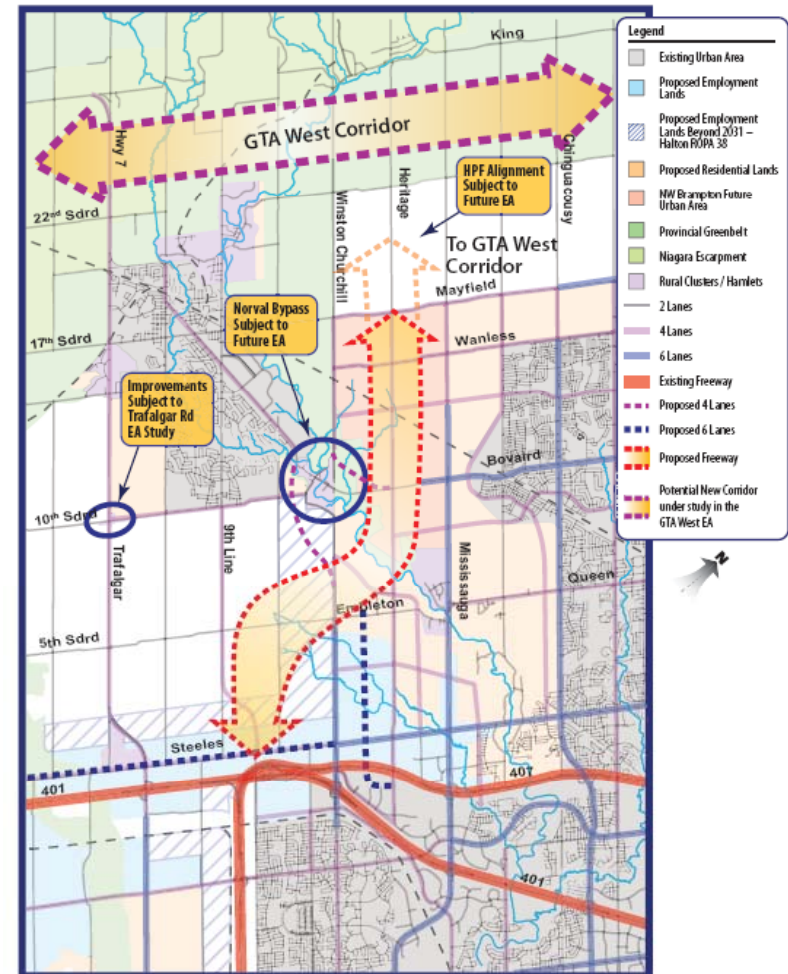


Form revision: 00/00/01



# Future Traffic Conditions

- A North-South Transportation Corridor (NSTC) is proposed to cross the corridor, under the Halton-Peel Boundary Study (HP BATS).
- An assessment of Bovaird Drive was completed with and without the NSTC for the 2021 and 2031 horizon years.
- To accommodate the projected increase in traffic, Bovaird Drive should be 6 lanes from Worthington Avenue/Lake Louise Drive to Heritage Road, and 2 lanes from Heritage Road to the project limit.



Preliminary Recommendations; Subject to future Environmental Assessment Studies.

Source: PIC 2, HP BATS



# Environmental Investigations

The following environmental investigations have been completed as part of this study:

- Terrestrial Resources
- Drainage
- Fish and Fish Habitat
- Archaeological Assessment
- Built Heritage Assessment
- Groundwater Investigation

# Needs and Opportunities for Improvements Along Bovaird Drive

Based on a review of existing and future conditions, as well as preliminary consultation with stakeholders, the following needs/ opportunities have been identified:

- Accommodate existing and future traffic demands;
- Accommodate future transportation network improvements (i.e. North-South Transportation Corridor);
- Accommodate transit system expansion along the corridor;
- Address deteriorating pavement condition;
- Address drainage deficiencies and opportunities for Stormwater Management;
- Address culvert structure deficiencies;
- Address deficiencies at CNR structure;
- Accommodate pedestrian and cyclist movements through the corridor, and
- Address lack of illumination.

# Planning Alternatives Considered

**Alternative 1:** Maintain Bovaird Drive in its present configuration as a two-lane road (i.e. “do nothing”). Continue regular maintenance and periodic resurfacing of the roadway.

**Alternative 2:** Improve adjacent parallel arterial roadways to accommodate the projected future traffic demand for Bovaird Drive.

**Alternative 3:** Improve existing public transit service within the City of Brampton, and connect to the major activity areas of the Greater Toronto Area (GTA), to encourage a shift in modal choice for automobile to public transit modes.

**Alternative 4:** Incorporate Travel Demand Management (TDM) measures aimed at shifting travel behaviour to reduce peak hour vehicular traffic demand. Such measures may include increasing the number of car-pool parking facilities, creating high occupancy vehicle (HOV) lanes and introduction of flexible work hours by major employers.

**Alternative 5:** Implementation of traffic control improvements along Bovaird Drive which may include the optimization of signal timing.

**Alternative 6:** Widen Bovaird Drive, including geometric improvements to intersections and the addition of continuous traffic lanes.

**Alternative 7:** A combination of two or more of the alternatives mentioned above.

# Discussion and Preliminary Assessment of Planning Alternatives

Component	Area of Study	Issues and Assessment
Natural Environment	<b>Wetlands and Vegetation</b>	There are 4 potential constraint areas including Greenbeld Protected Countryside, Core Area Valleylands and Woodlots, Linkage Corridors, and Species at Risk. Alternatives 1 to 5 would have no adverse effects on vegetation. Alternatives 6 and 7 have potential adverse effects on vegetation. Adverse effects would be avoided to the extent possible, and mitigation would be provided.
	<b>Wildlife Habitat</b>	Alternatives 1 to 5 would have minimal adverse effects on wildlife. Alternatives 6 and 7 have potential adverse effects on wildlife habitat, however, adverse effects would be avoided to the extent possible, and mitigation would be provided.
	<b>Groundwater/ Surface Water/ Drainage</b>	There is potential for changes in stormwater quantity and quality with Alternatives 6 and 7. Potential mitigation measures will be documented in a stormwater management report that will be prepared as a component of this project.
	<b>Fisheries and Water Quality</b>	There are seven tributary watersheds that may be impacted. Two of the tributaries (2a and Huttonville Creek) have an overall sensitivity rating of high. Alternatives 1 to 5 would have no adverse effects on fisheries and water quality. Alternatives 6 and 7 have potential adverse effects on vegetation. Adverse effects would be avoided to the extent possible, and mitigation would be provided.
Socio-Economic Environment	<b>Land Use</b>	Alternatives 1 to 5 would have no adverse affect on the existing land use. Alternatives 6 and 7 may have potential adverse effects on existing land use, but will provide enhanced access to properties. For Alternatives 6 and 7, adverse effects would be avoided to the extent possible, and/or mitigation would be provided, where possible.
	<b>Noise</b>	Alternatives 1 to 5 will have no effect on traffic noise. Alternatives 6 and 7 may affect traffic noise levels and would need to be investigated further as a component of this study.
	<b>Archaeology and Cultural Heritage Resources</b>	A Stage 2 Archaeological Assessment is recommended for the high and moderate potential lands. A Stage 2 Archaeological Assessment will be completed as a component of this project, at a later date. A Built Heritage and Cultural Landscape Assessment identified ten buildings within the study area that are considered to have heritage value. For Alternatives 6 and 7, adverse effects would be avoided to the extent possible, and/or mitigation would be provided, where possible.

# Discussion and Preliminary Assessment of Planning Alternatives

Component	Area of Study	Issues and Assessment
<b>Socio-Economic Environment</b>	<b>Agricultural</b>	Alternatives 1 to 5 would have no adverse affect on existing agricultural land use. Alternatives 6 and 7 may have potential adverse effects on existing agricultural land use. For Alternatives 6 and 7, adverse effects would be avoided to the extent possible, and/or mitigation would be provided, where possible.
	<b>Access Considerations</b>	All of the alternatives will allow all existing property access to be maintained.
	<b>Utilities</b>	Alternative 1-5 will have no adverse effect on utilities. Alternatives 6 and 7 may require the relocation of existing utilities.
	<b>Construction Disruptions</b>	Potential adverse effects with Alternatives 6 and 7 only.
<b>Engineering Factors</b>	<b>Safety</b>	Potential improvements with Alternatives 6 and 7 only.
	<b>Travel Delay/Traffic Capacity</b>	Potential minor capacity improvement with Alternatives 3, 4 and 5. Potential major capacity improvements with Alternatives 6 and 7.
	<b>Cost</b>	Alternatives 6 and 7 have the highest capital cost.
<b>Other</b>	<b>Compatibility with Region and Municipal Plans</b>	Consistent with the City of Brampton and the Region of Peel Official Plan.

# Assessment of Alternatives (1)

**Alternative 1:** Dropped from further consideration, as it fails to address key deficiencies, particularly existing and future congestion, deficient pavement conditions and lack of accommodation of pedestrian and cyclists.

**Alternative 2:** Improvements to other roadways are planned by Region of Peel and have been considered in the traffic projections. Even with planned improvements to other roadways, there will still be significant increases in peak hour traffic demands on Bovaird Drive. Therefore, Alternative 2 fails to address the identified deficiencies.

**Alternative 3:** The study anticipates that provision of additional public transit service in this area will attract some growth in transit usage. The Brampton Transit and Transportation Master Plan recommends a sustainable, balanced transportation network. This planning alternative does not eliminate the need for physical improvements, but may be considered in a conjunction with other planning alternatives proposed.

# Assessment of Alternatives (2)

**Alternative 4:** Traffic Demand Management (TDM) strategies generally need to be applied on regional or larger area scales to achieve their desired effect. Although TDM measures may decrease travel demand, TDM measures alone are not seen as a viable strategy for Bovaird Drive.

**Alternative 5:** Traffic signals are optimized on a regular basis, based on changing traffic patterns and volumes. Potential traffic control improvements would not have a significant effect on traffic congestion.

# Assessment of Alternatives (3)

**Alternative 6:** Widening the existing roadway on Bovaird Drive and provision of additional lane capacity is necessary to accommodate traffic demand along the corridor. Alternative 6 is the only alternative that addresses the need for pedestrian and cyclist provisions in the corridor.

**Alternative 7:** A combination of Alternative 2 - 6 with one or more of the above alternatives could accommodate the projected future traffic demand along the Bovaird Drive corridor while minimizing environmental impacts.



# Preferred Alternative

The preferred planning alternative is ***Alternative 7***: A combination of Alternative 6 with one or more of the above alternatives.

# Next Steps

- Public Information Centre No.1 – May 2010;
- Review and confirm preferred planning alternatives and assessment in light of comments received from the public and agencies;
- Complete Environmental Inventory;
- Develop alternative design concepts;
- Complete detailed impact analysis;
- Develop proposals for mitigation of negative effects;
- Second meeting with agencies and stakeholders
- PIC No. 2 – Fall 2010, and;
- Prepare and File Environmental Study Report.

## MEETING RECORD

### Engineering Services for the Design and Contract Administration of:

Project	Project #
<b>Mississauga Road Widening</b> From North of Queen Street to North of Bovaird Drive West	#06-4025
<b>Bovaird Drive West Widening</b> From West of Mississauga Road to 500m East of Mississauga Road	#02-4090
<b>Trunk Sanitary Sewer on Mississauga Rd.</b> From Queen Street to Bovaird Drive	#07-2225
<b>Trunk 1200mm Zone 6 Alloa Watermain on Mississauga Rd.</b> From Bovaird Drive to the Future West Brampton Reservoir Site	#08-1210
<b>Trunk 600mm Zone 6 Watermain</b> From the Future West Brampton Reservoir Site to the Future Williams Parkway	#08-1107

### REGION OF PEEL TEAM MEETING #65

**Date:** July 26, 2010, 9:30AM – 12:45PM  
**Held:** Region of Peel – Airport Road 3rd Floor Large Board Room  
**Purpose:** Discussions with CVC / MNR and other Requirements

#### ATTENDEES:

<b>Peel Region</b>	Alex Sales	Cathy Cater
	Sally Rook	
<b>CVC</b>	Liam Marray	Jakub Kilis
	Sam Bahar	
<b>MNR</b>	Mark Heaton	
<b>MMM</b>	Elionora Berstein	
<b>Geomorphic Solutions</b>	Paul Villard	
<b>AMEC</b>	David Sinke	
<b>The Municipal Infrastructure Group Ltd</b>	Arbinder Hundal	Lana Russell

- 1) **Bovaird Drive**
- 65-1 Region PM presented the project background, specifically as it related to the existing culvert under Bovaird Drive, east of its intersection with Mississauga Road. The reasoning for the culvert extension south of Bovaird was also presented. The reasoning was that since some work related to the Mississauga Road widening required construction work near the Huttonville Creek then it made sense to go in only once and complete the road works and the culvert extension. Also the Schedule C, Class EA, completed by TSH (2003) specifically noted that the
- Info.

existing Culvert should be extended to accommodate the ultimate Bovaird Drive widening to 6 lanes.

- |      |  |        |
|------|--|--------|
| 65-2 | TMIG elaborated on the specific contents in the 2003 TSH that recommended the culvert extension for the ultimate 6 lanes widening of Bovaird Drive.  | Info.  |
| 65-3 | The Region stated that it wished to do what is right, whether that is now (under the MRIP), or later under another Region project. That is why it was proposed to complete the road works and the culvert extension under one project resulting in a one-time only disturbance of the Huttonville Creek.   | Info.  |
| 65-4 | The Regions Planning advised that it will not commence the Bovaird Drive works for at least 10 years from time of completion of Contract 3 of the Mississauga Road Improvements Project.   | Info.  |
| 65-5 | The permitting requirements for Environmentally Sensitive Areas (ESA) were discussed. Geomorphic Solutions inquired as to the permitting process, whether consolidated comments from MNR and CVC would be provided by CVC. CVC clarified that they have no agreements with the MNR. Therefore both agencies must receive separate submissions. However the two agencies will discuss concerns before issuing their separate comment letters. | Info.  |
| 65-6 | Both MMM and AMEC confirmed that the existing culvert under Bovaird Drive is an open bottom culvert.   | Info.  |
| 65-7 | MNR suggested that the existing culvert extension, including different options should be addressed by the current Class EA being undertaken by AMEC.   | AMEC   |
| 65-8 | MNR also suggested that the Region's EA group has more liaison with the MOE. It should seek MOE guidance regarding the validity of the TSH EA, in particular the requirements for the existing culvert extension. Coupled with this is the fact that the new on-going Class EA covers the same ground and area.  | Region |
| 65-9 | AMEC explained that it is working on the existing culvert extension through its Class EA. It recommended that the culvert extension should not be handled as part of the Mississauga Road Improvements Project. Therefore the Mississauga Road Improvements Project will proceed with the existing culvert, and no submissions will be made for the culvert extension. AMEC will complete its investigations to this end.                    | Info.  |

- 65-10 The Region agreed with this strategy, as it may be at least 10 to 20 years before the culvert extension is required, and so many other things may happen in the meantime to warrant a change in thinking regarding a solution to this issue. Info.
- 2) MNR Requirements / Recommendation**
- 65-11 The MNR recommended that the Mississauga Road Improvements Project should proceed without a culvert extension. The culvert extension will be addressed by the current on-going EA being completed by AMEC. Info.
- 65-12 There was a general agreement to follow this route. Info
- 65-13 Therefore the design of the Mississauga Road and Bovaird Drive intersection will be modified to reflect a 4 lane widening with no culvert extension. MMM
- 65-14 MNR described the passing of new guidelines and rules and to address the Redside Dace and other issues. The Region is generally invited to meetings regarding the passage of new guidelines and rules. The last such meeting was held May 26, 2010. MNR
- 65-15 MNR inquired if the CVC had reviewed the Huttonville Creek Embankment submission. The response was that Karen Chisholme of the CVC had provided comments. Info.
- 65-16 The CVC will confirm that the works within the Huttonville Creek valley had been reviewed and provide the comments to Peel Region / TMIG / Geomorphic Solutions. CVC
- 65-17 Geomorphic Solutions also confirmed that separate submissions of the same drawings and design briefs were made to the agencies. Info.
- 65-18 MNR requested further details regarding how the OGS would provide water quality control and the control provided for the initial 25mm flush. MNR suggested that techniques outlined in the CVC/TRCA low impact design manual should be considered. Demonstrate overall benefit to Redside Dace species, including no impact i.e. less than or equal to 25mg/l SS in discharge from erosion and sediment control areas. Info.
- 65-19 Geomorphic Solutions / TMIG to provide additional details with regard to stormwater management for water outletting to Huttonville Creek. Geomorphic Solutions / TMIG

### 3) Permits

- |                       |  |                             |
|-----------------------|--|-----------------------------|
| 65-20                 | Currently the Region is waiting for 1 permit from the CVC for Contract 2 of the Mississauga Road Improvements Project. The following submissions for the permit for works along the Tributary of the Credit were made: <ol style="list-style-type: none"> <li>1. Application for Development, Interference with Wetlands and Alteration to Shorelines and Watercourses – April 16, 2010.</li> <li>2. Supplemental Information and Response to Comments from CVC on original submission – July 21, 2010.</li> </ol> | CVC                         |
| 65-21                 | For Contract 3 of the Mississauga Road Improvements Project the Region is waiting for 1 permit from the CVC and 1 permit from the MNR. The submission for the Huttonville Creek Embankment works was made on April 16, 2010. Supplemental information has been requested by MNR.   | CVC/MNR                     |
| <br>                  |  |                             |
| <b>4) Road Design</b> |  |                             |
| 65-22                 | MMM confirmed that the east side of the new Mississauga Road is urban, with retaining walls at the portion adjacent to Huttonville Creek.  | Info.                       |
| 65-23                 | The embankment works within the Huttonville Creek valley must demonstrate a benefit to the Redside Dace habitat; this includes stormwater management through the use of SWM Ponds, orifice controls and water quality treatment.   | Geomorphic Solutions / TMIG |
| 65-24                 | Question was asked regarding whether the CVC or the MNR has any preference to the type of OGS. There is no preference.   | Info                        |
| 65-25                 | The MNR suggested the use of more porous materials for use of the paved areas. It was explained that while these may work for bicycle lanes, sided walks, lay-bys and smaller residential streets, these materials are not suitable for heavy traffic and volume that Mississauga Road and Bovaird Drive will be subjected to.   | Info.                       |
| 65-26                 | The MNR elaborated on its discharge policy. <ol style="list-style-type: none"> <li>1. Standard is 25mg/L for Redside Dace watercourses.</li> <li>2. 80% removal of TSS for watercourses that do not have Redside Dace.</li> </ol>  | Info.                       |



65-27	MNR also stated that impacts of smaller storms must also be addressed.	Geomorphic Solutions / TMIG
<b>5) Action Items</b>		
65-28	Geomorphic Solutions / TMIG to provide the Region with an additional copy of the Huttonville Embankment works for AMEC.	Geomorphic Solutions / TMIG
65-29	Geomorphic Solutions / TMIG to provide MNR with additional SWM detail for the Mississauga Road drainage that will be directed to Huttonville Creek, including water quality treatment and quantity control measures.	Geomorphic Solutions / TMIG
65-30	The Stormwater Management Report for Contract 3 should be provided to AMEC.	TMIG

Please contact the writer if there are any errors or omissions in this summary.

Next steps:

- Next meeting TBD, 2010 to discuss project issues and progress.
- Obtain CVC permit for the works adjacent to the Tributary of the Credit River prior to proposed tender date for Contract 2.

Minutes Prepared by  
**The Municipal Infrastructure Group Ltd.**

Arbinder Hundal, P. Eng.  
July 27, 2010

**Distribution:** All attendees, including

**Region of Peel:**

CC:

TMIG            Mark Tarras  
                    Laura Koyanagi

MMM            Bob Koziol

## Minutes of Meeting

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October 7, 2010  
Our File: 109089-75

**Subject:** Bovaird Drive Class Environmental Assessment  
From Lake Louise Drive/Worthington Avenue to  
1.5 km West of Heritage Road,  
and Mississauga Road Class Environmental Assessment  
Joint Meeting with CNR and GO Transit

**Date:** Monday, September 13, 2010

**Time:** 2:30 p.m.

**Location:** 9445 Airport Road, Region of Peel Offices, 3<sup>rd</sup> Floor Boardroom

**In Attendance:**

Compton Bobb	➤	City of Brampton
Neal Smith	➤	Region of Peel
Sabrina Khan	➤	Region of Peel
Kathy Cater	➤	Region of Peel
Alex Sales	➤	Region of Peel
Nadine Navano	➤	AECOM
Javier Mena-Diep	➤	AECOM
Denny Jubani	➤	CNR
Trevor Anderson	➤	GO Transit
David Sinke	➤	AMEC Earth & Environmental
Derk Meyer	➤	AMEC Earth & Environmental

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### MATTERS DISCUSSED:

### ACTION BY:

#### CNR & GO Transit Plans and Requirements

1. There are currently two mainline tracks; a third track extends from downtown Brampton to west of the Mount Pleasant Station. An extension of the third track is anticipated. Within five years, all-day traffic is planned by GO.
2. A major consideration for extension of the third track is the crossing of the Credit River to the west, and whether the third track will cross on the north or south side.
3. Specified clearance for GO Transit is 7.4 m desired, and 7.1 m minimum. Minimum clearance for CNR is 7.01 m.
4. At Bovaird Drive, GO and CN want to protect for four tracks total. At Mississauga Road, GO and CN wish to protect for three tracks total.



## **MATTERS DISCUSSED:**

## **ACTION BY:**

### **Bovaird Drive Grade Separation**

5. AMEC provided an overview of study status and considerations to date. Several alternative designs were provided, either utilizing the existing structure with construction of separate pedestrian structure, or construction of a new structure accommodating the westbound lanes of Bovaird Drive spanning the ultimate four tracks.
6. CNR noted they have significant limitations to flagging availability, and this will need to be considered in timing of construction. Peel Region noted that Mississauga Road will be constructed first, and Bovaird Drive will not be constructed for some time.
7. CNR noted they are not certain of the timing of the fourth track, however, subsequent to the meeting, additional information was provided to Peel Region.
8. CNR noted that the anticipated track blocks would likely be from 10 p.m. to 5 a.m., i.e. approximately six hours of night work. Work including piers, abutments and girders would be required to be completed within this block.
9. CN and GO noted that if the Region's preference was to utilize the existing structure, it would be acceptable to them. GO Transit noted their preference for either Option 1 (existing structure with separate pedestrian bridge) or Option 3 (new structure with 7.4 m vertical clearance).
10. GO Transit noted it is unlikely that the lay-by facility will be constructed at Creditview, and much more likely that it will be pushed further west to Georgetown. Confirmation on this study is anticipated this year.
11. Drawings to be provided to CNR prior to finalization of the ESR.

### **Creditview Road**

12. Drainage of the Creditview Subway (City of Brampton project) was discussed. AMEC noted the intent was to drain by gravity following Bovaird Drive to the Huttonville Creek, or to follow the internal development roadway pattern also outletting to Huttonville Creek.

### **Mississauga Road (from AECOM Notes)**

13. AECOM provided an overview of the Mississauga Road Class EA Study: PIC #1 was held in late 2008 and the study was delayed due to area development and impacts on the corridor. The traffic study concluded that grade separation is warranted over the rail lines; two alternatives have been analysed passing over and under the tracks.
14. AECOM presented the draft grade separation evaluation matrix, which is part of the overall evaluation (including widening to the east and west of the centreline and intersection control on the corridor).

**MATTERS DISCUSSED:****ACTION BY:**

15. AECOM highlighted the most significant findings:
  - Drainage – the overpass performs better, as the underpass will need to be integrated with existing drainage systems and may require permanent pumping station
  - Utility conflicts – AECOM is currently investigating the depth of the TransCanada Pipelines north of the rail line; an underpass could impact the required cover; overburden with an overpass is less of an issue
  - Rail operations – underpass would require temporary rail diversion and cause disruption to service; no diversion is required with an overpass
  - Groundwater, aquatic features, and capital costs – overpass is preferred
  - Property impacts – overpass requires more property than underpass
16. Discussion between the Region and AECOM regarding the profile of under- and overpass, due to the pipeline. As long as the slope is within design guidelines, it is difficult to compare alternatives.
17. The Region confirmed that overall the overpass is clearly preferred.
18. CN prefer the overpass as it avoids rail diversion.
19. The group discussed the Creditview Road underpass:
  - City of Brampton noted that the EA was completed and it had CN buy-in. There were other issues in this location that warranted an underpass. AMEC noted that these issues included community intrusion and the relative position of access roads to the GO station; an overpass would result in sight-line difficulties here.
20. City of Brampton confirmed that it is okay with an overpass.
21. The Region noted that accessibility, walk/cycle and trail crossing issues will be addressed with the City in a future discussion.
22. CN noted that freight uses currently need two tracks. The study must protect for future rail needs of CN, VIA and GO to a 2031 horizon. Typically, CN does not predict this far into the future.
23. GO noted that to protect for future services, the study should protect for a minimum of three tracks. Beyond 2021, four tracks may be needed.
24. AMEC noted that protection for three tracks may increase property requirements.
25. The Region noted that the study needs to justify the basis of its design; the EA needs to be completed now but an addendum can be added later if new information is available.
26. GO noted that desired rail clearance is 7.4m with a minimum of 7.1m.

**MATTERS DISCUSSED:**

**ACTION BY:**

27. AECOM reviewed the project schedule: the team is currently revising the traffic study and stormwater management reports. PIC #2 is scheduled for mid January 2010.
28. Regarding next steps for the EA with GO Transit and CN, CN noted that this meeting is enough and future issues can be covered via conference call.
29. GO will need to circulate preliminary designs within GO Transit, and will want to review comments upon report completion.

Meeting Minutes prepared by,

AMEC EARTH & ENVIRONMENTAL,  
a division of AMEC Americas Limited



Per: David Sinke, P. Eng.

DS/kf

c.c. Jason Stahl – AMEC Earth & Environmental

## Minutes of Meeting

February 16, 2011  
Our File: 109089-75

**Subject:** Bovaird Drive Class Environmental Assessment  
From Lake Louise Drive/Worthington Avenue to  
1.5 km West of Heritage Road

**Date:** Wednesday, February 9, 2011

**Time:** 9:00 a.m.

**Location:** 9445 Airport Road, Region of Peel Offices, 1<sup>st</sup> Floor Boardroom

**In Attendance:**

	➤	Region of Peel
Mark Heaton	➤	Ministry of Natural Resources
	➤	CVC
Cam Portt	➤	C. Portt & Associates
Bill Blackport	➤	Blackport & Associates
Joanne Ayquem	➤	Parish Geomorphic
Steve Chipps	➤	AMEC Earth & Environmental
David Sinke	➤	AMEC Earth & Environmental

### MATTERS DISCUSSED:

### ACTION BY:

#### **Bovaird Drive/Huttonville Creek Crossing East of Mississauga Road**

1. David Sinke provided a brief introduction to the on-going Class Environmental Assessment, stressing the need and justification for widening of Bovaird Drive. Bovaird Drive will be widened to six lanes, from Lake Louise to the new north/south freeway, and from four lanes, from this point westerly to Heritage.
2. The intention is to proceed with further consultation with agencies heading towards a PIC in early spring 2011.
3. AMEC presented three options for the Huttonville Creek crossing of Bovaird Drive. Drawings were presented for each alternative, and an evaluation matrix was presented. The evaluation matrix addressed various natural environmental, social, economic and technical factors, and was reviewed by the various AMEC team members.
4. The three options considered are as follows:  
  
Option 1: Widen Mississauga Road to the west; extend the existing 1.6 m x 5.53 m open footing culvert by 16 m to the north and by 8 m to the south.

**MATTERS DISCUSSED:****ACTION BY:**

- Option 2: Widen Mississauga Road to the west. Replace the existing Huttonville Creek culvert on the existing alignment with a 1.65 m x 10.5 m x 83.0 m concrete open footing culvert.
- Option 3: Shift Mississauga Road further west than Options 1 and 2 and maintain the existing Huttonville culvert on the existing alignment, avoiding instream work.
5. AMEC noted that Option 3 results in very significant impacts to the Apple Factory Store on the north-west quadrant, and the Petro Canada gas bar on the south-west quadrant, likely resulting in the need for full buyout of each site. The cost associated with such an undertaking would be extremely prohibitive. Consequently, Option 3 has been dropped by the Region as not viable, and the preferred option is Option 1.
  6. Following the presentation of alternatives and assessment by AMEC, comments were received by Agencies. Mark Heaton of MNR noted that in his opinion, the Region cannot throw out Option 3. Mark reiterated that the Huttonville Creek is reddsides dace habitat, and reddsides dace are an endangered species. He reiterated that the Endangered Species Act prohibits destruction of habitat. Mark requested that additional data be provided to justify the expectation that costs would be excessive for Option 3. Mark requested that the Region of Peel meet with the Apple Factory and Petro Canada representatives to present the evaluation and determine their position regarding impacts of Option 3.
  7. AMEC noted that the current process proceeds only to filing of the EA, not to submission for a permit under the Act. MNR would not confirm if following concurrence with the proposal in the EA stage, if a permit could still be denied by the Minister at the detailed design phase.
  8. Bill Blackport enquired about the potential of compensation through funding of off-site enhancement or creation of reddsides dace habitat. MNR reiterated that the first preference is to avoid impact, but did not preclude this opportunity.
  9. MNR requested clarification if the alignment shift proposed in Option 3 would affect the culvert alignment on Mississauga Road presented by AECOM. It was noted that this culvert location is beyond the limit of the back-to-back curves presented by AMEC.
  10. The Region of Peel will arrange meetings with the property owners in the near future.

**Peel**

Meeting Minutes prepared by,

AMEC EARTH & ENVIRONMENTAL,  
a division of AMEC Americas Limited



Per: David Sinke, P. Eng.

DS/kf

# Minutes

**Title:** Mississauga Road, Queen Street to Mayfield Road  
**Project Update Meeting**  
**Date:** October 26, 2011  
**Time:** 8:30 a.m. – 11:30 a.m.  
**Place:** Region of Peel Conference Room

**Present:** Jason Stahl, Amec; David Sinke, Amec; John Parish, Parish Geomorphic; Arbinder Hunal, TMIG; Bob Koziol, MMM; Adrian Smith, City of Brampton; Susan Jorgensen, City of Brampton; Bryan Smith, City of Brampton; Hitesh Topiwala; Laura Koyanagi, TMIG; Henrik Zbogar, City of Brampton; Robert Evangelista, Hydro One Brampton; Robert Agostini, Hydro One Brampton; Andrea Warren; Lori Ann Thomsen; S.M. Bahar, CVC; Alex Sales; Liz Brock; Steve Ganesh; Gary Kocialek; Jakub Kilis, CVC; Liam Marray, CVC; Tom Farrell, MNR; Mark Heaton, MNR; Travis Brown, Aecom; Peter Cholewa, Aecom; Chris King; Anthony Zois; Nicola Lower, Aecom; Gary Epp, Aecom; Grace Krasowski; Karl Gueneis, Aecom; Jeff Radley, Cole Engineering; Cam Portt, C. Portt & Associates; Steve Chipps, Amec;

	DESCRIPTION	ACTION
1	Introduction of participants and overview of the study area including flyby.	none
2	<p><b>DISCUSSION FROM POWERPOINT PRESENTATION:</b></p> <p><b><u>Section A1 - Culvert crossing of Queen Street</u></b></p> <ul style="list-style-type: none"> <li>arched culvert preferred by Region</li> <li>may still need to meet some requirements to be grandfathered and receive an exemption from MNR</li> <li>MNR commented that the EA meets date requirements for exemption but may not meet content requirements</li> <li><b>MNR to review EA provisions for habitat mitigation before sign-off</b></li> </ul>	<p>MNR Alex Sales</p>
3	<p><b><u>Section A2 - Mississauga Road north and south of Bovaird where Huttonville Creek is adjacent to road</u></b></p> <ul style="list-style-type: none"> <li>Retaining wall is preferred option – 13m of fill is required to edge of retaining wall</li> <li>MNR asked how habitat loss is being replaced as part of an overall benefit. Is there in-stream works planned for the construction of the wall?</li> <li>Alex Sales commented that 65m will be provided from roadway to edge of meander belt + 13m on City of Brampton lands to total 78m. City of Brampton to provide agreement to use lands for meander belt. A valley restoration plan needed to restore riparian habitat.</li> </ul>	<p>MNR Alex Sales City of Brampton</p>

<p>4.</p>	<p><b><u>Section B - Bovaird Drive/Huttonville Creek Crossing East of Mississauga Road</u></b></p> <p>Amec provided a supplementary information package that included a full assessment of all options; a plan view of all options with meander belt and riparian habitat highlighted; a cross-section of the inlet/outlet for Options 2 and 5; animal passage review memo; fisheries specific assessment chart; and a summary table of meander and habitat area impacts.</p> <p><b>Interim Construction of Bio-wall</b></p> <p>It is proposed that the bio-wall suggested in Section A be extended north when Mississauga Road is widened and constructed to the east limit of the 6-lane configuration. Construction is proposed within the fisheries window (3 months long only). It is unrealistic to assume that both the bio-wall and or proposed culvert be constructed at the same time; however staging will be discussed at a future date.</p> <p><b>Preferred Alternative</b></p> <ul style="list-style-type: none"> <li>• Region prefers Option 2 – arched culvert to provide wider span than existing culvert. It is a balanced approach which improves wildlife passage, fluvial morphology and hydraulics while minimizing impact to Redside Dace habitat and lesser cost implications.</li> <li>• <b>MNR indicated that an agreement could be reached in principal to Option 2, and that the height of the crossing should be optimized to maximize the chance of wildlife using the culvert.</b></li> <li>• Proposed width of span - 10.5m - was questioned by MNR and they indicated that a 12m span should be considered to be consistent with the crossing at Queen Street</li> <li>• MNR requested height of span should be optimized; however ultimate height is constrained by the road profile.</li> <li>• CVC indicated Option 4 is preferred: the clear span bridge. They requested additional time to review supplementary material.</li> <li>• Additional meeting to be set to determine the final option choice.</li> </ul>	<p>Neal Smith David Sinke CVC MNR</p>
<p>5.</p>	<p><b><u>Section C - Bovaird Drive/Huttonville Creek Crossing south of the Rail Tracks</u></b></p> <p><b>Background information:</b></p> <ul style="list-style-type: none"> <li>• Mississauga Road improvements driven by northwest Brampton development.</li> <li>• Mount Pleasant draft plan is approved for a unique community that incorporates integrated transportation and habitat protection. City of Brampton is completing a strategic vision for west side of Mississauga Road with a connecting road between approved and future development plans (i.e., proposed Osmington Development in the north west quadrant of Mississauga Road and Bovaird Drive West)</li> <li>• The City of Brampton would like a transit supportive connection for the west side of Mississauga Road. The overall east-west Station Road concept is to provide for a transit and pedestrian friendly alternative to Bovaird Drive allowing for interconnected communities</li> <li>• Currently City planning documents only have a protection policy in place</li> </ul>	<p>MNR Peter Cholewa Neal Smith</p>

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for an east to west connection (Station Road)

#### Discussion

- MNR noted the following:
  - Station Road currently does not exist in any planning studies, there is no supporting Class EA in place for its existence and the need for it was not included in previous discussions
  - MNR needs to know where Station Road will be located, if there will there be one or two crossings and what is the length of any proposed closures?
  - MNR and CVC worked with the City of Brampton on its subwatershed plan and secondary plan that resulted in the Schedule A Natural Heritage System, and the proposed number of crossings. The goal of the subwatershed study was to avoid and minimize the number of Huttonville Creek crossings. MNR noted that based on the number of crossing proposals for Huttonville Creek it is “getting beat up”
  - Concern about approving and constructing an environmentally damaging crossing that may never be realized
  - **In principal, MNR is in favour of the 42m span option**
- The City is proposing to address concerns for the location of Station Road by initiating a Station Road Class EA that will include a holistic land use planning component and accordingly address impacts to Redside Dace.
- The Region proposes to complete its Mississauga Road ESR based on recommending a 42 metre clear span (Option 2) which can best accommodate the creek meander belt; however, could result in another Huttonville Creek crossing on the west side of Mississauga Road to service this development area.
- The Mississauga Road EA problem statement will remain the same and not reference a need for an east to west connection (Station Road).
- The City of Brampton preferred Mississauga Road Huttonville Creek crossing is Option 3, an 86 metre long elbow culvert (12 metre at outlet, 9 metre at inlet) that can accommodate a future intersection (i.e., east to west Station Road)
- A 55 metre clear span would be required to accommodate a Station Road intersection which has an estimated cost of \$18 million
- The Region’s Mississauga Road ESR will acknowledge that the City intends to initiate its own Station Road Class EA process (a letter from City will be placed in ESR appendix), the results of which will be considered by the Region while the crossing is reviewed in detailed design
- If the Station Road construction goes ahead, Brampton will need to budget for a wider span bridge and cost of making revisions to the existing Region EA in an addendum to the EA. If the Region’s watermain is relocated in

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	<p>the future as a result of the Station Road EA – expenses to be covered by the City of Brampton.</p> <ul style="list-style-type: none"> <li>As it stands now, the CNR overpass would be constructed in 2017. City could complete its Station Road EA by 2014 and the Region would prepare a Mississauga Road EA Addendum based on any changes to the Huttonville Creek crossing design (e.g., 55 metre clear span) influenced by the City’s Station Road EA</li> <li><b>MNR is agreeable to this approach (i.e., file ESR that recommends 42 metre clear span) and will work with the Region on developing an overall benefit plan with MNR at detailed design.</b></li> </ul>	
6.	<p><b>Hydro</b></p> <ul style="list-style-type: none"> <li>MNR questioned if hydro poles could be located to west side in Section B. Jaime Acosta responded that there is existing underground infrastructure and they could not be relocated.</li> </ul>	
7.	<p><b>Regional Infrastructure</b></p> <ul style="list-style-type: none"> <li>Need to have ESR expeditiously in place is driven by the Region’s water and wastewater servicing requirements (1200mm diameter Alloa feedermain, 600mm diameter watermain and sanitary) which needs to be in place by 2014 to service development. Region needs the new Mississauga Road ROW and may even have to consider putting temporary watermains in the road allowance and later relocate them to appropriate alignments once Station Road EA is complete (proposed 26 metre ROW).</li> <li><b>Building of infrastructure will start next year so resolution of EA at a critical stage and needs to be filed by spring of 2012.</b></li> </ul>	<b>MNR</b>
8.	<p><b>Realty</b></p> <ul style="list-style-type: none"> <li>Needs to know final design for property requirements as soon as possible.</li> </ul>	<b>Alex Sales</b>

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## Minutes of Meeting

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January 25, 2012  
Our File: 109089-75

**Subject:** Bovaird Drive Class Environmental Assessment  
From Lake Louise Drive/Worthington Avenue to  
1.5 km West of Heritage Road  
Supplemental Meeting for Huttonville Creek Crossing of Bovaird Drive

**Date:** Thursday, January 19, 2012

**Time:** 1:30 p.m.

**Location:** 10 Peel Centre Drive, Suite 'A', Region of Peel Offices, Mississauga Room

**In Attendance:**

Neal Smith	➤	Region of Peel
Liz Brock	➤	Region of Peel
Mark Heaton	➤	MNR
Melinda Thompson	➤	MNR
Jakub Kilis	➤	CVC
Bahar SM	➤	CVC
David Sinke	➤	AMEC Environment & Infrastructure
Jason Stahl	➤	AMEC Environment & Infrastructure
Steve Chipps	➤	AMEC Environment & Infrastructure
<b>VIA TELEPHONE</b>		
Joanna Eyquem	➤	Parish Geomorph

### MATTERS DISCUSSED:

### ACTION BY:

1. The following is a summary of the supplemental meeting to the October 26, 2011 meeting where the crossing of Huttonville Creek and Bovaird Drive was discussed.

### Region of Peel Preferred Solution

2. The material from the previous meeting was briefly reviewed by AMEC. Focus on the holistic view taken of the entire Huttonville Creek corridor was reiterated by AMEC, which has taken into account many other factors. The various factors have been outlined at the October 26, 2011 meeting on the Huttonville Creek Assessment Table previously provided.
3. The Region preference remains at Option 2, which has a minimum clear span of 10.5m.
4. Parish Geomorph reviewed the logic behind the 10.5m span. It was indicated that based on a risk assessment process, a 32.8m meander belt has been determined at this location. However, further review of

## **MATTERS DISCUSSED:**

## **ACTION BY:**

the 100 year erosion limit indicated a meander of no more than 9m. A factor of safety of 5% of the existing meander belt as recommended by CVC increases the meander to the preferred 10.5m value.

5. Other factors led to the Region's preferred alternative, specifically cost. The estimate for a Con/Span precast unit of a span of 10.975m (36') is \$1.2 million. The meander belt span structure option (with a 24m clear span) is estimated at over \$7 million.
6. The 10.5m span is able to convey the Regional Storm event, which is an improvement over the existing condition, which overtops during this event.

## **CVC Review**

7. CVC indicated that their policy approach is to span the meander belt or the 100 year erosion limit. However, recognizes that a balanced approach is needed at this location.
8. The unilateral decision on the 10.5m span concerns CVC, which needs justification based on technical data to allow the reduced span.
9. CVC indicated that the data provided previously on ecology, animal passage, NHS, and hydraulics indicates that the reduced span is feasible. However, concern was expressed over the fluvial geomorphic data, noting that the 100yr erosion limit had been determined on 9m, where the meander belt was 32.8m.
10. Specific concern was expressed on the reduction of the meander belt from the conclusion of the Mississauga Road EA Hazard Assessment of 36.0m to the recent report of 32.8m determined by Parish Geomorphic. Copies of the report and justification for the revised width are to be sent to CVC for review.
11. CVC indicated that 10.5m is seen as the minimum allowable span, and would like to see something between the minimum value and the meander belt span structure.

**AMEC**

## **MNR Position**

12. MNR indicated that the alternatives should show net benefit to the species-at-risk at this location. This is required to obtain a permit for approval of the final culvert configuration.
13. Although the MNR agrees in principle to the Region's preferred alternative, they would like to see the largest possible clear span while balancing the other factors such as cost. MNR pointed out that the fisheries-specific assessment table provided previously indicates that the meander belt span structure benefits reidside dace the greatest, with the reduced span the second best.
14. MNR indicated other projects where a balance was struck between the full span and constructability/cost issues. The example given was the

**MATTERS DISCUSSED:**

**ACTION BY:**

CNR crossing of East Huttonville Creek. Although a 9m span is required from an environmental perspective, a reduction in span was allowed due to constructability issues.

- 15. MNR reiterated that a net gain must be shown for the permit to be approved.

**Resolution**

- 16. It was agreed by all parties that the solution is somewhere between the 10.5m span and the meander belt span structure.
- 17. The feasibility of the Con/Span precast structure was discussed. Although the 10.5m span structure is preferred by the Region, there are pre-cast units available with a greater span, which would allow for a compromise. AMEC indicated that a 12.0m span was also an option available for a Con/Span structure. It was believed but not confirmed that a 14.0m unit was available by the distributor. AMEC to investigate the largest possible span for a precast unit, and the associated costs for each span.

**AMEC**

**Conclusion**

- 18. The critical nature of finalizing the preferred alternative for this structure was indicated, as the process has delayed the completion of the EA for Bovaird Drive.
- 19. CVC indicated that a priority will be placed on this issue, and expects a 2-3 week turnaround on review of the material.
- 20. MNR indicated that an environmental agency meeting is scheduled for February 6, 2012, where an internal conversation with CVC can take place. The results of this conversation will be shared subsequent to this meeting.

Meeting Minutes prepared by,

AMEC ENVIRONMENT & INFRASTRUCTURE,  
a division of AMEC Americas Limited



Per: Jason Stahl, B.Eng., E.I.T.

JS

c.c. All Present +  
Liam Marray – CVC  
Alex Sales – Region of Peel  
Steve Ganesh – Region of Peel

Ron Scheckenberger – AMEC Environment & Infrastructure  
Danny Stone – AMEC Environment & Infrastructure  
John Parish – Parish Geomorphic  
Cam Portt – Portt and Associates  
Steve Hill – Dougan and Associates

