

Public Information Centre No. 2

Municipal Schedule 'C' Class Environmental Assessment

Mississauga Road from Financial Drive to

Queen Street West



Wednesday, November 15, 2017

Lionhead Golf and Conference Centre, 8525 Mississauga Road

6:00 p.m. – 8:00 p.m.

WELCOME

**Tonight we invite you to
Participate
Ask Questions and
Provide us your Feedback**

Purpose

PIC No. 2 is to:

- 1 Learn about the Environmental Assessment Process
- 2 Review what has taken place so far and confirm the recommended design
- 3 Present a summary of the technical studies completed
- 4 Present the alternative designs and evaluation process
- 5 Discuss the potential environmental impacts and ways to reduce impacts
- 6 Review and comment on the recommended design
- 7 Provide your questions and comments

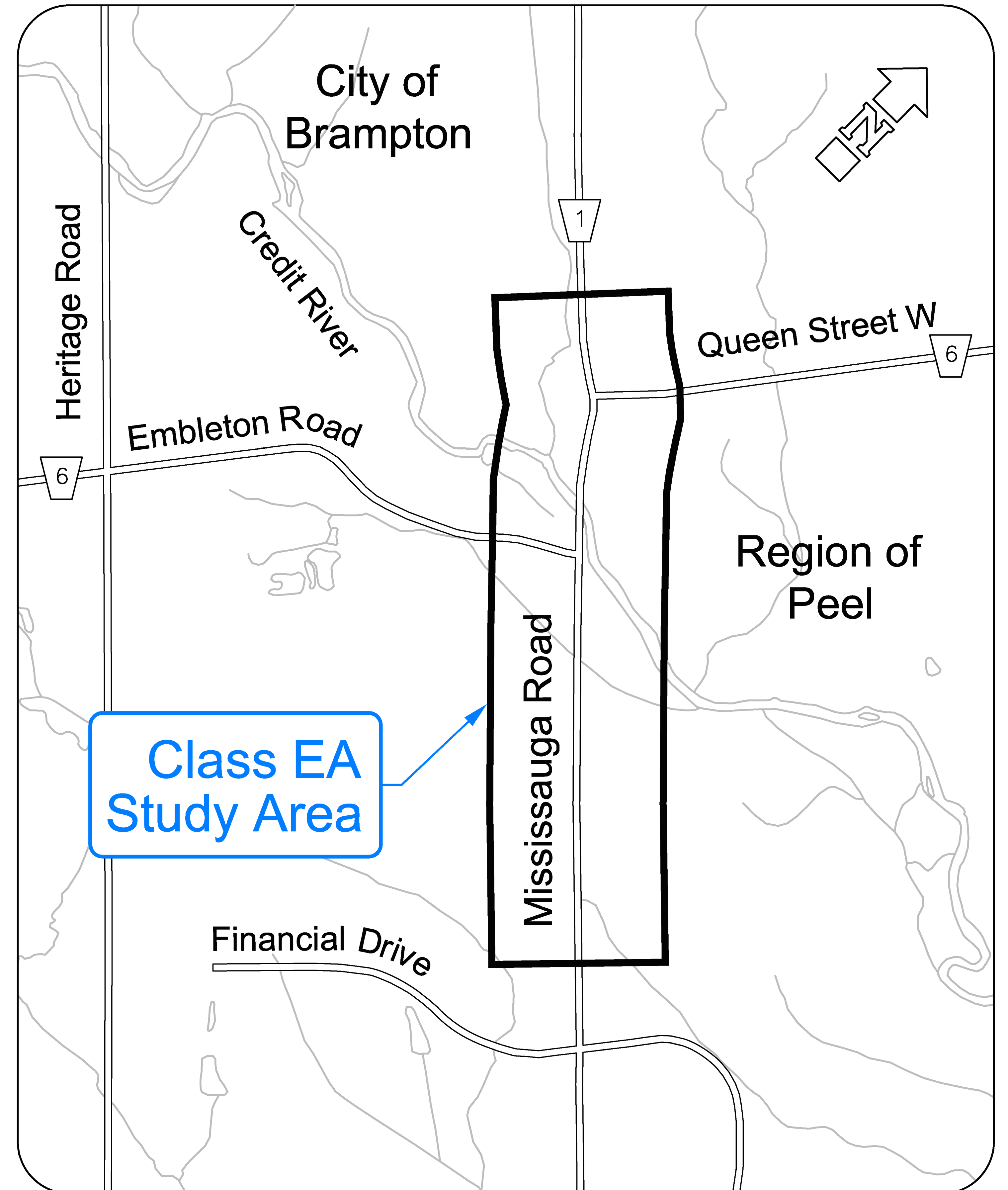
Your feedback is important and will be considered and incorporated in the preliminary design!

**Comment
Deadline is
November
30, 2017**

Study Area

Class EA Study Area

The study area is the section of Mississauga Road located within the City of Brampton from north of Financial Drive to north of Queen Street West.



Region of Peel Context

This Environmental Assessment supports the Region's 2015-2035 Strategic Plan and Term of Council Priorities

Working with You...

- The community voice and participation is welcome
 - Your feedback is important and will be considered in the preliminary design
 - We want to hear your questions today
 - Share your ideas and provide your input with us

- Coordination and partnerships occur
 - Transportation has partnered with Public Health to develop the Environmental Assessment Health Criteria which includes the alternative impacts on active transportation, accessibility and air quality

 - Transportation has consulted with the Credit Valley Conservation to look at improvements for stormwater management in the study area

See <https://peelregion.ca/strategicplan/> for more information on the Region's Strategic Plan

Region of Peel Context

This Environmental Assessment supports the Region's 2015-2035 Strategic Plan and Term of Council Priorities

Working with You to...

- Create a community where the built environment promotes healthy living, mobility, walkability, various modes of transportation, and healthy age-friendly environments
 - Improving active transportation facilities and connectivity by adding multi-use trails and sidewalks
 - Improving access to transit by working with the City of Brampton to enhance existing and future services
- Improve goods movement
 - Mississauga Road is identified as a Primary Truck Route in the Region's Strategic Goods Movement Network
- Adapt to and mitigate the effects of climate change
 - Improving stormwater management through Low Impact Development strategies
 - Reducing greenhouse gas emissions by reducing delay times for vehicle idling

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How does the LRTP (2012) relate to the Mississauga Road Class EA?

The LRTP identified the need to:

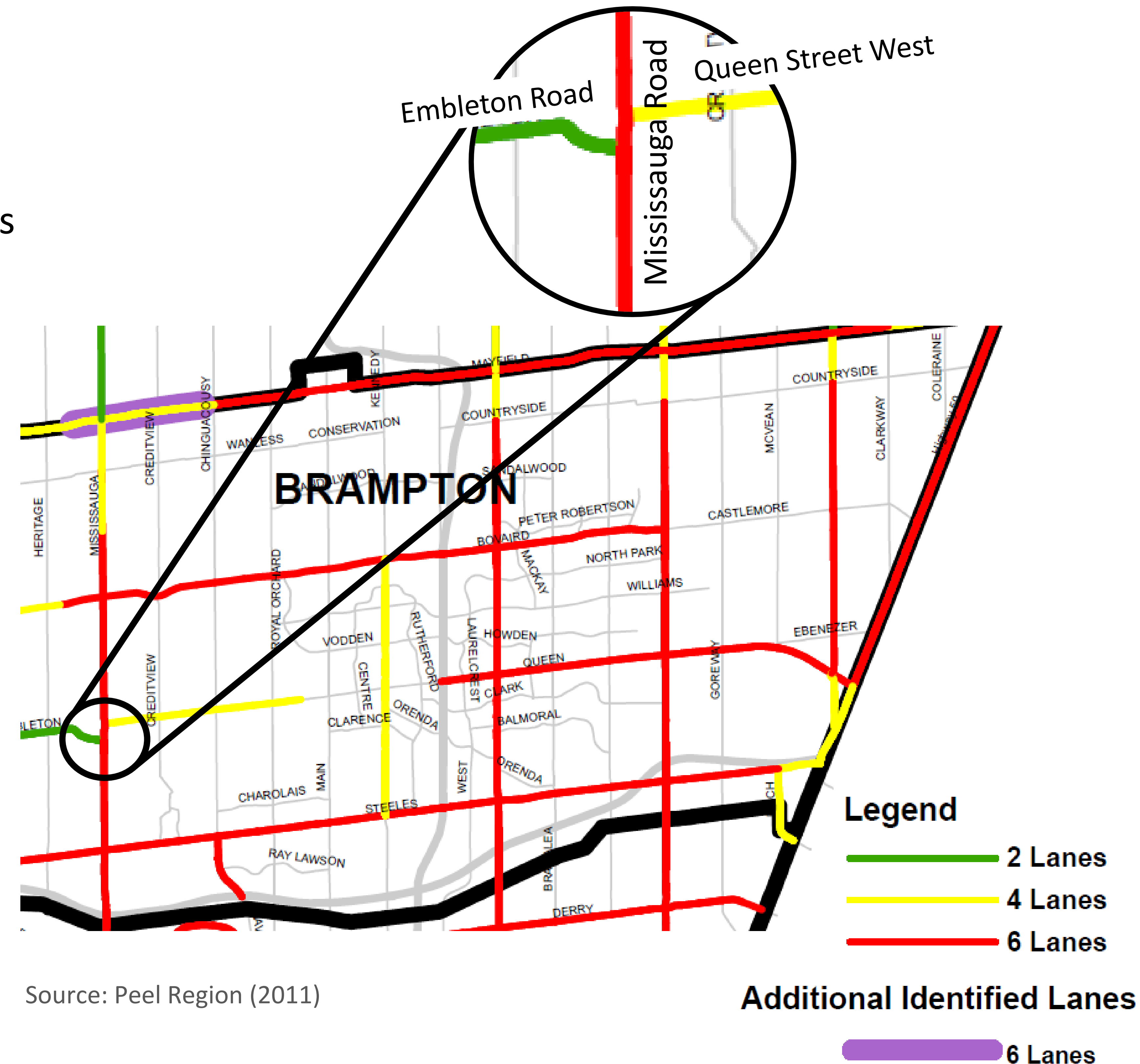


Widen Mississauga Road within the study limit from the existing four lanes to an ultimate six lanes to meet existing and future needs.



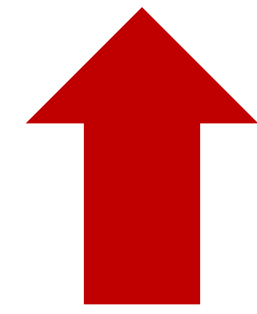
Improve other infrastructure such as transit and active transportation facilities to provide efficient multi-modal movement of people and goods.

Analysis conducted as part of the Class EA **confirmed the LRTP findings** that Mississauga Road requires widening to accommodate traffic growth into 2031.



Regional Context and Anticipated Growth

+ 23%



PEEL REGION POPULATION

1.44 Million residents



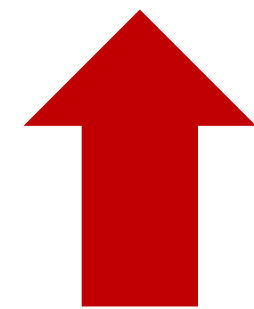
2016

1.77 Million residents



2031

+ 15%



PEEL REGION EMPLOYMENT

768,000 jobs



880,000 jobs

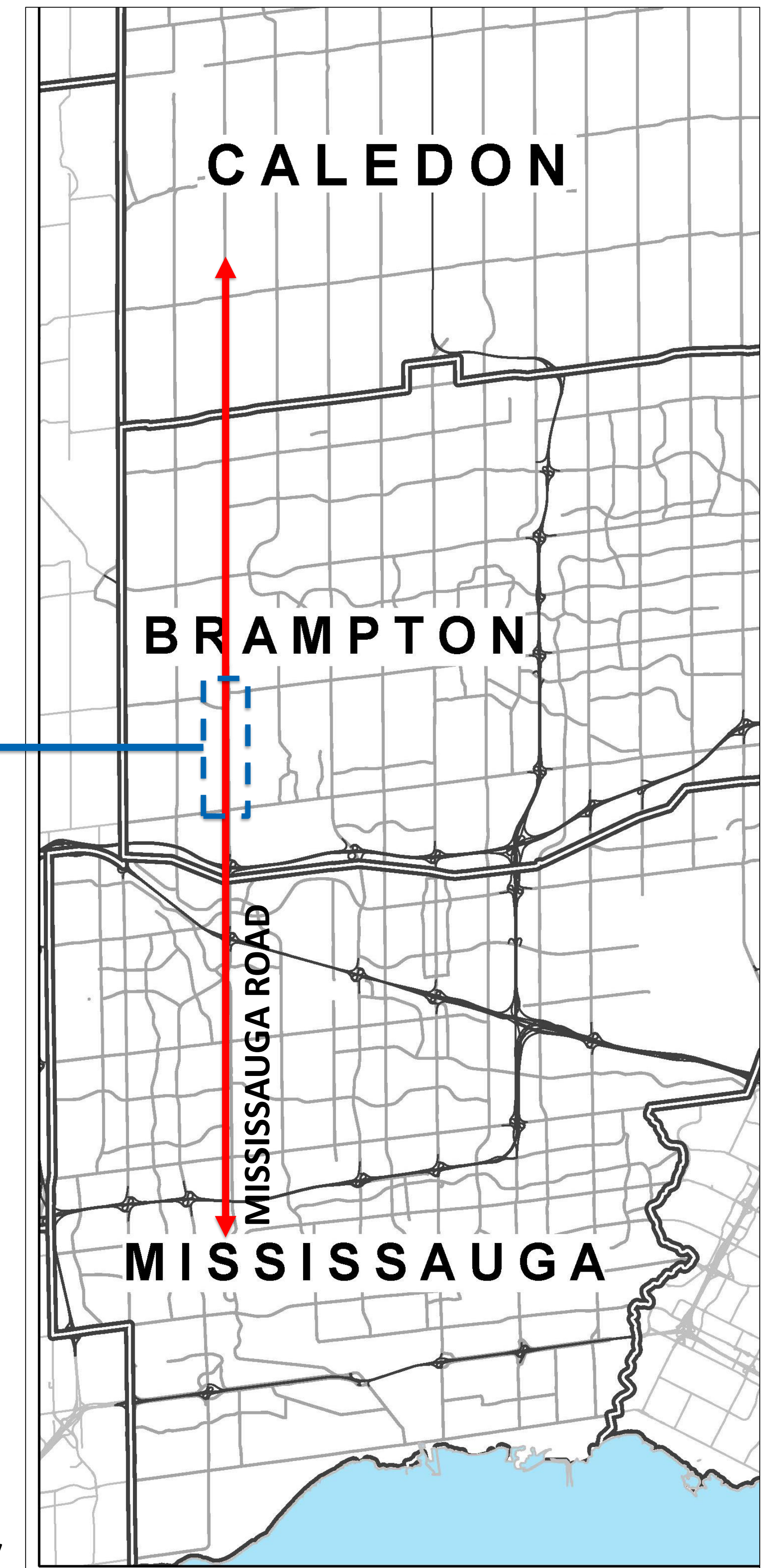


What does this mean?

Road improvements to increase capacity and improve connectivity on the existing road network are important parts of planning for the Region's future.

Study Area

Mississauga Road within the study area plays a key role in Peel Region's north-south connectivity



Existing Land Use & Future Development

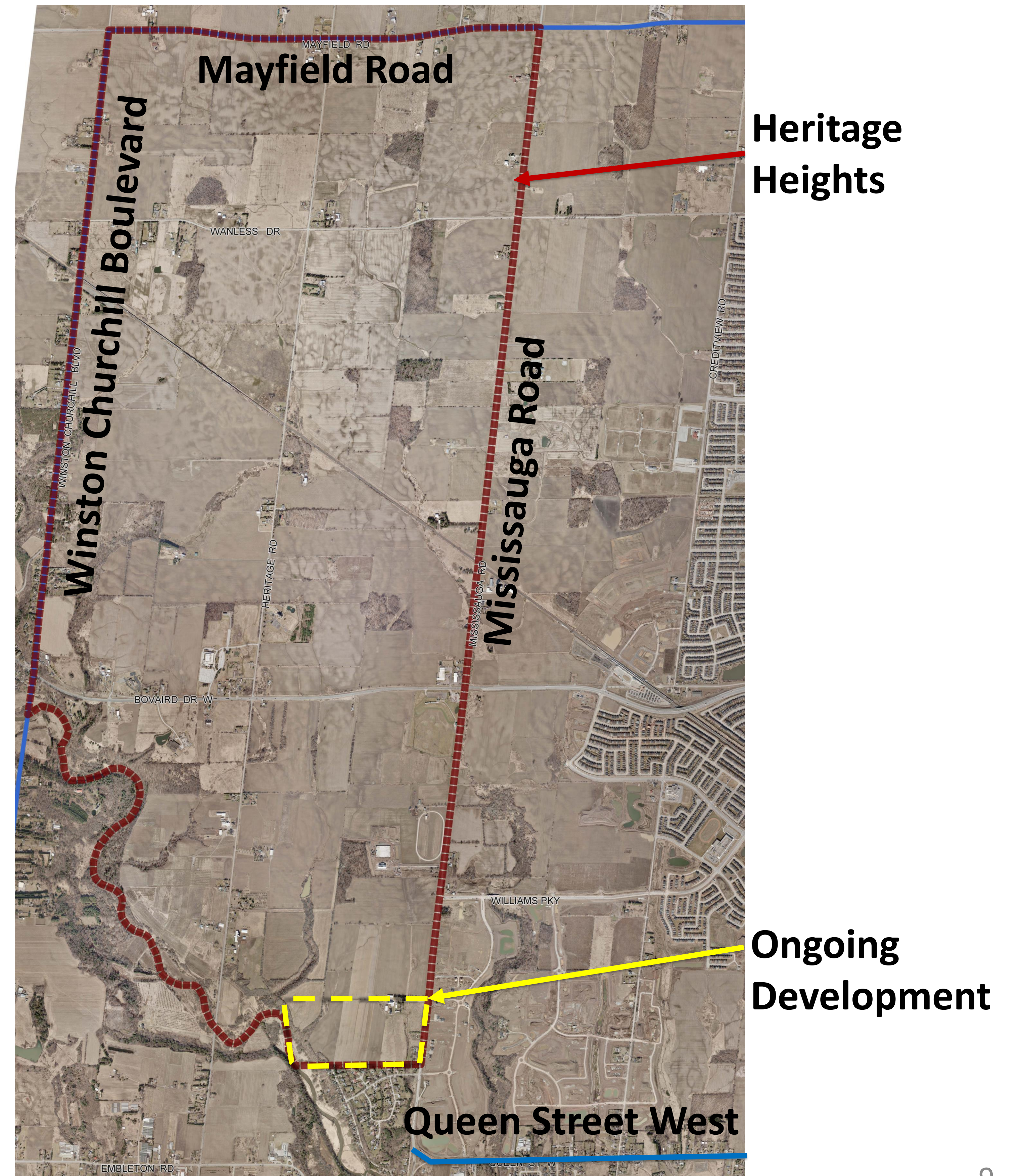
The study area is **predominately low density residential.**



Main intersections such as Mississauga Road at Queen Street West and Embleton Road provide **access to the Huttonville Community.**



North of the study area is an ongoing development. Development is planned to continue with the **Heritage Heights** development.



A Road Network Fit for the Future

Improving the way people travel

The Region's long term vision is to design and operate streets to optimize road capacity and to provide alternatives for all ways people travel



Cycling

Provide cycling infrastructure, **bike lanes, cycle tracks, multi-use trails, paved shoulders, or signed routes** with connections to the cycling network

Driving

Optimize person carrying capacity, consider **parking, access, winter maintenance, and goods movement**

Walking

Provide continuous amenities for pedestrians, **sidewalks or multi-use paths**, that allow for direct connections to public transit, roadways, schools, employment centres, and recreational facilities

Transit

With development, there is an opportunity to **improve or introduce new transit service/facilities** to the community

Changing current trends

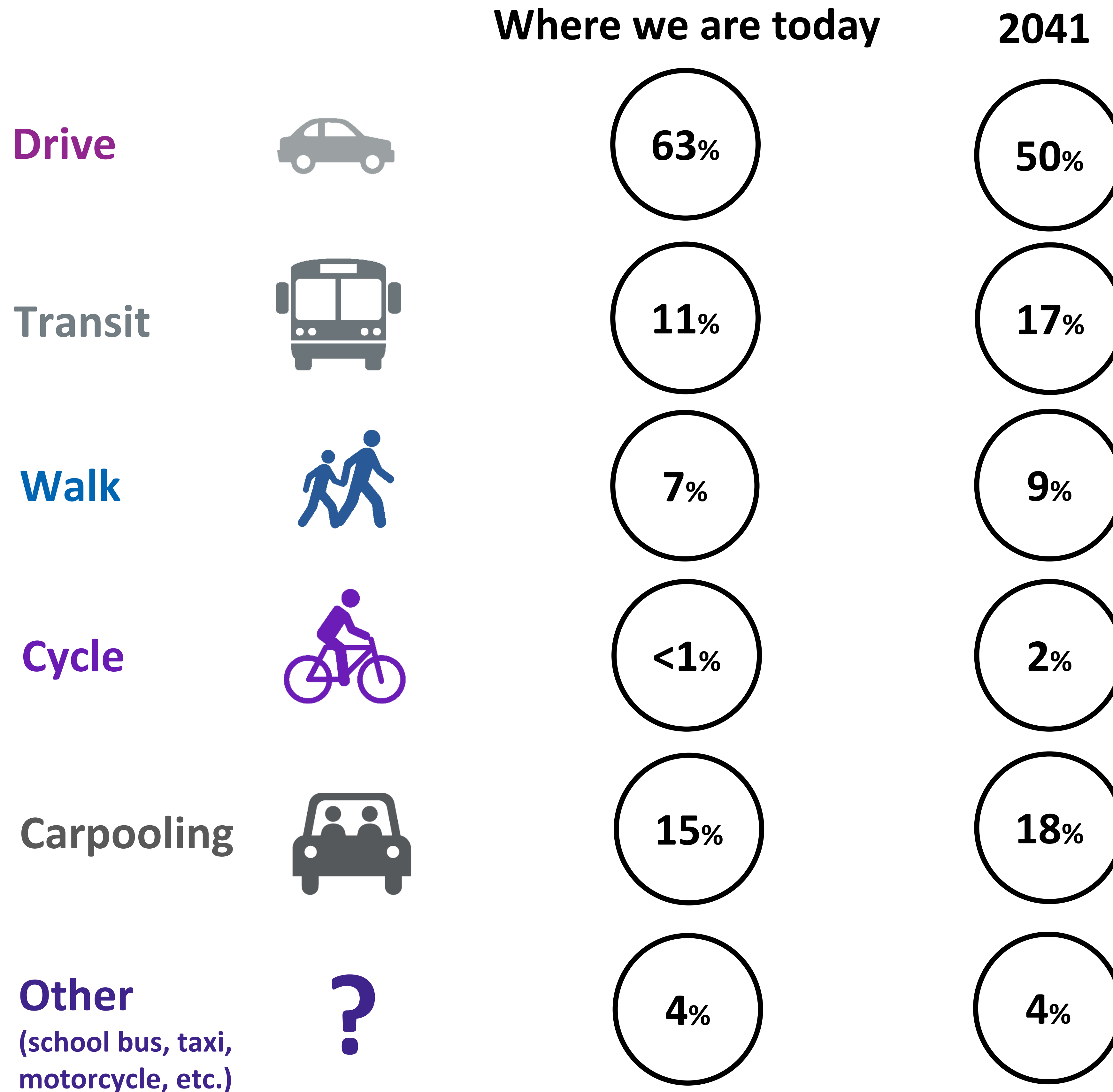
The Region's draft Long Range Transportation Plan Update and Sustainable Transportation Strategy envisions a significant shift in the operation of the transportation system by 2041.

By reducing our reliance on cars we:

- ✓ Reduce congestion
- ✓ Mitigate environmental damage
- ✓ Prevent chronic diseases such as diabetes and heart disease
- ✓ Offer travel options for everyone

Region of Peel Transportation Vision

How are people traveling in Peel Region?



The Vision



Peel Region is aiming for a **50%** sustainable mode share by 2041

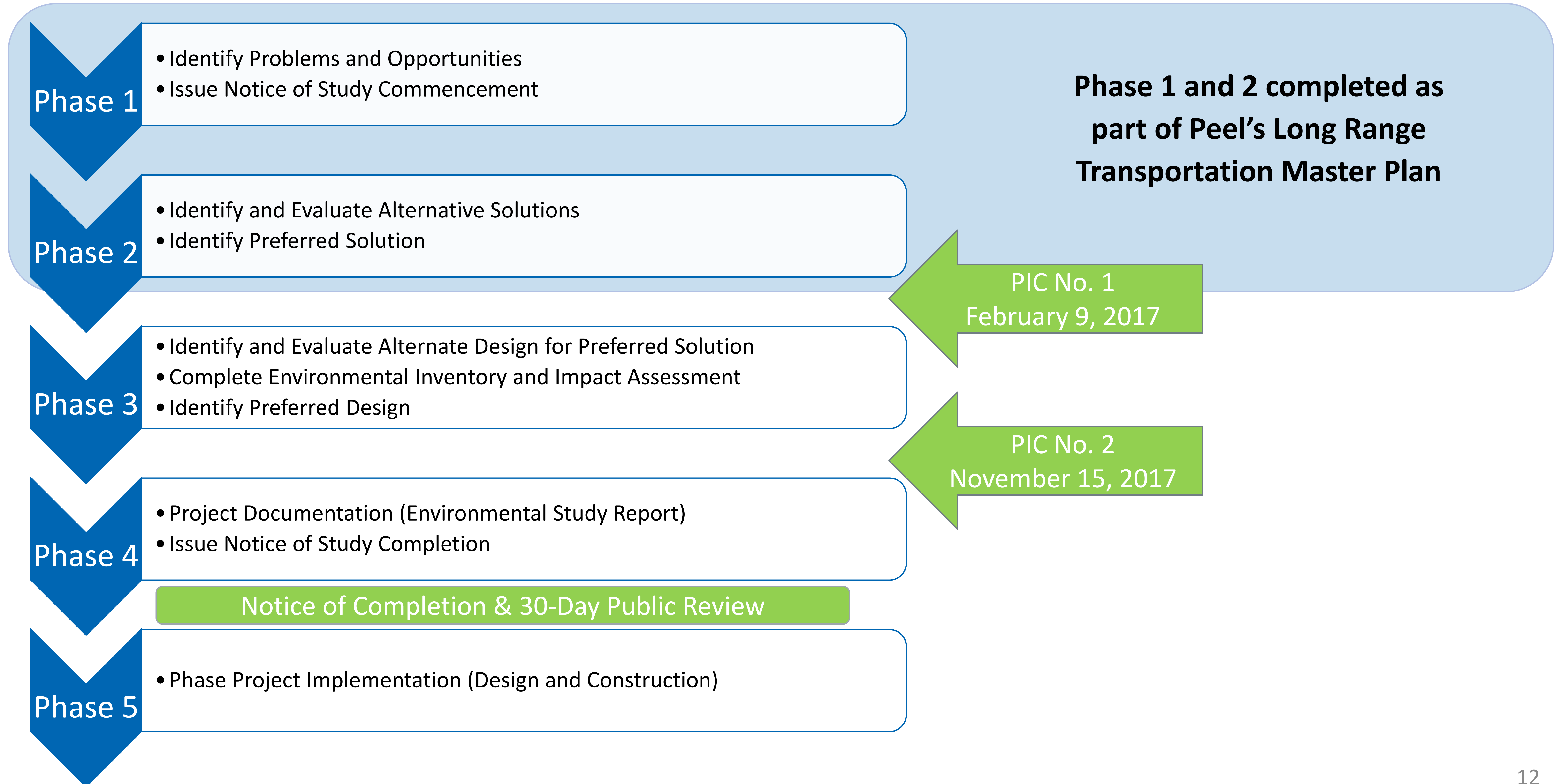


Providing infrastructure and programs to shift travel behaviour away from driving is a priority



Sustainable modes of travel allow us to build physical activity back into our lives, and reduce vehicle emissions and its associated health impacts.

Class Environmental Assessment Process

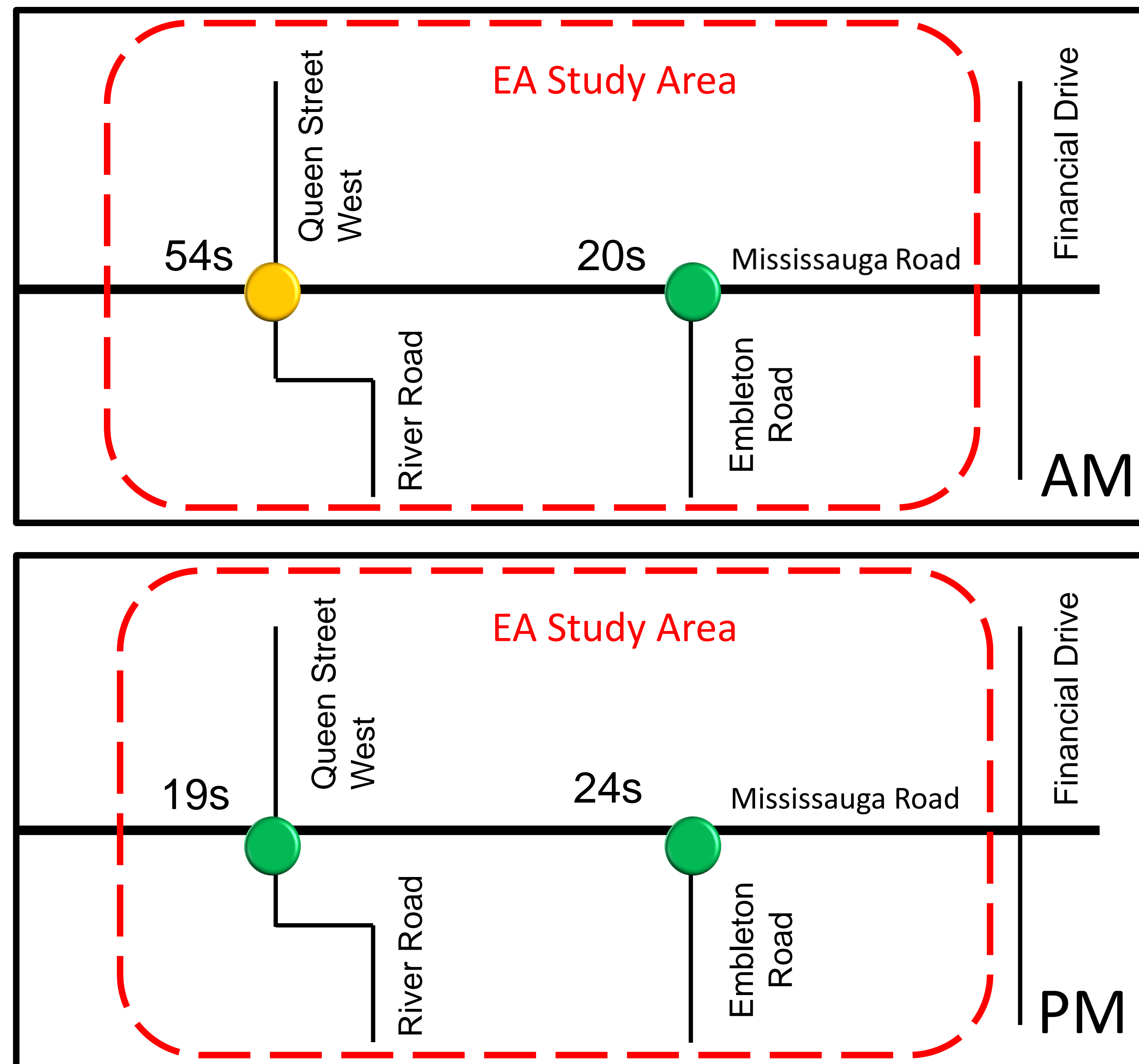


Traffic Study Overview – Existing Conditions

- Midblock traffic volumes approach or exceed capacity at some locations.
- Intersections operate well during peak hours with delays for some turning movements.
- Potential safety concerns – discontinuous active transportation facilities, some pavement markings not visible under dark and wet condition, poor visibility of street name signs, gaps for unsignalized intersections.



Traffic Congestion

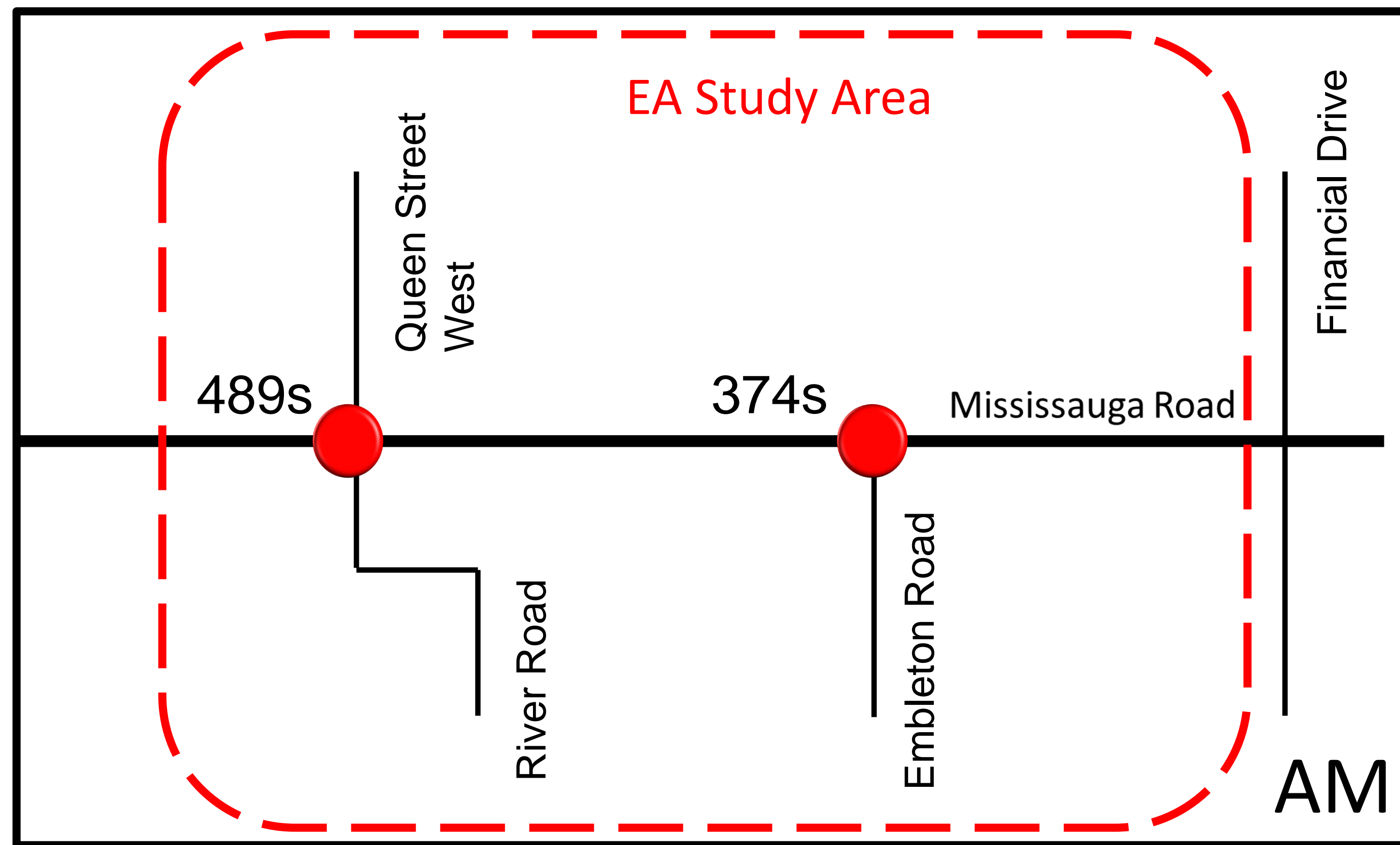


* Based on 2015 traffic data

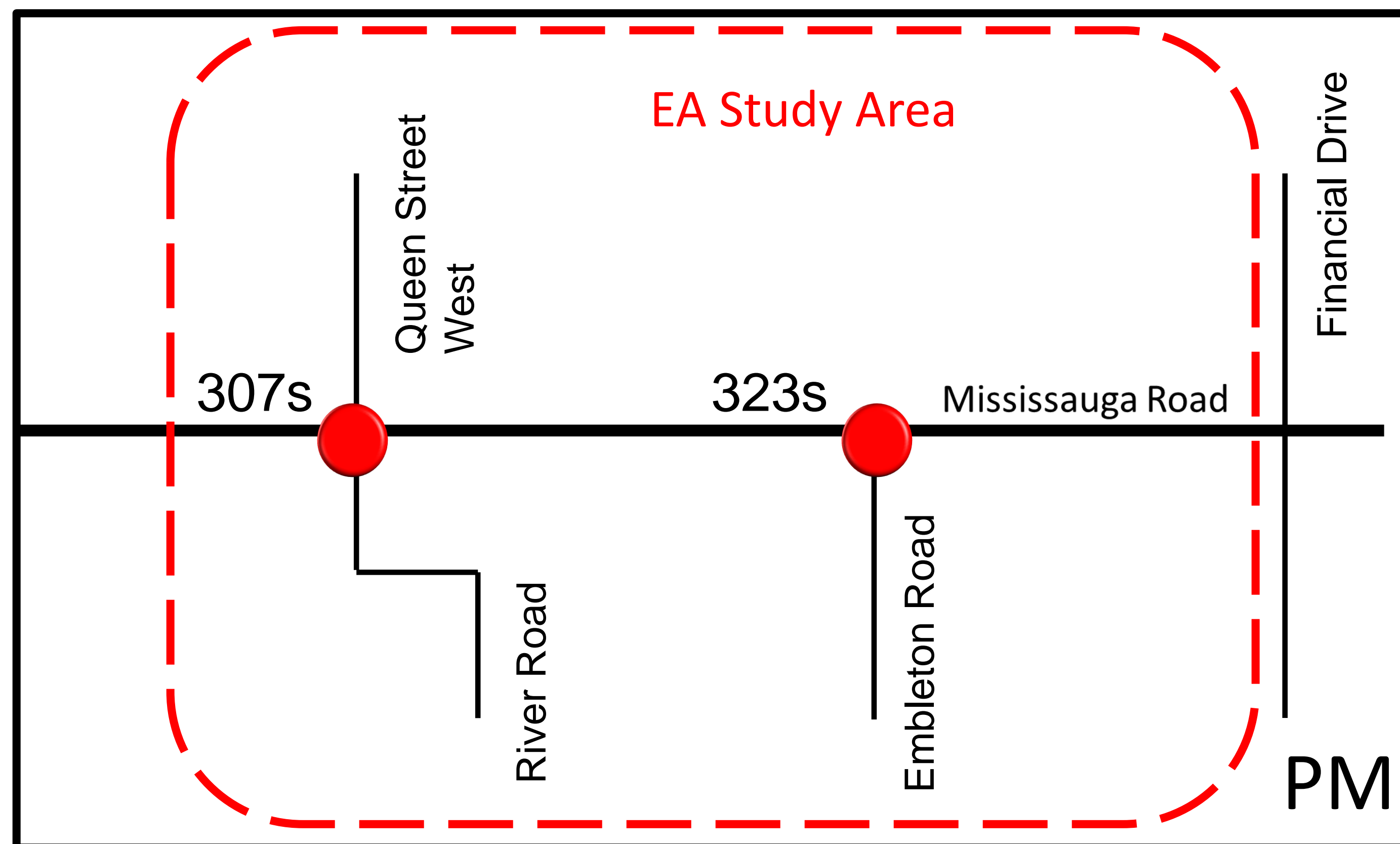
Legend

- S** Represents the number of seconds that a driver is delayed at the signalized intersection
- Represents congested conditions with slow operating speeds, high delays, and extensive queues at intersections
- Represents moderate congestion where small increases in volume can reduce operating speeds and increase delays and queues at intersections
- Represents stable traffic flow conditions with modest reduction in operating speeds and minimal delays at intersections

Future (2031) Conditions – No Improvements



➤ Delay from Queen Street West to Financial Drive would be **over 14 minutes** in the morning peak hour.

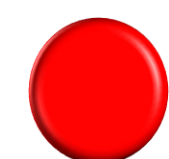


➤ Delay from Queen Street West to Financial Drive would be **over 10 minutes** in the afternoon peak hour.

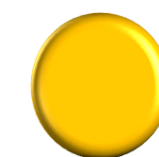


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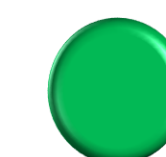
S Represents the number of seconds that a driver is delayed at the signalized intersection



Represents congested conditions with slow operating speeds, high delays, and extensive queues at intersections



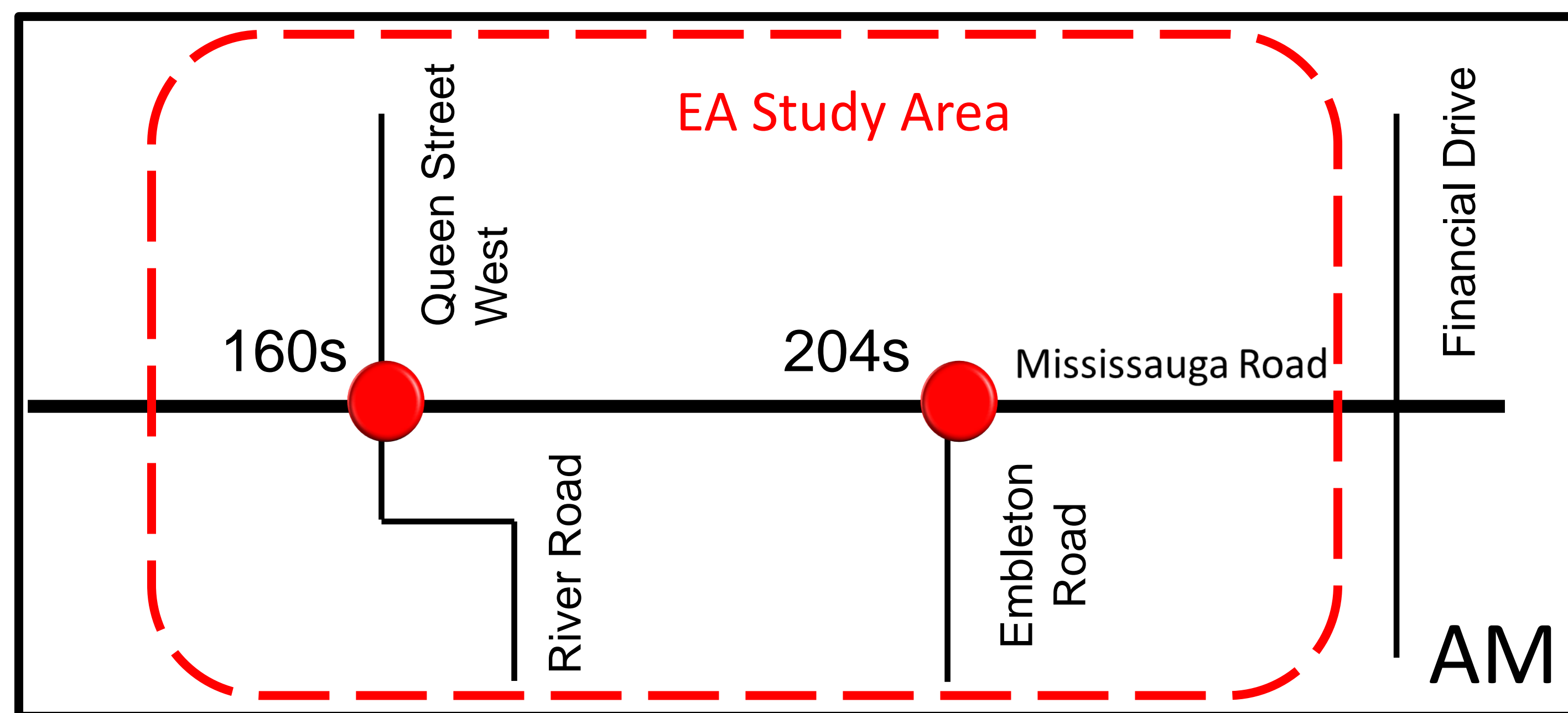
Represents moderate congestion where small increases in volume can reduce operating speeds and increase delays and queues at intersections



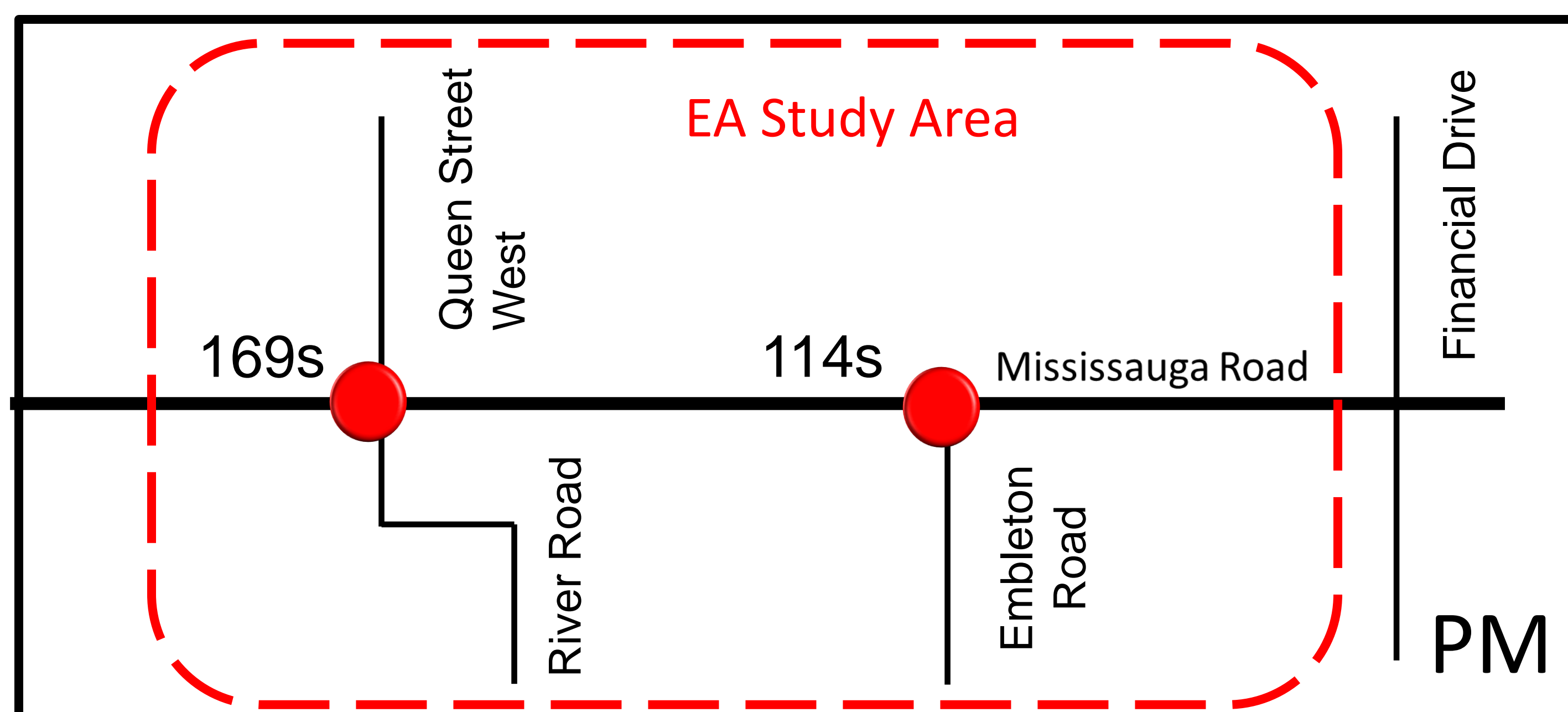
Represents stable traffic flow conditions with modest reduction in operating speeds and minimal delays at intersections

Future (2031) Conditions – With Improvements

- Findings consistent with 2012 Long Range Transportation Master Plan.
- Midblock traffic volumes forecast to exceed capacity, even with six (6) lanes.
- Significant reduction in driver delays at intersections with widening to six (6) lanes.
- Retaining four (4) lane crossing over Credit River would significantly deteriorate operations.



- With improvements delay in the **morning peak hour would be decreased by over 8 minutes.**

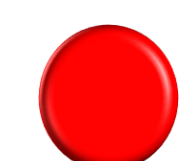


- With improvements delay in the **afternoon peak hour would be decreased by over 5 minutes.**



Legend

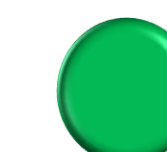
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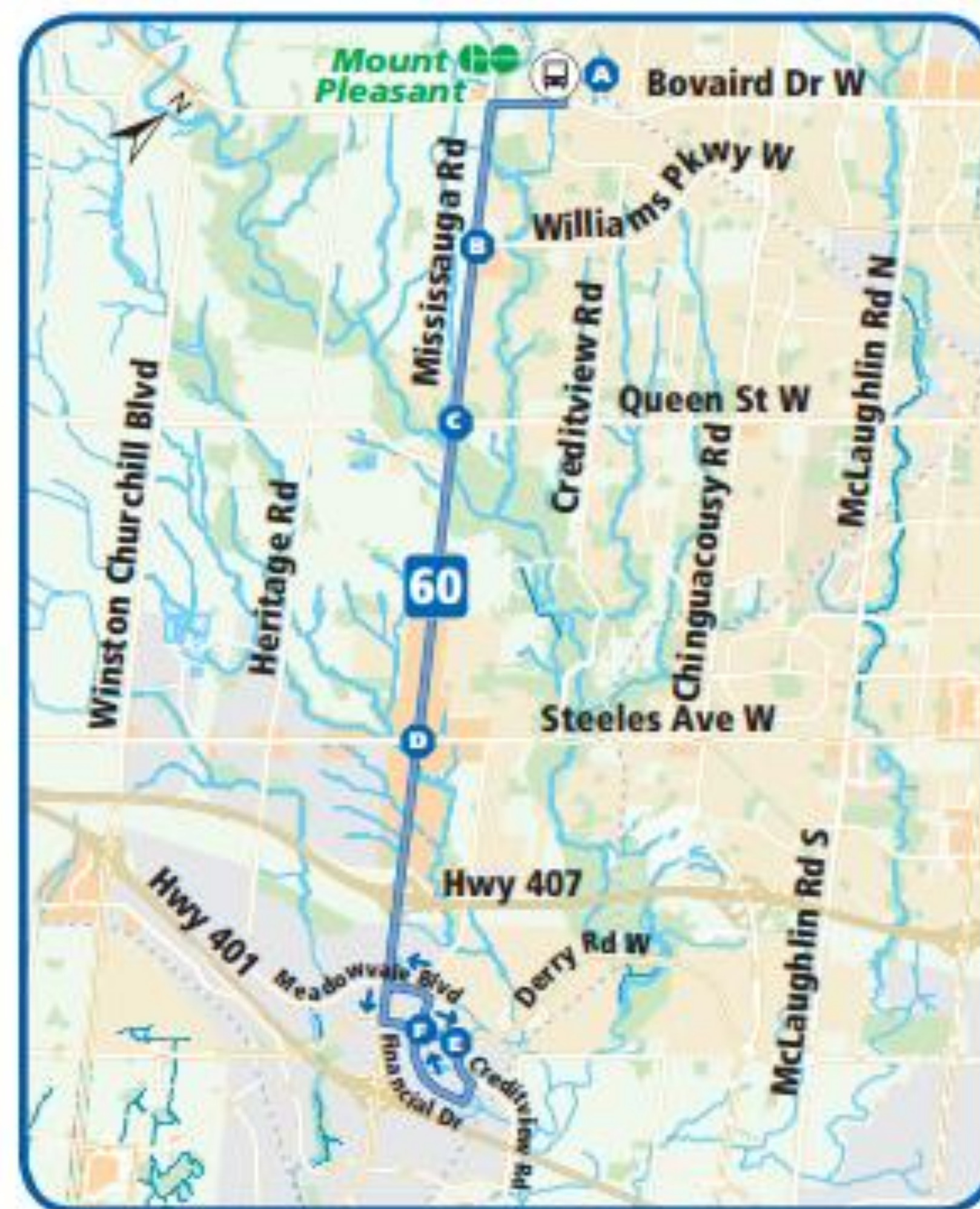
Represents moderate congestion where small increases in volume can reduce operating speeds and increase delays and queues at intersections



Represents stable traffic flow conditions with modest reduction in operating speeds and minimal delays at intersections

Existing and Future Transit Initiatives

- Brampton Transit will continue to operate one bus route - Route 60 Mississauga Road, through the study area, which will be serviced by stops at Queen Street West, Embleton Road, and Lionshead Golf Course Road.



Active Transportation

- As recommended in The Region of Peel Active Transportation Master Plan, pedestrian and cycling facilities will be constructed throughout the corridor in the form of multi-use trails on both sides of Mississauga Road.

Promotes mobility, walkability and various modes of transportation



Summary of Technical Studies

Natural Environment

Aquatic Environment

- Two Watercourses in the study area:
 - Credit River main branch – Cool/warmwater watercourse
 - Unnamed Intermittent Tributary – Does not provide fish habitat
- Up to 64 fish species reported in the Credit River watershed



Rainbow Trout



Barn Swallow



Chimney Swift



Cliff Swallow

Terrestrial Environment

- Breeding Bird Study was completed
 - Barn Swallow and Chimney Swift were observed (both protected species)
- Significant Natural Heritage Features
 - Churchville-Norval Wetland Complex
 - Credit River Valley
 - Wildlife passage under Credit River Crossing
- Other Species At Risk not observed within the study area but reported by MNRF:
 - Butternut (tree) – endangered
 - American chestnut (tree) – endangered
 - Eastern Meadowlark (bird) – threatened
 - Bobolink (bird) – threatened
 - Eastern Small-footed Bat – threatened
 - Little Brown Bat – endangered
 - Northern Bat – endangered

Summary of Technical Studies

Stage 1 & 2 Archaeological Assessments

Stage 1 results

- Over 98 % of the study area does not require a Stage 2 assessment due to the area being previously disturbed
- Under 2 % of the study area has potential for a Stage 2

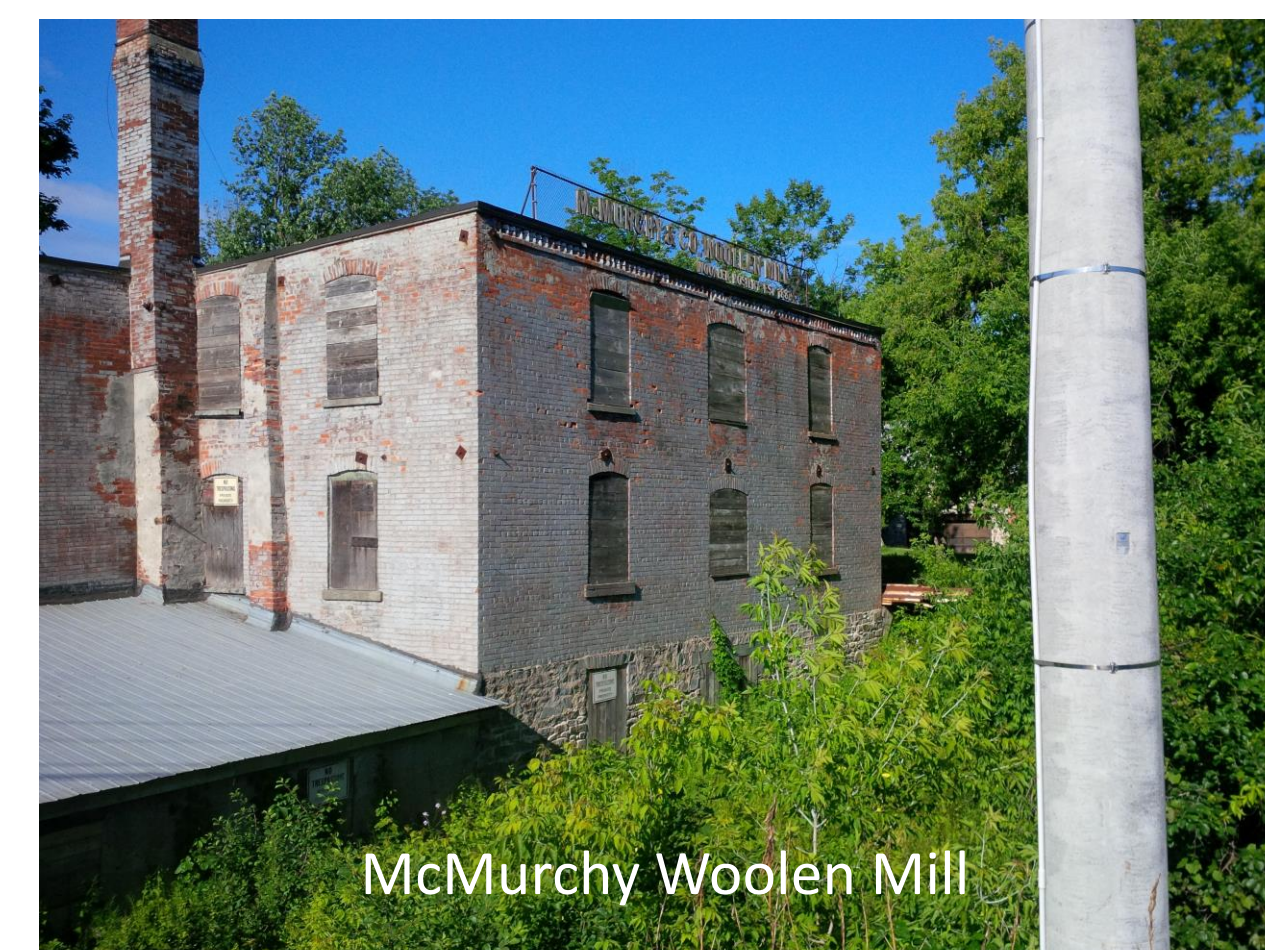
Stage 2 results

- The stage 2 assessment is currently underway, completion anticipated by end of 2017



Built Heritage & Cultural Landscape Assessment

- Heritage resources:
 - Designated:
 - The former McMurchy Woolen Mill located at 2100 Embleton Road
 - Grade B-Listed:
 - 2014 and 2015 Embleton Road
 - 8837 and 8935 Mississauga Road
 - 18 River Road
 - Landscape features on River Road
- The heritage character of buildings and landscapes are not to be impacted by any roadwork
- Heritage Impact Assessments should be completed for any potential impacts



Summary of Technical Studies

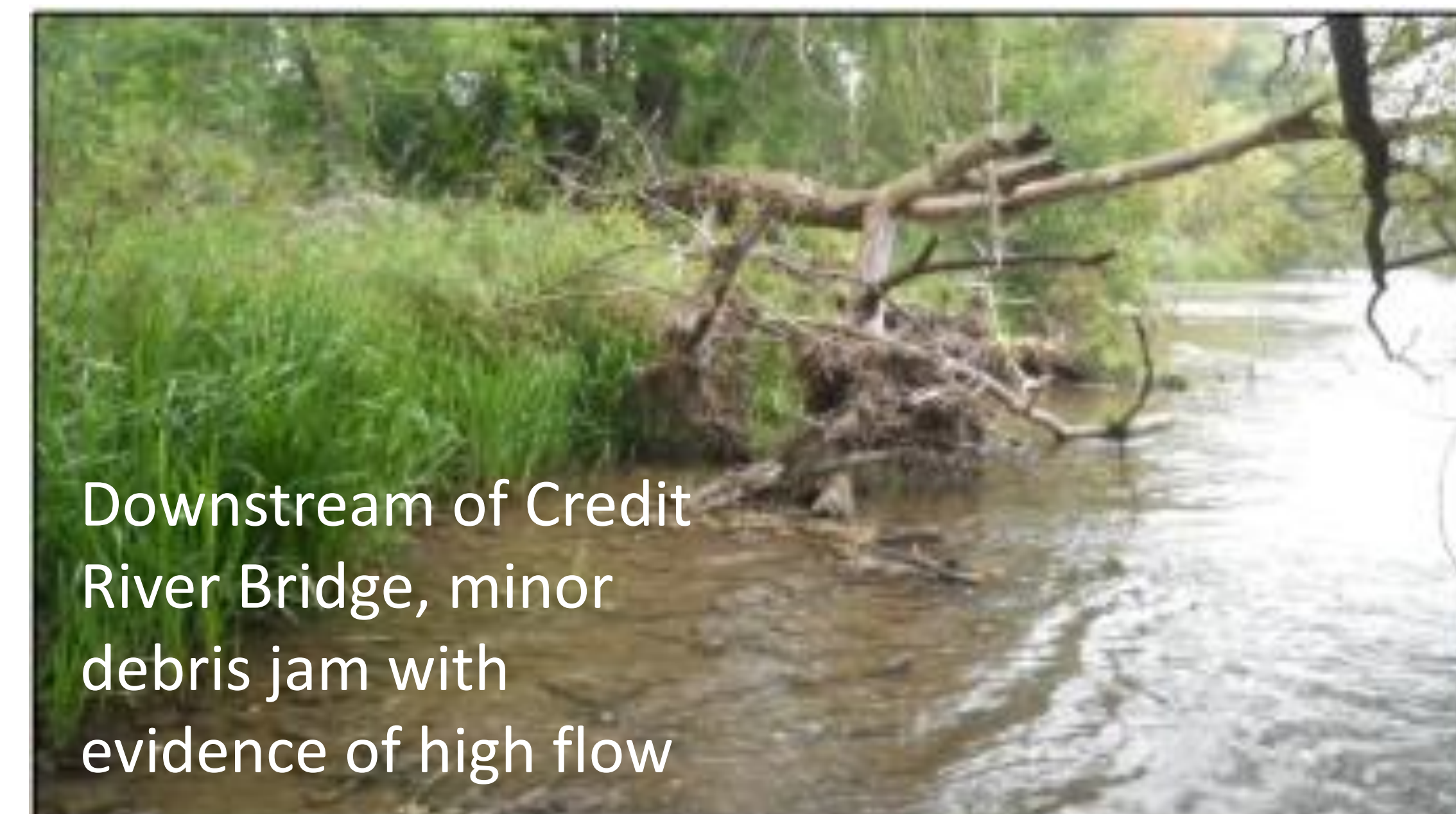
Hydrogeology

- Private well and septic survey
 - ❖ No private wells present in the local area
 - ❖ Several residences are on private septic systems, mainly along Embleton Road
- Recorded private septic systems will be identified during detailed design and assessed for any potential impacts



Fluvial Geomorphology

- Assessment included:
 - Historical assessment
 - River reach and meander belt assessment
 - Identification of stream crossing locations
 - Field investigation
- Key finding:
 - Recommended bridge span is 75m



Indigenous Consultation

- Consultation with Indigenous groups included:
 1. Mississaugas of the New Credit First Nation
 2. Six Nations of the Grand River
 3. Haudenosaunee Confederacy Chiefs Council (represented by the Haudenosaunee Development Institute)

- Information was shared with all groups

- An invitation to participate in the study was offered

- The Region of Peel and the Mississaugas of the New Credit First Nation met and signed an Agreement to have Field Liaison Representatives participate in the study activities

- The Region of Peel reached out to the Haudenosaunee Confederacy and offered to meet and provide an opportunity to participate in the study activities

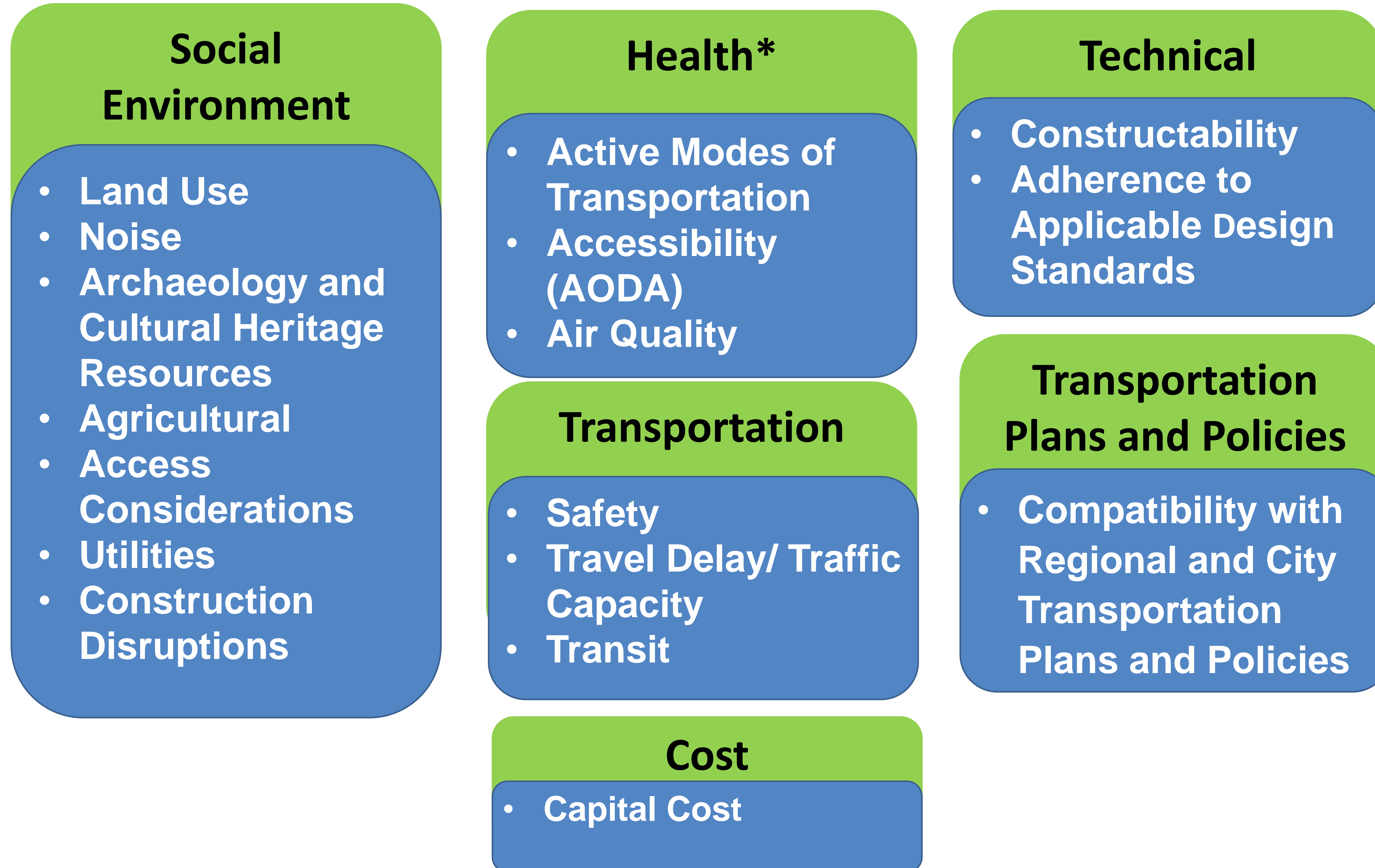
- The Region of Peel engaged with the Six Nation of the Grand River and agreed to keep the First Nation informed about the study

Problem & Opportunity Statement

- Based on a review of existing and future conditions and consultation with stakeholders, it has been determined that improvements are needed along the Mississauga Road corridor

- The specific problems and opportunities that are being addressed are:
 - existing and future traffic congestion – **Adding additional lanes**
 - roadway geometrics – **Improving deficient road elements**
 - intersection operations – **Improving signal timing**
 - pavement condition – **Resurfacing the roadway**
 - accommodation of transit – **Including new bus bays and shelters where required**
 - pedestrian and cyclists safety and facilities - **Adding multi-use trails and sidewalks**
 - stormwater management – **Installing new storm sewers and Low Impact Development systems**

Evaluation Criteria



*Utilizes the Environmental Assessment Health Criteria, developed in partnership with Peel Health.

Alternative Solutions Assessment

	3. TRANSIT INFRASTRUCTURE IMPROVEMENTS	4. ACTIVE TRANSPORTATION (AT) INFRASTRUCTURE IMPROVEMENTS	5. TRAVEL DEMAND MANAGEMENT	6. WIDEN MISSISSAUGA ROAD	7. COMBINATION
Natural Environment	<ul style="list-style-type: none"> Minor impacts dependent on the scope of the transit improvements implemented 	<ul style="list-style-type: none"> Minor impacts dependent on the scope of the transit AT improvements implemented 	<ul style="list-style-type: none"> No impacts 	<ul style="list-style-type: none"> Potential for minor impacts but can be mitigated with established practices and guidelines 	<ul style="list-style-type: none"> Potential for minor impacts but can be mitigated with established practices and guidelines
Social Environment	<ul style="list-style-type: none"> Potential for minor impacts dependent on the scope of the transit improvements implemented 	<ul style="list-style-type: none"> Potential for minor impacts dependent on the scope of the AT improvements implemented 	<ul style="list-style-type: none"> Limited impacts to land use and other social factors 	<ul style="list-style-type: none"> Potential for minor impacts associated with widening and property acquisition 	<ul style="list-style-type: none"> Potential for minor impacts associated with widening and property acquisition
Health	<ul style="list-style-type: none"> Minor improvements to AT infrastructure, AODA requirements, and air quality 	<ul style="list-style-type: none"> Significant opportunity to improve AT infrastructure, AODA requirements, and air quality 	<ul style="list-style-type: none"> No opportunity for improvements to AT infrastructure, AODA requirements, and air quality 	<ul style="list-style-type: none"> Opportunity to improve AT infrastructure, AODA requirements, and air quality 	<ul style="list-style-type: none"> Significant opportunity to improve AT infrastructure, AODA requirements, and air quality

Most Preferred

Neutral

Least Preferred

Alternative Solutions Assessment

	3. TRANSIT INFRASTRUCTURE IMPROVEMENTS	4. ACTIVE TRANSPORTATION (AT) INFRASTRUCTURE IMPROVEMENTS	5. TRAVEL DEMAND MANAGEMENT	6. WIDEN MISSISSAUGA ROAD	7. COMBINATION
Transportation	<ul style="list-style-type: none"> Increase in traffic congestion associated with increase in traffic volume but potential to improve transit 	<ul style="list-style-type: none"> Increase in traffic congestion associated with increase in traffic volume but no potential to improve transit 	<ul style="list-style-type: none"> Increase in traffic congestion associated with increase in traffic volume but no potential to improve transit 	<ul style="list-style-type: none"> Opportunity to improve traffic congestion, corridor capacity and transit infrastructure 	<ul style="list-style-type: none"> Significant opportunity to improve traffic congestion, corridor capacity and can greatly improve transit infrastructure
Cost	<ul style="list-style-type: none"> Moderate capital cost 	<ul style="list-style-type: none"> Moderate capital cost 	<ul style="list-style-type: none"> Minimal capital cost 	<ul style="list-style-type: none"> Higher capital cost associated with improvements 	<ul style="list-style-type: none"> Higher capital cost associated with improvements
Technical	<ul style="list-style-type: none"> Some constructability concerns and unable to upgrade corridor to new standards 	<ul style="list-style-type: none"> No constructability concerns and able to upgrade some aspects of corridor to new standards 	<ul style="list-style-type: none"> No constructability concerns and unable to upgrade corridor to new standards 	<ul style="list-style-type: none"> Many constructability concerns and able to upgrade some aspects of corridor to new standards 	<ul style="list-style-type: none"> Many constructability concerns and able to upgrade some aspects of corridor to new standards
Transportation Plans and Policies	<ul style="list-style-type: none"> Complies with some aspects of City and Region of Peel planning documents 	<ul style="list-style-type: none"> Complies with some aspects of City and Region of Peel planning documents 	<ul style="list-style-type: none"> Complies with some aspects of City and Region of Peel planning documents 	<ul style="list-style-type: none"> Complies with City and Region of Peel planning documents 	<ul style="list-style-type: none"> Complies with City and Region of Peel planning documents



Alternative Solutions

The following alternatives were assessed and Alternative 7 – Combination was recommended to be carried forward

1. DO NOTHING

- No improvements
- Continue regular maintenance

2. IMPROVE OTHER ROADS

- Add capacity to adjacent parallel roads to accommodate traffic

3. TRANSIT INFRASTRUCTURE IMPROVEMENTS

- Improve transit infrastructure to support Brampton Bus Rapid Transit Services and address capacity requirements

4. ACTIVE TRANSPORTATION (AT) INFRASTRUCTURE IMPROVEMENTS

- Improve AT infrastructure to support Region of Peel's Active Transportation Master Plan

5. TRAVEL DEMAND MANAGEMENT

Encourage and support change in travel behaviour to reduce peak travel demand by:

- Promoting car-pooling and possible HOV
- Promoting flexible work hours, increasing active transportation trips (biking/walking)

6. WIDEN MISSISSAUGA ROAD

- Addition of through traffic lanes including intersection improvements, to increase traffic capacity of the corridor

7. COMBINATION

Combination of:

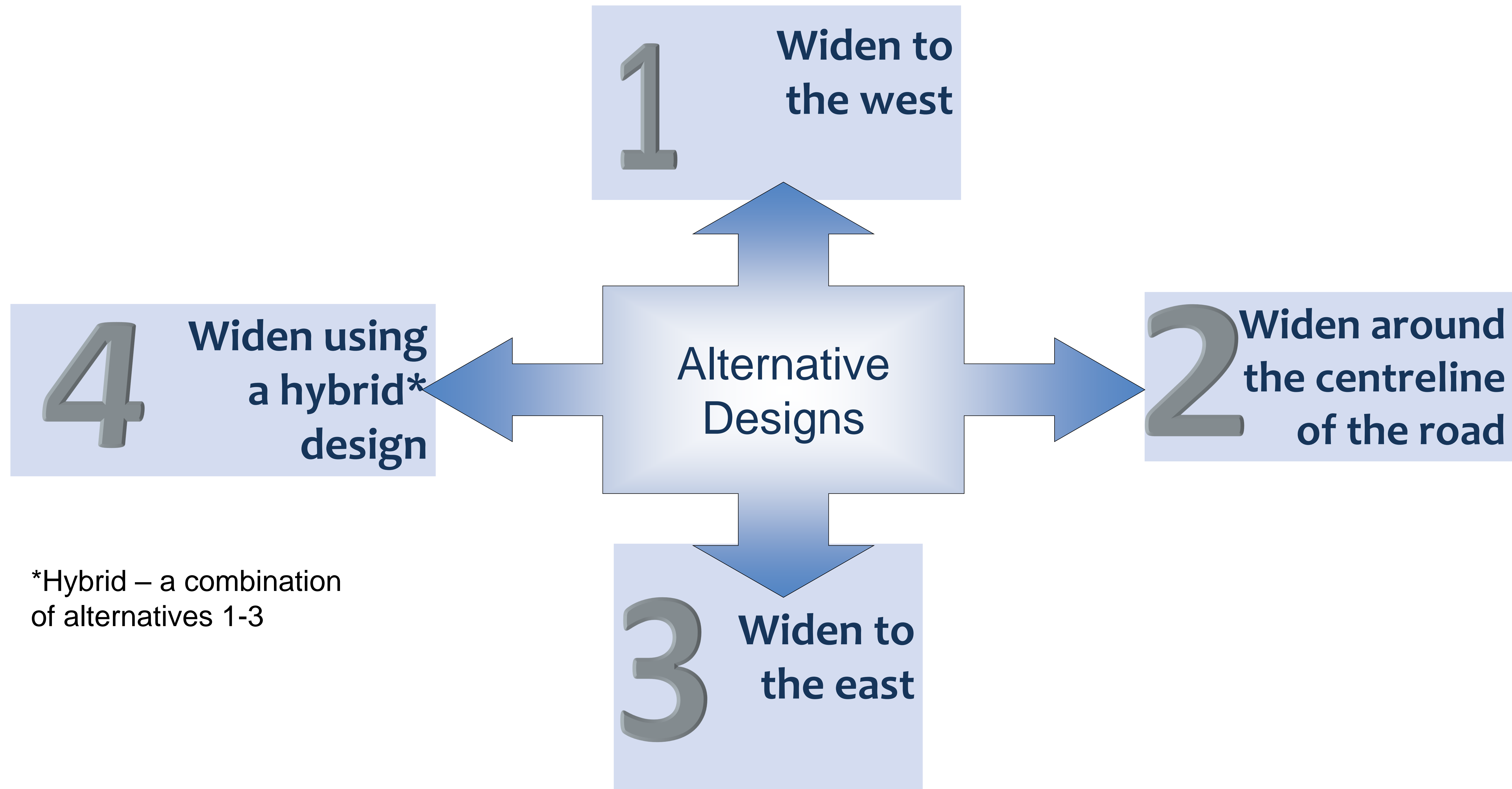
- Improve transit services
- Improve AT
- Travel Demand Management
- Widen Mississauga Road

Note: Alternatives 1 and 2 were eliminated as part of Peel's Long Range Transportation Plan Master Plan process as well as the traffic analysis completed and were subsequently not assessed.

What We Heard at PIC No. 1

What We Heard	What We Did
<p>The Study: Why are you conducting another study? It seems like this area was just under construction.</p>	<p>The need for this study was identified in the 2012 Region of Peel Long Range Transportation Plan Update. The purpose of the study is to examine the need and justification as well as the feasibility for improvements that may include widening, intersection improvements and new infrastructure to facilitate transit, walking and cycling for the Mississauga Road corridor.</p>
<p>Cycling Facilities: Are cycling facilities being considered as part of the EA? I support them.</p>	<p>Yes, as part of the EA process, a comprehensive review of the existing and planned pedestrian and cycling facilities within and around the study area was completed with the goal of improving the quality of pedestrian and cycling experience along the corridor. To address the needs for cyclists, a multi-use trail is identified throughout the study area.</p>
<p>Speeding Issues: Please review the road speed as part of this study. Previously the speed limit was 50km/h but it has been increased to 60km/h causing people to drive at up to 80km/h through the area.</p>	<p>Road speed was reviewed and consultation occurred with Traffic Operations to determine proposed alternatives. The project team will consider the posted speed limit reduction and will provide a recommendation in the final Environmental Study Report.</p>
<p>Intersection Questions: How will the Queen and Embleton intersections be remodelled?</p>	<p>The intersections of Lionhead Golf Course, Embleton and Queen Street will be redesigned to support 6 through lanes and turning lanes as recommended by the traffic report.</p>
<p>Safety for homeowners and pedestrians: High traffic volumes along Mississauga Road make it difficult to turn left into my property.</p>	<p>As part of this study, a traffic assessment was completed to assess existing and future traffic patterns, and recommended solutions to reduce congestion and improve traffic operations along the Mississauga Road corridor.</p>
<p>Concerns about expansion: What is happening in terms of widening?</p>	<p>A traffic assessment was completed to assess existing and future traffic patterns, and recommend solutions to reduce congestion and improve traffic operations along the Mississauga Road corridor. The results of the traffic analysis support the Region of Peel's Long Range Transportation Plan that identified the need for 6-lanes on Mississauga Road from Financial Drive to Queen Street by 2031.</p>
<p>Concerns about expansion: Will the bridges be widened as well as the roadway?</p>	<p>The study considered options for the Credit River Bridge as well as alignment options for the widening of Mississauga Road to a 6-lanes urban facility. The study team is recommending that the Credit River Bridge be fully replaced to facilitate the 6-lane widening.</p>

Alternative Design Concepts

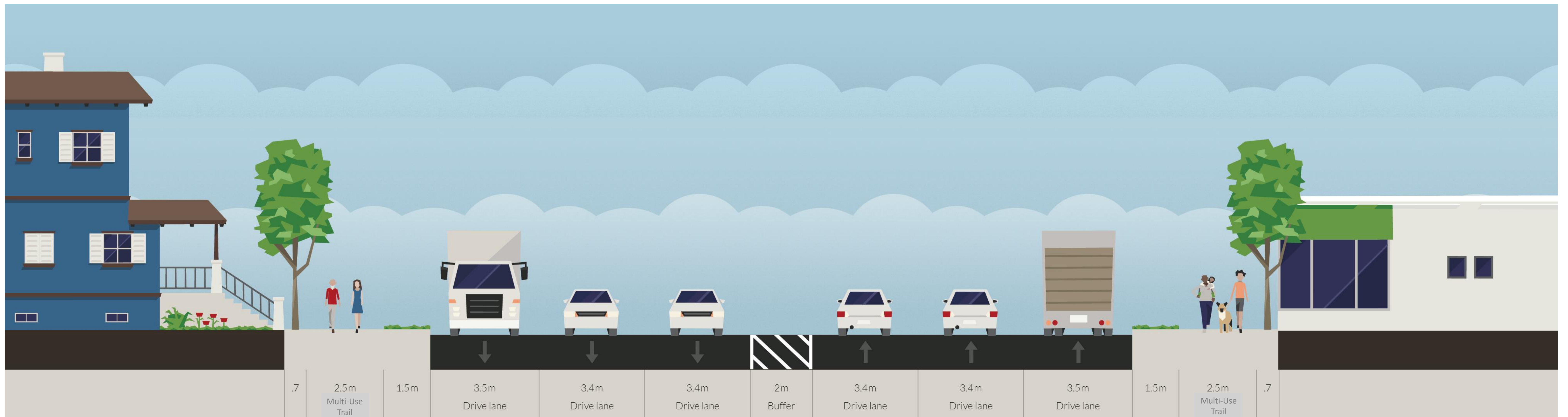


*Hybrid – a combination of alternatives 1-3

Alternative 4 – Widen using a hybrid design has been selected, as it allows for a targeted road design at high constraint and sensitive environmental areas

Key Design Considerations

- Full urban cross-section with curb and gutter on both sides
- Reduced widths for traffic lanes (to reduce impacts to natural features along the corridor), centre median, boulevards and multi-use trails
- Transit service at intersections with Queen Street West, Embleton Road and Lionshead Golf Course Road
- Bicycle and pedestrian infrastructure to service anticipated traffic to the City's new Community Centre



Typical Cross-Section for Mississauga Road

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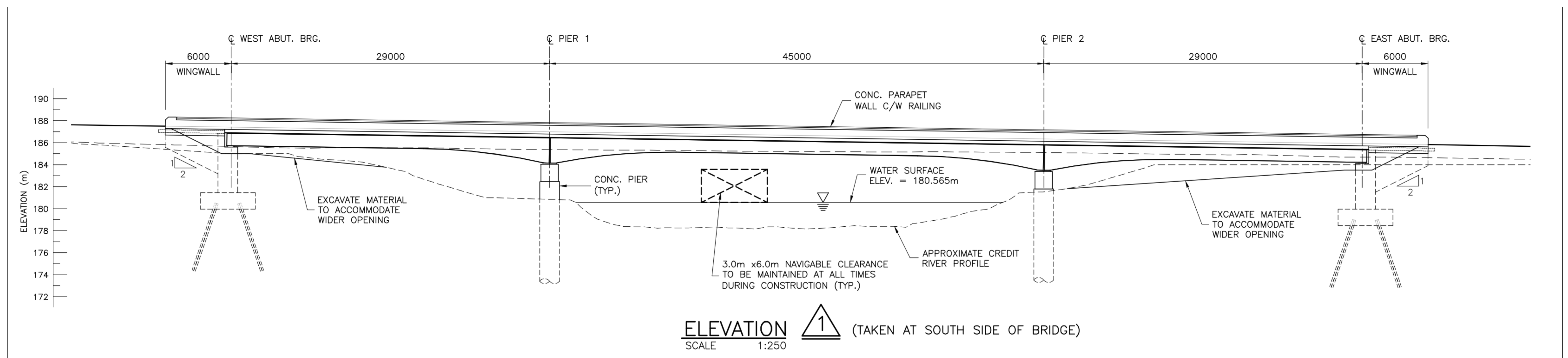
- Study area drains to the Credit River via 3 existing storm sewer outlets
- Key recommendations include:
 - Improve water quality by using underground infiltration trenches and oil/grit separators;
 - Replacement of the Credit River Bridge;
 - Replacement of the culverts, and
 - Upgrade of the existing storm sewer south of the Credit River.



Credit River Bridge

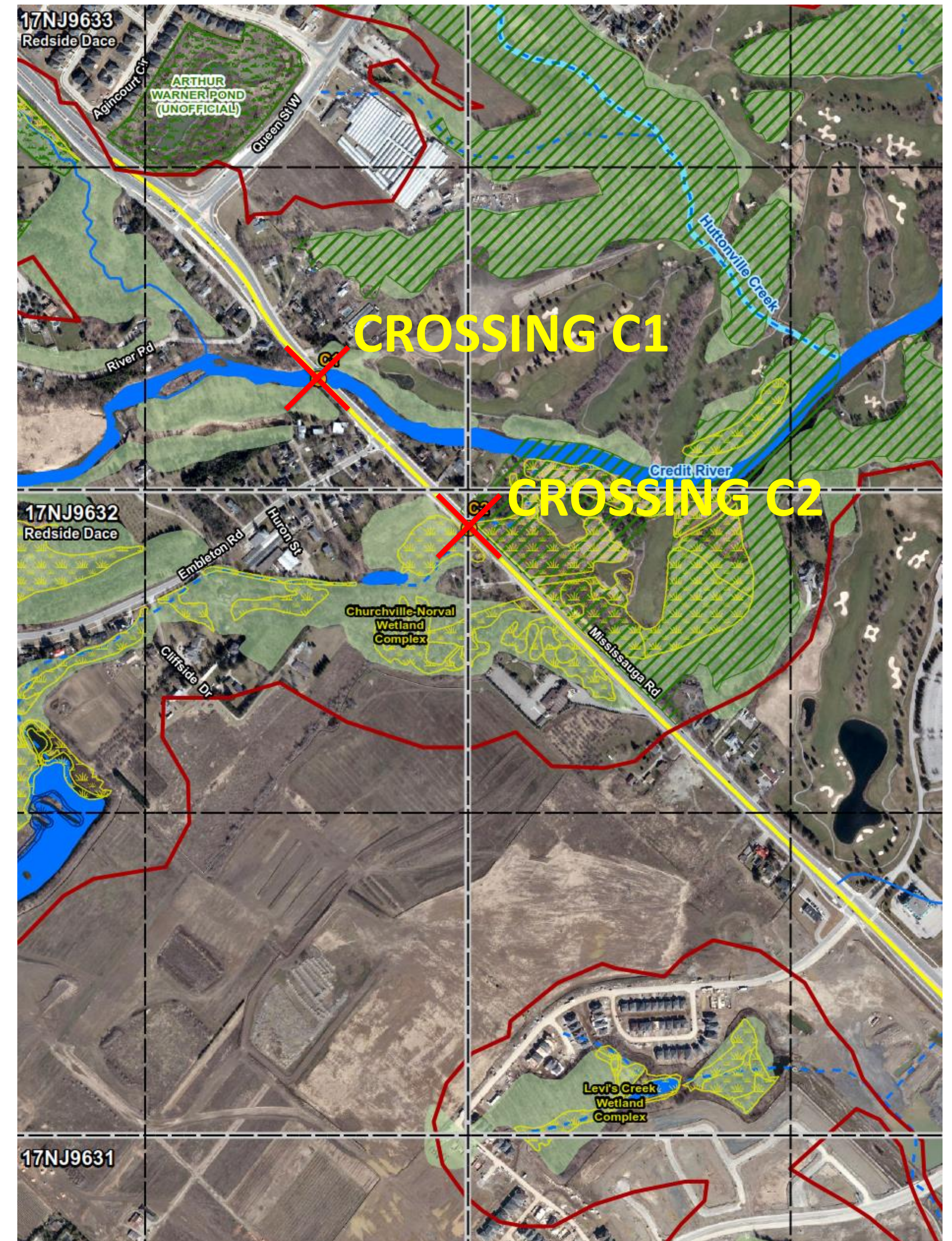
- Key facts of the existing bridge
 - Bridge was built in 1968 and the bridge deck was replaced in 2006
 - In a major storm event the river would overflow the bridge
- An assessment of alternatives was completed using a number of criteria including natural environment, social, cultural, economic, and transportation to evaluate the impacts and opportunities

Based on the alternative assessment, Full Replacement of the Credit River Bridge has been selected and carried forward in the design



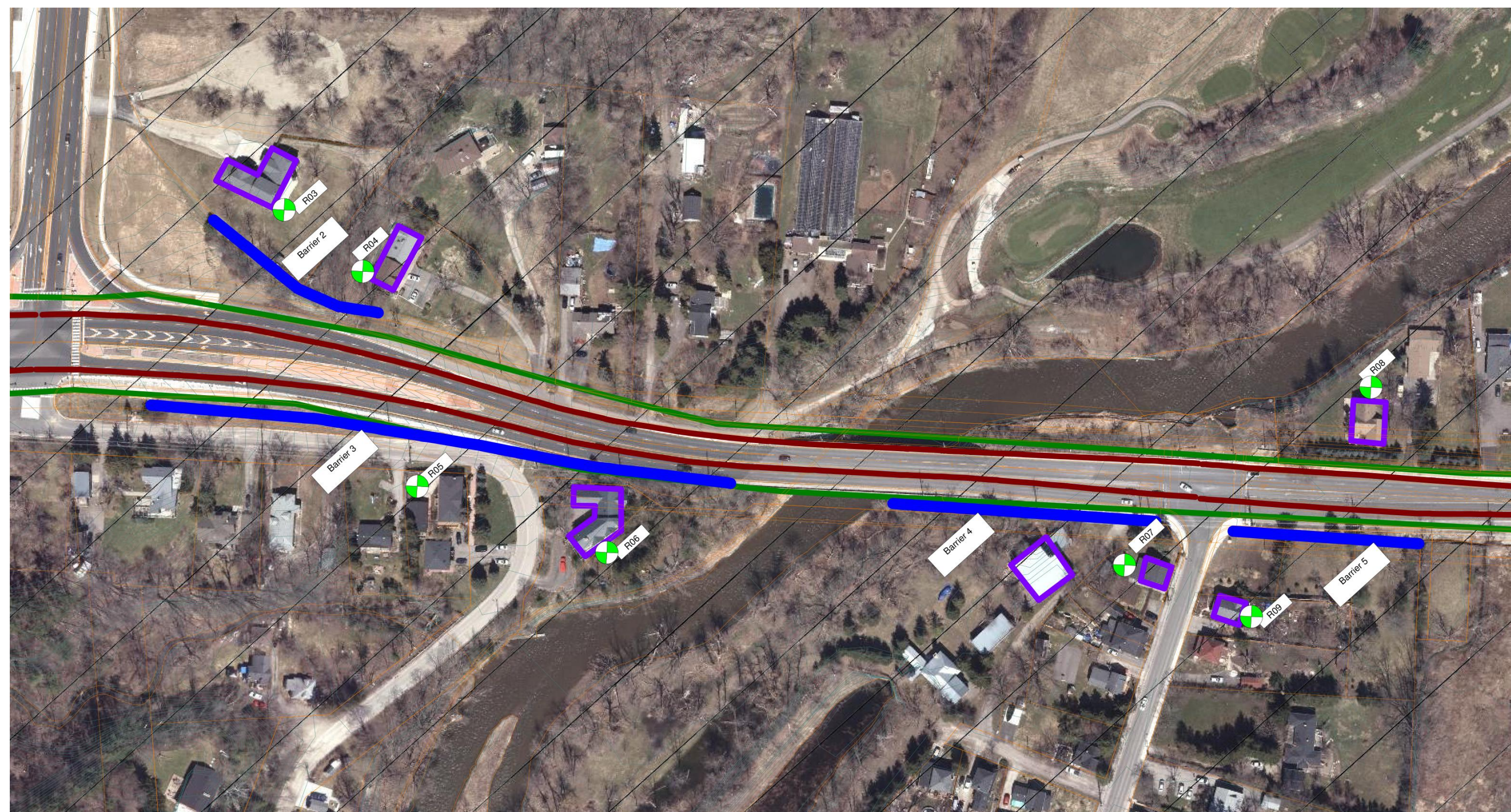
Configuration of new Mississauga Road Bridge crossing the Credit River

- The watercourses that cross the study area vary in sensitivity.
- The replacement of the Credit River crossing (Crossing C1) will require approval from Credit Valley Conservation (CVC) to complete the recommended work.
- The small tributary crossing south of Embleton Drive (Crossing C2) will be extended to accommodate the proposed road widening.
- Impacts to the Churchville-Norval Wetland Complex have been minimized by reducing the footprint of Mississauga Road.
- Final design concepts will be evaluated with CVC and the Ministry and Natural Resources and Forestry.



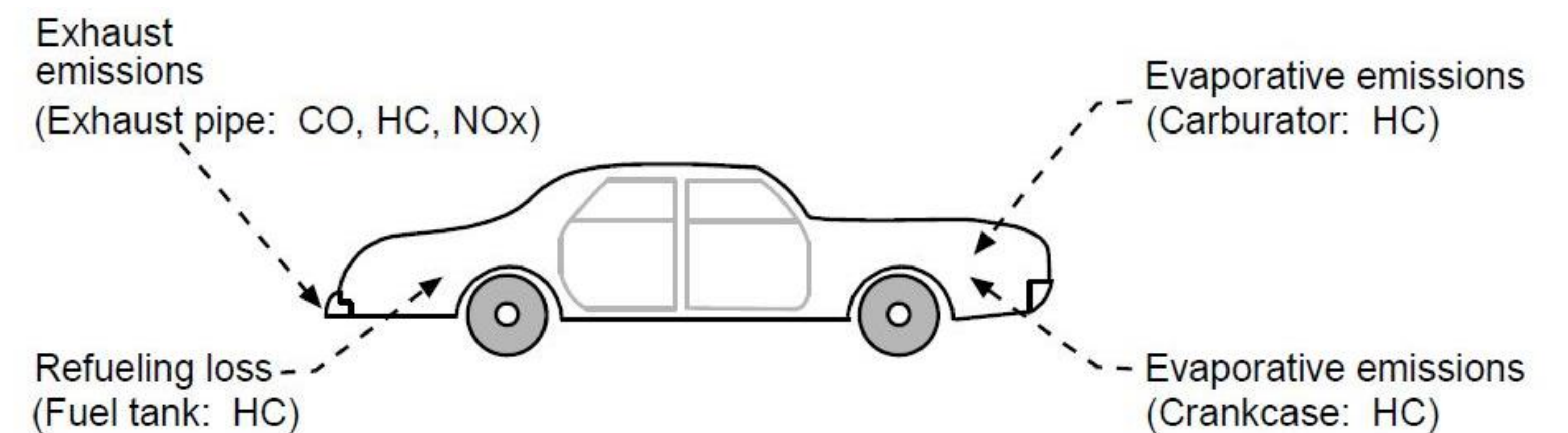
Noise

- Noise levels were modelled at key locations
- Impacts are predicted to be less than 5 dB
- 2031 levels are above the 60 dB criteria at a few locations
- 4 locations warranted for further investigation (blue lines)
- Construction noise impacts will be temporary
- Noise by-law guidelines to be followed



Air Quality

- Assessment was completed based on preliminary design, traffic projections and future land development
- The air quality levels meet the Ministry of the Environment's air quality criteria
- No negative effects on air quality are expected



Emissions and Emission Sources of Light-Duty Vehicles.

Landscape & Streetscape Design

- Impacts to mature street trees, wooded areas, and vegetation located along the banks of the Credit River will be minimized
- Silver Maples (aka. Huttonville Maples) will be protected
- A comprehensive streetscaping/tree protection plan will be prepared in the detailed design phase
- Landscape and Streetscape Design will follow guidelines from the Region's Streetscaping Toolbox with input from the City of Brampton's Open Space Planning Design and Construction section and the Credit Valley Conservation approved planting species list



'Huttonville Maples' to be protected



Existing wooded areas requiring edge removals

Next Steps

- Review and confirm recommended alternative and assessment in light of comments received from the public and other stakeholders
- Prepare and File Environmental Study Report
- File Notice of Completion
- 30-Day Public Review

**Comment
Deadline is
November 30,
2017**

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**Thank you
for your
participation!**

Website: www.peelregion.ca/pw/transportation/environ-assess/ea-mississauga-rd-2proj.htm

Future Six Lane Crossing of Credit River

