



Mississauga Road, Olde Base Line Road, Bush Street, Old Main Street, and Winston Churchill Boulevard Class EA

Public Information Centre #1

Thursday, May 9, 2013
Belfountain Public School


 

1 Welcome

- Please sign in and take a workbook
- If you have any questions our team is available to help you
- Place your completed workbook in the Comment Box, or send it to:

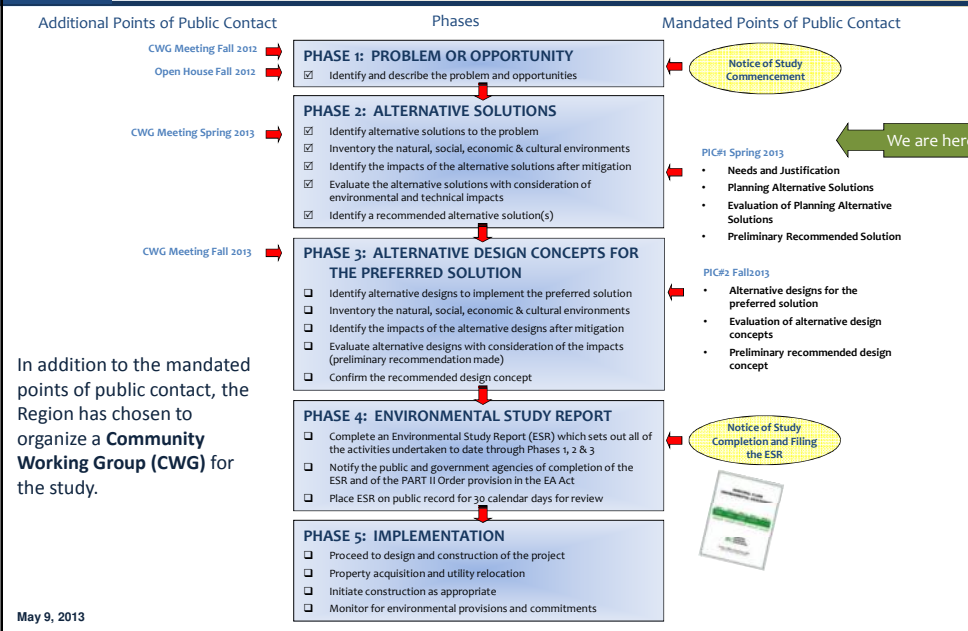
Gino Dela Cruz Project Manager Gino.DelaCruz@peelregion.ca	Asha Saddi Technical Analyst saddia@peelregion.ca
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by Thursday, May 23, 2013

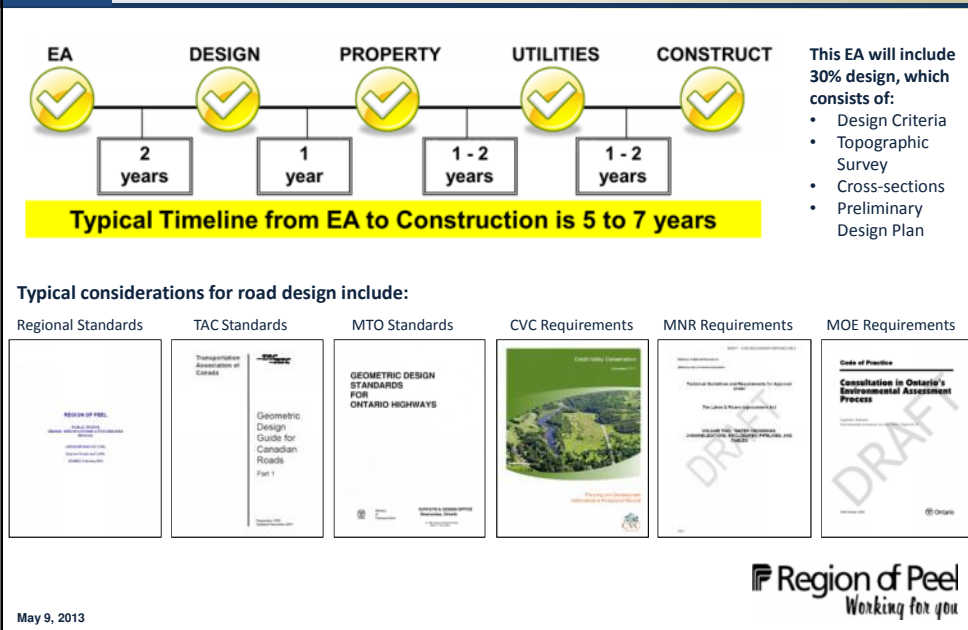


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4 Beyond the Municipal Class EA Process

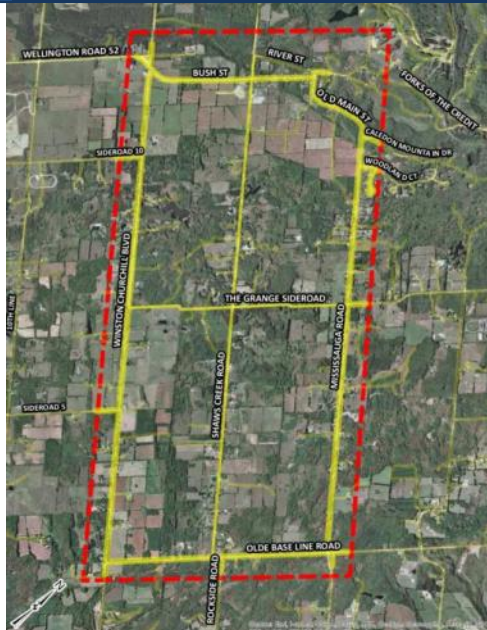


5 Process from EA Study to Construction



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Study Area



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The Study Area consists of:

- Bush Street
- Winston Churchill Boulevard
- Mississauga Road / Old Main Street
- Olde Base Line Road

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Project Update

- Notice of Study Limits Expansion & Project Bulletin July 2012
- Established Community Working Group (CWG)
 - CWG Meeting #1 held on October 23, 2012
 - CWG Meeting #2 held on April 4, 2013
- Public Open House held on October 30, 2012
 - To gain insight from public on transportation issues
 - To solicit participation in CWG

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What we have heard

- **Maintain rural character & countryside scenic quality**
- Preserve historic fences and features
- Preserve natural environment
- Maintain existing vertical alignment and cross-section
- Balance interests of all residents
- Address poor pavement conditions
- Improve pedestrian safety
- Address excessive speeds
- Address issues arising from trucks
- Accommodate cyclists outside travelling lane of traffic
- Improve sightlines in some locations
- Address parking congestion on weekends
- Address issues with motorcycle traffic

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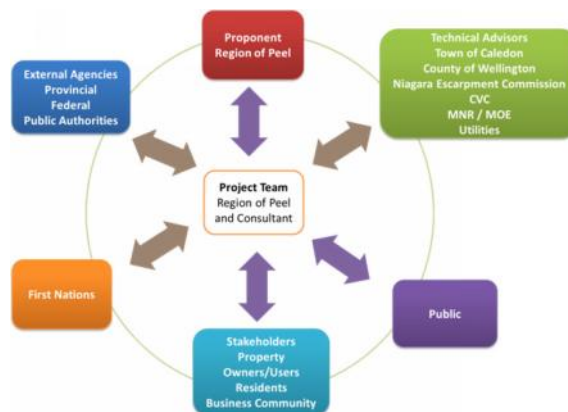
Study Objectives and Organization

Study Objectives

- Identify problems and opportunities
- Develop context-sensitive planning alternative solutions and a preferred solution
- Complete a functional design for the preferred concept
- Prepare a formal Environmental Study Report (ESR) documenting the study findings and recommendations

Goals

- Community and Stakeholder engagement
- Opportunities for Active Transportation
- Increase safety for all users
- Improve asset condition
- Improve natural environmental condition

**Vision**

Improvements through Context Sensitive planning and design will enhance experience for all users and reflect the character of the community

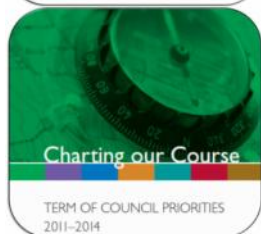
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Strategic Plan and Term of Council Priorities for 2011-2014

This Environmental Assessment supports a number of actions and initiatives related to transportation and the environment in the **Region's Strategic Plan Goals and Actions and the Term of Council Priorities**



- **Environment**
Protect, enhance and restore the environment
- **Transportation**
Support and influence sustainable transportation systems
- **Public Safety**
Ensure a safe Peel community

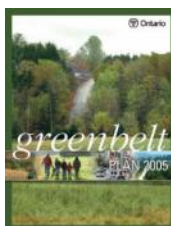


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Planning and Policy Context

Guiding Policies



- Official Plan



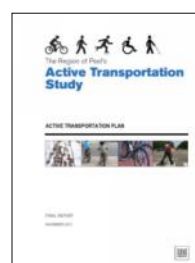
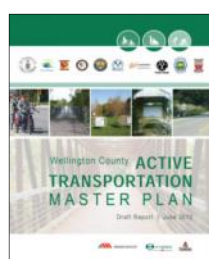
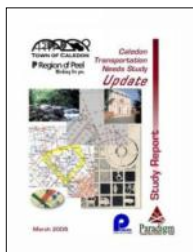
- Official Plan



- Official Plan

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12 Transportation Studies and Initiatives



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13 Draft Problem Statement

Work to date has confirmed similar issues identified in the 2010 study. Existing problems on the study area roads (Mississauga Road/Old Main Street, Bush Street, Winston Churchill Boulevard and Olde Base Line Road) consist of:

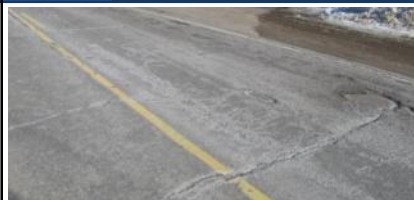
- Deficient pavement conditions and drainage
- Deficient sightlines
- Safety for all road users, including safety of wildlife
- Motor vehicle accidents involving wildlife



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14 Needs Assessment Summary



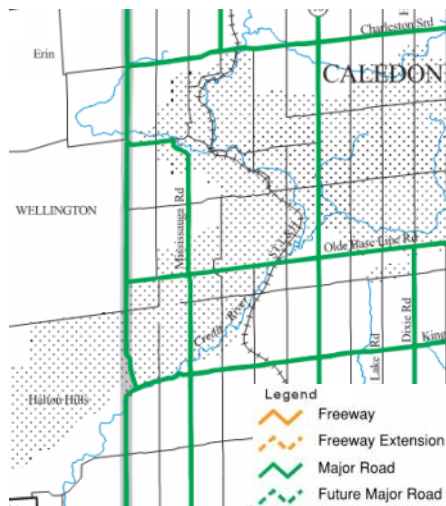
Based on the identified problems and issues, there is the requirement to address the following needs:

- Pavement Conditions and Drainage
- Sightlines
- Improving Safety for All Users
- Pedestrian and Cyclist Needs

Details on the Needs Assessment are provided in the following display panels.



15 Role and Function of Regional Arterial Roads



Region of Peel Official Plan – Schedule E

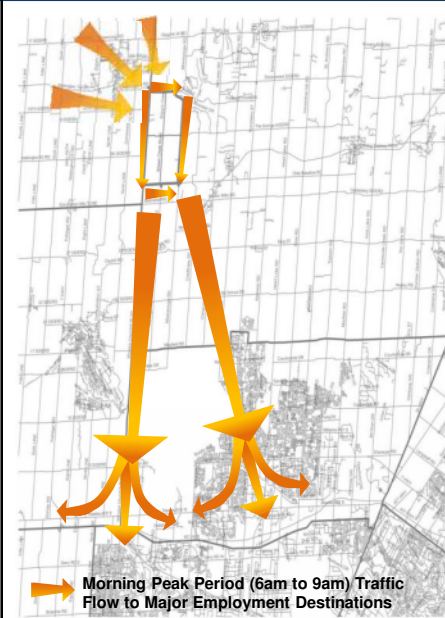
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General Objectives of Peel's Transportation System

- To achieve a safe convenient and efficient movement of people and goods in the Region Support the provision of improved transportation mobility to all residents, employees and visitors
- Promote and encourage all sustainable modes of transportation to provide mobility and choice
- Minimize adverse environmental impacts caused by transportation
- Support a transportation system that enhances economic growth in the Region
- Ensure Regional transportation infrastructure is sustainable and that practices and performance measures are in place to maintain a safe and efficient Regional transportation network



16 Broader Transportation Network



The roads in the study area provide connections to major employment destinations.

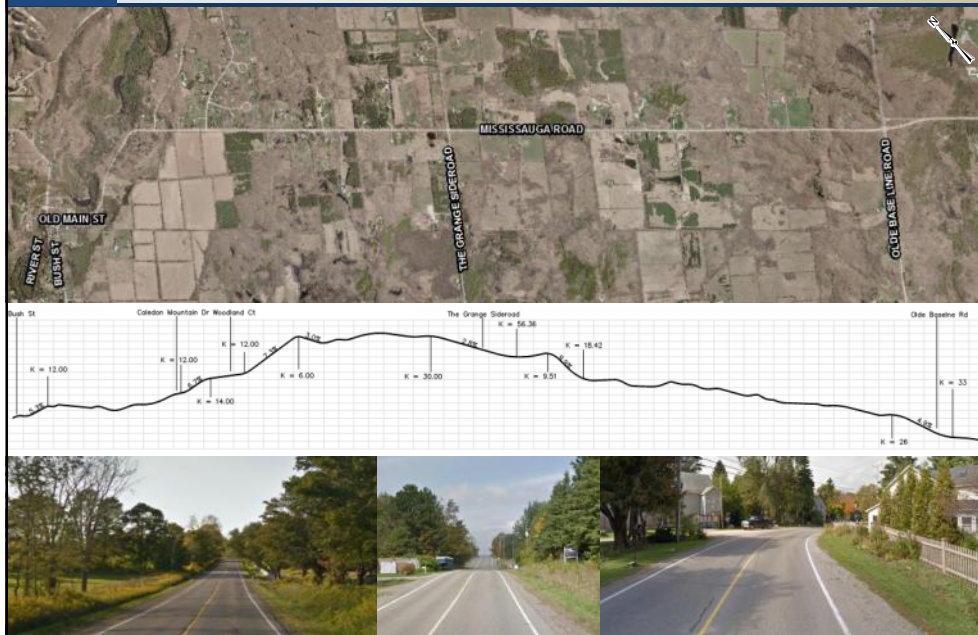
Bush Street (Regional Road 11), Mississauga Road / Old Main Street (Regional Road 1), Winston Churchill Boulevard (Regional Road 19), and Olde Base Line Road (Regional Road 12) are all part of the Peel Region arterial road network.

Winston Churchill Boulevard (Regional Road 25) is also part of the Wellington County arterial road network.

The roads in the study area also provide connections to tourist destinations in the immediate and surrounding area.



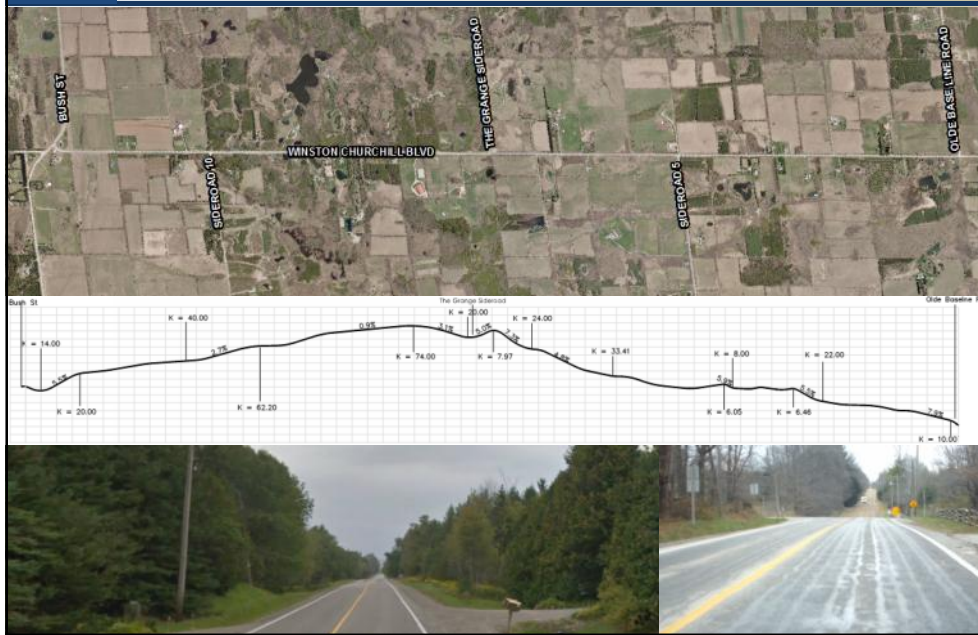
17 Old Main St - Mississauga Rd



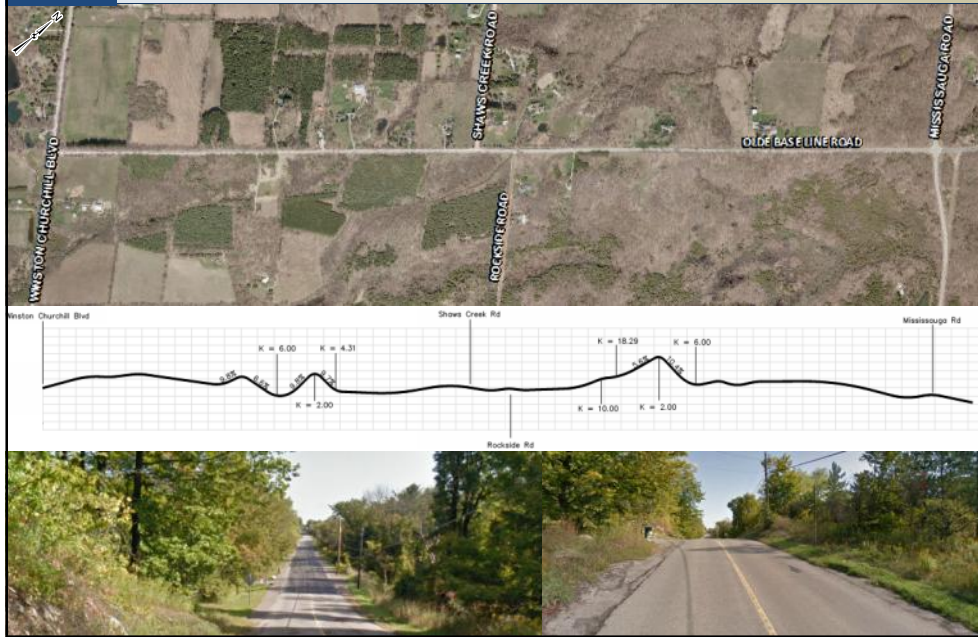
18 Bush Street (WCB-Old Main St)



19 Winston Churchill (Bush-OBL)

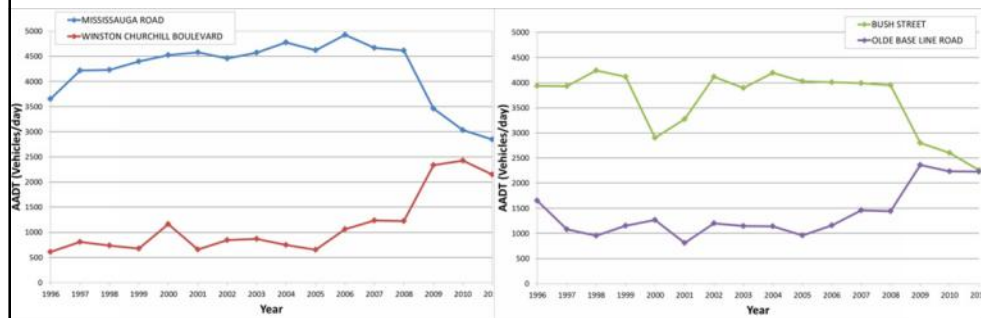


20 Olde Base Line (WCB-Mississauga)



21 Traffic Trends

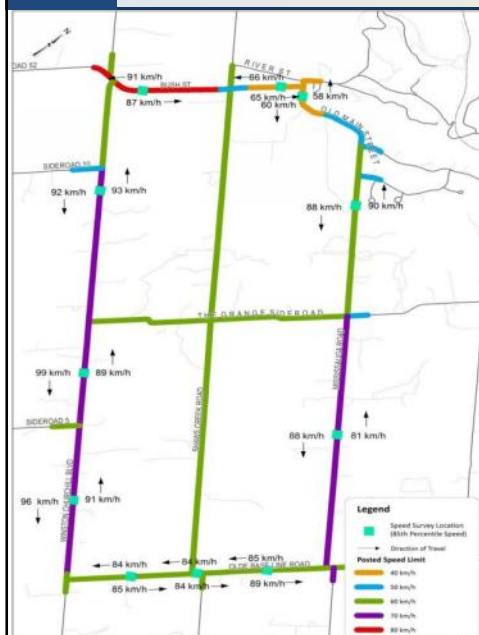
Mississauga Road and Winston Churchill Bush Street and Olde Base Line Road



Over the last 15 years, overall traffic on the four arterials has been relatively stable, with an average of 9,500 to 10,000 vehicles per day combined for the four arterial roads

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Traffic Speeds



Speed surveys indicate that traffic generally travels at higher speeds than the posted speed limits.

Road segments where the 85th percentile speeds are more than 20 km/h over the posted speed limits include:

- Olde Base Line Road
- Mississauga Road between The Grange Sideroad and Woodlands Court
- Winston Churchill Boulevard
- Bush Street in the Village of Belfountain



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Collisions by Road Segment

Segment	AADT	Segment Length	Number of Collisions
Mississauga Road between Olde Base Line Road & The Grange Sideroad*	2750	3.0 km	11
Mississauga Road between The Grange Sideroad & Bush Street	2660	3.3 km	9
Bush Street between Mississauga Road & Winston Churchill Boulevard	2100	2.0 km	1
Winston Churchill Boulevard between Bush Street & Olde Base Line Road	2500	6.0 km	8
Olde Base Line Road between Winston Churchill Boulevard & Mississauga Road*	2370	2.7 km	9

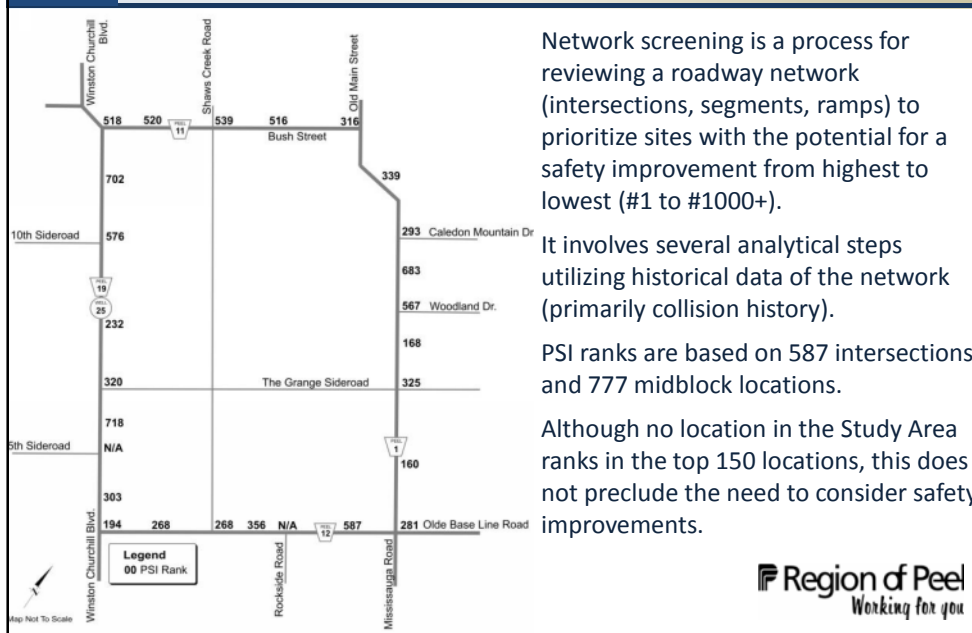
Source: Collision information provided by Peel Region's Safety group.
 * Average AADT along corridor. AADT estimated from TMC data provided by Region's Traffic Group

Highest number of collisions are on:

- Mississauga Road between Olde Base Line Road and The Grange Sideroad
 - Olde Base Line between Winston Churchill Boulevard and Mississauga Road
- Consider options to improve safety on the Study Area roads



24 Performance Safety Index (PSI)



25 Collisions by Severity

Property Damage Only	62	91%
Non Fatal Injury	6	9%
Fatality	0	0%
TOTAL	68	100%

(Based on 2006-2010 data)

0 collisions involving a pedestrian

1 collision involving a cyclist (sideswipe)

Non-fatal injury collisions evenly distributed

30 collisions at intersections

38 collisions at midblock (non-intersections)

26 Collisions by Impact Type

Animal	37%	
Single Vehicle	34%	(includes avoiding animals)
Angle	10%	
Sideswipe	7%	
Rear End	4%	
Turning Movement	4%	
Approach	3%	
TOTAL	100%	

(Based on 2006-2010 data)

44% of collisions involve animals

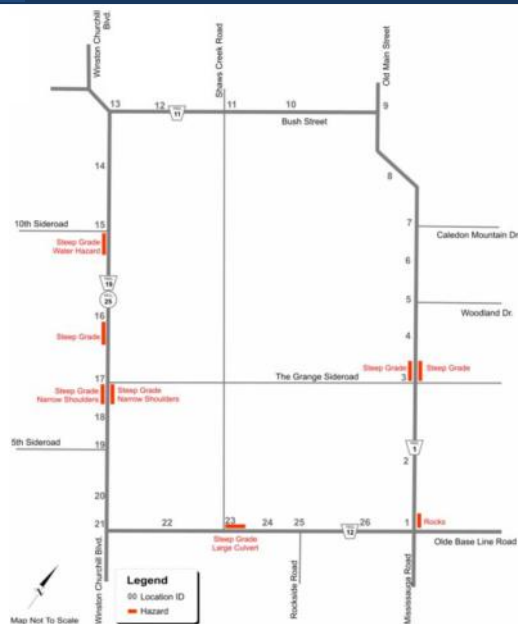
Second highest – single vehicles with drivers losing control

Consider options to reduce animal-related collisions



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27 Roadside Hazards



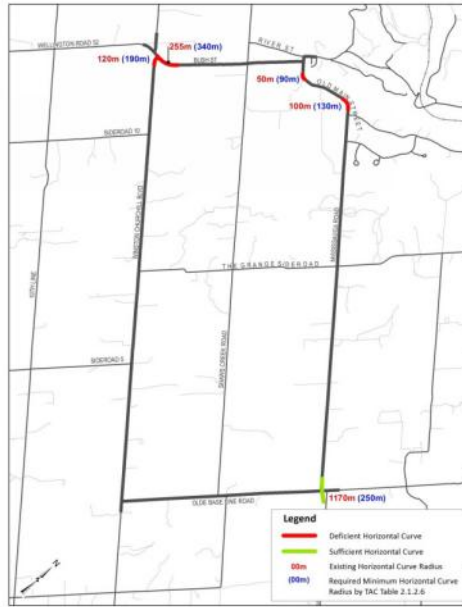
Roadside hazards include hydro poles, steep slopes, and rock cuts. The Study will consider options to improve safety at roadside hazard locations.



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Horizontal Alignment Deficiencies

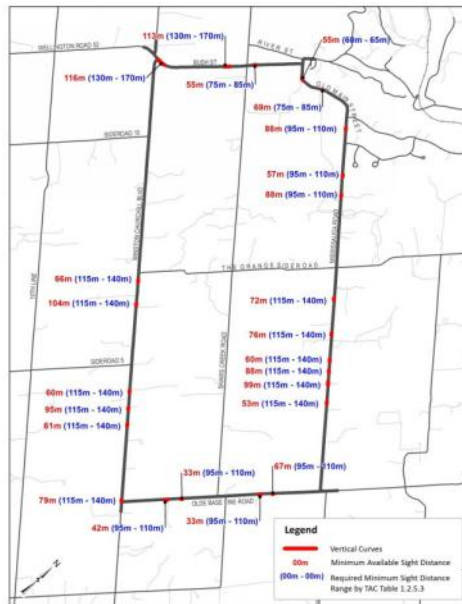


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Vertical Alignment Stopping Sight Distance Deficiencies

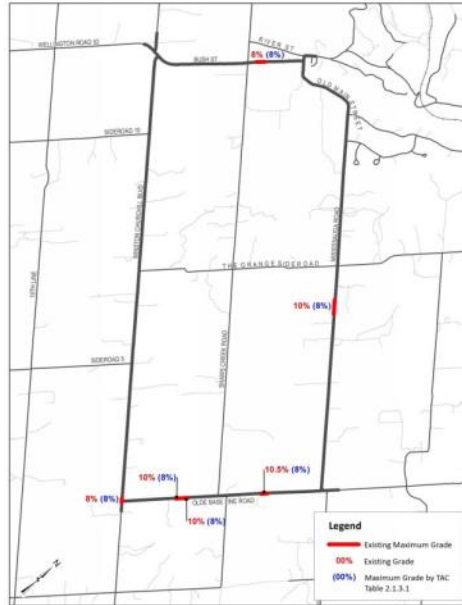


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Vertical Alignment
Grade Deficiencies



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Sight Distances at Driveways

At many driveways, sight distances are inadequate.

	Yes	No	TOTAL
Fully Meets Minimum Standards	75 (41%)	109 (59%)	184 (100%)
Fully Meets Minimum Desirable Standards	51 (28%)	133 (72%)	184 (100%)

Based on Transportation Association of Canada design standards.
Based on drivers turning left or right from their driveways.



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Pedestrians and Cyclists



- Legend**
- Existing Cycling Facilities**
 - Paved Shoulder
 - Multi-Use Trail
 - Region Capital Program and Other Facilities**
 - Planned Paved Shoulder
 - Planned Multi-Use Trail
 - Municipal Path*
 - Planned Municipal Path*
 - Proposed Cycling Facilities**
 - Bike Lanes
 - Paved shoulder
 - Multi-Use Trail
 - Signed/Marked Share Lanes
 - Other Cycling Features**
 - Trail Crossings (see Section 8.6)
 - Adjacent AT Networks**
 - Multi-use trail
 - Paved shoulder
 - Proposed Connection
 - Other Features**
 - Rivers
 - Rail Corridor
 - Parks
 - Valleylands
 - Designated Greenfield

The Peel Active Transportation Study shows Winston Churchill Boulevard, Olde Base Line Road, Mississauga Road, and Bush Street as part of the Regional cycling network, with proposed and/or planned paved shoulders for cyclists

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Summary of previous public input

Pedestrians:

- While there is an interest in improving pedestrian safety, there are mixed opinions on how that should be done

Cyclists:

- Safety concerns for cyclists
- While there is a desire for improved cycling infrastructure, mixed opinions as to how best to accommodate cyclists



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Pavement and Drainage Conditions

- The preliminary findings from the geotechnical investigations completed to date reveal that structural capacity and strength of all roads are in poor condition and are expected to continuously deteriorate.
- The main cause to pavement distress is attributed to variable granular thickness along roadways with a non-uniform base and sub-base materials.
- Shoulder granular is also thinner than the sub-base below the roadway which affects the drainage of the base leading to frost heave and rutting.
- Some of the pavement deficiencies identified throughout the study area include:
 - Wheel tracking and rutting
 - Transverse and longitudinal meander and mid-lane cracking
 - Alligator pavement edge cracking



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34 Pavement and Drainage Conditions by Roadway

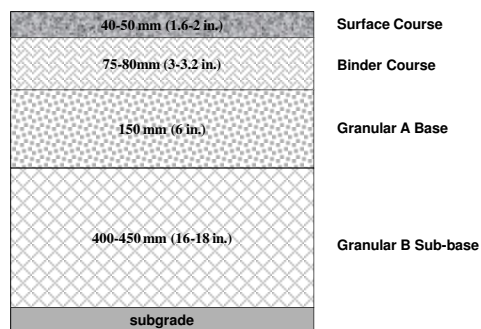
Roadway	Existing Conditions / Pavement Deficiencies	
Mississauga Road/Old Main Street	<ul style="list-style-type: none"> •Granular thickness of base and sub-base highly variable •“Bathtub” construction –granular under shoulder is thinner than under the roadway •Wheel tracking rutting •Slight alligator pavement edge cracking 	<ul style="list-style-type: none"> •Moderate alligator transverse cracking •Longitudinal meander and mid-lane cracking •Inadequate / sub-standard ditches •Ponding and vegetation along shoulders
Bush Street	<ul style="list-style-type: none"> •Granular thickness of base and sub-base highly variable •Pot holes 	<ul style="list-style-type: none"> •Centreline and transverse cracking •Deficient structural capacity and stability
Winston Churchill Boulevard	<ul style="list-style-type: none"> •Deficient structural capacity and stability •Medium severity raveling •Localized depressions 	<ul style="list-style-type: none"> •Shallow bedrock does not allow for drainage under roadway
Olde Base Line Road	<ul style="list-style-type: none"> •High severity loss of aggregates •Pot holes •Frost heave and temperature related deterioration 	<ul style="list-style-type: none"> •Water logging due to top permeable layers and bottom relatively impermeable silty clay •Shallow bedrock does not allow for drainage under roadway

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35 Recommended Pavement Structures by Roadway

Geotechnical Investigations completed to date have recommended the following pavement structure to address the deficient pavement conditions:



* Note: The pavement recommendations will be confirmed in the subsequent phases of this study.

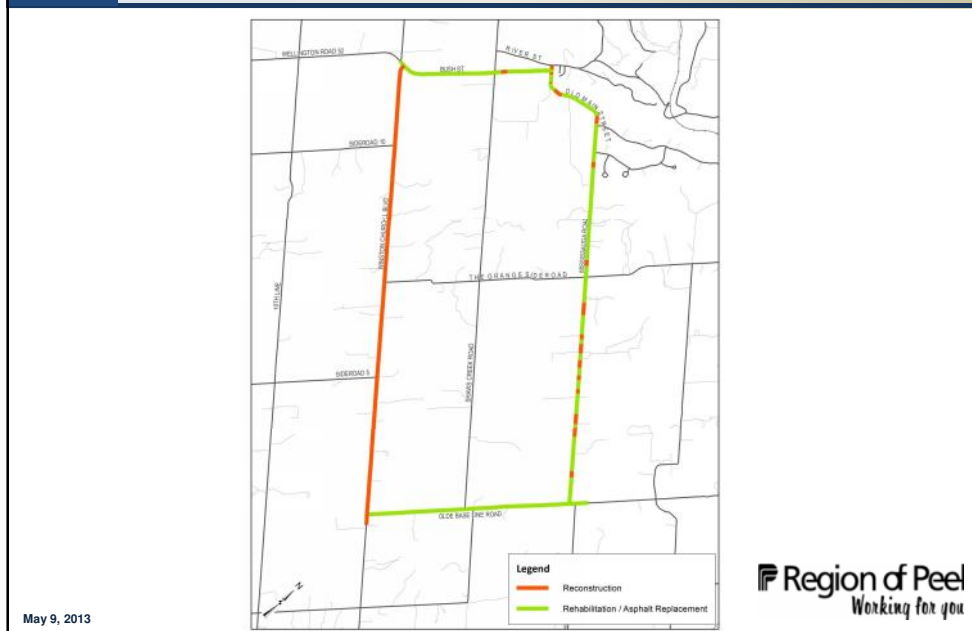
Pavement structure granular materials must conform to OPSS (Ontario Provincial Standard Specification) specifications.

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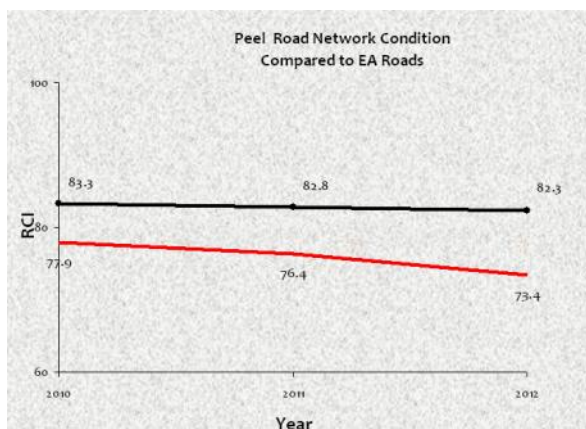
36

Preliminary Geotechnical Recommendations



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Ride Condition Index (RCI)



- Black line represents projected network RCI for all Regional Roads.
- Red line represents projected RCI for the roads in the study area.

- The Ride Condition Index (RCI) is a quantitative number that represents the overall condition and quality of a Regional road network.
- The RCI aggregates the rating of many types of road defects including cracking, rutting, potholes and surface quality into one measurable number.
- Study area roads are below the network average and are deteriorating faster than the network average and will likely be below the level of service (72) for roads in the next 3- 5 years.

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Needs Assessment

- Reduce collisions and improve safety, particularly in areas where there are steep grades, sharp curves, vertical crests, and driveways
- Accommodate pedestrians in areas of high pedestrian activity
- Improve pedestrian safety
- Reduce conflicts between cyclists and motorized vehicles
- Address substandard sightlines for the prevailing traffic speeds
- Address roadside hazards
- Reduce collisions with animals
- Improve traffic signage
- Minimize impact of increase in traffic volumes
- Address excessive speeds – cars, trucks, motorcycles
- Address poor conditions of the roadway pavement
- Address parking congestion in Belfountain experienced on weekends
- **There is no need for additional travel lanes**

There is a recognition that users may have competing interests and needs



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Guiding Principles for Solutions

These principles will provide guidance to the study team when generating alternative solutions to address the problem statement:

- **Maintain the rural character and countryside scenic quality**
- Preserve historic fences and heritage / cultural / archaeological features
- Preserve / enhance the natural environment
- Protect the Niagara Escarpment
- Balance interests and meet needs of all road users – motorists, pedestrians, cyclists, farm vehicles, horses, trucks, wildlife
- Provide a context sensitive design
- Enhance local tourism and economic development of the area

It is recognized that different users may have competing interests



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40 Preliminary Alternative Solutions

Problem or Opportunity	Mississauga Rd. / Old Main St.	Bush St.	Winston Churchill Blvd.	Olde Base Line Rd.
1. Excessive Speeds	✓	✓	✓	✓
Alternative Solutions:	iii. Pavement markings (e.g. SLOW)		v. Enforcement	
i. Do nothing	iv. Narrowing travel lanes		vi. Combinations of the above	
ii. Lower Design Speeds	v. Traffic Signage			
2. Deteriorating Pavement Conditions and Drainage Deficiencies	✓	✓	✓	✓
Alternative Solutions:	iii. Road Rehabilitation			
i. Do nothing	iv. Combinations of the above			
ii. Road Reconstruction				
3. Horizontal Alignment Deficiencies	✓	✓	✓	OK
Alternative Solutions:	iii. Pavement markings (e.g. SLOW)			
i. Do nothing	iv. Lower Design Speeds			
ii. Traffic signage	v. Combinations of the above			



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41 Preliminary Alternative Solutions – cont'd

Problem or Opportunity	Mississauga Rd. / Old Main St.	Bush St.	Winston Churchill Blvd.	Olde Base Line Rd.
4. Vertical Alignment Deficiencies •Deficient Stopping Sight Distance •Deficient Grade	✓ ✓	✓ ✓	✓ ✓	✓ ✓
Alternative Solutions:	iii. Traffic Signage		v. Combinations of the above	
i. Do nothing	iv. Road Reconstruction to reduce grades and bring vertical curves up to standard			
ii. Lower Design Speeds				
5. Pedestrian and Cycling Needs •Regional Active Transportation Plan identifies all study roads as proposed or planned cycling facilities with paved shoulders	✓	✓	✓	✓
Alternative Solutions:	iii. Sidewalks		vi. Combinations of the above	
i. Do nothing	iv. Bike racks at local businesses			
ii. Widening / partially paving shoulders	v. Landscaping to shelter pedestrians from traffic			



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42 Preliminary Alternative Solutions – cont'd

Problem or Opportunity	Mississauga Rd. / Old Main St.	Bush St.	Winston Churchill Blvd.	Olde Base Line Rd.
6. Safety •Collisions by location	✓	OK	✓	✓
•Collisions by type	•Almost half of all collisions involve animals			
Alternative Solutions: i. Do nothing ii. Lower Design Speeds	iii. Pavement markings iv. Traffic Signage including animal crossing warning		v. Seasonal communications and education regarding deer activity vi. Combinations of the above	
7. Intersection Deficiencies •Deficient Sight lines	✓	✓	✓	✓
Alternative Solutions: i. Do nothing ii. Roundabout	iii. Remove overgrown vegetation iv. Lower Design Speeds		v. Road Reconstruction to reduce grades and bring vertical curves up to standard vi. Combinations of the above	



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43 Preliminary Alternative Solutions – cont'd

Problem or Opportunity	Mississauga Rd. / Old Main St.	Bush St.	Winston Churchill Blvd.	Olde Base Line Rd.
8. Driveway Deficiencies •Deficient Turning Sight Distance	•More than half of driveways have deficient turning sight distance (approximately 70%)			
Alternative Solutions: i. Do nothing ii. Lower Design Speeds	iii. Traffic Signage iv. Road Reconstruction to reduce grades and bring vertical curves up to standard		v. Combinations of the above	
9. Roadside Hazards •Trees, ditches, steep slopes, poles, etc.	✓	OK	✓	✓
Alternative Solutions: i. Do nothing ii. Remove hazards	iii. Install guide rails iv. Combinations of the above			



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44 Preliminary Evaluation Criteria

Maintain the rural character and countryside scenic quality

Transportation

- Geometric alignment
- Traffic operations
- Driveway operations
- Accommodation of all road users
- Safety
- Stormwater quality and quantity

Socio-Economic Environment

- Residential properties
- Farm operations
- Businesses
- Archaeological resources
- Built and cultural heritage resources
- Air, noise, vibration impacts

Natural Environment

- Vegetation and wildlife habitat
- Aquatic habitat
- Terrestrial habitat
- Species at Risk
- Wildlife movement and safety
- Wetlands and watercourses
- Natural hazards

Capital Costs

- Construction costs
- Property acquisition



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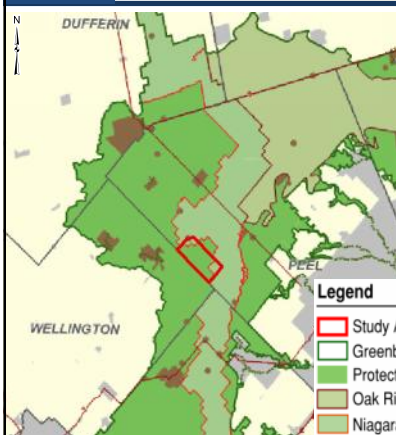
Inventory of Existing Natural, Archaeological and Built/Cultural Heritage Conditions



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Greenbelt and Greenlands



- Legend**
- Study Area
 - Greenbelt Area
 - Protected Countryside
 - Oak Ridges Moraine Area
 - Niagara Escarpment Plan Area



- Legend**
- Study Area
 - Core Areas of the Greenlands System
 - Core Areas Outside Peel
 - Area with Special Policies (Refer to Figure 2)
 - 2031 Regional Urban Boundary

Policy Areas Map

- Greenbelt
- Region of Peel Core Greenlands

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Niagara Escarpment



- PEEL REGION**
-
- Legend**
- Escarpment Natural Area
 - Escarpment Protection Area
 - Escarpment Rural Area
 - Mineral Resource Extraction Area
 - Escarpment Recreation Area
 - Urban Area
 - Minor Urban Centre (Boundary Defined)
 - Public Land (in Parks and Open Space System)
 - Special Policy Area
 - Policy Amendments to the Niagara Escarpment Plan
- THE NIAGARA ESCARPMENT PLAN 2005
APPROVED AND ORDERED June 1, 2005
C.C. #122005
Amendment Contributed to 2012



- Policy Areas Map
 - Niagara Escarpment Plan
 - NE and SE corners of study area

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Natural Environment



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- ESA's, ANSI's, wetlands, woodlands, and watercourses
- Watercourses are tributaries to Credit River (Erin Branch) including Second Creek and Roger's Creek.
- All tributaries are managed as coldwater fish habitat



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Natural Environment

- 30 Species at Risk Habitat & Species of Conservation Concern
 - 4 vegetation species
 - 10 bird species
 - 5 herpetofauna species
 - 3 mammals species
 - 5 insect species
 - 3 fish species



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Archaeological Assessment



Stone wall, cedar fence on Winston Churchill Boulevard

Boulder fence and cedar rail fence, Shaw's Creek and Olde Base Line

Cedar fence along Bush

Stone fence - Mississauga Road at The Grange

Winston Churchill Boulevard – low/wet and sloping beyond the road

Northwest view towards Bush – potential for archaeological significance in field

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Built / Cultural Heritage

Mississauga / Bush

- 48 identified resources
- 4 designated under Ontario Heritage Act
- 23 listed by Town of Caledon
- Another 11 listed with high significance

Olde Baseline / Winston Churchill

- 21 identified resources
- None designated under Ontario Heritage Act

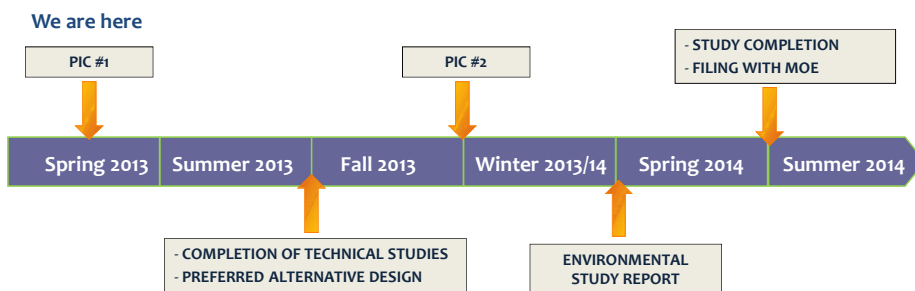


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Next Steps / Schedule



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Thank You

Please complete your workbook and place it in the Comment Box, or send your comments by email/fax/mail to either of the following team members by Thursday, May 23, 2013

You can view tonight's information boards again on our website:

<http://www.peelregion.ca/pw/transportation/enviro-assess/mississauga-road-bush.htm>

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Thank you for your participation

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