Airport Road Improvements










APPENDICES ESR 2

Municipal Class Environmental Assessment
Airport Road
from 1.0km north of Mayfield Road to 0.6km north of King Street

October 2015

Region of Peel
Working for you

P PIC 1 AND 2 BOARDS

Municipal Class Environmental Assessment

Airport Road
from 1 km North of Mayfield Road to 0.6 km North of King Street

Public Information Centre #1

Date: Thursday, June 20, 2013

Time: 6:30 p.m. – 8:30 p.m.

Location: Caledon Community Complex
6215 Old Church Road
Caledon East

Region of Peel
Working for you

1 Welcome to PIC #1

- Please sign in and take a comment sheet.
- If you have questions, our representatives are available to discuss the project with you.
- Place your completed comment sheets in the Comment Box or send them to Sally Rook, Project Manager by Friday, July 12, 2013.

  sally.rook@peelregion.ca

2 Purpose of PIC #1

The purpose of this Public Information Centre (PIC) is to:

- explain the Municipal Class Environmental Assessment process
- present the study information technical studies that have been completed to date
- present alternative planning solutions, evaluation and a recommended planning solution
- ask for your input and comments on the recommended planning alternative
- explain what will happen next

Northward bound along Airport Road

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3 Municipal Class EA Process

Phases

Phase 1: PROBLEM OR OPPORTUNITY

- ☑ Identify and describe the problem and opportunities

Notice of Study Commencement

Phase 2: Alternative Solutions

- ☑ **Identify alternative solutions to the problem**
- ☑ **Inventory the natural, social, economic & cultural environments**
- ☑ **Identify the impact of the alternative solutions after mitigation**
- ☑ **Evaluate the alternative solutions with consideration of environmental and technical impacts**
- ☑ **Identify a recommended alternative solution**

PIC#1 June 20, 2013

- **Needs & Justification**
- **Planning Alternative Solutions**
- **Evaluation of Planning Alternative Solutions**
- **Preliminary Recommended Solution**

We are here

Phase 3: Alternative Design Concepts for the Preferred Solution

- ❑ Confirm preference for recommended solution
- ❑ Identify alternative designs to implement the preferred solution
- ❑ Inventory the natural, social, economic & cultural environments
- ❑ Identify the impact of the alternative designs after mitigation
- ❑ Evaluate alternative designs with consideration of the impacts (preliminary recommendation made)
- ❑ Confirm the recommended design concept

PIC#2 (winter 2014)

- **Alternative designs for the preferred solution**
- **Evaluation of alternative design concepts**
- **Preliminary recommended design concept**

Phase 4: Environmental Study Report

- ❑ Complete an Environmental Study Report (ESR) which sets out all of the activities undertaken to date through Phases 1, 2 & 3
- ❑ Notify the public and government agencies of completion of the ESR and of the PART II Order provision in the EA Act
- ❑ Place ESR on public record for 30 calendar days for review

Notice of Study Completion and Filing the ESR

Phase 5: Implementation

- ❑ Proceed to design and construction of the project
- ❑ Property acquisition and utility relocation
- ❑ Initiate construction as appropriate
- ❑ Monitor for environmental provisions and commitments

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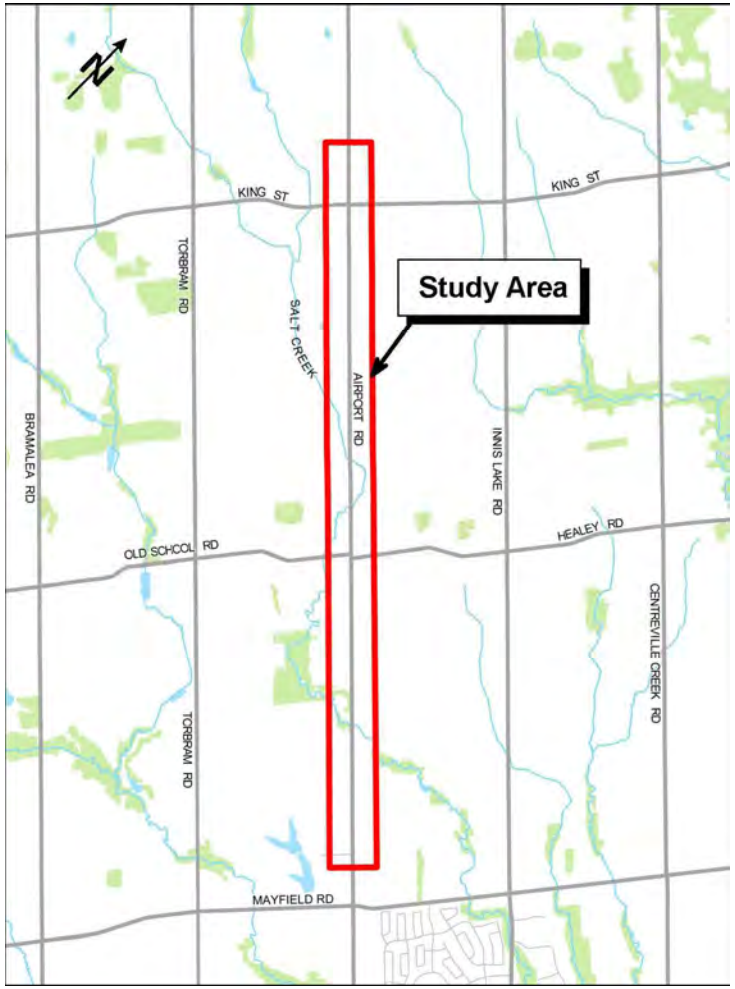
4 Study Area

The Study Area extends from approximately 1.0 km north of Mayfield Road to approximately 0.6 km north of King Street



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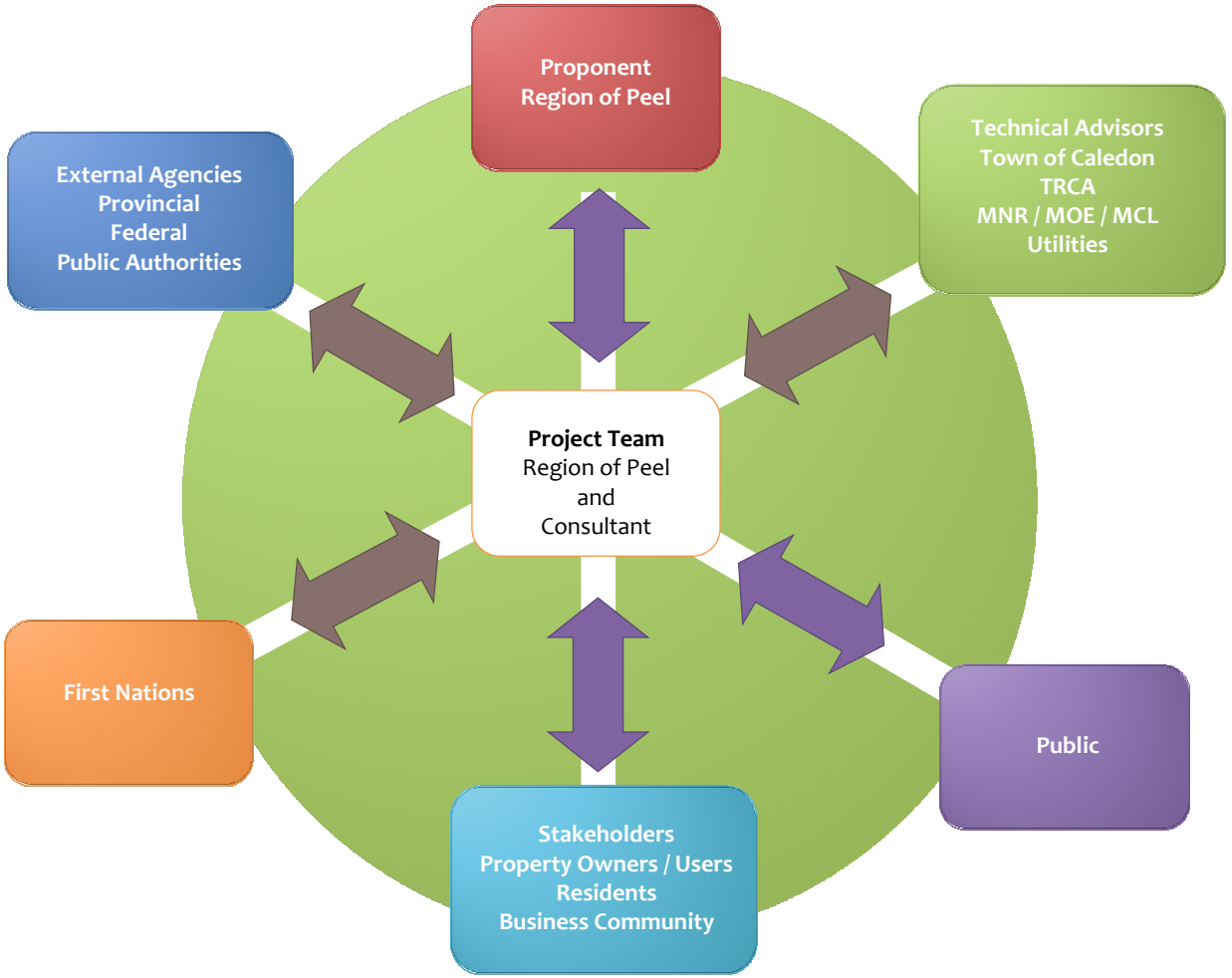
5 Study Objectives and Organization

Study Objectives

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



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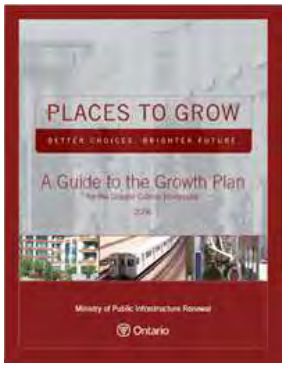
6 Strategic Plan and Term of Council Priorities for 2011-2014

This Environmental Assessment supports a number of actions and initiatives related to transportation and 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

7 Planning and Policy Context



Provincial Places to Grow

Forecasts Peel to grow to 1.6 million by 2031

The Long Range Transportation Plan

Identifies the need for capacity improvements to along Airport Road to support growth

Peel Region
OfficialPlanReview

Region of Peel Official Plan

Provides a framework for guiding growth and development in Peel

Sandhill Land Use Study

Provides Official Plan policy guidance and Zoning By-law provisions to guide the future development of Sandhill

Town of Caledon Transportation Needs Study

Acknowledges the need for improvements to this section of Airport Road

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8 Environmental Inventories

The following environmental inventories are being completed for Airport Road:

- Existing Natural Environment
- Geotechnical and Pavement Design
- Drainage and Stormwater Management
- Archaeology
- Built Heritage and Cultural Landscape
- Structural Assessment and Design
- Noise Study
- Air Quality
- Contaminated Site Screening

9 Fisheries and Fish Habitat

- Fish habitat has been assessed approx. 50m upstream and 100m downstream of each crossing
- Spring surveys will be conducted to document spring conditions and to screen for the presence/absence of mussels
- Identification of one "perched" culvert

- **Redside Dace** not known to currently occupy Salt Creek. MNR records show Salt Creek to be a "recovery habitat"
- All design concepts will be evaluated with consideration to MNR guidelines and legislation

Redside Dace

10 Wildlife and Wildlife Habitat

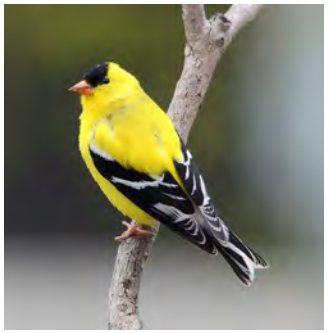
- Barn Swallow, listed as Threatened, was observed in the study area
- The **'breeding bird' window**, which restricts work between May 1 to August 31, will be enforced
- MTO initiative with MNR for the **protection of Barn Swallow habitat** will be followed
- Four bird species found within the study area are recommended by Bird Studies Canada as priority species for conservation in Peel Region:
  - Savannah Sparrow / Eastern Kingbird
  - American Goldfinch / Cliff Swallow
- Additional field investigations will be conducted during the Spring/Summer

Eastern Kingbird

Barn Swallow

Savannah Sparrow

Cliff Swallow



American Goldfinch

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11 Vegetation and Vegetation Communities

- No Tree or Plant species regulated under the *Endangered Species Act* or *Species at Risk Act* were found in the study area

- 19 trees were identified to be within the 45m right-of-way. A follow-up survey will be completed when the preliminary design is finalized

- High proportion of invasive Giant Reeds (Phragmites), a non-native species that is tolerant of salt spray was observed

12 Drainage and Stormwater Management

- 9 steel cross culverts, 2 structural concrete culverts and 1 bridge
- 2 structural culverts will need to be extended to support the wider road
- Existing roadside ditches provide water quality/quantity control to runoff
- Storm sewers present at Norris' Bridge
- There are no stormwater management facilities adjacent to the study area

13 Archaeology and Built Heritage

Stage 1 Archaeological Assessment identified the following structures as heritage features:

14 Built Heritage Resources:

- 1 church
- 1 bridge
- 1 commercial building
- 1 former schoolhouse
- 10 residences

11 Cultural Heritage landscapes:

- 1 remnant farmhouse
- 10 farmscapes

14001 Airport Road

Sandhill United Church

- Identification of potential areas that may require a Stage 2 Property Assessment has been identified and will be conducted if impacted by the proposed work

14 Air Quality / Noise Study

Results of the Air Quality Assessment

1) Without improvements, emission levels will increase as a result of increased congestion, e.g. by 2031, vehicles will take 4 times longer to clear the Airport Road / King Street intersection and emission levels in the area are expected to nearly double
2) With road widening and intersection improvements, current levels can be maintained and improved, despite the higher traffic demands
3) Emission levels along Airport Road are expected to decrease as a result of the proposed road widening and continued tightening of vehicle emissions standards

Results of the Noise Assessment

1) With improvements, road noise levels are expected to minimally increase (indistinct)

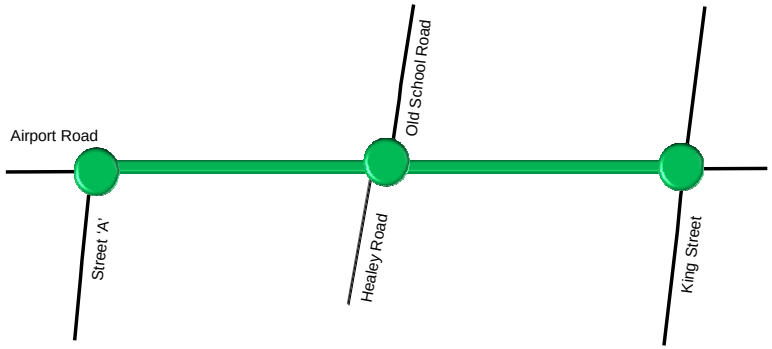
2) Overall, noise levels within the study area remain within acceptable limits and no permanent noise mitigation measures are required. (i.e. noisewalls)

15 Traffic Study Overview

Tasks associated with the traffic analysis included:

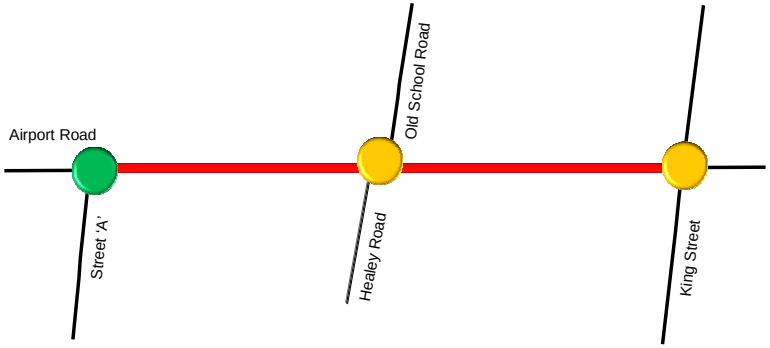
- A review of existing traffic conditions throughout the corridor
- Analysis of intersections and midblock road sections
- A review of the safety performance for the corridor
- An assessment of future travel demands and deficiencies
- Identification of improvements for intersections and road sections to handle future travel demands
- Roundabout feasibility for the intersections:
  - Old School Road-Healey Road
  - King Street

16 Traffic Study Overview (AM Peak Hours)



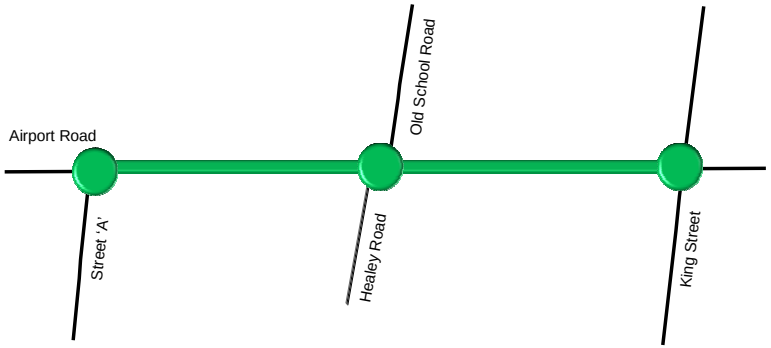
Existing Traffic Conditions

Level of congestion with no improvements to the Road



2031 Projected Traffic Conditions

Level of congestion with improvements to the Road



2031 Projected Traffic Conditions

Legend

- 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

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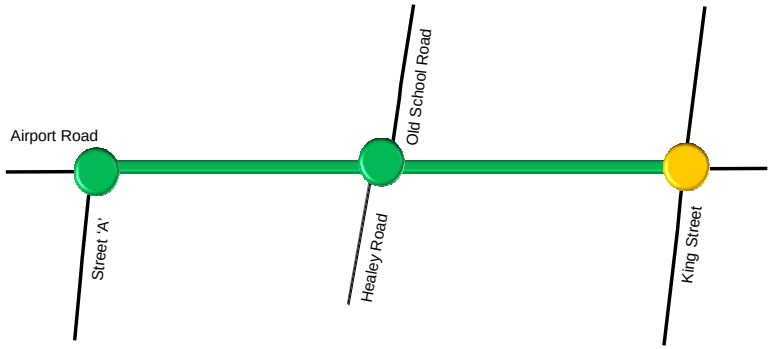
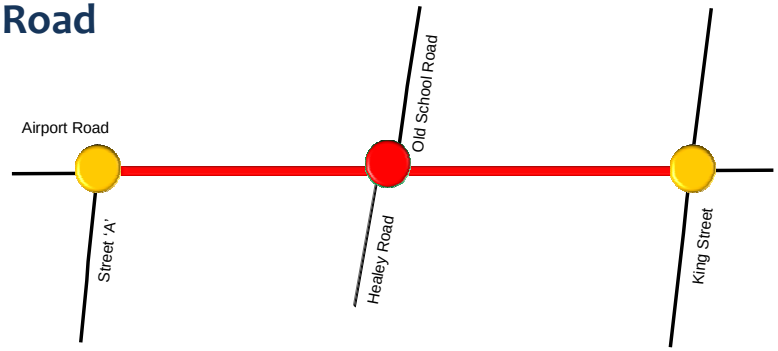
17 Traffic Study Overview (PM Peak Hours)



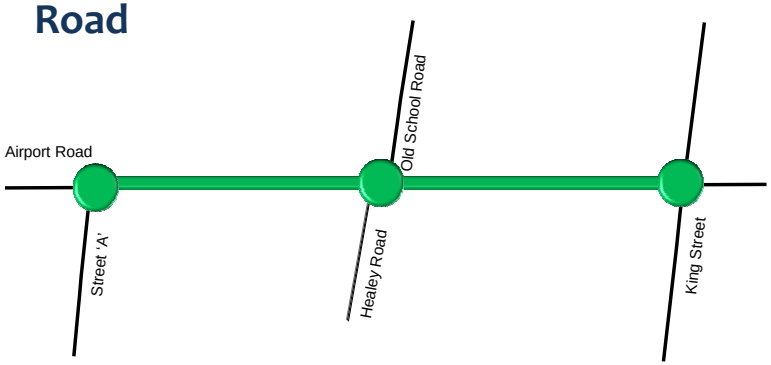
Existing Traffic Conditions

Level of congestion with no improvements to the Road



2031 Projected Traffic Conditions

Level of congestion with improvements to the Road



2031 Projected Traffic Conditions

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18 Traffic Study Overview – Future

Two alternatives were explored for the 2031 horizon year:

1) Alternative A – maintain existing conditions

2) Alternative B – 5 lane cross section including a continuous centre left turn lane and intersection improvements

Alternative B is preferred based on the traffic capacity criteria as it provides significantly improved levels of service

19 Safety Pilot

- Review of collision history identifies this study area as a potential candidate for a “Safety Edge” pilot
- A Safety Edge is created when road paving is done and leaves an angled finish where the pavement meets the gravel allowing for safer recovery if a vehicle runs off the pavement
- Further investigation will be done to determine feasibility

20 Roundabouts

- Roundabout feasibility study confirms roundabouts can function at all intersections
- Further analysis and preliminary design will be done for both types of intersections, signalized and roundabout

King Street

Old School Road/Healey Road

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21 Active Transportation/Transit

Existing Conditions

- No active transportation facilities within the study area
- No transit facilities within the study area, Brampton Transit has 2 stops 0.5 km south of the study area in Tullamore:
  - 1 - Airport Road/Mayfield Road
  - 2 - Airport Road/Perdue Court

Recommendations

- Paved shoulders from 1 km north of Mayfield Road to south limits of Sandhill
- Sidewalks and dedicated on-street bike lanes within the Sandhill settlement area

22 Goods Movement and the Road Characterization Study (RCS)

Goods Movement

- Current truck percentage on this section of Airport Road is approximately 10%-15% - this is the "medium-high" range
- South of the study area is the Tullamore South Industrial Park which calls for a full build out by 2018
- North limits of the study area is the Sandhill Commercial/Industrial Centre. A series of development applications have been received for highway commercial and trucking uses

Road Characterization Study

- RCS classifications consider adjacent land use, context sensitivity, requirements for the form and function of sections of roadway today and in the future
- Design criteria and cross sections shown are in-line with proposed RCS recommendations

Problem/Opportunity Statement

Improvements are needed along the Airport Road corridor to address/accommodate:

1. existing and future traffic demands
2. pedestrian and cyclist movements through the corridor
3. access control

Alternative Solutions

Four alternative solutions were developed to address the problem statement

1
DO NOTHING

- No improvements
- Continue regular maintenance

2
IMPROVE OTHER ROADS

- Add capacity to adjacent parallel roads

3
INTERSECTION IMPROVEMENTS ONLY

- Improve all intersections within the study area without widening

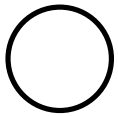
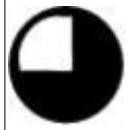
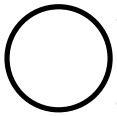
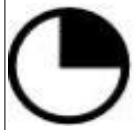
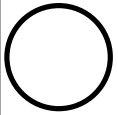
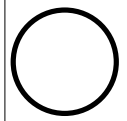
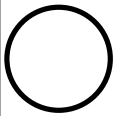
4
WIDEN AIRPORT ROAD WITH INTERSECTION IMPROVEMENTS

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

25 How are Alternative Solutions Evaluated?

Criteria	Evaluate
Traffic Operations and Safety	How well do the alternatives manage motor vehicle, cycling and pedestrian traffic in a safe manner?
Natural Environment	What impacts do the alternatives have on natural environment features such as vegetation, wildlife and drainage?
Socio-Cultural Environment	What impacts do the alternatives have on existing established communities and businesses, property noise/vibration, potential archaeological resources, built heritage features and visual character?
Economic Environment	What is comparative cost to construct each alternative, including utility location, capital, property and maintenance and operating costs?
How the Alternative Complies / Supports Regional and Municipal Official Plans and Policies	Active Transportation Plan
	Goods Movement Strategic Network
	Road Characterization Study
	Sandhill Land Use Study and Tullamore South Industrial Park
	Region of Peel's Long Range Transportation Plan and Town of Caledon's Transportation Needs Study

26 Evaluation of Alternative Planning Solutions

Evaluation Criteria	Alternative 1 **Do Nothing**	Alternative 2 **Improve Other Roads**	Alternative 3 **Intersection Improvements with no widening**	Alternative 4 **Intersection Improvements with widening**
Traffic Operations and Safety	 • Does not allow for addition of continuous centre left turn lane (safety) • Road will not support projected growth (operations)	 • Does not allow for addition of continuous centre left turn lane (safety) •May slightly reduce projected growth on this road (operations)	 • Does not allow for addition of continuous centre left turn lane (safety) • Will extend the ability of the road to function without widening for a brief time	 • Allows for addition of continuous centre left turn lane (safety) • Road will support projected growth (operations)
Natural Environment	 • No disturbance to existing Natural Environment • Does not allow for improved SWM infrastructure	 • Disturbance to existing Natural Environment would be greater due to the increased scope of work required to upgrade alternative routes • Does not allow for improved SWM infrastructure	 •Disturbance to existing Natural Environment would be minimized •Does not allow for improved SWM infrastructure	 • Allows for improved SWM in ditches • Allows for increased sizing of cross culverts
Socio-Cultural Environment	 • No impact to existing businesses and residences	 • No impact to existing businesses and residences	 • No impact to existing businesses and residences	 • Does support truck movement for adjacent existing business in the corridor
Economic Impact / Capital Cost	 • No capital cost of construction • Does not support truck movement for adjacent current or future businesses in the corridor	 • Capital cost of construction for parallel roads would be much greater than for Airport Road • Does not support truck movement for adjacent current or future businesses in the corridor	 • Capital cost of construction would be minimized • Does not support truck movement for adjacent current or future businesses in the corridor	 • Capital cost of construction is highest of the alternatives • Can support truck movement for adjacent current or future businesses in the corridor
Transportation Plans and Policies	 • Does not allow for addition of Active Transportation facilities • Does not support identified needs of Region of Peel's Long Range Transportation Plan or Caledon's Transportation Needs Study	 • Does not allow for addition of Active Transportation facilities • Does not support identified needs of Region of Peel's Long Range Transportation Plan or Caledon's Transportation Needs Study	 •Does not allow for addition of Active Transportation facilities •Limits support identified needs of Region of Peel's Long Range Transportation Plan or Caledon's Transportation Needs Study	 • Allows for addition of Active Transportation facilities • Supports identified needs of Region of Peel's Long Range Transportation Plan and Caledon's Transportation Needs Study
RECOMMENDATION	Not Recommended	Not Recommended	Not Recommended	Recommended Carry Forward

Legend: Least Preferred  1 point  2 points  3 points  Most preferred 

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27 Preliminary Recommended Alternative Planning Solution

The preliminary recommended alternative solution developed in consultation with agencies is Alternative 4:

Widen Airport Road with Intersection Improvements

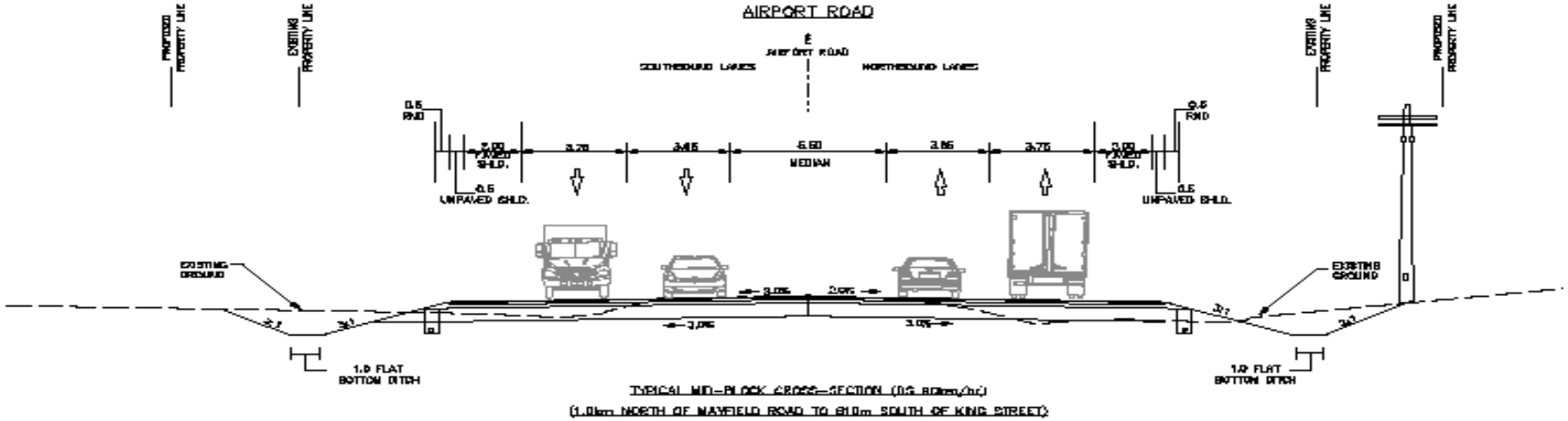
Alternative 4 will address the problem statement developed for the Airport Road corridor

28 Design Criteria

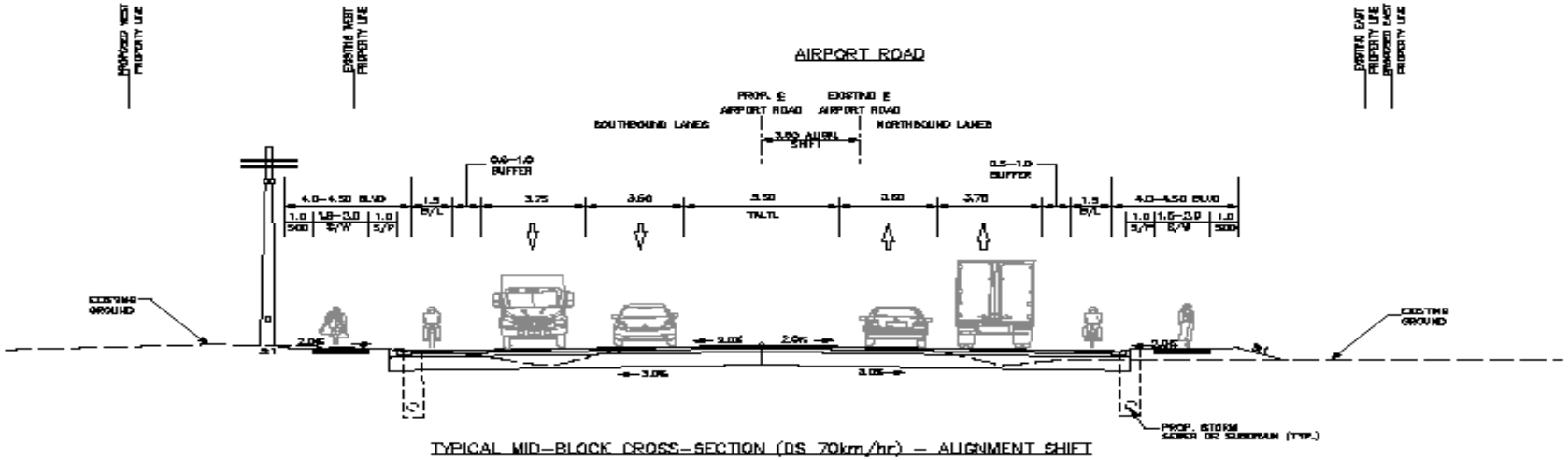
DESIGN PARAMETERS	PRESENT CONDITIONS	DESIGN STANDARDS		PROPOSED STANDARDS
		TAC	MTO	
Row Width	36m	20 - 45	N/A	45 m (1)
Posted Speed	80 & 60km/hr (2)	80 km/hr	80 km/hr	80 & 60km/hr (2)
Design Speed (D.S.)	90 & 70km/hr (3)	90 km/hr	90 km/hr	90 & 70km/hr (3)
Minimum Stopping Sight Distance	95 m	130-170 m	160 m	160 m
Equivalent Minimum 'K' Factor for 90km/hr D.S.	n/a	30 – 40 Sag 32 – 53 Crest	40 Sag 50 Crest	40 Sag 50 Crest
Equivalent Minimum 'K' Factor for 70km/hr D.S.	n/a	20 – 25 Sag 16 – 23 Crest	25 Sag 25 Crest	25 Sag 25 Crest
Minimum Radius for 70km/hr D.S.	n/a	190 m	190 m	190 m
Minimum Radius for 90km/hr D.S		340 m	340 m	340 m
Number of Lanes	2 Lanes Rural	4	4	5 Lane Rural (4)
Lane Width for 90km/hr D.S.	2 x 3.6 m	3.5 – 3.7 m	3.5 m	3.75m Curb Lanes, 3.65m Inside Lanes 3.5m Turn Lanes, 5.5m Median
Lane Width for 70km/hr D.S.	2 x 3.6 m	3.5 – 3.7 m	3.5 m	3.75m Curb Lanes, 3.5m Inside Lanes 3.35 -3.5m Turn Lanes, 5.5m Median
Boulevard Width	N/A	3.0 m	3.0m	5.5m Min.

NOTE:
(1)ROW width will vary based on grading and design selected at the intersections.
(2)Sandhill Settlement area existing and proposed posted speed is 60km/hr (from 610m south of King street to the project limit on the north end).
(3)Sandhill Settlement area existing design speed assumed to be 70km/hr, proposed design speed is 70km/hr (from 610m south of King Street to the project limit on the north end).
(4)An urban cross-section will be implemented through Sandhill Settlement Area

29 Preliminary Typical Cross-Sections



TYPICAL MID-BLOCK CROSS-SECTION (0S 80km/hr)
(1.0km NORTH OF MAYFIELD ROAD TO 610m SOUTH OF KING STREET)



TYPICAL MID-BLOCK CROSS-SECTION (0S 70km/hr) – ALIGNMENT SHIFT
(610m SOUTH OF KING STREET TO 600m NORTH OF KING STREET)

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30 Design Considerations

- Sandhill United Church and Sandhill Pipes and Drums
- Sightline deficiencies at 5 properties (potential to improve vertical alignment)
- Addition of paved shoulders to implement the Active Transportation Plan recommendation
- Possible roundabouts at all intersections
- In absence of roundabout option at Old School-Healey, a geometric realignment and signalization will be required
- In absence of roundabout option at King Street, additional turn lanes required on all approaches
- Existing gas station N/E corner of Airport and King is within the Region's right-of-way

31 Utility Relocations

- All Hydro is above ground
  - West side to Sandhill
  - East side within Sandhill

- The right-of-way in this section of Airport Road was increased in the Region of Peel Official Plan from 36 metres to 45 metres

- Existing location of Utility facilities will be maintained as much as possible

32 Next Steps

- Receive public comments by Friday, July 12, 2013
- Review and confirm preferred planning alternatives and assessment in light of comments received from the public and agencies to date and confirm / modify design
- Complete Environmental Inventory
- Develop alternative design concepts
- Complete detailed impact analysis
- Develop proposals for mitigation of negative effects
- PIC #2 – Winter 2014

Timeline

Alternative Planning Solutions

Public Information Centre #1

Draft Environmental Study Report

Jan 2013 | Spring 2013 | Winter 2014 | May 2014 | June 2014

Problem & Opportunity

Public Information Centre #2

Alternative Designs

Notice of Completion

34 What happens next?

How can you provide comment on the project?

Please fill out the comment sheet today, or send comments by email/fax/letter to Sally Rook by **Friday, July 12, 2013.**

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

http://www.peelregion.ca/pw/transportation/environ-assess/airport-road-ea.htm

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Regional Municipality of Peel
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Fax: 905-791-1442
Email: sally.rook@peelregion.ca

Thank you for your participation

Region of Peel
Working for you

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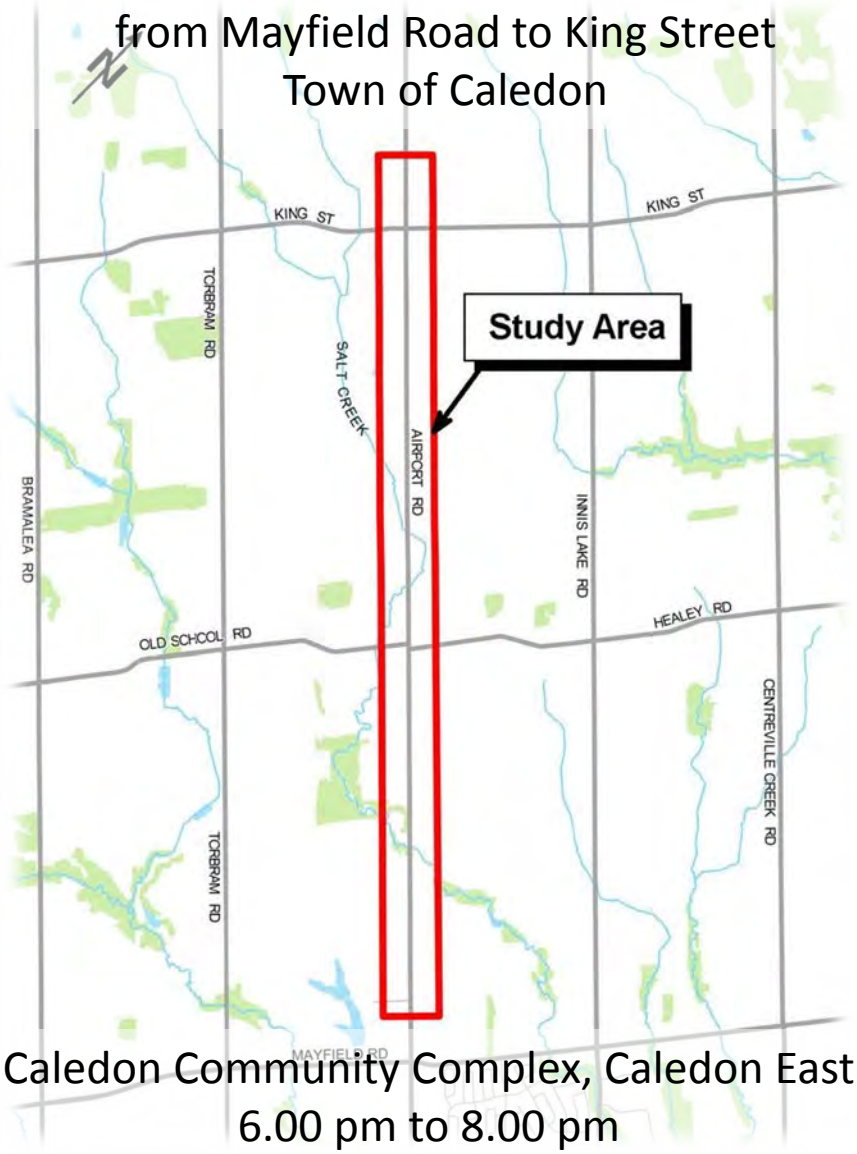
Welcome

Public Information Centre No. 2

AIRPORT ROAD ENVIRONMENTAL ASSESSMENT

from Mayfield Road to King Street
Town of Caledon



Caledon Community Complex, Caledon East
6.00 pm to 8.00 pm
Thursday, November 27, 2014

Please sign in and we'll keep you in touch with the study progress

Region of Peel
Working for you

Public Information Centre No. 2

Purpose:

1. explain how the Municipal Class EA process works
2. review what has taken place so far and confirm the recommended planning alternative
3. provide a summary of your questions / comments
4. present a summary of technical studies completed
5. present the alternative designs and evaluation process used to select a recommended design
6. discuss the potential environmental impacts and the ways to reduce the impacts of the recommended design
7. ask for your input and comments on the recommended design and show what will happen next

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How the Municipal Class EA process works

The Municipal Class EA process provides a framework for municipalities to plan, design, and construct municipal infrastructure projects. This project is following a Schedule C classification which is the most rigorous.

Phases 1 to 4

1. • Problem/Opportunity — completed
2. • Alternative Planning Solutions — completed
3. • Alternative Designs — **we are here**
4. • Environmental Study Report

Notice of Completion and 30-day public review

Phase 5

Implementation – Detailed Design and Construction

Goods Movement Corridor

Airport Road is designated as a goods movement corridor within the study area.

The current truck percentage on this section of Airport Road is approximately 10%-15% - a “medium-high” range.

South of the study area is the Tullamore South Industrial Park with anticipated full build out by 2018.

At the north limits of the study area is the Sandhill Commercial/Industrial Centre. A series of development applications have been received for highway commercial and trucking uses.

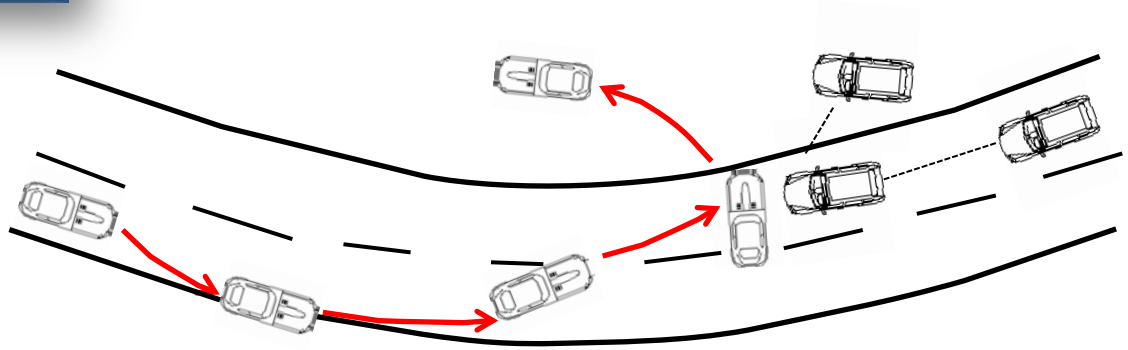
Outer lane widths, roundabout dimension and air quality study have all considered the goods movement priority for the study area.

Pilot Project Road Safety Edge

The Region will commence a pilot study with the construction of a safety edge between Street A (south end of study area) to the Healey Road/Old School Road proposed roundabout.

The safety edge is placed at a 45 ° angle between the road shoulder and pavement surface.

An accident caused by tire scrubbing is illustrated in the diagram. The vehicle at the left scrubbed the edge of the pavement and when it returned, the driver overcorrected, lost control, and crossed into the adjacent lane and on-coming traffic. The safety edge will help prevent this type of accident.



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What has taken place so far?

Confirmation of the preferred planning solution:

- *widen Airport Road from 2 lanes to 4 lanes with a centre lane for turning left*
- *intersection improvements*

Completion of Study reports for


Natural Environment


Archaeology


Structures


Stormwater Drainage


Air Quality


Geotechnical


Tree and Wildlife


Cultural Heritage


Noise


Fluvial Geomorphology


Contaminated Site Screening

Review and response to comments from PIC No. 1

Development of alternative design concepts for the preferred planning solution (above).

Impact analysis of alternative designs and any required mitigation.

1 You asked and we answered - your questions/comments

Question/Comment	Answer
Request for water services in the study area.	A new water service zone would need to be created which is an expensive proposition that would only occur when there is sufficient development to warrant. The Town has no new development plans and the Region will not be bringing water to the study area at this time.
Why upgrade the hydro poles if widening won't take place for at least 5 years?	Hydro One is replacing 11 poles that are rotted inside as part of its maintenance program. Replacement needs to take place now.
North Peel Community Church parishioners are parking on the road shoulder and need a parking lot.	It is not within the scope of this EA to facilitate parking for the Church; however consideration will be given for access in and out of the church with the proposed intersection works at King Street. ***Update: there is a site plan application being reviewed by the Town for a parking lot that will work with the EA design.***
Make sure a signalized intersection or roundabout is adequate for the turning of large vehicles, e.g. farm tractors.	It is the Region's intent to make sure all vehicles, including farm equipment, emergency vehicles and trucks are able to manoeuver through the area and its intersections safely and efficiently.
Request for adequate shoulder for postal vehicles and comment about community mail boxes.	Canada Post commented that most rural delivery customers are being switched out to Community Mailboxes long before the construction of Airport Road occurs.
Lower the speed limit.	The posted speed limit of 60 km/hr in Sandhill, and 80 km/hr south of Sandhill is considered reasonable for the area and for the intended function of Airport Road.
Provide a centre lane for safe turning.	A dedicated centre left-turn lane is included in the preferred alternative design for Airport Road.

2 You asked and we answered - your questions/comments

Question/Comment	Answer
Request for noise barriers.	The noise study concludes noise walls are not required. Noise levels are expected to minimally increase and the Region's policy considers protection for only qualifying back or side facing yards.
General comment about disappearing farmland and the impact to air quality and land use by the proposed changes.	While agriculture is not listed in the environmental inventory, it has been considered in the study. The Town of Caledon's Official Plan identifies the adjacent land use (with the exception of the Sandhill Settlement area) as agricultural and Green Belt lands. As such, the cross section being proposed is rural. The Air Quality Study shows that as traffic increases and the road becomes congested, air quality declines. By providing the ability for traffic to free-flow, air quality is improved. The proposed widening is to to facilitate the increased traffic we know will be travelling through the area in the next 20 years. It is anticipated that very little existing working farm land will be required for this project.
Agricultural operations, use, and access along Healey and Old School will be affected by increased traffic.	The dedicated centre left-turn lane proposed along Airport Road is anticipated to reduce conflicts between vehicles (farm or otherwise) turning into properties and through traffic.
Widening Airport Rd to 4 lanes will lead to growth of subdivisions into the agricultural reserve, increasing the pressures on the wrong roads and putting agricultural machinery in conflict with motorists.	At this time there is no development application related to subdivisions or any other multi-home developments in the study area.

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3 You asked and we answered - your questions/comments

Question/Comment	Answer
Why widen now for the future since traffic is moving well? Secondary roads could be improved and would be safer to take traffic.	•Traffic study shows road will be congested in the future without improvements so we are planning now with road construction scheduled for 2020. •Secondary roads are not built to a standard to facilitate high volumes of traffic. To upgrade a secondary road to an arterial road would not be cost effective and would not necessarily suit the adjacent land uses and intended character of the area.
Straightening out the jog at Airport (offset intersection at Healey/Old School) and adding 4 lanes to Airport will increase use of side roads that are not meant for commuter traffic. Better east-west arterial roads are needed since commuters are avoiding Mayfield in favour of Healey/Old School.	The Town and Region are aware that there has been an increase in traffic on Old School Road in recent years. It is anticipated that once Mayfield Road from Dixie Road to Highway 50 is widened and can accommodate greater traffic volumes without delay, commuters currently using Old School Rd as a by-pass will return to using Mayfield Road as their preferred route.
Area will be greenbelt for a while (i.e. Agricultural) and would like to know what strategies Region/Caledon have for commuters.	When modelling and forecasting needs for the future, the Region's Long Range Transportation Plan (LRTP) takes into account that Region and Town roads have different functions, standards and uses. The current LRTP doesn't identify a need to widen King Street. It will be looked at again when the LRTP is updated with the 2041 population and employment projections.
Can you confirm when the ROW for Airport Road was increased to 45m?	As per the Region's Official Plan (Office Consolidation, March 2012), Airport Road within the study area, has a ROW of 45m with provision for up to 54m ROW at intersections. It has not been determined at this time exactly what the ROW requirement is at the King St intersection.
Do you have further information on the three major structures (culvert/bridge) and other issues?	As the design has progressed we have identified that all three major structures in the study area will need to be replaced.

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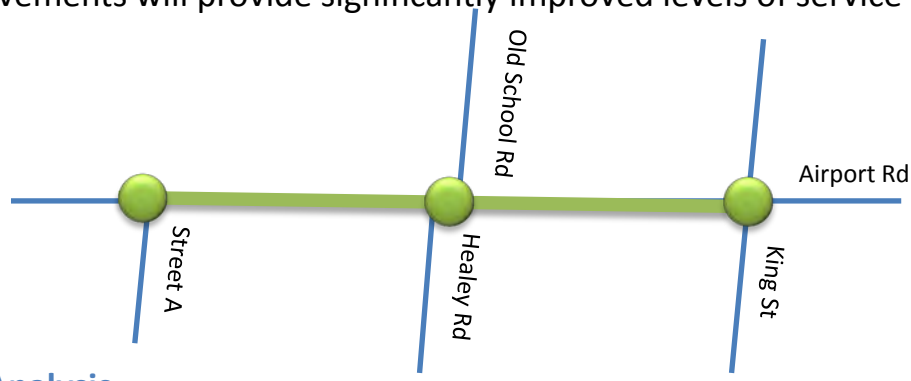
1 Updated Technical Reports

Traffic

Improvements

A 5-lane cross section including a continuous centre left turn lane and intersection improvements will provide significantly improved levels of service

2031 a.m. and p.m. peak traffic modelling shows there will be no congestion **with improvements**



Roundabout Analysis

Analysis shows that roundabouts will function well to improve safety and congestion and are recommended at the Old School Road/Healey Road and King Street intersections

Natural Environment

Designated Natural Areas

- no Provincially Significant Wetlands (PSWs), Areas of Natural and Scientific Interest (ANSIs), or Environmentally Sensitive Areas (ESAs) are located within 120 m of the study area
- impacts to the Regional Greenland System of the Region of Peel and Environmental Policy Area of the Town of Caledon are expected to be minor
- impacts to the TRCA Terrestrial Natural Heritage System are expected to be minor

2 Updated Technical Reports

Natural Environment continued

Fisheries & Fish Habitat

- aquatic habitat surveys were undertaken in Sept. 2012, Nov. 2012, and Sept. 2014 for eight watercourse crossings
- the Norris Bridge, Deans Culvert, and Salt Creek Culvert watercourse crossings directly support fish habitat; while the remaining crossings indirectly support fish habitat
- Salt Creek is identified as Redside Dace (a small endangered minnow) 'recovery habitat', and thus subject to the requirements of the ***Ontario Endangered Species Act (ESA)***
- no mussels species at risk were documented within the study area.

Impact Assessment and Mitigation

- no barriers to fish passage will result from this project
- all culverts have been enlarged and culvert lengths kept to a minimum
- all culvert works will be performed in the dry
- restoration and enhancement plans will be prepared, focusing on the three major watercourse crossings
- an Endangered Species Act permit, if required, will be secured during detailed design

3 Updated Technical Reports

Vegetation and Vegetation Communities

- 137 plant species were recorded within the study area
- no plant species identified are regulated under the ***Ontario Endangered Species Act*** or the ***Canada Species at Risk Act***
- two species identified in the cultural meadows, are rare in the Region of Peel (Narrow-Leaved Willow Herb and American Mountain-Ash)
- three plant species are considered by the Toronto Region Conservation Authority as species of concern (Shagbark Hickory, Narrow-Leaved Willow Herb, Fly-Away Grass)

Impact Assessment and Mitigation

- approximately 9.62ha of natural and/or planted areas will be removed (Cultural Vegetation, Wetland Vegetation, and Human Influenced Lands)
- overall, the impact to these communities is considered minor

Tree Inventory

- a tree inventory was undertaken in November 2012 and June 2014
- the species, size and condition (trunk integrity, canopy structure, crown vigour, etc.) of trees were assessed
- 213 trees, consisting of 27 species, were identified along the corridor
- trees ranged in size from 10 to 160 cm DBH (diameter at breast height)
- generally, trees were in good to fair condition
- most predominant species were: Manitoba Maple, Silver Maple, Blue Spruce and Austrian Pine
- no tree or plant species regulated under the ***Ontario Endangered Species Act*** or ***Canada Species at Risk Act*** were found in the study area

Impact Assessment and Mitigation

- 151 trees will need to be removed to accommodate the road widening (i.e. trees located within the grading limits and 1.5m beyond)
- trees will be replaced in keeping with Peel Region/TRCA standards
- suitable planting locations for replacement trees will be determined during detail design

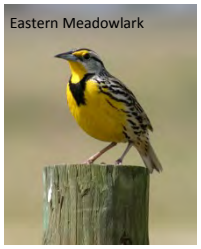
4 Updated Technical Reports

Wildlife and Wildlife Habitat

- field investigations were conducted in Sept. 2012, and June and July 2013
- 47 wildlife species were recorded within the study area
- adjacent lands consist of disturbed low quality wildlife habitat
- higher quality habitat is associated with the Salt Creek crossings
- species such as mink, raccoon, and striped skunk use the travel corridors through the Salt Creek culverts
- other mammal species such as Virginia opossum, meadow vole, red fox, and coyote were recorded within the study area
- evidence of white-tailed deer indicates a minor crossing corridor over Airport Road, south of Old School Road

Species at Risk

- 3 bird species at risk were identified:
  barn swallow, eastern meadowlark and bobolink
  All three species are considered 'Threatened' and regulated under the ***Ontario Endangered Species Act (ESA)*** and the ***Federal Species at Risk Act (SARA)***. Wood Thrush, an additional bird species at risk, may be present
- cliff swallow nests where found in two of the three major culvert crossings along Airport Road



Impact Assessment and Mitigation

- the proposed road improvements are not expected to have a significant impact on wildlife habitat
- larger culverts will improve wildlife passage
- clearing or disruption of vegetation or replacement of structures where birds may be nesting will be completed outside the nesting window of March 25 to August 31
- permitting requirements will be followed

5 Updated Technical Reports

Structures

The existing Norris Bridge and Deans Culvert were built in 1955; and the Salt Creek Culvert was built in 1960.

All three structures will be removed and replaced with larger, open footing precast structures. Replacement will be undertaken in two stages with two lanes of traffic maintained throughout construction.

Culvert/Bridge	Existing Size	Improvement
Norris Bridge	10.7 m wide X 2.8 m high	14.64m X 3.35m arch bridge
Deans Culvert	6.3 m wide X 2.3 m high	10.67m X 2.13m rectangular concrete culvert
Salt Creek Culvert	6.8 m wide X 1.7m high	10.67m X 2.13m rectangular concrete culvert

A perched culvert (culvert with an outlet elevated above the downstream water surface) located 930m south of King Street will be replaced.

Fluvial Geomorphology

(the study of river systems and how they are affected by human processes)

- the Salt Creek Culvert and Norris Bridge crossings display some areas where sediment is depositing, which likely become fish barriers during low-flow periods
- river function would benefit from improvements to the channel form and help both fish passage and sediment transport issues
- replacement of the three structures and upgrades of all existing culverts will allow for Salt Creek crossing to move naturally and enhance Redside Dace habitat

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6 Updated Technical Reports

Drainage and Stormwater Management

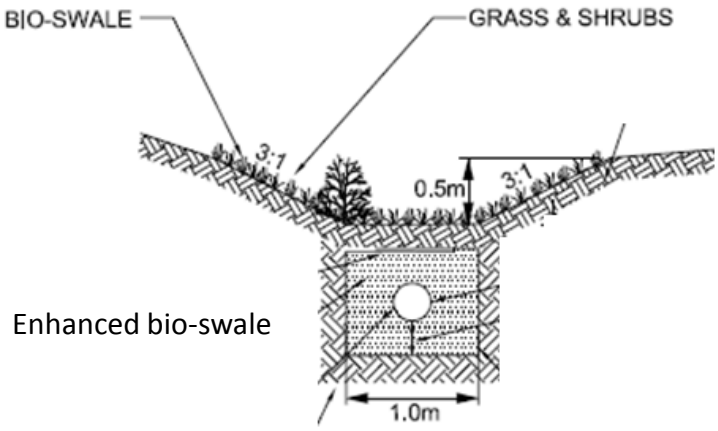
- Salt Creek currently overtops Airport Road at the three major crossings under Regional Storm conditions. With the enlargement of all three structures, overtopping of the roadway will be eliminated
- the nine smaller crossing culverts within study area will all be replaced and upsized to 800mm culverts

Stormwater Quantity Control

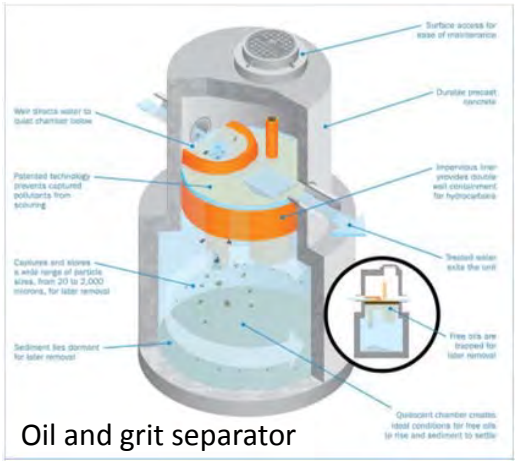
- in rural areas, existing V-shaped ditches that currently convey stormwater to the Salt Creek system are to be improved to flat bottom infiltration ditches
- within Sandhill, the road cross section will be urban, including curb and gutter. Storm sewers with oil and grit separators and bioswales will be used to convey drainage to culverts /receiving drainage systems

Stormwater Quality Control

- use of enhanced bio-retention swales as a **pilot project** within the study area
- oil/grit separators to improve total suspended solid (TSS) and treat run-off water
- sediment and erosion control measures will be implemented during construction



Enhanced bio-swale



Oil and grit separator

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7 Updated Technical Reports

Archaeological and Built Heritage Resources

- the Stage 1 Archaeological Assessment and Cultural Heritage report was completed
- the Archaeological assessment indicates that the right-of-way is considered disturbed and has no archaeological potential; however there are a number of areas beyond the existing ROW that demonstrate archaeological potential
- a Stage 2 Archaeological Assessment is being conducted for any identified areas impacted by the proposed work. The Stage 2 Assessment will be conducted by test pit survey and/or pedestrian survey. When the survey is conducted the test pits are excavated at 5m intervals and would only be conducted when ploughing for a pedestrian survey is not feasible.

The Cultural Heritage report identified 11 Cultural Heritage Landscapes and 14 Built Heritage Resources within the study area, including the following 3 buildings designated under ***Ontario Heritage Act***:

- **Kennedy-Breen House** – located north/west quadrant of Old School Road
- **Masters House** – located on the east side of Airport Road, south of King Street
- **North Peel Community Church** – located on King Street, east of Airport Road

- there will be **no impacts** to these buildings or to the **Sandhill United Church**

Heritage Impact Assessments (HIA) have or will be undertaken for:

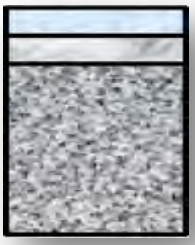
- Norris Bridge crossing
- 13803 Airport Road, a mid-nineteenth century building
- 5968 King Street, a 1.5 storey mid-nineteenth century residence
- 13949 Airport Road, a mid-nineteenth century residence
- Elite Gas Bar and Convenience Store
- 5964 King Street, a log house construction after 1850

* Sandhill Pipes and Drums building being evaluated for relocation

8 Updated Technical Reports

Geotechnical & Pavement Design

- a visual inspection of the pavement was carried out in March 2013
- overall pavement remains in good condition, with slight to moderate edge cracking
- no major areas of geotechnical concern were encountered in the boreholes
- the proposed pavement structure consist of:
  - Asphalt 150mm
  - Granular A Base 150mm
  - Granular B Type II Sub-base 450- 600mm
- the pavement structure will support heavy vehicles



Air Quality & Noise

Widening the road and the introduction of roundabouts will reduce congestion and lower total emissions along the route, resulting in better air quality conditions than those expected in either 2021 and 2031 if no changes are made.

With improvements, road noise levels are expected to minimally increase (indistinct). No noise mitigation is required within the study area.

Contaminated Site Screening

There is no obvious evidence of adverse environmental impacts within the right-of-way. However adjacent properties may be potential sources of impact through ground water. During construction a soil management plan will be developed that includes monitoring and sampling as required.

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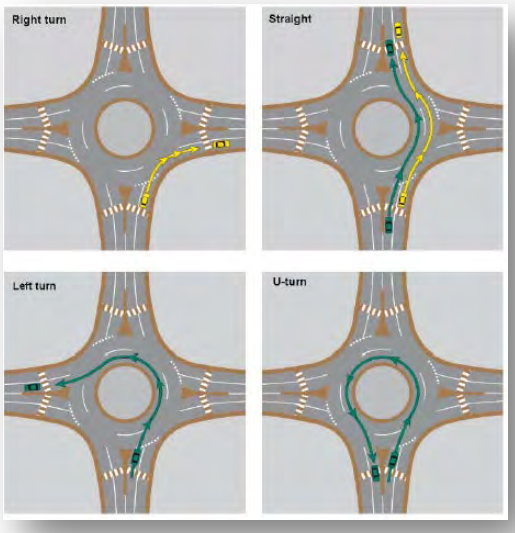
all about ROUNDABOUTS

Major Advantages

- decrease speed and serious collisions
- reduce delays and idling
- lower maintenance costs
- Peel roundabouts are built to accommodate all motor vehicles, including large trucks and farm machinery

How to use a 2-lane roundabout*

- **when entering the roundabout**, yield to pedestrians and traffic in all lanes of the roundabout
- choose the correct lane for your route and follow through
- **within the roundabout**, do not change lanes inside a roundabout, even when exiting
- **when exiting the roundabout**, signal and yield to pedestrians



****to learn more, visit the Roundabout Education Booth***

evaluation matrix
Signalized Intersection vs Roundabout 1

Study Element	Criteria	Alternatives			
		Roundabout	Rating	Signals	Rating
Traffic Capacity, Operations, Access, Safety and Goods Movement					
Existing Traffic Capacity	**How will the alternative serve the current volume of vehicular, pedestrian and cycling traffic?**	• will function well to move vehicles, pedestrians and cyclists through the intersection with minimal stopping • will lessen delay (enhance traffic flow) as per Synchro model (traffic evaluation software)	◑	• will function well to move vehicles, pedestrians and cyclists through the intersection	◔
Forecasted Traffic /Transportation Network	**Does the alternative accommodate forecasted traffic to the 2031 planning horizon year?**	• alternative will accommodate forecasted traffic to the 2031 planning year	◔	• alternative will accommodate forecasted traffic to the 2031 planning year	◔
	Will the alternative address the transportation network demand needs and be compatible with other transportation plans?	• alternative meets network demands and is compatible with Region and Town of Caledon planning documents	◔	• alternative meets network demands and is compatible with Region and Town of Caledon planning documents	◔
Active Transportation (pedestrian and cycling activities)	**How does the alternative serve future pedestrian needs?**	• pedestrians yield to traffic and cross one leg of traffic at a time in the indicated pedestrian crossing zone	◔	• pedestrians cross at the signalized cross walk. However crossing distance is greater because of multiple lanes of traffic	◔
	How does the alternative serve future cycling needs?	• roundabouts make all turning movements slightly more comfortable for cyclists who choose to ride through the roundabout • cyclists can dismount and join pedestrians at cross walk	◑	• cyclists can choose to ride through the intersection joining existing traffic • cyclists can dismount and join pedestrians at cross walk • cyclists turning left cross the path of on-coming vehicles – a bike box can provide safety for this movement	◕
Accessibility (to meet Accessibility for Ontarians with Disabilities Act (AODA) standards)	**Will the alternative accommodate users who have accessibility needs (i.e. vision impaired, wheelchair, etc.)?**	• surface indicators to be provided to accommodate users who have accessibility needs	◔	• countdown signals to be provided • auditory signals will be provided • surface indicators to accommodate users who have accessibility needs	◕

LEGEND: LEAST PREFERRED ○ (0 Pts.) ◔ (1 Pts.) ◑ (2 Pts.) ◕ 3 Pts.) MOST PREFERRED ● (4 Pts.)

Signalized Intersection vs Roundabout 2

Study Element	Criteria	Alternatives			
		Roundabout	Rating	Signals	Rating
Traffic Capacity, Operations, Access, Safety and Goods Movement (continued)					
Emergency / Farm Vehicle Use	**How does the alternative accommodate emergency and/or farm vehicles?**	• will convey emergency and/or farm vehicles through the intersections • use of roll-over curbs to better accommodate the larger vehicles	◑	• will convey emergency and/or farm vehicles through the intersections	◔
Access Management	**What effect will the alternative have on 'right-in/right-out' access restrictions to properties in the Sandhill Industrial/Commercial Centre?**	• roundabout allows 'right-in/right-out' accesses for properties at the intersection to function as 'full moves' accesses • roundabout makes it easier for 'right-in/right-out' accesses throughout Sandhill by using roundabout to turn direction	◑	• vehicles will be unable to make left turns out of properties with 'right-in/right-out' access restrictions	◔
Safety	**Which alternative is safer?**	• Intersection will be constructed to MTO and Region standards • less conflict points with other vehicles • vehicle impact less severe – mostly side-swipes with no head-on collisions • design naturally reduces vehicle speed • King Street – based on accident history potential to eliminate the angle, approaching head-on and turning collisions - of 47.5% reduction. • expected crash reduction between 19-48% for all severities • potential to reduce non-fatal type collisions by 42% • potential to eliminate the angle and turning movement collisions for a total of 27.3% reduction. • expected crash reduction of 71% • potential to reduce by 27.3% non-fatal injury type of collisions	●	• intersection will be constructed to adhere to all Ministry of Transportation (MTO) and Region standards for safety	◔
Goods Movement	**Will the alternative serve to facilitate goods movement (trucking)?**	• designed to accommodate larger turning vehicles such as transport trucks • use of roll-over curbs and apron to better accommodate large trucks, farm and emergency vehicles	◑	• truck turning movements can be accommodated through dedicated right and left turn lanes	◔

LEGEND: LEAST PREFERRED ○ (0 Pts.) ◔ (1 Pts.) ◑ (2 Pts.) ◕ 3 Pts.) MOST PREFERRED ● (4 Pts.)

Signalized Intersection vs Roundabout

Study Element	Criteria	Alternatives			
		Roundabout	Rating	Signals	Rating
Social Environment					
Heritage and Archaeological impacts	**What impacts do the alternatives have on built heritage features?**	**King at Airport** • two heritage churches located close to the Airport and King intersection will not be negatively affected **Healey/Old School at Airport** • no heritage features within the dimensions of the proposed roundabout		**King at Airport** • two heritage churches located close to the Airport and King intersection will not be negatively affected **Healey/Old School at Airport** • no heritage features within the dimensions of the proposed intersection	
Business and Private Property Impacts	**How does the alternative impact properties at the intersection?**	**King at Airport** • four full property buy-outs to construct the roundabout **Healey/Old School at Airport** • one full property buy-out to construct the roundabout		**King at Airport** • four full property buy-outs to construct the signalized intersection **Healey/Old School at Airport** • There are two options for signalization – option 1requires two buyouts and option 2 requires one buyout	
	How much property will be required, if any for the alternative?	**King at Airport** • roundabout will require more property than the signalized intersection – approximately 0.807ha (one full buyout)		**King at Airport** • Signalized intersection will require less property than a roundabout – approximately 0.72ha (one full buyout)	
		Healey/Old School at Airport • roundabout will require slightly more property than either option for a signalized intersection – approximately 1.162ha (one full buyout)		**Healey/Old School at Airport** • signalized intersection Option A will require slightly less property than a roundabout – approximately 1.27ha (including two full buyouts) • signalized intersection Option B will require slightly less property than a roundabout – approximately 1.11ha (including one full buyout)	
Air Quality and Noise	**What effect does the alternative have on air quality and noise levels?**	• air quality is better than a signalized intersection since vehicles are not sitting idling at red lights • noise levels will be within acceptable Ministry of the Environment (MOE) parameters.		• air quality and noise levels will be within acceptable Ministry of the Environment (MOE) parameters	

LEGEND: LEAST PREFERRED  (0 Pts.)  (1 Pts.)  (2 Pts.)  3 Pts.) MOST PREFERRED  (4 Pts.)

Signalized Intersection vs Roundabout 4

Study Element	Criteria	Alternatives			
		Roundabout	Rating	Signals	Rating
Landscaping and Storm Water Management					
Landscaping	**Will the alternative provide opportunities for landscape features?**	• centre of the roundabout will be landscaped • can facilitate a 'Gateway' feature or road designation feature	◑	• there is no room within the boulevard for landscaping	○
Storm Water Management	**Can the alternative incorporate current storm water management practices such as LID (low impact design)?**	• LID practices can be implemented to keep water within the centre of the roundabout and store to water landscaping	◔	• there is no room in the boulevard for LID practices	○
Construction Cost					
Initial Capital Cost	**What is the comparative cost to construct each alternative including utility relocations, property impacts, capital and maintenance costs?**	• the initial capital cost to construct a roundabout is greater	○	• the initial capital cost to construct a signalized intersection is less	◔
Life-Cycle Cost	**What is the total life-cycle cost of the alternative including the cost for construction, utility relocations, property acquisitions as well as ongoing operation and maintenance costs?**	• maintenance costs are lower than signalized intersection option	◔	• maintenance costs are higher than roundabout option due mainly to signals	○
OVERALL SCORE IN POINTS			**25**		**19**

LEGEND: LEAST PREFERRED ○ (0 Pts.) ◔ (1 Pts.) ◑ (2 Pts.) ◕ 3 Pts.) MOST PREFERRED ● (4 Pts.)

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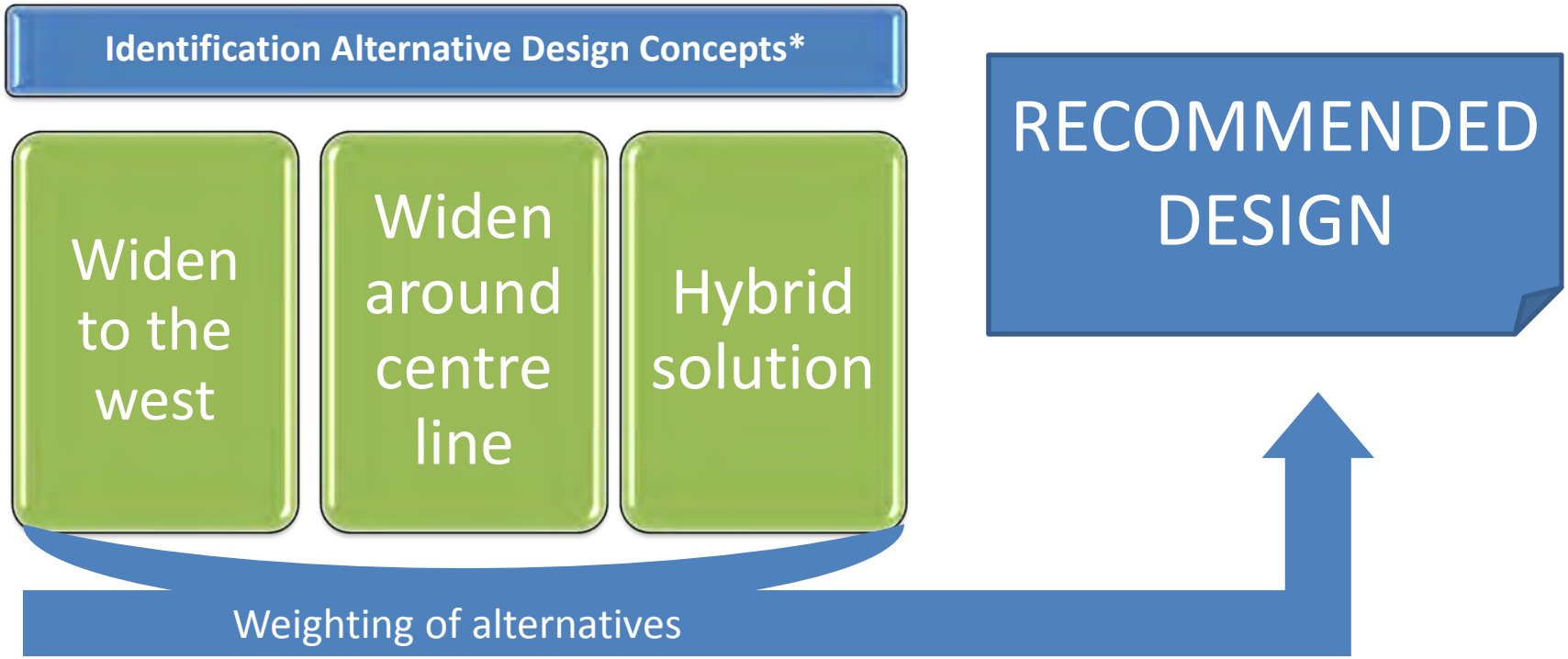
evaluation process

Alternative Design Concepts



*Widening to the east was not pursued for evaluation since that design would require the removal of heritage buildings and negatively impact hydro locations on the east side of the road.

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evaluation of Design Alternatives 1

Category	Criteria	Criteria Indicators	Alternative 1 Widen around the Centre Line	Alternative 2 Widen to the west	Alternative 3* A hybrid approach
Engineering	Constructability	Ability to minimize construction constraints & complexity. Are there opportunities for construction staging (i.e. keeping lanes open)	• Maintain 2 lanes operational during construction. • Slightly higher potential need to overbuild to avoid three stage construction	• Keep 2 lanes operational during construction • Construction staging opportunities marginally improved (i.e. ease of two stage construction) • Potential less complex staging at structures	• Maintain 2 lanes operational during construction. • Improved staging opportunities through Sandhill • Slightly higher potential need to overbuild to avoid three stage construction
	Transportation	Ability to maximize road capacity	• Provides a 5 lane configuration – 2 northbound and 2 southbound lanes with a central turning lane	• Same as alternative 1	• Same as alternative 1
	Overall Safety	Ability to improve vehicular safety along corridor (ensure that all vehicles including farm, emergency and transport trucks can negotiate through the area and its intersections safely and efficiently)	• 2.5M paved shoulder with Rumble Strip • Safety improved by additional road capacity and central turning lane; however does not reduce conflicts at intersections	• Same as alternative 1	• Same as alternative 1
	Stormwater Management	Ability to address water quantity and quality in ROW	• South of Sandhill flat bottom ditches with infiltration material to improve water quality and quantity recommended. Within Sandhill urban cross section will be provided to help alleviate flooding issues.	• Same as alternative 1	• Same as alternative 1
	Utility Conflicts	Ability to minimize effects on utilities within ROW	• Impacts to hydro on both sides of the road • Sanitary sewer remains beyond west edge of pavement throughout project length • Potential isolated impacts to sanitary sewer at structure locations	• Will avoid impacts to hydro south of Sandhill but will impact Hydro within Sandhill • Will require relocation of sanitary sewer on west side at structure locations. Increase costs to accommodate sanitary sewer beneath roadway • Avoids potential impact to watermain on east side at Salt Creek culvert crossing	• Impacts to hydro on both sides of the road • Sanitary sewer width roadway within Sandhill • Potential isolated impacts to sanitary sewer at structure locations
Natural Environment	Terrestrial Features	Adverse effects on terrestrial species and habitats	• Barnswallow, Eastern Meadowlark and Bobolink, regulated as a Threatened bird species and have been observed in area – each alternative will have an equal impact on bird species. • 27 trees species identified within ROW – no endangered plant or tree species identified • Will require removal of approx. 150 trees	• Similar impacts to wildlife and wildlife habitat • Similar number of trees impact (approximately 150 trees will be directly impacted)	• Similar impacts to wildlife and wildlife habitat • Similar number of trees impact (approximately 150 trees will be directly impacted)
		Potential to enhance local terrestrial communities.	• No protected designated natural areas • Impacts to TRCA Terrestrial Natural Heritage System are expected to be minor. • Some trees will need to be removed for widening however they will be replaced on a 3-1 basis • Larger culverts will improve opportunity for wildlife passage	• Same as alternative 1	• Same as alternative 1
	Aquatic Features	Adverse effects on water crossings	• 3 structures need to be replaced – Salt Creek Culvert, Deans Culvert, Norris Bridge which will require in-water work and temporary effects on watercourse crossings	• Same as alternative 1	• Same as alternative 1
		Potential to minimize impact to aquatic features	• Salt Creek identified as Redside Dace "recovery habitat". Improvements to structures will help minimize impact on water crossings.	• Grading will encroachment into pond (open aquatic eco site) located west side of Airport Road south of Norris Bridge	• Same as alternative 1
	Drainage	Ability to minimize infringement into floodplain	• 3 structures will be replaced with open footing pre-cast concrete spans preventing overtopping of road during regional storm conditions	• Increased fill into TRCA Regulated Area north of Norris Bridge	• Same as alternative 1

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evaluation of Design Alternatives 2

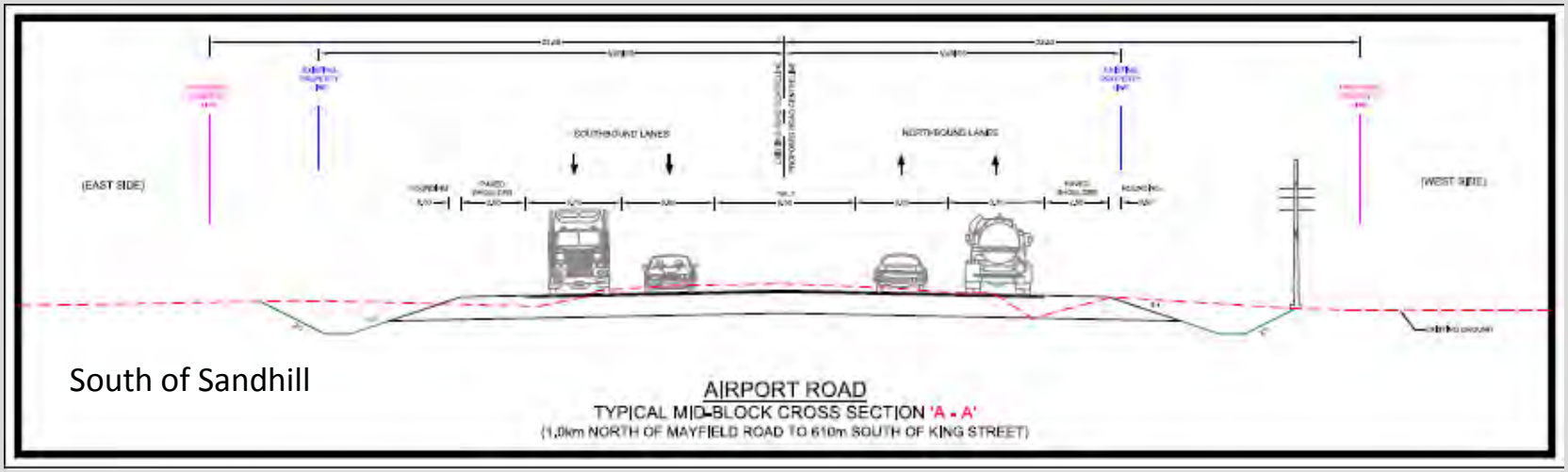
Category	Criteria	Criteria Indicators	Alternative 1 Widen around the Centre Line	Alternative 2 Widen to the west	Alternative 3* A hybrid approach
Socio-Economic Environment	Property Requirements	Amount of property required (hectares)	• Total **15** property buy-outs (12 east side, 3 west side) • Total proposed property required - **10 ha** • Removal of Sanhill United Church	• Total **14** property buy-outs (7 east side, 7 west side) • Total proposed property required – **10 ha** • Avoids impacts to Sandhill United Church	• Total **13** property buy-outs (10 east side, 3 west side) • Total proposed property required – **10 ha** • Avoids impacts to Sandhill United Church
	Accessibility to Properties	Ability to maintain/maximize access	• Accesses will be maintained for all existing properties • Centre turning lane will accommodate left turn in to properties in a safe manner	• Same as alternative 1	• Same as alternative 1
	Business Operations	Ability to enhance business attractiveness	• Center turning lane will make access into existing businesses easier and safer especially for trucks	• Same as alternative 1	• Same as alternative 1
	Active Transportation	Ability to provide sidewalks and/or multi-use trail	• A sidewalk is planned on both sides of the road within Sandhill	• Same as alternative 1	• Same as alternative 1
		Ability to meet cyclist requirements	• Paved shoulder for bicycles outside of Sandhill settlement area. Online bike lanes provided within Sandhill.	• Same as alternative 1	• Same as alternative 1
	Noise	Are noise levels within acceptable parameters following widening?	• With improvements the noise levels will remain within acceptable parameters. No noise mitigation is required.	• Same as alternative 1	• Same as alternative 1
	Accessibility	Ability to be accessible for people with disabilities	• Will incorporate accessibility options such as pedestrian cross walks, countdown signals, line markings, accessible curb ramps, and tactile surfaces where feasible. • Intersections will be AODA compliant	• Same as alternative 1	• Same as alternative 1
Cultural Environment	Archaeological Resources, Built Heritage & Cultural Landscapes	Potential for disruption of archaeological/heritage resources and cultural landscapes.	• Will impact heritage structures including: - Identified Sandhill United Church - Identified Sandhill Pipes and Drums - Listed historic frame building that may have been used as a 19th century District Court building - Identified nineteenth-century house that is a remnant of the historic settlement of Sandhill - Identified - 2 mid-nineteenth century residences of log construction on the n/w corner of King St. - Identified – Elite Gas Bar • Will require replacement of Norris Bridge which is an identified heritage structure.	• Will impact heritage structures including: - Identified Sandhill Pipes and Drums building - Listed historic frame building that may have been used as a 19th century District Court building - Identified nineteenth-century house that is a remnant of the historic settlement of Sandhill - Identified - 2 mid-nineteenth century residences of log construction on the n/w corner of King St. - Identified – Elite Gas Bar Avoids impact to Sandhill United Church. • Will require replacement of Norris Bridge which is an identified heritage structure.	• Same as alternative 2
Cost	Capital & Operating Costs	Cost of construction and operating costs	• Construction cost of the same order of magnitude	• Construction cost of the same order of magnitude Lower hydro relocation costs largely offset by other increased costs to accommodate sanitary sewer)	• Construction cost of the same order of magnitude

most neutral least

***Hybrid approach** – combination of alternatives 1 and 3 – widen around centre line from the south limit of study area to approximate south limit of Sandhill; shift centre line to the west (by 7.5M) in Sandhill; return to existing centre line at the proposed roundabout at King Street.

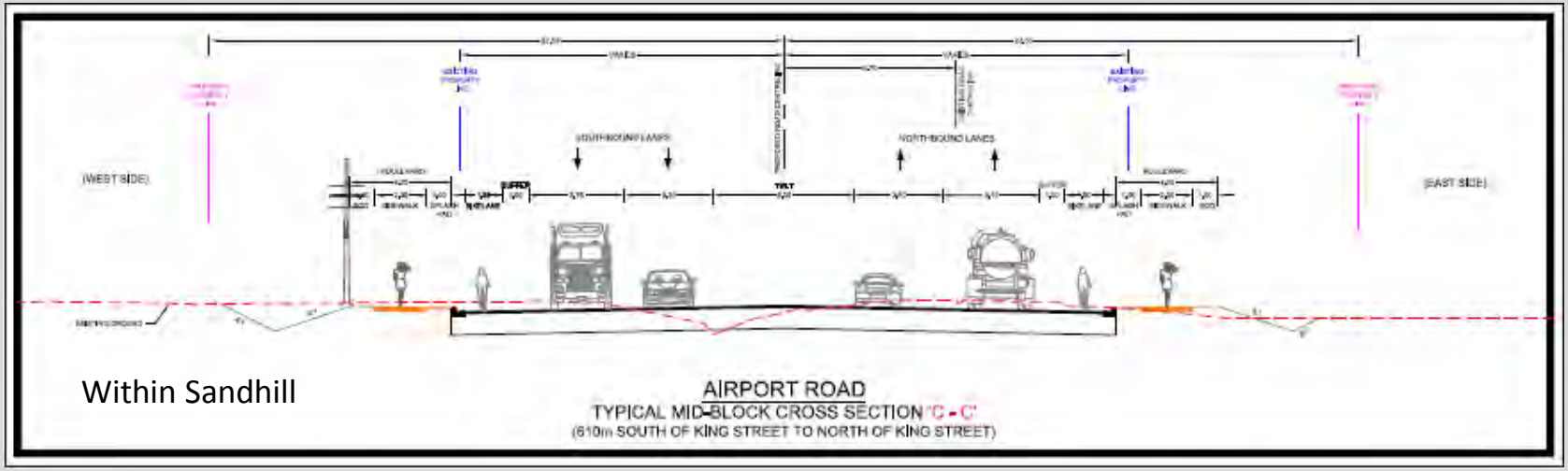
Typical Cross sections -

recommended design



South of Sandhill

AIRPORT ROAD
TYPICAL MID-BLOCK CROSS SECTION 'A - A'
(1.0km NORTH OF MAYFIELD ROAD TO 610m SOUTH OF KING STREET)

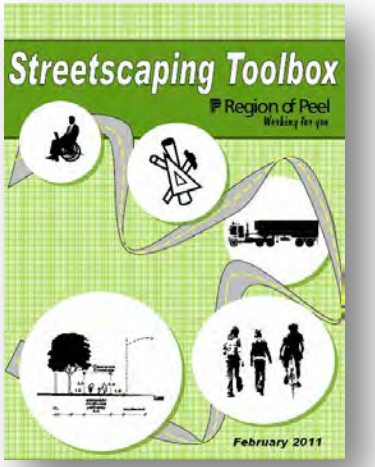


Within Sandhill

AIRPORT ROAD
TYPICAL MID-BLOCK CROSS SECTION 'C - C'
(610m SOUTH OF KING STREET TO NORTH OF KING STREET)

Commitments

- engineering
- access and safety
- environment
- active transportation (AT)
- social/economic
- cultural heritage
- landscaping



We will ensure:

- improved sight lines for property accesses identified with deficiencies
- access to existing properties/entrances is maintained during construction and after, through the addition of a centre turning lane throughout the study area
- safety improvements with the use of roundabouts at King Street and Old School Road/Healey Roads
- an overall benefit to the habitat of endangered species created through the use of wider structures
- an on-street bike lane (AT facility) within Sandhill; a paved shoulder in rural areas for bicyclists; and sidewalks on both sides of the road within Sandhill and on new structures to accommodate future development
- a pilot project “Safety Edge” is installed (a safety edge is an angled finish at the pavement edge which allows for safer recovery if a vehicle runs off the pavement)
- no impacts to Sandhill United Church and North Peel Community Church
- the landscaping plan will follows the guidelines for the Region’s Streetscaping Toolbox
- a formal tree preservation/planting plan is prepared in the detailed design phase with tree removals replaced on a 3:1 basis
- improved stormwater management for the entire corridor and new storm sewers in Sandhill

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What happens next?

- receive public comments by **December 18, 2014**
- answer your study questions
- confirm the recommended design concept
- document the study findings and results and incorporate them along with the recommended design concept into an Environmental Study Report (ESR)
- mail a notice of completion to adjacent property owners within the corridor and members of the public who registered at the PICs
- advertise the study completion in local newspapers
- place the ESR on public review for 30 days

Timeline

February 2012	June 2013	November 2014	February 2014	March 2015	2020
Commencement	PIC No. 1	PIC No. 2	Environmental Study Report	Study Completion	Approximate Construction Start

Please tell us what you think before

December 18, 2014

You can review the boards on our website and provide comment at:

http://www.peelregion.ca/pw/transportation/environ-assess/airport-road-ea.htm

or fill out the comment sheet today and submit, or send comments by email/fax/letter to:

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