

Let's Move Peel

Long Range Transportation Plan 2019



Long Range Transportation Plan **2019**

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Introduction



These are exciting times in Transportation. New, innovative and user-friendly opportunities are influencing the way people think about and choose transportation. The growing opportunities will allow people and goods to move more safely and efficiently.

Significant future growth together with new and innovative travel options have challenged us to think beyond the traditional way of building more infrastructure to address congestion. It is neither an effective or sustainable approach to accommodate 2 million people by 2041. With this in mind, the Region of Peel has updated our Long Range Transportation Plan. Our Plan takes a balanced approach, recommending both transportation network improvements and programs to support the use of walking, cycling, and transit.

But we can't do it alone. We will work with our partners at all levels of government and the private sector to ensure that by 2041, people and goods can move safely, conveniently, and in healthier ways around Peel.

A handwritten signature in black ink that reads "Gary Kocialek".

Gary Kocialek, P.Eng

Director, Transportation Division
Region of Peel



Cafe

Executive Summary

Background

The Long Range Transportation Plan (LRTP) is a five-year plan based on a 2041 horizon that guides transportation planning needs in the Region of Peel. The Plan serves as the basis for infrastructure programming and capital budgeting needs and is an input into the Development Charges By-law Update. The intent of the LRTP is to address the increasing demands on the Region of Peel's transportation network from the population and employment growth forecasted in the Growth Plan for the Greater Golden Horseshoe, 2017.

This LRTP follows the Municipal Class Environmental Assessment (MCEA) Process for Transportation Master Plans and is reviewed and updated every five years based on changes in the transportation and land use planning landscape, trends driving change, and updates to legislation.

The Region of Peel is Growing (Problem Statement)

The Long Range Transportation Plan is both guided by and intended to contribute to the achievement of the Region of Peel's Strategic Plan vision, *Community for Life*. As part of developing the Region of Peel's Strategic Plan, a community engagement survey identified traffic congestion as the number one Top of Mind issue for Region of Peel residents, followed by managing growth¹.

The Region of Peel's population is expected to grow by about 500,000 additional people and about 250,000 additional jobs. By 2041, these numbers will total about 2 million and 970,000 respectively². If current travel trends continue, traffic congestion is expected to increase by 45%, translating to an additional 190,000 vehicle trips within the Region of Peel in the weekday morning peak period³. This will have significant impacts on the transportation network, resulting in increased travel times and congestion.

The Region of Peel's Growth Management Strategy

The Long Range Transportation Plan is one component of the Region of Peel's Growth Management Strategy, a collaborative approach to planning and managing the forecasted growth into 2041. This integrative approach coordinates Official Plan policies, water and wastewater, housing, planning and servicing, transportation planning, and financial policies to efficiently plan for and manage growth.

Alternatives to Addressing Growth

To address this growth and foreseeable increase in travel demand, the Long Range Transportation Plan identified four alternatives through technical analysis and consultation. They include:

1. Do Nothing;
2. Road Improvements Only – invest in widening existing roadways and construct new roads;
3. Sustainable Modes Only – invest in walking and cycling infrastructure; and
4. Combination – Invest in a combination of planned road improvements and active transportation infrastructure to achieve a 50% sustainable mode share.

The Preferred Alternative

The four alternatives were evaluated against five categories, which include transportation, economic natural, social and health, and cultural criteria. The results recommend the Combination as the preferred alternative.

Summary Evaluation Matrix

Category	Alternatives			
	Do Nothing	Road Improvements Only	Sustainable Transportation Modes Only	Combination
Transportation				
Economic				
Natural Environment				
Social and Health				
Cultural Environment				
OVERALL				
	Least Preferred	Somewhat Preferred	Somewhat Preferred	Most Preferred
RECOMMENDATION				Recommended Alternative

The Combination alternative is comprised of both planned road improvement and achievement of the 50% sustainable mode share. The approach includes the proposed Greater Toronto Area West Corridor, road modifications on arterial roads, planned road improvements based on capital plans, master plans, and Provincial plans, and sustainable and active transportation infrastructure. An analysis of this alternative shows that the current level of service can be maintained on the future transportation network through fiscally responsible infrastructure investments.

Shifting to Sustainable Modes of Transportation

Achieving the 50% sustainable mode share target will be a joint effort between the Region of Peel and the three local municipalities. This target is an average of the sustainable mode share targets identified for each local municipality, which were developed in consultation with local municipal staff, technical and modelling analysis, and best practices research. The sustainable mode share targets for each local municipality are:

Local Municipality	2011 Sustainable Mode Share	2041 Sustainable Mode Share Target
City of Brampton	37%	48%
Town of Caledon	29%	32%
City of Mississauga	38%	55%

To successfully achieve a 50% sustainable mode share by 2041, the Region of Peel will build on the success of current carpooling, active transportation and transit use in the Region. Increasing the sustainable mode share in the Region leads to a safer and more efficient road system, resulting in improvements to both vehicular and safe mobility. To achieve these objectives and implement supporting strategies, three guiding focus areas and corresponding component strategies were developed for the LRTP based on foundational regional and Provincial policies, public consultation and conditions unique to the Region of Peel:

Transportation Focus Area	Objective	Component Study
Sustainable Mobility	The Region of Peel will strive to create a transportation system that provides its residents with a variety of travel options and promote sustainable modes.	Sustainable Transportation Strategy
Safe Mobility	The Region of Peel will create safer roads for pedestrians, cyclists, and vehicle operators to reduce the number of fatal and serious injury collisions.	Vision Zero Road Safety Strategic Plan
Vehicular Mobility and Goods Movement	The Region of Peel will continue to improve vehicular flow (through innovative forms of traffic management, maintenance, and strategic road and highway infrastructure projects).	Goods Movement Strategic Plan

Implementation

The Long Range Transportation Plan establishes a five-pronged approach to implementation of the 50% sustainable mode share and associated transportation planning strategies to manage growth. They are:

Execution of Component Studies: Three guiding transportation focus areas were developed for the LRTP intended to:

1. Prioritize sustainable transportation measures as the key solution to addressing long-term transportation challenges;
2. Ensure the safety of all road users through a 10% reduction in injuries and fatalities; and,
3. Optimize the existing transportation capacity.

The focus areas bring together the key transportation component studies: the Sustainable Transportation Strategy, Vision Zero Road Safety Strategic Plan, and the Goods Movement Strategic Plan. Each of the component studies include a series of action plans intended to achieve the LRTP's objective and the Region of Peel's vision of a *Community for Life*.

Road Network Improvements and Active Transportation Infrastructure: The LRTP recommends a combination of road improvements and AT infrastructure, intended to facilitate the Region of Peel's journey towards the 50% sustainable mode share target.

Transportation Regional Official Plan Policy Amendment: The key themes and principles identified in the LRTP will be translated into policies to be included in the Region of Peel's Official Plan.

Advocacy: Advocacy for Provincial investment in key highway and transit initiatives would bolster the Region of Peel's ability to achieve the 50% sustainable mode share target.

Securing Funding: The Region of Peel will be securing funding to support the implementation of the component studies and infrastructure improvements in a way that is responsible and financially sustainable.

Conclusion

The 2019 LRTP is an update to the 2012 LRTP, focusing on transportation infrastructure needs to service population and employment growth to 2041. The overarching goal of the LRTP is to establish a transportation network system in Peel where 50% of travel is through sustainable modes, such as walking, cycling, transit, and carpooling by 2041. The Long Range Transportation Plan unifies the three component studies – Sustainable Transportation Strategy, Road Safety Strategic Plan, and the Goods Movement Strategic Plan – to make Peel a place for everyone. In doing so, Peel will remain an attractive destination — for every type of person, at every stage of life, to live in, work in or visit – a *Community for Life*.

the 1990s, the number of people in the UK who are employed in the public sector has increased from 10.5 million to 12.5 million, and the number of people in the public sector who are employed in health care has increased from 2.5 million to 3.5 million (Department of Health 2000).

There are a number of reasons why the public sector has grown so rapidly. One of the main reasons is that the government has increased its spending on health care. This has led to a rapid increase in the number of people employed in health care. Another reason is that the government has increased its spending on other public services, such as education and social care. This has also led to a rapid increase in the number of people employed in these sectors.

There are a number of challenges facing the public sector in the future. One of the main challenges is that the government is expected to reduce its spending on health care. This could lead to a rapid decrease in the number of people employed in health care. Another challenge is that the government is expected to reduce its spending on other public services, such as education and social care. This could also lead to a rapid decrease in the number of people employed in these sectors.

There are a number of ways in which the public sector can be made more efficient. One way is to reduce the number of people employed in the public sector. This could be done by reducing the number of people employed in health care, education, and social care. Another way is to increase the productivity of the people who are employed in the public sector. This could be done by providing them with better training and resources.

There are a number of ways in which the public sector can be made more effective. One way is to increase the quality of the services that are provided. This could be done by providing better training and resources to the people who are employed in the public sector. Another way is to increase the transparency of the public sector. This could be done by providing more information about the way in which the public sector is run.

There are a number of ways in which the public sector can be made more sustainable. One way is to reduce the carbon footprint of the public sector. This could be done by providing better training and resources to the people who are employed in the public sector. Another way is to increase the resilience of the public sector. This could be done by providing more information about the way in which the public sector is run.

There are a number of ways in which the public sector can be made more accountable. One way is to increase the transparency of the public sector. This could be done by providing more information about the way in which the public sector is run. Another way is to increase the participation of the public in the way in which the public sector is run. This could be done by providing more opportunities for the public to voice their views.

There are a number of ways in which the public sector can be made more inclusive. One way is to provide better training and resources to the people who are employed in the public sector. Another way is to provide more opportunities for the public to voice their views. This could be done by providing more information about the way in which the public sector is run.

There are a number of ways in which the public sector can be made more innovative. One way is to provide better training and resources to the people who are employed in the public sector. Another way is to provide more opportunities for the public to voice their views. This could be done by providing more information about the way in which the public sector is run.

1.0

Background

- 1.1 What is the Long Range Transportation Plan?
- 1.2 Regional Context
- 1.3 Coordination
- 1.4 Building a *Community for Life*
- 1.5 Future Growth
- 1.6 Integrated Approach to Growth Management
- 1.7 Emerging Trends



1.0 Background

1.1 What is the Long Range Transportation Plan?

The Long Range Transportation Plan (LRTP) is a plan that guides transportation planning needs in the Region of Peel into the 2041 horizon year. As part of the Municipal Class Environmental Assessment (MCEA) process, the Plan is reviewed every five years to determine the need for a formal review and update.⁵ As such, the 2019 LRTP is an update to the 2012 Plan.

As one of the fastest growing municipalities in Ontario, improving mobility from the lens of sustainability, safety, and efficiency is one of the most critical issues facing the Region of Peel. The Region of Peel's population is expected to grow to almost 2 million by 2041.² This means that by 2041, Peel needs to accommodate the transportation needs of an additional 500,000 residents and 250,000 additional jobs. While we look ahead to this growth, managing traffic congestion is already a significant challenge.

The LRTP serves as the basis for infrastructure programming and capital budgeting needs and is an input into the Region of Peel's Development Charges (DC) Background Study and By-law update. It is intended to address the increasing demands on the Region's transportation network. To allow for growth, the LRTP prioritizes Region-wide strategies that focus on shifting our approach from primarily widening roadways to a balanced approach that maintains the level of service through the shifting of travel modes and sustainable infrastructure investments. A specific targeted strategy is the 50% sustainable mode share, intended to shift half of the Region of Peel's travel to sustainable options such as transit, walking, cycling and carpooling by 2041.³ Translated into current network trends, the 50% mode share requires a 13% reduction in single-occupant vehicles and 13% increase in sustainable modes to support growth. A detailed background on how the 50% sustainable mode share was established can be found in Appendix A. The target is based on inputs and coordination with the local transportation master plans, Provincial plans such as the Growth Plan for the Greater Golden Horseshoe, 2017, the Metrolinx 2041 Regional Transportation Plan (RTP) and the Region of Peel Official Plan.

The Region of Peel has been working with the local municipalities to move in one coordinated direction for transportation planning. The LRTP's approach takes into account the unique needs of each municipality and embeds them into the direction of the Plan.

The LRTP was developed in accordance with the MCEA Process for Master Plans. It addresses Phases 1 and 2 of the MCEA process by:

1. defining the problem;
2. assessing a range of alternative solutions;
3. selecting a preferred solution based on a systematic evaluation of natural, social, and economic environments; and
4. extensive public consultation throughout the process. See Appendix B for a detailed summary of the consultation.

The LRTP is guided by and intended to help achieve the Region of Peel's Strategic Plan 2015-2035 vision, *Community for Life*. The vision guides the Region of Peel to shift travel behaviour from driving alone to more sustainable modes, and building infrastructure to support these modes. This change will lead to alleviating the transportation network from pressures associated with growth by providing viable alternative solutions.

1.2 Regional Context

Situated in the heart of the Greater Toronto Hamilton Area (GTHA) (Figure 1-1), the Region of Peel is comprised of three local municipalities: the City of Brampton, the Town of Caledon, and the City of Mississauga. Combined, the Region currently serves 1.5 million residents and has a road network comprised of 26 Regional Roads and over 390 kilometres of active transportation infrastructure.

FIGURE 1-1
Region of Peel's pivotal location in the GTHA

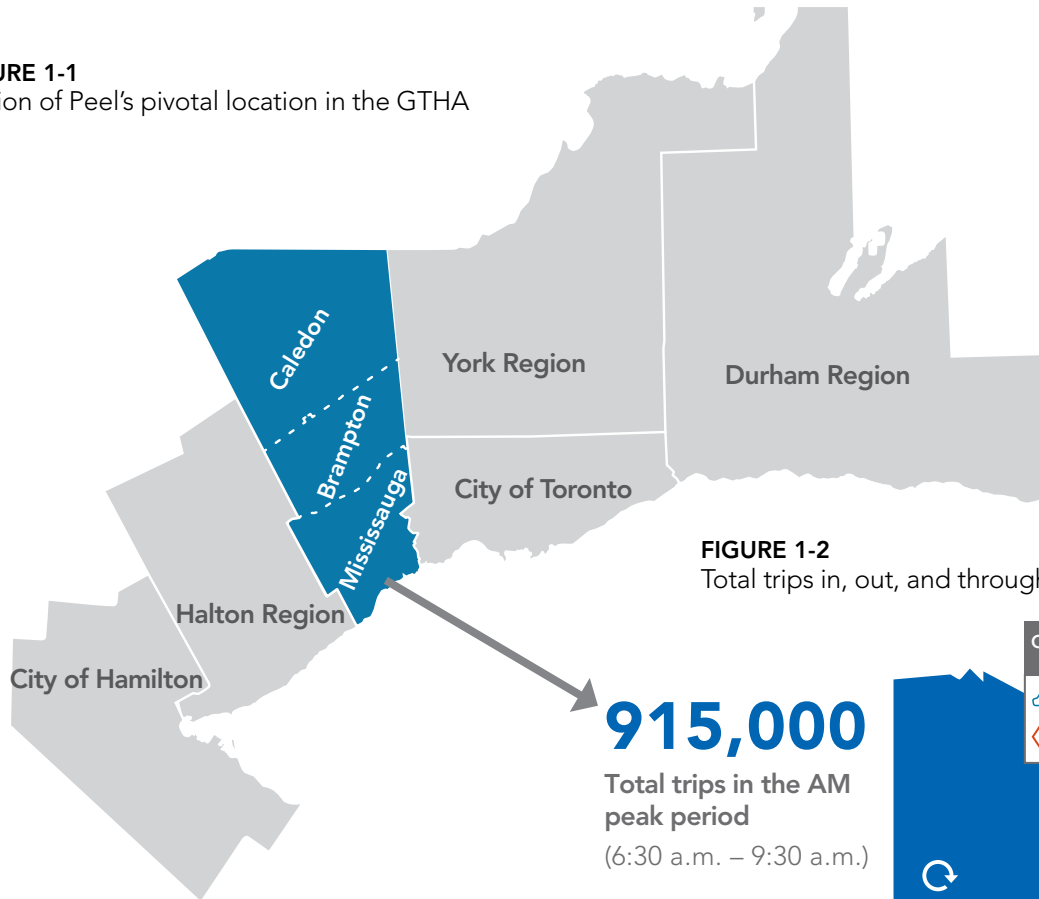
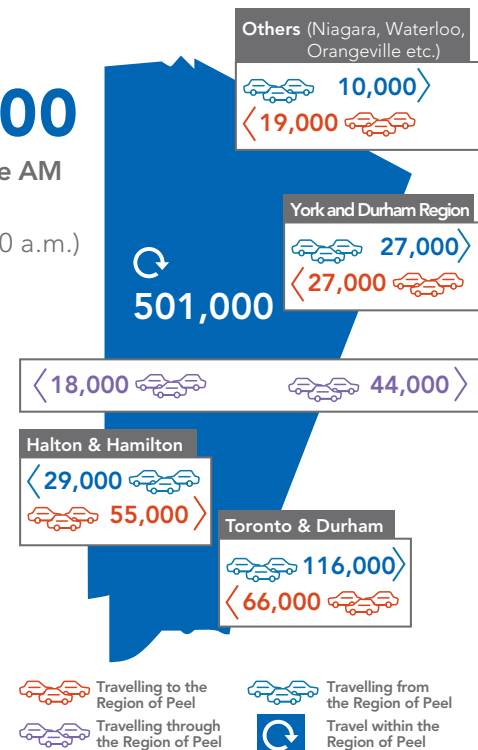


FIGURE 1-2
Total trips in, out, and through the Region of Peel

915,000

Total trips in the AM peak period
(6:30 a.m. – 9:30 a.m.)



As the second largest municipality in Ontario, its location within the center of the GTHA, and home to Toronto Pearson International Airport, the Region of Peel's transportation network is one of the most travelled in the world. While a significant number of the morning peak period trips within our network are travelling through the Region of Peel to other destinations to the east and west, the Region of Peel attracts a total of 167,000 trips from other municipalities including Toronto, Halton Region, Hamilton, York Region, Durham Region and other surrounding areas as demonstrated in Figure 1-2. Trips that originate from Peel are largely self-contained, as over half of the trips that begin in and end in Peel. To continue to make the Region of Peel an ideal place to thrive and foster a *Community for Life*, Peel needs to appropriately plan for and manage travel demand associated with future population and employment growth.

Source: Transportation Tomorrow Survey, 2016

1.2.1 Region of Peel Transportation System Overview

Active Transportation and Transportation Demand Management



4 Carpool Lots: 1 along Regional Road, 3 along 400 series highways in Peel.



79 member companies that participate in the Smart Commute Program, equating to 131,556 employees with access to transportation demand management programs and incentives.⁶



More than 390 kilometres of active transportation infrastructure has been constructed on Regional roads.



Since 2009, the Region of Peel has engaged 54 schools in the school travel planning strategy.



In 2018, 165 schools participated in the Region of Peel's "Bike to School Week" program.



Since the launch of the school bike racks program in 2015, the Region of Peel has installed 256 bike racks.

Transit

The Brampton and Mississauga transit systems have been growing strongly in the past few years. Both agencies intend to continue building infrastructure, optimizing and adding services.



Brampton Transit – 66 routes; five rapid transit.⁷
Mississauga Transit – more than 81 routes; 10 express routes.⁷



TransHelp is the Region of Peel's specialized public transit serving person's with disabilities in Brampton, Caledon, and Mississauga. It provides about 700,000 trips per year.



Brampton average weekday ridership is about **116,000**.⁷



MiWay boards about 190,000 people every weekday on average.⁹



Peel is serviced by three **GO Transit** lines, including 12 rail station stops.⁹



GO Transit operates 10 GO Bus routes through Peel, connecting to over 25 destinations outside Peel's boundaries.⁹

In 2016, 19,000 daily rides started at the 12 GO Train stations in Peel.¹⁰

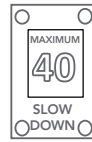


In 2016, 18,500 daily rides ended at the 12 GO Train stations in Peel.¹⁰

Safety



In 2014, red light cameras showed reductions in the number of angle collision by 81.8% and fatal and injury collision by 87.9%.



Vehicle activated traffic calming signs in the Region recorded a 6% reduction in operating speed.



Traffic calming speed cushions reduced speed on average by 3.5% in 2017.

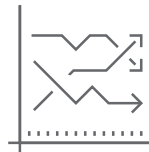
Goods Movement



Toronto Pearson International Airport is Canada's busiest airport. By 2037, Pearson Airport is forecasted to process upwards of 85 million passengers, 1 million tonnes of cargo, and more than 630,000 flights per year, which will facilitate over 700,000 jobs in Ontario.



Four in every nine jobs in the Region of Peel depend on the movement of goods.



The Region of Peel's goods movement industry contributes \$49 billion worth of gross domestic product (GDP) to the regional, provincial, and national economies.¹¹



In 2012, about 36% of truck trips in Ontario occurred on the Region's road network.

Highways and Regional Road Network



The Region of Peel operates 26 Regional roads, consisting of 1,666 lane kilometres.



6 High Occupancy Vehicle (HOV) Lanes are currently in planning, underway, or have been completed in the Region of Peel.

Airport



Toronto Pearson International Airport currently generates and facilitates approximately 332,000 jobs, and facilitates \$42 billion or 6% of Ontario's GDP.

Intermodal Facilities

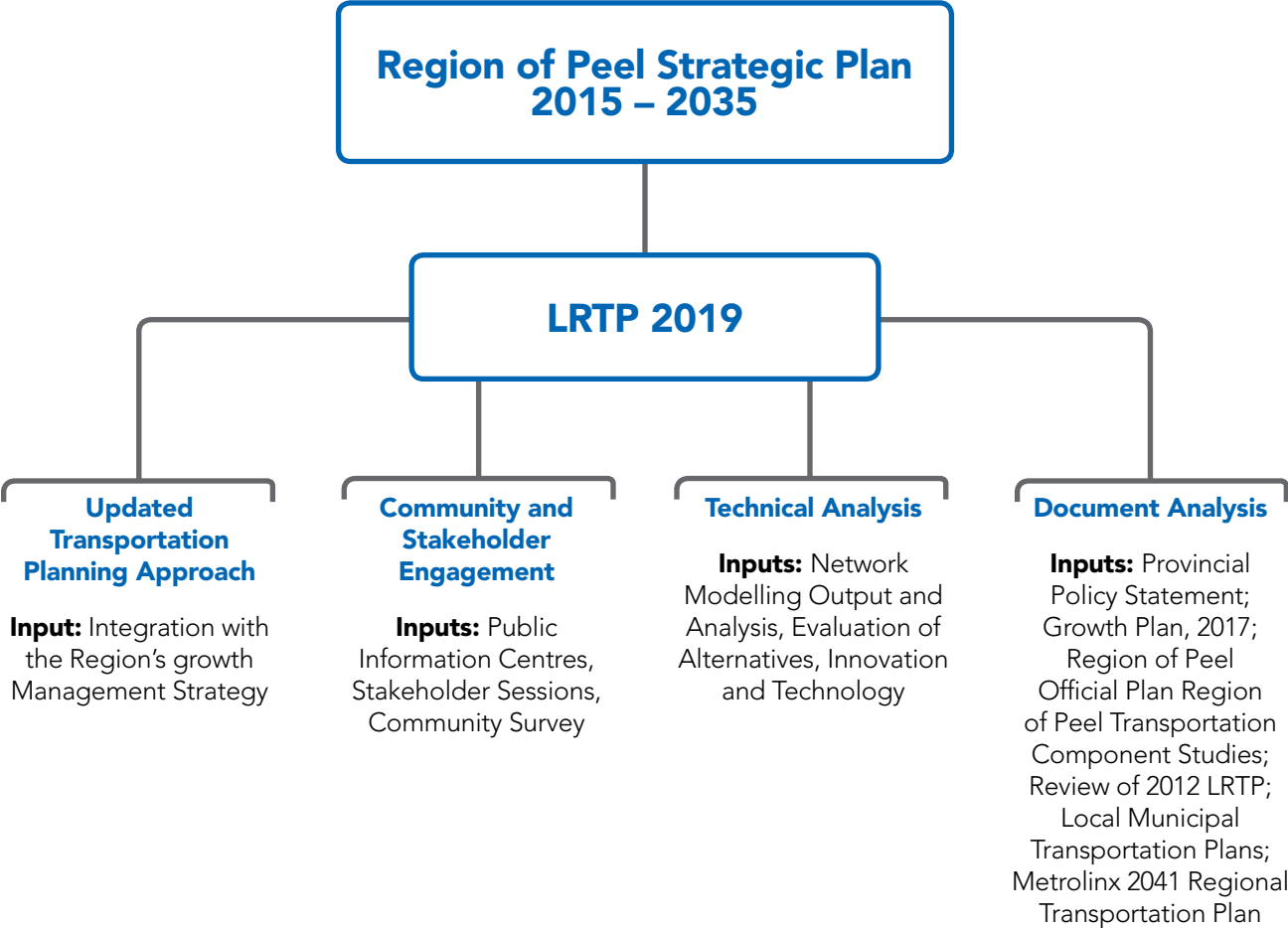


CN Brampton Intermodal Terminal is the largest terminal in Canada. 60% of CN's system-wide intermodal traffic touches the Brampton Intermodal Terminal.¹¹

1.3 Coordination

Various plans provide direction on managing growth, sustainable transportation options, infrastructure investment, the efficient movement of people and goods, and improving safety. The Long Range Transportation Plan ensures an integrated approach towards the Region’s *Community for Life* vision over the next two decades. The Long Range Transportation Plan aligns with the Provincial Policy Statement, the Growth Plan for the Greater Golden Horseshoe: Places to Grow 2017, the Region of Peel Strategic Plan, and the Regional Official Plan.^{13,14}

FIGURE 1-3
Inputs into the Long Range Transportation Plan 2019



1.4 Building a Community for Life: The Need for a 50% Sustainable Mode Share

Currently in the Region of Peel, 63% of people travel in single-occupant vehicles and only 37% of people use sustainable modes of transportation.

As part of developing the Region of Peel’s Strategic Plan 2015-2035, a community engagement survey identified traffic congestion as the number one Top of Mind issue for Peel residents, followed by managing growth.

FIGURE 1-4
10 Top of Mind Issues, Region of Peel



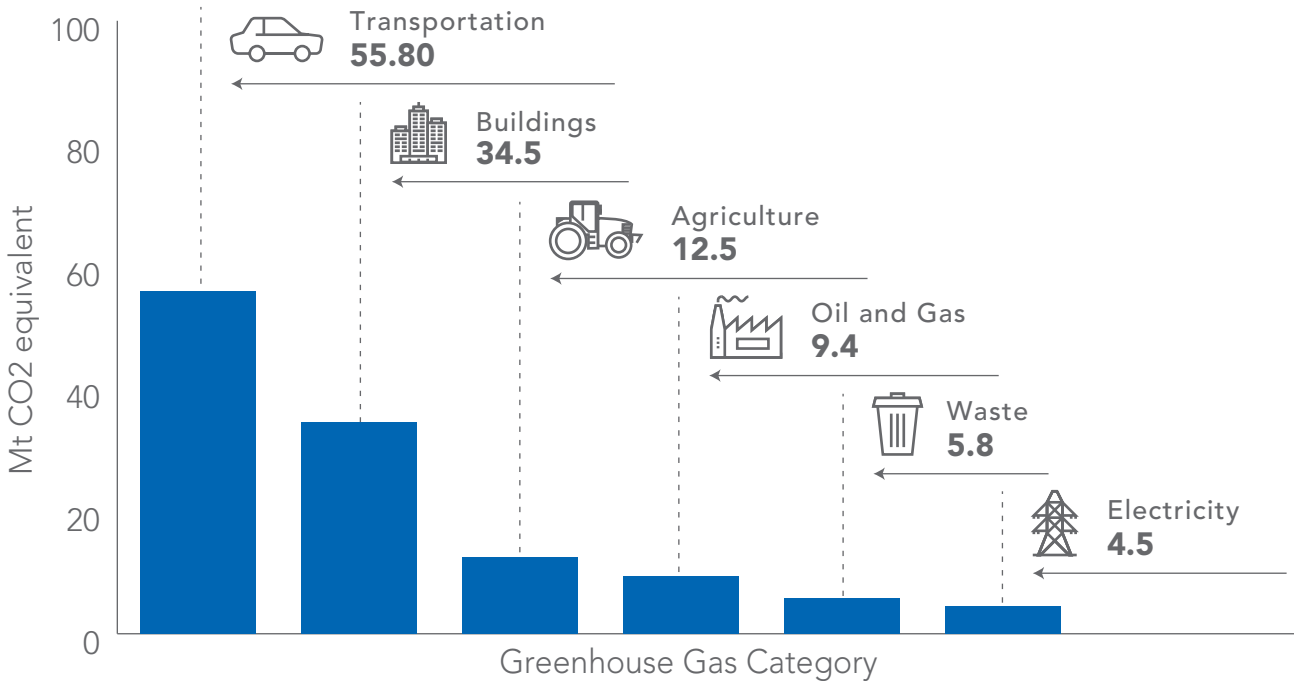
The building of a *Community for Life* depends on the Region of Peel’s ability to respond to these Top of Mind issues. In particular, the Region of Peel will need to focus future transportation infrastructure investment on making sustainable and active travel options, such as transit routes, carpooling, walking, and cycling, more viable.

Not making these changes in transportation planning, given the significant growth expected, would indirectly impact the environment, the health of future generations, and the economy in lost gross domestic product (GDP).

1.4.1 Environmental Consequence

Transportation is the single-largest source of air pollution and greenhouse gas (GHG) emissions in Canada. In 2016, the transportation sector accounted for 55.8% of Ontario’s GHG emissions, making it the single-largest source in the Province.¹⁵ The leading cause of climate change is the release of GHG emissions through human activities such as transportation, agriculture, or landfills.

FIGURE 1-5
2016 Greenhouse Gas Emissions in Ontario



Source: Made in Ontario Environment Plan, 2018.

1.4.2 Health Cost

Transportation network systems that favour auto-dependency contribute to negative health outcomes now and in the future. Figure 1-6 identifies the number of premature deaths that can be prevented by increasing physical activity and decreasing traffic-related air pollution. In 2014, the annual costs of physical inactivity and obesity in the GTHA was \$4 billion, including \$1.4 billion in direct medical costs. Diabetes-related medical costs attributed to inactivity exceed \$550 million in the GTHA each year. If these trends continue, the rate of diabetes is projected to double from 7.1% in 2002 to 16.4% by 2027.¹⁶

There are also substantial costs associated with motor vehicle collisions. In 2010, the total direct and indirect costs of transport-related injuries in Ontario was \$1.23 billion.¹⁷

FIGURE 1-6
Forecasted Transportation Impacts to Health

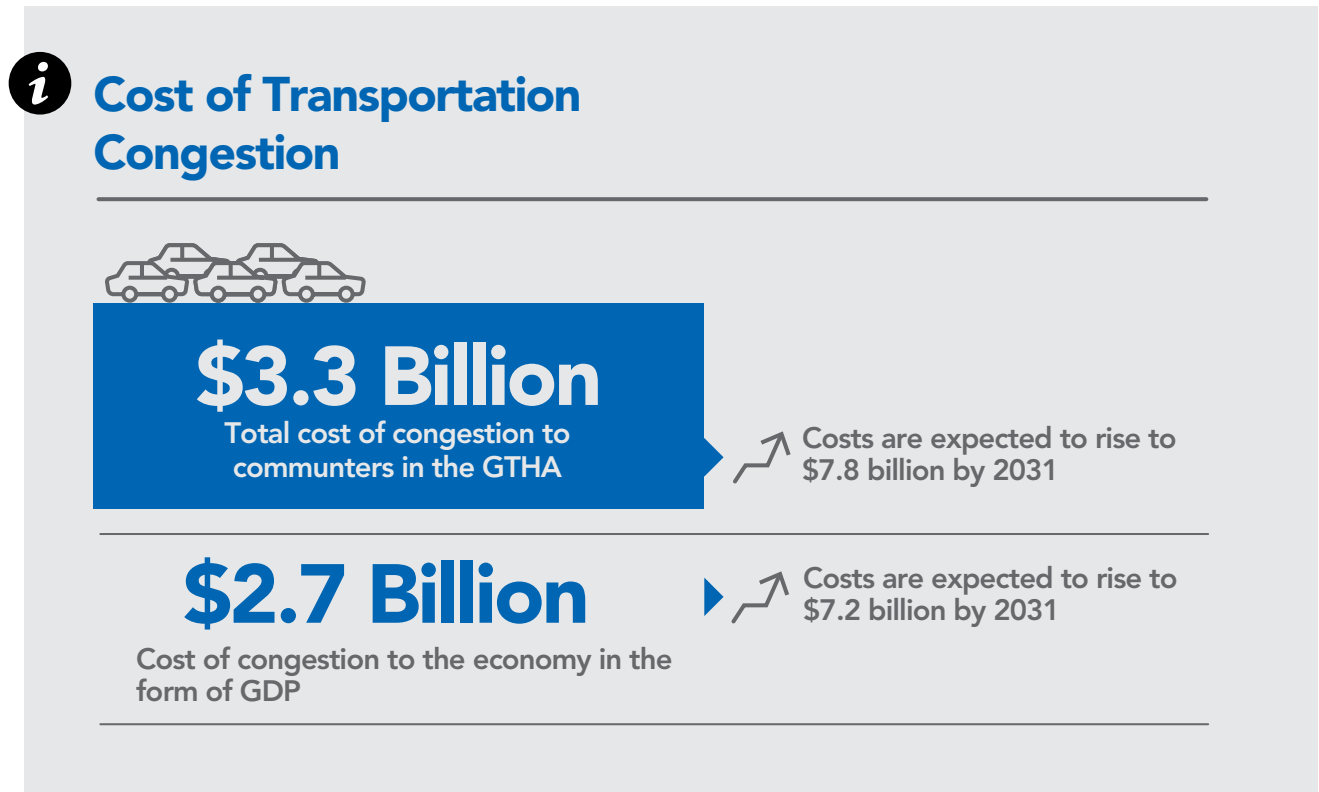


Source: Improving Health by Design in the Greater Toronto-Hamilton Area, 2014

1.4.3 Economic Cost

The impacts of congestion include delay, diminished productivity, wasted energy, environmental degradation and a diminished standard of living. These economic, social, and environmental costs all have the ability to impact a Region's economic viability. In 2006, the total cost of congestion to commuters in the GTHA was estimated to be \$3.3 billion and costs to the economy in the form of GDP was estimated to be \$2.7 billion (Figure 1-7). If congestion remains unaddressed, these cost will more than double over the next quarter century.¹⁸

FIGURE 1-7
Cost of Congestion to Economic Viability

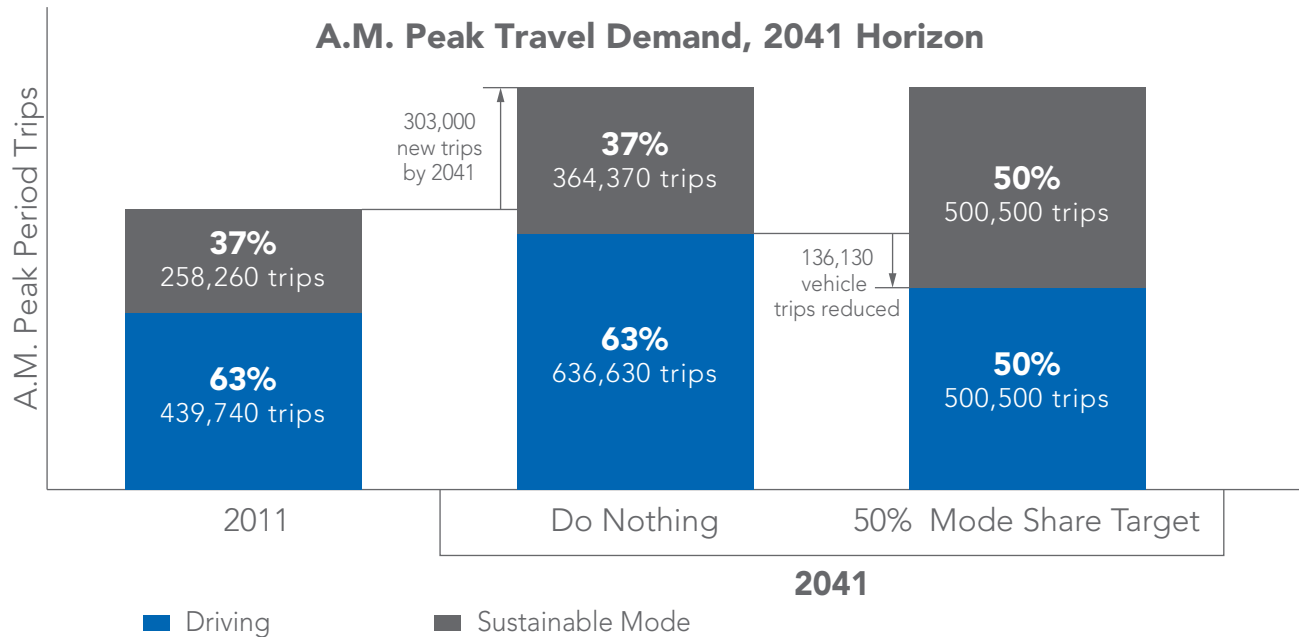


Source: Metrolinx, Cost of Congestion Report, 2008

1.5 Future Growth

By 2041, the Region of Peel will be home to over 500,000 new residents and 250,000 new jobs resulting in a total population of approximately 2 million people and 970,000 jobs.² Translating this growth onto the Region’s transportation network amounts to a 45% increase in vehicle trips in the morning peak period by 2041. This is the equivalent of 303,000 additional trips on roads across the Region.

FIGURE 1-8
Forecasted A.M. Peak Travel Demand



Although roadway investments will be part of a balanced transportation system for the Region of Peel, widening of Regional roads to eliminate congestion alone is no longer a reliable solution. Road widenings increase the capacity of the network, which is beneficial for the short to medium-term; however, in the long term, the benefits diminish as growth continues and volumes approach capacity.

To stay ahead of the forecasted growth, the Region of Peel must provide a transportation network that focuses on sustainable and safe transportation as a practical element of the system. Moving forward, as an outcome of this LRTP 2019, the Region of Peel has adopted the 50% sustainable mode share target.

Problem Statement

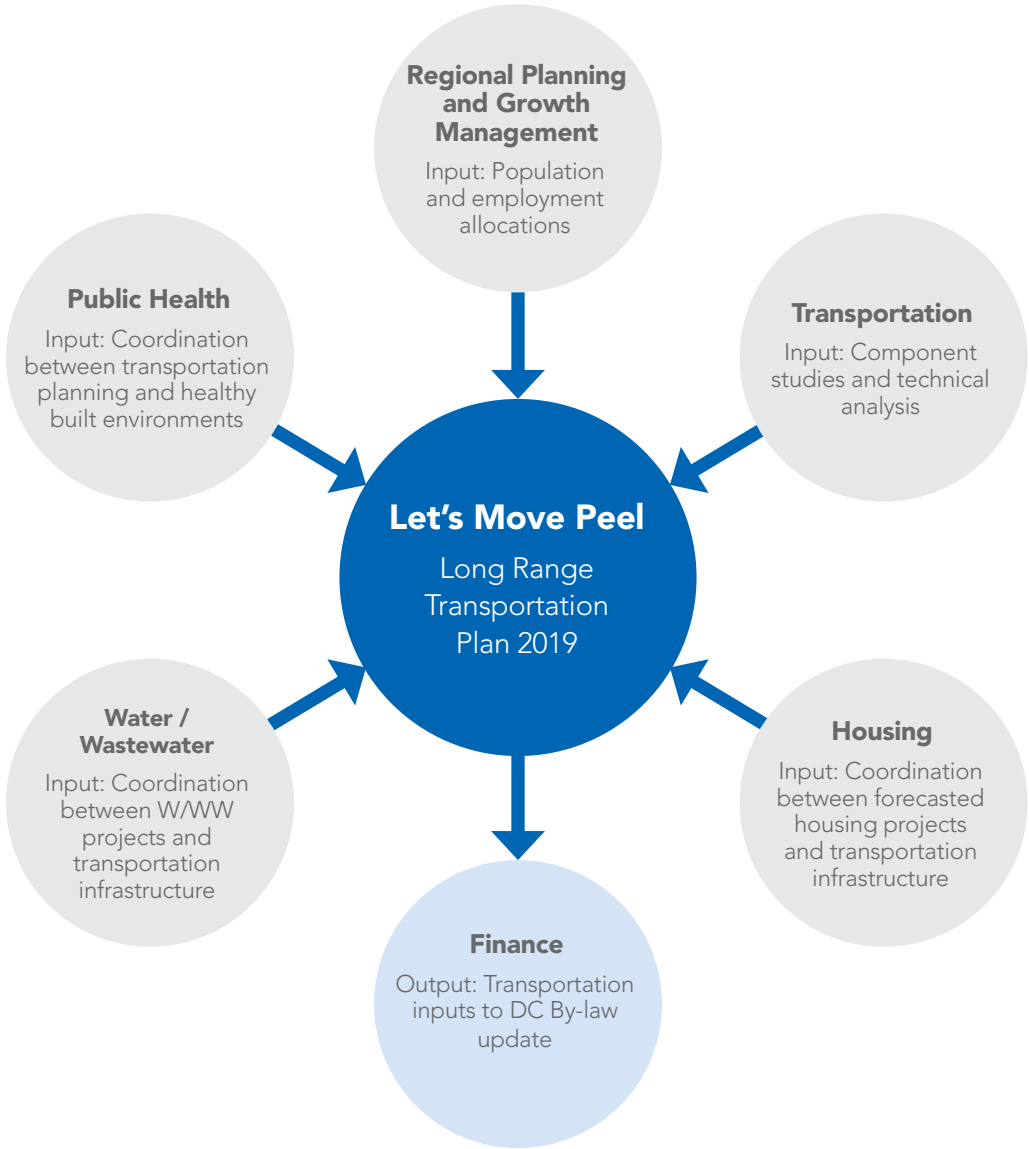
Traffic congestion has been identified as the number one Top of Mind issue by the Region’s residents, followed by managing growth. If current travel trends continue, trips are expected to increase 45% by 2041 because of population and employment growth. This will have significant impacts on the transportation network, resulting in increased travel times and congestion.

**45% increase in the weekday Morning Peak Period.*

1.6 Integrated Approach to Growth Management

The Region of Peel’s Growth Management Strategy is a collaborative and integrative approach to planning and managing growth into 2041. The Strategy is responsible for delivering key services that manage our resources effectively, in collaborative and financially responsible manner. These include, transportation, water and wastewater, housing, public health, planning and financing (Figure 1-9). This strategy encourages the implementation of innovative strategies to planning, financing, and servicing growth to 2041. Examples of collaboration include the coordination and co-implementation of transportation infrastructure requirements with water and wastewater works to 2041.

FIGURE 1-9
Long Range Transportation Plan and Growth Management Strategy



1.7 Emerging Trends

In 2012, the Region of Peel set out to address its most pressing transportation challenges. These included gaps in accessible transportation, rising health and environmental concerns, and loss of economic resources due to congestion. Section 1.7 highlights the emerging trends since 2012.

Since the 2012 LRTP, the Region of Peel has focused on traffic flow and safety enhancements, community development, active transportation, transportation demand management, as well as climate change initiatives, to get people and goods moving more efficiently.

Looking at current trends emerging in the Region helps inform transportation planning initiatives as we prepare for growth heading into 2041 (Figure 1-10).

FIGURE 1-10
Emerging Trends since 2012



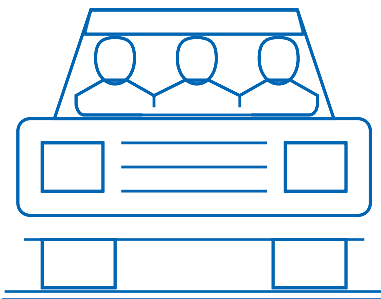
Autonomous vehicles: Self-driving vehicles will soon become a reality on our roads. It's predicted that fully autonomous vehicle technology will be available by early 2020's with full saturation in the 2050's.¹⁹



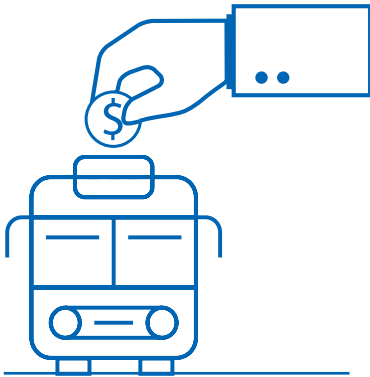
Health and age-friendly networks: The design of our built environment affects which travel options are feasible for residents. By designing safe and accessible built environments that encourage physically active travel for users of all ages and abilities, we can support increased mobility. The equitable distribution of healthy built environments across the Region will help make health achievable for the diverse communities that call the Region of Peel home.



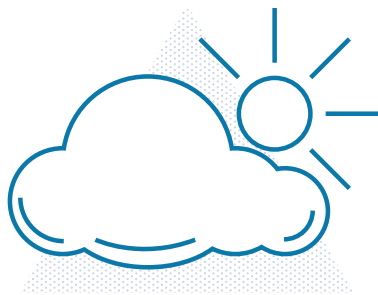
Pearson mobility hub: In 2018, Toronto Pearson International Airport welcomed 49.6 million passengers. It has become the fifth most connected airport in the world; has access to 71% of the global economy; generates or facilitates 86,000 jobs in Peel; and the surrounding Airport Employment Zone generates 1,000,000 trips to the area each day. The Greater Toronto Airport Authority (GTAA) and Metrolinx are working together to explore the feasibility of building a major regional transportation centre at Toronto Pearson Airport. It is expected to connect the Kitchener GO Line, 407 Transitway, Finch LRT, UP Express, the Eglinton Crosstown and Mississauga transitway, as well as several existing bus services.²⁰



Shared mobility: Shared mobility includes carsharing, bike-sharing, ridesharing (i.e. carpooling and vanpooling), as well as alternative transit services such as paratransit, shuttles, and private transit services, which can supplement existing bus and rail services. The same vehicle can be used for multiple travel purposes. By reducing the need for vehicle ownership, shared mobility can help reduce traffic congestion and the demand for parking space.



Transit investment: In recent years, there has been an unprecedented investment in transit by the Province of Ontario. In its 2017 Infrastructure Plan, investment to the Transit sector was the highest at 35%, followed by Highways and Other Transportation at 19%.²¹



Climate change and natural environment: Climate change has impacts on air, water, and land. While we mitigate emissions, we must also respond to the climate change induced impacts of extreme weather through the implementation of climate resilient transportation infrastructure.

the 1990s, the number of people with a mental health problem has increased in the UK (Mental Health Act 1983, 1990).

There is a growing awareness of the need to improve the lives of people with mental health problems. The Department of Health (1999) has set out a strategy for mental health care in the UK. The strategy is based on the following principles:

- People with mental health problems should be treated as individuals.
- People with mental health problems should be given the opportunity to participate in decisions about their care.
- People with mental health problems should be given the opportunity to live in the community.

The strategy also sets out a number of objectives for the mental health services:

- To reduce the number of people with mental health problems who are admitted to hospital.
- To improve the quality of care for people with mental health problems.
- To improve the support available to people with mental health problems.

The strategy also sets out a number of actions that should be taken to achieve these objectives:

- To improve the training and skills of mental health professionals.
- To improve the availability of mental health services.
- To improve the support available to people with mental health problems.

The strategy also sets out a number of actions that should be taken to improve the lives of people with mental health problems:

- To improve the housing available to people with mental health problems.
- To improve the employment opportunities available to people with mental health problems.
- To improve the social support available to people with mental health problems.

The strategy also sets out a number of actions that should be taken to improve the lives of people with mental health problems:

- To improve the quality of life for people with mental health problems.
- To improve the quality of care for people with mental health problems.
- To improve the support available to people with mental health problems.

The strategy also sets out a number of actions that should be taken to improve the lives of people with mental health problems:

- To improve the quality of life for people with mental health problems.
- To improve the quality of care for people with mental health problems.
- To improve the support available to people with mental health problems.

2.0

**Transportation Focus
Areas**



2.0 Transportation Focus Areas

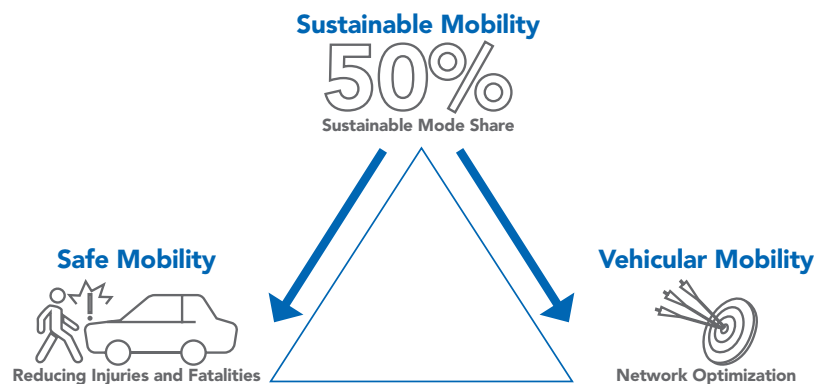
Increasing the sustainable mode share in the Region leads to a safer and more efficient road system, resulting in improvements to both vehicular and safe mobility. To achieve these objectives and implement supporting strategies, three guiding focus areas were developed for the LRTP based on Regional and Provincial policies, public consultation and conditions unique to the Region of Peel. The focus areas draw upon the interdependencies of transportation component studies to support the implementation of strategies and actions the Region of Peel is undertaking.

Recognizing that emerging trends and new technologies provide opportunities to bolster each focus area, the Region of Peel has been actively researching innovative ways to optimize the transportation system to become more efficient, sustainable, and safe. The Region is currently developing its first Transportation Innovation Strategy. The Strategy will be guided by two key approaches: utilizing improved methods, tools and materials; and adapting Regional processes to support the most current transportation demands. Innovation strategies already implemented or under review for future implementation in Peel are embedded within each of the transportation focus areas.

Sustainable Mobility: The Region of Peel will build on the success of current carpooling, active transportation and transit use in the Region to successfully achieve a 50% sustainable mode share by 2041. Improving sustainable modes of transport supports the objectives of all other focus areas by reducing the severity of collisions and enhancing network efficiency. The Region of Peel will strive to create a transportation system that provides its residents with a variety of travel options and promotes sustainable modes. See pages 31 to 44. Component Study: Sustainable Transportation Strategy.

Safe Mobility: Through sustainable infrastructure upgrades and implementation of the Vision Zero strategies, the Region of Peel will strive to create safer roads for pedestrians, cyclists, and vehicle operators to reduce the number of fatal and serious injury collisions. See pages 45 to 50. Component Study: Vision Zero Road Safety Strategic Plan.

Vehicular Mobility and Goods Movement: In addition to road and active transportation, the Region of Peel will optimize the existing system to manage congestion to keep people and goods moving efficiently. Through innovative forms of traffic management, maintenance, and strategic and strategic road and highway infrastructure projects, the Region will continue to improve vehicular flow. See pages 51 to 57. Component Study: Goods Movement Strategic Plan.



Sections 3.0 to 5.0 of this document detail the purpose of each focus area, highlighting their importance towards growth and how they will champion the achievement of the 50% sustainable mode share.

3.0

Sustainable Mobility

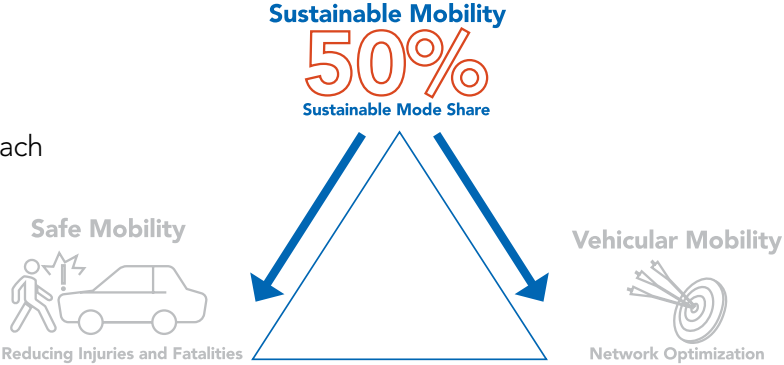
- 3.1 What is Sustainable Mobility?
- 3.2 What is Peel Doing?
- 3.3 Transit in the Region of Peel
- 3.4 Innovation in Sustainable Mobility



3.0 Sustainable Mobility

3.1 What is Sustainable Mobility?

Sustainable mobility refers to a balanced approach to managing travel demands, which for the Region means a target of 50% of trips made by a sustainable mode by 2041. Sustainable modes include walking, cycling, public transit, carpooling, and alternatives to travel (i.e. telework).

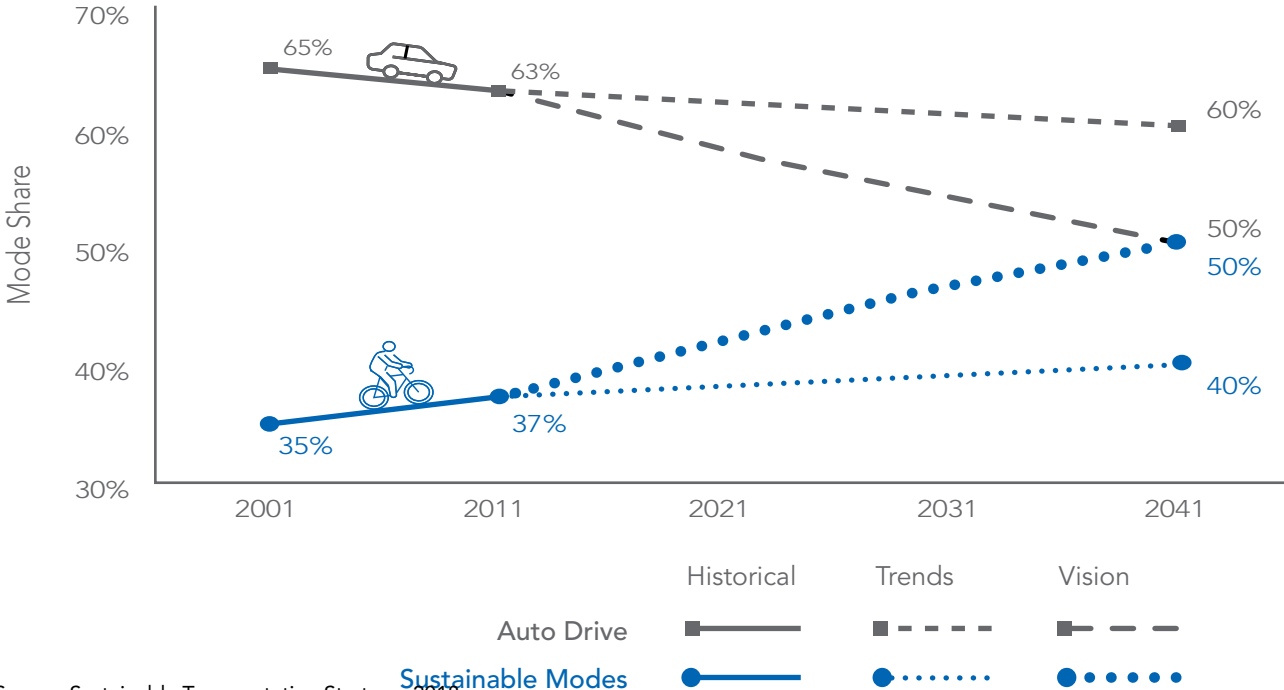


3.2 What is Peel Doing?

The Region of Peel adopted the Sustainable Transportation Strategy (STS) 2018-2022, which identifies the Region’s roles and responsibilities to increase the proportion of trips made by sustainable modes through a series of action items. The action items are broken down into: transportation demand management (TDM) and active transportation (AT). For a detailed account of the key action items and measures, refer to the Sustainable Transportation Strategy (STS) 2018-2022 document.

The overarching objective of the Plan is to shift 50% of trips in the Region to sustainable modes by 2041, which represents a 13% increase from today’s use.

FIGURE 3-1
Mode Share ‘Vision’ and ‘Trends’ Target for 2041 (AM Peak Period)



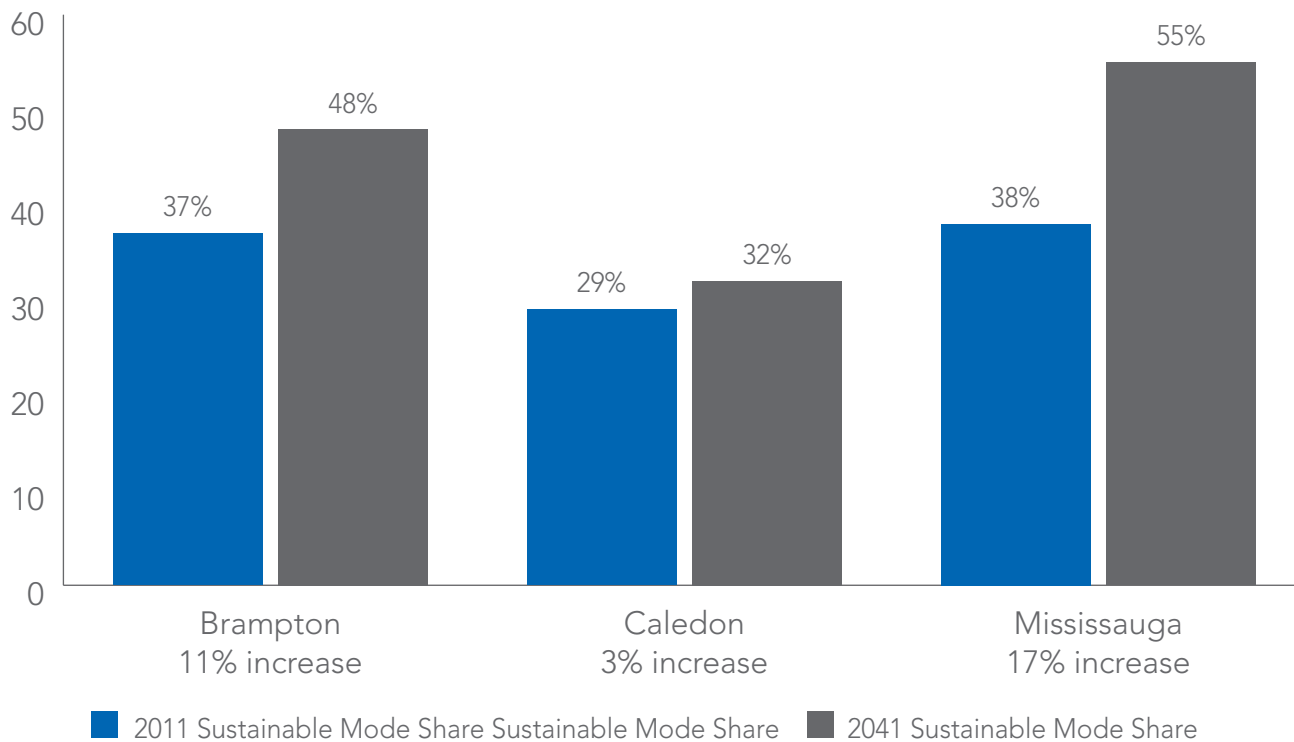
Source: Sustainable Transportation Strategy, 2018

3.2.1 What Does the 50% Sustainable Mode Share Target Look Like?

The sustainable mode share targets for the City of Brampton, the Town of Caledon, and the City of Mississauga are 48%, 32%, and 55% respectively, as seen in Figure 3-2. Together, these mode share targets results in a 50% average sustainable mode share target for the Region of Peel. These targets were developed based on the unique local context, consultation with municipal staff, and modelling analysis. As noted in Figure 3-1, to achieve this overall target of 50%, a 13% decrease in driving and corresponding 13% increase in sustainable modes is required across the Region of Peel.

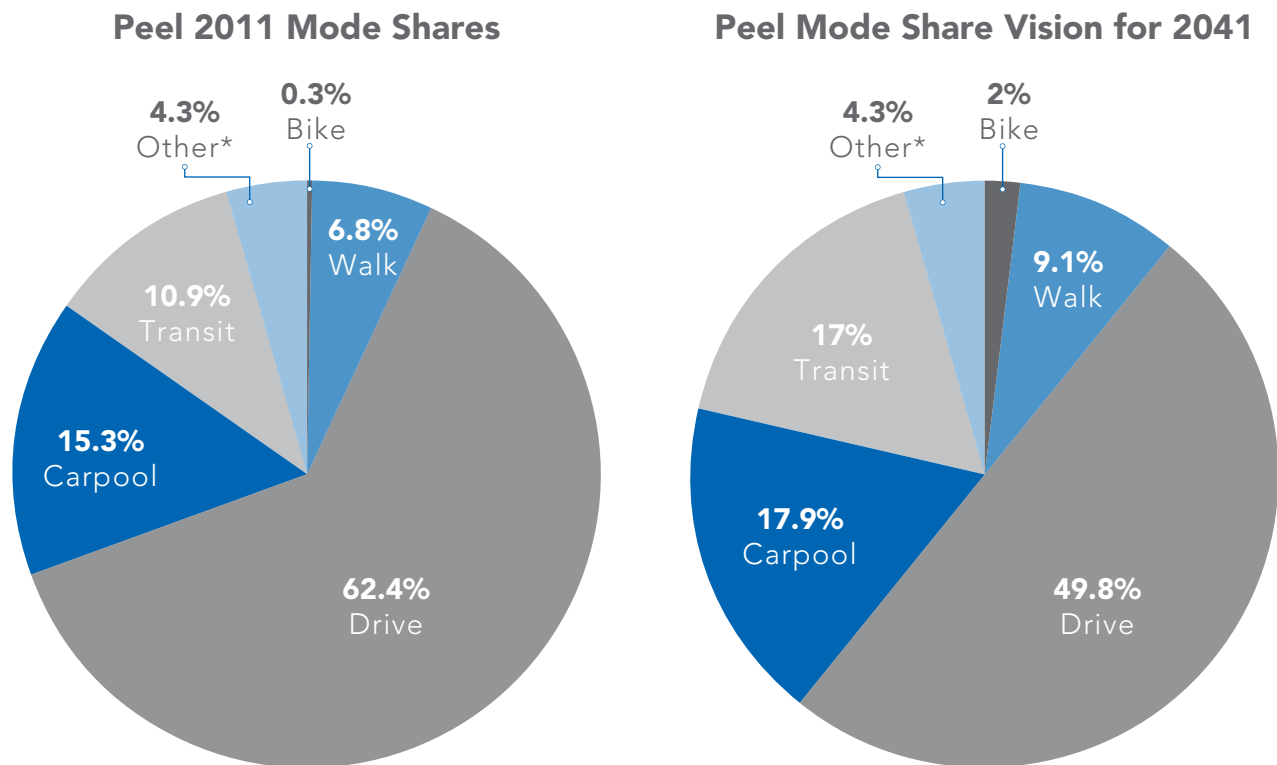
FIGURE 3-2

2011 and 2041 Sustainable Mode Share Breakdown for Brampton, Caledon, and Mississauga



The 50% sustainable mode share target is further broken down by walking, cycling, transit, carpooling, driving, and other modes (telework etc.) Figure 3-3 illustrates the current and required shifts by mode, to achieve the Region’s desired targets.

FIGURE 3-3
Current and Desired Mode Share Targets, Region of Peel



*"Other" modes include school buses, taxis, and motorcycles.

3.2.2 Transportation Demand Management (TDM)

Transportation demand management (TDM) refers to policies, programs, and services that promote travel by sustainable modes while reducing driving by individuals, particularly in weekday peak periods. The travel modes most often associated with TDM are transit, carpooling/vanpooling, cycling and walking. TDM is also associated with options that reduce commuting such as compressed work weeks, alternative work schedules and teleworking.

TDM tools and techniques represent an economical and efficient way to maximize the return on investment in major transportation infrastructure and services such as rapid transit lines, cycling facilities and carpool lots.

TDM strategies embedded within the STS, and by extension the LRTP, are aligned with the Metrolinx 2041 RTP for the GTHA.²² This alignment will help ensure a seamless inter and intra-regional travel network and viable non-driving travel options to alleviate the future transportation system from pressures associated with growth.

For a full account of Transportation Demand Management measures, refer to the Sustainable Transportation Strategy (STS) 2018-2022.

Snapshot of TDM Actions

Examples of TDM action items that will be implemented through the Sustainable Transportation Strategy are:

TDM Social Marketing

Social marketing is an approach to developing activities aimed at changing people's behaviour for the benefit of individuals and society. For example, the Region might target newly developed communities to promote and educate future residents of sustainable travel options. The Region will test a number of tools and techniques to determine which have the greatest potential to promote mode shift, and will align these with other sustainability initiatives.

Carpooling and Vanpooling

As a ridesharing tool, carpooling and vanpooling provide approaches to make the best use of available capacity in the transportation network. By creating new carpool lots, the Region of Peel can incorporate and encourage mobility options into the Region-wide transportation system, including transit.



3.2.3 Active Transportation Strategies

Getting more people walking and cycling as their regular transportation choices is fundamental to achieve a sustainable transportation system. Active transportation planning is often designed through three types of initiatives:

1. Provide infrastructure that supports active transportation as a viable travel option;
2. Develop policies that facilitate active transportation; and
3. Build programs to promote and encourage walking or cycling as preferred modes.

Active Transportation is an effective way to maximize the return on investment in major transportation infrastructure and services. Through initiatives such as route planning and cycle maintenance, people become aware of their travel options, understand how to use them, and are willing to try them. This in turn helps maximize the use of existing or new AT infrastructure, reducing the overall demand on the network.

Snapshot of Active Transportation Strategies

Examples of active transportation action items that will be implemented through the Sustainable Transportation Strategy are:

Walking Infrastructure

The Region will identify a number of pedestrian improvement areas, based in part on their proximity to key destinations such as schools and transit hubs (to support first/last mile connections) and on the feasibility that people will choose to walk in those areas. A series of upgrades and safety enhancements are also planned to improve walkability. Figure 3-4 illustrates the existing pedestrian network in the Region of Peel with the proposed infrastructure improvements required to establish a comprehensive network that supports growth.

Cycling Network Infrastructure

The Region plans to establish a cycling network through a series of cycling infrastructure improvements, with an emphasis on:

- Establishing new cycling facilities as part of planned road capital projects or committed AT projects;
- Upgrading existing facilities, including both linear facilities and spot intersection upgrades; and
- New infill cycling projects to address gaps in connectivity.

Figure 3-5 illustrates the existing cycling network in the Region of Peel as well as the broader network once cycling infrastructure improvement projects are implemented.

FIGURE 3-4
Existing Pedestrian Network and Proposed Improvements

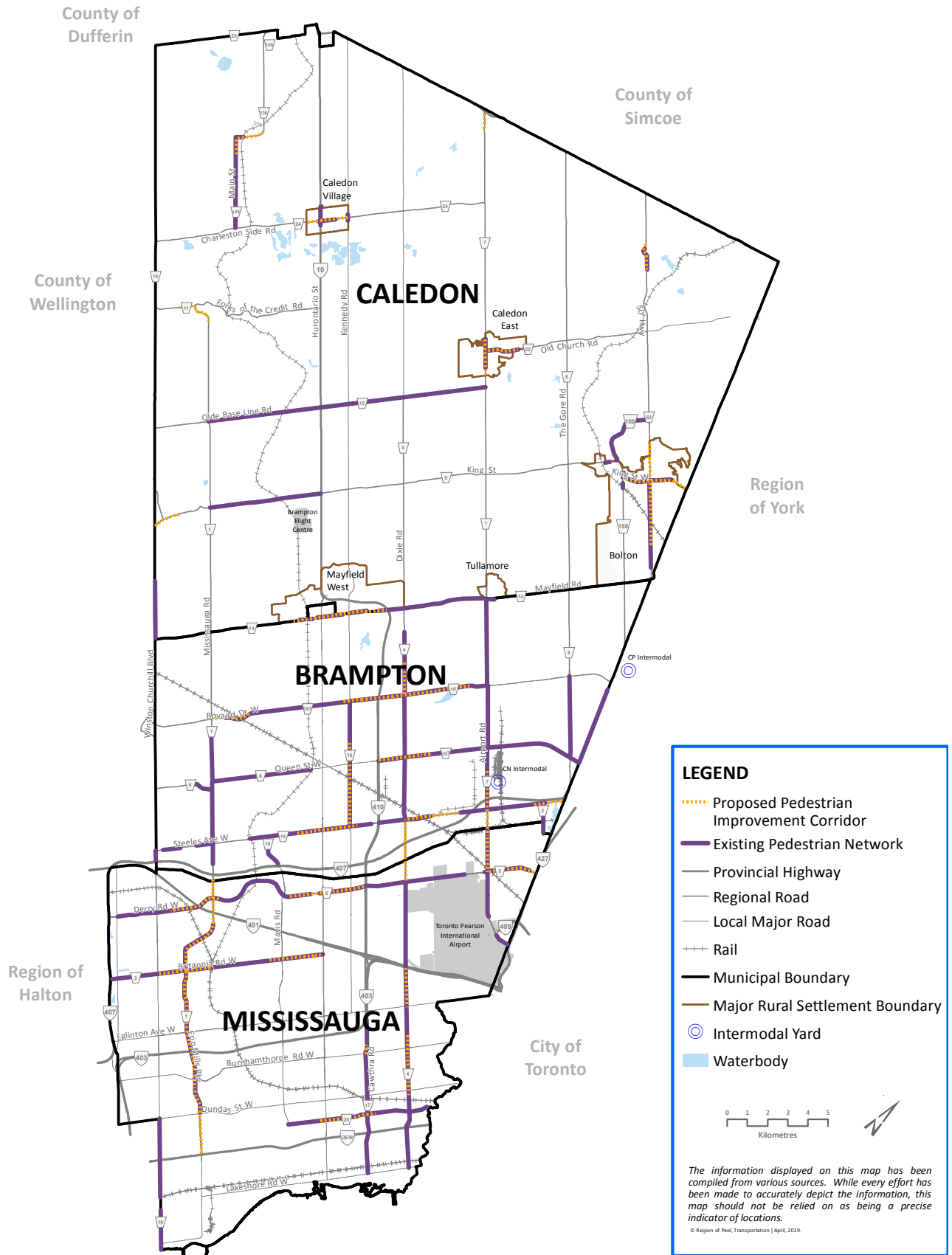
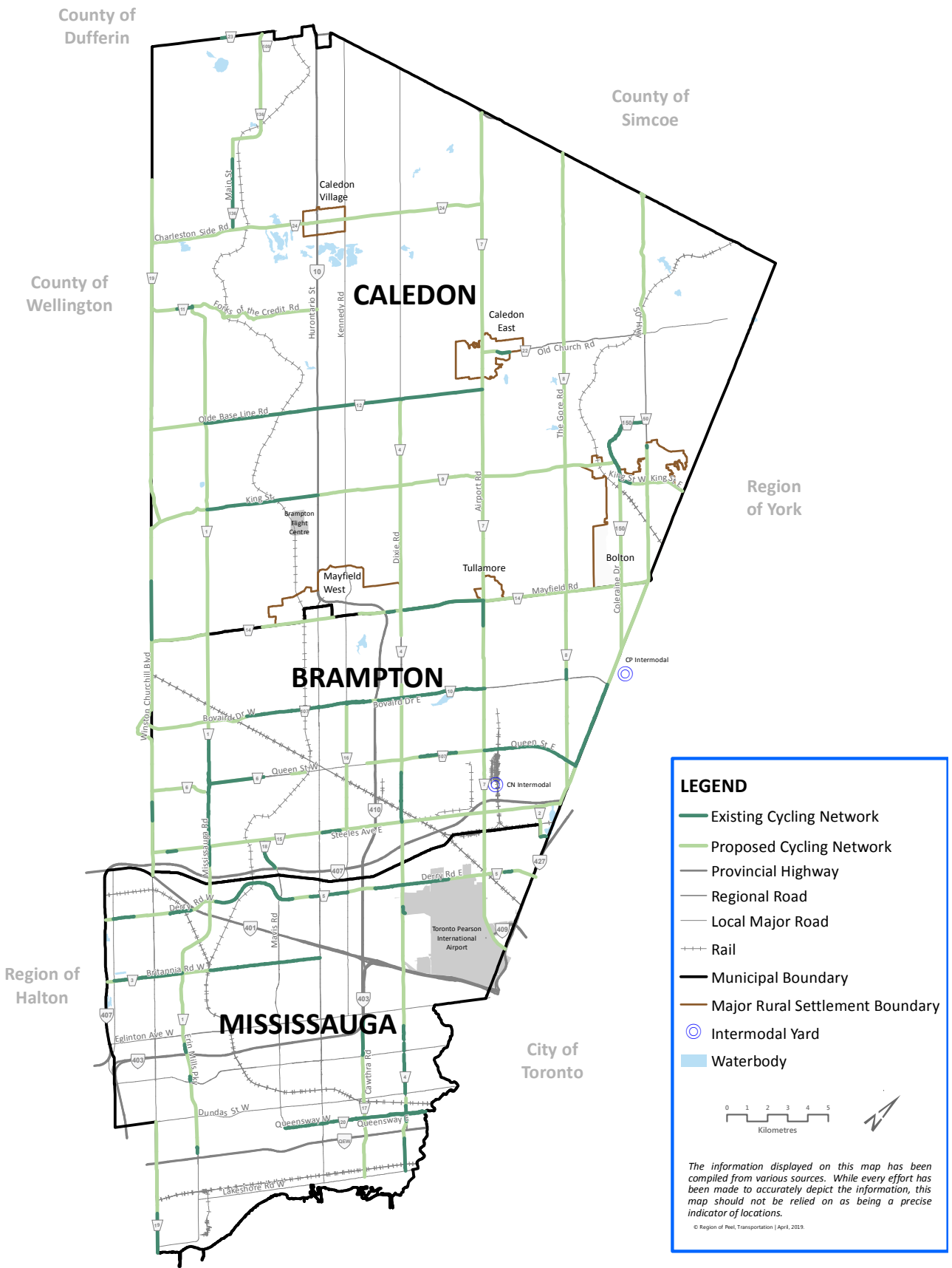


FIGURE 3-5
Existing and Proposed Cycling Network



LEGEND

- Existing Cycling Network
- Proposed Cycling Network
- Provincial Highway
- Regional Road
- Local Major Road
- + Rail
- Municipal Boundary
- Major Rural Settlement Boundary
- ⊙ Intermodal Yard
- Waterbody

0 1 2 3 4 5
Kilometres

The information displayed on this map has been compiled from various sources. While every effort has been made to accurately depict the information, this map should not be relied on as being a precise indicator of locations.

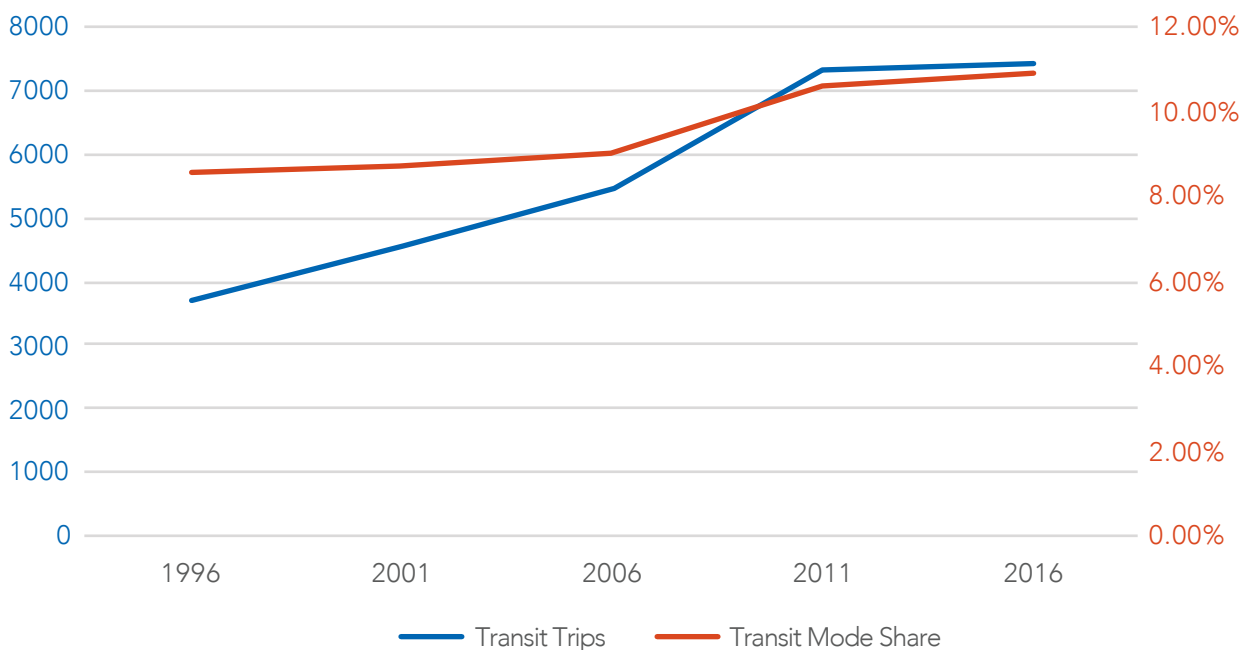
© Region of Peel, Transportation | April, 2019.

3.3 Transit in Peel

3.3.1 What does Transit in Peel Look Like?

The transit system in the Region of Peel is an interconnected network of local bus routes, express bus routes, bus rapid transit (BRT), GO Bus routes, GO Train routes and a series of mobility hubs and major transit station areas. These transit services are provided by Brampton Transit and MiWay, the two local transit agencies that serve the cities of Brampton and Mississauga respectively, and GO Transit, a division of Metrolinx, that provides inter-regional transit to connect the Region of Peel to other regions in the Greater Toronto and Hamilton Area (GTHA). Schools, shopping centres, employment centres, major transit stations, and mobility hubs in and around the Region of Peel all play a role in shaping the Region's transit system as major destinations or connections. Figure 3-7 identifies some of the Region of Peel's major intra and inter-regional destinations. With all this activity in the Region of Peel, transit use has been on the rise, as demonstrated in Figure 3-6 and it continues to increase. Today, transit accounts for 10.9% of the Region of Peel's mode share.

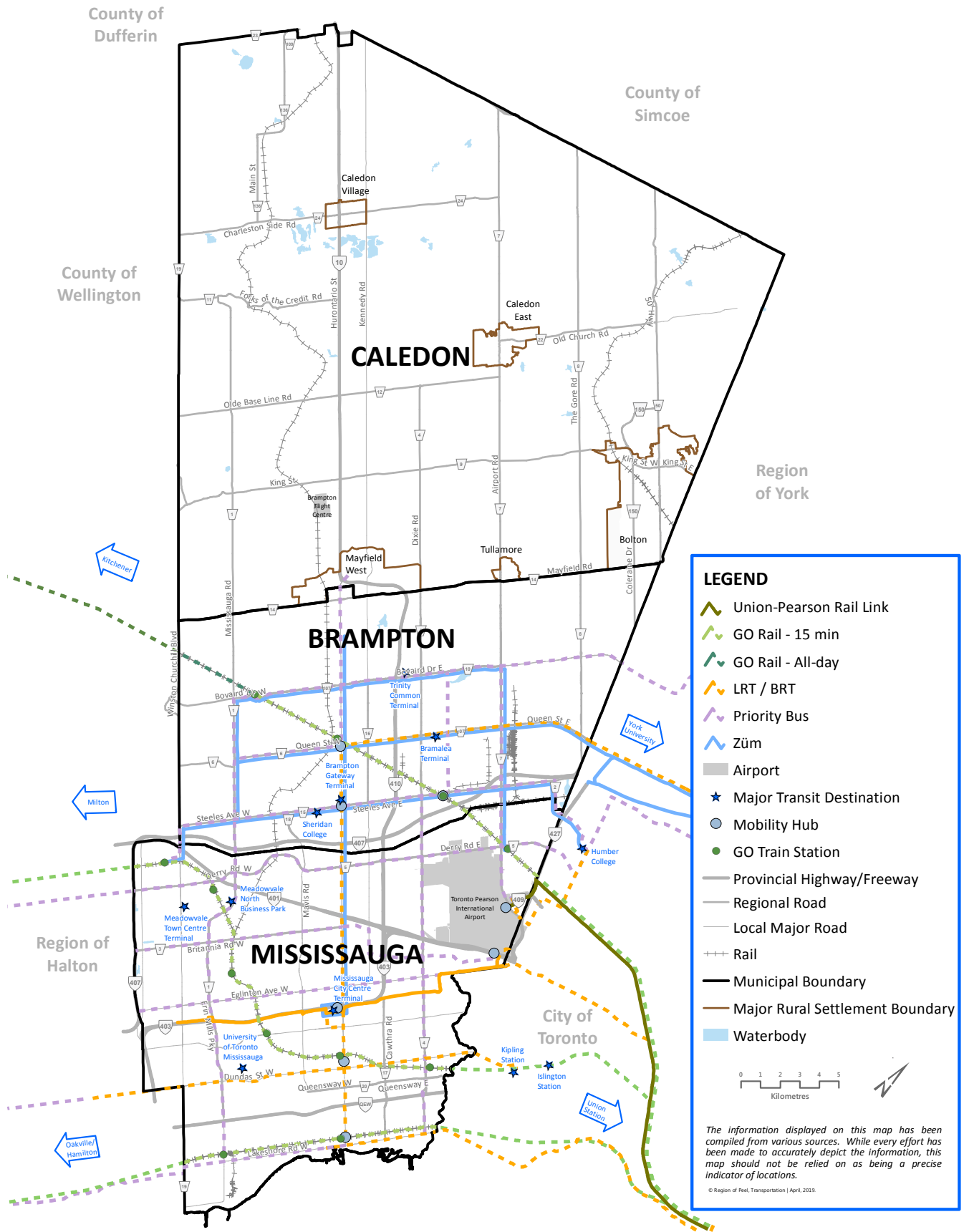
FIGURE 3-6
Transit Mode Split and Transit Trips from 1996 to 2016, Region of Peel



Source: Transportation Tomorrow Survey

As the Region of Peel continues to grow and become home to more people and jobs, the role of transit in addressing travel demand will become increasingly important. Achieving the Region's goal of a 50% sustainable mode share by 2041 requires increases in walking, cycling, and carpooling mode shares, but the largest increase is required in transit mode share. By 2041, the Region of Peel's transit mode share will need to be 17%.

FIGURE 3-7
Rapid Transit Network



3.3.2 What is Peel Doing?

To achieve the mode share increase, the Region of Peel is undertaking several actions in collaboration with local municipalities and Metrolinx.

Policies

Major Transit Station Areas (MTSA) Study

The Growth Plan, 2017 defines major transit station areas as the area including and around any existing or planned higher-order transit station or stop within a settlement area; or the area including and around a major bus depot in an urban core. The Growth Plan, 2017, requires municipalities to delineate and undertake detailed planning for these areas.² As such, the Region of Peel in collaboration with the local municipalities, is undertaking an MTSA study to delineate station boundaries and geographies through an integrative land use, transportation, infrastructure, and financial planning approach.

Mobility Hubs

The Big Move, 2008, the predecessor to the Metrolinx 2041 RTP, identified eight mobility hubs in the Region of Peel. Mobility hubs are major transit stations and surrounding areas that are designed to support a high number of transit boardings and alightings, and facilitate seamless, efficient transfers between modes. They are particularly significant because of their combination of existing or planned frequent rapid transit service with an elevated development potential. The Region of Peel's Official Plan policies encourage the concentration of high-density employment uses and intensification in proximity to these mobility hubs.¹⁴ The Region of Peel is committed to support Metrolinx and the local municipalities on development within these hubs and the integration of modes at these hubs.

Transit Projects and Delivery

Highway 407 Transitway

The 407 Transitway is a planned 150-kilometre high-speed inter-regional transit line that will be constructed on a separate right-of-way that parallels Highway 407, with stations, parking and access connections. Eight stations will be strategically located to maximize existing bus rapid transit systems within each of the local municipalities. It will span the GTA between Brant Street in Halton Region and Brock Road in Durham Region. The 407 Transitway is being planned in four segments²⁴:

- Brant Street to Hurontario Street – EA ongoing
- Hurontario Street to Highway 400 – EA complete
- Highway 400 to Kennedy Road – EA complete
- Kennedy Road to Brock Road – EA complete

The Region of Peel is working with the Province on the advancement of these projects in collaboration with local municipalities.

Mississauga Transitway

The City of Mississauga and Metrolinx have established the Mississauga Transitway, which is the first dedicated bus corridor to be built within the GTHA. The Transitway can be found on Figure 3-7 and includes 12 stations from Winston Churchill Boulevard in the west to Renforth Drive in the east.

Accessible Transportation

The Region of Peel is responsible for the provision of TransHelp, which is specialized public transit for people who cannot use public transit due to a physical, cognitive, visual, sensory or mental health disability. With future growth and an aging population, TransHelp trips are expected to grow from 570,000 annual trips in 2013 to almost 2 million by 2031.

Advocacy

The Region of Peel supports the City of Brampton, Town of Caledon, and City of Mississauga in advocating for key transit projects to improve mobility throughout the Region. The Region's current advocacy positions include:

Kitchener GO Line

Currently, 21% of people travelling from the Region of Peel to Toronto use transit to facilitate their trip and 41% of those travellers rely specifically on GO Rail at some point of their journey.¹⁰ To make transit an easy and convenient travel choice for commuters, the Region of Peel is advocating for two-way, all-day, 15 minute GO service along the Kitchener Line from Union Station to Mount Pleasant GO Station.

Milton GO Line

The Milton GO Line connects key employment and commercial centres in the City of Mississauga to Downtown Toronto and serves approximately 80,000 jobs that exist along the corridor (Meadowvale, Streetsville, Cooksville, and Dixie and Dundas areas).²⁶ In addition to 15-minute peak period service, the Region of Peel is advocating for two-way, all-day, 15-minute service along this corridor.

Bolton Rail Service

In 2010, the Metrolinx Bolton Commuter Rail Service Feasibility Study confirmed the need to connect Bolton to Downtown Toronto based on projected population and employment growth.²⁷ The Region of Peel and the Town of Caledon are advocating for a commuter rail service to connect Union Station to Bolton to achieve transit-supportive plans for Bolton.

Collaboration

Metrolinx 2041 Regional Transportation Plan Frequent Rapid Transit Network

Metrolinx 2041 RTP guides the continuing transformation of the transportation system in the GTHA. It recommends the implementation of a Frequent Rapid Transit Network, which identifies 75 new or in development rapid transit projects for the GTHA. Eighteen of these projects are in the Region of Peel and include higher order transit on Regional roads.²² Peel's existing and proposed rapid transit projects are shown in Figure 3-7. The Region of Peel is working with Metrolinx on the advancement of these projects in collaboration with local municipalities.

Transit Fare Integration

Partnerships between Brampton Transit, MiWay, York Region Transit and GO Transit have been developed to allow for seamless travel through fare integration. Passengers travelling from Mississauga's MiWay to Brampton's ZÜM or York Region to ZÜM will be able to make their transfer at no additional cost. Passengers travelling from any GO Transit service onto Brampton Transit and MiWay will only have to pay a reduced fare.²⁸ These partnerships enable seamless travel experiences and contribute to the creation of a world-class transit system.

Employment of Advanced Transit Technology

Brampton Transit is a leader in adopting advanced transit technologies and infrastructure in the GTHA and has been experiencing tremendous ridership growth with the introduction of its ZÜM BRT routes. The ZÜM service uses state-of-the-art buses and employs advanced transit technologies and infrastructure such as queue jump lanes and transit signal priority. Queue jump lanes are right turn lanes upgraded to allow transit vehicles to advance to the front of the queue at intersections. The ZÜM service also employs transit signal priority, a technology that is equipped on buses that allows a bus to lengthen a green signal or shorten a red signal at certain intersections for enhanced schedule reliability. Brampton's ZÜM service also provides real-time Next Ride Information and heated bus shelters to ensure a comfortable and reliable transit experience for users.

Town of Caledon Transit Feasibility Study

The Town of Caledon completed the Caledon Transit Feasibility Study which identifies the need and options for local transit services and reasonable levels of service and investment (source:29). As population and employment grows in the Town of Caledon, transit will become an integral component of achieving the Town's future travel demands.

3.4 Innovation in Sustainable Mobility

3.4.1 Bikeability Diagnostic Tool

The Region of Peel is collaborating with Carleton University to design a cycling network assessment tool. The tool will consider factors such as safety, accessibility, travel times, and connectivity to identify where the Regional cycling network can be further improved. Using this tool, the Region of Peel will be able to address the needs of less experienced cyclists and increase overall cycling mode share in the Region of Peel.

3.4.2 The Community Cycling Program

This program takes a strategically targeted approach to building cycling capacity by supporting travel behaviour change. The Region is collaborating with the local municipalities and external organizations to establish bike hubs with programming that offers trips by bike, such as cycling mentorship and bike repair workshops. These programs serve to improve cycling skills and familiarity with the network, provide greater access to bicycles, and create a community where cycling is a viable mode of transport.

4.0

Safe Mobility

- 4.1 What is Safe Mobility?
- 4.2 What is Peel Doing?
- 4.3 Road Safety Initiatives
- 4.4 Innovation in Safe Mobility



SLOW

NEW



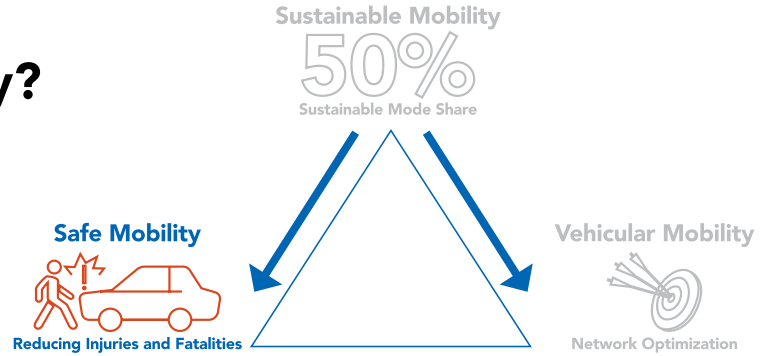
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4.0 Safe Mobility

4.1 What is Safe Mobility?

Safe mobility refers to a balanced and sustainable transportation system that provides safe mobility choices through the efficient design of the network.



4.2 What is Peel Doing?

While the road system needs to keep us moving, it must also be designed to protect us at every turn. Life and health cannot be exchanged for other benefits, such as speed. That is the thinking behind the Region's Vision Zero Road Safety Strategic Plan (2018-2022), which establishes a goal of a 10% reduction in fatal and injury collisions by 2022.

The Vision Zero philosophy is summarized in one sentence: No loss of life is acceptable. To move people and goods safely and efficiently, the Vision Zero RSSP identifies identifies the following six emphasis areas:



Intersection collisions



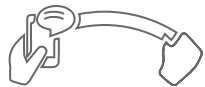
Impaired driving



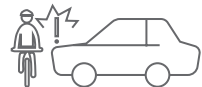
Aggressive driving



Pedestrian collisions



Distracted driving



Cyclist collisions

Source: Vision Zero Road Safety Strategic Plan, 2018

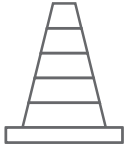
4.3 Road Safety Initiatives

Each emphasis area has a set of countermeasures to improve safety. Some examples are shown here.



Policies Incorporating Road Safety

We can be proactive and plan for safety by incorporating features such as lower speeds and traffic calming measures in the design stage.



Road Safety Audits

During a road safety audit the Region reviews an existing or future road or intersection to identify safety improvements that will benefit everyone using the road.



Red Light Camera Program

Red light cameras are installed at signalized intersections. Vehicles that run red lights are photographed and the vehicle owner is issued a ticket with the intent of deterring the behaviour. There are 28 red light cameras installed throughout Peel, with a planned expansion of five additional cameras in 2019.



Traffic Calming Speed Cushions

Speed cushions are small rubber pads placed across the road with spaces between them that are used to slow down vehicles. The difference between speed cushions and speed bumps is that cushions are spaced in sections to let emergency vehicles pass without having to slow down.



Speed Feedback Signs and Speed Trailers

Electronic “your speed” radar signs are used in areas where speed is an issue, letting motorists know what speed they are currently travelling. They are often used at curves in the roadway and in school zones to emphasize the need for reduced speed.



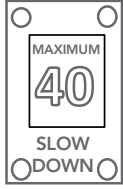
Shark Teeth Pavement Markings

Sharks teeth pavement markings are installed at roundabouts and right-turn channels, showing motorists where to stop and calling attention to pedestrian crosswalks.



Pedestrian Crossovers

Pedestrian crossovers help people cross roads easily and safely. They may be identified with signs on both sides of the roadway and special pavement markings, and may include flashing lights and/or overhead signs.



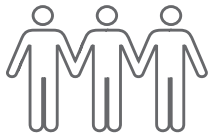
Vehicle Activated Traffic Calming Signs (VATCS)

These electronic signs include a radar speed detector which, when triggered, illuminate the posted speed of the roadway to passing motorists. VATCS are generally installed at locations where speeding is a concern or where there is a significant change in speed limit such as entering a village.



Education and Awareness Working Group

A working group of the Vision Zero Taskforce will coordinate education, outreach, and communications to improve the safety of vulnerable road users within the Region of Peel.



Road Safety Ambassadors

The Region has plans to establish a network of road safety ambassadors in its communities and agencies to promote Vision Zero, and the Vision Zero Traffic Safety Culture.



Vision Zero Traffic Safety Culture

Create a social climate in which traffic safety is highly valued and rigorously pursued.

4.4 Innovation in Safe Mobility

4.4.1 Automated Speed Enforcement Cameras

The Region of Peel, through partnership with Ontario Traffic Council and the City of Toronto, is working on bringing photo-based speed enforcement to community safety zones and school areas. As with red light cameras, the owner of the vehicle is mailed a ticket if caught speeding in these areas.

4.4.2 Leading Pedestrian Intervals (LPI)

The Region of Peel will be piloting LPI's at select intersections. The technology allows pedestrians to begin walking before any vehicles are allowed to move into the intersection. This gives right-of-way and added visibility to pedestrians, making crossings safer.

4.4.3 Vision Zero Task Force

The Region of Peel has established a Vision Zero Task Force to work closely with stakeholders to implement, modify, monitor and evaluate the effectiveness of the Road Safety Strategic Plan and the implemented countermeasures identified in the Action Plan. The Task Force will help to create a social climate in which road safety is highly valued and rigorously pursued. It will support the ongoing efforts to achieve the Road Safety Strategic Plan's vision and goal by ensuring that all opportunities to improve road safety are identified, prioritized, supported, and implemented as appropriate.

5.0

Vehicular Mobility and Goods Movement

- 5.1 What is Vehicular Mobility and Goods Movement?
- 5.2 What is Peel Doing?
- 5.3 Innovation in Vehicular Mobility and Goods Movement



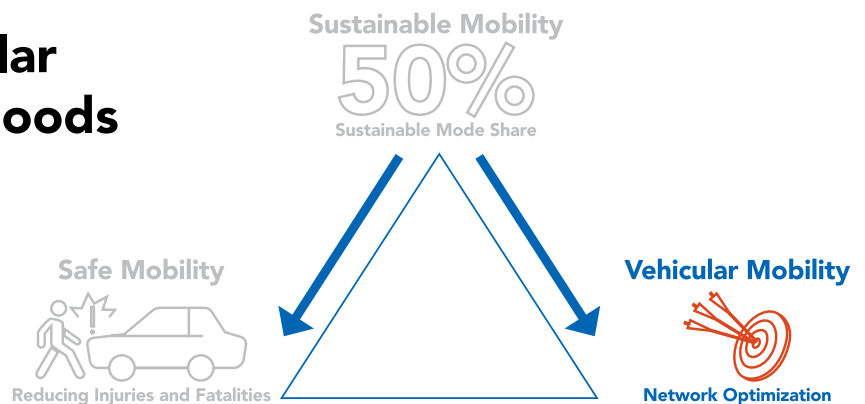
5.0 Vehicular Mobility and Goods Movement

5.1 What is Vehicular Mobility and Goods Movement?

The Region of Peel has jurisdiction over 26 Regional Roads comprised primarily of arterial roads, which serve the function of moving through traffic, long distance trips

consisting of intra and inter-movements between municipalities and regions, and provides access to urban activity centres and traffic. Regional arterial roads are designed to move all vehicle types with a high proportion of commercial vehicles to facilitate the movement of goods.

Vehicular mobility refers to the movement of people and goods along road and highway infrastructure. While the LRTP's primary focus is to shift 50% of the Region's travel demand to sustainable modes of transport, vehicular mobility is responsible for the remaining 50%. In addition to the active transportation infrastructure improvements and road network improvements identified in Section 6, optimizing the existing transportation network is essential to ease congestion and manage growth. Providing efficient vehicular flow on Regional roadways in addition to active transportation facilities helps to ensure that Peel's residents have choice and access to all modes of transportation.



5.2 What is Peel Doing?

5.2.1 Moving Cars Efficiently

While building new roads and widening existing roads will help to improve a transportation system's efficiency as the population grows, the Region of Peel also aims to optimize, operate, and maintain the existing transportation system through several key actions:

Traffic Network Progression

The Region of Peel, in conjunction with the City of Mississauga and the City of Brampton, analyzes and improves traffic flow on Regional roads by conducting speed and delay runs, adjusting traffic signal timings, and making the necessary changes to address traffic congestion, specifically on Goods Movement Networks, to ensure traffic moves efficiently.

Right-Turn Channel Enhancements

To improve awareness of pedestrians and maintain traffic flow, the Region of Peel is installing pedestrian crossovers within right-turn channels and is adjusting the vehicular path of right-turning vehicles to maximize pedestrian conspicuity.

Storage Lane Extension

To help improve network flow at or near intersecting roads, the Region undertakes a systematic review of storage lanes. This helps us ensure that appropriate storage is provided for turning traffic, and that queuing does not extend beyond the available storage lane where it can impact flow and safety.

Intersection Improvements

The Region's Development Charges By-law Study identifies anticipated improvements on an annual basis after the review of the existing road network and intersections. Planned improvements are continuously reviewed utilizing modelling software such as Synchro to verify validity of the geometrical improvements during the planned year.

Roundabout Conversion Study

A roundabout is a method of intersection control that allows all modes of transportation to maneuver safely and efficiently through a road junction where two or more roads meet or cross each other at one point. They are known as a traffic calming measure and also reduce major conflicts points between road users. There are currently three roundabouts in the Region of Peel (Dixie and Old Baseline Road, Coleraine Drive and Highway 50, Coleraine Drive and King Street).

Portable Variable Message Signs

These devices collect Bluetooth signature data along a section of road, which is analyzed and used to provide travelling motorists with real-time travel information. They can display pre-set messages as well as information on planned or unexpected events. These devices are commonly used during planned construction projects, allowing travelling motorists to plan routes according to conditions.

Operations and Maintenance

Traffic volumes and weather conditions are main causes of roadway breakdown. Roadway maintenance activities include pothole and road shoulder repairs, safety barrier and noise wall repair, drainage system, roadside, sign and winter maintenance. Many routine maintenance activities are considered life extending and can delay the need for any major work done on a road. When road improvements or major rehabilitations are moving forward, priority maintenance of active transportation infrastructure is required to offset traffic volumes on Regional roads.

5.2.2 Moving Goods Efficiently

The Region of Peel is demonstrating leadership in goods movement in Ontario and is taking an important step forward to maintain its position as a significant freight hub for Canada. As such, the Region's transportation system must accommodate the intermodal facilities and the Toronto Pearson International Airport. Goods movement and goods movement-dependent industries account for approximately 4 out of 9 jobs in the Region of Peel. When compared, the Region of Peel has the highest share of goods movement establishments across all GTHA municipalities.

FIGURE 5-1
Benefits of the Goods Movement Industry to the Region of Peel



Source: Region of Peel Goods Movement Strategic Plan, 2017

In addition to the local economic benefits, the Region of Peel is a national contributor. Its goods movement industries contribute \$49 billion worth of GDP to the regional, provincial, and national economies.¹¹

In order to continue its success in goods movement, the Region of Peel developed the Goods Movement Strategic Plan, 2017-2021. Examples of key action items are shown here. A detailed account of all action items can be found in the Goods Movement Strategic Plan.

Foster Industry Innovation Through a Connected and Automated Vehicles (CAV) Corridor Pilot Project

Connected and automated vehicle technologies will have a significant impact on the transportation industry, offering the potential for greater productivity, safety, and efficiency. As the nation's primary freight centre, the Region of Peel needs to understand how best to integrate CAV into the activities and operations of its businesses.

Adapt to Advancements in the E-Commerce Shift

The growing popularity of online shopping has resulted in increasing numbers of home deliveries, with more delivery trucks in residential communities on ever-tighter schedules. The Region of Peel, in collaboration with McMaster University and Transport Canada, is undertaking an E-Commerce study to understand its impacts on the transportation system and appropriately plan for policies and network efficiencies that adapt to this shifting retail landscape.

Understand and Manage Aggregate Movements and its Impact on Communities

Quarries and concrete manufacturing companies in the Region of Peel serve an active construction industry across the GTHA. Aggregate is an important and time-sensitive commodity with impacts on the roads and communities in the Region due to truck configuration, weight, noise, dust, and debris. To better understand the impact of the industry and implement strategies if needed, we would need to conduct a study of the volume, weight and frequency of aggregate trips.

Pursue Alternative Fuels and Fuel Efficiency Initiatives

Transportation is the single largest source of greenhouse gas emissions (GHGs) in Canada. The Region of Peel, along with municipalities across the province, is focused on building sustainable communities that are resilient to the perils of climate change. The intent of this action item is to determine initiatives that can be pursued and assist business with obtaining funding for alternative fuel solutions to reduce transportation GHG impacts.

Demonstrate and Advance Peel's National Role and Importance in Freight Fluidity

Supply chain fluidity and competitiveness is an end-to-end process. Current fluidity models lack data on the last-mile connections, resulting in an incomplete picture of supply chains. The Region is not just a local freight centre; the freight activities have national importance and have an impact on attracting businesses to Canada. Without sufficient data, we cannot develop full end-to-end fluidity measures, even though the first, last and transfer miles prevalent in the Region are commonly the higher-risk stages in supply chain performance. Data is needed for in-depth analysis of buffer time indices, bottle necks, and ultimately the travel times in and out of the Region and the surrounding metro area.

Collaborative Initiatives

Additionally, the Region of Peel understands the importance of collaborative work, and has initiated two programs to support the key action items in the Goods Movement Strategic Plan, further supporting efficient movement of goods and network optimization: the Goods Movement Task Force and the Smart Freight Centre.

- The Goods Movement Task Force was established in 2009. This forum, which brings together key public and private sector stakeholders, has the mandate to improve the efficiency, competitiveness, and sustainability of the goods movement system in the Region. The Task Force meets three times a year and discusses issues such as congestion, legislative and regulatory impediments and barriers, operational barriers, comprehensive data collection, and strategic goods movement planning.
- The Smart Freight Centre is a consortium for freight research between the University of Toronto, York University, McMaster University, and the Region of Peel. It was established in 2018 with a mandate to improve the quality of life and ongoing economic vibrancy in the GTHA by conducting evidence-based research and obtaining decision advocacy to coordinate freight transportation infrastructure, land development, regulations, technology, and resources.

5.3 Innovation in Vehicular Mobility and Goods Movement

5.3.1 Off-Peak Delivery

The Region of Peel is initiating its first Off-Peak Delivery pilot project and has partnered with private sector delivery companies to champion the six-month pilot project, which began in February 2019. The objective is to help reduce congestion by shifting truck traffic from regular hours to off-peak hours (between 7 p.m. to 7 a.m.) throughout the Region, improve network efficiencies and provide businesses with cost savings. By diverting trucks from peak hours to off-peak hours we can also help reduce carbon emissions from congested roads and improve air quality.

5.3.2 Electric Vehicle Integration

We are seeing a rapid increase in electric vehicles on the Region's road network. With no direct emissions during operation, these vehicles have positive health and environmental effects. Their use can also help transition towards lesser emissions throughout an entire transportation network system.

5.3.3 Traffic Management Centre

The Region of Peel has designed and constructed a state-of-the-art Traffic Management Centre (TMC) to better manage traffic congestion. The TMC is equipped with a traffic control system that:

- Allows for real-time adjustment to traffic signal timings;
- Includes a CCTV camera feed for real-time monitoring of traffic conditions; and,
- Provides real-time feeds on major traffic incidents and weather conditions.

Access to real-time information increases efficiency, improves operations and maintenance, and supports emergency management. The system also collects data for future planning.

the 1990s, the number of people in the UK who are employed in the public sector has increased from 10.5 million to 12.5 million, and the number of people in the public sector who are employed in health care has increased from 2.5 million to 3.5 million (Department of Health 2000).

There are a number of reasons for this increase. One of the main reasons is the increasing demand for health care services. The population of the UK is increasing, and the number of people who are aged 65 and over is increasing rapidly. This has led to an increase in the number of people who are in need of health care services, and this has led to an increase in the number of people who are employed in the public sector.

Another reason for the increase is the increasing demand for health care services from the private sector. The private sector is becoming increasingly important in the provision of health care services, and this has led to an increase in the number of people who are employed in the public sector. The private sector is also becoming increasingly important in the provision of health care services, and this has led to an increase in the number of people who are employed in the public sector.

A third reason for the increase is the increasing demand for health care services from the voluntary sector. The voluntary sector is becoming increasingly important in the provision of health care services, and this has led to an increase in the number of people who are employed in the public sector. The voluntary sector is also becoming increasingly important in the provision of health care services, and this has led to an increase in the number of people who are employed in the public sector.

There are a number of other reasons for the increase. One of the main reasons is the increasing demand for health care services from the public sector. The public sector is becoming increasingly important in the provision of health care services, and this has led to an increase in the number of people who are employed in the public sector. The public sector is also becoming increasingly important in the provision of health care services, and this has led to an increase in the number of people who are employed in the public sector.

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6.0

Future Transportation Network

- 6.1 Transportation Planning Alternatives and Criteria
- 6.2 Evaluation of Alternatives
- 6.3 Road Capital Program



6.0 Future Transportation Network

Using the strategic framework in Sections 3.0 to 5.0, the Region of Peel identified seven preliminary alternatives, which led to the preferred alternative for the future transportation network.

6.1 Transportation Planning Alternatives and Criteria

As part of the Municipal Class Environmental Assessment (MCEA) process for master plans, the seven preliminary alternatives included both qualitative and sensitivity analyses, accounting for potential implications on the network and demand assumptions. They are detailed in Figure 6-1 below.

FIGURE 6-1
Future Transportation Planning Alternatives

Scenario	Network Assumptions	Demand Assumptions
Do nothing	Current conditions of the roadway, active infrastructure, carpool and transit network	Current modal split: 37% sustainable modes and 63% driving
Feasible road improvements only	GTA West No Peel-Halton Freeway, modifications on arterial roads only (Williams Parkway, Financial Drive and Bram West Parkway) Planned road improvements based on capital plans and master plans from Peel, local municipalities, the Province and other Regions/municipalities in the GTHA	Current modal split: 37% sustainable modes and 63% driving
Ultimate road improvements only	GTA West No Peel-Halton Freeway, road modifications on arterial roads only (Williams Parkway, Financial Drive and Bram West Parkway) Widening every Regional road in the City of Brampton and City of Mississauga to 6 lanes Widening Airport Road, Gore Road, Dixie Road and Mississauga Road from Mayfield Road to King Street, to 4 lanes	Current modal split: 37% sustainable modes and 63% driving
50% sustainable transportation modes only	Current conditions of the roadway, but enhanced transit, active transportation and carpool infrastructure	50% sustainable modes and 50% driving
Combination of planned road improvements and 40% sustainable mode split	GTA West No Peel-Halton Freeway, modifications on arterial roads only (Williams Parkway, Financial Drive and Bram West Parkway) Planned road improvements based on capital plans and master plans from Peel, local municipalities, the Province and other Regions/municipalities in the GTHA Slightly enhanced transit, active transportation and carpool infrastructure	40% sustainable modes and 60% driving
Combination of planned road improvements and 50% sustainable mode split	GTA West No Peel-Halton Freeway, modifications on arterial roads only (Williams Parkway, Financial Drive and Bram West Parkway) Planned road improvements based on capital plans and master plans from Peel, local municipalities, the Province and other Regions/municipalities Enhanced transit, active transportation and carpool infrastructure	50% sustainable modes and 50% driving
No GTA West – Combination of planned road improvements and 50% sustainable mode split	No GTA West Peel-Halton Freeway with modifications on arterial roads (Williams Parkway, Financial Drive and Bram West Parkway) Planned road improvements based on capital plans and master plans from Peel, local municipalities, the Province and other Regions/municipalities in the GTHA Enhanced transit, active transportation and carpool infrastructure	50% sustainable modes and 50% driving

6.2 Evaluation of Alternatives

Through consultation, the preliminary scenarios were narrowed down to four: “Do Nothing”, “Feasible Road Improvements Only”, “50% Sustainable Transportation Modes Only”, and “Combination of Feasible Road Improvements and 50% Sustainable Mode Split”. These alternative solutions were then used for the entirety of the “Evaluation of Alternatives” section. Refer to Figure 6-2 for the final list of alternatives considered.

FIGURE 6-2
Future Transportation Planning Alternatives

Alternatives	Name	Description
Alternative 1	Do Nothing	<ul style="list-style-type: none"> Current conditions of the roadway, active transportation (AT) infrastructure, carpool and transit networks
Alternative 2	Road Improvements Only	<ul style="list-style-type: none"> Feasible road improvements based off capital plans and master plans from Peel, local municipalities, and the Province by 2041
Alternative 3	Sustainable Transportation Modes Only	<ul style="list-style-type: none"> Current conditions of the roadway, but enhanced transit networks Reaching the Region's mode share target of achieving 50% sustainable transportation modes by 2041 by improving AT and carpool network and helping local municipalities improve transit operations on Regional roads
Alternative 4	Combination	<ul style="list-style-type: none"> Feasible road improvements based on capital plans and master plans from Peel, local municipalities, and the Province by 2041 Reaching the Region's mode share target of achieving 50% sustainable transportation modes by 2041 by improving AT and carpool network and helping local municipalities improve transit operations on Regional roads

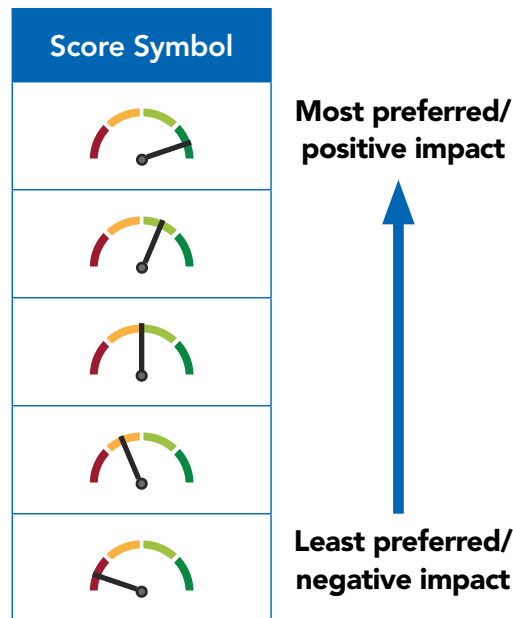
The four alternatives detailed above were evaluated based on the following five categories:

1. Transportation
2. Economic
3. Natural Environment
4. Social and Health
5. Cultural Heritage

The legend on the next page defines the scoring. Some criteria are scored based on a quantitative analysis and others are scored based on qualitative expert judgement. A consistent approach was taken to evaluate the alternatives. When a baseline existed, alternatives were scored against the baseline, and when a baseline did not exist, alternatives were ranked in relation to each other*.

* Note: the subcriteria may be weighted differently based on magnitude of impact

FIGURE 6-3
Transportation Planning
Alternatives Scoring
Legend

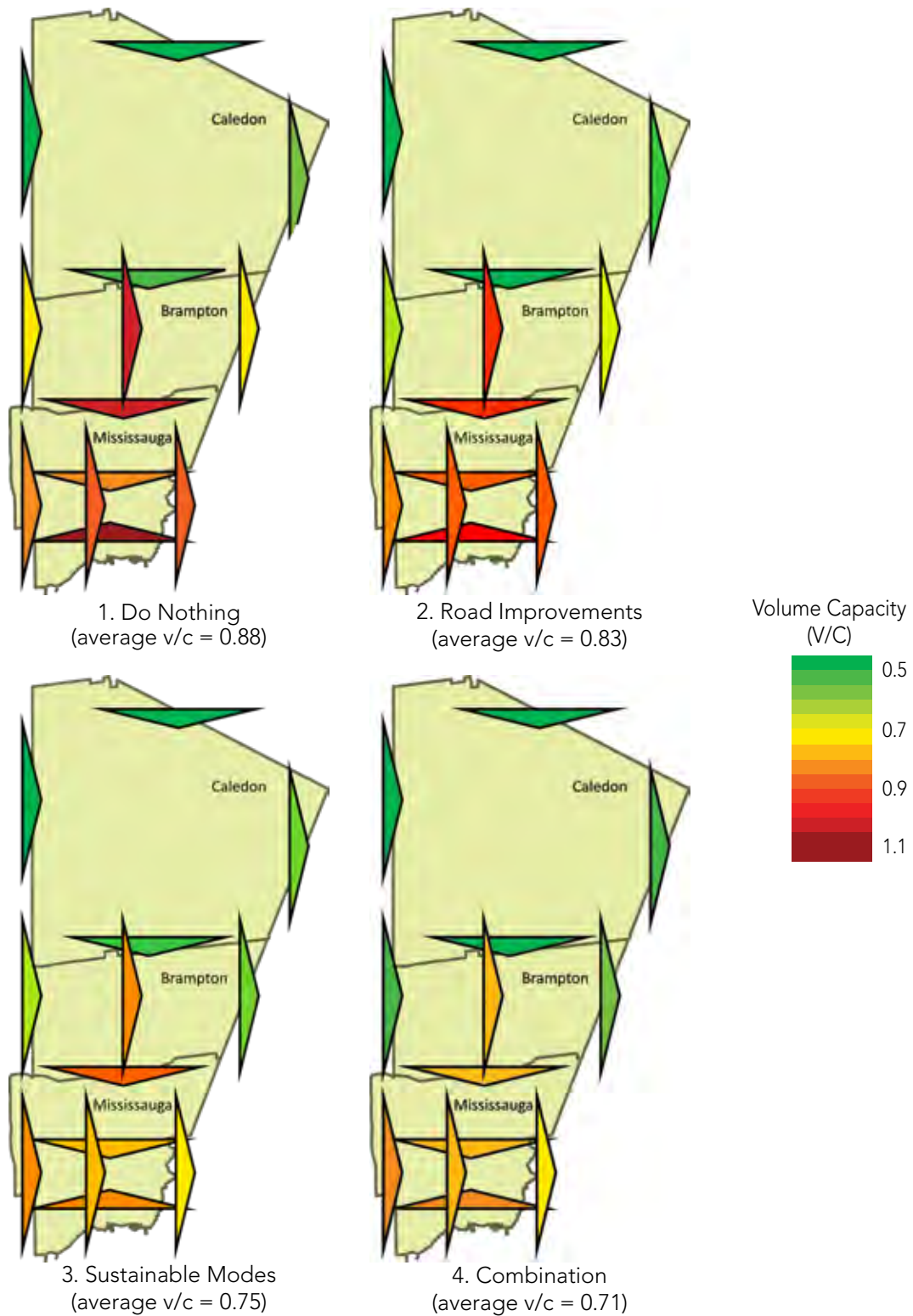


6.2.1 Transportation Criteria

Four ways that the transportation network can be categorized and defined are considered:

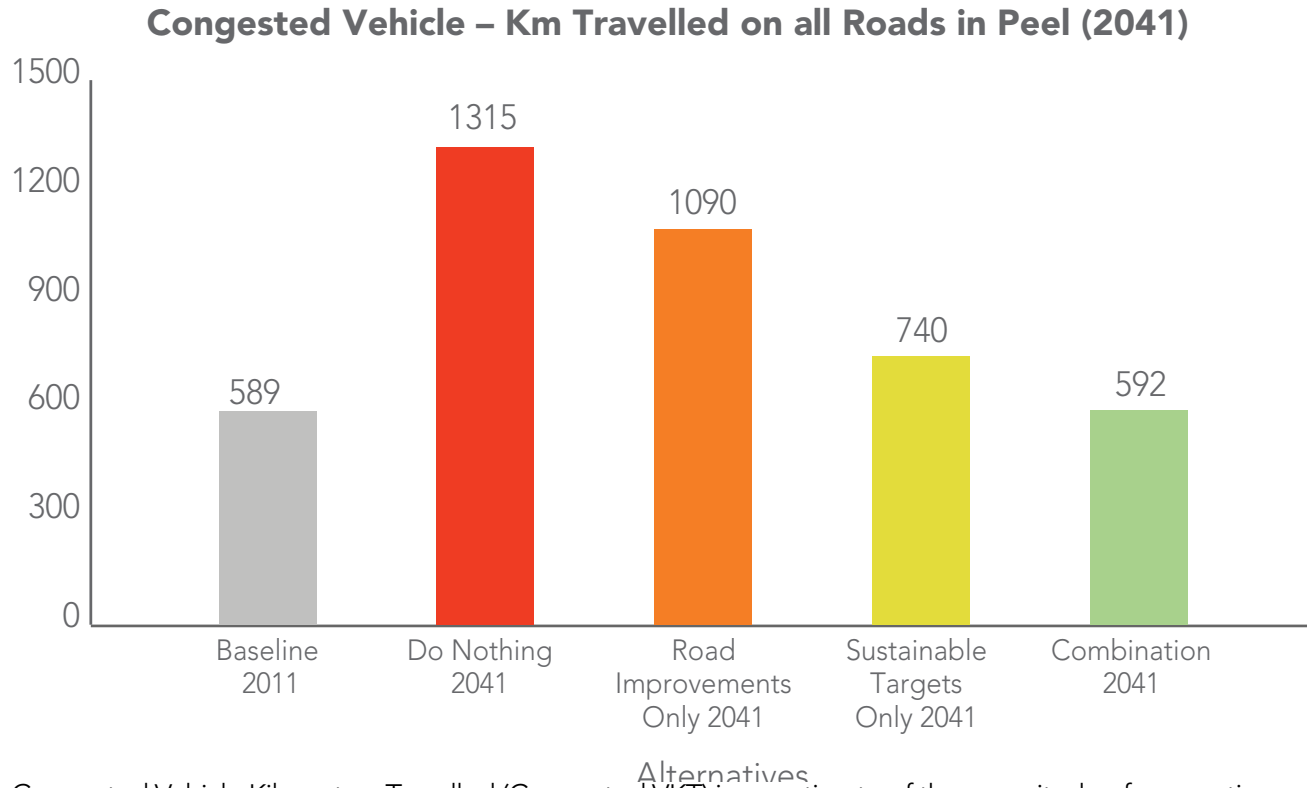
1. Impact on sustainable modes of transportation include any positive or negative operational impacts on active transportation, carpooling and transit. Sustainable modes of transportation are encouraged. In addition to the health and environmental benefits of using sustainable transportation, increased sustainable trips decrease single-occupant vehicle trips on the road and reduce congestion, when compared to the “do nothing” scenario.
2. Impact on vehicle traffic can be measured in two ways, both of which require data from Peel’s Travel Demand Forecasting Model.
 - Impact on road network level-of-service: Region of Peel’s traffic level-of-service is measured by the volume-to-capacity (V/C) ratios for 2041 at screenlines in the peak direction for the morning peak-hour; the volume of vehicles going through a screenline relative to the screenlines’ assumed vehicle capacity. Screenlines are geographic lines that intersect a series of roads and are used to summarize the traffic conditions of important boundaries (e.g. Brampton West, or Mississauga/Brampton boundary). A lower volume-to-capacity (V/C) ratio is more desirable. See Figure 6-4 on the next page for the results of the screenline analysis.
 - Impact on congestion: congested vehicle-kilometers travelled for all roads within Peel by 2041 is a useful estimate of the magnitude of traffic congestion at the Regional level. To calculate the VKT, the congested KMs are multiplied by the respective number of vehicles experiencing congestion on a road section and are summed over the Region. A lower congested VKT value is more desirable. See Figure 6-5 on page 65 for the results of the congested VKT analysis.
3. Impact on road connectivity includes first and last-mile access, which is the ease of accessing the transportation network from/to the origin and destination.
4. The impact on goods movement is closely correlated to road connectivity and vehicle traffic. Good last-mile access is important for efficient deliveries and maintaining the level of service for vehicles. For example, vehicles making long-haul trips must be able to exit the freeway and reach their destination efficiently.

FIGURE 6-4
 Screenline Analysis for the Morning Peak-Hour for the Peak Direction for 2041



Peel's traffic level-of-service is measured by the volume-to-capacity (v/c) ratios for 2041 at screenlines in the peak direction for the morning peak-hour. Lower v/c numbers are desired, and a v/c of 0.9 or higher is the threshold for congestion. The screenline analysis shows that Alternative 4: Combination is the most effective in improving level-of-service at screenlines. Significant improvements to level-of-service can be seen on the screenlines in Brampton and Mississauga. The average screenline v/c in Peel is the lowest with Alternative 4: Combination, having an average of 0.71.

FIGURE 6-5
Congested VKT Values for Morning Peak-Hour on All Roads Within Peel by 2041



Congested Vehicle Kilometers Travelled (Congested VKT) is an estimate of the magnitude of congestion. Lower Congested VKT values are more desirable. Alternative 4: Combination, having the lowest estimated Congested VKT value of 592,000 by 2041, is the most effective alternative in this regard. For reference, the estimated 2011 baseline Congested VKT was 589,000. This means that Alternative 4: Combination by 2041 delivers a similar Congested VKT value to the 2011 baseline, which is desirable.

FIGURE 6-6
 Alternatives against Transportation Criteria

Category	Evaluation Criteria	Alternatives			
		Do Nothing	Road Improvements Only	Sustainable Transportation Modes Only	Combination
Transportation	Impact on sustainable modes of transportation (AT, carpool, and transit)	Current AT and carpool infrastructure may be inadequate in the future due to population growth. Transit may deteriorate if Regional support is not properly provided to local municipalities.	Space for current or future sidewalks may diminish through road widenings. New lanes could introduce more HOV opportunities. Transit may deteriorate if Regional support is not properly provided to local municipalities.	Expansion of AT network throughout Peel. Supports implementation of new carpool initiatives. Increased support given to local municipalities to improve transit.	Expansion of AT network throughout Peel - but compromise with road expansion in situations. Supports implementation of new carpool initiatives. New lanes could introduce more HOV opportunities. Increased support given to local municipalities to improve transit.
	Impact on vehicle traffic	Average V/C ratio at screenlines by 2041: 0.88. Congested VKT of 1.31 million. Roads will become severely congested, creating unacceptable travel conditions.	Average V/C ratio at screenlines by 2041: 0.83. Congested VKT of 1.09 million. Congestion will slightly improve due to increased road capacity compared with Do Nothing scenario, creating poor to moderate traffic conditions.	Average V/C ratio at screenlines by 2041: 0.75. Congested VKT of 0.74 million. Congestion will noticeably improve due to mode shift compared with Do Nothing scenario, creating fair to good traffic conditions.	Average V/C ratio at screenlines by 2041: 0.71. Congested VKT of 0.59 million. Congestion will significantly improve due to mode shift and increased road capacity compared with Do Nothing scenario, creating optimal traffic conditions.
	Impact on road network connectivity	Current conditions of the road, no improvements for enhanced road connectivity.	Road connectivity can improve through road improvement projects.	Current conditions of the road, no improvements for enhanced road connectivity.	Road connectivity can improve through road improvement projects.
	Impact on goods movement flow	High congestion, no improvements to road level of service and connectivity will impede goods movement flow and on-time delivery.	Increased road connectivity will enhance goods movement flow. Moderate level of service might hinder delivery times and on-time delivery services.	No improvements to road capacity and network connectivity may impede goods movement flow. Maintaining level of service will make delivery times on-time and reliable.	Increased road connectivity will enhance goods movement flow. Optimal level of service will make delivery times and on-time delivery services reliable.
OVERALL					

Source: Region of Peel, 2017

6.2.2 Economic Criteria

Transportation has a significant impact on the Region’s economy and its local businesses. According to the 2012 MTO-Peel Commercial Vehicle Survey, about \$1.8 billion worth of goods travel through the Region of Peel daily.³⁰ Transportation has a huge impact on businesses that inherently rely on the goods movement sector. A multi-modal transportation system with a good level of service across all modes will make travel easier for customers and could benefit local businesses.

The economic cost of congestion is separately considered. The cost of congestion evaluates the loss of productivity and opportunities. Recent estimates for the cost of congestion have been as high as \$2.7 billion in the GTHA.¹⁸ Finally, capital costs to implement each alternative are considered. The capital costs will consider all the various costs throughout the lifecycle of each alternative — ranging from planning, design, construction, maintenance and operations.

FIGURE 6-7
Alternatives against Economic Criteria













Category	Evaluation Criteria	Alternatives			
		Do Nothing	Road Improvements Only	Sustainable Transportation Modes Only	Combination
Economy	Impact on businesses	Reduced vehicular mobility due to congestion, and no increased support for sustainable modes of transportation may negatively affect business’ supply and demand.	Increased road network connectivity and moderate level of service can better facilitate potential supply and demand for businesses.	Reduced road network connectivity may negatively affect supply of certain businesses. Enhanced network of sustainable modes and improved level of service will better facilitate customers.	Increased road network connectivity and optimal level of service, as well as the enhanced network of sustainable modes can best facilitate both supply and demand for businesses.
	Cost of congestion	High cost of congestion due to extremely poor level of service.	Moderate level of service reduces cost of congestion.	Noticeably improved level of service reduces cost of congestion.	Significantly improved level of service reduces cost of congestion.
	Capital costs	Minimal maintenance and operational costs.	High capital costs due to road widening and road construction.	Medium capital costs for expansion of AT infrastructure and support of sustainable mode programs.	High capital costs due to road widenings, new road construction, AT infrastructure, and support of sustainable mode programs.
OVERALL					

6.2.3 Natural Environment Criteria

Transportation alternatives were assessed for their environmental impacts. For this category, impacts on the natural heritage system (NHS) caused by new construction initiatives, such as road widening projects, are considered.

An increase in GHG emissions negatively damages the environment through global warming. As such, a high-level analysis was performed to calculate the amount of GHG emitted annually within Peel using Transport Canada’s UTEC emissions calculator alongside Peel’s Transportation Forecasting Model. This analysis only considers automobiles (vehicles and trucks), and analyzes the emissions as carbon dioxide equivalents (CO₂e). It is also important to note that this analysis does not consider emerging technologies, such as the penetration of electric vehicles, nor does it consider any policies or programs aimed at reducing emissions.

















FIGURE 6-8
Alternatives against Natural Environment Criteria

Category	Evaluation Criteria	Alternatives			
		Do Nothing	Road Improvements Only	Sustainable Transportation Modes Only	Combination
Environment	Impact to natural heritage system	No impact.	Minimal negative impacts due to road widening.	Negligible negative impacts due to new AT and carpool infrastructure.	Minimal negative impact due to road widening and new AT and carpool infrastructure.
					
	Impact on GHG emissions	2.8 million tonnes of CO ₂ e emitted annually in 2041 (66% increase in CO ₂ e since 2011 conditions).	2.9 million tonnes of CO ₂ e emitted annually in 2041 (70% increase in CO ₂ e since 2011 conditions).	2.7 million tonnes of CO ₂ e emitted annually in 2041 (60% increase in CO ₂ e since 2011 conditions).	2.8 million tonnes of CO ₂ e emitted annually in 2041 (66% increase in CO ₂ e since 2011 conditions).
					
OVERALL					

6.2.4 Social and Health Criteria

The social and health category is focused on assessing impacts to residents. The transportation network will have direct and indirect impacts on residents' lives, health and well-being. Pollutants emitted from vehicles can negatively affect the physical health of residents. The pollutants considered include CO, NH₃, NO_x, PM₁₀, PM_{2.5}, SO_x, and VOC. Since the same approach was taken to estimate pollutants as estimating GHG emissions, refer to the natural environment criteria for the methodology used and limitations present in the analysis.









FIGURE 6-9
Alternatives against Social and Health Criteria

Category	Evaluation Criteria	Alternatives			
		Do Nothing	Road Improvements Only	Sustainable Transportation Modes Only	Combination
Social and Health	Impact on residents' physical and mental health	Poor mobility, limited travel options provided to residents, and little promotion of active transportation.	Improved mobility but congestion may frustrate residents. Limited travel options and little promotion of active transportation.	Promotion of healthier lifestyles such as walking and cycling. Improved mobility but localized congestion may frustrate citizens.	Support for all modes of transportation: promotion of healthier lifestyles via active transportation, and less frustration, since congestion is largely mitigated.
					
	Impact on age-friendly accessible living	Accessibility services and accessibility of the network will largely remain as is. Extreme road congestion coupled with an aging population might hinder accessibility services.	Accessibility services and accessibility of the network will largely remain as is, but with improved road connectivity.	Accessibility services will increase, and accessibility of the network will also increase due to enhanced transit network, more pedestrian-orientated sidewalks, and shift away from SOV's.	Accessibility services will increase, and accessibility of the network will also increase due to enhanced transit network, more pedestrian-orientated sidewalks, and shift away from SOV's. Includes improved road network connectivity, better facilitating accessible mobility.
					
	Impact on air quality	151,000 tonnes of pollutants emitted annually in 2041 (75% increase in pollutants since 2011 conditions).	148,000 tonnes of pollutants emitted annually in 2041 (71% increase in pollutants since 2011 conditions).	144,000 tonnes of pollutants emitted annually in 2041 (66% increase in pollutants since 2011 conditions).	145,000 tonnes of pollutants emitted annually in 2041 (68% increase in pollutants since 2011 conditions).
					
OVERALL					

6.2.5 Cultural Heritage Criteria

Cultural Heritage impacts include encroachment to sensitive areas such as existing and historical settlement areas, hamlets, places of worship and cemetery locations. The transportation alternatives were assessed for any violation of those elements, and no impact towards such locations is considered ideal. The aboriginal groups in the Region of Peel were also consulted to discuss aboriginal land claims. These consultations have been summarized in Appendix B.

FIGURE 6-10
Alternatives against Cultural Heritage Criteria

Category	Evaluation Criteria	Alternatives			
		Do Nothing	Road Improvements Only	Sustainable Transportation Modes Only	Combination
Culture	Impact on cultural heritage sites	No impact.	Minimal negative impact due to road widening.	Negligible negative impacts due to new AT and carpool infrastructure.	Minimal negative impact due to road widening and new AT and carpool infrastructure.
					
OVERALL					

6.2.6 Summary of Evaluations

As Figure 6-11 indicates, the preferred alternative is Alternative 4: Combination. Alternative 4 offers a long-term solution that provides an optimal level of service for vehicles, enhanced road connectivity, increased support for sustainable modes of transportation, and increased reliability for the goods movement industry.

These positive transportation impacts directly and indirectly benefit the social, health, and economic categories, making Alternative 4 the optimal alternative for these categories as well. The average score given to the four alternatives in each individual category is summarized below.

FIGURE 6-11
Summary Evaluation Matrix

Category	Alternatives			
	Do Nothing	Road Improvements Only	Sustainable Transportation Modes Only	Combination
Transportation				
Economic				
Natural Environment				
Social and Health				
Cultural Environment				
OVERALL	 Least Preferred	 Somewhat Preferred	 Somewhat Preferred	 Most Preferred
RECOMMENDATION				Recommended Alternative

6.3 Road Capital Program

With the Combination alternative being selected as the recommended alternative, the Region of Peel will continue its Road Capital Program of feasible road improvements. The Road Capital Program is an internal program that identifies road development projects. These projects include road widenings, new road development and road enhancements. These projects are further considered for intersection improvements and new infrastructure to facilitate transit, walking and cycling. All projects are reviewed to ensure compliance with the Region's strategic plans. A detailed list of infrastructure projects can be found in Appendix D.

The approach in determining the road capital program for the Long Range Transportation Plan 2019 consists of two parts:

- A sensitivity analysis to evaluate if all road improvements identified in the Region's Roads Improvement Program and 2019 Capital Budget are still required by their anticipated completion dates.
- A modelling exercise to assess if additional road improvements not identified in the 2019 Capital Budget may be required by 2031 or 2041. The analysis involved flagging corridors based on their level of service, connectivity, and other technical factors. Each potential recommendation is cross referenced with the overarching goals of the 2019 Long Range Transportation Plan, including promoting sustainable mobility, safe mobility, and vehicular mobility and goods movement.

Figure 6-12 to Figure 6-16 map the current and future road networks as well as specific road improvement projects to the 2041 horizon year.

FIGURE 6-12
Existing Number of Lanes, Region of Peel 2019

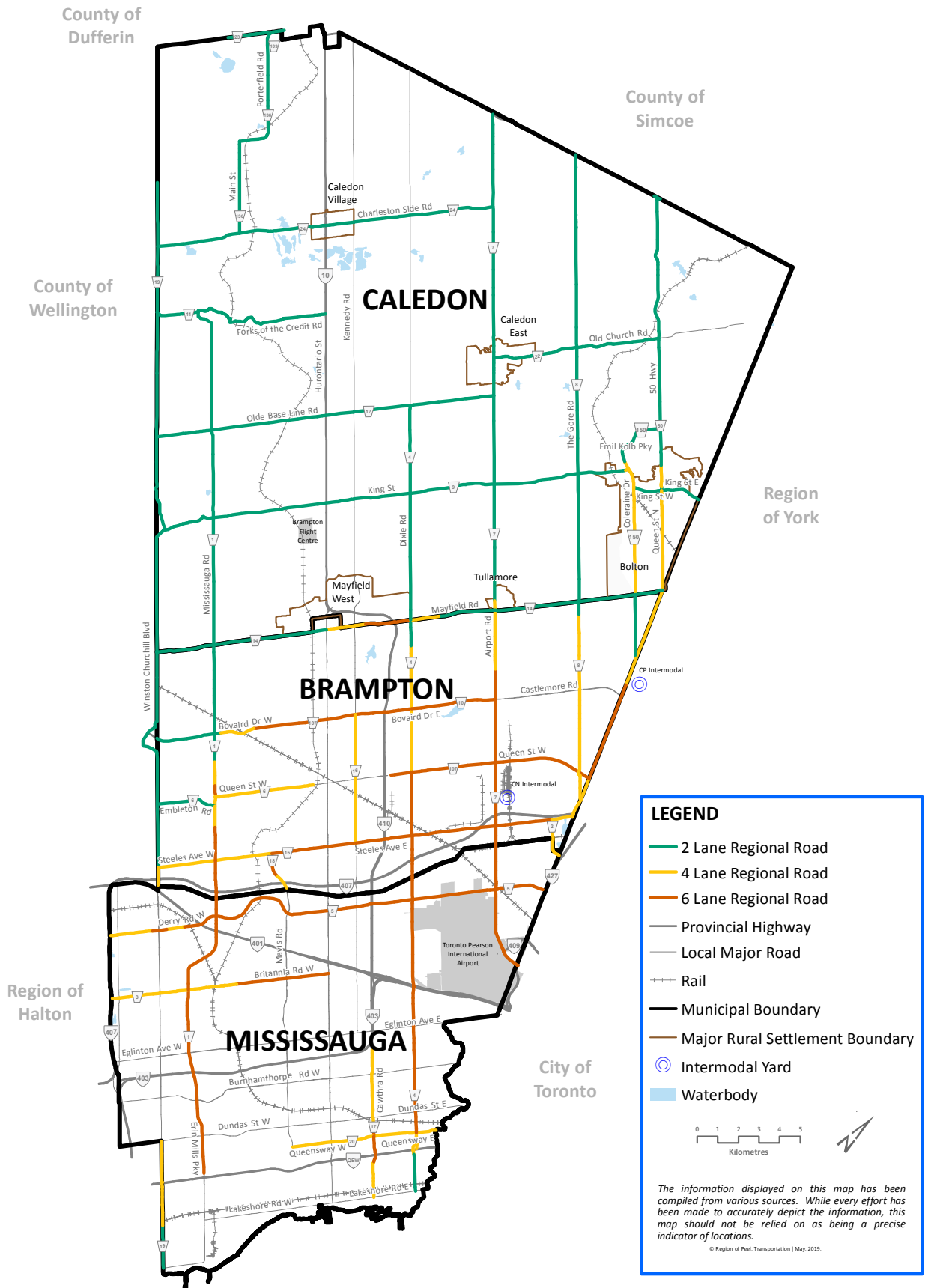


FIGURE 6-13
Road Widenings, Region of Peel 2031 Horizon Year

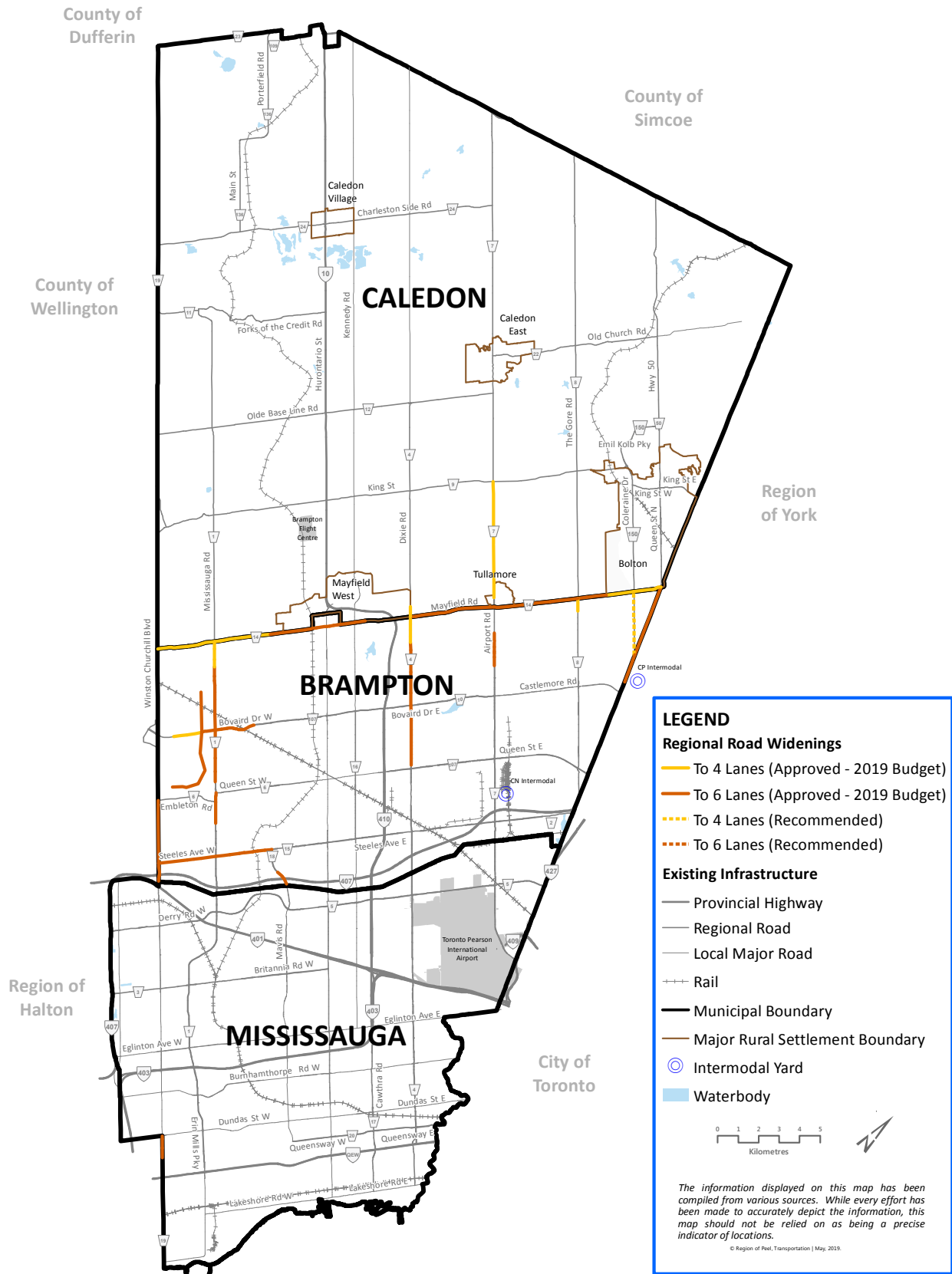


FIGURE 6-14
 Number of Lanes, Region of Peel 2031 Horizon Year

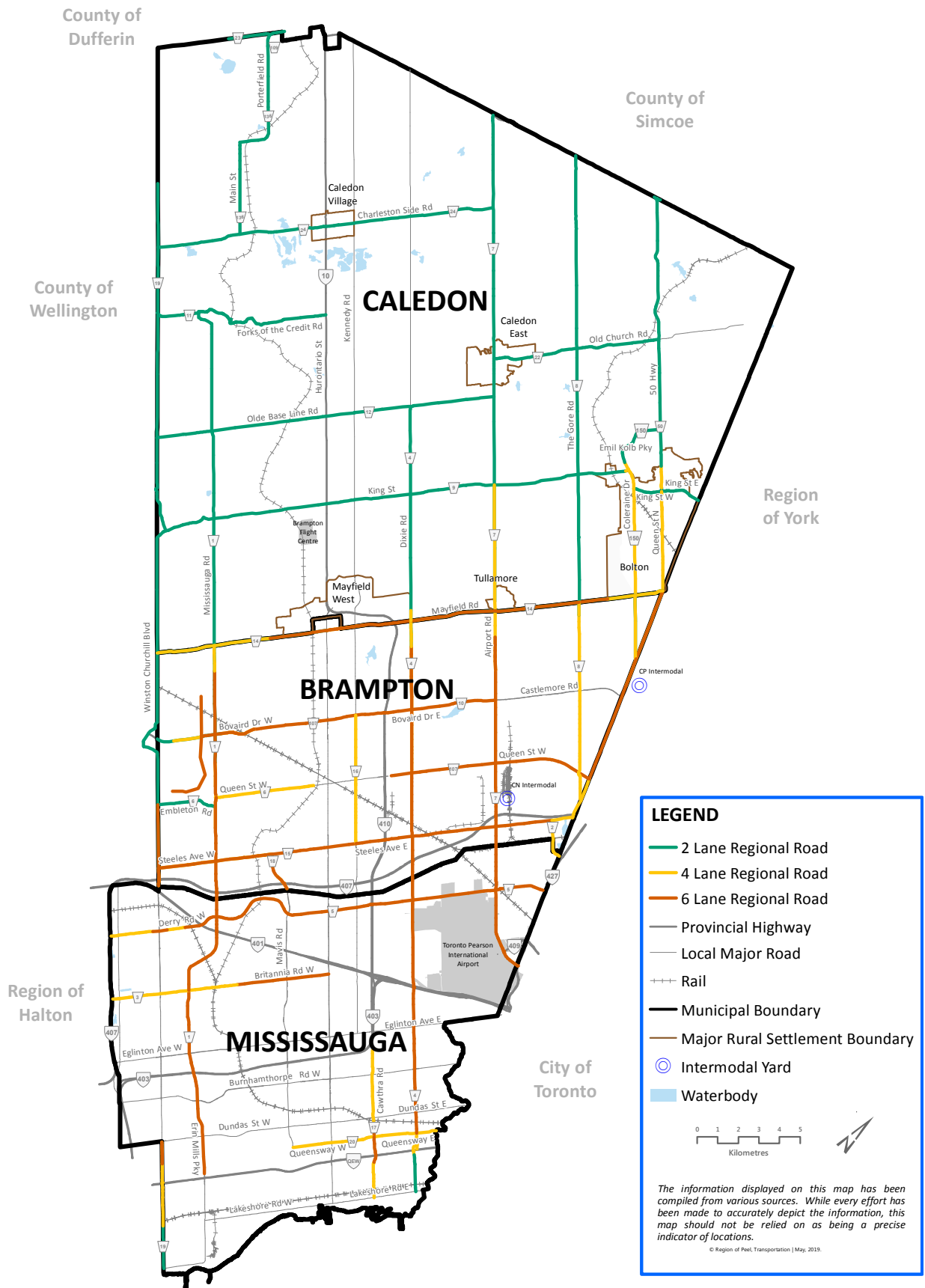


FIGURE 6-15
Road Widenings, Region of Peel 2032-2041 Horizon Years

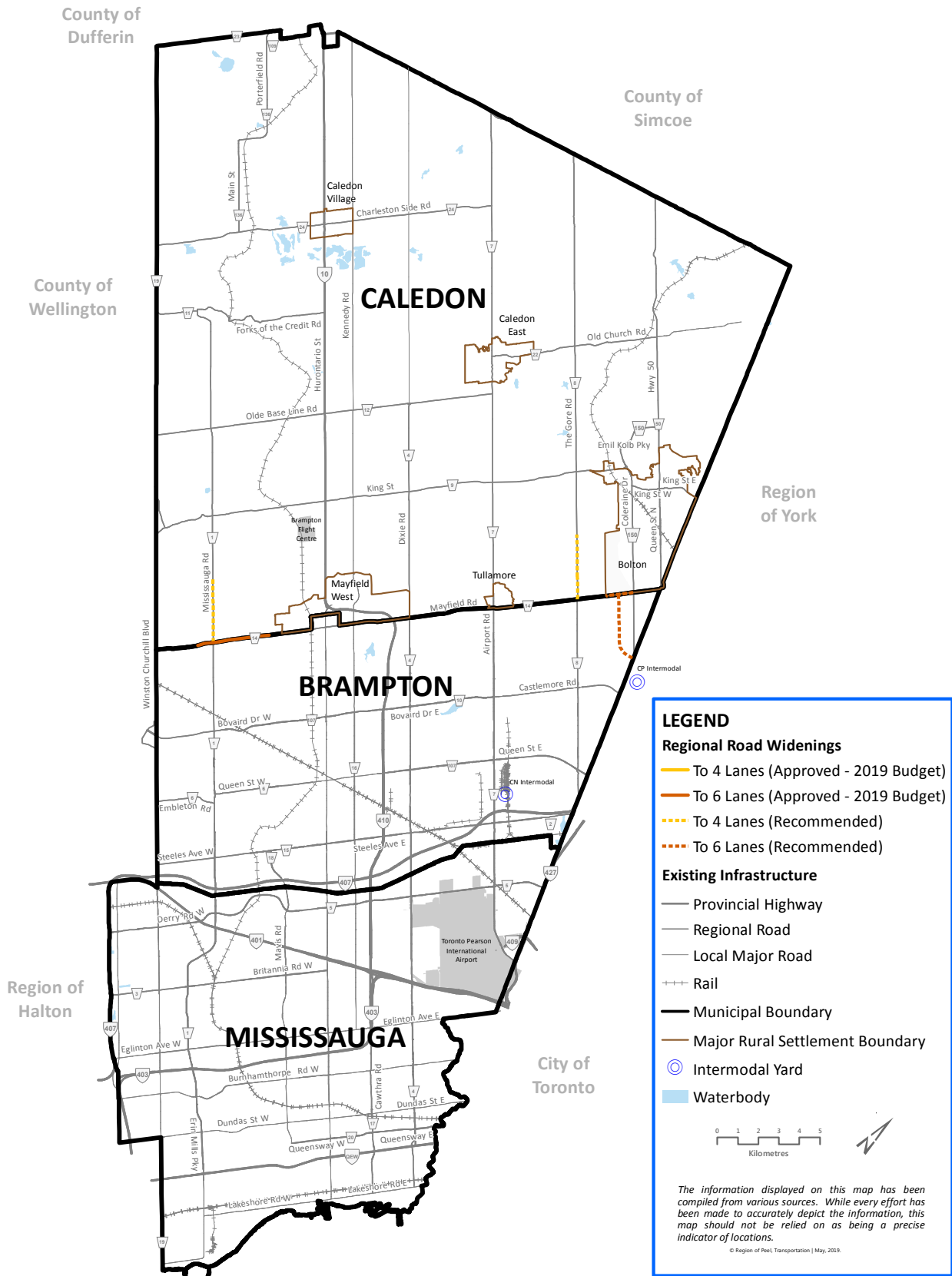
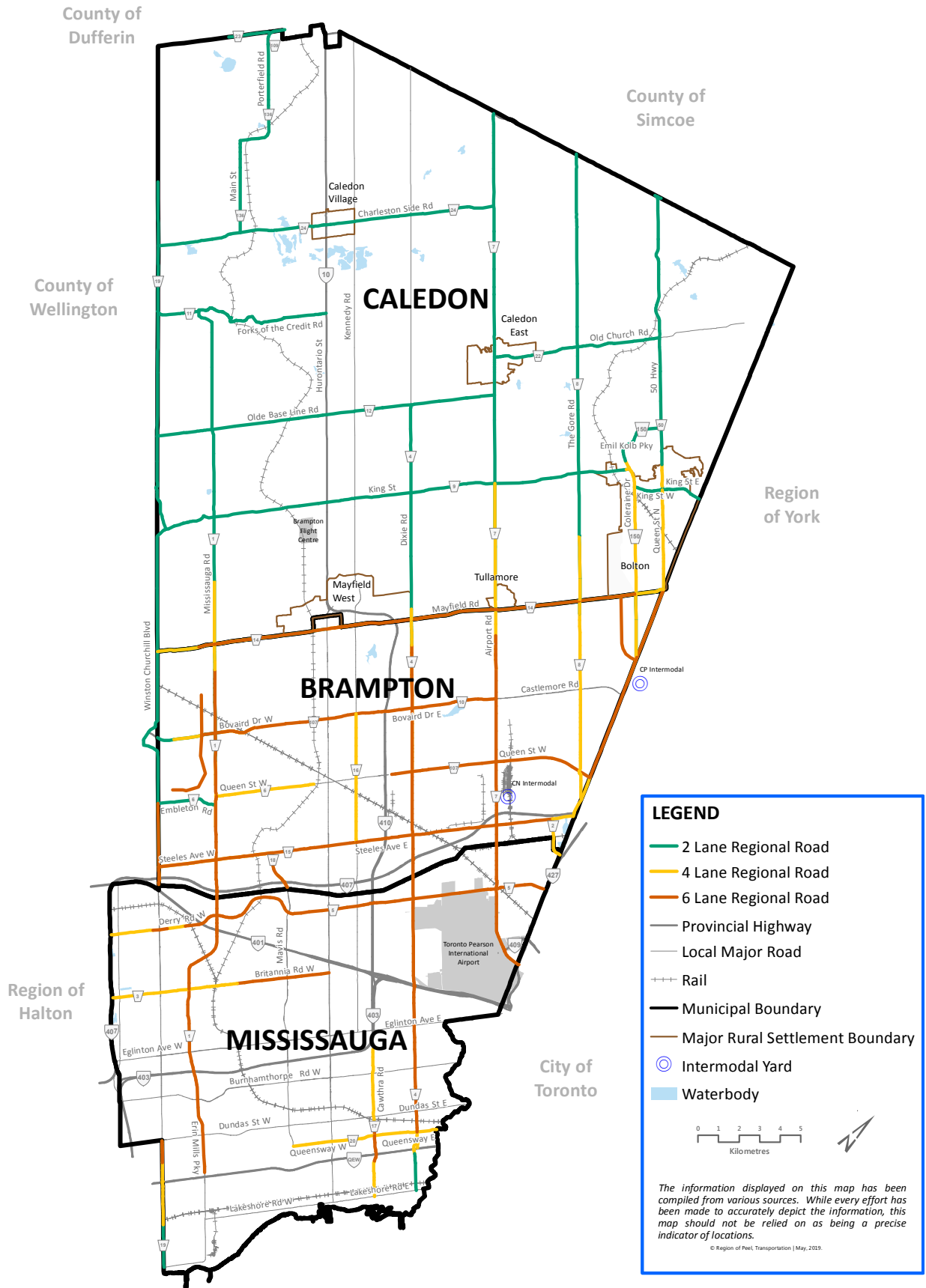


FIGURE 6-16
 Number of Lanes, Region of Peel 2041 Horizon Year



7.0

Implementation and Measurement

- 7.1 How will the Region of Peel Implement the Long Range Transportation Plan?
- 7.2 How will the Region of Peel Measure Success?

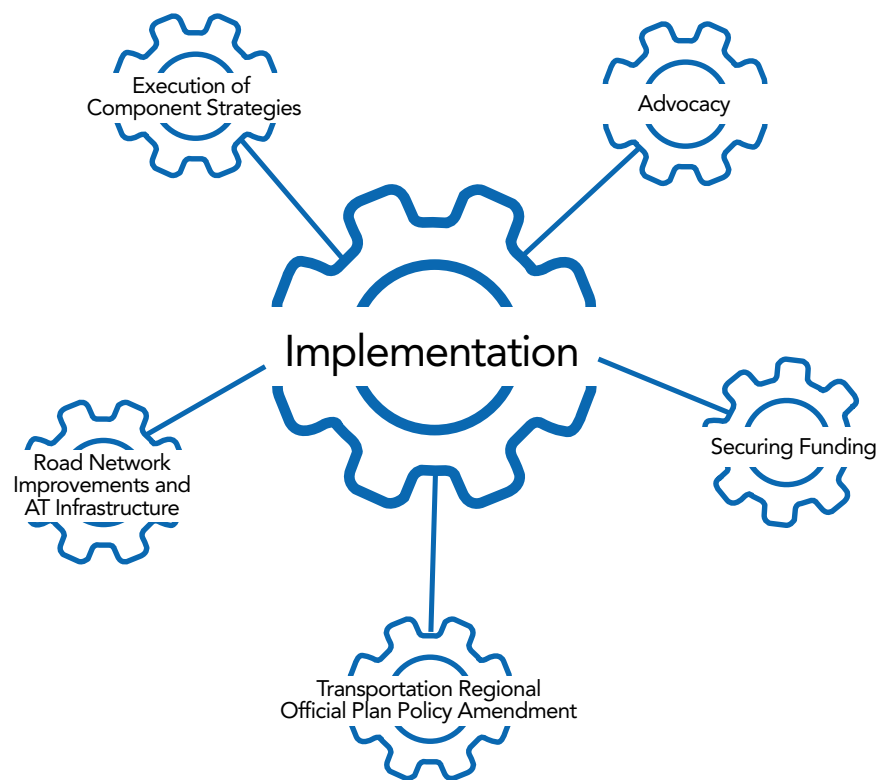


7.0 Implementation

7.1 How will the Region of Peel Implement the Long Range Transportation Plan?

The implementation of the LRTP will be a five-pronged approach (Figure 7-1). The first is the execution of the three component strategies: Sustainable Transportation Strategy; Vision Zero Road Safety Strategic Plan; and the Goods Movement Strategic Plan. The actions identified within these strategies are intended to enhance the health, well-being, and quality of life for current and future residents, businesses, and visitors to the Region through improvements in safe, sustainable, and vehicular mobility, as the Region works towards achieving its vision of a *Community for Life*.

FIGURE 7-1
Region of Peel's Five-Pronged Approach to Implementation



The second prong consists of the Road Network and Active Transportation (AT) improvements identified in Section 3.0. The combination of road improvements and AT infrastructure is intended to facilitate the Region's journey towards the 50% sustainable mode share target to accommodate anticipated growth and develop in a way that does not compromise the ability of future generations to meet their needs.

FIGURE 7-2
Themes Identified for Policy Review

Key Themes	Proposed Policy Directions
Minimizing health impacts/improving health through transportation	<ul style="list-style-type: none"> • Mitigate the health impacts that result from a growing transportation network and its relationship to GHG emissions, air quality, and injury prevention • Increase number of Region of Peel residents using active modes to travel to work and school • Grow the active transportation network to foster social interaction, community connectivity and improved health
Increasing efficiency of the goods movement network	<ul style="list-style-type: none"> • Implement freight transportation demand management measures to increase efficiency of the Region’s goods movement network • Plan for and protect major goods movement facilities for the long term • Work with appropriate agencies to develop a long-term vision for the U.S.-Canada border and ensure the efficient movement of people and goods • Implement timely intersection improvements to ensure efficient movement of traffic along goods movement corridors
Integrating land use planning with transportation planning	<ul style="list-style-type: none"> • Electricity transmission and distribution systems now included in definition of “infrastructure” • Develop and implement freight supportive land use guidelines to ensure coordination between land use planning and goods movement • Integrate transportation demand management into planning and development approvals process • Promote active transportation and transit • Provide bicycle parking at schools, transit stations, commercial properties, and community and cultural locations • Support transit use by encouraging area municipalities to integrate transit service with active transportation through the planning and development approvals process • Area municipalities to promote land uses that foster social interaction, facilitate active transportation and community connectivity and encourage building and site designs that provide convenient access for users • Collaborate with local municipalities to ensure the design of Regional roads support the development of complete streets and complete communities
Shifting trips to sustainable modes	<ul style="list-style-type: none"> • Facilitate the use of sustainable modes through the provision of bicycle parking • Implement action plans for advancing a sustainable multi-modal goods movement system in Peel • Implement TDM strategies in existing and future transit hubs, major transit corridors and major transit station areas • Encourage transit and active transportation • Promote infrastructure that encourages teleworking
Partnerships	<ul style="list-style-type: none"> • Work with area municipalities to plan for and protect major goods movement facilities and corridors for the long term • Strengthen partnerships with public and private stakeholders to implement a vision for goods movement in the Region of Peel
Monitoring	<ul style="list-style-type: none"> • Periodically review the strategic goods movement network in the Region of Peel • Evaluate and measure the progress of TDM programs and develop new innovative strategies and initiatives • Develop performance indicators for the implementation and use of active transportation and use these indicators to monitor the impact and effectiveness of the active transportation plan
Environmental	<ul style="list-style-type: none"> • Promote better coordination, communication, and improved efficiency of goods movement using freight transportation demand management measures • Improve reliability in the transportation system by promoting the implementation of transportation infrastructure that is resilient to extreme weather conditions such as green infrastructure

This LRTP sets the direction for transportation planning and decision-making in the Region of Peel. It introduces several key themes and principles that would need to be translated into policies to be incorporated into the Region's Official Plan. Consequently, the third prong to the implementation approach is a Regional Official Plan Amendment (ROPA) to update transportation policies. Figure 7-2 provides an overview of the key themes discussed in this LRTP and the proposed policy direction that will inform the Transportation ROPA.

Provincial infrastructure and investment play an integral role in shaping the Region's future transportation system and achieving the LRTP objectives. Consequently, the fourth prong consists of advocacy efforts for key highway and transit corridors in the Region. To achieve the 50% sustainable mode share target by 2041, the largest increase from current conditions must occur in transit mode share, making provincial investment in transit essential to the Region's ability to meet this target. The Region of Peel's current transit advocacy positions include:

1. Kitchener Line: Two Way, All-Day, 15 Minute GO Service (Union Station to Mount Pleasant GO)
2. Milton Line: Two Way, All-Day, 15 Minute GO Service (Union Station to Milton GO)
3. Bolton Rail Service (Union Station – Bolton)



Courtesy of: Metrolinx, 2014

The Region of Peel has been advocating for a highway in the GTA West corridor to accommodate future growth, reduce substantial strain on Regional and Municipal transportation networks, and facilitate the efficient movement of goods. The highway is required, not only for transportation capacity, but also as a catalyst for future economic growth in the Region of Peel. To ensure timely completion of the corridor, the Region of Peel continues to advocate that the Province of Ontario resume the GTA West Corridor Environmental Assessment (EA) from the point where it was suspended and move forward with a highway and associated dedicated transitway. In addition to meeting future travel demand, the completion of this EA is integral to the Region's ability to advance comprehensive land use planning in key areas protected by the Province.

In order to complete the Provincial Freeway Network within the Region of Peel, alleviate truck traffic demand on Regional north-south arterial roads, and enhance safety, the Region of Peel also continues to advocate for the further extension of Highway 427 beyond Major Mackenzie Drive.

FIGURE 7-3
Funding for Regional Transportation Projects

	Source of Funds	Description of Tax
Current	Internal reserves	Property tax
	Development Charges reserves/funds	Development charges levy paid by developers
	Gas tax	Tax on fuel allocated to municipalities
Other Possible Funding	Federal stimulus funding	Usually one-time, short-term programs
	Toll roads/HOV lanes	User pay systems
Additional Strategies in Lieu of Funding	Public-Private Partnerships (PPP)	Partnership with government and private sector (usually for larger-scale projects)

The final prong of the approach is securing funding to support the implementation of the component strategies and infrastructure improvements in a way that is responsible and financially sustainable. Figure 7-3 shows the funding sources available to the Region of Peel for various transportation projects.

Internal reserves fund both state of good repair projects and a portion of growth-related project costs. Development Charge reserve funds are used for growth-related projects and are collected based on the *Development Charges Act, 1997*.³¹ Federal gas tax funding is a permanent funding source allocated to the Province, which in turn flows as funding to municipalities to invest in local infrastructure. In the Region of Peel, Council has approved the Federal gas tax to be utilized for TransHelp, active transportation such as multi-use trails and transportation demand management programs.

7.2 How will the Region of Peel Measure Success?

To ensure the LRTP is meeting the objectives of the three focus areas; sustainable mobility, vehicular mobility, and safe mobility, a measurement protocol has been developed composed of performance indicators. Figure 7-4 provides a snapshot of the key objectives and action items, and their associated measure of effectiveness. These measures are intended to provide staff with insights into our progress towards the long term goals of: achieving a 50% sustainable mode share, managing congestion, and reducing injuries and fatalities by 10% within our transportation system.

The changing nature of the transportation and planning landscape, results of the Region’s progress toward long-term goals, trends driving change, and updates to legislation require a continual evaluation of the LRTP’s original assumptions. In accordance with the MCEA process, the LRTP document will be reviewed every five years to determine the need for a formal update to the Plan to reflect these changes.⁵

FIGURE 7-4
Snapshot of Measurement Protocol

Focus Area	Key Objective(s)	Key Action Item(s)	Potential MOE (Measure of Effectiveness)
Sustainable Mobility	Increase sustainable modal share to 41% by 2021	Expand active transportation (AT) infrastructure and implement programs that support it, via specific Sustainable Transportation Strategy (STS) action items and projects	Number of active transportation trips. The goal is a daily increase of 122,000 trips from 2011 levels by 2021
		Expand network of carpool facilities and programs that promote carpooling on the Regional road network, via specific STS action items and projects	Number of carpool trips. The goal is a daily increase of 34,000 trips from 2011 levels by 2021
		Support local municipalities with transit enhancement on Regional roads	Number of transit trips. The goal is a daily increase of 34,000 trips from 2011 levels by 2021
		Develop a methodology for assessing multi-modal level of service to support transportation studies	Development of a project-based accurate methodology to assess multi-modal level of service
	Meet the mobility needs of persons with disabilities who are unable to use conventional transit	Expand service provision of TransHelp services and look for integration opportunities with conventional transit	Number of people that utilize specialized transit to access conventional transit
			Amount of first and last mile infrastructure that is updated to AODA standards
Provide support to schools to encourage a healthy lifestyle	Expand the School Travel Planning (STP) program to 100 schools by 2020	Transportation modes of students in STP schools (based on hands-up surveys, family counts, travel surveys, and traffic counts)	
Reduce air emissions from transportation sources	Use the Region's Air Quality Model to identify drivers of poor air quality vehicles and identify and implement intervention and mitigation strategies	Amount of harmful pollutants emitted	
Vehicular Mobility	Reduce congestion by increasing capacity of the transportation network where feasible	Evaluate the identified road improvements in the Region of Peel for implementation	Congestion levels (volume-to-capacity, travel times) on improved corridors
	Increase efficiency of exiting transportation network through intelligent transportation systems (ITS)	Implement and optimize advanced traffic signals for Mississauga and Brampton	Vehicle travel time on designated corridors
	Optimize road operations and maintenance	Provide winter maintenance at the level endorsed by Regional Council	Maintenance of roadways at the level of service endorsed at Regional Council
	Increase the efficiency of the movement of goods in Peel Region	Complete and implement the <i>Long Combination Vehicle (LCV) Study</i> to better facilitate the use of LCVs in Peel	Number of LCV trips originating and/or destined for the Region
		Facilitate the safe and efficient movement of parcels by surveying Peel residents on e-commerce and identifying opportunities for improvement	Travel times on designated roads and truck delivery times
Survey responses from Peel residents and the total potential distance savings on Regional delivery routes			
Foster industry innovation through a Connected Automated Vehicle (CAV) corridor pilot project	Number of CAV corridor pilot participants		
Safe Mobility	Reduce fatal and injury collisions in the Region of Peel and move towards Vision Zero	Reduce the number of fatal and injury collisions in the six key emphasis areas: intersection related, aggressive driving related, distracted driving related, pedestrian, cyclist, and impaired driving related through the implementation of the <i>Road Safety Strategic Plan (RSSP)</i>	Decrease number of fatal and injury collisions by 10% by 2022.

8.0

Conclusion



8.0 Conclusion

As the Region continues to rapidly grow and develop, there is a need to invest in sustainable transportation modes to sustain growth and achieve a *Community for Life*.

The Long Range Transportation Plan recognizes that relying on automobile-oriented road improvements alone is an unsustainable method of addressing the Region's transportation demands. The Region of Peel is moving towards an integrated network in which 50% of trips are made using sustainable modes of transportation such as transit, cycling, walking and carpooling. The benefits to the community and its people are many, ranging from reduced pressure on road infrastructure to reduced emissions and more sustainable communities.

The LRTP is designed to assist in informed decision-making, specifically as it relates to capital budgeting and infrastructure programming in support of future growth and the Development Charges Background Study and By-law Update. The LRTP identifies actions in each of the three focus areas – sustainable mobility, safe mobility, and vehicular mobility and goods movement. These actions will help ensure that by 2041, the Region increases the network capacity for growth by establishing a balanced network between automobiles and sustainable modes to be safe, efficient, and integrative both within the Region and with the broader network across the Greater Toronto and Hamilton Area.

While the Long Range Transportation Plan is developed in view of a 2041 horizon year, it is expected that an update will be completed in five years to ensure the Region is providing people with the choice and ability to access safe, sustainable, efficient travel modes. The Long Range Transportation Plan unifies the three component studies – Sustainable Transportation Strategy, Road Safety Strategic Plan, and the Goods Movement Strategic Plan. In doing so, Peel will remain an attractive destination — for every type of person, at every stage of life, to live in, work in or visit – a *Community for Life*.

A

Appendix A

Region of Peel 50% Sustainable Mode
Share Target Background Paper

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1.0 Introduction

The Peel Long Range Transportation Plan (LRTP) serves as the Transportation Master Plan for the Region of Peel. By 2041, it is anticipated that morning peak hour trips within the Region of Peel will increase by approximately 40% or 303,000 added trips. This growth will have a significant impact on travel, and road widenings alone will not be able to contain the potential increase in congestion. Considering the anticipated growth, the LRTP addresses increasing demand pressures on Peel's transportation network by focusing on shifting travel behaviour through a transportation infrastructure needs approach.

Increasing the network capacity by means of road expansion is approaching its limits; the Region of Peel is shifting its focus towards sustainable travel choices. Analysis performed in 2015-2016 demonstrated the need for a 50% sustainable mode share target by 2041 to better manage growth. The target is intended to address travel demands stemming from growth while serving as a prime consideration for prioritising transportation goals in the Region.

In 2016, an independent review of the modal split targets was undertaken by a consultant. The analysis and recommendations, which developed into the Sustainable Transportation Strategy (STS), determined a 50% sustainable mode share target as feasible and outlined the Region's roles and responsibilities in achieving the mode share targets. The STS was approved by Council in February 22, 2018 under Council Resolution 2018-121.

This background paper chronicles how the Region arrived at the decision to increase the sustainable mode usage and documents the methodology followed to set a 50% sustainable mode share target..

2.0 Background

Where we were

The Region of Peel has traditionally been in the practice of widening roads to accommodate population and employment growth. The planning approach during the 1990's and early 2000's was primarily car-centric, intended to complement the rise of the automobile and suburban growth, with an emphasis on keeping vehicles and goods moving.

Where we are

Today, the Region of Peel serves 1.4 million residents and has a road network comprised of 28 Regional roads. Currently, 63% of people drive and only 37% of people use sustainable modes of transportation. As part of developing the Region's Strategic Plan 2015-2035, a community engagement survey identified traffic congestion as the number one "top of mind issue" for Peel residents followed by managing growth (see Figure 1).

FIGURE 1
10 Top of Mind Issues, Region of Peel



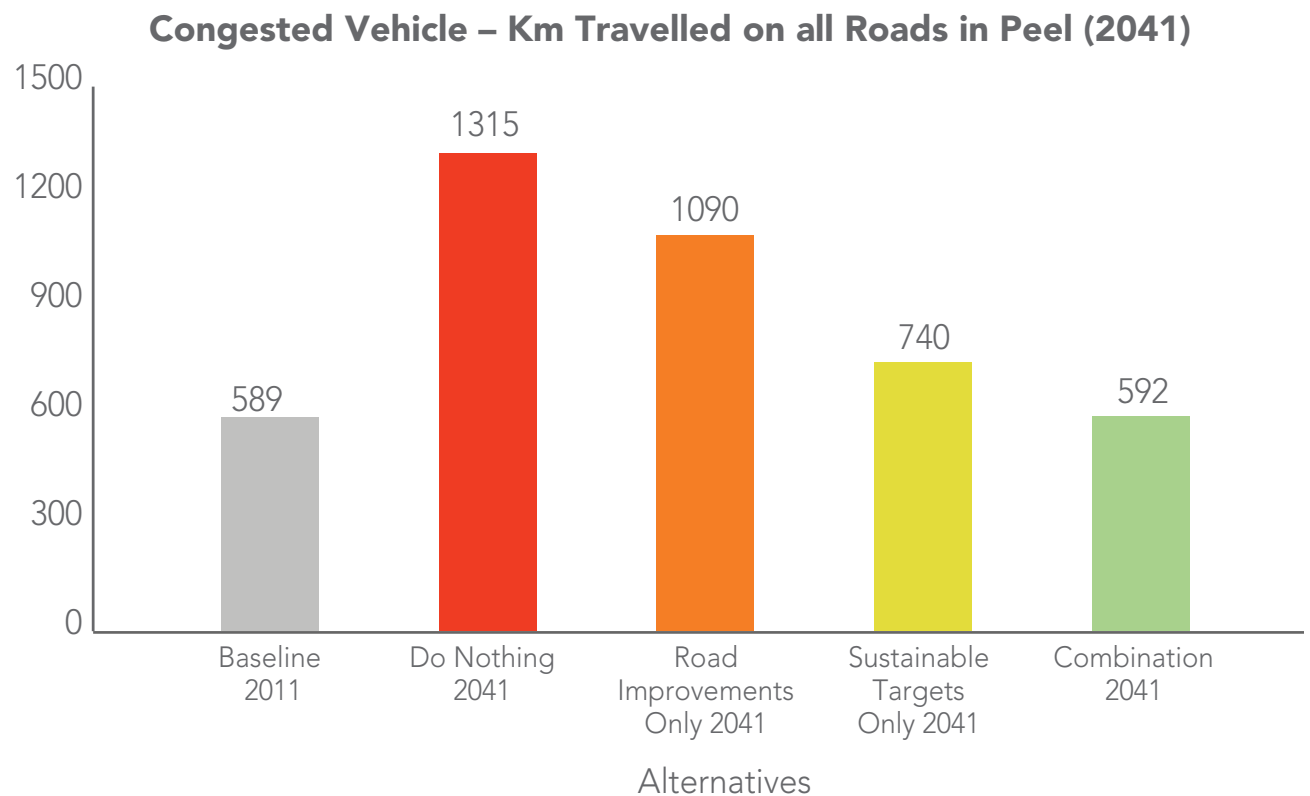
Where we're going

By 2041, the Region of Peel will be home to over 500,000 new residents and 250,000 new jobs resulting in a total population of approximately 2 million people and 970,000 jobs (Growth Plan, 2017). Resultantly, the number of trips on Peel roads every weekday morning is expected to increase by over 40% by 2041. This is equivalent to 303,000 additional trips. With this anticipated growth, leaving current travel behaviours unaddressed will have significant impacts on the transportation network, resulting in unsustainable travel times.

Congested Vehicle-Kilometers Travelled (VKT) for all roads within Peel by 2041 is a useful estimate of the magnitude of traffic congestion at the regional level. To calculate the VKT, the congested KMs are multiplied by the respective number of vehicles experiencing congestion on a road section and are summed over the Region. A lower Congested VKT value is more desirable.

As per Figure 2, Peel's modelling analysis shows that by 2041, in a "Road Improvements Only" scenario where all feasible road improvements are implemented by Peel, local municipalities, and the province, the Congested VKT value rises 85% compared to the 2011 Baseline. This is a significant deterioration of congestion levels by 2041. This analysis helps in understanding that road improvements and widenings alone cannot solve the issue of deteriorating congestion due to growth.

FIGURE 2
Congested VKT Values for the Morning Peak-Hour on All Roads Within Peel by 2041

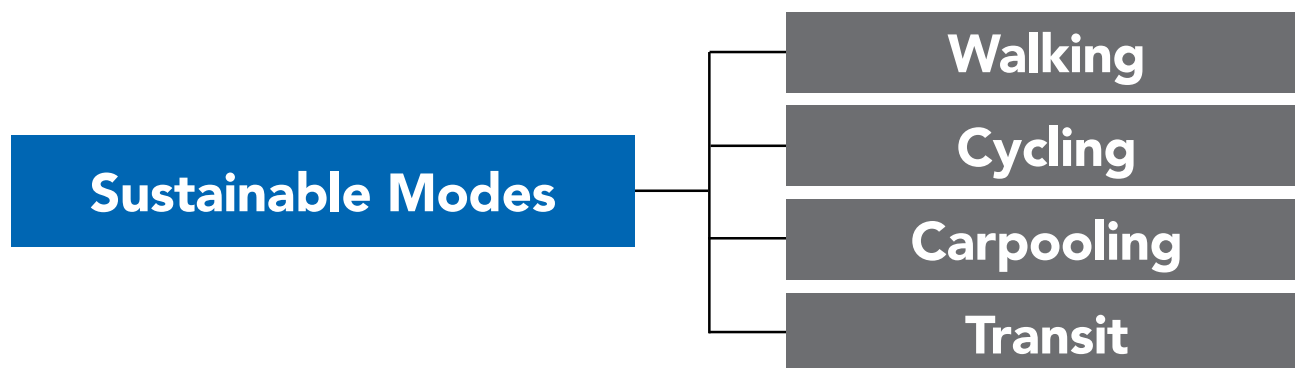


Importance of the LRTP Mode Share Target to the Region of Peel

The Region's Long Range Transportation Plan sets the framework to guide long-term transportation infrastructure needs, investment, and decision making. It is the mechanism to shift travel behaviour away from single occupant vehicle trips and towards sustainable modes of transportation comprised of walking, cycling, carpooling, and public transit (See Figure 3). This shift plays an important role in diverting the Regional road system from unsustainable travel times.

FIGURE 3

Congested VKT Values for the Morning Peak-Hour on All Roads Within Peel by 2041



To build a "Community for Life" as envisioned in the Region's Strategic Plan, the Region of Peel is responsible for addressing the top of mind issues identified in Figure 1. The Regional Official Plan sets out the policy framework for identifying an approach to address these issues and mandates facilitating the movement of all travel modes while promoting the efficient movement of people and goods, with a focus on moving people by modes other than single occupant vehicles. The 50% sustainable mode share target is a Region wide position that commits to developing and promoting a sustainable and integrated multimodal transportation system.

With the implementation of the sustainable mode share targets, in combination with feasible road widenings, the Congested VKT by 2041 will only see a 5% increase from the 2011 Baseline, which is extremely desirable [please refer to Figure 2].

The modal split is also an action plan for the guiding principles of the Provincial Growth Plan, 2017 which gives direction on providing travel choices, including sustainable transportation as a practical element of the urban transportation system. By prioritizing the 50% sustainable mode share, the Region is planning and managing its transportation system in a way that encourages the most financially and environmentally appropriate mode for trip-making.

3.0 Development of Mode Share Targets

3.1 Preliminary Research and Resources

Data Selection and Historical Trend Analysis

Various datasets were used in the in the development and validation of the Region’s modal split targets (see Table 1). The process took place in 2015 and 2016, and thus, the data and references beyond ones approved in 2016 were not used in the analysis.

TABLE 1: Sources of Data Used

Source	Description	Comments
Transportation Tomorrow Survey	Collects information on the demographics (age, gender, etc.) and travel choices and preferences every 5 years	Current conditions of the roadway, active transportation (AT) infrastructure, carpool and transit networks
Census Program – National Household Survey	Statistics Canada collects census data for every person in Canada every five years on a specific day	Feasible road improvements based off capital plans and master plans from Peel, local municipalities, and the Province by 2041
Region of Peel’s Population and Employment Forecasts	Population and employment forecasts that are obtained from Regional Planning and Growth Management in the Region of Peel are used to see the rate of future growth	Current conditions of the roadway, but enhanced transit networks Reaching the Region's mode share target of achieving 50% sustainable transportation modes by 2041 by improving AT and carpool network and helping local municipalities improve transit operations on Regional roads

The Transportation Tomorrow Survey (TTS) from 1996-2011 was used to identify the historical trends of mode shares in Peel Region. The TTS data was retrieved by using the “Primary Mode of Travel” and “Regional Municipality of Households” parameters, whilst filtering it for the AM Peak Hour (6:00am to 9:00am), and for trips that start from Peel households. These factors were applied ensure consistency with project’s goals and ensure compatibility with Peel’s Travel Demand Forecasting Model. From there, the data was used to find the historical trends of mode shares in Peel Region. Between 1996 and 2011, the morning peak transit mode share increased from 9.1% to 10.9%, while the auto driver mode share decreased from 64.2% to 63.0% (see Table 2).

TABLE 2: Historical Trends of Household Trips Mode Share within Peel (1996-2011)

*Other mode includes trips such as: school bus, taxi passenger, and any uncaptured modes

AM Peak Period	1996	2001	2006	2011
Auto Driver	64.2%	64.7%	62.9%	63.0%
Carpool	13.5%	13.8%	15.2%	14.9%
Transit (local and GO Transit)	9.1%	9.1%	9.5%	10.9%
Walk and Cycle	8.4%	7.9%	7.6%	6.9%
Other*	4.7%	4.5%	4.8%	4.3%

Internal and External References Used

In addition to the compilation of datasets, Regional staff undertook a detailed review of available plans and policies from the Region of Peel, local municipalities and transit agencies, and the Province (see Table 3). These references provided Regional staff with direction in regards to the future mode shares, since some plans and policies incorporated pre-determined modal split targets.

TABLE 3: List of References used in this project

Sources	Year	Carpool	Transit	A.T.
The Big Move, Metrolinx	2008		X	
Long Range Transportation Plan (LRTP), Region of Peel	2012	X	X	X
Active Transportation Plan, Region of Peel	2012			X
5 Year Transportation Demand Management Plan, Region of Peel	2015	X	X	X
Moving Mississauga from Vision to Action, City of Mississauga	2011		X	
Cycling Master Plan, City of Mississauga	2010			X
Transportation Master Plan Update (as well as Technical Reports #3, #4, #5 and #6), City of Brampton	2015	X	X	X
Pathways Master Plan, City of Brampton	2002			X
GO Rail Ridership Growth Projection, Metrolinx	–		X	
Transportation Demand Management Evaluation Tool, Region of Peel	2015	X	X	X

3.2 Detailed Review of References

In order to gain a better understanding of the factors that affect the modal share in Peel Region, research was done on various documents, plans, policies, programs, and planned future developments (see Table 3). All factors that could influence future behavioural change were reviewed and evaluated, as detailed below.

Active Transportation (Walk and Cycle)

Based on the 2012 Active Transportation Study, the Region of Peel is aiming to increase the total active transportation trips from 5% to 10% in the long term. Both the City of Brampton and City of Mississauga have a long-term active transportation target of 10% (see Table 4).

Peel Region's first Active Transportation Plan (approved in 2012) fostered the development of Active Transportation infrastructure, programming and education. The Active Transportation facilities that were implemented by the Region of Peel from 2012 – 2015 (see Appendix A) were also taken into consideration.

TABLE 4: Future Active Transportation Targets

	Short Term	Long-Term Goal	Source
Region of Peel	7%	10%	Peel Region's Active Transportation Plan (2012)
City of Mississauga	–	10%	Moving Mississauga From Vision to Action: Mississauga Interim Transportation Strategy (July 2011)
City of Brampton	–	10%	City of Brampton Transportation Master Plan Update (April 2015)

Public Transit

The transit system within Peel Region consists of GO Transit, Mississauga Transitway (MiWay) and Brampton Transit, owned by Metrolinx, City of Mississauga and City of Brampton respectively. Jurisdiction of public transit lies with the local municipalities. Therefore, the transit component in this approach is highly dependent on the information and data collected from each owner.

City of Mississauga

City of Mississauga has identified their A.M. peak travel period transit modal split to be 18% in 2031 (see Table 5). This split was calculated with an assumption that all planned improvements, including Metrolinx 2041 RTP projects, MTO highway improvements, local and regional road Improvements would be implemented within the planned timeframe.

City of Brampton

City of Brampton has identified their local transit modal splits in the P.M. peak travel period as 14% by 2031 and 16% by 2041 (see Table 5). To achieve this, Brampton Transit recommends that higher order transit facilities be implemented in strategic locations. This includes expanding upon the ZÜM network and also introducing new rapid transit corridor that operate in exclusive lanes.

Metrolinx

The GO Rail Passenger Survey (2013) within Peel Region provides the ridership information of Lakeshore West Line, Milton Line and Georgetown Line. It allows a brief understanding of the usage of each station along these three transit lines. However, the summary does not provide any information on trip origin/destination at the station, nor the number of Peel residents using the transit services. Therefore, the GO Rail Passenger Survey could only be used as a reference.

TABLE 5: Future Public Transit Targets

	2031	2041	Comments	Source
City of Mississauga	18%	–	<ul style="list-style-type: none"> The modal split target was determined for AM Peak Period trips It includes both local and GO transit 	Moving Mississauga From Vision to Action: Mississauga Interim Transportation Strategy (July 2011)
City of Brampton	14%	16%	<ul style="list-style-type: none"> The modal split target was determined for PM Peak Period trips It includes only local transit 	City of Brampton Transportation Master Plan Update (April 2015)

Regional Transportation Demand Management Programs

Transportation Demand Management (TDM) Programs developed by Peel Region were considered during the review of references (see Table 6). To account for the impact and effectiveness of TDM in reducing vehicular trips, each project was assigned a score reflecting the influence that the project could have on various modal choices.

TABLE 6: TDM Programs and Projects within Peel Region

Programs/Projects	AT	Transit	Carpool	Telework	Origin/ Destination	Priority
AT Infrastructure	1	2	0	0	Both	Very High
Smart Commute Program Support	2	2	1	2	Destination	High
TDM Guidelines and Tools Project	1	1	1	0	Both	High
Changes to Development Approval Process	1	1	1	0	Both	High
Development Review	1	1	1	0	Both	High
Telework Guidebook	0	0	0	1	Destination	High
Residential Outreach Programs	2	1	0	0	Origin	High
TDM Social Marketing	1	1	1	0	Origin	High
School Parking Pilot Program	1	0	0	0	Both	High
School Travel Planning Pilot	1	0	0	0	Both	High
Pedal wise Mentorship Program	1	0	0	0	Origin	Medium
CBSM in Southfields Neighbourhood	1	1	1	0	Origin	Medium
Individualized Marketing for Carpool Lot	–	1	1	0	Origin	Medium
Walk + Roll Peel Website	1	0	0	0	Both	Low
Bicycle Clinic Pilot Project	1	0	0	0	Origin	Low
Events (e.g.: Bike Month, etc.)	1	0	0	0	Origin	Low
Greenbelt Trail	1	0	0	0	Both	Low
Employee Trip Reduction Programs	1	1	1	2	Destination	Low
Peel Safe and Active Route to School Committee (PSARTS)	1	0	0	0	Both	Low
Bike Rodeo Kit	1	0	0	0	Both	Low
Active Switch Community Program	1	0	0	0	Origin	Low
Study on Mitigating Congestion	2	2	2	2	Both	Low
Carpool lot in Bolton	2	1	–	–	Origin	Low

(0=not a main target of the project/program; 1=Intensive; 2=Less Intensive)

Other

Other unique initiatives considered during the literature review included but were not limited to:

- Mississauga Transitway
- Hurontario Light Rail Transit (LRT)
- Regional Express Rail (RER) services
- GTA West Corridor Planning and Environmental Assessment Study

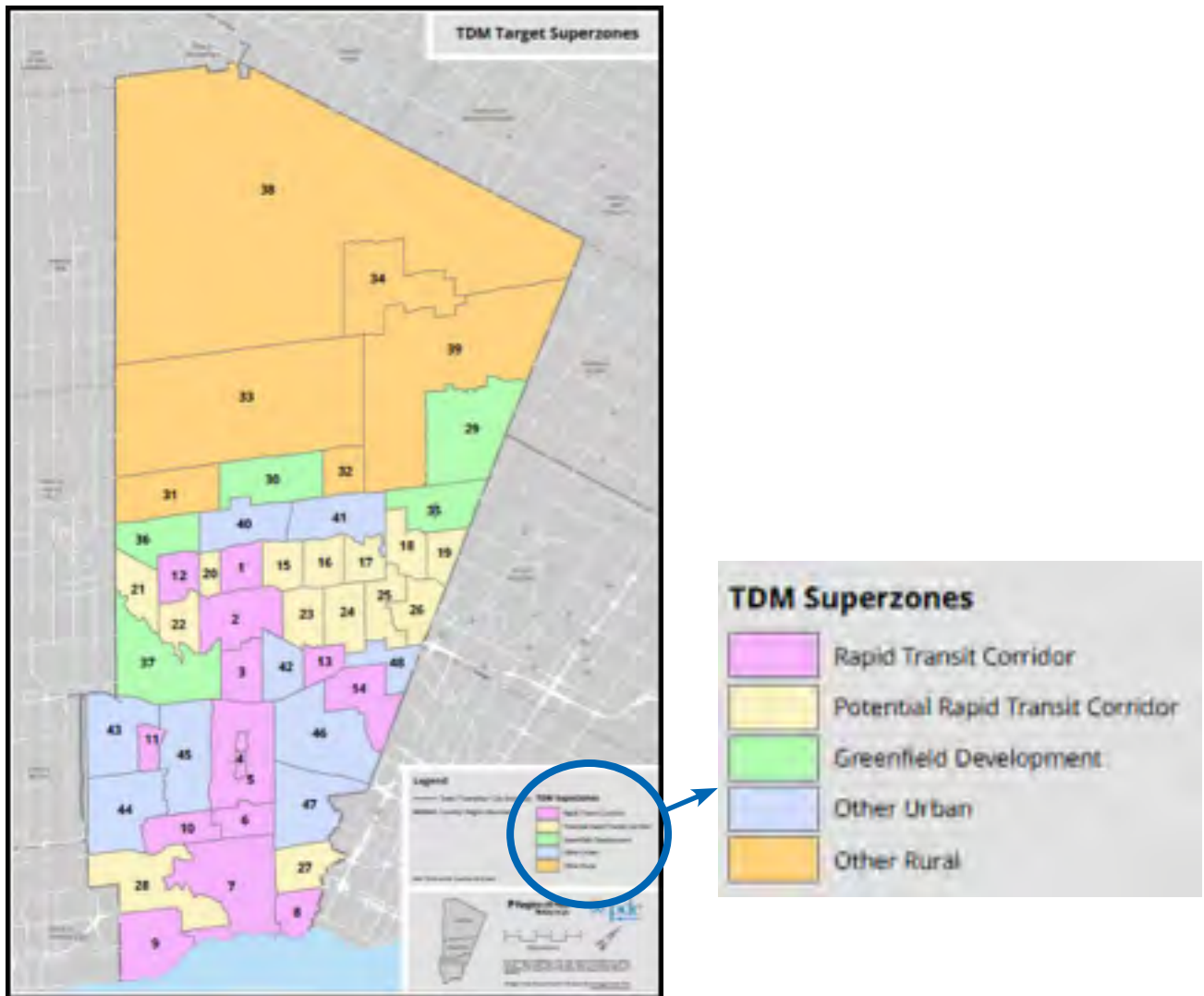
3.3 Development of Preliminary Modal Split Targets

Step 1: Development of Traffic Super-Zones

To forecast future mode share targets in Peel, a total of 48 regional Super-zones were grouped into five different Super-Zone categories.

The Super-zones were created by grouping together smaller TTS traffic zones that have similar land use characteristics, current and future transportation infrastructure, routes, including transit, and growth rates. Thus, it can be assumed that the future mode share targets will be similar in each of the Super-zone categories. The Super-zone categories included rapid transit corridor, potential rapid transit corridor, greenfield development, other urban, and other rural areas (see Figure 4).

FIGURE 4
Super-zones for Mode Share Analysis



Step 2: Ranking of Modal Targets for Traffic Super-Zones

To determine the sustainable mode split growth potential for each Super-zone category, transportation and land use characteristics, past travel behavior patterns, future plans, policies, and infrastructure were weighted (see Table 7).

TABLE 7: Ranked Mode Share for each Super-zone Category

Zone Category	Auto Driver	Carpool	Public Transit	Active Transportation
Rapid Transit Corridor	5	3	1	1
Potential Rapid Transit Corridor	4	4	2	2
Greenfield Development	2	1	4	3
Other Urban	3	5	3	4
Other Rural	1	2	5	5

Note: 1 is the highest, 5 is the lowest

For example: the Rapid Transit Corridor was ranked as having the highest potential growth in regards to Public Transit amongst the Super-zone categories. This was concluded from the planned service and infrastructure improvements (such as Hurontario LRT, Mississauga Transitway, and RER). Similar analysis was performed for each mode and Super-zone category.

Step 3: Development of Modal Targets for Individual Super-Zones

The rankings of modal share growth informed the mode targets for each Super-zone. This was done at the individual Super-zone level, and then aggregated to the entire Super-zone category.

It was assumed that the travel behavior trend in the past will continue into the future. Thus, linear extrapolation was used to forecast data for each individual Super-zone. However, adjustments had to be made to account for past trends that could change over the next thirty years. Factors taken into consideration while adjusting the projected trends included, but were not limited to:

- Population and Employment Growth: Obtaining Population and Employment Forecasts and calculating Compound Annual Growth Rates (CAGR) from the forecasts. Through the reference review and the increasing sustainable mode trends, multiple scenarios were analyzed where the population and employment CAGR was used to increase sustainable mode shares and decrease driving.
- Official predetermined mode share targets by Local Municipalities and/or the Region itself: Predetermined mode share targets by the Region and (its) local municipalities were considered when developing the future modal splits for each Super-zone category.

Step 4: Aggregation of Modal Split Targets into Super-zone Categories

Once the forecast modal targets for each individual Super-zone were developed, the results were then aggregated to determine the future modal targets for the entire Super-zone category. This was done using the Weighted Average Method, with Population and Employment as the weights (see Table 8 for results).

TABLE 8: Summary Table of Modal Split Targets for each Super-Zone Category (2011 – 2041)

Rapid Transit Corridor				
	2011	2021	2031	2041
Driving	62.3%	59.7%	55.5%	51.0%
Carpool	14.7%	16.2%	17.5%	19.2%
Transit	13.1%	14.5%	16.3%	18.5%
Walk/Cycle	6.9%	7.4%	8.5%	9.5%
Others	3.0%	2.2%	2.2%	1.8%

Potential Rapid Transit Corridor				
	2011	2021	2031	2041
Driving	63.3%	60.5%	58.0%	54%
Carpool	15.7%	16.5%	18.3%	19.0%
Transit	9.4%	10.8%	12.5%	16.2%
Walk/Cycle	7.2%	7.8%	8.5%	9.2%
Others	4.4%	4.4%	2.7%	1.6%

Greenfield Development				
	2011	2021	2031	2041
Driving	66.8%	64.8	63.0%	60.0%
Carpool	14.0%	15.4%	16.2%	17.5%
Transit	6.8%	7.2%	8.0%	10.0%
Walk/Cycle	5.2%	5.5%	6.5%	7.2%
Others	7.2%	7.1%	6.3%	5.3%

Other Urban Areas				
	2011	2021	2031	2041
Driving	62.5%	60.0	58.1%	56.0%
Carpool	15.3%	16.2%	17.0%	17.5%
Transit	10.8%	12.2%	13.0%	15.0%
Walk/Cycle	7.1%	7.4%	8.5%	9.0%
Others	4.36%	4.2%	3.4%	2.5%

Rapid Transit Corridor				
	2011	2021	2031	2041
Driving	71.2%	68.5%	68.5%	66.8%
Carpool	6.6%	7.5%	8.1%	9.2%
Transit	3.5%	3.6%	3.8%	4.0%
Walk/Cycle	1.6%	1.7%	2.0%	2.5%
Others	17.2%	17.7%	17.0%	17.5%

Step 6: Conversion of Modal Targets to the Municipal and Regional Level

The mode share targets for each Super-zone category were then further aggregated to determine the targets for Local Municipalities and the Region.

The findings of the analysis resulted in a 54% driving and 46% sustainable mode share target by 2041 for the Region of Peel (see Table 9).

TABLE 9: Region of Peel Preliminary Mode Share Targets by horizon year

Mode Share (AM Peak Period)	2011 (TTS) Total Population: 1.56M		2021 Horizon Total Population: 1.56M		2031 Horizon Total Population: 1.77M		2041 Horizon Total Population: 1.94M		
	No. Trips	% of Trips	No. Trips	% of Trips	No. Trips	No. Trips	% of Trips		
Driving	0.42M	63%	0.46M	60%	0.50M	0.51M	54%	↓	
Sustainable Mode	0.25M	37%	0.30M	40%	0.36M	0.43M	46%	↑	
Carpool	0.10M	15%	0.12M	16%	0.15m	0.17M	19%	↑	
Transit	0.07M	11%	0.09M	12%	0.11m	0.15M	16%	↑	
Walk/Cycle	0.05M	7%	0.06M	7%	0.07M	0.08M	9%	↑	
Others	0.03M	4%	0.03M	4%	0.03M	0.02M	2%	↑	
Total Trips	0.67M	100%	0.76M	100%	0.86M	0.94M	100%	↑	

Step 6: Review of Results

The results were validated quantitatively and qualitatively, samples of the validation techniques are presented below.

Mathematical methods of validation

Trend analysis was performed to see the relationship of future modal split targets with past modal splits. As previously estimated, the relationship for most modes were not linear, but rather higher-degree functions. The targets fit well with exponential and polynomial functions. This indicates that in order to obtain the future modal splits, there needs to be an accelerated effort of increasing sustainable modes, more so than in the past.

Referencing with predetermined municipal targets

The results were cross-referenced with pre-determined modal split targets from external sources. For example:

- Calculated Active Transportation modal split of 9% was less than the Region’s target of 10%.
- The transit target for the City of Mississauga was calculated to be 17% by 2041. However, the City of Mississauga’s own transit target for 2031 (10 years earlier) was determined as 18%.

Overall, the results suggest that the calculated targets are less than the Local Municipal and Regional pre-determined targets for various sustainable modes. This suggests that the preliminary modal share targets might be slightly low.

Comparison of Targets with other Municipalities

The mode share targets for the Region of Peel were compared against current modal splits of other municipalities. Since the Region of Peel will be experiencing rapid intensification and urbanization by 2041, comparisons were made to the City of Toronto, which has achieved a 53.6% sustainable modal split in 2011 for AM Peak Period (see Table 10). This analysis indicates that a 46% target of sustainable modes by 2041 might be slightly low.

TABLE 10: Summary Table of Modal Splits for Single Tier and Regional Municipalities within the Greater Toronto Area – Year: 2011

	Auto Driver	Carpool	Public Transit	Walk + Cycle	Other
Toronto	46.4	11.6	29.3	10.9	1.8
Peel	63.0	14.9	10.9	6.9	4.3
York	65.6	13.7	11.3	5.6	3.9
Durham	66.0	13.0	9.5	6.9	4.6
Halton	69.5	11.1	8.9	6.1	4.4

Step 7: Review of Results

As the Region of Peel stands right now, there are limited road widening opportunities to increase capacity throughout the transportation network. The undertaking of the technical analysis was a necessary step for Peel to determine the most practical approach to addressing congestion and its worsening state.

While the in-house preliminary analysis resulted in a 46% sustainable mode share target, a detailed review and validation of the results determined that the sustainable targets were slightly low from a technical standpoint due to the following reasons:

- Pre-determined mode share targets set by the Local Municipalities regarding Active Transportation and Transit are higher than the Region's preliminary analysis.
- Pre-determined mode share target set by the Region regarding Active Transportation is higher than the Region's preliminary analysis.
- Comparisons with other municipalities such as the City of Toronto indicate the feasibility of higher sustainable mode shares for a rapidly urbanizing municipality like Peel.

A 50% target was determined to be technically sound and a viable solution to growth demands. The technical analysis was combined with the need to provide sustainable transportation as a practical element of the urban transportation system to accommodate growing communities, as directed through the Growth Plan (2017).

Therefore, for the Region of Peel to proactively stay ahead of the growth forecasted into 2041, the technical analysis and policies illustrate the need for new active transportation routes, transit, and shared mobility services are required to alleviate the network from increasing congestion.

From an infrastructure stand point, the 50% sustainable mode share target ensures faster transitions of the Regional infrastructure to one that viably supports future community growth.

4.0 Background

Throughout the fall of 2016, the Region of Peel engaged IBI Group to undertake an independent review of the 50-50 mode share target through the 2041 horizon year. IBI’s review included validating individual mode targets for all traffic zones within Peel via a “bottom-up” approach. This was to account for the fact that specific area conditions can influence on modal splits.

The validation process started with a review of current zone conditions and trends for each mode as well as targets set by current policies and plans.

Following that, each zone was scored based on criteria that indicated its potential for increasing a specific sustainable mode. For example, if a zone had a walking mode share of 6% and above, a point would be allocated to the zone rank, indicating that particular zone has geographic characteristics that encourages walking today and can therefore be leveraged to encourage more walking in the future (see Table 11 for full list of criteria).

Zones with the highest scores were assigned the highest mode share increases. For example, to meet the Regional walking mode share target of 9% by 2041, 45,000 trips of this mode are required. A zone with higher score in walkability will be then assigned the highest mode increase that would accommodate the required trips. The feasibility of the increase in trips was then assessed using separate criteria to ensure that the increases in trips are attainable in each zone.

IBI’s review confirmed the 50% sustainable mode share target is feasible. The interim modal share targets for 2021 and 2031 were also adjusted to better reflect the potential increase in each of the sustainable mode, and will be used to measure the Region’s progress.

The final set of modal share targets, broken down by municipality and horizon year, was also developed by IBI (see Table 12).

TABLE 11: IBI Mode Specific Criteria

Mode	Criteria
Walking	<ul style="list-style-type: none"> • Specific area’s 2011 walking mode share being greater than 6% • Over 500 trips being made that are less than 2 km • Population density greater than 50 persons/ha • The area’s land use is a mix of residential and employment
Cycling	<ul style="list-style-type: none"> • 2011 cycling mode share being higher than average • Over 500 auto trips that are under 5 km • Urban density is greater than 50/persons/ha
Transit	<ul style="list-style-type: none"> • Specific area has more than 80 jobs + persons/ha by 2041 • The 2031 transit time to auto time competitiveness ratio is lower than 2.0 • 2011 transit mode share is above Regional average • Specific area’s future transit mode share has the potential to be greater than 10%
Carpool	<ul style="list-style-type: none"> • Specific area’s 2011 commute carpooling mode share is above 5% • 2031 transit time to auto time competitiveness ratio is higher than 2.5 • Car ownership rate lower than Regional average of 1.7 cars/household

TABLE 12: Final Targets: Peel Region Mode Share Targets by Municipality 2041
(Source: IBI Group/Region of Peel)

Peel Region	2011	2041 Vision
Driving	62.5%	49.8%
Walking	6.8%	9.1%
Cycling	0.3%	2.0%
Transit	10.8%	17.0%
Carpool	15.2%	17.9%
Other	4.3%	4.3%
Sustainable Transportation	37.5%	50.3%

Caledon	2011	2041 Vision
Driving	71.0%	68.1%
Walking	3.5%	3.6%
Cycling	0.0%	0.8%
Transit	2.0%	2.5%
Carpool	8.2%	9.9%
Other	15.3%	15.1%
Sustainable Transportation	29.0%	31.9%

Brampton	2011	2041 Vision
Driving	62.7%	51.8%
Walking	7.4%	9.1%
Cycling	0.2%	1.8%
Transit	8.8%	14.6%
Carpool	16.5%	18.6%
Other	4.4%	4.0%
Sustainable Transportation	37.3%	48.1%

Mississauga	2011	2041 Vision
Driving	61.8%	45.4%
Walking	6.6%	9.8%
Cycling	0.4%	2.3%
Transit	12.9%	21.1%
Carpool	14.8%	18.3%
Other	3.4%	3.1%
Sustainable Transportation	38.2%	54.6%

5.0 Exploring Possible Solutions through Municipal Class Environment Assessment

The Long Range Transportation Plan is a transportation master plan (TMP) and as such, it needs to undergo the Municipal Class Environmental Assessment (MCEA) process. Throughout the MCEA, the Region of Peel has identified multiple approaches for addressing the growing demand on its transportation system and derived the best preferred scenario using public consultation feedback as well as qualitative and quantitative in-house analyses.

As part of this process, the Region of Peel identified seven (7) preliminary scenarios that were presented at a Public Information Centre (PIC) for stakeholder review and feedback. The preliminary scenarios assumed various modal splits and possible changes to the transportation network. A qualitative and sensitivity analyses were performed to communicate the implications of each scenario on the 2041 network [refer to Appendix B].

The stakeholder feedback from the PIC, combined with assessment of scenario implications on the Regional road network, resulted in narrowing down the original preliminary scenarios to the “Do Nothing”, “Planned Road Improvements Only”, “50 per cent Sustainable Transportation Modes Only”, and “Combination of Planning Road Improvements and 50 percent Sustainable Mode Split” alternatives.

To land on the scenario that addresses growth pressures on the transportation network and meets the long-term demand needs, evaluation criteria were developed using best practices from neighbouring Regions, including Halton and York, as well as requirements prescribed in Phase 2 of the MCEA Process. To assess the scenarios against the criteria, qualitative and quantitative analyses were performed on each of the alternatives.

- The qualitative analysis was performed to better understand the underlying implications that each alternative may impose on the transportation network, natural environment, cultural heritage, social care, health care, and economics.
- The quantitative analysis involved macroscopic modelling, which uses the population and employment forecasts to predict the number of vehicles that will travel through Regional road segments in future.

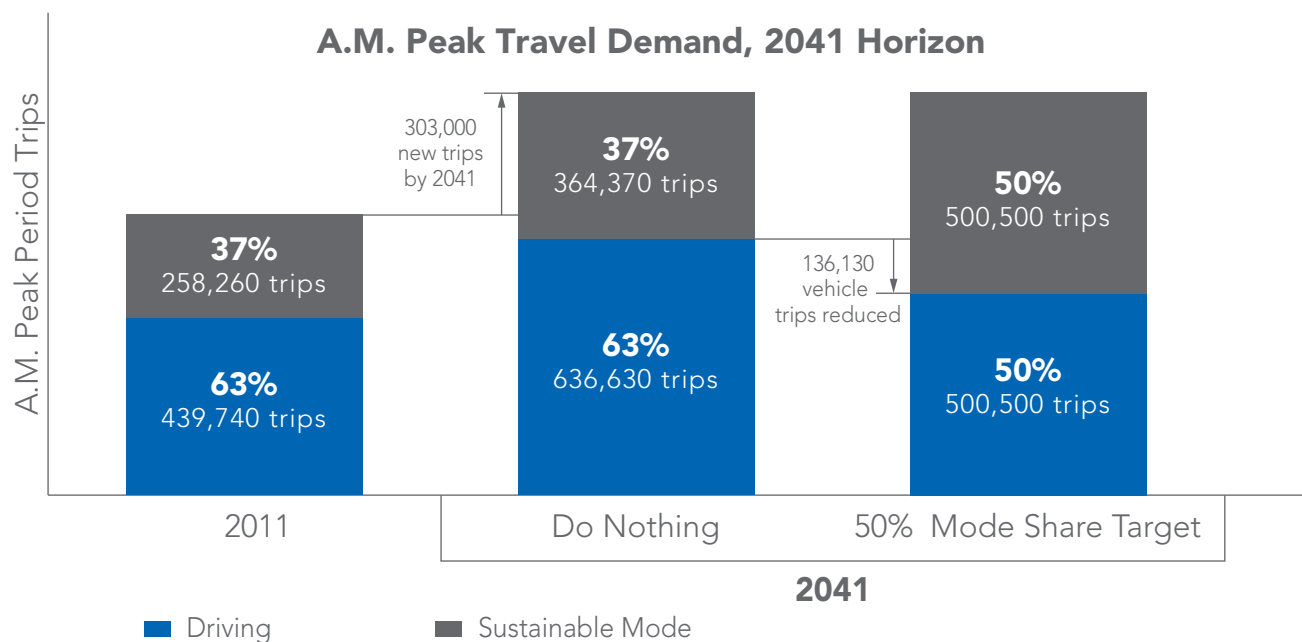
The model is used to determine which roads on the network are nearing or exceeding capacity and is becoming congested travel. This serves as an indication for network improvements as part of the Regional Road Capital Program.

The MCEA results indicated that the “Combination of Planning Road Improvements and 50% Sustainable Mode Split” is the most preferred scenario for the Region of Peel.

6.0 Conclusion

Background and modeling work have shown that by 2041, Peel Region's growth will translate to approximately 303,000 more trips in the AM peak period (see Figure 5). This induces significantly more vehicles on the road which increases congestion. The technical analysis has demonstrated that roads can only be widened to a practical limit, and a shift in modal shares is required to manage the growth of vehicular trips and minimize congestion.

FIGURE 5
AM Peak Period Travel Demand Into 2041 Horizon Year



The development of Region of Peel's modal split targets went through two important phases spanning over 3 years: an internal analysis, and afterwards, a detailed review by an external consultant. Both phases followed a sound methodology that used both quantitative and qualitative methods. References and information from Local Municipalities and the Province were sources for developing the modal share targets.

Through Peel and IBI's examination, a 50% sustainable modal split target by 2041 is feasible, and via modelling analysis it was confirmed that this target will support the Region with addressing congestion and increased travel times in light of the forecasted growth.

As further commitment on behalf of the Region to decrease traffic congestion, manage growth, and support development of viable communities, the 50% sustainable mode share target was endorsed by Regional Council in February 2018 (Resolution 2018-121, refer to Appendix A).

Appendix A-1: **Council Resolution 2018 – 121**

Resolution 2018 – 121

That the Region of Peel's Sustainable Transportation Strategy and its associated five-year implementation plans, be approved;

And further, that the Director of Transportation be delegated the authority to execute both the Service Delivery agreement with Metrolinx and the Funding Agreement with three Transportation Management Associations (Smart Commute Mississauga, Smart Commute Brampton-Caledon, and Smart Commute Pearson Airport Area) in the Region of Peel, to be renewed as required;

And further, that a copy of the joint report of the Commissioners of Public Works and Health and the Medical Officer of Health, titled "Sustainable Transportation Strategy and Five-Year Implementation Plans", be forwarded to the City of Brampton, City of Mississauga, City of Toronto, Credit Valley Conservation Authority, Dufferin-Peel Catholic District School Board, Halton Region, Metrolinx, Peel District School Board, Toronto and Region Conservation Authority, Town of Caledon, York Region, Ontario Ministry of Transportation, Ontario Ministry of Municipal Affairs, and the Building Industry and Land Development Association for their information.

The MCEA results indicated that the "Combination of Planning Road Improvements and 50% Sustainable Mode Split" is the most preferred scenario for the Region of Peel.

Appendix A-2: Preliminary Evaluation of Alternatives

Scenario	Network Assumptions	Demand Assumptions	Transportation Planning Principles
Do nothing	<ul style="list-style-type: none"> Current conditions of the roadway, active infrastructure, carpool and transit network 	<ul style="list-style-type: none"> Current modal split: 37 per cent sustainable modes and 63 per cent driving 	<ul style="list-style-type: none"> Base scenario for benchmarking
Planned Road Improvements Only	<ul style="list-style-type: none"> GTA West No Peel-Halton Freeway. Only modifications on arterials roads (Williams Parkway, Financial Drive and BramWest Parkway) Planning road improvements based off Capital Plans and Master Plans from Peel, local municipalities, the Province and other Regions/Municipalities in the GTHA 	<ul style="list-style-type: none"> Current modal split: 37 per cent sustainable modes and 63 per cent driving 	<ul style="list-style-type: none"> Less reflective of healthy, compact and complete community planning principles. Address long term network goals and needs
Ultimate Road Improvements Only	<ul style="list-style-type: none"> GTA West No Peel-Halton Freeway. Only modifications on arterials roads (Williams Parkway, Financial Drive and BramWest Parkway) Widening every Regional Road in the City of Brampton and Mississauga to 6 lanes Widening Airport Road, Gore Road, Dixie Road, and Mississauga Road from Mayfield to King Street to 4 lanes 	<ul style="list-style-type: none"> Current modal split: 37 per cent sustainable modes and 63 per cent driving 	<ul style="list-style-type: none"> Less reflective of healthy, compact and complete community planning principles. Address long term network goals and needs Impractical to assume network can be continuously widened to address long term network goals and needs
50 Per Cent Sustainable Transportation Modes Only	<ul style="list-style-type: none"> Current conditions of the roadway, but enhanced transit, AT and carpool infrastructure 	<ul style="list-style-type: none"> 50 per cent sustainable modes and 50 per cent driving 	<ul style="list-style-type: none"> Very reflective of healthy, compact and complete community planning principles Address long term network goals and needs
Combination of Planned Road Improvements and 40 per cent Sustainable Mode Split	<ul style="list-style-type: none"> GTA West No Peel-Halton Freeway. Only modifications on arterials roads (Williams Parkway, Financial Drive and BramWest Parkway) Planned road improvements based off Capital Plans and Master Plans from Peel, local municipalities, the Province and other Regions/Municipalities in the GTHA Slightly enhanced transit, AT and carpool infrastructure 	<ul style="list-style-type: none"> 40 per cent sustainable modes and 60 per cent driving 	<ul style="list-style-type: none"> Slight shift towards healthier, compact and complete community planning principles Address long term network goals and needs
Combination of planned Road Improvements and 50 per cent Sustainable Mode Split	<ul style="list-style-type: none"> GTA West No Peel-Halton Freeway. Only modifications on arterials roads (Williams Parkway, Financial Drive and BramWest Parkway) Planned road improvements based off Capital Plans and Master Plans from Peel, local municipalities, the Province and other Regions/Municipalities Enhanced transit, AT and carpool infrastructure 	<ul style="list-style-type: none"> 50 per cent sustainable modes and 50 per cent driving 	<ul style="list-style-type: none"> Very reflective of healthier, compact and complete community planning principles Exceeds long term network goals and needs
No GTA West – Combination of Planned Road Improvements and 50 per cent Sustainable Mode Split	<ul style="list-style-type: none"> No GTA West Peel-Halton Freeway with road modifications on arterial roads (Williams Parkway, Financial Drive, and BramWest Parkway) Planned road improvements based off Capital Plans and Master Plans from Peel, local municipalities, the Province and other Regions/municipalities in the GTHA Enhanced transit, AT and carpool infrastructure 	<ul style="list-style-type: none"> 50 per cent sustainable modes and 50 per cent driving 	<ul style="list-style-type: none"> Scenario considered to prepare for Ontario Ministry of Transportation's announcement on the status of the GTA West Environmental Assessment

B

Appendix B

Consultation Summary Report

Introduction

Let's Move Peel 2019 is a five year update of the Region of Peel's Long Range Transportation Plan (LRTP), conducted under the Municipal Class Environmental Assessment Master Plan process.

While research and technical analysis were key components to undertaking the work, consultation with a broad range of stakeholders through a variety of interactions was also critical to the process. This report summarizes the key consultation activities undertaken as part of the LRTP 2019 Update.

Municipal Class Environmental Assessment (MCEA) Master Plan Process

Public consultation is a mandatory requirement for projects undertaken under the MCEA process, which specifies minimum consultation and notification requirements. As the Region of Peel views public consultation as a critical component in both accommodating future growth and achieving our vision of "Community for Life", we have exceeded the minimum consultation requirements.

Consultation Goals

Our consultation goal in undertaking the LRTP Update was as follows:

"To ensure that meaningful, accessible, innovative and participatory public and stakeholder consultation is undertaken as part of the LRTP Update."

The principles which comprised our goal are described as follows:

- **Meaningful**
 - ◆ We will provide background and context with clear explanations of the choices facing stakeholders and residents to allow for informed discussion and input into the LRTP update.
 - ◆ We will give due consideration to all the input, ideas and suggestions we receive.
 - ◆ We will close the loop by telling stakeholders and residents how their input has been considered, where it has been incorporated into the plan or influenced our thinking, and if it has not been included, why it has not.
- **Accessible**
 - ◆ We will develop communications materials that are easy to understand, jargon-free and supported by visuals.
 - ◆ We will recognize and find ways to address barriers to participation in the process that will consider time constraints, distance, and other factors.
 - ◆ We will consider and where possible, meeting the accessibility regulations and guidelines outlined in the Accessibility for Ontarians with Disabilities Act as well as the Region of Peel accessibility requirements.

- **Innovative**

- ◆ We will identify new and innovative ways that go beyond traditional Public Information Centres to inform Peel residents and encourage them to become involved in the process.
- ◆ We will integrate technology and traditional forms of engagement to provide residents and stakeholders with a range of consultation alternatives.

- **Participatory**

- ◆ We will ensure that stakeholders and residents know and understand that we want and value their input, and include clear calls to action in all communications materials.
- ◆ We will clearly define the various target audiences and will identify consultation techniques specific to these groups and their engagement preferences

Top of Mind Issues

The starting point for our LRTP was the findings of community consultation in support of the Region of Peel's Strategic Plan (2015), which not only highlights the importance of the community voice and participation, but also identified the 10 "top of mind" issues in Peel. Not surprisingly, traffic congestion was identified as the primary issue. This told us that given the new growth anticipated for Peel to 2041, we needed to explore both supply and demand side solutions to address the issue of traffic congestion. In doing so, we would also address many of the other "top of mind" issues identified by Peel residents.

Methods

In consulting with stakeholders and the public, the LRTP Project Team identified a number of approaches of engaging with stakeholders which were in line with the goal and principles outlined at the outset of the project.

While traditional Public Information Centres (PICs) met the statutory consultation requirements, staff also undertook to update this model and broaden our consultation approach to include a variety of methods. For example, staff updated traditional PICs by hosting them in shopping malls to bring the consultation to the public, rather than having the public travel out of their way to another location. The project team also engaged with stakeholders using non-traditional methods, including through a dedicated project website, social media, the development of an educational YouTube video, and attendance at community events such as farmer's markets and fairs. Through these approaches, a variety of learning styles including visual (through display boards for example), verbal (through conversations with staff), and physical (through hands on activities) were addressed.

Stakeholders

While the LRTP's core project team was comprised of transportation planners and engineers, several other groups were engaged, including the following internal and external stakeholders.

Internal Stakeholders

Project Team

Transportation staff – operations and maintenance, construction, infrastructure planning

Growth Management Core/Advisory/Steering Committees - comprised of staff from the following areas: finance, housing, planning, water and wastewater, and others including health

Region of Peel staff

Executive Leadership Team

Accessibility Advisory Committee

Council

External Stakeholders

Area Municipal Staff (through various committees and working groups)

Local Transit Providers

Boards of Trade

Police

Metrolinx

Ministry of Transportation/Ministry of Municipal Affairs

Greater Toronto Airports Authority

Conservation Authorities

First Nations

Neighbouring Municipalities

Uber

Cycling Advisory Group

Transport Canada

Development Industry (through regular meetings)

Consultation Summary

Description	Date		Key Messages (formal and informal)
<p>Notice of Commencement and PIC 1</p> <p>Goal – to introduce the public to the LRTP update and solicit initial feedback/ideas</p>	<p>Issued Jan 5, 2017 PICs</p> <p>Caledon – Jan 17</p> <p>Brampton – Jan 18</p> <p>Mississauga – Jan 19</p>	<p>134</p> <p>48 written comments received</p>	<ul style="list-style-type: none"> • Need for increased public transit provision including subways • Need to keep transit fares low • Need to widen roads • Move cycle lanes off road • Consider dedicated truck lanes • Need to improve truck safety • Need to improve driver education and testing • Need to adjust traffic signal timing • Need to build highways • Adjust transit route operating times (before 7 am) • Need to manage future growth • Need to consider technology such as uber, electric vehicles, etc. • Improve transit connectivity to key destinations (universities, etc.)
Survey	January 2017	105 responses to survey	<ul style="list-style-type: none"> • Top Transportation Priorities Identified by Residents: • 36% Reducing Congestion • 33% Better Transit
Let's Move Peel Website	Jan 2017	5103 unique visitors	n/a
YouTube video featuring interviews conducted at first round of PICs	Jan 2017	1125 views	n/a
Connect to Peel Newsletter	February 21st, 2017	115,000 subscribers	n/a
Other	4.4%	4.0%	

Summer 2017 Consultations – joint with Official Plan Review

Goal – to share information on LRTP update and solicit feedback/ideas

Bread and Honey Festival	June 2017	189	<ul style="list-style-type: none"> • Many commented on the gridlock in Mississauga. • The need for a connected system, in particular suggestion of a subway was discussed. Three people mentioned the need for the subway to connect to Peel at Square One. • Mississauga BRT – challenge with the fact that individuals now must drive to the station because the buses no longer go into communities, making it more inconvenient. Residents felt that as they were already in their car, they might as well drive instead of taking the BRT. • One commenter noted that money dedicated to transportation should be moved to protect environmental resources as there did not seem to be a political will to build a comprehensive transportation system. An LRT here and a BRT there is not going to resolve the problem of gridlock. Piecemeal lines will not improve the situation • Suggestion from commuters for connections from Mississauga to Toronto with transit. • One commenter suggested putting electric charging station in parking lots for transit riders, so that when they return their cars are charged.
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CeleBrampton	June 10, 2017	98	<ul style="list-style-type: none"> • Several questions about the timeline for LRT construction and route • One long-time resident wants to see an LRT • Several questions about timelines for GTA West
Caledon Day	June 17, 2017	40	<ul style="list-style-type: none"> • One comment from Mississauga resident that the BRT is excellent • Question about whether transit will connect to Bolton – no options for residents without cars • Comment that road paving on Old Base Line has been done poorly, frequently needing repair • Question about the status of GTA West and the 427 extension • No new development in Caledon should be permitted until a light rail system is developed, following Sweden as an example
Bolton Farmer’s Market	July 8, 2017	60	<ul style="list-style-type: none"> • Several residents inquired about plans for a Bolton GO station • Comments about local public transit included support from a few residents • One resident wanted bike lanes and made reference to Ottawa, another felt bike lanes on Main St. did not make sense with the hill and worried about losing parking • Unsafe intersection at Airport Rd. and Caledon East – misalignment of streets, need for advance left • Concern about safety of trucks on HWY 50 • More charging stations for hybrid vehicles in Bolton needed
Brampton Farmer’s Market	July 22, 2017	80	<ul style="list-style-type: none"> • We need to be expanding roads around Mayfield and other roads with lots of residential development to reduce congestion • Expand transit to provide more frequent service during off-peak periods • Resident frustrated that good transit won’t be built in his lifetime • Resident would like to see the 410 extended into Orangeville • Resident in support of some street parking on Main St. so people can purchase items quickly • Resident wanted to see LRT • Resident supported LRT but not through downtown Brampton, also suggested that it go north of Queen • Several questions about the status of the LRT • Resident was concerned about how the LRT would affect the Farmers Market • Kennedy Road bus stops are after the intersection, which, when they stop, blocks the intersection and cars get stuck behind the bus • We need better transit • There is too much traffic around residential communities

Mississauga Farmer's Market	August 16, 2017	110	<ul style="list-style-type: none"> • Need for better, more affordable transit • more bike lanes desired • Suggestion for reduced public transit fares for seniors • Resident wants to see more transit connections to Toronto • Comment that Brampton should not have rejected the LRT down Hurontario • Resident does not like that the 403 runs through Mississauga • East-west transit connection is more important than north-south • Issue with cars parked on both sides of the street • Good access to transit at Hurontario & Dundas
Port Credit Farmer's Market	August 19, 2017	40	<ul style="list-style-type: none"> • Need more cycling routes • Congestion is a problem, local roads not built for larger volumes at high speeds • Need better transportation connections to the airport – UP Express only goes downtown • High transportation costs for those on a fixed income
Bolton Fall Fair	September 23, 2017	54	<ul style="list-style-type: none"> • There is a need for a crosswalk on Hwy 50 • Sidewalks on Hwy 50 are not consistently on the same side of the road – resident must “zig zag” across to walk safely • We don't need public transit in Bolton • There are many accidents at Countryside & Mclean • Bolton is unsafe for cyclists • Need to improve snow clearing on Hwy 50 • Bolton is not pedestrian friendly • Need for public transit for young people, who cannot get around in Bolton without a car • Buses also offer independence for seniors • Concern about traffic on Innis Lake Rd. as Caledon East develops

Winter 2018 Stakeholder Workshop Goal – to discuss the impact of key planning issues on the future transportation network			
Stakeholder Workshop	January 19, 2018	39 agencies represented	<ul style="list-style-type: none"> • Need to consider the impact of emerging technologies, particularly driverless vehicles in future planning • Many regulatory considerations including liability, privacy, data ownership, cross jurisdictional issues, reliable Wi-Fi network • Need to plan for aging population • Need to encourage complete communities through a variety of measures including active transportation/ transportation demand management, • Active transportation and Transit are the key transportation measures to focus on in planning for the future

<p>PIC 2 Goal – present information and solicit feedback</p>	<p>Notice Issued Feb 1st PICs Mississauga – Feb 12, 2018 Caledon – Feb 13, 2018 Brampton – Feb 15, 2018</p>	<p>104 residents signed in 22 written comments received</p>	<p>Mississauga</p> <ul style="list-style-type: none"> • A cycle lane on Airport Road is dangerous. • Question about why there is no map of the existing cycling network. • LRT on Hurontario will add congestion, monorail is better on the road. • Comment that there is no space to expand the road on Mavis, developers are permitted to build right to the road. • Question from Ministry of Transportation staff/Mississauga resident about next steps after the cancellation of GTA West. (Response: Region will be re-evaluating work) • Question about the status of GO rail to Caledon. • Clarification sought about how the cancellation of GTA West will affect population projections. • Question about what inter-municipal transportation connections are being planned. • Clarification sought about how the Region is addressing the growth of autonomous vehicles and how it is addressing off-peak travel. <p>Caledon</p> <ul style="list-style-type: none"> • Inquiry about the location of road improvements and road widenings in Caledon. • Question about the plans for Caledon’s transportation system in Caledon East. • Inquiry about the possibility of making Orangeville’s rail line – currently mapped as a multi-use trail – into a passenger rail line. • We need to be pushing for rail link between Caledon and Mississauga with industry and Metrolinx. • Landowners feel inconvenienced by GTA West. • There should be more paved roads east to west in Caledon, north of Prime Agriculture. • Need for improved transit access in Caledon. • Inquiry about when acquisitions to support road widenings will take place. • Question about whether pedestrian improvements means enhanced boulevards. • Inquiry about how the BramWest Parkway is affected by the GTA West decision. • Question about the specifics of the LRTP and how it impacts Mississauga Road Environmental Assessment. • Resident at Mississauga Rd. and Wanless states there is a need for a traffic light. • The heat and real time bus times not functioning on some Zum stops. • Question about the Region’s plans for GTA West and specific details of the Provincial announcement. • Inquiry about how road improvements were determined and how they will be prioritized. • Question about how cycling network is being integrated with transit system. • Question about specific plans for improving intersection of Mississauga Road and Bovaird. • Clarification sought on how active transportation routes are chosen. <p>Brampton</p> <ul style="list-style-type: none"> • Question from landowner in NW Brampton/SW Caledon about plans for GTA West.
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Summer 2018 Consultations (joint with Official Plan Review)			
Goal – promote ongoing awareness of Official Plan Review and LRTP Update and solicit comments			
Bread and Honey Festival	June 2, 2018	110	
Caledon Day	June 16, 2018	75	
Brampton Farmer's Market	June 23, 2018	70	

Region of Peel Accessibility Advisory Committee	April 18, 2019		
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Spring 2019 Consultation			
Goal – to present preferred alternative and solicit feedback			
PIC #3	<p>Notice Issued April 4th, 2019 and April 11th, 2019</p> <p>PIC Dates</p> <p>Brampton: April 23, 2019</p> <p>Caledon: April 25, 2019</p> <p>Mississauga: April 30, 2019</p>	<p>25 attended</p> <p>5 written comments received</p>	<p>General Comments from all 3 municipalities</p> <ul style="list-style-type: none"> Residents inquired about the North-South corridor being shown as a lane widening 50% sustainable mode share goal seems on the higher end, what are some techniques that can be implemented to encourage people out of their cars What does the preferred alternative entail exactly? <p>Brampton</p> <ul style="list-style-type: none"> Need better transit network connections throughout Brampton How will the recommended infrastructure projects incorporate safety designs for ease of use? Construction completion timelines for widening projects, specifically Dixie Road What is the timeline regarding the proposed widening of Winston Churchill Boulevard from Highway 401 to north of Embleton Road. <p>Caledon</p> <ul style="list-style-type: none"> Questions about localized issues Feasibility of transit in Caledon <p>Mississauga</p> <ul style="list-style-type: none"> The Region is striving for 50% sustainable mode share, is this feasible?

Indigenous Consultation

A consultant (Enterprise Canada) was retained to identify Indigenous communities to be consulted and advise on best practices in engaging indigenous communities.

Research was conducted on land claims posted on the Government of Ontario website – ontario.ca/page/current-land-claims. No current land claims affecting the Region of Peel were identified.

On the recommendation of the Indigenous consultant:

- One First Nation and two Métis groups were identified for consultation. Peel Region is situated on the traditional lands of all three groups.
- First Nations and Métis communities whose traditional lands are located outside the boundaries of the Region of Peel were not consulted.

Outreach

Mississauga of the New Credit First Nation (MNCFN)

- The MNCFN was consulted on August 9, 2017 at the MNCFN band office attended by:
 - ◆ Fawn Sault, Manager, MNCFN Department of Consultation and Accommodation (DOCA)
 - ◆ Darin Wybenga, MNCFN Cultural Advisor
 - ◆ Tina Detaramani, Peel Region
 - ◆ Sara Monture, Enterprise
- The following agenda was used:
 1. Introductions
 2. MNCFN History
 3. Presentation on Peel Region Long Term Transportation Plan
 4. Discussion
 5. Next steps
- During the two-hour session, a detailed history of the MNCFN was provided by the MNCFN Cultural Advisor, including an explanation of the traditional territory. The DOCA Manager provided an overview of the community's priorities: economic development, protecting the environment, and the MNCFN current land claim for the water within their traditional territory. Tina Detaramani took the group through the LRTP presentation.

Following both presentations there was a general discussion on the changing world of transportation and the need for comprehensive plans.

MNCFN requested to be updated as the plan evolves especially if there will be environmental impacts.

Credit River Métis Council and Métis Nation of Ontario (MNO)

A separate approach was used to consult the Credit River Metis Council and Metis Nation of Ontario (MNO) to meet the obligation to consult when a project or plan will affect their traditional hunting territories. Peel Region falls within MNO Region 8 and there is a signed consultation protocol in place.

The Region of Peel followed the MNO consultation protocol specified below:

To engage the Métis Nation of Ontario (MNO) Regional Consultation Protocols, governments and proponents are asked to send consultation information, requests or notices in writing to:

Métis Consultation Unit
Métis Nation of Ontario Head Office
500 Old St. Patrick Street, Unit D
Ottawa, Ontario, K1N 9G4
Fax: (613) 725-4225

The MNO Head Office will ensure the information, request or notice is sent to the Chair and Committee members of the appropriate Regional Consultation Protocol for their review, assessment and response. This model will ensure all consultation requests are logged, responded to in a timely manner and tracked. However, all responses and follow up engagement will be with the appropriate Regional Consultation Committee.

Key outcomes

- No concerns were raised by the Mississaugas of the New Credit, the Indigenous group that required a meeting in person for consultation.
- In keeping with the protocol above, a letter (Appendix 2) was sent outlining Peel Region's long-term transportation plan and included an offer an in-person information session.
- There was no response to a letter written to the Métis Nation of Ontario and the Credit River Métis Council, the preferred method of consultation with these two Indigenous groups.

Future Consultation

As outlined in this document, extensive public and stakeholder consultation was undertaken as part of the 2019 LRTP Update and has informed the recommendations of the plan. Moving forward to implementation, ongoing "check ins" with the public and stakeholders will be critical in ensuring successful implementation of the plan, and timely responsiveness to emerging issues.



April 3, 2017

Métis Consultation Unit
Métis Nation of Ontario Head Office
500 Old St. Patrick Street, Unit D
Ottawa, Ontario, K1N 0G4
Fax: (613) 725-4225

Re: Peel Region's Long Range Transportation Plan Update

Dear Sir or Madam,

Peel Region is currently in the process of updating our Long Range Transportation Plan (LRTP).

Peel Region acknowledges the traditional lands on which it sits and is thereby reaching out to the Métis Nation of Ontario and the Credit River Métis Council to seek their input into the LRTP.

Background

The increasing vitality and health of Peel Region has caused more travel to and from the Region. There is a growing need to ensure that the transportation infrastructure such as our road network can keep up with the changing conditions. The Region participates in a number of studies, surveys, and programs which examines current transportation trends in order to prepare for the future.

The LRTP provides a strategic framework for addressing the transportation challenges and opportunities in Peel, and will inform transportation policies through an amendment to the Regional Official Plan. Peel's first LRTP was adopted in 2005, and was updated in 2012. This 2017 update of the LRTP addresses the changing social, economic, environmental, and cultural climate in Peel, and surrounding Greater Toronto Area and Hamilton Area (GTHA) context.

Using technical work, stakeholder input, an evaluation of the changing nature of planning in the Region, and outcomes from other studies and surveys, the LRTP forms an action-oriented implementation plan and will further serve as input to other studies such as Environmental Assessments. It will also help achieve the goals and vision of the Region's Strategic Plan.

Finally, the LRTP will help the Region accommodate Peel's growing population by looking at sustainable ways to do so.

Public Works
10 Peel Centre Dr., Suite 8, Brampton, ON L6T 4B9
416-905-7511-3600 www.peelregion.ca

If you wish to participate in this planning process, please contact:

Eric Chan, P. Eng.
Project Manager, Long Range Transportation Plan Update
10 Peel Centre Drive, Suite B, 4th Floor, Brampton, ON L6T 4B9
eric.chan@peelregion.ca
905-791-7800 ext-4417


We look forward to working together to build a comprehensive and sustainable Long Range Transportation Plan.

Sincerely,



Gary Kozlowski, P. Eng.
Director, Transportation Division


Public Works
10 Peel Centre Dr., Suite 8, Brampton, ON L6T 4B9
416-905-7511-3600 www.peelregion.ca



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LONG RANGE TRANSPORTATION PLAN UPDATE

NOTICE OF STUDY COMMENCEMENT AND PUBLIC INFORMATION CENTRES

The Region of Peel is undertaking an update to the Long Range Transportation Plan to determine transportation requirements to service population growth to the year 2041.

The study is being conducted in accordance with the requirements of Phases 1 and 2 of the Municipal Class Environmental Assessment, which is an approved process under the *Environmental Assessment Act*.

The lands to which the LRTP update apply is the entire Region of Peel.

In support of the Long Range Transportation Plan and component studies, including the Sustainable Transportation Strategy, Road Safety Plan and Goods Movement Long Term Plan, the Region of Peel is hosting three open houses. The open houses will provide members of the public the opportunity to learn about the LRTP and component studies, ask questions of staff, and provide input.

Details of the Open Houses are as follows:

<p>Town of Caledon Tuesday, January 17, 2017 2-9 pm Banquet Hall A Caledon Community Complex 6215 Old Church Rd Caledon, ON L7C 1J7</p>	<p>City of Brampton* Wednesday, January 18, 2017 2-9 pm Hudson's Bay Court Bramalea City Centre 25 Peel Centre Dr Brampton, ON L6T 3R5</p>	<p>City of Mississauga Thursday, January 19, 2017 2-9pm Centre Court Erin Mills Town Centre 5100 Erin Mills Pkwy Mississauga, ON L5M 4Z5</p>
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*Will also include information on the City of Brampton's Active Transportation Master Plan

For more information, please visit the project website: letsmovepeel.ca
 Or contact Eric Chan at 905-791-7800 ext. 4417 or [email](mailto:eric.chan@peelregion.ca)

www.peelregion.ca

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Region of Peel
working with you

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Join Us to Plan Peel's Transportation Future

January 17-19 open houses to hear your ideas that will feed Peel's Long Range Transportation Plan

How would you improve road safety, walkability, or goods movement?

We're updating the Region's Long Range Transportation Plan to accommodate a population of almost 2 million by 2041 and we need your ideas to develop innovative transportation solutions.


Join us at an open house and share what matters most to you:

- **Town of Caledon**
Tuesday, Jan. 17, 2017, 2 - 9p.m.
Caledon Community Complex - Banquet Hall A
6215 Old Church Rd
Caledon, ON
- **City of Brampton**
Wednesday, Jan. 18, 2017, 2 - 9p.m.
Bramalea City Centre - Hudson's Bay Court
25 Peel Centre Dr
Brampton, ON
- **City of Mississauga**
Thursday, Jan. 19, 2017, 2-9 p.m.
Erin Mills Town Centre - Centre Court
5100 Erin Mills Pkwy
Mississauga, ON

Come discuss:

- **Road safety planning** to reduce collisions that cause injuries and death on Peel roads.
- **Sustainable transportation strategy** to make walking, cycling, public transit, and carpooling more desirable.
- **Goods movement long term planning** to improve shipping of goods by rail, road, or air.

Visit the website for [more information](#)



Growth Management at the Region of Peel

Planning our communities to 2041

WATER AND WASTEWATER MASTER PLAN

Notice of Study Commencement and Public Information Centre #1 – Region of Peel 2018

Water and Wastewater Master Plan

The Study

The Region of Peel has initiated a Water and Wastewater Master Plan for its lake-based systems (where Lake Ontario is the source of drinking water and the discharge point for treated wastewater) to update the current 2013 Master Plan.

The objective of the study is to identify long-term servicing plans for the Region's lake-based water and wastewater systems to support growth to 2041 and to consider longer-term servicing needs for growth beyond 2041.

The study area for the 2018 Water and Wastewater Master Plan includes the City of Mississauga, the City of Brampton and parts of the Town of Caledon.

The study will also review the Region's capital plan to meet the current servicing agreements with York Region and the City of Toronto.

The Process

The study will define existing problems and opportunities, consider and evaluate solutions and identify preferred water and wastewater servicing strategies. The study follows the master planning process of the Municipal Engineer's Association. The Master Plan will follow Approach #1, which will fulfill the requirements for Schedule A and A+ projects and become the basis for future investigations for specific Schedule B and C projects.

Public Consultation

The Region wishes to ensure that anyone with an interest in this study has the opportunity to be involved and to provide input. Opportunities for input will include Public Information Centres (PICs) as well as direct consultation. The PICs will be held at key points during the study to present the study findings to date and gather feedback.

The Region of Peel will be hosting the first PICs in conjunction with the open houses on the draft Growth Management and Transportation ROPAs. They will take place on:

- February 12, 2018, 4-8 p.m. (RBC Theatre, Living Arts Centre, 4141 Living Arts Dr., Mississauga)
- February 13, 2018, 4-8 p.m. (Embassy West Ballroom, Royal Ambassador, 15430 Innis Lake Rd., Caledon)
- February 15, 2018, 4-8 p.m. (Windsor Ballroom B&C, Courtyard Marriot, 90 Biscayne Cres., Brampton)

Representatives from the Region and its consultants will be present at the PICs to answer questions and discuss the next steps in the study.

If you have any questions or comments, or wish to obtain more information, please contact Martin Pendlebury, P.Eng., Project Manager, Regional Municipality of Peel, 10 Peel Centre Dr., 4th Fl., Suite A, Brampton, ON L6T 4B9, at 905-791-7800 ext. 4548 or martin.pendlebury@peelregion.ca

Information will be collected in accordance with the Municipal Freedom of Information and Protection of Privacy Act. With the exception of personal information, all comments will become part of the public

record of the study. The study is being conducted according to the requirements of the Municipal Class Environmental Assessment, which is a planning process approved under Ontario's Environmental Assessment Act.

Kathryn Lockyer, Regional Clerk and Director of Clerk's
Dated and posted this 1st day of February, 2018.

LONG RANGE TRANSPORTATION PLAN

Notice of Long Range Transportation Plan Public Information Centre #2

The Region of Peel is undertaking an update to the Long Range Transportation Plan (LRTP) to determine transportation requirements to service population and employment growth to the year 2041.

The study is being conducted in accordance with the requirements of Phases 1 and 2 of the Municipal Class Environmental Assessment, which is an approved process under the Environmental Assessment Act.

The lands to which the LRTP update apply is the entire Region of Peel. On this basis, no key map has been provided with this notice.

In January 2017, the Region of Peel hosted the first set of Public Information Centres (PICs) to provide members of the public with the opportunity to learn about the LRTP, ask questions of staff and provide input.

The Region will be hosting the second set of PICs in conjunction with the open houses on the draft Growth Management and Transportation Regional Official Plan Amendments. They will take place on:

- February 12, 2018, 4-8 p.m. (RBC Theatre, Living Arts Centre, 4141 Living Arts Dr., Mississauga)
- February 13, 2018, 4-8 p.m. (Embassy West Ballroom, Royal Ambassador, 15430 Innis Lake Rd., Caledon)
- February 15, 2018, 4-8 p.m. (Windsor Ballroom B&C, Courtyard Marriot, 90 Biscayne Cres., Brampton)

For additional information on the LRTP update, please contact Roman Kuczynski, Supervisor, Transportation Planning Engineering at 905-791-7800, ext. 4381 or roman.kuczynski@peelregion.ca.

Information will be collected in accordance with the Municipal Freedom of Information and Protection of Privacy Act. With the exception of personal information, all comments will become part of the public record of the study.

Kathryn Lockyer, Regional Clerk and Director of Clerk's
Dated and posted this 1st day of February, 2018.



Public Notice



LONG RANGE TRANSPORTATION PLAN UPDATE

Notice of Long Range Transportation Plan Public Information Centre #3

The Region of Peel is undertaking an update to the Long Range Transportation Plan (LRTP) to determine transportation requirements to service population and employment growth to the year 2041.

The study is being conducted in accordance with the requirements of Phases 1 & 2 of the Municipal Class Environmental Assessment, which is an approved process under the *Environmental Assessment Act, 1990*.

The lands to which the LRTP update applies is the entire Region of Peel. On this basis, no key map has been provided with this notice.

The Region will be hosting a third set of Public Information Centres (PICs) on the LRTP update. They will take place on:

Brampton

Date: April 23, 2019

Location:

Greenbriar Recreation Centre
Multi-purpose Room
1100 Central Park Dr
Brampton, ON, L6S 2C9

Time: 4 p.m. – 8 p.m.

Caledon

Date: April 25, 2019

Location:

Caledon East Community Complex
Banquet Hall A
6215 Old Church Rd
Caledon East, ON, L7C 1J7

Time: 4 p.m. – 8 p.m.

Mississauga

Date: April 30, 2019

Location:

Iceland Mississauga
North Lounge
705 Matheson Blvd E
Mississauga, ON L4Z 3X9

Time: 4 p.m. – 8 p.m.

Comments on the LRTP will be accepted until **May 8, 2019**

Please direct all comments and inquires to Pegah Tootoonchian, Planner, at 905-791-7800, ext. 7834 or Pegah.Tootoonchian@peelregion.ca.

REST AREAS ALONG EXTERIOR PATHS OF TRAVEL

Public Consultation

In accordance with the Integrated Accessibility Standards Regulation of the *Accessibility for Ontarians with Disabilities Act, 2005*, the Region of Peel is developing a guideline for the design and placement of rest areas along exterior paths of travel adjacent to Regional Roadways. The above LRTP PICs will also include public consultation to seek public insight into the development of this guideline.

Public Information Centre #1

LONG RANGE TRANSPORTATION PLAN UPDATE

LetsMovePeel.ca

WHAT WHY HOW

The Long-Range Transportation Plan (LRTP) Update
 A vision plan for the region's transportation future, including the Peel Region's role in the Greater Golden Horseshoe.

Plan a better transportation future for you and your children
 Make transportation in the region safer, cleaner, and more efficient.

Make best use of existing transportation infrastructure
 Make changes to transportation infrastructure that will improve the region's transportation system.

Transportation Themes

Promoting Sustainable Modes of Transportation | Attracting People and Business to Peel Region | Implementing Strategies to Manage Traffic Demand | Harmonizing Truck and Passenger Vehicles in Peel Region

Contact
 Eric Chen, PEng, PMP
 Executive Director, Transportation
 Peel Region
 905-882-2200 ext. 2200
 eric.chen@peelregion.ca

WHAT WE ARE PLANNING FOR

MORE PEOPLE
 Today: 3 people icons
 2041: 4 people icons

MORE JOBS
 Today: 1 job icon
 2041: 4 job icons

PEARSON INTERNATIONAL
 Today: 1 person icon
 2023: 4 person icons

MORE TRUCKS
 Today: 1 truck icon
 2023: 4 truck icons

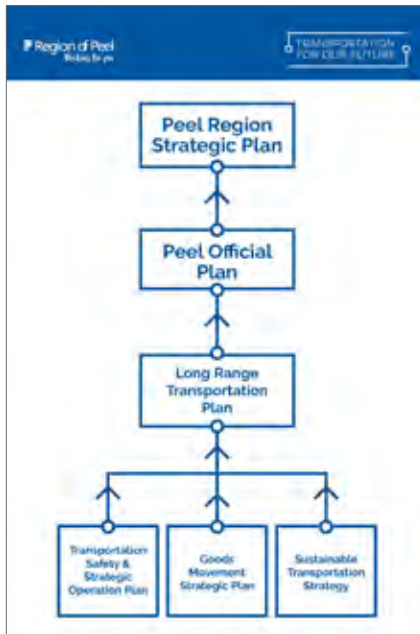
WHAT WE ARE PLANNING FOR

CLIMATE CHANGE AND NATURAL ENVIRONMENT
 Providing transportation solutions that are less harmful to the environment

HEALTHY AND AGE-FRIENDLY BUILT ENVIRONMENTS
 Making active travel more feasible for all.

BETTER GOODS MOVEMENT
 Finding ways to support this business sector and integrate it with the community

WELL MANAGED GROWTH
 Reducing congestion by offering other modes of transportation than single-occupant vehicles



Region of Peel
Building for you

TRANSPORTATION FOR OUR FUTURE

TELL US WHAT YOU THINK

CALEDON
Tuesday, January 13 2017 | April 2017
Caledon Community Complex
605 Old Church Rd. Caledon East
2:00 pm to 9:00 am

BRAMPTON
Wednesday, January 18 2017 | April 2017
Bramalea City Centre
45 Peel Centre Dr. Brampton
2:00 pm to 9:00 pm

MISSISSAUGA
Thursday, January 19 2017 | April 2017
Edin Mills Town Centre
1500 Edin Mills Pkwy. Mississauga
1:00 pm to 9:00 pm

ONLINE SURVEY
www.letsmovepeel.ca

MAIL
Region of Peel
Transportation Department
1000 Wellington St. W.
Mississauga, Ontario L5L 1A7
Phone: (905) 874-2100
Fax: (905) 874-2101
TTY: (905) 874-2102
Email: info@peel.ca

Region of Peel
Building for you

TRANSPORTATION FOR OUR FUTURE

HOW WE GET AROUND PEEL

MOST OF US DRIVE

- 66% / Car Drivers
- 5% / Pedestrians and Cyclists
- 2% / School Bus Passengers
- 17% / Carpoolers
- 9% / Transit Riders

HOW THE 9% USE LOCAL TRANSIT

Transit Mode Split and Transit Trips (2010-2016)

GTHA Transit Agency Annual Ridership

Agency	Ridership
Peel	147,000
Brampton	100,000
Mississauga	100,000
GTU	100,000
YRT	100,000
YRT	100,000
YRT	100,000
YRT	100,000
YRT	100,000
YRT	100,000
YRT	100,000

Region of Peel
Building for you

TRANSPORTATION FOR OUR FUTURE

HOW WE GET AROUND PEEL

POTENTIAL WALKING TRIPS
We Drive When We Could Walk

2016 (Millions)

- 98% Car Drivers
- 20% Carpoolers
- 4% Transit Riders
- 4% Cyclists
- 17% Pedestrians

WE DRIVE WHEN WE COULD CYCLE
Potential Cycling Trips

2016 (Millions)

- 97% Car Drivers
- 20% Carpoolers
- 5% Transit Riders
- 9% Cyclists
- 8% Pedestrians

Region of Peel
Building for you

TRANSPORTATION FOR OUR FUTURE

HOW WE GET TO WORK

THE MAJORITY OF US WORK IN PEEL

More Than Half Of Peel's Peak Period Trips Are Intra-Regional

895,000
Total person trips in the AM peak period (6:00 a.m.-9:00 a.m.)

WE DRIVE FURTHER TO GET TO WORK

City	Median Trip Distance to Work Area
Orillia	6
Port Hope	11
Georgetown	11
Markham	16
Mississauga	16

Region of Peel
Building for you

TRANSPORTATION FOR OUR FUTURE

MOVING TOWARD A MORE SUSTAINABLE TRANSPORTATION FUTURE

Car Drivers

Transit Riders

Carpoolers

Pedestrians and Cyclists

Public Information Centre #2

Region of Peel working with you

TRANSPORTATION FOR OUR FUTURE

LONG RANGE TRANSPORTATION PLAN UPDATE

LetsMovePeel.ca

Region of Peel working with you

TRANSPORTATION FOR OUR FUTURE

WHAT WHY HOW

The Long-Range Transportation Plan (LRTP) Update
 A 25-year plan to guide regional transportation policy through 2041. Will inform amendments to the Regional Official Plan. A transportation master plan conducted under the Municipal Class Environmental Assessment (EA) process.

Plan a better transportation future for you and your children
 Make transportation in Peel easier, faster, greener, safer, healthier.

Make best use of existing transportation infrastructure
 Make strategic investments in new transportation infrastructure. Make sustainable transportation and transit a priority. Plan for new transportation technologies.

Transportation Themes

- Promoting Sustainable Modes of Transportation
- Increase Efficiency of the Goods Movement Network
- Integrate Land Use Planning with Transportation Planning
- Improve Health Through Transportation

Contact
 Roman Kuczynski, MA, MCIP, RPP
 Supervisor
 Transportation System Planning
 Transportation Division
 Public Works, Region of Peel
 (905) 791-7800 ext. 4381
 roman.kuczynski@peelregion.ca

Region of Peel working with you

TRANSPORTATION FOR OUR FUTURE

WHAT WE ARE PLANNING FOR

MORE PEOPLE
 Today: 3 people icons. 2041: 5 people icons. +500,000 people.

MORE JOBS
 Today: 1 job icon. 2041: 3 job icons. +50,000 jobs.

PEARSON INTERNATIONAL
 Today: 3 people icons. 2033: 5 people icons. +10 million passengers annually.

MORE TRUCKS
 Today: 3 truck icons. 2041: 5 truck icons. +50,000 trucks daily.

Region of Peel working with you

TRANSPORTATION FOR OUR FUTURE

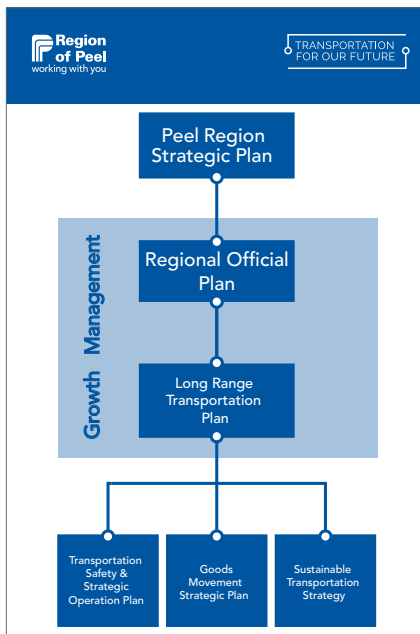
WHAT WE ARE PLANNING FOR

CLIMATE CHANGE AND NATURAL ENVIRONMENT
 Providing transportation solutions that are less harmful to the environment.

HEALTHY AND AGE-FRIENDLY BUILT ENVIRONMENTS
 Making active travel more feasible for all.

BETTER GOODS MOVEMENT
 Finding ways to support this business sector and integrate it with the community.

WELL MANAGED GROWTH
 Reducing congestion by offering other modes of transportation than single-occupant vehicles.



Region of Peel working with you

TRANSPORTATION FOR OUR FUTURE

WHERE WE ARE IN THE PROCESS

2016
 LRTP Update begins
 ■ Modeling Work
 ■ Launch of Component Studies

2017
 Studies & Consultations
 ■ LRTP Public Information Centre 1
 ■ Completion of Component Studies
 ■ Completion of Modeling Work

WE ARE HERE!

2018
 Winter 2018
 ■ Stakeholder Workshop
 ■ LRTP Public Information Centre 2
 ■ Transportation ROPA Open Houses & Public Meeting

Spring 2018
 ■ LRTP Adoption
 ■ Transportation ROPA Adoption
 ■ Notice of LRTP Study Completion

Region of Peel working with you TRANSPORTATION FOR OUR FUTURE

TELL US WHAT YOU THINK

MISSISSAUGA

Monday, February 12, 2018
 Mississauga Living Arts Centre, RBC Theatre
 4141 Living Arts Dr, Mississauga
 4:00 p.m. to 8:00 p.m., Presentation at 6:30 p.m.

CALEDON

Tuesday, February 13, 2018
 Royal Ambassador, Embassy West Ballroom
 15430 Innis Lake Road, Caledon East
 4:00 p.m. to 8:00 p.m., Presentation at 6:30 p.m.

BRAMPTON

Thursday, February 15, 2018
 Courtyard Marriott, Windsor Ballroom B&C
 90 Biscayne Crescent, Brampton
 4:00 p.m. to 8:00 p.m., Presentation at 6:30 p.m.

Region of Peel working with you TRANSPORTATION FOR OUR FUTURE

HOW WE GET AROUND PEEL

MOST OF US DRIVE

- 66% / Car Drivers
- 5% / Pedestrians and Cyclists
- 2% / School Bus Passengers
- 17% / Carpoolers
- 9% / Transit Riders

HOW THE 9% USE LOCAL TRANSIT

Transit Mode Split and Transit Trips 1996, 2001, 2006 & 2011

Year	Transit Mode Split (%)	Transit Trips (Millions)
1996	~1.5	~1.0
2001	~2.5	~1.5
2006	~4.5	~2.5
2011	~9.0	~4.5

Area	GTHA Transit Agency Annual Ridership (2013-2015)	3-Year Growth (2013-2015)
Peel	15.4%	7.8%
GTHA	4.4%	1.3%
YIP Transit	1.3%	0.3%
Hamilton	0.3%	0.1%
Durham	-0.2%	-0.2%
York Region	-2.5%	-2.5%
Canada	-13.3%	-13.3%

Region of Peel working with you TRANSPORTATION FOR OUR FUTURE

HOW WE GET AROUND PEEL

POTENTIAL WALKING TRIPS

We Drive When We Could Walk (2km or less)

Mode	Percentage
Car Drivers	58%
Carpoolers	20%
Transit Riders	2%
Cyclists	1%
Walkers	17%

WE DRIVE WHEN WE COULD CYCLE

Potential Cycling Trips (7km or less)

Mode	Percentage
Car Drivers	63%
Carpoolers	20%
Transit Riders	5%
Cyclists	0%
Walkers	8%

Region of Peel working with you TRANSPORTATION FOR OUR FUTURE

HOW WE GET TO WORK

THE MAJORITY OF US WORK IN PEEL

More Than Half Of Peel's Peak Period Trips Are Inter-Regional

895,000 Total person trips in the AM peak period (6:00 a.m.-9:00 a.m.)

Geographic Area	Trips
Others (i.e. Barrie)	8,000
York	20,000
Peel Region	523,000
Halton & Hamilton	25,000
Toronto & Durham	122,000

WE DRIVE FURTHER TO GET TO WORK

Geographic Area	Median Trip Distance To Work Area
GTHA	9
Peel Region	11
Caledon	21
Brampton	10
Mississauga	10

Region of Peel working with you TRANSPORTATION FOR OUR FUTURE

MOVING TOWARD A MORE SUSTAINABLE TRANSPORTATION FUTURE

Car Drivers: Shows a downward trend in the percentage of trips over time.

Transit Riders: Shows an upward trend in the percentage of trips over time.

Carpoolers: Shows an upward trend in the percentage of trips over time.

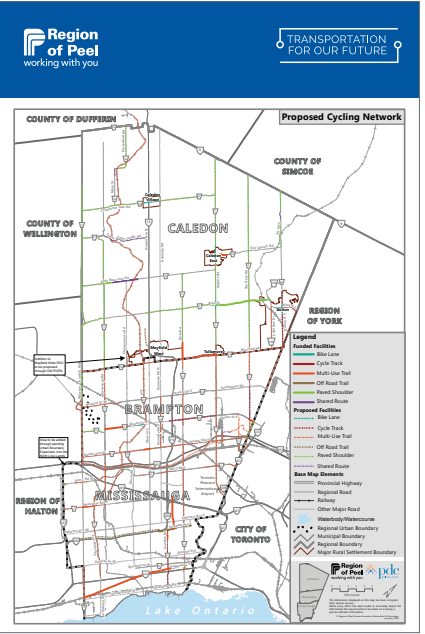
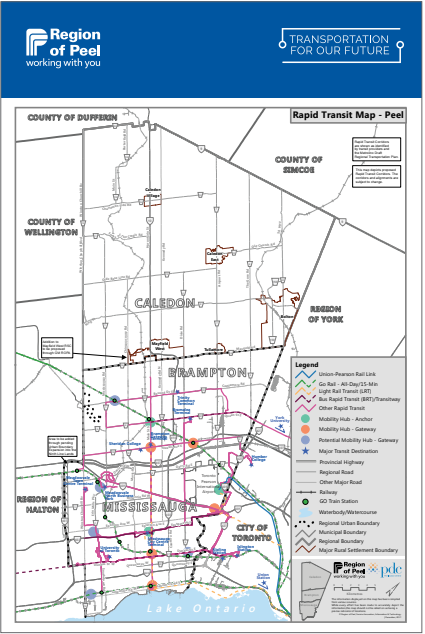
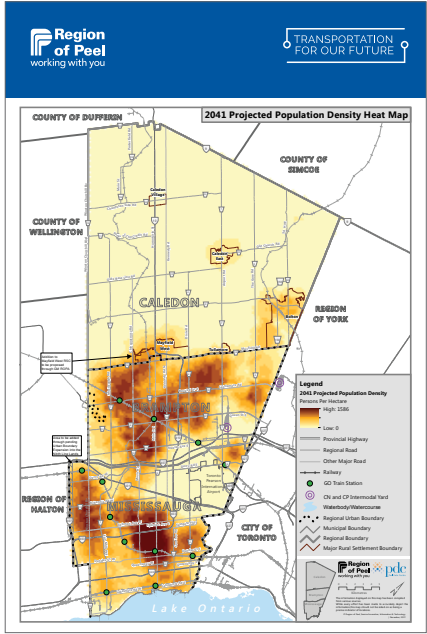
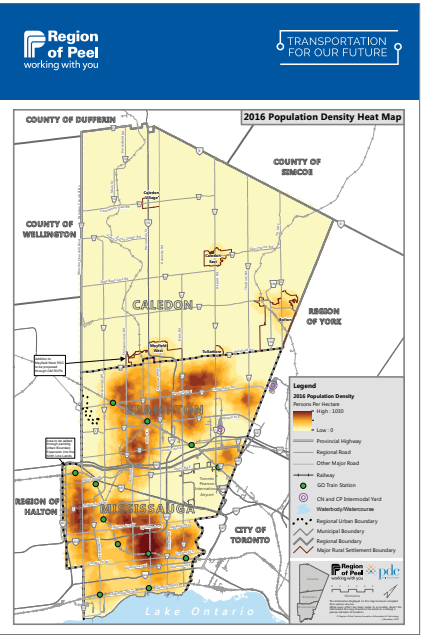
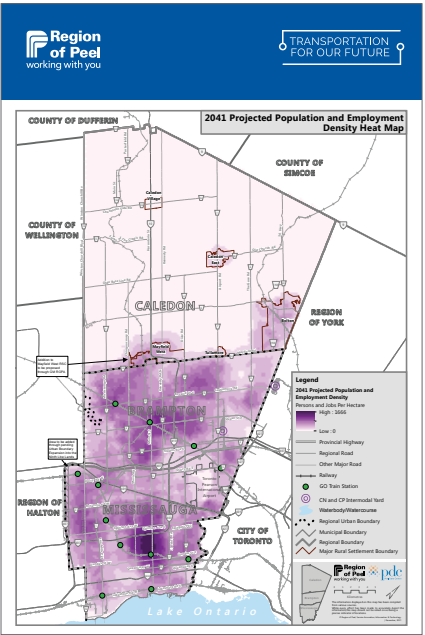
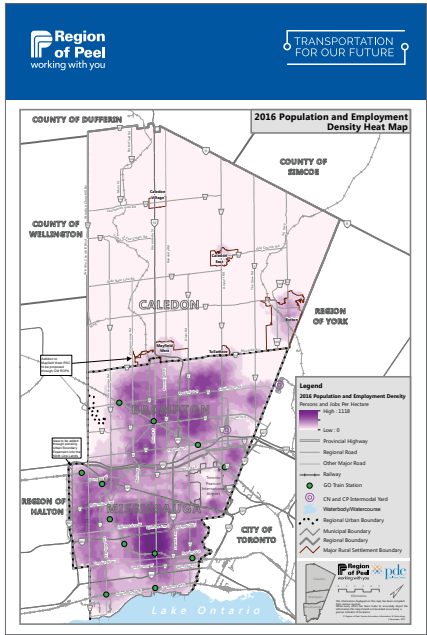
Pedestrians and Cyclists: Shows a slight upward trend in the percentage of trips over time.

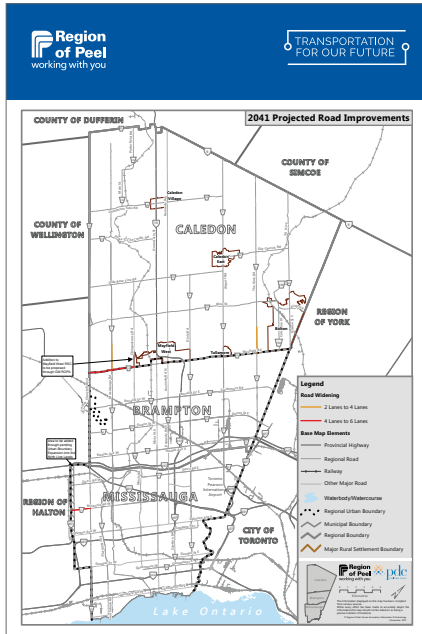
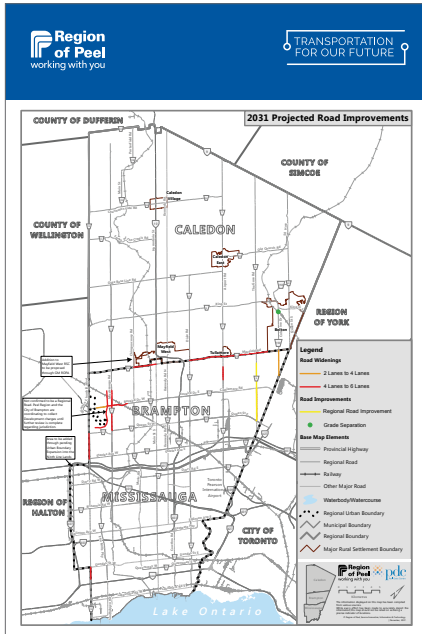
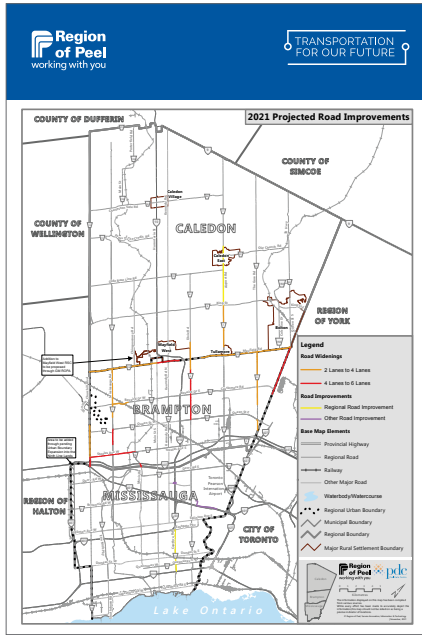
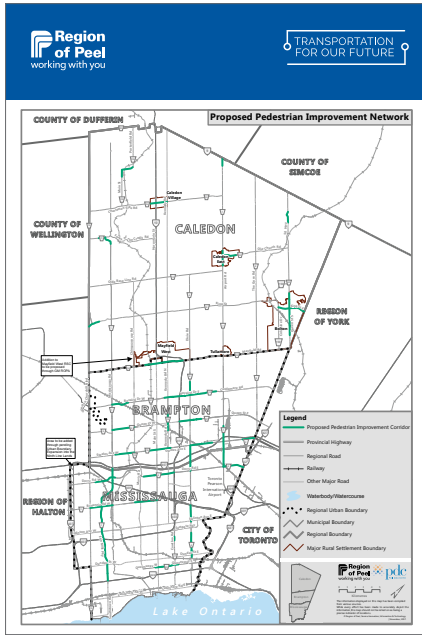
Region of Peel working with you TRANSPORTATION FOR OUR FUTURE

LONG RANGE TRANSPORTATION PLAN STAKEHOLDER WORKSHOP

Bank of Montreal Room, 2nd Floor
 January 19, 2018
 8:00 a.m. to 12:00 p.m.

LetsMovePeel.ca





Public Information Centre #3

Let's Move Peel

Long Range Transportation Plan 2019

Welcome


Public Information Centre



Region of Peel Long Range Transportation Plan

Regional Context

Situated in the heart of the Greater Toronto and Hamilton Area, the Region of Peel is comprised of three local municipalities: the City of Brampton, the Town of Caledon, and the City of Mississauga. Combined, the Region currently serves 1.5 million residents and has a road network comprised of 28 Regional Roads.




What is the LRTP?

The Region's population is expected to grow to almost 2 million by 2041. This means that by 2041, Peel needs to accommodate the transportation needs of an additional 500,000 residents and 250,000 additional jobs.

The Long Range Transportation Plan (LRTP) is a five-year plan that guides transportation planning needs in the Region of Peel and sets out the blueprint to accommodate this anticipated demand.

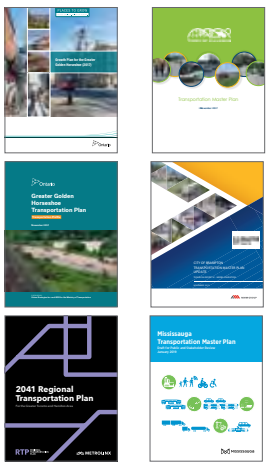

The LRTP is being conducted in accordance with the requirements of Phases 1 and 2 of the Municipal Class Environmental Assessment (MCEA) for Master Plans, which is an approved process under the Environmental Assessment Act.



Developing The Long Range Transportation Plan

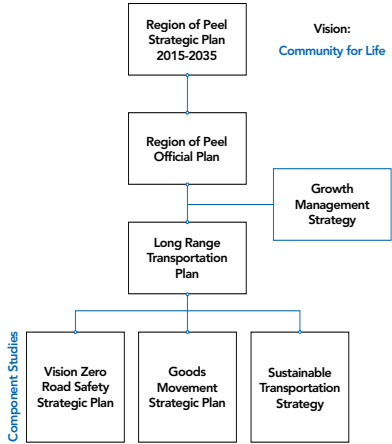
Provincial and Local Planning Documents

The LRTP was guided by Provincial planning documents including: The Growth Plan, 2017; work completion to date on the Greater Golden Horseshoe Transportation Plan; and 2041 Metrolinx Regional Transportation Plan, as well as local municipal transportation planning objectives.


Region of Peel Long Range Transportation Plan

Vision: Community for Life



Component Studies


- Vision Zero Road Safety Strategic Plan
- Goods Movement Strategic Plan
- Sustainable Transportation Strategy



Integrated Growth Management Approach

What is the Integrated Growth Management Approach?


The Growth Management Strategy at the Region of Peel is a collaborative approach to planning and managing the forecasted growth into 2041 as it relates to Official Plan policies, water and waste water planning and servicing, transportation planning, and financial policy.



The Long Range Transportation Plan serves two primary functions within the Growth Management Strategy:

- Input:** aligns the Region's transportation infrastructure improvements with other Regional infrastructure requirements to service growth
- Output:** serves as technical input into the Development Charges Background Study* and By-law update through the capital budgeting in support of future growth


*Development charges fund infrastructure required for growth.




Current State Where We Are

Currently 63% of people travel in single occupant vehicles and only 37% of people use sustainable modes of transportation

A survey conducted as a part of the Peel's Strategic Plan 2015-2035 identified **traffic congestion** as the number one top of mind issue for Peel residents, followed by **managing growth**.



Improving the above will contribute to Peel's Vision of a **Community for Life**



Future Growth Where We Are Going

The Region of Peel is expected to grow by more than 500,000 more people and 250,000 jobs by 2041 resulting in a total population of approximately 2 million people and 970,000 jobs

Vehicle trips are expected to increase by 45% by 2041 in the morning peak period, amounting to about 190,000 additional vehicle trips within the Region of Peel. The increase in total trips is estimated to be about 303,000 trips, inclusive of driving, carpooling, transit, walking, and cycling.*

*The base year for these estimates is 2011

516,000* more people by 2041

265,000* more jobs by 2041

*These values are approximate estimates only

Problem Statement

Traffic congestion has been identified as the number one "top-of-mind issue" by Peel's residents, followed by managing growth. If current travel trends continue, trips are expected to increase by 45%* by 2041 because of population and employment growth. This will have significant impacts on the transportation network, resulting in increased travel times and congestion.

*45% increase in the weekday AM Peak Period

Four Alternatives to Address Growth

- Do nothing**: Leave existing transportation system as is
- Road improvements only**: Only invest in widening existing roadways and constructing new roads
- Sustainable transportation modes only**: Only invest in walking and cycling infrastructure
- Combination**: Planned Road Improvements and 50% Sustainable Mode Split

Evaluation of Alternatives Criteria

- Transportation**: Impact on Sustainable Modes of Transportation, Impact on Vehicular Traffic, Impact on Road Network Connectivity, Impact on Goods Movement Flow
- Natural**: Impact on Natural Heritage System, Impact on GHG Emissions
- Cultural**: Impact on Cultural Heritage Sites
- Social**: Impact on Residents' Physical and Mental Health, Impact on Age-Friendly Accessible Living, Impact on Air Quality
- Economic**: Impact on Businesses, Cost of Congestion, Capital Costs

Evaluation of Alternatives Results

Category	Alternatives			
	Do Nothing	Road Improvements Only	Sustainable Transportation Modes Only	Combination
Transportation	Major negative impact	Minor negative impact	Neutral/negligible impact	Major positive impact
Natural Environment	Major negative impact	Minor negative impact	Neutral/negligible impact	Major positive impact
Cultural Environment	Major negative impact	Minor negative impact	Neutral/negligible impact	Major positive impact
Social and Health	Major negative impact	Minor negative impact	Neutral/negligible impact	Major positive impact
Economic	Major negative impact	Minor negative impact	Neutral/negligible impact	Major positive impact
OVERALL	Least Preferred	Somewhat Preferred	Somewhat Preferred	Most Preferred
RECOMMENDATION				Recommended Alternative

Score Symbol	Score Definition
Major negative impact	Major negative impact
Minor negative impact	Minor negative impact
Neutral/negligible impact	Neutral/negligible impact
Minor positive impact	Minor positive impact
Major positive impact	Major positive impact

Preferred Alternative Combination

The combination alternative is comprised of:
Planned Road Improvements and 50% Sustainable Mode Share.

This includes:

- GTA West Corridor
- Road Modifications on Arterials Roads (i.e. Williams Parkway, Financial drive, BramWest)
- Planned Road Improvements based off Capital Plans, Master Plans (regional and local), Provincial Plans
- Sustainable Transportation Infrastructure

*This includes transit and carpooling

Region of Peel 50% Sustainable Mode Share Target

What are Sustainable Modes?

What does Peel's 50% Sustainable Mode Share Target for 2041 Look Like:

2011: 37% (258,240 trips) Other, 63% (419,760 trips) Driving

2041 (Do Nothing): 37% (258,240 trips) Other, 63% (419,760 trips) Driving

2041 (50% Sustainable Mode Share Target): 37% (258,240 trips) Other, 50% (300,000 trips) Sustainable Mode, 13% (87,000 trips) Driving

What Are The 2041 Targets For Each Sustainable Mode?

Peel 2011 Mode Shares: 4.3% Other, 0.3% Bike, 6.8% Walk, 15.3% Carpool, 10.9% Transit, 62.4% Drive

Peel Mode Share Vision for 2041: 4.3% Other, 2% Bike, 17.9% Carpool, 17.9% Transit, 49.8% Drive

**"Other" modes include school buses, taxis and motorcycles. They are not a focus of this strategy.

Transportation Focus Areas

The Region of Peel will build on the success of current carpooling, active transportation and transit use in the Region to successfully achieve a 50% sustainable mode share by 2041.

Increasing the sustainable mode share in the Region leads to a safer and more efficient road system, resulting in improvements to both vehicular and safe mobility.

Sustainable Mobility

What is Sustainable Transportation

Sustainable transportation refers to a balanced approach at managing travel demands. Sustainable modes include walking, cycling, public transit, carpooling, and alternatives to single occupant vehicle travel.

Sustainable Mobility Goal: 50% Sustainable Mode Share by 2041

How will the Region achieve its Sustainable Mobility Objectives?

The Region's **Sustainable Transportation Strategy** guides Peel in its efforts to offer a safer, more efficient and healthier transportation system by 2041 by laying out the implementation plan for achieving a 50% sustainable mode share.

Year	Auto Drive (Historical)	Sustainable Modes (Historical)	Auto Drive (Trends)	Sustainable Modes (Trends)	Auto Drive (Vision)	Sustainable Modes (Vision)
2001	65%	35%	-	-	-	-
2011	63%	37%	-	-	-	-
2021	-	-	-	-	-	-
2031	-	-	-	-	-	-
2041	-	-	60%	40%	50%	50%

Key strategies include:

- Active Transportation Infrastructure:** This includes pedestrian and cycling infrastructure such as multi-use trails and cycle tracks
- Transportation Demand Management:** This includes initiatives aimed to influence travel behavior

Safe Mobility

What is Safe Mobility?

Safe mobility refers to a balanced and sustainable transportation system that provides safe mobility choices through the efficient design of the transportation network system.

Safe Mobility Goal: 10% Reduction in Injuries and Fatalities by 2022

How will the Region achieve its Safe Mobility Objectives?

The Region's **Vision Zero Road Safety Strategic Plan** provides the action plan for reducing fatal and injury collisions in the following emphasis areas:

- Intersection Collisions
- Impaired driving
- Aggressive driving
- Pedestrian collisions
- Distracted driving
- Cyclist collisions

Key strategies include:

- Red Light Camera Program:** Installation of a camera at an intersection to discourage red light running
- Traffic Calming Speed Cushions:** Small rubber pads placed across the road which spaces between them that are used to help slow down cars

Vehicular Mobility and Goods Movement

What is Vehicular Mobility and Goods Movement?

Vehicular mobility and goods movement refers to the movement of people and goods through road and highway infrastructure.

How will the Region achieve its Vehicular Mobility Objectives?

The Region of Peel also continuously aims to optimize, operate, and maintain the existing transportation system through several operational functions such as ensuring traffic network progression and operations and maintenance.

How will the Region achieve its Goods Movement Objectives?

The Region's Goods Movement Strategic Plan provides a 5 year action plan to help move goods more efficiently, manage congestion and mitigate effects on health and the environment in Peel.

\$10.7 billion
Estimated worth of goods that originate in, move through, or are destined for Peel every week.

4 out of 9 jobs in Peel are in goods movement-dependent industries

Approximately 2 of 5 businesses are involved in a goods movement sector
Peel Region has the highest share of goods movement establishments across all the municipalities.

Key strategies include:

- Off-Peak Deliveries:** This initiative aims to reduce congestion by shifting truck traffic from regular hours to off-peak hours (between 7pm to 7am)
- Adaptation to Advancements in E-commerce:** The Region of Peel, is undertaking an E-commerce study to understand its impacts on the transportation system and plan for the shifting retail landscape accordingly

Implementation of the Long Range Transportation Plan

The objectives of the L RTP will be achieved through a 5-prong approach:

Execution of Component Studies: The Sustainable Transportation Strategy, Vision Zero Road Safety Strategic Plan, and the Goods Movement Strategic Plan each include an action plan of initiatives intended to achieve the L RTP's objectives and Peel's vision of a Community for Life.

Road Network Improvements and AT Infrastructure: The L RTP recommends a combination of road improvements and AT infrastructure which are intended to facilitate the Region's journey towards the 50% sustainable mode share target.

Transportation Regional Official Plan Policy Amendment: The key themes and principles identified in the L RTP will be translated into policies to be included in the Region's Official Plan.

Advocacy: Advocacy for Provincial investment in key highway and transit initiatives will bolster the Region's ability to achieve the 50% sustainable mode share target.

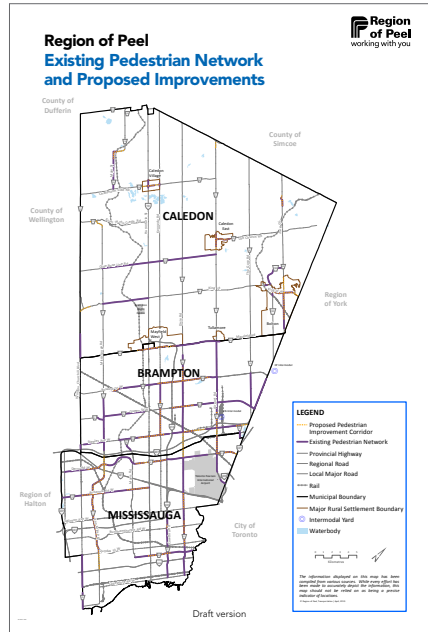
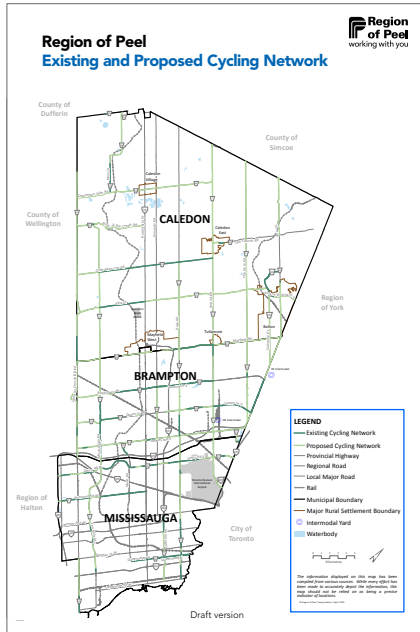
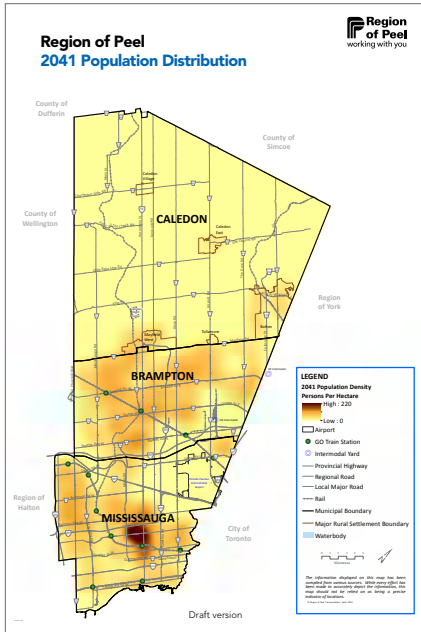
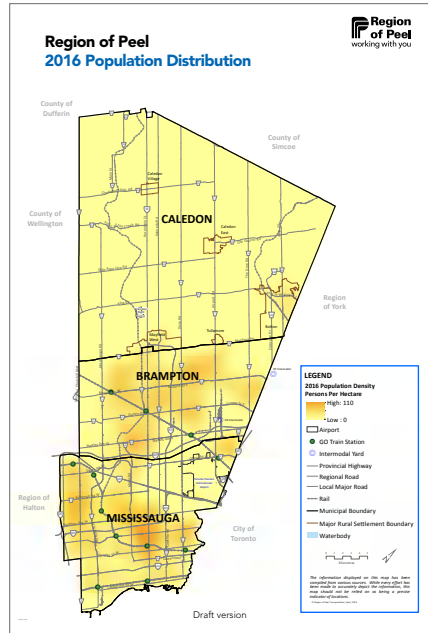
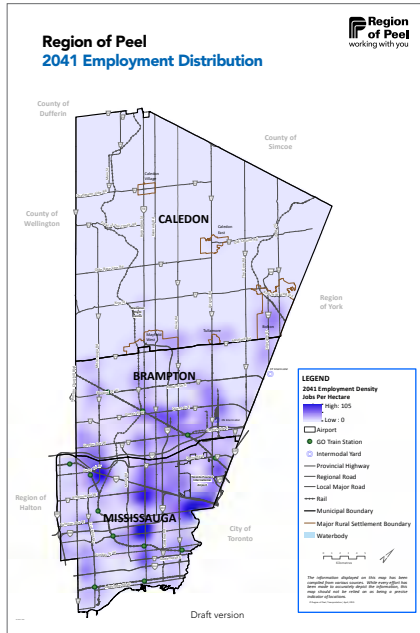
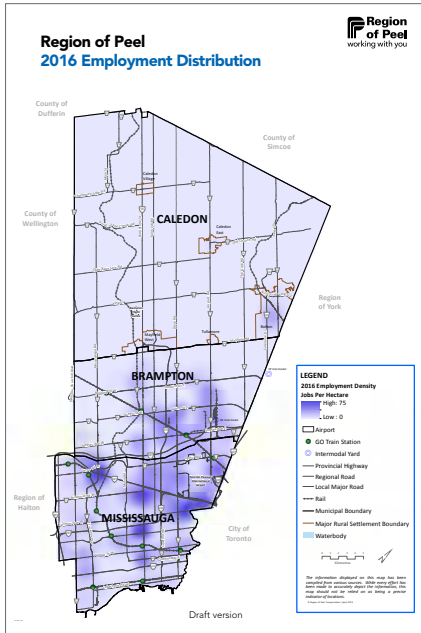
Securing Funding: The Region will be securing funding to support the implementation of the component strategies and infrastructure improvements in a way that is responsible and financially sustainable.

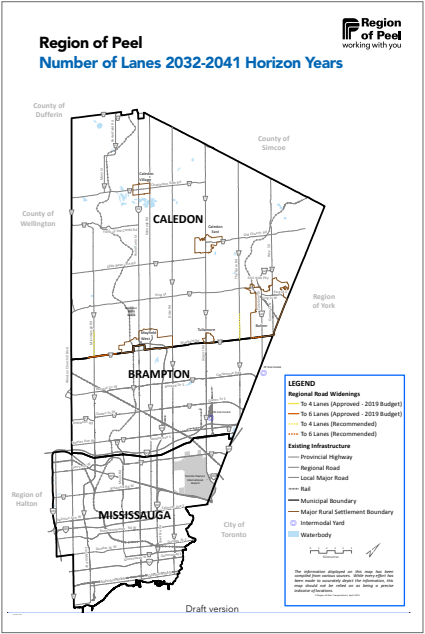
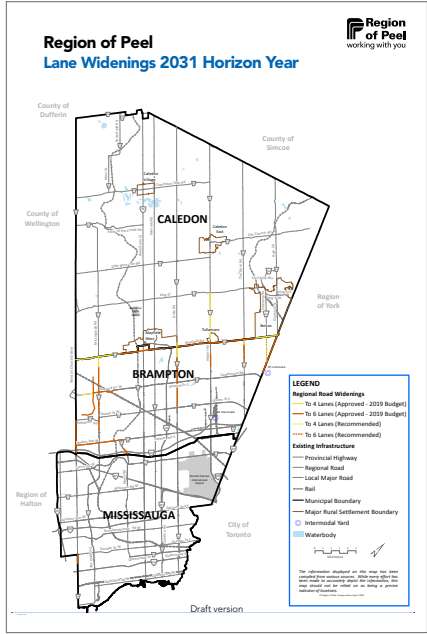
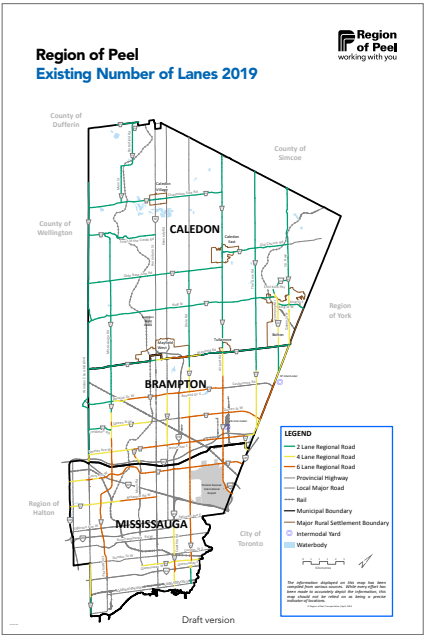
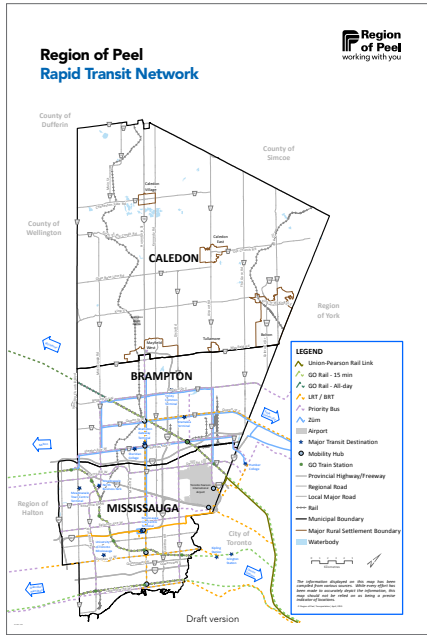
Timeline Next Steps

- September 2016 → Study Commencement
- January 2017 → Public Information Centre 1
- April 2017 → Public Information Centre 2
- 2018 → Long Range Transportation Plan Technical Analysis & Updates
- April 2019 → Public Information Centre 3 Comment Period
- June 2019 → Council Adoption Notice of Study Completion

Tell us what you think
Comments and feedback will be accepted until May 8, 2019

Please send all comments to:
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Strategic Policy and Projects Transportation Division
10 Peel Centre Drive
Brampton, Ontario L6T 4B9
905-791-7800 ext. 7834
Pegah.Tootoonchian@peelregion.ca



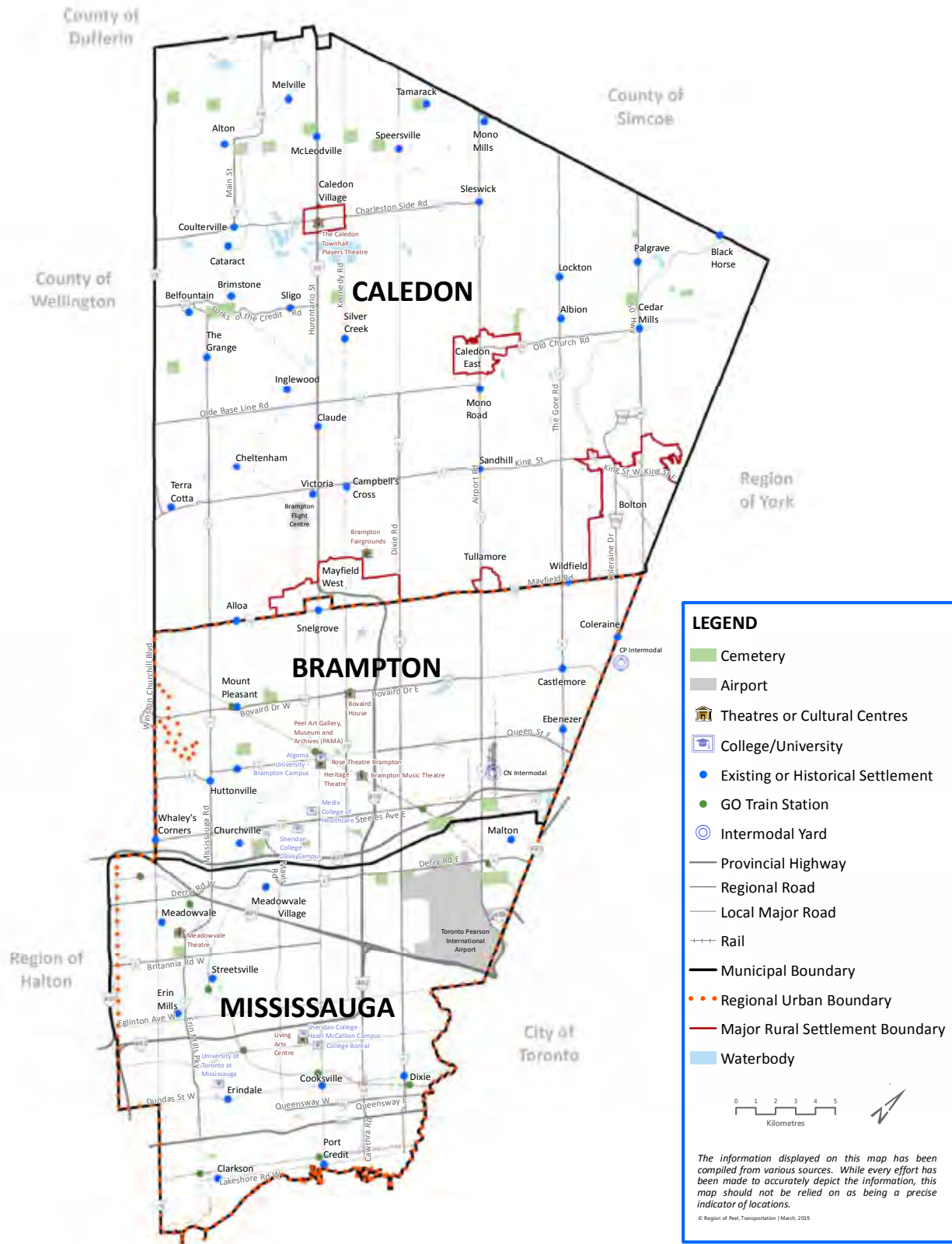


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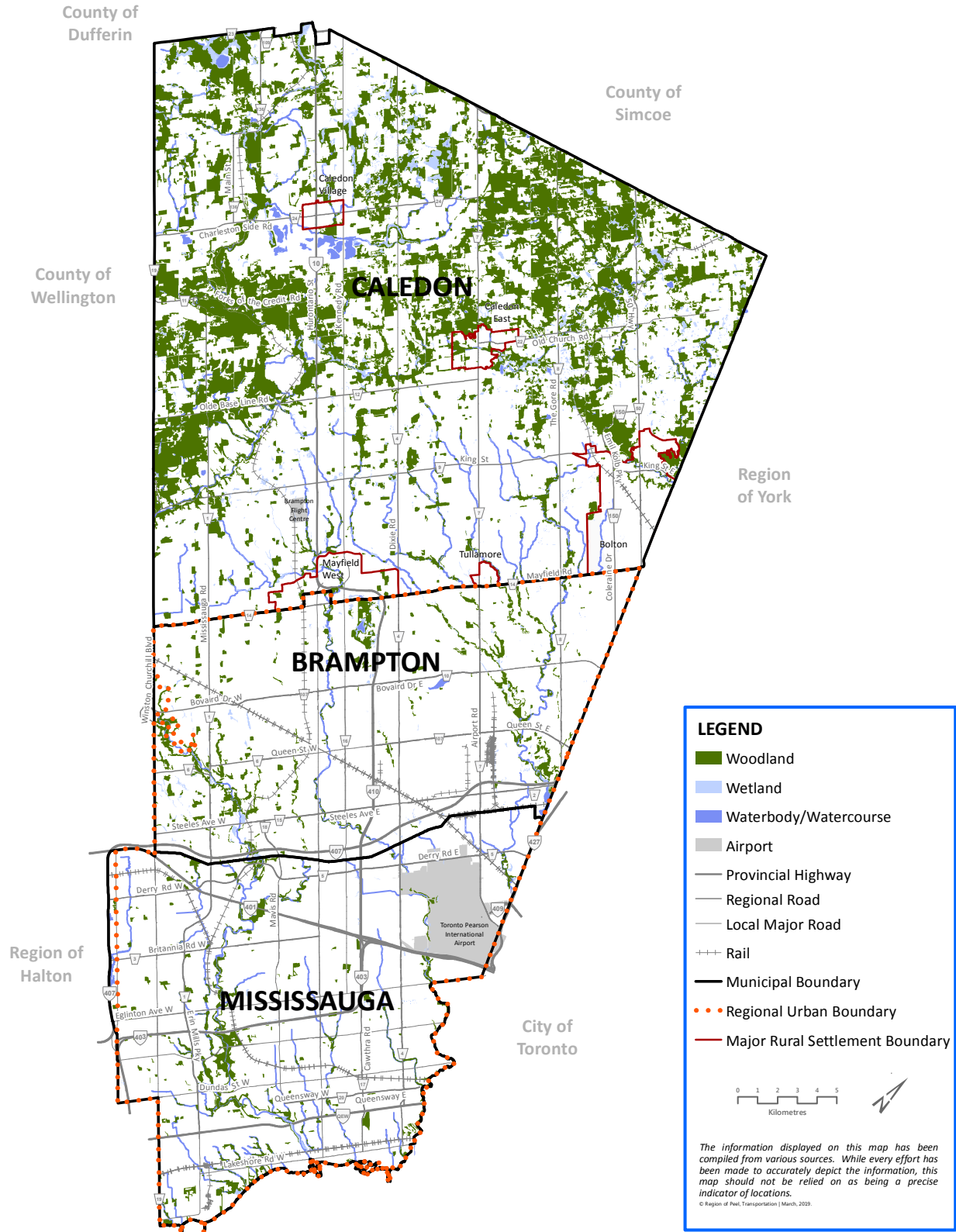
Appendix C

Evaluation Criteria Maps

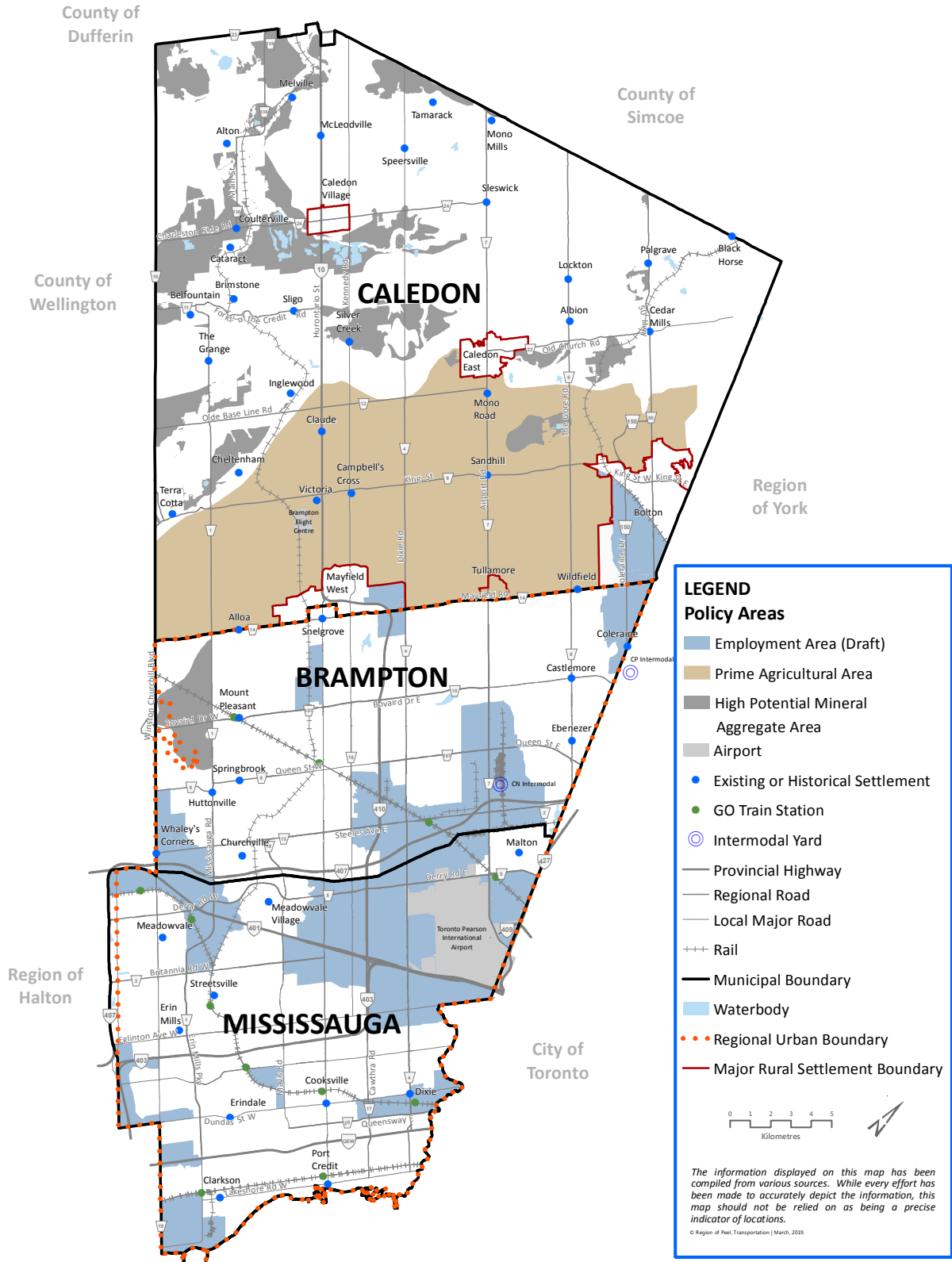
Cultural Heritage



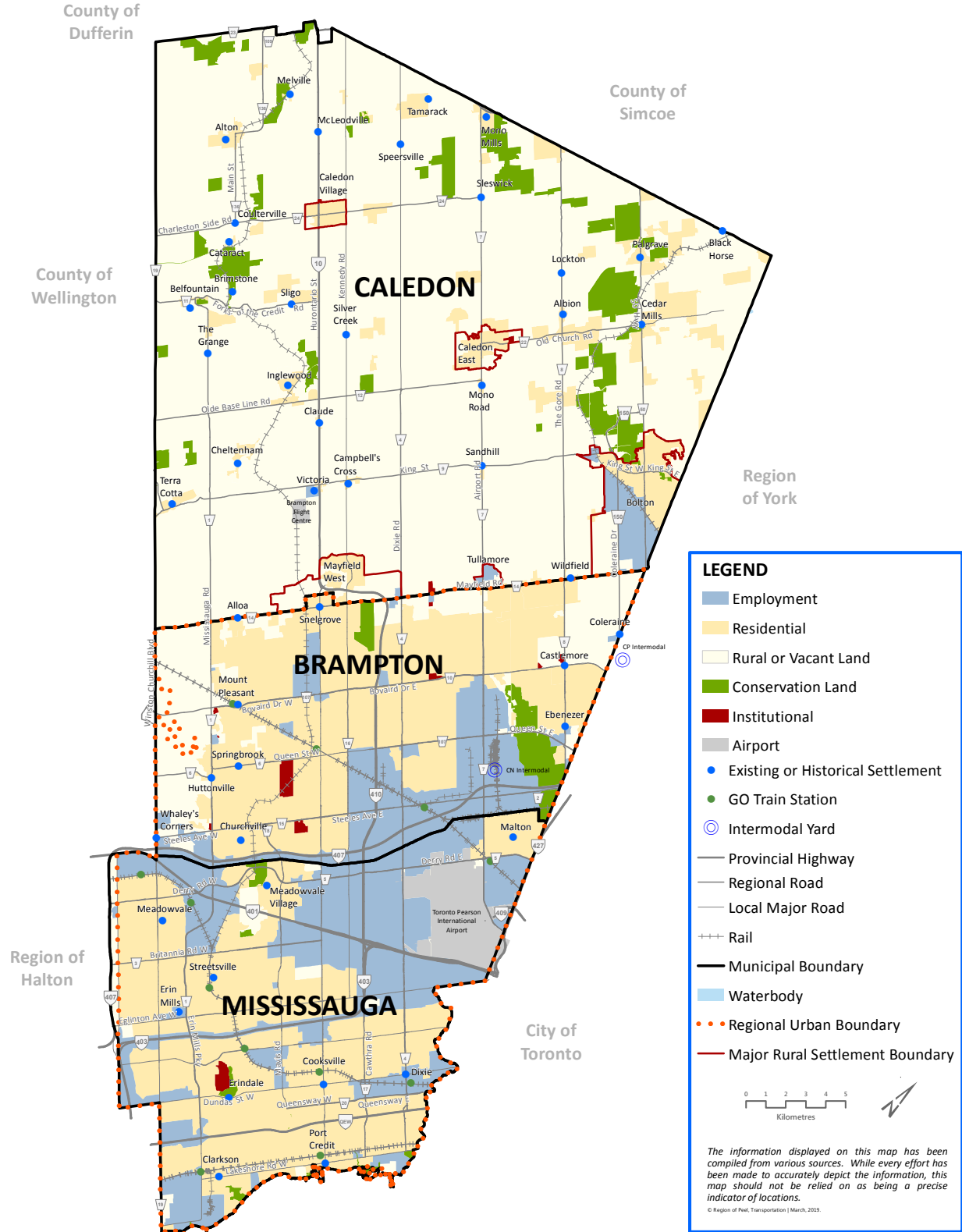
Natural Heritage



Economic



Social and Health



D

Appendix D

Recommended Road Improvement Schedule

BY 2031			
Road	Details of Improvement	EA Status	Part of 2019 Approved Budget?
Airport Road	2 to 5 lane widening from 1.0 km north of Mayfield Road to King Street	Completed	Y
	Corridor Improvements from King Street to Hunstmill Drive	Works in Progress	Y
	4 to 6 lane widening from Braydon Boulevard to Countryside Drive	Works in Progress	Y
Bovaird Drive	2 to 4 lane widening from Mississauga Road to 1.5 km West of Heritage Road	Completed	Y
	4 to 6 lane widening from James Potter/Creditview to Mississauga Road	Completed	Y
	4 to 6 lane widening from Mississauga Road to North/South Freeway (1 km W of Mississauga Road)	Completed	Y
Cawthra Road	Corridor and Intersection Improvements from Eastgate Parkway to Queen Elizabeth Way	Works in Progress	Y
Coleraine Drive	2 to 4 lane widening from Highway 50 to Mayfield Road	–	N
Dixie Road	4 to 6 lane widening from Queen Street East to Bovaird Drive	Completed	Y
	2 to 4 lane widening from Countryside Drive to Mayfield Road	Completed	Y
	2 to 5 lane widening from Mayfield Road to 2 km northerly	Completed	Y
	4 to 6 lane widening from Bovaird Drive to Countryside Drive	Completed	Y
Highway 50	5 to 7 lane widening from Castlemore Road to Mayfield Road	Completed	Y
Mavis Road	4 to 6 lane widening of Mavis Road, Region's portion, including the structure over Highway 407	Completed	Y
Mayfield Road	2 to 5 lane widening from Airport Road to The Gore Road	Completed	Y
	2 to 4 lane widening from Coleraine Drive to Hwy 50	Completed	Y
	2 to 6 lane widening from Hurontario Street to Chinguacousy Road	Completed	Y
	2 to 4 lane widening from The Gore Road to Coleraine Drive	Completed	Y
	2 to 5 lane widening from Chinguacousy Road to Mississauga Road	Completed	Y
	5 to 6 lane widening from Dixie Road to Bramalea Road	Completed	Y
	2 to 4 lane widening from Mississauga Road to Winston Churchill Boulevard	Completed	Y
	4 to 6 lane widening from Heart Lake Road to Hurontario Street	Completed	Y
	North Side Boulevard Widening - Bramalea Rd to Airport Rd	Completed	Y
	4 to 6 lane widening from Airport Rd to Clarkway Dr	Completed	Y
Mississauga Road	2 to 4 lane widening from Bovaird Drive to Mayfield Rd	Completed	Y
	4 to 6 lane widening from Financial Drive to Queen Street	Works in Progress	Y
	4 to 6 lane widening from Queen Street to Bovaird Drive	Works in Progress	Y
	4 to 6 lane widening from Bovaird Drive to Sandalwood Pkwy	Completed	Y
North/South Arterial Road	6 lane road from Future BramWest Pkwy to Bovaird Drive	–	Y
	6 lane road from Bovaird Drive to Future Sandalwood Pkwy	–	Y

Steeles Avenue West	4 to 6 lane widening from Chinguacousy Road to Mississauga Road	Completed	Y
	4 to 6 lane widening from Mississauga Road to Winston Churchill Boulevard	Completed	Y
The Gore Road	2 to 4 widening from Squire Ellis Drive to Mayfield Road and	Completed	Y
	Corridor Improvements from Queen Street East to Castlemore Road	Completed	Y
	4 to 6 lane widening from Castlemore Road to Countryside Drive	-	Y
Winston Churchill Boulevard	2 to 4 lane widening from 2.0 km South of Embleton Road to Embleton Road	Works in Progress	Y
	4 to 6 lane widening from Highway 401 to Steeles Avenue	Works in Progress	Y
	5 to 7 lane widening from Steeles Avenue to 2 km South of Embleton Road	Works in Progress	Y
	4 to 6 lane widening from 2 km South of Embleton Road to Embleton Road	Works in Progress	Y
	4 to 6 lane widening from North Sheridan Way to Dundas Street	-	Y

BY 2041

Road	Details of Improvement	EA Status	Part of 2019 Approved Budget?
Mayfield Road	5 to 6 lane widening from Chinguacousy Road to West of Mississauga Road	Completed	Y
	4 to 6 lane widening from Clarkway Drive to Coleraine Drive	-	N
Mississauga Road	2 to 4 lane widening from Mayfield Road to Old School Road	-	N
The Gore Road	2 to 4 lane widening from Mayfield Road to Healey Road	-	N
A2	6 lane road from Mayfield Road to Highway 50	Work in Progress	N

* The 2012 LRTP recommended the widening of The Gore Road between Queen Street and Countryside Drive. An Environmental Assessment (EA) was completed for The Gore Road between Queen Street and Castlemore Road. The results recommended corridor improvements versus road widening. In this regard, the portion of The Gore Road between Castlemore Road and Countryside Drive is no longer required to be widened to 6 lanes.

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In-text Citations

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Figure 1-5	Ministry of the Environment, Conservation and Parks, Preserving and Protecting our Environment for Future Generations: A Made-in-Ontario Environment Plan, 2018: https://prod-environmental-registry.s3.amazonaws.com/2018-11/EnvironmentPlan.pdf
Figure 1-6	Medical Officers of Health in the GTHA, Improving Health by Design in the Greater Toronto-Hamilton Area, 2014
Figure 1-7	Metrolinx, Cost of Congestion Report, 2008
Figure 3-1	Region of Peel, Sustainable Transportation Strategy, 2018
Figure 3-3	Region of Peel, Sustainable Transportation Strategy, 2018
Figure 3-4	University of Toronto Data Management Group, Transportation Tomorrow Survey, 2011
Figure 5-1	Region of Peel, Goods Movement Strategic Plan, 2017

