



Transportation

Integrated Master Plan – Volume 5

5

Integrated Master Plan Report Outline

The Integrated Master Plan (IMP) for Water, Wastewater, and Transportation is a comprehensive document that describes the planning, evaluation, and decision-making process to develop long-term infrastructure strategies for water, wastewater, and transportation in Halton Region.

The IMP is organized into six volumes:



Volume 1 – Executive Summary

Provides a brief overview of the IMP including the problem and opportunity statement, study purpose, key planning policy and technical considerations, and descriptions of the recommended infrastructure strategies for water, wastewater, and transportation.



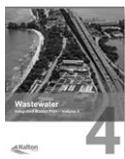
Volume 2 – Planning Overview and Foundations

Outlines the integrated planning framework and methodology used for the IMP. This volume summarizes the study vision, objectives, Municipal Class EA process, key planning policies, growth forecasts, and existing conditions. It provides the foundation for the subsequent volumes.



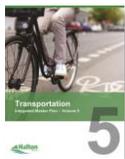
Volume 3 – Water

Provides documentation for the Region’s water system. This volume outlines study objectives, baseline data/performance, methodologies, technical analyses, and evaluation that informed the recommended water servicing strategy and its components.



Volume 4 – Wastewater

Provides documentation for the Region’s wastewater system. This volume outlines study objectives, baseline data/performance, methodologies, technical analyses, and evaluation that informed the recommended wastewater servicing strategy and its components.



Volume 5 – Transportation

Provides documentation for the Region’s transportation infrastructure system. This volume outlines study objectives, baseline data/performance, methodologies, and technical analyses informed the recommended transportation strategy and its components that support all road users including transit, active transportation and auto.



Volume 6 – Consultation and Engagement

Provides documentation of the consultation and engagement process, including notices, presentation materials from Public Information Centres (PICs), and records from workshops with agencies, local municipalities, and other interested parties.

This report is the complete **Volume 5 – Transportation Master Plan** which is one of six volumes that together form the complete Integrated Master Plan Report and should be read in conjunction with the other volumes.

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Acronyms and Abbreviations

ASP	Archaeological Screening Process
ATMP	Active Transportation Master Plan
BRT	Bus Rapid Transit
COVID-19	Coronavirus Disease of 2019
DMTR	Defining Major Transit Requirements
GGH	Greater Golden Horseshoe
GTHA	Greater Toronto and Hamilton Area
HOV	High Occupancy Vehicle
IGMS	Integrated Growth Management Strategy
IMP	Integrated Master Plan
JBPE	Joint Best Planning Estimates
MCEA	Municipal Class Environmental Assessment
MECP	Ministry of Environment, Conservation and Parks
MTO	Ministry of Transportation
OTM	Ontario Traffic Manual
PPS	Provincial Planning Statement
Region	Regional Municipality of Halton Region
ROP	Regional Official Plan
ROPA 49	Regional Official Plan Amendment 49
RTP	Regional Transportation Plan
QEW	Queen Elizabeth Way
TMP	Transportation Master Plan
TSP	Transit Signal Priority
VKT	Vehicle Kilometres Travelled

1.0 Introduction

- 1.1 Master Plan Objectives
 - 1.2 Components of the Integrated Master Plan
 - 1.3 Vision Statement and Considerations
 - 1.4 Problem Opportunity Statement
 - 1.5 Study Area
 - 1.6 Population and Employment Planning Forecasts
-

1.0 Introduction

Halton Region has undertaken an Integrated Master Plan (IMP) to develop the next region-wide Water, Wastewater, and Multi-Modal Transportation Master Plans. The outcome of this work is a long-term integrated servicing strategy for Regional infrastructure to accommodate future growth to 2051. This provides the strategies and tools required to meet the future water, wastewater, and transportation infrastructure needs beyond 2031.

The IMP ensures that water and wastewater infrastructure and services are effectively planned and implemented to maintain appropriate levels of service for residents and businesses as the Region continues to grow. In parallel, the development of a robust multi-modal transportation network supports Halton Region's long-term vision by accommodating increasing travel demand and enhancing connectivity. Together, these infrastructure strategies are being developed to align with local growth priorities and remain flexible to adapt to evolving needs through Halton's Enhanced Growth Monitoring process.

The purpose of Volume 5 is to present the preferred transportation strategy developed as part of the Integrated Master Plan and provide the supporting background and implementation considerations necessary to bring the plan into action.

1.1 Master Plan Objectives

The key objectives of the IMP are to:

- guide the management and development of the Region's water, wastewater and transportation (including the active transportation network) systems;
- maximize capacity, system flexibility and life expectancy of Regional water, wastewater and transportation infrastructure;
- identify the need, timing and cost of servicing and infrastructure; and,
- provide the strategies and tools required to meet the water, wastewater and transportation infrastructure needs of the community now and in the future.

1.2 Components of the Integrated Master Plan

The IMP is comprised of three (3) key components:

- **Water:** focuses on the delivery of safe, clean drinking water to homes and businesses within the urban areas.
- **Wastewater:** addresses the collection and treatment of wastewater from the urban areas before returning the treated water to the environment.
- **Transportation:** focuses on a Regional transportation network for transit users, active transportation (e.g., pedestrians and cyclists), cars and trucks (including farm vehicles) that accommodates all users and abilities.

Recognizing that the needs of the communities are changing, the IMP brings together these systems in a coordinated way that allows the Region to evolve and support a dynamic and resilient future.

1.3 Vision Statement and Considerations

The vision statement is a compact, high-level statement that guided the master planning process and informed the considerations developed for the plan. The overarching vision statement of the IMP is:

“Building a safe, equitable and sustainable future for the Region’s Water, Wastewater and Transportation systems through responsible and proactive planning”.

In support of this overarching vision, the IMP also includes two focused vision statements specific to the study components:

The Water and Wastewater vision focuses on:

“Planning for a future Regional water and wastewater system that is safe, efficient, resilient and prioritizes the environment”.

Meanwhile, the Transportation vision focuses on:

“Planning for a future multi-modal Regional transportation system that is safe, continuous, and connected across Halton Region to support all modes of travel, all users and all abilities”.

In addition to the vision statements, key considerations were developed to help guide the IMP decision making process and the development of the infrastructure strategies. The considerations include:

- **Equitable Infrastructure Services** – Provide for water and wastewater services in urban areas and access to multi-modal Regional transportation infrastructure (including active transportation, transit and auto).
- **Safe and Healthy Communities** – Support healthy and active lifestyles and community well-being. For example, the provision of active transportation infrastructure and the provision of safe drinking water.
- **Sustainability** – Balance social, environmental and economic goals to support growth in a sustainable manner.
- **Climate Change** – All phases of Regional water, wastewater and multi-modal transportation infrastructure planning must recognize and incorporate climate change.
- **Communication and Consultation** – Ensure the IMP process and strategies are clearly and openly communicated and consulted on stakeholders.
- **Integration of Planning for Regional Infrastructure** – Ensure a coordinated approach to implementation of Regional water, wastewater, and multi-modal transportation infrastructure.
- **Technical Innovation** – Include innovation in the development of Regional water, wastewater and multi-modal transportation infrastructure strategies.

Together the vision statements and considerations provide a strategic foundation for shaping priorities, evaluating alternative solutions, and making informed decisions throughout the course of the IMP.

1.4 Problem and Opportunity Statement

The problem and opportunity statement serves as a foundation for the Master Plan process in accordance with the Municipal Class Environmental Assessment (MCEA) process and helps establish the overall scope of the project. The IMP problem or opportunity statement is defined as follows:

“The Integrated Master Plan has been initiated to update the Region’s long-term servicing strategy and capital implementation plan for Water, Wastewater and Transportation to support future growth to 2051.”

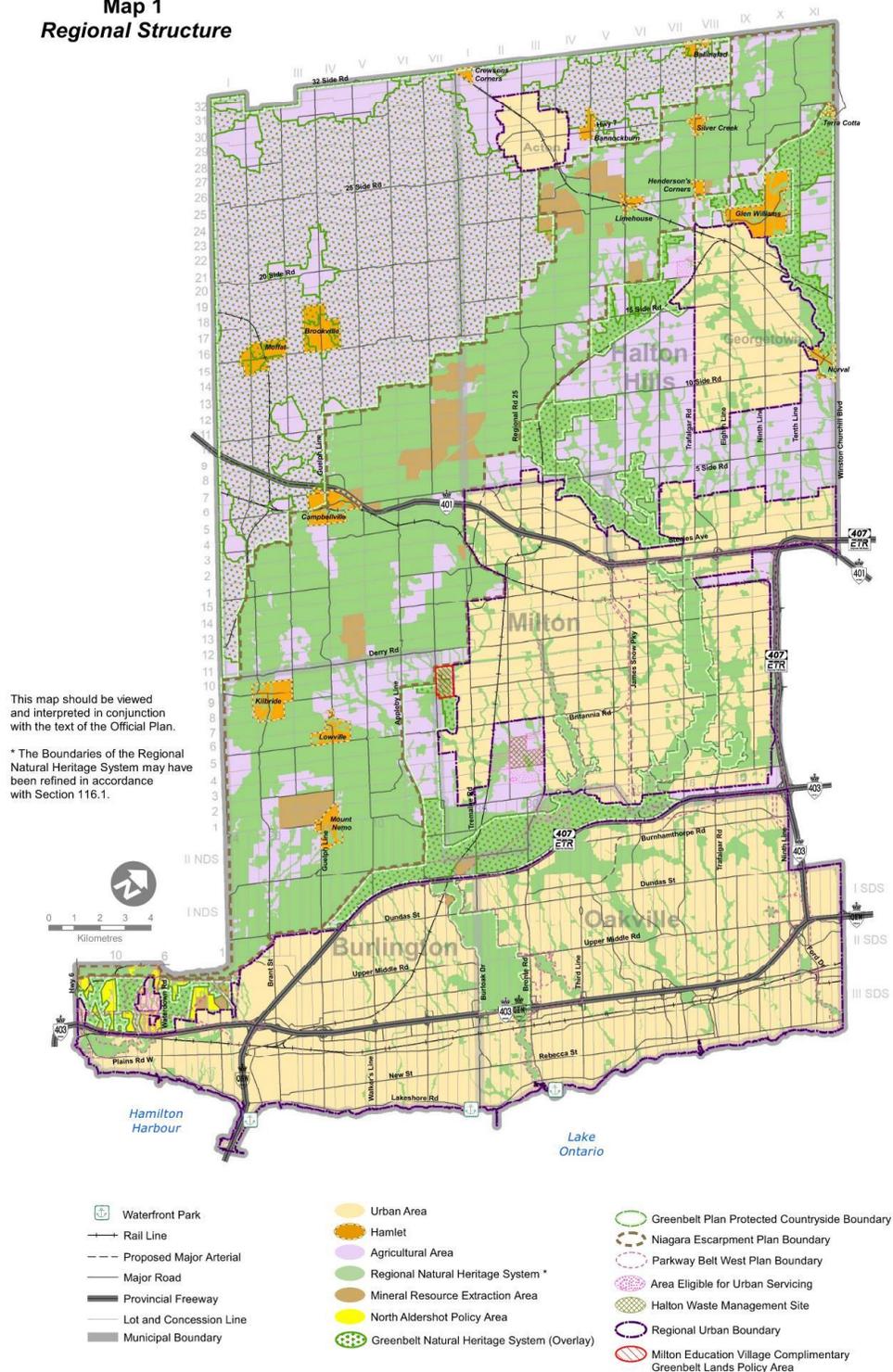
1.5 Study Area

Halton Region is located in Southern Ontario and is bordered by the City of Hamilton to the west, the Region of Peel to the east, Wellington County to the north and Lake Ontario to the south. The Region is comprised of four Local Municipalities including the City of Burlington, the Town of Halton Hills (including the communities of Acton and Georgetown), the Town of Milton and the Town of Oakville.

Halton Region covers an area of 966 square kilometres with a population of over 650,000. The Region features a diverse range of urban centres, suburban communities, rural areas, and protected natural landscapes, including parts of the Niagara Escarpment and the Greenbelt, which contribute to its unique environmental and cultural character.

The study area can be seen in **Figure 1**.

Map 1 Regional Structure



May 16, 2024

Figure 1 – Halton Region Study Area

1.6 Population and Employment Planning Forecasts

Following the completion of Halton’s Integrated Growth Management Strategy (IGMS) and the Regional Official Plan Amendment 49 (ROPA 49), the Region developed the comprehensive Joint Best Planning Estimates (JBPEs) update for population and employment in the fall of 2023 with the Local Municipalities. The JBPEs are essential input for planning and delivering Regional infrastructure, ensuring services like water, wastewater, and transportation can accommodate future growth.

The 2023 JBPEs version 3.032 to the year 2051, align with the new housing targets set out in Bill 23. The updated forecasts consider new direction from the Province of Ontario as well as recently approved growth areas. As a result of the new housing targets, the JBPEs anticipate higher population growth over the next decade across all of the Halton Region’s Area Municipalities than the initial IGMS and ROPA 49.

As the Region’s population and employment base is forecasted to increase between 2031 and 2051, the IMP builds on the long-term servicing strategies previously outlined in the 2011 water, wastewater, and transportation master plans to reflect the population and employment growth projections to 2051.

Table 1 highlights the residential population forecasts to the year 2051, and **Table 2** highlights the employment forecasts to the year 2051.

Table 1 – Residential Population Forecasts (as per JBPEs version 3.032)

Municipality	2051*
Burlington	324,000
Halton Hills	167,000
Milton	455,000
Oakville	443,000
Total	1,389,000

**The 2051 forecasts are based on the Minister’s decision on ROPA 49 through Bill 162, Get It Done Act, 2024, which received Royal Assent on May 16, 2024, as well as Bill 23, More Homes Built Faster Act, which received Royal Assent on November 28, 2022.*

Table 2 – Employment Population Forecasts (as per JBPEs version 3.032)

Municipality	2051*
Burlington	150,000
Halton Hills	87,000
Milton	175,000
Oakville	212,000
Total	624,000

**The 2051 forecasts are based on the Minister’s decision on ROPA 49 through Bill 162, Get It Done Act, 2024, which received Royal Assent on May 16, 2024, as well as Bill 23, More Homes Built Faster Act, which received Royal Assent on November 28, 2022.*

2.0 Related Studies and Background Information

2.1 Transportation Planning Context



2.0 Related Studies and Background Information

2.1 Transportation Planning Context

A comprehensive review of existing studies and documentation was undertaken to inform the development of the transportation component of the IMP. These materials provided critical context regarding the existing network, strategies, and ongoing initiatives across Halton Region.

The Transportation component of the IMP lays out a strategy for the Region's future transportation network to the year 2051. The IMP builds on the previous Halton Region Transportation Master Plan (2011), and Active Transportation Master Plan (2015) and utilized the Joint Best Planning Estimates as a foundation to develop strategies for infrastructure requirements to accommodate future growth from 2031 to 2051. Inputs into the IMP included background studies and plans by the Region, Local Municipalities, as well as adjacent municipalities and other agencies such as the Ministry of Transportation and Metrolinx. An overview of these plans and studies is provided in the following sections.

The following section highlights key documents, in addition to those identified in Volume 2, that have been referenced in the development of the Transportation strategy.

2.1.1 Provincial

2.1.1.1 Provincial Planning Statement (2024)

As discussed in Volume 2, the 2024 *Provincial Planning Statement* (PPS) provides policy direction on matters of provincial interest related to land use planning and development. Replacing both the 2020 *Provincial Policy Statement* and *A Place to Grow*, the 2024 PPS establishes a unified framework while maintaining certain *Growth Plan* policies that were referenced in the *Greenbelt Plan*. Municipalities now have greater flexibility to plan for growth based on local conditions, including setting growth targets and delineating Major Transit Station Areas. Corridors for infrastructure and transportation must be protected for current and future needs, with development adjacent to these corridors designed to minimize adverse impacts. The Ontario Government's *Planning Act, 1990*, requires that all planning decisions in the province be consistent with the PPS.

Section 3.2 and 3.3 in the PPS, highlights the relevant transportation planning policies, including:

- Transportation systems should be safe, energy efficient, and multimodal, supporting zero- and low-emission vehicles and improved connectivity.
- Existing infrastructure should be used efficiently, incorporating demand management strategies where feasible.
- Corridors for infrastructure and transportation must be protected for current and future needs, with development adjacent to these corridors designed to minimize adverse impacts.
- Co-location of linear infrastructure is encouraged where appropriate, along with preserving abandoned corridors for compatible uses.

The 2024 PPS emphasizes greater local responsibility in planning while supporting infrastructure investments that align with housing and economic growth goals. Its policies promote sustainable, integrated water, wastewater, and transportation systems that protect environmental and community health.

2.1.1.2 Connecting the GGH: A Transportation Plan for the Greater Golden Horseshoe (2022)

The Ontario Ministry of Transportation's *Connecting the GGH: A Transportation Plan for the Greater Golden Horseshoe*, was created to provide a 30-year vision for enhanced mobility across and beyond the Greater Golden Horseshoe Region (refer to **Figure 2** and **Figure 3**). The Plan lays out a framework for a transportation system that provides safe, efficient and convenient options for people and businesses and supports the well-being and economic prosperity of the region into the future. The Plan's vision for 2051 includes infrastructure, service improvements and policies organized under the four inter-related themes of: fighting gridlock and improving road performance; getting people moving on a connected transit system; supporting a more sustainable and resilient region; and efficiently moving goods.

Examples of key transportation improvements include but are not limited to the development of Highway 413 from Highway 400, between King Road and Kirby Road to the 401/407 ETR interchange east of Trafalgar Road and the 407 Transitway (an east-west bus rapid transit corridor parallel to Highway 407). Other improvements including widening of various segments of Highway 401, Highway 403 and QEW throughout Halton Region.

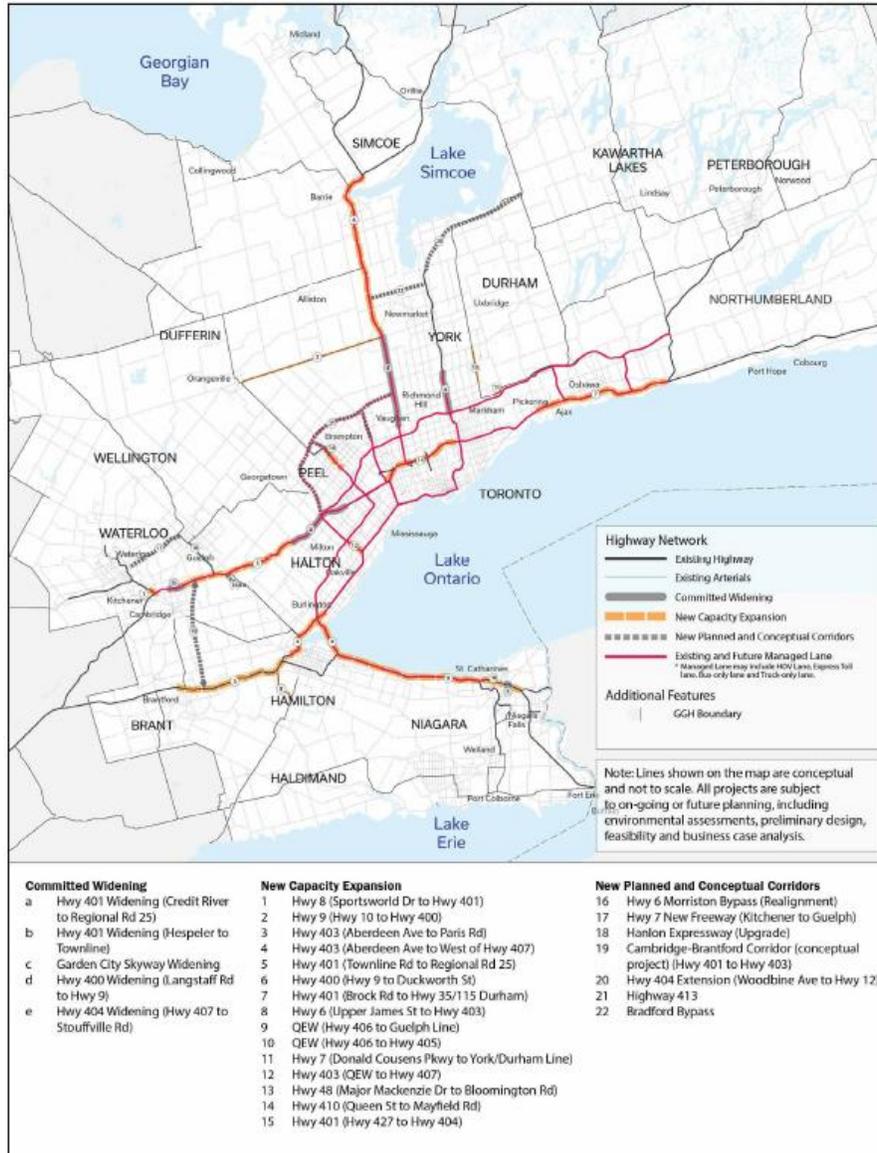


Figure 2 – Map 4 from MTO Connecting the GGH (2022) showing current, planned and conceptual future road infrastructure

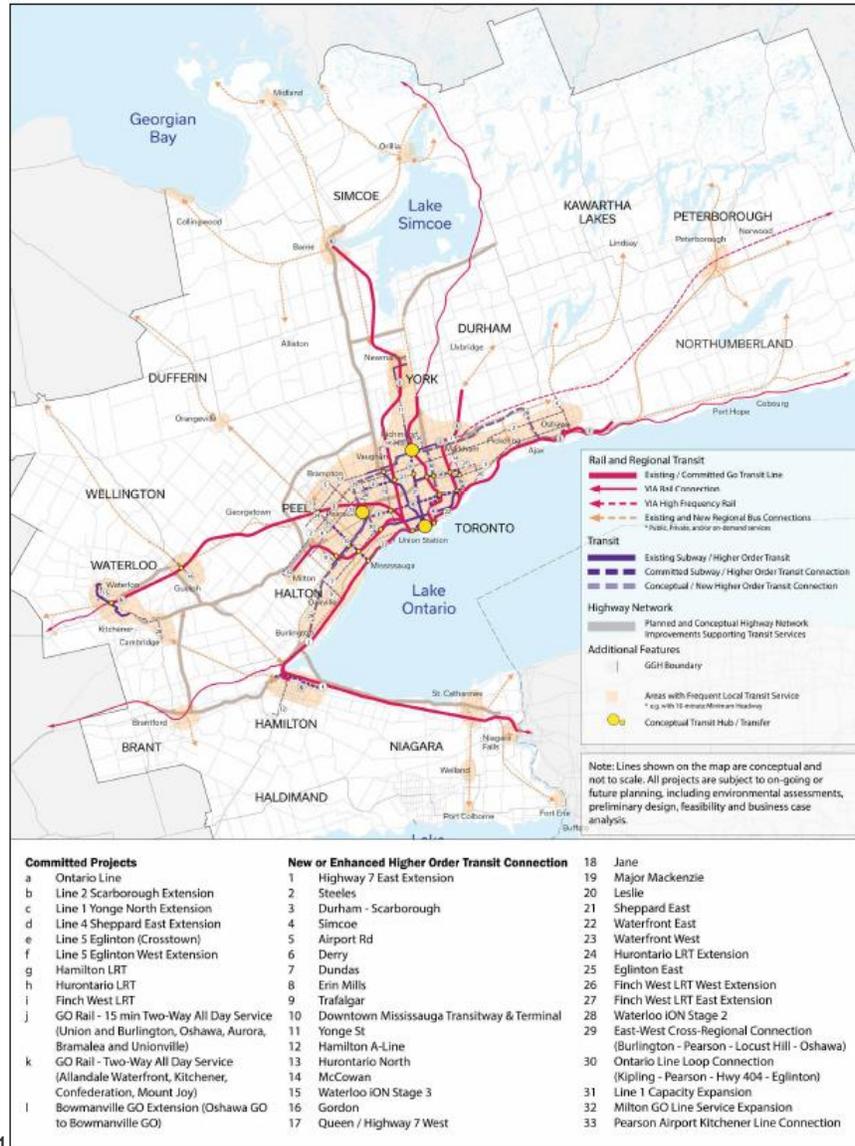


Figure 3 – Map 5 from MTO Connecting the GGH (2022) showing current, planned and conceptual future transit infrastructure and services

2.1.1.3 The Metrolinx 2041 Regional Transportation Plan (2018)

In March 2018, Metrolinx released the *2041 Regional Transportation Plan (RTP)* for the Greater Toronto and Hamilton Area (GTHA). The vision of the 2041 RTP is for “a sustainable transportation system that is aligned with land use and supports healthy and complete communities.” Metrolinx is currently undertaking an update to extend the plan to 2051.

The Plan largely focuses on the development of a Frequent Rapid Transit Network throughout the GTHA. This network consists of expanded 15-minute GO Rail service, Bus Rapid Transit (BRT), Light Rail Transit, and subway projects, as well as a series of Priority Bus Corridors (refer to **Figure 4**). The Frequent Rapid Transit Network will play an important role in the Region’s transportation future by connecting more people with fast, efficient public transit. Frequent Rapid Transit Network projects within Halton Region include for example:

- Milton GO Rail Line and Lakeshore West Line – 15-minute Two-Way All-Day
- Priority Bus along Harvester Road/Speers Road/Cornwall Road, Derry Road, Regional Road 25, Trafalgar Road, Brant Street, Dundas Street West
- Dundas Street BRT
- Trafalgar Road BRT
- Frequent Regional Express Bus along Highway 401, Highway 403 and Highway 407



Figure 4 – Map 6 from Metrolinx 2041 Regional Transportation Plan (2018), 2041 Frequent Rapid Transit Network

2.1.2 Regional Plans

As of July 1, 2024, the Halton Region Official Plan is no longer an official plan for the Regional Municipality of Halton as the Planning Act identifies the Region as an “upper-tier municipality without planning responsibilities”. Instead, it is now deemed an Official Plan of each of the Local Municipalities in Halton (e.g. Town of Halton Hills) until such time as it is revoked or amended by the respective municipality.

The 2022 Regional Official Plan (ROP) is a land use policy document that guides how Halton Region grows and develops. It includes goals and objectives for new development that reflect the vision of residents and Regional council. The ROP addresses region-wide issues and provides a consistent vision for land use in the Local Municipalities of Burlington, Halton Hills, Milton and Oakville. Each Local Municipality has an Official Plan of their own, which will work alongside the adopted ROP until they undertake a review of their Official Plan.

The ROP sets out Regional structure consisting of systems, land use designations and constraints to development. The ROP also focuses on four key thematic areas, these include: planning vision, healthy communities, land stewardship and implementation. As noted above, the ROP, in conjunction with Official Plan of the Local Municipalities, continues to provide direction and high-level guidance for the Region's growth and development.

2.1.2.1 Transportation Master Plan to 2031 – The Road to Change (2011)

Halton Region's 2011 Transportation Master Plan, *The Road to Change*, was designed to guide the development of a Regional transportation system that supports the objectives of a sustainable Halton and meet the Region's transportation needs safely, effectively and cost efficiently to 2031. The Plan put forward a vision for transportation planning that accommodates various travel choices and supports a sustainable and multi-modal network.

As the Region continues to grow beyond 2031, the types of mobility options and how people move within and beyond the Region will continue to evolve. It is critical to continue to plan for a multi-modal transportation network that prioritizes infrastructure for transit and active transportation. The IMP builds on the recommendations of the 2011 Transportation Master Plan to guide the Region's transportation vision into the future to 2051 and beyond.

The Region continues to implement improvements from the TMP to 2031, including the following ongoing MCEA studies:

- New North Regional Road Corridor (formerly 5 ½ Line)
- North Halton Coordinated Municipal Class Environmental Assessment Study
 - James Snow Parkway (Britannia Road to Highway 401), 4 to 6 lanes
 - Steeles Avenue (Regional Road 25 to Trafalgar Road), 4 to 6 lanes
 - Regional Road 25 from 5 Side Road to 10 Side Road, localized improvements
- Norval West Bypass Transportation Corridor Improvements, new 4 lane corridor from Highway 7 to 10 Side Road
- Regional Road 25 Corridor Study (Speers Road to Derry Road), 4 to 6 lanes
- Trafalgar Road Corridor Study (Highway 407 ETR to Steeles Avenue), 4 to 6 lanes
- James Snow Parkway Extension Addendum (Highway 407 ETR to Britannia Road), new 6 lanes corridor

2.1.2.2 Active Transportation Master Plan (2015)

The Halton Active Transportation Master Plan (ATMP) supports the transportation network set out in the 2011 Halton Transportation Master Plan, which includes addressing cycling and walking along Regional roads to fulfill the transportation needs in Halton Region. The ATMP identifies active transportation infrastructure to 2031, with a vision of providing walking and cycling facilities on all Regional roads in urban areas, and paved shoulders on all Regional roads in rural areas. As part of this vision, active transportation infrastructure will be planned, designed and incorporated within roadway resurfacing and capital projects. The IMP updates the recommendations from the 2015 ATMP in consideration of updated guidelines and best practices, including facility type and intersections.

2.1.2.3 Mobility Management Strategy (2017)

Halton Region has developed a Mobility Management Strategy based on the principle of 'Mobility-as-a-Service'. This principle recognizes that mobility options are no longer clearly divided between roadway and transit options. In addition, transit options are no longer defined by fixed-route, fixed guideway, or demand-responsive transit-services, but rather, are offered as a menu of travel options provided by both the public and private sector and supported by technology. This Strategy guides the evolution of a region-wide inter- and intra-transportation network to 2041.

The development of a Region-wide Transit Priority Mobility Network is one of the key recommendations of the Mobility Management Strategy study. A network of east/west and north/south Transit Priority Corridors were identified.

2.1.2.4 Defining Major Transit Requirements in Halton Region (2019)

The Defining Major Transit Requirements (DMTR) study is a continuation and fulfillment of the next steps established through the Mobility Management Strategy in support of the vision for a multi-modal transportation network. The focus of the DMTR is on Regional Infrastructure investment to support transit.

As part of the DMTR Study, Preliminary 2031 and 2041 Recommended Transit Priority Corridor Networks – Infrastructure, were identified which served as a key input into the IMP. These Transit Priority Corridors includes Bus in Mixed Traffic Corridors, Priority Bus Corridors and Bus Rapid Transit Corridors.

2.1.3 Local Municipal Plans

In addition to Regional plans, the Local Municipalities also have developed plans to guide future travel demand. Some key plans considered as part of the IMP include for example the following:

Burlington

- Integrated Mobility Plan (2023)
- Cycling Plan Update (2020)
- Rural Active Transportation Plan (2022)

Halton Hills

- Transportation Master Plan (2011)
- Active Transportation Plan (2019)
- Transit Service Strategy (2019)
- Mobility Master Plan (ongoing)

Milton

- Transportation Master Plan (2024)
- Transit Master Plan Update (2024)
- Milton Transit Services Review and Master Plan (2019)

Oakville

- Switching Gears- Transportation Master Plan (2018)
- Active Transportation Master Plan (2017)
- Transportation Master Plan Update (2025)
- Midtown Transportation Master Plan (2026)
- Oakville Transit Five-Year Business Plan (2024)

2.1.4 Adjacent Municipal Plans

Adjacent Municipalities have developed plans to guide future travel demand. Some key plans considered as part of the IMP include the following:

City of Hamilton

- Transportation Master Plan, City in Motion (2018)
- Hamilton's Cycling Master Plan (2009)
- Accelerated Active Transportation Implementation Plan (2024)
- Recreational Trails Master Plan (2016)

Wellington County

- Active Transportation Plan (2022)

Region of Peel

- Let's Move Peel- Long Range Transportation Plan (2019)
- Sustainable Transportation Strategy (2018)
- Goods Movement Plan (2019)

3.0 Existing Transportation System

3.1 Mobility in Halton Region at a Glance



3.0 Existing Transportation System

3.1 Mobility in Halton Region at a Glance

The existing transportation system serving Halton Region is a multi-modal network of roads and walking and cycling infrastructure. All elements of the system are interconnected through rural and urban areas and play a role in the provision of healthy and safe communities, supporting active lifestyles and providing multi-modal transportation options for all road users, including the movement of goods and farm-related vehicles.

To inform the development of the preferred transportation strategy, the existing transportation network was assessed and considered. This section gives a snapshot of how people travel within and beyond Halton Region today and provides an overview of Halton Region's existing and previously planned transportation network.

3.1.1 How People Travel Within and Beyond Halton Region

Every day, thousands of people move within Halton Region to access jobs, school, shopping, services, recreation, and other destinations. Like many other population centres in the Greater Golden Horseshoe, residents and visitors within and beyond Halton Region often travel by cars, either as a driver or passenger. To support increasing travel demand, the Region's transportation system will need to rely on infrastructure that supports multi-modal forms of travel such as walking, cycling, public transit and carpooling. In addition to supporting travel demand on the Regional road network, this supports the health and well-being of residents and supports connections between Halton's diverse Local Municipalities and surrounding communities.

Since the previous Transportation Master Plan, the most significant impact to travel demand was as a result of the COVID-19 pandemic in 2020. During this time, travel patterns and behaviours were altered in Halton Region and beyond due to pandemic-related restrictions that changed how and where people worked, shopped and recreated. As travel patterns have started to return to pre-2020 patterns, one outcome which continues to evolve is hybrid work.

3.1.2 Existing and Previously Planned Conditions

The following sections provide a high-level overview of Halton Region’s existing transportation network.

3.1.2.1 Road Network

The transportation network within Halton Region consists of Provincial highways, Regional roads, and Local Municipal roads. Together, this forms a comprehensive and interconnected network that underpins the efficient movement of people and goods across Halton Region and the broader Greater Golden Horseshoe area.



Provincial Highway Corridors within Halton Region include:

- **Highway 401:** A major east–west corridor running through Halton Hills and Milton, extending from Halton Region boundaries between Wellington County and Peel Region.
- **Queen Elizabeth Way (QEW):** An east–west highway, extending across Burlington and Oakville that connects the Region to the major population centres of Hamilton and Toronto.
- **Highway 407 ETR:** A tolled east–west highway spanning Burlington, Oakville, and Milton, extending from Halton Region boundaries between the City of Hamilton and Peel Region.
- **Highway 403:** Extends across southern Burlington and Oakville in an east–west direction, then shifts to a north–south orientation along Oakville’s eastern edge to link with Highway 407.
- **Highway 7:** An east-west corridor traversing Halton Hills and connecting to the City of Brampton.
- **Highway 6:** A north–south route at Burlington’s western border, linking the QEW to Dundas Street.

Regional Road Network

Halton Region is responsible for planning, constructing, operating and maintaining a network of major arterial roads designed to support safe, reliable, and efficient movement across the Region’s urban and rural communities. These Regional roads also serve as key connectors to the Provincial highway system. The primary east–west regional arterials include Dundas Street, Derry Road, Britannia Road, and Steeles Avenue. The primary north–south regional arterials include Brant Street, Guelph Line, Appleby Line Regional Road 25, James Snow Parkway/Neyagawa Boulevard, and Trafalgar Road. Together, these roads integrate local mobility with regional accessibility and interprovincial connectivity to Provincial highways.

Based on the 2024 Transportation Progress Report, the Regional Road system consists of approximately 1,209 lane–kilometers of roadway. In addition to the road component, the Regional road network currently consists of approximately 330 traffic control signals, 183 bridges and major culvert structures, and 7,793 streetlights.



1,209
Lane-km of
Roadway



330
Signalized
Intersections



183
Bridges and
Structures



7,793
Streetlights

An overview of Halton Region's existing Road network is shown on **Figure 5** below.

Through the Region's 2011 Transportation Master Plan (TMP), which projected transportation network needs to 2031, most of the Regional roads are proposed to be at six lanes. These previously proposed improvements have largely been implemented or are in the process of being implemented by 2031.

Local Municipal Roadways

Local Municipalities are also responsible for a range of roads within Halton Region including minor arterials, multi-purpose arterials, collector roads, and local roads. These roads generally provide multi-modal access to the various residential, commercial, and institutional land uses within Halton Region. Compared to the Region's major arterial road network, Local Municipal roads typically operate at lower speeds and lower traffic volumes, reflecting their role in supporting shorter trip distances and internal traffic circulation within each Local Municipality.

Within the broader transportation network, these corridors complement the Regional and Provincial systems by supporting first-mile/last-mile connectivity and enhancing local mobility.

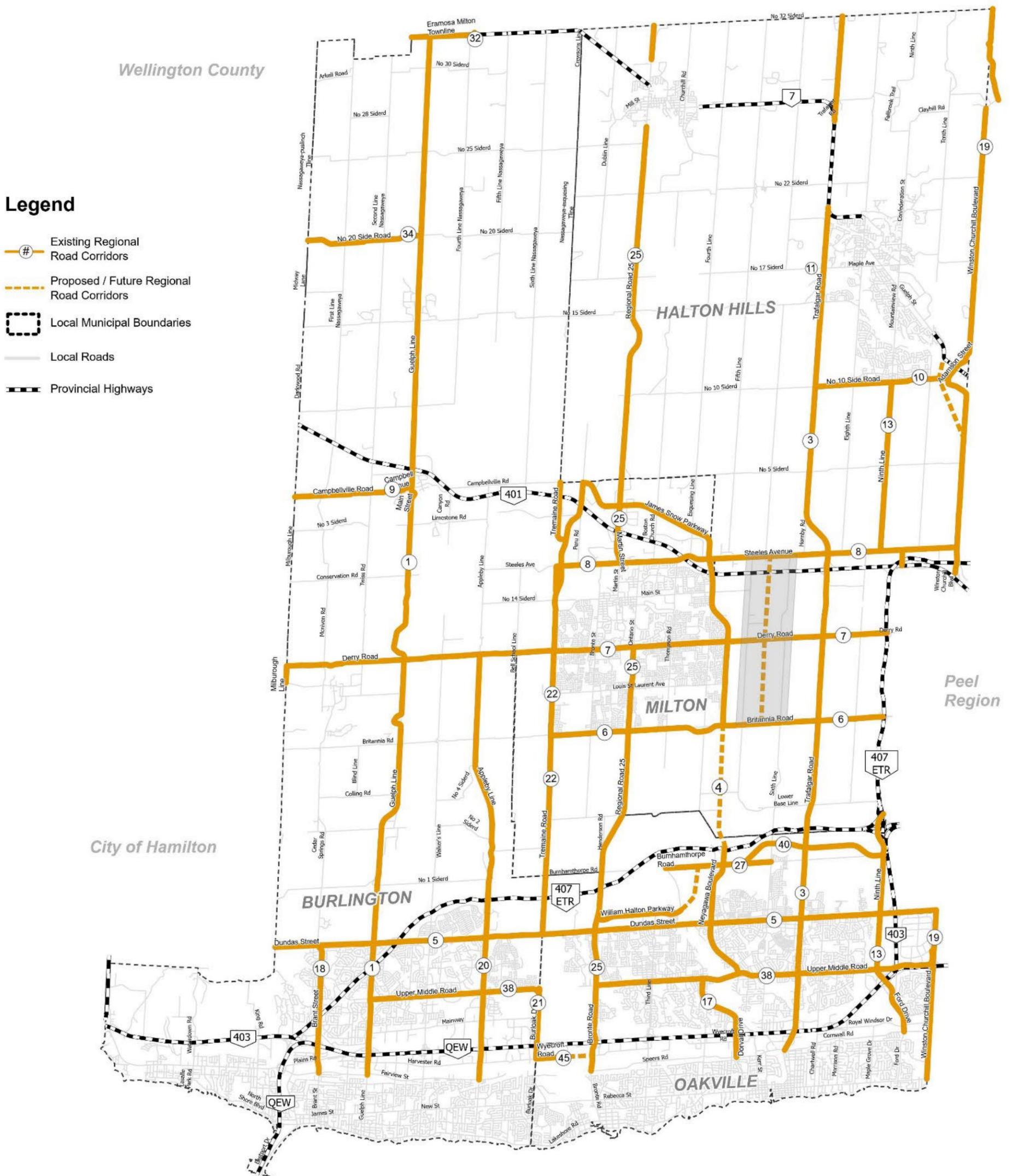


Figure 5 – Existing Regional Road Network in Halton Region

0 2 4 KM

3.1.2.2 Transit

Transit service is provided by Burlington Transit, Oakville Transit, Milton Transit, and the Town of Halton Hills.

Local Transit

Transit services across Halton Region differ in several ways. While the City of Burlington, the Town of Oakville, and the Town of Milton operate fixed routes and specialized transit services, the Town of Halton Hills currently operates specialized transit and one conventional service route in partnership with Milton Transit. The Town of Oakville and the Town of Milton also operate On Demand services – Oakville offers an On Demand service and Milton operate Milton Transit OnDemand. The coverage of the respective Transit Services areas is shown in **Figure 6**.



Inter-Regional Transit

Halton Region is also served by several inter-regional transit providers, most notably GO Transit, which connects residents to major employment and activity centres across the Greater Toronto and Hamilton Area (GTHA). Additional connections are available via Mississauga Transit (MiWay) and the Hamilton Street Railway (HSR).

GO Transit operates rail service along three key transit lines traversing Halton: Lakeshore West, Milton, and Kitchener (formerly Georgetown) lines. GO Bus services operate along major Provincial highways including Highway 407, Highway 403/QEW, and other corridors.

Figure 6 illustrates the extent of local transit services alongside the inter-regional rail network.

Halton Region Transit Priority Corridors (Infrastructure)

There are also planned infrastructure improvements for Transit Priority Corridors within Halton Region as identified within the Defining Major Transit Requirement in Halton Region Study including Mixed Traffic, High Occupancy Vehicle (HOV) lanes, and Bus Rapid Transit (BRT) corridors. The goal of these corridors is to improve travel speed and reliability for transit vehicles to move people more efficiently. A central focus of the IMP is to build upon the work completed through the DMTR to provide the infrastructure required to support growth to 2051.

3.1.2.3 Active Transportation Facilities

Active Transportation (AT) is defined as the movement of people or goods powered by human activity. AT includes walking, cycling, in-line skating, skateboarding, scooting, and moving with human-powered mobility devices. These traditional forms of AT are now being complemented by emerging technologies, such as forms of micromobility – small, light, low-speed, electrically assisted vehicles such as e-bikes and e-scooters.



A well-connected AT network is a major component of an equitable, multi-modal transportation system and provides many other benefits including health and wellbeing to people and the natural environment, the economy and mobility choice.

People travelling by active modes make a variety of types of trips, including a range of utilitarian purposes such as commuting to work or school, to access shopping or services, or for visiting friends and family. Many AT trips are recreational in nature, and may not have a specific destination, such as when people walk their dogs, take a leisurely bike ride or more strenuous exercise such as jogging or long-distance road cycling. Due to their lower speeds, AT trips tend to be short; few walking trips are longer than one kilometer, while cycling is well-suited for trips of approximately one to five kilometers (approximately 15-20 minutes). Many short trips can be accommodated by active transportation when a supportive environment for walking and cycling is provided.

Halton Region’s AT network is currently made up of a range of facilities along Regional roads including sidewalks, multi-use paths, and various cycling facilities in urban areas in addition to paved shoulders in rural areas. The AT network implemented to date has been guided by the ATMP (2015).

In addition to AT facilities on Regional roads, there is an extensive network of AT facilities along Local Municipal roads and open space (parks, rivers, and hydro corridors).

4.0 Assessment of Existing and Future Transportation Infrastructure

- 4.1 Opportunities and Considerations
 - 4.2 Developing a Multi-Modal Network
-

4.0 Assessment of Existing and Future Transportation Infrastructure

Identifying and evaluating strategy alternatives is a core element of the master planning process. The development of strategies allows for a comprehensive review of potential solutions, supporting informed decision-making and ensuring the recommended strategies are both well-founded and defensible.

The IMP builds on the recommendations of previous Regional Master Plans and utilizes the Joint Best Planning Estimates as a foundation to develop strategies for infrastructure requirements to accommodate future growth from 2031 to 2051. Inputs to the IMP include background studies and plans by the Region, Local Municipalities, adjacent municipalities, and other agencies such as the Ontario Ministry of Transportation and Metrolinx. Along with new/updated analysis tools, including a new travel demand model, these inputs formed a comprehensive and integrated base for understanding and planning infrastructure in Halton Region. This was followed by identifying and evaluating strategy alternatives to allow for a comprehensive and transparent review of potential solutions, supporting informed decision-making, and ensuring the recommended strategies are well-founded. As with previous transportation master plans, each system was assessed independently, considering the full range of opportunities and considerations.

The overall process is illustrated in **Figure 7** and includes the inputs described above. The process considered the identification of opportunities and considerations, development of alternative solutions and the identification of the preferred infrastructure solution and strategy.

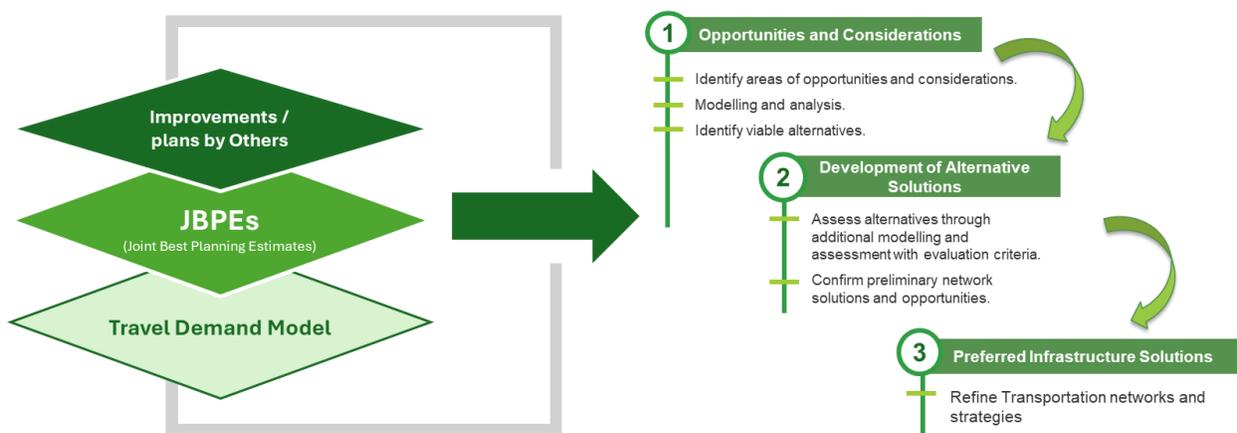


Figure 7 – Process for Development of the Preferred Strategy

The preferred transportation strategy identified through this process will form the foundation of the Region’s long-term capital and implementation programs to 2051. These programs provide a coordinated framework to guide infrastructure investments, ensure alignment with growth projections, and support sustainable, resilient, and adaptable systems through to 2051.

Recognizing the importance of monitoring and responding to growth across the Region, the strategies identified through the IMP will be adaptable to support local growth priorities to 2051.

4.1 Opportunities and Considerations

Various components of the existing transportation network, including Regional roads, future planned Transit Priority Corridor infrastructure and the Region's active transportation network, have their own unique factors that were considered in the development of the preferred transportation strategy.

Regional Roads

The IMP builds on the Region's 2011 Transportation Master Plan, and considered other provincial and Local Municipal plans, including adjacent municipalities. The assessment of the Region's existing and future road network was shaped by the following considerations:

- Provision of safe and convenient facilities for all users;
- Equal consideration of all travel modes;
- Application of 'complete streets' approaches;
- Support future higher density land uses in Major Transit Station Areas;
- Support the movement of goods and farm equipment; and,
- Support transit through the provision of transit supportive infrastructure.

Transit Priority Corridors

Transit Priority Corridors are essential to addressing future travel demand by providing the infrastructure to improve bus travel speed and reliability, enabling the movement of more people with greater efficiency. As outlined in Section 2.1.2.4, the Region completed the Defining Major Transit Requirements in Halton Study (DMTR) in 2019 which identified the infrastructure to support Preliminary 2031 and 2041 Recommended Transit Priority Corridor Networks. The IMP builds on this work and key factors in further refining the future Transit Priority Corridor network included:

- prioritization of safety and user needs;
- maximization of corridor space;
- opportunities to remain dynamic;
- support inter and intra-regional transit efforts;
- provide connections within and between Major Transit Station Areas; and
- support overall regional connectivity.

Active Transportation Network

Active transportation (AT) plays an important role in the provision of healthy and connected communities and supporting active lifestyles through walking and cycling. The AT facilities for the Region's updated AT network may include a combination of cycle tracks, dedicated separated bike lanes, multi-use paths, paved shoulders and sidewalks. The development of the updated AT network was informed by the following considerations:

- Prioritizing road users' safety and needs;
- Maximizing corridor space;
- Finding opportunities to remain dynamic;
- Improving connectivity to Local Municipal networks;
- Coordinating improvements with transit and network continuity; and,
- Supporting AT crossings at Provincial infrastructure (intersections, interchanges, and structures).

The usability and safety of complex intersections is also an integral component of the Region's AT network and industry standard designs for multi-modal protected intersections improve visibility and reduce conflicts between vehicles, pedestrians, and cyclists.

Overall Opportunities and Considerations

The opportunities and considerations listed above for each component of the transportation network formed an overall set of opportunities considered in the development of the preferred transportation strategy:

- provision of safe and convenient facilities for all users, including pedestrians and cyclists;
- maximize corridor space and be more dynamic to adapt to changing travel demand and local growth priorities;
- balanced consideration of all travel modes;
- enhanced overall regional connectivity; and,
- support the movement of goods and farm equipment.

4.2 Developing a Multi-Modal Network

As described above, to support travel demand through to 2051, a comprehensive review of its transportation network was completed. This review also included forecasting the travel demand within the Region to 2051.

Based on network modelling, travel demand will be approaching or at road capacity on key Regional corridors by 2051. The majority of the Region's network is either at six lanes or is planned to be widened in the near term which limits the opportunity for further widening and focuses strategies on opportunities that optimize corridors to support multi-modal travel, as well as providing a balanced and resilient transportation network that focuses on moving people. As such, prioritizing transit-related infrastructure that is supported by active transportation, provides the greatest potential for moving people across the Region and addressing future travel demand. This also allows the Region to respond to changes in future travel demand and Local Municipality growth priorities to 2051.

This section outlines the process used to develop Halton's multi-modal transportation network and describes how the active transportation, Transit Priority Corridor infrastructure, and roadway elements were brought together to create a resilient and adaptable network that supports local growth priorities and future travel demand.

4.2.1 Assessment of Regional Road Network

Building on the Region's 2011 TMP, the infrastructure strategy for transportation was developed through an iterative process to support growth to 2051.

Recognizing the many roles that the Regional Road network plays, a detailed analysis of the transportation network was conducted to determine how growth to 2051 would impact the existing Regional Road network. Central to this analysis was the inclusion of previous improvements and plans, the Region's Travel Demand Model, and JBPEs. While the opportunities and considerations of this strategy are discussed above in Section 4.1, this section provides an overview of the long list of scenarios reviewed, the evaluation of alternative solutions and the development of a preferred network (as shown above in **Figure 7**).

Additional information on travel demand modelling assumptions, scenario testing and analysis that informed this assessment are documented in Appendix 5A.

4.2.1.1 Data Inputs to Network Strategy Development

The Travel Demand Model encompassed both Halton Region and key surrounding jurisdictions, for example, Hamilton, Wellington, Peel, York, and Toronto, allowing for a more comprehensive understanding of inter-regional travel patterns. Building on the previous 4-step Travel Demand Model used in earlier Transportation Master Plans, the Travel Demand Model was extensively updated, calibrated and validated using the most recent data sources, including the Transportation Tomorrow Survey (TTS) and Statistics Canada Census data, Halton Automatic Traffic Recorder (ATR) Counts, Cordon Counts, MTO Highway Counts, GO Rail Station Boarding Counts and Local Transit Boarding and Alighting Counts, along with Traffic Analysis Zones (TAZ) Boundary updates and JBPEs.

4.2.1.2 2051 Transportation Network Needs

Based on the network modeling, travel demand will be approaching or at road capacity on key Regional corridors by 2051.

Prioritizing transit-related infrastructure that is supported by active transportation, provides the greatest potential for moving people across the Region, improving inter-regional connectivity, and responding to changes in future demand and Local Municipality growth priorities to 2051.

To develop a flexible and comprehensive transportation strategy, alternative solutions were developed.

The following six (6) evaluation criteria were used to identify the preferred transportation strategy:

- Provision of equitable infrastructure services;
- Safe and healthy communities;
- Sustainability;
- Climate Change;
- Integration of planning for regional infrastructure; and,
- Technical innovation.

To guide the development of a future-ready and flexible transportation system, a structured, scenario-based approach was undertaken to assess the transit and roadway strategies. This process was designed to identify the most effective infrastructure solutions that align with the Region’s vision and key transportation considerations outlined in Section 1.3. As illustrated in **Figure 8**, the assessment followed a three-stage framework: development of a long list of scenarios, formulation of network solution alternatives, and refinement into a preferred network. The development of the active transportation network is discussed in Section 4.2.2.

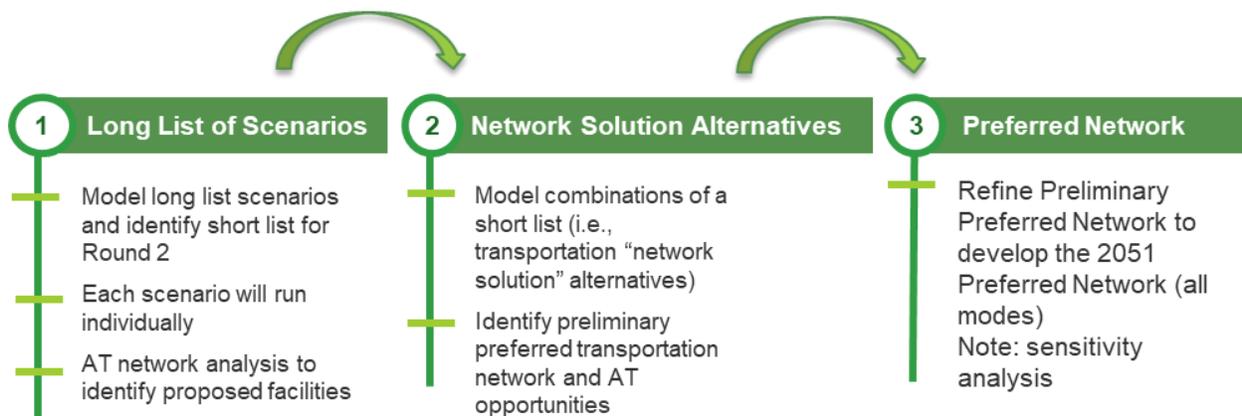


Figure 8 – Regional Road Network Development Approach

4.2.1.3 Regional Road Network Development

Round 1: Long List of Scenarios

The long-list scenarios drew on recommendations from the 2011 TMP and the 2019 Defining Major Transit Requirements (DMTR) study, and included input from Local, Regional, and Provincial plans.

The long list of scenarios included:

- 2051 Base Scenario (i.e. including 2031 Regional Capital Program, 2041 Transit Priority Corridor Network per 2019 DMTR and Metrolinx improvements per 2041 RTP)
- Speed Sensitivity of Queue Jump/Transit Signal Priority (TSP)
- Upgrade Priority Bus Corridors (Mixed Traffic with Queue Jump + TSP)
- Upgrade to additional Priority Bus Corridor to High Occupancy Vehicle (HOV) + TSP
- Upgrade to Priority Bus Corridors from HOV+TSP to Bus Rapid Transit (BRT) Corridors

Overall findings for the long list of scenarios indicate:

- A reduction in Vehicle Kilometres Travelled (VKT) under all scenarios.
- Addition of BRT corridors (Scenario 5) resulted in the most significant reduction in VKT due to more dedicated transit corridors.
- Addition of BRT Corridors resulted in the reduction in auto users and increase in transit users at all corridors.
- Most significant impact is observed on Regional Road 25, connecting Bronte GO to Milton GO. Regional Road 25 is a key corridor that is centrally located, hence attracting more transit users.
- A combination of additional “HOV/TSP” corridor segments and BRT corridors are to be included in the Network Alternatives (i.e. Round 2 Modelling).

Through the analysis, the following corridors were reviewed in further detail, and the following was carried forward through the subsequent stages of analysis:

- North Service Road (Between Burloak Drive and Regional Road 25): Since the completion of the Halton Region 2011 TMP, the Wyecroft Road extension has proceeded to construction to support east-west travel. The addition of a 4-lane North Service Road extension between Burloak Drive and Regional Road 25 would not be likely to attract significant traffic volumes. Therefore, the North Service Road extension between Burloak Drive and Regional Road 25 was not carried forward.
- Upper Middle Road (between Regional Road 25 and Ninth Line to remain as a 4-lane road): Based on the analysis, there are opportunities to consider localized improvements along Upper Middle Road to address future travel demand. Widening Upper Middle Road to 6 lanes from Regional Road 25 to Ninth Line was not carried forward.

Round 2: Network Alternative Solutions

Building on the findings of Round 1, the second round of the modelling tested network alternative solutions that considered the following:

- Most Regional Road will be widened to six-lane by 2031 within the urban area, the focus for transportation network improvements will be on transit-infrastructure.
- Transit-infrastructure improvements as recommended in the 2019 Defining Major Transit Requirements (DMTR) Study are the basis for the Transit Priority Corridor network including cross boundary connections.

- Local Municipal plans such as Transportation, Transit and Active Transportation Master Plans and network improvements in local and adjoining municipalities will be considered.
- Future MTO and Metrolinx network improvements will be considered.

The alternatives analysed are described in **Table 3** below and illustrated in **Figure 9**.

Table 3 – Regional Road and Transit Priority Corridor Infrastructure Network Alternatives

Network Alternative	Description
2051 Base Case Network	<ul style="list-style-type: none"> • 2031 Capital Road Program • 2041 Transit Priority Corridor Network per 2019 DMTR
2051 Core Transit	<ul style="list-style-type: none"> • 2031 Capital Road Program • 2041 Transit Priority Corridor Network per 2019 DMTR with enhancements to Higher Order Transit Spines (for example, Dundas Street/Trafalgar Road/Regional Road 25/Derry Road)
2051 Enhanced Transit	<ul style="list-style-type: none"> • 2031 Capital Road Program • 2041 Transit Priority Corridor Network per 2019 DMTR with additional Higher Order Transit Spines, for example Steeles Avenue and Britannia Road and additional transit improvements on various corridors

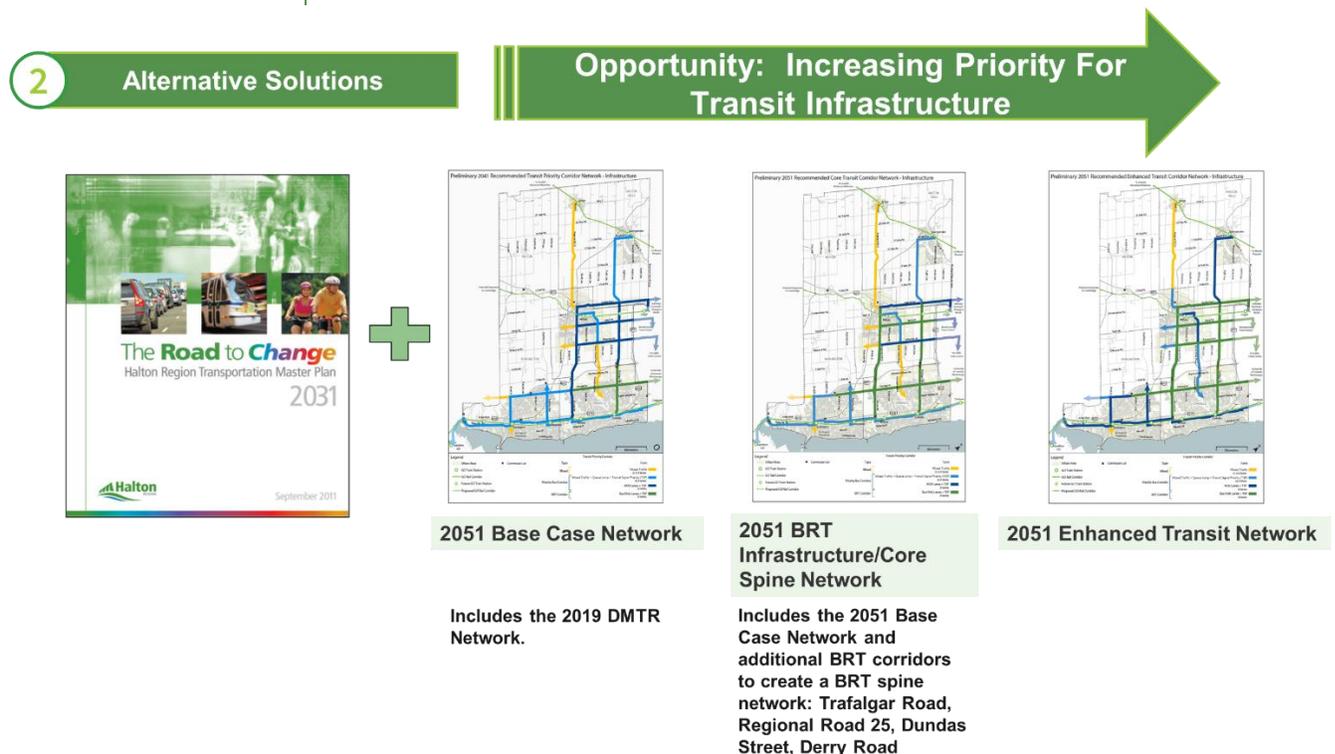


Figure 9 – Development of Network Alternatives

The elements from the alternatives underwent a detailed evaluation, as shown in **Table 4**, with the framework for analysis shown in **Figure 10**. This informed the development of a preferred network solution that is both effective and sustainable, and that positions Halton Region to meet the future travel demand in support of local growth priorities.

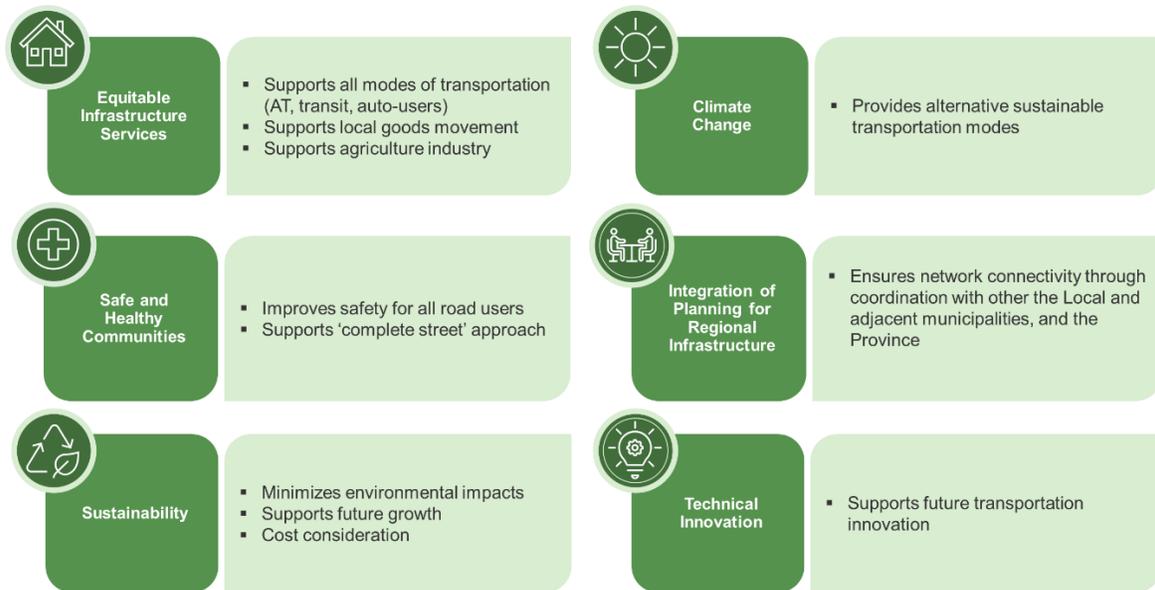


Figure 10 – Framework for Analysis and Evaluation

Table 4 – Advantages and Disadvantages of Alternative Solutions

Factor	Criteria	2051 Base Network	2051 BRT Infrastructure/Core Spine Network	2051 Enhanced Transit Priority Corridor Infrastructure Network
Equitable Infrastructure Services	<ul style="list-style-type: none"> Supports all modes of transportation (AT, transit, auto-users) 	<ul style="list-style-type: none"> Travel demand is supported by all Alternative Solutions and best supported by prioritizing transit infrastructure. 		
	<ul style="list-style-type: none"> Supports local goods movement 	<ul style="list-style-type: none"> All alternative solutions support local goods movement. 		
	<ul style="list-style-type: none"> Supports agriculture vehicles 	<ul style="list-style-type: none"> All alternative solutions support agriculture vehicles. 		
Safe and Healthy Communities	<ul style="list-style-type: none"> Supports safety for all road users 	<ul style="list-style-type: none"> All alternative solutions would provide the opportunity to support safety for all road users by providing space for all modes. 		
	<ul style="list-style-type: none"> Supports 'complete street' approach 	<ul style="list-style-type: none"> All alternative solutions would provide the opportunity to support a complete street approach. 		
Sustainability	<ul style="list-style-type: none"> Minimizes environmental impacts 	<ul style="list-style-type: none"> All alternatives would have similar impacts on the natural, cultural and heritage environments. 		
	<ul style="list-style-type: none"> Supports future growth 	<ul style="list-style-type: none"> Placing a priority on transit-related infrastructure supported by active transportation infrastructure provides the greatest potential for moving people across the Region and would be most resilient to changes in future demand and Local Municipality growth priorities to 2051. 		
	<ul style="list-style-type: none"> Cost consideration 	<ul style="list-style-type: none"> Costs increase as priority for transit through infrastructure increases. 		
Climate Change	<ul style="list-style-type: none"> Provides alternative sustainable transportation modes 	<ul style="list-style-type: none"> Alternative sustainable transportation modes best supported by prioritizing transit infrastructure, supported by active transportation infrastructure. 		
Integration of Planning for Regional Infrastructure	<ul style="list-style-type: none"> Ensures network connectivity through coordination with other the local and adjacent municipalities, and the Province 	<ul style="list-style-type: none"> All alternatives provide and support network connectivity. 		
Technical Innovation	<ul style="list-style-type: none"> Supports future transportation innovation 	<ul style="list-style-type: none"> All alternatives provide flexibility to support emerging technology. 		

Round 3: Elements of Network Alternative Solutions to develop the Transportation Network Strategy for Roads and Transit

By drawing on the highest-performing elements of each Alternative Solution, the Preferred 2051 Transportation Network Strategy was developed to prioritize transit-supportive infrastructure to meet 2051 travel demand and providing long-term flexibility to meet local growth priorities. The Preferred 2051 Transportation Network Strategy is aligned with Local Municipalities' growth priorities, Metrolinx (RTP 2041), and the Ministry of Transportation (2051 GGH Transportation Plan) to ensure a Region-wide approach that supports both regional and local transportation priorities. It reflects a forward-looking vision for a resilient, scalable, and adaptable transportation system capable of evolving with changing travel behaviour while supporting local growth objectives.

4.2.1.4 Preferred Transportation Network Strategy for Road and Transit Priority Corridor Infrastructure

Overall, the Preferred 2051 Transportation Network Strategy for Halton Region delivers a comprehensive, multimodal approach to meet future travel demand and support local growth priorities.

For the Regional road network, the strategy builds on the 2011 Transportation Master Plan and identifies select new corridor widenings, targeted localized improvements and Transit Priority Corridor infrastructure to accommodate travel demand to 2051.

Refer to Section 5.0 for a more detailed description of the Preferred Transportation Strategy.

4.2.2 The Active Transportation Network Development Process

Prior to and since the adoption of the 2015 Active Transportation Master Plan, Halton Region has worked to implement an active transportation network that reflects the local context and user needs, resulting in a range of facilities for walking, cycling, and other self-propelled means of transportation.

Today, Halton’s active transportation network supports a wide range of active travel options that are affordable, have the potential to provide overall health benefits, and help reduce traffic congestion and environmental impacts. The 2051 Regional Active Transportation Network builds upon the 2015 ATMP recommended network with guidance from the most recent guidelines and standards, including Ontario Traffic Manual (OTM) Book 18, Cycling Facilities.

Based on the principles above, the process of developing the 2051 Regional Active Transportation Network consisted of two primary stages as denoted in **Figure 11**.



Figure 11 – Regional AT Network Development Process Overview

4.2.2.1 Network Identification

This included identifying and documenting facilities that are already constructed, as well as documenting planned projects in various phases of implementation, including those under construction, and those in various stages of planning (e.g., Municipal Class Environmental Assessments), preliminary or detailed design stages, to projects that are soon to be implemented as per the Region’s capital plan, or are already under construction. The recommendations of the 2015 ATMP were also documented as a baseline for potential refinements or updates as part of this plan.

To assist in the assessment of future needs of the AT network, the following information was collected:

- **Location identification information:** reviewed Regional roads in key segments, and documenting geographic coordinates for each segment;
- **Traffic data:** included traffic volumes, posted and operating speeds, and percentage of cars/trucks; and,
- **Land use context:** based on land uses designation in the Region’s Official Plan, while also noting and considering existing vs. future development areas, and Local Municipal Official Plans and Secondary Plans. The presence of transit service was also considered.

4.2.2.2 Facility Selection

Once data have been collected and reviewed in the Network Identification stage, data were then consolidated and organized per Regional corridor for the analysis and selection of appropriate AT facilities for each corridor. Facility evaluation was carried out separately for the cycling and walking networks; cycling network analysis was completed first for each corridor segment, as this would determine whether the facility type for a corridor segment would be dedicated to cycling or be a shared use facility which would also accommodate walking, such as a multi-use path.

During the development of Halton's active transportation network, the most recent guidelines and best practices were used to inform network and corridor-specific recommendations. These included key portions of the Ontario Traffic Manual (e.g., Books 15 and 18), the Transportation Association of Canada guidance, and other key design guidelines and best practices. Corridor-specific AT infrastructure facility selection is expected to be refined through subsequent work, in particular MCEA studies and detailed design processes.

The development of the AT network and associated facility recommendations was guided by some key overarching goals and principles, including:

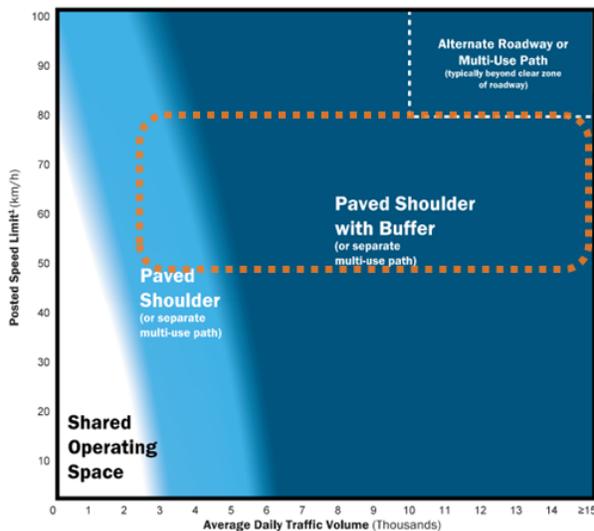
- Ensuring facility recommendations align with current guidelines and best practices for protection and safety;
- In urban areas, providing pedestrian facilities on both sides of all roads and protected cycling facilities within the boulevard where feasible;
- In rural areas, providing paved shoulders of sufficient width for multimodal use and considering opportunities for separated facilities where feasible;
- Creating a clear and convenient environment for pedestrians and cyclists that meets user expectations; and,
- Ensuring that facilities are chosen that facilitate and simplify transitions and crossings at intersections and other key locations.

Cycling Facility Evaluation

Cycling facility selection was guided by the process set out in the OTM Book 18. Notably, this guidance document was updated in 2021 (after the completion of the 2015 Halton ATMP) and includes an evolution in cycling facility selection. This evolution includes distinct selection processes for urban/suburban and rural contexts, as well as a significantly lower threshold where it is recommended to physically separate cycling facilities and limiting the application of unseparated facilities (such as shared and designated operating space) to lower speed and volume conditions.

As illustrated in **Figure 12**, physically separated cycling facilities in urban/suburban contexts should be considered for most Regional roads, and a paved shoulder with buffer in most rural contexts.

Desirable Cycling Facility Pre-Selection Nomograph Rural Context¹ (Step 1)



Desirable Cycling Facility Pre-Selection Nomograph Urban/Suburban Context (Step 1)

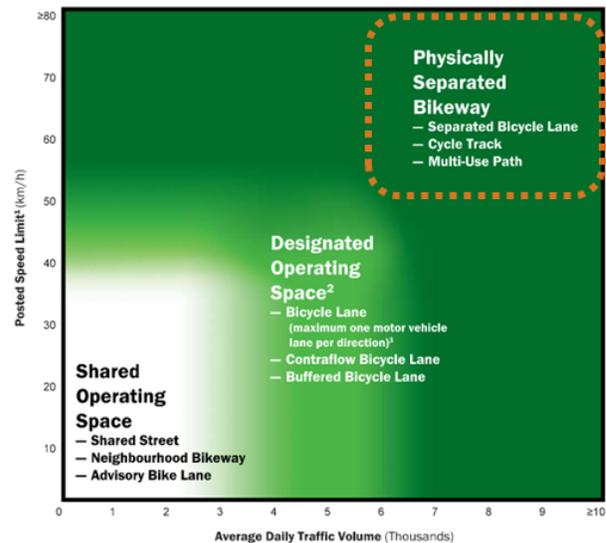


Figure 12 – Cycling Facility Pre-Selection Nomographs from OTM Book 18 (2021), with Typical Regional Road Conditions Highlighted

The cycling facility selection process for the Halton Regional network followed the three-step process, as set out in OTM Book 18.

1. Pre-select facility type options by applying motor vehicle speed and volume and considering adjacent land use to identify and document the initial preferred level of separation, and whether operating space for cycling should be shared, designated, or separated.
2. Perform a more detailed & contextual evaluation considering a broader range of roadway characteristics, and considering feasibility based on available space and potential constraints or costs, as well as the function of the cycling route and anticipated users. This level of analysis was then applied to determine a specific facility type for each corridor segment.
3. Documentation of the rationale for the facility type selection along with implementation considerations.

Walking Facility Evaluation

Once cycling facilities were selected, this determined which corridor segments would include a multi-use facility that would be shared by people on foot and on bicycle, including multi-use paths in urban areas, and paved shoulders in rural areas. Other locations in urban areas were generally identified for sidewalks, including addressing gaps where these did not currently exist. As noted above, one goal of the Regional AT network was to provide sidewalks on both sides of all Regional roads in urban areas. In some cases, a more detailed evaluation of feasibility and consideration of existing and future land use was needed to determine transitions between urban and rural areas, and which locations would be appropriate to transition between different walking facilities.

An overview of some the key findings and considerations related to the development of the AT network is provided in **Table 5**.

Table 5 – Key Active Transportation Findings and Considerations

Land Use	Potential Facility Types	Considerations
Urban Areas	Cycle Tracks & Sidewalks	<ul style="list-style-type: none"> • Connectivity, existing facility type and other context-related factors • Maintain existing Multi-Use Paths • Opportunities for cycle tracks • Opportunities for separated bike lanes as retrofit
	Separated Bike Lanes and Sidewalks (or Multi-Use Path)	
	Multi-Use Path	
Hamlets	Highly varied/context sensitive	Existing conditions and context, including transition to adjacent facilities (for example, rural paved shoulders)
Rural Areas	Paved Shoulder	Given high speeds and volumes, most future paved shoulders should include a painted buffer, where practical and feasible Consider constraints in the corridor

The full Regional walking and cycling networks are detailed in Section 5.1.3.

Overall, the 2051 Active Transportation Network provides a safe, connected, and adaptable system for walking and cycling across Halton Region. Key elements include separated cycling facilities and sidewalks in urban areas, multi-use paths where feasible, and buffered paved shoulders in rural corridors. Coordinated with Local Municipal plans, the network supports active travel, enhances accessibility, promotes health and environmental benefits, and aligns with Regional growth priorities.

4.2.3 Integrating Halton’s Multi-Modal Transportation Network

While each of the transportation networks have been presented as individual components, the planning of each network was connected and simultaneously considered and refined through an extensive consultation and engagement process. Together, the road, active transportation and Transit Priority Corridor networks will serve as the cornerstone of a flexible, multi-modal transportation network to adapt to local growth priorities and serve future travel demand in Halton. As a result, Halton Region’s transportation system will be resilient and adaptable to support local growth priorities and increasing travel demand through:

- Localized corridor widening and improvements
- Flexibility and adaptability to support the evolution of the Transit Priority Corridors
- Prioritizing walking and cycling facilities, including at intersections
- Supporting strategies and technologies (for example, transit signal priority)

5.0 Preferred Transportation Strategy

5.1 A Multi-Modal Network for 2051

5.2 Capital Program for the Preferred Strategy

5.0 Preferred Transportation Strategy

5.1 A Multi-modal Network for 2051

This section outlines the preferred multi-modal network strategy, featuring a connected Transit Priority Corridor network, an updated active transportation network, select road widenings and localized improvements which will serve as the cornerstone of a flexible, multi-modal transportation network to adapt to local growth priorities and serve future travel demand in Halton Region.

5.1.1 Regional Road Network

The Region's 2011 Transportation Master Plan projected network needs to 2031, including 6-lane cross sections for most Regional Roads and new corridors within the urban area. To support growth beyond 2031, a limited number of additional road widenings have been identified:

- Neyagawa Boulevard (Regional Road 4) – Widening from 4 to 6 lanes from Dundas Street to Highway 407 (47 m right-of-way)
- Trafalgar Road (Regional Road 3) – Widening from 4 to 6 lanes from Steeles Avenue to 10 Side Road (47 m right-of-way)
- Ninth Line (Regional Road 13) – Widening from 4 to 6 lanes from Steeles Avenue to 10 Side Road (47 m right-of-way)

These improvements are required for the Regional road network to remain responsive to future travel demand, including supporting Transit Priority Corridor network.

It should be noted that two previously proposed roadway widening projects identified in the 2011 TMP were reviewed (per Section 4.2.1.3) and were not carried forward to the preferred transportation. These include:

- North Service Road Extension (Burloak Drive to Regional Road 25) – removed from future planning and no longer recommended for implementation; and,
- Upper Middle Road (Regional Road 25 to Ninth Line) – to remain at four lanes with localized improvements to accommodate future travel demand.

Figure 13 depicts the proposed lane configurations and road network associated with the Preliminary Preferred Solution and is followed by **Figure 14** that illustrates the phasing of the road network improvements. **Figure 15** illustrates the right-of-way required for each corridor.

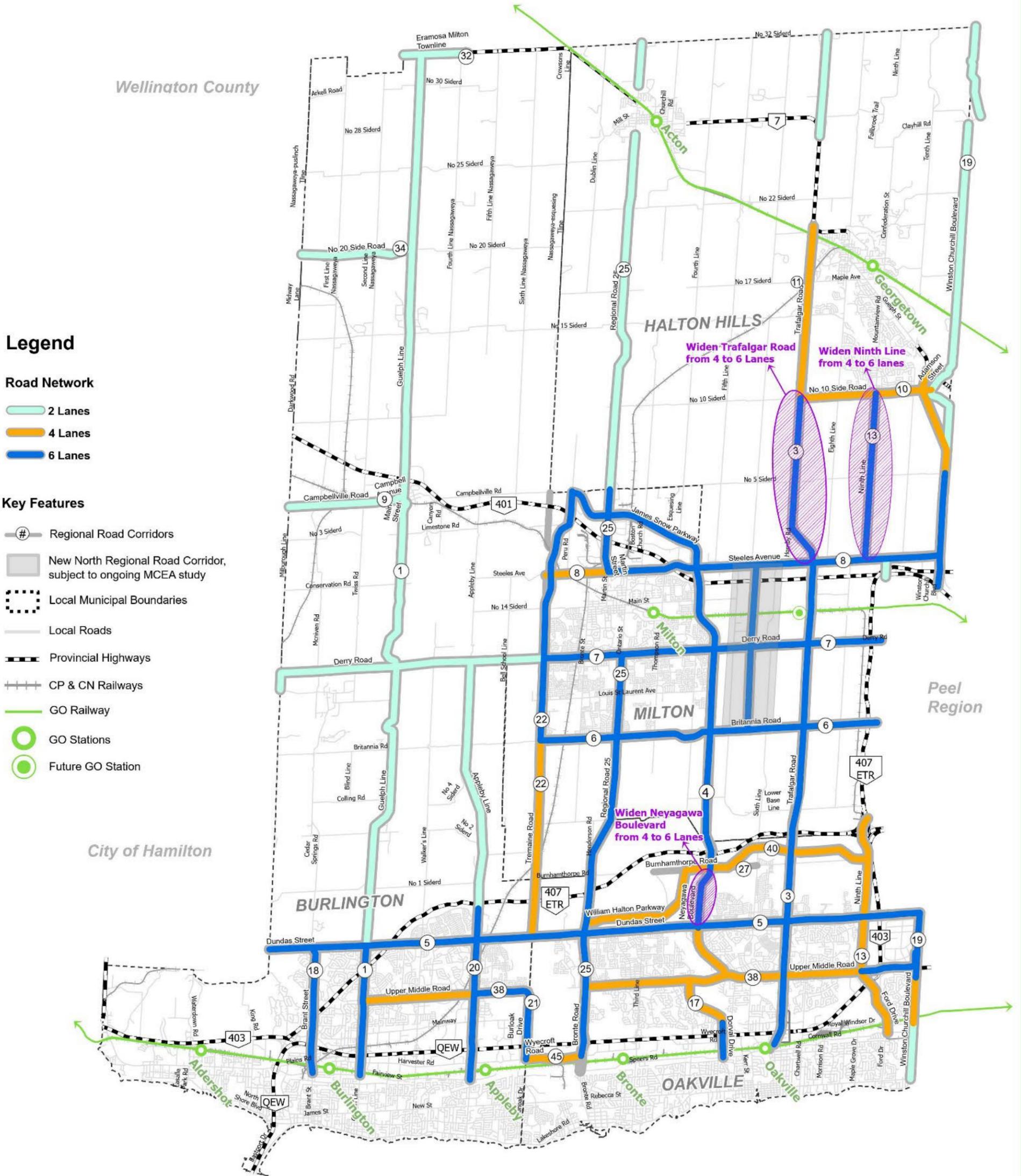


Figure 13 – 2051 Preferred Strategy Network – Lane Configuration



Regional Road Improvements

Previously Planned Road
Widenings / New Roads

Timing of Regional Road
Improvements identified through
the Integrated Master Plan to 2051

- 2032-2036
- 2037-2041
- 2042-2046
- 2047-2051

Key Features

- Regional Roads
- New North Regional Road Corridor, subject to ongoing MCEA Study
- Local Municipal Boundaries
- Local Roads
- Provincial Highways
- CP & CN Railways
- GO Railway
- GO Stations
- Future GO Station

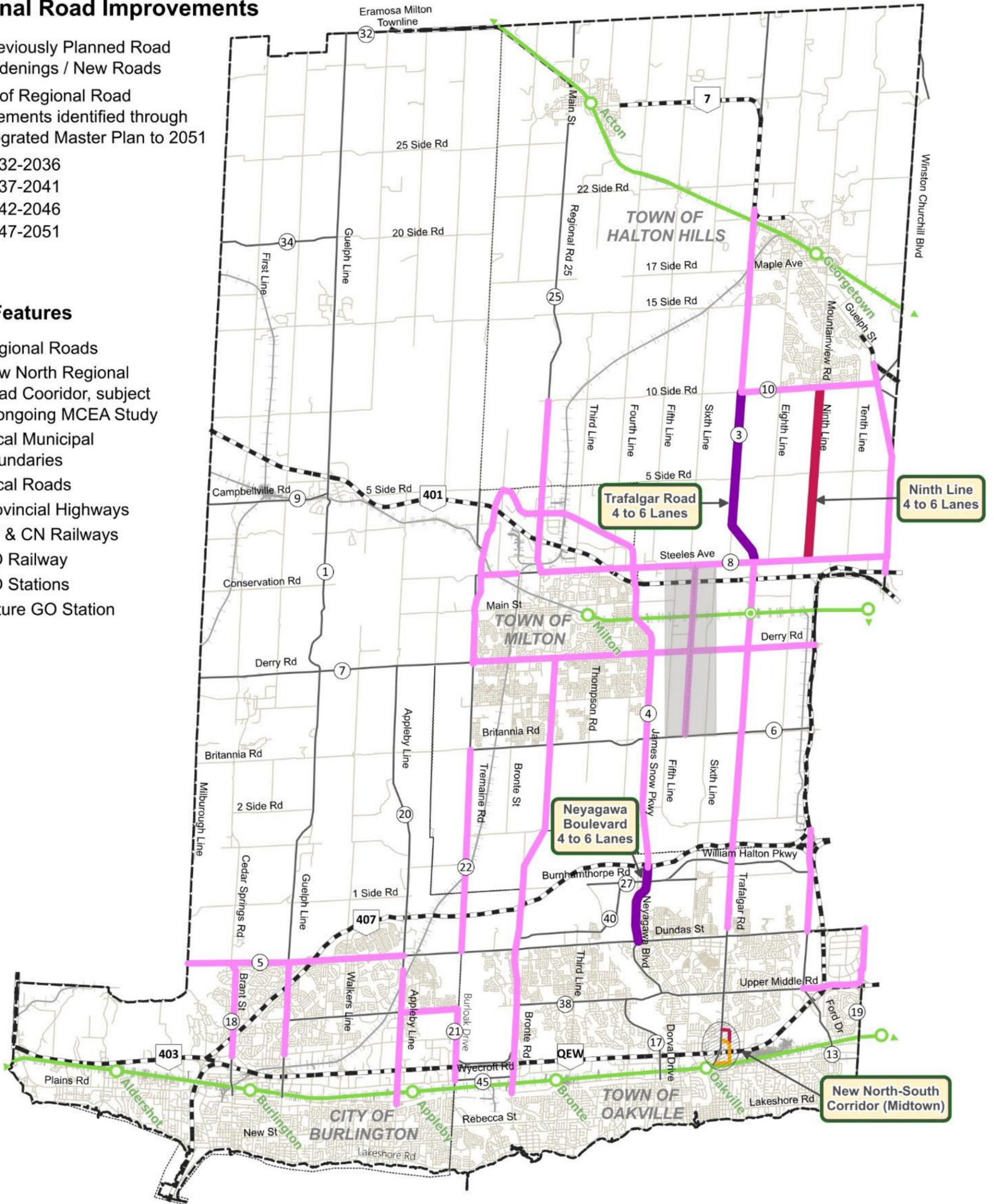
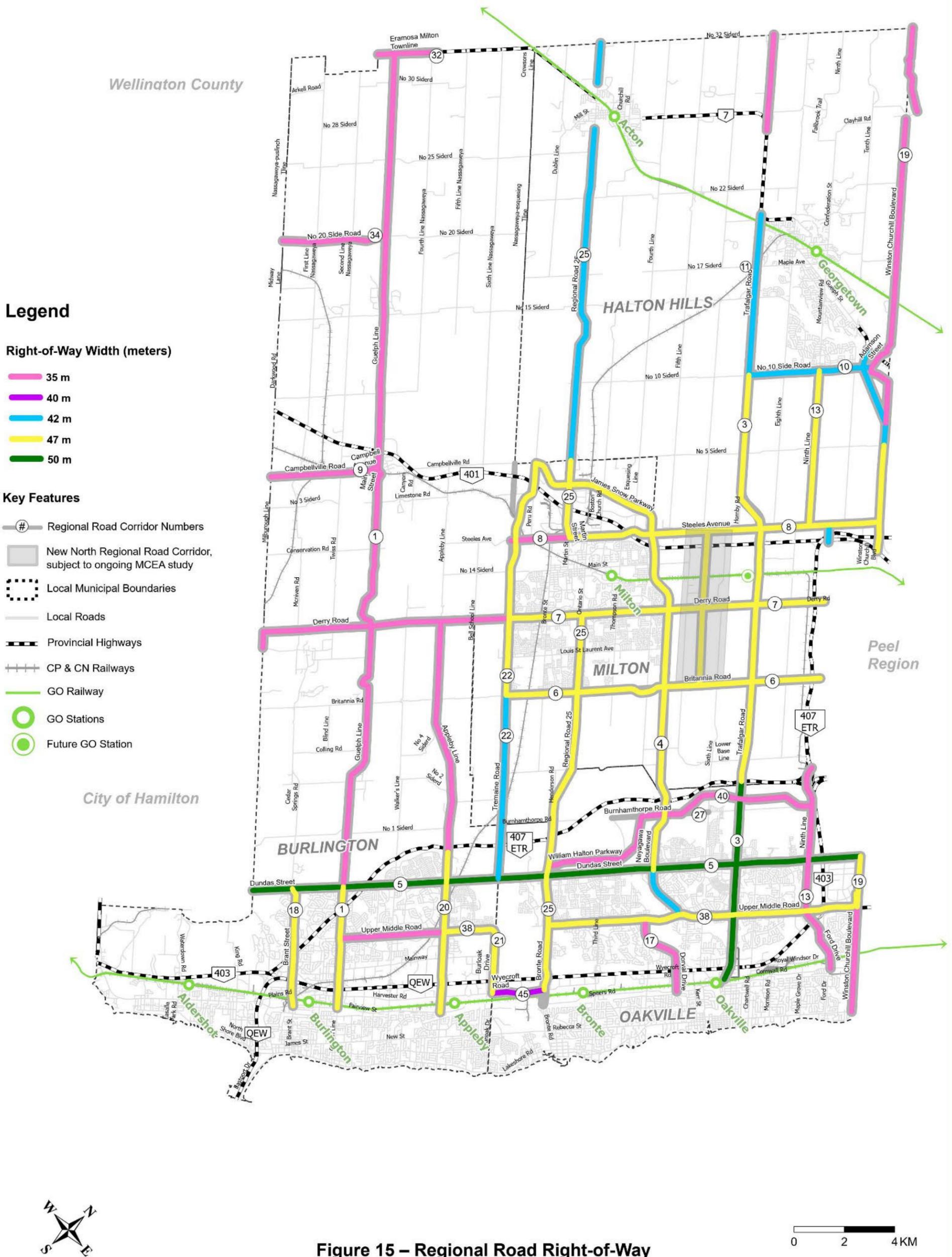


Figure 14 – Phasing of Regional Road Improvements

0 2 4 KM



Legend

Right-of-Way Width (meters)

- █ 35 m
- █ 40 m
- █ 42 m
- █ 47 m
- █ 50 m

Key Features

- # Regional Road Corridor Numbers
- New North Regional Road Corridor, subject to ongoing MCEA study
- Local Municipal Boundaries
- Local Roads
- Provincial Highways
- ++ CP & CN Railways
- GO Railway
- GO Stations
- Future GO Station

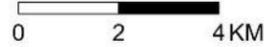


Figure 15 – Regional Road Right-of-Way

Localized Corridor Improvements

Based on increasing travel demand by 2051, there are segments of corridors where future travel demand may be addressed through localized improvements, instead of full widenings. Localized improvements may include, for example, signal optimization, signage improvements, additional auxiliary lanes and local lane widening. The following segments of the corridors were identified as potential candidates for localized improvements to address future travel demand:

- Regional Road 25 from 5 Side Road to north of 25 Side Road;
- 10 Side Road (Regional Road 10) between Trafalgar Road and Winston Churchill Boulevard;
- Guelph Line (Regional Road 1) between Campbellville Road and Highway 401;
- William Halton Parkway (Regional Road 40) between Regional Road 25 and Ninth Line;
- Upper Middle Road (Regional Road 38) between Regional Road 25 and Ninth Line/Ford Drive; and,
- Ford Drive (Regional Road 13) between Upper Middle Road and Highway 403.

The timing of the localized corridor improvements is identified on Figure 16 and will be confirmed through the monitoring of travel demand and intersection operations. The exact type of improvement to be implemented will be based on future monitoring and study findings.

Localized Improvements

Timing of Localized Corridor Improvements identified through the Integrated Master Plan to 2051

- █ 2032-2036
- █ 2037-2041
- █ 2042-2046
- █ 2047-2051

Key Features

- Regional Roads
- New North Regional Road Corridor, subject to ongoing MCEA Study
- Local Municipal Boundaries
- Local Roads
- Provincial Highways
- CP & CN Railways
- GO Railway
- GO Stations
- Future GO Station

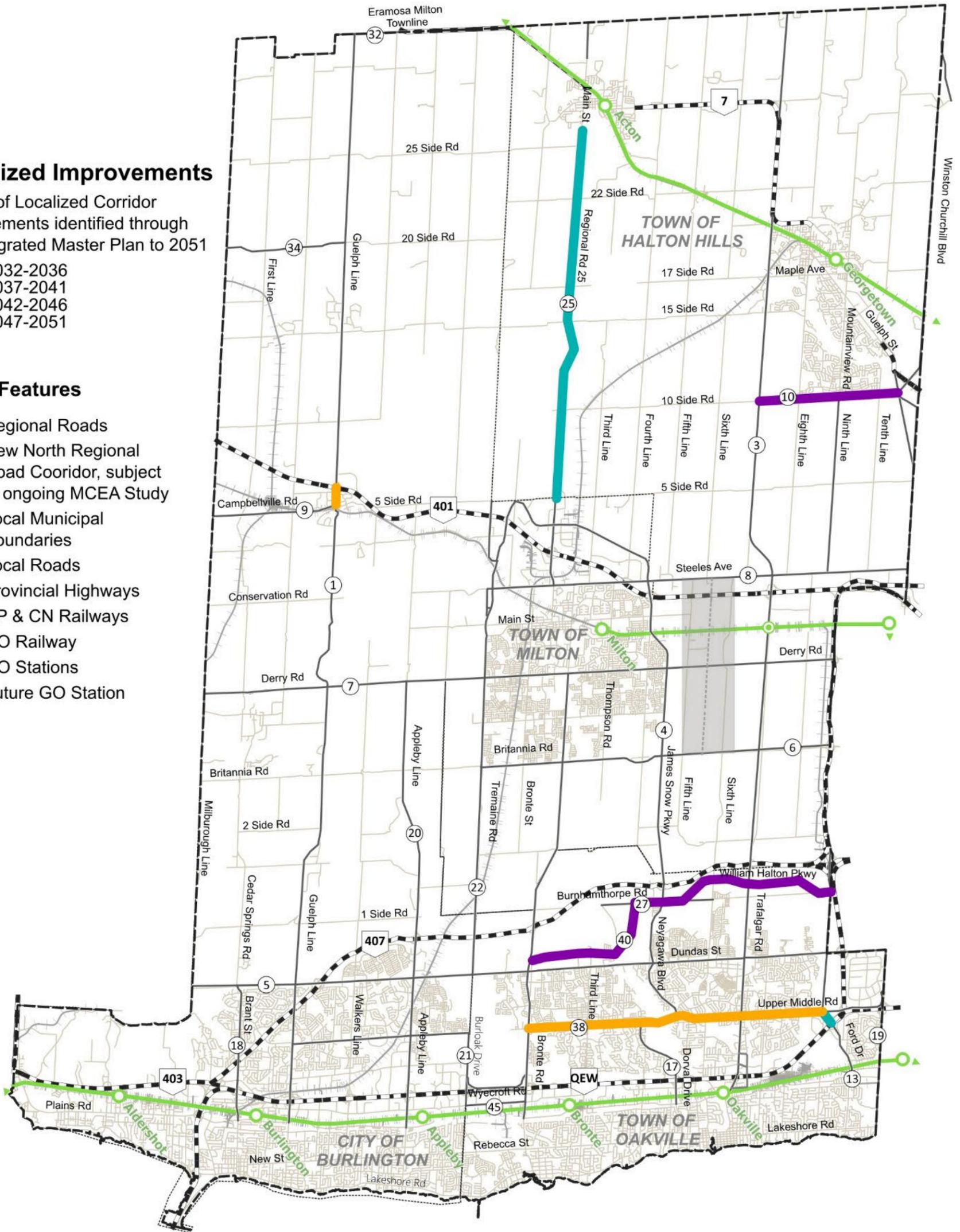
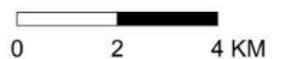


Figure 16 – Future Localized Improvements Along Halton Regional Road Corridors



5.1.2 Transit Priority Corridor Networks

In order to accommodate future travel demand, Transit Priority Corridors are configured through infrastructure or operational improvements to improve travel speed and reliability for transit using the corridor. The Transit Priority Corridor Network has been developed to be flexible to adapt to local growth priorities. Improvements will evolve and scale appropriately over time by building flexibility into the network to allow priority and infrastructure treatments to be upgraded as ridership increases, ensuring that enhancements reflect where demand is highest. Key elements of the **Transit Priority Corridor Network include Bus in Mixed Traffic with Priority at Intersections, High Occupancy Vehicle (HOV) Lane with Priority at Intersections and Bus Rapid Transit, as shown in Figure 17 below.**

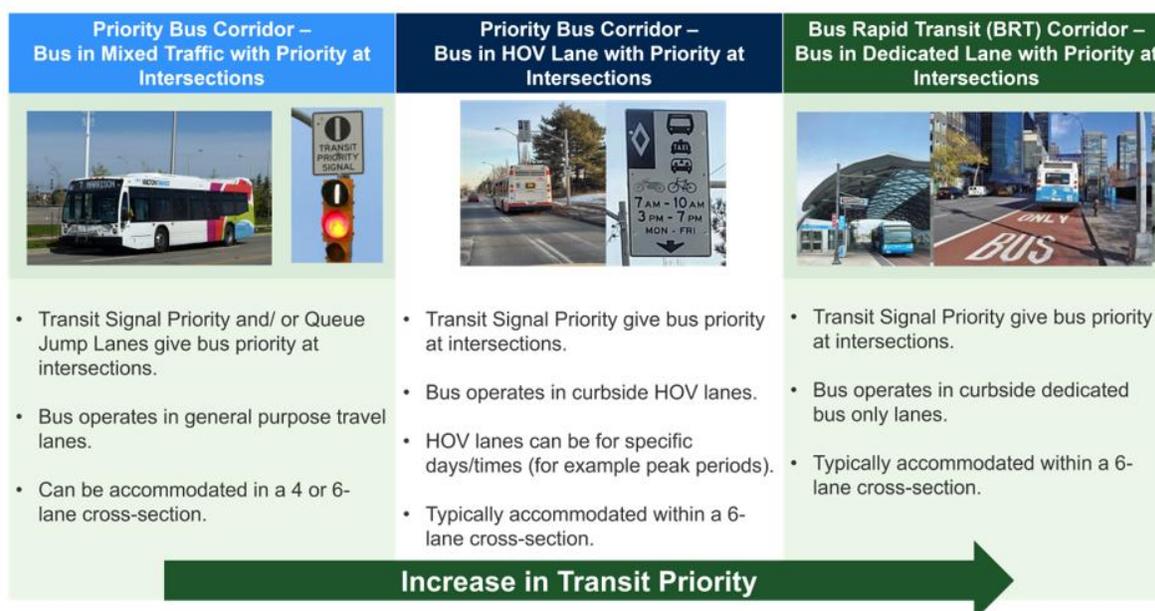


Figure 17 – Elements of 2051 Transit Priority Corridor

The 2051 Transit Priority Corridor Network was developed to establish strategic north-south and east-west transit spines, accommodating future travel demand and enhancing connectivity, including:

- North-South Core Bus Rapid Transit (BRT) Network – Regional Road 25, and Trafalgar Road (south through Midtown Oakville on the North-South Corridor).
- East-West Core Bus Rapid Transit (BRT) Network – Dundas Street and Derry Road.
- High Occupancy Vehicle lanes - multiple corridors including Brant Street, Appleby Line, James Snow Parkway, Britannia Road and Steeles Avenue.
- Additional transit priority infrastructure: Transit Signal Priority, Queue Jump lanes.

In addition, through the Integrated Master Plan, the Region has aligned with ongoing local studies including the Midtown Oakville Transportation Plan (November 2025) which supports the Midtown Oakville Official Plan Amendment as adopted by Town of Oakville Council in February 2025. The North-South Corridor from Cross Avenue to White Oaks Boulevard, as developed by the Town of Oakville, has

been included in the Region’s Integrated Master Plan along with the timing and costs provided by the Town.

The 2051 Transit Priority Corridor Network is presented on **Figure 19** and the potential phasing of the Transit Priority Corridors is shown on **Figure 20, Figure 21** and **Figure 22**. However, it should be noted that the implementation of the ultimate 2051 Transit Priority Corridor will be phased and will evolve based on travel demand and local priorities. It is recognized that the timing and transition of the Transit Priority Corridors will require close coordination between the Region and the Local Municipalities.

The following drivers are key considerations that will help to determine the timing for the evolution of the Transit Priority Infrastructure:

- **Travel Demand:** Providing sufficient capacity through the Transit Priority Corridors to accommodate the future travel demand.
- **Transit Ridership:** Ensuring that infrastructure is in place for transit priority improvements to evolve based on demand and local priorities.
- **Connected Transit Network:** Serving travel demand to support future growth and connections to key destinations.

Figure 18 provides an overview of transit-related improvements such as transit signal priority intersections and dedicated HOV and BRT on Regional roads by 2051. For a description of each of the Transit Priority Corridor Types, refer to **Figure 17** above.



Figure 18 – Overview of Transit Priority-Related Improvements on Regional Corridors by 2051

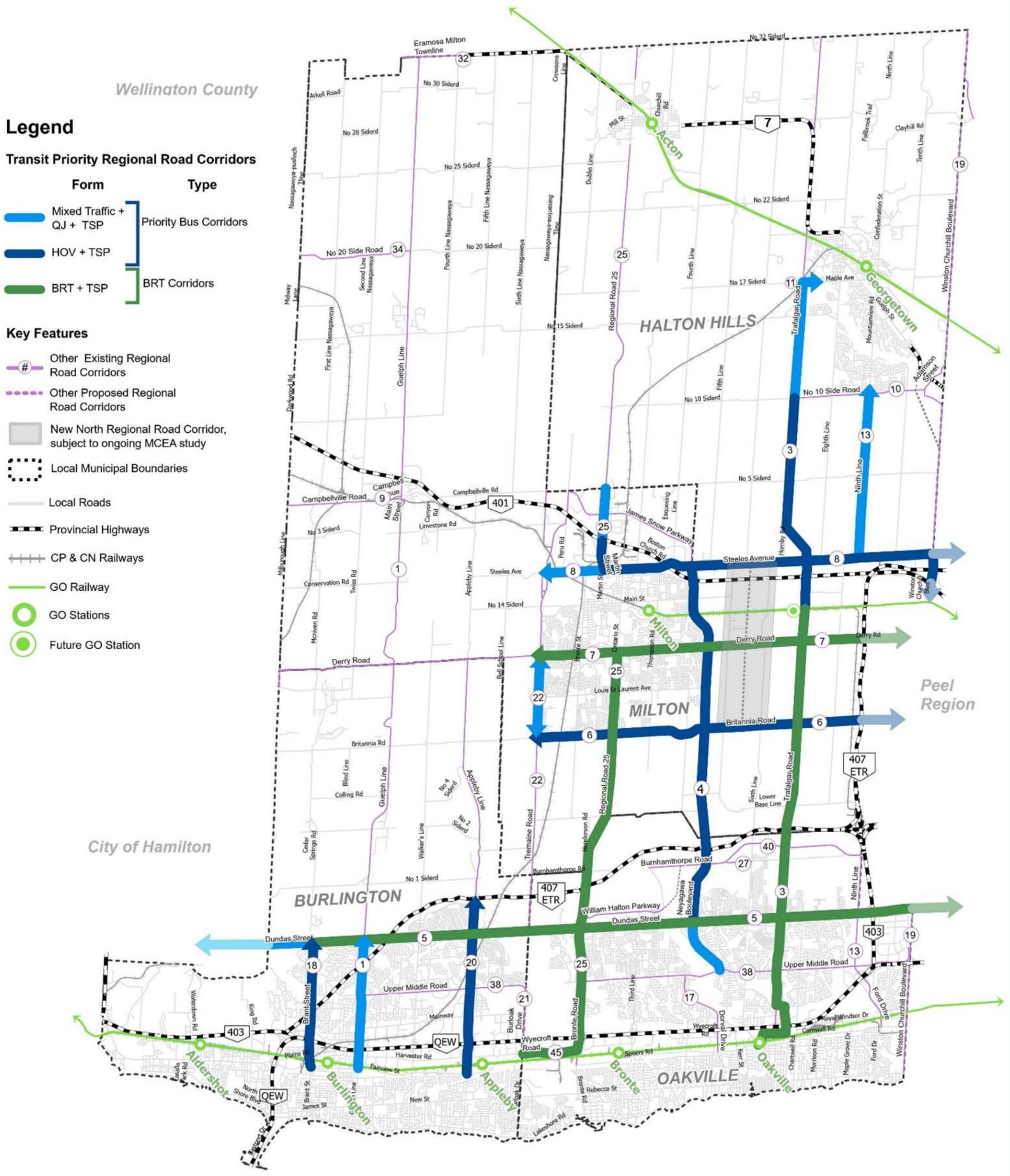
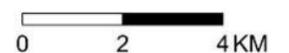


Figure 19 – 2051 Preferred Transit Priority Corridor Infrastructure Network



Wellington County

Legend

Timing of Transit Priority Corridor Infrastructure Improvements Identified through the Integrated Master Plan

- 2032 - 2036 (Mixed Traffic + QJ + TSP)
- 2037 - 2041 (Mixed Traffic + QJ + TSP)
- - - 2032 - 2036 (HOV + TSP)
- - - 2037 - 2041 (HOV + TSP)

Key Features

- Regional Road Corridors
- New North Regional Road Corridor, subject to ongoing MCEA study
- Local Municipal Boundaries
- Local Roads
- Provincial Highways
- CP & CN Railways
- GO Railway
- GO Stations
- Future GO Station

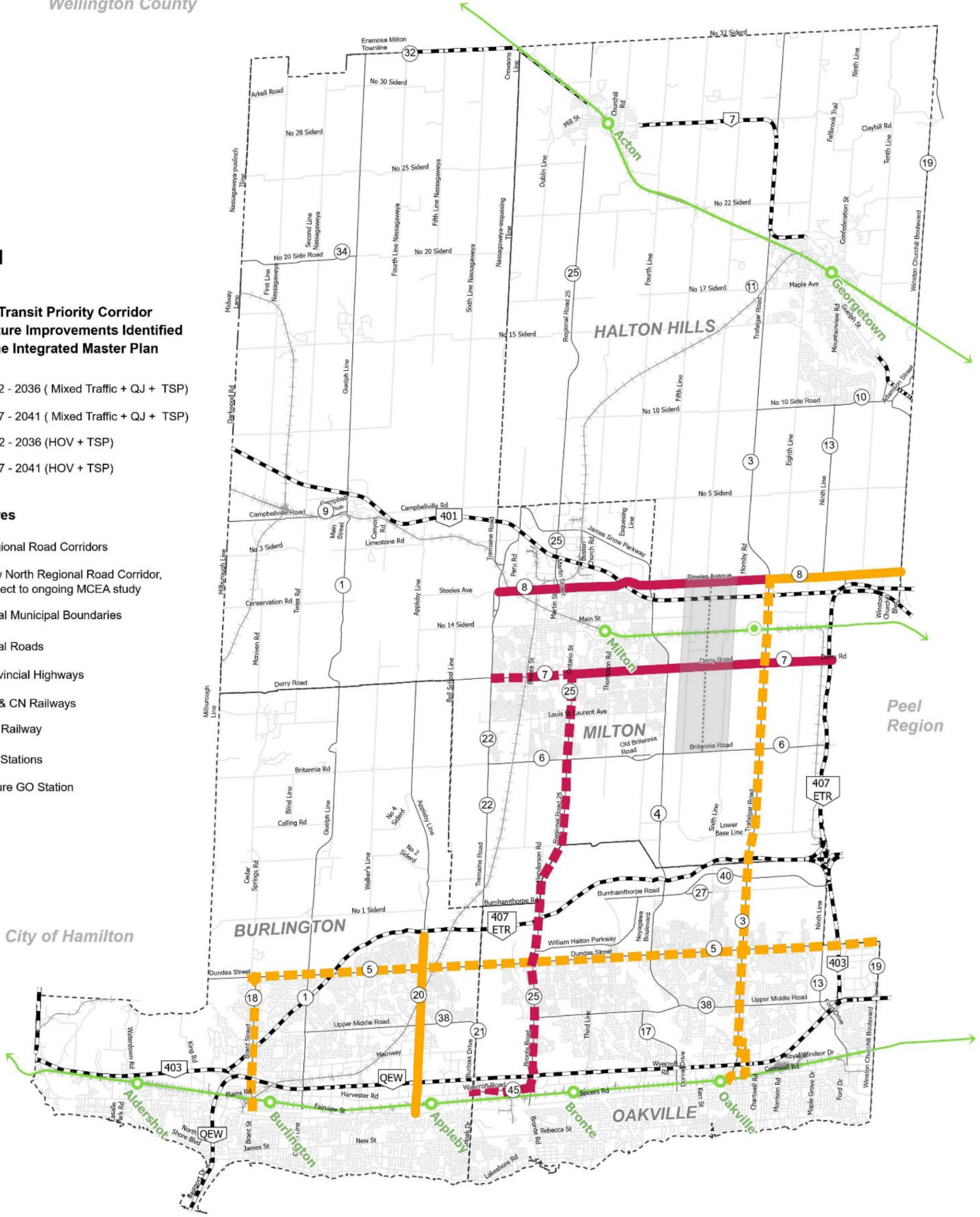


Figure 20 – 2031+ Phasing of Transit Priority Corridors

0 2 4 KM

Wellington County

Legend

Timing of Transit Priority Corridor Infrastructure Improvements Identified through the Integrated Master Plan

- 2042 - 2046 (Mixed Traffic + QJ + TSP)
- 2042 - 2046 (HOV + TSP)
- 2042 - 2046 (BRT + TSP)

Key Features

- Regional Road Corridors
- New North Regional Road Corridor, subject to ongoing MCEA study
- Local Municipal Boundaries
- Local Roads
- Provincial Highways
- CP & CN Railways
- GO Railway
- GO Stations
- Future GO Station

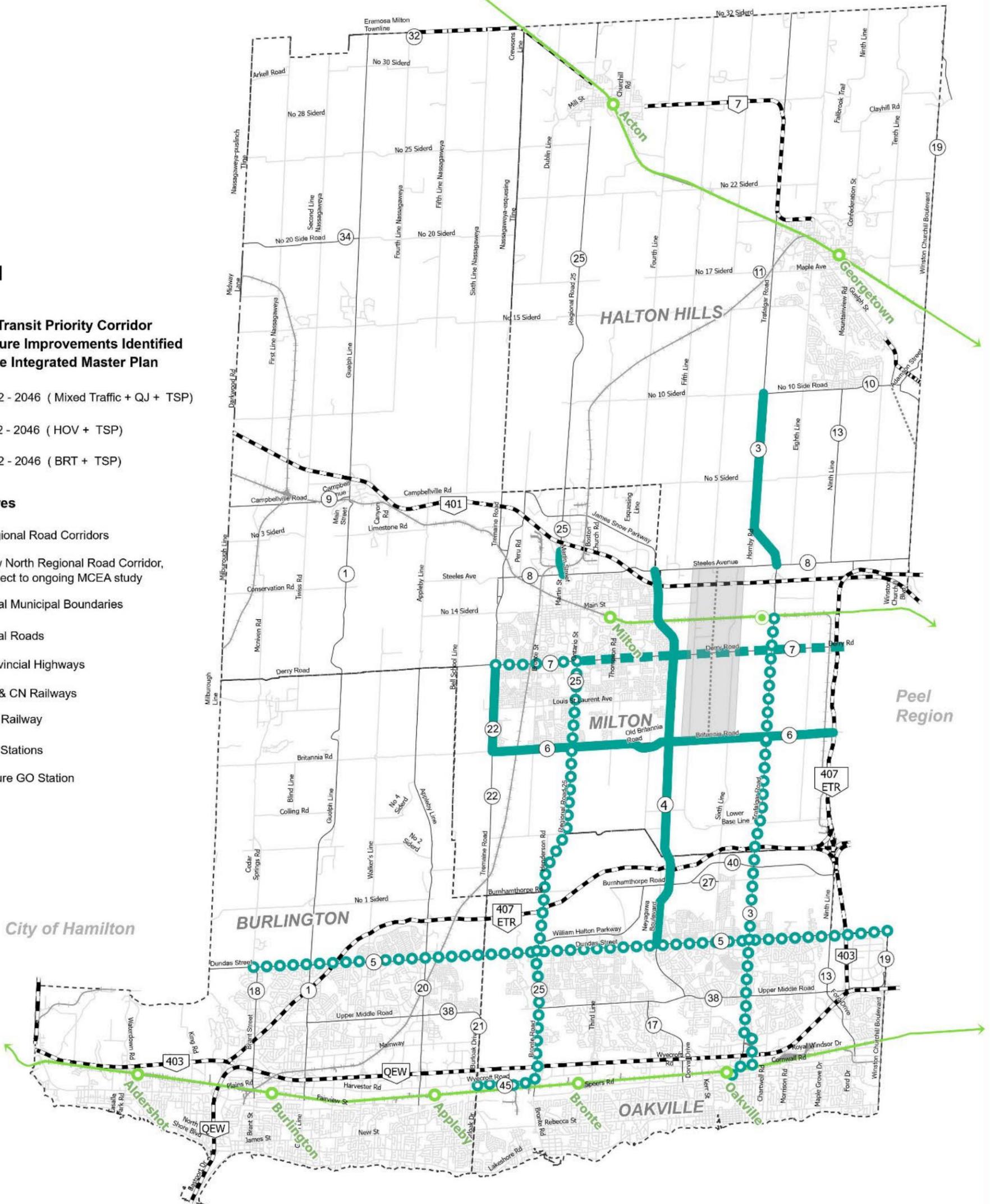


Figure 21 – 2042 to 2046 Phasing of Transit Priority Corridors

0 2 4 KM

Legend

Timing of Transit Priority Corridor Infrastructure Improvements Identified through the Integrated Master Plan

- 2047 - 2051 (Mixed Traffic + QJ + TSP)
- 2047 - 2051 (HOV + TSP)
- 2047 - 2051 (BRT + TSP)

Key Features

- Regional Road Corridors
- New North Regional Road Corridor, subject to ongoing MCEA study
- Local Municipal Boundaries
- Local Roads
- Provincial Highways
- CP & CN Railways
- GO Railway
- GO Stations
- Future GO Station



Figure 22 – 2047 to 2051 Phasing of Transit Priority Corridors



5.1.3 Active Transportation Network

The updated active transportation network for Regional road corridors was developed to provide a clear and convenient environment for pedestrians and cyclists, in consideration of corridor conditions and updated guidelines. Through the implementation of Halton’s Active Transportation Network, recommended facilities will undergo further refinement through the lifecycle of a capital project (for example through a Municipal Class Environmental Assessment Study and/or detailed design), with adjustments to be made based on the location context and most recent guidelines and standards.

The proposed 2051 Active Transportation Network will include a combination of the following facilities:

Sidewalks: In-boulevard paved/concrete paths for pedestrians, separated from the roadway by a curb/buffer.



Figure 23 – Sidewalk on Upper Middle Road

Multi-use Paths: In-boulevard two-way shared use facilities, separated from roadway by a curb/buffer.



Figure 24 – Multi-Use Path on Dundas Street

Cycle Tracks: In-boulevard cycling facilities separated from the roadway by a curb/buffer; may allow for either one-way or two-way cycling flow.



Figure 25 – Two-way Cycle Tracks on Trafalgar Road

Separated Bike Lanes: A portion of the roadway designated for exclusive bicycle use, with buffer areas that provide physical separation from motor vehicles.



Figure 26 – Separated Bike Lanes on Plains Road

Paved Shoulders: Portions of the roadway outside the designated traffic lanes for the use of cyclists, pedestrians, and stopped motor vehicles. In most instances, painted buffers are recommended as part of the paved shoulders where practical and feasible.



Figure 27 – Paved Shoulder on Guelph Line

It should be noted that there is some overlap between the AT network improvements. For instance, a considerable number of in-boulevard multi-use paths are included in the strategy which are designed to be shared by pedestrians and cyclists and thus were included as both part of the on-road cycling and walking networks. The sets of improvements are designed to complement each other, and work together to create a seamless, connected network of infrastructure that can be used to access key destinations across Halton Region. The network improvements are summarized in the following sections, and the 2051 Walking Network is shown on Figure 28, and the 2051 Cycling Network is shown on Figure 29.

Through the implementation of the Active Transportation Network, consideration of how facilities interact at the intersection level is critical. One recent approach to intersection design is the concept of “protected intersections,” an international best practice in multi-modal intersection design that has become increasingly prevalent across Canada in recent years. Key objectives for protected intersections include reducing motor vehicle speeds, separating high-risk conflicts, minimizing crossing distances, maximizing visibility, using clear and consistent design language, and the minimization of delay for all users.

Depending on the context, elements of protected intersections which prioritize walking and cycling through intersection-based treatments to provide separate and dedicated space for pedestrians, cyclists and motorists, may include:

- Corner islands to physically separate turning traffic from queued cyclists and pedestrians.
- Setback crossings, including crossrides for cyclists parallel to crosswalks, and forward queuing areas for cyclists and pedestrians to enhance visibility and reaction time for turning motor vehicles.
- Pedestrian refuge areas between in-boulevard cycling facilities and the roadway to reduce the signalized crossing distance for pedestrians, and separate queuing areas for people on bikes.
- Bicycle signals and signal phasing changes, such as protected turn signal phasing or leading pedestrian or bicycle intervals.

Halton Region AT infrastructure design focus on ensuring facilities are appropriate to allow people of all ages and abilities to travel comfortably and safely by aligning with relevant national and provincial accessibility and design guidelines and standards, and adaptation of applicable updates over time. Improvements to active transportation will be refined throughout the capital project lifecycle, with elements to be tailored to the specific location context, feasibility, and current guidelines and standards. Protected intersections elements as noted above are to be considered as part of future intersection design projects. The exact features are expected to vary in different land use contexts and specific to geographic locations.

Legend

2051 Walking Network

- Multi-use Paths
- Sidewalks
- Paved Shoulders**

Key Features

- Regional Roads
- New North Regional Road Corridor, subject to ongoing MCEA Study
- Local Municipal Boundaries
- Local Roads
- Provincial Highway Crossings***
- Provincial Highways
- CP & CN Railways
- GO Railway
- GO Stations
- Future GO Station

** All paved shoulders should be buffered, where practical and feasible.

*** Crossings at Provincial Highways are subject to further review and consultation with MTO.

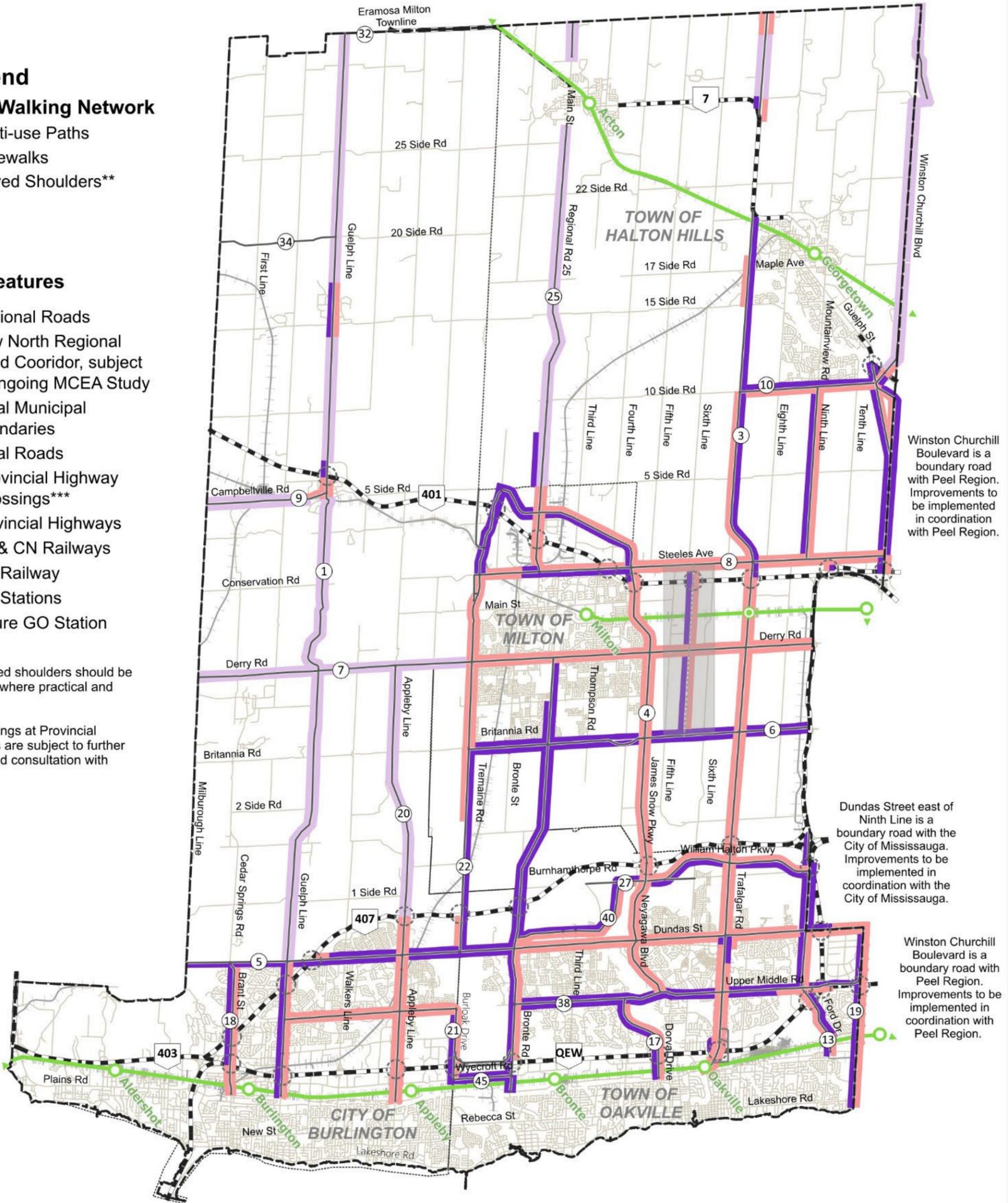
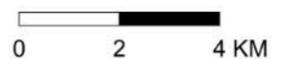


Figure 28 – 2051 Regional Walking Network



Legend

2051 Cycling Network

- Two-way Cycle Tracks
- One-way Cycle Tracks
- Multi-use Paths
- Separated Bike Lanes*
- Paved Shoulders**

Key Features

- Regional Roads
- New North Regional Road Corridor, subject to ongoing MCEA Study
- Local Municipal Boundaries
- Local Roads
- Provincial Highway Crossings***
- Provincial Highways
- CP & CN Railways
- GO Railway
- GO Stations
- Future GO Station

* The feasibility of separation, including location, subject to further review.

** All paved shoulders should be buffered, where practical and feasible.

*** Crossings at Provincial Highways are subject to further review and consultation with MTO.



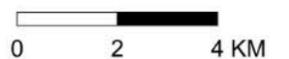
Winston Churchill Boulevard is a boundary road with Peel Region. Improvements to be implemented in coordination with Peel Region.

Dundas Street east of Ninth Line is a boundary road with the City of Mississauga. Improvements to be implemented in coordination with the City of Mississauga.

Winston Churchill Boulevard is a boundary road with Peel Region. Improvements to be implemented in coordination with Peel Region.



Figure 29 – 2051 Regional Cycling Network



5.2 Cost Estimation Framework

At the master planning stage, cost estimates are developed to provide a high-level understanding of the capital costs required to implement the preferred servicing strategies. Estimates at this stage are planning-level values suitable for long-range financial forecasting, DC updates, and capital budgeting. The costing approach for the IMP is based on a unit-rate methodology, using representative cost rates appropriate for master planning.

Given the broad level of project definition typical of a Master Plan, cost estimates in the IMP generally correspond to Class 4 (Conceptual) or Class 5 (Order of Magnitude) under the Association for the Advancement of Cost Engineering (AACE) classification system. These estimates typically carry an expected accuracy range of -30 to +50, reflecting the preliminary nature of project details available at this stage. Accordingly, these values should be understood as high-level master planning estimates that provide a defensible basis for long-range forecasting. As projects advance through subsequent phases, such as MCEA studies (where required), preliminary design, and detailed design, the cost estimates will be refined to reflect the increased level of definition and information available at each stage. Updated estimates will then be incorporated into the Region's capital budgeting process as part of ongoing project development and implementation.

A summary of the overall costing framework is provided in Appendix 5B. Final project costs, presented in Section 5.3, represent the total estimated capital cost to implement the Preferred Transportation Servicing Strategy and will inform Halton Region's DC By-law Update and Capital Budget.

5.3 Capital Program for the Preferred Strategy

The capital program supports the implementation of the Preferred Transportation Strategy and outlines the infrastructure investments required to accommodate travel demand to 2051. The Preferred Strategy represents a planned investment of approximately \$909 million. The program's master plan level cost estimates include three primary types of improvements: active transportation infrastructure, road widenings/localized corridor improvements, and Transit Priority Corridor infrastructure. Costs account for applicable preliminary planning, environmental assessment, detailed design, utility relocations, property acquisition, and construction.

The active transportation component is estimated at approximately \$172 million and supports the development of a connected network of pedestrian and cycling facilities. This includes on-road and off-road infrastructure such as sidewalks, paved shoulders, separated bike lanes, multi-use paths, and cycle tracks, as well as the inclusion of protected intersections, signage, and pavement markings.

Road network improvements to accommodate future travel demand are estimated at \$418 million and include critical projects identified in the Integrated Master Plan, including three major road widenings, localized corridor improvements, and the Midtown North-South Corridor in Oakville which has been included for coordination purposes based on cost and timing information provided by the Town of Oakville.

Transit Priority Corridor infrastructure cost is estimated at approximately \$292 million which includes for example, transit signal priority measures, queue jump lanes, supporting infrastructure such as signage and pavement markings.

Project costs are master plan level costs estimated using the methodology described in Appendix 5B. The capital program includes information on the project descriptions, type, location, timing, estimated costs, and applicable EA requirements. The capital projects that support the Preferred Transportation Strategy are summarized in **Table 6** and **Table 7**. This includes only the costs of new projects identified through the IMP and excludes projects identified through the 2011 TMP to accommodate travel demand to 2031.

Table 6 – Summary of Transportation Capital Program

Category	Total (\$Millions)
Regional Road Improvements	\$ 322
Localized Corridor Improvements	\$ 95
Active Transportation	\$ 172
Transit Priority Corridors	\$ 292
Additional Studies	\$ 27
Total	\$ 909

Notes: This Table does not include the cost of projects already funded through the Allocation Program. Total may not add up due to rounding.

Table 7 – Capital Program and Phasing Table for the Preferred Transportation Strategy

Master Plan ID	Project Description	Municipality	Class EA	2032-2036	2037-2041	2042-2046	2047-2051	Total
Regional Road Improvements								
T1	Trafalgar Road Widening from 4 to 6 lanes between Steeles Ave and 10 Side Road	HH	Schedule C	-	\$ 1,500,000	\$ 14,500,000	\$ 81,600,000	\$ 97,600,000
T2	Neyagawa Boulevard Widening from 4 to 6 lanes from Highway 407 to Dundas Street	OAK	Schedule C	-	\$ 1,500,000	\$ 9,200,000	\$ 39,900,000	\$ 50,600,000
T3	Ninth Line Widening from 4 to 6 lanes between Steeles Avenue and 10 Side Road	HH	Schedule C	\$ 14,000,000	\$ 91,800,000	-	-	\$ 105,700,000
T4	Midtown North-South Corridor from Cross Avenue to Iroquois Road (based on cost and timing provided by Town of Oakville)	OAK		\$ 41,400,000	-	-	-	\$ 41,400,000
T5	Midtown North-South Corridor from Iroquois Road to White Oaks Boulevard (based on cost and timing provided by Town of Oakville)	OAK		-	\$ 27,100,000	-	-	\$ 27,100,000
Localized Corridor Improvements								
T6	Upper Middle Road from Regional Road 25 to Ninth Line	OAK	-	\$ 24,700,000	-	-	-	\$ 24,700,000
T7	Regional Road 25 from 5 Side Road to North of 25 Side Road	HH	-	-	-	\$ 10,300,000	-	\$ 10,300,000
T8	10 Side Road from Trafalgar Road to Winston Churchill Boulevard	HH	-	-	-	\$ 2,400,000	\$ 12,700,000	\$ 15,100,000
T9	William Halton Parkway from Regional Road 25 to Ninth Line/Ford Drive	OAK	-	-	-	\$ 3,700,000	\$ 21,100,000	\$ 24,700,000
T10	Ford Drive from Upper Middle Road to Highway 403	OAK	-	-	\$ 500,000	\$ 14,600,000	-	\$ 15,100,000
T11	Guelph Line from Campbellville Road to Highway 401	BUR	-	\$ 5,500,000	-	-	-	\$ 5,500,000
Active Transportation				\$ 43,500,000	\$ 47,600,000	\$ 51,400,000	\$ 29,700,000	\$ 172,200,000
Transit Priority Corridors				\$ 67,700,000	\$ 33,300,000	\$ 133,600,000	\$ 57,500,000	\$ 292,100,000
Additional Studies				\$ 8,000,000	\$ 7,000,000	\$ 5,000,000	\$ 7,000,000	\$ 27,000,000
Total				\$ 204,700,000	\$ 210,300,000	\$ 244,700,000	\$ 249,500,000	\$ 909,210,000

Notes: This Table does not include the cost of projects already funded through the Allocation Program.
Total may not add up due to rounding.

6.0 Implementation – From Plan to Action

- 6.1 Phasing and Implementation Strategy
 - 6.2 MCEA Process and Project Categorization
 - 6.3 Implementation Commitments and Next Steps
 - 6.4 Monitoring and Adaptive Management
-

6.0 Implementation – From Plan to Action

The IMP is designed to support the delivery of a safe, reliable, and efficient transportation system that meets the Region's needs beyond 2031, while remaining responsive to local growth priorities. The Integrated Master Plan will serve as a technical foundation for subsequent studies that support the development of the Financial Plan for the implementation of the program. The IMP translates the recommended transportation strategy into an actionable, phased capital program with associated timelines and implementation considerations. It also provides a framework for ongoing monitoring and refinement to ensure that infrastructure delivery remains responsive to growth priorities, system conditions, and regulatory requirements.

6.1 Phasing and Implementation Strategy

The transportation infrastructure phasing and implementation strategy has been developed to align the delivery of capital projects with anticipated travel demand in Halton Region, local growth priorities, and coordination with other Regional infrastructure projects based on the following planning horizons: 2031, 2036, 2041, 2046 and 2051.

Project timing remains flexible and allows for adjustments as local growth priorities and travel demand evolve. The phasing plan recognizes lead time requirements such as EA process, regulatory approvals, property acquisition, and other factors influencing project readiness.

Transportation projects have been phased as shown previously in **Table 7**.

6.2 MCEA Process and Project Categorization

The IMP has been prepared in accordance with Approach 1 of the MCEA process. As such, it fulfills preliminary Phases 1 and 2 of the MCEA process for transportation needs across the Region and will be used as support for subsequent Schedule B and C project specific studies.

Transportation infrastructure projects identified through the IMP fall into the following categories:

- **Exempt Projects (Formerly Schedule A and A+):** Projects that are generally limited in scale and have minimal adverse effects on the environment. These include routine, maintenance, or low-impact work that are small in scale, with predictable and easily manageable impacts.
- **Eligible for Screening to Exempt:** Certain projects may be eligible for exemption from further MCEA requirements if they meet specific criteria and successfully complete the appropriate screening processes. These processes assess factors such as proximity to environmentally sensitive natural areas, cultural heritage or archaeological potential, and adjacent sensitive land uses. Screening may include, but is not limited to, the Archaeological Screening Process (ASP) and other evaluations outlined in the MCEA manual. If the screening confirms minimal environmental impact, the project may proceed without a full Schedule B or C Class EA. Otherwise, the applicable MCEA process must be followed. Proponents may also choose to bypass screening entirely and undertake a full Schedule B or C MCEA process and must still obtain any other required permits or approvals.
- **Schedule B Projects:** Projects with moderate potential for environmental effects. These must undergo Phases 1 and 2 of the MCEA process and will require project-specific investigations,

consultation with the public, review agencies and First Nations and Indigenous Communities, and documentation before proceeding to implementation.

- **Schedule C Projects:** Projects with potential for significant environmental impacts. These require completion of all phases of the MCEA process, including project-specific investigations, consultation with the public, review agencies and First Nations and Indigenous Communities, and the preparation and filing of an Environmental Study Report (ESR).

The MCEA requirements for each project have been identified in the capital program. Exempt projects may proceed directly to design and construction, while projects eligible for screening may undergo the ASP to determine if they qualify for exemption from the MCEA process. The IMP was developed as a broad level assessment and acknowledges that further detailed studies and targeted consultation and engagement with the public, review agencies and First Nations and Indigenous Communities will be required to fulfill the specific MCEA requirements for Schedule B and C projects identified within the IMP.

The following, **Table 8**, summarizes the MCEA requirements applicable to the recommended transportation capital projects identified through the IMP.

Table 8 – MCEA Requirements for Transportation Capital Projects

Item	Class EA Schedule	Project ID	Project Description
1	Schedule C	T1	Trafalgar Road widening from 4 to 6 lanes along with AT improvements between Steeles Avenue to 10 Side Road.
2	Schedule C	T2	Neyagawa Boulevard widening from 4 to 6 lanes along with AT improvements between Dundas Street to Highway 407.
3	Schedule C	T3	Ninth Line widening from 4 to 6 lanes along with AT improvements between Steeles Avenue to 10 Side Road.
4	*	T6	Upper Middle Road localized improvements at five (5) intersections from Regional Road 25 to Ninth Line.
5	*	T7	Regional Road 25 localized improvements at two (2) intersections from 5 Side Road to the north of 25 Side Road.
6	*	T8	10 Side Road localized improvements at eight (8) intersections from Trafalgar Road to Winston Churchill Boulevard.
7	*	T9	William Halton Parkway localized improvements at five (5) intersections from Regional Road 25 to Ninth Line/Ford Drive.
8	*	T10	Ford Drive localized improvements at three (3) intersections from Upper Middle Road to Highway 403.
9	*	T11	Guelph Line localized improvements at one (1) intersection from Campbellville Road to Highway 401.

Note: For all IMP projects, the latest version of the MCEA process and the Environmental Act should be referenced at the time of the future studies.

**The MCEA Schedule for localized improvements will be subject to the nature of the study and MCEA process requirements at that time. Based on the 2024 MCEA process, construction of localized improvements at specific locations and construction of intersections (including roundabouts) within an existing right-of-way is exempt. In addition, the redesignation of a linear paved facility through signage or pavement marking modifications (i.e. not requiring physical construction beyond localized operational improvements), as well as the reconstruction of linear infrastructure will be for the same purpose/use/capacity and at the same location (e.g. addition of cycling facilities or continuous centre turn lanes -i.e. no change to the number of motor vehicle lanes) are also considered to be exempt from the MCEA process.*

6.2.1 Future Studies

To support ongoing implementation, in addition to the MCEA Study process, a number of ongoing and future programs and studies are required to continue to provide the data and analysis necessary to guide informed decisions and maintain an evidence-based planning framework. For example, the Transportation Tomorrow Survey (TTS), which is a comprehensive travel survey conducted in the Greater Golden Horseshoe area once every five years, and the Cordon Count Program, which is a collaborative and coordinated data collection program, are key inputs into the Region's Travel Demand Model. Further, updates to the Master Plan and other supporting will be required refine strategies to accommodate travel demand.

Together, these studies will help the Region maintain a robust, data-driven foundation for transportation planning by:

- Monitoring network performance and travel patterns;
- Supporting timely and informed updates to the IMP;
- Ensuring transportation priorities align with growth and policy objectives; and
- Strengthening coordination between road, Transit Priority Corridor, and active transportation networks.

6.3 Implementation Commitments and Next Steps

During the next steps of project implementation, including future studies and detailed design, the following requirements will be considered:

- Continued engagement with Local municipalities, agencies, the public, and First Nations and Indigenous Communities where treaty rights may be impacted by projects.
- Completion of additional site-specific supporting investigations as required (e.g., source water protection, geotechnical, hydrogeological, topographic surveys, floodplain analysis, etc.).
- Consideration of potential impacts to and risks from natural hazards and wetlands (e.g., flooding, erosion, unstable soils/bedrock) to ensure that proposed works avoid or minimize impacts and do not negatively affect hazard or wetland functions, in accordance with conservation authority approval requirements.
- Development of preliminary design.
- Assessment of potential utility relocations, including consideration of potential impacts to natural hazards, wetlands, and other environmental features.
- Refinement of infrastructure locations and alignments.
- Review and confirmation of property requirements.
- Identification of preferred construction methodologies, including review and mitigation of potential construction-related impacts (e.g., traffic, noise and vibration, dust, dewatering requirements, service disruptions, etc.).

- Assessment of installation methods (e.g., trenchless vs. open cut) for water infrastructure near or crossing watercourses and valley lands.
- Fulfillment of all provincial, municipal, and conservation authority permits and approval requirements.
- Continued engagement with Local municipalities, the public, and First Nations and Indigenous Communities where treaty rights may be impacted by projects.

6.4 Monitoring and Adaptive Management

The IMP provides a long-range framework for infrastructure delivery that reflects current understanding of existing and future transportation needs while also recognizing that growth and development priorities (which ultimately drive transportation demands) will evolve over time. As growth progresses and new information becomes available, it is essential that assumptions supporting the plan are periodically reviewed. The Region will implement a monitoring approach to track key technical, regulator, and planned considerations, ensuring that the timely and responsive delivery of the recommended infrastructure program remains efficient and aligned with evolving conditions and growth priorities.

The monitoring framework will enable refinement of the transportation infrastructure phasing and implementation plan over time. Monitoring will be carried out by the Regional staff in consideration of, for example, the following:

- The Region and the Local Municipalities recognize the importance of monitoring growth across Halton and will collaborate to continue the implementation of an Enhanced Growth Monitoring Framework that supports the delivery of regional infrastructure to support Local Municipal growth strategies, while still ensuring growth is managed effectively and sustainably across the Region.
- The Region will continue to coordinate with Local Municipalities regarding the timing and implementation of Regional infrastructure projects, particularly where works occur within municipal rights-of-way or in areas of intensified growth. This coordination may include ongoing communication related to the status and timing of growth-related capital projects to support alignment with municipal capital programs and planning initiatives.
- Completion of planning studies, Schedule B or C MCEA studies, and detailed design, which may refine the scope and/or timing of projects.
- Monitoring will consider the status and duration of permitting and approval processes required under applicable legislation, including approvals from the MECP, Conservation Authorities (e.g., under Ontario Regulation 41/24), and other regulatory bodies. Early identification of permitting risks or extended review periods will help the Region adjust project timelines and sequencing.
- The Region will monitor the status of projects and adjust phasing as needed to maintain network continuity, align timelines, and support coordinated infrastructure delivery.
- Status of funding sources and programs to assess financial readiness for project implementation.
- Internal and external resourcing to enable project delivery on schedule, particularly where multiple high-priority projects converge.

- The Region will continue to monitor updates to federal, provincial and local policies, legislation, and technical guidelines that may influence the planning, design, or delivery of transportation infrastructure. Where applicable, the Region will adapt implementation strategies to maintain compliance and minimize delays associated with new or evolving regulatory requirements.

The phasing, implementation and monitoring plan for the transportation system provides a framework to guide infrastructure delivery through to 2051. It balances technical requirements and growth priorities, while providing the flexibility needed to adapt to future uncertainties. This plan will continue to evolve through ongoing monitoring and coordination across planning, engineering, and financial functions.

7.0 Conclusion

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This volume of the IMP presents a comprehensive strategy for addressing the Region's long-term transportation needs to 2051. This Transportation volume is part of a broader strategy that integrates water, wastewater, and transportation planning to ensure Halton's infrastructure remains resilient, adaptable, and sustainable. Grounded in technical assessments, population and employment forecasts, and other input data, the IMP Transportation volume outlines a preferred strategy to support anticipated growth and local priorities across Halton Region to 2051.

The transportation system will be resilient and adaptable to support local growth priorities and increasing travel demand through:

- Localized corridor widening and improvements.
- Flexibility and adaptability to support the evolution of the Transit Priority Corridors.
- Prioritizing walking and cycling facilities, including at intersections.
- Supporting strategies and technologies (for example, real-time data collection to support adapting the strategies).

This document is the fifth of six (6) volumes, with the previous volumes focusing on planning foundations, water and wastewater and subsequent volume focusing on consultation.