Integrated Master Plan

Water, Wastewater and Transportation

Public Information Centre #1 – Project Introduction

November 27, 2023 to January 2, 2024

About this Public Information Centre (PIC)

How to get involved

Watch the PIC videos and/or review the presentation.

- **Video 1 – Introduction**
- **Video 2 – Water and Wastewater**
- **Video 3 – Transportation**
- **Video 4 – Next Steps**

Provide comments and feedback through our online survey by January 2, 2024.

Visit the Infrastructure Master Plans webpage on halton.ca.

Email imp@halton.ca to join the study mailing list, provide feedback, or request material in an alternate format.

Project Introduction

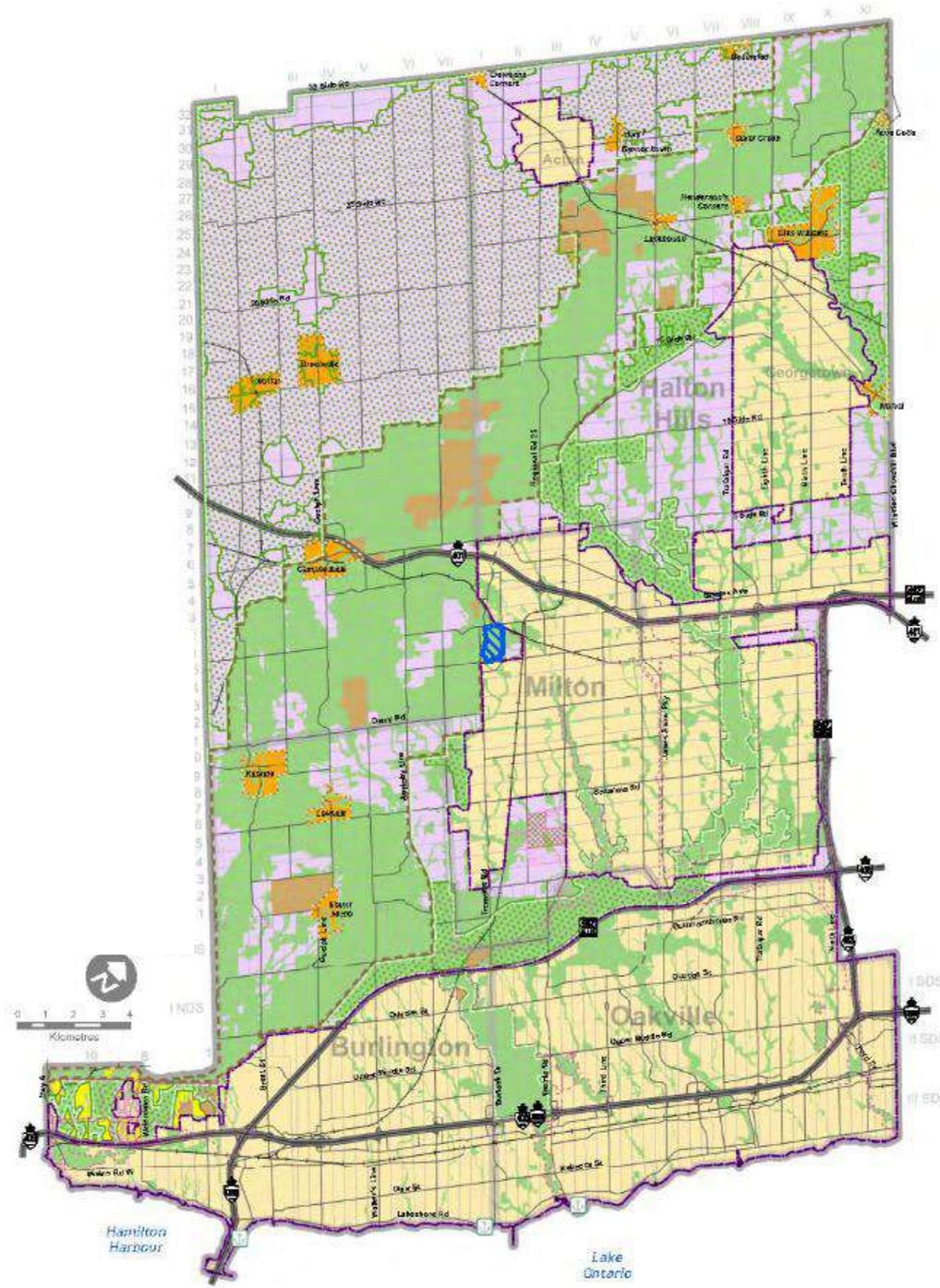
About the Study

Halton Region has initiated the **Integrated Master Plan (IMP)** to complete the next region-wide Water, Wastewater and Multi-Modal Transportation Master Plans.

The Integrated Master Plan will:

- 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; and
- provide the strategies, policies and tools required to meet the water, wastewater and transportation infrastructure needs of the community now and in the future.

The IMP Study Area includes Halton's four Local Municipalities: the City of Burlington, and the Towns of Halton Hills, Milton and Oakville.



Source: Map 1 Regional Structure, Halton Region Regional Official Plan Amendment 49 (ROPA 49)

What is the Integrated Master Plan?

The components of the IMP are:

- **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 sewage 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 all abilities.

We recognize that the needs of our communities are changing. Planning these systems together will allow us to evolve and support a dynamic future.

Public Information Centre (PIC) #1 Objectives

Timeline

November 27, 2023
Start of online PIC - New information posted on the project webpage and online recording

November 27, 2023 to January 2, 2024
Fill in the Online Survey
Provide feedback

Winter 2024
Review and consider all feedback, comments and questions

Form an understanding of the Master Plan process

Learn about the study, problem and opportunities

Understand baseline information such as growth projections, existing systems, as well as opportunities and considerations

Provide an opportunity for public stakeholders to ask questions and provide input

Note: this is the first of two PICs for this study.

Municipal Class Environmental Assessment (MCEA) Process

Process

- The **Integrated Master Plan** is being planned in accordance with the requirements of the *Municipal Class Environmental Assessment* (October 2000, amended 2007, 2011, 2015 and 2023), which is an approved process under Ontario's *Environmental Assessment Act*.
- The main elements of the MCEA planning process are incorporated into five phases depending on the level of complexity of the project or Master Plan.
- This Master Plan will follow Phases 1 and 2 of the MCEA process.

Master Plan Process (Inputs and Outputs)

Technical, Community and Stakeholder Inputs

Technical inputs guide the plan's focus, objectives and integration:

- Strategic Business Plan 2023 – 2026
- Background, Policy and Data Review
- Planning Forecast
- Local Master Plans, Area Specific Plans (for example MTSAs)
- Design Criteria and Levels of Service
- Systems Analysis and Modelling
- Cost Estimating and Capital Budgeting

Integrated Water, Wastewater and Transportation Master Plan

Community and stakeholder inputs are comments from the public, Local Municipalities, community groups and Indigenous Communities that help inform the plan's details.

Outputs

Outputs are what this process will help us achieve:

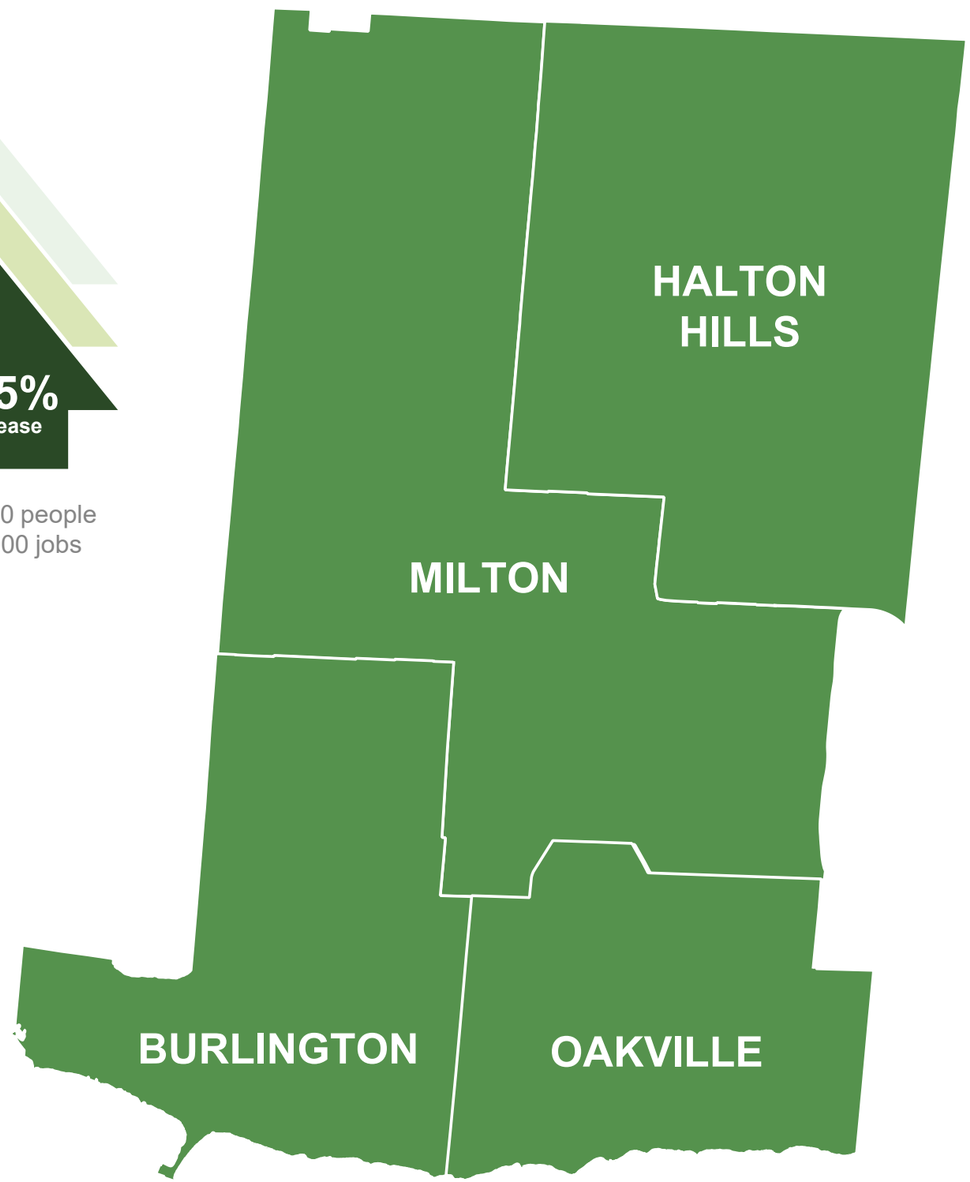
- Master Plan Document
- Measures, Actions and Recommendations
- Project List and Costs
- Implementation Plans
- Capital Budget and Development Charges Guidelines
- Design Criteria Update

Planning for Growth

	2021	2051*
People	**896,000** People and Jobs	**2,013,000** People and Jobs
	616,000 Total people	1,389,000 Total People
Burlington	193,000	324,000
Halton Hills	65,000	167,000
Milton	138,000	455,000
Oakville	220,000	443,000
Jobs	280,000 Total jobs	624,000 Total Jobs
Burlington	99,000	150,000
Halton Hills	25,000	87,000
Milton	45,000	175,000
Oakville	111,000	212,000

125% increase

+773,000 people
+344,000 jobs



*the 2051 projections are estimates and are subject to change

Vision Statement and Considerations

Integrated Master Plan Vision

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

Water/Wastewater Vision

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

Transportation Vision

Planning for a future Regional transportation system that is safe, continuous, connected and coordinated for all users and all abilities.

Vision Statement and Considerations

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

Problem and Opportunity Statement

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.

We Want to Hear From You

Please provide your comments and feedback on Public Information Centre #1 by completing the online survey by **January 2, 2024**.

We will review and take feedback into consideration as we move into phase 2 of the Master Plan study.

Please continue to video 2 – Water and Wastewater




Integrated Master Plan

Public Information Centre #1 – Water and Wastewater

November 2023

Existing Conditions – Water

Halton Region's Existing Water Conditions

- Two Systems: The existing water infrastructure is comprised of a lake-based system and groundwater supply system.
- The lake-based water system distributes drinking water to the City of Burlington, the Town of Oakville, part of the Town of Milton and a small part of the Town of Halton Hills.
- The groundwater supply systems currently distribute drinking water to residents of Milton, Georgetown, Acton and Campbellville.

Existing Regional Water Facilities and Usage

6 Water Purification Plants

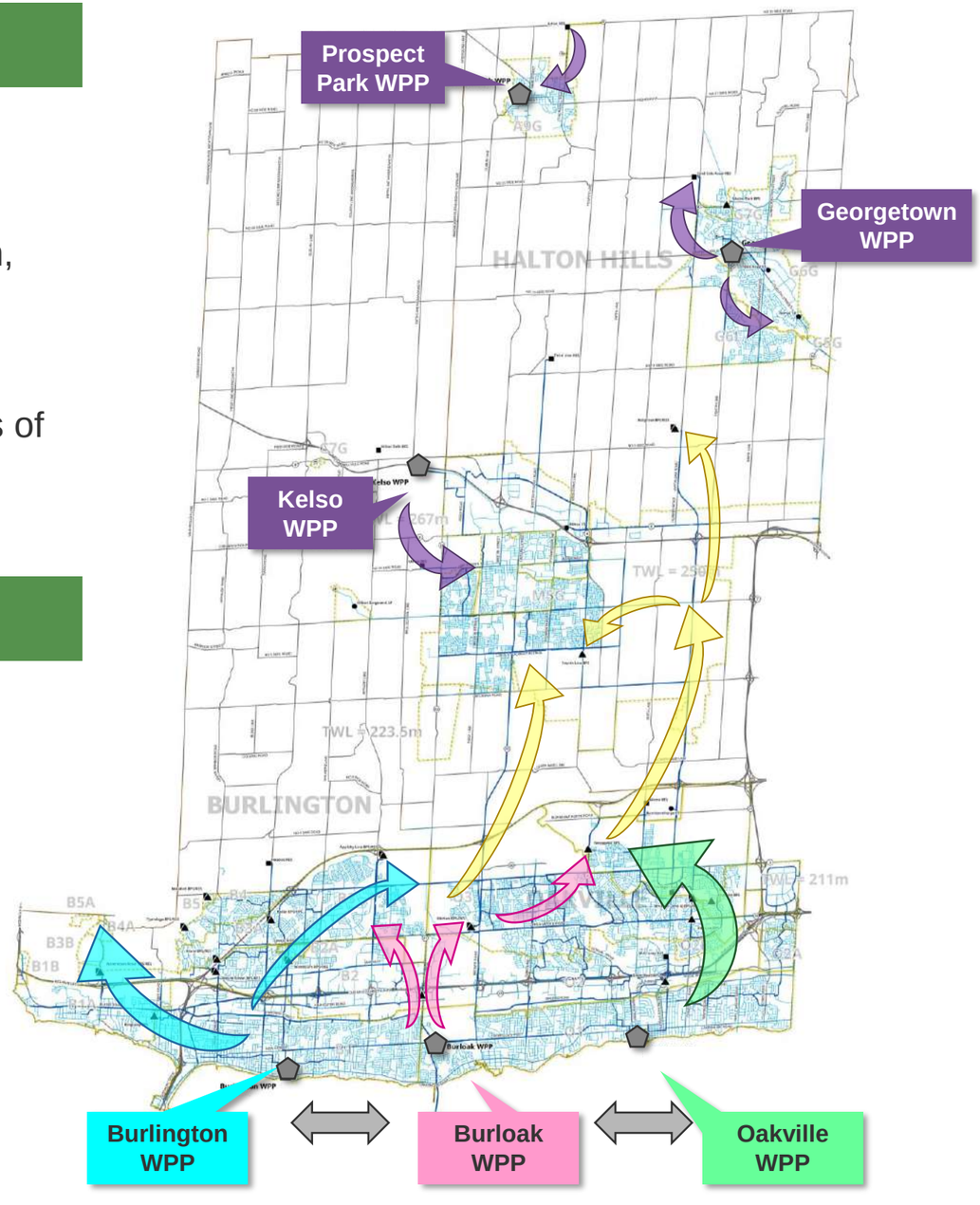
18 Water Storage Facilities

64,188 MILLION LITRES Total Lake Water Treated

19 Booster Pumping Stations

2,470 km of Watermains

8,785 MILLION LITRES Total Groundwater Treated



Existing Conditions – Wastewater

Halton Region's Existing Wastewater Conditions

- Two Systems: The existing wastewater infrastructure is comprised of a lake-based system in South Halton and a stream-based system in North Halton.
- The lake-based wastewater system includes four large drainage areas that discharge to Lake Ontario: Skyway, Mid-Halton, Oakville Southeast and Oakville Southwest Wastewater Treatment Plants (WWTP).
- The stream-based wastewater system includes two major areas: Acton and Georgetown Wastewater Treatment Plants (WWTP).

Existing Regional Wastewater Facilities and Usage

6 Wastewater Treatment Plants

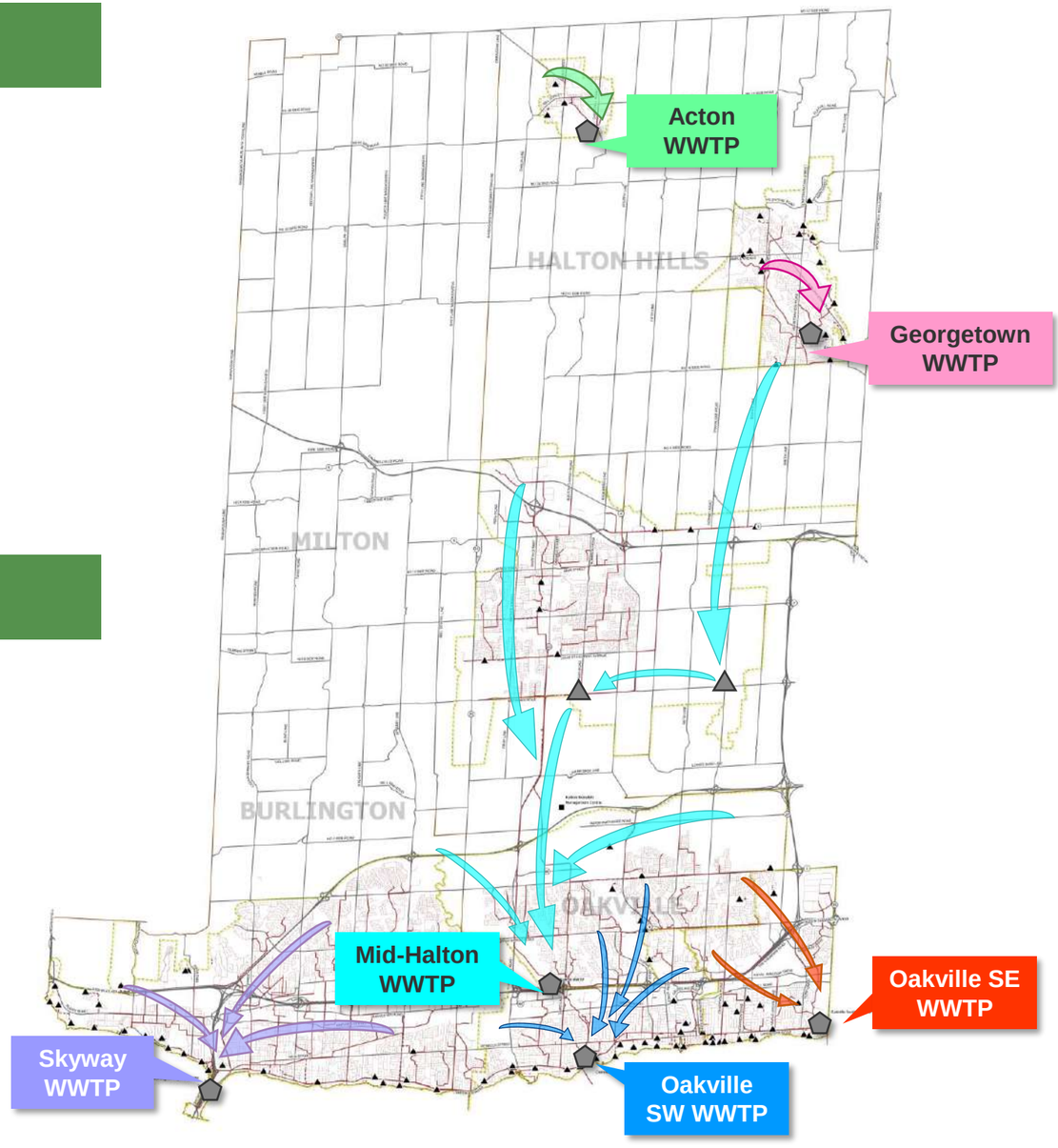
15 Stream-based Pumping Stations

12,717 MILLION LITRES — Total Stream Based Sewage Treated

76 Lake-based Pumping Stations

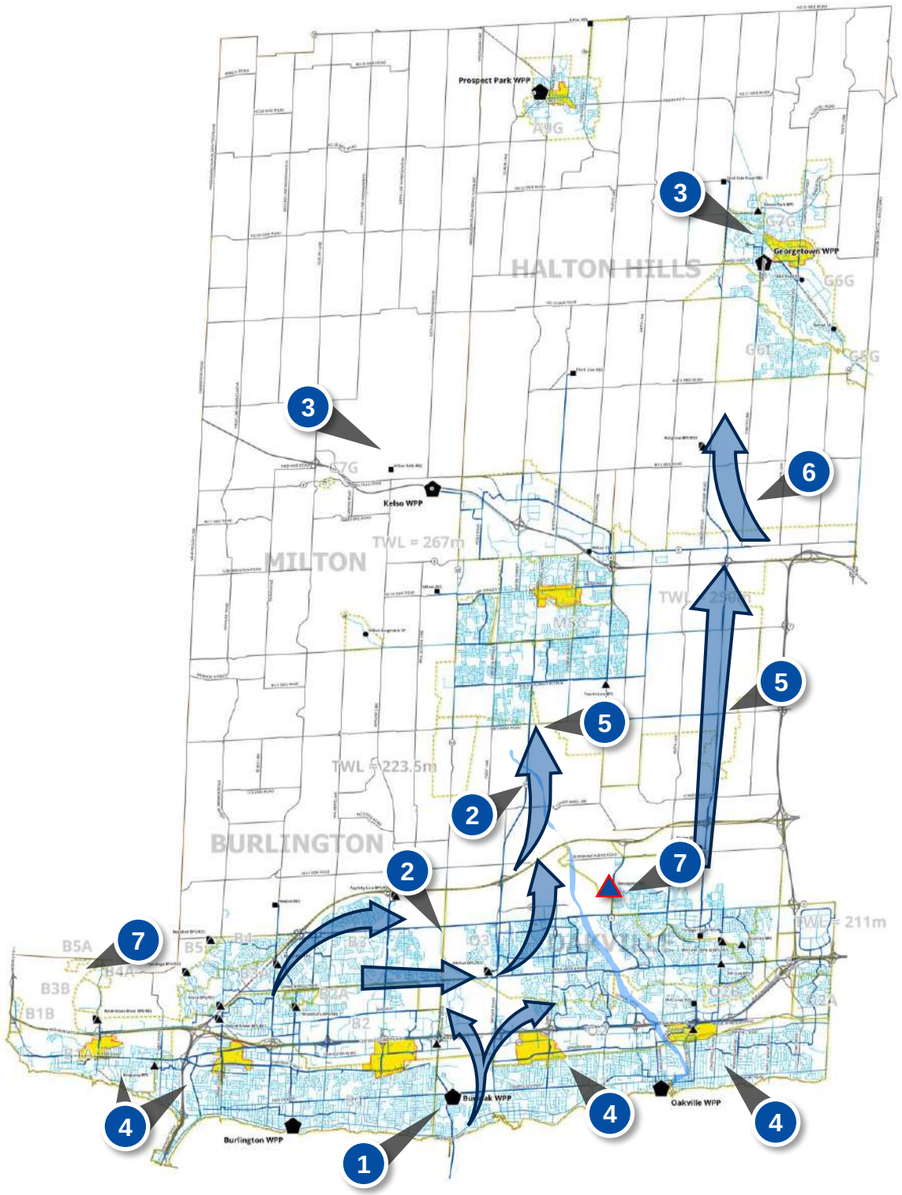
1,987 km of Sewers

83,308 MILLION LITRES — Total Lake-based Sewage Treated



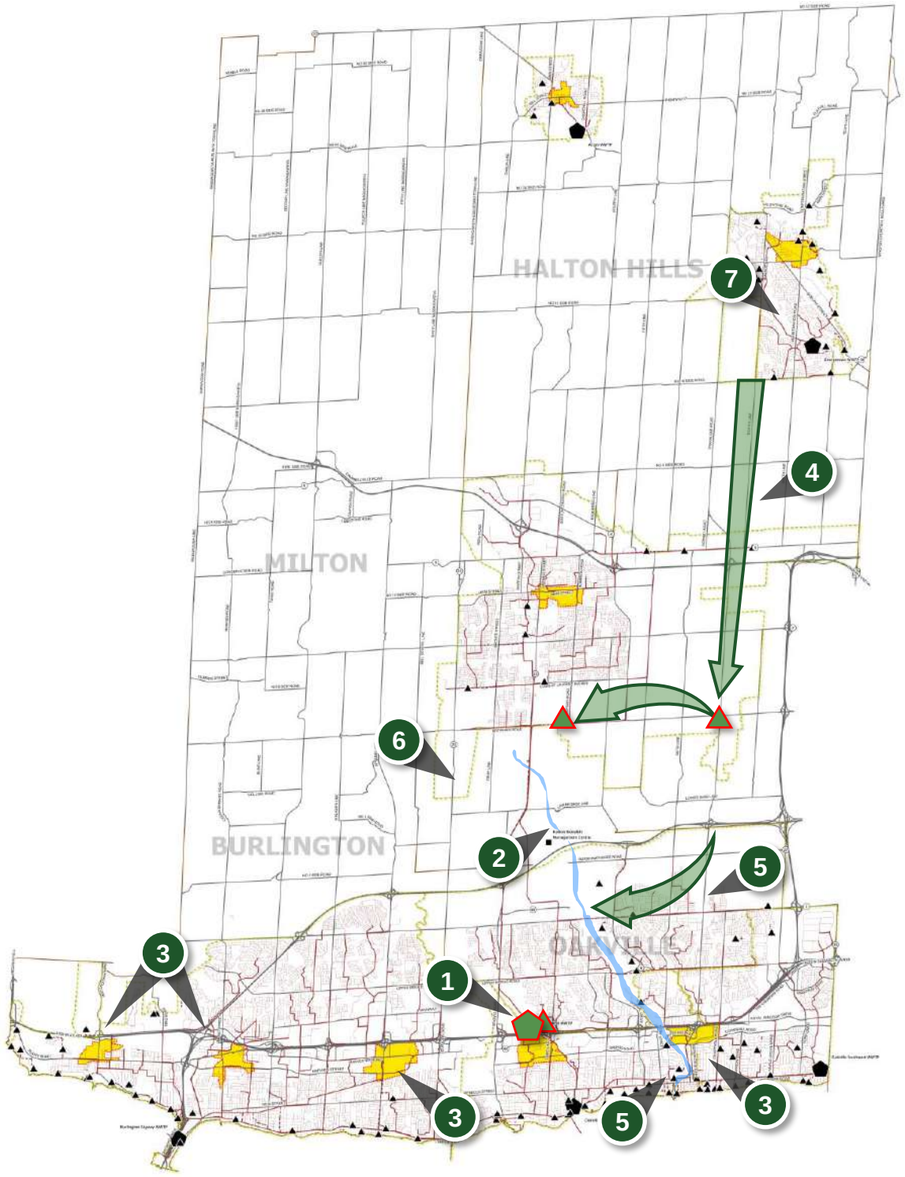
Opportunities and Considerations – Water System

1	Water treatment expansion.
2	Environmental challenges related to creek crossings (e.g., Sixteen Mile Creek, and Bronte Creek).
3	Balance of treatment capacity at lake and groundwater source.
4	Continued growth within the urban area.
5	Resiliency by providing multiple paths for water to flow through the system.
6	Supporting greenfield growth with water system expansions.
7	Continue to maintain level of service and security of supply.



Opportunities and Considerations – Wastewater System

1	Wastewater treatment expansion.
2	Environmental challenges related to creek crossings (such as Sixteen Mile Creek).
3	Continued growth within the urban area.
4	Trunk extension for greenfield growth in Halton Hills and Milton.
5	Infrastructure upgrades to support growth across the Region.
6	Consider energy efficient servicing strategies.
7	Review strategies for system consolidation.



We Want to Hear From You

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Please Continue to Video 3 – Transportation




Integrated Master Plan

Public Information Centre #1 – Transportation

November 2023

Transportation Network Overview

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

Transportation network within Halton Region consists of:

Road Networks: Provincial Freeways/Highways, Regional roads and Local Municipal roads. Regional Roads are major arterials that:

- support transit, active transportation, goods movement and farm vehicles;
- connect rural and urban centres; and
- provide inter/intra-regional connections.

Active Transportation (AT) Networks: a combination of walking and cycling facilities, such as:

- paved shoulders;
- bike lanes;
- boulevard multi-use paths; and
- sidewalks.

Transit and Rail Services:

- Local and Specialized Municipal Transit Services;
- Metrolinx GO Transit (Rail and Bus) Services; and
- VIA Rail.

Existing Regional Transportation Network

Existing Regional Road Facilities

1,159
Lane-km of Roadway

322
Signalized Intersections

177
Bridges and Structures

7,086
Streetlights

Existing Regional Active Transportation Facilities

71 Lane-km
Dedicated Bike Lanes

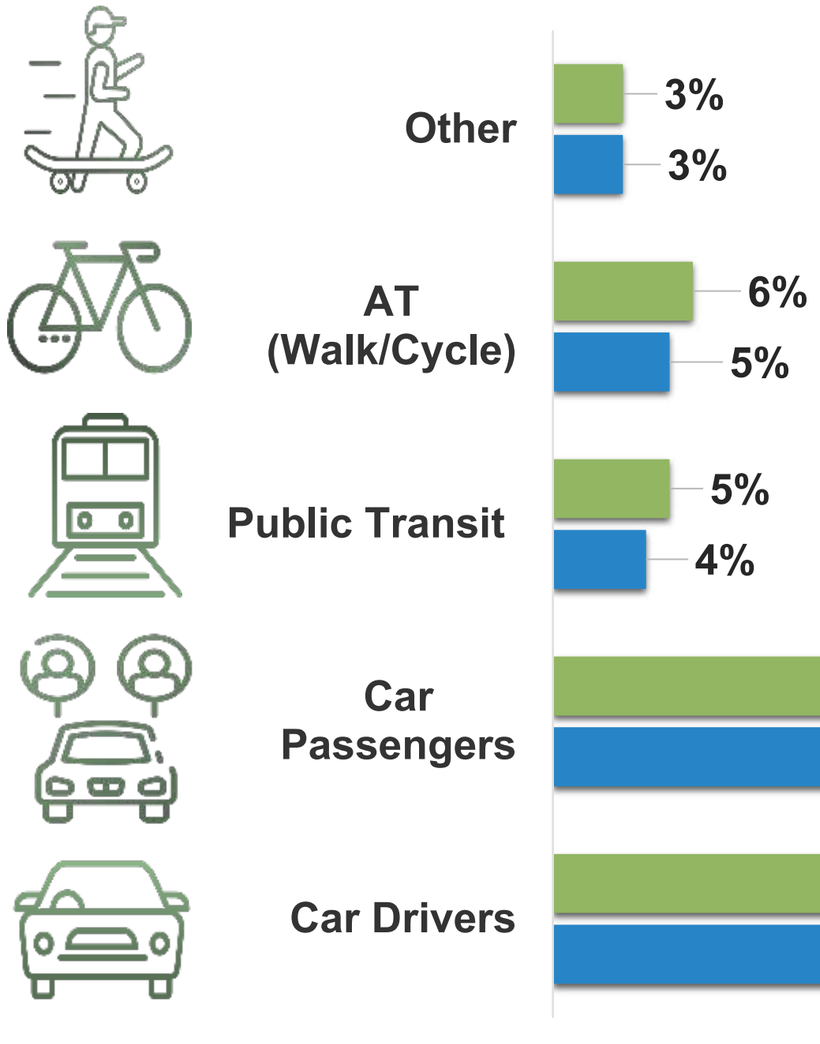
202 Lane-km
Paved Shoulders

143 Lane-km
Sidewalks

127 Lane-km
Multi-Use Trails

Source: Halton Region 2022 Transportation Progress Report

How Do People Travel in Halton Region?



Transportation Tomorrow Survey (TTS) is completed once every five years.

TTS is a cooperative effort by local and provincial government to collect travel information in southern Ontario.

The most recent TTS was completed in 2016.

The 2022 TTS was conducted in fall 2022 and spring 2023 with results anticipated in 2024.

Note: The 2006 TTS data total to 101% due to rounding of the numbers to nearest integers.

Source: 2006 and 2016 Transportation Tomorrow Survey

Future Regional Road Network – Opportunities and Considerations

Regional roads are **places for people to move** and for **goods moving places**.

Key considerations for the road network include:

- 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.

Source: Halton Region - Road Safety and Active Transportation Initiatives - Council report (2023)

Future Active Transportation Network – Opportunities and Considerations

Safety is a priority for the transportation network in Halton Region and active transportation (AT) is a key element to providing an inclusive and multi-modal transportation system available to all users of all abilities.

The **Integrated Master Plan (IMP)** will review the needs of the AT network to accommodate future growth and support non-auto modes of travel and the overall reduction in greenhouse gas emissions.

Key considerations for developing updated AT include:

- prioritization of safety and user needs;
- maximization of corridor space;
- opportunities to remain dynamic;
- connection to local municipal networks;
- coordination with transit and network continuity; and
- AT crossings at Ministry of Transportation infrastructure (i.e., interchanges and structures).

Source: Halton Region - Road Safety and Active Transportation Initiatives - Council report (2023)

Potential Active Transportation Opportunities and Considerations

The active transportation facilities for the Region's updated active transportation network may include a combination of dedicated bike lanes, multi-use paths, paved shoulders and sidewalks.

Multi-Use Path

Paved Shoulders

Cycle Tracks

Source: Halton Region - Road Safety and Active Transportation Initiatives - Council report (2023)
Photo credits: Google Maps

Intersection considerations are key components to creating a safe and comfortable active transportation network. Sample strategies to manage potential conflicts between pedestrians, cyclists and motorists include:

- pavement markings and solid green surface treatment;
- signs;
- bicycle signals; and
- setback crossings.

Protected Corner

Crossride

Future Transit Priority Corridor Network – Opportunities and Considerations

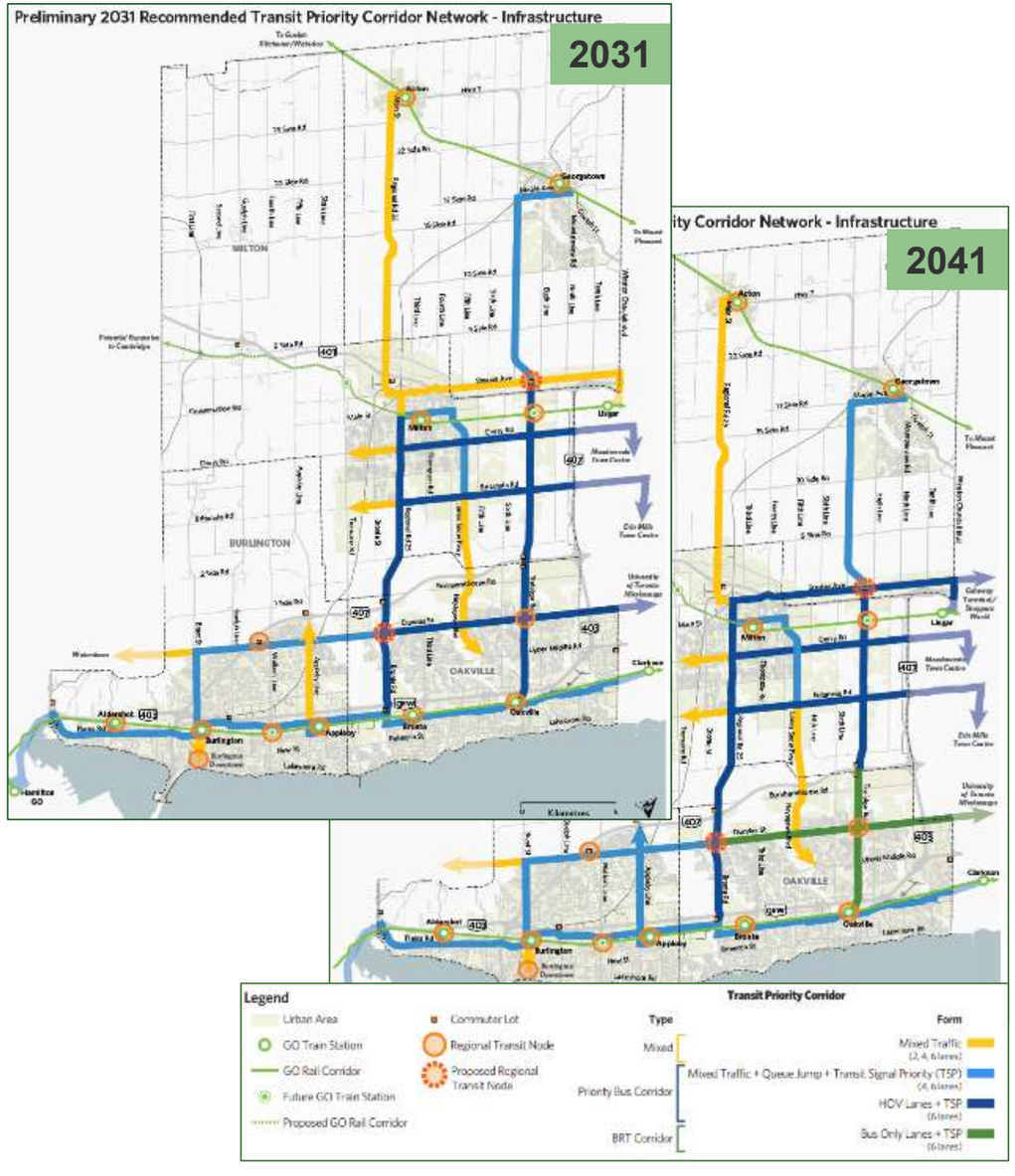
Transit Priority Corridors improve travel speed and reliability for buses using the corridor to move more people more efficiently.

The **Defining Major Transit Requirements (DMTR) Study** that was completed in 2019 identified preliminary recommended Transit Priority Corridor (TPC) Networks for 2031 and 2041 with respect to infrastructure.

The IMP will review the recommended 2031 and 2041 TPC networks, and any additional improvements/refinements required to address Halton's travel needs to 2051.

Key considerations for developing the TPCs include:

- 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.



Defining Major Mobility Requirements in Halton Region – Figure i-4 and Figure i-5 Preliminary 2031 and 2041 Recommended Transit Priority Corridor Network Maps are available at: halton.ca/

Potential Transit Priority Corridor Improvements – Opportunities and Considerations

Corridor improvements to support the function of the transit priority corridors may include:

- Transit Signal Priority (TSP);
- queue jump facilities;
- bus shelters and other transit stop improvements;
- partially dedicated lanes (HOV and transit); and
- fully dedicated transit vehicle lanes or infrastructure.

Photo credits: Google Maps

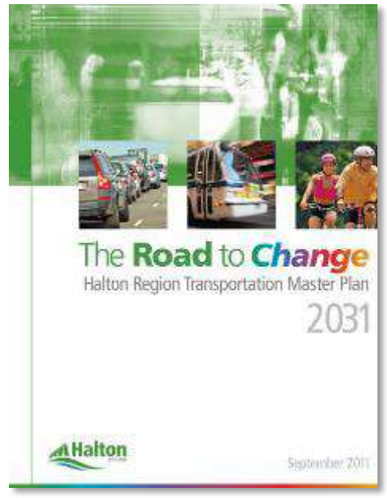
Moving Forward – A Multi-Modal Regional Network

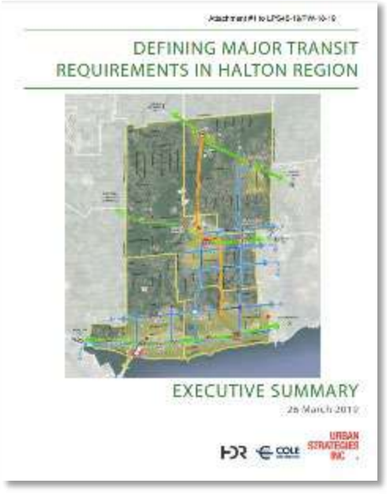
The IMP will build upon the Region's 2011 Transportation Master Plan (TMP) and the 2015 Active TMP and will consider other provincial and local municipal planning documents.

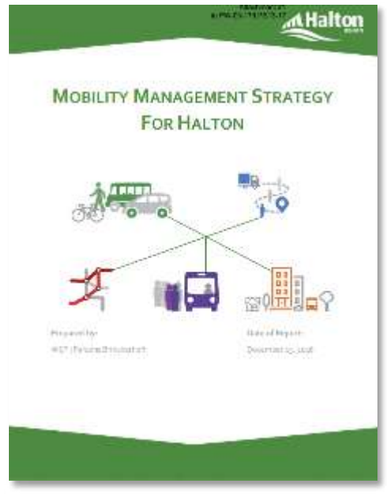
As identified in the 2011 TMP and the 2015 ATMP, most Regional roads in the urban area are planned to be widened to 6 lanes with active transportation by 2031.

The IMP will review the 2011 TMP and 2015 ATMP recommended networks in the context of the most recent guidelines and standards to develop the Region's future multi-modal transportation network which will:

- support to a variety of users and vehicle types;
- prioritize safety and user needs;
- support the movement of goods and farm equipment;
- support transit and overall regional connectivity;
- maximize corridor space and remain dynamic; and
- address Halton's travel needs to 2051 and beyond.







We Want to Hear From You

Please provide your comments and feedback on Public Information Centre #1 by completing the online survey by **January 2, 2024**.

We will review and take feedback into consideration as we move into phase 2 of the Master Plan study.

Please continue to video 4 – Next Steps




Integrated Master Plan

Public Information Centre #1 – Next Steps

November 2023

Key Milestones

Timeline

Summer 2022
Notice of Commencement Issued

November 27, 2023 to January 2, 2024
Public Information Centre #1

- Master planning process overview.
- Problem and opportunity statement.
- Baseline information such as growth projections, existing systems, and opportunities/considerations.
- Gather public input and answer questions. **– We are here!**

August 2023
Project Update

Early winter 2024
- Review and consider feedback from agencies, stakeholders and the public.
- Consult, review and consider feedback from Indigenous Communities.

A Look Ahead

Your Feedback and engagement is Important!

Halton Region will review and consider all feedback, comments and questions received as part of Public Information Centre #1.

Your participation is important as proposed key considerations will support future work.

The opportunities identified will also inform potential solutions and enhance the evaluation framework to further align with the vision and considerations.

We appreciate any comments or questions you provide.

Next Steps

Following this Public Information Centre, Halton Region will:

- Review and consider feedback from agencies, stakeholders and the public.
- Consult, review and consider feedback from Indigenous Communities.
- Develop and evaluate servicing strategy alternatives.
- Select the preliminary preferred servicing alternatives strategy.
- Prepare for PIC #2.
- Continue to consult with review and approval agencies and other key stakeholders.

Additional project information
can be found on the project webpage on **halton.ca.**

Do you have any questions, comments, or want to stay up to date? Please contact us.

Online Survey
Provide your feedback by
January 2, 2024

Study Webpage
Learn more about the project at **halton.ca**

Contact the Project Team

General Inquiry
imp@halton.ca

Please note that information related to this study will be collected in accordance with the Freedom of Information and Protection of Privacy Act. All comments received will become part of the public record and may be included in the study documentation prepared for public review.