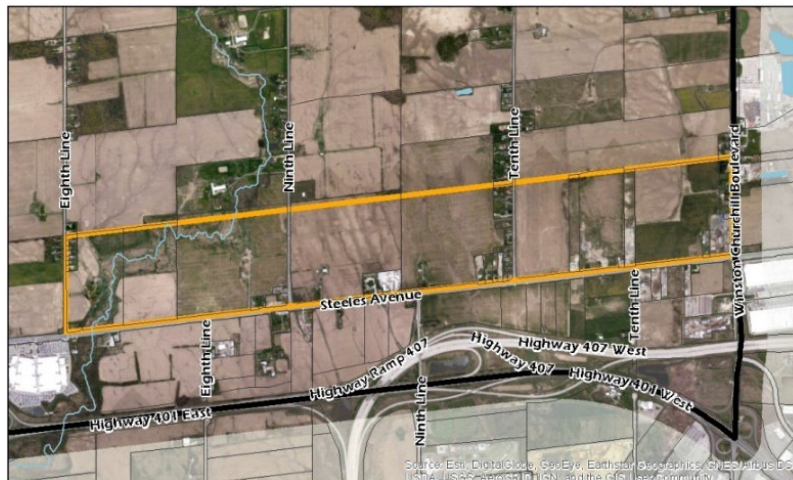


EMPLOY HH

Premier Gateway Phase 2B Employment Area Integrated Planning Project

LAND USE OPTIONS REPORT



Macaulay Shiomi Howson Ltd

January 30, 2023

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Executive Summary

The Premier Gateway area is the main greenfield employment area within the Town of Halton Hills and the Town continues to see strong interest and demand for shovel-ready employment lands in the area due to good highway access and high visibility from 400 series highways. The Premier Gateway Phase 2B Secondary Plan will help to establish the basis for new development to occur and contribute to achieving the Town's economic objectives. The location of the Phase 2B Study Area is shown on Map 1.

The purpose of this Study is to develop a detailed local development framework including land use designations and policies for a portion of the employment lands needed to accommodate the second phase of employment lands for the 2031 planning horizon. The study was initiated in 2020 and a number of studies have been undertaken to support the development of the Secondary Plan.

This report outlines the background analysis that helped to inform the creation of two land use options, the input that has been received on the two land use options, and responses to that input. It also provides an overview of the preferred land use option, public input on the preferred land use from an on-line survey and responses to those comments.

Based on the technical analyses and public input the following factors helped to inform the creation of the two land use options:

Natural Heritage System

- The Natural Heritage System (NHS) is based on the recommendations of the Scoped Subwatershed Study (SWS) and the buffers are included in it.
- Certain headwater drainage features that were identified in the Region of Halton Natural Heritage System have not been included in the NHS but will be further evaluated at the Subwatershed Impact Study stage.

GTA West Corridor (Highway 413 and Northwest GTA Transmission Corridor)

- The GTA West Corridor (Highway 413 and Northwest GTA Transmission Corridor), would be located in a north-south direction through the middle of the Secondary Plan area. The Province has identified the Focused Analysis Area which would contain both Highway 413 and the Northwest GTRA Transmission corridor.
- On Map 3 of the Halton Region Official Plan Amendment 49 (ROPA 49) that has recently been approved by the Province, a large part of the Secondary Plan area

has now been removed from the Corridor Protection Area by narrowing the protected area to the Focused Analysis Area.

Transportation Network

- The only means of road access from the west side of the study area to the east side is Steeles Ave. A new east-west collector road is intended to be located in a relatively central location between Steeles Avenue and the northern boundary of the Secondary Plan except where it would conflict with the Natural Heritage System. The road alignment on both side of Tenth Line is subject to further review.
- The new east-west road will not extend all the way west to Eighth Line given the significance of the NHS associated with the East Sixteen Mile Creek.
- New north-south collector roads which connect Steeles Ave to the east-west collector road are needed to enhance connectivity.
- A second collector road connection to Winston Churchill Blvd is recommended although it is shown outside of the study area due to the location of existing houses along the west side of Winston Churchill Blvd.

Existing Residential Uses

- Existing residential uses are proposed to be identified as legally permitted uses within the Employment designation in both options. Policies that permit additional home occupation and/or office uses and require appropriate mitigation measures / buffers between existing residential uses and new employment uses will be included in the Secondary Plan.

8079 Eighth Line

- The property located at 8079 Eighth Line (referred to as the Gilbach property) was the subject of Ontario Land Tribunal (formerly OMB/LPAT) settlement discussions and the owners have submitted an Official Plan amendment application for the property which includes the preparation of its own Scoped Subwatershed Study.

Employment Uses

- A Prestige Industrial designation is recommended as the appropriate designation for the employment uses within the study area.
- Large parcel sizes are generally desirable within employment areas but parcels have been broken up by the proposed Highway 413, the natural heritage system, existing uses, and to a lesser extent the road pattern.

Supportive Commercial Uses

- Existing commercial uses along Steeles Ave are proposed to be recognized.

- Approximately 1.6 to 3.2 ha (4 to 8 acres) of supportive commercial land is warranted to support the employment area and should be encouraged to locate along Steeles Ave and Winston Churchill Ave.

Agriculture

- There is one facility located outside of the study area which has a Minimum Distance Separation (MDS) as shown by a dashed yellow circle that will affect land within the study area.

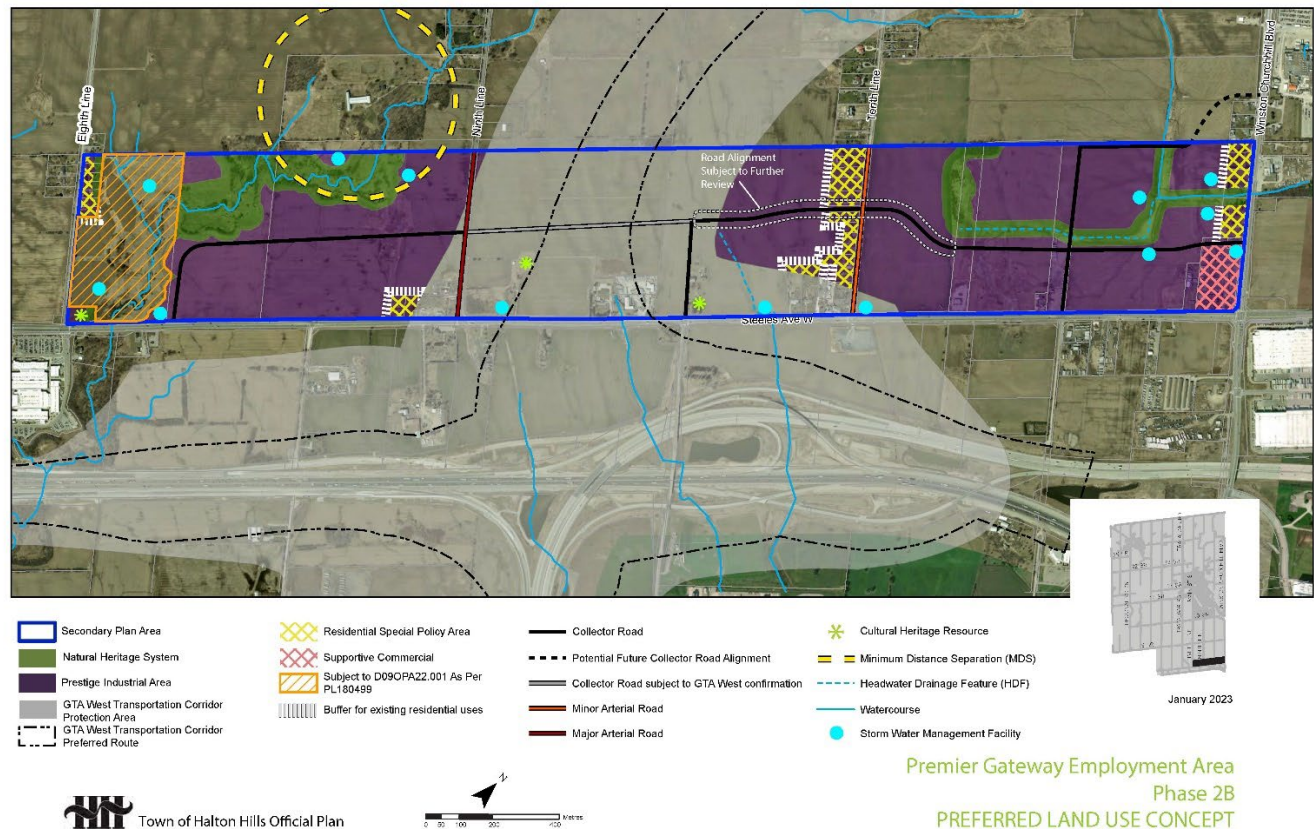
Cultural Heritage Resources

- The three properties identified in the cultural heritage report will be recognized on both options.

A wide variety of comments were provided on the two land use options and responses to those comments have been provided in a chart form in Section 4, Public Input of this report. Based on the comments received on the two options, a draft Preferred Land Use plan was prepared which:

- Locates the new supportive commercial use at the northwest corner of Winston Churchill and Steeles Ave to assist with creating a gateway function for the entrance to the Town and the Employment Area.
- Indicates that the 8079 Eighth Line (Gilbach) property will be subject to a site-specific designations and policies which identify the permitted uses and the limits of the Natural Heritage System on the property.
- Uses Option B for the location of the east-west collector road between Eighth and Ninth Lines which follows the eastern edge of the NHS as much as possible to minimize fragmentation of land. The exact location road can be refined through the development application process.
- Uses Option A for the inclusion of a new north-south collector road east of Tenth Line which aligns with the southern portion of Tenth Line and thereby increases access opportunities in the Secondary Plan area.
- Extends the overlay “Road alignment subject to further review” that applies to the east-west collector road to the east side of Tenth Line as requested.
- Protects for Highway 413 based on the Corridor Protection Area approved in Regional Official Plan Amendment 49.

The current version of the draft Preferred Land Use plan is shown below.



An on-line survey of the draft Preferred Land Use plan was undertaken through “Let’s Talk Halton Hills”. The main areas of support for the preferred land use plan include:

- The Natural Heritage System and natural areas are being saved
- It considers agriculture and wildlife in the area
- It increases the tax base
- Additional roads are being added
- Public input can be provided to the plan
- Water, sanitary, sewers and natural gas systems are being extended to the area
- More jobs are being created
- Industry is located away from the core of Halton Hills and close to Highway 401.

The main concerns that have been expressed with respect to the Preferred Land Use plan relate to:

- Traffic congestion
- Noise, air and light pollution
- Development of agricultural lands

- Need to provide for sustainable development
- Lack of additional parkland
- Location of the new roads
- Location of the new commercial uses
- Amount of parking.

Responses to the concerns that have been raised include:

- These lands have been planned to provide for employment uses for a number of years and are required for the Town to meet its employment targets under the Growth Plan and to provide an increased tax base and employment opportunities for planned /approved residential growth in the Town.
- The policies in the Secondary Plan will permit warehouse uses but will encourage a diversity of industrial development including the Town's target sectors.
- Supportive commercial use locations are also identified in the Phase 1B Secondary Plan at the corner of Steeles Ave and Trafalgar Rd and supportive commercial uses will also be permitted in the Prestige Industrial designation. Major retail uses will not be permitted within the employment area.
- Full municipal services will be introduced to the area as development proceeds although interim servicing to accommodate development ahead of regional servicing may be considered.
- All development will need to meet the Town's Green Development Standards which address a variety of sustainable practices.
- The Recreation and Parks Dept has not identified a need for additional active parkland in this area; however, a trail system along the edge of the Natural Heritage System is recommended and will provide for passive recreational opportunities.
- The traffic congestion that currently occurs in the study area is primarily a result of traffic from outside of the study area. Additional roads are proposed in the study area and the widening of Highway 401 has just been completed. The Region is undertaking a Master Transportation Plan update which will further address transportation improvements.
- Policies in the Secondary Plan will address noise, air quality and lighting and site-specific studies will be required at the time of development applications.
- Development in the area will be permitted up to a height of 10 storeys for hotels and office buildings and 8 storeys for all other development with appropriate setbacks in order to allow for more intensive development.
- Heritage properties have been identified and policies will be included in the Secondary Plan that address heritage conservation in addition to those in the Official Plan.

- Parking requirements are addressed in the Zoning By-law and will be reviewed as part of site-specific development applications.

The Preferred Land Use plan is being used as the basis for creating the draft Secondary Plan which will be subject to public and agency meetings and feedback. The information received from this input will be used to refine the draft Secondary Plan and create a recommended Secondary Plan.

1 Introduction

1.1 Purpose

The purpose of the Premier Gateway Phase 2B Integrated Planning Project is to undertake a Secondary Plan Study and a Scoped Watershed Study that will develop a detailed local development framework including land use designations and policies for the Phase 2B employment lands which are needed to accommodate the second phase of employment lands for 2031 planning horizon.

The purpose of this report is to identify the factors that have led to the development of two land use options and the input that has been received on the options. It also clarifies and highlights certain aspects of the preferred land use concept and the initial input on it. The Preferred Land Use plan will be used as the basis of preparing a draft Secondary Plan for the Phase 2B lands. Please note that the Preferred Land Use plan is a **draft** which may be subject to further refinement.

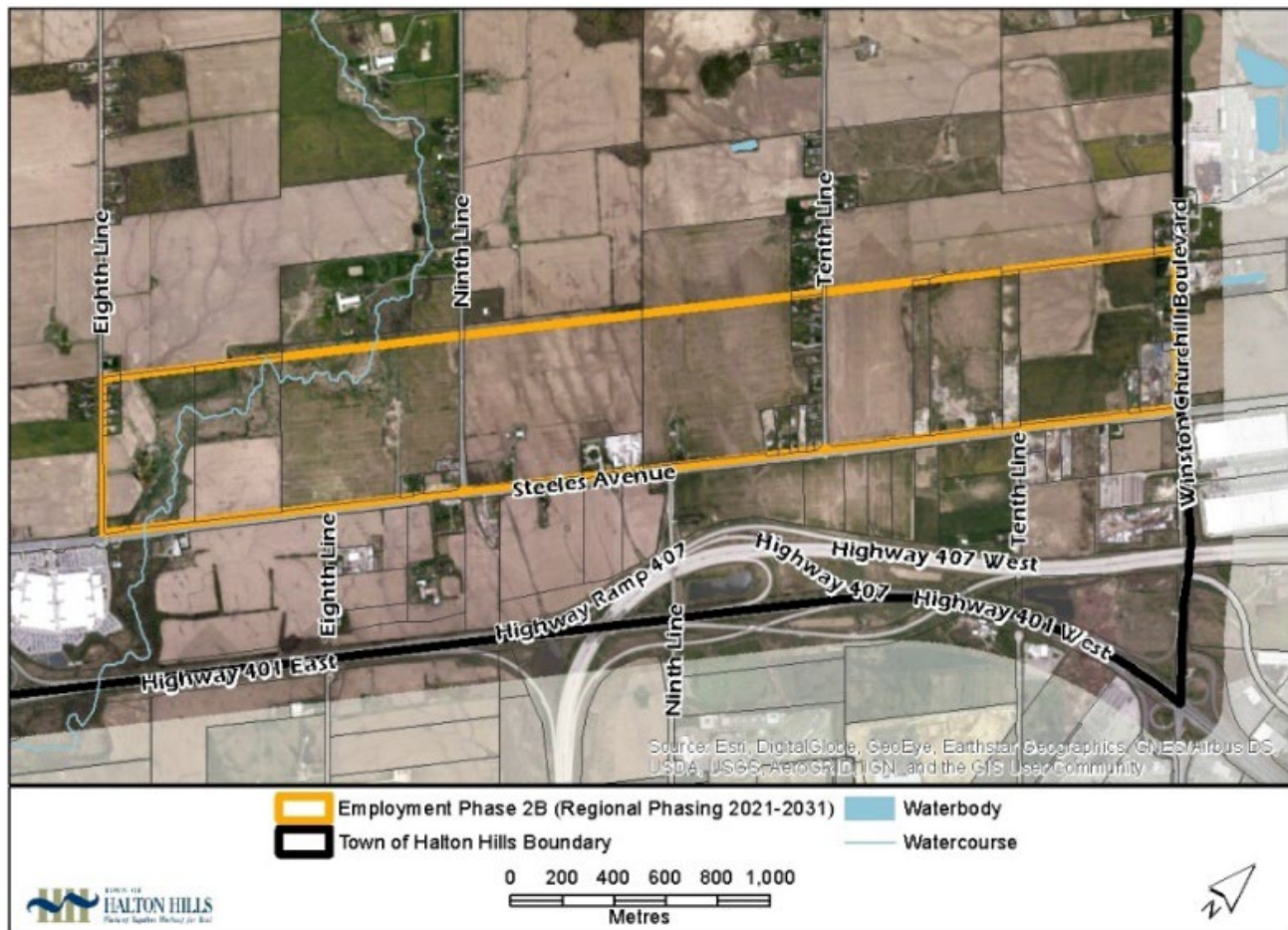
1.2 Context

The Town of Halton Hills' Premier Gateway Employment Area is intended to accommodate the majority of the Town's employment growth for the next 20 years. The lands are within the Urban Area in the Regional Official Plan and identified for municipal water and sewer servicing. The Phase 2B lands are currently designated as Employment Area Phase 2B in the Town's Official Plan.

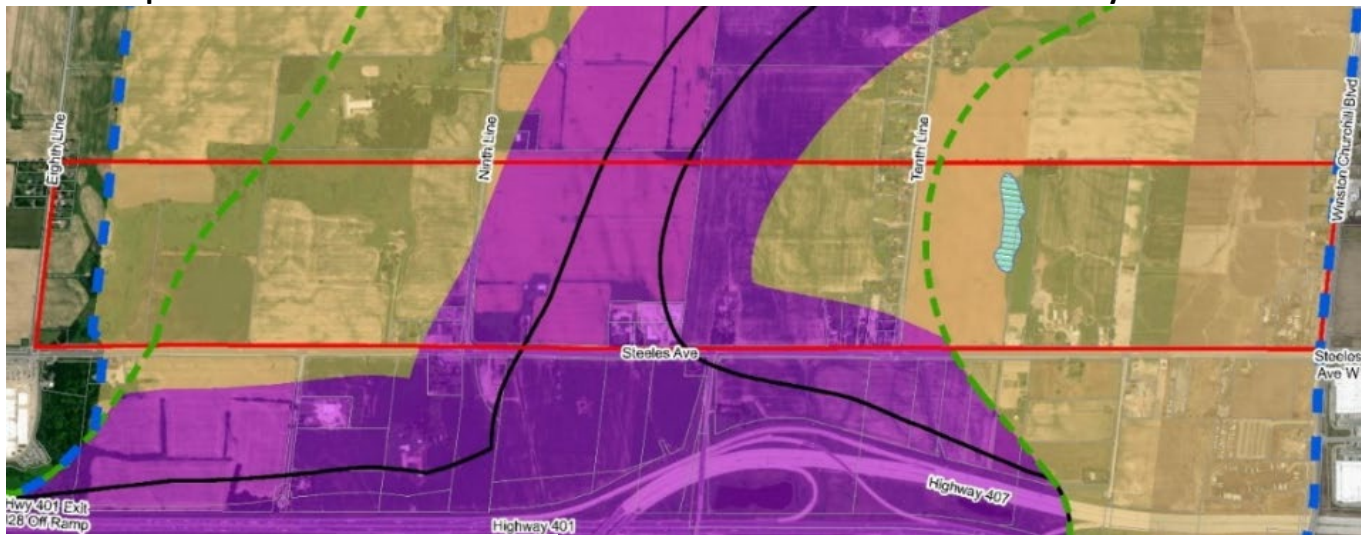
The Phase 2B Study Area is shown on Map 1 and bounded by:






- East: Winston Churchill Boulevard;
- South: Steeles Avenue;
- West: Eighth Line;
- North: Property boundaries which follow a line parallel to, and approximately 0.6 kilometers north of, Steeles Avenue.

Map 1 – Study Area



A large portion of the Phase 2B lands are within the corridor protection area for the GTA West Corridor Environmental Assessment (EA) being undertaken by the Ministry of Transportation (MTO). The EA Study will create the preliminary design for a new multimodal transportation corridor that includes Highway 413, transitway and potential goods movement priority features. On September 26, 2019 the draft Technically Preferred Route (TPR) was presented at a Public Information Centre in the Town of Halton Hills. The MTO stated that they had reduced interest in areas outside the draft Focused Analysis Area (FAA), and indicated that those lands could be removed from corridor protection once the FAA was confirmed. On August 7, 2020, MTO released revised mapping illustrating the Focused Analysis Area as shown below. This mapping supersedes the 2019 mapping.

Map 2 - GTA West Corridor Environmental Assessment Draft Focused Analysis Area

-  Transportation Corridor Study Area
-  Alternative Routes Area
-  Preferred Route Area
-  Focused Analysis Area
-  Reduced Interest Area

In addition, the Ministry of Energy, Northern Development and Mines and the Independent Electricity System Operator are undertaking a separate study for a GTA West transmission corridor. This corridor would be in addition to the proposed 170 metre wide multi-modal corridor but the Study Area for the transmission corridor continues to follow the draft TPR and will, for the most part, be located inside the proposed Focused Analysis Area for the GTA West Corridor as shown on Map 2.

- The Premier Gateway Phase 2B lands were frozen for development until the GTA West EA process had progressed to a point where confirmation was provided by the MTO on what lands are/are not required for the transportation corridor. Based on the TPR and FAA, a portion of the lands within the Study Area will be permanently precluded from development in order to accommodate the multi-modal corridor if it proceeds and the Secondary Plan will need to take into consideration the location of the FAA. Halton Region Official Plan Amendment (ROPA) 49 was approved by the province in November 2022 which releases the lands outside of the Focused Analysis Area from corridor protection but lands inside the Focused Analysis Area remain within the Corridor Protection Area.

1.3 Study Process

The Integrated Planning Project, which consists of a Secondary Plan and Scoped Subwatershed Study, is being undertaken in five phases as follows:

- Phase 1 Project Initiation;
- Phase 2A Existing Conditions;
- Phase 2B Scoped Subwatershed and Natural Heritage System Planning;
- Phase 3 Detailed Planning Study;
- Phase 4A Recommended Land Use Option;
- Phase 4B Preferred Land Use Plan;
- Phase 5A Draft Secondary Plan, Official Plan & Zoning By-law Amendments;
- Phase 5B Final Secondary Plan, Official Plan & Zoning By-law Amendments.



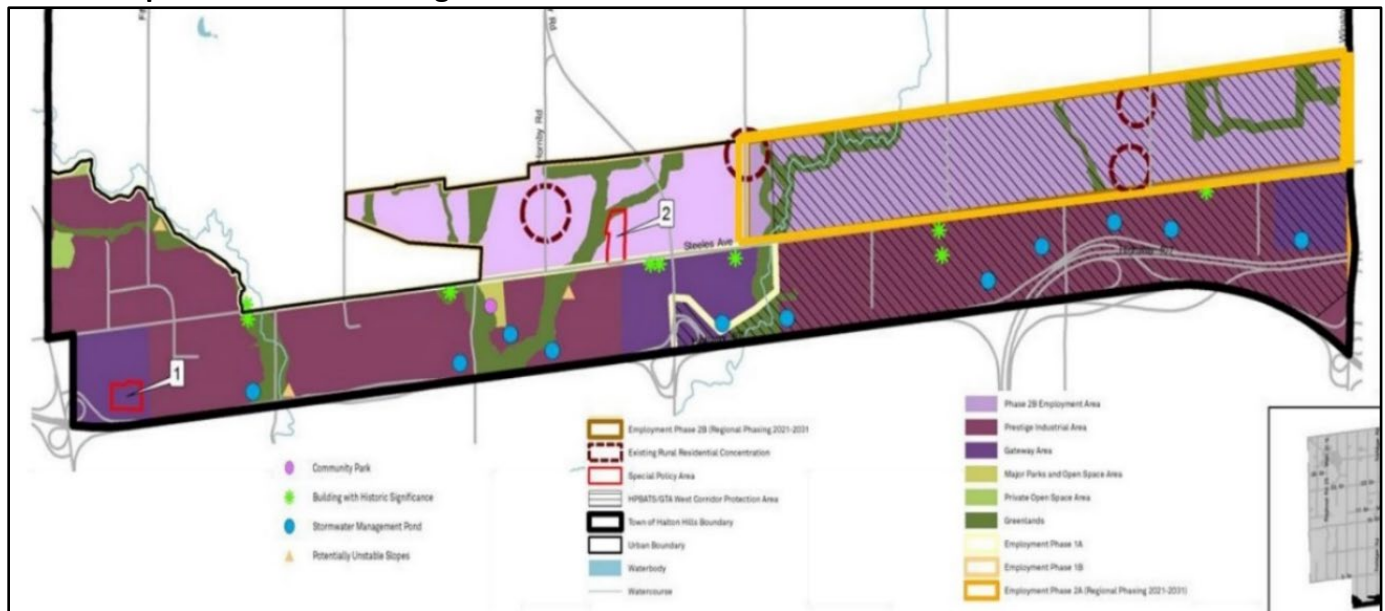
The Secondary Plan study is being undertaken as an integrated planning project in conjunction with the Scoped Subwatershed Study. The Scoped Subwatershed Study will characterize the natural features and system within the Study Area through detailed measurement, analysis and computer modelling. It will assess the impacts of land use change to the flood and erosion hazards, groundwater and natural systems and provide a recommended management plan to mitigate impacts through land use planning, stormwater management and development of a Natural Heritage System. It will also provide recommendations for future studies to verify and refine the management plan and prepare a monitoring plan to evaluate the impacts during development and assess the effectiveness of the management plan. Finally, it will assist with the development of Secondary Plan policies and mapping to support the implementation of the recommended management plan.

1.4 Background Report

As part of Phase 2A of the Study, a Background Report was prepared which provided the groundwork for the detailed planning and analysis in subsequent phases of the Study. The report identified the existing Provincial, Regional and Town planning policy framework.

The Study Area is recognized as Provincially Significant Employment lands by provincial policy and has been designated “Urban Area” and “Regional Natural Heritage System” in the Regional Official Plan. There is also an Employment Area overlay on the Urban Area. The Study Area is designated “Phase 2B Employment Area” and “Greenlands” in the Town’s Official Plan which indicates it will be developed for prestige industrial uses to the 2031 horizon. An excerpt of the Premier Gateway Employment lands as shown in Schedule A8 of the Official Plan is shown on Map 3 below. The Study Area is outlined in yellow.

Map 3 - Official Plan Designation



The Background Report also identified the current conditions and influences within the Study Area.

Existing Land Uses

- The majority of the lands are currently agricultural / vacant which provide large potential blocks for the development.
- The existing employment and commercial development in the area has the potential to service future employment uses.

- There is existing residential development as noted in the Residential concentrations on Map 3 which requires careful consideration with respect to any future employment development.
- Existing natural vegetation is primarily associated with the watercourses.

Map 4 - Existing Land Use



Topography

- The area has rolling topography and the high point of land occurs around Tenth Line. The new servicing and grading of the area will need to address the topography.

Natural Heritage

- The Natural Heritage System identified in the Halton Region Official Plan and Halton Hills Official Plan is intended to protect key natural heritage features and functions and enhance key features, linkages, and buffers. Development within the natural heritage system will be restricted.
- East Branch Lisgar of the Sixteen Mile Creek Watershed, Mullet Creek of the Credit River Watershed and the wetland areas are the most significant natural heritage features in the Study Area although there are also headwater features.

- The Study Area is under the jurisdiction of both Conservation Halton and Credit Valley Conservation Regulations and policy.

Natural Hazards

- The Flood Hazard Mapping for the area will be verified.
- Development on lands subject to natural hazards will be limited to passive recreation uses, if feasible, in consultation with the Conservation Authority.

Stormwater

- The quality and quantity of stormwater and groundwater recharge areas will be addressed.

Servicing

- The Area Servicing Plan will need to align any future water and wastewater servicing strategies with the Highway 413 final alignment.
- The Region has identified a potential water storage deficiency that will service the Study Area which will be monitored and addressed as part of the next Regional Water and Wastewater Master Plan and Regional Municipal Comprehensive Review. It is not expected that it will impact the servicing timing for the Study Area.
- Large scale Regional water and wastewater infrastructure is planned in the near term to bring lake based servicing to development in Halton Hills including the Eighth Line/Trafalgar Trunk sanitary sewer.

Transportation

- The Highway 413 Corridor is located in the middle of the Study Area and it will provide enhanced access (although the area already has good accessibility) and good visibility for adjacent lands that will be seen by thousands of people driving by everyday but it will also create challenges for connectivity and servicing between the east and west sides of the Study Area. Based on the Corridor Protection Area, it is expected that a portion of the lands within the Study Area will be permanently precluded from development in order to accommodate the multi-modal corridor.
- Roads that cross Highway 413 which are not an interchange location, will be subject to an overpass, underpass, or truncation realignment.

Cultural Heritage

- There are two sites within the Study Area that are listed on the Town's Heritage Register under the Ontario Heritage Act and one has been identified as a potentially significant cultural heritage resource.

Noise and Air Quality

- The potential noise and air quality impacts of the proposed employment land uses on the existing and proposed sensitive land uses within and adjacent to the Study Area will be addressed.
- The analysis will not include impacts from Highway 413 which is being addressed through its own Environmental Assessment process.

Agricultural System

- The lands to the north of the Study Area are identified as Prime Agricultural area. Policies recognize and protect agriculture as an important industry in Halton and as the primary long-term activity and land use throughout the Agricultural System. There are farming operations within and to the north of the Study Area that will be allowed to continue and must be considered in planning for the introduction of employment uses including the application of Minimum Distance Separation Formulae.

2 Supporting Studies

A series of technical analyses has been undertaken in order to assist in further assessing constraints within the Study Area and to establish the development of appropriate policies to guide the proposed development. The technical reports are available on the Town's website at <https://www.haltonhills.ca/en/residents/premier-gateway-phase-2b.aspx#Background-information>.

2.1 Supporting Commercial Needs Assessment

A Supportive Commercial Needs Assessment was undertaken to determine how much land should be designated /zoned for commercial floor space to support the employment uses. The report concludes that:

- Based on approximately 109 ha (269 ac) of gross employment land, there will be a demand for 3,700 to 7,400 sq m (40,000 to 80,000 sq ft) of supportive commercial space. This is approximately 2% and 3% of the Area.
- This would require approximately 1.6 to 3.2 ha (4 to 8 acres) of land within the Secondary Plan area.
- It is suggested that the Supportive Commercial opportunities be provided on Steeles Ave and Winston Churchill Blvd.

2.2 Cultural Heritage Resource Assessment

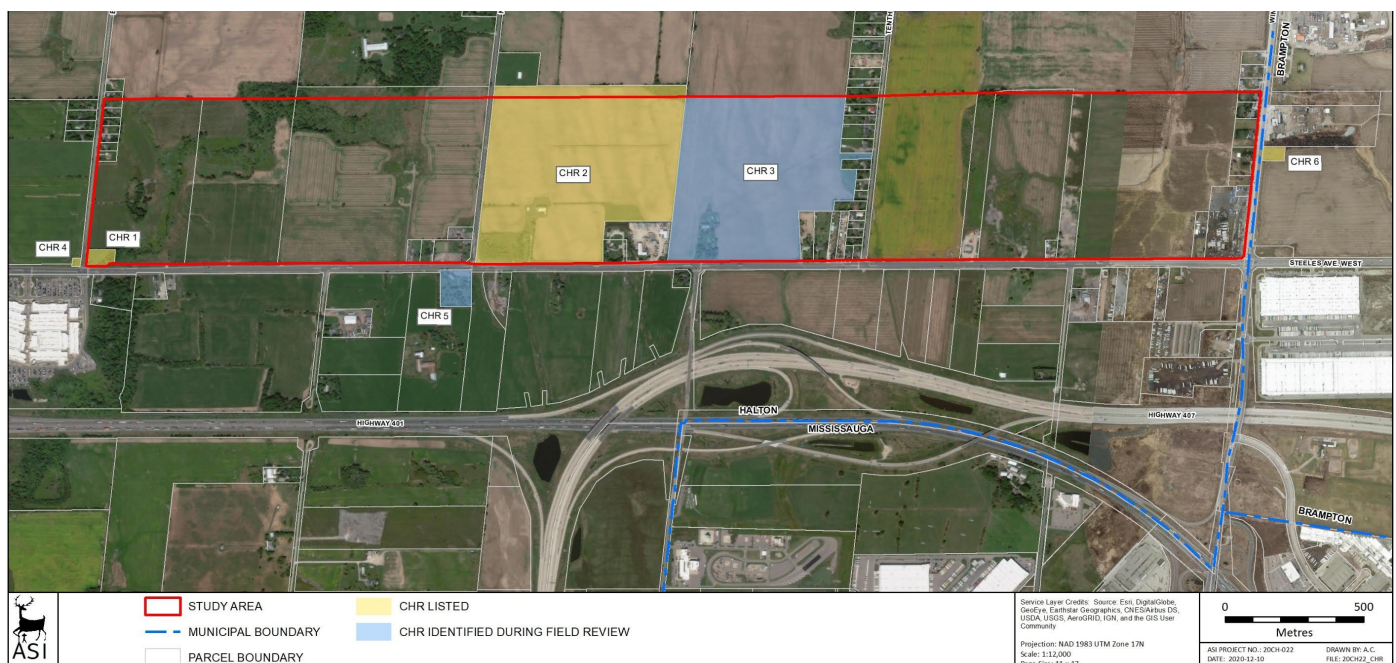
The purpose of the Cultural Heritage Resource Assessment was to describe the existing conditions of the study area, present an inventory of existing and potential cultural heritage resources, and propose appropriate mitigation measures and recommendations for minimizing and avoiding potential negative impacts to identified existing and potential cultural heritage resources. The report concluded that:

- Three properties within the study area, including two properties listed on the Town of Halton Hills Register of Property of Cultural Heritage Value, are candidates for conservation. See the map below.
- Three properties outside of the study area are not directly impacted but may be affected by development within the study area.
- Any proposed development on or adjacent to an identified existing or potential cultural heritage resource should require a Cultural Heritage Evaluation Report and/or Heritage Impact Assessment.
- Land use development in the secondary plan area should be planned to integrate the conservation of cultural heritage resources with conservation strategies for natural heritage features and environmentally-sensitive areas.

- Urban design and built form guidelines for the secondary plan area should be planned to ensure appropriate relationships between new buildings and cultural heritage resources. Development adjacent to or incorporating a cultural heritage resource should be respectful of the resource, having regard for scale, massing, setbacks, building materials, design features and heritage attributes.

Map 5 below highlights the properties in yellow that are already on the Town's Heritage Register, and the blue properties are those identified during field research.

Map 5 – Cultural Heritage Mapping



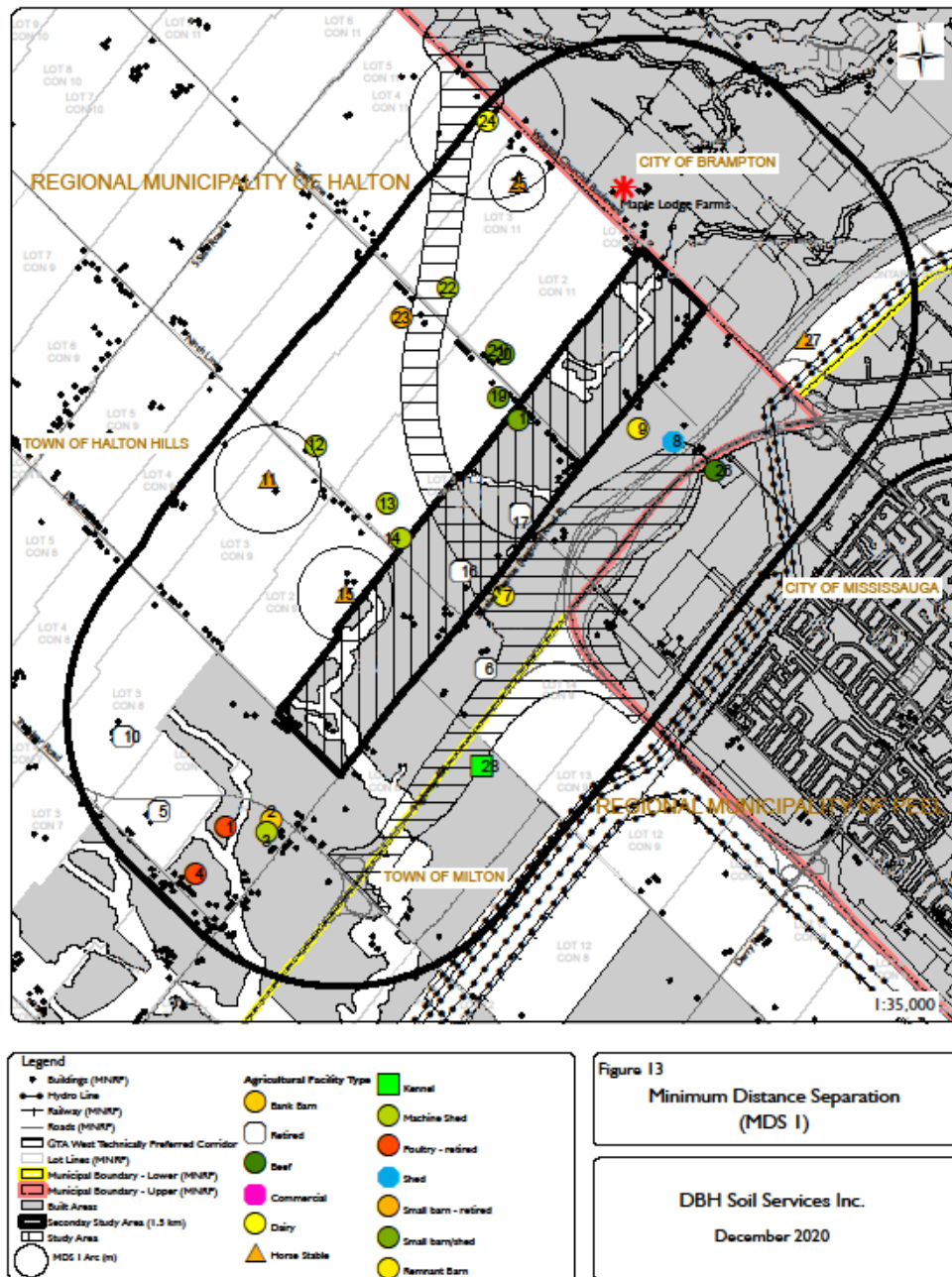
2.3 Agricultural Impact Assessment

The Agricultural Impact Assessment looked at agricultural policy, agricultural land use, agricultural investment and agricultural fragmentation, and concluded that the proposed future development of the Premier Gateway Phase 2B lands would have minimal impact on the surrounding agricultural activities within the Secondary Study Area but that certain mitigation measures are recommended. With respect to development within the Phase 2B Secondary Plan area this includes:

- Identifying the Minimum Distance Separation (MDS 1) calculations completed for agricultural facilities that were capable of housing livestock in the Study Area;
- Upgrading the road network to include wider shoulder areas for farm vehicles;
- Installing fencing and signage between the new employment lands and agricultural lands;

- Using directional lighting that does not affect the farms;
- Designing employment uses with sound and dust reduction at the source; and
- Locating employment uses that may increase vermin away from agricultural uses.

Map 6 – Agricultural Minimum Distance Separation



2.4 Functional Servicing Study

Additional analysis has taken place on the provision of services since the Background Report was prepared to focus on the draft Preferred Land Use Plan. The Functional Servicing Study report indicates that the planned Employment Area can ultimately be serviced by the Region's proposed upgrades to water and wastewater infrastructure along Steeles Avenue, Ninth Line and Tenth Line and crossing Highway 413.

Water

Ultimate water servicing to the Secondary Plan area generally requires commissioning of the Region's planned 600mm diameter Steeles Avenue trunk watermain with a 400mm diameter watermain loop along Ninth Line, the Proposed Collector Road and Tenth Line, as well as 300mm diameter watermain running along the Proposed Collector Road connections to the Steeles Avenue trunk at key locations.

Employment Lands located west of Highway 413 can initially be serviced by 300mm diameter watermain network connected to a short (50 metre) extension of the 600mm diameter Steele Avenue trunk main that terminates east of Eighth Line and Sixteen Mile Creek. Buildout of the planned 600mm diameter Steeles Avenue watermain to west of Highway 413 combined with the 400mm diameter Ninth Line transmission watermain will provide sufficient water flows and pressure to all development located west of Highway 413.

A looped watermain, including the planned 600mm diameter watermain and an additional 400mm diameter watermain crossing of Highway 413 will be required prior to development of the east portion of the Study Area. The only existing Halton Region water infrastructure located east of Highway 413 is an emergency interregional connection to the Region of Peel's system, located at Steeles Avenue and Winston Churchill Boulevard. If uncertainty around timing of Highway 413 study and associated impact on Regional water infrastructure construction for the area will significantly impede development plans for the east portion of the Premier Gateway Employment Area (PGEA) Phase 2B lands, then the feasibility of alternative water supply to the area could be further explored with Halton Region.

Waste Water

Ultimate wastewater servicing to the Secondary Plan lands will require a trunk sewer running west from the Highway 413 Corridor to the existing HH#3 Waste Water Pumping Station (WWPS)/ Eighth Line/Trafalgar Trunk Sewer and a pumping station and forcemain to service the Employment Lands located east of Highway 413 (or an

equivalent solution that can include a deeper trunk sewer running across the entire width of Steeles Avenue from Winston Churchill Boulevard to Eighth Line).

Before the planned 2025 commissioning of the proposed Eighth Line/Trafalgar Trunk Sewer, there are capacity constraints at the downstream HH#3 WWPS and HH#2 WWPS that must be considered in determining the allocation to proposed development across all PGEA lands (including Phase 2B and previously approved Phase 1B lands).

Wastewater flows from future development west of Highway 413 can be conveyed by local gravity sewer along internal roads to the outlet at the existing HH#3 WWPS. Construction of the planned Steeles Avenue trunk sewer to west of the Highway 413 can also be developed to service the entire PGEA 2B lands west of Highway 413.

Lands located east of Highway 413 will require the ultimate servicing solution to be constructed by the Region (including the HH#4 WWPS and forcemain or equivalent proposed trunk sewer) or an approved interim solution such as front-ended or interim pumping station and forcemain (that will still require crossing Highway 413 to discharge into local sewers or the component of Steeles Avenue trunk sewer constructed to west of Highway 413).

An interim pumping station and forcemain to service initial phases of development is feasible and can be located to suit future development phasing in the east. All temporary/interim infrastructure must be approved by Halton Region.

2.5 Transportation Study

Additional analysis has occurred since the Background Report was prepared to provide more detailed assessment of the future traffic conditions and to address the implications of the draft Preferred Land Use Plan. The study area currently faces a number of transportation challenges including:

- Limited arterial road capacity;
- Lack of transit service;
- Limited active transportation connectivity;
- Closely spaced access locations onto the arterial roads which have inadequate storage thereby contributing to road safety concerns and operational delays; and
- Demand for access locations close to highway interchanges.

Trip generation modelling was undertaken to forecast future traffic to 2031. The modelling included planned future road improvements. In general, the critical movements in the future background traffic operations consist of insufficient left-turn lane storage at intersections along Steeles Avenue intersections. The following

intersections that had a Level of Service E or F in at least one of the movements (i.e. through traffic, left turns or right turns) include:

- Steeles Avenue and Trafalgar Road
- Steeles Avenue and Eighth Line / Premium Outlets Mall
- Steeles Avenue and Ninth Line (both north and south segments)
- Steeles Avenue and Tenth Line (both north and south segments)
- Steeles Avenue and Winston Churchill Boulevard
- Steeles Avenue and Heritage Road
- 5 Side Road and Winston Churchill Boulevard [Peel]
- Trafalgar Road and Highway 401 Westbound Off ramp
- Winston Churchill Boulevard and Highway 401 Westbound Off- Ramp
- Winston Churchill Boulevard and Highway 401 Eastbound Off-Ramp
- Steeles Avenue and East-West Collector Road
- 5 Side Road and Tenth Line.

To address the issues identified with 2031 total traffic operations, various potential mitigation measures were identified and tested. For these issues, at least one mitigation measure that eliminated the issue with volumes exceeding capacity of excessive delays was found.

Based on the analysis, the recommended mitigation measures for discussion with stakeholders consist of:

- Steeles Avenue, Winston Churchill Boulevard:
Appropriate extension of exclusive left-turn storage lanes when these roads are widened.
- 5 Side Road and Winston Churchill Boulevard:
Addition of westbound left-turn lane and eastbound right-turn lanes
- 5 Side Road and Tenth Line:
Signalization; Addition of eastbound right-turn lane, westbound right-turn lane, and southbound left-turn lane
- Steeles Avenue and Tenth Line (South Segment) / Road B:
Addition of second southbound left-turn lane
- Steeles Avenue and E/W Collector Road:
Implementation of eastbound left-turn phase
- Steeles Avenue and Ninth Line (South Segment) / Road A:
Addition of second westbound left-turn lane; Northbound configured to be exclusive left-turn lane and shared-through/right turn lane. Northbound left-turn phase added in PM peak hour. Conversion to a three-lane roundabout should also be considered.

While the report proposes various mitigation measures for critical movements in the study area, general mitigation measures were not identified for movements along Steeles Avenue. Typical mitigation measures were not sufficient to address capacity issues along Steeles Avenue and the improvements are deemed to be outside the scope of this Secondary Plan study. As a result, the report recommends that, as part of the Steeles Avenue Environmental Assessment, the Region examine additional mitigation measures; ban problematic movements (while allowing U-Turns at other intersections or at roundabouts); construct parallel roads; or consider other measures to encourage use of different routes or alternative travel modes. Other modes of travel include active transportation, ridesharing, and transit.

2.6 Scoped Subwatershed Study

As noted in section 1.3, a Scoped Subwatershed Study (SWS) is being undertaken to identify important natural features and functions, and ultimately establish a water management approach which protects and preserves these important elements as part of a functioning Natural Heritage System (NHS). The SWS provides a base line assessment and characterization of surface water, groundwater, stream morphology and natural heritage in Phase 1 and then assesses the impacts of the land use plan on these features as well as providing a management plan in Phase 2. Phase 3 will provide an implementation and monitoring plan.

The NHS was refined through Phase 2. The proposed NHS includes the following:

- Wetlands (surveyed boundaries) within the East Sixteen Mile Creek and Mullet Creek catchment areas, as well as 30m buffers,
- Significant Woodland community with a 30m buffer,
- Other woodlands with a 10m buffer,
- Fish habitat (East Sixteen Mile Creek and Mullet Creek) with 30m buffer,
- Stable top of slope with a 15m access allowance,
- Linkage (60m wide) between the Mullet Creek wetlands along the HDF identified with a management recommendation of Conservation (MC(5) and MC(6)), and
- Linkage (60m wide) between the thicket swamp (SWT2-2) and woodland (FOD4) in the eastern portion of the study area.

The proposed NHS in the SWS is generally in line with the Town's Greenlands system and Region's NHS and has been used to establish the basis for the NHS in the land use options.

The SWS also provides an analysis of stormwater management criteria and identifies the anticipated location for stormwater management facilities which will be shown on the draft Secondary Plan. The Phase 2 report states that the stormwater management strategy would significantly reduce the post-development peak flows, so that they

effectively achieve post-to-pre control at the drainage outlets from the Phase 2B study area, for all storm events up to and including the Regional Storm event. The stormwater facilities should be designed to address water quality treatment to an enhanced level and Low Impact Development Best Management Practice's should be applied throughout the land being developed.

The Phase 2 report also states that a relatively modest capture rates would be required to maintain pre-development groundwater recharge under urban land use conditions. This is to be confirmed as part of future studies such as the Subwatershed Impact Study.

Headwater Drainage Features (HDF) have been evaluated and have management recommendations ranging from 'conservation' which means the feature should be retained to 'no management' which means the feature can be removed.

The report provides mitigation strategies that will be utilized as development proceeds and the Subwatershed Impact Studies are undertaken.

2.7 Fiscal Impact Study

The Town's Official Plan policies require that appropriate financing policies are in place to guide future development within secondary plan areas and that new secondary plans will be based on "a Fiscal Impact Analysis that demonstrates development shall not negatively impact the Town's financial position". This means that the Secondary Plan area can be serviced and implemented in a manner that does not place a fiscal burden on Town taxpayers, either in terms of increased tax rates, debt, or reduction in service levels below levels acceptable to the Town.

The Fiscal Impact looked at two tax levy scenarios. Under Option 1, development was assumed to be evenly split between manufacturing and warehousing sectors, and under Option 2, 80% of industrial development occurring in warehousing and 20% within manufacturing. The summary concludes that the incremental annual operating and capital costs total \$2.8 million at buildout of the Secondary Plan Area. This compares to anticipated annual tax revenue at current tax rates of \$5.1 million under Tax Levy Option 1 and \$3.4 million under Tax Levey Option 2. The fiscal impact at buildout of the Secondary Plan Area is a \$2.3 million annual surplus under Option 1 and \$593,000 under Option 2. In both cases there is a surplus but it is much more robust under Option 1.

3 Land Use Options

3.1 Land Use Framework

As identified in Section 2, there are a number of technical analyses which have identified information that was used in the preparation of the two land use options. The following highlights the important considerations which helped to inform the creation of the options:

Natural Heritage System

- The elements of the Natural Heritage System (NHS) are based on the recommendations of the Scoped Subwatershed Study (SWS) and given the importance of creating a strong, functional, and resilient NHS, the same NHS is shown in both options.
- The components of the NHS and the size of the buffers that are included in the land use options are described in section 2.6 of this report and as previously noted, the buffers are included in the NHS.
- A linkage between the wetland east of Tenth Line and the Mullet creek has been straightened out in both cases to facilitate development options.
- It is noted that further detailed site-specific analysis including a Subwatershed Impact Study (SIS) will be required at the development stage that may result in fine tuning of the NHS.
- Based on the SWS results, certain headwater drainage features that were identified in the Region of Halton Natural Heritage System have not been included in the NHS but will be further evaluated at the SIS stage. If they are confirmed to have a headwater drainage feature function, they may be able to be relocated if their function is maintained.

GTA West Corridor (Highway 413 and Northwest GTA Transmission Corridor)

- As noted in section 1.2 above, the GTA West Corridor (Highway 413 and Northwest GTA Transmission Corridor), would be located in a north-south direction through the middle of the Secondary Plan area and is therefore shown on both options. The Province has identified the Focused Analysis Area which would contain both Highway 413 and the Northwest GTRA Transmission corridor. The GTA West Corridor Environmental Assessment has not been completed and timing for the construction of the Highway has not been published but the area is protected and the Preferred Analysis Area has been shown on both options.
- On Map 3 of the Halton Region Official Plan Amendment 49 (ROPA 49) that has recently been approved by the Province, a large part of the Secondary Plan area has now been removed from the Corridor Protection Area by narrowing the

protected area to the Focused Analysis Area. As a result, the remainder of the land in the Secondary Plan outside of the Focused Analysis Area/Corridor Protection Area can proceed with development once the Town's OPA 21 dealing with the corridor protection area is revised and this Secondary Plan is adopted/approved.

- The east-west collector road shown crossing Highway 413 is noted in both land use options as subject to Highway 413 confirmation.

Transportation Network

- Currently, the only means of road access from the west side of the study area to the east side is Steeles Ave. A new east-west collector road through the Secondary Plan area is recommended given the level of traffic that is forecast to occur on Steeles Ave and the surrounding area and so it is shown on both options. The collector road is intended to generally be located in a relatively central location between Steeles Avenue and the northern boundary of the Secondary Plan except where it would conflict with the Natural Heritage System. It is noted on both of the options that the road alignment west of Tenth Line is subject to further review
- The new east-west road will not extend all the way west to Eighth Line however, given the significance of the Natural Heritage System associated with the East Sixteen Mile Creek located east of Eighth Line.
- New north-south collector roads which connect Steeles Ave to the east-west collector road are needed to enhance connectivity and increase movement options for both vehicular and active transportation modes of travel.
- A second collector road connection to Winston Churchill Blvd is recommended in both options although it is shown outside of the study area due to the location of existing houses along the west side of Winston Churchill Blvd.
- It is noted that the Secondary Plan is only intended to identify collector road locations and that additional local roads may be created by plans of subdivision.
- If Highway 413 proceeds, the location of the potential east-west collector road crossing it will be subject to further analysis.

Existing Residential Uses

- Existing residential uses are proposed to be identified as legally permitted uses within the Employment designation in both options. Policies that permit additional home occupation and/or office uses within the properties can be added in the Secondary Plan. This would recognize their long standing existence and be consistent with the approach taken in the Phase 1B Secondary Plan.
- Policies will need to be put in place in the Secondary Plan to require appropriate mitigation measures / buffers between existing residential uses and new employment uses.

Supportive Commercial Uses

- Existing commercial uses along Steeles Ave are proposed to be recognized.
- As identified in section 2.1, the Supportive Commercial Needs Report indicates that 1.6 to 3.2 ha (4 to 8 acres) of commercial land is warranted to support the employment area.
- The Supportive Commercial Needs Report indicates that new supportive commercial uses should be encouraged to be located along Steeles Ave and Winston Churchill Ave. Two locations for this concentration of uses have been identified.

Employment Uses

- A Prestige Industrial designation is recommended as the appropriate designation for the employment uses within the study area which reflects the goals for the Premier Gateway area.
- Large parcel sizes are generally desirable within employment areas but in Phase 2B, the parcels have been broken up by the proposed Highway 413, the natural heritage system, existing uses, and to a lesser extent the road pattern.

8079 Eighth Line

- The property located at 8079 Eighth Line (referred to as the Gilbach property) was the subject of settlement discussions with the Town. The owners have submitted an Official Plan amendment application for the property, which includes the preparation of its own Scoped Subwatershed Study, to support their proposal to allow for a waterpark and commercial entertainment/hospitality uses on the site. Although, the two land use options for the Premier Gateway Phase 2B lands identified Prestige Industrial and Natural Heritage System designations on the site, the property is subject to a site specific application which will determine the appropriate land use designations as per the agreed Minutes of Settlement.

Agriculture

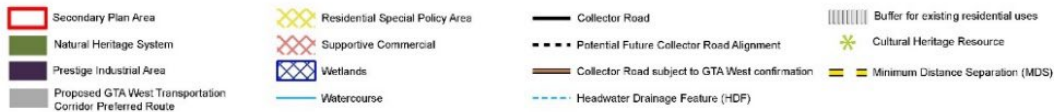
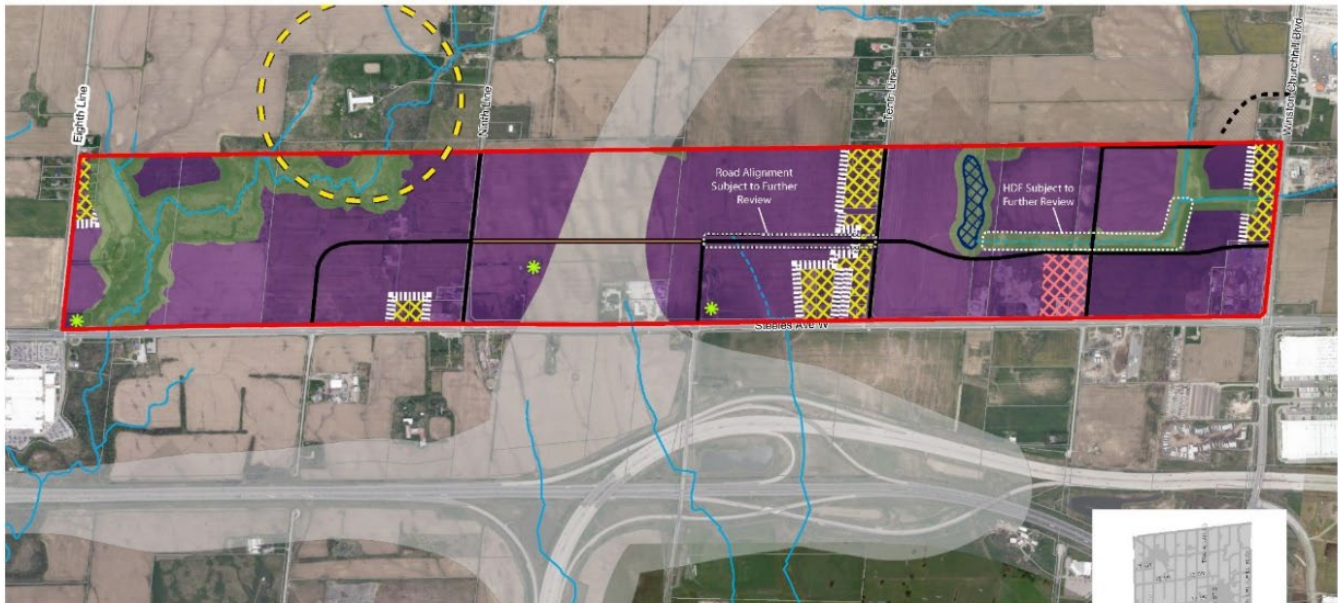
- There is one facility located outside of the study area which has a Minimum Distance Separation (MDS) as shown by a dashed yellow circle on both options that will affect land within the study area.

Cultural Heritage Resources

- The three properties identified in Cultural Heritage Resource Assessment will be recognized on both options.

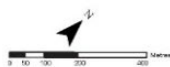
3.2 Options

Map 7 - Option A



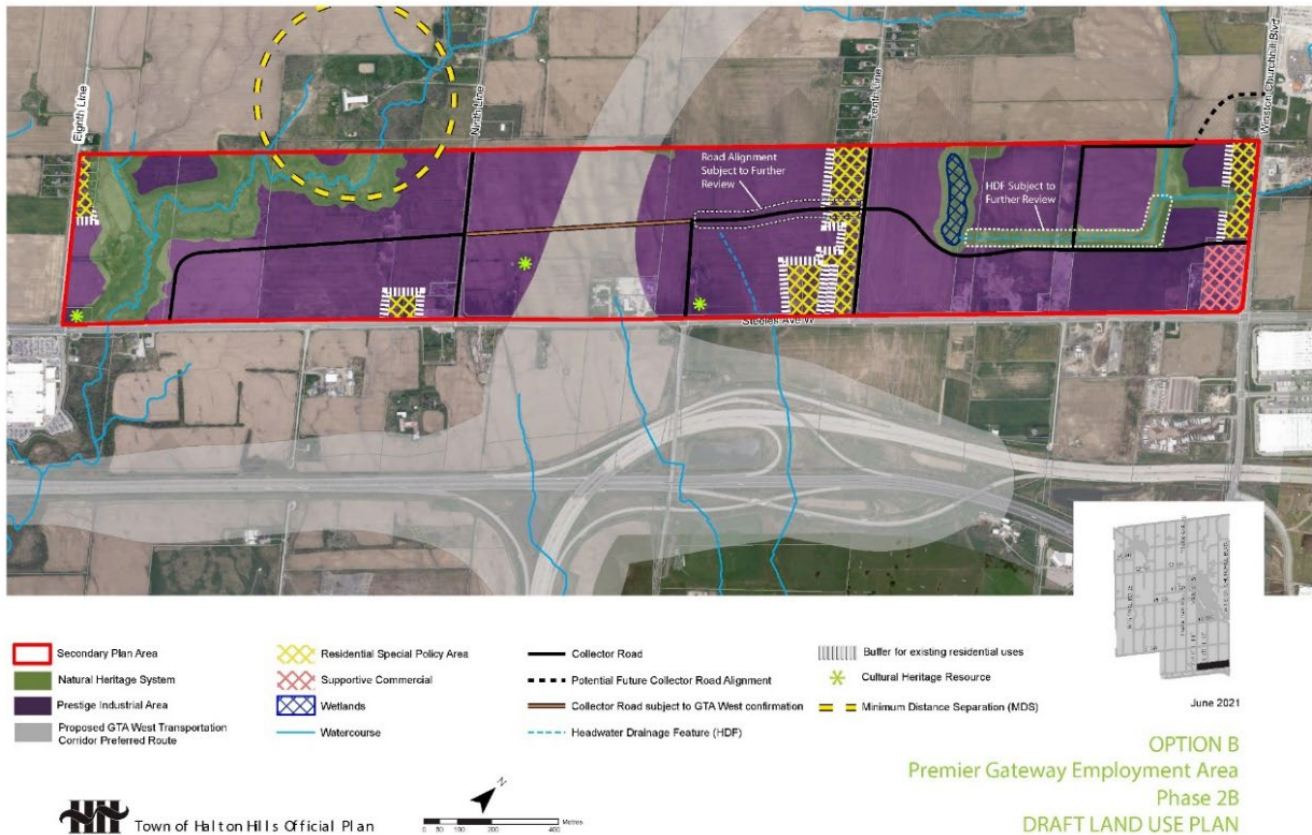
June 2021

Town of Halton Hills Official Plan



OPTION A
Premier Gateway Employment Area
Phase 2B
DRAFT LAND USE PLAN

Map 8 - Option B



3.3 Comparison of Options

Due to the variety of constraints and parameters identified with the study area as well as the shape of the study area itself, there are many similarities between the two options. The differences between the two options include:

1. **Supportive Commercial**
In Option A the location of the Supportive Commercial is shown as the northwest corner of Steeles Ave and the new extension of Tenth Line South. In Option B it is located at the north west corner of Steeles Ave and Winston Churchill Blvd.
2. **East-West Collector Road location**
In Option A the western edge of the collector road ends at the northern extension of Eighth Line South. In Option B its extents to the eastern limit of the Sixteen Mile Creek valley.

3. North-south Collector Road location

A north-south collector road is shown connecting the east-west collector to Steeles Ave opposite Tenth Line South in Option A but not in Option B.

4 Public Input

Two public meetings have been held to date as part of the Study process. The first was held virtually on November 16, 2020 to outline:

1. the study purpose,
2. timelines,
3. technical studies being undertaken,
4. planning policy framework that provides guidance for the study
5. existing conditions, and
6. areas of influence that will be addressed during the study.

The second public meeting was held virtually on June 2021 to present the two land use options and information from the background studies that supported the creation of those options. Both of these meetings are a valuable part of guiding the study and the refinement of the land use options.

A copy of the presentations that were made during those two meetings is available on the Town of Halton Hill's website at: <https://letstalkhaltonhills.ca/premier-gateway-p2b-employ-hh>.

A summary of the comments that have been made during and subsequent to the public meeting in June 2021 are outlined in the chart below which also provides responses to those comments.

Questions/ Comments	Response
What is Supportive Commercial?	The kinds of commercial uses that will provide support to the main employment uses such as banks, printing presses and restaurants.
Did the technical studies reveal any big surprises?	There has been nothing that was unanticipated so far. There are issues that have to be addressed as the study progresses.
We live on 8 th Line. Will municipal services be coming to the street with all the development? Will 8 th Line be widened to 4 lanes? Am concerned about more traffic on our street. Lights on the street would be helpful.	New development will have full municipal servicing. An Environmental Assessment is being undertaken for 8 th Line which is assessing adding room for active transportation but it is not assessing widening the road to provide for

	additional vehicular lanes although the study is still in the early stages.
Will the Transportation Study provide information on road improvements along Steeles Avenue (e.g. suggest turning lanes, restrict turning movements or driveway accesses off the road, signalized intersections, etc)?	Yes, the study will make recommendations on those issues except for individual access points along Steeles Ave which will not be addressed.
We live on 10 th Line, just a few houses north of Steeles. We wish to know the details about what will happen to our home? Will it be purchased? By who? When?	There are no plans for the Town to purchase these lands. You may sell your land to an adjacent owner, a developer or anyone interested in purchasing it if you wish but the Town will not be purchasing individual properties.
No connection for the new east/west collector road onto 8 th Line. Why is there the need/desire to enter onto Winston Churchill and not bring it down to Steeles Ave in a similar manner?	The need to bring the collector to Winston Churchill Blvd is stronger than to 8 th Line as Winston Churchill Blvd is a major arterial road. In addition, bringing the road to Winston Churchill Blvd will reduce the traffic that has to pass through the Steeles Ave and Winston Churchill Blvd intersection. There are also significant natural heritage features on 8 th Line that are a limiting factor for connecting the collector road to 8 th Line.
What is the proposed width of the planned collector road?	That will be determined through the Study depending on the capacity required.
What is the timing after the secondary plan is completed/approved for the infrastructure (Water, Sanitary, Roads) to be completed?	There is some uncertainty at this time. The watermain is under design. It will all be dealt with through the Region's Master Water and Wastewater Plan.
You keep referring to the GTA West Corridor, as if it's a foregone conclusion, that it will be a reality. Are we to understand that a highway is going to be	Part of the lands within the Secondary Plan area are within a Corridor Protection Area for the GTA West Corridor/Highway 413. This is designated in the Regional and Town Official Plans and as the Secondary Plan has to

<p>pushed through there? A highway that the people do not want, but the Province does. What are the working assumptions around the highway corridor?</p>	<p>conform to the Town's Official Plan, it must therefore be recognized.</p> <p>The corridor is undergoing a provincial Environmental Assessment process and the federal government is assessing whether a federal EA needs to be undertaken. From a planning perspective, consideration will be given to development of the Secondary Plan area both with and without Highway 413. Resident and Council concerns are recognized but because of the policies currently in place, the potential for it to be built must be addressed.</p>
<p>Is relocation a possibility for the heritage resources?</p>	<p>The Official Plan policies will consider relocation of cultural heritage resources only as a last resort. A Heritage Impact Assessment is required for any development on or adjacent to a cultural heritage resource which would have to rationalize why no other options are available.</p>
<p>Will the properties fronting onto Steeles Avenue be permitted to connect to servicing from that road or will servicing be only permitted from a collector road.</p>	<p>The Region may support a servicing connection if a local service line is available along Steeles Ave. Individual connections to the trunk sanitary sewer that will be extended along Steeles Ave, are not typically supported. This will have to be addressed as part of a detailed servicing report.</p>
<p>Move the north/south component of the proposed collector road west of Ninth Line so that it follows the property line between the two main properties rather than the eastern edge of the Natural Heritage System. Alternatively allow a local road connection. This would avoid fragmentation and the creation of unusable sections of land.</p>	<p>Moving the collector road to the location requested would not meet the Region's intersection spacing requirements of 400 m for a full-movement access on a major corridor such as Steeles Ave given the proximity of Eighth Line South. The north-south component can be designed to follow the edge of the NHS as much as possible to minimize fragmentation or the creation of unusable sections of land and a policy can be added to the Secondary Plan that allows the collector road to shift to the east if desired as long as it meets Regional</p>

	intersection spacing requirements. Identifying the collector road as shown allows for the western parcel to develop without depending development of the adjacent parcel to the east.
Provide for flexibility in determining the location, geometry, and width of collector and local roads.	The final alignment of new roads will be determined as part of the development approval process and as a result, there is still some flexibility. Recommendations will be made on the width of collector roads based on an analysis of projected traffic volumes.
Do not preclude individual landowner driveway, road, and servicing connections or access to Steeles Avenue West and collector roads where it can be justified.	Individual access to arterial roads will be restricted /controlled and will be based on a Traffic Impact Study at the time of development applications. Servicing connections will be addressed as part of the Functional Servicing Study required in support of development applications.
Outline cost sharing principles amongst landowners with regards to shared infrastructure costs, and include policies to support cost sharing best practices.	General policies to address cost sharing can be addressed at the Secondary Plan policy stage.
Allow for interim phasing of developments and interim site, collector/local road, and servicing conditions prior to the full construction of the Secondary Plan infrastructure.	Phasing in the Secondary Plan will be based on the availability/ timing of servicing and road capacity, and policies addressing interim or front-end servicing will be included.
Is GM Blue Plan aware of the dewatering issues on Sixth Line, Steeles Ave and Old Hornby Road in Phase 1B and the inconvenience to residents and cost to Region to mitigate and solve issues. This should be avoided in Phase 2B.	A policy will be added to the Secondary Plan to address dewatering mitigation.
Would East/West Road undergo its own Environmental Assessment (EA) to determine the final alignment, width,	The east-west collector road would be built by the developers so it would not be required to go through an EA but Town would be very

location, and if yes, what is the timing for it?	involved in what the road geometrics would look like.
When will Town/Region release those lands from Corridor Protection that the Province is not interested in?	The province has approved the Halton Region Official Plan Amendment 49 (ROPA 49) that reduces the Corridor Protection Area to the Focused Analysis Area so all of the remaining lands will be released once the Town's revised OPA 21 and this Secondary Plan are approved.
Are water and sanitary sewage planned for in future on 8th Line north of Steeles Ave?	Water and sanitary services will follow the roads that are planned within the Secondary Plan area. Specific connections for the residents can be considered when water and sewer is available. The Region does not extend water and waste water services outside of the urban area except in unusual circumstances.
Option A seems to propose a shorter east-west collector road. This may result in fewer local road connections within the overall road network.	It does but it also leaves the parcel of land immediately east of Sixteen Mile Creek without direct access to a collector road.
What sort of controls will there be on the type of employment and the type of industry in the area and its impact on the environment?	The lands are proposed to be designated for prestige employment uses so no heavy industry will be permitted. The recommendations of the Air Quality and Noise studies address how to mitigate impacts and will be reflected in the Secondary Plan policies. In addition, more detailed analysis of the impacts and the proposed mitigation will be addressed when development applications are submitted and the specific industry is known.
It's difficult to enforce the green development standards so I hope Town will have a better result.	The Town has updated Green Development Standards that apply to employment uses so sustainable development will be guided by those Standards and other programs that Town has developed.

<p>Encourage the Town to revisit the intersection of the east west collector with Tenth Line. A modest shift to the south will result in a more 'gradual' alignment that will be to be shorter in length. This shift will also result in more 'linear' frontages for those properties north and south of the road. Extend the "Road alignment subject to further review" overlay to the east side of Tenth Line.</p>	<p>The overlay stating "Road alignment subject to further review" has been extended to the east side of Tenth Line. Policies in the Secondary Plan will indicate that the collector road is intended to cross Tenth Line in a relatively central location between Steeles Avenue and the northern boundary of the Secondary Plan and its location will be subject to further review at the time of development applications taking into consideration the existing residential houses on the west side of Tenth Line and the final location of the Natural Heritage System east of Tenth Line.</p>
<p>Concern that the future road outside of the study area that exits onto Winston Churchill is not warranted and should be removed from the Plan and that the north-south segment of Road 'B' terminate in a cul-de-sac.</p>	<p>The traffic consultant identified that there is a need for this road to provide access to employment lands in the NE corner of the Study Area. Due to the housing along the west side of Winston Churchill Blvd and the location of the environmentally sensitive areas, the road is proposed to be connect with Winston Churchill Blvd outside of the study area. There is a long-term intention for lands north of the study area to be developed, and the connection to Winston Churchill Blvd would be required to provide efficient road access to those lands.</p> <p>The distance between the proposed intersection at Winston Churchill Blvd and the entrance to Maple Lodge Farms is approximately 250m. This is sufficient to ensure effective operation of both intersections.</p> <p>It is also noted that, as the road is located outside of the Secondary Plan, it will be subject to further study when the lands to the north are designated for development.</p>
<p>Given the characterizations provided within the Phase 1 Report and aerial interpretation of HDFs TESMC(3)1 and TESMC(3)2 and Watercourse MC(4)2, GEI</p>	<p>Comment noted.</p>

is agreeable to the above-noted management recommendations and constraint rankings.

It is unclear whether the Ministry of Northern Development, Mines, Natural Resources and Forestry (MNDMNRF) has accepted the catchment areas shown on Map 3. It is recommended that Maple Lodge Farms understand whether the catchment areas identified on Map 3 have been approved by the MNDMNRF, to confirm that the SWT2-2 community is not located within the same catchment area as the Levi Creek Provincially Significant Wetland (PSW) complex. If in the same catchment, potential would exist for the SWT2-2 community to be added into the PSW complex.

Some survey results were not provided within the Scoped SWS given that the report was prepared mid-field season. The report should be updated with the survey methods and results to confirm the extent of survey effort within and adjacent to the Subject Lands.

Typically, terrestrial crayfish SWH is not identified within CUM communities; however, since wetland habitat was recorded as an inclusion within the CUM there is potential for it to be classified as this SWH type. Further terrestrial crayfish studies should be completed to confirm the extent of the SWH and confirm whether they are located within or in proximity to the wetland communities. If they are located within the CUM areas isolated from the wetland communities, GEI would recommend that they should not be considered SWH.

The MNRF has not reviewed the catchment area boundaries on the east side of the Secondary Plan area. However, it is noted that the SWT2-2 wetland is located outside of the Levi's Creek catchment basin boundary as mapped within the Levi's Creek wetland evaluation prepared by the MNRF (2007). As such, this specific wetland unit has already been excluded from the Levi's Creek PSW complex by the MNRF themselves.

The fulsome survey results were provided in the Phase 2 report.

Agreed. Because of this, the wetland was included within the NHS with a buffer, whereas the CUM was only included as a linkage; the entire CUM was not included within the NHS.

The SWH Screening Table (identified within Appendix B of Appendix H of the Phase 1 Report) should be revised to reflect the updated survey results. The SWH Screening Table did not consider the presence of Bat Maternity Colonies SWH within the FOD4 community given the sub-dominance of Bur Oak and Shagbark Hickory. This should be considered as these tree species are typically considered suitable snag habitat for bat species.

In-situ data collection and observations for validating and calibrating both hydrologic/ecohydraulic modelling and geomorphic change analyses were limited to the fall of 2020 and the spring of 2021. While the spring freshet event for 2021 was indeed examined, higher magnitude but less frequent events were not observed. GEI recommends that in-situ data collection and analysis of summer convective storm events of higher intensity still be considered. Summertime thunderstorm event response should be included in the analysis.

Agreed.

The HSP-F hydrologic model has represented the approved model the hydrologic analyses within the Sixteen Mile Creek Watershed for over 20 years, and throughout that time has been refined, calibrated and validated for several subwatershed studies and update studies in support of Secondary Plans (i.e., Bristol Survey, Sherwood Survey, Highway 401 Business Park, Boyne Survey, and Derry Green Secondary Play Area, and Milton Phase 4). These validations as part of other studies have applied local rainfall and streamflow data for the respective study areas, which have collected multi-season hydrometeorological data including summer thunderstorm conditions. Furthermore, the HSP-F hydrologic model has been updated to incorporate approved stormwater management plans and designs prepared in support of Tertiary Planning Studies and detailed designs within each of the Secondary Planning Areas as well as other areas in the Town of Milton, hence incorporates the most current information for the land use and stormwater management within the watershed. Recognizing the legacy of refinement, updates, and validation for the HSP-F model since its original development, it is respectfully suggested that the model parameterization is representative of the physiographic conditions within the Premier Gateway Phase

The standardized Rapid Geomorphic Assessment (RGA) and Rapid Stream Assessment Tool (RSAT) field sheets were not included within the relevant appendix for the Phase 1 Report. This should be added to support the conclusions drawn.

Appendix D (Hydrology) only includes raw data and two digital hydrology models. The actual calibration and verification process (e.g., excel sheets for data analysis) should be included.

Some vulnerabilities of the HSP-F model were identified when comparing the overall model simulation period (i.e., 56 years of simulation), the new rainfall and flow observation period and data quality (i.e., 6 months and rainfall data), as it does not correspond with the stream flow alterations for a few major storms. This model should be updated to support the verification results presented within the Phase 1 Report. The Visual OTTHYMO was not calibrated and was only updated for the purpose of verification. It is recommended the Visual OTTHYMO model be calibrated and applied for design storms for floodplain purposes.

2B Area, and is appropriate for use within the current study.

Field forms will be included within the Phase 1 Characterization Appendix as a part of the final draft submission.

Additional documents showing the calibration and verification process (i.e., Excel spreadsheets) will be included in the final reporting.

We respectfully disagree with the characterization of HSP-F model having “vulnerabilities”. As noted above, the HSP-F hydrologic model has been calibrated and validated extensively as part of previous studies conducted over the past 20+ years, hence is considered to be representative of the hydrologic conditions within the sub watershed and the current study area. Furthermore, we concur that a 6-month period of record is inappropriate for determining long term flood frequency and erosion potential. Hence, the 56-year continuous simulation methodology using a fully calibrated and validated hydrologic model has been applied.

In regards to the Visual OTTHYMO model, the purpose of developing the hydrologic model in different platforms is to maintain consistency with the current hydrologic modelling approach within Conservation Halton and CVC jurisdictions.

The HSP-F methodology has been applied as the core hydrologic model to establish stormwater management criteria. The VO methodology has been applied as a verification of the recommended stormwater management plan.

Given the Visual OTTHYMO model has no capability to have continuous simulations, and therefore cannot entirely replace the HSP-F model, GEI recommends using the updated HSP-F model instead of the Visual OTTHYMO model to simulate the design storms for peak flows.

Given two culverts are not included within the model because of accessibility, it is recommended to code the road embankments into HEC-RAS model to be conservative.

Regarding the boundary conditions, it is recommended to have a “sensitivity analysis” using +/- 25% and +/- 50% for the current normal depth to eliminate the impacts caused by the boundary conditions.

As noted above, the purpose of developing the hydrologic model in different platforms is to maintain consistency with the current hydrologic modelling approach within Conservation Halton and CVC jurisdictions. The HSP-F methodology has been applied as the core hydrologic model to establish stormwater management criteria. The VO methodology has been applied as a verification of the recommended stormwater management plan.

The two culverts cited are located underneath private driveways within the Mullet Creek Subwatershed, and along a headwater drainage feature (i.e. not along the regulated watercourse). As such, that the exclusion of these structures from the hydraulic model does not affect final conclusions and recommendations of importance for the Scoped Subwatershed Study.

The downstream-most cross-section within the current hydraulic model, for which the boundary condition is established, is located downstream of the hydraulic structure at Winston Churchill Blvd. Recognizing that this cross-section is located approximately 800 m upstream of the nearest roadway hydraulic structure, and the absence of any hydraulic constraints along the reach in between, the application of Normal Depth to establish the boundary condition is considered appropriate. Further, adjustments of the Normal Depth input parameter (i.e. energy gradeline slope) as suggested by GEI would not be anticipated to affect the resulting floodline mapping through the study area since the hydraulic structure at Winston Churchill represents the governing hydraulic constraint for the hydraulic analyses.

Bedrock was noted at depths of 15 to 20 m, and locally as shallow as 3.0 m depth (Figure GW-3).

In general, the cross-sections identified a thick layer of fine-grained soils extending from surface to bedrock interbedded with discontinuous sand lenses. Further a basal sand and gravel unit was identified at the bedrock-overburden interface.

GEI is in general agreement with the classifications of aquifer material and/or aquitard materials, except of diamicton coarse-grained soils (silt and sand matrix), which have been classified as an aquitard material. Given the potential permeable nature of a silt-sand mixture, this unit should be classified as an aquifer material, and as such the potential for lateral groundwater flow within the overburden unit may be greater than anticipated.

Hydraulic conductivity estimates from single well response tests were provided, however, details as to what soil units the tests were completed in was not provided. Considering the potential variability in soil conditions, further clarification is required in order to assess the provided hydraulic conductivity values.

The bedrock potentiometric surface and groundwater flow is shown on Figure GW-10. The groundwater flow direction was noted to flow from the northwest to both the southeast (MC subwatershed) and southwest (ESMC subwatershed);

Comment acknowledged.

This is consistent with the Phase 1 report; however, the basal sand/gravel was interpreted to be discontinuous.

The majority of the borehole lithology that isn't sand or gravel, is interpreted as clay, silty clay, or fine-grained diamict. This predominant fine-grained overburden unit is interpreted as an aquitard. Agreed, there are some borehole records that suggest somewhat coarser diamict than others and these local heterogeneities may mean the sediment acts as poor aquitards or poor aquifers. They may provide the conditions for greater groundwater flow; however, these areas appear to be localized and more discontinuous than the surrounding finer grained sediment. Therefore, we have not identified these sediments as a separate, distinct aquifer unit.

The single well response testing was completed and reported on by others as part of the subwatershed study at the Northeast Corner of Steeles Avenue and 8th Line (JLA et al. 2020). It was reported that the tests took place in wells screened within units of 'sandy silt to silty sand till' and 'silty sand to sandy silt till'.

The final report will be modified to indicate that the "Horizontal bedrock flow originates from the northwest and declines both toward the northeast (Mullet Creek subwatershed) and southwest (East Sixteen Mile Creek

however, the provided Figure GW- 10 shows bedrock groundwater flow originating from the northwest and flowing to both the south towards ESMC and to the northeast towards MC. Clarification is required.

Additional information is required to comment on anticipated vertical gradients based on the limited information provided on MECP WWRs.

A recharge rate of 100 mm/year has been provided for the Subject Lands. This is consistent with the Halton Region's Hydrogeological & Best Management Practices for Groundwater Protection Guidelines (2014).

It was noted that given the impermeable nature of the surficial soils it is not considered likely that local wetlands within the Phase 2B Study Area would have significant functional groundwater discharge. However, groundwater discharge to streams that have incised through the upper impermeable soils into the underlying impermeable soil is possible. This should be considered.

GEI is in general agreement with the preliminary assessment of potable groundwater sources in the vicinity of the Subject Lands.

The TSS numbers reported from the grab samples are considerably high (i.e., 59000 ug/L), however, the long-term TSS range is only 0.5 to 292 with a Mean of 16. Given that the TSS removal target for a SWM facility is normally only 80% for SWM

subwatershed)...", consistent with Figure GW-10.

Additional wells (multi-level) are expected to be drilled to provide additional information on groundwater levels and vertical gradients. This should be part of future, more detailed planning phases and will be discussed in the next phase of this study.

Comment acknowledged.

This possibility is discussed at the end of Section 2.1.4.3.5 (last paragraph): "Groundwater discharge may occur in other areas locally where stream reaches incise through the Halton Till and into more permeable sediments, as well as where the till is thin such that the till is sufficiently fractured to be hydraulically active and connected to deeper, coarser sediments or fractured shallow bedrock."

Comment acknowledged.

The comment has been noted. The recommended stormwater management plan will be provided in Phase 3 report and will include guidance for the selection for the SWM facilities to satisfy provincial criteria to achieve an Enhanced standard of treatment.

quality controls, the residue TSS after a significant rainfall could be 11800 ug/L assuming required SWM facilities are in place. This TSS number may need to be verified and discussed.	
The Total Phosphorus numbers for grab samples are reasonable.	The comment has been noted.
GEI recommends that site-specific investigations are required to verify the findings reported within the Phase 1 Report.	The comment has been noted. Recommendation for future studies (i.e., SISs) will be provided in the Phase 3 report and will include recommendations for the site-specific investigations.
Section 3.2.3.2 outlines various ecological buffers associated with natural heritage features in accordance with Halton Region, CH and Growth Plan policies. CVC policies are not included within this section and should be updated since the eastern portion of the Phase 2B Study Area is located within CVC's jurisdiction.	Agreed.
These policies are specific to provincially or regionally significant features and not features that are determined to be non-significant. Discussion on buffer requirements for nonsignificant features (e.g., non-provincially/non-regionally significant wetlands) was not accurately represented within the Phase 1 Report.	The text will be reviewed for final reporting.
Language should be updated within the Phase 1 Report to include discussion about wetland reconfiguration for non-PSW units where consistent with applicable policies.	The text will be reviewed for final reporting. However, possible wetland reconfiguration is to be addressed at the SIS stage.
The NHS (shown on Map 6) incorporates the following features within or immediately adjacent to the Castle Farms property: the SWT2-2, the CUM	Additional clarification will be provided in final reporting.

downstream of the OA that hosts Watercourse MC(4)2 and the offsite FOD4 community. While these features were included within the NHS boundary, it is unclear what is driving the inclusion of these features (e.g., is the SWT2-2 wetland community a regionally significant or non-regionally significant wetland). Understanding whether the features within the landscape are provincially or regionally significant is important as that helps determine the vegetative setbacks associated with the features to ensure protection of ecological functions. If features are not regionally or provincially significant, then reduced buffers should be explored, and consideration around merit for inclusion within the NHS may be warranted.

Two linkages were identified on Map 6 (labeled as Option 1 and 2). Neither linkage is identified on the Subject Lands; however, no setbacks associated with the linkages are defined within the Phase 1 Report. It should be confirmed whether the linkage widths as shown are inclusive of any setbacks required through various policies.

The Phase 1 Report provided a preliminary determination of the extent of natural heritage features within the Phase 2B Study Area. Several natural vegetation communities were identified within or immediately adjacent to the Subject Lands, including a FOD4 and a SWT2-2 vegetation community. It is recommended to confirm whether MNDMNRF has approved the wetland catchment area delineation to inform the OWES evaluation. Additional hydrologic

Buffers are not required on linkages.

The wetland catchment areas have not been provided to the MNRF for review. As noted in Section 2.6.2.2 of the Phase 2 report, "A fulsome wetland evaluation process through the Ontario Wetland Evaluation System (OWES) was initiated, however through subsequent discussion between the Town of Halton Hills and its study partners (i.e. the Region of Halton and Conservation Halton), it was agreed that the evaluations would not be completed as this would have an impact on many lands outside of the Phase 2B Scoped SWS study area due to the

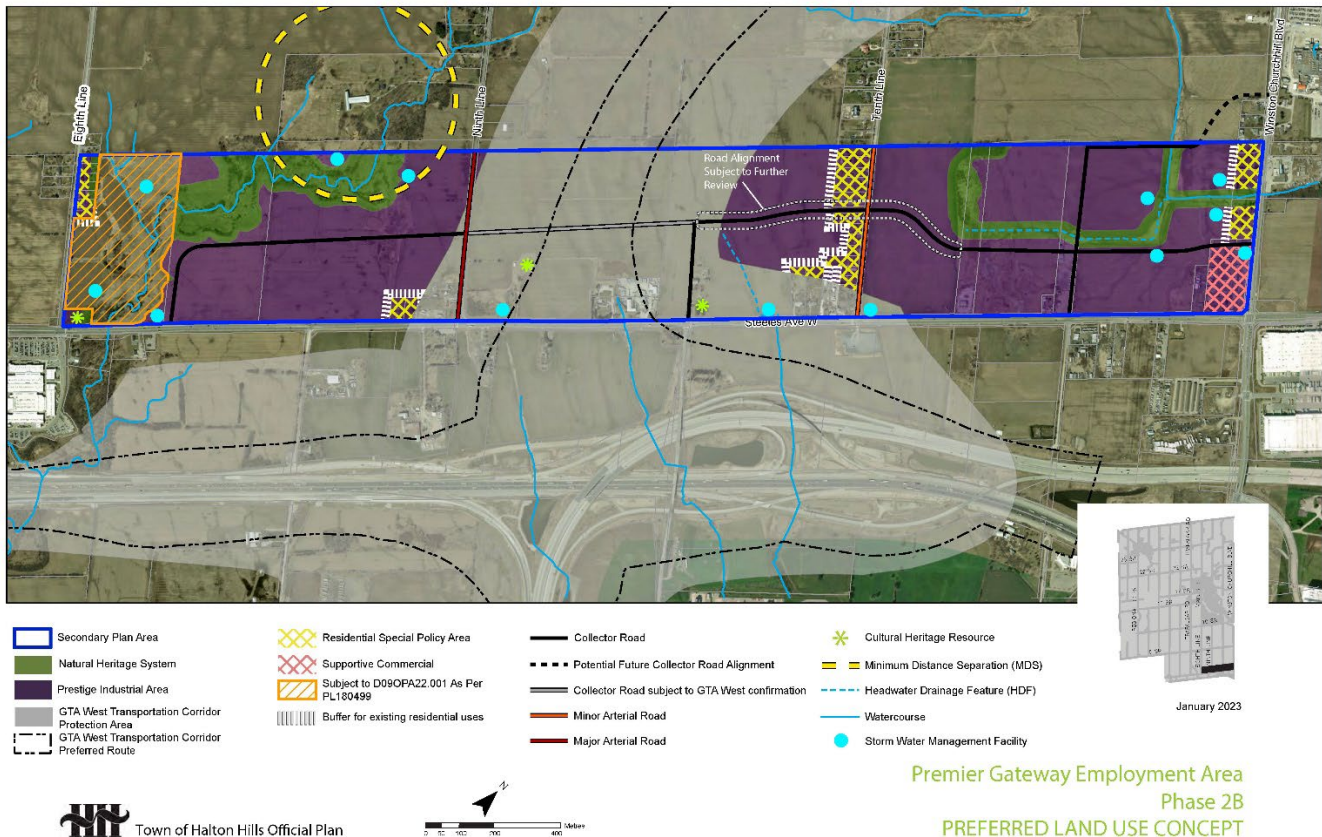
<p>modelling is warranted following additional calibrations. Finally, additional clarification/verification of groundwater information is required.</p>	<p>large size of the wetland catchment areas. Rather, wetlands within the East Sixteen Mile Creek and Mullet Creek catchment areas are provided a 30m buffer, consistent with buffers widths applied to provincially significant wetlands. Supporting documentation (ref. email correspondence Benson-Linhardt, February 17, 2022; meeting with Conservation Halton and Town of Halton Hills April 25, 2022) is included in Appendix A [of the Phase 2 report] for reference.” Responses/clarification to the groundwater-specific questions have been provided earlier in this document.</p>
<p>Following finalization of the significance of natural heritage features within the landscape, a detailed constraints analysis should be completed to inform the ultimate NHS boundary. The current NHS linework shown on Map 6 does not provide sufficient rationalization about the extent of natural heritage features and their associated buffers.</p>	<p>Additional rationalization was provided in the Phase 2 report, including on Map A of that report.</p>
<p>As a food processing facility, MLF's operations are subject to stringent indoor air quality requirements. MLF should request that the municipality require a construction phase dust management plan and that this plan specifically consider MLF's operations.</p>	<p>Dust mitigation during both the construction phase and operations phase is appropriate to prevent, or minimize, nuisance effects. Construction Phase mitigations should include the implementation of best management practices for fugitive dust to prevent or minimize dust effects.</p>
<p>MLF should also request that significant excavating, grading, leveling and earth moving activities take place outside of the crop growing season, where applicable.</p>	

5 Preferred Land Use Plan

Based on the public, landowner and agency input that was received on the two land use options, a draft Preferred Land Use Plan has been created which:

- Locates the new supportive commercial use at the northwest corner of Winston Churchill and Steeles Ave to assist with creating a gateway function for the entrance to the Town and the Employment Area, and to respond to public feedback.
- Indicates that the 8079 Eighth Line (Gilbach) property will be subject to a site-specific designations and policies which identify the permitted uses and the limits of the Natural Heritage System on the property. This allows the Official Plan and zoning amendment applications for 8079 Eighth Line to proceed through the application process in a manner that satisfies the terms of the settlement at the Ontario Land Tribunal (formerly LPAT).
- Uses Option B for the location of the east-west collector road between Eighth and Ninth Lines. The location of the road is approximate and the north-south component of the road can be designed to follow the eastern edge of the NHS as much as possible to minimize fragmentation of land. The exact location road can be refined through the development application process and can be adjusted as long as it meets the Regional intersection separation policies along Steeles Ave.
- Uses Option A for the inclusion of a new north-south collector road east of Tenth Line which aligns with the southern portion of Tenth Line and thereby increases access opportunities in the Secondary Plan area.
- Extends the overlay “Road alignment subject to further review” that applies to the east-west collector road to the east side of Tenth Line as requested by public comment.
- Protects for Highway 413 based on the Corridor Protection Area approved in Regional Official Plan Amendment 49. The Corridor Protection Area in ROPA 49 includes both the Technically Preferred Route which was used as the basis for Corridor Protection Area in the two land use options as well as the Focused Analysis Area so that the Corridor Protection Area is now larger than shown in the two land use options.
- If the Province decides that Highway 413 is not going to proceed and corridor protection is no longer necessary, it is recommended that the Corridor Protection Area designation be replaced with the Prestige Industrial Area designation and, in relevant areas, with the Residential Special Policy Area overlay. As an Official Plan amendment will be required in order to remove the Corridor Protection Area, the new land use designation and overlay will be established at that time.

Map 9 – Draft Preferred Land Use plan



5.1 On-Line Public Survey

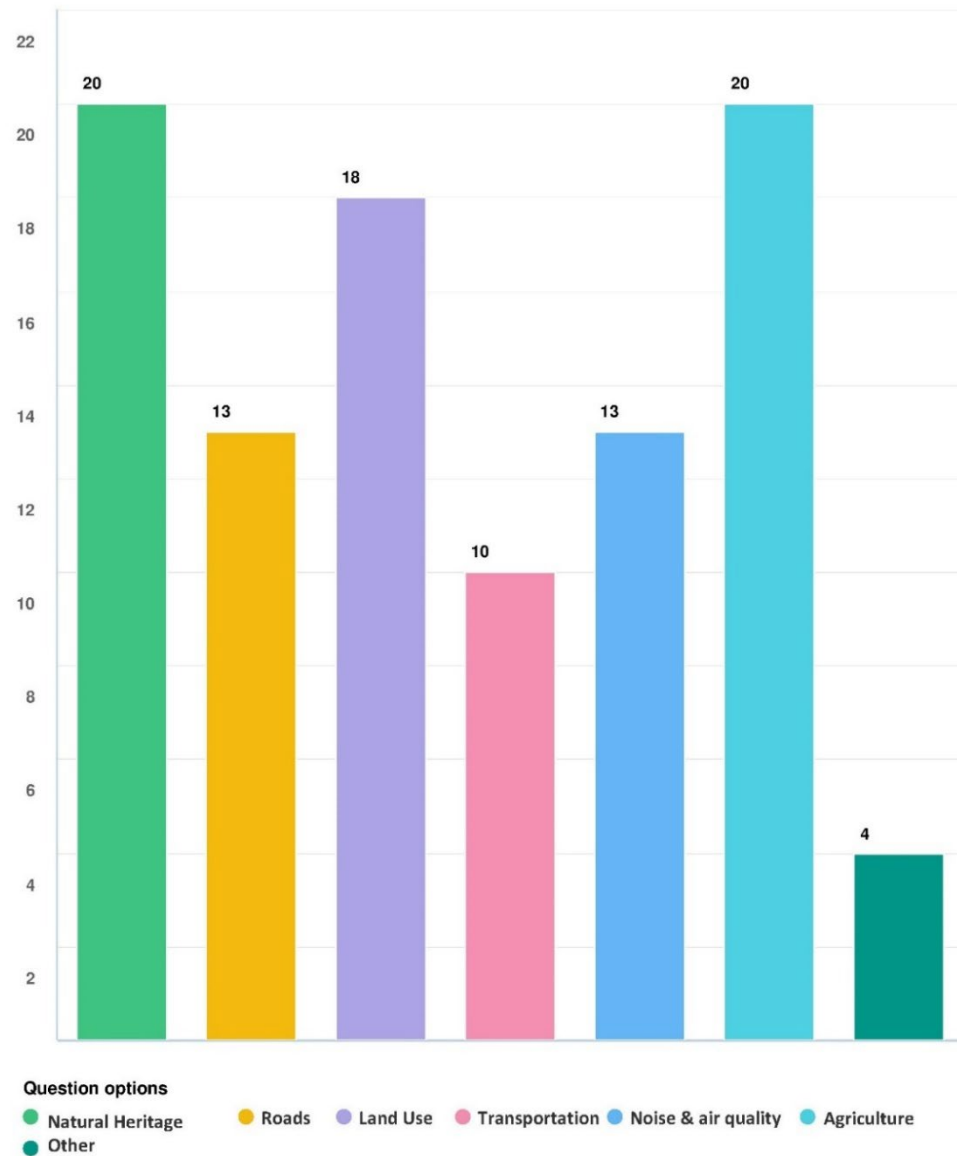
An on-line survey requesting public input on the draft Preferred Land Use Plan was posted on the Town's "Let's Talk Halton Hills" website. The Preferred Land Use Plan used in the on-line survey was based on the Technically Preferred Route for Highway 413 and not on the larger Corridor Protection Area which approved in ROPA 49 after the survey was complete.

The survey results were as follows:

Question 1

What element(s) (i.e. Natural Heritage System, roads, land uses) of the draft Preferred Land Use Plan matter to you most? Select all that apply.

There were 37 respondents with the results as shown on the graph below.



Question 2

What do you like about the draft Preferred Land Use Plan?

Responses included:

- The Natural Heritage System and natural areas are being saved
- Considers agriculture and wildlife in the area
- Increases the commercial tax base
- Adds more roads
- Public input can be provided to the plan
- Extension of water, sewage and natural gas systems to the area
- More jobs

- Industry is located away from the core of Halton Hills
- Its close to Highway 401

Question 3

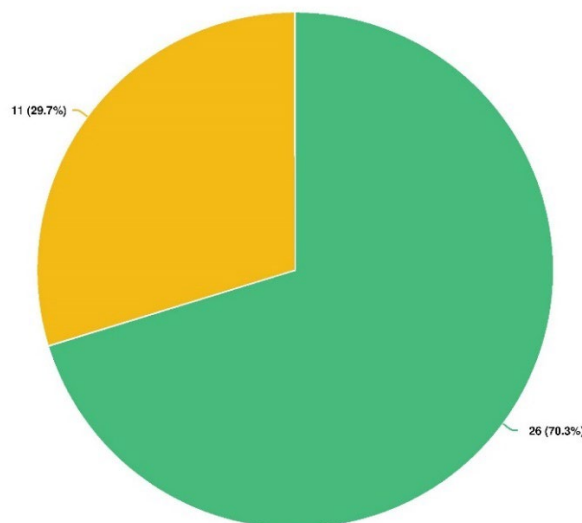
What do you dislike about the draft Preferred Land Use Plan?

Responses included:

- Using farm lands that are needed in the area
- Causing more traffic congestion / roads aren't wide enough
- Warehouses take up a lot of land and don't provide good jobs
- No provision for parkland / additional green space should be added
- The amount of commercial areas
- Creation of additional noise, light and pollution
- Additional jobs will create the demand for more housing causing overpopulation in the Town
- Lacking detail
- Proposed public transit corridor

Question 4

Supportive Commercial Uses such as gas stations, restaurants, and small retail, are being encouraged to locate on the northwest corner of Winston Churchill Blvd and Steeles Ave. Do you agree with the location for the Supportive Commercial Uses?



Question options

Yes No

Question 5

Are there any elements of the Preferred Land Use Plan you would like to see changed?

Responses:

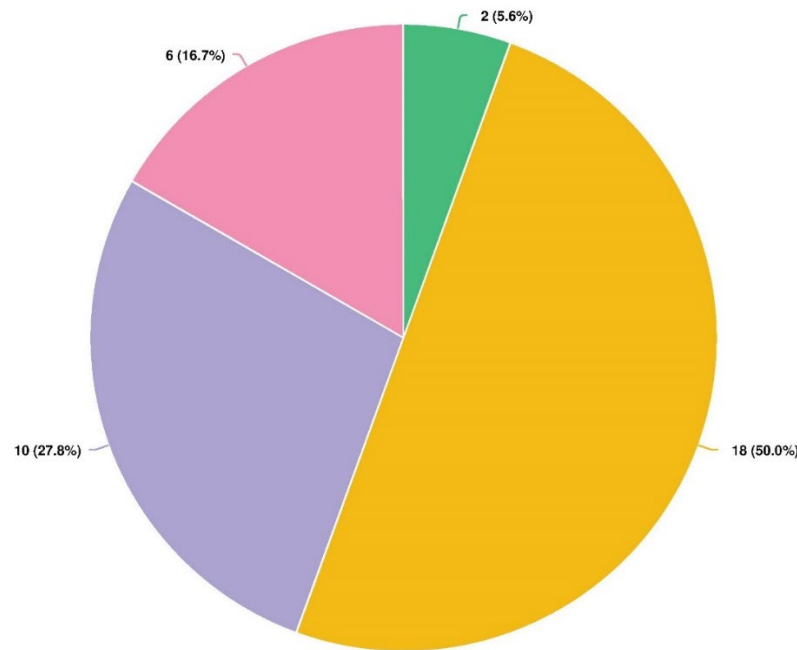
- Add more green space/ park space with art, recreational amenities and trails
- Consider the impacts on the water table
- Add supportive commercial near Steeles Ave and Eighth or Ninth Line
- Prefer small retail not big box stores
- Community centre
- Street lighting to use 3000 kelvin (amber lighting) as opposed 5000+ kelvin blue lighting
- Animal crossings to protect the wildlife
- Preserve as many trees as possible / native plants for landscaping
- Noise buffers walls for future GTAW corridor
- Less asphalt and buildings
- More buffer for residents
- All elements must reflect the town's net-zero emissions goal for 2030

Question 6

To what extent do you agree or disagree with the following statement: The Preferred Land Use Plan is generally consistent with my vision for the future of the Premier Gateway Phase 2B Employment Area.

Responses:

Shown on the graphic below.

**Question options**

● Strongly Agree ● Agree ● Disagree ● Strongly Disagree

Question 7

Do you have additional comments?

Responses:

- It would make sense to have the supportive commercial services closer to Toronto Outlet Mall
- City services (water, sewage, natural gas) should service 9th Line as it will become a gateway to Georgetown with 4 lanes, bike path and a sidewalk.
- Agriculture is very important to the sustainability of any community. Consider an event space or other low-environmental impact business.
- There are too many areas already assigned to be commercial instead of art and heritage development. Natural habitats are important for future generations.
- Add retail businesses that are useful such as a Costco etc. not more nail salons and walk-in clinics.
- Ensure plenty of parking at businesses and that roads are widened for future growth.
- Do not build businesses right up against roadways. Allow for set backs and future significant growth of roadways, plant trees and allow for pedestrian walk paths set back from streets/roadways, in front of business as a buffer.

- Less industry as there is enough traffic. A truck bypass may be necessary.
- Don't pave over everything
- Use native plants and trees with a mixed selection / adopt a tree protection zone
- Require highly energy-efficient buildings, perhaps with solar roofs or rooftop gardens
- Make sure policing is evident
- No water park
- Build up not out
- Consider how employees will get to the area so that it is not car dependent

5.2 Response to Public Comments

The public input received during the on-line survey of the draft Preferred Land Use Plan provides important input as part of the on-going Secondary Plan study. It is recognized that there can be competing objectives when it comes to addressing future development within an area.

- It is recognized that there are concerns with respect to adding employment uses in close proximity to existing residential and agricultural uses and that the development of employment uses will remove lands from agricultural use. These lands have been planned to provide for employment uses for a number of years and are required in order for the Town to meet its employment targets under the Growth Plan. They will also provide an increased tax base to the Town and support the Town's planned /approved residential growth with increased employment opportunities.
- Although warehousing will be a permitted use, the policies in the Secondary Plan will encourage a diversity of industrial development to provide a variety of employment jobs including the Town's target sectors of advanced manufacturing, food and beverage processing, clean technology and renewable energy, research and development, office, major hospitality and tourism.
- Supportive commercial uses are targeted in the Phase 1B Secondary Plan at the corner of Steeles Ave and Trafalgar Rd opposite the Toronto Outlets Mall and will also be permitted within the Prestige Industrial designation in Phase 2B so it is possible for supportive commercial uses to be located in the western side of the study area if there is a demand for it. Based on provincial policy, major retail uses will not be permitted anywhere within the employment area.
- Full municipal services including water, waste water and gas will be introduced to the area as development proceeds.
- All development will be asked to meet the Town's Green Development Standards which address a variety of sustainable practices including the use of native landscaping and tree preservation.

- The Recreation and Parks Department has not identified a need for additional active parkland in this area; however, a trail system along the edge of the Natural Heritage System is recommended and will provide for passive recreational opportunities.
- The traffic congestion that currently occurs in the study area is primarily a result of traffic from outside of the study area travelling through it. Additional roads are proposed within the study area and Highway 401 has just been widened. If Highway 413 proceeds, it is also expected to affect traffic volumes and patterns. Various mitigation measures have been identified for service delays at the intersections within the study area. The Region is undertaking a Master Transportation Plan update which will address transportation improvements.
- Policies in the Secondary Plan will address noise, air quality and lighting matters and site-specific studies will be required at the time of development applications to address and mitigate impacts on existing sensitive uses.
- Development in the area will be permitted up to a height of 10 storeys for hotels and office buildings and 8 storeys for other development with setbacks in order to allow for more intensive development where appropriate.
- Heritage sites have been identified and policies will be included in the Secondary Plan that address heritage preservation in addition to those that currently exist in the Official Plan.
- Parking requirements are addressed in the Zoning By-law and the review of development applications will address parking on a more site-specific basis to ensure that there is sufficient parking without providing an excess of parking.
- It is noted that determining the appropriateness of development applications on individual sites is not part of this study.

6 Next Steps

The reports addressing both transportation, and water and waste water servicing continue to be refined based on on-going feedback and discussions. The Phase 3 Report of the Scoped Subwatershed Study is in the process of being prepared and will incorporate comments on the Phase 2 report and address the implementation and monitoring components of the Subwatershed work. The work on these three reports is sufficiently advanced that they are not expected to result in any substantive changes to the Preferred Land Use Plan.

The Preferred Land Use Plan is being used as the basis for creating the draft Secondary Plan which will be subject to a round of public and committee meetings. The information received from the public and technical input will be used to refine the Secondary Plan and will result in a recommended Secondary Plan.