

Highway 401 Improvements from Steeles Avenue in Milton westerly to 1.5 km west of the Halton-Wellington Boundary

**Preliminary Design & Class Environmental
Assessment Study (GWP 2030-23-00)**

**Town of Milton Council Meeting
September 8, 2025**



Agenda

1. Project Overview
2. Study Process and Schedule
3. Traffic Review
4. Alternatives
 - a) Highway 401 Mainline Widening
 - b) First Line Nassagaweya Bridge Replacement
 - c) Guelph Line Interchange Improvements
5. Next Steps

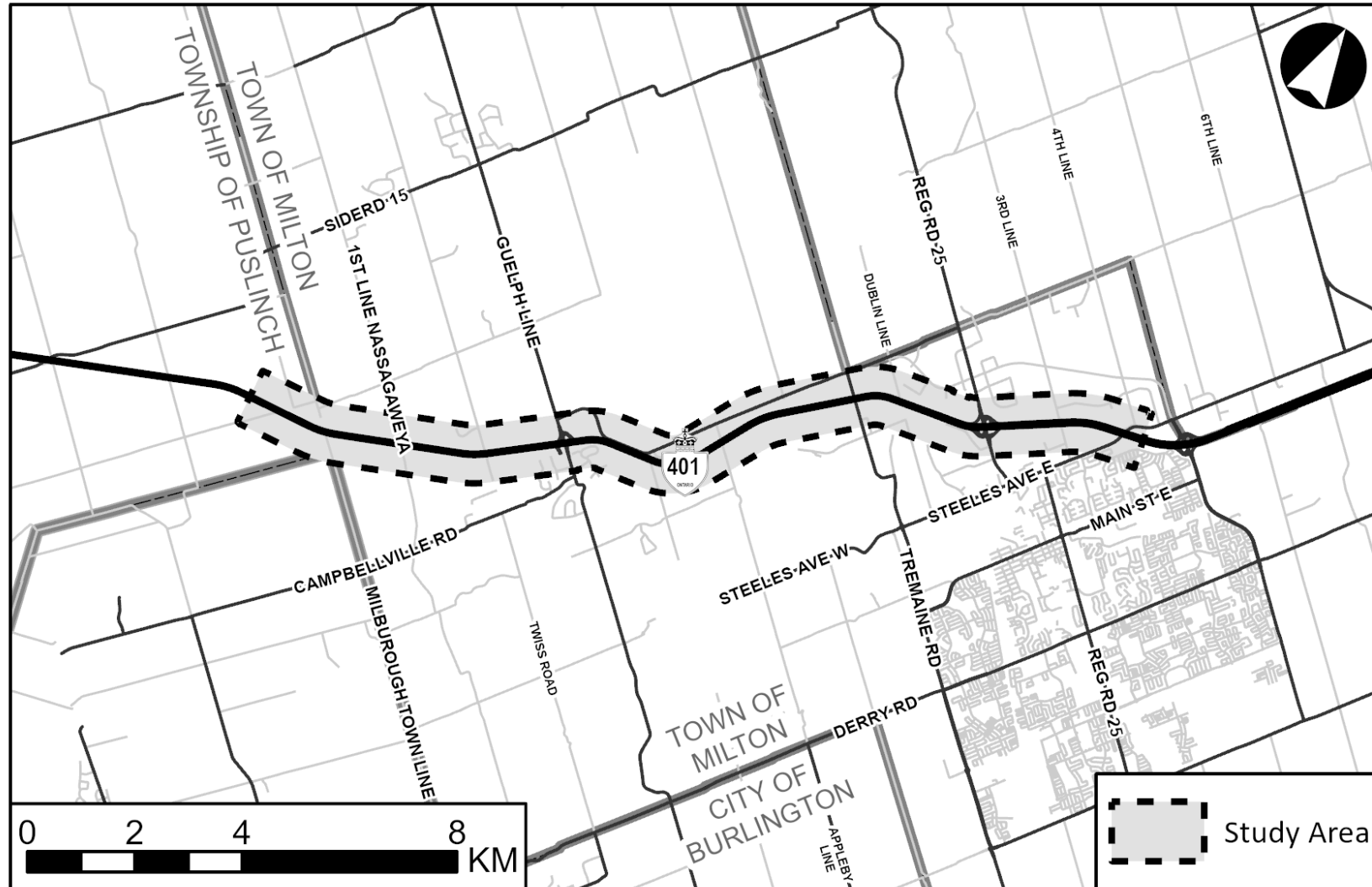
Project Overview

MTO has retained AECOM to complete the Preliminary Design and Class Environmental Assessment (EA) Study for Highway 401 Improvements from Steeles Avenue in Milton, westerly to 1.5 km west of the Halton-Wellington boundary.

The Project's key objectives are to address existing operational issues on Highway 401 throughout the Project limits, address future capacity needs of this Highway 401 corridor, and minimize the impacts of the Project on the natural, socio-economic, and cultural environments.

Improvements that will be investigated as part of this Project include highway expansion to provide additional capacity (i.e., widening), High-Occupancy Vehicle (HOV) lanes, carpool lot, bridge, lighting / illumination, drainage, and interchange modifications, and accommodating transit and active transportation plans.

Project Overview – Study Area



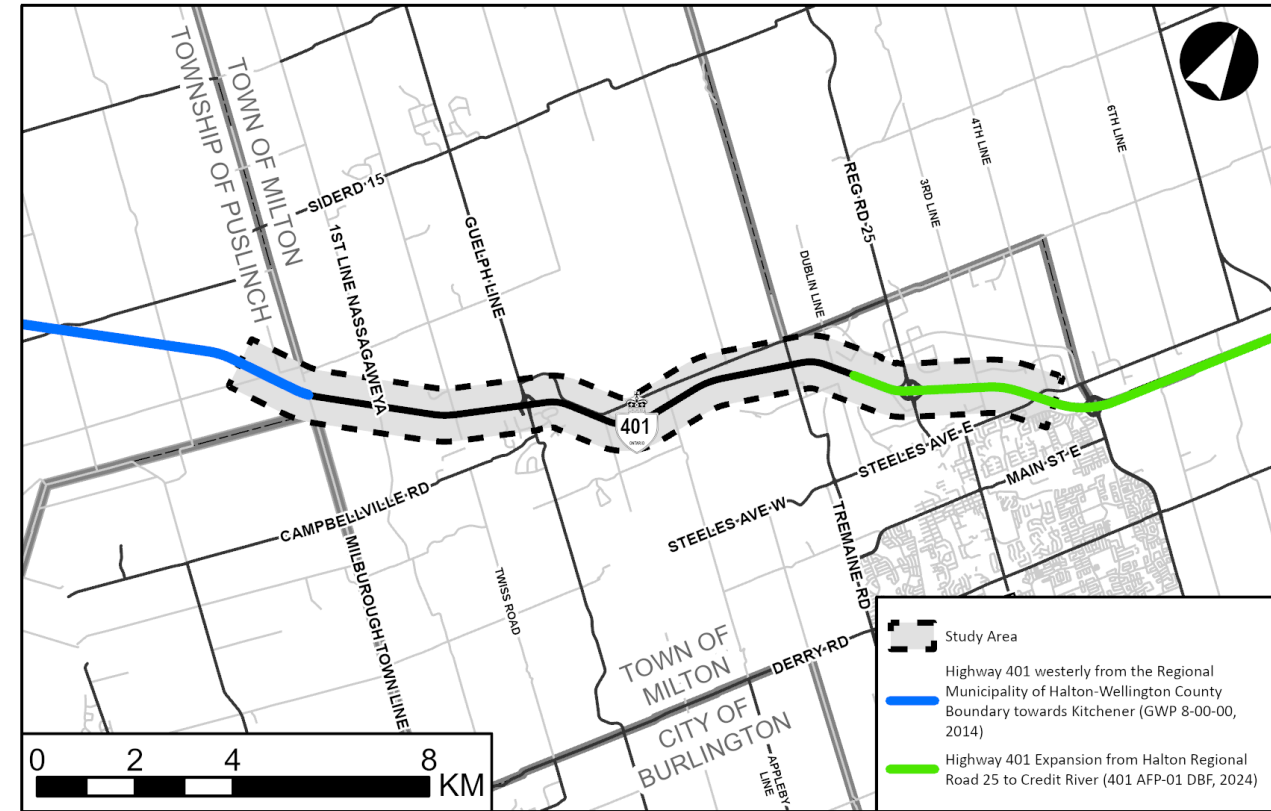
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Study Area

Project Overview – Adjacent MTO Projects

Previous MTO projects in this area include:

1. Highway 401 from the Halton-Wellington County Boundary towards Kitchener (2014).
 - Approved Preliminary Design and Class EA Study to expand Highway 401 from six lanes to 10 lanes including HOV lanes.
2. Highway 401 from Regional Road 25 to Credit River (2024).
 - Recently constructed Highway 401 expansion from six lanes to 10 or 12 lanes including HOV lanes.



Adjacent MTO Projects

The Highway 401 Milton Project is a key component of the broader framework of MTO projects necessary to improve the movement of people and goods along the critical Highway 401 corridor through this area.

Study Process

This Project is following the approved planning process for a Group 'B' project under the Ontario Ministry of Transportation Class Environmental Assessment for Provincial Transportation Facilities (amended 2000).

Public Information Centre (PIC) 1 occurred in June 2025. A second PIC will be held during this Study to provide interested parties with the opportunity to discuss the Study and provide input to the Project Team.

The environmental studies that will be completed and summarized in a Transportation Environmental Study Report (TESR)* include:

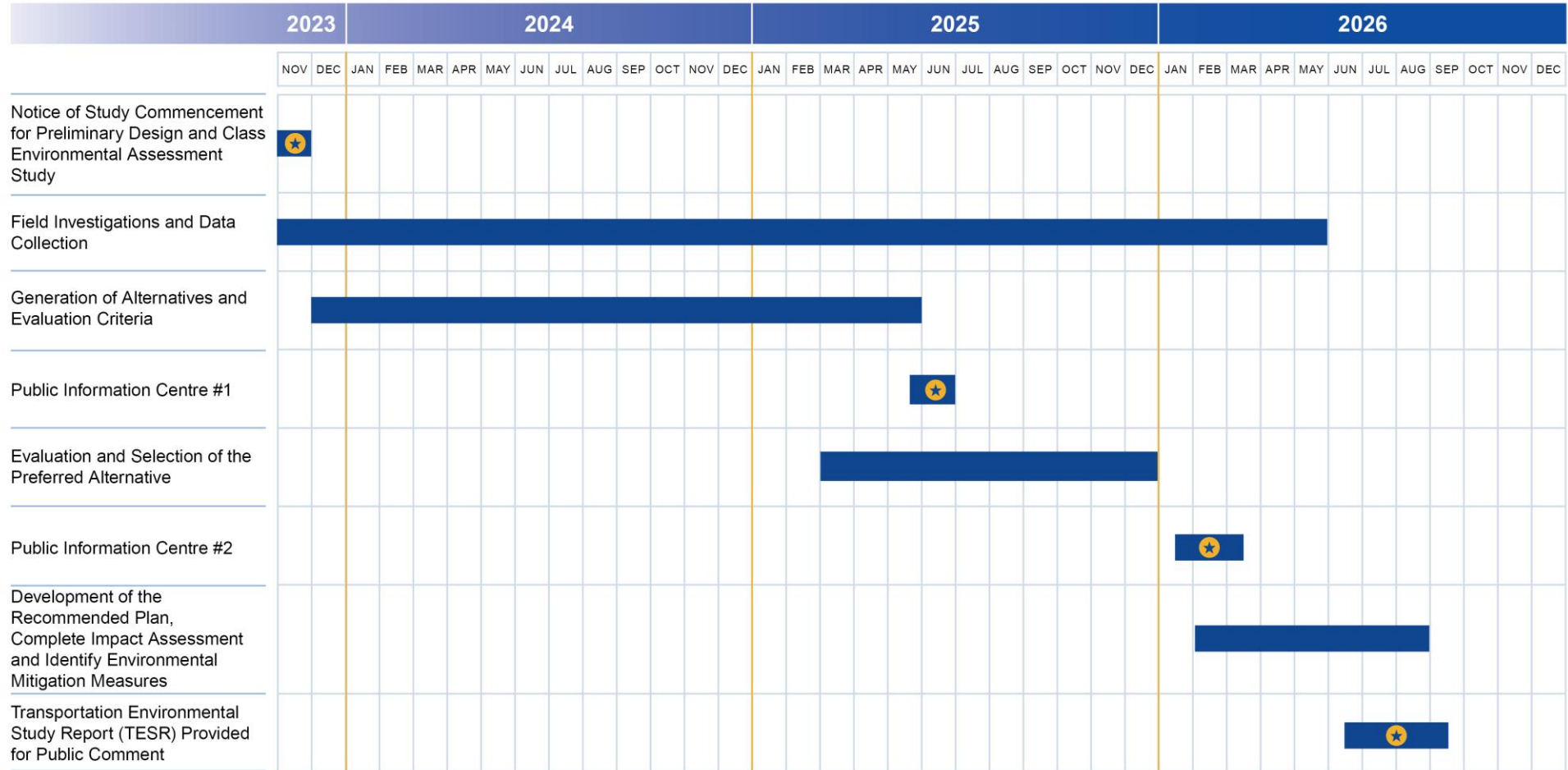
- Fish and fish habitat
- Terrestrial ecosystems
- Noise assessment
- Land use/designated areas
- Agricultural assessment
- Built heritage and cultural heritage landscapes
- Archaeology
- Air quality
- Groundwater
- Surface water
- Contaminated properties and waste management
- Landscape composition
- Snow drift
- Erosion and sediment control

**Note: The TESR will be made available for public comments at the end of this study.*



Study Schedule

Study Schedule



We Are Here

* Schedule subject to change and pending results of field work.

Highway 401 Traffic Capacity Review

- Traffic projections indicate the need for eight General Purpose Lanes and two HOV lanes within the Study Area to accommodate the future demand and align with Ontario's plan for a connected network of managed lanes.



Existing Traffic Conditions



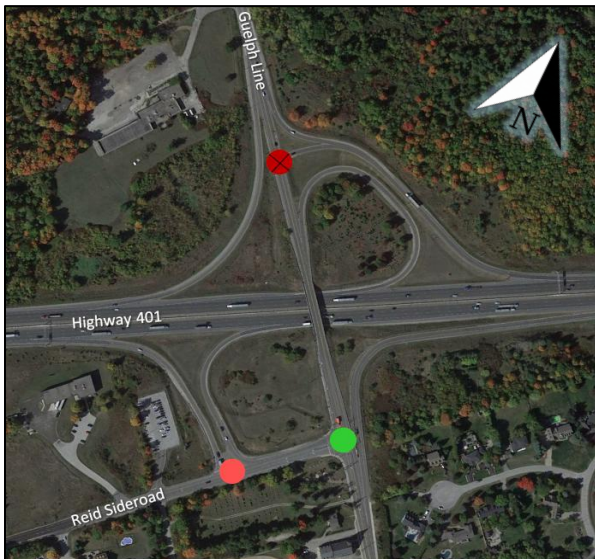
Future (2041) Do-Nothing Traffic Conditions

Highway 401 Traffic Conditions at Guelph Line Interchange

Guelph Line









Existing



Future (2041) Do-Nothing

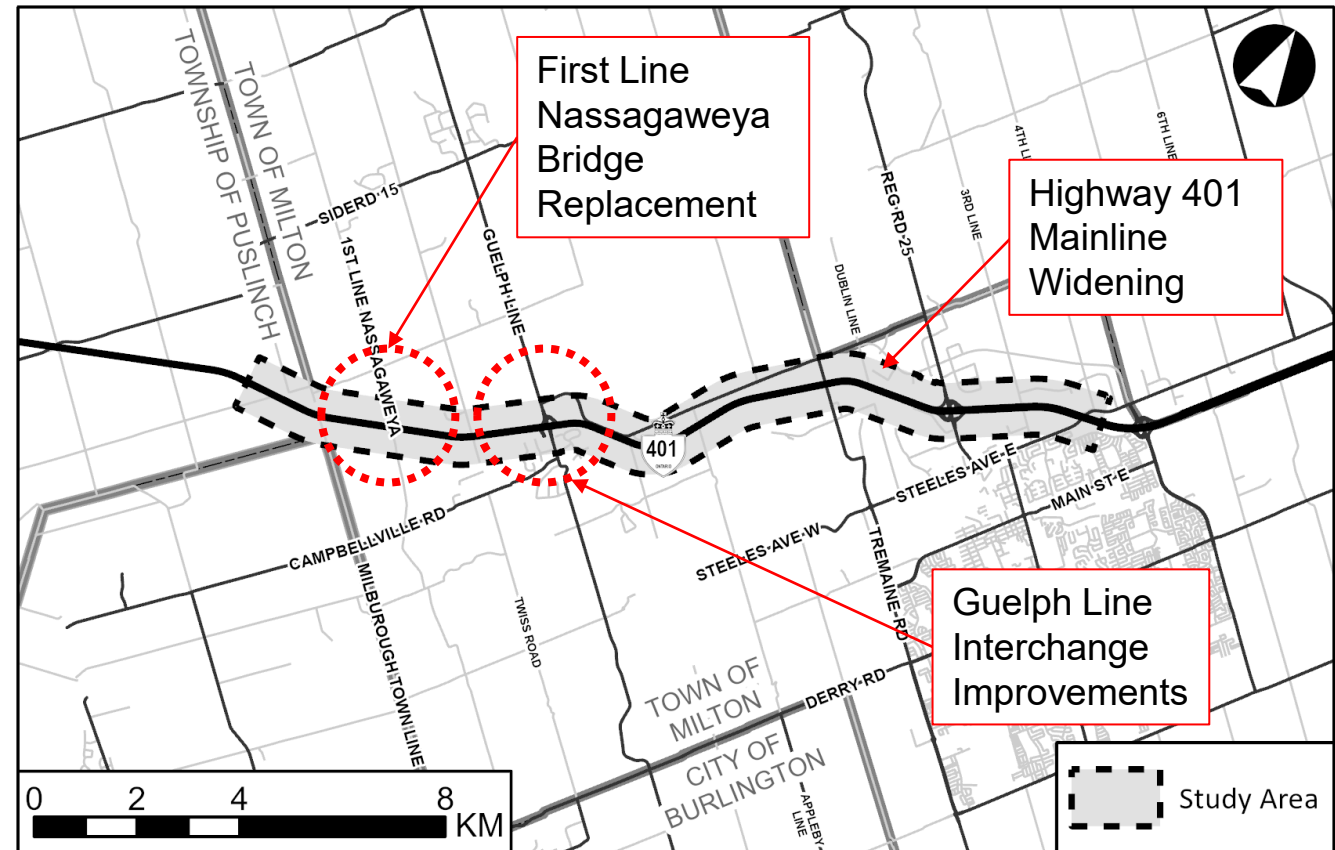
Legend

 Level of Service A	 Level of Service B	 Level of Service C
Free flow	Stable flow (slight delays)	Stable flow (acceptable delays)
 Level of Service D	 Level of Service E	 Level of Service F
Approaching unstable flow (tolerable delay)	Unstable flow (intolerable delay)	Forced flow (congested and queues fail to clear)

Alternatives

To address the Project's key objectives, the Project Team has developed alternatives for the below components:

- Highway 401 mainline widening.
- First Line Nassagaweya bridge replacement (to accommodate Highway 401 widening).
- Guelph Line interchange improvements.



Study Area – Alternatives

Mainline Widening – Alternatives

Existing

Alt. A: Widen About Existing Centre-Line*

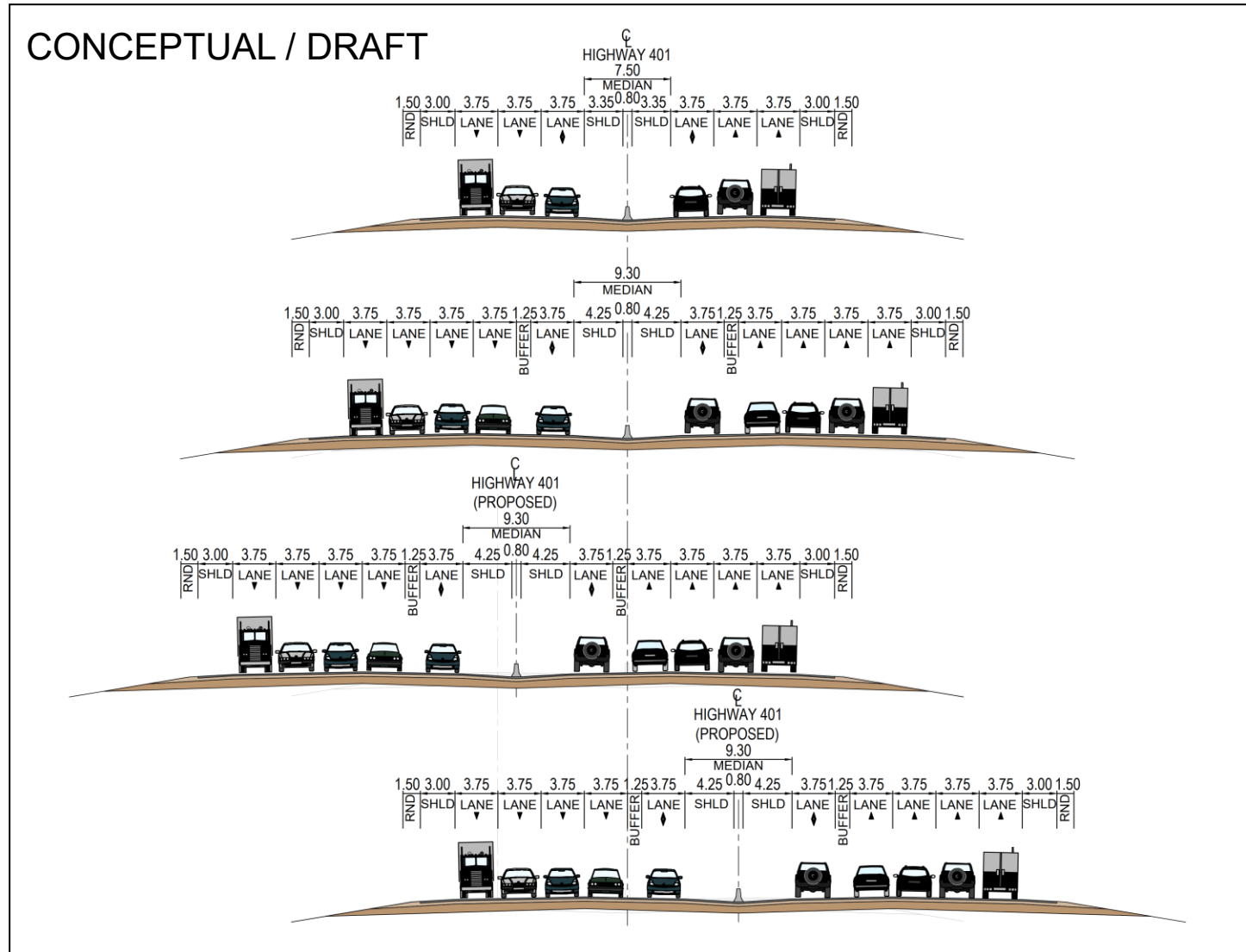
- Generally expands the highway footprint equally on both sides.

Alt. B: Widen to North*

- Generally expands the highway footprint to the north.

Alt. C: Widen to South*

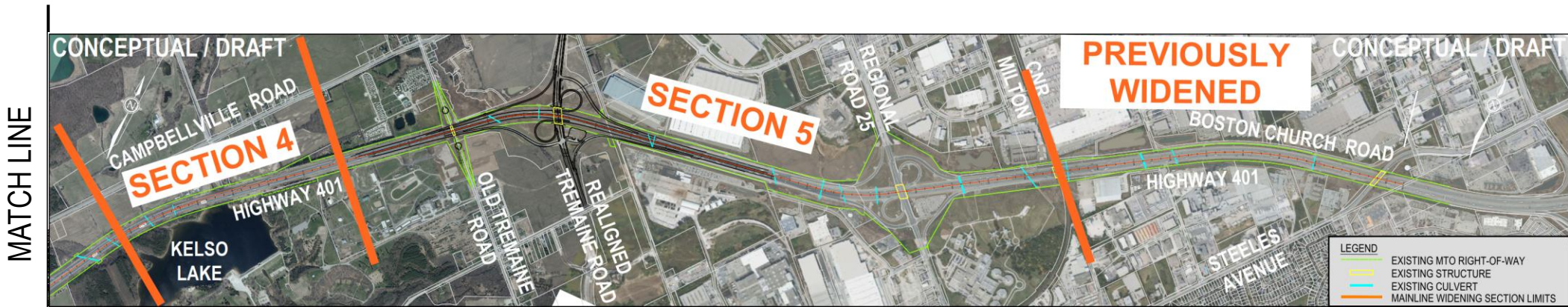
- Generally expands the highway footprint to the south.



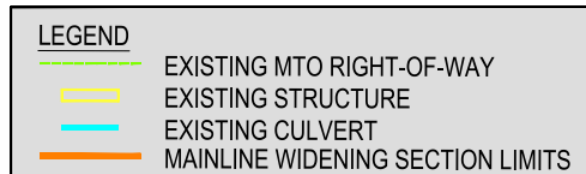
Mainline Widening Typical Sections

*Note: Generalized approach. Localized adjustments may be required during design.

Mainline Widening – Evaluation Sections



Notes: The new Tremaine Road bridge and interchange is currently in construction. Property requirements subject to further design.



First Line Nassagaweya Bridge Replacement – Alternatives

LEGEND	
	PROPOSED HIGHWAY 401
	PROPOSED ALTERNATIVE
	PROPOSED STRUCTURE
	PROPOSED ALTERNATIVE RIGHT-OF-WAY
	EXISTING MTO RIGHT-OF-WAY
	EXISTING PROPERTY LINE
	EXISTING STRUCTURE



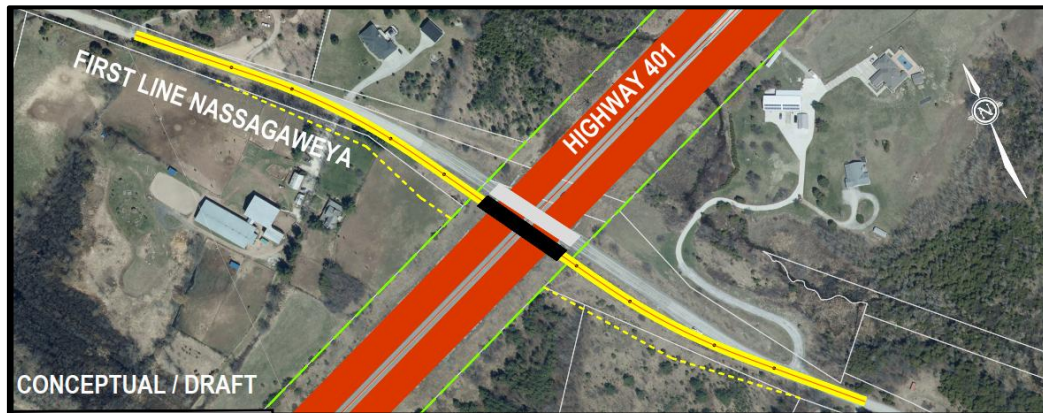
Alt. A – Replace on Existing Alignment

- Minimizes expansion of roadway footprint, requires full closure of traffic on First Line during construction.



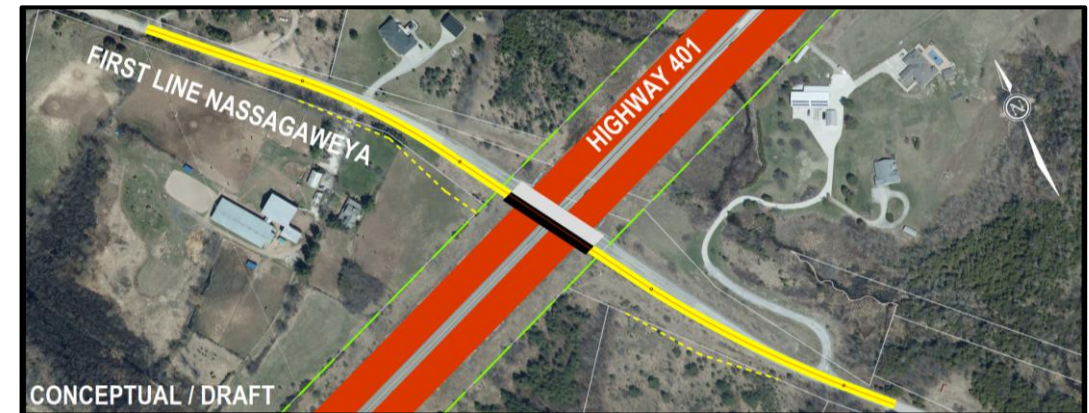
Alt. B – Realignment to the East

- Expands roadway footprint to the east and provides the opportunity to maintain two-way traffic on First Line during majority of construction.



Alt. C – Realignment to the West

- Expands roadway footprint to the west and provides the opportunity to maintain two-way traffic on First Line during majority of construction.

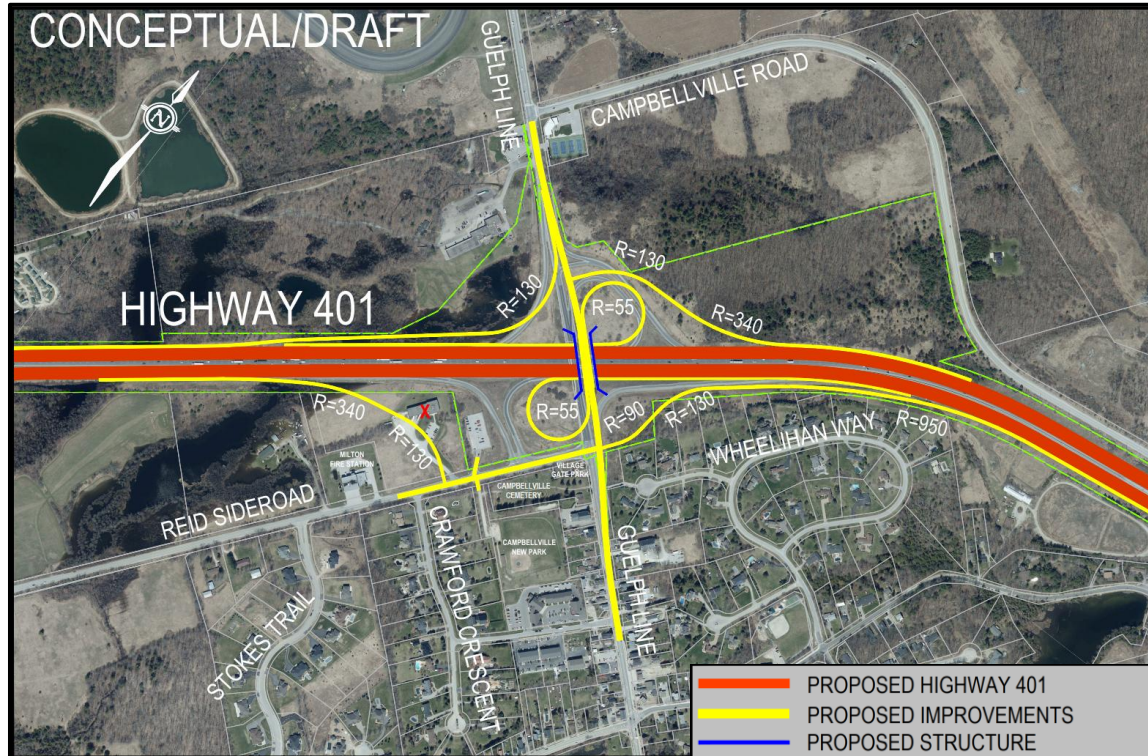


Alt. D – Minor Realignment to the West

- Limits expansion of roadway footprint, and traffic is reduced to a single lane (alternating direction controlled by signal) to allow for staged bridge replacement.

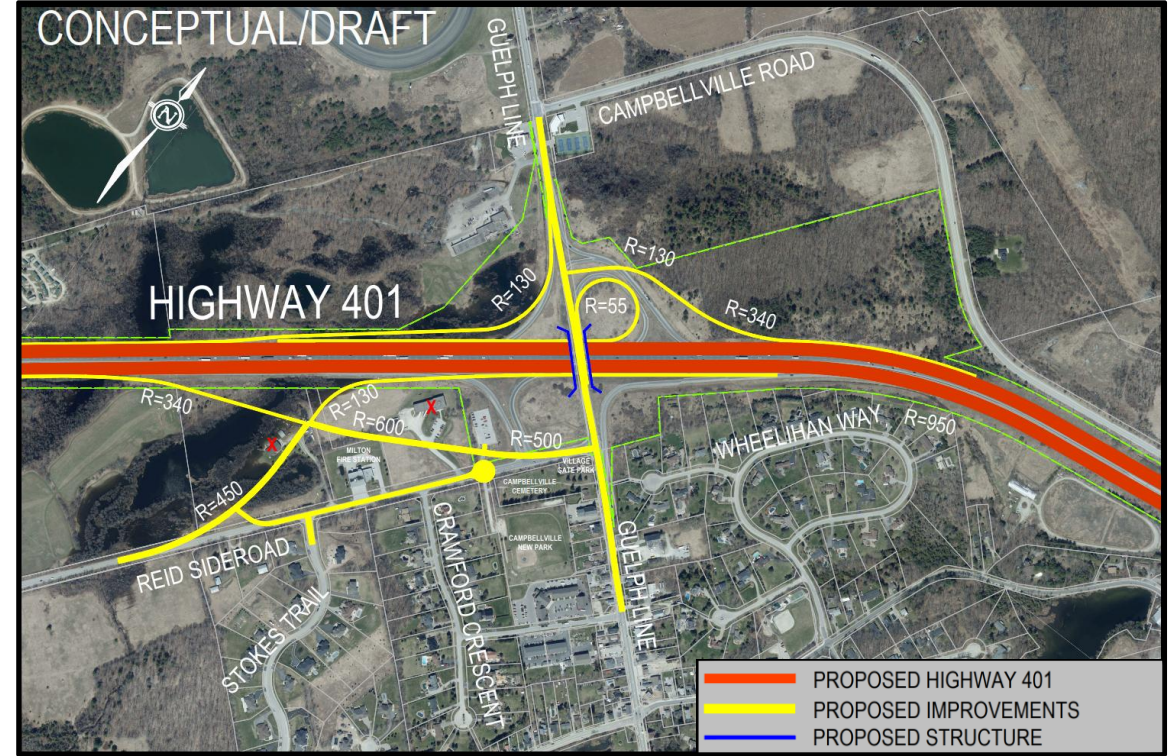
Guelph Line Interchange Improvements – Alternatives

Alt. A – Parclo A4 Modified with Buttonhook (Minor Highway 401 Realignment)



- Similar ramp configuration as existing, limits interchange footprint expansion.
- Indirect access from eastbound off-ramp to Guelph Line.
- Direct northbound and southbound access from Guelph Line to Highway 401.
- Direct access from Reid Sideroad to Guelph Line.

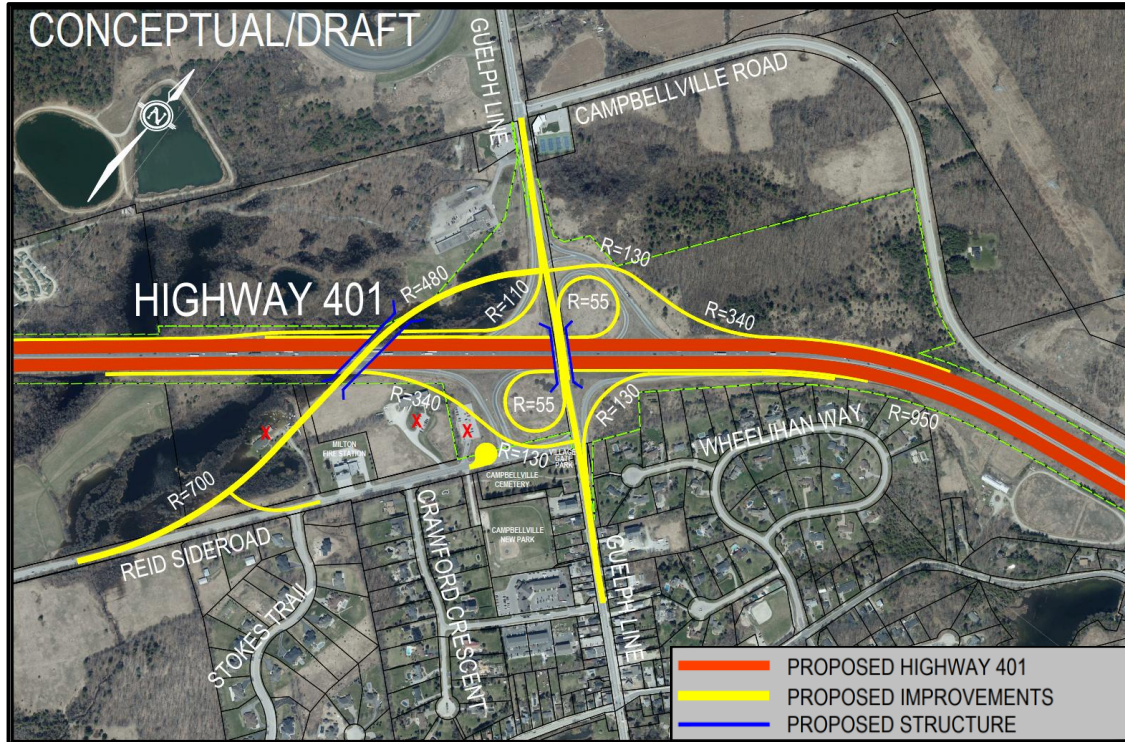
Alt. B – Parclo A4 / Modified Diamond (Minor Highway 401 Realignment)



- Non-typical ramp configuration, expands footprint to the southwest.
- Indirect access from eastbound off-ramp to Guelph Line.
- Direct northbound and indirect southbound access from Guelph Line to Highway 401.
- Indirect access from Reid Sideroad to Guelph Line. Increases separation between Reid Sideroad traffic and community.

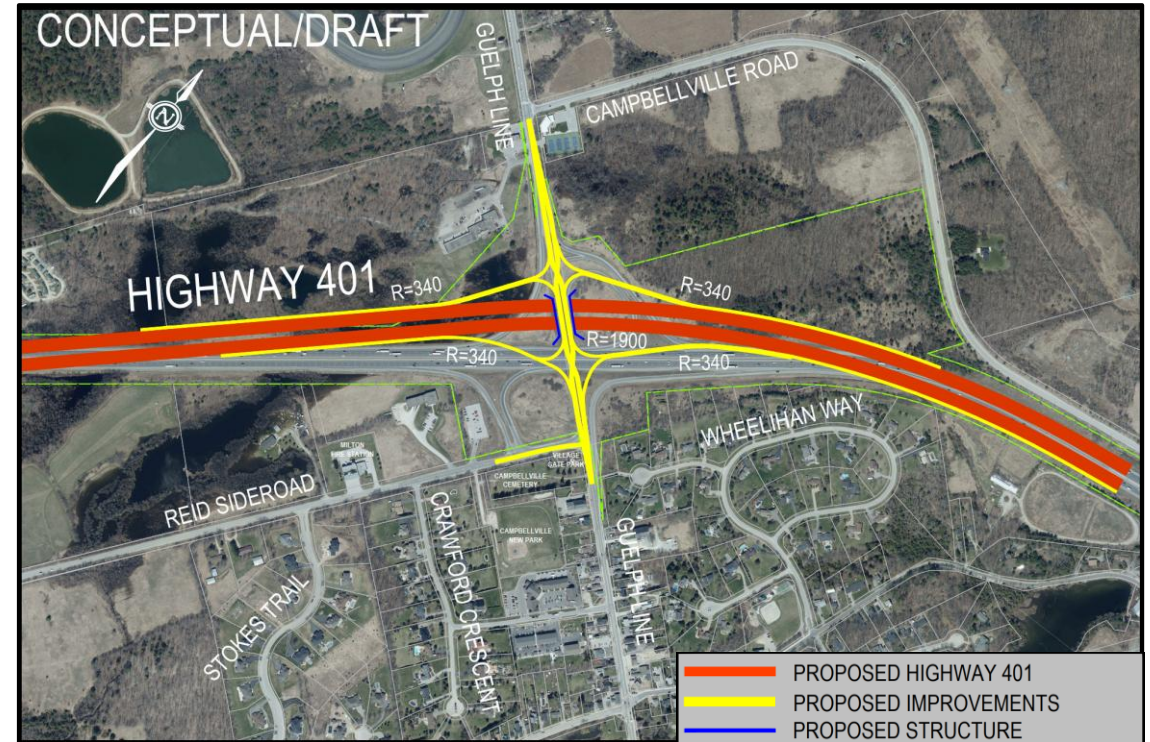
Guelph Line Interchange Improvements – Alternatives

Alt. C – Parclo A4 with Reid Sideroad North Realignment (Minor Highway 401 Realignment)



- Common ramp configuration with a realigned Reid Sideroad, expands interchange footprint to the northwest and southwest.
- Direct access from eastbound off-ramp to Guelph Line.
- Direct northbound and southbound access to Highway 401.
- Direct access from Reid Sideroad to Guelph Line. Increases separation between Reid Sideroad traffic and community.

Alt. D – Diverging Diamond Interchange (Major Highway 401 Realignment)



- Uncommon ramp configuration, expands footprint of interchange and highway to the northwest and northeast.
- Requires new alignment of Highway 401.
- Direct access to/from Guelph Line and Highway 401.
- Direct access from Reid Sideroad to Guelph Line.

Evaluation Criteria and Process

The Project Team will use the evaluation criteria to the right to assess the design alternatives for:

- Highway 401 mainline widening from six to ten lanes including HOV lanes.
- First Line Nassagaweya bridge replacement (to accommodate Highway 401 widening).
- Guelph Line interchange improvements.

Evaluation Component	Evaluation Criteria
Transportation and Cost Considerations	<ul style="list-style-type: none"> • Traffic Operations and Safety • Geometrics • Constructability • Cost • Utility Impacts
Natural Environments	Impacts To: <ul style="list-style-type: none"> • Terrestrial Environment (i.e., wildlife habitat, woodlots, and wetlands) • Species at Risk • Fish and Fish Habitat • Groundwater • Surface Water
Socio-Economic Environments	Impacts To: <ul style="list-style-type: none"> • Land Use • Traffic Noise • Air Quality • Aesthetics • Property Impacts • Agricultural Operations • Soils Management
Cultural Environments	Impacts to: <ul style="list-style-type: none"> • Archeological Resources • Built Heritage and Cultural Heritage Landscapes

Next Steps

- Project Team is currently responding to comments on PIC 1 (comments and questions regarding traffic noise, additional consultation opportunities, design alternatives, property, traffic and EA Study and project timing).
- Review Council comments.
- Assess and evaluate alternatives using the evaluation criteria presented in PIC 1 to select the Preferred Alternative.
- Identify preliminary property requirements and environmental impacts of the preferred Alternative.
- Present the Preferred Alternative at PIC 2 (tentatively scheduled for early 2026).
- Ongoing consultation with Indigenous communities, the public, stakeholders, municipalities, and government agencies throughout the Study.



**Thank You.
Any Questions?**