

Highway 401 Belleville to Kingston

Preliminary Design and Class Environmental Assessment:

- Study #1 (GWP 4022-21-00)
- Study #2 (GWP 4016-21-00)
- Napanee River Bridge Improvements (GWP 4040-20-00)

Public Information Centre #1

March 31, 2026



Welcome to Public Information Centre #1

The purpose of this Public Information Centre (PIC) is to present:

- Project overview and the process being followed.
- The need for the improvements.
- Existing conditions.
- Alternatives being considered:
 - Bridge rehabilitations/replacements.
 - Interchanges.
 - Protecting for future Highway 401 improvements for six and eight lanes.
- Evaluation process and criteria.
- Next steps.

We are here to listen to your input and answer your questions about the study. Please let us know if you require accommodation to participate.



Sign in



Chat with the Project Team



Fill out a comment sheet



View the displays at www.hwy401bellevilletokingston.ca



Contact us any time at:
projectteam@hwy401bellevilletokingston.ca
or 1-866-753-2640

Project Overview

The Ontario Ministry of Transportation of (MTO) has retained AECOM to undertake two Planning, Preliminary Design and Class Environmental Assessment (EA) Studies to address current and future transportation needs by developing a plan for the rehabilitation and/or replacement of various bridges and culverts, interchange improvements, and establishing the footprint of Highway 401 for the interim six and ultimate eight lanes of Highway 401, between the City of Belleville and the City of Kingston.

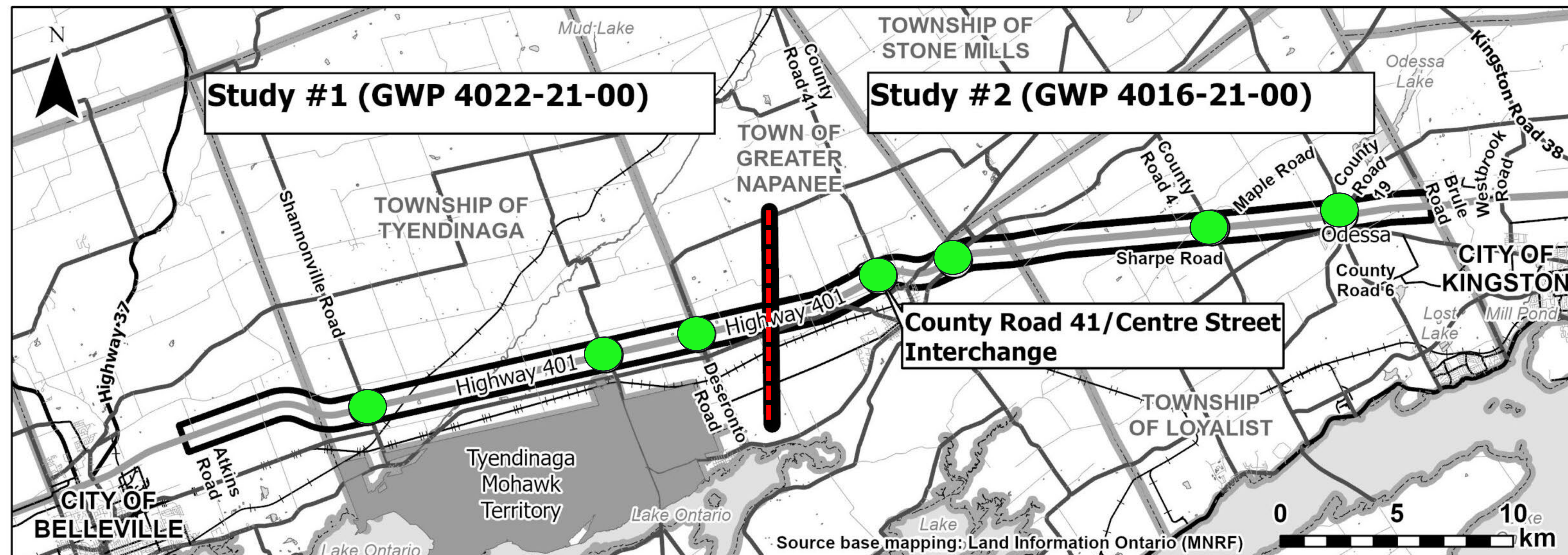
The Project is divided into two studies:

Study #1 (GWP 4022-21-00)

- Includes Highway 401 from 4.3 km east of Highway 37 to 5 km west of County Road 41 / Centre Street

Study #2 (GWP 4016-21-00)

- Includes Highway 401 from 5 km west of County Road 41 / Centre Street to 8 km west of Kingston Road 38.



Key Study Components



Key study components include:

- Environmental studies to better understand the natural, socio-economic and cultural heritage aspects. This helps us identify existing conditions, potential impacts, and the best ways to avoid or reduce them.
- Analyzing traffic patterns to understand how the corridor is used today and how it might function in the future.
- Inspecting bridges and culverts to determine if they need to be rehabilitated or replaced to ensure safety and long-term durability.
- Reviewing drainage and stormwater systems to support the proposed improvements and solve existing water-related issues.
- Reviewing electrical systems, including illumination upgrades, modifications to traffic signals, and needs at commuter parking lots.
- Updating geotechnical work, like studying foundations and pavement, to help shape the early design.
- Exploring how construction might be sequenced and staged to keep things running as smoothly as possible during the work.

We are looking at ways to improve interchanges along the corridor so they can accommodate necessary bridge replacements, accommodate the future highway footprint, handle future traffic volumes and meet today's design standards. This includes improvements at the following interchange locations:

Study #1:

- Highway 401 / Shannonville Road
- Highway 401 / Marysville Road
- Highway 401 / Deseronto Road

Study #2:

- Highway 401 / County Road 41 and Palace Road (Interchange Designs per approved PD/EAs)
- Highway 401 / Camden East Road (County Road 4)
- Highway 401 / Wilton Road (County Road 6)

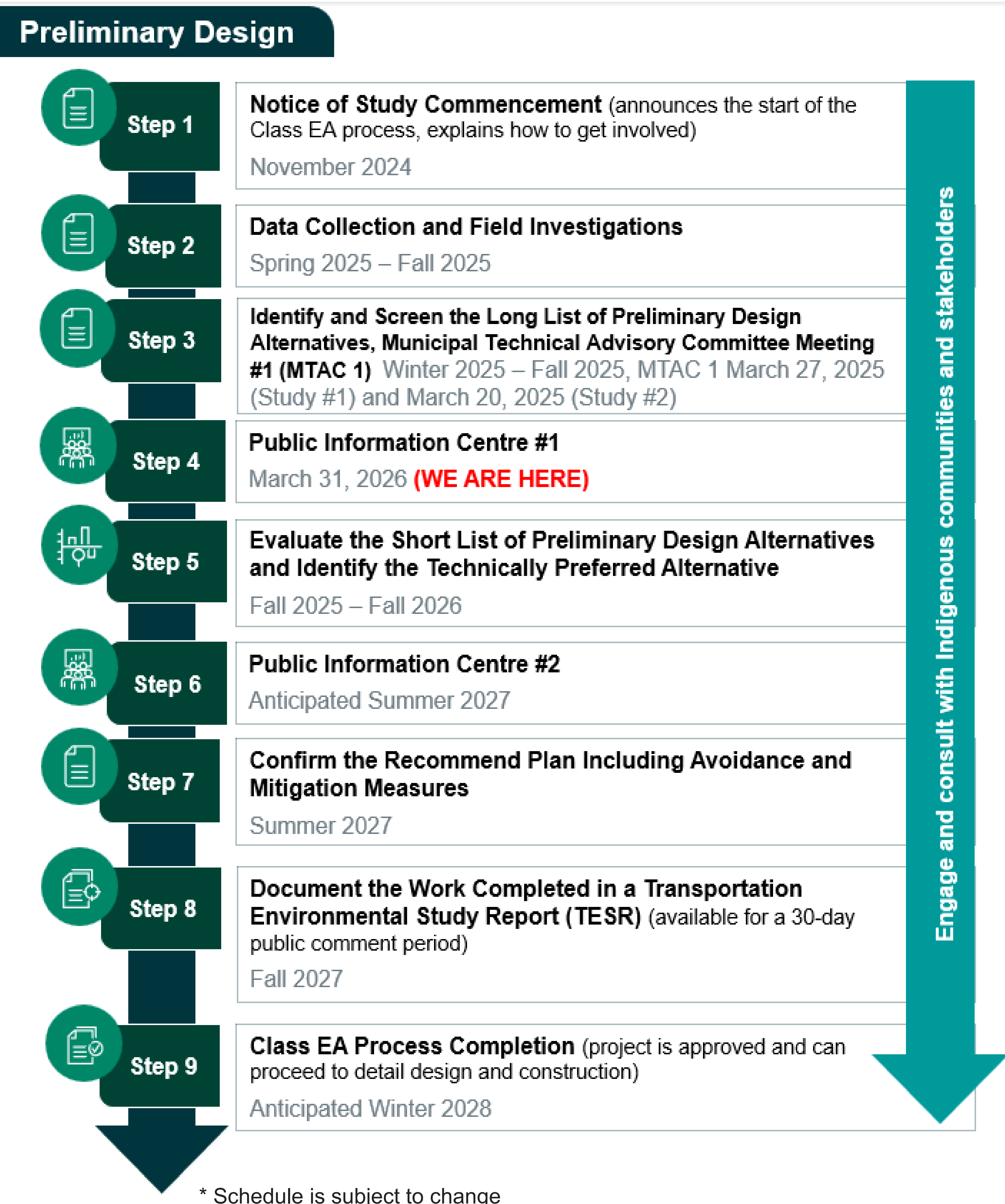
Class Environmental Assessment Process

This study is being undertaken as a Group ‘B’ project under the 2024 Class Environmental Assessment (EA) for Provincial Transportation Facilities and Municipal Expressways, which is an approved process for highway planning, design and construction projects.

Group ‘B’ projects involve modifications to access or the addition of capacity to existing provincial transportation facilities or municipal expressways.

The consultation plan includes:

- Engagement with Indigenous communities, municipal staff and Council, emergency service providers, regulatory and review agencies, transit and rail operators, and the public (including directly impacted property owners).
- Outreach via mail, website, toll-free telephone line, email, flyers, newspaper notices, and meetings.



Class Environmental Assessment Process Updates

- In 2019, modernization of the MTO Class EA (2000) was initiated to optimize the Class EA process by removing redundancies and expediting planning to facilitate a more streamlined implementation process.
- Amendments to the Class EA were approved in December 2023 and February 2024, and the Class EA was renamed the ***Class EA for Provincial Transportation Facilities and Municipal Expressways (2024)***.
- As part of the amendments, the EA process is now complete at the end of Preliminary Design, following the 30-day comment period for the Notice of Completion.
- As part of the new MTO Class EA (2024), Preliminary Design is the primary opportunity to provide feedback on the project.
- After Preliminary Design, opportunities for public stakeholder engagement on this project will be limited. However, the ministry will continue to engage with Indigenous communities and remains committed to fulfilling its Duty to Consult.
- At the end of the Preliminary Design Study, a **Transportation Environmental Study Report (TESR)** will be prepared to document the work completed and will be available for a 30-day public comment period.

Class Environmental
Assessment for Provincial
Transportation Facilities
and Municipal
Expressways

2024

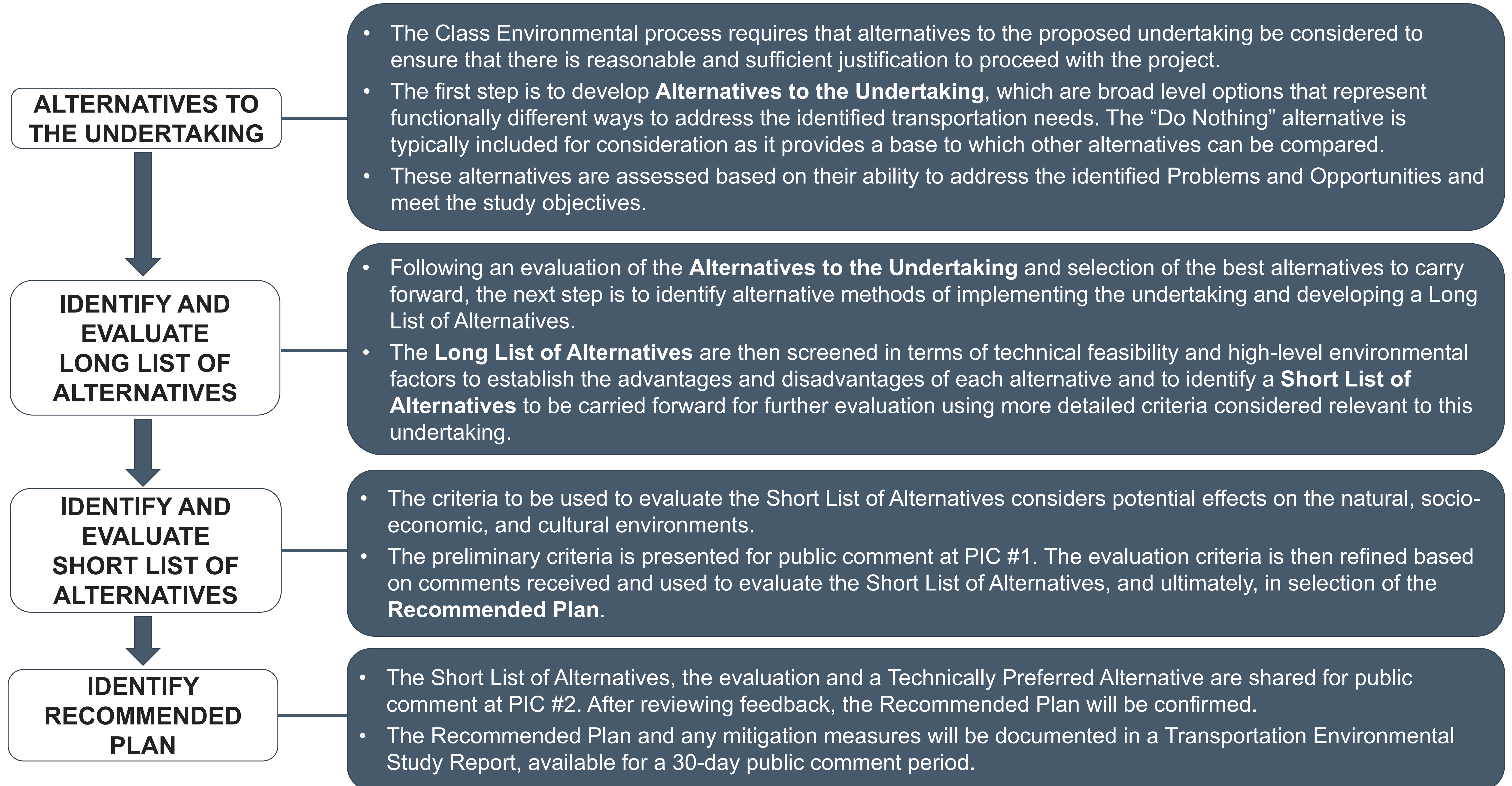
Ontario

Problems and Opportunities

Below is a summary of the Problems and Opportunities identified with the Study Area.






Problems	Opportunities
<ul style="list-style-type: none">• Many of the bridges and culverts in the study area are nearing the end of their service life and will require rehabilitation or replacement in the foreseeable future.• Construction staging along Highway 401 to facilitate rehabilitation or replacement of the structures while minimizing closures and impacts to the public.• It is increasingly difficult to undertake routine maintenance of highway infrastructure without significant impacts to traffic.• The existing interchanges require improvements to accommodate the structural rehabilitations or replacements, the ultimate footprint of Highway 401, and to address the current and future operational and geometric conditions.• There is a need to identify the footprint of a widened Highway 401, particularly at the interchanges, to ensure that the bridge and interchange designs permit the network to continue operating efficiently into the future and to address commercial and residential development pressures along the corridor.	<ul style="list-style-type: none">• Establishing the interim and ultimate footprint of Highway 401 now will allow the structural rehabilitations and replacements to be implemented efficiently and cost-effectively, while maintaining the safe operation of the highway.• Identifying the future interchange configurations will allow MTO to manage future development and access.

Evaluation Process and Selection of the Recommended Plan



Alternatives to the Undertaking

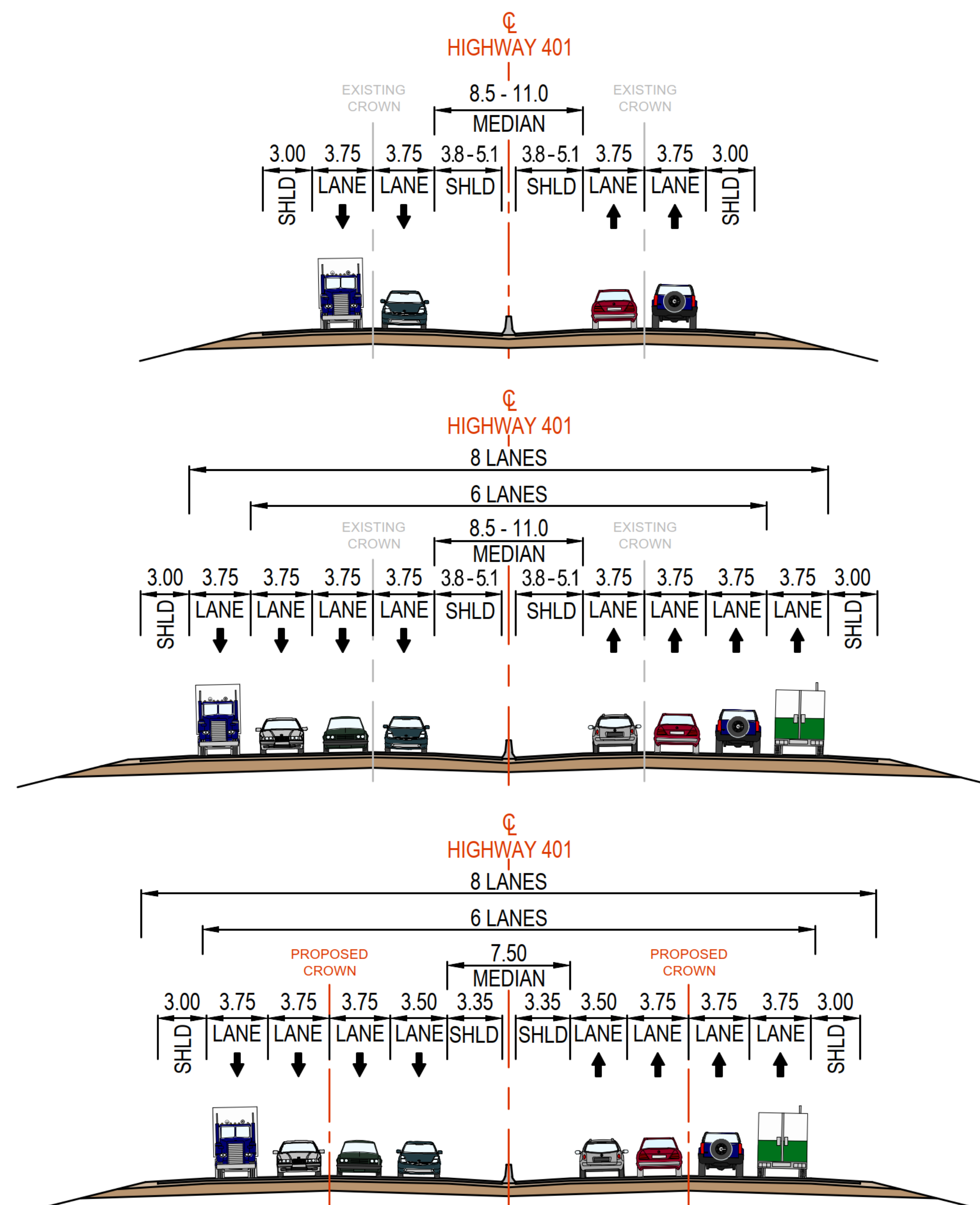
“Alternatives To” the project – which are functionally different ways of addressing the identified Problems and Opportunities – were developed and screened:

“Alternatives To” The Project	Do They Address The Problems and Opportunities?
<p>Do Nothing</p> <ul style="list-style-type: none"> The status quo, where improvements to Highway 401 are limited to maintenance of current infrastructure. 	<ul style="list-style-type: none"> Does not address the structural needs and anticipated future growth needs. Do not carry forward. 
<p>Transportation Demand Management (TDM)</p> <ul style="list-style-type: none"> TDM includes strategies that help reduce traffic congestion and aim to reduce the number of single-occupant vehicles on the road, encourage people to travel at less busy times, and promote alternative ways of getting around — such as public transit, cycling, and walking. 	<ul style="list-style-type: none"> Does not address the structural needs. Do not carry forward. 
<p>Improvements to Adjacent Road Systems</p> <ul style="list-style-type: none"> Expansion of existing municipal and regional road networks. 	<ul style="list-style-type: none"> Does not address the structural needs. Do not carry forward. 
<p>Improvements to the Highway 401</p> <ul style="list-style-type: none"> Establish an interim six lanes and ultimate eight lanes of Highway 401 and modify the configuration of existing interchanges to accommodate the rehabilitation and replacement of bridges and culverts. 	<ul style="list-style-type: none"> Addresses structural needs and anticipated future growth needs. Carry forward. 
<p>New Provincial Transportation Facility</p> <ul style="list-style-type: none"> A new highway and/or transitway to accommodate capacity needs and potentially enhance the performance of the transportation network. 	<ul style="list-style-type: none"> Does not address the structural needs. Do not carry forward. 

Improvements along Highway 401 and Footprint

- Proposed interchange improvements and structural replacements will be designed to accommodate both a six-lane and ultimate eight-lane footprint of Highway 401.
- Cross-section alternatives to accommodate the future footprint of Highway 401 have been developed as illustrated. The alternatives will be assessed in terms of property and environmental impacts, traffic staging and constructability.

HIGHWAY 401 WIDENING ALTERNATIVES EXISTING URBAN SECTION WEST STUDY LIMITS TO WYMAN ROAD AND 0.5 KM WEST OF COUNTY ROAD 41 TO 0.5 KM EAST OF PALACE ROAD



EXISTING 4 LANES,
8.5 - 11.0m URBAN MEDIAN

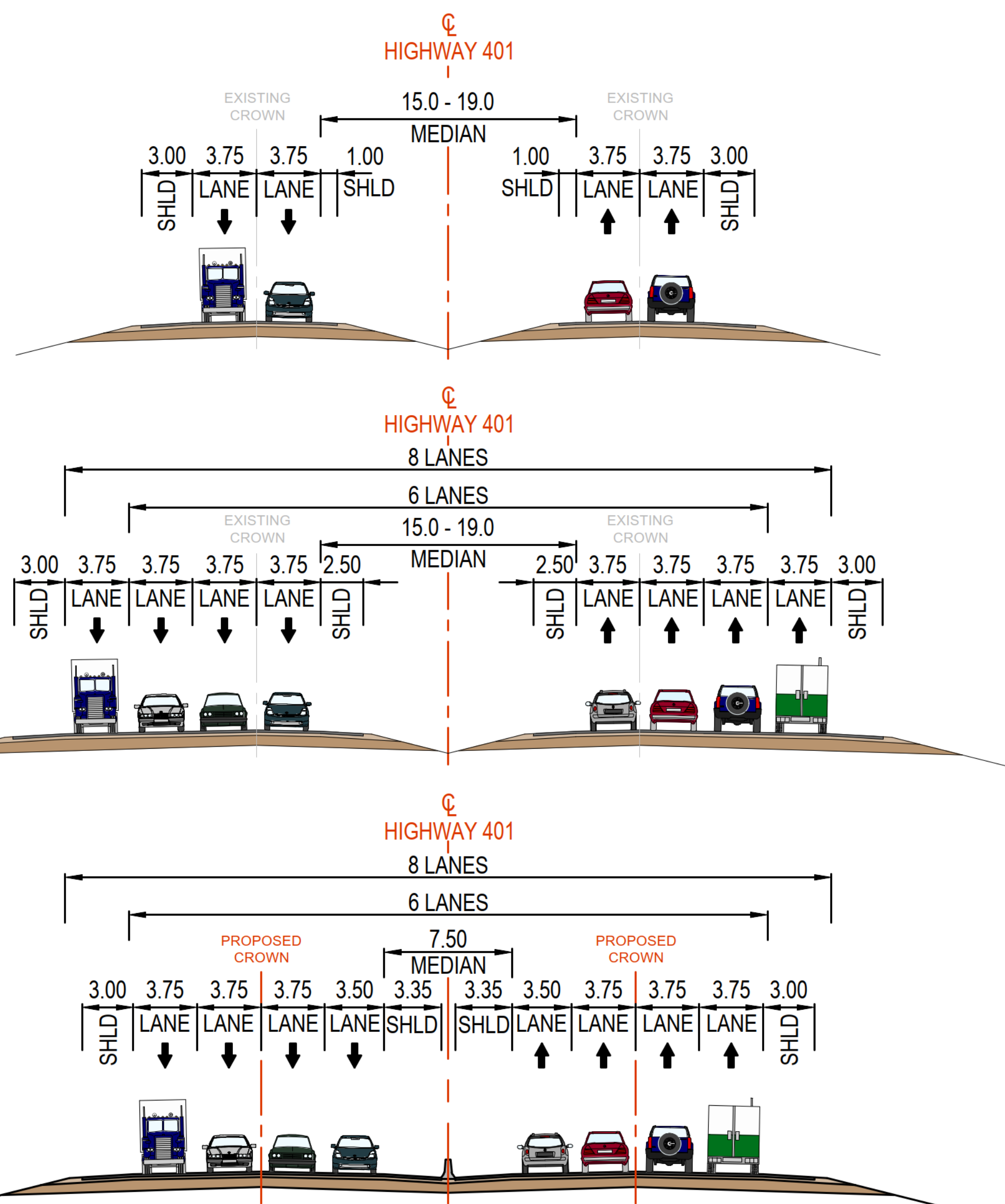
OPTION 1:
WIDEN TO OUTSIDE,
MAINTAIN EXISTING MEDIAN

OPTION 2:
RECONSTRUCT TO
7.5m URBAN MEDIAN

Improvements along Highway 401 and Footprint

HIGHWAY 401 WIDENING ALTERNATIVES EXISTING RURAL SECTION (1)

WYMAN ROAD TO 0.5 KM WEST OF COUNTY ROAD 41 AND
0.5 KM EAST OF PALACE ROAD TO EAST PROJECT LIMITS



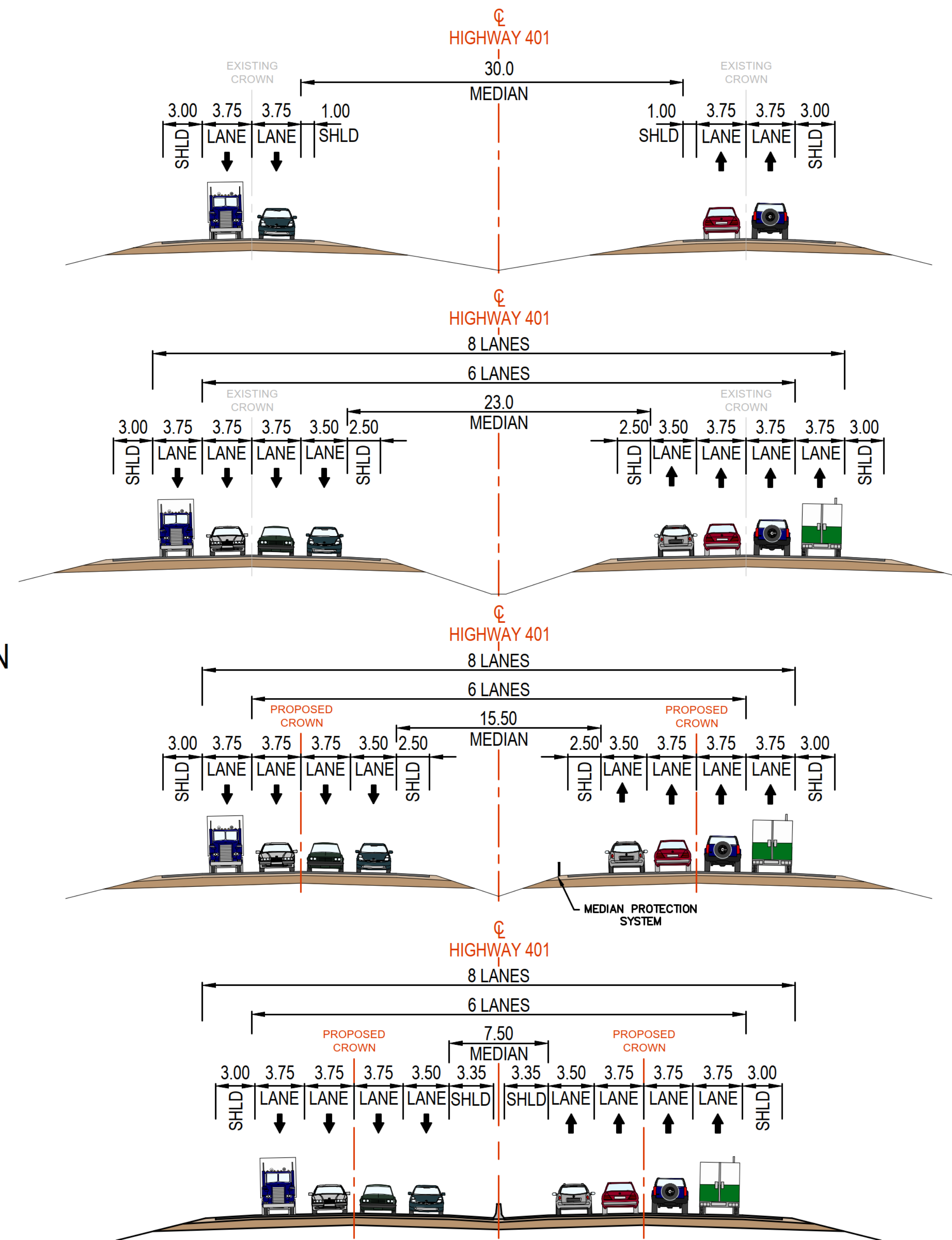
EXISTING 4 LANES,
15.0 - 19.0m RURAL MEDIAN

OPTION 1:
WIDEN TO OUTSIDE, MAINTAIN
15.0 - 19.0m RURAL MEDIAN

OPTION 2:
RECONSTRUCT TO
7.5m URBAN MEDIAN

HIGHWAY 401 WIDENING ALTERNATIVES EXISTING RURAL SECTION (2)

WYMAN ROAD TO 0.5 KM WEST OF COUNTY ROAD 41 AND
0.5 KM EAST OF PALACE ROAD TO EAST PROJECT LIMITS



EXISTING 4 LANES,
30.0m RURAL MEDIAN

OPTION 1:
WIDEN 1 LANE TO INSIDE AND 1 LANE
TO OUTSIDE, 23.0m RURAL MEDIAN

OPTION 2:
WIDEN TO INSIDE,
15.5m RURAL MEDIAN

OPTION 3:
RECONSTRUCT TO
7.5m URBAN MEDIAN

Culvert Alternatives and Drainage Improvements

The following culvert improvement strategies will be reviewed with the preferred highway footprint alternative.

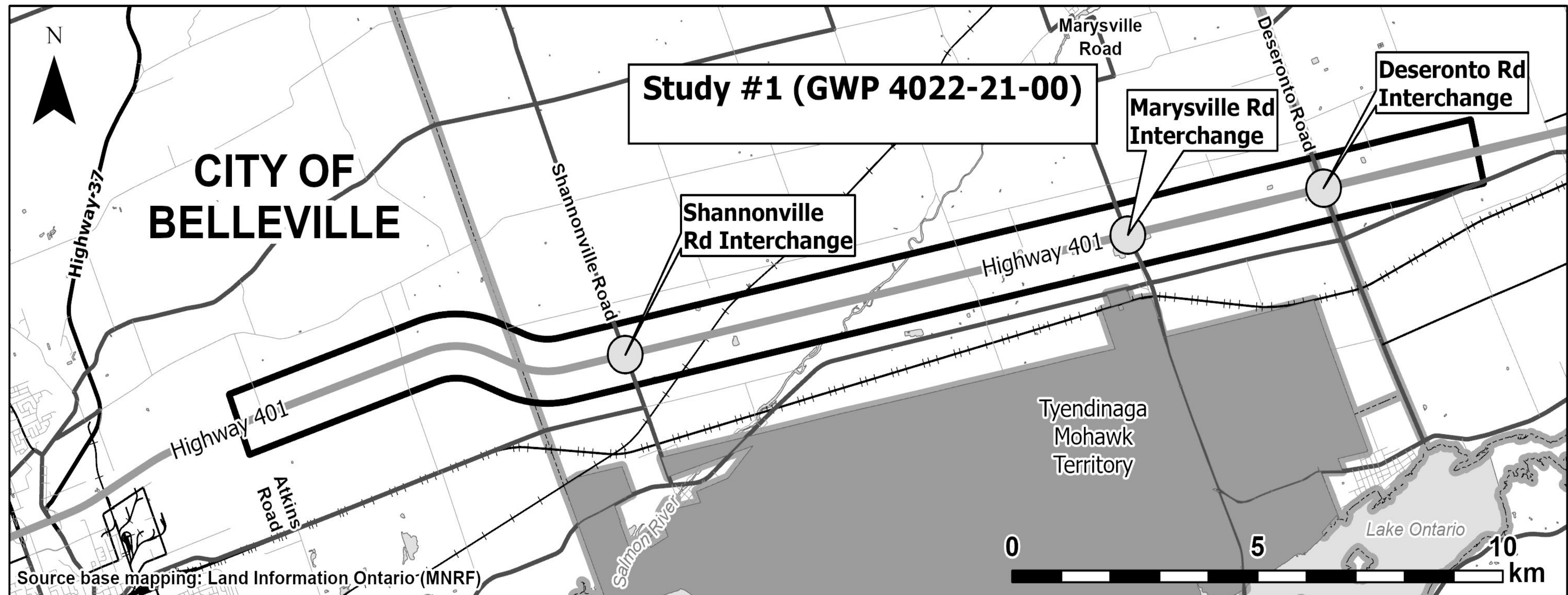
1. Replace the existing culvert with a new culvert. The new culvert length will accommodate the highway footprint.
2. Replace the existing culvert with a new bridge. The new bridge will accommodate the highway footprint.
3. Rehabilitate the existing culvert and construct culvert extensions at either end to accommodate the highway footprint.
4. Rehabilitate the existing culvert and construct retaining walls at each end to support the steeper embankments associated with the highway footprint.



Study #1 Existing Conditions and Long List Alternatives

Study #1 (GWP 4022-21-00)

Study #1, as illustrated below, includes Highway 401 from 4.3 km east of Highway 37 to 5 km west of County Road 41 / Centre Street.



Adjacent active studies:

- Highway 401 Planning, Preliminary Design and Class EA Study in Quinte West (GWP 4027-18-00), hwy401quintewest.ca
- Highway 401 Planning, Preliminary Design and Class EA Study from Kingston to Gananoque (GWP 4049-22-00), hwy401kingstontoganoque.ca
- Highway 401 Planning, Preliminary Design and Class EA Study from Gananoque to Mallorytown (GWP 4050-22-00), hwy401gananoquetomallorytown.ca
- Highway 401 Planning, Preliminary Design and Class EA Study from Mallorytown to Brockville (GWP 4011-22-00), hwy401mallorytowntobrockville.ca

Study Area and Existing Conditions




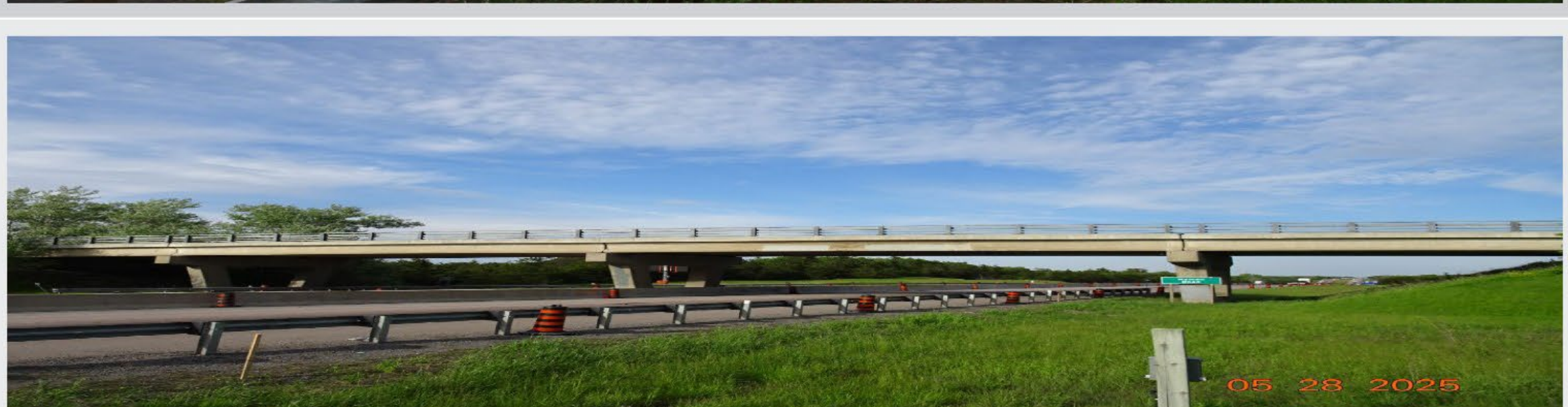

The Study Area for Study #1 including environmental features, existing bridges/culverts and notable geometric conditions and concerns are illustrated in the graphic below:



*Hard copy full size drawings of above existing conditions roll plans are available for review at this PIC.





Existing Bridge Conditions

Study #1

Structure Site	Photo	Overview
Deseronto Road Underpass 17X-0051/B0 *Interchange		<ul style="list-style-type: none"> • Four span prestressed concrete girder bridge. • Bridge is in fair condition. • Built in 1964. • Last major rehabilitation in 2004.
Marysville Creek Bridge 11X-0219/B0		<ul style="list-style-type: none"> • Single span concrete rigid frame. • Bridge is in good condition. • Built in 1961. • Last major rehabilitation in 2018.
Highway 49 Underpass 11X-0212/B0 *Interchange		<ul style="list-style-type: none"> • Four span concrete T-beam bridge. • Bridge is in good condition. • Built in 1961. • Last major rehabilitation in 2004.
Wyman Road Underpass 11X-0208/B0		<ul style="list-style-type: none"> • Four span prestressed concrete girder bridge. • Bridge is in good condition. • Built in 1964. • Last major rehabilitation in 2016.
Salmon River Bridge 11X-0207/B0		<ul style="list-style-type: none"> • Five span steel plate girder bridge. • Bridge is in good condition. • Built in 1956. • Last major rehabilitation in 2005.


Existing Bridge Conditions

Study #1

Structure Site	Photo	Overview
CPR Overhead 11X-0200/B0		<ul style="list-style-type: none"> • Single span concrete T-beam rigid frame bridge. • Bridge is in fair condition. • Built in 1957. • Last major rehabilitation in 1991.
Shannonville Road Underpass 11X-0175/B0 *Interchange		<ul style="list-style-type: none"> • Single span prestressed concrete box girder bridge. • Bridge is in good condition. • Built in 1960. • Last major rehabilitation in 2004.
Blessington Creek Bridge 11X-0174/B0		<ul style="list-style-type: none"> • Single span concrete T-beam bridge. • Bridge is in good condition. • Built in 1956. • Last major rehabilitation in 2015.
Mitchell's Road Underpass 11X-0173/B0		<ul style="list-style-type: none"> • Four span prestressed concrete girder bridge. • Bridge is in good condition. • Built in 1968. • Last major rehabilitation in 2013.

Existing Culvert Conditions

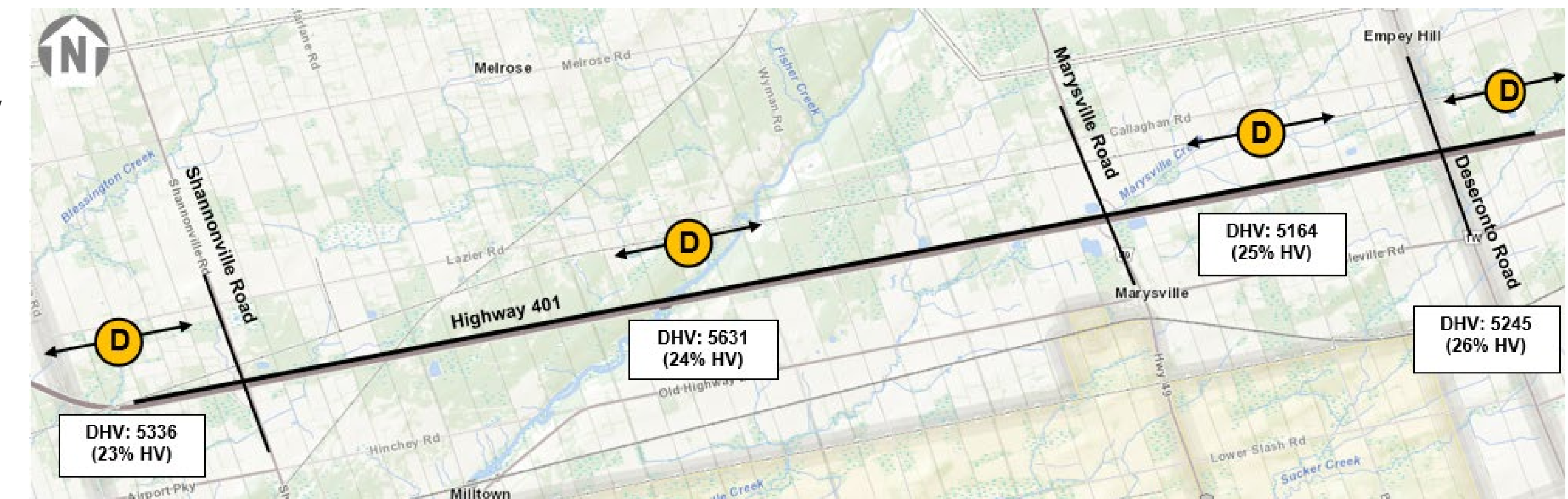
Study #1

Structure Site	Photo	Overview
<p>Culvert 1 km East of Deseronto Road 17X-0155/C0</p>		<ul style="list-style-type: none"> • Single span concrete rigid frame culvert. • Culvert is in fair condition. • Built in 1961. • Has not been rehabilitated.
<p>Culvert 1.7 km East of Marysville Road 11X-0321/C0</p>		<ul style="list-style-type: none"> • Single span concrete non-rigid frame culvert. • Culvert is in good condition. • Built in 1965. • Has not been rehabilitated.
<p>Marysville Creek Culvert 11X-0210/C0</p>		<ul style="list-style-type: none"> • Single span arch concrete culvert. • Culvert is in fair condition. • Built in 1961. • Has not been rehabilitated.
<p>Marysville Creek Culvert 11X-0209/C0</p>		<ul style="list-style-type: none"> • Single span arch concrete culvert. • Culvert is in fair condition. • Built in 1961. • Has not been rehabilitated.

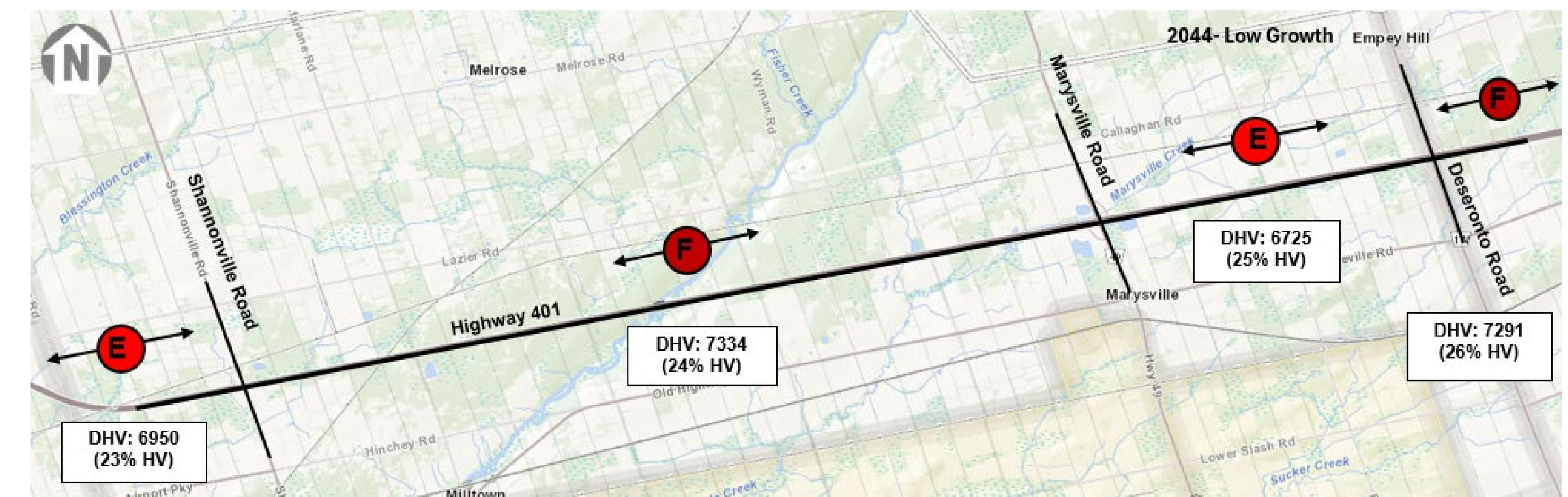
Existing & Future Traffic Conditions (Mainline)

– Study #1

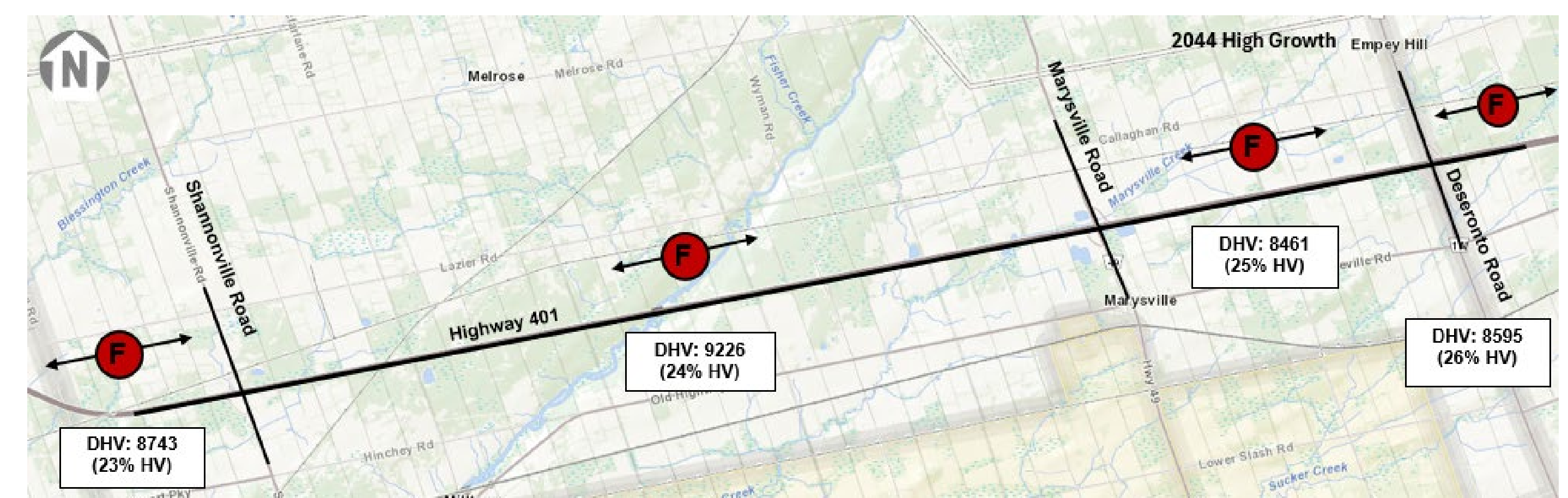
- A Traffic Operational Analysis has been undertaken to understand how traffic moves today and how it may operate in the future. The study looked at traffic conditions with four lanes (existing) and six and eight lane footprints of Highway 401.
- Traffic operations have been measured based on the Level of Service, which describes how freely vehicles can move along the highway (refer to depictions in the below table).
- The analysis identified that current level of service is acceptable.
- By 2044, without improvements, congestion is expected to increase, which would slow traffic and extend travel times.



Existing Conditions – LOS



Future Conditions (2044) – Low Growth, Do Nothing Scenario – LOS



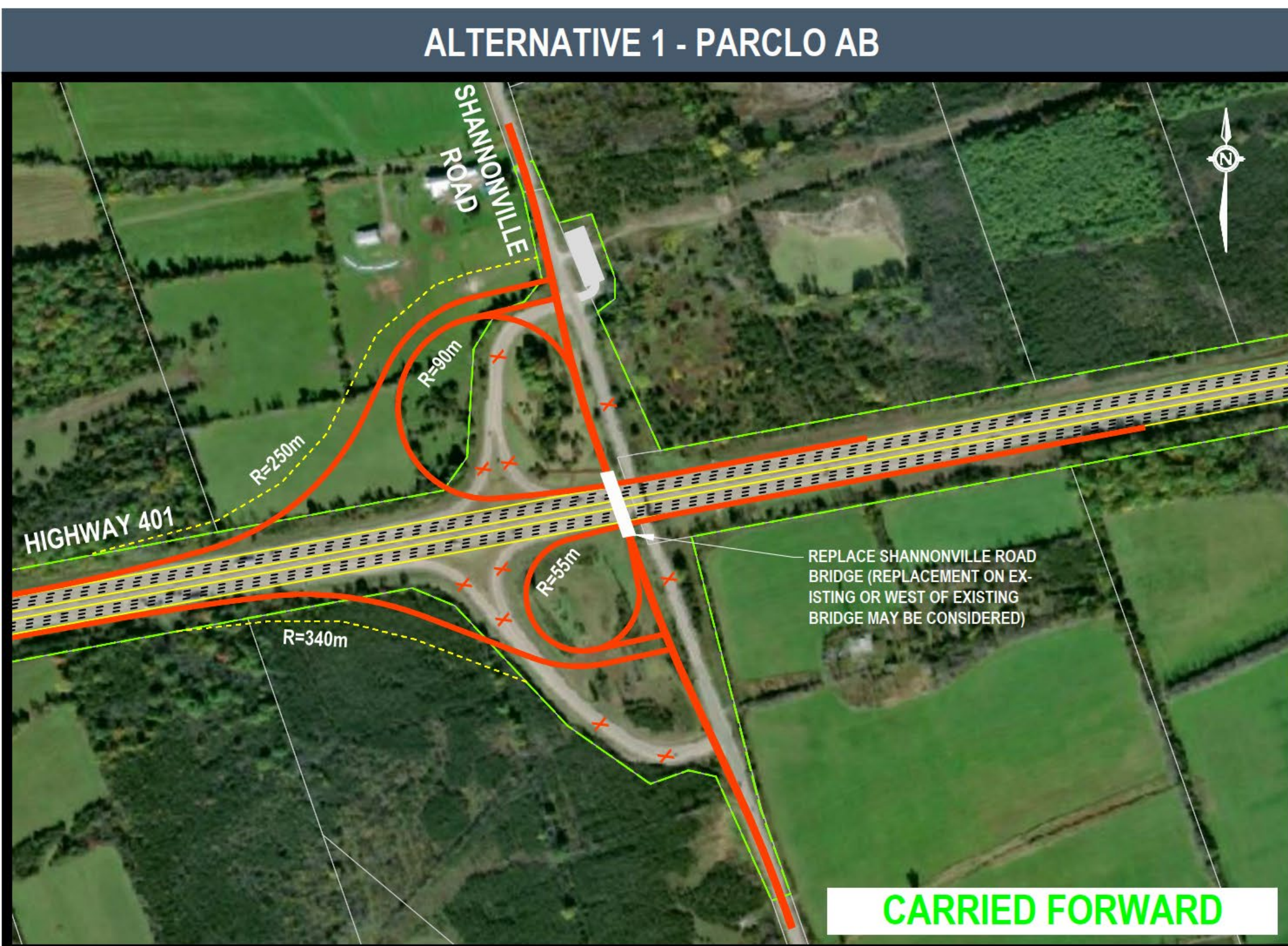
Future Conditions (2044) – High Growth, Do Nothing Scenario – LOS

Level of Service	Flow Conditions	Descriptions
A		No Delays
B		No Delays
C		Minimal Delays
D		Minimal Delays
E		Moderate Delays
F		Significant Delays

Best ↑

↓ Worst

Study #1: Long List of Alternatives – Highway 401 / Shannonville Road Interchange



DESCRIPTION:

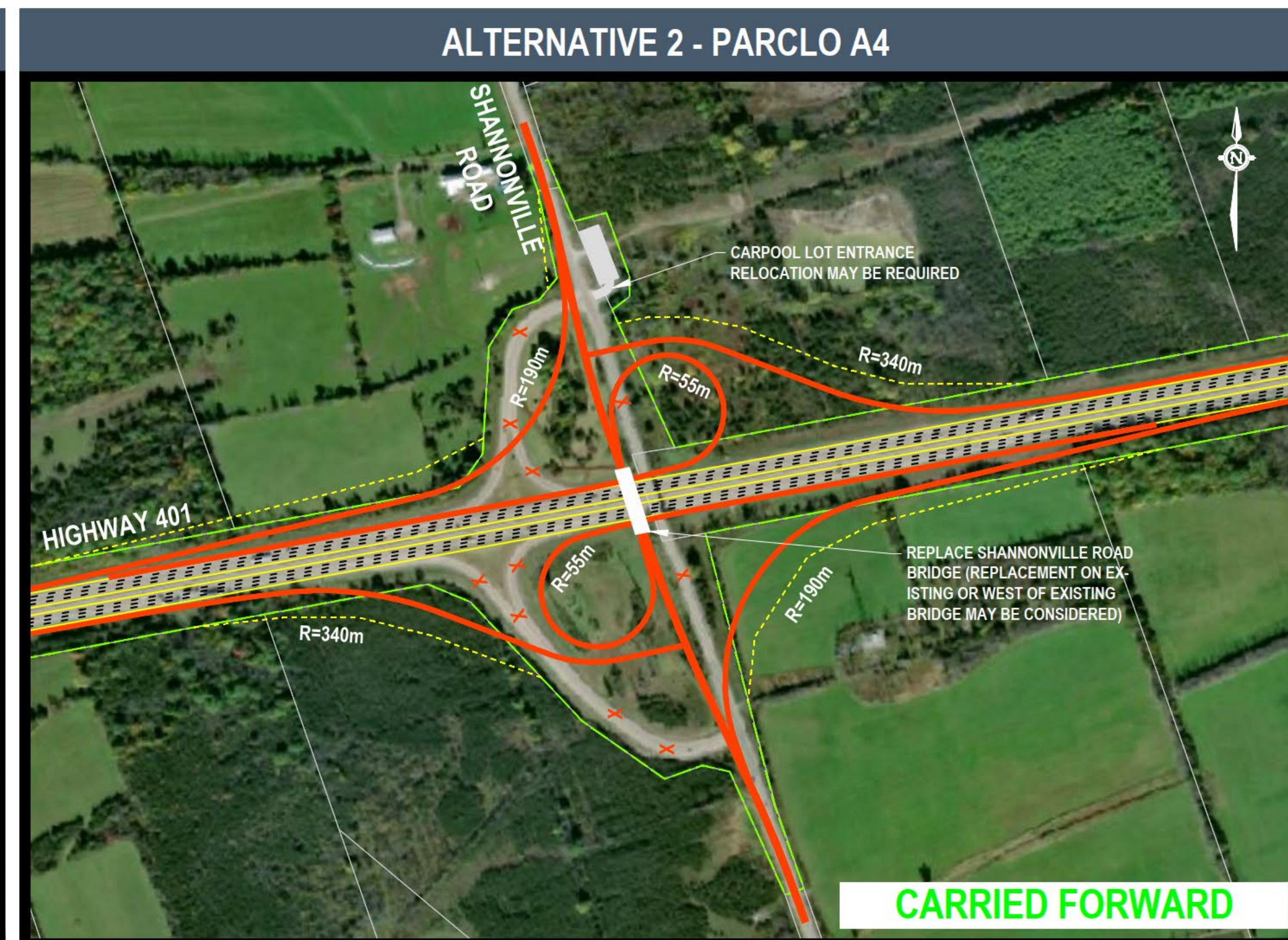
- Construct Parclo B2 with R-90m loop off ramp and R-250m entrance ramp on the north side
- Construct Parclo A2 with R-55m loop ramp and R-340m exit ramp on the south side
- Shannonville Road Bridge (11X-0175/B0) replaced adjacent to existing bridge or west of existing bridge

ADVANTAGES:

- Increased separation between Shannonville Road and Highway 401 westbound interchange ramps improves merging/weaving.
- No impacts to carpool lot entrance in northeast quadrant and lower impacts to natural environment.

DISADVANTAGES:

- B-loop configurations are typically less desirable than standard directional off ramps on high-speed freeways, due to quick change in speed, maneuverability and reduced capacity.
- Proposed B-loop configuration with R-90 does not meet minimum radius for required design speed
- Left turn movements at ramp terminal intersections are less desirable than directional ramps.



DESCRIPTION:

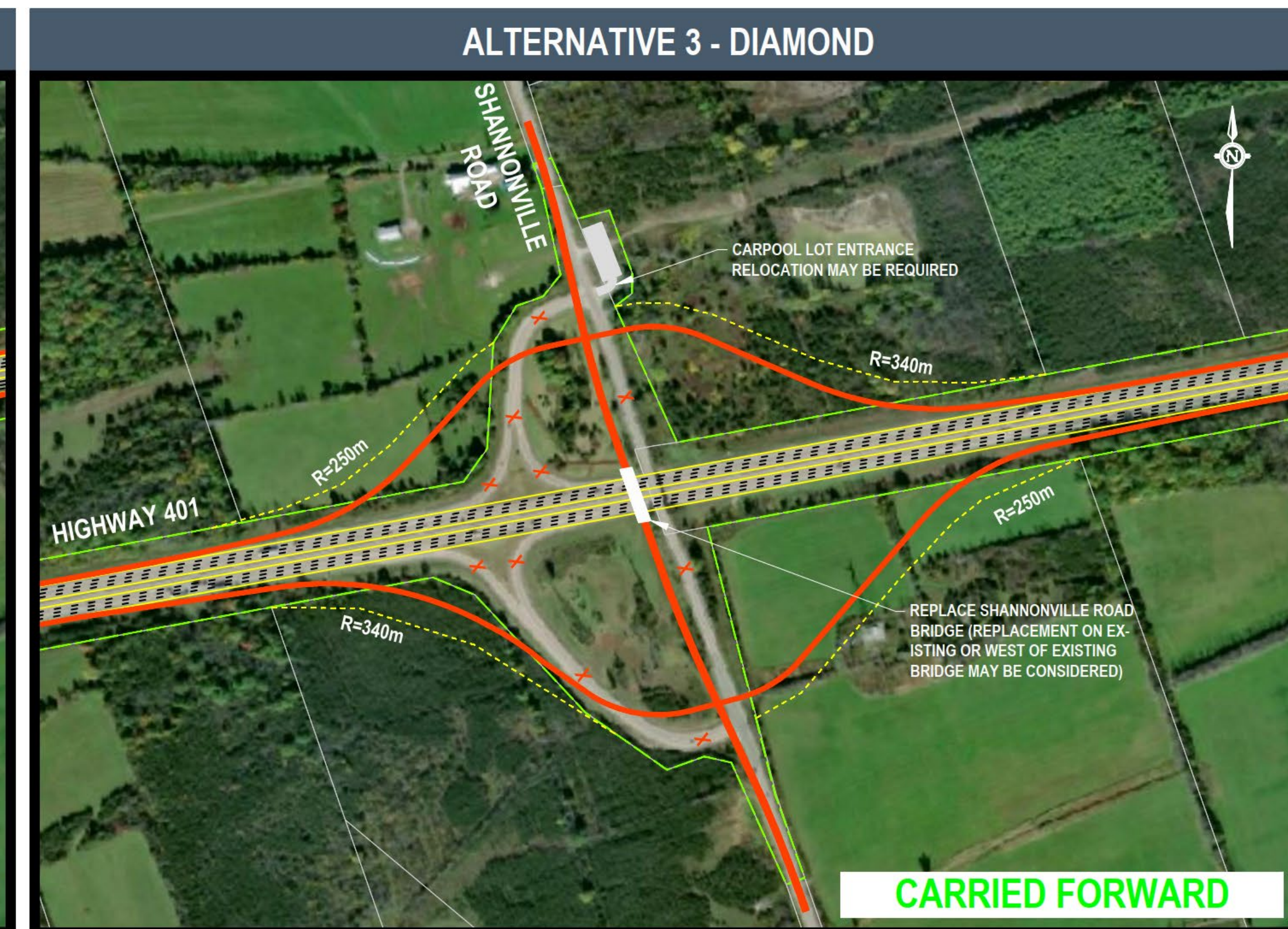
- Construct Parclo A4 with R-55m loop ramps, R-190m directional ramps and R-340m exit ramps.
- Shannonville Road Bridge(11X-0175/B0) replaced adjacent to existing bridge or west of existing bridge.
- Relocation of the carpool lot entrance in the northeast quadrant may be required.

ADVANTAGES:

- Parclo A4 is most desirable interchange in terms of traffic operations and ramp geometry.

DISADVANTAGES:

- Impacts to carpool lot entrance in northeast quadrant.
- Decreased separation between Shannonville Road and Highway 401 eastbound interchange ramps worsens merging/weaving.
- High construction cost due to the additional ramps and structures.
- Moderate impacts to carpool lot entrance in northeast quadrant.
- Increased potential for environmental impact in NE and SE quadrant of interchange.



DESCRIPTION:

- Reconstruct existing diamond interchange with R-340m ramps.
- Shannonville Road Bridge(11X-0175/B0) replaced adjacent to existing bridge or west of existing bridge.
- Relocation of the carpool lot entrance in the northeast quadrant may be required.

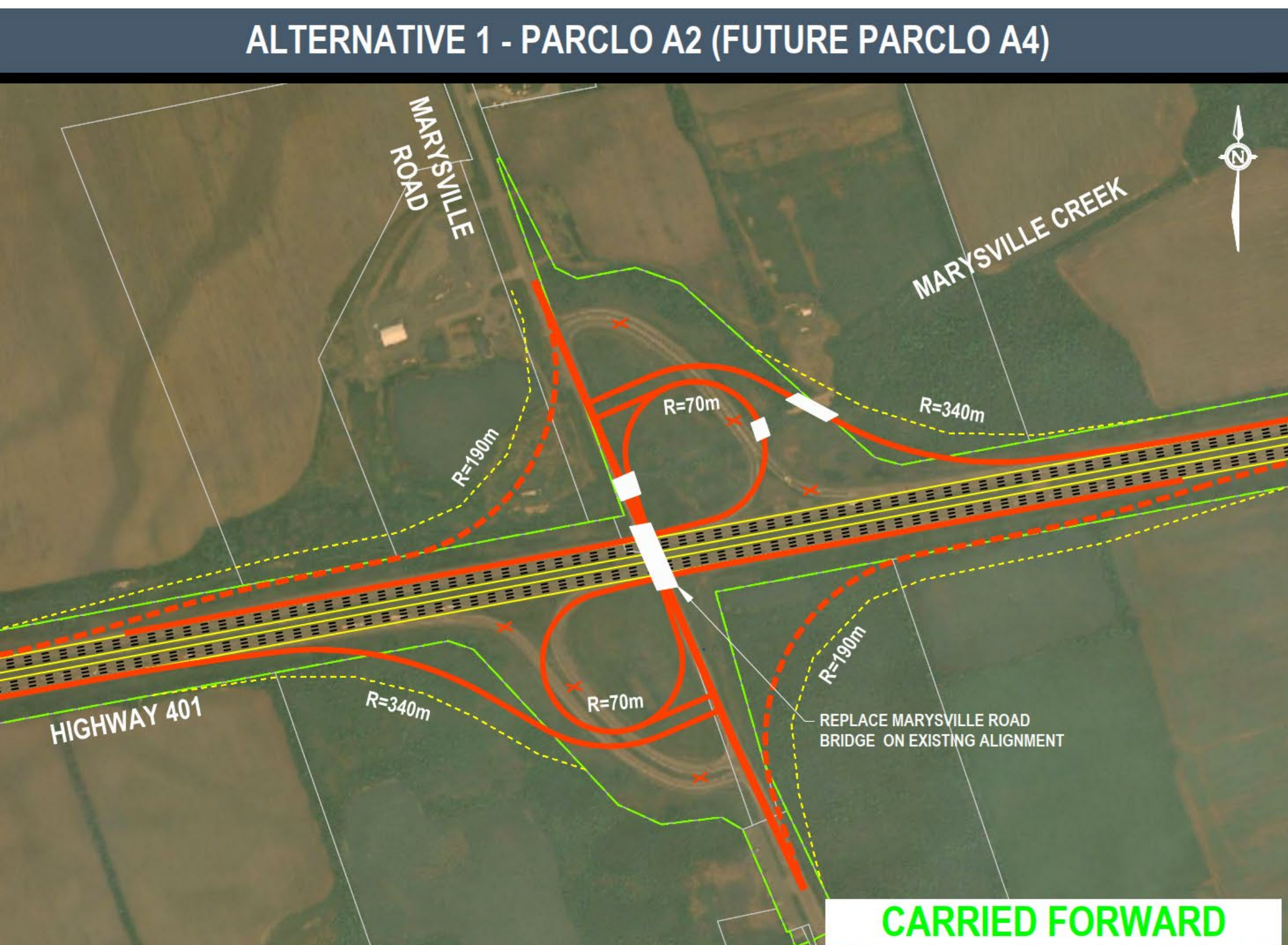
ADVANTAGES:

- Lower cost relative to other alternatives.

DISADVANTAGES:

- Impacts to carpool lot entrance in northeast quadrant.
- Diamond interchanges cannot accommodate high traffic volumes.
- Left turn movements at ramp terminal intersections are less desirable than directional ramps.
- Moderate impacts to carpool lot entrance in northeast quadrant.
- Increased potential for environmental impact in NE and SE quadrant of interchange.

Study #1: Long List of Alternatives – Highway 401 / Marysville Road Interchange



DESCRIPTION:

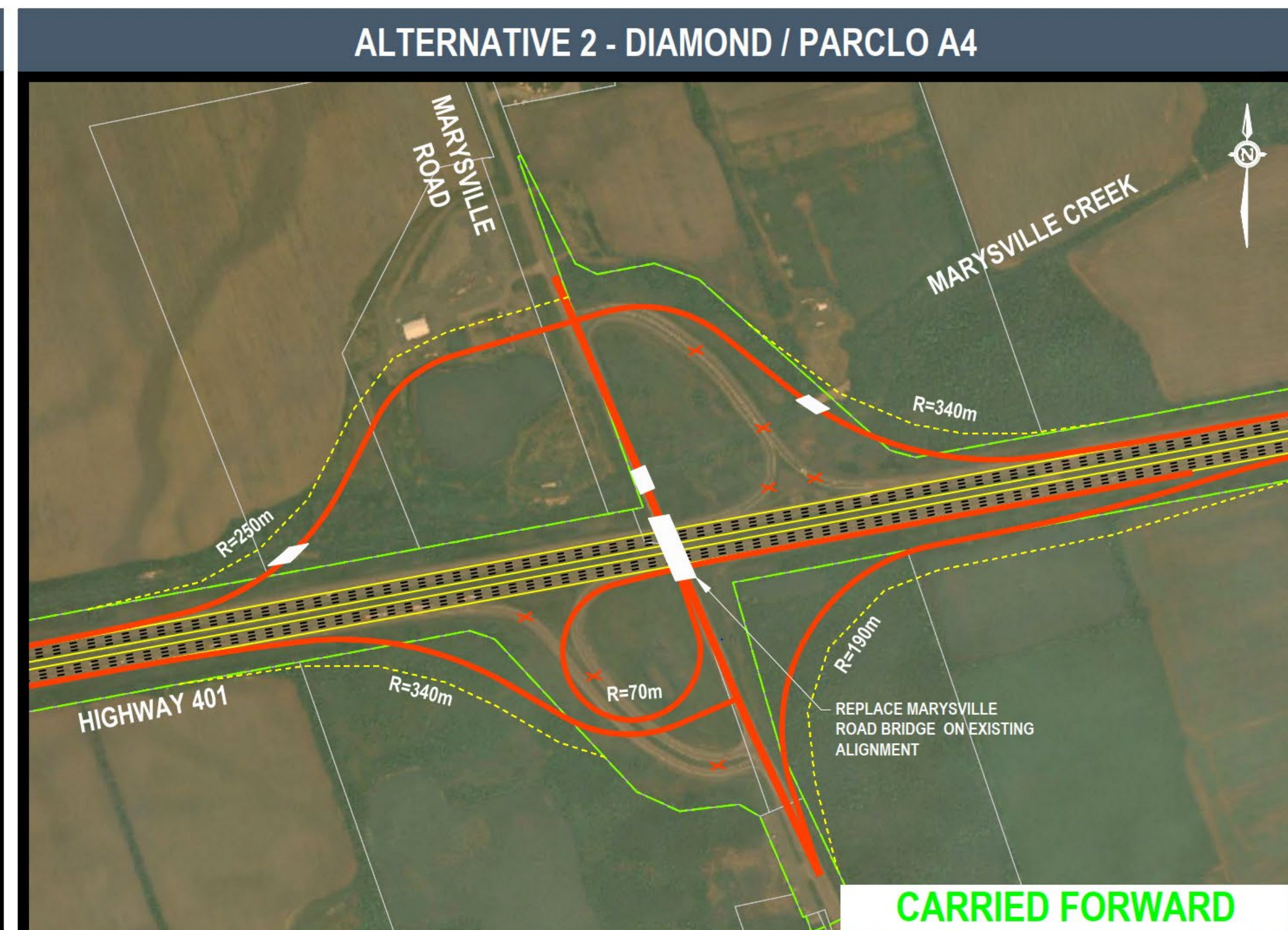
- Reconstruct existing Parclo A2 with R-70m loop ramps and R-340m exit ramps.
- Marysville Road Bridge (11X-0212/B0) replaced west or east of existing bridge. Marysville Creek Culvert (11X-0210/C0) replaced west or east of existing culvert. Marysville Creek Bridge (11X-0219/B0) replaced adjacent to existing bridge.
- Interchange type is Parclo A2 but can be phased to Parclo A4 by introducing N-W and S-W ramps. Additional impacts to those quadrants will be similar to Alternative 3.

ADVANTAGES:

- No impacts to commercial land use in northwest quadrant.
- Lower encroachment and impacts to natural environment.

DISADVANTAGES:

- Left turn movements at ramp terminal intersections are less desirable than directional ramps.



DESCRIPTION:

- Construct diamond interchange with R-340m ramps on the north side.
- Construct Parclo A4 with R-70m loop on-ramp, R-130m directional on-ramp, R-340m exit ramp on the south side.
- Marysville Road Bridge(11X-0212/B0) replaced west or east of existing bridge. Marysville Creek Culvert(11X-0210/C0) replaced west or east of existing culvert. Marysville Creek Bridge(11X-0219/B0) replaced adjacent to existing bridge.

ADVANTAGES:

- Improved traffic operations compared to existing condition.

DISADVANTAGES:

- Decreased separation between Marysville Road and Highway 401 eastbound interchange ramps worsens merging/weaving.
- Impacts to commercial land use in northwest quadrant.
- Significant impact to natural environment in northwest quadrant.



DESCRIPTION:

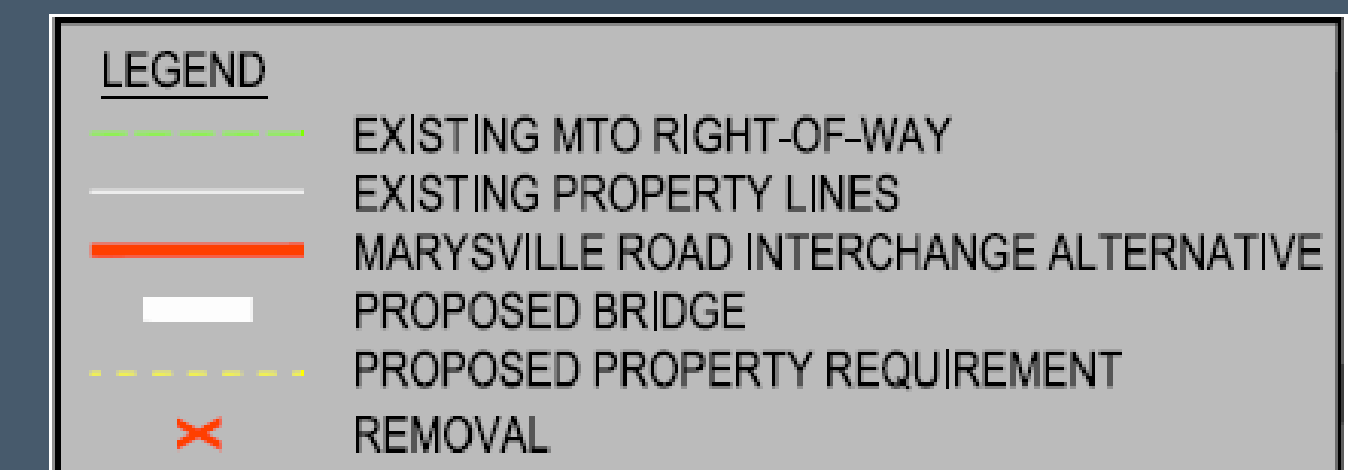
- Construct diamond interchange with R-340m ramps.
- Marysville Road Bridge(11X-0212/B0) replaced west or east of existing bridge. Marysville Creek Culvert(11X-0210/C0) replaced west or east of existing culvert. Marysville Creek Bridge(11X-0219/B0) replaced adjacent to existing bridge.

ADVANTAGES:

- No impacts to commercial land use in northwest quadrant.
- Lower cost relative to other alternatives.

DISADVANTAGES:

- Left turn movements at ramp terminal intersections are less desirable than directional ramps.



Study #1: Long List of Alternatives – Highway 401 / Deseronto Road Interchange

ALTERNATIVE 1 - PARCLO A2 (FUTURE PARCLO A4)



ALTERNATIVE 2 - DIAMOND



ALTERNATIVE 3 - PARCLO A2 / DIAMOND



DESCRIPTION:

- Reconstruct existing Parclo A2 with R-70m loop ramps and R-340m exit ramps.
- Deseronto Road Bridge(17X-0051/B0) replaced adjacent to existing bridge or east of existing bridge.
- Interchange type is Parclo A2 but can be phased to Parclo A4 by introducing N-W and S-W ramps (190m radii).

ADVANTAGES:

- Parclo A2 initially the lowest impacts to natural environment relative to other alternatives.
- No property impacts to residential land use.
- Opportunity to modify interchange in the future to Parclo A4 as it is most desirable interchange in terms of traffic operations and ramp geometry.

DISADVANTAGES:

- As a Parclo A2, left turn movements at ramp terminal intersections are less desirable than directional ramps.
- As a Parclo A4, decreased separation between Deseronto Road and Highway 401 eastbound interchange ramps worsens merging/weaving. Also, higher construction cost due to the additional ramps and structures.

DESCRIPTION:

- Construct diamond interchange with R-340m ramps.
- Deseronto Road Bridge(17X-0051/B0) replaced adjacent to existing bridge or east of existing bridge.

ADVANTAGES:

- Lowest cost relative to other alternatives.

DISADVANTAGES:

- Diamond interchanges cannot accommodate high traffic volumes.
- Left turn movements at ramp terminal intersections are less desirable than directional ramps.
- Significant impact to private property in northwest quadrant.
- Moderate impacts to natural environment in all quadrants.

DESCRIPTION:

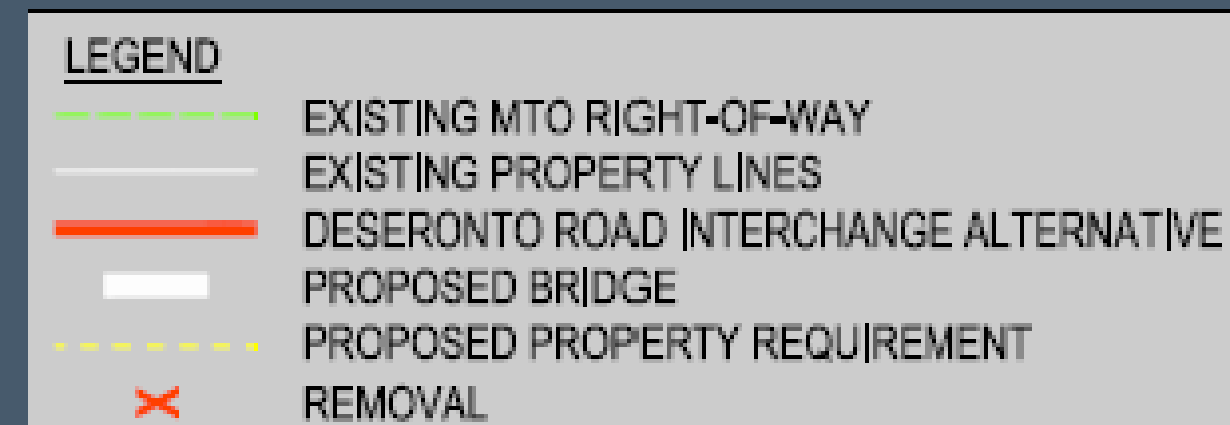
- Construct Parclo A2 with R-70m loop ramps and R-340m exit ramp on the north side.
- Construct diamond interchange with R-340m ramps on the south side.
- Deseronto Road Bridge(17X-0051/B0) replaced adjacent to existing bridge or east of existing bridge.

ADVANTAGES:

- Lower cost relative to other alternatives.
- No property impacts to residential land use.

DISADVANTAGES:

- Left turn movements at ramp terminal intersections are less desirable than directional ramps.
- Moderate impacts to natural environment in northeast, southwest and southeast quadrants.



Study #1: Long List of Alternatives – Mitchell Road Underpass

ALTERNATIVE 1 - REPLACE ON EXISTING ALIGNMENT



DESCRIPTION:

- Replacement of Mitchell Road bridge structure (11X-0173/B0) along the existing alignment.
- No realignment of Mitchell Road.

ADVANTAGES:

- Maintains tangent alignment of Mitchell Road.
- No encroachment and impacts to natural environment.
- Lowest cost alternative.

DISADVANTAGES:

- Mitchell Road closed for the duration of construction.
- 12.5 km detour required to support traffic travelling between Casey Road and Airport Parkway.

ALTERNATIVE 2 - REALIGNMENT TO THE EAST



DESCRIPTION:

- Realign Mitchell Road towards the East.

ADVANTAGES:

- Mitchell Road remains open during construction.

DISADVANTAGES:

- Minor impacts to natural environment.
- Introduces horizontal curves to Mitchell Road.

ALTERNATIVE 3 - REALIGNMENT TO THE WEST



DESCRIPTION:

- Realign Mitchell Road towards the West.

ADVANTAGES:

- Mitchell Road remains open during construction.

DISADVANTAGES:

- Minor impacts to natural environment.
- Introduces horizontal curves to Mitchell Road.

LEGEND

- EXISTING MTO RIGHT-OF-WAY
- EXISTING PROPERTY LINES
- MARYSVILLE ROAD INTERCHANGE ALTERNATIVE
- PROPOSED BRIDGE
- PROPOSED PROPERTY REQUIREMENT
- ✗ REMOVAL

Study #1: Long List of Alternatives – Wyman Road Underpass

ALTERNATIVE 1 - REPLACE ON EXISTING ALIGNMENT



DESCRIPTION:

- Replacement of Wyman Road bridge structure (11X-0208/B0) along the existing alignment.
- No realignment of Wyman Road.

ADVANTAGES:

- Maintains tangent alignment of Wyman Road.
- No encroachment and impacts to natural environment.
- Lowest cost alternative.

DISADVANTAGES:

- Wyman Road closed for the duration of construction.
- 8.8 km detour required to maintain traffic during construction.

ALTERNATIVE 2 - REALIGNMENT TO THE EAST



DESCRIPTION:

- Realign Wyman Road towards the East.

ADVANTAGES:

- Wyman Road remains open during construction.

DISADVANTAGES:

- Minor impacts to natural environment.
- Introduces horizontal curves to Wyman Road.

ALTERNATIVE 3 - REALIGNMENT TO THE WEST



DESCRIPTION:

- Realign Wyman Road towards the West.

ADVANTAGES:

- Wyman Road remains open during construction.

DISADVANTAGES:

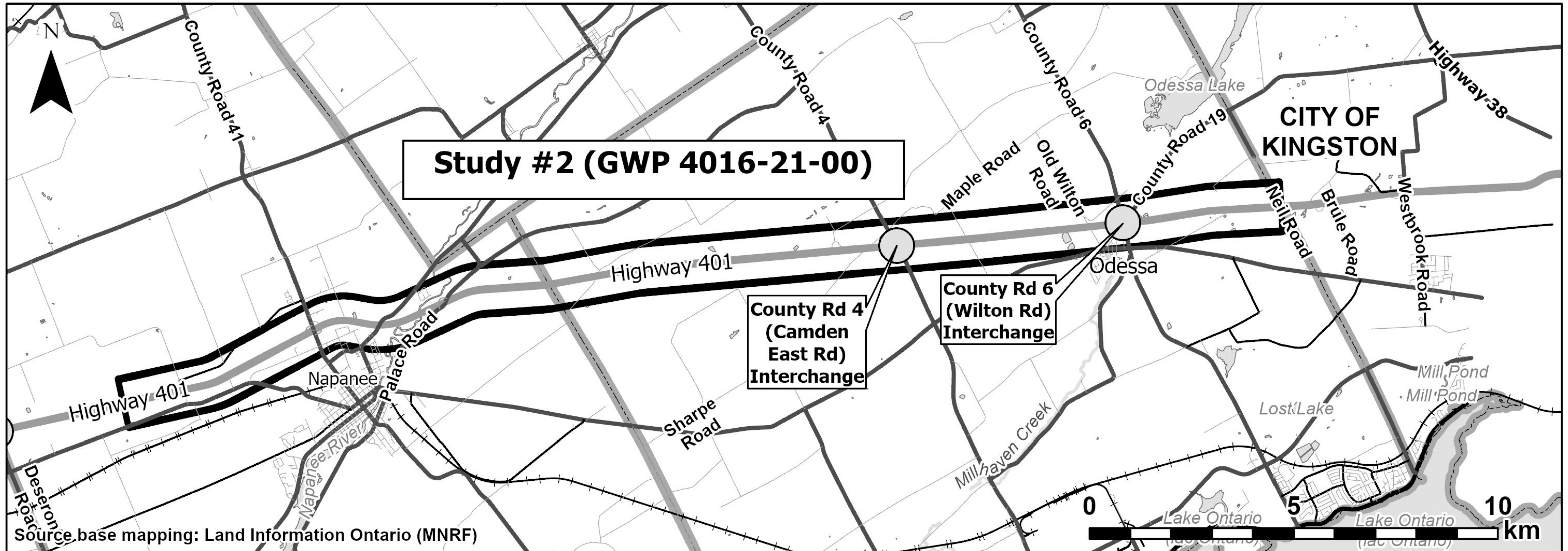
- Minor impacts to natural environment.
- Introduces horizontal curves to Wyman Road.

LEGEND	
	EXISTING MTO RIGHT-OF-WAY
	EXISTING PROPERTY LINES
	MARYSVILLE ROAD INTERCHANGE ALTERNATIVE
	PROPOSED BRIDGE
	PROPOSED PROPERTY REQUIREMENT
	REMOVAL

Study #2 Existing Conditions and Long List Alternatives

Study #2 (GWP 4016-21-00)

Study #2, as illustrated below, includes Highway 401 from 5 km west of County Road 41 / Centre Street to 8 km west of Kingston Road 38.



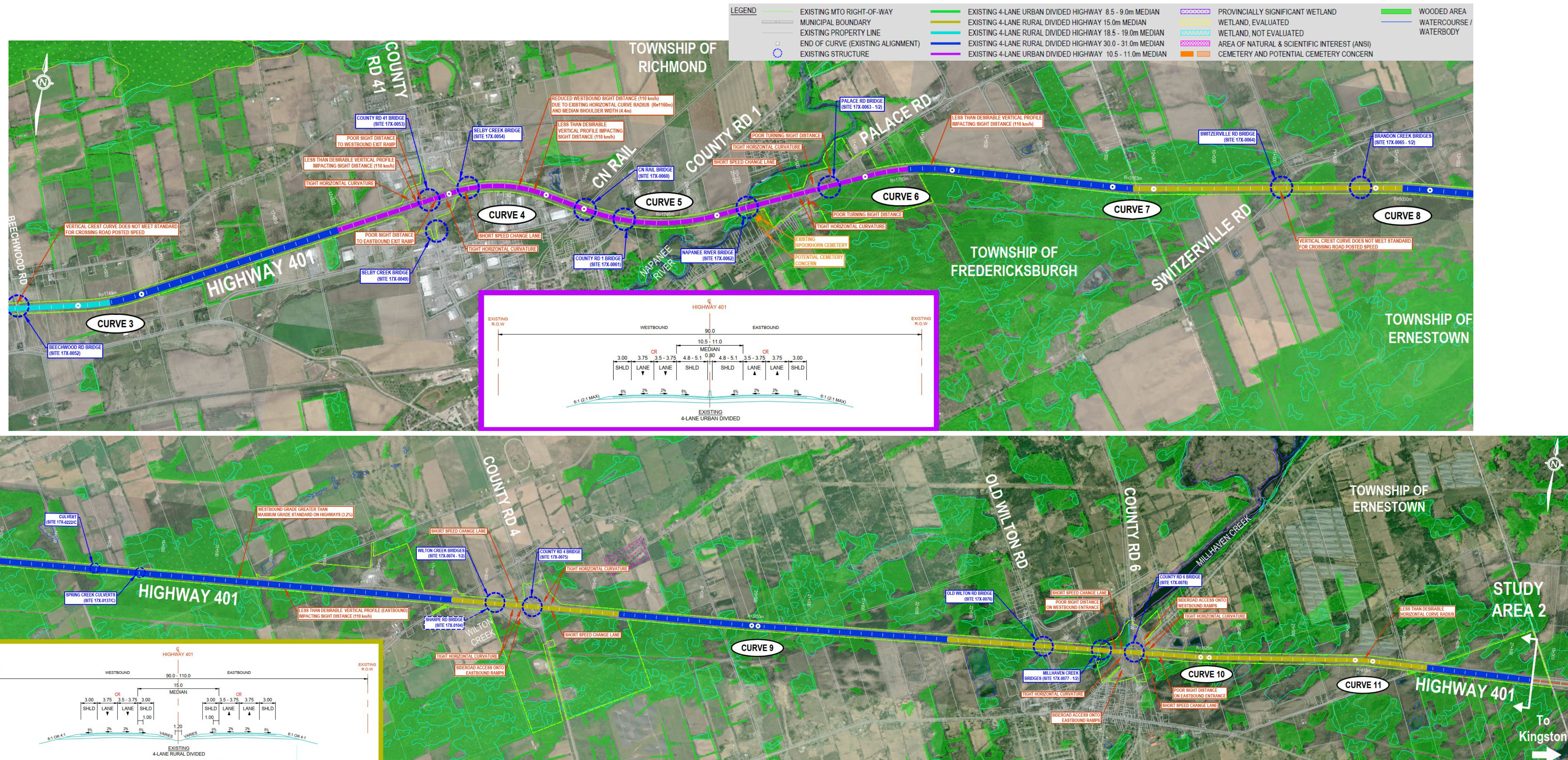
Z:\Kitchener-CAKCN1\DCS\GIS\Projects\60734357\900-CAD_GIS\920-929 (GIS-Graphics)\920-ENV\Design\01_Reports\ENV\Hwy401 Belleville to Kingston.aprx

Adjacent active studies:

- Highway 401 Planning, Preliminary Design and Class EA Study in Quinte West (GWP 4027-18-00), hwy401quintewest.ca
- Highway 401 Planning, Preliminary Design and Class EA Study from Kingston to Gananoque (GWP 4049-22-00), hwy401kingstontogananoque.ca
- Highway 401 Planning, Preliminary Design and Class EA Study from Gananoque to Mallorytown (GWP 4050-22-00), hwy401gananoquetomallorytown.ca
- Highway 401 Planning, Preliminary Design and Class EA Study from Mallorytown to Brockville (GWP 4011-22-00), hwy401mallorytowntobrockville.ca

Study Area and Existing Conditions






The Study Area for Study #2 including environmental features, existing bridges/culverts and notable geometric conditions and concerns are illustrated in the graphic below:



*Hard copy full size drawings of above existing conditions roll plans are available for review at this PIC.






Existing Bridge Conditions

Study #2

Structure Site	Photo	Overview
Wilton Road Underpass 17X-0078/B0 <i>*Interchange</i>		<ul style="list-style-type: none"> • Four span reinforced cast-in-place concrete T-beam bridge. • Bridge is in good condition. • Built in 1962. • Last major rehabilitation in 2016.
Millhaven Creek Bridge East and Westbound 17X-0077/B1 and B2		<ul style="list-style-type: none"> • Single span concrete rigid frame. • Bridge is in good condition. • Built in 1959. • Last major rehabilitation in 1983 (EB) and 1988 (WB).
Odessa Road Underpass 17X-0076/B0		<ul style="list-style-type: none"> • Four span concrete T-beam bridge. • Bridge is in good condition. • Built in 1960. • Last major rehabilitation in 2016.
Camden East Underpass 17X-0075/B0 <i>*Interchange</i>		<ul style="list-style-type: none"> • Four span concrete T-beam bridge. • Bridge is in good condition. • Built in 1961. • Last major rehabilitation in 2009.
Wilton Creek Service Road Bridge 17X-0104/B0		<ul style="list-style-type: none"> • Single span concrete rigid frame. • Bridge is in good condition. • Built in 1960. • Last major rehabilitation in 2016.






Existing Bridge Conditions

Study #2

Structure Site	Photo	Overview
<p>Wilton Creek Bridge East and Westbound 17X-0074/B1 and B2</p>		<ul style="list-style-type: none"> • Single span concrete rigid frame. • Bridge is in good condition. • Built in 1960. • Last major rehabilitation in 1983 (EB) and 1988 (WB).
<p>Brandon Creek Bridge East and Westbound 17X-0065/B1 and B2</p>		<ul style="list-style-type: none"> • Single span concrete rigid frame. • Bridge is in good condition. • Built in 1961. • Last major rehabilitation in 1987.
<p>Switzerville Road Underpass 17X-0064/B0</p>		<ul style="list-style-type: none"> • Four span reinforced cast-in-place concrete T-beam. • Bridge is in good condition. • Built in 1963. • Last major rehabilitation in 2016.
<p>Napanee River Bridge 17X-0062/B0</p>		<ul style="list-style-type: none"> • Three span concrete rigid frame. • Bridge is in good condition. • Built in 1960. • Last major rehabilitation in 1987.
<p>Newburgh Underpass 17X-0061/B0</p>		<ul style="list-style-type: none"> • Single span concrete rigid frame, concrete box girder. • Bridge is in good condition. • Built in 1960. • Last major rehabilitation in 2008.

Existing Bridge Conditions

Study #2

Structure Site	Photo	Overview
CNR Subway 17X-0060/B0		<ul style="list-style-type: none"> • Single span steel through plate girders with concrete deck. • Bridge is in good condition. • Built in 1959. • Last major rehabilitation unknown. • Currently not in-use – Deck fenced on both ends.
Selby Creek Bridge 17X-0054/B0		<ul style="list-style-type: none"> • Single span concrete rigid frame. • Bridge is in good condition. • Built in 1960. • Last major rehabilitation in 2017.
County Road 41 Overpass 17X-0053/B0 <i>*Interchange and Structure included based on previous Preliminary Design study.</i>		<ul style="list-style-type: none"> • Single span concrete rigid frame. • Bridge is in good condition. • Built in 1961. • Last major rehabilitation in 1983.
Selby Creek Bridge 17X-0049/B0		<ul style="list-style-type: none"> • Single span prestressed concrete box girder. • Bridge is in good condition. • Built in 2004. • Has not been rehabilitated.
Beechwood Road Underpass 17X-0052/B0		<ul style="list-style-type: none"> • Four span prestressed concrete girder. • Bridge is in good condition. • Built in 1964. • Last major rehabilitation in 2012.

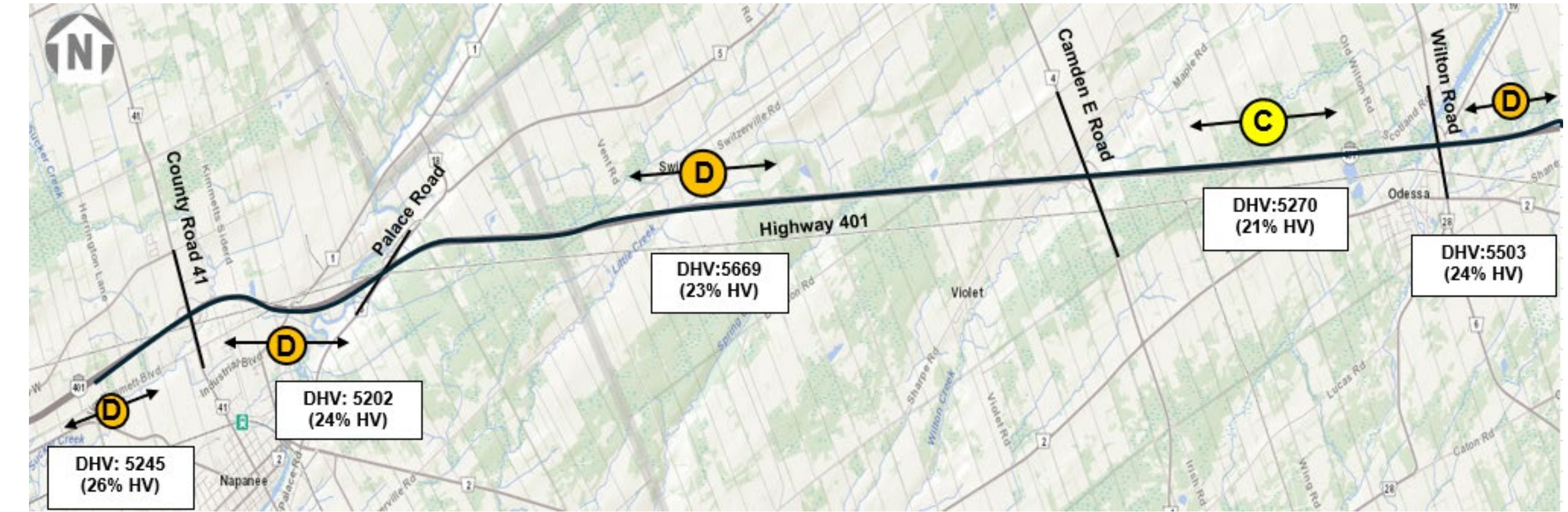
Existing Culvert Conditions

Study #2

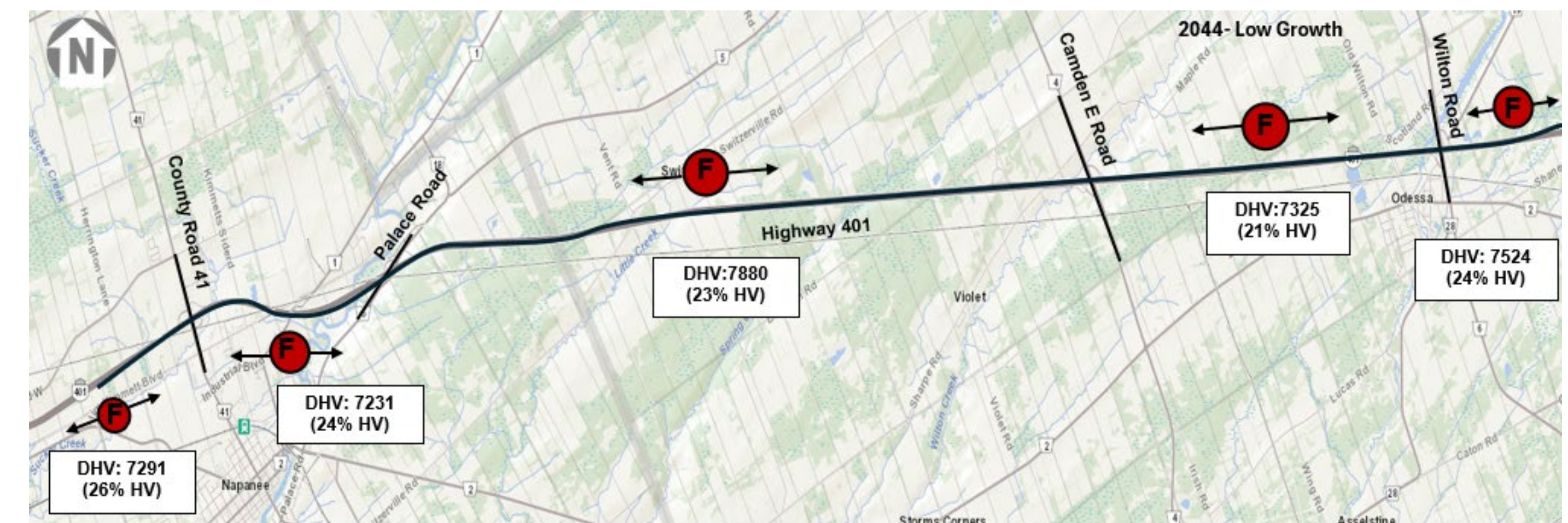
Structure Site	Photo	Overview
Westbrook Creek Culvert 07X-0132/C0		<ul style="list-style-type: none">• Single span concrete rigid frame culvert.• Culvert is in fair condition.• Built in 1960.• Has not been rehabilitated.
Spring Creek Culvert East and Westbound 17X-0137/C1 and C2		<ul style="list-style-type: none">• Single span concrete rigid frame box culvert.• Culvert is in good condition.• Built in 1961.• Has not been rehabilitated.
Culvert 2.7 km East of Brandon Creek Bridge 17X-0222/C0		<ul style="list-style-type: none">• Two cell corrugated steel pipe ellipse culvert.• Culvert is in good condition.• Built in 1965.• Has not been rehabilitated.

Existing & Future Traffic Conditions (Mainline) – Study #2

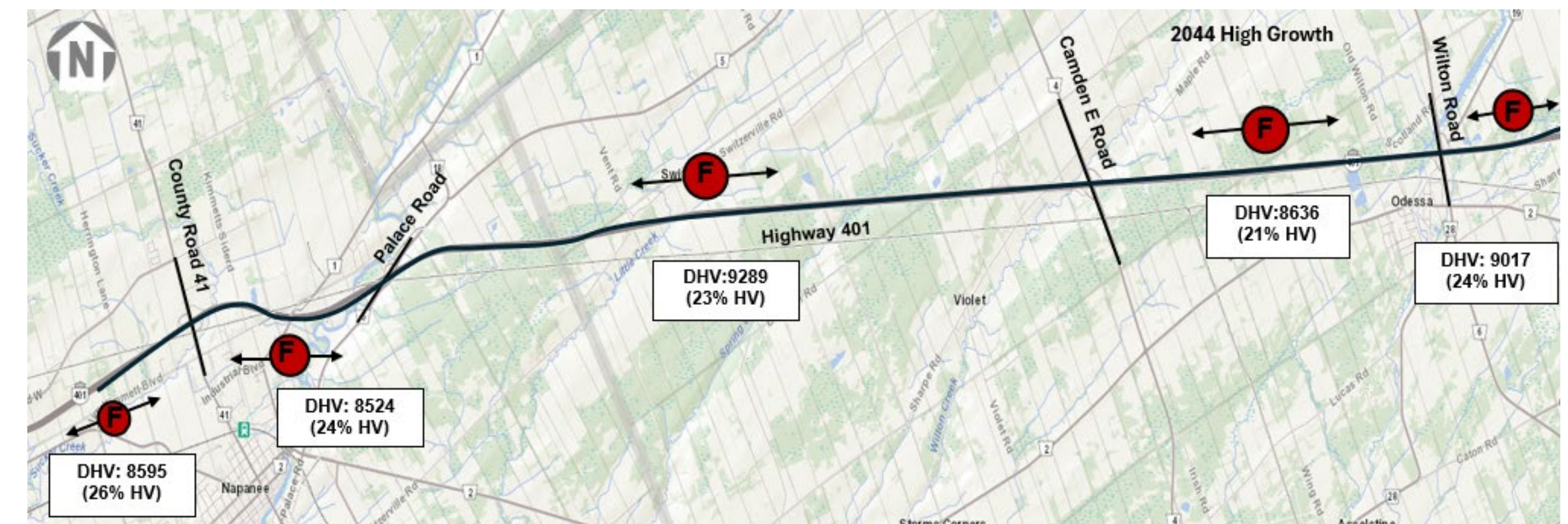
- Consistent with Study #1, a Traffic Operational Analysis looked at traffic conditions with four lanes (existing) and six and eight lane footprints of Highway 401.
- The analysis identified that the current level of service is acceptable.
- By 2044, without improvements, congestion is expected to increase which would slow traffic and extend travel times.



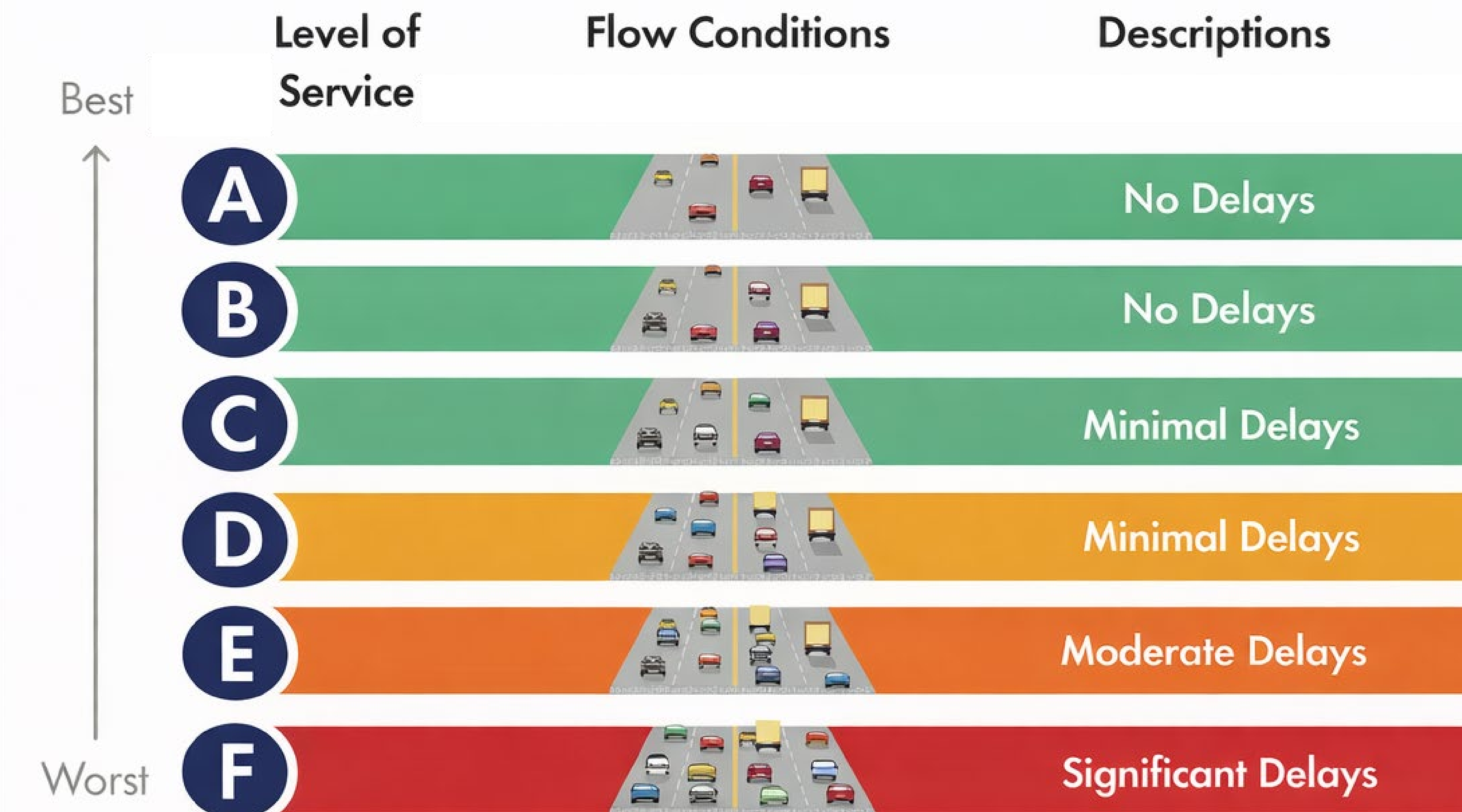
Existing Conditions (2025) – LOS



Future Conditions (2044) – Low Growth, Do Nothing Scenario – LOS



Future Conditions (2044) – High Growth, Do Nothing Scenario – LOS



Study #2: Long List of Alternatives – Highway 401 / Camden Road East (County Road 4) Interchange

ALTERNATIVE 1 - PARCLO A2 (FUTURE PARCLO A4)



DESCRIPTION:

- Improve existing Parclo A2 configuration with new ramp geometry including 70 m radius for both the northbound to westbound and southbound to eastbound on-ramps.
- Country Road 4 realigned to the east or on existing alignment.
- Replacement of County Road 4 structure (17X-0075/B0) and Wilton Creek crossing (17X-0074/B1 EBL and 17X-0074/B2 WBL).
- Realignment of Sharpe Road to the south to remove interchange access/interference.
- Interchange type is Parclo A2 but can be phased to Parclo A4 by introducing N-W and S-W ramps (190m radii).

ADVANTAGES:

- Opportunity to convert to Parclo A4 in the future which is the most desirable interchange configuration in terms of traffic operations.
- Sharpe Road realignment removes access to the interchange to improve commuter safety.

DISADVANTAGES:

- Southbound and northbound left-turn to access Highway 401 less than desirable than directional on-ramp including collision risk.
- High construction cost due to the additional ramps and structures associated with Parclo A4 (deferred to future costs).
- Moderate impacts to natural environment in all quadrants.

ALTERNATIVE 2 - DIAMOND



DESCRIPTION:

- Reconfigure the interchange to diamond interchange with improved ramp geometry.
- Country Road 4 realigned to the east or on existing alignment.
- Replacement of County Road 4 structure (17X-0075/B0) and Wilton Creek crossing (17X-0074/B1 EBL and 17X-0074/B2 WBL).
- Realignment of Sharpe Road to the south to remove interchange access/interference.

ADVANTAGES:

- Lowest construction cost in comparison to other alternatives.
- Lowest property and natural environmental impacts in comparison to the other alternatives.
- Increased intersection spacing between the realigned Sharpe Road intersection and ramp terminal.

DISADVANTAGES:

- Southbound and northbound left turn to access eastbound and westbound Highway 401 respectively is less than desirable than directional on-ramps, increasing collision risk.

LEGEND	
	EXISTING MTO RIGHT-OF-WAY
	EXISTING PROPERTY LINES
	COUNTY ROAD 4 INTERCHANGE ALTERNATIVE
	PROPOSED BRIDGE
	PROPOSED PROPERTY REQUIREMENT
	REMOVAL

ALTERNATIVE 3 - PARCLO A2 WITH ROUNDABOUTS



DESCRIPTION:

- Improve interchange to Parclo A2 configuration with improved ramp geometry including 70 m radius for both the northbound to westbound and southbound to eastbound on-ramps.
- Construct roundabouts at ramp terminals south of the existing intersection to the north and at the existing intersection on the south of the interchange.
- Replacement of County Road 4 structure (17X-0075/B0) and Wilton Creek crossing (17X-0074/B1 EBL and 17X-0074/B2 WBL).
- Country Road 4 realigned to the east or on existing alignment.
- Realignment of Sharpe Road to the south to remove interchange access/interference.
- Construct roundabout at new Sharpe Road intersection.

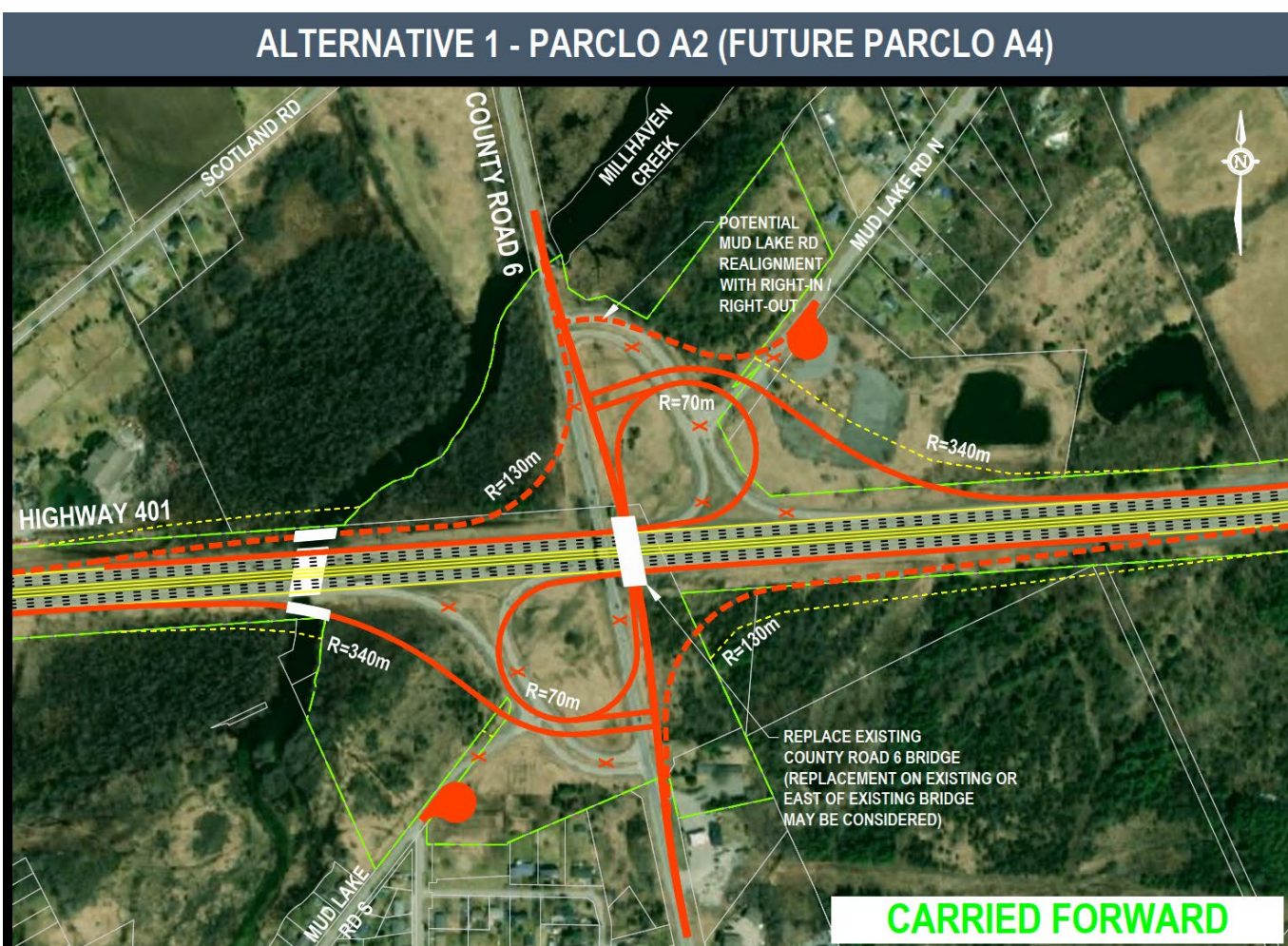
ADVANTAGES:

- Good traffic operations anticipated however there may be a learning curve for traffic using the roundabouts.
- Roundabouts generally reduce severity of collisions relative to signalized intersection.

DISADVANTAGES:

- High construction cost due to the introduction of roundabouts.
- Undesirable intersection spacing between the realigned Sharpe Road intersection and south ramp terminal.

Study #2: Long List of Alternatives – Highway 401 / Wilton Road (County Road 6) Interchange



ALTERNATIVE 1 - PARCLO A2 (FUTURE PARCLO A4)

DESCRIPTION:

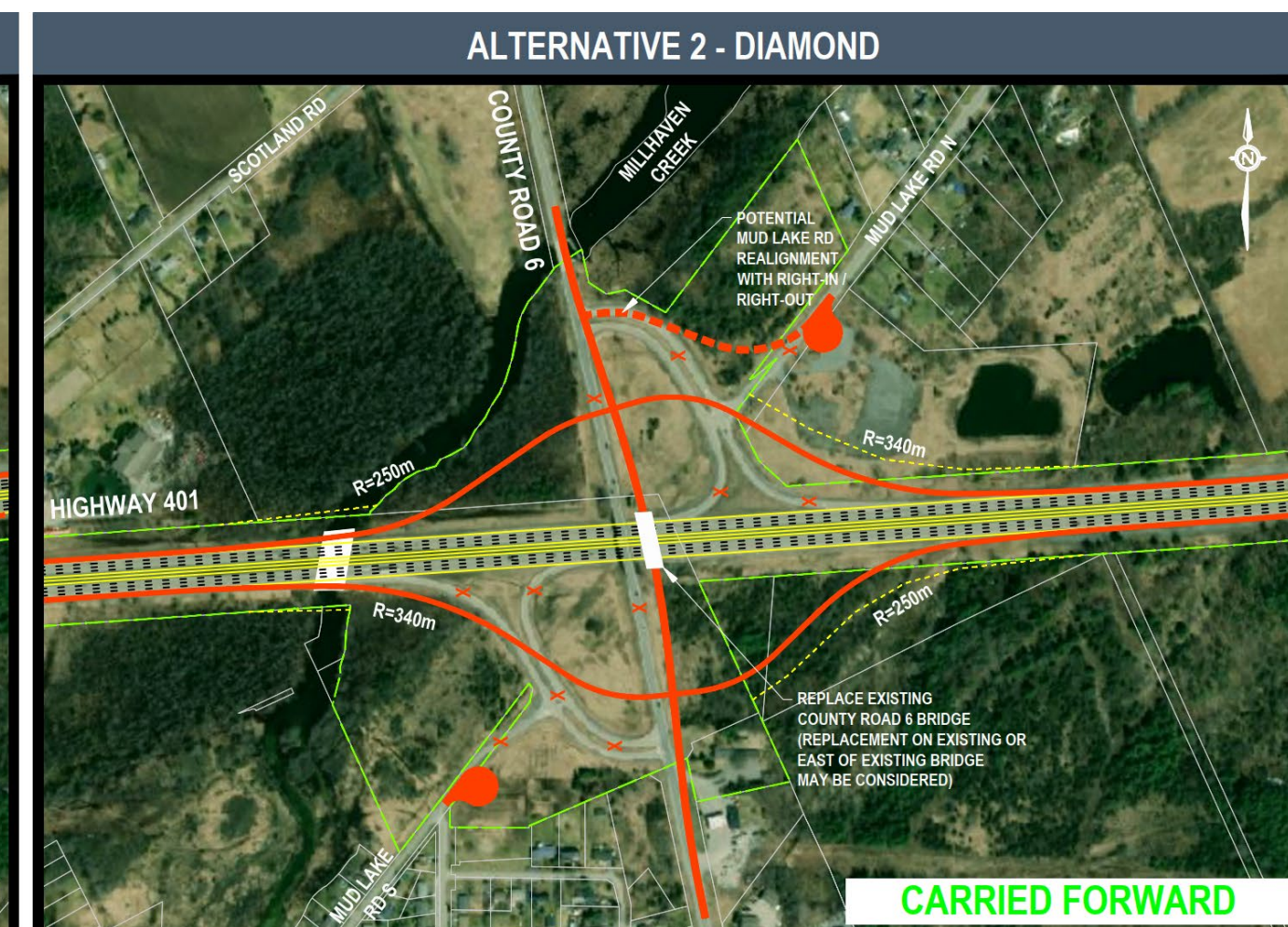
- Re-construct existing Parclo A2 configuration with new ramp geometry including 70 m radius for both the northbound to westbound and southbound to eastbound on-ramps.
- Cul-de-sac Mud Lake Road north and south of the interchange, removing access and interference to the interchange.
- Potential Mud lake Road North realignment and right in/out moves.
- Replace existing County Road 6 structure (17X-0078/B0) either on existing alignment or to the east of existing.
- Replacement of Millhaven Creek twin bridges (17X-0077/B1 EB and 17X-0077/B2 WB) across Highway 401, new culvert for W-N/S ramp.
- Interchange type is Parclo A2 but can be phased to Parclo A4 by introducing N-W and S-W ramps (190m radii).

ADVANTAGES:

- Flexibility to convert to Parclo A4 which is the most desirable interchange configuration in terms of traffic operations and ramp geometry.
- Mud Lake Road cul-de-sac removing access to the interchange to improve commuter safety.

DISADVANTAGES:

- Left turn lane to access Highway 401 is less than desirable in comparison to directional on ramps but can be improved via Parclo A4 in the future.
- Higher construction cost in comparison to other alternatives (defer Parclo A4 costs).
- Moderate environmental impacts in comparison to other alternatives.



ALTERNATIVE 2 - DIAMOND

DESCRIPTION:

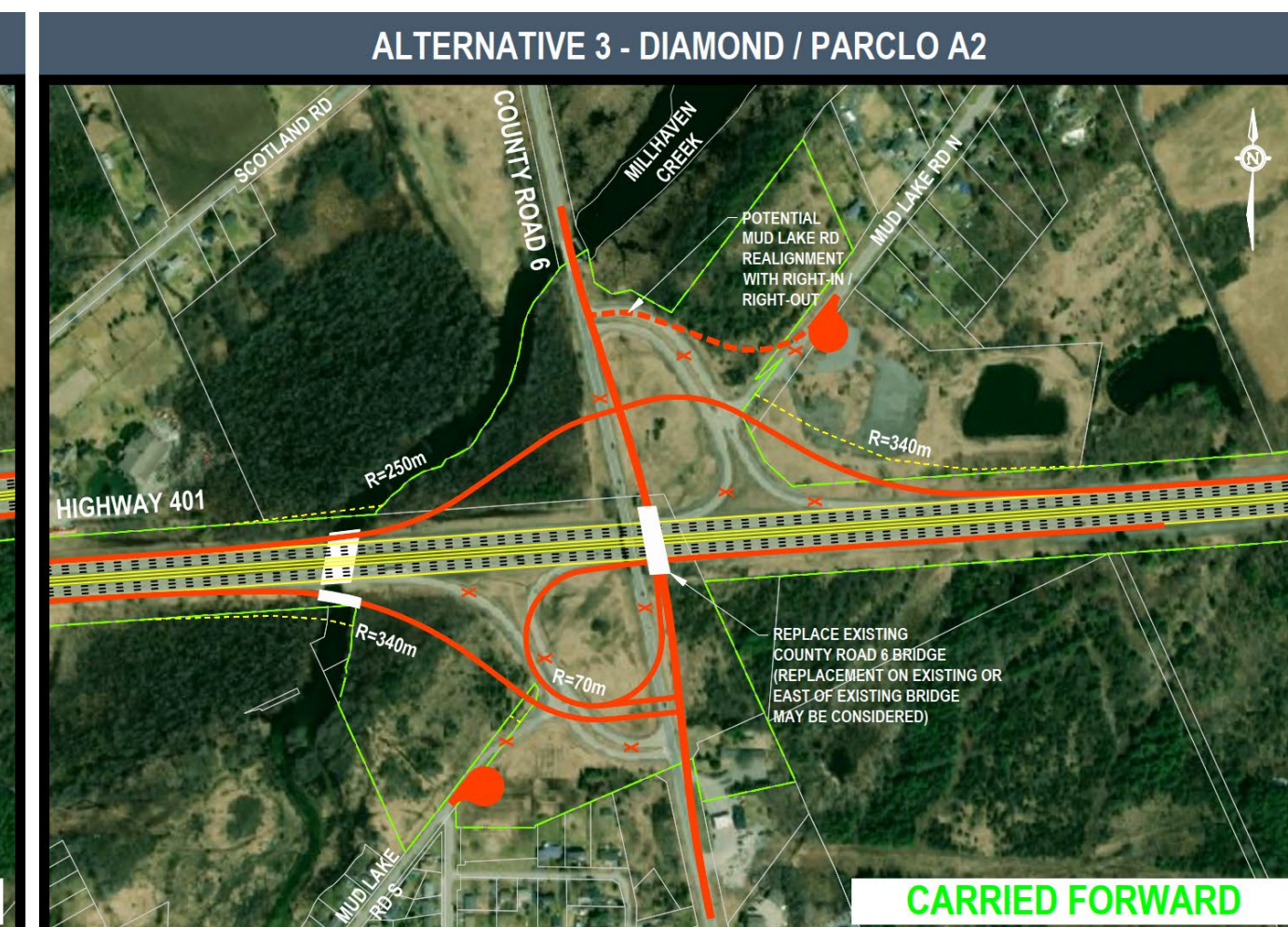
- Construct new diamond interchange with direct on and off ramps.
- Cul-de-sac Mud Lake Road north and south of the interchange, removing access and interference to the interchange.
- Potential Mud lake Road North realignment, utilizing the existing north ramp terminal.
- Replace existing County Road 6 Bridge (17X-0078/B0) either on existing alignment or to the east of existing.
- Replacement of Millhaven Creek twin bridges (17X-0077/B1 EB and 17X-0077/B2 WB) across Highway 401, N/S-W and W-N/S ramps.

ADVANTAGES:

- Lowest construction cost.
- Least environmental and residential impacts.
- Mud Lake Road cul-de-sac removing access to the interchange to improve commuter safety.

DISADVANTAGES:

- Left turn lane to access Highway 401 is less than desirable in comparison to directional on ramps.



ALTERNATIVE 3 - DIAMOND / PARCLO A2

DESCRIPTION:

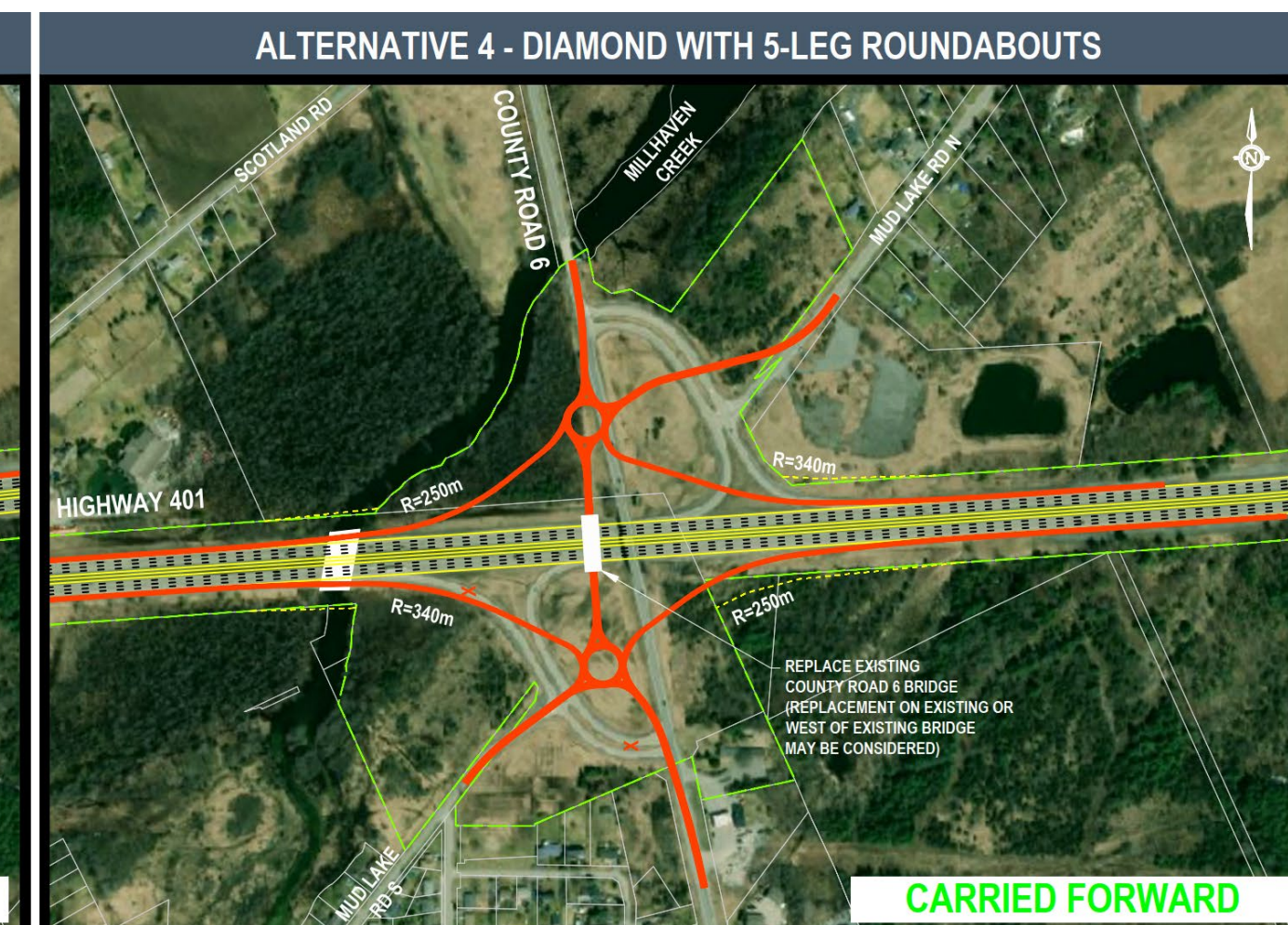
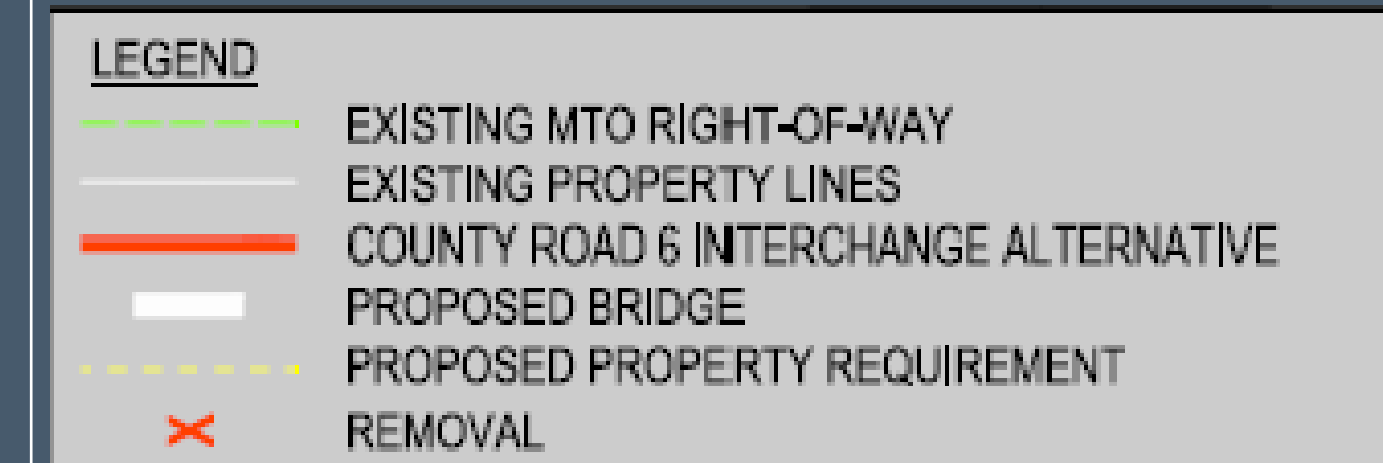
- Construct new diamond interchange configuration with direct on and off ramps North of Highway 401.
- Re-construct existing Parclo A2 configuration south of Highway 401 with new ramp geometry including 70 m radius.
- Cul-de-sac Mud Lake Road north and south of the interchange, removing access and interference to the interchange.
- Potential Mud lake Road North realignment, utilizing the existing north ramp terminal.
- Replacement of Millhaven Creek Culvert across Highway 401, new culvert for W-N/S ramp.
- Replace existing County Road 6 Bridge (17X-0078/B0) either on existing alignment or to the east of existing.

ADVANTAGES:

- Low residential and environmental impacts.
- Reduced interchange footprint from existing.
- Mud Lake Road cul-de-sac removing access to the interchange to improve commuter safety.

DISADVANTAGES:

- Left turn lane to access Highway 401 is less than desirable in comparison to directional on ramps.



ALTERNATIVE 4 - DIAMOND WITH 5-LEG ROUNDABOUTS

DESCRIPTION:

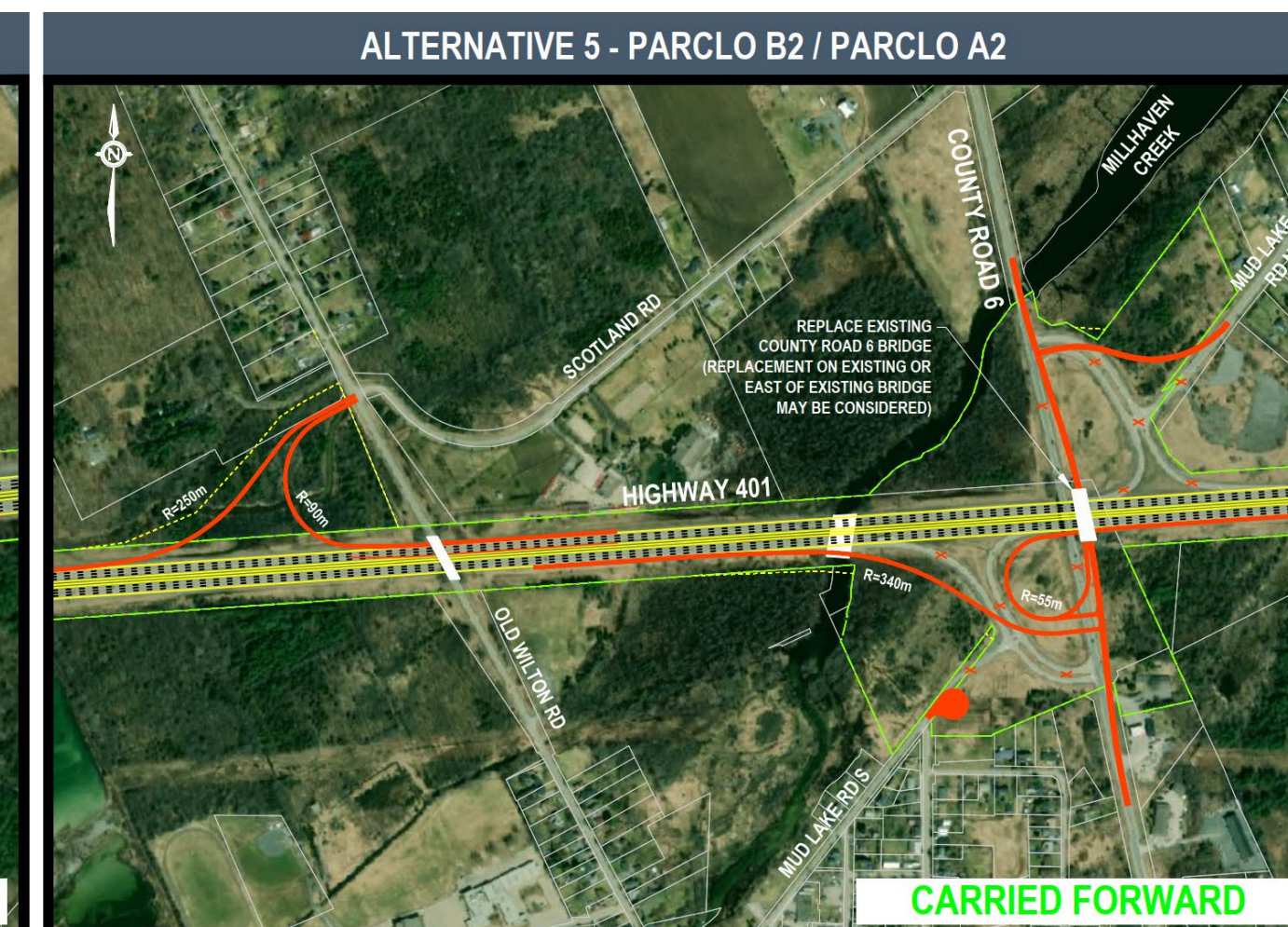
- Construct new diamond interchange configuration with direct on and off ramps North and South of Highway 401.
- Construct five leg roundabouts for north and south ramp terminals.
- Replacement of Millhaven Creek Culvert across Highway 401 and new N/S-E-W and W-N/S/E ramps.
- Realignment of County Road 6 structure (17X-0078/B0) on existing or to the east of existing.
- Maintains access to Highway 401 from Mud Lake Road north and south.

ADVANTAGES:

- Roundabouts provide less collision risk than stop controlled intersections.
- Low environmental impacts outside of existing interchange footprint.
- Maintains access to/from Mud Lake Road.

DISADVANTAGES:

- Higher construction cost in comparison to other alternatives.
- Will require traffic learning to operate multiple 5-leg, ramp terminal roundabouts.



ALTERNATIVE 5 - PARCLO B2 / PARCLO A2

DESCRIPTION:

- Re-construct existing Parclo A2 configuration South of Highway 401 with new ramp geometry including 55 m radius for the northbound to westbound on-ramp.
- Close the interchange ramps North of Highway 401.
- Realign Mud Lake Road North, utilizing the existing north ramp terminal.
- Construct new Parclo B2 interchange ramps to connect to Old Milton Road west of existing interchange.
- Replace existing County Road 6 underpass (17X-0078/B0) adjacent to existing structure.
- Cul-de-sac Mud Lake Road South of the interchange, removing access and interference to the interchange.
- Replacement of Millhaven Creek twin bridges (17X-0077/B1 EB and 17X-0077/B2 WB) across Highway 401, E-E/W and W-N/S ramps.

ADVANTAGES:

- Least environmental impact to Millhaven Creek and existing interchange location.
- Maintains access to/from Mud Lake Road.
- Reduced potential to impact Millhaven Provincially Significant Wetland.

DISADVANTAGES:

- Left turn to access Highway 401 less than desirable than directional on-ramp, potential increased collision risk.
- Additional commercial and residential impacts outside of existing interchange footprint.

Study #2: Long List of Alternatives – Beechwood Road Underpass

ALTERNATIVE 1 - REPLACE ON EXISTING ALIGNMENT



DESCRIPTION:

- Replacement of Beechwood Road bridge structure (17X-0052/B0) along the existing alignment.
- No realignment of Beechwood Road.

ADVANTAGES:

- Maintains tangent alignment of Beechwood Road.
- No encroachment and impacts to natural environment.
- Lowest cost alternative.

DISADVANTAGES:

- Beechwood Road closed for the duration of construction.
- 8.5 km detour required to support traffic during construction.

ALTERNATIVE 2 - REALIGNMENT TO THE EAST



DESCRIPTION:

- Realign Beechwood Road towards the East.

ADVANTAGES:

- Beechwood Road remains open during construction.

DISADVANTAGES:

- Minor impacts to natural environment.
- Introduces horizontal curves to Beechwood Road.

ALTERNATIVE 3 - REALIGNMENT TO THE WEST



DESCRIPTION:

- Realign Beechwood Road towards the West.

ADVANTAGES:

- Beechwood Road remains open during construction.

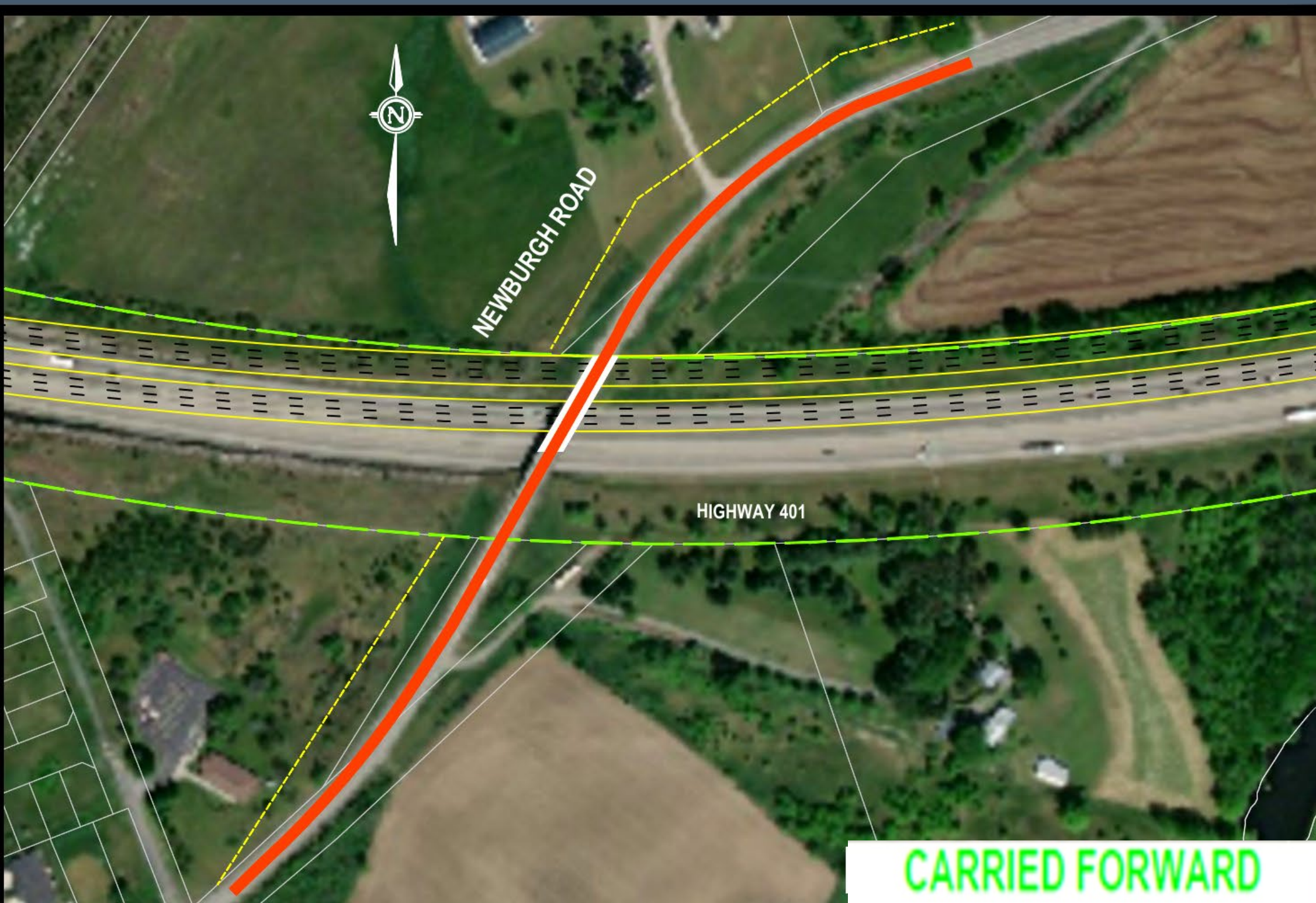
DISADVANTAGES:

- Minor impacts to natural environment.
- Introduces horizontal curves to Beechwood Road.

LEGEND	
	EXISTING MTO RIGHT-OF-WAY
	EXISTING PROPERTY LINES
	MARYSVILLE ROAD INTERCHANGE ALTERNATIVE
	PROPOSED BRIDGE
	PROPOSED PROPERTY REQUIREMENT
	REMOVAL

Study #2: Long List of Alternatives – Newburgh Road Underpass

ALTERNATIVE 1 - REPLACE ON EXISTING ALIGNMENT



DESCRIPTION:

- Replacement of Newburgh Road bridge structure (17X-0061/B0) along the existing alignment.
- No realignment of Newburgh Road.

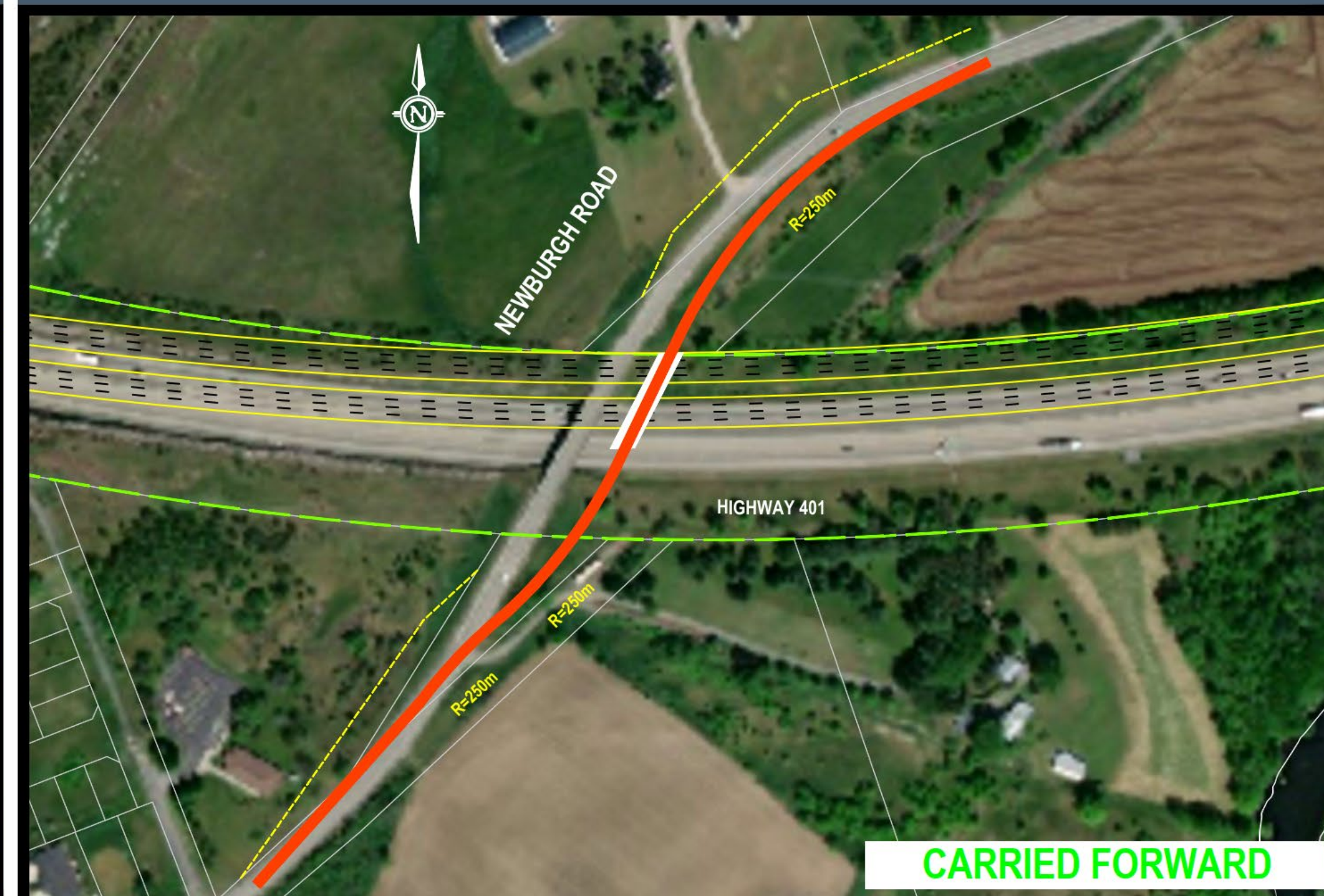
ADVANTAGES:

- Maintains tangent alignment of Newburgh Road.
- No encroachment and impacts to natural environment.
- Lowest cost alternative.
- Can remain open (one lane of traffic only) or can be closed.

DISADVANTAGES:

- 9 km detour required to support traffic during construction.

ALTERNATIVE 2 - REALIGNMENT TO THE EAST



DESCRIPTION:

- Realign Newburgh Road towards the East.

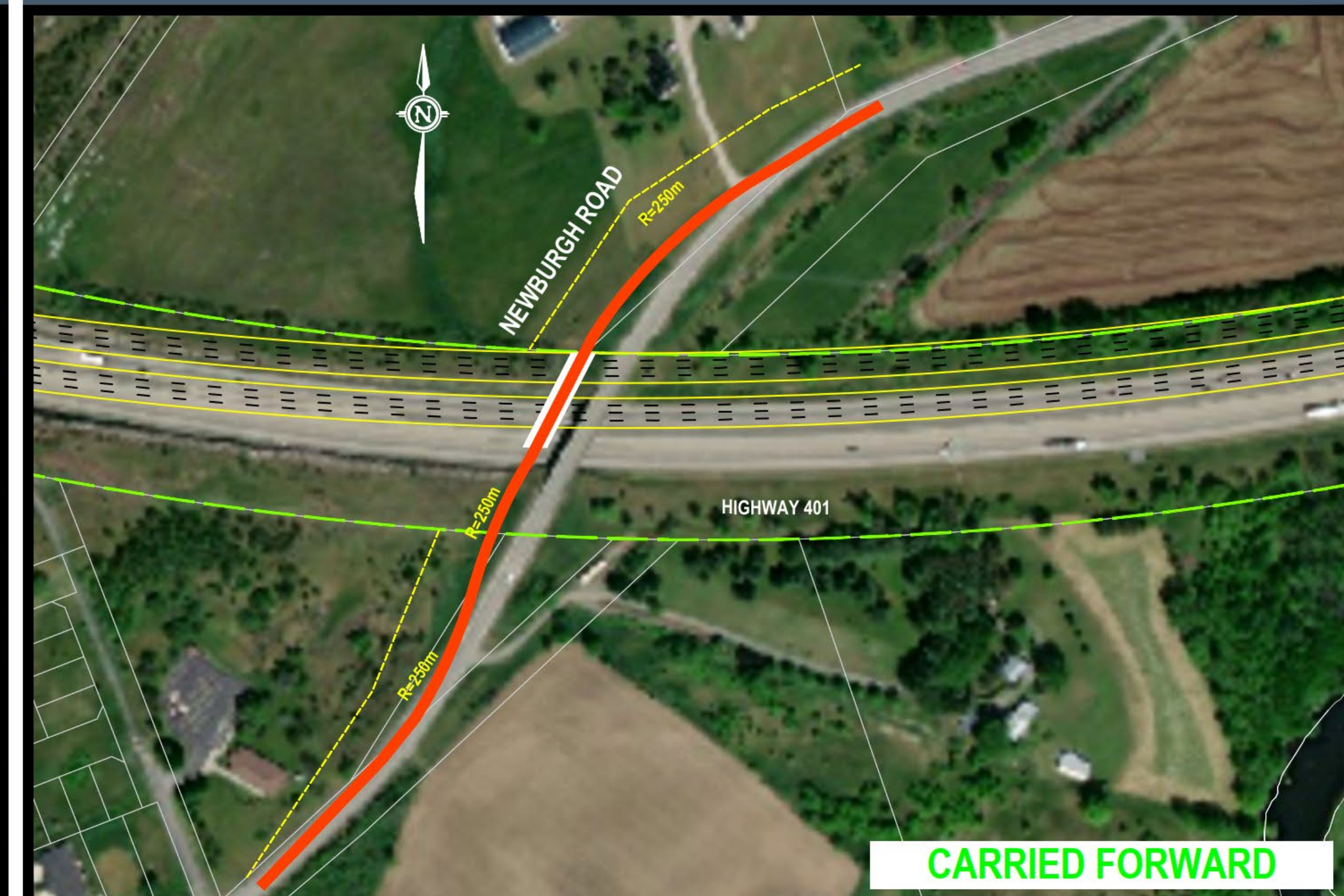
ADVANTAGES:

- Newburgh Road remains open during construction.

DISADVANTAGES:

- Minor impacts to natural environment.

ALTERNATIVE 3 - REALIGNMENT TO THE WEST



DESCRIPTION:

- Realign Newburgh Road towards the West.

ADVANTAGES:

- Newburgh Road remains open during construction.

DISADVANTAGES:

- Minor impacts to the natural environment.

LEGEND	
	EXISTING MTO RIGHT-OF-WAY
	EXISTING PROPERTY LINES
	MARYSVILLE ROAD INTERCHANGE ALTERNATIVE
	PROPOSED BRIDGE
	PROPOSED PROPERTY REQUIREMENT
	REMOVAL

Study #2: Long List of Alternatives – Switzerville Road Underpass

ALTERNATIVE 1 - REPLACE ON EXISTING ALIGNMENT



DESCRIPTION:

- Replacement of Switzerville Road bridge structure (17X-0064/B0) along the existing alignment.
- No realignment of Switzerville Road.

ADVANTAGES:

- Maintains tangent alignment of Switzerville Road.
- No encroachment and impacts to natural environment.
- Lowest cost alternative.

DISADVANTAGES:

- Switzerville Road closed for the duration of construction.
- 13 km detour required to support traffic during construction

ALTERNATIVE 2 - REALIGNMENT TO THE EAST



DESCRIPTION:

- Realign Switzerville Road towards the East.

ADVANTAGES:

- Switzerville Road remains open during construction.

DISADVANTAGES:

- Minor impacts to natural environment.

ALTERNATIVE 3 - REALIGNMENT TO THE WEST



DESCRIPTION:

- Realign Switzerville Road towards the West.

ADVANTAGES:

- Switzerville Road remains open during construction.

DISADVANTAGES:

- Minor impacts to natural environment.

LEGEND

- EXISTING MTO RIGHT-OF-WAY
- EXISTING PROPERTY LINES
- MARYSVILLE ROAD INTERCHANGE ALTERNATIVE
- PROPOSED BRIDGE
- PROPOSED PROPERTY REQUIREMENT
- ✗ REMOVAL

Study #2: Long List of Alternatives – Old Wilton Road Underpass

ALTERNATIVE 1 - REPLACE ON EXISTING ALIGNMENT



DESCRIPTION:

- Replacement of Old Wilton Road structure (17X-0076/B0).

ADVANTAGES:

- Maintains tangent alignment of Old Wilton Road.
- No encroachment and impacts to natural environment.
- Lowest cost alternative.
- Can remain open (one lane of traffic only) or can be closed.

DISADVANTAGES:

- 3 km detour required to support traffic during construction.

ALTERNATIVE 2 - REALIGNMENT TO THE EAST



DESCRIPTION:

- Realign Old Wilton Road towards the East.

ADVANTAGES:

- Old Wilton Road remains open during construction.

DISADVANTAGES:

- Minor impacts to natural environment.
- Introduces horizontal curves to Old Wilton Road.

ALTERNATIVE 3 - REALIGNMENT TO THE WEST



DESCRIPTION:

- Realign Old Wilton Road towards the West.

ADVANTAGES:

- Old Wilton Road remains open during construction.

DISADVANTAGES:

- Minor impacts to natural environment.
- Introduces horizontal curves to Old Wilton Road.

LEGEND	
	EXISTING MTO RIGHT-OF-WAY
	EXISTING PROPERTY LINES
	MARYSVILLE ROAD INTERCHANGE ALTERNATIVE
	PROPOSED BRIDGE
	PROPOSED PROPERTY REQUIREMENT
	REMOVAL

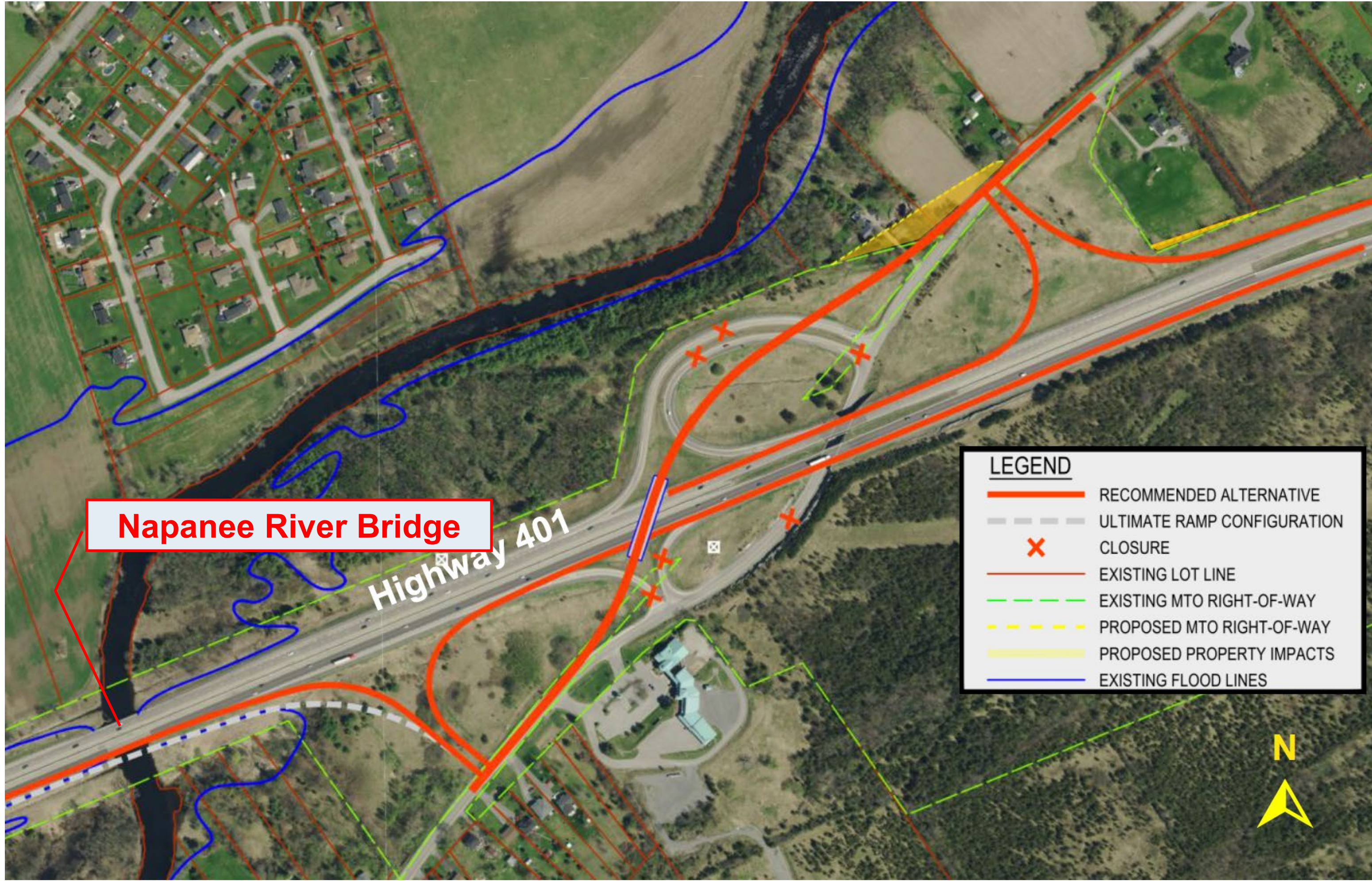
Napanee River Bridge Improvements Preliminary Design and Class Environmental Assessment

Previous Study - Palace Road Interchange

STUDY #2 PROJECT UPDATE

- The Ontario Ministry of Transportation completed a Group 'B' Class EA and Preliminary Design Study in 2019 to undertake improvements to the Highway 401 interchange at Palace Road (GWP 4197-13-00), located within the current Study #2 study area.
- The process was documented in the *Highway 401 Interchange Improvements at Palace Road Class Environmental Assessment and Preliminary Design Study Transportation Environmental Study Report* (March 2019).
- As the **Palace Road Interchange Technically Preferred Plan** advances to Detail Design, advancement of the **Napanee River Bridge (Site 17X-0062/B0)** from the current Study #2 project is required due to its proximity to Palace Road and thus, has been added to the scope of work as a separate Class EA and Preliminary Design study.

**Highway 401 / Palace Road Interchange
Technically Preferred Plan**



(Reference: Highway 401 Interchange Improvements at Palace Road Class Environmental Assessment and Preliminary Design Study TESR March 2019)

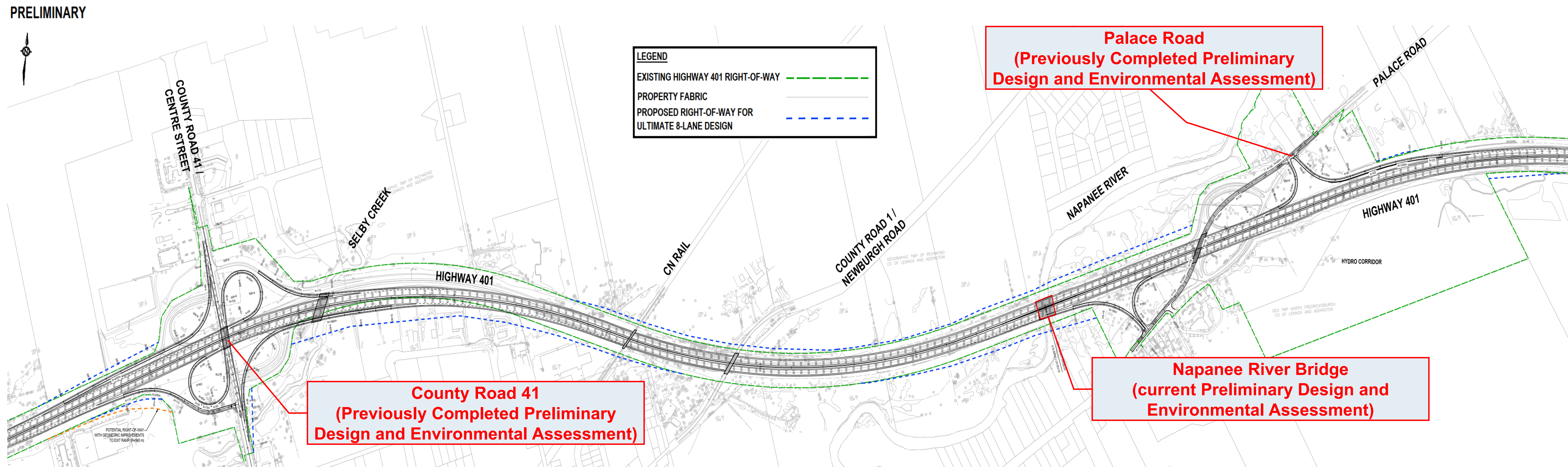
NOTE: As part of the current Study #2, the previously approved Palace Road Interchange Technically Preferred Plan was revisited to assess compatibility with an interim and ultimate footprint of Highway 401, as well as accommodation of a potential 130 km/h design speed of Highway 401. **Based on this review, no significant modifications to the previously approved configuration are recommended.**

Napanee River Bridge Class EA and Preliminary Design Study

STUDY AREA

The figure below shows the **Napanee River Bridge**, which the Project Team is advancing the Class EA and Preliminary Design Study.

In this area, other completed Preliminary Design and Class EA studies include; County Road 41 and Palace Road. The Highway 401 corridor through this segment considers protection for 8 lanes, which includes connections to the approved interchange designs for County Road 41 and Palace Road.



Napanee River Bridge Class EA and Preliminary Design Study

KEY PROJECT MILESTONES AND TIMELINES

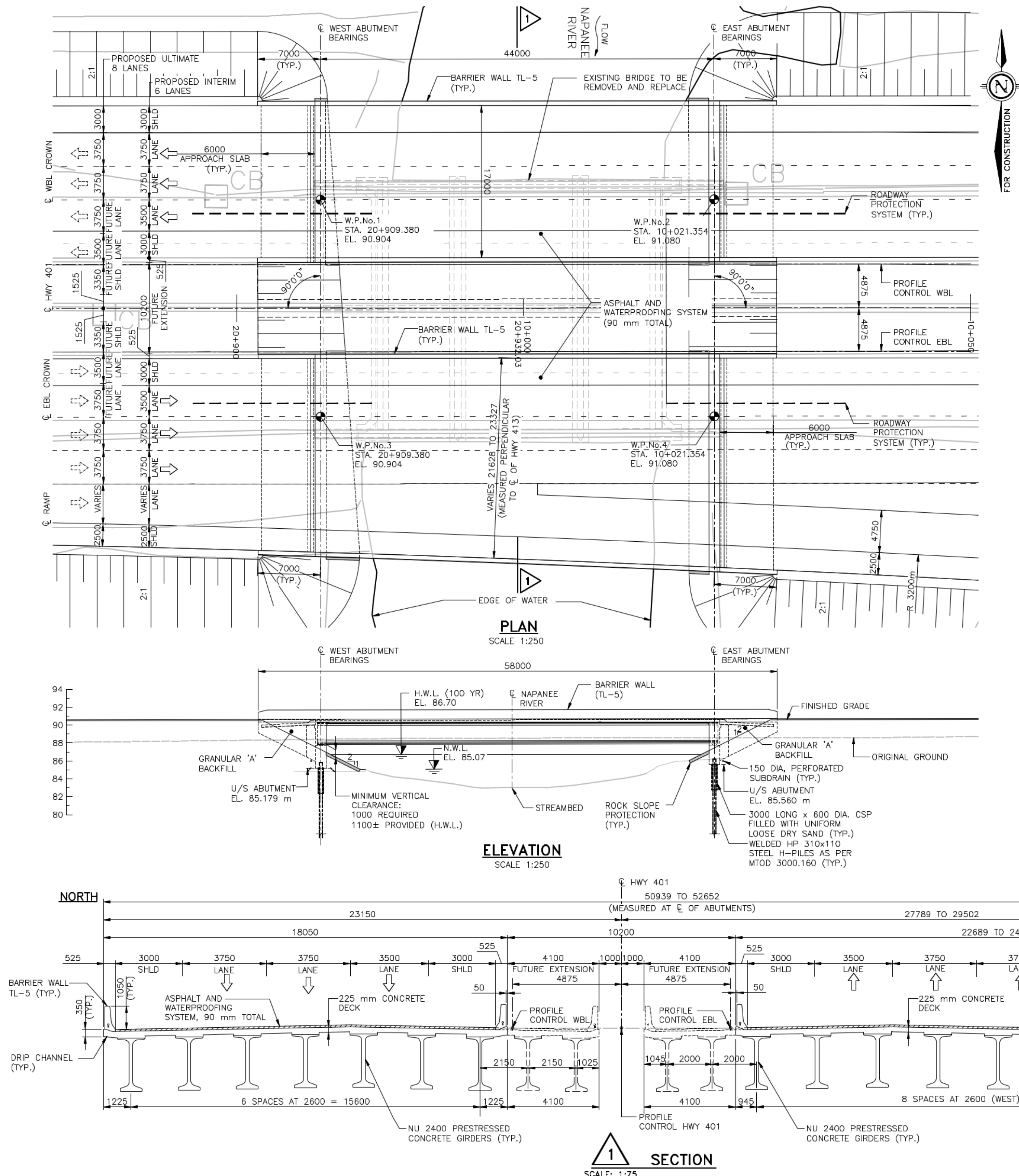
Key Tasks	Anticipated Schedule
Supplementary Investigations by Environmental and Drainage Teams	Spring 2026
Draft / Final Environmental Specialist Studies & Technical Reports	Spring / Summer 2026
Finalize TESR and Issue Notice of Completion with 30-day comment period	Summer / Fall 2026
Recommended Plan	Fall 2026



NOTE: Standalone environmental reports and a Transportation Environmental Study Report (TESR) will be prepared for the bridge's Preliminary Design. These are being prioritized ahead of the remaining Study #2 works.

Napanee River Bridge Class EA and Preliminary Design Study

BRIDGE ALTERNATIVE – SINGLE SPAN (RECOMMENDED)

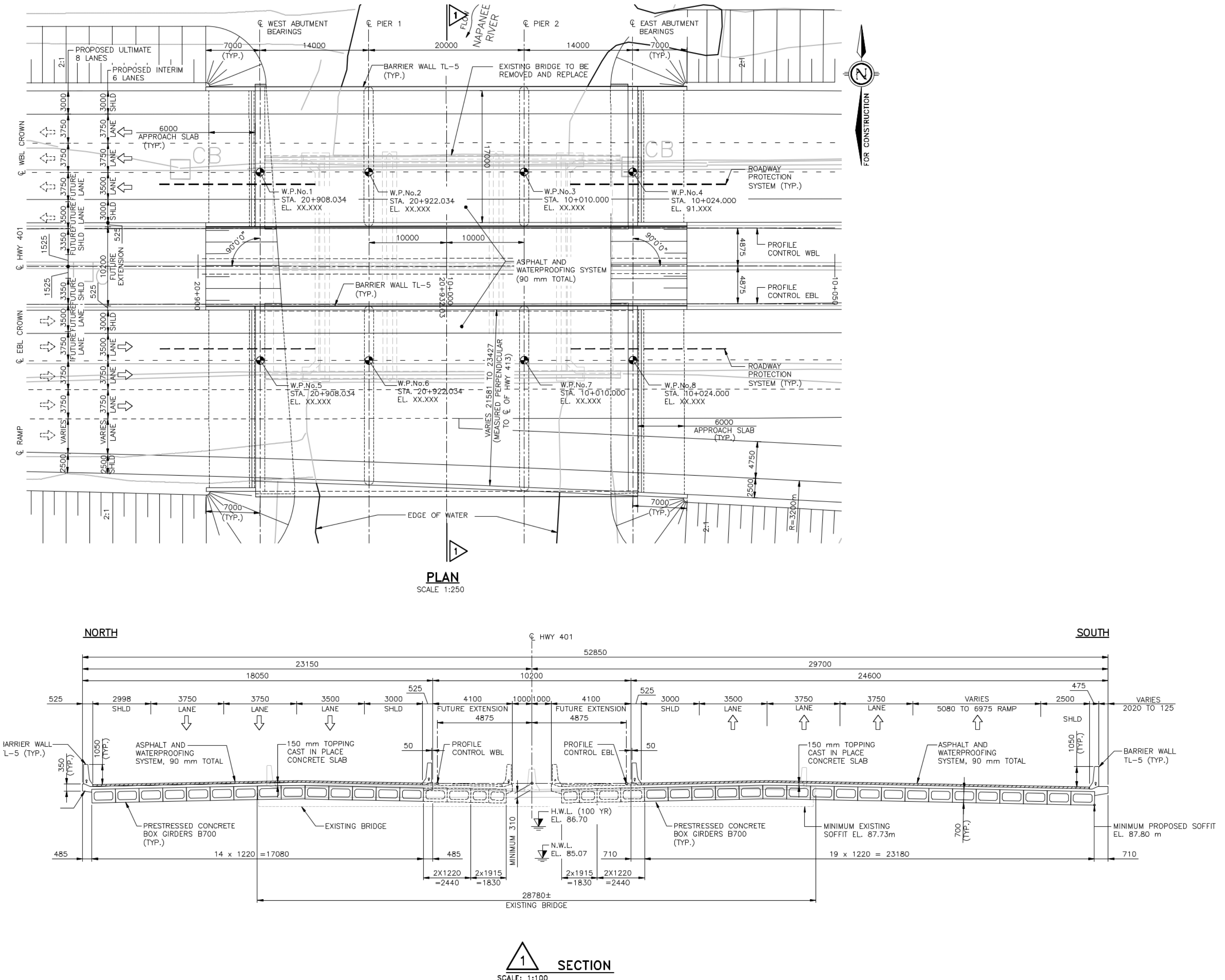


- 44 m long single span structure satisfies hydraulic and fluvial geomorphology requirements.
- Require profile raise along Highway 401 to meet freeboard water level requirements.
- Bridge type is Precast Concrete NU Girder.
- Bridge construction and staging to the north and south of the existing structure and Highway 401. Consideration for ultimate future lane locations.
- No pier construction required in the Napanee River and only removal of existing piers is required.
- ✓ This option is preferred as it minimizes impacts to the Napanee River (less piers in the water) while enhancing constructability and reducing cost.

Napanee River Bridge Class EA and Preliminary Design Study

BRIDGE ALTERNATIVE – THREE (3) SPAN

- 48 metres long multi-span structure satisfies hydraulic and fluvial geomorphology requirements. Minimizes profile raise along Highway 401 to meet freeboard water level requirements.
- Bridge type is Precast Concrete Box Girder.
- Pier construction required in the Napanee River which needs to be staged with removal of existing piers (higher construction complexity and potential disturbance to watercourse).
- Bridge construction and staging to the north and south of the existing structure and Highway 401. Consideration for ultimate future lane locations.
- ✘ This option is least preferred as it impacts the Napanee River (requires piers to be built in the water) which increases construction complexity, cost and future maintenance.



Next Steps in the Environmental Assessment Process

Short List Evaluation Criteria

The following draft evaluation criteria have been identified by the Project Team to evaluate the Short List of Alternatives:



Natural Environment

- Fish and Fish Habitat
- Wildlife and Wildlife Habitat
- Species at Risk
- Surface Water / Groundwater
- Designated Natural Areas / Wetlands & Vegetation Communities
- Contamination



Socio-Economic Environment

- Community Impacts
- Existing & Planned Land Uses
- Noise & Air Quality
- Property Impacts
- Impacts to Emergency Services
- Recreational Trails / Active Transportation Networks
- Climate Change



Cultural Environment

- Archaeological resources
- Built Heritage and Cultural Heritage Landscapes



Transportation and Constructability

- Traffic Operations
- Geometrics
- Safety
- Constructability
- Potential to impact existing utility and servicing infrastructure



Cost

- Construction Costs
- Property Acquisition Costs
- Operational / maintenance Costs

After this Public Information Centre, we'll create an Evaluation Matrix to compare all the alternatives based on the key factors you see.

This process will help us select a Technically Preferred Alternative that will address the issues affecting the corridor while aiming to minimize impacts.



Let us know what you think about the evaluation criteria

Designation and MTO Permit Control Areas

- Once a **Recommended Plan** has been identified, the MTO may designate lands as highway and acquire property prior to completion of the Class Environmental Assessment process.
- A designation enables the Ministry to provide route/corridor protection through the application of development control measures along the corridor and in the vicinity of the designated lands.
- For more information about highway corridor management, please visit: <https://www.ontario.ca/page/highway-corridor-management>.
- Any work on private property that is within 45 metres of the highway property or 395 meters from the centre point of an intersection or interchange requires approval from the MTO.
- Any work on private property that is within 800 metres of the highway property and that may have a large impact on traffic, is also subject to approval from MTO.
- For more details on requirements for permits, please visit: <https://www.Ontario.ca/page/highway-corridor-management> or make an inquiry regarding a specific property: <https://www.hcms.mto.gov.on.ca/>



Example of MTO Permit Control Areas:
Controlled-Access Highways (CAH)

Next Steps

- We will review and respond to the feedback we receive about this Public Information Centre.
- Please submit any comments by **April 30, 2026**.
- We will complete a detailed evaluation of the Short List of Alternatives, taking into account potential impacts and ways to reduce them.
- A second Public Information Centre is tentatively scheduled for Summer 2027 to share the results of the Short List evaluation and to present a Technically Preferred Alternative for your review and comment.

Freedom of Information and Protection of Privacy Act. Comments and information regarding this study are being collected to satisfy the requirements of the Ontario Environmental Assessment Act, and in accordance with the Freedom of Information and Privacy Act. With the exception of personal information, all comments will become part of the public record.

Ways to provide your comments:



Fill out a comment sheet and leave it in the box



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