



Highway 401 Preliminary Design and Environmental Assessment Study from County Road 28 to Hamilton Road, Port Hope, Study #2 GWP 4010-21-00

Public Information Centre #2
October 25, 2024- November 25, 2024

Under the *Integrated Accessibility Standards Regulation* (2011), the Ministry of Transportation, Ontario is committed to ensuring this presentation is accessible to all participants. If you have any accessibility requirements, please contact one of the project team members listed at the end of this presentation or on the project website.

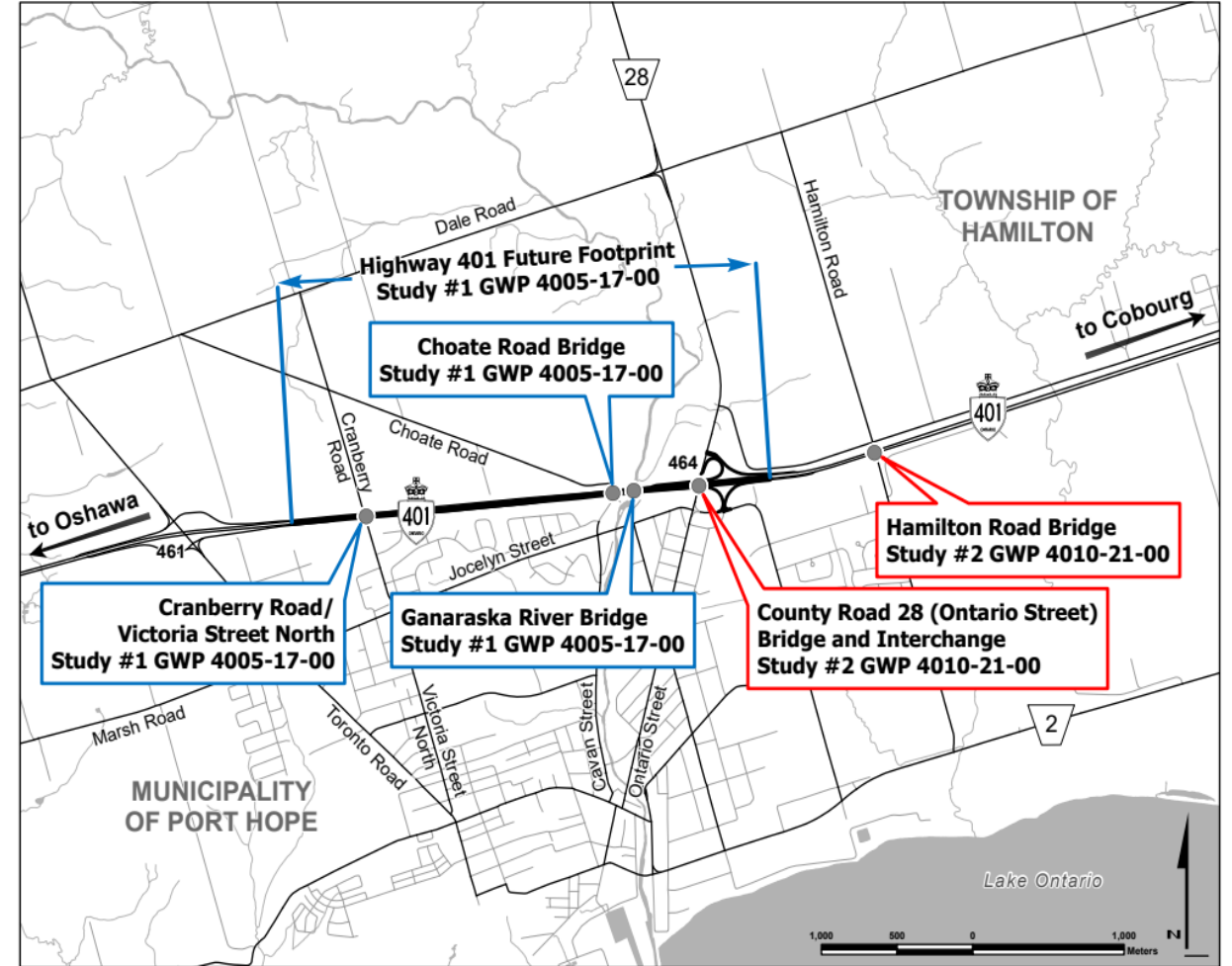
PROJECT DESCRIPTION AND PURPOSE

The Ministry of Transportation (MTO) has retained the services of Egis and LEA Consulting Ltd. Joint Venture (Egis-LEA Joint Venture) to carry out the Preliminary Design and Class Environmental Assessment (Class EA) for Highway 401 from 500m west of Cranberry Road to 450m east of County Road 28, including the Cranberry Road bridge, Choate Road bridge, Ganaraska River bridge, Hamilton Road bridge and County Road 28 (Ontario Street) Interchange in Port Hope.

The initial study has been divided into two (2) separate Class EA studies:

STUDY # 1 GWP 4005-17-00 included the structural needs of 3 bridges (Cranberry Road Bridge, Choate Road Bridge and Ganaraska River Bridge) and establishing the eight (8) and ten (10) lane future footprint of Highway 401 from 500m west of Cranberry Road to 450m east of County Road 28 (Ontario Street). The Preliminary Design for the Choate Road and Ganaraska River Bridges was completed in 2022.

STUDY #2 GWP 4010-21-00 includes future operational long-term needs at the County Road 28 (Ontario Street) interchange, and structural needs of 2 bridges (County Road 28 bridge and Hamilton Road Bridge).



CLASS ENVIRONMENTAL ASSESSMENT PROCESS

Study #2 is being carried out in accordance with the approved environmental planning process for Group 'B' projects under the MTO *Class Environmental Assessment (Class EA) for Provincial Transportation Facilities (2000)*.

A **Transportation Environmental Study Report (TESR)** will be prepared to summarize the study process and recommendations. Upon completion, the TESR will be made available for a 30-day public comment period.

Upon completion of the 30-day public comment period and provided there are no outstanding concerns, the TESR will be submitted to the Ministry of Environment, Conservation and Parks (MECP) and the study will be considered to have met the requirements of MTO's Class EA process.



CONSULTATION AND ENGAGEMENT

Consultation and engagement with external agencies, Indigenous communities, and the public at key milestones throughout the study are essential components of the Class EA process. Stakeholders and the public are encouraged to provide input at any point during this project.

Indigenous Communities that have been consulted with include:

- **Curve Lake First Nation**
- **Alderville First Nation**
- **Mississaugas of Scugog First Nation**
- **Mohawks of the Bay of Quinte First Nation**
- **Beausoleil First Nation**
- **Georgina Island First Nation**
- **Chippewas of Rama First Nation**
- **Métis Nation of Ontario**
- **Williams Treaties First Nations**
- **Hiawatha First Nation**

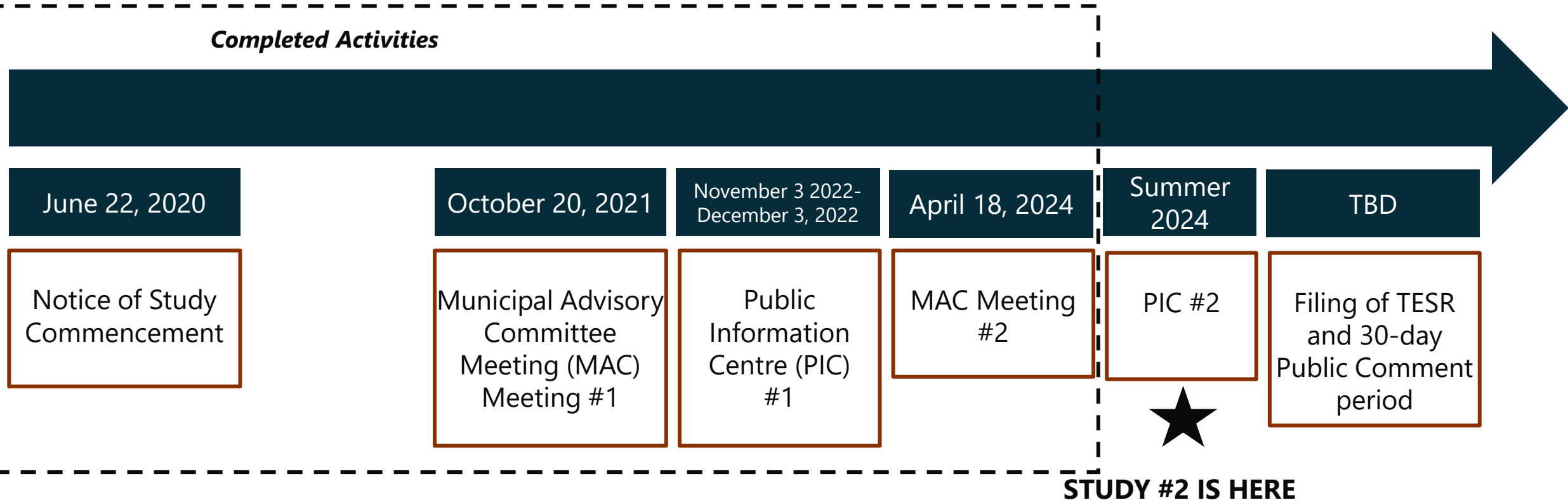
External Agencies that have been consulted with include:

- **Ministry of Environment, Conservation and Parks (MECP)**
- **Ministry of Natural Resources and Forestry (MNRF)**
- **Ministry of Tourism, Culture and Sport (MTCS)**
- **Infrastructure Ontario (IO)**
- **Ministry of the Environment and Climate Change (MECC)**
- **Ontario Federation of Agriculture (OFA)**
- **Local Emergency Services (Fire, Paramedic, Police)**
- **Ganaraska Region Conservation Authority (GRCA)**
- **Port Hope Area Initiative (PHAI)**
- **Municipality of Port Hope, Township of Hamilton and County of Northumberland**

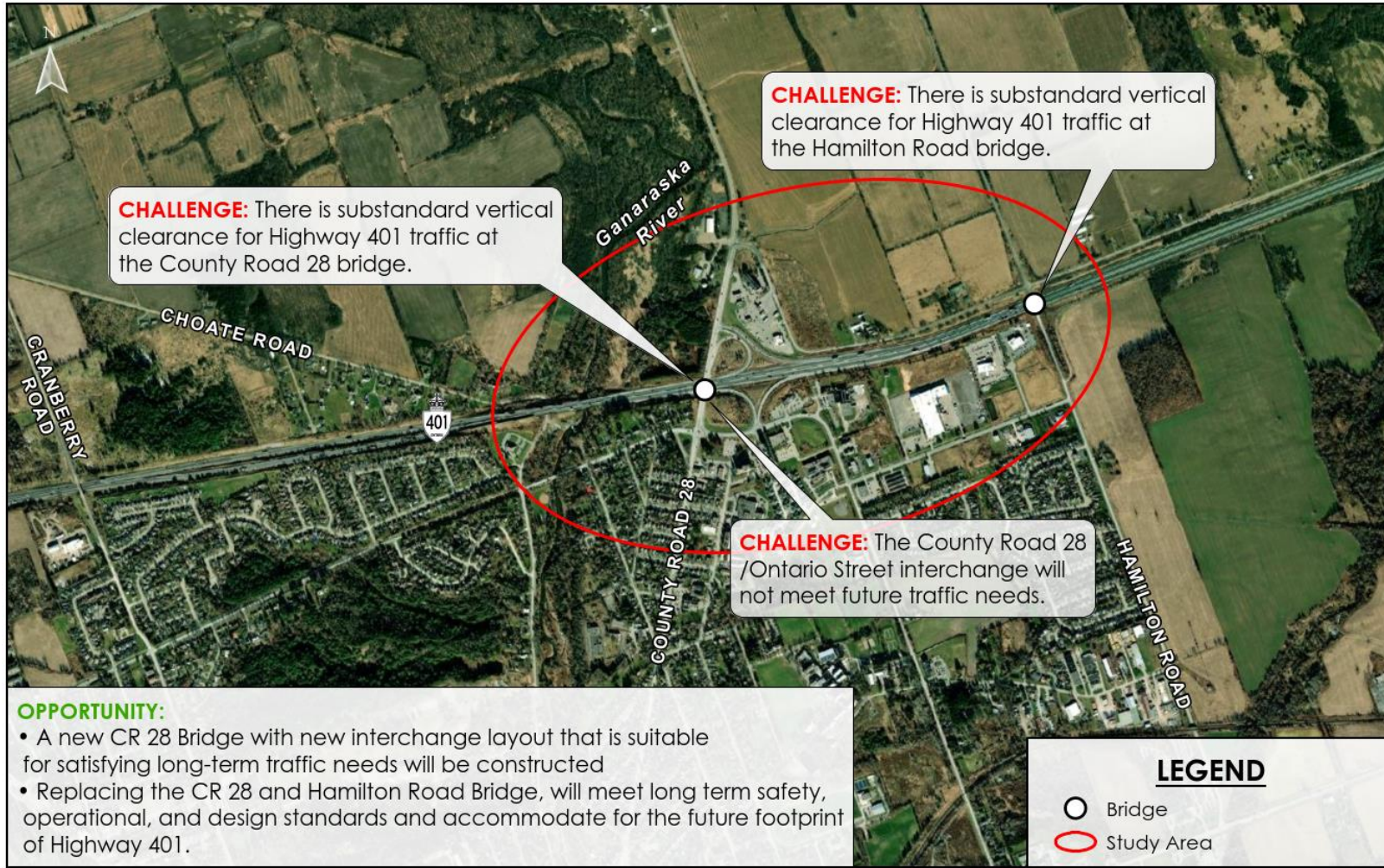
CONSULTATION AND ENGAGEMENT

Consultation and engagement opportunities that are being conducted at key points throughout Study #2 include:

Completed Activities



CHALLENGES AND OPPORTUNITIES



OVERVIEW OF ENVIRONMENTAL STUDIES

STUDY	DATE
Fisheries Existing Conditions	Complete
Terrestrial Impact Assessment	Complete
Noise Assessment Report	Complete
Erosion and Sediment Overview Risk Assessment Report	Complete
Cultural Heritage Assessment	Complete
Stage 1 Archaeology Assessment	Complete
Contamination Overview Study	Complete

COUNTY ROAD 28 (ONTARIO STREET) BRIDGE/INTERCHANGE

COUNTY ROAD 28 (ONTARIO STREET) EXISTING ENVIRONMENTAL CONDITIONS

Social and Cultural Environment

Cultural Heritage

- There are built heritage resources and cultural heritage landscapes due to historical farming activities north of Highway 401

Archaeology

- Lands predominantly in the northwest quadrant contain archaeological resources, including Indigenous artifacts
- Stage 1 Archaeological Assessment complete, Stage 2 Archaeological Assessment to be completed.

Land Use

- This area is predominantly used for commercial purposes
- Agricultural lands are located north of Highway 401
- Residential lands in the southwest quadrant
- Ganaraska Region Conservation Area (GRCA) in the northwest quadrant

Natural Environment

- Channel that drains into the tributary of the Ganaraska River in NW quadrant.
- No significant Fish Habitat



COUNTY ROAD 28 (ONTARIO STREET) BRIDGE EXISTING CONDITIONS



- Substandard vertical clearance resulting in high load strikes
- Narrow shoulder width underneath the bridge along Highway 401
- Does not accommodate the Highway 401 Future Footprint

COUNTY ROAD 28 (ONTARIO STREET) TRAFFIC USAGE

Existing Vehicular Traffic Volumes:

- Average daily traffic (ADT) ~2022 vehicles

Direction	AM Peak Hour Volume	PM Peak Hour Volume
Northbound	324	549
Southbound	628	521

Existing Pedestrian and Cyclist Volumes:

- At the bridge location, County Road 28 (Ontario Street) is not on a cycling network / route. Pedestrian usage of 2 to 3 per hour was observed.

HAMILTON ROAD BRIDGE

HAMILTON ROAD BRIDGE EXISTING ENVIRONMENTAL CONDITIONS

Social and Cultural Environment

Cultural Heritage

- There are built heritage resources and cultural heritage landscapes due to historical farming activities north of Highway 401.

Archaeology

- Stage 1 Archaeological investigations are complete. No further archaeological assessment required.

Land Use

- This area is predominantly used for agricultural purposes
- Commercial lands (car dealerships) are located in the southwest quadrant

Natural Environment

- No watercourses in proximity to the bridge



HAMILTON ROAD BRIDGE EXISTING CONDITIONS



- Substandard vertical clearance resulting in high load strikes
- Narrow shoulder width underneath the bridge along Highway 401
- Does not accommodate the Highway 401 Future Footprint

HAMILTON TRAFFIC USAGE

Existing Vehicular Traffic Volumes:

- Average daily traffic (ADT) ~1090 vehicles

Direction	Daily
Northbound	534
Southbound	556
Total	1090

Existing Pedestrian and Cyclist Volumes:

- At the bridge location, Hamilton Road is not on a cycling network/route. No pedestrian data is available.

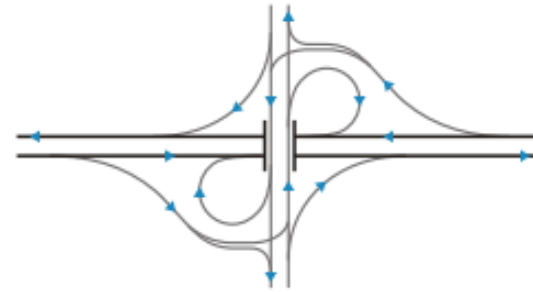
RECOMMENDED PLAN- COUNTY ROAD 28/ONTARIO STREET

TYPICAL INTERCHANGE CONFIGURATIONS

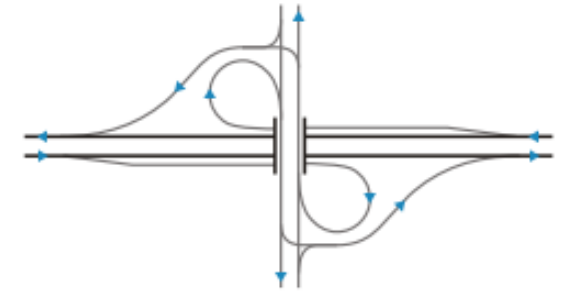
A Partial Cloverleaf (Parclo) interchange is the most common freeway-to-arterial interchange design in Ontario. The letter A designates the ramps meet the freeway before the arterial road crossing, while B designates that two ramps meet the freeway beyond the arterial road. The number designates how many quadrants of the interchange contain ramps. An A type allows for all right-hand turning movements, the B type requires some left-hand turning movements (associated with longer traffic delays).

Typical Interchange Configurations

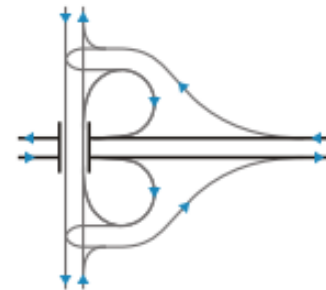
PARCLO A



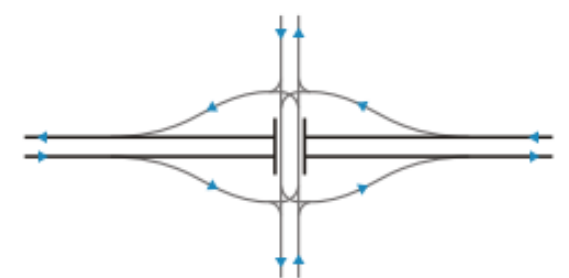
PARCLO B



PARCLO A-B



DIAMOND



SHORT LIST ALTERNATIVES CARRIED FORWARD

County Road 28 Interchange Alternatives

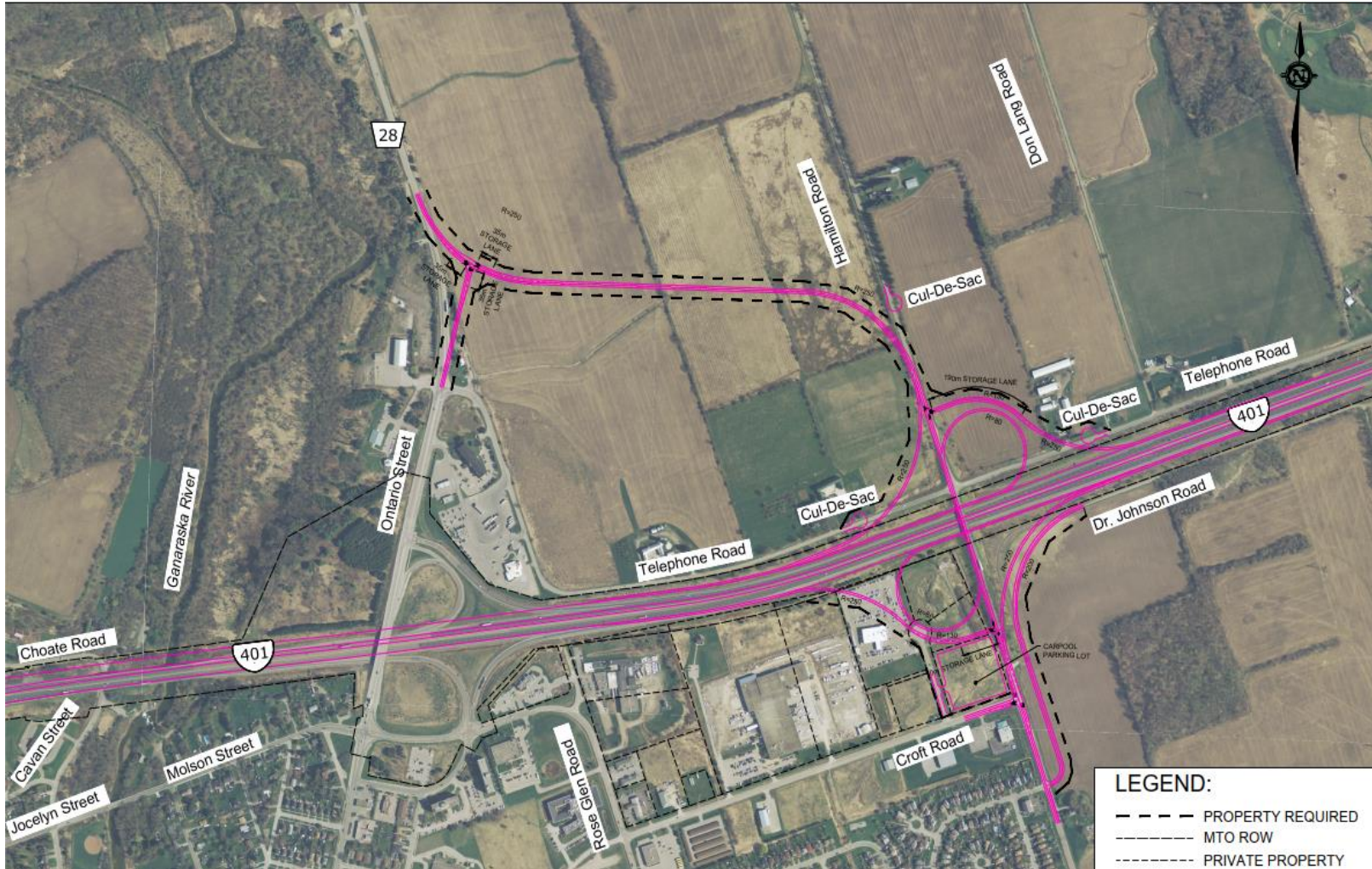
Alternative 1 – Parclo A4 at Hamilton Road.

Alternative 2 – Parclo AB at Hamilton Road.

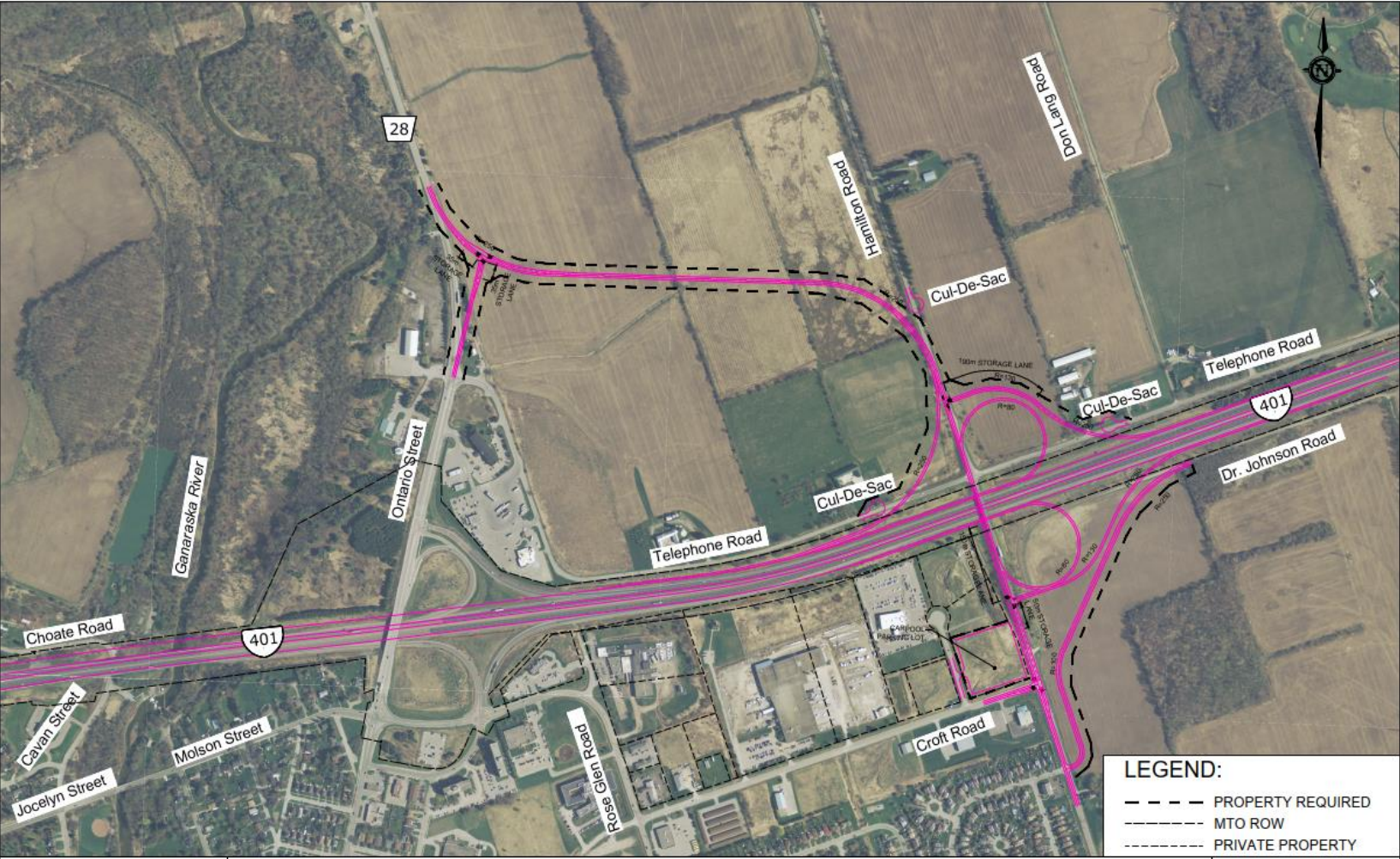
Alternative 3 – Parclo A4 at Croft Road

Alternative 4 – Parclo B at Ontario Street

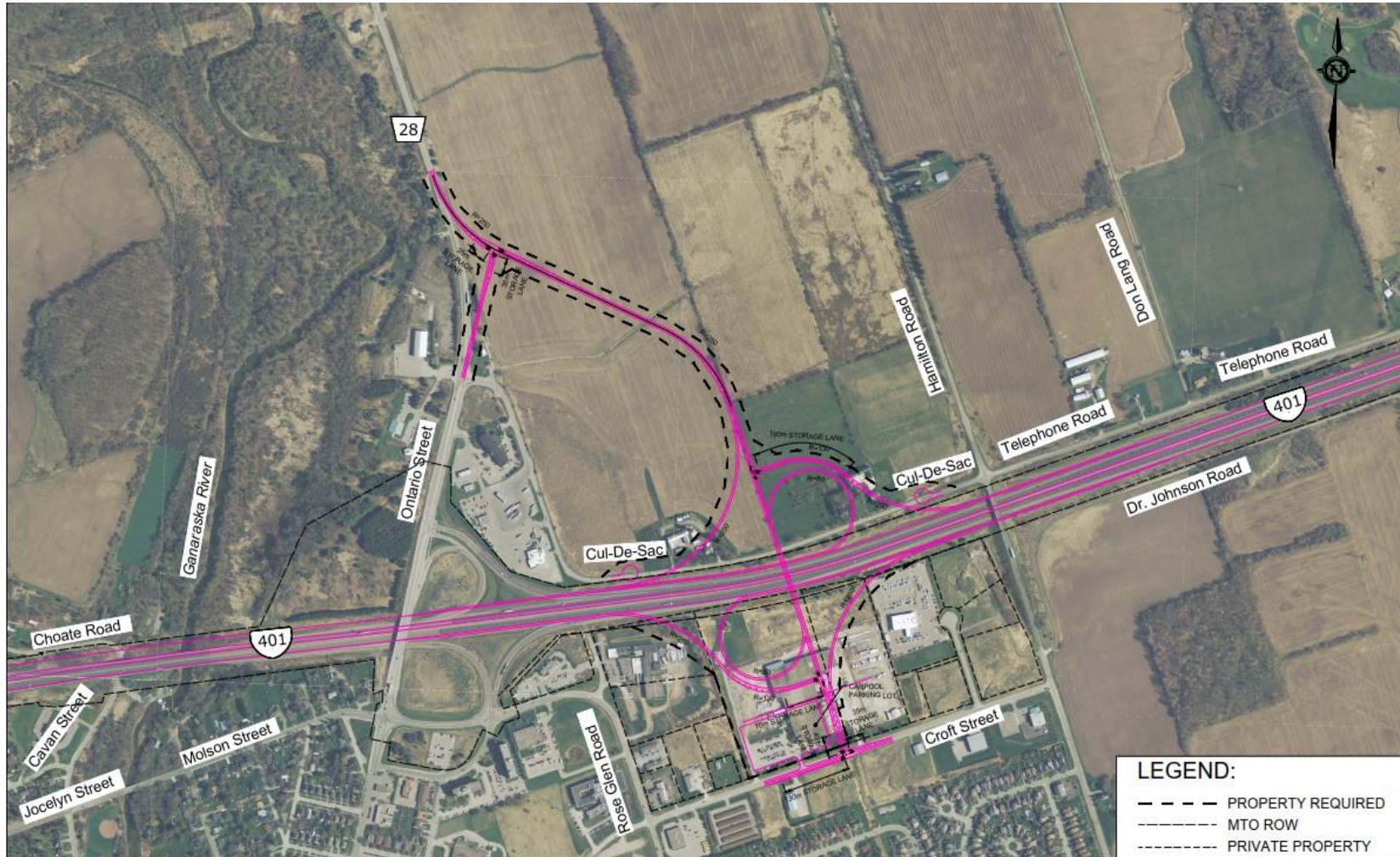
ALTERNATIVE 1: PARCLO A AT HAMILTON ROAD



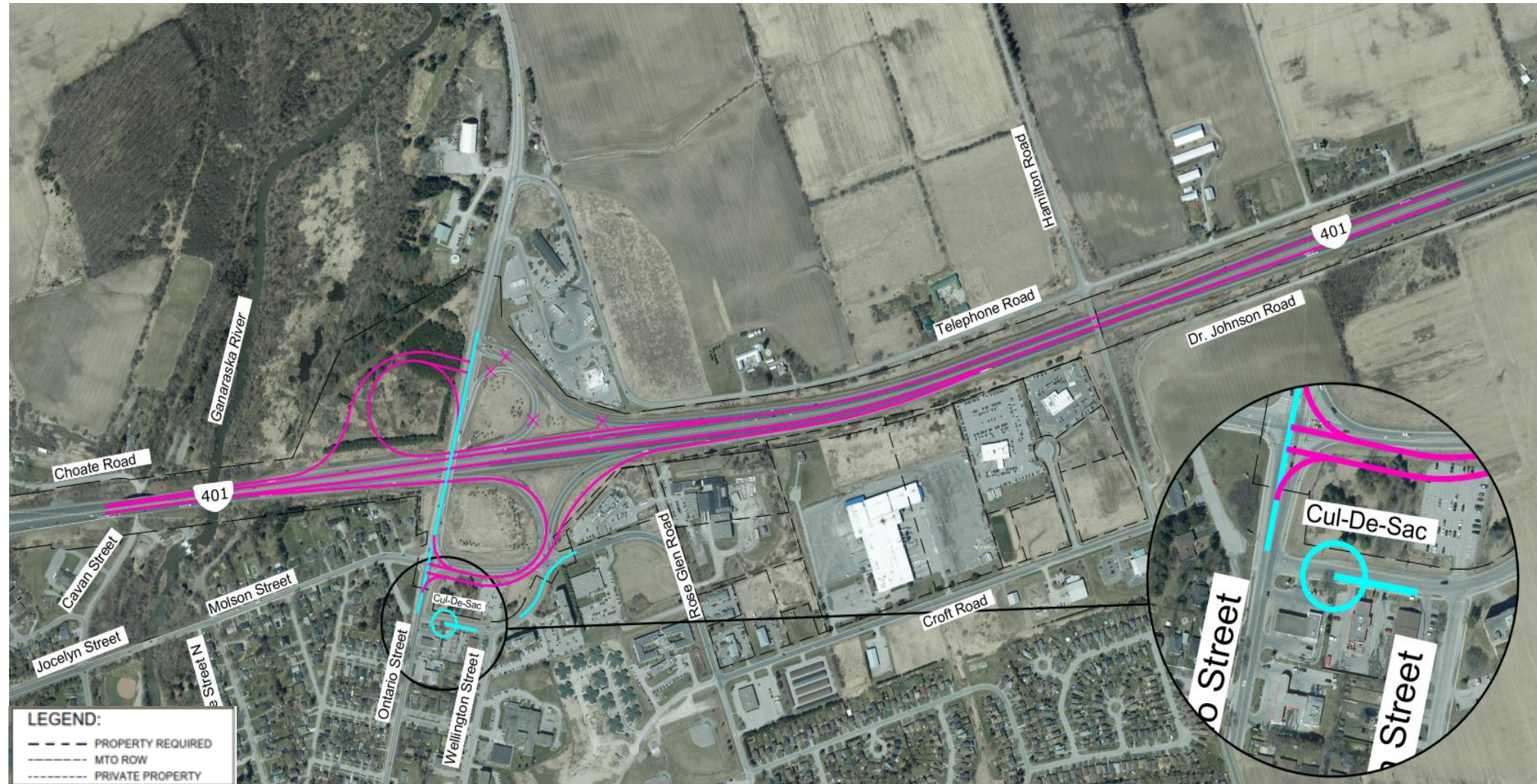
ALTERNATIVE 2: PARCLO AB AT HAMILTON ROAD



ALTERNATIVE 3: PARCLO A AT CROFT ROAD



ALTERNATIVE 4: PARCLO B AT COUNTY ROAD 28 (ONTARIO STREET)



EVALUATION CRITERIA

The evaluation criteria that has been identified to help select the recommended plan include:

Natural Environment

- Vegetation
- Wildlife Habitat

Socio Economic Environment

- Private properties
- Agricultural lands
- Commercial areas
- Heritage landscapes and buildings
- Noise
- Future development areas
- Archaeological resources

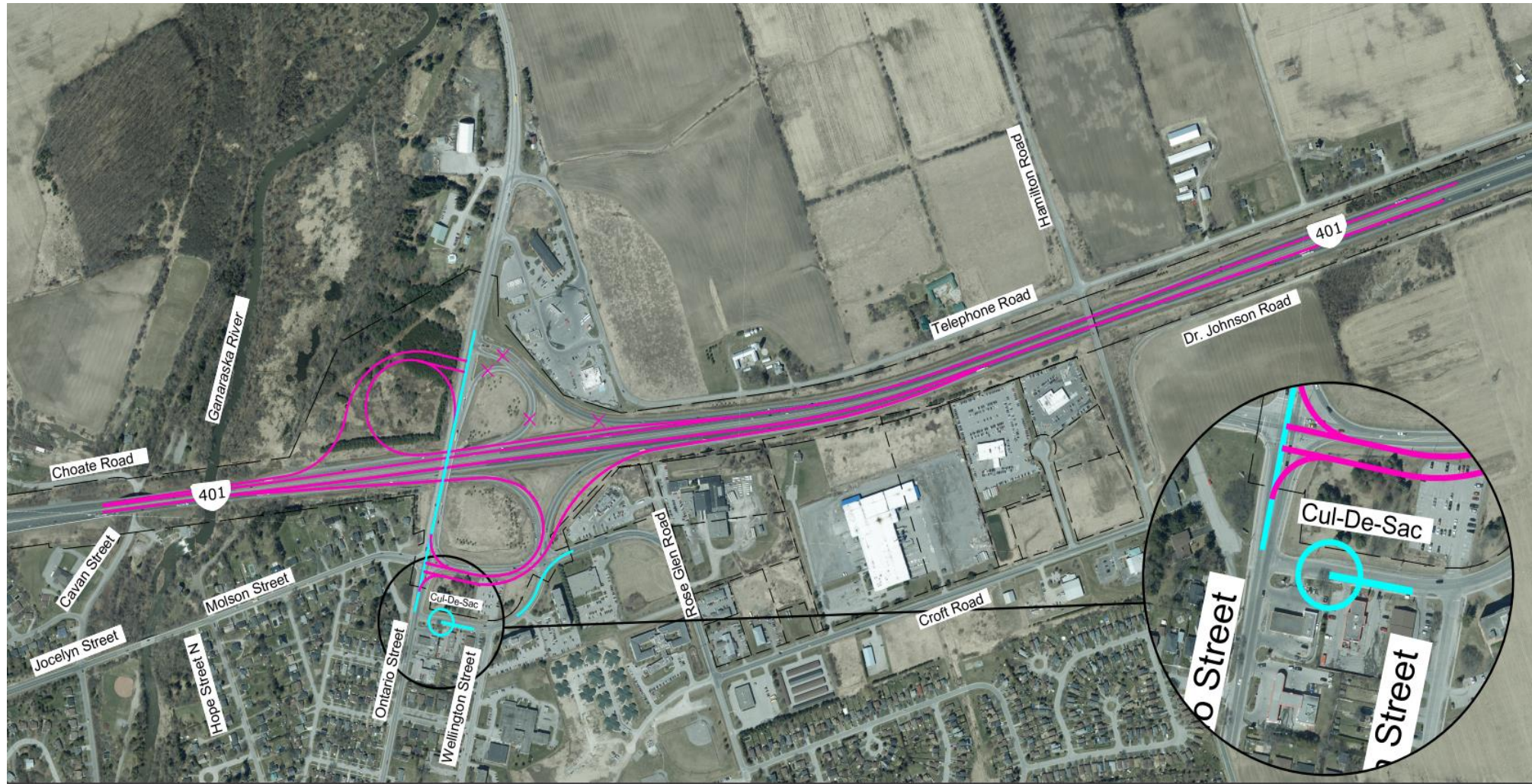
Transportation/Technical Considerations

- Level of Service
- Complexity of construction staging
- Construction duration
- Cost
- Delays to emergency services
- Municipal road impacts
- Traffic disruptions
- Conflict with utilities
- Access for local residents, school buses, and emergency vehicles.

COUNTY ROAD 28 EVALUATION CRITERIA

Criteria	Alternative # 1 Parclo A at Hamilton Road	Alternative # 2 Parclo AB at Hamilton Road	Alternative # 3 Parclo A4 at Croft Road	Alternative # 4 Parclo B at Ontario Street
Natural Environment	<ul style="list-style-type: none"> × Moderate impact to vegetation/wildlife habitat 	<ul style="list-style-type: none"> × Moderate impact to vegetation/wildlife habitat 	<ul style="list-style-type: none"> ✓ Smallest impact to vegetation/ wildlife habitat 	<ul style="list-style-type: none"> × Largest impact to vegetation/ wildlife habitat
Socio-Economic Environment	<ul style="list-style-type: none"> × Moderate permanent property required for agricultural land, residential, and commercial properties × Moderate impacts to Cultural Heritage Landscapes (CHLs) 	<ul style="list-style-type: none"> × Largest permanent agricultural land required × Moderate impacts to CHLs 	<ul style="list-style-type: none"> × Largest permanent commercial property required × Largest impacts to built heritage and CHLs 	<ul style="list-style-type: none"> ✓ Least property requirements for agricultural, residential, and commercial properties ✓ No impacts to built heritage and CHLs
Transportation	<ul style="list-style-type: none"> × Moderate length of closure × 1.1km increase in travel distance for local traffic × 1-minute increased travel time to EMS response distances × Minor municipal road upgrades required ✓ Best ramp geometry ✓ Best Overall Interchange Level of Service (LOS) ✓ No conflicts due to turning and weaving 	<ul style="list-style-type: none"> ✓ Shortest length of closure × 1.1km increase in travel distance for local traffic × 1-minute increased travel time to EMS response distances × Minor municipal road upgrades required × Fair ramp geometry × Acceptable interchange LOS × One conflict due to turning and weaving 	<ul style="list-style-type: none"> × Moderate length of closure × 1.1km increase in travel distance for local traffic × 1-minute increased travel time to EMS response distances × Major upgrades required to municipal roads ✓ Best ramp geometry × Acceptable interchange LOS ✓ No conflict due to turning and weaving 	<ul style="list-style-type: none"> × Long term closures required ✓ No increase in travel distance for local traffic ✓ No increased travel time for emergency response services ✓ No upgrades required to municipal road network × Worst ramp geometry × Unacceptable interchange LOS × Multiple conflicts due to turning and weaving
Constructability	<ul style="list-style-type: none"> × Moderate construction duration × Multiple conflicts with existing utilities ✓ Moderate staging complexity 	<ul style="list-style-type: none"> × Moderate construction duration × Multiple conflicts with existing utilities ✓ Moderate staging complexity 	<ul style="list-style-type: none"> × Longest construction duration × Conflicts with existing utilities ✓ Shortest length of closure 	<ul style="list-style-type: none"> ✓ Shortest construction duration ✓ Least conflicts with existing utilities × Most complex staging
Recommendation	Not Recommended	Not Recommended	Not Recommended	Recommended

RECOMMENDED PLAN - ALTERNATIVE 4

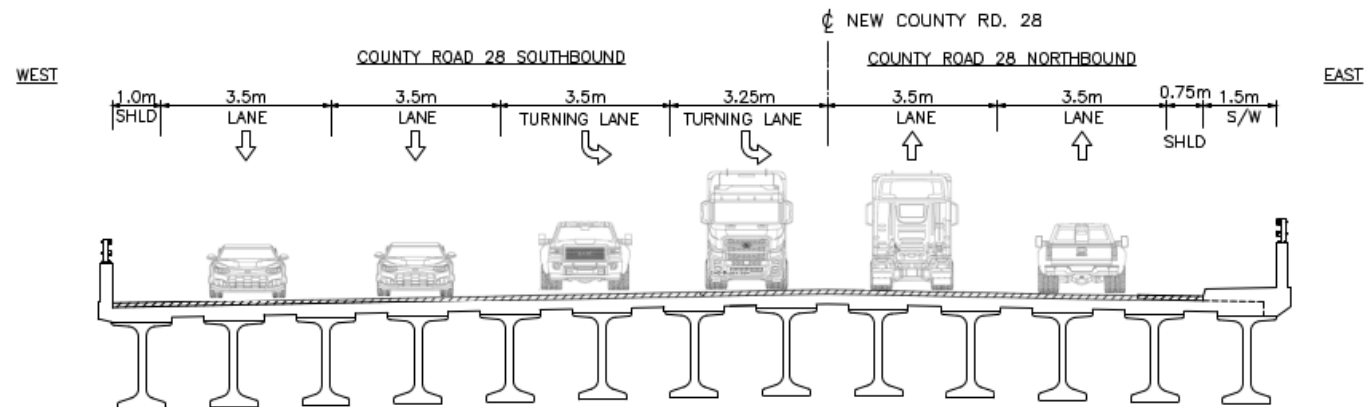
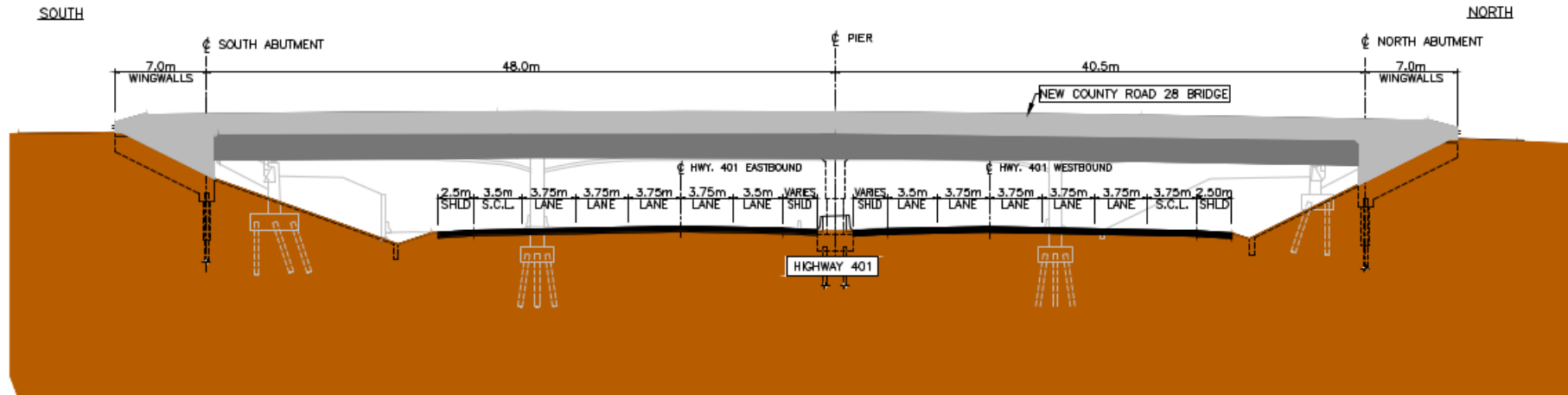


RECOMMENDED PLAN – PRELIMINARY DETOUR/STAGING FOR HIGHWAY 401 AT COUNTY ROAD 28 (ONTARIO STREET)

- CR28/Ontario Street Eastbound On and Off Ramp Closures anticipated with traffic detoured to Toronto Rd. and Burnham Street Interchanges.
- Traffic on Ontario Street will be reduced to a single lane in each direction during the bridge replacement.
- Full overnight closure of Highway 401 is anticipated during construction. Toronto Road and Burnham Street to Dale Road detour route (key map).
- The duration and number of closures will be determined during the detail design, the timing of which is currently unknown.



RECOMMENDED PLAN (COUNTY ROAD 28/ONTARIO STREET)

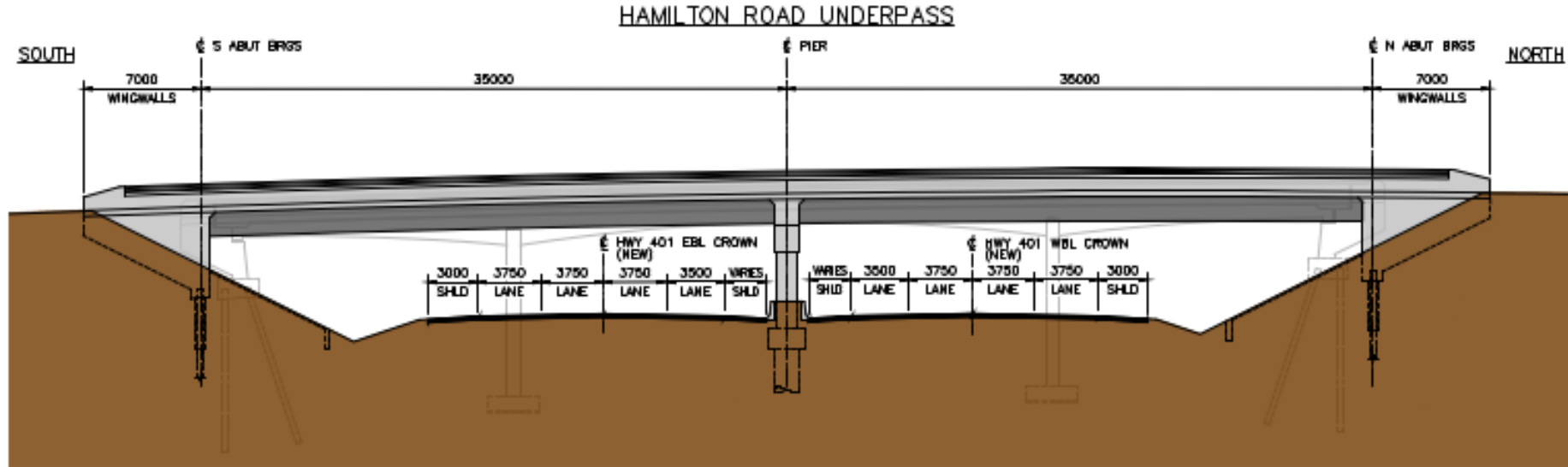


RECOMMENDED PLAN- HAMILTON ROAD BRIDGE

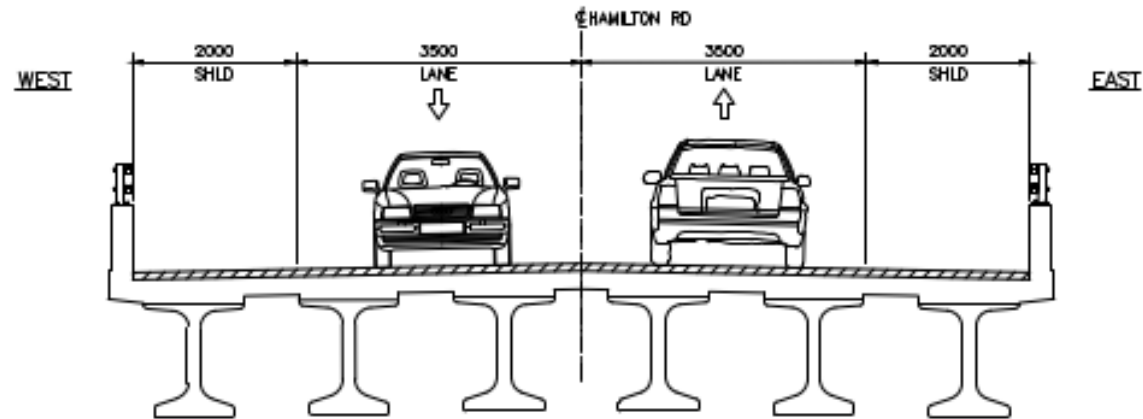
HAMILTON ROAD EVALUATION CRITERIA

Criteria	Alternative # 1 Replacement on Existing Alignment – Staged Traffic	Alternative # 2 Replacement on Existing Alignment- Full Closure
Natural Environment	✓ No significant impacts to vegetation and wildlife habitat	✓ No significant impacts to vegetation and wildlife habitat
Socio-Economic Environment	✓ Minor property required due to grade raise	✓ Minor property required due to grade raise.
Transportation	✓ Maintains traffic at the structure during construction. Reduced to one lane.	✗ Increased travel time for local users due to detour.
Constructability	<ul style="list-style-type: none"> ✗ Longer construction duration ✗ Complex staging with multiple set ups and take downs required. 	<ul style="list-style-type: none"> ✓ Shorter construction duration ✓ Partial accelerated replacement strategies available to reduce the duration of construction.
Recommendation	Not Recommended	Recommended

RECOMMENDED PLAN (HAMILTON ROAD)



ELEVATION



TYPICAL SECTION

RECOMMENDED PLAN – PRELIMINARY DETOUR/STAGING FOR HIGHWAY 401 AT HAMILTON ROAD

- Overnight closures of Highway 401 are anticipated during construction. Traffic will be detoured from County Road 28 to Dale Road, and from Dale Road to Burnham Street (key plan).
- The duration and number of closures will be determined during the details design, the timing of which is currently unknown.



RECOMMENDED PLAN – HAMILTON ROAD BRIDGE AND TELEPHONE ROAD INTERSECTION CLOSURE

- Hamilton Road Bridge will be closed during construction to facilitate the bridge replacement. Detour will include Telephone Road, Rose Glen Road and Croft Road. The duration of closures will be determined during the detail design, the timing of which is currently unknown.

- Telephone Road will be temporarily closed for short durations to facilitate the construction of Hamilton Road Bridge. Detour will include Telephone Road, County Road 28, Dale Road and Theatre Road.



NEXT STEPS

STUDY #2 GWP 4010-21-00 includes future operational long-term needs at the County Road 28 (Ontario Street) interchange, and structural needs of 2 bridges (County Road 28 bridge and Hamilton Road Bridge).

- PIC 1 (present short list) completed in Fall 2022
- PIC 2 (present Recommended Plan) Fall 2024
- File TESR for Public Comment Period TBD



IF YOU WOULD LIKE MORE INFORMATION, PLEASE CONTACT:

Ms. Laura Donaldson, P.Eng.
Consultant Project Manager
Egis

Tel: 343-344-2635

Toll free: 1-888-348-8991

Email: Laura.Donaldson@egis-group.com

Mr. Chris Teepell

MTO Project Manager

Ministry of Transportation – Project Delivery East

Phone: 613-583-3109

Email: Chris.Teepell@ontario.ca

For more information, please visit the project website at:

www.Hwy401PortHopeEA.com

For all media inquiries, please contact mto.media@ontario.ca.



Thank you for participating in this meeting. Information is being collected in accordance with the Freedom of Information and Protection of Privacy Act. With the exception of personal information, all comments will become part of the public record.

