



CITY OF BRANTFORD

**POWERLINE ROAD TRANSPORTATION
CAPACITY ENVIRONMENTAL ASSESSMENT**

PUBLIC INFORMATION CENTRE #1

July 10, 2024



WELCOME TO PUBLIC INFORMATION CENTRE # 1

POWERLINE ROAD TRANSPORTATION CAPACITY ENVIRONMENTAL ASSESSMENT

The purpose of Public Information Centre is to present information about the Environmental Assessment, provide the public with an opportunity to review and comment on the study process, existing conditions, and recommended technically preferred alternative solution(s).

Representatives from the City of Brantford and their consultant, Egis Canada Ltd. (formerly McIntosh Perry Consulting Engineers Ltd.), are available to discuss the project and answer any questions.



We want to hear from you as your involvement is key to the success of the Powerline Road Transportation Capacity Environmental Assessment. **Please sign in before leaving!**

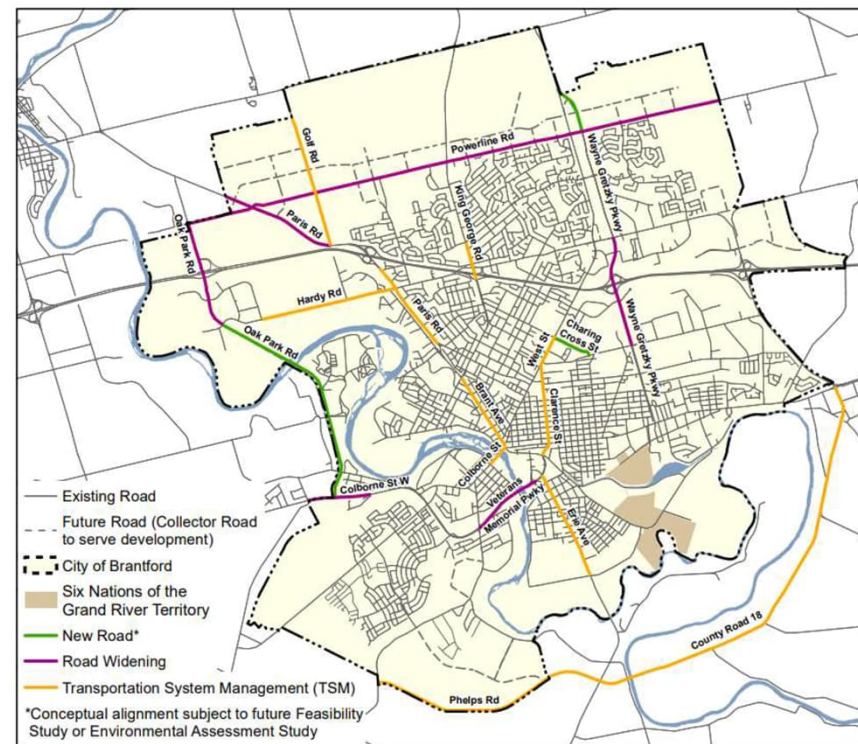
More details about the project are available on the project website:

Brantford.ca/PowerlineRoadEA

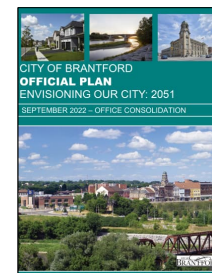
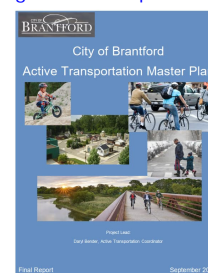
PLANNING AND POLICY CONTEXT

- City visions, policies, and principles have been outlined in the City's Official Plan, 2020 Transportation Master Plan (TMP) Update and Active Transportation Master Plan (2023).
- Updated Transportation Master Plan (2020) provided recommendations for future road network which included:
 - City wide Transportation Demand Management (TDM) initiative for new/extending transit services into the urban expansion area;
 - Incorporate Transportation System Management (TSM) initiatives into the redesign, including urban cross section, intersection control, auxiliary lane provisions, traffic signal coordination, roundabouts where feasible, etc., and
 - Widen Powerline Road to provide a basic 4-lane cross section between Oak Park Road to the eastern limits of the City boundary.
- Based on the TMP, Powerline Road is anticipated to operate at or above capacity by 2051.
- By 2051 population and employment forecasts for the City of Brantford and County of Brant are expected to grow by 60% and 77% respectively.

Demographic Area	2016	2051	Growth
Population			
County of Brant	38,000	59,000	55%
City of Brantford	101,700	165,000	62%
Total	139,700	224,000	60%
Employment			
County of Brant	15,000	26,000	73%
City of Brantford	44,900	80,000	78%
Total	59,900	106,000	77%

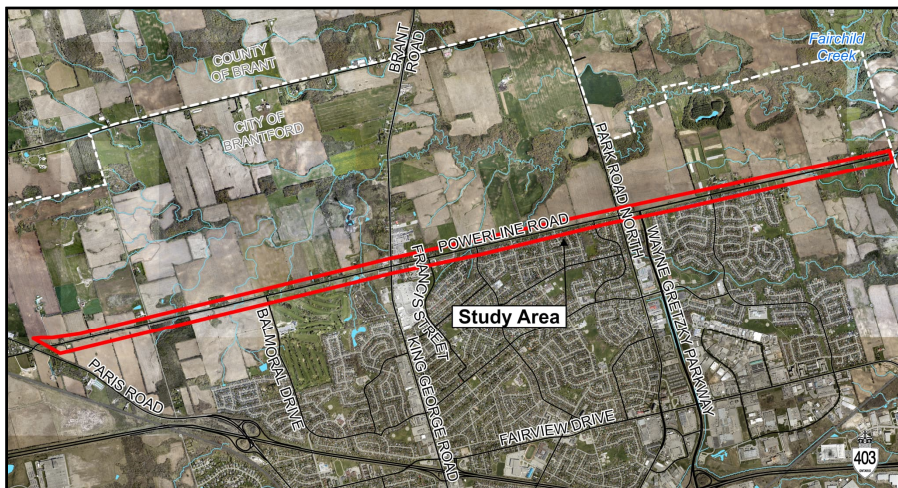


Source: Figure 4-11: Proposed 2051 Road Network Brantford TMP



STUDY AREA AND OVERVIEW

- The study area is to the north of Highway 403 and includes Powerline Road, from Paris Road to the east municipal boundary.
- Powerline Road is classified as a Major Arterial Roadway.
- Currently a two-lane rural road serving east-west traffic along the former northern City boundary.
- The study area land use is primarily rural and agricultural north of Powerline Road and more residential/commercial lands to the south.
- In 2017, the City of Brantford annexed approximately 2,720 hectares of land from the County of Brant.
- Considering employment and population growth forecasts, Powerline Road is expected to operate at or above capacity by 2051.
- The study area is within the North Expansion Lands in the Block Plan areas of Powerline East, Powerline West, Powerline Central and Balmoral.



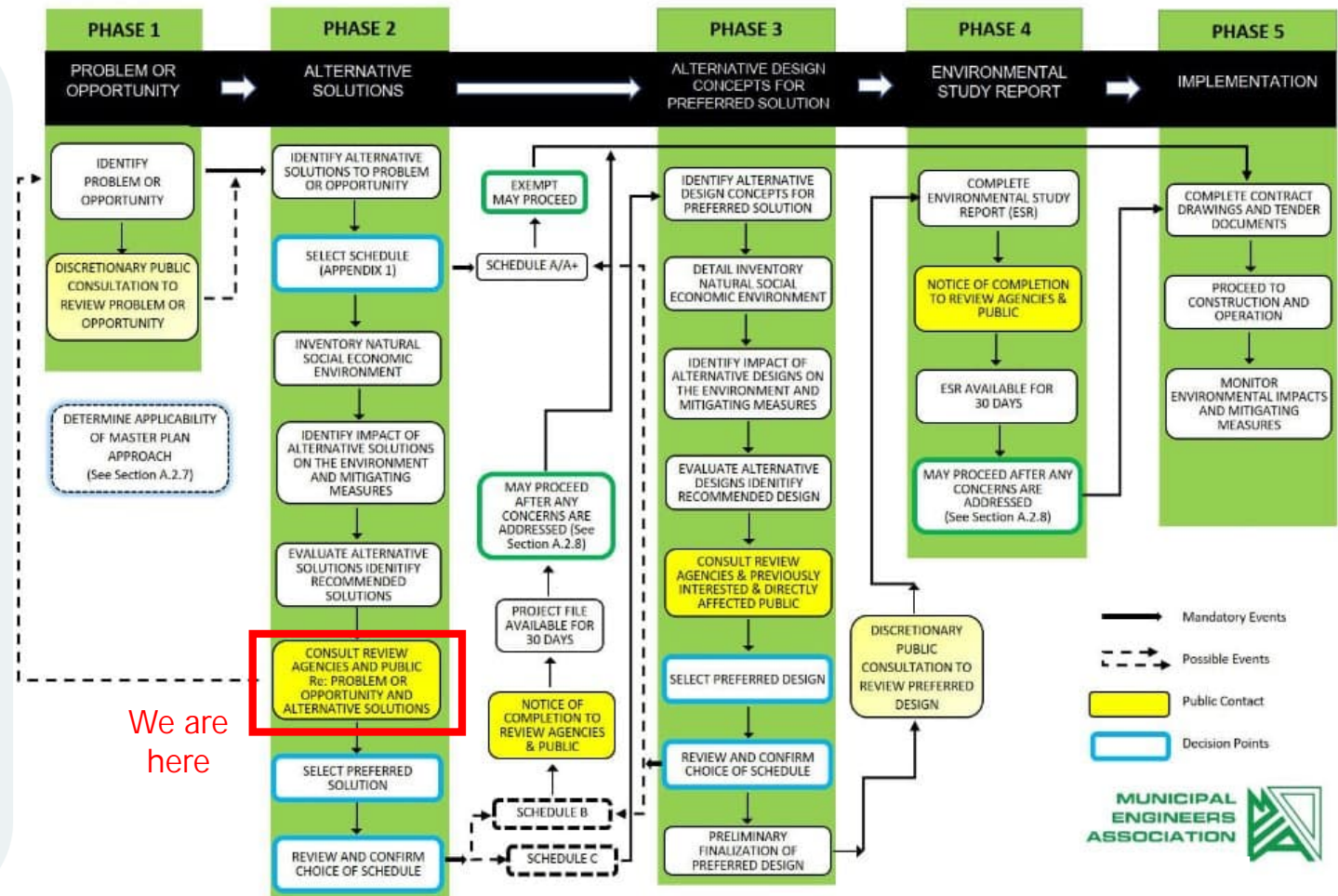
- Additional infrastructure improvements are also recommended to accommodate future growth:
 - New East-West Collector Road north of Powerline Road;
 - Widening Paris Road from Golf Road to the north-west City limits;
 - Northly extension of Wayne Gretzky Parkway from Powerline Road to Park Road North, and
 - Widening of Wayne Gretzky Parkway from Henry Street to Lynden Road.

MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT

- The Powerline Road Transportation Capacity Environmental Assessment will be completed in accordance with a Schedule 'C' Municipal Class Environmental Assessment (MCEA) and will complete Phase 1 to 4.
- The MCEA is a process by which municipal infrastructure projects (municipal roads, water and wastewater) are planned in accordance with the Environmental Assessment Act.
- The MCEA gives due regard to protect the environment, impacts, and includes the involvement of affected stakeholders in the decision-making process.
- Please visit: <https://municipalclassea.ca> for more information on the Municipal Class Environmental Assessment Process.

MUNICIPAL CLASS EA PLANNING AND DESIGN PROCESS

NOTE: This flow chart is to be read in conjunction with Part A of the Municipal Class EA



PROBLEM AND OPPORTUNITY STATEMENT

Powerline Road is a major arterial roadway within the City of Brantford (City) and is a two-lane rural road that serves east-west traffic along the former northern municipal boundary.

The City's Transportation Master Plan Update (2020 TMP) forecasts that Powerline Road will experience significant growth in traffic volumes over the coming years that will result in the majority of Powerline Road approaching or exceeding capacity during the future 2051 planning horizon. The 2020 TMP identified the need for infrastructure improvements to Powerline Road, from Paris Road to the east municipal boundary, to provide relief to the anticipated (2051) capacity constraints and to service future growth.

The project presents an opportunity to optimize the transportation network to accommodate the current and future travel demands, while minimizing potential impacts to the environment and climate change by:

- improving infrastructure along Powerline Road between Paris Road to the east municipal boundary, including active transportation infrastructure, to improve connectivity and safety for road users, pedestrians, and cyclists;
- enhancing existing intersection operations and optimizing level of service, and
- providing an improved connection to the designated greenfield area developments and northwest industrial areas and enhancing access to future neighborhood centres in support of the City's vision for growth in the Boundary Expansion Lands.



EXISTING ROAD NETWORK TRANSPORTATION

Powerline Road

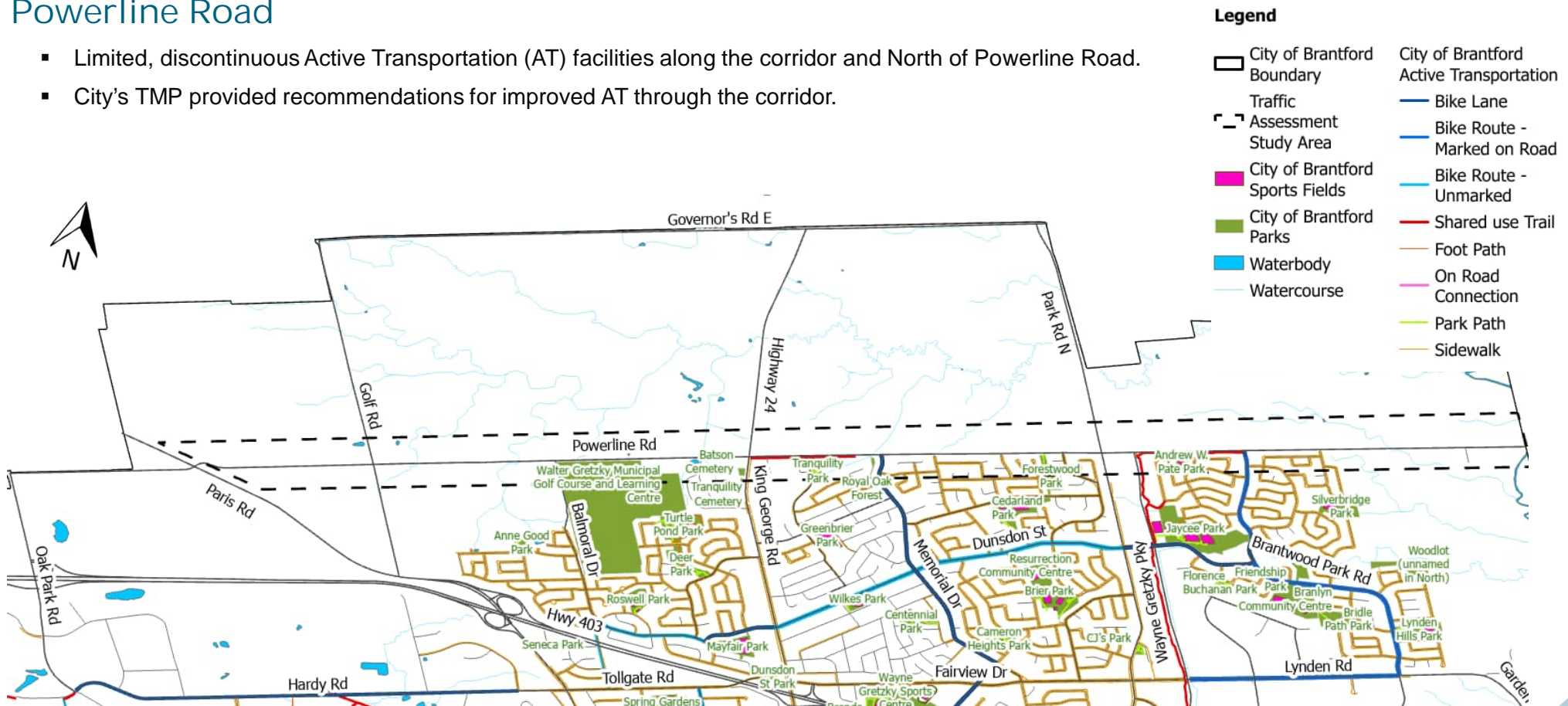
- Powerline Road is a Major Arterial Roadway, as per City's OP and TMP.
- Primary function of Major Arterial is to move large volumes of traffic (people and goods) within and through the City.
- As per latest City TMP, Powerline Road is recommended for widening from Oak Park Road to the eastern limits of the City boundary.



EXISTING ROAD ACTIVE TRANSPORTATION

Powerline Road

- Limited, discontinuous Active Transportation (AT) facilities along the corridor and North of Powerline Road.
- City's TMP provided recommendations for improved AT through the corridor.

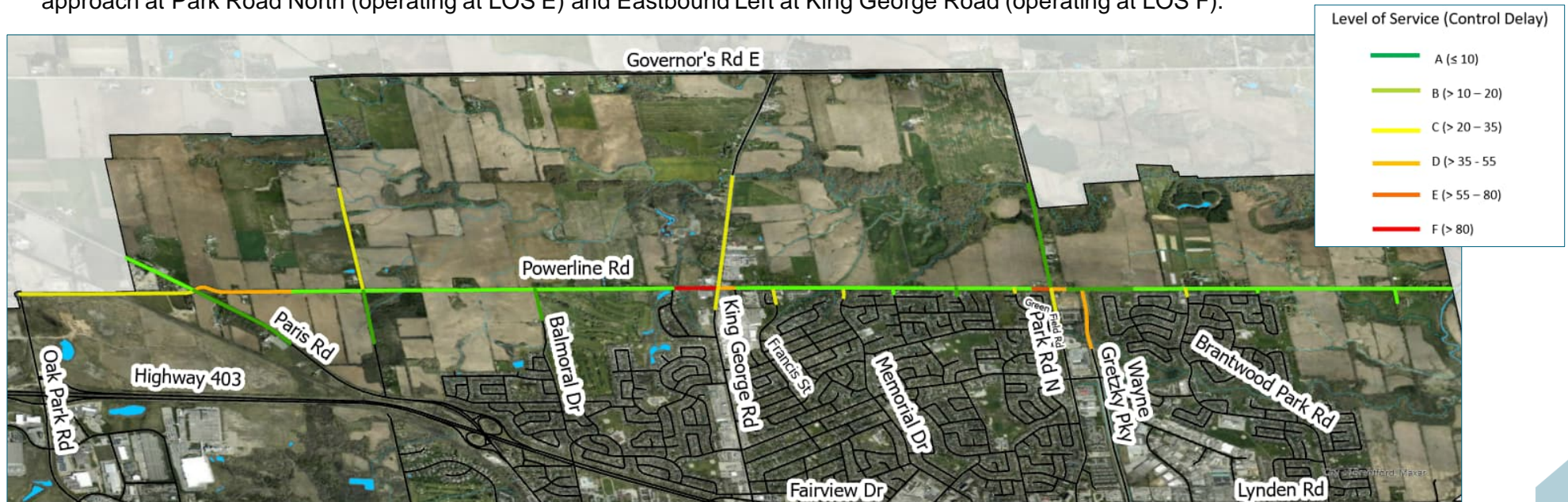


TRAFFIC ASSESSMENT – EXISTING CONDITIONS

- Traffic analysis was carried out to assess the available capacity (volume-to-capacity ratio or V/C) along Powerline Road including connecting roads such as Wayne Gretzky Parkway, Park Road North, Oak Park Road, and King George Road.
- Level of Service (LOS) – Assigned to movements based on the delay resulting from traffic control at the intersection:
 - LOS A/B indicates negligible delays.
 - LOS E/F indicates movements with long delays, which can result in long queues and traffic congestion.
 - Intersections are typically designed to achieve LOS C/D under peak hour conditions.

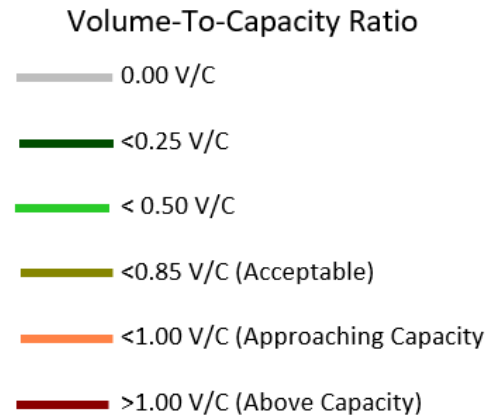
Analysis Findings:

- Under existing conditions, most intersections along Powerline Road are operating well with minimal delays with the exception of the Eastbound approach at Park Road North (operating at LOS E) and Eastbound Left at King George Road (operating at LOS F).



FUTURE (2051) TRAFFIC OPERATIONS DO NOTHING WITH NO WIDENING OF POWERLINE ROAD

- This scenario represents the anticipated future (2051) traffic operations with no improvements to the Powerline Road corridor.
- Powerline Road, west of Park Road North to Paris Road expected to exceed the critical V/C threshold of 0.85, with many segments approaching or exceeding a V/C of 1.0.
- Overall, the future (2051) conditions on Powerline Road without improvements indicate significant deficiencies in available capacity which may not adequately accommodate future area growth.



Volume to Capacity (V/C) Ratio is a measure that reflects mobility and quality of travel along a roadway. It compares demand (vehicle volumes) with roadway supply (carrying capacity):

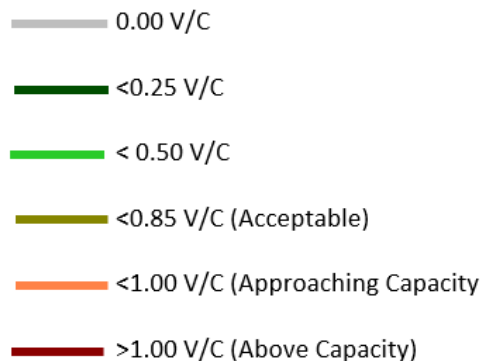
- Volume to capacity ratio exceeding 0.85 is considered critical
- Volume to capacity of 1.0 indicates a roadway is at capacity



FUTURE (2051) TRAFFIC OPERATIONS WIDENING OF POWERLINE ROAD

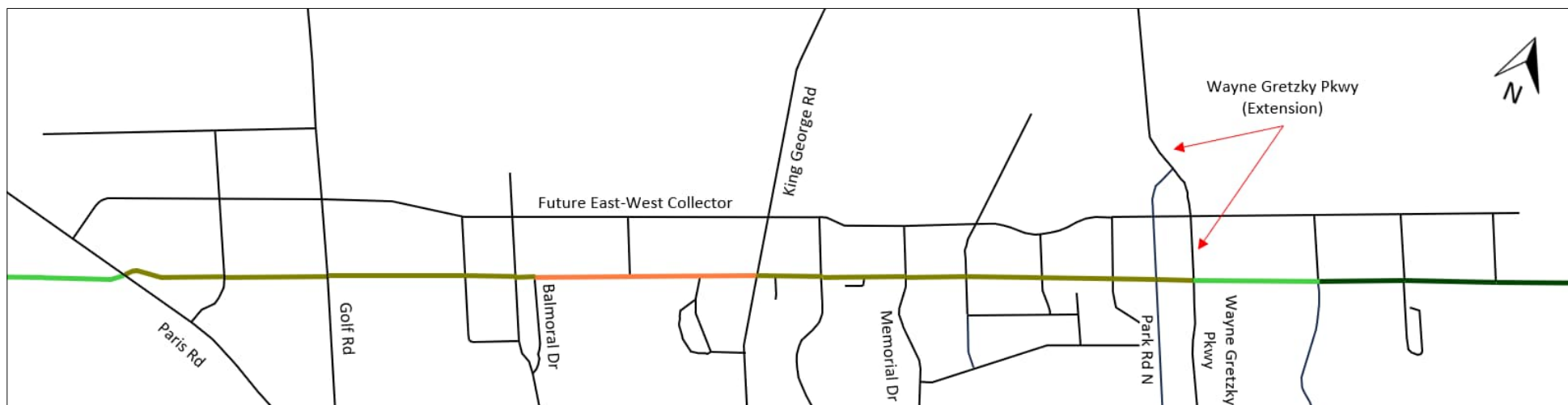
- This scenario represents the full build-out of the Transportation Master Plan recommendations for the road network, including the widening of Powerline Road from Paris Road to the east municipal boundary.
- Widening of Powerline Road results in greatest improvement to future traffic operations and meets City transportation planning goals as outlined in City Transportation Master Plan.
- If carried forward as the preferred alternative, further analysis would assess limits of widening, intersection configurations, new road connections, active transportation, transit, etc.

Volume-To-Capacity Ratio



Volume to Capacity (V/C) Ratio is a measure that reflects mobility and quality of travel along a roadway. It compares demand (vehicle volumes) with roadway supply (carrying capacity):

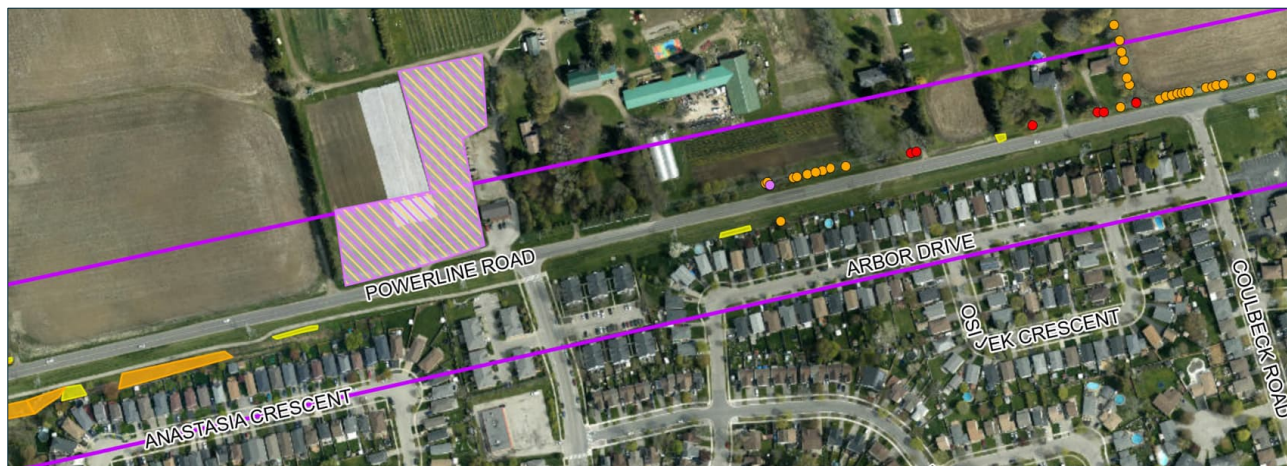
- Volume to capacity ratio exceeding 0.85 is considered critical
- Volume to capacity of 1.0 indicates a roadway is at capacity



NATURAL HERITAGE ENVIRONMENTAL

Natural heritage features within the study area include:

- Tributaries of Lower Jones Creek, Ravine Creek and Fairchild Creek, and Cold Spring Creek Complex (Provincially Significant Wetland);
- Natural vegetation / woodland coverage is confined to the edges of cultivated fields, natural features (tributaries and Cold Spring Creek Complex), residences / farmsteads and existing roadway corridors;
- Areas of limited vegetation along Powerline Road corridor due to existing overhead utility transmission towers, poles and lines;
- Avian community comprised primarily of common, generalist species which favor the urban / rural fringe and agricultural habitat;
- Appropriate habitat present for breeding/nesting/foraging for several Herptiles, birds, and mammals, and
- Potential habitat for species at risk (SAR) – Bats (Little Brown Myotis, Northern Myotis, and Tri-colored Bat), Birds (Chimney Swift, Common Nighthawk, Eastern Meadowlark and Bobolink), Snapping Turtle, Eastern Milksnake, Western Chorus Frog, and Butternut Trees.



LEGEND	
	Study Area
	Bat Snag Trees
SAR Observations	
	Butternut
	Eastern Meadowlark
	Eastern Wood Pewee
	Red Mulberry
	Barn Swallow
SAR Habitat	
	Potential Bobolink Habitat
	Potential Habitat for Other Grassland Species
	Potential Eastern Meadowlark Habitat
Invasive Species	
	European Buckthorn
	European Buckthorn
	Garlic Mustard
	Japanese Knotweed
	Phragmites

LAND USE/CONSTRAINTS

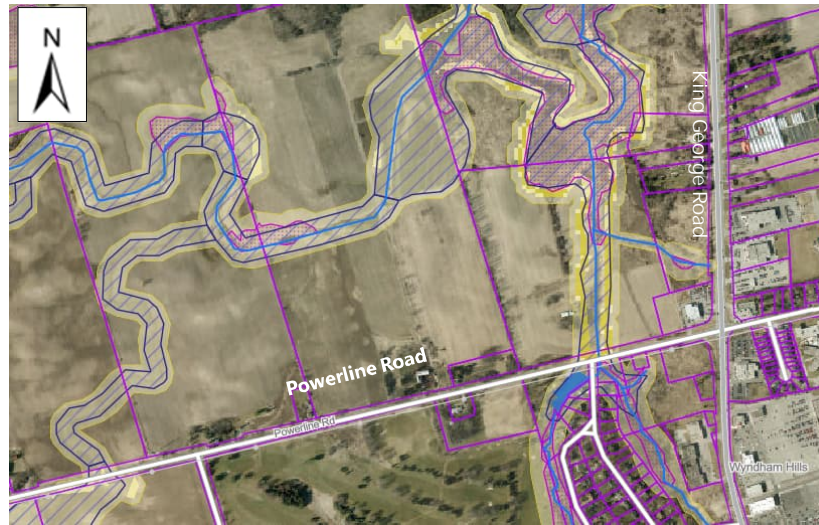
Existing land use/constraints within the study area:

- Powerline Road Right-of-Way;
- Powerline Road Utility Corridor;
- North Expansion Lands – Block Plans:
 - largely agricultural lands;
 - vacant lands;
 - commercial, and
 - residential uses.
- Designated Greenfield Area and core Natural Area;
- Grand River Conservation Authority (GRCA):
 - Regulated Area – Regulatory Floodplain, Meander Belt, Unstable Slopes/Soils (Slope Erosion, and Slope Valley) and Wetland;
 - Potential Watercourse Crossing (Tributaries of Lower Jones Creek, Ravine Tributary and Fairchild Creek) – Feasibility and Setback Constraints, and
- On-going City MCEAs – Wayne Gretzky Parkway Extension and Northwest Brantford Municipal Services.

Proposed future land use:

- Predominantly of residential and commercial lands, and
- New High School.

[GRCA Web Map \(grandriver.ca\)](http://grandriver.ca)



ARCHAEOLOGICAL AND BUILT CULTURAL HERITAGE

Archaeological Assessment

- A Stage 1 Archaeological Assessment was undertaken by Archaeological Consultants Canada.
 - Majority of ROW exhibits low to no potential for the recovery of archaeological resources.
 - Stage 2 Archaeological Assessment required for potentially undisturbed areas adjacent to existing infrastructure (i.e. roadway, sidewalks, ditching, etc.).

Cultural Heritage

- A Cultural Heritage Assessment Report (CHAR) was completed for the study area.
 - The study area is not located within or adjacent to a Heritage Conservation District designated under Part V of the Ontario Heritage Act.
 - No Part IV individually designated properties, or listed properties under the City of Brantford are located within or adjacent to the study area.
 - One Built Heritage Resource listed property (BHR 2) was identified. Nine potential Built Heritage Resources (BHR 1, 3 - 10) and two potential Cultural Heritage Landscapes (CHL 1 - 2) were identified during field investigations.



- Legend:
- subject property
 - previously subject to Stage 2 assessment, TLA, 2014
 - previously subject to Stage 2 assessment, ASI, 1991 (approximate limits)
 - watercourse
 - image location and direction
 - archaeological potential, Stage 2 test pit survey required
 - low to no archaeological potential, disturbed, no further fieldwork required
 - low to no archaeological potential, steeply sloped, no further fieldwork required

* Excerpt of Stage 1 Archeological Assessment Results

PROPOSED ALTERNATIVE SOLUTIONS

During Phase 2 of the Municipal Class Environmental Assessment process, Alternative Solutions are developed to address the identified Problem and Opportunity Statement. The following proposed Alternative Solutions were identified:

Alternative 1 – Do Nothing

No change made within the Study Area (status quo). No changes to the existing transportation network within the study area. No changes to existing conditions.

Alternative 2 – Limit Development of Surrounding Lands

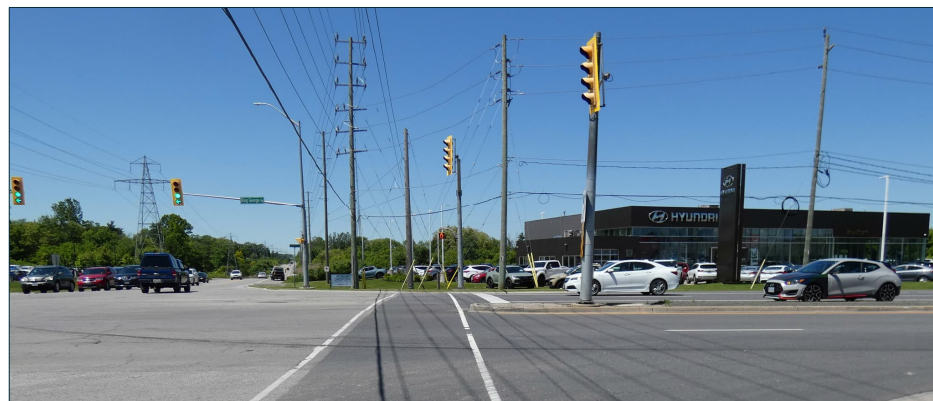
Implement planning policies which would limit population and employment growth in the North Expansion Lands to ease the future traffic constraints.

Alternative 3 – Maintain Powerline Road as a 2-Lane Cross-section







Localized infrastructure improvements within the Powerline Road corridor within the study area limits, including addition of active transportation infrastructure to improve connectivity and safety for road users, pedestrians, and cyclists, and improvements to existing intersections.

Alternative 4 – Widen Powerline Road

Widening of Powerline Road to urban arterial standards within the study area limits, including additional active transportation infrastructure, improved connections to the designated developments, improved connectivity and safety for road users, pedestrians, and cyclists, and intersection improvements.



EVALUATION CRITERIA

Transportation / Engineering	Natural Environment	Social Environment
 <ul style="list-style-type: none"> Existing and Future Transportation Network Connectivity – Existing and Future Active Transportation Transit Service Traffic Safety Constructability Existing Infrastructure Durability/ Service Life Phasing and Implementation 	 <ul style="list-style-type: none"> Environmentally Sensitive Areas Terrestrial Habitat (Wildlife and Vegetation) Fisheries/Aquatic Impacts Species at Risk Existing Watercourses Ground and Surface Water Quality/Quantity Climate Change Mitigation 	 <ul style="list-style-type: none"> Land Use Property Requirements Noise and Vibration Air Quality Aesthetics
Land Use Planning Objectives	First Nations / Cultural Environment	Economic Environment
 <ul style="list-style-type: none"> City Policies Provincial Policies 	 <ul style="list-style-type: none"> Natural Resources - Hunting, Harvesting, and Seedling Cultivating Archaeological Resources Built Heritage Resources and Cultural Heritage Landscapes 	 <ul style="list-style-type: none"> Capital Costs/Cost Benefit Operational and Maintenance Costs Property Acquisition Costs

PRELIMINARY EVALUATION OF ALTERNATIVE SOLUTIONS

Category	<u>Alternative 1</u> Do Nothing	<u>Alternative 2</u> Limit Development of Surrounding Lands	<u>Alternative 3</u> Maintain Powerline Road as a 2-Lane Cross-section	<u>Alternative 4</u> Widen Powerline Road
Transportation / Engineering	Not Preferred	Not Preferred	Less Preferred	Preferred
Land Use Planning Objectives	Not Preferred	Not Preferred	Less Preferred	Preferred
Natural Environment	Preferred	Preferred	Less Preferred	Less Preferred
First Nations / Cultural Environment	Preferred	Preferred	Less Preferred	Less Preferred
Social Environment	Not Preferred	Less Preferred	Not Preferred	Preferred
Economic Environment	Less Preferred	Preferred	Less Preferred	Less Preferred
Summary (Key Pros/Cons):	Not Recommended – Does not address the P&O Statement.	Not Recommended – Does not address the P&O Statement.	Not Recommended – Does not address the P&O Statement.	Recommended – Addresses the P&O Statement.
Abbreviation Legend: <ul style="list-style-type: none"> P&O – Problem and Opportunity TMP – City of Brantford Transportation Master Plan ATMP – City of Brantford Active Transportation Master Plan OP – City of Brantford Official Plan GHG – Greenhouse Gas ROW – Right-of-Way Ranking: <div> <div>Not Preferred</div> <div>Less Preferred</div> <div>Preferred</div> </div>	Pros: <ul style="list-style-type: none"> No impacts to the Natural Environment/sensitive areas. Protects First Nations access to Natural Resources. No impacts to land use/properties. Cons: <ul style="list-style-type: none"> Does not align with City's policy objectives (TMP/ATMP). Will not accommodate future traffic volumes. Traffic congestion will continue to increase/worsen. No opportunity to improve Active Transportation and/or Transit. Increased per km GHG emissions and negative effects on climate change. Increase in localized noise and air pollution. 	Pros: <ul style="list-style-type: none"> Ability to reduce environmental impacts by restricting development. Protects First Nations access to Natural Resources. No impacts to land use/properties. Cons: <ul style="list-style-type: none"> Does not align with City's policy objectives (TMP/ATMP/OP). Will not accommodate future traffic volumes from surrounding area. Traffic congestion will continue to increase/worsen. No opportunity to improve Active Transportation and/or Transit. Does not improve existing/future connectivity. Increased per km GHG emissions and negative effects on climate change. 	Pros: <ul style="list-style-type: none"> Provides localized capacity and congestion improvements. Opportunity to improve and extend service life of existing infrastructure. Cons: <ul style="list-style-type: none"> Does not align with City's policy objectives (TMP/ATMP). Will not accommodate future traffic volumes to support population and employment growth. Increased construction impacts. Limited opportunities to improve existing traffic congestion along Powerline Road. Limited opportunity to connect to future developments and improve public facilities (Active Transportation). Limited cost-benefit. 	Pros: <ul style="list-style-type: none"> Aligns with City's policy objectives (TMP/ATMP/OP). Accommodates future traffic volumes in support of population and employment growth. Improves multi-modal connectivity and enhanced active transportation (pedestrian / cyclist) connectivity. Improves local sustainability/GHG emission through efficient multi-modal travel and reduced traffic congestion. Cons: <ul style="list-style-type: none"> Increased impacts to adjacent land use, through property acquisition. Potential impacts to First Nations access to Natural Resources through widening of the ROW. Higher capital costs; however, this alternative offers the most substantial enhancements to all modes of traffic.

PROJECT SCHEDULE AND NEXT STEPS

Municipal Class Environmental Assessments Phases	Estimated Timeline
Phase 1 – Problem and Opportunity	Q1 2024
Phase 2 – Alternative Solutions	Q3 2024
Phase 3 – Alternative Design Concepts for Preferred Solution	Q1 2025
Phase 4 – Environmental Study Report	Q2 2025
Phase 5 – Implementation (Design and Construction)	To Be Determined

- Review and address public comments received and consider in the evaluation of alternative solutions;
- Continue consultation with Agencies, Stakeholders, First Nations, Developers, Utilities, and the Public;
- Update evaluation criteria and matrix, and confirm selection of Recommended Technically Preferred Alternative Solution based on consultation;
- Identify impacts of Alternative Solution(s) on the environment and develop mitigation measures, and
- Select the Technically Preferred Alternative Solution(s), to address the Problems and Opportunities Statement identified in Phase 1.

James Clarke, C.E.T., PMP
Senior Project Manager
City of Brantford
58 Dalhousie Street, P.O. Box 818
Brantford, ON N3T 5R7
Phone: 519-759-4150 ext. 5198
PowerlineRoadEA@brantford.ca



Alex Siciliano, P.Eng.
Consultant Project Manager
Egis
6240 Highway 7, Suite 200
Woodbridge, ON L4H 4G3
Phone: 613-903-4428
PowerlineRoadEA@brantford.ca

Thank you!
Your input is important to us.

