



# Volume 2 Appendices

## Environmental Study Report

County of Essex County Road 46 and  
Town of Tecumseh Concession Roads 8 and 9 Environmental Assessment Study

April 2026 REV. 1



Prepared By:  
BT Engineering Inc.  
509 Talbot Street  
London, ON N6A 2S5  
519-672-2222

## Appendix A

---

### Study Design



**Revision History**

Revision	Date	Description of Change

**Draft Study Design Report**

County of Essex County Road 46 and  
Town of Tecumseh Concession Roads 8 and 9  
Environmental Assessment Study

May 2024

**Prepared by:**  
BT Engineering Inc.  
509 Talbot Street  
London, ON N6A 2S5



**Table of Contents**

**1.0 INTRODUCTION..... 1**

1.1 Study Area..... 1

1.2 Study Design Report Purpose..... 2

**2.0 STUDY PROCESS..... 3**

2.1 Guiding Principles..... 3

2.2 Environmental Assessment Act Requirements..... 3

2.3 EA Phases..... 4

**3.0 STUDY APPROACH..... 6**

3.1 Consultation Program..... 6

3.2 Public Consultation..... 6

3.3 Agency Consultation..... 7

3.4 Indigenous Consultation..... 7

**4.0 NEED AND JUSTIFICATION..... 8**

4.1 Problem and Opportunity Statement..... 8

4.2 Study Considerations..... 8

**5.0 BACKGROUND..... 10**

5.1 Background Studies..... 11

5.1.1 Essex County Official Plan..... 11

5.1.2 Essex County Transportation Master Plan..... 11

5.1.3 Essex Windsor Region Transportation Master Plan (2005)..... 13

5.1.4 County Wide Active Transportation Study Master Plan (2012)..... 13

5.1.5 Town of Tecumseh Official Plan..... 13

5.1.6 City of Windsor Official Plan..... 16

5.1.6.1 Sandwich South Secondary Planning Area..... 16

5.1.6.1.1 County Road 42 Secondary Plan..... 17

5.1.6.1.2 East Pelton Planning Area..... 17

5.1.6.1.3 Sandwich South Master Servicing Plan..... 17

5.1.7 Municipality of Lakeshore Official Plan..... 18

**6.0 WORK PROGRAM..... 19**

6.1 Phase 1: Identification of the Problem/Opportunity..... 19

6.2 Phase 2: Development and Evaluation of Alternative Solutions..... 19

6.3 Phase 3: Alternative Design Concepts for the Preferred Solution..... 19

6.3.1 Environmental Inventories and Technical Investigations..... 19

6.3.1.1 Evaluation of Alternatives..... 21

6.4 Phase 4: Environmental Study Report..... 21

**7.0 ALTERNATIVE PLANNING SOLUTIONS..... 22**

**8.0 PRELIMINARY DESIGN ALTERNATIVES..... 24**

8.1 Coarse Screening and Evaluation of Alternatives..... 24

**9.0 STUDY SCHEDULE..... 25**

**GLOSSARY OF TERMS..... 26**

**List of Figures**

Figure 1: Study Area..... 2

Figure 2: Municipal Class EA Process..... 5

Figure 3: Essex County Official Plan (2014)..... 12

Figure 4: Town of Tecumseh, City of Windsor and Town of Lakeshore Official Plans..... 15

**List of Tables**

Table 1: Preliminary Evaluation of Alternative Planning Solutions..... 23

Table 2: Proposed Study Schedule..... 25

**List of Photos**

Photo 1: County Road 46 at 10th Concession..... 8

Photo 2: County Road 46 west of 10th Concession..... 9

Photo 3: County Road 46 at 8th Concession..... 20

## 1.0 INTRODUCTION

The County of Essex has initiated an Environmental Assessment (EA) Study to develop an operational plan for County Road 46 from the City of Windsor boundary southeasterly to County Road 19. Part of the EA Study involves improvements to the Town of Tecumseh Concession Roads 8 and 9. The EA for County Road 46 and Concession Roads 8 and 9 are being undertaken concurrently as one EA Study by BT Engineering Inc. (BTE) on behalf of the County of Essex and the Town of Tecumseh due to the proximity of the roads and the interconnected operational improvements required. The “EA Study” in this document refers to all three roads under study. The County of Essex will be the Proponent for the overall study.

The EA reflects the County Road 46 planning for a Schedule C undertaking of an arterial road under the jurisdiction of the County of Essex and Schedule B projects for collector roads under the jurisdiction of the Town of Tecumseh. Each component will be documented in a combined report. At the time of writing this draft Study Design, the Province is reviewing the Municipal Class EA requirements for Schedule B projects. These requirements will be reviewed as the study proceeds.

The EA Study will document the transportation need and establish the facility form and function of the corridors to accommodate existing and future traffic volumes in the County of Essex. All alternatives will consider the operation and safety of all modes of transportation including passenger and commercial vehicles, pedestrians and cyclists. The Study will identify any property requirements needed and define a long-term property protection plan.

The road infrastructure will be planned to accommodate the future population and economic growth targets in the County of Essex that are identified in the 2020 Provincial Policy Statement. The Provincial Policy Statement enables municipalities to plan for future population growth and development.

### 1.1 Study Area

The County Road 46 area under study extends from the southeast boundary of the City of Windsor approximately 8 km easterly to County Road 19. The Study Area is located in the Town of Tecumseh and is illustrated on **Figure 1**. It includes the Town of Tecumseh’s Concession Roads 8 and 9 from County Road 46 northerly to Highway 401, approximately 0.5 km and 1.0 km respectively. The Study Area boundaries extend 500 m on either side of the roadways under examination.

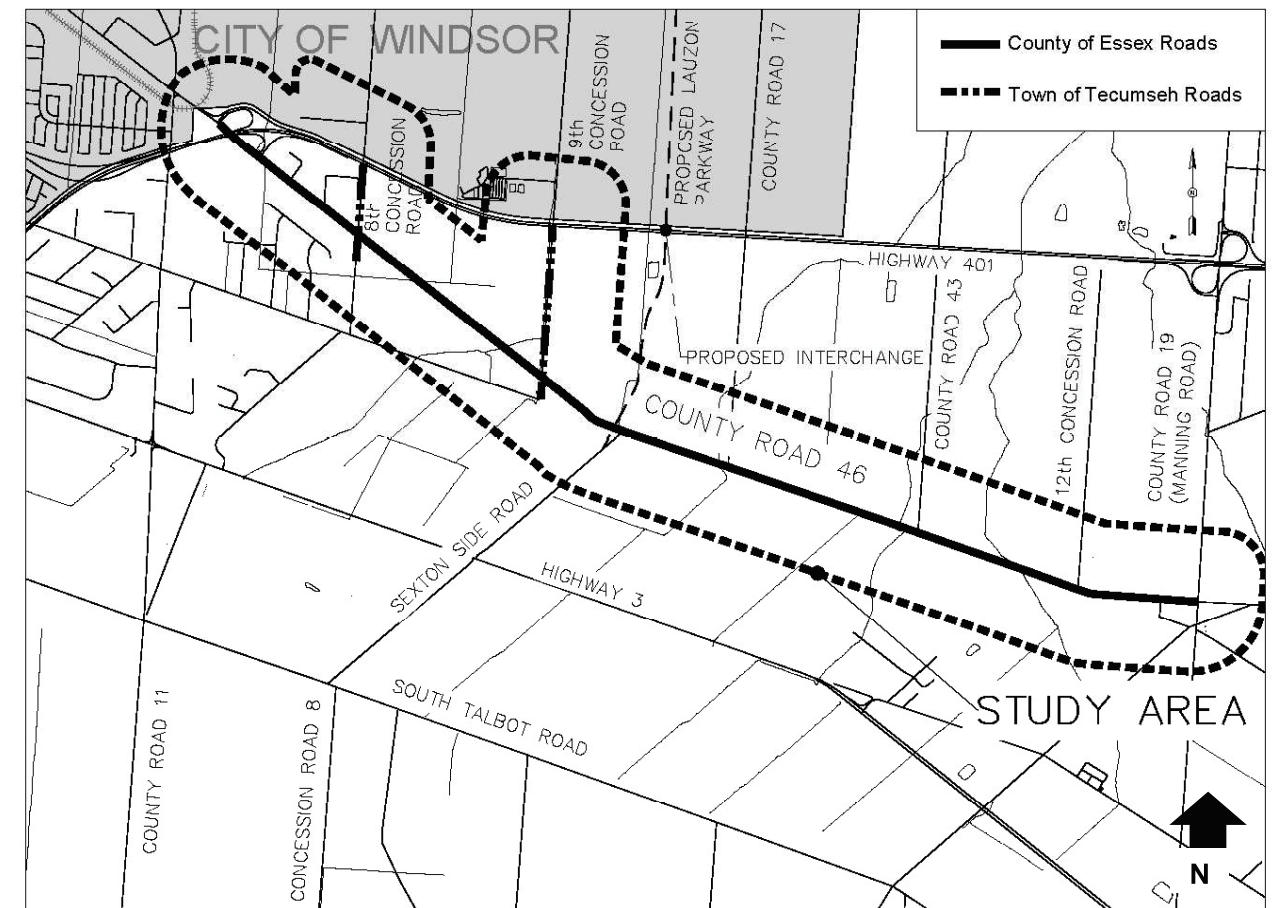


Figure 1: Study Area

### 1.2 Study Design Report Purpose

This Study Design Report (SDR) is the initial consultation document that outlines EA process commitments leading to the submission of an Environmental Study Report (ESR). The distribution of this report is intended to solicit early input on the planning process. Following the first public meeting, the SDR will be finalized based on input received and will be posted on the County of Essex and Town of Tecumseh’s websites as the Final SDR.

The purpose of this report is to:

- Define the need and justification of the project.
- Identify Planning Alternatives (Alternatives to the Undertaking) as described in **Section 1.0**.
- Describe the Municipal Class Environmental Assessment (MCEA) process.
- Solicit input from the public, agencies and stakeholders.
- Define the scope of work that will be undertaken as part of the study.

Based on the range of anticipated alternatives, their effects and capital costs of the project, the study is being initiated as a Municipal Schedule C project, as defined by the MCEA (Amended 2023), for County Road 46 and Schedule B for the Town of Tecumseh’s Concession Roads 8 and 9. The County of Essex and the Town of Tecumseh are the proponents of the project.

## 2.0 STUDY PROCESS

This Study will be conducted as a Schedule C EA Study for County Road 46 and a Schedule B EA for Concession Roads 8 and 9, meeting the requirements of the MCEA (Amended 2023). The mandatory requirements vary between the two. The study will culminate in the filing of a final report that will meet the requirements of both schedules.

This Study will complete all requirements under the MCEA process by establishing the need and justification for the project, considering all reasonable alternatives with acceptable effects on the natural, social and cultural environments, and proactively involving the public in defining a Recommended Plan.

### 2.1 Guiding Principles

A Class EA is an approved planning document that defines groups of projects and activities and the EA processes which the County of Essex and Town of Tecumseh are committed to follow. The process provides a decision-making framework for effectively meeting the requirements of the *Environmental Assessment Act*.

The study approach reflects the following Ministry of the Environment, Conservation and Parks (MECP) guiding principles for EA studies which are found in the MCEA (Amended 2023):

- Consider all reasonable alternatives.
- Provide a comprehensive assessment of the environment.
- Utilize a systematic and traceable evaluation of net effects.
- Undertake a comprehensive public consultation program.
- Provide clear and concise documentation of the decision-making process and the public consultation program.
- Documentation and “bump-up” principles and processes.
- Environmental clearance processes.

The approved Class EA process is extensive, with significant consultation and outreach to agencies and the public.

### 2.2 Environmental Assessment Act Requirements

The EA Study will follow the Class EA process, thereby meeting the requirements of the Municipal Engineer Association’s MCEA (Amended 2023), which at the time of writing this report is under review and may modify the study process as the study evolves. The Study is being initiated as a Schedule C EA based on the range on anticipated effects and capital cost of the project of the larger County project.

The EA will include three Public Consultation Centres (PCCs) and conclude with the preparation of an ESR that will document both the County and Town studies. Following this approach, the public will be provided with a 30-day review period at the Study conclusion.

As the initial step in the Class EA process, this SDR is being made available to the public. This satisfies discretionary Step 1.2 of the MCEA process, as illustrated in **Figure 2**. The public and agencies will have this initial opportunity to comment on the proposed approach.

## 2.3 EA Phases

A breakdown of tasks, by phase, for a Schedule B and C study is illustrated in the following MCEA Processes shown in **Figure 2**. Schedule B projects may be determined to be exempt following a screening process (to be determined).

### 3.0 STUDY APPROACH

Over the course of the study, input will be solicited from the public, stakeholders, agencies and Indigenous Communities. Input will be gathered through meetings, the project website, and discussions/communication with interested parties. The Study approach is to work collaboratively with interested parties to address issues and reach a consensus on the Recommended Plan.

#### 3.1 Consultation Program

The Consultation Program identifies the opportunities for the Project Team to discuss the Study with the public/stakeholders, agencies and Indigenous Communities. This Study will use several processes to engage with interested parties and provide an opportunity for input. The Consultation Program will include:

- Notices published in local newspapers, issued as media releases and directly mailed/emailed to the study mailing list at key points over the course of the study including:
  - Notice of Study Commencement.
  - PCC No. 1.
  - PCC No. 2.
  - PCC No. 3
  - Notice of Study Completion to advertise the start of the 30-day public review period of the ESR.
- Communication and coordination with agencies/consultants to obtain background information for input into the study and to obtain required approvals/permits.
- Study updates on the project webpage located on the County of Essex's website.
- Meetings with affected property owners, local residents, businesses and Indigenous Communities.

#### 3.2 Public Consultation

The study will use several techniques to proactively involve the public including PCCs and meetings with external stakeholders. Meetings will be organized with the stakeholders and may include adjacent landowners and other affected businesses or associations. These meetings will include representatives from the County of Essex, Town of Tecumseh and BTE.

Three PCCs will be held during the study. PCC No. 1 will present the project goals, problem and opportunity statement, SDR (Work Plan), environmental inventories, traffic analysis, assessment of Planning Solutions and seek public/agency input. PCC No. 2 will present the evaluation of design alternatives and the Technically Preferred Alternative (TPA) for the Study Area. PCC No. 3 will present the Recommended Plan and Mitigation.

The public meetings will be an integral component of the study - seeking input and comments from the public and stakeholders. There will be an opportunity for the public to comment on the study at any time. All information will be collected in accordance with the *Municipal Freedom of Information and Protection of Privacy Act* (2009). Anyone interested in the study will be added to the study mailing list upon request.

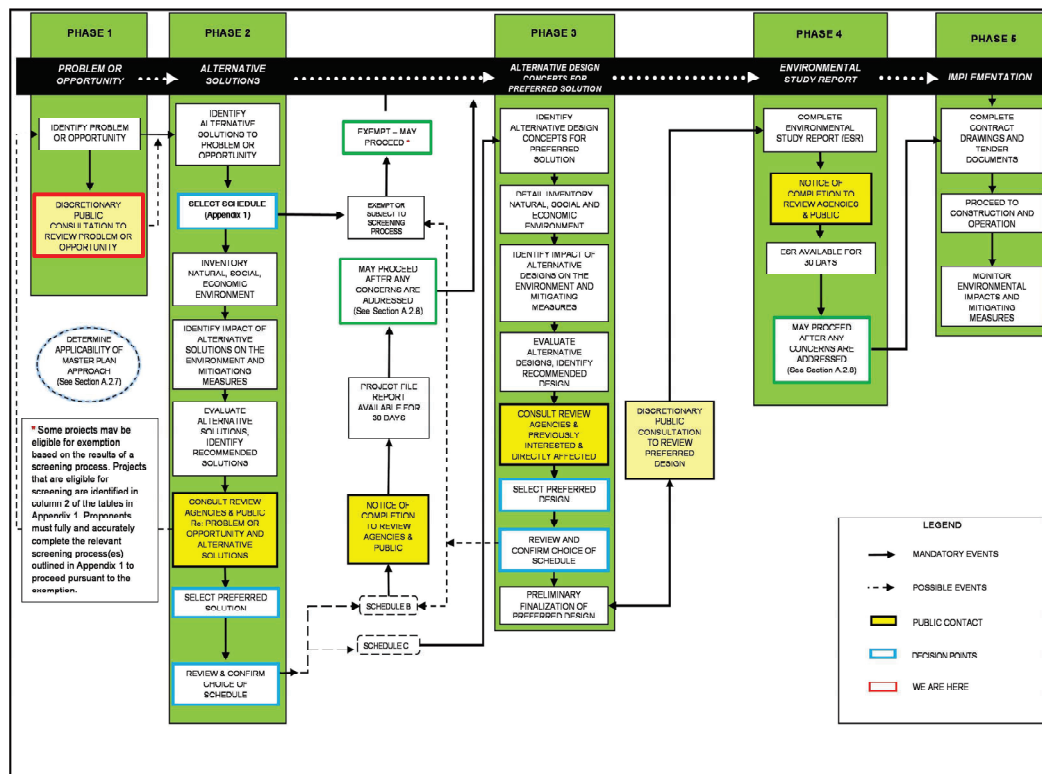


Figure 2: Municipal Class EA Process

### 3.3 Agency Consultation

Agencies/ministries will be contacted at the start of the study to inform them of Study Commencement and to circulate this SDR. As the study progresses, meetings will be held with select agencies (as required) to review the study and obtain approvals in accordance with the MCEA. Agencies will include:

- Ministry of Transportation
- Ministry of the Environment, Conservation and Parks (MECP)
- Ministry of Heritage, Sport, Tourism and Culture Industries (MHTSCI)
- Ministry of Natural Resources and Forestry (MNRF)
- Ministry of Agriculture, Food and Rural Affairs (OMAFRA)
- Ministry of Citizenship and Multiculturalism (MCM)
- Ministry of Indigenous Affairs
- Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC)
- Ministry of Community and Social Services
- Ministry of Municipal Affairs and Housing
- Ministry of Energy, Northern Development and Mines
- Ministry of Infrastructure
- Ministry of Community Safety and Correctional Services
- Ontario Provincial Police and Emergency Services

### 3.4 Indigenous Consultation

The County of Essex and the Town of Tecumseh have a constitutional duty to consult with Indigenous Communities with traditional land use or interests within the Study Area. Clear, effective and timely consultation with Indigenous Communities is essential to ensure the success of the project. This will include:

- Identification of interested/affected Indigenous Communities early in the decision-making process.
- Distribution and notification of relevant project-related information, including the MCEA process, environmental inventories and potential alternatives/impacts.
- Early identification of concerns/issues.
- Understanding of potential risk and impacts of the Study on Indigenous Peoples interests.
- Development of mutually acceptable solutions involving Indigenous Communities.
- Ensuring regulatory compliance throughout the Class EA process.

Indigenous Communities will be consulted throughout the duration of the Study and presentations will be made at their request.

## 4.0 NEED AND JUSTIFICATION

### 4.1 Problem and Opportunity Statement

Road network improvements are required within the western sectors of the County of Essex to accommodate planned/proposed development south of Highway 401 and bordering the City of Windsor. The reason this planning is required now is that it will facilitate land use development by defining the future road right-of-way and intersection locations. It will provide certainty for developers to plan their adjacent lands.

The Study will provide an opportunity to: improve efficiency of the road network; improve access and reduce traffic delays; and define a long-term transportation plan to support travel within the County of Essex. The Study will seek to support future growth within Town of Tecumseh and improve transportation for all road users.

### 4.2 Study Considerations

Key considerations, issues, constraints and commitments within the study area include:

**Transportation** - Improvements are required to: improve safety while accommodating planned growth in the County of Essex and the adjacent City of Windsor. The proposed regional road improvements for County Road 46 and Concession Roads 8 and 9 will accommodate traffic travelling to/from the new developments in the Oldcastle Hamlet, an employment hub and other trip origins and destinations in the surrounding County, such as Maidstone Hamlet. See **Photo 1** that shows heavy vehicles at the County Road 46 and 10th Concession intersection.



**Photo 1: County Road 46 at 10th Concession**

**Land Use** - There are two settlement areas located adjacent to the Study Area and a business park adjacent to the City of Windsor with a proposed industrial subdivision development between Concession Roads 8 and 9. Alternatives will consider proposed site plans to minimize impacts to existing development plans. Preference will also be given to alternatives that are within the Urban

Boundary as described in the Essex-Windsor Region Transportation Master Plan (EWRTMP). See **Photo 2** for example farm equipment that travels on County Road 46.

Additional existing land uses in the Study Area are predominantly Agriculture Lands.



**Photo 2: Farm Equipment on County Road 46 west of 10th Concession**

**Natural Environment** - The majority of the landscape through the Study Area has been converted over time from a natural state to an agriculturally dominated landscape. Remnant woodlots, the Pike Creek Drains and agricultural swales remain as the primary natural environmental features with the potential to support locally rare species or Species at Risk (SAR).

**Consultation and Engagement** - Communication and consultation with the public and stakeholders will be a key component of the EA process, providing an opportunity for input, information exchange and identification of issues/desires.

The study will also take a proactive approach to consultation with Indigenous Communities, including Aamjiwnaang First Nation (Chippewas of Sarnia), Chippewas of the Thames First Nation, Caldwell First Nation, Delaware Nation - Moravian of the Thames, Munsee-Delaware Nation, Oneida Nation of the Thames, Metis Nation of Ontario, Southern First Nations Secretariat and Walpole Island First Nation.

**Utilities** - The Study Area is constrained by existing utilities including an Enbridge pipeline and primary/secondary hydro lines. Alternatives will consider utility conflicts and advanced relocations will be identified early in the study.

## 5.0 BACKGROUND

The County of Essex and the City of Windsor are experiencing increasing development growth and an increase in traffic volumes as a result of planned/proposed development. Improvements are required for the safe and efficient movement of all modes of transportation (i.e. vehicles, pedestrians and cyclists). Major corridors within the Study Area include:

- **County Road 46:** County Road 46 is an east-west arterial roadway with a rural 2-lane cross section. This roadway is considered a key route in the Essex-Windsor roadway network. County Road 46 has been projected to have significant future capacity deficiencies due to forecasted population and employment growth and traffic distribution between the Highway 401/Country Road 46 interchange and County Road 19 (Manning Road). County Road 46 is described as a Secondary Regional Road from County Road 19 to County Road 17 and a Class II Arterial Road from County Road 17 to the City of Windsor boundary/ Highway 401.<sup>1</sup>
- **8th Concession Road and 9th Concession Road:** 8th Concession Road is a north-south rural road with a two-lane cross section and a posted speed limit of 50 km/h. It runs perpendicular to Highway 401 from County Road 46 where it ends at North Talbot Road to the south.  
9th Concession Road is a north-south rural road with a two-lane cross section and a posted speed limit of 50 km/h. The 9th Concession Road runs perpendicular to Highway 401 from County Road 46 where it becomes North Talbot Road to the south.  
8th Concession Road and 9th Concession Road have at-grade intersections with County Road 46 and are grade separated crossings over Highway 401.
- **Highway 401:** Highway 401 is a major freeway extending from Windsor to the Québec border. It is a major link across Ontario for the movement of goods and services and it feeds the busiest international border crossing in North America (approximately \$325 million of goods/day across the Detroit River). In the area of this study existing interchanges are located at County Road 46 at the City of Windsor boundary and at County Road 19 (Manning Road). Plans have been approved for an extension of Lauzon Parkway to Highway 3. This will result in some redistribution of area traffic with the provision of a new Highway 401 interchange located approximately midway between the County Road 46 and the County Road 19 Highway 401 Interchanges, refer to **Figure 1**.
- **Highway 3:** Highway 3 is a 4-lane divided highway corridor which parallels County Road 46 to the south. It is a major access route serving local area development and inter-regional traffic.
- **County Road 19:** County Road 19 is a 2-lane arterial road that provides a north-south network linkage to and from Highway 401. Plans for widening the corridor to 5 lanes have been in place since 2008.
- **Lauzon Parkway Extension:** The Lauzon Parkway Extension to Highway 3 is planned as a 4-lane arterial. It will support planned industrial and residential growth in the City of Windsor and the Sandwich South Secondary Plan area<sup>2</sup>. The provision of a new interchange with Highway

<sup>1</sup> Essex-Windsor Regional Transportation Master Plan (EWRTMP), IBI Group with Paradigm Transportation Solutions October 2005.

<sup>2</sup> Lauzon Parkway Improvements Class EA Study Executive Summary Environmental Study Report, MRC, A Member of MMM Group January 20, 2014.

401 will result in some redistribution of area traffic patterns and the improved access to Highway 401 should also stimulate the development of adjacent industrial lands.

### 5.1 Background Studies

Background studies have been completed in the Study Area to document the proposed land uses and planned improvements to the transportation network. These reports are summarized in the following sections.

#### 5.1.1 Essex County Official Plan

The County of Essex Official Plan<sup>3</sup> is a comprehensive planning document that identifies long-term goals and objectives to guide the development of the County of Essex. The Official Plan is coordinated with the local municipalities on planning and development issues that exceed municipal boundaries. It contains specific land use policies for settlement areas, agricultural areas and the protection of the natural environment. The County of Essex's transportation policies include all modes of travel including pedestrian and bicycle paths. The County of Essex's Official Plan encourages safe, energy efficient and economical movement of people and goods; identifies a hierarchy of roads based on the Transportation Master Plan (TMP); documents appropriate right-of-way widths; promotes active transportation; and transit services throughout; identifies corridors to protect for future transportation, transit and other infrastructure; identifies policies to protect railway and air services; and restricts development on private roads. Refer to **Figure 3**.

#### 5.1.2 Essex County Transportation Master Plan

The County of Essex is developing an updated Transportation Master Plan (TMP) that will evaluate current traffic conditions, changes that have been forecast since the previous TMP was developed and recommend measure to satisfy the County of Essex's transportation requirements to 2053. The updated TMP is being developed in parallel with this study. It will establish projected travel demands to comprehensively address the requirements for the movement of people and goods within the County of Essex including walking, cycling, public transit and motor vehicles.

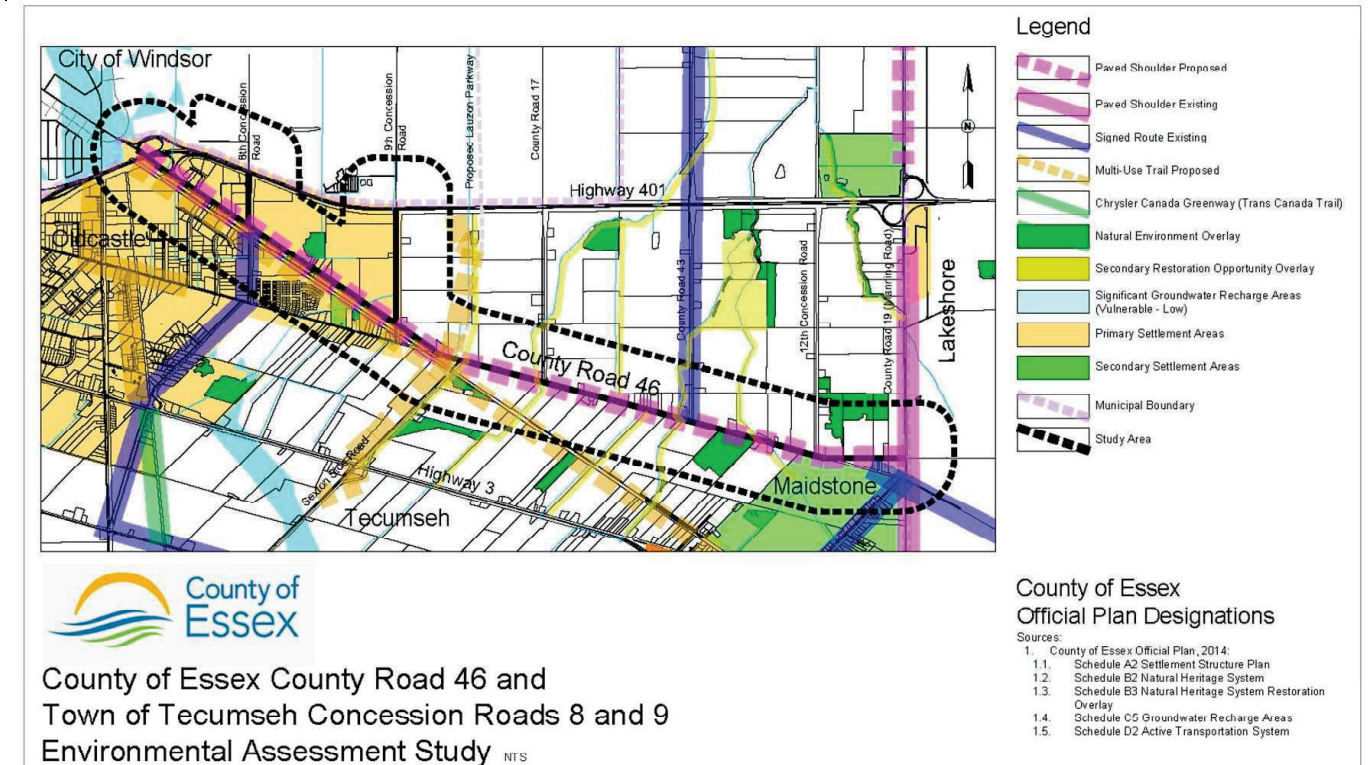


Figure 3: Essex County Official Plan (2014)

<sup>3</sup> County of Essex Official Plan, 2014

### 5.1.3 Essex-Windsor Region Transportation Master Plan (2005)

The main goals of the EWRTMP included:

- Fairly and equitably manage, coordinate and finance growth and non-growth-related region-wide transportation improvements, with a balance of capacity enhancements and demand management that best benefits the region.
- Have the region develop in a coordinated manner that will be effective in minimizing traffic congestion and associated environmental impacts, protecting and managing required transportation corridors and achieving the region's transportation management goals.
- Increase the availability of "viable" transportation options by making public transit, cycling and walking more attractive for Essex-Windsor residents.
- Identify achievable strategies, in the context of the County of Essex and the City of Windsor, to reduce the number of kilometres traveled by the private automobile per household by creating more compact built forms, mixed-use neighbourhoods and developments, and by adopting transit, cycling and pedestrian-supportive land use planning and urban design policies and plans.
- Formulate the TMP in an integrated, inclusive and comprehensive manner.
- Satisfy Phases 1 and 2 of the MCEA process dealing with transportation system needs and alternative planning strategies respectively.

County Road 46 from Highway 401 to County Road 19 Road was identified in the EWTRMP as a roadway that will experience significant capacity deficiencies due to population and employment growth and distribution.

### 5.1.4 County Wide Active Transportation Study Master Plan (2012)

The County Wide Active Transportation Master Plan<sup>4</sup> (CWATS) contains recommendations and guidelines for the planning, design, implementation and management of an active transportation network serving all of the County of Essex. County Road 46 was identified to include paved shoulders to better accommodate cyclists providing a linkage to other proposed network facilities in the CWATS. Immediately to the south of the subject section of County Road 46 it identifies a proposed multi-use pathway for pedestrians and cyclists utilizing the abandoned Canada Southern rail corridor.

### 5.1.5 Town of Tecumseh Official Plan

The Town of Tecumseh Official Plan, approved by the County of Essex, contains goals, objectives and policies established primarily to manage and direct physical change and the effects on the social, economic and natural environment of the Town.<sup>5</sup> The land uses identified on Schedule "A" are agricultural/Natural Areas outside the Settlement Area boundaries. The largest settlement, in the Study Area, is identified is the Oldcastle Hamlet located at the west end, adjacent to the City of Windsor. The hamlet is an Employment Node with Residential Neighbourhoods and Future Growth Areas. Adjacent to County Road 46, along the south side, is a Potential Human Made Linkage, located on an abandoned railway corridor. At the east end of the Study Area is the Maidstone Hamlet south of County Road 46. This hamlet is made up of Residential Neighbourhoods with three Commercial Nodes and one Community Node. Refer to **Figure 4**.

<sup>4</sup> County Wide Active Transportation Study (CWATS) Master Plan, September 2012

<sup>5</sup> Town of Tecumseh Official Plan Council Adopted February 2021.

Schedule "C" identifies the Natural Heritage System with the Town of Tecumseh. Within the Study Area, outside the hamlets the waterways/municipal drains are identified as Restoration Opportunities Overlay. These areas include the Pike Creek and Little River tributaries. The area's woodlots are designated Natural Environment Overlay, which are second priority natural heritage features.

Schedule "E-1" provides the Road Classifications for the Official Plan. The 8th Concession Road is designated a Collector (Urban) and the 9th Concession Road is designated a Collector Road (Rural). The right-of-way for all Collector Roads is 23 m.

The Town of Tecumseh is committed to the development and ongoing enhancement of the CWATS Master Plan in partnership with the County of Essex. On-Road CWATS is indicated on County Road 46 within the Study Area on Schedule "E-2". Concession Roads 8 and 9 are identified as providing CWATS On and Off Road Routes. Also identified is the Proposed Essex Region Conservation Authority (ERCA) Route along the abandoned railway south of County Road 46.

### 5.1.6 City of Windsor Official Plan

The City of Windsor Official Plan provides direction for the physical development of the municipality over a 20-year period while taking into consideration important social, economic and environmental matters. Under the *Planning Act*, Official Plans are required to be reviewed at intervals of not less than once every five years after the approval of the previous 5 Year Review.<sup>6</sup> The municipality is currently divided into a total of 20 planning districts. The 20 existing planning districts range in size from slightly more than 200 hectares to approximately 2,532 hectares (refer to Schedule A - Planning Districts & Policy Areas). These planning districts or parts of them, and the newly transferred lands (formerly South Sandwich) from the Town of Tecumseh will provide the basis for developing more detailed planning policies.

The City of Windsor's Sandwich South Planning District is located to the north of the County Road 46, 8 and 9th Concession Roads Study Area. This Planning District is bounded by the Windsor International Airport to the north, Town of Tecumseh to the east and south and to the west by the Devonshire Planning District boundary. Refer to **Figure 4**.

The 2024 Schedule D Land Use Plan identifies lands to the north of the Highway 401 as a large tract of Employment Lands with a site identified for a Major Institutional use along 8th Concession Road, in conjunction with Mixed Use designations. To the north a large area has been identified for a Future Urban Area.

Schedule F: Roads and Bikeways provides the roadway classifications for the City of Windsor. The Class I Arterials, shall have a minimum right of way width of 46 m, include:

- Lauzon Parkway.
- County Road 42.
- Baseline Road.
- 9th Concession Road.
- County Road 17.

Class II Collector Roads, shall have a minimum right of way width of 26 m, include:

- 7th Concession Road.
- 8th Concession Road.

#### 5.1.6.1 Sandwich South Secondary Planning Area

The Sandwich South Planning Area is 2,530 hectares of land at the eastern limit of Windsor. The area is generally bound by Highway 401 to the south, 7th Concession Road to the west, the EC Row Expressway to the north and the midpoint of County Road 17 and the 11th Concession to the east.

The lands are largely used for agricultural purposes at the present time, with the exception of the airport in the northwest quadrant. Also within the planning area are a small number of existing small-scale industrial and service commercial uses along County Road 42 and Baseline Road. Small pockets of residential subdivision development also exist within the planning area.

<sup>6</sup> City of Windsor Official Plan Amendment #85 as part of a 5- year review of the Official Plan. Official Plan Amendment #85 was approved by the Ministry of Municipal Affairs and Housing on 08/28/2013.

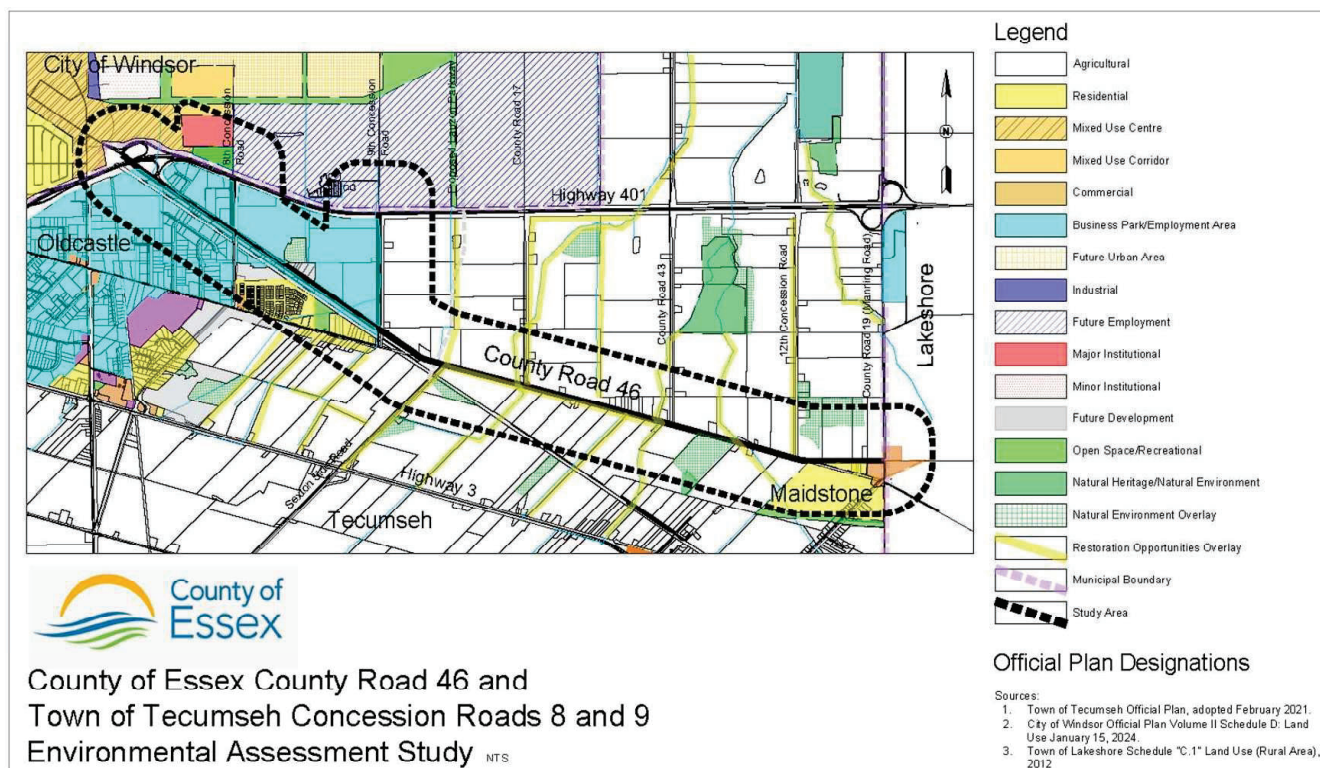


Figure 4: Town of Tecumseh, City of Windsor and Town of Lakeshore Official Plans

A Boundary Adjustment Agreement was approved for Windsor for the Annexation of the Sandwich South Planning Area, initiating the process for its eventual designation within the City of Windsor Official Plan by the Minister of Municipal Affairs and Housing on December 2002 between the Town of Tecumseh, County of Essex and City of Windsor Plan. The lands were needed by the City of Windsor to accommodate future growth, particularly employment growth as there was a shortage of industrial lands for potential larger scale manufacturing industries at that time.<sup>7</sup>

A Master Planning Study was initiated for the Sandwich South Lands in 2004, which resulted in Official Plan Amendment 60 (“OPA 60”). The study was completed in 2006 and approved by the Ontario Municipal Board (“the Board”) in 2007. OPA 60 established the overall land area requirements and general location of various land use categories to accommodate future growth.

#### 5.1.6.1.1 County Road 42 Secondary Plan

Within the Sandwich South Planning District is the County Road 42 Secondary Plan. This Secondary Plan includes the north half of Lot 15, Concessions 8, 9 and 10 to the south; County Road 42 and the Windsor International Airport to the north; 8th Concession Road to the west; County Road 17 to the east. The land uses identified include medium and low-density residential areas with Business Parks along County Roads 42 and 17 and a Regional Institutional Centre Node, for a Regional Hospital in the southeast quadrant of County Road 42 and 9th Concession Road. Open Space corridors criss-cross the planning area.

#### 5.1.6.1.2 East Pelton Planning Area

Within the Sandwich South Planning District is the East Pelton Planning Area. This planning area is located adjacent to the Study Area to the northwest. It is generally bounded by the 7th Concession Road to the west, Baseline Road residential area to the north, 8th Concession Road to the east and Highway 401 to the south. The major land uses include residential areas in the north half and mix use and commercial in the south half with a major institution designation along 8th Concession Road. Currently the Provincial South West Detention Centre is located on the major institutional land use designation. The Croatian Soccer Fields are located on the private recreational use at Highway 401 and 8th Concession Road. Open Space corridors criss-crossing the planning area.

#### 5.1.6.1.3 Sandwich South Master Servicing Plan

To accommodate the full build-out of the Sandwich South Planning District, the Master Servicing Plan<sup>8</sup> identified road design corridors to be included in the recommended transportation network design and are listed below:

- Widening of 8th Concession Road from 2 lanes to 4 lanes.
- Widening of 9th Concession Road from 2 lanes to 4 lanes.
- Development of an east-west collector traversing the full Study Area south of Joy Road south to connect with the East Pelton collector.
- No additional vehicular connection to Walker Road but consideration of an active transportation connection.

<sup>7</sup> Amendment No. 60 To the Official Plan City of Windsor, March 2007

<sup>8</sup> City of Windsor Sandwich South Master Servicing Plan, by Dillon Consulting May 2023

- Traffic calming measures on Baseline Road between 7th Concession Road and 8th Concession Road.

#### 5.1.7 Municipality of Lakeshore Official Plan

The Municipality of Lakeshore is located at the eastern limit of the County Road 46 and Concession Roads 8 and 9 Study Area. The Municipality of Lakeshore Official Plan (the Plan) provides the framework of future growth for the municipality. This Plan is a 20- year planning document incorporating a growth management framework for building sustainable and complete communities while protecting and enhancing the Town’s rich natural and agricultural resources.<sup>9</sup>

The Land Use Schedule “C.1” Land Use identifies the land uses at the intersection County Road 46 east of County Road 19 as Service Commercial. This designation allows commercial uses serving the travelling public, destination oriented commercial uses, and/or space extensive commercial. The larger land use designation is Agricultural adjacent to the county roads. Refer to **Figure 4**.

Schedule “D.1” provides the Road Classification for the Rural Area of the Municipality. County Road 19 is identified as a Rural Secondary Road, with right of way width varying from 24 to 45 m and County Road 46 is a Rural Regional Road, with right of way width varying from 24 to 45 m.

<sup>9</sup> Town of Lakeshore Official Plan (as approved by the Ontario Municipal Board), November 22, 2010

## 6.0 WORK PROGRAM

The major elements of the work program are described in the following sections. They were provided to the public, stakeholders and agencies for comment. They describe the sequential steps in the decision-making process for the future transportation plan in the Study Area.

### 6.1 Phase 1: Identification of the Problem/Opportunity

This phase of the Study will include establishing the Study scope, schedule and approach with the Project Team and agencies; issuing the Notice of Study Commencement; the collection and organization of background information; reviewing and documenting existing conditions; and the transportation analysis to identify operational, safety and traffic concerns. The transportation analysis will build upon the previous work that has been completed. It will examine, in greater detail, the operational implications of existing and projected traffic demands and the distribution of traffic resulting from the planned developments.

In addition, the following Community Engagement tools will be undertaken to proactively engage stakeholders early in the Study:

- **SDR:** This SDR presents: the Problem/Opportunity Statement; the consultation plan; project schedule; and identifies the scope of the Study's technical requirements, design standards and proposed evaluation criteria. This document is available for public/agency review and will help establish the foundation for all remaining environmental planning and public consultation processes.

### 6.2 Phase 2: Development and Evaluation of Alternative Solutions

The list of Alternative Planning Solutions is provided in **Section 7.0**.

The consideration of all reasonable alternatives is a guiding principle for EA studies. The corridor alignments, cross sections, and intersection alternatives will be generated through discussions with the County of Essex, the Town of Tecumseh, City of Windsor, agencies and the general public.

### 6.3 Phase 3: Alternative Design Concepts for the Preferred Solution

Preliminary Design Alternatives will be generated for the Preferred Alternative Planning Solutions based on an inventory of the natural, social and cultural environment and results of technical investigations.

#### 6.3.1 Environmental Inventories and Technical Investigations

Environmental inventories and technical investigations will be completed to assess the impacts of alternative design concepts. These investigations are summarized as follows:

**Natural Environment:** The environmental team will perform a desktop screening and site reconnaissance to determine the potential future field work, permitting and reporting Species at Risk (SAR) related requirements. It is anticipated that additional environmental work will be required, and the scope of this work will be developed following the preliminary site reconnaissance of the Study Area. Detailed technical field investigations have been completed in the Fall of 2023.

**Archaeology:** A Stage 1 Archaeological Assessment will be completed to: develop an inventory of archaeological resources in the proposed area; determine the presence of any archaeological sites in the area; and recommend appropriate strategies for future planning consideration. This will be

accomplished by conducting detailed documentary research of the land use, archaeological history, and present condition of the property. Based on the outcomes of the Stage 1 Assessment, a Stage 2 Archaeological Assessment may be required.

**Socio-Economic Assessment:** An inventory of existing land uses within the Study Area will be undertaken. This will include documentation of recreational/residential development (access, emergency services, trails, etc.), commercial, institutional and utility corridor land uses. The inventory will also include consideration and identification of future land uses such as developments, right-of-way requirements, future transit and transportation facilities and development that could be implemented complying with existing planning documents. Any land use changes that have occurred will be documented. See **Photo 3** for an illustration of existing land uses and intersection of County Road 46 and 8th Concession.



**Photo 3: County Road 46 at 8th Concession**

**Stormwater Drainage:** The drainage and stormwater management design criteria will be confirmed with the County of Essex and the Town of Tecumseh. Hydrologic calculations will be performed to determine the flows for the 5-to-100-year return period rainfall events and to establish the capacities of the existing and required system. As the various alternatives are developed, the corresponding drainage and stormwater design will be developed and detailed in a Stormwater Drainage Assessment, sufficient to permit identification of constraints and prepare preliminary cost estimates. Stormwater management may become part of the overall strategy for the land development in the study area(s).

**Survey:** A topographical survey of the preferred alignment will be completed to determine existing elevations, sizing and location of existing utilities including, watermains, sewers, gas mains, telephone, hydro and cable. Design locates will be obtained from all utilities, as required.

### 6.3.1.1 Evaluation of Alternatives

Preliminary Design Alternatives will be evaluated. Evaluation criteria will be identified including potential factors such as roadway level of service, traffic safety, accessibility, property impacts, socio-economic environment, natural environment, cultural heritage, technical aspects/construction complexity and implementation.

The evaluation and analysis will identify all improvement alternatives and associated cost estimates including lifecycle costs, alternative construction/ material options, proposed timeline and innovative solutions.

Based on the results of the evaluation, a Technically Preferred Alternative (TPA) will be selected. A technical memorandum outlining the results of the evaluation will be completed and will include: the assessment of alternatives to the undertaking; generation and assessment of preliminary design alternatives; evaluation criteria (i.e. environmental inventories and technical investigations); and selection of the TPA.

This document will be presented to the public for input at PCC No. 2. Following the PCC, refinements will be made to the TPA (if applicable), and the refined alternative will become the Recommended Plan. PCC No.3 will present the Recommended Plan and Mitigation. Following PCC No. 3, the ESR will be finalized.

### 6.4 Phase 4: Environmental Study Report

The preparation of the draft and final EA report will follow the format and content for an ESR accepted by MECP. The ESR will document the study methodology, findings, public involvement and recommendations for both the Schedule C and Schedule B studies. The Report will provide recommendations on the phasing of the proposed works and preliminary cost estimates. The public will be notified of the availability of the ESR for a 30-day public review period.

## 7.0 ALTERNATIVE PLANNING SOLUTIONS

The *Environmental Assessment Act* requires that all reasonable and feasible Planning Solutions (Alternatives to the Undertaking) be identified and evaluated at the start of the Study. Planning Solutions represent alternative ways or methods of addressing the Problem or Opportunity Statement specific to this study. These alternatives consider the overall needs of the study area and identify alternative approaches of addressing the need for improvements.

The Alternative Planning Solutions for this Study are summarized as follows:

1. Do Nothing - The Do Nothing Alternative must be considered as mandated by the Class EA. It represents a baseline from which other approaches can be compared. This alternative would maintain the existing road network and would not construct a new arterial road or interchange.
2. Transportation Demand Management (TDM) and Transportation Systems Management (TSM) - TDM would reduce vehicular demand and encourage alternative work hours, work at home, more active modes of transportation (cycling and walking) and the use of transit. TSM provides a more efficient use of existing infrastructure such as traffic signal optimization to limit or avoid the need for expansion.
3. Active Transportation - This alternative would maintain the existing road network with the addition of bicycle lanes and multi use pathways within the right-of-way.
4. Roadway Improvements - including:
  - a. County Road 46 improvements, including widening, turning lanes and intersection improvements, with connection to the future Lauzon Parkway Extension.
  - b. Widen 8th and 9th Concession Roads from County Road 46 to the City of Windsor boundary.

The evaluation of Alternative Planning Solutions selects the most reasonable alternatives that address the Problem and Opportunity Statement. A preliminary assessment of each Alternative Planning Solution is presented in **Table 1**. This assessment is provided for public review and comment.

Based on the preliminary review of Alternative Planning Solutions, Roadway Improvements is recommended to be carried forward, consistent with the EWRTPM. In addition, Transportation Demand Management and Active Transportation will be considered as a complimentary solution. This does not constitute a reasonable standalone solution; however, it may form part of the overall Recommended Plan for transportation improvements.

Table 1: Preliminary Evaluation of Alternative Planning Solutions

Screening Criteria	Alternative 1: Do Nothing	Alternative 2: TDM/TSM	Alternative 3: Active Transportation			Alternative 7: Roadway Improvements
<b>Transportation</b>						
Does the approach satisfy forecast traffic demand?	Does not address forecast demand.	May reduce vehicular demand by mode shift or work at home but will not eliminate need for new or improved infrastructure.	Improves local road access but does not eliminate need for new or improved infrastructure.			Meets forecast demand.
Does the approach improve safety?	Collisions frequency is expected to increase with increasing congestion.	Would mitigate some of the concerns resulting from the Do Nothing alternative. Will not address vehicular safety concerns but may improve pedestrian and cyclist safety.	Would mitigate some of the concerns.			Reduces collision potential within the overall Study Area by improving intersection control, reducing traffic congestion, and managing speeds.
Does the approach address all modes?	No change.	Addresses active modes of transportation.	Addresses active modes of transportation.			Accommodates all modes of transportation.
<b>Environmental</b>						
What is the magnitude of environmental impacts (natural, social and cultural environment)?	No impacts.	No or low impacts. Low impacts may be associated with active transportation projects/ improvements (i.e. sidewalks, bike lanes).	No impacts.			Low to medium environmental effect possible with new corridor. Magnitude of effects is subject to environmental mitigation.
<b>Land Use/Property</b>						
Does the approach support the Official Plan and EWRTPMP?	No.	Supports objectives of Official Plan to encourage the development of active transportation facilities within the Municipality.	No. Does not address access issues of the Official Plan or the recommendations of the EWRTPMP.			Supports the objectives of the Official Plan and the recommendations of the EWRTPMP.
<b>Preliminary Recommendation to Carry Forward?</b>	✘ Not recommended to be carried forward.	✔ Carried forward as a complimentary strategy (not a standalone solution).	✔ Carried forward as a complimentary strategy (not a standalone solution).			✔ Carried forward.

## 8.0 PRELIMINARY DESIGN ALTERNATIVES

This Section describes Preliminary Design Alternatives for the recommended Planning Solution for Roadway Improvements (see **Section 7.0**). The EA will identify the preferred alignment, intersection treatments, locations, and cross sections for the new/improved County Road 46 and Concession Roads 8 and 9.

As an initial step in the generation of alternatives, this Study will identify alternative alignments, cross sections (2, 4 and 5-lane cross sections), types of intersection control (roundabout and conventional signalized or unsignalized intersections) and locations for intersections. The alternatives carried forward for evaluation may include refinements or sub-alternatives based on the comments received and the range of environmental factors and effects.

### 8.1 Coarse Screening and Evaluation of Alternatives

As part of the technical investigations, an additional qualitative coarse screening may be completed to eliminate further alternatives which do not address the Problem Statement or have significant impacts such as natural environment, heritage resources or existing development (social environment) in comparison to other alternatives carried forward. The results of any additional coarse screening analysis will be presented at PCC No. 1.

For the final evaluation of remaining alternatives, the study will utilize a quantitative (i.e. numerically based) evaluation methodology.

## 9.0 STUDY SCHEDULE

A schedule for this Study is shown in **Table 2**.

**Table 2: Preliminary Study Schedule**

Task	Date
Project Start-Up Meeting	December 2023
Study Commencement Notice	Spring 2024
Draft SDR	February 2024
Public Consultation Centre No. 1	April 4, 2024
Information Gathering	Spring/Summer 2024
Environmental Review / Technical Investigations	Spring to Summer 2024
Generation of Preliminary Design Alternatives	Spring 2024
Analysis and Evaluation of Alternatives	Summer 2024
Public Consultation Centre No. 2	Fall 2024
Recommended Plan	Fall 2024
Public Consultation Centre No. 3	Winter 2024
Preparation of ESR	Spring 2025
30-day Public Review Period	Spring 2025

## GLOSSARY OF TERMS

• <b>AADT</b>	Annual Average Daily Traffic – the average 24-hour, two-way traffic per day for the period from January 1st to December 31st.
• <b>Alignment</b>	The vertical and horizontal position of a road.
• <b>Alternative</b>	Well-defined and distinct course of action that fulfils a given set of requirements. The EA Act distinguishes between alternatives to the undertaking and alternative methods of carrying out the undertaking.
• <b>Alternative Design Concepts</b>	Alternative ways of solving a documented transportation deficiency or taking advantage of an opportunity. (Alternative methods of carrying out the undertaking).
• <b>Alternative Project</b>	Alternatives to the Undertaking, see above.
• <b>Alternatives to the Undertaking</b>	Alternative ways of solving problems or meeting demand (Planning Alternatives).
• <b>Canadian Environmental Assessment Act (CEAA)</b>	The CEAA applies to projects for which the federal government holds decision-making authority. It is legislation that identifies the responsibilities and procedures for the environmental assessment.
• <b>Class Environmental Assessment Document</b>	An individual environmental report documenting a planning process which is formally submitted under the EA Act. Once the Class EA document is approved, projects covered by the class can be implemented without having to seek further approvals under the EA Act provided the Class EA process is followed.
• <b>Class Environmental Assessment Process</b>	A planning process established for a group of projects in order to ensure compliance with the Environmental Assessment (EA) Act. The EA Act, in Section 13 makes provision for the establishment of Class Environmental Assessments.
• <b>Corridor</b>	A band of variable width between two locations. In transportation studies a corridor is a defined area where a new or improved transportation facility might be located.
• <b>Criterion</b>	Explicit feature or consideration used for comparison of alternatives.
• <b>CWATS</b>	County Wide Active Transportation Master Plan
• <b>Detail Design</b>	The final stage in the design process in which the engineering and environmental components of preliminary

	design are refined and details concerning, for example, property, drainage, utility relocations and quantity estimate requirements are prepared, and contract documents and drawings are produced.
• <b>DFO</b>	Fisheries and Oceans Canada
• <b>EA</b>	Environmental Assessment
• <b>EA Act</b>	Ontario Environmental Assessment Act (as amended by S.O. 1996 C.27), RSO 1980.
• <b>Environment</b>	<ul style="list-style-type: none"> <li>• Air, land or water.</li> <li>• Plant and animal life, including human life.</li> <li>• The social, economic and cultural conditions that influence the life of humans or a community.</li> <li>• Any building structure, machine or other device or thing made by humans.</li> <li>• Any solid, liquid, gas, odour, heat, sound, vibration or radiation resulting directly or indirectly from human activities.</li> <li>• Any part or combination of the foregoing and the interrelationships between any two or more of them, in or of Ontario.</li> </ul>
• <b>Environmental Effect</b>	A change in the existing conditions of the environment which may have either beneficial (positive) or detrimental (negative) effects.
• <b>ESR</b>	Environmental Study Report
• <b>EWRTMP</b>	Essex-Windsor Regional Transportation Master Plan
• <b>Evaluation</b>	The outcome of a process that appraises the advantages and disadvantages of alternatives.
• <b>Evaluation Process</b>	The process involving the identification of criteria, rating of predicted impacts, assignment of weights to criteria, and aggregation of weights, rates and criteria to produce an ordering of alternatives.
• <b>External Agencies</b>	Include Federal departments and agencies, Provincial ministries and agencies, conservation authorities, emergency services, municipalities, Crown corporations or other agencies other than MTO.
• <b>Factor</b>	A category of sub-factors.
• <b>General Arrangement</b>	Structural plan of the bridge and proposed works including elevations and cross-sectional views of the bridge.

• <b>Individual Environmental Assessment</b>	An environmental Assessment requiring the submission of a document for approval by the Minister, pursuant to the EA Act and which is neither exempt from the EA Act nor covered by a Class EA approval.
• <b>MCEA</b>	Municipal Class Environmental Assessment
• <b>MECP</b>	Ministry of the Environment, Conservation and Parks.
• <b>MHSTCI</b>	Ministry of Heritage, Sport, Tourism and Culture Industries.
• <b>Mitigating Measure</b>	A measure that is incorporated into a project to reduce, eliminate or ameliorate detrimental environmental effects.
• <b>Mitigation</b>	Taking actions that either remove or alleviate to some degree the negative impacts associated with the implementation of alternatives.
• <b>MNRF</b>	Ministry of Natural Resources and Forestry.
• <b>MTO</b>	Ministry of Transportation Ontario.
• <b>NED</b>	Natural Environment Report
• <b>NSA</b>	Noise Sensitive Areas
• <b>OP</b>	Official Plan
• <b>PCC</b>	Public Consultation Centre
• <b>Planning Alternatives</b>	Planning alternatives are “alternative methods” under the EA Act. Identification of significant transportation engineering opportunities while protecting significant environmental features as much as possible.
• <b>Planning Alternatives</b>	That part of the planning and design process where alternatives to the undertaking and alternative routes are identified and assessed. Also described as “Alternative Project” under the federal EA Act.
• <b>Project</b>	A specific undertaking planned and implemented in accordance with the Class EA including all those activities necessary to solve a specific problem.
• <b>Proponent</b>	A person or agency that carries or proposes to carry out an undertaking, or is the owner or person having charge, management, or control of an undertaking.
• <b>Public</b>	Includes the general public, interest groups, associates, community groups, and individuals, including property owners.

• <b>Realignment</b>	Replacement or upgrading of an existing roadway on a new or revised alignment.
• <b>Recommended Plan</b>	That part of the planning and design process, during which various alternative solutions are examined and evaluated including consideration of environmental effects and mitigation; the recommended design solution is then developed in sufficient detail to ensure that the horizontal and vertical controls are physically compatible with the proposed site, that the requirements of lands and rights-of-way are satisfactorily identified, and that the basic design criteria or features to be contained in the design, have been fully recognized and documented in sufficient graphic detail to ensure their feasibility.
• <b>SAR</b>	Species At Risk
• <b>Screening</b>	Process of eliminating alternatives from further consideration, which do not meet minimum conditions or categorical requirements.
• <b>Section 16</b>	The act of requesting that an environmental assessment initiated as a class EA be required to follow the individual EA process. The change is a result of a decision by the proponent or by the Minister of Environment to require that an individual environmental assessment be conducted.
• <b>SDR</b>	Study Design Report.
• <b>Sub-factor</b>	A single criterion used for the evaluation. Each sub-factor is grouped under one of the factors.
• <b>Technical Advisory Committee</b>	The Advisory Committee will include the County and Consultant. It will act as the decision-making body for the study recommendations.
•	
• <b>TIS</b>	Traffic Impact Study
• <b>TMP</b>	Transportation Master Plan
• <b>TPA</b>	Technically Preferred Alternative
• <b>TPP</b>	Technically Preferred Plan
• <b>Traceability</b>	Characteristics of an evaluation process which enables its development and implementation to be followed with ease.

• <b>Undertaking</b>	In keeping with the definition of the Environmental Assessment Act, a project or activity subject to an Environmental Assessment.
----------------------	---