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## **STUDY DESIGN REPORT**

Highway 3 Twinning  
(GWP 3041-22-00),  
Talbotville Bypass and Highway 4  
Widening (GWP 3042-22-00)

August 2023



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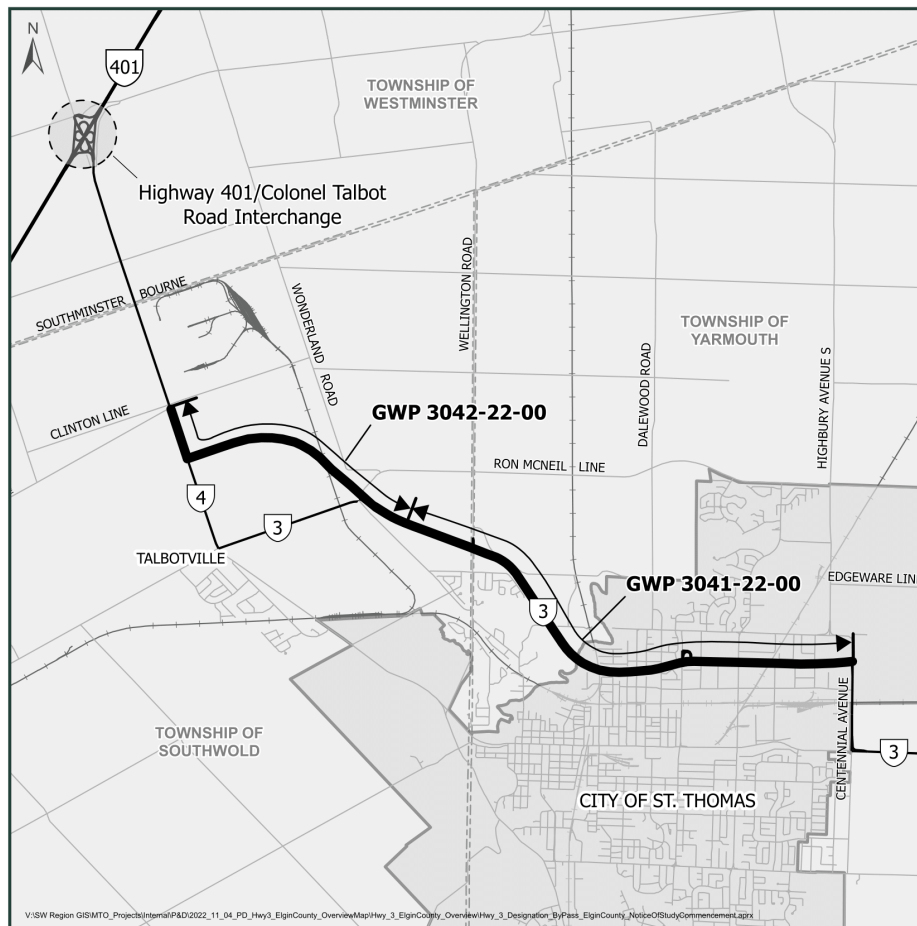
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## 1.0 Introduction and Project Overview

The Ontario Ministry of Transportation (MTO) has retained Stantec Consulting Ltd. (Stantec) to undertake a Preliminary Design, Detail Design and Class Environmental Assessment (Class EA) Study to address the future needs of the Highway 3 corridor, from Highway 4 near Talbotville Village in the Township of Southwold to Centennial Road in the City of St. Thomas (i.e., study area).

The study area is shown in **Figure 1**. The overall study area falls within the City of St. Thomas and Elgin County (Municipality of Central Elgin and Township of Southwold).



**Figure 1: Study Area**



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The study has been divided into two group work projects (GWPs), which include the following scope of work:

- Highway 3 Twinning (City of St. Thomas, Municipality of Central Elgin, and Township of Southwold)
  - Construction of two additional lanes (i.e., twinning) along Highway 3 from Ron McNeil Line to Centennial Avenue (approximately 9.4 km).
  - Preliminary Design, Detail Design, and Group 'B' Class EA (GWP 3041-22-00).
- Talbotville Bypass and Highway 4 Widening (Township of Southwold)
  - Construction of a new Talbotville Bypass from Highway 4 to Highway 3 at Ron McNeil Line.
  - Widening of Highway 4 from two to four lanes from Clinton Line to the new Talbotville Bypass (approximately 2.4 km).
  - Preliminary Design, Detail Design, and Group 'A' Class EA (GWP 3042-22-00).

### 1.1 Purpose of the Study Design Report

A Study Design Report (SDR) is a requirement for Group 'A' projects following the Class EA process. The purpose of this SDR is to summarize the study process that will be followed, document the planning decisions that have been made with respect to the assessment, and selection of the Preferred Alternative to the Undertaking. This report will provide the basis for moving the study forward with confidence once stakeholder comments regarding the above have been addressed and will lead to the final submission of a Transportation Environmental Study Report (TESR) for each GWP.

MTO will follow the plans and decisions outlined in this document unless modifications are made as a result of the feedback received during the SDR comment period, or new and directly applicable information is obtained during the course of the study, or a different study process is developed by MTO. In either case, all affected parties will be apprised of the change.





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## 2.0 Study Process

The projects are being completed in accordance with the Class Environmental Assessment (EA) for Provincial Transportation Facilities (2000), as either Group 'A' or Group 'B' projects under the MTO Class EA, as discussed below. Group 'A' projects are considered new transportation facilities and bypasses. Group 'B' projects are considered major improvements to existing transportation facilities. Group 'A' and 'B' projects are considered approved under Ontario's Environmental Assessment Act subject to compliance with the Class EA.

The Class EA study process is based on an assessment of alternatives, starting with a broad perspective, and narrowing to a more focused perspective as the study progresses. The process of collecting additional environmental data as the project becomes more focused ensures that current information is sought and used throughout the study process. The public, stakeholders and Indigenous communities will be consulted/engaged during the assessment and evaluation of alternatives, and to refine issues/concerns in an attempt to develop measures for resolving them. Key steps in the study process include:

- 1. Transportation Needs Assessment:** involves an assessment of transportation needs to identify the problem(s) and opportunity(ies) and the need for improvements.
- 2. Transportation System Alternatives to the Undertaking:** involves an assessment of alternatives to the undertaking and identifies those that will be carried forward for further study.
- 3. Alternative Methods for Carrying Out the Undertaking:** documents the selection of a recommended alignment alternative for the Highway 3 Talbotville Bypass and Highway 3 Twinning and Highway Planning Alternatives generated and assessed within the recommended corridor alternative (i.e., highway alignments, highway widenings, and interchanges).
- 4. Impact Assessment and Environmental Protection/Mitigation for the Proposed Highway Improvements:** identifies and assesses potential environmental impacts of the proposed highway improvements through environmental investigations, and the development of mitigation measures to address the identified environmental impacts associated with the proposed highway improvements.



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5. **Ongoing Stakeholder Consultation and Indigenous Community Engagement:** involves consultation with the public, stakeholders (landowners, area residents, municipalities, provincial and federal agencies), and Indigenous communities on the above. Two Public Information Centres (PICs) will be held at key decision points.
6. **Study Documentation:** involves the preparation of a Transportation Environmental Study Report (TESR) to document the study process for each GWP (Group 'A' and Group 'B' projects). The TESR will be available for review for a 30-day public comment period.
7. **Project Environmental Clearance:** ensures the Class EA requirements are met, and the project is cleared to proceed to construction.

## 2.1 Group A Project - Highway 4 Widening & Talbotville Bypass

The Highway 4 Widening and Highway 3 Talbotville Bypass Preliminary Design, Detail Design, and Class EA study is being undertaken as a Group 'A' project, which is required for the construction of a new transportation facility and bypass. **Figure 2** provides an overview of the Class EA process that will be followed for this project.

This project includes the following improvements:

- Widening of existing Highway 4 from two to four lanes (from the new Talbotville Bypass to Clinton Line).
- A new Highway 3 alignment bypassing Talbotville (also known as the Talbotville Bypass), connecting Highway 3 near Ron McNeil Line to Highway 4.
- Roundabout at Highway 4 and Talbotville Bypass.
- CNR grade separation as part of the Talbotville Bypass.
- Interchange at Ron McNeil Line/Wonderland Road.
- Associated drainage and infrastructure improvements to facilitate the construction of the bypass, including construction of new culverts, and bridges.

The project is currently in the Preliminary Design stage. During this phase, design alternatives will be developed and evaluated to select a Preferred Alternative to be refined following input from agencies, stakeholders, Indigenous communities, and the public, becoming the Preferred Plan. The Preferred Plan will then be carried forward to Detail Design. Ongoing consultation will take place throughout Preliminary Design and Detail Design as part of the Class EA Study process.



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## 2.2 Group B Project – Highway 3 Twinning

The Highway 3 Twinning Preliminary Design, Detail Design, and Class EA study is being undertaken as a Group 'B' project in accordance with the requirements of the Class EA. A Group 'B' project is required for major improvements to existing provincial transportation facilities, such as improvements to interchanges where there may be major footprint modifications, and highway improvements where significant modification to the "footprint" beyond the roadbed of an existing highway is proposed. **Figure 3** provides an overview of the Class EA process that will be followed for this project.

This project includes the following improvements:

- Twinning of Highway 3 through St. Thomas to the Township of Southwold (Centennial Avenue to Ron McNeil Line).
- Interchange at Wellington Road.
- Improvements to First Avenue interchange.
- Connection to proposed Centennial Avenue roundabout (study being completed by others).
- Twinning of Kettle Creek Bridge.
- Associated drainage improvements (culverts and sewers), rehabilitation of existing bridges and assessment for noise barriers and retaining walls, as required.

The project is currently in the Preliminary Design stage. During this phase, design alternatives will be developed and evaluated to select a Preferred Alternative. The Preferred Alternative will be refined with input from agencies, stakeholders, Indigenous communities, and the public, becoming the Preferred Plan. The Preferred Plan will then be recommended and carried forward to Detail Design. Ongoing consultation will take place throughout Preliminary Design and Detail Design as part of the Class EA Study process.



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**THE CLASS ENVIRONMENTAL ASSESSMENT PROCESS FOR GROUP 'A' PROJECTS**

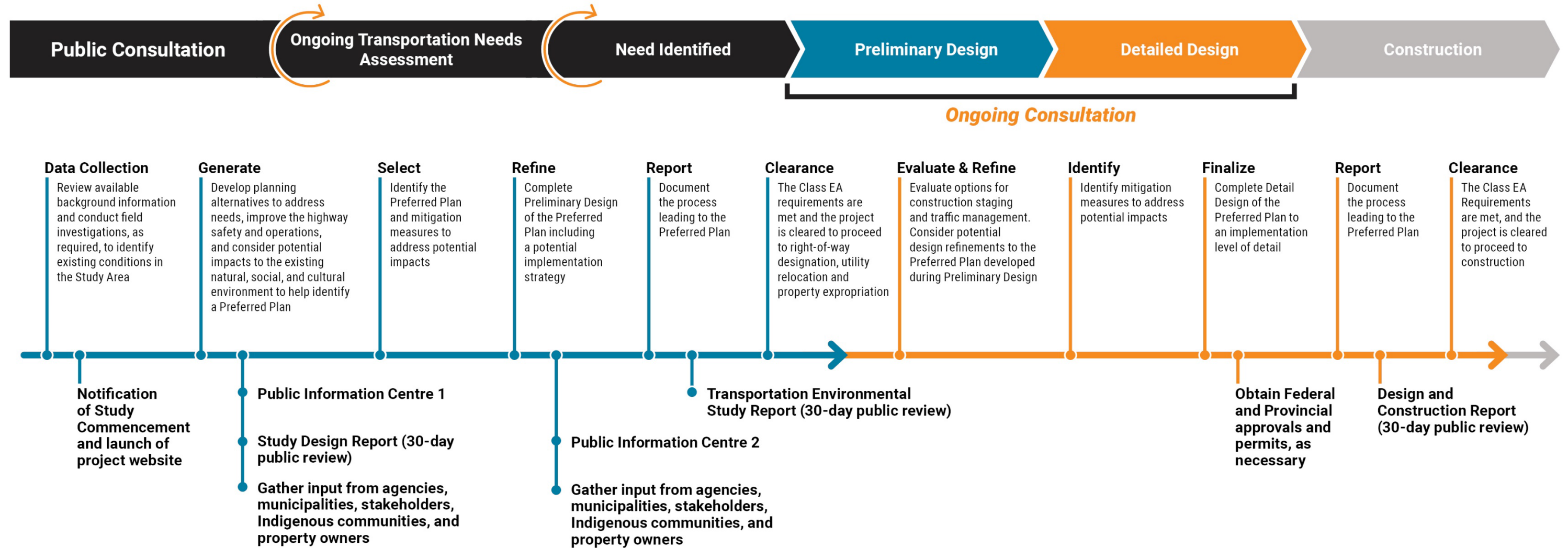


Figure 2: Class EA Process for Group 'A' Projects

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**THE CLASS ENVIRONMENTAL ASSESSMENT PROCESS FOR GROUP 'B' PROJECTS**

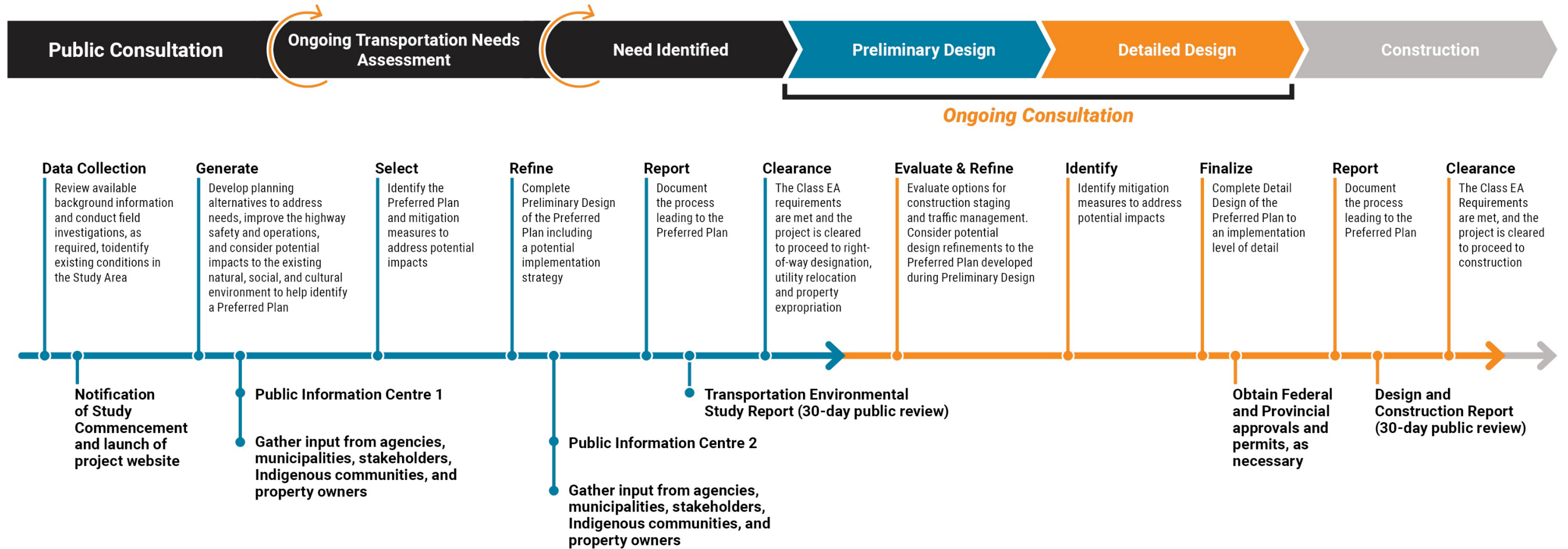


Figure 3: Class EA Process for Group 'B' Projects

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# 3.0 Transportation Needs Assessment

## 3.1 Function of Highway 3

Highway 3 is a King's Highway that provides a strategic connection to the City of St. Thomas and Highway 401, using Highway 4, within the study area. Highway 3 allows for efficient movement of people and goods, with accommodation of heavy truck traffic and long combination vehicles along the highway. Access to Highway 3 is provided via existing intersections at Highway 4, Ford Road, Wellington Road, the existing First Avenue interchange, and Centennial Avenue. Highway 3 provides a critical transportation link between Highway 401 and the growing industrial area within the City of St. Thomas.

## 3.2 Statement of Problem and Opportunity

The provincial highway network plays a key role in linking communities and supporting economic prosperity across Ontario. Planned growth within the industrial sector of the City of St. Thomas is expected to result in increased vehicular and truck traffic volumes travelling to and from Highway 401 along Highway 4 and Highway 3. Highway 3 improvements and the Talbotville Bypass are being planned to support recent and future industrial, commercial, and residential growth, and to address projected travel demand and aid in network connectivity in the area.

The purpose of the study is to identify a Preferred Plan that addresses current and future transportation needs in the study areas as part of the Ministry's ongoing review of safety and operational needs for the provincial highway network. This study will include reviewing existing conditions, developing and evaluating alternatives, identifying a Preferred Plan, and developing environmental protection and mitigation measures. A Preferred Plan will be confirmed and designated (i.e., protected) as part of this study. The study has been initiated to address the following problems and opportunities:

### Problems

- Traffic on Highway 3 and Highway 4 through Talbotville will continue to increase as recent and future industrial, commercial, and residential growth occurs, which will impact safety in the community.



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- Highway 3 is a two-lane undivided highway with at-grade intersections, which is not suitable for the anticipated increase in traffic generated by the recent and future industrial, commercial, and residential growth.

### **Opportunities**

- Highway 3 improvements and Talbotville Bypass are being planned as a provincial project to support future industrial, commercial, and residential growth in the County of Elgin and St. Thomas areas. It will aim to address projected travel demand and aid in network connectivity in the area.
- Provide a four-lane divided Highway 3 between Centennial Avenue and Highway 4 to enhance safety and operations.
- Replace existing at-grade intersections with interchanges to promote free-flow movement along Highway 3 through the majority of the study area.

## **3.3 Study Purpose**

The purpose of this study is to identify a Preferred Plan for a free-flow, four-lane Highway 3 within the study limits with access restricted to interchange locations. The study will include the development and evaluation of a range of reasonable alternatives and a Preferred Plan will be selected and designated at the completion of the study to assist municipalities, landowners, and businesses with planning and development in the surrounding study area.



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# 4.0 Assessment and Selection of Alternatives to the Undertaking

The Class EA requires that ‘reasonable alternatives’ be considered to address identified challenges and opportunities. This involves two levels of analysis. The Alternatives to the Undertaking considers a broad range of alternatives that could address the project needs. Once the best alternative is selected, the Alternative Methods of Carrying out the Undertaking can be studied. The rationale for and the assessment of Alternatives to the Undertaking is discussed below.

## 4.1 Do Nothing

The “Do Nothing” alternative is used as the baseline for comparative evaluation of alternatives and is considered the status quo, where the area transportation system would be limited to maintenance of current transportation infrastructure and the implementation of approved provincial and municipal initiatives. The Do Nothing alternative does not address the study problems and needs for Highway 3 for the following reasons:

- Increased costs for the delivery of goods and services.
- Negative economic impact on industry and community quality of life.
- Negative environmental impacts through increased fuel consumption and emissions.
- Increased driver delay and stress.
- Constrained employment and economic growth in the study area.
- Loss of opportunity to improve highway safety and ensure adequate future highway capacity and operational needs to support the recent and future industrial, commercial, and residential growth in St. Thomas.

This alternative does not address the needs and opportunities for the study area and is therefore eliminated from further consideration in this study.





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### 4.2 Optimize the Existing Area Transportation System

Considerations for the optimization of the existing area transportation system include Travel Demand Management (TDM) and Transportation Systems Management (TSM). The objective of TDM strategies is to improve the operation of the current area transportation system by managing travel demand independent of expanding or constructing new infrastructure. The objective of TSM is to improve the efficiency and safety of the current area transportation system and to optimize the use of existing and planned infrastructure through a wide range of strategies and technology policies and initiatives on existing municipal roads and existing provincial highways.

TDM and TSM are more applicable to commuter traffic with more defined origin/destination patterns than the local, recreational, and commercial traffic that use Highway 3. Optimization of the existing area transportation system is therefore not consistent with the future role of Highway 3. The optimized existing area transportation system alternative does not address the needs and opportunities for the study area, and it is therefore eliminated from further consideration in this study.

### 4.3 Expanded/New Non-Road Infrastructure

Expanded/new non-road initiatives include:

- New or improved local transit service to potentially divert people movement from private cars and relieve congestion on existing municipal roadways, or it could function as a component of inter-regional transit.
- Increased freight rail services for goods movement within existing rail corridors and/or along new rail corridors could encourage the diversion of freight from trucks. The ability to expand rail service and divert longer haul goods to rail may provide some relief to network congestion both on regional arterials and on the provincial highway network.
- Providing inter-regional transit and passenger rail and/or provincial transitways through new/increased services within the existing area transportation system and/or through new services in new corridors, could relieve congestion and increase the performance of the area transportation system.



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The vast majority of trips in the study area are made using automobiles and trucks. The scattered origin/destination patterns of travel within and beyond the study area are not conducive to supporting the use of non-road alternatives. The expanded/new non-road infrastructure alternative does not address the needs and opportunities for the study area, and it is therefore eliminated from further consideration in this study.

### 4.4 Widen/Improve Existing Road Network

Alternatives within this category include widened/improved or new municipal arterial roads to improve capacity and operations and provide congestion relief on existing facilities through additional lanes to increase the performance of the transportation network. Municipal roads are not generally designed and maintained to the standards required for higher speed, long distance inter-regional travel that is required through this study area. They are intended to serve as area access roads and are characterized by slower-moving and turning traffic. Mixing long-distance and local traffic creates other transportation network concerns. Widened/ improved or new municipal roads are therefore eliminated from further consideration in this study.

### 4.5 Improve Highway 3 and Highway 4

This alternative includes the twinning and extension of Highway 3 (Talbotville Bypass) and widening of Highway 4 to provide improved capacity and operations, and to increase the performance of the area transportation system. Improvements to Highway 3 and Highway 4 address the needs and opportunities for the study area and provide the following benefits:

- Opportunity to improve highway safety.
- Opportunity to provide future highway capacity and operational needs.
- Maximize the use of the existing highway corridor.
- Opportunity to improve the existing highway to meet current MTO design standards.
- Opportunity to protect Talbotville Village from increased volumes of commercial/truck traffic.

The assessment of the alternatives to the undertaking is summarized in **Table 1**.



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**Table 1: Assessment of Alternatives to the Undertaking**

Description	Advantages/Disadvantages	Does it Address the Needs and Opportunities?
<p><b>Do Nothing</b></p> <ul style="list-style-type: none"> <li>Area transportation system would be limited to maintenance of current transportation infrastructure and the implementation of approved provincial and municipal initiatives.</li> </ul>	<ul style="list-style-type: none"> <li>Increased costs for the delivery of goods and services.</li> <li>Negative economic impact on industry and community quality of life.</li> <li>Negative environmental impacts through increased fuel consumption and emissions.</li> <li>Increased driver delay and stress.</li> <li>Constrained employment and economic growth in the study area.</li> <li>Loss of opportunity to improve highway safety and provide adequate future highway capacity and operational needs.</li> </ul>	<p>Does not address the needs and opportunities for the study area. Do not carry forward.</p>
<p><b>Optimize the Existing Area Transportation System</b></p> <ul style="list-style-type: none"> <li>Optimize the existing area transportation system including TDM and TSM. The objective of TDM strategies is to improve the operation of the current area transportation system by managing travel demand. The objective of TSM is to improve the efficiency and safety of the current area transportation system and to optimize the use of existing and planned infrastructure through a wide range of strategies and technology policies and initiatives on existing municipal roads and existing provincial highways.</li> </ul>	<ul style="list-style-type: none"> <li>TDM and TSM are more applicable to commuter traffic than the local, recreational, and commercial traffic that predominates on Highway 3.</li> <li>Loss of opportunity to improve highway safety and provide adequate future highway capacity and operational needs.</li> </ul>	<p>Does not address the needs and opportunities for the study area. Do not carry forward.</p>
<p><b>Expanded/ New Non-Road Infrastructure</b></p> <ul style="list-style-type: none"> <li>Initiatives including new or improved local transit service to potentially divert people movement from private cars and relieve congestion on existing roadways, increased freight rail services for goods movement within existing rail corridors and/or along new rail corridors to encourage the diversion of freight from trucks and provide inter-regional transit and passenger rail and/or provincial transitways through new/increased services in new corridors.</li> </ul>	<ul style="list-style-type: none"> <li>The scattered origin/destination patterns of travel within and beyond the study area are not conducive to supporting the use of non-road alternatives.</li> <li>Loss of opportunity to improve highway safety and provide adequate future highway capacity and operational needs.</li> </ul>	<p>Does not address the needs and opportunities for the study area. Do not carry forward.</p>
<p><b>Widen/ Enhance Existing Road Network</b></p> <ul style="list-style-type: none"> <li>Widen/enhance or construct new municipal arterial roads to improve capacity and operations and provide congestion relief on existing facilities through additional lanes to increase the performance of the transportation network.</li> </ul>	<ul style="list-style-type: none"> <li>Provides congestion relief on existing facilities through additional lanes.</li> <li>Municipal roads are not generally designed and maintained to the standards required for higher speed, long distance inter-regional travel that is required through this study area.</li> <li>Mixing long-distance and local traffic creates other transportation network concerns.</li> <li>Constrained employment and economic growth in the study area.</li> <li>Increased costs for the delivery of goods and services.</li> <li>Loss of opportunity to improve highway safety and provide adequate future highway capacity and operational needs.</li> </ul>	<p>Does not address the needs and opportunities for the study area. Do not carry forward.</p>



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Description	Advantages/Disadvantages	Does it Address the Needs and Opportunities?
<p><b>Improve Highway 3 &amp; Highway 4</b></p> <ul style="list-style-type: none"> <li>Includes the twinning and extension of Highway 3 (Bypass) and widening of Highway 4 to provide improved capacity and operations.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Opportunity to improve highway safety.</li> <li>✓ Provides future highway capacity and operational needs.</li> <li>✓ Maximizes the use of the existing highway corridor.</li> <li>✓ Improves the existing highway to meet current MTO design standards.</li> <li>✓ Bypass areas of the existing highway constrained by adjacent development/facilities and to protect Talbotville Village from commercial/truck traffic.</li> </ul>	<p><b>Addresses the needs and opportunities for the study area.</b></p> <p><b>Carry forward.</b></p>



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### **4.6 Preferred Alternative to the Undertaking**

Based on the above, Improve Highway 3 and Highway 4 is the Preferred Alternative to the Undertaking carried forward for further study and includes:

- Highway 3 Twinning (City of St. Thomas, Municipality of Central Elgin, and Township of Southwold) – Construction of two additional lanes along Highway 3 from Ron McNeil Line to Centennial Avenue (approximately 9.4 km) (GWP 3041-22-00).
- Talbotville Bypass and Highway 4 Widening (Township of Southwold) – Construction of a new Talbotville Bypass from Highway 4 to Highway 3 near Ron McNeil Line (approximately 2.4 km) and widening of Highway 4 from two to four lanes from Clinton Line to the new Talbotville Bypass (approximately 0.8 km) (GWP 3042-22-00).



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# 5.0 Environmental Assessment Approval Regulations

The work on a study of this type must be carried out in accordance with the applicable environmental legislation and the current government policies and procedures. These are described below.

## 5.1 Impact Assessment Act

The Canadian *Impact Assessment Act, 2019* (IAA) and its regulations establish the legislative basis for the federal impact assessment process. Under the IAA, an environmental assessment is only required for projects included in the list of designated projects or Physical Activities regulations. These types of projects are likely to have significant adverse environmental effects and therefore may be subject to a federal EA. A proponent is not required to complete the federal EA process if a project is not on this list. This project does not fall under the list of designated projects.

## 5.2 Ontario Environmental Assessment Act

Environmental assessment is a planning and decision-making process used to promote environmentally responsible decision-making. In Ontario, this process is defined and finds its authority in the *Environmental Assessment Act (EAA), 1990*. The purpose of the EAA is to provide for the protection, conservation, and wise management of Ontario's environment. To achieve this purpose, the EAA promotes responsible environmental decision-making and ensures that interested persons have an opportunity to comment on undertakings that may affect them.

The EAA requires an EA of any major public sector undertaking that has the potential for significant environmental effects, including public roads, transit, wastewater, and stormwater installations.

## 5.3 Project Specific Environmental Assessment Process

For additional information, the following documents are available to assist with understanding the process:

- *Class Environmental Assessment Provincial Transportation Facilities, MTO, July 2000*



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- *Environmental Reference for Highway Design (ERD), MTO 2006, updated in June 2013*
- *Code of Practice for Preparing, Reviewing, and using Class Environmental Assessment in Ontario, MOE, January 2014*

These publications are available from the MTO Research Library Online Catalogue ([www.library.mto.gov.on.ca](http://www.library.mto.gov.on.ca)) and from Publications Ontario ([www.publications.serviceontario.ca](http://www.publications.serviceontario.ca)).

## 5.4 Environmental and Engineering Principles and Protection

This study will follow the engineering and environmental principles outlined in the Class EA document, including but not limited to:

### Transportation Engineering Principles:

- Providing for the efficient movements of people and goods.
- Addressing the identified transportation problems and opportunities.
- Maximizing the opportunity to satisfy existing and future provincial travel demand.
- Reflecting sound engineering judgement.
- Ensuring compatibility and consistency with existing and future transportation system users.
- Ensuring technical feasibility.
- Minimizing environmental impacts and the use of non-renewable natural resources.
- Minimizing property requirements and impacts to adjacent properties.
- Minimizing net energy usage.
- Avoiding directing large volumes of long-distance provincial traffic through settlement areas.
- Maximizing opportunities to make facilities safer.
- Providing the maximum benefit for the lowest cost.



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### **Environmental Protection Principles:**

- Identifying existing conditions and potential impacts relevant to the study.
- Avoiding or minimizing environmental impacts through consideration of alternatives.
- Meeting the statutory duties of federal and provincial environmental legislation.
- Addressing the MTO Statement of Environmental Values.
- Balancing environmental protection considerations with transportation engineering considerations.
- Recognizing that there may be environmental impacts from environmental mitigation measures.
- Monitoring the implementation of protection and mitigation measures during construction.
- Providing mitigation efforts in proportion to environmental significance and ability to reasonably mitigate.

### **Evaluation Principles:**

- Providing an evaluation process that is traceable, replicable, and understandable providing both subjective and objective processes.
- Giving due consideration to all relevant factors.
- Establishing an evaluation process through consultation with external stakeholders.
- Carrying out a subjective or objective evaluation.
- Refining factors from one stage to the next.

### **Consultation Principles:**

- Notifying relevant stakeholders, property owners, and agencies of the intention at the beginning of the study.
- Placing an emphasis on consulting with stakeholders most directly affected.
- Providing timely and user-friendly opportunities for input.
- Using the consultation process to assist in the identification of data requirements.
- Constructively addressing input received during the consultation process.





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- Demonstrating how consultation received in earlier stages of a study affects a project.
- Allowing for variance in the amount, extent, and timing of consultation depending on the complexity of a project, nature of the issues, and identified concerns.
- Selecting appropriate methods of notification.
- Making reasonable efforts to resolve concerns.

Environmental protection requirements for Class EA projects are summarized in the *Environmental Protection Requirements for Transportation Planning and Highway Design, Construction, Operation and Maintenance* (2014). This document contains a compilation of environmental protection requirements to clarify the requirements of environmental statutes, regulations, and government policies that apply to transportation projects.

## 5.5 Other Approval Requirements

Undertaking an Environmental Assessment also requires consideration of other approvals and review agencies. They include:

### Federal Review Agencies

- Fisheries and Oceans Canada (DFO) – MTO/DFO/OMNRF Fisheries Protocol, *Fisheries Act* (FAA)
- Environment and Climate Change Canada – *Migratory Birds Convention Act*

### Provincial Review/Policy Requirements

- Provincial Policy Statement (2020)
- Ministry of the Environment, Conservation and Parks– *Environmental Assessment Act, Environmental Protection Act, Ontario Noise Protocol, Endangered Species Act* (ESA), *Provincial Parks and Conservation Reserves Act*
- Ontario Access and Privacy Office – *Freedom of Information and Protection of Privacy Act*
- Ministry of Natural Resources and Forestry – MTO/DFO/OMNRF Fisheries Protocol, Ontario Wetlands Policy
- Ministry of Citizenship and Multiculturalism – Ontario Archaeological Protocol, Ontario Heritage Act



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### Municipal Policy\*

- Official Plans
- Secondary Plans
- Zoning Bylaws
- Transportation Planning Policy

*\*MTO is not required to obtain approvals or exemptions for Municipal Official Plans, zoning exemptions, or policy. However, municipal policies and plans are considered during the study, including during the evaluation of alternatives.*

## 5.6 Acceptance of Study Process and Recommendations

Throughout the study, input will be solicited from the public through meetings, telephone conversations, the project website, and two Public Information Centers (PICs).

Interested agencies and stakeholders will be contacted throughout the project and will be informed of project progress at key milestones and in advance of the PICs. External agencies and stakeholders to be contacted include local municipal staff and council as well as government bodies (i.e., MECP, MNRF). Local and relevant stakeholders have been identified and notified as part of the Notice of Study Commencement and as part of PIC 1.

The project team will conduct the study in a manner that addresses and resolves specific issues and concerns as they arise. During the study, the decision-making process will be clearly documented to provide a traceable process that is easily understood by the public, agencies, and stakeholders involved in the study.



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# 6.0 Consultation Process

The consultation process provides an opportunity for the project team to discuss the study process and/or any other issues relating to the project with the public, agencies, Indigenous communities, and other interested parties.

The process aims to share study information with all interested parties and provide an opportunity for input to the study and decision-making processes. This is accomplished by presenting the findings of each stage of the study process and obtaining input from the public, government agencies and ministries, Indigenous communities, non-government interest groups, and property owners.

Consultation activities being planned as part of this study to help ensure that all interested parties have an opportunity to review study information and offer feedback include:

- Notices of key consultation events in local newspapers (i.e., The Londoner, St. Thomas Times Journal).
- Communication with external agencies in order to obtain pertinent technical information and identify the requirement for legislative or regulatory approvals related to the undertaking.
- Canada Post unaddressed admail.
- An interactive, accessible project website ([www.highway3elgin.ca](http://www.highway3elgin.ca)).
- Coordination with municipalities to post project notifications on websites and social media.
- Indigenous community engagement.
- Meetings with municipal staff and council.
- Communication with affected property owners.
- Communication with local residents, businesses, and local highway users.
- Two PICs.
- 30-day comment period of the SDR
- 30-day comment period of the TESRs



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The goal of the public notification program is to ensure that the public and all stakeholders are kept informed at key points in the study process. The purpose of these key notification points and associated consultation activities include:

- Notice of Study Commencement – Newspaper notices, project website launch, Canada Post unaddressed admail, and direct correspondence to project mailing list to announce the study start-up (June 2023).
- Notice of PIC 1 and SDR – Newspaper notices, Canada Post unaddressed admail and direct correspondence to project mailing list to announce PIC 1 and the 30-day SDR comment period (August – September 2023).
- PIC 2 – Newspaper notices, Canada Post unaddressed admail, and direct correspondence to project mailing list to announce PIC 2 (Fall 2023).
- Notice of Study Completion – Newspaper notices, Canada Post unaddressed admail, and direct correspondence to project mailing list to announce the 30-day TESR comment period,

The consultation program will continue through subsequent study stages, including detail design and construction.

## 6.1 Government Ministry/Agency Liaison

Each ministry/agency is contacted at the outset of the study to inform them of the study commencement and to discuss the project need, justification, goals, and objectives.

The contact list includes the following agencies and will be updated as the study progresses:

### Provincial

- Infrastructure Ontario
- Ministry of Natural Resources and Forestry
- Ministry of the Environment, Conservation and Parks
- Ministry of Citizenship and Multiculturalism
- Ministry of Agriculture, Food and Rural Affairs

### Municipal

- City of St. Thomas
- Municipality of Central Elgin
- Township of Southwold
- County of Elgin



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### Local Elected Representatives

- MPP – Elgin-Middlesex-London
- Township of Southwold – Mayor
- City of St. Thomas – Mayor
- Municipality of Central Elgin – Mayor

### Emergency Services

- Ontario Provincial Police – West Region Headquarters, Elgin County
- St. Thomas Police
- Township of Southwold Fire Department
- Medavie EMS – Elgin
- St. Thomas Fire Department
- Municipality of Central Elgin Fire Department

### School Boards/ Bus Service

- Southwestern Ontario Student Transportation Services
- Thames Valley District School Board
- London District Catholic School Board
- Conseil scolaire Viamonde/Conseil scolaire ecole
- Service de transport Francobus
- Conseil scolaire catholique providence

### Other Stakeholders

- Kettle Creek Conservation Authority
- Ontario Trucking Association
- Railway City Cycling Club
- Elgin/St. Thomas Small Business Centre
- Elgin Business Resource Centre
- Hydro One
- Entegrus
- Bell
- Ontario Southland Railway
- CN Rail
- Ontario Federation of Snowmobile Clubs - District 5/Southwestern Ontario Snowmobile Region
- Elgin Federation of Agriculture
- Elgin County Tourism
- St. Thomas Chamber of Commerce
- Enbridge
- Cogeco
- Rogers

Provincial agencies, municipalities, and other relevant stakeholders play an important role in the study. The staff of each agency and municipality will be kept informed of all aspects of the project. **Table 2** provides an overview of the stakeholder consultation workplan for the project. Where required, meetings will be held with relevant agencies or municipalities to discuss project specific issues.



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**Table 2: Stakeholder Consultation Work Plan**

Requirements	How Our Team Will Complete These Requirements
<p>Notify stakeholders, ministries, agencies, municipalities, interest groups, Indigenous communities, and property owners directly affected by the project at study milestones.</p>	<ul style="list-style-type: none"> <li>• Send notices to MPP, external agencies, and municipalities through direct correspondence.</li> <li>• Direct correspondence to potentially directly affected property owners once potential impacts are confirmed.</li> <li>• Obtain relevant external agency contact information and confirm contacts.</li> <li>• Identify stakeholder groups unique to the project.</li> <li>• Contact Indigenous communities in accordance with MTO policy (on MTO letterhead).</li> <li>• Confirm concerns and any permits or approvals required.</li> <li>• Provide responses to all letters, comments, and inquiries.</li> <li>• Initiate discussion with property owners directly affected by the project.</li> <li>• Summarize all comments received and prepare responses for MTO review.</li> <li>• Summarize all input and responses.</li> </ul>
<p>Notify Ministry of the Environment, Conservation and Parks (MECP)</p>	<ul style="list-style-type: none"> <li>• Send Notices to MECP.</li> <li>• Send Project Information Form to <a href="mailto:eanotification.swregion@ontario.ca">eanotification.swregion@ontario.ca</a> and respond to letters and issues.</li> </ul>
<p>Contact Municipalities</p>	<ul style="list-style-type: none"> <li>• Confirm current contacts and relevant office(s) for the municipalities.</li> <li>• Send initial letter of notification describing current assignment, seeking input.</li> <li>• Keep municipalities up-to-date regarding design refinements and provide responses to all letters, comments, and inquiries.</li> <li>• Take input into consideration during the project.</li> </ul>
<p>Engage Indigenous communities</p>	<ul style="list-style-type: none"> <li>• Initiate notification through correspondence (as described above) directly from MTO and meet with communities as requested.</li> <li>• Assist MTO in responding to all correspondence, comments, and inquiries.</li> <li>• Engage for archaeological field work as required.</li> </ul>



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Requirements	How Our Team Will Complete These Requirements
Contact MTO District Staff	<ul style="list-style-type: none"><li>• Consult at start-up meeting and notify of start of project and take input into consideration.</li><li>• Record input in study documentation.</li></ul>
Document Consultation in TESR	<ul style="list-style-type: none"><li>• The Consultation Log document will ensure that every issue is resolved and included in final study documentation (TESR) to confirm accountability in the EA process.</li><li>• Send TESR Public Review notification letters and notice to all external agencies, stakeholders, property owners, and the public, and respond to external agencies/public comments received during the public review period.</li></ul>

## 6.2 Public Consultation

The public plays a key role in the study. Public input is received at each of the PICs as well as continuously during the study. As the study progresses, contact will be made with a number of groups and organizations who have interest in the project. The range of public organizations with an interest in the project can include communities, interest groups including snowmobile and outdoor recreation clubs, local associations (i.e., for trucking, agricultural, etc.), and tourist attractions. As discussed above, the public will be notified of opportunities for public input through:

- Notices in newspapers – each notice will be placed in papers relevant to the study area.
- Direct mailings to the project mailing list and property owners (where possible).
- Canada Post unaddressed admail.
- The project website ([www.highway3elgin.ca](http://www.highway3elgin.ca)).
- People interested in the project are requested to express their interest to be added to the project mailing list by contacting a member of the project team via email.

Additional meetings and discussions will be held with the general public and property owners during the study, as required.



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### 6.2.1 Public Information Centers (PICs)

PICs form part of the overall Consultation Plan for the project and are designed to involve stakeholders early and throughout the study to identify concerns and provide opportunities for input. Two PICs are planned as part of this study and will provide information for both GWPs. A PIC Summary report will be prepared following each PIC. PICs will be hosted in-person. Consultation materials will be made available on the project website.

The purpose of PIC 1 is to provide an opportunity for the public to review and comment on the existing conditions, Problems and Opportunities, Alternatives to the Undertaking, Screening of the Alternatives, the potential alternative design concepts, and the evaluation process, including proposed evaluation criteria, and next steps in the study. The purpose of PIC 2 is to present the results of the evaluation and the Preferred Plan, including proposed mitigation measures to minimize potential impacts.

### 6.2.2 Transportation Environmental Study Report - Public Comment

The Transportation Environmental Study Report (TESR) fulfills the documentation requirements of the *Class EA for Provincial Transportation Facilities (2000)* for Group 'A' and Group 'B' projects. The purpose of the TESR is to describe the project, document input received from the public, external ministries, relevant stakeholders, agencies, and municipalities, provide an overview of the alternatives considered during the study, and document the evaluation of the alternatives, the Preferred Plan, and impacts and mitigation measures. A minimum 30-day public comment period is required by the Class EA to provide an opportunity for the public to review and comment on the project.

Notices will be sent to notify agencies, stakeholders, Indigenous communities, and the public of the TESR 30-day public comment period and where the report will be available for review. The TESR public review comment period is tentatively scheduled for Spring 2024.

## 6.3 Municipal Consultation and Agency Meetings

The study team will facilitate meetings and engage with the upper and lower tier municipalities and Kettle Creek Conservation Authority (KCCA) staff. This will include staff from the City of St. Thomas, Elgin County, Municipality of Central Elgin, Township of Southwold, and KCCA. Ongoing communication with these contacts will confirm regional transportation needs and existing conditions information for the study area. Coordination will occur with the KCCA for work near, or within watercourses within their jurisdiction.





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### **6.4 Indigenous Communities and Organizations**

Indigenous community engagement will be carried out by MTO in accordance with MTO policies. MTO will advise of any Indigenous communities and organizations that have traditional and/or treaty rights in the study area. A preliminary list of Indigenous communities and organizations to be engaged during the study is provided below:

- Aamjiwnaang First Nation
- Caldwell First Nation
- Chippewas of Kettle and Stony Point First Nation
- Chippewas of the Thames First Nation
- Munsee-Delaware Nation
- Oneida of the Thames
- Walpole Island First Nation
- Six Nations of the Grand River
- Haudenosaunee Confederacy Chiefs Council



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## 7.0 Environmental and Engineering Studies

Information on the existing natural, socio-economic, cultural, and engineering environments will be obtained from published sources, through site investigations, and information received from the public and external agencies.

MTO has developed guidance documents to make sure that MTO projects follow federal and provincial environmental legislation and government policy. The Ministry's *Environmental Standards and Practices* documents provide for a consistent and systematic approach to environmental management.

These documents are available for review on MTO's website: <http://www.mto.gov.on.ca/english/highway-bridges/environmental-standards-practices.shtml>. A link to the Class EA document is available on the project website: ([www.highway3elgin.ca](http://www.highway3elgin.ca)). This project will include the factor-specific environmental components or elements identified in **Table 3**.

**Table 3: Factor-Specific Environmental Elements**

Natural Environment	Socio-Economic Environment	Cultural Environment	Engineering Environment
<ul style="list-style-type: none"> <li>• Fish and Fish Habitat</li> <li>• Wildlife</li> <li>• Vegetation</li> <li>• Wetlands</li> <li>• Groundwater</li> <li>• Surface Water</li> <li>• Soil</li> <li>• Species-at-Risk</li> </ul>	<ul style="list-style-type: none"> <li>• Aesthetics</li> <li>• Highway and Construction Noise</li> <li>• Community/ Recreation</li> <li>• Air Quality and Greenhouse Gases</li> <li>• Private Property</li> <li>• Land Use</li> <li>• Agriculture</li> <li>• Commercial/ Industrial</li> <li>• Tourism</li> </ul>	<ul style="list-style-type: none"> <li>• Archaeological resources and areas of archaeological potential</li> <li>• Built Heritage Resources</li> <li>• Cultural Heritage Landscapes</li> </ul>	<ul style="list-style-type: none"> <li>• Stormwater management</li> <li>• Erosion and Sediment Control</li> <li>• Management of Excess Materials</li> <li>• Aggregates and Mines</li> <li>• Highway Geometrics and Design</li> <li>• Bridge Engineering</li> <li>• Foundation and Geotechnical Engineering</li> </ul>



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<b>Natural Environment</b>	<b>Socio-Economic Environment</b>	<b>Cultural Environment</b>	<b>Engineering Environment</b>
	<ul style="list-style-type: none"><li>• Contaminated Properties</li><li>• Businesses</li><li>• Landscape Architecture</li></ul>		<ul style="list-style-type: none"><li>• Traffic Study</li><li>• Utilities</li></ul>

### 7.1 Approach to Specialist Work

The level of detail of environmental and engineering work for the study will change depending on the study phase to identify environmental conditions and constraints at an appropriate level of detail.

During the initial stages of the study, the scope of work will focus on identifying significant constraints to aid in confirming a range of alternatives and which alternatives can be considered for further evaluation. Environmental work will then focus on field investigations for feasible alignment alternatives, and specific features will be focused on to determine if they affect the viability of an alternative. An assessment of potential impacts will be undertaken for the Preferred Plan, and possible mitigation or avoidance measures will be developed and confirmed with agencies and stakeholders.

Mitigation for environmental impacts will be identified and addressed at a preliminary design level of detail. Environmental impacts and proposed mitigation measures will be documented within the TESR. The TESR will also include a summary of commitments for future work to be carried out during detail design. This is appropriate as some types of impacts cannot be confirmed at a preliminary design level of detail. Final approvals required from external agencies will be listed in the report.

The following sections describe the scope and work plans for confirming and identifying environmental conditions and constraints in the study area for the factor-specific areas: natural sciences (including vegetation, terrestrial ecosystems, wetlands, Species at Risk, and fish and fish habitat), groundwater, noise, land use and socio-economics, contamination, archaeology, built heritage and cultural heritage landscapes, air quality and greenhouse gases, erosion and sediment control, and landscape architecture.

The development and evaluation of alternatives will focus on avoiding impacts to significant features in the study area including, but not limited to:



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### **Natural Environment**

- Areas of Species at Risk Habitat
- Significant Wildlife Habitat
- Source Water Protection Areas/Water Intake Protection Zones

### **Socio-Economic Environment**

- Recreation Features, including trails, snowmobile trails.
- Residential Areas
- Commercial Developments
- Businesses
- Municipal Facilities
- Utilities, including hydro and watermains
- Railways
- Contaminated Property

### **Cultural Environment**

- Archaeological Resources and Areas of Archaeological Potential
- Built Heritage Features
- Indigenous Traditional Knowledge (obtained through consultation with Indigenous communities as part of project consultation and archaeological investigations).

The locations and/or boundaries of the above significant features will be confirmed with relevant agencies as part of the background data collection process.

#### **7.1.1 Fish and Fish Habitat**

The study area is located within the jurisdiction of the Southern Region/Aylmer-Guelph District of the MNR and resides in Fisheries Management Zone 16 (FMZ16). The study area is located within the jurisdiction of the Kettle Creek Conservation Authority. The preliminary development and evaluation of alignment alternatives will focus on minimizing potential fish and aquatic impacts, including implications for Species-at-Risk (SAR).



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Fish and fish habitat work for this study will be carried out in accordance with the requirements of the *MTO/DFO/MNRF Protocol for Protecting Fish and Fish Habitat on Provincial Transportation Undertakings* (Version 4, 2020) and the *Interim Environmental Guide for Fisheries* (MTO 2020).

The work will include a detailed review of background information, including SAR distribution maps, for all alignment alternatives. Consultation will also take place with the MECP/MNRF to collect background data regarding watercourse thermal and flow regimes, fish communities, and the potential for SAR to occur in the study area. The fisheries team will use this background information to provide input to the evaluation of alternatives.

Information to be reviewed for the purposes of this study will include agency data and documentation, aerial photography, and correspondence with individuals knowledgeable with the natural resources in the study area. The background information includes, but is not limited to:

- MNRF Databases
- Endangered Species Act
- Fisheries Management Plans
- Species-at-Risk in Ontario Checklist and Distribution Maps

Upon selection of a Preferred Plan, the fisheries team will conduct spring and summer field investigations in 2023/2024 according to the *Environmental Guide for Fisheries*, following the *MTO/DFO/MNRF Fisheries Protocol*. A Fish and Fish Habitat Existing Conditions and Impact Assessment Report will then be prepared to summarize existing conditions and to provide an impact assessment of the Preferred Plan.

### 7.1.2 Terrestrial Ecosystems

The terrestrial ecosystem is defined as the interaction of land, water, and biotic components functioning as an ecological unit over space and time, and includes vegetation, wetlands, wildlife, and wildlife habitat. Primary terrestrial concerns related to transportation projects include loss of habitat or habitat function, and habitat fragmentation. The terrestrial ecosystems team will carry out background data collection, field investigations, an impact assessment, and reporting for the project. Field data collection and inventory will follow the Environmental Reference for Highway Design (ERD).



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The terrestrial ecosystems work will include a review of background information, including NHIC and Land Information Ontario (LIO) data, wildlife atlases and other online data sources. Background information will be compiled in GIS to allow mapping and quantitative analysis of existing conditions and constraints. Sources will include:

- *Endangered Species Act*
- Species-at-Risk in Ontario Checklist and Distribution Mapping
- Checklist of Vascular Plants
- The MNRF Natural Heritage Information Centre (NHIC) database to confirm the presence or absence of rare floral or faunal species.
- Atlas of the Mammals of Ontario
- Ontario Breeding Bird Atlas
- Ontario Herpetofaunal Atlas
- Fisheries Management Plans

The research conducted for terrestrial ecosystems will include:

- Reviewing relevant background documents.
- Obtaining existing information from and coordinating with MNRF and KCCA.
- Incorporating Indigenous traditional ecological knowledge, if available.
- Providing input to development and evaluation of alternatives based on existing data and information and assess potential impacts and mitigation.
- Identifying and describing any areas for the Preferred Plan that have the potential to support Species-at-Risk. Specific timing of any additional field surveys will be determined through correspondence with the MNRF Species-at-Risk biologist.
- Preparing and submitting an Information Gathering Form if Species-at-Risk are identified by the MNRF or during field data collection to determine authorization requirements under the *Endangered Species Act*.

Terrestrial vegetation units in the study area will be characterized according to the MNRF's Ecological Land Classification (ELC) system. Terrestrial ecology field studies will identify impacts to vegetation, loss of habitat function for local vegetation and wildlife, and conflicts with existing management practices for the Preferred Plan. The terrestrial ecology inventory will also identify any vegetation or wildlife species that may be protected under the provincial *Endangered Species Act* and the federal *Species at*



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*Risk Act.* Terrestrial ecosystems (vegetation, wetland, and wildlife resources) will be evaluated in sufficient detail to support analysis and evaluation of the route alternatives and selection of the Preferred Plan.

Field investigations will be conducted, which will include Ecological Land Classification, a breeding bird survey, wildlife habitat assessment, identification of potential habitat for SAR, and recording of incidental SAR observations. Field staff will identify and describe any areas that have the potential to support SAR.

Wildlife habitat assessments will be conducted along the Preferred Plan. All evidence of wildlife (birds, mammals, and herpetofauna) will be recorded and associated with specific vegetation areas (ELC units). Species detection will be primarily visual or auditory and incidental in nature. Special attention will be given to recognizing habitat conditions which may be suitable for supporting significant faunal species.

In addition to documenting wildlife species occurrences, field inventories will also document significant wildlife habitat. Significant wildlife habitat is defined, by the MNR's (MNRF) *Significant Wildlife Habitat Technical Guide* (2000), as habitat that is "ecologically important in terms of features, functions, representation or amount and contributing to the quality and diversity of an identifiable geographic area or Natural Heritage System" and is protected under the *Provincial Policy Statement* (2020).

For the purposes of this study, significant wildlife habitat includes habitats that fall within any of the following four categories:

- Seasonal concentration areas.
- Rare vegetation communities and specialized habitats for wildlife.
- Habitats for species of conservation concern, excluding the habitats of endangered and threatened species.
- Animal movement corridors.

Significant wildlife habitat will be evaluated using information gathered from field surveys as well as secondary data available from the MNRF and other sources.

The identification of terrestrial and wildlife resource constraints in the study area is intended to assist in the analysis and evaluation of alternatives and the selection of the Preferred Plan. The information will also be used in the development of appropriate mitigation measures for minimizing impacts to regulated areas, habitats for significant vegetation, wildlife, sensitive vegetation communities, etc.



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The study area will be checked for the presence of nesting migratory or protected birds, in accordance with the *Migratory Birds Convention Act* (1994). Where the nests of migratory or protected birds are identified, mitigative measures will be recommended to avoid interaction with migratory birds during construction.

A Natural Sciences Existing Conditions and Impact Assessment Report summarizing existing conditions and providing an impact assessment of the Preferred Plan will be prepared.

### 7.1.3 Socio-Economic Environment

The Provincial Policy Statement (2020) (PPS) provides policy direction for matters of provincial interest related to land use planning and development but does not directly regulate planning policy for municipalities. The Ministry's actions are guided by the transportation policies included in the PPS, which indicates that:

- A transportation system should be provided that is safe, energy efficient, facilitates the movement of people and goods, and is appropriate to address projected needs.
- Efficient use shall be made of existing and planned infrastructure.
- As part of a multimodal transportation system, connectivity within and among transportation systems and modes should be maintained and, where possible, improved including connections which cross jurisdictional boundaries.
- Major goods movement facilities and corridors shall be protected for the long term.

Policies within the PPS that relate directly to this study include:

#### *Policy 1.6.4*

*Infrastructure and public service facilities should be strategically located to support the effective and efficient delivery of emergency management services, and to ensure the protection of public health and safety in accordance with the policies in Section 3.0: Protecting Public Health and Safety.*

#### *Policy 1.6.7.1*

*Transportation systems should be provided which are safe, energy efficient, facilitate the movement of people and goods, and are appropriate to address projected needs.*

#### *Policy 1.6.7.3*

*As part of a multimodal transportation system, connectivity within and among transportation systems and modes should be maintained and, where possible, improved including connections which cross jurisdictional boundaries.*





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### *Policy 1.6.8.2*

*Major goods movement facilities and corridors shall be protected for the long term.*

This study will be carried out within the context of the MTO responsibilities and requirements of the PPS.

### **Connecting the Southwest: Transportation Plan for Southwestern Ontario**

The Southwestern Ontario Transportation Plan (2020) aims to support mobility and connectivity in and around Southern Ontario. The Plan outlines a roadmap to address mobility challenges faced in Southern Ontario and explore future opportunities. The Plan is focused on getting people moving and connecting communities, supporting a competitive open business environment, improving safety, providing more choice and convenience, and preparing for the future.

### **County of Elgin Official Plan**

The County of Elgin Official Plan (2023) establishes a county-wide framework for managing growth and land use, and supports healthy, liveable, and vibrant communities.

The Official Plan focuses on intra-regional transportation management, and to remain easily accessed by, and connected to, the existing transportation network. The County seeks to establish an integrated transportation system that safely and efficiently accommodates various modes of transportation and ensures that all infrastructure occurs in a manner that is compatible with adjacent land uses. The County identifies the Proposed Talbotville Bypass as a Proposed Transportation Corridor on Schedule B of the Official Plan.

### **County of Elgin Roads Plan and Policies**

The County of Elgin Roads Plan and Policies Report (2009) was developed to build and maintain an efficient, effective and safe transportation network that accommodates the needs of the community and supports economic development and sustainable growth.

Goals set by the Plan include providing a transportation system that is complementary to and coordinated with Ontario Provincial Highways to provide connection between the two, by reviewing road corridors in consultation with MTO.

Truck routes may be established by the County through the passing of bylaws, and will utilize Provincial Highways, arterial roads, non-residential collector roads and suburban links, thereby avoiding residential neighbourhoods and areas.



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The County is currently updating the 2009 Roads Plan and Policies report with a new Transportation Master Plan with a focus to support prosperity in the County by helping goods move to and from markets in the County and beyond. This includes providing adequate infrastructure for the agri-business industry and using the strategic location along Highway 401 to provide an efficient network.

### **Municipality of Central Elgin Official Plan**

The Municipality of Central Elgin Official Plan (2022) guides and supports the growth that contributes to a strong, vibrant and healthy community, and guides land use and development within the Municipality.

The Official Plan recognizes that transportation infrastructure is an important part of economic growth. Central Elgin identifies the need for Provincial Highways, County Roads and/or local arterial roads to accommodate employment related traffic. Highway 3 and Highway 4 are two roads within the Municipality under jurisdiction of MTO. Central Elgin is committed to curating an efficient transportation system, by coordinating transportation planning initiatives, activities and connectivity with other levels of governments.

Major sectors of Central Elgin's economy are dependent on the efficient movement of goods. It is imperative that conflicts between truck traffic, railways, and commuter/local traffic are minimized. Central Elgin is committed to the safe and efficient movement of goods and working with the government to minimize risks throughout the Municipality. The Official Plan notes that the Municipality will meet the needs of local businesses to provide truck routes, while protecting the residential neighbourhoods from truck noise, pollution and hazards.

### **Township of Southwold Official Plan**

The Township of Southwold Official Plan (2021) outlines the goals, objectives, and policies for managing growth and development in the community. The Plan identifies the need to provide an efficient, well-connected, and safe transportation network for moving people and goods and provides guidance for sustainable expansion of infrastructure.

There are three Provincial Highways located in the Township under jurisdiction of MTO: Highway 401, Highway 3, and Highway 4. These connect the Township to a broader network that supports the movement of people and goods within the Township and Southwestern Ontario. The Plan supports the protection of planned corridors and prohibits development on planned corridors that could negatively affect the use of the corridors.



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### **City of St. Thomas Official Plan**

The City of St. Thomas Official Plan (2018) provides goals and policies that guide growth, economic development, and protection of historic buildings and natural heritage features across the City.

The Official Plan identifies the importance of transportation access characteristics within the City, and the need for employment lands to be in proximity to major roads for efficient travel and goods movement. The City recognizes these corridors can support where jobs should be located, and ease for industries to access Highway 401. The City is serviced by Highway 3, the St. Thomas Expressway, which primarily runs east west and is accessed through the First Avenue interchange and intersections. The majority of the City's employment land supply has goods access to Highway 3, which provides attractive commuting opportunities, along with rail access. The City of St. Thomas is currently updating their Official Plan.

### **City of St. Thomas Transportation Master Plan**

The City of St. Thomas Transportation Master Plan (2021) envisions a multi-modal transportation network and solutions to support growth through to 2041. The Plan identifies transportation infrastructure requirements to address existing challenges and support growth, along with policies that guide transportation and land use decisions.

The City of St. Thomas recognizes the importance of goods movement to support economic activity. The Plan notes that most of the internal employment lands are anchored along Talbot Street and the St. Thomas Expressway (Highway 3), which allows the City to route truck traffic to Highway 3, where possible. The transportation network within the City provides connections to Highway 3, through County Roads (Ron McNeil Line and Wellington Road), and major arterial roads (First Avenue). The First Avenue interchange is under jurisdiction of MTO.

#### **7.1.4 Noise**

The acoustics investigation will include an assessment of the design alternatives based on noise impact as per the following: 1) number of residences or areas affected by noise from the baseline "do nothing" condition; and 2) the anticipated noise mitigation (barriers) expected to address noise from the baseline "do nothing" condition. Each design alternative will be ranked based on these two criteria from least to most impacted.

A detailed noise and vibration review of the Preferred Plan will be conducted by determining Noise Sensitive Areas (NSAs) where noise impacts as a result of the project may be of concern. A prediction model to determine noise levels from road traffic on NSAs using FHWA Traffic Noise Model 2.5 will be completed. The predicted noise



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levels at NSAs will be compared to applicable criteria to determine the potential impact and significance at each. A vibration assessment will be undertaken by reviewing the study area to determine any potential areas in which vibration from the Preferred Plan may be a concern. Traffic information will also be reviewed, and vibration estimates at critical receptors will be completed. Stantec will compare predicted vibration levels at NSAs to applicable guidelines to determine the potential impact and significance at each.

If the acoustic impact exceeds the permissible limit at the receptors, potential noise mitigation measures will be reviewed, and the technical, economic, and administrative feasibility will be considered and documented. A Noise Technical Report documenting the findings and recommendations of the acoustics and vibration investigation will be prepared.

### 7.1.5 Contamination Overview Study

A contamination overview study (COS) will be carried out for the study area, in the form of an Assessment of Past Uses (APU) report, to identify and document actual and potential environmental contamination (i.e., soil and water) concerns associated with the study area. Work for this component of the study will be carried out in accordance with the ERD (2013), MTO Environmental Guide for Contaminated Property Identification and Management, MTO Environmental Standards and Practices, and *Ontario Regulation (O.Reg.) 406/19*, made under the *Environmental Protection Act*, 2019, as amended.

A review of publicly available historical records pertaining to potential environmental concerns, as well as reviewing historic aerial photography and an ERIS search of the study area will be carried out. This information will be considered during the development and evaluation of alignment alternatives.

A COS will be prepared to identify and document the actual and potential sources of contamination within the study area. The results of the COS will be considered during the development and evaluation of alternatives and documented in the TESR.

### 7.1.6 Cultural Environment

#### 7.1.6.1 Archaeological Resources

A Stage 1 and Stage 2 archaeological assessment (AA) will be completed for this project. The Stage 1 AA will include a review of relevant literature, the MCM Ontario Archaeological Sites Database, previous AAs completed within/adjacent to the study area, historical maps, relevant archaeological master or management plans, and a site visit. The information gathered during the Stage 1 AA will then be used to recommend



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further archaeological work, as applicable, in the form of a Stage 2 AA. A Stage 1 Archaeology Assessment Report will be prepared and submitted to MCM for review and inclusion in the *Ontario Public Register of Archaeological Reports*.

The Stage 2 AA will be limited to the areas within the study area identified as retaining archaeological potential during the Stage 1 AA. The Stage 2 AA will provide an overview of archaeological resources within the study area and provide a determination of whether any of the identified resources contain cultural heritage value or interest. It is assumed that lands will not be accessible for ploughing and, as such, the Stage 2 physical survey will consist of the test pit survey method undertaken over one day of work. Surveying will follow the applicable MCM standards.

The information gathered during the Stage 2 AA will be used to recommend further archaeological work, as applicable, in the form of Stage 3 mitigation or avoidance and protection strategies. A Stage 2 Archaeology Technical Report will be prepared and submitted to MCM for review and inclusion in the *Ontario Public Register of Archaeological Reports*.

### 7.1.6.2 Cultural Heritage Resources

A cultural heritage resource assessment will be completed in accordance with Section 3.7 of the ERD. Archival and secondary source material will be utilized to place the study area in provincial and regional historical context. Consultation with provincial, regional, and municipal bodies will be undertaken to identify potential heritage sites in the study area. A roadside survey will then take place to identify built heritage resources and cultural heritage landscapes (BHCHL). Based on the findings of the background search and field investigation, an evaluation of each potential BHCHL will be undertaken according to Section 5 of the *Environmental Guide for Built Heritage and Cultural Heritage Landscapes*, and in conjunction with O.Reg. 9/06. An impact assessment will be carried out on the Preferred Plan alternative to identify impacts on cultural heritage resources within and adjacent to the study area. Based on the findings, recommendations will be provided to address areas where preservation or mitigation measures may be required. A Built Heritage and Cultural Heritage Landscape Factors Technical Report will be prepared for the study area.

The report will include:

- Historical overview of the study area.
- Description of the existing conditions: a brief description of the (known and potential) cultural heritage resources within the study area, including a summary table and map depicting those resources.
- Identification and assessment of potential impacts (direct and indirect).



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- Description of proposed mitigation measures for any negative impacts.
- Community engagement.
- Description of clear commitments for future work (implementation and monitoring).

### **7.1.7 Erosion and Sediment Overview Risk Assessment**

Past reports and guidelines will be identified and followed as part of the assessment. The team will identify relevant topographic and surface water features, environmentally sensitive features, and the overall site soil types in the study area. The study area will be divided into evaluation areas using surficial geology data. Each area will be evaluated based on erosion potential and nearby environmentally sensitive features to develop an erosion potential rating and a consequence rating. An erosion and sedimentation risk rating will be assigned to each evaluated area and to the overall study area. Recommendations will be developed following MTO Guidelines, and procedures will be developed to be included in the Erosion and Sediment Control Plan for the Preferred Plan.

## **7.2 Engineering Studies**

This study is led by an engineering team that is responsible for generating, developing, and evaluating project alternatives in accordance with current geometric design standards.

### **7.2.1.1 Highway Engineering**

The Highway Engineering work plan includes the coordination of specialists in the areas of bridge engineering, drainage and hydrology engineering, electrical engineering, foundations engineering, and traffic engineering. The Highway Engineering team will:

- Undertake an inventory of the existing highway system and study area including environmental features, highway geometrics, roadside safety features, property, utilities, and traffic operations.
- Assess the existing conditions of the highway system to determine current highway geometrics and roadside safety.
- Analyze the existing traffic volumes, level of service, and collision reports to determine the current operational deficiencies.
- Collect future land use information such as Official Plans and relevant Zoning By-laws to determine the short-term and long-term land uses within the study area.



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- Assess the property and utility requirements for the alternatives.
- Assess the environmental and business impacts associated with the alternatives.
- Confirm the recommended improvements, including geometrics, lane configuration, interchange requirements, and roadside safety.
- Identify the recommended improvements including structural, property and utility requirements, and environmental constraints.
- Document the Preferred Plan.

A brief overview of the scope of work for supporting engineering specialties is provided below.

### **7.2.1.2 Drainage and Hydrology Engineering**

The scope of work for the drainage and hydrology engineering team includes the development of a preliminary stormwater management plan and review of watercourse hydrology for the Preferred Plan. The Drainage team will complete a Culvert Inspection Report, a Culvert Design Report, and a Drainage and Hydrology Report.

### **7.2.1.3 Electrical Engineering**

The electrical engineering team will develop a Preliminary Electrical Plan, which includes identifying electrical needs for traffic signals, illumination, etc., develop a utility plan of the study area, and identify locations of all known electrical infrastructure.

### **7.2.1.4 Traffic Engineering**

The traffic engineering team will complete updated traffic counts within the study area. A traffic study will be carried out to make recommendations related to traffic operations and safety (existing and future) in the study area. The team will be able to use data collected to estimate future traffic volumes on the alternatives and the Preferred Plan. Collision Reports for the last five years will be reviewed and collision patterns and locations with high collision frequency will be identified. Once a recommended design alternative of the by-pass is determined, Stantec will conduct an operational analysis to identify the impacts of any traffic diversions, detours, or lane closures during construction, as required.

The traffic study will include the following tasks:

- Consult with the Ministry's staff regarding maintenance, operational and safety problem areas.



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- Consult with the local municipal staff to identify local traffic and operational issues.
- Review existing correspondence related to public complaints and concerns.
- Update traffic projections based on growth and future development.
- Conduct an analysis of traffic capacity and level of service.
- Analyze collision records to determine collision trends and collision-prone locations.
- Analyze traffic operations.
- Identify corrective alternatives for improvements to resolve geometric deficiencies, operational and safety problems and/or to provide safety and operational efficiency, particularly at collision-prone locations.
- Examine roadside safety.
- Assess traffic operations for alternatives considered.
- Traffic management and staging plans that can minimize delay during construction.





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# 8.0 Next Steps in the Study Process

The Class EA process is a comprehensive planning process that involves identifying and evaluating project alternatives, identifying associated environmental impacts, and developing a plan for a solution that minimizes impacts, while addressing the identified transportation problem.

This study includes three distinct but inter-related steps (i.e., Alternatives Review and Evaluation, Preliminary Design Documentation, and EA Clearance) that will coincide with opportunities for public, stakeholder, and external agency input as discussed in the following sections.

The submission of this report marks the end of the project initiation stage. This stage of the study has included:

- Providing notice of the Study Commencement to the public, local municipalities, stakeholders, property owners, Indigenous communities, and external agencies.
- Reviewing input received.
- Initiating a review of background information available for the study area.
- Reviewing and documenting the existing conditions.
- Identifying and documenting deficiencies, operational problems, and safety issues.
- Reviewing and selecting the most suitable Alternative to the Undertaking.

This stage also included presenting and receiving input on the above-mentioned materials to the public, agencies, and stakeholders at the first PIC.

## 8.1 Alternatives Review and Evaluation

During this stage, the project team will identify existing natural, socio-economic, cultural and engineering conditions in the study area, and develop a range of Preliminary Design Alternatives.

Preliminary Design Alternatives will be generated based on the *Principle for Generating Alternatives* in the *Class EA for Provincial Transportation Facilities* (2000) including transportation engineering principles and environmental protection principles.

Transportation engineering and environmental protection factors are both considered in generating Preliminary Design Alternatives.



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In accordance with the requirements of the *Endangered Species Act*, impacts to Species-at-Risk and their habitat will also be avoided during the development of Preliminary Design Alternatives.

### 8.1.1 Proposed Evaluation Process

In accordance with the Class EA and *Environmental Assessment Act*, the evaluation process will consider a range of engineering and environmental (natural, socio-economic, and cultural) factors in the study area. The assessment of potential effects will include consideration of:

- Potential impacts.
- Opportunity to mitigate the impact.
- Net environmental impacts following incorporation of mitigation measures.
- An evaluation of the advantages and disadvantages associated with each alternative.

Each stage of the evaluation process will be based on the results of the previous stage and assess the alternatives in greater detail. It is important that the evaluation criteria capture the key issues. The evaluation process will be developed to provide an objective approach to the analysis and evaluation of each alternative. The goal of the evaluation process is to identify a Preferred Plan that is cost-effective, provides safe operations and reasonable local access, while minimizing effects on the environment.

The evaluation process is based on the following Class EA guiding principles:

- The evaluation process must be traceable, replicable, and must be understandable by those who may be affected by the decisions.
- All relevant factors, including transportation engineering and environmental protection, will be given due consideration.
- The evaluation may be subjective (based on reasoned argument) or objective (using quantifiable data).
- The proposed evaluation process will be refined through consultation with external stakeholders.
- Evaluation factors may be refined from one stage of a project to the next.



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- The evaluation process will increase in detail as the study progresses. During the study, several alternatives will be identified; of which some will be screened out because they do not satisfy either the engineering or environmental goals of the evaluation process. Any alternatives that are screened out will be documented, and the reasons for not considering the alternative further will be included in the final TESR.

### 8.1.2 Evaluation Criteria

The evaluation process is based on evaluation criteria and factors relevant to the study. Evaluation criteria have been developed to address the key environmental and engineering issues related to the decision-making process of selecting a Preferred Plan. Evaluation criteria are grouped under four main factor groups: Highway Engineering, Socio-economic Environment, Cultural Environment, and Natural Environment.

The evaluation criteria are independent variables, each of which may contribute a positive or negative influence on the overall suitability of a given alternative. In order to identify the effects on various evaluation criteria, measures are developed for each criteria. These measures identify and describe impacts, cost, and performance for the criteria.

The evaluation criteria have been developed and will be presented at the first PIC for public and agency input. A set of Preliminary Design Alternatives will be developed and presented at PIC 2.

The draft evaluation criteria presented at PIC 1 is presented in **Table 4**.

**Table 4: Evaluation Factors and Criteria**

<b>Category</b>	<b>Criteria</b>	<b>Measures</b>
<b>Highway Engineering</b>	<b>Traffic Operations</b>	Level of Service (LOS) – Highway 3 Level of Service (LOS) – Municipal Intersections
	<b>Geometrics &amp; Safety</b>	Collisions Accommodates Long Combination Vehicles (LCVs), large agricultural vehicles Accommodates active transportation Ramp radii Intersection spacing Crossing road alignment



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<b>Category</b>	<b>Criteria</b>	<b>Measures</b>
		Crossing road grade at ramp terminal. CNR compatibility
	<b>Constructability</b>	Complexity of staging and detours. Duration of construction.
	<b>Utilities</b>	Impacts to utilities.
	<b>Total Cost</b>	Construction cost
<b>Natural Environment</b>	<b>Terrestrial Ecosystem</b>	Area of impact to wildlife habitat. Area of impacts to vegetated areas due to construction.
	<b>Species of Conservation Concern, Species at Risk</b>	Area impacts to potential SAR habitat.
	<b>Fish and Fish Habitat</b>	Number of watercourse crossings, Impacts to fish habitat.
<b>Socio-Economic Environment</b>	<b>Property</b>	Approximate area of impact to existing and future land uses. Approximate number of private properties potentially impacted by construction activities.
	<b>Business Operations/Viability</b>	Number of businesses directly impacted (i.e., access to/from commercial property or landscaped areas) or displaced.
	<b>Noise</b>	Relative potential change in traffic noise levels on surrounding residential dwellings.
	<b>Air Quality</b>	Relative potential to affect air quality.
	<b>Contamination</b>	Potential to encounter contaminated soils/groundwater.
	<b>Stormwater</b>	Total additional impervious area requiring stormwater management strategies/facilities.
<b>Cultural Environment</b>	<b>Cultural Heritage Resources</b>	Conserves built heritage resources and cultural heritage landscapes. Minimize potential impact on known (i.e., previously recognized) and potential built heritage resources and cultural heritage landscape.



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Category	Criteria	Measures
	<b>Archaeological Resources</b>	Conserves archaeological resources. Minimize potential impact to archaeology sites and areas of archaeological potential.

### 8.1.3 Evaluation Process

Alternatives will be evaluated using a comparative analysis based on the evaluation criteria and consideration of the advantages and disadvantages of each alternative. The alternatives are assigned a ranking (least preferred, moderately preferred, and most preferred), based on how well each alternative is judged to satisfy the evaluation criteria.

The individual rankings are determined by completing a comparison of each alternative against the other. The individual ranking assigned for each factor is then summarized to provide the results of the evaluation process. The results will then identify the Most Preferred, the Moderately Preferred, and the Least Preferred Alternatives. This process results in identifying the “best” improvement plan and identifies the advantages and disadvantages of each alternative.

The evaluation of alternatives is an iterative process that includes consideration of input from the public, agencies, and stakeholder groups to help identify which project specific issues or impacts are important.

### 8.1.4 Select Preferred Plan

The concluding step in the analysis and evaluation process is the selection of a Preferred Plan. This process will include consideration of public/stakeholder response to the evaluation process, review of the results of the analysis and evaluation based on specialist work, input received during the study, and determination which criteria have the most influence on the outcome of the evaluation process. The Preferred Alternative will be selected and presented to the public, stakeholders, and external agencies at the second PIC. Based on the feedback received at PIC 2, the Technically Preferred Plan may be refined and the Preferred Plan will be confirmed.

## 8.2 Preliminary Design Documentation

The Class EA process for each GWP will be documented within two separate TESRs that will outline the route planning and preliminary design process for both projects (Bypass and Twinning). The TESRs will be made available for a 30-day public comment period.



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### 8.3 EA Clearance

If no concerns or issues are outstanding by the end of the 30-day comment period, the project is considered to have met the requirements of the Class EA, and MTO may proceed to detail design, subject to the commitments documented in the TESRs, and obtain any outstanding environmental approvals.

*Environmental Clearance – Right-of-Way Designation, Utility Relocation, and Property Expropriation* obtained at the conclusion of the planning and preliminary design stage of the study will permit the Ministry to:

- Designate the facility under the *Public Transportation and Highway Improvement Act* (1990).
- Acquire property consistent with the project needs or initiate proceedings under the *Expropriations Act* (1990) (Note: The Ministry has indicated that initially property will be acquired on a willing seller/willing buyer basis or under circumstances where the future highway designation on a property prevents the current owner from using the property).
- Negotiate temporary and permanent property acquisition, consistent with the project needs (including ROW designation).
- Relocate utilities.
- Initiate subsequent study stages (i.e., detail design and contract preparation) for the Preferred Plan.

The TESRs will include commitments for future consultation with agencies, relevant stakeholders, property owners, and the public during detail design and construction. Environmental Clearance – Construction Start is provided at the completion of the detail design stage to permit the Ministry to begin to physically alter ground, water, or vegetation. If there are no significant concerns following the Public Review Period, the project will be eligible for Environmental Clearance – Construction Start.



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## **9.0 Conclusion**

This SDR summarizes the study process that will be followed and documents the planning decisions that have been made with respect to the assessment and selection of the Preferred Alternative to the Undertaking.

This report provides the basis for moving the study forward with stakeholder input. Following the 30-day public review period of this report, comments received from the public, stakeholders, Indigenous communities, and agencies will be incorporated and the report will be made available on the project website for reference.

