Addendum to the Malden Road Transportation Public Safety & Urban Design Improvements Project Schedule C Municipal Class EA

Addendum Report

Prepared for: Town of Lasalle
Prepared by: Stantec Consulting Ltd.

Stantec

October 14, 2021

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Revision	Description	Author	Quality Check	Independent Review

Sign-off Sheet

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1.0 Introduction

Stantec Consulting Ltd. (Stantec) has been retained by the Town of LaSalle to complete the Malden Road Transportation, Public Safety and Urban Design Improvement Class Environmental Assessment (EA) Addendum and Preliminary Design. The project is being conducted as an Addendum to the 2009 Malden Road Schedule 'C' Municipal Class EA study.

The purpose of this Addendum is to document changes to the previously recommended design from 2009 based on current environmental conditions, changes in traffic patterns and land use/development, and updated municipal and provincial policies to ensure that the project and the mitigation measures are still valid given the current planning context. The ultimate recommended design will address safety, transportation, active transportation, and urban design improvements along Malden Road.

1.1 Study Area

The study area (**Figure 1**) extends along Malden Road from Meagan Drive northerly to Todd Lane, approximately 3.6 km, in the Town of LaSalle in Essex County. The study area for the Addendum review is consistent with the 2009 Class EA, though it should be noted that since 2020, County Road 3 is no longer within these limits south of Meagan Drive (the connecting link was changed to Golfview south of Meaghan Drive).

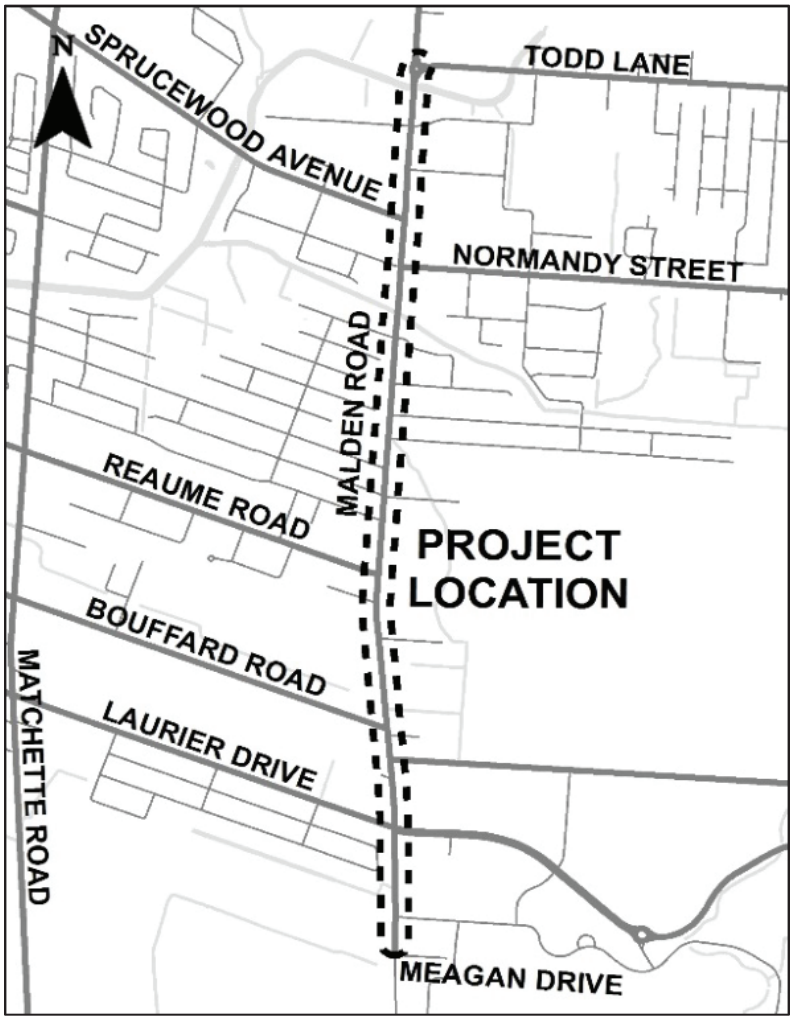

Figure 1: Study Area

1.2 Background - 2009 Class EA

In 2009, a Schedule 'C' Municipal Class EA was completed by the Town of LaSalle and Essex County for the Malden Road/County Road 3 corridor. The purpose of the EA was to identify a preferred design concept to resolve roadway operational deficiencies, future transportation capacity needs, pedestrian and cycling needs, urban design features, safety issues and concerns along the corridor, and meet the requirements of the Class Environmental Assessment process. The preferred design summarized in the Environmental Study Report included the following:

- Widen Malden Road from two lanes to five lanes from just north of Todd Lane to Normandy Street.
- Widen Malden Road to three lanes, one lane in each direction plus a continuous two-way left turn lane) from south of Normandy Street to south of Meagan Drive.
- Lane configuration improvements at intersections in the study area and a roundabout at Todd Lane and Malden Road.
- Optimize signal timings at all signalized intersections in the study area.
- On-road and Share the Road cycling lanes.
- Implement sidewalk on the west side of Malden Road, and multi-use path on the east side of Malden Road south of Cahill Drain.
- Urban streetscape features along the corridor.

To date, the five-lane widening of Malden Road, including incorporation of roadway and streetscape improvements between Normandy Street and Todd Lane and the construction of a roundabout at the Malden Road and Todd Lane intersection, have been completed. Other improvements recommended by the 2009 Environmental Study Report have not been implemented.

2.0 Municipal Class EA Process

All municipalities in Ontario are subject to the provisions of the Ontario Environmental Assessment Act (EA Act) and its requirements to prepare an Environmental Assessment (EA) for applicable public works projects, such as the Malden Road EA Addendum. The Ontario Municipal Engineers Association (MEA) "Municipal Class Environmental Assessment" document (October 2000 as amended in 2007, 2011, and 2015) provides municipalities with a five-phase planning process approved under the EA Act to plan and undertake municipal infrastructure projects, including works associated with transportation, in a manner that protects the environment as defined in the Act. The five phases are as described below:

- Phase 1: Review background planning and policy documents. Identify study area needs, problems and opportunities.
- Phase 2: Prepare physical description of the study area and inventory of natural, social, and economic environments. Identify and evaluate all reasonable alternative solutions.
- Phase 3: Identify and evaluate alternative designs for the preferred solution.
- Phase 4: Document the process with an Environmental Study Report (ESR).
- Phase 5: Implement the project (detailed design and construction).

The Municipal Class EA document classifies projects into separate categories: Schedule 'A', 'A+', 'B', or 'C'. The 2009 Malden Road Class EA followed the requirements of a Schedule 'C' project and completed Phases one through four of the Class EA study process.

2.1 Addendum Process

Section A.4.3. of the MEA Class EA document identifies that an Addendum should be prepared to address significant modifications to the project, change in environmental conditions, or lapse of time (10 years). Since a 10-year period has occurred between the filing of the EA report and commencement of construction, a review of the 2009 ESR is required to determine if the recommendations for the study area are still relevant based on current environmental conditions, changes in traffic patterns and land use/development, and updated municipal and provincial policies.

If significant modifications are required, an Addendum to the 2009 ESR is required to describe the reasons for changes, along with environmental impacts and proposed mitigation.

If an Addendum is required, it is to be placed on public record for a minimum 30-day review period along with the 2009 ESR. Only the items in the Addendum (i.e., the changes to the 2009 Class EA) are open for review during the 30-day public review period.

2.2 Part II Order Process

Interested persons may provide written comments to the Town of LaSalle for a response using the following contact information:

Peter Marra, P.Eng.
Deputy Chief Administrative Officer
Town of LaSalle
5950 Malden Road
LaSalle, ON N9H 1S4
pmarra@lasalle.ca

In addition, a request may be made to the MECP for an order requiring a higher level of study (i.e., requiring an individual/comprehensive EA approval before being able to proceed), or that conditions be imposed (e.g., require further studies), only on the grounds that the requested order may prevent, mitigate, or remedy adverse impacts on constitutionally protected Aboriginal and treaty rights. Requests on other grounds will not be considered. Requests should include the requester contact information and full name for the ministry. Requests may be made relating only to the items in the Addendum (i.e., the changes to the 2009 Class EA).

Requests should specify what kind of order is being requested (request for additional conditions or a request for an individual/comprehensive environmental assessment), how an order may prevent, mitigate, or remedy those potential adverse impacts, and any information in support of the statements in the request. This will ensure that the ministry is able to efficiently begin reviewing the request.

The request should be sent in writing by mail or by email to:

Minister of the Environment, Conservation and Parks
Ministry of Environment, Conservation and Parks
777 Bay Street, 5th Floor
Toronto, ON M7A 2J3
minister.mecp@ontario.ca

and

Director, Environmental Assessment Branch
Ministry of Environment, Conservation and Parks
135 St. Clair Avenue West, 1st Floor
Toronto, ON M4V 1P5
EABDirector@ontario.ca

Requests should also be sent to the Town.

3.0 Consultation

Consultation and engagement with stakeholders represent an important element of the Class EA process. The consultation plan seeks both to meet statutory consultation requirements as part of the Class EA process, but also to serve as an extension of community conversations surrounding the various developments within the community, by providing meaningful opportunities for the community to participate in the planning process.

A project contact list was created which includes multi-level government agencies and officials, Town of LaSalle staff, emergency service contacts, potentially interested Indigenous communities, members of the public, utility services, special interest groups, as well as land developers active within the project study area. The list was regularly updated to include those who expressed interest in the study. Addresses for all properties within the study area were compiled and used for the mail-out of the initial Notice of Study Commencement.

Formal points of contact for the Class EA Addendum included a Notice of Study Commencement and a Public Consultation Centre (PCC). Notices were sent via mail or email (where requested) to property owners within the study area, the project contact list, and Indigenous communities. The County and Town websites also hosted information on the project including all project notifications and documents.

A copy of the project contact list and correspondence is provided in **Appendix A**.

3.1 Notice of Study Commencement

The Notice of Study Commencement was first issued September 13, 2019. The notice was emailed/mailed to the contact list, Indigenous communities, and property owners, and was published in the LaSalle Post newspaper on September 27, 2019. Comments received were generally requesting to be added to the study mailing list and noted the need for safe pedestrian and active transportation facilities. No comments were received from Indigenous communities, or agencies.

3.2 Public Consultation Centre

To protect the health and safety of Town of LaSalle residents and staff during the COVID-19 pandemic, a virtual Public Consultation Centre (PCC) was held from December 21, 2020 to February 5, 2021. The Town of LaSalle arranged for the Notice of PCC to be displayed on two variable message boards on the side of Malden Road from December 29, 2020 to January 12, 2021. The messaging read “Future Malden Improvements, Visit lasalle.ca”.

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The Notice of PCC #1 was distributed as follows:

- Town of LaSalle project website became available on December 14, 2020 (https://www.lasalle.ca/en/town-hall/malden-road-environmental-assessment-update.asp).
- Project Contact List on December 14, 2020.
- Town of LaSalle social media starting December 14, 2020 until February 5, 2021.
- PlaceSpeak became available on December 14, 2020.
- Property Owners along Malden Road on December 14, 2020.
- Indigenous Communities on December 15, 2020.

Two pre-recorded presentations were made available online for public review and input on the problems being addressed, background information and the alternatives considered. One video presented all display boards, and the full-length transcript, while another presentation provided an executive summary review of the presentation and transcript. A copy of the PCC displays is included in **Appendix A**.

The Town of LaSalle's website directed users to the PlaceSpeak and/or Youtube link for the video presentations (https://www.placespeak.com/en/topic/6405-malden-road-transportation-public-safety-and-urban-design-improvements/#/overview). PlaceSpeak provides a location-based engagement platform for public consultation, allowing for timelines, discussion boards, video embedding and project details to be customized to provide a comprehensive overview of the project. PlaceSpeak requires users to create a login and enter in contact information to understand their location in proximity to the study area and ensure contact can be made regarding any concerns raised.

Over the course of the project, PlaceSpeak has made 214 connections (logins), has received 63 comments, and has collected 2397 views. The full presentation video remains on the PlaceSpeak portal. The discussion board and comments regarding PCC were accepted from December 21, 2020 to February 5, 2021.

The video presentations were embedded in the Town of LaSalle's PlaceSpeak portal from December 21, 2020 to February 5, 2021 on the Town's website. The videos were comprised of the PCC presentation slides, with audio narration. The full presentation was approximately 25 minutes in length, while the executive summary video was approximately six minutes.

3.2.1 Comments Received

A total of 89 comments were received from the public and stakeholders, through email, phone calls, and the PlaceSpeak discussion board between December 21, 2020, and February 5, 2021. The PlaceSpeak discussion board collected 64 comments and included locals stating their preferences and opinions on what they would like to see within the Malden Road Improvements. A summary of the discussion posts is included in **Table 1**. Generally, comments and concerns received were related to the following items:

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Table 1: Summary of PlaceSpeak Discussion

Theme	Comment/ Concern	Response
Safety/ Accessibility	The corridor lacks safe facilities for pedestrians, cyclists, and auto users. Consider the implementation of crosswalks, separated active transportation, and safe intersections. Also consider traffic calming measures (speed bumps, reduced speed limits).	Improvements to Malden Road will prioritize safety within the corridor. Intersection improvements will address pedestrian crossings and accessibility requirements under the Ontarians with Disabilities Act (AODA), remove the channelized right turns, and include crossings for cyclists to increase safety along the corridor. The recommended alternative solutions from the 2009 Malden Road Environmental Assessment (EA) include the implementation of pedestrian crosswalks near the Cahill Drain to provide safe routes for cyclists and pedestrians. The improvements will accommodate users of all abilities.
Active Transportation	Improvements to active transportation are needed along Malden Road. Provide designated active transportation facilities (bike lanes, buffered bike lanes, multi-use path) along the corridor, connecting to local trails).	On-road buffered bike lanes (1.0 m painted buffer) with separated sidewalks will be implemented along Malden Road from the Cahill Drain to the southern study limits. During the detailed design phase of the project, the Town may choose to refine the width, and include pre-cast concrete curbs and flexible bollards, or raised concrete planter boxes within the buffer to separate cyclists from mixed-traffic, for improved comfort and safety of cyclists. The 2009 Malden Road EA recommendations included the implementation of multi-use trails near the Cahill Drain to improve the east-west connection and provide a safe alternate route for cyclists to loop around the commercial section of Malden Road between Normandy Street and Todd Lane. The improvements to active transportation along the corridor provides linkages to the existing trails at Cahill Drain and will improve the overall connectivity of the transportation network.
Traffic	Impacts to traffic flow as a result of intersection improvements – consider roundabouts over traffic lights where feasible.	The recommended alternative solutions from the 2009 Malden Road Environmental Assessment are generally applicable today, and include: • Widen Malden Road from Cahill Drain and Meagan Drive to three lanes, with one general purpose lane in each direction and a two-way left turn lane. • Signalize the Reaume Road intersection and protect for a future road extension to the east of Malden Road. The following intersections along Malden Road require improvements: • Malden Road and Laurier Parkway • Malden Road and Bouffard Road • Malden Road and Reaume Road The configuration of these intersections will be further refined during detailed design.
Natural Environment	Protection of the existing natural environment of the area including species at risk, wooded areas.	The study area is a mixed-use urban corridor, with potential for Species at Risk (SAR) plants, reptiles, and birds to occur, although limited suitable habitat is present. Several large ornamental trees along Malden Road have been identified and taken into consideration for the design phase. There are six municipal drains which intersect with the study area: Turkey Creek/Grand Marais Drain; Cahill Drain; Normandy Drain; Tourangeau Drain, Bessette Drain, and Marentette Drain. There are no critical SAR fish habitat documented in these drains, though there is potential for Northern Sunfish, Pugnose Minnow and Spotted Sucker (endangered/threatened) to be present in the Cahill Drain and the Tourangeau Drain. These features will be considered during the design phase, and all work surrounding natural features will be completed in accordance with provincial regulations, such as the *Endangered Species Act.*

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Theme	Comment/ Concern	Response

Amenities & Aesthetics	Consider bus shelters, street trees, and garbage cans.	The 2009 Malden Road EA recommended improving aesthetic characteristics of the public realm where feasible, including:
		• Making Malden Road an enjoyable and attractive throughfare and destination that can attract tourism and business.
		• Relocate utility poles to remove barriers.
		• Consider decorative roadway lighting.
		• Consider pedestrian level illumination in the commercial areas and at nodal areas.
		• Establish a consistent landscape strategy.
		  ○ Street trees
		  ○ Planters and baskets in the civic district
		  ○ Street furnishings
		  ○ Continuous sidewalks
		These recommendations will be considered during the design phase for incorporation along the corridor.

A communication log of all comments and responses is included in **Appendix A**.

4.0 Problem and Opportunity Statement

- Phase One of the Municipal Class EA process involves identification of the problems and/or opportunities for the undertaking. The Problem and Opportunity Statement from the 2009 Class EA was reviewed in order to confirm its applicability within the current planning context. Key elements of the Problem and Opportunity Statement are summarized below, with commentary that speaks to any significant changes over the past decade:
- For a variety of health-related and lifestyle reasons, many of the existing and future residents of LaSalle want to maintain a healthy, active lifestyle by walking or riding their bikes to/from the Malden Town Centre and other destinations within and adjacent to the Malden Road Corridor.
    - Still applicable. In addition, the Town adopted a new Official Plan in 2018, which continues the vision for a vibrant, mixed-use Town Centre, and establishes a Multi-Use Corridor along Malden Road from the Town Centre south to Laurier Parkway. The Addendum shall have regard for the Community Structure and Land Use Plan as identified within the 2018 Official Plan. In addition, it is noted that there are a number of challenges associated with implementing a Mixed-Use Corridor along an arterial roadway and striking a balance between efficient automobile use and active transportation/public realm components.
- The volume of vehicular traffic using the Malden Road corridor had increased significantly in the decade prior to 2009. Based on traffic analysis which considers future development including the Bouffard and Howard Planning District and the establishment of the Vollmer Culture and Recreation Complex, traffic is expected to increase.
    - Still applicable. The Addendum shall consider current and proposed land uses within the Town's new 2018 Official Plan, as well as updated traffic counts.
- The recommended design shall incorporate a number of design principles adopted by LaSalle Council which collectively articulate the shared community vision for the Town. This includes urban places framed by architecture and landscape of a high standard of design that celebrates local history, climate, ecology and building practice, in keeping with new urban design guidelines and standards for both the public realm and private lands.
    - Still applicable. The Addendum shall also consider the urban design policies within the 2018 Official Plan and will look to strike a balance between traditional guidelines for arterial roads and the implementation of the Mixed-Use Corridor designation to create a safe and accommodating environment for all modes of traffic.

4.1.1 Problem and Opportunity Statement Update

There is an opportunity to apply a 'complete streets' approach to the Malden Road corridor to create a balanced transportation system designed and built for pedestrians, cyclists, transit, and automobiles, while still recognizing the purpose of an arterial roadway. The overall preferred design shall meet the evolving needs of existing and future LaSalle residents for a 20-year planning horizon.

Additionally, the preferred design shall establish an implementation strategy for the corridor that is fiscally and environmentally responsible, enhances public safety for motorized and non-motorized forms of transportation, promotes and facilitates healthy and active lifestyles, properly addresses on-going municipal servicing requirements, and is capable of retaining/attracting businesses, services, and residents as part of a vibrant and safe Malden Town Centre and Malden Mixed Use Corridor.

In summary, the Malden Road Class EA Addendum seeks to:

- Use updated traffic analysis and forecasting to develop a preferred design for the corridor that balances the needs of both local and regional vehicular traffic, active transportation, and adjacent land uses.
- Review and improve safety and operations at intersections along the study area for all corridor users.
- Support the implementation of the vision for the Malden Town Centre and Mixed-Use Corridor as identified through the LaSalle Official Plan, while recognizing the function of Malden Road in the regional context.

5.0 Update to Study Area Existing Conditions

5.1 Policy Context

More than 10 years have passed since the completion of the Malden Road EA and, since then, a variety of provincial and municipal policy changes have occurred that now apply to Malden Road and the implementation of the Malden Road EA Addendum.

The focus of the following policy review is to address all of the new or modified policies, which the Malden Road EA Addendum has considered.

5.1.1 Ontario Traffic Manuals

The purpose of the Ontario Traffic Manual (OTM) is to provide information and guidance for transportation practitioners and to promote uniformity of treatment in the design, application and operation of traffic control devices and systems across Ontario. Since the 2009 Malden Road Class EA, significant changes have been made to the regulations within the Highway Traffic Act of Ontario (HTA), specifically surrounding pedestrian crossings and cycling facilities. To properly acknowledge and implement these changes, the below sections provide a review of what the Addendum to the Malden Road Class EA needs to consider for pedestrian crossings and active transportation infrastructure within the study area.

5.1.1.1 Ontario Traffic Manual Book 15 – Pedestrian Crossing Treatments

The OTM Book 15 (June 2016) provides practical guidance and application information on pedestrian roadway crossing treatments and is a response to concerns over the cost of maintaining standard pedestrian crossover (PXO) or traffic control signals. The book includes new PXO layouts for low-speed, low-volume roads, creating options for municipalities, such as the Town of LaSalle, that are looking into non-signalized pedestrian crossings, which could be considered for various points along Malden Road. New PXO crosswalk beacons include the use of solar power, as these crosswalks are:

- Free from trenching, cabling, and in-ground wiring.
- Easy to mount or retrofit onto a range of square and round poles.
- Improve driver compliance to provide the highest yield rate per dollar spend on the system.

PXOs are to be marked crosswalks identified by signs and pavement markings. Pedestrians, vehicles, and cyclists must all understand the rules of the road at these crosswalks to ensure safety for everyone. Pedestrians must exercise due care and cross only when traffic has come to a complete stop. If the PXO has a flashing beacon, the corresponding button should be pressed to activate it. The beacon will help increase driver awareness. Vehicles must watch for pedestrians, be prepared to stop, and only start moving again once the pedestrian has cleared the roadway. Cyclists must follow the same rules as vehicles. Cyclists wishing to cross at the PXO should dismount and walk the bike across.

5.1.1.2 Ontario Traffic Manual Book 18 – Cycling Facilities

A direct comparison of the relative safety of different types of bicycle facilities and degrees of separation is difficult. A bicycle facility with greater separation may appear to be 'safer' but may result in more conflicts at intersections and driveways, especially if the separation makes the cyclist less visible to the motorist. The overarching cycling facility selection process outlined in the OTM Book 18: Cycling Facilities (2013) follows a three-step process:

- Step 1: Facility Pre-Selection: Pre-select an appropriate type based on vehicular volume and speed using the OTM Book 18 Nomograph.
- Step 2: Consider corridor specific characteristics: Consider design characteristics such as visibility of cyclists, number of driveway accesses and whether on-street parking is provided.
- Step 3: Justify Decision and Identify Design Enhancements: Document the rationale by way of this EA.

The methodology outlined in OTM Book 18 was employed to determine the suitable facility for the study area corridor.

5.1.2 Provincial Policy Statement

The Provincial Policy Statement 2020 (PPS) is the guiding document that provides overall policy directions on matters of provincial interest relating to land use planning and development in Ontario. The original PPS came into effect in 2005 and was the planning policy that the original Malden Road Municipal Class EA (2009) was completed under. Since then, the 2020 PPS has replaced the 2005 and 2014 PPS, however, no major changes were made to the transportation infrastructure policies.

The Malden Road Municipal Class EA Addendum supports matters of provincial interest as it aims to create an efficient intermodal transportation system, inclusive of active transportation, that safely facilitates the movement of people and goods, while also being energy efficient, transit-supportive, and future-oriented to address projected needs of both the Town and the County. As part of the Malden Road EA, efficient use will be made of existing servicing and transportation infrastructure, and consideration will be made to already planned infrastructure in order to minimize unnecessary public expenditures. Through the use of this EA and other town and county led transportation demand management strategies, efficient land development patterns will be developed within LaSalle and the surrounding area.

5.1.3 County of Essex Official Plan

The County of Essex Official Plan was prepared in 2014 and outlines how land should be used and the ways in which the County should grow, in order to meet future community needs until 2031. A main goal of the Official Plan is to invest in a region-wide transportation system that connects all urban areas within the County by providing a highly interconnected road network and accessible transportation system that is designed and built for pedestrians, cyclists, transit, and automobiles.

As Malden Road is recognized as an important commercial corridor for the Town of LaSalle, it is important to promote the continual development and improvement of Malden Road as it adds to the existing accessible and active transportation system within the County. The County's Active Transportation System will continue to evolve over time through the addition of missing links and the incorporation of additional linkages such as Malden Road. The expansion of Malden Road was recommended as part of the 2004 Draft Essex-Windsor Transportation Master Plan (TMP) but was not included as a transportation policy within the Official Plan until the 2014 adoption. The Malden Road Municipal Class EA Addendum process will need to consider these transportation policies in order to properly address any missing linkages and ensure the County's vision is met.

5.1.4 County Wide Active Transportation System Master Plan

The County of Essex developed a County Wide Active Transportation System Master Plan (CWATS) to guide the County and local area municipalities in implementing a network of cycling and pedestrian facilities over a period of 20 years. CWATS is an important and essential document to assist the local municipalities and other partners to encourage walking and cycling for recreation and utilitarian trips and reduce the reliance on single occupant motor vehicle trips. Adopted in 2012, CWATS is continually expanding its network of paths and trails every year.

As CWATS was adopted after the 2009 Malden Road EA was completed, there are a variety of recommendations, such as active transportation connections between Malden Road and Normandy Street, Todd Lane, and Reaume Road, that were not able to be included or assessed as part of the 2009 design recommendations. This recommendation, as well as the many other related recommendations within the CWATS that now apply to Malden Road, will need to be considered through this addendum and will need to be included in the final preferred design recommendations.

Within CWATS, Malden Road is identified as an important corridor for multimodal connections to adjacent municipalities. The 2012 CWATS Master Plan identified Malden Road as a candidate route for alternative active transportation route analysis. One of the important objectives of the study was to identify a continuous and connected county wide active transportation network that builds upon, connects, and supports existing and planned local municipal routes and facilities. The study proposed a multi-use trail between Normandy Street and Todd Lane and a context sensitive solution south of Reaume Road to the southern study area limits. A context sensitive solution is proposed as this section of the roadway is considered to be a highly desirable active transportation route but requires a design solution that meets the needs of the County and the Town of LaSalle, considering site specific criteria, design challenges and opportunities.

5.1.5 Town of LaSalle, Official Plan

An Official Plan is a policy document that guides the short-term and long-term development in a community. It applies to all lands within the municipal boundary and the policies within it provide direction for the size and location of land uses, provision of municipal services and facilities, and preparation of regulatory bylaws to control the development and use of land.

The Town of LaSalle's Official Plan provides direction for the Town over a period of 20 years, to 2038, on matters related to land use planning and growth, and to promote the Provincial policy planning system.

Schedule A and Schedule B of the Official Plan identify the Malden Road corridor as a Mixed-Use Corridor. The Mixed-Use Corridor Designation functions as the connective spine of the Town as well as links for the surrounding neighborhoods. Areas that are designated Mixed-Use Corridor Designation will typically include an array of compatible land uses including retail and service commercial uses, mid-rise and high-rise residential uses, as well as institutional and community uses. These Mixed-Use Corridors are expected to provide people-oriented employment and to accommodate higher density/intensity development, while maintaining a broad mix of land uses that support investment in transit and the achievement of complete communities.

The Town's transportation system is depicted on Schedule D of the Official Plan. The intent of the Official Plan is to develop a multimodal transportation system that is safe, efficient, economical, convenient, and comfortable for all users, while respecting the heritage assets, natural features, and character of the Town. The objectives of the Plan related to transportation include:

- Developing and maintaining multimodal transportation routes throughout the Town with linkages to external transportation systems.
- Ensuring the transportation system is interconnected, efficient, safe, and supportive of all modes of travel.
- Enhancing active transportation facilities with streetscape elements such as benches, waste receptacles, bicycle racks, crosswalks, pedestrian-scaled lighting, and shade.
- Integrating the multi-modal transportation system with existing and planned land use patterns.

Schedule D of the Official Plan identifies a planned collector road parallel to Malden Road from Bouffard Road to Suzanne Street, and well as the extension of Reaume Road from Malden Road to Huron Church Line.

5.1.6 Town of LaSalle Transportation Master Plan, January 2020

The LaSalle Transportation Master Plan (TMP) and Age-Friendly Active Transportation Master Plan (ATMP) are guiding documents for enhancing and facilitating a comprehensive multimodal transportation network in the Town of LaSalle. The plan encompasses all modes of transportation and was adopted by LaSalle Council in January 2020.

The overall vision for the TMP/ATMP is to create an accessible, well-connected, and age-friendly transportation network that supports sustainable and multimodal travel for pedestrians, cyclists, transit users, and motorists of all ages and abilities. In addition to the envisioned future of LaSalle, the TMP/ATMP also illustrates some challenges and opportunities facing Malden Road. The TMP/ATMP elevates the need for a review of traffic and intersection operations as well as the need for a greater separation for cycling facilities, such as the need for an upgraded in-boulevard pathway along Malden Road within the study area.

The TMP/ATMP also identifies issues for improvement at the following intersections along Malden Road:

- Sprucewood Avenue/Malden Road
- Normandy Street/Malden Road
- Morton Drive/Tuttle Avenue/Malden Road

- Reaume Drive/Malden Road
- Bouffard Road/Malden Road
- Laurier Drive/Malden Road

The TMP/ATMP is a guiding document with recommendations that will need to be considered when determining a solution for Malden Road, as part of the Malden Road Municipal Class EA Addendum process.

5.1.7 LaSalle Transit Feasibility Study, February 2016

The Town of LaSalle explored the feasibility of providing more transportation choices for residents and workers through a Phase 1 Feasibility Study, to accommodate population growth, support the needs of a growing and aging population and create more intensified urban communities. The 2016 Transit Feasibility Study determined that there is a need, backed with community support, to introduce a new transit service in the Town. To support the travel needs of the Town, potential service options include operating a fixed-route, a flexible demand-response service, or a combination of the two. Transit services require a reliable, efficient transportation network that can accommodate multiple modes of transportation. Phase 2 of the study will include developing a business plan with proposed detailed service designs.

5.1.8 Essex Windsor Regional Transportation Master Plan, October 2005

Essex County updated their Windsor Area Long Range Transportation Study in 2002 with an Essex-Windsor Regional Transportation Master Plan (EWRTMP) in 2005. The study goal was to develop a new comprehensive Regional Transportation Master Plan for the Essex Windsor region with recommended policies and an implementation strategy that will serve the needs of the region to year 2021.

The EWRTMP encompassed the County of Essex, its seven local municipalities and the City of Windsor. The report identified that in its existing two-lane configuration, a section of Malden Road from Todd Lane to Normandy Street will have significant capacity deficiencies to accommodate future travel demands.

The regional transportation study included an extensive assessment of options to address the region’s transportation system needs to 2021. A series of strategic roadway capacity enhancements, mainly in the form of important road widenings, were recommended in the region to solve localized route capacity deficiencies owing to forecasted population and employment growth and distribution. The widening of Malden Road to four through lanes from Todd Lane to the limits of the sanitary sewer area was under planning process during the evaluation of the study. The study reinforced the widening as a part of the preferred alternative solution.

5.1.9 Comprehensive Zoning Review/Draft Mixed Use Zoning

The Town is currently preparing a new Comprehensive Zoning By-law to implement the land use policies and designations that are part of the Town's new Official Plan. There will be five zone categories along the Malden Road Corridor: (i) The LaSalle Town Centre Zone, from Todd Lane to the Cahill Drain; (ii) the Mixed-Use Corridor Zone, from the Cahill Drain to Laurier Parkway; (iii) the Institutional Zone (for Sandwich Secondary School); (iv) the Recreational Zone (for the Vollmer Complex); and (v) the Residential One Zone, for remaining lands affected by this EA Addendum located south of Laurier Parkway.

The "LaSalle Town Centre Zone" and the "Mixed Use Corridor Zone" permit a wide range of retail, service commercial, professional, and medical offices, and mid-rise apartment style residential buildings and land uses. The redevelopment/development of Malden Road, from Todd Lane to the Cahill Drain as the LaSalle Town Centre, and from the Cahill Drain to Laurier Parkway as the connective spine Mixed Use Corridor, is a key strategic goal for this community. The new zone regulations being developed for these two zones will incorporate urban design, building and parking standards that will facilitate the continued urbanization/transformation of what will become vibrant, pedestrian and transit-oriented places that will be safe, attractive, and inviting for residents and visitors of all ages. They will provide people-oriented employment and accommodate higher density/intensity development while maintaining a broad mix of land uses that support investment in transit, active transportation and the achievement of complete streets and communities.

The Recreational, Institutional and Residential One Zone categories will continue to be applied to the existing municipal recreational complex, secondary school and low-density residential homes located south of Laurier Parkway.

5.1.10 Malden Road Urban Design Guidelines, April 2009

The Town of LaSalle prepared Urban Design Guidelines as part of the 2009 Malden Road Transportation, Public Safety & Urban Design Improvements Project. The purpose was to provide design guidelines that build upon the corridor's infrastructure improvements to create a safe, accessible, pedestrian, and public realm in LaSalle. The guidelines provide a foundation for both the public and private sector property improvements within the right-of-way. General Urban Design Principles are provided:

- Enriching the Public Realm – Define a pedestrian friendly civic realm through improved building facades, lighting, and character. Reduce the scale of the street and vehicular right of way and implement designated active transportation facilities where feasible.

- Designing for All Seasons – A streetscape with mature street trees providing protection from winter winds and summer heat, making the public realm more desirable. Support ongoing community participation in beautification programs and foster partnerships to improve environmental conditions.
- Commercial and Residential Intensification – Redevelopment opportunities should improve frontage and pedestrian access to enhance the road's role and prominence as the main civic throughfare and provides potential for streetscaping.
- Flexible Framework – Provide a set of practical design guidelines that can encourage dynamic planning over a longer timeframe. Improvements such as burying overhead electrical infrastructure over time and improving nature along the corridor where feasible, when the opportunity arises.
- Land Economics – Consideration of higher density applications to encourage more mixed-use development is recommended.

The Urban Design Guidelines report outlines additional urban design opportunities and general streetscape designs, and character area guidelines, green gateway guidelines for consideration along Malden Road. These design guidelines have been taken into consideration for this study.

5.2 Socio-Economic Environment

5.2.1 Existing Land Uses and Official Plans

The Malden Road Class EA Study Area extends between the Town of LaSalle's northern limits to the urban boundary in the south, south of Meagan Drive. The study area includes a unique combination of uses including commercial, residential, recreational, institutional, and agricultural uses. The study area contains three approved land designations:

- The LaSalle Town Centre District' north of Cahill Drain.
- A 'Mixed Use Corridor' south of Cahill Drain to Laurier Parkway.
- A 'Residential District' from Laurier Parkway to Meagan Street.

Malden Road is designated as a Mixed-Use Corridor in the Town of LaSalle Official Plan (2018), as shown on the updated Land Use Plan (Schedule B), in **Figure 2**. At the time the 2009 Malden Road EA was completed, Malden Road only had significant development surrounding the major intersection of Sprucewood Ave/Malden Road and Normandy/Malden Road. Since then, various chain commercial and service commercial uses have built up along Malden Road between Todd Lane and Morton Drive, and a variety of health-related office uses have also been developed fronting Malden Road.

There has also been more commercial/service commercial uses and office uses developed on off streets adjacent to Malden Road, with Sprucewood Avenue seeing the most residential to commercial redevelopment since 2009. Furthermore, there has been significant streetscape improvements to the commercial building that existed in 2009, as well as significant changes to intersections and crossings, with the Todd Lane roundabout being one of the most dramatic changes.

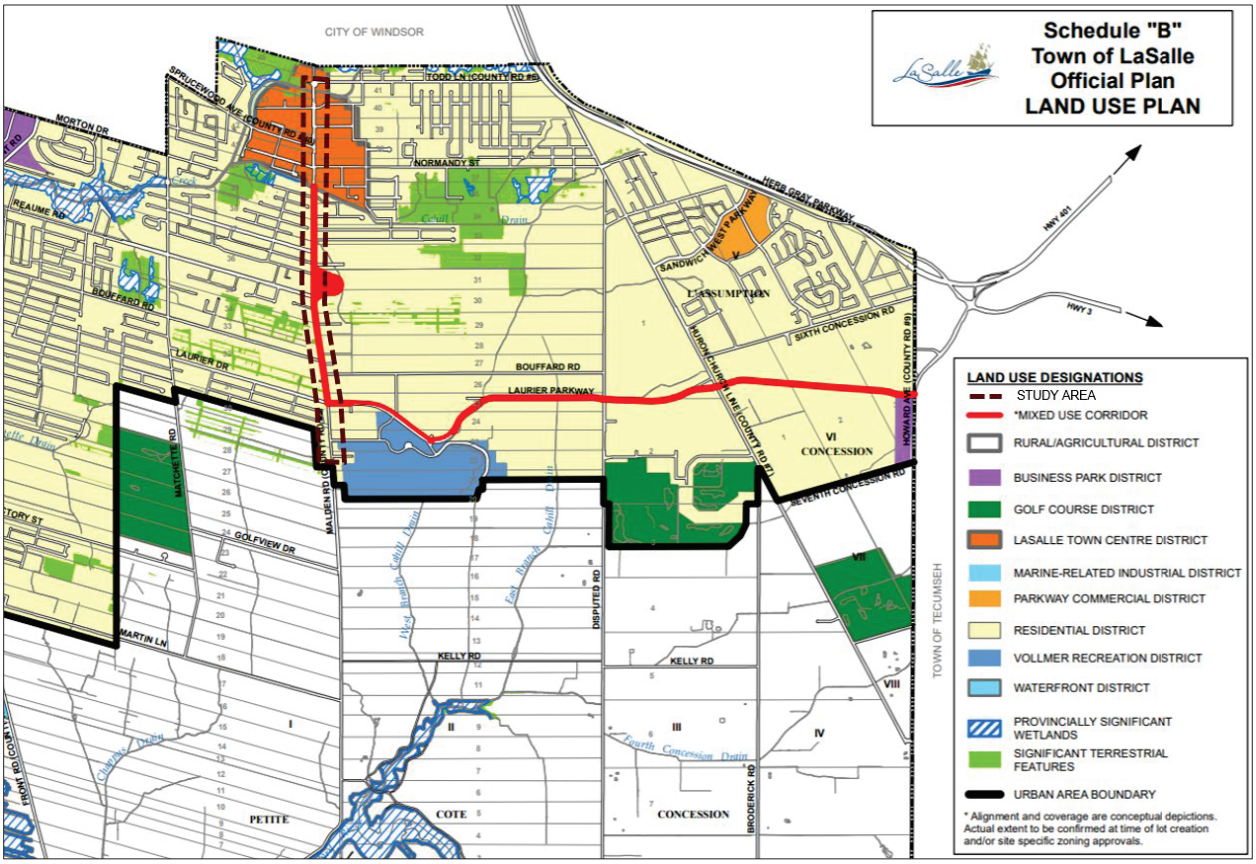


Figure 2: Land Use Plan (Schedule B), Town of LaSalle Official Plan

5.2.2 Historical Population Growth

Population statistics are used to understand historical trends in growth and help produce growth projections. Essex County, Town of LaSalle, and City of Windsor Census population statistics from 2006 to 2016 are presented in **Table 2** to illustrate historical population growth. The jurisdictions presented in **Table 2** are based on Official Plan boundaries; Essex County's population statistics include the following Census subdivisions: Amherstburg, Essex, Kingsville, Lakeshore, LaSalle, Leamington, and Tecumseh.

Table 2: 2006-2016 Census Population of LaSalle, Windsor, and Essex

	2006	2011	2016	2006-2016 Change
Essex County	176,920	177,720	181,525	4,605
Town of LaSalle	27,650	28,643	30,180	2,530
City of Windsor	216,470	210,890	217,185	715

During the period from 2006 to 2016, there has been marginal growth in the City of Windsor, Town of LaSalle, and Essex County. Most notably, the greatest change has been observed in the Town of LaSalle, with 9% growth from 2006 to 2016 (approximately 1% annual growth rate) compared to 2.6% in Essex County and 0.3% in the City of Windsor. Looking back throughout history, the greatest growth in the region occurred in the 1990s, with slowed growth in recent years.

5.3 Natural Environment

The Malden Road Corridor is an existing urban developed corridor. In general, the existing right-of-way has been significantly disturbed as a result of construction of various infrastructure components (i.e., roads, sewers, watermains, utilities) and buildings.

The information contained in this section describes the existing natural environment features, functions, and context in proximity to the study area, based on a review of background information, field investigations and consultation with agency staff.

5.3.1 Essex Region Conservation Authority

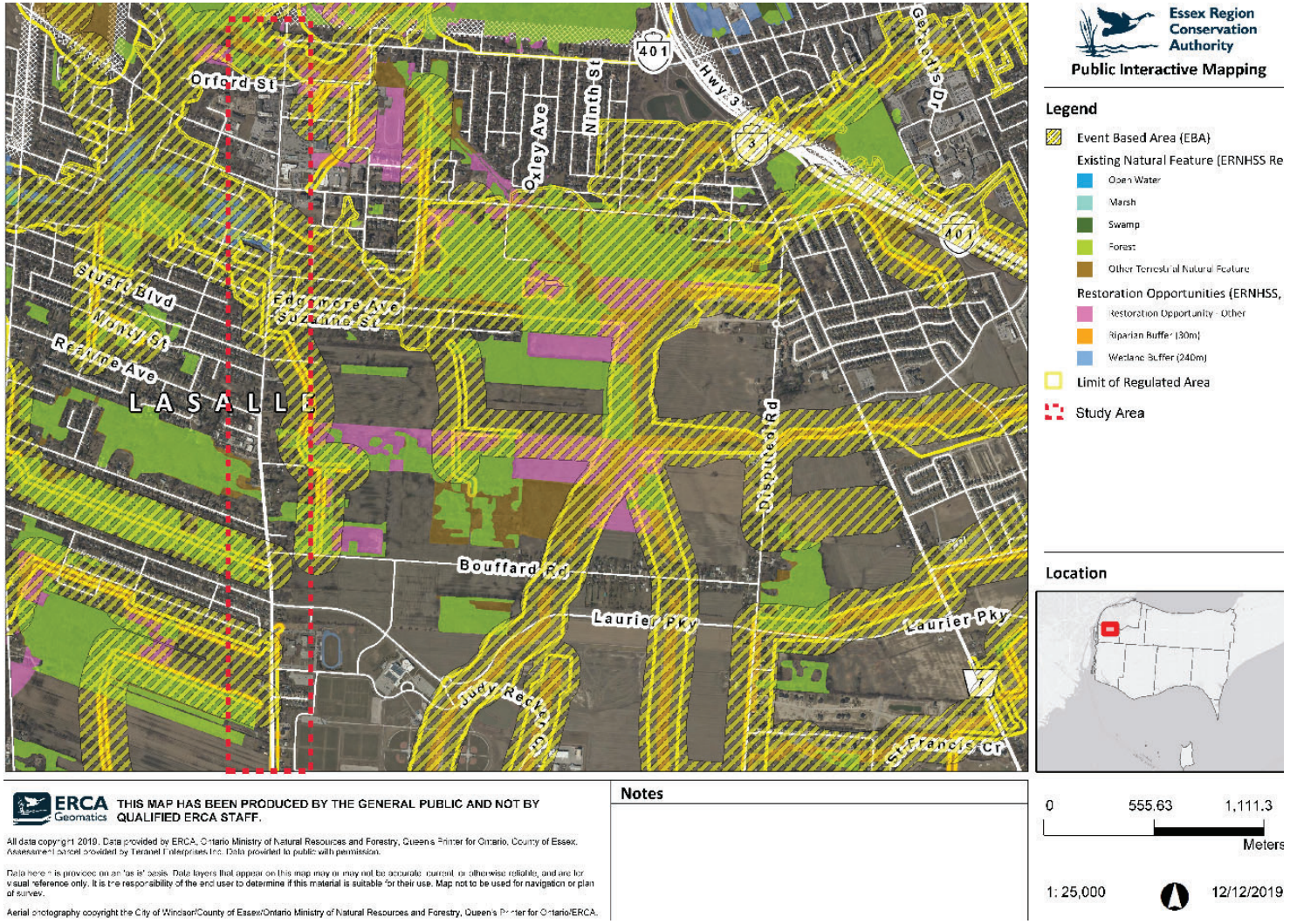
The Town of LaSalle is located within the Essex Region Conservation Authority (ERCA) jurisdiction and the lands within the study area are subject to Regulation Policies, as portions are located within the ERCA Regulatory Area. A desktop review of ERCA regulation mapping, as depicted in **Figure 3**, determined that lands within the study area are located within/subject to the following policies:

1. Event Based Area (EBA): The EBA is an area where modeling has demonstrated that a spill from a specific activity can or could cause deterioration to the raw water quality at the drinking water system. Future studies may improve the certainty of these areas to limit the impact that future uses may have on the drinking water system.

2. Existing Natural Feature (forest): Forest cover within the ERNHSS refers to features which were identified through aerial photography interpretation as natural features with tree cover. These features not only include vegetation communities which meet the definition of a “forest” based on the Ecological Land Classification (ELC) system - a treed community with greater than 60% tree cover. Guidelines for the protection and restoration of forests are based on objectives to promote healthy, self-sustaining treed ecosystems. Enhancing these natural corridors will re-establish linkages to major natural nodes and will in turn create new habitat and terrestrial resource areas.

3. Restoration Opportunity Other: Areas identified as restoration opportunities through a qualitative interpretation of the existing landscape using available aerial photography. These include opportunities to increase interior forest habitat, consolidate forest patch shape/reduce edge, wetland restoration areas, as well as provide linkage and connectivity between core natural features.

Figure 3: Essex Region Conservation Authority (ERCA) Regulation Map



5.3.2 Natural Heritage Features

Schedule C of the Town of LaSalle Official Plan designates Natural Environmental Features that exist within the Town, as established in the Essex Region Natural Heritage System Strategy (ERNHSS) prepared by ERCA. Portions of the Natural Environment intersect the study area near the following intersections:

- Reaume Road and Malden Road
- Bouffard Road and Malden Road
- Laurier Drive and Malden Road

Schedule E also designates areas within the Town of LaSalle that are susceptible to flooding, including the roundabout at Todd Lane and Malden Road, as well as lands along Malden Road that are located south of Normandy Street and North of Suzanne Street.

5.3.3 Fish and Fish Habitat

Six municipal drains intersect the study area, including Turkey Creek/Grand Marais Drain, Cahill Drain, Normandy Drain, Tourangeau Drain, Bessette Drain, and Marentette Drain.

Turkey Creek runs east/west and intersects the study area where Malden Road meets Todd Lane. The Cahill Drain intersects the study area just north of the Morton Drive and Malden Road intersection, and the drain continues east out of the study area. The Normandy Drain is a branch of the Cahill Drain that flows north from where the Cahill Drain intersects Malden Road, and continues parallel to Malden Road, until Normandy Street, where the drain then flows east along Normandy Street. The Tourangeau Drain intersects Malden Road at Stanton Street and runs south adjacent to Malden Road, until the drain reaches the intersection of Stuart Boulevard and Malden Road, where the drain then flows east out of the study area. Lastly, the Bessette Drain intersects the study area at Laurier Parkway and runs parallel with Malden Road south to past Meagan Drive, outside the study area. The Marentette Drain intersects the study area just north of Mike Raymond Drive and flows north parallel to Malden Road until the drain reaches the intersection of Reaume Road and Malden Road. The drain branches off just south of Laurier Parkway and flows east out of the study area.

There are no Species at Risk fish habitat documented in these drains, although there is potential for Northern Sunfish, Pugnose Minnow and Spotted Sucker (endangered/threatened) to be present in the Cahill Drain and the Tourangeau Drain.

In-water works will be required for the Cahill Drain culvert extension and may impact fish habitat. A restricted in-water work timing window based on fish species present falls between March 15 and July 15. Permit approvals will be obtained through the Department of Fisheries and Oceans (DFO) and ERCA, as required.

5.3.4 Terrestrial Ecosystems

The study area is a mixed-use urban corridor, with potential for Species at Risk plants, reptiles, and birds to occur, although limited suitable habitat is present. There are several large ornamental trees that have been identified along Malden Road that were taken into consideration during the design phase.

5.3.5 Species at Risk

Through the *Endangered Species Act*, certain rules have been prepared for work on improving, maintaining, or repairing a drain or ditch that could affect a protected species or habitat. A search of the biodiversity atlases and Natural Heritage Information Centre (NHIC) Explorer was conducted for Species at Risk records within the past 30 years (from 1989-present) within the 5 subject site 1 km squares that cover the entire study area (UTM ID: 17G2979, 17G3079, 17LG2978, 17LG2977, 17LG2976). A review of the database was completed and the SAR with potential to occur in the study area are identified in **Table 3**. Per the *Endangered Species Act, Ditch and Drainage Work and Endangered or Threatened Species*, a permit shall still be required if operations affect various species, including Pugnose Minnow, identified in **Table 3.**

Table 3: Potential SAR in Study Area

Species	Committee on the Status of Species at Risk in Ontario (COSSARO) List Ranking and Habitat Protection	COSSARO Habitat Considerations
Plants		
Climbing Prairie Rose	Special Concern Assessed as a species of special concern prior to the *Endangered Species Act 2008* (ESA).	Found in open habitats with moist heavy clay to clay-loam soils such as old fields, abandoned agricultural land, as well as prairie remnants and shrub thickets – depends on areas being kept open by periodic fire or other disturbances.
American Chestnut	Endangered Assessed as endangered prior to the ESA.	Prefers dryer upland deciduous forests with sandy, acidic to neutral soils. In Ontario, it is only found in the Carolinian Zone between Lake Erie and Lake Huron. The species grows alongside Red Oak, Black Cherry, Sugar Maple, American Beech, and other deciduous tree species.
Dense Blazing-star	Threatened Assessed as threatened prior to the ESA.	Grows in moist prairies, grassland savannahs, wet areas between sand dunes, and abandoned fields. This plant does not do well in the shade and is usually found in areas that are kept open and sunny by fire, floods, drought, or grazing.
White Colicroot	Endangered The Colicroot was already assessed as threatened when the ESA took effect in 2008. It was reassessed as endangered in June 2016.	Colicroot grows in open, sunny, and moist habitats with sandy or mucky soil, such as prairies and old abandoned fields. It has also been found along roadsides and forest edges. It does not tolerate shade or competition from other plants and appears to do well in areas that are kept open by fire, drought, grazing and other disturbances.
Riddell's Goldenrod	Special Concern Assessed as a species of special concern prior to the ESA.	Prefers open tallgrass prairie habitat with moist to wet calcium-rich soils. In Ontario, it also occurs in roadside ditches and along railway right-of-ways.
Scarlet Ammannia	Endangered Assessed as endangered prior to the ESA.	Found on mudflats, sand beaches, and the edges of wetlands and ponds that are seasonally flooded. Fluctuating water levels are important to its survival. It does well in habitat that is generally submerged early in the year and when water levels recede later in the summer the plants emerge.

Species	Committee on the Status of Species at Risk in Ontario (COSSARO) List Ranking and Habitat Protection	COSSARO Habitat Considerations
Red Mulberry	Endangered Assessed as endangered when the ESA took effect in 2008. It was re-assessed as endangered in 2015.	Grows in moist, forested habitats and on both sandy and limestone-based loamy soils. It is often found in areas where the forest canopy is quite open and allows lots of sunlight to reach the forest floor, but it will tolerate some shade.
Eastern Flowering Dogwood	Endangered Assessed February 18, 2009.	Eastern Flowering Dogwood grows under taller trees in mid-age to mature deciduous or mixed forests. It most commonly grows on floodplains, slopes, bluffs and in ravines, and is also sometimes found along roadsides and fencerows.
Eastern Prairie Fringed Orchid	Endangered Assessed as endangered prior to the ESA.	Grows in wetlands, fens, swamps, and tallgrass prairie. It has been found in ditches and railroad rights-of-way.
Reptiles (snakes, lizards, and turtles)		
Butler's Gartersnake	Endangered Already assessed as endangered when the ESA took effect in 2008.	Prefers open, moist habitats, such as dense grasslands and old fields, with small wetlands where it can feed on leeches and earthworms. Burrows made by small mammals and even crayfish are sometimes used as hibernacula. This species is also commonly found in rock piles or old stonewalls.
Massasauga (Carolinian population)	Endangered The Massasauga Rattlesnake was listed as threatened when the ESA took effect in 2008. On June 27, 2014, the population was split into two and the Carolinian population listed as endangered.	Tall grass prairie, bogs, marshes, shorelines, forests and alvars, but require open areas to warm themselves in the sun. Also found in dry habitats such as rock barrens or forest clearings where they can more easily maintain the body temperature, while also foraging and mating in lowland habitats such as grasslands, wetlands, bogs and the shorelines of lakes and rivers. Massasaugas hibernate underground in crevices in bedrock, sphagnum swamps, tree root cavities and animal burrows.
Common five-lined skink (Carolinian population)	Endangered Assessed September 10, 2009.	Common Five-lined Skinks like to bask on sunny rocks and logs to maintain a preferred body temperature (28-36°C). During the winter, they hibernate in crevices among rocks or buried in the soil. The Carolinian population can be found under woody debris in clearings with sand dunes, open forested areas, and wetlands.
Blandings Turtle	Threatened Assessed as threatened when the ESA took effect in 2008. A reassessment in May 2017 confirmed this status.	Live in shallow water, usually in large wetlands and shallow lakes with lots of water plants. It is not unusual, though, to find them hundreds of metres from the nearest water body, especially while they are searching for a mate or traveling to a nesting site. Blanding's Turtles hibernate in the mud at the bottom of permanent water bodies from late October until the end of April.
Birds		
Yellow-breasted Chat	Endangered Assessed November 30, 2011.	Lives in thickets and scrub, especially locations where clearings have become overgrown. These birds spend their winters in coastal marshes and eats insects gathered from the foliage of low, dense shrubs, or from the ground.

Species	Committee on the Status of Species at Risk in Ontario (COSSARO) List Ranking and Habitat Protection	COSSARO Habitat Considerations
Fish		
Spotted Sucker	Special Concern Assessed as Special Concern when the ESA took effect in 2008.	Inhabits clear creeks and small to moderate sized rivers with sand, gravel, or hard-clay bottoms, usually free of silt. Also found in turbid habitats or in rocky riffle areas of streams for breeding.
Pugnose Minnow	Threatened Assessed as threatened when the ESA took effect in 2008. It was reassessed as threatened in 2012.	The Pugnose Minnow prefers coastal wetlands, and slow-moving rivers and streams with clear, warm water, little or no current, and abundant vegetation.
Northern Sunfish	Special Concern Northern Sunfish (Great Lakes – Upper St. Lawrence populations) Assessed June 2, 2017.	Lives in shallow vegetated areas of quiet, slow flowing rivers and streams, as well as warm lakes and ponds, with sandy banks or rocky bottoms and prefer to be near aquatic vegetation where they can avoid strong currents.

5.3.6 Groundwater

Previous geotechnical reports have been completed along the corridor as part of past infrastructure projects, and additional investigations were completed for the 2009 Class EA. These past geotechnical reports indicated that groundwater is present, particularly at the Turkey Creek and Cahill Drain crossings. The reports also indicated that the ground is genuinely a silty clay with pockets of sand, and bed rock is anticipated to be about 30 m below grade. Furthermore, the topography was noted to be very flat, resulting in poor drainage of the natural soils.

5.4 Cultural Resources

The requirement to consider cultural heritage in Municipal Class Environmental Assessments (EA) is discussed in the Municipal Class Environmental Assessment Manual (MCEA Manual) (Municipal Engineers Association 2015) and the revised 2014 Provincial Policy Statement (PPS) (Government of Ontario 2014). The MCEA Manual considers cultural heritage, including built heritage resources and cultural heritage landscapes, as well as archaeological resources, as one in a series of environmental factors to be considered when undertaking an MCEA, particularly when describing existing and future conditions, development alternatives, and determination of the preferred alternative.

5.4.1 Cultural Heritage

A *Cultural Heritage Assessment Report (CHAR)* (Stantec 2021), has been completed to identify heritage resources, including built heritage and cultural heritage landscapes, present within, and adjacent to the study area. The methodology included a historical background research, municipal and agency consultations, as well as a field survey from the ROW, which was completed on January 15, 2020. The assessment concluded that one heritage resource, a Queen Anne style residence at 7140 Malden Road is located within the study area.

The *Cultural Heritage Assessment Report (CHAR)* is provided in **Appendix B**.

5.4.2 Archaeology

A Stage 1 archaeological assessment, involving background research and a property inspection, was completed on January 15, 2020 to consider areas of archaeological potential in the study area. The assessment concluded that much of the study area, approximately 77.6%, retains low to no archaeological potential as it includes: extensive land disturbance, low and permanently wet areas, and previously assessed areas. Stage 2 archaeological assessment is not required.

The *Stage 1 Archeological Assessment* (Stantec 2020) is provided in **Appendix C**.

6.0 Review of Alternative Solutions

As part of the Class EA Addendum process, a series of alternatives were evaluated to identify future constraints and identify future opportunities. The following alternative solutions were evaluated:

- Do Nothing: Assumes no improvements to the corridor or the surrounding road network.
- Network Extensions: Assumes the planned extension of Reaume Road east to Huron Church Road and the Extension of Ellis Street south to Diotte Street are made to the corridor through to 2041.
- Previously Planned Improvements Alternative: Assesses the Network Extensions with previously recommended improvements from the 2009 Malden Road EA.
- Improved Alternative with Three-Lane Cross-Section: Scenario with improvements and solutions based on constraints identified in the previously planned improvements alternative scenario. This includes one lane in each direction with a two-way centre turning lane south of Normandy Street to the southern extent of the study area with intersection improvements. This scenario also includes the planned extensions of Reaume Road and Diotte Street. This includes on-street bike facilities which are able to fit within the right-of-way due to the three-lane cross-section.
- Improved Alternative with Four-Lane Cross-Section: Scenario with improvements and solutions based on constraints identified in the previously planned improvements alternative scenario. This includes two lanes in each direction between Normandy Street and the southern extent of the study area with intersection improvements. This scenario also includes the planned extensions of Reaume Road and Diotte Street. On-street bike lanes are unable to be accommodated within the right-of-way, a shared multi-use path would be provided on the east side of the road.

A transportation analysis was completed for each alternative and is documented in the *Traffic Report* (Stantec 2021)*,* available under separate cover.

6.1.1 Changes to 2009 Class EA Alternative Solutions

Based on the review of alternative solutions between 2009 and 2020, the recommended alternative solutions are still generally applicable today.

Information presented to the project team in January 2021 identified that the 2009 Malden Road Transportation, Public Safety & Urban Design Improvements Project Environmental Study Report did not document communication made by the Town of LaSalle in the final version of the report, to remove the realignment of Bouffard Road east of Malden Road as part of the preferred design. In 2009, a Part II Order Request was submitted under the Environmental Assessment Act through the Ministry of Environment, Conservation and Parks concerning this intersection. The Town of LaSalle agreed to leave the intersection in the current alignment, and the Part II Order request was withdrawn. However, a revised final report was not prepared to reflect this discussion in the 2009 Malden Road EA ESR and the current project team was unaware of this amendment at the commencement of the current EA Addendum process.

To address the previous communications made by the Town of LaSalle, Stantec reviewed and developed additional design alternatives at the Bouffard Road intersection. This review included:

- Leaving the intersection in the current offset form.
- The realignment of Bouffard to the west of Malden.
- The realignment of Bouffard to the east of Malden.

The existing environmental conditions, current municipal and provincial planning policies, and changes in traffic patterns have been reviewed to determine if the 2009 recommendations are still relevant. The review of current and future conditions in the corridor and surrounding land use changes determined that the realignment and signalization of the Bouffard Road and Malden Road intersection should be recommended as part of the overall design for the Malden Road corridor. The following provides a summary of the key findings from the *Traffic Report* (Stantec 2021)*,* provided under separate cover.

The Level of Service (LOS) analysis of the existing Malden/Bouffard intersection indicates reasonable operations (LOS C or better) except for Bouffard Road west during the PM Peak which has a LOS D for the eastbound left and right movements. In the future conditions under a “Do Nothing” scenario, both legs of Bouffard Road operate at a LOS F for the Malden Road left turns due to queue and delay. In the future considerations

under a “Network Extension Scenario” (fourth leg at Reaume and extension of Diotte), there is improvement on the east leg of Bouffard to LOS C, but the west leg remains LOS F due to queue and delay. In the future conditions under the proposed scenario which includes realignment and traffic signals, the intersection operates at a LOS A.

The collision history for the five-year period from 2014-2019 indicates that the Malden Road at Bouffard Road intersection resulted in 22 collisions, and a rate of 1.46 collisions per million vehicles (CMV). This collision rate is higher than most other intersections and the total number of collisions represents 10.8% of all intersection collisions within the corridor. Further, when projecting future collisions, the analysis identifies that this intersection will have higher than expected annual collision frequencies. This indicates that the geometry of the staggered Bouffard Road intersection will continue to result in a higher collision frequency when compared to other intersections within the corridor.

At the present, Bouffard Road East and Bouffard Road West form a “staggered intersection” with Malden Road and are approximately 113 m apart. A considerable number of vehicles make a right-hand turn to continue the east-west/west-east through movement on Bouffard Road. As east-west traffic flows are predicted to grow along Bouffard Road, it is anticipated that even more vehicles will attempt to undertake this turning movement in its current configuration, which will result in increased collisions over time.

The left turn lanes on Malden Road at the staggered Bouffard Road intersections overlap, resulting in insufficient space to properly decelerate prior to the anticipated queues of traffic. The stop-controlled intersections perform poorly in the future, resulting in extensive delays to the left turning movements. To address this, traffic signals are warranted which cannot be completed properly without a realigned Bouffard Road intersection.

The realignment of the intersection would include an improved skew angle as compared to the existing intersection of the west leg of Bouffard Road with Malden Road. The combination of a realignment of Bouffard Road and traffic signals would improve the operational and safety performance at the intersection. Enhanced pedestrian and cycling east-west connections will be included in this redesigned intersection.

Based on the findings, the EA Addendum concludes that the realignment and signalization of Bouffard Road east of Malden Road is recommended as part of the overall design for the Malden Road corridor.

6.1.2 Recommended Alternative

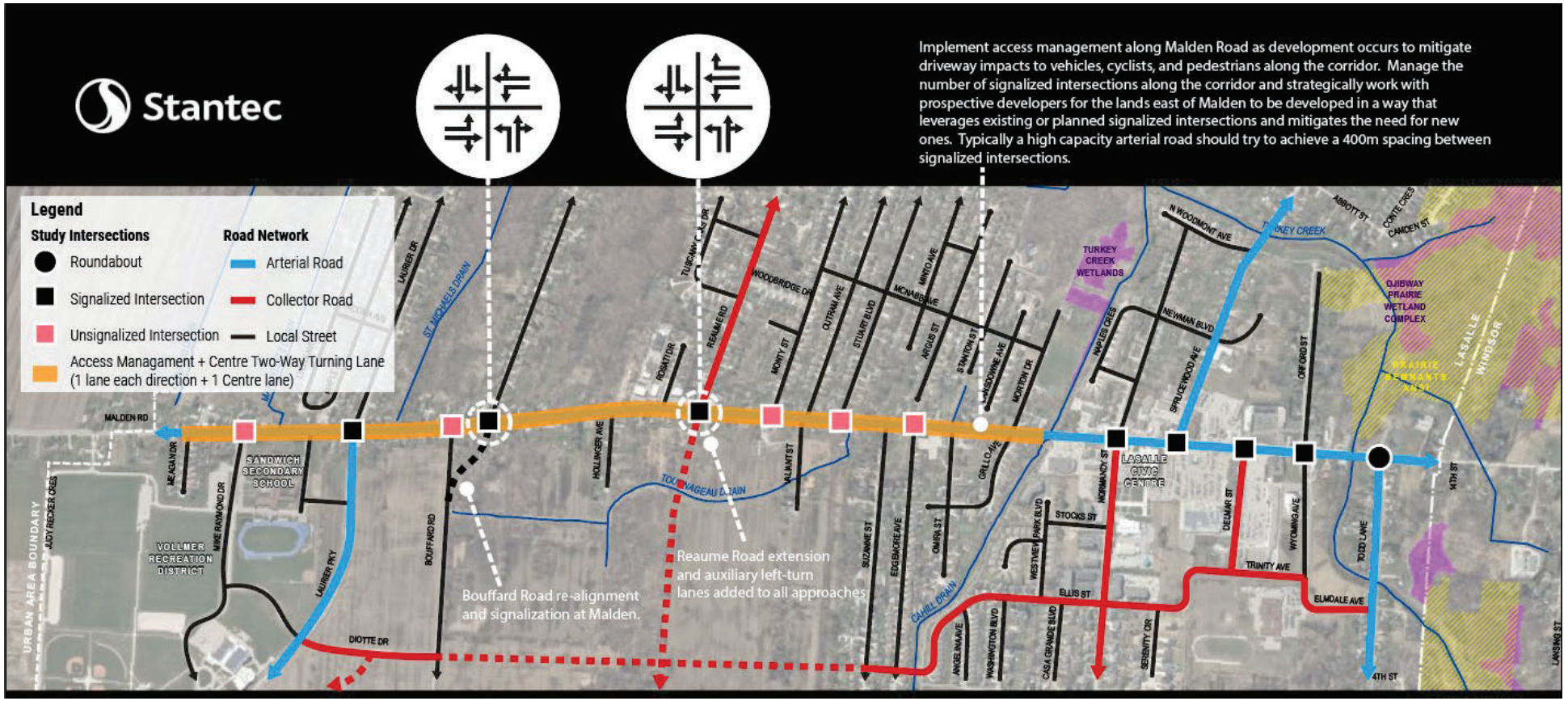
Based on the review completed by the Project Team, the Improved Alternative with Three-Lane Cross-Section, previously recommended by the 2009 Environmental Study Report (and subsequently appealed and amended), is the recommended alternative with the addition of planned extensions of Reaume Road and Diotte Street, and the realignment and signalization of Bouffard Road. Several roadway improvements are recommended to address vehicular deficiencies identified through the analysis of the previously proposed solutions for Malden Road. These recommendations include physical measures, as well as access management policy measures to support the corridor's growth into the future. The recommended alternative is summarized below:

- Widen Malden Road to three lanes from south of Normandy Street to south of Meagan Drive.
- Signalize the Reaume Road Intersection and protect for a future road extension to the east of Malden Road.
- Re-align and signalize Bouffard Road to eliminate the offset intersections and create a continuous east-west corridor across Malden Road.
- Adjust alignment at Laurier Drive/Laurier Parkway to improve operations and safety.
- Implement buffered on-road bike lanes and sidewalks on both sides of Malden Road.
- Implement pedestrian crosswalk and multi-use trails near the Cahill Drain to improve east-west connection.

No changes are being recommended for the section between Normandy Street northerly to the study limit, as the improvements associated with this part of the 2009 EA have already been constructed.

These improvements are further discussed in the *Preliminary Design Report Addendum* (Stantec 2021), under separate cover. A visual summary of the recommended solutions is shown in **Figure 4**.

Figure 4: Improved Alternative with Three-Lane Cross-Section



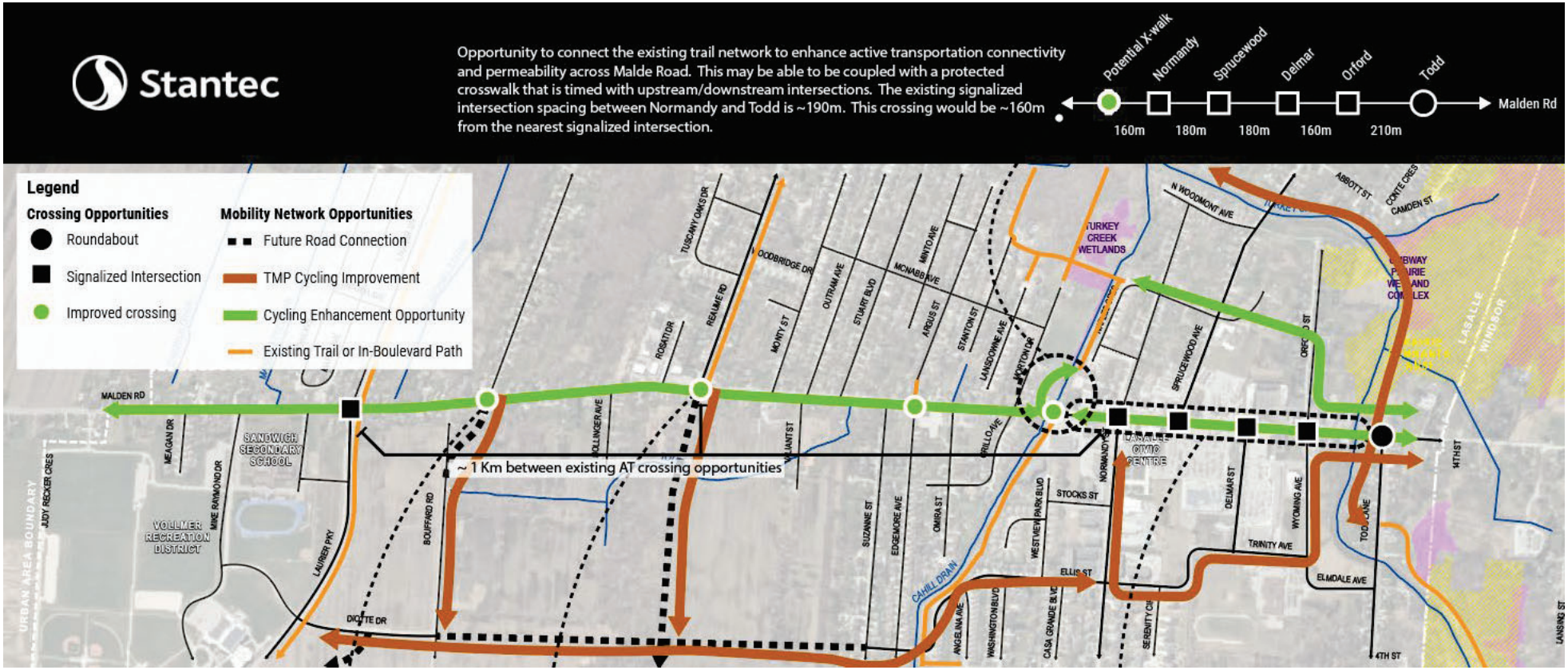
6.2 Active Transportation Alternative Solutions

Along Malden Road there are opportunities to increase, connect, enhance, and provide Active Transportation facilities, crossings, and connections. These opportunities align with the recommendations of the Town of LaSalle planning documents, such as the Transportation and Active Transportation Master Plan, as well as LaSalle's Transportation and Age Friendly Active Transportation Master Plan.

Constraints were identified, including right-of-way space, limited opportunity for protected crossing locations, entrance locations, connectivity with other parallel corridors, and discontinuous or inconsistent facilities.

The existing active transportation constraints and opportunities are presented in **Figure 5**.

Figure 5: Existing Active Transportation Constraints & Opportunities



Review of Alternative Solutions
October 14, 2021

Active Transportation alternatives were developed for the Malden Road corridor, from the Cahill Drain to the Southern Study Limits.

The methodology outlined in OTM Book 18 was employed to develop suitable facilities for the study area corridor. The selection of active transportation facility type focuses on vehicular speed, vehicular volume, numbers of accesses onto the roadway, and availability of on-street parking. It should be noted that although OTM Book 18 provides a tool for bicycle facility selection, it is to be treated as a guideline to complement engineering judgement, therefore design considerations were also reviewed based on site-specific conditions.

Three alternatives were developed:

1. In-boulevard multi-use path on the east side, sidewalk on the west side.
2. On-road buffered bike lanes with separated sidewalks.
3. Two-way cycle track on the east side with separated sidewalks.

The Active Transportation Alternative Solutions were evaluated using numerous factors, including:

- Natural Environment: which considered terrestrial & aquatic habitat, wildlife, and climate change.
- Socio-economic Environment: which considered property acquisition/impacts, business operations, streetscapes & aesthetics, accessibility, active transportation, and municipal and provincial planning.
- Cultural Environment: which considered archaeological resources, built cultural resources & landscapes, Indigenous Lands & Treaty Rights.
- Technical Considerations: which considered constructability & utilities, traffic operations, road safety for all road users, maintenance & operations, and capital cost.

Comments received from agencies, stakeholders and members of the public were also considered.

The alternatives and evaluation process are further discussed in the *Traffic Report* (Stantec 2021) provided under separate cover.

6.3 Recommended Active Transportation Facility

The recommended active transportation facility for the Malden Road corridor from the Cahill Drain to the Southern Study Limits, was determined to be on-road buffered bike lanes with separated sidewalks. This includes a dedicated 1.5 m on-road bike lane on both sides of the roadway with an approximate 1.0 m-wide painted buffer and sidewalks on both sides of the roadway. During Detailed Design, the Town may choose to refine the width of the cycling lanes or buffer width, and include raised planter boxes or flexible bollards, as opposed to the painting markings, to provide additional separation between the roadway and cycling lanes.

Furthermore, to promote connectivity and safety within the active transportation network, a new pathway connection is proposed to connect the existing Cahill Drain Trail. The existing Cahill Drain Trail is disconnected between the east and west sides of Malden Road presenting a discontinuous network and experience for pedestrians and cyclists. The new proposed section of pathway will connect to the existing sections of pathway on the west and east sides of Malden Road via a dedicated new crosswalk at Malden Road. This will provide an alternative route to avoid the busy commercial core and enhance the east-west trail connection by mitigating Malden Road as a barrier. This improvement is in alignment with the previously recommended solution from the 2009 EA.

7.0 Potential Environmental Impacts and Proposed Mitigation Measures

This section outlines the updates of potential environmental impacts from those outlined in the 2009 Class EA, including the natural environment, socio-economic environment, built heritage resources and archaeological resources. Potential direct and indirect impacts are highlighted, including mitigation measures, as well as commitments to future work during the detailed design and construction phases.

7.1 Socio-Economic Environment

The socio-economic impacts are related to short term construction activities which cannot be avoided or mitigated, and long-term property impacts to residential properties along the Malden Road corridor.

To accommodate and mitigate short term impacts as a result of construction activities, the Town will ensure temporary access to residential, commercial, businesses and parks is available. The streetscape along Malden Road will be temporarily impacted during construction and will have some permanent impacts with the removal of trees to widen the corridor. A landscape plan will be developed as required during detailed design.

The Town of LaSalle has contacted property owners with anticipated direct, permanent impacts to their property. Property acquisition is required throughout the study area corridor to accommodate the proposed roadway and active transportation improvements. Property acquisition is predominantly required south of Cahill Drain, on both east and west sides of the corridor, to accommodate increased right-of-way width.

The proposed Malden Road right-of-way limit is depicted on the preliminary design drawings provided in **Appendix D**. The new right-of-way and limits of property acquisition will be further refined during detailed design and are subject to Town of LaSalle Council approval to continue into property acquisition discussions.

7.2 Natural Environment

7.2.1 Terrestrial Ecosystems

There are several large ornamental trees that have been identified along Malden Road. A tree impact assessment was completed and concluded that an estimated 90 trees of various sizes are anticipated to be impacted by the proposed improvements. The majority of these trees are located on private property to be acquired through the ROW widening. It should be noted that many of these impacts are based on an estimated tree trunk location and determined from aerial imagery and as such, these potential tree impacts will need to be confirmed during detailed design.

7.2.2 Proposed Mitigation Measures

The following standard mitigation measures/best practices are provided to reduce potential impacts to the adjacent natural heritage features during construction:

- Delineate the project footprint with tree protection fencing prior to construction to reduce impacts to adjacent natural features.
- Wash, refuel and/or service equipment a minimum of 30 m from watercourses to reduce the risk of deleterious substances from entering surface waters.
- Thoroughly clean construction machinery prior to entering the site to reduce the potential for establishment of highly invasive species such as Phragmites.
- To reduce the potential for spread of inspect pests such as the Emerald Ash Borer, trees cut should be disposed of on site (either through spreading of wood chips or trees cut and sawed into logs).

7.2.2.1 Erosion and Sediment Control

Silt fencing or sediments logs will be used if exposed soils are at risk of eroding. In addition to any specified requirements (i.e., documented with design drawings), additional silt fence and/or sediment logs should be available on site, prior to grading operations, to provide a contingency supply in the event of an emergency. Materials requiring stockpiling (fill, topsoil, etc.) will be stabilized and kept a safe distance (>30 m) from watercourses.

Erosion and sediment controls should be monitored and maintained, as required. Controls are to be removed only after the soils of the construction area have been stabilized and adequately protected until cover is re-established.

7.2.2.2 Wildlife Protection

Vegetation clearing is to occur between September 1 and March 31 to avoid the primary breeding (nesting) period for birds in accordance with the Migratory Birds Convention Act (MBCA). If vegetation removal will occur during the primary breeding period (April 1 to August 31), areas to be cleared should be marked and a qualified biologist should conduct nest surveys approximately seven days, or less, in advance of the planned clearing. If nests are found, clearing of the area would cease until the young have naturally fledged.

Removal of potential suitable bat maternity roost trees is to occur outside of the bat roosting period from April 1 to September 30 to avoid direct harm to bats, and to reduce the risk to bat species protected under the ESA.

A visual search of the construction area (including machinery) shall be conducted each day to locate and avoid reptiles, amphibians, and other wildlife. If wildlife are encountered, they will be given reasonable time to flee the area on their own. If a wildlife species must be moved, a person knowledgeable in handling techniques may relocate it to a location that is both safe and suitable. Handling of a SAR is not permitted without permission under the ESA.

7.2.2.3 Site Rehabilitation

A plan to rehabilitate temporary easement areas upon completion of the work should be prepared to re-naturalize the area and retain the ecological function of the natural heritage features. The plan should be prepared in consultation with ERCA and should include a program to monitor the success of the restoration plantings and the presence of invasive species.

7.2.2.4 Endangered Species Act Authorizations

With the implementation of mitigation, including timing windows, impacts to SAR or SAR habitat are not anticipated and therefore authorizations under the ESA are not anticipated to be required.

7.2.3 Fish and Fish Habitat

There are no critical Species at Risk fish habitat documented in these drains, although there is potential for Northern Sunfish, Pugnose Minnow and Spotted Sucker (endangered/threatened) to be present in the Cahill Drain and the Tourangeau Drain. Indirect impacts to fish habitat can include sediment introductions from adjacent graded areas, increasing turbidity which impairs vision for feedings. Suspended sediments can abrade gill membranes leading to physical stress, and impact prey organisms' behavioral changes. Heavy sediments can deposit on coarser substrates generally used for spawning, incubation of juvenile fish, or food production.

7.2.4 Approvals and Permits

Permit requirements will be confirmed during detailed design. Prior to commencing design implementation, the following permits/approvals may be required:

7.2.4.1 Fisheries Act

The Fisheries Act includes prohibitions against harmful alteration, disruption, or destruction (HADD) of fish habitat. It extends protection to all fish and fish habitat. When a HADD cannot be avoided or mitigated, a subsection 35(2) authorization with appropriate offsetting of residual adverse effects is required.

In-water works will be required for the Cahill Drain culvert extension and may impact fish habitat. The proposed culvert construction plan will be submitted to DFO as a Request for Review. If DFO determines that the proposed work will result in the Harmful Alteration, Disruption or Destruction (HADD) of fish habitat for the killing of fish through means other than fishing, an application for Authorization under the Fisheries Act will be submitted to DFO.

7.2.4.2 Conservation Authority Regulated Area

Under O.Reg.157/06 permit is required for development or interference with wetlands and alterations to shorelines and watercourses. A permit application package will need to be prepared and submitted to ERCA that includes the following information:

- Maps and photographs showing the location of project work relative to regulated features.
- Environmental mitigation measures for sediment and erosion control, re-vegetation and seeding.
- Other site-specific data as required.

Consultation with ERCA is recommended to confirm complete permit application requirements.

7.2.4.3 Fish and Wildlife Conservation Act

If in-water work involving isolation techniques require relocation of fish, turtles or other wildlife, a Wildlife Scientific Collectors Authorization may be required from the Ministry of Northern Development, Mines, Natural Resources and Forestry under the *Fish and Wildlife Conservation Act*.

7.2.5 Proposed Mitigation Measures

The following standard mitigation measures/best practices are provided to reduce potential impacts to the adjacent aquatic habitat features during construction:

- A restricted in-water work timing window between March 15 to July 15 for the protection of spawning fish.
- Design and implement an Erosion and Sediment Control (ESC) plan that identifies erosion control measures that should be installed, monitored, and maintained throughout all phases of the Project until the site has been stabilized.
- Designated areas for equipment refueling should be located a minimum 30 m from watercourses, waterbodies, or regulated areas.
- Machinery shall arrive on site in a clean condition and maintained free of fluid leaks, invasive species, and noxious weeds.
- Develop and implement a contaminant and spill management plan (or equivalent) that reduces the risk of accidental spills or releases (including construction materials) from entering a watercourse.
- Wash, refuel and service machinery and store fuel and other materials for the machinery in such a way as to reduce the risk of the entry of deleterious substances to surface water features.
- Remove all construction materials from site upon project completion.

7.2.6 Spills Contingency Plan

Spills containment and clean-up procedures shall be implemented immediately in the unlikely event of a spill. The proponent shall immediately contact the Ministry of Environment, Conservation and Parks (MECP) Spills Action Centre. The MECP Spills Action Centre is the first point of contact for spills at the provincial and federal level. In addition, the following agencies will be contacted:

- Fisheries and oceans Canada (Toll-free: 1-855-852-8320).
- Ministry of Natural Resources and Forestry (Toll-free: 1-866-517-0571).
- Essex Region Conservation Authority (Call: 1-888-487-4760).

A contingency plan will be in place to effectively address inadvertent releases of sediment laden water or other deleterious substances from the project site. The contingency plan shall outline the steps that the contractor is to take in the event of a sediment release or other type of spill.

7.3 Cultural Resources

7.3.1 Cultural Heritage

A *Cultural Heritage Assessment Report (CHAR)* (Stantec 2021), has been completed to identify heritage resources, including built heritage and cultural heritage landscapes, present within, and adjacent to the study area. The methodology included a historical background research, municipal and agency consultations, as well as a field survey from the ROW, which was completed on January 15, 2020. The assessment concluded that one heritage resource, a Queen Anne style residence at 7140 Malden Road is located within the study area. Depending on the approaches that may be identified through planning and detailed design, this resource may be at risk for indirect impacts resulting from construction-related ground vibration. It is recommended that the Town consult with a qualified building conditions specialist or geotechnical engineer with previous experience working with heritage structures to identify appropriate vibration mitigation measures in advance of construction. Mitigation measures for vibration may include developing an appropriate vibration setback distance, a vibration attenuation study, and/or a construction monitoring program.

7.3.2 Archaeology

A Stage 1 archaeological assessment involving background research and a property inspection, was completed on January 15, 2020, to consider areas of archaeological potential in the study area. The assessment concluded that much of the study area, approximately 77.6%, retains low to no archaeological potential as it includes: extensive land disturbance, low and permanently wet areas, and previously assessed areas. The remaining portion of the study area, approximately 22.4%, retains potential for the identification and documentation of archaeological resources. Thus, a Stage 2 archaeological assessment is required for any portion of the Project's anticipated construction which impacts an area of archaeological potential. These areas are identified in the *Stage 1 Archeological Assessment* (Stantec 2020) (**Appendix C**).

The *Stage 1 Archaeological Assessment* was submitted to MHSTCI and entered into the Ontario Public Register of Archaeological Reports on July 20, 2020.

8.0 Implementation

The 2009 EA does not outline the necessary permits and approvals required from various agencies during detailed design and prior to construction. As project details are further refined during detailed design, required permits and approvals will be determined.

8.1 Potential Impacts during Construction

The mitigation of construction related impacts will follow the *Environment Construction Guidelines for Municipal Road, Sewage and Water Projects,* issued by the Municipal Engineers Association.

Impacts are discussed in various sections throughout this report, identifying the impacts during construction and the proposed mitigation measures. The following potential adverse effects are identified:

- Disruption/removal of existing vegetation.
- Construction noise and vibration from equipment.
- Dust generation altering air quality.
- Disruption to vehicular traffic.
- Mud, sedimentation, and soil compaction during construction.
- Contamination from spills.
- Impacts to water quality.
- Impacts to fish and wildlife, and their habitat.
- Potential impacts to archaeological resources.

Mitigation and monitoring conditions indicate a commitment on the part of the Town to mitigate potential environmental impacts and undertake a monitoring program post-construction.

It is intended that the proposed works will be executed in a manner that minimizes any adverse impacts on the natural, socio-economic, and cultural environments within the study area. The contractor is responsible for ensuring work is carried out in a manner that minimizes environmental impacts. A qualified environmental inspector is to be assigned to ensure compliance with environmental objectives.

8.1.1 Disposal of Excess Material

Surplus excavated material shall be removed to locations arranged by the Contractor. Prior to the disposal of any surplus material, the Contractor shall provide the Engineer with a sketch of dumping site(s), including site access points. A written statement from the property owner(s) agreeing to allow the disposal of fill on the property must be approved by a Contract Administrator (CA). Furthermore, the placement of fill within any area associated with valleys, wetlands, shorelines, and other hazardous lands that are regulated by Ontario Regulation 162/06 requires the written permission of conservation authorities.

All approvals and permits will have to be obtained. Relevant MECP policy framework and best management practices should be referenced and applied where applicable.

Upon completion of the disposing, levelling, and grading of surplus excavated material on any property, a written statement shall be obtained from the property owner(s) releasing the Contractor and Town from any claims and accepting the condition of the property as satisfactory.

8.1.2 Measures for Proper Tree Removal and Preservation of Residual Plant Communities

A Tree Protection Plan should be developed during the detailed design stage in order to provide guidelines for protecting and removing trees. Recommendations should outline how to best manage trees, as well as guidelines for removed timber resource use and minimizing soil compaction. The plan should also include hazard tree monitoring, pruning, insect and disease control, aerating, watering, and mulching guidelines for maintenance both during and post-construction.

8.1.3 Mud and Dust Control

All necessary measures should be taken during construction to prevent dust accumulation as a result of construction operations. The Contractor shall be responsible for all dirt and mud that it tracked onto the roadways from vehicles entering or leaving the job site. Upon request from the Contract Administrator, the Contractor shall immediately clean-up any mud or dirt resulting from construction activities. If the contractor is unable to sufficiently proceed with clean-up activities, the Contract Administrator will perform the necessary clean-up. Erosion and sediment control measures outlined in earlier sections will aid in controlling mud and dust levels by keeping exposed soil at a minimum.

8.1.4 Monitoring and Maintenance

During construction, the Town is responsible for ensuring that the environmental protection recommendations outline in the 2009 EA and this Addendum, as well as other subsequent agency approval conditions, are obeyed.

9.0 Closing

This EA Addendum Report was prepared to address significant modifications to the project as documented in the 2009 ESR. A review of the 2009 ESR was completed to determine if the recommendations were still relevant based on current environmental conditions, changes in traffic patterns and land use/development, and updated municipal and provincial policies.

Modifications to the recommendations in the 2009 ESR were required as described in this report. Specifically, the modifications include the realignment and signalization of Bouffard Road east of Malden Road as part of the overall design for the Malden Road corridor.

The EA Addendum process has involved consultation with directly affected members of the public, Indigenous communities, and review agencies to ensure that they were aware of the project and that their concerns have been addressed.

The filing of this report represents the conclusion of Addendum process as described in the MCEA document. Only the items in the Addendum (i.e., the changes to the 2009 Class EA) are open for review during the 30-day public review period. Provided that no Part II Order requests are received, and provided all appropriate permits are obtained, the Town may proceed with implementation of the project.

Interested persons may provide written comments to the Town of LaSalle for a response using the following contact information:

Peter Marra, P.Eng.
Deputy Chief Administrative Officer
Town of LaSalle
5950 Malden Road
LaSalle, ON N9H 1S4
pmarra@lasalle.ca

A request may be made to the MECP for an order requiring a higher level of study (i.e., requiring an individual/comprehensive EA approval before being able to proceed), or that conditions be imposed (e.g., require further studies), only on the grounds that the requested order may prevent, mitigate, or remedy adverse impacts on constitutionally protected Aboriginal and treaty rights. Requests on other grounds will not be considered. Requests should include the requester contact information and full name for the ministry. Please refer to **Section 2.1** for more information.