Infrastructure Ontario and Ontario Ministry of Transportation

Design and Construction Report #1

Highway 3 Widening Project – Essex to Leamington

December 2023 – 21-3142

Public and Agency Review

This Detail Design and Class Environmental Assessment Study is being carried out as a Group B undertaking following the Ministry of Transportation (MTO) Class Environmental Assessment (EA) for Provincial Transportation Facilities (2000), which has been documented in this Design and Construction Report (DCR).

A copy of this document is available for review on the project website between **December 22, 2023,** and **January 24, 2024**: **www.Hwy3Essex.com.**

Interested persons are encouraged to review this document and provide comments by **January 24, 2024,** to any of the project Team Members identified at the addresses noted below. Information collected will be used in accordance with the *Freedom of Information and Protection of Privacy Act* and the *Access to Information Act*. With the exception of personal information, all comments will become part of the public record.

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If you have any accessibility requirements to participate in this study, please contact one of the individuals identified above.

Section 16 Order (Aboriginal and Treaty Rights)

In addition, a request may be made to the Minister of the Environment, Conservation and Parks 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 should specify what kind of order is being requested (request for additional conditions or a request for an individual/comprehensive EA), how an order may prevent, mitigate or remedy those potential adverse impacts on constitutionally protected Aboriginal and Treaty Rights, and any information in support of the statements in the request. This will ensure that the ministry is able to begin reviewing the request efficiently.

The request should be sent in writing or by email to both of the following MECP contacts, copying the project team members listed above:

Minister of the Environment, Conservation and Parks
Ministry of Environment, Conservation and Parks
777 Bay Street, Fifth Floor
Toronto Ontario, M7A 2J3
Email: minister.mecp@ontario.ca

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

Information collected will be used in accordance with the Freedom of Information and Protection of Privacy Act. With the exception of personal information, all comments will become part of the public record. If you have accessibility requirements to participate in this project, please contact one of the team members listed above.

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Executive Summary

The Ontario Ministry of Transportation (MTO) and Infrastructure Ontario (IO) retained GIP Hwy 3 Inc. to complete the Design-Build-Finance (DBF) contract for the Class Environmental Assessment (EA), Detail Design, and Construction for the Highway 3 Widening Project, from 1.2 kilometres east of Essex County Road 23 easterly to 1.1 kilometres east of Essex County Road 34, in Essex County.

The Highway 3 Widening Project is being completed as a Group 'B' undertaking following MTO's Class EA for Provincial Transportation Facilities (2000). Works will build upon the previously completed Preliminary Design as documented in the 2006 Approved Transportation Environmental Study Report (TESR) and Preliminary Design Report (PDR) (Earth Tech Canada Inc.), the 2021 TESR Addendum (GHD), as well as the 2021 Design-Build-Ready (DBR) Report (GHD). As part of the Class EA process, a DCR is required to document construction details, including the traffic management plan for the project.

As the widening of Highway 3 is a multi-year construction project, two Design and Construction Reports (DCRs) will be prepared to allow Environmental Clearance to be issued. The majority of construction will be initiated in areas where permits can be obtained promptly, while not being delayed due to several municipal drain approvals that require more significant time to obtain. This provides flexibility within the construction schedule to advance the majority of the works, while obtaining the appropriate permits in other environmentally sensitive areas, or areas that require specific permissions. As each DCR is completed, it will be made available for a 30-day public comment period and a 30-day MECP review prior, prior to the start of construction.

A Notice of Study Commencement was published for the Highway 3 Widening Project. The Notice of Study Commencement was published in the Leamington Southpoint Sun on May 17, 2023, and the Essex Free Press on May 25, 2023. Twenty-five comments were received concerning the Project at the time of publishing this DCR #1.

Overall, the widening of Highway 3 includes the following key improvements:

- Design and construction of a new four-lane cross-section of Highway 3 with a 15-metre depressed median, with two new lanes being constructed for the eastbound direction and rehabilitation of the existing lanes for the westbound direction;
- Closure of Cameron Side Road/Concession Road 9, Marsh Road/Concession Road 8, Inman Side Road/South Talbot Road and Upcott Side Road, subject to the Ontario Land Tribunal decision;
- Concession Road 8 and McCain Side Road connection and intersection removal;
- Traffic signal replacement for the Highway 3 widening at Division Road (Essex Road 29) and Union Avenue (Essex Road 34);
- New traffic signals at Belle River Road (Essex Road 27), Essex Road 18, and Graham Side Road;
- Realignment of South Talbot Road at Belle River Road (Essex Road 27) and at Division Road (Essex Road 29);
- Realignment and extension of Division Road (Essex Road 29) from 130 metres north of the future west South Talbot Road connection with Division Road to Highway 3 and the Unnamed Road from Division Road (Essex Road 29) to Inman Side Road;
- Realignment of Essex Road 18 at Highway 3;
- New noise barrier along the south side of Highway 3, west of Division Road (Essex Road 29); and
- Drainage improvements, including abandonment/extension/rehabilitation/ replacement of culverts.

These proposed improvements are anticipated to begin in spring 2024, subject to approvals, and will be completed within MTO and municipal-owned lands and the existing right-of-way (ROW). Property required to facilitate the work was acquired following Preliminary Design, and no additional permanent property taking is required.

Based on the scope of work for this project, impacts to adjacent land uses are anticipated to be minimal. With appropriate mitigation measures implemented during construction, potential impacts can be avoided, mitigated, or minimized to the extent possible.

During construction, long-duration closures of Belle River Road (Essex Road 27), Division Road (Essex Road 29), Essex Road 18, Graham Sideroad, and Union Avenue (Essex Road 34) at Highway 3 will occur. During the closures, signed detour routes will be provided utilizing the County Road Network. Access to adjacent sideroads will be provided throughout construction. Advanced signage will be provided.

The project has potential to impact terrestrial and aquatic natural features including species at risk (SAR) and significant wildlife habitat (SWH). To avoid impacts to SAR, and minimize potential impacts to SAR habitat and SWH, mitigation measures will be included in the construction contract. Exclusionary fencing will be installed at work locations with the potential to impact SAR species. Fish and fish habitat impacts are anticipated to be minimal with mitigation measures implemented. In addition, the Landscaping and Ecological Restoration Plan includes measures to protect, or salvage and relocate, locally rare plant species, where feasible.

Excess soils, including those impacted by Phragmites (a highly invasive species), will be managed on-site in accordance with *Ontario Regulation (O. Reg.) 406/19*.

Archaeological Assessments were completed as part of the Preliminary Design and Design-Build Ready phases, which determined that further archaeological assessment is not required. The proposed improvements do not impact built heritage features or cultural landscapes.

As required by the MTO Class EA, all permits, approvals, and exemptions required for the project shall be obtained prior to Environmental Clearance – Construction Start being issued. Design related environmental approvals and permits required prior to construction include:

- Council/Ontario Land Tribunal (OLT) approval for municipal road closures;
- Register impacts to Butternut under O. Reg.830/21 of the Endangered Species Act (ESA, 2007) through a Notice of Activity;
- Acceptance of Archaeological Assessment reports into the Ontario Public Register of Archaeological Reports by the Ministry of Citizenship and Multiculturalism (MCM);
- Acceptance of Section 78(5) Minor Improvement Reports under the Drainage Act for applicable culverts and adoption of municipal by-law(s); and
- Environmental Clearance – Construction Start following the DCR comment period and receipt of all PLAAs for works detailed in this DCR #1.

In addition, the following authorizations/licenses are required prior to handling wildlife during construction:

- A Wildlife Scientific Collector's Authorization from the Ministry of Natural Resources and Forestry (MNRF) for wildlife salvage; and
- A License to Collect Fish for Scientific Purposes from MNRF for fish salvage under the *Fish and Wildlife Conservation Act*.

To confirm the implementation and effectiveness of the environmental mitigation measures and provisions included in the construction Contract, an Environmental Management Plan (EMP) has been created for the project. The objective of the EMP is to maintain and, where possible, improve the state of the environment affected by the proposed improvements. This includes the development of appropriate mitigation measures for implementation during construction to fulfill the regulatory and contract requirements, protect the environment and meet MTO obligations.

During construction, environmental monitoring for this project will:

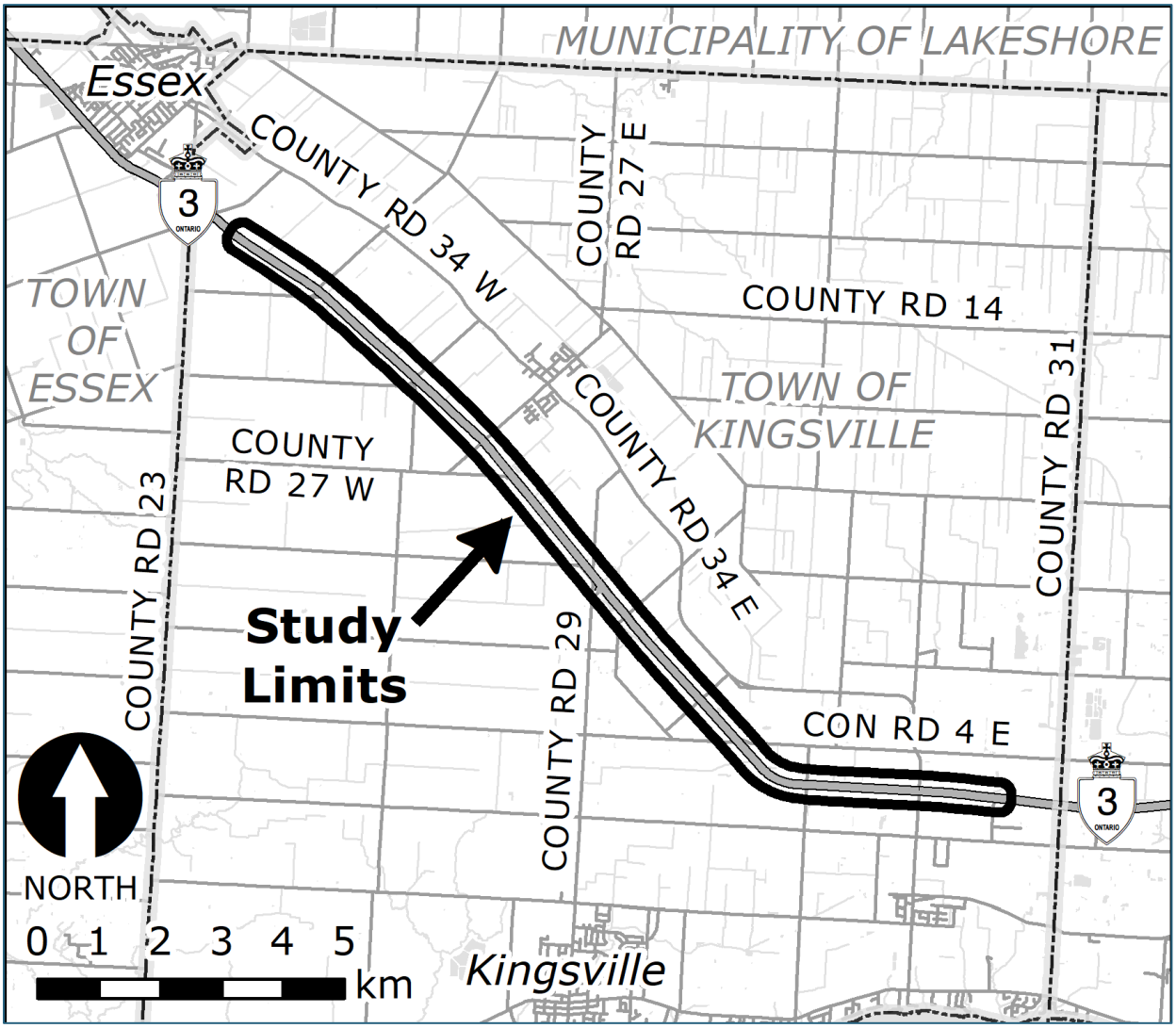
- Inspect and monitor pre-construction, construction, and post-construction environmental work specified in the Contract; and
- Thoroughly evaluate any changes proposed by the Contractor to ensure that changes meet the intent of the measures and provisions, as outlined in this DCR, and reflect prevailing conditions on-site.

The implementation and effectiveness of the measures and provisions included in the Contract will be monitored by GIP Hwy 3 Inc.’s environment inspector(s) and documented in summary reports weekly.

1.0 Project Overview

The Ontario Ministry of Transportation (MTO) and Infrastructure Ontario (IO) retained GIP Hwy 3 Inc. to complete the Design-Build-Finance (DBF) contract for the Class Environmental Assessment (EA), Detail Design, and Construction for the Highway 3 Widening Project, from 1.2 kilometres east of Essex County Road 23 easterly to 1.1 kilometres east of Essex County Road 34, in Essex County (the "Project"), as illustrated in **Figure 1** below.

Figure 1: Map of the Study Limits



1.1 Project Background

In 1999, the MTO initiated a Preliminary Design and a Group B Class EA for Highway 3 from Outer Drive just east of the City of Windsor to the east junction of Union Avenue (Essex Road 34) just west of Leamington. The purpose of this study was to review existing traffic, geometry, safety, pavement conditions, drainage, structural and electrical features, and to examine the need for improvements to address current and projected traffic needs within the overall Highway 3 Windsor to Leamington Study Area. The results of this study were documented in the 2006 Transportation Environmental Study Report (TESR) (2006 Approved Plan). As the 2006 Approved Plan was older than five years, the original findings required review prior to construction.

In 2020, the study area conditions were investigated, assessed, and evaluated to determine if transportation or environmental changes had occurred that would impact the 2006 Approved Plan. These reviews identified significant changes within the corridor, resulting in modifications to the 2006 Approved Plan to develop the 2020 Recommended Plan. These changes were documented in a TESR Addendum (GHD 2021) and are summarized below:

- Closure of Cameron Side Road/Concession Road 9, March Road/Concession Road 8, Inman Side Road/South Talbot Road, and Upcott Side Road, subject to the Ontario Land Tribunal decision;
- Concession Road 8 and McCain Side Road connection and intersection removal;
- Traffic signal replacement for the Highway 3 widening at Division Road (Essex Road 29) and Union Avenue (Essex Road 34);
- New traffic signals at the intersections of Highway 3 at Belle River Road (Essex Road 27), Essex Road 18, and Graham Side Road;
- The environmental conditions review presented changes in the regulatory environment concerning Species at Risk (SAR), and preserving the social and natural environment; and
- The installation of a noise barrier was indicated as a change from the 2006 Approved Plan. The noise barrier shall be designed and constructed as part of this project.

1.2 Project Description

The Highway 3 Widening Project will be completed as a Group 'B' undertaking following MTO's Class EA for Provincial Transportation Facilities (2000). Works will build upon the previously completed Preliminary Design as documented in the 2006 Approved TESR and Preliminary Design Report (PDR) (Earth Tech Canada Inc.), the 2021 TESR Addendum (GHD), as well as the 2021 Design-Build-Ready (DBR) Report (GHD). As part of that TESR Addendum, a DCR is required to document construction details, including the traffic management plan for the project.

The overall Works generally include:

- Design and construction of a new four-lane cross-section of Highway 3 with a 15-metre depressed median, with two new lanes being constructed for the eastbound direction and rehabilitation of the existing lanes for the westbound direction;
- Reconfiguration of five intersections along Highway 3, including associated illumination and auxiliary lanes;
- Installation of new traffic signals at five intersections;
- Closure, construction, removal, and realignment of select side roads;
- Extension, relocation, construction, and/or removal of structural and non-structural culverts; and
- Design and construction of supporting infrastructure, including drainage, traffic signals, illumination, roadside safety, and noise barrier.

Work following the EA Process will be delivered in two phases. Most of the work will be documented in DCR #1, with DCR #2 being prepared following receipt of Municipal Drain Act approvals requiring additional approval time. The work to be documented in DCR #2 is summarized in **Table 1**.

Table 1: Summary of DCR #2 Drainage Act Approval Requirements

Municipal Drain	Proposed Improvements	Drainage Act Requirement
Ninth Concession Road Drain	C3 Culvert Extension	Section 78(5) Minor Improvement Report
	SC1 Culvert Removal	
	Drain Realignment Around Cul-de-Sac	
Eighth Concession Road Drain and Upper Portion of Eighth Concession Road Drain	SC4 Culvert Extension	Section 78(5) Minor Improvement Report
	Drain Realignment (Belle River Road)	
	SR2 And SR5 New Culverts	
	Drain Realignment (Eighth Concession Road)	
Cottam Sideroad Branch of Seventh Concession Drain	SC5 New/Relocated Culvert	Section 78(1) Major Improvement Report
	Drain Realignment	
	Culvert Replacement	
	Drain Extension to North	Section 4 Petition
Number 5 Drain	C4 Culvert Extension	Section 78(1) Major Improvement Report
	C5 Culvert Extension	
	SR18 and SR19 New Culverts	
	SR8 New Culvert and Drain Realignment	
Old Number 5 Drain at Division Road	New Retaining Wall	Section 78(1) Major Improvement Report
Schiller Drain	SR9 New Culvert	Section 78(1) Major Improvement Report
	Drain Realignment	
	New/Relocated Private Entrance Culverts	
	Watershed Boundary Changes	Section 76 Report (as part of S78(1))
Tully Award Drain	SR10 and SR11 New Culverts	Section 78(1) Major Improvement Report

Municipal Drain	Proposed Improvements	Drainage Act Requirement
Fourth Concession Road Drain	C12 Culvert Extension	Section 78(1) Major Improvement Report
	Drain Realignment	
	SR16 and SR16A New/Relocated Private Entrance Culverts	
New Municipal tile Drain	New drain to provide legal drainage outlet for tiled properties north of Unnamed Road	Section 4 report
New Municipal Open Drain	New drain to provide legal drainage outlet for Unnamed Road using existing private ditch	Section 4 report

Work documented in DCR #1 will begin in early 2024 with construction complete anticipated in early 2027. At the conclusion of the Project, the upgraded and new infrastructure will improve regional and international connectivity along this critical stretch of Highway 3.

1.3 Environmental Policy

GIP Hwy 3 Inc.'s commitment to protecting the environment and conducting operations in an environmentally responsible manner is founded on our expectation of meeting or exceeding all applicable environmental regulatory requirements. We recognize environmental performance is important to our stakeholders and the communities in which we work. GIP Hwy 3 Inc. strives to continually improve our programs and put procedures in place to mitigate potential environmental impacts. These objectives are consistent with our key values of:

- Integrity and Mutual Respect;
- Complete Openness;
- Entrepreneurial Enthusiasm;
- Trust; and
- Mutual Accountability.

2.0 Environmental Assessment Process

The MTO Class EA was approved under the Ontario *Environmental Assessment Act* (OEAA) in 2000. This planning process provides a streamlined approach that allows individual projects or activities within a defined "class" to meet the requirements of the OEAA, provided the Class EA is followed. The MTO Class EA document follows a principle-based approach, and includes the following principles that shall be addressed during the course of a study:

- Transportation Engineering Principles to confirm that the project meets current engineering design standards for the safe and efficient movement of people and goods across Ontario;
- Environmental Protection Principles to protect or mitigate potential natural, socio-economic, and cultural environmental impacts through the development of mitigation measures;
- Consultation Principles to encourage meaningful engagement with stakeholders such as the public, agencies and Indigenous communities;
- Evaluation Principles to provide an evaluation of alternatives that provides a balance between engineering requirements and environmental protection that is open and transparent; and
- Documentation Principles provide stakeholders an opportunity to review the design, potential impacts and proposed mitigation measures.

As the widening of Highway 3 is a multi-year construction project, two DCRs will be prepared to allow Environmental Clearance to be issued for Construction Start for works identified in each respective DCR. Most of construction will be initiated in areas where permits can be obtained in a timely manner, while not being delayed due to several Municipal Drain Act approvals that require more significant time to obtain. This provides flexibility within the construction schedule to advance most of the work, while obtaining the appropriate permits in other environmentally sensitive areas, or areas that require specific permissions. As each DCR is completed, it will be made available for a 30-day public comment period, and an additional 30-day MECP review period.

In addition, during the 30-day public comment period, a request may be made to the Minister of the Environment, Conservation and Parks 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.

Following the 30-day public comment period and the 30-day MECP review period, and assuming no Section 16 Orders have been received, the works documented in each DCR will proceed to construction.

3.0 Consultation

Consultation was initiated as part of the Preliminary Design Phase in 2006 and continued with the TESR review as documented in the 2021 TESR Addendum (GHD, 2021). GIP Hwy 3 Inc. has advanced this consultation as further detailed below. Consultation materials are included in **Appendix A**.

3.1 Consultation Plan

A Consultation Plan was developed for the Project to confirm the public, drivers, emergency service providers, Governmental Authorities, Indigenous communities, and other stakeholders are educated, informed and engaged where necessary.

The consultation program included tasks defined as a requirement in the Ontario *Environmental Assessment Act*, the Class EA, the Environmental Reference for Highway Design (ERD, MTO June 2013), commitments made in the 2021 TESR Addendum, and tasks set out in or required to obtain the Environmental Approvals necessary for the Project (authorizations, permits, monitoring, mitigation plans). These tasks included, but were not limited to, publication of Notices, public release of Environmental Assessment/Compliance Submittals, formal public comment/response periods, responses to comments, and meetings with stakeholders and Governmental Authorities.

3.2 Project Contact List

A Contact List of potentially affected stakeholder groups and individuals was updated based on the previous Contact List from the 2021 TESR Addendum and will be maintained throughout the Project term. This list will be updated for completeness and accuracy as required and will include, but not be limited to:

- Government Authorities and Ministries;
- Local and regional municipal staff and elected officials;
- Indigenous communities;
- Members of Provincial Parliament;
- Emergency service providers;
- Transportation service providers, including student transportation services;

- Utility companies; and
- Public interest groups, community groups, local businesses and residents who are directly affected by or identify with an interest in the Project.

3.3 Project Website and Project Email

A Project Website was developed by GIP Hwy 3 Inc.'s Communication team to function as a tool for providing information to stakeholders and obtaining input to the study (**www.hwy3essex.com**). The website is updated at key points during the Project to coincide with key engagement periods for the Class EA and construction activities. The website includes a Privacy Policy as required under the *Freedom of Information and Protection of Privacy Act*, a subscription service that complies with requirements in the *Personal Information Protection and Electronic Documents Act* and a section for stakeholders to provide comments directly to the Project Team. The website was built to *Accessibility for Ontarians with Disabilities Act* compliance and includes a statement confirming that the Project Team can be contacted if they have any accessibility requirements in order to participate in this project.

Key pages for the website include:

- **Home** – includes the Project name, a subscription option to join the Project Contact List via email, and a Latest Project Update section to highlight the current activity.
- **Project Background** – includes a brief history of the Project and links to previous EA documents.
- **Project Details** – includes a summary of the proposed improvements and an interactive map illustrating the Project Study Area.
- **Class Environmental Assessment Process** – presents an overview of the Class EA Process and the EA documentation being prepared.
- **Road Closure Information** – provides construction updates to identify anticipated traffic impacts.
- **Contact Us** – includes a link to the comment form and confirms respondents will be subscribed to the Project Contact List. It also includes a statement confirming comments received will be collected in accordance with the Freedom of Information and Protection of Privacy Act.
- **FAQs** – provides Frequently Asked Questions developed by the Communications Team to address concerns from Stakeholders.

A Project Team Email (hwy3essex@dillon.ca) is being used to receive comments from stakeholders and agencies and provide responses. The email address has been included on the Contact Us page of the Project Website.

3.4 Notice of Study Commencement

A Notice of Study Commencement (NOSC) was prepared to introduce the Detail Design and Class EA stage of the Project, describe the anticipated scope of work, the anticipated timing of construction and the Class EA process. The NOSC was issued as follows:

- Ontario Government Notice (OGN) and cover letter distributed to MPP Anthony Leardi through email (May 3, 2023);
- OGN published in the Southpoint Sun (May 17, 2023) and the Essex Free Press (May 25, 2023) newspapers;
- OGN and cover letter distributed by MTO to Indigenous communities on the Contact List through emails (May 17, 2023);
- OGN and cover letter distributed to agencies and public stakeholders on the Contact List through hard copy letters and emails (May 17, 2023);
- OGN published on the Project website (May 18, 2023); and
- OGN distributed to Canada Post mailing routes within the Study Area via Neighbourhood Mail to notify nearby residents and businesses (May 18, 2023).

At the time of publishing this DCR #1, 25 comments were received from agencies, Indigenous communities and public stakeholders. Several comments received were to request addition to the Project Contact List, to modify the appropriate contact for an agency, or to confirm receipt of the NOSC. Comments with more complex content and/or questions have been summarized in **Table 2** and **Table 3** below.

Table 2: Agency Comments

Agency	Summary of Comment	Summary of Response
MECP Susan Ecclestone	Noted if impacts to species at risk or their habitat cannot be avoided to contact the ministry regarding Authorization under the *Endangered Species Act*.	Acknowledged that the requirements of the *Endangered Species Act* will be met.
MCM Karla Barboza	Requested GWP numbers for the 2006 TESR and the 2021 TESR Addendum for internal filing.	GWP numbers were provided accordingly.
MECP Mark Badali	Confirmed receipt of the Notice of Commencement and requested the corresponding Project Information Form be emailed to the appropriate MECP Regional EA email address.	*[Project Information Form sent by B. Fleming (Dillon) on May 23, 2023*]
	Provided a letter of acknowledgement and supporting attachment in response to the Notice of Commencement. Asked for clarification on why two Design and Construction Reports will be prepared to document the Class EA process instead of one.	Confirmed two DCRs are being prepared to allow the majority of construction to be initiated in areas where permits can be obtained in a timely manner, while not being delayed due to several municipal drain approvals that require more significant time to obtain. This provides flexibility within our construction schedule to advance the majority of the works, while obtaining the appropriate permits in other environmentally sensitive areas, or areas that require specific permissions.

Agency	Summary of Comment	Summary of Response
Coast Guard/DFO Laurence Long	Requested themselves and their colleague be added to the Contact List. Inquired about adding an entrance to their Coast Guard/DFO property off of Highway 3 as their current access requires maintenance of an access agreement with a private citizen. This arrangement adds complexity to planning maintenance trips to the site and the ability to carry out more complex projects on their site.	Confirmed that they will be added to the Contact List. Confirmed that the process to apply for an entrance permit is through the ministry's Highway Corridor Management System, however GIP Hwy 3 Inc. forwarded a plan to the ministry to show where the site is located in the interim. Following the ministry's review, the proposed access does not meet highway access management guidelines for the Highway 3 classification and designation, and the access will not be permitted.
Coast Guard/DFO Douglas Jibb	Provided supplementary justification for request to add an access to the Coast Guard/DFO property off of Highway 3.	

Table 3: Public and Stakeholder Comments

Comment	Response
Noted that the Project is not correctly named as the boundary does not reach the limits of the Town of Leamington. Inquired if the Project Team has considered how many greenhouses have been constructed in the area since the 2006 TESR was approved. Inquired why the highway widening is being extended to Highway 77 to accommodate increased traffic volumes. Requested to be added to the Contact List.	Confirmed that they will be added to the Contact List. Confirmed the limits of the Project Study Area as 1.2 kilometres east of Essex Road 23 (Arner Townline) easterly to 1.1 kilometres east of Essex Road 34 (Union Avenue). Confirmed that the justification for this project has been documented in the 2006 TESR and the 2021 TESR Addendum for the twinning of Highway 3 which was made available for 30-day public review. Confirmed that based on the current and projected traffic volumes, this section of Highway 3 does not warrant widening to four-lanes to Highway 77.
Inquiry to how the widening will affect their property (ex. tree loss, sound barrier installation, road encroachment). Requested to be added to the Contact List.	Confirmed that they will be added to the Contact List. Noted that select tree and vegetation removal within MTO owned property at the southwest corner of Highway 3 and Essex Road 29 (Division Road) took place at end of July 2023 to facilitate geotechnical borehole drilling. Additional tree removals will occur in spring 2024 at this location to facilitate construction of a noise barrier within the MTO right of way and will not encroach on private property.

Comment	Response
Confirmed receipt of the Notice of Commencement and noted that they had previously left comments with an engineer in Chatham related to the Project. Noted they do not support the Project as proposed and recommended that a single-lane highway with overpasses and on/off ramps would provide a more continuous flow of traffic. Inquired how many intersections there will be with Highway 3 and how many will have automated traffic lights. Inquired what the posted speed of the widened highway will be.	Confirmed that the justification for this project has been documented in the 2006 TESR and the 2021 TESR Addendum for the twinning of Highway 3 which was made available for 30-day public review. Noted that the proposed improvements will improve the safety and traffic operations of this section of Highway 3. Improvements include 3 new signalized intersections as well as the closure of sideroads that currently intersect with the highway. Confirmed construction timelines and that they will be added to the Contact List.
Request for phone conversation to discuss their questions related to the Project.	Confirmed that they will be added to the Contact List. Provided figure and description of the improvements planned for the Highway 3/Essex Road 18 intersection.
Inquired if the realignment of County Road 18 will be adjusted to meet Highway 3 at a perpendicular angle, as its current alignment creates a blind spot on the passenger side of a vehicle entering the intersection. Inquired if a preliminary outline of construction plans around Division Road have been developed.	Confirmed that they will be added to the Contact List. Provided figure and description of the improvements planned for the Highway 3/County Road 18 intersection.

Comment	Response
Noted support for the Project. Noted that South Talbot Road should remain open to Highway 3 with only a right-hand turning lane as was done similarly with Ellis Road.	Confirmed that they will be added to the Contact List. Noted that the decision to fully close side roads was based on various factors including their low traffic volume compared to the proposed signalized intersections and improved safety. These factors were previously documented in the 2021 TESR Addendum.
Inquired when Concession Road 8 will be closed. Noted that branches off of Concession Road 8 is actually a continuation of Marsh Road and not McCain Sideroad.	Confirmed that they will be added to the Contact List. Noted that Concession Road 8, south of Highway 3, is anticipated to be closed during the summer of 2024 and Concession Road 8, north of Highway 3, is anticipated to be closed in the summer of 2026. Noted that the Project Team will review the naming of McCain Sideroad and will revise as required.
Inquired about construction schedule, specifically if all four intersection closures will occur at the same time or individually as the Project progresses.	Confirmed that they will be added to the Contact List. Noted that work is scheduled to begin in early 2024 and that sideroad closures will be completed progressively. Noted that Concession Road 9, south of Highway 3 is anticipated to be closed during the summer of 2024 and Concession Road 9, north of Highway 3, is anticipated to be closed during the summer of 2026.

3.5 Governmental Authority Meetings

GIP Hwy 3 Inc. hosted Governmental Authority (GA) meetings as needed to meet with applicable GA's and discuss updates on the Project and GIP Hwy 3 Inc. activities, including the status of applicable Permits, Licenses, Approvals and Authorizations (PLAAs), environmental laws, and other necessary approvals. Key technical and environmental specialists attended GA Meetings as required.

At the first GA meeting held August 28, 2023, GIP Hwy 3 Inc. presented the Environmental Management System for the Project, and outlined team roles, responsibilities, and approvals processes. This included the approaches, plans and schedules to identify and address key Municipal and Agency issues which may require approval, authorization, permitting and/or monitoring/mitigation.

GAs invited to attend the first meeting included:

- Ministry of Citizenship and Multiculturalism;
- Ministry of Natural Resources and Forestry;
- Ministry of the Environment, Conservation and Parks;
- Fisheries and Oceans Canada;
- Essex Region Conservation Authority (ERCA);
- County of Essex;
- Town of Essex
- Town of Kingsville; and
- Municipality of Leamington.

In general, GIP Hwy 3 Inc.'s overall strategy for liaising with GAs includes:

- Opening the lines of communication early in the Project;
- Obtaining all required PLAAs within the anticipated timeframes as shown in the Proposed Works Schedule;
- Working proactively with all levels of GAs to obtain, amend or update the PLAAs and ensure compliance with Applicable Laws and regulations;
- Establishing clear lines of communication with the authorities best suited to tackle discipline specific Project issues; and
- Scheduling meetings, as required, to facilitate the design development discussions as the design packages are being produced to ensure any comments or requirements are captured during the design development process.

GA Meetings will continue to be held as needed until all PLAAs are obtained.

3.5.1 Governmental Authority Communications Meetings

GA Communications Meetings are also being held as needed throughout the Project to focus on key issues related to communications throughout design and construction. These meetings will be a forum to provide information on current design/approvals/ construction activities and upcoming communications and to receive feedback on past and planned communications that can be incorporated to continuously improve.

The first GA Communications Meeting was held in combination with the GA Meeting on August 28, 2023. Attendees invited as part of the GA Communications Meeting specifically included:

- County of Essex;
- Town of Essex;
- Town of Kingsville;
- Municipality of Leamington;
- Windsor/Essex Student Transportation Services;
- Badder Bus Service Ltd.;
- G&L Stevenson Transport;
- First Student;
- Sharp Bus Lines;
- Switzer-Carty Transportation Inc.;
- OPP;
- Windsor Fire and Rescue Services; and
- City of Windsor/Transit Windsor

GA Communications Meetings will continue to be held as needed until the Project is complete.

3.6 Indigenous Consultation and Engagement

GIP Hwy 3 Inc. recognizes and acknowledges the importance of appropriate engagement with potentially impacted Indigenous communities, and of the duty to consult. The objective of Indigenous consultation and engagement as part of this Project is to provide an opportunity for open dialogue to discuss the Project and offer comments and feedback to the project team.

The following Indigenous communities were confirmed by MTO and added to the Project Contact List:

- Aamjiwnaang First Nation;
- Caldwell First Nation;
- Chippewas of Kettle and Stony Point First Nation;

- Chippewas of the Thames First Nation;
- Delaware Nation at Moraviantown;
- Munsee-Delaware Nation;
- Oneida Nation of the Thames; and
- Walpole Island First Nation.

Indigenous communities were provided with information about the design and construction of the Project through OGN notices and letters issued by MTO. By way of these notices, Indigenous communities were provided with Project updates, and invited to provide comments.

Indigenous communities were invited to participate in salvaging rare plants within the Project limits, as further detailed in **Section 4.2** and **Section 5.4.1.1**. MTO and GIP Hwy 3 Inc. will coordinate with interested communities to schedule appropriate date(s) to conduct these plant salvages.

Indigenous communities will continue to be engaged by MTO, with support from GIP Hwy 3 Inc. during the remainder of the design stage and the subsequent construction stage of the Project. In an effort to include local Indigenous businesses within the supply chain of both subcontractors and suppliers, GIP Hwy 3 Inc. will continue to evaluate, and is in the process of reaching out to Indigenous communities for natural plant supply and fuel supply for the Project.

3.7 Rare Plant Salvage

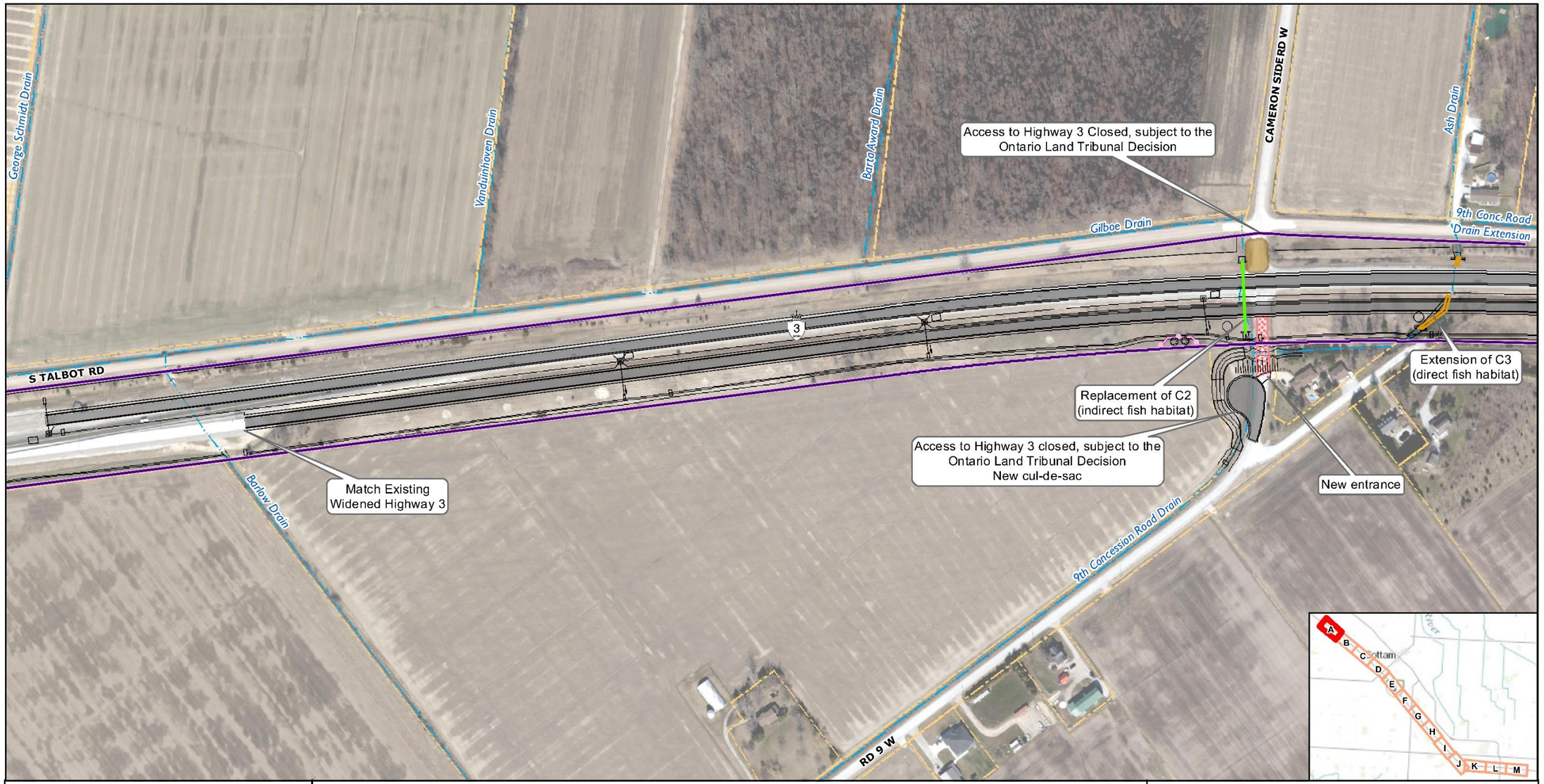
In addition to Indigenous communities, a letter was sent October 25, 2023, to the Essex County Field Naturalists' Club, the Windsor Essex County Environment Committee, and the ERCA to offer a window of opportunity to salvage any locally rare plants from the construction area. GIP Hwy 3 Inc. will coordinate with interested agencies to schedule appropriate date(s) to conduct these plant salvages.

4.0 Detailed Description of the Recommended Design

As approved as part of the 2006 TESR and the 2021 TESR Addendum, the widening of Highway 3 includes the following key improvements, as shown on **Figure 2**:

- Design and construction of a new four-lane cross-section of Highway 3 with a 15-metre depressed median, with two new lanes being constructed for the eastbound direction and rehabilitation of the existing lanes for the westbound direction;
- Closure of the following sideroads, with construction of new cul-de-sacs (subject to the Ontario Land Tribunal decision):
  - Cameron Side Road/Concession Road 9;
  - Marsh Road/Concession Road 8;
  - Inman Side Road/South Talbot Road; and
  - Upcott Side Road.
- Concession Road 8 and McCain Side Road connection and intersection removal;
- Traffic signal replacement for the Highway 3 widening at Division Road (Essex Road 29) and Union Avenue (Essex Road 34);
- New traffic signals at Belle River Road (Essex Road 27), Essex Road 18 and Graham Side Road;
- Realignment of South Talbot Road at Belle River Road (Essex Road 27) and Division Road (Essex Road 29);
- Realignment and extension of Division Road (Essex Road 29) from 130 metres north of the future west South Talbot Road connection with Division Road to Highway 3 and the Unnamed Road from Division Road (Essex Road 29) to Inman Side Road;
- Realignment of Essex Road 18 at Highway 3;
- New noise barrier along the south limit of the Highway 3 right-of-way (ROW), west of Division Road; and
- Drainage improvements including abandonment /extension/rehabilitation/ replacement of culverts.

Figure 2A: Proposed Improvements



MINISTRY OF TRANSPORTATION

HIGHWAY 3 WIDENING PROJECT

PROPOSED IMPROVEMENTS

FIGURE 2A

- Proposed Improvements
- Tree Protection Fencing
- Proposed Culvert Work (DCR 1)
- Proposed Culvert Work (DCR 2)
- Limits of Pavement
- Pavement Removal and Environmental Restoration
- Excess Materials Management Area (EMMA) Approximate Location
- MTO Right-of-Way
- Property Ownership Parcel
- Municipal Drain (MNRF)

SCALE 1:3,000

0 35 70 140 m

MAP DRAWING INFORMATION: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community
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PROJECT: 21-3142 STATUS: DRAFT DATE: 2023-12-08

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GIP Hwy 3 Inc

Figure 2B: Proposed Improvements

MINISTRY OF TRANSPORTATION

HIGHWAY 3 WIDENING PROJECT

PROPOSED IMPROVEMENTS

FIGURE 2B

- Proposed Improvements
- Limits of Pavement
- Excess Materials Management Area (EMMA) Approximate Location
- MTO Right-of-Way
- Property Ownership Parcel
- Municipal Drain (MNRF)
- Waterbody (MNRF)

SCALE 1:3,000

0 35 70 140 m

MAP DRAWING INFORMATION: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community
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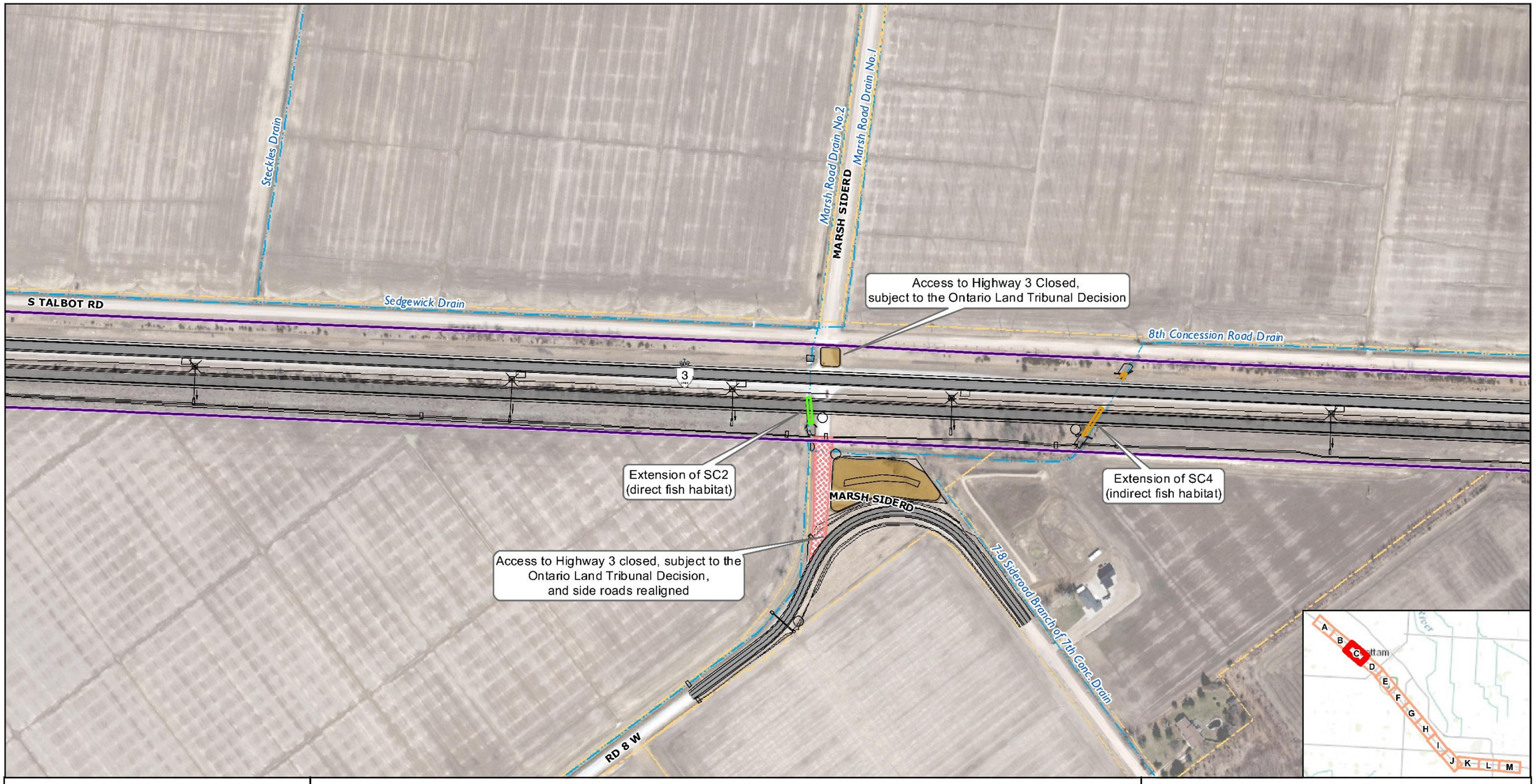
PROJECT: 21-3142 STATUS: DRAFT DATE: 2023-12-08

Figure 2C: Proposed Improvements



MINISTRY OF TRANSPORTATION

HIGHWAY 3 WIDENING PROJECT

PROPOSED IMPROVEMENTS

FIGURE 2C

- Proposed Improvements
- Proposed Culvert Work (DCR 1)
- Proposed Culvert Work (DCR 2)
- Limits of Pavement
- Pavement Removal and Environmental Restoration
- Excess Materials Management Area (EMMA) Approximate Location
- MTO Right-of-Way
- Property Ownership Parcel
- Municipal Drain (MNRF)

SCALE 1:3,000

0 35 70 140 m

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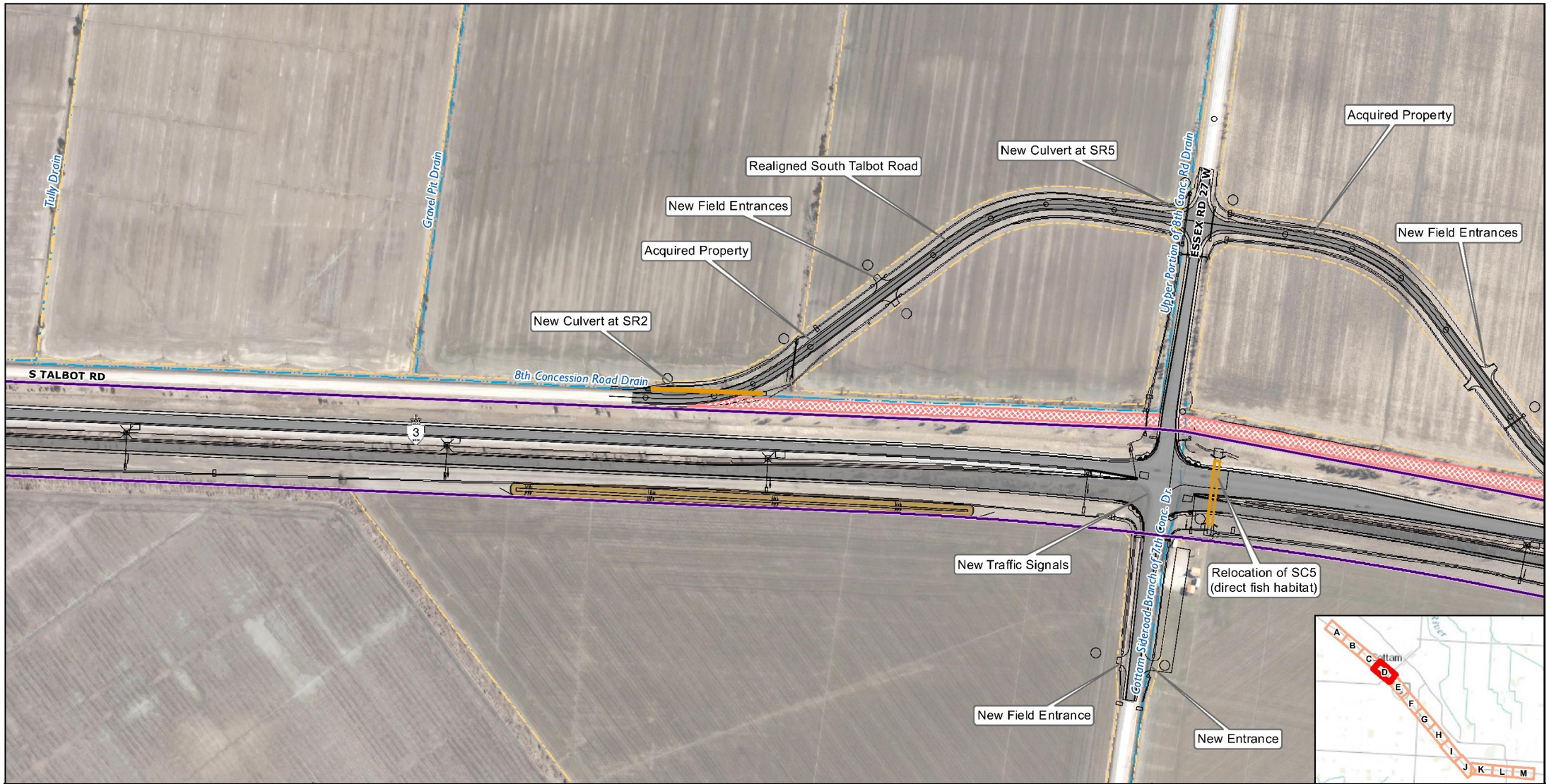
GIP Hwy 3 Inc

Figure 2D: Proposed Improvements



MINISTRY OF TRANSPORTATION

HIGHWAY 3 WIDENING PROJECT

PROPOSED IMPROVEMENTS

FIGURE 2D

- Proposed Improvements
- Proposed Culvert Work (DCR 2)
- Limits of Pavement
- Pavement Removal and Environmental Restoration
- Excess Materials Management Area (EMMA) Approximate Location
- MTO Right-of-Way
- Property Ownership Parcel
- Municipal Drain (MNRF)

SCALE 1:3,000

0 35 70 140 m

MAP DRAWING INFORMATION: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community
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GIP Hwy 3 Inc

Figure 2E: Proposed Improvements

MINISTRY OF TRANSPORTATION

HIGHWAY 3 WIDENING PROJECT

PROPOSED IMPROVEMENTS

FIGURE 2E

- Proposed Improvements
- Proposed Culvert Work (DCR 1)
- Limits of Pavement
- Pavement Removal and Environmental Restoration
- MTO Right-of-Way
- Property Ownership Parcel
- Municipal Drain (MNRF)
- Waterbody (MNRF)

SCALE 1:3,000

0 35 70 140 m

MAP DRAWING INFORMATION: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, Geobase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community
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GIP Hwy 3 Inc

Figure 2F: Proposed Improvements

MINISTRY OF TRANSPORTATION

HIGHWAY 3 WIDENING PROJECT

PROPOSED IMPROVEMENTS

FIGURE 2F

- Proposed Improvements
- Proposed Culvert Work (DCR 1)
- Proposed Culvert Work (DCR 2)
- Limits of Pavement
- Pavement Removal and Environmental Restoration
- MTO Right-of-Way
- Property Ownership Parcel
- Municipal Drain (MNRF)
- Waterbody (MNRF)

SCALE 1:3,000

0 35 70 140 m

MAP DRAWING INFORMATION: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community
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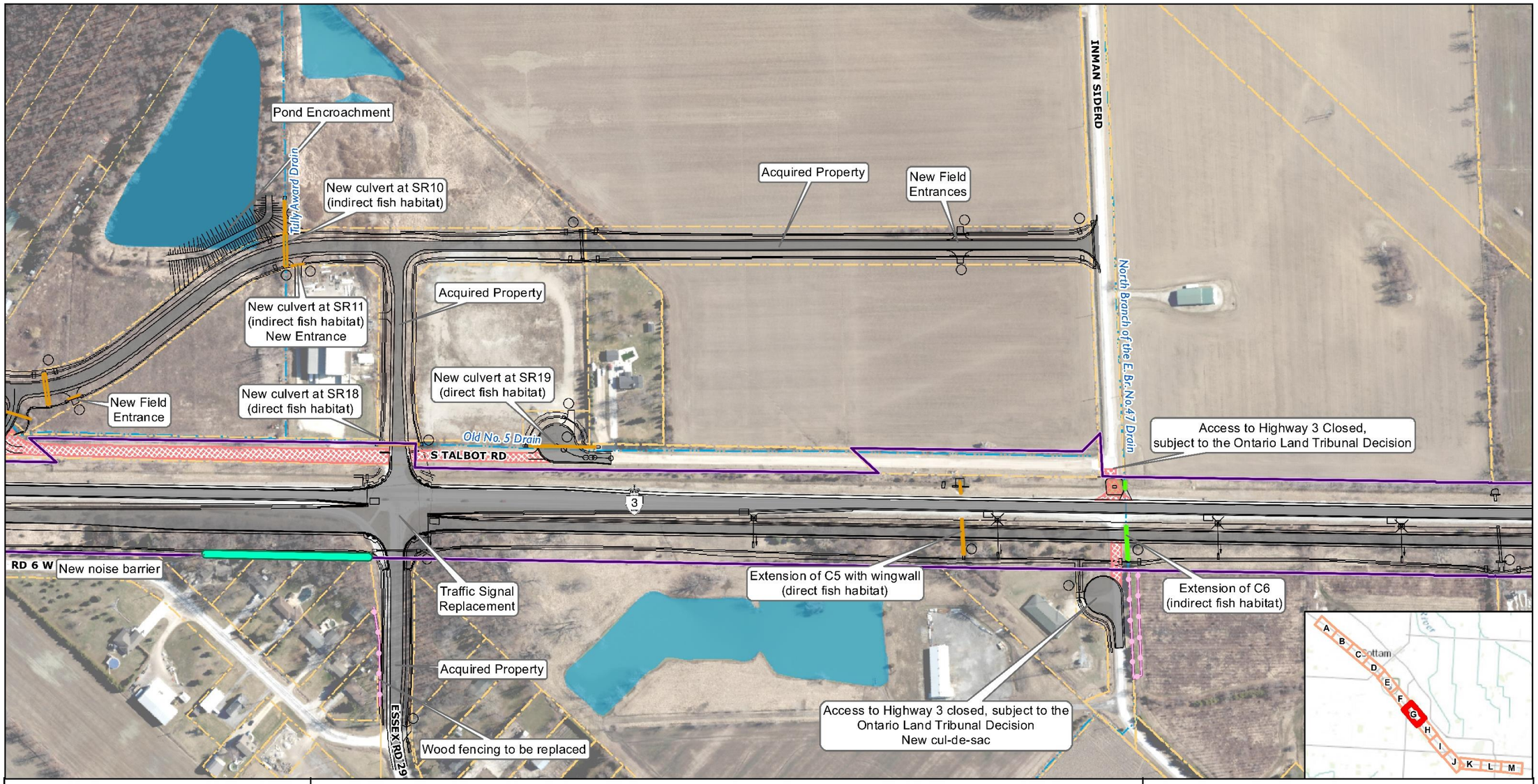
PROJECT: 21-3142 STATUS: DRAFT DATE: 2023-12-08

Figure 2G: Proposed Improvements



MINISTRY OF TRANSPORTATION

HIGHWAY 3 WIDENING PROJECT

PROPOSED IMPROVEMENTS

FIGURE 2G

- New Noise Barrier
- Proposed Improvements
- Tree Protection Fencing
- Proposed Culvert Work (DCR 1)
- Proposed Culvert Work (DCR 2)
- Limits of Pavement
- Pavement Removal and Environmental Restoration
- Excess Materials Management Area (EMMA) Approximate Location
- MTO Right-of-Way
- Property Ownership Parcel
- Municipal Drain (MNRF)
- Waterbody (MNRF)

SCALE 1:3,000

0 35 70 140 m

MAP DRAWING INFORMATION: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community
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GIP Hwy 3 Inc

PROJECT: 21-3142 STATUS: DRAFT DATE: 2023-12-08

Figure 2H: Proposed Improvements

MINISTRY OF TRANSPORTATION

HIGHWAY 3 WIDENING PROJECT

PROPOSED IMPROVEMENTS

FIGURE 2H

- Proposed Improvements
- Proposed Culvert Work (DCR 1)
- Limits of Pavement
- Excess Materials Management Area (EMMA) Approximate Location
- MTO Right-of-Way
- Property Ownership Parcel
- Municipal Drain (MNRF)

SCALE 1:3,000

0 35 70 140 m

MAP DRAWING INFORMATION: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community
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PROJECT: 21-3142 STATUS: DRAFT DATE: 2023-12-08

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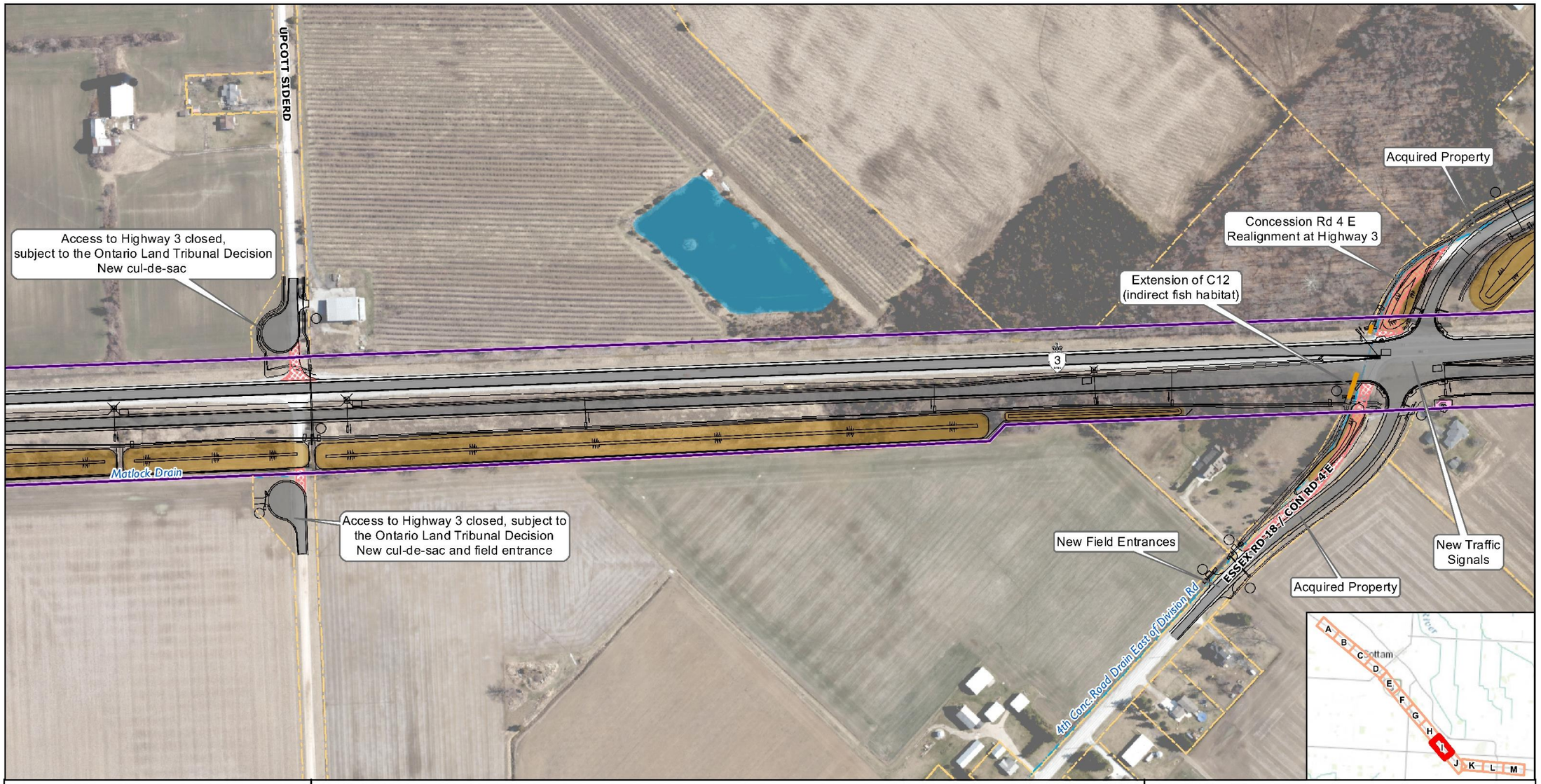
GIP Hwy 3 Inc

Figure 2I: Proposed Improvements



MINISTRY OF TRANSPORTATION

HIGHWAY 3 WIDENING PROJECT

PROPOSED IMPROVEMENTS

FIGURE 2I

- Proposed Improvements
- Tree Protection Fencing
- Proposed Culvert Work (DCR 2)
- Limits of Pavement
- Pavement Removal and Environmental Restoration
- Excess Materials Management Area (EMMA) Approximate Location
- MTO Right-of-Way
- Property Ownership Parcel
- Municipal Drain (MNRF)
- Waterbody (MNRF)

SCALE 1:3,000

0 35 70 140 m

MAP DRAWING INFORMATION: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community
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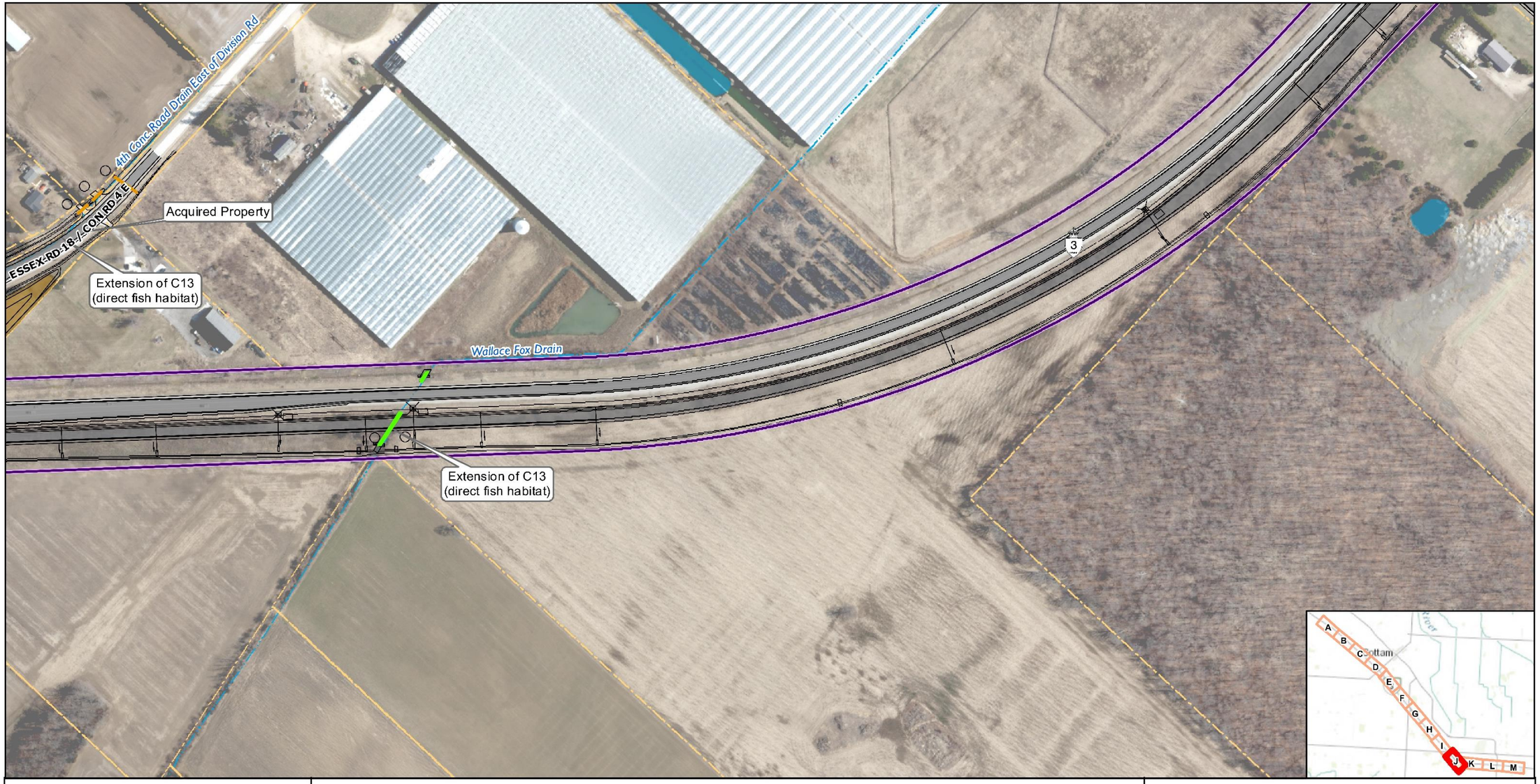
Figure 2J: Proposed Improvements



MINISTRY OF TRANSPORTATION

HIGHWAY 3 WIDENING PROJECT

PROPOSED IMPROVEMENTS

FIGURE 2J

- Proposed Improvements
- Proposed Culvert Work (DCR 1)
- Proposed Culvert Work (DCR 2)
- Limits of Pavement
- Excess Materials Management Area (EMMA) Approximate Location
- MTO Right-of-Way
- Property Ownership Parcel
- Municipal Drain (MNRF)
- Waterbody (MNRF)

SCALE 1:3,000

0 35 70 140 m

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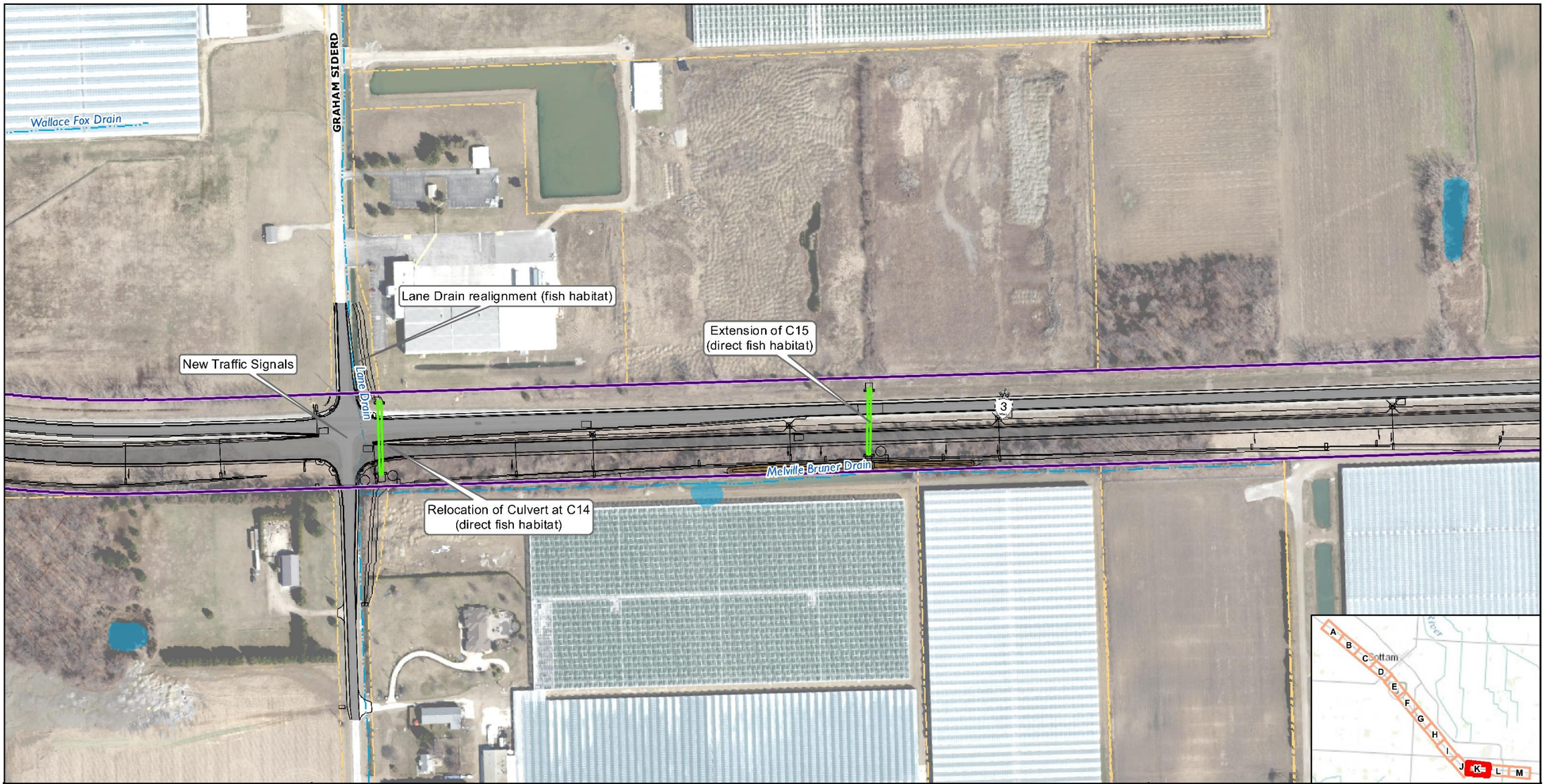
PROJECT: 21-3142 STATUS: DRAFT DATE: 2023-12-08

Figure 2K: Proposed Improvements



MINISTRY OF TRANSPORTATION

HIGHWAY 3 WIDENING PROJECT

PROPOSED IMPROVEMENTS

FIGURE 2K

- Proposed Improvements
- Proposed Culvert Work (DCR 1)
- Limits of Pavement
- Excess Materials Management Area (EMMA) Approximate Location
- MTO Right-of-Way
- Property Ownership Parcel
- Municipal Drain (MNRF)
- Waterbody (MNRF)

SCALE 1:3,000

0 35 70 140 m

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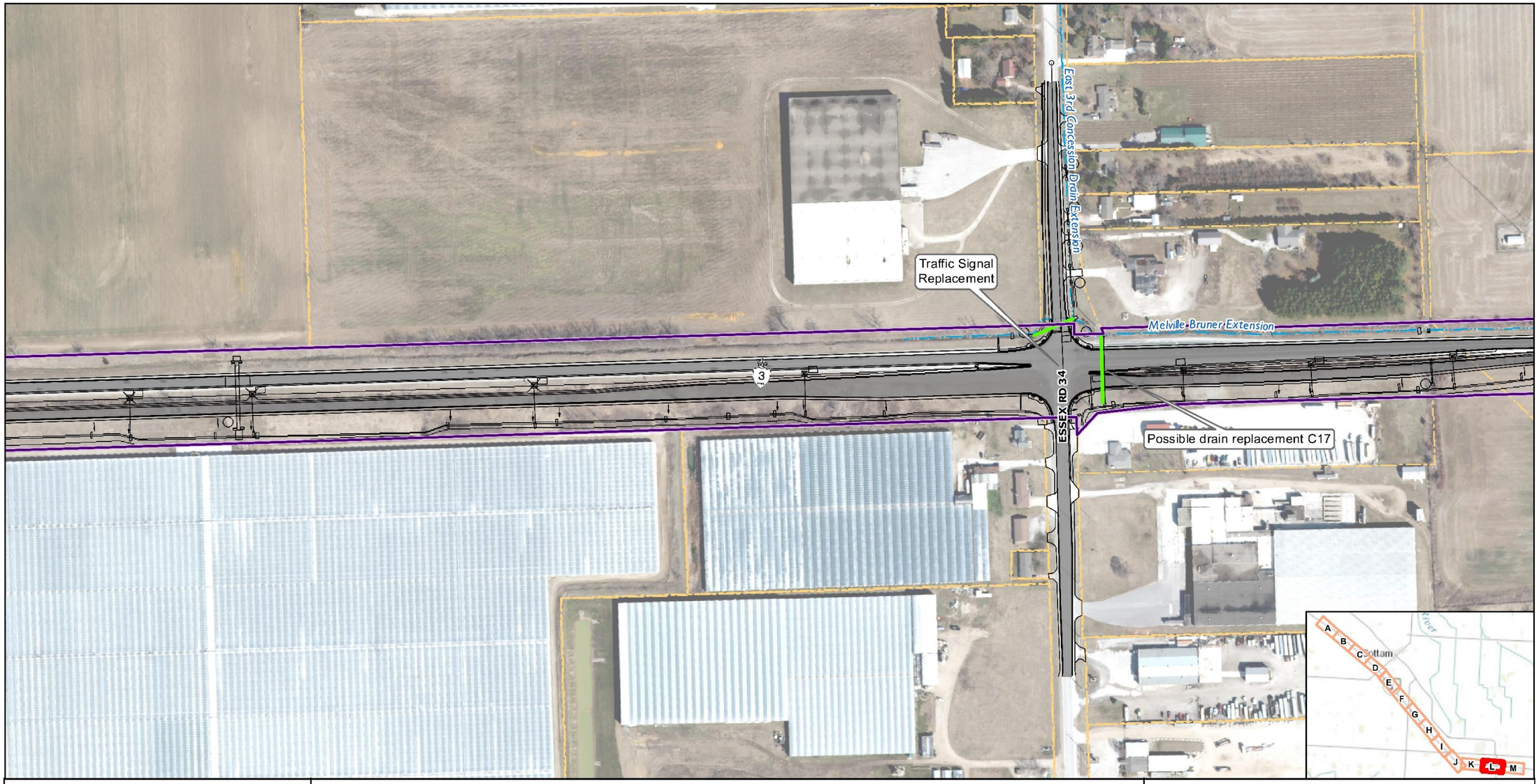
PROJECT: 21-3142 STATUS: DRAFT DATE: 2023-12-08

Figure 2L: Proposed Improvements



MINISTRY OF TRANSPORTATION

HIGHWAY 3 WIDENING PROJECT

PROPOSED IMPROVEMENTS

FIGURE 2L

- Proposed Improvements
- Proposed Culvert Work (DCR 1)
- Limits of Pavement
- MTO Right-of-Way
- Property Ownership Parcel
- Municipal Drain (MNRF)
- Waterbody (MNRF)

SCALE 1:3,000

0 35 70 140 m

MAP DRAWING INFORMATION: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community
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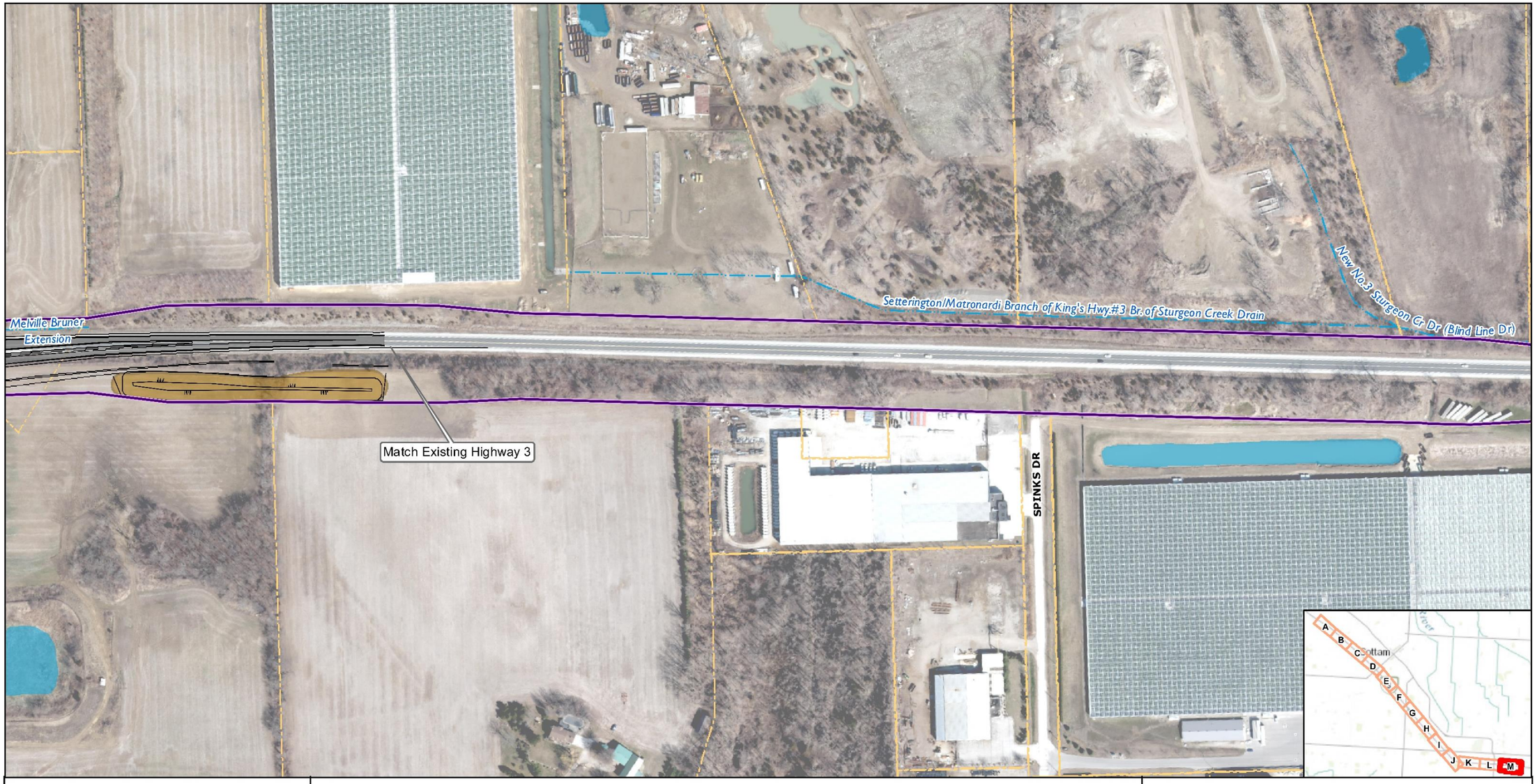
PROJECT: 21-3142 STATUS: DRAFT DATE: 2023-12-08

Figure 2M: Proposed Improvements



MINISTRY OF TRANSPORTATION

HIGHWAY 3 WIDENING PROJECT

PROPOSED IMPROVEMENTS

FIGURE 2M

- Proposed Improvements
- Limits of Pavement
- Excess Materials Management Area (EMMA) Approximate Location
- MTO Right-of-Way
- Property Ownership Parcel
- Municipal Drain (MNRF)
- Waterbody (MNRF)

SCALE 1:3,000

0 35 70 140 m

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GIP Hwy 3 Inc

During the Detail Design stage, the following activities were undertaken to help confirm the recommended design, identify potential environmental impacts and develop appropriate and effective mitigation measures:

- Reviewed the Preliminary Design reports, Design-Build Ready reports and identified opportunities for improvements or required updates to the design;
- Reviewed the 2021 TESR Addendum updated environmental impact studies and refined environmental protection/mitigation measures; and
- Conducted additional consultation with the public, agencies, Indigenous communities, and other stakeholders.

It is anticipated that construction will start in early 2024, with completion by early 2027.

Additional details pertaining to key improvements are included below.

4.1 Utility Relocation

In advance of construction, MTO arranged for the following utilities to be relocated to mitigate conflicts with the proposed works:

- Bell Canada along the north ROW of Highway 3 with various crossings in the vicinity of crossing roads;
- Gosfield North Communications in the vicinity of Concession Road 8/Marsh Sideroad, Belle River Road (Essex Road 27), Division Road (Essex Road 29), and Inman Sideroad;
- Enbridge Gas crossing Highway 3 in the vicinity of Division Road (Essex Road 29);
- Hydro One distribution facilities along Graham Sideroad, Belle River Road (Essex Road 27) and Division Road (Essex Road 29); and
- Town of Kingsville watermain crossing Highway 3 west of Division Road (Essex Road 29).

During construction, insulation will be installed over the Town of Kingsville watermain located at Essex Road 18 and Union Road (Essex Road 34). Additionally, a new fire hydrant will be installed on Essex Road 18.

4.2 Site Preparation

Prior to construction, erosion and sediment control (ESC) measures shall be installed to isolate the work areas, with site-specific plans being implemented at fish-bearing

drainage features, in accordance with the Erosion and Sediment Control Plan which was prepared to detail the ESC measures implemented for the project and associated maintenance and monitoring requirements. Wildlife exclusionary fencing shall be installed along work areas adjacent to SAR snake habitat to isolate the work areas and prevent incidental harm to these species, in accordance with the Wildlife Fence Plan, which denotes the locations for exclusion fencing. Vegetation removals have been minimized to the extent feasible, and rare plants shall be identified for salvage and relocation where feasible, in consultation with interested agencies and Indigenous communities. Vegetation shall be removed along the corridor within the rights-of-way in accordance with the Clearing and Grubbing Plan. Prior to any tree clearing, advance notification of 10 business days shall be provided to adjacent property owners/occupants and to municipalities for trees to be removed within municipal ROW.

4.3 Sideroad Closures

Due to low traffic volumes and operational concerns, several side roads will be permanently closed, subject to an Ontario Land Tribunal (OLT) decision. These closures are detailed in the following sections.

4.3.1 South of Highway 3

The following side roads will be permanently closed as of the dates indicated:

- Concession Road 9 (July 2024);
- Concession Road 8 (September 2024);
- South Talbot Road (June 2025); and
- Upcott Side Road (July 2025).

At each closure location south of Highway 3, a turning basin (cul-de-sac) will be constructed to permit vehicle turnaround, with the exception of Concession Road 8 that will be connected to McCain Side Road. The diameter of these basins will accommodate large vehicles including buses, snowplows and emergency vehicles.

4.3.2 North of Highway 3

Permanent closure of the following sideroads north of Highway 3 will occur in 2026:

- Cameron Side Road;
- Marsh Road;
- Inman Side Road;
- South Talbot Road (between Inman Side Road and Division Road (Essex Road 29); and
- Upcott Side Road.

Closure of these sideroads north of Highway 3 will operate as stop controlled intersections with South Talbot Road. At Upcott Side Road approaching Highway 3 and South Talbot Road approaching Division Road (Essex Road 29) turning basins will be constructed similar to the closure south of Highway 3. These closures to the north of Highway 3 will be closed in spring/summer 2026 as rehabilitation of the existing highway is completed.

4.4 Municipal Road Realignments

The following municipal road improvements are proposed to improve operations and safety of the proposed intersections by increasing offset between intersections, prioritizing higher volume movements or improving sightlines:

- South Talbot Road will be realigned at Belle River Road (Essex Road 27) and at Division Road (Essex Road 29);
- Realignment and extension of Division Road (Essex Road 29) from 130 metres north of the future west South Talbot Road connection with Division Road to Highway 3 and the Unnamed Road from Division Road (Essex Road 29) to Inman Side Road; and
- Realignment of Essex Road 18 at Highway 3.

4.5 Noise Barrier

A new noise barrier will be constructed on the south side of Highway 3, west of Division Road (Essex Road 29) along the MTO ROW. The noise barrier will be 154.8 metres in length, 3.5 metres in height, and will include absorptive panels on both sides.

4.6 Drainage Improvements

The proposed improvements will have a number of direct and indirect impacts to the existing drainage infrastructure, which includes storm sewers, ditches and crossing culverts, which are documented in the Drainage Hydrology, Hydraulics and Stormwater Management Plan prepared by GIP Hwy 3 Inc. and summarized below.

The Project is located within an area of low topographic relief with relatively poor draining clayey soils. The surrounding lands are predominantly agricultural, and drainage is achieved through a network of municipal drains. The existing drainage system for the Project area consists of open ditches and culverts, which convey surface runoff to one of many municipal drains. There are 24 existing culvert crossings of Highway 3; 16 of which are classified as municipal drains.

The following drainage improvements are proposed for the Highway 3 Widening Project:

- Five structural culverts conveying municipal drains crossing Highway 3 that require rehabilitation and extension, one structural culvert conveying a municipal drain crossing Highway 3 requires replacement with a new structure, and two structural culvert removals will occur where crossings of sideroads to be closed will no longer be needed;
- 16 non-structural culverts crossing under Highway 3 that will require replacement or extension, and one requiring elimination;
- Modifications to five municipal drains, including realignments to accommodate proposed road improvements;
- 21 new or replacement sideroad culverts and associated ditching;
- 29 new entrance culverts;
- Maintenance to remove accumulated sediment from watercourse crossing culverts and municipal drain channels within the Highway 3 corridor;
- Median ditches consisting of vegetated flat bottom channel with variable side slopes (maximum 4:1), which will outlet to the right (south) highway roadside ditch at multiple locations via pipe connections comprised of a grated inlet structure and short segment of storm sewer; and
- Roadside ditches will generally consist of low-gradient vegetated flat bottom swales.

4.6.1 Drainage Act Approvals

The requirements under the *Drainage Act* for the Project works were determined through a review of available drainage reports and discussions with the Town of Kingsville.

Minor Drainage Improvement Reports are required for each of the proposed culvert extensions described below per Section 78(5) of the *Drainage Act*, except for C2; as temporary works do not require approval under the Act.

Drainage works requiring additional approval time are summarized in **Table 1** in **Section 1.2** of this DCR and will be documented in DCR#2.

4.6.1.1 SC2: Structural Culvert 14+625 – Sedgewick Drain

SC2 (Sedgewick Drain) is a concrete ridged frame open-footed (RFO) structural culvert that runs north to south under Highway 3. This culvert will be extended south with a precast concrete box structure.

4.6.1.2 C2: Centreline Culvert 12+481 – Gilboe Drain – Temporary Extension

C2 (Gilboe Drain) is a high-density polyethylene non-structural culvert that runs north to south under Highway 3. To facilitate work required in early 2024, a temporary extension will be constructed to the south. The permanent replacement with a larger high-density polyethylene culvert will be constructed once Municipal Drainage Act approvals have been received; this work will be documented in DCR #2.

4.6.1.3 SC6: Structural Culvert 16+900 – Seventh Concession Road Drain

SC6 (East Part Seventh Concession Road Drain) is a concrete RFO structural culvert that runs north to south under Highway 3. This culvert will be extended to the north with an equivalent cast-in-place RFO structure and to the south with a precast concrete box structure.

4.6.1.4 SC7: Structural Culvert 10+015 – Boose Drain

SC7 (Boose Drain) is a concrete RFO structural culvert that runs north to south under Highway 3. This culvert will be extended to the north with an equivalent cast-in-place RFO structure and to the south with a precast concrete box structure.

4.6.1.5 C6: Centerline Culvert 11+063 – North Branch of East Branch of Number 47 Drain

C6 (Branch of East Branch Number 47 Drain) is a concrete RFO non-structural culvert that runs north to south under Highway 3. This culvert will be extended to the south with an equivalent cast-in-place RFO structure.

4.6.1.6 SC8: Structural Culvert 11+661 – East Branch of Number 47 Drain

SC8 (East Branch Number 47 Drain) is a concrete RFO structural culvert that runs north to south under Highway 3. This culvert will be extended to the north with an equivalent cast-in-place RFO structure and to the south with a precast concrete box structure.

4.6.1.7 C13: Centerline Culvert 14+209 – Wallace Fox Drain

C13 (Wallace Fox Drain) is a concrete RFO non-structural culvert that runs north to south under Highway 3. This culvert will be extended with an equivalent cast-in-place RFO structure to the north and south.

4.6.1.8 C14: Centerline Culvert 15+195 – Lane Drain

C14 (Lane Drain) is a corrugated steel pipe (CSP) non-structural culvert that runs north to south under Highway 3. This culvert will be replaced with a precast concrete box structure and realigned as a result of the highway widening. A section of Lane Drain will be infilled and realigned east of its current position.

4.6.1.9 C15: Centerline Culvert 15+606 – Melville Bruner Drain Extension

C15 (Melville Bruner Drain Extension) is a CSP non-structural culvert that runs north to south under Highway 3. This culvert will be replaced with a precast concrete box structure.

4.6.1.10 C17: Centerline Culvert 17+021 – East Third Concession Drain Extension

C17 (East Third Concession Drain Extension) is a CSP non-structural culvert that runs north to south under Highway 3. This culvert will be replaced with a new CSP structure, and the existing culvert will be removed or abandoned.

4.6.2 Water Quality and Quantity Control

Stormwater management quality and quantity control will be provided in the Highway 3 roadside ditches. Water quality enhancement will be provided along the low-gradient vegetated channels, which will be equipped with rock check dams to reduce velocities and promote the settlement of suspended sediment. A level of quantity control will also be provided in the roadside ditches, where the available storage will help to attenuate peak flows. The results of hydrologic analysis demonstrate that the potential impacts related to the magnitude of peak flows will be minimal.

4.7 Construction Staging and Traffic Management

Construction will be undertaken in three stages over three years:

- **Stage 1:** Highway 3 traffic will be maintained on the existing (future westbound) lanes while the new eastbound lanes are constructed to the south. There will be two separate crossover detours constructed at Belle River Road (Essex Road 27) and Graham Sideroad to accommodate construction of culverts crossing Highway 3 adjacent to these sideroads. Stage 1 will be completed over two years (2024 and 2025).
- **Stage 2:** All Highway 3 traffic will be shifted to the newly constructed eastbound lanes (temporarily operating with two-way traffic configuration) while the existing lanes are reconstructed and converted for use as the new westbound lanes. Stage 2 will be completed in year three (2026).
- **Stage 3:** Westbound traffic will be shifted to the rehabilitated westbound lanes; the inside (median) lanes in both directions will be temporarily closed while temporary works are removed and final work in the median area is completed. Stage 3 will be completed in year three (2026).

Some sub-stages will be required at localized locations to accommodate works crossing Highway 3 and/or the side roads. During Stage 1, long-term temporary closures will be required on the side roads to accommodate construction of the new eastbound lanes and the realignment or reconstruction of the side roads. These will be subject to the following limitations:

- The planned permanent closure of the four low-volume municipal sideroad intersections (subject to an OLT decision) will occur throughout Stage 1;

- Of the remaining five intersections (at the four intersecting County roads and at Graham Sideroad), no two adjacent intersections will be fully closed at any given time;
- Left turns from Highway 3 will be permitted at all intersections where the corresponding side road is open to traffic, and left turn lanes will be maintained on Highway 3 at all signalized intersections; and
- Where temporary closures of the sideroads are required during construction, signed detours will be provided as described below:
  - Closure of Belle River Road (Essex Road 27) south of Highway 3 will follow Highway 3 to Essex Road 23 back to Essex Road 27;
  - Closure of Belle River Road (Essex Road 27) north of Highway 3 will follow Essex Road 34 to Division Road (Essex Road 29) back to Highway 3;
  - Closure of Division Road (Essex Road 29) south of Highway 3 will follow Essex Road 18 to Highway 3;
  - Closure of Essex Road 18 north of Highway 3 will follow Highway 3 to Union Avenue (Essex Road 34) back to Essex Road 18;
  - Closure of Essex Road 18 south of Highway 3 will follow Division Road (Essex Road 29) to Highway 3;
  - Closure of Graham Side Road north of Highway 3 will follow Essex Road 18 to Essex Road 34 back to Highway 3;
  - Closure of Graham Side Road south of Highway 3 will follow Road 2 East to Essex Road 34 back to Highway 3;
  - Closure of Union Avenue (Essex Road 34) south of Highway 3 will follow Road 3 East to Essex Road 31 back to Highway 3; and
  - Closure of Union Avenue (Essex Road 34) north of Highway 3 will follow Essex Road 18 to Essex Road 31 back to Highway 3.
- Traffic will be maintained on existing Highway 3 during winter shutdown periods. Essex Road 27, Essex Road 29, Essex Road 18, Graham Side Road and Essex Road 34 will be open. All intersections at Highway 3 will be controlled by temporary signals prior to the first winter shutdown period.

Municipalities, Emergency Medical Service (EMS), transit, and bus companies have actively participated in the study through attendance at various meetings. Details of

these stakeholder meetings are included in **Section 3.0** and additional stakeholder comments are included in **Appendix A**.

4.7.1 Stage 1

Stage 1 will include the start of construction for many of the major elements of the project. These elements include:

- Construction of the new Highway 3 eastbound lanes;
- Extension of structural and non-structural culverts that will cross the new Highway 3 eastbound lanes;
- Replacement of two culverts crossing the existing Highway 3 (at Essex Road 27 and at Graham Sideroad);
- Realignment of South Talbot Road Essex Road 27;
- Realignment of Essex Road 29 north of Highway 3;
- Construction of the Unnamed Road and South Talbot Road connection at Essex Road 29; and
- Reconstruction of side roads at future signalized intersections.

The construction of the Highway 3 eastbound lanes, the South Talbot Road realignment at Belle River Road (Essex Road 27), and the Division Road (Essex Road 29) realignment north of Highway 3 can be constructed offline from existing roadways.

Due to property, adjacent municipal drains, and environmental constraints, vehicle traffic access at Highway 3 sideroads will require temporary long-term sideroad closures while approaches to Highway 3 and the new eastbound lanes at the future signalized intersections are being constructed. Temporary sideroad closures at Highway 3 and Belle River Road (Essex Road 27), Division Road (Essex Road 29), Essex Road 18, Graham Sideroad, and Essex Road 34 will be required. Of these sideroads, no two adjacent sideroads shall be temporarily closed at the same time during construction.

The four low-volume sideroad intersections to the south of Highway 3 will be permanently closed (subject to an OLT decision) once the construction of the new eastbound lanes reaches each location.

Temporary by-pass roads will be constructed to maintain two lanes of traffic on Highway 3 during the replacement of two culverts (structural culvert SC5 on the east

side of Belle River Road (Essex Road 27), and non-structural culvert C14 on the east side of Graham Sideroad). These culverts will be replaced prior to construction of the new Highway 3 eastbound lanes.

4.7.2 Stage 2

During Stage 2, eastbound and westbound Highway 3 traffic will be diverted to the new Highway 3 eastbound lanes using median crossovers at the project limits. Major construction elements in Stage 2 include:

- Northerly extensions of culverts crossing Highway 3; and
- Rehabilitation of the existing alignment of Highway 3 that will become the new westbound lanes.

Two-way traffic will operate on the new eastbound lanes while the rehabilitation work occurs on the existing lanes. The four low-volume sideroad intersections to the north of Highway 3 will be permanently closed. Temporary widenings will be used on the east side of the five remaining intersections to provide adequate space for left turn lanes. The Highway 3 intersections with Belle River Road (Essex Road 27), Division Road (Essex Road 29), Essex Road 18, Graham Side Road, and Union Avenue (Essex Road 34) will be controlled by temporary signals.

4.7.3 Stage 3

In Stage 3, a single lane of westbound and eastbound traffic will operate in the westbound and eastbound lanes, respectively. This will enable final work within the median to be completed, including the following:

- Removal of median crossovers;
- Removal of temporary widenings and construction of median islands at signalized intersections; and
- Completion of permanent traffic signals.

Completion of final paving and application of pavement markings will be undertaken by temporarily shifting eastbound traffic daily onto the new westbound lanes through the use of police officers. Similar to Stage 2, all intersections will remain open, except for short-term closures that will be required for the paving operations at each of the intersections.

The Stage 3 works will be undertaken during the same year as Stage 2.

4.8 Miscellaneous Improvements

The proposed improvements will also require relocation of driveways and field entrances, along with their associated drainage culverts, steel fences, address markers and mailboxes, predominantly where impacted by road realignments and intersection improvements.

5.0 Environmental Impact Assessment and Mitigation Measures

During the initial Detail Design phase (or Design-Build-Ready phase), and as documented in the 2021 TESR Addendum, GHD completed the five-year TESR review and reviewed the potential for direct and indirect environmental impacts as a result of the proposed improvements to Highway 3. The TESR Addendum identified measures to best mitigate these impacts. As part of the current Design-Build-Finance phase, the impact assessment and mitigations measures developed were reviewed and refined to address specific environmental concerns during construction.

The proposed improvements are anticipated to begin in early 2024, subject to approvals. Work will be completed within MTO and municipal owned lands and the existing ROW. Property required to facilitate the work was acquired following Preliminary Design and no additional permanent property taking is needed to complete construction, therefore, impacts to adjacent land uses are anticipated to be minimal. One property at Division Road (Essex Road 29) will be temporarily impacted during construction due to grading into the edge of their stormwater management pond. With appropriate mitigation measures implemented during construction, potential impacts can be avoided, mitigated or minimized to the greatest extent possible.

The following sections outline the potential natural, socio-economic, and cultural environmental impacts anticipated for construction of the proposed improvements. Environmental protection measures, mitigation measures, monitoring and contingency measures have been incorporated into the construction Contract and are summarized in **Table 5** in **Section 6.0**.

5.1 Highway and Traffic Engineering

5.1.1 Traffic and Emergency Services

The planned closures of Concession Road 9/Cameron Side Road, Concession Road 8/ Marsh Road, Inman Side Road/South Talbot Road and Upcott Side Road with Highway 3

(subject to an OLT decision) have the potential to reduce access to Highway 3 and increase the overall travel time for emergency response routes.

Emergency services staff from Essex County and the Town of Kingsville participated in the development of the 2020 Recommended Plan. With their involvement, emergency services were supportive of the closure of the low volume sideroads and the enhanced access to Highway 3 through traffic signals at the added locations of Belle River Road (Essex Road 27), Essex Road 18, and Graham Side Road.

EMS staff have actively participated in the study through attendance at the GA Communications Meetings.

To minimize delays, emergency vehicles shall be given priority access through the construction zone, where possible, and emergency service providers (OPP, fire and ambulance) shall be updated throughout the project on construction staging and closures, including the construction start date and any significant changes to traffic operations. EMS shall be invited to attend regularly scheduled progress meetings throughout construction.

Advanced signage shall be posted a minimum of seven days in advance of construction start, advising motorists of potential traffic delays. All traffic staging shall be completed in accordance with the Ontario Traffic Manual (OTM) Book 7 – Temporary Conditions.

5.1.2 Construction Traffic

Construction traffic shall access the construction area from the existing road network at specified construction access/egress locations. Traffic control, in accordance with OTM Book 7 – Temporary Conditions, shall be required during construction. Traffic disruptions on the highway shall be minimized by advance signing.

5.1.3 Utilities

MTO has arranged for utilities to be relocated in advance of construction to mitigate conflicts with the proposed works. Impacts during construction are not anticipated.

5.1.4 Traffic Signals

The existing traffic signals on Highway 3 at both Division Road (Essex Road 29) and Union Avenue (Essex Road 34) shall be replaced to accommodate the proposed

four-lane cross section of Highway 3. New traffic signals shall be installed at Belle River Road (Essex Road 27), Essex Road 18 and Graham Side Road. All traffic signals shall be AODA-compliant for pedestrian crossings.

5.2 Drainage and Stormwater Management

Detailed hydrology and hydraulic analyses have been undertaken to evaluate the performance of the proposed drainage improvements. The analysis included an assessment of existing and proposed conditions such that impacts to flow and water level conditions can be evaluated. The results of the analysis indicate that impacts related to the proposed drainage improvements included in DCR #1 will be minimal and drainage systems will be maintained throughout construction.

5.3 Excess Soil and Contaminated Material Management

5.3.1 Excess Soil Management

Construction is anticipated to generate a significant amount of surplus earth material, which shall be managed in compliance with the On-Site and Excess Soil Management Regulation (*O. Reg. 406/19*). As per the Earth Management Plan, all surplus soil generated by this Project is expected to be managed on-site and therefore is not considered excess soil as defined by O. Reg. 406/19. Placement of surplus soil shall be undertaken in consideration of adjacent land uses, soil concentrations, and potential receptors to minimize any potential adverse effects.

Excess Earth Management Areas (EMMAs) have been identified within the Highway 3 ROW where surplus soil is anticipated to be placed. Following final grading, these areas shall be vegetated with a native seed mix.

5.3.2 Contaminated Material

A Waste and Contamination Management Plan was prepared for this project, which identified areas with minor arsenic concentrations in the soil. Management of arsenic-impacted soils shall be undertaken in consideration of adjacent land uses, soil concentrations, and potential receptors to minimize any potential adverse effects. As such, this soil may be managed on-site in EMMAs where it will be located 30 metres from a waterbody and buried a minimum of 0.5 metres or placed under a paved surface.

ESC measures shall be maintained and monitored until exposed soil is stabilized, in accordance with the Erosion and Sediment Control Plan.

There is potential to encounter contaminated soils during construction which was not previously identified. If unknown contamination is discovered, the Waste and Contamination Management Plan outlines the procedure to be followed. Any contaminated soils leaving the Project shall be removed from the Contract Limits in accordance with O. Reg 406/19, Reg. 347 (General – Waste Management), and O. Reg. 351/12 (Waste Management Systems) under the *Environmental Protection Act* (EPA). The soils shall be transported to an appropriate receiver as confirmed by a Qualified Person (QP).

5.3.3 Spills Handling

A Spill Management Plan has been developed for this project which identifies roles and responsibilities, including notification requirements, to follow in the event of a spill. In addition, the construction contract shall include provisions for the handling of spills during construction (MTO General Conditions of Contract). As required for MTO construction contracts, the General Conditions specify incident management, under several pieces of legislation, for protecting the environment and natural features. Relevant legislation includes the *Environmental Protection Act*, the *Fisheries Act*, the *Gasoline Handling Act,* Ontario *Pesticides Act,* the Ontario *Water Resources Act* and *Transportation of Dangerous Goods Act*.

5.4 Natural Environment

5.4.1 Terrestrial Ecosystem

Natural environment investigations were initially completed during the Preliminary Design phase in 2001 and documented in the 2006 TESR, however, due to the age of the surveys, required updating. In 2020, the terrestrial ecosystem existing conditions for the Study Area were assessed by GHD and documented in a Terrestrial Ecosystems Assessment Report (GHD 2021) and the 2021 TESR Addendum. MTO subsequently prepared a Terrestrial Ecosystems Framework (September 2022) which summarized relevant vegetation, wildlife and SAR information from the Terrestrial Ecosystems

Assessment Report (GHD 2021) to provide context for the impact assessment and mitigation recommendations.

The following section provides an overview of the natural environment in the Study Area and additional surveys that were completed by GIP Hwy 3 Inc. Overall, impacts to wildlife and natural features were determined to be minimal and temporary in duration with the mitigation measures developed in place.

5.4.1.1 Vegetation Removals

Tree and vegetation removals and earth works will be required as part of the project for grading and site clearing activities. The anticipated tree/vegetation removals are not expected to impact natural features beyond the existing ROW and MTO and municipal owned lands. Most of the vegetation present within the ROW is low-sensitivity, disturbed habitat, but some small to medium sized woodlands occur. ROW species composition consisted of common native and non-native roadside trees, shrubs, and herbaceous species, with the exception of Butternut, which are protected SAR and discussed further in **Section 5.4.1.4**. and locally rare species discussed in further detail below.

Minor vegetation removals have occurred as part of early works to facilitate access to the noise barrier location for the installation of boreholes as part of the foundation investigation. Adjacent property owners/occupants were provided with advance notice of this work and a biologist was present to conduct a sweep of the area to avoid impacts to SAR snakes and/or nesting birds.

As noted in **Section 3.7**, rare plants will be offered for salvage to local Indigenous communities and select stakeholders.

Potential impacts from tree and vegetation removal and earth works include:

- Increased erosion and sedimentation of lands adjacent to the construction area;
- Increased vulnerability of the areas cleared of vegetation to invasion by non-native species;
- Decreased shade and cover for fish and wildlife;
- Localized temporary displacement of wildlife due to disturbance associated with construction activity;

- Potential for imported materials (e.g., gravel) to be released to adjacent riparian habitat and displace native substrates;
- Social/aesthetic impacts;
- Decrease in natural diversity; and
- Decrease in ecosystem services, such as air quality regulation, greenhouse gas mitigation and stormwater control.

To mitigate potential impacts to adjacent vegetation, erosion and sediment control measures shall be in place prior to vegetation removals. In addition, three trees have been identified for preservation and therefore, tree protection fencing will be installed in these areas. Clusters of swamp rose mallow will be avoided where possible and where feasible, naturally occurring areas of native shrubs and plants will be salvaged and relocated within the Project limits. Where feasible, vegetation removal shall occur during winter months or outside of sensitive wildlife periods.

A Landscape and Ecological Restoration Plan has been developed to provide compensation plantings for the trees being removed. This plan also requires that disturbed areas be re-stabilized and re-vegetated as soon as possible following disturbance using a native seed mix.

5.4.1.2 Invasive Species

Large stands of Phragmites (*Phragmites australis ssp. australis*) are present throughout the Project Area. Phragmites is an invasive perennial grass native to Europe, which has invaded low lying areas across southern Ontario in recent years. Phragmites grows at a rapid pace through the warmer spring and summer months. The species spreads both by seed propagation, as well as through the spreading of rhizomes allowing it to colonize new areas very quickly making it difficult to eradicate.

With the proposed improvements for the highway widening, the potential for additional spread of the species is great, and the opportunity to implement control measures is available. In 2020 and 2021, GHD conducted terrestrial field surveys and identified the general locations of Phragmites patches within the Study Area that were subsequently mapped in detail by MTO in 2022. Under the Ontario *Invasive Species Act* (ISA, 2015), vegetation and topsoil removed from these Phragmites areas shall be disposed of in a manner to prevent spreading.

In October 2023, GIP Hwy 3 Inc. undertook confirmatory reviews to confirm invasive species presence. With the exception of Phragmites, all vegetation species observed were common roadside species, including weeds, and no specific eradication treatment for invasive species is recommended beyond the mitigation protocol for Phragmites.

Vegetation removals will include removal of existing colonies of Phragmites. Removal of this species is considered a benefit to surrounding communities. To minimize potential spread of Phragmites as a result of disturbance, a Phragmites Mitigation Plan has been developed for implementation during construction and incorporated into the Earth Management Plan. In general, it is anticipated that Phragmites and Phragmites-impacted soils removed as part of earth excavation activities shall be buried 1 metre deep on-site in the EMMAs as part of the earth excavation works. Remaining stands of Phragmites within the Highway 3 ROW will be chemically treated in accordance with the Phragmites Mitigation Plan.

Mechanical removal of the plant in tandem with the earth excavation for the widening works will effectively remove the species from this area. Due to the ability of invasive species to easily spread through seed, the Contractor shall implement best management practices to prevent the introduction or spread of Phragmites, including proper soil management and equipment cleaning protocols, including the practices outlined in the Clean Equipment Protocol for Industry from the Ontario Invasive Plant Council (Halloran, J, *et al.,* 2013).

GIP Hwy 3 Inc.'s Landscape Architect shall conduct vegetation monitoring site visits during the spring, summer and fall seasons, each year for the three years of construction, to confirm the methods used were successful in eradicating the Phragmites from the site and to inspect for any visual evidence of Phragmites.

5.4.1.3 Wildlife and Wildlife Habitat

The background review completed by GHD in 2020 identified suitable habitat (watercourses and riparian vegetation) to support three herptile species of conservation concern; one turtle species, one frog species and one snake species. The mitigation measures included for Eastern Foxsnake (documented in **Section 5.4.1.4** of this report under Species at Risk) shall also serve to protect these herptiles.

GWP Hwy 3 Inc.'s biologist conducted additional wildlife sweeps for herptiles and birds prior to vegetation removals in advance of geotechnical drilling for the noise barrier on July 27, 2023. No bird nests were observed in vegetation being removed and no snakes were observed in the work area.

The remaining highway corridor provides limited habitat to common species. During construction, the following temporary impacts to wildlife and wildlife habitat are anticipated:

- Disruption to wildlife movement and wildlife avoidance during active construction;
- Disturbance to herptiles that could be traveling through or utilizing riparian habitats within and adjacent to the construction area; and
- Permanent removal of riparian vegetation in the median with the potential to provide wildlife habitat.

The Contractor shall conduct daily visual inspections for wildlife in the active work areas and if wildlife is encountered in the construction area, the Contractor shall be required to temporarily suspend work until the animal is out of harm's way. If the species persists in the work area, a person qualified to handle wildlife shall be contacted to relocate the animal.

5.4.1.4 Species at Risk

Since the 2021 Terrestrial Report was prepared by GHD, there have been legislative changes affecting two of the SAR species with potential to occur within the Study Area. Red-headed Woodpecker (*Melanerpes erythrocephalus*), listed as Special Concern under the ESA in the 2021 report, is now up-listed to Endangered (END) under both the ESA and SARA. While this species was not observed during field surveys, it has low potential to occur in the Study Area as there is suitable habitat of open, deciduous woodlands or forest clearings present.

Barn Swallow (*Hirundo rustica*) was listed in the 2021 Terrestrial Report as Threatened (THR) under both the ESA and SARA. This species has since been down-listed to Special Concern (SC) under the ESA. Barn Swallow and their nests were observed in the Study Area during field surveys. While no longer protected under the *Endangered Species Act* (ESA), they are still afforded protection under the *Migratory Bird Convention Act*.

The following sections detail the potential impacts to SAR with the potential to occur within the Study Area and proposed mitigation measures. In addition, SAR Awareness Training will be provided to site staff for the following species.

Butternut

Six butternut trees (Endangered under the ESA and *Species at Risk Act* [SARA]) are present within the ROW and will require removal for the works to proceed. To compensate for these impacts, the project will be registered under O. Reg. 830/21 of the *Endangered Species Act* (ESA, 2007) through a Notice of Activity, with 55 butternut seedlings planted in accordance with Ontario Regulation 830/21 requirements.

GIP Hwy 3 Inc.'s ecologist/biologist shall conduct two years of post-construction monitoring of the Butternut compensation plantings. All inspections shall review visual vegetation health and seed mix establishment.

Eastern Foxsnake

The Eastern Foxsnake is listed as Endangered under the ESA and known generally to occur in Essex County where suitable habitat exists. No Eastern Foxsnake were observed during field surveys conducted by GHD as documented in the 2021 TESR Addendum. Previous consultation with MECP indicated that potential hibernacula habitat should be considered present and that the snakes may occur throughout the Study Area.

During construction, the following impacts to Eastern Foxsnake and its habitat are possible:

- Disruption to snake movement and avoidance during active construction;
- Disturbance to snakes that could be traveling through or utilizing riparian habitats within and adjacent to the construction area; and
- Permanent removal of riparian vegetation that provides suitable habitat.

The potential risk of impact to Eastern Foxsnake can be managed entirely through mitigation measures. This includes visual inspection of work areas and equipment for the presence of snakes during the active period (**April 1 to October 31**) and installation of exclusionary fencing prior to **April 1** to isolate work areas adjacent to Eastern Foxsnake Habitat.

SAR Bats

There is potential for SAR bats to be present within suitable roosting trees that may be proposed for removal. To mitigate potential impacts, tree removals shall occur outside of the bat maternity roosting period (**April 1 to September 30**).

5.4.1.5 Migratory Birds

A breeding bird survey was conducted by GHD in 2020. During this survey and other field surveys, a variety of common birds were observed. Eastern wood pewee, listed as Special Concern under the ESA and SARA, was also detected.

Trees and vegetation within the Project Area have the potential to provide suitable habitat for migratory bird nesting. During construction, the following temporary impacts to migratory birds are anticipated:

- Potential destruction of nests, eggs or young during construction; and
- Disturbance to migratory birds that could be utilizing the forests adjacent to the construction area.

Destruction and disturbance of active nests (with eggs or young birds), as well as wounding and/or killing protected species, is prohibited under the federal *Migratory Birds Convention Act* (MBCA, 1994). Potential impacts to migratory birds will be mitigated through the use of vegetation clearing windows to avoid the active nesting season (April 1 to August 31) and implementation of bird nesting preventative measures during the active nesting season.

5.4.2 Aquatic Ecosystem

GHD completed a Fish and Fish Habitat Existing Conditions and Impact Assessment Report (2021) as part of the 2021 TESR Addendum in accordance with the requirements of the Interim 2020 *MTO/DFO/MNDMNRF Protocol for Protecting Fish and Fish Habitat on Provincial Transportation Undertakings, Version 4* (Fisheries Protocol) and the guidance provided in MTO's (2020) *Interim Environmental Guide for Fish and Fish Habitat* (Fish Guide). This assessment was undertaken to identify the impacts of the approved improvements to fish and fish habitat within the Study Area.

As a result of proposed design refinements at the No. 5 Drain, an additional fisheries field visit was conducted by GIP Hwy 3 Inc. in October 2023 to confirm the existing conditions, and recommend any additional mitigation measures based on the anticipated impacts.

Table 4 provides additional details on the proposed works included in DCR #1 and associated fish habitat information.

Table 4: Proposed Improvements in Fish Habitat

Municipal Drain	Proposed Culvert Improvements	Fish Habitat
Sedgewick Drain	SC2 Culvert Extension Downstream	Direct
Gilboe Drain	C2 Culvert Temporary Extension Downstream	Indirect
Seventh Concession Drain	SC6 Culvert Extension Upstream and Downstream	Direct
Boose Drain	SC7 Culvert Extension Upstream and Downstream	Direct
North Branch of the East Branch Number 47 Drain	C6 Culvert Extension Downstream	Indirect
East Branch Number 47 Drain	SC8 Culvert Extension Upstream and Downstream	Indirect
Wallace Fox Drain	C13 Culvert Extension Upstream and Downstream	Direct
Lane Drain	C14 Relocation of Culvert/New Culvert	Direct
Melville Bruner Drain Extension	C15 Culvert Extension	Direct

It was determined that these proposed improvements are not likely to result in the death of fish or harmful alteration, disruption or destruction (HADD) of fish habitat if the proposed mitigation measures are implemented. In-water works shall occur from **July 16** to **March 14** for all of the culverts identified in **Table 4**. Additional mitigation measures were identified for culvert C14 in a Letter of Advice from Fisheries and Oceans Canada (DFO) which shall be incorporated into the construction contract.

As a result of riparian vegetation removal associated with these culvert works, erosion and sediment transport are an anticipated impact of the project. An Erosion and Sediment Control Plan, including site-specific plans at these culvert locations, has been developed and shall be implemented during construction. Key measures are discussed in **Section 5.4.1.1** of this report.

5.5 Socio-Economic Environment

5.5.1 Highway Noise

Based on the 2021 TESR Addendum, a noise barrier was deemed required, cost-effective and technically practical at one location north of Division Road on the west side of Highway 3.

With this noise barrier in place, the noise level at the nearest receptor would be 56 dBA resulting in an average noise level reduction of approximately 7 dBA compared to the future scenario if no barrier was installed.

5.5.2 Construction Noise

Construction activities will vary temporally and spatially as the project progresses. Noise levels from construction at a given receptor location will also vary over time, as different activities take place and as activities change location within the ROW.

Temporary or short-term construction related noise could impact receptors in the vicinity of the planned improvements based on the Construction Noise and Vibration Plan carried out for the various construction stages. Therefore, there is the potential for noise complaints from area residents based on the predicted noise impacts.

To reduce potential noise impacts, the Contractor shall implement a variety of site-specific best management practices during construction.

The following municipal by-law stipulate times of day during which construction may occur:

- **Town of Kingsville Noise By-Law (By-Law 28-2006):** Noise from construction or the operation of construction equipment in residential areas is exempt from general prohibitions of the by-law between the hours of 11:00 am to 4:00 pm on Sundays and between the hours of 7:00 am to 9:00 pm every other day.

A Municipal Noise By-Law exemption is not required for Provincial undertakings as stated in the Ontario *Legislation Act* (2006). However, it is recommended that additional mitigation measures be considered and implemented during construction work adjacent to residential areas if it is determined that there is a need to further reduce noise impacts (e.g., if persistent complaints arise). Any noise complaints raised during construction shall be addressed following processes outlined in the Project's Communications Plan, which includes the following:

- Document the noise/vibration complaint, including the date and time of the complaint and contact information of the complainant. The specific location, duration, time, and character of noise and/or vibration heard shall be included in the complaint to assist in the investigation and mitigation process;
- Investigate the noise/vibration complaint to identify the source of the noise and/or vibration issue;
- Conduct sound level measurements to determine the severity of the noise/vibration impacts at the affected area. If noise levels are confirmed to be excessive, then implement best practice noise/vibration control measures to minimize or eliminate the source of the complaint. Document the mitigation measures in a log; and
- Follow up with the complainant providing results of the noise complaint investigation, including steps/actions taken to mitigate or limit future incidents.

5.5.3 Vibration

No representative receptors were identified as having the potential to experience vibration impacts higher than the 5.08 millimeters per second vibration criterion for structural safety set by the Federal Transit Administration (FTA). Best management practices shall be implemented during construction to minimize potential vibration impacts on nearby sensitive receptors.

5.5.4 Climate Change

To support the MTO's mandate to develop sustainable infrastructure that accounts for climate change, the Drainage Team completed the hydrologic assessment considering MTO Highway Standards Branch Engineering Memorandum #2016-14 "Implementation of the Ministry's Climate Change Consideration in the Design of Highway Drainage Infrastructure". As well, the hydraulic analysis of the crossings was completed using

methods and software acceptable to MTO technical design standards, including the Highway Drainage Design Standards (2008) and the MTO Drainage Manual.

5.5.5 Air Quality

Localized air quality may be adversely affected during construction due to dust generation from construction activities and equipment movements. Fugitive dust and air quality impacts on adjoining land uses are anticipated to be minimal and short in duration. Fugitive dust impacts to the travelling public on Highway 3 from construction activities are anticipated to be negligible.

Provisions to minimize potential air quality related impacts during construction include the use of best management practices for dust and other emissions.

The Contractor shall follow the Best Management Practices Plan (BMPP) for Fugitive Dust included in the Construction Management Plan to manage fugitive dust emissions. Any dust complaints raised during construction shall be addressed following processes outlined in the Communications Plan, and outlined in **Section 5.4.2** above.

5.5.6 Illumination

Illumination improvements proposed as part of the Project have been designed to increase safety for the travelling public while minimizing light trespass and reduce night sky pollution. Shielding will direct light away from adjacent natural heritage features to minimize impacts on wildlife.

Illumination modifications and improvements for the Project include:

- New continuous conventional LED luminaires along Highway 3 for the four-lane to two-lane transition east of Union Avenue (Essex Road 34). The temporary transition illumination constructed as part of the adjacent Contract (DB 2020-3022) shall be removed;
- Modifications to the existing partial conventional illumination with new LED luminaires at Highway 3 and Belle River Road (Essex Road 27), Division Road (Essex Road 29) and Union Avenue (Essex Road 34) intersections to accommodate new traffic signals and the proposed four-lane cross section of Highway 3; and

- New partial illumination with LED luminaires shall be added at Highway 3 and Essex Road 18 and Graham Side Road intersections to accommodate new traffic signals and the proposed four-lane cross section of Highway 3.

5.5.7 Source Water Protection

As outlined in the Source Protection Plan for Essex Region (October 1, 2015, updated May 28, 2019), the Study Area is located in the Essex Region Source Protection Area. The primary objective of the Source Protection Plan, as provided for in the *Clean Water Act*, is to protect existing and future drinking water sources.

The majority of Highway 3 within the Project Area does not intersect any source water protection areas, with the exception of the eastern portion of the alignment near the Municipality of Leamington. The eastern portion of Highway 3 intersects a regionally significant groundwater recharge area (score 6) and a highly vulnerable aquifer area (score 6). In addition, the eastern portion of the Highway 3 alignment intersects the Town of Kingsville municipal (lake-based) water supply source water intake protection Zone 2 at Graham Sideroad.

Ancillary project activities (e.g., the application of road salt, handling and storage of fuel, etc.) may pose a low risk to local groundwater and surface water quality.

To mitigate potential impacts to groundwater resources during construction, fuel handling and storage will be a minimum of 30 metres away from watercourses. To handle spills and contaminated materials, the Spill Management Plan will be implemented during construction, and the Contract General Conditions shall include incident management requirements following relevant legislation, including the *Environmental Protection Act, Fisheries Act, Gasoline Handling Act,* Ontario *Pesticides Act,* Ontario *Water Resources Act* and *Transportation of Dangerous Goods Act.*

5.5.8 Agriculture

The planned closures of Concession Road 9/Cameron Side Road, Concession Road 8/Marsh Road, Inman Side Road/South Talbot Road and Upcott Side Road with Highway 3 (subject to an OLT decision) have the potential to disrupt farm/agricultural operations by reducing access to and across Highway 3 and increasing travel time. Sideroad closures have the potential to further separate farm operations that work on

both sides of Highway 3 and increase the number of large agricultural equipment/vehicles on local roads.

During Preliminary Design, it was determined that the existing local roads are sufficient to convey large farm equipment/vehicles until they reach alternative intersections to cross Highway 3 while Highway 3 crossings and/or sideroads are temporarily closed.

The proposed intersection improvements will enhance safety for agricultural equipment accessing or travelling across Highway 3 through controlled-access intersections which have been designed to accommodate large agricultural equipment/vehicles.

5.5.9 Access to Properties During Construction

Access to residential, industrial and commercial properties within the Project Area shall be maintained throughout construction. Some out-of-way travel may be required due to temporary sideroad closures.

5.5.10 Recreation/Active Transportation

Highway 3 within the Project Area does not currently provide for active transportation within the corridor, however proposed closures of Concession Road 9/Cameron Side Road, Concession Road 8/Marsh Road, Inman Side Road/South Talbot Road and Upcott Side Road with Highway 3 (subject to an OLT decision) have the potential to reduce access across Highway 3 for cyclists and pedestrians.

Although there would be a reduction in access across Highway 3 due to the proposed road closures, there are other alternative routes available in the municipal road network, which would minimize potential disruption to cyclists and pedestrians. Further, with the installation of traffic signals at the proposed intersections, controlled traffic conditions are provided. At the traffic signals, pedestrian traffic signals shall be implemented to provide for sufficient green time for pedestrians to cross the highway.

The County of Essex County Wide Active Transportation Study (CWATS) Master Plan (2012) identifies cycling facilities that cross Highway 3 at Essex Road 29 (Division Road) and Essex Road 18. Both intersections will be signalized and will include fully paved shoulders within the side road work limits that would accommodate planned future cycling facilities.

5.6 Cultural Resources

5.6.1 Archaeology

Archaeological Assessments (AA) were previously conducted as part of the TESR Review stage. Several Stage 2, 3 and 4 AA Reports have been submitted to MCM for acceptance into the Ontario Public Register of Archaeological Reports. Acceptance of these reports by MCM shall be required before construction in these areas can commence. As a result of these assessments, sites with archaeological potential within the Project Limits have been excavated and documented to the extent required under the *Standards and Guidelines for Consultant Archaeologists* (MTC, 2011) and no further assessment is required.

Archaeological Monitors will be present on site, at select locations, to ensure protection of archaeological resources.

Should unassessed buried archaeological resources be uncovered during construction, these may be a new archaeological site and therefore subject to Section 48 (1) of the Ontario *Heritage Act*. Upon discovering the archaeological resources, the Contractor shall immediately cease alteration of the local site area and notify the Contract Administrator, who shall engage a licensed archaeologist to carry out archaeological fieldwork, in compliance with Section 48 (1) of the Ontario *Heritage Act*.

Any person discovering human remains shall immediately notify the police or coroner and the Registrar of Cemeteries, Ministry of Government Services. Notification to the project Environmental Manager and MTO Environmental Planner shall occur so the MTO Regional Archaeologist can be informed.

5.6.2 Built Heritage

As noted in the 2006 TESR, the lands along Highway 3 do not include any built heritage structures and therefore no impacts to built heritage structures are anticipated.

6.0 Summary of Environmental Concerns and Commitments

The environmental mitigation measures recommended in the 2006 TESR and the 2021 TESR Addendum were reviewed and revised based on the final Detail Design. The proposed works are not anticipated to have significant impacts on the natural, cultural, or socio-economic environment in close proximity to the Project Area. To the extent possible, adverse impacts can be avoided or mitigated by the measures and provisions outlined in **Table 5** that shall be carried forward into the construction contract.

6.1 Environmental Clearance and Approvals

As required by the MTO Class EA, all permits, approvals, and exemptions required for the Project shall be obtained prior to Environmental Clearance – Construction Start being issued. Design-related environmental approvals and permits required prior to construction include:

- Council/OLT approval for municipal road closures;
- Register impacts to Butternut under O. Reg.830/21 of the Endangered Species Act (ESA, 2007) through a Notice of Activity;
- Acceptance of Stage 2, 3, and 4 Archaeological Assessment reports (Timmins Martelle Heritage Consultants Inc.) into the Ontario Public Register of Archaeological Reports by MCM; and
- Acceptance of Section 78(5) Minor Improvement Reports under the Drainage Act for applicable culverts and adoption of municipal by-law(s).

In addition, the following authorizations/licenses are required prior to handling wildlife during construction:

- Obtain a Wildlife Scientific Collector's Authorization from the Ministry of Natural Resources and Forestry (MNRF) for wildlife salvage; and
- Obtain a License to Collect Fish for Scientific Purposes from MNRF for fish salvage under the *Fish and Wildlife Conservation Act*.

Table 5: Summary of Environmental Concerns and Commitments

I.D. #	I.D. # Sub-Issues	Potential Impacts/ Concerns	Potentially Concerned Agencies/Stakeholders	Mitigation/Protection/Monitoring
1. Highway and Traffic Engineering	1.1. Traffic and Emergency Services	Potential traffic disruption and emergency service delays to incident locations during construction.	County of Essex, Town of Essex, Town of Kingsville, Emergency Service Providers, Provincial Highway Road Users, Local Road Users, Adjacent Business Owners, Property Owners	• Advanced signage shall be posted at least seven days in advance of construction start, advising motorists of potential traffic delays. • Emergency vehicles shall be given priority access through the construction zone. • Emergency Service Providers shall be updated throughout the project on construction staging, including the construction start date and any significant changes to traffic operations. • Emergency Service Provider contact information shall be provided to the Contractor and they shall be invited to attend regularly scheduled progress meetings throughout construction. • All traffic control measures shall be implemented following Ontario Traffic Manual Book 7 – Temporary Conditions.
	1.2. Construction Traffic	Potential traffic disruption/delays caused by construction vehicles entering/exiting construction areas.	County of Essex, Town of Essex, Town of Kingsville, Emergency Service Providers, Provincial Highway Road Users, Local Road Users, Adjacent Business Owners, Property Owners	• Construction traffic shall access the construction area from the existing road network at specified construction access/egress locations in accordance with Ontario Traffic Manual Book 7 – Temporary Conditions.
2. Drainage and Stormwater Management	2.1. Surface water quality and quantity	Potential impacts to quantity and quality of surface water to receiving watercourses.	MECP, MNRF, ERCA, County of Essex, Town of Kingsville	• An Erosion and Sediment Control Plan (ESCP) shall be included in the construction Contract to mitigate temporary and long-term impacts to natural areas. Site-specific ESC measures have been developed for fish-bearing drainage features. • ESC measures shall be installed prior to construction works adjacent to natural features and remain in place until final vegetation becomes established. • ESC measures shall be installed within the drainage network to mitigate impacts to existing culvert locations and locations where drainage networks leave the construction limits.

I.D. #	I.D. # Sub-Issues	Potential Impacts/ Concerns	Potentially Concerned Agencies/Stakeholders	Mitigation/Protection/Monitoring
3. Excess Soil and Contaminated Material Management	3.1. Excess Soil Management	Potential impacts to adjacent natural features from placement of excess earth materials.	Ministry of the Environment, Conservation and Parks (MECP), ERCA, County of Essex, Town of Essex, Town of Kingsville	• All surplus soil generated by this Project is anticipated to be managed on-site in Excess Material Management Areas (EMMAs) and therefore is not considered excess soil as defined by O. Reg. 406/19. • EMMAs shall have ESC measures in place to prevent sediment release to surrounding lands. • Soil placement activities shall be undertaken in consideration of adjacent land uses, soil concentrations, and potential receptors to minimize any potential adverse effects. • Placement of surplus soils shall be done in a manner/location so as not to affect current or future surface water drainage. • Following final grading, areas where excess soils have been placed shall be vegetated with a native seed mix.
	3.2.Contaminated Material	Potential to encounter contaminated soils during construction which was not previously identified.	MECP, Ministry of Natural Resources and Forestry (MNRF), ERCA, County of Essex, Town of Essex, Town of Kingsville	• Management of arsenic-impacted soils shall be undertaken in consideration of adjacent land uses, soil concentrations, and potential receptors to minimize any potential adverse effects. • Soil in areas with minor arsenic concentrations may be managed on-site and reused under pavement or within the EMMAs buried at a depth of 0.5 metres. ESC measures shall be maintained and monitored until exposed soil is stabilized. • Any unknown contaminated soils, or soil contaminated as a result of a spill shall be removed from the Contract Limits in accordance with O. Reg. 406/19, Reg. 347, and OPSS 180 as applicable. The soils shall be transported to an appropriate receiver as confirmed by a Qualified Person (QP). • Prior to soil leaving the Contract Limits, the QP shall determine if a project area notice needs to be filed on the Excess Soils Registry. • If soils leave the Contract Limits, they shall be accompanied by a hauling record that meets the requirements of O. Reg 406/19 and the Environmental Protection Act. • Hazardous soils that exceed Reg. 347 Schedule 4 are considered subject waste and shall be managed in accordance with OPSS 180.07.07 and Reg. 347 including registration of the waste.
	3.3. Spills Handling	Potential adverse impacts of spills on environment and natural features including release of deleterious substances.	MECP, Ministry of Natural Resources and Forestry (MNRF), ERCA, County of Essex, Town of Essex, Town of Kingsville	• Spills shall be managed in accordance with the Spill Management Plan. • The spill kit on site shall contain a supply of absorbent products such as booms, pads and socks. • MTO General Conditions of Contract specifies incident management requirements following relevant legislation including, Environmental Protection Act, Fisheries Act, Gasoline Handling Act, Ontario Pesticides Act, Ontario Water Resources Act and Transportation of Dangerous Goods Act.

I.D. #	I.D. # Sub-Issues	Potential Impacts/ Concerns	Potentially Concerned Agencies/Stakeholders	Mitigation/Protection/Monitoring
4. Natural Features	4.1. Vegetation Removals	Increased erosion and sedimentation of lands adjacent to the construction area. Increased vulnerability of the areas cleared of vegetation to invasion by non-native species. Decreased shade and cover for fish and wildlife. Localized temporary displacement of wildlife due to disturbance associated with construction activity. Potential for imported materials (e.g., gravel) to be released to adjacent riparian habitat and displace native substrates. Social/aesthetic impacts. Decrease in natural diversity. Decrease in ecosystem services, such as air quality regulation, greenhouse gas mitigation and stormwater control.	MNRF, ERCA, County of Essex, Town of Essex, Town of Kingsville	• Clearly demarcate work limits at outset of construction and minimize unnecessary vegetation clearing. • A silver birch (Betula pendula) is identified along the south edge of the ROW, east of Graham Side Road and two white oaks (Quercus alba) are identified along the south edge of the ROW, west of Concession Road 9. These shall be preserved and protected through the installation of tree protection fencing as part of the Project. • Identify naturally occurring areas of native shrubs and plants to be salvaged and relocated within the Project limits. Efforts shall be made to salvage and relocate naturally occurring juniper (Juniperus virginiana) of all sizes within the project limits and make excess trees available to the ERCA for other undertakings. • Vegetation near areas where swamp rose mallow was observed to occur shall be avoided where feasible, and disturbance limited. Wherever possible the health and integrity of the landscape surrounding these clusters (at culverts C4 and SC7) shall be maintained. • Where feasible, vegetation removal shall occur during winter months or outside of sensitive wildlife periods. • Appropriate vegetation clearing techniques shall be used (e.g., felling trees away from retained natural areas and watercourses) in accordance with the Clearing and Grubbing Plan; • Avoid working underneath the canopy of existing trees to be retained. Where equipment shall operate in close proximity to trees to be retained, prune branches using best management practices to mitigate impacts to trees. • For trees within the municipal ROW, GIP Hwy 3 Inc. shall notify municipalities prior to the removal of existing trees ten days prior to the removal. • Existing trees scheduled for removal shall be compensated for with replacement trees. Replacement trees shall be planted in accordance with the Landscape and Ecological Restoration Plan. • Where excavation is required in close proximity to trees, tree roots are to be cut/pruned to the face of the excavation with a clean and sharp handsaw or loppers. Pruning cuts shall result in a clean cut with root bark securely attached at either side of the cut. • In dust-sensitive areas (e.g., near the watercourses, etc.) control dust using water and not chemical suppressants. • Conduct equipment maintenance and refueling at the designated and properly contained maintenance areas in the works yard or at commercial garages located well away from watercourses

I.D. #	I.D. # Sub-Issues	Potential Impacts/ Concerns	Potentially Concerned Agencies/Stakeholders	Mitigation/Protection/Monitoring
				outside retained vegetation areas. The Contractor shall have a Spills Management Plan and required materials on site at all times in accordance with OPSS 100. • Ensure that all construction machinery is cleaned and maintained prior to arrival on-site to prevent the introduction of pollutants or exotic invasive species. • Temporarily stockpiled soil, debris or other excess materials, and construction-related materials, shall be properly contained (e.g., inside silt fencing) in areas separated at least 30 metres from the watercourses in accordance with OPSS 180. Construction materials and debris shall be removed and appropriately disposed of following construction. Cut and grubbed material shall be disposed of through chipping or other appropriate means, in accordance with OPSS 180. • Re-stabilize and re-vegetate exposed surfaces as soon as possible following disturbance, per OPSS 804 using native seed identified in the Landscape and Ecological Restoration Plan. • All ESC measures shall be in place prior to the start of construction and remain in place until restoration is complete and disturbed areas are stabilized against erosion. • Inspect ESC measures weekly and following rainfall events, and repair as required. • Use of mesh or netting-type stabilization material shall not be used on site. • ESC measures shall be monitored weekly and/or after every 10 millimetres or greater rainfall event, as they could require periodic cleaning, maintenance and/or reconstruction. If deficiencies are found, they shall be repaired and/or replaced promptly. • Grading, placement of topsoil and seeding specifications to be implemented to decrease erosion potential and promote suitable native vegetation regeneration. • Disturbed areas along drains shall be re-vegetated with species native to the area to minimize invasion and colonization by non-native species and increase shade/cover for wildlife. • Restore all disturbed areas to pre-construction conditions with native seed mix and stabilize within 45 days to prevent erosion. • Final cover, including seeding and erosion control blanket shall be completed by November 1, of any given year. • An inspection log shall be maintained by GIP Hwy 3 Inc. and kept up to date and available for review by applicable authorities.

I.D. #	I.D. # Sub-Issues	Potential Impacts/ Concerns	Potentially Concerned Agencies/Stakeholders	Mitigation/Protection/Monitoring
	4.2. Invasive Species	Potential spread of Phragmites.	MNRF, MECP, ERCA, County of Essex, Town of Essex, Town of Kingsville	A Phragmites Mitigation Plan has been developed for implementation during construction, and incorporated into the Earth Management Plan. General mitigation measures include: • Phragmites and Phragmites-impacted soils is anticipated to be buried 1 metre deep on-site in the EMMAs as part of the earth excavation works. Mechanical removal of the plant shall be undertaken in tandem with the earth excavation. • Phragmites present in areas not impacted by construction shall be chemically treated in the spring of each construction year. • In accordance with OPSS 206, the Contractor shall implement best management practices to prevent the introduction or spread of Phragmites, including proper soil management and equipment cleaning protocols, including the practices outlined in the Clean Equipment Protocol for Industry from the Ontario Invasive Plant Council (Halloran, J, et al., 2013). • GIP Hwy 3 Inc.'s Landscape Architect shall conduct vegetation monitoring site visits during the spring, summer and fall seasons, each year for the three years of construction, to confirm the methods used were successful in eradicating the Phragmites from the site and to inspect for any visual evidence of Phragmites. • Soils and vegetation that have been treated for the control and management of Phragmites shall remain on site, subject to the review and approval by the Contracting Authority. • Care shall be taken to prevent the release of Phragmites seeds and rhizome fragments during transport. All plant materials and infested soils shall be loaded into an enclosed container, or secured in trucks with a cover/tarp to prevent the release of seeds along other roadways during the transportation process. Special care shall be taken to ensure the tarps are securely fastened and functioning to contain all plant materials and soil when high winds and/or rain is present as this may increase the potential for plant material spread.
	4.3. Wildlife and Wildlife Habitat	Disturbance to migratory bird nesting and/or bat maternity roosting areas. Disruption to wildlife movement and wildlife avoidance during active construction.	MNRF, ERCA, County of Essex, Town of Essex, Town of Kingsville	• Where feasible, vegetation removal shall occur outside of the migratory bird nesting window (**April 1 to August 31**) and trees outside of the bat maternity roosting season (**April 1 to September 30**). • Conduct visual inspections for wildlife prior to the start of construction each day and regularly throughout the day during the active season. This shall include a thorough walk-through of the work area and searching any vegetation, brush piles, logs or rock piles and equipment. If wildlife are observed, work shall be temporarily suspended until the species is out of harm's way.

I.D. #	I.D. # Sub-Issues	Potential Impacts/ Concerns	Potentially Concerned Agencies/Stakeholders	Mitigation/Protection/Monitoring
		Disturbance to herptiles that could be traveling through or utilizing riparian habitats within and adjacent to the construction area. Permanent removal of vegetation with the potential to provide wildlife habitat.		• Immediately upon observation of an actively nesting female turtle, personnel and vehicles shall clear the area within the turtle's line of sight as much as possible to allow the female to finish laying. Startling a nesting female could lead to abandonment of the partially laid nest before the eggs are concealed. A Qualified Biologist shall be consulted immediately to discuss mitigation options, including measures to take if relocation of hatchlings or egg salvage is needed. • If a turtle or snake nest or overwintering site is discovered, work shall be temporarily suspended and a Qualified Biologist shall be contacted. • All injured wildlife (SAR or non-SAR) shall be transported to an authorized wildlife rehabilitator by a representative of Hwy 3 GIP Inc. Euthanasia of injured wildlife is not permitted unless conducted by an authorized wildlife rehabilitator. If an animal is unable or unwilling to flee from human presence, it is likely injured. Signs of wildlife injury include obvious wounds, broken limbs, lethargy, lameness, and difficulty standing or breathing. Injured wildlife experience high levels of stress and pain, and their behaviour is usually unpredictable and defensive, posing an increased risk to handlers. Always use extreme caution when handling injured wildlife, wear thick gloves, and limit handling as much as possible. Avoid aggravating any obvious injuries such as wounds or broken bones. Transport injured wildlife in a dark container where possible. • Construction activities shall be limited to the work area, and if necessary, sensitive features shall be demarcated if they are located immediately adjacent to the work zone.
	4.4. Species at Risk	Eight butternut trees are present; one of which is located outside of the Study Area, but within 'regulated' habitat (i.e., 50 metres) of the Study Area. Potential to impact Eastern Foxsnake within Study Area.	MNRF, ERCA, County of Essex, Town of Essex, Town of Kingsville	SAR Awareness Training will be provided to site staff for Butternut and Eastern Foxsnake. Butternut: • A total of 55 seedlings shall be planted to compensate for the proposed Butternut removals in accordance with the L Landscaping and Ecological Restoration Plan • Butternut seedlings to be planted between **March 1** to **May 15** and **September 20** to **October 30**. If the seedlings are grown in a container, then the period is from **May 16** to **May 26**. The seedlings shall be planted in the same seed zone from which it was grown. • GIP Hwy 3 Inc.'s ecologist/biologist shall conduct two years of post-construction monitoring of the Butternut compensation plantings. All inspections shall review visual vegetation health and seed mix establishment.

				Eastern Foxsnake:
				• Contractors shall be vigilant and complete a visual inspection of work areas, machinery and equipment each day prior to commencement or when moving to new locations, throughout the active period for Eastern Foxsnake (**April 1 to October 31**). This shall include a thorough walkthrough of the work area and searching any brush piles, logs or rock piles.
				• Measures shall be put in place to prevent Eastern Foxsnake from entering construction areas. These measures shall include the installation of temporary fencing prior to April 1 to exclude Eastern Foxsnake and contain the work area in proximity to drainage features and other potential natural habitats. Exclusion fences shall be included in the Contract drawings and specifications. Fencing shall be inspected daily during active construction to check for breaches of instability and shall be maintained from **April 1** to **October 31**.
				• Exclusion fencing shall be installed according to GIP Hwy 3 Inc.'s Wildlife Fence Plan and to the guidelines detailed in the Species at Risk Branch Best Practices Technical Note on Reptile and Amphibian Exclusion Fencing (MNRF 2013). No synthetic plastic ESC netting or fencing shall be used in Eastern Foxsnake habitat due to the risk of entanglement/injury/ death of reptiles. At these locations, alternatives such as Curlex Netfree© blanked or rip rap over geotextile fabric shall be used for erosion control to prevent entanglement of Eastern Foxsnake.
				  ○ Inspect wildlife exclusion fences periodically for damages that may affect the integrity of the fence or allow passage of wildlife through it. Inspections shall occur following spring melt and heavy rain fall events, similar to inspections to ESC controls;
				  ○ In order to prevent wildlife from encroaching into designated work areas, exclusion fences shall be designed specifically to deter Eastern Foxsnake, with a smooth material to prevent these snakes from climbing, and stakes shall be on the activity side; and
				  ○ Temporary exclusion fencing shall be installed in locations that have been identified to provide preferred suitable habitat to Eastern Foxsnake. Eastern Foxsnake in the Carolinian region prefer to inhabit cultural meadow, thickets, wetlands and drain communities as movement and foraging corridors. Eastern Foxsnake tends to avoid inhabiting agricultural lands as they lack vegetation for cover and are easily susceptible to predation.
				• If Eastern Foxsnake are encountered in the construction area, work shall be suspended until the animal is out of harm's way. If the species persists in the work area, a person qualified to handle Eastern Foxsnake shall be contacted to relocate the animal.
				• Disturbance to brush piles/logs shall be avoided wherever possible during the active season. If a brush/log pile shall be moved or disturbed outside this window, it shall be carefully inspected for

I.D. #	I.D. # Sub-Issues	Potential Impacts/ Concerns	Potentially Concerned Agencies/Stakeholders	Mitigation/Protection/Monitoring
				snakes. If eggs or hatchlings are present, work shall cease and a qualified terrestrial biologist and MECP shall be contacted to discuss mitigation options. • Work occurring between September to late May has the potential to discover hibernacula, particularly in areas where there are animal burrows, rock crevices, gabion baskets or foundations are present. If Eastern Foxsnake is discovered, work in this area shall halt and a qualified terrestrial biologist shall be contacted to discuss mitigation options. • GIP Hwy 3 Inc. shall retain a qualified terrestrial biologist experienced in the verification and relocation of SAR snakes and other wildlife. • Construction equipment that is left idle for over one hour or is parked overnight in the active period shall be inspected for the presence of Eastern Foxsnake before (re)ignition. This visual examination shall include all lower components of the machinery, including operational extensions and running gear. SAR Bats: • Tree removals shall occur during winter months or outside of the bat maternity roosting season (**April 1 to September 30**).
	4.5. Migratory Birds	Potential removal, disturbance or destruction of avian nests, eggs or young prior to and during construction. Disturbance to migratory birds that could be utilizing the forests adjacent to the construction area.	MNRF, Environment and Climate Change Canada	To protect birds and comply with the *Migratory Birds Convention Act* (1994), the following measures shall be incorporated into the construction contract: • Install and maintain bird nesting preventative measures at concrete culverts that have potential to provide suitable nesting habitat during the active nesting period (**April 1 to August 31**). • Ensure that no bird nests shall be removed or disturbed in accordance with the MBCA, SARA, and ESA during structure work. Where wildlife or wildlife nests are encountered, a qualified terrestrial biologist shall be consulted on appropriate next steps. • Avoid vegetation clearing during the breeding bird season (**April 1 to August 31**). If vegetation removal cannot be avoided during this time frame, then a nest sweep survey shall be conducted to assess if the habitat provides any nesting structures for avian species. Vegetation clearing shall take place within 48 hours of the inspection. If active nests are observed, a buffer will be identified for the nest and removals cannot occur until fledglings have left the nest, as confirmed by a qualified biologist.

I.D. #	I.D. # Sub-Issues	Potential Impacts/ Concerns	Potentially Concerned Agencies/Stakeholders	Mitigation/Protection/Monitoring
				• Workers shall be vigilant and check works areas for the presence of breeding birds and nest containing eggs and young. • If breeding birds and/or nests are encountered, work shall not continue until after August 31 or as soon as it has been determined that the young have left the nest.
	4.6. Aquatic Ecosystems	Potential impacts to water temperature and increased erosion potential with the removal of riparian vegetation. Potential impediment of fish passage during unwatering. Potential impacts as a result of a release of deleterious materials (e.g., oil, fuel, debris, grease) into the drains and any heavy equipment entering a waterbody.	MNRF, ERCA, DFO	• Implementation of in-water works within direct and indirect fish habitat from **July 16 to March 14** of any given year (no in-water works between **March 15 to July 15**), to protect sensitive life stages/processes of fish. • Where possible, in-water works shall be conducted in-the-dry during low flows or when flows are non-existent. • Work shall be scheduled to avoid wet, windy and rainy periods to control erosion and sedimentation. • Design and implement isolation/containment system to delineate temporary in-water work zones and to maintain clean flow downstream/around the work zone at all times. • When temporary flow control shall be undertaken for the work it shall be according to the Contract Documents as per OPSS 182 and 517 and relevant permits and supported by all appropriate erosion and sediment control measures to isolate the temporary instream construction zones required for the works. • When using a pump, the intake shall be controlled to prevent entry of fish and other aquatic wildlife (screen any water intakes or outlet pipes to prevent entrainment or impingement of fish). • Limit access to banks to protect riparian vegetation and minimize bank erosion. • Only clean materials free of fine particulate matter shall be placed in the water for temporary construction measures (e.g., coffer dams shall be constructed of 'pea gravel' bags, geotextile fabric, sheet pile or other clean material). • Unless specified in the Contract Documents, vehicles and equipment shall not enter or be operated in the municipal drains or on waterbody banks or in riparian vegetation areas. • Vehicular and equipment maintenance and refueling shall be conducted as far away from waterbodies, waterbody banks and riparian vegetation areas as possible and practical (minimum 30 metres away), and shall be controlled to prevent any discharge of equipment fuels and fluids onto the ground or into waterbodies. • Ensure that machinery arrives on site in a clean condition and maintained free of fluid leaks, invasive species and noxious weeds.

I.D. #	I.D. # Sub-Issues	Potential Impacts/ Concerns	Potentially Concerned Agencies/Stakeholders	Mitigation/Protection/Monitoring
				• Operate, store and maintain all equipment and associated materials in a manner that prevents the entry of any deleterious substance to the waterbody. • All stockpiled materials, including but not limited to excavated overburden and topsoil, excess materials, construction debris and containers shall be stored and stabilized in a manner that prevents them from entering any waterbody. • All construction debris and litter shall be removed frequently. • All materials used to provide environmental protection shall not contain deleterious substances. • All exposed soils or disturbed areas that drain into a drain/watercourse shall be treated with seed and cover according to OPSS 804 immediately after exposure or upon completion of the work in or around the drain/watercourse or on the drain/watercourse bank. • All excess material shall be managed in accordance with the Earth Management Plan. • The Spill Management Plan shall be implemented immediately in the event of a sediment release or spill of a deleterious substance and keep an emergency spill kit on site. • As a general condition of the contract, the Contractor shall be responsible for the control of dust for all road works. • Construction of pools in waterbody beds, shall be according to OPSS 821. • Implement the Erosion and Sediment Control Plan to mitigate impacts to fish and fish habitat. • Install appropriate ESC measures (e.g., silt fence, filter rolls, check dams) prior to clearing and grading. • ESC measures shall remain in place until disturbed soils have stabilized naturally or covered with rock, where proposed on drawings. • Watercourse embankments shall be restored and stabilized immediately before removing all site isolation measures. • Stockpiled organic material and soils shall be placed away from all watercourses and protected (i.e., temporarily stabilized). • Excavated bank material shall be temporarily stored within the ROW and reused. Any extra material shall be managed in accordance with the Earth Management Plan. • Any fish confined or trapped within the isolated areas shall be removed by a qualified biologist under a licence from the MNRF prior to dewatering. Only clean materials (i.e., free of particulate matter) shall be used for cofferdams. • Municipal drains shall not be diverted or blocked.

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				• Replacement of the existing culvert shall be designed in a manner not to impede fish passage;
				• The Environmental Inspector shall monitor construction activities in and around the municipal drains and ensure all related mitigation measures are properly installed and maintained, and are functioning effectively.
				• All ESC measures shall be integrated with the construction operation schedule. Operations near or in municipal drains shall not commence until temporary ESC measures have been installed. In the event that the Contract Administrator determines that controls are unacceptable or ineffective, the Contractor shall cease the offending operations and operations shall remain suspended until otherwise directed by the Contract Administrator in writing.
				• The Contractor shall not take such measures and provide protection systems to ensure that any materials resulting from construction:
				  ○ Do not fall into or enter the waterbody; and
				  ○ Minimize the escape of dust such that no visible dust reaches the waterbody.
				• Where riparian vegetation has been removed, re-establish bank vegetation with native species suitable for the site.
				• Where riparian vegetation shall be re-established, the proponent shall plant or seed vegetation when at least four weeks remain in the growing season.
				• Whenever possible, operate machinery on land above the high-water mark and in a manner that minimizes disturbances to the banks and bed of the municipal drain.
				• New concrete box culverts constructed in watercourses with direct fish habitat shall be embedded to accommodate 400 millimetres of suitable sized substrate.

		Impacts from erosion and sediment release.	ERCA, MECP	An Erosion and Sediment Control Plan has been developed and shall be implemented during construction, including the following key measures: • All erosion and sediment control measures shall be in place prior to the start of construction and remain in place until restoration is complete and disturbed areas are stabilized against erosion. • Routinely inspect erosion and sediment control measures, including following storms, and repair as required. • Use of mesh or netting-type stabilization material shall not be used on site. • ESC measures shall be monitored regularly and/or after every 10 millimetres or greater rainfall event, as they could require periodic cleaning, maintenance and/or reconstruction. If deficiencies are found, they shall be repaired and/or replaced promptly.

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				• Grading, placement of topsoil and seeding specifications to be implemented to decrease erosion potential and promote suitable native vegetation regeneration. • Disturbed areas along drains shall be re-vegetated with species native to the area to minimize invasion and colonization by non-native species and increase shade/cover for wildlife. • Restore all disturbed areas to pre-construction conditions with roadside seed mix and stabilize within 45 days to prevent erosion. • Final cover, including seeding and erosion control blanket shall be completed by November 1, of any given year. • An inspection log shall be maintained by GIP Hwy 3 Inc. and kept up to date and available for review by applicable authorities.
		Impacts from dewatering.	ERCA, MECP, MNRF	The control of water from dewatering operations is to be conducted in accordance with OPSS 518, 517 and 182 which include: • Where dewatering is required, appropriate energy dissipation and settling/filtration measures shall be used for discharge of dewatering water to ensure no erosion or sediment release occurs in the drain/watercourse in accordance with OPSS 517 and 182; • Dewatering operations shall be directed to a sediment control device or natural attenuation area prior to discharge to drain/watercourses. If a natural attenuation area is used, a minimum 30-metre setback shall be maintained from the receiving drain/watercourse; • When water is discharged to a drain/watercourse, it shall be done in a manner that does not cause erosion or other damage to adjacent lands; and • Any fish stranded within the temporary work zones isolated for the in-water works shall be rescues using appropriate techniques by qualified individuals and released downstream of/away from the temporary work zones. • Fish salvage and relocation shall occur prior to and/or during the de-watering activities, depending on the depth of water in the isolated work area. Fish shall be collected using methods approved under the Licence to Collect Fish for Scientific Purposes and they shall be identified to species (where possible), enumerated and relocated downstream, beyond the construction work area. In the event that the temporary work area isolation barriers fail, additional fish rescues shall be conducted to remove all fish from the work area prior to resuming construction. All collections and sampling shall be performed in compliance with the Best Management Practices (BMPs) identified in the Fisheries Policy Section Technical Bulletin.

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5. Socio-Economic Environment	5.1. Construction Noise	Potential noise impacts during construction.	Area residents, County of Essex, Town of Essex, Town of Kingsville, MECP	• Limit noise-generating construction activities to within the hours permitted by the municipalities' noise control by-laws:
				  ○ If any work must be scheduled between 9:00 pm and 7:00 am, or before 11:00 am or after 4:00 pm on a Sunday, GIP Hwy 3 Inc. shall notify in writing nearby residents of the work at least 24 hours in advance to minimize disruption.
				• For construction work with the potential to generate significant noise where mitigation is not feasible, GIP Hwy 3 Inc. shall notify nearby residents of the work at least 24 hours in advance to minimize disruption;
				• Schedule work to minimize cumulative noise impacts (i.e., machinery operating simultaneously) where possible, especially within the potential problem areas identified in **Figure 2**;
				• Avoid using unnecessarily large or noisy equipment. Ensure equipment is fitted with standard noise-damping devices or better;
				• Ensure construction equipment and muffling devices are maintained in proper working order according to manufacturers' recommendations to comply with the equipment noise level specifications of MECP guideline NPC-115;
				• Avoid unnecessary idling of equipment;
				• Inform employees of noise impacts and mitigation/control measures by requiring all on-site staff to participate in environmental awareness training specific to the Construction Noise and Vibration Plan;
				• Avoid using the areas in close proximity to noise-sensitive receptors (identified in **Figure 2**) as laydown areas;
				• Minimize drop heights of materials and avoid uncontrolled tailgate banging;
				• Ensure equipment operators are well-trained and experienced;
				• Route heavily-loaded trucks on main roads and away from noise-sensitive areas where possible;
				• Investigate quieter alternative construction equipment/processes for the required work, including but not limited to:
				  ○ Equipping heavy machinery with broadband backup alarms; and
				  ○ Avoiding the simultaneous undertaking of particularly noisy tasks;
				  ○ Use high-capacity compressed air storage to minimize air compressor operation; and
				  ○ Implement the noise and vibration complaint management program established in the CNVP (see Section 9.0).

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				GIP Hwy 3 Inc. shall follow procedures discussed in Section 9 of the Construction Noise and Vibration Plan to address noise complaints. To support potential noise complaint resolution activities, GIP Hwy 3 Inc. shall consider determining baseline noise levels at nearby sensitive receptors identified in the noise assessment to mitigate potential claims against the Project. Based on the surrounding area, baseline noise levels could be reasonably predicted through a traffic noise assessment. • Any monitoring of baseline or active construction noise monitoring should occur on the property line of the noise-sensitive area closest to the work area. If noise complaints persist during construction, GIP Hwy 3 Inc. shall consider installing and maintaining additional noise mitigation measures on and around the work area where feasible, including but not limited to: • Acoustic barriers; • Echo barriers tied to site fencing; and • Enclosures for stationary equipment.
	5.2. Vibration	Potential to experience vibration impacts higher than the 5.08 millimetres per second vibration criterion for structural safety.	Area residents, County of Essex, Town of Essex, Town of Kingsville, MECP	The following best management practices shall be implemented during construction to minimize potential vibration impacts on nearby sensitive receptors: • Avoid using unnecessarily large equipment; • Where possible locate equipment/processes with significant ground vibration in areas that maximize distance from Points of Reception; • Keep all equipment in good working order and used only as intended; • Route heavily-loaded trucks away from vibration-sensitive locations where feasible; and • Ensure truck travel routes are well graded and without potholes and bumps.
	5.3. Air Quality	Potential fugitive dust, air quality impacts caused by construction and construction traffic.	Area residents, County of Essex, Town of Essex, Town of Kingsville, MECP	Provisions to minimize potential air quality related impacts during construction include the following best management practices for dust and other emissions: • Clean construction sites and paved roadway regularly to remove construction-caused debris and dust; • Employ covered loads when hauling fine-grained materials; • Use tire washes and other methods to prevent trucks and other vehicles from tracking soil, mud or dust onto the paved roadway; • Cover soil and aggregate stockpiles as necessary, within 45 days;

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				• Enforce compliance with posted speed limits and, as appropriate, implement further reductions in speeds when approaching work zone; • Restore disturbed areas and re-establish removed vegetation including tree plantings as soon as practically possible; • Use well-maintained equipment and machinery and comply with operating specifications; • Minimize operation and idling of gas-powered equipment and vehicles, especially during smog advisories; • Minimize vehicular traffic on exposed soils and stabilize high traffic areas with suitable cover material; • Avoid excavation and other construction activities with potential to release airborne particulates during windy and prolonged dry periods; and, • Cover or otherwise contain loose construction materials with potential to release airborne particulates during transport, installation, or removal. The Contractor shall follow the Best Management Practices Plan (BMPP) for Fugitive Dust included in the Construction Management Plan to manage fugitive dust emissions.
	5.4. Illumination	Potential light trespass and increased night sky pollution.	Area residents, County of Essex, Town of Essex, Town of Kingsville, MECP, ERCA, MNRF	• Potential impacts shall be reduced by LED luminaires that emit zero up-light. • Shield shall direct light away from natural heritage features to minimize impacts on wildlife.
	5.5. Source Water Protection	Potential for impacts to local groundwater quality.	MECP, County of Essex, Town of Essex, Town of Kingsville	• All equipment maintenance and refueling shall be conducted at least 30 metres away from waterbodies/water sources. • The Contractor shall implement the Spill Management Plan during construction and the spill kit on-site shall contain a supply of absorbent products, such as booms, pads and socks. • All works shall be undertaken in accordance with the Essex Region Source Protection Plan.. • Apply current best management practices (i.e., MTO's Salt Management Plan). • To handle spills and contaminated materials, the Contract General Conditions shall include incident management requirements following relevant legislation, including the Environmental Protection Act, Fisheries Act, Gasoline Handling Act, Ontario Pesticides Act, Ontario Water Resources Act and Transportation of Dangerous Goods Act.

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	5.6. Access to Properties	Disruption of regular access to properties during construction.	Area residents, County of Essex, Town of Essex, Town of Kingsville	• Access to residential, industrial and commercial properties within the Project Area shall be maintained throughout construction.
6. Cultural Resources	6.1. Deeply buried cultural deposits and unmarked human remains	Potential destruction/ disturbance during construction.	Ministry of Citizenship and Multiculturalism (MCM)	• Archaeological Monitors will be present on site at select locations to ensure protection of archaeological resources. • Should unassessed buried archaeological resources be uncovered during construction, these may be a new archaeological site and therefore subject to Section 48 (1) of the Ontario Heritage Act. Upon discovering the archaeological resources, the Contractor shall cease alteration of the local site area immediately and notify the Contract Administrator who shall engage a licensed archaeologist to carry out archaeological fieldwork, in compliance with Section 48 (1) of the Ontario Heritage Act. • Any person discovering human remains shall immediately notify the police or coroner and the Registrar of Cemeteries, Ministry of Government Services. Notification to the project Environmental Manager and MTO Environmental Planner shall occur so that the MTO Regional Archaeologist can be informed.

6.1.1 Review of DCR #1

A Notice of Completion for this DCR #1 shall be sent to the Project Contact List. The DCR #1 shall be available on the project website (**www.hwy3essex.com**) for a 30-day public and agency comment period followed by a subsequent 30-day MECP review period. Following the MECP review period, assuming no Section 16 Order Requests have been received, and once applicable permits and approvals have been obtained, works included in DCR #1 can proceed to construction.

6.2 Environmental Construction Inspection and Monitoring

To confirm the implementation and effectiveness of the environmental mitigation measures and provisions included in the construction Contract, an Environmental Management Plan (EMP) has been developed for the project. The objective of the EMP is to maintain and, where possible, improve the state of the environment affected by the proposed improvements. This includes the development of appropriate mitigation measures for implementation during construction to fulfill the regulatory and contract requirements, protect the environment and meet MTO obligations.

During construction, environmental monitoring for this project shall:

- Inspect and monitor pre-construction, construction, and post-construction environmental work specified in the Contract; and
- Evaluate any changes proposed by the Contractor to ensure that changes meet the intent of the measures and provisions, as outlined in this DCR, and reflect prevailing conditions on-site.

GIP Hwy 3 Inc.'s Environmental Inspector(s) shall conduct daily inspections of planned works focusing on higher environmental risk works with observations and findings recorded as appropriate. Once satisfactory environmental controls have been achieved, periodic random bi-weekly inspections will be carried out until construction is complete. Observations requiring actions can be corrected immediately by communicating with workers and/or escalated as appropriate through the environmental incident or nonconformity processes. Summary reports shall be prepared on a weekly basis.